



**LANGSTAFF ROAD MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT (EA)
WESTON ROAD TO HIGHWAY 7**

YORK REGION

APPENDIX C: CONSULTATION RECORD

PART 7: CN Meeting Minutes

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**LANGSTAFF ROAD MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT (EA)
WESTON ROAD TO HIGHWAY 7**

YORK REGION

CANADIAN NATIONAL RAILWAY (CN) MEETING MINUTES

Date: January 20, 2017
 10:00 a.m. to 12:00 noon

Location: CN Rail
 1 Administration Road,
 Concord, ON
 Stn 515

Project Number: 3216079

Project: Langstaff Road EA –
 Weston Road to Highway 7

Purpose: Meeting #1 with Canadian National (CN) Rail

Attendees:	Agency
Stefan Linder	CN Rail
Vince White	CN Rail
Drew Redden	CN Rail – Community Affairs
Brian Wolf	York Region
Tim Kwan	York Region
Neil Ahmed	MMM
Katherine Jim	MMM
Allan Milke	MMM
Jian Guan	MMM

FINAL

Item	Details	Action By
ITEM 1 –	INTRODUCTIONS	
1.1	Those at the meeting were introduced. A presentation package was distributed. N. Ahmed, MMM, provided a brief study overview and background information, noting that the purpose of the meeting is to provide an introduction of the project , review key issues and constraints associated with the potential Langstaff Road extension at CN’s MacMillan Yard and get an early understanding of CN’s general requirements.	
1.2	This Class EA study is a multi-disciplinary project with MMM Group as the lead consultant. The MMM Rail group will participate in the study along with various other disciplines and sub-consultants as presented.	
ITEM 2 –	PROJECT OVERVIEW AND BACKGROUND	
	Key components of EA:	
2.1	Improvements to Langstaff Road	
	<ul style="list-style-type: none"> • The need to widen Langstaff Road from 4 to 6 lanes between Weston Road and Highways 7, including the “missing link” over the CN yard was identified in the York 	

Any omissions or errors in these notes should be forwarded to the author immediately.

Item	Details	Action By
	Region's Transportation Master Plan (TMP) Update (2016).	
2.2	Langstaff Road Interchange at Highway 400	
	<ul style="list-style-type: none"> Langstaff Road currently has a partial interchange with Highway 400 to and from the south. The potential implementation of a full interchange is a key component of the study and it is very important component to the overall transportation planning of York Region. 	
2.3	Langstaff Road grade separation with GO Transit Barrie Line:	
	<ul style="list-style-type: none"> The warrant for a grade separation at the GO Transit crossing / Langstaff Road, east of Keele Street will be determined as part of the EA Study. The Project Team will be meeting with Metrolinx later that day. 	
2.4	Langstaff Road extension at CN MacMillan Yard:	
	<ul style="list-style-type: none"> Various Langstaff Road crossing alternatives at the CN Rail MacMillan Yard were developed as part of the <i>Vaughan Metropolitan Centre (VMC) and Surrounding Areas Transportation Study</i>. The current study will take into consideration the previously developed conceptual alternatives and develop alignment alternatives for analysis and evaluation. A preferred crossing alignment will be identified through the EA Study. 	
ITEM 3 –	LANGSTAFF ROAD EXTENSION AT CN MACMILLAN YARD	
3.1	Background for the Need of the Extension	
	<ul style="list-style-type: none"> N. Ahmed noted that the study horizon year is 2041. It is anticipated that there will be significant population and employment growth in York Region. The population is projected to increase from 1.1 million in 2014 to 1.8 million in 2041. The employment number is projected to increase from 565K in 2014 to 900K in 2041. There are a number of urban growth centres adjacent to the study area including Vaughan Metropolitan Centre, Vaughan Mills Centre and Concord GO Centre. The potential Langstaff Road extension may serve to accommodate the regional traffic growth by: <ul style="list-style-type: none"> Reducing traffic demands on Highway7 and 	

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Item	Details	Action By
	<p>Rutherford Road.</p> <ul style="list-style-type: none"> ○ Providing an efficient route for truck traffic. ○ Improving access to the industries surrounding CN Yard. ○ Improving Regional travel linkages from Keele Street and Weston Road. <ul style="list-style-type: none"> ● The improvements to Langstaff Road were identified as part of the <i>Highway 7 Corridor Traffic Engineering Study (2012)</i>. ● The Langstaff Road Extension was considered as part of the <i>VMC and Surrounding Areas Transportation Study (2012)</i>. ● The <i>Langstaff Road Extension Cost-Benefit Analysis</i> was completed in 2015. ● The improvements to Langstaff Road were also identified as in the <i>City of Vaughan TMP (2012)</i> and <i>York Region TMP Update (2016)</i>. 	
3.2	Key Constraints in the Study Area	
	<p>N. Ahmed highlighted the following key constraints in the study area:</p> <ul style="list-style-type: none"> ● Significant issues with crossing multiple tracks at the MacMillan Yard while maintaining daily CN operations. ● Close proximity to the other Highway 400 interchanges and to the surrounding properties. ● Potential widening/replacement of the crossing structure at West Don River which is considered to be an environmentally sensitive feature. ● Potential grade separation at Langstaff Road and the Barrie GO Line. 	
ITEM 4 –	CN OPERATIONS AT THE MACMILLAN YARD	
4.1	<ul style="list-style-type: none"> ● CN provided background information on the current layout, train movements, general daily operations, yard access points, site constraints, origins/destinations of traffic (rail and truck) and future plans at the MacMillan Yard. The project team marked up an aerial photo of the Rail Yard based on preliminary information provided at the meeting and requested CN to provide a general site plan of the Rail Yard. The marked-up photo of the Rail Yard is attached to 	CN

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Item	Details	Action By
	<p>the meeting minutes and the general discussion is summarized as follows:</p> <ul style="list-style-type: none"> ○ The Rail Yard is in operation 24/7 all year round, with average 75 to 100 trains coming in and out daily. There may be a short closure on Christmas Eve. There is no dedicated allocation time for maintenance. Maintenance works are required to be completed in between track times with no major disruption to the daily operation. ○ Since the opening of the MacMillan Yard in the early 1960s, CN's business and operations have evolved and the location of the yard is strategic to CN's entire North American operations. ○ CN to provide the utility drawings within the Rail Yard. ○ The tracks within the Classification Yard were constructed with the minimum horizontal clearance at the north end of MacMillan Yard. ○ There is a single pullback track expansion planned on at the north end of the yard. ○ CN prefers the tunneling option as opposed to overpass option. ○ CN had expressed a number of concerns to the Region and the City regarding the overpass option. The main concern is the disruption to the daily operation during construction. Another concern is the safety and security of the yard (i.e. people can look into the yard from the overpass or physical vulnerability). ○ For the three alignment alternatives that were presented to CN as part of the <i>(VMC) and Surrounding Areas Transportation Study</i>, CN considers the south alignment as the most viable option, although the overpass options are not welcomed by CN for the reasons noted above. ○ CN will be responsible for flagging during construction. ○ CN leases some of the properties located on the outskirts of the Rail Yard to business tenants. CN to provide property drawings to the project team. 	<p>CN</p> <p>CN</p>

Any omissions or errors in these notes should be forwarded to the author immediately.

Item	Details	Action By
	<ul style="list-style-type: none"> ○ CN to check with its marketing group to provide any future expansion plans. To staff knowledge, there is no immediate expansion plans. ○ There are approximately 1,300 employees who currently work at the Rail Yard on shifts. ○ CN has its own environmental staff to prevent, monitor, and manage any spills on site. 	CN
4.2	N. Ahmed noted that it is typical practise to sign a confidentiality agreement to ensure the information shared by CN is protected.	
4.3	CN agreed to arrange a site visit for a group up to 4 members and it is preferable to receive one to two weeks of notice ahead of time. MMM will arrange.	MMM
4.4	The project team will coordinate with CN for any future geotechnical investigation and CN is open to the idea of using a flat car for drilling however prefers conventional access. CN will provide available geotechnical reports to the project team.	CN
4.5	York Region noted that the “missing link” on Langstaff Road is a key component of the overall transportation network in the Region. The Region and the project team recognize the challenges associated this project and specifically potential impacts to the CN Yard. The Region would like to ensure a “win-win” situation for both the Region and CN.	
ITEM 5 –	ONGOING CONSULTATION WITH CN	
5.1	<p>K. Jim summarized the CN involvement throughout study as follows:</p> <ul style="list-style-type: none"> • Spring 2017: Collect background info • Spring 2017: Identify problems and opportunities • Fall/Winter 2017: Consult in regards to the analysis and evaluation of alternatives <ul style="list-style-type: none"> ○ Evaluate impacts to CN yard and operations • Spring 2018: Select the preferred alternative • Spring 2018: Discuss construction staging related issues in relation to CN yard 	
ITEM 6 –	PROJECT SCHEDULE	

Any omissions or errors in these notes should be forwarded to the author immediately.

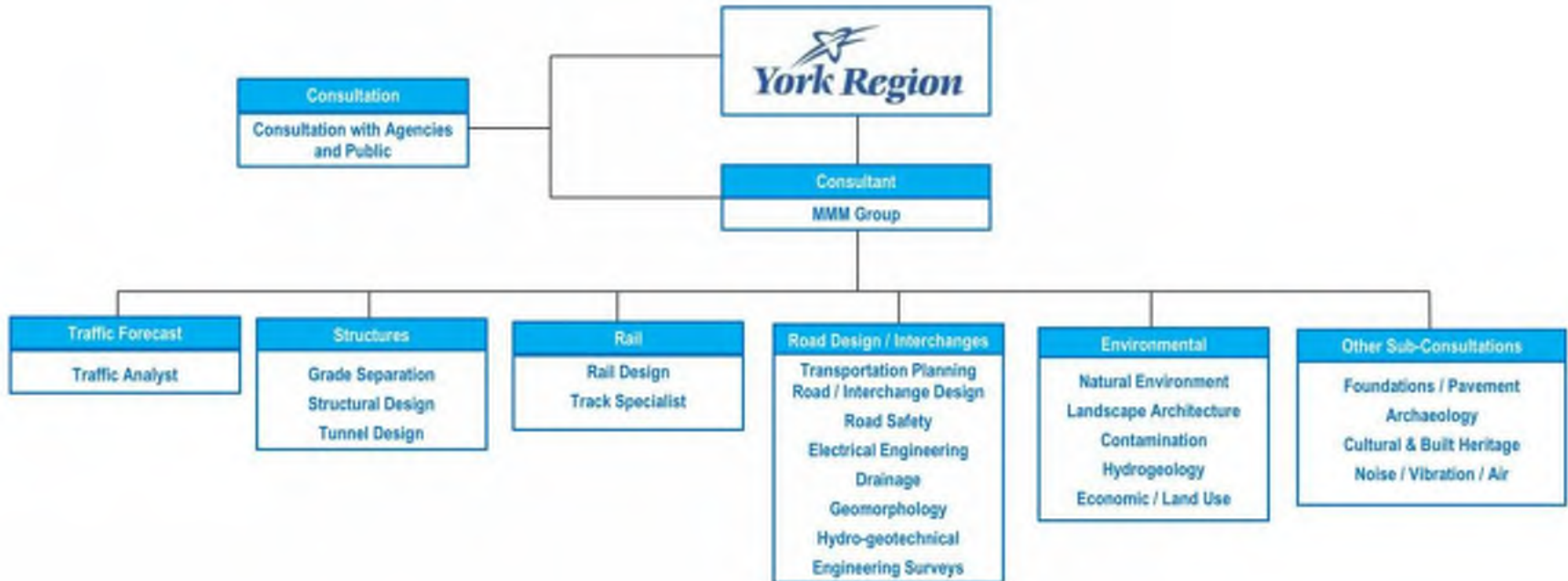
Item	Details	Action By
6.1	K. Jim noted that Open House #1 is tentatively scheduled for spring 2017 and Open House #2 is scheduled for Spring, 2018. The study is anticipated to be completed by the end of 2018.	
ITEM 7 –	NEXT STEPS / OTHER BUSINESS	
7.1	MMM to schedule a site visit with CN.	MMM

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Langstaff Road
Class Environmental Assessment
Weston Road to Highway 7

**CN Meeting –
January 20, 2017**

Project Organization



Project Overview and Background

- Growth in York Region, including:
 - Vaughan Metropolitan Centre, Vaughan Mills Centre, and Concord GO Centre

Population

1.1 million
2014

to

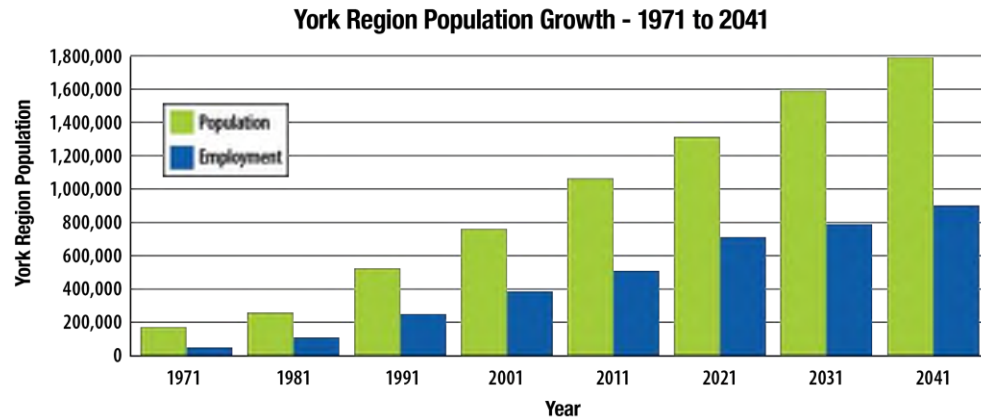
1.8 million
2041

Employment

565 thousand
2014

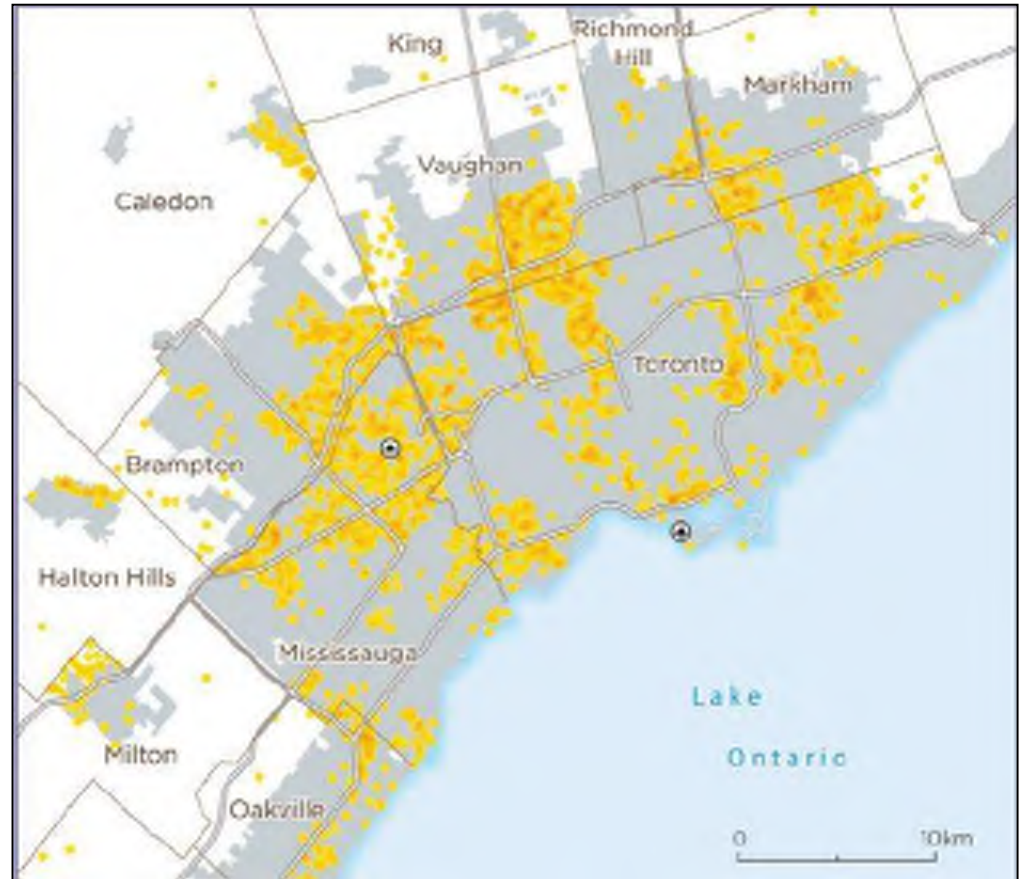
to

900 thousand
2041



Accommodating Traffic Growth

- Reduce traffic volumes on Highway 7 and Rutherford Road
- Provide an alternative route for truck traffic
- Improve access to the industries located west of CN Yard
- Improve Regional travel linkages from Keele Street and Weston Road

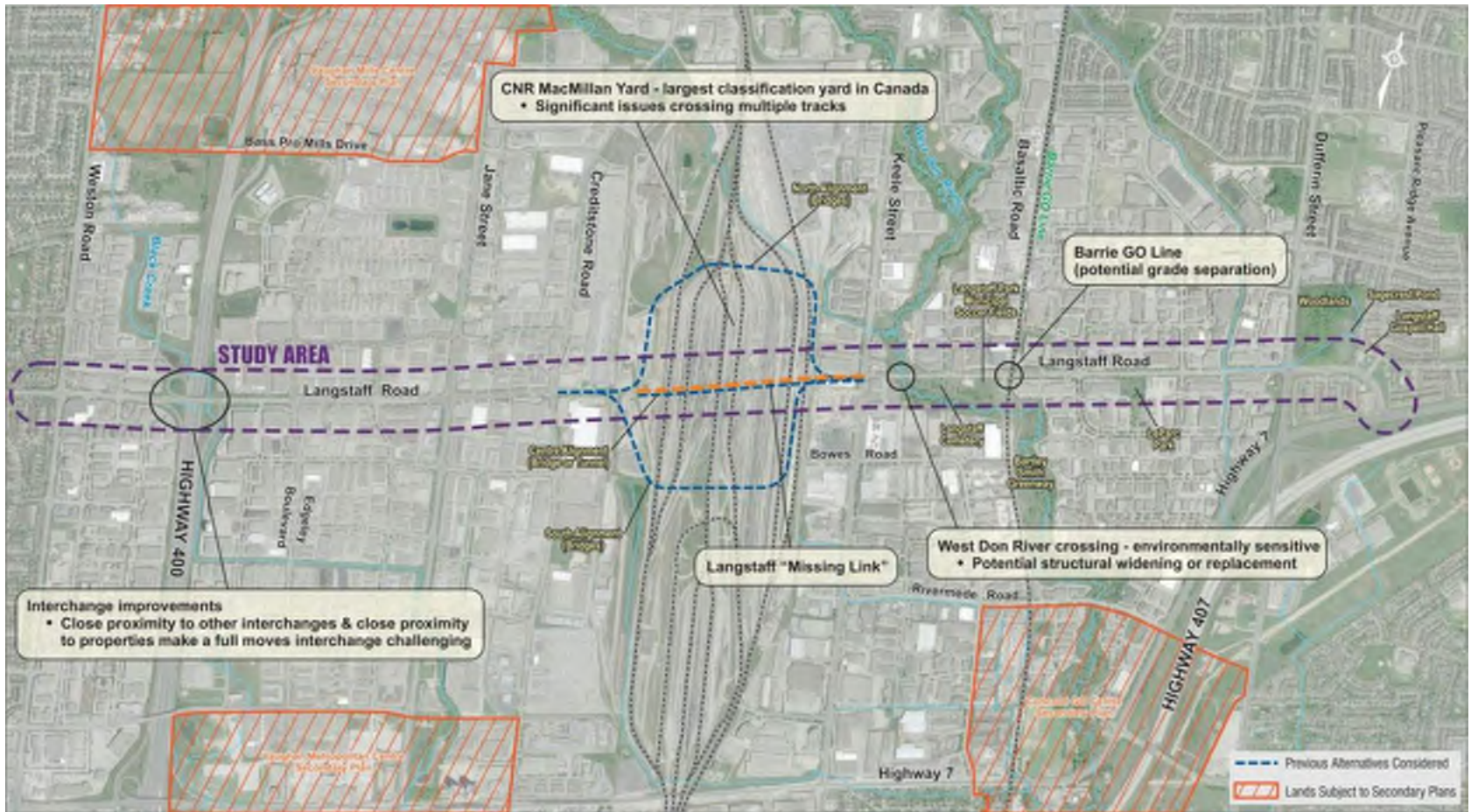


Source: *Planning for Prosperity* (2015), Map 5, **Employment in Manufacturing 2011**, Neptis Foundation

Project Overview and Background

- Several recent studies identify potential improvement:
 - Highway 7 Corridor Traffic Engineering Study (2012)
 - VMC and Surrounding Areas Transportation Study (2012)
 - Langstaff Road Extension Cost-Benefit Analysis (2015)
 - York Region TMP Update (2016)
 - Vaughan TMP (2012)
 - Highway 400 interchange north-oriented ramps also to be considered

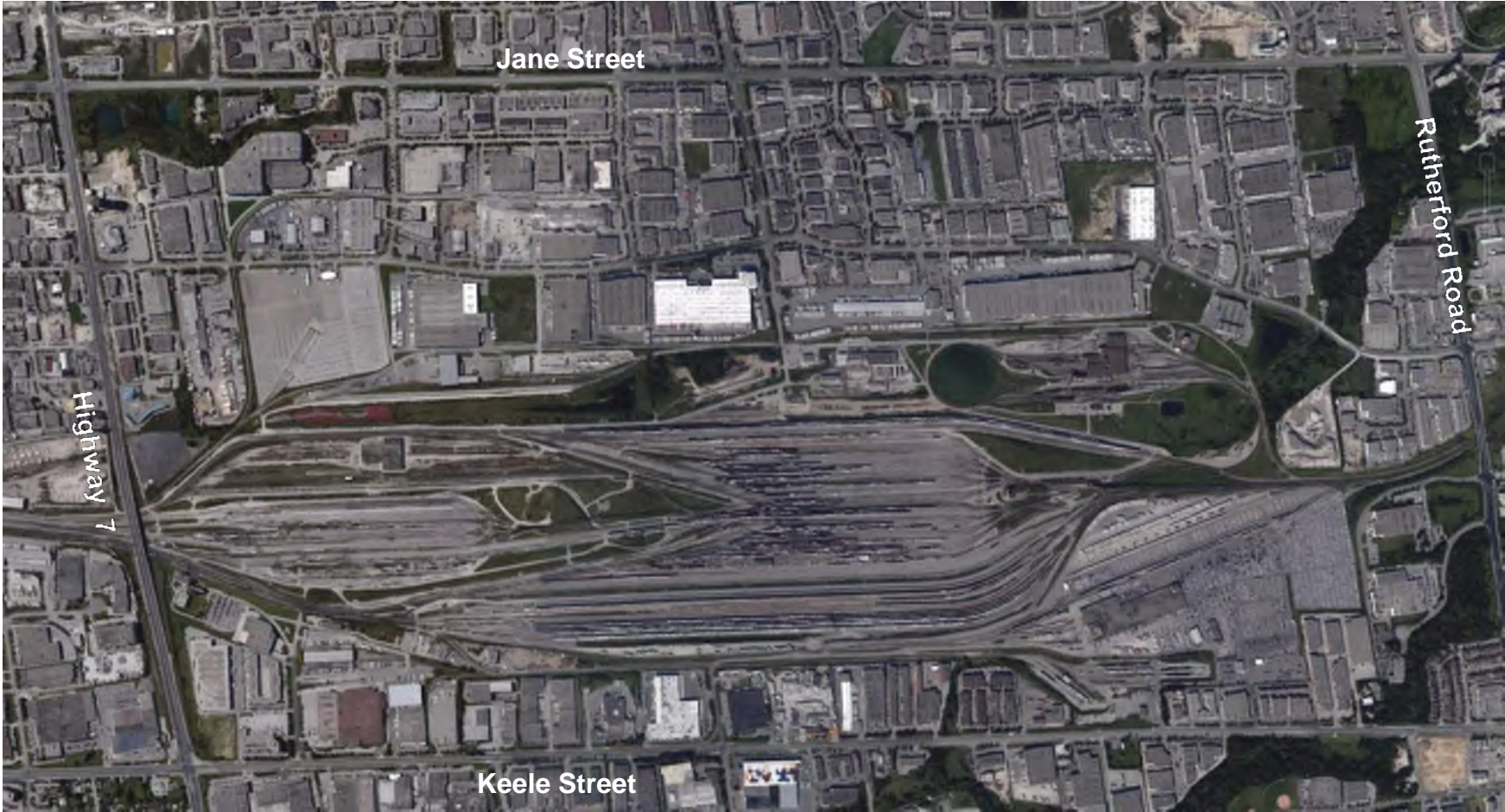
Study Area and Key Issues



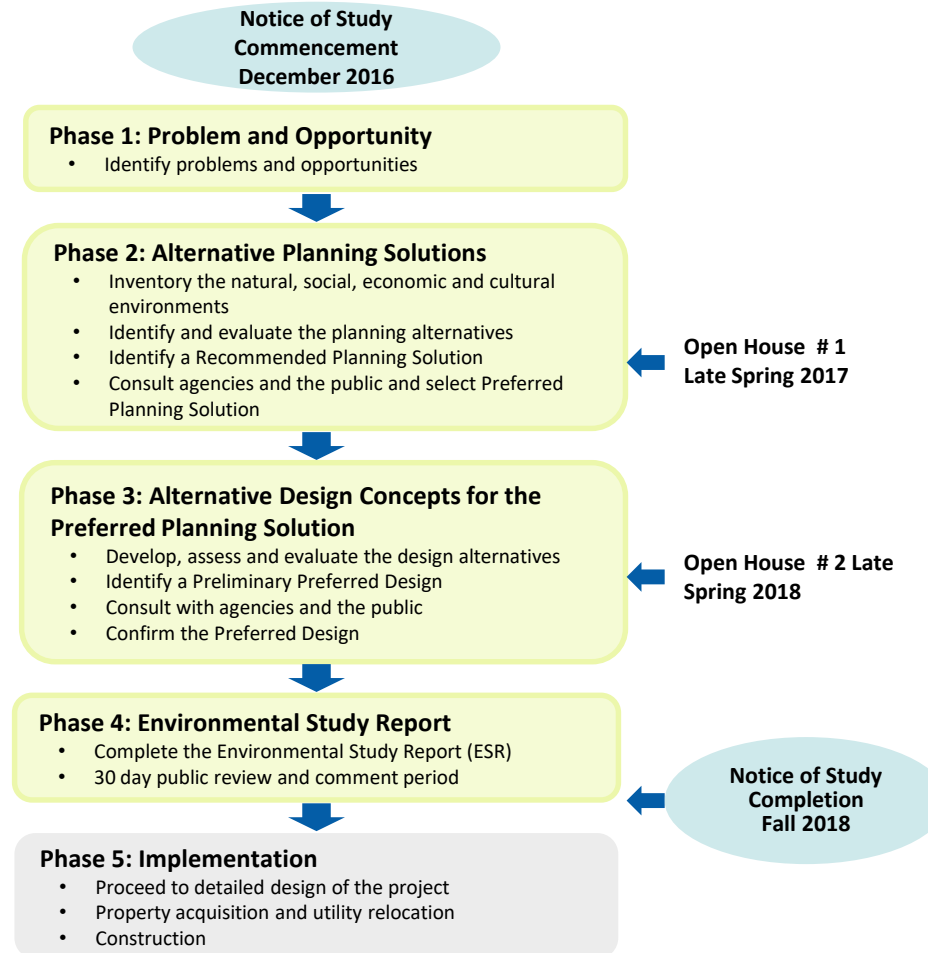
CN Operations

- Yard Layout and Operations Areas
- Historical Growth of Yard (tracks #, trains, etc.)
- Future Improvements of Yard (tracks #, expansion, etc.)
- Train Movement
- Access Points to Yard
- General Daily Operation
- CN Autoport
- Origins / Destinations of Rail Traffic, Truck Traffic
- Area businesses supporting yard

CN Operations

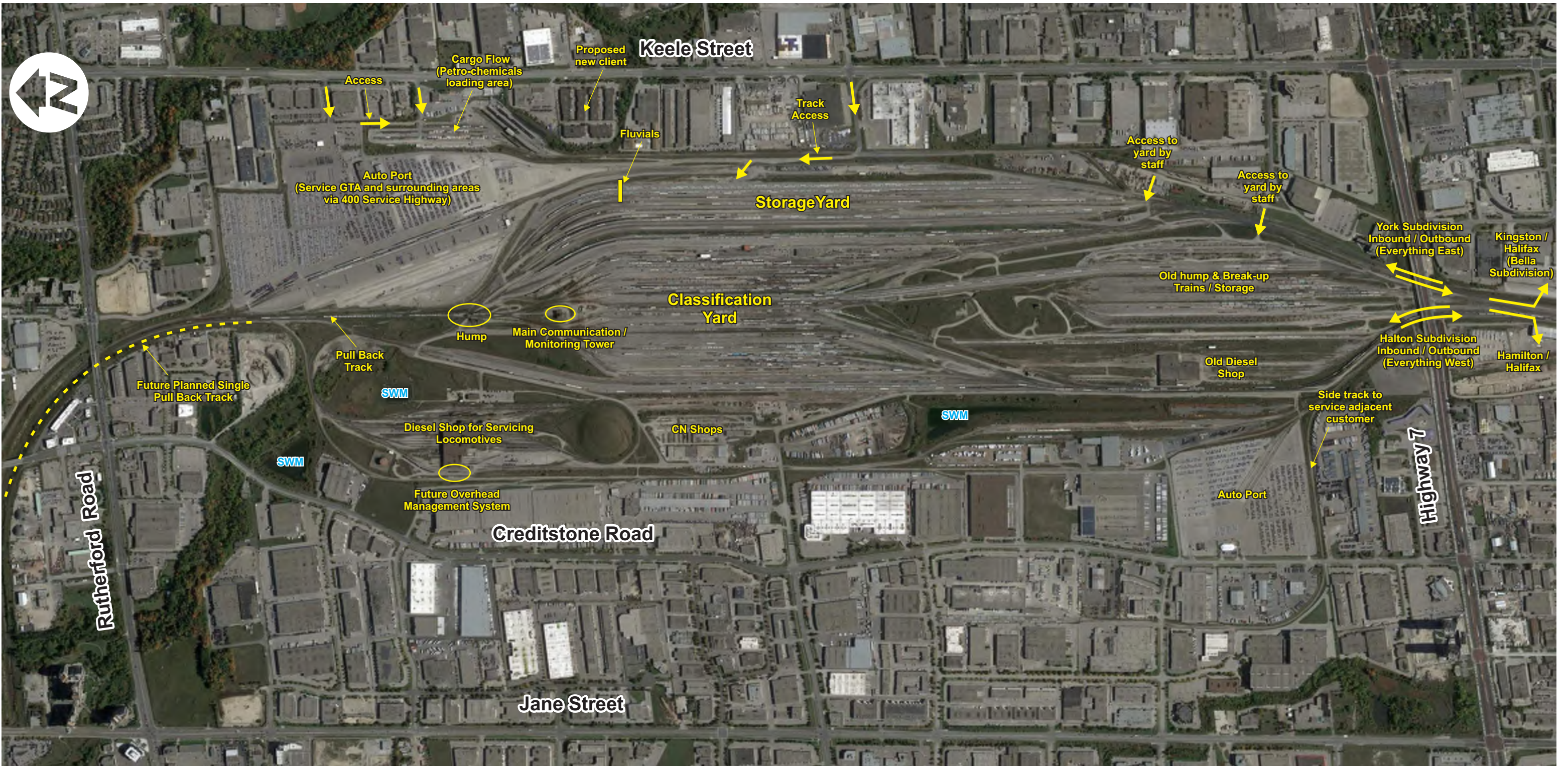


EA Study Process



Involvement of CN

- **Spring 2017:** Collect background info
- **Spring 2017:** Identify problems and opportunities
- **Fall/Winter 2017:** Consult in regards to the analysis and evaluation of alternatives
 - Impacts to CN yard and operations
- **Spring 2018:** Select the preferred alternative
- **Spring 2018:** Discuss construction staging related issues in relation to CN yard



Keele Street

Cargo Flow
(Petro-chemicals
loading area)

Proposed
new client

Access

Track
Access

Fluvials

Access to
yard by
staff

Access to
yard by
staff

Auto Port
(Service GTA and surrounding areas
via 400 Service Highway)

Storage Yard

York Subdivision
Inbound / Outbound
(Everything East)

Kingston /
Halifax
(Bella
Subdivision)

Old hump & Break-up
Trains / Storage

Classification
Yard

Hump

Main Communication /
Monitoring Tower

Halton Subdivision
Inbound / Outbound
(Everything West)

Hamilton /
Halifax

Old Diesel
Shop

Pull Back
Track

Future Planned Single
Pull Back Track

SWM

Diesel Shop for Servicing
Locomotives

CN Shops

SWM

Side track to
service adjacent
customer

Auto Port

Future Overhead
Management System

Rutherford Road

Creditstone Road

Highway 7

Jane Street



MEETING MINUTES

Date: May 15, 2017
1:00 p.m. to 2:00 p.m.

Project Number: 3216079

Location: CN Rail
1 Administration Road,
Concord, ON

Project: Langstaff Road EA –
Weston Road to Highway 7

Purpose: Meeting #2 with Canadian National (CN) Rail

Attendees:
Stefan Linder
Michael Vallins
Vincent White
Brian Wolf
Neil Ahmed
Katherine Jim
Allan Mielke

Agency
CN Rail
CN Rail
CN Rail
York Region
WSP
WSP
WSP

Item	Details	Action By
ITEM 1 –	INTRODUCTIONS	
1.1	Those at the meeting were introduced. Michael Vallins will be replacing Stefan Linder as the main CN contact for the Langstaff Road EA Study.	
1.2	York Region provided a brief introduction for the Langstaff Road EA Study. In following the Municipal Class EA process, all reasonable alternatives will be considered as part of the study.	
ITEM 2 –	PROJECT STATUS	
2.1	WSP provided a brief update on the project status.	
	<ul style="list-style-type: none"> Traffic analysis is being carried out to demonstrate the need and justification for the improvements required on Langstaff Road and at the Highway 400 interchange. The first Open House is to be held in June 2017 where the study process and technical findings to date will be presented. Members of the public will be invited to provide input. 	
2.2	The Project Team is considering conceptual plans for the crossing of Langstaff Road across the CN yard. CN opposes the concept of building a crossing over or under its MacMillian Yard but will work with the Region and Project Team to ensure all options (including a tunnel, a bridge and the do nothing approach) are thoroughly	

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Item	Details	Action By
	explored for the purposes of the EA.	
2.3	CN commented that any potential impacts to the yard would also impact the entire CN system.	
2.4	The Project Team recognized that there are many technical challenges associated with crossing across the CN yard and suggested that a workshop with CN be arranged, primarily considering over options since these are more problematic. A “straight” crossing across the CN yard will be assumed as the “starting point” for the workshop discussion and other alternatives may be considered subject to progress during the workshop. (See discussion under Item 3).	
ITEM 3 –	PROPOSED CN WORKSHOP	
3.1	<p>The objectives of the workshop are to:</p> <ul style="list-style-type: none"> • identify the key constraints in the CN yard • identify the potential construction –related and permanent impacts as a result of the proposed crossing • identify potential methods to address impacts and key issues • identify technical works required to address key issues 	
3.2	It was agreed that the workshop will be a half-day session; facilitated by one of the WSP senior engineers.	
3.3	CN advised that their Operations staff will also attend the workshop as they are most familiar with the track operations. The workshop will be held at CN offices to better accommodate CN staff attendance.	
3.4	<p>CN stressed that their main concerns are:</p> <ul style="list-style-type: none"> • operational security over the classification yard; there should be no public visibility into the yard from a crossing structure (e.g. a visual barrier on the structure would be required) • ideally, there should be no new piers in the CN yard • should a structure be proposed, there must be sufficient horizontal and vertical clearance between the tracks and the structure and any piers • should any piers be placed in the yard, there must be sufficient offset between a pier and the adjacent tracks; 	

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Item	Details	Action By
	<p>generally, there is a 25 ft separation between the centreline of the track to a pier although crash wall protection may be possible to reduce this</p> <ul style="list-style-type: none"> • should tracks be closed and relocated during construction, there will be cascading effects to the yard as all the tracks in the classification area are closely positioned and new switching will reduce capacity • there should be minimal down time on any of the tracks • any temporary changes to track works and to the yard to accommodate construction of the crossing structure will take multi years to plan due to the need to coordinate with CN operations • access to the yard during construction would be a challenge although access was provided recently for Highway 7 structure work • contractors will have to follow the emergency protocol by CN (i.e. call CN operation first, who will then call 911; CN staff will then coordinate with the first responders when on site). 	
3.5	Visual aids / drawings will be prepared for the workshop.	
ITEM 4 –	ONGOING CONSULTATION WITH CN	
4.1	The Project Team stressed that it is important to have ongoing consultation with CN and document the key issues and constraints identified by CN as part of the EA Study. Subject to findings at the workshop and input from CN, the Project Team may consider concepts such as a hybrid structure type (i.e. some sections with piers, and a section as suspension bridge), or tunnelling.	
ITEM 5 –	PROJECT SCHEDULE	
5.1	Open House 1 is to be held in June 2017.	
ITEM 6 –	NEXT STEPS / OTHER BUSINESS	
6.1	WSP will forward possible dates for the workshop to CN.	WSP



MEETING MINUTES

Date: June 29, 2017
9:00 a.m. to 11:30 a.m.

Project Number: 3216079

Location: CN Rail
1 Administration Road,
Concord, ON

Project: Langstaff Road EA –
Weston Road to Highway 7

Purpose: Meeting #3 with Canadian National (CN) Rail

Attendees:

Michael Vallins
Brian Wolf
Neil Ahmed
Augustin Yun
Katherine Jim
Allan Mielke
Cam Tytgat (Teleconference)
Hugh Robinson (Teleconference)

Agency

CN Rail
York Region
WSP
WSP
WSP
WSP
WSP
WSP subconsultant

Item	Details	Action By
	Prior to commencing the meeting, CN invited the Project Team to a boardroom which has a balcony that overlooks the operation of the southerly portion of the Rail Yard. CN briefly explained the operation of the tracks and highlighted typical classification processes.	
ITEM 1 –	INTRODUCTIONS	
1.1	Those at the meeting were introduced.	
1.2	The purpose of the meeting is to review conceptual corridors across the CN Rail Yard	
ITEM 2 –	TRAFFIC RESULTS / NEED AND JUSTIFICATION	
2.1	WSP provided a brief update on the need and justification for the proposed improvements on Langstaff Road including the connection across the CN Rail Yard.	
	<ul style="list-style-type: none"> • York Region is growing and the associated infrastructure also needs to be improved to support growth. • Much of the new growth areas are north of Rutherford Road, as well as Vaughan Metropolitan Centre near Highway 400 and Highway 7. • Rutherford Road and Highway 7 are the two Regional 	

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Item	Details	Action By
	<p>arterial roads immediately adjacent to Langstaff Road.</p> <ul style="list-style-type: none"> • Rutherford Road will continue to attract commuter traffic and it is being widened to handle the traffic needs to the north. • The primary function of Highway 7 is to support transit, pedestrians and urbanized land uses as a transit spine and growing city centre; it does not sufficiently goods movement. • Langstaff Road is needed to support goods movement in the area given that other parallel corridors are not as suitable. 	
2.2	<p>CN recognizes there is growth within York Region; however, would urge the Project Team to consider “outside of the box” solutions, including:</p>	
	<ul style="list-style-type: none"> • Optimize Rutherford Road and Highway 7 by diverting commuters and encouraging trucks to use these road during off peak hours. • How are autonomous vehicles being accounted for? This will help increase capacity on the roads. • Upgrade or widen parallel roads to achieve the additional capacity required. 	
2.3	<p>The Project Team responded that the Region is already carrying out various Travel Demand Management initiatives to help reduce traffic volumes.</p>	
2.4	<p>The Project Team also noted that widening parallel roads to beyond planned program is not typical – e.g. an 8-lane cross section on Regional arterial road. There will be significant impacts to adjacent communities.</p>	
2.5	<p>Using aerial photography, CN noted that the Rail Yard has been in the current location since 1965. The surrounding area was all vacant lands at that time. In recent years, all the lands around the Rail Yard have been developed. The CN Rail Yard has largely remain the same since 1965.</p>	
2.6	<p>WSP explained that the traffic analysis findings presented at Open House 1 is on a screenline level (CN reviewed Open House 1 material). Screenline results show that there is a need for additional east-west capacity. Microsimulation is being carried out to assess the transportation needs in greater detail, including</p>	

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Item	Details	Action By
	signal timing, queue length, turning movement requirements, etc. This includes the proposed improvement at the Highway 400 interchange. It was noted that MTO is also planning to implement HOV lanes on Highway 400 from Langstaff Road northerly.	
2.7	The Project Team reviewed the Alternative Solutions and evaluation presented at Open House 1 – Do Nothing, Transportation Demand Management, Alternative Modes of Transportation, Operation Improvements, Upgrade Parallel Roads Beyond Planned Improvements, and Langstaff Road and Highway 400 interchange improvements. The preferred alternative solution is improvements on Langstaff Road and Highway 400.	
2.8	Next Open House will be held in spring 2018 where the preliminary plan for the improvements on Langstaff Road and Highway 400 will be presented. The Project Team will be focused on developing the alignment, including consultation with technical agencies including CN.	
2.9	CN noted that the MacMillan Yard is one of their major yards in North America. Other key centres are at Winnipeg, Chicago, Montreal, etc. Many of their transport routes are across Canada and the US from coast to coast.	
2.10	WSP Geomatics group had asked for Permission to Enter in order to obtain survey information of the yard. CN noted that will not be possible due to operational and privacy issues but will share their in house survey information of the yard with the Project Team.	CN
2.11	Despite their participation in the consultation process as part of the EA Study, CN stressed that they are not in agreement the proposed need for the connection of Langstaff Road between Jane Street and Keele Street. The Project Team acknowledges the current position of CN.	
ITEM 3 –	CONCEPTUAL CROSSING OPTIONS ACROSS CN YARD	
3.1	WSP developed four crossing concepts for the “straight through” alignment over the CN Rail Yard – connecting between Langstaff Road at Creditstone Road and Langstaff Road at Keele Street. The four alternatives vary in structure type and span widths.	
3.2	<p>Alternative 1:</p> <ul style="list-style-type: none"> • Spans are the shortest compare to other alternatives (80 m) • Easier to build from a structural perspective, can utilize “conventional construction method” 	

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Item	Details	Action By
	<ul style="list-style-type: none"> • About 5 piers through the core yard. • Least structural cost compared to other alternatives. <p>CN comments:</p> <ul style="list-style-type: none"> • This alternative would impact inbound/outbound train operations significantly. • Piers to the east will impact the wheel shop • To the west, this area is where the trains wait for inspection before departing. A pier at that location will lead to safety concern. • The core classification yard (middle portion) is a very sophisticated operation for tracking and sorting rail cars. It is considered a “No Touch” zone. It is controlled by computer on all the tracks for all the trains (e.g. how much braking to apply, etc.) • The tracks to the east and west may be mitigated to some degree. However, for future planning, CN do not want any piers which would prohibit their ability to utilize their own land. • There are relatively larger separation between tracks in the east portions of the yard (sufficient for crew to walk through). The central area does not allow any walking through the area unless tracks are locked out. • In general, yard tracks are relatively easier to move / mitigation; the mainline tracks have computer and electrical systems tied in. • Staging area and equipment on site would be a challenge during construction as CN do not permit lifting over the yard – all the tracks will have to be locked out. 	
3.3	<p>Alternative 2:</p> <ul style="list-style-type: none"> • 250 m long span – still need one pier in the classification area. • Total of 5 spans, 4 piers / towers. • Extradosed bridge – cable stayed. Height of tower is shorter but will need a larger pier • Cable stayed and suspension bridges are different in terms of the cable setup and different technology and mechanism. • Cable stayed bridge can general be spanned longer. • Footprint of the pier is about 6 m. <p>CN comments:</p> <ul style="list-style-type: none"> • Tower 1 to the east would be in the area of existing access road; this may be acceptable as a potential area for a tower. 	

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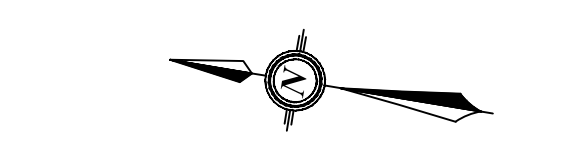
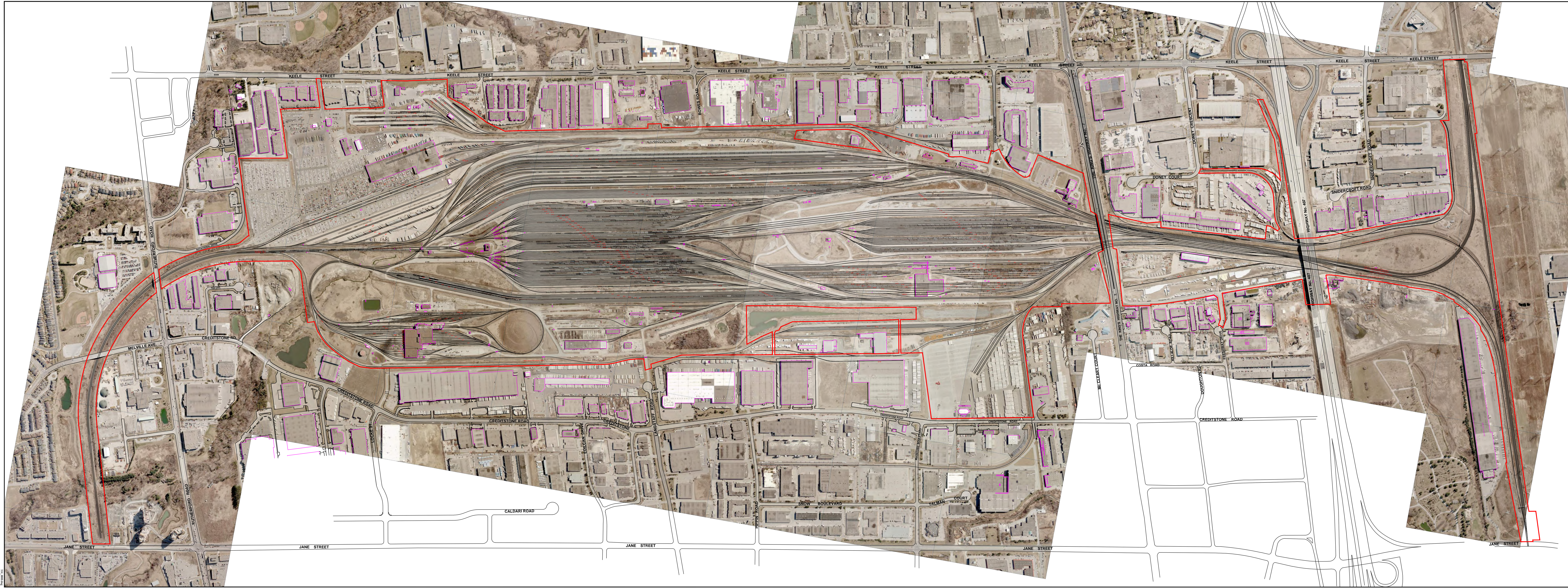
Item	Details	Action By
	<ul style="list-style-type: none"> • Tower 2 would be in the area of the mechanical shop. There are tracks going into the mechanical / wheel shop. Not acceptable. • Tower 3 would be located in the classification area. Not acceptable. • Tower 4 would be in a mechanical area. There are working tracks in the area to assist with train repair. Not acceptable. • Tower 5 would be in staff area of the shop. • This alternative is relatively less impactful compared to Alternative 1. However, it is still impacting various operation areas (except for Tower 1). 	
3.4	<p>Alternatives 3 and 4:</p> <ul style="list-style-type: none"> • Both alternatives are cable stayed bridges • Alternative 3: 380 m span; piers are spanning the entire sorting / classification area. • Alternative 4: 480 m main span. • Cable stayed bridge is typically considered as economical to span up 750 m. • Tower would be at a height of about 180 m. Consideration should be given to use a suspension bridge for span length greater than 750 m to be economical. <p>CN comments:</p> <ul style="list-style-type: none"> • Requires 25 m working zone at the pier. With pier about 6-8 m in diameter, it is still a very large footprint. • The Project Team asked if the tracks on the east can be moved further to the east. CN responded that it may be difficult since some of the areas are sloped. Similarly, on the west side, some of the areas are on a slope. • CN noted that they generally do not utilize areas that are sloped. 	
3.5	<p>In general, CN is concern with a bridge over the classification yard. CN does not support any infrastructure over its yard and drainage from the bridge onto the yard will not be acceptable. Drainage will have to be drained to adjacent areas.</p>	
3.6	<p>CN noted that having piers in the yard can be dangerous, for example, potentially for a rail car to hit the pier/bridge. This will put the public at risk.</p> <p>WSP responded that these type of bridges are generally designed for ship impact loads.</p>	
3.7	<p>All the structures will require large clearance underneath about 15-</p>	

Any omissions or errors in these notes should be forwarded to the author immediately.

Item	Details	Action By
	20 m rise. Therefore, there may be relatively long approaches to tie back to grade of the road, e.g. about 250 m leading to the approach span.	
3.8	The potential for a north and south alignment across the CN yard was discussed. WSP prepared high level conceptual crossing location for discussion.	
3.9	<p>North Alignment:</p> <ul style="list-style-type: none"> • The north alignment would curve to the north and crosses the yard about 600 m north of the “straight through” alignment. • This alignment is not acceptable to CN as this is located in very close proximity to the hump area. • Any impacts to the hump area will impact the operation of the entire yard. • The alignment will also be very close to the operation tower. • This is a very noisy area. • This facility has been in the area for about 50 years. • Unless the crossing is as far north as Rutherford Road, the north alignment crossing is not acceptable. 	
3.10	<p>South Alignment:</p> <ul style="list-style-type: none"> • The south alignment would curve to the south and cross in an area where there are some “vacant pockets” in the yard. • CN noted there may be more opportunities for pier location under this option. • CN noted this may be better than the “straight through” alignment as this is not directly across the classification area. 	
3.11	York Region noted that Langstaff Road will be posted at 60 km/h and the design speed should be updated to 80 km/h. WSP to update.	
3.12	CN suggested that other “tie in” points on either ends at Langstaff Road should be considered – for example, limit impact to CN yard and buy out adjacent properties. York Region noted that direct impact to properties is not preferred.	
3.13	In general, CN does not want any infrastructure on their property that may limit their ability to expand or opportunities to improve their operation. To them, any piers in the yard is not preferred.	
3.14	CN is also concern about the timing required to construct the bridge and the ability for equipment and construction access	

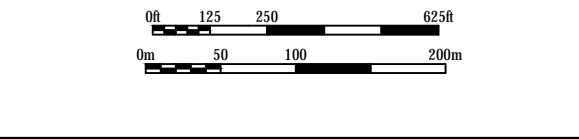
Any omissions or errors in these notes should be forwarded to the author immediately.

Item	Details	Action By
	during construction.	
3.15	The Region would like to find a “win-win” situation for both the Region and CN, and asked that CN consider what the Region may be able to offer to help improve the operation of CN.	
3.16	The conceptual plans shown at the meeting was provided to CN (all four “straight through” alternatives, as well as the south and north alignment concepts). CN will provide input.	CN
3.17	WSP will develop the south alignment option further. Similar options to the “straight through” alignment will be developed and provided to CN for review.	WSP / CN
3.18	WSP appreciates the challenges associated with the crossing of the rail yard. Specialists on the Project Team were involved with the CP Port Coquitlam yard in Vancouver and have demonstrated where impacts to the yard may be minimized. CN feels that any construction will impact their operation.	
3.19	CN noted that the further south the crossing may be located, the better. CN stressed again for the Project Team to think “outside of the box” solution, e.g. parallel road to Highway 7, and other solutions to ease traffic on Highway 7 and Rutherford Road.	
ITEM 4 –	NEXT STEPS	
4.1	The Project Team will develop the south alignment option as discussed above. The tunnel option will also be explored as part of the study.	
4.2	CN commented that even with the tunnel crossing solution, there has to be zero settlement associated with the tunnel.	
4.3	The next meeting with CN is to be schedule in late August / early September 2017.	WSP
ITEM 5 –	OTHER BUSINESS	
5.1	There was no other business	



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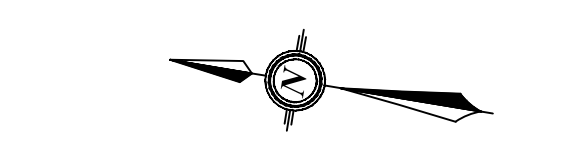
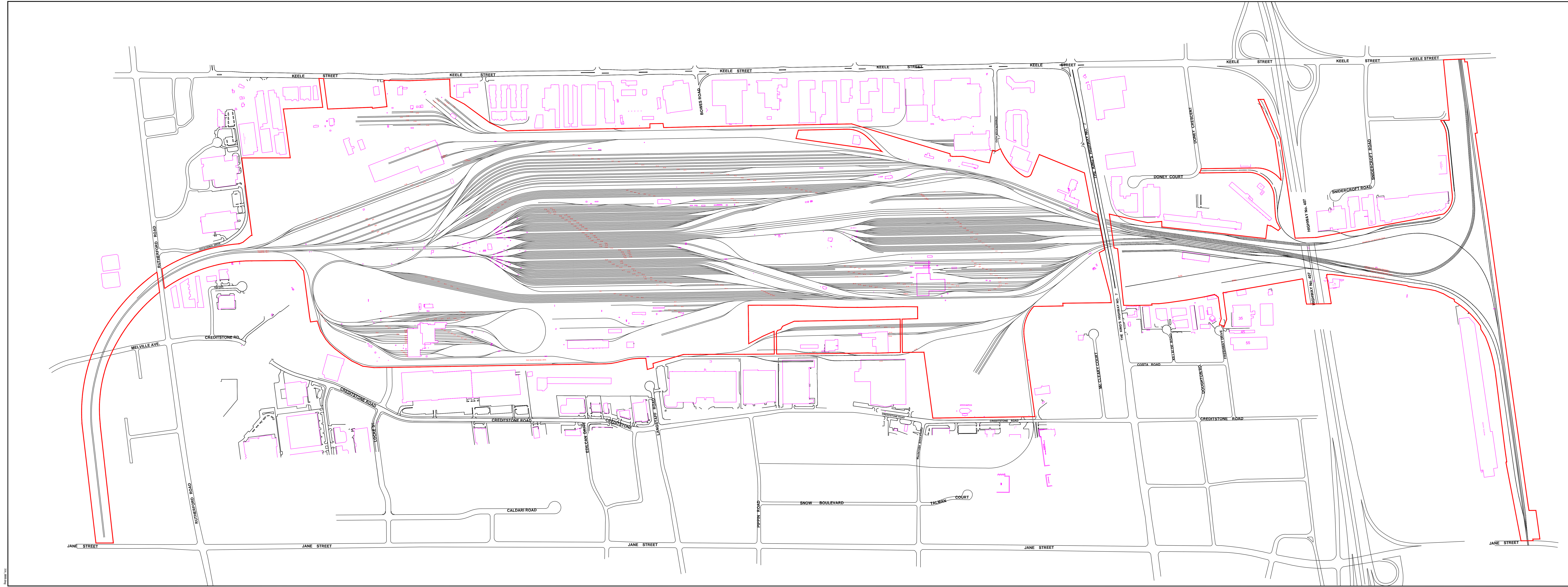
AERIAL PHOTO - 2011



MacMillan Yard
City of Vaughan

SUBDIVISION:	Huber (314)
SPUR / ANTENNE:	MacMillan Yard (778)
MILEAGE / MILLIAIRE:	As Shown
DATE:	July 22, 2015
C7500 rev 7-0909	1/5000



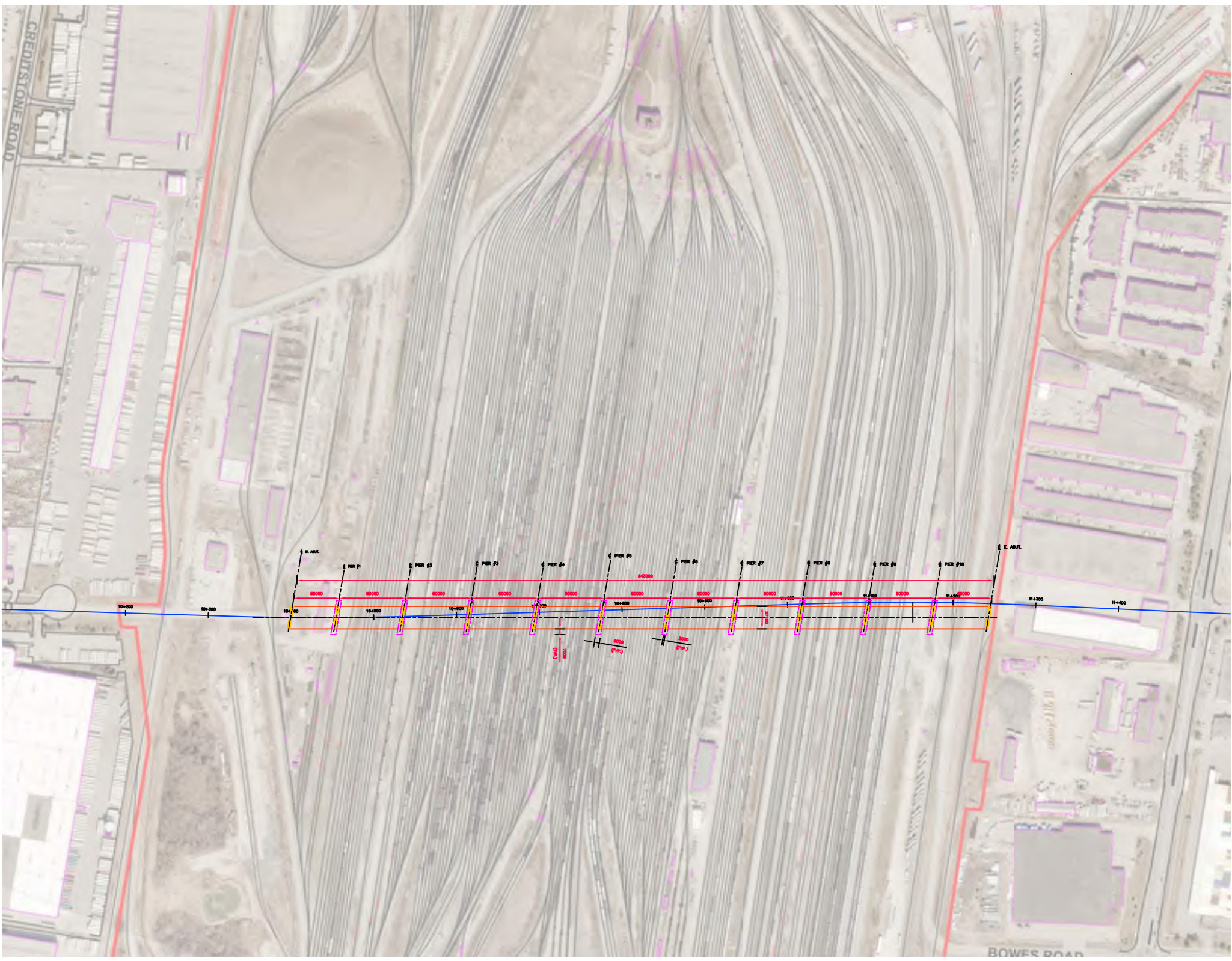


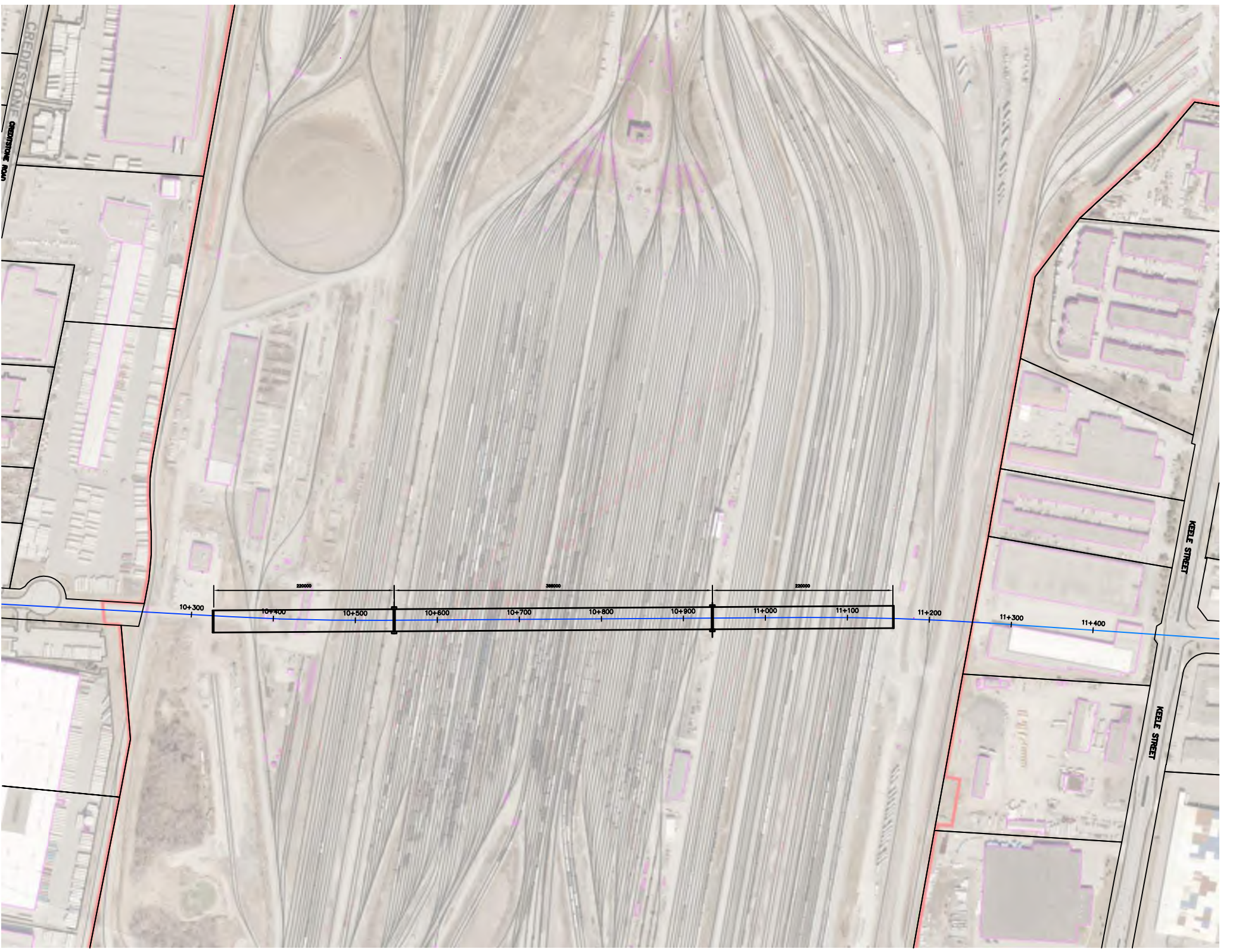
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MacMillan Yard
 City of Vaughan

SUBDIVISION:	Huber (314)
SPUR / ANTENNE:	MacMillan Yard (77B)
MILEAGE / MILLIAIRE:	As Shown
DATE:	July 22, 2015
C7510 rev 7-0909	1/5000



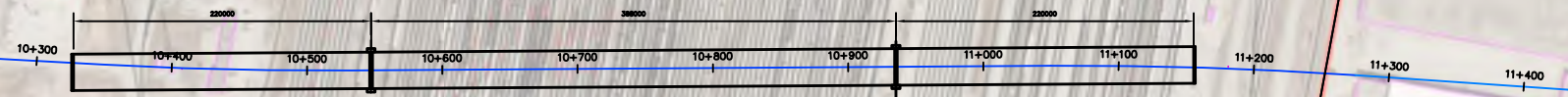


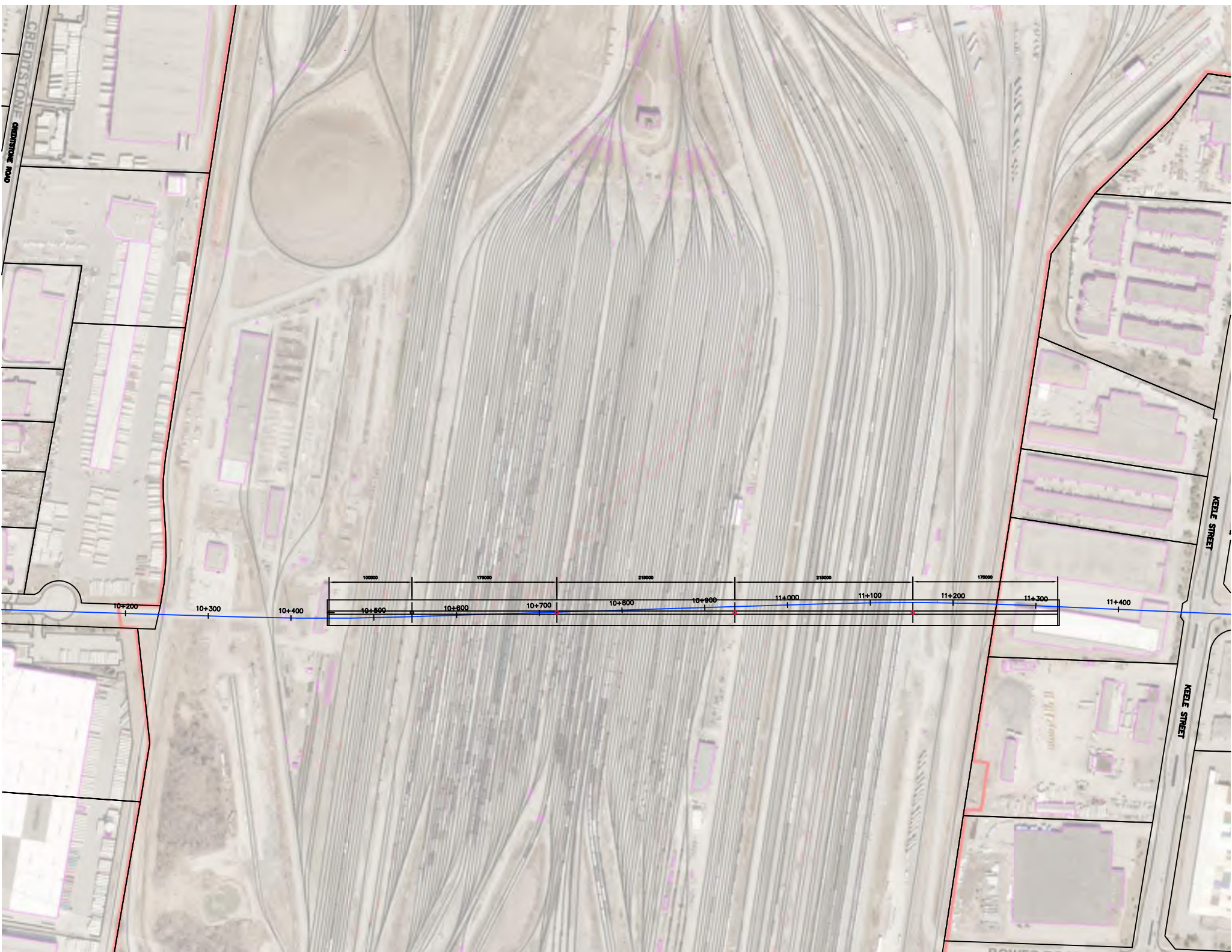


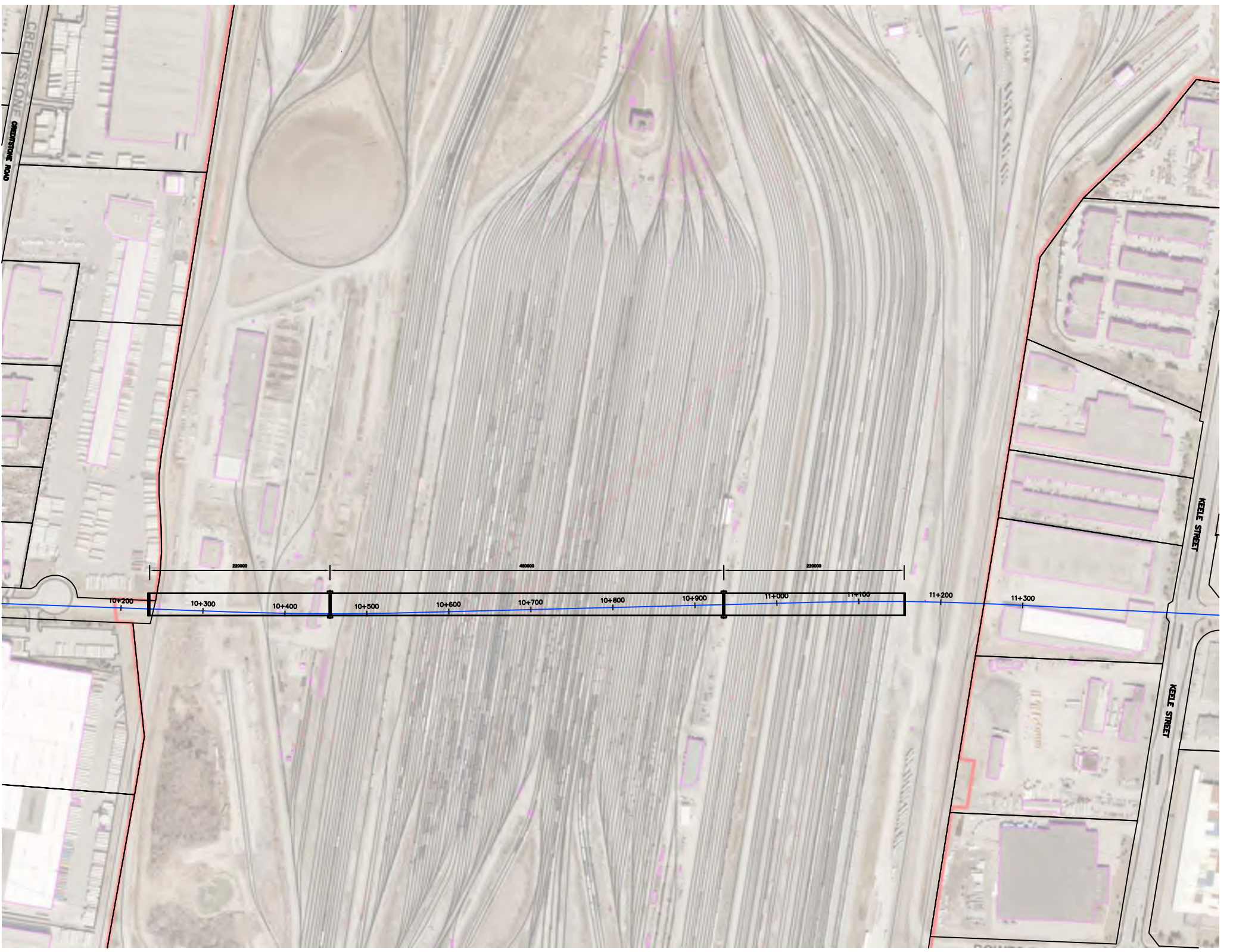
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KEELE STREET

KEELE STREET









MEETING MINUTES

Date: November 1, 2017
9:30 a.m. to 11:30 a.m.

Project Number: 3216079

Location: CN Rail
1 Administration Road,
Concord, ON

Project: Langstaff Road EA –
Weston Road to Highway 7

Purpose: Meeting #4 with Canadian National (CN) Rail

Attendees:
Michael Vallins
Brian Wolf
Tim Kwan
Neil Ahmed
Augustin Yun
Katherine Jim

Agency
CN Rail
York Region
York Region
WSP
WSP
WSP

Item	Details	Action By
ITEM 1 –	LAST MEETING WITH CN – JUNE 29, 2017	
	The outstanding action items from CN Meeting #3 are noted as follows. Other action items were discussed in CN Meeting #4 and are documented under the corresponding agenda item.	
1.1	Item 2.10 – CN to provide the survey information of the CN MacMillan Yard to the Project Team.	CN
1.2	Item 3.19 – WSP carried out a high level review of the potential property impacts of widening adjacent roads (Highway 7, Rutherford Road, Jane Street and Keele Street) as an alternative solution to provide additional capacity to the regional road network. It is estimated that over 230 properties are potentially impacted with additional widening of these other roads. The reference to this alternative and related property impacts will be included in the EA documentation.	
ITEM 2 –	CONCEPTUAL CROSSING OPTIONS ACROSS CN YARD	
2.1	Based on comments provided by CN at the previous meeting on June 26, 2017, WSP developed three structure alternatives along the south alignment across the CN MacMillan Yard. The structure types including Steel Box / “I” Girder bridge, Cable Stayed bridge and Extradosed bridge, are consistent with those developed for the “straight through” alignment as presented previously. The structure piers were placed in between rail tracks based on the aerial	

Any omissions or errors in these notes should be forwarded to the author immediately.

Item	Details	Action By
	imagery.	
2.2	WSP inquired about the possibility of relocating or combining the tracks along the east and west perimeters of the yard. CN noted these tracks were used to service the businesses adjacent to the yard and at-grade crossing could be accepted as the traffic along the tracks is relatively low. WSP noted that Langstaff Road will be grade separated at all rail track crossings. The Project Team will consider how to retain services on these tracks.	
2.3	<p>CN noted that bridge piers cannot be placed on the access road to the mechanic shop and drainage swale on the east side of the yard. WSP asked if the mechanic shop can be relocated. CN noted that the mechanic shop is fairly new and was relocated to the current location 5 years ago. The new location was identified to maximize the efficiency of the train repair services.</p> <p><i>[Post meeting note. It is assumed that the access road and drainage swale can be utilized if enough clearance can be provided for traffic on the access road and the drainage in the swale is not disturbed.]</i></p>	
2.4	CN expressed concerns that the pier locations may potentially obstruct the truck traffic along the access roads and reduce the flexibility for future realignment of the existing rail tracks, as the realignment of the existing tracks may continue to evolve.	
2.5	WSP noted that, for bridge with conventional span length, pier construction can be completed with night time closures. For example, on Hwy 401, each caisson pile foundation typically takes approximately 2 nights and the entire pier construction could be completed in 3 to 4 weeks of night time closures. CN noted that a track on either side of the pier will be required to be taken out of service during construction for an 8-hour window. The tracks cannot be shut down for a long duration of time.	
2.6	CN expressed concerns over impacts due to vibration during construction. WSP noted that pre-augered holes can be provided to minimize vibration concerns for foundation construction. In addition monitoring program can be developed to mitigate any excessive vibration. Precast components also can be utilized to accelerate the construction.	
2.7	CN noted that the offset requirement for the bridge piers is 25 feet from face of pier to the centre of tracks without crash walls.	

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Item	Details	Action By
2.8	WSP noted that, for the Steel Girder Box bridge, the number of piers shown on the plan can be reduced and the girders can be launched for the straight section of the structure. CN expressed concerns over the crane location during construction and the potential access for the crane.	
2.9	The Region reiterated that it would like to find a “win-win” situation for both the Region and CN and offered CN an independent yard optimization study and requested CN to consider any other potential yard improvements that may be needed as part of the study.	
2.10	WSP noted that the pier diameter could be 2.0 m to 2.5 m for the Extradosed bridge. [<i>Post Meeting Note: The pier size will be more refined at the next meeting.</i>]	
2.11	CN noted that the vertical clearance requirement is 7.4 m.	
2.12	CN agreed to provide a hand mark-up of the access roads and rail crossings within the yard.	CN
ITEM 3 –	TUNNELING ALTERNATIVE UPDATE	
3.1	<p>WSP noted that the Project Team has started developing the tunneling option for the CN Yard crossing. Background data from CN will be required to carry out this work. The key data required includes the following:</p> <ul style="list-style-type: none"> • Geotechnical reports – including boring and test pit location plan, boring and test pit logs, laboratory testing, soil and rock parameters. • Known buried/underground utilities, location, type and depth. • Allowable settlement and vibration criteria of running track and switches criteria – CN noted that the allowable settlement requirement is 10 mm. • Known culverts, location, type and depth. 	
ITEM 4 –	EVALUATION FRAME WORK AND CRITERIA	
4.1	WSP circulated the CN MacMillan Yard crossing alternatives evaluation framework to those who attended the meeting, noting that overpass alternatives along the north, centre and south alignments will be evaluated along with the tunnel option.	
4.2	CN requested inclusion of a criteria that evaluates the accessibility for bridge maintenance. WSP noted that an inspection catwalk can	

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Item	Details	Action By
	be attached to the super structure for maintenance purposes to avoid crews entering the yard for inspection and maintenance work.	
4.3	WSP to provide the alternative evaluation table to CN for comments before sharing with the public.	WSP
ITEM 5 –	NEXT STEPS	
5.1	The Project Team will be developing the tunnel option and identifying the preferred crossing alternative using evaluation criteria in early spring. The Open House #2 is currently planned for Spring of 2018.	
ITEM 6 –	OTHER BUSINESS	
6.1	No other business was discussed.	



MEETING MINUTES

Date: May 28, 2018
10:00 a.m. to 12:00 p.m.

Project Number: 3216079

Location: CN Rail
1 Administration Road,
Concord, ON

Project: Langstaff Road EA –
Weston Road to Highway 7

Purpose: Meeting #5 with Canadian National (CN) Rail

Attendees:

Michael Vallins
Brian Wolf
Tim Kwan
Neil Ahmed
Katherine Jim
James Sherlock
Han Choi
Allan Mielke
Cam Tytgat
Jian Guan
Hugh Robinson

Agency

CN Rail
York Region
York Region
WSP
WSP
WSP
WSP
WSP
WSP
WSP
Robinson Project Services

Item	Details	Action By
ITEM 1 –	LAST MEETING WITH CN – November 1, 2017	
	The outstanding action items from CN Meeting #4 are noted as follows. Other action items were discussed in CN Meeting #5 and are documented under the corresponding agenda item.	
1.1	Meeting #4 Item 1.1 – CN to provide the survey information of the CN MacMillan Yard to the Project Team.	CN
1.2	Meeting #4 Item 2.12 – CN agreed to provide a hand mark-up of the access roads and rail crossings within the yard.	CN
ITEM 2 –	INTRODUCTION	
2.1	Those at the meeting were introduced. B. Wolf noted that the purpose of the meeting is to provide a status update of the EA study and to present the CN MacMillan Yard crossing alternatives, the associated evaluation table and the preliminary preferred alternative; subject to discussion at the meeting and input from CN.	

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Item	Details	Action By
ITEM 3 –	EA STUDY STATUS	
3.1	A presentation package was distributed. In terms of study timeline, Open House #1 was held on June 14, 2017. Open House #2, is tentatively scheduled for Fall 2018 after the municipal election.	
ITEM 4 –	Need and Justification (Slides 5 to 15)	
4.1	<p>Using the presentation package, WSP summarized the need and justification of the EA Study. Some materials were presented at the first Open House and also at previous meetings with CN.</p> <p>N. Ahmed noted that Langstaff Road is identified as part of the Frequent Transit Network in the York Region <i>2016 Transportation Master Plan (TMP)</i>.</p> <p>Langstaff Road is also identified as a Primary Arterial Goods Movement corridor between Highway 400 and Dufferin Street, strategically located within an intensifying employment area, and in close proximity to primary growth areas including Vaughan Metropolitan Centre, Vaughan Mills Centre and Concord GO Centre.</p>	
4.2	<p>As part of the Recommended Planning Solution presented at Open House #1, the improvements on Langstaff Road include:</p> <ul style="list-style-type: none"> • Langstaff Road widening to 6 lanes, not precluding converting 2 curb lanes to 2 HOV lanes in the future; • Construction of Langstaff Road connection across the CN MacMillan Yard; • Conversion of Highway 400 / Langstaff Road interchange to a full-move interchange; • Construction of grade separation at GO Transit Barrie Line; • Intersection improvements; and • Accommodation for alternative modes of transportation improvements including provision of or improvements to transit system and pedestrian and cycling facilities. 	
ITEM 5 –	CN CROSSING ALTERNATIVES	
5.1	N. Ahmed noted that CN had previously asked whether widening parallel roads (i.e. Highway 7 and Rutherford Road) to 8 lanes was considered as part of the study. It was reiterated that upgrading parallel roads beyond planned improvements was one of the	

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Item	Details	Action By
	<p>alternative solutions considered and was not recommended.</p> <p>Through a high-level review of the potential property impacts of widening adjacent roads (Highway 7, Rutherford Road, Jane Street and Keele Street) to beyond planned program, an estimate of over 230 properties may potentially be impacted. In addition, it is not consistent with the Region's current policy to widen its arterial roads to no more than 6 through lanes.</p>	
5.2	<p>(Slide 17) N. Ahmed noted that the Project Team had met with CN four times previously and CN's key comments are summarized as follows:</p> <ul style="list-style-type: none"> • CN's main concerns include the impacts to the daily operations, flexibility to the track realignment and security of the yard. • The core classification yard (middle portion) is considered to be a "No-Touch" zone. • The north alignment is not acceptable to CN as it is located in close proximity to the hump area. • CN considers the south alignment is the most viable option of all three overpass options, although, in general, CN does not support any infrastructure over the classification yard. 	
5.3	<p>(Slide 20) A typical cross section of the CN structure is shown. CN commented that a visual barrier should be added to the typical cross section as security over the yard is a primary concern (i.e. shielding from visual intrusion and preventing physical objects/liquids to be projected into the yard).</p>	WSP
5.4	<p>(Slides 21 to 25) N. Ahmed noted that, based on CN's comments, the following four alternatives were carried forward for further evaluation:</p> <ul style="list-style-type: none"> • Alternative 1 – Steel Box Girder Bridge (south alignment) • Alternative 1A – Steel Box Girder Bridge (modified south alignment) • Alternative 2 – Extradosed Bridge (south alignment) • Alternative 3 – Post-tensioned Segmental Concrete Bridge (south alignment) • Alternative 4 – Tunnel Option (centre alignment) <p>The south alignment is shifted slightly to the north to provide a longer tangent section of the structure for Alternative 1A.</p>	

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Item	Details	Action By
ITEM 6 –	CN CROSSING ALTERNATIVES EVALUATION	
6.1	<p>(Slide 26) N. Ahmed noted the most relevant evaluation criteria developed for the evaluation of the alternatives includes the following:</p> <ul style="list-style-type: none"> • Socio-economic; • Structure engineering; • CN operation; • Transportation and other considerations; and • Cost <p>A summary of the evaluation is included in the presentation package. The detailed evaluation table will be enclosed with the meeting minutes (see attached).</p>	
6.2	<p>Overall, Alternative 4 (Tunnel) has a significantly higher construction cost than all the other alternatives (about 5 times more). Alternative 1 has the lowest construction cost; and Alternatives 1A, 2 and 3 all have a similar range of construction costs.</p>	
6.3	<p>There was much discussion about the construction methodology associated with each alternative and the potential impacts to CN operation.</p> <p>WSP structural staff noted that incremental launching method is required for Alternatives 1 and 1A to launch the girders from one pier to the next. This construction method minimizes the duration of work required over the rail tracks. Balanced segmental construction method is required for Alternatives 2 and 3. This construction has a longer construction duration over the tracks as the superstructure is erected by cantilevering out from opposite sides of each pier and the segments are subsequently added to each cantilever.</p>	
6.4	<p>WSP noted that Alternative 4 (tunnel option) has minimal impact to CN yard with minor temporary disruption expected due to the ground response monitoring required during construction. Based on CN's previous comment on no construction will be allowed over live train traffic, Alternative 1A has the least impact to the yard during construction but requires additional smaller piers. When considering the significant cost of Alternative 4, Alternative 1A is the most preferred option.</p>	

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Item	Details	Action By
6.5	<p>CN asked that if protective measures can be provided during construction to prevent objects from falling from the overhead construction into the yard (which typically has ongoing activities). It appears to CN that Alternatives 2 and 3 are more preferred as there are less piers in the yard.</p> <p>WSP will provide the plan and profile drawings for each alternative and the evaluation table. CN agreed to provide comments on which alternative is most preferred by CN.</p> <p>It was agreed that WSP would provide a list of specific requests to ensure that appropriate input is requested of CN.</p>	WSP/CN
ITEM 7 –	CN CROSSING PREFERRED ALTERNATIVE	
7.1	<p>N. Ahmed noted that two internal workshops were held with WSP’s rail specialists to review the feasibility of Alternative 1A. Based on readily available information, analysis was carried out at each pier and abutment for Alternative 1A. The factors that were considered include construction access, impacts to CN operations (permanent and temporary) and mitigation measures. A detailed constructability memo will be provided to CN for review along with the meeting minutes (see attached).</p> <p>Should another alternative be identified as the preferred alternative following CN’s review of the evaluation table. WSP will carry out similar analysis regarding construction access and mitigation measures for the preferred alternative.</p>	WSP
7.2	<p>CN noted that a visual screening treatment is required to prevent people from observing CN operation from the bridge above.</p>	
7.3	<p>CN noted that a development plan application was filed by the property owner located at 8470 Keele Street. B. Wolf noted that the Region is aware of the development plan and have advised them about the EA Study. There will be further contact with the property owner regarding the potential property impact associated with the CN crossing alternatives.</p>	
7.4	<p>CN noted that the main employee access on the west side of the yard is potentially impacted by the Langstaff Road grade separation profile. WSP noted the access required to the yard will be reviewed as part of the study.</p>	WSP
7.5	<p>There was some discussion about the method for occasional inspection of the structure as CN would not want inspection equipment to disturb their daily operation. It was noted that a</p>	

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Item	Details	Action By
	catwalk may be constructed under the structure or the use of a drone is possible.	
7.6	It was acknowledged that significant planning will be required to coordinate construction activities such as temporary track closure, staging area, alternate access, emergency protocol, etc. H. Robinson briefly shared his previous experience on constructing a road crossing over a rail yard in Port Coquitlam, British Columbia.	
7.7	CN asked about the construction timing of the project. York Region responded that the CN crossing is not on the current 10-year capital program. However, the funding priorities may be updated subject to annual Council review.	
ITEM 8 –	NEXT STEPS	
8.1	<p>N. Ahmed noted that the next steps of the project include the following:</p> <ul style="list-style-type: none"> • Consult with MTO regarding the Highway 400 interchange improvements design alternatives; • Develop preliminary design of the preferred alternative including Langstaff Road widening, GO Rail grade separation, CN crossing and Highway 400 interchange improvements. • Open House #2. 	
8.2	M. Vallins noted that the CN crossing alternatives design and the alternatives evaluation table can be provided to internal engineering and operation staff for review. CN requested that a purchase order for CN's reviewing work be created by York Region. York Region acknowledged they will review the scope and approve the Purchase Order accordingly.	CN / York Region
8.3	The next meeting with CN is anticipated to be in August / September to review CN comments on the alternatives evaluation. WSP to arrange. It was reiterated that CN's input is important and that it is timely now to proceed with review and comment in order to complete the EA document based on a feasible project across the yard.	WSP

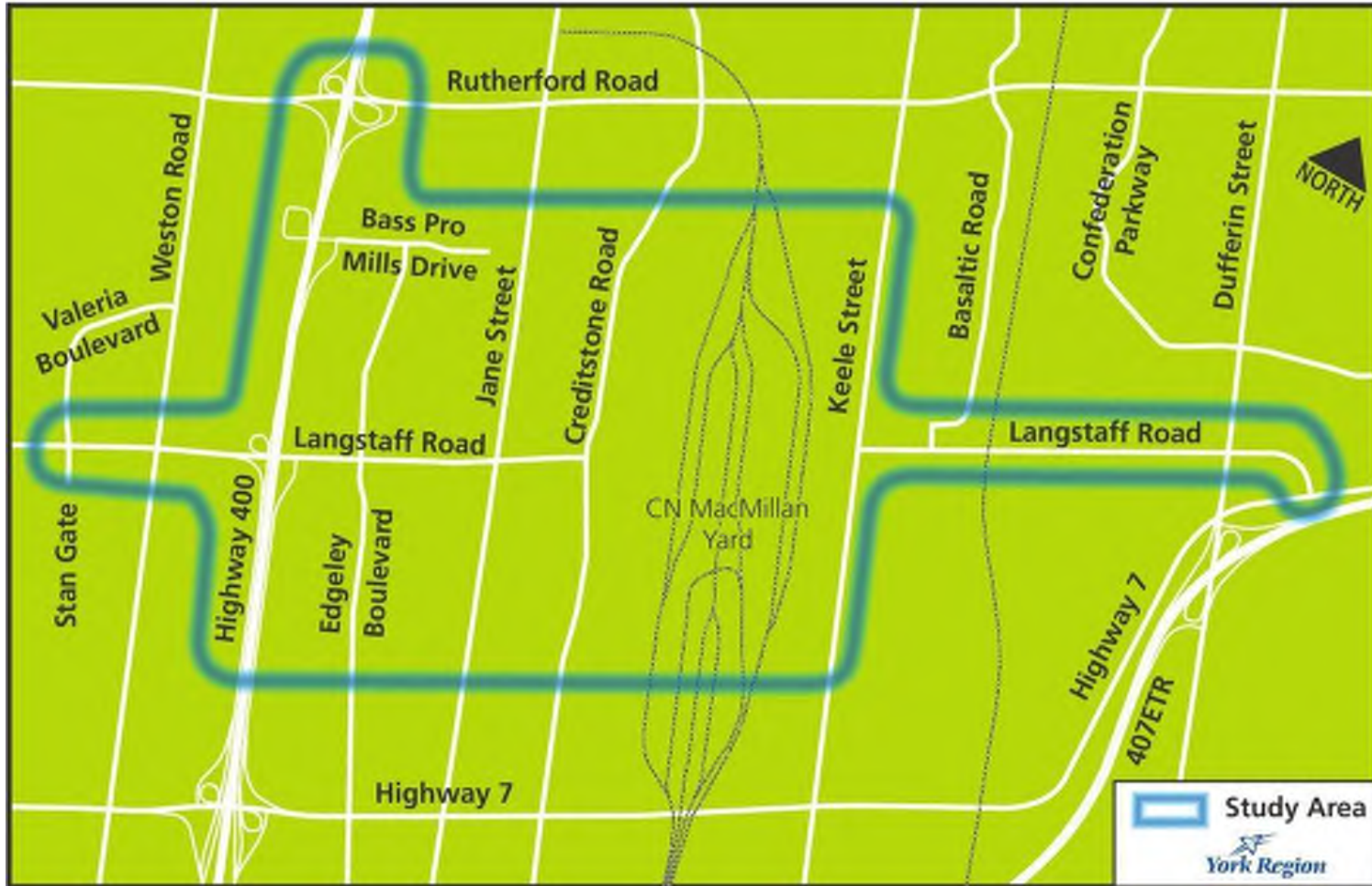
Langstaff Road
Class Environmental Assessment
Weston Road to Highway 7

**CN Meeting –
May 28, 2018**

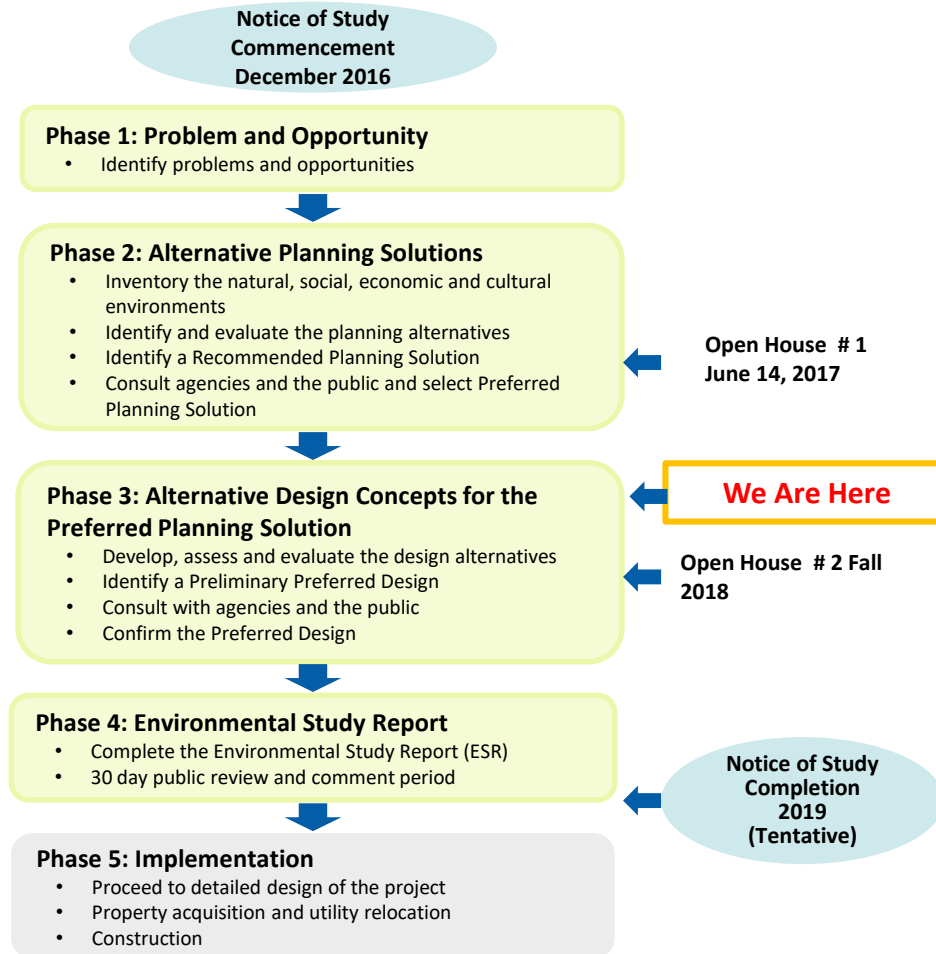
Agenda

- EA Study Status
- Need and Justification
- CN Crossing Alternatives
- CN Crossing Alternatives Evaluation
- CN Crossing Preferred Alternative
- Next Steps

Study area



Environmental Assessment Study Process

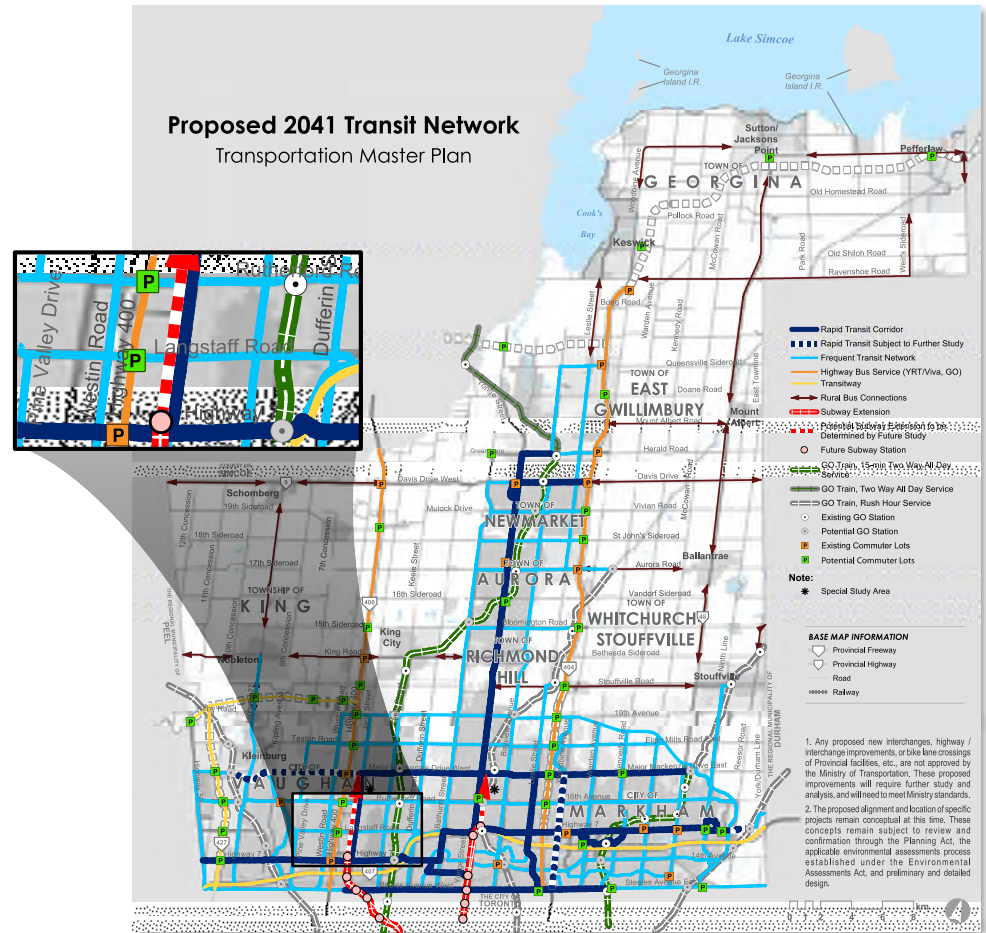


Connecting the Transit Network

The Region's transit network includes the following key components:

- **Rapid transit corridors:** Major Mackenzie Drive, Highway 7, Steeles Avenue, Jane Street, Yonge Street, and Leslie Street.
- **Regional Express Rail:** Metrolinx improvements.
- **Frequent Transit Network:** operate at frequencies of 15 minutes or less.

Langstaff Road is identified as part of the Frequent Transit Network

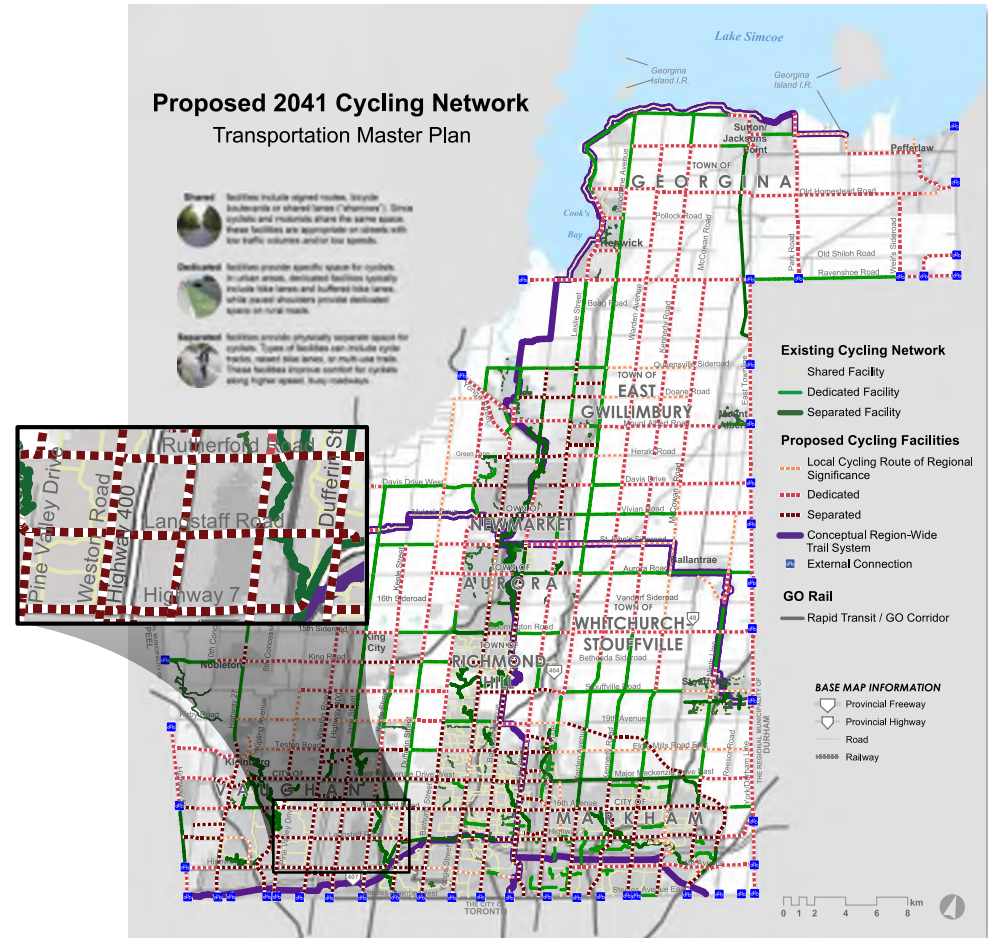


Growing Cycling Network

The Region will grow the cycling network by integrating active transportation in urban areas:

- **Strategic Cycling Network:** Linking existing and future planned facilities
- **Address Sidewalk Gaps:** to improve connections to transit stations and destinations.
- **New Design Approaches:** To improve safety, comfort and convenience of cyclists a

Langstaff Road is identified for a separated facilities for cycling (i.e. multi-use trail or bike lanes)

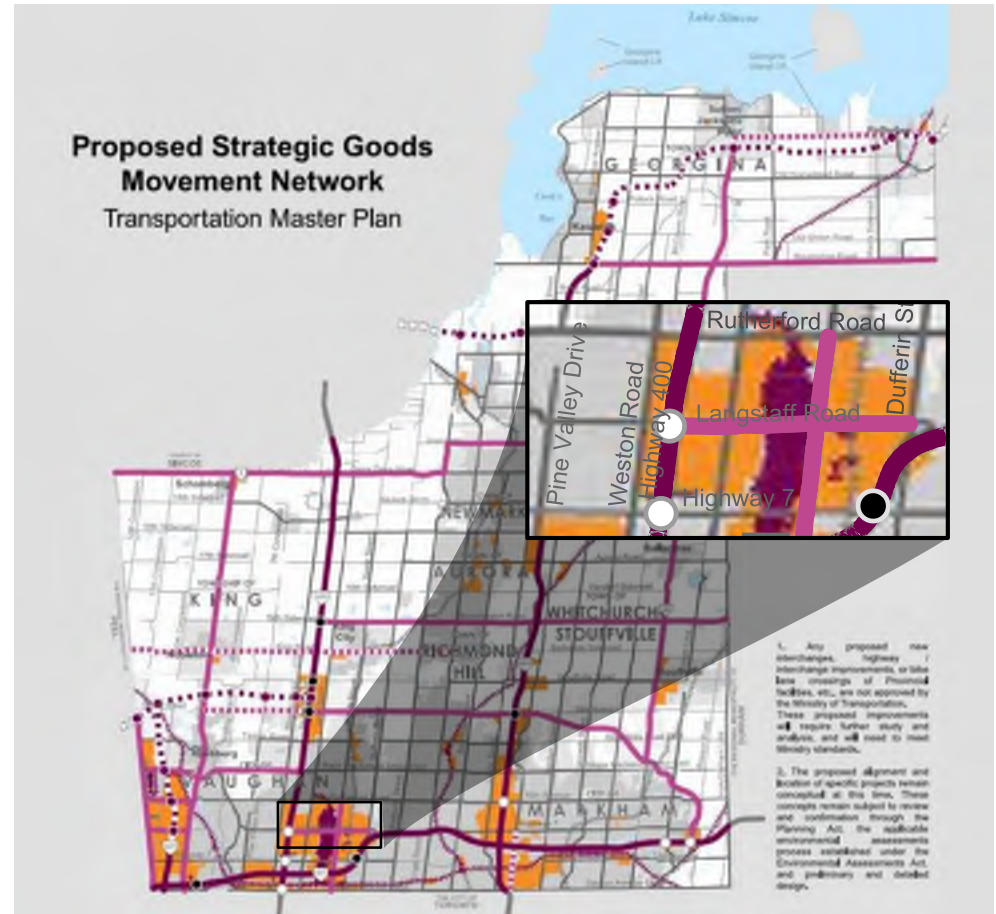


Supporting Goods Movement

Regional Strategic Goods Movement Network tiers:

1. Highway goods movement corridor
2. Primary arterial goods movement corridor
3. Secondary goods movement corridor

Langstaff Road is identified as a **Primary Arterial Goods Movement Corridor** between Highway 400 and Dufferin Street and is surrounded by employment areas



Growth in York Region

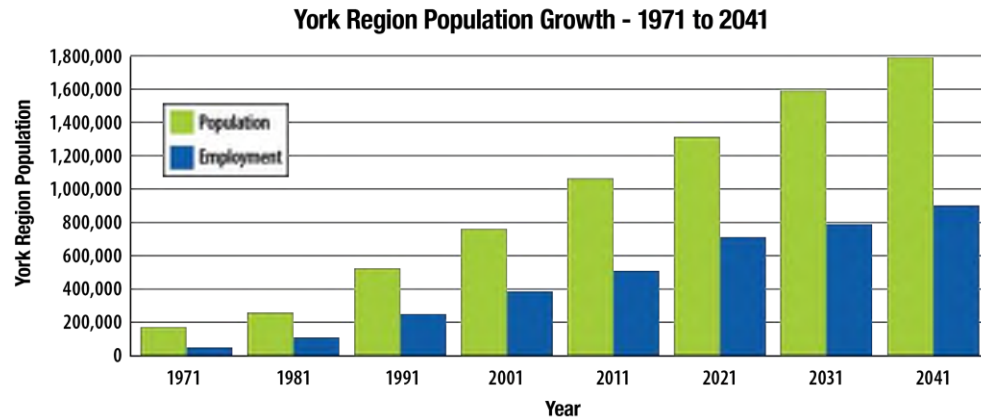
- Growth in York Region, including:
 - Vaughan Metropolitan Centre, Vaughan Mills Centre, and Concord GO Centre

Population

1.1 million
2014 to **1.8** million
2041

Employment

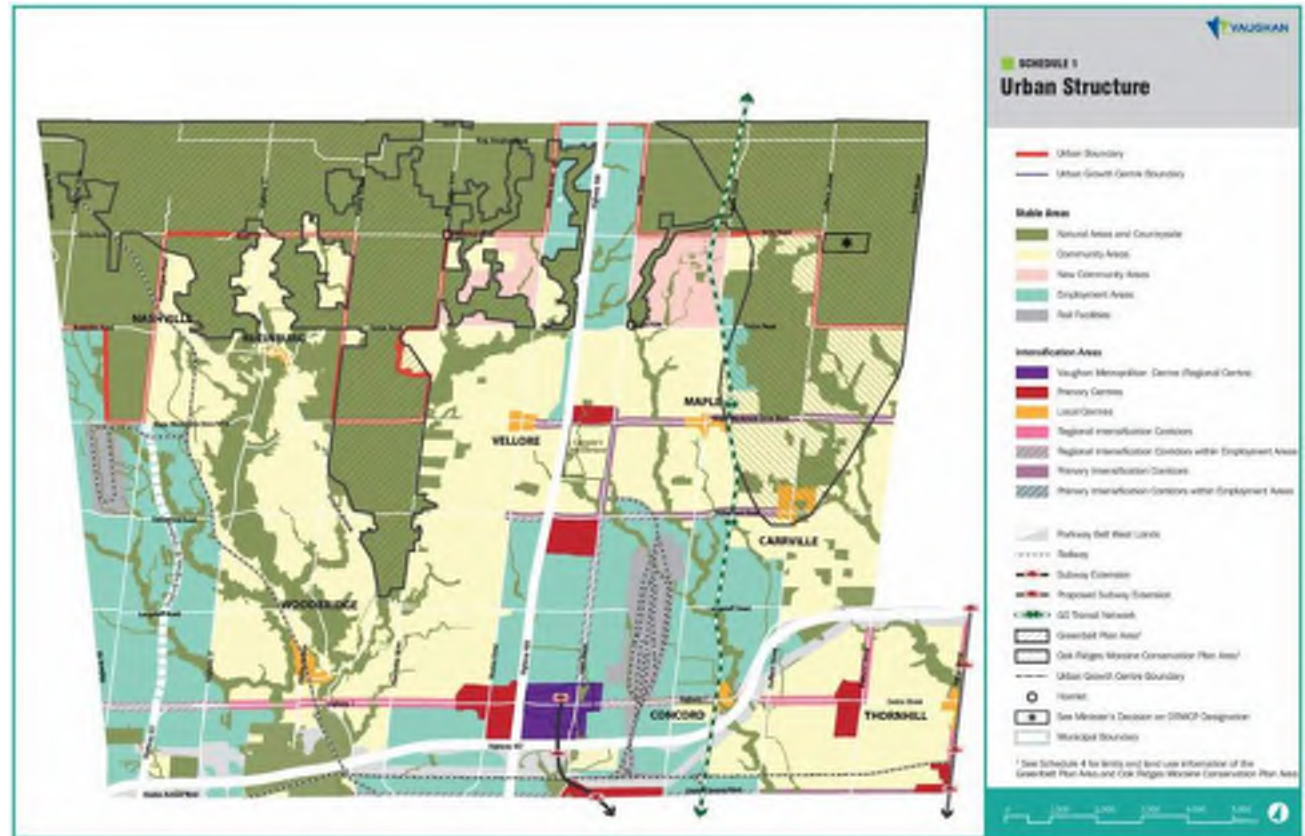
565 thousand
2014 to **900** thousand
2041



Growth in the City of Vaughan

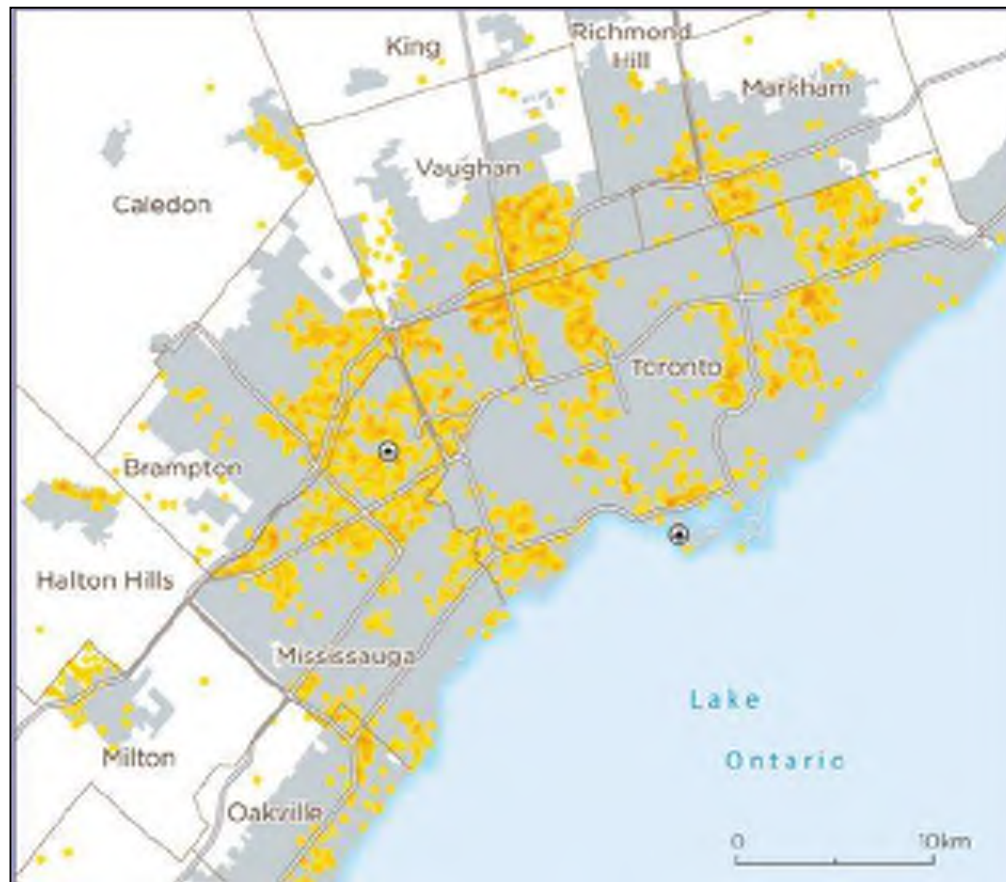
A number of **growth centres** in close proximity to the study area:

- Vaughan Metropolitan Centre
- Vaughan Mills Centre
- Concord GO Centre
- Weston Road / Highway 7
- Carrville Centre



Accommodating Traffic Growth

- Reduce traffic volumes on Highway 7 and Rutherford Road
- Provide an alternative route for truck traffic
- Improve access to the industries located west of CN Yard
- Improve Regional travel linkages from Keele Street and Weston Road



Source: *Planning for Prosperity* (2015), Map 5, **Employment in Manufacturing 2011**, Neptis Foundation

Needs and Justification

The **problems** and **opportunities** identified for Langstaff Road are summarized here:



Recommended Planning Solution

- **Add New Lanes:** Widen Langstaff Road
- **Langstaff Road Connection:** Construct Langstaff Road link across the CN MacMillan Yard.
- **Highway 400 Interchange Improvements:** Convert Highway 400/Langstaff Road Interchange to a full-move interchange
- **Grade Separation:** Construct grade separation at Langstaff Road / Barrie GO Line
- **Intersection Improvements:** Turning lanes, traffic signal timing optimization, etc.
- **Alternative Modes of Transportation:** Provision of improvements to pedestrian and cycling facilities. Improvements to transit system (e.g. improved transit amenities)

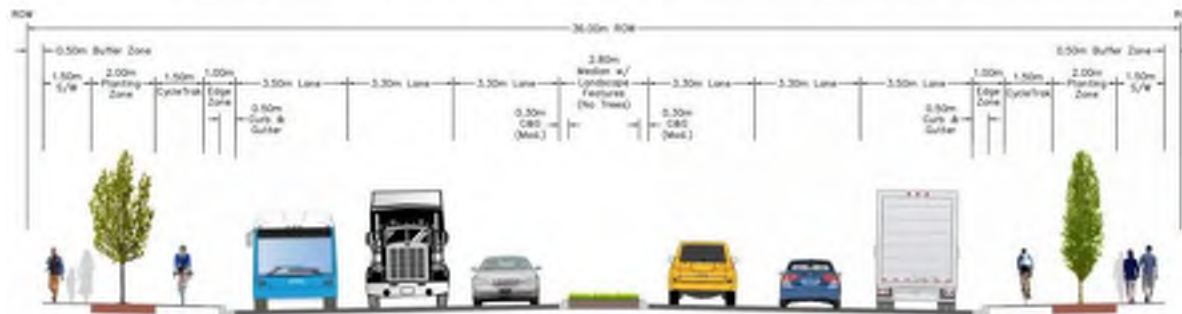


Langstaff Road Widening

- Widening Langstaff Road from 2 to 6 lanes between Weston Road and Dufferin Street based on best-fit alignment to minimize property impacts.



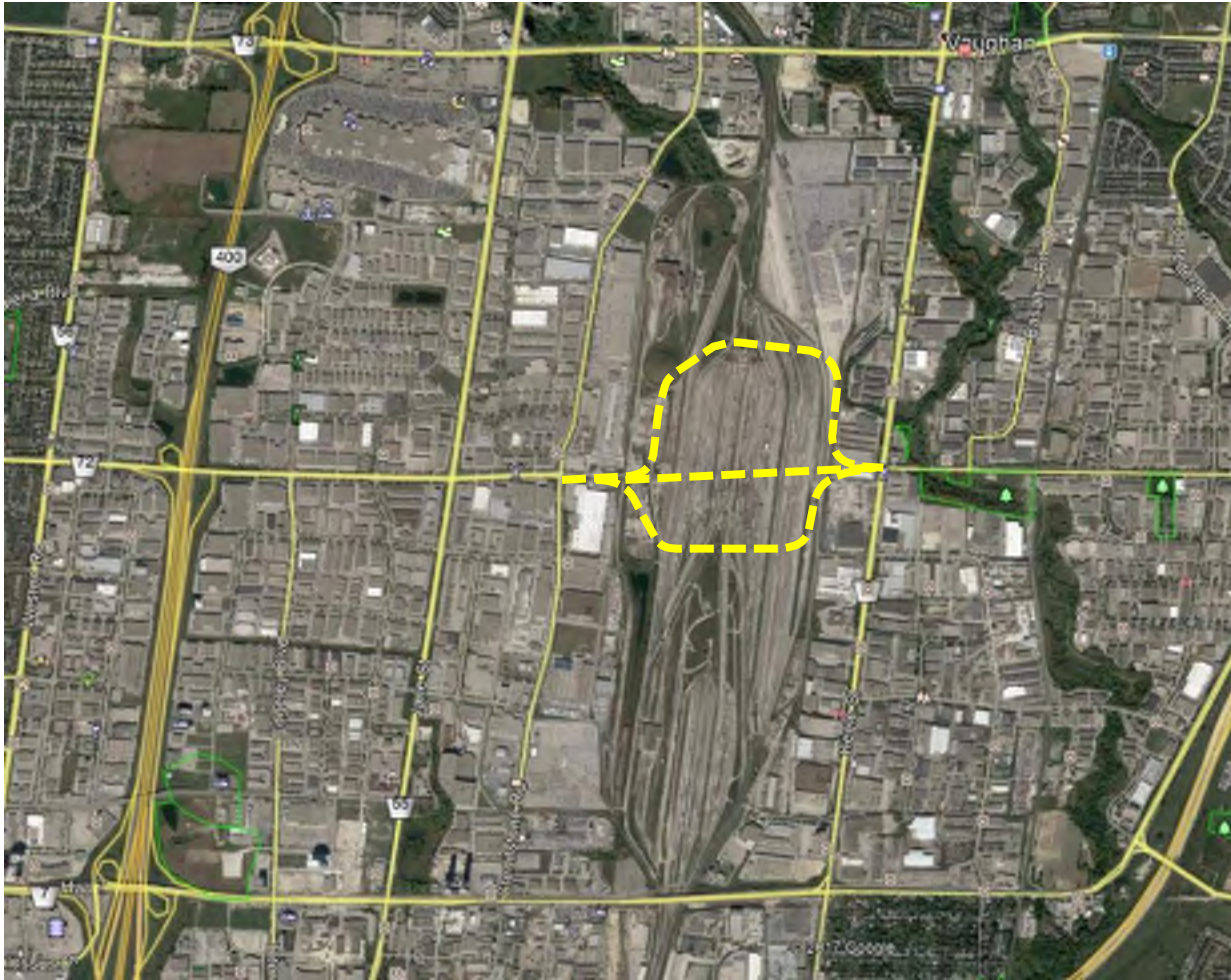
Langstaff Road EA – Weston Road to Highway 7 – Finalized Proposed Cross Section



Involvement of CN

- **Meeting #1 (January, 2017):** Collected background info
- **Meeting #2 (May, 2017):** Identified problems and opportunities
- **Meeting #3 (June, 2017):** Presented initial round of crossing alternatives
- **Meeting #4 (November, 2017):** Presented refined crossing alternatives updated based on CN's comments
- **Meeting #5 (May 2018):** Select the preferred alternative
- **Meeting #6 (2019):** Discuss construction staging related issues in relation to CN yard

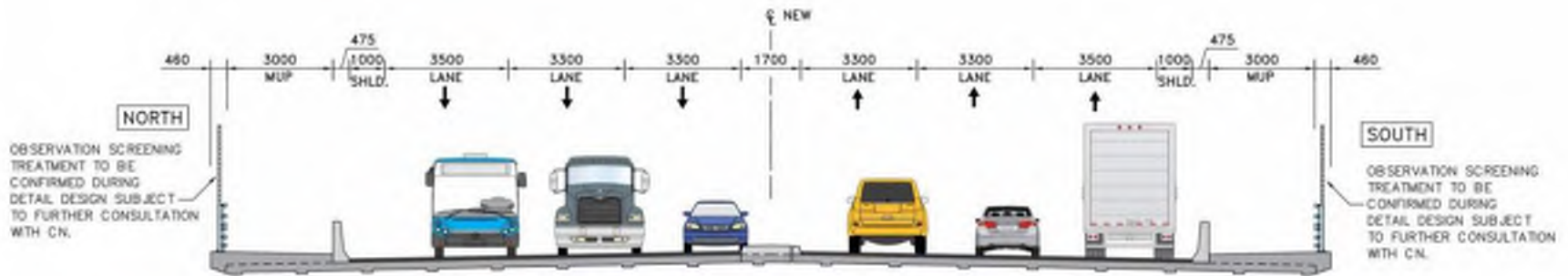
Langstaff Road / CN Crossing Options



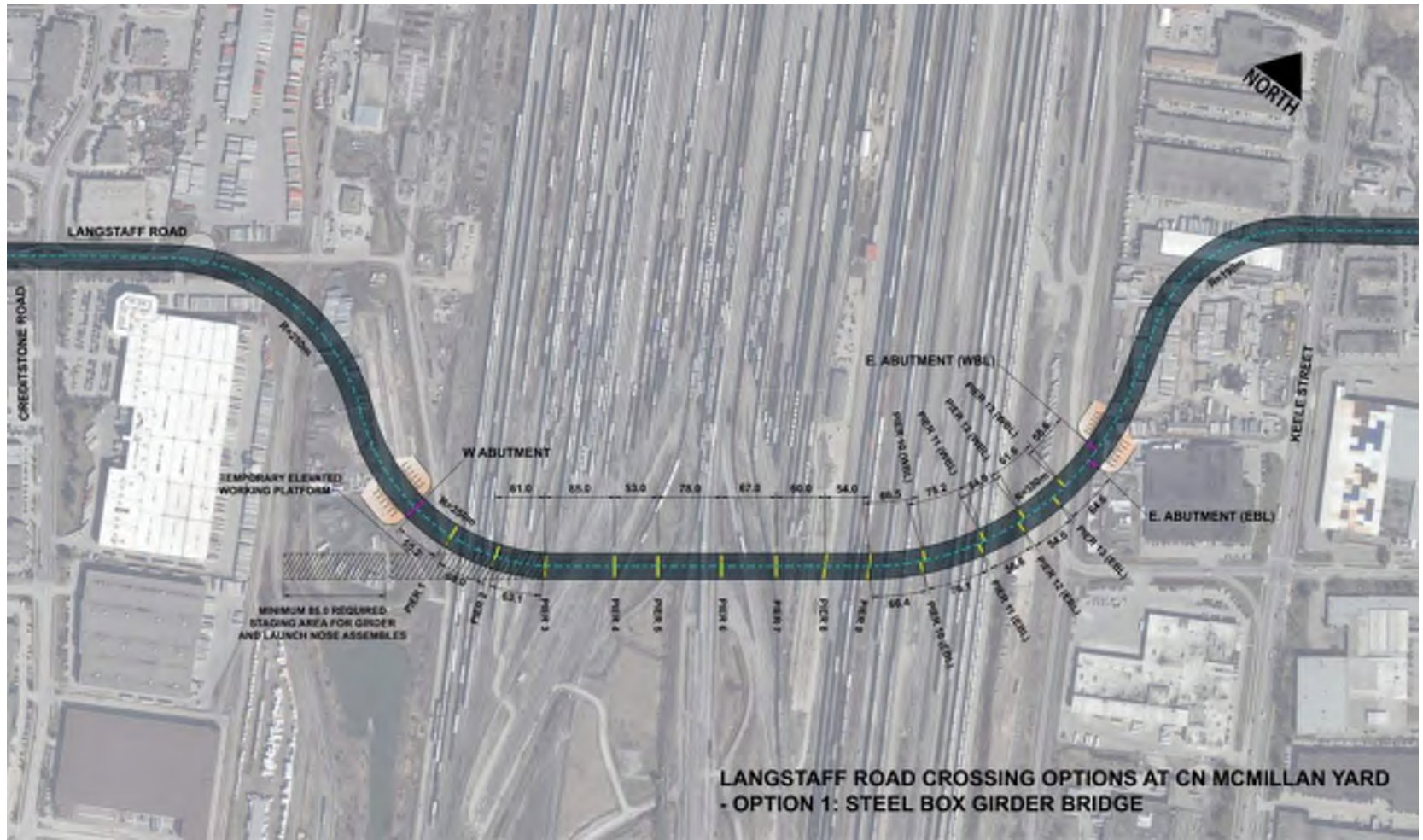
Summary of Key Comments from CN

- CN's main concerns include the impacts to the daily operations, flexibility to the track realignment and ssecurity of the yard.
- The core classification yard (middle portion) is considered to be a “No-Touch” zone.
- The north alignment is not acceptable to CN as it is located in close proximity to the hump area.
- CN considers the south alignment is the most viable option of all three overpass options, although, in general, CN does not support any infrastructure over the classification yard.

Preliminary CN Crossing Overpass Structure Cross-Section



CN Crossing Alternative 1



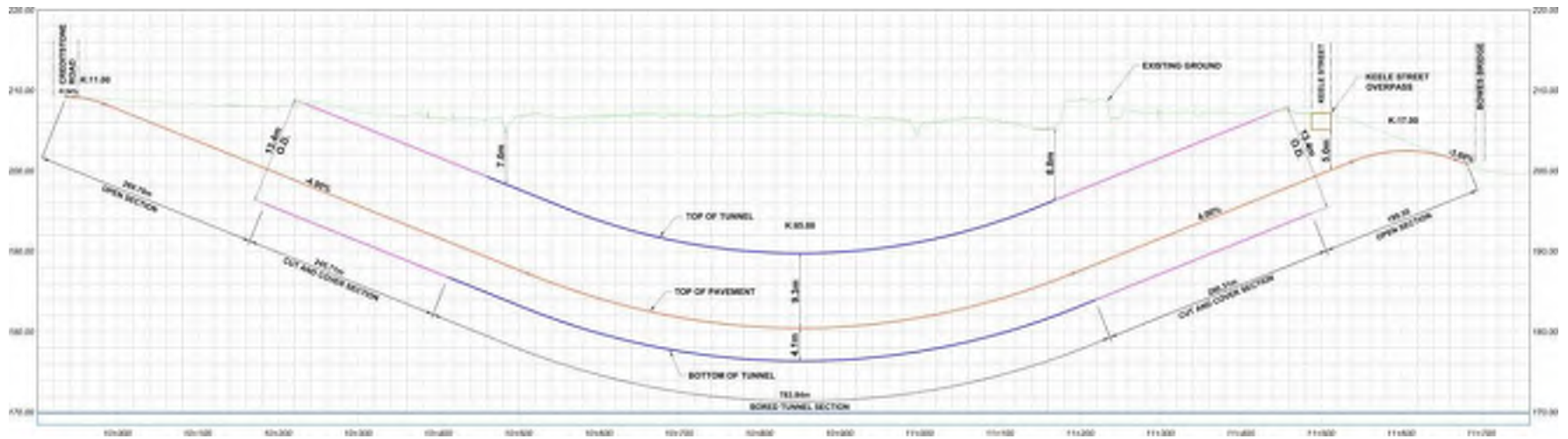
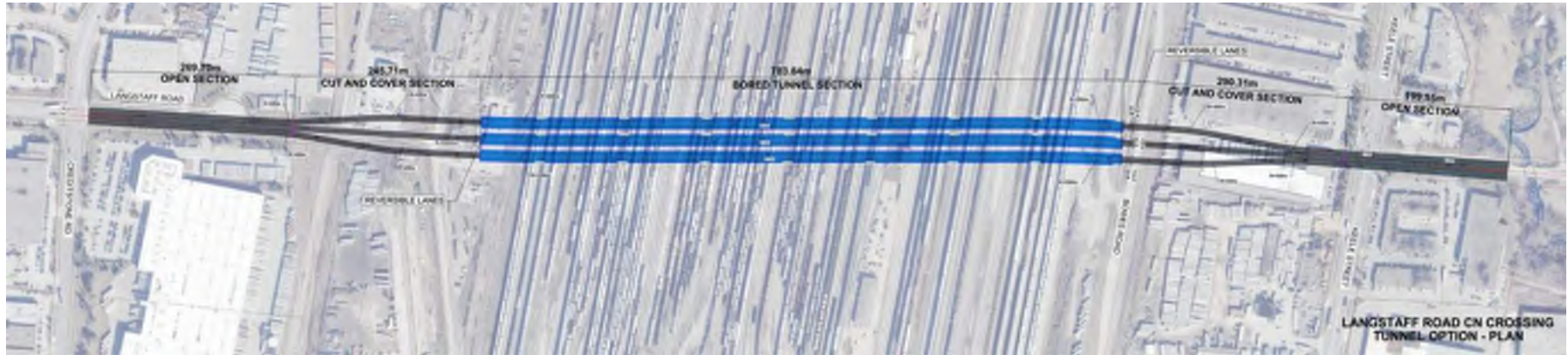
CN Crossing Alternative 2



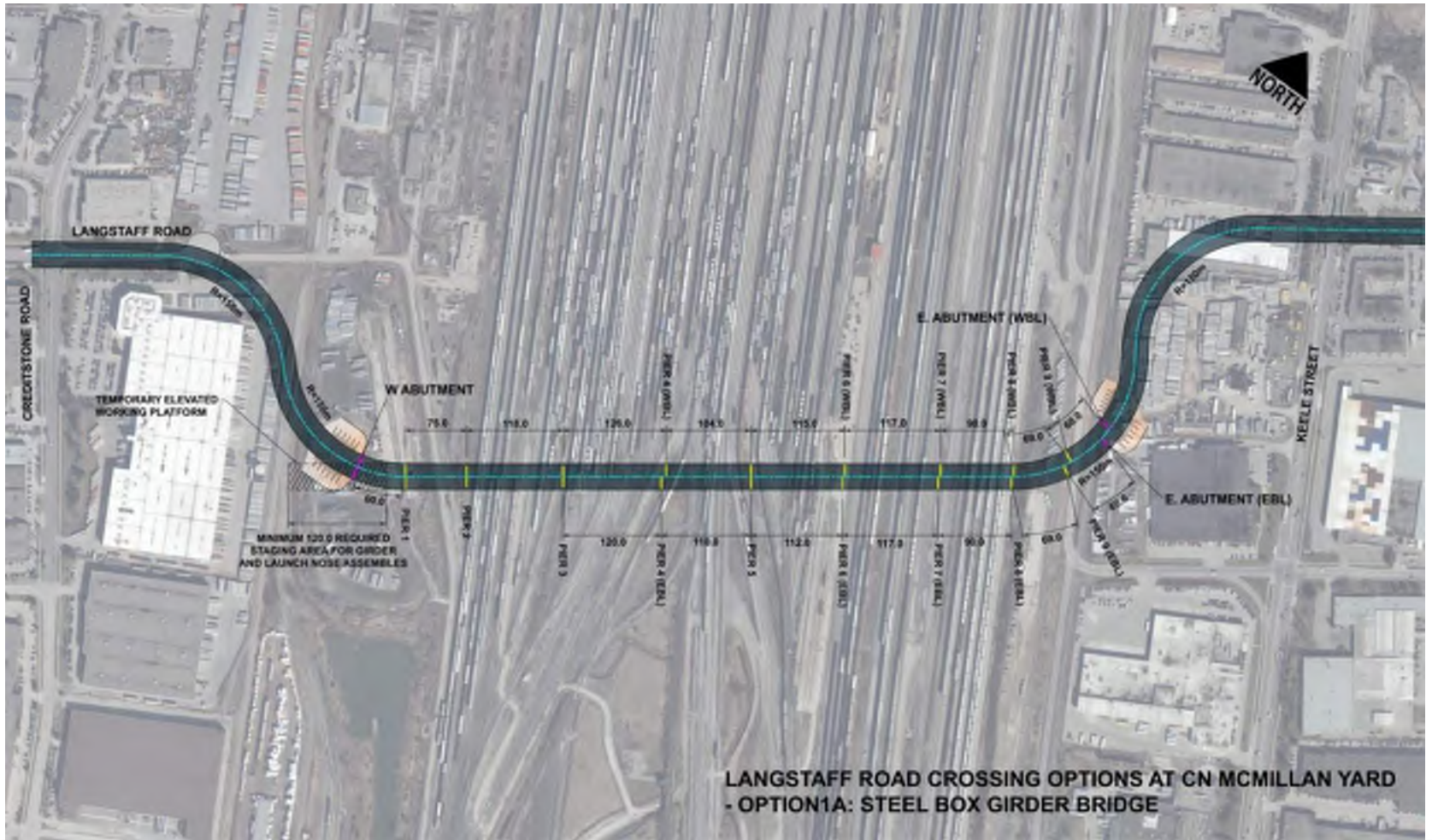
CN Crossing Alternative 3



CN Crossing Alternative 4 – Tunnel Option



CN Crossing Alternative 1A



CN Crossing Alternative 1A Technical Feasibility Evaluation

The following factors were considered for each pier and abutment location:

- Construction Access;
- Impacts to CN operations (permanent and temporary); and
- Mitigation measures.

Example of Technical Feasibility Evaluation – Pier #2 Site Schematic



Example of Technical Feasibility Evaluation – Pier #2 Proposed Pier Access



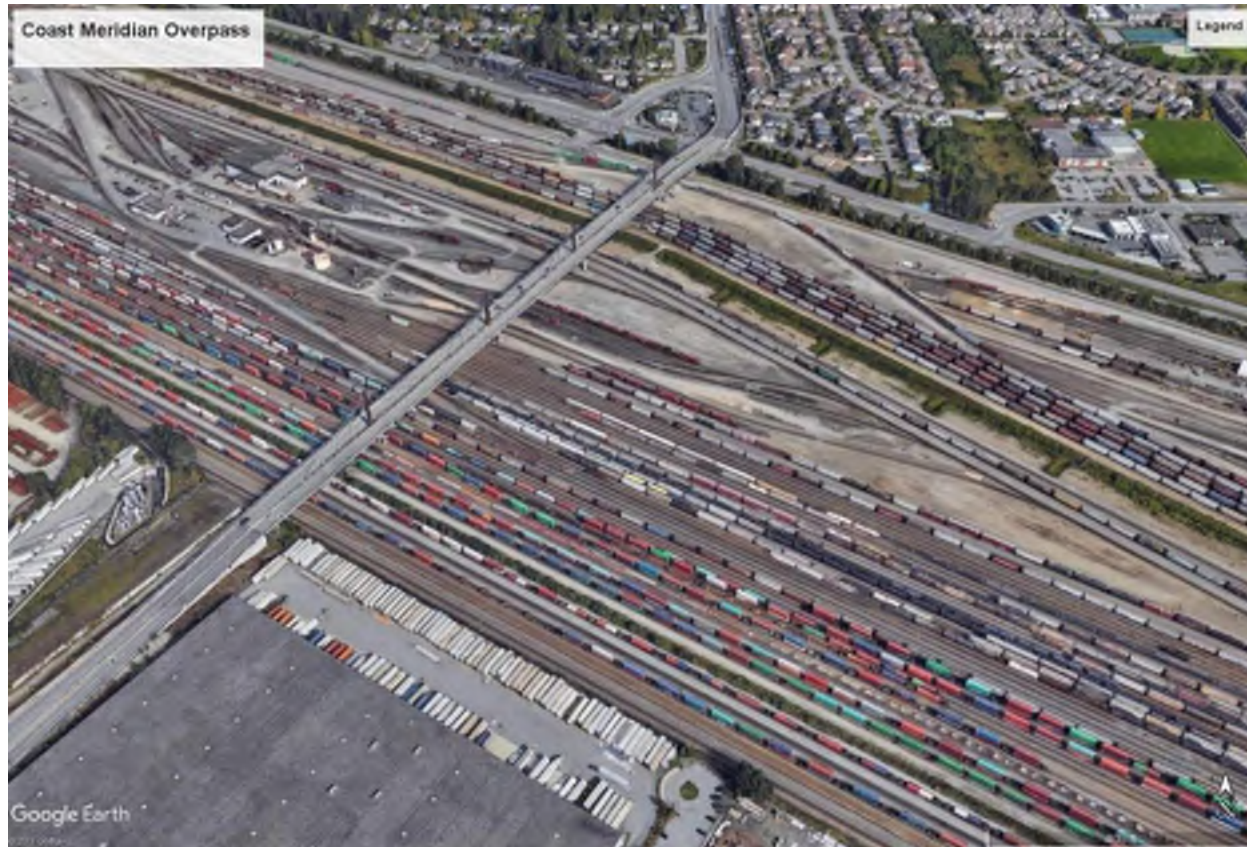
CN Crossing Alternatives Evaluation Table

Langstaff Road Improvements EA Study – CN MacMillan Yard Crossing Alternatives Evaluation Table					
Factors/Criteria	Option 1 - Steel Box Girder Bridge (South Alignment)	Option 2 - Extradosed Bridge (South Alignment)	Option 3 - Post-tensioned Segmental Concrete Bridge (South Alignment)	Option 4 - Tunnel Option (Central Alignment)	Option 1A - Steel Box Girder Bridge – Long Span (South Alignment)
1.0 Socio-Economic					
2.0 CN Operation					
3.0 Structural Engineering					
4.0 Transportation & Other Considerations					
5.0 Cost					
Overall Summary and Preference					

LEGEND Less Preferred → More Preferred

Example of Rail Yard Crossings in Canada

- Port Coquitlam CP Yard – Coast Meridian Overpass



Next Steps...

- Consult with MTO regarding the Highway 400 interchange improvements design alternatives.
- Develop preliminary design of the preferred alternative:
 - Langstaff Road Widening
 - GO Rail Grade Separation
 - CN Crossing
- Open House 2 (2019)



MEETING MINUTES

Date: December 21, 2020
1:00 p.m. to 2:30 p.m.
Location: Teleconference (MS Teams)

Project Number: 3216079
Project: Langstaff Road EA –
Weston Road to Highway 7

Purpose: Meeting #6 with Canadian National (CN) Rail

Attendees:
Michael Vallins
Colin Wong
Tim Kwan
Katherine Jim
Jian Guan

Agency
CN Rail
York Region
York Region
WSP
WSP

Item	Details	Action By
ITEM 1 –	LAST MEETING WITH CN – May 28, 2018	
	The outstanding action items from CN Meeting #5 are noted as follows. (These were not discussed during the December 21, 2020 Meeting)	
1.1	Meeting #5 Item 1.1 – CN to provide the survey information of the CN MacMillan Yard to the Project Team.	CN
1.2	Meeting #5 Item 1.2 – CN agreed to provide a hand mark-up of the access roads and rail crossings within the yard.	CN
ITEM 2 –	EA STUDY STATUS UPDATE	
2.1	K. Jim noted that C. Wong has replaced Brian Wolf as the Project Manager from York Region and Neil Ahmed was replaced by herself as the Project Manager from WSP, as both Brian and Neil retired in 2019.	
2.2	K. Jim noted that the Project Team is seeking for a commitment for the overpass design across the CN MacMillan Yard as part of the EA Study, and to be able to identify an area of protection for the future Langstaff Road extension across CN MacMillan Yard. Based on CN’s input, the EA Study will document a list of future work commitment during detailed design in order to facilitate construction staging, access, as well as approach and strategy to accommodate CN operation during construction. C. Wong noted that there are many components to the Langstaff	

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Item	Details	Action By
	<p>Road improvements (road widening, grade separation with Metrolinx GO Barrie line, and the extension across CN MacMillan Yard). Following the completion and approval of the EA Study, the Region may proceed with selected components of the improvements on Langstaff Road. The proposed improvements are not currently within the Region’s 10-year Capital Plan and is anticipated to be a long-term improvement in the transportation network for York Region. The CN crossing, in particular, will likely require funding from various levels of government. Further consultation with CN will be continued during detailed design.</p>	
2.3	<p>K. Jim noted that the last meeting with CN was held in May 2018, prior to Open House #2 (November 28, 2018). The Project Team is currently in the process of completing the EA Study including the remaining technical work (e.g. structural general arrangement for the bridge over CN MacMillan Yard and stormwater management assessment). An Environmental Study Report (ESR) is being prepared to document the decision making process of the EA Study and is anticipated to be filed for public review in Spring 2021.</p> <p>At the last meeting with CN, the Project Team presented the preliminary preferred CN Yard crossing design alternative and the design alternatives analysis and evaluation table. These were also presented to the public at Open House #2. The preliminary preferred design is Alternative 1A – Steel Box Girder Bridge - Long Span).</p> <p>At the meeting, WSP also presented a memo documenting the feasibility of constructing the preliminary preferred alternative over the yard with a focus on the construction access to each pier and abutment and the associated impacts to CN operations during construction. It was noted that the memo was prepared on a high level only as site access to CN Yard was not granted for further investigation during the EA Study. Subsequent to the meeting, the memo, together with the analysis and evaluation table of the CN structure design alternatives, were provided to CN for review and comment.</p>	
2.4	<p>Following the May 2018 meeting with CN, CN has retained a consultant to review the information provided by the Langstaff Road Project Team. (See Discussion Item 3.2).</p>	
ITEM 3 –	MEETING DISCUSSION	
3.1	<p>K. Jim noted that the Project Team has recently met with the property owner of 2777 Langstaff Road located immediately west</p>	

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Item	Details	Action By
	<p>of the CN MacMillan Yard on the south side of Langstaff Road. Based on the comments received from the property owner, the Preliminary Preferred Design was subsequently updated to avoid physically impacting the building on site. The tangent section of the alignment through the core of the yard remained unchanged and the alignment update was only made to the west approach. It is noted that the updated alignment is similar to the version of the preliminary plan shown to CN at the May 2018 meeting.</p>	
3.2	<p>M. Vallins noted that CN has retained a consultant under the Region's PO number to review the design materials provided by the Project Team. The initial draft report was submitted to CN for review recently. CN is anticipated to meet with the consultant and internal operation staff in mid January 2021 to discuss comments on the design and the challenges associated with constructing a bridge over CN MacMillan Yard.</p> <p>CN agreed that a meeting with the Langstaff Road EA Project Team may be arranged for mid February 2021. <i>[Post meeting note: A meeting date is tentatively set for February 17, 2021.]</i></p>	
3.3	<p>M. Vallins noted that the "Do-Nothing" scenario is the preferred option by CN and reiterated the following previous concerns with building a bridge over the yard:</p> <ul style="list-style-type: none"> • Concerns with public observing yard's daily operation from bridge above which would lead to security issues; • Concerns with future structure inspection and maintenance which may disrupt CN operation and services as nothing is allowed to be suspended over live rail traffic.; • Concerns with track displacement as a result of bridge piers and footing construction etc.; • Concerns with limiting the flexibility of yard reconfiguration and expansion; and • Concerns with the disruption to service due to construction activities (i.e. crossing tracks for construction access, and large number of crews on site, associated training, etc.). 	
3.3	<p>K. Jim inquired if CN is using the stormwater management pond owned by City of Vaughan, located just west of the CN Yard. M. Vallins confirmed that the CN does not drain to the SWM pond; however, is aware that the operation of the SWM pond may directly impact the operation of the yard due to its proximity.</p>	
3.4	<p>K. Jim asked when the Project Team is expected to receive feedbacks from CN as the Project Team is in the process of completing the study and it is likely the revised Preliminary</p>	CN

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Item	Details	Action By
	<p>Preferred Alternative (see Item 3.1) will be filed as the preferred design.</p> <p>M. Vallins noted that CN is expecting to provide comments in February 2021. In general, CN is in agreement for the Project Team to proceed with the remaining technical work (e.g. structure and water resource) based on the revised Preliminary Preferred Alternative for the CN crossing (namely Alternative 1A – Steel Box Girder Bridge - Long Span). The associated technical work and the revised Preliminary Preferred Alternative will be documented in the ESR.</p> <p><i>[Post Meeting Note: A meeting with CN is scheduled for February 17, 2021.]</i></p>	
3.5	<p>K. Jim noted that the preparation of the General Arrangement (GA) drawing for the CN crossing structure is critical for the completion of study in a timely manner. Per the above-noted discussion item, the Project Team will start developing the GA based on the revised Preliminary Preferred Alternative (see item 3.1). The ESR will note that the design is preliminary only and will be subject to refinement and modification based on consultation with CN during detailed design.</p> <p>M. Vallins stressed that it is important for CN's comments and input be incorporated in the ESR; CN has been and will be an important stakeholder to the study and the proposed extension of Langstaff Road across the CN Yard.</p> <p>K. Jim noted that the Project Team will proceed with the development of the GA. CN's formal comments from the upcoming February 2021 meeting and thereafter will be included in the ESR.</p> <p>M. Vallins noted that CN does not objection to this approach.</p>	
ITEM 4 –	OTHER BUSINESS	
4.1	<p>T. Kwan asked if there was an early estimate of the spending from CN's consultant before the end of year (to accommodate Region's year end invoicing). M. Vallins responded that he will check and advise the Region.</p>	CN



MEETING MINUTES

Date: October 19, 2021
4:00 p.m. to 4:30 p.m.
Location: Teleconference (MS Teams)

Project Number: 3216079
Project: Langstaff Road EA –
Weston Road to Highway 7

Purpose: Meeting #7 with Canadian National (CN) Rail

Attendees:
Dimeji Olawuwo
Colin Wong
Tim Kwan
Katherine Jim
Nadia Dabagh

Agency
CN Rail
York Region
York Region
CIMA+
WSP

Regrets:
Michael Vallins
CN Rail

Item	Details	Action By
ITEM 1 –	INTRODUCTIONS	
1.1	Those at the meeting were introduced.	
ITEM 2 –	EA STUDY STATUS UPDATE	
2.1	<p>The Project Team thanked CN for providing input to the Langstaff Road EA via letter dated August 27, 2021. York Region subsequently responded via letter dated September 28, 2021.</p> <p>York Region expressed that the Project Team acknowledged CN’s concern and that CN’s requests for the various technical reviews are very detailed in nature which would be more suited to be carried out in the detailed design assignment considering the long term timeline for the proposed crossing of the CN MacMillan Yard. There are many components to the improvements on Langstaff Road (widening to 6-lane between Weston Road and Dufferin Road, CN MacMillan Yard crossing and Metrolinx GO Barrie Line grade separation) and are anticipated to be implemented through a phased approach. The near term improvement will be focused on the widening of Langstaff Road between Keele Street and Dufferin Street to four lanes. The timeline for this is four-laning is 2026.</p> <p>York Region noted that it is committed to conduct the required technical studies and will work collaboratively with CN to address outstanding concerns. These technical studies will be more suited</p>	

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Item	Details	Action By
	<p>to be completed during detailed design with the most up-to-date information and standards available at that time. The commitment for further technical review will be documented in the Environmental Study Report as part of the consultation record with CN through the EA Study.</p> <p>Review and assessment completed as part of the EA Study have been carried out at a level that is suitable in the context of a planning study.</p>	
2.2	<p>York Region noted that it is planning to file the Environmental Study Report (ESR) by the end of the year.</p>	
2.3	<p>CN noted that it took a long time to provide comments because there were a number of internal discussions regarding the proposed alternatives for the CN crossing and their potential impacts to operations. CN suggested that the Region should consider other options of diverting increased traffic to other parallel roads. CN noted that it is always willing to assist and collaborate in the future as they understand that cities are growing and the need for access is always growing.</p> <p>CIMA+ noted that earlier on in the EA study, alternatives to consider further widening parallel east-west corridors and other modes of transportation were reviewed; however, will not fully address the future transportation need.</p>	
2.3	<p>CN noted that it does not see themselves putting additional tracks within the current classification tracks. Most expansion is taking place in other yards. From a construction standpoint, the Langstaff Road project would be very disruptive to CN operations.</p> <p>York Region noted that it will undertake technical studies during detailed design to understand and address CN's concerns in all aspects; York Region and CN will work collaboratively in the future.</p> <p>The Project Team noted that the design of the CN crossing within the context of the Langstaff Road EA is at a high level for planning purposes only and once again confirmed additional technical reviews will have to be completed during detailed design. CIMA+ noted that the design plates that will be included as part of the ESR appendices will show the CN crossing and will clearly note that proposed easement over CN property will be subject to future negotiation and agreement with CN.</p>	
2.4	<p>CN noted that they would like to have less direct exposure of their operation to the public; however, recognized that these interactions are becoming more frequent due to the growing city. The CN</p>	

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Item	Details	Action By
	MacMillan Yard is already at its peak and CN does not have any major growth planned. CN Senior Management is most concerned about the crossing from a public safety standpoint.	
2.5	Throughout the EA process, the CN has been provided opportunities to review material related to the evaluation of the CN crossing which will be included as part of the final ESR. The Project Team and CN agreed that CN will not review the draft ESR as the content related to CN are similar to the package they provided comments on recently.	
2.6	CN acknowledged status of the EA Study and the filing of the ESR, as well as the Region's commitments to future technical studies.	
ITEM 3 –	NEXT STEPS	
3.1	CN will receive the Notice of Completion when the ESR is filed later this year. CN may provide more comments during the review period, if required.	
3.2	D. Olawuwo will update M. Vallins on the discussions and outcome of the meeting.	