

# TD PLACE FUNCTIONAL OBSOLESCENCE REPORT

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**OSEG**

NOVEMBER 26, 2019

**ROSSETTI**

# SECTION 1

## INTRODUCTION

### 1 TD PLACE FUNCTIONAL OBSOLESCENCE REPORT

In an entertainment driven economy, it is critical for a facility to be maintained in excellent condition, to provide fluid functionality, to be versatile, to adapt to changing environment and trends in customer needs, and to meet the experiential expectations of fans, players/performers, stakeholders and government entities. The purpose of this report is to evaluate the facility's ability to endure as a multipurpose sports and entertainment centre in a modern context.

ROSSETTI was contracted by Ottawa Sports and Entertainment Group (OSEG) to provide a facility assessment of the North Stands and TD Place Arena. Representatives from ROSSETTI visited the site on October 28, 2019 to perform a general review of TD Place Arena and the North Stands and interview operations and maintenance personnel. In addition to the site visit, the findings in this report draw from primary source material including past structural reports, an energy audit and a development feasibility study. The report also comments on the facility in context of current building codes – annotated plans (Appendix A) provide a visual reference that describe the facility in terms of spectator comfort (concourse area, washroom count, concession points of sale).

This obsolescence report will also address the venues offerings, amenities and experience which contribute collectively to its ability to measure up to other facilities and compete in a competitive marketplace for attention and entertainment dollars. A facility's life span is determined by its ability to respond to technological advancements, sports entertainment industry trends and a community's needs. **It is demonstrated within this report that the existing North Stands and the arena at TD Place currently function at levels well below contemporary standards and will continue to decline in performance.**



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### Cited Reports

1. Lansdowne Park Ottawa Civic Centre & North Stands, Feasibility Study of Possible Redevelopment - Leibe Engineering Associates, 2018
2. Frank Clair Stadium/Ottawa Civic Centre, Renovation and Addition Study – Stadium Consultants International, 2009
3. TD Place North Energy Audit Investigation and Analysis, WSP Canada 2017
4. Mechanical Concept Design Report, Stantec 2010
5. Structural Summary Existing Conditions by Adjeleian Allen Rubeli Ltd. Consulting Engineers, July 8, 2009
6. 2008 Structural Design Analysis of the Main Box Girder Frames by Adjeleian Allen Rubeli Ltd. Consulting Engineers, November 2008
7. 2008 Structural Adequacy Report including the Steel Box Girder Structural investigation by Adjeleian Allen Rubeli Ltd. Consulting Engineers, August 2008
8. Ottawa Civic Centre & North Side Stands at Lansdowne Park Frank Clair Stadium – Structural Adequacy Report 2007 by Adjeleian Allen Rubeli Ltd. Consulting Engineers, September 2007

## 1.1 BUILDING DESCRIPTION

The Ottawa Civic Centre and North Stands were constructed in 1967. The complex includes an outdoor stadium, two exterior concourses, an indoor ice arena, two interior concourses, service spaces, loading dock, locker rooms, storage, offices and operations spaces. The main structural system is eight steel box girder frames that support a long span steel roof structure and the precast seating of the exterior stadium. Two large exterior access ramps flank east and west ends of the stadium.

## 1.2 SITE USE

As the center piece of Lansdowne Live!, TD Place offers a range of entertainment options and events for the whole family. TD Place is home to three sports franchises: Ottawa REDBLACKS, Ottawa 67's, and Ottawa Fury FC. The arena hosts a variety of touring music and other performances yearly. These programming considerations place high-demands on the multi-use functionality of the arena and stadium complex.

The Arena at TD Place hosts events like Skate Canada, The Brier, UFC, Davis Cup, theatre shows as well as concerts of various sizes. While the Arena at TD Place's current infrastructure supports existing special events, they are unable to host events like the Memorial Cup due to deficiencies addressed in this report.



Ottawa Civic Centre Entrance 3



## 2019 Events

Ottawa 67's (including Playoffs)	41
Ottawa Fury FC (including Semi-finals)	19
REDBLACKS	9
Other Sport Events (OFSAA Wrestling, Colonel By Classic, USL Playoffs, Ottawa Irish Rugby etc)	10
Entertainment	21
<b>TOTAL TICKETED EVENTS</b>	<b>100</b>
Community Events (Camp Oochieegas, Job Fairs, YSB SleepOUT)	9
Public Skate/DJ Skate/ Family Skate	18
<b>TOTAL EVENTS</b>	<b>127</b>



Ottawa Civic Centre Interior



TD Place Stadium North Grandstand

# SECTION 2

## BUILDING SYSTEMS REVIEW

### 2 STRUCTURAL REVIEW

ROSSETTI reviewed previous structural reports and a conducted site visit to assess the current conditions and deficiencies in the structure.

#### 2.1 PREVIOUS STRUCTURAL REPORT

Previous studies by Leibe Engineering (2018) and Adjeleian Allen Rubeli Consulting Engineers (2007,2008) were provided and reviewed for this report. Selected significant structural deficiencies noted in previous reports are highlighted in this section.

The most significant finding by AAR Engineers concluded that the structure is significantly under-capacity for the design dead load. As explained in Leibe Engineering's summary, "the original design dead load of the precast concrete seating reported on the original structural steel design detail drawings is significantly lower than the weight identified in the original precast concrete shop drawings. This results in the stadium raker beams being overloaded in the structural analysis undertaken for only gravity loads." Due to the overloading of the structure, there has been a load restriction requirement in-place for the Ottawa Civic Centre and North stands structure. In effect, this restriction limits the simultaneous use of the arena and stadium during fall and winter months when there is a possibility of partial snow load. This results in the facility lacking the ability to be used to its maximum potential.

Leibe Engineering studied the gravity and seismic loads and found that the required seismic upgrade to the building would require the demolition and replacement of significant structural members. As summarized in the report: "A computer model of one of the box-girder frames was developed and analyzed for gravity and seismic loads. The results indicate that seismic upgrading of the existing building would impact the box-girder frames, secondary elements and foundations of Ottawa Civic Centre and North Stands. The seismic upgrade required to the box-girder frames, secondary elements and foundations would result in the demolition, replacement and reinforcement of substantially all

of Ottawa Civic Centre and North Stands, along with additional structural elements such as bracing and foundations."

#### 2.2 2012-2015 LANSDOWNE PARK STRUCTURAL REFURBISHMENT AND CONTINUED MAINTENANCE

The renovated Ottawa Civic Centre and North Stands included a significant amount of structural work. The scope of structural work included structural reinforcement, repairs, and remediations to cracked members, welds and connections. These issues were previously outlined in reports from Adjeleian Allen Rubeli Ltd. Consulting Engineers in 2007 and 2008. As Leibe Engineering notes in the study, the refurbishments to Ottawa Civic Centre and North Stands addressed structural maintenance issues and do not address the major issue of structural overloading.

Although, this report does not aim to expand or revisit the structural assessment of the building in detail, the site observations and information from OSEG provided evidence of new cracks in concrete and corrosion of structural members. Due to the nature of the structural damage being caused by settling and movement over time, it is likely that structural maintenance will be required in the future.

#### 2.3 LEAKS

As noted in Leibe Engineering's report, the box girders are not sealed at the joints and have evidenced cracking at welded fabrication joints. Arena maintenance has also identified that there is infiltration through the precast stadia joints. While ongoing maintenance and previous capital projects have attempted to remediate this issue, there continues to be conduits for water infiltration into the building. After years of attempted repairs, it appears that it is not likely or possible to eradicate this issue permanently, causing on-going maintenance and operational costs. During the site visit there were multiple (10+) locations of water collection including suspended tarps, buckets, etc. including some areas with as many as ten buckets required to contain the leak. Arena operations has stated that they are required to replace dozens of ceiling tiles before every single event they hold within the arena. There is also evidence of mold throughout the arena both in

the public areas above seating and within the back of house areas in contained office spaces. Maintenance has also attempted to cover the mold issues up visually but it could possibly be causing indoor air quality issues as well.

## 2.4 BUILDING ENVELOPE

As the previous report by SCI (2009) states, the existing concourse perimeter consists of single pane (non-insulated glazing) in non-thermally broken frames along the north, east and west elevations, which contributes to excessive heat loss during the winter months. It is not financially feasible to replace the single pane with double pane insulated glazing. This façade condition does not meet current energy code requirements (MMA Supplement SB-10 which reference ASHRAE 90.1 or the National Energy Code of Canada for Buildings) and causes high operational costs.

Under the north stands, the extent of the roof envelope of the arena is the precast stadia and an acoustical tile ceiling with no insulation provided. Similar to the glazing noted above, this is also not energy code compliant, causes high operational costs and poor spectator comfort. In discussing with the arena's maintenance and operations teams, they have had to add freeze protection to all wet utilities within this interstitial space. Also, patrons consistently leave their seats in this area to stand directly under heating vents during breaks in play because they are too cold at their seats.

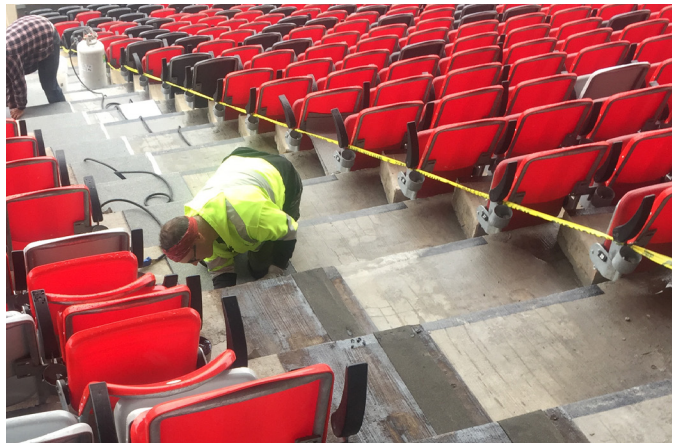
## 2.5 BUILDING SYSTEMS

As noted in Stantec's report (2010), there are multiple mechanical deficiencies in the existing systems. This report does not intend to reanalyze this scope; however, additional observations and conversations add more weight to the analysis performed. In terms of HVAC capacity, it has been the experience of the arena that the systems are not able to keep up with demand. The existing air handlers are running at full strength and the arena remains too cold for patron comfort. This is further exacerbated by the envelope deficiencies noted earlier. There are no dehumidification systems in place which has caused issues for the venue to meet requirements to obtain higher quality shows and events as well as struggling to maintain adequate ice quality for their own team's events. The lack of ventilation capacity was noted to be insufficient to properly exhaust carbon monoxide and carbon dioxide, and in combination with the lack of dehumidification functionality, the venue's

susceptibility to mold growth and other indoor air quality issues is increased. The systems that are in place have been further noted to be extraordinarily loud which further causes issues with broadcast, musical and speaking event opportunities. It has been noted that there are instances where they are required to turn off equipment due to this fact which makes the patron discomfort worse. The systems' insufficiency further aggravates this noise issue because they are forced to operate at maximum speed at all times.



Water damaged ceiling tiles at lower concourse.



Stadia joint repairs in progress



Deteriorating stadia/joint condition

# SECTION 2

## BUILDING SYSTEMS REVIEW



Spalling concrete exposing steel reinforcing



Water seepage and efflorescence



Severe concrete cracking/slab damage



Structural concrete damage - investigation recommended



Severe, repeated water damage at lower concourse



Severe water infiltration causing mold/damage



Severe water infiltration causing mold/damage



Severe water infiltration causing mold/damage

# SECTION 3

## CIVIC CENTRE ARENA

### 3.1 OTTAWA CIVIC CENTRE RIGHT SIZING

Based on market trends and statistical attendance data of other comparable sports venues, the arena is found to be inefficiently oversized in General seating capacity. With a current maximum hockey attendance capability of 9,500 and 10,585 for concerts, the actual utilization levels are misaligned with market demands, trends and expectations (as further exemplified in table below). Market growth within the industry is predicated on an efficient venue with less seats and higher costs per seat to allow for better returns. Based on our review of history, current market demands and industry indicators, the current arena venue should be sized to satisfy 5,500 in hockey mode and 6,600 in concert mode as supported by table below.

The detrimental inefficiencies found within an oversized venue are as follows:

- Redundancy of infrastructure and additional costs associated. Mechanical systems are unnecessary oversized to treat air in a larger volume leading to higher operational costs.
- Guests are more comfortable in a space that is appropriately sized.
- Larger venues are less flexible in accommodating various event, performances and uses - limiting the venue's ability to draw new events. TD Place currently utilizes a curtain system that has associated costs for maintenance and operations.

### 3.2 SEATING

According to a seating manifest provided by OSEG, the arena seats 9,163 (not including floor seats). The existing seating was installed in 1992 and appear to be in relatively good condition.

AODA standards require 92 wheelchair accessible seats for this capacity stated above. Ottawa Civic Centre provide 47 wheelchair accessible seats. The wheelchair accessible seating is restricted to two general viewing locations; one in the corner of the lower concourse and two near the rink blue lines on the main concourse level. This seating distribution does not provide equitable accommodation for patrons.

Although the barrier free seating areas provides the required clear floor area for wheelchairs, the space does not allow for circulation behind patrons when in use. Building operations has noted that this causes operational and circulation issues at main concourse locations.

There are several building codes issues related to the seating that would require substantial modifications to the bowl to rectify. Most notably, the seating aisles are 990mm wide where 1100mm is be required by code. In addition, there are no center railings as required.

### 3.3 PUBLIC CIRCULATION

For games and events, the public enters TD Place Arena main concourse from two grand staircases off of Exhibition Way (Gates 2 and 3). Approximately 1,300 seats are accessed from the lower concourse on the south side of the bowl and approximately 7,900 seats are accessed from the main concourse level. The main concourse area of approximately 25,300 sf provides 3.2 sf per occupant. A modern facility will provide a concourse allowing 4.0 to 4.5 sf per occupant at minimum. The main concourse is further constricted by temporary designated retail areas. The lower concourse area of 11,700 provides 9 sf per occupant. The concourse space, though generous, is also utilized as a field side club.

AODA accessible access is available at Gate 1. TD Place has only one elevator which does not provide accessible access to all levels of the stadium/ arena. The AODA accessible path utilizes exterior ramps with issues subsequently outlined in this report.

The functional issues with the placement of the elevator expands beyond its inability to serve AODA patrons. The service, public and team/ talent pathways are intermixed creating poor experience, inefficiency and maintenance issues. This creates a poor experience for VIP performers whose path to the green room might overlap with food service personal traveling to the main commissary and accessible public patrons.

### 3.4 CONCESSIONS

Overall, the deficiency in the number of points of sale



(POS), the experiential discomfort of overcrowding and the limited ability to provide desired offerings create a concession experience that is not competitive with industry standards. TD Place has 10 concessions and 4 portable vendors on the main concourse and 2 portable vendors on the lower concourse equating to a total of 43 POS available for a typical 67's game. With seating count of approximately 9,200 seats, the current building ratio is approximately 1:214; minimum ratio of 1:150 would require 60 POS.

The individual concessions are very small, a majority having only two points of sale, creating inefficiencies in food service delivery and overcrowding. Operations noted that due to space and ventilation constraints the concessions have vent-less fryers which are less efficient and have limited functionality. This deficiency limits the possible offerings at each concession. Overcrowding is escalated by concourses that do not provide enough width to adequately accommodate concession queuing.

### 3.5 MERCHANDISING

The arena has only one permanent retail for team or event merchandise sales on the concourse. As a temporary solution, OSEG utilizes two pop-up retail stores on concourse. The temporary nature of the retail requires arena staff to set up the shops for each event – requiring high labor/operations cost, inefficiencies and limits options/ revenue for merchandising. For guests entering at Gates 2 and 3, there is a small, combined team store for the 67's, REDBLACKS and Fury that is accessed off of Exhibition Way.

#### Right Sizing Supporting Statistics:

Ottawa 67's in 2018 averaged 3800 fans per game which aligns with the OHL League average as a whole.

Attendance is trending downwards as 67'S average attendance over past 10 years was 4900 fans.\*

Industry standard defined through major venue operators in North America define 7,000 seats as maximum needed for second tier type concerts.

In 2018 there were 66 events in the arena. Excluding the 38 hockey games there were 28 other ticketed events (including 20 concerts and 8 other sporting events)

Comparable OHL arena markets hold 30 events a year, supplementary to hockey.

\*Source:www.hockeydb.com



Lack of retail



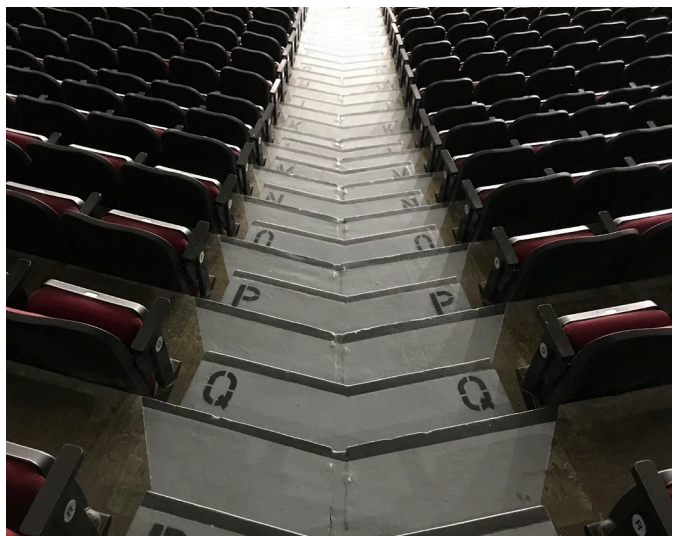
Concession conditions/  
no grease duct capability



Sponsorship zone



Tech space at defunct suite level



Aisle railing missing (typical)

### 3.6 PREMIUM PRODUCT

Successful venues offer an optimum mix of premium product and a healthy gradient of seating options. The correct product inventory mix paired with the appropriate ticketing strategy is crucial to the longevity of a venue—for both fan experience as well as the impact revenue, year over year. As compared to modern venues, TD Place offers almost no diversity in seating type or premium offering.

TD Place was designed with a level of four to six person suites surrounding the horse-shoe bowl. Due to excessive building code violations, the suite level has been condemned for guest access. The suites are accessed by a private corridor that does not meet current building code requirements. The corridor width is 1090 mm - 1100mm is required by code. Additionally, the access stairs do not have adequate handrails, headroom is limited, the guardrails at boxes are too low, there is no accessible access, inadequate toilet facilities, and various trip hazards are present throughout. It is financially unfeasible to bring these spaces up to code - improving them to a level of reasonable patron functionality and experience comparable to similar venues would be extremely difficult.

Lack of suites was cited as a primary deficiency when TD Place was given feedback from the Memorial Cup location selection committee. An investment in improving premium product at TD Place presents many challenges. Bringing the existing suite level up to code would require extensive renovation and the addition of an elevator. An upgrade of the lower concourse would be an opportunity to create a new club and VIP experience; however, the location of the existing video board makes it impossible for these seats to be premium.

### 3.7 MEDIA AREAS

A limited number of defunct suites, discussed above, have been adapted into production spaces. The local authority having jurisdiction granted special, limited permission to utilize these suites as spaces for audio mixing and lighting operations – given that a limited number of rooms be used and there is no public access.

TD Place has no permanent press box function. Operations created a make-shift 'press box' utilizing four rows in the bowl. A small desk was retrofitted to fit over the seating which is not functional. Press use 'booster chairs' to be able to sit during the event. This

set-up, though temporary, is not code compliant. The railings are not tall enough to support the increased height. With no true designated area, the set-up presents issues for audio, acoustics and sight-lines.

### 3.8 SPONSORSHIP

Overall, in comparison to modern venues, the sponsorship opportunities at TD Place are limited, lack flexibility and do not maximize fan engagement. Outside of the bowl, sponsorship integration is limited to exterior signage locations and TVs displays in the concourses. Inside the bowl, static sponsorship signage is located over the vomitories and at the interior of the dasher board. In addition, there are two sponsored sections of seating, TD Bank and Hilton, and a car display activation that rotates yearly on the lower concourse.

### 3.9 EVENT FUNCTIONALITY

TD Place must function for a variety of event types with different sight-lines and seating count constraints. To achieve this flexibility, the arena has black stage curtains that subdivide the bowl. For theatre and music event types, the seating bowl is partitioned with curtains to eliminate the perception of an empty venue. Similarly, during regular season 67's games, the curtains are use permanently to block off the upper tier of the seating bowl. Both the curtains and tracks, increase operational costs and create possible issues for future maintenance – components are difficult to access and will need to be replaced when they age.

The arena has a single video board located on the south wall. The video board location makes it functional for concert set-ups, however during hockey or ice events, the location leaves 1,300 seats on the southside of the bowl without views of the scoreboard.

TD Place operations team cited issues that make the arena unusable for certain stage productions and shows. This list includes the limitations of the ceiling grid, dimensions of the ice and dasher boards. The ceiling rigging system holds 3,000 lbs per vertical drop. This weight maximum is insufficient for certain concert set ups and does not allow for a center hung scoreboard. The arena ice does not have required corner radius' for NHL hockey. The current facility has a 20' radius, should have 28' radius – ice width is 80' not the required 85'. Remediation of this would be expensive, requiring modification or replacement of the entire under ice refrigeration coil/ layout. TD Place dasher boards are also at end of life and will require replacement.

### 3.10 OPERATIONS SPACES

Event level planning is critical to the daily operational efficiency and success of a venue. TD Place's event level lacks an functional organization of operations offices and support spaces and does not maintain the key adjacencies needed for efficiency. As used today, the event level is abundant in overlapping paths of travel, isolated programs, and often adverse mix of uses.

A primary concern is the path and efficiency of food service. The main commissary was recently renovated and serves concessions on both the North and South side. Food service personal do not have a designated elevator to service the building; furthermore, the location of the main commissary is not adjacent to the only existing elevator in the building bringing their path through multiple unrelated spaces or even outside to the public plaza.

Facility operation team offices are not adequately provided in this facility. Operations has annexed non-operational and condemned spaces scattered throughout the facility and are still under-served. The lack of adequate office space creates cramped and overpopulated offices and the lack of consolidated office space creates operational inefficiencies for the operations and maintenance teams. OSEG, team and marketing offices have a consolidated office wing located on the west side of the North Stand building. These offices have been recently remodeled and provide adequate space to meet the needs of the business.

### 3.11 LOCKER ROOMS / GREEN ROOMS

The lockers rooms are located in the west side of the event level. The arena requires accommodations for home team, visiting team, referees, and green rooms for visiting acts. The current lockers do not adequately fit these functions.

67's team spaces include team locker space, providing both game day and street lockers, and a team lounge that doubles as a screening room. The 67's locker room does not have proper ventilation and lacks proper restroom accommodations; multiple toilets, grooming areas, drying areas, and multiple sinks would be required to make it meet expected standards. 67's team spaces are also deficient for training and recovery – there is only one hydro therapy 'pool' and the layout of the trainer room is inefficient and small.

The non-team locker spaces are not secured, not functional, and do not provide adequate shower/

restroom facilities. Many of the restroom and shower locations that are provided do not meet AODA standards. As noted by the operations team, the arena does not have the required visiting locker room space to host major events like the Memorial Cup.



Talent/Player/Service/Accessible corridor



Ad hoc locker room space



Washroom converted to locker space

### 3.12 STORAGE

The functional operation of TD Place suffers from a lack of designated, organized and strategically located storage space. Lack of designated space has led to the makeshift creation of storage space found haphazard throughout the arena and stadium. On the exterior, unoccupiable spaces have been annexed for storage; these areas are not weather protected – uses are either limited or goods risk being damaged or stolen. The minimal designated space for storage is further tightened by office program that has overtaken storage space. For example, the food service office is housed in the dry goods storage room. In addition, operational spaces such as marshalling, loading, occupiable spaces have been seized for storage further disabling the functionality of back of house/operational efficiency.

Storage plays an important role in the management of trash and recycling. TD Place lacks space for trash storage or sorting on either concourse. Operations has annexed spaces that are needed for other program spaces just to store trash. Deficiency in well-planned space for trash storage and processing results in unsightly views of trash collection for guests, higher operational costs, and the underutilization of valuable concourse space.

### 3.13 LOADING DOCK

The arrangement of the loading dock creates issues for deliveries and access. A truck level loading dock is provided for trucks with lift gates but is positioned at a right angle to truck access and also does not provide a direct access to the marshalling/ storage area causing damage to building and goods. The grade level truck dock does not provide a direct route causing loading/unloading to maneuver tight turns which creates both inefficiencies and damage to building and goods. The marshalling area itself is interrupted by columns causing maneuvering difficulties and operational damage. Multiple programs overlap in the space adjacent to the loading dock resulting in a marshalling area that is difficult to navigate. At the time of the tour, a mechanical lift, Zamboni, temporary storage and staging space were all found in this area. The ice melt is also located in the middle of the marshalling area causing further difficulties for maneuvering.

### 3.14 EXITING/RAMPS

Throughout the facility, there are ramps that are not code compliant. Of primary note, the large ingress/ egress ramps on the east and west end have code

and accessibility issues. Their slope appears to be greater than 1:10 as required (1:12 is recommended). Further, landings for rest are required every 9 meters of horizontal travel. These two requirements alone, would add approximately 26m (>30%) of horizontal travel to each of the existing ramps. The perimeter guards are ~1000mm high where 1070mm is required for majority of the ramps' length. Additionally, this requirement is increased to 1500mm at the top landing or anywhere the elevation exceeds 10m to the ground below. The gap below the top rail of these guards is also larger than the requirement to restrict passage of 100mm sphere. The intermediate rails provided are spaced further than the 1650mm required (1700-1830mm).

Within the arena, at each vomitory entering the bowl on the concourse level there are small ramps which also appear to be steeper than the 1:10 requirement and most of these conditions do not have handrails on both sides as required.



Obstructed path from loading dock



Ice melt pit obstructing circulation/marshalling space



Non-occupiable space used for storage



Improper spacing, lack of urinal screen, low head clearance



Main commissary space



Inadequate lavatory count/clearance/accessibility



Condition of concession and lack of grease hood

# SECTION 4

## NORTH STADIUM GRANDSTAND

### 4.1 RIGHT SIZING – Stadium

The total seating capacity of the stadium (north and south stands) is approximately 24,000. The average attendance of the nine Ottawa Redblacks games played at TD Stadium in 2019 was 22,600. Overall, the stadium is sized well for the market and use.

The South stands host a variety of premium products including Loges, Field Club, Otto's Club, Suites and the Subaru Upper Log Cabin, an upgraded experience with lounge seating options and food and non-alcoholic beverages included. While the south stand offers a good range of premium products, the number of suites, club, and loge seating is not well distributed. The newest CFL stadium, Mosaic Stadium, offers similar products however premium product takes up a larger percentage of stadium offerings. A larger overall percentage of premium product and increased distribution would increase

### 4.2 SEATING

According to a seating manifest provided by OSEG, the North Stands capacity is 14,028 seats with 44 AODA seats. 141 AODA seats would be required to comply with current standard. The current seating layout does not provide adequate dispersion of AODA seating.

As stated in previous SCI Report (2009), the distance and number of seats between access aisles does not conform with current code requirement. Additionally, the center rows of the stadium are more the 14 + tiers away from a concourse access point. Although, some modern soccer pitches have very long lower bowls, it is typically desirable to minimize travel distances to a concourse.

### 4.3 SPECTATOR SIGHTLINES

As stated in previous report by SCI (2009), our analysis confirms the spectator sight lines are below modern facility standard for a soccer field. Sightline design should provide clear sightlines to the sidelines of the soccer field; current design does not allow player to be seen when they are at the sideline.

### 4.4 PUBLIC CIRCULATION

The upper stadium concourse is approximately 15,900

s.f. and the main stadium concourse is approximately 10,200 s.f – an additional 25,300 s.f. is provided when the arena concourse is opened to guests. Combined the North Grandstand has 51,400 sf of concourse circulation- providing 3.6 sf per person.

As discussed in Section 3.3, the only elevator in the arena and stadium complex does not provide access to the upper concourse of the stadium. To resolved AODA access, patrons are driven in golf-carts up exterior ramps that flank each side of the stadium. This operation is costly and not code compliant, requiring a dedicated team of over 20 people.

### 4.5 CONCESSIONS

There are 4 concessions on the upper stadium concourse and 2 concessions on the main stadium concourse. These concessions have similar issues as described in Section 3.4. For the North Grandstand, the lack of proper ventilation and make-up air supply has led to complaints of smelling grease from the north-side of the concessions. It was also observed that concession counter tops do not offer a section that meets AODA height requirements. Operations noted that due to space and ventilation constraints the concessions have vent-less fryers which are less efficient and have limited functionality.

For a total capacity of 14,072, the stadium should target 140 POS based on a 1:100 ratio. Currently, the POS Count for the main concourse (including arena concessions) is 58 and the POS count for the north upper concourse is 60.

### 4.6 MERCHANDISING

A single small team retail location is available on the lower stadium concourse. Space previously dedicated to retail in the past has been converted to concessions and storage.

### 4.7 PREMIUM PRODUCT

The North Grandstand has a single premium offering of the field side TD Zone seating and shared Club Space. Due to the existing structure, there is limited opportunity to retro-fit the North Grandstand to extend premium product offerings.

#### 4.8 MEDIA AREAS

Camera locations are set up on platforms over vomitories- this causes potential sightline issues as well as issues related to accessibility and logistics.

#### 4.9 SPONSORSHIP

The field side TD Zone is the only sponsorship location with in the stands. Concourse sponsorship is limited to TV screens. Overall, there is an opportunity for the expansion of sponsored spaces and types to expand revenue and meet modern sponsor expectation for experiential integration.

#### 3.15 WASHROOMS

The permanent toilet room facilities of the arena and stadium are below the code required minimums for women’s washrooms and further below the recommended ratios for a competitive level of service with comparable venues.

Code required minimum (for seating alone):

Arena M=34 W=34

Stadia M=50 W=50

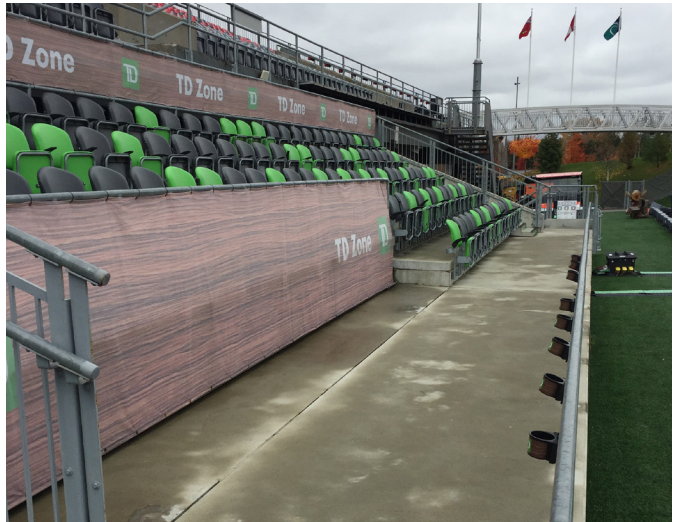
The arena provides 25 fixtures for women and 85 fixtures for men.

The stadium provides 40 fixtures for women (including the arena concourse) and 45 fixtures for men.

Further, the toilet facilities that are provided are not compliant in their current condition. Multiple toilet rooms have a urinal to toilet ratio greater than 2:1 and have a lavatory to toilet ratio less than 1:2 as required by code. No universal toilet rooms are provided for the public on the premises. While some accessible facilities are provided, some toilet rooms do not provide accessible stalls and there does not appear to be any ambulatory stalls provided. Additionally, as required by some codes, many fixtures are spaced too closely with none of the existing urinals providing privacy screens. Multiple toilet rooms that are built under the stadia also have head clearance issues at the structural members causing “head knocker” conditions that cannot be resolved without carving out unusable floor area within the already undersized toilet rooms. The arena has attempted to reduce liability by painting and/ or padding these conditions. Attempting to retrofit the existing toilet rooms into compliance would further reduce the current deficiency, with some toilet rooms losing 50% or more of their existing fixture count. The venue has attempted to remedy these deficiencies with portable toilet facilities which is not addressed within the building code.



Temporary toilet facilities permanently used



Recently added field side seating amenity



Platform camera location (typical)

# CONCLUSION

## EVALUATING PHYSICAL AND FUNCTIONAL OBSOLESCENCE

The renovations to the Stadium North stands and Arena, started in 2012, addressed many of the essential “physical life” cycle needs, the superficial qualities of the facility which have a much shorter life span than the more detrimental “design service life” duration cycle, which consists of the more fundamental aspects of the facilities ability to satisfy current functional needs and user expectations. The renovation also made modest urban adjustments to a new district which surrounds it, but the facility remained quite introverted and isolated.

Today's expectations in physical life cycle spans are continuously getting shorter in the entertainment and sports industry with 10-12 years considered average. The design life as opposed to physical life is the long term health of a buildings ability to satisfy need and adequate levels of performance (financial and functional).

Obsolescence is evidenced in this report through physical life deterioration, wear and tear, beyond inefficient functionality and technological deficiencies. Changes in the economic conditions and user/functional requirement in this facility are the most heavily weighted and defined as design life obsolescence. The experiential design, appearance, and social communal needs have an impact to the buildings relevance. The impact of deficiencies on a the North stands can be classified into curable obsolescence and incurable obsolescence.

Curable obsolescence is one that can be controlled by the building management through choice in construction materials, application of high standards of maintenance and refurbishment. But, it can only be managed to a certain extent in a condition of renovation.

The factors or conditions which tend to fall into the category of incurable obsolescence are evidenced and include:

- a. Physical Construction faults or limitations.
- b. Construction systems assembly deterioration.
- c. Poor levels of functionality and standard of services.

Normally, curable obsolescence can be easily counteracted by means of maintenance or repair. The value in this reoccurring endeavor is always subject to many economical drivers and must be evaluation in reference to the incurable. The incurable obsolescence in this case results in the financially inappropriate changes that would be required to remediate, ones that are very difficult to execute, limited predominantly by the drastic physical changes that would be needed.

Many of the conditions assessed in this report have an aggregated direct negative impact on fan/performer morale and culture beyond rising maintenance costs and constantly increasing capital re-investment. The current conditions also have a direct impact on lost revenue, the receding ability in performance and output, general safety, accessibility and trends towards decreasing attendance.

The two key types of physical and functional obsolescence found within this facility are deemed incurable as they would require the introduction of new fundamental spatial characteristics in each venue which are currently not adaptable due to the completely inflexible existing structural system and the complex interconnected relationship of the two current venues. These two key categorical types coupled with the impacts found within the curable, but costly deficiencies in deterioration and aesthetic, as well as the economic and contextual outcomes, allows us to define this facility as approaching the end of its design service life cycle.



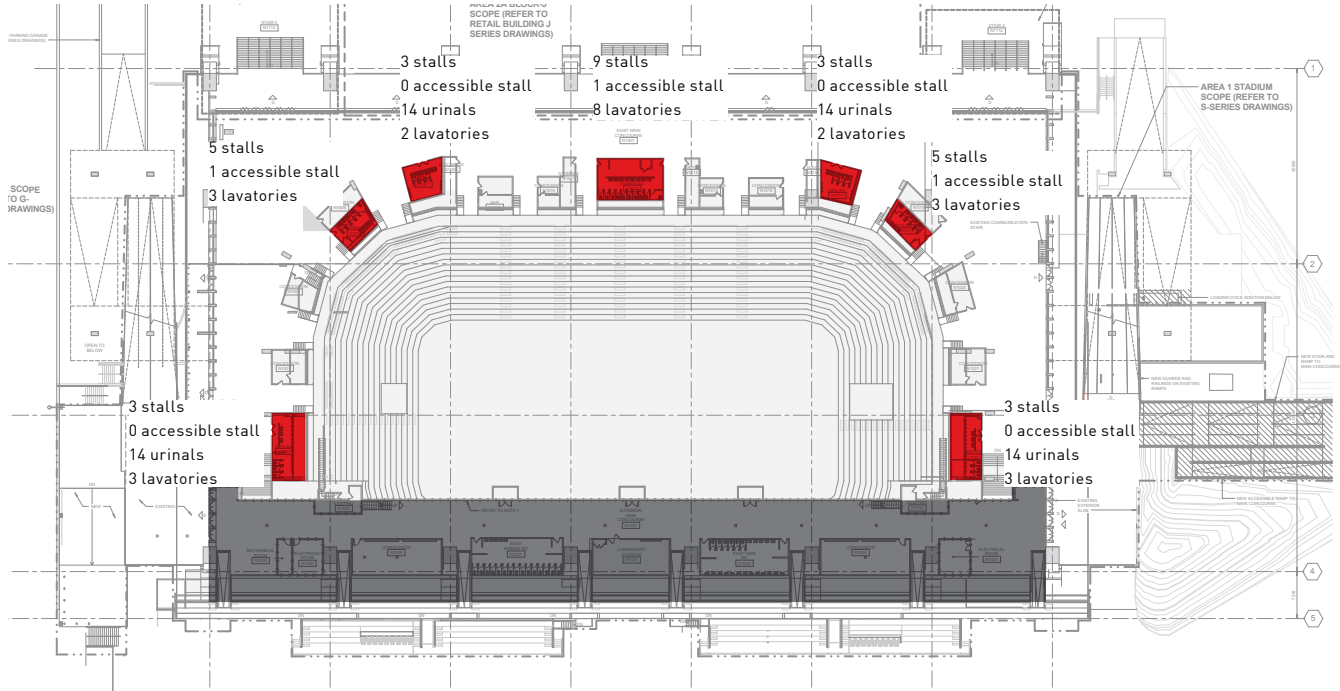
## TD PLACE - LANSDOWNE CONTEXT

It is clear that TD Place lives in a modern and energetic context, of which this facility does not parallel, nor does it act in synergy or harmony in contribution. This report does not delve into the greater urban contributions of this facility or lack thereof, in detail, but does evidence that this facility is antiquated in the realm of its relationship to its surrounding neighborhood and potential contribution as valued communal asset. Contemporary facilities contribute as communal assets directly through integration of programming, spaces and amenities that are accessible to the public throughout the day. The promotion of a higher quality of life for the community and increased utilization rates, foot traffic and urban vibrancy, all contribute to the financial health of the district as a whole as a true urban asset and catalyst. The essence of the current facility contradicts these contemporary urban trends and fundamentally does not contribute to the neighborhood to its highest potential.

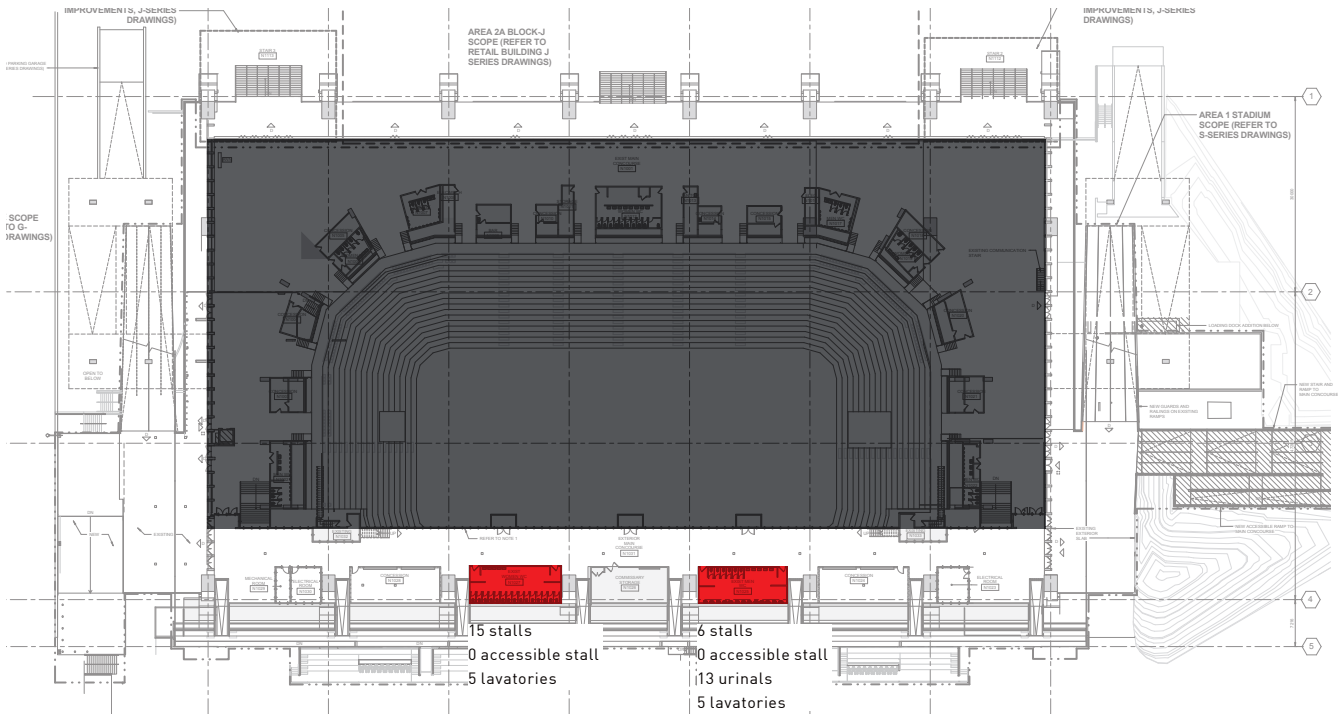


North Grandstand context

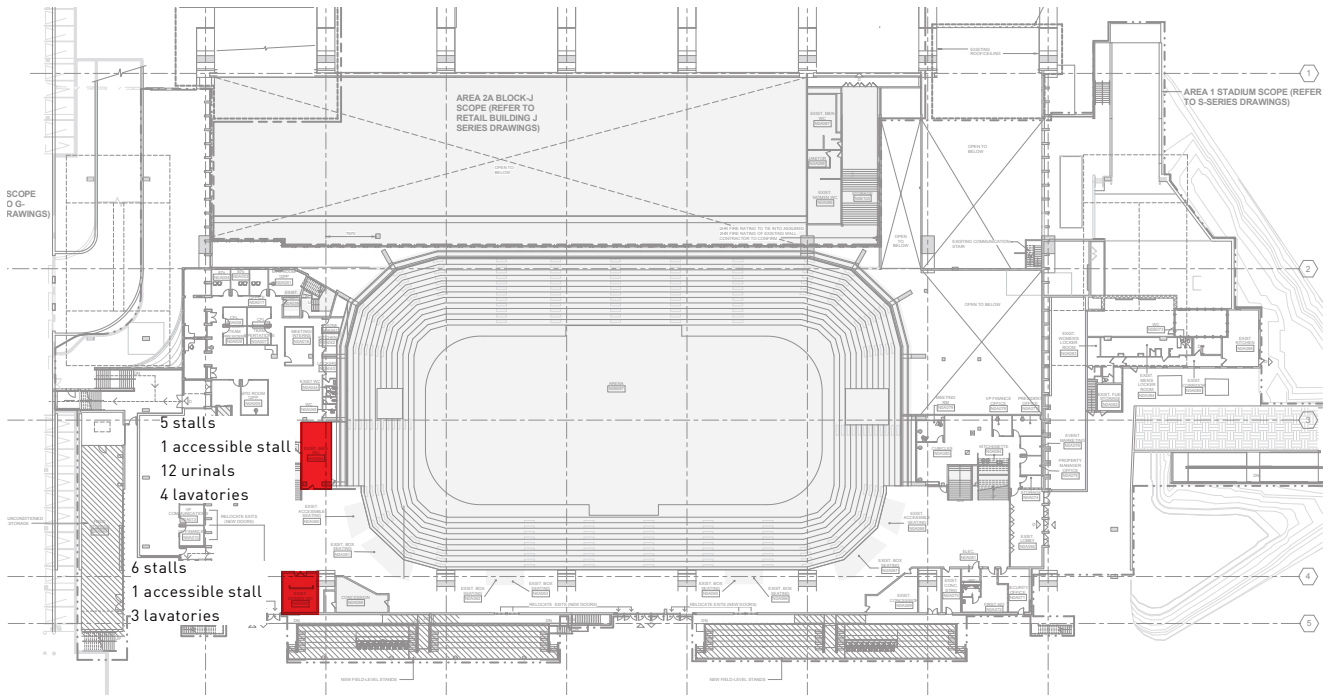
# APPENDIX



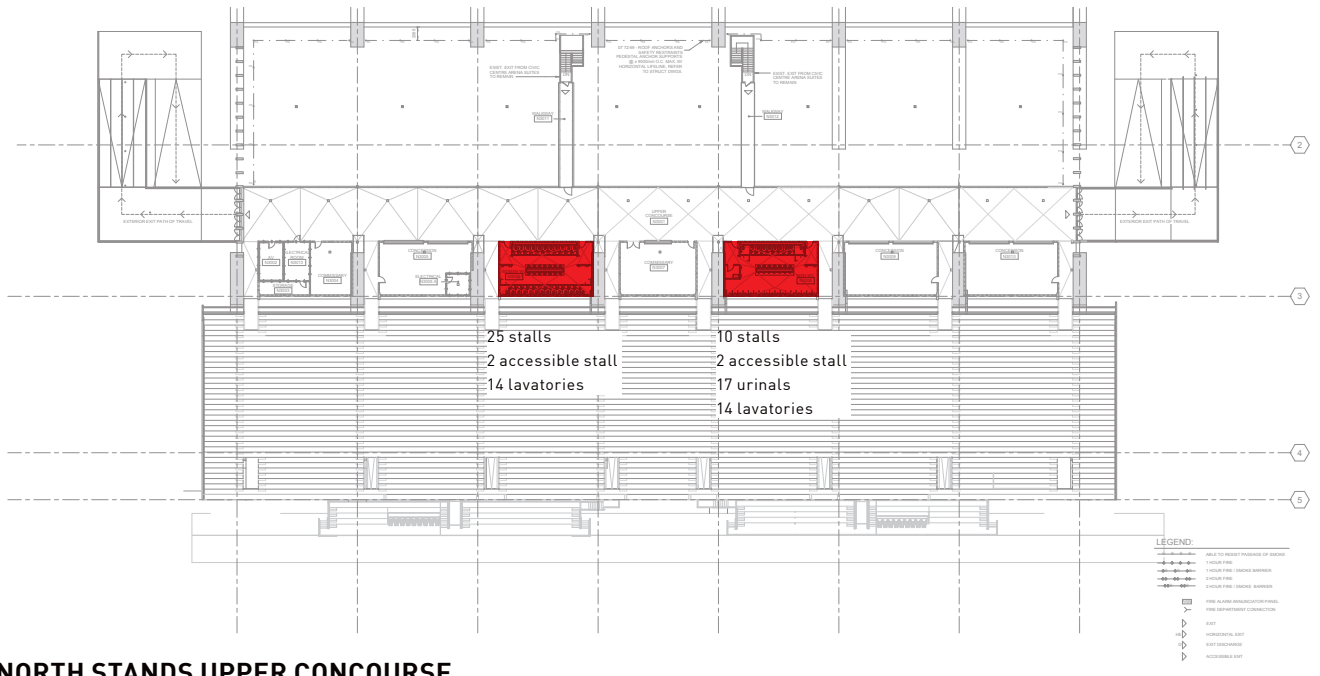
**TD PLACE ARENA MAIN CONCOURSE**



**NORTH STANDS MAIN CONCOURSE**



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