CITY OF TORONTO

DUFFERIN TRANSFER STATION PAVEMENT REHABILITATION
CONTRACT NO. 25SWM-IRM-042CDU

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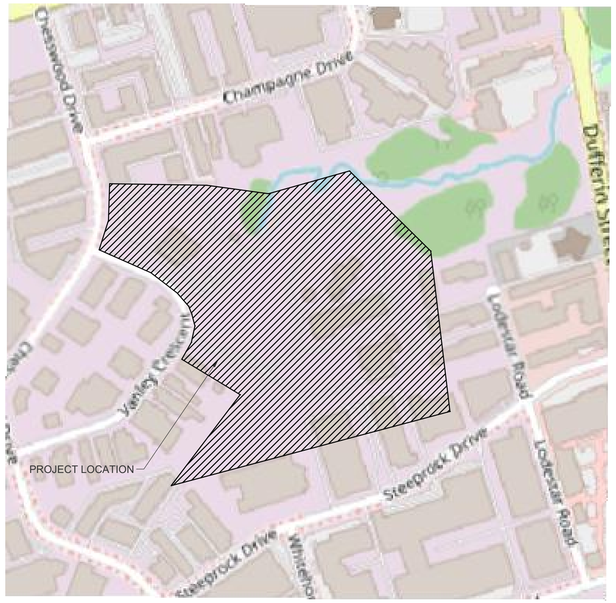

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
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150 Commerce Valley Drive West
Thornhill, Ontario
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No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
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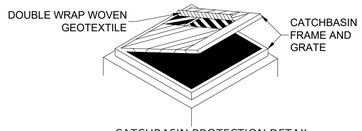
DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
COVER PAGE

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	N.T.S			DRAWING NUMBER:	1627-2025-5-01	G000
DATE:	DECEMBER 2025					

GENERAL NOTES:

1. ALL WORK SHALL BE ACCORDING TO THE CURRENT OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS. THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
2. ALL WORK WITHIN THE CITY RIGHT-OF-WAY SHALL BE CONSTRUCTED ACCORDING TO THE CONTRACT DRAWINGS AND SPECIFICATIONS.
3. ALL DIMENSIONS ARE EXPRESSED IN METERS (m) AND PIPE SIZES ARE EXPRESSED IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.
4. ANY DISCREPANCIES BETWEEN SITE CONDITIONS AND CONSTRUCTION DRAWING MUST BE REPORTED TO THE CONTRACT ADMINISTRATOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND APPROPRIATE ACTION SHALL BE TAKEN TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR.
5. ALL SURVEY STAKE LAYOUT POINTS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE LAYOUTS SHALL BE IMMEDIATELY REPORTED TO THE CITY.
6. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION AND TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR. GRASS AREAS SHALL BE TREATED WITH 100mm OF TOPSOIL AND SHALL BE SODDED ACCORDINGLY TO TS 5.00 DATED SEPTEMBER 2017 AND TS 5.10 DATED SEPTEMBER 2021.
7. ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE FOR REFERENCE PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION AND DEPTH OF ALL UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE INCURRED.
8. ALL EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OFF SITE, AT A LOCATION ARRANGED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES, PERMITS AND COSTS.
9. NO STOCKPILING PERMITTED. THE CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED MATERIALS INCLUDING ENGINEERED FILLS, GRANULARS, SOILS, CRUSHED STONES, CONCRETE, ASPHALT ETC, IN ACCORDANCE WITH THE SOIL MANAGEMENT PLAN. DISPOSAL SHALL BE CARRIED OUT AS PART OF THE BASE SCOPE OUTLINED IN THE CONSTRUCTION CONTRACT FOR OFF-SITE EXPORT AND MECP APPROVED LANDFILL.
10. THE CITY OF TORONTO ADHERES TO THE ONTARIO REGULATION 406/19 UNDER THE ENVIRONMENTAL PROTECTION ACT WHICH GOVERNS THE MOVEMENT AND REUSE OF EXCESS SOIL.
11. THE ONTARIO REGULATION 406/19 AIMS TO ENSURE THAT EXCESS SOIL IS MANAGED PROPERLY, REDUCING THE RISK OF CONTAMINATION AND ILLEGAL DUMPING.
12. CONTRACTOR IS RESPONSIBLE FOR REGISTERING AND TRACKING EXCESS SOIL REMOVED FROM A CONSTRUCTION SITE TO AN APPROVED REUSE SITE.
13. CONTRACTOR MUST TRACK THE TRANSPORTATION OF EXCESS SOIL, INCLUDING DETAILS OF WHO IS MOVING THE SOIL, WHERE IT IS BEING TRANSPORTED, AND WHEN.
14. EXCAVATION AND DISPOSAL OFF SITE OF ASBESTOS CONTAINING ASPHALT MATERIAL IS CONTRACTOR'S RESPONSIBILITY. CONTAMINATED MATERIAL MUST BE REMOVED IN ACCORDANCE WITH MINISTRY OF LABOUR, IMMIGRATION, TRAINING AND SKILLS DEVELOPMENT (MLITSD), HEALTH AND SAFETY ACT, O.REG. 278/05 AND ALL OTHER APPROPRIATE FEDERAL, PROVINCIAL AND MUNICIPAL REGULATIONS AND DISPOSED OF AT A SITE THAT CAN ACCEPT THE ASBESTOS CONTAINING CONTAMINATED MATERIAL.
15. THE BASE SCOPE INCLUDES REMOVING EXISTING PAVEMENT AND UNDERLYING LAYERS, COMPACTING AND PROOF ROLLING THE GRANULAR BASE, AND PREPARING FOR NEW PAVEMENT AS PER CONTRACT DRAWINGS.
16. ALL EXCAVATED MATERIALS (PAVEMENT AND SUBLAYERS) SHALL BE TESTED AND DISPOSED OF PER ONTARIO REGULATION 406/19 AND THE SOIL MANAGEMENT PLAN (SMP). THE CONTRACTOR IS RESPONSIBLE FOR TESTING, CLASSIFICATION, AND HAULING CONTAMINATED MATERIALS (IF ANY) TO AN MECP-APPROVED LANDFILL AT THE PROVISIONAL RATE OUTLINED IN THE CONSTRUCTION CONTRACT.
17. FOR THE PRE-ENGINEERED BUILDING AND BUNKER AREA, THE BASE SCOPE INCLUDES EXCAVATION AND DISPOSAL OF EXISTING PAVEMENT AND SUBLAYERS AS UNCONTAMINATED WASTE PER ONTARIO REGULATION 406/19. THE CONTRACTOR IS ALSO RESPONSIBLE FOR TESTING AND DISPOSAL OF CONTAMINATED MATERIALS AS PER THE REGULATION.
18. SEE GEOTECHNICAL REPORT, PREPARED BY WSP (JUNE 17, 2024) FOR INFORMATION ON SUBSURFACE CONDITIONS, ASBESTOS AND GENERAL RECOMMENDATIONS.
19. SEDIMENT CONTROL TRAPS COMPOSED OF A DOUBLE LAYER OF FILTER CLOTH (TERRAFIX 270R OR APPROVED EQUAL) SHALL BE PLACED UNDER THE GRATES/COVERS OF ALL EXISTING CATCHBASINS/ MANHOLES OR AS DIRECTED BY THE CONTRACT ADMINISTRATOR. THE SEDIMENT CONTROL TRAPS SHALL BE MAINTAINED, CLEANED AND REPAIRED OR REPLACED AS REQUIRED DURING CONSTRUCTION AND REMOVED AT THE END OF THE CONSTRUCTION PERIOD.
20. ADJUST ALL STRUCTURES (MAINTENANCE HOLES, CATCHBASINS, ETC) TO SUIT PROPOSED PAVEMENT ELEVATIONS INCLUDING BREAKING DOWN AND REMOVAL OF PORTION OF TOP OF STRUCTURES TO ALLOW FOR ANY/ALL ADJUSTMENTS.
21. ALL TEMPORARY TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION SHALL BE ACCORDING TO THE CURRENT ONTARIO TRAFFIC MANUAL BOOK 7: TEMPORARY CONDITIONS FIELD EDITION.
22. CONTRACTOR SHALL REINSTATE LINE PAINTING TO MATCH PRE-CONSTRUCTION LOCATIONS AND AS PER THE TORONTO TRANSPORTATION SERVICES PAVEMENT MARKING DESIGN GUIDELINES, ONTARIO TRAFFIC MANUAL (OTM) - BOOK 11: PAVEMENT, HAZARD, AND DELINEATION MARKINGS AND CITY GUIDELINES.
23. ALL EXISTING CB RIMS TO BE PROTECTED AND IF ANY REMOVED FOR CONSTRUCTION SHALL BE RE-INSTALLED/RESTORED TO ORIGINAL OR BETTER CONDITION ACCORDING TO NEW OPSD 400.030 FRAME AND GRATE AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
24. THE CONTRACTOR SHALL PROVIDE ANY NECESSARY HEATING REQUIRED FOR THE INSTALLATION OF CONCRETE AND ASPHALT ON-SITE AS PART OF THE BASE SCOPE.
25. ROADWAY EXCAVATION INCLUDES THE REMOVAL OF EARTHEN MATERIALS FROM WITHIN THE ROADWAY TO CONSTRUCT THE SUBGRADE, INCLUDING THE REMOVAL OF UNSATISFACTORY MATERIAL, TO THE GRADE AND CROSS SECTION AS SHOWN ON THE PLANS.
26. ALL EXCAVATION ZONES SHALL BE PROOF ROLLED,COMPACTED, INSPECTED AND APPROVED BY THE CONTRACT ADMINISTRATOR PRIOR TO THE PLACEMENT OF ANY SUBSEQUENT MATERIALS.
27. ALL EXISTING ROAD SIGNS/ROAD FURNITURE ETC. TO BE PROTECTED AND ANY IF REMOVED FOR CONSTRUCTION SHALL BE RE-INSTALLED/RESTORED TO ORIGINAL OR BETTER CONDITION, AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
28. BASE SCOPE INCLUDES EXCAVATED SOIL AROUND THE NEW BUILDING TO BE HAULED AWAY AND DISPOSED OF IN A MECP-APPROVED LANDFILL AT NO COST.
29. NO MAJOR DEWATERING PROBLEMS ARE ANTICIPATED AT THE SITE. ANY WATER SEEPAGE CAN BE COLLECTED IN TEMPORARY SUMPS (PROTECTED AGAINST EROSIONS WHERE NECESSARY) AND REMOVED BY PUMPING. DISCHARGE TO PASS THROUGH FILTRATION SYSTEM (I.E. FILTER BAG) PRIOR TO DISCHARGE FROM SITE.

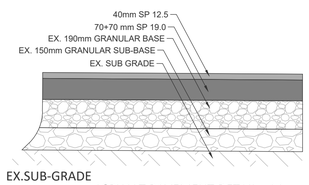


CATCHBASIN PROTECTION DETAIL
N.T.S

1. TO BE INSTALLED ON ALL CATCHBASINS AND MAINTAINED DURING CONSTRUCTION PERIOD.
2. WOVEN GEOTEXTILE TO HAVE EQUIVALENT OPENING SIZE BETWEEN 0.15mm AND 0.25 mm.
3. WOVEN GEOTEXTILE TO BE REPLACED PERIODICALLY WHEN ACCUMULATED SEDIMENTS INTERFERES WITH DRAINAGE

PAVEMENT AND CURB NOTES:

1. ALL PAVEMENT GRANULAR BASE AREAS SHALL BE COMPACTED TO A MINIMUM OF 100% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
2. COMPACTION TESTING, CONCRETE TESTING AS PER CITY STANDARDS AND MONITORING OF HMA PLACEMENT, AMONG OTHER EVALUATIONS.
3. THE RECOMMENDED CONSTRUCTION OF FLEXIBLE PAVEMENT STRUCTURE SHOULD BE CARRIED OUT AS FOLLOWS:
   - REMOVE THE EXISTING ASPHALT AND UNDERLYING GRANULAR MATERIAL TO A DEPTH OF 180mm BELOW THE PROPOSED FINISHED GRADE.
   - PROOF-ROLL THE EXPOSED GRANULAR BASE, REPAIR SOFT SPOTS WITH GRANULAR A (TS1010) AND REGRADE AS NECESSARY.
   - PLACE 40mm SP12.5FC2 CAT E (PG 70-28) SURFACE COURSE ON TOP OF 140mm SP19.0 CAT E (PG 70-28) BINDER COURSE IN TWO LIFTS. HMA MIXES SHOULD BE PRODUCED AND REPLACED IN ACCORDANCE WITH TS310 REQUIREMENTS.
   - THE CONTRACTOR SHALL APPLY TACK COAT BETWEEN HMA LAYERS IN ACCORDANCE WITH TS 3.20 REQUIREMENTS.
4. THE SUPPLY AND PLACEMENT OF ALL ASPHALT MATERIALS SHALL CONFIRM TO CITY SPECIFICATIONS TS 310, TS 3.30, TS 1003 AND TS 1151.
5. THE SUPPLY AND PLACEMENT OF ALL CONCRETE MATERIAL SHALL CONFORM TO CITY SPECIFICATION TS 3.40, TS 3.50 AND TS 1350.
6. CONCRETE PAVEMENT TO HAVE A MINIMUM 24 HOURS COMPRESSIVE STRENGTH OF 32 MPa (EXPOSURE CLASS C-2).
7. THE SUPPLY AND PLACEMENT OF ALL GRANULAR BASE SHALL CONFIRM TO CITY SPECIFICATIONS TS 501, TS 1010 AND OPSS 314.
8. 300mm WIDE BY 40mm DEEP LAP JOINTS ARE REQUIRED AT ALL LIMITS OF CONSTRUCTION WHERE PROPOSED ROAD SURFACE MATCHES THE EXISTING ROAD SURFACE. MILLED SURFACES TO BE COATED WITH SS-1 ASPHALT EMULSION PRIOR TO PAVING.
9. PROPOSED CONCRETE CURB SHALL BE 32 MPa CONCRETE (EXPOSURE CLASS C-2) AS PER TS 3.50, TS 1350.
10. EXISTING ASPHALT THICKNESS MAY VARY, TAPER TO MATCH EXISTING AT CONSTRUCTION LIMITS.
11. CONTRACTOR SHALL LIMIT EXCAVATION TO THE MINIMUM DEPTH NECESSARY TO ACCOMMODATE THE PROPOSED PAVEMENT STRUCTURE, AS DEFINED BY THE DESIGN SPECIFICATIONS, AND REFRAIN FROM EXCAVATING BEYOND THIS DEPTH TO THE EXISTING SUBGRADE UNLESS REQUIRED FOR UNFORESEEN CONDITIONS. ANY DEVIATIONS FROM THE SPECIFIED EXCAVATION DEPTHS DUE TO UNEXPECTED CONDITIONS MUST BE IMMEDIATELY REPORTED TO THE CONTRACT ADMINISTRATOR FOR ASSESSMENT AND APPROVAL.
12. SAW CUT EXISTING PAVEMENT AND CURB ETC. AT CONSTRUCTION LIMITS TO PROVIDE A CLEAN JOINT FOR THE PROPOSED WORK.
13. CONTRACTOR SHALL INSTALL DOWELS AS PER CITY STANDARD T-216.02-3 ON ALL CONSTRUCTION JOINTS (LONGITUDINAL AND TRANSVERSE).
14. CONTRACTOR SHALL INSTALL UTILITY ISOLATION AT MANHOLES AND CATCHBASINS AS PER CITY STANDARD T-216.02 -5
15. THE RECOMMENDED CONSTRUCTION FOR THE RIGID PAVEMENT INVOLVES REMOVING 480mm OF EXISTING PAVEMENT, PROOF-ROLLING THE SUBGRADE AND COMPACT TO 95% SPMDD AND REPAIRING ANY SOFT SPOTS WITH GRANULAR B, TYPE I. AFTER REGRADING, 150mm OF NEW GRANULAR A WILL BE PLACED, FOLLOWED BY A 100mm OPEN GRADED DRAINAGE LAYER (OGDL). THE AREA WILL THEN BE PAVED WITH 230mm OF JOINTED PLAIN CONCRETE PAVEMENT (JPCP), WITH JOINT SPACING AND LOAD TRANSFER DETAILS FOLLOWING THE CITY'S STANDARD DRAWING T-216.02-3.
16. CONSTRUCTION OF THE JPCP SHOULD BE IN ACCORDANCE WITH OPSD 552.010 AND OPSD 552.051. THE DOWEL BARS SHALL BE AS PER OPSD 552.051 (32mm DIAMETER BY 450mm LONG EPOXY COATED SMOOTH BARS); THE TIE BARS SHALL BE AS PER OPSD 552.010 (15mm DIAMETER BY 760mm LONG EPOXY COATED DEFORMED BARS). TIE BARS SHALL NOT BE PLACED WITHIN 600mm OF A TRANSVERSE JOINT.
17. SMOOTH TRANSITIONS ARE REQUIRED IN ALL AREAS WHERE NEW PAVEMENT STRUCTURES MEET EXISTING FACILITIES. ALL LONGITUDINAL AND TRANSVERSE JOINTS SHOULD MEET THE REQUIREMENTS OF OPSS.PROV 313. ALL LONGITUDINAL JOINTS SHOULD BE STAGGERED BETWEEN ASPHALT LIFTS. STAGGERING OF THE LONGITUDINAL JOINTS SHOULD BE CONSTRUCTED BY OFFSETTING THE PAVING EDGE OF THE SURFACE AND BINDER COURSE BY A MINIMUM OF 150mm.
18. TRANSITIONS BETWEEN EXISTING AND NEW GRANULAR BASE SHOULD BE COMPLETED AT A MINIMUM 10H:1V TAPER, WHERE REQUIRED.



ASPHALT PAVEMENT DETAIL - AA
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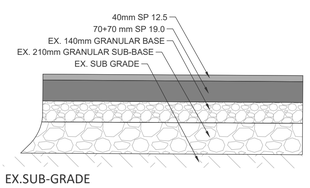

ASPHALT PAVEMENT DETAIL - BB
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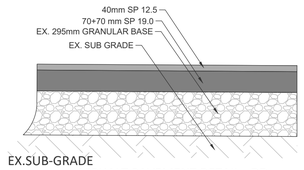

ASPHALT PAVEMENT DETAIL - DD
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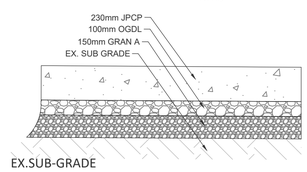

ASPHALT PAVEMENT DETAIL - EE
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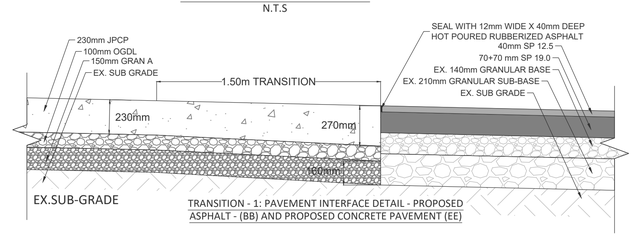
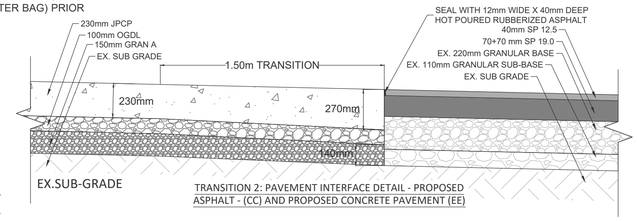
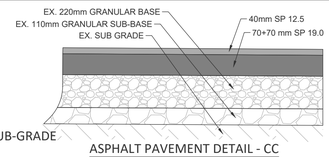


TRANSITION - 1: PAVEMENT INTERFACE DETAIL - PROPOSED ASPHALT - (BB) AND PROPOSED CONCRETE PAVEMENT (EE)



TRANSITION 2: PAVEMENT INTERFACE DETAIL - PROPOSED ASPHALT - (CC) AND PROPOSED CONCRETE PAVEMENT (EE)



ASPHALT PAVEMENT DETAIL - CC
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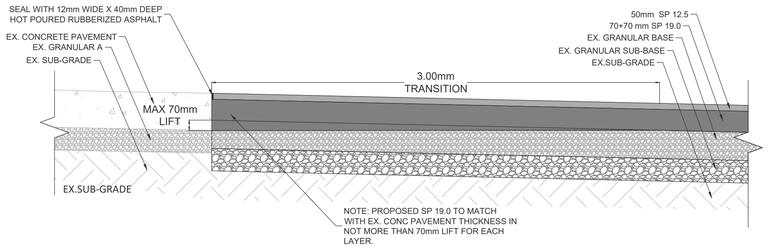
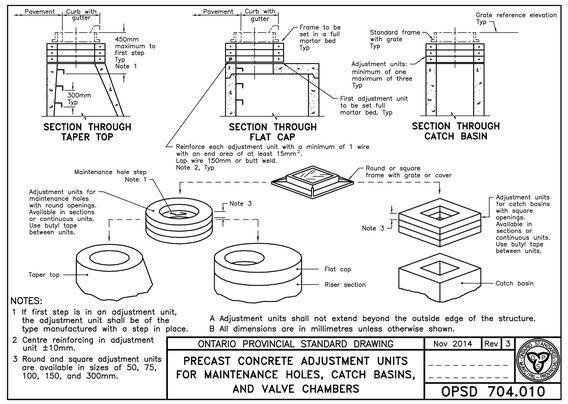


TRANSITION 3: PAVEMENT INTERFACE DETAIL - PROPOSED ASPHALT AND EXISTING CONCRETE PAVEMENT

CONSTRUCTION NOTES:

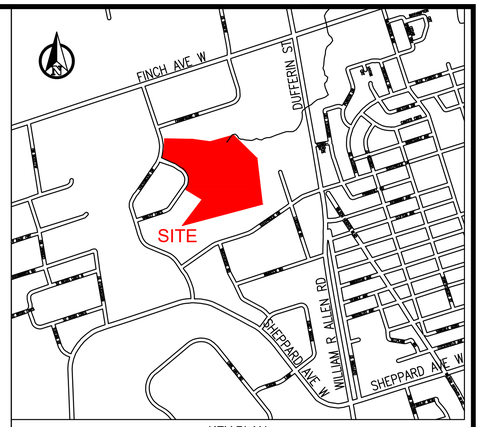
1. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, CONTRACTOR IS REQUIRED TO SUBMIT DETAILED WORK METHODOLOGY, WORK SCHEDULE OF INDIVIDUAL CONSTRUCTION ACTIVITIES, DURATIONS, DATES AND SCHEMATIC OF WORKS ZONES WITHIN THE PROJECT AREA. CONSTRUCTION WORK WILL COMMENCE UPON THE CONTRACT ADMINISTRATOR'S APPROVAL OF THE SUBMITTED WORK PLAN.
2. PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A CONCRETE POUR SCHEDULE AND WORK PLAN TO INDICATE THE LOCATION OF ALL PROPOSED CONSTRUCTION JOINTS, CONTRACTION JOINTS, UTILITY ISOLATION AND DOWEL LOCATIONS. CONCRETE PLACEMENT WILL COMMENCE UPON THE APPROVAL OF THE SUBMITTED CONCRETE WORK PLAN.
3. CONSTRUCTION PAVING ACTIVITIES CAN ONLY OCCUR DURING THE FOLLOWING PERIODS:
   - NORMAL WEEKDAYS: MONDAY TO FRIDAY 6:00AM TO 6:00PM.
4. CONCRETE POURS MUST BE COORDINATED WITH OPERATING SCHEDULE OF TRANSFER STATION, SO THAT THE MINIMUM 24 HOUR CONCRETE CURING PERIOD IS ACHIEVED PRIOR TO PUBLIC USE.
5. CONTRACTOR TO INDICATE TEMPORARY LAYDOWN AREAS AS PART OF WORK PLAN SUBMITTAL WHICH NEED TO BE APPROVED BY CONTRACT ADMINISTRATOR AND CITY.
6. CONTRACTOR MUST COMPLETE PAVEMENT CONSTRUCTION PRIOR TO RELEASING THE CONSTRUCTION SITE FOR PUBLIC USE. EXPOSED GRANULAR SUBBASE DURING SITE HANDOVER IS NOT PERMITTED.
7. ALL EXISTING SIGNS SHALL BE PROTECTED. ANY EXISTING SIGNS WHICH REQUIRE REMOVAL TO FACILITATE CONSTRUCTION SHALL BE REMOVED AND REINSTATED AT THE CONTRACTOR'S EXPENSE.
8. PROTECT EXISTING RADIATION EQUIPMENT AND BOLLARDS LOCATED NEAR SCALE DECK DURING CONSTRUCTION PERIOD.
9. THE FOLLOWING QA /QC MATERIAL TESTING ARE REQUIRED DURING CONSTRUCTION:
   - CONCRETE TESTING: SLUMP TEST; AIR CONTENT TEST; CONCRETE COMPRESSIVE STRENGTH TEST VIA CASTING OF CYLINDERS.
   - SOIL COMPACTION TESTING: COMPACTION TO SPECIFIED SPMDD; 1 SPOT TESTING EVERY LIFT PER 250 M2 OF BACKFILLING AREA.
   - ASPHALT COMPACTION TESTING: COMPACTION TO SPECIFIED MDD; 1 SPOT TESTING EVERY LIFT PER 250 M2 OF PAVED AREA.
   - ASPHALT TESTING: FULL MARSHALL MIX COMPLIANCE FOR HL/ FULL SUPERPAVE MIX COMPLIANCE FOR SP.



NOTES:
1 If first step is in an adjustment unit, the adjustment unit shall be of the type manufactured with a step in place.
2 Centre reinforcing in adjustment unit ±10mm.
3 Round and square adjustment units are available in sizes of 50, 75, 100, 150, and 300mm.

A Adjustment units shall not extend beyond the outside edge of the structure.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 3
PRECAST CONCRETE ADJUSTMENT UNITS FOR MAINTENANCE HOLES, CATCH BASINS, AND VALVE CHAMBERS	OPSD 704.010	



KEY PLAN
N.T.S

NOTES:

MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

SOLID WASTE MANAGEMENT SERVICES

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L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO
SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

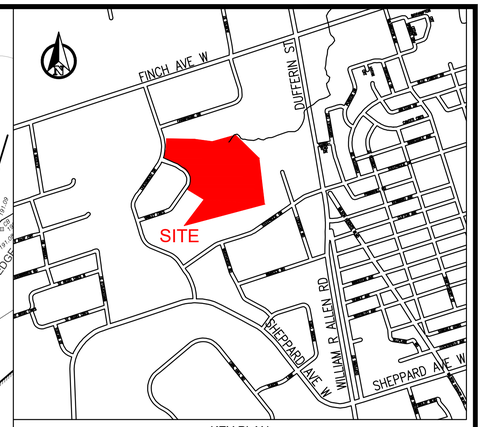
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
DETAILS AND NOTES

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	N.T.S			DRAWING NUMBER:	1627-2025-5-02	C001
DATE:	DECEMBER 2025					



KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	HANDRAIL RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION

NOTES:

1. DRAWING IS AS PER CSRS.UTM-17N COORDINATE SYSTEM.
2. TOPOGRAPHIC INFORMATION PREPARED BY J.D.BARNES LIMITED.
3. ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM CGVD28: 78 AND ARE DERIVED FROM THE ONTARIO MINISTRY OF NATURAL RESOURCES AND FORESTRY BENCH MARK No 0011960UT118 HAVING A PUBLISHED ELEVATION OF 189.318 METERS.

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1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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GENERAL MANAGER,
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MATTHEW CASCHERA
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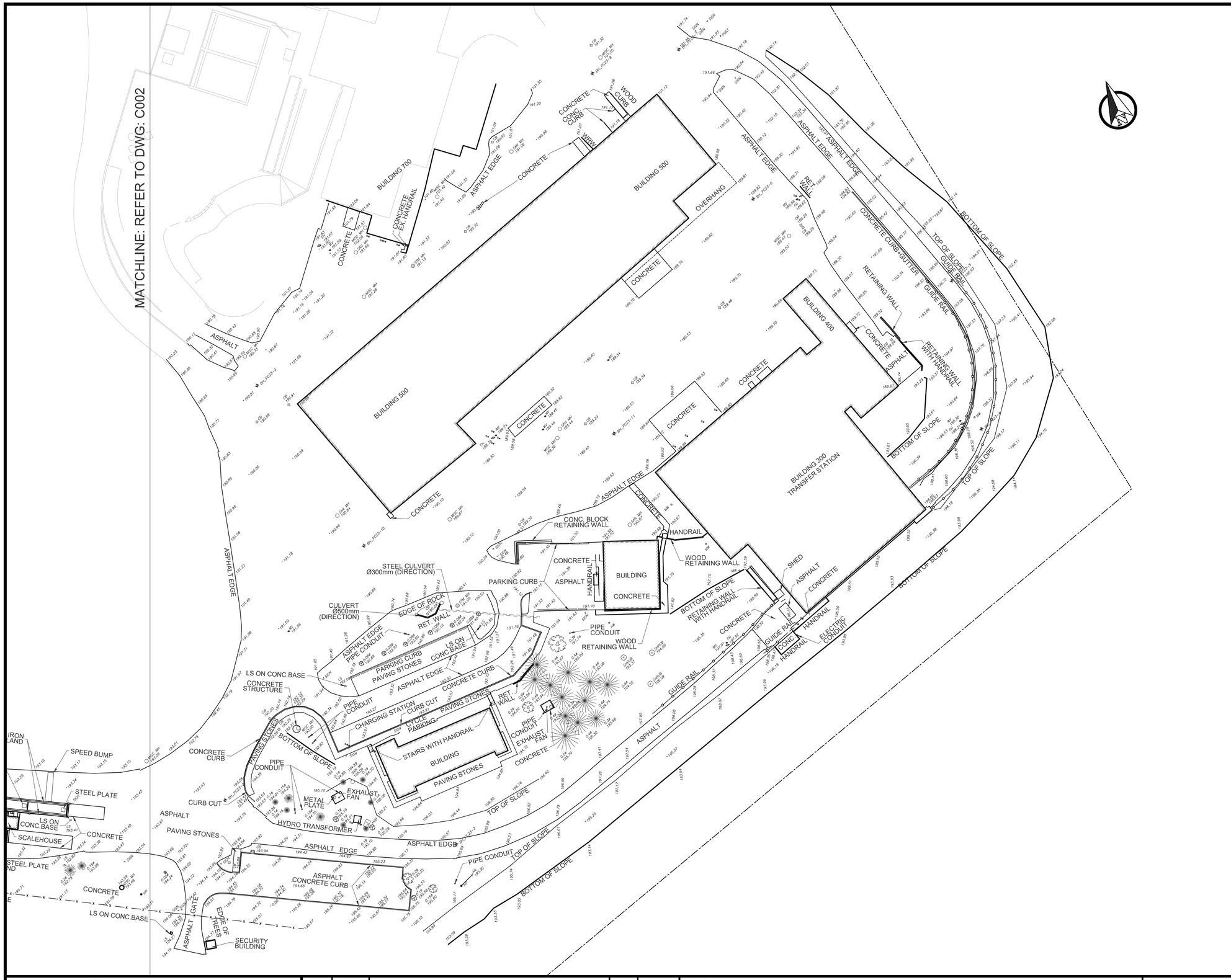
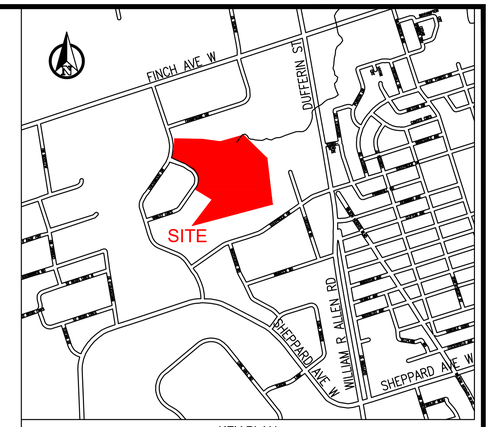
PROJECT ADDRESS:
35 SYNAGOGUE CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
TOPOGRAPHICAL SURVEY

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-03		C002
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	HANDRAIL RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION

NOTES:

1. DRAWING IS AS PER CSRS.UTM-17N COORDINATE SYSTEM.
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No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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MATTHEW CASCHERA
DIRECTOR,
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35 VANLEY CRESCENT
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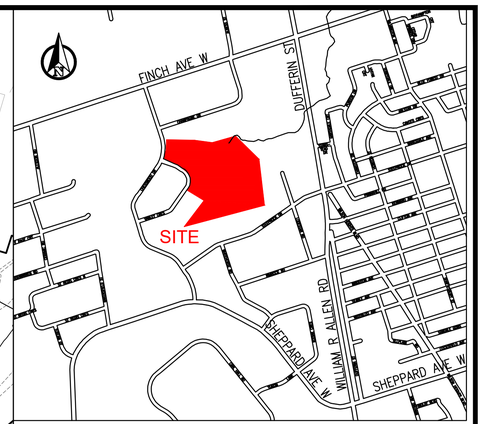
DUFFERIN TRANSFER STATION

PAVEMENT REHABILITATION
TOPOGRAPHICAL SURVEY

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-04		C003
DATE:	DECEMBER 2025						



KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
—o—o—o—	GUIDE RAIL
—o—o—o—	HANDRAIL RAIL
	BUILDING FOOTPRINT
—163.0—	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
—·—·—·—	EXISTING PROPERTY LINE
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
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CB	DENOTES CATCH BASIN
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HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION

NOTES:

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4. THE BOREHOLE INFORMATION SHOWN ON THE DRAWINGS HAS BEEN INCORPORATED FROM THE GEOTECHNICAL DESIGN REPORT AND IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND INTERPRET THE BOREHOLE LOGS INDEPENDENTLY AND ACCOUNT FOR ANY SITE-SPECIFIC CONDITIONS DURING CONSTRUCTION.

SOLID WASTE MANAGEMENT SERVICES

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L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
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AND RESOURCE MANAGEMENT

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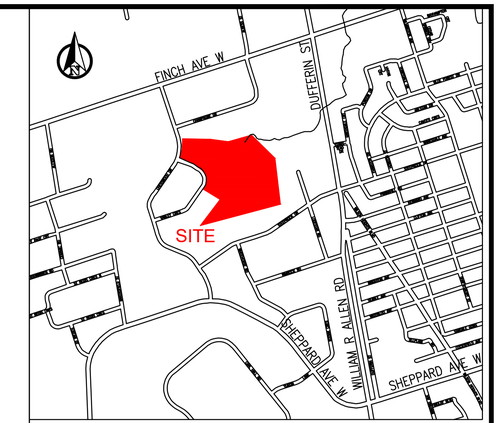
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
EXISTING SITE PLAN - CONTOUR MAP

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-05		C004
DATE:	DECEMBER 2025						



KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	HANDRAIL RAIL
	BUILDING FOOTPRINT
163.0	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING PROPERTY LINE
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
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HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION

NOTES:

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Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

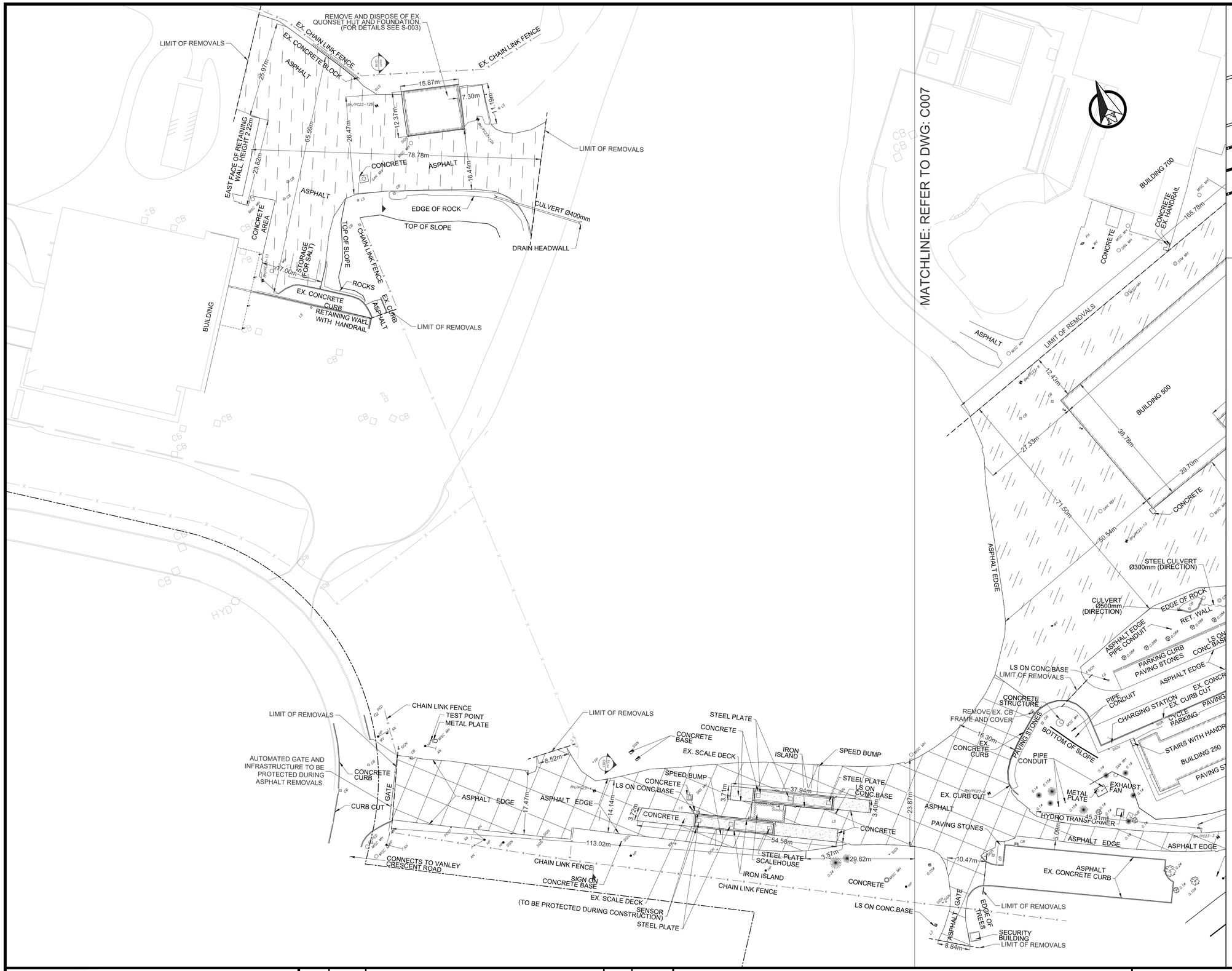
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

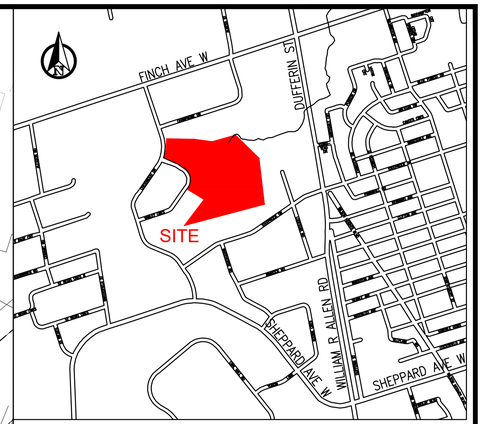
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
EXISTING SITE PLAN - CONTOUR MAP

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-06		C005
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

- EXISTING PROPERTY LINE
- EXISTING ASPHALT TO BE REPLACED WITH TYPE AA PAVEMENT (SEE C001)
- EXISTING ASPHALT TO BE REPLACED WITH TYPE BB PAVEMENT (SEE C001)
- EXISTING ASPHALT TO BE REPLACED WITH TYPE CC PAVEMENT (SEE C001)
- EXISTING ASPHALT TO BE REPLACED WITH TYPE DD PAVEMENT (SEE C001)
- EXISTING CURB AND GUTTER TO BE REMOVED
- EXISTING CURB TO BE REMOVED
- EXISTING WOODEN CURB TO BE REMOVED
- CONCRETE TO BE RETAINED
- EXISTING CONCRETE TO BE REPLACED WITH TYPE EE PAVEMENT (SEE C001)
- BOLLARD TO BE REMOVED
- BOLLARD TO BE RETAINED

NOTES:

1. DRAWING IS AS PER CSRS.UTM-17N COORDINATE SYSTEM.
2. SEE GEOTECHNICAL REPORT FOR EXISTING PAVEMENT INFORMATION, INCLUDING PRESENCE OF ASBESTOS IN ASPHALT.
3. ALL FEATURES SHOWN IN THIS DRAWING ARE EXISTING FEATURES.
4. CONTRACTOR TO VERIFY ESTIMATED REMOVAL QUANTITIES.
5. REMOVAL DEPTH OF EXISTING PAVEMENT TO SUIT PROPOSED PAVEMENT.
6. FOR CONSTRUCTION NOTES REFER TO C001.
7. FOR EXISTING AND PROPOSED CROSS SECTIONS REFER TO C017 TO C018.
8. DOOR OPENING SENSORS SHALL BE ADEQUATELY PROTECTED. THE CONTRACTOR SHALL ALSO PROTECT OVERHEAD GATES, TRACKS, AND SENSORS AT THE TIPPING FLOOR, AS WELL AS RADIATION SENSORS AT THE SCALE HOUSE. IF DAMAGED, THE CONTRACTOR SHALL REPLACE THE SENSORS AT THEIR OWN COST.

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0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

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PROJECT ADDRESS:
35 VANLEY CRESCENT
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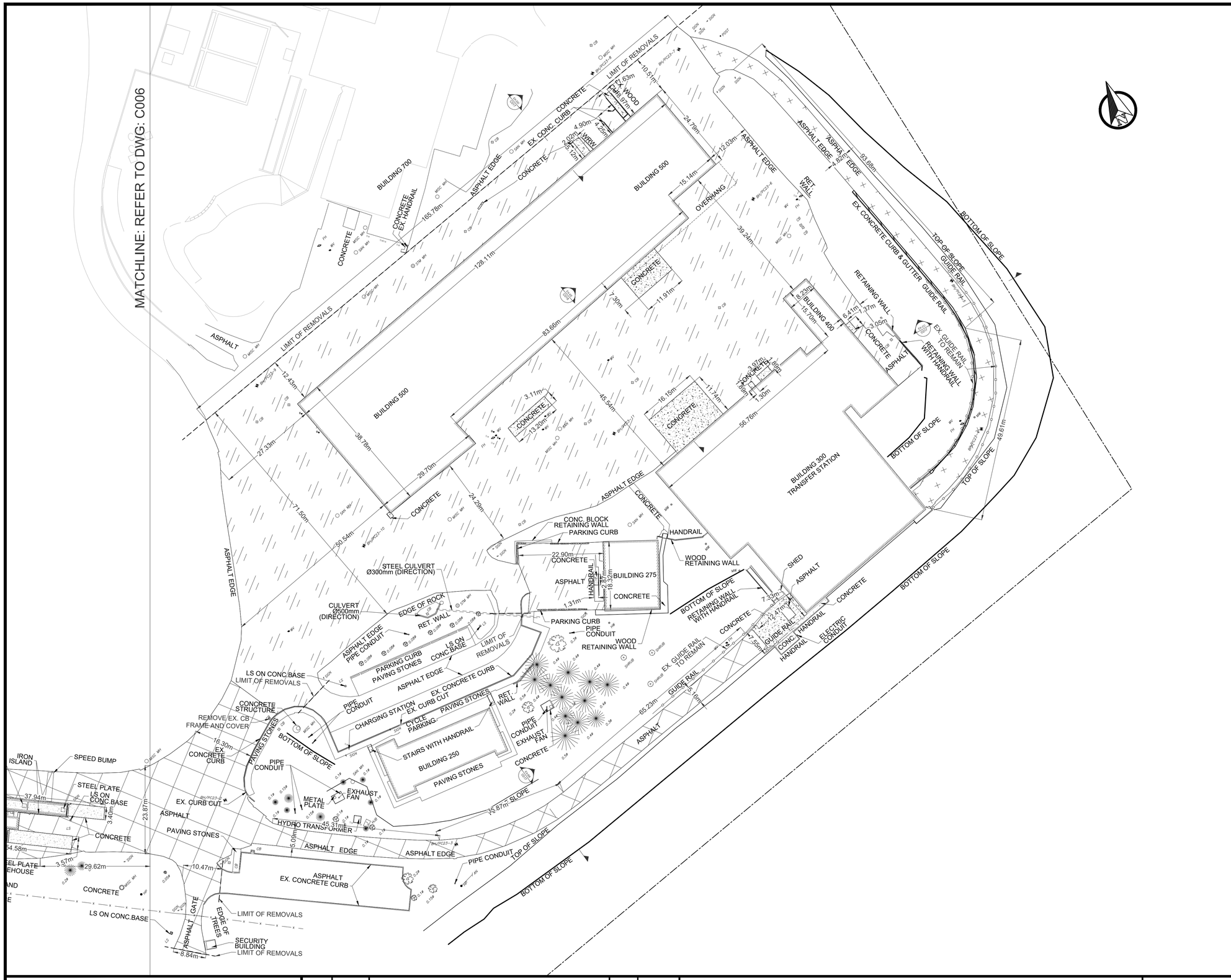
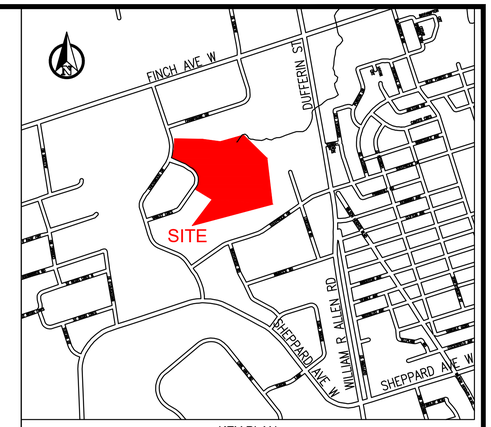
DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
REMOVALS

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-07		C006
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

- EXISTING PROPERTY LINE
- EXISTING ASPHALT TO BE REPLACED WITH TYPE AA PAVEMENT (SEE C001)
- EXISTING ASPHALT TO BE REPLACED WITH TYPE BB PAVEMENT (SEE C001)
- EXISTING ASPHALT TO BE REPLACED WITH TYPE CC PAVEMENT (SEE C001)
- EXISTING ASPHALT TO BE REPLACED WITH TYPE DD PAVEMENT (SEE C001)
- EXISTING CURB AND GUTTER TO BE REMOVED
- EXISTING CURB TO BE REMOVED
- EXISTING WOODEN CURB TO BE REMOVED
- CONCRETE TO BE RETAINED
- EXISTING CONCRETE TO BE REPLACED WITH TYPE EE PAVEMENT (SEE C001)
- BOLLARD TO BE REMOVED
- BOLLARD TO BE RETAINED

NOTES:

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L3T 7Z3, Canada

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0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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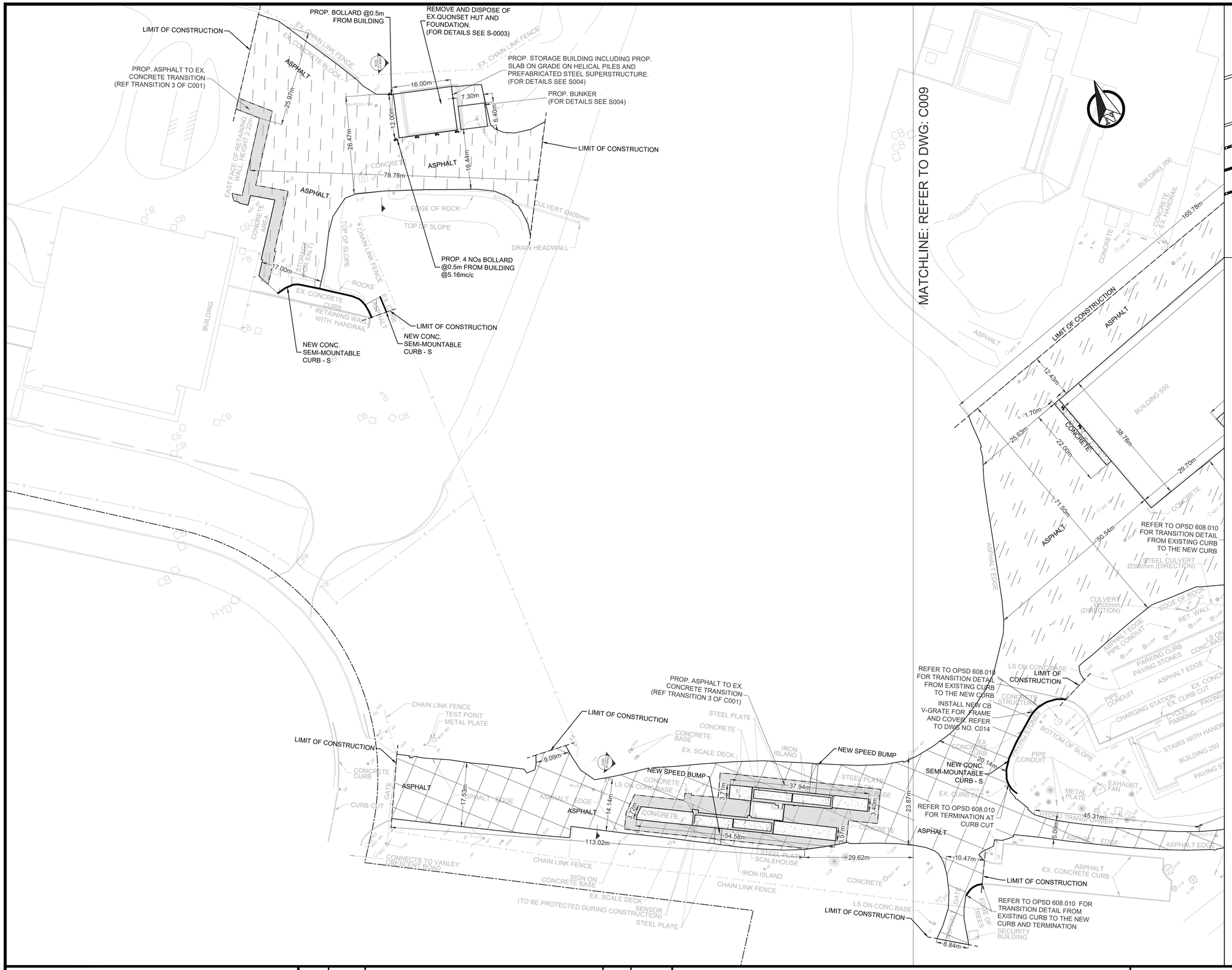
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

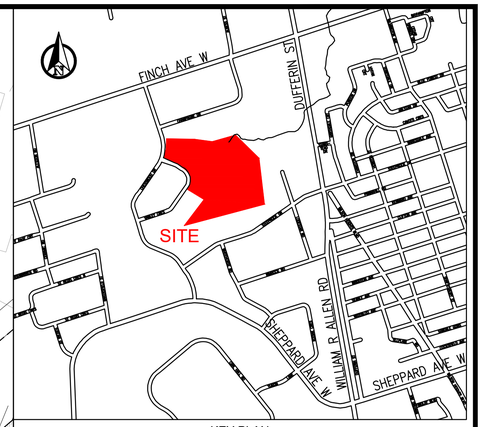
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
REMOVALS

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-08		C007
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

- EXISTING PROPERTY LINE
- PROPOSED CURB (OPSD 600.020 TANGENT)
- PROPOSED CONCRETE CURB (OPSD 600.020 SUPERELEVATED)
- PROPOSED LONGITUDINAL JOINTS
- PROPOSED TRANSVERSE JOINTS
- EXISTING PROPERTY LINE
- PROPOSED ASPHALT TO PROPOSED CONCRETE TRANSITION
- PROPOSED ASPHALT TO EXISTING CONCRETE TRANSITION
- PROPOSED ASPHALT TYPE AA (SEE C001)
- PROPOSED ASPHALT TYPE BB (SEE C001)
- PROPOSED ASPHALT TYPE CC (SEE C001)
- PROPOSED ASPHALT TYPE DD (SEE C001)
- PROPOSED CONCRETE TYPE EE (SEE C001)
- EXISTING CONCRETE TO BE RETAINED
- B1 PROPOSED BOLLARDS (SEE DETAIL 1 ON C015)
- B2 PROPOSED BOLLARDS (SEE DETAIL 2 ON C015)

NOTES:

1. DRAWING IS AS PER CSRS.UTM-17N COORDINATE SYSTEM.
2. SEE DRAWING C001, C014 AND C015 FOR PROPOSED PAVEMENT/ CURB NOTES AND DETAILS
3. CONTRACTOR TO PROVIDE LEVELING ADJUSTMENT WHEN INSTALLING V-GRATE FRAMES AS REQUIRED.
4. CONTRACTOR TO LOCALLY MATCH LOW-POINT OF CURB TO LOW-POINT OF V-GRATE.
5. CONC.SEMI-MOUNTABLE CURB - T INDICATES CONCRETE SEMI-MOUNTABLE CURB WITH WIDE GUTTER - TANGENT.
6. CONC.SEMI-MOUNTABLE CURB - S INDICATES CONCRETE SEMI-MOUNTABLE CURB WITH WIDE GUTTER - SUPERELEVATED.
7. LONGITUDINAL AND TRANSVERSE JOINTS SHOULD BE AT EVERY 4.5m AS PER OPSD 551.010. AT TRANSVERSE JOINTS THE DOWEL BARS SHOULD BE AS PER OPSD 552.051, ATTACHED AT 300mm SPACING (32mm DIAMETER BY 450mm LONG EPOXY COATED SMOOTH BARS).
8. ISOLATION JOINT TO BE PROVIDED AT THE INTERFACE BETWEEN CONCRETE PAVEMENT AND EXISTING STRUCTURE. REFER TO T-216.02-5 FOR DETAIL.
9. CONTRACTOR TO FOLLOW UTILITY ISOLATION AS PER T-216-02-05 ON C014.
10. FOR CONSTRUCTION NOTES REFER TO C001.
11. FOR EXISTING AND PROPOSED CROSS SECTIONS REFER TO C017 TO C018.
12. DOOR OPENING SENSORS SHALL BE ADEQUATELY PROTECTED AT ALL LOCATIONS. THE CONTRACTOR SHALL ALSO PROTECT OVERHEAD GATES, TRACKS, AND SENSORS AT THE TIPPING FLOOR, AS WELL AS RADIATION SENSORS AT THE SCALE HOUSE. IF DAMAGED, THE CONTRACTOR SHALL REPLACE THE SENSORS AT THEIR OWN COST.
13. THE CONTRACTOR SHALL REPLACE CATCH BASIN COVERS FOR ALL CATCH BASINS LOCATED WITHIN THE CURB AND GUTTER ALONG THE ROAD EDGE.

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

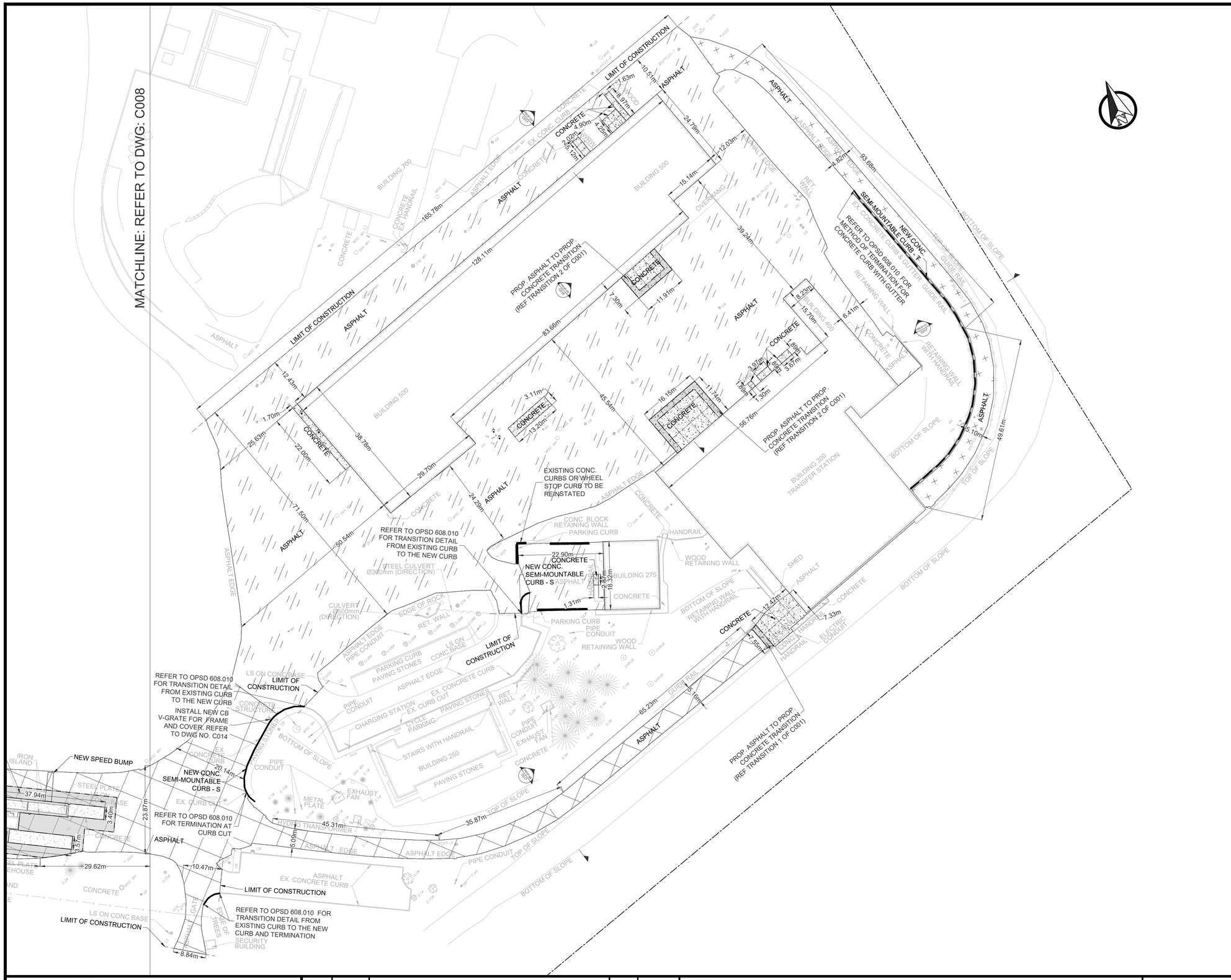
DUFFERIN TRANSFER STATION

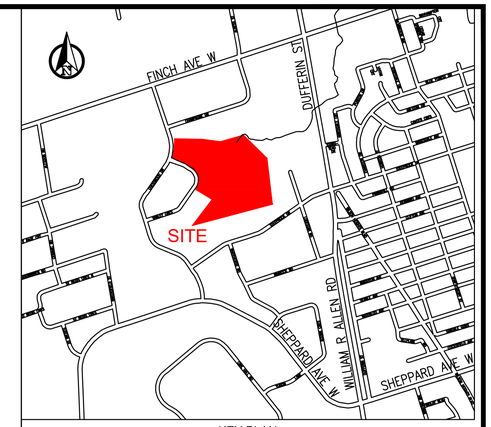
PAVEMENT REHABILITATION

PROPOSED PAVEMENT

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-09		C008
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

- EXISTING PROPERTY LINE
- PROPOSED CURB (OPSD 600.020 TANGENT)
- PROPOSED CONCRETE CURB (OPSD 600.020 SUPERELEVATED)
- PROPOSED LONGITUDINAL JOINTS
- PROPOSED TRANSVERSE JOINTS
- EXISTING PROPERTY LINE
- PROPOSED ASPHALT TO PROPOSED CONCRETE TRANSITION
- PROPOSED ASPHALT TO EXISTING CONCRETE TRANSITION
- PROPOSED ASPHALT TYPE AA (SEE C001)
- PROPOSED ASPHALT TYPE BB (SEE C001)
- PROPOSED ASPHALT TYPE CC (SEE C001)
- PROPOSED ASPHALT TYPE DD (SEE C001)
- PROPOSED CONCRETE TYPE EE (SEE C001)
- EXISTING CONCRETE TO BE RETAINED
- B1 PROPOSED BOLLARDS (SEE DETAIL 1 ON C015)
- B2 PROPOSED BOLLARDS (SEE DETAIL 2 ON C015)

NOTES:

1. DRAWING IS AS PER CSRS.UTM-17N COORDINATE SYSTEM.
2. SEE DRAWING C001, C014 AND C015 FOR PROPOSED PAVEMENT/ CURB NOTES AND DETAILS
3. CONTRACTOR TO PROVIDE LEVELING ADJUSTMENT WHEN INSTALLING V-GRATE FRAMES AS REQUIRED.
4. CONTRACTOR TO LOCALLY MATCH LOW-POINT OF CURB TO LOW-POINT OF V-GRATE.
5. CONC.SEMI-MOUNTABLE CURB - T INDICATES CONCRETE SEMI-MOUNTABLE CURB WITH WIDE GUTTER - TANGENT.
6. CONC.SEMI-MOUNTABLE CURB - S INDICATES CONCRETE SEMI-MOUNTABLE CURB WITH WIDE GUTTER - SUPERELEVATED.
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0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

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PROJECT ADDRESS:
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TORONTO M3J 2B7

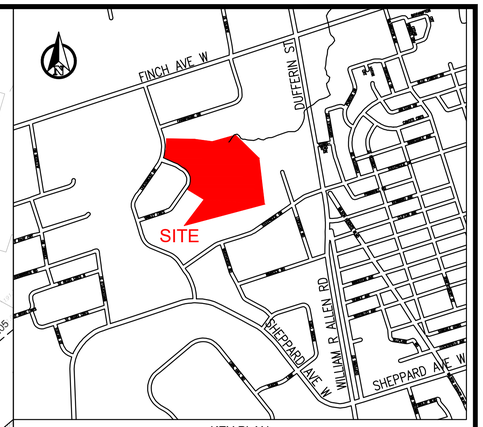
DUFFERIN TRANSFER STATION

PAVEMENT REHABILITATION

PROPOSED PAVEMENT

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-10		C009
DATE:	DECEMBER 2025						



KEY PLAN
N.T.S

LEGEND:

—·—·—	EXISTING PROPERTY LINE
164.52	PROPOSED ELEVATION
2.5%	PROPOSED SLOPE
BH/PC	DENOTES BOREHOLE LOCATION

NOTES:

1. DRAWING IS AS PER CSRS.UTM-17N COORDINATE SYSTEM.
2. PROPOSED GRADES TO MATCH EXISTING GRADES UNLESS NOTED OTHERWISE.
3. INSTALL SUBDRAIN UNDERNEATH ALL PROPOSED CURBS AND AS SHOWN. SEE SUBDRAIN DETAIL ON C014. ALL SUBDRAINS SHALL OUTLET TO THE NEAREST CATCHBASIN.

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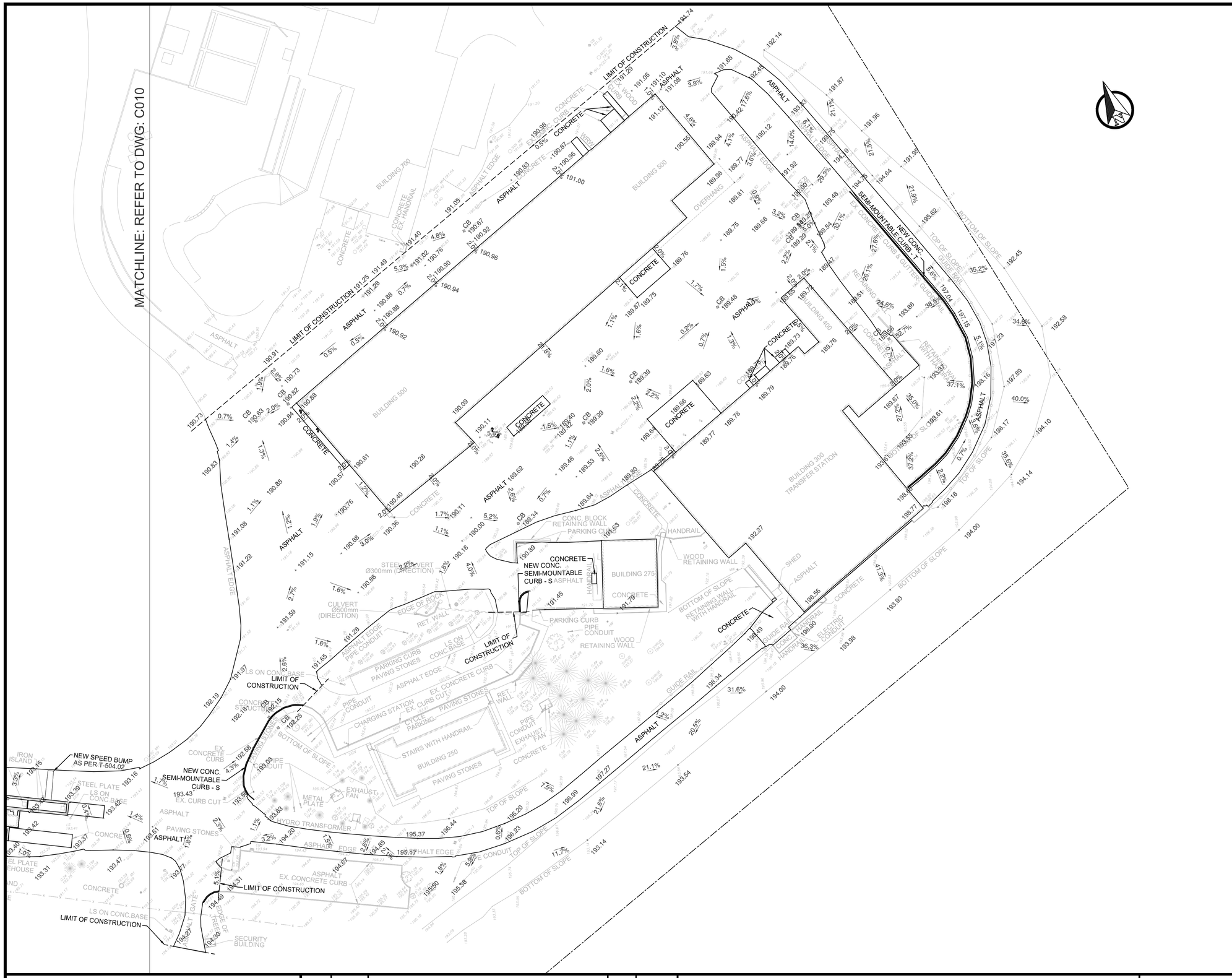
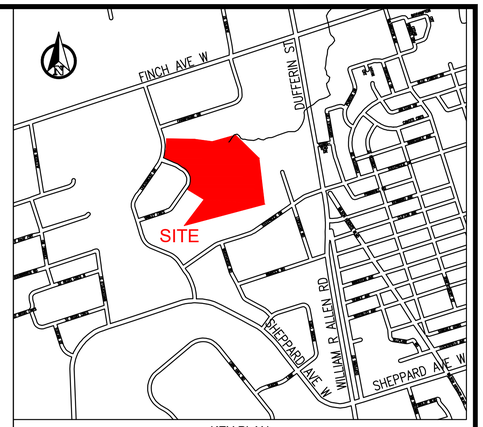
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
PROPOSED GRADES

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-11		C010
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

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—·—·—	EXISTING PROPERTY LINE
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BH/PC	DENOTES BOREHOLE LOCATION

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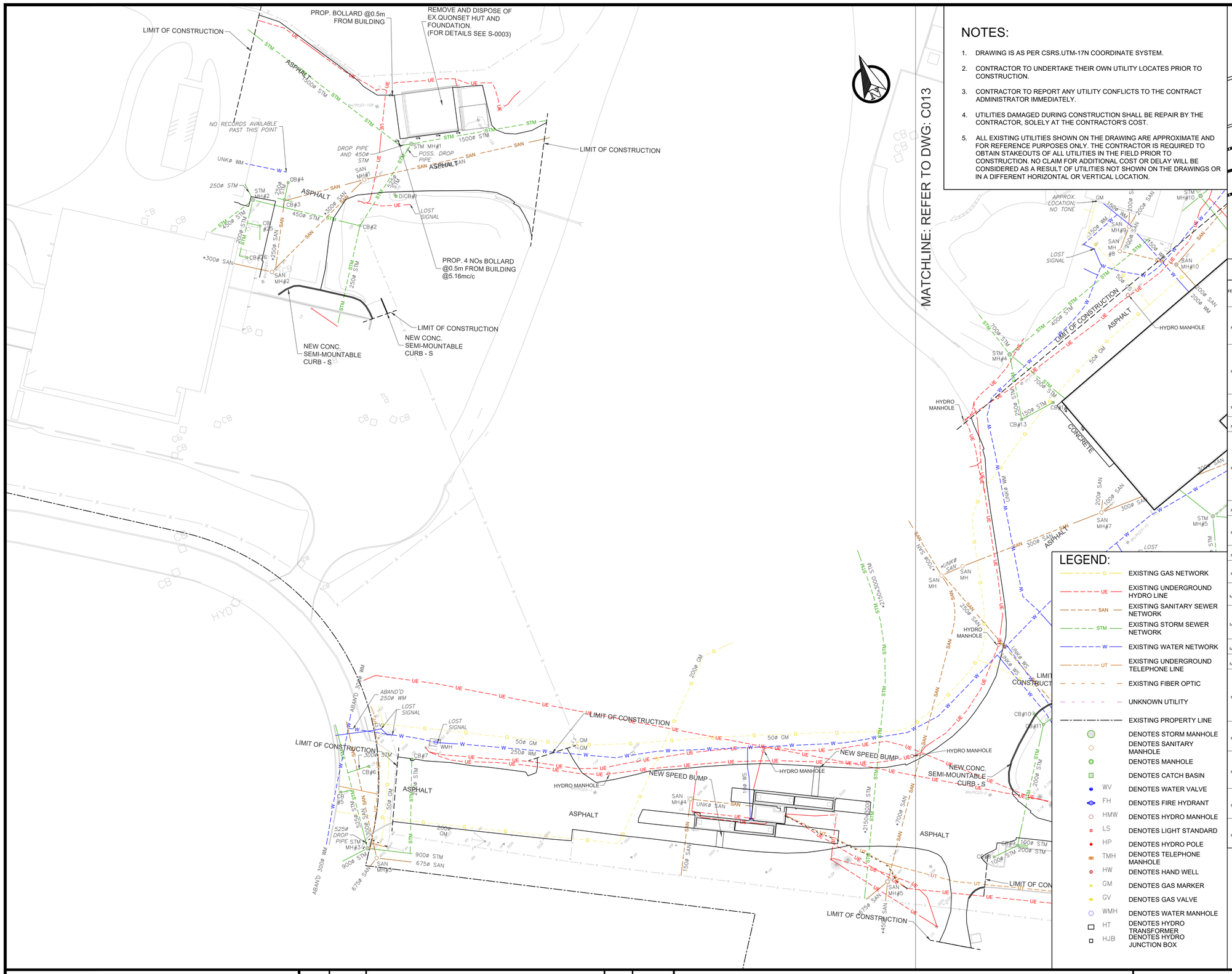
DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
PROPOSED GRADES

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-12		C011
DATE:	DECEMBER 2025						



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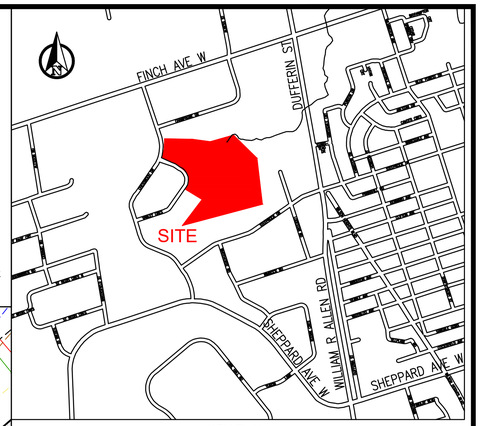

KEY PLAN
N.T.S

LEGEND:

- G — EXISTING GAS NETWORK
- UE — EXISTING UNDERGROUND HYDRO LINE
- SAN — EXISTING SANITARY SEWER NETWORK
- STM — EXISTING STORM SEWER NETWORK
- W — EXISTING WATER NETWORK
- UT — EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING FIBER OPTIC
- UNKNOWN UTILITY
- EXISTING PROPERTY LINE
- DENOTES STORM MANHOLE
- DENOTES SANITARY MANHOLE
- DENOTES MANHOLE
- DENOTES CATCH BASIN
- WV — DENOTES WATER VALVE
- FH — DENOTES FIRE HYDRANT
- HMW — DENOTES HYDRO MANHOLE
- LS — DENOTES LIGHT STANDARD
- HP — DENOTES HYDRO POLE
- TMH — DENOTES TELEPHONE MANHOLE
- HW — DENOTES HAND WELL
- GM — DENOTES GAS MARKER
- GV — DENOTES GAS VALVE
- WMH — DENOTES WATER MANHOLE
- HT — DENOTES HYDRO TRANSFORMER
- HJB — DENOTES HYDRO JUNCTION BOX

FEATURE ID	DIRECTION	DIAMETER (MM)	INVERT DEPTH (M)	TOP OF LID/ GRATE ELEVATION (M)	INVERT ELEVATION (M)	NOTES
SAN MH#1	*E	*300	*5.26	187.40	*182.14	RECESSED CHAMBER; FULL OF DEBRIS
	SW	300	5.12		182.28	
	W	250	3.60		183.80	
SAN MH#2	*NW	*300	N/A	187.36	N/A	NO ACCESS; TRAILER ON TOP OF MANHOLE
	*E	*300	N/A		N/A	
SAN MH#3	N	300	6.82	192.88	186.06	
	SE	675	7.26		185.62	
	SW	675	7.09		185.79	
SAN MH#4	*SE	N/A	N/A	193.44	N/A	
	SW	150	2.38		191.06	
SAN MH#5	*NE	*700	N/A	193.69	N/A	VERY DEEP CHAMBER AND PLATFORM OBSTRUCTING VIEW
	*SW	*450	N/A		N/A	
	*W	*675	N/A		N/A	
SAN MH#6	N	250	3.80	195.09	191.29	
	E	100	3.68		191.41	
SAN MH#7	NE	200	6.00	190.84	184.84	
	E	100	2.12		188.72	
	E	300	6.04		184.80	
	W	300	6.06		184.78	
SAN MH#8	NE	200	4.40	191.66	187.26	
	SE	200	4.41		187.25	
	NE	200	4.52		187.48	
SAN MH#9	NE	200	2.94	192.00	189.06	
	SW	200	4.53		187.47	
	NW	200	3.95		187.18	
SAN MH#10	NE	200	3.93	191.13	187.20	
	S	200	3.96		187.17	
SAN MH#11	N	200	3.45	189.44	185.99	
	N	150	1.38		188.06	
	*SE	*150	N/A		N/A	
	S	200	1.30		188.14	
	W	300	4.02		185.42	
SAN MH#12	N	200	2.21	190.87	188.66	
	S	200	2.15		188.72	
SAN MH#13	N	200	2.98	191.06	188.08	
	SW	200	3.12		187.94	
STM MH#1	E	1500	5.27	187.80	182.53	RECESSED CHAMBER
	SW	525	4.56		183.24	POSSIBLE DROP PIPE
	±SW	±525	±3.60		±184.20	
	W	1500	3.59		184.21	
	W	1500	5.15		182.65	DROP PIPE
	W	450	1.53		186.27	
STM MH#2	N	250	2.52	186.73	184.21	
	SE	450	2.65		184.08	
	SW	200	1.52		185.21	
	W	450	1.94		184.79	
STM MH#3	N	525	5.05	192.81	187.76	
	N	525	5.96		186.85	POSSIBLE DROP PIPE
	SE	900	6.07		186.74	
	W	900	6.00		186.81	
STM MH#4	N	700	5.85	190.73	184.88	
	E	400	2.95		187.78	
	SW	700	5.53		185.20	
	S	250	1.60		189.13	
STM MH#5	NW	700	3.75	189.87	186.12	
	E	600	3.65		186.22	
	SE	300	3.35		186.52	
	S	300	3.50		186.37	

FEATURE ID	DIRECTION	DIAMETER (MM)	INVERT DEPTH (M)	TOP OF LID/ GRATE ELEVATION (M)	INVERT ELEVATION (M)	NOTES
STM MH#6	N	300	2.43	191.09	188.66	
	W	200	2.30		188.79	
STM MH#7	N	300	2.20	191.21	189.01	
	W	400	2.42		188.79	
STM MH#8	N	300	2.28	189.36	187.08	
	E	600	2.84		186.52	
	SE	250	2.22		187.14	
	W	600	2.87		186.49	
STM MH#9	E	300	2.30	189.47	187.17	
	S	150	1.87		187.60	
	W	600	2.38		187.09	
STM MH#10	N	150	2.34	191.42	189.08	
	E	400	3.02		188.40	
	S	250	2.77		188.65	
	W	400	3.04		188.38	
DICB#1	N/A	N/A	N/A	N/A	N/A	UNABLE TO ACCESS; COVERED WITH STONES
CB#2	NW	450	4.95	188.51	183.56	RECESSED CHAMBER; DROP STRUCTURE MAY BE PRESENT ON SW CORNER
	NE	525	5.05		183.46	
	*SW	*250	*1.41		*187.10	
CB#3	NW	250	2.65	186.79	184.14	FULL OF DEBRIS
	NE	250	2.32		184.47	
	SE	250	2.70		184.09	
	SW	250	2.33		184.46	
CB#4	SW	250	1.50	186.67	185.17	GOSS TRAP
CB#5	E	N/A	N/A	192.83	N/A	
CB#6	W	300	1.10	192.89	191.79	
CB#7	S	200	2.39	192.71	190.32	
CB#8	E	100	0.39	193.88	193.49	
CB#9	NE	200	1.26	193.94	192.68	
	SE	100	0.50		193.44	
	SE	200	1.10		192.84	
	W	100	1.00		192.94	
CB#10	S	200	0.78	192.20	191.42	
CB#11	N	200	0.98	192.25	191.27	
	NE	200	1.02		191.23	
	SW	200	0.90		191.35	
DICB#12	E	200	1.45	190.40	188.95	FULL OF DEBRIS; ADDITIONAL LATERAL MAY BE PRESENT
CB#13	N	250	1.17	190.58	189.41	
	E	150	0.65		189.93	
CB#14	W	150	0.56	190.91	190.35	
CB#15	N	250	1.47	190.72	189.25	
CB#16	SW	300	1.98	190.92	188.94	
CB#17	S	300	1.61	191.32	189.71	
DCB#18	W	300	1.26	189.29	188.03	GOSS TRAP, FULL OF DEBRIS
CB#19	N	300	1.34	189.48	188.14	
CB#20	N	300	1.44	189.39	187.95	
CB#21	N	300	1.29	189.29	188.00	
CB#22	E	150	0.55	189.56	189.01	
	S	250	0.96		188.60	
CB#23	NW	300	1.73	189.29	187.56	
CB#24	N	200	0.84	189.70	188.86	
CB#25	*NW	*200	*1.24	*186.93	*185.69	BLUE CONTAINER OBSTRUCTING ACCESS
	*S	N/A	*1.00		*185.93	
CB#26	NW	200	0.90	186.98	186.08	

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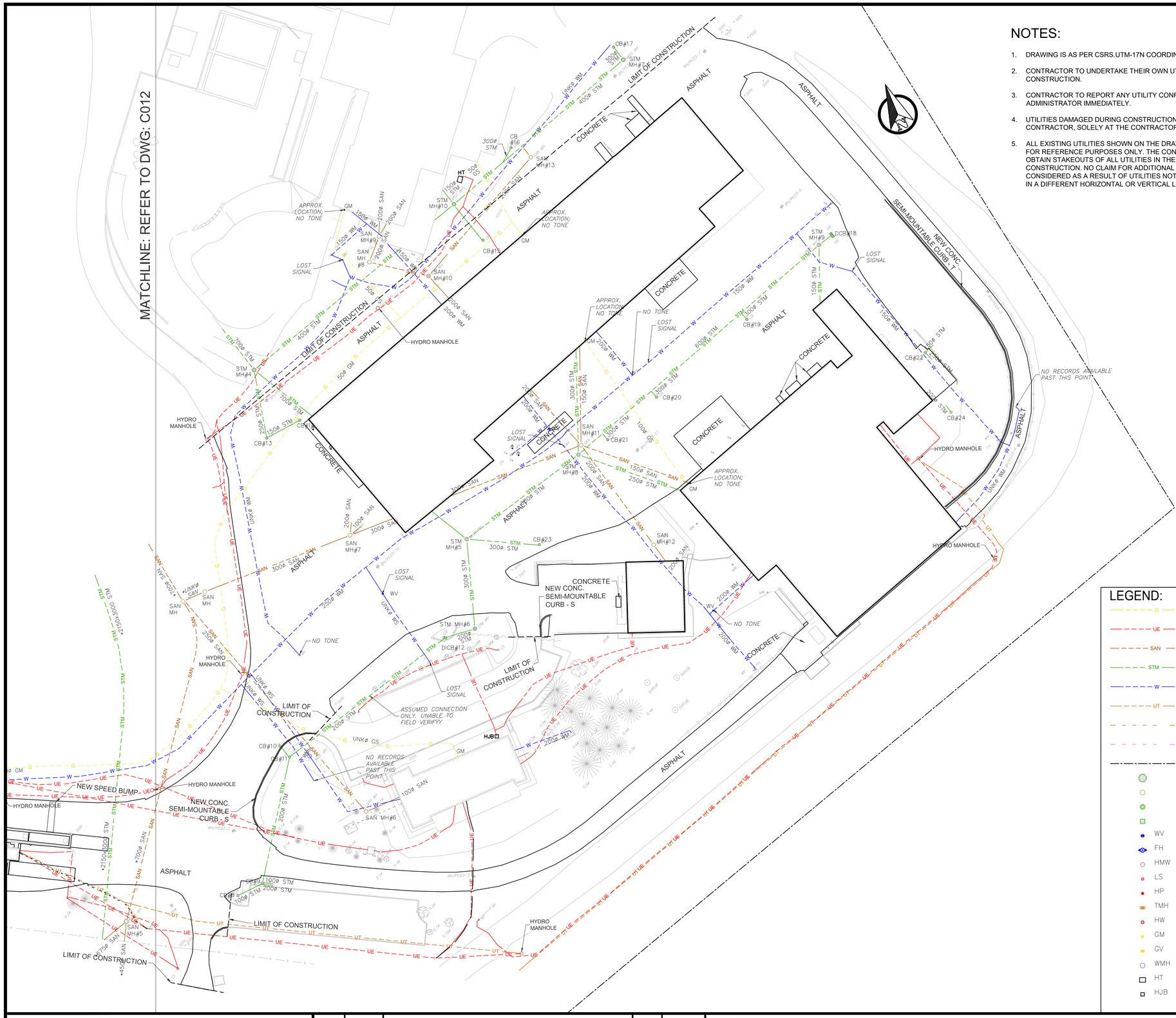
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
EXISTING SITE SERVICES

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-13		C012
DATE:	DECEMBER 2025						

MATCHLINE: REFER TO DWG: C012



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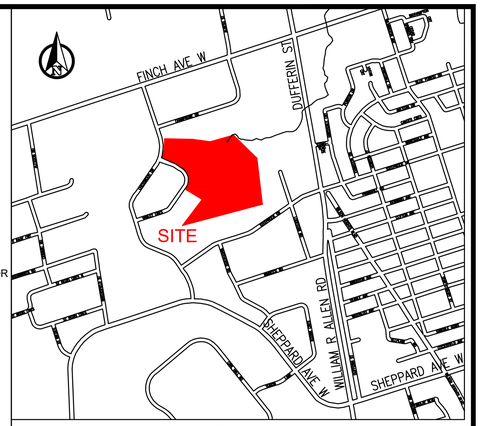

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- HT — DENOTES HYDRO TRANSFORMER
- HJB — DENOTES HYDRO JUNCTION BOX

FEATURE ID	DIRECTION	DIAMETER (MM)	INVERT DEPTH (M)	TOP OF LID/ GRATE ELEVATION (M)	INVERT ELEVATION (M)	NOTES
SAN MH#1	*E	*300	*5.26	187.40	*182.14	RECESSED CHAMBER; FULL OF DEBRIS
	SW	300	5.12		182.28	
	W	250	3.60		183.80	
SAN MH#2	*NW	*300	N/A	187.36	N/A	NO ACCESS; TRAILER ON TOP OF MANHOLE
	*E	*300	N/A		N/A	
SAN MH#3	N	300	6.82	192.88	186.06	
	SE	675	7.26		185.62	
	SW	675	7.09		185.79	
SAN MH#4	*SE	N/A	N/A	193.44	N/A	
	SW	150	2.38		191.06	
SAN MH#5	*NE	*700	N/A	193.69	N/A	VERY DEEP CHAMBER AND PLATFORM OBSTRUCTING VIEW
	*SW	*450	N/A		N/A	
	*W	*675	N/A		N/A	
SAN MH#6	N	250	3.80	195.09	191.29	
	E	100	3.68		191.41	
SAN MH#7	NE	200	6.00	190.84	184.84	
	E	100	2.12		188.72	
	E	300	6.04		184.80	
	W	300	6.06		184.78	
SAN MH#8	NE	200	4.40	191.66	187.26	
	SE	200	4.41		187.25	
SAN MH#9	NE	200	4.52	192.00	187.48	
	NE	200	2.94		189.06	
	SW	200	4.53		187.47	
SAN MH#10	NW	200	3.95	191.13	187.18	
	NE	200	3.93		187.20	
	S	200	3.96		187.17	
SAN MH#11	N	200	3.45	189.44	185.99	
	N	150	1.38		188.06	
	*SE	*150	N/A		N/A	
	S	200	1.30		188.14	
	W	300	4.02		185.42	
SAN MH#12	N	200	2.21	190.87	188.66	
	S	200	2.15		188.72	
SAN MH#13	N	200	2.98	191.06	188.08	
	SW	200	3.12		187.94	
STM MH#1	E	1500	5.27	187.80	182.53	RECESSED CHAMBER
	SW	525	4.56		183.24	POSSIBLE DROP PIPE
	±5W	±525	±3.60		±184.20	
	W	1500	3.59		184.21	
	W	1500	5.15		182.65	DROP PIPE
	W	450	1.53		186.27	
STM MH#2	N	250	2.52	186.73	184.21	
	SE	450	2.65		184.08	
	SW	200	1.52		185.21	
	W	450	1.94		184.79	
STM MH#3	N	525	5.05	192.81	187.76	
	N	525	5.96		186.85	POSSIBLE DROP PIPE
	SE	900	6.07		186.74	
	W	900	6.00		186.81	
STM MH#4	N	700	5.85	190.73	184.88	
	E	400	2.95		187.78	
	SW	700	5.53		185.20	
	S	250	1.60		189.13	
STM MH#5	NW	700	3.75	189.87	186.12	
	E	600	3.65		186.22	
	SE	300	3.35		186.52	
	S	300	3.50		186.37	

FEATURE ID	DIRECTION	DIAMETER (MM)	INVERT DEPTH (M)	TOP OF LID/ GRATE ELEVATION (M)	INVERT ELEVATION (M)	NOTES
STM MH#6	N	300	2.43	191.09	188.66	
	W	200	2.30		188.79	
STM MH#7	N	300	2.20	191.21	189.01	
	W	400	2.42		188.79	
STM MH#8	N	300	2.28	189.36	187.08	
	E	600	2.84		186.52	
	SE	250	2.22		187.14	
	W	600	2.87		186.49	
STM MH#9	E	300	2.30	189.47	187.17	
	S	150	1.87		187.60	
	W	600	2.38		187.09	
STM MH#10	N	150	2.34	191.42	189.08	
	E	400	3.02		188.40	
	S	250	2.77		188.65	
	W	400	3.04		188.38	
DICB#1	N/A	N/A	N/A	N/A	N/A	UNABLE TO ACCESS; COVERED WITH STONES
CB#2	NW	450	4.95	188.51	183.56	RECESSED CHAMBER; DROP STRUCTURE MAY BE PRESENT ON SW CORNER
	NE	525	5.05		183.46	
	*SW	*250	*1.41		*187.10	
CB#3	NW	250	2.65	186.79	184.14	FULL OF DEBRIS
	NE	250	2.32		184.47	
	SE	250	2.70		184.09	
	SW	250	2.33		184.46	
CB#4	SW	250	1.50	186.67	185.17	GOSS TRAP
CB#5	E	N/A	N/A	192.83	N/A	
CB#6	W	300	1.10	192.89	191.79	
CB#7	S	200	2.39	192.71	190.32	
CB#8	E	100	0.39	193.88	193.49	
CB#9	NE	200	1.26	193.94	192.68	
	SE	100	0.50		193.44	
	SE	200	1.10		192.84	
	W	100	1.00		192.94	
CB#10	S	200	0.78	192.20	191.42	
CB#11	N	200	0.98	192.25	191.27	
	NE	200	1.02		191.23	
	SW	200	0.90		191.35	
DICB#12	E	200	1.45	190.40	188.95	FULL OF DEBRIS; ADDITIONAL LATERAL MAY BE PRESENT
CB#13	N	250	1.17	190.58	189.41	
	E	150	0.65		189.93	
CB#14	W	150	0.56	190.91	190.35	
CB#15	N	250	1.47	190.72	189.25	
CB#16	SW	300	1.98	190.92	188.94	
CB#17	S	300	1.61	191.32	189.71	
DCB#18	W	300	1.26	189.29	188.03	GOSS TRAP; FULL OF DEBRIS
CB#19	N	300	1.34	189.48	188.14	
CB#20	N	300	1.44	189.39	187.95	
CB#21	N	300	1.29	189.29	188.00	
CB#22	E	150	0.55	189.56	189.01	
	S	250	0.96		188.60	
CB#23	NW	300	1.73	189.29	187.56	
CB#24	N	200	0.84	189.70	188.86	
CB#25	*NW	*200	*1.24	*186.93	*185.69	BLUE CONTAINER OBSTRUCTING ACCESS
	*S	N/A	*1.00		*185.93	
CB#26	NW	200	0.90	186.98	186.08	

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
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150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

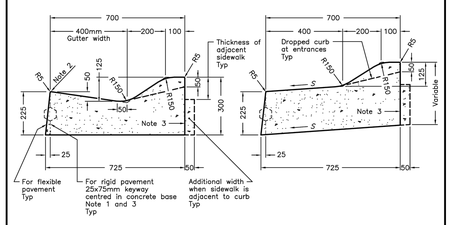
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
EXISTING SITE SERVICES

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-14		C013
DATE:	DECEMBER 2025						

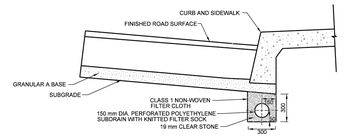


TANGENT SUPERELEVATED

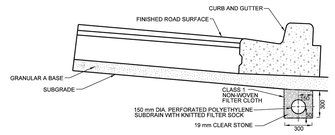
LEGEND:
S – Rate of pavement superelevation in percent, %.

NOTES:
1 When curb and gutter is adjacent to concrete pavement or base, this drawing shall be used in conjunction with OPSD 552.010 and 552.020.
2 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.
3 For slipforming procedure a 5% batter is acceptable.
A Treatment at entrances shall be according to OPSD 351.010.
B Outlet treatment shall be according to the OPSD 610 Series.
C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2012	Rev 2
CONCRETE SEMI–MOUNTABLE CURB WITH WIDE GUTTER	OPSD 600.020	



TYPICAL SUBDRAIN DETAIL FOR MONOLITHIC CONCRETE CURB AND SIDEWALK

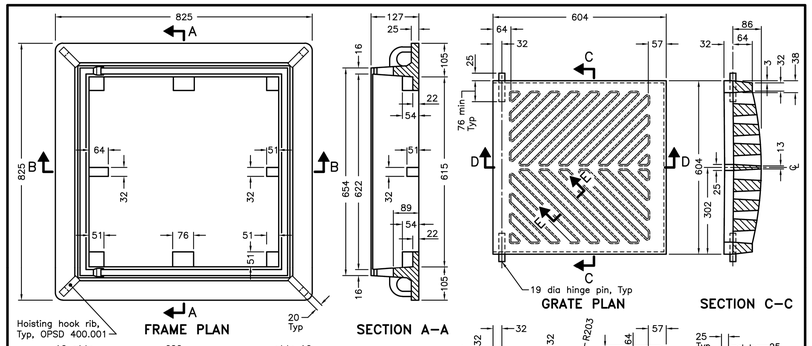


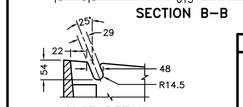
TYPICAL SUBDRAIN DETAIL FOR CONCRETE CURB AND GUTTER

NOTES:
1. FILTER CLOTH SHALL BE OVERLAPPED AT TOP AND INSTALLED ACCORDING TO TS 405.
2. IF THE EXISTING CONCRETE CURB AND GUTTER IS TO REMAIN IN PLACE, THE SUBDRAIN SHALL BE PLACED BEHIND THE CURB UNDER THE STONE BASE. THE SUBDRAIN SHALL BE PLACED AS CLOSE AS POSSIBLE TO THE CENTRELINE OF THE CURB.
3. LEDGE BEHIND CURB IS FOR ILLUSTRATION ONLY, REFER TO T-600.06-1 FOR DETAIL.

All dimensions are in millimetres unless otherwise shown.

TORONTO	ENGINEERING & CONSTRUCTION SERVICES STANDARD DRAWING	REV 3	NOV 2014
	ROADWAY SUBDRAINS	T-216.02-8	
		NTS	SHEET 1

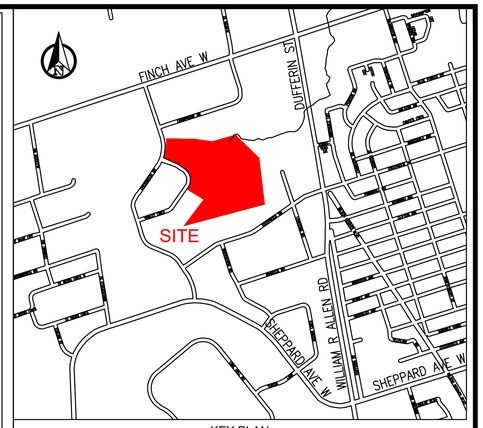




SLOT DETAIL

NOTE:
A This OPSD shall be read in conjunction with OPSD 610.010.
B All dimensions are in millimetres unless otherwise shown.

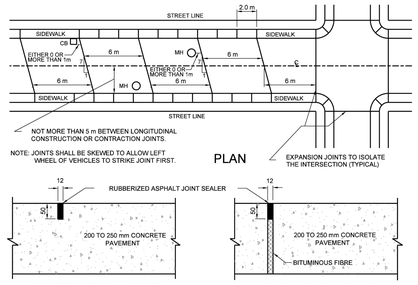
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 3
CAST IRON, SQUARE FRAME WITH SQUARE V GRATE FOR CATCH BASINS, HERRING BONE OPENINGS	OPSD 400.030	



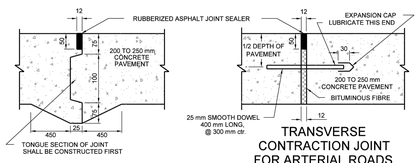
KEY PLAN
N.T.S

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.



CONTRACTION JOINT EXPANSION JOINT

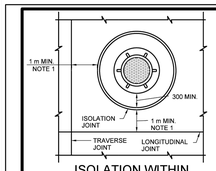


CONSTRUCTION JOINT TRANSVERSE CONTRACTION JOINT FOR ARTERIAL ROADS OR AS SPECIFIED

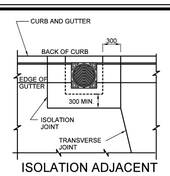
NOTES:
1. PLACE STEEL MESH 102 x 102 @ 2.02 kg / m^2 AROUND MAINTENANCE HOLES AND CATCHBASINS TO COVER AREA ENCLOSED BY 1.5 m FROM THE APPURTENANCE, AND BE CLEAR OF JOINTS BY 150 mm.
2. RECONSTRUCTION SHOULD BE CARRIED FURTHER TO THE NEXT JOINT.

All dimensions are in millimetres unless otherwise shown.

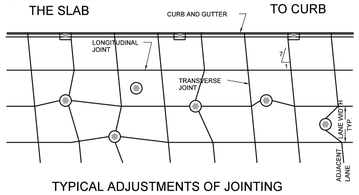
TORONTO	ENGINEERING & CONSTRUCTION SERVICES STANDARD DRAWING	REV 2	SEP 2019
	LOCATION AND DETAIL OF JOINTS FOR RIGID PAVEMENTS	T-216.02-3	
		NTS	SHEET 1



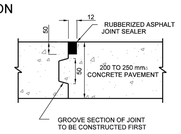
ISOLATION WITHIN THE SLAB



ISOLATION ADJACENT TO CURB



TYPICAL ADJUSTMENTS OF JOINTING AT UTILITY ISOLATION

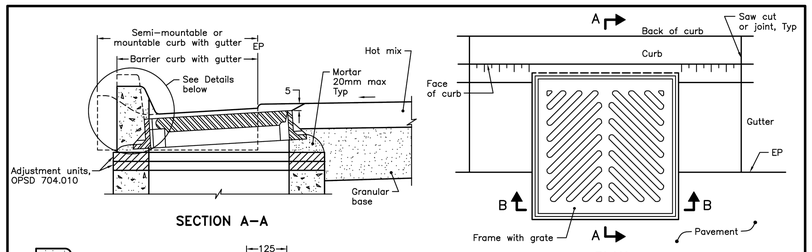


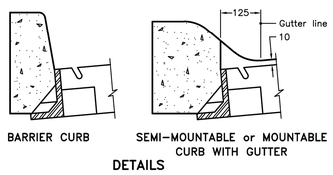
ISOLATION JOINT

NOTES:
1. WHEN LONGITUDINAL JOINT OR TRANSVERSE JOINT IS WITHIN 1 m OF THE ISOLATION JOINT, USE APPROPRIATE ADJUSTMENT OF JOINTING.

All dimensions are in millimetres unless otherwise shown.

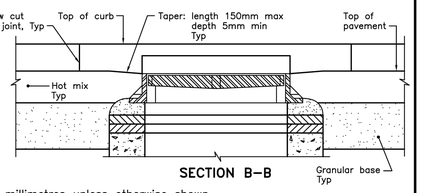
TORONTO	ENGINEERING & CONSTRUCTION SERVICES STANDARD DRAWING	REV 1	NOV 2014
	UTILITY ISOLATION IN COMPOSITE PAVEMENT	T-216.02-5	
		NTS	SHEET 1



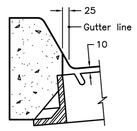


BARRIER CURB SEMI–MOUNTABLE or MOUNTABLE CURB WITH GUTTER

DETAILS



SECTION B–B



BARRIER CURB WITH GUTTER

NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 2
CATCH BASIN FRAME WITH GRATE INSTALLATION AT CURB WITH GUTTER	OPSD 610.010	

SOLID WASTE MANAGEMENT SERVICES

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150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO — SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

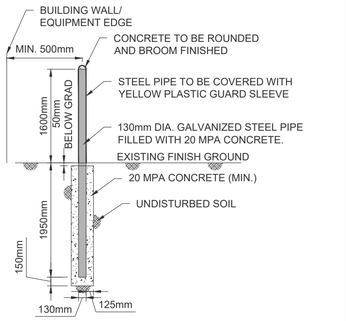
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

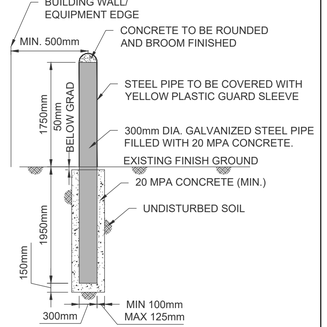
DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CIVIL DETAILS - 1

CIVIL

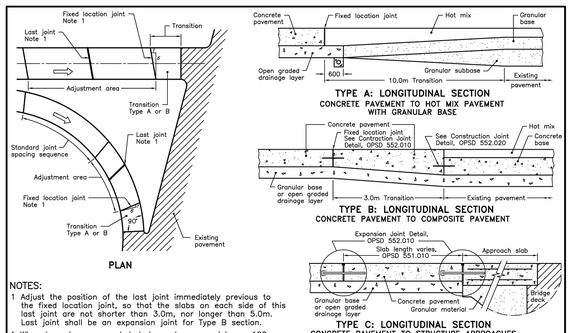
DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	N.T.S			DRAWING NUMBER:	1627-2025-5-15	C014
DATE:	DECEMBER 2025					



DETAIL 1: TYPE - 1 GALVANIZED
STEEL CONCRETE-FILLED BOLLARD
SCALE 1:50

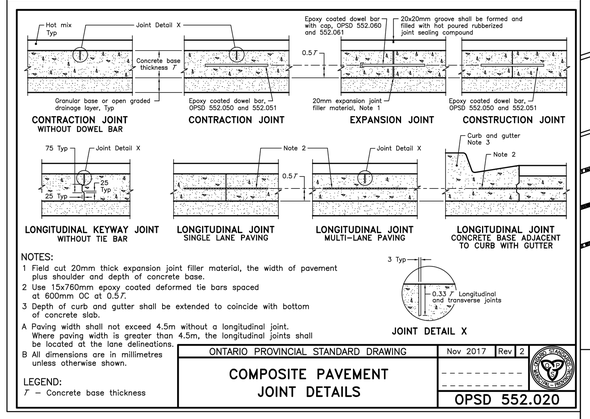


DETAIL 2: TYPE - 2 GALVANIZED
STEEL CONCRETE-FILLED BOLLARD
SCALE 1:50



NOTES:
1 Adjust the position of the last joint immediately previous to the fixed location joint, so that the slabs on each side of this last joint are not shorter than 3.0m, nor longer than 5.0m. Last joint shall be an expansion joint for Type B section.
A When base is open graded drainage layer, a minimum 100mm of Granular A material is required beneath it.
B For Type C details of approach slab see structural drawing(s).
C All dimensions are in millimetres unless otherwise shown.

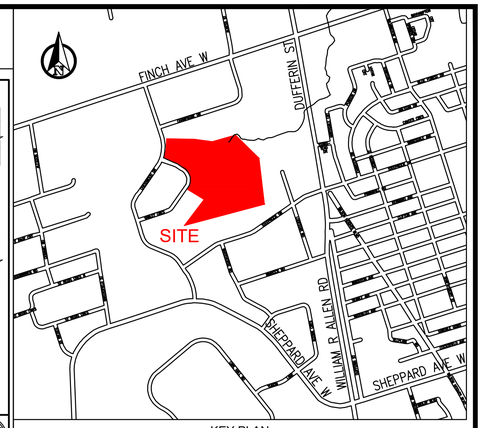
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2017	Rev 2
CONCRETE PAVEMENT APPROACH TREATMENT TO HOT MIX AND COMPOSITE PAVEMENTS AND STRUCTURE APPROACHES	OPSD 555.010	



NOTES:
1 Field cut 20mm thick expansion joint filler material, the width of pavement plus shoulder and depth of concrete base.
2 Use 15x760mm epoxy coated deformed tie bars spaced at 600mm OC at 0.5 7.
3 Depth of curb and gutter shall be extended to coincide with bottom of concrete slab.
A Paving width shall not exceed 4.5m without a longitudinal joint. Where paving width is greater than 4.5m, the longitudinal joints shall be located at the lane delineations.
B All dimensions are in millimetres unless otherwise shown.

LEGEND:
7 – Concrete base thickness

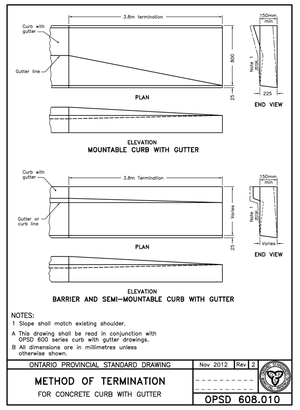
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2017	Rev 2
COMPOSITE PAVEMENT JOINT DETAILS	OPSD 552.020	



KEY PLAN
N.T.S

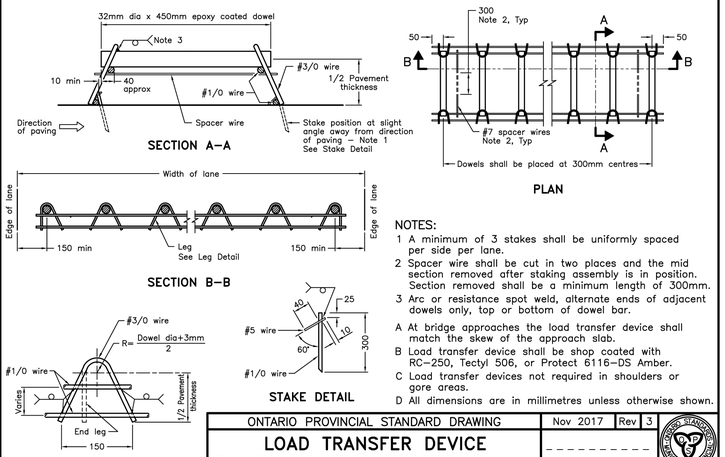
NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.



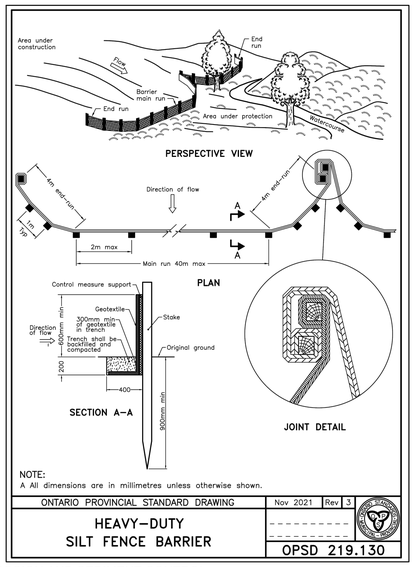
NOTES:
1 Slope shall match existing shoulder.
A This drawing shall be read in conjunction with OPSD 600 series curb with gutter drawings.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2012	Rev 2
METHOD OF TERMINATION FOR CONCRETE CURB WITH GUTTER	OPSD 608.010	



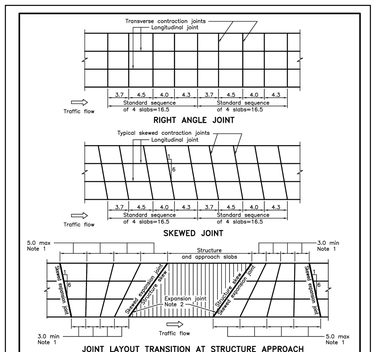
NOTES:
1 A minimum of 3 stakes shall be uniformly spaced per side per lane.
2 Spacer wire shall be cut in two places and the mid section removed after staking assembly is in position. Section removed shall be a minimum length of 300mm.
3 Arc or resistance spot weld, alternate ends of adjacent dowels only, top or bottom of dowel bar.
A At bridge approaches the load transfer device shall match the skew of the approach slab.
B Load transfer device shall be shop coated with RC–250, Tectyl 506, or Protect 6116–DS Amber.
C Load transfer devices not required in shoulders or gore areas.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2017	Rev 3
LOAD TRANSFER DEVICE RIGHT ANGLE CONTRACTION JOINT CONCRETE OR COMPOSITE PAVEMENT	OPSD 552.051	



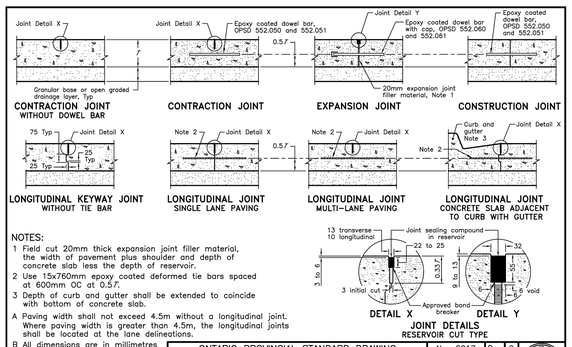
NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2021	Rev 3
HEAVY–DUTY SILT FENCE BARRIER	OPSD 219.130	



NOTES:
1 The transverse joint adjacent to the skewed expansion joint shall be placed so the slab length is not shorter than 3.0m nor longer than 5.0m.
2 Expansion joints shall be placed at each end of both structure approach slabs.
A All joints shall be according to OPSD 552.010 or OPSD 552.020.
B Construction joints shall be right angled joints located a minimum of 2.0m from adjacent transverse joints.
C Transverse joints shall be extended to include the full width of the concrete shoulders and curb with gutter.
D All dimensions are in metres unless otherwise shown.

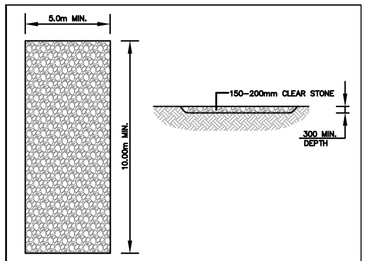
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2017	Rev 2
CONCRETE AND COMPOSITE PAVEMENT JOINT SPACING	OPSD 551.010	



NOTES:
1 Field cut 20mm thick expansion joint filler material, the width of pavement plus shoulder and depth of concrete slab less the depth of reservoir.
2 Use 15x760mm epoxy coated deformed tie bars spaced at 600mm OC at 0.5 7.
3 Depth of curb and gutter shall be extended to coincide with bottom of concrete slab.
A Paving width shall not exceed 4.5m without a longitudinal joint. Where paving width is greater than 4.5m, the longitudinal joints shall be located at the lane delineations.
B All dimensions are in millimetres unless otherwise shown.

LEGEND:
7 – Concrete slab thickness

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2017	Rev 2
CONCRETE PAVEMENT JOINT DETAILS	OPSD 552.010	



NOTES:
1. GRANULAR MATERIAL IS TO BE CLEAN APPROVED MATERIAL AND PLACED AT NOTED DIMENSION PRIOR TO LAND DISTURBANCE.
2. GETEXTILE IS TO BE PLACED OVER THE ENTIRE AREA PRIOR TO STONE PLACEMENT.
3. MAINTENANCE – THE ENTRANCE SHAL BE MAINTAINED IN A CONDITION WHICH WILL REDUCE TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W. AND GRANULAR MATERIAL IS TO BE REPLACED AS WANTED OR DIRECTED BY THE CONTRACT ADMINISTRATOR. WSP MODIFIED

CONSTRUCTION MUD–MAT DETAIL

EROSION AND SEDIMENT CONTROL

1. EROSION AND SEDIMENT CONTROL (ESC) MEASURES WILL BE IMPLEMENTED PRIOR TO, AND MAINTAINED DURING CONSTRUCTION PHASES, TO PREVENT ENTRY OF SEDIMENT INTO THE WATER. ALL DAMAGED EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE REPAIRED OR REPLACED WITHIN 48 HOURS OF INSPECTION OR BOTH.
2. ALL DISTURBED AREAS WILL BE MINIMIZED TO THE EXTENT POSSIBLE, AND TEMPORARILY OR PERMANENTLY STABILIZED OR RESTORED AS THE WORK PROGRESSES.
3. CONTRACTOR SHALL INSTALL SEDIMENT CONTROL TRAPS AT ALL CATCHBASINS ON SITE. ALL SEDIMENT CONTROL TRAPS ARE TO BE REGULARLY CHECKED AND MAINTAINED INCLUDING AFTER ALL STORM EVENTS.
4. THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO MINIMIZE SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREA. IF THE PRESCRIBED MEASURES ARE NOT EFFECTIVE IN PREVENTING THE RELEASE OF DELETERIOUS SUBSTANCE, THEN ALTERNATIVE MEASURES MUST BE IMPLEMENTED IMMEDIATELY TO MINIMIZE POTENTIAL ECOLOGICAL AND IMPACTS AND A TORONTO REGION CONSERVATION AUTHORITY ENFORCEMENT OFFICE SHOULD BE IMMEDIATELY CONTACTED. ADDITIONAL ESC MEASURES TO BE KEPT ON SITE AND USED AS NECESSARY.
5. ALL ACTIVITIES, INCLUDING MAINTENANCE PROCEDURES, WILL BE CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBBLE, CONCRETE OR OTHER DELETERIOUS SUBSTANCES INTO THE WATER. VEHICULAR REFUELING AND MAINTENANCE AND REFUELING WILL BE CONDUCTED A MINIMUM OF 30M FROM THE WATER.
6. ALL GRADES WITHIN THE REGULATORY FLOOD PLAN WILL BE MAINTAINED OR MATCHED.
7. MUD MATS TO BE PROVIDED ON SITE AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES EXIT THE SITE. MUD MATS SHALL BE A MINIMUM OF 5.0m WIDE, 10.0m LONG (LENGTH MAY VARY DEPENDING ON SITE LAYOUT) AND 0.3m DEEP AND SHALL CONSIST OF 150mm TO 200mm CLEAR STONE MATERIAL OR APPROVED EQUIVALENT. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE MUD MAT AND THAT THE MAT IS MAINTAINED IN A MANNER TO MAXIMIZE ITS EFFECTIVENESS AT ALL TIMES.

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CIVIL DETAILS - 2

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	N.T.S			DRAWING NUMBER:	1627-2025-5-16	C015
DATE:	DECEMBER 2025					

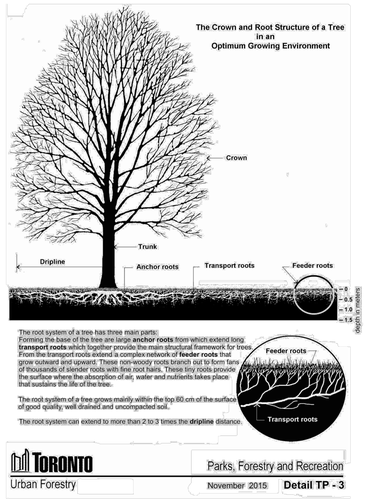


Figure 1: Urban Forestry Detail TP-3

2. Protecting Trees

There are a number of steps that can be taken to protect trees prior to, during and after any construction project. Hiring an arborist should be the first step. An arborist can advise on current tree maintenance requirements and determine the impact the proposal will have on trees and the surrounding natural environment.

An inventory of trees on subject and adjacent properties that may be impacted by the proposed work should be prepared in accordance with the City tree by-laws so that the project can be designed with tree protection in mind. A tree protection plan prepared by an arborist will identify the location, species, size and condition of all trees within the area of consideration, identify the extent of injury where applicable and outline proposed tree protection measures for the trees identified for protection.

The **area of consideration** for trees protected under the Private Tree By-law (Municipal Code, Chapter 813, Article III) includes the entire area of site disturbance, including construction related traffic and material storage, and extends 6m beyond the limit of site disturbance. For trees protected under Ravine and Natural Feature Protection By-law (Municipal Code, Chapter 658), the area of consideration includes the area of site disturbance and 12m area beyond.

The following chart provides the required distances for determining a **minimum tree protection zone** (TPZ) for trees located on a City street, in parks and on private property subject to Private Tree By-law and for trees located in areas regulated under the Ravine and Natural Feature Protection By-law. The minimum tree protection zones are based on the diameter of the tree. While these guidelines provide minimum protection distances for the anchor and transport roots of a tree, there can still be significant loss of the feeder roots beyond the established tree protection zone. Feeder roots are responsible for water and nutrient absorption and gas exchange. **For this reason, Urban Forestry may require a TPZ larger than the minimum, depending on the tree and the surrounding environment.**

Trunk Diameter (DBH)[1]	Minimum Protection Distances Required[2] City-owned and Private Trees	Minimum Protection Distances Required Trees in Areas Protected by the Ravine and Natural Feature Protection By-law
		Whichever of the two is greater:
<10cm	1.2 m	The drip line[4] or 1.2 m
10- 29 cm	1.8 m	The drip line or 3.6 m
30[3] – 40 cm	2.4 m	The drip line or 4.8 m
41 – 50 cm	3.0 m	The drip line or 6.0 m
51 – 60 cm	3.6 m	The drip line or 7.2 m
61 – 70cm	4.2 m	The drip line or 8.4 m
71 – 80cm	4.8 m	The drip line or 9.6 m
81 – 90 cm	5.4 m	The drip line or 10.8 m
91 – 100 cm	6.0 m	The drip line or 12.0 m
>100 cm	6 cm protection for each 1 cm diameter	12cm protection for each 1 cm diameter or the drip line[5]

Table 1: Minimum Tree Protection Zone (TPZ) Determination

[1]Diameter at breast height (DBH) measurement of tree stem taken at 1.4 metres (m) above the ground.
[2]MinimumTree Protection Zone distances are to be measured from the outside edge of the tree base.
[3]Diameter (**30** cm) at which trees qualify for protection under the Private Tree By-law.
[4]The drip line is defined as the area beneath the outer most branch tips of a tree.
[5]Converted from ISA Arborists' Certification Study Guide, general guideline for tree protection barriers of 1 foot of diameter from the stem for each inch of stem diameter.

The diagram below shows how the TPZ is determined:

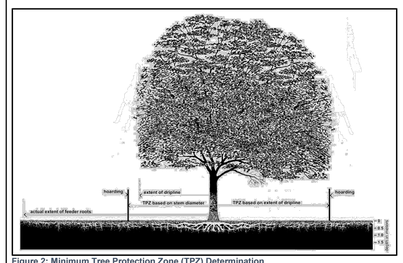


Figure 2: Minimum Tree Protection Zone (TPZ) Determination

In some cases, disturbances in the TPZ may be unavoidable, in which case, the TPZ must be adjusted in consultation with the arborist and Urban Forestry. In these situations, it may be necessary to implement other tree protection measures such as horizontal root protection as noted in section 3 of this document.

In addition to establishing and creating tree protection zones, it may be necessary to implement other protective measures, such as adding mulch to the root zone, aeration of the soil, pruning for deadwood or removing limbs that may be impacted by construction activity. This is also the time to determine the location where new trees can be planted to compliment the construction project and help with the renewal and growth of the urban forest.

Prior to commencing with any excavation, roots approved for pruning by Urban Forestry must first be exposed using pneumatic (air) excavation, by hand digging or by using a low pressure hydraulic (water) excavation. This **exploratory excavation** must be undertaken by an experienced operator under the supervision of a qualified and experienced arborist. The water pressure for hydraulic excavation must be low enough that root bark is not damaged or

removed. This will allow a proper pruning cut and minimize tearing of the roots. The arborist retained to carry out root pruning must contact Urban Forestry no less than three (3) working days prior to conducting any specified work.

Exploratory excavation may also be required for open face cuts outside the minimum tree protection zone (TPZ).

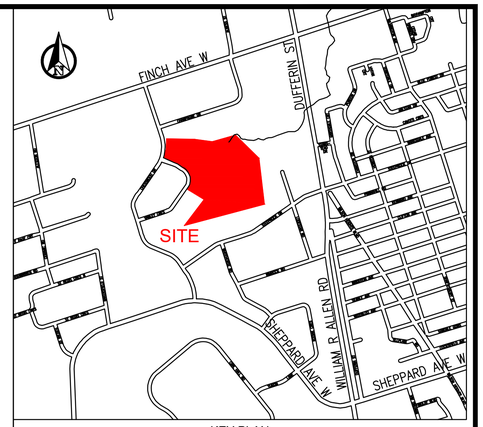
Communication between owners and their designated agents, arborists, contractors and sub-contractors throughout the construction process is critical to ensure that everyone involved is aware of the issues surrounding tree protection, and fully understands the tree protection methodology. Construction damage to trees is often irreversible.

Prohibited Activities Within a TPZ

Except where authorized by Urban Forestry, any activity which could result in injury or destruction of a protected tree or natural feature, or alteration of grade within a Ravine and Natural Feature Protection (RNFP) area, is prohibited within a TPZ, including, but not limited to, any of the following examples:

- demolition, construction, replacement or alteration of permanent or temporary buildings or structures, parking pads, driveways, sidewalks, walkways, paths, trails, dog runs, pools, retaining walls, patios, decks, terraces, sheds or raised gardens
- installation of large stones or boulders
- altering grade by adding or removing soil or fill, excavating, trenching, topsoil or fill scraping, compacting soil or fill, dumping or disturbance of any kind
- storage of construction materials, equipment, wood, branches, leaves, soil or fill, construction waste or debris of any sort
- application, discharge or disposal of any substance or chemical that may adversely affect the health of a tree e.g. concrete sluice, gas, oil, paint, pool water or backwash water from a swimming pool
- causing or allowing water or discharge, to flow over slopes or through natural areas
- access, parking or movement of vehicles, equipment or pedestrians
- cutting, breaking, tearing, crushing, exposing or stripping tree's roots, trunk and branches.
- nailing or stapling into a tree, including attachment of fences, electrical wires or signs
- stringing of cables or installing lights on trees
- soil remediation, removal of contaminated fill
- excavating for directional or micro-tunnelling and boring entering shafts

The above mentioned prohibitions are for area(s) designated as a TPZ. If possible, these prohibitions should also be implemented outside the TPZ in areas where tree roots are located. The roots of a tree can extend from the trunk to approximately 2-3 times the distance of the dripline.



KEY PLAN
N.T.S

NOTES:

MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

3. Tree and Site Protection Measures

The following are examples of specific tree and site protection measures that may be required by Urban Forestry:

- Plywood tree protection hoarding (minimum 19mm or ¾"), or equivalent barriers, as approved by Urban Forestry, shall be installed in locations as detailed in an Urban Forestry approved Tree Protection Plan. Tree protection barriers must be made of 2.4m (8ft) high plywood hoarding or equivalent as approved by Urban Forestry. Height of hoarding may be less than 2.4m (8ft), to accommodate tree branches that may be lower, or as approved by Urban Forestry. Within a City road allowance where visibility is a consideration, 1.2m (4ft) high orange plastic web snow fencing on a 38 x 89mm (2"x 4") frame should be used. The detail on tree protection barrier construction is shown on Figure 4 in section 7 of this document
- In specific situations where the required full minimum tree protection zone (TPZ) cannot be provided, a **horizontal** (on grade) **root protection**, designed by a qualified professional such as arborist or landscape architect, may be considered, subject to approval by Urban Forestry. Urban Forestry's objective is zero soil compaction within the tree protection zone, therefore best efforts must be made to achieve this objective using materials and best practices available that minimize the vertical loading and spread the loading horizontally.
- Any area designated for stockpiling of excavated soil must be outside of TPZs and be enclosed with sediment control fencing. Sediment control fencing shall be installed in the locations as indicated in an Urban Forestry approved Tree Protection Plan. The sediment control fencing must be installed to Ontario Provincial Standards (OPSD-219.130 – see Section 7, Figure 5) and to the satisfaction of Urban Forestry. When feasible, the sediment control fencing can be attached to the tree protection barrier as shown in Figure 6. Sediment control fencing near trees shall be constructed as per detail shown on Figure 6 of this document

4. Tree Protection Signage

TORONTO
Parks, Forestry & Recreation

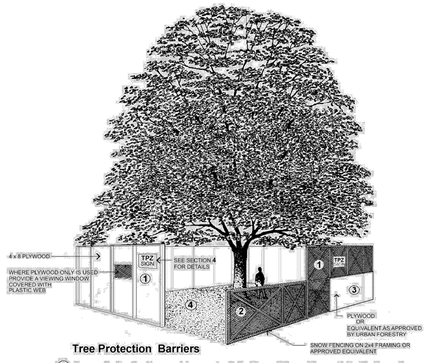
Tree Protection Zone (TPZ)

All construction related activities, including grade alteration, excavation, soil compaction, any materials or equipment storage, disposal of liquid and vehicular traffic are NOT permitted within this TPZ.

This tree protection barrier must remain in good condition and must not be removed or altered without authorization of City of Toronto, Urban Forestry.

Concerns or inquiries regarding this TPZ can be directed to:
311 or 311@toronto.ca

Figure 3: Tree Protection Sign



Tree Protection Barriers

1. **Tree protection barriers must be constructed with a solid wood frame clad with plywood or approved equivalent. Height of hoarding may be less than 8 ft. to accomodate any branches that may be lower.**
2. **Tree protection barriers for trees situated on the City road allowance where visibility must be maintained can be 1.2m (4ft.) high and consist of orange plastic web snow fencing on a wood frame made of 2 x 4s.**
3. **Where some excavate or fill has to be temporarily located near a tree protection barrier, plywood must be used to ensure no material enters the Tree Protection Zone.**
4. **No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.**

Note:
Sediment control fencing shall be installed in locations indicated in an Urban Forestry approved Tree Protection Plan. The sediment control fencing must be installed to Ontario Provicial Standards (OPSD-219.130) heavy duty silt fence barrier and to the satisfaction of Urban Forestry. See Detail TP- 2

TORONTO
Urban Forestry
Parks, Forestry and Recreation
February 2016
Detail TP-1

8. Permits for Tree Removal or Injury

If the full minimum tree protection zone (TPZ) as identified in Section 2 cannot be provided, a permit to injure the tree must be obtained.

Any requests for removal or injury of a tree protected by City by-laws must be made on the appropriate application forms and submitted to Urban Forestry at the appropriate address. Permit application forms are available at www.toronto.ca/trees. Any requests for tree relocation will be considered as a tree injury.

If approval is granted for removal of a City-owned tree, applicants will assume all costs involved, which include appraised tree value, removal, and tree replacement costs. If approval is granted for removal of private trees or trees in ravine and natural feature protected areas, the permit will be subject to conditions, including tree replacement. If approval is granted for injury of City-owned, private trees or trees in ravine and natural feature protected areas, the permit will be subject to conditions, including implementation of a Tree Protection Plan, as determined by Urban Forestry.

In some instances, where the tree is healthy and the management of the tree or forest cover has not been addressed to the satisfaction of Urban Forestry, requests received by Urban Forestry may be forwarded to a Community Council and City Council for approval.

Urban Forestry does not have the authority to issue a permit to injure or remove a heritage tree[2]. Such requests would be forwarded to a Community Council and/or City Council for approval.

Butternut (*Juglans cinerea, L.*) is an endangered species. Butternuts and their habitat are protected under Endangered Species Act (S.O. 2007, c.6) available on the Government of Ontario website at http://www.ontario.ca/laws/statute/07e06/v1. A permit to injure or remove a butternut tree must be obtained from the Ministry of Natural Resources and Forestry Ontario.

[2] Heritage Tree – A tree that has been designated under Part IV of the Ontario Heritage Act or trees recognized as heritage trees by the Ontario Heritage Tree Program of Trees Ontario.

Any person who contravenes any provision of the City's tree protection by-law is guilty of an offence.

More information on tree protection and permit application forms for tree removal and injury are available on Urban Forestry web page at www.toronto.ca/trees.

For additional information regarding the removal or injury of trees protected under City by-laws, please call 311.

9. Tree Guarantee Deposits

Tree Protection Guarantee

Urban Forestry may request a **tree protection guarantee** to secure the protection of trees that may be impacted by work on city streets, or to secure the satisfaction of all conditions of permit issuance. Tree protection guarantees held by the City shall only be released by the City provided that all construction activities are complete, compliance with all permit terms and conditions has been verified, there has been no encroachment into the minimum tree protection zone (TPZ) and the trees are healthy and in a state of vigorous growth.

Where Urban Forestry has confirmed an unauthorized encroachment into the TPZ or the terms and conditions of a permit have not been complied with, Urban Forestry will retain the guarantee until satisfactory compliance.

It is the applicant's responsibility to submit a written request to Urban Forestry for the refund of the tree protection guarantee deposit as soon as construction and landscaping is completed.

Tree Planting Security

Urban Forestry may request a **tree planting security deposit** in an amount equal to the cost of planting and maintenance for two (2) years in order to ensure compliance with approved landscape or replanting plans. The security deposit may be held by the City after the planting of the trees for a period of two (2) years and shall be released by the City provided that the trees have been maintained, are healthy and in a state of vigorous growth upon inspection, two (2) years after planting. It is the applicant's responsibility to advise Urban Forestry that trees have been planted in accordance with approved plans, in order that the two (2) year maintenance period begin.

Prior to release by the City, any dead/dying trees must be replaced, deadwood and sucker growth should be pruned, and mulch should be topped up where necessary. If stakes and ties were used, they must be removed within one (1) year. Any encroachments are to be removed prior to assumption, including walkways, timbers or bricks that result in increased height of soil or mulch around the trees, and lights in trees.

It is the applicant's responsibility to submit a written request to Urban Forestry for the refund of a Tree Guarantee Deposit, two (2) years after the completion of all construction activity and/or two (2) years after tree planting. This request should be made during the growing season, not while

TREE PRESERVATION NOTES AND GUIDELINES:

1. TREE PROTECTION BARRIERS SHALL BE INSTALLED TO STANDARDS AS DETAILED IN TREE PROTECTION POLICY AND SPECIFICATIONS FOR CONSTRUCTION NEAR TREES BY TORONTO PARKS, FORESTRY & RECREATION URBAN FORESTRY AND TO THE SATISFACTION OF URBAN FORESTRY https://www.toronto.ca/data/parks/pdf/trees/tree-protection-specs.pdf.
2. TREE PROTECTION BARRIERS MUST BE INSTALLED USING PLYWOOD CLAD HOARDING (MINIMUM 19mm OR ¾" THICK) OR AN EQUIVALENT APPROVED BY URBAN FORESTRY.
3. TREE PROTECTION BARRIERS INCLUDING LANDSCAPING MUST REMAIN IN PLACE AND IN GOOD CONDITION DURING CONSTRUCTION AND/OR SITE DISTURBANCE. IT MUST NOT BE ALTERED, MOVED OR REMOVED UNTIL AUTHORIZED BY URBAN FORESTRY.
4. EXTREME CARE MUST BE TAKEN TO PROTECT EXISTING TREES. INSTALL AND MAINTAIN TEMPORARY WORKING FENCES AROUND ALL TRESS TO BE PROTECTED, IN ACCORDANCE WITH OPSD 220.01.
5. ALL TREE ROOTS EXPOSED DURING CONSTRUCTION TO BE NEATLY TRIMMED WITH SUITABLE EQUIPMENT AT EXCAVATION LIMITS.

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO
SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
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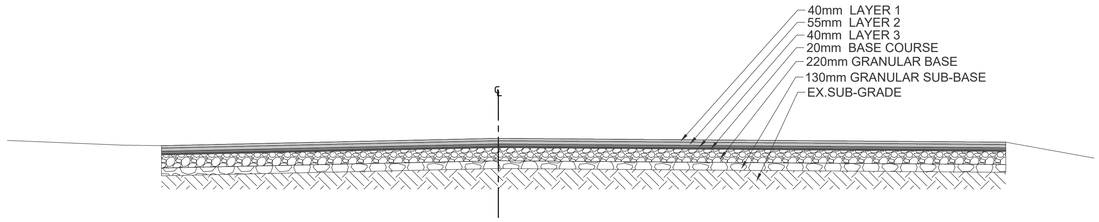
TORONTO M3J 2B7

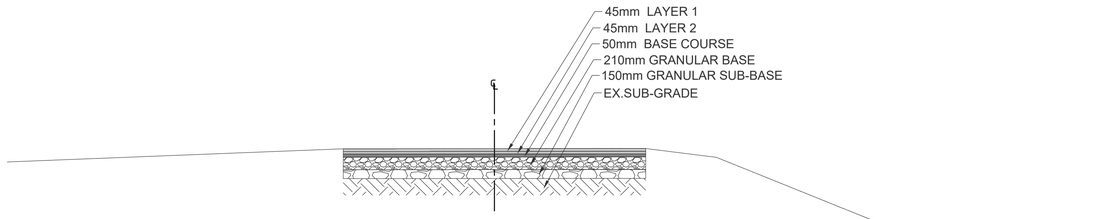
DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CIVIL DETAILS - 3

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	N.T.S			DRAWING NUMBER:	1627-2025-5-17		C016
DATE:	DECEMBER 2025						



EX-AA
C005 EXISTING ASPHALT PAVEMENT



EX-BB
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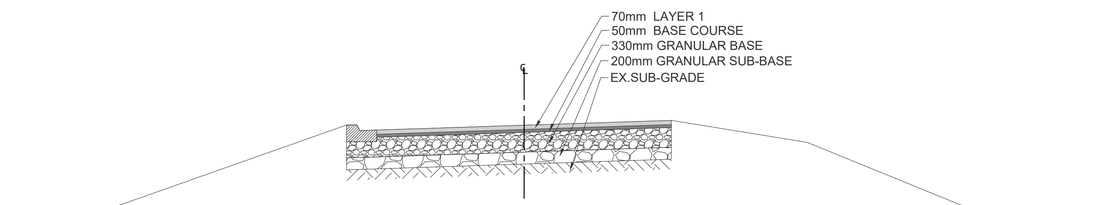

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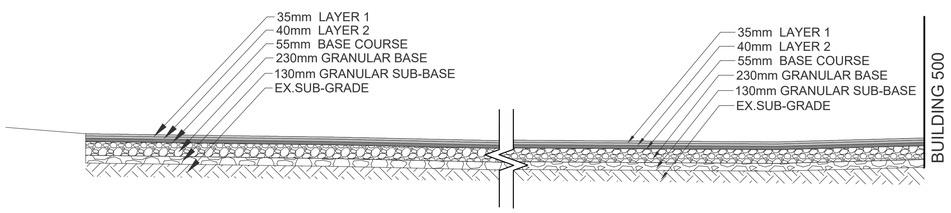

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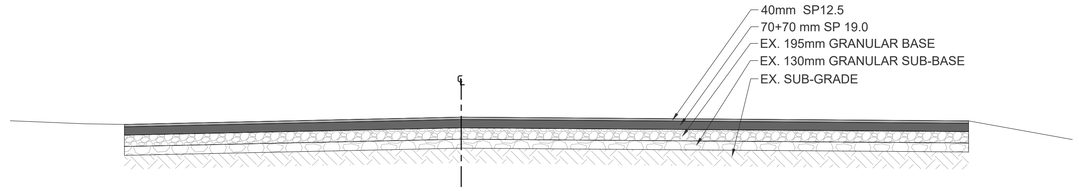
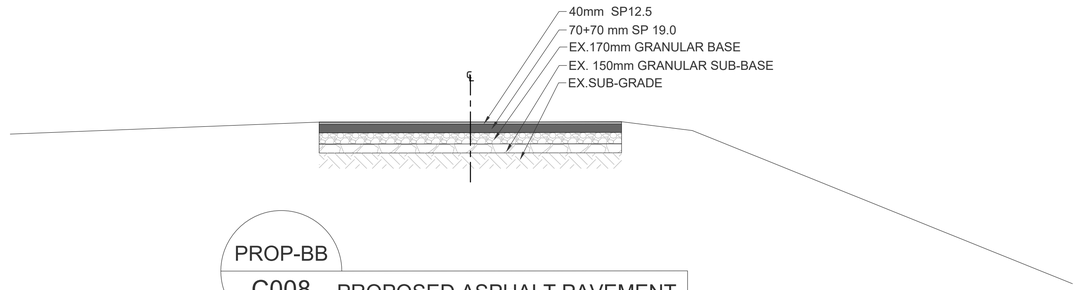
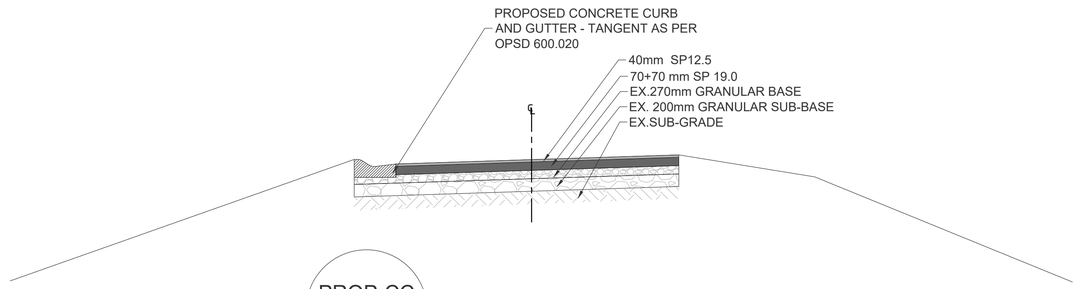


PROP-AA
C007 PROPOSED ASPHALT PAVEMENT



PROP-BB
C008 PROPOSED ASPHALT PAVEMENT



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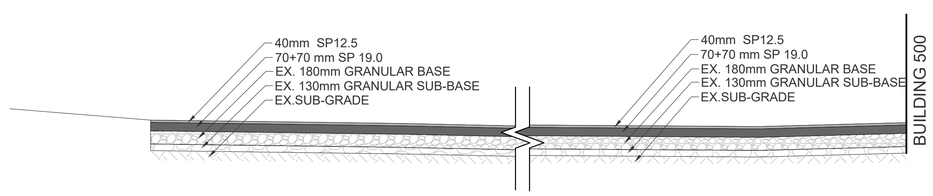


PROP-DD
C008 PROPOSED ASPHALT PAVEMENT

NOTES:

1. THE DIMENSION SHOWN FOR THE EXISTING ASPHALT COMPOSITION ARE APPROXIMATE AND ARE BASED ON THE GEOTECHNICAL INVESTIGATION REPORT DATED JUNE 17, 2024.
2. THE CONTRACTOR IS RESPONSIBLE TO INTERPOLATE THE EXISTING PAVEMENT COMPOSITION BETWEEN BOREHOLES AT THEIR RISK AND COST.

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

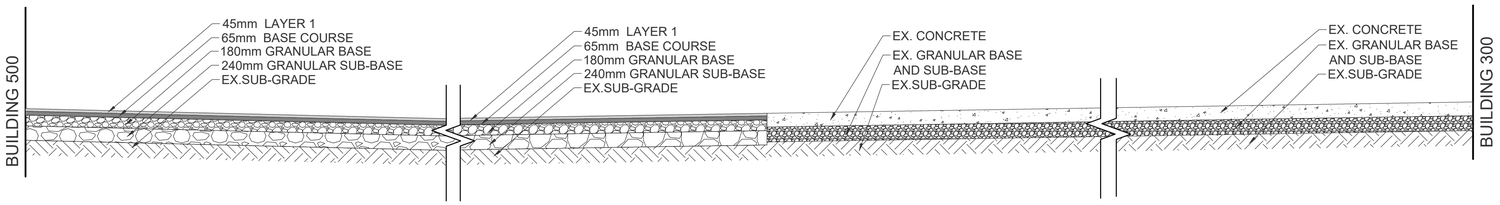
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

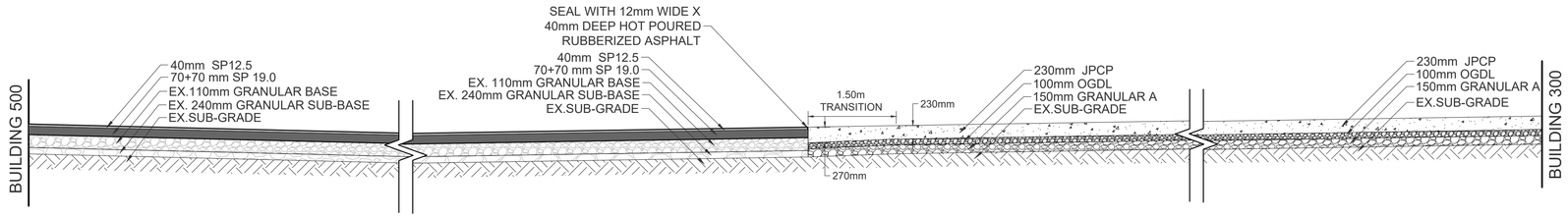
DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
SECTIONS - 1

CIVIL

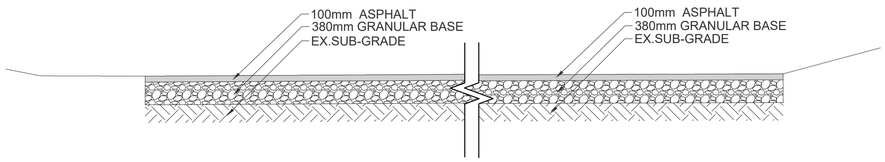
DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	N.T.S			DRAWING NUMBER:	1627-2025-5-18	C017
DATE:	DECEMBER 2025					



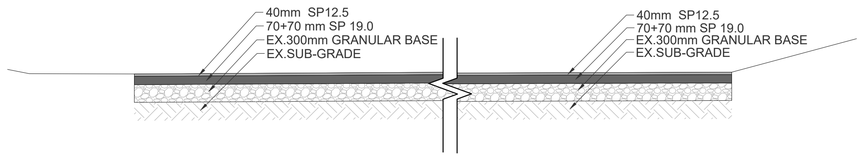
EX-EE
C006 EXISTING ASPHALT PAVEMENT



PROP-EE
C008 PROPOSED ASPHALT PAVEMENT



EX-FF
C005 EXISTING ASPHALT PAVEMENT



PROP-FF
C007 PROPOSED ASPHALT PAVEMENT

NOTES:

1. THE DIMENSION SHOWN FOR THE EXISTING ASPHALT COMPOSITION ARE APPROXIMATE AND ARE BASED ON THE GEOTECHNICAL INVESTIGATION REPORT DATED JUNE 17, 2024.
2. THE CONTRACTOR IS RESPONSIBLE TO INTERPOLATE THE EXISTING PAVEMENT COMPOSITION BETWEEN BOREHOLES AT THEIR RISK AND COST.

SOLID WASTE MANAGEMENT SERVICES

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Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
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SOLID WASTE MANAGEMENT SERVICES

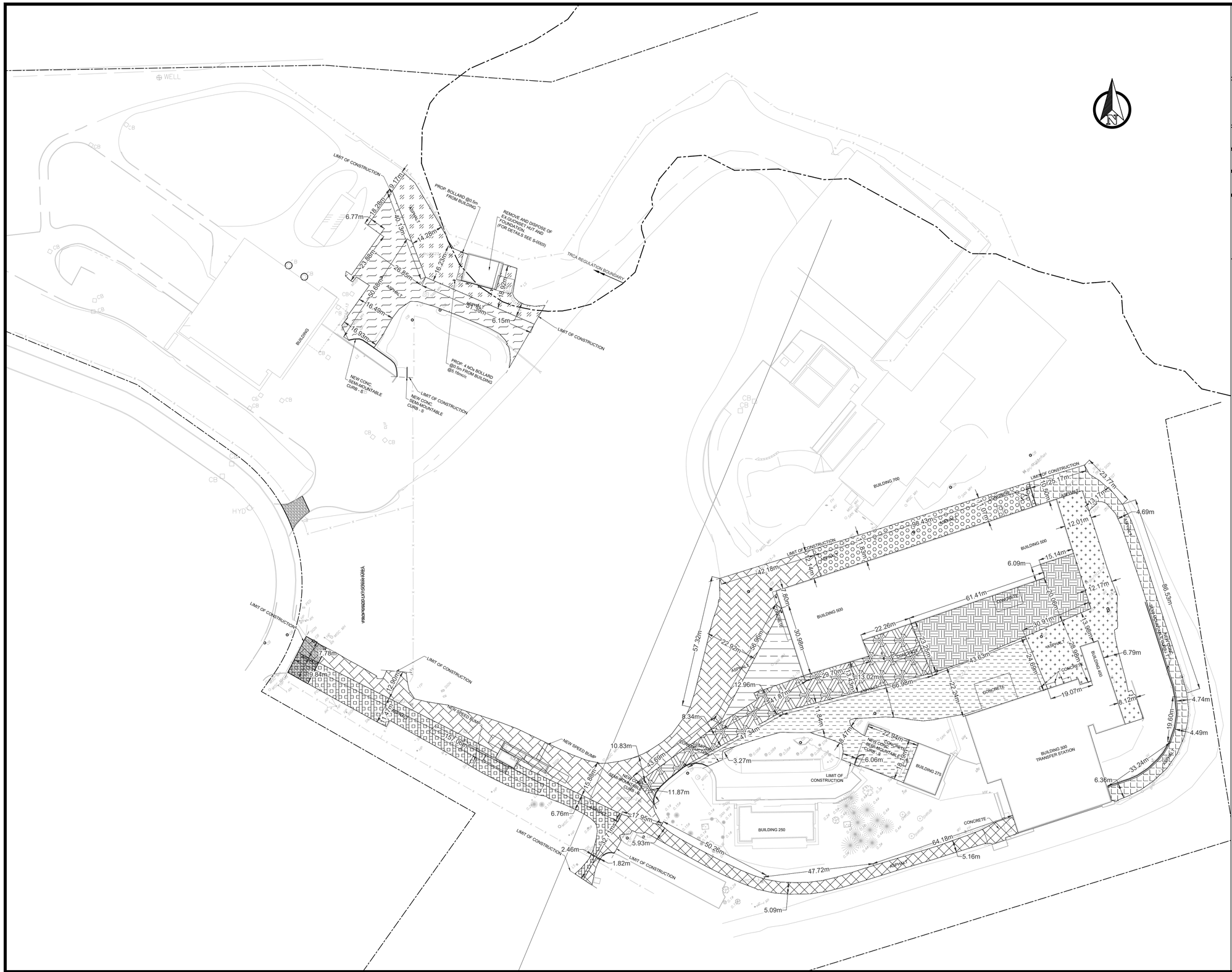
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

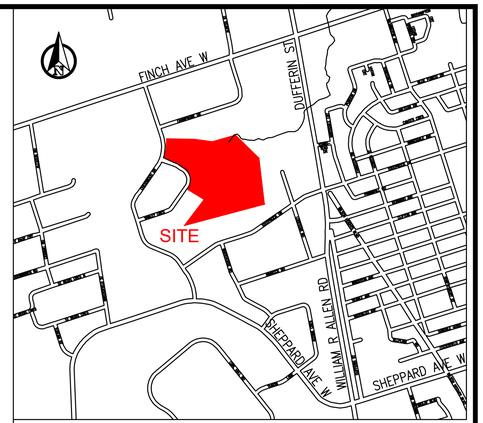
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
SECTIONS - 2

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	N.T.S			DRAWING NUMBER:	1627-2025-5-19	C018
DATE:	DECEMBER 2025					





KEY PLAN
N.T.S

LEGEND:

— x — x — x —	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
	TRCA REGULATION BOUNDARY
× 197.74	DENOTES GROUND SHOTS
B●	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE A1
	CONSTRUCTION STAGE- PHASE A2
	CONSTRUCTION STAGE- PHASE A3
	CONSTRUCTION STAGE- PHASE A4
	CONSTRUCTION STAGE- PHASE A5
	CONSTRUCTION STAGE- PHASE B
	CONSTRUCTION STAGE- PHASE C1
	CONSTRUCTION STAGE- PHASE C2
	CONSTRUCTION STAGE- PHASE C3
	CONSTRUCTION STAGE- PHASE C4
	CONSTRUCTION STAGE- PHASE D1
	CONSTRUCTION STAGE- PHASE D2

NOTES:

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2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
3. FOR PROPOSED PAVEMENTS TYPICAL SECTIONS REFER TO DWG: C001.
4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

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L3T 7Z3, Canada

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TORONTO

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AND RESOURCE MANAGEMENT

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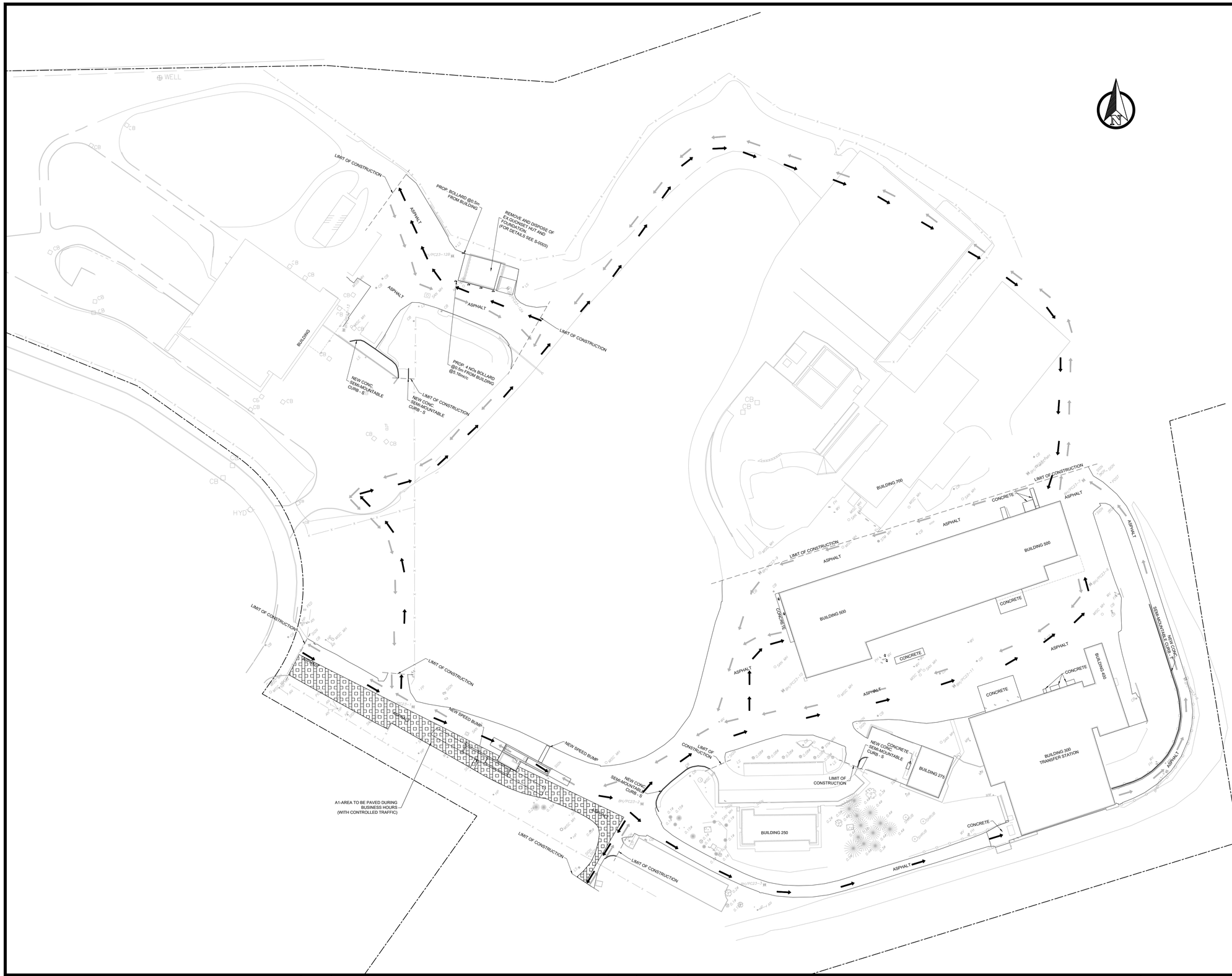
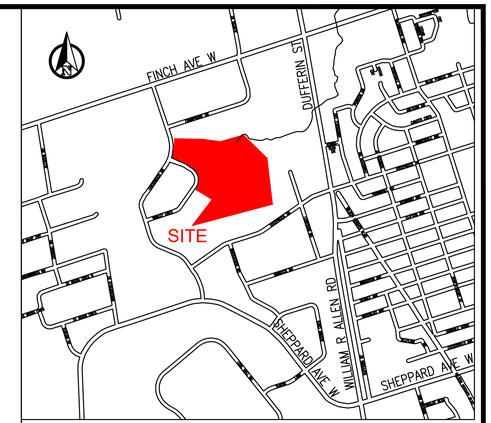
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-20		C019
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE A1
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
3. FOR PROPOSED PAVEMENTS TYPICAL SECTIONS REFER TO DWG: C001.
4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

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L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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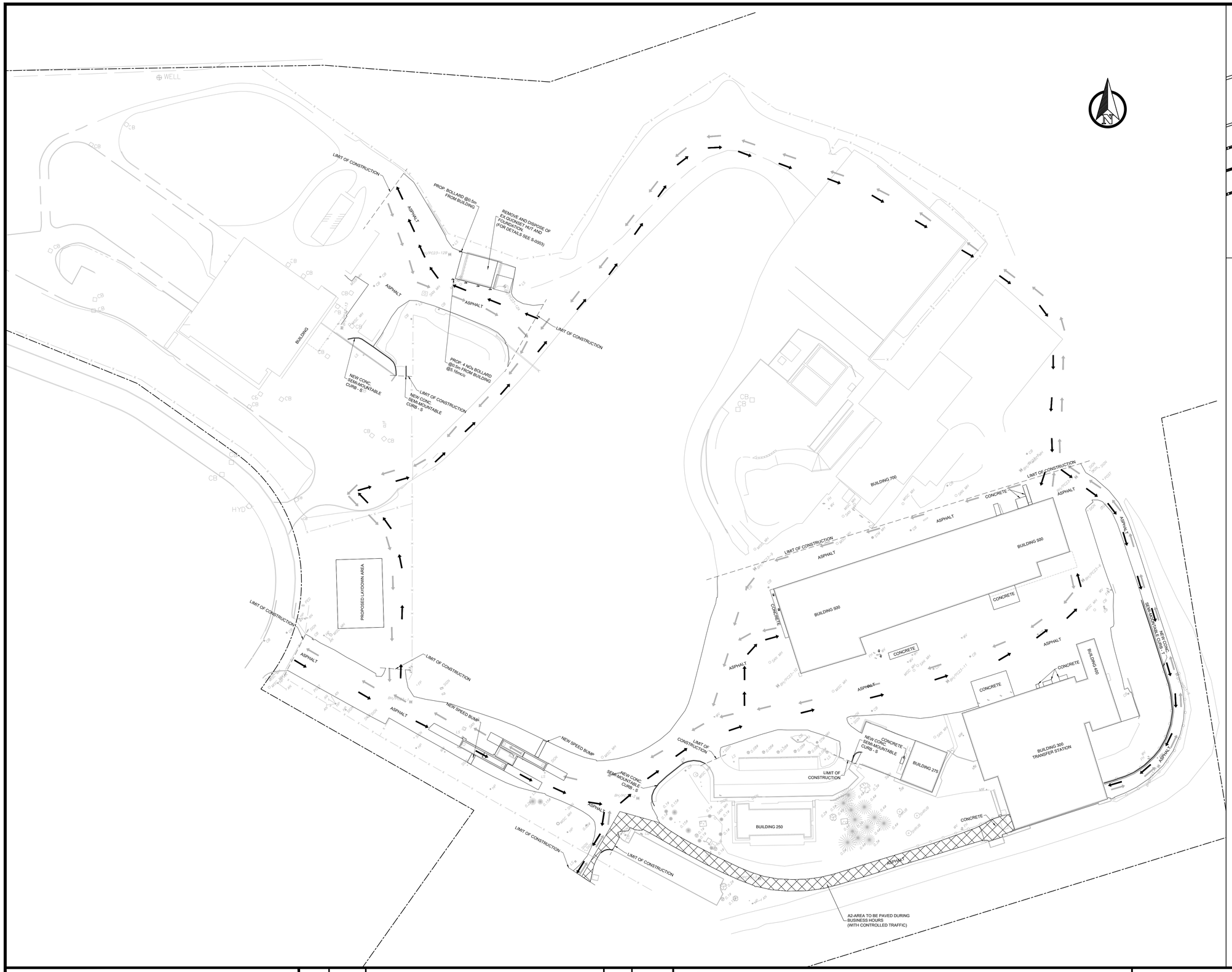
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

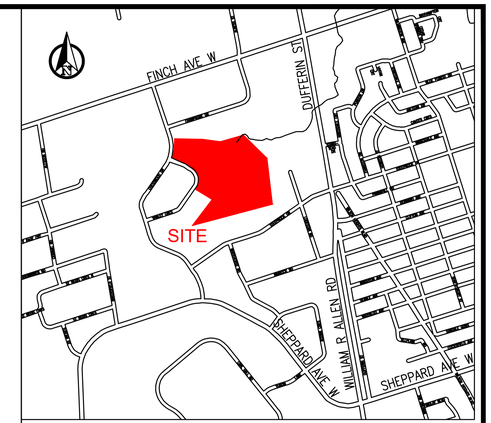
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE A1

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-21	C020
DATE:	DECEMBER 2025					





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE A2
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
3. FOR PROPOSED PAVEMENTS TYPICAL SECTIONS REFER TO DWG: C001.
4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.
5. PROVIDE AN INTERNAL VEHICLE TURNAROUND AREA WITHIN BUILDING 300 (TRANSFER STATION) TO ALLOW VEHICLES TO SAFELY U-TURN AND EXIT IN A FORWARD DIRECTION. CONFIRM DESIGN ACCOMMODATES THE SPECIFIED DESIGN VEHICLE USING SWEPT-PATH ANALYSIS.

SOLID WASTE MANAGEMENT SERVICES

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Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

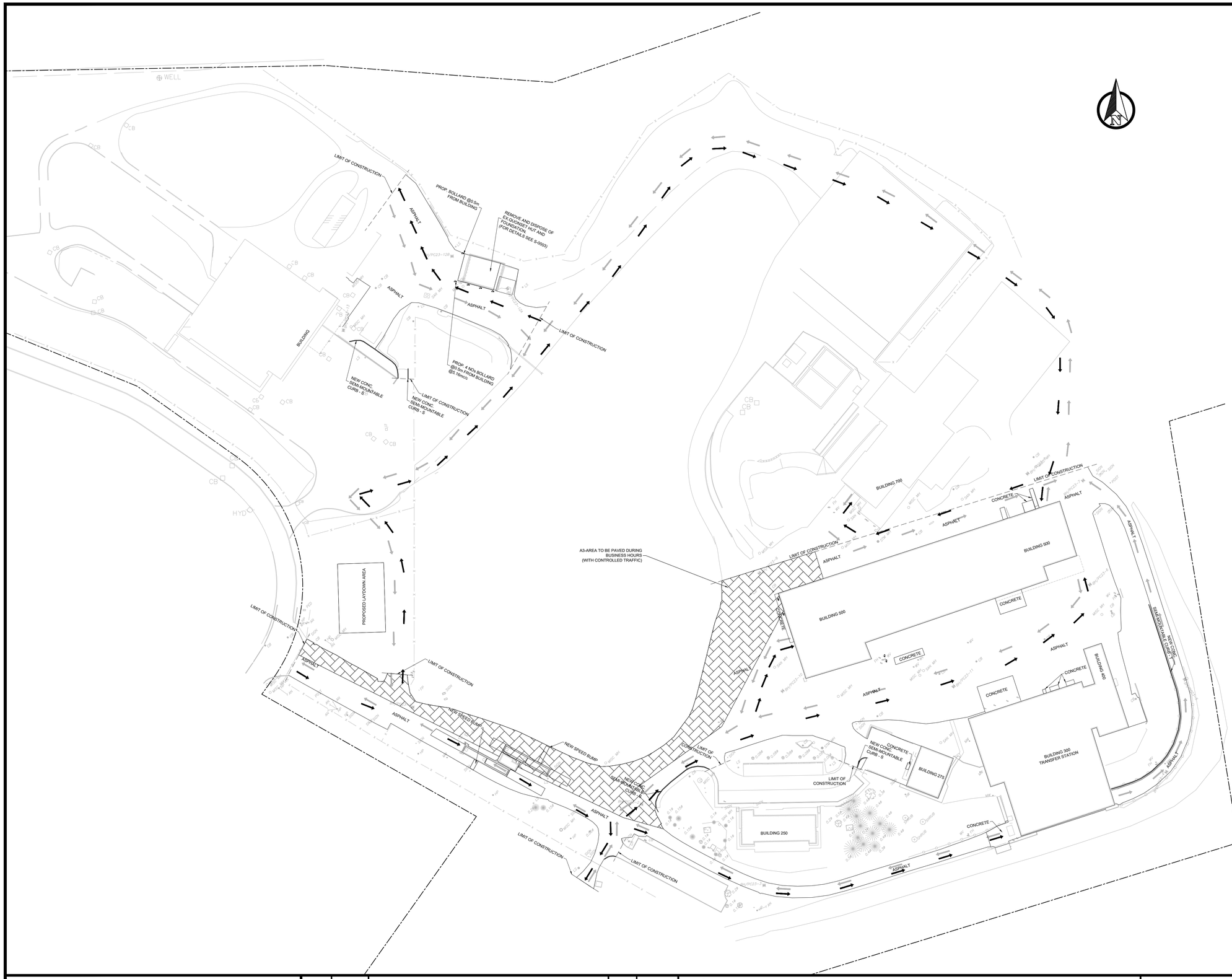
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

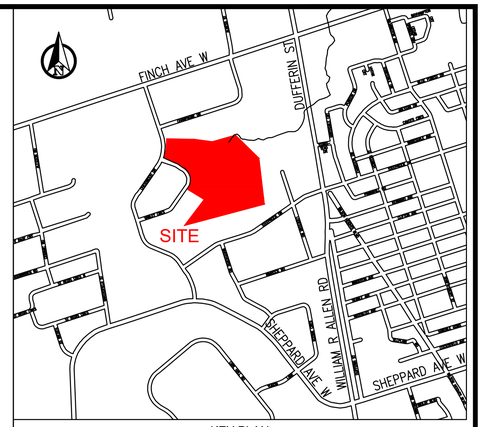
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE A2

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-22	C021
DATE:	DECEMBER 2025					





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
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FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE A3
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
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4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

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1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
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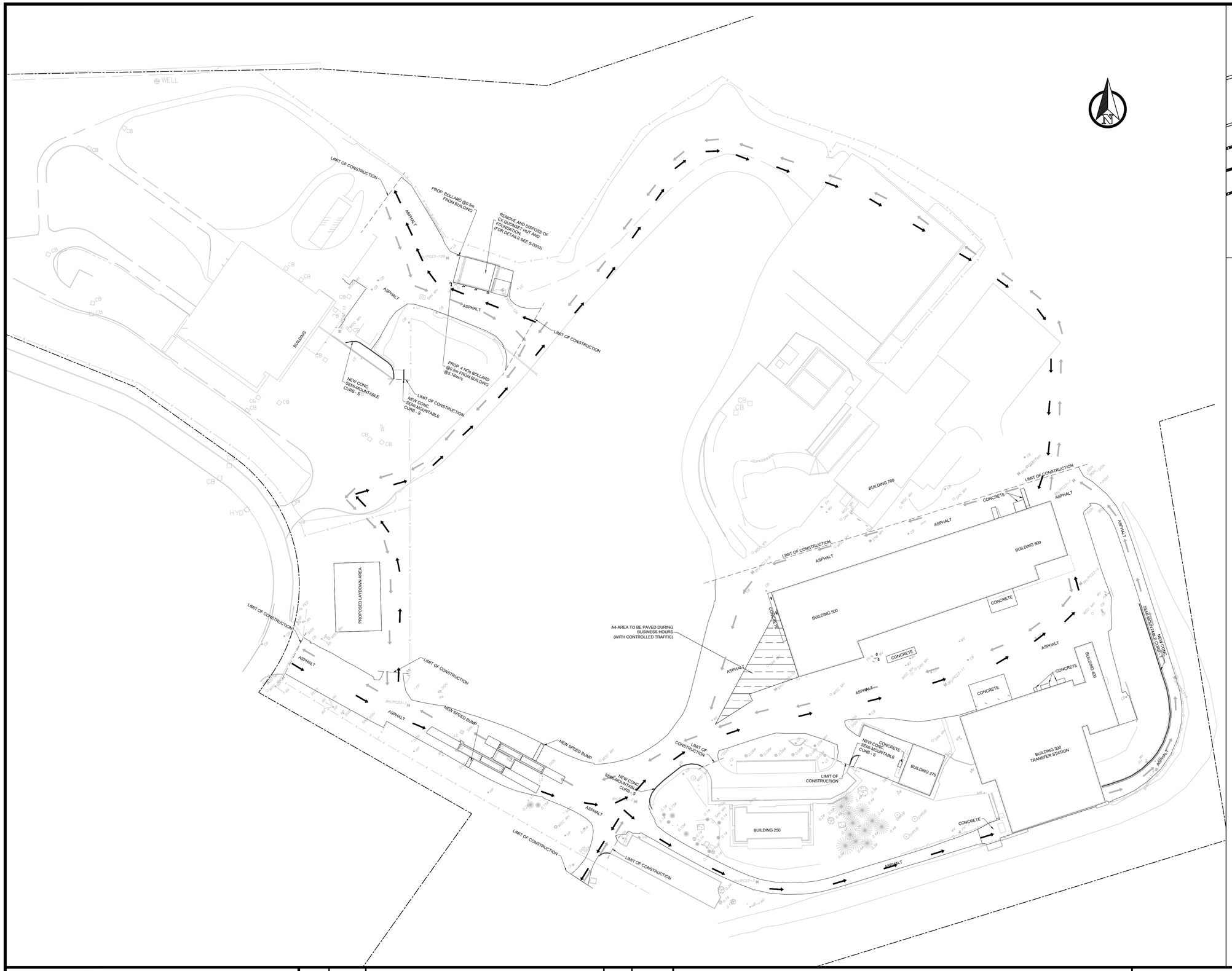
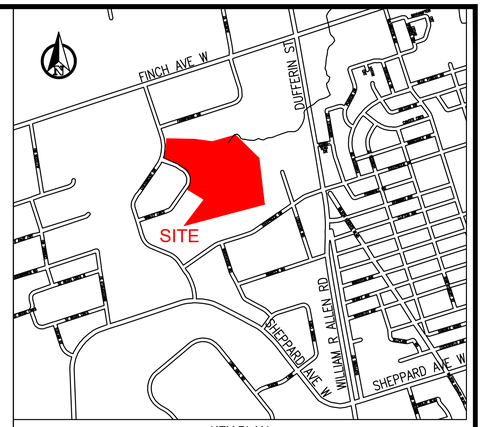
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE A3

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-23	C022
DATE:	DECEMBER 2025					





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE A4
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
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4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

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0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

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MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
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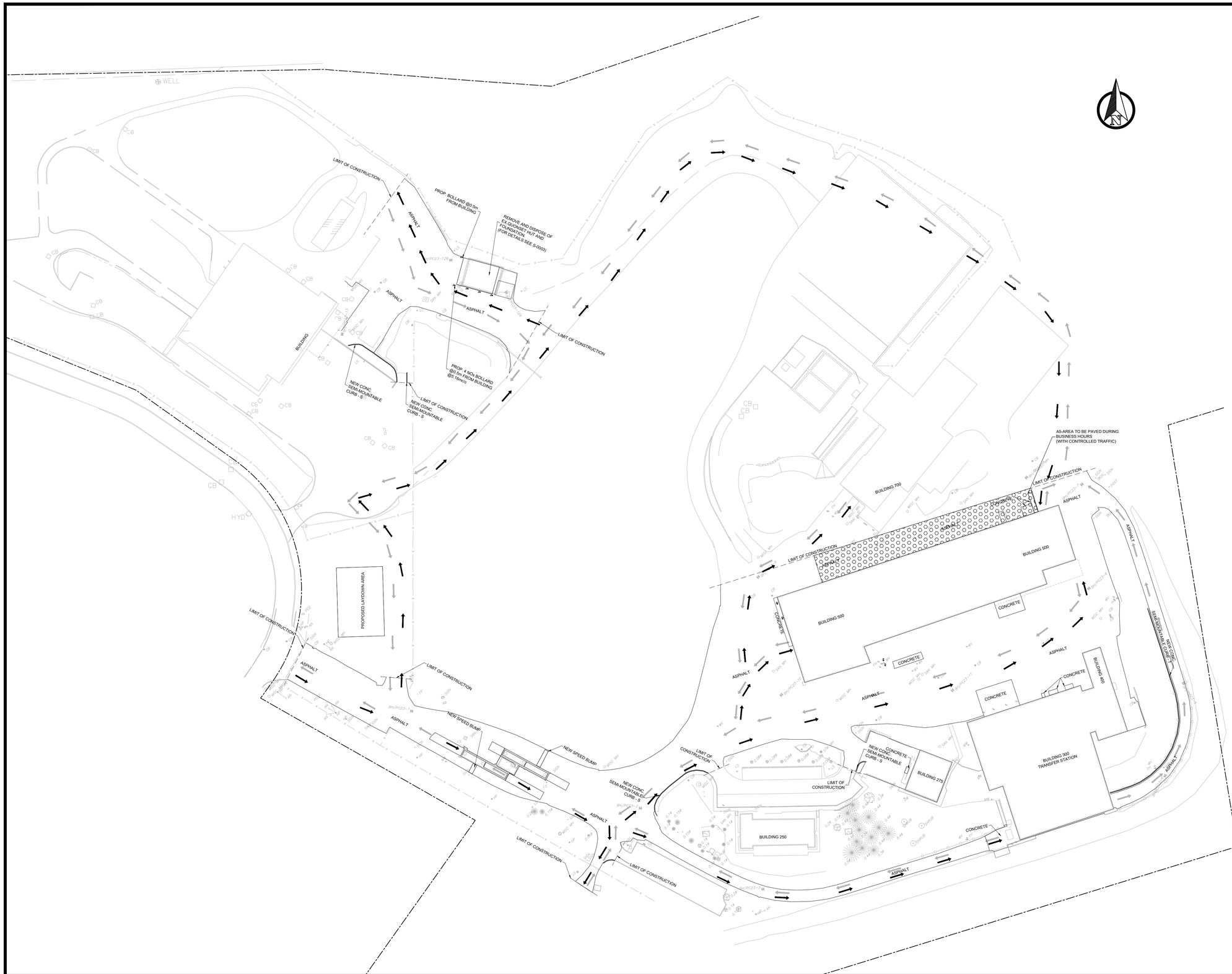
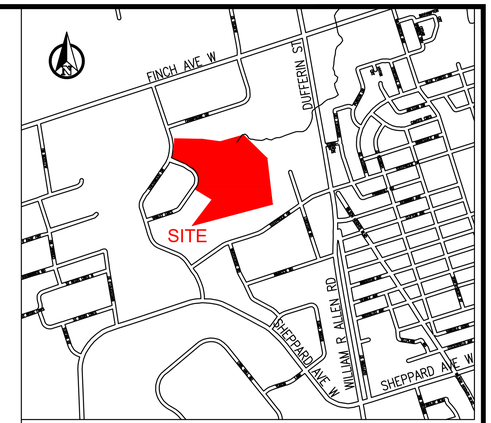
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE A4

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-24		C023
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE A5
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
3. FOR PROPOSED PAVEMENTS TYPICAL SECTIONS REFER TO DWG: C001.
4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

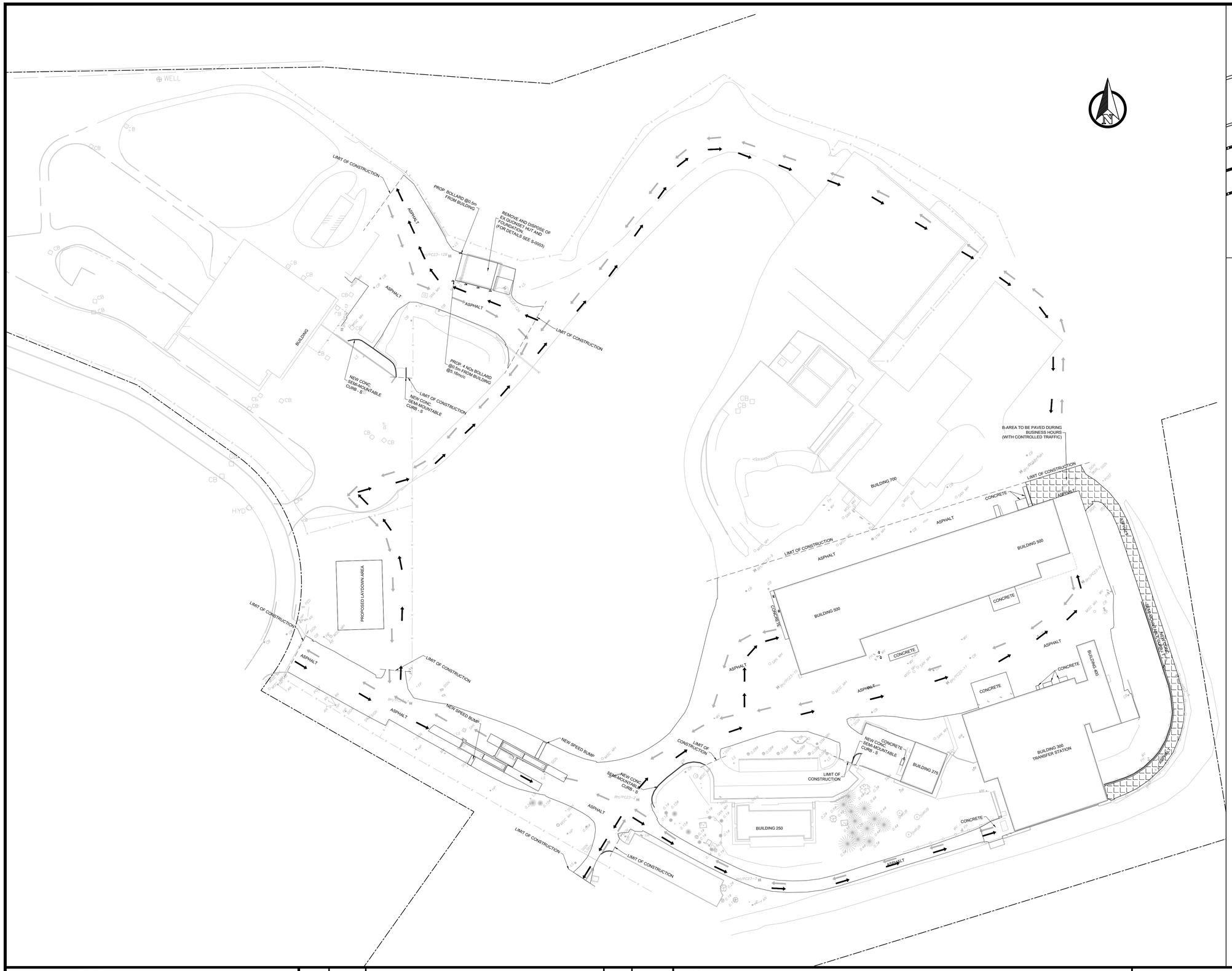
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

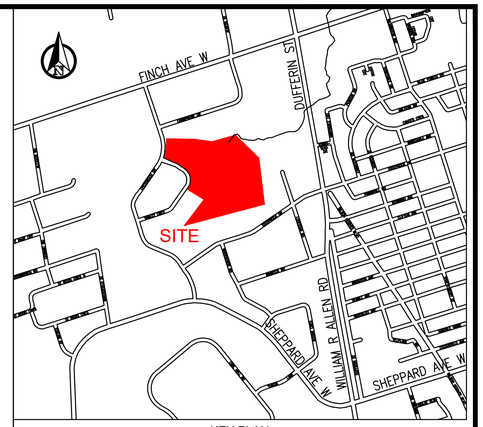
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE A5

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-25	C024
DATE:	DECEMBER 2025					





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE B
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
3. FOR PROPOSED PAVEMENTS TYPICAL SECTIONS REFER TO DWG: C001.
4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.
5. PROVIDE AN INTERNAL VEHICLE TURNAROUND AREA WITHIN BUILDING 300 (TRANSFER STATION) TO ALLOW VEHICLES TO SAFELY U-TURN AND EXIT IN A FORWARD DIRECTION. CONFIRM DESIGN ACCOMMODATES THE SPECIFIED DESIGN VEHICLE USING SWEPT-PATH ANALYSIS.

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L3T 7Z3, Canada

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1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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SOLID WASTE MANAGEMENT SERVICES

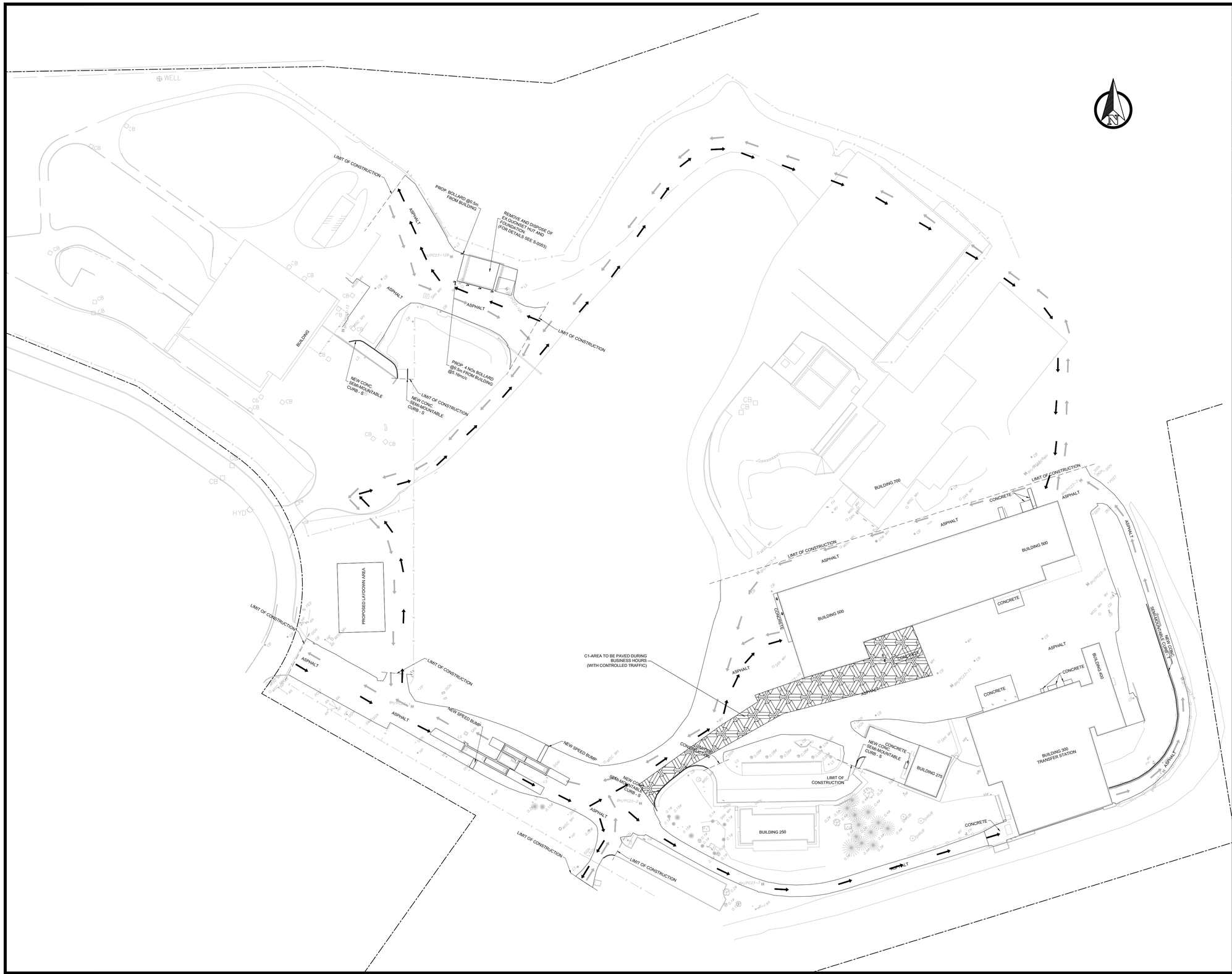
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

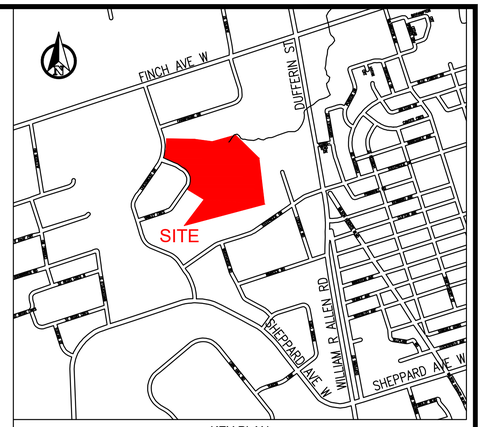
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE B

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-26		C025
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE C1
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
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4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

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L3T 7Z3, Canada

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1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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AND RESOURCE MANAGEMENT

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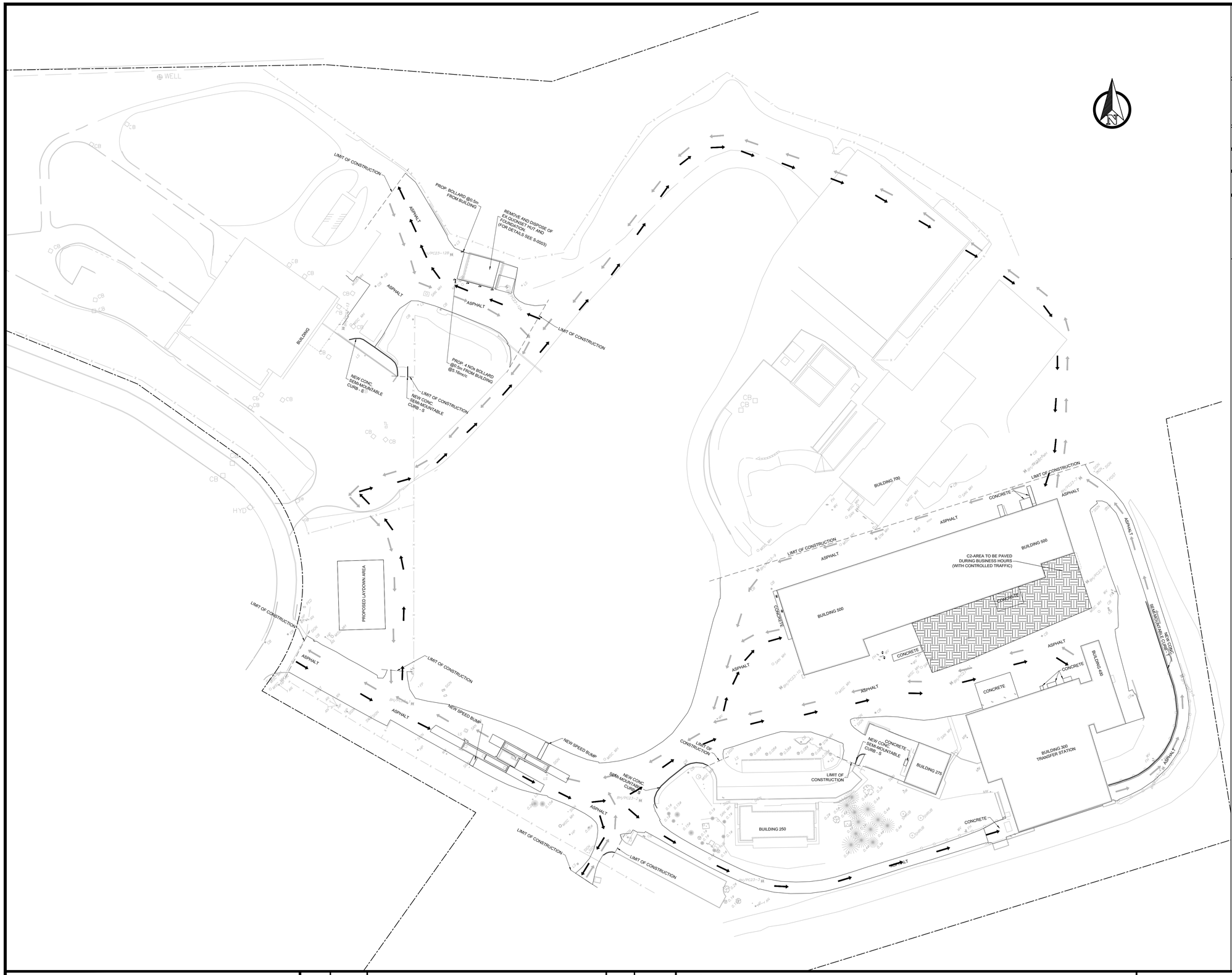
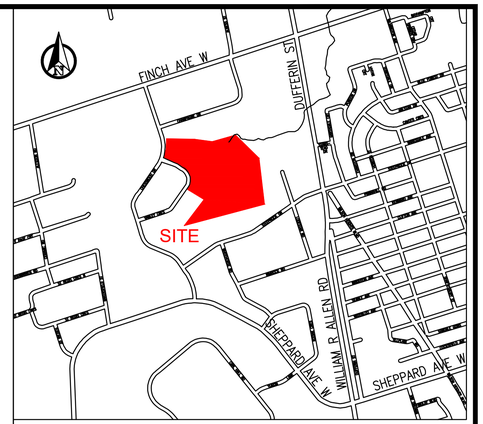
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE C1

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-27	C026
DATE:	DECEMBER 2025					





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
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SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE C2
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
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4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

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L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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MATTHEW CASCHERA
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AND RESOURCE MANAGEMENT

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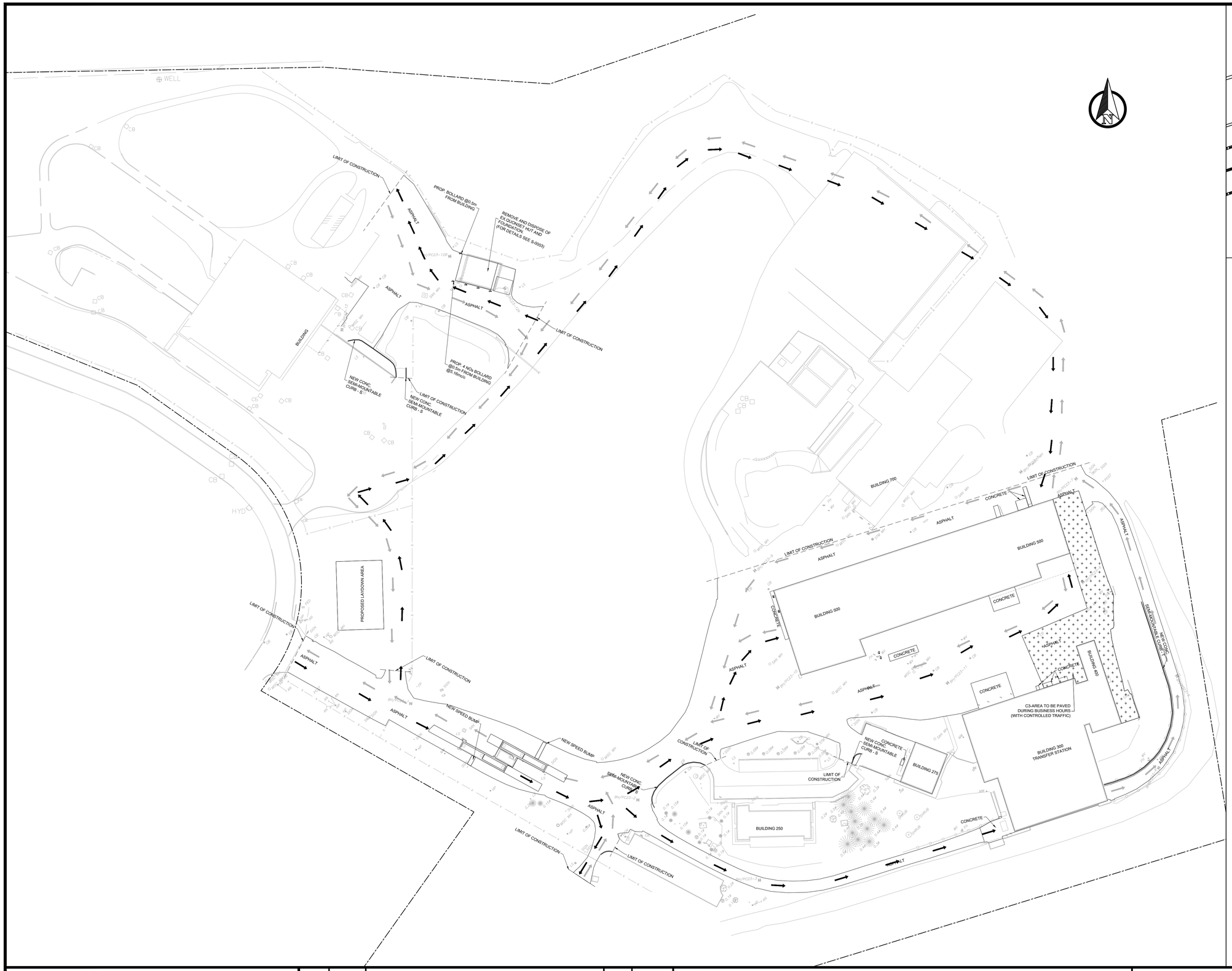
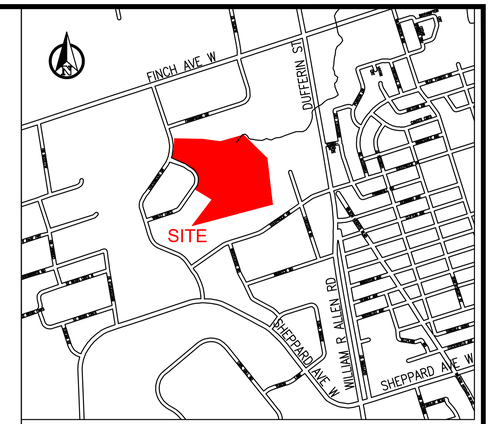
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE C2

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-28	C027
DATE:	DECEMBER 2025					





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE C3
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
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4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

SOLID WASTE MANAGEMENT SERVICES

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L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

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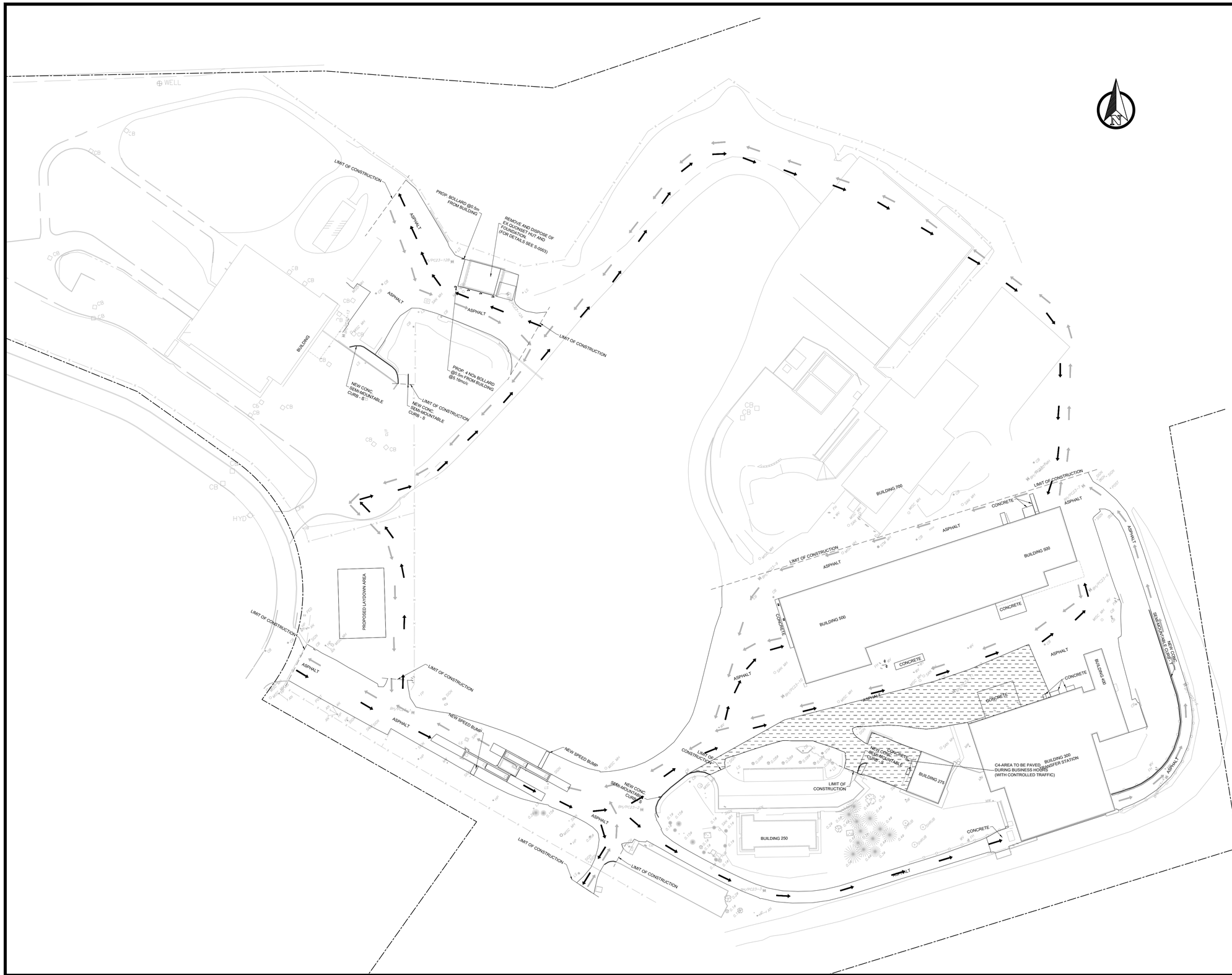
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

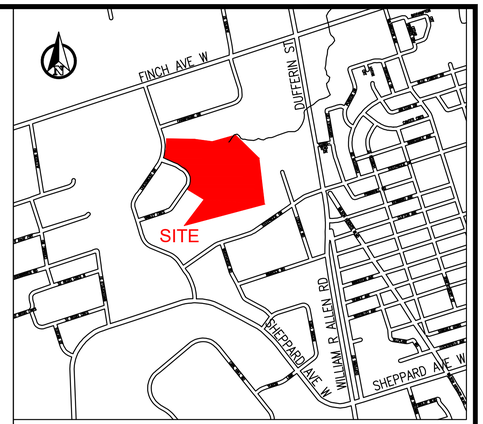
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE C3

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-29		C028
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
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HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE C4
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
3. FOR PROPOSED PAVEMENTS TYPICAL SECTIONS REFER TO DWG: C001.
4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

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0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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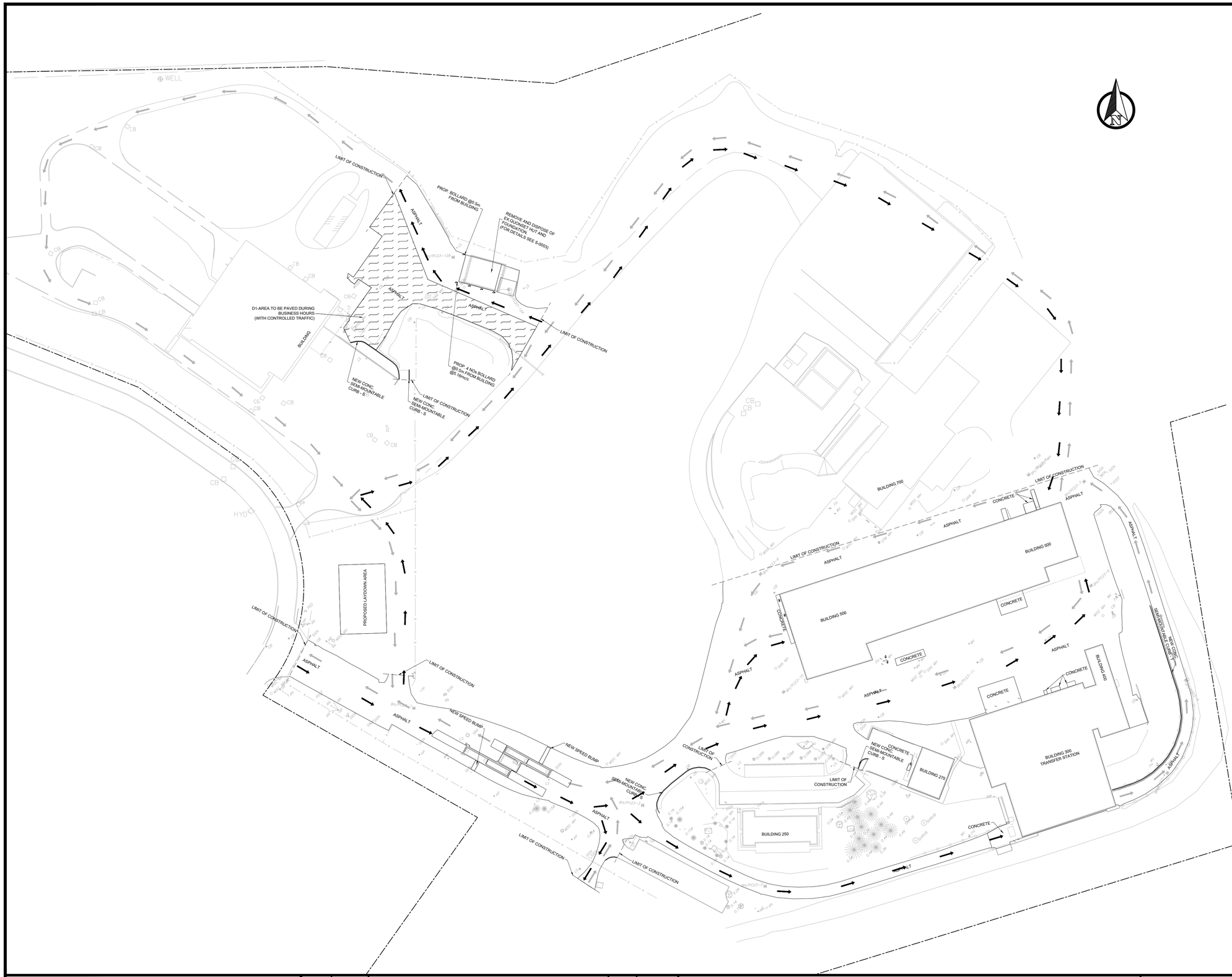
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

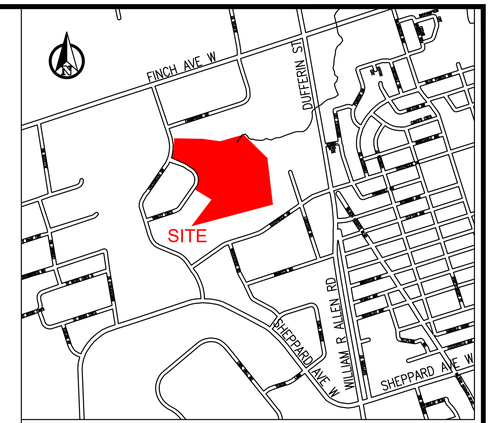
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE C4

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-30		C029
DATE:	DECEMBER 2025						





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
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HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE D1
	INBOUND
	OUTBOUND

NOTES:

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2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
3. FOR PROPOSED PAVEMENTS TYPICAL SECTIONS REFER TO DWG: C001.
4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

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L3T 7Z3, Canada

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0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

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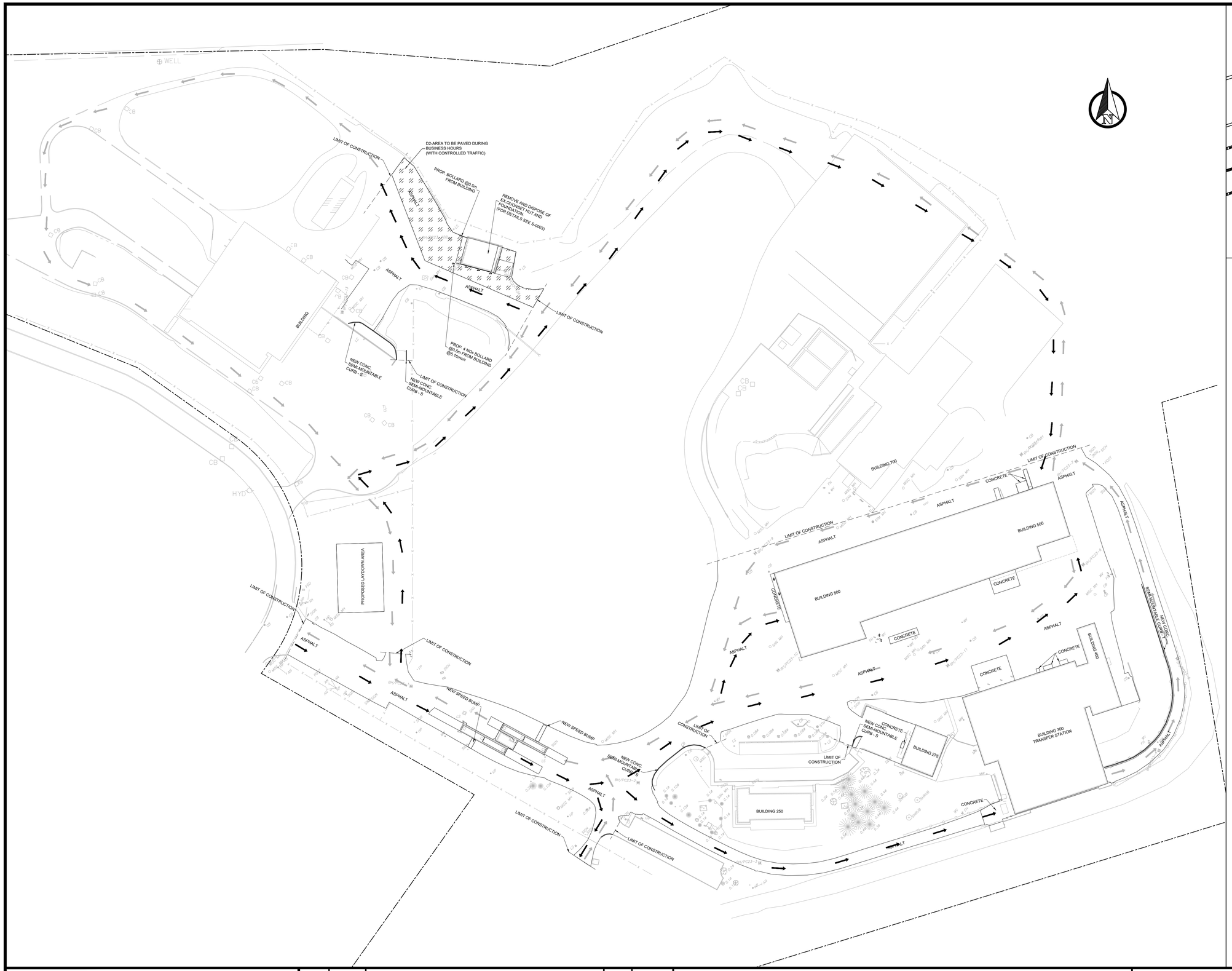
MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

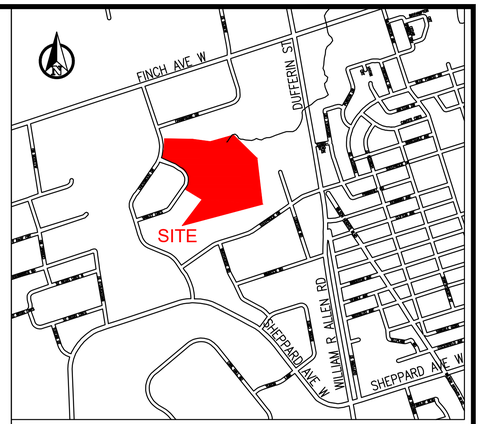
PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE D1

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-31	C030
DATE:	DECEMBER 2025					





KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
SAN MH	DENOTES SANITARY SEWER MANHOLE
MISC MH	DENOTES OTHER MANHOLE
WV	DENOTES WATER VALVE
FH	DENOTES FIRE HYDRANT
HW	DENOTES HAND WELL
MW	DENOTES MAINTENANCE WELL
HP	DENOTES HYDRO POLE
HJB	DENOTES HYDRO JUNCTION BOX
P	DENOTES PILLAR
BH/PC	DENOTES BOREHOLE LOCATION
	CONSTRUCTION STAGE- PHASE D2
	INBOUND
	OUTBOUND

NOTES:

1. MEASUREMENTS SHOWN ON THESE PLANS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. EACH CONSTRUCTION STAGE PHASE SHOWN SHALL BE DELINEATED WITH PROPER TEMPORARY FENCE SUCH AS FAST FENCE OR APPROVED EQUAL AND, JERSEY BARRIERS.
3. FOR PROPOSED PAVEMENTS TYPICAL SECTIONS REFER TO DWG: C001.
4. FOR PROPOSED PAVEMENT CROSS-SECTIONS REFER TO DWG: C017 T0 C018.

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
CONSTRUCTION STAGING - PHASE D2

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:800			DRAWING NUMBER:	1627-2025-5-32	C031
DATE:	DECEMBER 2025					

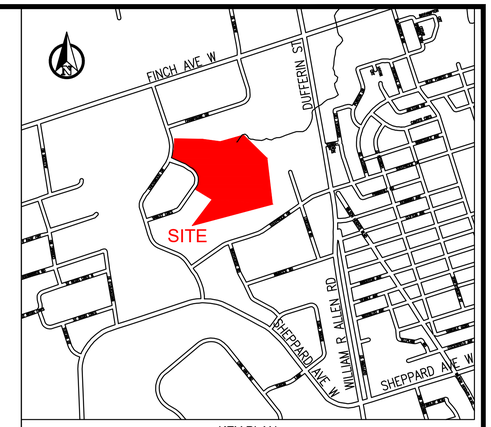
(E) QUONSET HUT BUILDING TO BE REPLACED W/ (N) STORAGE AND BUNKER BUILDINGS - SEE S-004

PROPOSED EMERGENCY FIRE ROUTE FOR NEW STORAGE AND BUNKER BUILDING WITH FIRE ROUTE SIGNAGE CONFIRMING TO TORONTO MUNICIPAL CODE CHAPTER 880.

EXISTING EMERGENCY FIRE ROUTE FOR BUILDING 75

EX. FIRE HYDRANT

EX. FIRE HYDRANT



KEY PLAN
N.T.S

LEGEND:

—x—x—x—	DENOTES CHAIN LINK FENCE
	GUIDE RAIL
	BUILDING FOOTPRINT
	EXISTING PROPERTY LINE
× 197.74	DENOTES GROUND SHOTS
B	DENOTES BOLLARD
FP	DENOTES FLAG POLE
PED	DENOTES TELEPHONE PEDESTAL
LS	DENOTES LIGHT STANDARD
RS	DENOTES ROAD SIGN
	DENOTES SHRUB
0.1ø	DENOTES DECIDUOUS TREE WITH TRUNK DIAMETER
0.1ø	DENOTES CONIFEROUS TREE WITH TRUNK DIAMETER
CB	DENOTES CATCH BASIN
STM MH	DENOTES STORM SEWER MANHOLE
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BH/PC	DENOTES BOREHOLE LOCATION
	FIRE ROUTE
	INBOUND
	OUTBOUND

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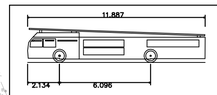

Aerial Fire Truck	
Overall Length	11.887m
Overall Width	2.489m
Overall Body Height	2.256m
Min Body Ground Clearance	0.229m
Track Width	2.489m
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

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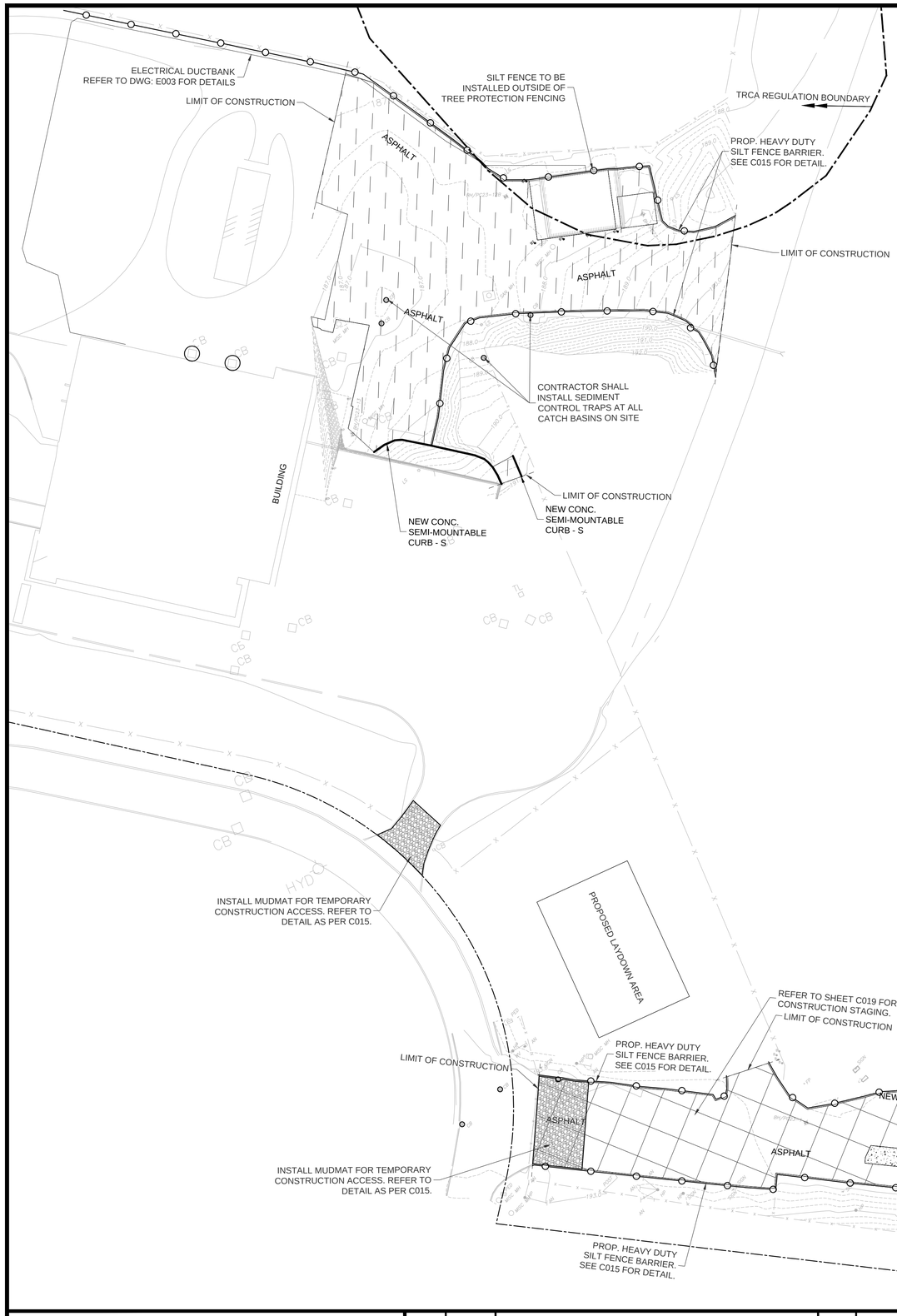
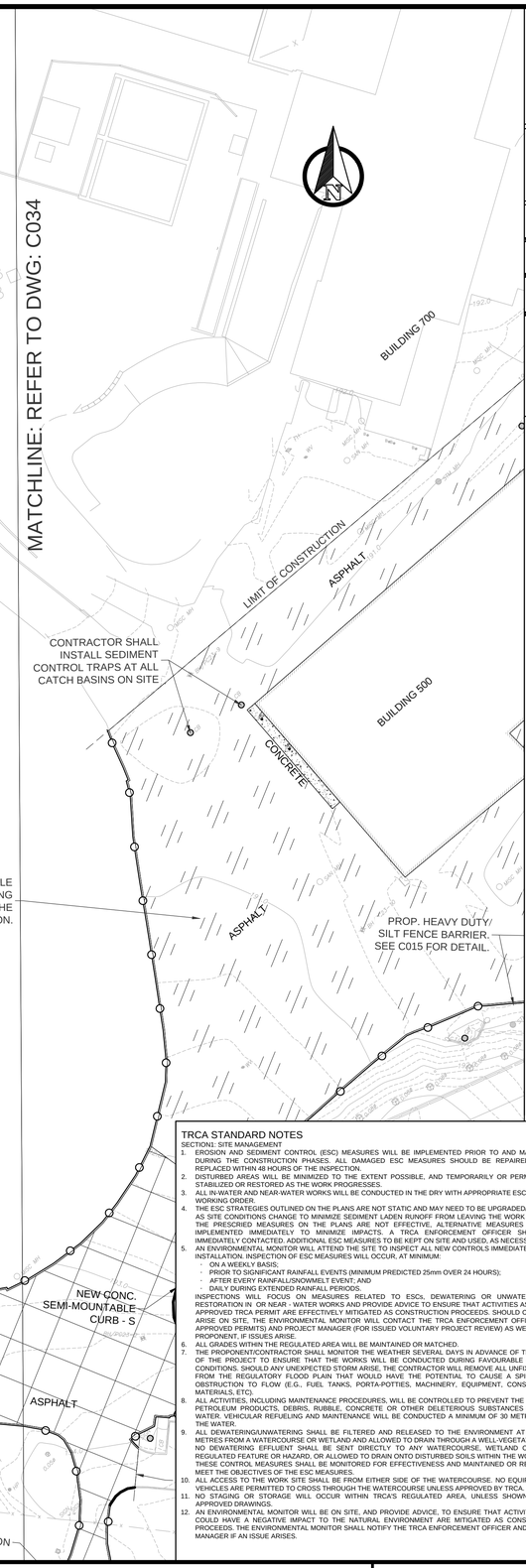
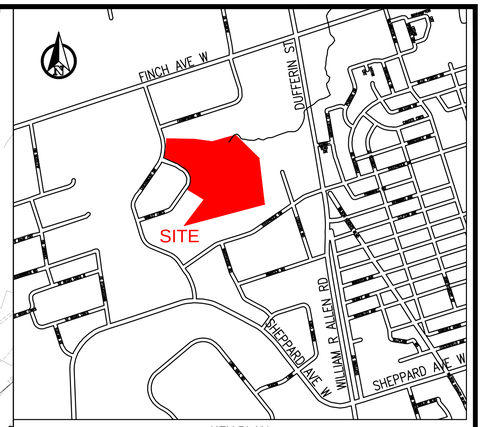
DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
FIRE PLAN

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1608-2025-6-33	C032
DATE:	DECEMBER 2025					







KEY PLAN
N.T.S

LEGEND:

- EXISTING PROPERTY LINE
- EXISTING MAJOR CONTOUR (163.0)
- EXISTING MINOR CONTOUR
- PROPOSED CURB (OPSD 600.020 TANGENT)
- PROPOSED CONCRETE CURB (OPSD 600.020 SUPERELEVATED)
- TRCA REGULATION BOUNDARY
- PROPOSED ASPHALT TYPE AA (SEE C001)
- PROPOSED ASPHALT TYPE BB (SEE C001)
- PROPOSED ASPHALT TYPE CC (SEE C001)
- PROPOSED ASPHALT TYPE DD (SEE C001)
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- EXISTING CONCRETE TO BE RETAINED
- B1 PROPOSED BOLLARDS (SEE DETAIL 1 ON C015)
- B2 PROPOSED BOLLARDS (SEE DETAIL 2 ON C015)
- HEAVY DUTY SILT FENCE (SEE DETAIL ON C015)
- SEDIMENT TRAP FOR CATCH BASIN

GENERAL NOTES

1. REFER TO C001 FOR GENERAL NOTES AND C015 FOR EROSION AND SEDIMENT CONTROL RELATED NOTES.
2. ALL ACTIVITIES, INCLUDING MAINTENANCE PROCEDURES, WILL BE CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBBLE, CONCRETE OR OTHER DELETERIOUS SUBSTANCES INTO THE WATER. VEHICULAR REFUELING AND MAINTENANCE WILL BE CONDUCTED A MINIMUM OF 30 METRES FROM THE WATER.
3. PRIOR TO SITE DISTURBANCE THE CONTRACTOR/PROPONENT SHOULD ENSURE THAT THE WORKS ARE IN CONFORMANCE WITH THE MIGRATORY BIRDS CONVENTION ACT. PLEASE NOTE THAT THE GENERAL BREEDING BIRD TIMING WINDOW FOR THIS AREA IS APRIL 1ST TO AUGUST 31ST, HOWEVER, BREEDING ACTIVITIES MIGHT INITIATE PRIOR TO AND CONTINUE PAST THIS PERIOD.
4. PLEASE NOTIFY TRCA ENFORCEMENT OFFICER (416.661-6600, EXT. 8477), AND TRCA PROJECT MANAGER (ZACK CARLAN AT 416.661.6600, EXT. 5310, ZACK.CARLAN@TRCA.CA) 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
5. AN ENVIRONMENTAL MONITOR WILL BE ON SITE, AND PROVIDE ADVICE, TO ENSURE THAT ACTIVITIES THAT COULD HAVE A NEGATIVE IMPACT TO THE NATURAL ENVIRONMENT ARE EFFECTIVELY MITIGATED AS CONSTRUCTION PROCEEDS. THE ENVIRONMENTAL MONITOR SHALL NOTIFY THE TRCA ENFORCEMENT OFFICER AND PROJECT MANAGER IF ISSUES ARISE.

TRCA STANDARD NOTES

SECTION1: SITE MANAGEMENT

1. EROSION AND SEDIMENT CONTROL (ESC) MEASURES WILL BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING THE CONSTRUCTION PHASES. ALL DAMAGED ESC MEASURES SHOULD BE REPAIRED AND/OR REPLACED WITHIN 48 HOURS OF THE INSPECTION.
2. DISTURBED AREAS WILL BE MINIMIZED TO THE EXTENT POSSIBLE, AND TEMPORARILY OR PERMANENTLY STABILIZED OR RESTORED AS THE WORK PROGRESSES.
3. ALL IN-WATER AND NEAR-WATER WORKS WILL BE CONDUCTED IN THE DRY WITH APPROPRIATE ESCs IN GOOD WORKING ORDER.
4. THE ESC STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO MINIMIZE SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREAS. IF THE PRESCRIED MEASURES ON THE PLANS ARE NOT EFFECTIVE, ALTERNATIVE MEASURES MUST BE IMPLEMENTED IMMEDIATELY TO MINIMIZE IMPACTS. A TRCA ENFORCEMENT OFFICER SHOULD BE IMMEDIATELY CONTACTED. ADDITIONAL ESC MEASURES TO BE KEPT ON SITE AND USED, AS NECESSARY.
5. AN ENVIRONMENTAL MONITOR WILL ATTEND THE SITE TO INSPECT ALL NEW CONTROLS IMMEDIATELY AFTER INSTALLATION. INSPECTION OF ESC MEASURES WILL OCCUR, AT MINIMUM:
   - ON A WEEKLY BASIS;
   - PRIOR TO SIGNIFICANT RAINFALL EVENTS (MINIMUM PREDICTED 25mm OVER 24 HOURS);
   - AFTER EVERY RAINFALL/SNOWMELT EVENT; AND
   - DAILY DURING EXTENDED RAINFALL PERIODS.

   INSPECTIONS WILL FOCUS ON MEASURES RELATED TO ESCs, DEWATERING OR UNWATERING, OR RESTORATION IN OR NEAR - WATER WORKS AND PROVIDE ADVICE TO ENSURE THAT ACTIVITIES AS PER THE APPROVED TRCA PERMIT ARE EFFECTIVELY MITIGATED AS CONSTRUCTION PROCEEDS. SHOULD CONCERNS ARISE ON SITE, THE ENVIRONMENTAL MONITOR WILL CONTACT THE TRCA ENFORCEMENT OFFICER (FOR APPROVED PERMITS) AND PROJECT MANAGER (FOR ISSUED VOLUNTARY PROJECT REVIEW) AS WELL AS THE PROPONENT, IF ISSUES ARISE.
6. ALL GRADES WITHIN THE REGULATED AREA WILL BE MAINTAINED OR MATCHED.
7. THE PROPONENT/CONTRACTOR SHALL MONITOR THE WEATHER SEVERAL DAYS IN ADVANCE OF THE ONSET OF THE PROJECT TO ENSURE THAT THE WORKS WILL BE CONDUCTED DURING FAVOURABLE WEATHER CONDITIONS. SHOULD ANY UNEXPECTED STORM ARISE, THE CONTRACTOR WILL REMOVE ALL UNFIXED ITEMS FROM THE REGULATORY FLOOD PLAIN THAT WOULD HAVE THE POTENTIAL TO CAUSE A SPILL OR AN OBSTRUCTION TO FLOW (E.G., FUEL TANKS, PORTA-POTTIES, MACHINERY, EQUIPMENT, CONSTRUCTION MATERIALS, ETC).
8. ALL ACTIVITIES, INCLUDING MAINTENANCE PROCEDURES, WILL BE CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBBLE, CONCRETE OR OTHER DELETERIOUS SUBSTANCES INTO THE WATER. VEHICULAR REFUELING AND MAINTENANCE WILL BE CONDUCTED A MINIMUM OF 30 METRES FROM THE WATER.
9. ALL DEWATERING/UNWATERING SHALL BE FILTERED AND RELEASED TO THE ENVIRONMENT AT LEAST 30 METRES FROM A WATERCOURSE OR WETLAND AND ALLOWED TO DRAIN THROUGH A WELL-VEGETATED AREA. NO DEWATERING EFFLUENT SHALL BE SENT DIRECTLY TO ANY WATERCOURSE, WETLAND OR OTHER REGULATED FEATURE OR HAZARD, OR ALLOWED TO DRAIN ONTO DISTURBED SOILS WITHIN THE WORK AREA. THESE CONTROL MEASURES SHALL BE MONITORED FOR EFFECTIVENESS AND MAINTAINED OR REVISED TO MEET THE OBJECTIVES OF THE ESC MEASURES.
10. ALL ACCESS TO THE WORK SITE SHALL BE FROM EITHER SIDE OF THE WATERCOURSE. NO EQUIPMENT OR VEHICLES ARE PERMITTED TO CROSS THROUGH THE WATERCOURSE UNLESS APPROVED BY TRCA.
11. NO STAGING OR STORAGE WILL OCCUR WITHIN TRCA'S REGULATED AREA, UNLESS SHOWN ON THE APPROVED DRAWINGS.
12. AN ENVIRONMENTAL MONITOR WILL BE ON SITE, AND PROVIDE ADVICE, TO ENSURE THAT ACTIVITIES THAT COULD HAVE A NEGATIVE IMPACT TO THE NATURAL ENVIRONMENT ARE MITIGATED AS CONSTRUCTION PROCEEDS. THE ENVIRONMENTAL MONITOR SHALL NOTIFY THE TRCA ENFORCEMENT OFFICER AND PROJECT MANAGER IF AN ISSUE ARISES.

TRCA STANDARD NOTES (CONTINUED)

13. TREE STAKES SHOULD BE MADE OF BIODEGRADABLE WOOD, AND ANY TREE TIES MADE OF NON-FUNGICIDE TREATED BIODEGRADABLE BINDER TWINE AS OPPOSED TO METAL T-STAKES AND GALVANIZED WIRE.
14. FOR CAST-IN-PLACE WORKS, CONTRACTOR CANNOT WASHOUT WITHIN THE TRCA BOUNDARY. THE CONTRACTOR TO PROVIDE A WASHOUT PLAN AND DETAIL TO THE CONTRACT ADMINISTRATOR IF A WASHOUT WITHIN THE TRCA BOUNDARY IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES OCCUR.
15. CONTRACTOR TO DETERMINE REGRADING EXTENTS FOR CONSTRUCTION ACCESS. DISTURBANCE LIMITS MAY NOT EXCEED 'LIMIT OF CONSTRUCTION' OUTLINED ON DRAWINGS.
16. CONTRACTOR TO TAKE NOTE THAT LIGHTER EQUIPMENT SHALL BE USED IN VALLEY LAND AREA DUE TO SPACE CONSTRAINTS. TURNING IN THE VALLEY LANDS IS RESTRICTED - CONTRACTOR TO BACK IN ANY TRUCKS FOR MATERIAL REMOVAL OR PROVISION OF SUPPLIES. ALL TRUCK REVERSALS TO BE GUIDED WITH A TRAINED FLAGPERSON.

SECTION 2: ENVIRONMENTAL COMPLIANCE

17. PLEASE NOTIFY THE FOLLOWING CONTACTS 48 HOURS PRIOR TO COMMENCING CONSTRUCTION: TRCA ENFORCEMENT (T: 437-880-2124, E: INSPECTIONS@TRCA.CA) FOR APPROVED PERMITS AND THE TRCA PROJECT MANAGER FOR ISSUED VOLUNTARY PROJECT REVIEWS. PLEASE ENSURE YOU QUOTE THE TRCA FILE NUMBER OR TRCA PERMIT NUMBER IN YOUR NOTIFICATION.

RESTORATION NOTES

1. CULTIVATE SOIL TO REDUCE COMPACTION. REFER TO SPECIFICATIONS AND GENERAL NOTES.
2. APPLY 150mm DEPTH TOPSOIL.
3. TREES SEED WITH MICROLEND ALL DISTURBED AREAS. APPLICATION DEPTH FOR COMPOST AND SEED TO BE MINIMUM 50mm DEPTH. INCLUDE COMMON OATS (AVENA SATIVA) AS A NURSE CROP AT 25KG/Ha FOR SEEDING. USE WHEAT (ITRITICUM AESTIVUM) AS A NURSE CROP FOR SEEDING LATE IN THE SEASON.
4. MUST BE UNIFORMLY GRADED AND SHALL BE FREE OF EROSION, STONES GREATER THAN 50mm DIAMETER, WEEDS AND ANY OTHER UNWANTED VEGETATION. EXISTING SURFACE SOIL SHALL BE UNIFORMLY CULTIVATED TO A MINIMUM DEPTH OF 25mm TO PROVIDE A LOOSE AND FRIABLE SEEDBED TO ACCELERATE GERMINATION OF SEED.
5. ALL SEED TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR MULCH, TACKIFIER, AND SPECIFIC SEEDING RATE AND TIMING OF APPLICATION.
6. CONTRACTOR TO VERIFY SEEDING RATES RELATIVE TO SOIL TYPE PRIOR TO INSTALLATION OF SEED.
7. ALL SEEDING ON DISTURBED AREAS SHALL BE PROTECTED WITH "MICROLEND" TO MANUFACTURER'S SPECIFICATIONS.
8. ALL PACKING SLIPS MUST BE PROVIDED TO THE CONTRACT ADMINISTRATOR PRIOR TO SEED PLACEMENT.
9. RESTORATION OF DISTURBED AREAS AS INDICATED ON PLANS.
10. CONTRACTOR TO USE SEED MIX CVC-7 FROM OSC SEEDS. THE SEED MIX SHALL INCLUDE:
    - 10% BLACK EYED SUSAN (RUDBECKIA HIRTA)
    - 1% BLUE WOOD (HEART LEAVED ASTER) ASTER CORDIFOLIUS)
    - 1% CANADA ANEMONE (ANEMONE CANADENSIS)
    - 2% CANADA GOLDENROD (SOLIDAGO CANADENSIS)
    - 2% COMMON MILKWEED (ASCLEPIAS SYRIACA)
    - 25% EVENING PRIMROSE (OENOTHERA BIENNIS
    - 1% GRASS LEAF GOLDENROD (EUTHAMNIA GRAMINIFOLIA)
    - 15% MEADOWOPEN FIELD SEDGE (CAREX GRANULARIS)
    - 1% NEW ENGLAND ASTER (SYMPHYOTRICHUM NOVAE ANGLIAE)
    - 40% RIVERBANK WILD RYE (ELYMUS RIPARIUS)
    - 1% VIRGINS BOWER (CLEMATIS VIR

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DUFFERIN TRANSFER STATION

PAVEMENT REHABILITATION

EROSION AND SEDIMENT CONTROL PLAN

CIVIL

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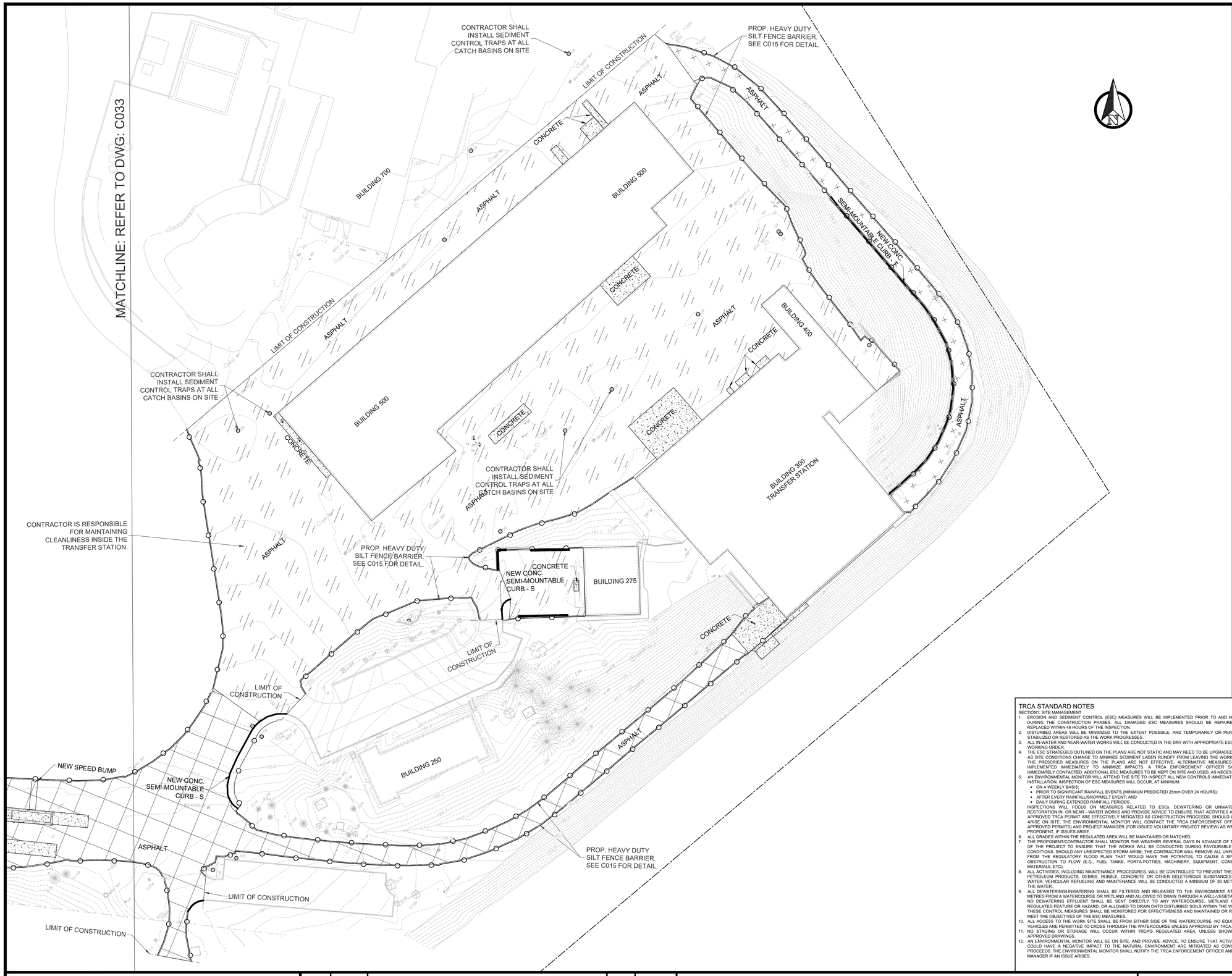

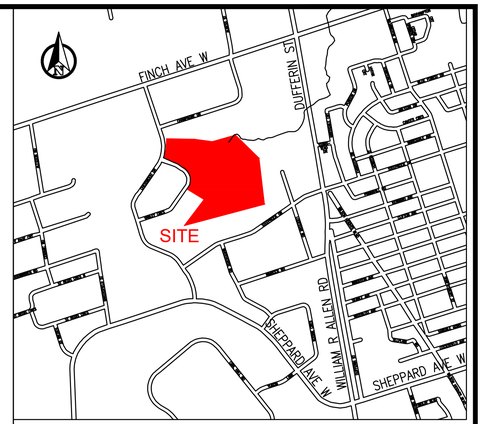

KEY PLAN
N.T.S

LEGEND:

- EXISTING PROPERTY LINE
- EXISTING MAJOR CONTOUR (163.0)
- EXISTING MINOR CONTOUR
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GENERAL NOTES

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9. ALL DEWATERING/UNWATERING SHALL BE FILTERED AND RELEASED TO THE ENVIRONMENT AT LEAST 30 METRES FROM A WATERCOURSE OR WETLAND AND ALLOWED TO DRAIN THROUGH A WELL-VEGETATED AREA. NO DEWATERING EFFLUENT SHALL BE SENT DIRECTLY TO ANY WATERCOURSE, WETLAND OR OTHER REGULATED FEATURE OR HAZARD, OR ALLOWED TO DRAIN ONTO DISTURBED SOILS WITHIN THE WORK AREA. THESE CONTROL MEASURES SHALL BE MONITORED FOR EFFECTIVENESS AND MAINTAINED OR REVISED TO MEET THE OBJECTIVES OF THE ESC MEASURES.
10. ALL ACCESS TO THE WORK SITE SHALL BE FROM EITHER SIDE OF THE WATERCOURSE. NO EQUIPMENT OR VEHICLES ARE PERMITTED TO CROSS THROUGH THE WATERCOURSE UNLESS APPROVED BY TRCA.
11. NO STAGING OR STORAGE WILL OCCUR WITHIN TRCA'S REGULATED AREA, UNLESS SHOWN ON THE APPROVED DRAWINGS.
12. AN ENVIRONMENTAL MONITOR WILL BE ON SITE, AND PROVIDE ADVICE, TO ENSURE THAT ACTIVITIES THAT COULD HAVE A NEGATIVE IMPACT TO THE NATURAL ENVIRONMENT ARE MITIGATED AS CONSTRUCTION PROCEEDS. THE ENVIRONMENTAL MONITOR SHALL NOTIFY THE TRCA ENFORCEMENT OFFICER AND PROJECT MANAGER IF AN ISSUE ARISES.

TRCA STANDARD NOTES (CONTINUED)

13. TREE STAKES SHOULD BE MADE OF BIODEGRADABLE WOOD, AND ANY TREE TIES MADE OF NON-FUNGICIDE TREATED BIODEGRADABLE BINDER TWINE AS OPPOSED TO METAL T-STAKES AND GALVANIZED WIRE.
14. FOR CAST-IN-PLACE WORKS, CONTRACTOR CANNOT WASHOUT WITHIN THE TRCA BOUNDARY. THE CONTRACTOR TO PROVIDE A WASHOUT PLAN AND DETAIL TO THE CONTRACT ADMINISTRATOR IF A WASHOUT WITHIN THE TRCA BOUNDARY IS REQUIRED BEFORE ANY CONSTRUCTION ACTIVITIES OCCUR.
15. CONTRACTOR TO DETERMINE REGRADING EXTENTS FOR CONSTRUCTION ACCESS. DISTURBANCE LIMITS MAY NOT EXCEED 'LIMIT OF CONSTRUCTION' OUTLINED ON DRAWINGS.
16. CONTRACTOR TO TAKE NOTE THAT LIGHTER EQUIPMENT SHALL BE USED IN VALLEY LAND AREA DUE TO SPACE CONSTRAINTS. TURNING IN THE VALLEY LANDS IS RESTRICTED – CONTRACTOR TO BACK IN ANY TRUCKS FOR MATERIAL REMOVAL OR PROVISION OF SUPPLIES. ALL TRUCK REVERSALS TO BE GUIDED WITH A TRAINED FLAGPERSON.

SECTION 2: ENVIRONMENTAL COMPLIANCE

17. PLEASE NOTIFY THE FOLLOWING CONTACTS 48 HOURS PRIOR TO COMMENCING CONSTRUCTION: TRCA ENFORCEMENT (T: 437-880-2124; E: INSPECTIONS@TRCA.CA) FOR APPROVED PERMITS AND THE TRCA PROJECT MANAGER FOR ISSUED VOLUNTARY PROJECT REVIEWS. PLEASE ENSURE YOU QUOTE THE TRCA FILE NUMBER OR TRCA PERMIT NUMBER IN YOUR NOTIFICATION.

RESTORATION NOTES

1. CULTIVATE SOIL TO REDUCE COMPACTION. REFER TO SPECIFICATIONS AND GENERAL NOTES.
2. APPLY 150mm DEPTH TOPSOIL.
3. TREES SEED WITH MICROLEND ALL DISTURBED AREAS. APPLICATION DEPTH FOR COMPOST AND SEED TO BE MINIMUM 50mm DEPTH. INCLUDE COMMON OATS (AVENA SATIVA) AS A NURSE CROP AT 25KG/Ha FOR SEEDING. USE WHEAT (TRITICUM AESTIVUM) AS A NURSE CROP FOR SEEDING LATE IN THE SEASON.
4. MUST BE UNIFORMLY GRADED AND SHALL BE FREE OF EROSION, STONES GREATER THAN 50mm DIAMETER, WEEDS AND ANY OTHER UNWANTED VEGETATION. EXISTING SURFACE SOIL SHALL BE UNIFORMLY CULTIVATED TO A MINIMUM DEPTH OF 25mm TO PROVIDE A LOOSE AND FRIABLE SEEDBED TO ACCELERATE GERMINATION OF SEED.
5. ALL SEED TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS FOR MULCH, TACKIFIER, AND SPECIFIC SEEDING RATE AND TIMING OF APPLICATION.
6. CONTRACTOR TO VERIFY SEEDING RATES RELATIVE TO SOIL TYPE PRIOR TO INSTALLATION OF SEED.
7. ALL SEEDING ON DISTURBED AREAS SHALL BE PROTECTED WITH "MICROLEND" TO MANUFACTURER'S SPECIFICATIONS.
8. ALL PACKING SLIPS MUST BE PROVIDED TO THE CONTRACT ADMINISTRATOR PRIOR TO SEED PLACEMENT.
9. RESTORATION OF DISTURBED AREAS AS INDICATED ON PLANS.
10. CONTRACTOR TO USE SEED MIX CVC-7 FROM OSC SEEDS. THE SEED MIX SHALL INCLUDE:
    - 10% BLACK EYED SUSAN (RUDBECKIA HIRTA)
    - 1% BLUE WOOD (HEART LEAVED ASTER) ASTER CORDIFOLIUS)
    - 1% CANADA ANEMONE (ANEMONE CANADENSIS)
    - 2% CANADA GOLDENROD (SOLIDAGO CANADENSIS)
    - 2% COMMON MILKWEED (ASCLEPIAS SYRIACA)
    - 25% EVENING PRIMROSE (OENOTHERA BIENNIS
    - 1% GRASS LEAF GOLDENROD (EUTHAMNIA GRAMINIFOLIA)
    - 15% MEADOW/OPEN FIELD SEDGE (CAREX GRANULARIS)
    - 1% NEW ENGLAND ASTER (SYMPHYOTRICHUM NOVAE ANGLIAE)
    - 40% RIVERBANK WILD RYE (ELYMUS RIPARIUS)
    - 1% VIRGINS BOWER (CLEMATIS VIR

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	CK	
0	NOV. 2025	ISSUED FOR 100% DETAILED DESIGN REVIEW	CK	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
35 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT REHABILITATION
EROSION AND SEDIMENT CONTROL PLAN

CIVIL

DESIGN:	NJ	DRAFTING:	VK	CHECK:	CK	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2025-5-34		C034
DATE:	DECEMBER 2025						

1. GENERAL

1.1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH PROJECT SPECIFICATIONS AND ALL OTHER CONTRACT DRAWINGS.

1.2. REFER TO THE MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF OPENINGS AND SLEEVES NOT SHOWN ON THE STRUCTURAL DRAWINGS. NO STRUCTURAL MEMBER OR COMPONENT SHALL BE CUT, NOTCHED OR OTHERWISE ALTERED UNLESS APPROVED IN WRITING BY THE ENGINEER OF RECORD.

1.3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING, STABLE AND CAPABLE OF WITHSTANDING THE LOADING NOTED AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, TEMPORARY BRACING, GUY WIRES OR TIE-DOWNS.

1.4. DURING CONSTRUCTION, IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT DESIGN LIVE LOADS INDICATED IN THESE NOTES IS NOT EXCEEDED. WHERE NECESSARY, THESE LOADS SHALL BE REDUCED UNTIL MATERIALS REACH THEIR SPECIFIED DESIGN STRENGTH.

1.5. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, SEQUENCE AND SAFETY.

1.6. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE; ELEVATIONS ARE IN METRES UNLESS NOTED OTHERWISE.

1.7. DO NOT SCALE DRAWINGS.

2. DESIGN DATA

2.1 CODES AND STANDARDS

2.1.1. THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2024 ONTARIO BUILDING CODE (OBC).

2.1.2. ALL REINFORCED CONCRETE ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CAN/CSA-A23.3-19 (DESIGN OF CONCRETE STRUCTURES). AND CSA S806-12 (DESIGN AND CONSTRUCTION OF BUILDING STRUCTURES WITH FIBER-REINFORCED POLYMERS).

2.1.3. ALL STRUCTURAL STEEL ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CAN/CSA-S16-19 - LIMIT STATES DESIGN OF STEEL STRUCTURES.

2.2. LATERAL LOADS

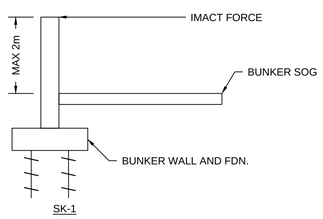
2.2.1. THE STRUCTURE HAS BEEN DESIGNED TO RESIST THE LATERAL LOADS DUE TO EARTHQUAKE AND WIND IN ACCORDANCE WITH THE ONTARIO BUILDING CODE. THE DESIGN PARAMETERS FOR WIND AND EARTHQUAKE ARE AS NOTED BELOW:

a) WIND LOADS
q= 0.44 kPa 1/50 AVERAGE HOURLY WIND PRESSURE (NORTH YORK, ON)
Iw - 1
IMPORTANCE CATEGORY: NORMAL

b) EARTHQUAKE LOADS
THE SUPRESTRUCTURE EARTHQUAKE FORCES MUST BE CALCULATED IN ACCORDANCE WITH THE EQUIVALENT 2024 ONTARIO BUILDING CODE.EARTHQUAKE IMPORTANCE FACTOR, BASED ON TABLE 4.1.8.5 OF 2024 OBC: CATEGORY: NORMAL
Ie = 1
SEISMIC HAZARD PARAMETERS FOR LOCATION: NORTH YORK, ON
Sa(0.2) = 0.195, Sa(0.5) = 0.107, Sa(1.0) = 0.056, Sa(2.0) = 0.028
PGA = 0.125
SITE CLASSIFICATION FOR SEISMIC SITE RESPONSE: CLASS = D
SEISMIC CATEGORY: SC2
SEISMIC FORCE RESISTING SYSTEM (SFRS): CONVENTIONAL STEEL CONSTRUCTION OF MOMENT/BRADED FRAME
Rd=1.5
Ro=1.3

2.3. FOUNDATION WALL LOADS

2.3.1. PUSH WALL LOADING (SEE SK-1):
ASSUMED LOADER : CASE 580 SUPER N LOADER BACKHOE
LOADER OPERATING WEIGHT = 188.5kN
LOADER BUCKET WIDTH = 7km/h
SLOW DOWN DISTANCE = 0.1m
STOPPING TIME = 0.1 second
FRICTION COEFFICIENT OF RUBBER ON WET CONCRETE SLAB = 0.6
FORCE REQUIRED TO BRING TO HALT = 341kN (FACTORED)
IMPACT FORCE ACTS AT HEIGHT FROM TOP OF SLAB = 2m MAX.



SK-1

2.3.2. FOUNDATION WALLS HAVE BEEN DESIGNED FOR THE COMBINATION OF SUB AND SUPERSTRUCTURE REACTIONS. THE SUPERSTRUCTURE REACTIONS ARE PRELIMINARY AND SHALL BE CONFIRMED WITH THE VENDOR PRIOR TO CONSTRUCTION.

2.4. DESIGN LOADS

2.4.1. MAIN FLOOR
a) LIVE LOAD: 12.0 kPa

2.4.2. ROOF STRUCTURE
a) COLATERAL LOAD: 2.5 kPa
b) LIVE LOAD: 1.0 kPa
c) SNOW LOAD (NORTH YORK, ON):
i. 1 IN 50 YEARS ASSOCIATED GROUND SNOW LOAD: 1.2kPa
ii. 1 IN 50 YEARS ASSOCIATED RAIN LOAD: 0.4kPa
iii. SPECIFIED ULTIMATE LIMIT STATE SNOW LOAD: 1.36kPa
iv. SPECIFIED SERVICEABILITY LIMIT STATE SNOW LOAD: 1.22kPa

3. FOUNDATIONS

3.1. STRUCTURAL DESIGN IS BASED ON THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT TITLED "GEOTECHNICAL INVESTIGATION DUFFERIN TRANSFER STATION, CITY OF TORONTO, ONTARIO" BY WSP DATED JUNE 17, 2024. SITE PREPARATION AND FOUNDATION INSTALLATION SHALL COMPLY WITH THE INFORMATION CONTAINED WITHIN THIS REPORT.

3.2. ALL FOOTINGS TO BE ESTABLISHED ON HELICAL PILES DESIGNED TO WITHSTAND THE PRESCRIBED REACTIONS FROM THE STRUCTURE. A SPECIALIZED CONTRACTOR SHOULD BE ENGAGED TO DESIGN AND INSTALL HELICAL PILES. THE HELICAL PILE DESIGNER MUST BE AN ENGINEER IN THE PROVINCE OF ONTARIO AND DETERMINE THE DEPTH AND TYPE OF HELICAL PILES BASED ON SOIL CONDITIONS AND THE REQUIRED DESIGN LOADS.

3.4. THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10.

4. FOUNDATION WALLS

4.1. DO NOT BACKFILL AGAINST WALLS RETAINING EARTH UNTIL THE SLABS HAVE BEEN CAST AND ATTAINED 100% OF ITS DESIGN STRENGTH.

4.2. WHERE THE SLAB AT GRADE IS USED TO TIE THE TOP OF A WALL RETAINING EARTH, THAT WALL SHALL BE ADEQUATELY SHORED UNTIL THE SLAB ABOVE GRADE HAS BEEN CAST AND ATTAINED 100% OF ITS DESIGN STRENGTH.

4.3. CARRY OUT BACKFILLING AGAINST FOUNDATION WALLS WHERE THERE IS GRADE ON BOTH SIDES IN SUCH A MANNER THAT THE LEVEL OF BACKFILLING ON ONE SIDE OF THE WALL IS NEVER MORE THAN 500 mm DIFFERENT FROM THE LEVEL ON THE OTHER SIDE OF THE WALL.

5. CONCRETE

5.1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF LOW CARBON CONCRETE AS SPECIFED IN THE SPECS AND CONFROMING TO TORONTO GREEN STANDARD V4 AND CAN/CSA A23.1-24 AND BE PROPORTIONED IN ACCORDANCE TO THE EXPOSURE CLASS REFERRED IN TABLE 1.

5.2. OPENINGS, SLEEVES, EMBEDDED DUCTS:

5.2.1. NO SLEEVES SHALL BE PLACE VERTICALLY OR HORIZONTALLY THROUGH BEAMS UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.

5.2.2. WHEN TOTAL WIDTH OF PIPES OR DUCTS CAST INTO A SLAB EXCEED 300 mm IN 600 mm OF WIDTH THEN THE CONTRACTOR SHALL ADD A LAYER OF 15M @300 mm ON CENTER ABOVE AND PERPENDICULAR TO THE DUCT/PIPE RUNS EXTENDING 300 mm BEYOND THE LAST DUCT/PIPE ON EACH SIDE.

5.3. CONSTRUCTION JOINTS:

5.3.1. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE MADE IN BEAMS, UNLESS SHOWN OR APPROVED IN WRITING BY THE ENGINEER OF RECORD.

5.3.2. VERTICAL CONSTRUCTION JOINTS SHALL NOT BE MADE AT MID-SPAN OF BEAMS OR SLABS, UNLESS SHOWN OR APPROVED IN
WRITING BY THE ENGINEER OF RECORD.

5.4. FORMS FOR STRUCTURAL CONCRETE SHALL NOT BE STRIPPED UNTIL THE CONCRETE HAS REACHED AT LEAST 75% OF THE SPECIFIED COMPRESSIVE STRENGTH.

5.5. DO NOT DRIVE OR FORCE REBAR INTO FRESH CONCRETE. ALL REBAR TO BE SECURELY FASTENED PRIOR TO PLACING CONCRETE.

5.6. ALL HARD EDGES OF CAST IN PLACE CONCRETE TO HAVE 25mm CHAMFERED EDGE.

5.7. PVC WATERSTOPS SHOWN IN SECTION TO BE TIED TO REBAR CAGE EVERY 300mm. USE MANUFACTURER'S RECOMMENDED ANCHORING CLIPS. DO NOT PUNCTURE PVC WATERSTOP.

6. STRUCTURAL GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCING

6.1. GLASS FIBER REINFORCED POLYMER (GFRP) REBARS SHALL COMPLY WITH THE FOLLOWING STANDARDS:
a) CSA S806-12 (DESIGN AND CONSTRUCTION OF BUILDING STRUCTURES WITH FIBRE-REINFORCED POLYMERS)
b) CSA S807-19 (SPECIFICATION FOR FIBER-REINFORCED POLYMERS

6.2. GLASS FIBRE REINFORCED POLYMER REINFORCING (GFRP) BARS SHALL BE GRADE III MEETING ALL THE REQUIREMENTS OF CSA S807-19, ASTM D8505/D8505M-23 AND THE FOLLOWING:
a) STRAIGHT BARS SHALL HAVE INTEGRAL DEFORMED RIBS AND BOND STRENGTH TESTED ACCORDING TO ASTM D7913 SHALL HAVE A MINIMUM CHARACTERISTIC VALUE > 2900PSI AND SLIP AT LOADED END < 0.5 mm.
b) THE BOND DEPENDENT COEFFICIENT (Kb) ACCORDING TO CSA S806-12 ANNEX S SHALL BE < 0.8 FOR STRAIGHT BARS.

6.3. MINIMUM TENSILE STRENGTH: 145KSI (1000MPa) FOR ALL SIZES.

6.4. MINIMUM MODULUS OF ELASTICITY: 8700KSI (60GPa).

6.5. GROOVED/MILLIED AND SANDCOATED BARS ARE NOT ALLOWED.

6.6 GFRP MANUFACTUTER SHALL HAVE AUTHORIZATION LETTER FROM BUILDING MATERIAL EVALUATION COMMIISSION (BMEC) UNDER THE ONTARIO CODE ACT, 1992 THAT ALLOWS THEIR REBARS IN TO BE USED IN BUILDING CONSTRUCTION.

6.7. APPROVED STRUCTURAL GFRP REBAR MANUFACTURER:
a) MST BAR (200A Han an Road,Toronto, ON, Canada L4L 3R7)
b) OR, APPROVED EQUIVALENT.

6.8. THE MINIMUM COVER TO GFRP REINFORCEMENT SHALL BE 60mm UNO. AS NOTED IN CSA/CAN A23.1 ACCORDING TO THE SPECIFIED CONCRETE MIXES IN TABLE 2.

6.9. ALL BARS SHALL HAVE A MINIMUM EMBEDMENT EQUIVALENT TO THE STRAIGHT TENSION EMBEDMENT LENGTH CORRESPONDING TO THE SIZE OF THE BAR. DOWELS FROM WALLS TO SLABS SHALL HAVE A MINIMUM EMBEDMENT OF 800 mm INTO WALLS AND SLABS UNLESS OTHERWISE NOTED OR SHOWN.

6.10. PROVIDE DOWELS TO WALLS SIMILAR IN NUMBER, SIZE AND SPACING TO THE VERTICAL STEEL IN THE WALL ABOVE UNLESS OTHERWISE NOTED OR SHOWN.

6.11. SPLICE BARS ACCORDING TO THE LAP LENGTH SHOWN IN TABLE 3. DO NOT PROVIDE ALTERNATIVE SPLICE LOCATIONS UNLESS REVIEWED AND APPROVED BY THE ENGINEER OF RECORD. WHERE NO SPLICE LENGTH SHOWN, PROVIDE CLASS B TENSION SPLICE OR STANDARD HOOK AS INDICATED. FOLLOW CSA STANDARDS FOR TSB AND STD HOOK LENGTHS.

7. CHEMICAL/ADHESIVE AND MECHANICAL ANCHORS

7.1. CHEMICAL/ADHESIVE ANCHORS SHALL BE HILTI HY-200 ADHESIVE SYSTEM, UNLESS NOTED OTHERWISE.

7.2. MECHANICAL ANCHORS SHALL BE HILTI KWIK-BOLT III, UNLESS NOTED OTHERWISE.

7.3. WHERE DETAILS NOTE EPOXY GROUT, USE HILTI HY-200 ADHESIVE SYSTEM.

7.4. ALTERNATIVE ENGINEER APPROVED ANCHOR TYPES ARE PERMITTED. SUBMIT PROPOSED ANCHOR TYPE AND MANUFACUTRE'S PUBLISHED DATA INCLUDING LOAD CAPACITY, EDGE DISTANCE REQUIREMENTS AND SPACING REQUIREMENTS FOR APPROVAL PRIOR TO USING ALTERNATIVE ANCHOR.

7.5. INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

7.6. THE MANUFACTURER'S REPRESENTATIVE SHALL TRAIN INSTALLERS.

8. STRUCTURAL STEEL

8.1. STRUCTURAL WIDE FLANGE SHAPES (W) SHALL CONFORM TO CAN/CSA-G40.20/G40.21 GRADE 350W OR ASTM A992/A992M GRADE 50 (345 MPa).

8.2. STRUCTURAL WELDED WIDE FLANGE SHAPES (WWF) shall CONFORM TO CAN/CSA-G40.20/G40.21 GRADE 350W.

8.3. ANGLES, PLATES AND CHANNELS (L, C) SHALL CONFORM TO CAN/CSA-G40.20/G40.21 GRADE 300W.

8.4. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A500 GRADE C.

8.5. ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 55 WELDABLE STEEL OR 300W THREADED ROD CONFORMING TO CSA G40.21-M, UNLESS OTHERWISE NOTED OR SHOWN.

8.6. STRUCTURAL BOLTS SHALL CONFORM TO ASTM A325M, NUTS SHALL CONFORM TO ASTM A563M. WASHERS CONFORM TO ASTM F436M.

8.7. NON-SHRINK GROUT SHALL HAVE A 35 MPa (5000 PSI) MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS.

8.8. PROVIDE MINIMUM LENGTH OF BEARING OF 200 mm FOR ALL STEEL BEAMS BEARING ON MASONRY AND CONCRETE AND A MINIMUM OF 100 mm ON STRUCTURAL STEEL, UNLESS OTHERWISE NOTED OR SHOWN.

8.9. CENTRE BEARING PLATES UNDER BEAMS UNLESS OTHERWISE NOTED OR SHOWN.

8.10. NO STRUCTURAL STEEL SHALL BE CUT IN THE FIELD UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.

8.11. ALL WELDS EXPOSED TO VIEW SHALL BE GROUND SMOOTH.

8.12. IT IS THE INTENTION OF THESE DESIGN DOCUMENTS TO DELEGATE THE DESIGN OF PRE-ENGINEERED STORAGE BUILDING (SUPERSTRUCTURE) INCLUDING ALL STRUCTURAL STEEL CONNECTIONS TO A PROFESSIONAL ENGINEER, LICENSED IN THE PROVINCE OF ONTARIO. SUBMIT SEALED SHOP DRAWINGS PRIOR TO CONSTRUCTION.

8.13. PROVIDE ALL ANCHOR RODS, CAST IN PLATES WITH ANCHORS, AND ANCHORS REQUIRED TO CONNECT STRUCTURAL STEEL TO CAST-IN-PLACE CONCRETE.

8.14. LENGTH FOR ANCHOR RODS, STRAP ANCHORS AND SIMILAR DEVICES IS GIVEN FOR THE STRAIGHT LENGTH WITHOUT HOOK. PROVIDE A 75 mm (3") HOOK FOR ALL ANCHOR RODS AND A 50 mm (2") HOOK FOR ALL STRAP ANCHORS, TYPICAL UNLESS NOTED OTHERWISE.

8.15. ALL STRUCTURAL STEEL OUTSIDE OF THE ABOVE GRADE BUILDING ENVELOPE SHALL BE HOT DIPPED GALVANIZED PER ASTM A123 AND ALL FASTENERS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED PER ASTM A153.

8.16. THE CONTRACTOR SHALL COORDINATE EMBEDDED ITEMS REQUIRED FOR STRUCTURAL,ELECTICAL AND MECHANICAL ELEMENTS.

HELICAL PILE GENERAL NOTES:

1. REFER TO OBC 2024 PART 4, SECTION 4.1.3.2 FOR THE LOADING COMBINATIONS.

2. THE PRESCRIBED HELICAL PILE DESIGN LOADS ARE ONLY FOR REFERENCE TO THE PILE DESIGNER. BASE REACTIONS PROVIDED BY THE PRE-ENGINEERED BUILDING SHOP DRAWING AND THUS THE FINAL LOADING COMBINATIONS SHALL BE REVIEWED AND CONFIRMED BASED ON THE PROFESSIONAL JUDGEMENT OF THE DESIGNER TO COMPLY WITH OBC 2024.

3. APPROVED HELICAL PILE/ANCHOR MANUFACTURERS:
a. EBS GEOSTRUCTURAL INC., 320 WOOLWICH STREET, BRESLAU, ONTARIO, N0B 1M0
b. TECHNO METAL POST TORONTO, 1 YONGE STREET, SUITE 1801, TORONTO, ONTARIO, M5E 1W7 OR APPROVED EQUIVALENT

4. SUBMITTALS:
a. ONE (1) SET OF SITE-SPECIFIC SHOP DRAWINGS SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE PROVINCE OF ONTARIO. SHOP DRAWINGS SHALL INCLUDE:
i. HELICAL PILE/ANCHOR NUMBER, LOCATION, AND PATTERN BY ASSIGNED IDENTIFICATION NUMBER
ii. HELICAL PILE/ANCHOR DESIGN LOAD
iii. ASSUMED GEOTECHNICAL RESISTANCE FACTOR
iv. TYPE AND SIZE OF HELICAL PILE/ANCHOR SHAFT
v. HELICAL CONFIGURATION (NUMBER AND DIAMETER OF HELICAL PLATES)
vi. MINIMUM EFFECTIVE TORQUE REQUIREMENT
b. CALIBRATION REPORTS FOR INSTALLATION EQUIPMENT UTILIZED ON THE PROJECT. THE CALIBRATION TESTS SHALL HAVE BEEN COMPLETED WITHIN ONE YEAR OF THE DATE SUBMITTED.
c. AFTER COMPLETION OF THE INSTALLATION OF THE HELICAL PILES/ANCHORS, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A REPORT OF ALL HELICAL PILES/ANCHORS INSTALLED ON THE PROJECT CERTIFYING THE ULTIMATE LOAD CAPACITY (WITH MINIMUM FACTOR OF SAFETY OF 2.0) OF THE PILES/ANCHORS INSTALLED, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA.

5. CORROSION PROTECTION:
a. ALL HELICAL PILE SHAFTS AND HELICES SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 AFTER FABRICATION.
b. THE DESIGN SERVICE LIFE FOR THE HELICAL PILES SHALL BE 50 YEARS.

6. EXAMINATION AND ACCEPTANCE OF SITE CONDITIONS
a. GENERAL CONTRACTOR SHALL INSPECT, ACCEPT AND CERTIFY IN WRITING TO THE HELICAL PILE/ANCHOR SUBCONTRACTOR THAT SITE CONDITIONS MEET SPECIFICATIONS FOR THE FOLLOWING ITEMS PRIOR TO INSTALLATION OF THE HELICAL PILES/ANCHORS;
b. VERIFY SUB-GRADE PREPARATION AND ELEVATIONS CONFORM TO THE SPECIFIED REQUIREMENT.
c. VERIFY LOCATION, ALIGNMENT, AND ELEVATIONS OF HELICAL PILES/ANCHORS.
d. VERIFY LOCATION, ALIGNMENT, AND ELEVATIONS OF ANY SERVICES WITHIN WORK AREA.
e. THE GENERAL CONTRACTOR SHALL VERIFY THAT ALL HELICAL PILES/ANCHORS MAY BE INSTALLED IN ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS REGARDING SUCH ITEMS AS UNDERGROUND OBSTRUCTIONS, RIGHT-OF-WAY LIMITATIONS, UTILITIES, ETC.
f. IN THE EVENT OF A DISCREPANCY, THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER. THE
g. GENERAL CONTRACTOR SHALL NOT PROCEED WITH HELICAL PILE/ANCHOR INSTALLATION IN AREAS OF DISCREPANCIES UNTIL SAID DISCREPANCIES HAVE BEEN RESOLVED. ALL COSTS ASSOCIATED WITH UNRESOLVED DISCREPANCIES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
h. DO NOT PROCEED WITH INSTALLATION OF HELICAL PILES/ANCHORS UNTIL SUB-GRADE SOIL CONDITIONS ARE CORRECTED BY THE GENERAL CONTRACTOR.

7. INSTALLATION
a. A TORQUE INDICATOR SHALL BE USED DURING HELICAL PILE/ANCHOR INSTALLATION. THE TORQUE INDICATOR CAN BE AN INTEGRAL PART OF THE INSTALLATION EQUIPMENT OR EXTERNALLY MOUNTED IN-LINE WITH THE INSTALLATION TOOLING. TORQUE INDICATORS SHALL MEET REQUIREMENTS SET FORTH BY HELICAL PILE/ANCHOR MANUFACTURER.
b. IF THE HELICAL PILE/ANCHOR IS REFUSED OR DEFLECTED BY A SUBSURFACE OBSTRUCTION, THE INSTALLATION SHALL BE TERMINATED AND THE PILE REMOVED. THE OBSTRUCTION SHALL BE REMOVED, IF FEASIBLE, AND THE HELICAL PILE/ANCHOR RE-INSTALLED. IF THE OBSTRUCTION CANNOT BE REMOVED, THE HELICAL PILE/ANCHOR SHALL BE INSTALLED AT AN ADJACENT LOCATION, SUBJECT TO REVIEW AND ACCEPTANCE OF THE OWNER.
c. IF THE TORSIONAL STRENGTH RATING OF THE CENTRAL STEEL SHAFT AND/OR INSTALLATION EQUIPMENT HAS BEEN REACHED PRIOR TO PROPER POSITIONING OF THE LAST PLAIN EXTENSION SECTION RELATIVE TO THE FINAL ELEVATION, THE CONTRACTOR MAY REMOVE THE LAST PLAIN EXTENSION AND REPLACE IT WITH A SHORTER LENGTH EXTENSION. IF IT IS NOT FEASIBLE TO REMOVE THE LAST PLAIN EXTENSION, THE CONTRACTOR MAY CUT SAID EXTENSION SHAFT TO THE CORRECT ELEVATION. THE CONTRACTOR SHALL NOT REVERSE (BACK-OUT) THE HELICAL PILE/ANCHOR TO FACILITATE EXTENSION REMOVAL.
d. THE CONTRACTOR SHALL RECORD THE TORQUE VALUES FOR EACH INDIVIDUAL HELICAL PILE/ANCHOR AT 300mm (1 FOOT) INCREMENTS DURING INSTALLATION. THESE RECORDS SHALL BE SUBMITTED TO THE OWNER FOR RECORD.

8. FIELD QUALITY CONTROL
a. CENTERLINE OF HELICAL PILE/ANCHOR SHALL NOT BE MORE THAN 75 mm FROM INDICATED PLAN LOCATION.
b. HELICAL PILE/ANCHOR PLUMBNESS SHALL BE WITHIN 2 OF DESIGN ALIGNMENT.
c. TOP ELEVATION OF HELICAL PILE/ANCHOR SHALL BE WITHIN 50 mm OF THE DESIGN VERTICAL ELEVATION.

9. HEAVY DUTY SHELFING NOTES:

9.1. ALL SHELVING UNITS SHALL BE PREFABRICATED, MODULAR, HEAVY-DUTY SYSTEMS CONSTRUCTED WITH POWDER-COATED STEEL FRAMING.

9.2. EACH UNIT SHALL INCLUDE ANCHORED VERTICAL POSTS, HORIZONTAL BEAMS, CROSS BRACING, AND SHELVING PANELS, WITH A MINIMUM LOAD CAPACITY OF 18 KN PER SHELF.

9.3. THE SHELVING SYSTEM SHALL CONSIST OF TWO EQUALLY SPACED SHELF LEVEL ON THE NORTH SIDE AND FOUR EQUALLY SPACED SHELF LEVELS ON THE REMAINING THREE SIDES WITHIN A TOTAL HEIGHT OF 3.6 METERS, WITH AN OPEN BOTTOM.

9.4. VERTICAL POSTS SHALL BE ANCHORED TO FLOOR SLAB AND PROTECTED AGAINST ACCIDENTAL IMPACT USING COLUMN PROTECTORS.

9.5. STAMPED SHOP DRAWINGS MUST BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

9.6. INSTALL SHELVING UNITS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SHOP DRAWINGS.

9.7. ALL SHELVING UNITS SHALL BE DESIGNED AND FABRICATED TO MEET SPECIFIED LOAD CAPACITIES AND COMPLY WITH RELEVANT BUILDING CODES AND STANDARDS.

9.8. MANUFACTURER SHALL PROVIDE CERTIFICATION OF LOAD CAPACITY AND COMPLIANCE WITH SPECIFIED REQUIREMENTS.

TABLE 1

CONCRETE EXPOSURE CLASS REQUIREMENT

STRUCTURAL ELEMENTS	NOT EXPOSED		EXPOSED TO FREEZING AND THAWING ONLY			EXPOSED TO CHLORIDES WITH OR WITHOUT FREEZING AND THAWING		
	MIN COMPRESSIVE STRENGTH f'c (b) (MPa)	SLUMP (c,d)	EXPOSURE CLASS	MIN COMPRESSIVE STRENGTH f'c (b) (MPa)	SLUMP (c,d)	EXPOSURE CLASS	MIN COMPRESSIVE STRENGTH f'c (b) (MPa)	SLUMP (c,d)
FOUNDATION MAT						A-1	35	100 25
FOUNDATION WALLS						A-1	35	100 25

NOTES:
(a) MAXIMUM AGGREGATE SIZE IS 20mm (TYPICAL U/N).
(a) MINIMUM COMPRESSIVE STRENGTHS ARE AT 28 DAYS UNLESS NOTED OTHERWISE.
(a) THE SLUMP SPECIFIED IN TABLE 1 IS THE SLUMP BEFORE THE ADDITION OF ANY SUPERPLASTICIZING ADMIXTURES.
(a) WHEN SUPERPLASTICIZING FLOWING CONCRETE IS USED, THE SLUMP BEFORE THE ADDITION OF SUPERPLASTICIZING ADMIXTURE SHALL BE AS SPECIFIED, OR LOWER, AND AFTER THE ADDITION OF THE SUPERPLASTICIZING ADMIXTURES SHALL REMAIN BELOW THE POINT AT WHICH SEGREGATION WILL OCCUR.

TABLE 2

CONCRETE COVER REQUIREMENTS	
CAST AGAINST EARTH	75mm
FOUNDATION WALLS, SLAB ON GRADE	60mm

TABLE 3

REINFORCEMENT SPLICES
35 MPa CONCRETE, NORMAL WEIGHT
GFRP BARS

BAR SIZE	LAP LENGTH (mm)			
	GFRP BARS (mm)		DOWELS	
	CLASS A	CLASS B	A	B
10M	300	390	300	360
15M	490	650	400	510
20M	600	770	480	620
25M	800	1050	770	1000
30M	1050	1350	920	1190

NOTES:

1. DOWELS ARE TO MATCH WALL REINFORCEMENT UNLESS NOTED OTHERWISE. USE CLASS A LENGTH FOR ANCHORAGE.
2. PROVIDE CLASS B LAP UNLESS NOTED OTHERWISE.
3. LAP SPLICE LENGTHS SHOWN IN THE TABLE ARE BASED ON HEAVIER CONFINED BARS.
4. TABLE APPLIES UNLESS SHOWN OTHERWISE.
5. DEVELOPMENT LENGTHS ARE EQUAL TO CLASS 'A' LAP SPLICES.
6. DEVELOPMENT LENGTHS ARE FOR GFRP REBARS ASSUMING 400 MPa STRESS IN THE BARS.

TABLE 4

HELICAL PILE NO.	LIMIT STATE	DESIGN HELICAL PILE FORCE (kN)	
		VERT.	HORIZ.
HP1	ULS	900 (840)	35 (20)
	SLS	675 (635)	20 (15)
HP2	ULS	170	N/A
	SLS	120	
HP3	ULS	510 (482)	25 (10)
	SLS	400 (371)	15 (7.5)
HP4	ULS	85	N/A
	SLS	60	
HP5	ULS	275	
	SLS	200	
HP6	ULS	135	
	SLS	100	

NOTES:
1. POSITIVE DENOTES COMPRESSION AND NEGATIVE DENOTES TENSION.
2. REACTIONS IN PARENTHESES ARE PRELIMINARY VALUES FROM THE PRE-ENGINEERED BUILDING SUPPLIER. CONTRACTOR SHALL PROVIDE FINAL SHOP DRAWINGS INDICATING THE PRE-ENGINEERED APPLIED LOADS AND CONFIRM THAT FINAL PRE-ENGINEERED BUILDING REACTIONS DO NOT EXCEED THESE ASSUMED VALUES PRIOR TO CONSTRUCTION.

ABBREVIATIONS

	PLUS OR MINUS
Ø,	DIA DIAMETER
ALT	ALTERNATE
ASL	ADDITIONAL SNOW LOAD
B. (BOT.)	BOTTOM
BEW	BOTTOM EACH WAY
B.L.L.	BOTTOM LOWER LAYER
BM	BEAM
B.U.L.	BOTTOM UPPER LAYER
C	CHANNEL
c/c	CENTRE TO CENTRE
c/w	COMPLETED WITH /CONNECT WITH
CANT'	CANTILEVER
Cf	FACTORED COMPRESSION
CJ	CONTROL JOINT
CL	CENTRE LINE, CONTROL LINE
CMU	CONCRETE MASONRY UNIT
Cs	SPECIFIED (UNFACTORED) COMPRESSION
DP	DEEP
DWG	DRAWING
DWL	DOWEL
EA	EACH
EE	EACH END
EF	EACH FACE
EJ,	EXP JT EXPANSION JOINT/MOVEMENT JOINT
EL	ELEVATION
EMBED	EMBEDMENT
ENG	ENGINEER
EQ	EQUAL
EW	EACH WAY
EX.	EXIST EXISTING
EXP JT	EXPANSION JOINT
f'c	COMPRESSIVE STRENGTH OF CONC
fy	YIELD STRENGTH
GALV	GALVANIZED
(H)	HIGH
HEF	HORIZONTAL EACH FACE
HSS	HOLLOW STRUCTURAL SECTION
L	SINGLE ANGLE
LG	LONG/LENGTH
LL	LIVE LOAD
MAX	MAXIMUM
MF	MOMENT FRAME
Mf	FACTORED MOMENT
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
NTS	NOT TO SCALE
Pa	PASCAL
Pf	FACTORED AXIAL LOAD
Ps	SPECIFIED (UNFACTORED) AXIAL LOAD
R/W	REINFORCE WITH
REINF	REINFORCEMENT
REV	REVISION, REVISED
SIM	SIMILAR
S.S.	STAINLESS STEEL
STIR	STIRRUP
SYM	SYMMETRICAL
t	THICKNESS
T	TOP
THK.	THICK
TEW	TOP EACH WAY

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DUFFERIN TRANSFER STATION
PAVEMENT AND CURB REHABILITATION
GENERAL NOTES

STRUCTURAL

DESIGN:	SA	DRAFTING:	ML	CHECK:	RL	CONTRACT No.	25SWM-IRM-042CDU
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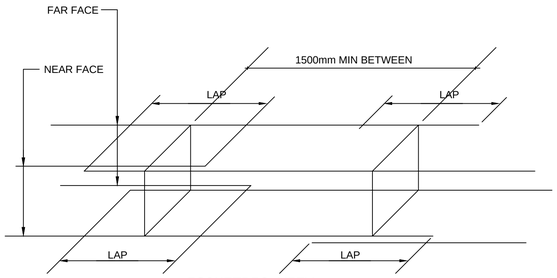
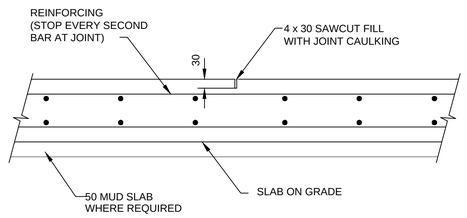


ISOMETRIC VIEW

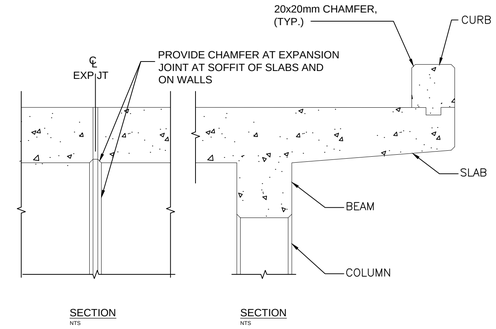
NOTE:

LAP LENGTH CLASS B CSA23.3 UNLESS NOTED OTHERWISE

ARRANGEMENT FOR HORIZONTAL REINFORCING BARS
NTS

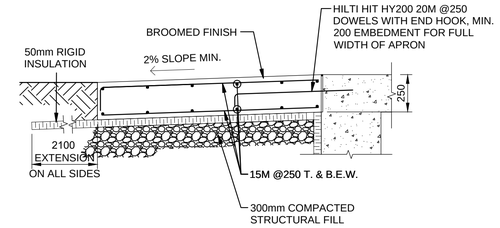


CONTROL JOINT FOR SLAB ON GRADE
NTS



NOTE:
PROVIDE CHAMFER ALONG EXPOSED EDGES ON CONCRETE SLABS, BEAMS, CURBS, COLUMNS, WALL OPENINGS AND SIMILAR ITEMS UNLESS OTHERWISE NOTED OR DIRECTED.

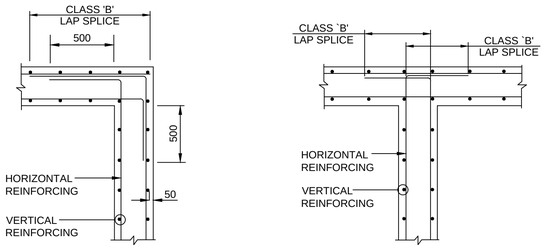
CHAMFERS
NTS



TYPICAL REINFORCEMENT FOR CONCRETE APRON AT VEHICLE DOOR

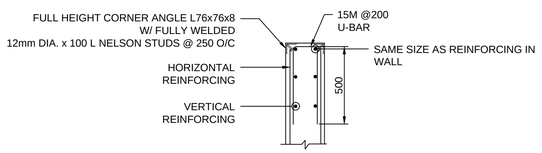
NOTES:
1. 50mm RIGID INSULATION: STYROFOAM HIGH LOAD 40 BY DOW CHEMICAL CANADA OR EQUIVALENT PRODUCT.
2. APRON SLAB CONCRETE SHALL BE C-1 EXPOSURE CLASS WITH MINIMUM 35 MPa COMPRESSIVE STRENGTH.

TYPICAL APRON SLAB DETAIL
NTS

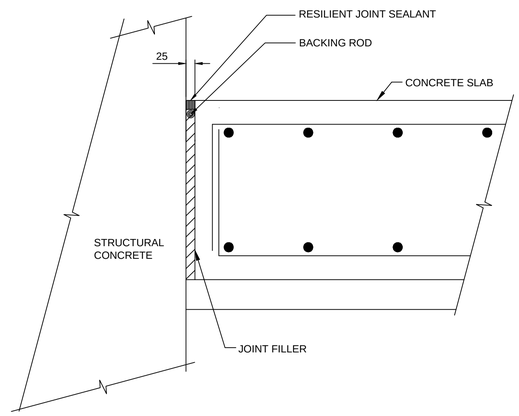


WALL CORNER
2-LAYERS OF BARS
NTS

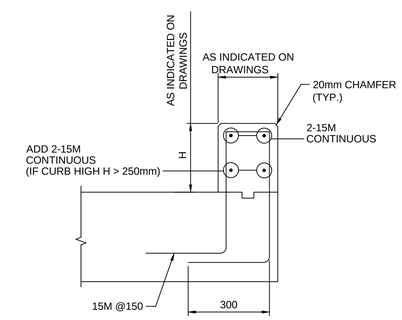
WALL INTERSECTION
2-LAYERS OF BARS
NTS

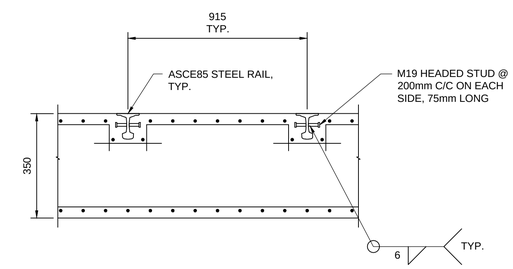


CONCRETE WALL CORNERS / TOP AND INTERSECTIONS
NTS

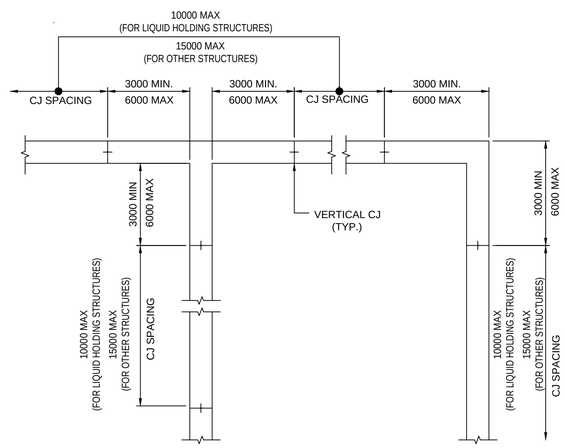


ISOLATION JOINT FOR SLAB ON GRADE
NTS



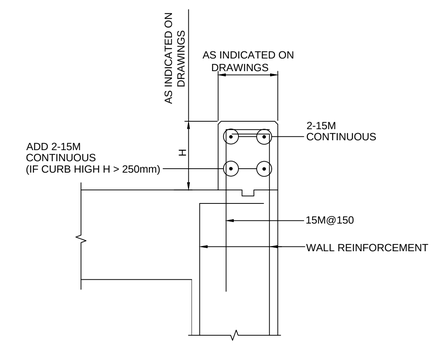


PROTECTION RAIL DETAIL
NTS



NOTES:
1. COORDINATE CONSTRUCTION JOINT LOCATIONS AND TIME BETWEEN CONCRETE POURS WITH SPECIFICATION 03300.
2. LOCATE WALL CONSTRUCTION JOINTS AS SHOWN, UNLESS INDICATED OTHERWISE.

WALL CONSTRUCTION JOINT SPACING
NTS



CONCRETE CURB REINFORCEMENT DETAIL
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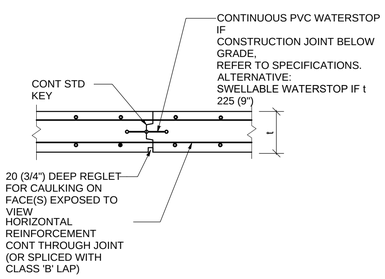

NOTE:

DO NOT PLACE CONSTRUCTION JOINTS IN ANY SHEAR WALLS.

CONSTRUCTION JOINT IN WALL
NTS

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DUFFERIN TRANSFER STATION
PAVEMENT AND CURB REHABILITATION
TYPICAL DETAILS

STRUCTURAL

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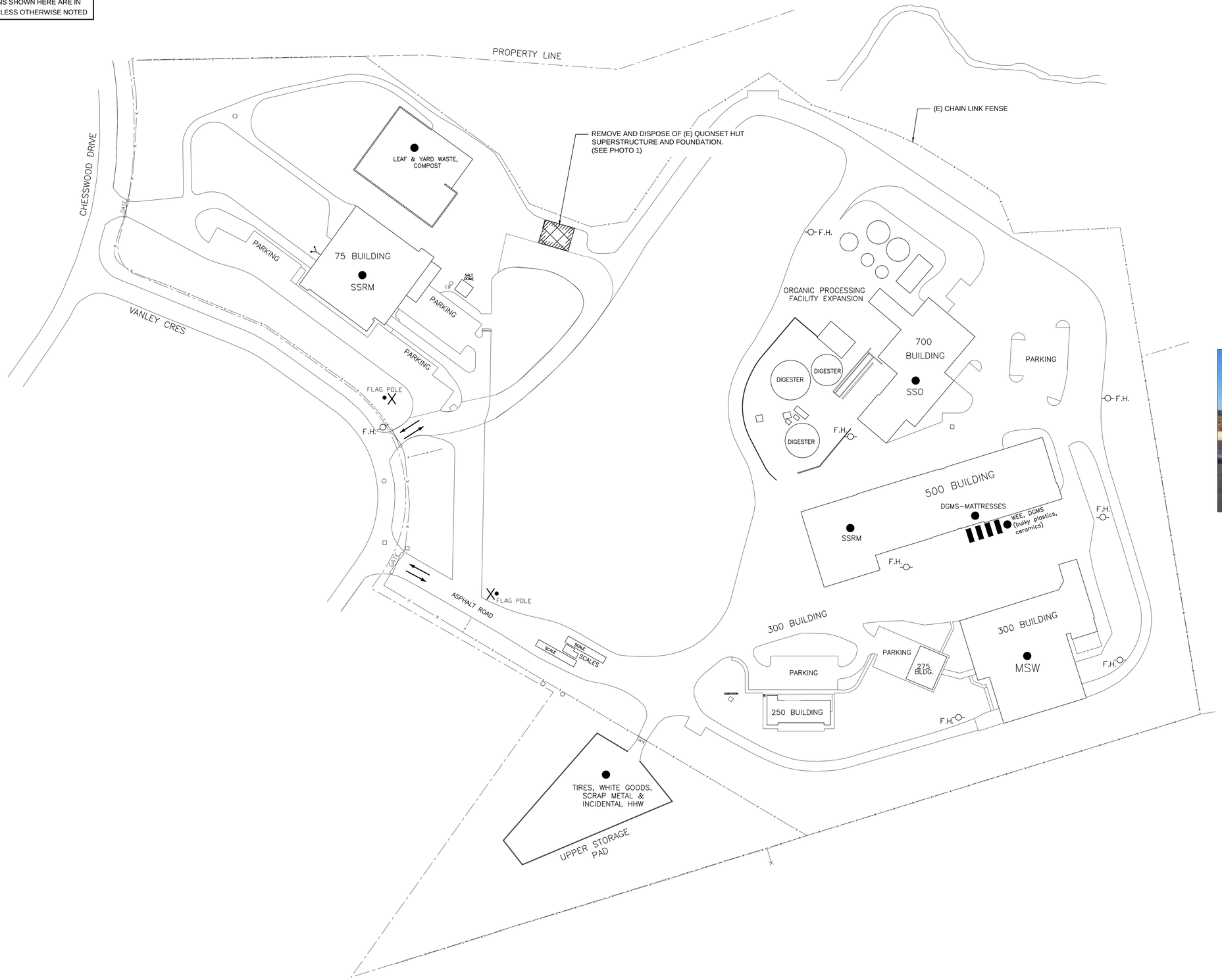

LOCATION PLAN

REMOVE AND DISPOSE OF (E) QUONSET HUT SUB AND SUPERSTRUCTURE

PHOTO 1 - (E) QUONSET HUT

NOTE:

1. (E) QUONSET HUT INCLUDES A PRE-FABRICATED STEEL SHELL ON CONCRETE SLAB ON GRADE THAT IS FULLY SLATED FOR DEMOLITION.

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DUFFERIN TRANSFER STATION

PAVEMENT AND CURB REHABILITATION

DEMOLITION PLAN

STRUCTURAL

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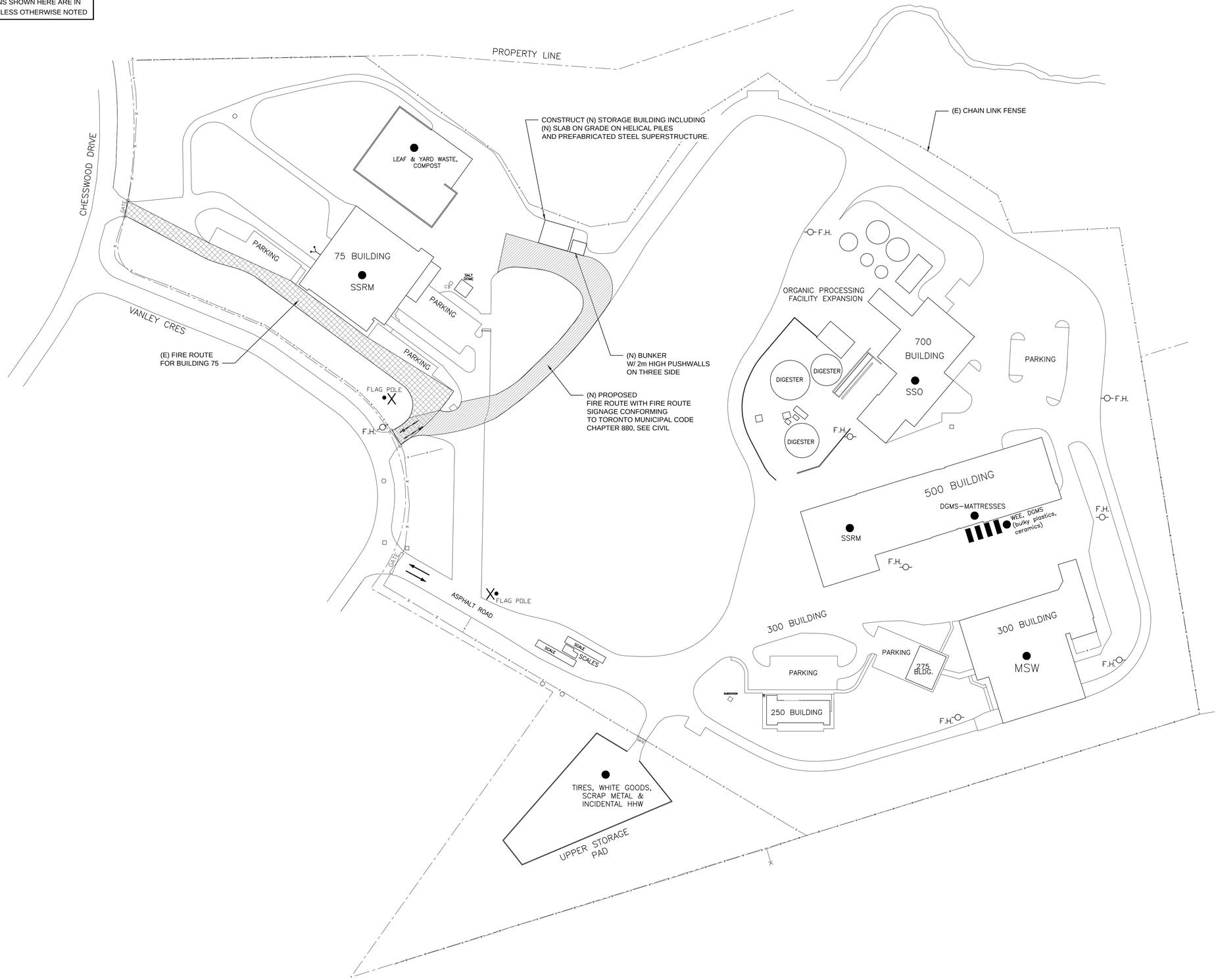

LOCATION PLAN

NOTE:

1. (E) QUONSET HUT INCLUDES A PRE-FABRICATED STEEL SHELL ON CONCRETE SLAB ON GRADE THAT IS FULLY SLATED FOR DEMOLITION.

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DUFFERIN TRANSFER STATION

PAVEMENT AND CURB REHABILITATION

PROPOSED PLAN

STRUCTURAL

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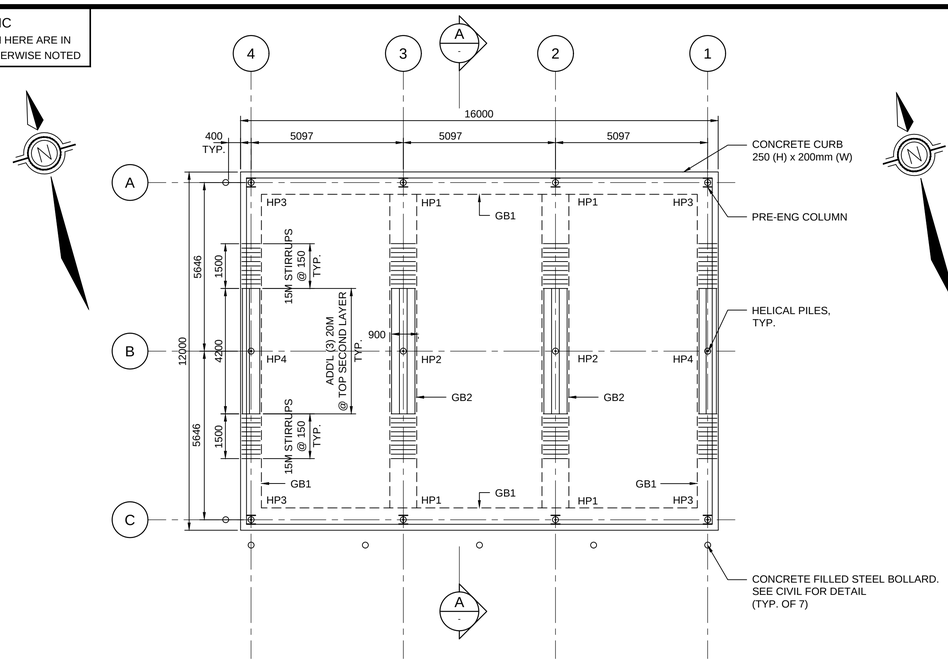
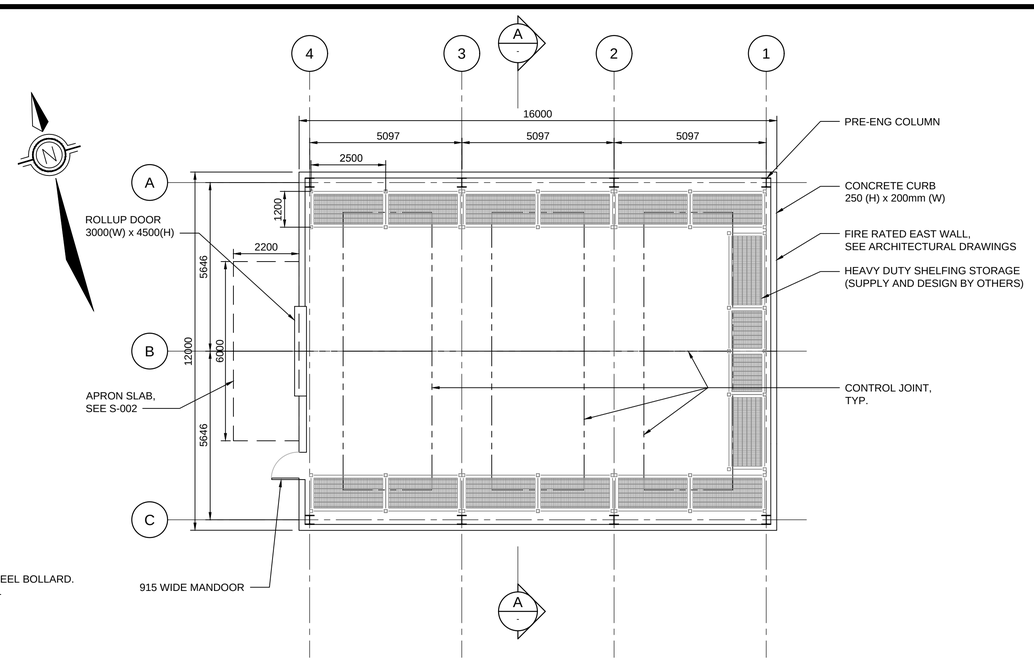


STORAGE BUILDING FOUNDATION PLAN

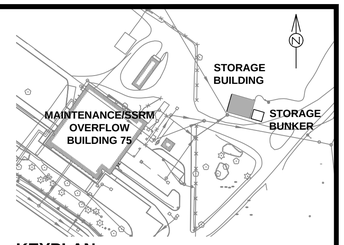
1:100



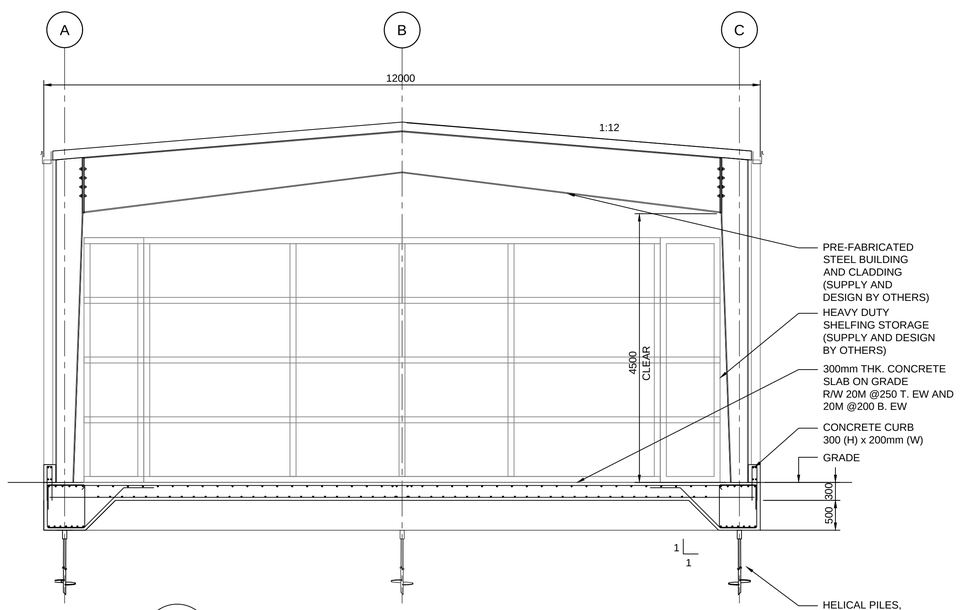
STORAGE BUILDING FLOOR PLAN

1:100

NOTE:
1. REFER TO BUILDING SUPPLIER'S SHOP DRAWINGS FOR DOOR, COLUMN AND INSULATED PANEL DETAILS.
2. REFER TO VENDOR SHOP DRAWINGS FOR THE HEAVY DUTY SHELFING STORAGE DETAILS AND ANCHORAGE.
3. REFER TO GENERAL NOTES FOR SHELVING REQUIREMENT.

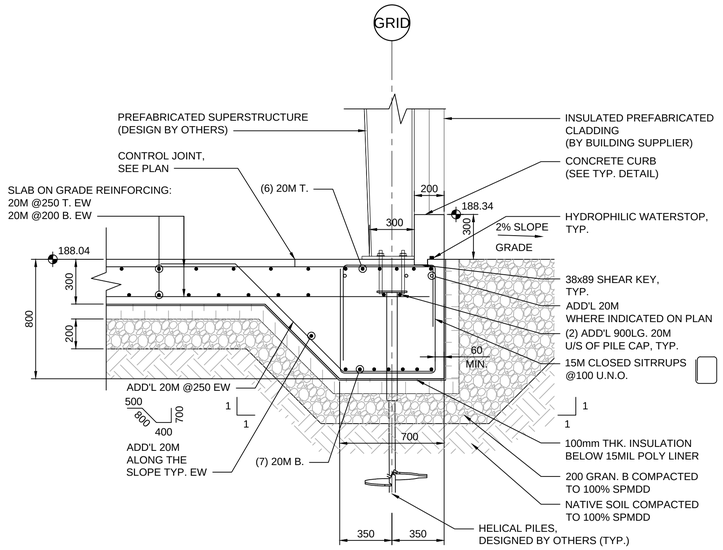


KEYPLAN



PREFABRICATED BUILDING SECTION

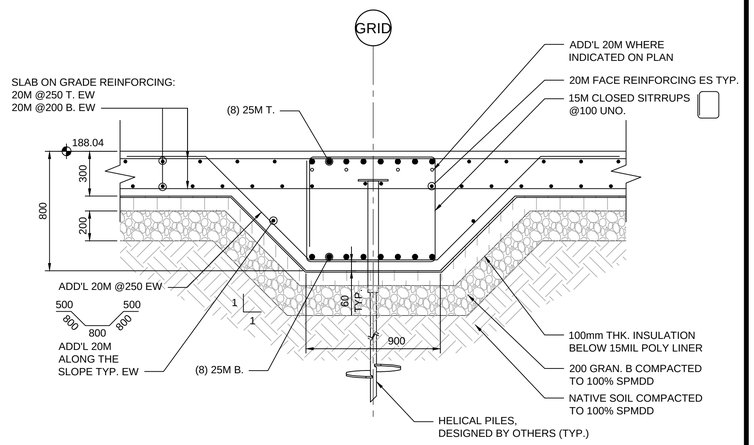
SCALE: 1:50



GRADE BEAM 1 (GB1) CROSS SECTION

1:20

NOTES:
1. ALL GRADE BEAM TOP REBARS TO BEND DOWN TO COVER AT GL A AND C.
2. ALL TOP SLAB REBARS TO BEND DOWN TO COVER AT GL A AND C.



GRADE BEAM 2 (GB2) CROSS SECTION

1:20

NOTES:
1. ALL GRADE BEAM TOP BARS TO BEND DOWN TO COVER AT GL A AND C.

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DUFFERIN TRANSFER STATION

PAVEMENT AND CURB REHABILITATION
STORAGE BUILDING PLANS AND DETAILS

STRUCTURAL

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METRIC
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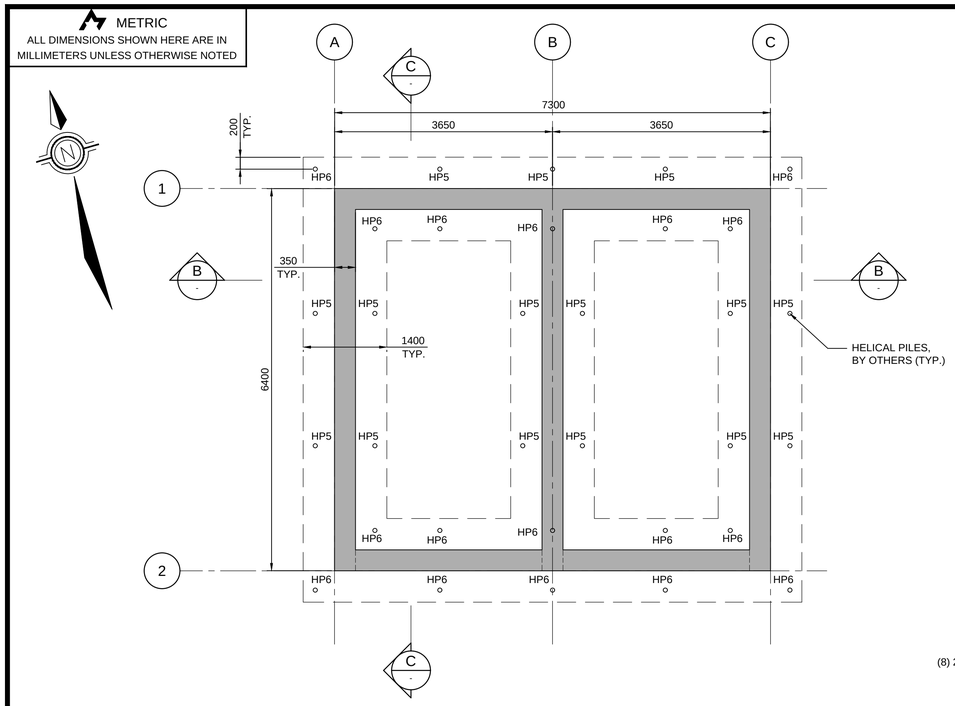
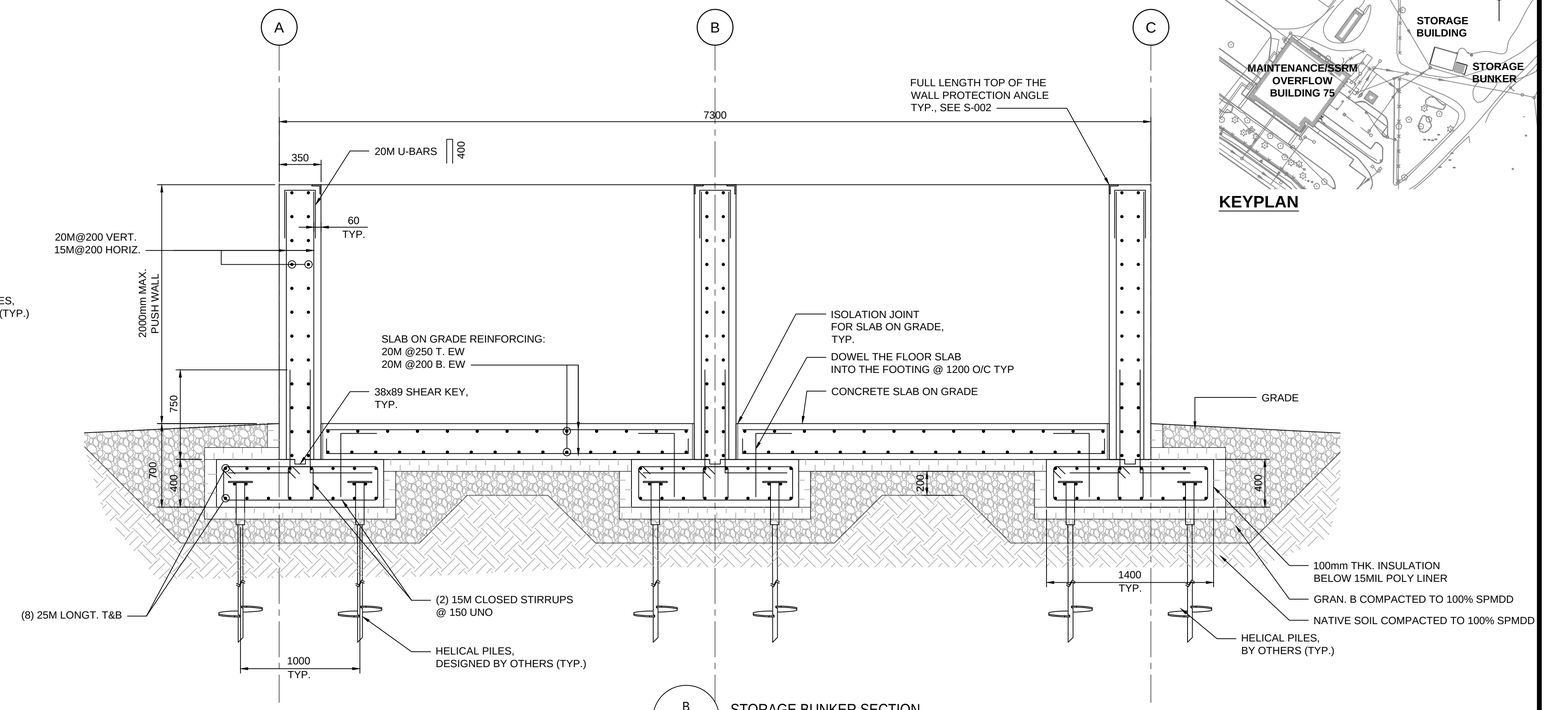
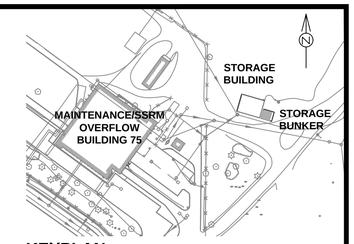


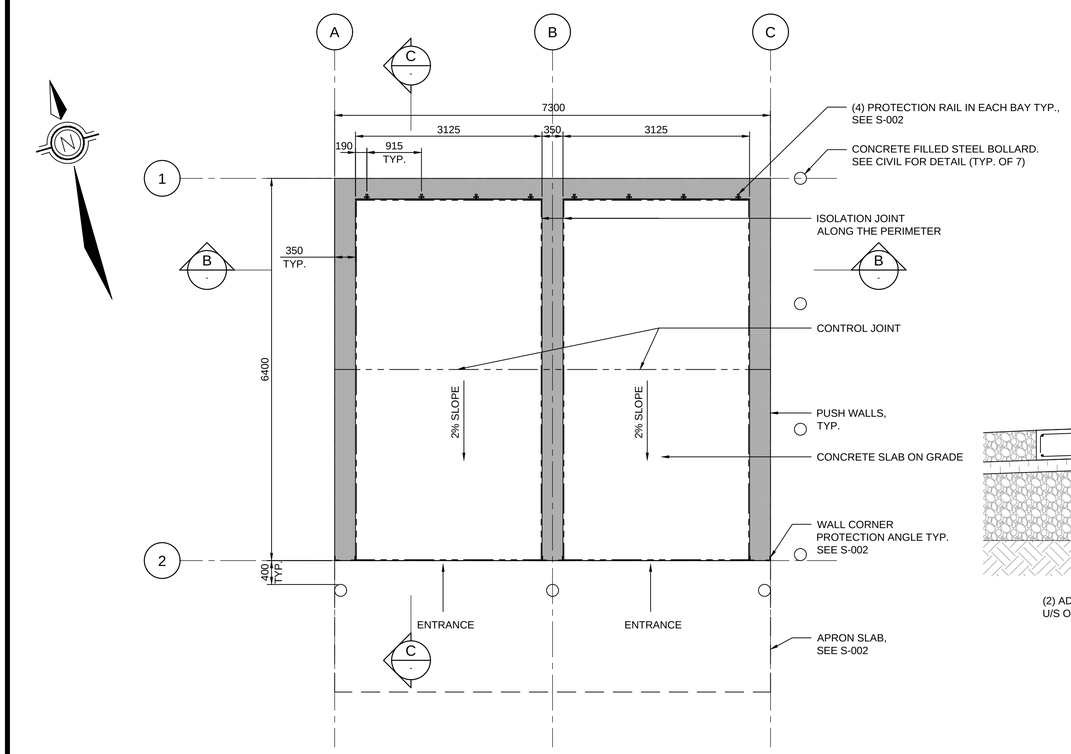
STORAGE BUNKER FOUNDATION PLAN
1:50



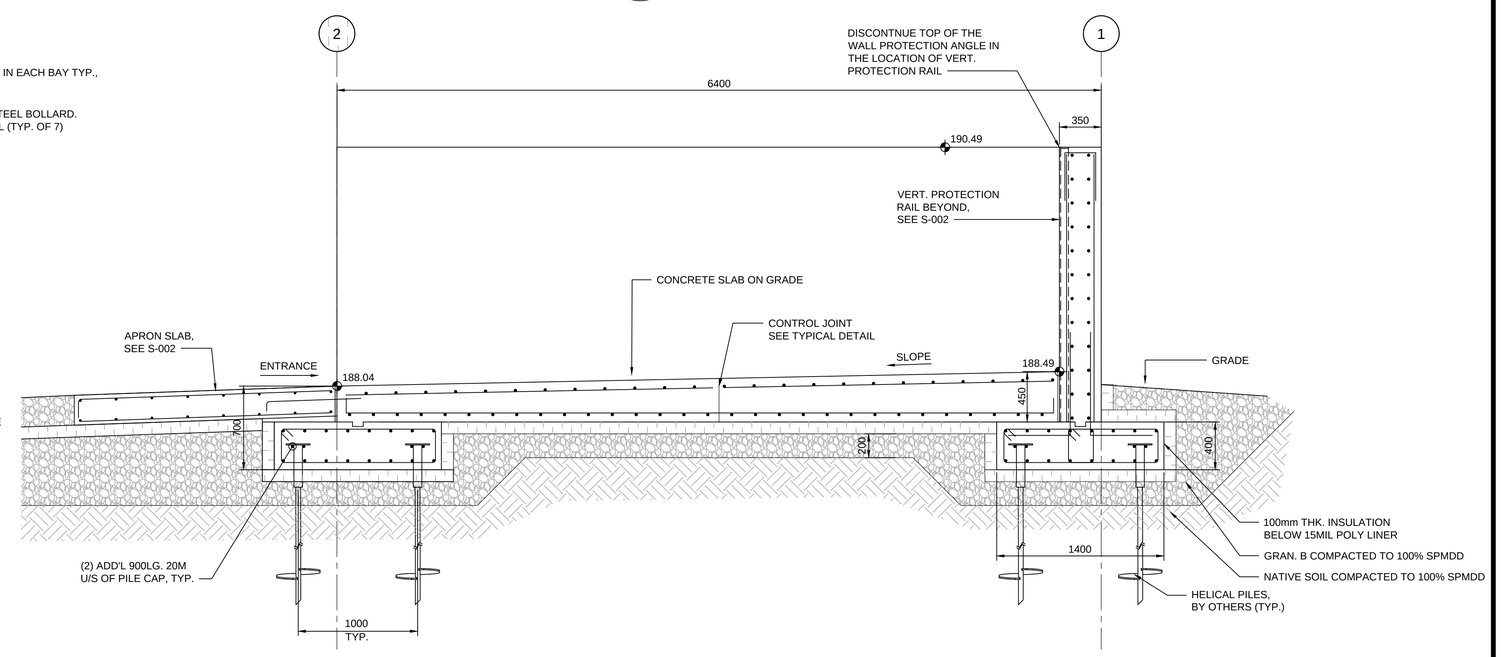
B
-
STORAGE BUNKER SECTION
SCALE: 1:25



KEYPLAN



STORAGE BUNKER FLOOR PLAN
1:50



C
-
STORAGE BUNKER SECTION
SCALE: 1:25

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	SA	
0	OCT. 2025	ISSUED FOR PERMIT	SA	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
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PROJECT ADDRESS:
75 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT AND CURB REHABILITATION
STORAGE BUNKER PLANS AND DETAILS

STRUCTURAL

DESIGN:	SA	DRAFTING:	ML	CHECK:	RL	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	AS NOTED			DRAWING NUMBER:	1608-2025-6-39		S-006
DATE:	OCTOBER 2025						

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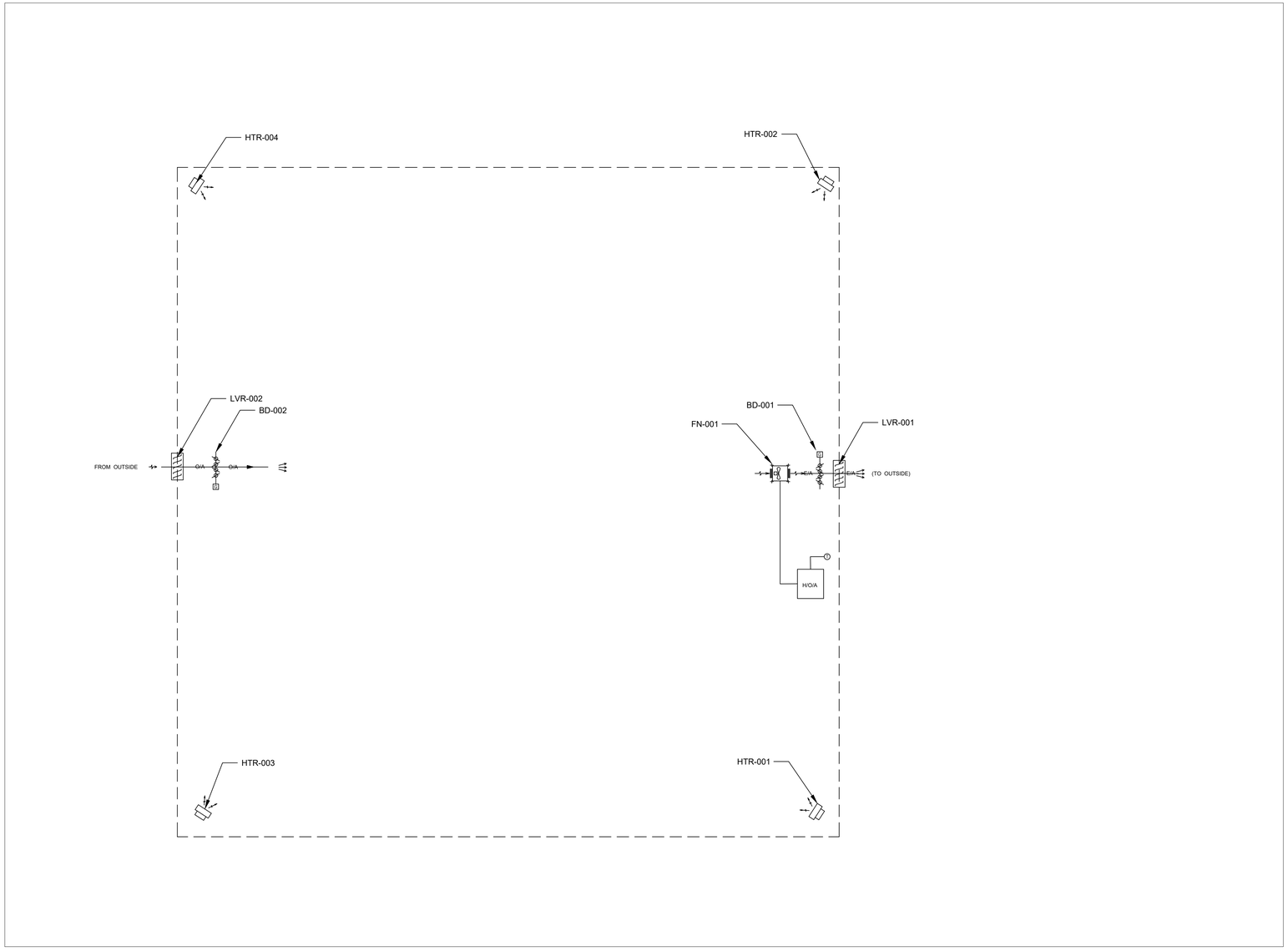

HVAC-STORAGE ROOM AIRFLOW SCHEMATICS

N.T.S

LEGENDS AND ABBREVIATIONS

MECHANICAL LEGEND	
DESCRIPTION	SYMBOL
SUPPLY AIR	S/A S/A
EXHAUST AIR	E/A E/A
OUT AIR	O/A O/A
EXHAUST DUCT UP	
EXHAUST DUCT DOWN	
SUPPLY DUCT UP	
SUPPLY DUCT DOWN	
DUCTWORK	
AIRFLOW DIRECTION	
DIFFUSERS/GRILLE TAG	TYPE / AIRFLOW
FAN	
THERMOSTAT	T
TEMPERATURE TRANSMITTER	TT
DEMOLISH	
MOTORIZED DAMPER	M
BACKDRAFT DAMPER	B
COOLING COIL	C C
HEATING COIL	H C
AIR FILTER	

ABBREVIATIONS	
DESCRIPTION	SYMBOL
ABOVE FINISHED FLOOR	AFF
BALANCING DAMPER	BD
COMPLETE WITH	C/W
DOWN	DN
EXHAUST AIR	E/A
EXHAUST FAN	EF
FULL LOAD AMPS	FLA
HAND-OFF-AUTO	HOA
HORSEPOWER	HP
HEATER	HT
LOCAL CONTROL PANEL	LCP
LOUVER	LV
OUTSIDE AIR	O/A
PUSH BUTTON	PB
RETURN AIR	R/A
STATIC PRESSURE	SP
SUPPLY AIR	S/A
TYPICAL	TYP

SEQUENCE OF OPERATION

1. THE STORAGE BUILDING HVAC SYSTEM SHALL CONSISTS OF AN EXHAUST FAN (FN-001), SUPPLY AND EXHAUST AIR BACK DRAFT DAMPERS (BD-001 AND BD-002), CONVECTIVE ELECTRIC HEATERS (HTR-001, HTR-002, HTR-003 AND HTR-004).
2. THE VENTILATION SYSTEM SHALL BE DESIGNED TO OPERATE WHEN THE SPACE TEMPERATURE DICTATES.

   a. WHEN THE ROOM TEMPERATURE HAS BEEN MEASURED BY THE SPACE THERMOSTAT ABOVE 30°C, THE EXHAUST FAN (FN-001) SHALL BE ENERGIZED AND ALLOW THE OUTSIDE AIR TEMPERATURE TO COOL DOWN THE SPACE.
   b. WHEN THE ROOM TEMPERATURE HAS BEEN MEASURED BY THE SPACE THERMOSTAT BELOW 30°C, THE EXHAUST FAN (FN-001) SHALL BE DE-ENERGIZED.
   c. HEATERS (HTR-001, HTR-002, HTR-003 AND HTR-004) SHALL BE STAND ALONE AND SHALL BE ENERGIZED, ONCE ROOM TEMPERATURE REACHES 10°C HEATERS SHALL BE DE-ENERGIZED WHEN SPACE TEMPERATURE IS ABOVE 10°C.
      i. TEMPERATURE SET POINTS: HEATING: 10 C°, COOLING: 30 C°

SOLID WASTE MANAGEMENT SERVICES

wsp

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0	OCT. 2025	ISSUED FOR PERMIT	JA	

TORONTO

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DUFFERIN TRANSFER STATION

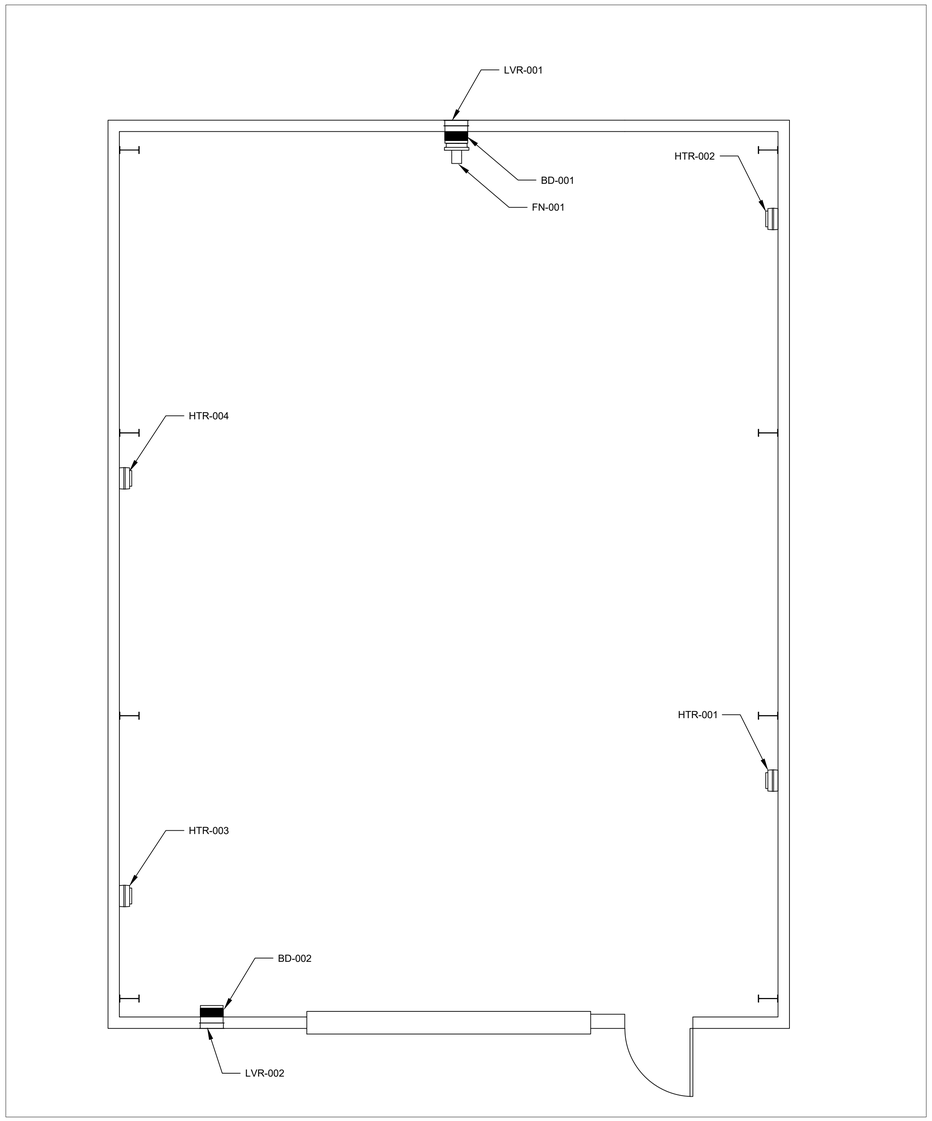
PAVEMENT AND CURB REHABILITATION

AIRFLOW SCHEMATICS

MECHANICAL

DESIGN:	JA	DRAFTING:	IO	CHECK:	JH	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	N.T.S			DRAWING NUMBER:	1608-2025-6-40		M-001
DATE:	SEPTEMBER 2025						

METRIC
ALL DIMENSIONS SHOWN HERE ARE IN MILLIMETERS UNLESS OTHERWISE NOTED



HVAC-STORAGE ROOM PLAN
1:50

FAN SCHEDULE									
UNIT NO.	MANUFACTURER	MODEL	AIR FLOW	STATIC PRESSURE	VOLTAGE	PHASE	MOTOR POWER	WEIGHT	REMARKS
FN-001	TWIN CITY FAN & BLOWER	TCWP12DTC	200 L/s	50.0 Pa	120 V	1	0.125 kW	10kg	C/W DISCONNECT SWITC, EC MOTOR AND CONTROLLER, VIBRATION ISOLATOR AND SUPPORTS

ELECTRIC UNIT HEATER SCHEDULE							
UNIT NO.	MANUFACTURER	MODEL	HEATING CAPACITY	VOLTAGE	PHASE	WEIGHT	REMARKS
HTR-001	HEATREX	HX-238	3 kW	208 V	3	20.00 kg	C/W DISCONNECT SWITCH, T STAT AND SUPPORTS
HTR-002	HEATREX	HX-238	3 kW	208 V	3	20.00 kg	C/W DISCONNECT SWITCH, T STAT AND SUPPORTS
HTR-003	HEATREX	HX-238	3 kW	208 V	3	20.00 kg	C/W DISCONNECT SWITCH, T STAT AND SUPPORTS
HTR-004	HEATREX	HX-238	3 kW	208 V	3	20.00 kg	C/W DISCONNECT SWITCH, T STAT AND SUPPORTS

NOTES:

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE OBC, ASHRAE, AND BEST PRACTICES.
2. ALL DIMENSIONS ARE IN 'MM' UNLESS OTHERWISE NOTED.
3. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO ORDERING MATERIALS AND EQUIPMENT, AND PRIOR TO INSTALLATION.
4. REPORT ANY CONFLICTS / OMISSIONS TO THE ENGINEER IMMEDIATELY UPON RECOGNITION OF ISSUE.
5. ENSURE ALL WALL OPENINGS THROUGH ARE MADE WEATHER TIGHT WITH FLASHING AND SEALANT.
6. LOCATE ALL DUCTWORK AND EQUIPMENT IN SUCH A MANNER SO AS TO MAXIMAIZE AVAILABLE HEADSPACE BELOW.
7. DUCTWORK SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED.
8. PROVIDE BIRDSCREENS ON ALL LOUVERS / EXTERIOR TERMINATIONS.

SOLID WASTE MANAGEMENT SERVICES

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0	OCT. 2025	ISSUED FOR PERMIT	JA	

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AND RESOURCE MANAGEMENT

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DUFFERIN TRANSFER STATION
PAVEMENT AND CURB REHABILITATION
HVAC-PLAN

MECHANICAL

DESIGN:	JA	DRAFTING:	IO	CHECK:	JH	CONTRACT No. 25SWM-IRM-042CDU
SCALE:	1:50			DRAWING NUMBER:	1608-2025-6-41	M-002
DATE:	SEPTEMBER 2025					

ELECTRICAL SYMBOLS – SINGLE LINE DIAGRAM

- BUS DUCT
- BREAKER, MEDIUM AND HIGH VOLTAGE
- CIRCUIT BREAKER
- HIGH AND MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER
- HIGH VOLTAGE FUSED INTERRUPTER SWITCH
- FUSE DISCONNECT TERMINAL BLOCK
- HIGH VOLTAGE UNFUSED INTERRUPTER SWITCH
- DRAWOUT OR PLUG–IN CONNECTION
- DRAWOUT CIRCUIT BREAKER (LOW VOLTAGE)
- DISCONNECT SWITCH
- DISCONNECT SWITCH FUSED
- DISCONNECT SWITCH NON–INSULATED
- FUSE
- SW — SWITCH
- TRANSFER SWITCH
- MTR — METER
- DM — DIGITAL METER
- TRANSFORMER, POWER AND DISTRIBUTION
- TR kVA — TRANSFORMER
- AUTOTRANSFORMER
- 600V 120V — CONTROL TRANSFORMER
- POTENTIAL TRANSFORMER
- CURRENT TRANSFORMER
- ZERO SEQUENCE CURRENT TRANSFORMER
- BUSHING CURRENT TRANSFORMER
- M M_SIZE M_RTG — MOTOR INDUCTION TYPE
- M M_SIZE M_RTG — MOTOR SYNCHRONOUS TYPE
- VFD — VARIABLE FREQUENCY DRIVE
- SS — SOFT STARTER (BLOCK)
- SOFT STARTER
- RECTIFIER
- INVERTER

- DIODE
- MS — MOTOR STARTER
- MANUAL STARTER
- OVERLOAD
- CONTACTOR
- REVERSE CONTACTOR
- CAPACITOR OR REACTOR
- INDUCTOR
- SOLENOID
- LIGHTNING ARRESTER
- SURGE PROTECTION
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR
- SURGE CAPACITOR
- HEATER
- BATTERY
- DELTA CONNECTION
- WYE CONNECTION
- SOLID GROUNDED NEUTRAL
- RESISTOR GROUNDED NEUTRAL
- GROUND
- CABLE POTHEAD
- WIRE CONNECTION
- WIRES NOT CONNECTED
- RTD — RESISTANCE TEMPERATURE DETECTOR
- K — KEY INTERLOCK
- E — ELECTRICAL INTERLOCK
- M — MECHANICAL INTERLOCK
- G — GENERATOR
- RESISTOR OR HEATER
- VARIABLE RESISTOR
- STU/ LSIG — POWER CIRCUIT BREAKER WITH ELECTRONIC TRIP UNIT LETTERS DENOTE PROTECTION FUNCTIONS
- 15A 2 — MOTOR STARTER WITH INSTANTANEOUS TRIP CIRCUIT PROTECTOR, CONTACTOR AND THERMAL OVERLOAD RELAY. THE CONTINUOUS CURRENT RATING AND STARTER SIZE AS INDICATED

ELECTRICAL ABBREVIATIONS

AC	ALTERNATING CURRENT
A/C	AIR CONDITIONING
ACT	ACTUATOR
AF	AMPERE FRAME
ANN	ANNUNCIATOR
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BAT	BATTERY
BKR	BREAKER
C	CONDUCTOR
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CCT	CIRCUIT
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DG	DIESEL GENERATOR
DM	DIGITAL METERING
DS	DISCONNECT SWITCH
EF	EXHAUST FAN
ELU	EMERGENCY LIGHTING UNIT
EP	EXPLOSION PROOF
ESTOP	EMERGENCY STOP
ETM	ELAPSED TIME METER
F	FUSE
FA	FIRE ALARM
FPR	FEDER PROTECTION RELAY
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON REVERSING
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GPR	GENERATOR PROTECTION RELAY
H–O–A	HAND OFF AUTOMATIC
HTR	HEATER
HZ	HERTZ
HVAC	HEATING, VENTILATION, AIR CONDITIONING
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
kVA	KILOVOLT–AMPERES
kVAR	KILOVOLT–AMPERES REACTIVE
LA	LIGHTNING ARRESTOR
LB	LOAD BREAK
LP	LIGHTING PANEL
L/R	LOCAL/REMOTE
LSG	LONG, SHORT AND GROUND FAULT PROTECTION
LSIG	LONG, SHORT, INSTANTANEOUS AND GROUND FAULT PROTECTION
LTG	LIGHTING
M	MOTOR
MCC	MOTOR CONTROL CENTRE
M–O–A	MANUAL–OFF–AUTOMATIC
MPR	MOTOR PROTECTION RELAY
MTR	METER
MTS	MANUAL TRANSFER SWITCH
N	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
NEC	NATIONAL ELECTRICAL CODE
O/L	OVERLOAD
ONAN	OIL NATURAL AIR NATURAL
ONAF	OIL NATURAL AIR FORCE
P	PUMP
PB	PUSH BUTTON
P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
PDP	POWER DISTRIBUTION PANEL
PM	POWER METERING
PNL	PANEL
PNLB	PANELBOARD
PLC	PROGRAMMABLE LOGIC CONTROLLER
PS	POWER SUPPLY
PT	POTENTIAL TRANSFORMER
RPU	REMOTE PROCESSING UNIT
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TERMINAL UNIT
SEN	SENSOR
SHLD	SHIELDED
SN	SOLID NEUTRAL
SOL	SOLENOID
S/S	SUBSTATION
SW	SWITCH
SWG	SWITCHGEAR
TB	TIE BREAKER
TDR	TIME DELAY RELAY
TR	TRANSFORMER
TS	TRANSFER SWITCH
UPS	UNINTERRUPTIBLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE
VT	VOLTAGE TRANSFORMER
WP	WEATHER PROOF
XFMR	TRANSFORMER

SOLID WASTE MANAGEMENT SERVICES

wsp

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1	DEC. 2025	ISSUED FOR TENDER	SA	
0	OCT. 2025	ISSUED FOR PERMIT	SA	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

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MATHEW CASCHERA
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AND RESOURCE MANAGEMENT

PROJECT ADDRESS
75 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT AND CURB REHABILITATION
LEGEND AND ABBREVIATIONS

ELECTRICAL

DESIGN:	RV	DRAFTING:	KK	CHECK:	BA	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	NTS			DRAWING NUMBER:	1608-2025-6-42		E-001
DATE:	DECEMBER 2025						

PHOTO 1 - EXISTING MAINTENANCE BUILDING AND POWER CONNECTION POINT

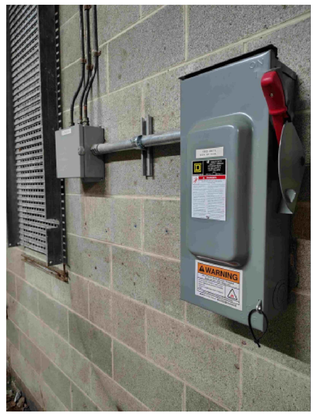
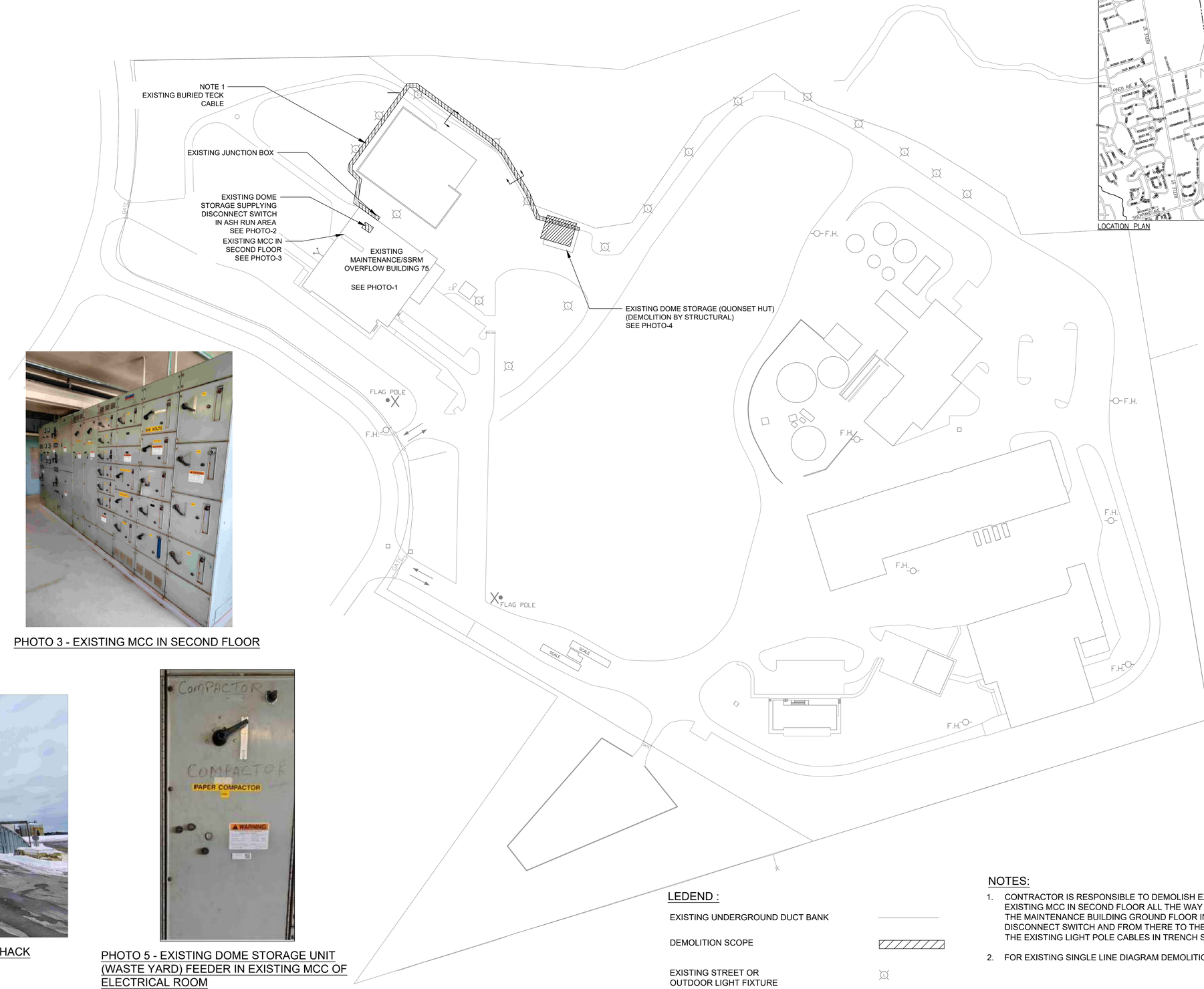


PHOTO 2 - EXISTING 100A DISCONNECT SWITCH FOR YARD STORAGE DOME

PHOTO 3 - EXISTING MCC IN SECOND FLOOR

PHOTO 4 - EXISTING STORAGE DOME AND SHACK

PHOTO 5 - EXISTING DOME STORAGE UNIT (WASTE YARD) FEEDER IN EXISTING MCC OF ELECTRICAL ROOM



LOCATION PLAN

LEDEND :

EXISTING UNDERGROUND DUCT BANK	
DEMOLITION SCOPE	
EXISTING STREET OR OUTDOOR LIGHT FIXTURE	

NOTES:

1. CONTRACTOR IS RESPONSIBLE TO DEMOLISH EXISTING TECK CABLE FROM EXISTING MCC IN SECOND FLOOR ALL THE WAY TO 100A DISCONNECT SWITCH IN THE MAINTENANCE BUILDING GROUND FLOOR IN ASH RUN AREA INCLUDING DISCONNECT SWITCH AND FROM THERE TO THE EXISTING DOME STORAGE UNIT. THE EXISTING LIGHT POLE CABLES IN TRENCH SHALL REMAIN.
2. FOR EXISTING SINGLE LINE DIAGRAM DEMOLITION REFER TO DRAWING E-004.

SOLID WASTE MANAGEMENT SERVICES

wsp

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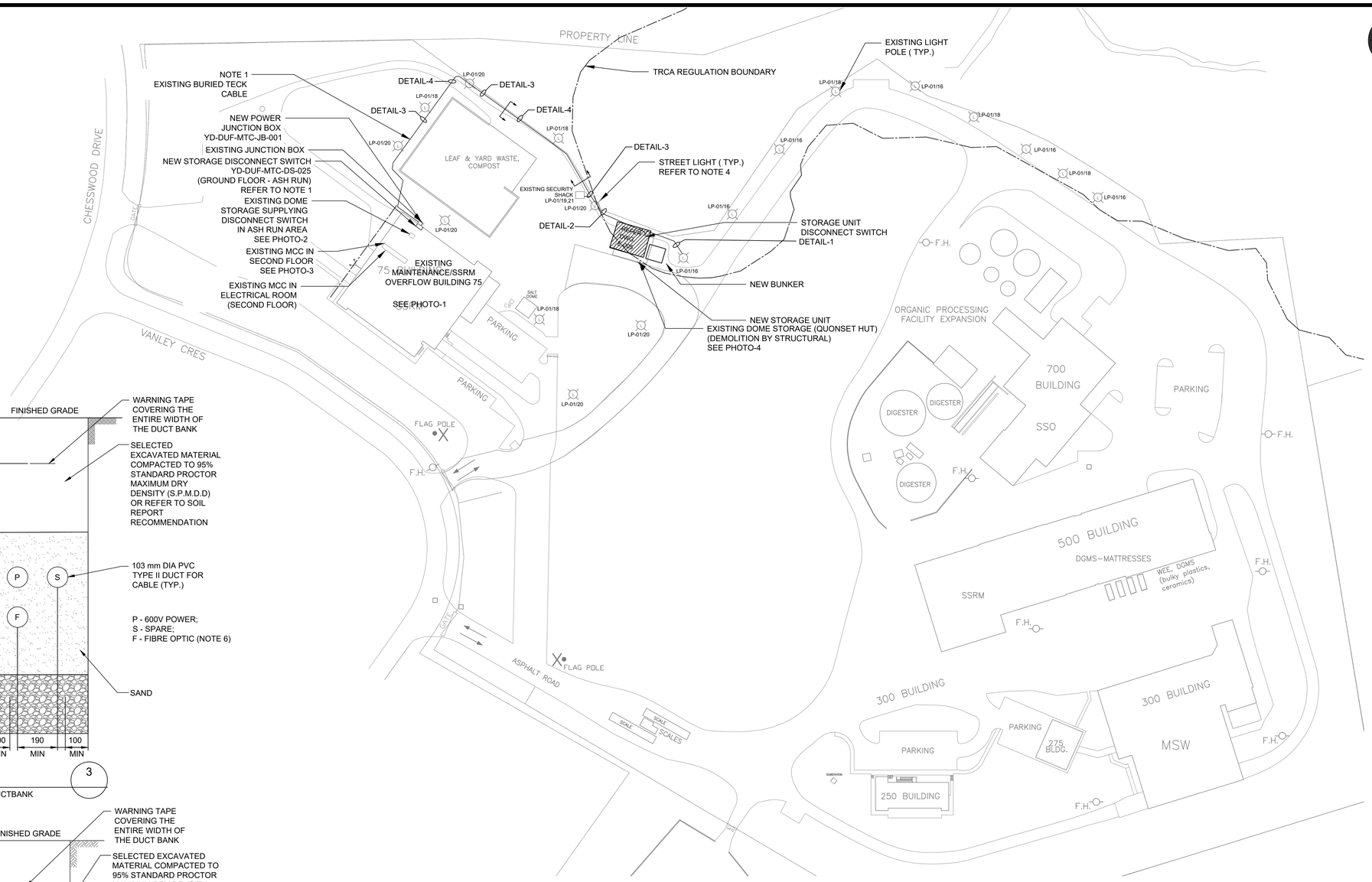
DUFFERIN TRANSFER STATION

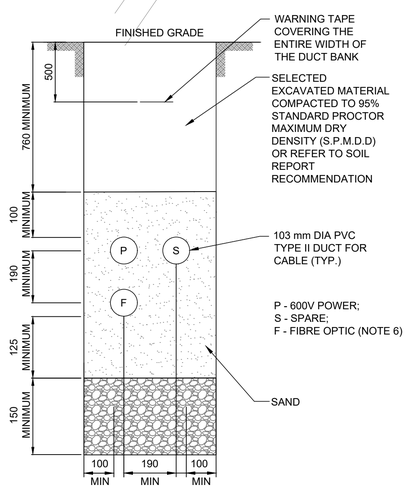
PAVEMENT AND CURB REHABILITATION
ELECTRICAL SITE PLAN - DEMOLITION

ELECTRICAL

DESIGN:	RV	DRAFTING:	KK	CHECK:	BA	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:1000			DRAWING NUMBER:	1608-2025-6-43		E-002
DATE:	DECEMBER 2025						

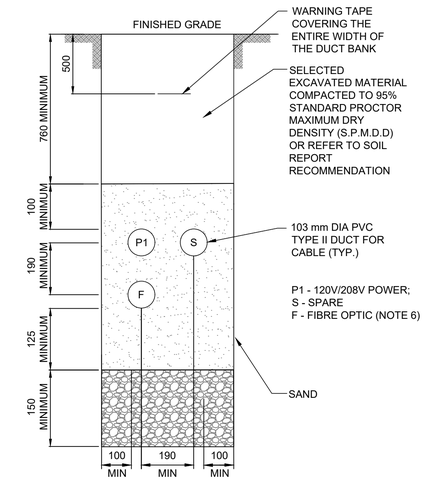


LOCATION PLAN



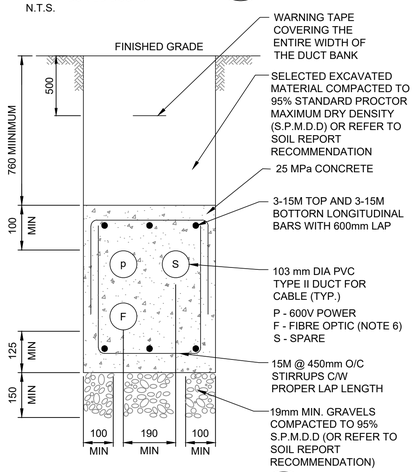
DETAIL - 3 (3)

DIRECT BURIED DUCTBANK
N.T.S.



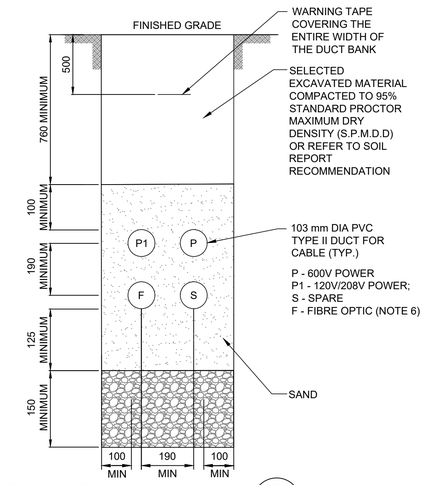
DETAIL - 1 (1)

DIRECT BURIED DUCTBANK
N.T.S.



DETAIL - 4 (4)

CONCRETE ENCASED DUCTBANK
N.T.S.



DETAIL - 2 (2)

DIRECT BURIED DUCTBANK
N.T.S.

NOTES:

1. CONTRACTOR IS RESPONSIBLE TO SUPPLY AND INSTALL NEW 60A FUSED DISCONNECT SWITCH IN THE ASH RUN AREA, ALSO SUPPLY AND INSTALL CABLE FROM NEW DISCONNECT SWITCH TO THE YARD WASTE FEEDER BREAKER IN THE MCC AT THE ELECTRICAL ROOM, IN SECOND FLOOR OF BUILDING.
2. CONTRACTOR TO INSTALL NEW CABLE AND CONDUIT FROM NEW 60A FUSED DISCONNECT SWITCH IN THE ASH RUN AREA TO NEW STORAGE UNIT IN NEW DUCT BANK PARALLEL TO EXISTING LIGHTING CABLE CONDUIT AND IN SAME ROUTE OF DEMOLISHED TECK CABLE AS SHOWN IN DRAWING.
3. CONTRACTOR ALSO SHOULD INSTALL A NEW 4" UNDERGROUND DUCT AS SPARE, PARALLEL TO POWER CONDUIT IN ITEM 2 ABOVE AND CAP THE DUCT AT BOTH END.
4. CONTRACTOR TO FIELD VERIFY THE LOCATION AND PROVIDE POWER FEED FROM THE NEW STORAGE UNIT LIGHTING PANEL TO NEAREST STREET LIGHT POLE FIXTURES AS SHOWN ON DRAWING. (ACCORDING TO CITY THE CABLES BETWEEN LIGHT FIXTURES ALREADY EXIST). CONTRACTOR IS RESPONSIBLE TO KEEP ALL EXISTING INTERCONNECTION CABLES/CONDUITS BETWEEN LIGHT POLES AND ENSURE THAT LIGHT POLES ARE RE-POWERED AND THEIR FEED REINSTATED AS PER EXITING CONDITIONS.
5. CONTRACTOR IS FULLY RESPONSIBLE TO PROVIDE THE TEMPORARY POWER TO THE SECURITY SHACK AND STREET LIGHTING DURING CONSTRUCTION PHASE. THE POWER SUPPLY SHOULD BE DIFFERENT FROM THE EXISTING POWER SOURCE (A RENTAL GENERATOR CAN BE USED).
6. THE FIBER OPTIC CONDUIT SHALL BE INSTALLED FOR FIBER OPTIC CABLE WHICH WILL BE INSTALLED BY OTHERS. CONTRACTOR SHALL COORDINATE CONDUIT INSTALLATION WITH FIBER OPTIC CABLE PROVIDER DURING CONSTRUCTION.

LEDEND :

UNDERGROUND DUCT BANK

EXISTING STREET OR OUTDOOR LIGHT FIXTURE

SOLID WASTE MANAGEMENT SERVICES

wsp

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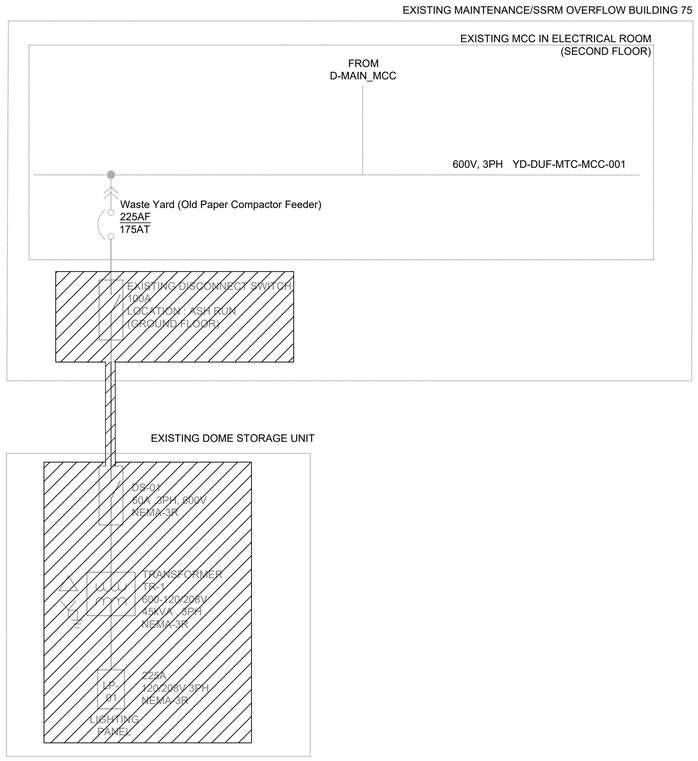
DUFFERIN TRANSFER STATION

PAVEMENT AND CURB REHABILITATION

ELECTRICAL SITE PLAN - CONSTRUCTION

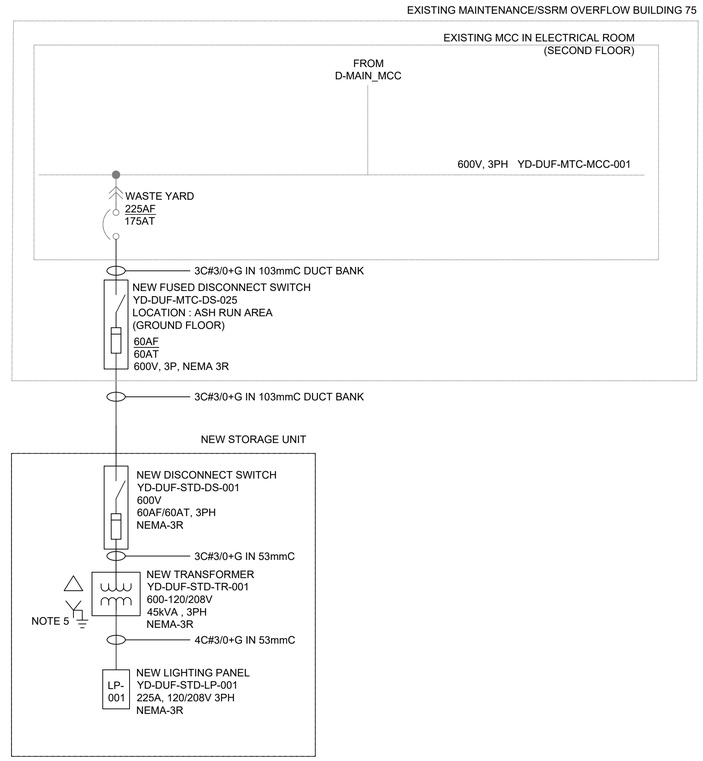
ELECTRICAL

DESIGN:	RV	DRAFTING:	KK	CHECK:	BA	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	1:1000			DRAWING NUMBER:	1608-2025-6-44		E-003
DATE:	DECEMBER 2025						



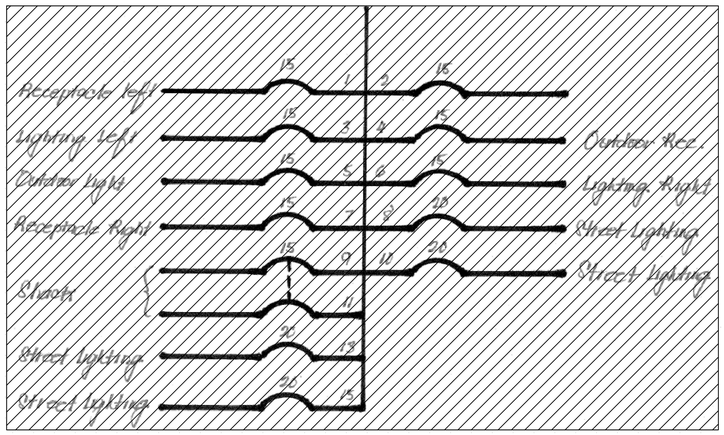
SINGLE LINE DIAGRAM (DEMOLITION)

SCALE: N.T.S.



SINGLE LINE DIAGRAM (MODIFICATION)

SCALE: N.T.S.



EXISTING DOME STORAGE LIGHTING PANEL SCHEDULE (NOTE 1)

SCALE: N.T.S.

DESCRIPTION		CCT LOAD (W)	BRK SIZE (AMP)	CCT No.	CCT No.	BRK SIZE (AMP)	CCT LOAD (W)	DESCRIPTION	
INDOOR LIGHTS		816	15A	1	2	30A		SPD	
EXHAUST FAN - FN-001		125	15A	3	4				
RECEPTACLE LEFT		1000	15A	5	6				
UNIT HEATER - HTR-002	(2C#10+G)	3000	15A	7	8	15A	3000	UNIT HEATER - HTR-003	(2C#10+G)
				9	10				
				11	12				
UNIT HEATER - HTR-004	(2C#10+G)	3000	15A	13	14	15A	864	EXTERIOR LIGHTING CONTROL PANEL	
				15	16	20A	1000	STREET LIGHTS - 1	(2C#4+G)
				17	18	20A	1000	STREET LIGHTS - 2	(2C#4+G)
SECURITY SHACK	(2C#8+G)	2000	20A	19	20	20A	1000	STREET LIGHTS - 3	(2C#4+G)
				21	22	20A	1000	STREET LIGHTS (NOTE 1)	(2C#4+G)
RECEPTACLE RIGHT		1000	15A	23	24	15A	1000	OUTDOOR RECEPTACLE	
ROLLING DOOR		500	20A	25	26	15A	3000	UNIT HEATER - HTR-001	(2C#10+G)
EMERGENCY LIGHTS		500	15A	27	28				
SPARE		-	15A	29	30				
SPARE		-	15A	31	32	15A	-	SPARE	
SPACE		-		33	34	15A	-	SPARE	
SPACE		-		35	36	15A	-	SPARE	
TOTAL LOAD -23805 W									

NEW STORAGE UNIT LIGHTING PANEL YD-DUF-STD-LP-001 SCHEDULE (NOTES - 2,3,4)

- 225A, 120/208V, 3PH,4W
- ALL BREAKERS TO BE 15A UNLESS OTHERWISE INDICATED.
- PANEL TO INCLUDE SURGE PROTECTION DEVICE.
- ALL THE CONDUCTORS AND CONDUITS SHALL BE 3#12+G IN 27mmC UNLESS OTHERWISE INDICATED.

NOTES:

1. THE LOCATION OF EXISTING STREET LIGHTS SUPPLIED FROM EXISTING CIRCUIT NO 15 OF EXISTING LIGHTING PANEL IS NOT KNOWN. CONTRACTOR SHALL COORDINATE WITH CITY AND INVESTIGATE AND FIND THE ASSOCIATED STREET LIGHT AND SUPPLY IT FROM CIRCUIT NO 22 OF NEW LIGHTING PANEL. CONTRACTOR SHALL PROVIDE UNIT PRICE FOR SUPPLY AND INSTALLATION OF A 2C#4+G CABLE IN UNDERGROUND 4" DUCT FOR THIS LOAD.
2. FOR SPECIFICATION OF SURGE PROTECTION DEVICE (SPD) FOR LIGHTING PANEL REFER TO SECTION 16612, THE SPD SHALL MEET THE REQUIREMENTS FOR LOW EXPOSURE LEVELS.
3. CONTRACTOR SHALL FINALIZE THE LIGHTING PANEL FEEDER SIZES AFTER ALL NEW LOADS SHOP DRAWING REVIEW.
4. CONTRACTOR IS RESPONSIBLE TO DISTRIBUTE LOAD EQUALLY BETWEEN 3 PHASES OF LIGHTING PANELS. THE BRANCH CIRCUIT CONNECTIONS SHALL BE ADJUSTED AS REQUIRED TO OBTAIN THE BEST BALANCE OF CURRENT BETWEEN PHASES. THE MAXIMUM CURRENT IMBALANCE SHALL NOT EXCEED 10% OF TOTAL CONNECTION LOAD.
5. CONTRACTOR SHALL INSTALL NEW GROUNDING SYSTEM CLOSE TO NEW DISCONNECT SWITCH AT OUTSIDE OF NEW STORAGE BUILDING AS PER DETAILS 1 &2 OF DRAWING No. E-006.

SOLID WASTE MANAGEMENT SERVICES

wsp

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	SA	
0	OCT. 2025	ISSUED FOR PERMIT	SA	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS
75 VANLEY CRESCENT
TORONTO M3J 2B7

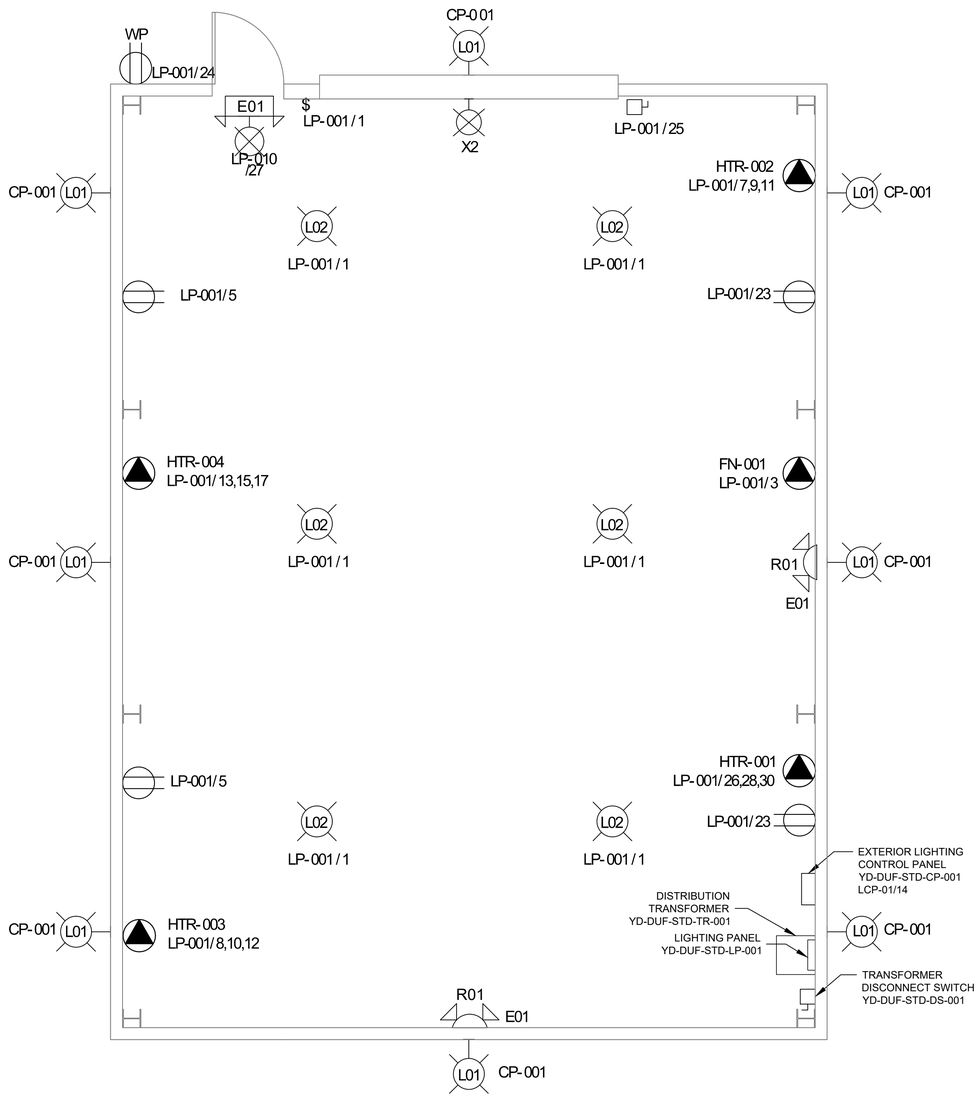
DUFFERIN TRANSFER STATION

PAVEMENT AND CURB REHABILITATION

SINGLE LINE DIAGRAM AND LIGHTING PANEL SCHEDULE - DEMOLITION / MODIFICATION

ELECTRICAL

DESIGN:	RV	DRAFTING:	KK	CHECK:	BA	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	NTS			DRAWING NUMBER:	1608-2025-6-45		E-004
DATE:	DECEMBER 2025						

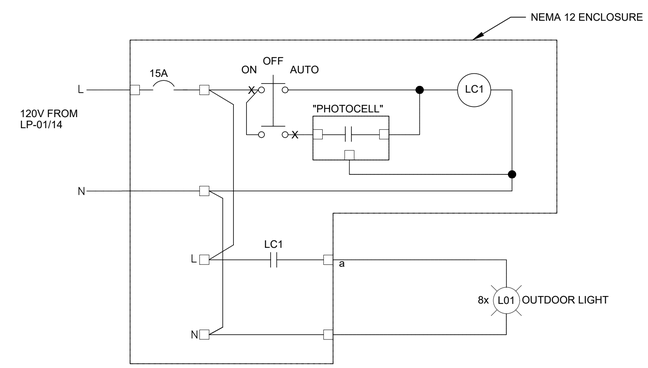


NEW STORAGE UNIT - LIGHTING AND POWER PLAN

SCALE: 1:50

SYMBOL	TYPE	VOLTS	INPUT WATTS	DESCRIPTION	LAMPS TYPE	BALLAST	MANUFACTURERS CATALOG NUMBER	MOUNTING
L01	LED	120-347	108	LED WALL PACK LIGHTING FIXTURE, 50,000 HOUR LIFE. POLYCARBONATE COVER. POWDER COATED DIE-CAST ALUMINUM HOUSING. RUST & CORROSION PROOF, NO CRACKING OR PEELING. IP65 RATED. 5-YEAR WARRANTY.	108W LED 5000K	LED DRIVER HIGH EFFICIENCY	1. ILLUMINEX TRADITIONAL WALL PACK ILX-CWP2-108W-MV-50K 4. APPROVED EQUAL	WALL
L02	LED	120-347	136	HIGH BAY LED LIGHTING FIXTURE. DIE CAST FRAME. CLEAR POLYCARBONATE LENS. 0-10V DIMMING. SUITABLE FOR WET LOCATIONS. 21,000 LUMENS. IP65 AND NEMA 4X RATED.	136W LED 5000K	LED DRIVER HIGH EFFICIENCY	1.SIGNIFY HCY LED HIGH BAY HCY-1421L-8CST-UN3-DM 4. APPROVED EQUAL	SUSPENSION CEILING
E01	LED	120VAC IN./ 6VDC OUT.		BATTERY UNIT EMERGENCY LIGHT AND PICTOGRAM SINGLE FACE EXIT COMBINATION UNIT. RATED FOR WET LOCATION. FEATURE : 1. DIE-CAST ALUMINUM BODY WITH GREY EPOXY POWDER COAT FINISH. CLEAR, IMPACT AND HEAT RESISTANT PRISMATIC GLASS GLOBE 2. LONG-LIFE, MAINTENANCE-FREE LEAD-CALCIUM BATTERY 3. BATTERY CHARGER IS CURRENT LIMITED, TEMPERATURE COMPENSATED, SHORT-CIRCUIT PROOF AND REVERSE POLARITY PROTECTED 4. EMERGENCY HEADS WITH TWIN LAMP DESIGN 5. SELF-POWERED EXIT (COMBO) INCLUDES A TRANSFER CIRCUIT TO DRIVE FOUR REMOTE LED-BASED REMOTE EXIT SIGNS 6. EXIT SIGN USES A LED LAMP ILLUMINATE THE GREEN RUNNING MAN. 7. EXIT SIGN IS CSA CERTIFIED	2W LED EXIT SIGN, 36W BATTERY, UNIT 6 VDC, FOR 30 MINS	LED DRIVER HIGH EFFICIENCY	1. LUMACELL. CM-SC-L 2. APPROVED EQUAL	WALL
R01		6VDC	5	REMOTE LUMINAIRE RATED FOR WET LOCATION FEATURES : 1. REMOTE LUMINAIRE: TWO 6VDC, 5W LED LAMP HEADS 2. INJECTION MOLDED, IMPACT RESISTANT, FLAME RETARDANT THERMOPLASTIC CASE AND FIXTURE.	5W LED	LED DRIVER HIGH EFFICIENCY	1. LUMACELL. MQM2LD2 2. APPROVED EQUAL	WALL
X2	LED	12VDC	5	EXIT SIGN, SELF POWERED, THERMOPLASTIC HOUSING, NI-CAD BATTERY, SELF-TESTING, 30 MIN CAPACITY, RED LETTERS, SINGLE FACE RATED FOR WET LOCATION	5W LED	LED DRIVER HIGH EFFICIENCY	1. LITHONIA, WLTE SERIES 2. ABB, GRANDE SERIES 3. APPROVED EQUAL	WALL

LUMINAIRE SCHEDULE



EXTERIOR LIGHTING CONTROL PANEL YD-DUF-STD-CP-001

SOLID WASTE MANAGEMENT SERVICES

wsp

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1	DEC. 2025	ISSUED FOR TENDER	SA	
0	OCT. 2025	ISSUED FOR PERMIT	SA	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

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GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS
75 VANLEY CRESCENT
TORONTO M3J 2B7

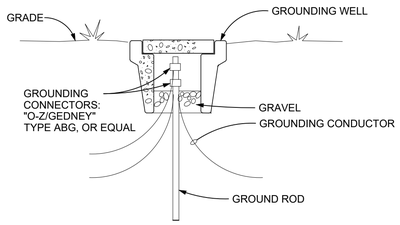
DUFFERIN TRANSFER STATION

PAVEMENT AND CURB REHABILITATION

NEW STORAGE UNIT POWER AND LIGHTING LAYOUT AND LUMINAIRE SCHEDULE

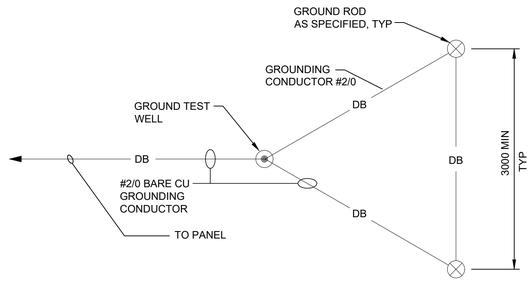
ELECTRICAL

DESIGN:	RV	DRAFTING:	KK	CHECK:	BA	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	AS INDICATED			DRAWING NUMBER:	1608-2025-6-46		E-005
DATE:	DECEMBER 2025						



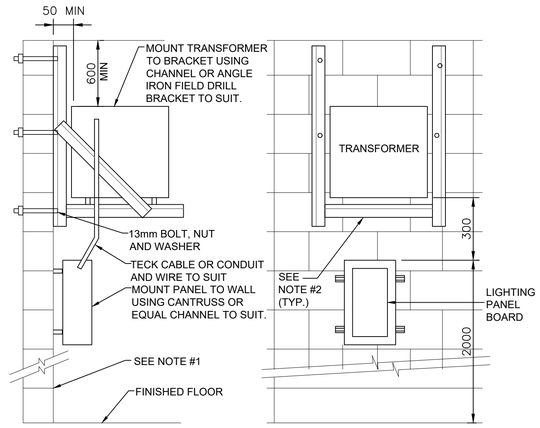
GROUND TEST WELL (1)

N.T.S.



GROUND GRID (2)

N.T.S.

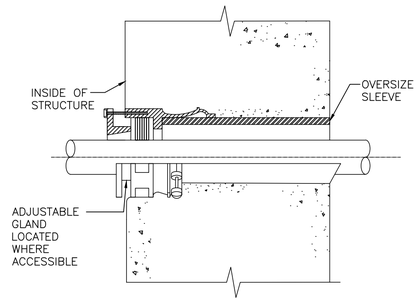


NOTES:

1. WALL MUST BE MASONRY TYPE. FOR DRYWALL PARTITIONS PROVIDE ADDITIONAL SUPPORT FRAME INDEPENDENT OF WALL.
2. CHANNEL SUPPORT FRAME TO BE 75MMX75MMX7MM STEEL ANGLE.
3. WHERE APPLICABLE ADAPT ARRANGEMENT FOR MOUNTING ON BUILDING STEEL.
4. MAXIMUM TRANSFORMER SIZE 50KVA, LARGER SIZE TRANSFORMERS TO BE FLOOR MOUNTED

WALL MOUNTED PANELBOARD OR TRANSFORMER (3)

N.T.S.

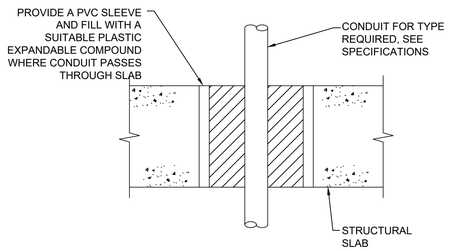


NOTES:

1. USE WATER TIGHT CONDUIT SEAL WHERE CONDUIT PENETRATIONS OF BUILDING EXTERIOR WALLS ARE BELOW GRADE

WATERTIGHT CONDUIT SEAL (4)

N.T.S.

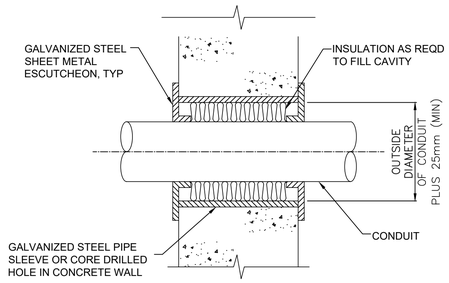


NOTE:

1. ALL CONDUITS THROUGH CONCRETE FLOOR SLABS AND EQUIPMENT PADS SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL.

SLAB PENETRATION (5)

N.T.S.

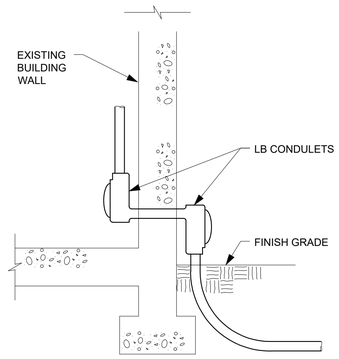


NOTES:

1. CONDUITS WHICH INDIVIDUALLY PASS THRU AN INTERIOR WALL SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL. IF WALL IA A FIRE WALL, FILL CAVITY WITH FIRE STOP SEALANT SPECIFIED IN SECTION.
2. INFORM STRUCTURAL DESIGNERS IF CONDUITS ARE MULTIPLE (>2'-0" LONG GROUPING) FOR STRUCTURAL REQUIREMENTS. STACKING VERTICALLY IS USUALLY PREFERABLE TO HORIZONTAL PLACEMENT.
3. ALL THE MATERIALS, CLIPS, HANGERS, STRUT, FASTENERS, ANCHORS, SCREWS AND ASSORTED HARDWARE RELATED TO THE INSTALLATION MUST BE SS 316.

WALL PENTRATION (6)

N.T.S.



NOTES:

1. INSTALL CONDUITS THROUGH EXISTING WALLS IN ACCORDANCE WITH THIS DETAIL IF NOT OTHERWISE INDICATED.
2. DRILL HOLE USING METHODS THAT LEAVE A SMOOTH OPENING. SEAL OPENING AROUND CONDUIT, INSIDE, AND OUTSIDE, WITH ONE PART POLYURETHANE IMMERSIBLE SEALANT.

CONDUIT ENTRANCE (7)

N.T.S.

SOLID WASTE MANAGEMENT SERVICES

wsp

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	SA	
0	OCT. 2025	ISSUED FOR PERMIT	SA	

TORONTO

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PROJECT ADDRESS
75 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION

PAVEMENT AND CURB REHABILITATION

INSTALLATION DETAILS

ELECTRICAL

DESIGN:	RV	DRAFTING:	KK	CHECK:	BA	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	NTS			DRAWING NUMBER:	1608-2025-6-47		E-006
DATE:	DECEMBER 2025						

ROOF ASSEMBLY

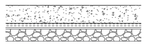
R01

OUT

INSULATED METAL COMPOSITE PANEL (R-35)
ON PERFORATED GALVANIZED Z ROOF PURLINS
ON PRE-ENGINEERED STEEL BEAMS

IN

FLOOR ASSEMBLY



F01

IN

300MM CONCRETE SLAB
RIGID INSULATION (R-15)
6 mil POLYETHYLENE AIR BARRIER
COMPACTED GRANULAR FILL OR GRAVEL
COMPACTED SOIL

OUT

WALL ASSEMBLIES

W01

INSULATED METAL COMPOSITE PANEL (R-19)
ON HORIZONTAL PERFORATED GALVANIZED Z-GIRT FRAMING
ON PRE-ENGINEERED STEEL COLUMNS

W02: FIRE-RESISTANT RATED WALL. TO ACHIEVE A MINIMUM OF 1-HOUR FIRE-RESISTANCE RATING FROM INSIDE IN ACCORDANCE WITH CAN/ULC-S101. WALL TO BE CONSTRUCTED IN FULL COMPLIANCE WITH A TESTED AND CERTIFIED ASSEMBLY, LISTED BY ULC, INTERTEK, OR EQUIVALENT RECOGNISED AGENCY. SUBMIT TEST REPORT OR CERTIFICATE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

OUT

INSULATED METAL COMPOSITE PANEL (R-19)
ON HORIZONTAL PERFORATED GALVANIZED Z-GIRT FRAMING
ON PRE-ENGINEERED STEEL COLUMNS

IN

NAME OF PRACTICE:
WSP CANADA INC.
150 COMMERCE VALLEY DRIVE WEST, THORNHILL ON L3T 7Z3

NAME OF PROJECT:
DUFFERINE TRANSFER STATION- PAVEMENT AND CURB REHABILITATION- BUNKER BUILDING

LOCATION:
75 Vanley Crescent, North York, ON, M3J 2B7

DATE:
JUNE 2025

ONTARIO BUILDING CODE DATA MATRIX - PART 9

ITEM	ARTICLE	OBC REF.
9.00	BUILDING CODE VERSION: O. REG. 163/24 LAST AMENDMENT O. REG. 447/24	
9.01	PROJECT TYPE: ■ NEW CONSTRUCTION ☐ CHANGE OF USE ☐ ADDITION ☐ ADDITION AND RENOVATION ☐ RENOVATION DESCRIPTION: NEW BUNKER BUILDING	[A] 1.3.3.3.
9.02	MAJOR OCCUPANCY(s): GROUP F, DIVISION 3 (LOW HAZARD INDUSTRIAL OCCUPANCY)	9.10.2.
9.03	SUPERIMPOSED MAJOR OCCUPANCIES: ☐ YES ■ NO DESCRIPTION:	9.10.2.3.
9.04	BUILDING AREA (sq. m): EXISTING: 0 m^2 NEW: - TOTAL: 47 m^2	[A] 1.4.1.2.
9.05	GROSS AREA (sq. m): EXISTING: 0 m^2 NEW: - TOTAL: 47 m^2	[A] 1.4.1.2.
9.06	MEZZANINE(S) AREA: EXISTING: 0 m^2 NEW: - TOTAL: 0 m^2	9.10.4.1.
9.07	BUILDING HEIGHT: STOREY ABOVE GRADE: 1 STOREY BELOW GRADE: 0 (m) ABOVE GRADE: 2	[A] 1.4.1.2 & 9.10.4.
9.08	NUMBER OF STREETS/ FIREFIGHTER ACCESS ROUTES: 1	9.10.20.
9.09	SPRINKLER SYSTEM: ☐ REQUIRED ■ NOT REQUIRED PROVIDED: ☐ ENTIRE BUILDING ☐ IN LIEU OF ROOF RATING ☐ BASEMENT ONLY ☐ SELECTED COMPARTMENTS ☐ SELECTED FLOOR AREAS ■ NONE DESCRIPTION:	9.10.8.2.- 4., 3.2.4.7(4)
9.10	FIRE ALARM REQUIRED: ☐ YES ■ NO	9.10.18
9.11	CONSTRUCTION TYPE: RESTRICTION: ■ COMBUSTIBLE PERMITTED ☐ NON-COMBUSTIBLE REQUIRED ACTUAL: ☐ COMBUSTIBLE ☐ NON-COMBUSTIBLE ■ COMBINATION OF COMBUSTIBLE AND NON-COMBUSTIBLE ☐ ENCAPSULATED MASS TIMBER ☐ COMBINATION OF ENCAPSULATED MASS TIMBER AND NON-COMBUSTIBLE HEAVY TIMBER CONSTRUCTION: YES ■ NO	9.10.6., 3.1.5. 3.2.1.4.
9.12	OCCUPANT LOAD: FLOOR LEVEL/AREA ---------- OCCUPANCY TYPE ---------- BASED ON ■ m2 / PERSON ☐ DESIGN OF BUILDING OCCUPANT LOAD (PERSONS) 2 POSTED LIMIT REQUIRED N/A	9.9.1.3., 3.1.17.1.
9.13	BARRIER-FREE: ☐ YES ■ NO EXPLANATION BUILDING IS NOT INTENDED TO BE OCCUPIED ON A DAILY OR FULL TIME BASIS BARRIER-FREE ENTRANCES: NUMBER	9.5.2., 3.8. 3.8.1.2.
9.14	HAZARDOUS SUBSTANCES: ☐ YES ■ NO EXPLANATION:	9.10.1.3.
9.15	REQUIRED FIRE RESISTANCE RATINGS — HORIZONTAL ASSEMBLIES (H) / SUPPORTING ASSEMBLY (H) / NONCOMBUSTIBLE IN LIEU OF RATING STOREYS BELOW GRADE: N/A N/A ☐ YES ☐ NO ■ N/A FLOORS OVER BASEMENT: N/A N/A ☐ YES ☐ NO ■ N/A FLOORS: 0 N/A ☐ YES ☐ NO ■ N/A ROOF: N/A N/A ☐ YES ☐ NO ■ N/A MEZZANINE: N/A N/A ☐ YES ☐ NO ■ N/A	9.10.8.
9.16	SPATIAL SEPARATIONS - CONSTRUCTION OF EXTERIOR WALLS	9.10.14.

	AREA OF EBF (m^2)	LIMITING DISTANCE (m)	PERMITTED % OF UNPROTECTED OPENINGS	PROPOSED % OF UNPROTECTED OPENINGS	REQUIRED F.R.R. (H)	WALL CONSTRUCTION REQUIRED	WALL CLADDING REQUIRED
N	15m^2	45m (TO PROPERTY LINE)	UNRESTRICTED	0%	N/A.	COMB./NON-COMB.	COMB./NON-COMB.
S	15m^2	102m (TO PROPERTY LINE)	UNRESTRICTED	83%	N/A.	COMB./NON-COMB.	COMB./NON-COMB.
E	13m^2	61m (TO CL BTWN BUILDINGS)	UNRESTRICTED	0%	N/A.	COMB./NON-COMB.	COMB./NON-COMB.
W	13m^2	0.5m (TO CL BTWN BUILDINGS)	0	0%	1	NON-COMB.	NON-COMB.

9.17	PLUMBING FIXTURE REQUIREMENTS:	FLOOR LEVEL/AREA ----------	OCCUPANT LOAD ----------	OBC REFERENCE 3.4.7.1.(3)	WCS REQUIRED 0 WCS PROVIDED 0	3.7.4.
9.18	ENERGY EFFICIENCY: COMPLIANCE PATH: THE BUILDING IS EXEMPT FROM SB-10 DIVISION 3, 1.1.2.1. TO 1.1.2.3. REQUIREMENTS AS PER 1.2.1.1.					12.2. SB-10 DIVISION 3, 1.2.1.1.

NAME OF PRACTICE:
WSP CANADA INC.
150 COMMERCE VALLEY DRIVE WEST, THORNHILL ON L3T 7Z3

NAME OF PROJECT:
DUFFERINE TRANSFER STATION- PAVEMENT AND CURB REHABILITATION- STORAGE BUILDING

LOCATION:
75 Vanley Crescent, North York, ON, M3J 2B7

DATE:
JUNE 2025

ONTARIO BUILDING CODE DATA MATRIX - PART 9

ITEM	ARTICLE	OBC REF.
9.00	BUILDING CODE VERSION: O. REG. 163/24 LAST AMENDMENT O. REG. 447/24	
9.01	PROJECT TYPE: ■ NEW CONSTRUCTION ☐ CHANGE OF USE ☐ ADDITION ☐ ADDITION AND RENOVATION ☐ RENOVATION DESCRIPTION: NEW STORAGE BUILDING	[A] 1.3.3.3.
9.02	MAJOR OCCUPANCY(s): GROUP F, DIVISION 3 (LOW HAZARD INDUSTRIAL OCCUPANCY)	9.10.2.
9.03	SUPERIMPOSED MAJOR OCCUPANCIES: ☐ YES ■ NO DESCRIPTION:	9.10.2.3.
9.04	BUILDING AREA (sq. m): EXISTING: 0 m^2 NEW: - TOTAL: 192 m^2	[A] 1.4.1.2.
9.05	GROSS AREA (sq. m): EXISTING: 0 m^2 NEW: - TOTAL: 192 m^2	[A] 1.4.1.2.
9.06	MEZZANINE(S) AREA: EXISTING: 0 m^2 NEW: - TOTAL: 0 m^2	9.10.4.1.
9.07	BUILDING HEIGHT: STOREY ABOVE GRADE: 1 STOREY BELOW GRADE: 0 (m) ABOVE GRADE: 6	[A] 1.4.1.2 & 9.10.4.
9.08	NUMBER OF STREETS/ FIREFIGHTER ACCESS ROUTES: 1	9.10.20.
9.09	SPRINKLER SYSTEM: ☐ REQUIRED ■ NOT REQUIRED PROVIDED: ☐ ENTIRE BUILDING ☐ IN LIEU OF ROOF RATING ☐ BASEMENT ONLY ☐ SELECTED COMPARTMENTS ☐ SELECTED FLOOR AREAS ■ NONE DESCRIPTION:	9.10.8.2.- 4., 3.2.4.7(4)
9.10	FIRE ALARM REQUIRED: ☐ YES ■ NO	9.10.18
9.11	CONSTRUCTION TYPE: RESTRICTION: ■ COMBUSTIBLE PERMITTED ☐ NON-COMBUSTIBLE REQUIRED ACTUAL: ☐ COMBUSTIBLE ☐ NON-COMBUSTIBLE ■ COMBINATION OF COMBUSTIBLE AND NON-COMBUSTIBLE ☐ ENCAPSULATED MASS TIMBER ☐ COMBINATION OF ENCAPSULATED MASS TIMBER AND NON-COMBUSTIBLE HEAVY TIMBER CONSTRUCTION: YES ■ NO	9.10.6., 3.1.5. 3.2.1.4.
9.12	OCCUPANT LOAD: FLOOR LEVEL/AREA ---------- OCCUPANCY TYPE ---------- BASED ON ■ m2 / PERSON ☐ DESIGN OF BUILDING OCCUPANT LOAD (PERSONS) 2 POSTED LIMIT REQUIRED N/A	9.9.1.3., 3.1.17.1.
9.13	BARRIER-FREE: ☐ YES ■ NO EXPLANATION BUILDING IS NOT INTENDED TO BE OCCUPIED ON A DAILY OR FULL TIME BASIS BARRIER-FREE ENTRANCES: NUMBER	9.5.2., 3.8. 3.8.1.2.
9.14	HAZARDOUS SUBSTANCES: ☐ YES ■ NO EXPLANATION:	9.10.1.3.
9.15	REQUIRED FIRE RESISTANCE RATINGS — HORIZONTAL ASSEMBLIES (H) / SUPPORTING ASSEMBLY (H) / NONCOMBUSTIBLE IN LIEU OF RATING STOREYS BELOW GRADE: N/A N/A ☐ YES ☐ NO ■ N/A FLOORS OVER BASEMENT: N/A N/A ☐ YES ☐ NO ■ N/A FLOORS: 0 N/A ☐ YES ☐ NO ■ N/A ROOF: N/A N/A ☐ YES ☐ NO ■ N/A MEZZANINE: N/A N/A ☐ YES ☐ NO ■ N/A	9.10.8.
9.16	SPATIAL SEPARATIONS - CONSTRUCTION OF EXTERIOR WALLS	9.10.14.

	AREA OF EBF (m^2)	LIMITING DISTANCE (m)	PERMITTED % OF UNPROTECTED OPENINGS	PROPOSED % OF UNPROTECTED OPENINGS	REQUIRED F.R.R. (H)	WALL CONSTRUCTION REQUIRED	WALL CLADDING REQUIRED
N	97m^2	81m (TO PROPERTY LINE)	UNRESTRICTED	0%	N/A.	COMB./NON-COMB.	COMB./NON-COMB.
S	97m^2	100m (TO PROPERTY LINE)	UNRESTRICTED	0%	N/A.	COMB./NON-COMB.	COMB./NON-COMB.
E	69m^2	0.5m (TO CL BTWN BUILDINGS)	0	0%	1	NON-COMB.	NON-COMB.
W	69m^2	26m (TO CL BTWN BUILDINGS)	UNRESTRICTED	12%	N/A.	COMB./NON-COMB.	COMB./NON-COMB.

9.17	PLUMBING FIXTURE REQUIREMENTS:	FLOOR LEVEL/AREA ----------	OCCUPANT LOAD ----------	OBC REFERENCE 3.4.7.1.(3)	WCS REQUIRED 0 WCS PROVIDED 0	3.7.4.
9.18	ENERGY EFFICIENCY: COMPLIANCE PATH: THE BUILDING IS EXEMPT FROM SB-10 DIVISION 3, 1.1.2.1. TO 1.1.2.3. REQUIREMENTS AS PER 1.2.1.1.					12.2. SB-10 DIVISION 3, 1.2.1.1.

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	SA	
0	OCT. 2025	ISSUED FOR PERMIT	SA	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
75 VANLEY CRESCENT
TORONTO M3J 2B7

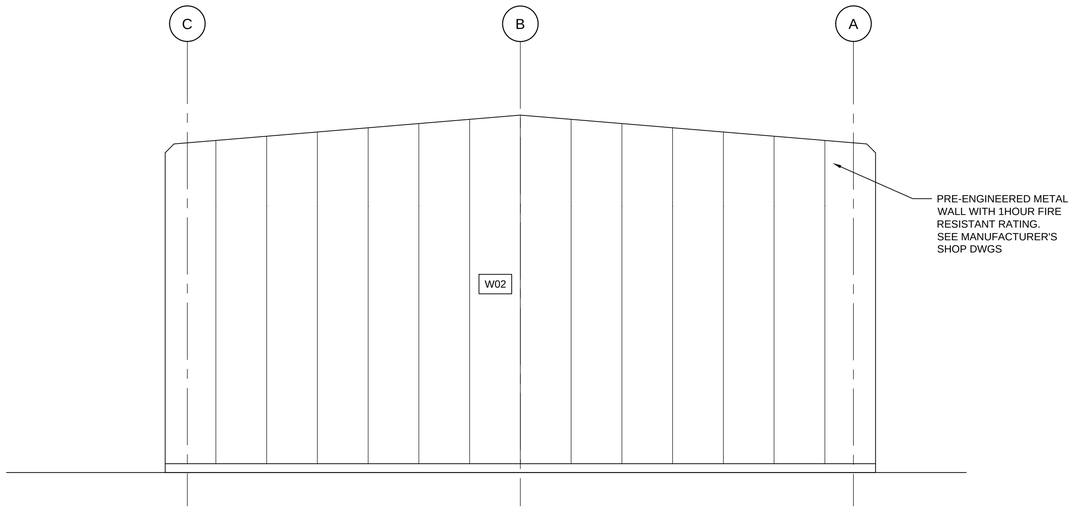
DUFFERIN TRANSFER STATION

PAVEMENT AND CURB REHABILITATION

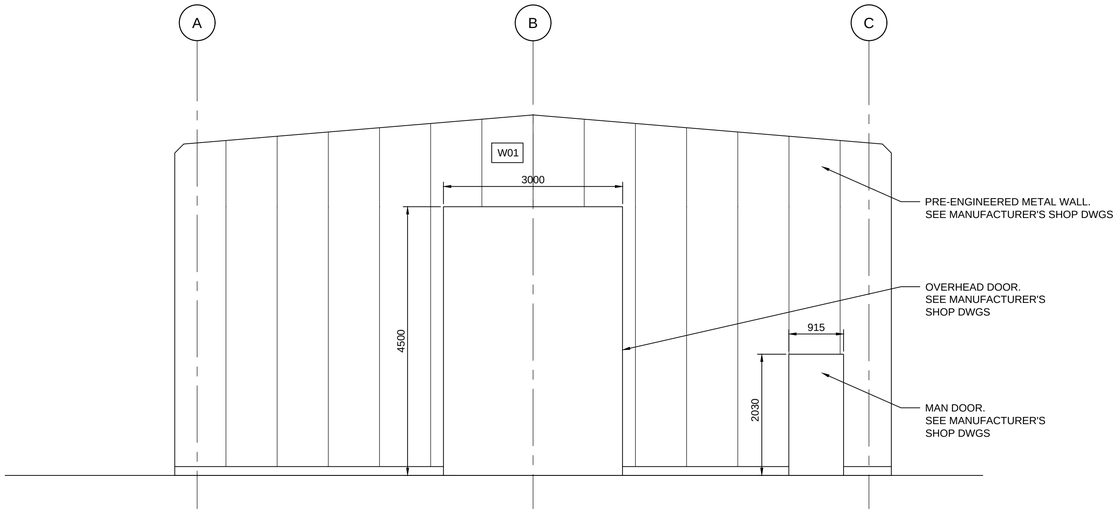
OBC MATRICES- FLOOR, ROOF AND WALLS ASSEMBLIES

ARCHITECTURAL

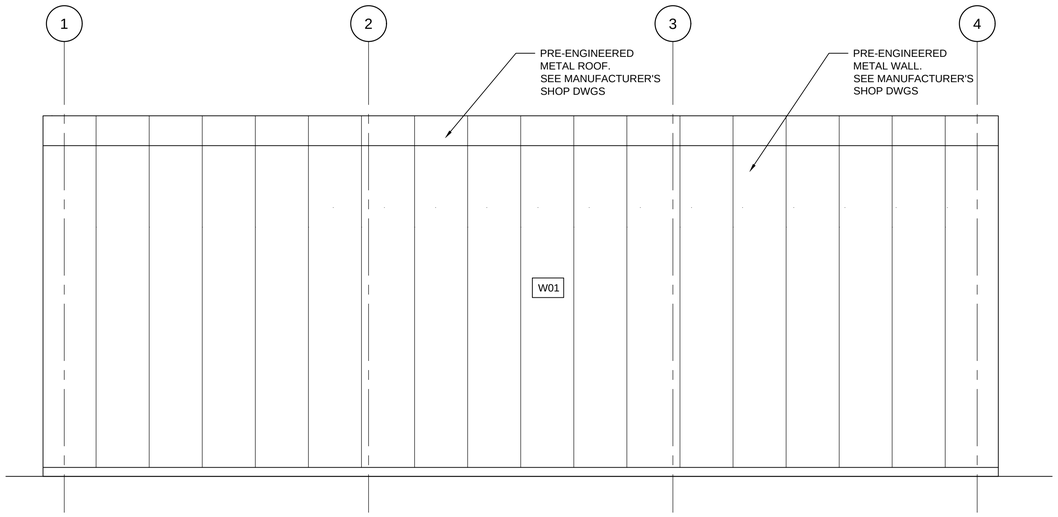
DESIGN:	SA	DRAFTING:	ML	CHECK:	SA	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	AS NOTED			DRAWING NUMBER:	1608-2025-6-48		A-001
DATE:	OCTOBER 2025						



4 A-002 EAST ELEVATION
SCALE: 1:50

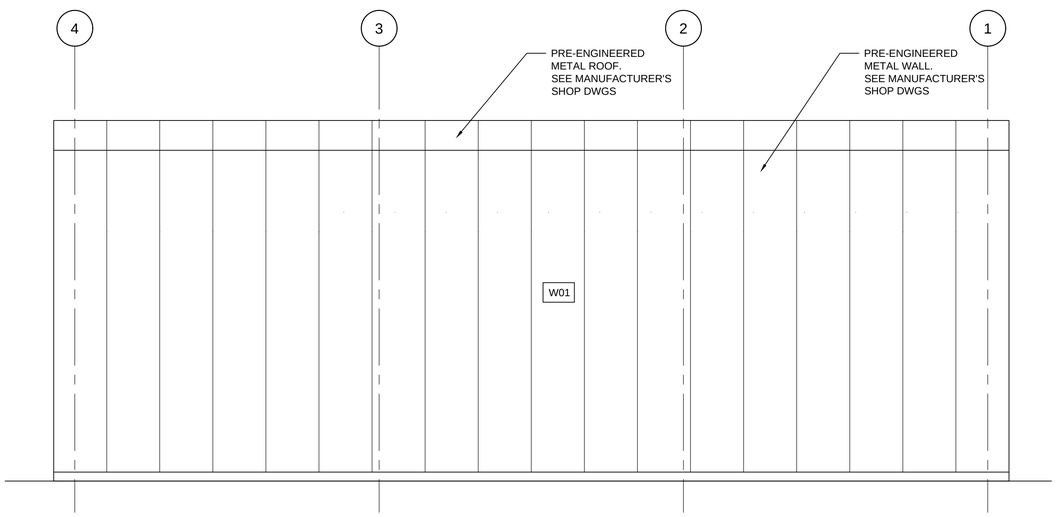


2 A-002 WEST ELEVATION
SCALE: 1:50



NOTE:
THE PRE-ENGINEERED BUILDING SHALL BE PROVIDED WITH A COMPLETE RAINWATER COLLECTION SYSTEM, INCLUDING GUTTERS, DOWNSPOTS, EAVESTROUGHS, AND ASSOCIATED COMPONENTS, DESIGNED BY THE VENDOR TO CAPTURE ROOF RUNOFF AND CONVEY IT TO THE NEAREST CATCH BASIN AS INDICATED ON THE CIVIL DRAWINGS. ALL INSTALLATION SHALL COMPLY WITH APPLICABLE STANDARDS AND ALIGN WITH THE CIVIL DESIGN DETAILS.

3 A-002 NORTH ELEVATION
SCALE: 1:50



1 A-002 SOUTH ELEVATION
SCALE: 1:50

SOLID WASTE MANAGEMENT SERVICES

WSP Canada Inc.
+1 289-982-9277
150 Commerce Valley Drive West
Thornhill, Ontario
L3T 7Z3, Canada

No.	DATE	REVISIONS	INITIAL	SIGNED
1	DEC. 2025	ISSUED FOR TENDER	SA	
0	OCT. 2025	ISSUED FOR PERMIT	SA	

TORONTO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER,
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASCHERA
DIRECTOR,
INFRASTRUCTURE
AND RESOURCE MANAGEMENT

PROJECT ADDRESS:
75 VANLEY CRESCENT
TORONTO M3J 2B7

DUFFERIN TRANSFER STATION
PAVEMENT AND CURB REHABILITATION
STORAGE BUILDING ELEVATIONS

ARCHITECTURAL

DESIGN:	SA	DRAFTING:	ML	CHECK:	SA	CONTRACT No.	25SWM-IRM-042CDU
SCALE:	AS NOTED			DRAWING NUMBER:	1608-2025-6-49		A-002
DATE:	OCTOBER 2025						

SOLID WASTE MANAGEMENT SERVICES

HDR Corporation
100 York Boulevard, Suite 300
Richmond Hill, ON L4B 1J8
(289) 695-6600 www.hdrinc.com

No.	DATE	REVISIONS	INITIAL	SIGNED
F	2/5/2025	ISSUED FOR TENDER	YC	YC
E	12/11/2024	RE-ISSUED FOR 100% DESIGN SUBMISSION	YC	YC
D	4/18/2024	ISSUED FOR 100% DESIGN SUBMISSION	YC	YC
C	3/14/2024	95% DESIGN ISSUED FOR CLIENT REVIEW	YC	YC
B	12/22/2023	50%/70% DESIGN ISSUED FOR CLIENT REVIEW	YC	YC
A	10/31/2023	PRELIMINARY ISSUED FOR CLIENT REVIEW	YC	YC

TORONTO

LICENSED PROFESSIONAL ENGINEER
Y. I. CHEANG
100202559
Feb 5 2025
PROVINCE OF ONTARIO

SOLID WASTE MANAGEMENT SERVICES

MATT KELIHER
GENERAL MANAGER
SOLID WASTE MANAGEMENT SERVICES

MATTHEW CASHERA
DIRECTOR
INFRASTRUCTURE AND RESOURCE MANAGEMENT

DIMITAR DIMITROV
SENIOR PROJECT MANAGER
SOLID WASTE MANAGEMENT SERVICES

DUFFERIN TRANSFER STATION

EXTERIOR LIGHTING AND PEDESTRIAN WALKWAY MARKINGS

CIVIL

PAVEMENT MARKING AND SIGNAGE

DESIGN:	YC	DRAFTING:	YC	CHECK:	AS	CONTRACT No. 23SWM-IRM-028CDU
SCALE:	1:500			DRAWING NUMBER:	1627-2023-5-16	C1
DATE:	FEBRUARY 5, 2025					