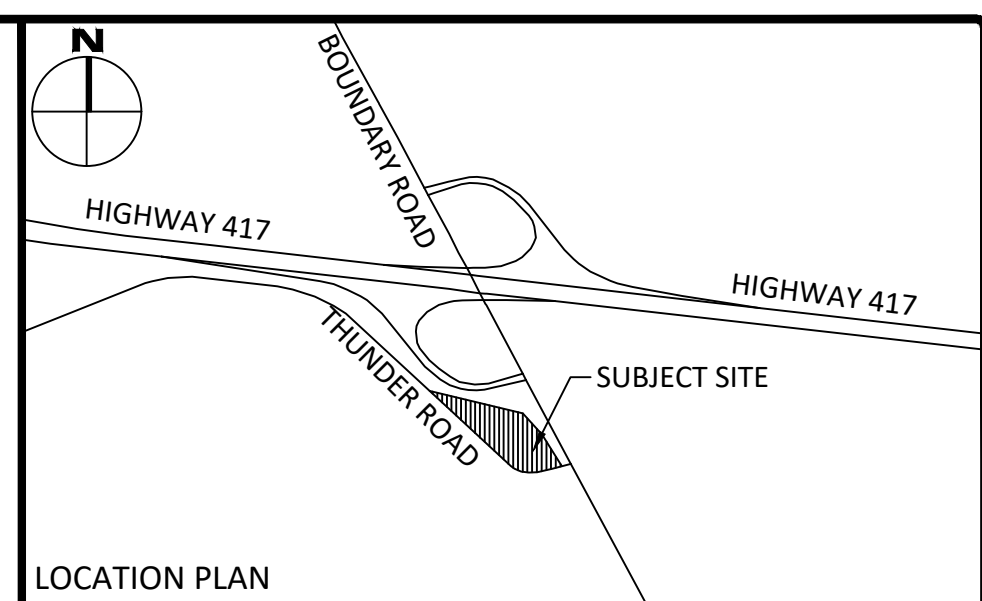
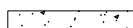
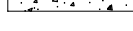
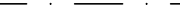
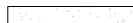
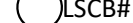
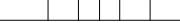
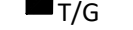
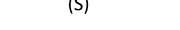
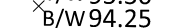
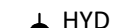




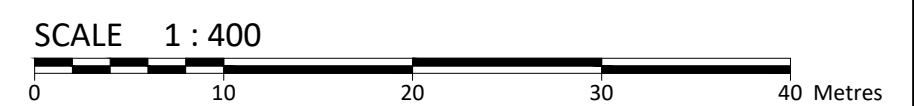
LEGEND

	CONCRETE BARRIER CURB		LIMIT OF CONSTRUCTION
	CONCRETE		PERFORATED PIPE SUBDRAIN
	PROPOSED ASPHALT		DRAINAGE SWALE
	PROPOSED GRAVEL		DRAINAGE DITCH
	LANDSCAPING CATCH-BASIN		SLOPING AT 3:1 UNLESS SPECIFIED
	CBM#H# T/G		SURFACE ELEVATION
	CBH# T/G		SWALE ELEVATION
	MH#A T/G		TOP OF WALL ELEVATION BOTTOM OF WALL ELEVATION
	HYD B/F		OVERLAND FLOW ROUTE
	WATER VALVE		SILT FENCE BARRIER
	WATER METER		STRAW BALE CHECK DAM
	REMOTE WATER METER		MUD MAT
	BOLLARD PER CITY STD F-4		TRENCH DRAIN

FOR REVIEW ONLY
NOT FOR CONSTRUCTION

2	REISSUED FOR SITE PLAN CONTROL	OCT. 31, 2024
1	ISSUED FOR SITE PLAN CONTROL	MAY 14, 2024
No.	Revisions	Date

Check and verify all dimensions before proceeding with the work	Do not scale drawings
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Stamp:

Professional Engineer Stamp: J. D. J. HEWISON, License No. 100506243, dated 11/01/2024, Province of Ontario.

Client: **BROFORT INC.**
2161 THURSTON DRIVE
OTTAWA, ON K1G 6C9

Project:

PROPOSED WAREHOUSE
6165 THUNDER ROAD

Drawing Title:

LOT GRADING, DRAINAGE,
EROSION & SEDIMENT CONTROL PLAN

Scale:	1:400	Project Number:	CCO-23-1882
Drawn By:	JH		
Checked By:	RF	Drawing Number:	C101
Designed By:	JH		

01	882	D07-12-XX-XXXX
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#XXXXXX

1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
2. THIS PLAN IS NOT A CADASTRAL SURVEY DERIVED FROM LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN SHOWING INFORMATION SUPPLIED BY (OR SHOWN ON) FAIRHILL, MOFFATT & WOODLAND DRAWING # 1-9 (OF 9) AND CANNOT BE RELIED UPON TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT CURBING, SIDEWALKS, SIDEWALKS AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP-TO-DATE LAND TITLE SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY BEFORE COMMENCING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
5. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND LEVEL FOR EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY AUTHORITIES.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
11. DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE ENGINEER/CITY.
12. ALL ROADWAY, PARKING LOT, AND GRADING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
13. CONTACT THE CITY FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO THE PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY'S SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOD.
14. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION, IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
15. ELECTRICAL, GAS, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCY:
 - TELEPHONE SERVICE - HYDRO ONTARIO
 - GAS SERVICE - ENBRIDGE
 - TELEPHONE SERVICE - BELL CANADA
 - TELEVISION SERVICE - ROGERS
16. INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES HYDRO ONTARIO, BELL AND THE CITY.
17. CONTRACTOR TO ENSURE ALL APPLICABLE OPS SPECIFICATIONS ARE FOLLOWED DURING CONSTRUCTION
18. ALL PROPOSED CURB TO BE CONCRETE BARRIER CURB UNLESS OTHERWISE SPECIFIED.
19. THIS PLAN MUST BE READ IN CONJUNCTION WITH THE GEOTECHNICAL INVESTIGATION.

1. RESTORE ANY TRENCHES AND DISTURBED SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN EXISTING CONDITION AND TO THE SATISFACTION OF CITY AUTHORITIES.
2. CONCRETE CURB AND SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD SCL 1 (BARRIER CURB), SCL 2 (SIDEWALK), AND SCL 3 (SIDEWALK WITH CONCRETE SIDEWALK) AS NOTED. PROVISIONS SHALL BE MADE FOR CURB DEPRESSIONS AT SIDEWALKS, DRIVEWAYS AND RAMP.
3. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH DETAIL R-10 AND DETAIL R-11 OR 509.010, 509.310, AND SHALL BE REINSTATEMENT PER THE DETAIL SHOWN ON THIS DRAWING.
4. GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 150MM AND ALL STRIPES SHALL BE DETAIL R-10.
5. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 100% SPWDO.
6. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEAMS & NECESSARY REPAIRS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER.
7. SUB- EXCAVATE SOFT AREAS AND FILL WITH GRANULAR "B" COMPACTED IN MAXIMUM 300mm LIFTS.
8. PAVEMENT STRUCTURE. REFER TO DETAIL.

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND RECEIVING WATER BODY FROM CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, TEMPORARY SEDIMENT CONTROL, GEOTECHNICAL STABILIZATION AND OVERFLOW PROTECTION. BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED DURING CONSTRUCTION ON ALL PROPOSED ROAD CORRIDORS, HARVARD AVENUE, AND ALL OTHER ROADWAYS, MANHOLES AND OTHER SEDIMENT TRAPS. NO RECYCLED GROUND MATERIAL SHALL BE PERMITTED FOR USE ON SITE. THE CONTRACTOR SHALL ENSURE THAT FILL MATERIALS ARE PROTECTED FROM EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCIES.
2. AT THE DISCRETION OF THE PROJECT MANAGER OR MUNICIPAL ENGINEER, THE CONTRACTOR SHALL PROVIDE SLOTTED OR SLOTTED AND DESIGNATED LOCATIONS.
3. FOR SILT FENCE BARRIER, USE OSDP 210.10. GEOTECHNICAL FILL SLOPE AS PER OSDP 1860, TABLE 3.

EXCEPT AS PROVIDED IN PARAGRAPHS 4.1, AND 4.2. BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TERMINATED. TEMPORARILY ACCUMULATED SEDIMENT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED.

4.1. WHEN CONSTRUCTION INITIATION OR TERMINATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE.

4.2. WHERE CONSTRUCTION ACTIVITY WILL BE RESUMED ON A PORTION OF THE SITE WITHIN 21 DAYS WHEN ACTIVITIES CEASED, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE. IF CONSTRUCTION MEASURES ARE NOT INITIATED ON THAT PORTION OF SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASED, THE CONTRACTOR SHALL BE SUBJECT TO THE FOLLOWING:

5. SEDIMENT THAT IS ACCUMULATED BY THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS ESCAPE OF THE SEDIMENT TO THE DOWNSTREAM OF THE CONTROL MEASURE. SEDIMENT SHALL BE REMOVED TO LEVEL OF THE CONTROL MEASURE. THE CONTROL MEASURE WAS CONSTRUCTED AND BE ACCORDING TO THE FOLLOWING:
6. FOR LIGHT GUITY SEDIMENT BARRIERS, ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE IT REACHES THE LESSER OF THE FOLLOWING:
 - 11.1. A DEPTH OF ONE-HALF THE EFFECTIVE HEIGHT OF THE CONTROL MEASURE.
 - 11.2. A DEPTH OF 300 MM IMMEDIATELY UPSTREAM OF THE CONTROL MEASURE.
7. FOR ALL CONTROL MEASURES, ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO PERFORM MAINTENANCE.
8. ACCUMULATED SEDIMENT SHALL BE REMOVED PRIOR TO THE RESUMPTION OF THE CONSTRUCTION ACTIVITIES.
9. ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AT AN APPROPRIATE LOCATION.

- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED TO ENSURE THEY ARE IN EFFECTIVE WORKING ORDER. THE CONDITION OF THE CONTROL MEASURES SHALL BE MONITORED PRIOR TO FORECAST STORM EVENT AND FOLLOWING A STORM EVENT.
7. DUST CONTROL MEASURES SHOULD BE CONSIDERED PRIOR TO CLEARING AND GRADING. THE USE OF WATER, CALCIUM CHLORIDE OR LIME OR LUTITE OR MAGNETIUM CHLORIDE FLAMES/EMULSION SHALL BE USED AS DUST SUPPRESSANTS AS PER OPS 508. THIS IS TO LIMIT WIND EROSION OF SOILS WHICH MAY TRANSPORT SEDIMENTS WHEN THEY ARE BLOWN UP TO THE RECEIVING WATER BY THE NEXT RAINSTORM.
- ALL 'GREEN AREAS' TO BE TREATED WITH 150mm TOPSOIL AND SOD AS SOON AS FEASIBLE, AS PER OPS 570.
- ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL POLLUTION (E.G. FERTILISERS, PESTICIDES, MANHOLES), AND BE SURROUNDED BY EROSION CONTROL MEASURES WHEREVER IS LEFT IN PLACE IN EXCESS OF 14 DAYS.
- IF REQUIRED, CONSTRUCTED/SETTLING/BASINS SHALL BE CONSTRUCTED AS PER OPS 215,240 AND LOCATED ON FLAT GRADE UPSTREAM OF OTHER EROSION CONTROL MEASURES. WATERCOURSES SHALL NOT BE DIVERTED, OR BLOCKED, AND THERE SHALL BE NO EXCESSIVE SEDIMENTATION. IF NOT CONSTRUCTED OR UTILIZED, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT, IF CLOSURE OF ANY PERMANENT WATER PASSAGE IS REQUIRED FOR EROSION CONTROL, THE CONTRACTOR SHALL PROVIDE TO THE OPEN PORTION OF THE WATERCOURSE WITHOUT HARM.
21. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO OPS 577
23. WHERE DEVELOPMENT IS REQUIRED, THE DISCHARGED WATER SHALL BE CONTAINED IN ACCORDANCE WITH OPS 518.
- ALL SLURRY/FILTRATION BASINS SHALL BE EQUIPPED WITH 150mm 1200mm DIAMETER (OR APPROVED EQUIVALENT) AND SHALL BE CLEANED AND REPLACED AS REQUIRED.