



KEY PLAN
SCALE: N.T.S

LEGEND

- ○ PROPOSED STORM MANHOLE
- ● PROPOSED SANITARY MANHOLE
- □ CATCH BASIN – NO ICD
- ⋈ PROPOSED VALVE & BOX
- PROPOSED HYDRANT & VALVE
- ○ EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- □ EX.CB. EXISTING CATCHBASIN
- ⊗ EX.V&C EXISTING VALVE & CHAMBER
- EX.H&V EXISTING HYDRANT & VALVE
- – – – SITE LIMIT

REFER TO DRAWING No. 100 FOR GENERAL NOTES

BENCHMARK

ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF BURLINGTON MONUMENT No. 176 HAVING A PUBLISHED ELEVATION OF 148.534 METERS

No.	DESCRIPTION	DATE	BY	APPRVD. BY
1	FIRST SUBMISSION	10/19/2021	BA	PAS

REVISIONS

APPROVALS

MUNICIPAL	REGIONAL
MANAGER OF DESIGN AND CONSTRUCTION	COMMISSIONER OF PUBLIC WORKS
DATE	DIRECTOR OF DESIGN AND CONSTRUCTION

CITY OF Burlington

SALOTTO BUILDING GROUP INC.
4375 MILLCROFT PARK DR
CITY OF BURLINGTON
HALTON REGION

LICENSED PROFESSIONAL ENGINEER
P. A. SLAMA
100010210
Nov 5/21
PROVINCE OF ONTARIO

GENERAL PLAN

GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

DESIGN BY: BA	DRAWN BY: TS	PROJECT No. 2102761
SCALE: 1:1000	DATE: SEPTEMBER 2021	
		DRAWING No. 101
		CITY FILE No.:

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NOT FOR CONSTRUCTION





KEY PLAN
SCALE: N.T.S

LEGEND

- 475.00 — EXISTING CONTOUR
- EXISTING STORM MANHOLE
- EXISTING CATCH BASIN
- PROPOSED STORM CATCH BASIN MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CLEAN WATER COLLECTOR MANHOLE
- CATCH BASIN – NO ICD
- CATCH BASIN – WITH ICD TYPE "C"= 36.8 L/S
- PROPOSED STORM SEWER
- PROPOSED DITCH OR SWALE
- PROPOSED 3:1 MAX SLOPE
- PROPOSED STORM DRAINAGE AREA BOUNDARY
- MAJOR STORM DRAINAGE AREA BOUNDARY
- MAJOR OVERLAND FLOW DIRECTION
- SITE LIMIT

0.50 — RUN–OFF COEFFICIENT
0.71ha — PROP. DRAINAGE AREA (ha)

REFER TO DRAWING No. 100 FOR GENERAL NOTES

BENCHMARK

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HALTON REGION

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P. A. SLAMA
100010210
Nov 5/21
PROVINCE OF ONTARIO

STORM DRAINAGE AREA PLAN

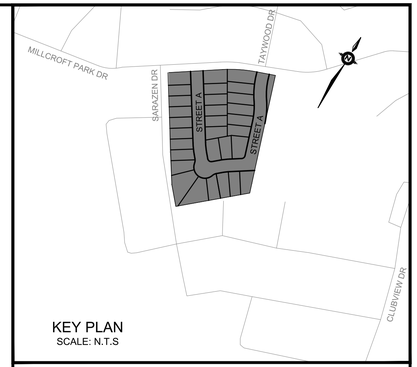
GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

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KEY PLAN
SCALE: N.T.S

LEGEND

- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY DRAINAGE AREA BOUNDARY

0.82 ha | 3.55
4 | 14

- PROP. DRAINAGE AREA (ha)
- PROP. POPULATION PER UNIT
- TRIBUTARY POPULATION
- UNIT COUNT
- SITE LIMIT

REFER TO DRAWING No. 100 FOR GENERAL NOTES

BENCHMARK

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Nov 5/21
PROVINCE OF ONTARIO

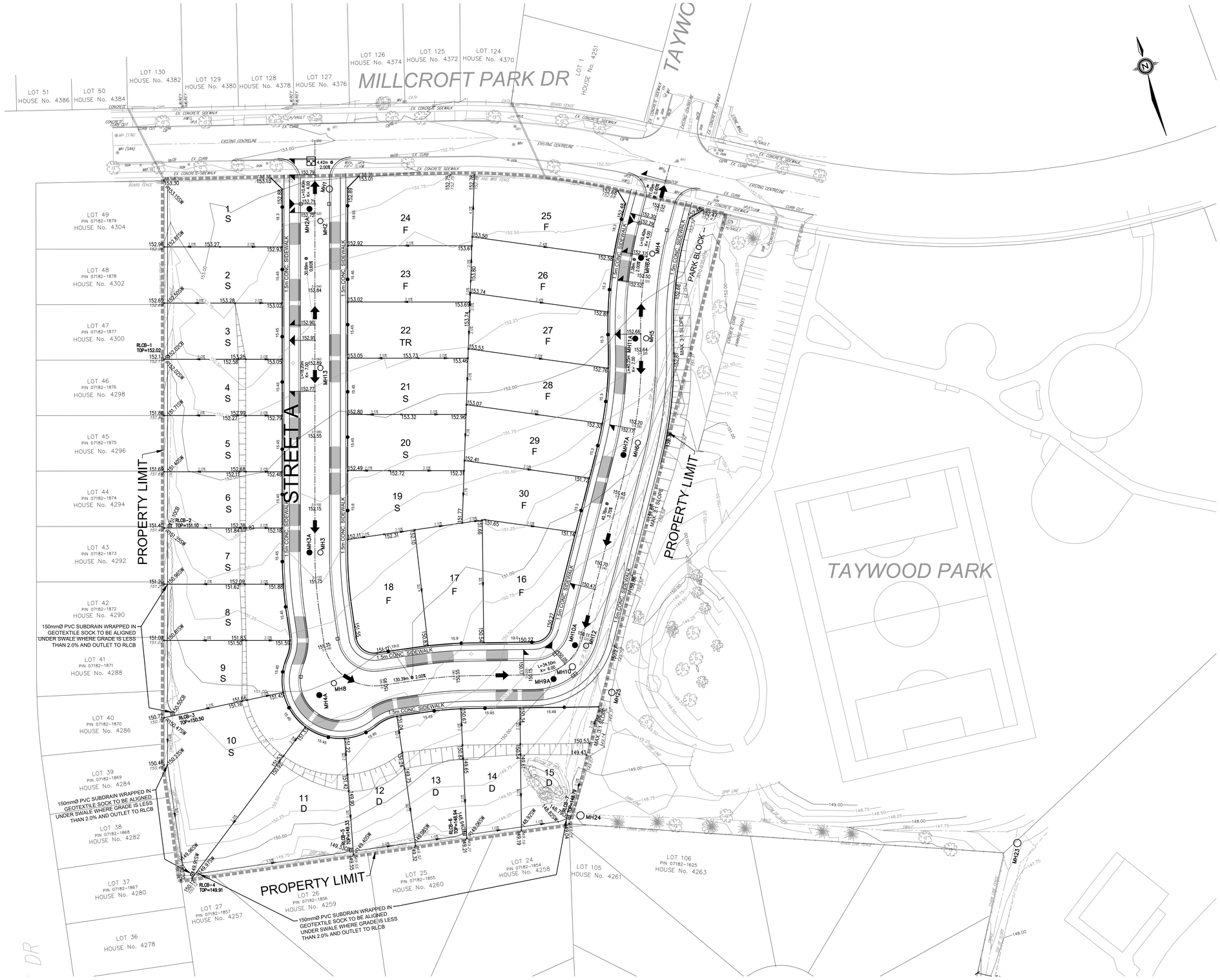
SANITARY DRAINAGE AREA PLAN

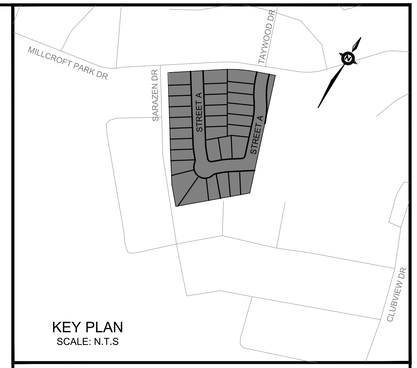
GEI Consultants
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SCALE:	1:1000	DATE:	SEPTEMBER 2021	2102761
				DRAWING No. 301
				CITY FILE No.:

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KEY PLAN
SCALE: N.T.S

LEGEND

- EXISTING CONTOUR
- EXISTING GRADE
- PROPOSED GRADE
- PROPOSED EDGE OF PAVEMENT GRADE
- PROPOSED TOP OF CURB GRADE
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING CATCH BASIN
- PROPOSED STORM MANHOLE
- PROPOSD CLEAN WATER COLLECTOR MANHOLE
- PROPOSED SANITARY MANHOLE
- CATCH BASIN – NO ICD
- PROPOSED DOUBLE CATCH BASIN
- PROPOSED WATER VALVE/ VALVE AND BOX CHAMBER
- PROPOSED HYDRANT AND VALVE
- SITE LIMIT
- PROPOSED DITCH OR SWALE
- PROPOSED 3:1 SLOPE
- OVERLAND FLOW DIRECTION
- EXISTING OVERLAND FLOW DIRECTION
- CURB DEPRESSION

REFER TO DRAWING No. 100 FOR GENERAL NOTES

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4375 MILLCROFT PARK DR
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HALTON REGION

LICENSED PROFESSIONAL ENGINEER
P. A. SLAMA
100010210
NOV 5/21
PROVINCE OF ONTARIO

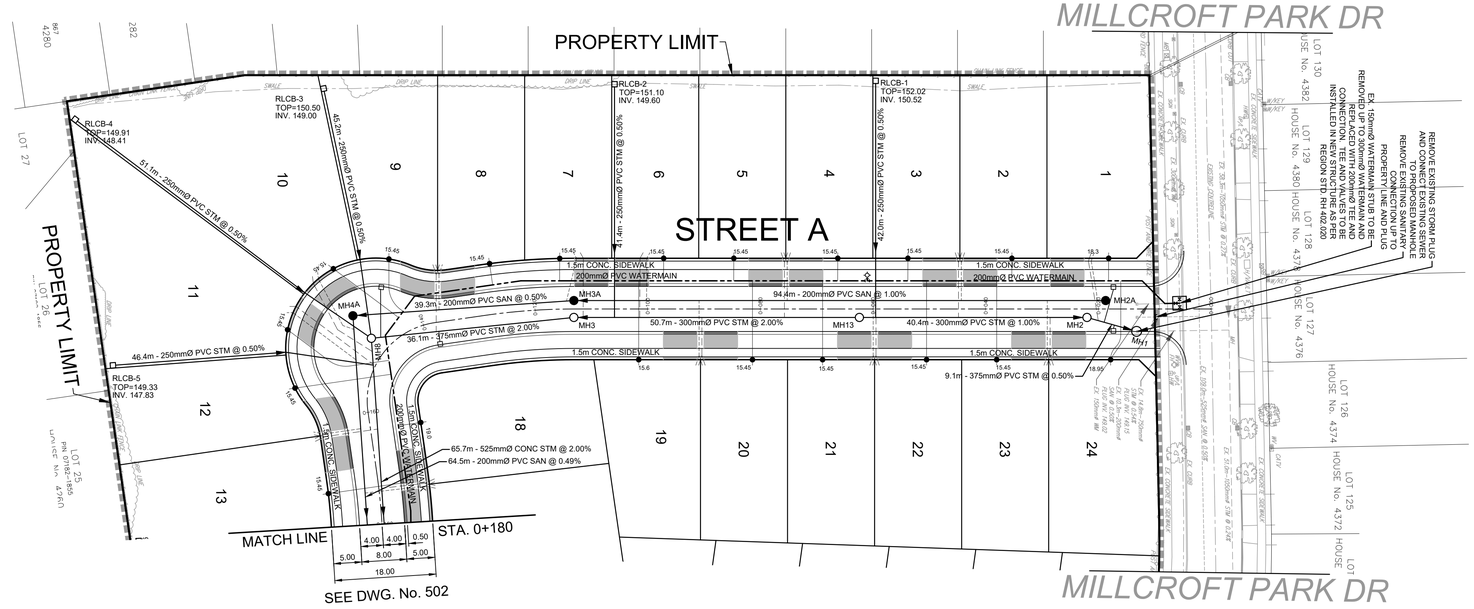
GRADING PLAN

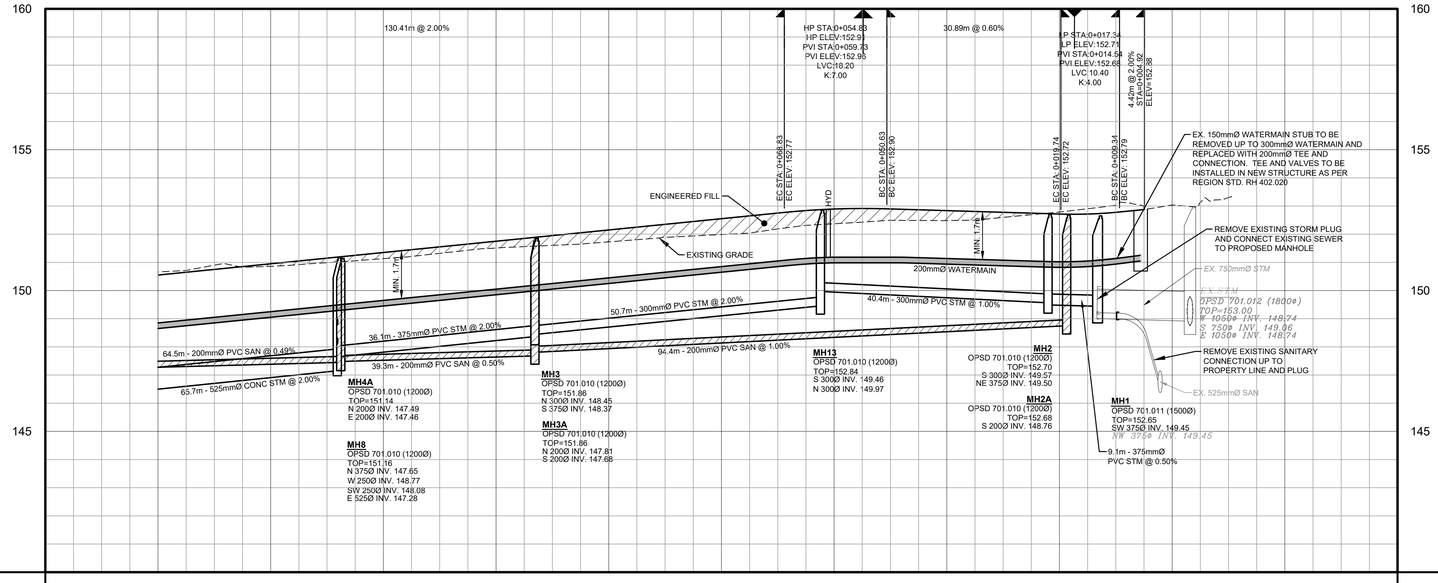
GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

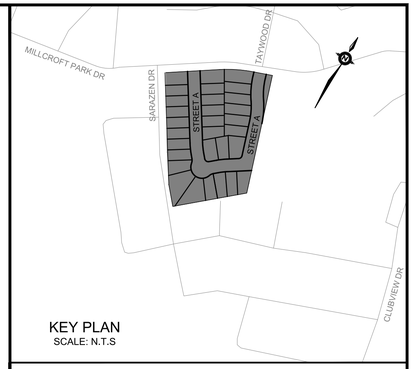
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KEY PLAN
SCALE: N.T.S

LEGEND

- PROPOSED STORM MAINTENANCE HOLE
- PROPOSED CLEAN WATER COLLECTOR MAINTENANCE
- PROPOSED SANITARY MAINTENANCE
- CATCH BASIN – NO ICD
- PROPOSED VALVE & CHAMBER
- PROPOSED VALVE & BOX
- PROPOSED HYDRANT & VALVE
- TEMPORARY FLUSHING STATION
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EX.CB. EXISTING CATCHBASIN
- EX.V&C EXISTING VALVE & CHAMBER
- EX.H&V EXISTING HYDRANT & VALVE
- LIMIT OF SITE
- PROPOSED CHAIN LINK FENCE

PROPOSED CENTRELINE ELEVATIONS	150.55	150.95	151.35	151.75	152.15	152.55	152.89	152.84	152.72		PROPOSED CENTRELINE ELEVATIONS
EXISTING CENTRELINE ELEVATIONS	150.66	150.86	151.13	151.51	151.73	151.99	152.37	152.48	152.79	153.04	EXISTING CENTRELINE ELEVATIONS
CENTRELINE CHAINAGE	0+180	0+160	0+140	0+120	0+100	0+080	0+060	0+040	0+020	0+000	CENTRELINE CHAINAGE

REFER TO DRAWING No. 100 FOR GENERAL NOTES

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HALTON REGION

LICENSED PROFESSIONAL ENGINEER
P. A. SLAMA
100010210
Nov 5/21
PROVINCE OF ONTARIO

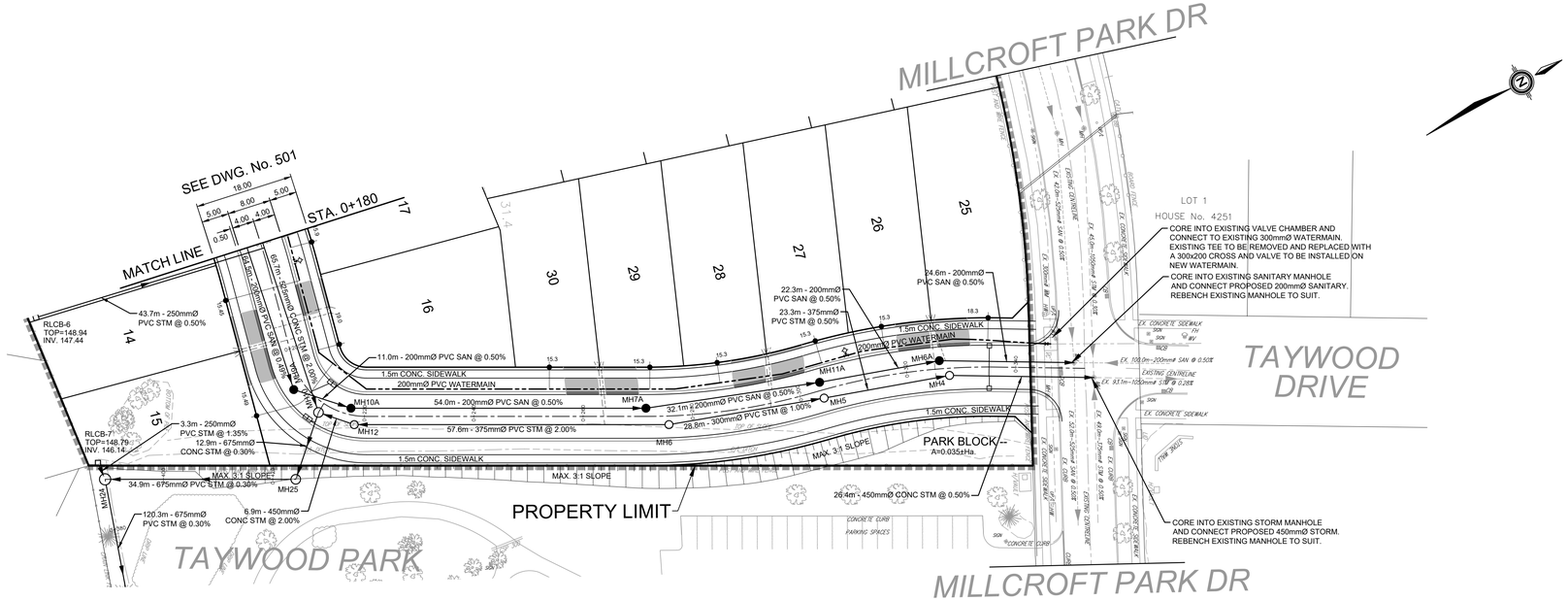
STREET A
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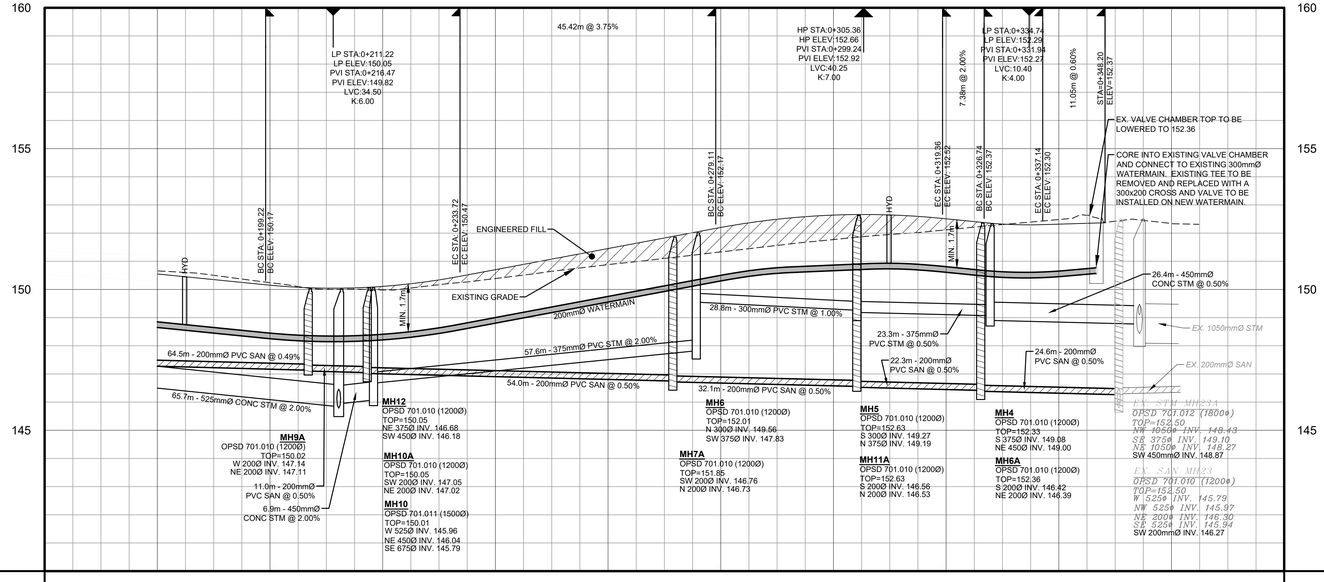
GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

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SCALE: 1:500 (HORIZ) 1:100 (VERT)	DATE: SEPTEMBER 2021	DRAWING No. 501
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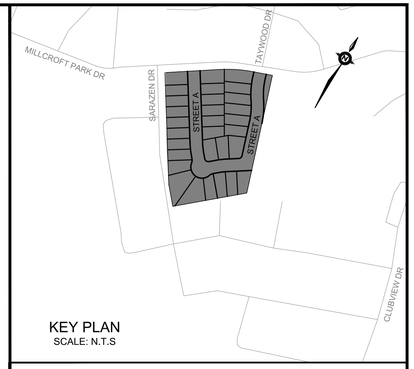
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PROPOSED CENTRELINE ELEVATIONS	150.55	150.15	150.11	150.70	151.45	152.20	152.64	152.51	152.32	PROPOSED CENTRELINE ELEVATIONS
EXISTING CENTRELINE ELEVATIONS	150.66	150.24	149.98	150.39	150.88	151.33	151.77	152.11	152.48	152.34	EXISTING CENTRELINE ELEVATIONS
CENTRELINE CHAINAGE	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	CENTRELINE CHAINAGE



KEY PLAN
SCALE: N.T.S

LEGEND

- PROPOSED STORM MAINTENANCE HOLE
- PROPOSED CLEAN WATER COLLECTOR MAINTENANCE
- PROPOSED SANITARY MAINTENANCE
- CATCH BASIN – NO ICD
- PROPOSED VALVE & CHAMBER
- PROPOSED VALVE & BOX
- PROPOSED HYDRANT & VALVE
- TEMPORARY FLUSHING STATION
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EX.CB. EXISTING CATCHBASIN
- EX.V&C EXISTING VALVE & CHAMBER
- EX.H&V EXISTING HYDRANT & VALVE
- LIMIT OF SITE
- PROPOSED CHAIN LINK FENCE

REFER TO DRAWING No. 100 FOR GENERAL NOTES

BENCHMARK

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DATE	DIRECTOR OF DESIGN AND CONSTRUCTION

CITY OF Burlington

SALOTTO BUILDING GROUP INC.
4375 MILLCROFT PARK DR
CITY OF BURLINGTON
HALTON REGION

LICENSED PROFESSIONAL ENGINEER
P. A. SLAMA
100010210
Nov 5/21
PROVINCE OF ONTARIO

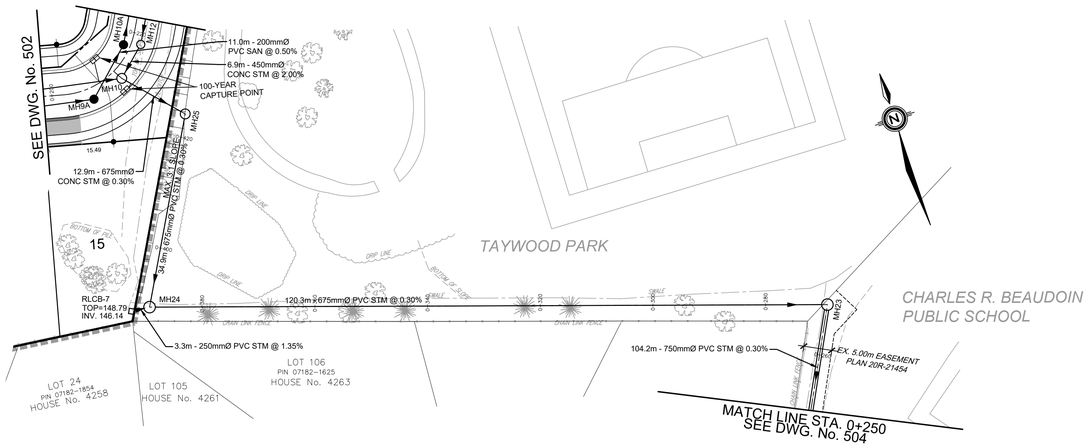
STREET A
STA 0+180 TO 0+360

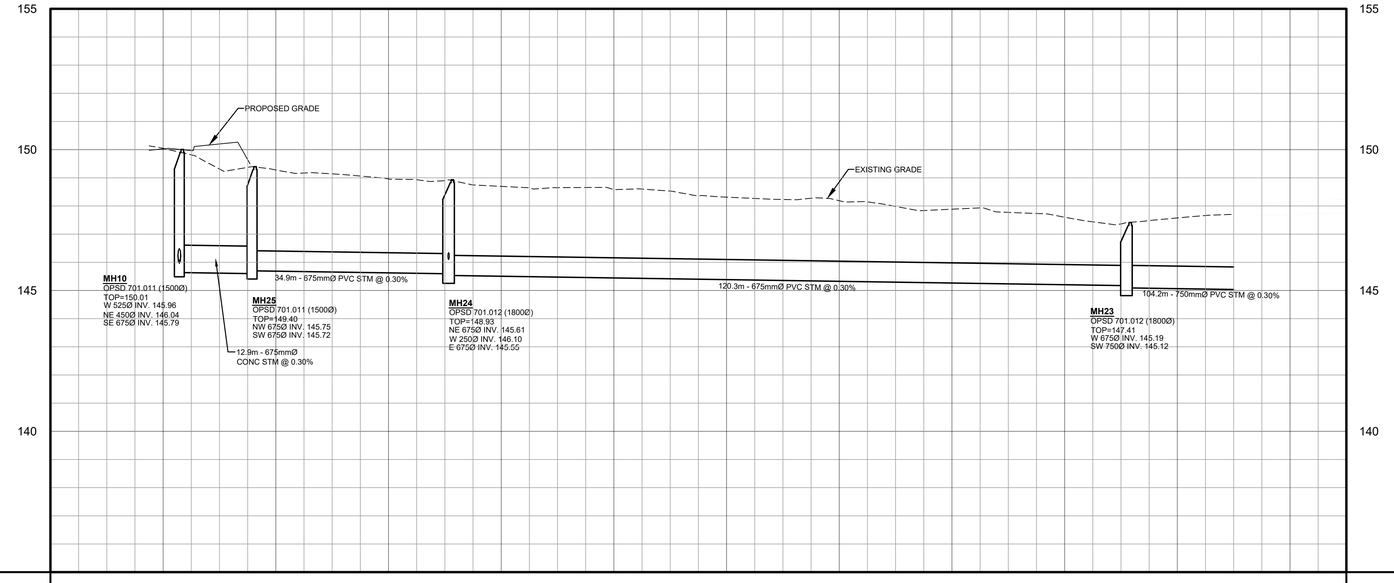
GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

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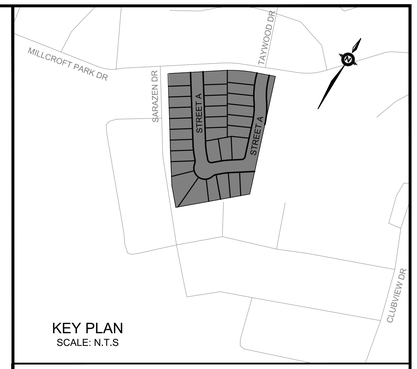
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PROPOSED CENTRELINE ELEVATIONS											PROPOSED CENTRELINE ELEVATIONS
EXISTING CENTRELINE ELEVATIONS	150.05	149.28	148.96	148.70	148.58	148.31	148.19	147.89	147.60	147.57	147.80	EXISTING CENTRELINE ELEVATIONS
CENTRELINE CHAINAGE	0+440	0+420	0+400	0+380	0+360	0+340	0+320	0+300	0+280	0+260	0+240	CENTRELINE CHAINAGE



KEY PLAN
SCALE: N.T.S

LEGEND

- PROPOSED STORM MAINTENANCE HOLE
- PROPOSED CLEAN WATER COLLECTOR MAINTENANCE
- PROPOSED SANITARY MAINTENANCE
- CATCH BASIN – NO ICD
- PROPOSED VALVE & CHAMBER
- PROPOSED VALVE & BOX
- PROPOSED HYDRANT & VALVE
- TEMPORARY FLUSHING STATION
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EX.CB. EXISTING CATCHBASIN
- EX.V&C EXISTING VALVE & CHAMBER
- EX.H&V EXISTING HYDRANT & VALVE
- LIMIT OF SITE
- PROPOSED CHAIN LINK FENCE

REFER TO DRAWING No. 100 FOR GENERAL NOTES

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4375 MILLCROFT PARK DR
CITY OF BURLINGTON
HALTON REGION

LICENSED PROFESSIONAL ENGINEER
P. A. SLAMA
100010210
Nov 5/21
PROVINCE OF ONTARIO

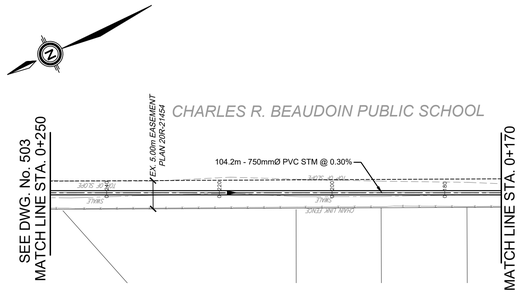
STORM OUTLET
STA 0+250 TO 0+430

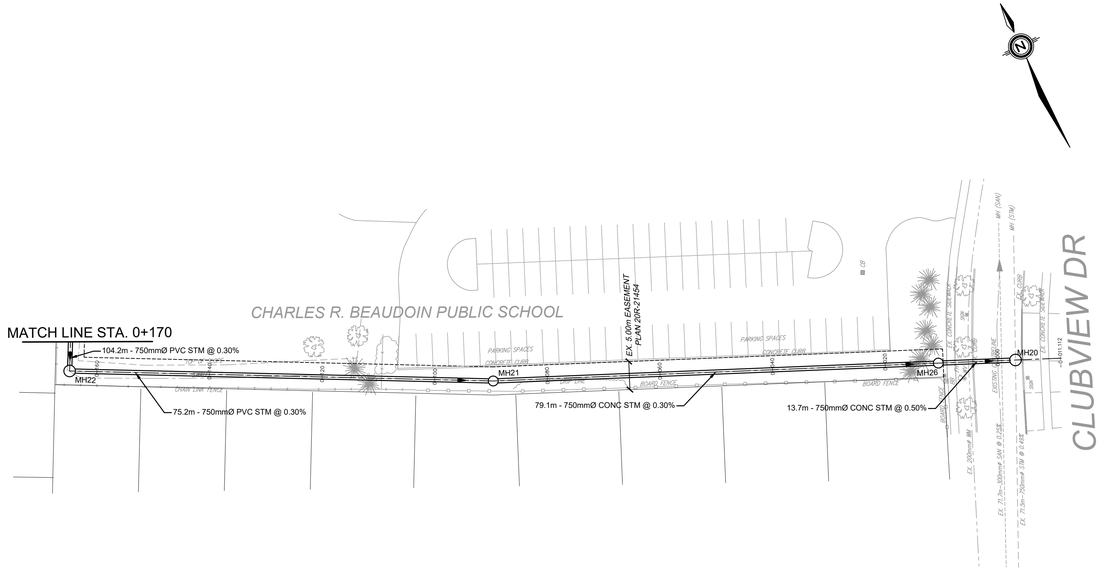
GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

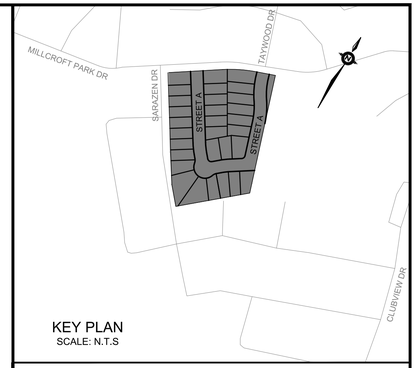
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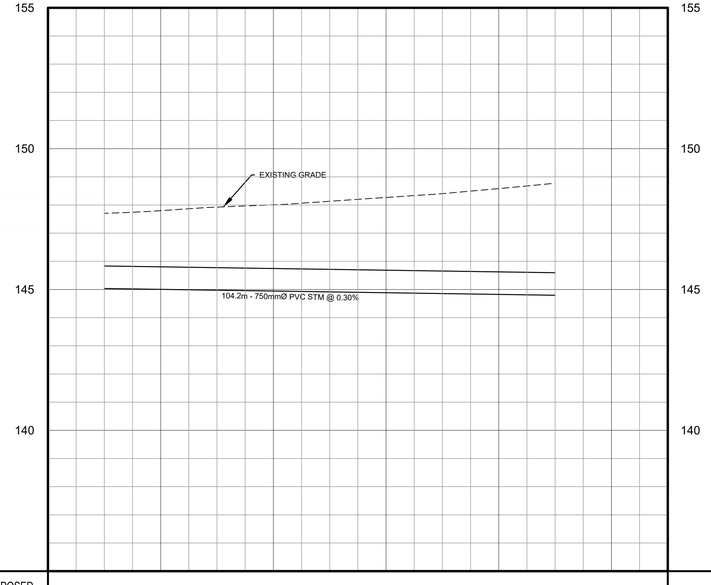


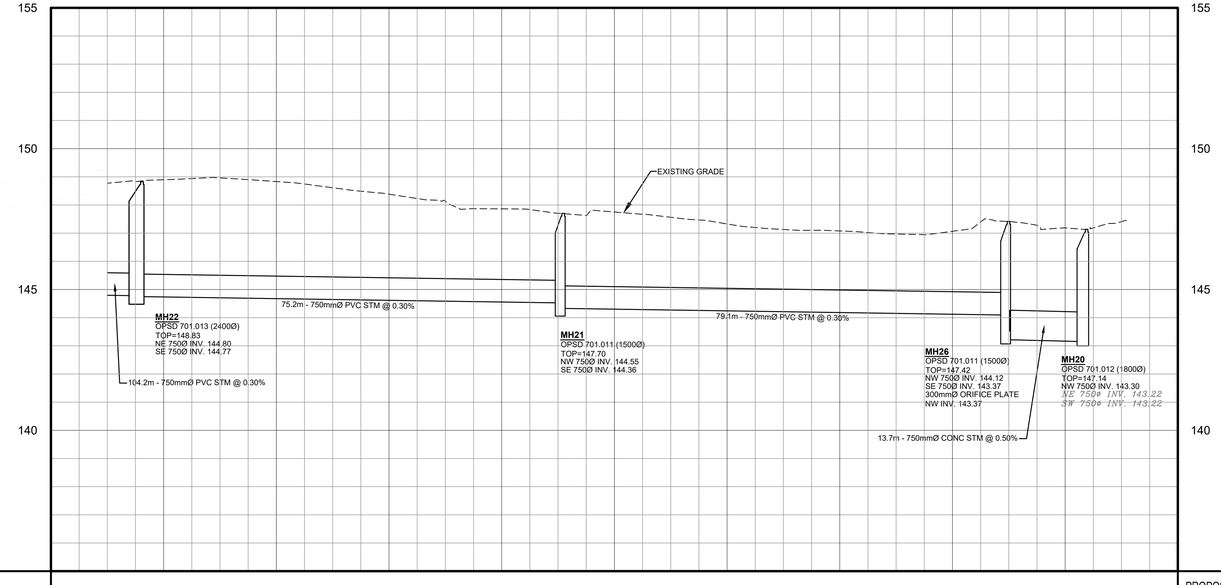


KEY PLAN
SCALE: N.T.S

LEGEND

- PROPOSED STORM MAINTENANCE HOLE
- PROPOSED CLEAN WATER COLLECTOR MAINTENANCE
- PROPOSED SANITARY MAINTENANCE
- CATCH BASIN – NO ICD
- PROPOSED VALVE & CHAMBER
- PROPOSED VALVE & BOX
- PROPOSED HYDRANT & VALVE
- TEMPORARY FLUSHING STATION
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EX.CB. EXISTING CATCHBASIN
- EX.V&C EXISTING VALVE & CHAMBER
- EX.H&V EXISTING HYDRANT & VALVE
- LIMIT OF SITE
- PROPOSED CHAIN LINK FENCE





PROPOSED CENTRELINE ELEVATIONS											PROPOSED CENTRELINE ELEVATIONS
EXISTING CENTRELINE ELEVATIONS	147.80	148.01	148.27	148.58	148.90	148.90	148.83	148.38	147.86	147.75	147.33	147.08	147.07	147.19	EXISTING CENTRELINE ELEVATIONS
CENTRELINE CHAINAGE	0+240	0+220	0+200	0+180	0+160	0+160	0+140	0+120	0+100	0+080	0+060	0+040	0+020	0+000	CENTRELINE CHAINAGE

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4375 MILLCROFT PARK DR
CITY OF BURLINGTON
HALTON REGION

LICENSED PROFESSIONAL ENGINEER
P. A. SLAMA
100010210
Nov 5/21
PROVINCE OF ONTARIO

STORM OUTLET
STA 0+000 TO 0+250

GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

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		CITY FILE No.:

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HRCA STANDARD NOTES

SECTION 1: SITE MANAGEMENT

1. EROSION AND SEDIMENT CONTROL (ESC) MEASURES WILL BE IMPLEMENTED PRIOR TO, AND MAINTAINED DURING THE CONSTRUCTION PHASES, TO PREVENT ENTRY OF SEDIMENT INTO THE WATER. ALL DAMAGED EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE REPAIRED AND/OR REPLACED IMMEDIATELY.
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 EROSION AND SEDIMENT CONTROLS.
4. THE EROSION AND SEDIMENT CONTROL 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 TO WORK AREAS. IF THE PRESCRIBED MEASURES ON THE PLANS ARE NOT EFFECTIVE IN PREVENTING THE RELEASE OF A DELETERIOUS SUBSTANCE, INCLUDING SEDIMENT, THEN ALTERNATIVE MEASURES MUST BE IMPLEMENTED IMMEDIATELY TO MINIMIZE POTENTIAL ECOLOGICAL IMPACTS. HRCA 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, AS WELL AS ON A REGULAR BASIS, OR FOLLOWING RAIN/SNOWMELT EVENT, TO MONITOR ALL WORKS, AND IN PARTICULAR WORKS RELATED TO EROSION AND SEDIMENT CONTROLS, DEWATERING OR UNWATERING, RESTORATION AND IN- OR NEAR- WATER WORKS. SHOULD CONCERNS ARISE ON SITE THE ENVIRONMENTAL MONITOR WILL CONTACT THE TRCA ENFORCEMENT OFFICER AS WELL AS THE PROPONENT.
6. 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.
7. ALL GRADES WITHIN THE REGULATORY FLOOD PLAIN WILL BE MAINTAINED OR MATCHED, EXCEPT WHERE NOTED ON THE PLANS.
8. 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 AN UNEXPECTED STORM ARISE, THE CONTRACTOR WILL REMOVE ALL UNFIXED ITEMS FROM THE REGIONAL STORM 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.
9. ALL DEWATERING / UNWATERING SHALL BE TREATED 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 FOREST, 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 OBJECTIVE OF PREVENTING THE RELEASE OF SEDIMENT LADEN WATER.
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 THE HRCA.

SECTION 2: CONSTRUCTION TIMING

1. IN ORDER TO COMPLY WITH THE MIGRATORY BIRDS CONVECTION ACT, HRCA RECOMMENDS THAT TREE REMOVALS BE COMPLETED BETWEEN AUGUST 1 AND APRIL 1. IN THE EVENT TREES MUST BE REMOVED OUTSIDE THIS TIME, A QUALIFIED ECOLOGIST MUST PERFORM A NEST CHECK.
2. TO PROTECT LOCAL FISH POPULATIONS DURING THEIR SPAWNING, NURSERY AND MIGRATORY PERIODS, UNLESS APPROVED BY MNR, ACTIVITIES IN REDSIDE DACE HABITAT MAY ONLY OCCUR BETWEEN JULY 1 AND SEPT 15.

SECTION 3: FISH AND WILDLIFE RELOCATION

1. FISH AND WILDLIFE STRANDED WITHIN THE WORK AREA SHALL BE CAPTURED AND RELEASED LIVE IN SUITABLE HABITAT UPSTREAM OF THE WORK AREA UNDER THE SUPERVISION OF A QUALIFIED AQUATIC BIOLOGIST. A PERMIT FROM THE MINISTRY OF NATURAL RESOURCES IS REQUIRED.

SECTION 4: ENVIRONMENTAL COMPLIANCE

1. PLEASE NOTIFY HRCA ENFORCEMENT OFFICER (_____ AT 905-XXX-XXXX EXT. XXXX) 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
2. 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 HRCA ENFORCEMENT OFFICER AND PROJECT MANAGER IF AN ISSUE ARISES.

DUST CONTROL MEASURES

A DUST CONTROL PLAN IS TO BE PROVIDED BY THE CONTRACTOR AND WILL INCLUDE:

1. IDENTIFICATION OF ALL POTENTIAL DUST SOURCES;
2. A DESCRIPTION OF THE DUST CONTROL METHOD(S) TO BE USED FOR EACH SOURCE;
3. A SCHEDULE, RATE OF APPLICATION, CALCULATIONS OR SOME OTHER MEANS OF IDENTIFYING HOW OFTEN, HOW MUCH OR WHEN THE CONTROL METHOD IS TO BE USED;
4. PROVISIONS FOR MONITORING AND RECORD-KEEPING; A BACKUP PLAN IN CASE THE FIRST CONTROL PLAN DOES NOT WORK OR IS INSUFFICIENT;
5. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING SURE THE PLAN IS IMPLEMENTED AND CAN BE CONTACTED IN THE EVENT OF A DUST COMPLAINT

PRE-GRADING PLANNING
1. TOPSOIL STRIPPING AND EARTHWORKS TO BE TIMED TO COINCIDE WITH EACH MUNICIPAL SERVICING AND/OR CONSTRUCTION PHASE; OR
2. STRIP TOPSOIL AND GRADE ENTIRE PROJECT AND APPLY VEGETATION GROUND COVER TO GRADED OR TOPSOIL STRIPPED AREAS WHERE CONSTRUCTION PHASE BEGINS MORE THAN 90 DAYS AFTER GRADING OR TOPSOIL STRIPPING OPERATIONS END.

WATERING (POST-GRADING)
1. WITHIN ACTIVE TOPSOIL STRIPPING, EARTH MOVING OR UNDERGROUND/ABOVEGROUND MUNICIPAL SERVICING AREAS, WATER TO BE APPLIED AT SUFFICIENT FREQUENCY AND QUANTITY TO PREVENT VISIBLE EMISSIONS FROM EXTENDING MORE THAN 30m FROM POINT OF ORIGIN.

TOPSOIL STOCKPILES
1. CONFINE LOAD IN/OUT PROCEDURES TO LEEWARD (DOWNWIND) SIDE OF THE MATERIAL. TOPSOIL PILES TO BE LOCATED DOWNWIND OF EXISTING RESIDENTIAL AREAS.
2. APPLY WATER TO HAUL ROADS AND STOCKPILE BY WAY OF WATER TRUCK.
3. GRADE AND VEGETATE TOPSOIL STOCKPILE TO PREVENT FUTURE WIND EROSION.

WIND FENCING
1. INSTALL 1.0m TO 1.5m HIGH BARRIERS WITH 50% OR LESS POROSITY LOCATED ADJACENT TO ROADWAYS OR URBAN AREAS TO REDUCE THE AMOUNT OF WINDBLOWN MATERIAL LEAVING THE SITE.

REDUCE VEHICLE SPEED
1. LIMIT VEHICLE SPEED TO 25 km/hr MAXIMUM. MAY NEED TO BE USED IN CONJUNCTION WITH WATERING TO PREVENT VISIBLE DUST EMISSIONS.

MINIMIZE DISRUPTED SURFACE AREAS
1. TO DISTURB ONLY THOSE AREAS ABSOLUTELY REQUIRED. VEGETATION LEFT IN PLACE DURING SITE WORK REDUCES THE AREA SUBJECT TO WIND EROSION.

RESTRICT ACTIVITIES DURING HIGH WIND PERIODS
1. RESCHEDULE WORK AROUND WINDY DAYS. THE HIGH VISIBILITY OF CERTAIN WORKS AND THE CLOSE PROXIMITY AND POPULATION IMPACTED SHOULD BE TAKEN INTO CONSIDERATION WHEN SCHEDULING DUST-PRODUCING WORK.

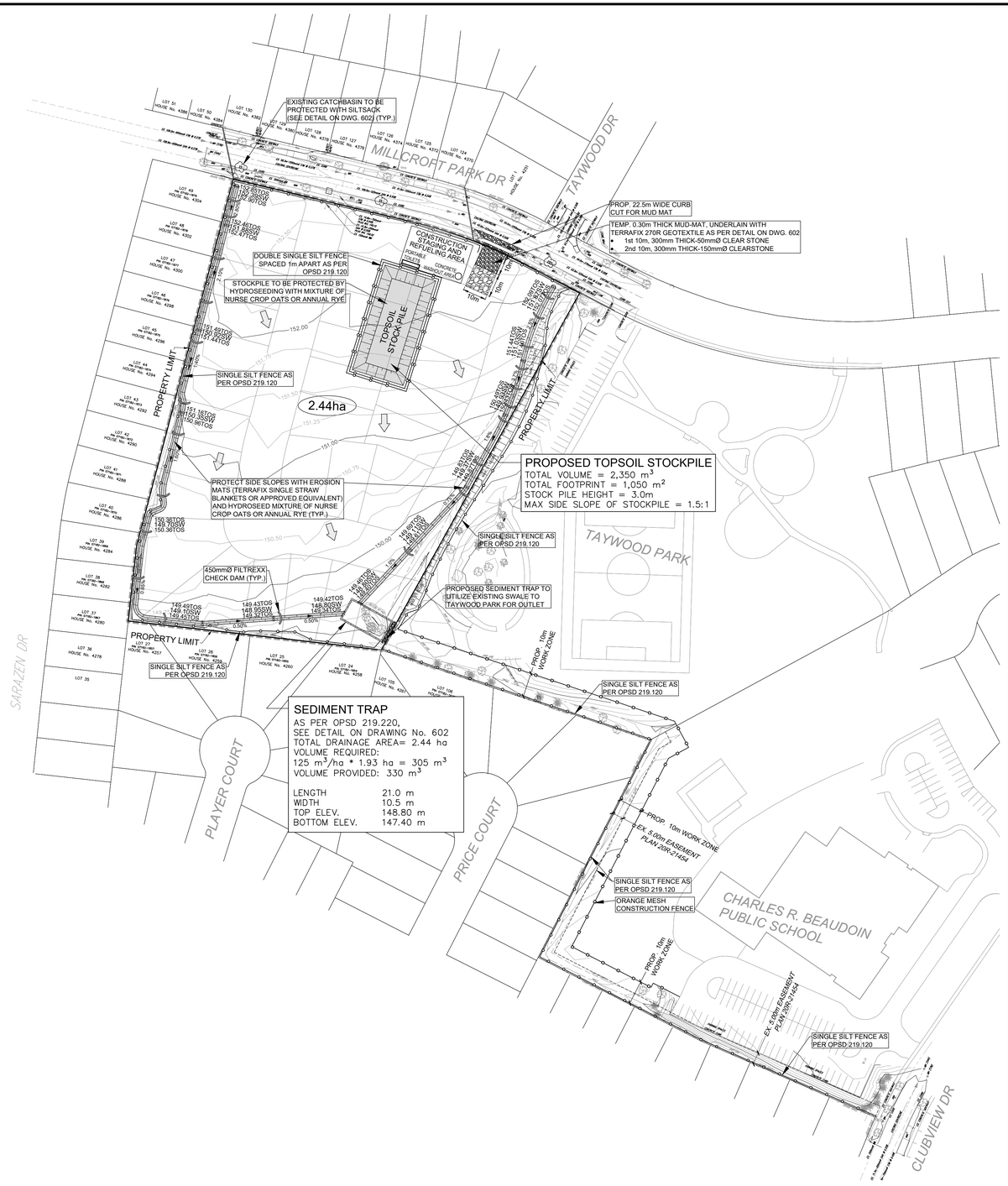
ROAD CLEANING
1. SPILLAGE, EROSION OR MATERIALS "TRACKED OUT" ON A ROAD TO BE CLEANED USING MECHANICAL STREET SWEEPERS OR FLUSHER TRUCK BY AT LEAST THE END OF THE WORKDAY AND IMMEDIATELY IF IT EXTENDS MORE THAN 15 METRES ALONG A PAVED PUBLIC ROADWAY.

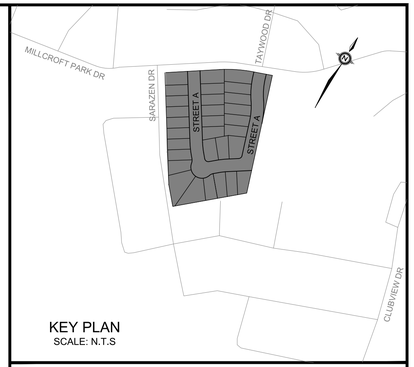
CONSTRUCTION STAGING

1. CONSTRUCT GRANULAR MUD MAT (TEMPORARY CONSTRUCTION ACCESS) OF MILLCROFT PARK DRIVE.
2. CLEAR AND GRUB EXISTING VEGETATION, INCLUDING TREES IDENTIFIED FOR REMOVAL.
3. ERECT SEDIMENT CONTROL FENCING RESPECTING EXISTING TREES DRIPLINE.
4. PROTECT EXISTING CB'S ALONG MILLCROFT PARK DRIVE.
5. CONSTRUCT TEMPORARY SEDIMENT POND WITH OUTLET STRUCTURES. APPLY STRAW MATTING AND HYDROSEED SLOPES AS DETAILED.
6. CONSTRUCT TEMPORARY CUT-OFF SWALES, APPLY EROSION MATS AND HYDROSEED. INSTALL ROCK CHECK DAMS WITHIN CUT-OFF SWALES.
7. STRIP AND STOCKPILE TOPSOIL AS PER DRAWING, EXPORT EXTRA TOPSOIL OFF SITE.

HOUSE KEEPING MEASURES - EROSION AND SEDIMENTATION CONTROL

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION, AS DIRECTED BY THE ENGINEER.
2. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AND SHALL BE DETERMINED BY THE ENGINEER.
3. SILT CONTROL FENCING SHALL BE INSTALLED ACCORDING TO THIS EROSION AND SEDIMENT CONTROL DRAWING No. 601 AND MAINTAINED UNTIL COMPLETION OF THE LANDSCAPING AND SITE STABILIZATION.
4. NO CONSTRUCTION ACTIVITY OR MACHINERY SHALL INTRUDE BEYOND THE SILT/SNOW FENCE OR LIMIT OF DEVELOPMENT. ALL CONSTRUCTION VEHICLES SHALL LEAVE THE SITE AT DESIGNATED LOCATIONS AS SHOWN ON THE PLANS. ALL MATERIAL AND EQUIPMENT SHALL BE STORED ON SITE IN A DESIGNATED AREA. NO MATERIAL OR EQUIPMENT SHALL BE STORED ON THE MUNICIPAL RIGHT OF WAY. NO CONSTRUCTION VEHICLES WILL PARK ON THE MUNICIPAL ROADS.
5. ALL EXPOSED SOILS SHALL BE IMMEDIATELY STABILIZED WITH A SEED AND MULCH APPLICATION AS DIRECTED BY THE ENGINEER.
6. STOCKPILES SHALL BE SET BACK FROM ANY WATERCOURSE AND STABILIZED AGAINST EROSION AS SOON AS POSSIBLE. A SETBACK OF AT LEAST 15M FROM ANY TOP OF BANK OR WATERCOURSE IS REQUIRED.
7. CLEANING AND REPAIRS OF CHECK DAMS, MUD MATS AND ANY OTHER TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE DONE AS NECESSARY THROUGH REGULAR INSPECTION OR AS DIRECTED BY THE ENGINEER.
8. SEDIMENT/SILT SHALL BE REMOVED FROM THE SEDIMENT CONTROL DEVICES AND THE CATCHBASIN BUFFERS AFTER STORM EVENTS AND DISPOSED OF IN AREAS AS APPROVED BY THE ENGINEER.
9. ALL RE-GRADED AREAS WITHIN THE SITE WHICH ARE NOT OCCUPIED BY BUILDINGS, ROADWAYS, SIDEWALKS OR DRIVEWAYS SHALL BE TOPSOILED AND SODDED/SEEDED IMMEDIATELY AFTER COMPLETION OF FINAL GRADING OPERATIONS OR AS DIRECTED BY THE ENGINEER.
10. INSPECTION OF THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES WILL OCCUR ON A WEEKLY BASIS, AFTER SIGNIFICANT RAINFALL OR SNOW MELT EVENTS AND DAILY DURING EXTENDED RAIN OR SNOW MELT PERIODS.
11. MATERIALS TO REPAIR DAMAGED ESC MEASURES MUST BE KEPT ON-SITE AT ALL TIMES.
12. THE ESC STRATEGIES ON THESE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED / AMENDED AS SITE CONDITIONS CHANGE TO PREVENT SEDIMENT RELEASE TO THE NATURAL ENVIRONMENT. FAILED ESC MEASURES MUST BE REPAIRED IMMEDIATELY.
13. SERVICING OF CONSTRUCTION EQUIPMENT ON SITE IS PROHIBITED.
14. CLEANING OF EXISTING ROAD(S) AT SITE ACCESS POINTS SHALL BE DONE DAILY DURING CONSTRUCTION OR AS NECESSARY THROUGH REGULAR INSPECTION OR AS DIRECTED BY THE ENGINEER.
15. DUST CONTROL TO BE REVIEWED DAILY. WATER TRUCK TO BE PROVIDED ON-SITE AND ALL HAUL ROAD /WORKING AREAS TO BE SPRAYED WITH WATER AS REQUIRED TO ENSURE DUST IS CONTROLLED ON-SITE.
16. ROCK CHECK DAMS ARE TO BE CLEANED OF ALL ACCUMULATED SEDIMENT AS SOON AS SEDIMENT HAS ACCUMULATED TO A DEPTH GREATER THAN 50% OF THE UPSTREAM CHECK DAM.
17. ALL LITTER AND DEBRIS SHALL BE MONITORED AND DISPOSED OF DAILY OR AS NECESSARY THROUGH REGULAR INSPECTION.
18. THE SILT FENCE MUST BE INSPECTED WEEKLY AND IMMEDIATELY AFTER RAINFALL OR SIGNIFICANT SNOW MELT EVENTS FOR RIPS AND TEARS, BROKEN STAKES, BLOW OUTS (STRUCTURAL FAILURE) AND ACCUMULATION OF SEDIMENT. THE SILT FENCE MUST BE FIXED AND/OR REPLACED IMMEDIATELY WHEN DAMAGED. ACCUMULATED SEDIMENT MUST BE REMOVED FROM THE SILT FENCE WHEN ACCUMULATION REACHES 50% OF THE HEIGHT OF THE FENCE.
19. SILT SACKS (OR APPROVED EQUIVALENT) ARE TO BE INSTALLED AT ALL CATCHBASINS AND CATCHBASIN MANHOLES LOCATIONS UPON COMPLETION OF SERVICING.
20. SITE CONTACT FOR EROSION AND SEDIMENT MEASURES - GIANMARCO TAVANEILLO, TACC CONSTRUCTION (416)-989-8104.





KEY PLAN
SCALE: N.T.S

LEGEND

- SITE LIMIT
- EXISTING GROUND CONTOUR AND ELEVATION — 205.00
- EXISTING OVERLAND FLOW DIRECTION
- PROP. SINGLE SILT FENCE
- PROP. DOUBLE SILT FENCE
- PROP. ORANGE MESH CONSTRUCTION FENCE
- EX. CATCHBASINS TO BE PROTECTED WITH SILT SACK
- TRIBUTARY AREA TO EROSION CONTROL FEATURE — 2.44ha
- 450mmØ FILTREXX CHECK DAM

BENCHMARK

ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF BURLINGTON MONUMENT No. 176 HAVING A PUBLISHED ELEVATION OF 148.534 METERS

No.	DESCRIPTION	DATE	BY	APPRVD BY
1	FIRST SUBMISSION	10/19/2021	BA	PAS

REVISIONS

APPROVALS

MUNICIPAL	REGIONAL
MANAGER OF DESIGN AND CONSTRUCTION	COMMISSIONER OF PUBLIC WORKS
DATE	DIRECTOR OF DESIGN AND CONSTRUCTION

CITY OF Burlington

SALOTTO BUILDING GROUP INC.
4375 MILLCROFT PARK DR
CITY OF BURLINGTON
HALTON REGION

LICENSED PROFESSIONAL ENGINEER
P. A. SLAMA
100010210
NOV 5/21
PROVINCE OF ONTARIO

EROSION & SEDIMENT CONTROL CONSTRUCTION MANAGEMENT AND MOBILITY PLAN

GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

DESIGN BY: B. A.	DRAWN BY: B. A.	PROJECT No. 2102761
SCALE: 1:1000	DATE: SEPTEMBER 2021	DRAWING No. 601
		CITY FILE No.:

NOT FOR CONSTRUCTION

File : B:\Working\ARMLAND GROUP\2102761 4375 Millcroft Park Dr\00_CAD\Design\Sheets\2102761 – ESC.dwg, Date : Oct 19, 2021 – 3:27pm, Edit By : dmo

EPA United States Environmental Protection Agency

Stormwater Best Management Practice
Concrete Washout

NPDES Permits for Clean Water

Minimum Measure
Construction Site Stormwater Runoff Control

Subcategory
Good Housekeeping/Materials Management

Description of Concrete Washout at Construction Sites

Concrete and its ingredients

Concrete is a mixture of cement, water, and aggregate material. Portland cement is made by heating a mixture of limestone and clay containing oxides of calcium, aluminum, silicon and other metals in a kiln and then pulverizing the resulting clinker. The fine aggregate particles are usually sand. Coarse aggregate is generally gravel or crushed stone. When cement is mixed with water, a chemical reaction called hydration occurs, which produces glue that binds the aggregates together to make concrete.

Concrete washout

After concrete is poured at a construction site, the chutes of ready mixed concrete trucks and concrete pumps/pump trucks must be washed out to remove the remaining concrete before it hardens. Equipment such as wheelbarrows and hand tools also need to be washed down. At the end of each work day, the drums of concrete trucks must be washed out. This is customarily done at the ready mixed batch plants, which are usually off-site facilities, however large or rural construction projects may have on-site batch plants. Cementitious (having the properties of cement) washwater and solids also come from using such construction materials as mortar, plaster, stucco, and grout.

Environmental and Human Health Impacts

Concrete washout water (or washwater) is a slurry containing toxic metals. It's also caustic and corrosive, having a pH near 12. In comparison, Drano liquid drain cleaner has a pH of 13.5. Caustic washwater can harm fish gills and eyes and interfere with reproduction. The safe pH ranges for aquatic life habitats are 6.5 – 9 for freshwater and 6.5 – 8.5 for saltwater.

Construction workers should handle wet concrete and washout water with care because it may cause skin irritation and eye damage. If the washwater is dumped on the ground (Fig. 1), it can run off the construction site to adjoining roads and enter roadside storm drains, which discharge to surface waters such as rivers, lakes, or estuaries. The red arrow in Figure 2 points to a ready mixed truck chute that's being washed out into a roll-off bin, which isn't watertight. Leaking washwater, shown in the foreground, will likely follow similar



Figure 1. *Chute washwater being dumped on the ground*



Figure 2. *Chute washwater leaking from a roll-off bin being used as a washout container*

paths to nearby surface waters. Rainfall may cause concrete washout containers that are uncovered to overflow and also transport the washwater to surface waters. Rainwater polluted with concrete washwater can percolate down through the soil and alter the soil chemistry, inhibit plant growth, and contaminate the groundwater. Its high pH can increase the toxicity of other substances in the surface waters and soils. Figures 1 and 2 illustrate the need for better washout management practices.

Best Management Practice Objectives

The best management practice objectives for concrete washout are to (a) collect and retain all the concrete washout water and solids in leak proof containers, so that this caustic material does not reach the soil surface and then migrate to surface waters or into the ground water, and (b) recycle 100 percent of the collected concrete washout water and solids. Another objective is to support the diversion of recyclable materials from landfills. Table 1 shows how concrete washout materials can be recycled and reused.

Table 1 – Recycling concrete washout materials

Uses of Recycled Materials	Concrete Washout Materials						
	Washwater	Cement fines[a]	Aggregate Fine	Aggregate Coarse	Hardened Concrete	Unused fresh concrete
Reused to washout additional mixer truck chutes or drums	X					
Reused as a ready mixed concrete ingredient	X		X[b]	X	X	
Reused as an ingredient of precast concrete products, e.g., highway barriers, retaining wall blocks, riprap	X		X	X	X	X
Reused as crushed concrete products, e.g., road base or fill			X	X	X	X
Reused to pave the yards of ready mixed concrete plants						X
Returned back to a surface water, e.g., river, lake, or estuary		X[c]				

a. Fine particles of cementitious material (e.g., Portland cement, slag cement, fly ash, silica fume)
b. Recyclable, if allowed by the concrete quality specifications
c. Treated to reduce the pH and remove metals, so it can be delivered to a municipal wastewater treatment plant, where it is treated further and then returned to a natural surface water

Washwater recycling, treatment, disposal

Washwater from concrete truck chutes, hand mixers, or other equipment can be passed through a system of weirs or filters to remove solids and then be reused to wash down more chutes and equipment at the construction site or as an ingredient for making additional concrete. A three chamber washout filter is shown in Figure 3. The first stage collects the coarse aggregate. The middle stage filters out the small grit and sand. The third stage has an array of tablets that filter out fines and reduces the pH. The filtered washwater is then discharged through a filter sock. An alternative is to pump the washout water out of the washout container (Fig 4) and treat the washwater off site to remove metals and reduce its pH, so it can be delivered to a publicly owned treatment works (POTW), also known as a municipal wastewater treatment plant, which provides additional treatment allowing the washwater to be discharged to a surface water. The POTW should be contacted to inquire about any pretreatment requirements, i.e., the National Pretreatment Standards for Prohibited Dischargers (40CFR 403.5) before discharging the washwater to the POTW. The washwater can also be retained in the washout container and allowed to evaporate, leaving only the hardened cementitious solids to be recycled.



Figure 3. *Concrete washout filter*



Figure 4. *Vacuuming washwater out of a washout container for treatment and reuse*

Solids recycling

The course aggregate materials that are washed off concrete truck chutes into a washout container can be either separated by a screen and placed in aggregate bins to be reused at the construction site or returned to the ready mixed plant and washed into a reclaimer (Fig. 5). When washed out into a reclaimer, the fine and course aggregates are separated out and placed in different piles or bins to be reused in making fresh concrete. Reclaimers with settling tanks separate cement fines from the washwater, and these fines can also be used in new concrete unless prohibited by the user's concrete quality specifications.



Figure 5. *Ready mixed truck washing out into a reclaimer*

Hardened concrete recycling

When the washwater in a construction site concrete washout container has been removed or allowed to evaporate, the hardened concrete that remains can be crushed (Fig. 6) and reused as a construction material. It makes an excellent aggregate for road base and can be used as fill at the construction site or delivered to a recycler. Concrete recyclers can be found at municipal solid waste disposal facilities, private recycling plants, or large construction sites.



Figure 6. *Crushed concrete stockpile and crusher*

Wet concrete recycling

Builders often order a little more ready mixed concrete than they actually need, so it is common for concrete trucks to have wet concrete remaining in their drum after a delivery. This unused concrete can be returned to the ready mixed plant and either (1) used to pour precast concrete products (e.g., highway barriers, retaining wall blocks, riprap), (2) used to pave the ready mixed plant's yard, (3) washed into a reclaimer, or (4) dumped on an impervious surface and allowed to harden, so it can be crushed and recycled as aggregate. Unused wet concrete should not be dumped on bare ground to harden at construction sites because this can contribute to ground water and surface water contamination.

Washout Containers

Different types of washout containers are available for collecting, retaining, and recycling the washwater and solids from washing down mixed truck chutes and pump truck hoppers at construction sites.

Chute washout box

A chute washout box is mounted on the back of the ready mixed truck. If the truck has three chutes, the following procedure is used to perform the washout from the top down: (1) after the pour is completed, the driver attaches the extension chute to the washout box, (2) the driver then rotates the main chute over the extension chute (Fig. 7) and washes down the hopper first then the main chute, (3) finally the driver washes down the top down chute and last the extension chute hanging on the box. All washwater and solids are captured in the box. After the wash down, washwater and solids are returned to the ready mixed plant for recycling. A filter basket near the top of the washout box separates out the coarse aggregates so they can be placed in a bin for reuse either at the construction site or back at the cement plant.



Figure 7. *Chute washout box*

Chute washout bucket and pump

After delivering ready mixed concrete and scraping the last of the customer's concrete down the chute, the driver hangs a washout bucket shown in Figure 8 (see red arrow) on the end of the truck's chute and secures the hose to insure no leaks. The driver then washes down the chute into the bucket to remove any cementitious material before it hardens. After washing out the chute, the driver pumps (yellow arrow points to the pump) the washwater, sand, and other fine solids from the bucket up into the truck's drum to be returned to the ready mixed plant, where it can be washed into a reclaimer. A removable screen at the bottom of the washout bucket prevents course aggregate from entering the pump. This course aggregate can also be returned to the plant and added to the coarse aggregate pile to be reused. All the materials are recycled.



Figure 8. *Chute washout bucket and pump*

Hay bale and plastic washout pit

A washout pit made with hay bales and a plastic lining is shown in Figure 9. Such pits can be dug into the ground or built above grade. The plastic lining should be free of tears or holes that would allow the washwater to escape (Fig. 10). After the pit is used to wash down the chutes of multiple ready mixed trucks and the washwater has evaporated or has been vacuumed off, the remaining hardened solids can be broken up and removed from the pit. This process may damage the hay bales and plastic lining. If damage occurs, the pit will need to be repaired and relined with new plastic. When the hardened solids are removed, they may be bound up with the plastic lining and have to be sent to a landfill, rather than recycled. Recyclers usually accept only unmixed material. If the pit is going to be emptied and repaired more than a few times, the hay bales and plastic will be generating additional solid waste. Ready mixed concrete



Figure 9. *Hay bale and plastic washout pit*

Figure 10. *Leaking washout pit that has not been well maintained*

trucks can use hay bale washout pits, but concrete pump trucks have a low hanging hopper in the back that may prevent their being washed out into bale-lined pits.

Vinyl washout container

The vinyl washout container (Fig. 11) is portable, reusable, and easier to install than a hay bale washout pit. The biodegradable filter bag (Fig. 12) assists in extracting the concrete solids and prolongs the life of the vinyl container. When the bag is lifted, the water is filtered out and the remaining concrete solids and the bag can be disposed of together in a landfill, or the hardened concrete can be delivered to a recycler. After the solids have been removed several times and the container is full of washwater, the washwater can be allowed to evaporate, so the container can be reused. The washwater can be removed more quickly by placing another filter bag in the container and spreading water gelling granules evenly across the water. In about five minutes, the water in the filter bag will turn into a gel that can be removed with the bag. Then the gel and filter bag can be disposed to together.



Figure 11. *Vinyl washout pit with filter bag*



Figure 12. *Extracting the concrete solids or gelled washwater*

Metal washout container

The metal roll-off bin (Fig. 13) is designed to securely contain concrete washwater and solids and is portable and reusable. It also has a ramp that allows concrete pump trucks to wash out their hoppers (Fig. 14). Roll-off providers offer recycling services, such as, picking up the roll-off bins after the washwater has evaporated and the solids have hardened, replacing them with empty washout bins, and delivering the hardened concrete to a recycler (Fig. 15), rather than a landfill. Some providers will vacuum off the washwater, treat it to remove metals and reduce the pH, deliver it to a wastewater treatment plant for additional treatment and subsequent discharge to a surface water. Everything is recycled or treated sufficiently to be returned to a natural surface water.



Figure 13. *Mixer truck being washed out into a roll-off bin*



Figure 14. *Pump truck using the ramp to wash out into a roll-off bin*



Figure 15. *Delivering hardened Concrete to a recycler*

Another metal, portable, washout container, which has a rain cover to prevent overflowing, is shown in Figure 16. It is accompanied by an onsite washwater treatment unit, which reduces the pH and uses a forced weir tank system to remove the coarse aggregate, fine aggregate, and cement fines. The washwater can then be reused at the construction site to wash out other mixer truck chutes and equipment. The solids are allowed to harden together and can be taken to a concrete recycler (Fig. 17) to be crushed and used as road base or aggregate for making precast products, such as retaining wall blocks. All materials are recycled.



Figure 16. *Washout container with a rain cover and onsite washwater treatment*



Figure 17. *Delivering hardened concrete to a recycler*

Siting Washout Facilities

Concrete washout facilities, such as washout pits and vinyl or metal washout containers, should be placed in locations that provide convenient access to concrete trucks, preferably near the area where concrete is being poured. However they

should not be placed within 50 feet of storm drains, open ditches, or waterbodies. Appropriate gravel or rock should cover approaches to concrete washout facilities when they are located on undeveloped property. On large sites with extensive concrete work, washouts should be placed at multiple locations for ease of use by ready mixed truck drivers. If the washout facility is not within view from the pour location, signage will be needed to direct the truck drivers.

Operating and Inspecting Washout Facilities

Concrete washout facilities should be inspected daily and after heavy rains to check for leaks, identify any plastic linings and sidewalls have been damaged by construction activities, and determine whether they have been filled to over 75 percent capacity. When the washout container is filled to over 75 percent of its capacity, the washwater should be vacuumed off or allowed to evaporate to avoid overflows. Then when the remaining cementitious solids have hardened, they should be removed and recycled. Damages to the container should be repaired promptly. Before heavy rains, the washout container's liquid level should be lowered or the container should be covered to avoid an overflow during the rain storm.

Educating Concrete Subcontractors

The construction site superintendent should make ready mixed truck drivers aware of washout facility locations and be watchful for improper dumping of cementitious material. In addition, concrete washout requirements should be included in contracts with concrete delivery companies.

Reference

NRMCA 2009. Environmental Management in the Ready Mixed Concrete Industry, 2PEMRM, 1st edition. By Gary M. Mullins. Silver Springs, MD: National Ready Mixed Concrete Association.

Websites and Videos

Construction Materials Recycling Association
www.concreterecycling.org

National Ready Mixed Concrete Association
www.nrmca.org

National Ready Mixed Concrete Research and Education Foundation
www.rmc-foundation.org

Additional information and videos on concrete washout containers and systems can be found by a web search for "concrete washout."

Photograph Credits

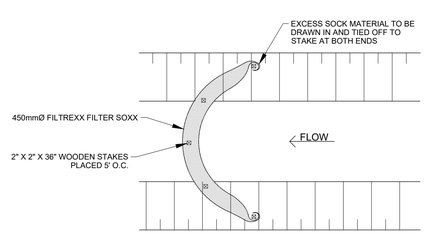
Figures 1, 2. *Mark Jenkins, Concrete Washout Systems, Inc.*
Figure 3. *Mark Shaw, Ultra Tech International, Inc.*
Figure 4. *Mark Jenkins, Concrete Washout Systems, Inc.*
Figure 5. *Christopher Crouch, CCI Consulting*
Figure 6. *William Turley, Construction Materials Recycling Association*
Figure 7. *Brad Burke, Innovative Concrete Solutions, LLC*
Figure 8. *Ron Lankester, Enviroguard*
Figures 9, 10. *Mark Jenkins, Concrete Washout Systems, Inc.*
Figures 11, 12. *Tom Card, RTC Supply*
Figures 13, 14, 15. *Mark Jenkins, Concrete Washout Systems, Inc.*
Figures 16, 17. *Rick Abney Sr., Waste Crete Systems, LLP*

Disclaimer
Please note that EPA has provided exremal links because they provide additional information that may be useful or interesting. EPA cannot attest to the accuracy of non-EPA information provided by these third-party websites and does not endorse any non'-government organizations or their products or services.

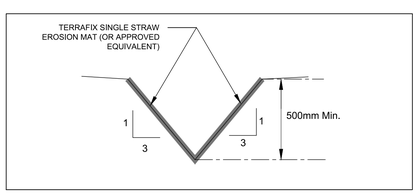
Office of Water, 4203M
www.epa.gov/npdes/pubs/concretewashout.pdf
www.epa.gov/npdes/stormwater/menuofbmps

EPA 833-F-11-006
February 2012

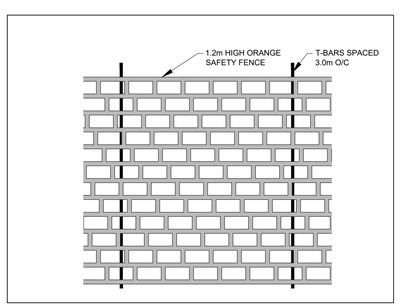
Figure B2-29: Design detail for mud mat for construction site vehicle access



FILTREXX CHECK DAM
N.T.S.



TYPICAL CUT-OFF SWALE CROSS SECTION
N.T.S.



TYPICAL CONSTRUCTION FENCE DETAIL

No.	DESCRIPTION	DATE	BY	APPRO'D. BY
	REVISIONS			
1	FIRST SUBMISSION	10/19/2021	BA	PAS
	APPROVALS			

MUNICIPAL
MANAGER OF DESIGN AND CONSTRUCTION
DATE

REGIONAL
COMMISSIONER OF PUBLIC WORKS
DIRECTOR OF DESIGN AND CONSTRUCTION

CITY OF Burlington

SALOTTO BUILDING GROUP INC.
4375 MILLCROFT PARK DR
CITY OF BURLINGTON
HALTON REGION

LICENSED PROFESSIONAL ENGINEER
P. A. SLAMA
100010210
Nov 5/21
PROVINCE OF ONTARIO

EROSION AND SEDIMENT CONTROL DETAILS

GEI Consultants
75 TIVERTON COURT, UNIT 100, MARKHAM, ONTARIO L3R4M8, 800.810.3281

DESIGN BY: B. A.	DRAWN BY: B. A.	PROJECT No.	2102761
SCALE: N.T.S.	DATE: SEPTEMBER 2021	DRAWING No.	602
		CITY FILE No.:	

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