- 1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE PLAN AND PROFILE DRAWINGS (C-200 TO C-201, C-210 TO C-212 & THE GRADING DRAWINGS (C-400) PREPARED BY STANTEC CONSULTING
- THESE PLANS FOR CONSTRUCTION ONLY WHEN APPROVED BY CN AND SEALED BY THE ENGINEER. 3. THE CONTRACTOR MUST CHECK AND VERIFY DIMENSIONS, GRADES, AND EXISTING CONDITIONS, OBTAIN ALL UTILITY LOCATES, AND VERIFY ELEVATIONS OF EXISTING SERVICES BEFORE PROCEEDING WITH ANY WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- 4. ANY PROPOSED CHANGES SHALL BE APPROVED BY THE CONTRACT ADMINISTRATOR AND CN, AND THE ENGINEER. 5. ALL UNDERGROUND SERVICING TO BE INSPECTED BY STANTEC CONSULTING LTD. AND CERTIFIED FOR CN. CONTRACTOR SHALL COORDINATE WITH STANTEC
- AND SHALL CONTACT SAME AT LEAST 48 HOURS PRIOR TO INSTALLATION OF SERVICES 6. ALL CONSTRUCTION WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND
- REGULATIONS FOR CONSTRUCTION PROJECTS (LATEST EDITION), ONTARIO TRAFFIC MANUAL (OTM) BOOK 7 (LATEST EDITION). 7. ALL TRAFFIC MANAGEMENT, HAUL ROUTES, ROAD CLOSURES PLANS SHALL BE APPROVED BY THE TOWN OF MILTON AND A COPY MAINTAINED ON SITE AT
- 8. EMERGENCY SERVICE VEHICLES CAN ENTER THE SITE AT ANY ACCESS (EXISTING OR PROPOSED)
- 9. IF, FOR UNFORESEEN REASONS, THE CONTRACTOR AND/OR HIS/HER REPRESENTATIVE MUST ENCROACH ONTO PRIVATE LANDS TO UNDERTAKE ANY WORKS, HE/SHE MUST OBTAIN WRITTEN PERMISSION FROM THE SUBJECT PROPERTY OWNERS PRIOR TO ENTERING UPON THE PRIVATE PROPERTY TO PERFORM ANY WORKS. COPIES OF THESE LETTERS OF CONSENT MUST BE SUBMITTED TO CN PRIOR TO ANY WORK BEING PERFORMED. FAILURE TO COMPLY WITH THE ABOVE IS AT CONTRACTORS' RISK.

#### NOTES FOR WORKING NEAR WATER

- 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.

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 ANY AQUATIC RESOURCES TO AVOID POTENTIAL IMPACTS, IN THE EVENT THAT AN ACCIDENTAL SPILL OCCURS. 3. ALL DEWATERING/UNWATERING SHALL BE LOCATED AT LEAST 30 METRES FROM THE WATERCOURSE TO A FILTER BAG OR SPLASH PAD. NO DEWATERING
- SHALL BE SENT DIRECTLY TO ANY WATERCOURSE. THESE CONTROL MEASURES SHALL BE MONITORED FOR EFFECTIVENESS AND MAINTAINED OR REVISED TO MEET THE OBJECTIVE OF PREVENTING SEDIMENT FROM ENTERING THE WATERCOURSE.
- 4. ALL DISTURBED AREAS WILL BE STABILIZED AND RESTORED WITH NON-INVASIVE SPECIES IMMEDIATELY UPON COMPLETION OF GRADING WORK. ALL SEEDING AND PLANTING SHALL BE COMPLETED BEFORE OCTOBER OF THE CONSTRUCTION YEAR. FINAL SURFACE RESTORATION SHALL BE INITIATED AS SOON AS BACKFILLING AND GRADING ACTIVITIES HAVE BEEN COMPLETED. 5. DISTURBANCE AREAS WITHIN THE STREAM SHOULD BE LIMITED TO AN AREA THAT CAN BE COMPLETED AND STABILIZED WITHIN ONE WORKING DAY.
- 6. ALL NEAR-WATER WORK WILL BE CONDUCTED WITH APPROPRIATE EROSION AND SEDIMENT CONTROLS. IN-WATER WORKS SHALL NOT BE PERMITTED. THE CONTRACTOR SHALL MONITOR THE WEATHER SEVERAL DAYS IN ADVANCE TO ENSURE THAT WORKS ARE CONDUCTED DURING FAVORABLE WEATHER CONDITIONS. SHOULD AN UNEXPECTED STORM ARISE, THE CONTRACTOR SHALL IMPLEMENT A CONTINGENCY PLAN THAT HAS BEEN PRE-APPROVED BY THE CONTRACT ADMINISTRATOR AND CN. THE CONTINGENCY PLAN SHALL INCLUDE REMOVAL OF ALL ITEMS FROM THE REGIONAL STORM FLOODPLAIN THAT WOULD
- HAVE THE CAPACITY TO CAUSE AN OBSTRUCTION TO FLOW OR A SPILL (E.G., FUEL TANKS, UNFIXED EQUIPMENT, ETC.). 7. SITE ACCESS AND STAGING WILL MINIMIZE DISTURBANCE TO ALL WATERCOURSES AND THE NATURAL AREA. ANY MATERIAL STOCKPILED ON SITE WILL BE KEPT A SAFE DISTANCE FROM ANY SENSITIVE NATURAL FEATURES. AREAS CONTAINING EXPOSED SOILS OR STOCKPILED MATERIALS WILL BE ISOLATED USING SILT FENCING TO PREVENT THE ENTRY OF SEDIMENT INTO THE WATER. ADDITIONAL ESC SUPPLIES SHALL BE STOCKPILED ON SITE IN ORDER TO UPGRADE
- 8. THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ON THESE 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 PRESCRIBED MEASURES ON THE PLANS ARE NOT EFFECTIVE IN PREVENTING THE RELEASE OF A DELETERIOUS SUBSTANCE, ALTERNATIVE MEASURES SHALL BE IMPLEMENTED IMMEDIATELY TO MINIMIZE POTENTIAL ECOLOGICAL IMPACTS, AND THE CONTRACTOR SHALL CONTACT CN IMMEDIATELY. CN WILL SUPPLY THE SERVICES OF AN ENVIRONMENTAL INSPECTOR TO REGULARLY INSPECT AND MONITOR THE PROGRESS AND STATUS OF ENVIRONMENTAL CONTROLS, AND WHO SHALL HAVE THE FULL AUTHORITY OF CN TO ACT ON ITS BEHALF. THE PRESENCE OF THE ENVIRONMENTAL INSPECTOR SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR OF ITS
- CONTRACTUAL OBLIGATIONS WITH RESPECT TO ENVIRONMENTAL PROTECTION. 9. CONTRACTOR SHALL PROVIDE CN WITH 48 HOURS ADVANCE NOTICE PRIOR TO CONSTRUCTION START.

#### STREAM CONSTRUCTION

ESCS AS NECESSARY

- 1. TIMING RESTRICTIONS FOR IN-WATER WORK ALLOW CONSTRUCTION FROM JULY 1 TO MARCH 15.
- 2 WORKS TO BE COMPLETED DURING LOW FLOW CONDITIONS. STREAM CONSTRUCTION TO TAKE PLACE FROM UPSTREAM TO DOWNSTREAM
- 4. CN WILL RETAIN QUALIFIED STAFF TO COMPLETE FISH RESCUES PRIOR TO AND DURING DEWATERING
- 5. IN-WATER WORK TO BE COMPLETED IN THE DRY BY ISOLATING THE WORK AREA USING PUMP AROUND TECHNIQUES. 3. COFFERDAMS ARE TO BE COMPOSED OF METER BAGS AND A PLASTIC LINER, MATERIAL USED TO FILL BAGS TO BE CLEAN AND FREE OF FINES.
- . EXISTING FLOWS WILL BE MAINTAINED DOWNSTREAM OF THE DE-WATERED WORK AREA. 8. FLOW DISSIPATERS, FILTER BAGS OR OTHER APPROPRIATE MEASURES WILL BE USED AT ANY PUMP DISCHARGE LOCATION TO PREVENT EROSION AND THE
- DEPOSITION OF DELETERIOUS SUBSTANCES INTO THE WATERCOURSE. 9. SILT OR DEBRIS THAT HAS ACCUMULATED AROUND THE TEMPORARY COFFERDAMS WILL BE REMOVED PRIOR TO THEIR WITHDRAWAL.
- O.REFUELING OF EQUIPMENT WILL BE CARRIED OUT A MINIMUM OF 30 m AWAY FROM ANY AQUATIC RESOURCES TO AVOID POTENTIAL IMPACTS, IN THE EVENT THAT AN ACCIDENTAL SPILL OCCURS
- 11. ALL EXPOSED SOIL AREAS WILL BE STABILIZED AND RE-VEGETATED AS SET OUT IN THE PLANTING PLAN. 12. ALL MATERIAL USED IN THE CONSTRUCTION OF THE NEW STREAM WILL BE NATIVE MATERIAL OR WILL BE WASHED PRIOR TO ARRIVAL ON SITE TO PREVENT THE INTRODUCTION OF DELETERIOUS SUBSTANCES TO THE WATERCOURSE. 13. EXCESS TRAPPED SEDIMENTS AND CONTROLS ARE TO BE REMOVED ONLY AFTER THE SOILS OF THE CONSTRUCTION AREA HAVE BEEN STABILIZED AND

# SEQUENCE OF EROSION AND SEDIMENT CONTROL INSTALLATION

- 1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN. 2. CN WILL RETAIN QUALIFIED STAFF TO REMOVE ANY FISH FROM STANDING WATER FOLLOWING WORK AREA ISOLATION.
- 4. COMPLETE PROPOSED STREAM REALIGNMENT AND IN-STREAM FEATURES AS DETAILED ON DRAWING SHEETS C-200 TO C-952. 5. STABILIZE SLOPES AND DISTURBED AREAS AND IMPLEMENT PLANTING PLAN (LI-300 to L-502).

# <u>MONITORING</u>

- SITE MONITORING WILL BE CARRIED OUT AT VARIOUS MILESTONES BY THE OWNER'S REPRESENTATIVE. (NUMBERED BELOW): 1. ONCE ALL EROSION AND SEDIMENT CONTROL MEASURES INSTALLED;
- 2. DURING INSTALLATION OF DIVERSION PUMPING:
- DURING ANY FISH RESCUE 4. DURING INSTALLATION OF SUBSTRATE AND IN-STREAM FEATURES OF THE PROPOSED STREAM; AND
- 5. PRIOR TO EROSION AND SEDIMENT CONTROL MEASURE REMOVAL.

# STREAM CONSTRUCTION SEQUENCING PLAN

ADEQUATELY RE-VEGETATED.

3 FSTABLISH PLIMP AROUND DIVERSION

- IN-WATER WORK MAY TAKE PLACE BETWEEN JULY 1ST AND MARCH 15TH. NO IN-WATER WORK SHALL TAKE PLACE WITHOUT NOTIFYING THE CONTRACT
- ADMINISTRATOR. 1. INSTALL SILT FENCE ALONG WATERCOURSE TO PROTECT EXISTING WATERCOURSE FROM CONSTRUCTION TRAFFIC AND AROUND STAGING AREA(S). 2. INSTALL SILT FENCING AND COFFER DAMS TO ISOLATE WORK AREA, PUMP STREAM FLOWS AROUND WORK AREA ACCORDING TO WATER MANAGEMENT PLAN. 3. CN WILL RETAIN QUALIFIED STAFF TO PERFORM FISH RESCUE IN ISOLATED WORK AREA,
- 4. DE-WATER WORK AREA BY PUMPING. 5. REMOVE TREES / OTHER VEGETATION AS SHOWN ON REMOVALS PLAN (C-950 TO C-952), APPROPRIATE SPECIES OF TREE CANOPIES, LOGS AND BRUSH TO BE STOCKPILED ON SITE FOR USE IN STRUCTURES
- 6. COMMENCE CONSTRUCTION OF PROPOSED STREAM, COMMENCING WORKS AT THE DOWNSTREAM END. 7. TOPSOIL SHALL BE STRIPPED AND SET ASIDE, THEN REPLACED ON BANKS AND VALLEY WALLS AS APPROPRIATE AS WORK MOVES UPSTREAM.
- 8. A QUALIFIED ENGINEER OR FLUVIAL GEOMORPHOLOGIST OR REPRESENTATIVE THEREOF SHALL BE PRESENT DURING THE CONSTRUCTION OF THE STREAM
- 9. COMPLETED AREAS OF STREAM CONSTRUCTION SHALL BE STABILIZED WITH COIR MATTING AND SEEDED ACCORDING TO THE APPROVED PLANTING PLAN AS WORK PROCEEDS DOWNSTREAM.
- 10. INSTALL SILT FENCE TO PROTECT WATERCOURSE FROM UNSTABILIZED UPLAND AREAS AND CONSTRUCTION TRAFFIC.

#### 11. REPEAT STEPS 2 TO 11 AS REQUIRED TO COMPLETE STREAM WORKS. 12.IMPLEMENT FULL PLANTING PLAN.

- · WATER INTAKES OR OUTLET PIPES TO BE SCREENED TO PREVENT ENTRAINMENT OR IMPINGEMENT OF FISH.
- WATER PUMPED DURING DE-WATERING ACTIVITIES MUST BE DISCHARGED IN SUCH A MANNER AS TO MINIMIZE IN-STREAM EROSION AND SEDIMENTATION. POSSIBLE ALTERNATIVES INCLUDE USING A FILTER BAG, DISCHARGING INTO A VEGETATED AREA AT LEAST 30 m FROM THE WATERCOURSE OR DISCHARGING INTO AN APPROPRIATELY SIZED SETTLING BASIN, ETC.

# UNDERGROUND SERVICES

1. CONTRACTOR SHALL VERIFY ELEVATION AND LOCATION OF ANY EXISTING UNDERGROUND SERVICES PRIOR TO COMMENCING SITE WORK AND SHALL NOTIFY THE CONTRACT ADMINISTRATOR OF ANY CONFLICTS BETWEEN DRAWINGS AND LOCATED SERVICES. 2. THE CONTRACTOR TO RESTORE ALL OFF-SITE AFFECTED PROPERTY TO ORIGINAL CONDITION.

#### **EROSION CONTROL NOTES**

- 1. ALL SILT FENCING TO BE INSTALLED PRIOR TO COMMENCEMENT OF ANY AREA GRADING, EXCAVATION OR DEMOLITION. 2. EROSION CONTROL FENCE TO BE PLACED AROUND THE BASE OF ALL STOCKPILES. ALL STOCKPILES TO BE KEPT A MINIMUM OF 2.5 m FROM ALL
- 3. TERRAFIX 270R FILTER FABRIC TO BE INSTALLED UNDER CONSTRUCTION ENTRANCE, CONSTRUCTION VEHICLE ENTRANCE TO CONSIST OF CLEANED OR REPLACED 200mm THICK, 50 mm/ STONE. STONE TO BE TAKEN UP AND CLEANED OR REPLACED WHEN ACCUMULATIONS COVER 50% OF TOP OF STONE (SEE DETAIL). CONSTRUCTION ENTRANCE TO BE A MINIMUM OF 5.0 m WIDE AND 20.0 m LONG. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE CONSTRUCTION ENTRANCE.
- 4. EROSION PROTECTION TO BE PROVIDED AROUND ALL STORM AND SANITARY MANHOLES AND/OR CATCHBASINS. 5. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE WORKS PROGRESSES. THE CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION
- 6. EROSION AND SEDIMENT CONTROLS WILL BE MONITORED ON A DAILY BASIS, AFTER PRECIPITATION AND RAIN EVENTS, AND ANY NECESSARY REPAIRS WILL BE COMPLETED WITHIN 48 HOURS. SHOULD THE CONTROLS NOT SERVE THEIR INTENDED PURPOSE THEY WILL BE CORRECTED OR REPLACED. 7. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF ONE THIRD (1/3) THE HEIGHT OF THE SILT FENCE. THE CONTRACTOR SHALL REMOVE AND DISPOSE OFF-SITE ACCUMULATED SEDIMENT FROM ALL BARRIERS TO THE LÉVÉL OF EXISTING GRADE, IN A MANNER THAT AVOIDS SEDIMENT
- ESCAPE TO THE DOWNSTREAM SIDE OF DEVICE. ALL BARRIERS SHALL REMAIN IN PLACE UNTIL AFTER THE SURROUNDING GROUND HAS BEEN RESTORED. 8. ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RE-STABILIZED EITHER BY MATTING OR RESTORATION OF VEGETATIVE GROUND COVER.
- 9. NO ALTERNATIVE METHODS OF EROSION CONTROL PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE CONTRACT ADMINISTRATOR. 10. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE REGIONAL ROAD AND SIDEWALKS AT THE END OF EACH WORK DAY.

  11. STANTEC CONSULTING LTD. TO MONITOR THE SITE DEVELOPMENT TO ENSURE ALL EROSION CONTROLS ARE INSTALLED AND MAINTAINED. CONTRACTOR TO COMPLY WITH THE ENGINEER'S INSTRUCTIONS TO INSTALL, MODIFY, OR MAINTAIN EROSION CONTROL WORKS.

### CONSTRUCTION PHASING AND ACCESS PLAN:

- 1. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION PHASING AND ACCESS PLAN TO THE CONSULTANT AND CN FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO THE PLANNED START OF CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT COMMENCE UNTIL THE CONSTRUCTION PHASING AND ACCESS PLAN HAS BEEN APPROVED BY THE CONSULTANT AND CN.
- 2. SITE ACCESS AND STAGING SHALL MINIMIZE DISTURBANCE TO ALL WATERCOURSES AND THE SURROUNDING NATURAL AREAS. 3. STREAM CONSTRUCTION TO TAKE PLACE FROM DOWNSTREAM TO UPSTREAM WHERE POSSIBLE.
- 4. THE CONSTRUCTION PHASING AND ACCESS PLAN SHALL RECOGNIZE THE FOLLOWING GENERAL SEQUENCING OF EVENTS REQUIRED FOR STREAM CONSTRUCTION PROJECTS, AND SHALL APPLY THEM AS APPROPRIATE AT THIS SITE: • INSTALL WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE PRE-APPROVED WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL PLANS. DO NOT COMMENCE DEWATERING OF THE CONSTRUCTION AREA.
- CN WILL RETAIN QUALIFIED STAFF TO PERFORM FISH RESCUE FOLLOWING WORK AREA ISOLATION. CONTRACTOR TO COORDINATE IN ACCORDANCE WITH FISH SALVAGE PLAN, DEWATER CONSTRUCTION AREA.
- COMPLETE CONSTRUCTION OF BANK STABILIZATION, INCLUDING ALL GRADING AND BANK PROTECTION STRUCTURE INSTALLATIONS AND CROSS-SECTIONS AS DETAILED ON PLAN (C-200 - C-212), AND DETAIL (FIGURE C-500 TO C-504) DRAWINGS. • COMPLETED AREAS SHALL BE SEEDED/PLANTED ACCORDING TO THE PLANTING PLAN (L-300 TO L-301 AND L-500 TO L-501) AS WORK PROCEEDS

#### WATER MANAGEMENT PLAN:

UPSTREAM.

- 1. THE CONTRACTOR SHALL SUBMIT A WATER MANAGEMENT PLAN TO THE CONSULTANT AND CN FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO THE PLANNED START OF CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT COMMENCE UNTIL THE WATER MANAGEMENT PLAN HAS BEEN APPROVED BY THE
- 2. THE WATER MANAGEMENT PLAN SHALL SPECIFY BEST MANAGEMENT PRACTICES WITH RESPECT TO WORKING IN THE WET, AS THEY APPLY TO THE SITE AND CONSTRUCTION PHASING PLAN. THE WATER MANAGEMENT PLAN SHALL ALSO SPECIFY ANY OTHER DRAINAGE STRATEGIES WHICH MINIMIZE THE IMPACTS OF WORKING IN THE WET.

#### HIGH FLOW CONTINGENCY PLAN:

- 1. THE CONTRACTOR SHALL SUBMIT A HIGH FLOW CONTINGENCY PLAN TO THE CONSULTANT AND CN FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO THE PLANNED START OF CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT COMMENCE UNTIL THE HIGH FLOW CONTINGENCY PLAN HAS BEEN APPROVED BY THE CONSULTANT THE BY OWNER.
- 2. THE HIGH-FLOW CONTINGENCY PLAN SHALL OUTLINE THE ACTIONS WHICH SHALL BE TAKEN IF AN UNEXPECTED STORM ARISES AND THE RESULTING HIGH FLOWS CAUSE CONSTRUCTION TO CEASE, FOR REASONS OF SAFETY OR DAMAGE TO THE BANK STABILIZATION CONSTRUCTION. ACTIONS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE REMOVAL OF ALL ITEMS FROM THE REGIONAL FLOODPLAIN THAT WOULD HAVE THE CAPACITY TO CAUSE AN OBSTRUCTION TO FLOW OR REPRESENT A POTENTIAL SPILL HAZARD (E.G., FUEL TANKS, UNFIXED EQUIPMENT, ETC.).

# EROSION AND SEDIMENT CONTROL PLAN:

PER THE PLANTING PLAN ON FIGURE L-300 TO L-501

- 1. THE EROSION AND SEDIMENT CONTROL PLAN MUST BE SUBMITTED TO THE CONSULTANT AND CN FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO THE PLANNED START OF CONSTRUCTION. CONSTRUCTION MAY NOT COMMENCE UNTIL THE EROSION AND SEDIMENT CONTROL PLAN HAS BEEN APPROVED BY THE CONSULTANT AND THE CITY.
- 2. THE EXACT CONFIGURATION OF THE EROSION AND SEDIMENT CONTROL PLAN WILL BE DEPENDENT ON THE CONTRACTOR'S CONSTRUCTION PHASING. THE
- PREPARATION OF THE EROSION AND SEDIMENT CONTROL PLAN IS THE RESPONSIBILITY OF THE CONTRACTOR. 3. THE EROSION AND SEDIMENT CONTROL PLAN WILL INCORPORATE THE FOLLOWING PRINCIPLES AS THEY APPLY TO THE SITE AND CONSTRUCTION PHASING
- THE EROSION AND SEDIMENT CONTROL PLAN SHALL ADHERE TO ANY AND ALL PERMIT REQUIREMENTS FROM MUNICIPAL, PROVINCIAL, AND/OR FEDERAL AGENCIES.
- EROSION AND SEDIMENT CONTROLS WILL BE IMPLEMENTED PRIOR TO AND DURING THE CONSTRUCTION PHASES.
- EROSION CONTROL (THE PREVENTION OF EROSION OF SOIL FROM THE LANDSCAPE) FROM DISTURBED SURFACES SHALL BE ACHIEVED THROUGH THE
- USE OF PRUDENT CONSTRUCTION PHASING AND EROSION CONTROL MEASURES (E.G., COIR FIBER MATTING) WHERE NECESSARY. SEDIMENT CONTROL (THE TRAPPING OF SEDIMENT BEING CARRIED BY RUNOFF) SHALL BE ACHIEVED USING APPROPRIATELY INSTALLED SEDIMENT CONTROL MEASURES (E.G., TEMPORARY SILT FENCE, SEDIMENT TRAPS, TURBIDITY CURTAIN) AS NECESSARY. AREAS TO BE PROTECTED INCLUDE:
- TRAPPED SEDIMENTS AND CONTROLS ARE TO BE REMOVED ONLY AFTER THE SOILS OF THE CONSTRUCTION AREA HAVE BEEN STABILIZED AND ADEQUATELY RE-VEGETATED, UNLESS SEDIMENTS HAVE ACCUMULATED TO A DEPTH OF ONE THIRD (1/3) THE HEIGHT OF THE SEDIMENT CONTROL DEVICE. THE CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT TO THE LEVEL OF EXISTING GRADE, IN A MANNER THAT AVOIDS SEDIMENT RELEASE TO THE DOWNSTREAM SIDE OF THE SEDIMENT CONTROL DEVICE. THE DISPOSAL LOCATION AND METHOD OF DISPOSAL OF REMOVED SEDIMENT MUST BE APPROVED BY THE CONSULTANT AND BY THE OWNER. ALL SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL AFTER THE SURROUNDING

STAGING AREAS, TREE CLEARING AND GRUBBING AREAS, TREE PRESERVATION AREAS, AREAS DELINEATED ON THE FIGURE, AND ALL OTHER WORK

- GROUND HAS BEEN PERMANENTLY STABILIZED ACCORDING TO THE PLANTING PLAN (L-300 TO L-501). SITE ACCESS AND STAGING WILL MINIMIZE DISTURBANCE TO ALL WATERCOURSES AND NATURAL AREAS. ANY MATERIAL STOCKPILED ON SITE WILL BE KEPT A SAFE DISTANCE FROM ANY SENSITIVE NATURAL FEATURES AND CONTAINED SUCH THAT SEDIMENT DOES NOT ENTER THE WATERCOURSE (EITHER FLOWING OR DEWATERED)
- MATERIALS REMOVED OR STOCKPILED DURING CONSTRUCTION (E.G., EXCAVATED SOIL, BACKFILL MATERIAL) MUST BE DEPOSITED, STORED, AND CONTAINED IN A MANNER TO ENSURE SEDIMENT DOES NOT ENTER A WATER BODY AND WILL BE APPROPRIATELY STORED, AS APPROVED BY THE CONSULTANT AND BY THE OWNER. AREAS CONTAINING EXPOSED SOILS OR STOCKPILED MATERIALS WILL BE ISOLATED USING APPROPRIATE SEDIMENT
- CONTROL DEVICES TO PREVENT THE ENTRY OF SEDIMENT INTO THE WATERCOURSE. • 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.
- THE 30 m DISTANCE FROM AQUATIC RESOURCES, A CONTAINMENT SYSTEM SHOULD BE IMPLEMENTED TO PREVENT ACCIDENTAL SPILLS OR LEAKS FROM ENTERING THE CREEK. • EROSION AND SEDIMENT CONTROL STRATEGIES 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. FOR ANY REASON. THE INSTALLED EROSION AND SEDIMENT CONTROLS ARE NOT EFFECTIVE IN PREVENTING THE EROSION AND SUBSEQUENT RELEASE OF SEDIMENT OR OTHER DELETERIOUS SUBSTANCES INTO THE WATERCOURSE,

• VEHICULAR REFUELLING AND MAINTENANCE WILL BE CONDUCTED A MINIMUM OF 30 METRES AWAY FROM ANY AQUATIC RESOURCE TO AVOID POTENTIAL

IMPACTS IN THE EVENT THAT AN ACCIDENTAL SPILL OCCURS. IF A GAS PUMP IS USED FOR FLOW DIVERSION AND IT IS NOT POSSIBLE TO ACHIEVE

ALTERNATIVE MEASURES SHALL BE IMPLEMENTED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE TO MINIMIZE POTENTIAL ECOLOGICAL IMPACTS. ANY REQUIRED UPGRADES OR AMENDMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. • NO EXCESS EARTH OR GRANULAR MATERIALS SHALL BE LEFT IN AREAS WHERE IT WILL BE SUBJECT TO EROSION INTO THE CREEK CHANNEL.

ALL DISTURBED AREAS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF GRADING WORK. STABILIZATION WILL CONSIST OF REVEGETATION AS

- NOTE: IN ADDITION TO BEING RESPONSIBLE FOR ENSURING THAT THE PRESCRIBED MEASURES ARE INSTITUTED AND FUNCTIONING AS INTENDED, THE CONTRACTOR IS ALSO RESPONSIBLE FOR IMPLEMENTING ANY INTERIM OR EMERGENCY MEASURES AS NECESSARY, TO ENSURE THAT NO SEDIMENT IS DISCHARGED TO THE WATERCOURSE. THE FOLLOWING EXTRA EQUIPMENT/MATERIALS ARE TO BE KEPT ON SITE AS A CONTINGENCY, IN CASE THE PROPOSED CONTROL MEASURES ARE BREACHED:
- SILT FENCE FILTER CLOTH
- FILTER BAGS (AT LEAST 1 PER INSTALLED BAG)
- PUMPS (AT LEAST 1 PER INSTALLED PUMP)
- CLEAN RIP-RAP (FREE OF FINES) FOR ROCK CHECK DAMS METER BAGS AND CLEAN GRAVEL (FREE OF FINES)
- ANY ADDITIONAL MATERIAL DEEMED NECESSARY TO REPAIR/REMEDIATE PROPOSED MEASURES, OR TO ADEQUATELY DEAL WITH UNEXPECTED HIGH FLOWS.

#### <u>FISH SALVAGE PLAN</u>

- 1. THE CONTRACTOR SHALL SUBMIT A FLSH SALVAGE PLAN TO THE OWNER AND CONSULTANT FOR APPROVAL AT LEAST SEVEN (7) DAYS PRIOR TO THE PLANNED START OF CONSTRUCTION.
- 2. D2. THE FISH SALVAGE PLAN SHALL INCLUDE COORDINATION WITH THE OWNER'S QUALIFIED FISHERIES BIOLOGIST TO COMPLETE ANY REQUIRED FISH RESCUES PRIOR TO THE START OF IN-WATER CONSTRUCTION ACTIVITIES. IT SHALL ALSO INCLUDE THE COORDINATION OF ADDITIONAL FISH RESCUES AT ANY POINT DURING CONSTRUCTION IF THE NET (OR BARRIER) IS DAMAGED OR OVERTOPPED.
- 3. AS PART OF THE COORDINATION OF FISH RESCUES, THE CONTRACTOR SHALL NOTIFY THE OWNER AND CONSULTANT AT LEAST 72 HOURS PRIOR TO ANY PLANNED FISH REMOVAL ACTIVITIES.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING FISH BARRIERS.





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ELEVATIONS ARE GEODETIC (CGVD 1928: 1978 ADJUSTMENT), DERIVED BY DIFFERENTIAL GPS OBSERVATIONS.

PROJECTION: UNIVERSAL TRANSVERSE MERCATOR

(UTM, ZONE 17, CM81°00'W) DATUM: NAD 83 (CSRS)

ORIGINAL GROUND TOPOGRAPHY BASED ON LIDAR SURVEY RECEIVED (NOV. 2014) AND SUPPLEMENTED BY STANTEC CONSULTING (MAY 2014, AUG. 2014 & JUNE 2015)

Key Map NTS.

Legend

By Appd YYYY.MM.DD Revision

Permit-Seal

ISSUED CONSTRUCTIO

File Name: 160960844 C-500DT



RJB HEA HEA 2021.08.13

Dwn. Chkd. Dsgn. YY.MM.DD

Client/Project CANADIAN NATIONAL RAILWAY

MILTON LOGISTICS HUB - NATURAL CHANNEL DESIGN FOR INDIAN CREEK AND TRIBUTARY A

Milton, ON

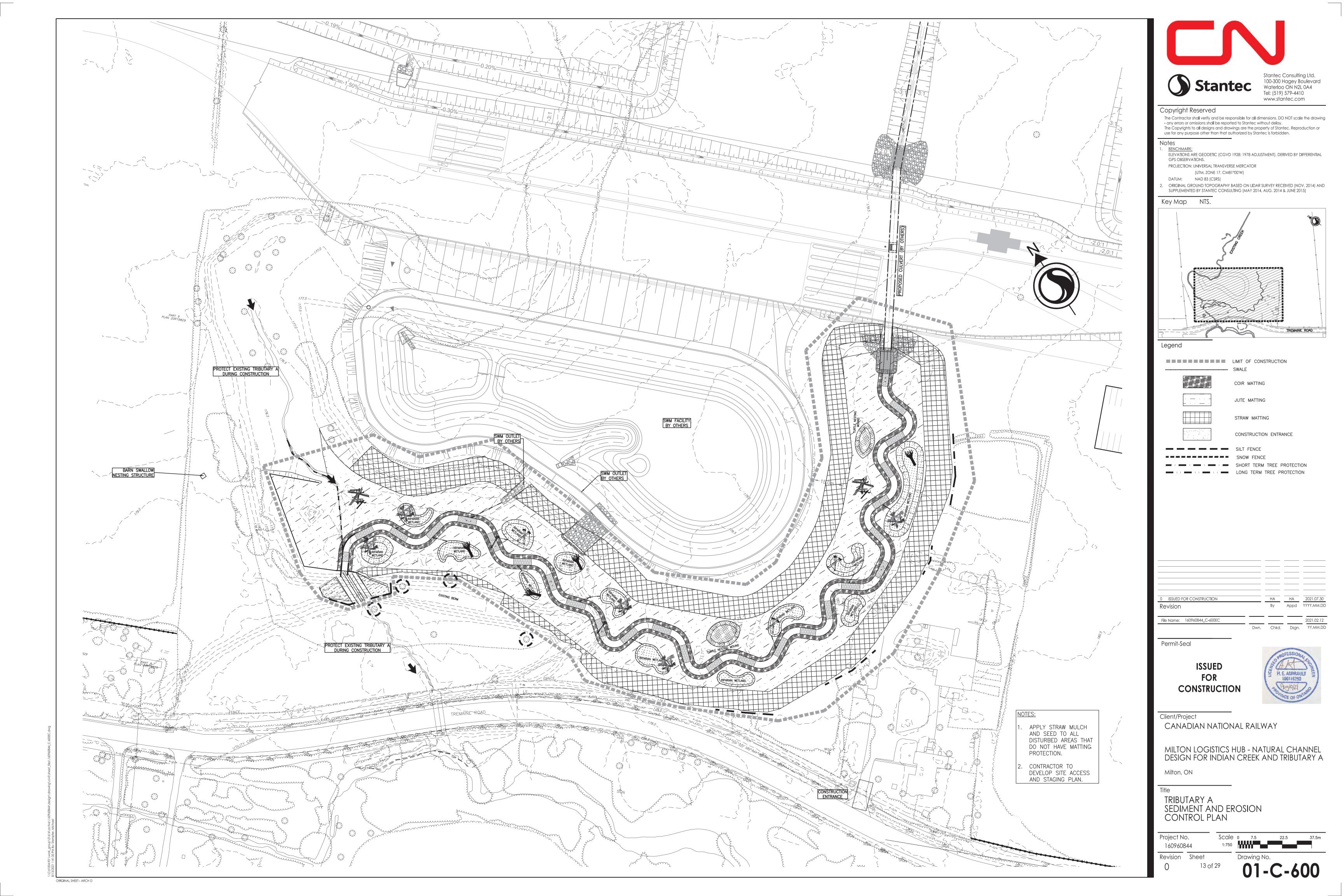
CONSTRUCTION NOTES

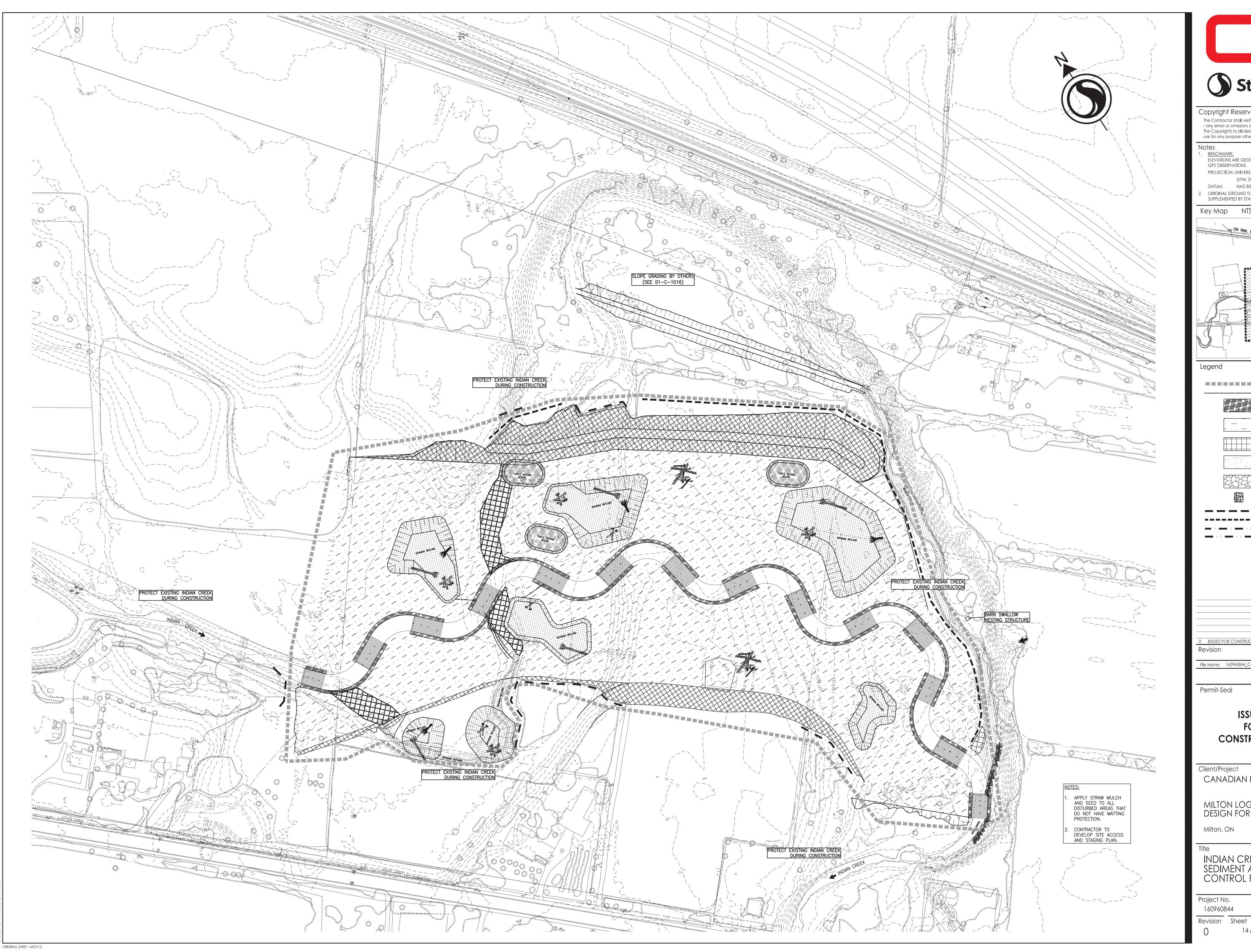
8 of 29

Project No. Scale

160960844 Revision Sheet

ORIGINAL SHEET - ARCH D









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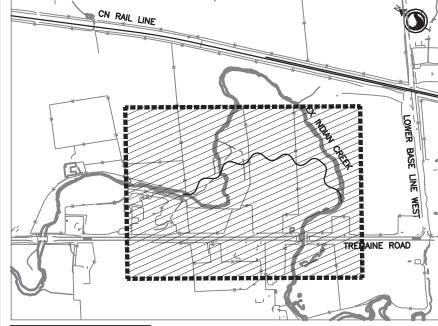
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ELEVATIONS ARE GEODETIC (CGVD 1928: 1978 ADJUSTMENT), DERIVED BY DIFFERENTIAL GPS OBSERVATIONS.

PROJECTION: UNIVERSAL TRANSVERSE MERCATOR (UTM, ZONE 17, CM81°00'W)

2. ORIGINAL GROUND TOPOGRAPHY BASED ON LIDAR SURVEY RECEIVED (NOV, 2014) AND SUPPLEMENTED BY STANTEC CONSULTING (MAY 2014, AUG. 2014 & JUNE 2015)

Key Map NTS.



Legend

LIMIT OF CONSTRUCTION

COIR MATTING

JUTE MATTING STRAW MATTING

CONSTRUCTION ENTRANCE

RIP RAP

Revision 
 Dwn.
 Chkd.
 Dsgn.
 YY.MM.DD
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Permit-Seal

**FOR** CONSTRUCTION



Client/Project CANADIAN NATIONAL RAILWAY

MILTON LOGISTICS HUB - NATURAL CHANNEL DESIGN FOR INDIAN CREEK AND TRIBUTARY A

Milton, ON

INDIAN CREEK SEDIMENT AND EROSION CONTROL PLAN

Project No. 160960844

