

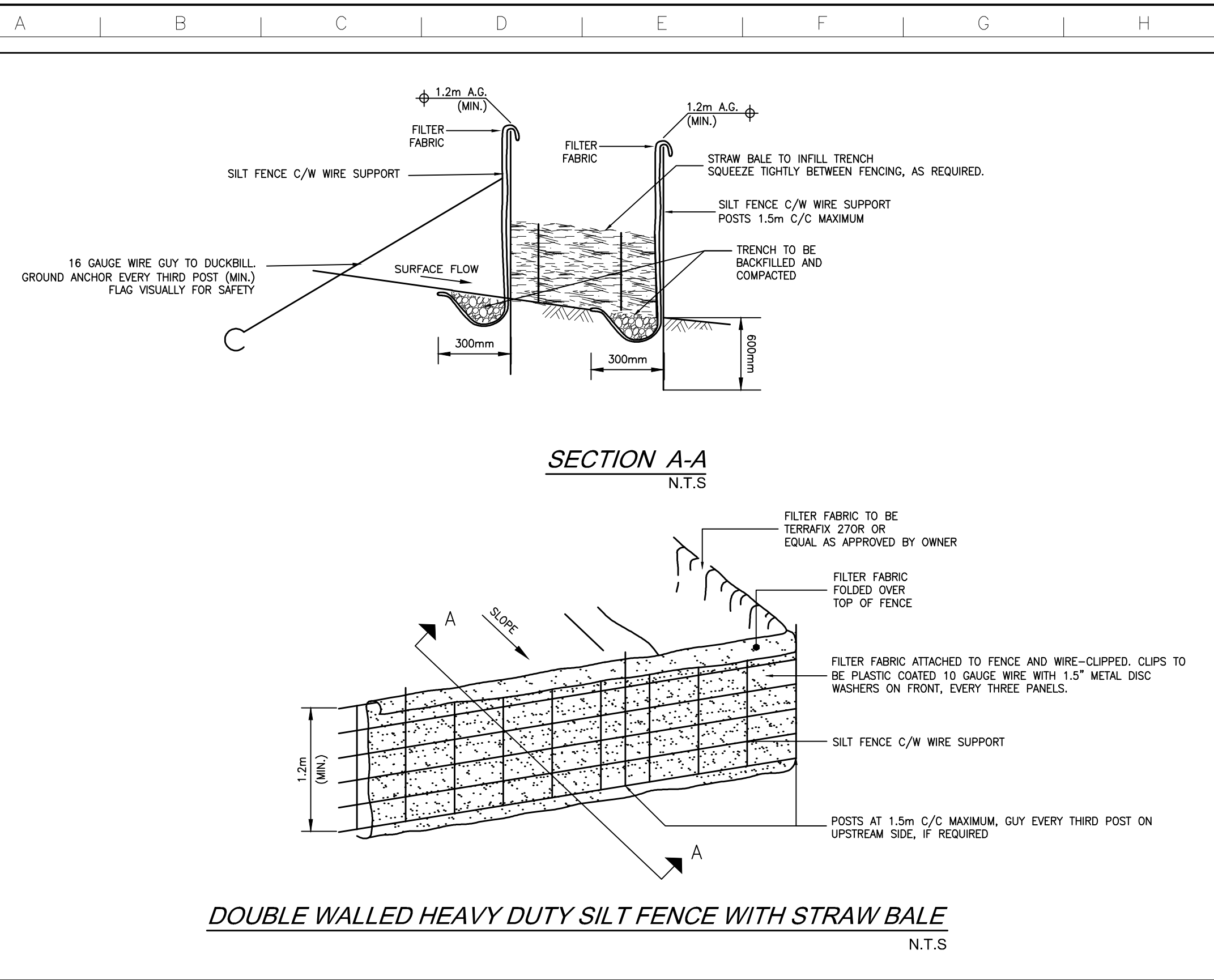
SCHEDULE 07 – Erosion and Sediment Control – Typical Details

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Notes

Legend



DOUBLE WALLED HEAVY DUTY SILT FENCE WITH STRAW BALE
N.T.S.

COIR MATTING

1. PROVIDE COIR FIBER MATTING TO MEET THE FOLLOWING SPECIFICATIONS:

Physical Specification (Roll)	
Material	100 percent coir twine woven into high strength mat [matting]
Thickness	7.6 mm
Tensile Strength	22.1 kN/m x 1.5.1 kN/m
Elongation	6% x 34%
Flexibility	65030 x 29590 mg/cm
Flow Velocity	Observed 11 ft./sec. (3.4 m/s)
Weight	29 oz/sq yd (880 g/sq m)
Size	2 m x 50 m (100 m ²)
*C/Factor	0.002
Open Area (measured)	50%

- STAKES PROVIDED, ARE TO BE MADE OF WOOD OR OTHER BIODEGRADABLE MATERIAL, WITH A HOOK TO ANCHOR MATTING. STAKES TO BE INSTALLED, SHALL BE NO LESS THAN 0.60m IN LENGTH. ECOSTAKES (OR EQUIVALENT) AND STAPLES SHALL NOT BE USED UNLESS AS SUPPLEMENTAL TO WOOD STAKES.
- APPLY SEED MIX AND STRAW PRIOR TO INSTALLING MATTING.
- INSTALL THE COIR FIBER MATTING IMMEDIATELY UPON FINAL GRADING. PROVIDE A SMOOTH SOIL SURFACE THAT IS FREE FROM STONES, CLOUDS, OR OTHER EXTRUDING DEBRIS THAT WILL PREVENT THE MATTING FROM CONTACTING THE SOIL.
- BEGIN INSTALLATION AT THE TOP OF THE SLOPE BY ANCHORING THE TOP OF THE MATTING IN A 0.15m DEEP x 0.60m WIDE TRENCH. STAKE MATTING IN PLACE WITH EVENLY SPACED STAKES EVERY 0.60m. BACKFILL AND COMPACT THE TRENCH AFTER STAKING.
- THE EDGES OF THE PARALLEL MATTING MUST BE STAKED WITH APPROXIMATELY 0.15m OF OVERLAP SUCH THAT THE EDGE OF THE DOWNSTREAM MATTING IS UNDER THE ONE JUST UPSTREAM. WHEN MATTING MUST BE SPICED DOWN THE SLOPE, INSTALL MATTING END-OVER-END (SHINGLE STYLE) WITH APPROXIMATELY 0.15m OF OVERLAP.
- INSTALL STAKES APPROXIMATELY 0.60m APART ACROSS THE MATTING AND AT ENDS, JUNCTIONS, AND TRENCHES. INSTALL STAKES ALONG THE OUTER EDGES, DOWN THE CENTRE OF EACH STRIP OF MATTING AND ALONG ALL LAPPED EDGES APPROXIMATELY 0.60m APART. EXCESS MATTING SHALL BE TRIMMED, ANCHORED, AND TRENCHED AT THE END OF THE SLOPE.
- THE OWNER OR OWNER'S REPRESENTATIVE MAY REQUIRE ADJUSTMENTS IN THE TRENCHING OR STAKING REQUIREMENTS TO FIT INDIVIDUAL SITE CONDITIONS.

GENERAL

- EQUIPMENT AND CONSTRUCTION MATERIAL SHALL BE STORED AWAY FROM THE WATER IN A MANNER THAT PREVENTS ANY DELETERIOUS SUBSTANCE FROM ENTERING THE WATER. REFUELING OF MACHINERY AND GENERATORS SHALL NOT BE CONDUCTED WITHIN 100m OF A WATERBODY AND SHALL BE COMPLETED IN A CONTROLLED MANNER WITH ADEQUATE SPILL PROTECTION ON SITE.

EROSION AND SEDIMENT CONTROL NOTES:

(SEE DETAILS THIS SHEET)

- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION OF THE AREA DRAINAGE SYSTEM DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT AND DURATION OF EXPOSED SOIL AND INSTALLING SILT FENCES AND OTHER SEDIMENT TRAPS/FILTERS SIMILAR TO THOSE ILLUSTRATED HEREIN.
- EROSION AND SEDIMENT CONTROL WORKS SHALL BE INSTALLED AND IN WORKING CONDITION PRIOR TO COMMENCEMENT OF CONSTRUCTION RELATED ACTIVITIES.
- SEDIMENT CONTROL MEASURES ADJACENT TO CONSTRUCTION AREAS MAY REQUIRE REMOVAL / RELOCATION IN ORDER TO COMPLETE SPECIFIC CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE SEDIMENT CONTROL MEASURES ARE IN PLACE AT ALL TIMES.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE MAINTAINED AND IMPROVED AS NECESSARY TO KEEP THEM EFFECTIVE AND MINIMIZE THE POTENTIAL FOR EROSION AND MIGRATION OF SEDIMENT TO THE DOWNSTREAM NATURAL ENVIRONMENT.
- AT THE DISCRETION OF THE OWNER OR OWNER'S CONSULTANT, ADDITIONAL SILT CONTROL DEVICES SHALL BE INSTALLED AT DESIGNATED LOCATIONS.
- SEDIMENT THAT IS ACCUMULATED BY THE TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS ESCAPE OF THE SEDIMENT TO THE DOWNSTREAM SIDE OF THE CONTROL MEASURE AND AVOIDS DAMAGE TO THE CONTROL MEASURE. ALL SEDIMENT SHALL BE REMOVED AND TOPSOIL WITH SEED TO BE ADDED IF NECESSARY.
 - ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AS PER OPSS 180, PRIOR TO THE REMOVAL OF ANY CONTROL MEASURE.
- STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL RECEIVERS (E.G. WATERCOURSES), AND BE SURROUNDED BY EROSION CONTROL MEASURES WHERE MATERIAL IS TO BE LEFT IN PLACE IN EXCESS OF 10 DAYS OR PRIOR TO A RAIN EVENT, WHICHEVER OCCURS SOONER.
- REMOVAL OF SEDIMENT CONTROL MEASURES AND COLLECTION OF ACCUMULATED SEDIMENT SHALL OCCUR FOLLOWING SUBSTANTIAL COMPLETION OF CONSTRUCTION (90%-100%) AND SITE STABILIZATION TO 90%.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND BOLSTER EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY TO KEEP THEM EFFECTIVE AND MINIMIZE THE POTENTIAL FOR EROSION.
 - SILT FENCE
 - FILTER CLOTH
 - PUMPS
 - CLEAN RIP-RAP (FREE OF FINES) FOR ROCK CHECK DAMS
- 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 NATURAL ENVIRONMENT. THE FOLLOWING EXTRA EQUIPMENT/MATERIALS ARE TO BE KEPT ON SITE AS A CONTINGENCY, IN CASE THE PROPOSED CONTROL MEASURES ARE BREACHED.

SLOPE PROTECTION NOTES

- ROLLED EROSION CONTROL PRODUCTS (RECP) ARE TO BE USED ON SLOPES GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
- RECP PRODUCTS ARE TO BE BIODEGRADABLE.
- RECP PRODUCTS ARE TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS. INSTALLATION TO BE INSPECTED AND REPAIRED AS NEEDED.
- RECP ARE TO BE APPLIED AS SOON AS POSSIBLE FOLLOWING GRADING AND SEEDING OF SUBJECT AREAS.
- SURFACES ARE TO BE SMOOTH AND FREE OF STONES AND DEBRIS OR OTHER WEED CLUMPS PRIOR TO RECP PRODUCTS BEING INSTALLED.
- CONTRACTOR TO ENSURE THAT RILLING/GULLYING IS RECTIFIED PRIOR TO RECP INSTALLATION. CONTRACTOR TO MONITOR RUNOFF UNDER THE RECP FOLLOWING INSTALLATION.
- CONTRACTOR TO ENSURE THAT RECP IS SECURED AT THE TOP OF THE SLOPE IN A TRENCH AND OVERLAP (SIDE TO SIDE AND BOTTOM TO TOP).
- CONTRACTOR TO INSPECT THE SITE WEEKLY OR AFTER EVERY RAINFALL EVENT AND IDENTIFY AREAS OF EROSION OR POTENTIAL EROSION. BEST MANAGEMENT PRACTICES ARE TO BE USED TO CONTROL THE EROSION. METHODS OF CONTROL MAY INCLUDE THE USE OF EROSION CONTROL BLANKETS C/W SEEDING, HYDRAULIC MULCH, STRAW MULCH, OR SOIL BINDER. SOILS ARE TO BE STABILIZED AS SOON AS AREAS ARE IDENTIFIED TO PREVENT FURTHER EROSION.

SILT FENCE NOTES (SEE DETAIL OPSD 219.110)

- STAKES ARE TO BE INSTALLED ON THE DOWNSTREAM SIDE OF THE BARRIER.
- CONTRACTOR TO MONITOR SILT FENCE FOR UV DEGRADATION.
- SILT FENCE IS TO BE CLEANED OUT ONCE SEDIMENT REACHES MAXIMUM 1/3 OF THE FENCE HEIGHT (MAX. 300mm DEPTH).

ROCK CHECK DAMS

- REFER TO OPSD 219.210 FOR TEMPORARY ROCK FLOW CHECK DAM, WITH V-DITCH.
- A SERIES OF CHECK DAMS SHOULD BE USED FOR SWALES/DITCHES WITH SIGNIFICANT GRADIENT OR SLOPE LENGTH.
- HEIGHT OF SUBSEQUENT CHECK DAMS MUST BE EQUAL TO THE ELEVATION OF THE BASE OF THE PREVIOUS DAM.
- SEDIMENT MONITORING AND REMOVAL, REQUIRED FROM THE BASE OF THE STRUCTURE, WHEN ACCUMULATION BECOMES VISIBLE (MAX. 300mm DEPTH).
- INSPECTION SHOULD TAKE PLACE WEEKLY AND AFTER EVERY RAINFALL AND SIGNIFICANT SNOWMELT EVENT TO IDENTIFY ANY PROBLEM AREAS.
- REPAIR TO THE SEDIMENT TRAP SHOULD TAKE PLACE WITHIN 24 HOURS OF DETERMINING THE DEFICIENCY.

HYDRAULIC MULCH NOTES

- COORDINATE/CONSULT WITH OWNER PRIOR TO UTILIZING ANY HYDRAULIC MULCH. TIMELINES AND SEEDING METHODS NEED TO BE CAREFULLY CONSIDERED PRIOR TO IMPLEMENTATION.
- ENSURE THAT A TACKIFIER IS USED TO KEEP PRODUCT IN PLACE.
- APPLY SEED MIX PRIOR TO MULCH WITH TACKIFIER.
- HYDRAULIC MULCH IS TO BE APPLIED AS SOON AS GRADING AND SEEDING WORK IS COMPLETE TO ENSURE STABILIZATION OF SOILS.
- RE-APPLY HYDRAULIC MULCH IF THE SUBJECT AREA IS DAMAGED OR ERODED BY WIND OR WATER.

AREA GRADING NOTES

PRIOR TO SITE WORKS

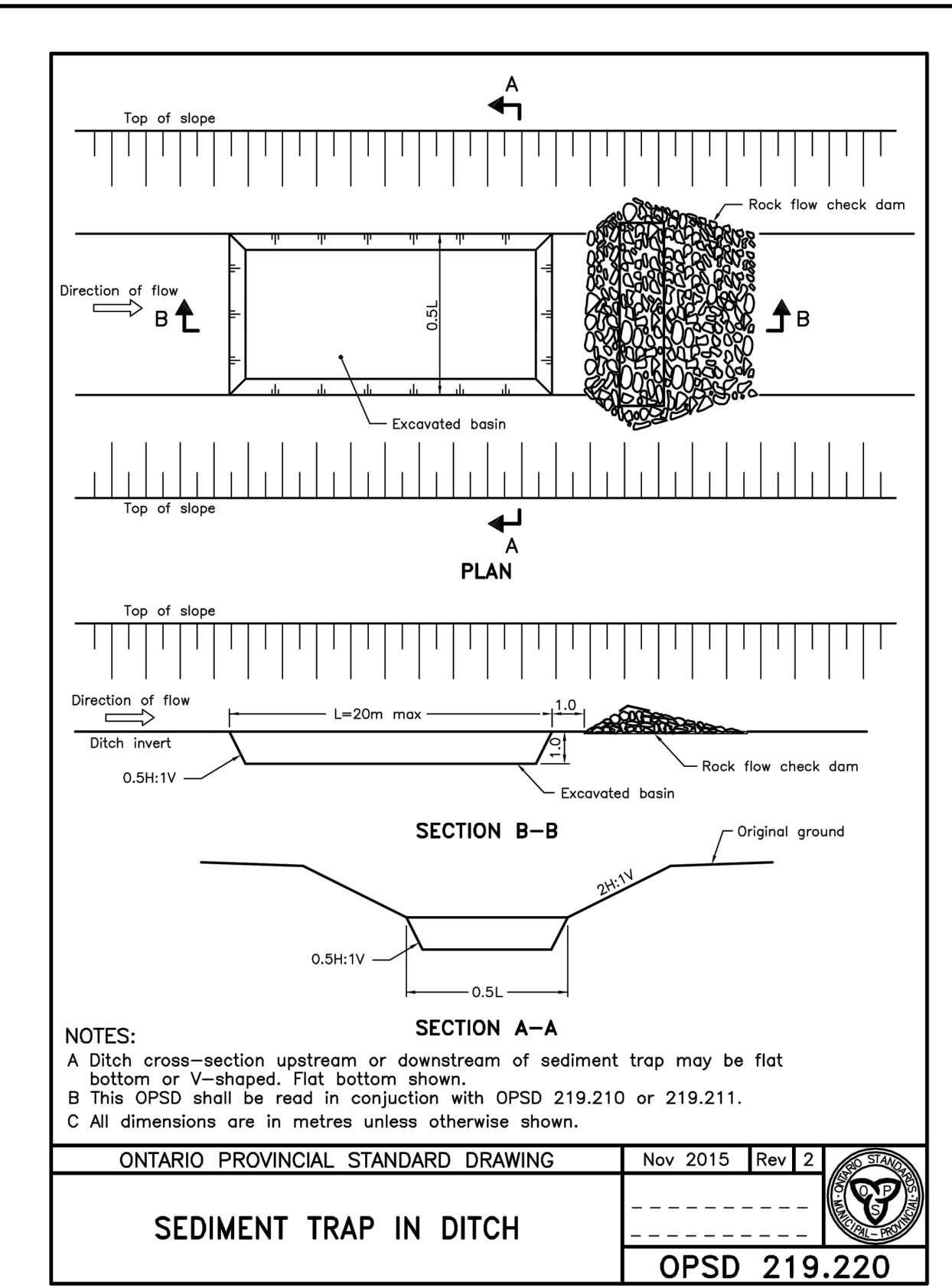
- INSTALL ALL SILT FENCE AND PROTECTIVE FENCING AS SHOWN ON THE PLANS AND MAINTAIN DURING CONSTRUCTION.
- MONTHLY EROSION AND SEDIMENT CONTROL REPORTS (QUARTERLY DURING PERIODS OF INACTIVITY) ARE TO BE SUBMITTED TO THE AUTHORITY UNTIL THE SITE HAS BEEN BUILT OUT (90%-100%) AND STABILIZED. REPORTS TO BE BASED ON FREQUENT INSPECTIONS PARTICULARLY AFTER RAINFALL>5mm.

DURING AREA GRADING

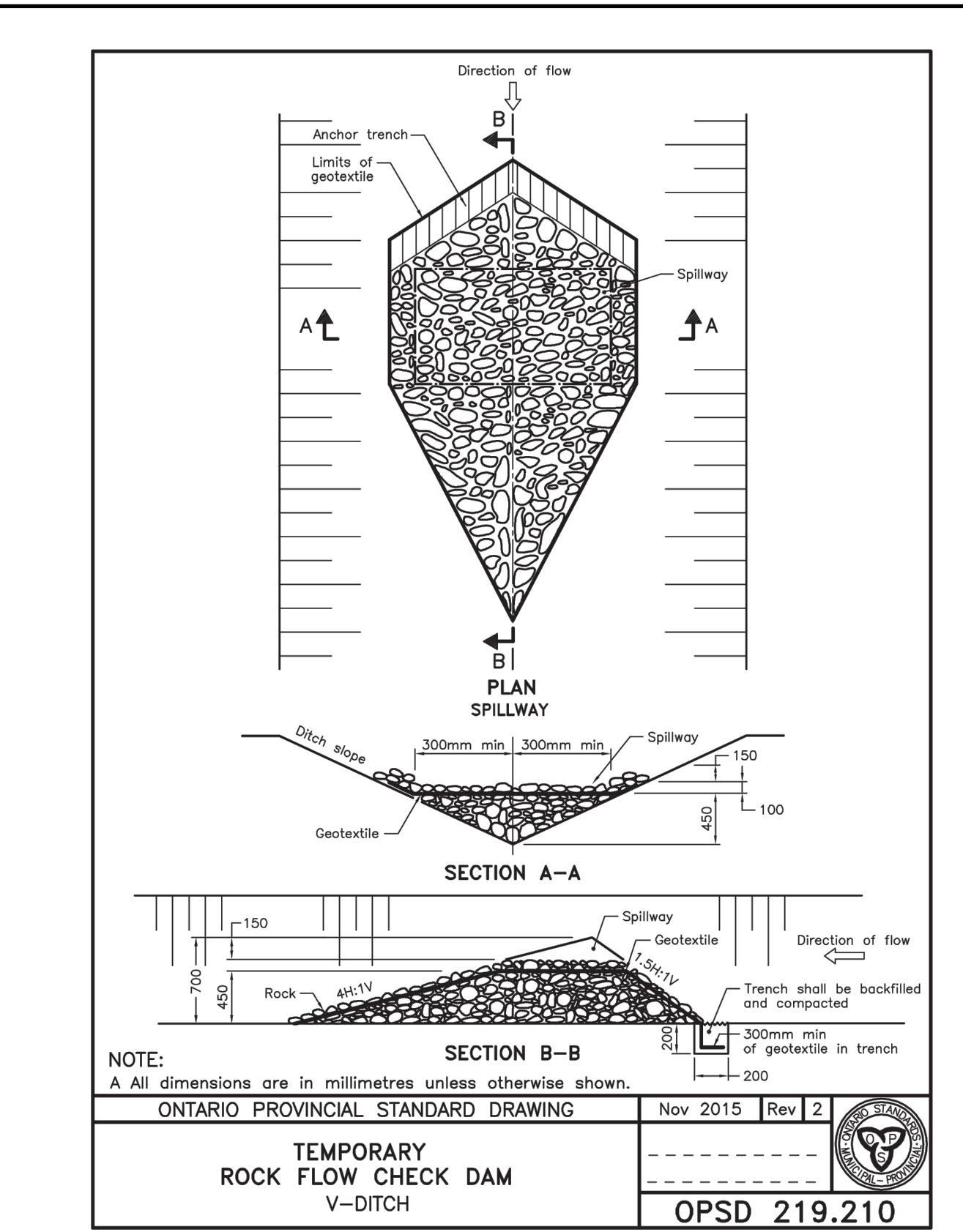
- TOPSOIL IS TO BE STRIPPED ONLY IN AREAS REQUIRING EARTHWORKS AND PLACED IN STOCKPILES AT THE LOCATIONS SHOWN ON THE PLANS OR AS APPROVED BY "THE DESIGNATED" QUALIFIED ENVIRONMENTAL SITE INSPECTOR.
- TEMPORARY TOPSOIL STOCKPILES ARE TO HAVE CONTINUOUS SILT FENCE PLACED IMMEDIATELY AROUND THE ENTIRE PERIMETER.
- ROADWAYS AND LAYDOWN YARDS ARE TO BE PLACED ON NATIVE GROUND AFTER TOPSOIL HAS BEEN STRIPPED.
- ALL TOPSOIL IS TO BE RE-SPREAD ON CONSTRUCTION IMPACTED AREAS AFTER FINAL GRADING IS COMPLETE TO A MINIMUM DEPTH OF 150mm (INCREASE IF ADDITIONAL TOPSOIL IS AVAILABLE).
- SILT FENCE AND EROSION CONTROL STRUCTURES TO BE CHECKED WEEKLY AND AFTER EACH RAINFALL>5mm FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES ONE THIRD OF THE WAY TO THE TOP OF THE BARRIER (MAX. 300mm DEPTH).

AFTER AREA GRADING

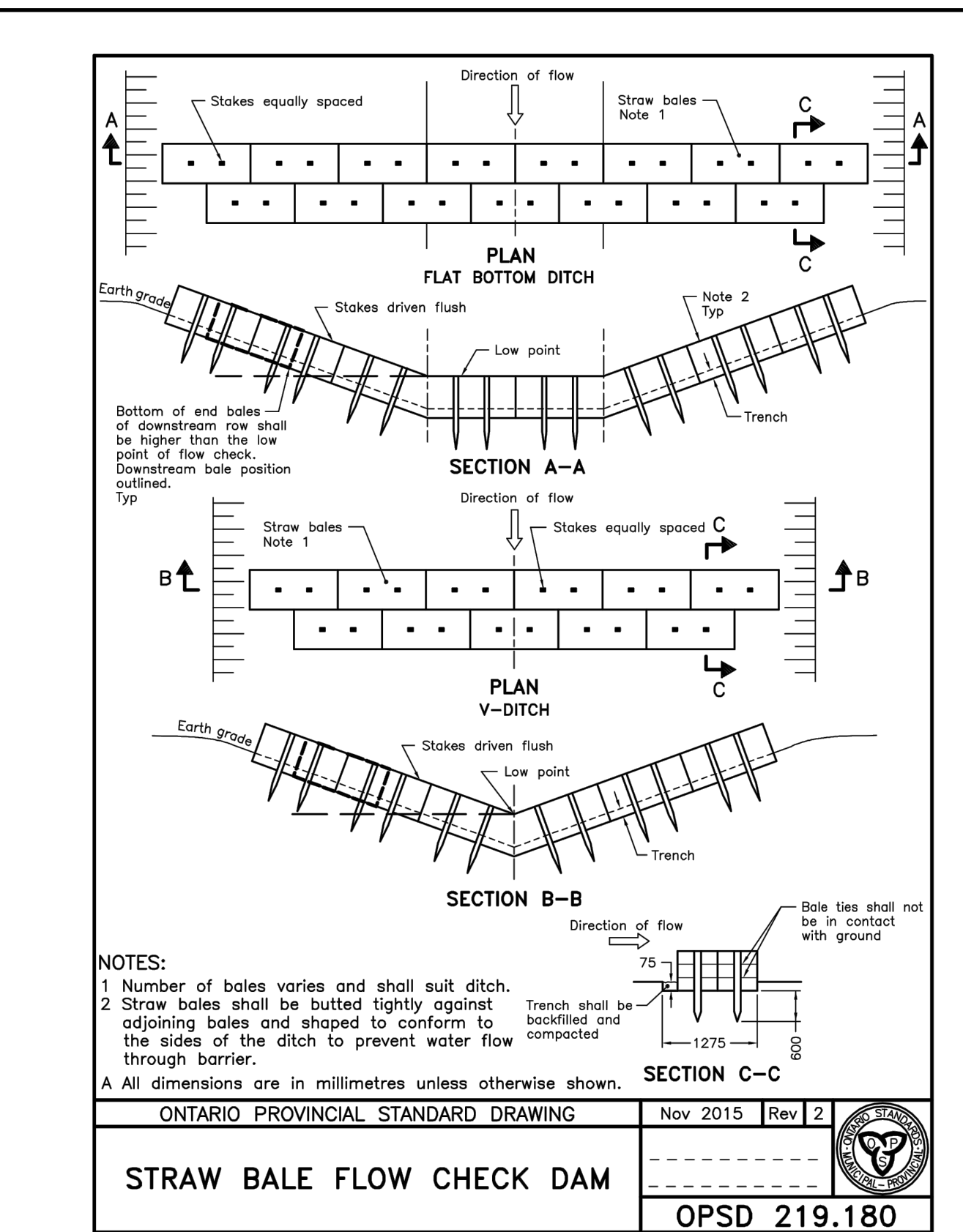
- FOLLOWING AREA GRADING, SEED EXPOSED SOIL AREAS WITH NATIVE GRASS MIX.
- REMOVAL OF SEDIMENT CONTROL MEASURES AND COLLECTION OF ACCUMULATED SEDIMENT SHALL OCCUR FOLLOWING SUBSTANTIAL COMPLETION OF CONSTRUCTION (90%-100%) AND SITE STABILIZATION TO 90%.



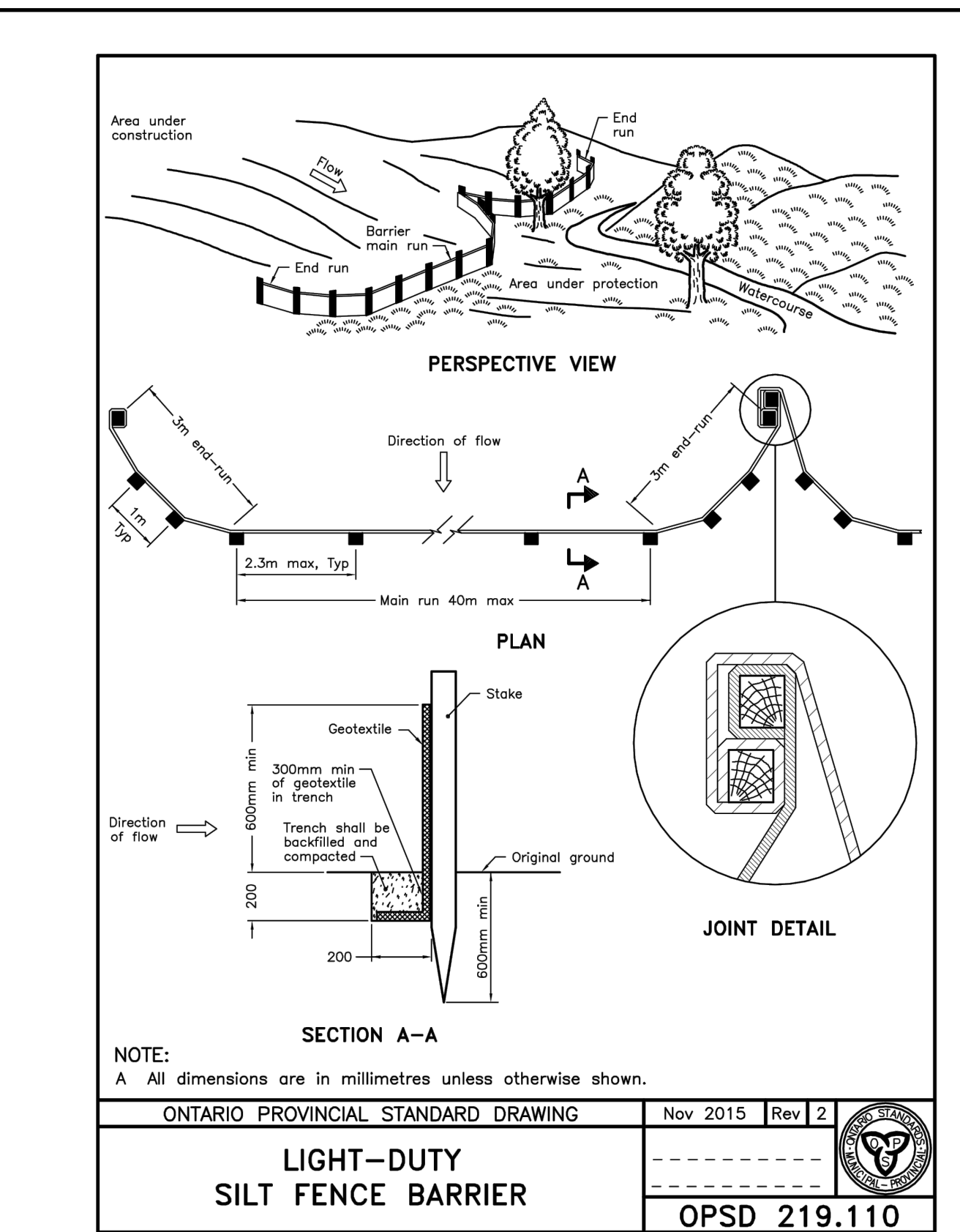
SEDIMENT TRAP IN DITCH
OPSD 219.220



TEMPORARY ROCK FLOW CHECK DAM V-DITCH
OPSD 219.210



STRAW BALE FLOW CHECK DAM
OPSD 219.180



LIGHT-DUTY SILT FENCE BARRIER
OPSD 219.110

0	ISSUED FOR CONSTRUCTION	DCW	JCB	15.12.18
Revision		By	Appd.	YY.MM.DD

File Name:	C500_133560100-Details.DWG	RCL	DCW	DCW	15.12.10
		Dwn.	Chkd.	Dign.	YY.MM.DD

Permit-Seal					

Client/Project					
AMHERST ISLAND WIND PROJECT					
75MW WIND FARM					
Amherst Island, Loyalist Township, Ontario					

Title					
CIVIL ACCESS ROAD					
DETAIL SHEET					

Project No.	Scale				
133560100	N.T.S.				
Drawing No.	Sheet	Revision			

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