

- 1.1. THIS SPECIFICATION PROVIDES THE REQUIREMENTS FOR THE DESIGN, SUPPLY, CONSTRUCTION, OPERATION, MAINTENANCE, AND REMOVAL (TEMPORARY WORKS) AND EQUIPMENT, INCLUDING DITCHES, DIVERSION CHANNELS, COFFERDAMS, SUMP BASINS, PONDS, PUMPS, PIPING, CONTAINMENTS, FILTERS, AND TREATMENTS REQUIRED FOR THE CARE OF WATER.
- 1.2. THE SUBJECT WATER SHALL INCLUDE ALL ITS FORMS INCLUDING ICE AND SNOW, AND FROM ALL SOURCES AND NATURAL WATER COURSES ON THE SITE INCLUDING RAIN, SURFACE RUN-OFF, GROUNDWATER, CONCRETE PRODUCTION WASHWATER, AND CONCRETE FORM WASHWATER.
- 1.3. COMPLY WITH ALL PROJECT PERMITS, APPLICABLE REGULATIONS, THE PROJECT ENVIRONMENTAL PLAN, AND FISHERIES AND OCEANS CANADA, ONLINE MEASURES TO AVOID CAUSING HARM TO FISH AND FISH HABITAT, INCLUDING AQUATIC SPECIES AT RISK, AND PATHWAY OF EFFECTS DIAGRAMS.

- 2.1. THE CARE OF WATER SHALL BE CONTINUOUS FROM THE START TO THE FINISH OF THE WORK, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, AS NECESSARY TO AVOID HINDERING OR COMPROMISING THE WORK AND TO ENSURE CONSTRUCTION SAFETY.
- 2.2. THE CARE OF WATER SHALL BE THE DRAWINGS MAY SHOW MEASURES FOR THE CARE OF WATER DEVELOPED IN THE PROCESS OF COMPLETE CONCEPTUALIZATION OF THE PROJECT. REGARDLESS, THE CONTRACTOR IS STILL COMPLETELY RESPONSIBLE FOR CARE OF WATER.
- 2.3. CONSULT WITH THE SITE ENVIRONMENTAL MONITOR PRIOR TO START WORK IN OR AROUND WATER.
- 2.4. MINIMIZE DISRUPTION OF FLOW IN WATERCOURSES.
- 2.5. INSTALL SEDIMENT AND EROSION CONTROL MEASURES PRIOR TO ANY CONSTRUCTION ACTIVITY.
- 2.6. INSTALL CARE OF WATER WORKS SO AS NOT TO INTERFERE WITH WORK BY OTHERS. WHERE THIS IS UNAVOIDABLE, OBTAIN ENGINEER'S PERMISSION BEFORE PROCEEDING.
- 2.7. DE-WATER THE SITE AS REQUIRED FOR CONSTRUCTION AND ENGINEER INSPECTION AND TESTING.
- 2.8. DRAIN SURFACE WATER AWAY FROM WORK AREAS TO PREVENT PONDING, WATER INFILTRATION IN FILL PLACEMENT AREAS, AND CREATION OF TEMPORARY AQUATIC HABITATS.
- 2.9. SCHEDULE AND PLAN EARTHWORKS TO MINIMIZE THE SIZE OF AREAS DISTURBED AND UNPROTECTED FROM EROSION FOR THE SHORTEST REASONABLE TIME. AVOID PERIODS OF HIGH RUN-OFF FOR THE INSTALLATION OF CARE-OF-WATER WORKS AND EARTHWORKS LIKELY TO CAUSE SIGNIFICANT SEDIMENTATION.
- 2.10. DIVERSION OUTLETS SHALL BE LOCATED SUCH THAT DIVERTED WATER RETURNS TO THE SAME DRAINAGE COURSE THAT IT WOULD HAVE REACHED NATURALLY, AND IN REASONABLE PROXIMITY TO THE WORK.
- 2.11. WHEN TEMPORARY WORKS ARE NO LONGER NEEDED, REMOVE AND RETURN AREAS TO A CONDITION SIMILAR TO BEFORE CONSTRUCTION WITH ATTENTION TO GRADING REQUIRED TO RESTORE NATURAL SURFACE WATER FLOW PATTERNS WHILE PERMITTING ACCESS TO THE WORKS. EXERCISE EXTREME CARE DURING THE REMOVAL STAGES, TO MINIMIZE THE LOSS OF SOIL SEDIMENT AND DEBRIS THAT WAS TRAPPED DURING CONSTRUCTION.

- 3.1. SUBMIT THE FOLLOWING IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS AND SCHEDULE:
 - 3.1.1. CARE-OF-WATER PLAN (CWP) INCLUDING MEANS AND METHODS FOR CARE-OF-WATER, EQUIPMENT AND MATERIAL DETAILS, AND DRAWINGS OR SKETCHES PROVIDING DETAILS AND ILLUSTRATING SEQUENCING.
 - 3.1.2. REDLINE DRAWING MARKUPS SHOWING EXTENT OF THE AREA WHERE CARE-OF-WATER WORKS OCCURRED INCLUDING PERMANENT ACCESS, TEMPORARY TRAILS, AND RECLAIMED AREAS.
- 3.2. DO NOT PROCEED WITH WORK ASSOCIATED WITH A SUBMITTAL UNTIL REVIEWED BY THE ENGINEER.
- 3.3. SUBMITTAL REVIEW BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FROM THE FULL RESPONSIBILITY OF THE WORK.

- 4.1. SETTLING PONDS SHALL BE DESIGNED AND INSTALLED AS INDICATED ON THE DRAWINGS TO REDUCE THE SEDIMENTATION OF WATER BEING DISCHARGED TO THE ENVIRONMENT TO OR BELOW ACCEPTABLE LEVELS.
- 4.2. SETTLING POND DESIGN SHALL HAVE A FACTOR OF SAFETY OF THREE (3) AND SHOULD BE DESIGNED TO MAINTAIN A MINIMUM FREEBOARD OF 0.5 METERS, PREVENT OVERFLOW DURING THE MAXIMUM DISCHARGE RATE, AND A MINIMUM 10-YEAR RETURN PERIOD 60-MINUTE DURATION STORM EVENT.
- 4.3. CLEAN OUT SETTLING PONDS, AS REQUIRED, DURING OPERATION AND AFTER THE WORK AND DISPOSE OF COLLECTED SEDIMENT, AS DIRECTED BY THE ENGINEER.

- 5.1. INSTALL SEDIMENT FENCE (SILT FENCE) OR STRAW BALE FILTERS AT GRUBBING LIMITS AS REQUIRED TO PREVENT SEDIMENTATION OF ADJACENT AREAS.
- 5.2. STRAW BALE FILTERS OR GEOTEXTILE SEDIMENT FENCES SHALL BE USED TO TRAP SEDIMENT FROM AREAS OF LIMITED RUN-OFF. SEDIMENT FILTERS SHALL BE PROPERLY ANCHORED TO PREVENT EROSION UNDER OR AROUND THEM.
- 5.3. INSTALL SEDIMENT FILTERS AROUND ALL CULVERT INLETS AS SHOWN ON DWG 2143.

