

GENERAL NOTES

- ALL DIMENSIONS AND INFORMATION SHALL BE CHECKED AND VERIFIED ON SITE AND ANY DISCREPANCIES MUST BE REPORTED TO THE DEPARTMENTAL REPRESENTATIVE BEFORE COMMENCING THE WORK.
- IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO BECOME INFORMED OF THE EXACT LOCATION AND ASSUME ALL RESPONSIBILITY FOR DAMAGE TO ALL UTILITIES, SERVICES AND STRUCTURES WHETHER ABOVE GROUND OR BELOW GROUND BEFORE COMMENCING THE WORK. SUCH INFORMATION IS NOT NECESSARILY SHOWN ON THE DRAWINGS, AND WHERE SHOWN, THE ACCURACY CANNOT BE GUARANTEED.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER, TO THE COMPLETE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.

EXCAVATION

- UNSUITABLE MATERIAL SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS, OR AS REQUIRED TO COMPLETE THE WORK.
- NO EXCAVATION SHALL BE STARTED UNTIL DEPARTMENTAL REPRESENTATIVE'S PERMISSION IN WRITING HAS BEEN RECEIVED.
- THE DETERMINATION OF ACCEPTABLE FOUNDATION WILL BE MADE BY THE DEPARTMENTAL REPRESENTATIVE. EXCAVATION SHALL BE THE MINIMUM REQUIRED TO REMOVE ORGANIC AND OTHER UNSUITABLE MATERIAL AND AS DETERMINED BY THE DEPARTMENTAL REPRESENTATIVE.
- SUBCONTRACTOR SHALL CARRY OUT EXCAVATION OPERATIONS IN AN ORDERLY MANNER AND SHALL TAKE SUCH MEASURES AS ARE NECESSARY TO KEEP THE AREAS BEING EXCAVATED AND WORKED FREE FROM STANDING WATER. SUCH MEASURES SHALL INCLUDE BUT MAY NOT BE LIMITED TO SLOPING THE EXCAVATION TO DRAIN, AND TO PROVIDING DRAINS, DITCHES, AND OTHER TEMPORARY DIVERSION AND PROTECTIVE WORKS. SURFACE FLOWS SHALL BE DIVERTED AWAY FROM EXCAVATIONS. SUBSURFACE FLOWS ENTERING THE EXCAVATION SHALL BE SATISFACTORILY CONTROLLED AND PUMPED OUT BY METHODS ACCEPTABLE TO THE DEPARTMENTAL REPRESENTATIVE.
- ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PRESERVE IN A SOUND, UNDISTURBED CONDITION ALL MATERIAL BELOW AND BEYOND THE LIMITS OF EXCAVATIONS.
- AT ALL TIMES DURING CONSTRUCTION, SUBCONTRACTOR SHALL ADOPT EXCAVATION PROCEDURES SUCH THAT THE STABILITY OF ANY SLOPE IS NOT IMPAIRED. EDCIV'S ACCEPTANCE OF EXCAVATION PROCEDURES SHALL IN NO WAY RELIEVE SUBCONTRACTOR OF ITS RESPONSIBILITY FOR SAFEGUARDING THE STABILITY OF ALL SLOPES EXCAVATED.
- NO EXCAVATION WITH A DEPTH GREATER THAN 500 mm SHALL BE LEFT UNATTENDED, OR UNPROTECTED AT ANY TIME DURING THE PERFORMANCE OF THE WORK.
- EXCAVATED MATERIAL MAY BE USED IN THE CONSTRUCTION OF THE WORK, IF, IN THE OPINION OF THE DEPARTMENTAL REPRESENTATIVE, THE MATERIAL SATISFIES THE REQUIREMENTS OF THE SPECIFICATIONS.

SHEET PILE

- NEW SHEET PILES TO COMPLY WITH:
STEEL - ASTM A328, COLD OR HOT ROLLED AND MINIMUM 7 GAUGE (4.5 mm THICK). CONTRACTOR MAY NEED TO SUPPLY AND INSTALL THICKER SHEET PILE DEPENDING ON THE CONTRACTOR'S MEANS AND METHODS OF INSTALLATION AND FROST CONDITIONS (TIME OF YEAR).
- SUBCONTRACTOR TO PROVIDE MILL CERTIFICATE TO THE DEPARTMENTAL REPRESENTATIVE INDICATING THE STEEL MEETS THE REQUIREMENTS.
- DEPTH OF EXISTING SHEET PILE TO BE EXPOSED SHALL NOT EXCEED 1 m, UNLESS STATED OTHERWISE.
- LOCATIONS IDENTIFIED FOR NEW FULL LENGTH SHEET PILE SHALL USE 4 m LENGTHS INSTALLED WITH TOP ELEVATION AS SPECIFIED IN THE CONTRACT DRAWINGS.
- INSTALLATION OF NEW 4 m LONG SHEET PILES TO BE INSTALLED WITHIN 2" OF VERTICAL.
- WELDING, IF REQUIRED, SHALL BE IN ACCORDANCE WITH CSA W59 AND SHALL FORM A CONTINUOUS WATERTIGHT SEAM.
- BACKFILLING SHALL BE IN LIFTS NOT EXCEEDING 200 mm SUCH THAT THE RELATIVE ELEVATION OF BACKFILL ON EACH SIDE OF THE SHEET PILE EXTENSION DOES NOT EXCEED 300 mm.
- TOP OF NEW SHEET PILE SHALL BE COVERED BY GRANULAR MATERIAL OR RIP RAP, DEPENDING ON LOCATION, AND TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.

STRIPPING AND DISPOSING OF MATERIAL

- NO STRIPPING OF ANY AREA SHALL START WITHOUT PRIOR APPROVAL FROM THE DEPARTMENTAL REPRESENTATIVE.
- ADEQUATE MEASURES SHALL BE TAKEN TO PROVIDE PROPER DRAINAGE OF SURFACE WATER FROM STRIPPED AREAS AND TO PREVENT PONDING.
- STRIPPED MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR OFF SITE, AT AN APPROVED AREA.

GABION DISPOSAL

- REMOVE AND DISPOSE OF WIRE FROM BASKETS INCLUDING METAL BRACKETS AND DETERIORATED WOOD POSTS EXPOSED AT EDGE OF CANAL
- ALL GABION BASKET MATERIAL/DEBRIS MUST BE DISPOSED OF OFFSITE AT AN APPROVED FACILITY.

RIP RAP

- WITHIN 5 DAYS OF AWARD OF CONTRACT, SUBCONTRACTOR SHALL SUBMIT TO THE DEPARTMENTAL REPRESENTATIVE THE NAME OF SOURCE PIT AND SIEVE TEST DATA FOR RIP RAP MATERIAL SPECIFIED. ADDITIONAL TESTING OF THE MATERIAL MAY BE REQUIRED DURING THE WORK TO DEMONSTRATE CONFORMANCE TO THE SPECIFIED GRADATIONS. MATERIAL MUST BE ACCEPTED BY THE ENGINEER OF RECORD.
- RIP RAP MATERIALS SHALL BE HARD, DENSE AND DURABLE LIMESTONE FROM APPROVED QUARRIES. RIP RAP SHALL BE CLEAN AND FREE FROM CRACKS, SEAMS AND INCLUSIONS OF DIRT, SAND, SILT, CLAY AND OTHER DELETERIOUS MATTER AS DETERMINED BY THE DEPARTMENTAL REPRESENTATIVE. INDIVIDUAL PIECES OF RIP RAP SHALL BE GENERALLY EQUIDIMENSIONAL IN SHAPE WITH THE LARGEST DIMENSION NOT MORE THAN TWICE THE SMALLEST.
- AFTER PLACEMENT, RIP RAP MATERIAL SHALL BE WELL GRADED WITHIN THE GRADATION LIMITS PROVIDED IN THE CONTRACT DRAWINGS.
- THE STOCKPILING OF RIP RAP MATERIALS WILL GENERALLY BE PERMITTED. SEGREGATION OF PARTICLE SIZES IN THE STOCKPILE SHALL BE PREVENTED AND THE RIP RAP MATERIALS SHALL MEET THE GRADATIONS. RIP RAP MATERIALS SHALL ONLY BE STOCKPILED IN AREAS APPROVED BY THE DEPARTMENTAL REPRESENTATIVE. RIP RAP MATERIALS SHALL BE PLACED IN THE STOCKPILES IN HORIZONTAL LAYERS.
- RIP RAP MATERIALS SHALL NOT BE DUMPED ON THE SLOPES AND PUSHED INTO PLACE. RIP RAP MATERIAL SHALL NOT BE DROPPED FROM A HEIGHT GREATER THAN 1.5 m.
- RIP RAP SHALL BE PLACED SO THAT SEGREGATION OF SIZES DOES NOT OCCUR. THE LARGER ROCK PARTICLES SHALL BE UNIFORMLY DISTRIBUTED WITH THE ZONE WITH THE SMALLER ROCK PARTICLES FILLING THE VOIDS BETWEEN THE LARGER PARTICLES TO PRODUCE A UNIFORM ZONE OF INTERLOCKING PARTICLES. RIP RAP SHALL BE LEVELED AND DRESSED TO ENSURE THAT THE RIP RAP ZONE IS STABLE, WITH NO TENDENCY TO SLIDE.
- BREAKING OF INDIVIDUAL PIECES AFTER PLACEMENT WILL NOT BE PERMITTED.
- RIP RAP SHALL BE PLACED TO ITS FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISTURBANCE OR DISPLACEMENT OF THE UNDERLYING MATERIAL.
- DRY SIDE SLOPE RIP RAP WHERE REQUIRED TO BE WELL GRADED.

WET SIDE SLOPE RIP RAP (EXCEPT AS NOTED)	
% PASSING	NOMINAL SIZE (mm)
100	305
30-90	265
0-15	210
0	105

DRY SIDE SLOPE STA. 0+540 TO 0+670	
% PASSING	NOMINAL SIZE (mm)
100	305
WELL GRADED	265
	210
	180
	155
	125
0	105

GRANULAR MATERIAL

- PLACING AND SPREADING OF GRANULAR MATERIAL IN ACCORDANCE WITH THESE SPECIFICATIONS SHALL BE PERFORMED IN SUCH A MANNER AS TO AVOID SEGREGATION OF SIZES AND OBTAIN A HOMOGENEOUS MASS.
- THE SELECTION OF COMPACTION EQUIPMENT SHALL BE SUBJECT TO THE APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE AND TO CONTINUING SATISFACTORY PERFORMANCE.
- WHERE NECESSARY TO ACHIEVE THE SPECIFIED COMPACTION, WATER SHALL BE APPLIED BY CONTROLLED SPRINKLING TO THE GRANULAR FILL MATERIALS IN AMOUNTS AS APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
- GRANULAR MATERIALS SHALL CONSIST OF CRUSHED, CLEAN, SOUND, MINERAL PARTICLES FREE FROM ROOTS, TOPSOIL OR OTHER DEBRIS. MATERIALS CONTAINING QUANTITIES OF ORGANIC MATTER, FLAT OR ELONGATED PARTICLES, DELETERIOUS MATERIAL, SILT, CLAY OR ROCK FINES, WHICH, IN THE OPINION OF THE DEPARTMENTAL REPRESENTATIVE, ARE UNACCEPTABLE WILL BE REJECTED.
- MATERIAL SHALL BE SUPPLIED IN ACCORDANCE WITH CONTRACT DRAWINGS.
- WITHIN 5 DAYS OF AWARD OF CONTRACT, SUBCONTRACTOR SHALL SUBMIT TO THE DEPARTMENTAL REPRESENTATIVE THE NAME OF SOURCE PIT AND SIEVE TEST DATA FOR ALL GRANULAR FILL MATERIALS SPECIFIED. ADDITIONAL TESTING OF THE MATERIAL MAY BE REQUIRED DURING THE WORK TO DEMONSTRATE CONFORMANCE TO THE SPECIFIED GRADATIONS.
- THE STOCKPILING OF GRANULAR FILL WILL BE PERMITTED BY THE DEPARTMENTAL REPRESENTATIVE, AT APPROVED LOCATIONS, PROVIDED THAT SUBCONTRACTOR EXERCISES EVERY PRECAUTION NECESSARY TO PREVENT SEGREGATION OF PARTICLE SIZES. THE STOCKPILED MATERIAL SHALL MEET THE GRADATION REQUIREMENTS SPECIFIED ABOVE. PROCESSED GRANULAR FILL MATERIALS SHALL BE PLACED IN STOCKPILES IN LAYERS NOT EXCEEDING 2 m IN THICKNESS.
- THE PLACING OF GRANULAR FILL MATERIALS SHALL BE DIRECTED AT OBTAINING A STABLE AND HOMOGENEOUS FILL WHICH IS FREE OF HORIZONTAL STRATIFICATIONS AND LENSES OR POCKETS OF MATERIALS WHICH DO NOT SATISFY THE REQUIREMENTS OF THESE SPECIFICATIONS.
- GRANULAR FILL MATERIAL SHALL NOT BE CONTAMINATED BY MIXING WITH ADJACENT MATERIALS. MATERIALS WHICH HAVE BECOME CONTAMINATED SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST.
- AFTER DUMPING, GRANULAR FILL MATERIAL SHALL BE SPREAD AND COMPACTED IN CONTINUOUS AND APPROXIMATELY HORIZONTAL LAYERS OF UNIFORM THICKNESS. EACH LAYER OF GRANULAR FILL MATERIAL SHALL BE NOT MORE THAN 200 mm THICK BEFORE COMPACTION.
- GRANULAR MATERIALS SHALL BE PLACED, SPREAD AND COMPACTED IN A MANNER TO PREVENT SLIDING OR DESEGREGATION OF PLACED MATERIAL.
- GRANULAR MATERIALS PLACED ON GENERALLY FLAT AREAS SHALL BE COMPACTED BY A SMOOTH STEEL DRUM VIBRATORY ROLLER WITH A CENTRIFUGAL FORCE. DEVELOPMENT OF NOT LESS THAN 5 t OR OTHER COMPACTION EQUIPMENT APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
- EACH LAYER OF MATERIAL SHALL BE COMPACTED BY NOT LESS THAN FOUR COMPLETE PASSES OF THE ACCEPTED COMPACTION EQUIPMENT TO 98% SPMD.

NORTHWEST EMBANKMENT - CONSTRUCTION LAYOUT COORDINATES

STATIONING WITH RESPECT TO NORTHWEST EMBANKMENT ALIGNMENT (NOT CANAL CENTRELINE)
AS SHOWN ON PLAN AND PROFILE SHEETS C101 TO C109

NORTHWEST EMBANKMENT CENTRELINE POINTS		
STATION	NORTHING	EASTING
0+100	4929835.34	649456.71
0+150	4929805.08	649416.90
0+200	4929774.83	649377.09
0+250	4929744.57	649337.29
0+300	4929714.31	649297.48
0+350	4929684.06	649257.67
0+400	4929653.80	649217.87
0+450	4929623.55	649178.06
0+500	4929593.29	649138.25
0+550	4929563.04	649098.45
0+600	4929532.78	649058.64
0+650	4929502.52	649018.83
0+700	4929472.27	648979.03
0+750	4929442.01	648939.22
0+800	4929411.76	648899.41
0+850	4929381.50	648859.61
0+900	4929351.42	648819.68
0+950	4929319.86	648780.90
1+000	4929286.44	648743.71
1+050	4929251.23	648708.22
1+100	4929214.85	648673.92
1+150	4929178.45	648639.65
1+200	4929142.04	648605.38
1+250	4929107.01	648569.70
1+300	4929072.17	648533.84
1+350	4929037.33	648497.98
1+400	4929001.78	648462.82
1+450	4928964.96	648429.00
1+500	4928930.83	648392.47
1+550	4928894.16	648358.51
1+600	4928855.43	648326.89
1+650	4928816.70	648295.26
1+700	4928778.77	648262.72
1+750	4928742.43	648228.38
1+800	4928706.09	648194.04
1+850	4928669.75	648159.70
1+900	4928633.41	648125.35
1+950	4928597.07	648091.01
2+000	4928560.73	648056.67
2+050	4928525.08	648021.02
2+100	4928490.04	647986.97
2+150	4928454.06	647951.26
2+200	4928418.69	647915.91
2+250	4928383.32	647880.57
2+300	4928347.80	647845.39
2+350	4928311.17	647811.36
2+400	4928272.83	647779.30
2+450	4928233.91	647747.92
2+500	4928197.56	647713.59
2+550	4928161.21	647679.26
2+600	4928124.86	647644.92
2+650	4928088.51	647610.59
2+700	4928052.16	647576.26
2+750	4928015.81	647541.93
2+800	4927979.46	647507.60
2+850	4927943.11	647473.27
2+900	4927906.75	647438.94
2+950	4927870.40	647404.61
3+000	4927834.05	647370.28
3+050	4927797.70	647335.95
3+100	4927761.35	647301.62
3+150	4927726.77	647266.53
3+200	4927690.50	647231.13

NORTHWEST EMBANKMENT - CONSTRUCTION LAYOUT TEMPORARY BENCHMARKS

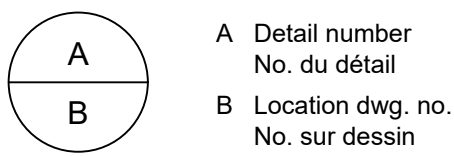
TBM	Description	Northing	Easting	Elevation
		NAD 83	NAD 83	GSC28:78
TBM1	LOCK 41 - SETPLUG	4927597.386	647153.316	222.845
TBM2	LOCK 41 - SETPLUG	4927605.939	647161.380	222.814
TBM3	LOCK 40 - SETPLUG	4928396.948	647909.579	227.055
TBM4	LOCK 40 - SETPLUG	4928406.008	647918.140	226.996
TBM5	LOCK 39 - SETPLUG	4928960.118	648441.525	231.543
TBM6	LOCK 39 - SETPLUG	4928971.817	648452.570	231.570
TBM7	LOCK 39 - CULVERT?			231.288
TBM8	LOCK 39 - CULVERT?			231.311
TBM9	TALBOT DAM - SOUTH OF PARKING AREA	4929877.481	649466.344	231.323
TBM10	TALBOT DAM - BRASS CAP IN NORTH D/S BRIDGE ABUTMENT	4929975.604	649471.203	227.888
TBM11	TALBOT DAM - BRASS ROD	4930088.829	649519.919	230.694
TBM12	REBAR	4930333.502	650233.336	234.528
TBM13	LOCK 38 - PK NAIL IN NORTH UPSTREAM LOCK APPROACH WALL	4930302.537	650588.040	235.545
TBM14	LOCK 38 - PK NAIL IN SOUTH UPSTREAM LOCK APPROACH WALL	4930271.591	650603.021	235.537
TBM15	LOCK 38 - PK NAIL IN SOUTH LOCK WALL BY DOWNSTREAM GAT	4930244.379	650500.422	235.535

Canada

KGS GROUP CONSULTING ENGINEERS

F	ISSUED FOR TENDER	DN	19-08-20
E	ISSUED FOR TENDER	DL	12-01-19
D	ISSUED FOR TENDER	DL	01-25-18
C	ISSUED FOR TENDER	DL	12-11-17
B	ISSUED FOR REVIEW - 99%	DL	11-15-17
0	ISSUED FOR REVIEW - 66%	DL	10-23-17
No.	Description	Dwn.By Des.Par	Date

Revision / Révision



A Detail number
No. du détail
B Location dwg. no.
No. sur dessin

ISSUED FOR TENDER

Project title / Titre du projet

TSW INFRASTRUCTURE
TALBOT CANAL
REHABILITATION - NORTH
EMBANKMENT

Drawing title / Titre du dessin

CONSTRUCTION NOTES

Drawn by / Dessiné par	Designed by / Conçu par
DAVID LEUNG	DAVID LEUNG
Approved by / Approuvé par	Drawing Date / Date du dessin
STEVE CLARK	DECEMBER 1, 2019

Project manager / Administrateur de projet

STEVE CLARK

Contract No. / Numéro du contrat

TBD

Project No. / Numéro du projet

161-14299-00

Drawing No. / Dessiné No.

G101

Sheet / Feuille

1 of 26

