Proposed New HDPE Culvert Crossings

Culvert ID #	HIGHWAY STATION	Size (mm)	Description	Fish Bearing Watercourse Crossing	Amphibian Modification	Applicable Standard Drawing
30000	H21+706	600				D-5
31050	H21+121	600	WATER PRESENT - FLOWS TO HWY			D-5
31100	H21+121	600	WATER PRESENT - FLOWS TO HWY			D-5
31300	H20+800	600	WATER PRESENT - FLOWS TO HWY		X	D-5
60100	H20+746	600	SEE DRAWING W-1 FOR CULVERT LENGTH			D-5, W-1
60200	H20+696	600	SEE DRAWING W-1 FOR CULVERT LENGTH			D-5, W-1
31500	H20+391	600	WATER PRESENT - FLOWS TO HWY			D-5
31600	H20+375	600	WATER PRESENT - FLOWS TO HWY			D-5
39100	H20+284	600				D-5
31900	H19+580	600	STANDING WATER			D-5
60300	H19+457	600	SEE DRAWING W-2 FOR CULVERT LENGTH			D-5, F-3, W-2
60350	H19+420	200	SEE DRAWING W-2 FOR CULVERT LENGTH			D-5, F-3, W-2
60400	H19+370	600	SEE DRAWING W-2 FOR CULVERT LENGTH			D-5, F-3, W-2
33500	H18+888	600	STANDING WATER			D-5
33300	H18+842	600	WATER PRESENT - FLOWS TO HWY			D-5
34500	H18+815	600	STANDING WATER			D-5
33200	H18+796	600	WATER PRESENT - FLOWS TO HWY			D-5
33100	H18+775	600				D-5
33000	H18+768	600				D-5
36400	H18+734	600				D-5
32500	H18+562	600	WATER BALANCE CULVERT			D-5
32300	H18+508	600	WATER PRESENT - FLOWS TO HWY			D-5
32200	H18+448	600	STANDING WATER			D-5
39200	H18+429	600				D-5
32100	H18+379	600	WATER PRESENT - FLOWS TO HWY			D-5
32000	H18+266	600	WATER PRESENT - FLOWS TO FISH BEARING STREAM AT TY-HISTANIS			D-5
60500	H18+191	600			X	D-5
60600	H17+990	600				D-5
60700	H17+833	600				D-5
36900	H17+691	600	WATER PRESENT - OLD DITCH FLOWS TO FOREST		X	D-5
37000	H17+629	600	DITCHES EITHER SIDE OF OLD ROAD - FLOWS TO HWY			D-5
37100	H17+555	600	STANDING WATER - BOGGY,		X	D-5
39300	H17+430	600				D-5
37200	H17+283	600	WATER PRESENT - FLOWS TO HWY,			D-5
60800	H17+067	600	SEE DRAWING W-3 FOR CULVERT LENGTH			D-5, W-3
60900	H17+043	600	SEE DRAWING W-3 FOR CULVERT LENGTH			D-5, W-3
60850	H17+040	200	SEE DRAWING W-3 FOR CULVERT LENGTH			D-5, W-3
37300	H17+012	600	STANDING WATER		X	D-5
60950	H16+898	600				D-5
60960	H16+867	600				D-5
61000	H16+707	900				D-5, HW-1
61100	H16+046	600				D-5
65000	H15+036	600			X	D-5
40100	H14+779	600				D-5
40400	H14+357	600				D-5
61300	H14+206	750				D-5
40500	H13+996	600				D-5
61500	H13+864	750				D-5
41000	H12+262	600				D-5
41100	H12+239	600				D-5
41200	H12+101	750				D-5
61800	H11+966	750			X	D-5
65500	H11+810	600				D-5
41600	H11+528	2 x 750		X		D-5
41700	H11+431	750				D-5
41900	H11+244	750				D-5
42000	H11+207	600				D-5
42100	H11+135	600				D-5
42200	H11+023	600				D-5
42300	H10+957	600				D-5
42400	H10+737	600				D-5
62100	H10+509	3 x 600			X	D-5, F-8
42500	H10+349	600				D-5
42600	H10+230	600			X	D-5
42700	H9+977	600				D-5
42800	H9+853	600				D-5
42900	H9+447	600				D-5
43000	H9+431	600				D-5
49000	H9+406	900				D-5
49001	H9+370	900				D-5
62300	H9+116	600				D-5
62400	H9+089	600				D-5
65600	H8+890	600				D-5
43200	H8+882	750	FLOWS SOUTH INTO TRIBUTARY TO SANDHILL CREEK	X		D-5
43300	H8+826	600				D-5
43400	H8+692	600				D-5

Proposed New HDPE Culvert Crossings

Culvert ID #	HIGHWAY STATION	Size (mm)	Description			Applicable Standard Drawing
62500	H8+450	600	SEE DRAWING W-8 FOR CULVERT LENGTH			D-5, W-8
62600	H8+317	600	SEE DRAWING W-8 FOR CULVERT LENGTH			D-5, W-8
43500	H8+202	600	ADD 5 METERS TO STANDARD LENGTH FOR SKEWED PIPE ORIENTATION			D-5
43600	H8+063	600	ADD 5 METERS TO STANDARD LENGTH FOR SKEWED PIPE ORIENTATION		X	D-5
43700	H7+936	600				D-5
62700	H7+710	600	SEE DRAWING W-12 FOR CULVERT LENGTH			D-5, W-12
62750	H7+570	600	SEE DRAWING W-12 FOR CULVERT LENGTH			D-5, W-12
62800	H7+307	600				D-5
44000	H7+161	600				D-5
44200	H6+364	600	ADD 5 METERS TO STANDARD LENGTH FOR SKEWED PIPE ORIENTATION		X	D-5
44400	H6+040	750			X	D-5
44600	H5+779	600	ADD 5 METERS TO STANDARD LENGTH FOR SKEWED PIPE ORIENTATION		X	D-5
44800	H5+595	600			X	D-5
44900	H5+450	900	ADD 5 METERS TO STANDARD LENGTH FOR SKEWED PIPE ORIENTATION			D-5
45000	H5+388	600	ADD 5 METERS TO STANDARD LENGTH FOR SKEWED PIPE ORIENTATION			D-5
45200	H4+790	1200		X		D-5, F-11
45300	H4+774	600		X		D-5, F-11
62900	H4+680	450	SEE DRAWING W-9 FOR CULVERT LENGTH			D-5, W-9, F-12
63000	H4+646	200	SEE DRAWING W-9 FOR CULVERT LENGTH			D-5, W-9, F-12
63100	H6+614	600	SEE DRAWING W-9 FOR CULVERT LENGTH			D-5, W-9, F-12
45400	H4+495	750				D-5
45500	H4+010	600			X	D-5
45600	H3+761	600				D-5
45700	H3+737	600				D-5
63200	H3+272	600				D-5
46000	H2+784	600				D-5
46200	H2+237	750				D-5
46300	H2+012	900				D-5
47200	H1+602	600				D-5
46500	H1+156	600				D-5
46600	H0+845	600			X	D-5
46650	H0+798	750			X	D-5
55100	W2+708	600				D-5
55000	W2+704	600				D-5
54200	W2+363	600				D-5
54250	W2+546	900	SEE DRAWING W-11 FOR CULVERT LENGTH			D-5, W-11
54300	W1+847	900	FLOWS SOUTH AND CONNECTS TO SANDHILL CREEK TRIBUTARY	X		D-5
54400	W1+371	600	FLOWS SOUTH AND CONNECTS TO SANDHILL CREEK TRIBUTARY	X		D-5
54500	W0+919	2 x 600	BALANCING FLOWS BETWEEN BOG HABITAT, BUT EVENTUALLY CONNECTS TO SANDHILL CREEK IN HIGHWATER	X		D-5
54600	W0+682	750	FLOWS NORTH AND EVENTUALLY CONNECTS TO SANDHILL CREEK	X		D-5
54700	W0+534	600	FLOWS NORTH AND EVENTUALLY CONNECTS TO SANDHILL CREEK	X		D-5
54800	W0+453	750	FLOWS NORTH AND EVENTUALLY CONNECTS TO SANDHILL CREEK	X		D-5

Proposed New Concrete Drainage Box Culverts

Culvert ID #	Highway Station	Size (mm)	Description	Fish Bearing Watercourse Crossing	Amphibian Modification	Applicable Standard Drawing
30500	H21+530	1800x900x5m BOX	FLOWS NORTH AWAY FROM HWY	X		D-7
31000	H21+341	1800x900x5m BOX	FLOWS NORTH AWAY FROM HWY	X		D-7
31200	H21+084	1800x1200x5m BOX	POOLING WATER, FLOWS TOWARDS HWY AND INTO WATERCOURSE	X		D-7
31400	H20+779	1800x1200x5m BOX	FLOWS NORTH AWAY FROM HWY	X		D-7
36600	H18+068	1800x900x5m BOX	FLOWS SOUTH INTO FOREST, THEN BACK AROUND INTO WATERCOURSE	X		D-7, F-5
36800	H17+780	1800x1200x5m BOX	WATER PRESENT - FLOWS TO HWY		X	D-7
37400	H16+008	1800x1200x5m BOX	FLOWS SOUTH TO LONG BEACH.	X		D-7
37500	H15+865	2400x1200x5m BOX	FLOWS SOUTH TO LONG BEACH.	X		D-7
37600	H15+741	1800x1200x5m BOX	FLOWS SOUTH TO LONG BEACH.	X		D-7
37700	H15+690	1800x1200x5m BOX	FLOWS SOUTH TO LONG BEACH.	X		D-7
37800	H15+543	2400x1200x5m BOX	WATER PRESENT			D-7
65100	H15+399	1800x1200x5m BOX				D-7, F-7
65150	H15+392	1800x1200x5m BOX				D-7, F-7
40600	H13+766	2400x1200x5m BOX				D-7
40700	H13+557	2400x1200x5m BOX				D-7
44700	H5+702	1800 x 1200 x 5m BOX				D-7
45100	H5+144	1800 x 1200 x 5m BOX		X		D-7
43250	H3+304	2100 x 1200 x 5m BOX	TRIBUTARY TO SANDHILL CREEK. FLOWS WEST	X		D-7, F-13
45900	H3+177	2100 x 900 x 5m BOX	TRIBUTARY TO SANDHILL CREEK. FLOWS SOUTHWEST	X		D-7, F-14
46100	H2+454	1800 x 1200 x 5m BOX	EPHEMERAL. FLOWS SOUTH INTO TRIBUTARY OF LOST SHOE CREEK	X		D-7
46400	H1+742	2100 x 900 x 5m BOX	FLOWS SOUTH. TRIBUTARY TO LOST SHOW CREEK	X		D-7, F-15

Proposed Temporary Access HDPE Culvert Crossings

Culvert ID #	HIGHWAY STATION	Sheet#	Size (mm)
70000	H21+363	T-1	450
70100	H20+758	T-2	450
70200	H20+672	T-2	450
70400	H19+977	T-2	450
70500	H19+781	T-3	450
70700	H19+137	T-3	450
70800	H18+197	T-4	450
70900	H17+639	T-5	450
71000	H17+491	T-5	450
71100	H17+138	T-5	450
71200	H15+050	T-8	450
71300	H14+491	T-8	450
71400	H14+339	T-8	450
71500	H14+220	T-8	450
71600	H14+168	T-8	450
71700	H13+855	T-9	450
71800	H13+710	T-9	450
71900	H13+693	T-9	450
72000	H13+513	T-9	450
72200	H12+590	T-10	450
72300	H12+475	T-10	450
72400	H12+020	T-11	450
72600	H10+820	T-12	450
72700	H10+548	T-12	450
72800	H9+375	T-14	450
72900	H9+125	T-14	450
73000	H9+088	T-14	450
73200	H8+606	T-14	450
73300	H8+452	T-15	450
73400	H7+850	T-15	450
73500	H7+725	T-15	450
73600	H7+600	T-15	450
73700	H7+280	T-16	450
73900	H6+660	T-16	450
74000	H6+370	T-17	450
74100	H6+154	T-17	450
74300	H5+768	T-17	450
74400	H5+450	T-18	450
74500	H5+380	T-18	450
74600	H5+217	T-18	450
74700	H5+000	T-18	450
74800	H4+587	T-19	450
74900	H4+180	T-19	450
75000	H3+289	T-20	450
75100	H2+890	T-20	450
75300	H2+100	T-21	450
75500	H1+420	T-22	450
75600	H1+100	T-22	450
75800	H0+250	T-23	450
75900	W1+899	T-25	450
76000	W2-546	T-26	450

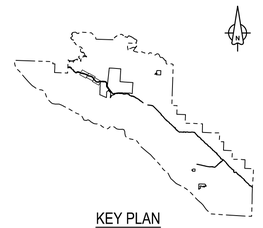
Proposed Permanent Access HDPE Culvert Crossings

Culvert ID #	HIGHWAY STATION	Sheet#	Size (mm)
80000	H20+270	T-2	600
80100	H19+488	T-3	600
80200	H13+215	T-9	600
80300	H11+650	T-11	600
80400	H10+200	T-13	600
80500	H6+820	T-16	600
80600	H5+880	T-17	600
80700	H2+100	T-21	600
80800	H1+530	T-22	600
80900	H0+670	T-23	600
81000	W1+416	T-25	600
81100	W1+672	T-25	600

NOTES:
1. ALL STATIONING IS HIGHWAY (H) OR WICK ROAD (W) STATIONING
2. ALL CULVERTS TO BE 600mm DIA HDPE UNLESS OTHERWISE SHOWN IN ACCORDANCE WITH DRAWING D-5
3. BOX CULVERTS TO BE IN ACCORDANCE WITH DRAWING D-7
4. CULVERTS IDENTIFIED AS AMPHIBIAN MODIFIED TO BE FILLED WITH NATIVE SOIL INSTEAD OF SPAWNING GRAVEL AS NOTED IN DRAWING D-5 AND D-7
5. TEMPORARY ACCESS CULVERTS TO BE IN ACCORDANCE WITH DRAWING D-9
6. PERMANENT ACCESS CULVERTS TO BE IN ACCORDANCE WITH DRAWING D-10
7. CULVERTS AND BRIDGES NOTED AS FISH BEARING WATERCOURSE CROSSINGS ARE LOCATED ALONG FISH BEARING WATERCOURSES OR ARE CONNECTED BY SURFACE FLOW TO FISH BEARING (OR ASSUMED FISH BEARING) HABITAT. SPECIAL TIMING RESTRICTIONS AND MITIGATION MEASURES WILL APPLY AS PER 01 35 43 ENVIRONMENTAL PROCEDURES. MITIGATION MEASURES FOR FISH BEARING WATERCOURSE CROSSINGS ARE LISTED BELOW:
   - 7.1. INSTREAM WORKS TO ONLY PROCEED FOLLOWING REVIEW BY DEPARTMENT OF FISHERIES AND OCEANS CANADA. REVIEW TO BE SECURED BY OTHERS
   - 7.2. OWNER'S ENVIRONMENTAL MONITOR MUST BE PRESENT DURING ALL INSTREAM WORKS BY CONTRACTOR
   - 7.3. 10 DAYS NOTICE TO BE PROVIDED TO DEPARTMENTAL REPRESENTATIVE TO ALLOW FOR SALVAGE AND RELOCATION OF FISH & AMPHIBIANS BY OWNER'S ENVIRONMENTAL MONITOR, AS NEEDED.
   - 7.4. ALL WORK WITHIN THE HIGH WATER MARK TO BE COMPLETED DURING FISHERIES WINDOWS NOTED IN SECTION 01 35 43
   - 7.5. INSTERAM WORKS TO BE APPROPRIATELY ISOLATED FROM STREAM FLOWS. WATER TO BE DIVERTED USING A METHOD APPROVED BY THE OWNER'S ENVIRONMENTAL MONITOR.

Parks Canada Agency / L'Agence Parcs Canada

PARSONS



KEY PLAN
N.T.S.

Revision/ Revision	Description/Description	Date/Date
–	----	----
–	----	----
3	ISSUED FOR TENDER	30/01/2019
2	ISSUED FOR TENDER	18/12/2018
1	ISSUED FOR TENDER	18/12/2017
0	ISSUED FOR TENDER	27/10/2017

Client/client

Parks Canada Agency / L'Agence Parcs Canada
Western and Northern Region / Ouest et Nord du Canada

Project title/Titre du projet
TOFINO
PACIFIC RIM NATIONAL PARK RESERVE ʔapsc̓iik t̓asi̓i (Ups-cheek ta-shee) "Going in the right direction on the trail"

Consultant Signature Only

Designed by/Concept par
DON CHALMERS / 2016-11

Drawn by/Dessine par
DAVID COX / 2016-11

PCA Project Manager/Technical Authority
Administrateur de Projets APC
JACKIE HICKS

Drawing title/Titre du dessin
ʔapsc̓iik t̓asi̓i (Ups-cheek ta-shee) "Going in the right direction on the trail" TRAIL DESIGN

PROPOSED HDPE CULVERT SCHEDULE AND BOX CULVERT SCHEDULE

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Révision no.
PCA #1522	D-2 OF	3