



MAP BOOK

Ice Jam Flood Inundation Map Library

Athabasca Flood Hazard Study - Volume 3

Submitted to:

Alberta Environment and Parks

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Submitted by:

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19117524

March 2020

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Table of Contents

Ice Jam Flood Inundation Index Map

50-Year Flood Inundation Extent

100-Year Flood Inundation Extent

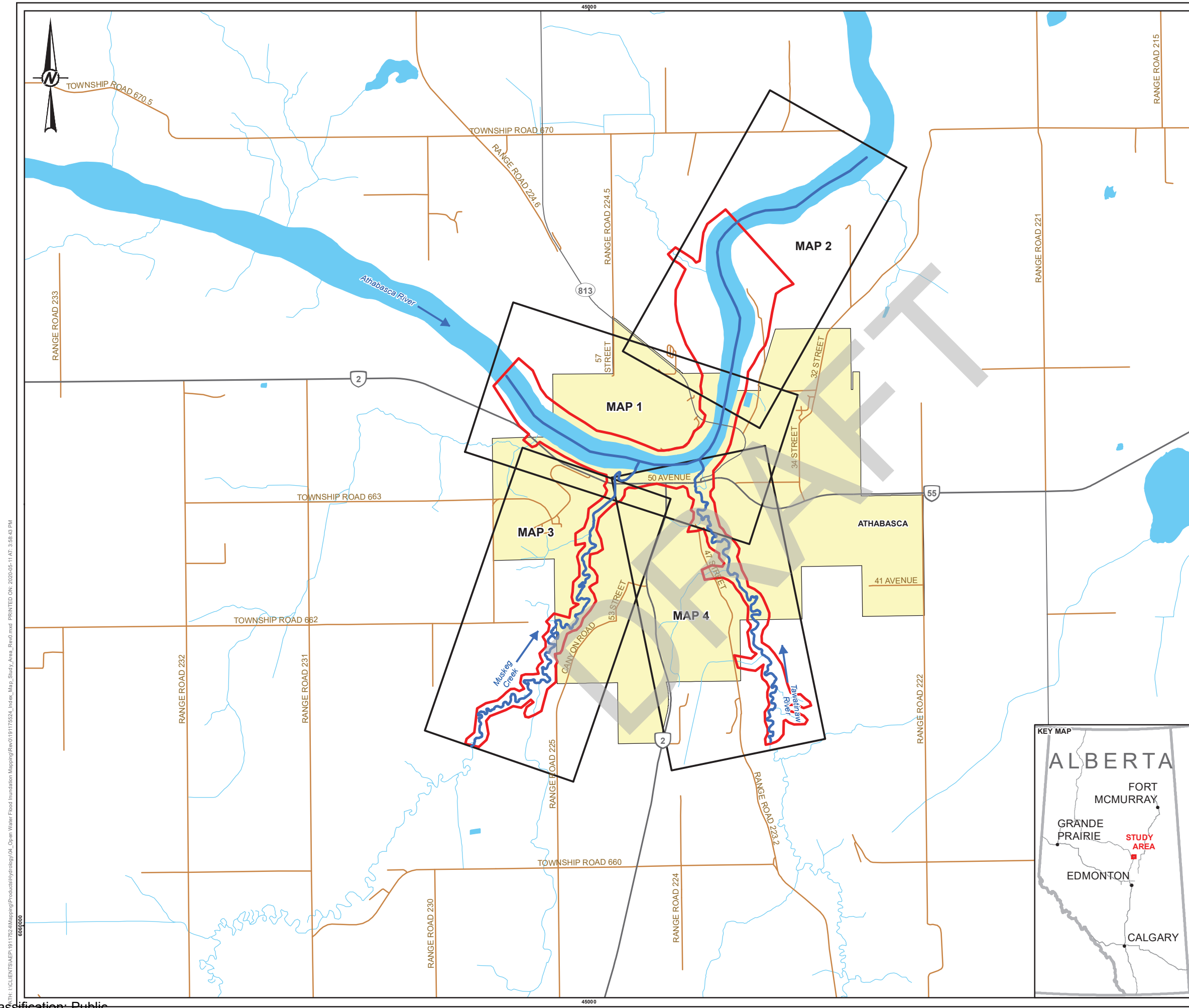
200-Year Flood Inundation Extent

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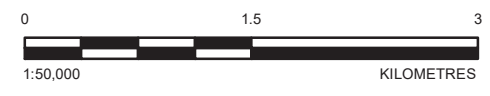
ICE JAM FLOOD INUNDATION INDEX MAP

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LEGEND

- PRIMARY HIGHWAY
- SECONDARY HIGHWAY
- LOCAL ROAD
- WATERCOURSE
- WATERBODY
- POPULATED PLACE
- SURVEY REACH
- MAPBOOK EXTENT
- FLOOD HAZARD STUDY AREA



NOTE(S)

- PLEASE REFER TO THE ACCOMPANYING **ATHABASCA FLOOD HAZARD STUDY REPORT** FOR IMPORTANT INFORMATION CONCERNING THESE MAPS.
- TO DETERMINE WHETHER OR NOT A PARTICULAR SITE IS SUBJECT TO FLOODING, REFERENCE SHOULD BE MADE TO THE COMPUTED FLOOD LEVELS IN CONJUNCTION WITH SITE-SPECIFIC SURVEYS WHERE DETAILED DEFINITION IS REQUIRED.
- NON-RIVERINE AND LOCAL SOURCES OF WATER HAVE NOT BEEN CONSIDERED. CHANNEL OBSTRUCTION, LOCAL STORMWATER INFLOW, GROUNDWATER SEEPAGE OR OTHER LAND DRAINAGE CAN CAUSE FLOOD LEVELS TO EXCEED THOSE INDICATED ON THE MAP. LANDS ADJACENT TO A FLOODED AREA MAY BE SUBJECT TO FLOODING FROM TRIBUTARY STREAMS NOT INDICATED ON THE MAPS.
- LINE WORK FOR BRIDGES AND FLOOD CONTROL STRUCTURES IS SHOWN ABOVE FLOOD INUNDATION AREAS, EVEN IN CASES WHERE BRIDGES OR FLOOD CONTROL STRUCTURES ARE INUNDATED.

DEFINITIONS:

FLOOD INUNDATION MAPPING - DELINEATES FLOOD INUNDATION AREAS, SHOWING THE EXTENT OF ONE OR MORE FLOOD SCENARIOS UNDER EXISTING CONDITIONS. DEPENDING ON THE PARTICULAR FLOOD SCENARIO, THE MAPPING MAY BE DIVIDED INTO MULTIPLE ZONES. FLOOD INUNDATION MAPPING IS TYPICALLY USED FOR NEAR REAL-TIME EMERGENCY RESPONSE PLANNING AND OPERATIONS.

FLOOD INUNDATION AREA - THE AREA INUNDATED DURING A PARTICULAR FLOOD SCENARIO UNDER EXISTING CONDITIONS. THE FLOOD INUNDATION AREA MAY BE DIVIDED INTO MULTIPLE ZONES, INCLUDING AREAS INUNDATED DUE TO POTENTIAL FLOOD CONTROL STRUCTURE FAILURE. FLOOD INUNDATION AREAS MAY CHANGE AS A RESULT OF FUTURE DEVELOPMENT OR FLOW OBSTRUCTIONS.

FLOOD SCENARIO - FLOW CONDITIONS THAT DESCRIBE A PARTICULAR FLOOD EVENT. FLOOD SCENARIOS TYPICALLY REPRESENT A RANGE OF FLOWS, BASED EITHER ON FLOOD FREQUENCY ANALYSIS OR SET FLOW INTERVALS. THE FLOOD SCENARIOS INCLUDED WITH THIS MAP SET INCLUDED THE 2-YEAR, 5-YEAR, 10-YEAR, 20-YEAR, 35-YEAR, 50-YEAR, 75-YEAR, 100-YEAR, 200-YEAR, 350-YEAR, 500-YEAR, 750-YEAR AND 1000-YEAR OPEN WATER FLOOD EVENTS, AND THE 50-YEAR, 100-YEAR AND 200-YEAR ICE JAM FLOOD EVENTS.

REFERENCE(S)

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PROJECT
ATHABASCA FLOOD HAZARD STUDY

TITLE
OPEN WATER AND ICE JAM FLOOD INUNDATION INDEX MAP

CONSULTANT	YYYY-MM-DD	2020-03-31
DESIGNED		NS
PREPARED		PT
REVIEWED		NS
APPROVED		NS

PROJECT NO. 19117524 CONTROL 4000 REV. 0 FIGURE 1



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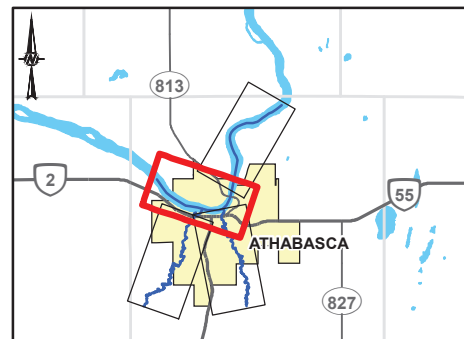
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50-YEAR FLOOD INUNDATION EXTENT

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LEGEND		50-YEAR ICE JAM FLOOD INUNDATION EXTENT
—	CROSS SECTION	50-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	CULVERT
RS 4994	RIVER STATION (M)	BRIDGE
	MAPPING BOUNDARY	
	FLOW DIRECTION	
	LOCAL ROAD	
	PRIMARY HIGHWAY	
	SECONDARY HIGHWAY	
		DESIGN DISCHARGE
		ATHABASCA RIVER = 915 M ³ /S



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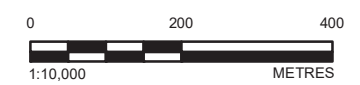
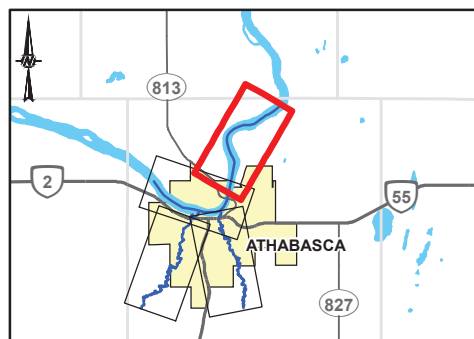
TITLE
50-YEAR ICE JAM FLOOD INUNDATION EXTENT

PROJECT NO.	CONTROL	REV.	FIGURE
19117524	4000	0	SHEET 1 OF 4



SHEET 1 ↑

LEGEND		50-YEAR ICE JAM FLOOD INUNDATION EXTENT
—	CROSS SECTION	50-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	DESIGN DISCHARGE ATHABASCA RIVER = 915 M ³ /S
RS 4994	RIVER STATION (M)	
	MAPPING BOUNDARY	
	FLOW DIRECTION	
	LOCAL ROAD	
	PRIMARY HIGHWAY	
	SECONDARY HIGHWAY	
HYDRAULIC STRUCTURES		
	CULVERT	
	BRIDGE	



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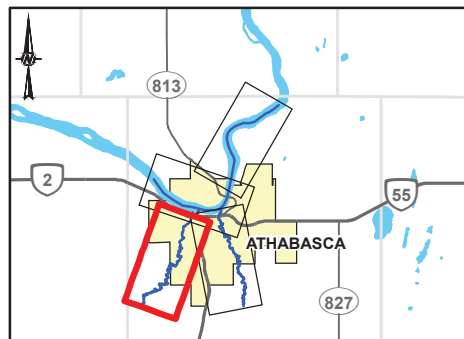
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PROJECT ATHABASCA FLOOD HAZARD STUDY			
TITLE 50-YEAR ICE JAM FLOOD INUNDATION EXTENT			
PROJECT NO. 19117524	CONTROL 4000	REV. 0	FIGURE SHEET 2 OF 4



LEGEND		50-YEAR ICE JAM FLOOD INUNDATION EXTENT
—	CROSS SECTION	50-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	DESIGN DISCHARGE ATHABASCA RIVER = 915 M ³ /S
RS 4994	RIVER STATION (M)	
	MAPPING BOUNDARY	
	FLOW DIRECTION	
	LOCAL ROAD	
	PRIMARY HIGHWAY	
	SECONDARY HIGHWAY	
HYDRAULIC STRUCTURES		
	CULVERT	
	BRIDGE	



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PROJECT
ATHABASCA FLOOD HAZARD STUDY

TITLE
50-YEAR ICE JAM FLOOD INUNDATION EXTENT

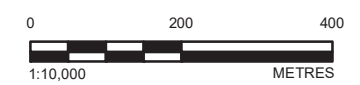
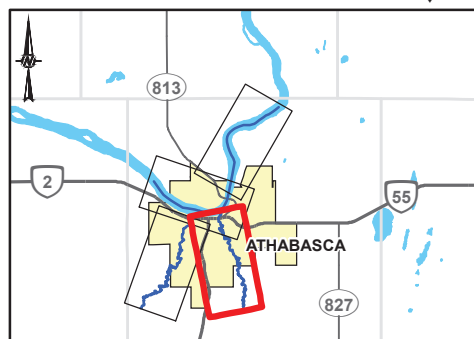
PROJECT NO.	CONTROL	REV.	FIGURE
19117524	4000	0	SHEET 3 OF 4



SHEET 1 ↑

↓ SHEET 3

LEGEND		HYDRAULIC STRUCTURES	50-YEAR ICE JAM FLOOD INUNDATION EXTENT
—	CROSS SECTION	◻	50-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	◻	50-YEAR ICE JAM FLOOD EXTENT
RS 4994	RIVER STATION (M)	—	
—	MAPPING BOUNDARY	—	
→	FLOW DIRECTION	—	
—	LOCAL ROAD	—	
—	PRIMARY HIGHWAY	—	
—	SECONDARY HIGHWAY	—	
			DESIGN DISCHARGE ATHABASCA RIVER = 915 M ³ /S



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ATHABASCA FLOOD HAZARD STUDY

TITLE
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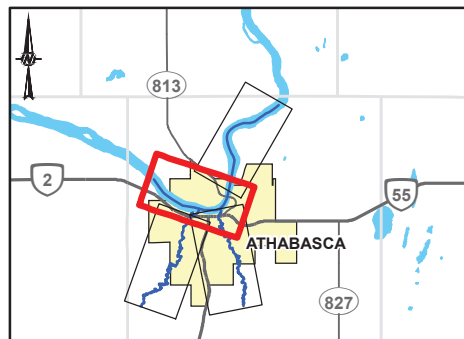
PROJECT NO.	CONTROL	REV.	FIGURE
19117524	4000	0	SHEET 4 OF 4

100-YEAR FLOOD INUNDATION EXTENT

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LEGEND		100-YEAR ICE JAM FLOOD INUNDATION EXTENT
—	CROSS SECTION	100-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	100-YEAR ICE JAM FLOOD EXTENT
RS 4994	RIVER STATION (M)	
	MAPPING BOUNDARY	
	FLOW DIRECTION	
	LOCAL ROAD	
	PRIMARY HIGHWAY	
	SECONDARY HIGHWAY	
HYDRAULIC STRUCTURES		DESIGN DISCHARGE
	CULVERT	ATHABASCA RIVER = 1,150 M ³ /S
	BRIDGE	



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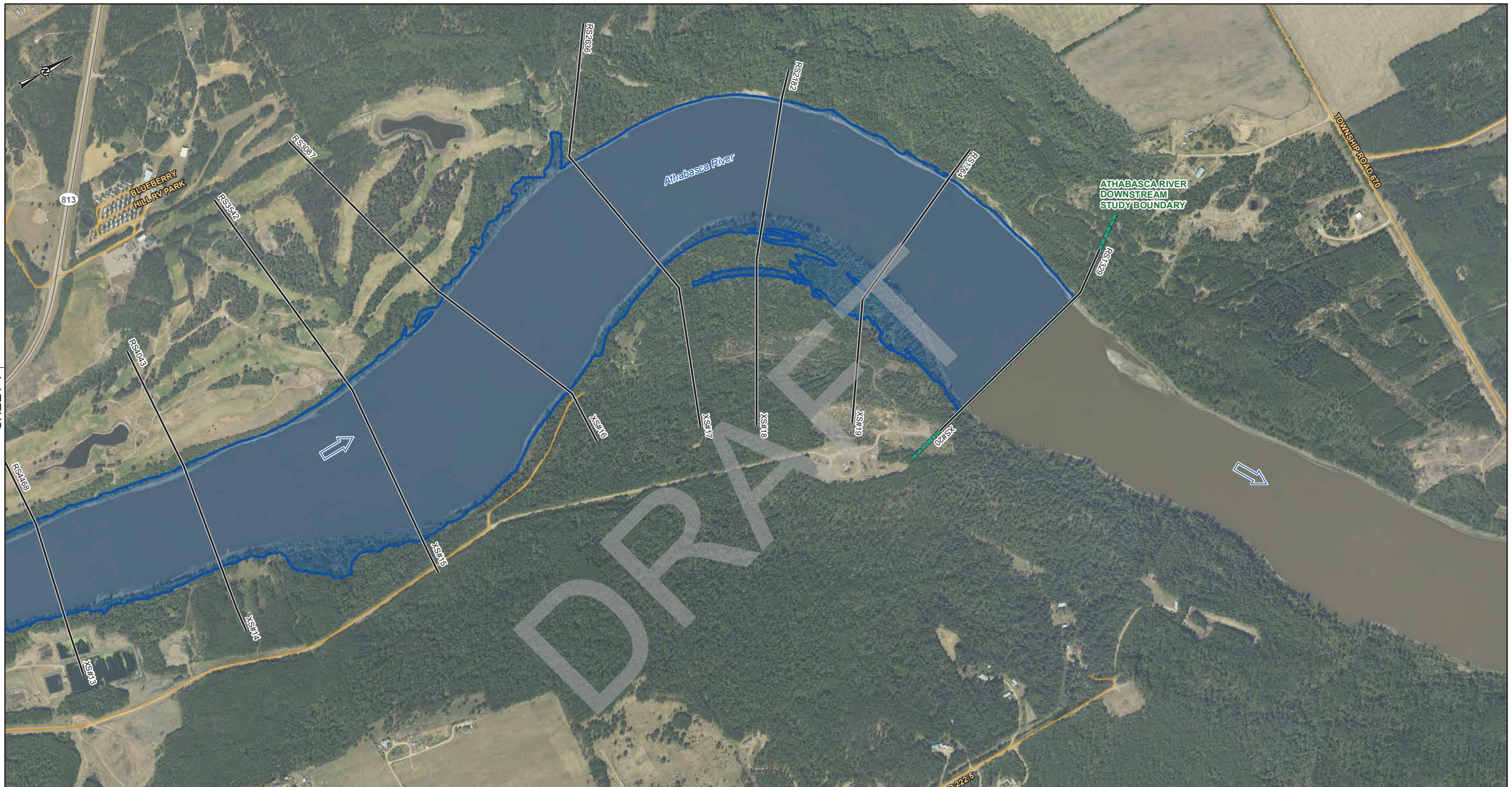
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TITLE
100-YEAR ICE JAM FLOOD INUNDATION EXTENT

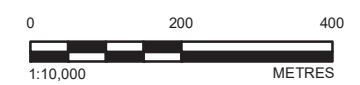
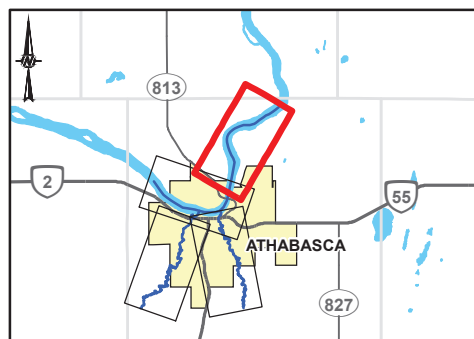
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SHEET 1 ↑

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—	CROSS SECTION	100-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	100-YEAR ICE JAM FLOOD EXTENT
RS 4994	RIVER STATION (M)	
	MAPPING BOUNDARY	
	FLOW DIRECTION	
	LOCAL ROAD	
	PRIMARY HIGHWAY	
	SECONDARY HIGHWAY	
	HYDRAULIC STRUCTURES CULVERT	
	BRIDGE	
	DESIGN DISCHARGE ATHABASCA RIVER = 1,150 M ³ /S	



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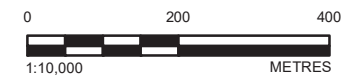
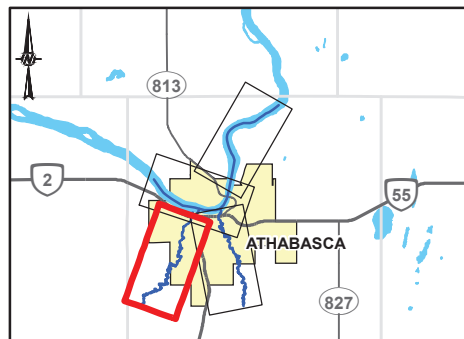
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TITLE 100-YEAR ICE JAM FLOOD INUNDATION EXTENT	
PROJECT NO. 19117524	CONTROL 4000
REV. 0	FIGURE SHEET 2 OF 4



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— CROSS SECTION	◻ CULVERT	◻ 100-YEAR ICE JAM FLOOD EXTENT
XS#10 CROSS SECTION NUMBER	— BRIDGE	
RS 4994 RIVER STATION (M)		
■ MAPPING BOUNDARY		
➔ FLOW DIRECTION		
— LOCAL ROAD		
— PRIMARY HIGHWAY		
— SECONDARY HIGHWAY		
		DESIGN DISCHARGE ATHABASCA RIVER = 1,150 M ³ /S



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PROJECT
ATHABASCA FLOOD HAZARD STUDY

TITLE
100-YEAR ICE JAM FLOOD INUNDATION EXTENT

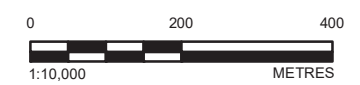
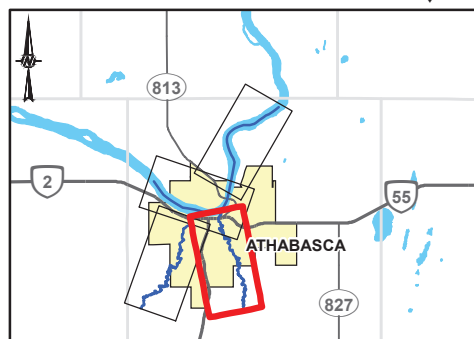
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—	CROSS SECTION	100-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	100-YEAR ICE JAM FLOOD EXTENT
RS 4994	RIVER STATION (M)	
	MAPPING BOUNDARY	
	FLOW DIRECTION	
	LOCAL ROAD	
	PRIMARY HIGHWAY	
	SECONDARY HIGHWAY	
		HYDRAULIC STRUCTURES
	CULVERT	
	BRIDGE	
		DESIGN DISCHARGE
		ATHABASCA RIVER = 1,150 M ³ /S



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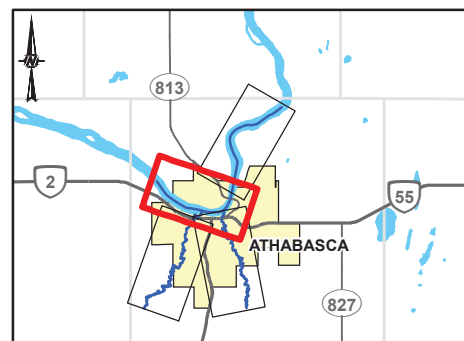
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TITLE		100-YEAR ICE JAM FLOOD INUNDATION EXTENT	
PROJECT NO.	CONTROL	REV.	FIGURE
19117524	4000	0	SHEET 4 OF 4

200-YEAR FLOOD INUNDATION EXTENT

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LEGEND		HYDRAULIC STRUCTURES		200-YEAR ICE JAM FLOOD INUNDATION EXTENT	
—	CROSS SECTION	◻	CULVERT	■	200-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	—	BRIDGE		
RS 4994	RIVER STATION (M)				
—	MAPPING BOUNDARY				
→	FLOW DIRECTION				
—	LOCAL ROAD				
—	PRIMARY HIGHWAY				
—	SECONDARY HIGHWAY				
	DESIGN DISCHARGE				
	ATHABASCA RIVER = 1,410 M ³ /S				



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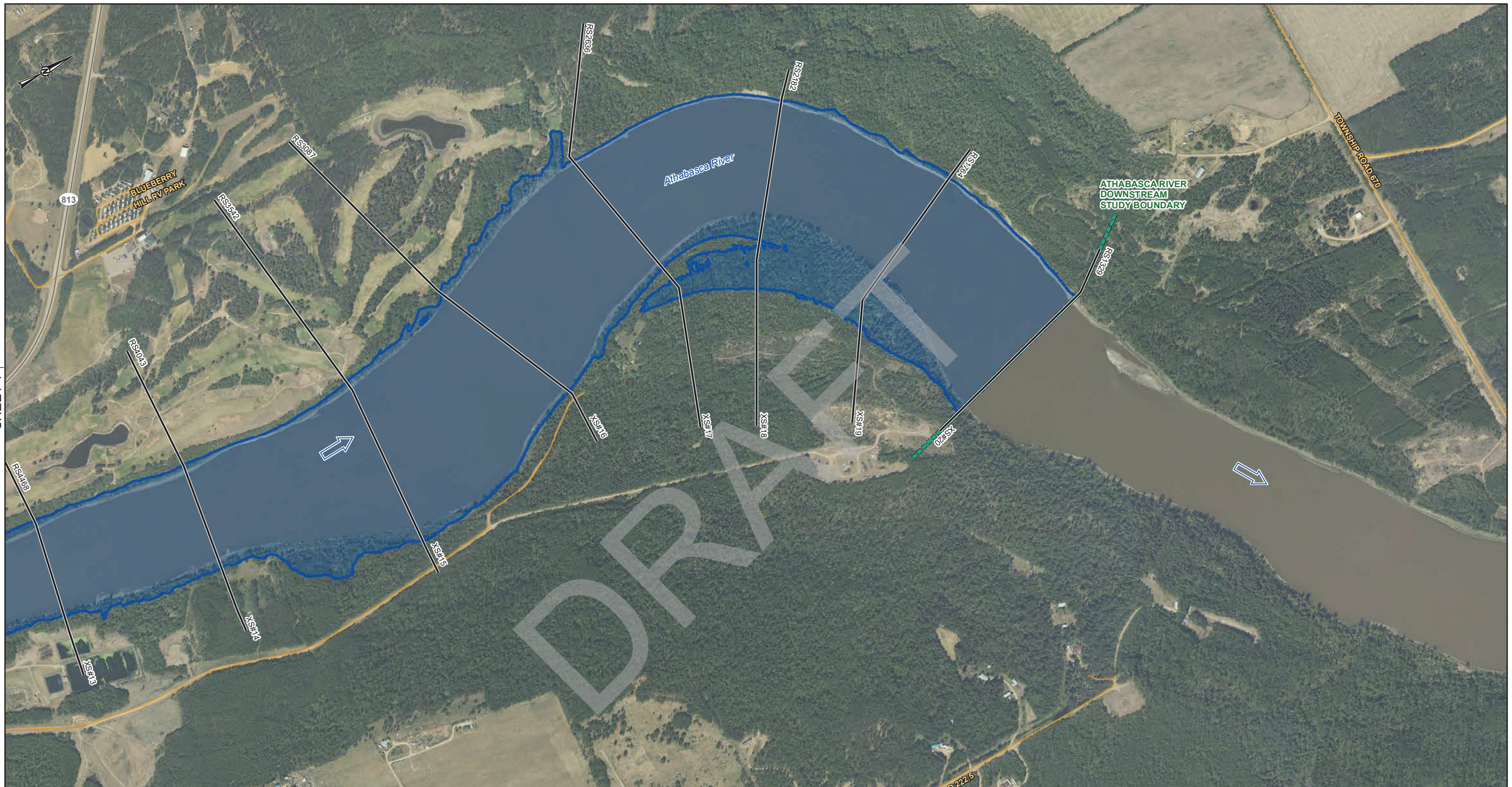
PROJECT
 ATHABASCA FLOOD HAZARD STUDY

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TITLE			
200-YEAR ICE JAM FLOOD INUNDATION EXTENT			
PROJECT NO.	CONTROL	REV.	FIGURE
19117524	4000	0	SHEET 1 OF 4

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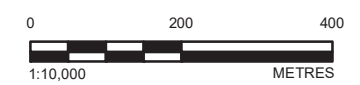
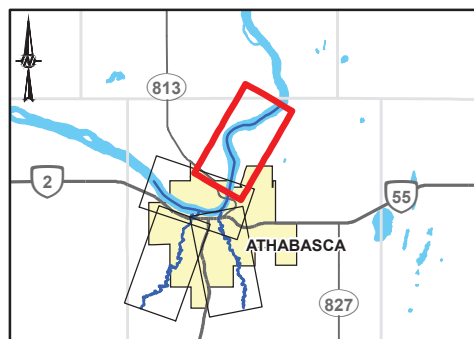
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—	CROSS SECTION	200-YEAR ICE JAM FLOOD EXTENT
XS#10	CROSS SECTION NUMBER	
RS 4994	RIVER STATION (M)	
	MAPPING BOUNDARY	
	FLOW DIRECTION	
	LOCAL ROAD	
	PRIMARY HIGHWAY	
	SECONDARY HIGHWAY	
	HYDRAULIC STRUCTURES CULVERT	
	BRIDGE	
	DESIGN DISCHARGE ATHABASCA RIVER = 1,410 M ³ /S	



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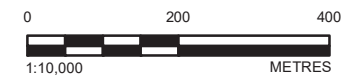
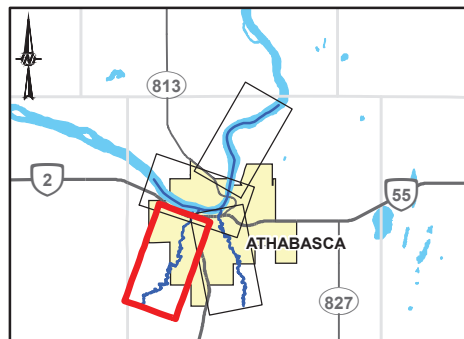
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TITLE 200-YEAR ICE JAM FLOOD INUNDATION EXTENT			
PROJECT NO. 19117524	CONTROL 4000	REV. 0	FIGURE SHEET 2 OF 4



SHEET 1 ↑

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— CROSS SECTION	◻ CULVERT	◻ 200-YEAR ICE JAM FLOOD EXTENT
XS#10 CROSS SECTION NUMBER	— BRIDGE	
RS 4994 RIVER STATION (M)		
■ MAPPING BOUNDARY		
➔ FLOW DIRECTION		
— LOCAL ROAD		
— PRIMARY HIGHWAY		
— SECONDARY HIGHWAY		
		DESIGN DISCHARGE ATHABASCA RIVER = 1,410 M ³ /S



CLIENT
ALBERTA ENVIRONMENT
AND PARKS

CONSULTANT



YYYY-MM-DD	2020-03-31
DESIGNED	NG/JC
PREPARED	PT/BP
REVIEWED	WP
APPROVED	DL

REFERENCE(S)
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DATUM: NAD 83 CSRS PROJECTION: 3TM 114

PROJECT
ATHABASCA FLOOD HAZARD STUDY

TITLE
200-YEAR ICE JAM FLOOD INUNDATION EXTENT

PROJECT NO.	CONTROL	REV.	FIGURE
19117524	4000	0	SHEET 3 OF 4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

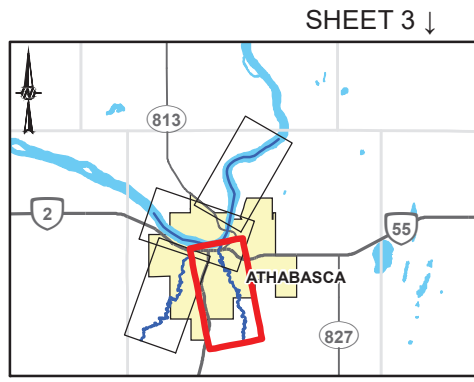
THE CLIENTS/USER 19117524/Mapping/Products/2020-03-31/19117524_200y-ice-jam-flood-inundation-extent_Rev0.mxd PRINTED ON: 2024-05-14 AT: 13:35:20 PM
 IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



LEGEND

—	CROSS SECTION		200-YEAR ICE JAM FLOOD INUNDATION EXTENT	
XS#10	CROSS SECTION NUMBER		HYDRAULIC STRUCTURES	
RS 4994	RIVER STATION (M)			CULVERT
	MAPPING BOUNDARY			BRIDGE
	FLOW DIRECTION			
	LOCAL ROAD			
	PRIMARY HIGHWAY			
	SECONDARY HIGHWAY			

DESIGN DISCHARGE
ATHABASCA RIVER = 1,410 M³/S



SHEET 3 ↓

CLIENT
ALBERTA ENVIRONMENT AND PARKS

CONSULTANT

YYYY-MM-DD	2020-03-31
DESIGNED	NG/JC
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0 200 400
1:10,000 METRES

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PROJECT
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TITLE
200-YEAR ICE JAM FLOOD INUNDATION EXTENT

PROJECT NO.	CONTROL	REV.	FIGURE
19117524	4000	0	SHEET 4 OF 4

DRAFT



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