#### APEGA Permit to Practice - P654

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# PEACE RIVER HAZARD STUDY

# ICE JAM MODELLING ASSESSMENT & FLOOD HAZARD IDENTIFICATION

# **ICE JAM FLOOD INUNDATION MAPS**

Prepared for:



15 June 2018

NHC Ref. No. 1001119





# **TABLE OF CONTENTS**

ICE JAM FLOOD INUNDATION INDEX MAP (1 SHEET)

50-YEAR ICE JAM FLOOD INUNDATION MAP (22 SHEETS)

100-YEAR ICE JAM FLOOD INUNDATION MAP (22 SHEETS)

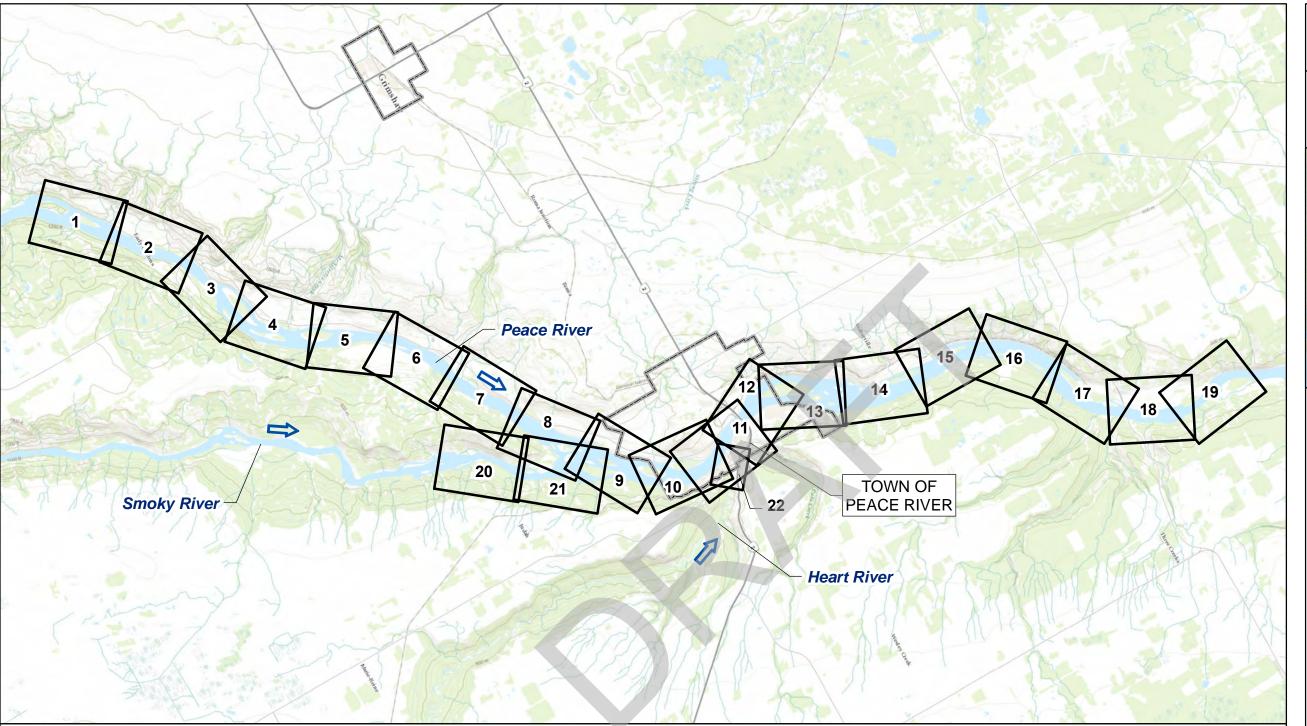
200-YEAR ICE JAM FLOOD INUNDATION MAP (22 SHEETS)







**ICE JAM FLOOD INUNDATION INDEX MAP** 



### **Notes to Users:**

- Please refer to the accompanying Peace River Hazard Study Ice Jam Modelling Assessment and Flood Hazard Identification Report (issued on 15 June 2018) for important information concerning these maps.
- Within the flood inundation areas shown on this map, there may be isolated
  pockets of high ground. 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.
- 3. Non-riverine and local sources of water have not been considered, and structures such roads, railways or barriers such as levees can restrict water flow and affect local flood levels. 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.
- Backwater flood inundation along the Smoky River near the mouth was considered using simulated water levels from the Peace River near the mouth of the Smoky River.
- The flood inundation area is shown above the line work for bridges and flood control structures that are below flood levels.

# **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 and isolated areas that may become inundated due to groundwater seepage or other subsurface connections. 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 include the 50-year, 100-year, and 200-year ice jam flood events.

# **Data Sources and References:**

- Orthophoto imagery acquired by ORTHOSHOP Geomatics Ltd. (3 May 2016) for Alberta Environment and Parks.
- Base data from Town of Peace River, Alberta Environment and Parks, AltaLIS, and NRCan.
- 3. Additional base mapping from Esri.



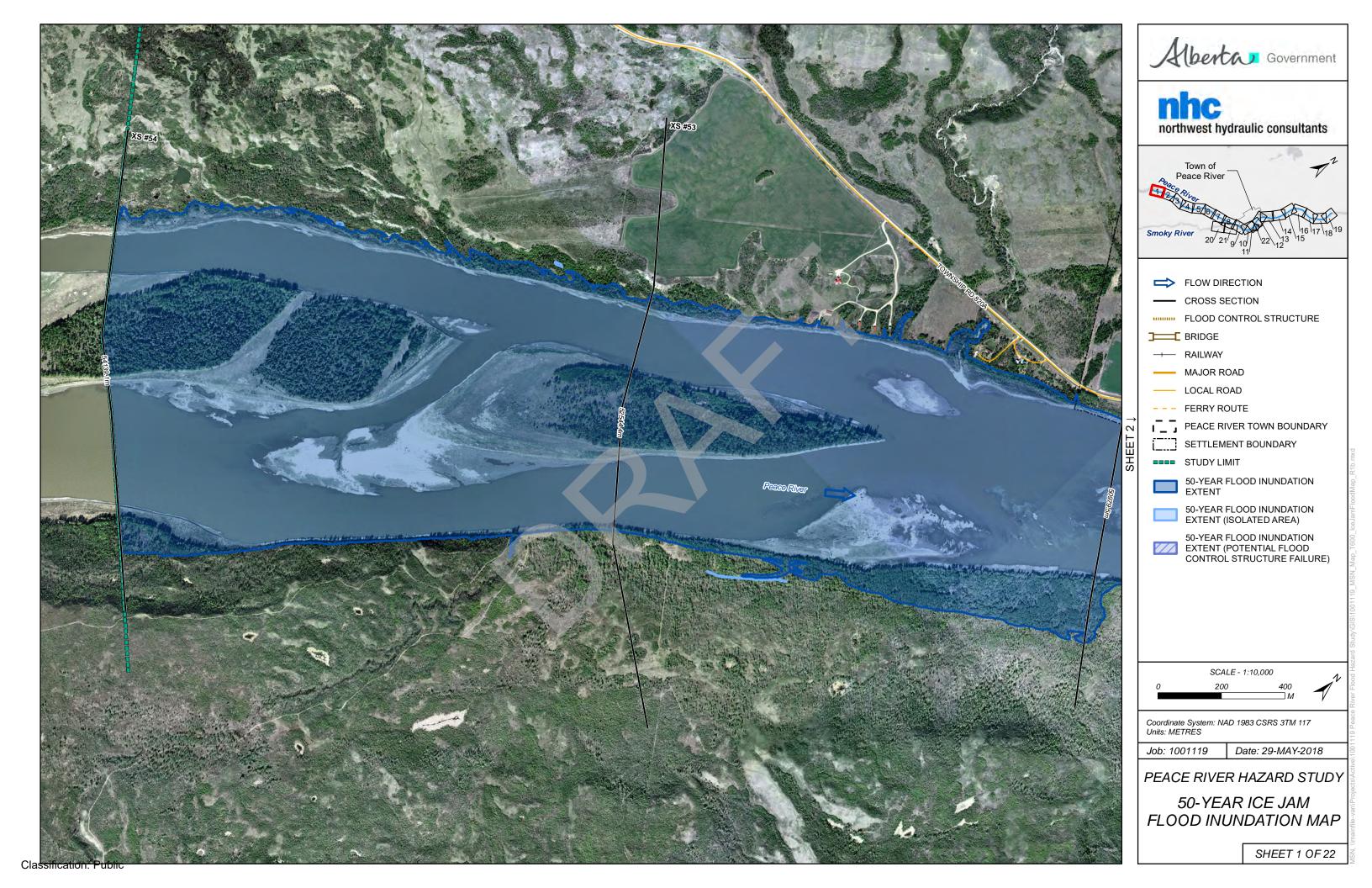
INDEX MAP

Classification: Public



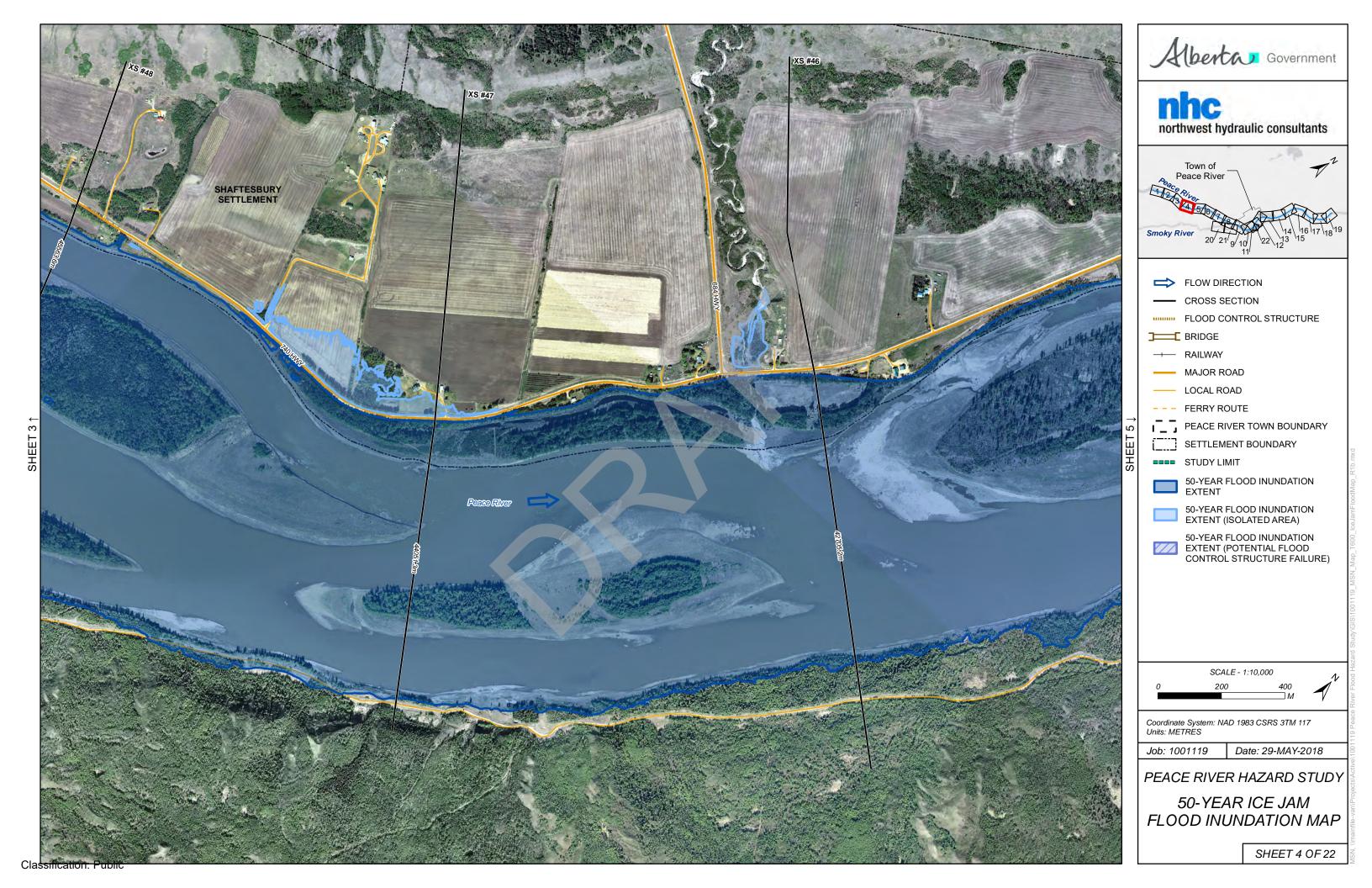


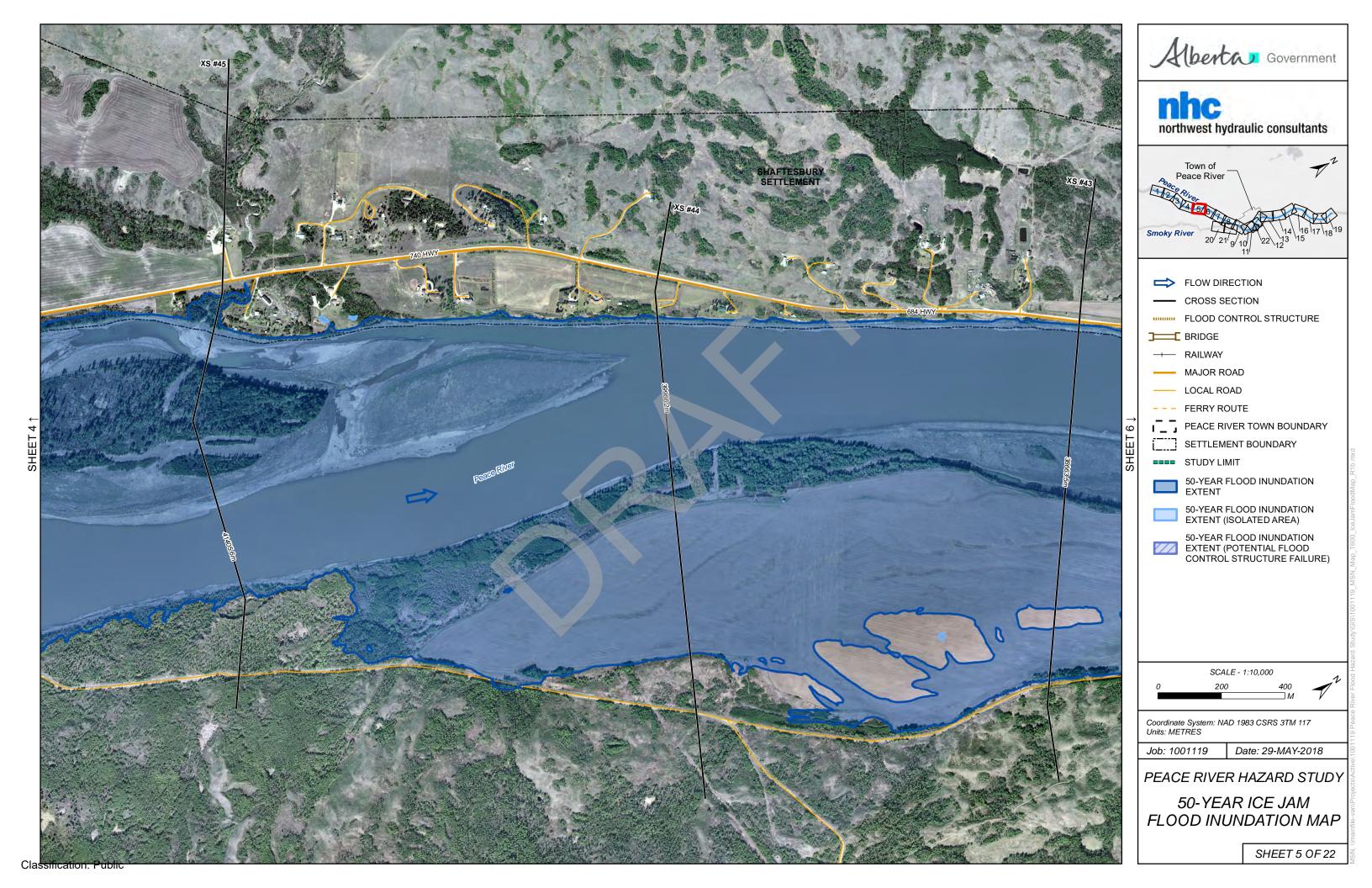










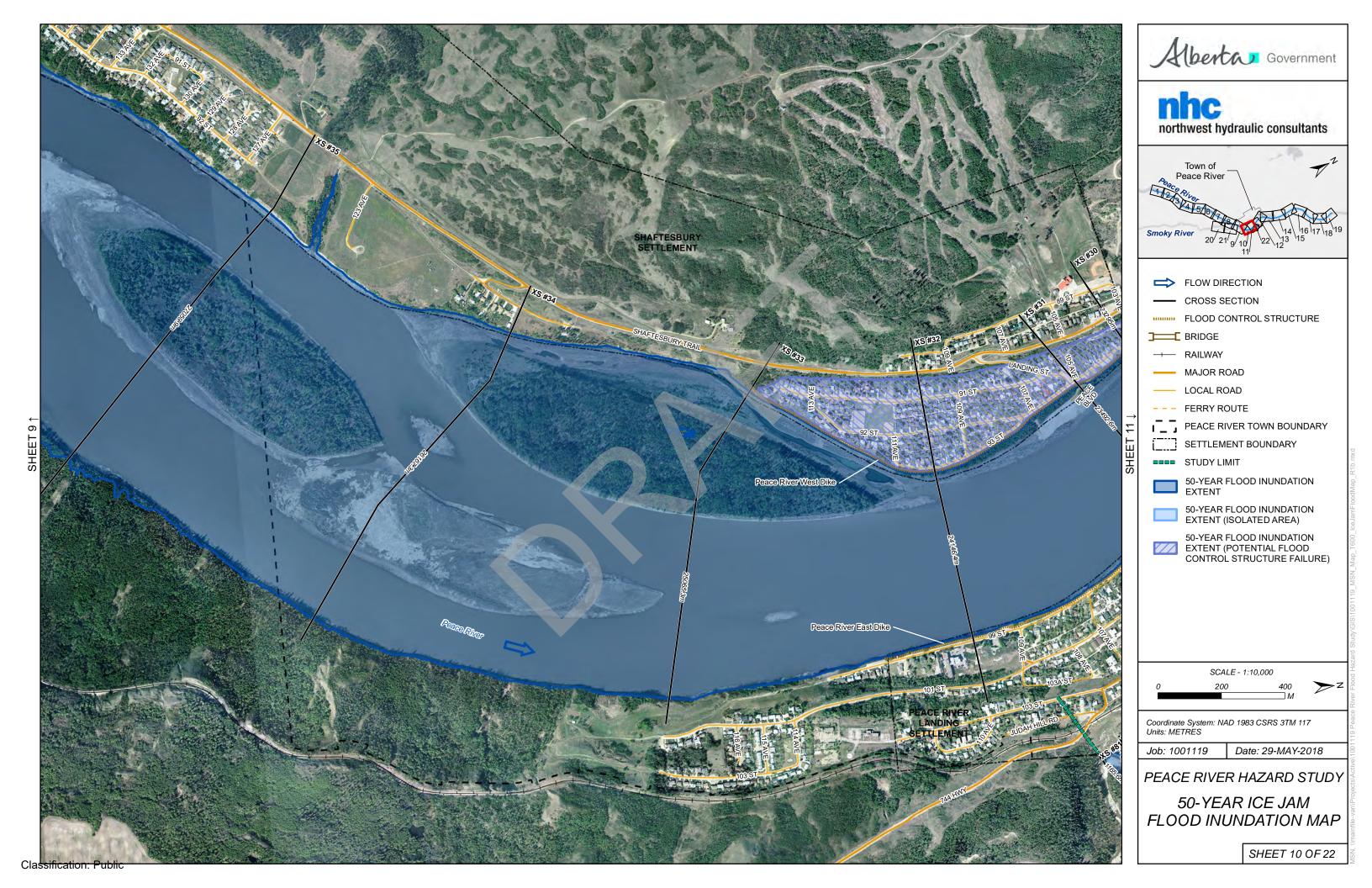


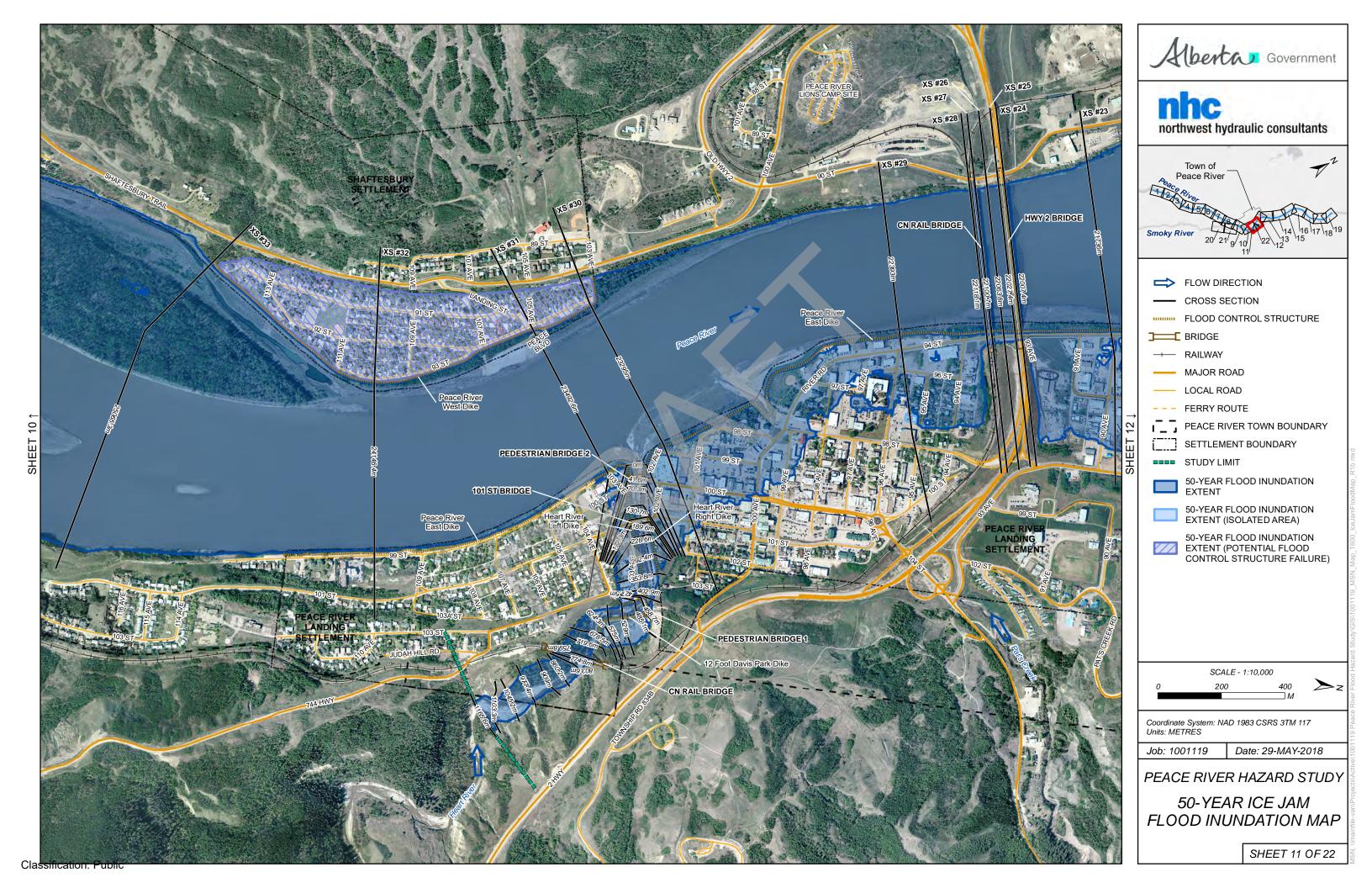


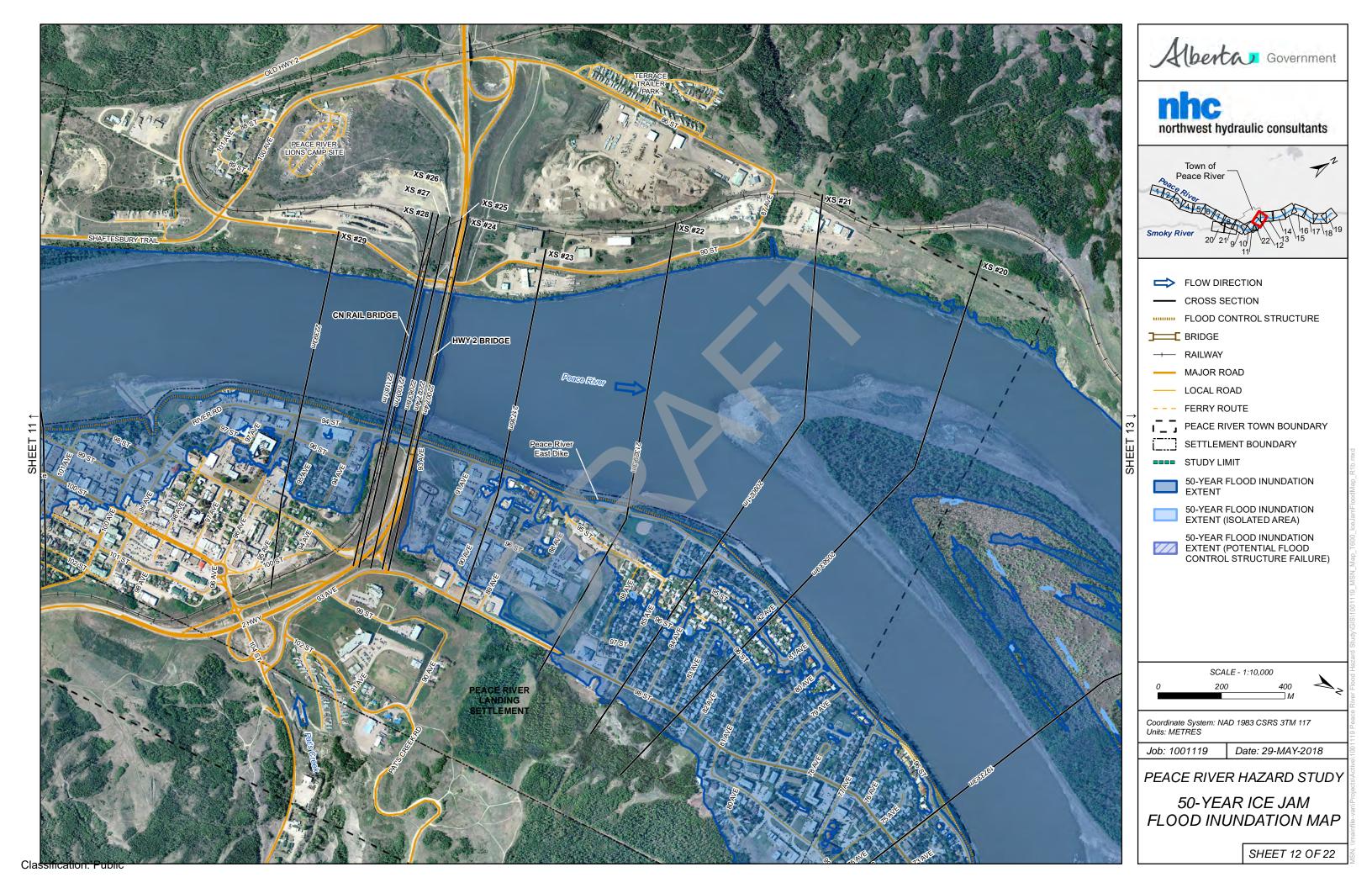


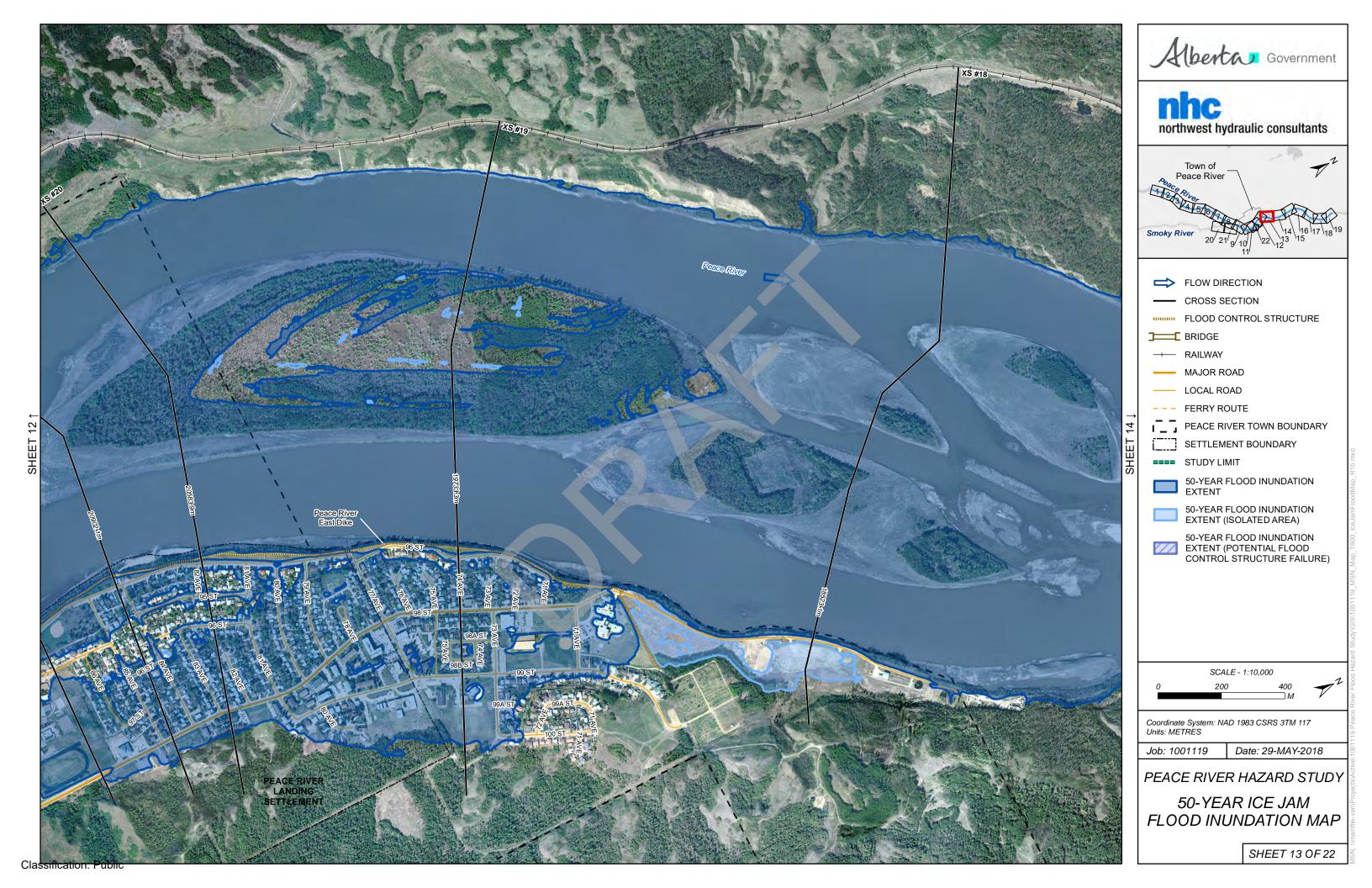


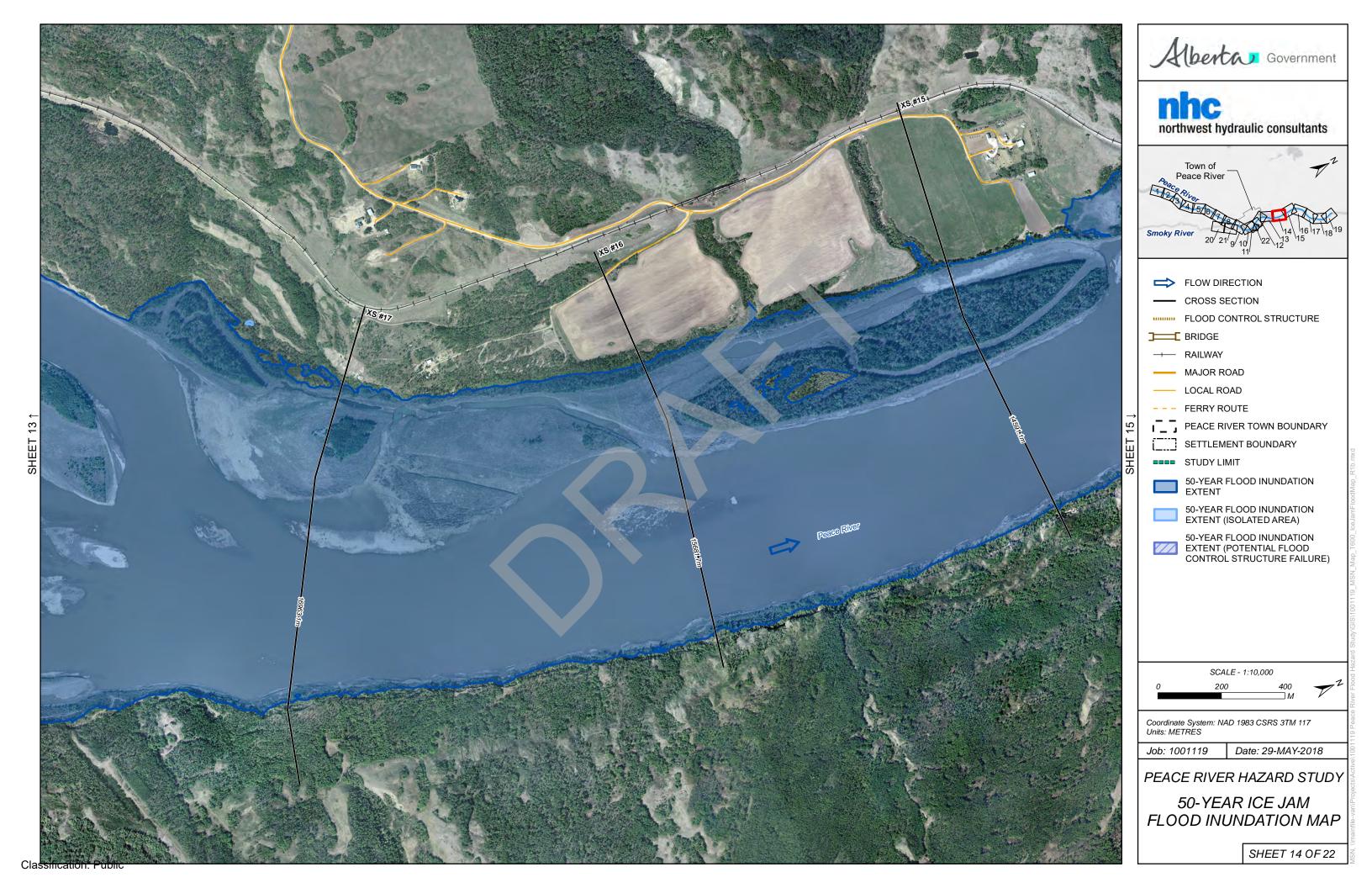




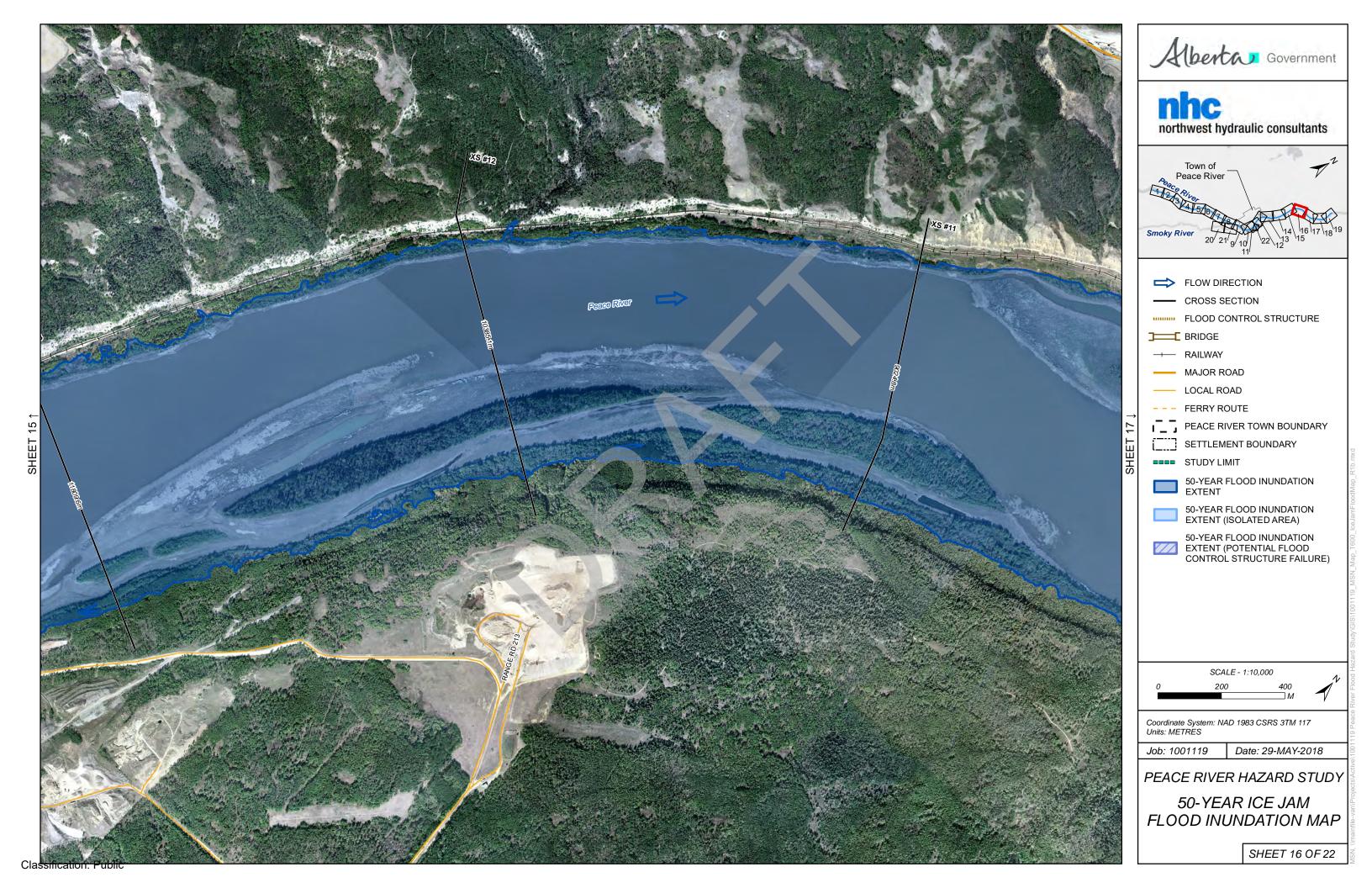


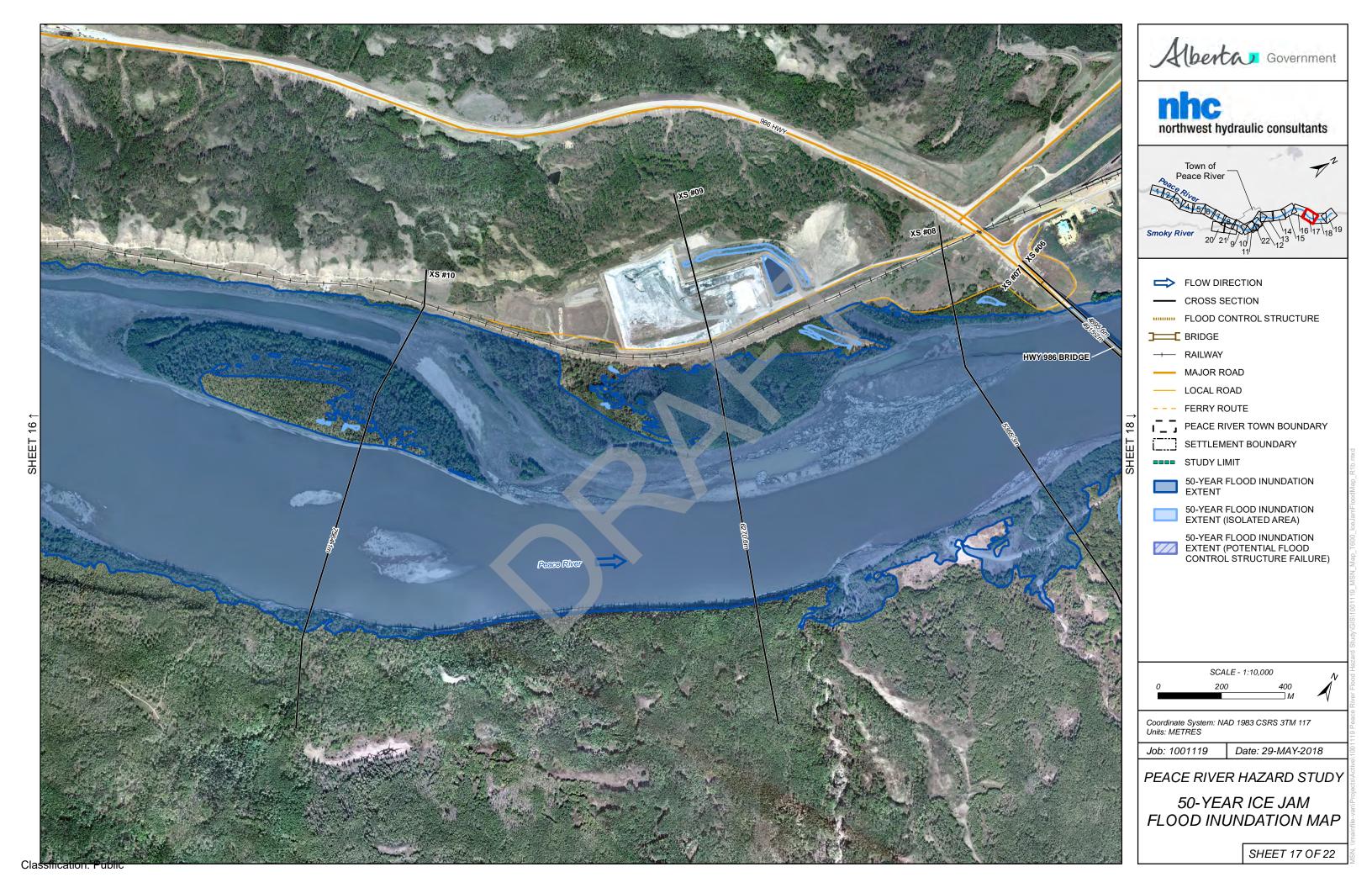


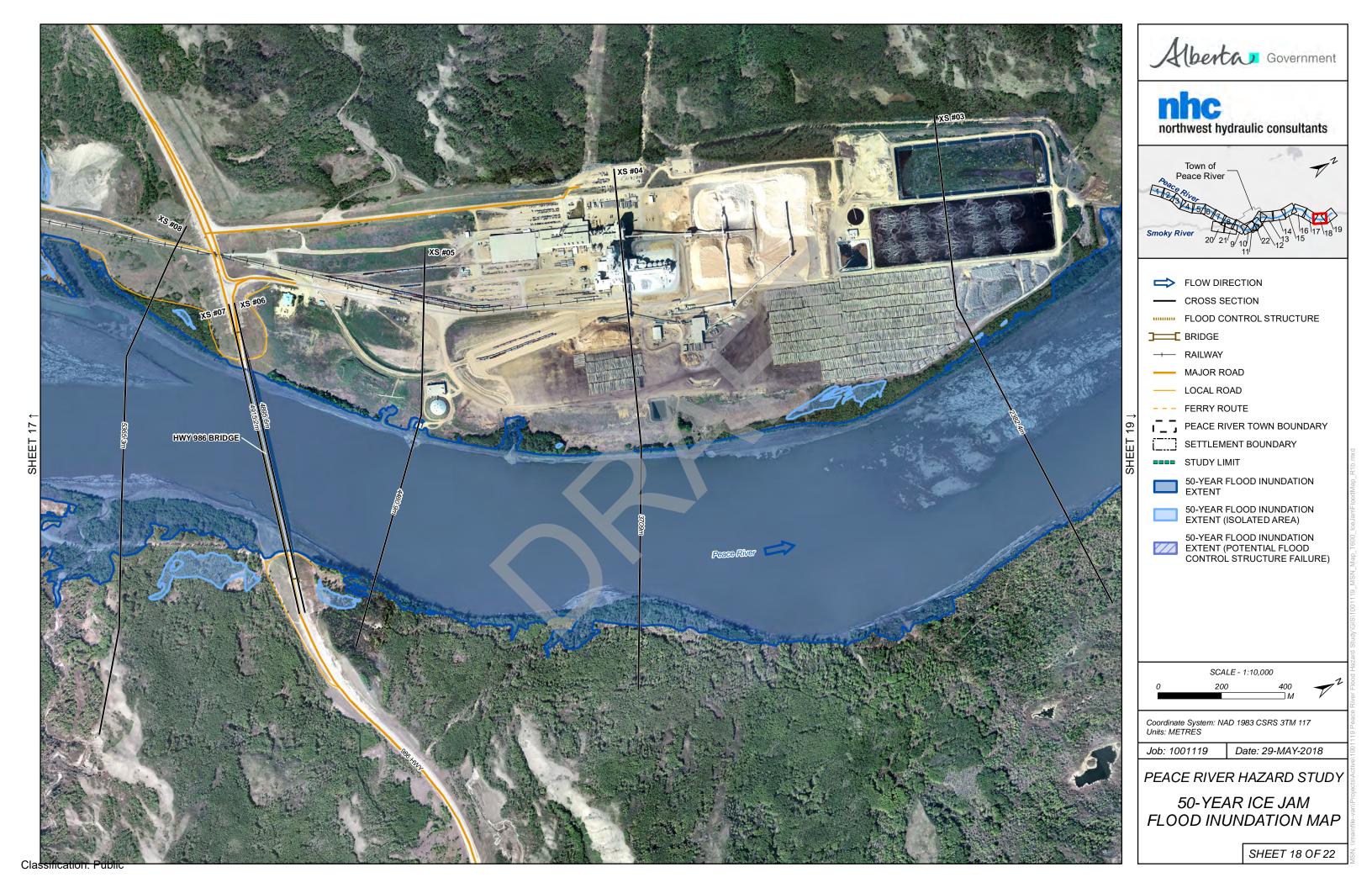


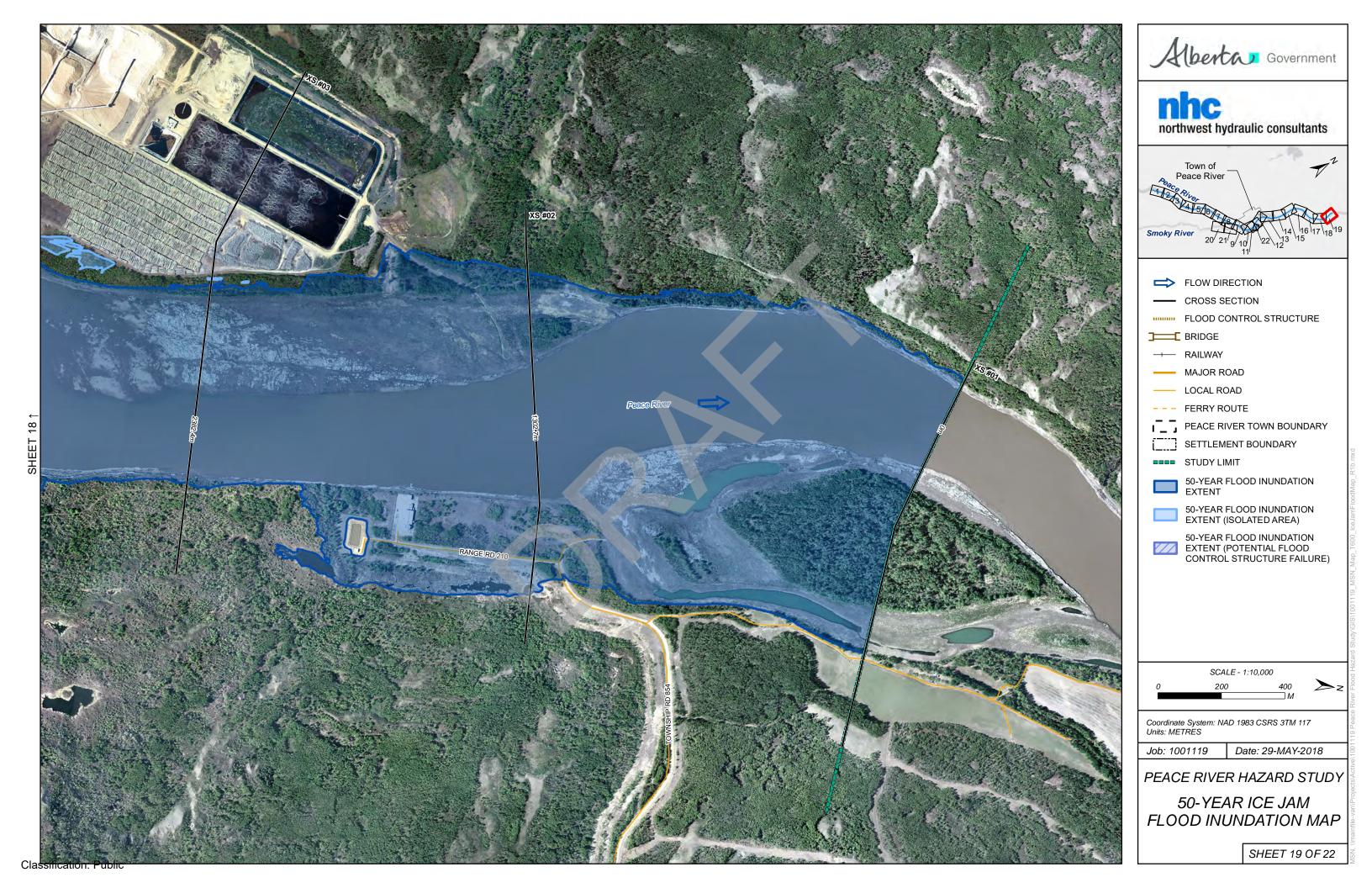






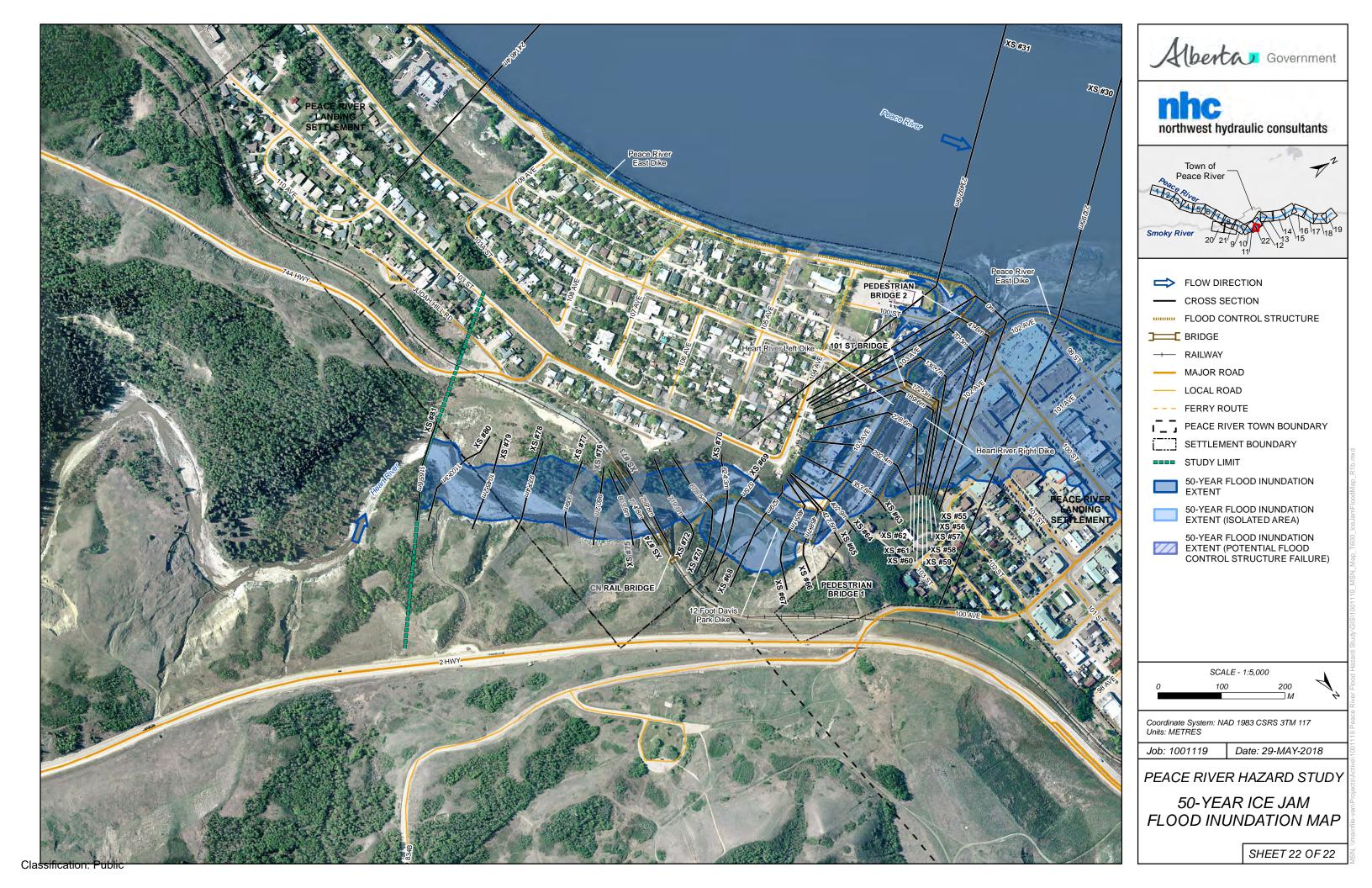














100-YEAR ICE JAM FLOOD INUNDATION MAP
(SHEETS 1 TO 22)



