

MEMORANDUM

State of Alaska

Department of Transportation and Public Facilities
Design and Engineering Services – Central Region
Preliminary Design and Environmental

TO: Jenelle Bloomfield, P.E.
Consultant Coordinator
Aviation Design

DATE: April 26, 2012

PROJECT NAME: Alaska Peninsula Highway
Bridges

PROJECT NO.: 53795

FROM: Mike Knapp, P.E.
Statewide Hydraulics
Engineer

SUBJECT: Bridge/Hydraulic Survey Request

For the Bridge Site Survey, we request the following features and items be surveyed at Leader Creek, Pauls Creek, and King Salmon Creek:

- Edge of pavement, fog lines, centerline, etc.
- Existing bridge plan dimensions/corners/joints
- Locations of abutments, footings, columns and other bridge elements
- Topographic data (to produce a 1-foot contour map) throughout the region defined in the attached JPEG illustrations, including the ground below the bridge and near the abutments
- Right-of-way limits
- Utility poles, man holes, overhead lines, and other utilities
- Other obstructions that might need to be addressed/removed to facilitate construction operations
- Pathways or trails under the bridges
- Approach roadway and embankment site survey, as needed, from Highway Design

The Bridge Section request for a Hydraulic Site Survey is very similar to Paul Janke's request at the Leader Creek site. The attached JPEG files illustrate the proposed survey extents and cross-section locations, generally. As you know, hydraulic survey guidance is provided in the PCM 1120.5.4 and AHDM Ch.6, Appendix B

(http://www.dot.state.ak.us/stwddes/desbridge/assets/pdf/hwydrnman/ch6_0695.pdf). The list below supplements that guidance for Pauls Creek and King Salmon Creek:

- Cross sections upstream and downstream of the bridge, spaced roughly one channel width apart (~100 ft)
Survey extents:
 - ~400 ft upstream and ~400 ft downstream of the bridges (see the attached illustrations)

"Get Alaska moving through service and infrastructure."

- Also, ground shots beyond the channel (~50 ft, lateral) to define overbank areas
- Point data directly under the bridge to define the abutment slopes and any existing structures there.
- Channel properties - Top of bank, toe of slope, thalweg, edge of water, and additional “breakline points” as necessary to define the channel between cross sections
- High ice and flood peak indicators, if any. (Anecdotal information offered by locals is helpful too)
- Jurisdictional boundaries - Ordinary high water, mean high water elevation, and high tide elevation.

cc: Richard Pratt, Marx Elmer, Loren Gehring