Bureau of Indian Affairs

2014 Providers Conference

Design Panel

Thursday, December 4th, 8:00 AM – 10:00 AM

Moderated by: Nathan Cornilles, P.E.
Bureau of Indian Affairs, Alaska Region,
Branch of Transportation
2014 Providers Conference

Design Panel

Members

Edward Hakala, P.E.
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Nathan Cornilles, P.E.
Civil Engineer, BIA

Dempsey Thieman, P.E.
PND Engineering, LLC

Kurt Wald, PE
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Nancy Elrod, P.E.
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Design Panel

Tomorrow’s Future Today for Alaska’s Tribes.

December 04, 2014
2014 Providers Conference Design Panel Members Contact Information

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## Design Panel Timeline

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<th>TIMELINE</th>
<th>PRESENTER</th>
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<td>08:00 to 08:20</td>
<td>Nathan Cornilles,</td>
<td>Panel Introduction &amp; Design Requirements Presentation</td>
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<td>BIA Transportation</td>
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<td>08:40 to 09:00</td>
<td>Edward Hakala, EBSC Engineering</td>
<td>Procuring Engineering Services for a Quality Project - With Audience Q&amp;A</td>
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<td>09:00 to 09:20</td>
<td>Dempsey Thiemen, PND Engineering</td>
<td>Planning Your Project - With Audience Q&amp;A</td>
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<td>09:25 to 09:50</td>
<td>Kurt Wald, Y-K CH2M Hill</td>
<td>Delta Freight &amp; Energy Corridor Plan With Audience Q&amp;A</td>
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<td>09:50 to 10:00</td>
<td>Nathan Cornilles,</td>
<td>Closing Comments</td>
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2014 Providers Conference
Design Panel

Presentation Topic:

BIA IRR Transportation Design Process – Regulations & Standards

Presented by:

Nathan Cornilles, P.E.
Civil Engineer, BIA
BIA IRR Transportation Design Process – Regulations & Standards Presentation Topics To Be Covered:

1. Where Alaska BIA Transportation fits within the structure of the Federal Government.


3. BIA Transportation Design Process

4. BIA Transportation Design Philosophy
Location of The Department of the Interior and The Department of Transportation Within The United States Government

Executive Branch

Legislative Branch

Judicial Branch
Department of the Interior & Department of Transportation Sub-Agencies
Bureau of Indian Affairs & Federal Land Highways Regions

TTAP Regions

Source: LTAP/TTAP

Western Federal Lands

Central Federal Lands

Eastern Federal Lands

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Tomorrow’s Future Today for Alaska’s Tribes.

December 04, 2014
Bureau of Indian Affairs, Alaska Region
Division of Tribal Transportation Options
For The 231 Federal Recognized Tribes We Serve

TRANSPORTATION DELIVERY OPTIONS

- FHWA PA 80 Tribes
- OSG 18 Tribes
- BIA PA 28 Tribes
- BIA Title I 105 Tribes
Request for Proposal Process – Planning & Design Professional

Design Contract – Communicating Your Needs To The Engineer

I. Introduction
   I. Notice of Invitation to Bid
   II. Project Description
   III. Scope of Work
   IV. Scope of Procurement
   V. Transportation Coordination

II. Conditions Governing the Procurement
   I. Sequence of Events
      I. Issue of RFP
      II. Submission of Proposal
      III. Proposal Evaluation
      IV. Contract Award
      V. Protest Deadline

III. General Requirements
   I. Acceptance of Conditions Governing Procurement
   II. Subcontracts
   III. Amended Proposals
   IV. Termination
   V. Governing Law

General Requirements (continued):
   I. Basis for Proposal
   II. Respondent Qualifications
   III. Ownership of Proposal
   IV. Professional Fee Proposal

   I. Response Format and Organization
      I. Number of Responses
      II. Number of Copies
      III. Proposal Format

   II. Specifications
      I. Mandatory Specifications
         I. Experience
         II. References

   III. Evaluation
      I. Evaluation Point Summary
      II. Shortlist Evaluation Factors

   IV. Appendix
      I. Definition of Terminology
BIA Transportation Design Regulations – Sorted By Source:

BIA/DOI
- 25 CFR Section 170 – IRR Program

United States Code
- 23 U.S.C. Section 106 – Plans, Specifications & Estimates
- 23 U.S.C. Section 109 – Standards

WFL/FHWA
- Code of Federal Regulations - Title 23: Highways
  - Part 625 – Design Standards for Highways
  - Part 630 – Pre-Construction Procedures
  - Part 635 – Construction and Maintenance
  - Part 645 – Utilities
  - Part 646 - Railroads
  - Part 650 – Bridges, Structures, Hydraulics
  - Part 661 – IRR Bridge Program

OSHA
- 29 CFR Part 1910 – Subparts A through T
  Jobsite Safety Regulations.

Federal Contracts
- 48 CFR – Code of Federal Acquisition Regulations

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BIA Transportation Design Standards & Guidance – Sorted By Source:

**AASHTO**
- Policy on Geometric Design of Highways and Streets (Green Book)
  Note: NHS Minimum Standards Regardless of Funding
- A Guide for Transportation Landscape and Environmental Design.

**FHWA/FLH**
- Flexibility in Highway Design
- Roadside Improvement for Local Road and Streets
- Improving Guardrail Installations and Local Roads and Streets
- Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-14

**AKDOT&PF**
- Alaska Highway Preconstruction Manual
- Standard Specifications for Highway Construction

**Other**
- Special Provisions to Standard Specifications
Design Contract Deliverables

**Phase I – Preliminary Engineering**

A. Monthly Progress Reports
B. Feasibility Study for Design
C. Survey Records Investigation Report
   a. ROW/Ownership/Site Control
D. Preliminary Reports Research
   a. On-going and future projects, materials, weather & existing planning
E. Field Reconnaissance (Site Visit)
   a. Meeting with Tribe, City, Corporation, and affected landowners – Document With Report/Photos
F. Preliminary Survey/Mapping
   a. Aerial mapping
G. Environmental Documentation
   a. NEPA Process
H. Utilities
   a. Location of all utilities within the proposed right-of-way
   b. Relocation recommendation
I. Preliminary Engineering Report
   a. Draft Report
Design Contract Deliverables

**Phase II – Design (IF APPLICABLE)**

**A. Monthly Progress Reports**

**B. Design Survey Sheet**
- Site control with PS&E showing PIs, vertical curves, horizontal curves, et.

**C. Right-Of-Way**
- Transfer documents and public use easement agreements

**D. Permits**
- ADOT&PF
- Borrow & Disposal site permits
- Mining & Reclamation Plan
- Wetlands Section 401 & 404

**E. Utilities Sheet**

**F. Construction Plans, Specifications, and Estimate**
- Plans, Specifications, and Cost Estimate at 65% 95% and 100% (approved & ready for construction)
- Health and Safety Certification by a licensed engineer
- 2 Full size Plans and 3 half-size plans of the Final Design-construction ready set.
- Project Development Manual – 2 sets

**G. Plans in Hand Review**
- 95% stage
The Engineering or Planning Firm That You Have Hired Is One Of The Important Steps In Ensuring That You Receive The Transportation Project At The End Of The Process That You Need.
The NEPA Process Follows The Design Process In The Same Steps And Corresponds With Major Project Milestones:
- Preliminary engineering
- Analysis of Alternatives
- Draft Design
- Finalize Design
- Permitting
- Construction
BIA TRANSPORTATION CULTURAL RESOURCES

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Tomorrow’s Future Today for Alaska’s Tribes.

December 04, 2014
BIA TRANSPORTATION, ALASKA REGION
CHALLENGES & DIVERSITY