

SELECTION PROCEDURE

1. Competitive Sealed Proposals will be evaluated by a committee (2 AAC 12, Article 4). Evaluation of responses to criteria set forth in Part C results in a numerical score for each proposal. Each criterion in Part C has an assigned weight for this RFP which demonstrates its relative importance. The total of all weights is 100 (100%). Each one-percent weight equates to a range of 0-5 points per Evaluator. The maximum points (score) obtainable for any proposal is equal to the product of 500 multiplied by the number of Evaluators.
2. Scoring of proposals will be accomplished as follows:
 - 2.1 Each Evaluator will individually read and rate each Offeror's response to each criterion described in Part C - Section I - Technical Proposal. Ratings will be based solely on contents of proposal and in compliance with the Contracting Agency's standard Instructions for Evaluation Committee. Except as may be stated within any criterion description in Part C, a rating of "5" = Best Response from all Offerors; "4" to "1" = Progressively Less Responsive; "0" = Non-Responsive. Ratings are multiplied by the assigned weights for each criterion to obtain criteria scores.
 - 2.2 After completion of individual ratings in Part C, Section 1, Technical Proposal, the Evaluation Committee will meet to discuss proposals. Evaluators may then alter their ratings; however, any changes shall be based solely on the criteria set forth in Part C.
 - 2.3 After scoring Part C - Section I - Technical Proposal, criteria scores for Part C - Section II - Preferences, and Section III - Price (if applicable), will be calculated based on criteria descriptions.
 - 2.4 The total score for each Offeror will be obtained by summing the scores determined for each criterion in Sections I, II and III of Part C. The order of ranking for negotiations shall be as follows: highest scored Offeror will be ranked first, next highest scored second, and etcetera.
3. Evaluators may discuss factual knowledge of, and may investigate Offerors' and proposed Subcontractors' prior work experience and performance, including projects referenced in proposal, available written evaluations, etcetera, and may contact listed references or other persons knowledgeable of a Contractor's and/or a Subcontractor's past performance. Factors such as overall experience relative to the proposed contract, quality of work, control of cost, and ability to meet schedules may be addressed. If any issues of significant concern to the proposed contract are discovered, the Committee may:
 - 3.1 Provide written recommendations for consideration during contract negotiations;
 - 3.2 Conduct discussions in accordance with paragraph 4, below.
4. The Committee may decide to conduct discussions (or "interviews") with responsible Offerors whose proposals are determined to be reasonably susceptible of being selected for award for the purpose of clarification to assure full understanding of, and responsiveness to, the solicitation requirements (AS 36.30.240 & 2 AAC 12.290). Offerors selected by the Committee for discussions may be permitted to submit Best and Final Offers (BAFO) for final Committee Evaluation. After discussions and any BAFOs, Evaluators will determine the final scoring and ranking for contract negotiations by evaluating written and oral responses using only the criteria set forth in Part C of this RFP (2 AAC 12.260(b)).
5. All Offerors will be advised of the Offeror selected for negotiation and, after completion of negotiations, a Notice of Intent to Award will be provided to all Offerors. If contract negotiations are unsuccessful with Offeror(s) selected for negotiation, the Contracting Agency may either cancel the solicitation or negotiate with other Offerors in the order of ranking.

NOTICES

PART

A

1. The Contracting Agency is an equal opportunity employer.
2. Copies of contract documents are available for review at the Contracting Agency's office. Offerors located outside the general vicinity of the Contracting Agency's office may telephone the Agency Contact identified on page one of this Part A for a discussion of such items.

General Conditions of the Professional Services Agreement are contained in the Small Procurement Standard Provisions Booklet, which is located on the Department's website under "Procurement."

The General Conditions are the **same** for both Competitive Sealed Proposals and Small Procurements.

3. Offerors are specifically advised that a contract shall not be in effect until a written agreement is executed by an authorized agent of the Contracting Agency. The Contracting Agency shall not be liable for any cost incurred by an Offeror in response to this solicitation, including any work done, even in good faith, prior to execution of a contract and issuance of a Notice to Proceed.

4. The Contracting Agency expressly reserves the right to waive minor informalities, negotiate changes or reject any and all proposals and to not award the proposed contract, if in its best interest. "Minor Informalities" means matters of form rather than substance which are evident from the submittal, or are insignificant matters that have a negligible effect on price, quantity, quality, delivery, or contractual conditions and can be waived or corrected without prejudice to other Offerors (2 AAC 12.990).

5. All proposals shall be open for public inspection (AS 36.30.230) after a Notice of Intent to Award is issued. Offerors should not include proprietary information in proposals if such information should not be disclosed to the public. Any language within a submittal purporting to render all or portions of a proposal confidential will be disregarded. Proprietary information which may be provided after selection for contract negotiations will be confidential if expressly agreed to by the Contracting Agency (AS 36.30.230).

6. Substitution for any personnel named in a proposal may result in termination of negotiations.

7. If it is discovered that a selected Offeror is in arrears on taxes due the State of Alaska, a contract may not be awarded until the Alaska Department of Revenue approves the payment provisions for the contract.

8. **Offerors and proposed subcontractors shall be in compliance with the statutory requirements for Alaska business licensing and professional registrations included in the certification statement on Page 2 of Part D in this RFP package.**

9. **PRICE COMPETITION:** Price cannot be an Evaluation Criterion in accordance with Article 3 of AS 36.30 for services that must be performed only by Architects, Engineers, Land Surveyors, or Landscape Architects (A/E, LS or LA) licensed in the State of Alaska, UNLESS the provisions of AS 36.30.270(d) apply; i.e., unless the services required are repetitious in nature, and the nature and amount of services required are thoroughly defined by measurable and objective standards to reasonably enable firms or persons making proposals to compete with a clear understanding and interpretation of the services required. If price is a factor, a majority of the evaluation committee must be registered in Alaska to perform architectural, engineering, or land surveying services.

- 9.1 If the services performed do not require an A/E, LS or LA, then all Offerors including any A/E, LS or LA must provide Price Proposals in accordance with AS 36.30.270(b) and 2 AAC 12.260(c).

- 9.2 Price (or any estimate of labor hours) cannot be an Evaluation Criterion for contracts that will receive Federal-aid highway program funding per 23 CFR 172.7 and FAA Airport Improvement Program funding per AC 150/5100-14E, 2.1. For FAA exceptions: see AC 150/5100/14E, 2.4.

10. An audit of the selected Offerors' and proposed Subcontractors' cost accounting systems and business records may be required to ascertain if systems are adequate for segregating contract costs; to establish a maximum allowable Indirect Cost Rate for the Agency's negotiator; and to investigate the accuracy of proposed labor rates and unit prices. In order not to unduly delay contract negotiation or award, be prepared to submit Pre-Audit Statement, DOT&PF Form 25A257 immediately for your firm and any subcontract that may exceed \$250,000.

For contract amounts less than \$250,000, the Contracting Agency may require the Offeror and proposed Subcontractor to submit the Pre-Audit Statement if deemed necessary to determine allowable costs under Title 23 CFR requirements. If selected for negotiation, failure to submit properly completed Pre-Audit Statement(s) in a timely manner may disqualify an Offeror from further consideration. Information from Pre-Audit Statements and any Audit conducted for the Contracting Agency is considered proprietary and will be confidential.

11. Standard insurance provisions for Worker's Compensation, General and Automobile Liability, and Professional Liability are contained in DOT&PF Form 25A269, Indemnification and Insurance. Coverages may be modified under very limited circumstances. Offeror should not assume any modification of coverages.

12. Professional Liability Insurance for the proposed contract: is not required

is required as shown on DOT&PF Form 25A269.

13. The proposed contract will will not be a Federally Assisted Program of the U.S. Department of Transportation. If it will be an assisted program, then the Offeror shall insert the following notification in all subcontract solicitations for bids or proposals pertinent to this RFP:

"In accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, CFR, U.S. Department of Transportation (U.S. DOT), Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. DOT issued pursuant to such Act, in any Subcontract entered into pursuant to this RFP, Disadvantaged Business Enterprise firms will be afforded full opportunity to submit bids or proposals and will not be discriminated against on the grounds of race, color, sex, or national origin, in consideration for an award.

14. Pre-proposal Conference: None As follows:

15. Special Notices:

15.1 Per Alaska Statute (AS) 36.30.210(e): An Alaska Business License is required of Contractors who do business in Alaska at time of award. To qualify for the Alaska Offerors' Preference, under AS 36.30.321, an Offeror shall have a valid Alaska business license as a prerequisite to proposal. Information regarding applying for an Alaska Business License can be found on-line at <https://www.commerce.alaska.gov/web/cbpl/BusinessLicensing.aspx> or by calling 1-907-465-2550. The business license must be in the name of the company under which the proposal is submitted.

15.2 Effective May 8, 2015, the Department, in coordination with the U.S. Department of Transportation, adopted a Race-Neutral Disadvantaged Business Enterprise (DBE) Program for its federal-aid program. The Race-Neutral DBE program applies to federally-funded construction-related professional services solicitations, with the exception of FAA-funded projects located within the boundaries of the Department's Northern Region, which remain under a Race-Conscious DBE program.

The Department encourages contractors to utilize DBEs in all Federal-aid projects to ensure the Department meets its overall DBE Utilization Goal. All DBE participation will count towards the Race-Neutral program. If you have any questions about this notice or the Department's DBE program, please contact the Civil Rights Office at (907) 269-0851 or refer to their website <http://www.dot.alaska.gov/cvlrts/index.shtml>

SUBMITTAL CHECKLIST

Offeror may use left margin to check off items when completed.

An Alaska Business License is required of Contractors who do business in Alaska at time of award (AS 36.30.210(e)).

- [] 1. Offerors must carefully review this RFP Package for defects and questionable material and become familiar with submittal requirements. Submit written comments to the address shown under "Submittal Deadline and Location" on page 1 of Part A - RFP. Substantive issues will be addressed in a written addendum to all RFP recipients on record. Failure to comply with directions may result in lower score and may eliminate a submittal from consideration. Protests based on alleged improprieties or ambiguities in a solicitation may be disallowed at the discretion of the Contracting Agency if the protest is not received in writing at least ten Agency work days prior to the Submittal Deadline (AS 36.30.565).
- [] 2. Review Part A - RFP and the proposed Statement of Services and any other attached or referenced materials. If no Statement of Services is attached, telephone the Agency contact person identified on page 1 of Part A.
- [] 3. Review Part C - Evaluation Criteria. Read each criterion in light of the proposed Statement of Services. Note any project specific criteria which may have been added or any changes to standard criteria descriptions which may have been made. Be aware of the assigned weight for each criterion. If a weight is not entered for any criterion on Part C, notify the Agency contact person. Plan your proposal to address the applicable criteria. Criteria Responses shall not exceed the number of pages stated below. **Note:** If weight is applied to Criterion #11, Alaska Bidder (Offeror) Preference, that box must be checked on page 1 of Part D, rfp-d.
- [] 4. Prepare a distinct Response for each criterion that has a weight more than zero. Failure to respond directly to any criteria weighted more than zero will result in an evaluation score of zero for that criteria. Any Responses to criteria weighted zero will be disregarded. Acceptable Responses must be specific and directly related to the Contracting Agency's proposed Statement of Services. Marketing brochures, federal SF330s, marketing resumes, and other non-project specific materials will be discarded without evaluation and should not be submitted.
- [] 5. **Each criterion Response must be titled, numbered and assembled in the order in which the criteria are listed in Part C**, so the criterion to which information applies shall be plainly evident. Material not so identified or assembled may be discarded without evaluation.
- [] 6. Price is is not an evaluation criterion for the proposed contract.
If Price is a Criterion, prepare **Billing Rates and/or Price Proposals** as described in Criteria #12 and/or #13.
- [] 7. Complete all entries on Part D - Proposal Form. Note the statutory requirements for Alaska business licenses and professional registrations, and be sure to sign and date the Certification. Copies of licenses and registrations may be provided with submittal, and will not count in the requirements of #8 below.
- [] 8. Attach Criteria Responses (**except any Billing Rates or Price Proposals**) to Part D - Proposal Form. The maximum number of attached pages (**each printed side equals one page**) for Criteria Responses shall not exceed: **Seven (7)**. Attached page limit does not include the four-page Part D - Proposal Form, or any Billing Rates or Price Proposals.

Criteria Responses shall be presented in **8-1/2" X 11" format**, except for a minimal number of larger sheets (e.g., 11" x 17") that may be used (e.g., for schedules) if they are folded to 8-1/2" X 11" size. Large sheets will count as multiple pages at 93.5 square inches or fraction thereof per page, unless otherwise noted.

CAUTION: Criteria Responses which do not comply with the required page limit or presentation size, may result in disqualification. Further, small print or typeface that is difficult to read may negatively influence evaluation of your submittal and affect scoring for "Quality of Proposal."

CHECKLIST IS CONTINUED NEXT PAGE

- [] 9.
- [] 10. Parts A, B and C of Form 25A270 and the proposed Statement of Services shall not be returned to the Contracting Agency. **Submittals shall consist of the following applicable items assembled as follows and in the order listed:**
- [] 10.1 Completed Part D - Proposal Form (generally at least one copy with original signature) and Responses to all evaluation criteria -- **except Billing Rates, Price Proposals** – attached. Each copy shall be fastened with one staple in the upper left corner. No other form of binding shall be used and no cover and no transmittal letter will be included. **CAUTION:** Failure to comply with this instruction will negatively influence evaluation of Submittal.
- [] 10.2 Number of copies of Part D (**all pages**) and Criteria Responses (**except Billing Rates, and Price Proposals**) required is: **Four (4)**
- [] 10.3 If **Billing Rates and/or Price Proposals** are required, **one copy** bound with one staple in the upper left corner separately enclosed in a sealed envelope marked on the outside to identify it as a **Billing Rates or Price Proposal** and the names of the Project and Offeror. Each **Billing Rates or Price Proposal** must be signed and dated by the person who prepares it (may be different signatures for each Subcontractor).
- [] 10.4 If Item 9, above, is completed for this RFP Package, any submittal items described therein. Unless otherwise stated, one copy only, bound appropriately.
- [] 10.5 Pre-Audit Statement, DOT&PF Form 25A257, shall **not** be provided with Submittal. (See Notice #10 on page 3 of Part A - RFP.)
- [] 10.6 **CAUTION:** If you replicate (other than by photocopy) Part D or any form in lieu of completing the forms provided by the Contracting Agency, provide a signed certification that lists such forms and attests that they are exact replicas of that issued by the Contracting Agency. Changed forms may result in rejection at the Contracting Agency's discretion. Any alteration – other than completion of the required entries – may be cause for rejection without recourse.
- [] 11. Deliver **submittals in one sealed package** to the location and before the submittal deadline cited in Part A - RFP. **Mark the outside of the package** to identify the Project and the Offeror. Proposals must be received prior to the specified date and time. Late proposals will not be opened (2 AAC 12.250).

EVALUATION CRITERIA

Criteria with a weight of zero are not applicable and should be disregarded. If a weight is not indicated for any criterion, telephone the Agency Contact person identified at the top of page 1 of Part A - RFP.

SECTION I - TECHNICAL PROPOSAL

1. Objectives and Services

1. Weight: 15

Response must **demonstrate your comprehension of the objectives and services** for the proposed contract. Do not merely duplicate the Statement of Services provided with this RFP. Also, consider if Statement of Services is sufficiently explicit; are expressed or implied schedules attainable/economically feasible; etcetera? Explain. **Define any assumptions made** in formulating Criteria Response. If design services for a construction project are included, express any opinions regarding alternative design considerations that could impact construction costs.

2. Methods

2. Weight: 10

Response must outline the methods for accomplishing the proposed contract or, if methodology is contained in the proposed Statement of Services, address its adequacy. Describe what, when, where, how, and in what sequence the work will be done. Address how proximity to the Project site, *particular* geographic familiarity, experience, and capabilities of your firms (Offeror and Proposed Subcontractors) and Project Staff might *specifically* contribute to the proposed methods. Identify the amount and type of work to be performed by any Subcontractors. Consider how each task may be carried out; what services or interaction required from/with the Contracting Agency; etcetera. Suggest alternatives, if appropriate. Identify any **distinct and substantive qualifications** for undertaking the proposed contract such as the availability of specialized equipment or unique approaches or concepts **relevant to the required services** which the firms may use.

3. Management

3. Weight: 0

Response must describe the administrative and operational structures that will be used for performing the proposed contract. For example consider: who will have overall responsibility for the contract? Who will have direct responsibility for specific disciplines? What will the lines of authority be? For any individual who would be in "responsible-charge" (reference AS 08.48) as an Architect, Engineer, Land Surveyor or Landscape Architect, so state and list his/her Alaska professional registration number. A graphic depiction is preferred in your response to this criterion. Additionally, the Contracting Agency may want to inspect work products in progress and have a close ongoing working relationship with your Project Staff. Accordingly, your response should also identify where the various contract services will be performed, *in proximity to the Contracting Agency's office*, and how communications will be maintained between your Project Staff, the Contracting Agency, and (as applicable) any other government agencies or the public.

4. Proposed Project Staff

4. Weight: 15

Response must name the individuals to perform the following **FUNCTIONS** plus any other professional/technical functions you deem essential to perform the services:

1. Contract Management (contract compliance)
2. Project Management (single point-of-contact directly engaged in contract performance)
3. Registered Professional Land Surveyor in responsible charge of project.
4. Ground Survey Team
5. Survey Office Staff

*All personnel acting in responsible charge for all Architectural, Engineering, Land Surveying, and Landscape Architecture functions require an Alaska Registration and must be identified in your proposal.

Continued Next Page

Describe the work to be performed by the individuals you name to perform essential functions and detail their specific qualifications and substantive **experience directly related to the proposed contract**. A response prepared specifically for this proposal is required. Marketing resumes often include non-relevant information which may detract from the evaluation of proposal. Lists of projects are not useful. Focus on individual's specific duties and responsibilities and how project experience is relevant to the proposed contract.

For each person named, identify their: employer, professional discipline or job classification and state of residency. List at least 3 professional references (contact persons and telephone numbers) for each person.

5. Workload and Resources

5. Weight: 15

Response must: (1) discuss both current and potential time commitments of your proposed Project Staff to all clients; (2) discuss the projected workload of each firm (Offeror and Proposed Subcontractors) for all clients; and (3) demonstrate adequate support personnel, facilities and other resources to provide the services required. Provide a list of current contracts with the Contracting Agency in which your proposed Project Staff are participating. Include all contracts statewide with regions, divisions, etc., of the Contracting Agency.

Briefly address capabilities for providing additional services and/or services under an accelerated schedule. Address capacity to reassign personnel, equipment and facilities whenever the proposed contract would not require such capabilities or was delayed.

6. Past Performance & Quality Control

6. Weight: 20

Response must describe previous projects the project team has worked on that are related in size and scope to this project. Describe the dollar amount of the projects and a brief narrative of the successes of the projects. Address how the experience will help your team to perform under this contract. Provide references (contact name and phone number) for each project. Indicate which of the proposed firms and project staff was involved in each project. The State reserves the right to investigate referenced projects, contact references and research other projects that the respondent has worked on.

Include in your response a description of your firm's quality control process and how this process has affected the quality of your deliverables. Use specific examples.

7. Quality of Proposal

7. Weight: 5

Offerors do not respond to this criterion. Committee members will rate this criterion based on their perception of the clarity, completeness and presentation of submittal. Note: This criterion is **NOT** used to evaluate color, graphics or other visual techniques except as they may detract from legibility.

8. Availability and Vicinity to Juneau

8. Weight: 10

Discuss your availability to commit and deploy resources and personnel to Juneau as required to provide deliverables described in the RFP and in the time outlined in your proposal.

9.

9. Weight: 0

SECTION II - PREFERENCES

10. Disadvantaged Business Enterprises

49 CFR 26

10. Weight: 0

This solicitation is being conducted under the Department's Race Neutral Disadvantaged Business Enterprise (DBE) program for construction related professional services solicitations. Therefore, there is no DBE goal for this solicitation and the criterion has a weight of zero (0).

See rfp-a, section 15. Special Notices, paragraph 15.2.

11. Alaska Bidder (Offeror) Preference

23 CFR 172.7(a)(1)(iii)(C), AC 150/5100-14E, and 2 AAC 12.260(e)

Weight shall be "0" if any federal funding, otherwise weight shall be at least "10".

11. Weight: 0

To be granted this preference:

Offeror must claim the Alaska Bidder (Offeror) Preference on page one of Part D Proposal Form. In claiming the Alaska Bidder (Offeror) Preference on page one of Part D, the Offeror is certifying that they meet the following requirements per AS 36.30.990:

- (A) Firm holds a current Alaska Business License;
- (B) Proposal is submitted under the name as appearing on the Firm's current Alaska Business License;
- (C) Firm has maintained a place of business within Alaska, staffed by the Firm or an employee of the Firm, for a period of six months immediately preceding the date of the offer;
- (D) Firm is incorporated or qualified to do business under the laws of the State of Alaska, is a sole proprietorship, and the proprietor is a resident of Alaska, is a limited liability company organized under AS 10.50 and all members are residents of Alaska, or is a partnership under AS 32.06, or AS 32.11 and all partners are residents of Alaska; and
- (E) If the Firm is a Joint Venture, it is composed entirely of entities that qualify under (A) - (D).

Alaska Bidder (Offeror) Preference will be scored: Rating x Number of Evaluators x Weight = Criterion Score.

Rating will be as follows:

An Alaska Offeror's preference (i.e., a Rating of 5) will be assigned to the proposal of an Offeror who certifies (by claiming the preference on page one of Part D) that they are an Alaska Bidder (Offeror) as described above.

No Alaska Offeror's preference (i.e., a Rating of 0) will be assigned to the proposal of an Offeror who does not certify (by failure to claim the preference on page one of Part D) that it qualifies as an Alaska Bidder (Offeror) as described above.

No narrative response to this criterion is required within the Offeror's Proposal.

SECTION III - PRICE

If price is not an Evaluation Criterion, weights for both Criterion #12 and #13 shall be "0". If price is an Evaluation Criterion, the sum of weights for Criterion #12 and #13 shall be at least "10", and all Offerors shall submit Price Proposals in the specified format(s).

See item #9, under Notices in Part A – RFP, regarding statutory and regulatory provisions about price competition and item #10.3, in Part B – Submittal Checklist, regarding procedure for submittal of Billing Rates and/or Price Proposals. Cost terminology is explained on page 2 of the Pre-Audit Statement (DOT&PF Form 25A257).

CAUTION: Submittal of Offeror's or Subcontractor's "standard" rate schedules or other pricing documents which are not in required format will be non-responsive if they do not allow direct comparison with other responsive proposals.

Rates and costs proposed by the Offeror selected for contract negotiations may be investigated for reasonableness and allowability in accordance with AS 36.30.400, .420 & .480, 2 AAC 12.550 and the contract cost principles in 48 CFR Part 31. Unsupported rates and costs may be disallowed or result in termination of negotiations, or contract award. All proposed rates and the negotiated contract rates will be public information.

12. Labor Billing Rates (Required Format)

12. Weight: 0

Provide a proposed total hourly Billing Rate (i.e., inclusive of Direct Cost of Direct Labor, all Indirect Costs, and Fee) only for each of the job **FUNCTIONS** listed below. Note: Some of these functions may be performed by one or more employees of the Offeror or Subcontractors; consequently, an individual might be billed under the contract at different rates appropriate to the functions performed. **Only the maximum rate paid to any individual for each listed job function** – regardless of employer (Offeror or Subcontractor) – **must be provided and will be considered for this response**. Rates for lower paid individuals or for other job functions, if any, will be addressed during contract negotiations.

1. Contract Management	(Estimated at	% of total labor effort)
2. Project Management	(Estimated at	% of total labor effort)
3.	(Estimated at	% of total labor effort)
4.	(Estimated at	% of total labor effort)
5.	(Estimated at	% of total labor effort)

*In accordance with the submittal Checklist ('rfp-b'), item 10.3, *Billing Rates must be signed and dated by the person who prepares it (may be different signatures for each Subcontractor)*

Response will be scored as follows: The maximum hourly rates proposed for the job functions listed above will be multiplied by the percentage of total labor effort (estimated above) and then summed to obtain an aggregate rate for each Offeror. If more than one rate is provided for any job function, only the highest rate will be used. Each Offeror's score will be calculated using the following equation – except that the **score will be zero if a rate for each listed function is not provided by an Offeror**.

$$\frac{(\text{Lowest aggregate rate from all Offerors}) \times (\text{MPP}^*)}{(\text{Offeror's aggregate rate})} = \text{Offeror's Criterion Score}$$

*MPP = Maximum Possible Points = (5) x (Number of Evaluators) x (Weight)

If no federal funding, then per AS 36.30.250(b), aggregate rates shall be reduced for the above calculation by the following applicable percentages when the rates are from Offerors that **designate preferences on page one of Part D**.

- ALASKA BIDDER (OFFEROR) PREFERENCE [2 AAC 12.260(d)]..... 5%
- ALASKA VETERAN-OWNED BUSINESS PREFERENCE [AS 36.30.175] (maximum \$5000)..... 5%
- and only ONE of the following:
- EMPLOYMENT PROGRAM PREFERENCE [AS 36.30.170(c)] 15%
- DISABLED SOLE PROPRIETOR OR 50% DISABLED EMPLOYEES [AS 36.30.170(e & f)]..... 10%

To claim employment or disabled preference, Offeror must be on the appropriate Alaska Division of Vocational Rehabilitation list at the time designated for opening (i.e., receipt) of proposals.

13. Total Price Proposal (Required Format)

13. Weight: 0

Provide proposed costs for all labor, subcontracts, equipment, expenses, etc., and a proposed amount for Fee. Submit a separate price proposal in the following format for the Offeror and for each Subcontract (first, second, third tier, etc.) that may exceed \$25,000. Each price proposal must be signed and dated by the person who prepares it. Note that the PRICES of the next lower tier subcontracts must be listed as COSTS in Item #4 (Other Direct Costs) of the price proposal for the next higher tier contractor so that the price of all subcontracts "roll-up" into the Offeror's total price proposal.

1. Show project title, project number, and Offeror or Subcontractor Name.
2. **Direct Costs of Direct Labor (DCDL)**
Show the estimated costs for each job classification of employees proposed for the contract. List under the following headings. Names required only for key staff and/or persons in "responsible-charge" (Ref: AS 08.48). **Hourly Rates must not include Indirect Costs or Fee.**

<u>Job Classification</u>	<u>Name</u>	<u>Total Hours</u>	<u>Rate(\$/hr)</u>	<u>Proposed Costs (\$)</u>
				Total DCDL: \$ _____

3. **Indirect Costs (IDC)**
These costs include what are generally referred to as 1) Fringe Benefits and 2) Overhead (including direct and indirect costs of Indirect Labor). Show the Proposed IDC Rate as a percentage of Direct Costs of Direct Labor and the product (IDC Amount) of that Rate multiplied by the total DCDL.

IDC Rate: _____ % IDC Amount: \$ _____

4. **Other Direct Costs (ODC)**
These costs include: subcontracts, equipment (company owned or rented), and reimbursable expenses (e.g., transportation, food and lodging, reproduction) – if not included in Indirect Costs. List proposed costs under the following headings. If multiples of an item required, list the proposed quantity, unit rate, and total cost for each. **Costs must be based on actual costs to the offeror or the subcontractor, without any profit or other markup.**

<u>Item</u>	<u>Quantity</u>	<u>Cost (\$/Unit)</u>	<u>Proposed Costs (\$)</u>
			Total ODC: \$ _____

5. **Total Proposed Cost**
Sum of DCDL + IDC + ODC

Total Cost: \$ _____

6. **Proposed Fee**
List a proposed amount (Contract Fee is generally negotiated using a structured Fee analysis of proposed costs).

Proposed Fee: \$ _____

7. **Total Proposed Price**
Sum of Total Proposed Cost plus Proposed FEE.

Total Price: \$ _____

8. *In accordance with the Submittal Checklist ('rfp-b'), item 10.3, Price Proposals must be signed and dated by the person who prepares it (may be a different signature for each subcontractor).*

Response will be scored as follows:
$$\frac{(\text{Lowest Total Proposed Price}) \times (\text{MPP}^*)}{(\text{Offeror's Total Proposed Price})} = \text{Criterion Score}$$

*MPP = Maximum Possible Points = (5) x (Number of Evaluators) x (Weight)

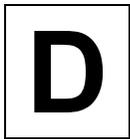
If no federal funding, then per AS 36.30.250(b), total price shall be reduced for the above calculation by the following applicable percentages when the prices are from Offerors **designate preferences on page one of Part D.**

- ALASKA BIDDER (OFFEROR) PREFERENCE [2 AAC 12.260(d)]..... 5%
- ALASKA VETERAN-OWNED BUSINESS PREFERENCE [AS 36.30.321(f)] (maximum \$5,000)..... 5%
- and only ONE of the following:
- EMPLOYMENT PROGRAM PREFERENCE [AS 36.30.321(b)] 15%
- DISABLED SOLE PROPRIETOR [AS 36.30.321(d) / (k)] 10%

To claim employment or disabled preference, Offeror must be on the appropriate Alaska Division of Vocational Rehabilitation list at the time designated for opening (i.e., receipt) of proposals.

Alaska Department of Transportation & Public Facilities PROPOSAL FORM

PART



THIS FORM MUST BE THE FIRST PAGE OF PROPOSAL. Attach criteria responses as explained in Part B - Submittal Checklist. No transmittal letter or cover sheet will be used.

PROJECT

Project Numbers-State/Federal.....	SFHWHY00263/0003250
Project Title	JNU: Marine, Franklin, & Thane: Seward to Mt. Roberts- Survey Services
REP No	25203024

OFFEROR (CONTRACTOR)

Contractor.....	:	
Street.....	:	
P.O. Box.....	:	
City, State, Zip.....	:	
Alaska Business License Number	:	
Federal Tax Identification No.	:	
DOT&PF DBE Certification No. (if any)	:	
Individual(s) to sign contract	:	
Title(s)	:	
Type of business enterprise (check one).....	:	[] Corporation in the state of . :
	:	[] Individual [] Partnership [] Other(specify)

ALASKA STATUTORY PREFERENCES (IF NO FEDERAL FUNDING)

Check the applicable preferences that you claim for the proposed contract (reference Criteria 11, 12 & 13 in Part C):			
[] Alaska Bidder (Offeror)	AND>>	[] Veterans AND>>	[] Employment Program <u>or</u> [] Disabled Persons

PROPOSED SUBCONTRACTOR(S)

<u>Service, Equipment, etc.</u>	<u>Subcontractor & Office Location</u>	<u>AK Business License No.</u>	<u>DOT&PF DBE Certification No.</u>

CERTIFICATIONS

I certify: that I am a duly authorized representative of the Contractor; that this Submittal accurately represents capabilities of the Contractor and Subcontractors identified herein for providing the services indicated; and that the requirements of the Certifications on page 2 and 3 of this Part D for 1) Alaska Licenses/Registrations, 2) Insurance, 3) Federal-Aid Contracts exceeding \$100,000, 4) Cost and Pricing Data, 5) Trade Restrictions/Suspension/Debarment, 6) Foreign Contracting, 7) DBE Commitment, and 8) Former Public Officer – will be complied with in full. These Certifications are material representations of fact upon which reliance will be placed if the proposed contract is awarded. Failure to comply with these Certifications is a fraudulent act. The Contracting Agency is hereby authorized to request any entity identified in this proposal to furnish information deemed necessary to verify the reputation and capabilities of the Contractor and Subcontractors. This proposal is valid for at least ninety days.

Signature : _____

Name..... : _____

Title..... : _____

Date: _____

Telephone (voice): _____

(fax): _____

Email Address: _____

CERTIFICATION FOR ALASKA BUSINESS LICENSES AND REGISTRATIONS

PART

D

Contractor and all Subcontractors shall comply with the following applicable requirements of Alaska Statutes:

1. **Alaska Business License** (Form 08-070 issued under AS 43.70) at the time contract is awarded as required by AS 36.30.210(e) for Contractor and all Subcontractors. In accordance with Administrative Manual, Section 81.120, proof of application for an Alaska Business license will satisfy this requirement. Per AAM 81.120, acceptable evidence that the offeror possesses a valid Alaska business license consists of any one of the following:
 - a. Copy of the Alaska business license.
 - b. A canceled check that demonstrates payment for the Alaska business license fee.
 - c. A copy of the Alaska business license application with a receipt stamp from the State's business license office.
 - d. A sworn notarized affidavit that the bidder/offeror applied and paid for the Alaska business license.
 - e. Other forms of evidence acceptable to the Department of Law.
2. **Certificate of Registration** for each individual to be in "responsible charge" (AS 08.48.341(11-14)) for Architecture, Engineering, Land Surveying, or Landscape Architecture (Form 08-2407 issued under AS 08.48.211) issued prior to submittal of proposal. Associates, consultants, or specialists under the supervision of a registered individual in "responsible charge" are exempt from registration requirements (AS 08.48.331).
3. **Certificate of Authorization for Corporations, Limited Liability Companies, and Limited Liability Partnerships** for Contractors and Subcontractors for Architecture, Engineering, Land Surveying, or Landscape Architecture (Form 08-2407 issued under AS 08.48.241). Entities offering to provide Architectural, Engineering or Land Surveying services do not need to be registered for such disciplines at the time proposal is submitted provided they obtain registration prior to contract award (AS 08.48.241).
4. **Certificate of Incorporation** (Alaska firms) or **Certificate of Authorization for Foreign Firm** ("Out-of-State" firms). All corporations, regardless of type of services provided, must have one of the certificates (AS 10.06.218 and other sections of Title 10.06 - Alaska Corporations Code).
5. **Current Board of Director's Resolution** for incorporated Contractors and incorporated Subcontractors for Architecture, Engineering, Land Surveying or Landscape Architecture (reference AS 08.48.241) that names the person(s) designated in "responsible charge" for each discipline. Such persons shall be licensed in Alaska and shall participate as project staff in the Contract/Subcontracts.
6. **All partners** in a Partnership to provide Architectural, Engineering, Land Surveying, or Landscape Architecture **must be legally registered in Alaska** prior to submittal of proposal for at least one of those disciplines (AS 08.48.251) which the Partnership offers.
7. **Joint Ventures**, regardless of type of services provided, must be licensed/registered in the legal name of the Joint Venture as used in this proposal (AS 43.70.020 and 43.70.110(4)).
8. **Contracts for Architecture, Engineering, Land Surveying, or Landscape Architecture** may not be awarded to individuals, corporations or partnerships not in compliance, respectively, with the provisions of paragraph 2, 3, and 6, above (AS 36.90.100).

For information about licensing, Offerors may contact the Alaska Department of Commerce, Community, and Economic Development, Division of Corporations, Business and Professional Licensing at P.O. Box 110806, Juneau, AK 99811-0806, or at Telephone (907) 465-2550, or at Internet address: <https://www.commerce.alaska.gov/web/cbpl>

CERTIFICATION FOR INSURANCE

Contractor will ensure that it and all Subcontractors have insurance coverage to effectuate the requirements of DOT&PF Form 25A269, Indemnification and Insurance.

CERTIFICATION FOR FEDERAL-AID CONTRACTS EXCEEDING \$100,000

The individual signing this proposal certifies to the best of his or her knowledge and belief, that:

- (1) No federal appropriated funds have been paid, by or on behalf of the Contractor, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the Contractor shall complete and submit Standard Form-LLL, Disclosure of Lobbying Activities, in accordance with its instructions. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

This certification is a material representation of fact upon which reliance will be placed if the proposed contract is awarded. Submission of this certification is a prerequisite for making or entering into the proposed contract imposed by Section 1352, Title 31, U.S. Code. The Contractor also agrees by submitting this proposal that Contractor shall require that the language of this certification be included in all lower tier subcontracts which exceed \$100,000 and that all such Subcontractors shall certify and disclose accordingly.

CERTIFICATION – COST AND PRICING DATA

In accordance with AS 36.30.400, any cost and pricing data submitted herewith, or in any future price proposals for the proposed contract, will be accurate, complete and current as of the date submitted and will continue to be accurate and complete during the performance of the contract, if awarded.

The Contractor certifies that all costs submitted in a current or future price proposal are allowable in accordance with the cost principles of the Federal Acquisition Regulations of Title 48, Code of Federal Regulations (CFR), Part 31 and that the price proposal does not include any costs which are expressly unallowable under the cost principles of the FAR of 48 CFR 31. In addition, all known material transactions or events that have occurred affecting the firm's ownership, organization and indirect costs rates have been disclosed.

CERTIFICATION – TRADE RESTRICTIONS AND SUSPENSION AND DEBARMENT

The individual signing this proposal certifies to the best of his or her knowledge that the Contractor and any subcontractors are in compliance with DOT&PF 25A262 Appendix A, General Conditions, Article A25 and Article A26.

CERTIFICATION - FOREIGN CONTRACTING

By signature on this solicitation, the offeror certifies that all services provided under this contract by the contractor and all subcontractors shall be performed in the United States. If the offeror cannot certify that all work is being performed in the United States, the offeror must contact the Contracts Officer to request a waiver at least 10 days prior to proposal deadline. The offeror must provide with their submission a detailed description of the portion of work being performed outside the United States, where, by whom, and the reason the waiver is necessary. Failure to comply with this requirement may cause the state to reject the bid or proposal as non-responsive, or cancel the contract.

CERTIFICATION – DBE COMMITMENT

For federal-aid projects with DBE goals: if the Contractor submits a utilization report that proposes to use certified DBE's in the performance of work, the Contractor certifies that every effort will be made to meet or exceed the proposed percentage.

In addition, the Contractor certifies that a Consultant Registration form shall be submitted to the DBE/Civil Rights Office for their firm and each subconsultant prior to award.

CERTIFICATION – FORMER PUBLIC OFFICER

Any proposer listing as a member of the proposer's team a current public officer or a former public officer who has left state service within the past two years must submit a sworn statement from that individual that the Alaska Executive Branch Ethics Act does not prohibit his or her participation in this project. If a proposer fails to submit a required statement, the proposal may be deemed nonresponsive or nonresponsible, and rejected, depending upon the materiality of the individual's proposed position.

The Ethics Act bars a public officer who leaves State service from representing, advising or assisting a person for compensation regarding a matter –

that was under consideration by the administrative unit in which the officer served, and in which the officer participated personally and substantially through the exercise of official action,

for two years after leaving state service. See AS 39.52.180(a). "Public officer" includes a state employee, a member of a state board and commission, and a trustee of the Exxon Valdez Oil Spill Trust. "Official action" means a recommendation, decision, approval, disapproval, vote, or other similar action or inaction. Possible remedies for violating the bar include penalties against the former public officer and voiding the state grant, contract or lease in which the former public officer is involved.

Additionally, former public officers may not disclose or use information acquired in the course of their official duties that could in any way result in a benefit to the former public officers or their families, if the information has not been disseminated to the public or is confidential by law, without appropriate authorization. See AS 39.52.140.

Each current or former public officer is responsible for determining whether he or she may serve in the listed capacity on this project without violating the Ethics Act. A form that a former public officer may use to certify their eligibility is attached. Current public officers may seek advice from their designated ethics supervisors concerning the scope and application of the Ethics Act. Former public officers may, in writing, request advice from the Office of the Attorney General, Ethics Attorney concerning the application of the Ethics Act to their participation in this project. It is the responsibility of the individual and the proposer to seek resolution in a timely manner of any question concerning the individual's eligibility.

PRE-AUDIT STATEMENT

(Confidential when completed)

Submit this form, completed and with required attachments, **only** if specifically requested, and **only** to the following address: DOT&PF, Attn: Office of Internal Review, PO Box 196900, Anchorage, AK 99519-6900 OR to fax number: (907) 269-0733. Confidentiality may not be ensured if delivered otherwise.

Evaluation of this statement may preclude the necessity for a comprehensive on-site audit of Contractor's records. Entries may be handwritten, if legible.

1. Identify your financial year including beginning and ending dates
2. List your actual costs, by the following categories, for your most recently ended fiscal year. Cost Terminology is defined on the reverse.
 - 2a. Direct Labor \$
 - 2b. Attach a Trial Balance with grouping of accounts used to arrive at the following Indirect Cost amounts:

Fringe Benefits	\$
General & Administrative Expenses	\$
Sum	\$
 - 2c. Indirect Cost Rate (Sum of 2b / 2a)Percent (%):
3. If your records have been audited within the last two years by a government agency, attach a copy of the Audit Report.
4. Attach copies of your most recent Internal and Audited (if performed by other than the Contracting Agency) Financial Statements.
5. Are your accounting methods for recording contract costs based on a job or project identified cost system?
[] Yes [] No If your response is "No", attach an explanation of your project cost accounting system.
6. If you charge projects based on unit rates (e.g.: for computer time, laboratory tests, copies or equipment use, etc.) attach a list of such items and unit rates.
7. Do you offset revenue received from unit rate payments against the applicable Indirect Cost Accounts?
[] Yes [] No

If you have questions concerning this document, please telephone our Auditors at (907) 269-0715.

CERTIFICATION

I certify that I am a duly authorized representative of the Contractor and that information and materials enclosed within this statement accurately represent financial records of the office listed below.

Signature: _____	Date: _____
Name: _____	Telephone: _____
Title: _____	Fax: _____
Contractor: _____	Email: _____

Office Address for which this Submittal is made:	Address where Accounting Records are maintained, if not at Office Address:
Street:	:
P.O. Box:	:
City, State, Zip:	:

COST TERMINOLOGY

DIRECT LABOR - Base salary or wages paid to employees charged directly to contracts or projects.

OTHER DIRECT COSTS - Actual costs of other than Direct Labor. Some examples of Other Direct Costs are subcontracts, equipment (company owned or rented), unit rate items and reimbursable expenses (travel, computer charges, reproduction, etc.).

INDIRECT COST RATE – A computed rate developed by adding all of a firm's general and administrative costs, and all other indirect costs, then dividing by a base value, usually direct labor dollars to get a percentage. This rate is normally compiled based on the consultant's applicable fiscal year.

INDIRECT COSTS - Indirect costs consist of allowable expenses which, because of their incurrence for common or joint cost objectives, must be prorated (allocated) to jobs or contracts using a specified Indirect Cost Rate. A cost objective is a function, organizational subdivision, contract, project or work unit for which cost data is accumulated under the Contractor's accounting system. Generally, Indirect Costs are segregated into the following categories: Fringe Benefits and General & Administrative Expenses .

Fringe Benefits - Costs for items such as:

Workers' Compensation Insurance
Deferred Compensation/Retirement Plans

Vacation Time and Authorized Leave
Social Security and Unemployment Taxes
Group Medical Plan and Life Insurance Premiums

Overhead costs for items such as the following, if they are not included in Direct Costs:

Indirect Labor (Supervisory, Administrative, etc.)
Travel, Food and Lodging
Maintenance and Depreciation of Equipment/Computers
Business Insurance Premiums Not Billed to Clients
Rent, Heat, Power, Light and Janitorial Services

Office Supplies
Communications
Reproduction Costs
Recruiting Expense
Rentals of Equipment/Computers

UN-ALLOWABLE COSTS - Costs for the following items and certain other costs defined in 48 CFR Part 31 and related regulations are not allowable. Such costs shall not be included as Indirect Costs or in the calculation of the Indirect Cost Rate.

Alcoholic Beverages
Advertising
Interest and Other Financial Costs
Contributions and Donations
Federal Income Taxes
Goodwill

Organization Costs
Lobbying Costs
Bad Debts
Fines and Penalties
Entertainment
Keyman Insurance

NOTE: IF YOUR ACCOUNTING SYSTEM WHOLLY OR PARTIALLY ALLOCATES INDIRECT COSTS ON OTHER THAN A DIRECT LABOR BASIS, ATTACH A DESCRIPTION OF THE COST POOLS OR SERVICE CENTERS YOU USE AND IDENTIFY THE INDIRECT COSTS RATE(S) AND BASE(S).

INDEMNIFICATION AND INSURANCE

Appendix D in Professional Services Agreements

IRIS Program No: SFHWY00263
Federal Project No: 0003250
Date Prepared: 05/09/2019

CONTRACTOR shall include the provisions of this form in all subcontracts that exceed \$25,000 and shall ensure Subcontractor's compliance with such provisions.

ARTICLE D1 INDEMNIFICATION

D1.1 The CONTRACTOR shall indemnify, hold harmless, and defend the CONTRACTING AGENCY from and against any claim of, or liability for negligent acts, errors or omissions of the CONTRACTOR under this Agreement. The CONTRACTOR shall not be required to indemnify the CONTRACTING AGENCY for a claim of, or liability for, the independent negligence of the CONTRACTING AGENCY. If there is a claim of, or liability for, the joint negligent error or omission of the CONTRACTOR and the independent negligence of the CONTRACTING AGENCY, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "CONTRACTOR" and "CONTRACTING AGENCY", as used within this article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "Independent Negligence" is negligence other than in the CONTRACTING AGENCY's selection, administration, monitoring, or controlling of the CONTRACTOR and in approving or accepting the CONTRACTOR's Work.

D1.2 The CONTRACTOR shall exercise that degree of skill, care and judgment commensurate with the professional standards for the services of a similar nature. When such standards are in dispute, they shall be established by a panel of three qualified, impartial professionals objectively selected and appointed by the Appeals Officer.

D1.3 The CONTRACTOR shall correct, through re-performance at its expense, any services which are deficient or defective because of the CONTRACTOR's failure to perform said services in accordance with professional standards, provided the CONTRACTING AGENCY has notified the CONTRACTOR in writing within a reasonable time, not to exceed 60 days, of the discovery of any such deficiency during the performance of the services and within 12 months of the date of final payment under this Agreement.

ARTICLE D2 INSURANCE

D2.1 Without limiting the CONTRACTOR's indemnification, it is agreed that CONTRACTOR shall purchase at its own expense and maintain in force at all times for the duration of this Agreement, plus one year

following the date of final payment, the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the CONTRACTOR's policy contains higher limits, the CONTRACTING AGENCY shall be entitled to coverage to the extent of such higher limits. Certificates of insurance must be furnished to the CONTRACTING AGENCY and incorporated into this Agreement with copies attached to this document. Certificates must provide for the CONTRACTING AGENCY to receive notice of any policy cancellation or reduction per AS 21.36 Sections 210-310. Failure to furnish certificates of insurance or lapse of the policy is a material breach and grounds for termination of the CONTRACTOR's services and may preclude other Agreements between the CONTRACTOR and the CONTRACTING AGENCY.

D2.1.1 Worker's Compensation Insurance: The CONTRACTOR shall provide and maintain, for all employees engaged in work under this Agreement, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal USL&H and Jones Act requirements. The policy(s) must waive subrogation against the State of Alaska.

D2.1.2 Commercial General Liability Insurance: Such policy shall have *minimum* coverage limits of \$300,000 combined single limit per occurrence, covering all business premises and operations used by the Contractor in the performance of services under this agreement. The policy shall be written on an "occurrence" form and shall not be written as a "claims-made" form unless specifically reviewed and agreed to by the CONTRACTING AGENCY.

D2.1.3 Comprehensive Automobile Liability Insurance: Such policy shall have *minimum* coverage of \$300,000 combined single limit per occurrence covering all vehicles used by the Contractor in the performance of services under this agreement.

D2.1.4 Professional Liability (E&O) Insurance: Covering all negligent errors or omissions, and negligent acts, which the CONTRACTOR, Subcontractor or anyone directly or indirectly employed by them, make in the performance of this Agreement which result in financial loss to the State of Alaska. Limits required are per the following schedule:

STATEMENT OF SERVICES

APPENDIX B

Agreement for Land Surveying and Mapping Services

ARTICLE B1 INDEX

<u>Article</u>	<u>Subject</u>
B1	Index
B2	General Criteria for Surveying and Mapping Services
B3	Surveying and Mapping Services
B3.1	Overview
B3.2	Control Surveys
B3.3	Surveying for Design
B3.4	Surveying for Right of Way
B3.5	Right of Way Mapping
B3.6	Pre & Post Construction Surveying
B3.7	Right of Way Engineering Closeout Services
B3.8	Aeronautical Surveys

ARTICLE B2 GENERAL CRITERIA FOR SURVEYING AND MAPPING SERVICES

B2.1 Standards. The Contractor shall perform the services to standards called for in the Alaska State Professional Land Surveyors (ASPLS) Standards of Practice, the California Geodetic Control Committee (CGCC) Standards for Band IV surveys, U.S. COE Manual EM-1110-1-10000 for Photogrammetric Mapping, or the DOT&PF Construction Surveying Requirements, as appropriate to the services being performed.

All studies, reports and services shall be performed in accordance with applicable codes, regulations and standards; professional practice procedures; and commonly recognized surveying and mapping methods. The contractor shall package the deliverable in an electronic format using folders. The Contractor shall not begin surveying for design, surveying for right-of way, or right-of-way mapping without specific written authorization from the Contracting Agency.

B2.2 Considerations. The Contractor shall consider the geographical location of the project as well as other environmental and site specific constraints when performing services. The Contractor shall procure the necessary right of entry permissions when required, including private property, any Native Allotments, and Alaska Railroad property.

B2.3 Registration. All survey services shall be conducted by, or under, the direct supervision of a Professional Land Surveyor (PLS) holding current registration in the State of Alaska. A PLS shall be an active, on-site field supervisor of the survey crew. A PLS shall also be directly involved in the preparation of all survey deliverables.

B2.4 Field books. The Contractor shall furnish hardbound field books for recording survey information. The books shall become the property of the Contracting Agency after the survey information has been entered and the contract completed. Each book shall be labeled with the project name and an appropriate title, e.g. Horizontal Control, Vertical Control, etc., and shall have an index and comments page. The index page shall reference the contents by page number. A readable PDF copy of the field books is acceptable.

B2.4.1 Field notes shall be kept in a neat and orderly fashion. All pages shall be consecutively numbered, showing date, weather, and crew names. All abbreviations used shall be described on the comments page. Sketches are to be used frequently and shall be detailed enough to assist in following the progression of the services. Notes and sketches shall be adequately detailed to convey their intent to a person who is not familiar with the project. Descriptions of all monuments or other points, recovered or set, are to include the data stamped on the monument and the condition of the monument.

B2.5 Units. U.S. Customary System of Measurement (foot units) shall be used throughout development of the project. Any metric conversions required shall be based upon the U.S. Survey Foot (3937 feet = 1200 meters exact).

B2.6 Drawings, Plats, and Maps shall be prepared in electronic format as specified by the Contracting Agency.

B2.6.1 Unless otherwise stated, the format and standards for all drawings will be according to the most current DOT/PF Southcoast I Region Design Drafting Manual. These standards are available upon request. The plotted scale shall be as specified by the Contracting Agency.

B2.6.2 Drawings shall be produced and provided in English (U.S. Survey foot units) format. Distances will be shown in horizontal ground foot units. Areas shall be annotated with "Ac." for acres, and "sq. ft." for square feet. Metric units shall not be shown on drawings developed for design work, unless requested to do so by the Contracting Agency.

B2.6.3 All linework and lettering must be of professional quality and all line widths and lettering sizes must be of such size that all information can be clearly shown without overlap or confusion. All lettering must be a minimum size of 0.1 inch at a full-scale plot. Lettering and linework must be in the appropriate black drafting ink. AutoCAD style names and fonts shall follow the Contracting Agency's specified standards. See the current Design Drafting Manual (B2.6.1)

B2.6.4 Linework shall not run through text. Do not break lines at text; mask the linework using color 155 solids. Solids shall be placed on the same layer as the text that the solid lies under.

B2.6.5 Drawings are to be accurate models of the data shown, e.g.; a line labeled N 10°00'00" E 104.35' shall be electronically drawn exactly as labeled, a line that is shown to terminate at a monument symbol shall be electronically drawn with no distance between the endpoint of the line and the center of the symbol, etc.

B2.6.6 All CAD work within Model Space shall be color by layer. The drawing shall include metadata, to include: control statements, drawing notes, and any other survey related info shown as text within Model space. The drawing shall be purged before submitting. Zoom to extents and remove any extraneous features. Check to ensure that all symbols are the same scale, which should be the plotted scale of the drawing. A standard DOT&PF north arrow, a legend depicting only the symbols and linework used on that sheet, a foot unit bar scale, and standard DOT&PF border will be included on each sheet within the drawing. Do not include any extraneous backup files.

B2.6.7 Final Plans, Maps, and Plats shall be submitted electronically and with solid black ink on 22" x 34" original mylar. All final drawings shall be plotted so that the ink is on the front surface of the mylar. Topographic drawings are not required to be plotted.

B2.6.8 Drawings not meeting these standards will be rejected. All drawing files shall be submitted electronically to the AK DOT&PF Survey Manager upon completion for review. The contractor shall perform their own internal review of these products before delivery, to see that Department standards have been followed.

B2.7 TINs shall be an Autodesk Civil3D Surface or 3D lines with an accompanying LandXML file. Include the TIN boundary as a closed polyline at elevation zero, and the fault lines as 3D polylines. All TINs produced shall be checked by ground based survey methods and by field inspection of contours generated by the TIN.

B2.7.1 A TIN certificate shall be submitted, signed, and sealed by the responsible PLS and shall contain the following: 1) the methods used to gather data for production of the TIN(s), 2) the accuracy of the TIN(s), and 3) the checks used to substantiate the accuracy of the TIN(s). All ground based TIN(s) shall be field checked before final submittal, and this shall be stated on the TIN certificate. All TIN(s) shall be checked by a PLS using withheld Topographic points randomly collected throughout the TIN(s) area. A minimum of 50 points shall be collected. Provide a spreadsheet showing the elevation differences from the TIN(s). A sample certification of TIN is available from the Contracting Agency's Survey Section.

B2.8 Coordinate Files shall be comma-delimited ASCII text files. Data shall be in the sequence Point Number, N, E, Z, and Description. Coordinates shall be given to three decimals for the Northings and Eastings, and two decimals for elevations. Points of unknown elevation shall have a placeholder of -9999 in the Z position. Descriptors are to be case sensitive, e.g.: Rebar5 shall not equal REBAR5. Descriptors for found or set monuments shall follow examples provided by the Contracting Agency.

B2.8.1 Point Numbering Scheme. The following point numbering scheme shall be used:

Range	Use
1-99	Primary Control Set (main project network control)
100 - 299	Secondary Control Set (traverse, TBM. Recovered NOS/NGS)
300-399	Photo Control (HV's)
500-599	Mapping Points (H&T/Spikes/Nails)
600-799	Search/Calculated
800-999	Other per DOT
1000-1999	Fnd Mons/Prop Cors
2000-2999	Computed/Protracted Points, Pre/Post Stakeout
3000+	Topography Survey Points

The Surveyor shall ensure that point numbers used in this task do not conflict with point numbers used in other survey tasks on this project.

B2.9 Electronic Data (drawing files, coordinate files, reports, etc.) shall be submitted on appropriate size and type of digital media.

B2.10 Quality Control shall be performed by the Contractor prior to all submittals. Three dimensional backsight checks shall be recorded at the beginning and end of all instrument setups. Three dimensional coordinate checks shall be recorded at the beginning and end of an RTK GNSS work session. These checks shall become part of the submittal, labeled as "Quality Control Checks" within the Control Summary deliverable. The Contracting Agency will **reject** submittals that do not substantially conform to the requirements of this statement of services.

B2.11 Reviews. Draft documents required under this agreement shall be submitted to the Contracting Agency Survey Manager for review. The Contractor shall allow three weeks for the return of written comments. The Contractor shall address and respond to these comments to the satisfaction of the Contracting Agency prior to submitting the final documents.

B2.12 Submittal Delivery. Deliverables shall be submitted to the Contracting Agency in accordance with the negotiated schedule.

ARTICLE B3
SURVEYING AND MAPPING SERVICES

B3.1 OVERVIEW

B3.1.1 General. The Contractor shall research all information applicable to the requirements of the assigned project and perform all necessary field and office services necessary to collect geospatial data and to reduce the collected data to a form useful for the Contracting Agency's project.

B3.1.2 Survey Limits and Scope. The survey limits and scope will be defined within each specific project's Request for Proposal.

B3.1.3 Survey Services shall be performed in the following sequence unless otherwise directed by the Contracting Agency:

- A. Research

- B. Pre-Work Meeting with ADOT&PF
- C. Control Survey
- D. Aerial Photography/Photogrammetry
- E. Topographic/Planimetric Survey
- F. Bridge Site(s)/Drainage Survey
- G. Special Features
- H. Right-of-Way Survey
- I. Right-of-Way Mapping
- J. Preconstruction Surveying
- K. Post Construction Surveying
- L. Right of Way Engineering Closeout Services

B3.2 Control Surveys

B3.2.1 General. Control surveys include establishing horizontal and vertical control points as directed by the Contracting Agency. The Contractor shall prepare a Survey Control Diagram (SCD) showing the results of the control survey. The SCD will be a recorded document, and as such, will need to meet certain criteria. All points used or tied as a part of these control surveys shall be included in the project coordinate file and shown on the SCD. SCD guidelines are available from the DOT&PF Survey Section. Prior to performing field surveys for the project, the Contractor shall meet with the Contracting Agency's Survey Manager, or their designee, to get existing Department control data and to discuss the control requirements for the project.

B3.2.1.1 Basis of Horizontal Control. When the primary control is provided by the Contracting Agency, it shall be held as the basis of control for the project. Contact the Contracting Agency if the provided control is found to be disturbed or out of tolerance. Any auxiliary control points necessary to augment this control shall be incidental to the task for which it is required. When the primary control is to be performed by the Contractor, the basis of control shall be as directed by the Contracting Agency's Survey Section. The local project coordinate system to be used shall be based upon transformation parameters supplied by the Contracting Agency.

B3.2.1.2 Horizontal Control Standards. All horizontal control survey measurements and references shall be recorded in field books. Electronic data collection can be used to record control data, but is not acceptable as the sole data source for survey measurements. Distances shall be measured and recorded in feet (nearest 0.01 foot). Recorded angle sets, at a minimum, will contain 2 direct and 2 reverse measurements of the forward angle right. When the difference between a direct and reverse pointing of an angle pair exceeds six seconds (ten seconds for distances of 150 feet or less), then that angle pair shall be rejected and remeasured. The mean angle right shall be used for all computations. All foresights and backsights shall be of the fixed leg type. Secondary control points may be side-tied in the same manner. Secondary control points shall be, at minimum, a mag-nail in paved areas or a 6-inch spike in unpaved areas.

All traverses performed shall meet or exceed the standards for Third Order Class I, Traverse Surveys as specified in the ASPLS Standards of Practice. All traverses shall be closed; beginning and ending at known points with an allowable linear error of closure of 1:10,000 or better. In no case shall ground traverses run greater than 2 miles between GNSS controlled points. Static GNSS work shall meet current CGCC Standards for Band IV Surveys. Traverse and GNSS network adjustments shall be by simultaneous least squares adjustment methods.

All cadastral, property, or right of way corners tied with GNSS shall be done using Static GNSS survey methods. These corners are to be considered secondary control and need only to be occupied once, providing there is a minimum of two 20 minute duration vectors from project control computed for the corner position that differ by no more than 0.08 feet horizontally. If in appropriate terrain RTK GNSS methods as outlined in **NGS publication User Guidelines for Single Base Real Time GNSS Positioning ver. 2.1 dated 8/2011** can be used. 3 vectors observed from 2 primary control points (bases) shall be averaged for final coordinates *or* another 3 vectors observed from same primary control point (base) after an interval not less than 2 hours from first set of observations shall be averaged for final coordinates. These 2 sets of observations shall differ no more than 0.08 feet horizontally.

B3.2.1.3 Primary Horizontal Control. For Highway Projects or traverses along road corridors, GNSS control points shall be set at approximately 2 mile intervals within the project limits, in areas where they may be easily traversed in and out of. These points shall be used for both the project horizontal and vertical control. A 5/8" dia. rebar or similar shall be used with a 2.5" aluminum cap or similar. Bearing objects as necessary shall be set and

documented. A minimum 4" dia. well case of length 2.5 feet shall be set around each monument with a protective cap and marker post. These points shall be driven to a maximum of 40 feet or refusal, whichever is less. An acceptable alternative would be to cement a cap into a solid rock outcropping or bedrock, or a dig-in type flared-base monument where conditions warrant.

Additional intervisible traverse points, as needed, shall be set at maximum 1320 foot intervals, and shall consist of a minimum 5/8" x 24" rebar (5/8" x 8" in pavement) with identifying cap. These points shall be located off of the existing paved surface wherever possible, and shall be set at least 0.1 foot below the existing ground surface. No spikes or nails shall be used as the Primary Horizontal Control.

All primary horizontal control points and reference points, found or set, shall be shown on the SCD.

The Contractor shall prepare a narrative horizontal control summary detailing the datum, primary control points used, Basis of Bearings, type of adjustment performed and statistics, problems encountered during the survey, equipment used, etc., which shall include annotated copies of control computations and control adjustments, and a horizontal control statement. For GNSS control surveys, the Contractor shall also provide a RINEX2 format data file of at least 8 hours of GNSS data for at least two control points for at least two different days in the Contractor's control network. **The Contracting Agency recommends logging as much data on as many different days as possible to account for any solar disturbances or other unanticipated problems that might occur.**

B3.2.1.4 Basis of Vertical Control. When primary vertical control is provided by the Contracting Agency, it shall be held as the basis of control for the project. Any auxiliary control points necessary to augment this control shall be incidental to the task for which it is required. When the primary vertical is to be established by the Contractor, the vertical datum shall be determined by the Contracting Agency. Note: A tie to MLLW shall be made for all surveys in or adjoining tidally influenced areas unless specifically directed to do otherwise by the Contracting Agency.

B3.2.1.5 Vertical Control Standards. All vertical control survey measurements shall be recorded in field books. If an electronic digital level is used and the data is recorded electronically the Contractor shall provide annotated copies of the raw and reduced data. All vertical survey circuits shall meet or exceed the standards for third order leveling as specified in the latest printing of the Federal Geodetic Control Committee's Standards and Specifications for Geodetic Control Networks. All vertical control points shall be part of a closed level loop; side-shots are not acceptable. Each loop shall be adjusted and this adjusted elevation used for any further loops. Loop closures and loop-adjusted elevations shall be shown in the field books. The books shall also be used to record descriptions and sketches of vertical control points found or set, condition of found points, and for electronically recorded data the loop information (start point, point(s) controlled, end point, etc.) necessary to interpret the data. Primary vertical control points (BMs and TBMs) shall be controlled by differential leveling. Elevations may be established for secondary control points by closed trigonometric loops, in which case sight distances shall not exceed 750 feet with foresights and backsights of approximately equal lengths, and the line of sight shall clear obstacles by a minimum of 1.5 feet to avoid the effects of adverse refraction. Elevation differences shall be measured and recorded to the nearest 0.01 foot.

B3.2.1.6 Primary Vertical Control. For highway projects or projects along road corridors, primary vertical control points shall be established every 1/2 mile or less. Existing official bench marks (BMs) shall be used wherever possible, with intermediate temporary bench marks (TBMs) established between them. These TBMs shall be stable objects such as luminaire and signal pole base bolts, spikes in trees, etc. **Wooden utility poles, scribes in concrete, and traverse points shall not be used for TBM's.** Contact the Contracting Agency for direction if no suitable TBM locations exist. Where no permanent official bench marks exist, the Contractor shall establish a minimum of two **permanent bench marks** per project site, or one per mile, whichever is the greater number, for use through project construction. Permanent bench marks shall be at a minimum, 9/16" dia. stainless steel rod driven no more than 40 feet or until refusal into dry ground, encased by a 2.5 foot section of 4" dia. well casing flush with the ground with a rubber cap covering the top of the pipe, or a brass cap cemented into rock outcrops or stable concrete structures, e.g. bridge abutments or building foundations and walls. These points may also satisfy the requirements for Horizontal control, under section B3.2.1.3. A marker post shall be placed near each permanent benchmark, found or set. Refer to the NOAA Manual NOS NGS 1, Geodetic Bench Marks for recommended guidelines for setting permanent benchmarks.

Primary vertical control points, found or set, shall be described in great detail, identifying the particular physical feature used for the elevation point, and sketches shall be made to aid in this effort. Instructions sufficient to enable someone unfamiliar with the project to find these points shall be recorded; these instructions shall include distances

and directions from recognizable terrain features such as major intersections, bridges, buildings, etc. All primary vertical control points, found or set, shall be tied to the project horizontal control and shown on the SCD.

The Contractor shall prepare and provide a narrative vertical control summary detailing the datum, primary control points used, vertical network adjustment data, problems encountered during the survey, equipment used, etc., which shall include an NGS benchmark data sheet if available.

B3.2.2 Survey Control Diagram. The Contractor shall prepare a Survey Control Diagram (SCD) for the project showing the relationship between survey monuments set and found in the field. The SCD typically shows all horizontal and vertical control found or set in the course of a survey, as well as all found or set monuments that exist in the roadway. The SCD will be recorded as a Record of Survey in the appropriate Recording District by the Contracting Agency once approved. In cases where Right of Way Mapping will not take place as part of a project, the Contractor may be required to show all monument ties on the SCD, as directed by the Contracting Agency.

B3.2.3 Survey Control Sheet. The Contractor shall prepare a Survey Control Sheet (SCS) for the project showing the relationship between the final project centerline and survey monuments in the field. This differs from a Survey Control Diagram (SCD-see section B3.2.2) in that the SCD does not show the final project centerline. The SCS shall be part of the construction plan set and its principal users will likely be Land Surveyors staking the project centerline prior to and after construction or replacing corners that have been disturbed, Contracting Agency surveyors checking that work, and the Project Engineer to ensure that existing monumentation does not get disturbed. Other near-term users may include Land Surveyors who are performing boundary work in the vicinity of the project. The SCS may be recorded as a Record of Survey, but typically is not. **The SCS must not be prepared before the final design centerline is known**, typically after the Pre PS&E Review. Samples are available from the Contracting Agency's Survey Section.

B3.2.4 Electronic Photographs. To assist in the point identification, verification of markings, condition of monument and accessories, we ask that .jpg digital photographs be gathered of all monuments found, set, or tied. Each corner should have a minimum of three photographs: one readable close-up of the cap, one near distance showing monument condition, and one with an overview of the monument and its surroundings (it helps to have a tripod setup over the point or some other indicator like fiberglass post to find monument in surrounding picture). All original bearing trees and other accessories of record should also be photographed for these corners. The photographs should be indexed by point number, with the point number in the file name to aid identification of the point. Many times a chalkboard or other similar device can be used in the field to identify the point in the photographs by writing the point legal designation and project point number on the board, and placing board in scene of the pictures. Resolution/File Size should be limited to no more than 1Mb per photo, or a resolution of no more than 2048x1356.

B3.3 Survey for Design

B3.3.1 General. Design Surveys include topographic, hydrographic, photogrammetric, and other geospatial methods of data collection associated with defining the existing ground surface and both natural and man-made features.

B3.3.2 Monument Ties. The Contractor shall research, locate, photograph, and verify all monuments within the existing Right-of-Way limits and the proposed construction limits. If the Contracting Agency previously performed a field survey tying monumentation, the existence of these monuments shall be field verified. This will insure that the Contracting Agency can comply with the provisions of AS 19.10.260 and AS 34.65.040, and enable an estimate of quantities to be made. Examples would be Rectangular or Centerline monuments. In the event there is no Right of Way survey performed, these corners will need to be surveyed using the methodology described in section B3.2.1.2, so their position can be accurately reestablished.

B3.3.3 Remote Sensing. When directed by the Contracting Agency, the Contractor shall obtain remotely sensed and associated mapping products. The Contracting Agency shall be granted rights to use of the data and associated delivered products, for our project design and other in-house uses, including transmittal to others.

B3.3.3.1 Photogrammetry. As an alternative to ground surveying, the Contractor may use controlled aerial photography to provide planimetric and topographic information. Use of photogrammetric data for this project is subject to the Contracting Agency's approval. As aerial photography may be used for a variety of analyses, the photography shall be natural color and have sufficient scale and resolution to allow for the preparation of the photogrammetric

products, which meet the required accuracies and provide economical acquisition. Aerial photography used for topographic mapping products shall be acquired during leaf-free and snow free conditions. Aerial photography used solely for orthophoto products may be acquired with leaf-on conditions. Existing photography may be substituted for new photography with the approval of the Contracting Agency Project Manager. All acquired aerial photography, and all photogrammetric products prepared by the Contractor, shall conform to the guidelines and standards of the US COE Manual EM-1110-1-1000. The Contractor using methods suitable to return the desired mapping accuracies shall control aerial photography used for mapping products. Horizontal and vertical datum for the photogrammetric products shall be on the same datums as that used for the project control. Any photo pre-mark panel points shall be set and controlled for this task, using the same methods and materials as detailed for auxiliary control points presented above for Horizontal and Vertical Control. The Contractor shall determine the number of, location of, and panel size for these points in conjunction with the firm performing the aerial photography. Each photogrammetric control point shall be marked using appropriate panel material. The Contractor shall remove and dispose of all panels set under this contract at the direction of the Contracting Agency. The use of the most cost effective techniques that will provide the specified products is encouraged. All photogrammetric products for development of TINs shall meet the format, content, accuracy and certification requirements of Section B3.3.4.1 through B3.3.4.6 unless directed otherwise by the Contracting Agency.

If aerial photography is acquired for, or available for use on this project, a digital orthophoto, geo-referenced to the project coordinates, shall be provided to the Contracting Agency for use in design. Orthophotos shall be delivered in two formats with the associated world files: uncompressed .TIF, and compressed Mr. Sid image file.

B3.3.4 Topographic Survey. Topographic features shall be surveyed using appropriate data collection methods. The Contractor shall provide complete topographic mapping in a single AutoCAD drawing file along with a single TIN upon completion. All points located in these surveys shall be included in the project coordinate file. The Contractor shall:

B3.3.4.1 Define the existing ground surface by creating a Triangular Irregular Network (TIN). The TIN shall be capable of accurately generating 1 foot contours in all areas. Hard shots (pavement, concrete, etc.) shall have vertical accuracy of less than 0.1 foot. The TIN shall incorporate fault lines (grade breaks, existing centerlines, edges of pavement, curbs [flowline and top back], sidewalks, shoulders and/or tops of bank, toes of slope/fill, ditches and/or drainages, etc.) and additional shots as necessary to insure that the TIN accurately represents the **existing ground surface**. The TIN shall not represent water surfaces. Sufficient data shall be gathered along driveways and side streets to allow grade matching. Provide TIN verification in the form of the Contracting Agency's TIN Certificate. (B2.7)

B3.3.4.2 Locate and map all existing improvements and utilities (above and below ground) within the survey limits. Mapping of overhead utility wires shall include the apparent low point of the wire sag. Overhead wire crossings shall also be located at the existing and proposed centerlines. Elevations for these points shall be the bottom wire elevation. Locate all attachments (guy wires, pedestals, stand pipes, load centers, lights, etc.) within the project survey limits. This includes, but is not limited to, power, telephone, fuel lines, water and sewer lines, cable television, edge of pavement, fences, signage, and navoids within the survey limits. Note any historical sites located in this area. Caution shall be used to avoid disturbing any historic remnants. Locate the edge of trees and identify the approximate average height of the trees at the edge. Locate the limits of any apparent contaminated soils and waters within the project area. Tie to any Corp of Engineers flood plain datums. For Airports: Heights of towers, antennas and any other structure that could be considered a hazard to aircraft shall be included. Determine location, finish floor elevations, peak roof elevations and a description of all buildings in and within 100 feet of the surveyed area. Locate the first tier of structures lying outside of the proposed airport boundary and within 200 feet of that boundary.

B3.3.4.3 Locate and map all drainage structures within the survey limits. Record diameter, length, invert elevations, structure type and condition, high water marks, and apparent flow direction.

B3.3.4.4 Locate and map any other physical feature, natural or man-made, including any ordinary or mean high water boundaries that could affect the design of the project, as directed by the Contracting Agency.

B3.3.4.5 After the Contracting Agency has reviewed the provided data, the Contractor may need to **extend the TIN & topographic mapping as specified** by the Contracting Agency.

B3.3.4.6 Locate and tie, both horizontally and vertically, **all proposed and existing geotechnical sample locations**. The Contractor shall stake the baseline or sample locations as directed by the Contracting Agency.

B3.3.5 Bridge Site/Drainage Survey. The Contractor shall perform drainage surveys in the vicinity of proposed channel crossings or major drainages. All work shall be tied to project horizontal and vertical control. Surveys shall be performed as specified in the Preconstruction or Drainage Manual unless otherwise directed by the Contracting Agency. The Contractor shall coordinate with the Contracting Agency for site-specific requirements. The data collected for these surveys shall be incorporated into the TIN and topographic files, and all shots taken shall be included in the project coordinate file.

For culverts 36 inches and over in diameter, 4 cross sections upstream and 4 cross sections downstream from the inlet and outlet of said culvert shall be surveyed. The spacing of these cross sections shall typically be equal to the average width of the existing streambed (i.e. 10 feet wide will then have cross sections taken at 10, 20, 30, and 40 feet up stream and downstream). Cross sections shall be taken perpendicular to the existing streambed. Shots shall be taken at: the thalweg, the toe of slope, the edge of existing water, ordinary high water, the top of bank, and one shot past the top of bank. The data collected for these surveys shall be incorporated into the TIN, topographic, and project coordinate files. The Contractor shall perform the following drainage survey work:

B3.3.5.1 For bridge sites, the line of **ordinary high water** shall be located. The Contractor shall search for evidence of extreme high water and locate it at the existing structure. These items shall be located both horizontally and vertically. The Contractor shall complete the appropriate sections of the Contracting Agency's Bridge Site Survey Form.

B3.3.5.2 Prepare a topographic map of each bridge site. The map shall show the ordinary high water elevation (or mean high water in tidally influenced areas) and indicate the edge of water at the time of the survey. All buildings, dikes, rock outcroppings and other physical features shall be noted on the map.

B3.3.5.3 Additional data collection for the Hydraulic Report may be required after the design has reached the Local Review stage.

B3.3.5.4 Prepare a Bridge Site Report, which is a summary in ASCII format noting pertinent information such as horizontal and vertical control basis, date of survey, bridge number, name of water body, ordinary high water coordinate point numbers, extreme high water coordinate point numbers, existing structure coordinate point numbers, and note whether body of water is navigable.

B3.3.6 Special Features. The Contractor shall collect ground elevation data necessary and stake the location of project specific appurtenances to the roadway (retaining walls, breakwaters, special ditches, turnouts, sound barriers, etc.) as necessary for their design and field review by the Contracting Agency.

B3.3.7 Deliverable Items. The deliverables shall be organized electronically in folders according to the following list. Only submit what is required for your specific project. Do not submit extra information not required by the Contracting Agency. Name the files and folders according to what they represent. Do not use contractor specific job numbers. CAD drawings should be named in such a manner that anyone can tell what it represents without having to open the drawing. An example would be "Sleetmute_Topo.dwg", and not "06-342.dwg". The Contractor shall submit the following items related to their survey to the AK DOT&PF Survey Section:

Deliverable Description

- A. Field Books: The original field books or PDF indexed, reduced, stamped and checked. (B2.4)
- B. Point Files: An ASCII coordinate file containing all recovered, computed, and topographic points in the local system (if provided). Electronic format shall be submitted. Elevations that are not valid TIN elevations shall be coded as such in the descriptor. (B2.8)
- C. Descriptors: An ASCII file listing all descriptors used and an expanded description of their meanings. Descriptors not used on this project shall not be included in this list. (B2.8)

Deliverable Description

- D. Survey Report and Control Summary: Horizontal and vertical control summaries in ASCII format. The Contractor shall also provide stamped annotated copies of control computations and control adjustments, including a check shot report. (B3.2)
- E. Survey Control Diagram (Record of Survey): Electronic CAD and PDF copy. (B3.2.2)
- F. Survey Control Sheet(s): Electronic CAD and PDF copy. (B3.2.3)
- G. GNSS Data: For GNSS control surveys, the Contractor shall provide RINEX2 GNSS data files of 8 hours length for at least 2 control points, along with any GNSS processing or OPUS reports. (B3.2.1.3)
- H. Electronic Pictures: Organized folders containing all of the control, monument ties, and project site photos. Do not use separate folders for each point. If applicable, the point number should be referenced within the image filename. (B3.2.4)
- I. TIN: All TIN files with a sealed and signed certificate of accuracy. Quality control check spreadsheet showing the differences from the true values (B2.7).
- J. Bridge Site/Drainage Survey mapping: Electronic drawing files and TIN files (B3.3.5.2)
- K. Bridge Site Report: Refer to the Preconstruction or Drainage Manual, and or the Contracting Agency for possible additional information. (B3.3.5.4)
- L. Project Drawing: A single complete and edited AutoCAD drawing file of the entire survey limits, containing topographic mapping (points, surfaces, annotations, metadata), base-mapping, bridge site/drainage surveys. (B3.3.4)
- M. Air Photo Report: A report of the photogrammetric control shall be provided including all ground control points, aerial photography camera logs, airborne GNSS control procedures and results, analytical aero triangulation results, current camera calibration reports, and other data associated with control of the aerial photography. (B3.3.3.1)
- N. Ortho Photo Mosaic: .tif format files shall be delivered in files less than 250MB in size. A compressed image file in Mr. Sid format shall also be included. An index file showing the project area and the areas covered by the individual files shall be included. (B3.3.3.1)

B3.4 SURVEYING FOR RIGHT-OF-WAY

B3.4.1 General. The Contractor shall perform the following services to the standards in B3.2. Typically the surveying for ROW is performed after horizontal control is established for the project. Any exceptions shall be discussed at the project pre-work meeting.

B3.4.1.1 Prior to commencement of the survey, the Contractor shall review any title documents and mapping in the Contracting Agency's possession which is considered relevant to the project. The Contractor shall be responsible for researching additional relevant documentation from other sources. These documents include but are not limited to the following:

Bureau of Land Management (BLM) and Department of Natural Resources (DNR) land status plats, BLM township survey plats, Mineral and U.S. Survey plats and field notes, any records of survey, subdivisions, and relevant engineering control surveys, United States Coast and Geodetic Survey (USC&GS)/ National Geodetic Survey (NGS) control diagrams-descriptions, DOT&PF right-of-way records and other easement or boundary documents of record, DOT&PF engineering as-builts, DOT&PF Airport Leasing documents, DNR surveys, and aerial photos, DEC Community Profile Maps, Local or Municipal data.

All research for property corner ties (generally includes local platting authority subdivision plats and right-of-way plats, BLM U.S. Surveys, state land survey plats, waiver documents, deeds, record of surveys and monument records) should be done prior to commencement of searching and tying property and ROW controlling corners.

B3.4.1.2 Tie the nearest Public Land Survey System (PLSS) monuments (Section, 1/4 Section and 1/16 Section Corners) left and right of the project Right-of-Way corridor or if existing monuments that represent the legal corner positions do not exist at those locations, sufficient additional rectangular monuments and/or accessories to control the computations of the legal locations of those corners per the relevant BLM *Manual of Surveying Instructions for Public Lands*. Any corner monument in need of rehabilitation or re-monumentation shall first be photographed, and then have rehabilitation accomplished prior to tying the monument location and re-photographing the final condition. The intent of the PLSS monument ties is to define the larger remaining parcel surrounding the existing road Right-of-Way.

Tie all existing centerline monumentation throughout the project limits including two centerline monuments at each end that extend beyond the limits of the project. Additional PLSS monuments shall be recovered to allow section breakdown for property boundary determination as directed by the Contracting Agency. Tie adequate centerline monumentation on side streets to determine side street alignment to the project limits. A minimum of two side street centerline monuments shall be tied. If side street centerline monuments are not recovered then sufficient block or lot corners will be tied to define the side streets.

For the initial surveys all property corners within and along the existing ROW and the ROW centerlines should be searched for, documented and tied. In most cases, there will be some non-fronting property corners also required to be tied to setup subdivision blocks, survey boundaries and side-street ROWs. Sufficient control is required to establish the location of all surveys adjoining the ROW, or where acquisitions are planned. The extent of the corners to be tied normally is discussed and clarified during contract negotiations or at the survey pre-work meeting.

B3.4.1.3 For projects with PLO ROWs or other ROWs dependent on the physical road location (such as prescriptive claims), tangent asbuilts are required. This procedure normally requires the field determination of pavement or unpaved surfaces centerline by physical measurement, and then location of those points. Points are normally surveyed near each tangent end and a minimum of 3 points on curves. The number of shots actually required depends on curve length and degree of curve and should be clarified in writing at the pre-work meeting. The Contractor at the direction of the Contracting Agency may also be tasked with developing an alignment and locating existing slope or clearing limits. Please consult the Contracting Agency's ROW Engineering section for guidance.

B3.4.2 Record of Survey. A Record of Survey shall be prepared for recording in the appropriate Recording District for the Right of Way survey. All Right of Way surveying completed above in section B3.4.1 shall be included in the Record of Survey. Consult with the Contracting Agency for guidance in the preparation of the Record of Survey.

B3.4.3 Annotated Plats and Research Documents. PDF Copies of all of the research documents for the rectangular survey, centerline monuments, ROW monuments and property corners shall be provided, along with annotations of whether the point was searched for and not found, or monument destroyed, or if found it's corresponding project point number. These annotations do not need to be "works of art", and many times are the original paper plat copies, or scans of such, that the field crews had in the field with them. The annotated plats should be indexed in some method (by Section Location, MOA grid, or other logical means), placed in labeled folders organized by the indexing scheme.

B3.4.4 Additional Topography for Right-of-Way Acquisition. The Contractor shall collect all topographic information that may affect the cost and/or schedule of defined right-of-way acquisitions for the project, such as culverts, land service or access roads, improvements, apparent contaminated soils or waters, buried fuel tanks, fences and any structures. Septic system, well and building locations are examples of pertinent data, usually outside of the acquisition area, that may affect the value of the right-of-way to be acquired.

B3.4.5 Deliverable Items. The deliverables shall be organized electronically in folders according to the following list. Only submit what is required for your specific project. Do not submit extra information not required by the Contracting Agency. Name the files and folders according to what they represent. Do not use contractor specific job numbers. CAD drawings should be named in such a manner that anyone can tell what it represents without having to open the drawing. An example would be "Sleetmute_ROW.dwg", and not "06-342.dwg". The Contractor shall submit the following items related to their Survey to the AK DOT&PF Survey Section:

Deliverable Description

- A. Field Books: The original field books or PDF indexed, reduced, stamped and checked. (B2.4)
- B. An ASCII coordinate file containing all recovered, computed, and topographic points in the local system

(if provided). Electronic format shall be submitted. Elevations that are not valid TIN elevations shall be shown as -9999. (B2.8)

- C. An ASCII file listing all descriptors used and an expanded description of their meanings. Descriptors not used on this project shall not be included in this list. This file shall be submitted with the draft coordinate file. (B2.8)
- D. Right of Way Survey Report Memo. A brief description of the survey methods, equipment, computations, quality control checks and accuracy estimates.
- E. Survey Control Diagram (Record of Survey): Electronic CAD and PDF copy. (B3.2.2)
- F. Annotated Plats and Research Documents. (B3.4.3)
- G. GNSS Data: For GNSS control surveys, the Contractor shall provide RINEX2 GNSS data files of 8 hours length for at least 2 control points, along with any GNSS processing or OPUS reports. (B3.2.1.3)
- H. Electronic Pictures: Organized folders containing all of the control, monument ties, and project site photos. Do not use separate folders for each point. If applicable, the point number should be referenced within the image filename. (B3.2.4)

B3.5 RIGHT-OF-WAY MAPPING

B3.5.1 General. The Contractor shall perform the services necessary to establish the existing Right of Way, and, prepare ROW Lines for Construction Plans, Base Maps, Right of Way Maps, Parcel Plats, Airport Property Plans, Airport Land Occupancy Maps, and Right of Way Acquisition Plats in accordance with the DOT&PF Right of Way Manual and specific instructions from the Contracting Agency.

B3.5.2 ROW Lines for Construction Plans. The Contractor shall submit an electronic drawing file which contains the existing ROW lines, existing ROW centerline, adjoining property lines and subdivisions. The Contractor shall include a narrative of the ROW that is being shown. Narrative shall include source documents and methods used to determine existing rights-of-way.

B3.5.3 Base Maps shall show the entire project limits and shall include a DOT&PF standard Right of Way title sheet, legend sheet, tract maps, plan sheets, monument summary sheets, and general notes sheet including a source document table using Contracting Agency supplied AutoCAD format at the scale and layout specified by the Contract Manager. The plan sheets shall show the following information:

- A. Existing property boundaries, including all Public Land Survey System survey lines.
- B. All subdivisions, including name, plat number, lot and block, or aliquot part description, and easements as shown.
- C. Existing right of way centerline.
- D. Existing rights-of-way
- E. Improvements.
- F. Other features required by the Right of Way Manual and /or the Contracting Agency.

B3.5.3.1 When preparing Base Maps, the Contractor shall (a) thoroughly document sources of existing rights-of-way (b) resolve problems with existing Right of Way and boundary locations and (c) analyze preliminary engineering information to determine where additional survey ties are required. The Contractor shall provide a written summary of (any significant) Boundary Problems encountered in making specific boundary determinations, including rationale for the solution. The Contractor shall provide digital copies of all research with the preliminary Base Map.

B3.5.3.2 The Contractor shall not begin preparing Base Maps without prior specific written authorization from the Contracting Agency.

B3.5.4 Right of Way Maps shall show the entire project limits and shall include a DOT&PF standard Right of Way title sheet, legend sheet, tract maps, plan sheets, and monument summary sheets. The plan sheets shall show all the information required for the Base Maps plus the following information:

- A. Proposed Right of Way.
- B. Proposed project centerline.
- C. Station and offsets to right of way limits.
- D. Easements.
- E. Parcels.
- F. Parcel Information Block.
- G. Proposed slope limits.
- H. Revision block.
- I. Other features required by the Right of Way Manual and /or the Contracting Agency.
- J. For Airport Property Plan and Airport Acquisition Plat (in addition to the above):
 - 1. Plan view showing Tracts and Parcels.
 - 2. Runway Centerline end coordinates in the NAD83 CORS datum.

B3.5.4.1 When preparing Right of Way Maps, the Contractor shall:

- A. Resolve survey conflicts with existing right of way and boundary locations.
- B. Analyze preliminary engineering information to determine where additional survey ties are required.
- C. Examine Title Reports and adjust preliminary boundaries, add additional easements and update owner information as required.
- D. Compute the Take and Remain areas of each parcel based on right of way requirements supplied by the Contracting Agency.
- E. Prepare Map per appropriate platting codes.

B3.5.5 Parcel Plats. The Contractor shall prepare plats for all parcels to be acquired for this project when directed by the Contracting Agency. Note: full takes do not need a parcel plat prepared. Parcel plats shall contain the information required by the DOT&PF Right of Way Manual. The Contractor shall make revisions to Parcel Plats requested by the Contracting Agency. Parcel Plats shall use the Contracting Agency's standard 8-1/2 by 14 inch format and be submitted as a PDF or in a format specified by the Contracting Agency. Plats shall be at a scale suitable for legibility and clarity of detail using Contracting Agency supplied AutoCAD format and shall contain information as required by the DOT&PF Right of Way Manual and the parcel plat checklist. A Title block and border drawing file will be supplied by the Contracting Agency.

B3.5.6 Airport Property Plan and Airport Acquisition Plat. The Contractor shall prepare an Airport Property Plan according to the DOT&PF Right of Way Manual. The Airport Property Plan is considered similar to a Base Map and relates the existing property boundary and property status. An Airport Acquisition Plat is necessary for acquisition areas in the Unorganized Borough and is required to follow the regulations as set for Right-of-Way Acquisition Plats by Department of Natural Resources.

B3.5.7 Airport Land Occupancy Maps. The Contractor shall research current and historic airport tenant lease documents, resolve any found discrepancies and map errors, and provide an updated Airport Land Occupancy (LO) Map, as directed by the Contracting Agency.

B3.5.8 Right-of-Way Negotiations. The Contractor shall provide technical support for right-of-way negotiations. This shall include interpreting documents prepared for the project and explaining project impacts to the Contracting Agency's personnel, property owners, and others. The Contractor shall also attend meetings as required to make presentations and answer questions.

B3.5.9 Pre-Acquisition Meeting. When requested by the Contracting Agency, the Contractor shall attend the pre-acquisition meeting. The purpose of this meeting is to discuss proposed project features and impacts to adjoining properties and parcel configuration prior to plat approval and acquisition. The Contractor should be prepared to discuss any design features which may affect adjoining properties such as project alignments, pathways, sidewalks, medians, curb and gutter, slope limits, impacts to driveways and utilities. Adjoining property information shall include lot boundaries, buildings, driveways, and any other features/improvements that will help the Contracting Agency in negotiations with affected property owners and others to assess project impacts. In addition to preliminary right of way plans, the Contractor may be requested to provide additional visual displays for clarification.

B3.5.10 Reviews and Schedule. The Contractor shall submit drafts of the Base Maps, Right of Way Maps and Parcel Plats, for the Contracting Agency's review, in accordance with the following: Base Maps shall be submitted with the Local Review Assembly. Right of Way Maps including proposed takes for project construction shall be submitted with the Plans-In-Hand Review Assembly. Right of Way Maps including proposed takes for the project and all required utility relocations shall be submitted within four months of the Plans-In-Hand Review submittal. Current Right of Way Maps shall be submitted with the PS&E Assembly. The Summary of Boundary Problems shall be submitted with the drafts of Base Maps. The Contracting Agency shall have a minimum of four weeks for the return of written comments. The Contractor shall address comments to the satisfaction of the Contracting Agency prior to submitting final documents for Right of Way Certification.

B3.5.11 Deliverable Items. The Contractor shall submit draft and final Base Maps, Right of Way Maps and Parcel Plats in PDF and DWG format for Contracting Agency review. Electronic copies of all research and the Summary of Boundary Problems shall be submitted with the draft Base Map. If requested by the Contracting Agency, the Contractor shall provide full sized mylars with original signature for recording along with the final Base Map submittal. Prior to Right of Way Certification, the Contractor shall submit two final Right of Way Maps on 11x17 paper with original signatures and one full size mylar with original signature.

B3.5.12 Provided Items. The Contracting Agency will provide the following (item A can be found on the DOT&PF web site. Items B-D can be obtained on the DOT&PF FTP site. Call 269-0680 for site addresses):

- A. One copy of the Title and Plans Section from the DOT&PF Right of Way Manual.
- B. Samples of final drawings, parcel plats, and title reports.
- C. Civil 3D Drawing Template
- D. The Contracting Agency's Standard Right of Way legend sheet.
- E. Original Title reports for each property to be acquired.

B3.6 Pre & Post Construction Surveys

B3.6.1 General. In order to best perpetuate the positions of DOT/PF Project Centerline Monuments, we encourage the use of Static GPS ties to permanent control stations that are set outside project limits, and are expected to last well beyond construction.

B3.6.2 Pre-Construction. When directed by the Contracting Agency upon completion of the design phase of the project, but prior to advertising for construction, the Contractor, using the previously established project control shall monument the project (PC's, PT's, and no-curve PI's, etc.) using conventional methods. All monuments established shall consist of a minimum 5/8" dia. X 24" rebar (5/8" dia. X 8" in pavement) with a 2" dia. cap, and stake nearby. Once set, all monuments shall be photographed and re-tied to verify their position (B3.2), and a comparison to the design coordinates shall be presented to the Contracting Agency in spreadsheet format. This information shall be presented in project staking report.

Static GNSS Control points for this task shall be set at approximately two mile intervals, or closer for a small project, outside of the construction limits, so as to last for the duration of the project. A plan identifying the type of monument to be set for control, and its proposed location, shall be submitted to the Contracting Agency prior to the work being performed. Control points from the design survey effort may be used for this effort upon approval.

Monuments that may be disturbed during construction shall be referenced by static GNSS to the off-project control. It shall be the Contractor's responsibility to coordinate with the Agency or Firm developing the Right of Way Mapping to identify these monuments. Two in line conventional reference points, set outside the construction limits, may be used in the cases where static GNSS will not work. Two vectors at a minimum shall establish the position of the monument to be referenced. These two vectors shall differ by no more than 0.08 feet.

This procedure is further explained here:

http://www.dot.state.ak.us/creg/dot-cadastral/Construction_Surveys/Centerline_Referencing_and_Perpetuation_2011.doc.

B3.6.3 Post-Construction: When directed by the Contracting Agency, and upon completion of the construction phase of the project, the Contractor shall establish and monument the project and a random control line. Monument type and spacing shall be determined in discussions with the Contracting Agency. In the case of a project centerline, the points shall be established using the data from the Pre-Construction effort. Right of Way monumentation that was referenced

prior to construction shall be field verified that it was not disturbed. A digital photo shall be required as proof. Any disturbed ROW monuments shall be reestablished as part of this effort. This procedure is further explained here http://www.dot.state.ak.us/creg/dot-cadastral/Construction_Surveys/Centerline_Referencing_and_Perpetuation_2011.doc. A final Record of Survey or data incorporation into the project Right of Way Mapping shall be completed that shows any new monumentation set.

B3.6.4 Final Record of Survey (Airports). When directed by the Contracting Agency, and upon completion of the Construction phase, the Contractor shall complete the final Record of Survey which may include, but is not limited to, the following tasks: FAA Aeronautical Survey, locate all navigational aids, as built the runway using guidelines provided by the Contracting Agency, set or check the airport boundary monumentation, set or check the access road monumentation, tie into older horizontal and vertical datums, and establish threshold coordinates. If land was acquired as part of the project a Right-of-Way Acquisition plat will be developed and recorded in the appropriate recording district.

Deliverable Description

- A. Field Books: The original field books or PDF indexed, reduced, stamped and checked. (B2.4)
- B. Point Files: An ASCII coordinate file containing all recovered, computed, and topographic points in the local system (if provided). Electronic format shall be submitted. Elevations that are not valid TIN elevations shall be coded as such in the descriptor. (B2.8)
- C. Descriptors: An ASCII file listing all descriptors used and an expanded description of their meanings. Descriptors not used on this project shall not be included in this list. (B2.8)
- D. Survey Report and Control Summary: Horizontal and vertical control summaries in ASCII format. The Contractor shall also provide stamped annotated copies of control computations and control adjustments, including a check shot report. (B3.2)
- E. Record of Survey for centerline and random control, and/or Monument of Record Forms (B3.6.3) if this information is not incorporated with the project Right of Way Mapping closeout effort. (B3.5 or B3.7)
- F. Project Staking Report (B3.6.2)
- G. GNSS Data: For GNSS control surveys, the Contractor shall provide RINEX2 GNSS data files of 8 hours length for at least 2 control points, along with any GNSS processing or OPUS reports. (B3.2.1.3)
- H. Electronic Pictures: Organized folders containing all of the control, monument ties, and project site photos. Do not use separate folders for each point. If applicable, the point number should be referenced within the image filename. (B3.2.4)
- I. Right of Way Acquisition plat. (B3.5.6)
- J. Airport as-built Record of Survey (B3.6.4)

B3.7 Right of Way Engineering Closeout Services

B3.7.1 Right of Way Engineering Services: *Engineering Services* may include identification of field surveying and mapping services necessary to close out the various projects, such as a Record of Survey or ROW Acquisition Plat, but the performance of the identified field surveying and associated mapping services will not be part of the initial *Right of Way Engineering Services*.

- A. The Contractor shall perform the services necessary to reconcile the Right of Way conveyance documents with the Right of Way Mapping in accordance with the Department Project Close Out check list, and specific instructions from the Contract Manager.

- B. The Contractor should check the centerline and right of way geometry (Bearings, Distances, Curves, Station-offsets, Monument Summary Tables etc.) for any mathematical errors to verify that the right of way can be computed from the information shown.
- C. The Contractor shall proof read the vesting documents of record on file with the Department and/or the Recorders Office. The written legal description and parcel plats will be checked against the Right of Way mapping both visually and for mathematical closure.
- D. The Contractor shall review the Right of Way mapping. The Right of Way mapping shall include (if it applies) the following information:
 1. Information as defined in the Project Close Out check list.
 2. Lands purchased in excess to the ROW needed for the project. These lands will be identified on the ROW mapping as "X" or "R" parcels on older projects.
 3. Commissioner's Quit Claim Deed or Relinquishment.
 4. Lands acquired from DNR will be referenced to the ADL number associated with the parcel.
 5. Files involving these parcels are contained within the Department Right of Way Section.
 6. Final Judgments need to be researched if there was a declaration of taking on the project.
- E. When reviewing the Right of Way mapping, the Contractor shall identify discrepancies among the ROW mapping, written legal descriptions, and parcel plats. The Department will review and approve and/or modify the corrective actions the contractor is to take.
- F. When directed by the Department the Contractor shall hand edit the original mylar Right of Way mapping using drafting ink and lettering sets and update any electronic drawings provided by the Department.
- G. The Contractor will submit copies of the edited ROW mapping to the Contracting Agency who will then submit the plans to the appropriate platting authority for plat approval. When directed by the Contracting Agency, the Contractor will make the final changes to the mylars and electronic drawings then submit for final review to the Contracting Agency. After platting authority and Department approval the contractor will sign the mylars using the Department's Contractor Closeout Certificate.

B3.8 Aeronautical Surveys

B3.8.1 General When directed by the Contracting Agency the Contractor shall perform any and all necessary tasks required by current FAA Advisory Circulars related to the performance and delivery of Aeronautical Surveys. The type and level of effort required will be determined by the Contracting Agency at the time of request. Additional design or ROW survey information may be requested concurrently with an Aeronautical Survey task.

The Contractor shall contact the Contracting Agency's Maintenance and Operation Supervisor, in the appropriate district, to coordinate airport entry procedures and shall exercise caution when working in the vicinity of the runway.

The Contractor shall coordinate with the Contracting Agency prior to fieldwork for threshold locations, runway length, and runway width; no changes to these shall be made without Contracting Agency approval.

Data providers shall make maximum use of existing data for the airport that is traceable to the source to meet the requirements of this Statement of Services before undertaking additional data collection.

B3.8.2 Services. For each of the airports, the Contractor shall perform the following tasks:

The ACs identified below detail the data collection requirements and accuracies for the AOC Survey.

AC 150/5300-16A "General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey."

AC 150/5300-17C "General Guidance and Specifications for Aeronautical Survey Airport Imagery Acquisition and Submission to the National Geodetic Survey."

AC 150/5300-18B "General Guidance and Specifications for Submission of Aeronautical Surveys to National Geodetic Survey (NGS): Field Data Collection and Geographic Information System (GIS) Standards."

Note: The FAA Airports GIS (AGIS) website and the ACs mentioned above are currently being refined and changes to the process should be expected. The Contractor shall use the most current AC upon the start of work for each airport.

B3.8.3 Record of Survey. A Record of Survey shall be prepared for recording in the appropriate Recording District for the Airport Monuments. All temporary monumentation completed above in Section B3.8.2 shall be included in the Record of Survey. Consult with the Contracting Agency for guidance in the preparation of the Record of Survey.

B3.8.4 Deliverable Items. Deliverables will be submitted to the FAA AGIS Portal, and copies of final FAA approved deliverables will be submitted to the Contracting Agency in a local geodetic system as specified by the contracting agency or developed by the Contractor as directed by the Contracting Agency. The Contractor shall submit, for each airport, the following items:

Deliverable Description

A. AC 150/5300-16A Deliverables:

- Geodetic Control Plan
- Geodetic Control Data and Report

B. AC 150/5300-17C Deliverables:

- Imagery Plan
- Georeferenced Imagery & Orthophotos
- Orthophotos

C. AC 150/5300-18B Deliverables:

- Survey and Quality Control Plan
- Airport GIS Survey Data
- AutoCAD Support Drawings and Files
- Final Project Report & Spreadsheet

ARTICLE 4
ADMINISTRATIVE REQUIREMENTS

B4.1 General. Execution of this Agreement does not guarantee any project assignments. Project will be assigned on a contractor rotation basis. The rotational procedures are explained in the attachment "Innovative Rotation Methodology".

The contractor shall provide services as identified and authorized by sequentially numbered Notices to Proceed (NTP) which shall be negotiated for each project assigned under this Agreement.

The CONTRACTOR shall be responsible for all tasks and services authorized by a Notice to Proceed signed by the Project Manager and shall perform such services in accordance with the project schedule.

B4.2 Project Schedule. A schedule of services shall be part of each project assignment negotiated under this term agreement. If the CONTRACTOR becomes aware of any reason why the project schedule may be delayed, such reason shall be identified in writing to the Project Manager within two working days of discovery.

B4.3 Project Staff. All services must be performed by or under the direct supervision of the following individuals. Only prior written approval from the CONTRACTING AGENCY shall accomplish replacement of, or addition to, the Project Staff named below:

<u>Name</u>	<u>Company</u>	<u>Project Responsibilities</u>
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B4.4 Professional Registration. Where applicable, all reports, plans, specification, estimates and similar work products provided by the CONTRACTOR shall be prepared by, or under, the supervision of the Registered Land Surveyor in responsible charge for the services. These Surveyors shall be currently registered in the State of Alaska and they shall sign and seal each final work product for what they are responsible.

B4.5 Billing Reports. The Contractor shall provide a two-page (typical) report with each monthly billing for months in which services are performed. The report shall specifically describe the services and other items **for which the billing is submitted**, and shall estimate the percent the services are complete. Any delayed costs from previous billing periods that are included in the current billing must be clearly explained in the report.

B4.6 Correspondence. All correspondence prepared by the Contractor shall bear the Contracting Agency's assigned Project name and numbers (State & Federal).

B4.7 Contractor Name on Plan Sheets and Documents. No Contractor logos shall be allowed on any electronic or hard copy document produced for the Contracting Agency. The Contractor company name shall be included in the box above or below the engineer's seal on each sheet. Documents produced for the Contracting Agency shall include the Contractor's company name at the bottom right of the first page, cover sheet, or title sheet only. Contractor letterhead shall be allowed only as exhibits in document appendices. The Contractor name shall be in the following format:

PLANS DEVELOPED BY:
COMPANY NAME

B4.8 Documents and Reports shall be printed with solid black letters that are double spaced on white, 8.5 inch x 11-inch bond or "Xerox Copy" paper. Other size paper may be used for illustrations if they are folded to 8.5 inch x 11-inch size. Original documents and reports shall be printed on one side of the paper only and shall be ready for copying. Documents and reports shall have no black and white photographs, color photographs, or multicolored graphics except as specifically approved by the Contracting Agency. Original, camera ready, copies of final documents and reports shall be submitted to the Contracting Agency for a check before printing.

B4.8.1 Copies. When the Contract calls for multiple copies of documents or reports, the copies shall be printed on both sides of the paper. However, the cover and pages with approved illustrations, multicolored graphics, or photographs shall be printed on one side of the page only. All copies - except for originals - shall be bound.

B4.8.2 Page Numbers. All documents shall be page numbered to allow every major Section, Chapter, Appendix, etc., to begin on a "right hand," odd numbered page.

B4.8.3 Covers. The cover of all documents and reports shall include the following information:

- A. Name of document or report.
- B. Date.
- C. Indicate whether draft or final.
- D. Project Name.
- E. State and Federal Project Number(s).
- F. Prepared for: Alaska Department of Transportation and Public Facilities.
- G. Prepared by:
- H. Map and/or picture of project area.

B4.9 Revisions. The Contractor shall modify work products in response to direction from the Contracting Agency. Corrections, adjustments, or modifications necessitated by the review/approval process, but which do not substantially affect the scope, complexity, or character of the services, shall be considered a normal part of the Contractor's services.

B4.9.1 Errors and Omissions. Except as described in this Statement of Services, work products shall be essentially complete when submitted to the Contracting Agency. Work products having significant errors or omissions will not be accepted until such problems are corrected.

B4.9.2 Review Meetings. Following each review the Contracting Agency will provide written comments and may hold a meeting to discuss the issues. The Contractor's personnel who are in responsible charge for the work products under review shall attend the meeting and they may be asked to interpret and provide explanations of the content.

B4.9.3 Comment Resolution. The Contractor shall provide a written response with subsequent submittals that address all written and oral comments from the Contracting Agency. All changes from previous submittals shall be clearly explained.

B4.9.4 Reproduction and Distribution. When the contract requires only the original or only one copy of a work product to be delivered, the Contracting Agency will reproduce and distribute all other copies required. Items delivered for reproduction shall be organized and camera ready for copying and not stapled or otherwise bound.

Statement of Services
Project No. SFHWY00263
February 6, 2020

Juneau - Marine Franklin & Thane: Seward to Mt. Roberts Resurface

The purpose of this contract is to provide the Department with accurate and precise topographical mapping, planimetrics, and boundary/ROW information for engineering and design of improvements along Marine Way from S. Seward St., including Franklin St. and Thane Rd. terminating on Thane Rd. at the intersection with Mt. Roberts St. for a length of +/- 1.2 miles of urban corridor. See attached files to this RFP for details of the region of interest.

The services to be performed shall generally follow the DOT Statement of Services as outlined in attached Appendix B particularly B3.2 – 5.

Task 1 - B3.3 Survey for Design

The purpose of Task 1 is to provide the Department with a design grade topographical and planimetric survey of the entire corridor from roughly ROW to ROW and intersections as shown on the survey request and attached files to RFP. This will include all above ground infrastructure to include any suspected encroachments into the ROW and adjacent buildings where near ROW. Underground utilities and infrastructure will be located per survey request. Survey control will be an extension of DOT project Z693930000 and will be densified as necessary by consultant. See attached survey control sheet and B3.2. DOT will supply 4 control points in project area.

Deliverables for Task 1 will include the following:

- All CAD files shall be prepared in AutoDesk Civil 3D ver. 2019. DOT will supply a template (dwt) along with description keys and field codes that if used properly will assist the consulting surveyor prepare a DOT compliant product. This dwt will also have translation parameters set for local and NAD83(92) AK SPCS Zone 1.
- Dwg shall contain all line-work and symbols depicting existing conditions of the corridor to include but not limited to all infrastructure, drainages, lighting, roads, trails, signs, terrain break lines, water boundaries and other surface features. Invert elevations, sizes and types of all culverts shall be shown. See B3.3.4
- Prepare a C3d compliant existing ground digital terrain model/surface and .landxml file of same.
- Prepare a Survey Control Diagram per B3.2.2
- Prepare a Survey Control Sheet(s) when given final design centerline per B3.2.3
- Provide other deliverables per B3.3.7

NOTE: GNSS survey grade equipment and techniques can be used for all field work where applicable including RTK. However each monument tie shall have redundant vectors taken from at least 2 primary control points. If not possible use redundant vectors from one primary control with a 2 hour time difference between occupations. Resultant coordinates will be a weighted mean average or if applicable a simultaneous least squares adjustment with corresponding statistical reporting submitted to DOT.

Task 2 - B3.4 Survey for Right of Way and ROW Mapping

The purpose of this task is to provide DOT with a ROW survey of the existing ROW and adjacent properties through the project corridor. DOT will supply what record ROW information that we can reasonably compile however consultant will be responsible for obtaining all record documents needed to determine and locate the existing ROW. See B3.4.1.1. A Record of Survey shall be prepared and recorded of existing ROW. This can be in conjunction with the ROW Base amp as outlined in B3.5.

Deliverables for Task 2 include:

- Provide separate Civil 3D 2019 .dwg from Task 1 using DOT supplied .dwt.
- Provide and record a ROS of the existing ROW with Juneau Recording District.
- Provide ROW mapping as outlined in B3.5. Parcel acquisition plats are not required under this contract at this time.
- Other deliverables as listed in B3.4 and B3.5

Timeline:

This project should start as soon as possible after receiving notice to proceed and deliverables can be in stages starting with the design/topo survey. The corridor runs through the Juneau cruise ship docking area and will become crowded beginning in late April 2020.

Consultant Qualifications:

- Respondents must discuss their proposed methodology and understanding of the deliverables in their proposal.
- Consultant will have prior, documented, and successful experience with control, design, and ROW surveying and mapping services for the Department.
- Proposal shall list staff, availability and their successful experience producing the products and deliverables as outlined.
- Project must be under the direct supervision of an Alaska Registered Professional Land Surveyor.
- Proposal shall detail proximity and ability to access Juneau in a timely manner throughout the course of the field survey along with the ability to respond on short notice to addendums and additional tasks after new negotiations and notice to proceed.
- Proposal shall list a preliminary schedule outlining timeline of final deliverables.