



# Alaska Department of Transportation & Public Facilities

## REQUEST FOR PROPOSALS PACKAGE

(Procurement per Article 3 of AS 36.30)

PART



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Proposed Statement of Services

Other: N/A

### ISSUING OFFICE

Agency Contact & Phone No.....: Jessica Wuttke-Campoamor, Planning Manager (907) 269-0519  
 Contracting Division .....: State of Alaska, Department of Transportation & Public Facilities, Program Development

### PROJECT

**RFP NUMBER** .....: 25202075  
 Project Numbers-State/Federal.....: CSAPT00410 / AIP 3-02-0242-xxx-xxxx  
 Project Site (City, Village, etc.).....: Quinhagak, AK  
 Project Title & Contract Description .....: Quinhagak Airport Layout Plan Update

This project will initiate an Airport Layout Plan (ALP) narrative to document existing conditions, forecast future activity, and develop a Capital Improvement Program and an ALP for the airport.

### SCHEDULE & PAYMENT

Anticipated period for performance-Begin/End: July 2020 through December 2022

Estimated amount of proposed contract:

- |                                                 |                                                            |                                                 |
|-------------------------------------------------|------------------------------------------------------------|-------------------------------------------------|
| <input type="checkbox"/> Less than \$200,000    | <input checked="" type="checkbox"/> \$200,000 to \$250,000 | <input type="checkbox"/> \$1,000,000 or greater |
| <input type="checkbox"/> \$250,000 to \$500,000 | <input type="checkbox"/> \$500,000 to \$1,000,000          |                                                 |

Proposed Method(s) of Payment:

- |                                                                      |                                                 |                                                     |
|----------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------|
| <input checked="" type="checkbox"/> Fixed Price Plus Expenses (FPPE) | <input type="checkbox"/> Firm Fixed Price (FFP) | <input type="checkbox"/> Cost Plus Fixed Fee (CPFF) |
|                                                                      | <input type="checkbox"/> Other:                 |                                                     |

### SUBMITTAL DEADLINE AND LOCATION

*OFFERORS ARE RESPONSIBLE TO ASSURE DELIVERY PRIOR TO DEADLINE (2 AAC 12.250). ONLY PROPOSALS RECEIVED PRIOR TO THE FOLLOWING DATE AND TIME WILL BE OPENED.*

DATE: **May 12, 2020** PREVAILING TIME: **4:00 PM**

**HAND DELIVER ONLY DIRECTLY TO FOLLOWING LOCATION** (and person, if named):

**\*Also see 15. Special Considerations, item 15.6**

Kathleen A. Bridenbaugh, PSA Unit Supervisor  
 AK Department of Transportation & Public Facilities  
 4111 Aviation Avenue  
 Anchorage, AK 99502 **Email:** [crdotpfcontracts@alaska.gov](mailto:crdotpfcontracts@alaska.gov)

**IMPORTANT NOTICE:** If you downloaded this solicitation from the State's Website, you must self-register for the Plan Holders list to receive subsequent addenda. Failure to register may adversely affect your proposal. It is the Offeror's responsibility to ensure that he has received all addenda affecting this RFP.

## **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>

15.3 The Department intends to send notices (including Notice of Intent to Negotiate, and Notice of Intent to Award) to Offerors by using the email address provided the Offeror's submitted Part D. Such delivery of an email sent by the Department is complete upon receipt in the addressee's email account. An email sent after 4:30pm shall be deemed to have occurred at the opening of business on the next working day. By submitting a response to this RFP, all Offerors consent to the use of Electronic Mail as described herein.

15.4 Interested parties are reminded that the Agency point of contact is noted on page 1 of this section, and all questions and requests for information shall be directed to this individual.

15.5 Due to the urgency of getting a Contract in place for this work, the Contracting Agency is shortening the proposal advertisement period and anticipates an expedited negotiation period. Note also the proposal page limit.

15.6 In light of the current health situation, the Department will accept an electronic (email) submission of proposals for this solicitation. Proposals should be submitted to [crdotpfcontracts@alaska.gov](mailto:crdotpfcontracts@alaska.gov) prior to the date and time shown on page 1. Offerors are responsible to assure timely delivery, and receipt of their proposal. Offerors are cautioned that due to mailbox restrictions, we cannot receive proposals over 20MB in size. The Contracting Agency will either print out proposals in color for distribution, or email a PDF to the Evaluation Committee.

## 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 (10) 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) pages, which includes the schedule submitted in response to Criterion 8**. 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. N/A

[ ] 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: **Six (6)**

[ ] 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: 10

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.

### 2. Methods

2. Weight: 20

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: 10

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. Airport/Aviation Planning
4. Civil Engineering\*
5. Land Surveying\*
6. Public Involvement Services

\*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 three (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 current contracts statewide with regions, divisions, etc.)

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: 10**

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. Schedule****8. Weight: 15**

The Department's desired milestones for this project are presented in Exhibit B-1 of the Proposed Statement of Services.

The schedule shall be in a Gantt chart format showing the duration of the activities, and start and finish dates. Demonstrate your plan to deliver acceptable work products as efficiently as possible. Distinguish between activities that are within your control and those that may be strongly influenced by others. Include agency comment periods.

Begin your schedule with receipt of NTP anticipated to occur on July 1, 2020.

Do not include estimates of resource usage.

The schedule may be presented on one (1) 11x17 sheet, which *will* be counted as one (1) page towards the proposal page limits.

**The negotiated agreement with the selected Offeror will include provisions obligating it to the performance in accordance with its proposed schedule. If the schedule is found to be unrealistic, the Contracting Agency may terminate negotiations and enter into negotiations with the next ranked firm.**

**9. N/A****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)

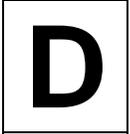
If no federal funding, then per AS 36.30.250(b), total price shall be reduced for the above calculation by the following applicable percentages when the prices are from Offerors **designate preferences on page one of Part D.**

- 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 .....	: CSAPT00410 / AIP 3-02-0242-xxx-xxxx
Project Title.....	: Quinhagak Airport Layout Plan Update
RFP No.....	: 25202075

### 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) <b>AND&gt;&gt;</b>	[    ] Veterans <b>AND&gt;&gt;</b> [    ] Employment Program <u>or</u> [    ] Disabled Persons

### PROPOSED SUBCONTRACTOR(S)

<u>Service, Equipment, etc.</u>	<u>Subcontractor &amp; Office Location</u>	<u>AK Business License No.</u>	<u>DOT&amp;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: CSAPT00410
Federal Project No: AIP 3-02-0242-xxx-xxxx
Date Prepared: 4/20/2020

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:



# PROPOSED STATEMENT OF SERVICES

## APPENDIX B

IRIS Program Number: CSAPT00410  
Federal Project Number: AIP 3-02-0242-XXX-XXXX  
Date Prepared: 4/23/2020

### Quinhagak Airport Layout Plan Update

#### Contents

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#### Exhibits

Exhibit B-1 Schedule  
Exhibit B-1A Deliverables Tracking Spreadsheet  
Exhibit B-2 ALP Guidance Manual  
Exhibit B-3 Table 2-1 of FAA AC 150/5300-18B  
Exhibit B-4 Record Boundary  
Exhibit B-5 Bristol Bay Nushagak 2016 LDP  
Exhibit B-6 Airport Property Map

#### **ARTICLE B1 – INTRODUCTION**

**B1.1 Project Location and Area.** The Quinhagak Airport is a general aviation (GA) airport located approximately 420 miles west of Anchorage and approximately 72 miles south of Bethel. It is owned and operated by the Native Village of Kwinhagak (NVK).

**B1.2 Project Need.** The Quinhagak Airport needs an Airport Layout Plan (ALP) and narrative update to determine projects necessary for the airport.

**B1.3 Project Description.** This project will update the ALP and narrative with forecasting and bring the ALP up to current design standards.

#### **ARTICLE B2 – ADMINISTRATIVE REQUIREMENTS**

**B2.1 General.** The Contractor shall provide services as identified and authorized by sequentially numbered Notices-to-Proceed. The Contractor shall not perform services or incur billable expense except as authorized by a NTP.

**B2.2 Project Staff.** All services must be performed by or under the direct supervision of the following individuals (replacement of, or addition to, the Project Staff named below shall be accomplished only by prior written approval from the Contracting Agency:

<u>Name</u>	<u>Project Responsibilities</u>
	Contract Manager
	Project Manager
	Planning
	Civil Engineering
	Land Surveying
	Public Involvement

**B2.3 Professional Registration.** All reports, plans, specification, estimates and similar work products provided by the Contractor shall be prepared by or under the supervision of the Registered Alaskan Engineer or Land Surveyor in responsible charge for the services. These Engineers or Land Surveyors shall be currently registered in the State of Alaska and they shall sign, seal and certify as to the accuracy of each final work product for which they are responsible.

**B2.4 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.

**B2.5 Correspondence.** All correspondence prepared by the Contractor shall bear the Contracting Agency's assigned Project name and numbers (State & Federal).

**B2.6 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.

**B2.6.1 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.

**B2.6.2 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.

**B2.6.3 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 the project area

**B2.7 Contractor Name of 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 plan 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 same font as other lettering on the plan sheet or document, shall be 1/16" or less in height on 11"X17" plan sheets, and shall be in the following format:

PLANS DEVELOPED BY:  
COMPANY NAME

**B2.8 Plans, Maps, and Plats** shall be submitted with solid black ink on A1, 841 x 594 mm original vellum or mylar in Contracting Agency format. **Final drawings** shall be on mylar unless another medium is specifically called for in the Contract. All final drawings shall be plotted so that the front surface of the mylar is inkable and erasable. No Kroy lettering or "sticky back" applications shall be used.

**B2.8.1 Right-of-Way Base Maps** and the **Right-of-Way Maps** shall be submitted to the Contracting Agency with the work products under review shall attend the meeting and they may be asked to interpret and provide explanations of the content.

**B2.8.2 Drafting.** All drawings shall be submitted in either Autocad, current format, or DXF format. All submissions shall include the Autocad drawing files, or DXF drawing files, on CD ROM disks. A standard layering scheme provided by the Contracting Agency shall be used.

**Failure to adhere to this scheme will be cause for rejection.** The drafting procedures shall be as outlined in the Contracting Agency's Draft Central Region Aviation Design Drafting Standards – including current metric revisions.

**B2.9 Specifications and Estimates** shall be submitted with solid black letters that are double spaced on white, 8.5 inch x 11-inch bond or "Xerox Copy" paper. They shall be printed on one side of the paper only and shall be ready for copying. Specifications and estimates shall contain no graphics and no photographs except as specifically approved by the Contracting Agency.

**B2.9.1** Copies of the Specifications shall be printed on both sides of the paper and shall be bound with a comb binder. Copies of the estimates shall be single sided. For Reviews, copies of estimates shall be included as the first item behind the cover of the Specifications.

**B2.9.2** All Specifications shall also be submitted on CD ROM discs as document files for Microsoft Word current edition or compatible software written for IBM compatible personal computers.

**B2.10 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.

**B2.10.1 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.

**B2.10.2 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.

**B2.10.3 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.

**B2.11 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 any other copies required. Items delivered for reproduction shall be organized and camera ready for copying and not stapled or otherwise bound.

**B2.12** The Contractor shall develop the Estimate for this project using the Department of Transportation & Public Facilities Bidtab IV program. Access to the program and instructional documentation for the software will be provided to the Contractor.

### **ARTICLE B3 – MANAGEMENT**

**B3.1 Performance Schedule.** The Contractor shall perform this Contract in accordance with the Project Schedule. The Contractor’s project schedule shall be provided and approved by the Contracting Agency prior to an NTP being executed. This schedule shows the interdependence and duration of the various design activities and Contract tasks. It is sequenced with the Contracting Agency’s duration estimates in order to complete the project on time. Not all activities/tasks are shown on the schedule, and the schedule only identifies the basic activities/tasks needed to complete the project. This schedule will be used by the Contracting Agency to track Contractor progress and billings.

**B3.1.1 Schedule Changes.** Adherence to the Project Schedule is essential in meeting the Contracting Agency’s long term goals and commitments. The Contractor agrees to expend all effort necessary to stay on schedule and meet the Contract delivery dates.

**B3.1.2 Progress Meetings/Reports.** The Contractor shall host progress meetings by phone (generally every month and typically a half hour in duration) with the Contracting Agency to review its progress reports, invoices, and schedule. Attendance at the meetings shall be limited to Contracting Agency project management staff and invited guests, along with the Contractor’s project manager and appropriate sub-consultants. The Contractor shall provide “exception reporting” of scheduled activities that are late, suspended, or significantly accelerated, and explain why any activity is off schedule or likely to become so; content shall follow requirements listed in Table 5-18 in Order 5100.38D (or most current version). The Contractor shall also explain what corrective action(s) are being taken. Upcoming events and milestones to be achieved over the succeeding month shall also be discussed. The Contractor shall keep brief email notes of all meetings and submit them to the Contract Manager within five working days following each meeting.

**B3.2 Project Coordination.** The Contracting Agency’s Project Manager will coordinate any needed services or activities of Contracting Agency staff and various Contracting Agency functional groups, such as Materials, Locations Survey, Planning, Utilities, Preliminary Design & Environmental, and Contracts.

**B3.2.1 Communication with FAA.** Communications with the FAA regarding this project will be managed solely by the Contracting Agency. The Contracting Agency may allow the Contractor to contact the FAA directly, but the Contracting Agency’s Project Manager shall be included on all correspondence.

**B3.2.2 Agency and Public Coordination/Release of Information.** The Contractor shall coordinate with appropriate federal (e.g. Environmental Protection Agency, Fish & Wildlife Service, U.S. Army Corps of Engineers, etc), state (e.g. Environmental Conservation, Fish & Game, State Historic Preservation Officer, etc), local government agencies, and the public, including special interest groups and organizations that could be potentially affected by the proposed project. The purpose shall be to inform these entities regarding the project and to allow them to identify concerns, suggestions, and/or alternative solutions. This shall not include negotiating mitigation of potential impacts. The Contractor shall not commit the Contracting Agency to any action to be accomplished by the proposed project. Any commitments to action or mitigation will be made by the Contracting Agency. The Contractor shall document all public and agency meetings and telephone conversations concerning the proposed project. Original signed documents shall be forwarded to the Contract Agency's Contract Manager. Public and agency involvement is further addressed in Article B7.

**B3.2.3 Correspondence.** All correspondence prepared by the Contractor shall bear the Contracting Agency's assigned project title and numbers (state and federal). The Contractor shall submit all written material (survey forms, scoping letters, etc.) used to solicit information or collect data for this project to the Contracting Agency for review and acceptance prior to its use or distribution. Copies of all outgoing correspondence and originals of all incoming correspondence shall be provided to the Contracting Agency at least once a week.

**B3.2.4 Release of Information.** The release of any project-related information must be approved by the Contracting Agency. The Contractor shall notify the Contracting Agency of all meetings with agencies, organizations, or individuals at least three working days in advance. Prior to such meetings, the Contractor shall discuss the agenda for the meeting with the Contracting Agency to ensure that no inappropriate or incorrect information is disclosed. Data collected under this Contract shall not be released to any agency, organization, or individual without prior approval of the Contracting Agency.

**B3.2.5 Right-of-Entry Permits.** The Contractor shall obtain Right-of-Entry authorizations for field work, when required. The Contractor shall provide copies of correspondence and permits to the Contracting Agency. Should the authorizations take additional time to obtain, performance schedule(s) may be adjusted accordingly. The Contractor shall not be entitled to any additional compensation for any delay incurred in obtaining Right-of-Entry permits.

**B3.3 Quality Control.** A Contractor in-house review shall occur before all submittals to the Contracting Agency. This includes, but is not limited to, content, style, drafting standards, and formatting. See B2.10.1 for more information.

**B3.4 FAA Disclaimer.** The following disclaimer shall be added to the inside front cover of each narrative report:

The preparation of this document as supported in part with financial assistance through the Airport Improvement Program from the Federal Aviation Administration (AIP Grant Number 3-02-0034-008-2018) as provided under Title 49 USC § 47104. The contents do not necessarily reflect the official views or policy of the FAA. Acceptance of this report by the FAA does not in any way constitute a commitment on the part of the United States to participate in any development depicted therein, nor does it indicate that the proposed development is environmentally acceptable in accordance with the appropriate public laws.

## **ARTICLE B4 – SURVEYING AND MAPPING INDEX**

**B4.1 Index.**

<u>Article</u>	<u>Subject</u>
B4	Index
B5	General Criteria for Surveying and Mapping Services
B6	Surveying and Mapping Services
B6.1	Overview
B6.2	Control Surveys
B6.3	Surveying for Design
B6.4	Surveying for Right of Way
B6.5	Right of Way Mapping
B6.6	Pre & Post Construction Surveying (NIC)
B6.7	Right of Way Engineering Closeout Services (NIC)
B6.8	Aeronautical Surveys (NIC)

**ARTICLE B5 – GENERAL CRITERIA FOR SURVEYING AND MAPPING SERVICES**

**B5.1 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.

**B5.2 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.

**B5.3 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.

**B5.4 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.

**B5.4.1** 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.

**B5.5 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).

**B5.6 Drawings, Plats, and Maps** shall be prepared in electronic format as specified by the Contracting Agency.

**B5.6.1** Unless otherwise stated, the format and standards for all drawings will be according to the most current DOT/PF Central Region Design Drafting Manual. These standards are available upon request. The plotted scale shall be as specified by the Contracting Agency.

**B5.6.2** 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.

**B5.6.3** 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)

**B5.6.4** 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.

**B5.6.5** 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.

**B5.6.6** 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.

**B5.6.7** 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.

**B5.6.8** 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.

**B5.7 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.

**B5.7.1** 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.

**B5.8 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 four 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.

**B5.8.1 Point Numbering Scheme.** The following point numbering scheme shall be used:

Range	Use
1-200	Primary Control Set (main project, line-of-sight traverses)
201-300	Primary GNSS Control
301-400	Aerial Control Panels or Naturals (HV's)
401-550	Secondary Control Points (Spikes/Nails)
551-600	Recovered Published Hz. Control (NGS, NOS, etc.)
601-700	Set or Recovered Vertical Control
701-2000	Fnd Mons/Prop Cors
2,001-5,000	Computed/Protracted Points, Search, Pre/Post Stakeout
5,001-20,000+	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.

**B5.9 Electronic Data** (drawing files, coordinate files, reports, etc.) shall be submitted on appropriate size and type of digital media.

**B5.10 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.

**B5.11 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.

**B5.12 Submittal Delivery.** Deliverables shall be submitted to the Contracting Agency in accordance with the negotiated schedule.

## **ARTICLE B6 – SURVEYING AND MAPPING SERVICES – TASK 1**

### **B6.1 Overview.**

**B6.1.1 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.

**B6.1.2 Survey Limits and Scope.** The Contractor shall: Set temporary control based upon AC 150/5300-16B and use it to complete the survey; tie appropriate items from Table 2-1, Airport Layout Plan Column of the FAA AC 150/5300-18B as shown in, but not limited to **Exhibit B-3**; tie enough boundary monuments to establish the record boundary **Exhibit B-4**; provide a Survey Control Diagram (SCD) in the Contracting Agency’s Bristol Bay Nushagak 2016 LDP **Exhibit B-5**; provide an Airport Property Map for the ALP **Exhibit B-6**. This survey shall be uploaded to AGIS. **Additional services may be added as necessary during negotiations.**

**B6.1.3 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 (NIC)
- E. Topographic/Planimetric Survey
- F. Bridge Site(s)/Drainage Survey (NIC)
- G. Special Features
- H. Right-of-Way Survey (tie into boundary)
- I. Right-of-Way Mapping (create Airport Property Map)
- J. Preconstruction Surveying (NIC)
- K. Post Construction Surveying (NIC)
- L. Right of Way Engineering Closeout Services (NIC)
- M. Aeronautical Surveys (NIC)

### **B6.2 Control Surveys**

**B6.2.1 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.

**B6.2.1.1 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.

**B6.2.1.2 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 both feet (nearest 0.01 foot) and meters (nearest 0.001 meter) as a check. 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 controlled 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.

**The use of Post-Processed Kinematic (PPK) or Real-Time-Kinematic (RTK) GNSS procedures are not allowed for establishing control.**

**B6.2.1.3 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 9/16" dia. stainless steel rod shall be used for these deep monuments. 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.**

**B6.2.1.4 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.

**B6.2.1.5 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.

**B6.2.1.6 Primary Vertical Control.** For highway projects or projects along road corridors, primary vertical control points shall be established every ½ 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.

**B6.2.2 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.

**B6.2.3 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.

**B6.2.4 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.

### **B6.3 Survey for Design**

**B6.3.1 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.

**B6.3.2 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.

**B6.3.3 Remote Sensing (May be added by amendment).** 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.

**B6.3.3.1 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.

**B6.3.4 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:

**B6.3.4.1 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)

**B6.3.4.2** 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.

**B6.3.4.3** 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.

**B6.3.4.4** 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.

**B6.3.4.5** 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.

**B6.3.4.6** 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.

**B6.3.5 Bridge Site/Drainage Survey (As necessary)** 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:

**B6.3.5.1** 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.

**B6.3.5.2** 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.

**B6.3.5.3** Additional data collection for the Hydraulic Report may be required after the design has reached the Local Review stage.

**B6.3.5.4** 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.

**B6.3.6 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.

**B6.3.7 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. (B5.4)
- 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. (B5.8)

## Deliverable Description

- 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. (B5.8)
- 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. (B6.2)
- E. Survey Control Diagram (Record of Survey): Electronic CAD and PDF copy. (B6.2.2)
- F. Survey Control Sheet(s): Electronic CAD and PDF copy. (B6.2.3)(NIC)
- 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. (B6.2.1.3)
- 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. (B6.2.4)
- I. TIN: All TIN files with a sealed and signed certificate of accuracy. Quality control check spreadsheet showing the differences from the true values (B6.7).
- J. Bridge Site/Drainage Survey mapping: Electronic drawing files and TIN files (B6.3.5.2)(NIC)
- K. K. Bridge Site Report: Refer to the Preconstruction or Drainage Manual, and or the Contracting Agency for possible additional information. (B6.3.5.4)(NIC)
- 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. (B6.3.4)
- 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. (B6.3.3.1)(NIC)
- 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. (B6.3.3.1)(NIC)

### **B6.4 Surveying for Right-of-Way**

**B6.4.1 General.** The Contractor shall perform the following services to the standards in B6.2. 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.

**B6.4.1.1** 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.

**B6.4.1.2** 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.

**B6.4.1.3** 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.

**B6.4.2 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.

**B6.4.3 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.

**B6.4.4 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.

**B6.4.5 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. (B5.4)
- 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. (B5.8)
- 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. (B5.8)
- 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. (B6.2.2)
- F. Annotated Plats and Research Documents. (B6.4.3)

- 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. (B6.2.1.3)
- 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. (B6.2.4)

## **B6.5 Right-of-Way Mapping (B6.5.6, Other Services as necessary)**

**B6.5.1 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, and Right of Way Acquisition Plats in accordance with the DOT&PF Right of Way Manual and specific instructions from the Contracting Agency.

**B6.5.2 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.

**B6.5.3 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.

**B6.5.3.1** 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.

**B6.5.3.2** The Contractor shall not begin preparing Base Maps without prior specific written authorization from the Contracting Agency.

**B6.5.4 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.

**B6.5.4.1** 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.

**B6.5.5 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.

**B6.5.6 Airport Property Plan (APP), Airport Acquisition Plat (AAP) or Airport Property Map (APM).** 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 Property Map is like the APP but has less information on it. 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.

**B6.5.7 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.

**B6.5.8 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.

**B6.5.9 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.

**B6.5.10 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.

**B6.5.10.1 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.

## **B6.6 Pre & Post Construction Surveys (NIC)**

**B6.6.1 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.

**B6.6.2 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](http://www.dot.state.ak.us/creg/dot-cadastral/Construction%20Surveys/Centerline%20Referencing%20and%20Perpetuation%202011.doc).

**B6.6.3 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](http://www.dot.state.ak.us/creg/dot-cadastral/Construction%20Surveys/Centerline%20Referencing%20and%20Perpetuation%202011.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.

**B6.6.4 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. (B5.4)
- 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. (B5.8)
- 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. (B5.8)
- 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. (B6.2)

- 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. (B6.5 or B6.7)
- F. Project Staking Report (B6.6.2)
- 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. (B6.2.1.3)
- 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. (B6.2.4)
- I. Right of Way Acquisition plat. (B6.5.6)
- J. Airport as-built Record of Survey (B6.6.4)

## **B6.7 Right of Way Engineering Closeout Services (NIC)**

**B6.7.1 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:
  - a. Information as defined in the Project Close Out check list.
  - b. 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.
  - c. Commissioner’s Quit Claim Deed or Relinquishment.
  - d. Lands acquired from DNR will be referenced to the ADL number associated with the parcel.
  - e. Files involving these parcels are contained within the Department Right of Way Section.
  - f. 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.

## **B6.8 Aeronautical Surveys (NIC)**

**B6.8.1 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.

**B6.8.2 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.

**B6.8.3 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.

**B6.8.4 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 B7 – AIRPORT LAYOUT PLAN – TASK 2**

**B7.1. General.** The Contractor shall develop an Airport Layout Plan (ALP) consistent with the standards and guidelines listed in this Article. The Contractor shall coordinate with the Contracting Agency prior to beginning work to ensure all standards and expectations are mutually understood.

**B7.2 Standards and Guidelines.** The Contractor shall adhere to guidance from the following list of documents. All versions of documents listed below are for reference only. Future versions also apply to this contract as they become available.

- a. AC 150/5000-17, *Critical Aircraft and Regular Use Determination*
- b. AC 150/5300-13A, *Airport Design*
- c. AC 150/5324-4B, *Runway Length Requirements*
- d. AC 150/5070-6B, *Airport Master Plans*
- e. 14 Code of Federal Regulations Part 77
- f. ARP SOP 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs)*
- g. ARP SOP 8.00, *Runway Safety Area Determination*
- h. Exhibit B-2: ALP Guidance
- i. Aviation Design Drafting Manual, Alaska Department of Transportation & Public Facilities Central Region, Aviation Design

The Contractor shall direct questions about the interpretation and coordination of the above resources to the Contracting Agency’s Project Manager.

**B7.3 Services.** The Contractor shall provide all services needed to create the ALP as described. This includes at a minimum:

- a. All survey work necessary to complete an ALP as described in Table 2-1 of AC 150/5300-18B and as described in Article B6 .
- b. Wind analysis using wind data from an acceptable data source in accordance with Appendix 2 of AC 150/5300-13A, Change 1.
- c. Airport operations summary, analysis, and forecasting
- d. Review of design standards

**B7.3.1 Scoping Meeting.** The Contractor shall attend a meeting with the Contracting Agency before commencing work on the ALP. Existing information may be drawn from the existing ALP on a case-by-case basis.

**B7.3.2 Airport Layout Plan drawing form and content.** The Contractor shall follow the ALP Guidance in Exhibit B-2 and as directed by the Contracting Agency. All drawings as required by the manual and as directed by the Contracting Agency shall be included. The ALP shall have a new cover sheets and signatures.

**B7.3.2.1** The Contractor shall produce an ALP to include the new survey data, obstruction data, topographic data, and planimetric data gathered in the survey. This includes, but is not limited to:

- a. Contract survey deliverables
- b. Land use inventory, including a map showing existing off airport land uses and future on-airport land uses
- c. Airspace conflicts analysis for objects affecting navigable airspace (14CFR Part 77, Subparts A and C).
- d. The most recent construction as-builts

**B12.3.2.2** The Contractor shall include future utility corridors on all near-term and ultimate Airport Layout sheets. The future utility corridors shall extend to exiting utilities using practicable routes that won't impede future airport or lease lot development. Utility corridor locations shall be coordinated with the following Contracting Agency functional groups: Aviation Design, Utilities, Aviation Leasing, and Program Development.

Airports with more complex utilities shall have a stand-alone Utility sheet included in the Airport Layout Plan set. Utility type, location, and capacity shall be clearly identified. The need for a standalone utility sheet will be determined by the Contracting Agency before the 50% review.

### **B7.3.3 Supporting Documents.**

**B7.3.3.1 FAA Forms.** The Contractor shall support the Contracting Agency in updating or completing FAA forms such as the Airport Master Record (5010-1) form and sketch, the Notice of Landing Area Proposal (7480-1) form, the AVN Data List, Modifications to Standards, or any other forms the project requires.

**B7.3.3.2 Supporting Calculations.** The Contractor shall provide the Contracting Agency with background calculations for all submittals as applicable. This includes, but is not limited to, wind analysis, magnetic declination calculations, threshold coordinate calculations and checks, and Building Restriction Line calculations.

**B7.3.3.3 Design standards report.** The Contractor shall provide, in addition to the ALP Narrative Report described in Section B12.3.6, a report describing design standard discrepancies and/or non-standard conditions. If the discrepancies are a result of a change in aircraft operations data, provide a recommended design designation (Airport Reference

Code, Runway Design Codes, and Taxiway Design Groups for each facility) to the Contracting Agency before beginning work on the ALP drawings. The Contracting Agency will provide design designations for the airport and each runway based in part on these recommendations.

**B7.3.3.4 ALP checklists.** The Contractor shall provide a completed ALP SOP 2.00 and 8.00 checklists and a completed DOT CR ALP checklist (included in Exhibit B-2) with every submittal except the 50% Review (B12.4.2).

**B7.3.4 Digital ALP Drawings.** The Contractor shall provide AutoCAD files compatible with the Contracting Agency's current edition. All drawings shall be in the orthographic coordinate system directed by the Contracting Agency. All files shall conform to B2.8.2.

**B7.3.4.1 Surfaces.** All surfaces used in the development of the ALP shall be in AutoCAD Civil 3D .dwg format.

**B7.3.4.2 Planimetry.** The Contractor shall provide all linework in the digital drawing on unique layers, per Article B2.8.2. See Article B4 for requirements for TINs, Control Summary, and Field Books.

**B7.3.4.3 Points.** The Contractor shall provide all point attribute data as AutoCAD Civil 3D Points, and provide a summary .txt or .csv file of the points in PENZD format (Point, Easting, Northing, Elevation, and Description).

**B7.3.5 Hard Copies.** The Contractor shall provide the final ALP product on 11x17 bond paper and two (2) copies on 22x34 #20 plain bond paper, approved by the Contracting Agency (See B2.8). The final narrative submittal shall be on 8.5x11 bond paper.

**B7.3.6 ALP Narrative.** The Contractor shall provide all sections as required by the ALP Guidance Manual in Exhibit B-2 and the Contracting Agency's Project Manager. All supporting calculations and estimates shall be developed per B12.3.3.

**B7.3.6.1 Aviation Activity.** The Contractor shall compile information concerning historical and current aircraft operations and forecast future air traffic data. Relevant data on air taxi, air charter, military, and general aviation shall be collected including enplanements and operations. The Contractor shall contact the FAA, air carriers, air taxi and air charter operators to obtain the most current air traffic data. Data shall also be obtained from relevant individual operators, including those based in Anchorage, and from the FAA. Available historical air traffic data shall be obtained and evaluated for growth in passenger, freight, mail, and number of operations. Trends in traffic activity shall be evaluated to determine growth rates, changes in aircraft types and frequency of service. Annual operations by specific aircraft type shall be obtained. Special operational features shall also be reviewed, such as increased seasonal activities.

**B7.3.6.2 Forecast of Aviation Activity.** The Contractor shall prepare aviation demand forecasts (low, mid and high growth alternatives) for the area. The Contractor shall produce new 5, 10, and 20-year forecasts of general, commercial, and military aviation activity, if any. The forecasts shall identify potential changes in the fleet of aircraft serving the region and shall determine the existing and forecast critical aircraft in accordance with AC 150/5000-17, which shall include a breakdown of number of operations by aircraft model that were used to support the determination.

**B7.3.6.2.1 Draft Forecast of Aviation Activity.** A draft forecast shall be submitted to the Contracting Agency. The Contracting Agency will submit the forecast to FAA for review and approval.

**B7.3.6.2.2 Final Forecast Aviation Activity.** The final forecast shall be submitted to the Contracting Agency with the 65% Master Plan Reports (B11). The Contracting Agency will submit the final forecast to the FAA for their review and approval.

**B7.3.6.3 Airport Facilities Standards.** The Contractor shall identify the standards to which the airport should be developed. The task shall include the design Airport Reference Code and the Runway Design Code to be used and a compiled list of dimensional standards for improvements, including but not limited to: airfield requirements (runways, safety areas, taxiways, lighting, apron areas, and service access); approach area dimensions and requirements for proposed and future approach category; general aviation needs (fixed base operations, aircraft storage, automobile parking, buildings, road access), transient and permanent aircraft parking and tie-down areas); general airport access; circulation and parking standards; other building area and land use requirements (lease lot identification and development); helicopter aprons; and security fencing.

**B7.3.7 Airport Brochure.** The Contractor shall prepare a color brochure summarizing the ALP, cost to repair “joy riding” on aircraft operational surfaces, and general airport safety on a double-sided, 11x17 sheet of paper that is divided into four 8.5x11 pages of a folded brochure.

**B12.3.7.1 Draft Airport Brochure.** A draft brochure shall be submitted to the Contracting Agency for review and approval with the 50% Review (B12.4.2).

**B12.3.7.2 Final Airport Brochure.** The final brochure shall be submitted to the Contracting Agency with the 95% Review (B12.4.3).

#### **B7.3.8 TINs.**

**B7.3.8.1 Existing Ground.** The Contractor shall define the existing ground surface by creating a TIN capable of accurately generating four (4) foot contours within the Airport Boundary and ten (10) foot contours within the outer boundary of the 14 CFR Part 77 conical surface.

**B7.3.8.2 Part 77.** The Contractor shall provide a Part 77 TIN accurately depicting all of the airport’s Part 77 imaginary Surfaces (primary, transitional, horizontal, conical, and approach) and their relationship to each other. The Contractor shall incorporate fault lines, as necessary, to provide an accurate product. The Contractor shall provide both a combined TIN of the most demanding surfaces, and individual TINs of each surface.

**B7.3.8.3 Threshold Siting Surfaces.** The Contractor shall provide individual surface TINs for Threshold Siting Surfaces as defined in AC150/5300-13A, NAVAID siting surfaces, and/or other surfaces as directed by the Contracting Agency. Refer to AC 150/5300-13A, Airport Design and AC 150/5070-6B, Airport Master Plans.

#### **B7.4 Submittals**

**B7.4.1 Reviews.** As described below, there will be three (3) ALP reviews by the Contracting Agency, with the 99% review being done concurrently by the Contracting Agency and the FAA. The Contractor shall incorporate edits and corrections as directed by the Contracting Agency prior to resubmission.

**B7.4.2 50% Review.** The Contractor shall submit the ALP to the Contracting Agency according to the project schedule in Exhibit B-1. If the submittal is accepted, the ALP shall be reviewed by the Contracting Agency’s project team and comments will be provided within 30 days. The Contractor shall incorporate all comments as directed by the Contracting Agency before the 95% Review (B7.4.2) submittal.

Provide with the review set:

- a. Draft ALP drawing set, including ACAD files (B7.3.2 and B7.3.4)
- b. Supporting calculations and estimates (B7.3.3)
- c. Draft ALP narrative report (B7.3.6)
- d. Draft airport brochure (B7.3.7)

**B7.4.3 95% Review.** The Contractor shall submit the ALP to the Contracting Agency according to the project schedule in Exhibit B-1. If the submittal is accepted, the ALP shall be reviewed by the Contracting Agency and comments will be provided within 30 days. The Contractor shall incorporate all comments as directed by the Contracting Agency before the 99% (FAA) Review (B7.4.4) submittal and provide a copy of all comments and responses from the 50% Review (B7.4.2).

Provide with the review set:

- a. 5010 form and sketch (B7.3.3.1)
- b. Draft ALP drawing set, including ACAD files (B7.3.2 and B7.3.4)
- c. Draft ALP narrative report (B7.3.6)
- d. Completed FAA SOP 2.00 and 8.00 checklists. Items that do not adhere to the checklists require an alternative plan to address the required information and discussion with the Contracting Agency (B7.3.3.4)
- e. Completed Central Region ALP Checklist (B7.3.3.4)
- f. Drafts of any required modifications to design standards (B7.3.3.1)
- g. Drafts of requests for any required letters of determination for non-standard conditions (B7.3.3.3)
- h. Comments and responses (B7.4.3)

**B7.4.4 99% (FAA) Review.** After the Contracting Agency review has confirmed that all comments have been satisfactorily addressed, the Contracting Agency will submit the ALP to FAA for their review. FAA will review the ALP and provide comments. The Contractor shall incorporate all comments and any additional comments as directed by the Contracting Agency before the Final Submittal (B7.4.5). A copy of all comments and responses from the 95% Review (B7.4.3) shall be submitted to the Contracting Agency.

- a. Draft ALP drawing set, including ACAD files (B7.3.2 and B7.3.4)
- b. Draft ALP narrative report (B7.3.6)
- c. Completed FAA SOP 2.00 and 8.00 checklists. Items that do not adhere to the checklists require an alternative plan to address the required information and discussion with the Contracting Agency (B7.3.3.4)
- d. Completed Central Region ALP Checklist (B7.3.3.4)
- e. Drafts of any required modifications to design standards (B7.3.3.1)
- f. Drafts of requests for any required letters of determination for non-standard conditions (B7.3.3.3)
- g. Comments and responses (B7.4.4)

**B7.4.5 Final Submittal.** After FAA has reviewed and accepted the ALP and all revisions, submit the following items. A copy of all comments and responses shall be submitted to the Contracting Agency.

- a. Hard copy ALP (B7.3.5)
- b. ALP narrative report (B7.3.5)
- c. Completed FAA SOP 2.00 and 8.00 checklists (B7.3.3.4)

- d. Completed Central Region ALP Checklist (B7.3.3.4)
- e. Comments and responses (B7.4.5)

**B7.5 Alaska Aviation System Plan (AASP) Update.** The AASP website ([www.internal.alaskaasp.com](http://www.internal.alaskaasp.com)) shall be updated to include all changes that occur during the development of the ALP. Personal logins shall be available from the Contracting Agency upon request. Work shall include updating the base facility information in the General Tab and performance measure metrics, as required; reviewing all Needs on the airport; deleting completed, outdated, or redundant Needs; and adding Needs identified as future work on the ALP.

**B7.6 Methodology and Documentation.** The methods used to gather the data for Article B7 shall be documented and given to the Contracting Agency. See Article B18.

**B7.7 Deliverable Items.** Submit the following:

- a. Design Standards Report (B7.3.3.3)
- b. Airport Brochure (B7.3.7)
- c. 50% ALP (B7.4.2)
- d. 95% ALP (B7.4.3)
- e. 99% (FAA) ALP (B7.4.4)
- f. Final ALP (B7.4.5)
- g. AASP Update (B7.5)

### **ARTICLE B8 – COMPLETION DOCUMENTATION – TASK 3**

**B8.1** The original of all documents prepared by the Contractor during project development shall be submitted with the final documents. These development documents include all notes, sketches, maps, photographs, survey data, computations (cost computations shall be under separate cover), digital terrain model, website files, and other materials that were created to develop, record, or justify services provided for the project. These documents shall identify all the assumptions made. See Article B2.

**B8.2** Survey data shall be submitted both on paper and on CD, as specified in Articles B4, B5, and B6.

**B8.3** Documents created to determine cost estimates shall contain sufficient information to allow the quantity for each item to be checked by starting from the source document. These documents shall be referenced to the applicable item.

**B8.4** Documents shall be submitted on CD ROM (CD). All CDs shall be labeled on the front of each CD with the project name, project numbers (state and federal), "Completion Documentation", and the CD number and the total number of CDs (X of Y format), as applicable. Work done on a computer shall be submitted on CD using Microsoft Word, Microsoft Excel, and/or AutoCAD software.

**B8.4.1 Naming Convention.** The Contractor shall use a consistent naming convention that includes titles to the file names that are consistent with the final documents.

**B8.4.2 Correspondence.** The Contractor shall compile all correspondence in electronic form and submit as part of the completion documents. See B3.2.

**B8.5 Deliverables.** Two copies of all completion documentation shall be provided, one for the Contracting Agency and one for the Native Village of Kwinhagak.

**Exhibit B-%  
Schedule**

<b>Item</b>	<b>Estimated Start Date</b>
NTP	August 1, 2020
Airport Layout Plan (50%)	August 1, 2021
Airport Layout Plan (final)	March 1, 2022

# Quinagak Airport Layout Plan (DOT&PF Program No. CSAPT00410)

## Exhibit B-1A

### Deliverables Tracking Spreadsheet (for use during Contract Administration)

Date Due	Date Received	Section	Title/Description
		<b>B6</b>	<b>Surveying and Mapping Services – Task 1</b>
		B6.3.7	Survey for Design deliverables
		B6.4.5	Surveying for Right-of-Way deliverables
		B6.5.10	Right-of-Way Mapping deliverables
		<b>B7</b>	<b>Airport Layout Plan – Task 2</b>
		B7.3.1	Scoping Meeting shall be held before starting the ALP
		B7.3.6.2.1	Draft Forecast of Aviation Activity
		B7.3.6.2.2	Final Forecast of Aviation Activity
		B7.3.7.1	Draft Airport Brochure
		B7.3.7.2	Final Airport Brochure
		B7.4.2	50% ALP review
		B7.4.3	95% ALP review
		B7.4.4	99% (FAA) ALP review
		B7.4.5	Final ALP submittal
		B7.5	AASP Update
		B7.6	Methodology and Documentation
		<b>B8</b>	<b>Completion Documentation – Task 3</b>
		B8.5	Completion documentation

# ALP Guide

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*Preparation and Submittal Guide for Airport  
Layout Plans, Narrative Reports, and Airport  
Master Record (5010) Updates*

*Alaska Department of Transportation & Public Facilities*

*Central Region*

*Aviation Design*

February 2019

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## 2.0 List of Acronyms

AC	Advisory Circular
AIP	Airport Improvement Program
ALP	Airport Layout Plan
AMP	Airport Master Plan
AOA	Airport Operations Area
ARP	Airport Reference Point
BRL	Building Restriction Line
DOT&PF	Alaska Department of Transportation & Public Facilities
FAA	Federal Aviation Administration
GA	General Aviation
IFR	Instrument Flight Rules
LDN	Day-Night Average Sound Level
NAVAID	Navigational Aid
NPIAS	National Plan of Integrated Airport Systems
OE/AAA	Obstruction Evaluation / Airport Airspace Analysis
OFA	Object Free Area
OFZ	Object Free Zone
RPZ	Runway Protection Zone
SOP	Standard Operating Procedure
SREB	Snow Removal Equipment Building
VFR	Visual Flight Rules

\* For complete list of Acronyms see the FAA web site.

## 3.0 Definition of Terms

**Composite Profile** refers to the ground elevations within the approach surface. The highest point perpendicular to the centerline of the approach surface is shown on the composite profile.

**Drafting Standards** refers to the Central Region Aviation Design Drafting Standards. All new ALPs or ALPs with significant revisions will conform to the current Drafting Standards.

**Drawing** refers to one or more sheets that completely address one section within the ALP. For example, the Existing Layout drawing for a small airport may be only one sheet, but it may be several sheets for a large airport, with each sheet showing only a section of the airport. If multiple sheets are needed to show the layout, include a small map on each sheet showing the entire airport or have one sheet showing the entire airport and the location of each sheet.

**Existing** are conditions and/or facilities that currently exist.

**Near Term** are imminent conditions and/or facilities that will soon become existing. They typically are being designed during development of the ALP. Near term as it relates to sheets in an ALP set does not correlate to the 0-5 year enplanement and operations forecast horizon.

**NPIAS** airports are airports that are part of the National Plan of Integrated Airport Systems (NPIAS), and are eligible to receive Federal Airport Improvement Program (AIP) grant monies.

**Plan** refers to the complete ALP drawing set.

**Project Manager** – means the DOT&PF design Project Manager responsible for the airport.

**Safety Critical Data** refers to the items listed in Table 4-1 of AC 150/5300-18B.

**Significant Change** is a change that is done to or by the airport. Examples of significant changes are a change to the Airport Operations Area (AOA) or the 14 CFR Part 77 imaginary surfaces.

**Significant Revision** is a change that is done to the Airport Layout Plan. An example of a significant revision is a change in the aeronautical forecast data. Significant revisions in the FAA's design standards or ALP guidelines will require the preparation of a new ALP and Narrative Report.

**Sheet** refers to a sheet of paper, drafting film (i.e. Mylar), or its electronic representation.

**Sponsor** is the recipient of an AIP grant. For purposes of this document, the Sponsor is the State of Alaska, Department of Transportation & Public Facilities.

**Ultimate** are conditions and/or facilities that are planned for the distant future, out to 20 years.

## 4.0 General

This guide is intended to simplify and streamline the production and maintenance of ALPs, Narrative Reports, and Airport Master Records (5010) submittals. This information is focused on resolving areas of confusion and incomplete guidance for the preparation of these documents as they apply to airports in the Central Region.

Completeness, conciseness, simplicity, and legibility are the major interests in the preparation of these documents. Stay mindful of the requirements. Don't add features or information unless it is required. Follow good engineering and drafting practices.

Non-NPIAS ALPs are not submitted for approval to the FAA; however, having an ALP for non-NPIAS airports is desirable. The same standards apply to these airports as to NPIAS airports.

### 4.1 Applicable Standards

Use the most current version of the following standards while developing ALPs, Narrative Reports, or Airport Master Records (5010):

#### 4.1.1 Federal ACs, Manuals, Orders, Etc.

- AC 150/5300-13 Airport Design
- AC 150/5070-6 Airport Master Plans
- AC 150/5395-1 Seaplane Bases
- AC 150/5390-2 Heliport Design

- AC 150/5300-16 General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the national Geodetic Survey
- AC 150/5300-17 Standards for Using Remote Sensing Technologies in Airport Surveys.
- AC 150/5300-18 General Guidance and Specifications for Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards
- AC 150/5325-4 Runway Length Requirements for Airport Design
- AC 150/5320-6 Airport Pavement Design and Evaluation
- Airport Sponsor Grant Assurances
- Order 5010.4 Airport Data and Information Management
- Order 5100.38 Airport Improvement Program Handbook
- Order 5300.1 Modifications to Agency Airport Design, Construction, and Equipment Standards
- Order 5190.6 Airport Compliance Manual
- Order 8260.3 United States Standard for Terminal Instrument Procedures (TERPS)
- 14 CFR, Part 77 Subpart C – Standards for Determining Obstructions to Air Navigation or Navigational Aids or Facilities
- 14 CFR, Part 139 Certification of Airports
- Title 49 USC, Section 47107(a)(16) - [Airport Layout Plan Grant Assurances](#)
- ARP SOP 2.00 Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs)

#### 4.1.2 FAA SOP for FAA Review and Approval of Airport Layout Plans (ALPs)

The FAA has a Standard Operating Procedure (SOP) for ALPs. This checklist, in its most current form, will be used on all ALPs being submitted, regardless of their NPIAS status. This provides consistency for all ALPs maintained by DOT&PF. This checklist will be submitted to DOT&PF with all reviews, and will be forwarded to the FAA for their reviews. See appendix G for a summary of common clarifications and acceptable deviations from the checklist.

#### 4.1.3 Department Manuals, Templates, and Checklists

**4.1.3.a. Central Region ALP Guide.** This guide is intended to supplement and clarify published information on ALPs and narrative reports.

**4.1.3.b. Central Region ALP Checklist.** The Central Region ALP checklist covers those items that are above and beyond the FAA's requirements (Appendix C). This checklist will be submitted to DOT&PF with all reviews.

**4.1.3.c. Department ALP Narrative Template for Rural Airports.** The template is generally applicable to non-Part 139, rural airport ALPs that do not have a previous master plan. See the template for details.

**4.1.3.d. Department Rural ALP Narrative Checklist.** Use this checklist in place of the FAA SOP narrative checklist when the Department ALP Narrative Template for Rural Airports is used.

**4.1.3.e. Central Region Aviation Design Drafting Manual.** The Central Region Aviation Design Drafting Standards will be used as they apply to the production of the ALP drawings. Contact the Project Manager for the current drafting standards.

## 5.0 Airport Layout Plan

### 5.1 ALP Function

Airports that receive AIP funds are required to meet all applicable State and Federal rules, regulations, and advisory circulars as the airports change, expand, and improve airport facilities. An ALP is a graphic representation of the ultimate plan for an airport, typically out to 20 years . It is designed to provide useful and understandable information to the Sponsor, the FAA, and the public in order to plan for current and future airport needs. It consists of a set of drawings and may be accompanied by either a master plan or a narrative report that justifies and explains the planned improvements.

### 5.2 Requirements to Produce and Maintain an ALP

To receive Federal funding, all proposed airport improvement projects must be shown on a current ALP approved by the Sponsor and the FAA. If the proposed project is something that is normally not shown on an ALP (like maintenance work or equipment purchase), the ALP must be reviewed, updated, and approved as appropriate prior to receiving a Federal grant for the work.

Seaplane bases have the same ALP requirements as land-based airports and runways.

The FAA requires written Sponsor Grant Assurances at the time of grant that the ALP will be kept up to date<sup>1</sup>. ALPs are normally considered current for a five-year period from the last signature date unless significant changes at the airport are made or are planned. ALPs may be determined to be current beyond that period without revisions if they meet current design standards and if no changes have occurred or are planned.

The Sponsor will not make or permit changes or alterations to the airport or any of its facilities that would adversely affect the safety, utility, or efficiency of the airport. All work, planned or executed, will be reflected on the ALP, and will be approved by the Sponsor and the FAA.

### 5.3 ALP Generation

ALPs are generated under five different circumstances. Each airport needs to be evaluated by the Project Manager to determine the level of effort needed to produce an ALP.

**5.3.1. Part of a Master Plan.** The products generated by the Master Planning effort negate the requirement for a narrative report. The ALP is an integral part of a Master Plan as well as a graphic representation of the Master Plan. Note that FAA requires an abbreviated narrative/executive summary of the Master Plan for circulation of the ALP to FAA Lines of Business for review.

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<sup>1</sup> Grant Assurance #29: Airport Layout Plans.

**5.3.2. Original Stand Alone ALP.** These ALPs are produced for new airports or airports that have not previously had an approved ALP. The narrative report will be produced in conjunction with the ALP.

**5.3.3. Update of an Existing ALP because of a significant revision.** An ALP update usually retains the original cover sheet, but requires the drawings to be re-printed. The cover sheet revision block will reflect that the set has been updated. An abbreviated narrative report describing the updated sections will generally need to be completed<sup>2</sup>. A significant revision is necessary if one or more of the following is true:

- Incorrect forecast;
- Design parameter change(s) to the existing facilities or proposed development (for example: aircraft design group change to runway or airport, change in existing or planned approach procedure from visual to NPI);
- Significant FAA design standards change;
- Significant physical changes to the airport (for example: Addition of a new taxiway );and/or
- Significant “pen and ink” changes to the current ALP.

**5.3.4. Update of an Existing ALP Because of Minor Planning Changes.** When minor changes occur to an approved ALP, only sheet updates are required. For example: the addition of a parking apron that does not affect 14 CFR Part 77 imaginary surfaces would only require changes to applicable sheets and a notation in the revision block of each modified sheet. These are also known as “pen and ink” changes. A general note describing the sheet updates should be added to the revision block on the cover sheet. FAA will initial these changes.

**5.3.5. As-Built Update of an Existing ALP to Reflect Current Existing Conditions.** Any project that includes construction and/or alteration of features within the AOA will require an as-built ALP. After completion of airport construction projects, an as-built ALP is completed within one year of final FAA acceptance of the project. To ensure timely completion of the as-built ALP, the Construction Project Engineer coordinates the update with Aviation Design immediately following completion of the project. Existing drafting standards will be used during these updates. The State project (IRIS) number will be referenced on the cover sheet revision block. See Submittals and Approvals for more information on as-building ALPs.

The symbology for the completed projects may be changed from “near term development” or “ultimate development” to “existing conditions” as applicable. Any other changes made during construction depicted in an as-built ALP associated with a major construction project may require re-submittal of the entire ALP for FAA and Sponsor approval. A Narrative Report is not usually required.

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<sup>2</sup> The Project Manager will determine if the level of effort in the ALP requires new signatures and/or a narrative update. This will ultimately be the result of early coordination with FAA. If a narrative is provided, an FAA approval letter will usually be received with the ALP approval.

## 5.3 ALP Form and Content

**5.3.1. General.** Before starting on an ALP, the DOT&PF Project Manager should sit down with the FAA to discuss general aspects of the airport. This is especially important if a Master Plan hasn't been completed, or if the runway(s) is being relocated or rotated.

Different drawings should be laid out in similar form to allow for ease of use and comparison. For example, the Existing Layout and Ultimate Layout sheets should be the same scale, orientation, and divided among multiple sheets in the same way.

### **5.3.2. Applicable drafting standards of as-builts, updates, and new ALPs.**

Content and required standards and styles are ultimately at the discretion of the project manager in coordination with FAA. The below list are the generally expected guidelines for form:

**5.3.2.a. As-Built** updates are generally accomplished using the same drafting style as the original drawings. Sometimes, especially if there has been a long gap between construction and as-building or between ALP generation and as-building, as-builts may be required to be updated to the current standards.

**5.3.2.b. Minor Updates** are either accomplished by hand drafting or by re-printing a specific sheet (or sheets). They generally use the same drafting style as the original drawings.

**5.3.2.c. Major Updates** almost always required the re-printing of all sheets and very often require a new cover sheet and new signatures. These updates require the application of all standards referenced in this guidance.

**5.3.2.d. New ALPs** require the application of all standards referenced in this guidance.

**5.3.3. Basic ALP Sheet Format and Content.** All drawing sheets must have commonly defined elements like borders and title blocks. See the Central Region Drafting Manual for specific requirements.

**5.3.3.a. Coordinates.** Provide all coordinates in North American Datum 83 (NAD83). Provide elevations in North American Vertical Datum 88 (NAVD88) and reference the geoid used in the applicable survey. Comply with AC 150/5070-6, AC 150/5300-16, 17, and 18 for accuracy.

**5.3.3.b. North Arrows** for ALPs show the magnetic declination from True North.

**5.3.3.c. Magnetic Declination.** Provide magnetic declinations for the year the ALP is signed by the Sponsor. If the runway numbers will change within the near term, update the near term and ultimate runway numbers with the new runway end numbers.

**5.3.3.d. Runway Classification.** The runway classification and approach type shall be determined by the Contracting Agency.

**5.3.3.e. Centerline Stationing.** Follow historic runway and taxiway stationing. Check previous ALPs and projects to determine stationing for the airport.

#### **5.3.3.f. Existing, Near-term, and Ultimate Sheets**

All ALPs should contain at least an existing and ultimate layout as a basis for airport planning. Optional near-term drawings are used as a drafting convenience at the discretion of the Project Manager when the “near-term” improvements are imminent. Near term sheets are drawings showing certain imminent structures or improvements as existing.

These optional drawings are needed under certain circumstances, as noted. The Project Manager or ALP Coordinator will determine the need for optional drawings in conjunction with discussions with FAA.

#### **5.3.4. Object, Surface and Obstruction Identification and Numbering**

Three general categories of objects/areas need to be addressed and numbered accordingly. Identification numbers are tied to the object and do not change based on existing and/or ultimate plans. The general classification of ALP objects is below:

**Point Objects:** In general, these are fixed objects like light poles, antennas, and individual trees:

- **Obstruction Objects (0001 - 0999):** All point objects that are obstructions or penetrations to applicable airspace surfaces.
- **Significant Objects (1001 - 1999):** List all safety critical objects that do not otherwise appear as obstructions elsewhere in the ALP.

**Area Objects:** Objects that cannot be easily defined by a single point:

- **Static Area (2001 – 2999):** Those areas whose footprint does not change based on the airspace surface being compared against. In general, these are fixed polygon objects like buildings, fence areas, critical areas, AOA, etc. These objects are treated much the same as point objects. List the station and offset range of these larger objects and report their maximum elevation and penetration based on the surface being analyzed. Treat buildings as cubic structures and locate the data point at the closest point to the runway CL.
- **Dynamic Area (3001 – 3999):** These are mainly polygons for terrain and roads. Their surface area, length, width, and highest point changes based on the airspace surface being compared. List the station and offset range of these larger objects and report their maximum elevation and penetration based on the surface being analyzed.

### 5.3.5. ALP Drawing Set Organization

The DOT&PF Project Manager or ALP Coordinator will determine when drawings may be combined into a single sheet or expanded into multiple sheets to provide drawing sets that are clear and concise. The drawings will appear in the ALP set as ranked below. Note the drawings are individually numbered in sequence to establish their hierarchy, but mixed between required and optional. Maintain the sequence as specified. Required drawings must appear in every ALP in one form or another; some drawings can be combined as long as clarity is maintained; check with the DOT&PF Project Manager or ALP Coordinator.

#### ***5.3.5.a. Drawing #1 “Cover” Required***

This drawing contains all approval signatures, location and vicinity map, index and revision history. The intent of the sheet is to show the airport information that has the least probability to change, thereby reducing hand-drafting effort required during ALP updates.

#### ***5.3.5.b. Drawing #2 – “Data” (Required)***

The Data drawing provides an overview of the airport’s general information, , wind data, runway information and taxiway information. Show the following items on the Data drawing:

- Windrose.
- Wind Coverage Data table.
- Airport Data table.
- Runway Data table – one data table per runway. If the runway numbers are being updated (i.e. 12/30 to 13/31), show the existing runway numbers for the existing portion of the table, and show the new runway numbers for the near term/ultimate portions of the table.
- Geographic Coordinates table - contains the Airport Reference Point (ARP) and the runway threshold coordinates. List the existing, near term, and ultimate ARP; Taxiway Data tables – required when more than two taxiways are located at the airport, or if layout sheets have insufficient room to clearly show the required information. Add the taxiway lighting and marking information to the Airport Data table if Taxiway Data tables are not being used. Note in the checklist where the information is shown.
- Title and Revision blocks.

Some airports may have too much information to fit on a single Data sheet. In this case, some elements, such as the windrose and wind coverage data table, may be moved to a second Data sheet. The Airport Data, Runway Data, and Geographic Coordinates tables will always appear on the first sheet of the Data drawing.

#### ***5.3.5.c. Drawing #3 “Existing Layout” (Required)***

This is a detailed, scaled representation of existing airport facilities. It provides pertinent dimensions and information pursuant to applicable standards. Compose and scale the sheet(s) to encompass pertinent peripheral features of the airport facility, such as the airport boundary, runway protection zones (RPZs), safety areas, 14 CFR Part 77 imaginary surfaces, and traverse ways, as well as the location and nature of all existing airport facilities and structures (such as

runways, taxiways, aprons, terminal buildings, or hangars). Refer to the checklists in Appendices B and C.

If a construction project is going to result in minor, immediate changes to the airport facilities, they can be shown as near term features on the Existing layout drawing with the postscript “near term” labels (i.e. construction will be started within one year); for example “SREB (Near Term)”. When creating as-builts of the ALP after the construction project, the label “(Near Term)” will be removed, leaving only the remaining “SREB” label. This will simplify the creation of as-builts, and maintenance of the ALP. If there are significant revisions, or if the drawing becomes too cluttered, a Near Term layout drawing should be used.

The apron size will be the total airside space available, and will include lease lot space. Runway end numbers will be those in effect when the ALP is signed.

### **Building Data Table**

Include a Building Data table on this drawing; if a separate Terminal Area drawing is included, place the table on that drawing. Assign a unique, sequential identification number to each permanent building or structure, and add the following in the table: description, location, top elevation, obstruction marking, and indicate if the building or structure will be removed or relocated. If a building is an obstruction, also list it on the Inner Approach or Airspace drawings, as appropriate.

### **OFZ Penetration Table**

List all Obstacle Free Zone (OFZ) penetrations in the OFZ Penetration Table. Identify the location of each penetration by station, offset, top elevation, penetration amount, and disposition. If there are/will be no penetrations, do not include the table and state “No OFZ penetrations” in a sheet note.

### **OFA Penetration Table**

List all Object Free Area (OFA) penetrations in the OFA Penetration Table. Identify the location of each penetration by station, offset, top elevation, penetration amount, and disposition. If there are/will be no penetrations, do not include the table.

#### ***5.3.5.d. Drawing #4 “Near Term Layout” (Optional)***

This drawing addresses the near term development in the same manner that the Existing Layout drawing describes the existing conditions. Refer to section 5.3.3.f.

***5.3.5.e. Drawing #5 “Ultimate Layout” (Required)*** This is a detailed, scaled representation of the ultimate airport development. It addresses the ultimate development in the same manner that the Existing Layout drawing describes the existing conditions.

If the ultimate development occurs in stages, include staging sketches in the Narrative Report. Do not identify stages on the ALP; all staged development will be labeled “ultimate”.

#### ***5.3.5.f. Drawing #6 “Declared Distances” (Optional)***

This drawing is required on airports that use declared distances to determine critical runway dimensions. It is a detailed, scaled representation of existing and/or ultimate runway information that is influenced when declared distances modify the runway length. Clearly show declared distances using arrows and dimensions. Identify clearway and stopway portions of the runway, if applicable. A line drawing of the declared distances can be included on the Existing Layout, Near Term Layout, and Ultimate Layout sheets, if layout space allows.

#### ***5.3.5.g. Drawing #7 “Terminal Area” (Optional)***

For Part 139 airports, or airports with significant terminal area development, provide one or more sheets that present a large-scale depiction of all buildings and their related infrastructure. The Terminal Area drawing may be combined with the Airport Layout Drawing for non-Part 139 airports where a significant number of buildings do not exist or are not planned. Show all buildings, existing and planned, aprons, fueling facilities, and the Building Restriction Line (BRL) with Part 77 elevation(s). Passenger terminal areas, cargo facilities, and general aviation (GA) areas are shown for airports with commercial service. The apron size will be the total airside space available, and will include lease lot space.

Label the BRL with the clearance below the transitional surface. This allows the user to easily see the maximum elevation allowable for buildings, and helps the designer determine the layout features.

#### **Building Data Table**

Include a Building Data table on this drawing. See Sec. 5.3.4 for object numbering. Include the following in the table:

- description
- location
- top elevation
- obstruction marking
- and indicate if the building or structure will be removed or relocated.

If a building is an obstruction, also list it on the appropriate Inner Approach or Airspace drawings.

#### ***5.3.5.h. Drawing #8 “Facility Layout” (Optional)***

Per AC 150/5070-6, chapter 10. This sheet is not typically used.

#### ***5.3.5.i. Drawing #9 “Existing Inner Portion of the Approach Surface” (Required)***

This drawing is a scaled detail of the inner portion of the approach surface. It shows the 14 CFR Part 77 approach surface from the ground to a height at least 100 feet above the primary surface and the threshold siting surface. Separate sheets may be required for each runway end. Departure surfaces may be shown on this sheet only if clarity can be adequately maintained.

Always show a plan, a profile, a Part 77 Surface Obstruction Table, and identify the controlling obstruction and the obstruction clearance slope. The location of the approach surface will begin 200 feet from the threshold on all paved and gravel runways. When there are penetrations to the Threshold Siting Surfaces or Departure Surfaces (when shown), include the appropriate Surface Penetrations Table or a “no penetrations” note for each runway end.

Assume the highest portion of a traverse way through the approach surface to be the center of the traverse way, if no survey data is available.

#### **Plan View:**

Significant objects in the approach surface will be labeled to indicate the location, elevation, and clearance height where they cross the runway centerline and the approach surface outer edges. See ARP 2.00 for a list of significant objects.

Show Part 77 obstructions to the inner approach surface. Use a leader with a unique identification number that correlates to the identification number in the Part 77 Surface Obstruction Table. If a large area of the topography penetrates the Part 77 surfaces, hatch the entire area and identify the point with the highest penetration.

#### **Profile View:**

Show a centerline profile within the primary surface, and a composite profile showing the highest points perpendicular to the extended runway centerline.

Show significant objects and Part 77 obstructions on the inner approach surfaces in profile.

Show the following surfaces:

- approach slope
- existing controlling obstruction clearance slope
- threshold siting surface slopes
- departure surface, if applicable
- Visual approach aid siting surfaces
- Obstacle Free Zones (when Inner approach OFZ is present)

#### **Obstruction Tables**

List the Part 77 obstructions in the Part 77 Surface Obstruction Table (Inner Portion). Identify the location of each obstruction by station, offset, top elevation, surface being penetrated, surface elevation, penetration amount, disposition, and stage to correct. These obstructions could occur in the approach, transitional, or primary surfaces. If there are no obstructions, indicate by noting “NONE” in the table.

### **Threshold Siting Surfaces**

For each threshold, establish the approach threshold siting surface requirements in accordance with AC 150/5300-13. In a separate note for each threshold, list the line number from AC 150/5300-13, Table 3-2, which defines the applicable threshold siting criteria.

In cases where there are threshold siting surface penetrations, provide a Threshold Siting Surface Penetration Table, and describe how each penetration will be mitigated. If there are no threshold siting surface penetrations, say so in a note.

### **Departure Surfaces**

If departure surfaces are included on this sheet, for each threshold, establish the departure surface requirements in accordance with AC 150/5300-13A. In cases where there are departure surface penetrations, provide a Departure Surface Penetration Table and describe how each penetration will be mitigated. If there are no departure surface penetrations, Say so in a note.

#### ***5.3.5.j. Drawing #10 "Near Term Inner Portion of the Approach Surface" (Optional)***

This drawing addresses the near term development in the same manner that the Existing Inner Portion of the Approach Surface drawing describes the existing conditions. This sheet will be included when a Near Term Layout drawing is used.

#### ***5.3.5.k. Drawing #11 "Ultimate Inner Portion of the Approach Surface" (Required)***

This drawing addresses the ultimate development in the same manner that the Existing Inner Portion of the Approach Surface drawing describes the existing conditions.

#### ***5.3.5.l. Drawing #12 "Runway Departure Surfaces" (Optional)***

This drawing shows the applicable departure surfaces in plan and profile, as defined in AC 150/5300-13A, Table 3-2. Use this drawing to depict on each runway end that has an instrument departure (current or planned).

Establish the departure surface requirements for each threshold in accordance with AC 150/5300-13A. In a separate note for each departure surface, list the line type from AC 150/5300-13A, Table 3-2, that defines the applicable departure surface criteria.

### **Departure Surface Siting Table**

In cases where there are departure surface penetrations, provide a Departure Surface Penetration Table and describe how each penetration will be mitigated. If there are no departure surface penetrations, Say so in a note.

#### ***5.3.5.m. Drawing #13 “Runway Profiles” (Required)***

This drawing shows the full length of all runway profiles, including Runway Safety Areas (RSAs). Do not show plan views. Provide a vertical scale capable of legibly depicting the Line of Sight requirements discussed below. Show existing as dashed and ultimate as solid bold. If a runway extension/shift, etc. impedes the clarity of this shared depiction, separate profiles for existing and ultimate may be needed.

Do not include airspace surfaces on this sheet.

This sheet may be included as part of other sheets in the drawing set depending on the project. Check with the Project Manager or ALP coordinator.

Include on the profile:

- runway high/low points
- vertical curve lengths (not full curve information like PVIs etc.)
- maximum longitudinal grade
- a copy of the profile 5 ft above the ground CL elevation representing the 5 ft Line of Sight (LOS) criteria discussed in 150/5300-13A.

#### ***5.3.5.n. Drawing #13 “Airport Airspace” (Required)***

This drawing shows all 14 CFR Part 77 surfaces for the ultimate airport development, in plan and profile, existing profile information, and an outer obstruction table. This drawing focuses on the areas not addressed by the Inner Approach drawing.

##### **Plan**

Draw a plan of the ultimate 14 CFR Part 77 surfaces. Depict obstructions to 14 CFR Part 77 surfaces on the plan by using a leader with an identification number that correlates to the identification number in the 14 CFR Part 77 Surface Obstruction Table. Show basic planimetry and topography in the background. If large areas of topography penetrate the 14 CFR Part 77 surfaces, hatch the entire area and identify the point with the highest penetration. Only assign identification numbers to objects that are obstructions for reference in the Part 77 Surface Obstruction Table.

##### **Profile**

Draw a composite profile of the existing ground showing the highest points perpendicular to the extended runway centerline within the approach surfaces. If the approach surface is too large to fit on a single sheet, it may be depicted with break lines. Do not show penetrations outside of the approach surface. Show the ultimate profile

##### **14 CFR Part 77 Obstruction Table**

Create a table that lists all the objects that penetrate the outer portion of the 14 CFR Part 77 surfaces. Do not include objects shown on the Inner Portion of the Approach table, but include a note that refers the user to that drawing. Identify the location of each obstruction by station,

offset, top elevation, surface being penetrated, surface elevation, penetration amount, disposition, and stage to correct. These obstructions could occur in any of the 14 CFR Part 77 surfaces. If there are no obstructions, indicate by noting "NONE" in the table. If more than one runway is present, list the station and offset from the primary runway and label the primary runway in a table note. Put only those items that are obstructions in the obstruction table.

#### ***5.3.5.o. Drawing #14 "Airport Property Map" (Required)***

This map provides information for analyzing the current and future aeronautical use of land acquired for airport use. It serves as an inventory of existing and future land and/or property rights owned by the airport. Don't depict details to the level of accuracy requiring a Land Surveyor's certification. Don't show distance and bearing for property lines.

Show all parcel boundaries on and off the airport controlled by DOT&PF for airport purposes and proposed additions. Clearly define separate parcels and easements within the airport boundary and area of proposed additions. Include in the airport boundary: aviation easements, leases, etc. in which the airport has a property interest. Assign a unique, sequential identification number to be used in the Property Status table on this drawing – match the Exhibit A identifications where possible. Delineate existing and ultimate property lines. Show the relationship of exterior property lines and the ultimate runway centerline as appropriate. Show major airport features that indicate aeronautical need for airport property (i.e. runways and RPZs).

If a land use drawing is not included in the ALP set, show any FAA-approved non-aeronautical uses on the property map with the date of approval (See 5.3.5.r.2).

#### **Property Status Table**

The Property Status table indicates an unique identification number (not a legal description), interest or ownership, grantor, grantee, parcel size, date acquired, date of expiration for any lease or easement, recorded document number, and any Federal or State funding received with applicable AIP or project number, as appropriate. Note any obligations associated with the property that could affect airport planning on the table.

#### ***5.3.5.p. Drawing #15 "Utility" (Optional)***

This drawing shows the capacity and location of major utilities on the airport and in the surrounding area. It is used only when major utilities cannot be clearly shown on the Layout drawing(s).

#### ***5.3.5.q. Drawing #16 "Airport Access" (Optional)***

This drawing is used when access to the airport is an issue, and includes fencing, access/entrance points, and other features related to airport access.

#### ***5.3.5.r. Drawing #17 "Land Use" (Optional)***

This drawing serves as a planning tool for airport managers and communities to insure that growth in the area around the airport will be compatible and not impede future aeronautical

expansion. It provides details for current and future uses of property within the airport boundaries. Showing property use outside airport boundaries assists in long term planning of the airport, but is not required. A stand-alone drawing is essential where there is substantial development on or near airport property that may be effected by or affect aeronautical uses of the airport. All Part 139 airports and airports of the International, Regional Center, and District classes (per the current Alaska Aviation System Plan) will have Land use plans. Separate sheets may be developed for On-Airport and Off-Airport, if necessary. All other airports may combine the Land Use drawing with the Layout drawing, if clarity can be preserved. If combined with the layout sheet, show any FAA-approved non-aeronautical uses on the property map with the date of approval (See 5.3.5.r.2).

The existing and proposed revenue support areas (aeronautical and non-aeronautical) are necessary for planners and leasing agents to determine lease availability. Identifying national and state lands facilitates planners and designers in identifying options for future aeronautical expansion.

Show the following categories on the Land Use drawing:

**5.3.5.r.1 Off-airport use:** Only list for Part 139 airports, airports with previous noise studies, or when specifically requested by the Department. List categories such as agricultural, residential, commercial, industrial, etc.. Contact the local community for zoning information.

**5.3.5.r.2 On-airport land use:** aeronautical use, non-aeronautical use<sup>3</sup>, A&H easements.

Do not show non-aeronautical uses on the ALP unless they have been formally approved by FAA<sup>3</sup>.

#### ***5.3.5.s. Drawing #18 Other Miscellaneous Plans (Optional)***

This sheet addresses a specific need at an airport that isn't covered in other sheets. Work with the Project Manager and ALP Coordinator if this sheet is proposed.

## **5.4. Narrative Report**

The Narrative Report is a short, concise document that contains relevant information and design rationale about the proposed development required by AC 150/5070-6 and ARP SOP 2.00. It is not part of the ALP, but is submitted to the FAA with the ALP and is used to facilitate approval and offers supplemental information on the airport when a master plan isn't available or is outdated. Avoid irrelevant and unnecessary subjects such as information on community history, demographics, and air carrier names (may include in special cases).

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<sup>3</sup> Non-aeronautical uses must be approved - meaning that the State has received a specific Letter of Determination from FAA allowing the non-aeronautical use. This is necessary to release the State from certain grant obligations that are usually required as a condition of acquiring the land with federal grants.

Provide a Narrative Report with all new stand-alone ALPs and all significant revisions. Minor changes and as-builts do not need a narrative update in most cases. The Project Manager will check with the FAA to see if the narrative needs to be updated before submittal. If an ALP is being prepared in conjunction with a Master Plan, a separate Narrative Report is not normally required, but is sometimes requested by FAA to aid in their review process.

Provide the Narrative Report on 8 ½"x11" paper, and provide staging sketches, if necessary. Staging sketches may be on 11"x17" sheets.

In some cases and at certain rural airports, the Central Region ALP Narrative Template for rural airports may be used to satisfy the narrative portion of the SOP 2.00 checklist. The template contains instructions describing appropriate times for use. If it is unclear whether or not the template may be used at a particular airport, ask before use.

## 5.5. ALP Submittals and Approval

DOT&PF will review all submittals. **DOT&PF will not accept or review incomplete submittals.** If the hard copy or electronic files submitted are incomplete, do not conform to standards, or are determined to be unacceptable, they will be rejected on that basis without further comment, and returned for completion and re-submittal. The ALP Coordinator will review all ALPs for consistency and compliance with applicable ACs and DOT&PF standards. Do not send submittals directly to the FAA. The project manager and ALP Coordinator are responsible for submitting ALPs and receiving approval from FAA.

### 5.5.1. Submittals

#### 5.5.1.a Master Plan, Stand Alone, Update due to a Significant Revision

There are generally at least three submittals required for each ALP as follows:

1. **Initial Submittal.** This is the 50% submittal, and should reflect basic airport layout and Part 77 surfaces. Submit the following:
  - a. One electronic file in PDF format that contains the following items conforming to the Drafting Standards:
    - i. Basic layouts for each ALP drawing in 22"x34" sheet format, printable on 11"x17" paper, showing major features of the airport and Part 77 surfaces.
    - ii. The ALP Narrative Report in 8 ½"x11" sheet format. Include preliminary discussions concerning design aircraft, forecasts, development staging, and potential requirements for modifications to standards.
    - iii. Airport Master Record (5010) markups and sketch.
2. **Draft Submittal.** This is the 95% submittal that has incorporated initial review comments, and is substantially complete. Once the submittal is accepted, the Project Manager, Consultant Coordinator, or Squad Leader will release it to the distribution list in Appendix A for review. Once DOT&PF's comments have been adjudicated, the Project Manager or the ALP Coordinator

will submit to the FAA's Obstruction Evaluation / Airport Airspace Analysis (OE/AAA) website. Submit the following:

- a. In CAD format with all reference files and data shortcuts bound to the drawings:
    - i. The ALP drawings in 22"x34" (ANSI D) sheet format.
    - ii. All survey, terrain modeling, and engineering files.
  - b. In Microsoft Word format:
    - i. The Narrative Report with staging sketches in 8 ½"x11" and 11"x17" format, as appropriate.
  - c. In PDF format:
    - i. The ALP drawings in one electronic file printable on 11"x17".
    - ii. The Narrative Report with staging sketches, if applicable.
    - iii. A completed FAA SOP Checklist.
    - iv. A completed Central Region ALP Checklist.
    - v. Airport Master Record (5010) markups and sketch.
  - d. In individual native files:
    - i. All other supporting files such as wind analysis, spreadsheets, estimates, etc.
3. **Final Submittal.** This is the final submittal that incorporates all review comments and is complete. See Appendix A for information on distribution. Submit the following:
- a. Two complete sets of the ALP drawings on 22"x34" Mylars, ready for signatures.
  - b. The Narrative Report with staging sketches, if applicable.
  - c. Three electronic copies on separate CDs of all the ALP documents in PDF and native file format as specified for the Initial or Draft Submittals.
  - d. Airport master Record (5010) redlines and sketch.

#### **5.5.1.b. Submittals – As-Built and Minor Updates**

**As-Built Submittal.** This submittal is made after a project is completed. ALP and Airport Master Record (5010) redlines are provided by the Construction Project Manager. Aviation Design in-house drafting staff completes the as-built drawings using the drafting standards in use at the time of the original drawing set. As-built submittals to the FAA may only be made if the survey data is the same as the current, approved ALP, the ultimate layout hasn't changed, and the ALP matches the Airport Master Record. If these conditions are not met, a full ALP review must occur with the FAA.

If the airport is being brought up to the ultimate layout, replace all "near term" and/or "ultimate" labels with "existing". The Project Manager or ALP Coordinator will request the ALP cover sheet from the FAA for as-built updates. After the as-built updates are complete, the FAA's cover sheet and DOT&PF's cover sheet will be sent to the FAA for signature. The FAA will initial the revision block upon acceptance of the as-built ALP, and return the DOT&PF's cover sheet. The ALP is now considered current as of the revision date.

**Minor Updates.** This submittal is for minor, "pen and ink" updates on the ALP. Specify all of the revised sheets in a single entry on the revision block of the first sheet of the ALP drawing set. Drafting standards in use at the time of the original ALP will be used during these updates. A

Narrative Report will not routinely be required. After the minor updates are completed, the Project Manager or ALP Coordinator will request the ALP cover sheet from the FAA. After the updates are complete, the FAA's cover sheet and DOT&PF's cover sheet will be sent to the FAA for signature, along with the FAA's copy of the revised sheets. The FAA will initial the revision block upon acceptance of the as-built ALP, and return the DOT&PF's cover sheet. The ALP is now considered current as of the revision date.

1. There are two methods for "pen and ink" changes:
  - a. Add "See Sheet 1" to any sheets being modified and describe the changes made on the first sheet, or
  - b. List the sheets being modified in the revision block on the first sheet and describe the changes in the revision block on the sheet being changed.

### 5.5.2. Approval

Three signatures are required for an approved ALP:

- Aviation Design Group Chief
- Preconstruction Engineer
- FAA

The Project Manager or ALP Coordinator will draft a letter to the FAA, which is signed by the Aviation Design Group Chief<sup>4</sup>. The letter, the ALP (in half sized, paper format), Narrative, and Mylar cover sheets are routed for DOT&PF signature. Once these signatures are obtained, the FAA's Mylars and DOT&PF's cover sheet are sent over to the FAA for their signature.

When the ALP is ready for signature, the Project Manager or ALP Coordinator will draft a letter for the FAA. The Aviation Design Section Chief recommends the finalized ALP for approval with this letter, and the Preconstruction Engineer approves it as the representative of the Sponsor. The ALP is then submitted to the FAA for approval.

Once the ALP is signed by the FAA for approved, it must be kept current. Unconditional approval requires all environmental approvals prior to ALP approval. Typically, ALPs are "conditionally approved". Conditional approval can be issued before the environmental document is completed, but does not relieve the Sponsor of the environmental requirements. Appendix A lists the distribution for approved ALPs.

---

<sup>4</sup> If the submittal is an as-built or a minor update, a letter from the Aviation Design Group Chief is not needed; a transmittal sheet signed by the Project Manager or the ALP Coordinator is sufficient.

## 5.6. Airport Master Record (5010) Update

The FAA has a statutory requirement to collect, maintain, and disseminate accurate, complete, and timely airport data for the public. It is collected through Airport Master Records, the 5010 form, and field inspections. The information is published six times a year in the Alaska Supplement, which is part of the Airport/Facility Directory.

Airport Master Records, commonly known as 5010s, are redlined by DOT&PF and sent to the FAA for publication in the Supplement. Not all the information sent to the FAA is published in the Supplement, but it is required in the submittal to the FAA. Appendix F contains a sample Airport Master Record submittal.

Airport Master Records need to be updated when discrepancies are found. Discrepancies fall into the following categories:

1. **ALP Preparation.** The Airport Master Record (5010) will be compared to the data used to update or create an ALP. Any discrepancies will be noted and forwarded on to the ALP Coordinator for review.
2. **Field Inspections.** Statewide Aviation conducts field inspections on a three-year rotation. The inspector field verifies the existing Airport Master Record data, and provides the 5010 markups, field notes, and photographs reflecting apparent discrepancies to Statewide Aviation. Minor changes are sent to the FAA by the inspector.
  - a. If changes or discrepancies are significant, or if the changes involve safety critical data fields, the markups and field notes are provided to the Central Region Safety Officer for investigation into the discrepancy or resolution of the problem. The Central Region Safety Officer will contact the ALP Coordinator and request a comparison with the ALP to help with resolution.
3. **Construction Project.** The Construction Project Manager will initiate the Airport Master Record (5010) update at the completion of the project.
  - a. A redlined 5010 and sketch will be sent to the ALP Coordinator for review with the ALP.
  - b. It is ideal to as-built the ALP at the same time as verifying the Airport Master Record. However, the Airport Master Record should not be delayed for the ALP as-built if they are not available at the same time.
4. **As-Built Survey.** When the as-built survey has been completed on a project, the Construction Project Manager or DOT&PF Surveys will initiate the Airport Master Record (5010) update.
  - a. A redlined 5010 and sketch will be sent to the ALP Coordinator for review with the ALP.
5. **General Procedures.** Instances outside of the above listed cases may cause the Airport Master Record (5010) to be updated. Examples include a runway being shortened due to erosion, an entity outside of DOT&PF lengthens the runway, or an error/conflict is found in the safety critical data. The ALP Coordinator will be notified by Maintenance & Operations, the Aviation Design Group Chief, or the Project Manager of the necessary update.

### 5.6.1 Airport Master Record (5010) Submittals and Review

The existing Airport Master Record (5010) shall be redlined showing the changes that need to be made. A sketch of the airport will also be provided on 8.5"x11" paper. The Airport Master Record (5010) and the sketch shall be submitted to the Project Manager and ALP Coordinator for all ALP submittals.

Upon receipt of an Airport Master Record (5010) update request, the ALP Coordinator will verify the airport reference point, airport elevation, runway length and width, threshold geographical coordinates, threshold elevations, touchdown zone elevations, and survey datum with the ALP and other sources to confirm its accuracy. A sketch will be developed showing the current conditions at the airport.

Once all the required information is assembled, the ALP Coordinator will send the information, along with the ALP approval letter, to the Central Region Safety Officer. The Project Manager assigned to that airport and the Construction Project Manager, if applicable, will be copied on the email to the Central Region Safety Officer. The Central Region Safety Officer is responsible for submitting the information to the FAA.

Airport Master Record submittals will consist of the following data:

1. A 5010 sketch (PDF and CAD).
2. A redlined Airport Master Record (5010).
3. Runway threshold geographical coordinates, elevations, touchdown zone elevations, and datum. Note "Estimated" if the coordinates are not surveyed.
4. The ALP approval letter signed by the FAA.
5. A Notice of Landing Area Proposal (Form 7480), if necessary.

## **Appendix A: Distribution List of ALPs**

During the development of an ALP, distributions and requests for comments will occur at the Project Managers' discretion for the Initial Submittal and/or Draft Submittal. An internal review by all of DOT&PF's Functional Groups assures that all pertinent groups have a chance to comment on the draft ALP before it is submitted to the FAA for their review and approval. These comments are then incorporated into the drawing set.

The Project Manager may decide to have an adjudication meeting as part of the review to address special circumstances. The following distribution lists are suggested, and may be altered by the Project Manager.

The Consultant Coordinator or Squad Leader will be responsible for compiling review comments and responses. The Consultant Coordinator or Squad Leader will also be responsible for distribution of the review comments and responses, as well as filing them as part of the airport records.

The Squad Leaders will coordinate review of Consultant CAD files with the drafters. This review is necessary to confirm the use of the Drafting Standards.

### **Initial Submittal (50%) Distribution**

Send the Submittal to the following:

- Project Manager,
- Squad Leader/Consultant Coordinator
- ALP Coordinator
- Drafter

### **Draft Submittal (95%) Distribution**

Send the submittal to the following:

- Aviation Design Group Chief
- Project Manager
- Squad Leader/Consultant Coordinator
- ALP Coordinator
- Drafter
- M&O Superintendent
- Airport Manager
- M&O Specialist
- Right of Way Chief
- Land Survey Manager
- Statewide Aviation
- Aviation Planning Chief
- Planner

- Leasing Chief
- Leasing Specialist
- Consultant

After DOT&PF's comments have been adjudicated, the ALP is sent to the FAA for review. The FAA review takes place through the OE/AAA website (<https://oeaaa.faa.gov>). Send an email to the FAA Planner and the ALP Coordinator with the Airspace numbers given at the end of the submittal process.

### Approved ALP Distribution

The Project Manager will distribute PDFs of the ALP, the Narrative Report, and the signed FAA approval letter to the same distribution list as the Draft Submittal, as well as the following distribution list:

- Full-sized ALP Mylars – one set each:
  - FAA
  - Aviation Design Flat File (with a copy of the signed FAA approval letter)
- Half- size (11"x17") paper ALP and Narrative Report – one set each
  - Central Files (with the original signed letter from the FAA)
  - Aviation Design ALP Book
  - Aviation Design Project File (with a copy of the signed FAA approval letter)
- Electronic ALP
  - Construction Project Manager (when the ALP is being as-built due to a recent construction project)
  - Central Region Webmaster
    - Specify the webpage ([http://dot.alaska.gov/stwdav/airports\\_public\\_central.shtml](http://dot.alaska.gov/stwdav/airports_public_central.shtml)), airport name, airport identifier, and link name (Airport Layout Plan)
    - Only the ALP will be posted on the web page, not the approval letter or the narrative
- Electronic ALP and Narrative Report
  - eDocs
  - L:\Aviation Masters\Airport Layout Plan\Approved ALPs in PDF
  - W:\Projects\Airport Name\ALP

## **Appendix B: APR SOP 2.00 Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs)**

## Appendix C: Central Region ALP Checklist

The CR ALP Checklist contains additional items DOT&PF requires on the ALP drawing set. It shall be used in conjunction with the FAA SOP "Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs)", FAA Advisory Circulars, FAA Orders, DOT&PF Central Region ALP Guidance Manual, and DOT&PF Central Region Aviation Design Drafting Standards.

Proposed airport improvements must be pursuant to 49 U.S.C. Section 47107(a)(16): Utilization of Navigable Airspace must be pursuant to 49 U.S.C. 44718 and 14 CFR Part 77. All projects depicted on the ALP are subject to NEPA Environmental Analysis. The proposed project must meet the conditions described in FAA Order 1050.1E and/or FAA Order 5050.4A, as appropriate.

Airport Name:

---

ALP Date and Type (New/Update/As-built)

---

Project Engineer/Planner and Company  
Name:

---

Contact E-mail and Phone Number:

---

### **This Checklist has been internally reviewed before being submitted for review:**

Project Manager:

---

Contact E-mail and Phone Number:

---

DOT Contact Information:

---

Review Type (Initial/Draft/Final/As-built):

---

Review Date:

---

Reviewer's Name and Phone Number:

---

Project Manager's Name and Phone Number:

---

<u>Cover</u>	Yes	No	N/A
Scale (Graphic)			
Township, Range, Sections			
Legend			
Airport name and Location			

<u>Data</u>	Yes	No	N/A
Airport Data Table (Existing, Near Term, and Ultimate)			
ICAO Airport Identifier			
National Airport Identifier			
FAA Site Number			
Runway Data Table (Existing, Near Term, and Ultimate)			
Design Aircraft over 60,000 lbs for each runway			
Approach Reference Code (APRC)			
Departure Reference Code (DPRC)			
True Mean Bearing (nearest 0.01 degree)			
Maximum Elevation above sea level			
RSA Length beyond runway ends			
ROFA Length beyond runway end or stopway			
Geographical Coordinates Table (add this information to the table)			
Airport Reference Point (NAD 83, nearest second)			
All Threshold or Displaced Threshold Coordinates (NAD 83, to the nearest 0.01 second)			
Drawing Index			
Matches sheet titles and numbers			
Taxiway Data Table (add this information to the table)			
Shoulder Width			
Declared Distances sketch (if no declared distances drawing)			

<u>Layout</u>	Existing			Near Term			Ultimate		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
North is to the top or left									
Note "NO RVZ OBSTRUCTIONS" or show and list in a table									
Taxiway Hold Position signs/markings									
Note "NO OFZ PENETRATIONS" or show and list in a table									
Runway Separation Distance from BRL									
Existing access points for aircraft taxing across airport property									
Runway elevations shown to 0.1 ft									

<u>Declared Distances</u>	Yes	No	N/A
Scale: 1" = 200 to 1"=600'			
North Arrow with magnetic year			
Elevations (nearest 1/10 of a foot)			
Key Runway Stationing			
Runways, Taxiways, Aprons, and NAVAIDS			
Buildings			
Traverse ways			
Trees and brush			
Water (ponds, lakes, streams, ocean)			
Runway Orientation			
True (mean) Geodetic Runway Bearing (nearest 0.01 degree) within the runway footprint			
Runway Threshold Lights			
Runway lengths (existing and ultimate)			
Clearway			
Stopway			
Displaced Threshold			
Relocated Threshold			
Takeoff Run Available (TORA)			
Takeoff Distance Available (TODA)			
Accelerate Stop Distance Available (ASDA)			
Landing Distance Available (LDA)			
Approach RPZ			
Departure RPZ			
OFA			
POFA			

<u>Inner Portion of the Approach Space</u>	Existing			Near Term			Ultimate		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
Plan View									
Elevations (nearest 1/10 of a foot)									
Key Runway stationing is shown									
Taxiways, Aprons, NAVAIDS									
True (mean) Geodetic Runway Bearing (nearest 0.01 degree) within the runway footprint									
Runway threshold lights									
Runway length and width within the runway footprint.									
Profile View									
Threshold lines up with the plan threshold									
Departure surfaces (if no Runway Departure Surfaces drawing)									
Part 77 Surfaces Obstruction Tables									
Station and offset									
Surface penetrated									
For each threshold, a "No Threshold Siting Surface Object penetrations" note or add a Threshold Siting Surface penetration Table where penetrations occur.									
Threshold Siting Surface Penetration Tables									
Separate table for each runway end									
Obstacle identification number									
Obstacle ID matches the plan view									
Description									
Station and offset									
Elevation									
Surface elevation									
Amount of surface penetration									
Proposed disposition of the Obstacle									
Stage to correct									
Notes									
Identify each applicable threshold siting criteria by line type (AC 150/5300-13A Table 3-2).									
Identify the controlling obstruction and specify the controlling obstruction clearance slope.									
Identify each runway departure, if no Runway Departure Surfaces drawing, or state "No Runway Departure Surface penetrations".									

<b>Runway Departure Surfaces</b>	Existing			Near Term			Ultimate		
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
Plan View									
North arrow with magnetic declination and year									
Key Runway stationing is shown									
Profile View									
Projected view of the Plan View									
Departure Obstruction Tables									
Surface elevation									

<b>Airspace</b>	Yes	No	N/A
Plan			
Dashed lines for the less demanding surfaces			
Obstruction Data Tables (Outer)			
Station and offset			
Surface elevation			
Notes			
“Refer to the inner portion of the approach surface sheets for close-in obstructions.”			
Primary surface width identified			
Source of base map			

<b>Property Map</b>	Yes	No	N/A
Drawing details – show property boundary (including easements), runways, and RPZs.			
North arrow with magnetic declination and year			
Property boundary references to runway centerline			
Off airport FAA sites			
Property Status Table (add this information to the table)			
Identification Number			
Grantor			
Grantee			
Date property was acquired			
Date of lease/easement expiration			
Recorded document number			
AIP project number under which the property was acquired			
AKSAS number under which the property was acquired			
Recording district			

<b>Land Use</b>	Yes	No	N/A
Aerial base map where possible			
Show the location of all existing and proposed revenue support (non-aviation) areas			
Identify ownership for native corporations, native allotments, and government (Alaska Department of Natural Resources [DNR], Bureau of Land Management [BLM], etc.)			

<b>Narrative</b>	Yes	No	N/A
Cover sheet, including airport name, date, prepared by/for (Consultants will add their contact information to the cover page)			
Footer, including airport name, page X of Y, date			
Equivalent level of safety			







<b>Airport Name:</b>			
<b>5010 Layout Drawing (Sketch) Checklist</b>	Yes	No	N/A
Vicinity map (1"=1 mile preferred) with north arrow			
Map information			
Note: The northern orientation of the vicinity map and sketch may not match.			
Scale (preferred)			
1" = 1,000' for runways greater than 4,000'			
1" = 500' for runways less than 4,000'			
North arrow and magnetic declination			
Airport property lines			
Roads and railroads on or adjacent to airport			
Terminal building			
Parking areas and access roads			
Air Traffic Control Tower (ATCT)			
Apron(s)			
Hangars			
Helipad			
Airport Elevation			
Beacon			
Wind indicator(s), not if lighted and/or controlled			
Segmented circle			
Seaplane docks/ramps			
Runway/Taxiway Systems			
Runway identification numbers			
Runway(s) physical length, including water lanes and helipads			
Runway(s) width, including water lanes and helipads			
Displaced threshold length			
Stopway(s)/overrun(s)			
Taxiway layout			
Security/Hazardous cargo area(s)			
Lighting/Approach Aids			
Threshold lights			
Runway visual range (RVR) or runway visibility value (RVV)			
REILs			
Approach lights			
Electronic aids (ILS-LOC, GS, MM, VOR, ASR, ASDE, etc)			
VASI/PAPI			
Taxiway lighting			

## Appendix G: Frequently Asked Questions

Appendix G will be updated on an as-needed basis; therefore check with the Project Manager for an updated version before starting an ALP.

- Check with the FAA Planner assigned to the airport before doing an update to see if any additional information needs to be included.
- Data Tables: Add DOT&PF's additional table information to the tables required in ARP SOP 2.00 (see Appendix E).
- Show the existing, near term (if applicable), and ultimate ARPs on the Geographical Coordinates Table (see comment for Pages A-12 and A-14) and the appropriate sheets.
- The Facilities Data Table Station/Offset is to the middle point of the facility surface closest to the runway. Give all map citations for electronic mapping, aerial photos, etc used on the ALP.
- The ARP for seaplane bases is based on the dock location. If there are multiple docks, find the centroid of the docks. The ARP for an airport that has both runways and waterways is based on the geometric centroid of the landing area.
- 14 CFR Part 77 Section 77.19(c) defines the primary surface as extending 200 feet off the end of the threshold on specially prepared surfaces. Specially prepared hard surfaces are defined on page 416 of Appendix A in AC 150/5300-18B; this definition includes gravel runways within Central Region.
- Label all weather stations as "weather station" instead of by their equipment type (eg AWOS).

**FAA ARP SOP 2.0: Standard Procedures for FAA Review and Approval of Airport Layout Plans (ALPs)**

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Table 2-1. Survey Requirements Matrix

This table is designed for use in two ways. First, it defines in a general fashion the task required to meet a specific objective. Each task listed is generalized and the process to complete it many contain many other pieces. Users should refer to the text of the referenced AC to ensure that all the required subtasks are completed. The second way to use this matrix is as a checklist to ensure all the required data is collected either before leaving the field or before submitting the data to the FAA.

Intended End Use of the Data ➤	AC Reference	Category II or III Operations	Navigational Aid Siting			Airport Layout Plan (ALP)	Airport Obstruction Chart	Construction		Instrument Procedure Development	Pavement Design, Construction, Rehabilitation or Roughness	Airport Mapping Database
			Non-Precision	Precision	Visual			Airside	Landside			
Required Tasks ▼												
Provide a Survey and Quality Control Plan	150/5300-16/17/18	•	•	•	•	•	•	•	•	•	•	•
Establish or validate Airport Geodetic Control	150/5300-16	•	•	•		•	•	•		•	•	•
Perform, document and report the tie to National Spatial Reference System (NSRS)	150/5300-16	•	•	•	•	•	•			•		•
Survey runway end(s)/threshold(s)	150/5300-18	•		•	•	•	•	• <sup>1</sup>		•	•	•
Monument runway end(s)/threshold(s)	150/5300-18	•		•	•	•	•	• <sup>1</sup>		•	•	
Document runway end(s)/threshold location(s)	150/5300-18	•		•	•	•	•	• <sup>1</sup>		• <sup>1</sup>	• <sup>1</sup>	
Identify and survey any displaced threshold(s)	150/5300-18	•		•	•	•	•	• <sup>1</sup>		•	•	•
Monument displaced threshold(s)	150/5300-18	•		•	•	• <sup>1</sup>	• <sup>1</sup>	• <sup>1</sup>		•		
Document displaced threshold(s) location	150/5300-18	•		•	•	•	•	• <sup>1</sup>		•	•	•
Determine or validate runway length	150/5300-18	•				•	•	• <sup>1</sup>		•	•	•
Determine or validate runway width	150/5300-18	•				•	•	• <sup>1</sup>		•	•	•
Determine runway profile using 50 foot stations	150/5300-18			• <sup>2</sup>		• <sup>2</sup>	• <sup>2</sup>	• <sup>1</sup>		•	• <sup>2</sup>	
Determine runway profile using 10 foot stations	150/5300-18	•		• <sup>2</sup>		• <sup>2</sup>	• <sup>2</sup>	• <sup>1</sup>		•	• <sup>2</sup>	• <sup>2</sup>
Determine the touchdown zone elevation (TDZE)	150/5300-18	•		•		•	•			•	•	
Determine and document the intersection point of all specially prepared hard surface (SPHS) runways	150/5300-18	•				•	•					•
Determine and document the horizontal extents of any Stopways	150/5300-18	•				•	•			•		•
Determine any Stopway profiles	150/5300-18	•				•	•			•		•
Determine if the runway has an associated clearway	150/5300-18	•				•	•					
Survey clearway to determine objects penetrating the slope	150/5300-18	•				•	•			•		•
Determine and document the taxiway intersection to threshold distance	150/5300-18					•						
Determine runway true azimuth	150/5300-18	•		•		•	•			•		•
Determine or validate and document the position of navigational aids	150/5300-18	•	•	•	•	•	•			•		
Determine or validate and document the position of runway abeam points of navigational aids	150/5300-18	•		•	•		•			•		
Determine potential navigational aid screening objects	150/5300-18		•	•	•							
Collect and document VOR receiver checkpoint location and associated data	150/5300-18		•								•	
Perform or validate and document an airport airspace analysis	150/5300-18	•	•	•	•	•	•	• <sup>1</sup>		•		
Collect and document helicopter touchdown lift off area (TLOF)	150/5300-18				•	•	•	•		•	•	•
Collect and document helicopter final approach and takeoff area (FATO)	150/5300-18				•	•	•	•		•	•	•
Collect or validate and document airport planimetric data	150/5300-18					•	•	•	•			•
Determine or validate the elevation of the Air Traffic Control Tower Cab Floor (if one is on the airport)	150/5300-18	•				•	•	•	•			•

<sup>1</sup> Only when runway construction is involved.

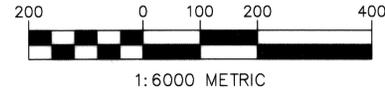
<sup>2</sup> All 14 CFR Part 139 airports require 10 foot stations. At all other airports the distance between stations is between 10 and 50 feet to meet local requirements

Intended End Use of the Data ➤	AC Reference	Category II or III Operations	Navigational Aid Siting			Airport Layout Plan (ALP)	Airport Obstruction Chart	Construction		Instrument Procedure Development	Pavement Design, Construction, Rehabilitation or Roughness	Airport Mapping Database
			Non-Precision	Precision	Visual			Airside	Landside			
Required Tasks ▼												
Perform or validate a topographic survey	150/5300-18	• <sup>3</sup>	•	•		•		•	•	• <sup>4</sup>		
Collect and document runway and taxiway lighting	150/5300-18	•				•						•
Collect and document parking stand coordinates	150/5300-18											•
Collect cultural and natural features of landmark value	150/5300-18					•	•					•
Determine elevation of roadways at the intersecting point of the Runway Protection Zone (RPZ) or the runway centerline extended	150/5300-18	•				•						
Determine all Land Use to 65 DNL contour	150/5300-18					•						
Document features requiring digital photographs	150/5300-18	•	•	•	•	•		•		•		
Document features requiring sketches	150/5300-18	•	•	•	•	•		•		•		•
Collect position and type of runway markings	150/5300-18	•				•						•
Collect position and type taxiway markings	150/5300-18											•
Locate, collect, and document photo ID points	150/5300-17						•					
Identify collect, and document wetlands or environmentally sensitive areas	150/5300-18					•						
Collect imagery	150/5300-17	•				•	•			•		•
Provide a final Project Report	150/5300-16/18	•	•	•	•	•	•	•	•	•	•	•

<sup>3</sup> Only required for the identified Category II and III special topographic survey

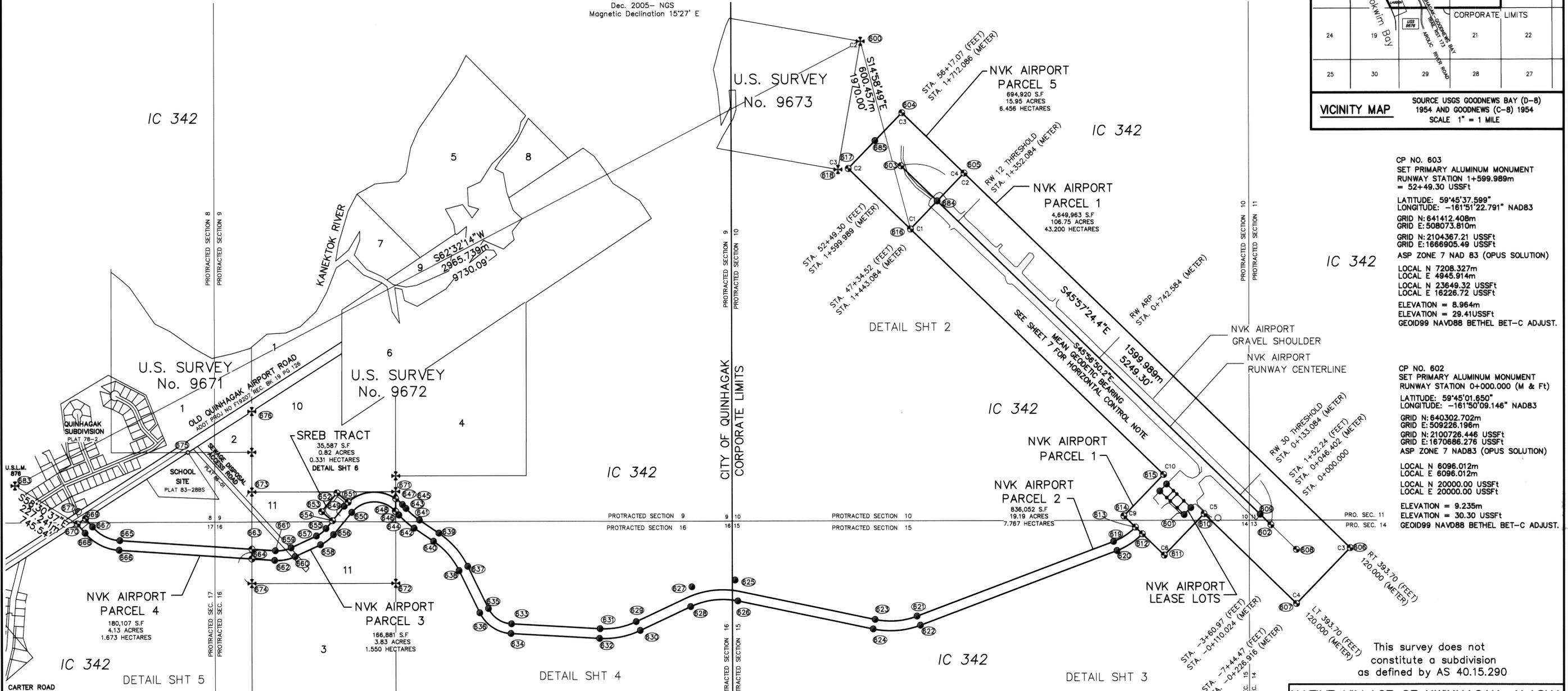
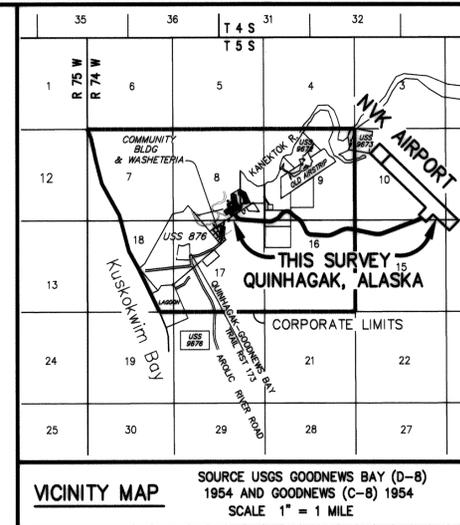
<sup>4</sup> For Cat II and III radar altimeter area or if specifically requested

SURVEY AND CONTROL NOTES ARE ON SHEET 7



Dec. 2005 - NGS  
Magnetic Declination 15'27" E

THRESHOLD AND ARP LOCATION DATA- METERS		
RW 12 THRESHOLD STA. 1+352.084	RW ARP STA. 0+742.584	RW 30 THRESHOLD STA. 0+133.084
GRID N:641240.469 GRID E:508252.366 LATITUDE: 59°45'32.030" LONGITUDE: -161°51'11.377" ELEVATION= 11.7(m)	GRID N:640817.737 GRID E:508691.354 LATITUDE: 59°45'18.336" LONGITUDE: -161°50'43.320" ELEVATION= 10.9(m)	GRID N:640395.005 GRID E:509130.343 LATITUDE: 59°45'04.641" LONGITUDE: -161°50'15.270" ELEVATION= 12.0(m)



CP NO. 603  
SET PRIMARY ALUMINUM MONUMENT  
RUNWAY STATION 1+599.989m  
= 52+49.30 USSFt  
LATITUDE: 59°45'37.599"  
LONGITUDE: -161°51'22.791" NAD83  
GRID N: 641412.408m  
GRID E: 508073.810m  
GRID N: 2104367.21 USSFt  
GRID E: 1666905.49 USSFt  
ASP ZONE 7 NAD 83 (OPUS SOLUTION)  
LOCAL N 7208.327m  
LOCAL E 4945.914m  
LOCAL N 23649.32 USSFt  
LOCAL E 16226.72 USSFt  
ELEVATION = 8.964m  
ELEVATION = 29.41USSFt  
GEOID99 NAVD88 BETHEL BET-C ADJUST.

CP NO. 602  
SET PRIMARY ALUMINUM MONUMENT  
RUNWAY STATION 0+000.000 (M & Ft)  
LATITUDE: 59°45'01.650"  
LONGITUDE: -161°50'09.146" NAD83  
GRID N: 640302.702m  
GRID E: 509226.196m  
GRID N: 2100726.446 USSFt  
GRID E: 1670686.276 USSFt  
ASP ZONE 7 NAD83 (OPUS SOLUTION)  
LOCAL N 6096.012m  
LOCAL E 6096.012m  
LOCAL N 20000.00 USSFt  
LOCAL E 20000.00 USSFt  
ELEVATION = 9.235m  
ELEVATION = 30.30 USSFt  
GEOID99 NAVD88 BETHEL BET-C ADJUST.

This survey does not constitute a subdivision as defined by AS 40.15.290

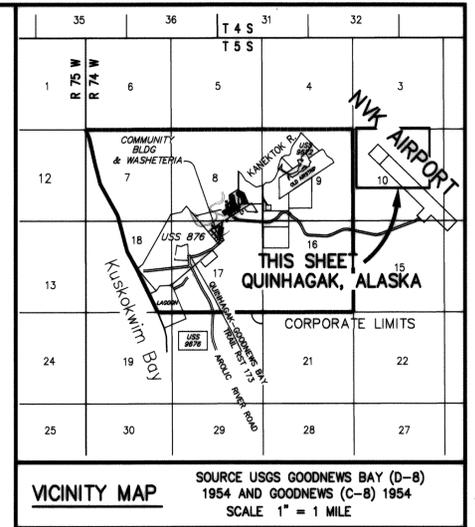
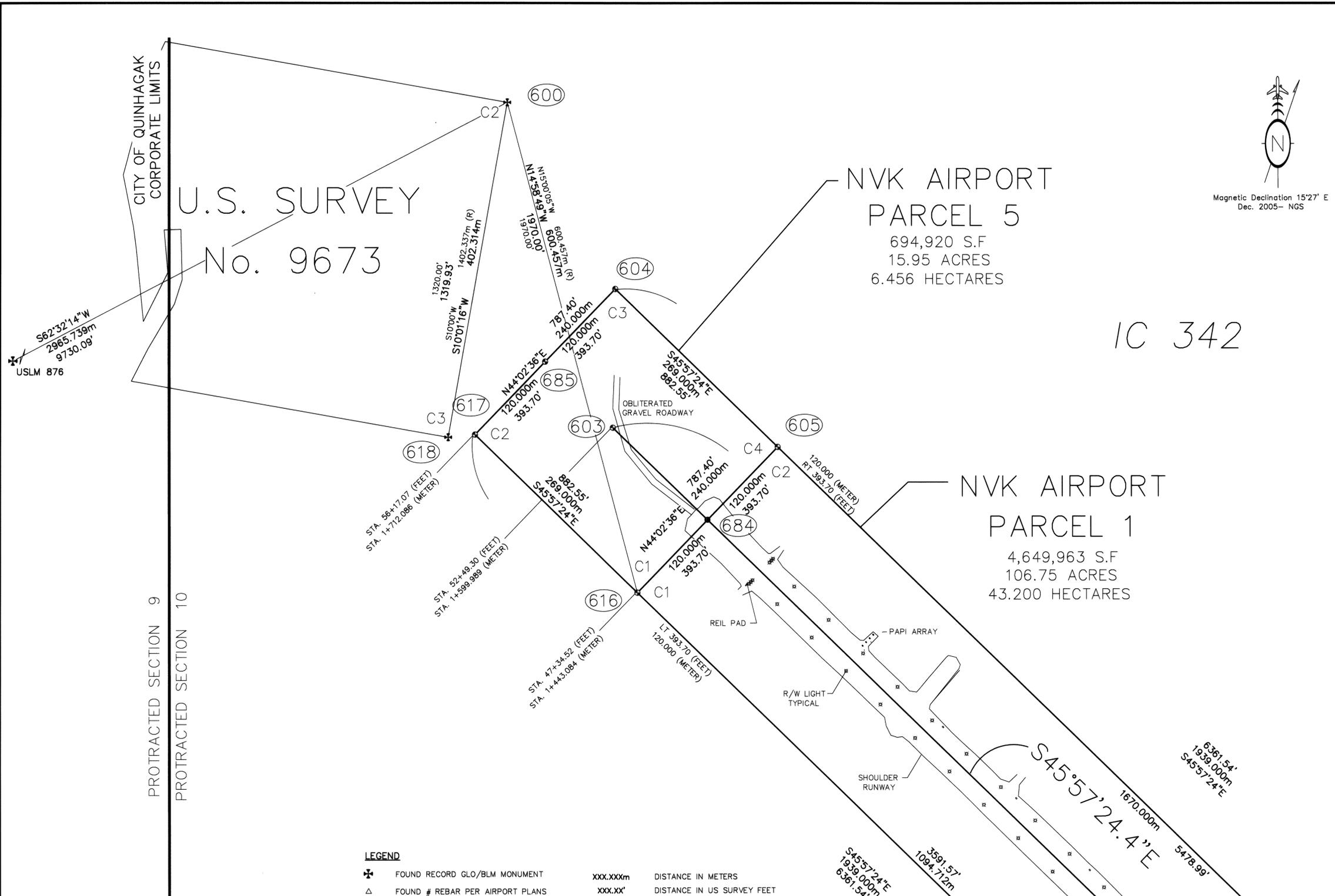
**Surveyor's Certificate**  
I hereby certify that I am properly Registered and Licensed to practice Land Surveying in the State of Alaska, and that this drawing represents a survey made by me or under my direct supervision, and that the monuments shown hereon actually exist as described, and that all dimensions and other details are correct to the extent shown hereon.  
Date: 1/30/2009  
Stephen Stoll, Registered Land Surveyor  
6726-LS  
Registration Number



- LEGEND**
- ✱ FOUND RECORD GLO/BLM MONUMENT
  - △ FOUND # REBAR PER AIRPORT PLANS
  - ⊙ FOUND REBAR AND ALCAP
  - ⊙ PRIMARY MONUMENT SET THIS SURVEY
  - × SET SPIKE OR PK FOR CONTROL POINT
  - SET SECONDARY MONUMENT 5/8"x30" REBAR AND ALCAP
  - SET LEASE LOT CORNER IN APRON AREA ALCAP AND MAGNET SET 0.2" B.G.
  - XXX.XXXm DISTANCE IN METERS
  - XXX.XX' DISTANCE IN US SURVEY FEET
  - S 89°55'38" E MEASURED DIMENSION
  - S 89°56'46" E (R) RECORD DIMENSION PLAT 92-6
  - S 89°56'46" E (R-89-56) RECORD DIMENSION & PLAT NO.
  - ⚡ POWER POLE AND ANCHOR
  - ✱ RUNWAY LIGHT
  - ⊙ CONTROL POINT NUMBER

**LEGAL DOCUMENTATION OF PROPERTY**  
This survey does not constitute a subdivision as defined by AS 40.15.290. This survey is intended to define and monument parcels of land created by Quitclaim Deeds for the purpose of establishing the NVK Airport in Quinhagak, Alaska. Original Quitclaim Deeds for NVK Airport Parcels 1, 2, 3 and 4 and the SREB Tract were recorded on September 27, 1999, in Book 230 beginning at Page 230 and also Page 303. Corrective Deeds were recorded on 11/30/2004 as document numbers 2004-001862-0 and 2004-001863-0. A Quitclaim Deed for Parcel 5 was recorded 4/2/2003 as document number 2003-000619-0.

**NATIVE VILLAGE OF KWINHAGAK, ALASKA**  
**NVK QUINHAGAK AIRPORT**  
**Survey Control Diagram**  
**Record Of Survey**  
Within Protracted Sections 8-11 AND 14-17, T. 5 S., R. 74 W., S.M., AK and Lot 11, U.S. Survey No. 9672  
BETHEL RECORDING DISTRICT  
MLA PROJ J: 05-245 QUINHAGAK AIRPORT DWG NVK ALP METRIC  
DRAWN SWS DATE 1/28/2005 SCALE 1:6000 METRIC  
CHECKED SWS, GK DATE 1/28/2005 SHEET 1 OF 8

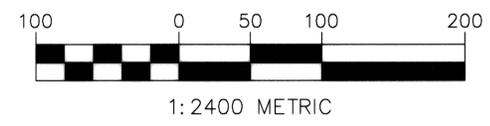


IC 342

PROTRACTED SECTION 9  
PROTRACTED SECTION 10

**LEGEND**

✦	FOUND RECORD GLO/BLM MONUMENT	XXX.XXXm	DISTANCE IN METERS
△	FOUND # REBAR PER AIRPORT PLANS	XXX.XX'	DISTANCE IN US SURVEY FEET
⊙	FOUND REBAR AND ALCAP	S 89°55'38" E	MEASURED DIMENSION
⊙	PRIMARY MONUMENT SET THIS SURVEY	S 89°56'46" E (R)	RECORD DIMENSION PLAT 92-6
×	SET SPIKE OR PK FOR CONTROL POINT	S 89°56'46" E (R-89-56)	RECORD DIMENSION & PLAT NO.
●	SET SECONDARY MONUMENT	⚡	POWER POLE AND ANCHOR
●	5/8"x30" REBAR AND ALCAP	*	RUNWAY LIGHT
•	SET LEASE LOT CORNER IN APRON AREA	Ⓢ	CONTROL POINT NUMBER
	ALCAP AND MAGNET SET 0.2' B.G.		



This survey does not constitute a subdivision as defined by AS 40.15.290

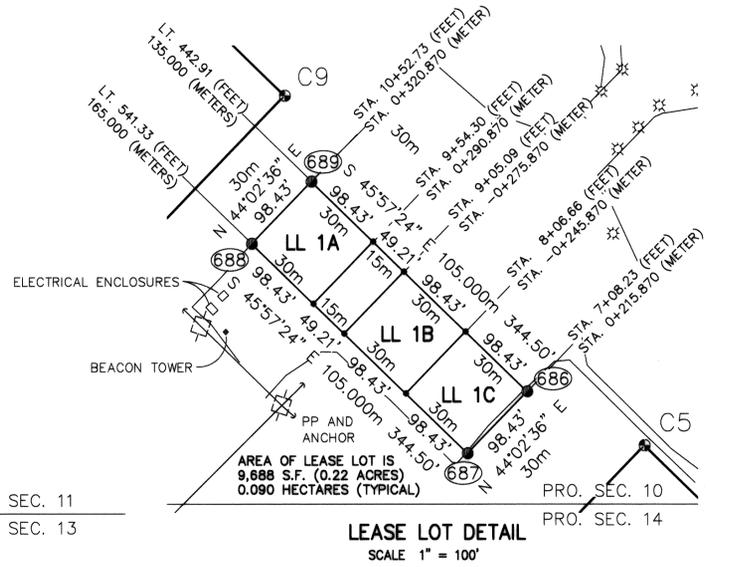
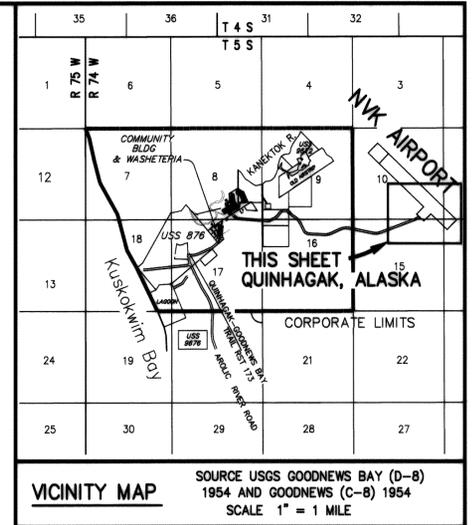
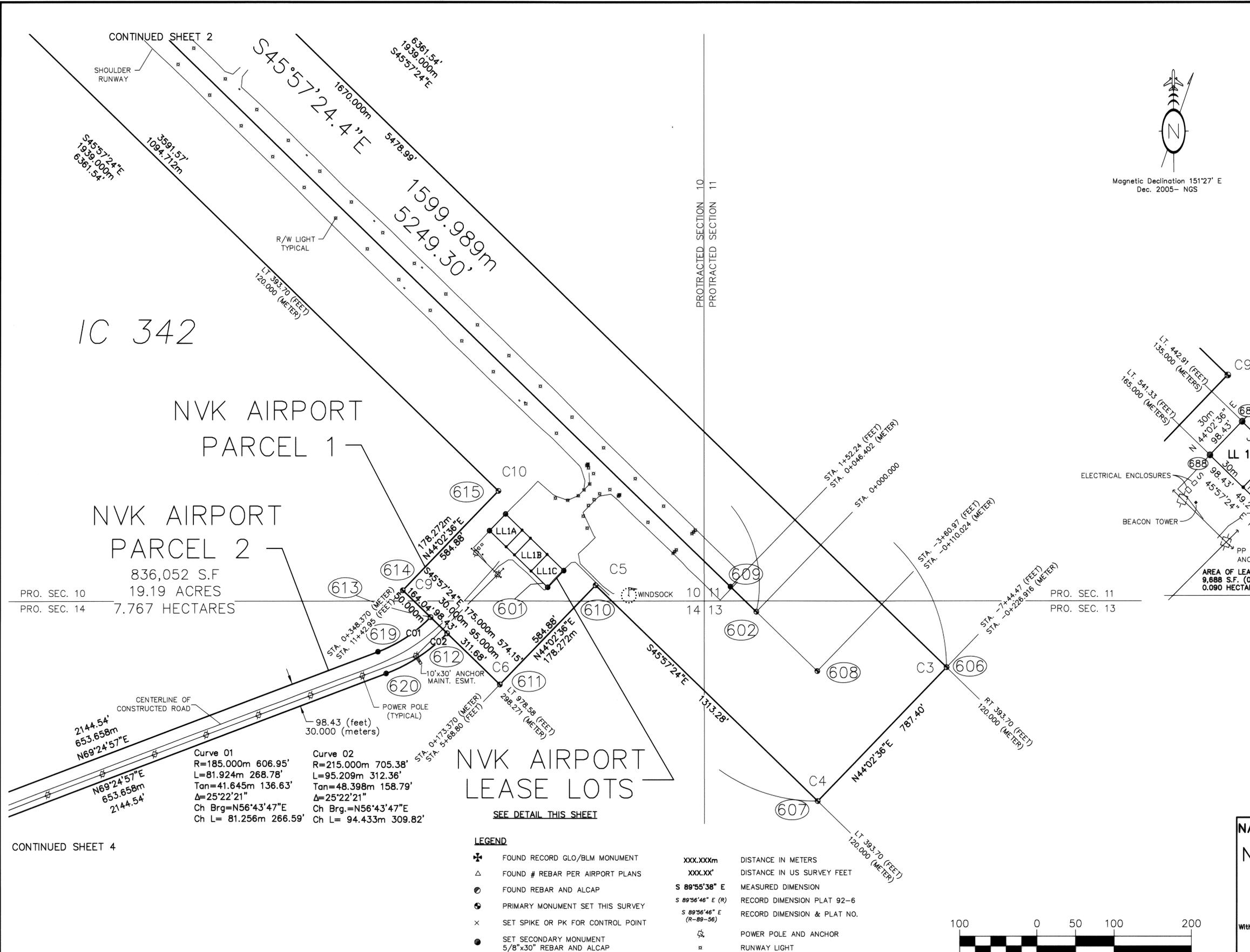
**NATIVE VILLAGE OF KWINHAGAK, ALASKA**  
**NVK QUINHAGAK AIRPORT**  
 Survey Control Diagram  
 Record Of Survey

Within Protracted Sections 8-11 AND 14-17, T. 5 S., R. 74 W., S.M., AK and Lot 11, U.S. Survey No. 9672

BETHEL RECORDING DISTRICT

MLA PROJ	J:\05-245 QUINHAGAK AIRPORT	DWG NVK ALP METRIC
DRAWN	SWS	DATE 1/28/2005
CHECKED	SWS, GK	DATE 1/28/2005
		SHEET 2 OF 8

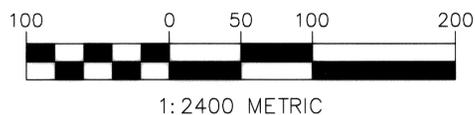
SURVEY AND CONTROL NOTES ARE ON SHEET 7



This survey does not constitute a subdivision as defined by AS 40.15.290

<b>NATIVE VILLAGE OF KWINHAGAK, ALASKA</b>			
<b>NVK QUINHAGAK AIRPORT</b>			
<b>Survey Control Diagram</b>			
<b>Record Of Survey</b>			
Within Protracted Sections 8-11 AND 14-17, T. 5 S., R. 74 W., S.M., AK and Lot 11, U.S. Survey No. 9672			
BETHEL RECORDING DISTRICT			
MLA PROJ	J:\05-245 QUINHAGAK AIRPORT	DWG NVK ALP METRIC	
DRAWN	SWS	DATE 1/28/2005	SCALE 1:2400 METRIC
CHECKED	SWS_GK	DATE 1/28/2005	SHEET 3 OF 8

SURVEY AND CONTROL NOTES ARE ON SHEET 7



SURVEY AND CONTROL NOTES ARE ON SHEET 7

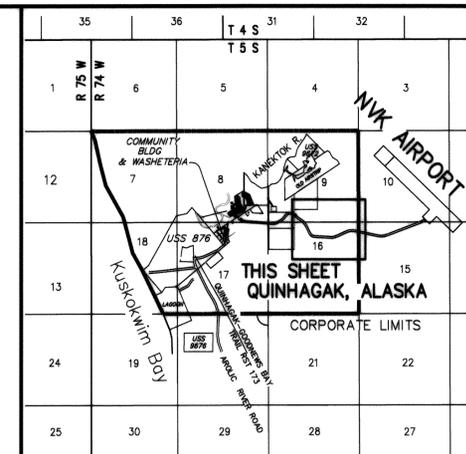
USS 9672

LOT 4

IC 342



Magnetic Declination 151'27" E  
Dec. 2005- NGS



VICINITY MAP SOURCE USGS GOODNEWS BAY (D-8) 1954 AND GOODNEWS (C-8) 1954 SCALE 1" = 1 MILE

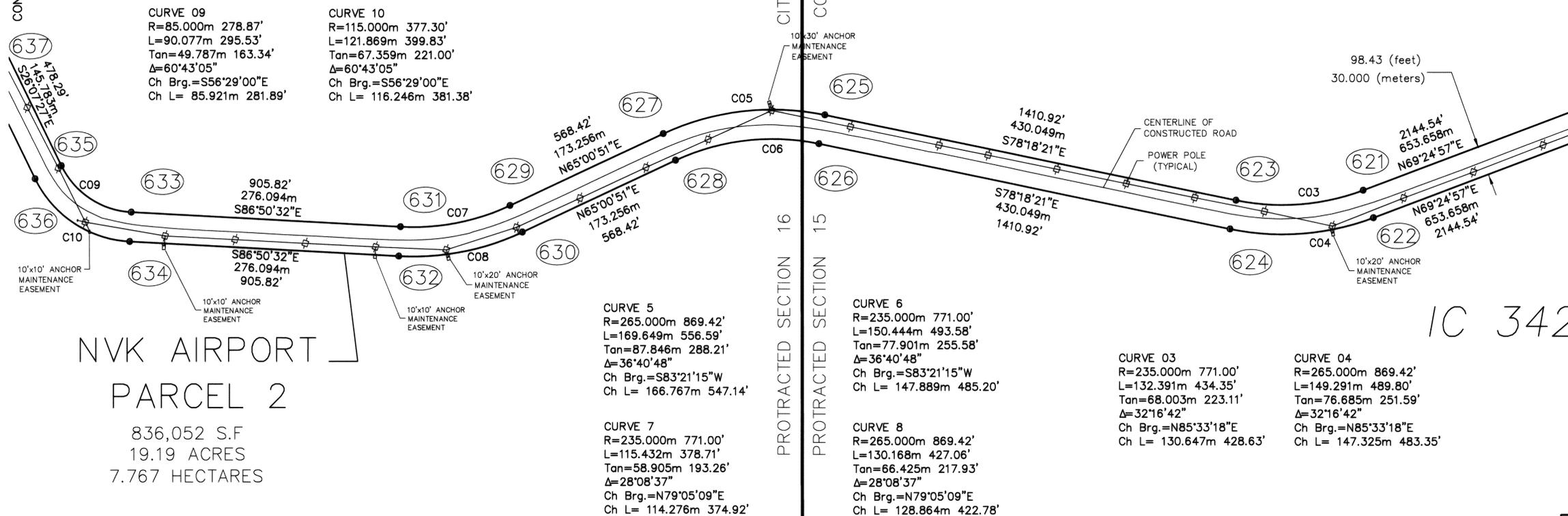
CITY OF QUINHAGAK PROTRACTED SECTION 9  
CORPORATE LIMITS PROTRACTED SECTION 10  
PROTRACTED SECTION 16  
PROTRACTED SECTION 15

PROTRACTED SECTION 9  
PROTRACTED SECTION 16

PROTRACTED SECTION 10  
PROTRACTED SECTION 15

CONTINUED SHEET 5

CONTINUED SHEET 3



IC 342

NVK AIRPORT  
PARCEL 2

836,052 S.F  
19.19 ACRES  
7.767 HECTARES

- LEGEND**
- ⊕ FOUND RECORD GLO./BLM MONUMENT
  - △ FOUND # REBAR PER AIRPORT PLANS
  - ⊙ FOUND REBAR AND ALCAP
  - ⊛ PRIMARY MONUMENT SET THIS SURVEY
  - × SET SPIKE OR PK FOR CONTROL POINT
  - SET SECONDARY MONUMENT 5/8"x30" REBAR AND ALCAP
  - SET LEASE LOT CORNER IN APRON AREA ALCAP AND MAGNET SET 0.2" B.G.
  - XXX.XXXm DISTANCE IN METERS
  - XXX.XX' DISTANCE IN US SURVEY FEET
  - S 89°55'38" E MEASURED DIMENSION
  - S 89°56'46" E (R) RECORD DIMENSION PLAT 92-6
  - S 89°56'46" E (R-89-56) RECORD DIMENSION & PLAT NO.
  - ⚡ POWER POLE AND ANCHOR
  - ⊞ RUNWAY LIGHT
  - ⊙ CONTROL POINT NUMBER

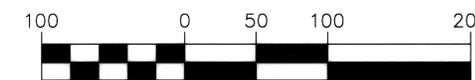
This survey does not constitute a subdivision as defined by AS 40.15.290

**NATIVE VILLAGE OF KWINHAGAK, ALASKA**  
**NVK QUINHAGAK AIRPORT**  
Survey Control Diagram  
Record Of Survey

Within Protracted Sections 8-11 AND 14-17, T. 5 S., R. 74 W., S.M., AK and Lot 11, U.S. Survey No. 9672

BETHEL RECORDING DISTRICT

MLA PROJ	J:\05-245 QUINHAGAK AIRPORT	DWG	NVK ALP METRIC
DRAWN	SWS	DATE	1/28/2005
CHECKED	SWS, GK	DATE	1/28/2005
		SHEET	4 OF 8



1:2400 METRIC



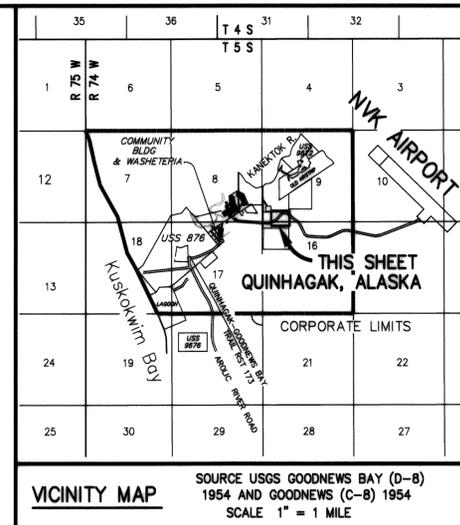
USS 9672  
LOT 10

CURVE 25  
R=120.000m 393.70'  
L=205.109m 672.93'  
Tan=137.880m 452.36'  
Δ=97°55'56"  
Ch Brg.=S88°33'14"W  
Ch L= 181.036m 593.95'

CORVE 17  
R=120.000m 393.70'  
L=17.334m 56.87'  
Tan=8.682m 28.48'  
Δ=8°16'34"  
Ch Brg.=S43°43'32"W  
Ch L= 17.319m 56.82'

CURVE 16  
R=120.000m 393.70'  
L=159.824m 524.36'  
Tan=94.279m 309.31'  
Δ=76°18'37"  
Ch Brg.=S86°01'08"W  
Ch L= 148.270m 486.45'

CURVE 15  
R=120.000m 393.70'  
L=27.952m 91.70'  
Tan=14.039m 46.06'  
Δ=13°20'45"  
Ch Brg.=N49°09'11"W  
Ch L= 27.888m 91.50'



S89°59'38"W 447.418m 1467.91'

SREB TRACT  
35,587 S.F  
0.82 ACRES  
0.331 HECTARES

LOT 11

CURVE 19  
R=85.000m 278.87'  
L=38.015m 124.72'  
Tan=19.331m 63.42'  
Δ=25°37'30"  
Ch Brg.=N52°24'01"E  
Ch L= 37.699m 123.69'

NVK AIRPORT  
PARCEL 3  
166,506 S.F  
3.83 ACRES  
1.550 HECTARES

NVK AIRPORT  
PARCEL 2  
836,098 S.F  
19.18 ACRES  
7.768 HECTARES

CURVE 20  
R=115.000m 377.30'  
L=51.433m 168.74'  
Tan=26.154m 85.81'  
Δ=25°37'30"  
Ch Brg.=N52°24'01"E  
Ch L= 51.005m 167.34'

PRO. SEC. 17  
PRO. SEC. 16

SCALES

LEGEND

- ✱ FOUND RECORD GLO/BLM MONUMENT
- △ FOUND # REBAR PER AIRPORT PLANS
- ⊙ FOUND REBAR AND ALCAP
- ⊙ PRIMARY MONUMENT SET THIS SURVEY
- × SET SPIKE OR PK FOR CONTROL POINT
- SET SECONDARY MONUMENT
- SET LEASE LOT CORNER IN APRON AREA

- XXX.XXXm DISTANCE IN METERS
- XXX.XX' DISTANCE IN US SURVEY FEET
- S 89°55'38" E MEASURED DIMENSION
- S 89°56'46" E (R) RECORD DIMENSION PLAT 92-6
- S 89°56'46" E (R-89-56) RECORD DIMENSION & PLAT NO.
- ⚡ POWER POLE AND ANCHOR
- ⊗ RUNWAY LIGHT
- ⊙ CONTROL POINT NUMBER



1:600 METRIC

This survey does not constitute a subdivision as defined by AS 40.15.290

NATIVE VILLAGE OF KWINHAGAK, ALASKA  
NVK QUINHAGAK AIRPORT  
Survey Control Diagram  
Record Of Survey

Within Protracted Sections 8-11 AND 14-17, T. 5 S., R. 74 W., S.M., AK and Lot 11, U.S. Survey No. 9672

BETHEL RECORDING DISTRICT

MLA PROJ	J:\05-245 QUINHAGAK AIRPORT	DWG NVK ALP METRIC
DRAWN	SWS	DATE 1/28/2005
CHECKED	SWS_GK	DATE 1/28/2005
		SCALE 1:600 METRIC
		SHEET 6 OF 8

SURVEY AND CONTROL NOTES ARE ON SHEET 3

BETHEL PLAT 2006-4

**HORIZONTAL CONTROL**

This project is located entirely within the Native Village of Kwinhagak (NVK) Airport Coordinate System. The NVK Airport Coordinate System is a local surface system in Metric Coordinates with US Survey Foot (USSFt) equivalents based on assumed coordinates of N6096.0122 E6096.0122 (N20000.00, E20000.00 USSFt) at Runway Centerline Station 0+000.000 (Meter) [0+00.00 (USSFt)].

Geodetic Coordinates and the Basis of Bearings for the Primary Runway Centerline Monuments were determined from 8 to 12 hour GPS Static Observations on October 12-13, 2005, and post-processed using the NGS OPUS Solution. Other primary monument locations were determined by multiple simultaneous GPS Static Observations using Topcon Legacy and Hiper High Precision Dual Phase Receivers which were processed using Topcon Tools v.5.11 software. The Basis of Bearings is True North at the Runway Centerline Monument set this survey at Runway Centerline Station 1+599.989 (Meter) [52+49.30 (USSFt)] and equates to being the Forward Geodetic Bearing from the monument placed at that Runway Centerline Station 1+599.989 (Meter) to the Runway Centerline Monument placed at Runway Centerline Station 0+000.000 (Meter), which is S 45°57'24.4" E. The Mean Geodetic Bearing of the line between the Primary Runway Monuments is S 45°56'50.2" E.

All other bearings are local bearings as oriented to the Basis of Bearings and distances shown are reduced to horizontal ground distances.

CONVERSION FROM NAD83 STATE PLANE, ZONE 7 METERS TO LOCAL METERS:

A. Scale State Plane Coordinates using the combined Scale Factor of 1.00010277 (Origin at Runway Centerline Station 0+000.000).

B. Translate resulting coordinates using -634,206.689m N and -503,130.183m E.

C. Rotate resulting coordinates around MLA #602 (Runway CL Station 00+00.00) by +0°07'26.8" (CW).

CONVERSION FROM LOCAL METERS TO STATE PLANE ZONE 7, NAD83 METERS:

A. Rotate coordinates around MLA #602 (Runway CL Station 00+00.00) by -0°07'26.8" (CCW).

B. Translate local coordinates using +634,206.689m N and +503,130.183m E.

C. Scale resulting coordinates using 0.99989724 (Origin at Runway Centerline Station 0+000.000).

**VERTICAL CONTROL**

The Vertical Datum is (NAVD88, Geoid 99 Bethel Bet-C Adjustment), expressed in Meters and the USSFt equivalent was determined by Simultaneous GPS Observations at the NVK Airport Centerline Monuments and Bethel Airport Control Monuments Bet-B and Bet-C. Bet-C was held using the NGS published NAVD 88 elevation of 30.45 meters (99.9 feet).

Elevations for other control points were determined by a series of Static observations and confirmed with GPS RTK solutions and solved using the Geoid99 model.

**SURVEY NOTES**

Geographic positions are ASP Zone 7 NAD83 (1996.0) as computed using the NGS OPUS Standardized Solution Report based on data collected on October 12-14, 2005.

This survey was performed in October, 2005 by McClintock Land Associates, Inc., using a combination of Static GPS and RTK GPS, techniques. Post processing of GPS data was done using Topcon Tools v. 5.11.

US Feet to meter conversion factor is 1200/3937.

The minimum closure of field traverses exceeds 1:10,000 before adjustment and 1:80,000 after adjustment.

**PLATS AND DOCUMENTS OF RECORD**

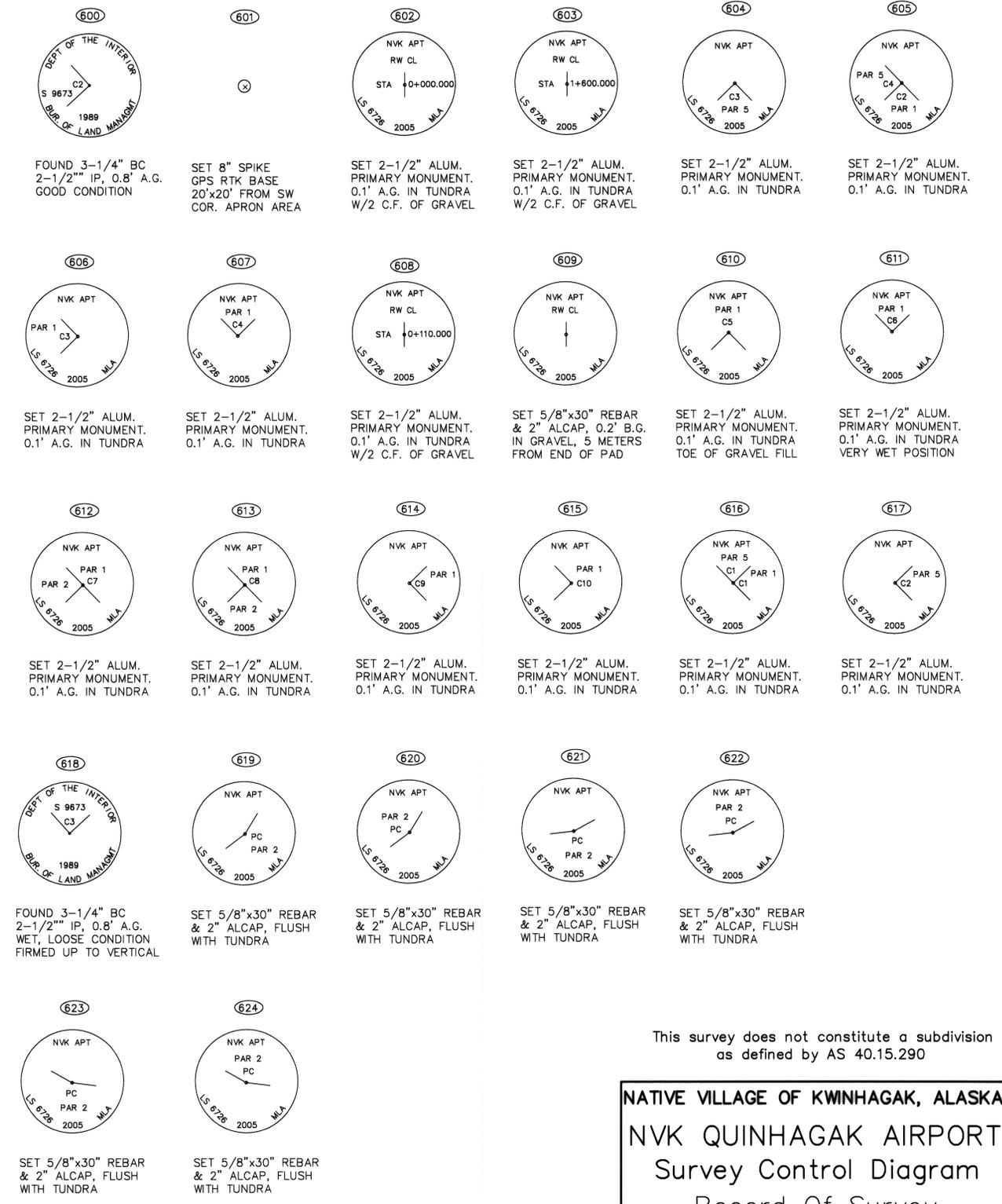
This survey does not constitute a subdivision as defined by AS 40.15.290. This survey is intended to define and monument parcels of land created by Quitclaim Deed for the purpose of establishing the NVK Airport in Kwinhagak, Alaska. Original Quitclaim Deeds for NVK Airport Parcels 1, 2, 3 and 4 and the SREB Tract were recorded on September 27, 1999, in Book 230 beginning at Page 230 and also Page 303. Corrective Deeds were recorded on 11/30/2004 as document numbers 2004-001862-0 and 2004-001863-0. A Quitclaim Deed for Parcel 5 was recorded 4/2/2003 as document number 2003-000619-0.

The following BLM US Survey Plats were also used:  
 USS 9671, LOTS 1-2, FILED 10/15/1990  
 USS 9672, LOTS 1-9, FILED 10/15/1990  
 USS 9672 DEPENDENT RESURVEY FILED 11/06/1994  
 USS 9673, LOT 1, FILED 8/13/1990

Plats filed in the Bethel Recording District:  
 SEWAGE DISPOSAL ACCESS ROAD FILED AS 86-01 BS  
 QUINHAGAK SCHOOL BOUNDARY SURVEY FILED AS 83-28 BS  
 QUINHAGAK SUBDIVISION FILED AS PLAT 78-2  
 QAINIRKTUUK EXCHANGE LOTS FILED AS PLAT 94-4  
 NATIVE VILLAGE OF KWINHAGAK AIRPORT LAYOUT PLAN DATED 05/21/01  
 SEWAGE LAGOON SITE RECORDED BOOK 39 PAGE 8  
 SEWAGE DISPOSAL ACCESS ROAD, PLAT FILING NO. 86-01'  
 STATE OF ALASKA DOT ROW EMP-RS-0215(1)

**MONUMENT DATA**

PT	NORTH	EAST	ELEV	DESCRIPTION
600	7593.0354	4820.0834	4.743	FOUND BLM BC MONUMENT
601	6132.8735	5820.4473	9.794	SET SPIKE - RTK BASE
602	6096.0124	6096.0120	9.235	SET ALUMINUM MONUMENT
603	7208.3273	4945.9155	8.964	SET ALUMINUM MONUMENT
604	7372.5233	4948.7527	8.516	SET ALUMINUM MONUMENT
605	7185.5033	5142.1246	8.541	SET ALUMINUM MONUMENT
606	6024.5181	6342.5469	8.912	SET ALUMINUM MONUMENT
607	5852.0024	6175.6987	8.656	SET ALUMINUM MONUMENT
608	6019.5235	6175.0992	8.608	SET ALUMINUM MONUMENT
609	6128.2709	6062.6579	11.241	SET REBAR AND ALCAP
610	6130.2822	5887.9661	8.480	SET ALUMINUM MONUMENT
611	6002.1382	5764.0320	7.486	SET ALUMINUM MONUMENT
612	6068.1822	5695.7445	7.565	SET ALUMINUM MONUMENT
613	6089.0383	5674.1800	7.684	SET ALUMINUM MONUMENT
614	6123.7983	5638.2392	7.782	SET ALUMINUM MONUMENT
615	6251.9423	5762.1734	7.730	SET ALUMINUM MONUMENT
616	7012.9875	4975.2765	8.824	SET ALUMINUM MONUMENT
617	7199.9977	4781.9138	8.833	SET ALUMINUM MONUMENT
618	7196.8613	4750.0590	4.374	FOUND BLM BC MONUMENT
619	6044.4618	5606.2424	8.199	SET REBAR AND ALCAP
620	6016.3771	5616.7899	7.922	SET REBAR AND ALCAP
621	5814.6455	4994.3165	8.108	SET REBAR AND ALCAP
622	5786.5608	5004.8640	8.382	SET REBAR AND ALCAP
623	5804.5198	4864.0627	7.559	SET REBAR AND ALCAP
624	5775.1425	4857.9822	8.260	SET REBAR AND ALCAP
625	5891.6846	4442.9395	6.462	SET REBAR AND ALCAP
626	5862.3073	4436.8589	6.370	SET REBAR AND ALCAP
627	5872.3840	4277.2929	6.553	SET REBAR AND ALCAP
628	5845.1916	4289.9647	6.767	SET REBAR AND ALCAP
629	5799.2013	4120.2516	6.248	SET REBAR AND ALCAP
630	5772.0090	4132.9235	6.096	SET REBAR AND ALCAP
631	5777.5648	4008.0434	6.584	SET REBAR AND ALCAP
632	5747.6103	4006.3908	6.706	SET REBAR AND ALCAP
633	5792.7736	3732.3692	6.553	SET REBAR AND ALCAP
634	5762.8192	3730.7166	6.980	SET REBAR AND ALCAP
635	5840.2174	3660.7350	7.407	SET REBAR AND ALCAP
636	5827.0078	3633.7998	6.736	SET REBAR AND ALCAP
637	5971.1063	3596.5444	7.102	SET REBAR AND ALCAP
638	5957.8968	3569.6091	7.254	SET REBAR AND ALCAP
639	6074.0702	3506.8714	7.254	SET REBAR AND ALCAP
640	6049.2043	3490.0878	6.279	SET REBAR AND ALCAP
641	6114.7392	3446.6177	6.614	SET REBAR AND ALCAP
642	6089.8734	3429.8341	6.492	SET REBAR AND ALCAP
643	6150.8184	3404.7734	6.279	SET REBAR AND ALCAP
644	6130.5584	3382.6481	6.523	SET REBAR AND ALCAP
645	6162.9350	3393.6784	6.066	SET REBAR AND ALCAP
646	6142.6749	3371.5531	5.913	SET REBAR AND ALCAP
647	6181.1752	3372.5819	6.066	SET ALUMINUM MONUMENT
648	6141.5749	3372.5603	6.005	SET ALUMINUM MONUMENT
649	6158.3658	3212.6988	7.071	SET REBAR AND ALCAP
650	6139.2481	3235.8183	7.224	SET REBAR AND ALCAP
651	6170.8811	3224.6694	7.437	SET ALUMINUM MONUMENT
652	6199.6866	3189.8344	7.041	SET ALUMINUM MONUMENT
653	6141.8436	3142.0035	6.248	SET ALUMINUM MONUMENT
654	6113.8345	3175.8755	6.279	SET ALUMINUM MONUMENT
655	6089.5236	3155.7725	6.157	SET REBAR AND ALCAP
656	6070.4058	3178.8920	6.462	SET REBAR AND ALCAP
657	6066.5216	3125.9037	5.700	SET REBAR AND ALCAP
658	6039.2855	3138.4812	5.700	SET REBAR AND ALCAP
659	6030.0190	3046.8600	5.456	SET REBAR AND ALCAP
660	6002.7830	3059.4377	5.883	SET REBAR AND ALCAP
661	6021.0436	2998.0422	5.304	SET REBAR AND ALCAP
662	5991.1150	2995.9745	4.968	SET REBAR AND ALCAP
663	6026.0908	2924.9873	4.389	SET ALUMINUM MONUMENT
664	5996.0215	2924.9553	3.962	SET ALUMINUM MONUMENT
665	6054.4460	2514.5579	4.237	SET REBAR AND ALCAP
666	6024.5173	2512.4903	4.023	SET REBAR AND ALCAP
667	6097.3126	2429.6209	4.023	SET REBAR AND ALCAP
668	6077.8718	2406.7724	4.023	SET REBAR AND ALCAP
669	6122.8918	2407.8568	4.054	SET ALUMINUM MONUMENT
670	6106.6206	2382.3113	4.023	SET ALUMINUM MONUMENT
671	6202.9644	3372.5938	6.187	FOUND BLM BC MONUMENT
672	5919.4743	3372.4390	6.767	FOUND BLM BC MONUMENT
673	6202.9172	2925.1755	5.608	FOUND BLM BC MONUMENT
674	5919.9568	2924.8744	4.450	FOUND BLM BC MONUMENT
675	6326.1158	2726.9138	4.968	FOUND 5/8" REBAR
676	6452.4946	2925.3257	4.572	FOUND BLM BC MONUMENT
677	6144.9590	2385.7661	4.237	FOUND REBAR AND ALCAP
678	6185.2947	2404.5547	3.383	FOUND REBAR AND ALCAP
679	6172.9583	2374.2720	3.840	FOUND 5/8" REBAR BENT
680	6144.9590	2385.7661	4.420	FOUND REBAR AND ALCAP
681	6185.4858	2352.6551	4.267	FOUND REBAR AND ALCAP
682	6136.6408	2372.7067	4.054	FOUND REBAR AND ALCAP
683	6225.3192	2188.5348	6.980	FOUND BLM IRON PIPE
684	7099.2454	5058.7006	10.638	FOUND REBAR AND ALCAP
685	7286.2556	4865.3379	n/a	SET REBAR AND ALCAP
687	6149.0454	5846.9893	n/a	SET REBAR AND ALCAP
688	6127.4887	5826.1388	n/a	SET REBAR AND ALCAP
689	6200.4770	5750.6576	n/a	SET REBAR AND ALCAP
690	6222.0539	5771.5180	n/a	SET REBAR AND ALCAP



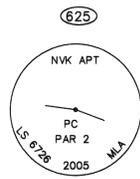
This survey does not constitute a subdivision as defined by AS 40.15.290

**NATIVE VILLAGE OF KWINHAGAK, ALASKA**  
**NVK QUINHAGAK AIRPORT**  
 Survey Control Diagram  
 Record Of Survey

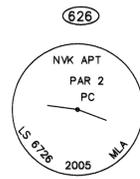
Within Protracted Sections 8-11 AND 14-17, T. 5 S., R. 74 W., S.M., AK and Lot 11, U.S. Survey No. 9672

BETHEL RECORDING DISTRICT

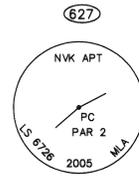
MLA PROJ	J:\05-245 QUINHAGAK AIRPORT	DWG NVK ALP METRIC
DRAWN	SWS	DATE 1/28/2005
CHECKED	SWS, GK	DATE 1/28/2005
		SHEET 7 OF 8



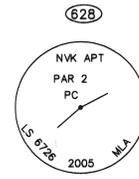
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



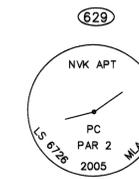
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



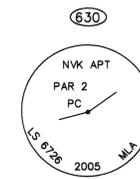
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



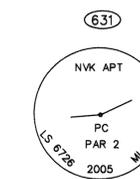
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



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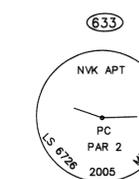
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



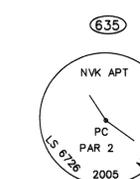
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



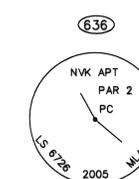
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



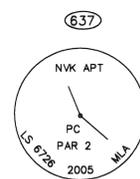
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



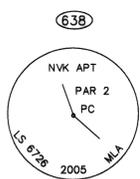
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



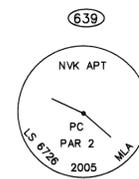
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



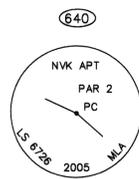
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



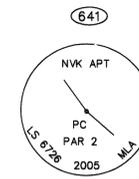
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



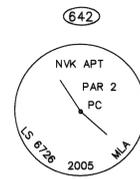
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



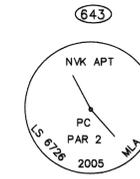
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



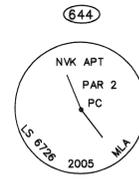
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



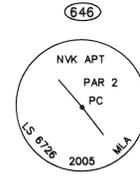
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



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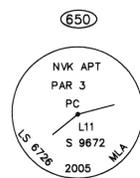
SET 2-1/2" ALUM. PRIMARY MONUMENT. 0.1' A.G. IN TUNDRA



SET 2-1/2" ALUM. PRIMARY MONUMENT. 0.1' A.G. IN TUNDRA



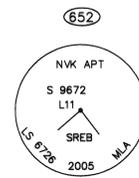
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



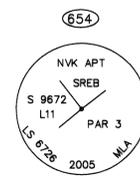
SET 2-1/2" ALUM. PRIMARY MONUMENT. 0.1' A.G. IN TUNDRA



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SET 2-1/2" ALUM. PRIMARY MONUMENT. 0.1' A.G. IN TUNDRA



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SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



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SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA

2006-4  
BETHEL REC DIST 58  
DATE FEB. 7, 2006  
TIME 10:32 AM  
Requested By: M. Climbuck  
Address: Last Assoc.



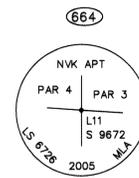
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



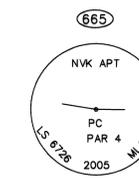
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



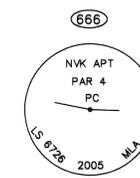
SET 2-1/2" ALUM. PRIMARY MONUMENT. 0.1' A.G. IN TUNDRA



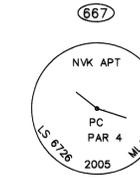
SET 2-1/2" ALUM. PRIMARY MONUMENT. 0.1' A.G. IN TUNDRA



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



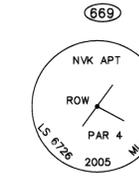
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



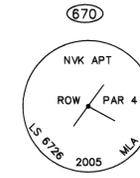
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



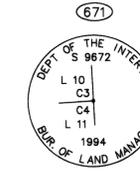
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



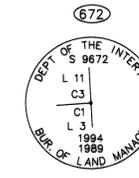
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



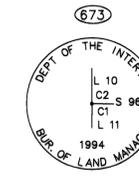
SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH TUNDRA



FOUND 3-1/4" BC 2-1/2" IP, FLUSH TUNDRA WET, LOOSE CONDITION



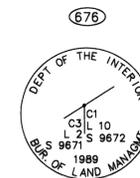
FOUND 3-1/4" BC 2-1/2" IP, 0.6' A.G. WET, BUT FIRM



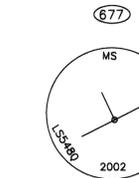
FOUND 3-1/4" BC 2-1/2" IP, FLUSH TUNDRA WET, LOOSE CONDITION



FOUND 5/8" REBAR BENT AND LOOSE USED GROUND AT BASE



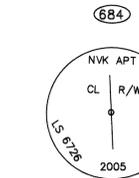
FOUND 3-1/4" BC 2-1/2" IP, FLUSH TUNDRA WET, LOOSE CONDITION



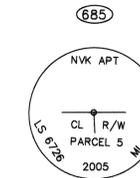
FOUND REBAR & ALCAP FLUSH W/ GRAVEL GOOD CONDITION



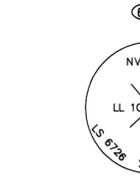
FOUND 3-1/4" OD IP 1.7' A.G. GOOD COND SCRIBED PIPE W/ PLUG



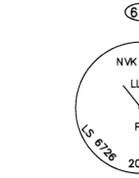
SET REBAR & ALCAP 0.2' DEEP IN GRAVEL 5/8"x30" REBAR, 2" CAP



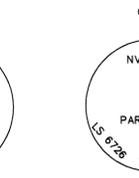
SET REBAR & ALCAP FLUSH W/ TUNDRA 5/8"x30" REBAR, 2" CAP



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH GRAVEL



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH GRAVEL



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH GRAVEL



SET 5/8"x30" REBAR & 2" ALCAP, FLUSH WITH GRAVEL

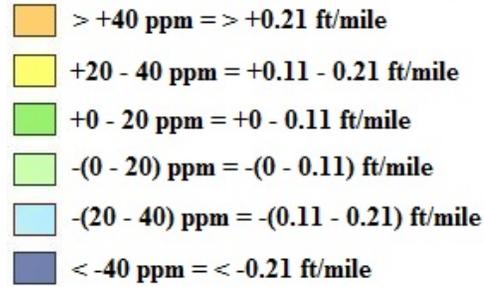
This survey does not constitute a subdivision as defined by AS 40.15.290

NATIVE VILLAGE OF KWINHAGAK, ALASKA  
NVK QUINHAGAK AIRPORT  
Survey Control Diagram  
Record Of Survey

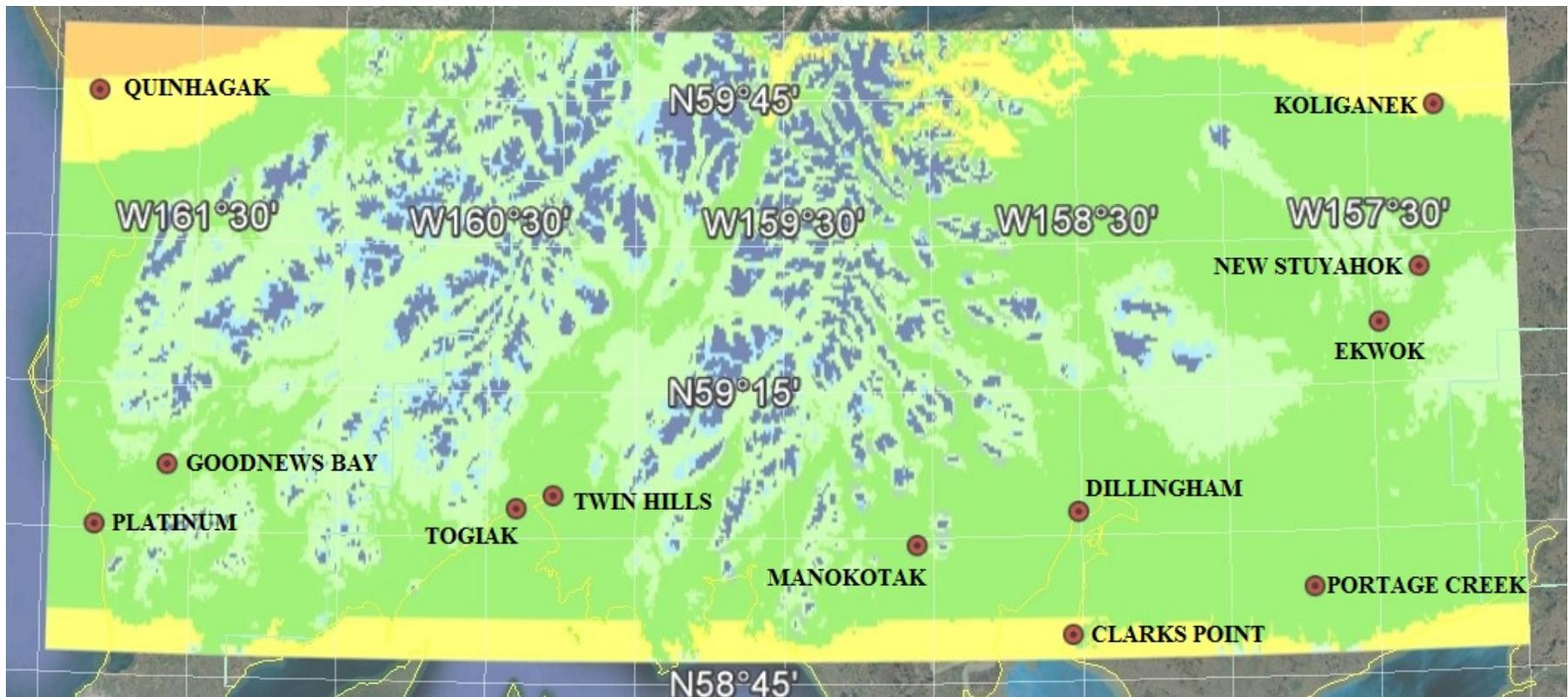
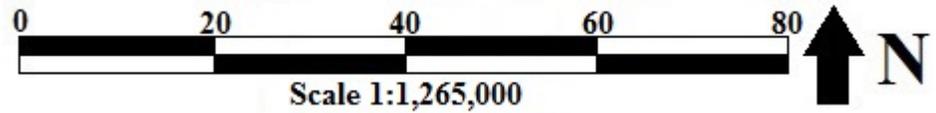
Within Protracted Sections 8-11 AND 14-17, T. 5 S., R. 74 W., S.M., AK, and Lot 11, U.S. Survey No. 9672

MLA PROJ J: 05-245 QUINHAGAK AIRPORT		DWG NVK ALP METRIC	
DRAWN SWS	DATE 1/28/2005	SCALE NTS	
CHECKED SWS, GK	DATE 1/28/2005	SHEET 8 OF 8	

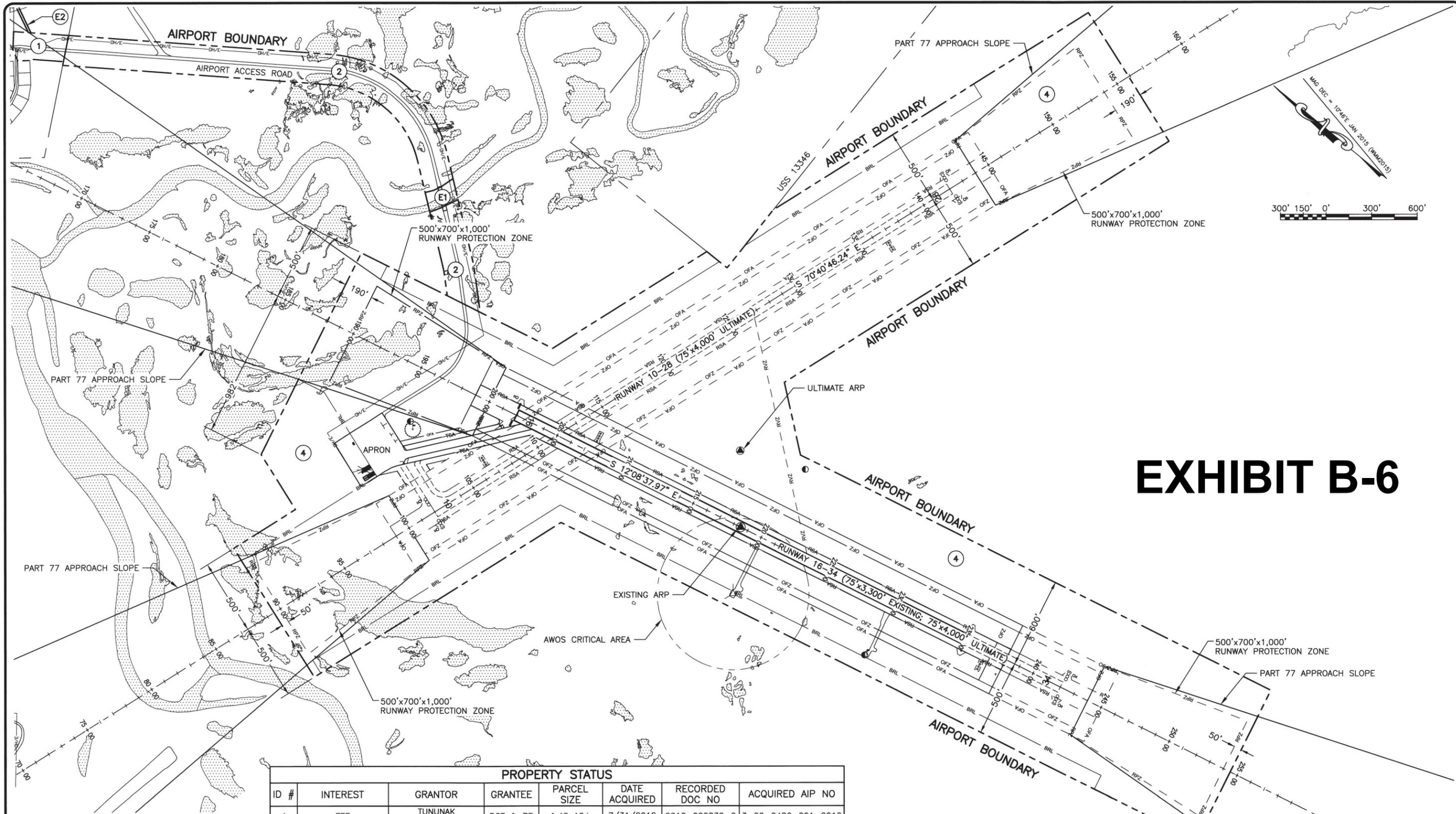
# EXHIBIT B-5



Prepared by:  
State of Alaska DOT&PF: Central Region  
PO Box 196900  
Anchorage, AK 99519  
(907) 269-0700



Date Plotted: 8/24/2017, 10:37 AM  
 Layout Name: Airport Property Map  
 File Name: 238003-AIRPORT PROPERTY MAP.DWG  
 Designed By: MM  
 Drawn By: RLC  
 Checked By: EAG



# EXHIBIT B-6

PROPERTY STATUS							
ID #	INTEREST	GRANTOR	GRANTEE	PARCEL SIZE	DATE ACQUIRED	RECORDED DOC NO	ACQUIRED AIP NO
1	FEE	TUNUNAK TRADITIONAL COUNCIL	DOT & PF	1.42 AC±	7/31/2012	2012-000832-0	3-02-0486-001-2012
2	FEE/SURFACE	TUNUNRMIUT RINIT CORP.	DOT & PF	16.30 AC	5/29/2012	2012-000587-0	3-02-0486-001-2012
	FEE/SUBSURFACE	CALISTA CORP.	DOT & PF	16.30 AC	5/29/2012	2012-000586-0	3-02-0486-001-2012
E1	EASEMENT	STATE OF ALASKA, DNR	DOT & PF	0.60 AC	1/24/2017	2017-000049-0	3-02-0486-001-2012
4	FEE/SURFACE	TUNUNRMIUT RINIT CORP.	DOT & PF	297.05 AC±	5/29/2012	2012-000587-0	3-02-0486-001-2012
	FEE/SUBSURFACE	CALISTA CORP.	DOT & PF	297.05 AC±	5/29/2012	2012-000586-0	3-02-0486-001-2012
E2	FEE/UTILITY EASEMENT & ROW	TUNUNAK TRADITIONAL COUNCIL	DOT & PF	2,665 SF ±	7/31/2012	2012-000831-0	3-02-0486-001-2012

BY	DATE	REVISION

**STATE OF ALASKA**  
**DEPARTMENT OF TRANSPORTATION**  
**AND PUBLIC FACILITIES**  
**CENTRAL REGION**

**TUNUNAK AIRPORT**  
 TUNUNAK, ALASKA  
 AIRPORT LAYOUT PLAN  
 AIRPORT PROPERTY MAP

DATE:	8/24/2017
SHEET:	10
OF	10