

# MEMORANDUM

# State of Alaska

Department of Transportation and Public Facilities

To: Design & Construction Branch Chiefs  
Northern Region

Date: September 7, 1989

File No:

Telephone No: 451-2215

From: *E. L. Engle*  
Elizabeth L. Engle, P.E., R.L.S.  
Director, Design and Construction

Subject: Survey Policy

The following general policy is established for all Design and Construction surveys.

## PURPOSE AND POLICY:

The purpose of this policy is to establish uniform standards and procedures to be followed in the Northern Region for the surveying, mapping and monumentation of right of way alignments and the preservation of survey monuments found to exist within the limits of new construction. It shall be the policy of the Northern Region that all Design and Construction surveys (including consultant contracts) are to be conducted within these guidelines.

## GENERAL:

All surveys are to comply with project specific written instructions jointly developed and mutually agreed to (sealed) by the Location Engineer (P.L.S.) and the Right of Way Engineer (P.L.S.). These instructions are to be reviewed (documented) and if necessary revised at the time the draft Design Study Report is reviewed, and are to become an integral part of the specific project's Construction Specifications to provide parameters for the perpetuation/preservation of monuments established by the Department or other monuments disturbed by construction activities.

As a minimum standard, all surveys to retrace or establish vertical and horizontal control and boundary monumentation shall be conducted to National Oceanic and Atmospheric Administration Third Order, Class I Standards in densely populated areas and Third Order, Class II Standards for sparsely populated areas. Since the terms "densely populated" and "sparsely populated" are subject to individual interpretation the project specific survey instructions are to identify which category applies to a project or in unusual circumstances parts of a project. Where a local platting authority has established more stringent requirements, they are to be adhered to.

Project plan sheets are to specifically detail all control points, their references, existing monumentation located prior to finalizing the project plans and specifications for advertising. The project specifications shall include specifics concerning survey instructions, filing monument records, requirements for professional land surveyor supervision and direction where required by State or local statute.

Right of Way Acquisition Plans shall conform to the guidelines of the local platting authority wherever possible. Variances will be requested from or

agreements will be negotiated with local platting authorities when their guidelines conflict with Department standards. All variances and agreements are subject to approval by the Director, Design and Construction.

**SPECIFIC SURVEY/MONUMENTATION PARAMETERS:**

- I. A. All airport project surveys shall comply with the parameters developed jointly by the Design and Location Sections (Attachment A), as well as any requirements established in the project specific survey instructions jointly developed by the Location Engineer and Right of Way Engineer.
- B. The right of way for highway projects shall be established and defined by centerline monuments at locations identified in the specific project instructions.
- II. All revisions in monumentation references, etc., shall be documented on the as-built drawings and by monument records where appropriate.
- III. All monument records are to be submitted in a timely manner. Where contract surveyors are utilized, this shall be as soon as practical after the survey is completed and not at the end of the contract. The submittals shall be a factor in determining progress payments.
- IV. The control points for aerial surveys shall be established to the degree of accuracy specified by the photogrametric consultant or as specified for the alignment and boundary control surveys, whichever is greater.
- V. Survey data provided to the Right of Way Section by the Location Section shall conform to the following minimum requirements.
  - A. Control Line data: Since Right of Way and Locations have compatible equipment, data should be provided in the form of field notes, Pacsoft printouts, data disks, and point plots if available.

**Basis of Bearing and Basis of Coordinates:**

1. The monuments upon which the project coordinates and bearings are based are to be clearly described including specification of the record document which established the control.
2. Right of Way is to be informed of the closure of the control traverse, and whether the final data presented is adjusted or unadjusted.
3. Control points set are to be clearly described to avoid confusion with "recovered" points.
4. The Basis of Stationing if any is to be indicated. A P-line stationing and curve data summary is also to be provided.

- B. Existing right of way and property lines: Right of Way's requirements will vary depending upon the type of property encountered.
1. Recovered Monuments: A complete description to include type, markings, material, condition, and reference description if not marked.
  2. Protracted Sections: Project must be tied into National Geodetic control net to establish protracted corners by State Plane Coordinates.
  3. Surveyed Sections: The surveyed section lines are the basis for the majority of properties, ties are to be made to corners at each end of section lines intersecting the project line. In areas where there has not been a lot of subdivision activity and where properties are described by aliquot parts, it would be appropriate to tie additional section and 1/4 corners such that a reasonable section breakdown could be computed.
  4. U.S. Surveys, Mineral Surveys, A.S.L.S. Surveys and other miscellaneous tract surveys are to have corners of lines intersecting the project located.
  5. Properties defined by metes and bounds descriptions are to be reviewed before crews are sent to the field so that possibly affected corners can be located.
  6. All subdivision primary monuments on lines intersecting the project are to be located including street centerline control, block corner, witness corners, and subdivision boundary monuments. As many secondary monuments including lot corners front and back and block PC's and PT's should be tied as reasonable with respect to the project schedule and budget. The requirement to recover secondary monuments should be given considerable emphasis for older urban subdivisions and less emphasis for more recent sub-urban subdivisions.
  7. All available monumentation defining highway, pipeline, and other rights of way are to be recovered and tied. In cases where original subdivision monumentation is the basis for the location of rights of way, an extra effort must be made to recover as many of the corners as possible.
  8. Unpatented valid mining claims constitute a potential compensable interest, therefore, it is necessary to locate and tie all existing claim corner posts.
  9. When corners cannot be located that fact is to be appropriately documented.
- C. Topography: The location of structures, signs, driveways, fences and miscellaneous improvements are to be recorded for appraisal and

compensation purposes, and any required specific topographic information is to be recorded to establish certain types of boundaries.

1. Riparian boundaries: In cases where the acquisitions bound on lakes and rivers determined to be navigable by DNR, the ordinary high water line is to be located to compute areas. The thread of a stream is to be located if the stream is considered non-navigable and a legal boundary.
2. Easements by Prescription: In cases where the State's claim to a right of way may be due to an existing road which has been in place in excess of 10 years an as-built survey of the toes of slope and the top of cutbank is to be performed to define the limits of our claim.
3. Unsurveyed Public Land Order Easements: When rights of way are defined as a specific distance each side of existing centerlines subject to valid prior existing rights, it is necessary to define the centerline to locate our right of way.

DLM/plj

cc: Charles Coyle, Western District Manager, Nome  
George Levasseur, Southcentral District Manager, Valdez  
Jeffery Ottesen, Director, Engineering and Operations, Headquarters

# MEMORANDUM

# State of Alaska

TO: Daniel D. Urbach  
Aviation Design Group Chief  
Northern Region

DATE: September 20, 1988

FILE NO:

TELEPHONE NO: 451-2284

THRU:

SUBJECT: R-0-W Property Surveys

FROM:

*DM*  
Patricia D. Miller  
Project Manager  
Northern Region

RECEIVED R/W

SEP 22 1988

Northern Region DOT & PF

## MEETING NOTES

On 9-19-88 a meeting was held at R-0-W. In attendance was John Bennett, Shirley Horn, Rose Peterson, Lee Saylor, Dan Urbach and Patty Miller. The purpose of the meeting was to discuss future airport property surveys. The conclusions of the meeting are listed below.

1. Lee Saylor will consult with R-0-W before surveyors go out to do design survey. During the initial design survey, all adjacent surveys will be retraced, meanders will be determined, runway centerline will be tied to existing monumentation.
2. Upon completion of land acquisition, R-0-W will instruct the surveyors to do the airport boundary survey.
3. The airport boundaries will be brushed and marked with signs.
4. A mylar titled "Record of Survey" will be prepared after property is surveyed. The mylar will be officially recorded by R-0-W.

/sv

cc: John Bennett, Right-of-Way  
Shirley Horn, Right-of-Way  
Lee Saylor, Locations

SURVEY POLICY - ATTACHMENT A