(a) Subprofessional experience gained before graduation. This experience shall be credited to the required preprofessional experience at a maximum of one-half the period of experience. Subprofessional experience shall be limited to no more than one year of preprofessional experience. Credible subprofessional experience may include one or more of the following:

(i) engineering experience, supervised; or

(ii) construction experience, supervised.

(b) Preprofessional experience is four years of total progressive experience, all of which is required to be completed at the time of application. Credible experience may include:

(i) approved subprofessional experience;

(ii) progressive experience on engineering projects which indicate the experience is of increasing quality and required greater responsibility;

(iii) experience not obtained in violation of the licensure act;

(iv) experience gained under the supervision of a licensed professional engineer/land surveyor or, if not, an explanation of why the experience should be considered acceptable;

(v) credible teaching experience at an advanced level, post graduate or senior graduate, in a college or university offering an engineering curriculum of four years or more that is approved by the board;

(vi) experience gained in engineering research and design projects by members of an engineering faculty, in an engineering curriculum approved by the board;

(vii) successful completion of graduate study leading to the master's degree in engineering, which has followed a baccalaureate degree in engineering, as credit for one year's experience. If the Ph.D. in engineering is completed under the same conditions, two year's total experience may be credited, including the one year credited for the master's degree, in the two year's total. If the Ph.D. is obtained without the master's degree, two year's experience may be credited. All degrees shall have been obtained from colleges or universities with board approved programs.

(2) Experience must be completed at the time of application. Experience time cannot be counted during periods counted for education.

(3) Experience should be gained under the supervision of a registered professional engineer or, if not, an explanation should be made showing why the experience should be considered acceptable.

(4) Upon request by the board, an applicant must demonstrate knowledge of fundamental principles of engineering design and the practical solution of engineering problems. (History: 37-67-202, MCA; IMP, 37-67-306, 37-67-309, MCA; Eff. 12/31/72; AMD, 1978 MAR p. 903, Eff. 6/24/78; AMD, 1979 MAR p. 1687, Eff. 12/28/79; TRANS, from Dept. of Prof. & Occup. Lic., Ch. 274, L. 1981, Eff. 7/1/81; AMD, 1986 MAR p. 1958, Eff. 11/29/86; AMD, 1998 MAR p. 534, Eff. 2/27/98; TRANS, from Commerce, 2002 MAR p. 1756; AMD, 2006 MAR p. 1630, Eff. 6/23/06.)

Subchapter 8

Licensure of Professional Land Surveyors

24.183.801 COMITY CONSIDERATION FOR PROFESSIONAL LAND SURVEYORS (1) Licensed land surveyors from any state or territory or possession of the United States, or of any country, can apply for comity consideration. Comity applicants shall meet the minimum requirements of the law and rules established by the board. Applicants shall complete and send to the department the standard application and appropriate fees based on one of the following:

(a) Applicants who have a current National Council of Examiners for Engineering and Surveying (NCEES) record must request a copy of their record be sent to the board office. In addition, they must complete only the following sections of the application for licensure as a professional land surveyor:

(i) general information;

(ii) licensure in other state;

(iii) affidavit; and

(iv) the land surveyor laws and rules questionnaire.

(b) If the comity applicant does not have a NCEES record, the entire application must be completed and submitted. The applicant shall submit the following within three months of the boards' receipt of a completed application:

(i) college or university transcripts when applicable;

(ii) five completed reference forms as required by ARM 24.183.503;

(iii) verification of licensure from state of original licensure which includes verification of passing the fundamentals of land surveying and principles and practices of land surveying examinations; and

(iv) the land surveyors laws and rules questionnaire.

(2) Once approved by the board, all comity applicants shall pass a closed book, state-specific, land surveying examination. (History: 37-67-202, MCA; IMP, 37-1-304, 37-67-313, MCA; Eff. 12/31/72; AMD, 1978 MAR p. 903, Eff. 6/24/78; AMD, 1979 MAR p. 1687, Eff. 12/28/79; TRANS, from Dept. of Prof. & Occup. Lic., Ch. 274, L. 1981, Eff. 7/1/81; AMD, 1983 MAR p. 645, Eff. 6/17/83; AMD, 1986 MAR p. 1958, Eff. 11/29/86; AMD, 1997 MAR p. 196, Eff. 1/28/97; AMD, 2002 MAR p. 1326, Eff. 4/26/02; TRANS, from Commerce, 2002 MAR p. 1756.)

24.183.802 CLASSIFICATION OF EXPERIENCE FOR LAND SURVEYING APPLICANTS (1) Land surveying experience shall include the following:

(a) preprofessional experience of four years of total progressive experience, gained under the supervision of a licensed professional land surveyor, all of which is required to be completed at the time of application. Land surveying experience must include a substantial portion spent in charge of work related to property conveyance and/or boundary line determination. Credible experience may include one or more of the following:

(i) approved preprofessional experience;

(ii) progressive experience on land surveying projects which indicate the experience is of increasing quality and required greater responsibility;

(iii) experience not obtained in violation of the licensure act;

(iv) experience such as aliquot part subdivision of sections, retracing existing boundaries, establishing new boundaries, corner search and reestablishment, researching existing public records, survey computations, preparation of legal

descriptions, certificates of survey, subdivision plats, corner recordation forms, exhibits and other documents pertinent to such work; or

(v) credible teaching experience at an advanced level, post graduate or senior graduate, in a college or university offering a land surveying curriculum approved by the board, gained under the supervision of a licensed land surveyor.

(2) Experience time cannot be counted during periods counted for education.

(3) Upon request by the board, land surveyor applicants must demonstrate adequate experience in the field aspects of the profession.

(4) Subprofessional experience shall be credited to the required preprofessional experience at a maximum of one-half the period of experience. Subprofessional experience shall be limited to no more than two years of preprofessional experience. Credible subprofessional experience may include one or more of the following:

(a) approved subprofessional experience;

(b) survey experience done under the supervision of a licensed professional land surveyor, including such work as:

(i) construction layout of buildings and miscellaneous structures;

(ii) surveys necessary to obtain data and location of highways, roads, pipelines, canals, etc.;

(iii) construction staking for land modification; and

(iv) construction staking for highways, roads, utilities, etc.;

(c) other construction surveying experience supervised by a licensed professional land surveyor; or

(d) other surveying experience supervised by a licensed professional land surveyor. (History: 37-67-202, MCA; IMP, 37-67-306, 37-67-309, MCA; NEW, 2006 MAR p. 1630, Eff. 6/23/06.)

Subchapter 9 reserved

Subchapter 10

Corner Recordation Requirements

24.183.1001 FORM OF CORNER RECORDS - INFORMATION TO BE INCLUDED (1) The form for recordation of corners pursuant to the Corner Recordation Act of Montana (Title 70, chapter 22, part 1, MCA) has been approved by the board of professional engineers and land surveyors. The approved version of the form for public land survey system was adopted by the board on July 1, 1981, and the approved version of the form for filing under the survey of record index was adopted on February 20, 2004. Blank corner record forms can be obtained from the Montana Association of Registered Land Surveyors, P.O. Box 359, Columbia Falls, Montana 59912, by contacting the association directly at (406) 892-4579, or on the internet at www.marls.com.

(2) The information to be included in a corner record is as follows:

(a) A description or quotation of those portions of the original or subsequent record which were used in evaluating the corner position.

(i) The original record for corners of government surveys will usually be the general land office field notes.

(ii) The original record for nongovernment surveys will usually be subdivision plats, certificates of survey or other surveys of record.

(iii) Subsequent record can come from sources such as previously filed corner records, maps and plats, private and public records, etc. Some of the subsequent record, even though not in the public record, but known to have validity by the surveyor, may be quoted and appropriately noted. The record data help support the reestablished corner position because they clearly show on what history the surveyor based the corner position. In some cases, however, the record may be unknown or not pertinent. A statement to that effect, if applicable, must appear on the corner record.

(b) A description of the original or subsequent record evidence found that locates the corner position.

(i) If portions of the found evidence cannot be reconciled with the record, then the disregarded record must be noted, and if possible, an opinion as to its cause narrated.

(ii) If no physical evidence of the original or subsequent monuments and accessories can be found, then the method used to reestablish the lost or obliterated corner (single proportion, fence intersection, parol evidence, terrain calls, centerline of road, etc.) shall be indicated.

(iii) Measurements used to establish proportioned positions must be shown on the corner recordation form or on a filed certificate of survey or subdivision plat referenced on the recordation form.

(c) A listing of all details about the corner and its location which will help exclusively identify the corner position, including size and type of monument and accessory, how marked if not shown in sketch, and distinguishing topographic calls which help locate the corner. In many cases, instructions on how to find the corner should be included.

(i) For public land survey system corners requiring recordation, sufficient information must be shown on the form to enable subsequent surveyors to verify the corner position identified on the form, and to reestablish the corner position if the monument is obliterated. Ideally, the references will be to at least two identifiable accessories or surveyed dimensions to two survey monuments.

(ii) References or ties to other corners are optional and may be drawn on the face or back of the corner record form, or references to certificate of survey may be made. Separate drawings may be attached to the corner form. If state plane coordinate values for the corner position are shown, then the control upon which they are based should be indicated.

(d) A sketch of the corner to show how a found or set corner is marked or show topography or accessory monuments found or set and their relation to the corner. There is no stipulated format; the sketch could be transcribed field note entries. For corners which were first shown on subdivision plats or on recorded or filed surveys, enough information must be shown so that the corner can be identified.

(e) The surveyor who performed or directed the field work which is depicted on the corner record shall sign and affix the licensee's seal in the certification.

(i) The affixing of the licensee's seal constitutes a certification by the surveyor that the corner record has been prepared in conformance with the Corner Recordation Act of Montana and the rules implementing the Act.

(ii) The employer blank is optional but useful in tracking down original field note data or adjacent record if, in the future, questions arise about the corner. The name and signature of the ground party chief is also optional information on the record form.

(f) For public land survey system corners, the cross index at the bottom of the page must be completed by the surveyor. Only the single township and range index where the corner is filed is to be completed.

(i) For corner records to be filed under the survey of record index, the index information must be filled in as completely as possible by the surveyor and made clear the name and number(s) of the recorded survey and the lot or parcel designation. The corner location diagram must have the pertinent section number filled in and a closed circle indicating the appropriate corner position in the section. This is intended to be an aid in searching the record once it has been filed. (History: 37-67-202, 70-22-107, MCA; IMP, 70-22-107, MCA; NEW, 1983 MAR p. 645, Eff. 6/17/83; AMD, 2002 MAR p. 1326, Eff. 4/26/02; TRANS, from Commerce, 2002 MAR p. 1756; AMD, 2005 MAR p. 1783, Eff. 9/23/05.)

Subchapter 11

Uniform Standards for Monumentation, Certificates of Survey, and Final Subdivision Plats

24.183.1101 UNIFORM STANDARDS FOR MONUMENTATION

(1) The following standards govern the monumentation of land surveys:

(a) The terms "monument" and "permanent monument" as used in these regulations mean any structure of masonry, metal or other permanent, durable material placed in the ground, which is exclusively identifiable as a monument to a survey point, expressly placed for surveying reference.

(b) All metal monuments must be at least one-half inch in diameter and 18 inches in length with a cap not less than one inch in diameter marked in a permanent manner with the license number of the surveyor in charge of the survey and either the name of the surveyor or the company employing the surveyor. Metal monuments marking a public land survey corner as described in 70-22-101, MCA, must be at least 24 inches long and 5/8 inch in diameter with an appropriately stamped metal cap at least two inches in diameter. A monument marking a public land survey corner may also consist of a cap as described in this rule set firmly in concrete.

(c) Before a subdivision plat or certificate of survey may be filed for record the surveyor shall confirm the location of as many monuments as, in the surveyor's professional judgment, are necessary to reasonably assure the perpetuation of any corner or boundary established by the survey and to enable other surveyors to reestablish those corners and boundaries and retrace the survey. The surveyor shall clearly identify on the face of the plat or certificate of survey all monuments pertinent to the survey, and the descriptions of these monuments must be sufficient to identify the monuments.

(d) The surveyor shall set all monuments prior to the filing of a plat or certificate of survey except those monuments that will be disturbed by the installation of improvements or that, because of severe weather conditions, may, in the surveyor's judgment, be more appropriately and accurately set after the weather has improved. In these two circumstances the surveyor may set monuments after the survey document is filed if the surveyor certifies on the survey document that the monuments will be set by a specified date. The surveyor shall set monuments, the placement of which has been deferred because of severe weather conditions, within 240 days of the date on which the survey document was filed.

(i) If during the later monumentation of the corners of a plat or certificate of survey that were not monumented before the plat or certificate was filed, the surveyor finds that it is necessary to set a reference monument to a corner, the surveyor shall prepare and file an amended certificate of survey or subdivision plat.

(ii) The failure of the surveyor to set the monuments by the date certified on the record of survey will be deemed a violation of these rules.

(e) The surveyor shall set monuments at the following locations:

(i) At each corner and angle point of all lots, blocks and parcels of land created by the survey.

(ii) At every point of intersection of the outer boundary of a subdivision with an existing road right-of-way line of record or a road right-of-way line created by the survey.

(iii) At every point of curve, point of tangency, point of reversed curve, point of compounded curve and point of intersection on each road right-of-way line created by the survey.

(iv) At the intersection of a boundary line and a meander line. Meander line angle points need not otherwise be monumented.

(f) If the placement of a required monument at its proper location is physically impractical, the surveyor may set a reference or witness monument. This monument has the same status as other monuments of record if its location is properly shown. If the surveyor relies upon any existing monument in conducting a survey, he or she shall confirm the location of the monument and show and describe it on the resulting certificate of survey or subdivision plat. (History: 76-3-403, MCA; IMP, 76-3-403, MCA; NEW, Eff. 1/5/74; EMERG, AMD, Eff. 7/1/74; AMD, Eff. 10/5/74; AMD, 1980 MAR p. 2806, Eff. 10/17/80; TRANS, from Dept. of Comm. Affairs, Ch. 274, L. 1981, Eff. 7/1/81; AMD, 2000 MAR p. 462, Eff. 2/11/00; TRANS, from Commerce, 2005 MAR p. 966.)

Rules 24.183.1102 and 24.183.1103 reserved

24.183.1104 UNIFORM STANDARDS FOR CERTIFICATES OF SURVEY

(1) A certificate of survey may not be filed by a county clerk and recorder unless it complies with the following requirements:

(a) A certificate of survey must be legibly drawn with permanent ink or printed or reproduced by a process guaranteeing a permanent record and must be 18 inches by 24 inches, or 24 inches by 36 inches, overall to include a 1 1/2 inch margin on the binding side.

(b) One signed copy on cloth-backed material or on 3 mil or heavier matte stable-base polyester film or equivalent and one signed reproducible copy on a stable-base polyester film or equivalent must be submitted.

(c) If more than one sheet must be used to adequately depict the land surveyed, each sheet must show the number of that sheet and the total number of sheets included. All certifications must be placed or referred to on one sheet.

(d) A certificate of survey must show or contain on its face or on separate sheets referred to on its face the following information. The surveyor may, at his or her discretion, provide additional information regarding the survey.

(i) A title or title block including the quarter-section, section, township, range, principal meridian and county, and, if applicable, city or town in which the surveyed land is located. Except as provided in (1)(f)(v), a certificate of survey must not bear the title "plat," "subdivision" or any title other than "Certificate of Survey."

(ii) The name(s) of the person(s) who commissioned the survey and the names of any adjoining platted subdivisions and the numbers of any adjoining certificates of survey previously filed.

(iii) The date the survey was completed and a brief explanation of why the certificate of survey was prepared, such as to create a new parcel, retrace a section line or retrace an existing parcel of land.

(iv) A north arrow.

(v) A scale bar. (The scale must be sufficient to legibly represent the required information and data.)

(vi) The location of, and other information relating to all monuments found, set, reset, replaced or removed as required by ARM 24.183.1101(1)(c).

(A) If additional monuments are to be set after the certificate of survey is filed, these monuments must be shown by a distinct symbol, and the certificate of survey must bear a certification by the surveyor as to the reason the monuments have not been set and the date by which they will be set.

(B) All monuments found during a retracement that influenced the position of any corner or boundary indicated on the certificate of survey must be clearly shown as required by ARM 24.183.1101(1)(c).

(vii) The location of any section corners or corners of divisions of sections the surveyor deems to be pertinent to the survey.

(viii) Witness and reference monuments and basis of bearings. For purposes of this rule the term "basis of bearings" means the surveyor's statement as to the origin of the bearings shown in the certificate of survey. The basis of bearings may refer to a particular line between monumented points in a previously filed survey document. If the certificate of survey shows true bearings, the basis of bearings must describe the method by which these true bearings were determined.

(ix) The bearings, distances and curve data of all boundary lines. If the parcel surveyed is bounded by an irregular shoreline or a body of water, the bearings and distances of a meander traverse generally paralleling the riparian boundary must be given.

(A) The courses along a meander line are shown solely to provide a basis for calculating the acreage of a parcel that has one or more riparian boundaries as the parcel existed at the time of survey.

(B) For purposes of this rule a line that indicates a fixed boundary of a parcel is not a "meander" or "meander line" and may not be designated as one.

(x) Data on all curves sufficient to enable the reestablishment of the curves on the ground. For circular curves these data must at least include radius and arc length. For nontangent curves, which must be so labeled, the certificate of survey must include the bearings of radial lines or chord length and bearing.

(xi) Lengths of all lines shown to at least tenths of a foot, and all angles and bearings shown to at least the nearest minute. Distance measurements must be stated in English units, but their metric equivalents, shown to the nearest hundredth of a meter, may be noted parenthetically.

(xii) A narrative legal description of the parcel surveyed as follows:

(A) If the parcel surveyed is either an aliquot part of a U.S. government section or a U.S. government lot, the information required by this subsection is the aliquot or government lot description of the parcel.

(B) If the survey depicts the retracement or division of a parcel or lot that is shown on a filed certificate of survey or subdivision plat, the information required by this subsection is the number or name of the certificate of survey or plat and the parcel or lot number of the parcel surveyed.

(C) If the parcel surveyed does not fall within (1)(d)(xii)(A) or (B), above, the information required by this subsection is the metes-and-bounds description of the perimeter boundary of the parcel surveyed.

(D) If the certificate of survey establishes the boundary of a parcel containing one or more interior parcels, the information required by this subsection is the legal description of the encompassing parcel.

(E) The requirement of this rule does not apply to certificates of survey that depict a partial retracement of the boundaries of an existing parcel or establish the location of lines or corners that control the location of an existing parcel.

(xiii) Except as provided by (1)(f)(iv), all parcels created by the survey, designated by number or letter, and the dimensions and area of each parcel. (Excepted parcels must be marked "Not included in this survey.") If a parcel created by the survey is identifiable as a 1/32 or larger aliquot part of a U.S. government section or as a U.S. government lot, it may be designated by number or letter or by its aliquot part or government lot identification.

(xiv) The location of any easement that will be created by reference to the certificate of survey.

(xv) The dated signature and the seal of the surveyor responsible for the survey. The affixing of this seal constitutes a certification by the surveyor that the certificate of survey has been prepared in conformance with the Montana Subdivision and Platting Act (76-3-101 through 76-3-625, MCA) and the regulations adopted under that Act.

(xvi) A memorandum of any oaths administered under 76-3-405, MCA.

(xvii) Space for the county clerk and recorder's filing information.

(e) Certificates of survey that do not represent a division of land, such as those depicting the retracement of an existing parcel and those prepared for informational purposes, must bear a statement as to their purpose and must meet applicable requirements of this rule for form and content.

(f) Procedures for divisions of land exempted from public review as subdivisions. Certificates of survey for divisions of land meeting the criteria set out in 76-3-207, MCA, must meet the following requirements:

(i) A certificate of survey of a division of land that would otherwise be a subdivision but that is exempted from subdivision review under 76-3-207, MCA, may not be filed by the county clerk and recorder unless it bears the acknowledged certificate of the property owner stating that the division of land is exempt from review as a subdivision and citing the applicable exemption.

(ii) If the exemption relied upon requires that the property owner enter into a covenant running with the land, the certificate of survey may not be filed unless it bears a signed and acknowledged recitation of the covenant.

(iii) If a certificate of survey invokes the exemption for gifts and sales to members of the landowner's immediate family, the certificate must indicate the name of the proposed grantee, the relationship of the grantee to the landowner and the parcel to be conveyed to the grantee.

(iv) If a certificate of survey invokes the exemption for the relocation of common boundary lines:

(A) The certificate of survey must bear the signatures of all landowners whose parcels will be altered by the proposed relocation. The certificate of survey must show that the exemption was used only to change the location of or eliminate a boundary line dividing two or more parcels, and must clearly distinguish the prior boundary location (shown, for example, by a dashed or broken line or a notation) from the new boundary (shown, for example, by a solid line or notation);

(B) The certificate of survey must show the boundaries of the area that is being removed from one parcel and joined with another parcel. The certificate of survey may, but is not required to, establish the exterior boundaries of the resulting parcels. However, the certificate of survey must show portions of the existing unchanged boundaries sufficient to clearly identify both the location and the extent of the boundary relocation;

(C) If a boundary line will be completely eliminated, the certificate must establish the boundary of the resulting parcel.

(v) A survey document that modifies lots in a platted and filed subdivision and invokes an exemption from subdivision review under 76-3-201 or 76-3-207(1)(d) or (e), MCA, must be entitled "amended plat of the (name of subdivision)," but for all other purposes is to be regarded as a certificate of survey. The document must contain a statement signed by the property owner that approval of the local government body is not required and citing the applicable exemption.

(vi) If the certificate of survey invokes an exemption from subdivision review under 76-3-207, MCA, the certificate of survey must bear, or be accompanied by, a certification by the county treasurer that all taxes and special assessments assessed and levied on the surveyed land have been paid.

(vii) For purposes of (1)(f), when the parcel of land for which an exemption from subdivision review is claimed is being conveyed under a contract-for-deed, the terms "property owner", "landowner" and "owner" mean the seller of the parcel under the contract-for-deed.

(g) Procedures for filing certificates of survey of divisions of land entirely exempted from the requirements of the Act. The divisions of land described in 76-3-201, 76-3-205 and 76-3-209, MCA, and divisions of federally owned land made by a United States government agency are not required to be surveyed, nor must a certificate of survey or subdivision plat showing these divisions be filed with the clerk and recorder. A certificate of survey of one of these divisions may, however, be filed with the clerk and recorder if the certificate of survey meets the requirements for form and content for certificates of survey contained in this rule and bears a certificate of the surveyor performing the survey citing the applicable exemption from the Act or, when applicable, that the land surveyed is owned by the federal government. (History: 76-3-403, MCA; IMP, 76-3-403, MCA; NEW, Eff. 1/5/74; EMERG, AMD, Eff. 7/1/74; AMD, Eff. 10/5/74; AMD, Eff. 4/5/76; AMD, 1977 MAR p. 955, Eff. 1/26/77; AMD, 1980 MAR p. 2806, Eff. 10/17/80; TRANS, from Dept. of Comm. Affairs, Ch. 274, L. 1981, Eff. 7/1/81; AMD, 2000 MAR p. 462, Eff. 2/11/00; TRANS, from Commerce, 2005 MAR p. 966.)

Rules 24.183.1105 and 24.183.1106 reserved

24.183.1107 UNIFORM STANDARDS FOR FINAL SUBDIVISION PLATS

(1) A final subdivision plat may not be approved by the governing body or filed by the county clerk and recorder unless it complies with the following requirements:

(a) Final subdivision plats must be legibly drawn with permanent ink or printed or reproduced by a process guaranteeing a permanent record and must be 18 inches by 24 inches or 24 inches by 36 inches overall to include a 1 1/2-inch margin on the binding side.

(b) One signed copy on cloth-backed material or on 3 mil or heavier matte stable-base polyester film or equivalent and one signed reproducible copy on a stable-base polyester film or equivalent must be submitted.

(c) If more than one sheet must be used to adequately depict the land subdivided, each sheet must show the number of that sheet and the total number of sheets included. All certifications must be placed or referred to on one sheet.

(d) A survey that modifies a filed subdivision plat must be entitled "amended plat of (lot, block and name of subdivision being amended)," and unless it is exempt from subdivision review by 76-3-201 or 76-3-207(1)(d) or (e), MCA, may not be filed with the county clerk and recorder unless it meets the filing requirements for final subdivision plats specified in this rule.

(2) A final plat submitted for approval must show or contain, on its face or on separate sheets referred to on the plat, the following information. The surveyor may, at his or her discretion, provide additional information regarding the survey.

(a) A title or title block indicating the quarter-section, section, township, range, principal meridian, county and, if applicable city or town, in which the subdivision is located. The title of the plat must contain the words "plat" and either "subdivision" or "addition".

(b) The name of the person(s) who commissioned the survey and the name(s) of the owner of the land to be subdivided if other than the person(s) commissioning the survey, the names of any adjoining platted subdivisions, and the numbers of any adjoining certificates of survey previously filed.

(c) A north arrow.

(d) A scale bar. (The scale must be sufficient to legibly represent the required information and data on the plat.)

(e) The location of, and other information relating to all monuments found, set, reset, replaced or removed as required by ARM 24.183.1101(1)(c).

(i) If additional monuments are to be set after the plat is filed, the location of these monuments must be shown by a distinct symbol, and the plat must bear a certification by the surveyor as to the reason the monuments have not been set and the date by which they will be set.

(ii) All monuments found during a retracement that influenced the position of any corner or boundary indicated on the plat must be clearly shown as required by ARM 24.183.1101(1)(c).

(f) The location of any section corners or corners of divisions of sections pertinent to the survey.

(g) Witness and reference monuments and basis of bearings. For purposes of this rule the term "basis of bearings" means the surveyor's statement as to the origin of the bearings shown on the plat. The basis of bearings may refer to a particular line between monumented points in a previously filed survey document. If the plat shows true bearings, the basis of bearings must describe the method by which these true bearings were determined.

(h) The bearings, distances and curve data of all boundary lines. If the subdivision is bounded by an irregular shoreline or body of water that is a riparian boundary, the bearings and distances of a meander traverse generally paralleling the riparian boundary must be given.

(i) The courses along a meander line are shown solely to provide a basis for calculating the acreage of a parcel with one or more riparian boundaries as the parcel existed at the time of survey.

(ii) For purposes of these regulations a line that indicates a fixed boundary of a parcel is not a "meander" or "meander line" and may not be designated as one.

(i) Data on all curves sufficient to enable the re-establishment of the curves on the ground. For circular curves these data must at least include radius and arc length. For non-tangent curves, which must be so labeled, the plat must include the bearings of radial lines or chord length and bearing.

(j) Lengths of all lines shown to at least tenths of a foot, and all angles and bearings shown to at least the nearest minute. Distance measurements must be stated in English units, but their metric equivalents, shown to the nearest hundredth of a meter, may be noted parenthetically.

(k) The location of any section corners or corners of divisions of sections the surveyor deems to be pertinent to the subdivision.

(l) All lots and blocks in the subdivision, designated by number, the dimensions of each lot and block, the area of each lot, and the total acreage of all lots. (Excepted parcels must be marked "Not included in this subdivision" or "Not included in this plat," as appropriate, and the bearings and lengths of these excepted boundaries must be shown.)

(m) All streets, alleys, avenues, roads and highways; their widths (if ascertainable) from public records, bearings and area; the width and purpose of all road

rights-of-way and all other easements that will be created by the filing of the plat; and the names of all streets, roads and highways.

(n) The location, dimensions and areas of all parks, common areas and other grounds dedicated for public use.

(o) The total acreage of the subdivision.

(p) A narrative legal description of the subdivision as follows:

(i) If the parcel being subdivided is either an aliquot part of a U.S. government section or a U.S. government lot, the information required by this subsection is the aliquot or government lot description of the parcel.

(ii) If the plat depicts the division of a parcel or lot that is shown on a filed certificate of survey or subdivision plat, the information required by this subsection is the number or name of the certificate of survey or plat and the number of the parcel or lot affected by the survey.

(iii) If the parcel surveyed does not fall within (2)(p)(i) or (ii), above, the information required by this subsection is the metes-and-bounds description of the perimeter boundary of the subdivision.

(iv) If the plat establishes the boundaries of a subdivision containing one or more interior parcels, the information required by this subsection is the legal description of the perimeter boundary of the subdivision.

(q) The dated signature and the seal of the surveyor responsible for the survey. The affixing of this seal constitutes a certification by the surveyor that the final plat has been prepared in conformance with the Montana Subdivision and Platting Act (76-3-101 through 76-3-625, MCA) and the regulations adopted under that Act.

(r) A memorandum of any oaths administered under 76-3-405, MCA.

(s) The dated, signed and acknowledged consent to the subdivision of the owner of the land being subdivided. For purposes of this rule when the parcel of land proposed for subdivision is being conveyed under a contract-for-deed, the terms "owner" and "owner of the land" refers to the seller under the contract-for-deed.

(t) Certification by the governing body that the final subdivision plat is approved.

(u) Space for the clerk and recorder's filing information.

(3) The following documents must appear on the face of or accompany the approved final plat when it is presented to the county clerk and recorder for filing:

(a) If applicable, the owner's certificate of dedication of streets, parks, playground easements or other public improvements.

(b) If applicable, a certificate of the governing body expressly accepting any dedicated land, easements or improvements. An acceptance of a dedication is ineffective without this certification.

(c) A certificate of a title abstractor showing the names of the owners of record of the land to be subdivided and the names of any lien holders or claimants of record against the land and the written consent to the subdivision by the owners of the land, if other than the subdivider, and any lien holders or claimants of record against the land.

(d) Copies of any covenants or deed restrictions relating to the subdivision.

(e) If applicable, a certificate from the state department of environmental quality stating that it has approved the plans and specifications for water supply and sanitary facilities.

(f) A certificate from the subdivider indicating which required public improvements have been installed and a copy of any subdivision improvements agreement securing the future construction of any additional public improvement to be installed.

(g) Unless otherwise provided by local subdivision regulations, copies of final plans, profiles, grades and specifications for improvements, including a complete grading and drainage plan, with the certification of a registered professional engineer that all required improvements which have been installed are in conformance with the attached plans. Local subdivision regulations may authorize the subdivider, under conditions satisfactory to the governing body, to prepare these plans and specifications after the final plat has been filed or file them with a government official other than the county clerk and recorder, or both.

(h) If applicable, the certificate of the examining land surveyor.

(i) If a street created by the plat will intersect with a state highway, a copy of the state highway access or encroachment permit.

(j) The certification of the county treasurer that all real property taxes and special assessments assessed and levied on the land to be subdivided have been paid. (History: 76-3-403, MCA; IMP, 76-3-403, MCA; NEW, Eff. 1/5/74; EMERG, AMD, Eff. 7/1/74; AMD, Eff. 10/5/74; AMD, Eff. 4/5/76; AMD, 1977 MAR p. 959, Eff. 11/26/77; AMD, 1980 MAR p. 2806, Eff. 10/17/80; TRANS, from Dept. of Comm. Affairs, Ch. 274, L. 1981, Eff. 7/1/81; AMD, 2000 MAR p. 1041, Eff. 2/11/00; TRANS, from Commerce, 2005 MAR p. 966.)

24.183.1108 GENERAL PRINCIPLES (1) Boundary location and monumentation are considered the practice of land surveying.

(2) National Geodetic Survey (NGS) is considered authoritative; however, their land surveyors, when acting under government authority, are not required to be a professional land surveyor to perform geodetic control surveys.

(3) Numerical accuracy, for example, submeter, is not a basis for consideration as to whether a professional land surveyor is required.

(4) Consideration of what is being mapped is not a basis for determining whether a professional land surveyor is required. Consideration of what the information will be used for should determine whether a professional land surveyor is required. In other words, it is not what is mapped, but the intended use for the data that determines whether or not a professional land surveyor is required.

(5) Preparation of legal descriptions for transfer of interest in real property is limited to professional land surveyors.

(6) Anyone may use land surveying methods for their own personal needs on their own property. Examples include assessing probable property lines, topography, and locations of physical features.

(7) Anyone can use land surveying methods to determine dynamic perimeters such as fire fronts, weather fronts, moving vehicles, etc., for reporting to the public, posting on the Internet, or any other use not prohibited by these guidelines.

(8) These guidelines do not preclude surveys performed by professional engineers or other legally recognized professions or trades as allowed by state law or administrative rule. (History: 37-1-131, 37-67-202, MCA; IMP, 37-1-131, 37-67-101, 37-67-301, MCA; NEW, 2011 MAR p. 385, Eff. 3/25/11.)

24.183.1109 GEOMATICS DEFINITIONS (1) "Accuracy" may refer to expressed accuracy or implied accuracy.

(a) "Expressed accuracy" means designating a numerical value for spatial accuracy or spatial relationships between objects or data.

(b) "Implied accuracy" means designating things such as equipment, equipment operating procedures, field procedures, analysis, methodologies, etc. to support a spatial accuracy expectation.

(2) "Authoritative" means certifiably accurate, based on the expertise of one who is sanctioned by an established governmental authority.

(a) The following are examples of authoritative activities:

(i) the collection and evaluation of evidence with the intent to determine land boundary locations;

(ii) the collection, analysis, and evaluation of measurements, with the intent to certify the positional relationship of data sets to property boundaries, an elevation datum, or a geodetic control network;

(iii) the collection, analysis, and subsequent publication of positional information related to geodetic control; and

(iv) meeting or offering to meet a contractual spatial accuracy requirement, express or implied.

(b) Each of the authoritative activities identified as an example in (2)(a) must be performed by a professional land surveyor, with the following exceptions:

(i) activities that may be performed by a person other than a land surveyor, under the laws of this state or of the United States;

(ii) a geodesist recognized as an expert in the field of measurement science may perform activities described in (2)(a)(iii); and

(iii) a professional engineer may perform activities described in (2)(a)(iv).

(3) "Certification" means a written assurance, warranty, guarantee, or official representation that some act has or has not been done, or some event has occurred, or some legal formality has been complied with. Persons or entities providing certifications do so utilizing specific authority, licensure, or jurisdiction granted by law. Certification requires special knowledge, expertise and/or authority, generally held by a responsible official. The following are examples of certification:

(a) the certification that a professional land surveyor applies to a certificate of survey; and

(b) the certification of the locational accuracy of a Geographic Information System (GIS) product.

(4) "Control" may refer to geodetic control, mapping control, or survey control.

(a) "Geodetic control" means a set of permanently monumented control points, also commonly referred to as "stations," whose coordinates are established by geodetic surveying methodology.

(i) Geodetic control work may only be performed by a professional land surveyor or a federal agency designated to perform such surveys.

(ii) Geodetic control provides a common, consistent, and accurate reference system for establishing coordinates from which supplemental surveying, engineering, and mapping work is performed and to which any geographic data may be tied.

(iii) All National Spatial Data Infrastructure (NSDI) framework data and users' applications data require geodetic control to register spatial data.

(iv) The official national common reference system is designated the National Spatial Reference System (NSRS). Mapping and surveying works may be connected to the NSRS by tying new projects to previously established control points that are part of the NSRS. The fundamental geodetic control for the United States is provided through the National Oceanic and Atmospheric Administration's National Geodetic Survey (NGS) managed by NSRS. Geodetic control includes horizontal and vertical control monuments that are part of the NSRS (the NGS database).

(b) "Mapping control" means any horizontal or vertical coordinate position used to control maps that are not included in the definitions of geodetic or survey control.

(i) Mapping control provides the framework for the spatial placement of nonauthoritative products such as aerial photography, parcel mapping, and Geographic Information Systems (GIS).

(ii) Mapping control may or may not require a professional land surveyor, depending upon the intended use of the products.

(iii) Mapping control is typically, though not necessarily, based on an official reference system or geodetic datum.

(iv) Mapping control may be accomplished with various levels of accuracy and by various methods depending upon the intended use of the products.

(v) Control for georeferencing GIS data, some aerial photography, resource mapping, and inventory mapping may not require supervision by a professional land surveyor.

(vi) Control for aerial photography for use in functions included in the practice of land surveying or engineering surveying (i.e. boundary determination or engineering design) must be performed under the direct supervision of a professional land surveyor.

(c) "Survey control" means any horizontal or vertical coordinate position used to control fixed works of engineering or legal land boundaries. Survey control may only be performed by a professional land surveyor (or a federal agency designated to perform such surveys). Survey control may or may not be based upon any official reference system or geodetic datum. Survey control may be based on assumed coordinates, or geodetic control, or property corners, or Public Land Survey System (PLSS) corners, or randomly selected points. Survey control may be accomplished in various levels of accuracy and by various methods depending upon the use of the finished product. The following are examples of survey control:

(i) control for construction projects;

(ii) control for subdivision platting;

(iii) control for boundary surveys;

(iv) control created or tied for cadastral surveys for the Bureau of Land Management;

(v) control created or tied for geodetic ties for plats or surveys;

(vi) control created or tied for boundary surveys;

(vii) control created or tied for subdivision design or staking;

(viii) control created or tied for construction staking; and

(ix) control created or tied for American Land Title Association surveys.

(5) "Geomatics" means the science and technology dealing with the character and structure of geospatial information, its methods of capture, organization, classification, qualification, analysis, management, display, and dissemination, as well as the infrastructure necessary for the optimal use of this information.

(6) "Photogrammetry and remote sensing" means the art, science, and technology of obtaining reliable information from noncontact imaging and other sensor systems about the earth and its environment, and other physical objects and processes through recording, measuring, analyzing, and representation.

(7) "Spatial data" means information that identifies the geographic location and characteristics of natural or constructed features and boundaries on the surface of the earth. This information may be derived from, among other things, remote sensing, mapping, and surveying technologies. Spatial data may also be known as geospatial data. (History: 37-1-131, 37-67-202, MCA; IMP, 37-1-131, 37-67-101, 37-67-301, MCA; NEW, 2011 MAR p. 385, Eff. 3/25/11.)

24.183.1110 ACTIVITIES INCLUDED WITHIN SURVEYING PRACTICE

(1) Activities that must be accomplished under the responsible charge of a professional land surveyor, unless specifically exempted in ARM 24.183.1111, include, but are not limited to the following:

(a) The creation of maps and georeferenced databases representing authoritative locations for boundaries, fixed works of engineering, or topography. Examples include:

(i) legal boundary surveys;

(ii) establishing or locating the extent, alignment, and acreage included in rights of way, easements, or other legal interests in real property;

(iii) engineering surveys for designs; and

(iv) as-built surveys.

(b) Preparing or offering to prepare a certificate of survey or plat.

(c) Preparing or offering to prepare legal descriptions or exhibits, and computation of associated acreage of real property boundaries, easements, or other legal interests in real property. Lands acquired for state highways are specifically exempted under 76-3-209, MCA.

(d) Original data acquisition or the resolution of conflicts between multiple data sources, when used for the authoritative location of features within data themes. Examples include:

(i) elevation and hydrography;

(ii) fixed works of engineering;

(iii) private and public boundaries; and

(iv) cadastral information.

(e) Original data acquisition by contract or second parties for authoritative purposes.

(f) Authoritative certification of positional accuracy of maps or measured survey data.

(g) Authoritative adjustments or authoritative interpretation of survey data.

(h) Geographic Information System (GIS)-based parcel or cadastral mapping used for authoritative boundary definition purposes wherein land title or development rights for individual parcels are or may be affected. Examples include:

(i) If the boundary of an administrative district is proposed to run "diagonally across section eight from the Northeast to the Southwest corners of said section" and a GIS-based map showing that line is adopted as the official representation of the boundary, that map must be prepared by, or under the direction of, a professional land surveyor.

(ii) If the boundary of an administrative district is proposed to run "one-half mile northeasterly of and parallel to County Road #4", and a GIS-based map showing that line is adopted as the official representation of the boundary, that map must be prepared by, or under the direction of, a professional land surveyor.

(iii) If a GIS-based map is used only to provide a graphical representation of that boundary, but authoritative determination of the boundary location is dependent upon survey of the described off-set line, preparation of the map need not be accomplished under the responsible charge of a professional land surveyor.

(i) Authoritative interpretation of maps, deeds, or other land title records to document or present evidence to assist in resolving conflicting boundaries.

(j) Acquisition and or verification of field data required to authoritatively position fixed works of engineering or cadastral data relative to control. Examples include:

(i) determination and identification of corner points; and

(ii) authoritative collection or calculation and compilation of geodetic coordinates of Public Land Survey System (PLSS) or any monument controlling a property line.

(k) Analysis, adjustment, or transformation of cadastral data with respect to geodetic control within a GIS, resulting in the certification of positional accuracy.

(l) Providing or offering to provide geodetic control/survey control and some types of mapping control.

(m) Establishing ground control and quality control proofing for remote sensing and photogrammetric products when used for authoritative purpose. (History: 37-1-131, 37-67-202, MCA; IMP, 37-1-131, 37-67-101, 37-67-301, MCA; NEW, 2011 MAR p. 385, Eff. 3/25/11.)

24.183.1111 ACTIVITIES EXCLUDED FROM SURVEYING PRACTICE

(1) A distinction must be made between making and documenting original measurements in the creation of survey products, versus the copying, interpretation, or representation of those measurements. Further, a distinction must be made according to the intent, use, or purpose of measurement products to determine an authoritative location, versus the use of those products as a locational reference for planning, infrastructure management, and general information. The following items are not to be included as activities within the definition of land surveying:

(a) Items and activities exempted in 60-2-209, MCA and 76-3-209, MCA.

(b) The creation of any map not used for the authoritative location of property boundaries, the definition of the shape or contour of the earth, or the location of fixed works of engineering. Examples include but are not limited to maps:

(i) prepared by private firms or government agencies for use as guides to motorists, boaters, aviators, or pedestrians;

(ii) prepared for publication in a gazetteer or atlas as an educational tool or reference publication;

(iii) prepared for or by educational institutions for use in the curriculum of any course of study;

(iv) produced by any electronic or print media firm as an illustrative guide to the geographic location of any event; and

(v) prepared by laypersons for conversational or illustrative purposes, including advertising material and users guides.

(c) The transcription of previously georeferenced data into a Geographic Information System (GIS) or Land Information System (LIS) by manual or electronic means, and the maintenance thereof, provided the data are clearly not intended to indicate:

(i) the authoritative location of property or administrative boundaries, easements, rights of way, or other legal interest in real property;

(ii) the definition of the shape or contour of the earth; and

(iii) the location of fixed works of engineering.

(d) The transcription of public record data into a GIS- or LIS-based cadastre (tax maps and associated records) by manual or electronic means, and the maintenance of that cadastre, provided the data are clearly not intended to authoritatively represent property or administrative boundaries or easements, rights of way, or other legal interests in real property. Examples include:

(i) tax maps;

(ii) zoning maps; and

(iii) school district maps.

(e) The preparation of any document by any federal government agency that does not define real property boundaries. Examples include:

(i) civilian and military versions of quadrangle topographic maps;

(ii) military maps;

(iii) satellite imagery;

(iv) aerial photography; and

(v) orthoimagery.

(f) The incorporation or use of documents or databases prepared by any federal agency into a GIS/LIS. Examples include:

(i) census and demographic data;

(ii) quadrangle topographic maps; and

(iii) military maps.

(g) Inventory maps and databases created by any individual or organization, in either hardcopy or electronic form of physical features, facilities, or infrastructure that are wholly contained within properties to which they have rights or for which they have management or regulatory responsibility. The distribution of these maps and/or databases outside the organization must contain appropriate metadata clearly indicating that the data is not for design.

(h) Maps and databases depicting the distribution of natural resources or phenomena. Examples include, but are not limited to, maps prepared by:

(i) foresters;

(ii) geologists;

(iii) soil scientists;
(iv) geophysicists;
(v) biologists;
(vi) archeologists; and
(vii) historians.

(i) Maps and georeferenced databases depicting physical features and events prepared by any government agency where the access to that data is restricted by law. This includes georeferenced data generated by law enforcement agencies involving crime statistics and criminal activities.

(j) Engineering surveys performed by a professional engineer as specifically allowed under 37-67-101(4), MCA.

(k) Work ordinarily performed by persons who operate or maintain machinery or equipment, communication lines, signal circuits, electric power lines, or pipelines.

(l) The preparation of documents that create, assign, reference, or transfer interests in real property by reference to a legal description prepared by a professional land surveyor. Examples include, but are not limited to:

(i) contracts;
(ii) deeds;
(iii) easements;
(iv) certificates of location for mining claims;
(v) rights of way; and
(vi) similar documents, which may incorporate or make reference to:
(A) plats;
(B) certificates of survey;
(C) narrative legal descriptions; or
(D) exhibits prepared by a professional land surveyor.

(m) Operating and publishing data from a continuously operating reference station (CORS).

(n) Original data acquisition by contract or second parties for nonauthoritative purposes when the metadata is clearly labeled "Not for Design."

(o) The acquisition, preparation, processing, manipulation, or certification of final products or original data developed or collected by remote sensing or photogrammetric methods. Control may be derived from existing sources for remote sensing or photogrammetric products, where spatial accuracy is not critical and specific map accuracy standards are not required. (History: 37-1-131, 37-67-202, MCA; IMP, 37-1-131, 37-67-101, 37-67-103, 37-67-301, MCA; NEW, 2011 MAR p. 385, Eff. 3/25/11.)

Subchapters 12 through 14 reserved

Subchapter 15

Shop Drawings

24.183.1501 FIRE PROTECTION SHOP DRAWINGS (1) When fire protection shop drawings are used to finalize engineering concepts: