

**Alberta Land Surveyors' Association
Professional Examinations
Spring 2009**

**The Surveying Profession
(Closed Book Exam)**

**Time Limit: 3 hours
Total Marks: 100**

Note: This exam contains 16 questions on 4 pages.

Marks Question

1. The following questions are related to the Surveys Act (SA) and the Manual of Standard Practice (MSP)?
- (2) (a) What is the major fundamental difference between these 2 sources?
(b) In which of the 2 documents would you find the following
- | | | |
|-----|---|-----------------|
| (1) | - Accuracies of surveys? | MSP / SA / Both |
| (1) | - Evidence under oath before a Land Surveyor? | MSP / SA / Both |
| (1) | - Where to Post pins on a right-of-way? | MSP / SA / Both |
| (1) | - Requirements for collecting and storing your field notes? | MSP / SA / Both |
| (1) | - Natural boundaries? | MSP / SA / Both |
| (1) | - How to establish a corner from a witness monument? | MSP / SA / Both |
| (1) | - Requirements for integrated surveys? | MSP / SA / Both |
2. **Director of Surveys**
- (2) (a) What is the role of the Director of Surveys?
(1) (b) What branch of the government does he work for?
(1) (c) Who is the current Director of Surveys?
3. **Director of Practice Review**
- (2) (a) What is the role of the Director of Practice Review?
(1) (b) What organization does he work for?
(1) (c) Who is the current Director of Practice Review?
- (3) 4. **Boundaries and Monuments**
There has been some publicity surrounding the location of the Alberta/Saskatchewan border. The border (4th meridian) was intended to be surveyed on the 110th degree of longitude, however the monument placed in 1938 along the 49th parallel to demarcate the boundary is approximately 80 meters east of the 110th degree of longitude, the intended location. Comment on the impact that this observation should have on the border.
5. **Survey Integration within the MSP**
- (2) (a) When is integration required?
(1) (b) If integration is not required, when is an ASCM still required to be tied in?
(1) (c) When a survey is integrated, how should the bearing note appear on the plan?

6. The Safety Committee is one of the newer committees of the ALSA. This committee's mandate is to educate the membership as to Acts and legislations that could impact them and their businesses. There have been numerous updates from this committee in *ALS News*.
- (2) (a) Why is Bill C-45 important in respect to your firm's safety program or to you as an Alberta Land Surveyor?
 - (2) (b) What should be your company's number one goal with respect to safety?
 - (2) (c) Working near underground facilities is always a safety issue due to the fact that you can not really see what is below the ground where you are working. Please describe 2 things you could do to prevent an incident from occurring when placing survey monuments in potentially dangerous situations?
 - (3) (d) As a minimum, what 3 basic things would you recommend that every field crew have to ensure the highest level of safety for you and your staff?
 - (e) The safety committee's most recent article in *ALS News* (December 2008) discusses due diligence.
 - (2) - What does due diligence mean to you?
 - (2) - The article in *ALS News* talks about 3 elements you or your company should do to show that due diligence has been met. Please name or describe 2 of these 3 elements?
7. In April 2008, the Standards Committee put forward a recommendation to amend the Manual of Standard Practice that would have the effect of allowing an Alberta Land Surveyor to register a plan for a public land disposition (showing statutory Iron Post) at Public Lands (SRD) and not at Land Titles.
- Council requested a legal opinion from its lawyer (Shores, Belzil, Jardine) to address whether there is a statutory requirement that a monument or statutory iron post, when placed by an ALS, must be shown on a plan registered at Land Titles. The final report from the Solicitor was received by the ALSA on April 16th, 2008, and distributed to the membership.
- (2) (a) According to the report, when you place a statutory monument, you are required to register a plan at Land Titles. What are their reasons for this?
 - (2) (b) According to the report, what is the difference between a monument and a statutory monument?
8. In the June 2006 *ALS News* SPR Corner article by Fred Cheng, ALS, writes about the need to scrutinize survey monuments, who has the right and what legislation exists to allow the removal of a survey monument. Within the Manual of Standard Practice there are definitions for the following that relate to survey evidence evaluations. Please define:
- (1) (a) Lost Monument;
 - (1) (b) Obliterated Monument;
 - (1) (c) Disturbed Monument;
 - (1) (d) Hierarchy of Evidence.
9. **Geomatics**
- (2) If a member of the public asks you "what is Geomatics"? How would you describe it to them in layman's terms?

- (2) 10. Describe the difference between *unprofessional conduct* and *unskilled practice* of an Alberta Land Surveyor?
- (2) 11. Describe the difference between *liability in negligence* and *liability in contract* for an Alberta Land Surveyor?
12. **Rights of Entry for Land Surveyors**
A March 2007 *ALS News* article by Fred Cheng talked about right of entry for Land Surveyors.
- (2) (a) Right to entry for surveying on private property is laid out in the Surveys Act. Under what terms is this right granted?
- (2) (b) Name 2 other Alberta Statutes that give a right of entry for Land Surveyors?
- (3) (c) There have been a number of complaints by the public toward the ALSA and the Director of Practice Review regarding surveyors' apparent misuse of this Right and/or damage to property. Please provide 3 ideas that you would instruct your field crews to limit your exposure of potential liability?
13. In the June 2003 *ALS News*, G.K. Allred, ALS wrote an article called "*Dormant Plans – Professional Liability or Financial Liability – or both?*"
- (1) (a) What is a dormant plan?
- (2) (b) Describe what portions of the Code of Ethics applies to individual land surveyors that allow their dormant plans to not be addressed?
- (2) (c) What would cause a dormant plan to be in violation to the Surveys Act?
- (2) (d) What is the financial liability to individual surveyors for their dormant plans?
- (1) (e) Please describe any safety concerns dormant plans present?
14. **TILMA and AIT (Chapter 7 – Labour Mobility)**
- (1) (a) What does the acronym TILMA stand for?
- (1) (b) What is required under TILMA for a British Columbia Land Surveyor to become an Alberta Land Surveyor? (What is the process?)
- (1) (c) What does the acronym AIT stand for?
- (1) (d) Who are the signatories to the AIT?
- (1) (e) How will this affect the ALSA and its membership?
15. In the March 2006 *ALS News*, a *GuardPost* article written by Jeff Boutilier, ALS talks about the process of Practice Review Board (PRB) interpretations.
- (1) (a) Give one reason why the PRB would define or interpret a survey related problem.
- (1) (b) The public has a voice in these interpretations. Who (position, not name) represents the public?
- (6) (c) There are currently 6 PRB interpretations published, please name **and** describe 3 of them?

16. Ethics

Describe whether any portions of the Code of Ethics are being violated in these scenarios. If nothing is being violated, please explain why. If your answer is yes, please explain and describe what portion of the Code it applies to.

- (3) (a) While surveying a pipeline right of way, you discover that a previous surveyor re-established a Part 2 monument (E $\frac{1}{4}$) from two NE section corners each on either side of the newly re-established monument. You find the centre of the original E $\frac{1}{4}$ pits, 2m north of the re-established post. You continue with your survey and register your plan but do nothing else.
- (3) (b) While surveying a line between the north and south halves of a section of land (your client owns the S $\frac{1}{2}$ of the section and is looking to subdivide the land for a future urban subdivision) you are unable to find one of the E $\frac{1}{4}$ monuments, and after an exhaustive search, decide to rely on proportioning to re-established this E $\frac{1}{4}$. At this time, a landowner from another section comes over and mentions that he knows where the pits and mounds were for this lost monument. He mentions that he saw the pit and mound a few years before when he was renting the land from previous owners, but knows they have been wiped out. The position he shows you is 5 m from your proportion and its position will give your client less overall land for his subdivision. You thank the neighbour for the information, continue on your re-establishment and register the plan.
- (3) (c) You have a meeting with a few of your competitors to discuss fee schedules. You and your competitors talk about what each are charging for all items on their fee schedules. Based on this information, you go back to your office and make up a new fee schedule and send it to your clients.
- (3) (d) The process you have set for your drafting department is to have a few junior drafters start plans, you then get a few senior drafters to check the plan and the senior drafters make all corrections to the plan. You have determined this is the fastest way to get plans to the client. Doing it any other way has reduced your profit margins and takes far too long.
- (3) (e) You hire a party chief on a contract basis. He presents his business card to you and it states his name, his company name, and that he is a land surveyor (he is an associate member of the ALSA). You know that he is going to have interaction with your clients and he will probably pass his business cards to them.
- (3) (f) You have completed a well site survey for your largest client that shows the boundary of a river within 60 m of the lease boundary. The client calls you and asks that the note on the plan be removed because the feature you have shown is really just the flood plain and not the river bank. You make the change, sign and issue the well site plan to the client.
- (3) (g) You are hired by a client to survey three new lots from two larger lots. Each of the larger lots has one boundary formed by a lake. Once your plan is completed, you send your plan to Alberta Environment for their approval, but they return it stating that your plan has shown the boundary of the lake incorrectly. You revise your plan and show the boundary as requested.