COMMONWEALTH OF VIRGINIA SEARCH & RESCUE STANDARD 7300

Descriptions for Criteria and Scoring Used in Field Evaluations

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APPROVED BY THE VIRGINIA SEARCH AND RESCUE COUNCIL and

THE VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT

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IT IS THE EXPECTATION OF THE TRACKING STANDARDS COMMITTEE AND TRACKING EVALUATORS THAT EACH AND EVERY CANDIDATE THAT PARTICIPATES IN EACH AND EVERY TRACKING EVALUATION STATION IS RESPONSIBLE TO KNOW, AND BE FAMILIAR WITH, ALL OF THE CRITERIA USED BY THE EVALUATORS TO ASSESS A CANDIDATE'S TRACKING SKILLS. IT IS NOT THE RESPONSILIBITY OF THE EVALUATOR TO ENSURE THAT THE CANDIDATE IS AWARE OF EVALUATION CRITERIA AND OTHER ASPECTS OF THE EVALUATION.

1. TOOLS

1.1.1. Category Description

Tracking skills are predominantly executable without material, tangible tools. Intangible tools, such as one's senses, sun angle and track traps, concepts including baseline, and practices such as indexing and tactics are important to have in a tracker's virtual tool kit. There are many circumstances, however, where material tools are useful and even necessary to allow the tracker to perform certain tasks. Flagging tape should be carried to preserve the PLS/LKP and can be used to mark clues or tracks. Aluminum foil, for example, can be used to create an impression of a known track and preserve it in actual size for others to see. Flashlights, log book, magnifying glass and other tools are difficult to improvise in the field, and should be included in a search tracker's field pack. Other tools, like track markers and a tracking stick are easy to improvise in the field, but the tracker should know how to use those and other tools.

Candidates will be evaluated on their knowledge and use of appropriate tracking tools, including but not limited to tracking sticks, measurement devices, track markers, field notebooks, flashlights and other light reflectors. Search and rescue trackers should also have equipment necessary to sustain oneself for a period of at least eight (8) hours in a wilderness environment.

1. TOOLS

1.1.2 Scoring

The candidate's score in this category will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate verbally expresses a lack of interest in using any tools to assist in tracking processes.

1 POINT - Candidate possesses at least two (2) basic tools. May not use some tools appropriately for a particular task. Shows little understanding for the use of tools to augment tracking techniques.

2 POINTS - Candidate possesses at least three (3) basic tools but may not be able to explain the uses of each and every of those tools. Candidate can explain at least one intangible tracking tool (even if additional tools are possessed and explained). Understands need for tools but does not necessarily use all of them correctly for particular tracking tasks.

3 POINTS - Candidate possesses at least four (4) basic tools and can explain the uses of each of those tools. Candidate can explain at least two intangible tracking tools (even if additional tools are possessed and explained). Candidate demonstrates proper selection and use of at least three (3) tools during tracking task. (e.g. using a mirror to redirect sunlight in to a track to render detail more visible).

4 POINTS - Candidate possesses at least five (5) basic tools and can explain the uses of each of those tools. Candidate possesses and can explain at least two additional material tracking tools. Candidate can explain at least three intangible tracking tools (even if additional tools are possessed and explained). Candidate demonstrates proper selection and use of at least four (4) tools during tracking task.

5 POINTS - Candidate possesses six (6) basic tools and can explain the uses of each of those tools. Candidate possesses and can explain at least four additional material tracking tools. Candidate can explain at least four intangible tracking tools. Candidate demonstrates proper selection and use of at least six (6) tools during tracking task. Candidate may demonstrate a method of protecting a track with regard to potential inclement weather.

1. TOOLS

1.1.3. Field Evaluation

An evaluation station will be conducted to allow candidates to demonstrate the tools carried in their pack and the uses for each tool. A station will be conducted to ensure that search and rescue tracking candidates understand conceptual tracking tools and have equipment appropriate for SAR and law enforcement tasks. Tracking candidates should be prepared to be self-sufficient for tasks in wilderness environments. A tracker's search pack should, at a minimum, have (and the candidate should be able to explain how to use) the following items:

1. Logbook and writing utensil,
2. Measuring device with at least one-quarter inch (¼") or centimeter (cm) graduations
3. Mirror
4. Two (2) Flashlights (one may be a headlamp)
5. Track marking material (e.g. sticks, flagging tape, powder, etc)
6. Tracking stick or equivalent
7. Flagging tape

Other suggested equipment include a camera, GPS, string, sunglasses, hat, tweezers, calipers, aluminum foil, casting material, plastic trash bag for protecting a track, etc.

The tracking candidate should also be able to explain the use of intangible tracking tools such as senses, sun angle, baseline, track traps, indexing, tactics, etc.

Another tracking evaluation station (the PLS/LKP station) will allow a candidate to discuss and/or demonstrate the use of tracking tools. The appropriate use of tools or field improvisation of tools will be considered in scoring for this category.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

2. INTERVIEWING

2.1.1. Category Description

Candidates will be evaluated on their ability to demonstrate knowledge of appropriate tracking related questions to ask prior to beginning a task (e.g. inquiring about weather history, subject information, PLS/LKP information, etc). Candidates should know what questions to ask based upon the missing person subject category as well as whom they are interviewing. Candidates should be familiar with, and able to fill out, a Missing (Lost) Person Questionnaire, as well as keep accurate notes in their own field notebook or appropriate forms.

Suggested questions are as follows:

What is missing person's name (Safe word, nickname)?
What is missing person's Age, Height, Weight, and Sex?
What clothing and other belongings were they known to have? (knife, watch, wallet, jewelry, etc.)
Does the missing person have any habits (smoke, chew gum/candy, etc)?
Medical Conditions/medications (what happens when subject does not take medications)
Footwear (size, type, is it wide/narrow, when was current subject's footwear purchased, ask to see subject's other footwear)
Has anyone been walking around the LKP/PLS? Can you view their outsoles?
Is the subject armed?
What are the circumstances of disappearance (where is PLS/LKP, when is the Time Last Seen, etc)?
Does the subject have any physical conditions that would affect the way s/he would walk? (E.g. recent injuries (limp, shuffle, etc), walking aids (cane, hiking stick), etc.)
Weather/Aging (even if tracker has been in area – questions need to be asked to show proficiency)
   1. **What was weather like before subject went missing (in attempt to identify a track aging bracket before person went missing – when was last rain, etc?)**
   2. **What was weather like when subject went missing (in attempt to characterize weather and ground conditions when person went missing)**
   3. **What has weather been since subject went missing (in attempt to characterize weather and ground conditions since person went missing)**
Have they gone missing before and if so where found?
Would there be any pets accompanying subject?
Is the subject familiar with area, have they been around this area regularly?

Other questions depending on circumstances that are not required:
Are there any recent circumstances in subject's life that may affect subject or location?
Does the missing person have any fears or favorite places?
What are the hazards in the area?
Is there any illicit drug or other adverse activity in the area?
What are a person's theories or potential scenarios of missing person circumstances?

2. INTERVIEWING

2.1.2. Scoring

The candidate's score in this category will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Verbally expresses a disdain or lack of interest for interviewing or does not conduct an interview.

1 POINT - Candidate asks one to five (1-5) questions. Candidate may be uncomfortable or unfamiliar with the questioning process. Candidate has no notes or information tools before or after interview.

2 POINTS - Candidate asks five to ten (5-10) questions. Candidate rarely looks at person during conversation. Candidate is mostly focused on writing notes, trying to remember which questions to ask or otherwise not completely engaged in interview process. Candidate may ask many questions, but is unable to integrate responses in to the situation, e.g. relaying pertinent information to someone else.

3 POINTS - Candidate is comfortable with questioning process, but carries on minimal conversation. Candidate conducts a significant interview with ten to fifteen (10-15) questions. Conversation dominated by candidate looking at notes and writing answers to most questions.

4 POINTS - Candidate is comfortable with questioning process and conducts normal conversation with reporting party that may be interspersed with occasionally looking at notes. Candidate conducts a thorough interview with comprehensive questioning (asks at least fifteen (15) questions) but needs to write down a few answers to questions.

5 POINTS - Candidate is fluent and comfortable with questioning process, carries on direct conversation with reporting party. Candidate conducts a thorough interview with comprehensive questioning and retains all information discovered during interview (may write down answers after interview). Candidate follows through with answers to questions and looks at footwear of persons that were in any areas of tracking significance (e.g. PLS, LKP, vicinity of clue, etc). Candidate has completed a Missing (Lost) Person Questionnaire in either a training or real world search.

2. INTERVIEWING

2.1.3. Field Evaluation

This category will be evaluated by the candidate's performance after the presentation of a particular scenario. The scenario will be presented during the PLS/LKP evaluation station. A simulated scenario will be presented to the candidate and s/he will then be evaluated on how s/he questions the reporting party for additional information. A candidate may have any form of pre-written questions or other memory-assisting resources to aid in recall of which questions to ask.

The assessment of a candidate's willingness and ability to conduct an interview could be done through a recommendation of the candidate from others according to their observation of the candidate in scenarios other than the field evaluation.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

3. POINT LAST SEEN / LAST KNOWN POINT (PLS/LKP)

3.1.1. Category Description

The initial planning point (IPP) is any location (including PLS or LKP) that, as revealed through investigations, is the reasonable and deduced location from which to begin searching and search planning. The point last seen (PLS) is a location where the missing person was allegedly seen by a witness. It may be the IPP of a search, or a revised location based on an eyewitness sighting. The last known point (LKP) is a location where the subject is reasonably certain to have been (e.g. an abandoned vehicle). This location can also be revised if a significant clue (e.g. wallet or track) belonging to or made by the subject is found during the search.

The PLS or LKP usually provides the best opportunity to find clues about the subject. It is important to both protect the PLS/LKP and be able to efficiently work the PLS/LKP. Factors affecting how a tracker approaches a PLS/LKP include the following considerations:

(1) Type of scene (e.g. abandoned vehicle, clue, house, witnessed location, etc)
(2) Known, alleged, reported or suspected path of subject
(3) Where person(s) other than the missing person entered, traveled through, or exited the area
(4) Sun angle
(5) Likely routes of travel
(6) Location of track traps
(7) Paths of more resistance that offer the tracker landmarks and obstacles to work from to minimize the potential of stepping on tracks of interest.

The tactics a tracker uses to approach and evaluate a PLS or LKP will depend on the variables mentioned above and more. The candidate shall approach the PLS/LKP in a manner that will result in the following:

(1) An increase of the opportunity for finding the subject's tracks,
(2) A reduction of the addition of sign and tracks to the area
(3) The preservation of the most amount of subject's track and sign as possible

3. PLS /LKP

3.1.2. Scoring

The candidate's score in this category will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate verbally expresses a lack of need to preserve any PLS or LKP and/or makes no effort to protect the PLS/LKP. Candidate intentionally adds damaging tracks or sign to the PLS/LKP.

1 POINT - Candidate knows the difference between PLS and LKP. Can discuss one factor that would influence how a PLS/LKP should be approached. Candidate should be able to detect and discuss pertinent information of a track of interest. Candidate may approach PLS/LKP in a manner that does not attempt to minimize damage to the missing person's sign.

2 POINTS - Can discuss two or more factors that would influence how a PLS/LKP should be approached. Candidate can demonstrate a proper approach to a known PLS/LKP, and can identify and catalog one track. Candidate can demonstrate how to properly secure a PLS/LKP.

3 POINTS - Can discuss three or more factors that would influence how a PLS/LKP should be approached. Candidate can find and properly approach a known or unknown PLS/LKP, and can do a track inventory of several tracks within. Candidate takes necessary steps to secure a PLS/LKP that has not already been secured. Candidate should be able to demonstrate how to properly mark a track, draw it and take pertinent measurements/dimensions, and document these properly in field notebook or appropriate forms. Candidate approaches PLS in a manner that unnecessarily adds sign contamination to the area. Candidate does not call for subject (if subject category appropriate).

4 POINTS - Can discuss four or more factors that would influence how a PLS/LKP should be approached. Candidate can find and properly approach different PLS/LKP's (e.g. clue, house, vehicle, etc), and do a complete track inventory of all tracks within, including elimination of known tread patterns. Candidate can provide an initial direction of travel for each track line within the PLS/LKP, and be able to eliminate those outside of the target time frame. Candidate protects PLS/LKP from persons that have no need to be in the area. Approaches area in a way that adds minimal additional sign.

5 POINTS - Can discuss how a PLS/LKP should be approached and five or more factors that would influence that approach. Candidate can demonstrate the proper approach for different types of PLS/LKPs, can locate those that have not been identified, and can demonstrate how to properly secure those. Candidate can perform a track inventory at a PLS/LKP that has multiple tracks. Candidate should be able to eliminate any tracks that are made by known persons and those that are outside of the target time frame. Candidate identifies pertinent tracks and provides an initial direction of travel for each. Candidate should be able to articulate findings to either personnel at base or to other teams in the field. Prevents unnecessary persons from entering the area. Candidate should be willing and able to assist others in learning to preserve and approach the PLS/LKP. If appropriate, candidate calls out for subject.

3. PLS /LKP

3.1.3. Field Evaluation

A scenario will be constructed that involves an initial planning point (IPP); either a point last seen or last know point. Typically it can be an abandoned vehicle but may also be a witness sighting at any location. A set of tracks representing the subject will be placed starting at the IPP. From there the tracks will lead away from the IPP for at least three hundred (300) yards and end no farther than one mile from the PLS/LKP. Along the track line there will be varying degrees of sign from easy (placed in track traps or placed with a lot of emphasis), difficult (placed with scuffing activity or other emphasis) and very difficult (normal walk but not in track traps).

After the "subject's" tracks are placed, at least one additional set of tracks will also be placed at the scene. These will represent tracks of a known party such as the reporting party or the person that the candidate will be interviewing at the onset of the scenario station of the evaluation. This additional track line provides the candidate the opportunity to inventory and eliminate at least one set of tracks as being known to not be the subject.

The evaluator will observe the candidate to see if s/he protects the PLS, selects an approach that minimizes disturbance, demonstrates reasonable care while investigating site, demonstrates use/control of sun/light sources, inventories area and eliminates irrelevant or known tracks, demonstrates ability to work contaminated sites and additional skills.

The candidate's ability to pass on pertinent information to others will be also be evaluated. Candidate should report any and all findings to the AHJ or person acting as the AHJ in an evaluation. This verbal reporting includes, but is not limited to, finding the subject's tracks, finding known tracks, and any other tracks that may be within or outside of the scenario time frame.

Since this is an evaluation of an individual, the assessment of a candidate's willingness and ability to assist and teach another tracker to properly preserve and approach the PLS/LKP would be done through a recommendation of the candidate from others according to their observation of the candidate in scenarios other than the field evaluation.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

4. DETECTION / AWARENESS

This category intends to define and measure a tracker's clue awareness and ability to detect tracks and sign. Clues are defined in 7402.22 as an indication of a person's presence or passage, specifically that of the missing person. Clue awareness is a fundamental skill for trackers whether the tracker employs the skills for law enforcement, search and rescue, military, hunting, biological research or other purposes. Without clue awareness, no clues would or could be detected.

This category of detection and awareness is split in to two subcategories: (1) Track detection and (2) Clue awareness. Track detection is finding a track or sign of a human footfall or tire. Clue awareness is the ability to detect other clues that may be on, near or distant from the human track line. While these two subcategories are extremely similar in nature, they are separated to facilitate explanation and scoring in the evaluation process.

4.1. Track Detection

<u>4.1.1. Category Description</u>

It has often been said that the job of the signcutter is to find the first two tracks. It is then up to the tracker to follow them. The National Association of Search & Rescue (NASAR) tracking program uses the acronym D.I.R.T. to describe a continual process of tracking that is initiated with Detection which is followed by Interpretation. Detection is the starting point from which tracking can begin. Detection should be a result of cutting for sign at or near the Point Last Seen, Last Known Point, possible clue or other reasonable starting point. Other starting points for signcutting can be at or near a person of interest such as the search subject, victim or perpetrator of crime when found – if the objective is to backtrack to find additional evidence.

Sign can also be detected on other signcutting tasks. These 'blind' signcutting tasks (with no known starting point such as a clue or PLS) can vary in type from signcutting a linear feature (e.g. a trail or drainage) to cutting for sign while on another task (e.g. a sweep task or working on a canine task).

4.1. Track Detection

4.1.2. Scoring

The final score for this subcategory will be calculated using average scores from several stations. The following criteria will be used to provide a score for a station (e.g. PLS/LKP) that does not have another grading system for this subcategory. The candidate's score in this subcategory will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate is unable to detect, and interpret as relevant, tracks or sign even in the easiest of ground covers such as mud, snow or other distinct track trap areas. Candidate may not understand that when a person moves on foot the contacted ground is changed in some way, and that sign is discoverable. Candidate verbally expresses a lack of interest in finding or identifying any sign pertinent to a missing person search.

1 POINT – Candidate is able to find sign or tracks in the easiest of ground covers such as soft mud or snow. Candidate is able to identify track pattern as relevant to search when no recent, similar age, or additional tracks are present. Only demonstrates ability to find and identify tracks or sign in one ground cover.

2 POINTS – Candidate can find tracks in variations of easy ground covers (e.g. exposed soil, frozen snow, etc). Candidate can follow person of interest's track pattern even when there is one other track line crossing it. Uses interview process to determine known outsole pattern(s) but is unable to distinguish them to assist in determining the person of interest's outsole pattern. Candidate demonstrates effectiveness in at least two different ground covers.

3 POINTS – Candidate can find tracks in moderate difficulty ground covers (e.g. rocky soil, recent leaf fall or approximately six (6) inch tall vegetation, etc). Candidate can follow person of interest's track pattern even when there are two or more other track lines crossing it. Uses interview process to determine known outsole pattern(s) and is able to distinguish them to assist in determining the person of interest's outsole pattern. Candidate demonstrates effective ability to detect sign/tracks in at least three different ground covers.

4 POINTS – Candidate can find tracks in moderately difficult ground covers (e.g. frozen soil, dry leaves, mixed vegetation, etc). Candidate can follow person of interest's track pattern even when there are three or more other track lines crossing it. Candidate demonstrates effective ability to detect sign/tracks in at least four different ground covers.

5 POINTS - Candidate can find tracks in very difficult ground covers (e.g. wet pine needles, rocky ground, brown vegetation, etc). Candidate follows person of interest's track pattern even when there are four or more other track lines crossing it. Candidate demonstrates effective ability to detect sign/tracks in at least five different ground covers.

4.1. Track Detection

4.1.3. Field Evaluation

Several field testing stations will be set up to evaluate a candidate's ability to find clues, sign or tracks relevant to a search for a missing person. These stations include (but input is not limited from) the PLS/LKP approach, Known/Unknown, Sign Squares and Signcutting stations.

PLS/LKP Approach

One station will be the PLS/LKP approach. A scenario station will be set up for each evaluation that involves a Point Last Seen or Last Known Point (e.g. a clue or an abandoned vehicle). At least one track line (and up to two track lines with different footwear or people) will be left from the PLS or LKP. Each track line will be made in different levels of difficulties, from easy through moderate to difficult for a person to follow. Each track line will cross at least five different ground covers (e.g. dry sand, wet sand, dry clay, wet clay, thawed grass, frozen grass, tall vegetation, deciduous leaves, pine needles, gravelly soil, gravel, rock, concrete/asphalt, etc). There will be up to five other track lines through the area to simulate a search team or other contamination over the person of interest's track line. Material clues (other than tracks e.g. phone, hat, card) will be placed around or along the station for the candidate to detect and manage.

The evaluator will initially present the scenario to the candidate. The candidate will have the opportunity to ask the evaluator questions. The candidate should then approach the scenario as they would in a real world situation. The candidate will have two (2) hours to complete this station. When the candidate has completed the station, s/he will debrief with the evaluator to inform him/her what was found. Once the candidate is done with his/her debriefing, the evaluator will then debrief the candidate on what was correctly detected (clues & tracks) and that which was erroneously detected (not placed as part of the evaluation). The score for this station will be factored in to the overall score of this category.

Sign Squares

A second station will be set up to evaluate a tracker's ability to detect tracks and sign. This station, called "Sign Squares", will consist of several (six to ten) squares that are approximately six feet by six feet in dimension. Each square will be marked with a boundary marker such as chalk, string, flags or flagging tape. If there is any question about the boundaries of any square, that question must be asked at the beginning of the station. Each square will have 0, 1 or 2 paths of travel through the square. Each path of travel will consist of three to four tracks. Tracking candidates will be asked to indicate the location of track lines in the squares. The score for this station will be factored in to the overall score of this category.

Candidates will have one hour to complete this station. Candidates may walk around the squares but cannot make any mark, footprint, handprint, from equipment or otherwise in the square as defined by the square boundary markers. If the candidate alters the interior of the squares in any way, the candidate will be disqualified from the station and may test this station at the next evaluation opportunity.

Signcutting station

The third station used to assess a tracking candidate's detection abilities will be the signcutting station. This station will consist of a linear feature (e.g. road, trail, drainage, etc) along which the candidate will look for clues, sign and tracks (i.e. cut for sign). The length of the feature may vary, but will typically be two hundred (200) feet long. The evaluator will make every reasonable effort to ensure that the station is pristine (having a lack of recent human activity) or account for pre-existing clues & sign in the debriefing and scoring of the station. Along that feature several track lines will be placed crossing the feature. Clues will also be put out for the candidate to detect. Candidates will have one hour to complete this station. Candidates must walk on the immediate feature (not more than ten (10) feet wide), and cannot wander off of the feature. If the candidate wanders off of the defined feature, the candidate will be disqualified from the station and may test this station at the next evaluation opportunity.

Once the candidate has completed the station s/he will debrief the station by walking with the evaluator and informing the evaluator what was detected in terms of tracks and clues. Once the candidate is done with his/her debriefing, the evaluator will then debrief the candidate on what was correctly detected (clues & tracks) and that which was erroneously detected (not placed as part of the evaluation). The score for this station will be factored in to the overall score of this category.

Known/Unknown

The fourth station used to assess a tracking candidate's detection abilities will be the Known/Unknown station. This station will consist of two sections: a known section and an unknown section. Candidates are presented with four tracks in the known section. In the unknown section, there are up to twenty (20) small areas that have tracks or do not have tracks in them. The evaluator will make every reasonable effort to ensure that the station is pristine (having a lack of recent human activity) or account for pre-existing clues & sign in the debriefing and scoring of the station. The candidate indicates whether tracks were detected or not. Scoring is determined as a ratio of tracks correctly detected compared to those that were placed. More information on the Known/Unknown station is on page 66.+

Other

Information, observations or deductions from other stations can be considered in the score for this category as well.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

4.2. Awareness

4.2.1. Category Description

Tracking is not just about finding and interpreting the next footprint on the ground. Tracking and searching also rely heavily on a tracker's attention to his/her surroundings. Good clue awareness incorporates tracking skills, but also integrates the use of other senses including smell and hearing. The evaluation of a candidate's awareness as a tracking skill will involve feedback from the candidate on what they see, hear, smell and otherwise sense; i.e. the extent of his/her awareness bubble.

In addition to the extent of one's awareness bubble, a person's disturbance bubble will also be assessed. For example, there are times when a large disturbance bubble (bright or otherwise very visible clothing and calling for the subject) is appropriate, and times when a decreased disturbance bubble (subdued color clothing, not smoking on task and minimizing noise) is appropriate (e.g. looking for an evasive subject).

It is important to know and be aware of the sun, moon, aircraft, vehicles, wind and other weather conditions, dogs and other mammals, scavengers (e.g. crows, ravens, vultures), other birds and noises that all of the above and more make (e.g. gunshots). Detection of the presence, movement and change in all these things and more are also important to be aware of.

4.2. Awareness

4.2.2. Scoring

The majority of the score will be determined by the ratio of clues placed compared to those detected by the tracker (in Signcutting and PLS Stations). The candidate's score in this subcategory in the PLS Station will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions in combination with the number of clues found compared to those placed.

0 POINTS – Verbally expresses lack of importance of awareness while tracking. Safety of self and others is put at risk by candidate's actions and decisions.

1 POINT – Consistently unaware of surroundings or situational changes. Inattentive to anything but the ground within ten feet of self.

2 POINTS – Candidate is somewhat, but not typically aware of changes in environment until advised.

3 POINTS – Candidate shows some awareness of self and surroundings as described in the category description (section 4.2.1) by informing evaluator of a couple changes or events nearby.

4 POINTS – Candidate consistently shows awareness of self and surroundings to include close and far changes or events. Shows ability to slow down or speed up depending on current needs and shows ability to advise others of needs.

5 POINTS – Candidate demonstrates superior awareness and detection of environment including sun angle, wind direction and changes, odors and distant noises. May be attentive to distant phenomena like moon phase, aircraft and other indications of an extended awareness bubble. Able to adapt seamlessly to changing environments and situation. Ability to detect changes in environment and determine best forward actions for self and team. Able to anticipate situational needs before needs are overdue (e.g. hydration, additional resources such as search personnel, etc).

4.2. Awareness

4.2.3. Field Evaluation

Individuals will be tested on awareness with regard to all occurrences and movements in the testing area. Candidates should verbalize what they see, hear, smell or otherwise sense while on task or during the evaluation.

Two stations will be set up to evaluate a tracker's clue awareness and detection ability. One of these stations is the PLS/LKP approach. When trailing the missing person in that scenario, clues will have been set out in the field that the searcher needs to detect and inform the evaluator that s/he has found. The evaluator is encouraged to place a couple clues in the first one hundred (100) meter of the PLS trail, then a clue in each subsequent one hundred (100) meter section of the trail to give the candidate ample opportunities to detect them. At least two clues should be placed, but no more than five. If the candidate passes a clue without detecting it, that will result in a reduced clue awareness score. If the candidate bypasses the clue and does not have the opportunity to see a particular clue (due to the use of signcutting techniques or his/her inability to trail as far as the clue), that will not be counted against the scoring in the clue awareness category.

The second station used to evaluate a tracker's skills and ability to detect clue is the Signcutting station. This station will consist of a linear feature (e.g. road, trail, drainage, etc) along which the candidate will look for clues, sign and tracks (i.e. cut for sign). The length of the feature may vary, but will typically be two hundred (200) feet long. The evaluator will make every reasonable effort to ensure that the station is pristine (having a lack of recent human activity) or account for pre-existing clues & sign in the debriefing and scoring of the station. Along that feature several track lines will be placed crossing the feature. Clues will also be put out for the candidate to detect. Candidates will have one hour to complete this station. Candidates must walk on the immediate feature (not more than eight (8) feet wide), and cannot wander off of the feature. If the candidate wanders off of the defined feature, the candidate will be disqualified from the station and may test this station at the next evaluation opportunity.

Once the candidate has completed the station s/he will debrief the station by walking with the evaluator and informing the evaluator what was detected in terms of tracks and clues. Once the candidate is done with his/her debriefing, the evaluator will then debrief the candidate on what was correctly detected (clues & tracks) and that which was erroneously detected (not placed as part of the evaluation). The score for this station will be factored in to the overall score of this category.

Information, observations or deductions from other stations can be considered in the score for this category as well.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

5. INTERPRETATION

Once sign is detected it must then be interpreted. Interpretation is an important step in the progression of the application of tracking to a missing person(s) search. Interpretations that are commonly sought for detected tracks and sign are determining if it was made by a human, animal or other track maker (e.g. wheeled vehicle, machinery or natural forces such as wind, water, etc), identifying an individual that made a track, determining the approximate age and direction of travel.

Interpreting a human track also includes identifying or eliminating it as having been made by a person of interest. This identification is often arrived at through processes of elimination of possible outsole tread patterns, aging, direction of travel, sign maker characteristics and other deductive reasoning.

When working a PLS/LKP or other area in a search, the tracker must be able to see and recognize sign in a variety of ground covers. Once sign has been found, the relevance of that sign must be determined. The tracker needs to be able to differentiate between relevant and irrelevant sign in contaminated areas to ensure the sign belongs to the subject. Properly identifying relevant sign can facilitate the search by confirming a subject's presence in an area and potentially closing the time-distance gap.

This category has been divided into several sub-categories to facilitate the evaluation of a tracker's interpretive knowledge, skills and abilities. These subcategories are Humanimal, Identification, Aging and Direction of travel. A description, scoring matrix and field evaluation methods are described in the following pages.

5.1. Humanimal (Human, animal or other)

5.1.1. Category Description

The ability to differentiate between human tracks and animal tracks is important because of the potential consequences on a search. Often a tracker will be called to evaluate a potential footprint or other sign for relevance to the missing person situation. In many situations an animal track and a partial human footprint can look similar. The consequences of a misidentified track include redirecting a search in the wrong direction. This can be to the missing person's detriment if finding that person is delayed due to incorrect interpretation of a potential clue.

Animals are constantly leaving tracks and sign in search areas. Animal tracks and sign are simply part of the baseline conditions that search and rescue trackers encounter on a consistent basis. A search is unlikely to occur in an area that is void of animal tracks and sign. While there are many differences between human tracks and sign, there are also many similarities between the two. Animals, like humans, move in regular patterns and various speeds from slow (walk) to fast (gallop). These gait patterns can (and have been) misinterpreted as human sign when tracks are not clearly distinguishable and a line of regular disturbance made by an animal has been thought to be that of a human.

Animal tracks also display characteristics and dimensions that have frequently been mistaken for human sign. As just a few examples, the toes of raccoon tracks have been misinterpreted as a barefoot child's track, deer hooves for outsole tread pattern, and bear tracks as human tracks.

Animal sign (e.g. turkey and deer scratching, bear and deer beds, feeding activity of various animals that causes damage to plants, digging behavior of animals, scat and other sign) can also been confused for human activity.

Search subjects occasionally have pets, specifically dogs, with them when they are reported missing. In these and other cases, dog tracks are often called in as potential clues. There are many non-domesticated (wild) species of the canine family present in Virginia and surrounding states, including grey fox, red fox and coyotes. Knowing the difference between domestic dog track characteristics and those of the aforementioned wild canine species can assist with clue interpretation in the field; sorting out domestic dog tracks made by the subject's pet from wild canines.

5.1. Humanimal (Human, animal or other)

5.1.2. Scoring

The final score for this subcategory will be calculated using weighted scores from the Sign Interpretation, Signcutting and PLS/LKP stations. The Sign Interpretation station has its own scoring system to generate a station score. The following criteria will be used to provide a score for the PLS/LKP and Signcutting stations that do not have another grading system for this subcategory.

Reciprocity: In case candidate demonstrates trouble with identification (or there are a lack of opportunities), a recent Cybertracker certification can be factored in to the Candidates Humanimal category score for the Signcutting and PLS/LKP stations.

If there is no opportunity for a candidate to demonstrate sign interpretation knowledge in either the PLS/LKP or the Signcutting station, that percentage of the overall category score can be derived from the scores earned in the station(s) that did have sign interpretation opportunities (i.e. the particular station that is void of other-than-human sign can be discounted for that station).

The candidate's score in this subcategory will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Demonstrates no ability to distinguish between human and non-human tracks and sign. Is easily confused or mistaken in attempting to distinguish the two apart. Verbally expresses lack of need to know, or disinterest in needing to know, how to distinguish animal tracks and sign from that of humans. All interpretations of animal sign were incorrect.

1 POINT – Demonstrates minimal ability to distinguish between human and non-human tracks and sign. Candidate may be able to identify some easy animal tracks and sign such as deer tracks in simple substrates such as mud or snow or antler rubs. Candidate is able to distinguish sign as only either animal or human, and makes many more interpretive mistakes than correct interpretations.

2 POINTS – Demonstrates some ability to distinguish between human and non-human tracks and sign, but is unable to distinguish human sign from similar animal sign. May be able to separate aged, distorted or difficult animal tracks from human tracks or tread pattern. Half of interpretation opportunities are incorrect, while half of animal or other sign interpretations are correct.

3 POINTS – Demonstrates moderate ability to distinguish between human and non-human tracks and sign. Less than half of interpretation opportunities are incorrect, while more than half of animal or other sign interpretations are correct. Can give simple examples of what some of the differences between animal and human sign may be. Is able to separate aged, distorted or difficult animal tracks from human tracks or tread pattern. A Cybertracker Track & Sign Level I interpreter or equivalent certification within the last three years may earn a tracking candidate 3 points in this subcategory.

4 POINTS – Has a good ability to distinguish between human and non-human tracks and sign. If an animal track intersects with human track line, candidate can stay on human line and indicate that they have passed another trail. Can give difficult examples of what some of the differences between animal and human sign may be. A Cybertracker Track & Sign Level II interpreter or equivalent certification within the last three years may earn a tracking candidate 4 points in this subcategory.

5 POINTS – Demonstrates an excellent ability to distinguish between human and non-human tracks and sign. Easily distinguishes aged, distorted or otherwise difficult animal tracks or sign (such as tracks, beds, digs, scratches, scat, etc) from that of humans. Can identify several indicators that distinguish domestic dog tracks from those of non-domesticated canine species such as grey fox, red fox and coyote. Can give thorough specific and difficult examples of what some of the differences between animal and human sign may be. A Cybertracker Track & Sign Level III interpreter or higher or equivalent certification within the last three years may earn a tracking candidate 5 points in this subcategory.

5.1. Humanimal (Human, animal or other)

5.1.3. Field Evaluation

There are usually plenty of opportunities to encounter human, animal and other tracks and sign in any location. Deer tracks and trails are ubiquitous. When animal tracks or sign are found in an evaluation area, the candidate can be questioned as to the source or cause of a particular track or sign. Incorrect identification of easy tracks leads to a lower score. Correct identification of the family (e.g. canine, feline, ungulate, bear, etc) yields to a moderate score. Correct identification of the species (domestic dog versus coyote) and more difficult tracks (distorted, aged or for other reasons can be confused with human sign) will yield a higher score.

A station can be set up that will have fifteen (15) to thirty (30) questions. Each question can be a track or sign made by a human, animal or other (vehicle, lightning strike, tool mark, etc). Questions posed will typically be "What made this?", "What is the direction of travel?", or others. A score will be given for the response received for each question as follows:

0 POINTS will be given for an incorrect human/non-human response to the question "What made this?" The following scoring will be compared to these actual answers as examples (e.g. A beaver chewed a tree that was actually cut by a chainsaw or a track was made by a human when it is actually a coyote track). Or complete shooting from the hip (distinctly and significantly erroneous answers e.g. duck-billed platypus for sign typically found in the United States).

1 POINT will be given for an answer that is not correct but is at least a recognition of the track/sign being made by a human, animal, or non-animal (a person cut a tree or a non-human made the track).

2 POINTS will be given when a correct human/non-human distinction is given but not specific answer or similar but not correct (e.g. a tool was used to cut a tree or a mammal made the track).

3 POINTS will be given when a specific cause is given but is not entirely correct (a hand saw was used to cut the tree or a domestic dog made the track).

4 POINTS will be given when a general cause is close to the answer (e.g. a saw was used to cut a tree or a canine made the track).

5 POINTS will be given when the correct specific cause is given (a chain saw was used to cut a tree or the track is that of a coyote).

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

5.2. Identification

5.2.1 Category Description

Identification is the determination of a specific source of a track, be it an individual person (e.g Jim vs. Tom), animal species (e.g. a missing child's pet vs. a coyote), vehicle tire (e.g. ATV vs. mountain bike) or other (e.g. tool mark vs. hiking stick). Identification is a critical element in the compound array of tracking skills.

On most searches for a missing person, there is little or no access to the subject's footwear as a known outsole pattern or foot shape. It is through a process of deduction and interpretation of an inventory of track patterns present at a search that a track of interest is usually developed. Once that track of interest is determined with the best available information, it is then important for a tracker to be able to detect tracks and correctly identify, by comparison to the track of interest, any other tracks deduced as having been made by the missing person. In other words, once the tracker determines and starts to follow a track of interest, it is crucial to stay on that track as opposed to mistakenly identifying other tracks as that track of interest.

There are also occasional opportunities to backtrack the missing person once s/he has been located to glean more information of his/her behavior while missing and potentially gain evidence along the way. In these cases, a known track pattern is often established as the subject's footwear can be observed. Then the tracker needs to be able to stay on the track line made by that person to the exclusion of all other tracks out there.

5.2. Identification

5.2.2. Scoring

Scores from two evaluation stations (the PLS/LKP and Known/Unknown stations) will be factored together to create a candidate's overall score for this subcategory. The score developed in the Known/Unknown evaluation station is calculated by an algorithm on the station answer sheet. The candidate's score in this subcategory for the PLS/LKP station will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate expresses disagreement with any need to be able to identify a track as similar or different to a track of interest.

1 POINT – Candidate understands that there is a need to be able to identify a track when detected, but is consistently incorrectly identifying tracks as similar to (or different than) a particular track of interest.

2 POINTS – Candidate is occasionally (three to four times out of ten) able to correctly identify a track as being the same as or similar to a particular track of interest, but may have several (four to five) mis-identifications of clear and different track patterns.

3 POINTS – Candidate is frequently (five to seven times out of ten) able to correctly identify a particular track of interest. May have a few (three to four) misidentifications of other tracks that are interpreted to be a particular track of interest.

4 POINTS – Candidate is usually (eight to nine times out of ten) able to correctly identify a particular track of interest. May have rare incorrect identifications (one or two) of similar patterns to a particular track of interest. May be able to correct a mis-identification.

5 POINTS – Candidate correctly identifies all particular tracks of interest with no mistakes.

5.2. Identification

5.2.3. Field Evaluation

Two evaluation stations will be used to evaluate a tracker's ability to correctly identify a track of interest.

PLS/LKP Approach

One station will be the PLS/LKP approach. After the tracking candidate has assessed the scene and inventoried the track patterns present, s/he must identify and eliminate the tracks that were made by person(s) (and associated track patterns) known not to be the missing person. Tracking a person by following his/her footfalls then requires a continual and repeated process of identifying the correct track pattern amongst others that were not made by the 'missing' person.

Known/Unknown

A second station will be set up to evaluate a tracker's ability to gather information about particular tread patterns, compare that information to a set of unknown tracks and draw a conclusion as to which known tread pattern made the unknown track. This station, called "Known/Unknown" will consist of two parts.

The first part will be a set of given tracks. These tracks will be clear, obvious and complete tracks that will be presented for the tracking candidate to view and gather information, by any means (except those that will alter or deteriorate the track) such as drawing, measuring and photographing. Once the tracker has studied the known tracks to his/her satisfaction, the tracker will proceed toward the second part of the station and at that point not be allowed to view the area with the known tracks again.

In the Unknown area, there will be approximately 20 small segments (approximately two feet by two feet in dimension). In each segment there will be one track or no recent tracks (a blank). The track may be a partial (small or large) or full track. Each track will be made by one of the given "known" tracks. It is also possible that an 'unknown' can have been made by a tread that was not presented in the series of 'known' tracks. The tracking candidate will then document his/her answers for each of the unknowns as having been made by the footwear that made one of the particular known tracks, or none of the known tracks, or no track at all (detection) and present those answers to the evaluator.

Other

Information, observations or deductions from other stations can be considered in the score for this category as well.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

5.3. Aging

5.3.1. Category Description

The ability to age tracks and sign is a crucial tool in the tracker's toolbox. It is used to eliminate old sign as potential clues, to deduce which is the freshest (most recent sign) to follow an individual, relate evidence to the timeline of a particular scenario, and to characterize the evidence found on the ground that may corroborate or negate a witness' statement.

Historical weather information should be gathered during the interview process and/or online for a given locality to assist in the evaluation of the age of tracks and sign. Information gathered online remotely from a search location should be verified in person upon arrival to the search location since online weather history isn't always accurate and precise to the search area. Weather information gathered should be that of the weather history before, during and since the person went missing or other scenario occurred. Tracks and sign cannot be "too fresh" to be that of a missing person, especially if the person is still moving. Tracks can be too fresh if they are deduced to be made after a suspect was apprehended or a person of interest was otherwise removed from the field. Tracks and sign can be eliminated as being too old to have been made by the missing person since s/he went missing, using the time last seen as a reference and comparison point.

The process of aging a track should be more involved than just looking at a track and shooting from the hip with a quick judgment based on appearance only. The determination of the age of tracks and sign should be a two step process. The first step in the process is to gather local historical weather information. The second step in the process should be to compare the characteristics of the track or sign in question with the weather history.

Placing an index or test track is also an important technique to use in the assessment of a track's age. It is important to place an index track with each change in ground cover to aid in accurate track or trail age.

5.3. Aging

<u>5.3.2. Scoring</u>

The final score for this subcategory will be calculated using weighted scores from the Aging stations and the PLS/LKP station. The following criteria will be used to provide a score for a station (e.g. PLS/LKP) that does not have another grading system for this subcategory. The candidate's score in this subcategory will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate does not see the value of aging sign or verbally expresses an antagonistic or contrary opinion of the need to gather and/or assess aging information.

1 POINT – Candidate may not gather weather history information, but can correctly discern quite obvious aging deductions (track is either very old or very fresh). Candidate may not place an index near track of interest. Has difficulty aging tracks that are less than 3 days old to an age of 48 hours.

2 POINTS – Candidate gathers minimal weather history information such as last bracket event. Can discern and explain differences in significant aging deductions such as before or after precipitation event. Can discern between fresh (e.g. within last 24 hours) sign and tracks from old (e.g. before last 24 hours) sign. Candidate may place index by track of interest, but is not able to use index to assess age of track of interest. Can discern age of tracks and sign within 24 hours on either side of actual sign age that is up to 3 days old. Candidate is able to describe one attribute of the tracks of interest that places it in the correct age timeframe.

3 POINTS – Candidate gathers appropriate weather history such as last bracket event and weather since that event. Can discern age of tracks and sign within 12 hours on either side of actual sign age that is up to 3 days old. Candidate uses index to compare and contrast age of track of interest in two or more ground covers. Candidate is able to describe two attributes of the tracks of interest that places it in the correct age timeframe.

4 POINTS – Candidate gathers thorough weather history during interview including weather before, during and after lost person event. Can discern age of tracks and sign within 6 hours on either side of actual sign age that is up to 3 days old. Candidate uses index to compare and contrast age of track of interest in three or more ground covers. Candidate is able to describe three attributes of the tracks of interest that places it in the correct age timeframe.

5 POINTS – Candidate gathers thorough weather history during interview including significant weather or any other aging event(s) providing a bracket before lost person event. Candidate asks about weather since that event, weather circumstances when the person went missing and weather history since the person went missing. Can discern age of tracks and sign within 3 hours on either side of actual sign age of sign that is up to three days old. Candidate uses index to compare and contrast age of track of interest in four or more ground covers. Candidate is able to describe four or more attributes of the tracks of interest that places it in the correct age timeframe.

5.3. Aging

<u>5.3.3. Field Evaluation</u>

The assessment of a person's ability to age tracks and sign will be conducted in two formats. The first format will be to quiz the tracking candidate about the age of the track and sign line that s/he has been asked to find and follow as a part of the PLS/LKP evaluation station.

The second method of testing the candidate's ability to age sign is the aging station. An evaluation station will be set up to evaluate a tracker's knowledge, skill and ability to determine the age of tracks and sign. This station is called the aging station. This station will contribute to the overall evaluation scores of a tracker's ability to interpret the amount time that has passed since a track of sign was made.

A method of testing the candidate's ability to age sign is by setting out, as part of the testing process, tracks and sign at known intervals and quiz the candidate as to the age of the sign. Up to five rows of tracks will be placed in a manner such that they are easy to detect. The tracks can be placed up to three days before the evaluation. It is best to have several sets that are 3 days, 2 days, 1 day and/or less than twenty-four hours old before the evaluation. The candidate will have one hour to complete this station. The time that each candidate begins and completes the evaluation station will be considered when grading the answers submitted by the candidate. Once the candidate has completed the station, s/he will present his/her answers to the evaluator.

SCORING
The following scoring matrix will be used to score the aging answers.

0 POINTS – Candidate gives an answer that is greater than 48.1 hours different than the known age of the tracks.
1 POINT – Candidate gives an answer that is 24.1 to 48.0 hours different than the known age of the tracks.
2 POINTS – Candidate gives an answer that is 12.1 to 24.0 hours different than the known age of the tracks.
3 POINTS – Candidate gives an answer that is 6.1 to 12.0 hours different than the known age of the tracks.
4 POINTS – Candidate gives an answer that is 3.1 to 6.0 hours different than the known age of the tracks.
5 POINTS – Candidate gives an answer that is less than or equal to 3.0 hours different than the known age of the tracks. The average score from this station will be factored in to the overall score for the candidate's interpretation of aging tracks and sign.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

5.4. Direction of Travel

5.4.1. Category Description

Determining direction of travel is an element of track and sign interpretation that can be determined by observing and studying tracks and sign. Direction of travel is a crucial element in track and sign interpretation that can send search resources in the correct direction. If misinterpreted, however, search resources can be sent in the wrong direction. It is therefore important that the tracker be able to correctly interpret the direction of travel of tracks and sign and communicate that to those that need to know.

Direction of travel can be determined by the way a particular footprint is pointed or oriented, transfer of a ground substance, by reading ground disturbances such as dragged material, by the way vegetation is leaning as a result of foot or tire impact, or other means.

5.4. Direction of Travel

<u>5.4.2. Scoring</u>

This subcategory overall score is determined as weighted combination of contributed scores from three stations – Sign Squares, Signcutting and the PLS/LKP stations. The majority of the score will be determined by the scores developed through the scoring algorithms in the Sign Squares and Signcutting stations on the answer sheets. The candidate's score in this subcategory from the PLS/LKP station will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate expresses a lack of interest or need for determining a direction of travel from tracks or sign.

1 POINT – Candidate acknowledges importance of determining direction of travel but is not, or rarely, able to determine direction of travel from tracks or sign.

2 POINTS – Candidate has difficulty determining direction of travel from tracks or sign or does not recover from mis-interpreted direction of travel.

3 POINTS – Candidate often interprets the correct direction of travel of sign, but occasionally misinterprets the sign.

4 POINTS – Candidate regularly determines the correct direction of travel of sign with a rare mistaken interpretation. Candidate recovers from a mistaken interpretation of direction of travel.

5 POINTS – Candidate consistently determines the correct direction of travel of sign without mistakes.

5.4. Direction of Travel

5.4.3. Field Evaluation

A couple stations will be used to evaluate a tracker's ability to correctly interpret the direction of travel of tracks and sign.

PLS/LKP Approach

One station will be the PLS/LKP approach. After the tracking candidate has assessed the scene, a successful trailing effort requires continual interpretation of the correct direction of travel of the tracks and sign that were made by the 'missing' person.

Sign Squares

A second station will be set up to evaluate a tracker's ability to interpret direction of travel. This station, called "Sign Squares", will consist of several (seven to nine) squares that are approximately six feet by six feet in dimension. Each square will have 0, 1 or 2 paths of travel through the square. Each path of travel will consist of three to four tracks. Tracking candidates will be asked to indicate the location and direction of travel of track lines in the squares.

Other

Information, observations or deductions from other stations can be considered in the score for this category as well.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

6. RECORDING and DOCUMENTATION

Documentation is an important skill for search and rescue trackers to demonstrate. The documentation of tracking information consists of ways to preserve and communicate tracking evidence that was found by the tracker. Documentation can occur through recording and reporting tracking information as it relates to a missing person(s) search.

Recording tracks is a way to preserve evidence and be able to transmit track information effectively. Track recording can be accomplished by photographing, drawing and casting. It is recommended in William Bodziak's *Footwear Impression Evidence* textbook that these processes be conducted in a particular manner and order from minimum chance of damaging track detail to most likely to damage original track detail (photograph first, sketch next then cast last).

1. Photograph the track from several angles — two or three overall scene and context images should be sufficient to get perspective on the location of the track to surrounding conditions, terrain, objects, etc.

2. Photograph the track up-close with a scale of measurement (Examination Quality Photograph). The plane of the camera should be parallel to the plane of the floor of the track to avoid perspective distortions and save the true image of the impression. Ideally, the scale should be a flat, non-reflective, measured surface.

3. Sketch the track with all measurements. The sketch can also be an important record for track comparison or relaying information in addition to the cast.

4. Cast the track last since it destroys the track.

This category was divided into subcategories to provide further explanation and an objective means to evaluate the knowledge skills and abilities of a search and rescue tracker to record and document tracking information.

6.1. Photographing

6.1.1. Category Description

Cameras are very useful in recording clue and track information. A picture is truly worth a thousand words when it comes to describing the details or condition of a clue and its surroundings. Cameras are included in many technological devices these days; almost every cell phone has a camera in it, some GPSs have one, and digital cameras or disposable cameras are easy to acquire. Taking pictures of tracks is a valuable skill for a tracker to perform properly.

Digital cameras allow instant access to the image for viewing or comparison. Digital images can also be printed out at base and shared with other tracking resources. Wireless and other cellular technology allows images to be shown to others via the viewing screen, shared via electronic messaging, or other means. Any picture that is taken will also be useful for storage or record-keeping in a tracker's logbook, after-action report or other completed documentation.

The first step in track preservation involves taking pictures at a distance. The first pictures are taken at a distance and show the location of the track and some familiar landmark or the context of the scene. It may be beneficial to place a marker (e.g. Styrofoam cup, placard, labeled paper, etc) next to the track to show where in the large view pictures the track is located. To pinpoint the track location, a second series of pictures at a short distance can show context of the track area with respect to close landmarks. The next series of track pictures should be up-close. They are called "examination-quality photographs" because they provide the most detail of the impression. Considerations for taking examination quality photographs are as follows:
1. First take a picture of the track without a scale, because placing a scale near the track could cause accidental disturbance.
2. Camera should be straight over the track.
3. Track should fill the image area.
4. Camera plane should be parallel to the plane of the track.
5. First pictures should be as found in natural lighting, unless dark.
6. Shade or light the track from different angles to highlight different parts and details in the track.
7. Next place a scale by the track and take pictures of the track and the scale with the same considerations as steps 2 through 6.

6.1. Photographing

6.1.2. Scoring

The candidate's score in this subcategory will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate makes no attempt to photograph the track. Verbally expresses lack of need to photograph tracks or a disinterest in needing to photograph tracks.

1 POINT – Candidate discusses circumstances when photographing a track would be beneficial to preserving and recording tracks. Candidate does not photograph a track.

2 POINTS – Candidate photographs a track using only one technique for photo-documenting a track. Track pictures do not include a scale.

3 POINTS – Candidate photographs a track using two or more techniques for photo-documenting a track. Track pictures may not include a scale. No scene context images are captured or no close-up images of the track are captured.

4 POINTS – Candidate photographs a track using three or more techniques for photo-documenting a track. Track pictures include a scale. Scene context image may be captured, but from only one angle.

5 POINTS – Candidate explains and photographs a track using four or more techniques for photo-documenting a track. These techniques include capturing overall scene images from more than one angle, camera plane is parallel to track plane, light and shadowing are used to emphasize details in track, close-up of track without scale, close-up of track with measured scale images are captured from straight above track. Candidate is willing and able to assist others in learning to photo-document a track.

6.1. Photographing

<u>6.1.3. Field Evaluation</u>

There will be several opportunities for a tracker candidate to photograph a track throughout all of the tracking evaluation stations including the PLS/LKP station and the Known/Unknown station. The candidate's score will be based on the use of recommended techniques to photo-document a track as found with and without a scale.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

6.2. Drawing

6.2.1. Category Description

Track drawings with accurate measurements facilitate a tracker's ability to retain, recall, and verify track details and convey those details to others. A track sketch or drawing does not have to be a work of art, but it does have to represent what a person sees when they find a track they intend to follow. The very act of sketching a track with measurements incorporates that pattern into the persons mind (cognition) so that s/he can re-cognize it when detected at a later time (e.g. during the trailing process).

Track measurements include the following dimensions:
Three basic measurements even if the track is made by a flat outsole (without separate heel):
1.   Overall track length
2.   Width of sole/ball/toe of track (widest part of front section of track)
3.   Width of heel of track (widest part of rear section of track)

Additional measurements:
4.   Length of heel if separate heel
5.   Length of arch
5.   Measurements of particular design elements such as lugs, circles, squares or other tread pattern elements

Trail measurements (those involving more than one track) also augment a tracker's documentation of observations. Trail measurements include (but are not limited to) the following:
6.   Straddle
7.   Pitch (for left and right side)
8.   Step Length (for right and left side)
9.   Overall Stride Length (for left and right side)

Drawing at different levels completes the tracker's recording of observations. In addition to track details and gait dimensions, an over-all, bird's-eye view sketch of the entire track line with significant features is helpful to represent, record and preserve the track evidence found.

6.2. Drawing

6.2.2. Scoring

The candidate's score in this subcategory will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate makes no attempt to draw the track or take measurements. Verbally expresses lack of need to sketch tracks, or disinterest in needing to sketch tracks.

1 POINT – Candidate sketches track only with no measurements. May include design elements that are not in the actual track. May make cursory drawing, but ability to use drawing to identify/verify future tracks is minimal.

2 POINTS –No overall sketch is produced, and no gait measurements are documented.

3 POINTS – Candidate sketches track with measurements to within one-half (1/2) inch. Track drawing includes three or more track measurements and at least one gait measurement. Track drawing correctly does not include design elements not present in the medium. Demonstrates ability to convey track information to others. No overall, bird's eye view sketch is produced.

4 POINTS – Candidate sketches track and stride with measurements to within one-quarter (1/4) inch. Track drawing includes four or more track measurements and at least two gait measurements. Uses drawing to confirm that the tracker is following the correct track. Overall, bird's eye view sketch represents a small amount of pertinent information with regard to the entire track line.

5 POINTS – Candidate sketch includes detailed track measurements to within one-eighth (1/8) inch to ensure accurate identification/verification of future tracks. Track drawing includes five or more track measurements and at least three gait measurements. Drawings are clear and accurate, and do not include design elements not present in the medium. Thorough bird's-eye view sketch includes clues, significant terrain features, landmarks and other relevant information. Candidate uses drawing and measurements to confirm correct track. Candidate demonstrates ability to convey track information to others. Candidate is willing and able to assist others in learning to measure and sketch tracks.

6.2. Drawing

6.2.3. Field Evaluation

The candidate will have multiple opportunities to produce track drawings. Scenarios and testing stations (including PLS/LKP and Known/Unknown stations) will be set up to evaluate several skill categories including drawing, a sub-category of recording. The candidate will need to measure track dimensions and include those measurements in the track drawing.

Candidate will need to sketch both an actual track of interest and an overall bird's-eye view of a scenario involving a track line that the candidate followed. Considerations involved in assessing the score of an individual's drawings include appropriate and accurate measurements, clarity of detail, minimization of 'ghost' details (details that are not present in track but were included in a drawing), demonstrated ability to use drawing to ID/verify a track, and conveyance of information to others.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

6.3. Casting

6.3.1. Category Description

A track is a tangible clue or a link in the chain of evidence. Casting a track will preserve the details of the track permanently in the mold, but will also permanently and irreparably destroy the original track. As every search should be treated as a crime scene until proven otherwise, it is crucial to seek and obtain permission from the AHJ and/or incident commander before casting a track.

If a good track is found and protecting the clue is imperative, a cast can be made that produces a permanent preservation of the track. An important track needs to be protected or preserved if it's possible it could be destroyed ... because of weather, traffic or other causes. Dental stone is now the material of choice for casting tracks. Dental stone is more durable than plaster and sets up well under water.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

6.3. Casting

6.3.2. Scoring

The candidate's score in this subcategory will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate verbally expresses a lack of any need to know about casting or how to cast tracks.

1 POINT – Candidate is unfamiliar with the casting process, but understands and communicates possible circumstances when casting a track would be beneficial.

2 POINTS – Candidate communicates at least two considerations involving casting a track. Candidate makes significant mistakes in (explaining or executing) the process such as casting a track first before any other means of recording a track. Does not make an effort to request permission from AHJ to cast a track.

3 POINTS – Candidate expresses or demonstrates knowledge of casting a track, but has significant omissions in the correct process such as mixing the material incorrectly, pouring or lifting in a way that damages the track or cast, etc.

4 POINTS – Candidate seeks permission from the AHJ to cast a track. Candidate expresses knowledge of casting a track or does cast a track but may make small errors in the process such as pouring incorrectly, removing the cast too soon, or causing damage to the cast by cleaning too early in the curing process.

5 POINTS – Candidate seeks permission from the AHJ to cast a track. Candidate properly and proficiently casts a track with a dental stone, recovers the cast without damaging it and demonstrates knowledge of the time required for a cast to cure sufficiently before cleaning, as well as repercussions for cleaning it too early. Candidate is willing and able to assist others in casting a track.

6.3. Casting

6.3.3. Field Evaluation

At any time during the tracking evaluation a tracking candidate is welcome to demonstrate or express the ability to cast a track. This can be done by selecting a track and verbally describing the process of casting. To achieve the highest score for this subcategory the candidate must demonstrate properly casting a track.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

6.4. Documentation

6.4.1. Category Description

If it isn't written down, it didn't happen. As part of providing a search service to the AHJ, the missing person and his/her family, documentation is a crucial aspect of search activities. Documentation can be as little as maintaining a field notebook with some notes jotted down. It can range to thoroughly, regularly and consistently submitting an after action report with substantial recording and reporting of a tracker's actions, observations and conclusions.

One may use ICS Form 214 or other means of recording tracking and other search decisions.

The ASTM Tracker Standard report format below (approved and published in 2010) will be used as a metric for a complete tracking report. Other less complete media for documentation can be a tracker's field book, a simple after action report with search data and a few sentences on search actions.

Source: ASTM Tracker Standard 2010

This is a documentation outline where each point becomes a sentence or more in your narrative report. This documentation is primarily for a tracker to use to improve the skill set and to communicate with other trackers.

1.   Heading Section:
- (a)   Report writer's name, address, telephone number, email
- (b)   Date and time report is written
- (c)   Incident or mission name or reference number
- (d)   Date and time of incident
- (e)   Incident subject name or names

2.   Preliminary Information Section:
- (a)   Who made the call that initiated your response: name, position, and contact telephone number
- (b)   Brief narrative of information that generated the call out, include dates, places, and times
- (c)   Description of incident given
- (d)   Where and when you are requested to meet and with whom
- (e)   Why they are requesting your assistance and your objective as a tracker resource
- (f)   Any other preliminary contributing information

3.   Incident Arrival Section:
- (a)   Time, date, and location of your arrival
- (b)   To whom you reported to upon arrival
- (c)   Confirm preliminary information for call out
- (d)   Additional information, provided at the scene, and by whom, to insure you are fully informed and understand all available facts of the incident
- (e)   Witness names and/or statements
- (f)   Weather, soil, and other factors affecting tracking
- (g)   Your objectives
- (h)   Description of all sign evidence relative to this incident

4.   Narrative Description of Actions Taken and Decisions Made:
- (a)   Actions taken should correspond to previously included information
- (b)   This section should include tracking definitions and a complete description of sign evidence using terms and references related to tracking factors
- (c)   Does physical evidence found support information provided
- (d)   Was PLS or LKP located, direction of travel, and explain with description
- (e)   Times, places, descriptions, who saw, who did, where it happened, why, conclusions, based on what you and fellow team members saw and did
- (f)   List actions, locations, team member or assignment changes
- (g)   Descriptive narrative should be a culmination of team member personal notes
- (h)   Writer's inclusive narrative description should be in agreement with all contributing team members, but not compromised if they differ

5.   Summary Section:
- (a)   Brief summation of actions taken, conclusions reached
- (b)   Did evidence support information as provided
- (c)   Distribution list of report
- (d)   Sign and date

6.   Map and Graphics:
- (a)   Attach footprint card, maps, photos, and drawings described in the report

6.4. Documentation

6.4.2. Scoring

The candidate's score in this subcategory will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate does not document actions related to task. No field notebook documenting training or real world mission experience. Unable to provide documentation related to claims or findings. Expresses a lack of interest or a lack of need to document training and real world mission tasks.

1 POINT – Candidate presents field notebook with brief descriptions of tracking tasks

2 POINTS – Candidate presents field notebook with descriptions of tracking tasks observations, conclusions and learning points. Tracking reports not complete or available. Limited amount of documentation presented due to training progression. Documentation content is minimal.

3 POINTS – Candidate presents field notebook with demonstrated progression in tracking ability. Candidate submits complete report from tracking training or an incomplete tracking report from tracking task on real world search mission. Training log book documents 25 or more hours of field work directly related to tracking within last three (3) years.

4 POINTS – Candidate submits complete formatted tracking report from real world search mission that is no more than three (3) years old. Training log book presented. Training Log contains entries related to actions, findings and conclusions documented in reports. Training log book documents 50 or more hours of field work directly related to tracking within last three (3) years.

5 POINTS – Candidate submits two or more complete reports of tracking tasks from real world search missions that are no more than three (3) years old. Training log book presented. Training log contains entries related to actions, findings and conclusions documented in reports. Training log book documents 100 or more hours of field work directly related to tracking within last three (3) years.

6.4. Documentation

6.4.3. Field Evaluation

Tracking reports can be submitted to an evaluator (or brought to an evaluation) to demonstrate the ability to write a professional tracking report. As part of the higher point score for this part of the evaluation, recent reports and a history of reports will be taken in to consideration. Official reports can take the place of field notes – it is an option of the tracker to retain or present either one or both.

Tracking candidates will be rated according to the criteria in section 6.4.2 that describe point values for demonstrating different levels of documentation.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

7. TRAILING

7.1.1. Category Description

Once relevant sign has been identified, a tracker that can follow the trail (line of tracks or sign) can facilitate a search by determining direction of travel and closing the time and distance gaps between the searchers and the missing person(s). It is important that the tracker can continue to follow the relevant trail despite crossing trails and contamination of different age sign or somebody other than a person of interest.

The tracker also should be able to continue to follow the trail across changes in medium, under different weather and lighting conditions. Once on a trail, the tracker should have the ability to recognize within a few steps whether they are still on the trail or have experienced a false positive and then can recover back to the trail. Once on the trail, the tracker needs to continually progress forward identifying any changes in directions, characteristics of maker and be able to convey information in detail to base or other trackers.

While track by track (a.k.a. step by step) is a viable tactic to use for reconstructing a crime scene and maintaining connection with a person's trail, it is not the only tactic available to trackers. There are a variety of tactics that can be utilized in order to advance the trail or regain a lost trail in a methodical, systematic and disciplined manner.

Candidates will be evaluated on their knowledge of various tracking tactics. Candidates will also have to demonstrate their ability to reacquire lost sign using tactics, as well as their ability to use the appropriate tactics to close the time/distance gap between the tracker and the lost subject.

7. TRAILING

7.1.2. Scoring

The only station that provides a candidate an opportunity to demonstrate trailing skills is the PLS/LKP station. The candidate's score in this category will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate does not employ any tactics to advance or recover trail. Verbally expresses lack of need to know, or disinterest in needing to know, how to use tactics to advance the trail.

1 POINT – Candidate can explain the use of tactics but cannot follow distinct trails in easy trailing conditions (e.g. snow, sand or mud or tracks made with emphatic intent in moderate difficulty ground covers). May lose the line of sign when moving from one ground cover to another, does not easily recover the sign. Struggles to progress forward on the sign line. Does not use tactics or tools to try and recover trail when loses or off the trail, or does so in inefficient manner. Can discuss the advantages and disadvantages of using one type of tactic to follow a trail of interest.

2 POINTS – Candidate is able to follow a distinct line of sign without contamination or crossing trails. May lose sign at direction changes or ground cover changes. Struggles to locate sign in changing lighting conditions; such as moving from an open field into tree cover. Does not progress forward on the line without having multiple difficulties and false positives. Can discuss the advantages and disadvantages of using two or more types of tactic to follow a trail of interest. Candidate takes an hour to advance the track line one hundred feet.

3 POINTS – Candidate is able to follow a distinct line of sign with limited contamination or crossing trails. Works moderately well from one substrate to another and at points of direction changes, can identify when on misleading sign and can recover track line with some difficulties. Is able to follow out a 100-yard trail of moderate difficulty. There should not be any more than two false positives on line. A tracker at this level should be able to progress on the trail at minimum of one hundred feet in thirty minutes, and should be able to identify every step in a continuing twenty five feet of the trail. Can discuss the advantages and disadvantages of using three or more types of tactic to follow a trail of interest. A Cybertracker Level I Tracker or equivalent certification within the last two years may earn a tracking candidate 3 points in this category.

4 POINTS – Candidate is able to identify and follow a distinct track line that changes direction several times over many ground covers, day or night, and under different weather conditions. May struggle to progress over a highly

contaminated area with effort, can recover from misleading sign. Is able to follow out a 200-yard trail of varying difficulties. The tracker should be able to move on the trail at a minimum of one hundred feet in twenty minutes, from time track line had been identified, with having no more than two false positives. The tracker at this level should have the ability to identify every step in a continuing fifty feet of the track line. Can discuss the advantages and disadvantages of using four or more types of tactic to follow a trail of interest. A Cybertracker Level II Tracker or equivalent certification within the last two years may earn a tracking candidate 4 points in this category.

5 POINTS – Candidate is able to identify and follow a distinct prime sign line over almost any ground cover, day or night, can work the sign through contaminated areas with little effort. Candidate uses tactics to stay on the trail and reduce the chance for any false leads. Is able to follow out a 300-yard trail of varying difficulties. Candidate is able to identify and follow a complicated and difficult distinct multi-direction track line over any ground cover, day or night, under different weather conditions and seasonal changes. Able to move forward on the track of interest at a rate of one hundred feet in fifteen minutes, in primarily an upright walking position. Has little hesitation when crossing contaminated areas containing multiple sign, or at trail crossings and at points of direction change by subject, by performing either track by track or by employing tactics. Should be able to read the characteristics of the sign to identify changes in the track maker's physical or mental state or if subject is being evasive. The tracker at this level should be able to identify every step in a continuing one hundred feet of trail. Can discuss the advantages and disadvantages of using five or more types of tactics to follow a trail of interest. A Cybertracker Level III Tracker or higher, or equivalent certification within the last two years may earn a tracking candidate 5 points in this category.

7. TRAILING

7.1.3. Field Evaluation

The tracking candidate will be evaluated on his/her abilities to formulate, communicate and execute tactics to find and follow the sign of a particular track maker.

A scenario station will be set up for each evaluation that involves a Point Last Seen or Last Known Point (e.g. a clue or an abandoned vehicle). At least one track line (and up to two track lines with different footwear or people) will be left from the vehicle. Each track line will be made in different level of difficulties, from easy through moderate to difficult for a person to follow. The track line will be approximately three hundred (300) yards long. The first one hundred yards will be the easiest to follow, then subsequent 100-yard sections will be increasingly difficult to follow based on ground covers and intent used to place the tracks. The entire track line will cross at least five different ground covers (e.g. dry sand, wet sand, dry clay, wet clay, thawed grass, frozen grass, tall vegetation, deciduous leaves, pine needles, gravelly soil, gravel, rock, concrete/asphalt, etc). There may be up to five other track lines through the area to simulate a search team or other contamination over the person of interest's track line.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

8. CLUE MANAGEMENT

8.1.1. Category Description

Every search for a missing person should be managed by search volunteers as a crime scene until it is proven otherwise, and volunteers rarely have the opportunity to prove otherwise during and immediately after the search. Possible clues are discovered on a regular basis at searches. Possible clues range from personal belongings such as phones, wallets, watches, glasses and clothing to discards such as notes, cigarette butts as well as tracks and other sign.

Field determination of the validity of the possible clue is often not possible. Therefore, all possible clues should be treated as potential evidence and managed accordingly. Proper and professional clue management includes documentation, recording, preserving and communicating clue information. Information that should be communicated includes the nature and location of the clue.

8. CLUE MANAGEMENT

8.1.2. Scoring

The candidate's score in this category will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate does not acknowledge the value of protecting, documenting and reporting potential clues. Verbally expresses a lack of need to preserve clues or demonstrates a behavior that is destructive, damaging or otherwise disturbs clue condition.

1 POINT – Demonstrates one consideration for clue management. Candidate may handle a potential clue inappropriately such as picking it up without authorization or demonstrates other clue-disturbing actions.

2 POINTS – Demonstrates two considerations for clue management. Candidate may manage or preserve clue without disturbance but does not report clue information. Does not take steps to preserve clue such as marking with flagging tape or photo-documenting clue.

3 POINTS – Candidate demonstrates three considerations for clue management. May demonstrate minimum clue management behavior to preserve clue such as keeping unnecessary people away from the clue. Candidate also records and communicates some information about the clue.

4 POINTS – Demonstrates four considerations for clue management. Candidate gathers thorough clue information such as location and condition. Communicates clue information, requests and follows direction from superiors as to clue handling. Photo-documents clue before disturbing it in any way.

5 POINTS – Candidate gathers thorough clue information such as location and condition. Communicates clue information, requests and follows direction from superiors as to clue handling. Photo-documents clue from several angles and perspectives before disturbing it in any way. Sketches clue location in reference to any landmarks, track line, terrain, structures and other features.

8. CLUE MANAGEMENT

8.1.3. Field Evaluation

The assessment of a person's ability to properly manage clues will be conducted during the tracking evaluation in the PLS/LKP station. A clue or two will be placed within close proximity of the track line. A candidate's ability to manage the clue will be evaluated according to the criteria described above.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

9. PROFESSIONALISM

9.1.1. Category Description

Professionalism is a measure of how individuals present themselves and their organization and the manner in which they conduct the duties and tasks assigned to them. The way a search and rescue professional presents him/herself reflects the Virginia SAR program, the person's group and the person himself/herself. Professional presentation includes appearance, demeanor, attitude, interaction with others and possibly additional criteria.

A person's appearance as a professional includes wearing a group uniform and being equipped for the weather and task. A person's demeanor involves how she/he presents herself/himself throughout a task, training or search mission. A person's demeanor, attitude and interaction with others are all interrelated, and can affect the overall teamwork dynamic when various resources, agencies and individuals work to find the missing person. A tracking candidate's demeanor and interaction with others include (but are not limited to) one's subordinates, superiors, base personnel, search manager, subject family and friends, and the authority having jurisdiction.

Additional aspects under consideration include: the willingness and preparedness to accept any task and/or perform other duties for which they are qualified, willingness to go beyond the bare minimum in completion of duties, acknowledgement of limits, flexibility to switch between tasks/duties as necessary throughout the conduct of the search and the willingness to share knowledge and mentor others in the art and science of tracking.

Candidates achieving the highest score for professionalism will exhibit all of these elements to a high degree. These candidates are careful to show the utmost respect to all. They readily perform any assignment asked of them within the limits of their qualifications and capabilities, and they are properly prepared for these tasks. They are positive and encouraging to others, and share their knowledge and experience to both aid the search effort and train/educate those less experienced. They understand the importance of maintaining a professional appearance and they strive to look and act in a manner that places themselves and their organizations in a positive light.

9. PROFESSIONALISM

9.1.2. Scoring

The candidate's score in this category will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate displays a consistent lack of professionalism through words or deeds, and/or is disrespectful towards the family, search team members, or AHJ personnel. Is ignorant of or totally disregards the potentially negative impact of his/her actions. Is not able, and/or expresses no desire, to work or function outside of a tracking environment.

1 POINT – Frequently portrays a lack of professionalism or ability/willingness to work with others. Seeks out only those on same team, not willing to work with others outside of own team. Limited ability or willingness to function outside of a tracking environment. Frequently lacks equipment for non-tracking tasks.

2 POINTS – Candidate responds to requests whether or not s/he is capable of performing them. May function well on tracking aspect of training or mission, but does not participate or assist with other search tasks or rescue. Some or minimal equipment for tasks in either role.

3 POINTS – Candidate works well with others within team. Portrays as a professional person both in knowledge and appearance. Correctly communicates abilities and information to others. Moderate knowledge and ability to function in a search environment in addition to tracking. Can work in a limited capacity on both search as well as rescue side, and is adequately equipped for either role. Has one tracker recommendation form submitted on behalf of candidate.

4 POINTS – Candidate works well with others regardless of team make-up or position on team. Able to accurately convey own abilities and deficiencies. Has proficient knowledge of both search as well as rescue side of event and can function in either. Seeks tracking and non-tracking tasks. Appearance portrays professional elements of member organization. Has two tracker recommendation forms submitted on behalf of candidate.

5 POINTS – Candidate consistently projects self as professional on and off the team. Appearance portrays professional elements of member organization, including identification of membership with member organization. Candidate is respectful of others. Works well with all other agencies. Candidate has sufficient knowledge of both search as well as rescue side of event and can function fluently in either. Has three tracker recommendation forms submitted on behalf of candidate.

9. PROFESSIONALISM

9.1.3. Field Evaluation

Each field evaluation station provides an opportunity for a person to present himself/herself as a professional. Therefore the candidates' behavior at all stations will influence the score for this category.

However, it is not expected that all of these criteria will be available for assessment in an individual evaluation. For that reason this process will include the request for recommendations. Recommendations from peers, members of the tracking evaluation committee, an AHJ, training officer or group leader are all acceptable.

Recommendations will constitute seventy percent (70%) of the score for this category, with the remaining thirty percent (30%) of the score to be drawn from the tracking evaluation stations.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

10. COMMUNICATION

<u>10.1.1. Category Description</u>

Explaining tracking is an indication of a person's ability to understand and practice tracking. It is also a benefit for the community that otherwise is unfamiliar with tracking. Explaining one's capabilities and the benefits of tracking provides both education to non-trackers as well as a demonstration of professionalism that one can articulate tracking in addition to perform the skill to the benefit of the community.

Those that are to be certified at lower tracker levels are learning more themselves and aren't proficient at explaining tracking. Those that are more experienced and higher level trackers can explain what their abilities and limitations are to anyone that is willing to listen (and some that aren't).

A significant part of presenting a professional resource that can perform tracking tasks during a search for a missing person is to, at any time, inform a representative of the Authority Having Jurisdiction (AHJ) (e.g. sheriff's deputy, state trooper, park ranger, etc) on what is being done to use tracking to help solve the missing person mystery. Other people that might need explaining of what the tracker is doing include search team members, search mission staff, emergent volunteers, family members and others. The ability to discuss and explain what a tracker is doing goes a long way to having the AHJ and others appreciate and respect the process and applicability of tracking to the search mission. This is an additional aspect of the professionalism of a specialty resource such as tracking, and the individual practitioners of the specialty (i.e. the tracker).

10. COMMUNICATION

10.1.2. Scoring

The candidate's score in this category will be based on the evaluator's assessment of the candidate's performance according or similar to the following descriptions:

0 POINTS – Candidate verbally, or otherwise expresses, a disinterest in explaining tracking to others.

1 POINT – Candidate acknowledges the need for explaining tracking, and tries to explain tracking to others but is not comfortable or confident at following through with articulating tracking skills. Candidate may be overconfident in discussion i.e. that candidate's confidence outpaces his/her skill level and is trying to discuss tracking at a level that is more skilled than the tracker. May discuss one basic concept about tracking correctly.

2 POINTS – Candidate is able to informally instruct interested parties on two basic tracking concepts (e.g. the use of a tracking stick, measuring tracks or others). The tracker's vocabulary is limited in usual terms (uses two to three terms correctly) or uses some terms incorrectly.

3 POINTS – Candidate is able to comfortably and effectively inform people regardless of their position in basic and intermediate concepts of tracking (e.g. signcutting tactics, importance of animal tracking, finding sign on different ground covers, etc) in an informal setting (e.g. a training) or on a real-world search. The candidate uses four to five tracking-specific terms correctly) but may use one or two terms incorrectly. Candidate receives one favorable recommendation with regard to his/her ability to explain and communicate tracking concepts.

4 POINTS – Candidate explains advanced tracking concepts (e.g. aging, resource management, etc) to others including teammates, AHJ representatives and fellow SAR personnel during trainings and real world events. Candidate may have difficulty with the finer points of justifying tracking such as when casting would be appropriate or how to apply a tracking skill to a particular situation. The candidate uses more than five tracking-specific terms correctly and uses no terms incorrectly. Candidate receives two favorable recommendations with regard to his/her ability to explain and communicate tracking concepts.

5 POINTS – Candidate exemplifies qualities of an instructor that willingly and effectively works to advance a tracking student's skill level. Candidate is able to explain advanced tracking concepts to people that have little or no knowledge about tracking. Candidate provides explanations without solicitation or prompting from an evaluator. Candidate receives three favorable recommendations with regard to his/her ability to explain and communicate tracking concepts.

10. COMMUNICATION

<u>10.1.3. Field Evaluation</u>

There will be several opportunities to see a tracking candidate conduct training sessions during an individual assessment. During the PLS/LKP evaluation station the candidate will need to explain what s/he is doing during the evaluation and debrief with the evaluator at the end of the station. During the pack check evaluation station, the candidate will explain what tools s/he uses and how. The candidate will also debrief with the evaluator at the end of the signcutting station.

Recommendations from an individual's performance outside of the evaluation stations are also suggested as an evaluation of this skill.

The candidate's demonstration of knowledge, skills and abilities in this category during search tasks in trainings or real missions can also be cited by an evaluator in support of a score in this category.

APPENDIX:

FIELD EVALUATION STATION DESCRIPTIONS

1. TRACKING TOOLS EVALUATION STATION

An evaluation station will be conducted to allow candidates to explain conceptual tracking tools and to demonstrate the tools carried in their pack. Each candidate will explain the uses for these and other tracking tools. This will be called the tracking tools station. This station contributes scores to the Tools, Professionalism and Communication categories.

A pack check will be conducted to ensure that search and rescue tracking candidates have equipment appropriate for SAR and law enforcement tasks. Tracking candidates should be prepared to be self sufficient for tasks in wilderness environments for at least eight (8) hours from leaving the command post or search base. A tracker's search pack should, at a minimum, have (and the candidate should be able to explain how to use) the following items:

1. Logbook and writing utensil,
2. Measuring device with at least one-quarter inch (¼") or centimeter (cm) graduations
3. Mirror
4. Flashlight or headlamp
5. Track Marking material (e.g. flagging tape, powder, sticks, etc)
6. Tracking stick or equivalent

If any of those items are to be improvised in the field, the tracking candidate is welcome to explain that. Other suggested equipment include a camera, GPS, string, sunglasses, hat, map case, tweezers, calipers, aluminum foil, casting material, etc.

There are intangible tools that a tracker must consider using as well. Those tools consist of (but are not limited to) sun/light angle, senses, baseline, track traps, indexing and others.

2. SIGN SQUARES EVALUATION STATION

Several evaluation stations will be set up to evaluate a tracker's detection and interpretation knowledge, skills and abilities. One station that contributes to a tracker's overall score for sign detection and interpretation is called the Sign Squares station. The Sign Squares station will evaluate a tracker's ability to detect and interpret sign in a small area.

This station will consist of several (six to nine) squares that are approximately six feet by six feet in dimension. Each square will be marked with a boundary marker such as chalk, string, flags or flagging tape. If there is any question about the boundaries of any square, that question must be asked at the beginning of the station. Each square will also be labeled by letters starting with A. The particular direction of the square will be announced by two (2) indications. The first indication will be the cardinal compass directions North, East, South and West. The squares will be oriented to the compass directions on site. The second indication will consist of flags or other markers indicating twelve (12) increments around the boundary of the square. These will be labeled 1 through 12 like the face of a (square) clock, with 12 oriented in the northerly direction.

Each square will have 0, 1 or 2 paths of travel through the square. Each path of travel will consist of three to four tracks. Tracking candidates will be asked to indicate the location of track lines in the squares as well as the direction of travel of the tracks and sign. The scores for this station will be factored in to the overall score for a tracker in the Track Detection and Direction of Travel Interpretation categories.

Candidates will have one hour to complete this station. Candidates may walk around the squares but cannot make any mark, footprint, handprint, disturbance from equipment or otherwise in the square as defined by the square boundary markers. If the candidate alters the interior of the squares in any way, the candidate will be disqualified from the station and be given a score of 0 for the station. The candidate may test this station at the next evaluation opportunity. Once the candidate has completed the station, s/he will present his/her answers to the evaluator. The evaluator will then debrief with the candidates on the answers for each square.

A candidate will receive credit when a track line is correctly indicated in location. The track line indicated by the candidate must be within a margin of error of no more than one (1) 'hour' of the line placed by the evaluator. For example, if an evaluator places a line of tracks from 3 to 9 (east to west) in the square, all of the following indications will be correct and earn credit for the candidate in track detection: 3-9, 4-9, 2-9, 2-10, 3-10, 4-10, 4-8, 3-8, 2-8, 9-3, 9-4, 9-2, 10-2, 10-3, 10-4, 8-2, 8-3, 8-4. Any 'half-hour' indications between 2 to 4 and 8 to 10 would also be acceptable (e.g. 3:30 – 9:30). For the same example, any indication from 10:30 clockwise to 1:30 and 4:30 clockwise to 7:30 would not be accepted for an answer.

For credit to be earned in interpreting the direction of travel, the correct direction must be indicated. For this part of the evaluation (and using the example above), credit would be earned for any of the following answers: 3-9, 4-9, 2-9, 2-10, 3-10, 4-10, 4-8, 3-8, 2-8. Any 'half-hour' indications from 2 to 4 going towards 8 to 10 would also be acceptable (e.g. 3:30 – 9:30). If a candidate indicated the tracks were going from (within an hour of) 9 to 3, s/he would get credit for detection but not for direction of travel.

3. SIGNCUTTING EVALUATION STATION

An evaluation station will be set up to evaluate a tracker's detection and interpretation knowledge, skills and abilities. This station is called the signcutting station. The signcutting station will evaluate a tracker's ability to detect clues and sign along a linear feature. This station will also contribute to the evaluation scores of a tracker's ability and skill to interpret human or animal sign and direction of travel, as well as explain what s/he has found to the evaluator.

This station will consist of a linear feature (e.g. road, trail, drainage, etc) along which the candidate will look for clues, sign and tracks (i.e. cut for sign). The length of the feature may vary, but will typically be two hundred (200) feet long. The evaluator will make every reasonable effort to ensure that the station is pristine (having a lack of recent human activity) or account for pre-existing clues & sign in the debriefing and scoring of the station. Along that feature several track lines will be placed that intersect the feature. Clues will also be put out for the candidate to detect. Candidates will have one hour to complete this station. Candidates must walk on the immediate feature (not more than eight (8) feet wide), and cannot wander off of the feature. If the candidate wanders off of the defined feature the candidate will be disqualified from the station and receive scores of 0, but s/he may test this station at the next evaluation opportunity.

Once the candidate has completed the station s/he will debrief the station by walking with the evaluator and informing the evaluator what was detected in terms of tracks and clues. Once the candidate is done with his/her debriefing, the evaluator will then debrief the candidate on what was correctly detected (clues & tracks) and that which was erroneously detected (not placed as part of the evaluation, not human tracks or not tracks at all).

4. SIGN INTERPRETATION EVALUATION STATION

An evaluation station will be set up to evaluate a tracking candidate's knowledge, skills and ability to interpret sign. This will be called the sign interpretation station.

The station will be set up with ten (10) to thirty (30) questions about tracks and sign. Each question can be a track or sign made by a human, animal or other (vehicle, lightning strike, tool mark, etc). There is no limit on what sign can be asked, but this station will focus on human tracks and sign or what can be interpreted as human sign. Questions posed will typically be "What made this?", "What is the direction of travel?", or others. A score will be given for the response received for each question as follows:

0 POINTS will be given for an incorrect human/non-human response to the question "What made this?" The following scoring will be compared to these actual answers as examples (e.g. A beaver chewed a tree that was actually cut by a chainsaw or a track was made by a human when it is actually a coyote track). Or complete shooting from the hip (distinctly and significantly erroneous answers e.g. duck-billed platypus for sign typically found in the United States).

1 POINT will be given for an answer that is not correct but is at least a recognition of the track/sign being made by a human, animal, or non-animal (a person cut a tree or a non-human made the track).

2 POINTS will be given when a correct human/non-human distinction is given but not specific answer or similar but not correct (e.g. a tool was used to cut a tree or a mammal made the track).

3 POINTS will be given when a specific cause is given but is not entirely correct (a hand saw was used to cut the tree or a domestic dog made the track).

4 POINTS will be given when a general cause is close to the answer (e.g. a saw was used to cut a tree or a canine made the track).

5 POINTS will be given when the correct specific cause is given (a chain saw was used to cut a tree or the track is that of a coyote).

The scores of all the questions will be summed then averaged for the total amount of questions. This average score will be the predominant factor in the Humanimal Interpretation category score.

5. AGING EVALUATION STATION

An evaluation station will be set up to evaluate a tracker's knowledge, skill and ability to determine the age of tracks and sign. This station is called the aging station. This station will contribute to the overall evaluation scores of a tracker's ability to interpret the amount time that has passed since a track of sign was made.

A method of testing the candidate's ability to age sign is by setting out, as part of the testing process, tracks and sign at known times and quiz the candidate as to the age of the sign. Four to five rows of tracks will be placed and marked. The tracks can be placed up to seventy-two (72) hours before the evaluation. It is best to have a set that is near 72 hours, 48 hours, 24 hours, 12 hours and 1 hour old at the time of the evaluation. The candidate will have one hour to complete this station. The time that each candidate begins the evaluation station will be considered when grading the answers submitted by the candidate.

Candidates may walk around the tracks but cannot disturb the tracks in any way to provide equal opportunity for all candidates working the station to see the same tracks. If the candidate alters the tracks in any way, the candidate will be disqualified from the station and be given a score of 0 for the station. The candidate may test this station at the next evaluation opportunity.

Once the candidate has completed the station, s/he will present his/her answers to the evaluator. The evaluator will then debrief with the candidates on the answers for each track line.

SCORING

The following scoring matrix will be used to score the aging answers.

O POINTS - Candidate gives an answer that is greater than 48.0 hours different than the known age of the tracks.

1 POINT - Candidate gives an answer that is 24.1 to 48.0 hours different than the known age of the tracks.

2 POINTS - Candidate gives an answer that is 12.1 to 24.0 hours different than the known age of the tracks.

3 POINTS - Candidate gives an answer that is 6.1 to 12.0 hours different than the known age of the tracks.

4 POINTS - Candidate gives an answer that is 3.1 to 6.0 hours different than the known age of the tracks.

5 POINTS - Candidate gives an answer that is less than or equal to 3.0 hours different than the known age of the tracks.

The average score from this station will be factored in to the overall score for the candidate's interpretation of aging tracks and sign.

6. KNOWN / UNKNOWN EVALUATION STATION

A station will be set up to evaluate a tracker's knowledge, skills and ability to interpret the identification of tracks. This station is called "Known/Unknown". It will evaluate the tracker's ability to gather information about particular tread patterns, compare that information to a set of unknown tracks and draw a conclusion as to which known tread pattern made the unknown track. This station will consist of two parts; the 'knowns' and the 'unknowns'.

The first part will be a set of given tracks – the knowns. These tracks will be clear, obvious and complete tracks that will be presented for the tracking candidate to view and gather information, by any means (except those that will alter or deteriorate the track) such as viewing, drawing, measuring and photographing. Once the tracker has studied the known tracks to his/her satisfaction, the tracker will proceed toward the second part of the station. At that point the tracking candidate will not be allowed to view the area with the known tracks again.

In the Unknown area, there will be approximately 20 small segments (approximately two feet by two feet in dimension). In each segment there will be either one track or no recent tracks (a blank). The track may be a partial (small or large) or full track. Each track will be made by either (1) one of the given "known" tracks, or (2) by a tread that was not presented in the series of 'known' tracks. It is possible that one or more of the segments will have no track in it at all. The tracking candidate will then document his/her answers for each of the unknowns as (1) having been made by the footwear that made one of the particular known tracks, (2) none of the known tracks (other) or (3) no track at all.

Candidates will have one hour to complete this station. Candidates may walk around the squares but cannot make any mark, footprint, handprint, disturbance from equipment or otherwise in the square as defined by the square boundary markers. If the candidate alters the interior of the squares in any way, the candidate will be disqualified from the station and be given a score of 0 for the station. The candidate may test this station at the next evaluation opportunity. Once the candidate has completed the station, s/he will present his/her answers to the evaluator. The evaluator will then debrief with the candidates on the answers for each square.

7. POINT LAST SEEN / LAST KNOWN POINT (PLS/LKP) EVALUATION STATION

STATION SETUP

A station will be set up to evaluate a multitude of knowledge, skills and abilities that a search and rescue (SAR) tracker must demonstrate. This station is the PLS/LKP station.

A scenario station that involves a Point Last Seen or Last Known Point (e.g. a clue, witness sighting or an abandoned vehicle) will be set up for each evaluation. One track line representing the person of interest or search subject will be placed starting at the PLS or LKP. The track line for the person of interest will be made in different levels of difficulties for the tracking candidate to follow. These levels will vary from easy (placed in track traps or stomped in with a lot of intention), medium difficulty (placed with some scuffing activity or other intention) to difficult (normal walk but not in track traps) and very difficult (evasive behavior or significant contamination from other track makers). Each track line will cross at least five different ground covers (e.g. dry sand, wet sand, dry clay, wet clay, thawed grass, frozen grass, tall vegetation, deciduous leaves, pine needles, gravelly soil, gravel, rock, concrete/asphalt, etc).

After the "subject's" tracks are placed, at least one additional set of tracks will also be placed at the PLS/LKP. These will represent tracks of a known party such as the reporting party or the person that the candidate will be interviewing at the onset of the scenario station of the evaluation. This additional track line provides the candidate the opportunity to inventory and eliminate at least one set of tracks as being known to not be the subject.

There may be up to five other track lines through the 'very difficult' area to simulate a search team or other contamination over the person of interest's track line. Material clues (other than tracks e.g. phone, hat, card) will be placed around or along the station for the candidate to detect and manage.

EVALUATION

The evaluator will initially present the scenario to the candidate. The candidate should then approach the scenario as they would in a real world situation. The candidate will have the opportunity to ask the evaluator questions. The candidate will then be evaluated on how s/he questions the reporting party for additional information. A candidate may have any form of pre-written questions or other memory-assisting resources to aid in recall of which questions to ask.

After the tracking candidate has assessed the scene and inventoried the track patterns present, s/he must identify and eliminate the tracks that were made by person(s) (and associated track patterns) known not to be the missing person. Tracking a person by following his/her footfalls then requires a continual and repeated process of identifying the correct track pattern amongst others that were not made by the person of interest. A successful trailing effort requires continual interpretation of the correct direction of travel of the tracks and sign that were made by the person of interest.

The candidate will have three (3) hours to complete this station. When the candidate has completed the station, s/he will debrief with the evaluator to inform him/her what was found. The candidate's ability to pass on pertinent information to others will be evaluated. Candidate should report any and all findings to the AHJ or

person acting as the AHJ in an evaluation. This verbal reporting includes, but is not limited to, finding the subject's tracks, finding known tracks, and any other tracks that may be within or outside of the scenario time frame.

Once the candidate is done with his/her debriefing, the evaluator will then debrief the candidate on what was correctly detected (clues & tracks) and that which was erroneously detected (not placed as part of the evaluation).

8. ARBITRATION / APPEALS IN EVALUATION

Any disagreement about an answer, opinion or other conflict in the tracking evaluation will be managed with the following guidelines:

1. In the course of the station, the candidate will present his/her answer(s) to the debriefing evaluator.
2. The evaluator will present the correct answer(s) to the candidate.
3. If there is any disagreement, the candidate may express that to the evaluator.
4. A second evaluator may be requested by the candidate for consultation on the correct answer(s). The second evaluator will typically have been involved in setting up the evaluation station.
5. If an understanding is reached between the candidate and the evaluators, then that will be the end of the appeal and the mutually agreeable answer and associated scoring will stand.
6. If both evaluators are in agreement about a scoring item, then one of these two results may be the course of action:
    a. If an understanding cannot be reached between the evaluators and the candidate, then the station score(s) will stand as decided by the evaluators.
    b. The evaluators may decide to dismiss the station score(s) and the candidate will then retain his/her score(s) on record before the station in question.
7. If the two evaluators cannot agree about a scoring item, the station may be discounted and the candidate will retain his/her scores on record before the station in question.
8. If the candidate is still unsatisfied with the evaluators' decisions, then she/he may submit a complaint to the VDEM SAR Training Specialist or SAR Coordinator.