

**Arizona Peace Officer Standards and Training Board © 2007
2643 East University Drive, Phoenix, Arizona 85034 (602) 223-2514**

**Arizona Peace Officer Standards and Training Board
PEACE OFFICER PHYSICAL APTITUDE TEST
(POPAT)**

The Peace Officer Physical Aptitude Test (POPAT) is administered to cadets in one of the Board's approved academies and is also required for peace officer applicants applying for waivers of the Basic Peace Officer Course. For academy cadets, the POPAT (or other job-related physical aptitude test approved by the Board) will normally be administered during the fourth to sixth weeks of training. It shall also be administered prior to the conclusion of the physical conditioning program and/or the cadet's successful graduation from the academy. **The POPAT has been designed for use in the Basic Peace Officer Course and is only approved for such use or as a part of the Board's waiver process.**

This section of the manual contains a brief description of how the POPAT was developed, as well as written procedures for administering and scoring the test. Also included are AZ POST Guidelines for Evaluating Alternative Physical Aptitude Tests.

A. DEVELOPMENT OF THE POPAT

Development of the POPAT consisted of conducting a detailed job analysis to identify the nature and extent of significant physical tasks performed on patrol. A combination work diary-interview-survey approach was used to collect the job analysis information. This data was used to develop tests which simulate actual job tasks (climbing obstacles, moving incapacitated persons, etc.). A total of five work sample tests were developed for inclusion into the POPAT:

99-YARD OBSTACLE COURSE Run a 99-yard obstacle course consisting of several sharp turns, a number of curb height obstacles, and a 34-inch high obstacle that must be vaulted.

BODY DRAG Lift and drag 165-pound, lifelike dummy 32 feet.

CHAIN-LINK FENCE Run five yards to a six-foot, chain-link fence, climb over fence, continue running another 25 yards.

SOLID FENCE CLIMB Run five yards to a six-foot solid fence, climb over fence, continue running another 25 yards.

500-YARD RUN Run 500 yards (equivalent to one lap plus 60 yards of a standard running track).

B. ADMINISTRATION OF THE POPAT

For purposes of assuring standardization across the state, all test equipment must meet stated specifications and all test protocols must be strictly followed. The POPAT shall be supervised by at least one test administrator who may be assisted by an appropriate number of test proctors. The POPAT shall be administered during one concurrent session.

Requirements for Test Administrators

POPAT administrators shall be Board specialty instructors in the area of physical conditioning or have equivalent training. A four-year degree in physical education or completion of a Board-approved physical conditioning program shall be considered equivalent training.

Recommendations for Test Proctors

As a means of ensuring that all tests are administered in a consistent and proper manner, it is recommended that all proctors have some background in exercise and exercise testing. Proctors need not have an extensive formal educational background, but should have a working familiarity with the types of tests that are included in the POPAT or other Board approved physical aptitude tests used by an academy. Training should be provided for those persons selected to be test proctors. An approach which has been found to be particularly effective for this training consists of having the proctors, as a group, go through the following step-by-step process for each test in the POPAT.

1. Review and discuss test proctor instructions.
2. Set up all testing equipment as specified in instructions.
3. Review set up for correctness; note critical features of setup and/or errors made in set up.
4. Administer tests to each other; proctors take turns being test subjects; where appropriate, proctors compare test results obtained for given test subject (e.g., stopwatch reading).

5. Critique and discuss results of trial administrations; note critical features of test administration; resolve all discrepancies identified during trial administrations.
6. Continue steps four and five, as necessary.

At the conclusion of this process, each proctor assumes his/her designated test station and several volunteers proceed from station-to-station through the entire POPAT. This allows the proctors to field test and identify any revisions that need to be made in the sequencing of the tests.

C. PROTOCOLS FOR POPAT ADMINISTRATION

Each segment of the POPAT is administered at a separate test station. All tests are timed. With the exception of the 500-Yard Run, each test is administered twice and the time for the fastest trial is used as the cadet's score. The specific instructions for administering each test follow. A flow chart depicting the processing of candidates and a form for recording each candidate's test data are also provided.

Example Test Flow Chart for Peace Officer Physical Aptitude Test (POPAT)

Proctors Required¹	Test Station	Elapsed Time (in minutes)²
3	A: Warm-up exercises	15 ³
1	B: Agility Run (2 trials)	15
1	C: Body Drag (2 trials)	15
1	D: Obstacle Climbs Chain Link Fence (2 trials) Solid Fence (2 trials)	20
3	E: 500-Yard Run	15 ⁴
Total Proctors:		3
Cadet Testing Rate:		40/1.5 hours (cadets tested in groups of 15 or less; each group begins at different station (B to D) and changes among stations, B, C, D every 15-20 minutes). All cadets are at stations A and E at the same time.

¹One proctor assigned to test stations B, C and D. All proctors are present at Station A and E.

²Estimates assume all test stations will be located in close proximity to each other.

³All cadets should group together at Station A for warm-up.

⁴All cadets report at same time and are run in groups. Group size will depend on number of available stopwatches.

Station A - Initial Processing/Warm-Up

MATERIALS: Cadets' scoring forms, pencils and an area large enough to conduct the warm-up routine.

PROCEDURES:

1. Give each cadet a POPAT data collection form. Instruct cadets to fill in their name, the date, and any other information that the academy wishes to collect (e.g., I.D. number, hiring agency).
2. Form three or more groups of equal size. Inform cadets that they are to remain with their group throughout the test. Academies with very large classes may need to form more than three groups.
3. Move cadet class to warm-up area (if not already there) and conduct warm-up activity.
4. Following warm-up, send each group to each test station using the following schedule. (Large classes may require a different schedule):

Group	1 st Station	2 nd Station	3 rd Station	Last Station
Group 1	Station B	Station C	Station D	Station E
Group 2	Station C	Station D	Station B	Station E
Group 3	Station D	Station B	Station C	Station E

Station B - 99-Yard Obstacle Course

MATERIALS: Stop watch, measuring tape, traffic cones (18), cord (250'), 6"x6"x3' curbs (3), and a 34" high obstacle (see test materials description).

SET UP:

Position obstacles and traffic cones (as specified in the diagram) on a smooth, flat, dry, paved, short grass or hard-packed surface. Re-check all measurements to verify all obstacles are correctly positioned. String cord between traffic cones.

PROCEDURES:

1. Instructions To Cadet: "This test simulates a short-distance foot pursuit that could occur in the parking lot of an office complex. This test requires you to make frequent changes in direction while running as fast as possible. This test will be administered twice, with a two-minute rest period between tests."
2. Walk length of course with cadet. Point out boundaries and emphasize that 34" obstacles *must be vaulted* by placing both hands on top of the barrier.
3. Allow cadet several minutes to stretch and warm up.
4. Position cadet at start line.
5. Remind cadet that:
 - a. He/she is to run the course as quickly as possible;
 - b. He/she will be tested twice, with at least a two-minute rest period between tests.
6. Assume position approximately half-way between start/finish lines as shown in the diagram. Set stopwatch at zero and start test with command, "*Ready, go.*"
7. Clock and record time taken to complete course on cadet's test form. *Record time to the nearest tenth of a second.*
8. Allow cadet two minutes to rest.
9. Re-test cadet following same procedures.
10. Direct cadet to next test station.

Station C - Body Drag

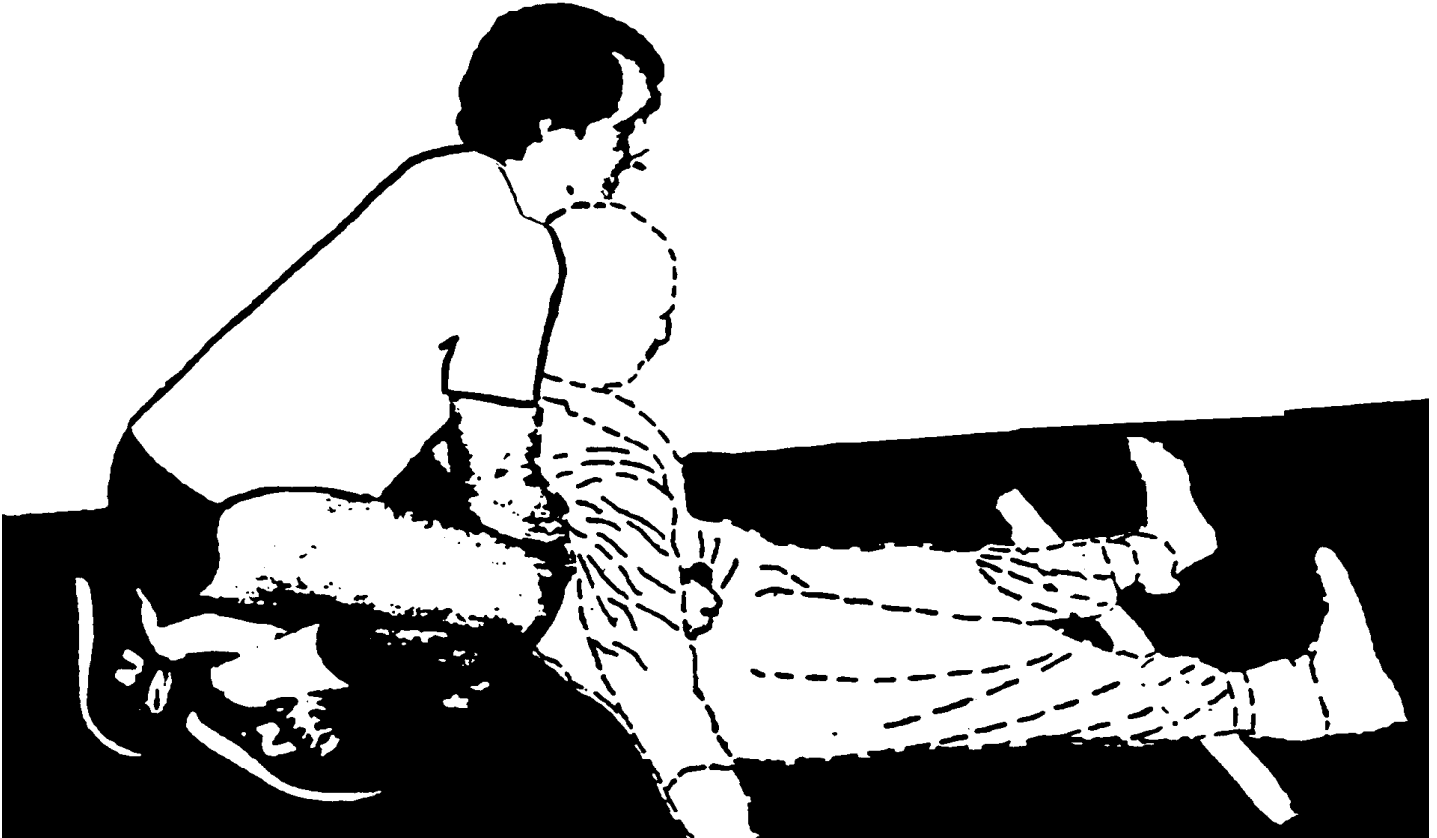
MATERIALS: Stopwatch, 165-pound dummy, measuring tape, four traffic cones and tape to mark start/finish lines.

SETUP:

1. Test is to be administered on a smooth, flat, dry, paved, short grass or hard-packed surface. Measure and mark start/finish lines 32 feet apart. Allow 10-15 feet beyond each line for the candidate to stop at the conclusion of the test. Mark lines with tape or chalk and traffic cones.
2. Position dummy face side up with head toward finish line and feet 12 inches behind start line (see diagram).

PROCEDURE:

1. Instructions to cadet: "This test simulates dragging someone who is physically incapacitated. The test requires that you lift and drag a life-like dummy that is lying face up on the floor. The dummy must be dragged 32 feet. The test will be given twice, with a two-minute rest period between. When lifting and dragging the dummy, please do not grab or pull the dummy by the head or arms as this may damage the dummy. You will lift the dummy first and tell me when you are ready to begin the test. Time starts when the dummy's feet cross the starting line and ends when the feet cross the finish line. DO NOT JERK THE DUMMY UP WHEN LIFTING IT."
2. Demonstrate proper method of grasping, lifting dummy (grabbing dummy under arms and lifting dummy's upper body off ground and up against cadet's body while knee is bent back relatively straight position - see diagram).
3. Instruct cadet to warm up by jogging in place and stretching out the lower back and trunk.
4. Remind cadet that he/she is to drag the dummy as fast as possible because the test is timed.
5. Check position of dummy. Set stopwatch at zero. Position self adjacent to cadet.
6. Instruct cadet to lift dummy at starting position. Inform cadet that test will begin when the dummy's feet cross the starting line. Start test when the dummy's feet cross the starting line.
7. Clock time that it takes cadet to drag dummy's feet across finish line. Record time to the nearest tenth of a second on cadet's test form.
8. Allow cadet to rest at least two minutes.
9. Re-test cadet following same procedures.



NOTE: It is important that cadets be thoroughly warmed up prior to this test. Particularly important are low back stretching exercises.

Station D - Fence Climb

MATERIALS: Stopwatch, six traffic cones, matting to cover side supports of fence, fence and 6' x 6' gym mat. (see test materials description.)

SETUP:

1. Position fence in center of a stretch of level, dry ground approximately 50 yards in length. Surface must be packed dirt or short grass (not pavement or long grass). Put matting on side support rails and behind fence (cadets are to land on the gym mat after going over fence).
2. Measure and mark start lines five yards from each side of fence, and finish lines 25 yards from each side of fence. Use two traffic cones to mark each line.
3. If two separate fences are utilized, the solid fence must be made of wood fence (not brick or concrete block).

PROCEDURES:

1. Instructions to cadet: *“Two tests of your ability to climb over fences will be administered at this station. Both fences are six feet high. One fence is solid wood and the other is chain link.*

The amount of time it takes you to climb the fences will be recorded. For each test you are to run up to the fence, scale the fence, and continue running to the finish line. Each test will be administered twice with at least a two-minute rest period between administrations. Your fastest time will be used as your score.

You may use any method you wish to get over the fences. However, you may not use the side supports in any manner to get over the fences. If you do, you will be scored as if you had failed to get over the fence. If you are unsuccessful in your first attempt to get over a fence, continue trying until you succeed.”

2. Position cadet at start line for six-foot chain-link fence climb (five yards from fence).
3. Inform cadet that he/she:
 - a. Is to approach and climb fence and run to finish line beyond fence as quickly as possible;
 - b. May use any method to climb fence as long as side supports are not used;
 - c. May continue trying to climb fence, if not successful in first attempt;
 - d. Will be tested twice on each fence;
 - e. Will be tested twice on the chain-link fence before being tested on the solid fence;
 - f. Will be instructed to start the test with command, "Ready, go."
4. Demonstrate a proper approach to going over the fence (with cadet observing).
5. Assume position adjacent to fence, set stopwatch at zero and start test with command, "Ready, go."
6. Observe whether cadet uses side supports to get over fence. Consider candidate to have failed to clear fence if he/she uses side supports.
7. Clock and record time on cadet's test form. **Record time to the nearest tenth of a second.**
8. Allow cadet at least two minutes to rest.
9. Re-administer test following same procedures.
10. Allow cadet to rest at least two minutes.
11. Position cadet at start line for solid wood fence test.
12. Move gym mat to chain link side of fence.
13. Repeat steps four through nine.

Station E - 500-Yard Run

MATERIALS: Stopwatch, measuring tape and two traffic cones.

SETUP: Test is to be given on a standard 440-yard athletic track. Measure and mark start/finish lines with traffic cones.

PROCEDURES:

1. Instructions to cadet: "This test simulates a long-distance foot pursuit and requires that you run 500 yards. The test consists of running one lap plus 60 yard's around the track.
When taking the test, try to pace yourself at about ¾ speed for the first lap [considerably faster than a jog, but slower than a sprint]. Do not try to sprint the entire distance. The test will be administered only once."
2. Instruct cadet to warm up by stretching and jogging in place.
3. Position cadet at start line.
4. Set stopwatch at zero and start test with command, "Ready, go."
5. Approach finish line as cadet approaches finish line.
6. Clock and record time taken to complete run on cadet's test form. **Record time to nearest tenth of a second.**
7. Review cadet's test form to confirm that all test scores have been recorded.
8. Observe cadet during cool down. Encourage cadet to walk around. Discourage cadet from lying or sitting down. **Notify appropriate personnel if cadet exhibits signs of physical distress** (dizziness, nausea, pallor, cold sweat, etc.).



PEACE OFFICER PHYSICAL APTITUDE TEST

DATA COLLECTION FORM

Participant's Name: _____

Date: _____

TEST SCORES				
(time in seconds) 4				
	1st Trial	2nd Trial	Best	Points*
Agility Run				
Body Drag				
Chain-Link Fence				
Solid Fence				
500-Yard Run				
TOTAL POINTS (SCORE):				

*See conversion charts for related points.

D. POPAT SCORING PROCEDURES

Because a cadet's total test performance is the best indication of his/her overall ability to perform the physical demands of the job, scores on the individual tests of the POPAT are combined to arrive at a total test score for each cadet. Scoring the tests in this manner, as opposed to scoring each individual test on a pass/fail basis, allows cadets to compensate for performing less than optimally on one test by performing extremely well on other tests.

Prior to combining scores, the scores on each individual test must be converted to T-scores and then weighted. This procedure places scores on the different tests on the same scale of measurement and assures that they carry a weight proportionate to their actual importance or likelihood of occurrence on the job. Since this procedure necessarily entails the use of statistical formulas requiring a working familiarity with advanced mathematical principles, a score conversion table has been provided for each test event. These tables are found at the end of this section.

Abridged and combined versions of all these tables are shown as Table 1 following. Each column in Table 1 corresponds to one of the tables found at the end of this section. Shown in the tables are the scores that correspond to different "raw" time values achieved on the individual tests. As an illustration, refer to Table 1. Under the "Chain-Link Fence Climb" column, the first entry is 4.0/120. This entry indicates that a time of 4.0 seconds on the Chain-Link Fence Climb translates to a converted weighted score of 120 points). As another example, refer to the bottom entry under the "Solid Fence Climb" column. The entry here of 15.6/58 means that a time of 15.6 seconds on the Solid Fence Climb test is equivalent to a converted weighted score of 58 points.

To determine the total score for each cadet, refer to the conversion tables at the end of this section (do not use the abridged version of these tables shown in Table 1) and write the score equivalent for the cadet's best time on each test in the space provided on the cadet's Data Collection Form. Next add up the points achieved on the five tests. The sum of these five values is the cadet's total score.

E. MINIMUM STANDARD

A minimum score of 384 points must be obtained to demonstrate sufficient physical ability to perform as a patrol officer. All cadets who score below 384 points must be provided with remedial training and must be permitted to retest *at least* once. *The retest must be all five events, administered under the same conditions as the initial test.*

Interim Test Not Scored

As indicated earlier, the primary purpose in administering the POPAT during the fourth to sixth weeks of the program is to aid staff in identifying cadets who have difficulty in particular physical aptitudes. The objective is to be able to provide such individuals with remediation prior to the final test. As such, it is not necessary or recommended that the interim test be converted to points. For reference purposes, normative information is provided in Table 2.

Table 1

AZ POST - PEACE OFFICER PHYSICAL APTITUDE TEST (POPAT)									
Abridged Score Conversion Chart									
99-Yard Obstacle Course		165-Pound Body Drag		Chain-Link Fence Climb		Solid-Fence Climb		500-Yard Run	
TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS
14.0	248	2.7	61	4.0	120	4.0	224	54.3	50
14.7	238	3.0	60	4.4	116	4.6	216	60.2	48
15.4	229	3.4	59	4.7	113	5.2	207	66.1	46
16.1	221	4.3	57	5.1	108	5.8	198	72.0	44
16.8	212	5.1	55	5.5	104	6.3	191	74.9	43
17.4	204	6.0	53	5.8	101	6.8	184	80.5	41
18.0	197	6.4	52	6.2	99	7.5	174	84.6	40
19.5	178	7.6	49	6.9	89	8.0	167	90.5	38
20.1	170	8.4	47	7.2	86	8.5	160	95.5	36
20.7	163	9.2	45	7.8	79	9.8	141	98.4	35
21.4	154	10.2	43	8.0	77	10.4	133	101.4	34
22.1	145	10.8	42	8.4	73	10.7	128	104.3	33
22.8	136	11.0	41	8.7	70	11.2	121	107.3	32
23.5	127	12.0	39	9.1	65	12.1	108	113.2	30
24.2	119	12.8	37	9.5	61	12.7	100	119.0	28
24.9	110	14.0	34	9.8	58	12.9	97	122.0	27
25.5	102	14.8	32	10.2	54	13.5	88	124.9	26
26.2	93	15.6	30	10.7	48	14.0	81	127.9	25
26.9	85	16.4	28	10.9	46	14.6	73	133.7	23
27.6	76	17.2	26	11.3	42	15.1	66	139.6	21
28.2	68	18.0	24	11.6	39	15.6	58	145.5	19

Minimum Total Passing
Score
384

**THIS CHART IS
AN EXAMPLE
ONLY**
(Not To Be Used For
Actual Scoring)

*Time given in seconds

Table 2

<p align="center">POPAT NORMS FOR MALES AND FEMALES AT CONCLUSION OF 12 WEEKS OF TRAINING</p>												
Percentile	Obstacle Course		Body Drag		Solid-Fence		Chain-Link Fence		500-Yard Run		TOTAL POINTS	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
90%	15.6	17.3	3.7	5.5	5.9	7.3	5.9	7.0	73.0	85.0	618	543
80%	16.1	18.2	4.0	5.8	6.2	7.7	6.1	7.4	75.6	90.0	604	533
70%	16.5	18.7	4.2	6.2	6.4	7.9	6.4	7.6	79.0	94.0	595	521
60%	16.9	19.0	4.4	6.5	6.6	8.2	6.5	7.9	81.0	97.0	587	510
50%	17.2	19.4	4.6	7.0	6.9	8.7	6.7	8.2	83.0	100.0	577	491
40%	17.6	19.7	4.8	7.6	7.0	9.4	6.9	8.4	85.0	102.0	568	478
30%	18.0	20.0	5.1	8.1	7.3	10.2	7.1	8.9	87.0	106.0	559	458
20%	18.3	20.5	5.4	8.8	7.6	10.8	7.4	9.4	90.0	108.5	546	438
10%	18.9	21.2	5.8	10.0	8.1	11.8	7.8	10.1	96.0	122.0	528	422
Best	14.2	15.8	2.6	4.0	5.0	5.4	4.9	5.8	61.1	74.0	655	611
Poorest	21.2	25.3	8.0	15.2	10.9	14.3	9.9	12.9	158.9	138.0	344	205
Mean	17.3	19.4	4.7	7.5	7.0	9.3	6.8	8.4	84.0	101.6	573	483
Std. Dev.	1.3	1.5	0.8	1.9	0.9	1.9	0.8	1.3	10.1	13.5	39	60
N	524	103	527	103	527	102	527	103	526	102	527	103

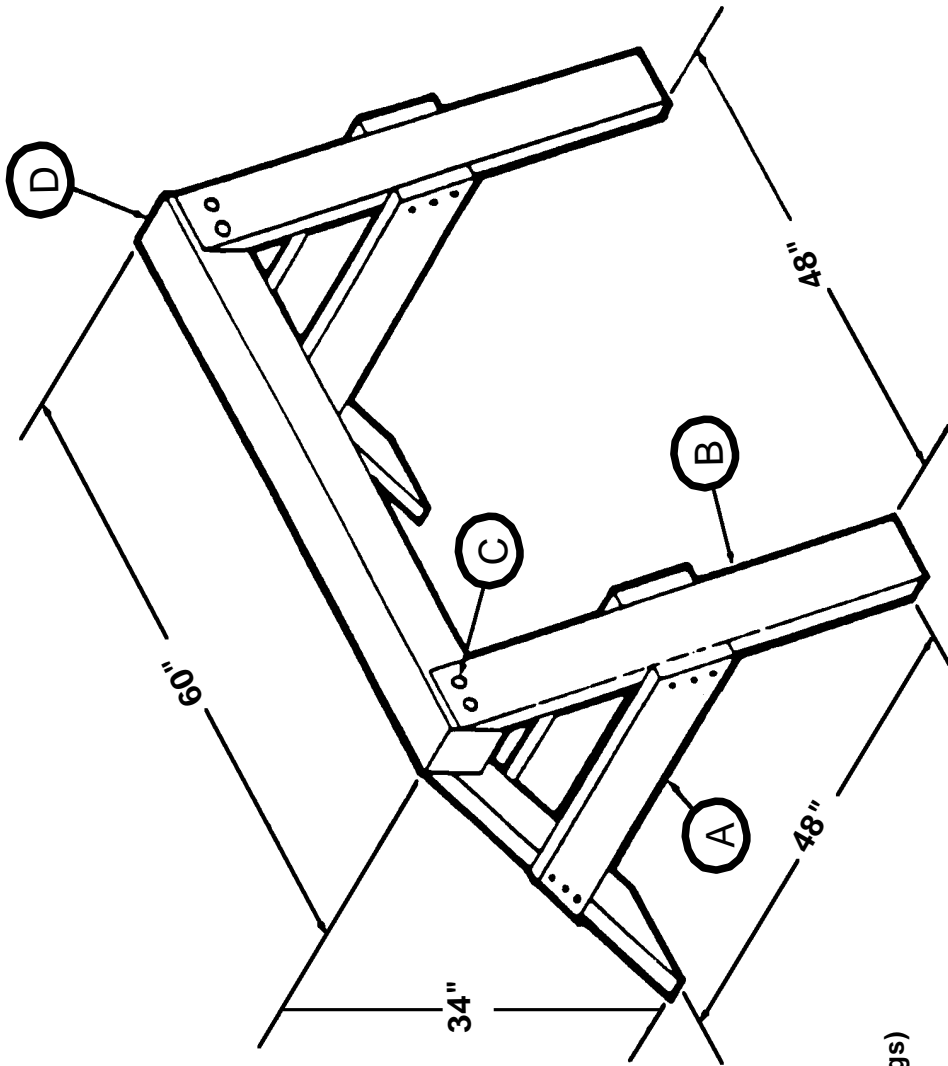
F. AZ POST GUIDELINES FOR EVALUATING ALTERNATIVE PHYSICAL APTITUDE TESTS

Academies seeking to use alternate job-related physical aptitude tests must submit the following documentation to the Board.

1. A written description of test content, including appropriate visual illustrations.
2. A detailed written description of test administration procedures.
3. A detailed written explanation of procedures used to score the test.
4. A formal validation report which explicitly describes:
 - a. Job analyses procedures and results including sampling considerations and statistical findings;
 - b. Test construction decisions;
 - c. Evidence of job relatedness, including data collection and analysis methods and results;
 - d. Psychometric properties of the test;
 - e. Rationale and procedure's utilized to establish the passing score.

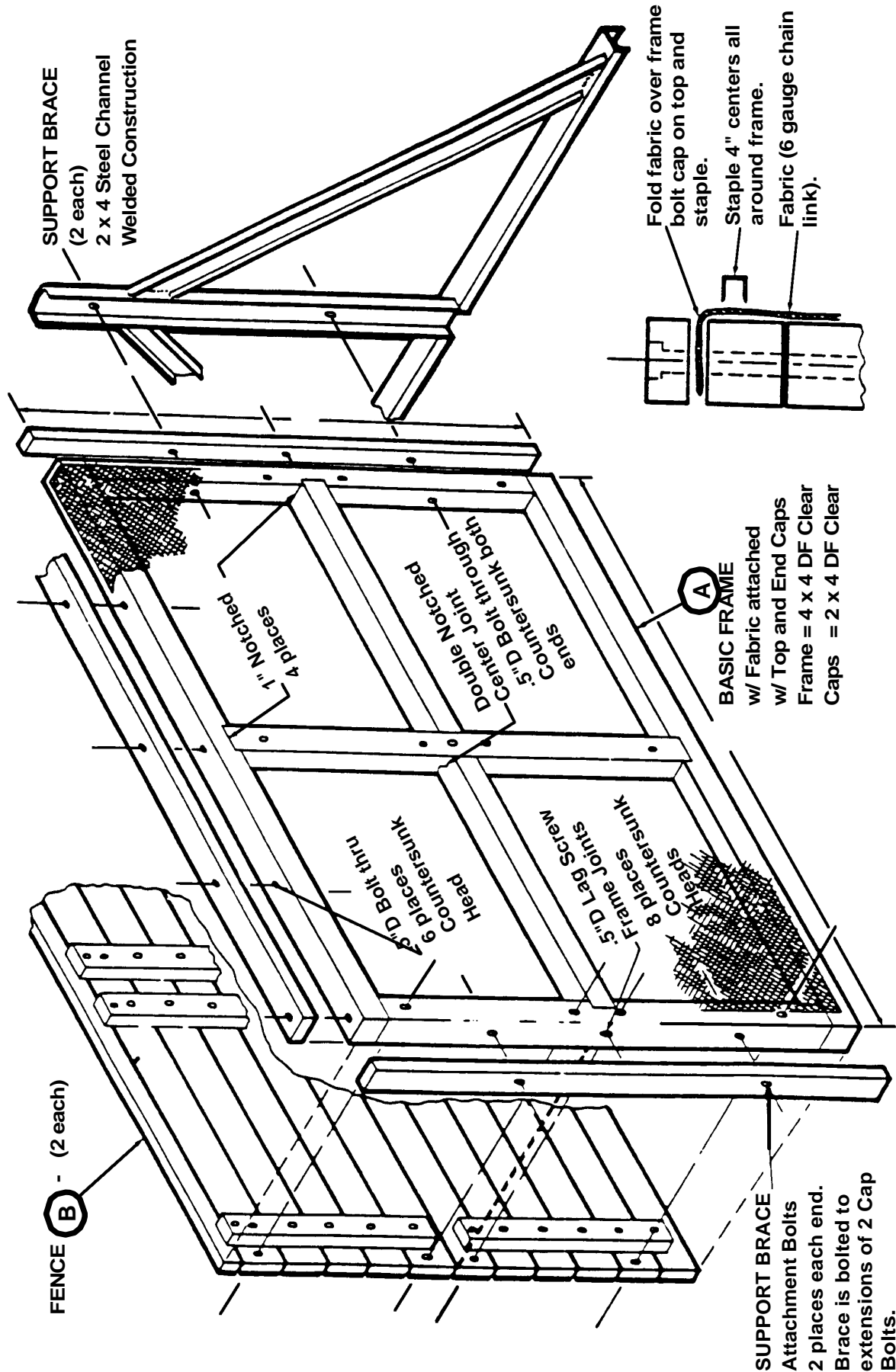
In reviewing the submitted documentation, it shall be the objective of the Board to determine only that a validation study was completed and that the proposed test is at least as rigorous as the approved POPAT. Agencies should also be aware that federal guidelines apply in determining the validity of an alternate test. The Uniform Guidelines on Employee Selection Procedures have been adopted by agencies responsible for enforcing federal equal employment opportunity law and outline the technical requirements for developing and using job-related employee selection procedures. However, Arizona POST will not endeavor to enforce or advise on compliance with these guidelines.

G. MATERIALS DESCRIPTION

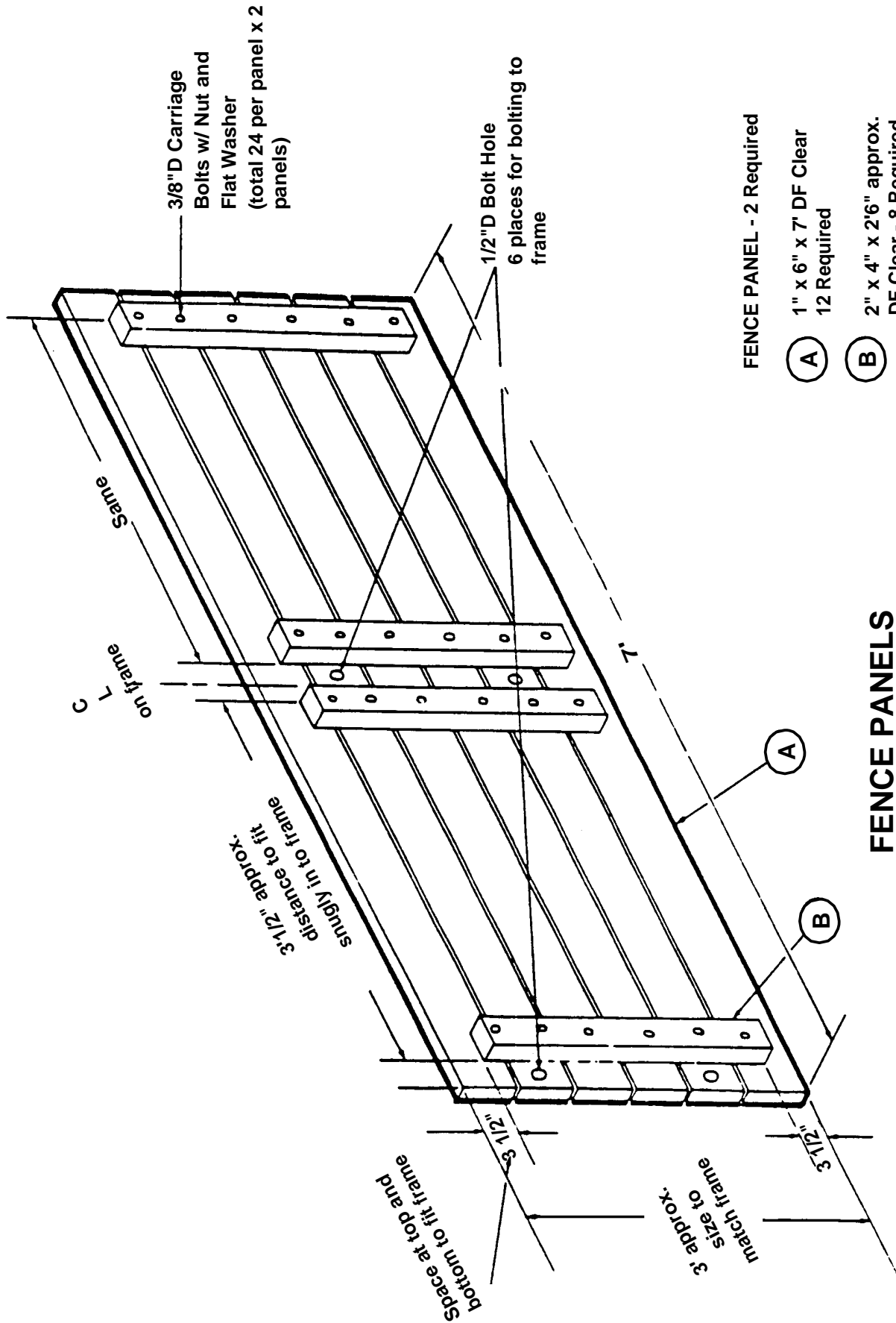


34" HIGH OBSTACLE

- (A)** 2" x 6" x 3' GUSSET
4 required (nail to legs)
- (B)** 2" x 6" x 3'6" LEG
4 required (bolt to beam)
- (C)** .5"D x 6" LAG BOLT & FLAT WASHER
8 required
- (D)** 8" x 8" x 5' BEAM
railroad tie okay if clear and clean



COMBINATION CHAIN LINK & SOLID FENCE



FENCE SUPPORT BRACES

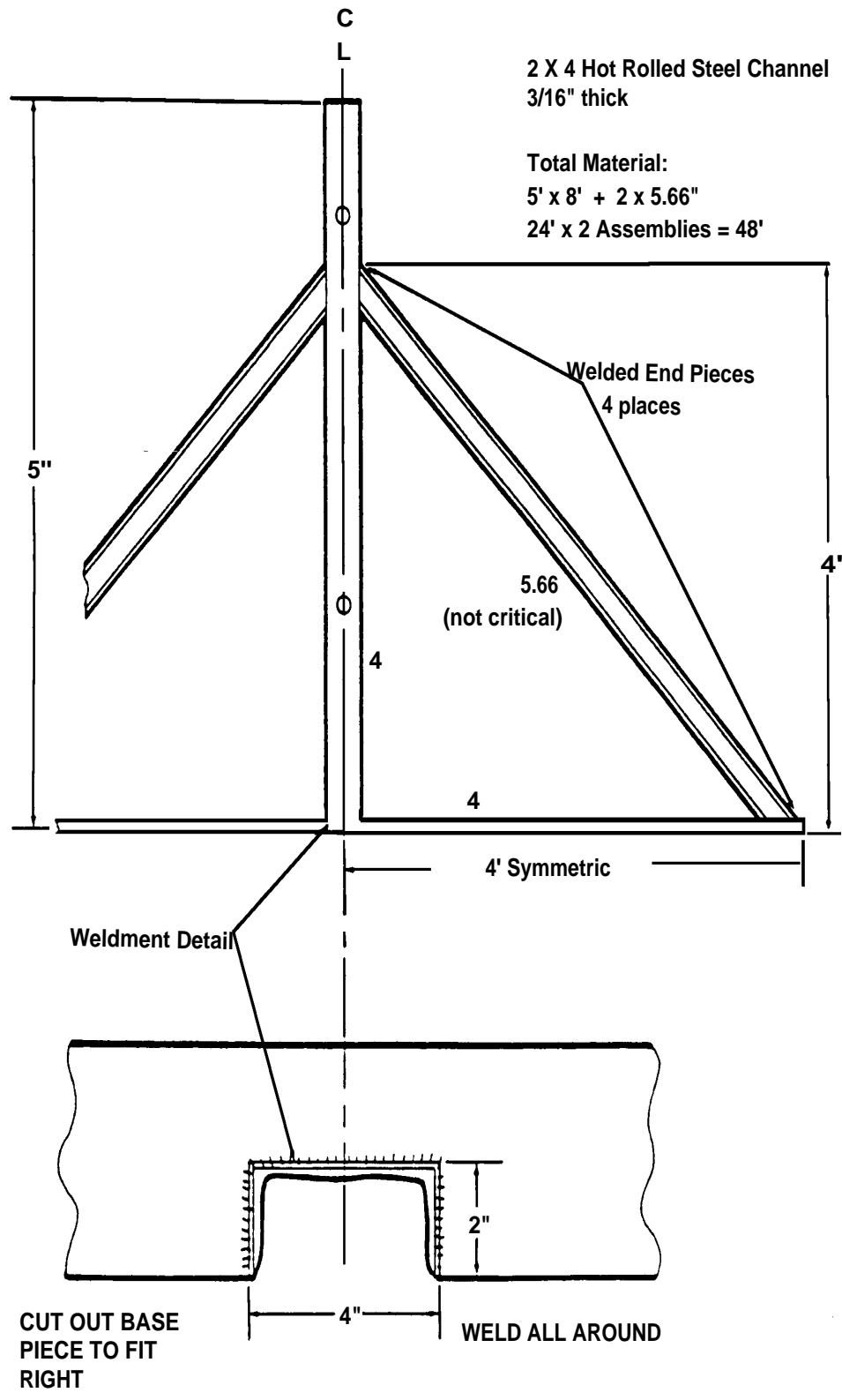
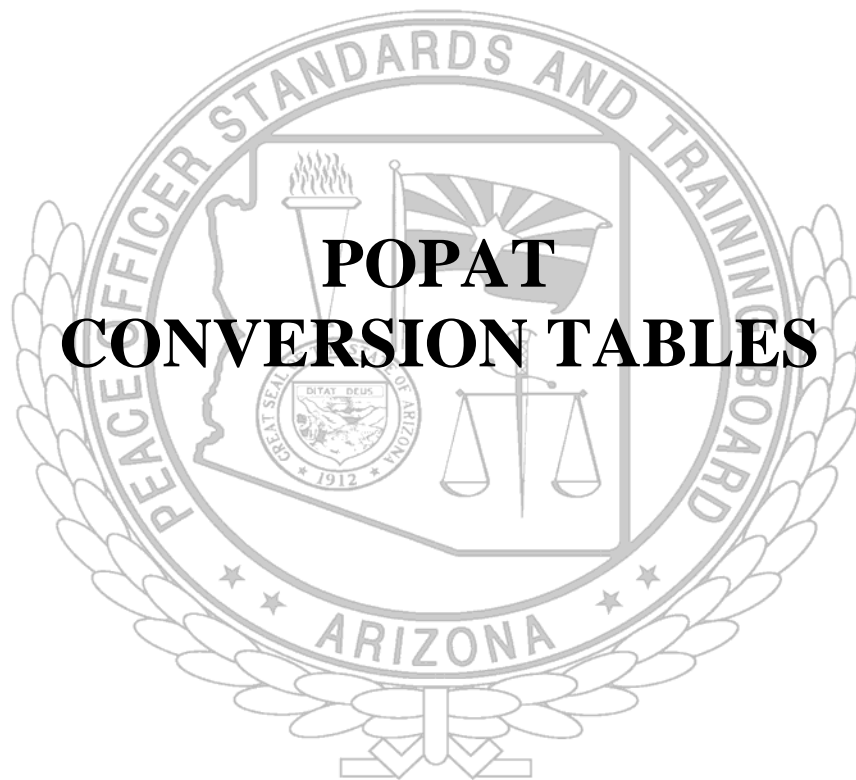


Table 3

MATERIALS AND EQUIPMENT LIST FOR POPAT

TEST	SET-UP	ADMINISTRATION	SPECIFICATIONS/ MANUFACTURER OF EQUIPMENT USED BY AZ POST (Major equipment only)
Station A: Initial Candidate		Data collection forms and pencils	
Station B: Obstacle Course	Measuring tape, traffic cones (18), cord (250 ft.), 6"x6"x3' Curbs (3) and 34" high obstacle	Stopwatch	See diagram
Station C: Body Drag	Measuring tape, tape to mark start/finish lines and traffic cones (4)	Stopwatch, 165-pound dummy	
Station D: Obstacle Climbs	Traffic cones (8), matting to cover fence supports, gym mat 6'x6' and fence	Stopwatch	See diagram *
Station E: 500-Yard Run	Measuring tape, traffic cones (2)	Stopwatch	

*Note that diagram is for combination chain link and solid fence.



**POPAT
CONVERSION TABLES**

99-YARD OBSTACLE COURSE CONVERSION TABLE

TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS
14.0	248	18.0	197	22.0	146	26.0	96	30.0	45
14.1	246	18.1	195	22.1	145	26.1	95	30.1	44
14.2	245	18.2	194	22.2	144	26.2	93	30.2	43
14.3	244	18.3	193	22.3	142	26.3	92	30.3	42
14.4	242	18.4	192	22.4	141	26.4	91	30.4	40
14.5	241	18.5	190	22.5	140	26.5	90	30.5	39
14.6	239	18.6	189	22.6	139	26.6	88	30.6	38
14.7	238	18.7	188	22.7	137	26.7	87	30.7	37
14.8	237	18.8	187	22.8	136	26.8	86	30.8	35
14.9	236	18.9	185	22.9	135	26.9	85	30.9	34
15.0	235	19.0	184	23.0	134	27.0	83	31.0	33
15.1	233	19.1	183	23.1	132	27.1	82	31.1	32
15.2	232	19.2	182	23.2	131	27.2	81	31.2	30
15.3	231	19.3	180	23.3	130	27.3	79	31.3	29
15.4	229	19.4	179	23.4	129	27.4	78	31.4	28
15.5	228	19.5	178	23.5	127	27.5	77	31.5	27
15.6	227	19.6	176	23.6	126	27.6	76	31.6	25
15.7	226	19.7	175	23.7	125	27.7	74	31.7	24
15.8	224	19.8	174	23.8	124	27.8	73	31.8	23
15.9	223	19.9	173	23.9	122	27.9	72	31.9	22
16.0	222	20.0	172	24.0	121	28.0	71	32.0	20
16.1	221	20.1	170	24.1	120	28.1	69	32.1	19
16.2	219	20.2	169	24.2	119	28.2	68	32.2	18
16.3	218	20.3	168	24.3	117	28.3	67	32.3	16
16.4	217	20.4	166	24.4	116	28.4	66	32.4	15
16.5	216	20.5	165	24.5	115	28.5	64	32.5	14
16.6	214	20.6	164	24.6	113	28.6	63	32.6	13
16.7	213	20.7	163	24.7	112	28.7	62	32.7	11
16.8	212	20.8	161	24.8	111	28.8	61	32.8	10
16.9	211	20.9	160	24.9	110	28.9	59	32.9	9
17.0	210	21.0	159	25.0	109	29.0	58	33.0	7
17.1	208	21.1	158	25.1	107	29.1	57	33.1	6
17.2	207	21.2	156	25.2	106	29.2	56	33.2	5
17.3	205	21.3	155	25.3	105	29.3	54	33.3	4
17.4	204	21.4	154	25.4	103	29.4	53	33.4	3
17.5	203	21.5	153	25.5	102	29.5	52	33.5	1
17.6	202	21.6	151	25.6	101	29.6	50		
17.7	200	21.7	150	25.7	100	29.7	49		
17.8	199	21.8	149	25.8	98	29.8	48		
17.9	198	21.9	148	25.9	97	29.9	47		

BODY DRAG CONVERSION TABLE

TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS
2.7	61	6.6	52	10.5	42	14.4	33	18.3	24	22.2	14	26.1	5
2.8	61	6.7	51	10.6	42	14.5	33	18.4	23	22.3	14	26.2	5
2.9	60	6.8	51	10.7	42	14.6	32	18.5	23	22.4	14	26.3	4
3.0	60	6.9	51	10.8	42	14.7	32	18.6	23	22.5	14	26.4	4
3.1	60	7.0	51	10.9	41	14.8	32	18.7	23	22.6	13	26.5	4
3.2	60	7.1	50	11.0	41	14.9	32	18.8	22	22.7	13	26.6	4
3.3	59	7.2	50	11.1	41	15.0	31	18.9	22	22.8	13	26.7	4
3.4	59	7.3	50	11.2	41	15.1	31	19.0	22	22.9	13	26.8	3
3.5	59	7.4	50	11.3	40	15.2	31	19.1	22	23.0	12	26.9	3
3.6	59	7.5	49	11.4	40	15.3	31	19.2	21	23.1	12	27.0	3
3.7	58	7.6	49	11.5	40	15.4	31	19.3	21	23.2	12	27.1	3
3.8	58	7.7	49	11.6	40	15.5	30	19.4	21	23.3	12	27.2	2
3.9	58	7.8	49	11.7	39	15.6	30	19.5	21	23.4	11	27.3	2
4.0	58	7.9	48	11.8	39	15.7	30	19.6	20	23.5	11	27.4	2
4.1	58	8.0	48	11.9	39	15.8	30	19.7	20	23.6	11	27.5	2
4.2	57	8.1	48	12.0	39	15.9	29	19.8	20	23.7	11	27.6	1
4.3	57	8.2	48	12.1	38	16.0	29	19.9	20	23.8	10	27.7	1
4.4	57	8.3	47	12.2	38	16.1	29	20.0	20	23.9	10	27.8	1
4.5	57	8.4	47	12.3	38	16.2	29	20.1	19	24.0	10	27.9	1
4.6	56	8.5	47	12.4	38	16.3	28	20.2	19	24.1	10		
4.7	56	8.6	47	12.5	37	16.4	28	20.3	19	24.2	9		
4.8	56	8.7	47	12.6	37	16.5	28	20.4	19	24.3	9		
4.9	56	8.8	46	12.7	37	16.6	28	20.5	18	24.4	9		
5.0	55	8.9	46	12.8	37	16.7	27	20.6	18	24.5	9		
5.1	55	9.0	46	12.9	36	16.8	27	20.7	18	24.6	9		
5.2	55	9.1	46	13.0	36	16.9	27	20.8	18	24.7	8		
5.3	55	9.2	45	13.1	36	17.0	27	20.9	17	24.8	8		
5.4	54	9.3	45	13.2	36	17.1	26	21.0	17	24.9	8		
5.5	54	9.4	45	13.3	36	17.2	26	21.1	17	25.0	8		
5.6	54	9.5	45	13.4	35	17.3	26	21.2	17	25.1	7		
5.7	54	9.6	44	13.5	35	17.4	26	21.3	16	25.2	7		
5.8	53	9.7	44	13.6	35	17.5	25	21.4	16	25.3	7		
5.9	53	9.8	44	13.7	35	17.6	25	21.5	16	25.4	7		
6.0	53	9.9	44	13.8	34	17.7	25	21.6	16	25.5	6		
6.1	53	10.0	43	13.9	34	17.8	25	21.7	15	25.6	6		
6.2	53	10.1	43	14.0	34	17.9	25	21.8	15	25.7	6		
6.3	52	10.2	43	14.1	34	18.0	24	21.9	15	25.8	6		
6.4	52	10.3	43	14.2	33	18.1	24	22.0	15	25.9	5		
6.5	52	10.4	42	14.3	33	18.2	24	22.1	15	26.0	5		

CHAIN LINK FENCE CLIMB CONVERSION TABLE

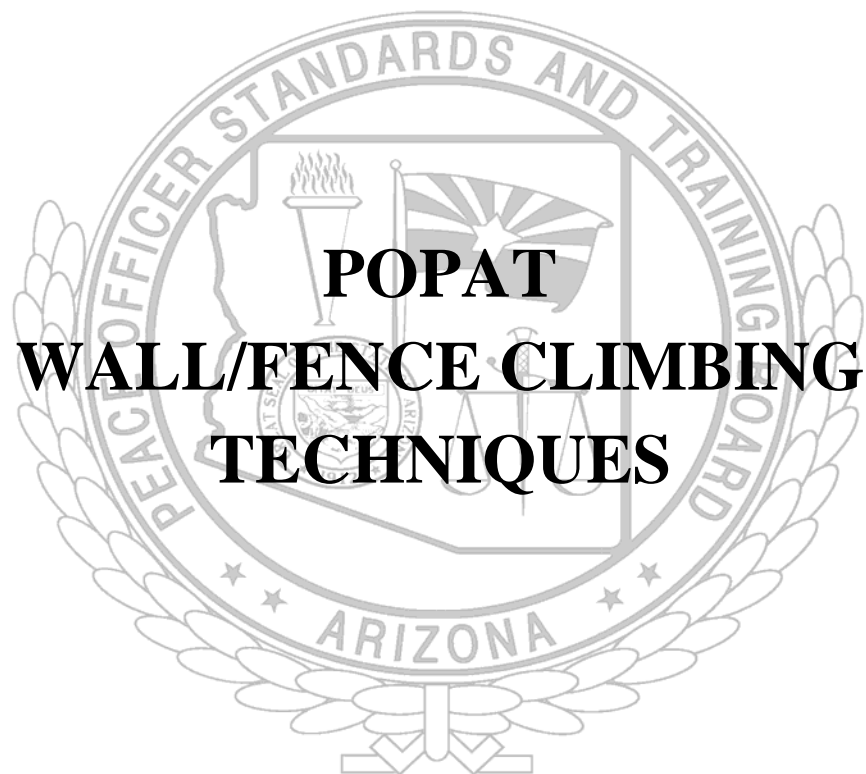
TIME	POINTS	TIME	POINTS	TIME	POINTS
4.0	120	7.8	79	11.6	39
4.1	119	7.9	78	11.7	37
4.2	118	8.0	77	11.8	36
4.3	117	8.1	76	11.9	35
4.4	116	8.2	75	12.0	34
4.5	115	8.3	74	12.1	33
4.6	114	8.4	73	12.2	32
4.7	113	8.5	72	12.3	31
4.8	112	8.6	71	12.4	30
4.9	111	8.7	70	12.5	29
5.0	109	8.8	69	12.6	28
5.1	108	8.9	68	12.7	27
5.2	107	9.0	66	12.8	26
5.3	106	9.1	65	12.9	25
5.4	105	9.2	64	13.0	23
5.5	104	9.3	63	13.1	22
5.6	103	9.4	62	13.2	21
5.7	102	9.5	61	13.3	20
5.8	101	9.6	60	13.4	19
5.9	100	9.7	59	13.5	18
6.0	99	9.8	58	13.6	17
6.1	98	9.9	57	13.7	16
6.2	97	10.0	56	13.8	15
6.3	96	10.1	55	13.9	14
6.4	94	10.2	54	14.0	13
6.5	93	10.3	52	14.1	12
6.6	92	10.4	51	14.2	11
6.7	91	10.5	50	14.3	10
6.8	90	10.6	49	14.4	8
6.9	89	10.7	48	14.5	7
7.0	88	10.8	47	14.6	6
7.1	87	10.9	46	14.7	5
7.2	86	11.0	45	14.8	4
7.3	85	11.1	44	14.9	3
7.4	84	11.2	43	15.0	2
7.5	83	11.3	42	15.1	1
7.6	82	11.4	41		
7.7	80	11.5	40		

SOLID FENCE CLIMB CONVERSION TABLE

TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS
4.0	224	7.0	181	10.0	138	13.0	96	16.0	53	19.0	10
4.1	223	7.1	180	10.1	137	13.1	94	16.1	51	19.1	8
4.2	221	7.2	178	10.2	136	13.2	93	16.2	50	19.2	7
4.3	220	7.3	177	10.3	134	13.3	91	16.3	48	19.3	6
4.4	218	7.4	176	10.4	133	13.4	90	16.4	47	19.4	4
4.5	217	7.5	174	10.5	131	13.5	88	16.5	46	19.5	3
4.6	216	7.6	173	10.6	130	13.6	87	16.6	44	19.6	1
4.7	214	7.7	171	10.7	128	13.7	86	16.7	43		
4.8	213	7.8	170	10.8	127	13.8	84	16.8	41		
4.9	211	7.9	168	10.9	126	13.9	83	16.9	40		
5.0	210	8.0	167	11.0	124	14.0	81	17.0	38		
5.1	208	8.1	166	11.1	123	14.1	80	17.1	37		
5.2	207	8.2	164	11.2	121	14.2	78	17.2	36		
5.3	206	8.3	163	11.3	120	14.3	77	17.3	34		
5.4	204	8.4	161	11.4	118	14.4	76	17.4	33		
5.5	203	8.5	160	11.5	117	14.5	74	17.5	31		
5.6	201	8.6	158	11.6	116	14.6	73	17.6	30		
5.7	200	8.7	157	11.7	114	14.7	71	17.7	28		
5.8	198	8.8	156	11.8	113	14.8	70	17.8	27		
5.9	197	8.9	154	11.9	111	14.9	68	17.9	26		
6.0	196	9.0	153	12.0	110	15.0	67	18.0	24		
6.1	194	9.1	151	12.1	108	15.1	66	18.1	23		
6.2	193	9.2	150	12.2	107	15.2	64	18.2	21		
6.3	191	9.3	148	12.3	106	15.3	63	18.3	20		
6.4	190	9.4	147	12.4	104	15.4	61	18.4	18		
6.5	188	9.5	146	12.5	103	15.5	60	18.5	17		
6.6	187	9.6	144	12.6	101	15.6	58	18.6	16		
6.7	186	9.7	143	12.7	100	15.7	57	18.7	14		
6.8	184	9.8	141	12.8	98	15.8	56	18.8	13		
6.9	183	9.9	140	12.9	97	15.9	54	18.9	11		

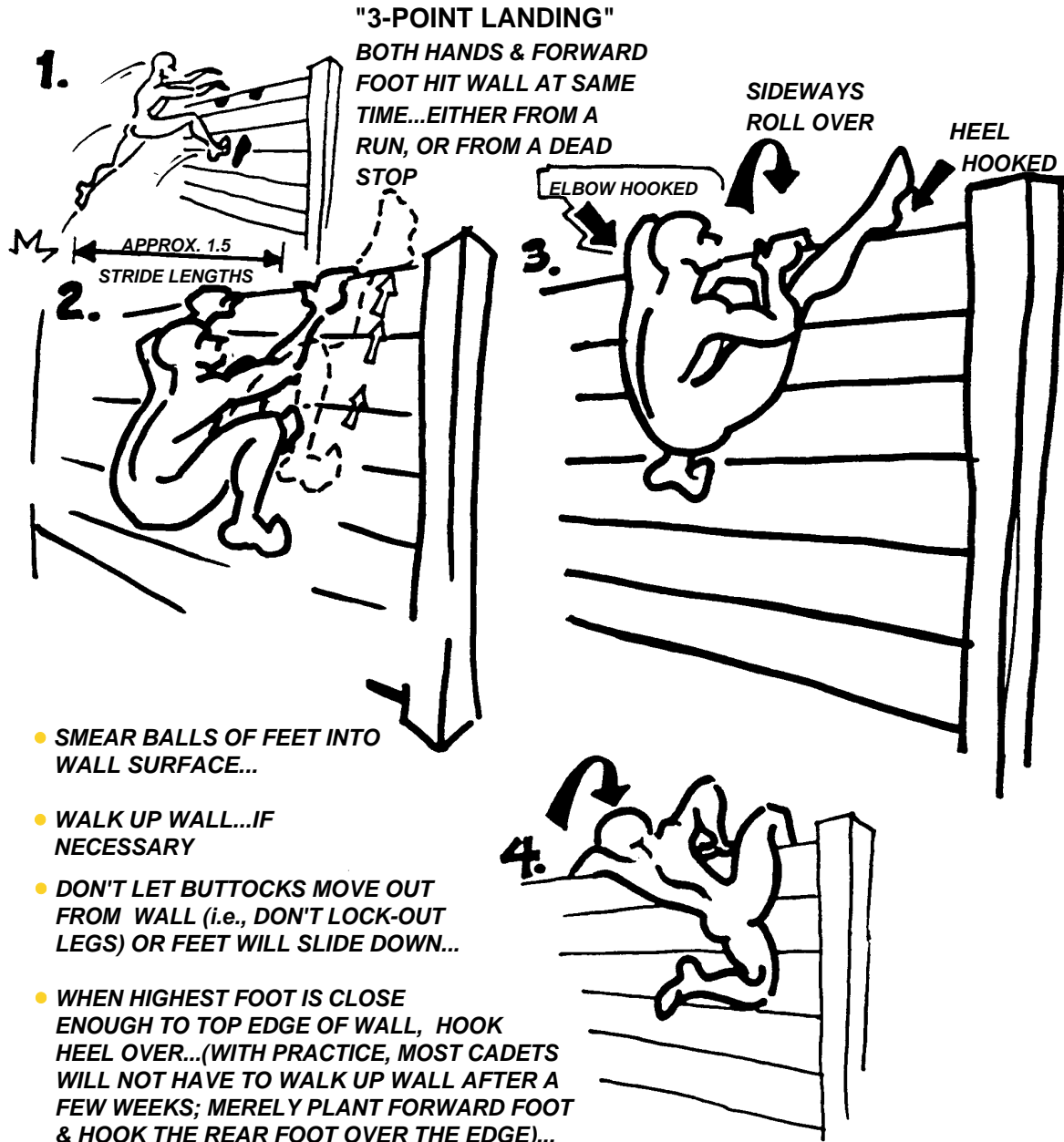
500-YARD RUN CONVERSION TABLE

TIME	POINTS	TIME	POINTS	TIME	POINTS	TIME	POINTS
53.0 to 55.9	50	91.1 to 94.0	37	129.4 to 132.2	24	167.6 to 170.5	11
56.0 to 58.7	49	94.1 to 97.0	36	132.3 to 135.2	23	170.6 to 173.4	10
58.8 to 61.7	48	97.1 to 99.9	35	135.3 to 138.1	22	173.5 to 176.4	9
61.8 to 64.6	47	100.0 to 102.8	34	138.2 to 141.1	21	176.5 to 179.3	8
64.7 to 67.6	46	102.9 to 105.8	33	141.2 to 144.0	20	179.4 to 182.2	7
67.7 to 70.5	45	105.9 to 108.7	32	144.1 to 147.0	19	182.3 to 185.2	6
70.6 to 73.5	44	108.8 to 111.7	31	147.1 to 149.9	18	185.3 to 188.1	5
73.6 to 76.4	43	111.8 to 114.6	30	150.0 to 152.8	17	188.2 to 191.1	4
76.5 to 79.3	42	114.7 to 117.6	29	152.9 to 155.8	16	191.2 to 194.0	3
79.4 to 82.3	41	117.7 to 120.5	28	155.9 to 158.7	15	194.1 to 196.9	2
82.4 to 85.2	40	120.6 to 123.4	27	158.8 to 161.7	14	197.0 to 199.9	1
85.3 to 88.2	39	123.5 to 126.3	26	161.8 to 164.6	13		
88.3 to 91.0	38	126.4 to 129.3	25	164.7 to 167.5	12		



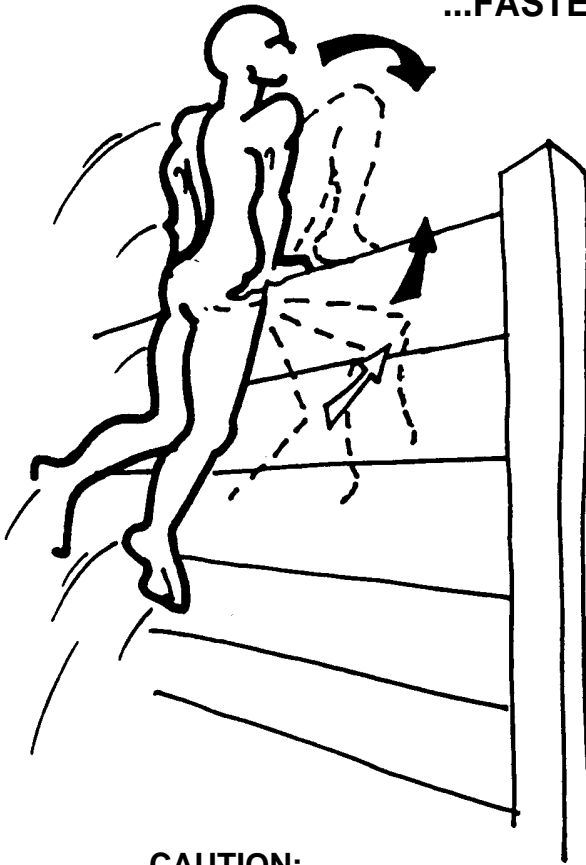
**POPAT
WALL/FENCE CLIMBING
TECHNIQUES**

WALL/FENCE CLIMBING TECHNIQUES



- SMEAR BALLS OF FEET INTO WALL SURFACE...
- WALK UP WALL...IF NECESSARY
- DON'T LET BUTTOCKS MOVE OUT FROM WALL (i.e., DON'T LOCK-OUT LEGS) OR FEET WILL SLIDE DOWN...
- WHEN HIGHEST FOOT IS CLOSE ENOUGH TO TOP EDGE OF WALL, HOOK HEEL OVER...(WITH PRACTICE, MOST CADETS WILL NOT HAVE TO WALK UP WALL AFTER A FEW WEEKS; MERELY PLANT FORWARD FOOT & HOOK THE REAR FOOT OVER THE EDGE)...
- KEEP TOES POINTED UPWARD (TOWARD SKY) SO THAT LARGER HAMSTRING MUSCLES ARE USED TO PULL; WHEN FOOT TURNS TO SIDE, SMALLER ADDUCTOR MUSCLES BECOME PRIMARY MOVER AND GROIN PULLS OFTEN OCCUR
- HOOK ELBOW/ARMPIT OF OPPOSITE SIDE OF BODY OVER TOP EDGE OF WALL & ROLL OVER, MAINTAINING LOW PROFILE, SCAN LANDING AREA BEFORE JUMPING

...FASTER METHOD...

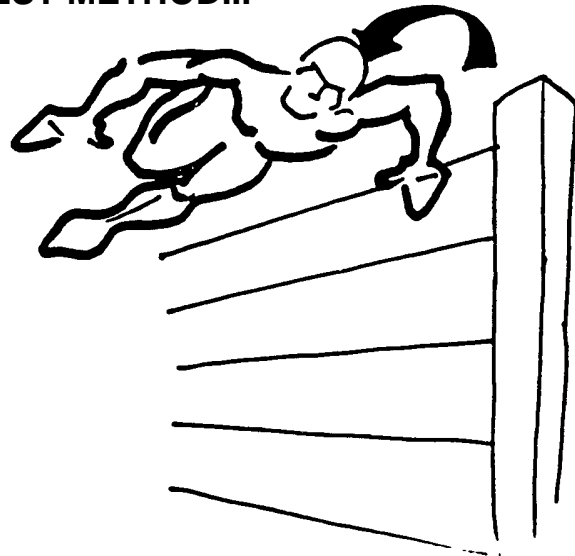


- BOTH HANDS HIT TOP OF WALL AT SAME TIME BUT FEET DO NOT CONTACT SIDE OF WALL...
- INSTEAD, CADET VAULTS/PRESSES UP TO THE TOP OF THE WALL USING HIS/HER MOMENTUM AND UPPER BODY STRENGTH...
- UNTIL HIS/HER ARMS ARE IN A FULL LOCKED POSITION SUPPORTING ENTIRE BODY WEIGHT... PELVIS IS AT TOP EDGE OF WALL LEGS DANGLING...
- FROM THIS POSITION, THE CADET'S DOMINANT FOOT IS BROUGHT UP TO THE TOP EDGE OF THE WALL... THE OPPOSITE FOOT/LEG IS THEN BROUGHT UP ALONGSIDE IT AND THE CADET MERELY JUMPS DOWN ON THE OPPOSITE SIDE...

CAUTION:

THESE TECHNIQUES ARE FASTER THAN THE 3-POINT/HEEL HOOKING TECHNIQUE, BUT, TACTICALLY, THE CADET IS A LARGER TARGET AND THE RISK OF CATCHING THEIR FOOT AND FALLING IS GREATER...

...FASTEST METHOD...



- SAME AS ABOVE EXCEPT CADET'S FEET NEVER TOUCH THE WALL...
- HE/SHE MERELY CLEARS BOTH LEGS OVER THE EDGE AS SOON AS HANDS GRASP THE WALL, USING FORWARD MOMENTUM