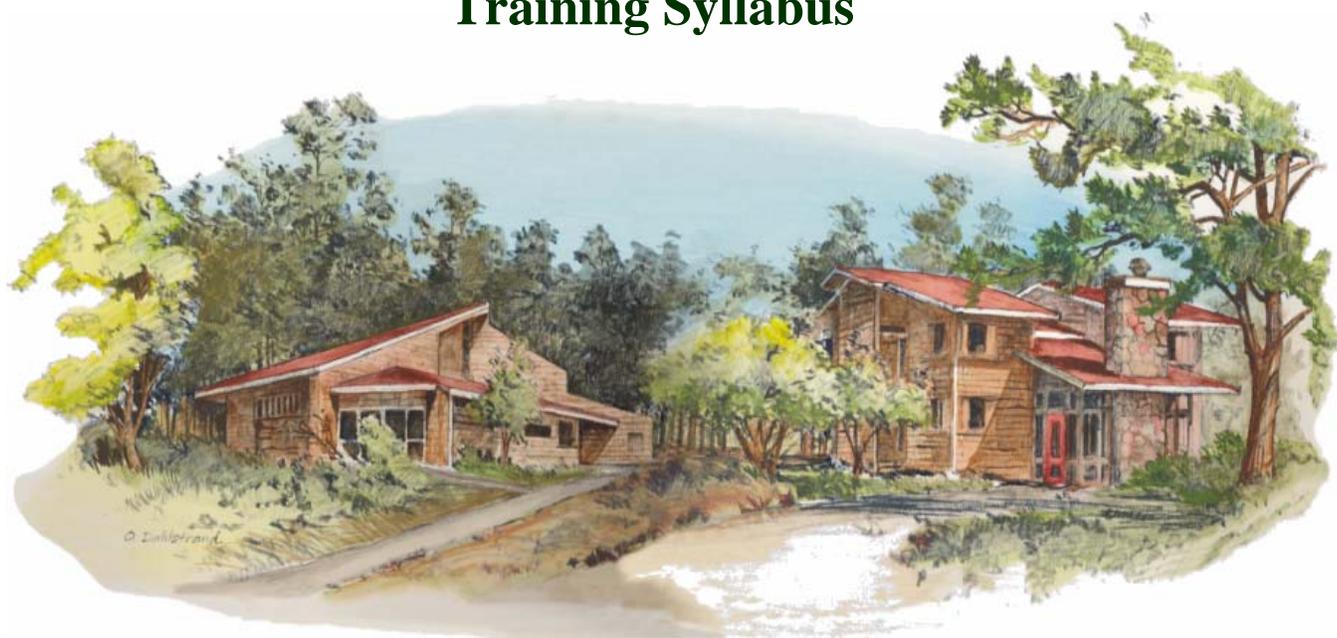


State of California . The Resources Agency . Department of Parks and Recreation

ADVANCED ELECTRICAL SKILLS

March 11-16, 2007

Training Syllabus



William Penn Mott Jr. Training Center



Memorandum

Date: February 21, 2007
To: Supervisor
From: Department of Parks and Recreation
William Penn Mott Jr. Training Center
Subject: Employee Attendance at Formal Training
Advanced Electrical Skills Group 10

An employee from your office will soon be attending the formal training program described in the attached. Please insure that the employee is fully prepared to attend the session and that the groundwork is laid for the employee's implementation of the training upon returning to work.

You can assist with capturing the full value of the training by taking the following steps:

Prior to Training

1. Make sure that specific employee needs are identified and, if necessary, called immediately to the attention of the Training Coordinator.
2. Review with the employee the reason for the employee's attendance.
3. Review objectives and agenda with the employee.
4. Discuss objectives and performance expected after the training.

Immediately Following Attendance

1. Discuss what was learned and intended uses of the training.
2. Review the employee's assessment of the training program for its impact at the workplace and review the due date of the Post-Training Evaluation form.
3. Support the employee's use of the training at the work place.

Prior to Three Months Following Training

1. Employee, after discussion with supervisor, must login to the Employee Training Management System (ETMS) to complete the Post-Training Evaluation form.
2. Supervisor evaluates the effectiveness of the training on the employee's job performance and logs in to the ETMS to complete the Training Effectiveness Assessment form.

Thank you for your assistance in seeing that the full benefit of training is realized.



Michael D. Green
Department Training Officer (Acting)

Attachment

cc: Participant

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*Mission Statement
Training Office*

*The mission of the Training Office is to improve
organizational and individual performance through
consulting, collaboration, training and development.*

MOTT TRAINING CENTER STAFF

Michael Green..... Department Training Officer (Acting)

Joanne Danielson Training Specialist

Chuck Combs..... Training Specialist

Dave Galanti Training Specialist

Sara Skinner Training Specialist

Michelle Gardner..... Cadet Training Officer

Connie Breakfield..... Cadet Training Officer

Pat Bost Assistant Program Coordinator

Pamela Yaeger Assistant Program Coordinator

Bill Spencer Assistant Program Coordinator

Edith Alhambra..... Assistant Program Coordinator

Summer Kincaid..... Assistant Program Coordinator

Brian Petersen Program Assistant

THE MISSION

of the California Department of Parks and Recreation is to provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high quality outdoor recreation.



FORMAL TRAINING GUIDELINES

Welcome to formal training, an essential component in your career development.

Since 1969, our Department has been providing a continuously changing number of diverse training programs at its main training facility, the William Penn Mott Jr. Training Center, and other locations including Marconi Conference Center and, most recently, the Two Rivers Training Facility in Sacramento. The Department strives to enhance your learning and job performance with formal training of the highest quality.

Our Department's dedication to training is only one aspect of its commitment to you and to the public. This commitment is costly and represents an important investment in you and your career. You and the Department realize a return on that investment by your positive participation in formal training itself and post training follow-through.

The program you will be participating in is described in this training syllabus, which outlines what you can expect from this training and what is expected of you. This syllabus details what you should do before you leave for training; what to do when you arrive; what you will be doing while in training; and, importantly, what you should be able to do when you return to your work site. Specifically:

1. **SYLLABUS:** The syllabus is now accessible on the Employee Training Management System (ETMS). You should print a copy of the syllabus to bring with you to class. Your copy of this syllabus is an important part of your training experience and should be brought with you to training. Read it before you arrive and review it following the program along with material you received at training.
2. **PRE-TRAINING ASSIGNMENTS:** Your completion of pre-training assignments is essential to the success of your training. You are responsible for all reading assignments in preparation for classroom sessions. Time will be provided during working hours to accomplish any assignments, which involve either individual or group efforts and resources. (Pre-training assignments are listed in the "Training Attendance Requirements" section.)

3. TRAVEL: Arrange your travel to and from the training through your District or Office. (No reimbursement for travel expense - including per diem costs - will be approved for travel not specifically authorized in advance by the District Superintendent.) Individuals may claim reimbursement for incidental expenses incurred as outlined in DAM 0410.6. The Training Center does not have the capability to provide transportation to/from Monterey Airport.
4. HOUSING: Housing will be assigned to you on a shared-room basis and will be available from 3:00 p.m. on the date of arrival to 12:00 noon on the date of departure. The Department provides your room and board expenses at the Training Center only. No per diem allowance will be authorized for living off-grounds. This does not preclude living off-grounds at your own expense. Please advise the Department Training Officer no later than one week before your scheduled arrival if you plan to live off-grounds. No animals are permitted in Asilomar housing. In the event of an emergency, staff must know your room assignment; therefore, you may not switch rooms without staff approval. Overnight guests are not allowed in the buildings unless registered beforehand at the front desk in Asilomar's Administration Building. Quiet hour for lodge living areas is 10:00 p.m.

HOUSING CANCELLATION POLICY: If you do not need lodging or must change or cancel your reservation, you must contact the Training Center at least 72 hours prior to your date of arrival. The Training Center is committed to ensuring that the reservation that has been made for you is accurate and needed.

5. MEALS: Meals will be provided, semi-cafeteria style, from dinner on the date of arrival through lunch on the date of departure. Meals will be served at 7:15 a.m. for breakfast, 12:00 noon for lunch, and 6:00 p.m. for dinner. Hot or box lunches may be provided on some days. If you require a special diet, notify the Asilomar Chef at 831-372-8016 no later than one week before your scheduled arrival.

In order to assist participants with limited mobility, Asilomar provides a shuttle to and from the dining hall. Please contact either Asilomar staff upon check in, or Training Center staff upon your arrival, for instructions on arranging a transport.

6. OFF-GROUNDS ACCOMMODATIONS: When authorized to stay off-grounds by the Department Training Officer, the Training Center will pickup the cost of your room and meals at the current DPR Asilomar rate. If you stay off grounds and have meals on grounds, the Training Center will authorize only what the Department pays Asilomar for lodging.

7. CLOTHING: Field uniforms as found in "Description of Required Field Uniforms", DOM Chapter 2300, Uniform Handbooks, not including optional items, will be worn daily by all uniformed employees during formal training sessions **unless otherwise specified in the Program Attendance Checklist**. Non-uniformed employees shall wear professional business attire.

Because we are on the conference grounds with many other groups, and the image we project as State Park employees is important not only during working hours but off duty hours as well, your informal sportswear should be appropriate.

8. ROOM SAFES: Two safes have been installed in each of the lodge rooms used by the Training Center (Live Oak, Tree Tops, and Deer Lodge). These safes are a type that allows the user to input their own combination of numbers to facilitate opening and closing. The Training Center has a master key for emergency entry. Safes are to be left in the open position when checking out of your room.
9. WEAPONS: Weapons are permitted in rooms under the following conditions. Authorized firearms and magazines stored while at the Training Center shall be in a safe condition and stored in one of the following locations: your room safe in Live Oak, Tree Tops, or Deer Lodge, one of the Training Center's safes in the Whitehead Room or secured in your vehicle.
10. ALCOHOLIC BEVERAGES: Participants shall not possess or consume alcoholic beverages in common areas (living room) while on the Asilomar Conference Grounds unless provided and hosted by Concessionaire Delaware North.
11. SMOKING: Smoking is not permitted in the Training Center or in any lodge or guest room on the Asilomar Conference Grounds.
12. TRAINING CENTER: The Training Center is located on Asilomar Conference Grounds, part of Asilomar State Beach. The Conference Grounds are operated for our Department by a concessionaire, and all lodging and food services are provided to us by employees of the concessionaire. Constant efforts are made to maintain a sound, harmonious working relationship between the Department and concessionaire. None of us can expect preferential treatment for any reason and, as a departmental employee, you will be expected to join in our continuing effort toward an effective relationship with each Asilomar concession staff member. On occasion, non-departmental groups may be staying in the same lodges. It is imperative that you represent the Department well on and off duty.
13. REGISTRATION: When you arrive at Asilomar Conference Grounds, go directly to the front desk at the Asilomar Administration Building for your room key and dining room ticket. If you require vegetarian meals, notify the front desk representative and your meal ticket will be marked accordingly.

14. **COURSE LEADERS:** The formal training you will attend is developed and, for the most part, conducted by experienced State Park employees in field and staff positions. Some courses will be conducted by qualified instructors from other agencies and educational institutions. Your course leaders have proven their ability and knowledge in their profession, and provide a level of expertise difficult to match.
15. **TRAINING CENTER STAFF:** A Training Center staff member has been assigned responsibility for your training group as well as for your training program. That staff member usually serves as a Course Leader as well as a Coordinator. During the program, you may be asked to assist Training Center staff in the logistics of your training program (organizing field trip transportation, supervising classroom breaks, etc.). Center staff will do all within their power to make your training experience pleasant and meaningful.
16. **TRAINING MATERIALS:** May be made available to you at both your unit and the Training Center. Handout materials issued at your unit should be brought to training for possible use. A conference binder or notebook will be issued to you at the training session for note taking and convenience in handling materials. Copies of DAM and DOM will be available to you for self-study. Bring your own pens and pencils.
17. **ATTENDANCE:** Regular attendance is a critical course requirement and your participation is important to the success of this training. All absences, except those of an emergency nature, must be approved in advance by the Training Specialist.
18. **COLLEGE CREDIT:** Most training programs are accredited by Monterey Peninsula College for lower division credit. If you successfully complete an accredited program, you will receive either a letter grade or a credit/no-credit designation.
19. **VEHICLES:** All vehicles should be parked in the lots adjacent to the Training Center. Any questions regarding use of a State vehicle while at the Training Center should be discussed with your supervisor prior to your departure for training, or with your Program Coordinator while at the Training Center.
20. **BICYCLES:** If you bring your bicycle, store it in the bicycle shed next to the Training Center. Bicycles may not be brought into any building nor chained to lamp posts, trees, etc. The Training Center has a limited number of bicycles available for your use. Prior to your use, you are required to complete a safety inspection and sign a waiver, which is posted in the bicycle shed.
21. **MAIL:** Mail forwarded to you during your time at the Center should be addressed to you in care of:

Department of Parks and Recreation
WILLIAM PENN MOTT JR. TRAINING CENTER

P. O. Box 699, Pacific Grove, CA 93950

22. CELL PHONES: As a courtesy to your fellow participants and course leaders ensure that your cell phone is turned off during classes. Participants should not be receiving or making cell phone calls during class time. Please limit those calls to your breaks.
23. FAX: The Training Center's FAX number is (831) 649-2824.
24. TELEPHONE: Limit phone calls during classroom hours to urgent business or emergencies. Anyone wishing to contact you by telephone during working hours should call the Center at (831) 649-2954. Calls after 5:00 p.m. or during weekends should be made to (831) 372-8016, Asilomar Conference Grounds, and the caller should tell the switchboard operator you are with a Department of Parks and Recreations training group.
25. LAUNDRY AND DRY CLEANING: May be taken care of by you at one of several local establishments. An iron is available for 24-hour checkout from the Training Center front desk.
26. RECREATION: Facilities available on grounds include a heated swimming pool, ping-pong and pool tables, and a volleyball court. The Monterey area offers horseback riding, golf, tennis, racquetball, deep sea fishing, and many historical landmarks and scenic sights to explore.
27. POST-TRAINING ASSIGNMENTS: In connection with formal training are to be completed under the direction of your supervisor. See "Program Attendance Requirements" in this syllabus.
28. COFFEE BREAK REFRESHMENTS: Will be available throughout each session at the Center. You will be asked to contribute to the "Hospitality Fund" to defray expenses. Please bring your own coffee cup.

PROGRAM ATTENDANCE CHECKLIST

To assist you in your preparation for formal training session at the William Penn Mott Jr. Training Center the following list is provided:

1. Read and understand the Advanced Electrical Skills Program Syllabus prior to your arrival at the Training Center.
2. Complete the following pre-training assignment.
 - Discuss the Advanced Electrical Skills program with your supervisor. What specific changes in your abilities and performance are expected to result from attending this training? List these expectations along with your own on the Advanced Electrical Skills Pre-Training Questionnaire.
 - Return the Pre-Training Questionnaire to the Program Coordinator on the first day of class, March 12, 2007.
 - Complete the assignment in the Advanced Electrical Skills Workbook. Instructions and worksheet will be reviewed and collected on the first day of the training program.
 - Review all materials received in Basic and Intermediate Electrical classes.

NOTE: Completion of the pre-training assignment is mandatory and with personal project equipment will count for 20% of your program grade. If you have questions or need help, call the Program Coordinator, Chuck Combs at (831) 649-7124 or email chuck@parks.ca.gov.

3. Remember to bring the following with you to training:
 - Program syllabus and workbook.
 - Ugly's Electrical Reference Booklet (2005 edition). If you don't have one, contact Chuck.
 - Personal safety equipment (head, eye, ear, and hand protection).
 - Coveralls or appropriate work clothing.
 - In case of inclement weather, bring serviceable rain gear.
 - Proper field uniform. See uniform handbook and note in formal training guidelines #7.
 - If available, bring Multi-Meter, digital or analog.
 - Coffee cup, alarm clock, pens, pencils.

POST-TRAINING ASSIGNMENT

Prior to ninety days after the completion of this program, the employee and his/her supervisor should sit down and discuss the impact and assess the effectiveness this program has had on the employee. Then both the supervisor and employee should login to the Employee Training Management System (ETMS) and complete the Post-Training Evaluation form (an email will be sent to both employee and supervisor notifying them that the evaluation needs to be completed). Once you login to the ETMS, you will need to fill out the evaluation form before you will be able to do anything else.

The post-training evaluation process is intended to provide a bridge between classroom instruction and the on-the-job application of training. The information obtained through this process will assist the training participant, supervisor, and Training Center in providing a return on the investment the Department has on training.

ADVANCED ELECTRICAL SKILLS GROUP 10 – Agenda – March 11-16, 2007

Lead Instructor: Lawrence Ross
Assistant Program Coordinator: Larry Tierney

Sunday

March 11

1500- REGISTRATION: *Check in at the Asilomar Registration Building.* All

<p><i>Special Notice:</i> This program will be conducted at the Mott Training Center Shop Annex, 2211 Garden Road, Building C, Monterey, California. Vans are available to transport you to and from the Shop Annex and will leave the Mott Training Center promptly at 0800 daily and return by 1700.</p>

Monday

March 12

0830-0930	Orientation/MPC Registration	Combs
0930-1200	Electrical Review: 3 Phase WYE vs. DELTA	Ross
1200-1300	<i>Lunch</i>	
1300-1430	Commercial Wiring and Electrical Systems Inspection	
1430-1630	Shop Applications: Conduit	

Tuesday

March 13

0830-1200	Transformers	Ross
1200-1300	<i>Lunch</i>	
1300-1630	Shop Demonstrations: Transformers Maintenance and Trouble Shooting	Ross

Wednesday

March 14

0830-1200	Motors and Motor Controls	Ross
1200-1300	<i>Lunch</i>	
1300-1630	Motor Troubleshooting: Demonstrations and Maintenance	Ross

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Thursday

March 15

0830-1200	Motor Controls and Logic	Ross
1200-1300	<i>Lunch</i>	
1300-1630	Demonstrations: Maintenance and Troubleshooting	Ross

Friday

March 16

0830-1000	Telecommunications and Signals	Ross
1000-1100	Final Examination	Ross
1100-1130	Exam Review	Ross
1130-1200	Program Summary and Evaluation	Combs
1200-	<i>Lunch and Depart</i>	

PROGRAM: ADVANCED ELECTRICAL SKILLS

36 HOURS

PROGRAM OUTLINE

	<u>Total Hours</u>
<u>PROGRAM ORIENTATION AND OVERVIEW</u>	1.0
<u>ELECTRICAL SYSTEMS</u>	6.0
Residential 110/220 Volt System Review	
Introduction to Commercial Wiring Codes	
Introduction to Poly Phase Circuits.....	
Circuit Design.....	
<u>ELECTRICAL WIRING</u>	20.0
Tools	
Materials.....	
Commercial Wiring Techniques.....	
Motors and Motor Controls.....	
Telephone and DC Circuits	
Troubleshooting.....	
Practical Performance Evaluation	
<u>RELATED SUBJECTS</u>	8.5
Safety	
Inspections and Preventative Maintenance.....	
Examinations.....	
Material Storage and Clean-up	
<u>PROGRAM EVALUATION</u>	<u>0.5</u>
Total Hours	36

ADVANCED ELECTRICAL SKILLS

PROGRAM ORIENTATION

Purpose: Participants will meet one another and the program coordinator and facilitator. The group will share expectations for the training program. In addition, program content will be reviewed and registration for Monterey Peninsula College completed.

Performance Objectives: By the close of the session the participant will

1. Review program content, procedure and evaluation processes.
2. Share and record expectations with the group participants.
3. Complete Monterey Peninsula College registration materials.
4. Adhere to all Training Center guidelines.

DEVELOPING ELECTRICAL SYSTEMS

Purpose: Develop the participant's ability to plan and construct single and poly phase commercial electrical systems.

Performance Objectives: By the close of the session the participant will

1. Demonstrate knowledge and understanding of the National Electric Code, California Administrative Code and Cal OSHA requirements for public use buildings, shops and other industrial or commercial electrical installations.
2. Identify single phase, 3 phase WYE, and 3 phase Delta electrical systems.
3. Demonstrate ability to design and construct single and poly phase electrical systems.

WIRING COMMERCIAL ELECTRICAL SYSTEMS

Purpose: Provide participants with a working knowledge of single, poly phase electrical systems, and system components.

Performance Objectives: By the close of the session the participant will

1. Recognize and maintain phasing in 3 phase systems.

2. Identify panels, breakers, motor starters and different wire sizes associated with single and poly phase systems.
3. Layout and install emt, bx and liquid tight conduit.

ELECTRICAL SYSTEMS INSPECTION

Purpose: Provide the participant with the knowledge and skills required to inspect and perform periodic preventative maintenance on single and poly phase electrical systems and system components.

Performance Objectives: By the close of the session the participant will

1. Identify voltage and amperage of systems and components.
2. Inspect for worn contacts, corrosion, loose connections and broken components.
3. Manually test auto-start circuits to verify proper operation.
4. Check for load imbalances in 3 phase systems.

ELECTRICAL SYSTEMS TROUBLESHOOTING

Purpose: The participant will develop the ability to troubleshoot common problems in single, poly phase electrical systems, and system components.

Performance Objectives: By the close of the session the participant will

1. Demonstrate the operation of systems and components to verify order of functions (logical progression).
2. Identify a problem by listening to the operator of the equipment (what the equipment is or is not doing).
3. Review what will occur when various components of a system do not function.

MOTORS AND MOTOR CONTROLS

Purpose: Upon completion of this course, participants will have a working knowledge of the operation and maintenance of many types of motor control equipment.

Performance Objectives: By the close of the session the participant will

1. Demonstrate how electric motors function and be familiar with the components of electric motors.
2. List the maintenance required for longevity and efficient operation of motors.
3. Restate the function and operation of motor controls.
4. Recognize the skills needed for troubleshooting and maintaining existing equipment and electrical systems.

RELATED TOPICS

Purpose: To develop an understanding of test equipment, specialty circuits and devices that the Park Maintenance Worker may be required to use and or repair.

Performance Objectives: By the close of the session the participant will

1. Employ a working knowledge of electrical test equipment commonly used in the electrical trade.
2. Demonstrate a basic understanding of telephone wiring systems, audio visual and alarm systems.

location map for
WILLIAM PENN MOTT JR. TRAINING CENTER
837 ASILOMAR BLVD.
PACIFIC GROVE, CALIFORNIA 93950

