

# **INFORMATION GUIDE SUBSTATION ELECTRICIAN PHYSICAL PERFORMANCE TEST**

**TEST #4022**

## **INTRODUCTION**

The **4022 Substation Electrician Physical Performance Test** battery is a performance test designed to cover several major physical abilities necessary to perform the job. The test battery is composed of three events. These three events are administered during a testing session. This Guide contains information that will assist you in taking the test battery, information about the test session, and information on preparing for each event.

## **TEST SESSION**

It is important that you follow the directions of the Test Administrator exactly. If you have any questions about the testing session, be sure to ask the Test Administrator before the testing begins. During testing, you may NOT leave the pole yard, smoke, or eat. The entire test session will take approximately one hour, so consider this before beginning the testing.

All cellular/mobile phones, pagers or other electronic equipment will NOT be allowed in the testing area. You will receive a Test Comment form so that you can make comments about the test. Write your comments on the form when you have completed the test battery.

## **INFORMATION GUIDE FEEDBACK**

At the end of this Guide you have been provided with an Information Guide Feedback page. If a procedure or policy has changed, making any part of this Guide incorrect, your feedback would be appreciated so that corrections can be made.

## TEST SESSION PREPARATION

During the physical performance test session you will be completing physically demanding activities. The following information lists the clothes and equipment you must bring to the testing session, as well as critical participation guidelines.

## WHAT TO BRING

The test will be completed outdoors and will be very physical in nature. You will need to wear the following clothes and bring the following equipment to perform the test. If you do not have the equipment listed here, you may not participate in the test, and your test session may not be rescheduled.

Closed toe, all-leather shoes with heels that lace up, such as boots.

Long sleeve, cotton shirt.

Long pants.

## PARTICIPANT GUIDELINES

Preparation for the testing will help you perform your best on the day of the test. For this reason, we recommend the following:

Eat a small meal before arriving at the test session. Do not eat within one hour of the scheduled time for your test session. This will allow for digestion of the food you ate. Do not drink coffee, tea, or caffeinated soda within one hour of your scheduled test session time. Do not smoke or use chewing tobacco within an hour of your session. **Drink water prior to and during your session**

## **TEST TAKING STRATEGIES**

Your emotional and physical state during the test may determine whether you are prepared to do your best.

### **CONFIDENCE**

If you feel confident about your physical abilities, you may lose some of your anxiety. Think of the test as a way of demonstrating the physical abilities you possess.

### **PUNCTUALITY**

Arrive early enough to feel relaxed and comfortable before the test battery begins.

### **CONCENTRATION**

Try to block out all distractions and concentrate only on the test.

### **EFFORT**

Give your best effort on the test and follow the instructions and perform the test as quickly as you can in accordance with the instructions.

### **LISTENING**

Listen carefully to all directions provided by the administrator. If necessary, ask the administrator to repeat directions or answer questions you may have.

Remember to give your best effort.

## PHYSICAL PERFORMANCE TEST BATTERY EVENTS

The 4022 Substation Electrician Physical Performance Test battery consists of three physical events. The purpose of this section is to provide an overview of the events in the test battery and information that may help during the testing. The three events that compose the 4022 Substation Electrician Physical Performance Test battery are described below.

### LIFT/CARRY

This event evaluates your ability to lift cartons of varying weights from the ground, carry them a short distance, place them on platforms of different heights, and return the cartons to their original places. This reflects work performed on the job when moving equipment and materials from the truck to the worksite and back to the truck.



### RECOMMENDED PREPARATION FOR LIFT/CARRY

Exercises that build muscular strength and endurance in the upper and lower body, torso/core area, and general aerobic capacity.

## **RAISE & LOWER**

This event evaluates your ability to raise and lower weights up a pole using a pulley and handline. You will be required to raise and lower weighted buckets of different weights several times to a height of 25 feet. This reflects work performed on the job when raising and lowering equipment and materials.



## **RECOMMENDED PREPARATION FOR RAISE & LOWER**

Exercises that build muscular strength and endurance in the upper and lower body, torso/core area, and general aerobic capacity.

## **RAISE & HOLD HOT STICK**

This event evaluates your ability to perform the physical task of grounding using a live line hot stick. This reflects work performed on the job when operating a live line tool.



## **RECOMMENDED PREPARATION FOR RAISE & HOLD HOT STICK**

Exercises that build muscular strength and endurance in the upper and lower body, torso/core area, and general aerobic capacity.

## **PHYSICAL PERFORMANCE TEST BATTERY PREPARATION**

The Substation Electrician Physical Performance test involves demonstration of several physical abilities essential to work performed on the job. These are grip strength, upper and lower body muscular strength, muscular endurance, and aerobic capacity. The following exercises can help you increase your abilities in these areas. For safety purposes, consult your physician prior to engaging in any exercise program.

While there are many ways to develop or strengthen the physical abilities essential to this test and the work of the job, the chart below provides suggestions of exercises that can increase the general abilities needed by this position. Resistance training (weights) has been shown to produce the greatest increases in strength. Before beginning these exercises, complete the warm-up to prepare the muscles and joints for the physically demanding exercises. Following the exercises, perform the cool-down exercises. When performing exercises, do not hold your breath. Breathe normally.

### **WARM-UPS**

#### **ARM CIRCLES**

Have the arms extended to the sides. Rotate the arms forward while increasing the size of the circle. Rotate the arms in the reverse direction and increase the size of the circle. Do 20 revolutions in each direction.

#### **MARCH & RUN IN PLACE**

March in place for 30 seconds while lifting the knees. Follow with running in place for 30 seconds.

#### **QUAD STRETCH**

Grasp a stable surface with the right hand. Bend the right knee and grasp the right foot with the left hand. Pull the right heel toward the buttocks for 10-20 seconds. Repeat with the left leg.

#### **SINGLE ARM CROSS**

Grasp the left arm at the elbow with the right hand. Pull the left arm across the body at shoulder height with the palm facing down. Hold this position for 10-20 seconds. Repeat with right arm.

### **GRIP STRENGTH**

#### **HAND GRIP**

Use a hand grip or tennis ball. Squeeze the grip with each hand 10 to 12 times.



## UPPER BODY MUSCULAR STRENGTH & MUSCULAR ENDURANCE

### BICEP CURLS

Place a dumbbell in each hand with the palms facing forward. Keep the feet shoulder width apart with the knees slightly flexed. Bend the elbows to lift the dumbbell to the shoulder. Keeping the elbows next to the torso, lower the weights to the starting position. To begin this exercise, select a weight that can be curled 4 to 8 times. Do two sets of 8-10 repetitions.

### PUSH-UPS

Lie face down on the floor with the hands and feet shoulder width apart. Keeping the torso straight, push upwards with the arms until they are fully extended. Keeping the torso in alignment, lower to a position in which the elbows are flexed to 90 degrees, then extend the arms until the elbows are straight. Complete as many push-ups as possible.

## LOWER BODY MUSCULAR STRENGTH & MUSCULAR ENDURANCE

### WALL SIT

Lie face down on the floor with the hands and feet shoulder width apart. Keeping the torso straight, push upwards with the arms until they are fully extended. Keeping the torso in alignment, lower to a position in which the elbows are flexed to 90 degrees, then extend the arms until the elbows are straight. Complete as many push-ups as possible.

### CALF RAISES

Stand with the feet a few inches apart. Raise up by extending at the ankle and raising the heels off the floor. Do two sets of 8-10 repetitions.

### LEG PRESS

Using a Leg Press/Hack Squat Machine. Sit in a position in which the knees are bent to approximately 90 degrees when the feet are placed against the plate on the machine. Do two set of 8-10 repetitions. Select a weight that can be easily moved 4 to 8 times.

## AEROBIC CAPACITY

### BICYCLE

Bicycle at a high cadence (60 or more revolutions per minute) at a low to moderate friction or gear setting for 30 or more minutes, 3 times per week

### RUN

Run for more than 20 minutes, 3 times per week.

## **COOL DOWN**

### **QUAD STRETCH**

Grasp a stable surface with the right hand. Bend the right knee and grasp the right foot with the left hand. Pull the right heel toward the buttocks for 10-20 seconds. Repeat with the left leg.

### **SINGLE ARM CROSS**

Grasp the left arm at the elbow with the right hand. Pull the left arm across the body at shoulder height with the palm facing down. Hold this position for 10-20 seconds. Repeat with right arm.

### **MODIFIED HURDLERS STRETCH**

Sit on the floor with the right leg extended. Bend the knee of the left leg and move the foot in toward the thigh of the other leg. Reach forward and attempt to touch the toes of the right foot. Hold this position for 10-20 seconds. Repeat with the left leg.



## **INFORMATION GUIDE FEEDBACK**

Please use this page to notify us of any changes in policies, procedures, or materials affecting this guide. Once completed, return to:

Southern California Edison  
Human Resources – Testing  
G.O. 5, 1st Floor  
1515 Walnut Ave.  
Rosemead, CA 91770

**Test Name: 4022 Substation Electrician Physical Performance Test**

COMMENTS