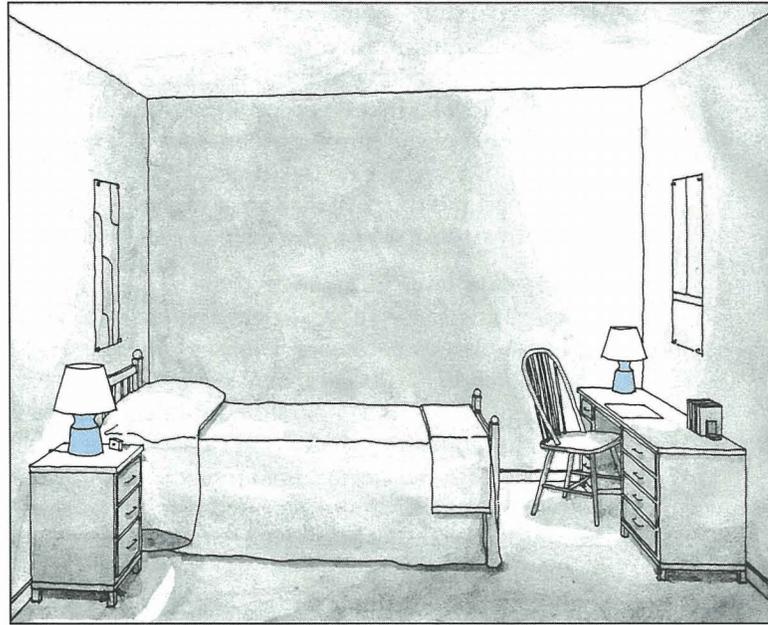


# Bedrooms

Provide a separately switched task light for reading in bed. Consider using wall-mounted luminaires with adjustable arms so that they can be positioned to direct light onto the reading material and to avoid glare. Locate the switch so that it is accessible from the bed. To avoid potential burns, be sure that the luminaires are secure, especially those containing incandescent lamps. Locate the luminaire above the head of the bed to minimize shadows. For orientation at night, use a low-wattage night light plugged into an electrical outlet instead of operating a hall or closet light.

Some bedrooms have luminaires in the closet. Consider using the room's ambient lighting for shallow closets because supplementary lighting for closets is not always necessary. Clothes-closet storage areas, as defined by the National Electric Code, may not contain unenclosed incandescent or fluorescent lamps. An enclosed surface-mounted luminaire with incandescent lamps may be used in closets if the luminaire is at least 12 inches away from the storage area (6 inches for a luminaire with fluorescent lamps). Enclosed recessed luminaires (with incandescent or fluorescent lamps) must be at least 6 inches away from the storage area. If a closet luminaire is likely to be left on, consider using a timer or luminaires with fluorescent lamps. Locate surface-mounted luminaires so that they do not interfere with placing objects on the shelf. Do not locate the luminaire directly over the storage shelf; instead, place it on the opposite wall, near the ceiling.

# Small Bedroom



## Typical

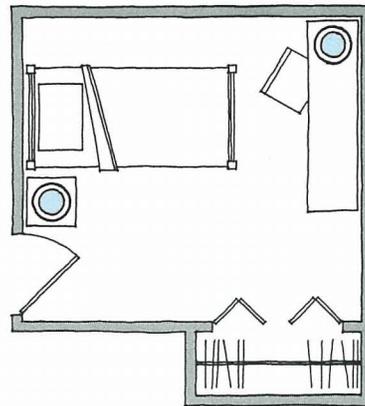
One table lamp containing one 75-watt incandescent A-lamp provides ambient lighting and lighting for the table, as does one desk lamp containing one 60-watt incandescent A-lamp. The table lamp is plugged into an electrical outlet that is controlled by a wall-mounted switch.

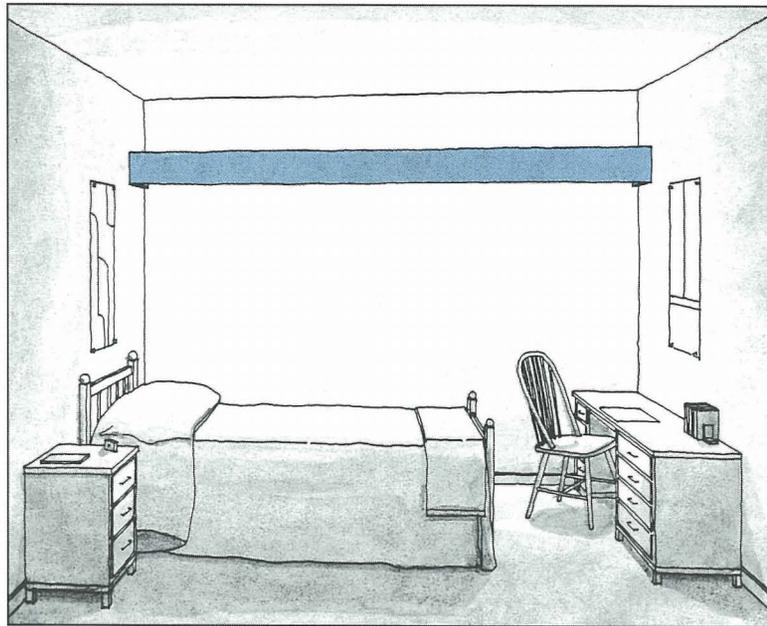
## Replace lamps

If less light output is acceptable, replace the A-lamp in the table lamp with a 60-watt halogen A-lamp. Replace the A-lamp in the desk lamp with a 52-watt halogen A-lamp.

## Replace lamps

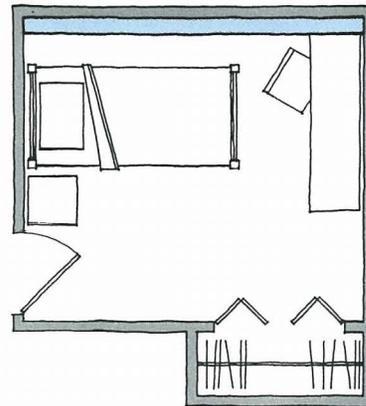
If the luminaires are large enough, replace the A-lamps in the table and desk lamps with electronically ballasted screwbase compact fluorescent lamps of 26-watts and 20-watts, respectively.



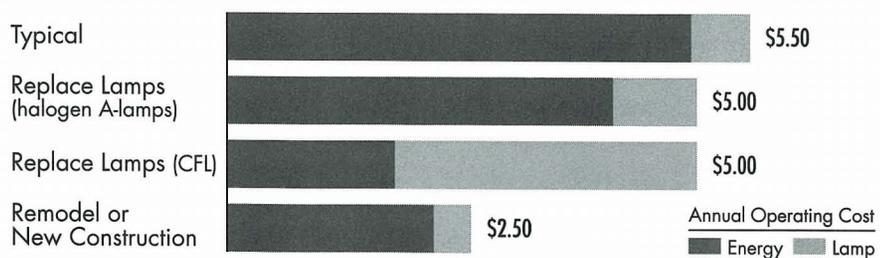


**Remodel or new construction**

A valance with a louver containing two 34-watt, 4-foot T12 RE730 linear fluorescent lamps and one electronic ballast provides ambient lighting. This design creates a different light distribution pattern, but still provides suitable lighting for the bed and desk.

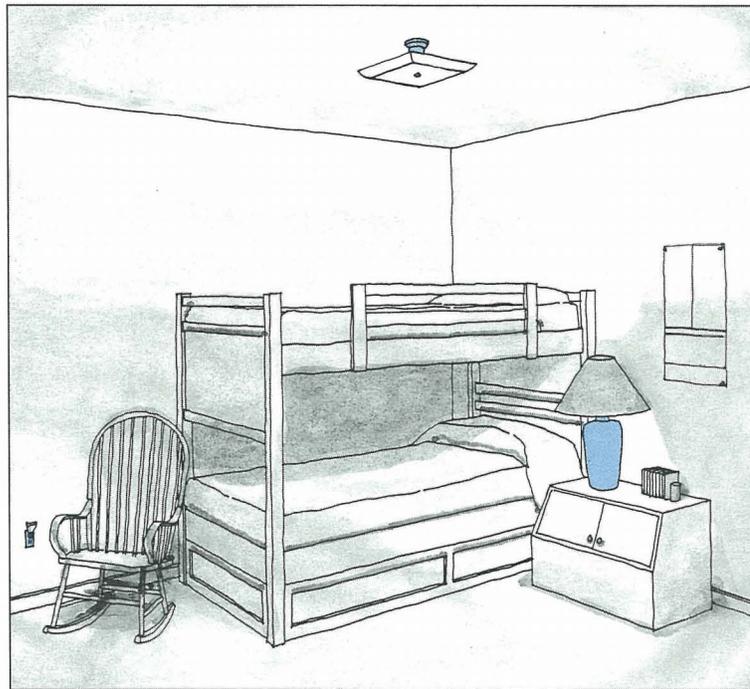


**Annual Operating Cost at \$0.10 per kWh**



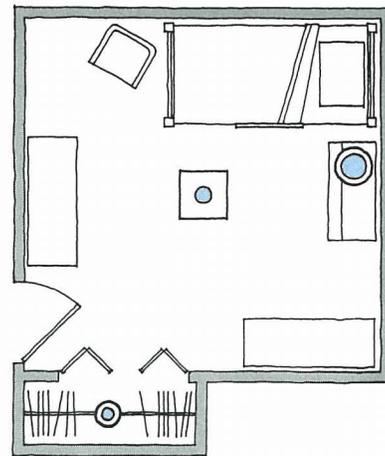
CFL = compact fluorescent lamps  
 For all of the lamps, assume 1 hour of use per day and 30 minutes per start.

# Children's Bedroom



## Typical

One ceiling-mounted diffuser containing two 60-watt incandescent A-lamps provides ambient lighting and is controlled by a wall-mounted switch. One desk lamp containing one 60-watt incandescent A-lamp provides lighting for the desk and bed. Lighting in the closet is provided by one ceiling-mounted luminaire containing one 60-watt incandescent A-lamp.

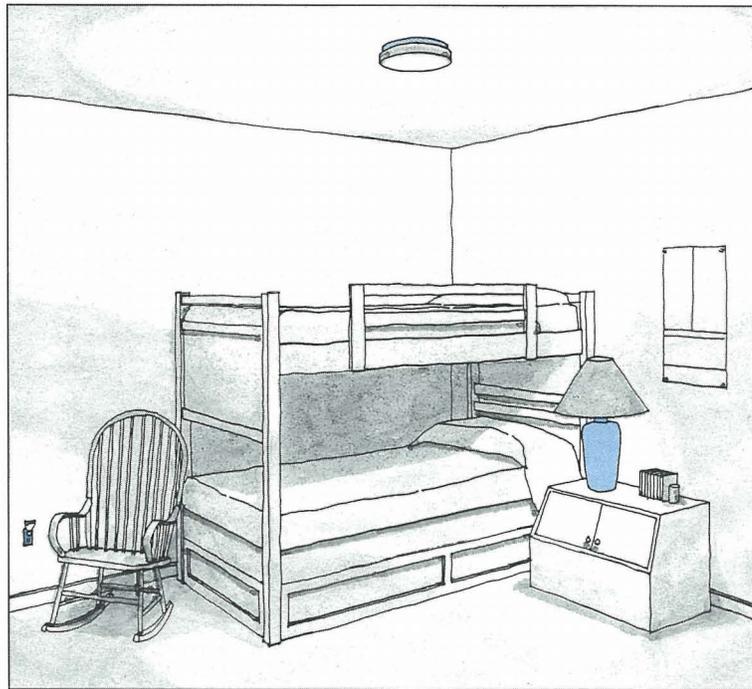


## Replace lamps

Replace all of the 60-watt lamps with 52-watt halogen A-lamps. If any of the lamps are operated for orientation or for a sense of security, add a night light that contains a photosensor.

## Replace controls

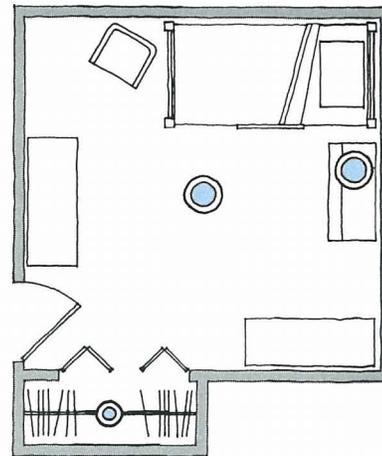
For the typical design, control the ceiling-mounted luminaire with a motion detector, and the luminaire in the closet with an interval timer.

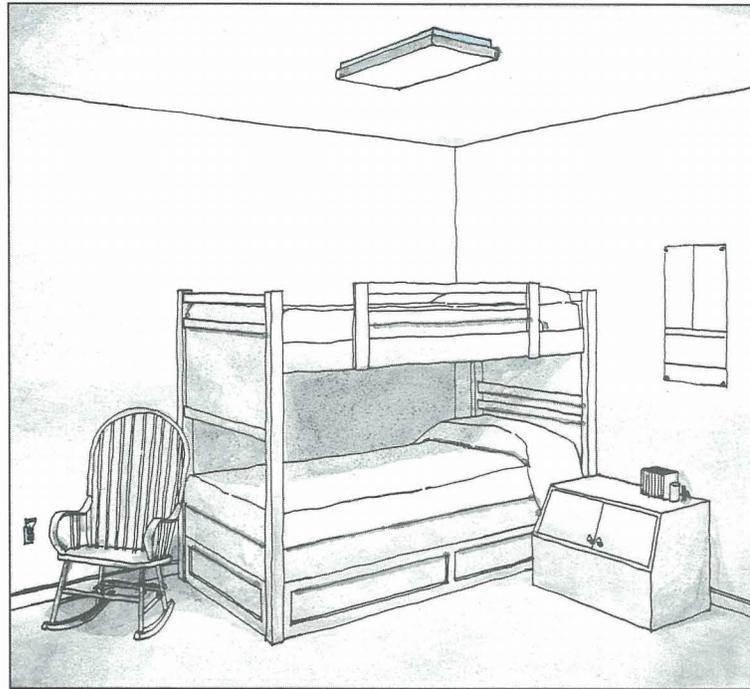


**Replace luminaires**

Replace the ceiling-mounted luminaire with one that contains a 32-watt, 12-inch RE730 circline lamp. Replace the remaining 60-watt lamps with 52-watt halogen A-lamps.

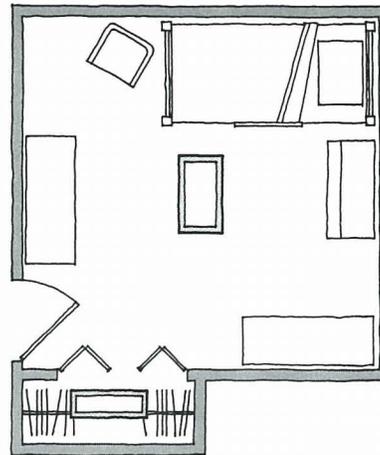
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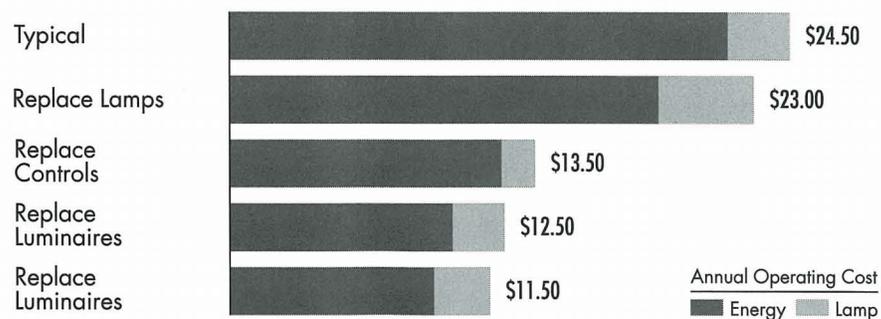


**Replace luminaires**

Install a ceiling-mounted diffuser that contains two 20-watt, 2-foot T12 RE730 linear fluorescent lamps and one magnetic ballast. One ceiling-mounted diffuser containing one 20-watt, 2-foot T12 RE730 linear fluorescent lamp and one magnetic ballast controlled by a wall-mounted switch provides lighting in the closet.

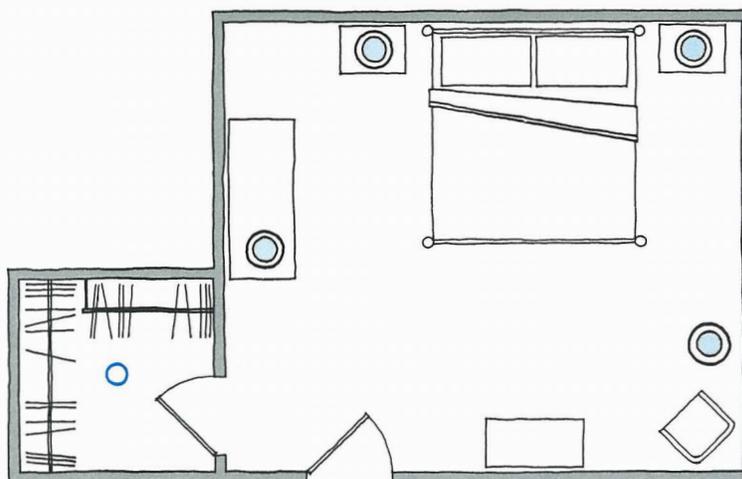
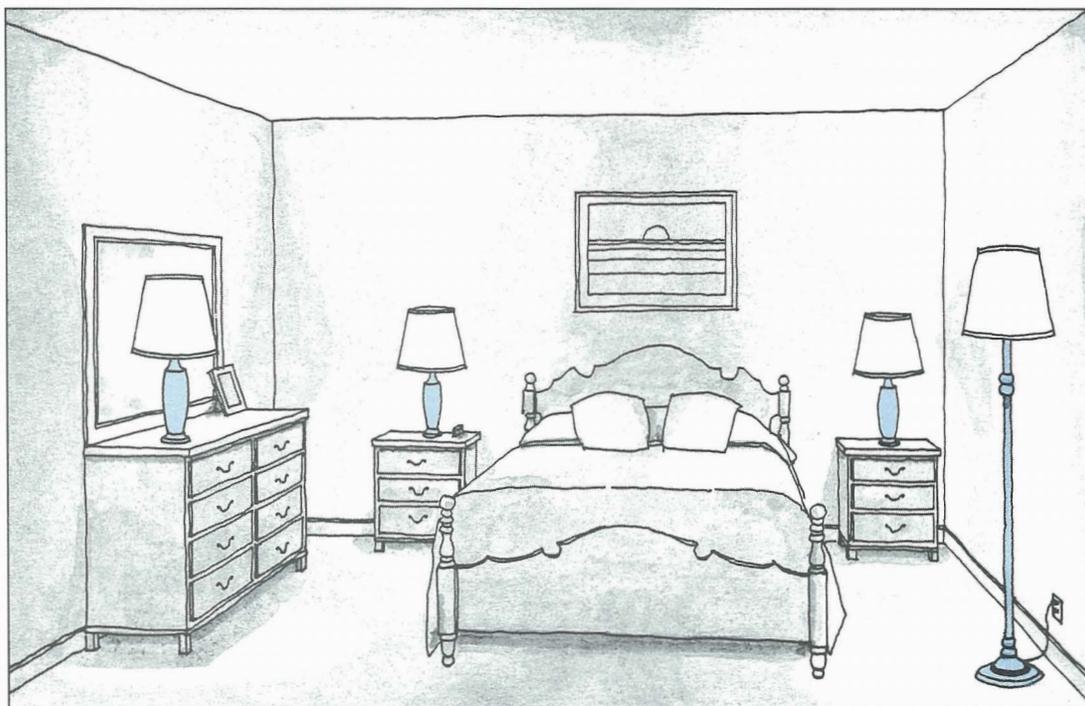


**Annual Operating Cost at \$0.10 per kWh**



Assume 4 hours of use per day for the lamps in the ceiling-mounted luminaire, 1 hour of use per day for the lamps on the desk and in the closet. Assume 2 hours per start for lamps in the ceiling-mounted luminaire and 1 hour per start for the desk lamp. The motion detector or timer reduction factor is 50 percent.

# Large Bedroom



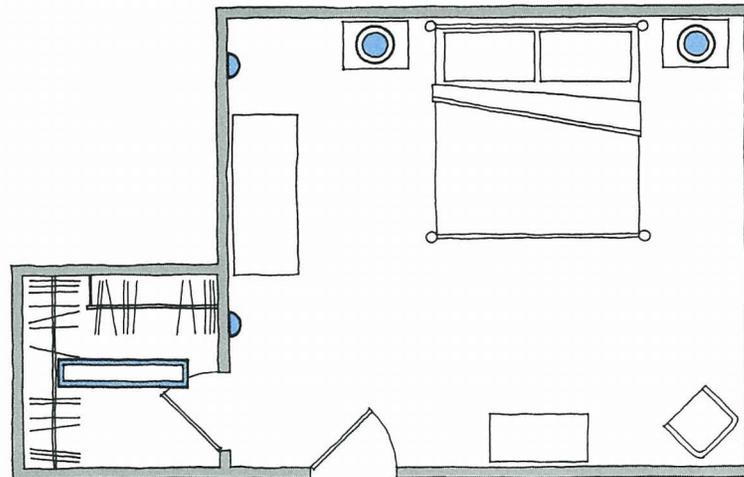
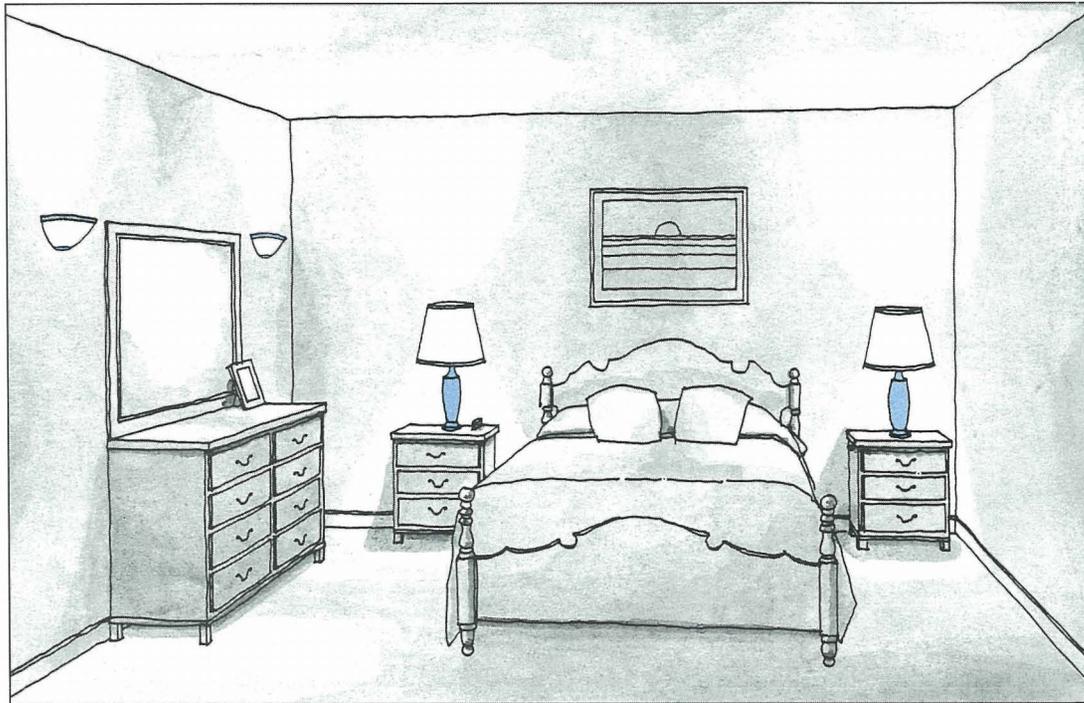
## Typical

Three table lamps and one floor lamp, each containing one 75-watt incandescent lamp, provide ambient lighting and lighting for the mirror and the bed. A wall-mounted switch controls the floor lamp. One recessed downlight containing one 60-watt incandescent A-lamp provides lighting for the closet and is controlled by a wall-mounted switch.

## Replace lamps

Replace the 75-watt A-lamps with 60-watt halogen A-lamps if lower light output is acceptable. Replace the lamp in the closet with a 52-watt halogen A-lamp.

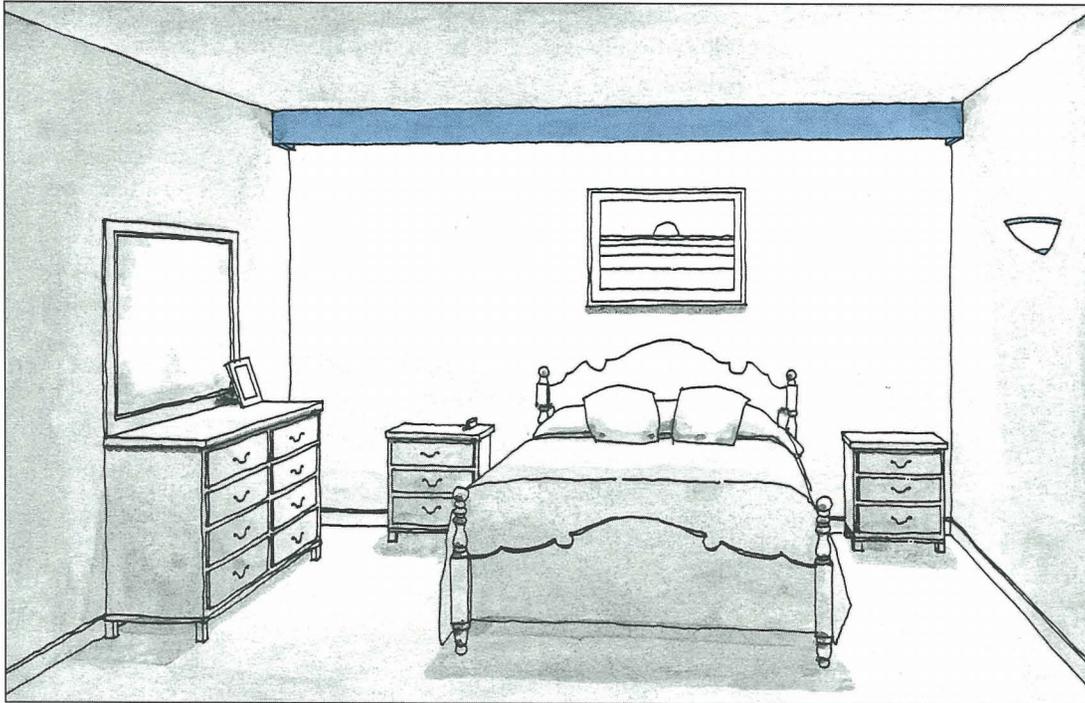
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**Remodel or new construction**

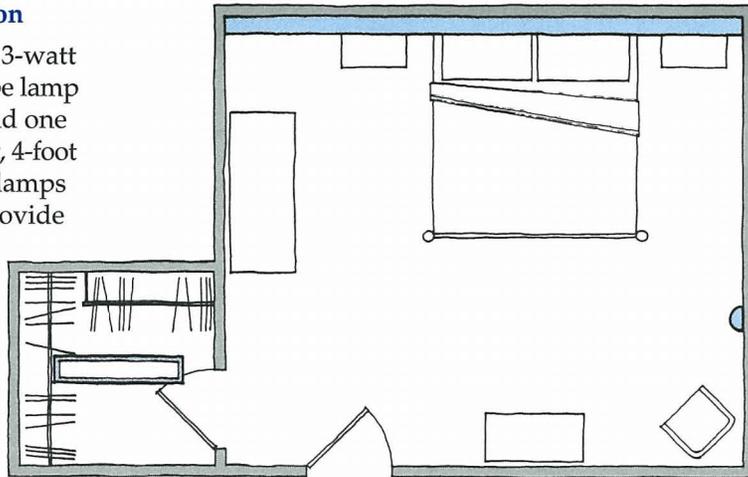
Two sconces, each containing one 13-watt compact fluorescent twin-tube lamp and one magnetic ballast, provide ambient lighting. Two table lamps, each containing an electronically ballasted 18-watt screwbase compact fluorescent quad-tube lamp, provide lighting

for the bed. The sconces are controlled by a wall-mounted switch. One ceiling-mounted diffuser containing one 34-watt, 4-foot T12 RE730 linear fluorescent lamp and one magnetic ballast provides lighting in the closet; this luminaire is controlled by a wall-mounted switch.

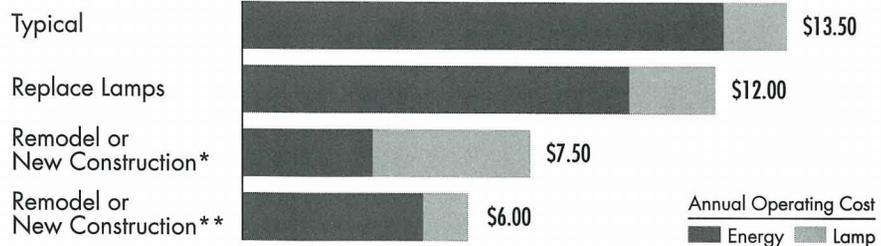


**Remodel or new construction**

One sconce containing one 13-watt compact fluorescent twin-tube lamp and one magnetic ballast, and one soffit containing three 32-watt, 4-foot T8 RE730 linear fluorescent lamps and one electronic ballast provide ambient lighting and lighting for the bed. The sconce and the soffit are controlled by separate wall-mounted switches. One ceiling-mounted diffuser containing one 32 watt, 4-foot T8 RE730 linear fluorescent lamp and one magnetic ballast provides lighting in the closet; this luminaire is controlled by a wall-mounted switch.



**Annual Operating Cost at \$0.10 per kWh**



\* Compact fluorescent twin-tube, compact fluorescent quad-tube, T12

\*\* Compact fluorescent twin-tube, T8, T8

For the lamps in the bedroom, assume 1 hour of use per day and 30 minutes per start. For the lamp in the closet, assume 30 minutes of use per day.