Reflected Ceiling Plan

References:


A lighting design can be indicated in a number of ways:

1) On the architect or interior designer’s plans:
   - Lighting can be indicated on either floor plans or reflected ceiling plans
   - Because lighting is constructed by different trades than the rest of the building,
   - Showing lighting on separate plans is generally preferred.
Lighting Documents

A lighting design can be indicated in a number of ways:

2) On the electrical plans:

The electrical plans use an architectural base plan and illustrate electrical information.

In addition to lighting, information presented on such plans include:

- Lighting controls, such as switches and dimmers
- Receptacles, connections to equipment, location of panelboards, and other electrical information
- Telephone jacks, data outlets, fire alarm devices, and other data signaling and communications systems
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**Lighting Documents**

A lighting design can be indicated in a number of ways:

In a complex building:
- lighting plans
- Power Plans
- signal plans
- legend sheets
- detail sheets
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Used as the base drawing for most lighting plans because lighting is usually mounted on ceilings.

Ceiling elements such as HVAC diffusers and grilles, sprinkler heads, and speakers are extremely important for coordination purposes.

For complex ceilings with vaults or coffers, the reflected ceiling plan provides critical dimensions.
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**Reflected Ceiling Plans**

Has the same orientation as the floor plan

Reflected ceiling plans should be drawn at the same scale as the construction floor plan

Reflected ceiling plans show partitions that extend to the ceiling and those that extend through the ceiling
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They also show

- Ceiling materials,
- Building grid lines
- Notes calling out ceiling heights,
- Changes in ceiling heights.
- Locations of all lights (including exit lights),
- Sprinkler heads,
- Air diffusers and vents
- Access panels,
- Speakers
- Any other item that is part of (or touches) the plane of the ceiling.
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Dimensions are included necessary to precisely locate elements that cannot be reasonably inferred by their relationship to something else.

Position of a down light in a gypsum wallboard ceiling must be dimensioned to its center point so the electrical contractor knows where to install it!

All items can be coordinated so the designer has a full understanding of what the final ceiling will look like.

Reflected ceiling plan will also have reference symbols to details drawn elsewhere in the set.
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Combined Ceiling/Floor Plans

It may be desirable to have downlights and chandeliers on the ceiling, wall sconces, table and floor amps, desk lamps, and undercabinet lights, all in the same space.

A base drawing showing ceiling details plus a furniture and casework plan makes it easier to show the various kinds of lighting equipment in the right location.
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Lighting Symbols

Symbols are usually not to scale

Symbols often appear much larger than scale so as to be easily seen on the plan

You can choose to develop scaled symbols
  Has the advantage of making the designer aware of potential interferences and aesthetic effects
Lighting Tags

A lighting tag is an identifier that describes the specific characteristics of luminaires on the plans.

The tag is drawn adjacent to a specific luminaire or group of similar luminaires.

Tag identifiers can be alphabetical {A, B, etc.} (most common) or alphanumeric {A1 F1a, etc.}.

Some tags also show the luminaire type or wattage.

The important point is for the tag to match the definition on the lighting schedule.
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Circuits

Communicate the intended switching or dimming groups by connecting lighting groups with lines or by indicating common control by letters.

Indicate how the lighting is to be wired by showing specific connections to control devices, such as dimmers and switches.
Difference between lighting design and electrical engineering:

A lighting design does not have to indicate the exact wiring.

The lighting designer clearly shows the desired switching or dimming groups but leaves the details of wiring, such as the number of circuits and the specific wiring between devices, to the engineer or contractor.

An engineer’s or contractor’s electrical drawing must illustrate the circuits, wiring, etc. for the design to be constructed.
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**Switching and Dimming**

Represented by symbols on the plan

A switch is usually indicated by a standard symbol

Dimmers and switches should be shown on the drawings at the intended location

Connection to the lights being controlled should be illustrated by a line or other obvious
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**Lighting Legends And Schedules**

Most lighting drawings include a legend and/or a schedule.

The legend always appears on the drawings.

A schedule may appear on the drawings or be included in a separate project book or manual.

In some cases, the legend and schedule are combined.
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Lighting Legends

The purpose of a lighting legend is to define each symbol

Older method - each luminaire was identified by a common symbol and a tag

Newer method - each luminaire can have a unique symbol
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Lighting Schedules

Provide a specification for each tag or symbol

The specification should include all of the following information:

- Tag
- General description of the luminaire
- Lamp(s) to be used in the luminaire
- Finish
- Mounting
- Watts
- Manufacturer and catalog number
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Lighting Specifications

Lighting plans are usually accompanied by written specifications
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