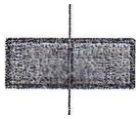
219 LIGHTING DESIGN – RCP's & What to Add

Reflected Ceiling Plans or RCPs

LAYING OUT CEILING TILES & PLACEMENT OF LIGHTING FIXTURES

When laying out ceiling tile grid consider the tile unit on either side of a center line or straddling:



EACH SIOE OF CENTER

STRADDLI NG CENTER

- This will help when trying to place light fixtures in the center of a hallway or avoid them being placed too close to walls.
- Always place light fixtures closer to each other than closer to a wall.
- Use fewer fixtures when you have offices and spaces with window walls. Natural light is light!
- Avoid designing ceiling tile layouts where tiles are less than 6" – Readjusts the tile layout using the concept noted above and/or splitting the difference in the dimension of the tile.

LIFE SAFETY ITEMS FOUND ON RCP'S

EXIT SIGNS

Exit signs must be visible from each end of hallways and from any location outside of a room.
Over exit doorways
Wall attached or Ceiling attached
One sided or two sided (Arrows on symbols show direction)

EMERGENCY LIGHTS W/BATTERY BACKUPS

Like exits signs, place Emergency Lights at ends of hallways to provide a lighted pathway. Light fixtures may be designed with battery backups to provide illuminated exit pathways. Some contacted to emergency generators some are battery only {30 minute life on some).

SMOKE DETECTORS

At entry locations to office/suite and all hallways

STROBE LIGHTS/ANNUNCIATORS & PULL STATIONS

Locations dictated by Fire Authority from submitted plans
Pull stations usually found at ends of hallways with a strobe light & annunciator located above.
Strobe lights placed so they project light to all location (Strobes assist the hearing impaired & Annunciators the blind plus people who don't pay attention!).

HVAC REGISTERS:

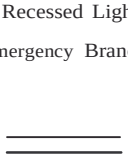
Supply & Return registers – 2 supplies for every 1return - typical. Never place a return and a supply register next to each other or you will create a "short exchange" (Air comes out of the supply and is immediately sucked back into the return register). Some HVAC designs have ducting to each supply & return register. Other designs may have a return air plenum where the area just above the suspended ceiling {The Plenum) serves as ducting for the returns air. These systems are design by the HVAC/Mechanical consultant. Your job, if required, is to transfer this info from the consultant's drawings onto the RCP. In addition, ducting sizes may affect your designs so review for restrictions!

SYMBOLS:

Electrical Plan Symbols - Lighting

Each engineering office uses their own set of electrical plan symbols; however, the symbols below are fairly common. Refer to the symbol *cover* sheet for special symbols used in a particular set.

2x2 Recessed light



2x2 Recessed Light on Emergency Branch

2x4 Recessed Light

2x4 Rece5sed Light on Emergency Branch

Recessed Linear light

Recessed linear Light on Emergency Branch

Surface Mounted Fluorescent IJght

Track Lighting

Recessed Can Light

Wall Mounted light

Recessed Wall Wash light

}iVAC Plan .Symbols

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Supply nd R,etum Airflow Symbols

Standard 4-Way Blow Diffuser

3-Way Blow Diffuser

2-Way Blow Diffuser

1-Way Blow Diffuser

Return Grille

Ol't'ection *of* Supply *Al t*

Electrical Plan Symbols - Fire Alarm

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Fire Alarm Pull Box

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Smoke Detector

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Electrical Plan Symbols - Security

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Panic Button or Distress Button

Magnetic Door Lock

Electric Door Latch

Card Reader

Electric Door Strike

Security Camera

Electrical Plan Symbols - Comm1unications

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Telephone Jack

Telephone Jack - Wall Mounted

Data Jack

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Electrical Plan Symbols - Power

Eveiy engineering offke uses their own set of symbols; however, the symbols below are fairfy common across many offices. Refer to the symbol shi:et for special symbo!s used in a particular set.

Du1>lex Outlet	Weatherproof Duplex. Outlet	Ground Fault Cirt'u.it Interrupt Duplex Outlet	Duplex Outlet - One Reoµtacle Controlled by Switch
Duplex Outlet on Emergency Bra nch	Quad Outlet - 4 Gang Box	S Switd1	3-Way Switch
Switch with Built-In Din11ner	Power Panel	lighting Panel	Through-Wall Sleeve
Junction Box.	Recessed Floor Box.		

You may find all of these sysmbols on Canvas in under Files - *Doc Standards for ID/ W2017*