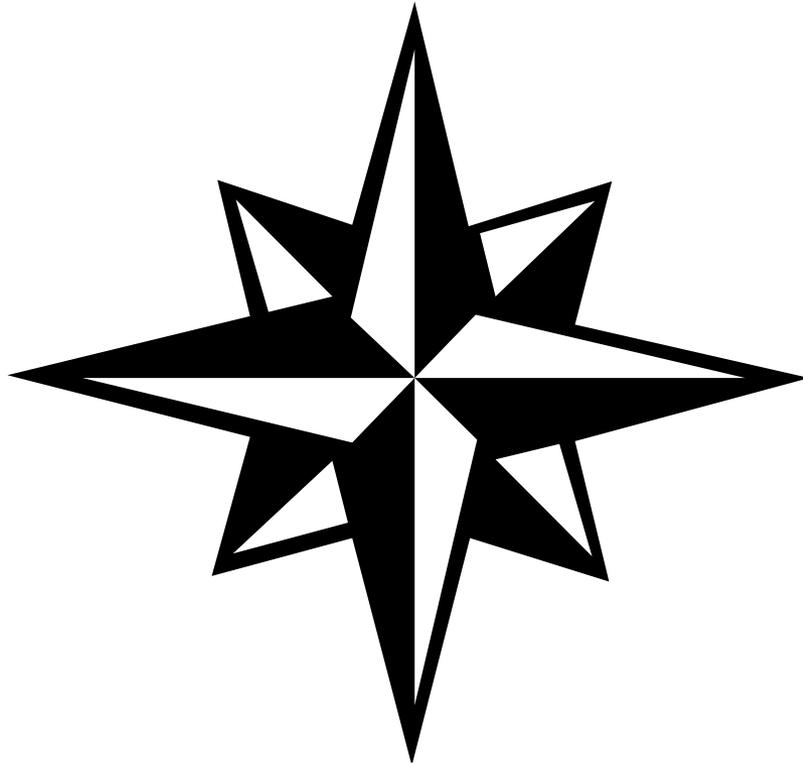




# Definition Of A Sign



- Purpose of Signs
- Visibility
- Basic Rules
- Sign Types
- Options In Lighting
- Lighting Types
- Photos of Signs
- Special Signs
- Variations In Sign
- Summary/Questions

# Purpose of Signs

Identify! Identify! Identify!

- Visibility:
- Readability
- Perceptual Detection: amongst surroundings



# Visibility

- Height
- Color
- Text
- Location

# Basic Rules

- 8 second rule ?
- Letter Height                      Viewing istance
- 4”                                      100 ft
- 10”                                     250 ft
- 16”                                     360ft (city blk)
- 33”                                     750ft



# Sign Types

- Building Signage
  - Letters (metal, plastic)
  - Panels (aluminum, wood carved or otherwise, plastic)
  - Box (dimensional)
  - Channel Letters (deeper with metal or plastic sides and open fronts for plastic/open faces)  
Raceways also to be mentioned later in illum.



# Variation In Sign Faces

- Flat
- Pan
- Embossed
- Opaque
- Vinyl
- Painted



# Freestanding/Pylon/Monument

- Roadside signage can be termed any of the above and be mounted to any of the below
  - Pedestal Monument
  - Pole(s)
  - Cladding
    - These signs may accomplish 2 things:  
identification of establishment and a directional to the business (sign location to business entrance)

# OPTIONS IN LIGHTING

- Internal Illumination –is a light source emitting from the actual sign.
- External Illumination-is a light source that illuminates from outside the sign.
- None

# • Types of lighting **LIGHTING**

-**Fluorescent** is a [gas-discharge lamp](#) that uses [electricity](#) to [excite mercury vapor](#). Use less power for the same amount of light, generally last longer, but are bulkier, more complex, and more expensive than a comparable incandescent lamp.

-**Neon** proven to be very sturdy and weather-resistant. Neon has comparatively long operational [lifetimes](#) compared to other light sources, combination of factors has contributed to neon's continued popularity in outdoor signage.<sup>1</sup> They operate using a low current [glow discharge](#). Higher power devices, such as [mercury-vapor lamps](#) or [metal halide lamps](#) use a higher current [arc discharge](#).

## -Cold Cathode/Neon

- A **cold cathode** is an element used within some [Nixie tubes](#), [gas discharge lamps](#), [gas filled tubes](#), and [vacuum tubes](#). The term 'cold cathode' refers to the fact that the cathode is not independently heated. In spite of this, the cathode itself may still operate at temperatures as high as if the cathode were heated.
- Cold cathode [fluorescent lamps](#) (CCFLs) are usually also called *cold cathodes*. [Neon lamps](#) are a very common example of a cold cathode lamp.
- Cold Cathodes remain popular for LCD backlighting and enthusiast computer [case modders](#).
- **Electron emission**
- A [cathode](#) is any [electrode](#) that emits [electrons](#). When used in electrical and electronic devices (most [fluorescent lamps](#), [vacuum tubes](#), etc.), the cathode is explicitly heated, creating a [hot cathode](#). By taking advantage of [thermionic emission](#), electrons can overcome the [work function](#) of the cathode without an [electric field](#) to pull the electrons out. But if sufficient voltage is present, electrons can still be stripped even out of a cathode operating at [ambient temperature](#). Because it is not deliberately heated, such a cathode is referred to as a cold cathode, although several mechanisms may eventually cause the cathode to become quite hot once it is operating. Most cold cathode devices are filled with a [gas](#) which can be [ionized](#). A few cold cathode devices contain a [vacuum](#).

-**Mercury Vapor MV** a lamp in which **ultraviolet & yellowish-green to blue visible light is produced by an electrical discharge through mercury vapor; energy efficient.**

-**Metal Halide MH** like other [gas-discharge lamps](#) such as the very-similar [mv lamps](#), MH lamps produce light by passing an electric arc through a mixture of gases. In a metal halide lamp, the compact [arc tube](#) contains a high-pressure mixture of [argon](#), [mercury](#), and a variety of metal [halides](#). The mixture of halides will affect the nature of light produced, influencing the [correlated color temperature](#) and intensity (making the light bluer, or redder, for example). The argon gas in the lamp is easily ionized, and facilitates striking the arc across the two electrodes when voltage is first applied to the lamp. The heat generated by the arc then vaporizes the mercury and metal halides, which produce light as the temperature and pressure increases.

- Like all other gas discharge lamps, metal halide lamps require [auxiliary equipment](#) to provide proper starting and operating voltages and regulate the current flow in the lamp.
- About 24% of the energy used by metal halide lamps produces light (65-115 [lm/W<sup>\(1\)</sup>](#)), making them generally more efficient than [fluorescent lamps](#), and substantially more efficient than incandescent bulbs

-**Light Emitting Diode LED** are based on the [semiconductor diode](#). When the diode is forward biased (switched on), [electrons](#) are able to [recombine](#) with [holes](#) and energy is released in the form of light. including lower [energy consumption](#), longer [lifetime](#), improved robustness, smaller size and faster switching.

# Building Examples & Illumination



# Example Monument or Pedestal



# Freestanding



# Pole/ladder



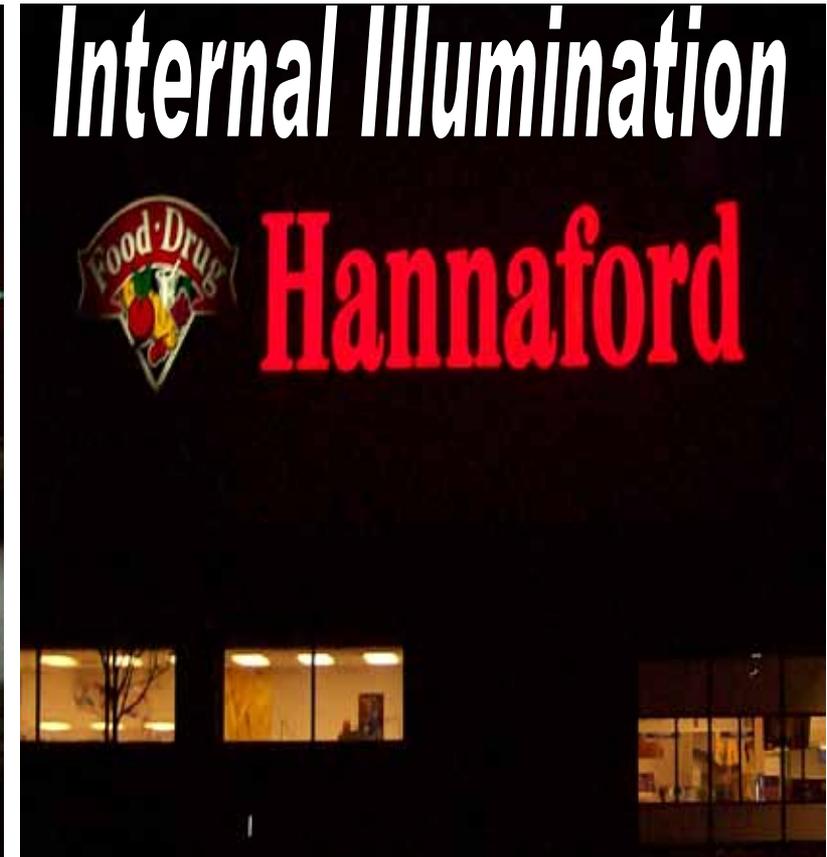
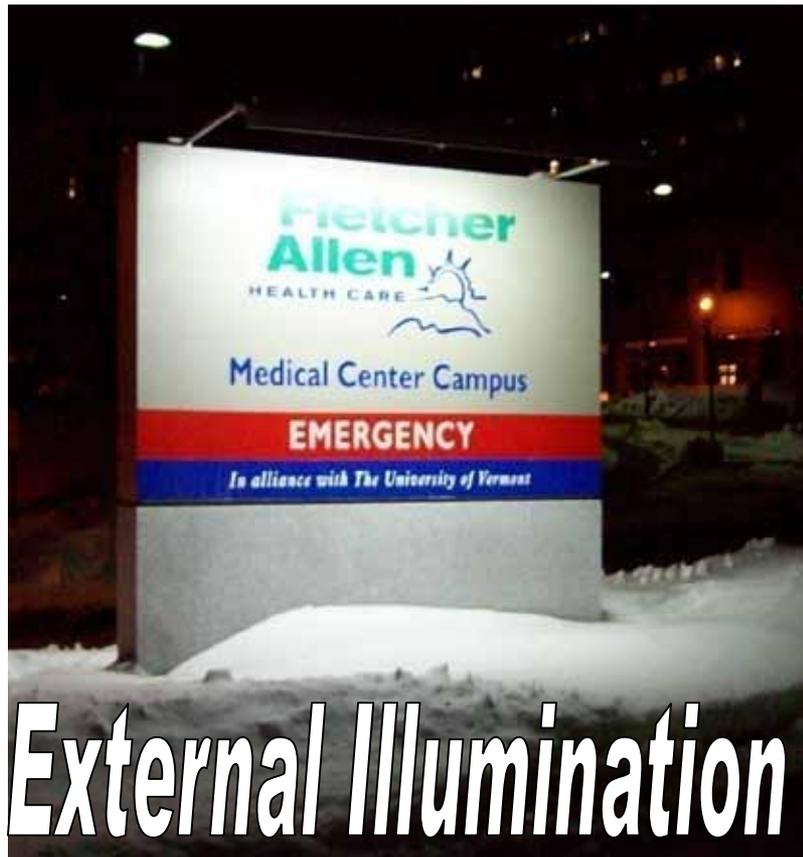
# Monument



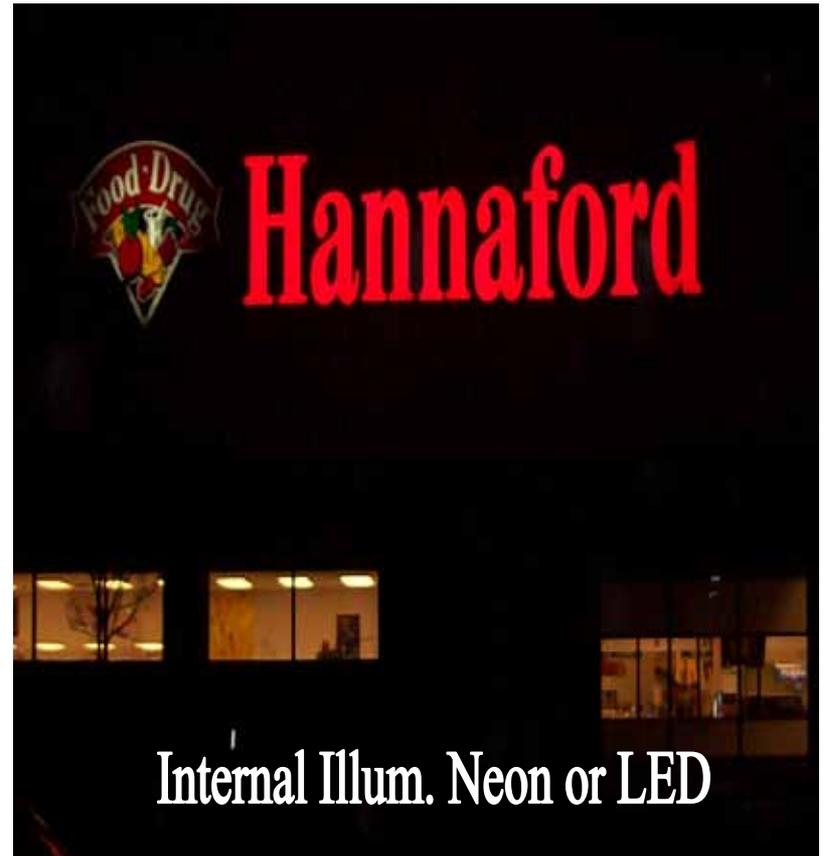
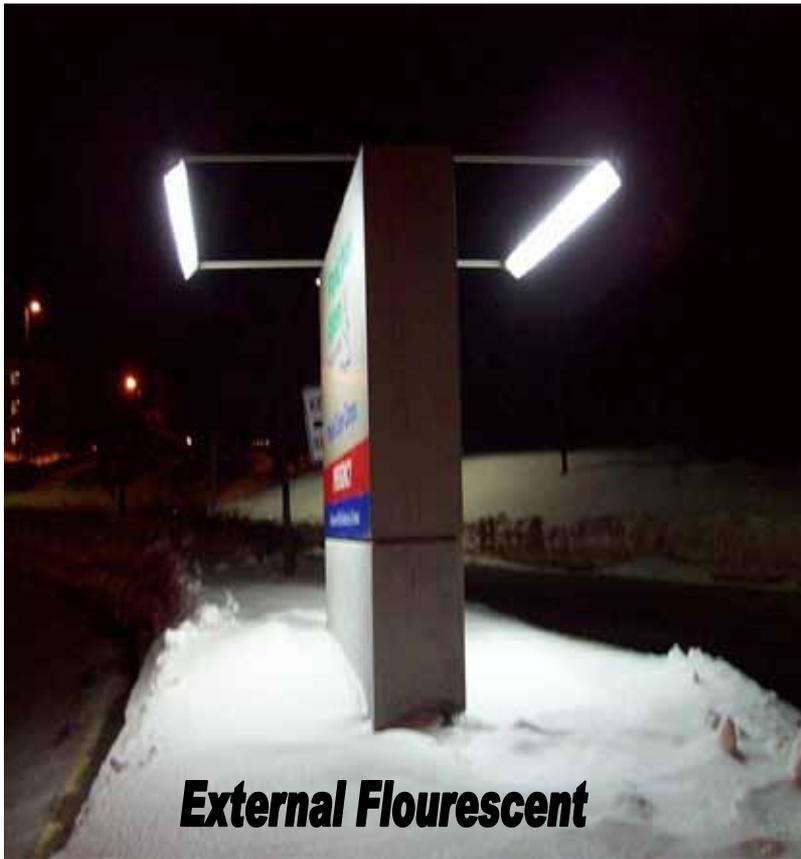
# Inside of a road sign



# Illumination Options



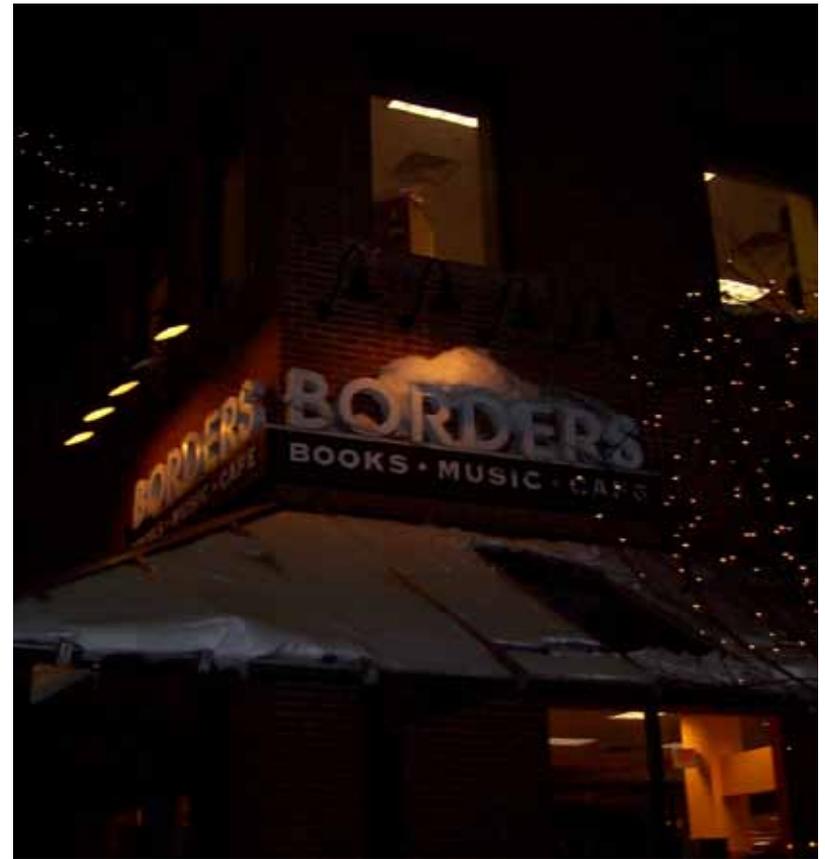
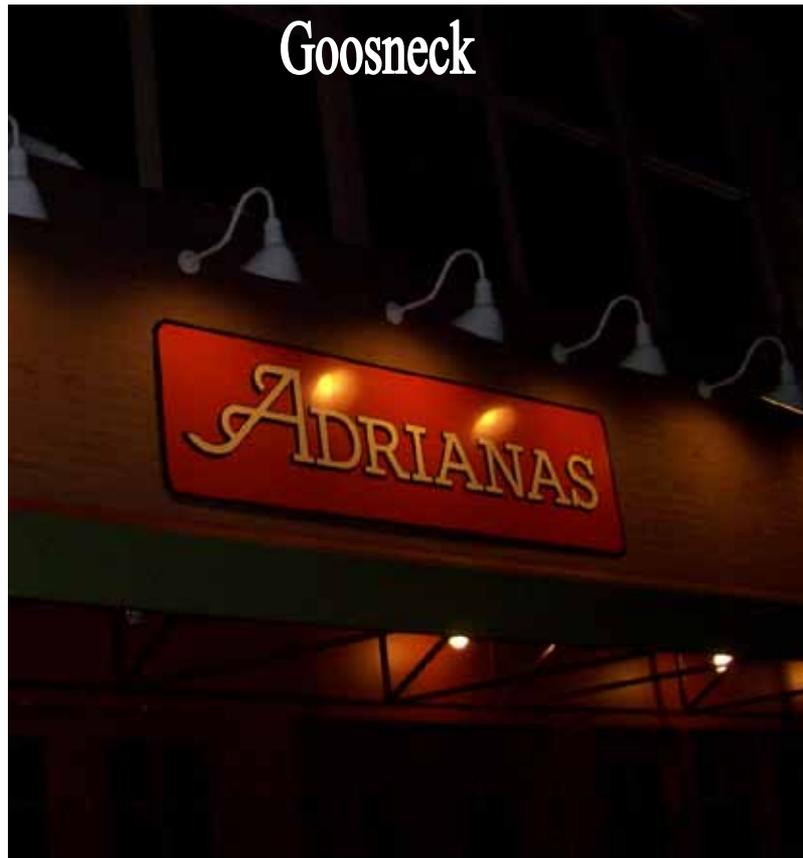
# Continued View



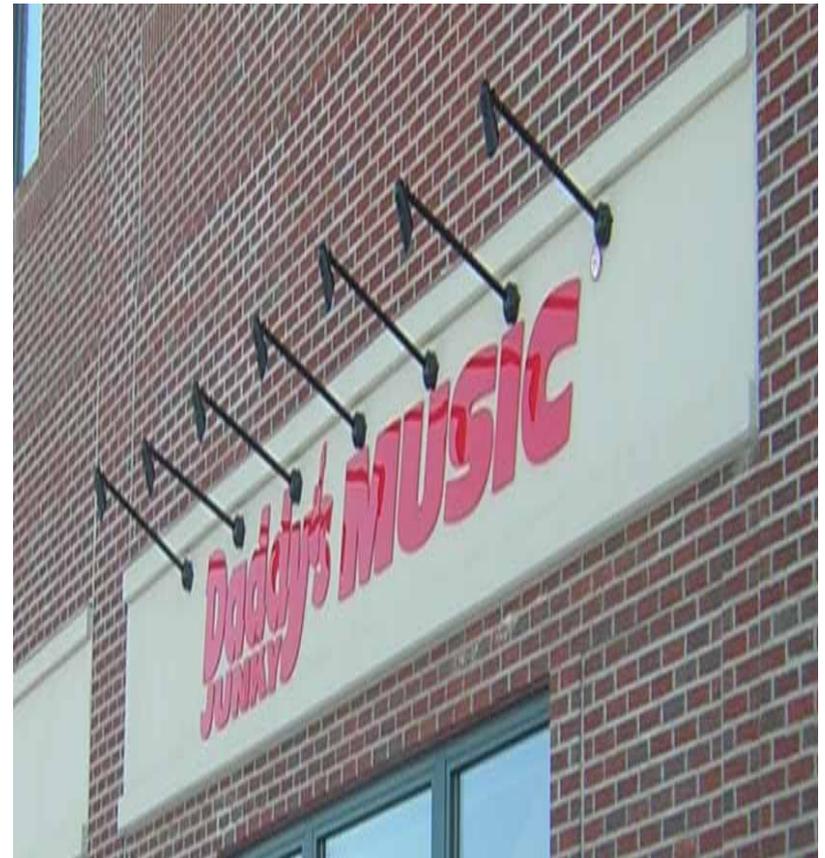
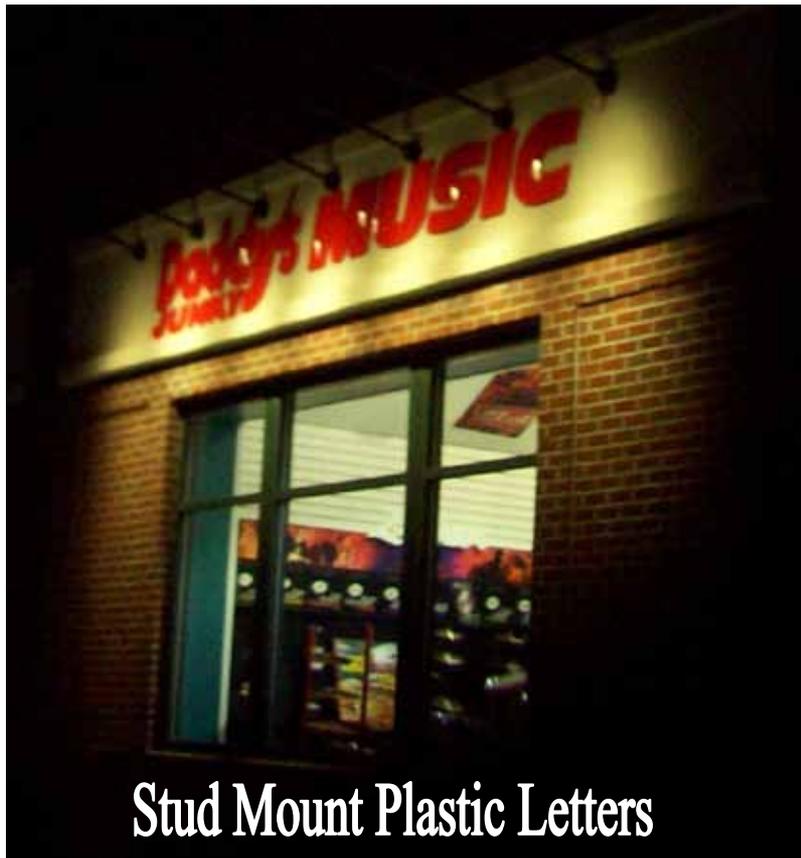
# External Lighting



# External Lights or Spotlight



# Proper External Light Spacing?



# Variety Signage Day



# Variety Signage Night



There are 5 types of signage.

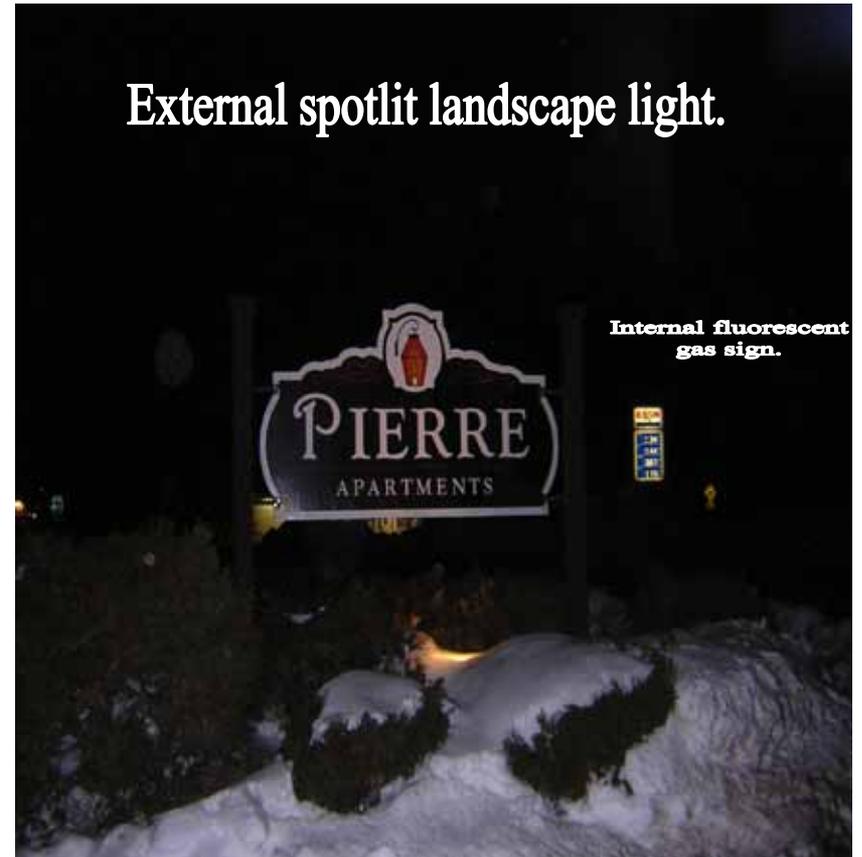
# Halo/Reverse Lit Letters



# Why a Raceway Sign



# Two Extremes





# Special Signs

- Readerboard
- Message Center
  - Programmable
  - Color Options
- Time/Temp
- Gas Station

Price competitiveness

# Time/Temp & Gas



- Subjective vs. objective

- Funny Signs:

- As seen in Greenville, SC:

- "Drive Slow, See Our City. Drive Fast, See Our Judge"**

- As seen near the tracks of the Newcastle Tramway Authority:

- "Touching Wires Causes Instant Death. \$200 Fine"**

- Shopping mall near handicap parking lot:

- "Stupidity is not a handicap! Park elsewhere!"**

- Seen on a garbage truck:

- "Satisfaction guaranteed or double your trash back!"**

- At a safari park**

- "elephants please stay in your car"**

- At a dairy Queen**

- "scream until daddy stops the car"**

- Questions?

# Resources for Reference

- “The Signage Source Book” by SBA, 2003
- “What’s Your Signage?” by New York State Small Business Development Center, 2004
- USSC: Member Resource Folio 2008