



**LEVITON**

**Applications Cookbook**  
**NorthStar™ Outdoor Controls**  
Version 2.0

FOR REFERENCE ONLY

# NORTHSTAR COOKBOOK NOTES

1. Refer to manufacturer's data sheets and installation instructions prior to installation.
2. Line feed 120/230/277VAC, 60Hz.
3. Ground not shown. Ground devices per applicable national and local codes and best practices.
4. For emergency power situations, illustrations assume transfer switch by others upstream of shown devices.
5. Line voltage load not to exceed contact rating per device specifications.
6. Power packs receiving separate feeds for switched loads and self power must have both feeds on the same phase.
7. All low-voltage devices consume current. Device power budget is estimated for these details; additional power sources may be required. See product literature for power specifications.
8. Maximum run length for analog wiring is 1000' feet @ #18 AWG.
9. Sensors wired in parallel will cause line voltage relay closure when occupancy is detected by any unit.
10. Devices in series requiring contact closure from a single device (clock input, demand response, emergency, etc.) must follow these wiring conventions: first device in sequence provides the +V to the triggering relay; signal from closure attached to all devices in sequence input; com from first device in sequence attached to com on all devices in sequence.
11. Ultrasonic ceiling mount sensors should be located a minimum of 6 ft from HVAC supply/return vents.
12. Trough-mounted, pendant-mounted, and pendant-mounted indirect lighting sources affect the operation of locally mounted sensors. Contractor is responsible for adjusting sensor locations to allow for proper operation.
13. Contractor is responsible for proper sensitivity and time delay settings for non-adaptive products, following the manufacturer's recommended placement, and field verification of circuits with respect to power pack placement.
14. Contractor is responsible for coordinating the operational options of sensors and power packs with the specific work requirements.
  - Work relevant energy code requirements affect circuits to be controlled and their control characteristics.
  - One power pack is required for each controlled circuit.
  - Refer to power pack data sheet for power output and installation guide for maximum number of sensors connected to a power pack.
  - If multiple circuits are to be controlled by a sensor, auxiliary relays may be used in conjunction with a power pack.
15. Ceiling sensors mounted over doorways should be placed 1 ft inside the threshold.
16. Up to 100 Mark VII-style ballasts may be controlled per daylighting zone by IRC.
17. All relays shown in de-energized state.

18. Individually cap off unused leads.
19. One-line parenthesis use:
  - (X) - Function
  - [#] - Terminal
20. Plug load control commercial receptacle P/Ns:
  - Standard Duplex:
    - Split Control (1 Outlet) CR015-1Px, CR020-1Px
    - Full Control (2 Outlets) CR015-2Px, CR020-2Px
  - Decora:
    - Split Control (1 Outlet) 16252-1Px, 16352-1Px
    - Full Control (2 Outlets) 16252-2Px, 16352-2Px
21. Control Receptacle:
  - Quantity per applicable codes.
  - Termination shown split receptacle. Termination per applicable codes.
  - Receptacle markings per applicable energy codes.

## DRAWING SYMBOLS

⊕ No connection

⊖ Connection

 Devices wired in parallel

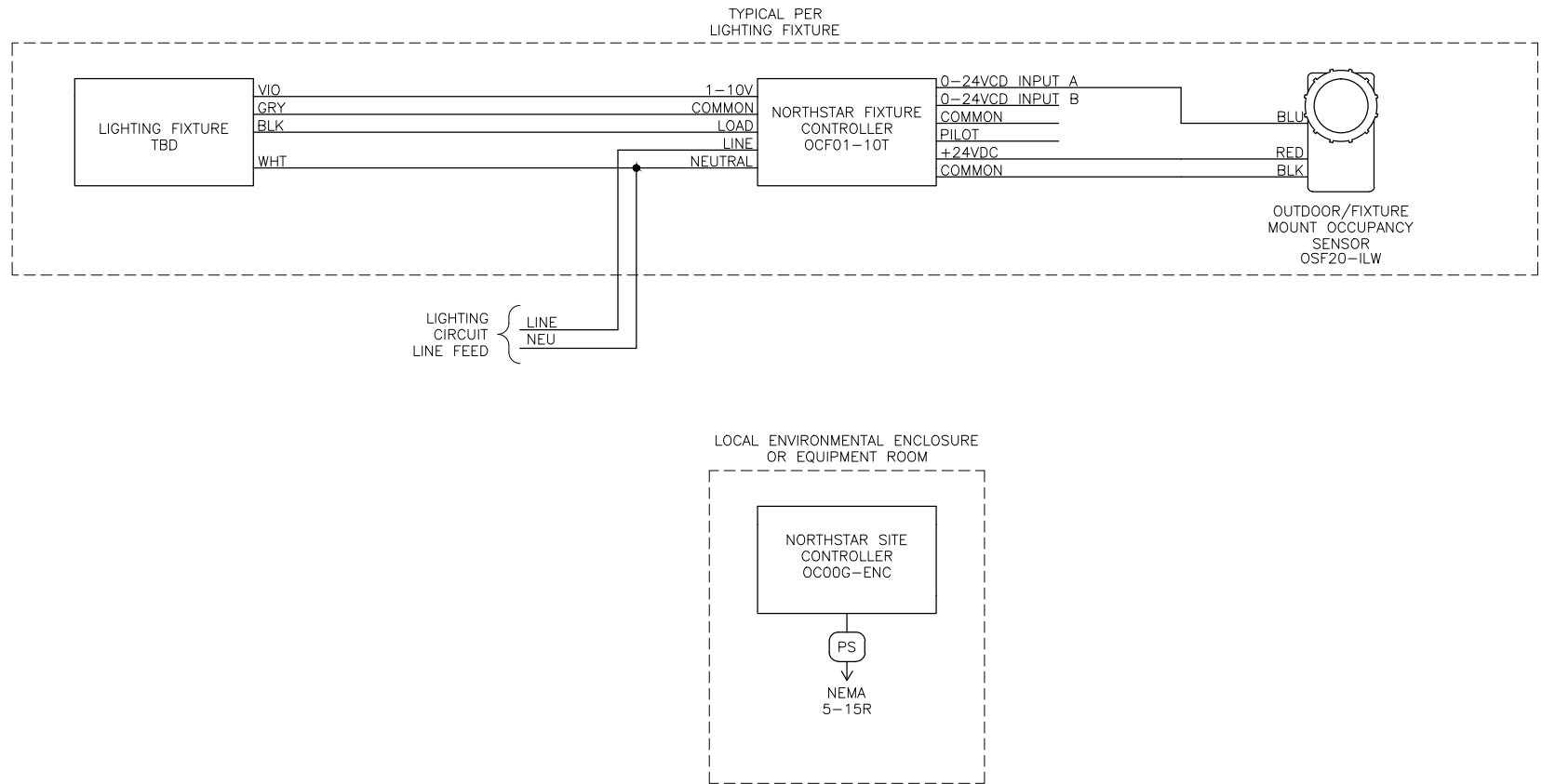
## DRAWING ABBREVIATIONS

LC	Luma-CAN		
LV	Low voltage		
HV	High voltage switch (maintained)		
LVM	Low voltage switch (momentary)		
	Equal to Leviton: 1081 (Toggle) or 56081 (Decora)		
LVT	Low voltage switch (maintained)		
	Equal to Leviton: 12021-2 (Toggle) or 56021-2 (Decora)		
LV2	IRC low voltage switch		
	Equal to Leviton: RLVSW-1LW (1 button), RLVSW-2LW (2-button) or RLVSW-4LW (4-button)		
UON	Unless otherwise noted		
BLK	Black	VIO	Violet
WHT	White	BRN	Brown
BLU	Blue	ORG	Orange
YEL	Yellow		

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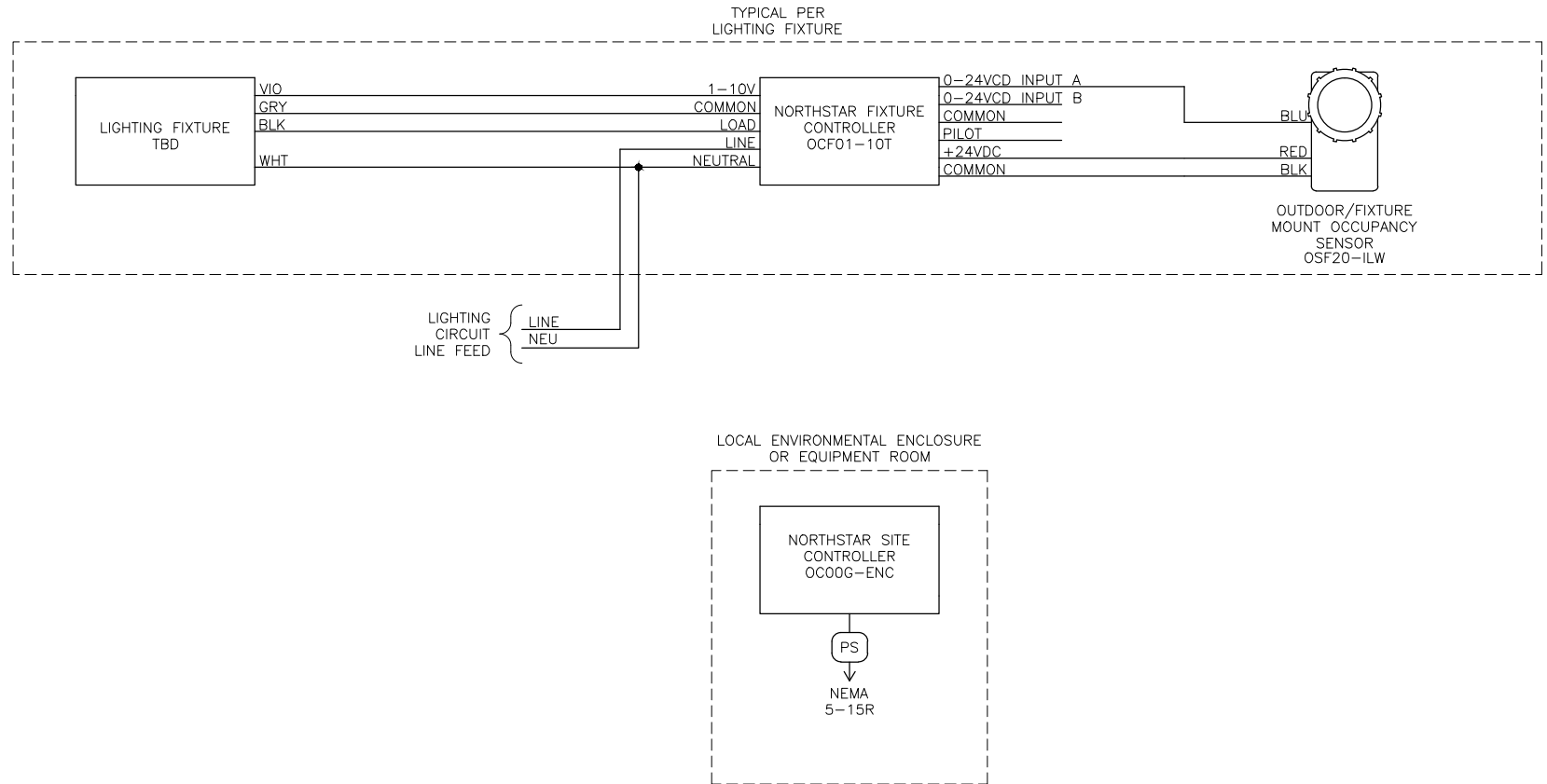
# PARKING GARAGE, OCCUPANCY SENSOR PER FIXTURE, NORTHSTAR



## NOTES:

1. REFER TO PRODUCT LABELS AND INSTALL SHEETS FOR ADDITIONAL INSTALLATION DETAILS.
2. INDIVIDUALLY CAP OFF UNUSED CONDUCTORS.
3. POWER PACK USED FOR SWITCHING LIGHTING LOAD AND AS AUXILIARY POWER FOR OCCUPANCY SENSORS.
4. DIAGRAM ASSUMES LIGHTING LOAD IS WITHIN DEVICE SPECIFICATIONS.
5. INSTALLING CONTRACTOR TO PROVIDE ENVIRONMENTALLY RATED ENCLOSURES FOR EQUIPMENT AND TERMINATIONS PER APPLICABLE CODES AND BEST PRACTICES.
6. NORTHSTAR FIXTURE CONTROLLERS COMMUNICATE WITH A NORTHSTAR SITE CONTROLLER. REFERENCE PRODUCT LITERATURE FOR ADDITIONAL DETAILS.

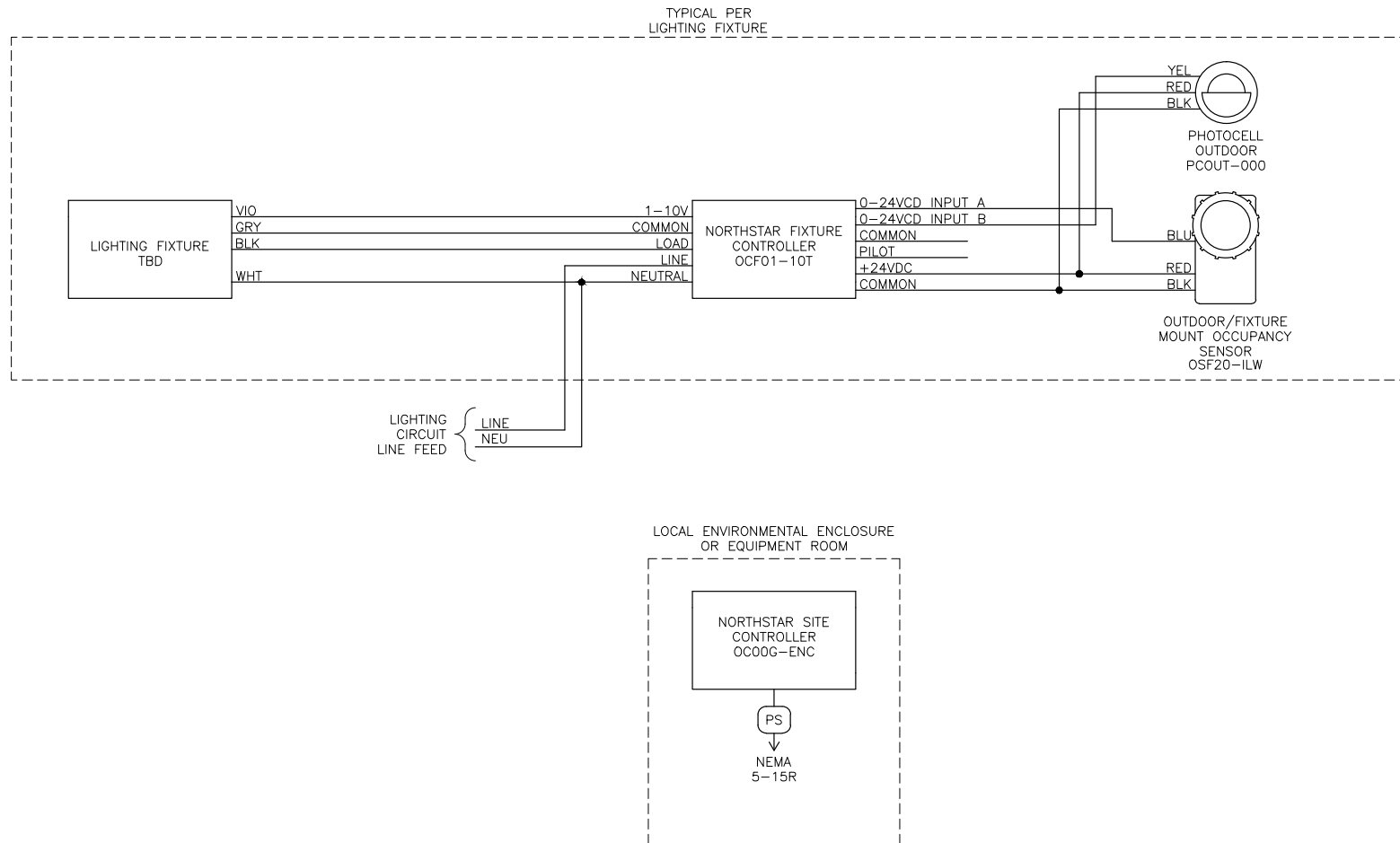
# SITE LIGHTING, OCCUPANCY SENSOR PER FIXTURE, NORTHSTAR



## NOTES:

1. REFER TO PRODUCT LABELS AND INSTALL SHEETS FOR ADDITIONAL INSTALLATION DETAILS.
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3. POWER PACK USED FOR SWITCHING LIGHTING LOAD AND AS AUXILIARY POWER FOR OCCUPANCY SENSORS.
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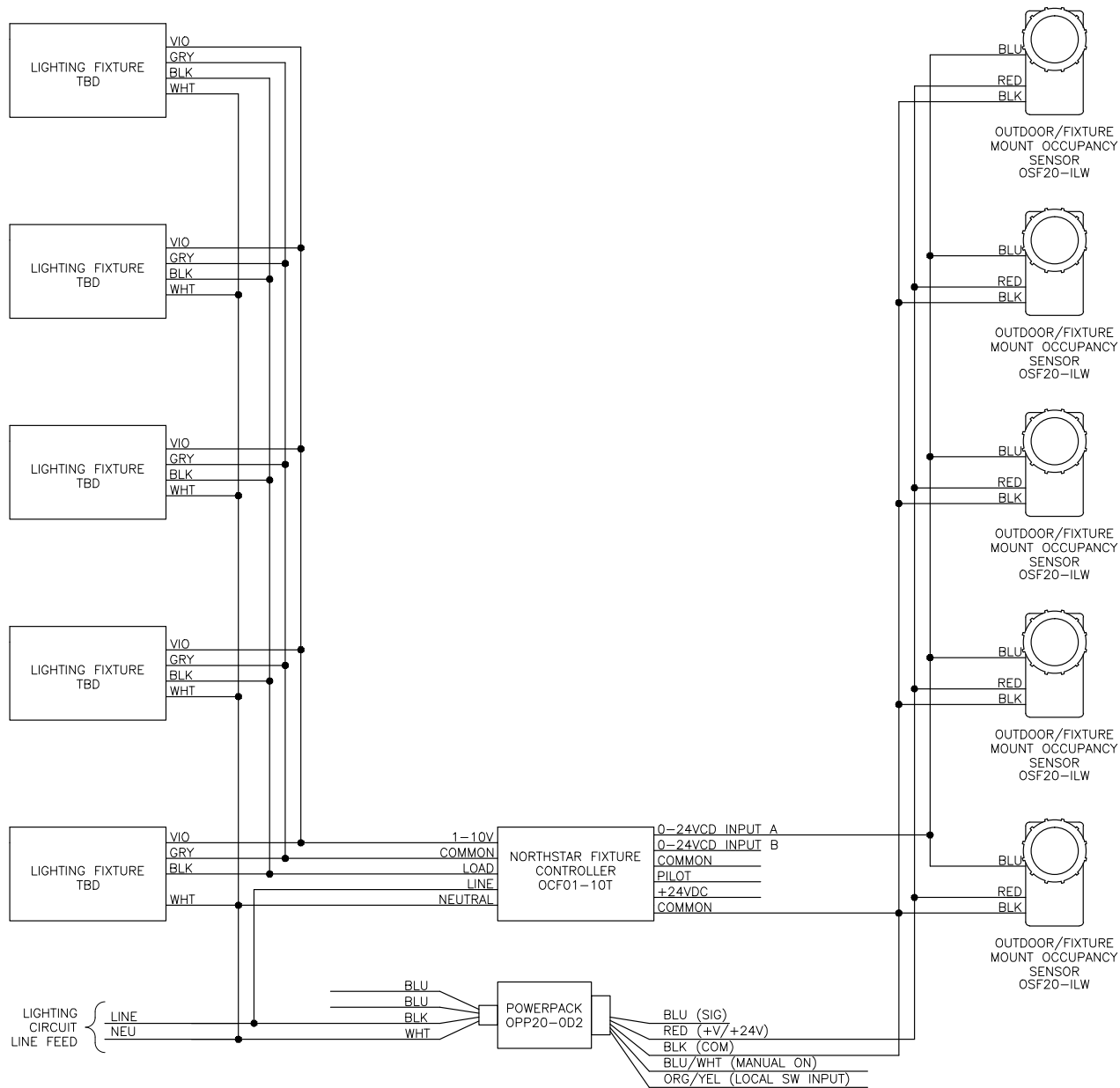
# SITE OR PARKING LIGHTING, OCCUPANCY AND PHOTOCELL PER FIXTURE, NORTHSTAR



## NOTES:

1. REFER TO PRODUCT LABELS AND INSTALL SHEETS FOR ADDITIONAL INSTALLATION DETAILS.
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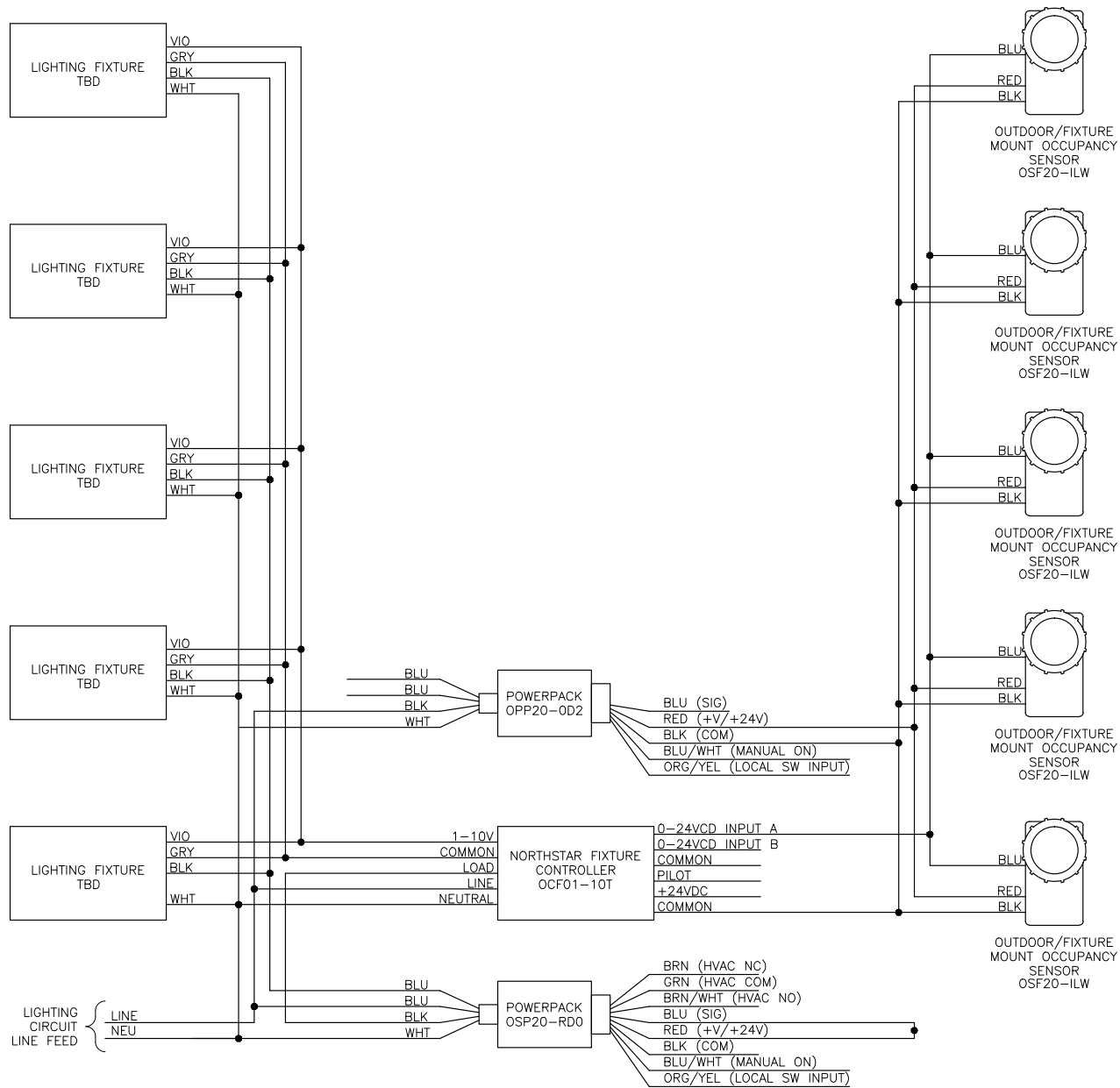
# PARKING ZONE (<5A), MULTIPLE OCCUPANCY SENSORS AND FIXTURES, NORTHSTAR



## NOTES:

1. REFER TO PRODUCT LABELS AND INSTALL SHEETS FOR ADDITIONAL INSTALLATION DETAILS.
2. INDIVIDUALLY CAP OFF UNUSED CONDUCTORS.
3. POWER PACK USED AS AUXILIARY POWER FOR OCCUPANCY SENSORS ONLY.
4. DIAGRAM ASSUMES LIGHTING LOAD IS WITHIN CONTROLLER SPECIFICATIONS.
5. INSTALLING CONTRACTOR TO PROVIDE ENVIRONMENTALLY RATED ENCLOSURES FOR EQUIPMENT AND TERMINATIONS PER APPLICABLE CODES AND BEST PRACTICES.
6. NORTHSTAR FIXTURE CONTROLLERS COMMUNICATE WITH A NORTHSTAR SITE CONTROLLER. REFERENCE PRODUCT LITERATURE FOR ADDITIONAL DETAILS.

# PARKING ZONE (>5A), MULTIPLE OCCUPANCY SENSORS AND FIXTURES, NORTHSTAR



## NOTES:

1. REFER TO PRODUCT LABELS AND INSTALL SHEETS FOR ADDITIONAL INSTALLATION DETAILS.
2. INDIVIDUALLY CAP OFF UNUSED CONDUCTORS.
3. ONE POWER PACK USED FOR SWITCHING LIGHTING LOAD, ONE AS AUXILIARY POWER FOR OCCUPANCY SENSORS.
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6. NORTHSTAR FIXTURE CONTROLLERS COMMUNICATE WITH A NORTHSTAR SITE CONTROLLER. REFERENCE PRODUCT LITERATURE FOR ADDITIONAL DETAILS.





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