



- ## LEGEND:
- A** **A** Meter Socket and Meter: Meter socket shall be furnished and installed by the Contractor as approved by the utility company. Meter shall be furnished and installed by the utility company. (Meter shall be sized for 480V, 3 $\phi$ , 200A service).

**A** **B** Main Circuit Breaker: 480V, 3-phase, molded case circuit breaker labeled "Main". Circuit breaker and enclosure shall be manufactured by Square D as shown below, size as per contract plans.

  - 100A Frame, 100A Trip, 18K A.I.C., Circuit breaker Cat. # FAL34100, Enclosure Cat. # FA100S
  - 250A Frame, 200A Trip, 35K A.I.C., Circuit breaker Cat. # JGL36200, Enclosure Cat. # J250S

**C** Main Contactor: 3-pole, 480V, 100A frame, magnetically held contactor with 120V coil, without enclosure. Contactor shall be manufactured by Square D, CAT. # SQ02-V02.

**D** Control Transformer: 480V - 120/240V, 1-phase, 3 wires, 3KVA dry type transformer with mounting lugs for outdoor use. Control transformer shall be manufactured by Square D, CAT. # 3S40F or approved equal.

**E** Control Circuit Breaker: 2-pole, 480V, 100A frame, 20A trip, bolt on type circuit breaker without enclosure. Circuit breaker shall be manufactured by Square D, CAT. # FAL24020.

**F** Control Panelboard: 1-phase, 3 wires, 120/240V, 100A mains with (12) 1-pole spaces, with solid groundable neutral, with enclosure. Panelboard shall be manufactured by Square D, CAT. # Q0112M100.

**G** Lighting Panelboard: 480V, 3-phase, 4 wires, 277/480V, 100A main circuit breaker manufactured by Square D, CAT. #HDL36100, solid groundable neutral and (30) 1-pole spaces without enclosure. Panelboard shall be NEMA 3R and shall be manufactured by Square D, CAT. # NF430L1. Circuit breakers shall be manufactured by Square D and from the following ratings, as specified in the contract plans.

  - 1-Pole-30A -CAT. # EDB14030
  - 1-Pole-50A -CAT. # EDB14050
  - 1-Pole-70A -CAT. # EDB14070

Use 70A branch circuit breaker for wire size #2AWG or larger. Other sizes (30A and 50A) may be use for smaller wire size.

**H** Bypass Switch: SPST, 20A, 120V, heavy duty toggle switch in weather proof Type-FS box.

**I** Photocell Unit: Single pole, 120V, 1800W with receptacle mounting bracket and 18" leads. Photocell shall be mounted thru control cabinet (120V) with gasketed lexan lens facing north and shall not be affected by artificial lights. It shall be manufactured by Precision Multiple Controls Inc., utility grade, locking type, or approved equal.

**J** Thermostat: 240V frame, 120V line, 500W, 40°F to 70°F operating range, weather proof Type-FS box.

**K** Strip Heater: 120V, 500W, chrome steel sheath for temperatures up to 1200°F (max), 1 1/2" wide terminals at one end.

**L** Duplex Receptacle: 120V, 20A heavy duty duplex receptacle GFCI type with grounding lug in weather proof Type-FS box and shall be attached to bottom of 120V panel.

**M** Secondary Circuit Breaker: 3-phase, 480V, 18K A.I.C., 100A frame, 100A trip, without enclosure. Circuit breaker shall be manufactured by Square D, CAT. # FAL34100.

**N** Copper Ground Rod: 3/4" dia. x 10ft long. See note 5.

**O** Anchor Bolt Assembly: (See E-33)

**P** Copper Ground Lug: 3/8" bolts size, #8 AWG ground wire, tin plated with inspection hole, lug shall have red color dye. Ground lug shall be manufactured by Thomas & Betts, CAT. #54132 or approved equal.

**A** **Q** Meter Disconnect: 480V, 3-Wire, single throw, non-fusible safety switch with lock on option. Switch shall be installed inside stainless steel NEMA 4X enclosure. Switch and enclosure shall be manufactured by Square D as shown below, size as per contract plans.

  - 100A Service -Cat. # HU363DS - SPL0
  - 200A Service -Cat. # HU364DS - SPL0

① Eight (8) 3" Rigid Metallic Conduit with bronze ground bushings, couplings and extension conduit stubs, as required. See notes 6 and 13.

② 3" Rigid Metallic Conduit (incoming service) shall have 4 #2 AWG wires. Contractor shall leave wire coil 10 ft. up the pole for utility connection and shall seal top of conduit on the pole. See note 2.

③ 3" PVC SCH-40. (Meter Cabinet to Load Center)

④ #8 bare ground wire to the Rigid Metallic bronze conduit bushing, cabinet and ground rod w/approved connector. See note 6.

**A** ⑤ 3" Rigid Metallic Conduit with incoming service wires.

⑥ 2" Rigid Metallic Conduit with 4 #2 AWG.

⑦ 3" Liquidite Flex Metallic Conduit (LFMC) with 4 #2 AWG or as specified on the Contract Plans. (To Load Center)
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- ORIGINAL SIZE IN INCHES
- ## NEW JERSEY TURNPIKE AUTHORITY NEW JERSEY TURNPIKE
- ### TYPE F LOAD CENTER DETAILS-1
- HNTB 145 RT. 46 WEST, SUITE 400  
WAYNE, NJ 07470 - CO# 240A28000700  
ANTHONY L. BARTELLO
- STANDARD  
DRAWING
- E-32
- 2012 UPDATE NOTES, AND LEGEND  
2009 ORIGINAL DRAWING

	BY	DATE
MADE	AG	05/2009
TRACED	MDC	05/2009
CHECKED	MS	05/2009
SUPERVISED	ALB	05/2009

<i>If you use this DWG:</i>	
<i>You also need</i>	<i>E-33</i>
<i>You may need</i>	<i>E-01</i>

	1	03/2012	UPDATE NOTES, AND LEGEND
	0	05/2009	ORIGINAL DRAWING
APP.	NO.	DATE	REVISION

NEW JERSEY TURNPIKE AUTHORITY	
NEW JERSEY TURNPIKE	
TYPE F LEAD CENTER DETAILS-1	
<b>HNTB</b> 145 RT. 46 WEST, SUITE 400, WAYNE, NJ 07470 - CON# 24GA28000700 <b>ANTHONY L. BARTELLO</b> <i>Anthony L. Bartello</i>	<b>STANDARD DRAWING</b>  <b>E-32</b>
New Jersey Professional Engineer License No. GE 40842	