

# CITY OF SUMMIT

# NEW JERSEY

Tatlock Park Sports Lighting

Grant Engineering Consultants, LLC – January 6, 2023

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## Tatlock Park Sports Lighting Report

### I. Background

Grant Engineering Consultants staff visited Tatlock Park to survey existing power distribution system and equipment to determine existing available electrical power for new Sports Lighting at Investors Bank Field and Upper Tatlock Field. Our staff also surveyed existing Field House's electric utility service equipment to document its ratings and spare capacity associated with interior renovation of the Field House. Each of the above locations is metered separately with the following information, ratings, and peak demands that were calculated using the latest 12 months of electric bills for each service that were provided to us by the City of Summit:

#### *a. Investors Bank Field:*

- i. Account No.: 100005244296
- ii. Existing Service: 208VAC, 200A, 3-Phase, 4-Wire
- iii. Peak Load: 13.1 kW (45.5 Amps)

#### *b. Upper Tatlock Field:*

- i. Account No.: 100005244403
- ii. Existing Service: 240VAC, 200A, 1-Phase, 3-Wire
- iii. Peak Load: 13.1 kW (68.2 Amps)

#### *c. Field House:*

- i. Account No.: 100005244528
- ii. Existing Service: 240VAC, 100A, 1-Phase, 3-Wire
- iii. Peak Load: 11 kW (57.3 Amps)

## II. Observations

### a. Investors Bank Field:

There is an existing electrical outdoor enclosure that houses electric utility service metering equipment, distribution panel, and Tennis Courts lighting control panel (see Photos 1 & 2). The distribution panel powers a sub-panel that is located in Investor Bank Field's press box.



**Photo 1 – Investors Bank Field Outdoor Enclosure with Electrical Equipment**



**Photo 2 – Investors Bank Field Outdoor Enclosure Electric Utility Service Meter**

*b. Upper Tatlock Field:*

There is existing outdoor electric utility service metering equipment and distribution panel at this location (see Photo 3). There are existing pole-mounted flood lighting fixtures that are fed from this service.



**Photo 3 – Upper Tatlock Field Electric Utility Service Meter and Distribution Panel**

*c. Field House:*

There is existing indoor electric utility service metering equipment and distribution panel inside the Field House (see Photo 4). All power and lighting loads are fed from the distribution panel.



**Photo 4 – Field House Electric Utility Service Meter and Disconnect**

### III. Recommendations

Proposed lighting loads at Investors Bank Field and Upper Tatlock Field have been analyzed and tabulated to determine if existing electric utility services have sufficient spare capacity for the new lighting loads. Due to limited available information on proposed electrical/mechanical equipment associated with existing Field House renovation, it is assumed that the existing electric service will be sufficient for the renovated Field House, as long as heating and cooling loads and sources of energy remain the same.

#### a. Investors Bank Field:

Existing Elec Service	Existing Peak Load	Proposed Lighting Load	Recommendations	Estimate
208VAC/200A/3-Ph/4-W	13.1 kW	50.36 kW	<ul style="list-style-type: none"> <li>• Reuse existing 200A service-entrance rated panel to feed the existing Tennis Court and the new Investors Bank Field Musco Lighting Panels.</li> <li>• Install a new 200A distribution panel to feed the new Investors Bank Field Musco Lighting Control Panel.</li> <li>• Install a new outdoor enclosure to house the new panels and Musco Lighting Control Panel.</li> <li>• Install new conduit, wiring, and electrical boxes for the new pole-mounted Musco Lighting Fixtures.</li> <li>• Install a new 20kW standby generator to power Investors Bank Field Egress and Security Lighting fixtures.</li> </ul>	\$300,000

b. Upper Tatlock Field:

Existing Elec Service	Existing Peak Load	Proposed Lighting Load	Recommendations	Estimate
240VAC/200A/1-Ph/3-W	13.1 kW	44.64 kW	<ul style="list-style-type: none"> <li>• Replace existing 200A service-entrance rated panel with a new 200A service-entrance rated panel, NEMA 3R.</li> <li>• Feed new Musco Lighting Control Panel from the new 200A service-entrance rated panel.</li> <li>• Install new conduit, wiring, and electrical boxes for the new pole-mounted Musco Lighting Fixtures.</li> </ul>	\$200,000

c. Field House:

Existing Elec Service	Existing Peak Load	Proposed Electric Load	Recommendations	Estimate
240VAC/100A/1-Ph/3-W	11 kW	11 kW	Reuse existing distribution panel to power all equipment in the Field House.	N/A