CITY OF MERCER ISLAND

Fire Marshal's Office
3030 78th Ave SE | MERCER ISLAND, WA 98040
PHONE: 206.275.7966 | www.mercerisland.gov

STATIONARY STORAGE BATTERY SYSTEMS

Project Type: Backup power for cell site	
Project Address: 8477 SE 68TH ST, MERCER ISLAND, WA 98040	
Contact Name: Zach Phillips w/Crown Castle	**Phone No.** 503/708-9200
Owner Name: T-Mobile	

1. Battery System

N/A ☐ The battery system has an electrolyte capacity of more than 50 gallons (189 L) for flooded lead-acid, nickel cadmium (Ni-Cd) and value-regulated lead-acid (VRLA)

Specify # of Gallons _____

N/A ☐ The battery system has more than 1,000 pounds (454 kg) for lithium-ion and lithium metal polymer.

Specify # of Pounds _____

Total gallons - Electrolyte & Acid (16 batteries): 44.48

2. Battery Classification (Total for building or control area)

- ☒ Nonrecombinant Vented Lead Acid- kWh? 70 kWh (252 megajoules)
- ☐ Nonrecombinant Vented Nickel-Cadmium- kWh? _____
- ☐ Recombinant Value Regulated Lead Acid Cells- kWh? _____
- ☐ Recombinant Valve Regulated Lithium-Ion Cells kWh? _____
- ☐ Lithium Metal Cells kWh? _____

3. Current Fire Protection Systems (Check all that apply)

- ☒ NFPA 72 Monitored Fire Alarm System
  - Monitoring Center/Central Station? NOC- (800)788-7011
- ☐ NFPA 704 Placarding
- ☒ Knox Box for Fire Department Access
- ☐ Fire Sprinkler System
- ☐ Neutralization Product and Quantity

4. **Permits Required (***fire code requirements are referenced in the table on the following page)*

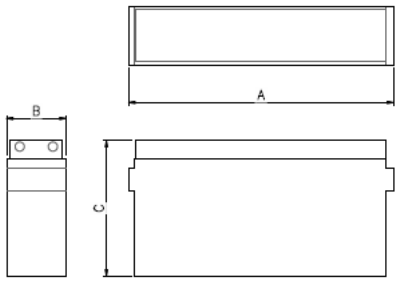
- Battery System Permit
- Fire Alarm Permit

BATTERY TECHNOLOGY	MAXIMUM ALLOWABLE QUANTITIES[a]	GROUP H OCCUPANCY
Flow batteries[b]	600 kWh	Group H-2
Lead acid, all types	Unlimited	Not Applicable
Lithium, all types	600 kWh	Group H-2
Nickel cadmium (Ni-Cd)	Unlimited	Not Applicable
Sodium, all types	600 kWh	Group H-2
Other battery technologies	200 kWh	Group H-2[c]

TABLE 608.1
BATTERY REQUIREMENTS

REQUIREMENT	NONRECOMBINANT BATTERIES		RECOMBINANT BATTERIES		OTHER BATTERIES
	Vented (Flooded) Lead Acid Batteries	Vented (Flooded) Nickel-Cadmium (Ni-Cd) Batteries	Valve Regulated Lead-Acid (VRLA) Cells	Lithium-Ion Cells	Lithium Metal Cells
Safety caps	Venting caps (608.2.1)	Venting caps (608.2.1)	Self-resealing flame-arresting caps (608.2.2)	No caps	No caps
Thermal runaway management	Not required	Not required	Required (608.3)	Not required	Required (608.3)
Spill control	Required (608.5)	Required (608.5)	Not required	Not required	Not required
Neutralization	Required (608.5.1)	Required (608.5.1)	Required (608.5.2)	Not required	Not required
Ventilation	Required (608.6.1; 608.6.2)	Required (608.6.1; 608.6.2)	Required (608.6.1; 608.6.2)	Not required	Not required
Signage	Required (608.7)	Required (608.7)	Required (608.7)	Required (608.7)	Required (608.7)
Seismic protection	Required (608.8)	Required (608.8)	Required (608.8)	Required (608.8)	Required (608.8)
Smoke detection	Required (608.9)	Required (608.9)	Required (608.9)	Required (608.9)	Required (608.9)

SPECIFICATIONS												
MODEL NUMBER	VOLTAGE	CAPACITY (AH)		NOMINAL DIMENSIONS						NOMINAL WEIGHT	
		8 HR TO 1.75 VPC @ 25°	10 HR TO 1.8 VPC @ 25°	INCHES			MILLIMETERS				
				A	B	C	A	B	C	LBS	Kg
NSB 190FT RED BATTERY	12	183 / 186 AH	187 / 190 AH	22.0	4.9	12.6	560	125	320	124.3	56.3



ELECTRICAL DATA		
MODEL NUMBER	SHORT CIRCUIT CURRENT	INTERNAL RESISTANCE (mOhms)
NSB 190FT RED BATTERY	5000 A	2.8

FLOAT VOLTAGE

CONSTANT VOLTAGE CHARGING IS RECOMMENDED.

RECOMMENDED FLOAT VOLTAGE: 2.27 +/- 0.02 VPC.

CHAPTER 12, SECTION 1206					
ELECTRICAL ENERGY STORAGE SYSTEM					
1206.2 SCOPE:					
STATIONARY STORAGE BATTERY SYSTEMS HAVING CAPACITIES EXCEEDING THE VALUES SHOWN IN TABLE 1206.2 SHALL COMPLY W/ SECTION 1206.2.1 THROUGH 1206.2.12.6, AS APPLICABLE.					
BATTERY STORAGE SYSTEM THRESHOLD QTY'S					
CATTERY TECHNOLOGY			CAPACITY ALLOWED		
LEAD ACID, ALL TYPES			70 kWh (252 MEGAJOULES)		
AH = VOLTAGE (AH)/1000					
VOLTS	AH		kWh	NO. OF BATTERIES	TOTAL kWh
12	190	1000	2.28	16	36.48
CONCLUSIONS:					
36.48	<	70 kWh	SECTION 1206.2 DOES NOT APPLY		
TOTAL BATTERY WEIGHT (16 BATTERIES):					1,988.8 LBS
TOTAL GALLONS - ELECTROLYTE & ACID (16 BATTERIES):					44.48

1 NORTHSTAR NSB 190FT RED BATTERY SPECS

SCALE: NOT TO SCALE