

## PART 3 – DRAWINGS AND SPECIFICATIONS

RFT No. Doc512222325, Contract No. 25ECS-MI-03HA

### **LIST OF DRAWINGS**

#### **GENERAL**

1	2F-2017-08-1	G001	COVER PAGE
2	2F-2017-08-2	G002	DRAWING INDEX - 1
3	2F-2017-08-3	G003	DRAWING INDEX - 2
4	2F-2017-08-4	G004	OVERALL SITE PLAN

#### **ARCHITECTURAL**

5	2F-2017-08-5	A001	GENERAL INFORMATION
6	2F-2017-08-6	A100	FLOOR PLANS, SECTIONS AND ELEVATIONS
7	2F-2017-08-7	A200	DETAILS AND SCHEDULES
8	2F-2017-08-8	A300	ARCHITECTURAL REMOVAL, MODIFICATION AND REINSTATEMENT WORK
9	2F-2017-08-9	A400	ARCHITECTURAL REMOVAL, MODIFICATION AND REINSTATEMENT WORK

#### **STRUCTURAL**

10	2F-2017-08-10	S001	GENERAL NOTES
11	2F-2017-08-11	S002	TYPICAL DETAILS
12	2F-2017-08-12	S003	RMF DEMOLITION - EXISTING MONORAIL AT EL. 88.00 AND EL. 92.10
13	2F-2017-08-13	S004	RMF DEMOLITION - PART PLAN AT EL. 88.00 AND SECTION
14	2F-2017-08-14	S006	RMF GENERATOR PAD - PLAN AT EL. 88.00, SECTION AND DETAILS
15	2F-2017-08-15	S008	FILTER GALLERY - EXTEND WALKWAY LAYOUT
16	2F-2017-08-16	S009	FILTER GALLERY - NEW PLATFORM PLAN, SECTIONS AND DETAILS
17	2F-2017-08-17	S010	TRANSFORMER BLDG - PROPOSED SUMP PIT PLAN, SECTIONS & DETAILS
18	2F-2017-08-18	S011	PIPE GALLERY, GENERATOR ROOM & WATER CONDUIT - SECTION ELEVATION & DETAILS
19	2F-2017-08-19	S012	PIPE GALLERY, GENERATOR ROOM & WATER CONDUIT - SECTION ELEVATION & DETAILS

#### **MECHANICAL**

20	2F-2017-08-20	M001	GENERAL LAYOUT
21	2F-2017-08-21	M201	PIPE GALLERY - RENOVATIONS AND DEMOLITION
22	2F-2017-08-22	M201A	ENLARGED PLAN GENERATOR ROOM HVAC

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23	2F-2017-08-23	M201B	ENLARGED PLAN GENERATOR ROOM PIPING
24	2F-2017-08-24	M202	PIPE GALLERY - EXHAUST STACK SECTION, ELEVATION
25	2F-2017-08-25	M203	PIPE GALLERY - COMBUSTION AIR INTAKE SECTION, ELEVATION
26	2F-2017-08-26	M207	FILTER GALLERY PLATFORM LAYOUT
27	2F-2017-08-27	M208	MECHANICAL DETAILS - 1
28	2F-2017-08-28	M209	MECHANICAL DETAILS - 2
29	2F-2017-08-29	M210	TRANSFORMER TUNNEL SUMP PUMP - PLAN AND ELEVATION

### ELECTRICAL

30	2F-2017-08-30	E001	ELECTRICAL LEGEND & ABBREVIATIONS - 1
31	2F-2017-08-31	E002	ELECTRICAL LEGEND & ABBREVIATIONS - 2
32	2F-2017-08-32	E003	ELECTRICAL LEGEND & ABBREVIATIONS - 3
33	2F-2017-08-33	E004	OVERALL SITE PLAN
34	2F-2017-08-34	E010	MASTER POWER SYSTEM BLOCK DIAGRAM
35	2F-2017-08-35	E011	MASTER SINGLE LINE DIAGRAM
36	2F-2017-08-36	E012	OVERALL GENERAL SINGLE LINE DIAGRAM 1
37	2F-2017-08-37	E013	OVERALL GENERAL SINGLE LINE DIAGRAM 2
38	2F-2017-08-38	E014	ATS & STANDBY GENERATOR WIRING SCHEMATIC
39	2F-2017-08-39	E015	ATS & STANDBY CONTROL WIRING BLOCK DIAGRAM
40	2F-2017-08-40	E016	FILTER CV PANEL CONTROL WIRING BLOCK DIAGRAM
41	2F-2017-08-41	E101	FHA-ELS-MCC-0400A/B SINGLE LINE DIAGRAM - MODIFICATIONS
42	2F-2017-08-42	E102	FHA-ELS-MCC-0400A/B ELEVATION LAYOUT - EXISTING AND MODIFICATIONS
43	2F-2017-08-43	E103	FHA-ELS-PDP-0400E SINGLE LINE DIAGRAM - NEW STANDBY BUS
44	2F-2017-08-44	E104	FHA-ELS-PDP-0400E ELEVATION LAYOUT
45	2F-2017-08-45	E105	FHA-ELS-PDP-0401A/B SINGLE LINE DIAGRAM - EXISTING
46	2F-2017-08-46	E106	FHA-ELS-PDP-0401A/B SINGLE LINE DIAGRAM - MODIFICATIONS
47	2F-2017-08-47	E107	FHA-ELS-PDP-0401A/B ELEVATION LAYOUT
48	2F-2017-08-48	E108	FHA-ELS-PDP-0506 SINGLE LINE DIAGRAM - MODIFICATIONS
49	2F-2017-08-49	E111	FHA-ELS-PDP-0500A/B SINGLE LINE DIAGRAM - MODIFICATIONS

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50	2F-2017-08-50 MODIFICATIONS	E112	FHA-ELS-PDP-0500A/B ELEVATION LAYOUT - EXISTING AND
51	2F-2017-08-51	E121	FHA-ELS-MCC-0600A/B SINGLE LINE DIAGRAM - MODIFICATIONS
52	2F-2017-08-52 MODIFICATIONS	E122	FHA-ELS-MCC-0600A/B ELEVATION LAYOUT - EXISTING AND
53	2F-2017-08-53	E131	FHA-ELS-PDP-0300 SINGLE LINE DIAGRAM - MODIFICATIONS
54	2F-2017-08-54	E132	FHA-ELS-PDP-0300 ELEVATION LAYOUT - EXISTING AND MODIFICATIONS
55	2F-2017-08-55	E133	FHA-ELS-PDP-0300E SINGLE LINE DIAGRAM - NEW STANDBY BUS
56	2F-2017-08-56	E134	FHA-ELS-PDP-0300E ELEVATION LAYOUT - NEW
57	2F-2017-08-57	E135	FHA-ELS-MCC-0301A SINGLE LINE DIAGRAM - EXISTING
58	2F-2017-08-58	E136	FHA-ELS-MCC-0301B SINGLE LINE DIAGRAM - EXISTING
59	2F-2017-08-59	E141	FHA-ELS-MCC-0200A/B SINGLE LINE DIAGRAM - MODIFICATIONS
60	2F-2017-08-60 MODIFICATIONS	E142	FHA-ELS-MCC-0200A/B ELEVATION LAYOUT - EXISTING AND
61	2F-2017-08-61	E143	FHA-ELS-PDP-0200E SINGLE LINE DIAGRAM - NEW STANDBY BUS
62	2F-2017-08-62	E144	FHA-ELS-PDP-0200E ELEVATION LAYOUT - NEW
63	2F-2017-08-63	E201	ELECTRICAL FLOOR PLAN - RMF PIPE GALLERY (EL. 88.00)
64	2F-2017-08-64	E202	ELECTRICAL FLOOR PLAN - RMF MCC ROOM (EL. 88.00)
65	2F-2017-08-65	E203	ELECTRICAL FLOOR PLAN - LOWER FILTER PIPE GALLERY (EL. 94.06)
66	2F-2017-08-66 BUILDING	E204	ELECTRICAL FLOOR PLAN - PUMPING STATION TUNNEL TO SERVICE
67	2F-2017-08-67 SWITCHGEAR ROOM	E205	ELECTRICAL FLOOR PLAN - PUMPING STATION BASEMENT LEVEL
68	2F-2017-08-68 78.64)	E206	ELECTRICAL FLOOR PLAN - PUMPING STATION GROUND LEVEL (EL.
69	2F-2017-08-69	E207	ELECTRICAL FLOOR PLAN - RMF & SERVICE BUILDING
70	2F-2017-08-70	E208	ELECTRICAL FLOOR PLAN - DETAIL 'A' - RMF & SERVICE BUILDING
71	2F-2017-08-71	E209	ELECTRICAL FLOOR PLAN - CHEMICALS ROOM, PIPE GALLERY
72	2F-2017-08-72	E211	ELECTRICAL FLOOR PLAN - SERVICE BUILDING BASEMENT-DEMOLITION
72A	2F-2017-08-72 PLAN	E211A	ELECTRICAL FLOOR PLAN - SERVICE BUILDING BASEMENT-STAGING
72B	2F-2017-08-72	E211B	ELECTRICAL FLOOR PLAN - SERVICE BUILDING BASEMENT

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73	2F-2017-08-73 94.06)	E212	ELECTRICAL FLOOR PLAN – LOWER FILTER PIPE GALLERY – WEST (EL
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74	2F-2017-08-74 94.06)	E213	ELECTRICAL FLOOR PLAN – LOWER FILTER PIPE GALLERY – EAST (EL
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#### INSTRUMENTATION

75	2F-2017-08-75	I001	LEGEND SHEET - 1
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76	2F-2017-08-76	I002	LEGEND SHEET - 2
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77	2F-2017-08-77	I003	LEGEND SHEET - 3
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78	2F-2017-08-78	I004	PROCESS & INSTRUMENTATION DIAGRAM
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79	2F-2017-08-79	I005	MECHANICAL CONTROL PANEL LAYOUT
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80	2F-2017-08-80	I006	MECHANICAL CONTROL PANEL WIRING
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81	2F-2017-08-81	I007	SPC-RPU-2022 PLC RACK LAYOUT
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82	2F-2017-08-82	I008	SPC-RPU-2022 PLC PANEL LAYOUT
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83	2F-2017-08-83	I009	SPC-RPU-2022 - PANEL POWER DISTRIBUTION 1
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84	2F-2017-08-84	I010	SPC-RPU-2022 - RACK 0 SLOT 03 WIRING DIAGRAM
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85	2F-2017-08-85	I011	SPC-RPU-2022 - RACK 0 SLOT 04 WIRING DIAGRAM
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86	2F-2017-08-86	I012	SPC-RPU-2022 - RACK 0 SLOT 05 WIRING DIAGRAM
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87	2F-2017-08-87	I013	SPC-RPU-2022 - RACK 0 SLOT 06 WIRING DIAGRAM
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88	2F-2017-08-88	I014	SPC-RPU-2022 - RACK 0 SLOT 07 WIRING DIAGRAM
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89	2F-2017-08-89	I015	SPC-RPU-2022 - RACK 1 SLOT 04 WIRING DIAGRAM
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90	2F-2017-08-90	I016	SPC-RPU-1223 - PLC RACK LAYOUT
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91	2F-2017-08-91	I017	SPC-RPU-1223 - PLC PANEL LAYOUT
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92	2F-2017-08-92	I018	SPC-RPU-1223 - RACK 0 SLOT 06 WIRING DIAGRAM
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93	2F-2017-08-93	I019	INSTRUMENTATION FLOOR PLAN
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94	2F-2017-08-94	I020	INSTALLATION DETAILS - 1
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95	2F-2017-08-95	I021	INSTALLATION DETAILS - 2
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96	2F-2017-08-96	I101	FLT-UPS-0001 – DEMOLITION DETAIL
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96A	2F-2017-08-96A	I101A	FLT-UPS-0001 AND FLT-CP-0005 - NEW MODIFICATIONS
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97	2F-2017-08-97	I102	FLT-UPS-0002 - DEMOLITION DETAIL
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97A	2F-2017-08-97A	I102A	2FLT-UPS-0002 AND FLT-CP-0006 - NEW MODIFICATIONS
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98	2F-2017-08-98	I103	MCC-0400 WIRING DETAIL
99	2F-2017-08-99	I104	MCC-0400 TIE BREAKER WIRING DETAIL
100	2F-2017-08-100	I105	FLT-CP-0007 FILTER CV SHUTOFF CONTROL PANEL LAYOUT AND WIRING
<del>101</del>	<del>2F-2017-08-101</del>	<del>I106</del>	<del>FLT-CP-0005 CONTROL PANEL</del>
<del>102</del>	<del>2F-2017-08-102</del>	<del>I107</del>	<del>FLT-CP-0006 CONTROL PANEL</del>
101	2F-2017-08-101	I106	SPC-RPU-1521 PANEL LAYOUT
102	2F-2017-08-102	I107	SPC-RPU-1521 POWER DISTRIBUTION
103	2F-2017-08-103	I108	SPC-RPU-1521 R00S06 - DEMOLITION DETAIL
104	2F-2017-08-104	I109	SPC-RPU-1521 R01S05

## **PART 3 – DRAWINGS AND SPECIFICATIONS**

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### **LIST OF SPECIFICATIONS AND APPENDICES:**

#### **DIVISION 1 GENERAL REQUIREMENTS**

01000	General Requirements
01110	Summary of Work
01140	Work Restrictions
01310	Project Management and Coordination
01312	Project Meetings
01320	CMP Construction Schedule
01330	Submittals
01350	Health and Safety
01359	Special Project Procedures
01410	Regulatory Requirements
01423	Reference Standards
01430	Manufacturers Services
01450	Quality Control
01510	Temporary Utilities
01521	Field Offices and Sheds
01550	Access Roads and Parking Areas
01560	Barricades and Enclosures
01570	Temporary Controls
01580	Project Identification and Signs
01610	Basic Product Requirements
01631	Substitutions
01640	WMS Entity Information
01701	Mobilization
01705	Health and Safety
01730	Execution
01741	Final Cleaning
01742	Cleaning and Pressure Testing
01751	Pre-Start-up, Start-up and Commissioning
01752	Start-up and Commissioning
01760	Warranty Work
01770	Closeout Procedures
01780	Closeout Submittals
01783	Operation and Maintenance Manual
01784	Spare Parts and Maintenance Materials
01789	Project Record Documents
01820	Demonstration and Training
01820a	Demonstration and Training Attendance Sign-in Sheet
01830	Factory Acceptance Testing

## **PART 3 – DRAWINGS AND SPECIFICATIONS**

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### **DIVISION 2 SITE WORKS**

02080	Hazardous Materials
02081	Lead Paint and Lead Product Removal
02082	Management of Non-Hazardous Waste
02137	Bracing and Shoring
02140	Dewatering
02200	Demolition and Removals
02201	Site Preparation
02315	Excavation and Backfilling
02911	Soil Preparation
02920	Tree, Lawns and Grasses

### **DIVISION 3 CONCRETE**

03100	Concrete Forming
03210	Reinforcing Steel
03300	Cast in Place Concrete
03400	Precast Concrete
03730	Restoration of Existing Concrete

### **DIVISION 4 CONCRETE UNIT MASONRY**

04200	Concrete Unit Masonry
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### **DIVISION 5 METALS**

05050	Welding-Quality Control
05500	Metal Fabrication (Basic)
05502	Metal Fabrication (Structural)

### **DIVISION 6 WOOD AND PLASTICS**

06100	Rough Carpentry
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### **DIVISION 7 THERMAL MOISTURE AND PROTECTION**

07100	Waterproofing
07800	Firestopping and Smoke Seals
07900	Sealants

### **DIVISION 8 DOORS AND WINDOWS**

08100	Hollow Metal Doors and Frames
08700	Finish Hardware

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### **DIVISION 9 FINISHES**

09600 Epoxy Floor Coating  
09900 Painting

### **DIVISION 13 INSTRUMENTATION AND CONTROL**

13010 Process Control – General  
13010-01 Factory Acceptance Test-Check Sheet  
13010-02 PCS Site Acceptance Test-Check Sheet  
13010-03 Process Logic Test Sheet  
13010-04 Field Installation Testing Log  
13010-05 Instrument Testing Log  
13010-06 Training  
13010-07 Alarming  
13010-08 PCS Documentation  
13010-09 Filtration & Backwash  
13040 Equipment and Data Tagging  
13105 General Instrumentation Requirements  
13130 Magnetic Flow Meter  
13134 Thermal Mass Flow Meter  
13138 Air Flow Switch  
13158 Float Switch  
13171 Ambient Air Temperature Transmitter  
13191 Flame Detector  
13199 Instrument Listing  
13200 Gas Detector  
13300 Control Panel Design  
13305 Field Wiring  
13310 Panel Construction  
13311 Enclosures  
13320 Panel Wiring  
13340 Panel Services  
13352 Combination Horn Beacon  
13361 Power Quality Meter

### **DIVISION 15 MECHANICAL**

15050 Mechanical Materials, Methods and Requirements  
15090 Supports, Anchors and Seals  
15101 Installation of Pipework  
15111 Valves  
15142 Water Piping – Copper  
15181 Piping and Equipment Insulation  
15190 Natural Gas Piping System  
15445 Sump Pumps  
15472 Seismic Restraint



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15550	Generator Engine Exhaust System
15760	Convection Heating and Cooling Units
15810	Ductwork and Accessories
15820	HVAC Ductwork Accessories
15850	Diffusers, Registers and Grilles

### DIVISION 16 ELECTRICAL

16010	Electrical General Requirements
16012	Existing Buildings - Modifications
16014	Short Circuit and Protection Device
16021	Demolition of Electrical Systems
16050	Basic Materials & Methods
16080	Electrical Testing
16110	Conduit Systems
16111	Cable Tray
16122	Wires and Cables 0-1000V
16130	Electrical Boxes
16132	Outlet Boxes, Conduit Boxes and Fittings
16275	Dry Type Transformers
16282	Uninterrupted Power System (UPS) 3-Phase
16412	Molded Case Circuit Breakers
16440	Disconnect Switches Fused and Non-fused up to 600V
16441	Panelboards
16450	Grounding
16480	Low Voltage Switchboards
16500	Natural Gas Engine Indoor Generator
16600	Automatic Transfer Switch

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### **APPENDICES**

- A      Section 1640a – Appendix G – WMS Entity Information – Excel Sheet**
- B      DSS Report Standby Generator Upgrades**
- C      Division 2 – A - R.C. Harris Treatment Plant Re-Survey 2024**
- D      Division 2 – B – Power Tunnel DSHM Survey**
- E      Division 2 – C – Power Tunnel IAQ Report 2024**
- F      Division 2 –D – EACC Mould Abatement Guidelines**
- G      Section 130892\_Generator PCN 2025-01-15**
- H      Section 13040 – Appendix A-Common System Tagging Loop Reservation**
- I      Section 13040 – Appendix B-Equipment (Asset) Tags List-Aluminum (Example)**
- J      Section 13040 – Appendix C-Equipment (Asset) Tag List-Lamacoid (Example)**
- K      Section 13040 – Appendix D-Supplemental Tag List-MCC Starter Disconnect-Lamocoid**
- L      Section 13040 – Appendix E-Supplemental Tag List-Source of Power-Lamacoid**
- M      Section 13040 – Appendix F-Supplemental Tag List-Control Station-Lamacoid**
- N      Section 130892\_Filtration & Backwash-FHA-PCN**
- O      Section 16014A – RC Harris Water Treatment Plant, Installation of Standby Generator  
Short Circuit Analysis Protection Device Coordination ARC Flash Study (Appendix A)**
- P      14B2802-R4 MCC 4 ASB - Shop Drawings**