

2019 - 2020 MECHANICAL HVAC UPGRADES FLAT ROCK & RUGBY MIDDLE SCHOOLS

HENDERSON COUNTY PUBLIC SCHOOLS, HENDERSON COUNTY,
HENDERSONVILLE, NORTH CAROLINA 28792

BY

DELTA ENGINEERING, INC.

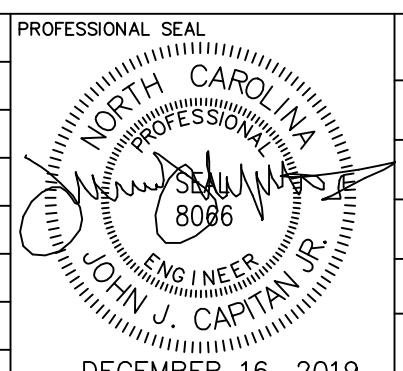
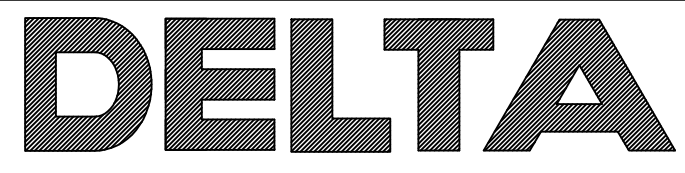
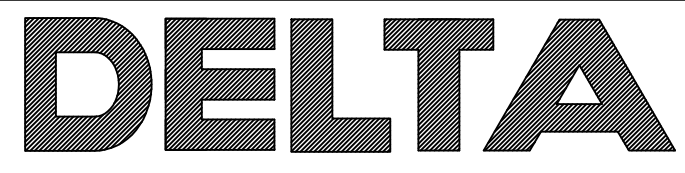
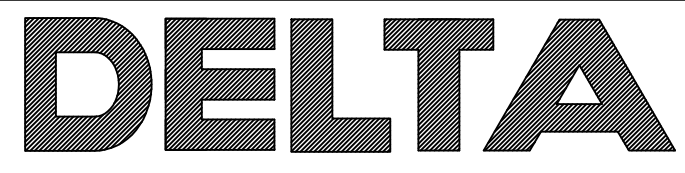
CONSULTING PROFESSIONAL ENGINEERS

315 EAST BROAD STREET GREENVILLE, SOUTH CAROLINA 29601

3106 RIVERINE VIEW, CHARLESTON, SOUTH CAROLINA 29414

TITLE SHEET & LIST OF DRAWINGS

DWG. NO.	SHEET NO.	DATE/DWG.	DRAWING TITLES (FLAT ROCK & RUGBY M.S.)	DWG. NO.	SHEET NO.	DATE/DWG.	DRAWING TITLES (FLAT ROCK & RUGBY M.S.)
GENERAL REFERENCE DRAWINGS: (FOR FLAT ROCK & RUGBY MIDDLE SCHOOLS)				GENERAL REFERENCE DRAWINGS: (FOR FLAT ROCK & RUGBY MIDDLE SCHOOLS)			
TS-1	1 OF 2	DEC. 16, 2019	PROJECT TITLE SHEET AND LIST OF DRAWINGS	EO-1	1 OF 1	DEC. 16, 2019	ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL NOTES
MO-1	2 OF 2	DEC. 16, 2019	MECHANICAL LEGENDS AND ABBREVIATIONS	ELECTRICAL - UPGRADE DRAWINGS: (FLAT ROCK)			
MECHANICAL HVAC UPGRADE DRAWINGS: (FLAT ROCK)				FRED-A1	1 OF 11	DEC. 16, 2019	FLAT ROCK - ELECTRICAL DEMOLITION PLAN - PART - A1 @ EXIST. MAIN FLOOR
FR-MD-A1	1 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC UPGRADE DEMOLITION PART - A1 FLOOR PLAN	FRED-A2	2 OF 11	DEC. 16, 2019	FLAT ROCK - ELECTRICAL DEMO. CEILING PLAN - PART - A1 @ EXIST. MAIN FLR
FR-MD-A2	2 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC UPGRADE DEMOLITION PART - A2 ENLARGED PLAN	FRED-B1	3 OF 11	DEC. 16, 2019	FLAT ROCK - ELECTRICAL DEMOLITION PLAN - PART - B1 @ EXIST. MAIN FLOOR
FR-MD-B1	3 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC UPGRADE DEMOLITION PART - B1 FLOOR PLAN	FRED-B2	4 OF 11	DEC. 16, 2019	FLAT ROCK - ELECTRICAL DEMO. CEILING PLAN - PART - B1 @ EXIST. MAIN FLR
FR-M-1	4 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC OVERALL FLOOR PLAN @ EXIST. MAIN FLOOR	FR-E-1	5 OF 11	DEC. 16, 2019	FLAT ROCK - ELECTRICAL OVERALL SYSTEMS PLAN @ EXIST. MAIN FLOOR
FR-M-2	5 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC ENLARGED FLOOR PLANS - (VRV ZONES 1 & 5)	FR-E-2	6 OF 11	DEC. 16, 2019	FLAT ROCK - SYSTEMS ENLARGED ELECTRICAL FLOOR PLANS - (ZONES 1 & 5)
FR-M-3	6 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC ENLARGED FLOOR PLANS - (VRV ZONES 3 & 4)	FR-E-3	7 OF 11	DEC. 16, 2019	FLAT ROCK - SYSTEMS ENLARGED ELECTRICAL FLOOR PLANS (ZONES 3 & 4)
FR-M-4	7 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC ENLARGED FLOOR PLANS - (VRV ZONE 2)	FR-E-4	8 OF 11	DEC. 16, 2019	FLAT ROCK - SYSTEMS ENLARGED ELECTRICAL FLOOR PLAN (ZONE 2 & RTU-1)
FR-M-5	8 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC PIPING, CONTROLS, & WIRING SCHEMATICS	FR-E-5	9 OF 11	DEC. 16, 2019	FLAT ROCK - SYSTEMS POWER WIRING SCHEMATIC DETAILS
FR-M-6	9 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC SYSTEMS DETAILS	FR-E-6	10 OF 11	DEC. 16, 2019	FLAT ROCK - ELECTRICAL PANEL SCHEDULES & RISER DETAILS
FR-M-7	10 OF 10	DEC. 16, 2019	FLAT ROCK - HVAC SYSTEMS SCHEDULES & DETAILS	FR-E-7	11 OF 11	DEC. 16, 2019	FLAT ROCK - ELECTRICAL CALCULATIONS
PLUMBING UPGRADE DRAWINGS: (FLAT ROCK) (ADD ALTERNATE BID - ITEM)				ELECTRICAL - UPGRADE DRAWINGS: (RUGBY)			
FRPL-A1	1 OF 2	DEC. 16, 2019	FLAT ROCK - UPGRADE PLUMBING DOMESTIC WTR @ PART-A1 FLOOR PLAN	RGED-A1L	1 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL DEMOLITION PLAN - PART - A1 @ EXIST. MAIN LOWER FLR
FRPL-B1	2 OF 2	DEC. 16, 2019	FLAT ROCK - UPGRADE PLUMBING DOMESTIC WTR @ PART-A1 FLOOR PLAN	RGED-A2L	2 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL DEMO. PLAN - PART - A2 @ EXIST. MAIN LOWER FLOOR
MECHANICAL HVAC UPGRADE DRAWINGS: (RUGBY)				RGED-B1L	3 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL DEMO. PLAN - PART - B1 @ EXIST. MAIN LOWER FLOOR
RG-MD-A1U	1 OF 14	DEC. 16, 2019	RUGBY - HVAC UPGRADE DEMOLITION PART - A1 UPPER FLOOR PLAN	RGED-B1L (2)	4 OF 17	DEC. 16, 2019	RUGBY - ELECT. DEMO. CEILING PLAN - PART - B1 @ EXIST. MAIN LOWER FLR.
RG-MD-A2U	2 OF 14	DEC. 16, 2019	RUGBY - HVAC UPGRADE DEMOLITION PART - A2 UPPER ENLARGED PLAN	RGED-A1U	5 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL DEMO. PLAN - PART - A1 @ EXIST. MAIN UPPER FLOOR
RG-MD-B1U	3 OF 14	DEC. 16, 2019	RUGBY - HVAC UPGRADE DEMOLITION PART - B1 UPPER FLOOR PLAN	RGED-A2U	6 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL DEMO. PLAN - PART - A2 @ EXIST. MAIN UPPER FLOOR
RG-MD-A1L	4 OF 14	DEC. 16, 2019	RUGBY - HVAC UPGRADE DEMOLITION PART - A1 LOWER FLOOR PLAN	RGED-B1U	7 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL DEMO. PLAN - PART - B1 @ EXIST. MAIN UPPER FLOOR
RG-MD-B1L	5 OF 14	DEC. 16, 2019	RUGBY - HVAC UPGRADE DEMOLITION PART - A2 LOWER FLOOR PLAN	RGED-B2U	8 OF 17	DEC. 16, 2019	RUGBY - ELECT. DEMO. CEILING PLAN - PART - B2 @ EXIST. MAIN UPPER FLOOR
RG-M1U	6 OF 14	DEC. 16, 2019	RUGBY - HVAC OVERALL FLOOR PLAN @ EXIST. UPPER MAIN FLOOR	RG-E1L	9 OF 17	DEC. 16, 2019	RUGBY - OVERALL ELECTRICAL FLOOR PLAN - @ EXIST. MAIN LOWER FLOOR
RG-M-A1U	7 OF 14	DEC. 16, 2019	RUGBY - HVAC ENLARGED UPPER PART-A FLOOR PLAN - (VRV ZONES 3 & 4)	RG-E-A1L	10 OF 17	DEC. 16, 2019	RUGBY - OVERALL ELECT. FLOOR PLAN - PART A @ EXIST. MAIN LOWER FLR.
RG-M-B1U	8 OF 14	DEC. 16, 2019	RUGBY - HVAC ENLARGED UPPER PART-B FLOOR PLAN - (VRV ZONE 3)	RG-E-B1L	11 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL UPGRADE PLAN - PART B @ EXIST. MAIN LOWER FLOOR
RG-M1L	9 OF 14	DEC. 16, 2019	RUGBY - HVAC OVERALL FLOOR PLAN @ EXIST. LOWER MAIN FLOOR	RG-E1U	12 OF 17	DEC. 16, 2019	RUGBY - OVERALL ELECTRICAL FLOOR PLAN - @ EXIST. MAIN UPPER FLOOR
RG-M-A1L	10 OF 14	DEC. 16, 2019	RUGBY - HVAC ENLARGED UPPER PART-A FLOOR PLAN - (VRV ZONES 1 & 2)	RG-E-A1U	13 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL UPGRADE PLAN - PART - A1 @ EXIST. MAIN UPPER FLOOR
RG-M-B1L	11 OF 14	DEC. 16, 2019	RUGBY - HVAC ENLARGED UPPER PART-B FLOOR PLAN - (VRV ZONES 1 & 2)	RG-E-B1U	14 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL UPGRADE PLAN - PART - B1 @ EXIST. MAIN UPPER FLOOR
RG-M-2	12 OF 14	DEC. 16, 2019	RUGBY - HVAC PIPING, CONTROLS, & WIRING SCHEMATICS	RG-E-2	15 OF 17	DEC. 16, 2019	RUGBY - ELECT. UPGRADE SYSTEMS WIRING & ONE-LINE SCHEMATIC DETAILS
RG-M-3	13 OF 14	DEC. 16, 2019	RUGBY - HVAC SYSTEMS DETAILS	RG-E-3	16 OF 17	DEC. 16, 2019	RUGBY - ELECTRICAL PANELS AND RISER DETAILS
RG-M-4	14 OF 14	DEC. 16, 2019	RUGBY - HVAC SYSTEMS SCHEDULES & DETAILS	RG-E-4	17 OF 17	DEC. 16, 2019	RUGBY - NEW HVAC UPGRADE ELECTRICAL LOADS

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>DEC. 16, 2019</td> <td>ISSUED FOR OWNER BIDDING.</td> <td>JJC</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY	1	DEC. 16, 2019	ISSUED FOR OWNER BIDDING.	JJC		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED BY: S. BRAUNBECK & J. CAPITAN</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">  </td> </tr> <tr> <td>DRAWN BY: CAPITAN</td> </tr> <tr> <td>CHECKED BY: CAPITAN</td> </tr> <tr> <td>DATE: DECEMBER-16-2019</td> </tr> <tr> <td>SCALE: AS NOTED</td> <td>DESIGN & ENGINEERING</td> </tr> <tr> <td>JOB NO.: DEI JOB NO. 19005</td> <td>ENERGY SYSTEMS</td> </tr> <tr> <td></td> <td>INFRASTRUCTURE UTILITIES</td> </tr> <tr> <td></td> <td>SYSTEMS ANALYSIS</td> </tr> <tr> <td></td> <td>COMMISSIONING REVIEW</td> </tr> </table>	DESIGNED BY: S. BRAUNBECK & J. CAPITAN		DRAWN BY: CAPITAN	CHECKED BY: CAPITAN	DATE: DECEMBER-16-2019	SCALE: AS NOTED	DESIGN & ENGINEERING	JOB NO.: DEI JOB NO. 19005	ENERGY SYSTEMS		INFRASTRUCTURE UTILITIES		SYSTEMS ANALYSIS		COMMISSIONING REVIEW	<p>TITLE SHEET & LIST OF DRAWINGS</p>	<p>PROJECT: 2019 - 2020 HVAC UPGRADES TO FLAT ROCK & RUGBY MIDDLE SCHOOLS</p> <p>HENDERSON COUNTY PUBLIC SCHOOLS 414 - 4TH STREET, HENDERSONVILLE, HENDERSON COUNTY, NORTH CAROLINA 29621</p>	<p>DRAWING: TS - 1</p> <p>SHEET: 1 OF 2 REV. NO.: IFOB</p>
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