

ADDENDUM #2

JANUARY 13, 2017

TRANSMITTED VIA EMAIL: 1 page

TO: ALL PLAN HOLDERS AND POTENTIAL BIDDERS

FROM: RON VENTURELLA, PURCHASING OFFICER 

**SUBJECT: FIELD HOUSE RENOVATIONS ENKA MIDDLE SCHOOL
(RFP# 59-16)**

The following changes, revisions, additions, and/or clarifications to the plans and/or specifications are hereby made a part of the original documents. **Be sure to acknowledge this addendum on the proposal sheet.**

Addendum # 2
RFP #59-16

1. Attached is a 2nd revised proposal form. Alternate #2 for asphalt shingles is no longer applicable and has been removed.
2. Attached are electrical drawings. Electrical specifications will be released next week (1/17/17 – 1/20/17).

Attached: 2nd Revised Proposal Form (2 pages), Electrical Drawings (5 pages)

End of Addendum #2

FIELD HOUSE RENOVATIONS ENKA MIDDLE SCHOOL (RFP# 59-16)

(NOTE: THIS FORM MUST BE FULLY EXECUTED AND RETURNED FOR CONSIDERATION OF PROPOSAL)

****2nd REVISED PROPOSAL FORM****

FIELD HOUSE RENOVATIONS ENKA MIDDLE SCHOOL
RFP# 59-16 DUE DATE: FEBUARY 8, 2017 by 4:00 PM

By submitting this proposal, the potential contractor certifies the following:

- ** This proposal is signed by an authorized representative of the firm.
- ** It can obtain and submit to the Owner insurance certificates as required within 5 calendar days after notice of award.
- ** The cost and availability of all equipment, materials, and supplies associated with performing the services described herein have been determined and included in the proposed cost.
- ** All labor costs, direct and indirect, have been determined and included in the proposed cost.
- ** All taxes have been determined and included in the proposed cost.
- ** The offeror has attended the conference (*if applicable*) or conducted a site visit and is aware of prevailing conditions associated with performing these services.
- ** The potential contractor has read and understands the conditions set forth in this RFP and agrees to them with no exceptions.

Therefore, in compliance with this Request for Proposals, and subject to all conditions herein, the undersigned offers and agrees, if this proposal is accepted within 45 days (normally less) from the date of the opening, to furnish the subject services for a cost not to exceed:

OFFEROR: _____

BASE BID: Renovations Field House at Enka Middle School, as stated in specifications.

\$ _____ dollars and ____/100 \$ _____

ALTERNATE #1: Provide hidden fastener, standing seam metal roof panel system, in lieu of exposed fastener, lap seam 26ga metal roof panels as stated in spec section 07411- 8/14.2.6.

\$ _____ dollars and ____/100 \$ _____

ALTERNATE #2: REMOVED NOT APPLICABLE

ALTERNATE #3: Provide and set in place as directed an 8' x20' shipping container for storage of Owner PE equipment. Contractor shall remove the container and take possession after Owner occupancy of the renovated field house.

\$ _____ dollars and ____/100 \$ _____

ALTERNATE #4: Provide and set in place on a base of 4" #57 stone after removal of topsoil, an 8'x20' shipping container in good condition and prep painted battleship grey. It will be used for storage of Owner PE equipment and shall remain in Owners possession after completion of the project.

\$ _____ dollars and ____/100 \$ _____

Addendums received and used in computing bid: YES/NO_____

Number of Addendums received: _____

OFFEROR: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NUMBER: _____ FAX: _____

FED ID No: _____ Type & License #: _____

E-MAIL: _____ MBE Status: _____

Principal Place of Business if different from above (See General Information on Submitting Proposals, Item 18.): _____

BY: (Signature) _____ TITLE: _____

DATE: _____ (Typed or printed name) _____

END OF 2nd REVISED PROPOSAL FORM

GENERAL NOTES

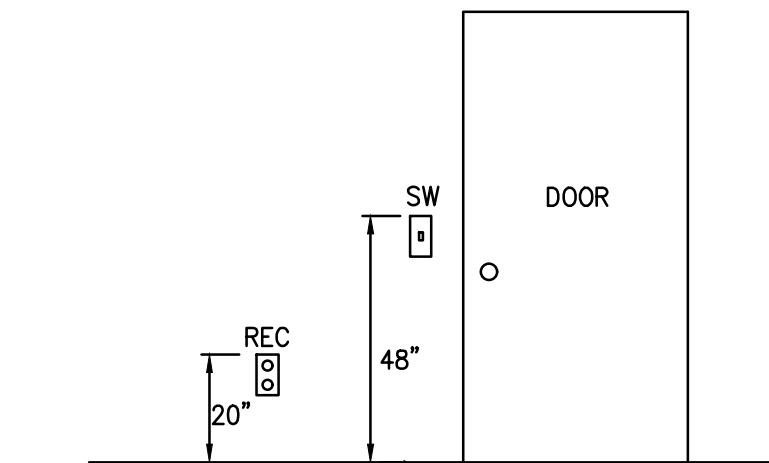
- ALL ELECTRICAL WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE 2014 VERSION OF THE NATIONAL ELECTRICAL CODE AND ALL OTHER LOCAL CODES, LAWS, AND ORDINANCES. WHERE ONE CODE DIFFERS FROM ANOTHER, THE STRICTER OF THE TWO SHALL APPLY.
- IT IS THE DUTY OF THE ELECTRICAL CONTRACTOR TO BE FAMILIAR WITH THE CONSTRUCTION DETAILS OF THE BUILDING. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE ELECTRICAL SYSTEM WITH ALL OTHER TRADES AND SHALL COMPLETE THE ELECTRICAL INSTALLATION AS SOON AS CONDITIONS WILL ALLOW.
- ALL WORK SHALL BE DONE IN A NEAT, QUALITY MANNER WITH ALL WIRING AND RACEWAYS CONCEALED.
- ALL ELECTRICAL DRAWINGS ARE GENERALLY DIAGRAMMATIC IN NATURE. THE ELECTRICAL CONTRACTOR SHALL CLOSELY COORDINATE ALL ELECTRICAL WORK WITH ALL OTHER TRADES WORKING ON THE PREMISES.
- WHERE CONDUIT AND WIRING HAS NOT BEEN SHOWN ON THE DRAWINGS THE ARRANGEMENT AND ROUTING OF LIGHTING AND RECEPTACLE BRANCH CIRCUITS WILL BE AT THE CONTRACTOR'S DISCRETION IN ACCORDANCE WITH GENERALLY ACCEPTED GOOD PRACTICE, N.E.C. REQUIREMENTS AND THE FOLLOWING LIMITATIONS:
 - SIZE BRANCH CIRCUIT CONDUCTORS WITHIN THE FOLLOWING MAXIMUM LENGTH LIMITS:
(MEASURE TO THE CENTER OF THE LOAD FOR LIGHTING CIRCUITS AND THE MOST REMOTE OUTLET FOR RECEPTACLE CIRCUITS)

	#12	#10	#8	#6
120V., 20A.	85'	110'	165'	270'
277V., 20A.	160'	250'	390'	600'
- THIS PROJECT TO MEET NFPA 72 AND ADA REQUIREMENTS REGARDING MOUNTING HEIGHTS OF ELECTRICAL DEVICES.
- RECESSED LIGHTING FIXTURES MUST HAVE 1/2" CLEARANCE FROM COMBUSTIBLE MATERIALS AND 3" CLEARANCE FROM INSTALLATION OR BE IC RATED PER ARTICLE 410.66 (A) 1 AND 2 AND 410.66 (B) OF THE 2014 NEC.
- IN ACCORDANCE WITH SPECIFICATIONS, DURING CONSTRUCTION OPERATIONS, THE ELECTRICAL CONTRACTOR SHALL MAKE A RECORD OF ALL APPROVED CHANGES FROM THE CONTRACT DRAWINGS, INCLUDING ACCURATE DIMENSIONS WHERE APPLICABLE, AND SHALL ALSO RECORD ACCURATE DIMENSIONS LOCATING ALL BELOW-GRADE OUTSIDE ELECTRICAL UTILITIES (WHETHER CHANGED OR NOT) WITH REFERENCE TO PERMANENT ABOVE-GRADE OBJECTS.
AT THE COMPLETION OF THE WORK ALL SUCH CHANGES SHALL BE RECORDED NEATLY IN RED INK BY THE ELECTRICAL CONTRACTOR ON AN UNUSED SET OF THE ELECTRICAL CONTRACT DRAWINGS SUPPLIED BY THE ARCHITECT. THE RED LINE CHANGES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER AND THE COMPLETED RECORD PRINTS RETURNED TO THE ARCHITECT.
- MINIMUM SIZE CONDUIT FOR 20A CIRCUITS IS 3/4".
MC CABLE IS PERMISSIBLE FOR LIGHT FIXTURE WHIPS (LESS THAN 6 FEET) AND AREA 20A CIRCUITS. HOME RUNS FROM AREA JUNCTION BOX TO BE ROUTED IN EMT CONDUIT. MC CABLE IS NOT ALLOWED IN OPEN CEILING AREAS.
- ALL PRE-WIRED EQUIPMENT MUST BE LISTED AND LABELED BY AN APPROVED TESTING AGENCY PER ARTICLE 110.3 (A AND B) OF THE 2014 NEC.
- THE TERMINATION PROVISIONS OF EQUIPMENT MUST BE USED IN DETERMINING THE AMPACITIES OF CONDUCTORS BASED ON TABLE 310.16 REGARDLESS OF THE INSTALLATION RATING OF THE CONDUCTORS PER ARTICLE 110.14 (C) 1 AND 2 OF THE 2014 NEC.
- FLASH PROTECTION WARNING LABELS REQUIRED ON SWITCHBOARDS, PANEL BOARDS, AND MOTOR CONTROL CENTERS PER ARTICLE 110.16 OF THE 2014 NEC.
- SPACES ABOUT ELECTRICAL EQUIPMENT MUST MEET 110.26 (A THROUGH F) ARTICLE 2014 NEC.
- RACEWAYS AND CABLES INSTALLED ABOVE SUSPENDED CEILING REQUIRED TO HAVE INDEPENDENT SUPPORT WIRES CEILINGS GRID WIRES CANNOT BE USED TO SUPPORT RACEWAY AND CABLES UNLESS CEILING GRID IS RATED FOR SUPPORT PER ARTICLE 300.11 OF THE 2014 NEC.
- INDIVIDUAL UNIT EQUIPMENT USED FOR EXIT SIGNS AND EMERGENCY LIGHTS THAT USES A RECHARGEABLE BATTERY MUST BE SUPPLIED BY THE CIRCUIT THAT SUPPLIES THE NORMAL LIGHTING FOR THAT AREA PER ARTICLE 700.12 (F) AND 700.17 OF THE 2014 NEC.
- LAY IN FIXTURES INSTALLED IN SUSPENDED CEILINGS SHALL BE FASTENED TO GRID BY SCREWS OR LISTED CLIPS PER ARTICLE 410.16 OF THE 2014 NEC.
- ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABEL-LISTED BY A NORTH CAROLINA APPROVED THIRD PARTY TESTING AGENCY.

POWER LEGEND

- ⊕ 20A, 125V, 2P, NEMA 5-20R DUPLEX RECEPTACLE
- ⊖ POWER OUTLET, 208V, SIZED AS NOTED.
- ⊕ QUADRAPLEX OUTLET, (2 DUPLEX OUTLETS IN 2 GANG BOX WITH 2 GANG COVER PLATE)
- ⊕ 20A, 125V, 2P, 3W, NEMA 5-20R DUPLEX RECEPTACLE MOUNT 6" ABOVE COUNTER TO BOTTOM OF OUTLET BOX.
- ⊕ FED-SPEC GRADE USB CHARGER WITH TAMPER-RESISTANT DUPLEX RECEPTACLE WIREMOLD #TR5262USB-IVORY OR APPROVED EQUAL.
- G ADJACENT TO RECEPTACLE DENOTES GROUND FAULT INTERRUPTER OUTLET, (FEED THRU TYPE).
- WP ADJACENT TO RECEPTACLE INDICATES WEATHERPROOF IN-USE TYPE COVER.
- WR ADJACENT TO RECEPTACLE INDICATES WEATHER RESISTANT TYPE RECEPTACLE.
- ▼ TYPICAL DATA/COMM OUTLET
DOUBLE GANG OUTLET BOX WITH SINGLE GANG MUD RING. ROUTE 3/4 INCH CONDUIT TO ABOVE CEILING SPACE. PROVIDE PULL STRING. COMMUNICATIONS CONTRACTOR TO PROVIDE FACE PLATE, WIRING, AND FINAL CONNECTIONS.
- ⊕ JUNCTION BOX
- LIGHTING OR RECEPTACLE PANEL BOARD.
- 30A/3P ☐ DISCONNECT SWITCH.
- 30A/F/3P/3R ☒ FUSED DISCONNECT SWITCH.
- FWE DISCONNECT FURNISHED WITH EQUIPMENT
- SM MOTOR RATED SWITCH, CONTINUOUS CURRENT RATED, QUANTITY OF POLES AS REQUIRED
- EF EXHAUST FAN.
- 2HP SEE MECHANICAL DWGS. FOR FAN SPECIFICATIONS. MOTOR, HORSEPOWER AS SHOWN.
- B-25 "HOME-RUN" TO PANEL BOARD.

BOTTOM OF FINISHED CEILING



TYPICAL DEVICE MOUNTING HEIGHT

SCALE: NONE

ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE

ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE

- ☒ Prescriptive ☐ Performance ☐ Energy Cost Budget

Description of work:

Interior up-fit in existing building. New 208/120 volt, 225 ampere electrical service. New electrical panels, new lighting, and new receptacles. Existing HVAC to remain.

Lighting Schedule

lamp type required in fixture	See light fixture schedule on sheet E401
number of lamps in fixture	See light fixture schedule on sheet E401
ballast type used in the fixture	See light fixture schedule on sheet E401
number of ballast in fixture	See light fixture schedule on sheet E401
total wattage per fixture	See light fixture schedule on sheet E401
total interior wattage specified vs. allowed	See COMcheck report on sheet E501
total exterior wattage specified vs. allowed	See COMcheck report on sheet E501

Equipment of schedules with motors (not used for mechanical systems)

motor horsepower	N/A
number of phases	N/A
minimum efficiency	N/A
motor type	N/A
# of poles	N/A

DESIGNER STATEMENT

To the best of my knowledge and belief, the design of this building complies with the electrical systems, service systems and equipment requirements of the North Carolina State Building Code, Volume X-Energy.

Signed:
Name: Hugh P. Bunn, PE
Title: Electrical Engineer

NEW PANEL A

208/120 VOLT, 225 AMP MAIN LUGS ONLY, 3 PHASE, 4 WIRE
COPPER PLATED BUS, FULLY RATED, 10KAIC

CONN LOAD	CIRCUIT USE	S N	225A M. L. O.	S N	CIRCUIT USE	CONN LOAD	PHASE A	PHASE B	PHASE C
4323	EXISTING DRYER	1		2	LTC-MULTIPURPOSE 100	1172	5495		
4323		3		4	LTC-STORAGE 100, RESTROOM 100, OFFICE 101, EXISTING TTY, MECH. TIO	1260		5583	
4323		5		6	SPARE 20A BREAKER				4323
500	NEW REC.-EXISTING MECH. 110	7		8	SPARE 20A BREAKER		500		
1260	NEW REC.-EXISTING OFFICE 101	9		10	SPARE 20A BREAKER			1260	
900	NEW REC.-MULTI PURPOSE ROOM	11		12	SPARE 20A BREAKER				900
612	EXISTING UH-1	13		14	SPARE 20A BREAKER		612		
612	EXISTING UH-2	15		16	SPARE 20A BREAKER			612	
1080	NEW REC.-MULTI PURPOSE ROOM	17		18	SPARE 20A BREAKER				1080
1248	EXISTING FREEZER	19		20	PREPARED SPACE ONLY		1248		
1248		21		22				1248	
500	EXISTING REC.-MULTI PURPOSE ROOM	23		24					500
750	REC.-EXISTING 111	25		26			750		
	SPARE 20A BREAKER	27		28					
	SPARE 20A BREAKER	29		30					
	PREPARED SPACE ONLY	31		32					
		33		34					
		35		36					
		37		38	PANEL B	1100	1100		
		39		40		1436		1436	
		41		42		1604			1604

NOTES:

- ALL CIRCUIT BREAKERS 20 AMPERE, SINGLE POLE, UNLESS NOTED OTHERWISE.

PHASE A	9745		
PHASE B		10139	
PHASE C			8407
TOTAL VA	28251		
CONNECTED AMPERAGE	79 AMPERES		

NEW PANEL B

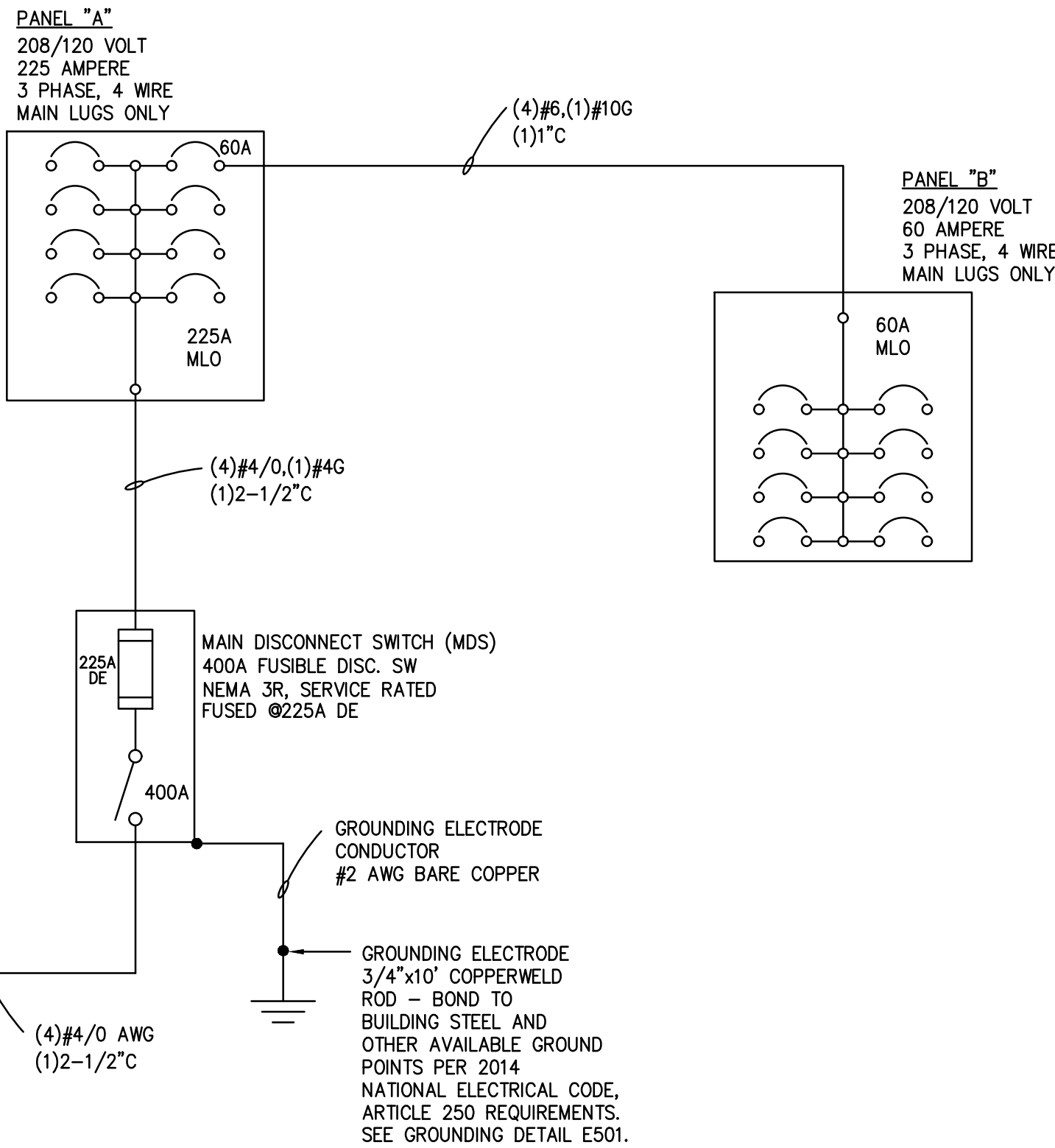
208/120 VOLT, 60 AMP MAIN LUGS ONLY, 3 PHASE, 4 WIRE
COPPER PLATED BUS, FULLY RATED, 10 KAIC

CONN LOAD	CIRCUIT USE	S N	60A M. L. O.	S N	CIRCUIT USE	CONN LOAD	PHASE A	PHASE B	PHASE C
540	NEW REC.-STORAGE 104, ELEC. 105	1		2	NEW LTC-EXTERIOR WALL PACKS	60	600		
600	EXISTING BOILER & PUMP	3		4	LTC-BESTROOM (107 & 109), STORAGE (104 & 106), ELEC. 105	836		1436	
1104	EXISTING FURNACE	5		6	EXISTING EXHAUST FAN (EF-1)	500			1604
	SPARE 20A BREAKER	7		8	EXISTING EXHAUST FAN (EF-2)	500	500		
	SPARE 20A BREAKER	9		10	SPARE 20A BREAKER				
	SPARE 20A BREAKER	11		12	SPARE 20A BREAKER				
	SPARE 20A BREAKER	13		14	SPARE 20A BREAKER				
	SPARE 20A BREAKER	15		16	SPARE 20A BREAKER				
	SPARE 20A BREAKER	17		18	SPARE 20A BREAKER				
	PREPARED SPACE ONLY	19		20	PREPARED SPACE ONLY				
		21		22					
		23		24					

NOTES:

- ALL CIRCUIT BREAKERS 20 AMPERE, SINGLE POLE, UNLESS NOTED OTHERWISE.

PHASE A	1100		
PHASE B		1436	
PHASE C			1604
TOTAL VA	4140		
CONNECTED AMPERAGE	12 AMPERES		



SINGLE LINE DIAGRAM

FAULT CURRENT

SINGLE LINE

SCALE: NONE



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DRAWINGS ISSUED FOR:

FORM & FUNCTION
ARCHITECTURE

9 West Walnut Street, Suite 3B, Downtown Asheville NC 28801
828-619-0301 | info@formandfunction.com

Enka Middle School Field
House Renovation
390 Asbury Road, Candler NC

GENERAL NOTES,
LEGEND, PANEL
SCHEDULES, SINGLE LINE
DIAGRAM

Issue Date: 1.16.17

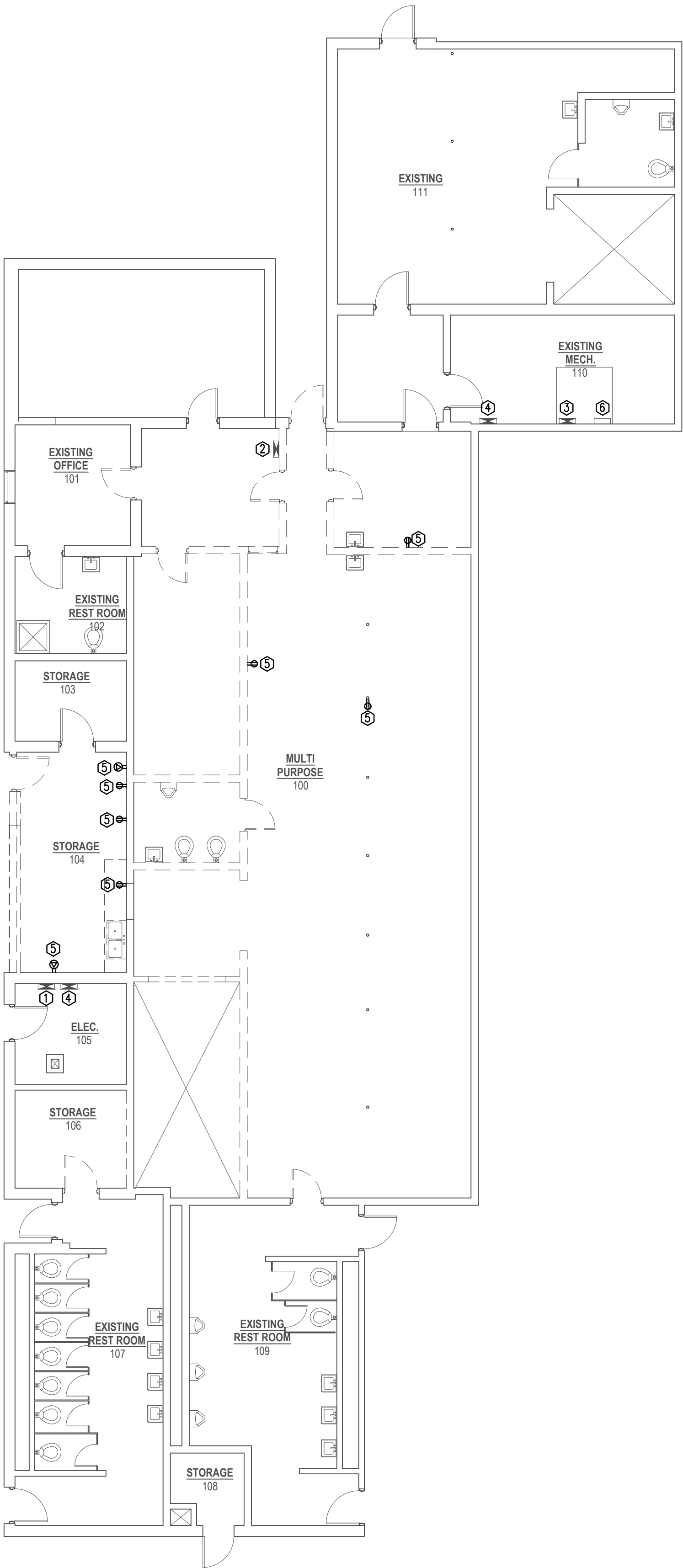
E101

MATRIX
ENGINEERING, INC.
912 South Pine Street
Spartanburg, South Carolina 29302
(864)583-6274
matrixei.com
PROJECT NUMBER: 2017-003
NC FIRM LICENSE #: C-1168



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DRAWINGS ISSUED FOR:



DEMOLITION PLAN
SCALE: 1/8"=1'-0

GENERAL DEMOLITION NOTES:

1. THIS BUILDING HAS TWO ELECTRICAL SERVICES. ELECTRICAL CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR REMOVAL OF EXISTING SERVICES.
2. ELECTRICAL CONTRACTOR TO REMOVE EXISTING GROUNDING ELECTRODES FROM EACH SERVICE.
3. DASHED LINES DENOTE WALLS THAT ARE TO BE DEMOLISHED. COORDINATE WITH GENERAL CONTRACTOR.
4. ELECTRICAL CONTRACTOR TO DISCONNECT AND REMOVE ALL EXISTING WIRING THAT IS NO LONGER USED.

KEYED DEMOLITION NOTES:

- 1 ELECTRICAL CONTRACTOR TO REMOVE EXISTING 240/120V 225A AMP PANEL, SERVICE CONDUCTORS, AND SERVICE CONDUITS.
- 2 ELECTRICAL CONTRACTOR TO REMOVE EXISTING LOAD CENTER. REMOVE EXISTING FEEDERS AND CONDUIT.
- 3 ELECTRICAL CONTRACTOR TO REMOVE EXISTING 208/120V, 3 PHASE 225A PANEL SERVICE CONDUCTORS, AND SERVICE CONDUITS.
- 4 ELECTRICAL CONTRACTOR TO REMOVE EXISTING PANEL.
- 5 ELECTRICAL CONTRACTOR TO REMOVE EXISTING RECEPTACLE, CONDUIT, & WIRE BACK TO PANEL.
- 6 ELECTRICAL CONTRACTOR TO REMOVE EXISTING 150A/3P ENCLOSED CIRCUIT BREAKER, CONDUIT AND WIRING.

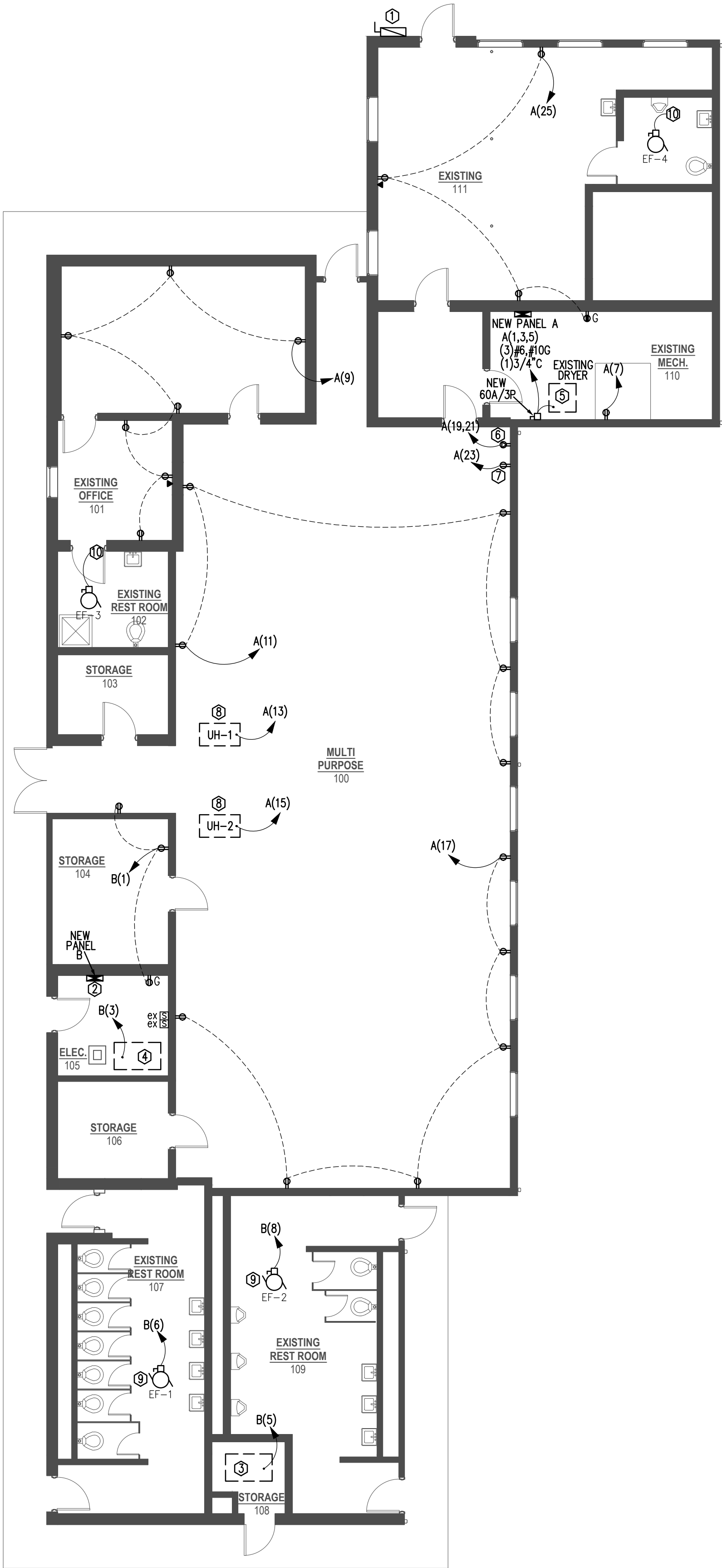
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Enka Middle School Field
House Renovation
390 Asbury Road, Candler NC

DEMOLITION PLAN

Issue Date: 1.16.17

E201



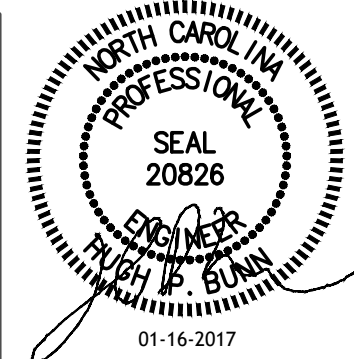
POWER PLAN
SCALE: 1/8"=1'-0

KEYED POWER NOTES:

- ① DENOTES PROPOSED LOCATION OF NEW 400A SERVICE ENTRANCE RATED DISCONNECT SWITCH. FUSED AT 225A DE.
- ② ELECTRICAL CONTRACTOR TO INSTALL NEW PANEL B IN LOCATION OF EXISTING 240/120V, 225A PANEL THAT IS INDICATED ON DEMO PLAN E201.
- ③ ELECTRICAL CONTRACTOR TO CONNECT EXISTING FURNACE TO NEW PANEL B AS INDICATED. UTILIZE EXISTING CONDUCTORS & CONDUIT.
- ④ ELECTRICAL CONTRACTOR TO CONNECT EXISTING BOILER & PUMP TO NEW PANEL B AS INDICATED. UTILIZE EXISTING CONDUCTORS & CONDUIT.
- ⑤ ELECTRICAL CONTRACTOR TO WIRE EXISTING DRYER TO NEW PANEL A AS INDICATED.
- ⑥ DENOTES EXISTING 208V, 20A RECEPTACLE. ELECTRICAL CONTRACTOR TO WIRE EXISTING RECEPTACLE TO NEW PANEL A AS INDICATED.
- ⑦ DENOTES EXISTING DUPLEX RECEPTACLE. ELECTRICAL CONTRACTOR TO CONNECT TO NEW PANEL A AS INDICATED.
- ⑧ DENOTES EXISTING UNIT HEATER. ELECTRICAL CONTRACTOR TO WIRE EXISTING HEATER TO NEW PANEL A AS INDICATED
- ⑨ DENOTES EXISTING EXHAUST FAN TO REMAIN. ELECTRICAL CONTRACTOR TO CONNECT EXISTING EXHAUST FAN TO NEW PANEL B.
- ⑩ WIRE EXISTING EXHAUST FAN LIGHTING CIRCUIT IN ROOM. FAN TO BE CONTROLLED BY SWITCH IN ROOM.

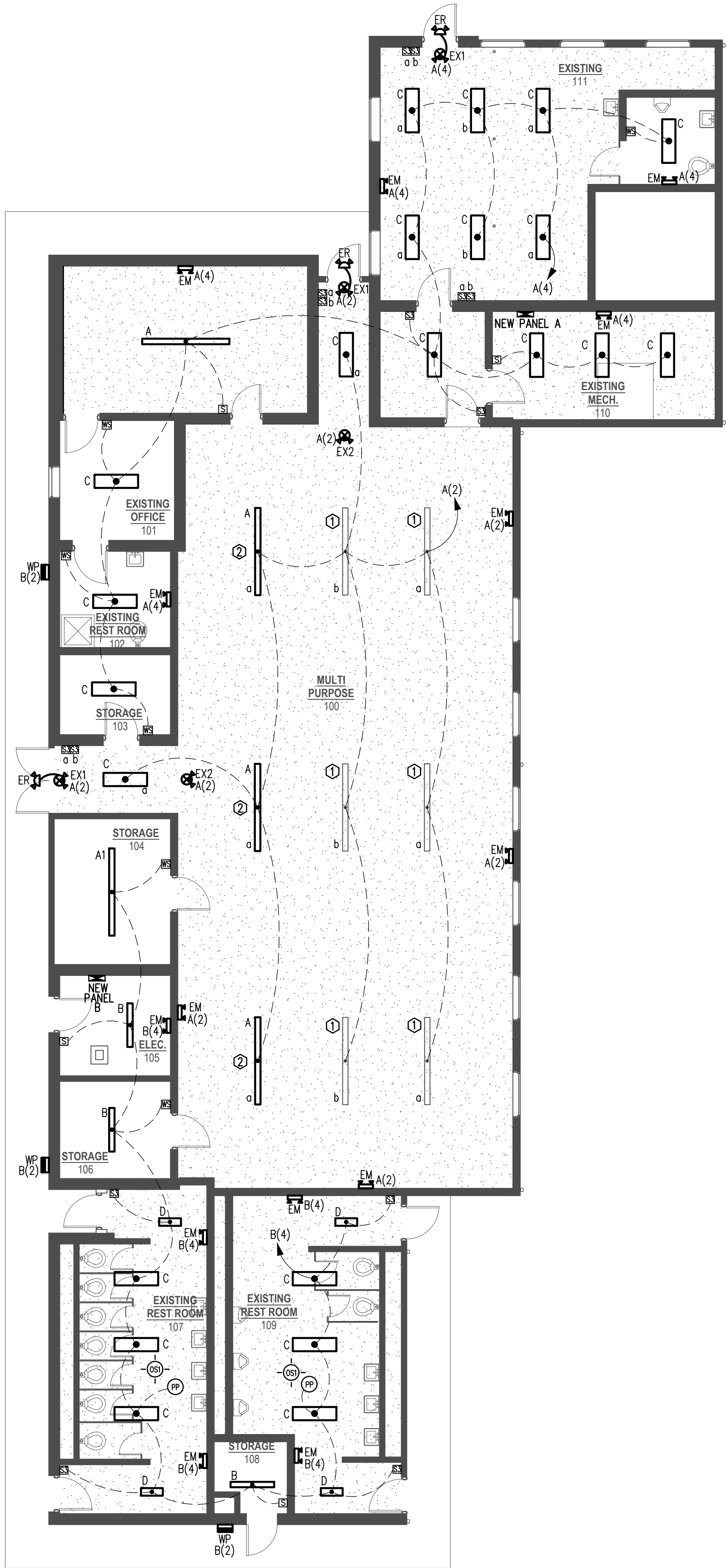
GENERAL POWER NOTES:

1. "ex" ADJACENT TO SWITCH, DENOTES EXISTING SWITCH FOR PUMP & BOILER TO REMAIN AS IS.
2. COORDINATE EXACT LOCATION OF RECEPTACLES WITH OWNER PRIOR TO INSTALLING.
3. COORDINATE LOCATION OF ANY DESIRED DATA WITH OWNER PRIOR TO INSTALLING.
4. FOR ALL MOTOR DRIVEN EQUIPMENT TO REMAIN IN SERVICE, ELECTRICAL CONTRACTOR TO VERIFY A CODE COMPLIANT DISCONNECTING MEANS EXISTS.



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DRAWINGS ISSUED FOR:



LIGHTING PLAN
SCALE: 1/8"=1'-0

LIGHTING FIXTURE SCHEDULE							
TYPE	DESCRIPTION	LAMP	MANUFACTURER PART #	VOLTAGE	WATTAGE	MOUNTING	REMARKS
A	8' INDUSTRIAL STRIP FIXTURE WITH WIRE GUARD WITH (4)32W T8 LAMPS	(4)32W T8	COLUMBIA LIGHTING CATALOG # CS8-232-EU-CSWG4	120	112	SURFACE MOUNTED	
A1	8' INDUSTRIAL STRIP FIXTURE WITH WIRE GUARD WITH (4)32W T8 LAMPS	(4)32W T8	COLUMBIA LIGHTING CATALOG # CS8-232-EU-CSWG4-CSHC	120	112	CHAIN HUNG	
B	4' INDUSTRIAL STRIP FIXTURE WITH WIRE GUARD WITH (2)32W T8 LAMPS	(2)32W T8	COLUMBIA LIGHTING CATALOG # CS4-232-EU-CSWG4	120	56	CHAIN HUNG	
C	4' SURFACE MOUNTED WRAPAROUND FIXTURE WITH (3)32W T8 LAMPS	(3)32W T8	COLUMBIA LIGHTING CATALOG # AWW4-332-3EU	120	82	SURFACE MOUNTED	
D	2' SURFACE MOUNTED WRAPAROUND FIXTURE WITH (2)17W T8 LAMPS	(2)17W T8	COLUMBIA LIGHTING CATALOG # AWW2-217-EU	120	30	SURFACE MOUNTED	
EM	DUAL HEAD EMERGENCY LIGHT WITH BATTERY BACKUP		COMPASS LIGHTING CATALOG # CU2	120	3		
ER	2-LAMP WEATHERPROOF REMOTE HEAD POWERED BY EXIT SIGN "EX1" BELOW	LED	COMPASS LIGHTING CATALOG # CCRRC	6	3		
EX1	THERMOPLASTIC LED EXIT SIGN WITH HEADS, BATTERY BACKUP, AND REMOTE HEAD POWER CAPACITY	LED	COMPASS LIGHTING CATALOG # CCR	120	12		
EX2	THERMOPLASTIC LED EXIT SIGN WITH HEADS AND NICKEL CADMIUM BATTERY BACKUP	LED	COMPASS LIGHTING CATALOG # CCR	120	12		
WP	LED WALL PACK WITH PHOTOCCELL INTEGRAL TO FIXTURE	LED	DECO LIGHTING CATALOG # VINCI-LED-20-40-UNV-FINISH-PC	120	20	WALL MOUNTED	

LIGHTING FIXTURE SCHEDULE NOTES:

1. LIGHTING FIXTURES MANUFACTURER SHALL BE PROVIDED AS SPECIFIED, UNLESS PRE-APPROVED DURING BIDDING BY THE ARCHITECT/ENGINEER.
2. VERIFY VOLTAGE REQUIREMENTS WITH RESPECT TO FLOOR PLAN CIRCUITING AND PANEL SCHEDULES.
3. VERIFY MOUNTING HEIGHTS ON ALL WALL AND SURFACE MOUNTED FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN.
4. VERIFY ALL LUMINAIRE COLOR SELECTIONS WITH ARCHITECT PRIOR TO PURCHASING AND INSTALLING.
5. BATTERY PACKS FOR ALL EXIT AND EMERGENCY LIGHT FIXTURES SHALL BE CAPABLE OF PROVIDING EMERGENCY POWER TO THE FIXTURES FOR A MINIMUM OF 90 MINUTES.

SWITCH LEGEND

- [S] LOCAL TOGGLE SWITCH
S.P.S.T, 20A, SPEC GRADE
- [S3] 3-WAY LOCAL TOGGLE SWITCH
S.P.S.T, 20A, SPEC GRADE
- [WS] WALL MOUNTED OCCUPANCY SENSOR
HUBBELL BUILDING AUTOMATION CATALOG# LHMDT1-COLOR
- [US1] DUAL TECHNOLOGY CEILING MOUNTED 360° OCCUPANCY SENSOR-500 SQ. FT
HUBBELL BUILDING AUTOMATION CATALOG# OMNIDT-500
- [PP] POWER PACK
HUBBELL BUILDING AUTOMATION CATALOG# UV-PP

GENERAL LIGHTING NOTES:

1. ALL LIGHT FIXTURES SHALL MEET THE SEISMIC REQUIREMENTS OF ASCE 7.
2. ELECTRICAL CONTRACTOR TO WIRE ALL EXIT SIGNAGE UN-SWITCHED TO THE LOCAL LIGHTING CIRCUIT IN THE ROOM WHERE MOUNTED.
3. LOWER-CASE LETTER ADJACENT TO LIGHT FIXTURE DENOTES SWITCH DESIGNATION FOR SWITCHING IN ROWS.
4. IN ROOMS THAT HAVE BOTH OCCUPANCY SENSOR AND SWITCH/SWITCHES, WIRE OCCUPANCY SENSOR AHEAD OF AND IN SERIES WITH SWITCH/SWITCHES.
5. COORDINATE WITH OWNER FOR PREFERRED LOCATION OF SWITCHES PRIOR TO INSTALLING.

OCCUPANCY SENSOR NOTES

1. ALL SENSOR LOCATIONS ARE APPROXIMATE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO INSTALLATION.
2. ULTRASONIC CEILING MOUNTED SENSORS REQUIRE THAT THEY BE NO CLOSER THAN 6 FEET TO AIR SUPPLY/RETURN REGISTERS.
3. ONE POWER PACK IS REQUIRED FOR EACH CIRCUIT CONTROLLED.

KEYED LIGHTING NOTES:

- ① DENOTES EXISTING 8' FIXTURE TO BE RELOCATED FROM CURRENT LOCATION TO NEW LOCATION AS SHOWN.
- ② DENOTES NEW 8' FIXTURE TO MATCH EXISTING LIGHT FIXTURES IN MULTI-PURPOSE ROOM. SEE FIXTURE SCHEDULE FOR FIXTURE CATALOG NUMBER.



COMcheck Software Version 4.0.5.1
Interior Lighting Compliance
Certificate

Section 1: Project Information

Energy Code: 2012 North Carolina Energy Conservation Code
Project Title: Enka Middle School-Field House Renovation
Project Type: Alteration

Construction Site:
380 Asbury Road
Candler, NC 28715

Owner/Agent:
Myles Alexander
Form & Function
9 West Walnut Street, Suite 3B
Downtown Asheville, NC 28801

Designer/Contractor:
Hugh P. Burn
Matrix Engineering
912 South Pine Street
Spartanburg, SC 29302

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (sq ft)	C Allowed Watts / ft ²	D Allowed Watts (B x C)
Exercise Center/Dressing/Locker/Fitting Room	4274	0.78	3380
Total Allowed Watts =			3380

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamp(s) Fixture	C # of Fixture	D Fixture Watt. (C x D)	E (B x D)
Exercise Center/Dressing/Locker/Fitting Room (4274 sq ft)				
Linear Fluorescent 1: A: 8' Industrial Strip Fixture: 48" T8 32W Electronic:	4	11	112	1232
Linear Fluorescent 2: B: 4' Industrial Strip Fixture: 48" T8 32W Electronic:	2	2	66	112
Linear Fluorescent 3: C: 4' Surface Mounted Wraparound: 48" T8 32W Electronic:	3	22	82	1804
Linear Fluorescent 4: D: 2' Surface Mounted Wraparound: 24" T8 17W Electronic:	2	4	30	120
Total Proposed Watts =				3268

Section 4: Requirements Checklist

Interior Lighting PASSES

Lighting Wattage:

1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
3380	3268	PASSES

Controls, Switching, and Wiring:

2. Separate lighting controls present for: Display/Accent Lighting, Cess Lighting, lighting for nonvisual applications (e.g., such as plant growth and food warming), lighting equipment that is for sale or for demonstrations in lighting education.
3. Hotel and motel guest rooms and guest suites have a master control device at the main room entry that controls all permanently installed luminaires and switched receptacles.
4. Supplemental task lighting has a control device integral to the luminaires or be controlled by a wall-mounted control device provided the control device is readily accessible and located so that the occupant can see the controlled lighting.
5. Independent controls for each space (switch/occupancy sensor).
- Exception:
3. Areas designated as security or emergency areas that must be continuously illuminated.
3. Lighting in stairways or corridors that are elements of the means of egress.

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6. Individual dwelling units separately metered.
7. Medical task lighting or arthroscopy display lighting claimed to be exempt from compliance has a control device independent of the control of the nonmedical lighting.
8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.
- Exceptions:
3. Only one luminaire in space.
3. An occupant-sensing device controls the area.
3. The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
3. Areas that are less than 0.5 Watts/sq ft.
9. Automatic lighting shutoff control in buildings larger than 5,000 sq ft.
- Exceptions:
3. Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.
10. Photocell/astronomical time switch on exterior lights.
- Exceptions:
3. Lighting intended for 24 hour use.
11. Tension wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).
- Exceptions:
3. Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available path.
12. Lighting controls are tested to ensure that control devices, components, equipment, and systems are calibrated, adjusted and operate in accordance with approved plans and specifications. Sequences of operation shall be functionally tested to ensure they operate in accordance with approved plans and specifications.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting alteration project represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting alteration project has been designed to meet the 2012 North Carolina Energy Conservation Code, Chapter 8, requirements in COMcheck Version 4.0.5.1 and to comply with the mandatory requirements in the Requirements Checklist.

Hugh P. Burn, P.E.
Name - Title
Signature
Date: 1-12-2017

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COMcheck Software Version 4.0.5.1
Exterior Lighting Compliance
Certificate

Section 1: Project Information

Energy Code: 2012 North Carolina Energy Conservation Code
Project Title: Enka Middle School-Field House Renovation
Project Type: Alteration
Exterior Lighting Zone: 2 (Residential mixed use area)

Construction Site:
380 Asbury Road
Candler, NC 28715

Owner/Agent:
Myles Alexander
Form & Function
9 West Walnut Street, Suite 3B
Downtown Asheville, NC 28801

Designer/Contractor:
Hugh P. Burn
Matrix Engineering
912 South Pine Street
Spartanburg, SC 29302

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Illuminated length of facade wall or surface	190 ft	2.5	No	375	60
Total Tradable Watts** =				0	0
Total Allowed Watts =				375	
Total Allowed Supplemental Watts** =				600	

* Wattage tradable is only allowed between tradable areas/surfaces.
** A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamp(s) Fixture	C # of Fixture	D Fixture Watt. (C x D)	E (B x D)
Illuminated length of facade wall or surface (150 ft) Non-tradable Wattage:				
LED 1: WP-LED Wallpack Other:	1	3	20	60
Total Tradable Proposed Watts =				0

Section 4: Requirements Checklist

Lighting Wattage:

1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.

Compliance: PASSES.

Controls, Switching, and Wiring:

2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.
3. Lighting not designated for dusk-to-dawn operation is controlled by either a a photosensor (with time switch), or an astronomical time switch.
4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.
5. All time switches are capable of retiming programming and the time setting during loss of power for a period of at least 10 hours.
6. Lighting controls are tested to ensure that control devices, components, equipment, and systems are calibrated, adjusted and operate in accordance with approved plans and specifications. Sequences of operation shall be functionally tested to ensure they operate in accordance with approved plans and specifications.

Exterior Lighting Efficiency and Application:

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Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2012 North Carolina Energy Conservation Code requirements in COMcheck Version 4.0.5.1 and to comply with the mandatory requirements in the Requirements Checklist.

Hugh P. Burn, P.E.
Name - Title
Signature
Date: 1-12-2017

Project Title: Enka Middle School-Field House Renovation
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