

APPENDIX B  
2018 BUILDING CODE SUMMARY  
FOR ALL COMMERCIAL PROJECTS  
(EXCEPT 1 AND 2 FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project:GOVERNOR MOREHEAD SCHOOL DORMS A, B, AND D UPGRADES  
Address:303 ASHE AVE, RALEIGH, NCZip Code27695-7216  
Proposed User:R-2  
Owner or Auth. Agent:DPI Jon JonesPhone#Emailjonathan.jones@dpi.nc.gov  
Owned By:City/CountyPrivateState  
Code Enforcement Jurisdiction:CityCountyState

LEAD DESIGN PROFESSIONAL:DAVID WHITNEY, PE

| DESIGNER      | FIRM           | NAME        | LICENSE # | TELEPHONE #  | EMAIL                       |
|---------------|----------------|-------------|-----------|--------------|-----------------------------|
| Architectural | RAYMOND, ENG.  | J. MORBATEN | 13657     | 919.872.7866 | JSMORBATEN@RAYMOND11.COM    |
| Civil         | CRUMPLER, PLLC | J. CRUMPLER | 034994    | 919.413.1704 | JSC@CRUMPLERCONSULTING.COM  |
| Electrical    | ATLANTEC, ENG. | D. WHITNEY  | 017382    | 919.571.1111 | DAVID@ATLANTECENGINEERS.COM |
| Fire Alarm    | ATLANTEC, ENG. | D. WHITNEY  | 017382    | 919.571.1111 | DAVID@ATLANTECENGINEERS.COM |
| Plumbing      | ATLANTEC, ENG. | B. FELTS    | 025036    | 919.571.1111 | BRAID@ATLANTECENGINEERS.COM |
| Mechanical    | ATLANTEC, ENG. | B. FELTS    | 025036    | 919.571.1111 | BRAID@ATLANTECENGINEERS.COM |
| Spr.-Stand.   | ATLANTEC, ENG. | B. FELTS    | 025036    | 919.571.1111 | BRAID@ATLANTECENGINEERS.COM |
| Structural    |                |             |           |              |                             |
| Ret. Walls    | >5' High       |             |           |              |                             |
| Other         |                |             |           |              |                             |

2018 EDITION OF NC CODE FOR:☐ New Construction☒ Addition☐ Renovation  
☐ 1st Time Interior Completion  
☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures & requirements  
☐ Phased Construction - Contact the local inspection jurisdiction for possible additional procedures & requirements

2018 NC EXISTING BUILDING CODE:☐ Prescriptive☐ Repair☐ Chapter 14  
ALTERATION:☐ Level I☒ Level II☐ Level III  
☐ Change of Use  
☐ Historic Property

CONSTRUCTED:1967ORIGINAL OCCUPANCY(S) (Ch. 3):GROUP A - RESIDENTIAL  
RENOVATED:CURRENT OCCUPANCY(S) (Ch. 3):RESIDENTIAL R-2  
PROPOSED OCCUPANCY(S) (Ch. 3):RESIDENTIAL R-2

RISK CATEGORY (Table 1604.5):CURRENT:☐ I☒ II☐ III☐ IV  
PROPOSED:☐ I☒ II☐ III☐ IV

BUILDING DATA

Construction Type:☐ I-A☐ II-A☐ III-A☐ IV☐ V-A  
☐ I-B☒ II-B☐ III-B☐ V-B

Sprinklers:☐ No☐ Partial☒ Yes☒ NFPA 13☐ NFPA 13R☐ NFPA 13D  
Standpipes:☒ No☐ YesClass☐ I☐ II☐ III☐ Wet☐ Dry  
Fire District:☒ No☐ YesFlood Hazard Area:☒ No☐ Yes  
Special Instructions Required:☐ No☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)  
Building Height:35Feet

Gross Building Area:

| FLOOR             | EXISTING (SQ. FT) | NEW (SQ. FT) | SUB-TOTAL |
|-------------------|-------------------|--------------|-----------|
| BLDG. A 1ST FLOOR | 4,896 SQ. FT      | 0 SQ. FT     |           |
| BLDG. A 2ND FLOOR | 4,401 SQ. FT      | 0 SQ. FT     |           |
| BLDG. B 1ST FLOOR | 5,450 SQ. FT      | 77 SQ. FT    |           |
| BLDG. B 2ND FLOOR | 4,413 SQ. FT      | 0 SQ. FT     |           |
| BLDG. D 1ST FLOOR | 5,048 SQ. FT      | 77 SQ. FT    |           |
| BLDG. D 2ND FLOOR | 4,396 SQ. FT      | 0 SQ. FT     |           |
| TOTAL BLDG. A     | 9,297 SQ. FT      | 0 SQ. FT     |           |
| TOTAL BLDG. B     | 9,863 SQ. FT      | 77 SQ. FT    |           |
| TOTAL BLDG. D     | 9,444 SQ. FT      | 77 SQ. FT    |           |

ALLOWABLE AREA

Occupancy:

|                   |   |
|-------------------|---|
| Assembly          | <input type="checkbox"/> A-1 <input type="checkbox"/> A-2 <input type="checkbox"/> A-3 <input type="checkbox"/> A-4 <input type="checkbox"/> A-5  |
| Business          | <input type="checkbox"/>  |
| Educational       | <input type="checkbox"/>  |
| Factory           | <input type="checkbox"/> F-1 Moderate <input type="checkbox"/> F-2 Low  |
| Hazardous         | <input type="checkbox"/> H-1 Detonate <input type="checkbox"/> H-2 Deflagrate <input type="checkbox"/> H-3 Combust <input type="checkbox"/> H-4 Health <input type="checkbox"/> H-5 HPM |
| Institutional     | <input type="checkbox"/> I-1 <input type="checkbox"/> I-2 <input type="checkbox"/> I-3 <input type="checkbox"/> I-4   |
| I-3 Condition     | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5  |
| Mercantile        | <input type="checkbox"/>  |
| Residential       | <input type="checkbox"/> R-1 <input checked="" type="checkbox"/> R-2 <input type="checkbox"/> R-3 <input type="checkbox"/> R-4  |
| Storage           | <input type="checkbox"/> S-1 Moderate <input type="checkbox"/> S-2 Low <input type="checkbox"/> High-piled <input type="checkbox"/> Parking Garage                                      |
|                   | <input type="checkbox"/> Open <input type="checkbox"/> Enclosed <input type="checkbox"/> Repair Garage  |
| Utility and Misc. | <input type="checkbox"/>  |

Accessory Occupancies:

|                   |   |
|-------------------|---|
| Assembly          | <input type="checkbox"/> A-1 <input type="checkbox"/> A-2 <input type="checkbox"/> A-3 <input type="checkbox"/> A-4 <input type="checkbox"/> A-5  |
| Business          | <input type="checkbox"/>  |
| Educational       | <input type="checkbox"/>  |
| Factory           | <input type="checkbox"/> F-1 Moderate <input type="checkbox"/> F-2 Low  |
| Hazardous         | <input type="checkbox"/> H-1 Detonate <input type="checkbox"/> H-2 Deflagrate <input type="checkbox"/> H-3 Combust <input type="checkbox"/> H-4 Health <input type="checkbox"/> H-5 HPM |
| Institutional     | <input type="checkbox"/> I-1 <input type="checkbox"/> I-2 <input type="checkbox"/> I-3 <input type="checkbox"/> I-4   |
| I-3 Condition     | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5  |
| Mercantile        | <input type="checkbox"/>  |
| Residential       | <input type="checkbox"/> R-1 <input type="checkbox"/> R-2 <input type="checkbox"/> R-3 <input type="checkbox"/> R-4   |
| Storage           | <input type="checkbox"/> S-1 Moderate <input type="checkbox"/> S-2 Low <input type="checkbox"/> High-piled <input type="checkbox"/> Parking Garage                                      |
|                   | <input type="checkbox"/> Open <input type="checkbox"/> Enclosed <input type="checkbox"/> Repair Garage  |
| Utility and Misc. | <input type="checkbox"/>  |

☐ Furnace room where any piece of equipment is over 400,000 Btu per hour input  
☐ Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower  
☐ Refrigerant machine room  
☐ Hydrogen cutoff rooms, not classified as Group H  
☐ Incinerator rooms  
☐ Paint shops, not classified as Group H, located in occupancies other than Group F  
☐ Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy  
☐ Laundry rooms over 100 square feet  
☐ Group I-3 cells equipped with padded surfaces  
☐ Group I-2 waste and linen collection rooms  
☐ Waste and linen collection rooms over 100 square feet  
☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power, or uninterrupted power supplies  
☐ Rooms containing fire pumps  
☐ Group I-2 storage rooms over 100 square feet  
☐ Group I-2 commercial kitchens  
☐ Group I-2 laundries equal to or less than 100 square feet  
☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

ALLOWABLE AREA (continued)

Special Uses:☐ 402☐ 403☐ 404☐ 405☐ 406☐ 407☐ 408☐ 409☐ 410☐ 411☐ 412☐ 413☐ 414☐ 415☐ 416☐ 417☐ 418☐ 419☐ 420☐ 421☐ 422☐ 423☐ 424☐ 425☐ 426☐ 427

Special Provisions:☐ 509.2☐ 509.3☐ 509.4☐ 509.5☐ 509.6☐ 509.7☐ 509.8☐ 509.9

Mixed Occupancy:☒ No☐ YesSeparation:\_\_\_\_HrOccupation\_\_\_\_

☐ Incidental Use Separation (508.2.5)  
This separation is not exempt as a Nonseparated Use (see exceptions).

☐ Nonseparated Use (508.3.2)  
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ Separated Use (508.3.3) - See Table 508.3.3 for area calculations. For each story, the area of occupancy shall be such that the ratio of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Actual Area of Occupancy A \_\_\_\_\_ Actual Area of Occupancy B \_\_\_\_\_  
Allowable Area of Occupancy A \_\_\_\_\_ Allowable Area of Occupancy B \_\_\_\_\_  
\_\_\_\_\_ + ... = \_\_\_\_\_ ≤ 1.00

| STORY NO. | DESCRIPTION AND USE | (A) BLDG. AREA PER STORY (ACTUAL) | (B) TABLE 503.5 AREA | (C) AREA FOR OPEN SPACE INCREASE <sup>1,6</sup> | (D) AREA FOR SPRINKLER INCREASE <sup>2</sup> | (E) ALLOWABLE AREA OR UNLIMITED <sup>3,4</sup> | (F) MAXIMUM BUILDING AREA <sup>4</sup> |
|-----------|---------------------|-----------------------------------|----------------------|---|--|--|--|
| 4th Floor |                     |                                   |                      |   |  |  |  |
| 3rd Floor |                     |                                   |                      |   |  |  |  |
| 2nd Floor |                     |                                   |                      |   |  |  |  |
| 1st Floor |                     |                                   |                      |   |  |  |  |

1. Frontage area increases from Section 508.2 are computed thus:  
a. Perimeter which fronts a public way or open space having 20 feet minimum width = \_\_\_\_\_ 682' \_\_\_\_\_ (F)  
b. Total Building Perimeter = \_\_\_\_\_ 833'-7" \_\_\_\_\_ (P)  
c. Ratio (F/P) = \_\_\_\_\_ 79 \_\_\_\_\_ (F/P)  
d. W = Minimum width of public way = \_\_\_\_\_ (W)  
e. Percent of frontage increase = 100 [(F/P - 0.25) x W] / 30 = \_\_\_\_\_ 36.18 \_\_\_\_\_ (%)

2. The sprinkler increase per section 508.3 is as follows:  
a. Multi-story building  $l_u$  = 200 percent  
b. Single story building  $l_u$  = 300 percent

3. Unlimited area applicable under conditions of Sections 507.

4. Maximum Building Area = total number of stories in the building x E (506.2).  
5. The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.3.1.

6. Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

|                                       | ALLOWABLE (TABLE 503) | INCREASE FOR SPRINKLERS     | SHOWN ON PLANS | CODE REFERENCE |
|---------------------------------------|-----------------------|-----------------------------|----------------|----------------|
| Type of Construction                  | Type _____ 11B _____  | Type _____ 11B _____        | CHPT 6         |                |
| Building Height in Feet (Table 504.3) | 35'-0"                | Feet=H+20"= _____ N/A _____ | 35'-0"         | 1968           |
| Building Height in Stories            | STORIES 2             | Stories+1= _____ N/A _____  | STORIES 2      | 1968           |

FIRE PROTECTION REQUIREMENTS

| BUILDING ELEMENT   | FIRE SEPARATION DISTANCE (FEET) | RATING |                         | DETAIL# AND SHEET# | DESIGN# FOR RATED ASSEMBLY | DESIGN# FOR RATED PENETRATION | DESIGN# FOR RATED JOINTS |
|--|---------------------------------|--------|-------------------------|--------------------|----------------------------|-------------------------------|--------------------------|
|  |                                 | REQ'D  | PROVIDED (W/REDUCTION)* |                    |                            |                               |                          |
| Structural frame, including columns, girders, trusses    | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Bearing walls  |                                 |        |                         |                    |                            |                               |                          |
| Exterior   | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| North  | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| East   | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| West   | >10'-0"                         | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| South  | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| Interior   | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| Nonbearing walls and partitions                          |                                 |        |                         |                    |                            |                               |                          |
| Exterior   | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| North  | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| East   | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| West   | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| South  | -                               | N/A    | EXISTING                | -                  | -                          | -                             | -                        |
| Interior walls and partitions                            | -                               | N/A    | -                       | -                  | -                          | -                             | -                        |
| Floor construction including supporting beams and joists | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Roof construction including supporting beams and joists  | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Roof Ceiling Assembly                                    |                                 |        |                         |                    |                            |                               |                          |
| Columns Supporting Roof                                  |                                 |        |                         |                    |                            |                               |                          |
| Shaft Enclosures - Exit                                  | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Shaft Enclosures - Other                                 | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Corridor Separation                                      | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Occupancy/Fire Barrier Separation                        | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Party/Fire Wall Separation                               | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Smoke Barrier Separation                                 | -                               | -      | -                       | -                  | -                          | -                             | -                        |
| Tenant/Dwelling Unit/Sleeping Unit Separation            | -                               | N/A    | N/A                     | N/A                | N/A                        | N/A                           | N/A                      |
| Incidental Use Separation                                | -                               | N/A    | N/A                     | N/A                | N/A                        | N/A                           | N/A                      |

\*Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting:☐ No☒ Yes  
Exit Signs:☐ No☒ Yes  
Fire Alarm:☐ No☒ Yes  
Smoke Detection Systems:☐ No☒ Yes☒ Partial  
Panic Hardware:☐ No☒ Yes  
Carbon Monoxide Detection:☒ No☐ Yes

PERCENTAGE OF WALL OPENING CALCULATIONS

| FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES | DEGREE OF OPENINGS PROTECTIONS (TABLE 705.6) | ALLOWABLE AREA (%) | ACTUAL SHOW ON PLANS (%) |
|---|--|--------------------|--------------------------|
| 00'-0   | 00'  | 00                 | 00                       |
| 00'-0   | 00'  | 00                 | 00                       |
| 00'-0   | 00'  | 00                 | 00                       |

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #:G-400-G403

☒ Fire and/or smoke rated wall locations (Chapter 7)  
☐ Assumed and real property line locations  
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)  
☐ Existing structures within 30 feet of the proposed building  
☒ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)  
☒ Occupant loads for each area  
☒ Exit access travel distances (1017)  
☒ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))  
☐ Dead end lengths (1020.4)  
☒ Clear exit widths for each exit door  
☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)  
☒ Actual occupant load for each exit door  
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation  
☐ Location of doors with panic hardware (1010.1.10)  
☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)  
☐ Location of doors with electromagnetic egress locks (1010.1.9.9)  
☐ Location of doors equipped with hold-open devices  
☐ Location of emergency escape windows (1030)  
☐ The square footage of each fire area (202)  
☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)  
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107)

| TOTAL UNITS | ACCESSIBLE UNITS REQUIRED | ACCESSIBLE UNITS PROVIDED | TYPE A UNITS REQUIRED | TYPE A UNITS PROVIDED | TYPE B UNITS REQUIRED | TYPE B UNITS PROVIDED | TOTAL ACCESSIBLE UNITS PROVIDED |
|-------------|---------------------------|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------------|
| 00          | 00                        | 00                        | 00                    | 00                    | 00                    | 00                    | 00                              |

ACCESSIBLE PARKING (SECTION 1106)

| LOT OR PARKING AREA | TOTAL # OF PARKING SPACES | REQUIRED | PROVIDED | # OF ACCESSIBLE SPACES PROVIDED |                   |                 | TOTAL # ACCESSIBLE UNITS PROVIDED |
|---------------------|---------------------------|----------|----------|---------------------------------|-------------------|-----------------|-----------------------------------|
|                     |                           |          |          | REGULAR WITH 5' ACCESS ASILE    | 132" ACCESS ASILE | 8' ACCESS ASILE |                                   |
| NAME                | 00                        | 00       | 00       | 00                              | 00                | 00              | 00                                |
| NAME                | 00                        | 00       | 00       | 00                              | 00                | 00              | 00                                |
| TOTAL               | 00                        | 00       | 00       | 00                              | 00                | 00              | 00                                |

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

| USE      | SPACE | WATER CLOSETS |        | URINALS | LAVATORIES |        | SHOWERS /TUBS | DRINKING FOUNTAINS |            |
|----------|-------|---------------|--------|---------|------------|--------|---------------|--------------------|------------|
|          |       | MALE          | FEMALE |         | MALE       | FEMALE |               | REGULAR            | ACCESSIBLE |
| EXISTING |       | 0             | 0      | 0       | 0          | 0      | 0             | 0                  | 0          |
| NEW      |       | 0             | 0      | 0       | 0          | 0      | 0             | 0                  | 0          |
| REQUIRED |       | 0             | 0      | 0       | 0          | 0      | 0             | 0                  | 0          |

ENERGY SUMMARY

NEW SPRINKLER ROOMS

ENERGY REQUIREMENTS:  
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ No ☐ Yes (The remainder is then N/A)  
Exempt Building: ☒ No ☐ Yes (Provide code or summary reference):  
Climate Zone: ☐ 3A☒ 4A☐ 5A

Method of Compliance: Energy Code☒ Performance☐ Prescriptive  
ASHRAE 90.1☐ Performance☐ Prescriptive  
If "Other" specify here)

Thermal Envelope (Prescriptive method only)  
Roof/Ceiling Assembly (each assembly)  
Description of assemblyASPHALT SHINGLES, UNDERLAYMENT, PLYWOOD SHEATHING, 2X6 ROOF RAFTERS WITH SPRAY APPLIED INSULATION WITH INTUMESCENT PAINT.  
U-Value of total assembly0.023  
R-Value of insulationR-42  
Skylights in each assemblyN/A  
U-Value of skylightN/A  
Total square footage of skylights in each assemblyN/A  
Exterior Walls (each assembly)  
Description of assemblyCEMENTITIOUS LAP SIDING, CONTINUOUS RIGID MINERAL WOOL INSULATION, WEATHER BARRIER OVER PLYWOOD SHEATHING, 6" METAL STUDS WITH BATT INSULATION.  
U-Value of total assembly0.048  
R-Value of insulationR-13 + R-7.5 CONTINUOUS  
Openings (windows or doors with glazing)N/A  
U-Value of assemblyN/A  
Solar heat gain coefficientN/A  
Projection factorN/A  
Door R-ValuesN/A  
Walls below grade (N/A)  
Floors over unconditioned space (N/A)  
Floors slab on grade  
Description of assembly4" CONCRETE SLAB OVER RIGID INSULATION  
U-Value of total assembly0.066  
R-Value of insulationR-15  
Horizontal/vertical requirementN/A  
Slab heatedN/A

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)  
N/A  
N/A

STRUCTURAL DESIGN

NEW SPRINKLER ROOMS

DESIGN LOADS:  
Importance Factors: Wind ( $l_w$ )N/A  
Snow ( $l_s$ )1.0  
Seismic ( $l_e$ )1.0  
Live Loads: Roof20 psf  
MezzanineN/A psf  
Floor100 psf  
Ground Snow Load:15 psf  
Wind Load: Basic Wind Speed115 mph (ASCE-7)  
Exposure CategoryC  
Wind Base Shears (for MWFRS)  $V_x$  = \_\_\_\_\_ 3 kips  $V_y$  = \_\_\_\_\_ 3 kips

SEISMIC DESIGN CATEGORY: ☐ A☒ B☐ C☐ D  
Provide the following Seismic Design Parameters:  
Occupancy Category (Table 1604.5) ☐ I☒ II☐ III☐ IV  
Spectral Response Acceleration  $S_s$  \_\_\_\_\_ 15.5 %g  $S_1$  \_\_\_\_\_ 7.7 %g  
Site Classification (Table 1613.5.2) ☐ A☒ B☐ C☐ D☐ E☐ F  
☐ Field Test☐ Presumptive☐ Historical Data  
Basic structural system (check one)  
☒ Bearing Wall☐ Dual w/Special Moment Frame  
☐ Building Frame☐ Dual w/Intermediate R/C or Special Steel  
☐ Moment Frame☐ Inverted Pendulum  
Seismic base shear:  $V_x$  = \_\_\_\_\_ 114 KIIPS  $V_y$  = \_\_\_\_\_ 114 KIIPS  
Analysis Procedure: ☐ Simplified☒ Equivalent Lateral Force☐ Dynamic  
Architectural, Mechanical, Components anchored? ☐ Yes☐ No  
LATERAL DESIGN CONTROL: ☐ Earthquake☐ Wind  
SOIL BEARING CAPACITIES:  
Field Test (provide copy of test report) \_\_\_\_\_ N/A psf  
Presumptive Bearing capacity1500 psf  
Pile size, type, and capacity \_\_\_\_\_ N/A  
SPECIAL INSPECTIONS REQUIRED: ☐ Yes☒ No

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT  
Thermal Zone  
Winter dry bulb \_\_\_\_\_ N/A  
Summer dry bulb \_\_\_\_\_ N/A  
Interior design conditions  
Winter dry bulb \_\_\_\_\_ N/A  
Summer dry bulb \_\_\_\_\_ N/A  
Relative humidity \_\_\_\_\_ N/A  
Building heating load \_\_\_\_\_ N/A  
Building cooling load \_\_\_\_\_ N/A  
Mechanical Spacing Condition System  
Unitary  
Description of unit \_\_\_\_\_ N/A  
Heating efficiency \_\_\_\_\_ N/A  
Cooling efficiency \_\_\_\_\_ N/A  
Size category \_\_\_\_\_ N/A  
Boiler  
Size category: If oversized, state reason. \_\_\_\_\_ N/A  
Chiller  
Size category: If oversized, state reason. \_\_\_\_\_ N/A  
List equipment efficiencies \_\_\_\_\_ N/A

ELECTRICAL SUMMARY  
ELECTRICAL SYSTEM AND EQUIPMENT  
Method of Compliance  
Energy Code: ☐ Prescriptive☐ Performance  
ASHRAE 90.1: ☐ Prescriptive☐ Performance  
Lighting schedule (each fixture type)  
Lamp type required in fixture \_\_\_\_\_  
Number of lamps in fixture \_\_\_\_\_  
Ballast type used in the fixture \_\_\_\_\_  
Number of ballasts in the fixture \_\_\_\_\_  
Total wattage per fixture \_\_\_\_\_  
Total interior wattage specified vs. allowed \_\_\_\_\_  
Total exterior wattage specified vs. allowed \_\_\_\_\_  
Additional Prescriptive Compliance  
☐ C406.2 More Efficient Mechanical Equipment Performance  
☐ C406.3 Reduced Lighting Power Density  
☐ C406.4 Enhanced Lighting Controls  
☐ C406.5 On-Site Renewable Energy  
☐ C406.6 Dedicated Outdoor Air System  
☐ C406.7 Reduced Energy Use in Service Water Heating  
☐ 506.2.3 Energy Recovery Ventilation Systems  
☐ 506.2.6 Automatic Daylighting Control Systems

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North Carolina Design Registration #F-1507  
3221 BLUE RIDGE ROAD, STE. 113  
RALEIGH, NC 27612  
P. 919.571.1111  
8 1 2 3  
REF. SCALE IN INCHES PROJECT # 24048

24048

REVISIONS  
FOR CONSTRUCTION  
5/27/25

SEAL  
17382  
DAVID J. WHITNEY  
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919.571.1111  
24048

PREPARED FOR:  
NC DEPARTMENT  
OF INSTRUCTION  
SCO #  
24-27792-01A

GOVERNOR MOREHEAD SCHOOL  
SPRINKLER, ADA TOILET, LIGHTING  
UPGRADES FOR DORMS A, B, + D  
RALEIGH, NC

CONTENTS:  
BUILDING CODE  
SUMMARY

DATE:  
May 27, 2025

DESIGNER: DJW  
ENGINEER: DJW

SHEET NO.  
T-102  
OF 2