



A NEW POLICE FACILITY FOR
ABERDEEN POLICE DEPARTMENT

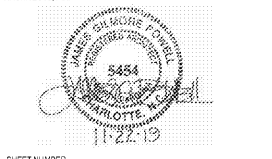
804 N. Sandhills Blvd.
Aberdeen, NC 28315

BUILDING CODE SUMMARY

DATE: 11-22-2019
PROJECT NO: 18062

REVISIONS
NO. DATE DESCRIPTION:

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SHEET NUMBER

A001

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(PROVIDE ON SHEET 1 OR 2 OF THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:
Importance Factors: Wind (Iw) _____
Snow (Is) 1.2 _____
Seismic (Ie) 1.5 _____
Live Loads: Roof: 20 psf
Mezzanine: See S001 psf
Floor: See S001 psf
Ground Snow Loads: Basic Wind Speed: 124 mph (ASCE-7)
Exposure Category B

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=23.6 g S₁=1.1 g S₂=0.8 g
Site Classification (ASCE-7) A B C D E F
Data Source: Field Test Prescribed Historical Data
Basic structural system (check one)
 Bearing Wall Dual Vertical Moment Frame
 Building Frame Dual Vertical Moment Frame or Special Steel
 Moment Resisting Frame Partially Restrained Moment Resisting Frame
Analysis Procedure: Simplified Equivalent Lateral Force Dynamic
Architectural, Mechanical, Elements specified? Yes No
LATERAL DESIGN CONTROLS: Earthquake Wind
SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) 2,000 psf
Minimum Bearing Capacity _____ psf
Provide type and capacity _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Thermal Zone:
winter dry bulb: 18°
summer dry bulb: 91°
Interior design conditions
winter dry bulb: 72°
summer dry bulb: 75°
relative humidity: 50%
Building heating load: 336,420 BTUH
Building cooling load: 438,272 BTUH
Mechanical Spacing Conditioning System
Unitary description of unit: DX VAV Rooftop units with fan powered terminal boxes and electric reheat coils
heating efficiency: See schedule
cooling efficiency: See schedule
size category of unit:
Boiler Size category: If oversized, state reason: _____
Chiller Size category: If oversized, state reason: _____
List equipment efficiencies:

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

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 See schedule
number of lamps in fixture See schedule
ballast type used in the fixture See schedule
number of ballasts in fixture See schedule
total wattage per fixture See schedule
total interior wattage specified vs. allowed (whole building or space by space) 7,520 vs. 16,000
total exterior wattage specified vs. allowed 880 vs. 1,200
Additional Efficiency Package Options
(When using the 2018 NCECC, not required for ASHRAE 90.1)
 C406.2 More Efficient HVAC Equipment Performance
 C406.3 Reduced Lighting Power Density
 C406.4 Enhanced Digital Lighting Controls
 C406.5 On-Site Renewable Energy
 C406.6 Dedicated Outdoor Air System
 C406.7 Reduced Energy Use in Service Water Heating

PLUMBING FIXTURE REQUIREMENTS
TABLE (2902.1)

Use	Waterclosets			Urinals			Lavatories			Showers/Tubs		Drinking Fountains	
	Male	Female	Unisex	Male	Female	Unisex	Male	Female	Unisex	Regular	Accessible		
Assembly (45.45)	0.36	0.69	-	-	0.225	0.225	-	-	-	0.09	0.09		
Business (82.82)	3.28	3.28	-	4	2.05	2.05	-	-	-	0.82	0.82		
Storage (2.2)	0.02	0.02	-	-	0.02	0.02	-	-	-	0.002	0.002		
Total	Required 3.66	3.99	-	-	2.295	2.295	-	-	-	0.912	0.912		
	Provided 3	5	3	4	4	4	3	-	-	2	2		

SPECIAL APPROVALS
Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHS, etc., describe below)

ENERGY SUMMARY

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:
Exempt Building: _____ Provide code or statutory reference: _____
Climate Zone: _____
Method of Compliance: _____
(If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: 60 mil white TPO membrane roof system on 1/4" glass fiber roof coverboard on R-25 rigid insulation
U-Value of total assembly: 0.04
R-Value of insulation: R-25
Skylights in each assembly: _____
U-Value of skylight: _____
Total square footage of skylight in each assembly: _____
Roof/ceiling Assembly (each assembly)
Description of assembly: Architectural shingles on 30# roofing felt on 3/4" exterior plywood sheathing on R-25 rigid insulation on metal deck
U-Value of total assembly: 0.04
R-Value of insulation: R-25
Skylights in each assembly: _____
U-Value of skylight: _____
Total square footage of skylights in each assembly: _____

Interior Walls (each assembly)
Description of assembly: Modular brick veneer with 2" air space, 2" rigid insulation on 1/2" glass mat sheathing on 6" metal studs with R-19 batt insulation and 5/8" gwb
U-Value of total assembly: 0.026
R-Value of insulation: R-10 and R-19
Openings (windows or doors with glazing)
U-Value of assembly: 0.29
Solar heat gain coefficient: 0.27
Projection factor: _____
Door R-Values: 1.3

Walls below grade (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade
Description of assembly: 4" concrete slab on 10 mil poly vapor retarder on granular fill
U-Value of total assembly: 0.92
R-Value of insulation: _____
Horizontal/vertical requirement: _____
Slab heated: _____

FIRE PROTECTION REQUIREMENTS

Building Element	Fire Separation Distance (feet)	Req'd	Rating (w/ * reduction)	Detail # and Sheet #	Design # for Rated Assembly	Sheet # for Rated Penetration	Sheet # for Rated Joints
Bearing walls							
Exterior							
North	0	0	N/A	N/A	N/A	N/A	
East	0	0	N/A	N/A	N/A	N/A	
West	0	0	N/A	N/A	N/A	N/A	
South	0	0	N/A	N/A	N/A	N/A	
Interior	0	0	N/A	N/A	N/A	N/A	
Non-Bearing walls and partitions							
Exterior							
North	0	0	N/A	N/A	N/A	N/A	
East	0	0	N/A	N/A	N/A	N/A	
West	0	0	N/A	N/A	N/A	N/A	
South	0	0	N/A	N/A	N/A	N/A	
Interior walls and partitions	0	0	N/A	N/A	N/A	N/A	
Floor construction including support beams and joists	0	0	N/A	N/A	N/A	N/A	
Floor Ceiling Assembly	0	0	N/A	N/A	N/A	N/A	
Columns Supporting Floors	0	0	N/A	N/A	N/A	N/A	
Roof construction including support beams and joists	0	0	N/A	N/A	N/A	N/A	
Roof Ceiling Assembly	0	0	N/A	N/A	N/A	N/A	
Columns Supporting Roof	0	0	N/A	N/A	N/A	N/A	
Shaft Enclosures - Exit	N/A	N/A	N/A	N/A	N/A	N/A	
Shaft Enclosures - Other	N/A	N/A	N/A	N/A	N/A	N/A	
Corridor Separation	N/A	N/A	N/A	N/A	N/A	N/A	
Occupancy/Fire Barrier Separation	N/A	N/A	N/A	N/A	N/A	N/A	
Party/Fire Wall Separation	N/A	N/A	N/A	N/A	N/A	N/A	
Smoke Barrier Separation	N/A	N/A	N/A	N/A	N/A	N/A	
Smoke Partition	N/A	N/A	N/A	N/A	N/A	N/A	
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	

PERCENTAGE OF WALL OPENING CALCULATIONS

Fire Separation Distance (feet from Property Lines)	Degree of Opening Protection (Table 710.3)	Allowable Area (%)	Actual Shown on Plans (%)
> 30'	Unprotected, Sprinklered	No Limit	No Limit

LIFE SAFETY SYSTEM REQUIREMENTS
Emergency Lighting: Yes No
Exit Signs: Yes No
Fire Alarm: Yes No
Smoke Detection Systems: Yes No
Carbon Monoxide Detection: Yes No

LIFE SAFETY PLAN REQUIREMENTS
Life Safety Plan Sheet #: A002
 Fire and/or smoke rated wall locations (Chapter 7)
 Assumed and real property line locations (if not on the site plan)
 Exterior wall opening area with respect to distance to assumed property lines (405.8)
 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 (1016.2, 1016.2(1))
 Dead end lengths (1020.4)
 Clear exit widths for each exit door
 Minimum occupant load capacity for each exit door can accommodate based on egress width (1005.3)
 Actual occupant load for each exit door
 Separation schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purpose 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 (1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS PROVIDED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING (1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	# OF ACCESSIBLE SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
			REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 13' ACCESS AISLE	
TOTAL	61	61	2	1	3

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(except 1 and 2-family dwellings and townhouses)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: Aberdeen Police Department Renovation and Addition
Address: 804 N. Sandhills Blvd., Aberdeen, NC Zip Code: 28315
Owner or Authorized Agent: Paul Sabiston Phone: 910-944-4505
(Town Manager) E-mail: _____
Owned By: City/County Private State
Code Enforcement Jurisdiction: City/Aberdeen County: _____ State
CONTACT: Scotty Smith 704-749-5585 ssmith@adwarchitects.com

DESIGNER FIRM NAME LICENSE# TELEPHONE E-MAIL

Architectural	ADW Architects	James G. Powell	5454	704-908-5140	powell@adwarchitects.com
Civil	City Design, P.A.	Steven J. Miller	027825	919-319-8718	smiller@citydesign.com
Electrical	Optima Engineering	Brian E. Thompson	24494	704-338-1292	
Fire Alarm	Optima Engineering	Brian E. Thompson	24494	704-338-1292	
Plumbing	Optima Engineering	Daniel A. Shell	043886	704-338-1292	
Mechanical	Optima Engineering	Mark E. Hunt	024693	704-338-1292	
Sprinkler-Standpipe	Optima Engineering	Daniel A. Shell	043886	704-338-1292	
Structural	STENHART	Lance D. Williams	26466	704-338-7926	williams@stenhart.com
Retaining Walls-5' High	City Design, P.A.	Zachary R. Parise	1899	919-319-8718	
Landscape	City Design, P.A.	Zachary R. Parise	1899	919-319-8718	

2018 NC BUILDING CODE: New Building Shell/Core 1st Time Interior Completions
 Addition Phased Construction - Shell Core

2018 NC EXISTING BUILDING CODE: Prescriptive Alteration Level I Historic Property
(check all that apply) Repair Alteration Level II Change of Use
 Chapter 14 Alteration Level III

CONSTRUCTED: 1992 **CURRENT OCCUPANCY(S):** (Ch. 3) Business
RENOVATED: _____ **PROPOSED OCCUPANCY(S):** (Ch. 3) Business
OCCUPANCY CATEGORY: (Table 1604.5): Current: _____ Proposed: IV

BASIC BUILDING DATA
Construction Type: I-A II-A III-A IV V-A
(check all that apply) I-B II-B III-B V-B
Sprinklers: No Partial NFPA 13 NFPA 13R NFPA 13D
Standpipes: No Class II III Wet Dry
Primary Fire District: No Yes Flood Hazard Area: No Yes
Special Inspections Required: No Yes

Gross Building Area Table

Floor	Existing (sq ft)	New (sq ft)	Sub-Total
6th Floor			
5th Floor			
4th Floor			
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor	5,540 SF	12,853 SF	18,393 SF
Basement			
TOTAL			18,393 SF

ALLOWABLE AREA
Primary Occupancy Classifications (s):
Assembly A-1 A-2 A-3 A-4 A-5
Business
Educational
Factory F-1 Moderate F-2 Low
Hazardous H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
Institutional I-1 I-2 I-3 I-4
I-1 Condition 1 2
I-2 Condition 1 2
I-3 Condition 1 2 3 4 5
Mercantile
Residential R-1 R-2 R-3 R-4
Storage S-1 Moderate S-2 Low High-Piled
 Parking Garage Open Enclosed Repair Garage
Utility & Miscellaneous

Accessory Occupancies Classification(s): _____
Incidental Uses (509): _____
This separation is not exempt as a Non-Separated Use (see exceptions).
Special Uses (Chapter 4 - List Code Sections): N/A
Special Provisions: (Chapter 5 - List Code Sections): N/A
Mixed Occupancy: Yes No Separation: _____ Exception: _____
 Non-Separated Use (508.3)
 Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum 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 ≤ 1
Allowable Area of Occupancy A Allowable Area of Occupancy B

Story	Description and Use	(A) Bldg Area per Story (actual)	(B) Table 506.2 ⁴ Area	(C) Area for Frontage Area ^{1,5}	(D) Allowable Area per Story or Unlimited ^{2,3}
1	A-3	18,393 SF			24,000

(1) Frontage area increases from Section 506.2 as follows:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____(F)
b. Total Building Perimeter = _____(P)
c. Ratio (F/P) = _____(F/P)
d. W = Minimum width of public way = _____(W)
(2) Unlimited area applicable under conditions of Section 507.
(3) Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
(4) The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
(5) Frontal increase is based on un-sprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	Allowable	Shown on Plans	Code Reference
Building Height in Feet (Table 504.3)	60' - 0"	26' - 6"	504.3
Building Height in Stories (Table 504.4)	3	1	504.4

¹ Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.