Office Addition to:

Building 500

1800 Herring Ave. Wilson, NC 27896

2018 APPENDIX B BUILDING CODE SUMMARY

Name of Project: Office Addition to Building 500

Address: 1800 Herring Ave. Zip Code: 27896

Owner or Authorized Agent: City of Wilson Phone #: (252) 399-2220 E-Mail:

Owned By: ☒ City / County ☐ Private ☐ State

Code Enforcement Jurisdiction: ☒ City Wilson ☐ County ☐ State

CONTACT : Robert Bartlett

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Building	Bartlett Engineering & Surveying, PC	Robert S. Bartlett	20106	252.399.0704	robert@bartletteng.com
Civil					
Electrical	Bartlett Engineering & Surveying, PC	Robert S. Bartlett	20106	252.399.0704	robert@bartletteng.com
Fire Alarm					
Plumbing					
Mechanical	Bartlett Engineering & Surveying, PC	Robert S. Bartlett	20106	252.399.0704	robert@bartletteng.com
Sprinkler-Standpipe					
Struct. - Metal Bldg.					
Struct. - Framing					
Structural - Fnd.					
Other					

2018 NC BUILDING CODE: ☐ New Building ☐ Addition ☐ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core completion only - *(Contact the local inspection jurisdiction for possible additional procedures and requirements.)*
☐ Phased Construction - *(Contact the local inspection jurisdiction for possible additional procedures and requirements.)*

2018 NC EXISTING BUILDING CODE:
Prescriptive Compliance : ☐ Repairs ☒ Alterations ☐ Additions ☐ Change of occupancy ☐ Historic
Work Area Compliance : ☐ Alteration Level I ☐ Alteration Level II ☐ Alteration Level III ☐ Additions ☐ Repairs ☐ Historic ☐ Change of Use
Performance Compliance : ☐ Repairs ☐ Alterations ☐ Additions ☐ Change of occupancy ☐ Historic

CONSTRUCTED: (date) _____ **CURRENT USE(s) (Ch. 3) :** STORAGE / BUSINESS
RENOVATED: (date) _____ **PROPOSED USE(s) (Ch. 3) :** STORAGE / BUSINESS
RISK CATEGORY: (Table 1604.5) Current: ☐ I ☒ II ☐ III ☐ IV
Proposed: ☐ I ☒ II ☐ III ☐ IV

BASIC BUILDING DATA

Construction Type : ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☒ V-B *(check all that apply)*
Sprinklers : ☒ NO ☐ Partial ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NAPA 13D
Standpipes : ☒ NO ☐ YES Class: ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District : ☒ NO ☐ YES **Flood Hazard Area:** ☒ No ☐ YES
Special Inspections Required: ☒ NO ☐ YES *(Contact the local inspection jurisdiction for possible additional procedures and requirements.)*

GROSS BUILDING AREA : 3,762

FLOOR	EXISTING (SQ. FT.)	NEW (SQ. FT.)	SUB-TOTAL
6th Floor			
5th Floor			
4th Floor			
3th Floor			
2nd Floor			
Mezzanine			
1stFloor	7,285		7,285
TOTAL :	7,285		7,285

ALLOWABLE AREA

Primary Occupancy Classification(s) : *(check all that apply)*
Assembly (303) ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business (304) ☐
Educational (305) ☐
Factory (306) ☐ F-1 Moderate ☐ F-2 Low
Hazardous (307) ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional (308) ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile (309) ☐
Residential (310) ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage (311) ☒ S-1 Moderate ☐ S-2 Low ☐ High-Piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Misc. (312) ☐

Accessory Occupancy Classification(s) :
Incidental Uses: (Table 509)
Special Uses: (Chapter 4 - List Code Sections)
Special Provisions: (Chapter 5 - List Code Sections)
Mixed Occupancy: ☐ NO ☐ YES Separation: _____ Hour Exception:

☒ Non-Separated Mixed Occupancy (508.3) - *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 (508.4) - *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 / Allowable Area of Occupancy A + Actual Area of Occupancy B / Allowable Area of Occupancy B = ≤ 1.0

_____ + _____ = _____

STORY NO.	DESCRIPTION and USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,2]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	S-1 Primary Occupancy (Existing)	7,284	9,000		

[1] Frontage space area increases from Section 506.3 are computed thus:
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)
e. Percent of frontage increase I_f = 100 [F/P - 0.25] x W/30 = _____ (%)

[2] Unlimited area applicable under conditions of Sections (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.

[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE [1]
Building Height in Feet (Table 504.3)[2]	40'	<28'	
Building Height in Stories (Table 504.4)[5]	1	1	

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
[2] The maximum height of air traffic control towers must comply with Table 412.3.1.
[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE RESISTANCE RATINGS EXISTING BUILDING

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQUIRED	RATING PROVIDED (W/ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural frame, including columns, girders, trusses							
Bearing walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing walls and partitions							
Exterior							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction including supporting beams and joists							
Floor Ceiling assembly							
Columns Supporting Floor							
Roof Construction including supporting beams and joists							
Roof/Ceiling assembly							
Columns Supporting Roof							
Shafts Enclosures - Exit							
Shafts Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/Sleeping Unit Separation							
Incidental Use Separation							

*Indicates section number permitting reduction.

PERCENTAGE OF WALL OPENING CALCULATIONS EXISTING BUILDING

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting:	☐ No	☒ Yes
Exit Signs:	☐ No	☒ Yes
Fire Alarm:	☐ No	☐ Yes Automatic Sprinkler System
Smoke Detection Systems:	☒ No	☐ Yes ☐ Partial, HVAC UNITS ≥5.0 TONS
Carbon Monoxide Detection:	☒ No	☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: LS-1

☐ 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 (705.8)
☐ Existing structures within 30' 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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ACCESSIBLE PARKING (SECTION 1106)

LOT OR PARKING AREA DESIGNATION	TOTAL # PARKING SPACES		# ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE SPACES PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	132" ACCESS AISLE	8' ACCESS AISLE	
TOTAL						

PLUMBING FIXTURE REQUIREMENTS EXISTING BUILDING (TABLE 2902.1)

USE		WATER CLOSETS MALE	WATER CLOSETS FEMALE	WATER CLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SERVICE SINK	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
	EXISTING										
	NEW										
	REQUIRED										

SPECIAL APPROVALS

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

ENERGY SUMMARY EXISTING

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.

(The remainder of this section is not applicable)

Existing building envelope complies with code: ☐ NO ☐ YES
Exempt Building: ☐ NO ☐ YES *(Provide code or statutory reference)*
Climate Zone : ☐ 3A ☐ 4A ☐ 5A
Method of Compliance : Energy Code ☐ Prescriptive ☐ Performance
ASHRAE 90.1 ☐ Prescriptive ☐ Performance

THERMAL ENVELOPE : *(Prescriptive method only*
Roof/Ceiling Assembly *(each assembly)*

Description of Assembly
U-value of Total Assembly
R-value of Insulation
Skylights in each assembly
U-Value of skylight
Total square footage of skylights in each assembly
Exterior Walls *(each assembly)*

Description of Assembly
U-value of Total Assembly
R-value of Insulation
Openings (windows or doors with glazing)
U-Value of assembly
Solar heat gain coefficient:
Projection factor:
Door R-Values:
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
U-value of Total Assembly
R-value of Insulation
Horizontal/vertical requirement
Slab heated

STRUCTURAL DESIGN EXISTING

DESIGN LOADS:
Importance Factors: Wind (I_w)
Snow (I_s)
Seismic (I_E)
Live Loads: Roof (live & snow)
Collateral
Mezzanine
Floor
Ground Snow Load:
Wind Loads: Ultimate Wind Speed (ASCE-7)
Exposure Category

SEISMIC CATEGORY ☐ A ☐ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration S_s ____ %g S_1 ____ %g
Site Classification (ASCE-7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data source: ☐ 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
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) _____ psf
Presumptive Bearing Capacity _____ psf
Pile Size, Type, and Capacity

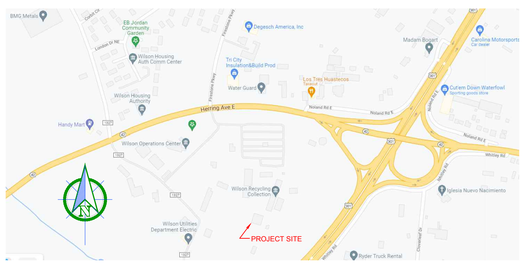
MECHANICAL SUMMARY SEE MECHANICAL SHEETS

MECHANICAL SYSTEMS SERVICE SYSTEMS AND EQUIPMENT:
Thermal Zone
Winter dry bulb
Summer dry bulb
Interior Design Conditions
Winter dry bulb
Summer dry bulb
Relative humidity
Building Heating Load
Building Cooling Load
Mechanical Spacing Conditioning System
Unitary
Description of unit
Heating efficiency
Cooling efficiency
Size category of unit
Boiler Size category. If oversized, state reason.
Chiller Size category. If oversized, state reason.
List Equipment Efficiencies
Equipment Schedules with Motors (mechanical systems)
Motor horsepower
Number of phases
Minimum efficiency
Motor type
# of poles

ELECTRICAL SUMMARY SEE ELECTRICAL SHEETS

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 fixture
Number of ballasts in fixture
Total wattage per fixture
Total interior wattage specified -vs- allowed
Total exterior wattage specified -vs- allowed
Additional Prescriptive Compliance
☐ 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

VICINITY MAP



BUILDING & LEAD DESIGN PROFESSIONAL

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PLANNING

SHEET INDEX

Robert S Bartlett
Digitally signed by Robert S Bartlett
Date: 2021.11.22 07:41:57 -05'00'

Owner:
City of Wilson Operations Center
Bldg. 500
1800 Herring Ave. Wilson, NC 27894

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20106 ROBERT S BARTLETT

Rev:	Date:	Description:

Title Sheet: CODE SUMMARY

Project: City of Wilson Operations Center Bldg. 500 1800 Herring Ave. Wilson, NC 27894

Drawn by: M. Winstead
Issue Date: 11-09-21
Project Number: 21-179
Sheet: CS-1

WALL LEGEND

SYMBOL	DESCRIPTION
	EXISTING BLOCK WALL
	PROPOSED BLOCK WALL TO MATCH EXISTING

ROOM FINISH SCHEDULE

FLOOR / WALLS — BASE / CEILING

	FLOOR		BASE		WALLS		CEILING
1	EXISTING	A	4" RUBBER COVE	1	PAINTED BLOCK	A	2x2 LAY-IN CEILING

NOTES:
1. ALL FINISHES TO BE AS SPECIFIED, UNLESS OTHERWISE NOTED.
2. ALL COLORS OF PAINT, FINISHES, TILES, AND TILE DESIGNS TO BE SELECTED BY OWNER.

LEGEND

SYMBOL	DESCRIPTION
FE	EXISTING ABC TYPE FIRE EXTINGUISHER
	ROUTE OF EXIT ACCESS TRAVEL DISTANCE
	EXISTING COMBINATION EXIT AND EMERGENCY LIGHT
	EXISTING EMERGENCY EXIT LIGHT
EM1	EXISTING REMOTE EMERGENCY EGRESS LIGHT POWERED BY INTERIOR EMERGENCY LIGHT BATTERY PACK, SUITABLE FOR WET/DAMP LOCATION

LIFE SAFETY NOTES:

PRIMARY OCCUPANCY FOR BLDG. 500 IS S-1

TWO PROPOSED OFFICES = B OCCUPANCY @ 320 SQ. FT.

OCCUPANT LOAD IS EXISTING

MAXIMUM EXIT ACCESS TRAVEL DISTANCE FOR S-1 CLASSIFICATION IS 200FT (WITHOUT SPRINKLER SYSTEM)
PER 2018 NCBC TABLE 1017.2

GENERAL NOTES

INTERIOR FINISHES:

FLOOR — EXISTING
COLOR:EXISTING

BASE: — ROPPE 700 SERIES OR EQUAL
COLOR: SELECTION BY OWNER

WALLS: — CMU BLOCK WALLS TO MATCH EXISTING
MORTAR TO MATCH BLOCK COLOR
1 COAT SEALER w/ BLOCK FILLER
2 COATS LATEX, EGGSHELL FINISH
PAINT - BENJAMIN MOORE OR EQUAL
COLOR: SELECTION BY OWNER

CEILING: — ARMSTRONG ACOUSTICAL LAY-IN TILE WITH 15/16" GRID SYSTEM
COLOR: WHITE

OFFICE DOORS: — HOLLOW METAL DOORS & FRAMES, PRIMED & PAINTED
"BENJAMIN MOORE" SEMI-GLOSS
COLOR: SELECTION BY OWNER

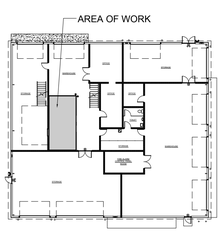
DOOR HARDWARE AND NOTES

ALL HARDWARE TO HAVE "BRUSHED NICKLE"FINISH

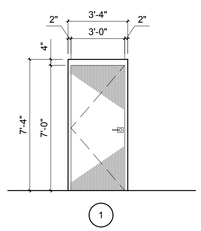
LOCKSET: — "YALE" 4600LN, GRADE 2 LOCKSET OR EQUAL

DOOR HINGE: — BALL BEARING HINGES WITH 32D FINISH OR EQUAL

NOTE: MANUFACTURER SHALL SUPPLY MASTER KEY TO FIT ALL DOORS
VERIFY KEYING SCHEMES WITH OWNER



KEY PLAN N.T.S.

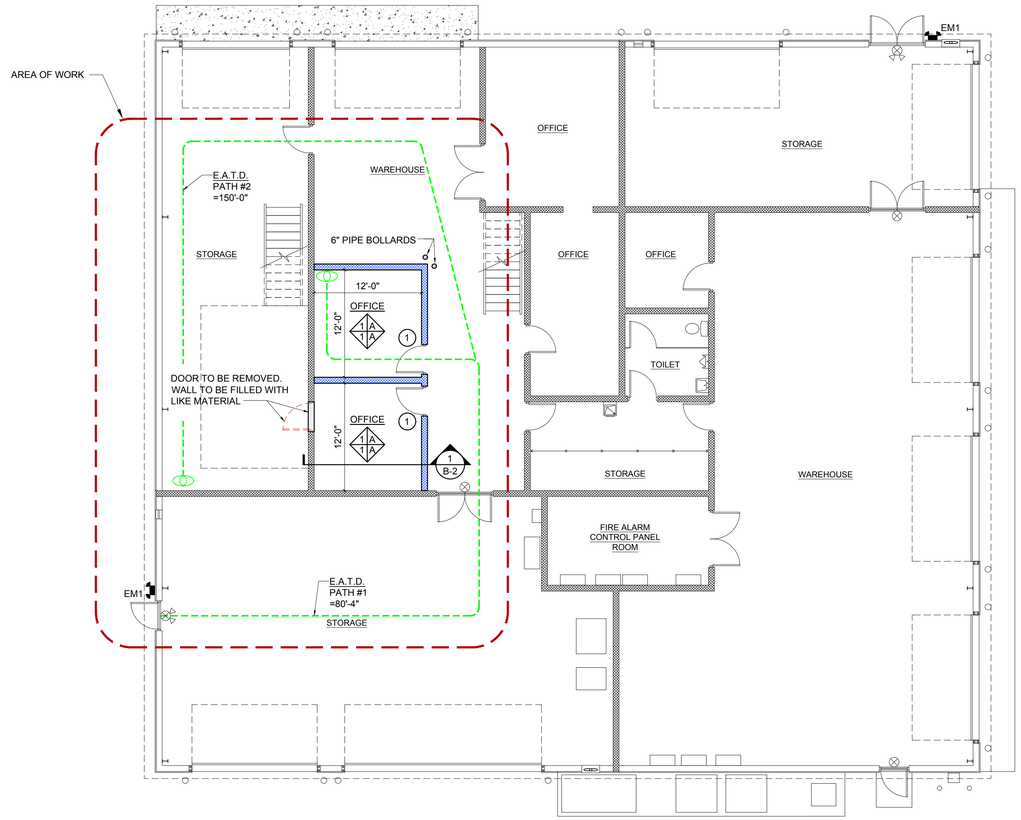


OFFICE

DOOR: 3'-0" x 7'-0" x 1-3/4",
16 GAUGE PAINTED HOLLOW METAL,
KEYED LEVER LOCKSET

FRAME: 16 GAUGE PAINTED HOLLOW METAL

DOOR ELEVATION SCALE: 1/4" = 1'-0"



LIFE SAFETY / PROPOSED FLOOR PLAN SCALE: 1/8" = 1'-0"

TOTAL = 7,284 SQ. FT. / AREA OF WORK = 320 SQ. FT.

Owner:
City of Wilson Operations Center
Bldg. 500
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SEAL 20106 ENGINEER ROBERT S. BARTLETT

Rev:	Date:	Description:

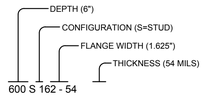
Title Sheet: LIFE SAFETY / PROPOSED FLOOR PLAN / DETAILS

Project: City of Wilson Operations Center
Bldg. 500
1800 Herring Ave. Wilson, NC 27894

Drawn by:	M. Winstead
Issue Date:	11-09-21
Project Number:	21-179
Sheet:	B-1

CFS ABBREVIATIONS

CONT	CONTINUOUS
EA	EACH
MIN	MINIMUM
OC	ON CENTER
PAF	POWDER ACTUATED FASTENER
REF	REFERENCE
SDS	SELF DRILLING SCREWS
SER	STRUCTURAL ENGINEER OF RECORD
SIM	SIMILAR
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE



CONFIGURATION TABLES	
S	SSMA CEE STUD
T	TRACK
CRC	COLD-ROLLED CHANNEL
FS	FLAT STRAP

MILS	GAGE
33	20
43	18
54	16
68	14
97	12
118	10

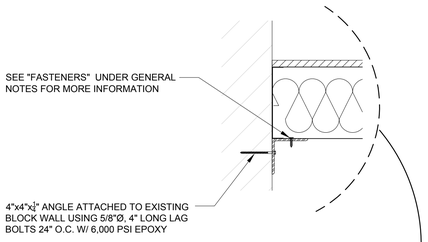
GENERAL NOTES:

DESIGN
LIGHT GAGE STEEL ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2012 NORTH CAROLINA BUILDING CODE (IBC 06) AND THE 2001/04 SUPPLEMENT AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL MEMBERS WITH THE FOLLOWING PARAMETERS:

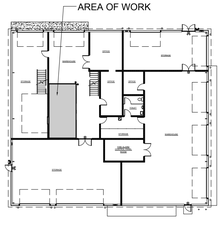
MATERIALS
1) DESIGNATIONS FOR STUDS AND ACCESORIES ARE BASED ON THE STANDARD DESIGNATIONS FOR THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) & THE STEEL NETWORK, INC.
2) STEEL STUDS AND TRACKS SHALL MEET THE REQUIREMENTS OF ASTM C955 AND SHALL BE GALVANIZED WITH G60 COATING OR THICKER
3) STEEL STUDS AND TRACKS OF LESS THAN 16 GAGE (54 MIL) SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI, GREATER THAN OR EQUAL TO 54 MIL SHALL HAVE MINIMUM YIELD STRENGTH OF 50 KSI
4) STEEL STUDS AND TRACKS OF HEAVIER GAGE OR LARGER FLANGE THAN SPECIFIED ON THESE DRAWINGS MAY BE SUBSTITUTED WITHOUT APPROVAL
5) ALL PLATE MATERIAL SHALL HAVE A YIELD STRENGTH OF 50 KSI
6) ALL WELDS ARE TO BE PERFORMED BY AN A.W.S CERTIFIED WELDER USING E70XX ELECTRODES

FASTENERS
1) FRAMING SCREWS SHALL BE CORROSION RESISTANT, SELF-DRILLING SCREWS OF THE SIZE DESIGNATED ON THE DRAWINGS. WHERE SPECIFIC SIZE SCREWS ARE NOT SPECIFIED, #10 SCREWS ARE TO BE USED.
2) PAF'S (PDF'S) SHALL BE:
CONCRETE - HILTI X-U 0.157" DIAMETER. MINIMUM EMBEDMENT IS 1"
STEEL - HILTI X-U 0.157" DIAMETER. MINIMUM EMBEDMENT IS 1/4"
3) THIS SUMBITTAL IS BASED ON FASTENER TENSILE AND SHEAR VALUES FROM THE 2011 HILTI TECHNICAL MANUAL. OTHER FASTENERS OF EQUAL CAPACITY MAY BE SUBSTITUTED.
4) MINIMUM SPACING OF FRAMING SCREWS: FASTENER TO EDGE OF STEEL - 1.5D, FASTENER TO FASTENER - 3D, WHERE D IS THE DIAMETER OF THE FRAMING SCREW

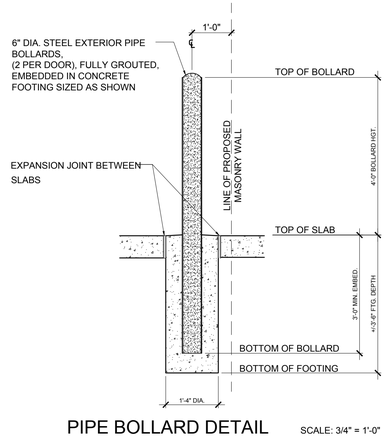
EXECUTION
1) THIS SUBMITTAL SHOWS THE INTENDED APPLICATION OF THE COLD FORMED STEEL FRAMING. THE CONTRACTOR SHALL REFER TO THE CONTRACT DOCUMENTS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.
2) CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIAL OR BEGINNING ANY ASSEMBLY OR ERECTION
3) ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.
4) ALL FIELD CUTTING OF STUDS AND TRACKS MUST BE DONE BY SAWING OR SHEARING. NO TORCH CUTTING PERMITTED
5) NO SPLICES IN STUDS, HEADERS, OR OTHER LOAD CARRYING MEMBERS ARE ALLOWED WITHOUT DETAILS SUPPLIED BY THE ENGINEER OF RECORD.
6) THE FOLLOWING SHALL BE USED FOR PAF UNLESS OTHERWISE NOTED:
CONCRETE: STEEL:
MIN. EDGE DISTANCE = 2.75" MIN. EDGE DISTANCE = 0.5"
MIN CENTERLINE SPACING = 2.75" MIN CENTERLINE SPACING = 1"
MIN. EMBEDMENT = 1" MIN. EMBEDMENT = 1/4"
7) STRUCTURAL FRAMING AT WINDOWS AND DOORS IS NOT DESIGNED TO SUPPORT BRICK DEAD LOADS NOR PROVIDE BEARING END SUPPORT FOR BRICK SHELVES.
8) ANY DISCREPANCIES IN THESE SHOP DRAWINGS MUST BE MADE KNOWN TO BARTLETT ENGINEERING & SURVEYING FOR REVIEW AND CORRECTION
9) DEVIATIONS FROM THESE SHOP DRAWINGS SHALL NOT BE MADE IN THE FIELD. MODIFICATIONS SHALL BE DESIGNED AND DETAILED BY BARTLETT ENGINEERING & SURVEYING PRIOR TO IMPLEMENTATION.
10) THE INSTALLATION OF COLD-FORMED CONNECTORS AND ASSOCIATED FASTENERS SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS



1 / B-2 SECTION
SECTION @ PROPOSED OFFICES
SCALE: 1/2" = 1'-0"



KEY PLAN N.T.S.



PIPE BOLLARD DETAIL SCALE: 3/4" = 1'-0"
TYPICAL PIPE BOLLARDS

Owner:
City of Wilson Operations Center
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1800 Herring Ave. Wilson, NC 27894

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SEAL 20105 ENGINEER ROBERT S. BARTLETT
NORTH CAROLINA PROFESSIONAL ENGINEER

Rev:	Date:	Description:

Title Sheet: SECTION AND NOTES

Project:
City of Wilson Operations Center
Bldg. 500
1800 Herring Ave. Wilson, NC 27894

Drawn by:	M. Winstead
Issue Date:	11-09-21
Project Number:	21-179
Sheet:	B-2

MECHANICAL SUMMARY

MECHANICAL SYSTEMS SERVICE SYSTEMS AND EQUIPMENT:

Thermal Zone	IV
Winter dry bulb	16 deg. F
Summer dry bulb	92 deg. F
Interior Design Conditions	
Winter dry bulb	68 deg. F
Summer dry bulb	75 deg. F
Relative humidity	50 %
Building Heating Load	20 MBH (AREA OF WORK ONLY)
Building Cooling Load	1.5 TONS (AREA OR WORK ONLY)
Mechanical Spacing Conditioning System	
Unitary	
Description of unit	(1) MULTI-ZONE DUCTLESS HEAT PUMP
Heating efficiency	80%
Cooling efficiency	21 SEER
Size category of unit	>65,000 BTU/HR.
Boiler	
Size category. If oversized, state reason.	N/A
Chiller	
Size category. If oversized, state reason.	N/A
List Equipment Efficiences	
Equipment Schedules with Motors (mechanical systems)	
Motor horsepower	N/A
Number of phases	
Minimum efficiency	
Motor type	
# of poles	

OUTSIDE AIR SUMMARY

Per Table 402 Natural Ventilation NC Mechanical Code

OUTSIDE AIR REQUIRED:

NATURAL VENTILATION

1150 SQ. FT. (TOTAL AREA VENTILATED) X 4% OF FLOOR AREA	46 SQ. FT.
TOTAL OPEN AREA REQUIRED=	46 SQ. FT.
TOTAL OUTSIDE AIR PROVIDED=	98 SQ. FT.

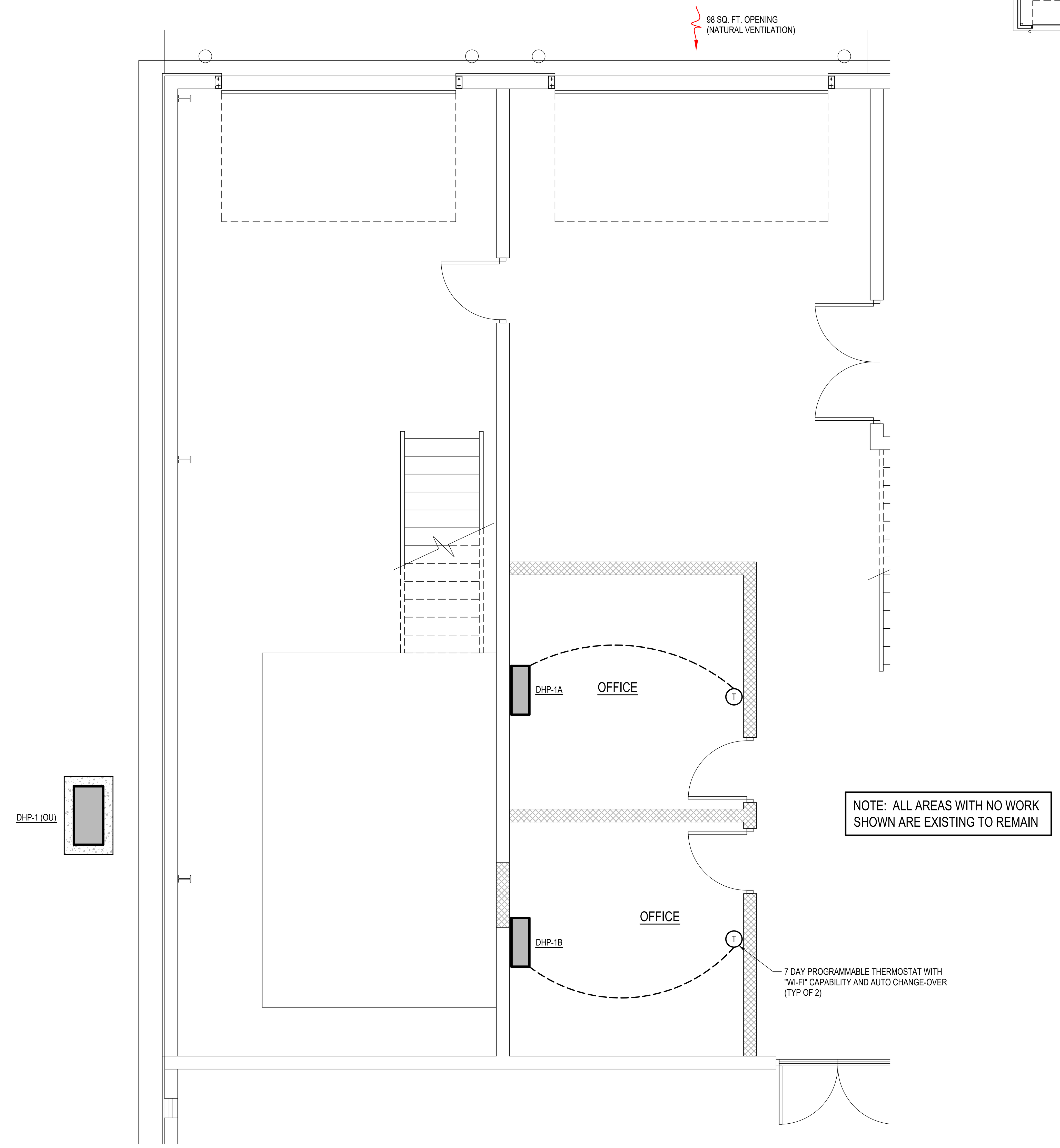
EQUIPMENT SCHEDULE

DUCTLESS HEAT PUMP SCHEDULE

DHP-1

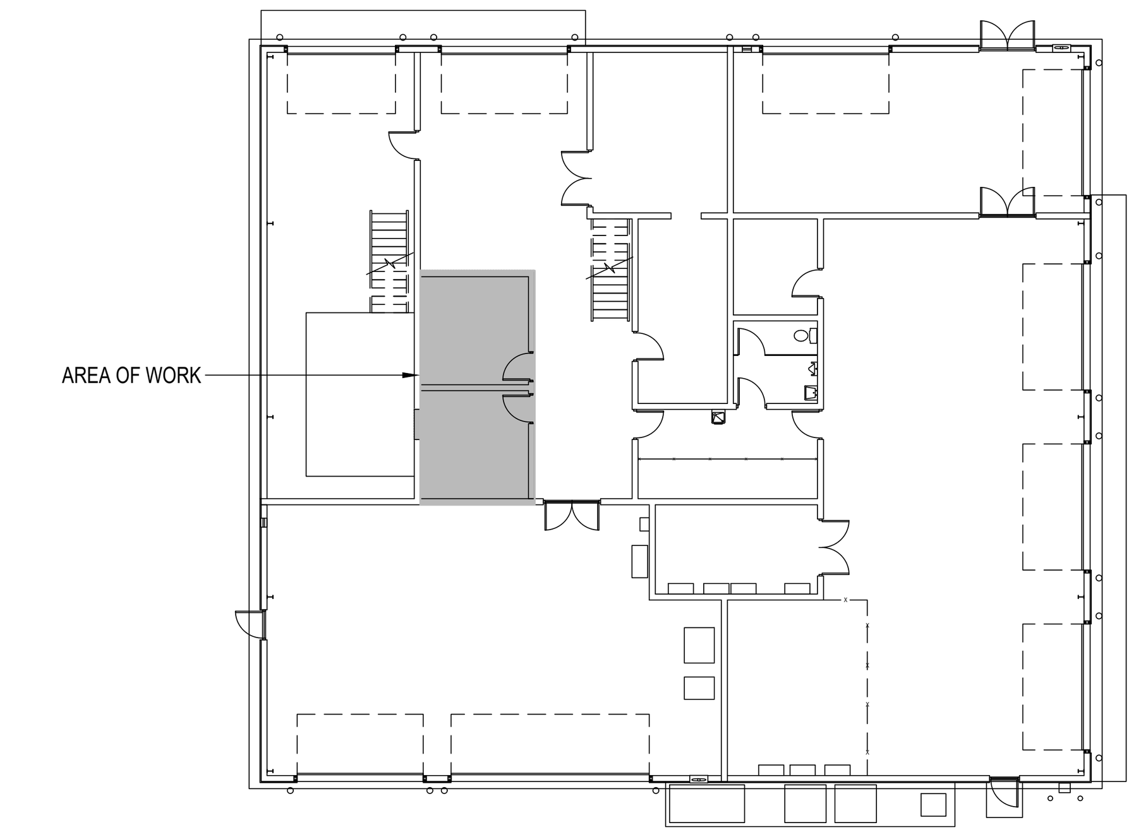
TRANE (OR EQUAL) - MULTI-ZONE
INDOOR UNIT 1A - NTXWPH09 (NOM 3/4 TONS)
INDOOR UNIT 1B - NTXWPH09 (NOM 3/4 TONS)
OUTDOOR UNIT - NTXSPB18 (NOM 1.5 TONS)
COOL CAP. - 17,200 BTU/HR. MAX
HEAT CAP. - 20,300 BTU/HR. MAX
240V 1Ø
MCA 16
MOCP 25
21 SEER

NOTES:
1. PROVIDE & INSTALL 1" CONDENSATE LINE FROM INDOOR UNIT TO 2" CONDENSATE MAIN AND TERMINATE ONTO EXTERIOR CONCRETE SPLASH BLOCK
2. VERIFY & MAINTAIN MIN. CLEARANCES ,MAXIMUM LENGTH AND HEIGHT DISTANCES WITH MANUFACTURER PRIOR TO CONSTRUCTION. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
3. PROVIDE AND INSTALL ROUGH-IN BOX FOR WALL MOUNTED DUCTLESS HEAT PUMP. ROUGH-IN BOX SHALL BE FIRE RATED AS REQUIRED. VERIFY EXISTING WALL CONDITIONS AT SITE PRIOR TO CONSTRUCTION
4. BOTTOM OF WALL MOUNTED INDOOR UNIT TO BE 8 FT. ±
5. PROVIDE & INSTALL WIRED THERMOSTATS FOR DUCTLESS HEAT PUMP.
6. VERIFY ALL MODEL NUMBERS WITH TRANE FOR MULTI-ZONE COMPATIBILITY PRIOR TO PURCHASE.



MECHANICAL PLAN

SCALE: 1/4" = 1'-0"



KEY PLAN

NTS

GENERAL MECHANICAL NOTE:

1. ALL WORK SHALL BE IN COMPLIANCE WITH LOCAL, STATE, AND NATIONAL CODES.

Prepared for:
City of Wilson Operations Center
Bldgs 500, 1500 & 2800
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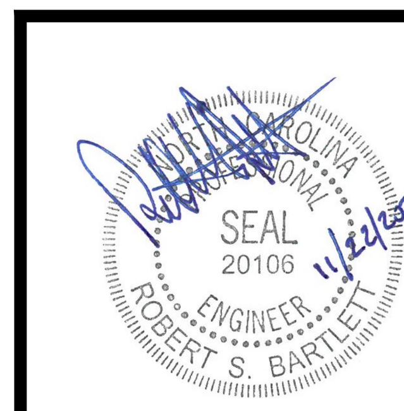


Rev:	Date:	Description:

Title Sheet: MECHANICAL PLAN

Project: City of Wilson Operations Center
Bldg. 500
1800 Herring Ave. Wilson, NC 27894

Drawn by:	JLT
Issue Date:	11-09-21
Project Number:	21-179
Sheet:	M-1

ELECTRICAL LEGEND

MARK	DESCRIPTION	MARK	DESCRIPTION
	"LED" LIGHT FIXTURE		FUSED DISCONNECT SWITCH
$o	PASSIVE DUAL TECHNOLOGY OCCUPANCY WALL SENSOR SWITCH		SWITCHED BRANCH CIRCUIT
	DUPLEX RECEPTACLE		UNSWITCHED BRANCH CIRCUIT
GFCI	"GFCI" DUPLEX RECEPTACLE		HOMERUN
WP	"GFCI" DUPLEX RECEPTACLE IN WEATHER-PROOF COVER		VOICE/DATA 1" CONDUIT TO ABV. CEILING

LIGHT FIXTURE SCHEDULE

SYMBOL	MANUFACTURER	DESCRIPTION	LAMPS			MOUNTING
			NO.	WATTS	TYPE	
	EELP OR EQUAL	VersaLED 2X4 LED LIGHTING PANEL WITH ACRYLIC LENS. 120V 4,652 LUMENS, 4,000K COLOR TEMP.	-	50	LED'S	LAY-IN

NOTES:

NOTE (1) - FIXTURES SHALL HAVE DISCONNECTING MEANS MEETING THE REQUIREMENTS OF NEC ARTICLE 410.130(G).

NOTE (2) - COORDINATE ALL FIXTURE REQUIREMENTS, COLOR TEMP, CRI (COLOR RENDERING INDEX) ETC. WITH OWNER PRIOR TO INSTALLATION.

NOTE (3) - SHIFT LOCATIONS OF FIXTURES IN MECHANICAL AREAS IF/AS REQUIRED TO BEST LIGHT SPACES & AVOID CONFLICTS WITH DUCTS, PIPING, ETC.

NOTE (4) - PROVIDE CHANNEL SUPPORTS WITH HANGER RODS, ETC. WHERE NECESSARY TO SUSPEND FIXTURES BENEATH DUCTWORK, PIPING, ETC.

LIGHTING DATA FOR N.C. ENERGY CODE (AREA OF WORK ONLY)

AREA USE	SQ. FT.	WATTS PER SQ.FT. ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
OFFICE	288	0.89	256.3	200	56.3

GENERAL ELECTRICAL NOTES:

1. WORK SHALL COMPLY WITH NATIONAL ELECTRICAL CODE (NEC) STATE BUILDING CODE, AND ALL REQUIREMENTS OF THE LOCAL INSPECTOR. ALL WORK SHALL BE BY LICENSED ELECTRICAL CONTRACTOR.
2. ALL BRANCH CIRCUITS SHALL BE E.M.T., RIGID CONDUIT OR MC CABLE AS PERMITTED OR REQUIRED. RIGID CONDUIT SHALL BE USED FOR CIRCUITS UNDER SLAB ON GRADE, OR WHERE APPROVED SCHEDULE 80 PVC MAY BE USED. EXPOSED CONDUIT SHALL BE PAINTED PER OWNER'S DIRECTION.
3. ALL NEW CONDUCTORS SHALL BE COPPER.
4. ALL EQUIPMENT LOADS SHALL BE VERIFIED BEFORE EQUIPMENT AND/OR CIRCUIT INSTALLATION. VERIFY LOCATION OF NEW RECEPTACLES WITH OWNER PRIOR TO INSTALLATION
5. PROVIDE GREEN GROUNDING CONDUCTOR CONTINUOUS FROM DEVICE TO PANEL GROUND BAR.
6. EMT FITTINGS SHALL BE HEXAGONAL ALL STEEL, COMPRESSION TYPE.
7. NEW RECEPTACLES AND SWITCHES SHALL BE COMMERCIAL GRADE BRYANT, SIERRA, LEVITON BRAND EXCEPT AS SPECIFIED.
8. NEW WALL OUTLET BOXES SHALL BE STEEL CITY OR RACO WITH PLATES.
9. ALL CIRCUITS SHALL BE TESTED WITH 500 VOLT TESTER PRIOR TO ENERGIZING.
10. ELECTRICAL CONTRACTOR SHALL CONNECT TO TERMINALS OF MECHANICAL EQUIPMENT AND EQUIPMENT SUPPLIED BY OWNER.
11. MOUNTING HEIGHTS FOR NEW SWITCHES & RECEPTACLES TO BE ADA COMPLIANT PER ANSI A117.1
12. FIRE STOP ALL PENETRATIONS THRU RATED WALLS. VERIFY EXISTING CONDITIONS AT SITE PRIOR TO CONSTRUCTION.

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT:

Method of Complience :

- [x] Prescriptive (Energy Code)
- [ ] Prescriptive (ASHRAE 90.1)
- [ ] Performance (Energy Code)
- [ ] Performance (ASHRAE 90.1)

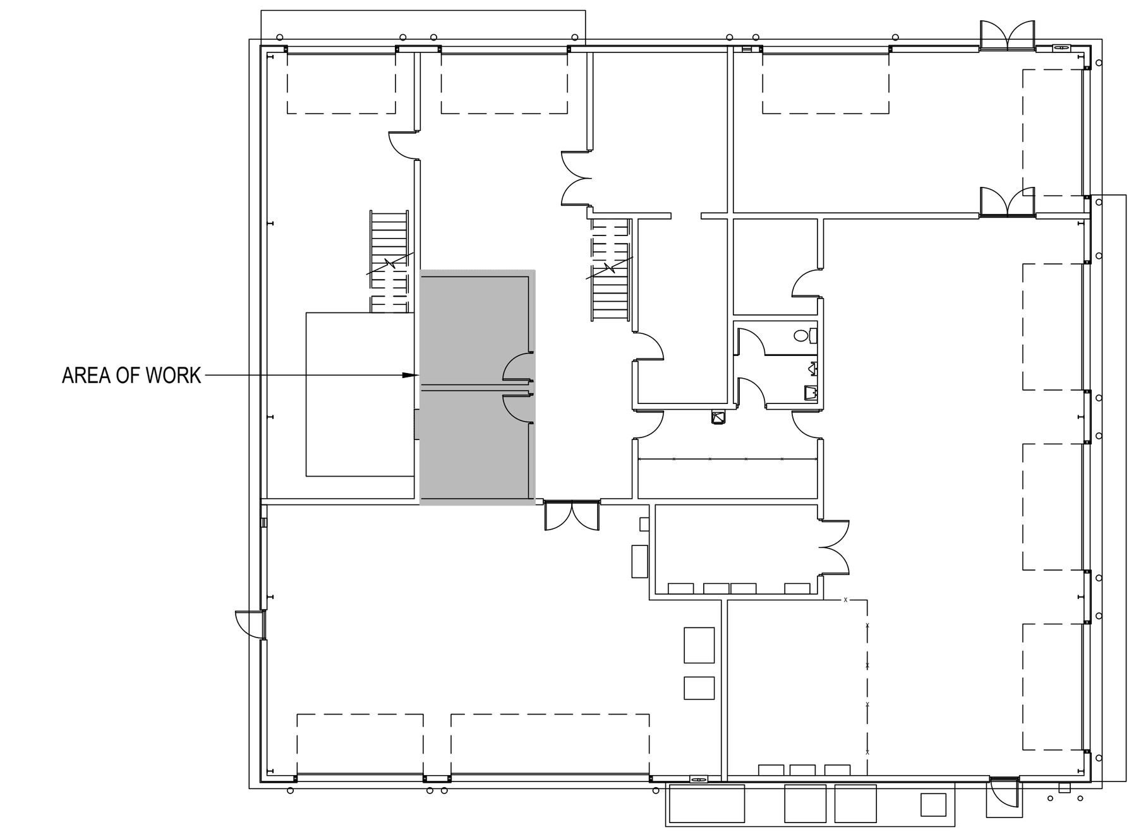
Lighting Schedule

THIS SHEET

- Lamp type required in fixture
- Number of lamps in fixture
- Ballast type used in fixture
- Number of ballasts in fixture
- Total wattage per fixture
- Total interior wattage specified -vs- allowed
- Total exterior wattage specified -vs- allowed

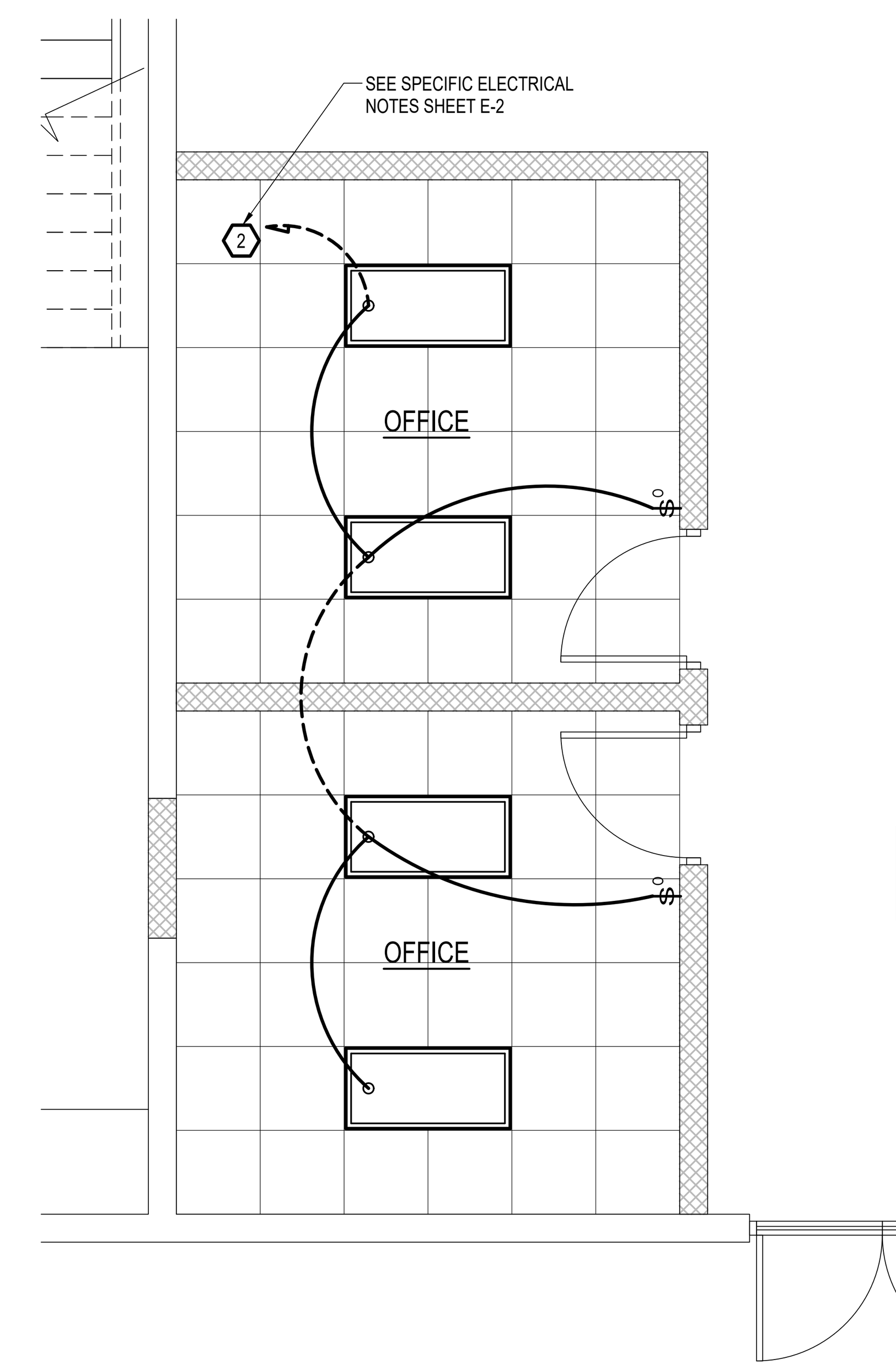
Additional Prescriptive Compliance

- [ ] 506.2.1 More Efficient Mechanical Equipment
- [ ] 506.2.2 Reduced Lighting Power Density
- [ ] 506.2.3 Energy Recovery Ventilation Systems
- [ ] 506.2.4 Higher Efficiency Service Water Heating
- [ ] 506.2.5 On-Site Supply of Renewable Energy
- [ ] 506.2.6 Automatic Daylighting Control Systems



KEY PLAN

NTS



NOTE: ALL AREAS WITH NO WORK SHOWN ARE EXISTING TO REMAIN

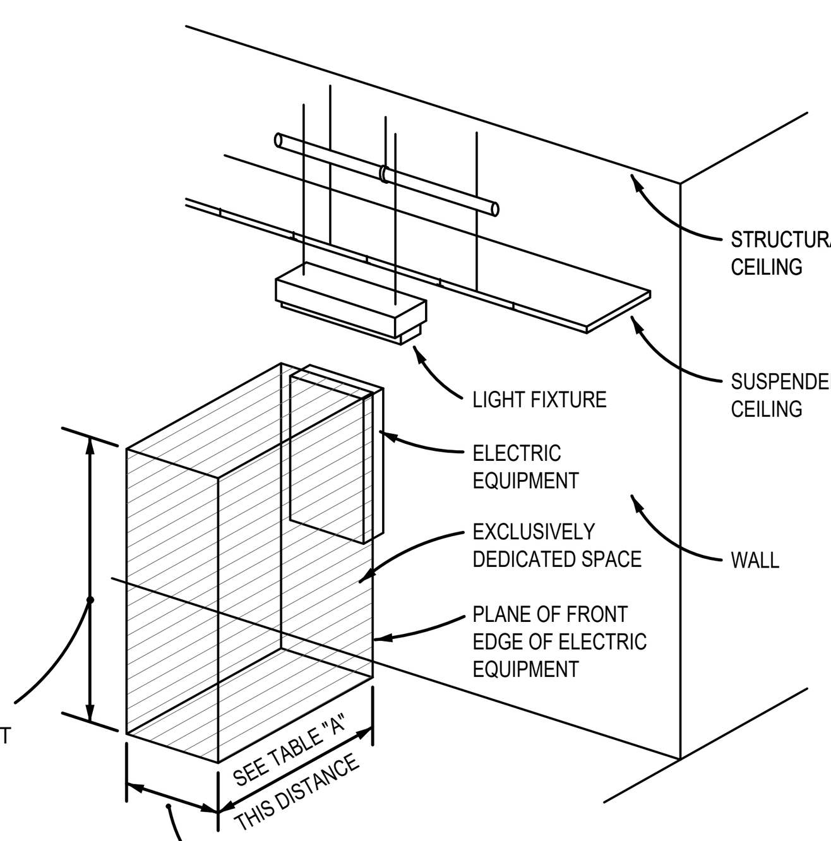
ELECTRICAL - LIGHTING PLAN

SCALE: 1/4" = 1'-0"

TABLE "A" WORKING CLEARANCES			
VOLTAGE TO GROUND	CONDITION: 1	2	3
(NOMINAL)	(MINIMUM CLEAR DISTANCE)		
0-150	3'	3'	3'
151-600	3'	3 1/2'	4'

WHERE THE "CONDITIONS" ARE AS FOLLOWS:

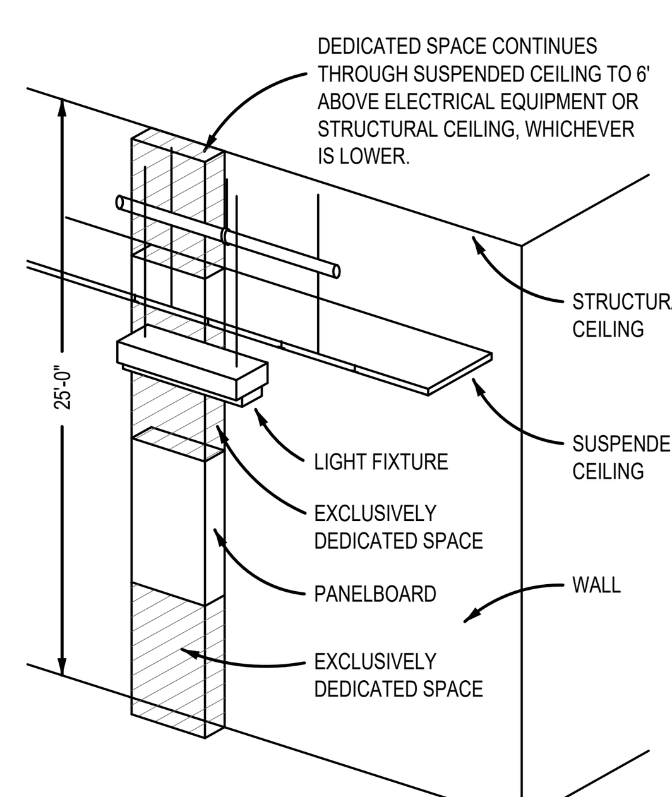
1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300 VOLTS SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.



NOTES:

1. THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF ELECTRICAL EQUIPMENT REQUIRED BY NEC SECTION 110-26.
2. THIS INCLUDES BUT IS NOT LIMITED TO PANELBOARDS, SAFETY SWITCHES, MOTOR STARTERS, JUNCTION BOXES AND OTHER ELECTRICAL EQUIPMENT.

ALL ELECTRIC EQUIPMENT



NOTES:

1. THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER PANELBOARDS FOR CABLES, RACEWAYS, ETC. TO AND FROM PANELBOARDS REQUIRED BY NEC SECTION 110-26.
2. NO PIPING, DUCTWORK OR EQUIPMENT FOREIGN TO THE ELECTRICAL EQUIPMENT OR ARCHITECTURAL APPURTENANCES SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THROUGH THE DEDICATED SPACES SHOWN. FOR EXCEPTIONS SEE NEC SECTION 110-26f.

PANELBOARDS

DEDICATED WORKING SPACE REQUIREMENTS

NO SCALE

GENERAL DEMO NOTE:

REMOVE ALL EXISTING UNUSED ELECTRICAL DEVICES, FIXTURES, BOXES, SWITCHES, WIRING, DISCONNECTS, CONDUIT, ETC. AS REQUIRED. DISPOSE OF ALL MATERIALS PROPERLY.

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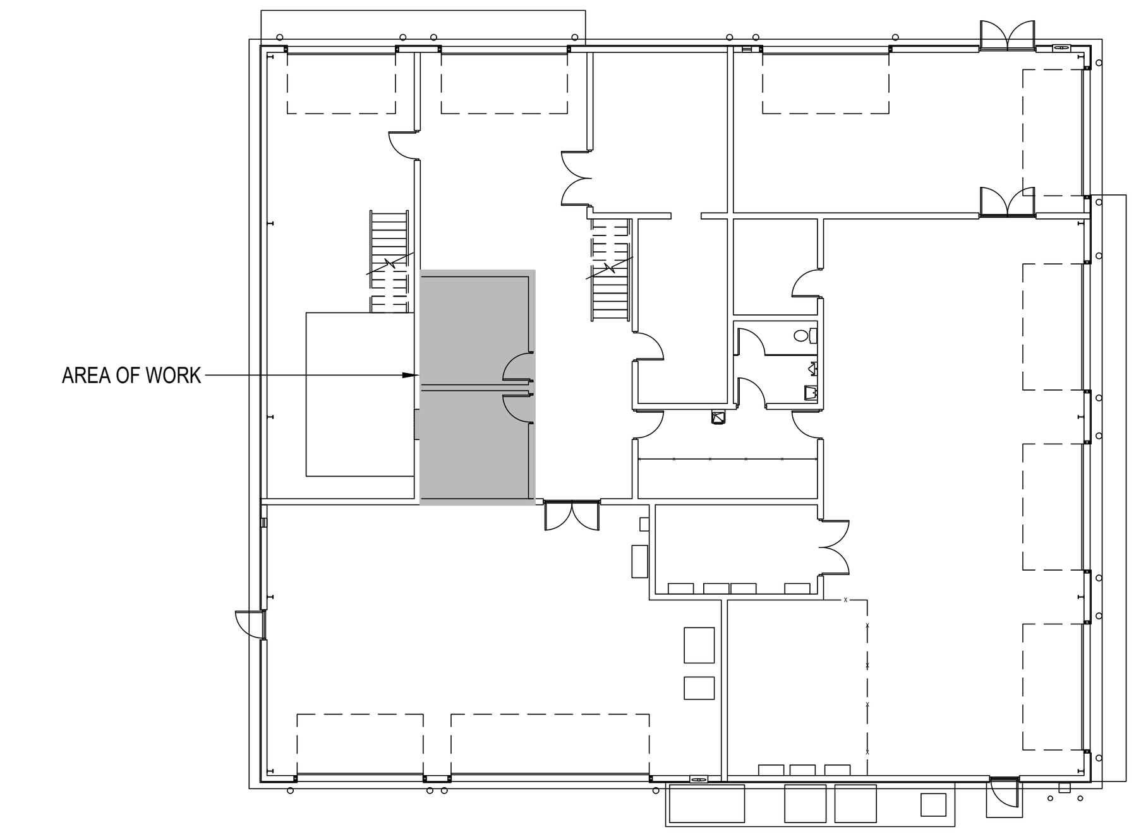
NORTH CAROLINA PROFESSIONAL SEAL 20106 ENGINEER ROBERT S. BARTLETT 11/22/2021

Rev:	Date:	Description:

Title Sheet: ELECTRICAL - LIGHTING PLAN

Project: City of Wilson Operations Center
Bldg. 500
1800 Herring Ave. Wilson, NC 27894

Drawn by:	JLT
Issue Date:	11-09-21
Project Number:	21-179
Sheet:	E-1

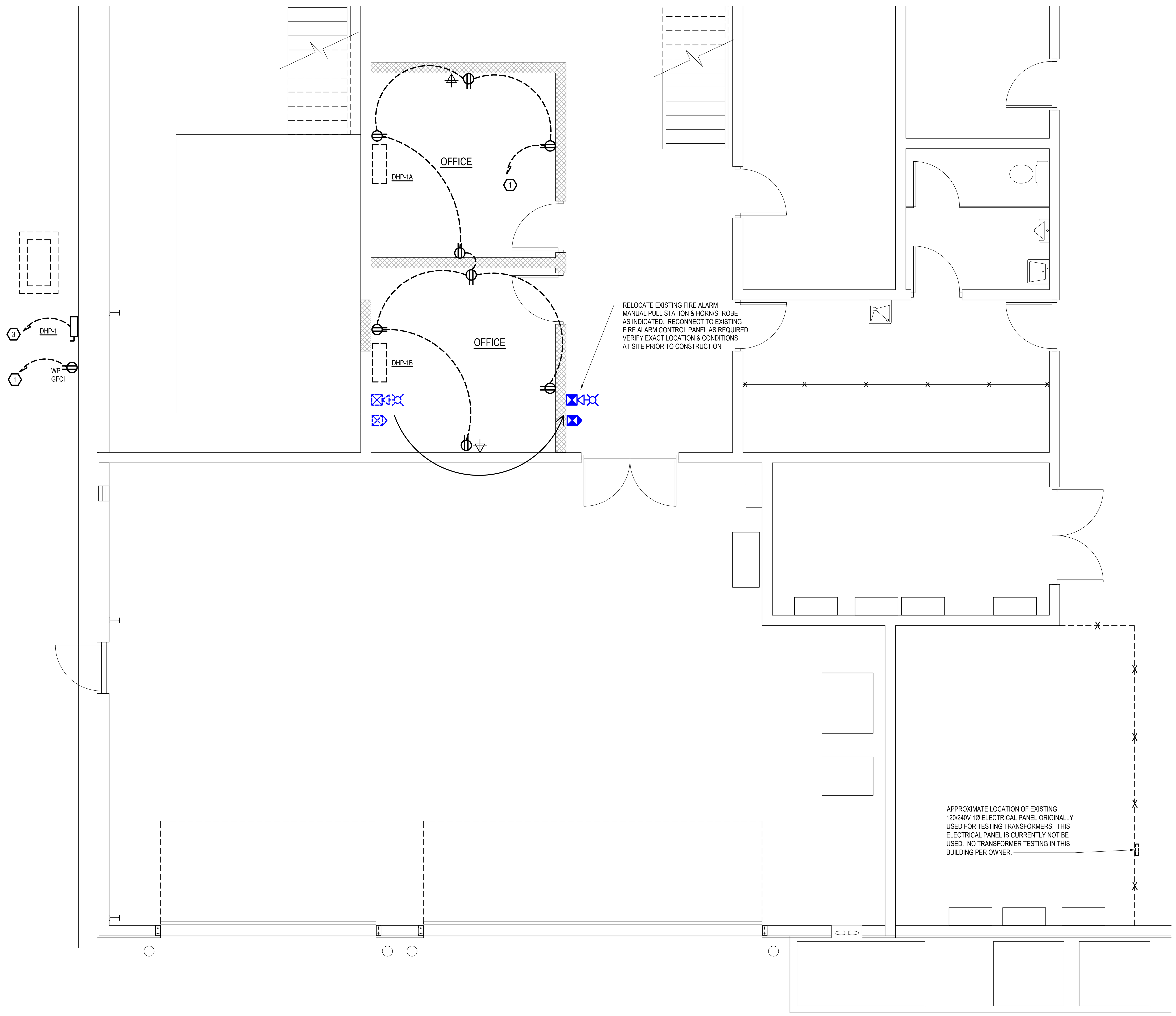


KEY PLAN
NTS

SPECIFIC ELECTRICAL NOTES

1. TIE NEW POWER BRANCH CIRCUIT INTO EXISTING LOCAL POWER BRANCH CIRCUIT WHERE POSSIBLE (8 RECEPT. PER CIRCUIT MAX.). PROVIDE AND INSTALL NEW 20 AMP 1 POLE BRANCH CIRCUIT BREAKER IN EXISTING 120/240V 1Ø ELECTRICAL PANEL AS REQUIRED. VERIFY EXACT LOCATION & CONDITIONS AT SITE PRIOR TO CONSTRUCTION
2. TIE NEW LIGHTING CIRCUIT INTO EXISTING LOCAL LIGHTING CIRCUIT WHERE POSSIBLE. PROVIDE AND INSTALL NEW 20 AMP 1 POLE BRANCH CIRCUIT BREAKER IN EXISTING 120/240V 1Ø ELECTRICAL PANEL AS REQUIRED. VERIFY EXACT LOCATION & CONDITIONS AT SITE PRIOR TO CONSTRUCTION (SHEET E-1)
3. TIE NEW DEDICATED POWER BRANCH CIRCUIT INTO NEW 25 AMP 2 POLE BRANCH CIRCUIT BREAKER IN EXISTING 120/240V 1Ø ELECTRICAL PANEL AS REQUIRED. VERIFY EXACT LOCATION & CONDITIONS AT SITE PRIOR TO CONSTRUCTION

NOTE: E.C. TO VERIFY LOADS ON EXISTING ELECTRICAL PANELS TO BE WITHIN PANEL RATINGS



NOTE: ALL AREAS WITH NO WORK SHOWN ARE EXISTING TO REMAIN

ELECTRICAL - POWER PLAN & FIRE ALARM PLAN
SCALE: 1/4" = 1'-0"

GENERAL DEMO NOTE:

REMOVE ALL EXISTING UNUSED ELECTRICAL DEVICES, FIXTURES, BOXES, SWITCHES, WIRING, DISCONNECTS, CONDUIT, ETC. AS REQUIRED. DISPOSE OF ALL MATERIALS PROPERLY.

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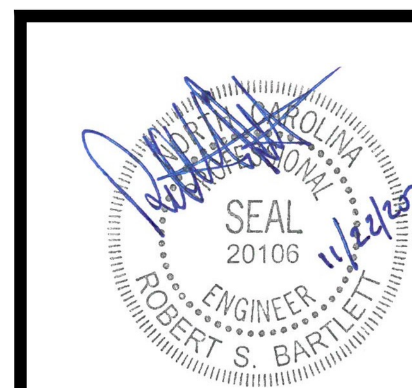

Rev:	Date:	Description:

Title Sheet: ELECTRICAL - POWER PLAN & FIRE ALARM PLAN

Project: City of Wilson Operations Center
Bldg. 500
1800 Herring Ave. Wilson, NC 27894

Drawn by:	JLT
Issue Date:	11-09-21
Project Number:	21-179
Sheet:	E-2