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: CP&P Batch Plant
Address: 452 Webb Road, NC 28334
Proposed Use: Industrial - Concrete Production
Owner or Authorized Agent: Concrete Pipe & Precast, LLC Phone # (804) 999-2278
Owned By: ☐ City/County ☑ Private ☐ State
Code Enforcement Jurisdiction: ☐ City _____ ☑ County Harnett

LEAD DESIGN PROFESSIONAL: Andrew Buchwald — (804) 752-1333

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #
Architectural				( )
Civil	Concrete Pipe & Precast	Andrew Buchwald	—	(804) 752-1333
Electrical	Concrete Pipe & Precast	Andrew Buchwald	—	(804) 752-1333
Fire Alarm				( )
Plumbing	Concrete Pipe & Precast	Andrew Buchwald	—	(804) 752-1333
Mechanical				( )
Sprinkler-Standpipe				( )
Structural	Concrete Pipe & Precast	Andrew Buchwald	—	(804) 752-1333
Retaining Walls >5' High				( )
Other				( )

YEAR EDITION OF CODE: 2018

☑ New Construction ☐ Renovation (Existing Bldg) ☐ Upfit ☐ Alteration

BUILDING DATA

Construction Type: ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B
Mixed construction: ☐ No ☐ Yes Types _____

Sprinklers: ☐ No ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ☐ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Fire District: ☐ No ☐ Yes

Building Height: ____ Feet ____ Number of Stories ☐ Unlimited per _____

Mezzanine: ☐ No ☐ Yes

High Rise: ☐ No ☐ Yes Central Reference Sheet # (if provided) _____

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6th Floor			
5th Floor			
4th Floor			
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor			
Basement			
TOTAL			

ALLOWABLE AREA

Primary Occupancy: ☐ Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
☐ Business ☐ Educational ☐ Factory-Industrial ☐ F-1 ☐ F-2
☐ High-Hazard ☐ H-1 ☐ H-2 ☐ H-3 ☐ H-4 ☐ H-5
☐ Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Use Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ Mercantile ☐ Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
☐ Storage ☐ S-1 ☐ S-2 ☐ High-piled
☐ Utility and Miscellaneous Parking Garage ☐ Open ☐ Enclosed ☐ Repair

Secondary Occupancy: _____

Special Occupancy: ☐ 508.2 ☐ 508.3 ☐ 508.4 ☐ 508.5 ☐ 508.6 ☐ 508.7 ☐ 508.8

Mixed Occupancy: ☐ No ☐ Yes Separation: _____ Hr. Exception: _____

☐ Non-Separated Mixed Occupancy (302.3.2)
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 Mixed Occupancy (302.3.3) - 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.

$$\frac{\textit{Actual Area of Occupancy A}}{\textit{Allowable Area of Occupancy A}} + \frac{\textit{Actual Area of Occupancy B}}{\textit{Allowable Area of Occupancy B}} \leq 1$$

_____ + _____ + ... = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503[5] AREA	(C) AREA FOR OPEN SPACE INCREASE[1]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA[4]

[1] Open space area increases from Section 506.2 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 $I_f = 100 [F/P - 0.25] \times W/30$ = _____ (%)

[2] The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I_s = 200 percent
b. Single story building I_s = 300 percent

[3] Unlimited area applicable under conditions of Sections Group B, F, M, S, A-4 (507.1, 507.2, 507.3, 507.5); Group A motion picture (507.8); Malls (402.6); and H-2 aircraft paint hangers (507.6).

[4] Maximum Building Area = total number of stories in the building x E but not greater than 3 x E.

[5] The maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type _____		Type _____	
Building Height in Feet	Feet _____	Feet = H + 20' = _____		
Building Height in Stories	Stories _____	Stories + 1 = _____	Stories	

FIRE PROTECTION REQUIREMENTS

Life Safety Plan Sheet #, if Provided _____

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/_____* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # 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							
Floor construction Including supporting beams and joists							
Roof construction Including supporting beams and joists							
Shafts - Exit							
Shafts - Other							
Corridor Separation							
Occupancy Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Tenant Separation							

* 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
Panic Hardware:	☐ No	☐ Yes

EXIT REQUIREMENTS

NUMBER AND ARRANGEMENT OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NUMBER OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS[1,3] (SECTION 1004.1)	
	REQUIRED	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1004.2.4)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS

[1] Corridor dead ends (Section 1004.3.2.3)
[2] Single exits (Table 1005.2.2)
[3] Common Path of Travel (Section 1004.2.5)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a)	(b)	(c)		EXIT WIDTH (in)[2,3,4,5,6]			
	AREA[1] sq. ft.	AREA[1] PER OCCUPANT (TABLE 1003.2.2.2)	EGRESS WIDTH PER OCCUPANT (TABLE 1003.2.3)		REQUIRED WIDTH (SECTION 1003.2.3) (a÷b) x c		ACTUAL WIDTH SHOWN ON PLANS	
			STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL

[1] See Table 1003.2.2.2 to determine whether net or gross area is applicable.
See definition "Area, Gross" and "Area, Net" (Section 1002)
[2] Minimum stairway width (Section 1003.3.3); min. corridor width (Section 1004.3.2.2); min. door width (Section 1003.3.1)
[3] Minimum width of exit passageway (Section 1005.3.3)
[4] See Section 1003.2.2.7 for converging exits.
[5] The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1003.2.3)
[6] Assembly occupancies (Section 1008)

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Wind (I_W) _____
Snow (I_S) _____
Seismic (I_E) _____

Live Loads: Roof _____ psf
Mezzanine _____ psf
Floor _____ psf

Snow Load: _____ psf

Wind Load: Basic Wind Speed _____ mph (ASCE-7-98)
Exposure Category _____
Wind Base Shears (for MWFRS) Vx = _____ Vy = _____

SEISMIC DESIGN CATEGORY A
Compliance with Section 1616.4 only? ☐ Yes ☐ No

SEISMIC DESIGN CATEGORY B, C, & D
Provide the following Seismic Design Parameters:

Seismic Use Group _____
Spectral Response Acceleration S_{MS}_____ %g S_{MI}_____ %g
Site Classification _____
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 = _____ V_Y = _____
Analysis Procedure _____ Simplified _____ Equivalent Lateral Force _____ Modal
Architectural, Mechanical, Components anchored? _____

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 _____

PLUMBING FIXTURE REQUIREMENTS

OCCUPANCY	WATERCLOSETS		URINALS	LAVATORIES		SHOWERS/ TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
TOTAL					

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, SBCCI, ICC, 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 energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget.

THERMAL ENVELOPE

Method of Compliance:

☐ Prescriptive ☐ Performance ☐ Energy Cost Budget

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
  - shading coefficient
  - projection factor
  - low e required, if applicable
- Door R-Values

Walls adjacent to unconditioned space (each assembly)

- Description of assembly
- U-Value of total assembly
- R-Value of insulation
- Openings (windows or doors with glazing)
  - U-Value of assembly
  - Low e required, if applicable
- 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

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:

☐ Prescriptive ☐ Performance ☐ Energy Cost Budget

Lighting schedule

lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs allowed
total exterior wattage specified vs allowed

Equipment schedules with motors (not used for mechanical systems)

motor horsepower
number of phases
minimum efficiency
motor type
# of poles

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Method of Compliance

☐ Prescriptive ☐ Energy Cost Budget

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
- heat output of unit
- cooling output of unit

Boiler
- total boiler output. If oversized, state reason.

Chiller
- total chiller capacity. If oversized, state reason.

List equipment efficiencies

Equipment schedules with motors (mechanical systems)

- motor horsepower
- number of phases
- minimum efficiency
- motor type
- # of poles