

CAMPBELL POINTE TOWNHOMES OFFICE & GYM FACILITY

BUIES CREEK, NORTH CAROLINA

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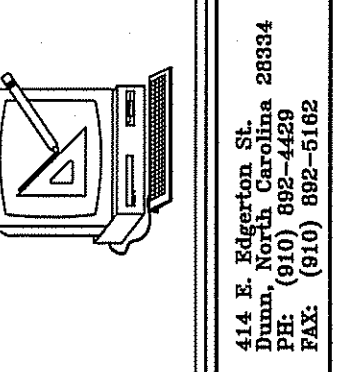
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AND, NOTES

PLANS FOR:
CAMPBELL POINTE TOWNHOMES
OFFICE & GYM FACILITY
BUIES CREEK, NORTH CAROLINA

REVISIONS	
NO.	



**Cruse
And
Associates, P.A.**
414 E. Edgerton St.
Dunn, N.C. 28334
TEL: (910) 892-4429
FAX: (910) 892-5162
LICENSE NO.: C-1721

CONSULTANTS:

CRUSE AND ASSOCIATES, P.A.
414 EAST EDGERTON ST.
DUNN, N.C. 28334
TEL (910) 892-4429
FAX (910) 892-5162

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DATE 07-23-18
DRAWN BY BAM
JOB NO. 18-21

SHEET NO.
CS

2012 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2 FAMILY DWELLINGS AND TOWNHOUSES)

NAME OF PROJECT: CAMPBELL POINTE TOWNHOMES
ADDRESS: BUIES CREEK, NORTH CAROLINA
PROPOSED USE: BUSINESS
OWNER OR AUTHORIZED AGENT: JASON PRICE
PHONE #: (910) 814-4236
EMAIL: JPRICECONSTRUCTION@YAHOO.COM

Table with 5 columns: DESIGNER, FIRM, NAME, LICENSE #, TELEPHONE NO., E-MAIL. Lists design professionals for various trades like CIVIL, ARCHITECTURAL, BUILDING, etc.

2012 EDITION OF NC CODE FOR: NEW CONSTRUCTION
EXISTING: RECONSTRUCTION, ALTERATION, REPAIR, RENOVATION
CONSTRUCTED: ORIGINAL USE(S), PROPOSED USE(S)
RENOVATED: CURRENT USE(S)

BASIC BUILDING DATA:
CONSTRUCTION TYPE: I-A, II-A, III-A, IV, V-A, V-B
SPRINKLERS: NO, PARTIAL, YES
STANDPIPES: NO, YES CLASS, II, III, WET, DRY
FIRE DISTRICT: NO, YES (PRIMARY)
BUILDING HEIGHT: 32'-0" FEET

GROSS BUILDING AREA table with columns: FLOOR, EXISTING (SQ FT), NEW (SQ FT), SUB-TOTAL. Lists areas for 6th, 5th, 4th, 3rd, 2nd, 1st floors, mezzanine, and basement.

PRIMARY OCCUPANCY: ASSEMBLY A-1, A-2, A-3, A-4, A-5
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
MERCANTILE: M-1, M-2, M-3, M-4
STORAGE: S-1 MODERATE, S-2 LOW, S-3 HIGH-PILED

ACCESSORY OCCUPANCIES: ASSEMBLY A-1, A-2, A-3, A-4, A-5
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
MERCANTILE: M-1, M-2, M-3, M-4
STORAGE: S-1 MODERATE, S-2 LOW, S-3 HIGH-PILED

INCIDENTAL USES (TABLE 508.2.5):
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

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, YES
SEPARATION: HR. EXCEPTION:

Table with 5 columns: ALLOWABLE HEIGHT (TABLE 503), INCREASE FOR SPRINKLERS, SHOWN ON PLANS, CODE REFERENCE. Lists height requirements for different construction types.

INCIDENTAL USE SEPARATION (508.2.5) THIS SEPARATION IS NOT EXEMPT AS A NON-SEPARATED USE (SEE EXCEPTIONS).
NON-SEPARATED USE (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.
SEPARATED USE (508.4) -SEE BELOW FOR AREA CALCULATIONS

Table with 7 columns: STORY NO., DESCRIPTION AND USE, (A) BLDG AREA PER STORY (ACTUAL), (B) TABLE 503 AREA, (C) AREA FOR OPEN SPACE INCREASE, (D) AREA FOR SPRINKLER INCREASE, (E) ALLOWABLE AREA OR UNLIMITED, (F) MAXIMUM BUILDING AREA. Shows story 1 with area 4,108 and maximum 6000.

1 OPEN SPACE AREA INCREASES FROM SECTION 506.2 ARE COMPUTED THIS:
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 If = 100 [(F/P) - 0.25] x W/30 = (%)
2 THE SPRINKLER INCREASE PER SECTION 506.3 IS AS FOLLOWS:
A. MULTI-STORY BUILDING Is = 200 PERCENT
B. SINGLE STORY BUILDING Is = 300 PERCENT
3 UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTIONS 507.
4 MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x E (506.4).
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.

FIRE PROTECTION REQUIREMENTS

Table with 7 columns: BUILDING ELEMENT, FIRE SEPARATION DISTANCE (FEET), RATING PROVIDED (W/REDUCTION), DETAIL AND SHEET #, DESIGN # FOR RATED ASSEMBLY, DESIGN # FOR RATED PENETRATION, DESIGN # FOR RATED JOINTS. Lists requirements for structural frame, exterior walls, interior walls, etc.

*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

LIFE SAFETY PLAN REQUIREMENTS:
LIFE SAFETY PLAN SHEET #, IF PROVIDED: JSP-1 OF 1

Table with 7 columns: 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. Shows accessible dwelling units N/A.

ACCESSIBLE PARKING-SEE SITE PLAN (SECTION 1106)

Table with 5 columns: LOT OR PARKING AREA, TOTAL # OF PARKING SPACES REQUIRED, # OF ACCESSIBLE SPACES PROVIDED, TOTAL # ACCESSIBLE PROVIDED. Shows 13 total spaces, 1 accessible.

DESIGN LOADS: IMPORTANCE FACTORS: WIND (Iw) 1.0, SNOW (Is) 1.0, SEISMIC (Ie) 1.0
LIVE LOADS: ROOF 20 PSF, MEZZANINE N/A PSF, FLOOR 100 PSF
GROUND SNOW LOAD: 15 PSF
WIND LOAD: BASIC WIND SPEED 100 MPH (ASCE-7), EXPOSURE CATEGORY C, WIND BASE SHEARS (FOR MWFRS) Vx = , Vy =

SEISMIC DESIGN CATEGORY CONFORM TO SECTION 2308
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS: OCCUPANCY CATEGORY (TABLE 1604.5) I, II, III, IV
SPECTRAL RESPONSE ACCELERATION Ss 11.4 %g, S1 5.1 %g
SITE CLASSIFICATION (TABLE 1613.6.2) A, B, C, D, E
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
SEISMIC BASE SHEAR: NOT APPLICABLE - COMPLIANCE WITH SECTION 2308 OF THE NCSBC.
ANALYSIS PROCEDURE: SIMPLIFIED, EQUIVALENT LATERAL FORCE, DYNAMIC ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? NOT APPLICABLE - COMPLIANCE WITH SECTION 2308 OF THE NCSBC.

LATERAL DESIGN CONTROL: EARTHQUAKE, WIND
SOIL BEARING CAPACITIES: FIELD TEST (PROVIDE COPY OF TEST REPORT) PSF, PRESUMPTIVE BEARING CAPACITY 2,000 PSF, PILE SIZE, TYPE, AND CAPACITY

PLUMBING FIXTURE REQUIREMENTS table with columns: USE, WATERCLOSETS, URINALS, LAVATORIES, SHOWERS/TUBS, DRINKING FOUNTAINS. Lists requirements for male/female fixtures.

SPECIAL APPROVALS: SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)

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.

CLIMATE ZONE: 3, 3A, 4A, 5
THERMAL ENVELOPE: METHOD OF COMPLIANCE: PRESCRIPTIVE, PERFORMANCE, 2010 ASHRAE 90.1, % GLAZED WALL AREA, ENERGY COST BUDGET

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY): DESCRIPTION OF ASSEMBLY WOOD TRUSS/ASPHALT SHINGLE, U-VALUE OF TOTAL ASSEMBLY 0.022, R-VALUE OF INSULATION R-46, SKYLIGHTS IN EACH ASSEMBLY N/A, U-VALUE OF SKYLIGHT N/A

EXTERIOR WALLS (EACH ASSEMBLY): DESCRIPTION OF ASSEMBLY WOOD FRAME WALL, BATT INSULATION, BRICK VENEER, U-VALUE OF TOTAL ASSEMBLY 0.038, R-VALUE OF INSULATION R19+R7 CONTINUOUS INS., OPENINGS (WINDOWS OR DOORS WITH GLAZING) DOUBLE PANE, VINYL FRAME, U-VALUE OF ASSEMBLY 0.30, SHADING COEFFICIENT N/A, PROJECTION FACTOR N/A, LOW E REQUIRED, IF APPLICABLE YES, DOOR R-VALUES R-2.5

WALLS ADJACENT TO UNCONDITIONED SPACES (EACH ASSEMBLY): DESCRIPTION OF ASSEMBLY N/A, U-VALUE OF TOTAL ASSEMBLY N/A, R-VALUE OF INSULATION N/A, OPENINGS (WINDOWS OR DOORS WITH GLAZING) N/A, U-VALUE OF ASSEMBLY N/A, LOW E REQUIRED, IF APPLICABLE N/A, DOOR R-VALUES N/A

WALLS BELOW GRADE (EACH ASSEMBLY): DESCRIPTION OF ASSEMBLY N/A, U-VALUE OF TOTAL ASSEMBLY N/A, R-VALUE OF INSULATION N/A

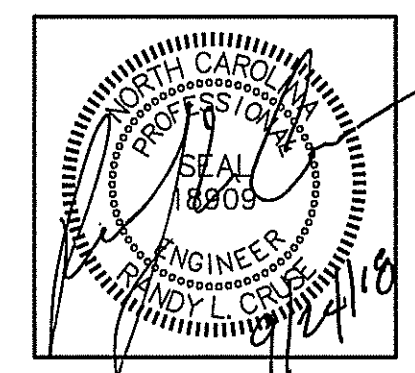
FLOORS OVER UNCONDITIONED SPACE (EACH ASSEMBLY): DESCRIPTION OF ASSEMBLY N/A, U-VALUE OF TOTAL ASSEMBLY N/A, R-VALUE OF INSULATION N/A

FLOOR SLABS IN GRADE: DESCRIPTION OF ASSEMBLY SLAB-IN-GRADE, U-VALUE OF TOTAL ASSEMBLY -, R-VALUE OF INSULATION -, HORIZONTAL / VERTICAL REQUIREMENT -, SLAB HEATED? NO

Summary:

ENERGY CODE: 2012 NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE
BUILDING CODE: 2012 NORTH CAROLINA STATE BUILDING CODE: BUILDING CODE
MECHANICAL CODE: 2012 NORTH CAROLINA STATE BUILDING CODE: MECHANICAL CODE
PLUMBING CODE: 2012 NORTH CAROLINA STATE BUILDING CODE: PLUMBING CODE
ELECTRICAL CODE: 2017 NATIONAL ELECTRIC CODE
ACCESSIBILITY CODE: ICC/ANSI 117.1-2003 AMERICAN NATIONAL STANDARD ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
CONSTRUCTION: V-B
OCCUPANCY: A-3
ELECTRICAL SUMMARY - SEE E SHEETS
MECHANICAL SUMMARY - SEE M SHEETS

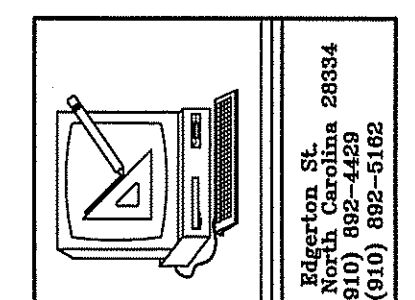
REVISION 1: WE CHANGED THE BUILDING OCCUPANCY FROM BUSINESS TO ASSEMBLY.



PLANS FOR: CAMPBELL POINTE TOWNHOMES OFFICE & GYM FACILITY BUIES CREEK, NORTH CAROLINA

REVISIONS table with columns: NO., DATE. Shows revision 1 on 09/24/2018.

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DATE 07-23-18
DRAWN BY BAM
JOB NO. 18-21
SHEET NO. APP-B

LIFE SAFETY PLAN REQUIREMENTS:

- ☑ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7) (SEE NOTE 1)
- ☑ ASSUMED AND REAL PROPERTY LINE LOCATIONS - SEE NOTE 2
- ☑ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8) - SEE NOTE 3
- ☑ EXISTING STRUCTURES WITHIN 30' OF THE PROPOSED BUILDING - SEE NOTE 4
- ☑ OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.1)
- ☑ OCCUPANT LOADS FOR EACH AREA
- ☑ EXIT ACCESS TRAVEL DISTANCES (1016)
- ☑ COMMON PATH OF TRAVEL DISTANCES (1014.3 & 1028.8)
- ☑ DEAD END LENGTHS (1018.4) - SEE NOTE 5
- ☑ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
- ☑ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.1)
- ☑ 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. SEE NOTE 6
- ☑ LOCATION OF DOORS WITH PANIC HARDWARE (1008.1.10) - SEE NOTE 7
- ☑ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1008.1.9.7) - SEE NOTE 8
- ☑ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1008.1.9.8) - SEE NOTE 8
- ☑ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES - SEE NOTE 8
- ☑ LOCATION OF EMERGENCY ESCAPE WINDOWS (1029) - SEE NOTE 8
- ☑ THE SQUARE FOOTAGE OF EACH FIRE AREA (902) - SEE NOTE 9
- ☑ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT (407.4) - SEE NOTE 10
- ☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

LIFE SAFETY PLAN NOTES:

1. NO RATED WALLS.
2. ALL ASSUMED AND REAL PROPERTY LINES >30'.
3. NO REQUIREMENT, SEPARATION DISTANCES ARE GREATER THAN 30' FOR ALL WALLS CONTAINING OPENINGS.
4. NO STRUCTURES WITHIN 20', SEE SITE PLAN.
5. NO DEAD ENDS.
6. NO RATING REQUIRED THIS STRUCTURE.
7. PANIC HARDWARE NOT REQUIRED.
8. NO DELAYED EGRESS LOCKS, ELECTROMAGNETIC LOCKS, HOLD OPEN DEVICES, OR EMERGENCY ESCAPE WINDOWS.
9. FIRE AREA PER FLOOR DOES NOT EXCEED ALLOWED MAXIMUM.
10. SMOKE COMPARTMENTS NOT REQUIRED.

**EXIT REQUIREMENTS:
NUMBER AND ARRANGEMENTS OF EXITS**

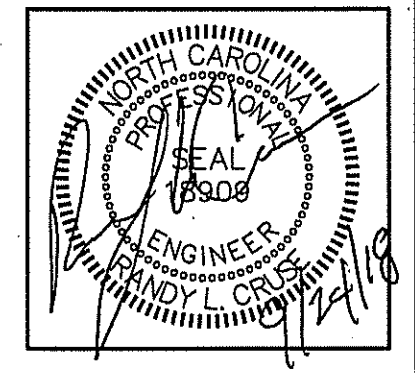
FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM ² NO. OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS ³ (SECTION 1015.2.1)	
	REQ'D.	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
ASSEMBLY	2	2	200'	86'-7"	50'-4"	56'-5"

1. CORRIDOR DEAD ENDS (SECTION 1017.3)
2. BUILDINGS WITH SINGLE EXITS (TABLE 1021.2), SPACES WITH ONE MEANS OF EGRESS (TABLE 1015.1)
3. COMMON PATH OF TRAVEL (SECTION 1014.3)

EXIT WIDTH

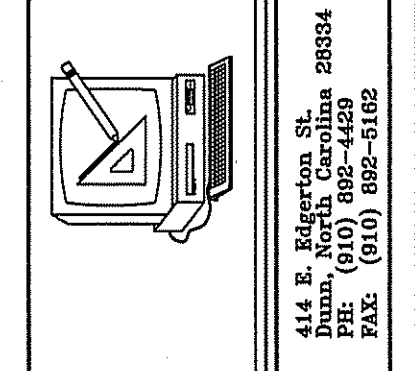
USE GROUP OR SPACE DESCRIPTION	(a) AREA ¹ SQ. FT.	(b) AREA ¹ PER OCCUPANT (TABLE 1004.1.1)	CALCULATED OCCUPANT LOAD (a/b)	(c) EGRESS WIDTH PER OCCUPANT (TABLE 1005.1)		REQUIRED WIDTH (SECTION 1005.1) (a/b) x c		ACTUAL WIDTH SHOWN ON PLANS	
				STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
BUSINESS	1089	100 GROSS	11	N/A	.2	N/A	2.2"	N/A	35"
EXERCISE ROOM	3016	50 GROSS	61	N/A	.2	N/A	12.2"	N/A	35"

1. SEE TABLE 1004.1.1 TO DETERMINE WHETHER NET OR GROSS AREA IS APPLICABLE. SEE DEFINITION "AREA, GROSS" AND "AREA, NET" (SECTION 1002)
2. MINIMUM STAIRWAY WIDTH (SECTION 1009.1); MIN. CORRIDOR WIDTH (SECTION 1018.2); MIN. DOOR WIDTH (SECTION 1008.1)
3. MINIMUM WIDTH OF EXIT PASSAGEWAY (SECTION 1023.2)
4. SEE SECTION 1004.5 FOR CONVERGING EXITS.
5. THE LOSS OF ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50% OF THE TOTAL REQUIRED (SECTION 1005.5)
6. ASSEMBLY OCCUPANCIES (SECTION 1028)



**PLANS FOR:
CAMPBELL PONTE TOWNHOMES
OFFICE & GYM FACILITY
BUJES CREEK, NORTH CAROLINA**

REVISIONS	
NO.	
1.	09/24/2018

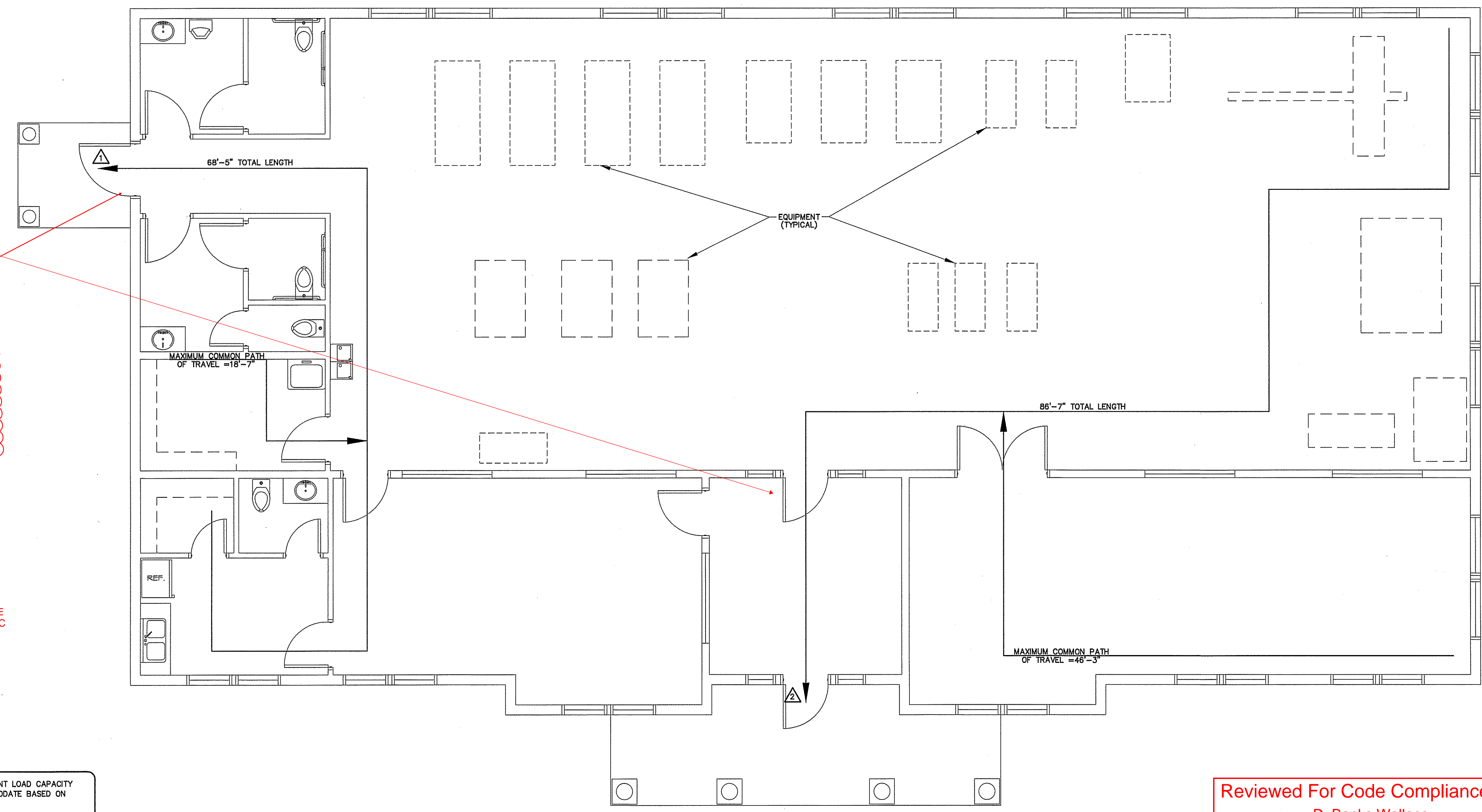


Cruse And Associates, P.A.
 115 S. Salisbury St.
 Durham, North Carolina 27834
 P.O. Box 1802-469
 Durham, NC 27818
 License No. C-1721

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DATE 07-23-18
DRAWN BY BAM
JOB NO. 18-21

SHEET NO.
LS-1 OF 1



If bolts are used instead of panic hardware, doors must have signs posted per NCBC 1008.1.9.3

PANIC HARDWARE REQUIRED PER NC FIRE CODE 2012 - 1008.1.10

MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.1)
 ▲ 41" CLEAR WIDTH DIVIDED BY .2" = 205 OCCUPANTS
 CALCULATED OCCUPANCY PER EXIT = 36 PEOPLE
 CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
 ▲ 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS
 CALCULATED OCCUPANCY PER EXIT = 36 PEOPLE
 CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.

LIFE SAFETY PLAN
 SCALE: 1/4" = 1'-0"

Reviewed For Code Compliance By:
D. Banks Wallace
 Chief Deputy Fire Marshal
 09/26/2018 9:25:38 AM

REVISION 1:
 WE CHANGED THE BUILDING OCCUPANCY FROM BUSINESS TO ASSEMBLY & BUSINESS.

ROOM NO.	ROOM NAME	FLOOR				BASE			WALLS			CEIL. HT.	CL.G.	REMARKS
		CONCRETE	CARPET*	TILE	RUBBER	WOOD	CERAMIC TILE	RUBBER BASE	BRICK	5/8" DRYWALL	5/8" DRYWALL	5/8" DRYWALL		
100	MEN'S RESTROOM	X	X	X	X	X	X	X	X	X	X	10'-0"	X	**
101	WOMEN'S RESTROOM	X	X	X	X	X	X	X	X	X	X	10'-0"	X	**
102	HOUSEKEEPING	X	X	X	X	X	X	X	X	X	X	10'-0"	X	
103	BREAK ROOM	X	X	X	X	X	X	X	X	X	X	12'-0"	X	
104	BUSINESS OFFICE	X	X	X	X	X	X	X	X	X	X	12'-0"	X	
105	FOYER	X	X	X	X	X	X	X	X	X	X	12'-0"	X	
106	YOGA ROOM	X	X	X	X	X	X	X	X	X	X	14'-0"	X	
107	GYM/EXERCISE AREA	X	X	X	X	X	X	X	X	X	X	14'-0"	X	
108	STORAGE	X	X	X	X	X	X	X	X	X	X	12'-0"	X	
109	PRIVATE RESTROOM	X	X	X	X	X	X	X	X	X	X	12'-0"	X	**

MARK	WINDOW SIZE				REMARKS	HEADERS
	WIDE		HIGH			
	WIDE	HIGH	WIDE	HIGH		
(A)	4'-0"	6'-0"	4'-0"	2'-0"	DOUBLE PANE WINDOW W/TEMPERED GLASS	(4) 2 X 12 HEADER WITH (2) 2X8 JACK AND KING STUDS AT EA. END AND (2) 2X8 STUDS IN CENTER.
(B)	3'-0"	4'-0"	3'-0"	2'-0"	DOUBLE PANE WINDOW W/TEMPERED GLASS	(4) 2 X 12 HEADER WITH (2) 2X8 JACK AND KING STUDS AT EA. END AND (2) 2X8 STUDS IN CENTER.
(C)	6'-0"	4'-0"	-	-	SINGLE PANE WINDOW WITH TEMPERED GLASS	

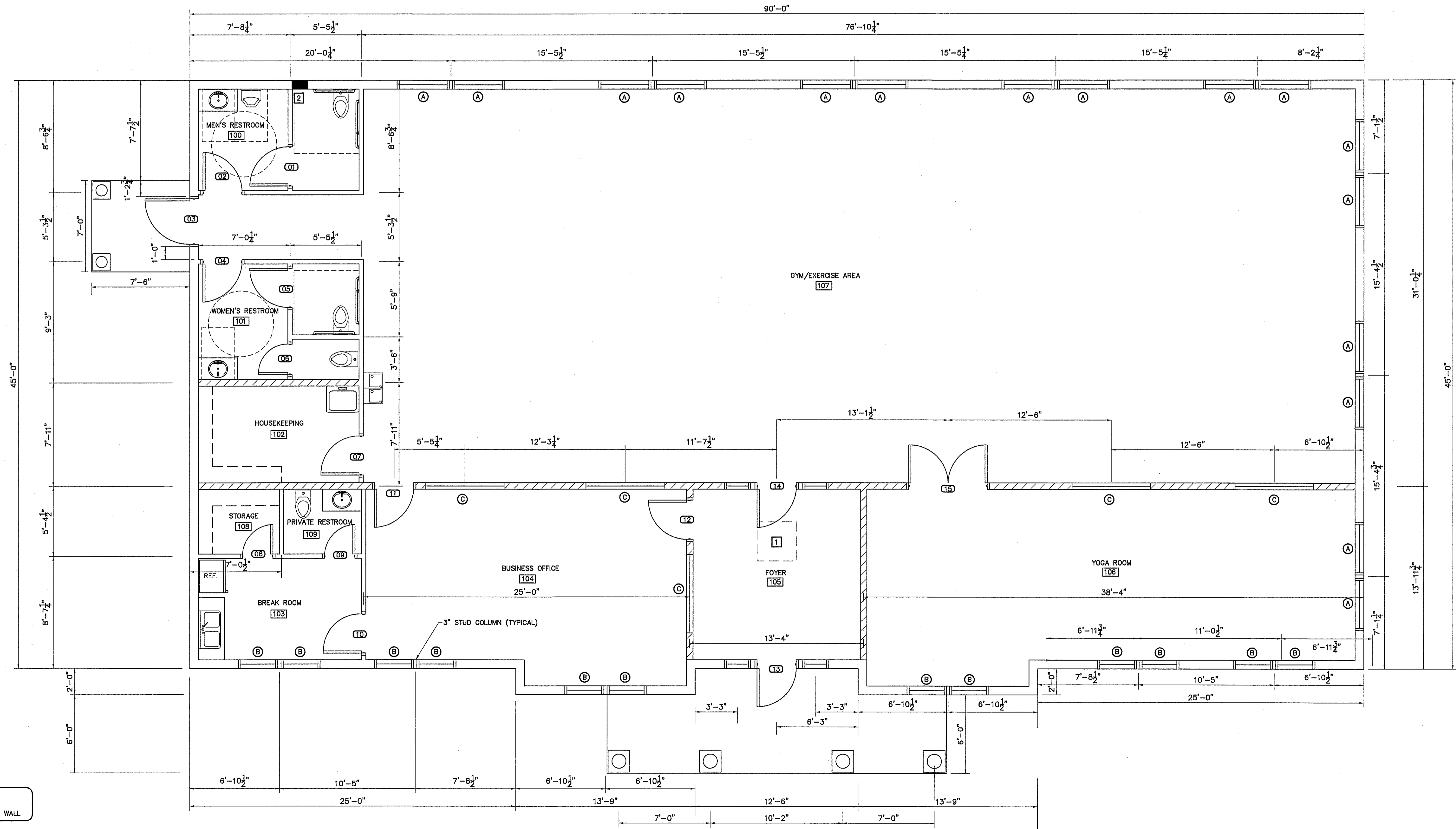
DOOR NO.	DOOR SIZE			REMARKS
	WIDE	HIGH	THICK.	
	(01)	3'-0"	7'-0"	
(02)	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(03)	3'-6"	7'-0"	1 3/4"	EXTERIOR STOREFRONT GLASS DOOR
(04)	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(05)	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(06)	2'-4"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(07)	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(08)	2'-4"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(09)	2'-4"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(10)	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(11)	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(12)	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR, HM FRAME
(13)	3'-0"	7'-0"	1 3/4"	DOUBLE PANE STOREFRONT EXT. GLASS DOOR W/24" SIDELIGHTS & 2'-6" TRANSOME
(14)	3'-0"	7'-0"	1 3/4"	EXTERIOR STOREFRONT DOUBLE PANE GLASS DOOR W/24" SIDELIGHTS
(15)	6'-0"	7'-0"	1 3/4"	STOREFRONT GLASS DOUBLE DOORS (TO BE TEMPERED)

* 26 OZ. NYLON OR EQUIVALENT, GLUE DOWN TYPE PREFERRED
 ** ALL RESTROOMS TO HAVE CERAMIC TILE ON THE FLOOR AND TO 4" A.F.F. ON ALL WALLS. OWNER TO VERIFY ALL FINISHES AND COLORS BEFORE PLACING ORDER.

KEYNOTE:
 1 3'X3' ATTIC ACCESS; GENERAL CONTRACTOR TO COORDINATE LOCATION WITH ALL TRADES.
 2 INSTALL (4) STUD COL. @ GIRDER TRUSS LOCATION. VERIFY LOCATION WITH TRUSS MANUFACTURER. INSTALL (4) SIMPSON H2.5A HURRICANE CLIPS AT EACH END OF GIRDER TRUSS.

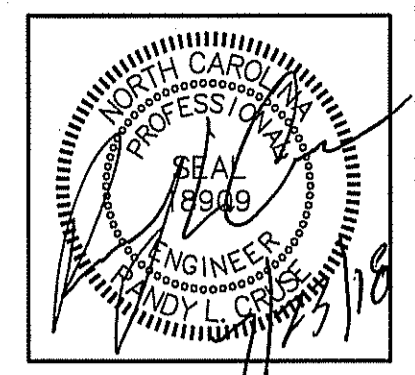
NOTES:
 1. EXTERIOR DIMENSIONS ARE TO WALL FRAMING.

VERIFY TYPES AND SIZES WITH OWNER BEFORE ORDERING. PROVIDE ALL HARDWARE AS REQUIRED. ALL HARDWARE TO BE A.D.A. COMPLIANT. VERIFY HARDWARE FINISHES & STYLES WITH OWNER BEFORE ORDERING. GLASS TO BE TEMPERED AS REQUIRED BY CODE.



LEGEND
 [Hatched Box] 2X6 WALL

PROPOSED FLOOR PLAN
 SCALE: 1/4" = 1'-0"



PLANS FOR:
CAMPBELL POINTE TOWNHOMES
OFFICE & GYM FACILITY
 BUIES CREEK, NORTH CAROLINA

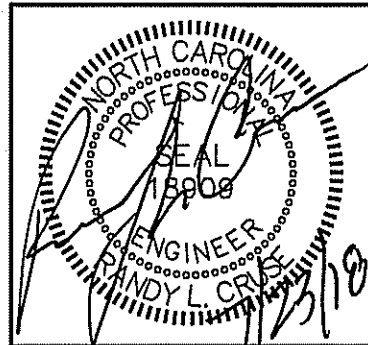
NO.	REVISIONS

Cruse And Associates, P.A.
 151 E. North Carolina St.
 Durham, North Carolina 27604
 P.O. Box 662-4459
 P.O. Box 662-5126
 LICENSE NO.: C-1721

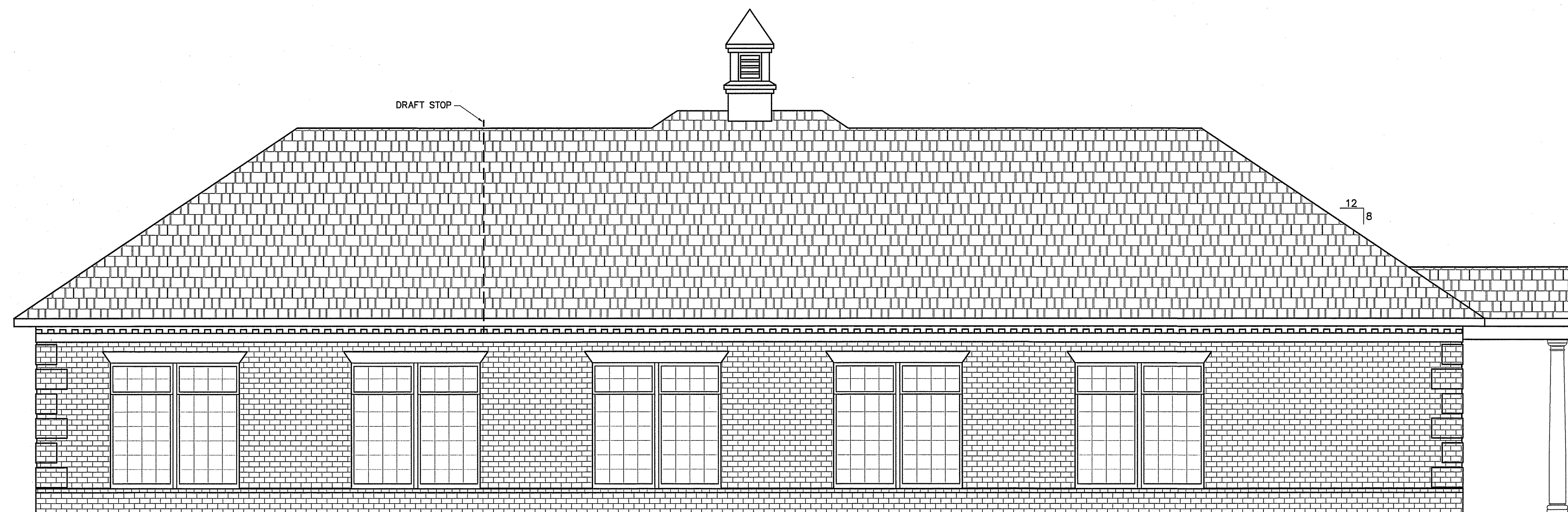
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 DRAWN BY BAM
 JOB NO. 18-21

SHEET NO.
F-1 OF 5



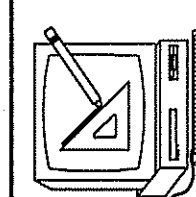
FRONT ELEVATION
SCALE: 1/4" = 1'-0"



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

PLANS FOR:
CAMPBELL POINTE TOWNHOMES
OFFICE & GYM FACILITY
BUJES CREEK, NORTH CAROLINA

REVISIONS	
NO.	



Cruse and Associates, P.A.
28824
P.O. Box 28824
Raleigh, NC 27602
TEL: (919) 882-4429
FAX: (919) 882-5122

Cruse and Associates, P.A.
LICENSE NO.: C-1721

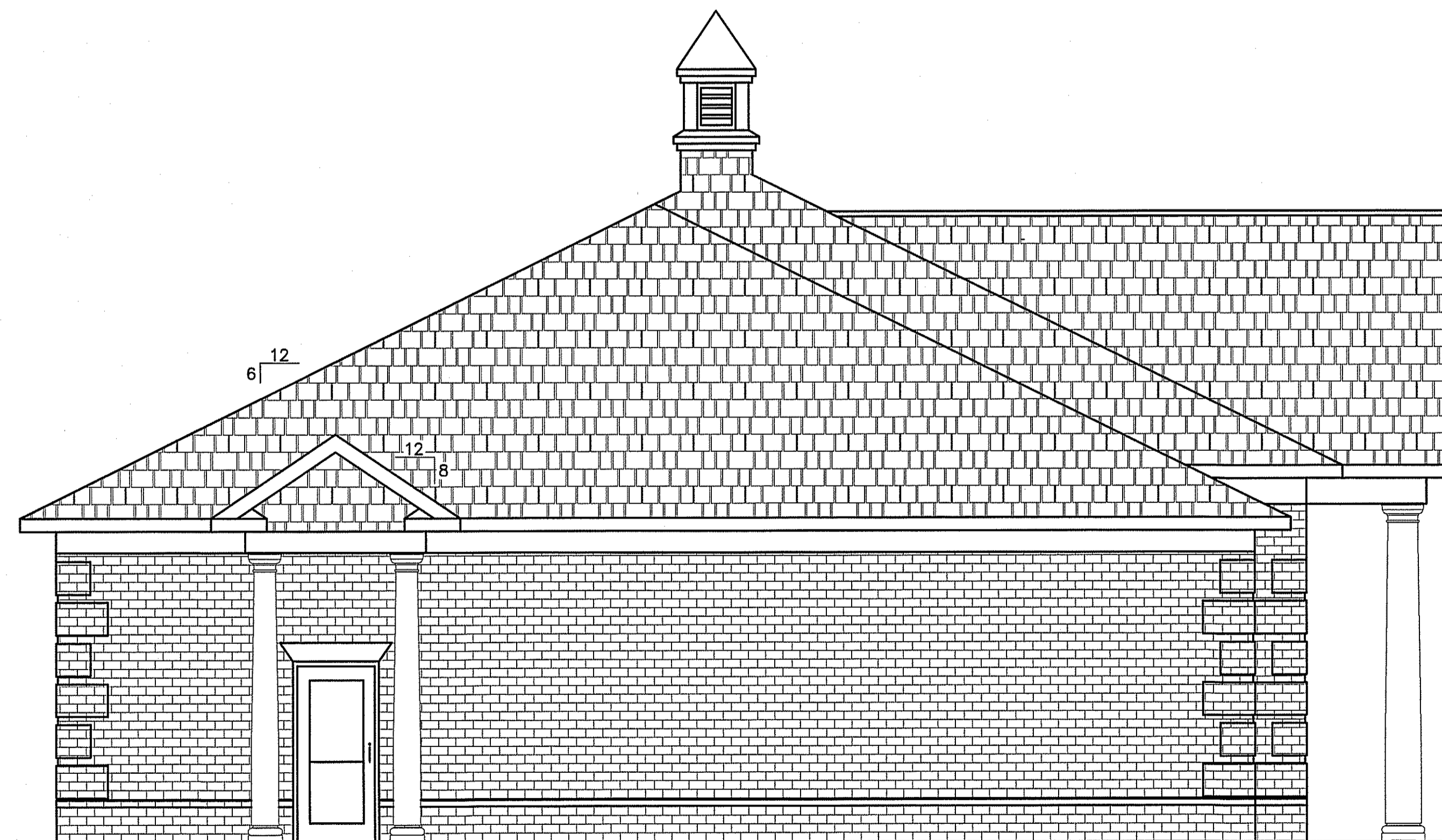
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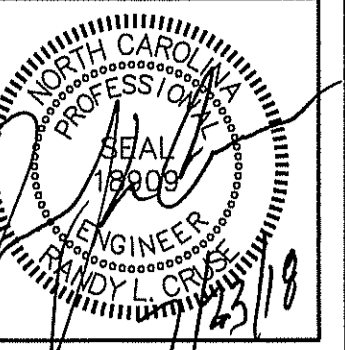
SHEET NO.
F-2 OF 5



RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

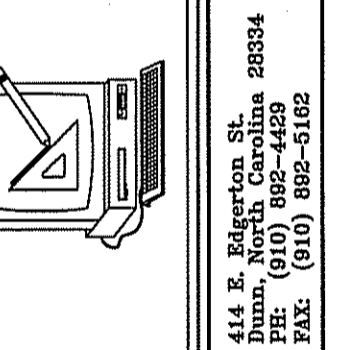


LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



PLANS FOR:
CAMPBELL POINTE TOWNHOMES
OFFICE & GYM FACILITY
BUJES CREEK, NORTH CAROLINA

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**Cruse
And
Associates, P.A.**

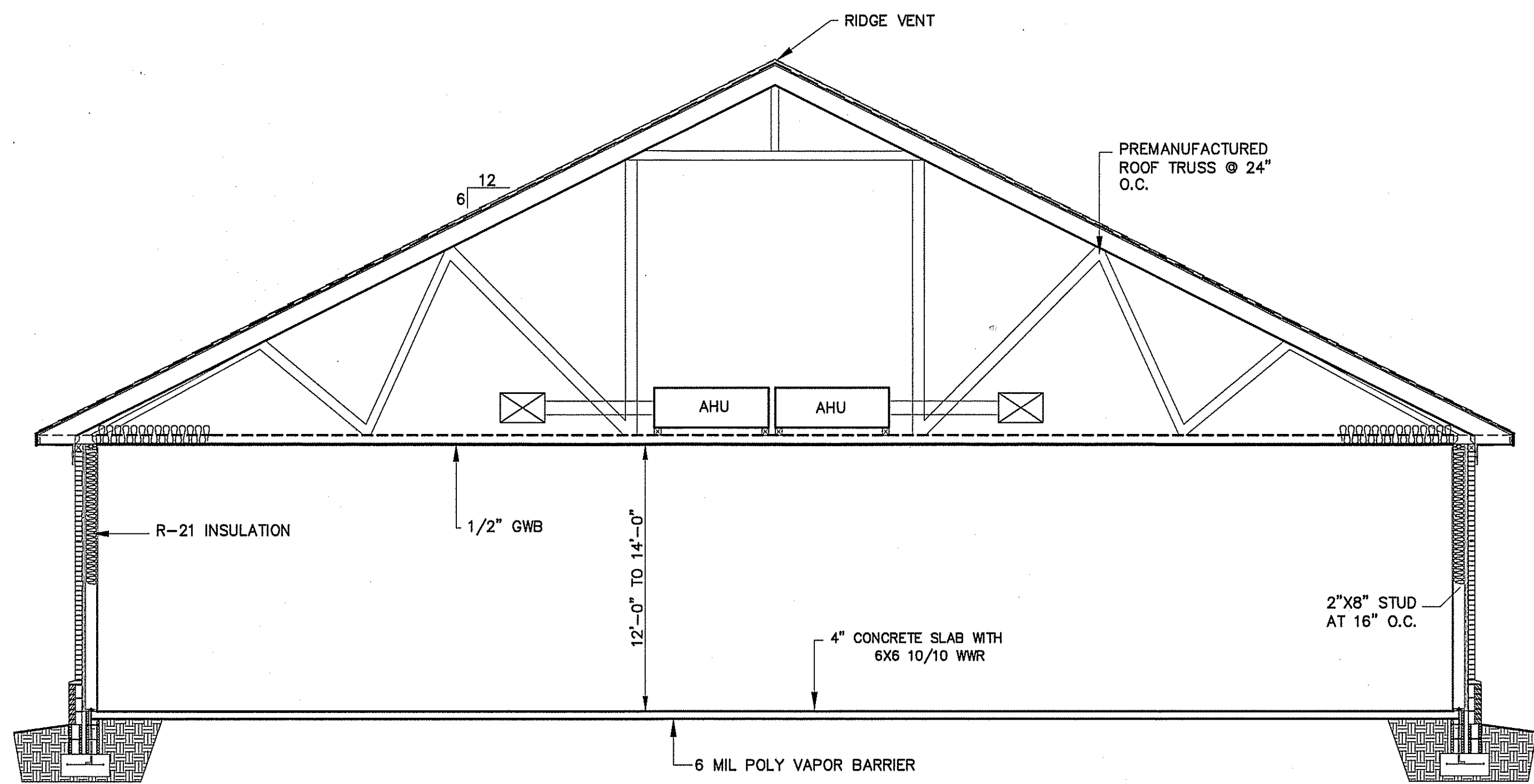
Andy L. Cruse, P.E.
1000 North Carolina 28834
P.O. Box 4489
P.E. (010) 862-4489
FAX: (010) 862-5122

LICENSE NO.: C-1721

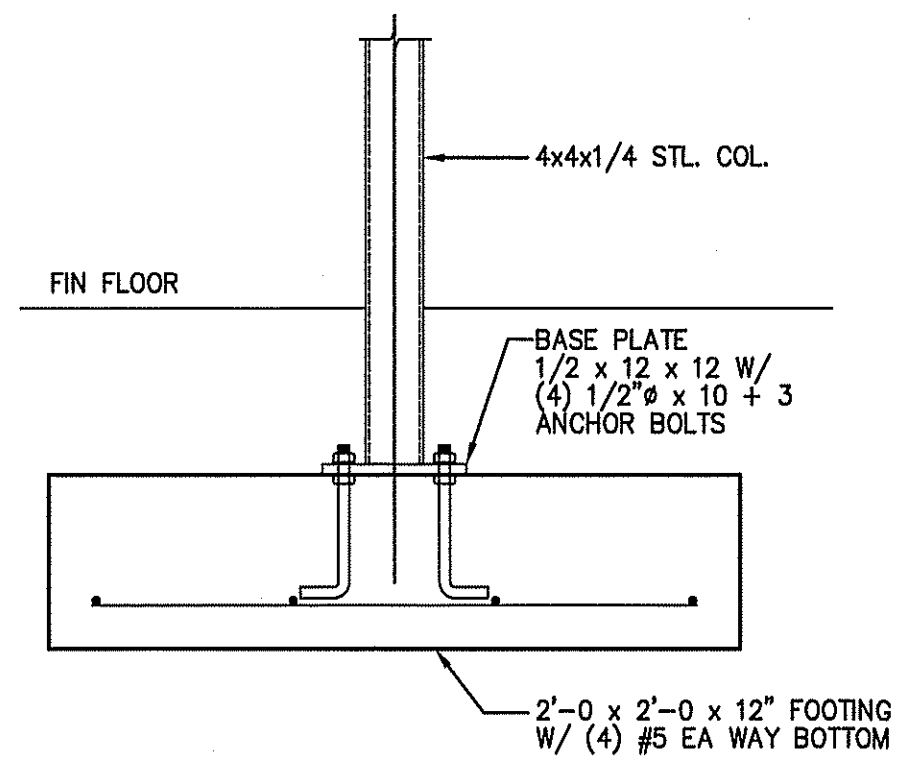
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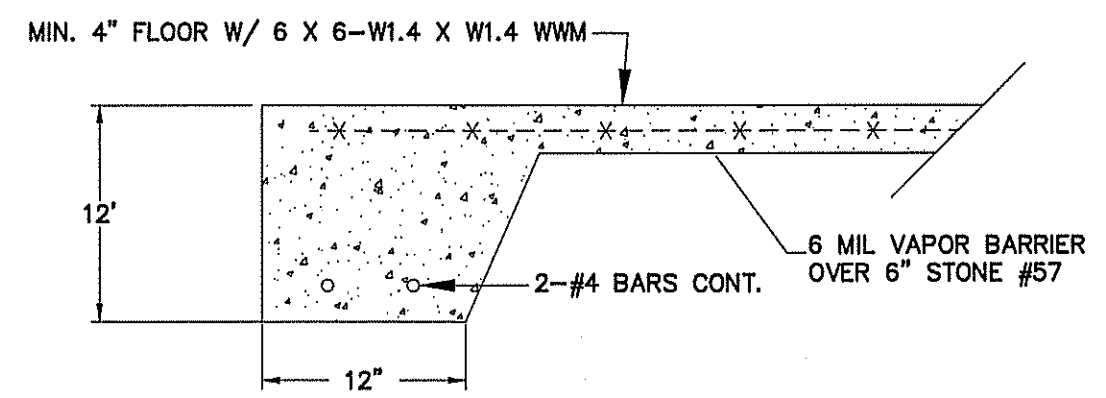
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F-3 OF 5



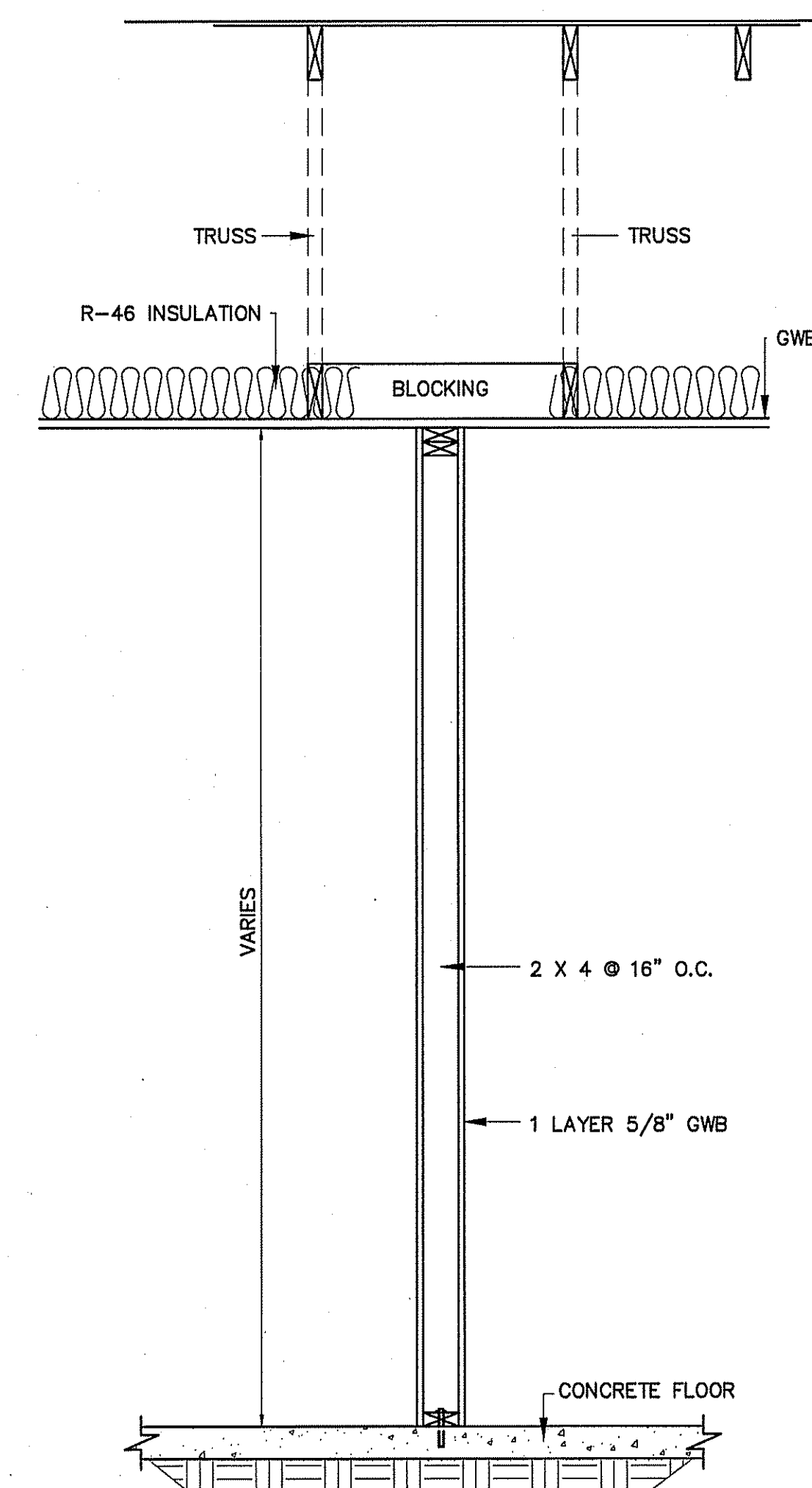
BUILDING SECTION
NOT TO SCALE



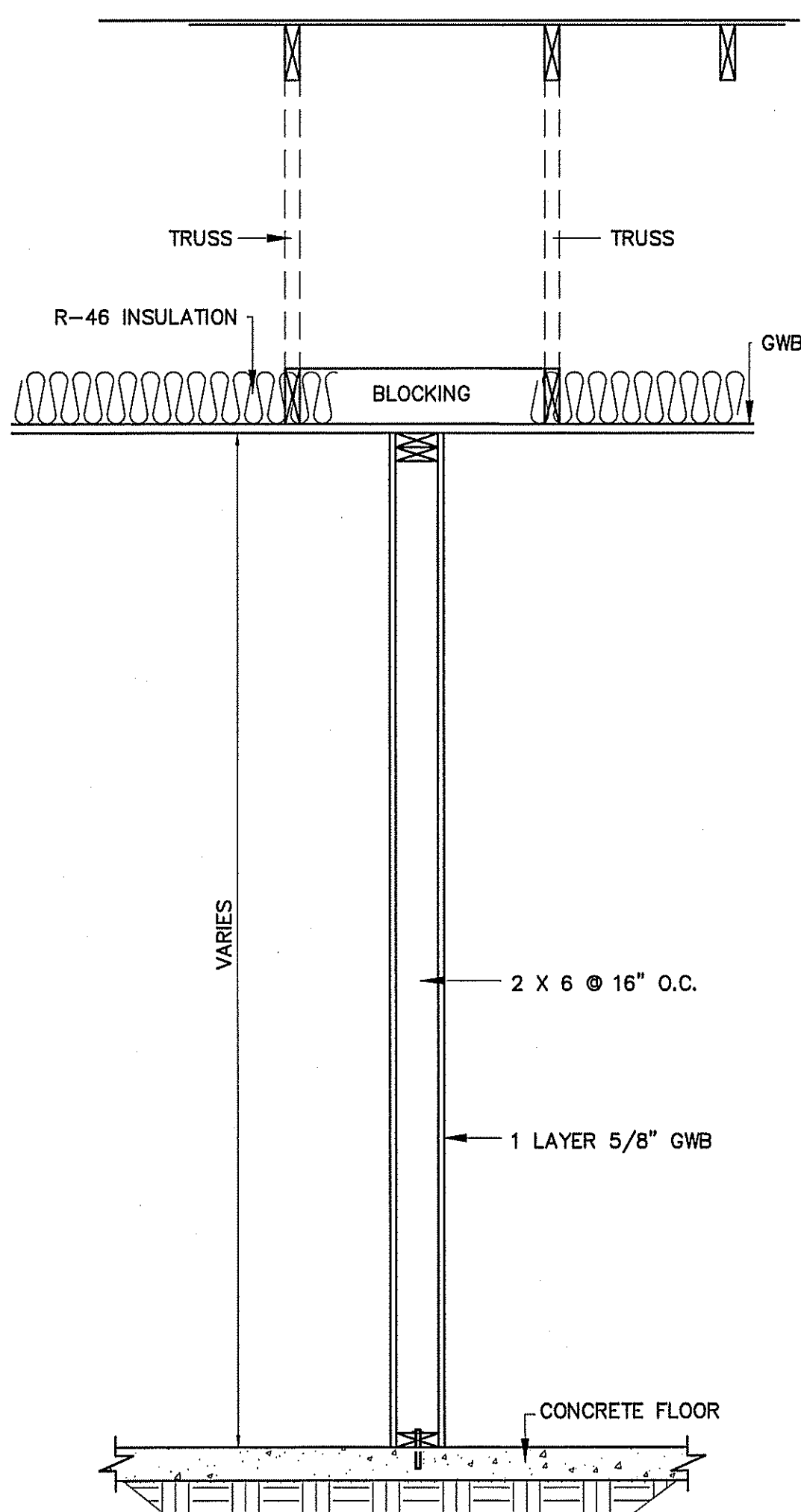
COLUMN FOOTING
NOT TO SCALE



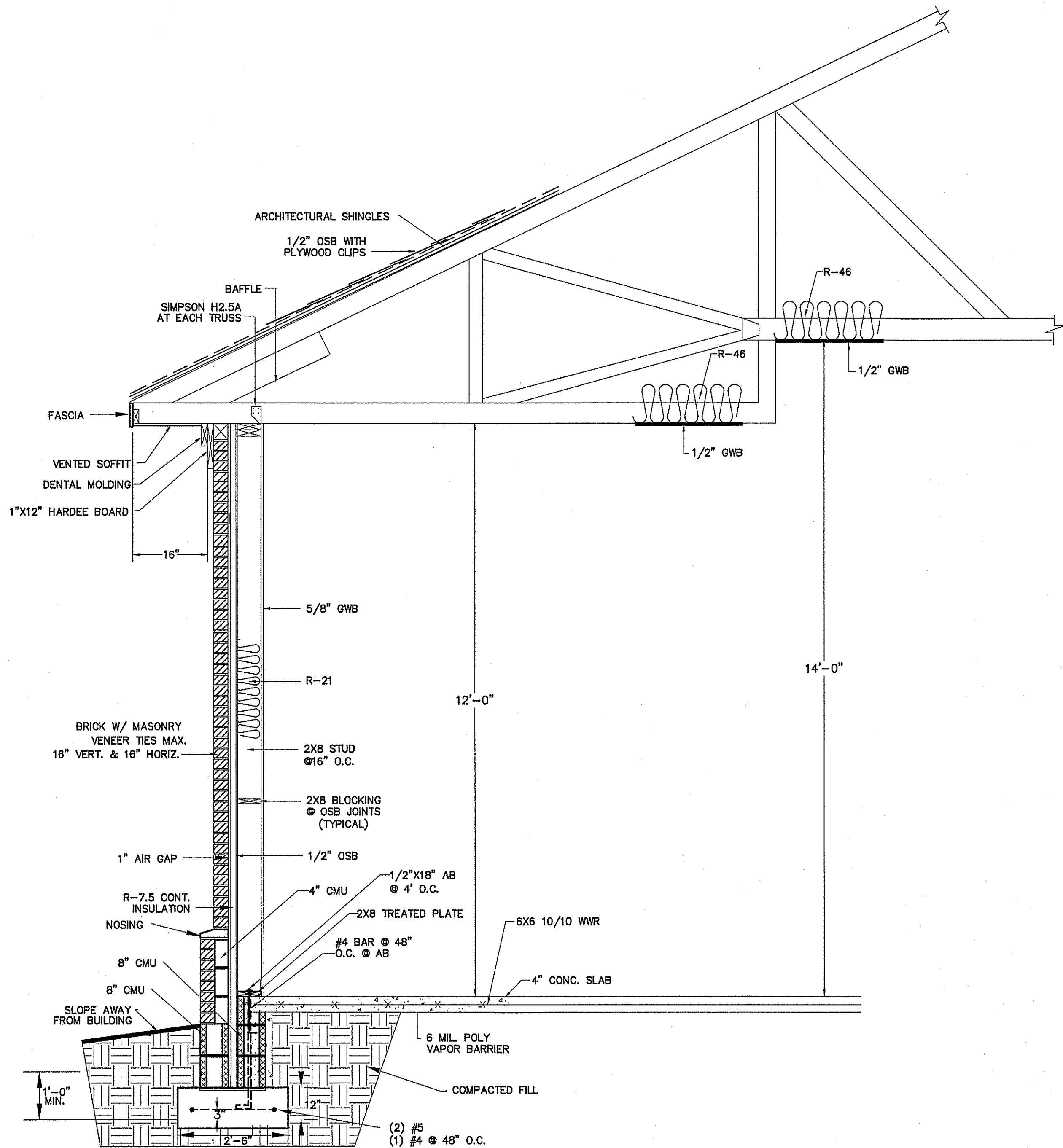
**CROSS-SECTION
TYPICAL THICKENED SLAB EDGE**
NOT TO SCALE



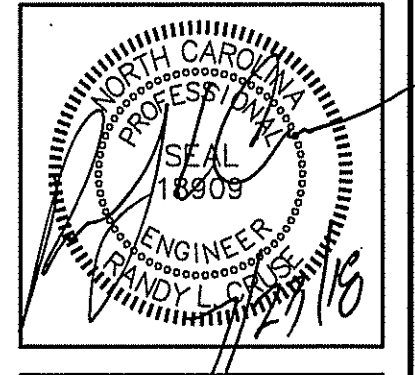
INTERIOR WALL SECTION
NOT TO SCALE



INTERIOR WALL SECTION
NOT TO SCALE

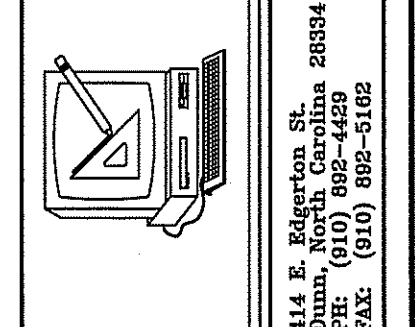


WALL SECTION
NOT TO SCALE



PLANS FOR:
**CAMPBELL PONTE TOWNHOMES
OFFICE & GYM FACILITY**
BUJES CREEK, NORTH CAROLINA

REVISIONS	
NO.	



**Cruse
And
Associates, P.A.**

414 E. Robertson St.
Durham, North Carolina 28334
PHONE: (919) 882-3102
FAX: (919) 882-3102

LICENSE NO.: 0-1721

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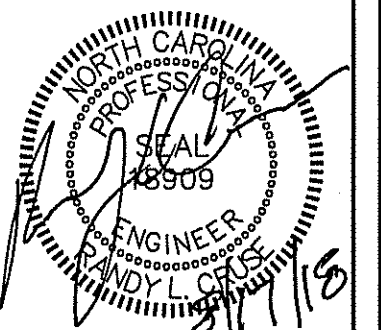
SHEET NO.
F-4 OF 5

NOTES:

1. ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF TO BE VERIFIED BY CONTRACTOR.
2. CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
3. CONTROL JOINTS TO BE PLACED AS SHOWN ON PLAN.

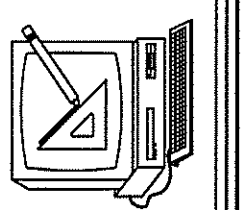
FOUNDATION NOTES:

1. FIELD VERIFY THE SIZE, LOCATIONS, ELEVATIONS, AND DETAILS OF ALL EXISTING CONSTRUCTION AND CONDITIONS THAT AFFECT THE WORK AND INFORM THE ENGINEER OF ANY DISCREPANCIES IN DIMENSION SIZES, LOCATIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK.
2. PROVIDE ALL SHORING, SHEETING, UNDERPINNING, AND OTHER MEANS REQUIRED TO PROTECT AND MAINTAIN THE SAFETY, INTEGRITY, AND STABILITY OF ALL EXISTING AND NEW CONSTRUCTION THAT MAY BE AFFECTED BY THE WORK.
3. CONCRETE SHALL DEVELOP COMPRESSIVE STRENGTHS (F'c) AT 28 DAYS AS FOLLOWS: FOUNDATIONS, WALLS, FOOTING, ETC. 3000 PSI
SLABS ON GRADE 3000 PSI
4. ALL BUILDING FOOTINGS AND FOUNDATIONS ARE DESIGNED BASED UPON A MINIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. IF SUITABLE SOIL CAPABLE OF SUSTAINING THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, THE ENGINEER SHALL BE NOTIFIED AND THE FOUNDATIONS SHALL BE CHANGED IN ELEVATION AND/OR SIZE AS DETERMINED BY THE ENGINEER.
5. CONCRETE BAR REINFORCEMENT SHALL BE NEW BILLET STEEL CONFORMING TO THE STANDARD SPECIFICATION FOR DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT ASTM A-615, GRADE 60.
6. ALL STRUCTURAL FILL INSIDE THE BUILDING SHALL BE SELECTED FILL COMPACTED TO 98% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT (ASTM D-898)
7. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI-315-80).
8. PROVIDE CORNER BARS AT ALL FOOTING CORNERS AND STEPS UNLESS OTHERWISE NOTED. BARS SHALL BE A MINIMUM OF 4'-0" LONG AND HAVE THE SAME SIZE AND SPACING AS HORIZONTAL REINFORCING.
9. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND A-82.
10. CONTINUOUS REINFORCING BARS SHALL BE LAPPED 48 BAR DIAMETERS AT ALL SPLICES UNLESS OTHERWISE NOTED.
11. STANDARD CONSTRUCTION JOINTS AND EXPANSION JOINTS SHALL BE LOCATED AS SHOWN ON THE PLANS.
12. ALL CONCRETE SHALL BE PROTECTED AGAINST FREEZING FOR SEVEN DAYS AFTER POURING.
13. FLOOR SLAB TO BE POURED ON 6 MIL POLYETHYLENE FILM OVER 4" THICK DRAINAGE FILL OR OVER EXISTING CONCRETE SLAB.
14. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND ARCHITECTURAL DRAWINGS AND CONSULT ALL AFFECTED SUBCONTRACTORS FOR LOCATIONS AND SIZES OF REQUIRED OPENINGS AND CAST-IN ITEMS IN CONCRETE WORK. ALL OPENINGS ON THE STRUCTURAL DRAWINGS SHALL BE SHOWN ON SHOP DRAWINGS FOR APPROVAL.



PLANS FOR:
CAMPBELL POINTE TOWNHOMES
OFFICE & GYM FACILITY
BUIES CREEK, NORTH CAROLINA

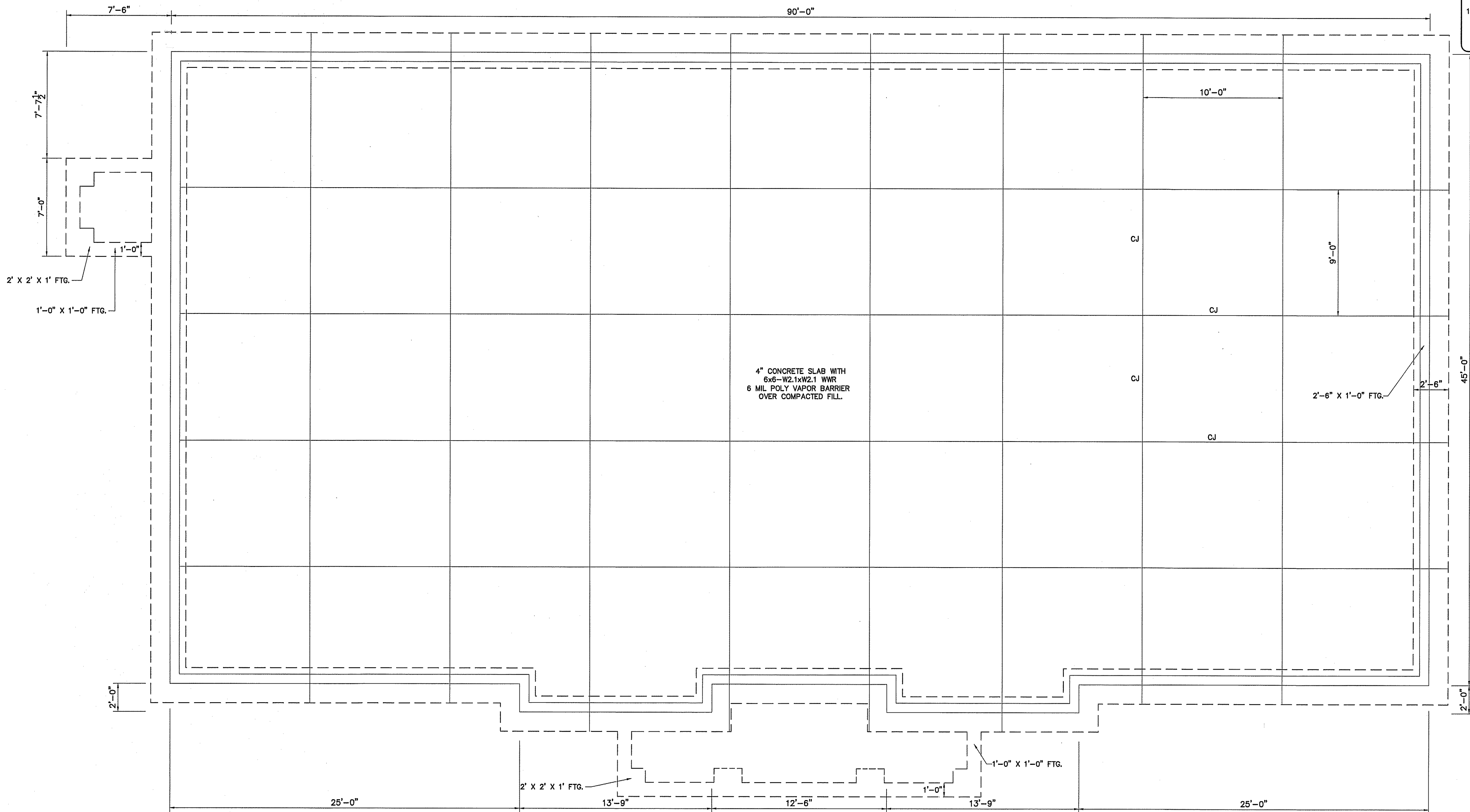
REVISIONS	
NO.	DATE
1	08/17/18


Cruse and Associates, P.A.
 614 E. Robertson St.
 Durham, NC 27601
 Phone: (919) 982-5182
 Fax: (919) 982-5182
 LICENSE NO.: C-1721

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 JOB NO. 18-21

SHEET NO.
F-5 OF 5



NOTES:
 ALL MEASUREMENTS ARE TO FRAMING, ALLOW FOR BRICK VENEER ON FOOTING, SEE WALL SECTION DETAIL SHEET F-4 OF 5.

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

PLUMBING FIXTURE SCHEDULE

MARK	MAKE	MODEL	DESCRIPTION	NOTES
P-1	AMERICAN STANDARD	MADERA 2854.016	EL 1.6/PA 16.5" HC ELONGATED WATER CLOSET HC ACCESSIBLE, FLUSH VALVE FLOOR MOUNTED	WHITE 5901.100 SEAT, 6047.161 MANUAL VALVE
P-2	AMERICAN STANDARD	MADERA 3451.660.020	EL 1.6/PA 15.0" ELONGATED WATER CLOSET HC ACCESSIBLE, FLUSH VALVE FLOOR MOUNTED	WHITE 5901.100 SEAT, 6047.161 MANUAL VALVE
P-3	AMERICAN STANDARD	AQUALYN 0476.028	SELF-RIMMING COUNTERTOP LAVATORY	AMERICAN STANDARD 1340M.105 SINGLE CONTROL METERING FAUCET W/POP-UP DRAIN
P-4	OASIS	PGBACSL	SPLIT LEVEL ELECTRIC WATER COOLER	BARRIER - FREE
P-5	JUST	DL-2133-A-GR	2 COMPARTMENT SINK	PROMIDE W/JPO-1000 PULLOUT ROSE SPRAY FAUCET; JDP-DROP POST DRAIN; J-1500 SOAP DISPENSER.
P-6	REFRIGERATOR	SELECTED BY OWNER		
P-7	STATESMAN	PCE 50 20LSA	LOWBOY 50 GAL 4.5 KW WATER HEATER	HEATER IS 32-1/4" TALL; ALLOW FOR MINIMUM CLEARANCES DURING INSTALLATION
P-8	MOP SINK BY OWNER			
P-9	WOODFORD	MOD-65	HOSE BIB FREEZE PROOF	ANTI-SIPHONING WITH VACUUM BREAKER, SELF DRAINING.
P-10	AMERICAN STANDARD	WASHBROOK 1.0 URINAL 6501.010	WALL HUNG URINAL RIM 17" A.F.F., HC ACCESSIBLE	SLOAN ROYAL 3/4" VALVE

* VERIFY ALL FIXTURES WITH OWNER BEFORE PURCHASE OR INSTALLATION SEE CIVIL PLANS FOR BACKFLOW PREVENTOR

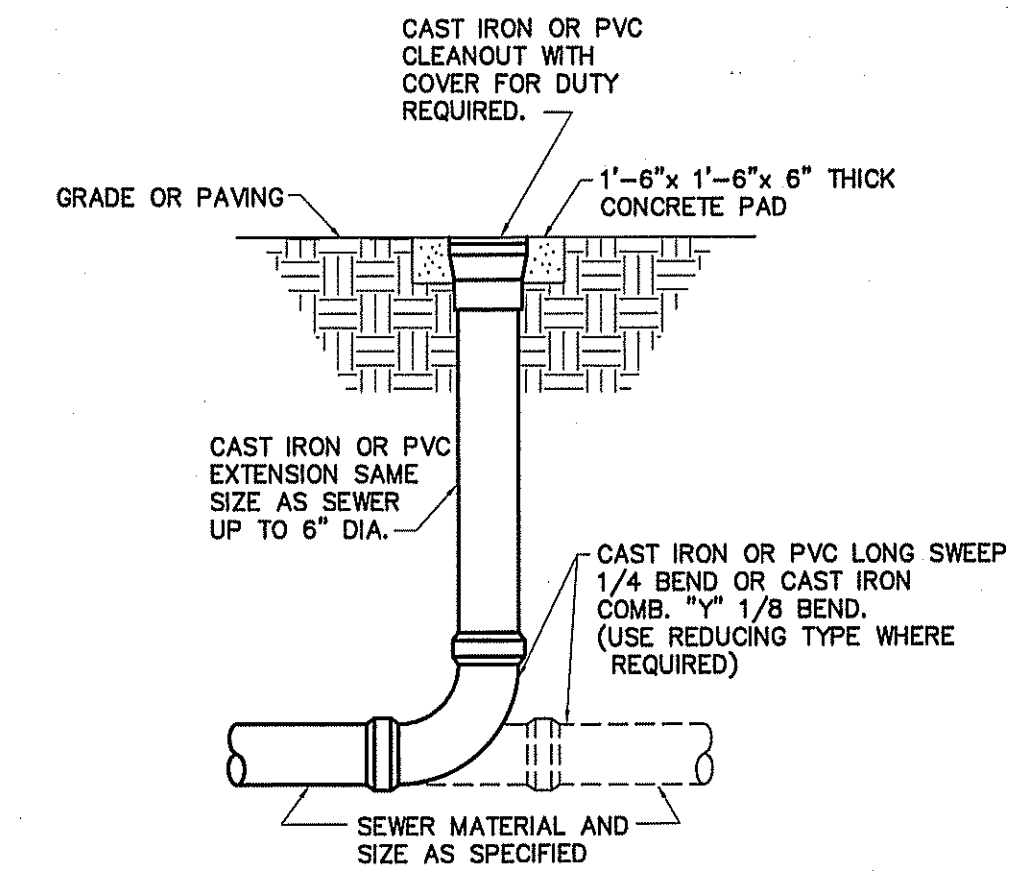
PLUMBING CONNECTION SCHEDULE

FIXTURE	C.W.	H.W.	WASTE	VENT
FLUSH TANK WATER CLOSET	1/2"	-	3"	2"
LAVATORY	1/2"	1/2"	2"	1 1/2"
ELEC. WATER COOLER	1/2"	-	2"	1 1/2"
FLOOR DRAIN			3"	2"
KITCHEN SINKS	1/2"	1/2"	3"	2"
MOP SINK	1/2"	1/2"	2"	1 1/2"
URINAL-3/4"V	3/4"	-	3"	2"

PLUMBING CALCULATIONS

ITEM	# OF	FIXTURE UNITS (EACH)			FIXTURE UNITS (TOTAL)			FIXTURE UNITS (WASTE)
		COLD	HOT	TOTAL	COLD	HOT	TOTAL	
FLUSH TANK WATER CLOSET	4	10.0	-	10.0	40.0	-	40.0	4/16
LAVATORY	3	1.5	1.5	2	4.5	4.5	6.0	1/3
DRINKING FOUNTAIN	2	.25	-	.25	.50	-	.50	0.5/1.0
2 COMP. SINK	1	3.0	3.0	4.0	3.0	3.0	4.0	5/5
HOSE BIBBS	2	1.5	-	1.5	3.0	-	3.0	1/2
MOP SINK	1	2.25	2.25	3	2.25	2.25	3.0	1/1
URINAL-3/4"	1	5.0	-	5.0	5.0	-	5.0	4/4
TOTAL					58.25	9.75	61.5	32.0

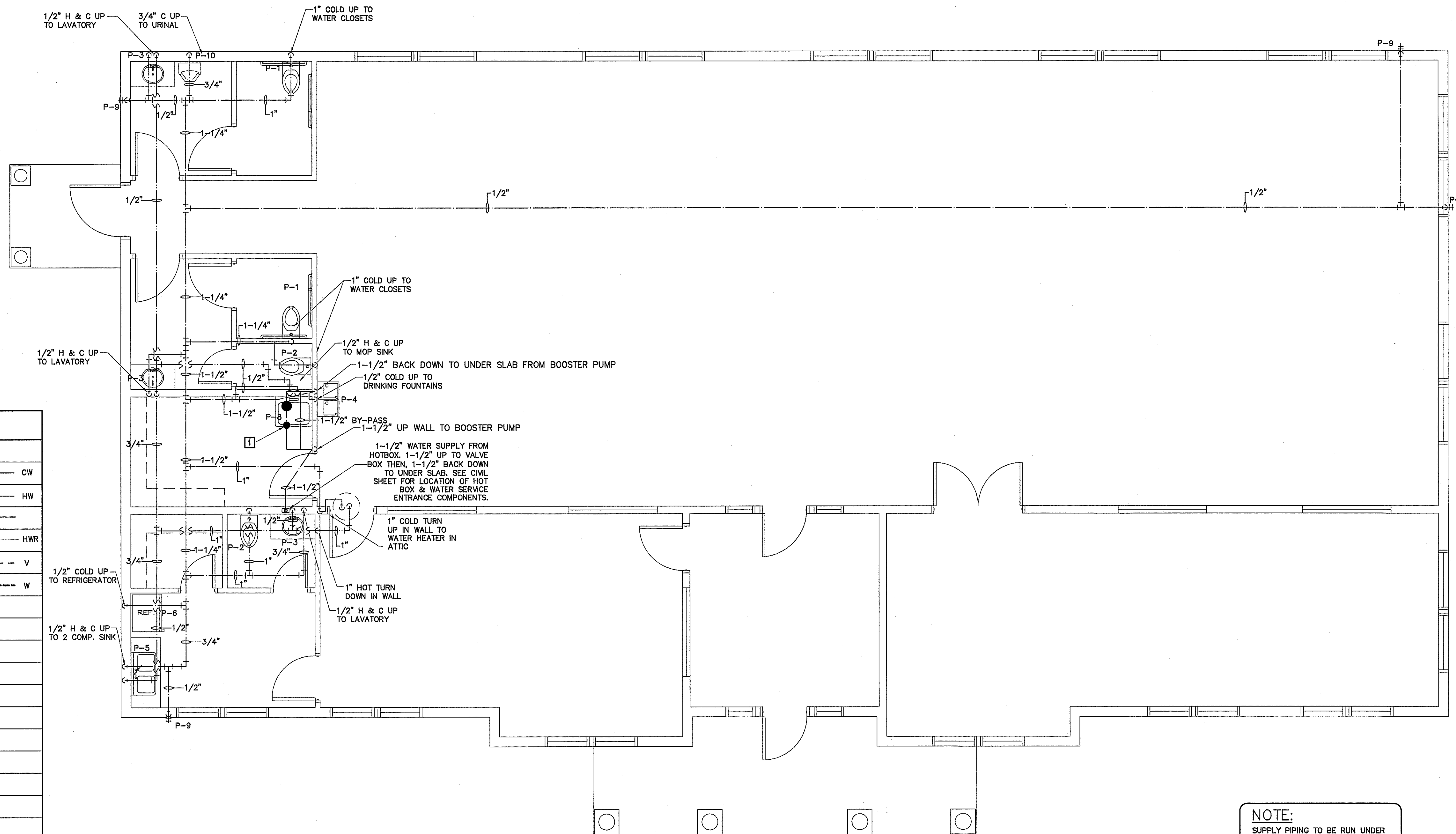
54.6 GPM
WATER SUPPLY PIPE SIZE: MINIMUM 1-1/2"



DETAIL-CLEAN OUT AT GRADE
NOT TO SCALE

KEY NOTE:

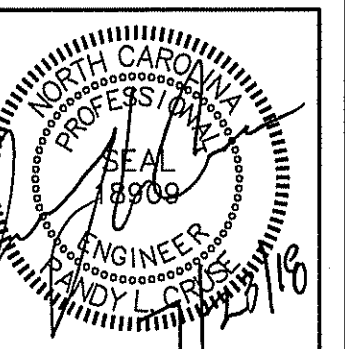
- 1 LITTLE GIANT INLINE 400 MODEL PUMP SYSTEM INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



NOTE:
SUPPLY PIPING TO BE RUN UNDER SLAB.

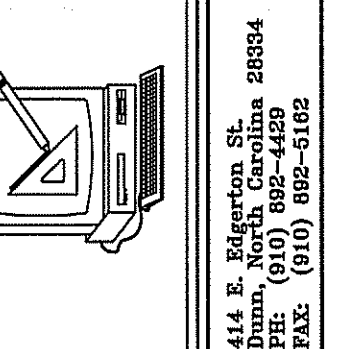
DESCRIPTION	SYMBOL
COLD WATER	— CW
HOT WATER	— HW
COLD WATER (FILTERED)	—
RECIRCULATED WATER	— HWR
VENT PIPING	— V
WASTE PIPING	— NEW — EXISTING — W
CLEAN OUT IN GRADE	□ C.O.I.G.
FLOOR CLEAN OUT	○ F.C.O.
NON FREEZE HOSE BIBB	— NFHB
FLOOR DRAIN	○ F.D.
CHECK VALVE	⊘
BALL VALVE	⊘
GATE VALVE	⊘
SHUT-OFF VALVE	⊘
BACKFLOW PREVENTER	⊘
FIXTURE DESIGNATION	P--
MOUNTING HEIGHT	MH
POINT OF CONNECTION NEW TO EXISTING	⊕
FLOOR SINK	⊕
SHOCK ABSORBER W/BALL VALVE SHUT-OFF	⊕ SA SIZE PER MANUF. RECOMMENDATIONS
CHANGE IN PIPE SIZE	—

PLUMBING SUPPLY PIPING PLAN
SCALE: 1/4" = 1'-0"



PLANS FOR:
CAMPBELL PONTE TOWNHOMES
OFFICE & GYM FACILITY
BUJES CREEK, NORTH CAROLINA

NO.	REVISIONS



Cruse and Associates, P.A.
1415 S. Salisbury St.
Durham, North Carolina 28334
P.O. Box 1000
Durham, NC 28302
TEL: (919) 896-4499
FAX: (919) 896-4502
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SHEET NO.
P-1 OF 3

PLUMBING FIXTURE SCHEDULE

MARK	MAKE	MODEL	DESCRIPTION	NOTES
P-1	AMERICAN STANDARD	MADERA 2854.016	EL. 1.6/PA 16.5" HC ELONGATED WATER CLOSET HC ACCESSIBLE, FLUSH VALVE FLOOR MOUNTED	WHITE 5901.100 SEAT, 6047.161 MANUAL VALVE
P-2	AMERICAN STANDARD	MADERA 3451.660.020	EL. 1.6/PA 15.0" ELONGATED WATER CLOSET HC ACCESSIBLE, FLUSH VALVE FLOOR MOUNTED	WHITE 5901.100 SEAT, 6047.161 MANUAL VALVE
P-3	AMERICAN STANDARD	AQUALYN 0476.028	SELF-RIMMING COUNTERTOP LAVATORY	AMERICAN STANDARD 1340M.105 SINGLE CONTROL METERING FAUCET W/POP-UP DRAIN
P-4	OASIS	PGBACSL	SPLIT LEVEL ELECTRIC WATER COOLER	BARRIER - FREE
P-5	JUST	DL-2133-A-GR	2 COMPARTMENT SINK	PROVIDE W/PO-1000 PULLOUT ROSE SPRAY FAUCET; JDP-DROP POST DRAIN; J-1500 SOAP DISPENSER.
P-6	REFRIGERATOR	SELECTED BY OWNER		
P-7	STATSMAN	PCE 50 20LSA	LOWBOY 50 GAL 4.5 KW WATER HEATER	HEATER IS 32-1/4" TALL; ALLOW FOR MINIMUM CLEARANCES DURING INSTALLATION
P-8	MOP SINK	BY OWNER		
P-9	WOODFORD	MOD-65	HOSE BIB FREEZE PROOF	ANTI-SIPHONING WITH VACUUM BREAKER, SELF DRAINING.
P-10	AMERICAN STANDARD	WASHBROOK 1.0 URINAL 6501.010	WALL HUNG URINAL RIM 17" A.F.F., HC ACCESSIBLE	SLOAN ROYAL 3/4" VALVE

* VERIFY ALL FIXTURES WITH OWNER BEFORE PURCHASE OR INSTALLATION
SEE CIVIL PLANS FOR BACKFLOW PREVENTOR

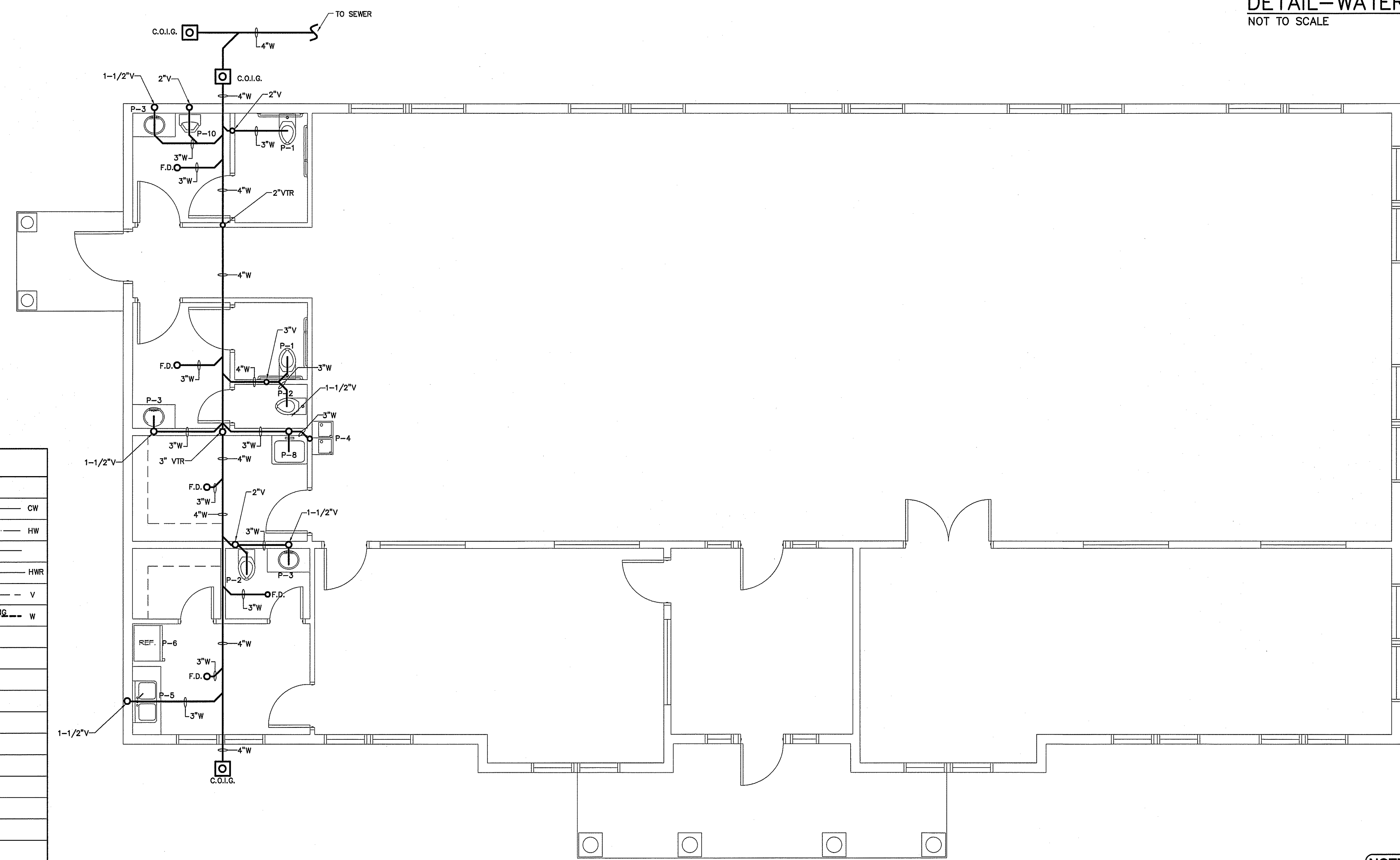
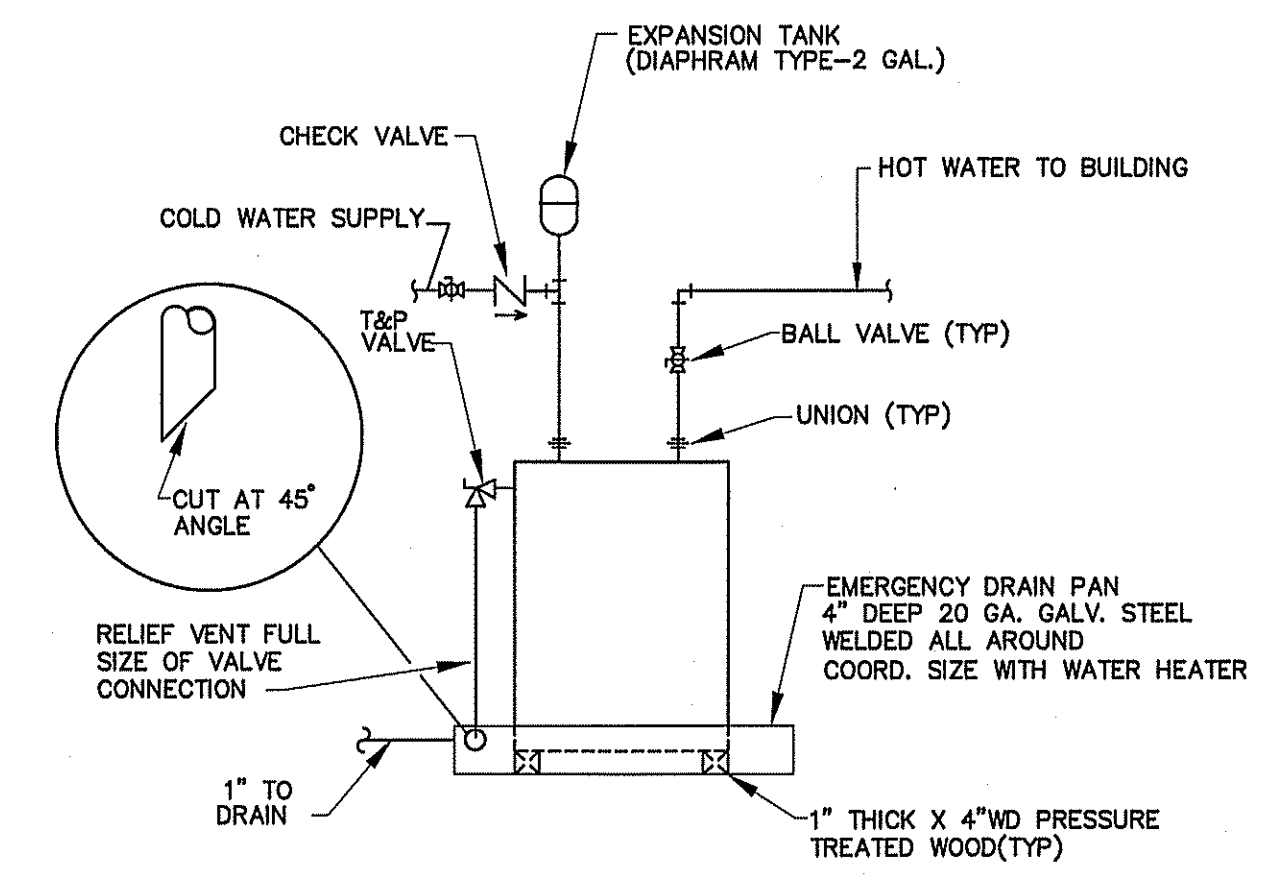
PLUMBING CONNECTION SCHEDULE

FIXTURE	C.W.	H.W.	WASTE	VENT
FLUSH TANK WATER CLOSET	1/2"	-	3"	2"
LAVATORY	1/2"	1/2"	2"	1 1/2"
ELEC. WATER COOLER	1/2"	-	2"	1 1/2"
HOSE BIBBS	1/2"	-	-	-
FLOOR DRAIN	-	-	3"	2"
KITCHEN SINKS	1/2"	1/2"	3"	2"
MOP SINK	1/2"	1/2"	2"	1 1/2"
URINAL-3/4"	3/4"	-	3"	2"

PLUMBING CALCULATIONS

ITEM	# OF	FIXTURE UNITS (EACH)			FIXTURE UNITS (TOTAL)			FIXTURE UNITS (WASTE)
		COLD	HOT	TOTAL	COLD	HOT	TOTAL	
FLUSH TANK WATER CLOSET	4	10.0	-	10.0	40.0	-	40.0	4/16
LAVATORY	3	1.5	1.5	2	4.5	4.5	6.0	1/3
DRINKING FOUNTAIN	2	.25	-	.25	.50	-	.50	0.5/1.0
2 COMP. SINK	1	3.0	3.0	4.0	3.0	3.0	4.0	5/5
HOSE BIBBS	2	1.5	-	1.5	3.0	-	3.0	1/2
MOP SINK	1	2.25	2.25	3	2.25	2.25	3.0	1/1
URINAL-3/4"	1	5.0	-	5.0	5.0	-	5.0	4/4
TOTAL	-	-	-	-	58.25	9.75	61.5	32.0

54.6 GPM
WATER SUPPLY PIPE SIZE: MINIMUM 1-1/2"



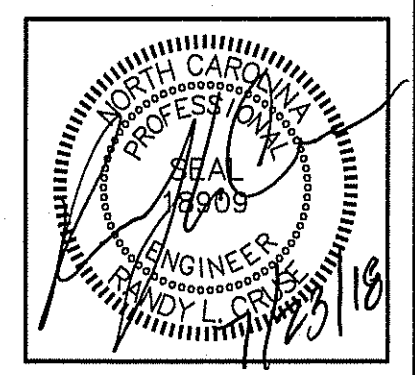
PLUMBING WASTE & VENT PIPING PLAN
SCALE: 1/4" = 1'-0"

PLUMBING LEGEND

DESCRIPTION	SYMBOL
COLD WATER	— CW
HOT WATER	— HW
COLD WATER (FILTERED)	— HWR
RECIRCULATED WATER	— HWR
VENT PIPING	- - - V
WASTE PIPING	— NEW — — — EXISTING — W
CLEAN OUT IN GRADE	□ C.O.I.G.
FLOOR CLEAN OUT	○ F.C.O.
NON FREEZE HOSE BIBB	— NFHB
FLOOR DRAIN	○ F.D.
CHECK VALVE	⌋
BALL VALVE	⊗
GATE VALVE	⊞
SHUT-OFF VALVE	⊞
BACKFLOW PREVENTER	⌋
FIXTURE DESIGNATION	P--
MOUNTING HEIGHT	MH
POINT OF CONNECTION NEW TO EXISTING	⊙
FLOOR SINK	⊞
SHOCK ABSORBER W/BALL VALVE SHUT-OFF	⊞ SA
CHANGE IN PIPE SIZE	↔

NOTE:
MAINTAIN 10' MINIMUM BETWEEN ALL INTAKE INLETS AND EXHAUST OUTLET.

NOTE:
ALL THE VTR'S TO TERMINATE ON THE REAR SIDE OF ROOF RIDGE.



PLANS FOR:
CAMPBELL POINTE TOWNHOMES
OFFICE & GYM FACILITY
BUJES CREEK, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
144 E. Blount Ave., Suite 100
Durham, NC 27601
Phone: (919) 286-4488
Fax: (919) 286-5088
LICENSE NO.: C-1721

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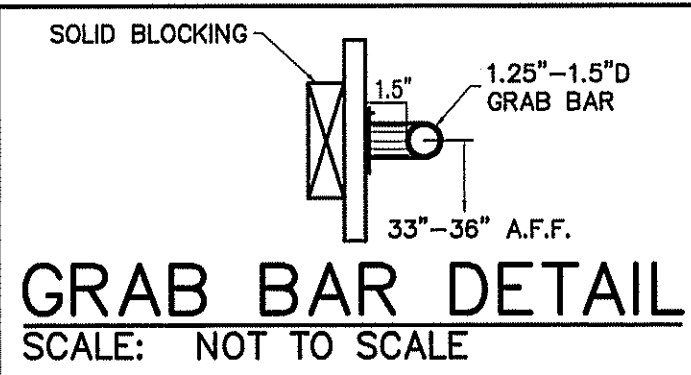
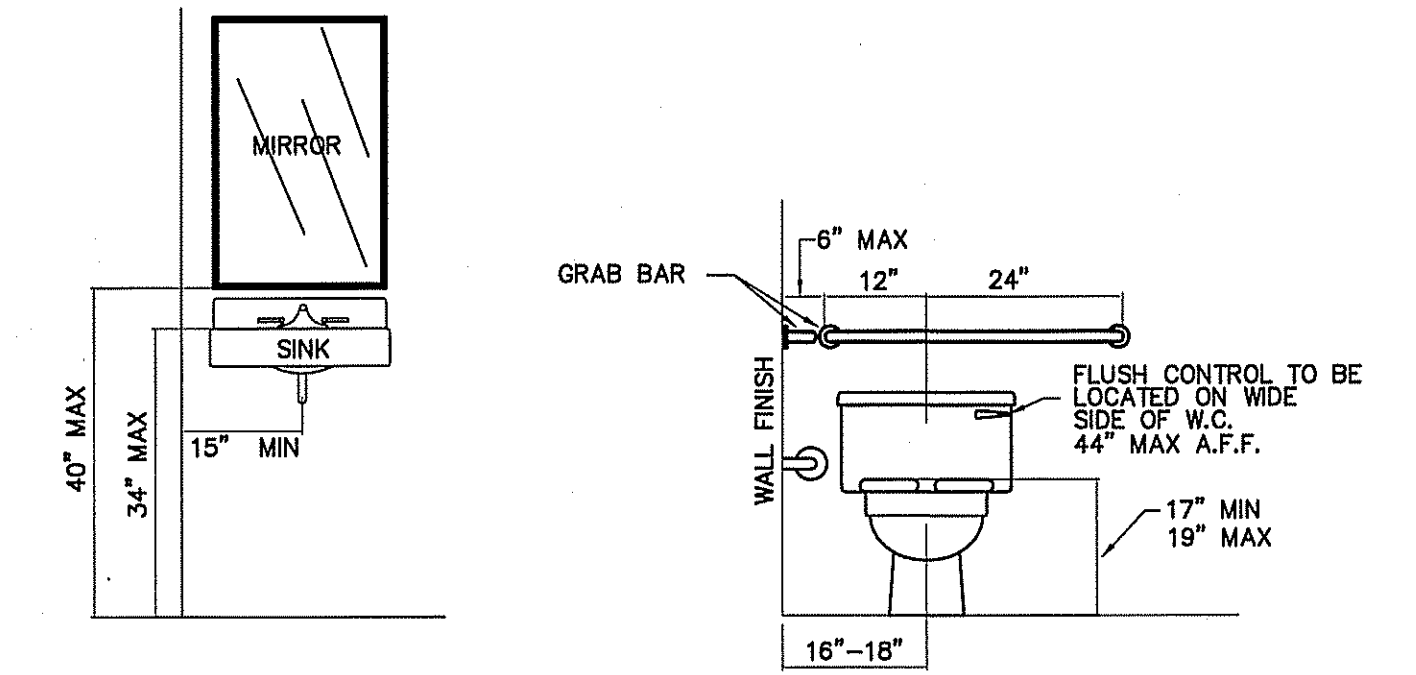
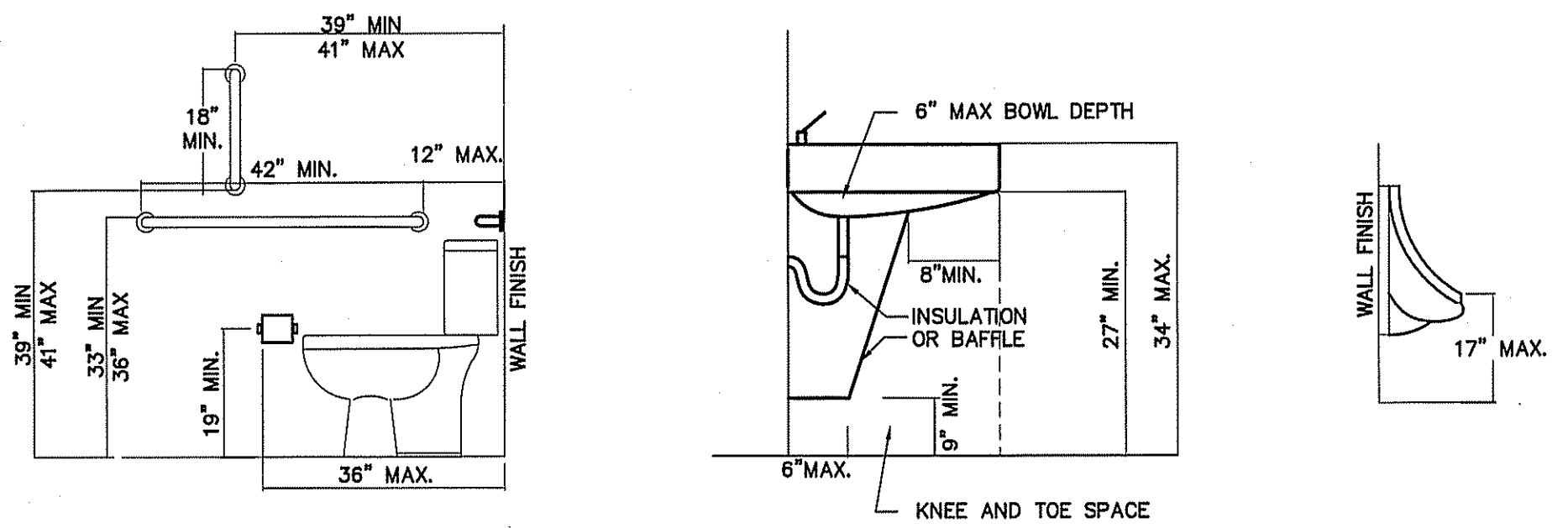
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SHEET NO.
P-2 OF 3

PLUMBING FIXTURE SCHEDULE				
MARK	MAKE	MODEL	DESCRIPTION	NOTES
P-1	AMERICAN STANDARD	MADERA 2854.016	EL 1.6/PA 16.5" HC ELONGATED WATER CLOSET HC ACCESSIBLE, FLUSH VALVE FLOOR MOUNTED	WHITE 5901.100 SEAT, 6047.161 MANUAL VALVE
P-2	AMERICAN STANDARD	MADERA 3451.660.020	EL 1.6/PA 15.0" ELONGATED WATER CLOSET HC ACCESSIBLE, FLUSH VALVE FLOOR MOUNTED	WHITE 5901.100 SEAT, 6047.161 MANUAL VALVE
P-3	AMERICAN STANDARD	AQUALYN 0476.028	SELF-RIMMING COUNTERTOP LAVATORY	AMERICAN STANDARD 1340M.105 SINGLE CONTROL METERING FAUCET W/POP-UP DRAIN
P-4	OASIS	PG8ACSL	SPLIT LEVEL ELECTRIC WATER COOLER	BARRIER - FREE
P-5	JUST	DL-2133-A-GR	2 COMPARTMENT SINK	PROVIDE W/JPO-1000 PULLOUT ROSE SPRAY FAUCET; JDP-DROP POST DRAIN; J-1500 SOAP DISPENSER.
P-6	REFRIGERATOR SELECTED BY OWNER			
P-7	STATESMAN	PCE 50 20LSA	LOWBOY 50 GAL 4.5 KW WATER HEATER	HEATER IS 32-1/4" TALL; ALLOW FOR MINIMUM CLEARANCES DURING INSTALLATION
P-8	MOP SINK BY OWNER			
P-9	WOODFORD	MOD-65	HOSE BIB FREEZE PROOF	ANTI-SIPHONING WITH VACUUM BREAKER, SELF DRAINING.
P-10	AMERICAN STANDARD	WASHBROOK 1.0 URINAL 6501.010	WALL HUNG URINAL RIM 17" A.F.F., HC ACCESSIBLE	SLOAN ROYAL 3/4" VALVE

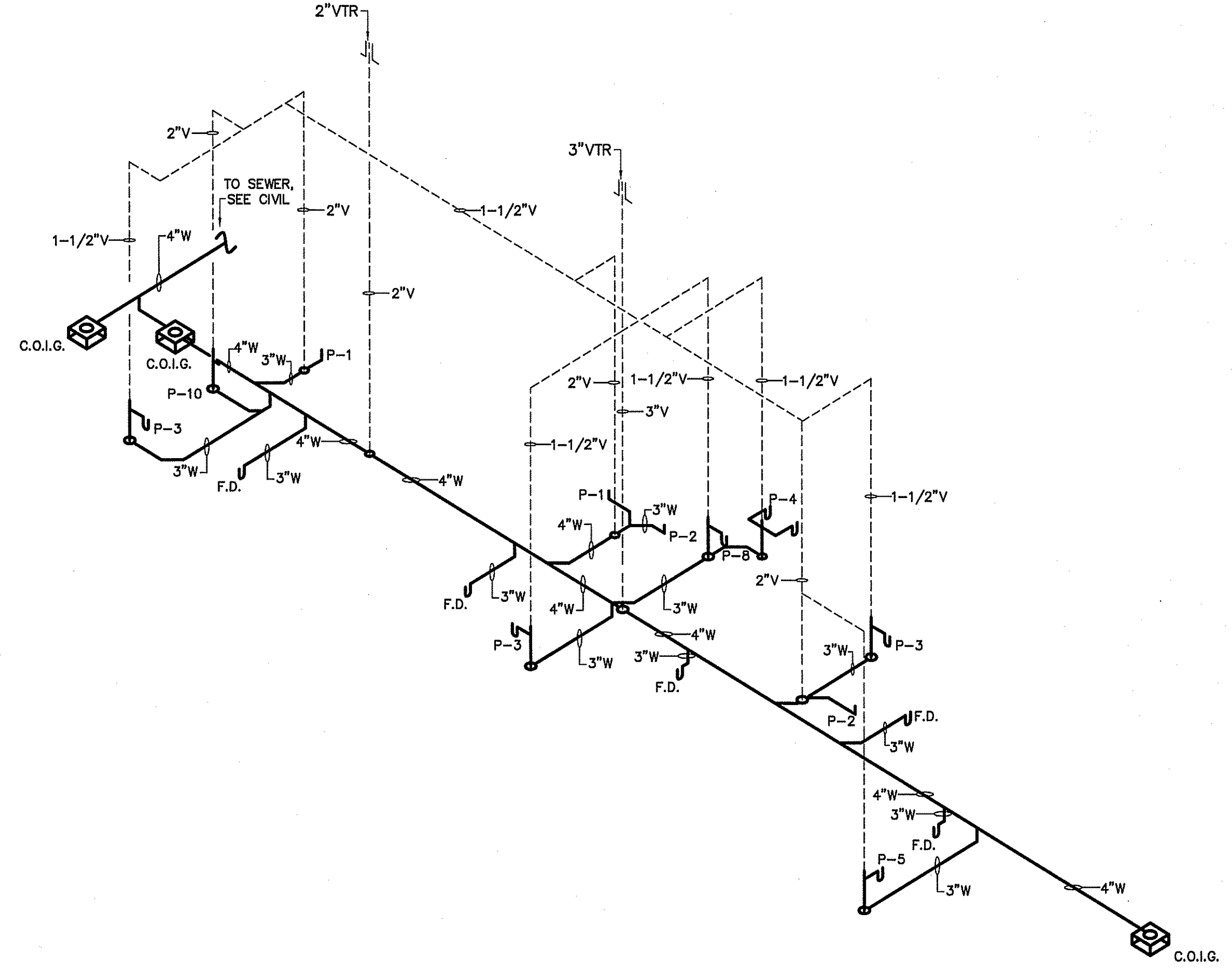
* VERIFY ALL FIXTURES WITH OWNER BEFORE PURCHASE OR INSTALLATION
SEE CIVIL PLANS FOR BACKFLOW PREVENTOR

- PLUMBING NOTES:**
- ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE LOCAL, STATE, AND NATIONAL CODES.
 - CONTRACTORS SHALL COORDINATE PIPING WITH ALL OTHER TRADES.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL/STRUCTURAL DRAWINGS FOR DIMENSIONS.
 - CONTRACTOR SHALL FURNISH AND INSTALL DIELECTRIC UNIONS AT ALL CONNECTIONS BETWEEN DISSIMILAR METALS.
 - CONTRACTOR SHALL FURNISH AND INSTALL ESCUTCHEONS AND COVER PLATES AT ALL FINISHED WALLS, CEILINGS AND FLOOR OPENINGS.
 - PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH STATE AND LOCAL CODE. (REFER TO SPECIFICATIONS.)
 - ALL PIPING SHALL BE TESTED FOR LEAKS. IF ANY LEAKS ARE DETECTED THE PIPING SHALL BE REPAIRED, RESOLDERED OR REPLACED AND RETESTED.
 - ALL SOLDER SHALL BE OF THE LEAD FREE TYPE.
 - WATER HEATER SHALL BE SUPPLIED WITH FACTORY INSTALLED T&P VALVES AND SHALL HAVE UNIONS AND ISOLATION VALVES.
 - DOMESTIC WATER SUPPLY PIPING SHALL BE COPPER, CPVC OR PEX WHERE ALLOWED BY CODE.
 - WASTE AND VENT PIPING SHALL BE SCH. 40 PVC OR HEAVY DUTY CAST IRON UNDER TRAFFIC AREAS.
 - INSTALL THERMOSTATICALLY CONTROLLED MIXING VALVES AS NEEDED TO ENSURE HOT WATER TEMPERATURE TO ALL HAND WASHING LOCATIONS DOES NOT EXCEED 110°F.
 - ALL FLOOR DRAINS & HUB DRAINS SHALL BE PROVIDED WITH TRAP PRIMER EXCEPT FLOOR DRAINS IN TOILETS WHERE HOSE BIBS ARE PROVIDED.
 - HOT WATER PIPING SHALL BE INSULATED WITH 1" THICK FIBROUS GLASS INSULATION. COLD WATER PIPING SHALL BE INSULATED WITH 1/2" FIBROUS GLASS INSULATION.
 - ALL SUPPLY RUNS TO BE UNDER SLAB.

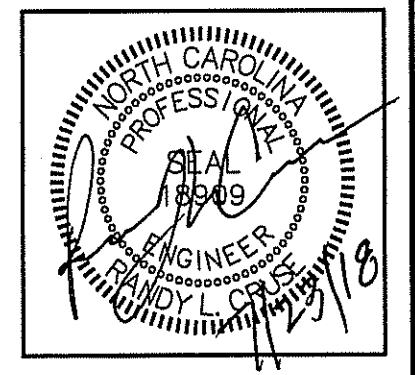


ALL FAUCETS/FIXTURES TO BE ADA COMPLIANT AS REQUIRED.
RESTROOM ACCESSIBILITY DETAILS
SCALE: 1/2" = 1'-0"

PLUMBING LEGEND	
DESCRIPTION	SYMBOL
COLD WATER	— CW
HOT WATER	— HW
COLD WATER (FILTERED)	— L
RECIRCULATED WATER	— HWR
VENT PIPING	- - - V
WASTE PIPING	— NEW — EXISTING — W
CLEAN OUT IN GRADE	□ C.O.I.G.
FLOOR CLEAN OUT	○ F.C.O.
NON FREEZE HOSE BIBB	— NFBH
FLOOR DRAIN	○ F.D.
CHECK VALVE	—
BALL VALVE	—
GATE VALVE	—
SHUT-OFF VALVE	—
BACKFLOW PREVENTER	—
FIXTURE DESIGNATION	P- --
MOUNTING HEIGHT	MH
POINT OF CONNECTION NEW TO EXISTING	—
FLOOR SINK	—
SHOCK ABSORBER W/BALL VALVE SHUT-OFF	— SA SIZE PER MANUF. RECOMMENDATIONS
CHANGE IN PIPE SIZE	—



WASTE & VENT RISER DIAGRAM
NOT TO SCALE



PLANS FOR:
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OFFICE & GYM FACILITY
BUJES CREEK, NORTH CAROLINA

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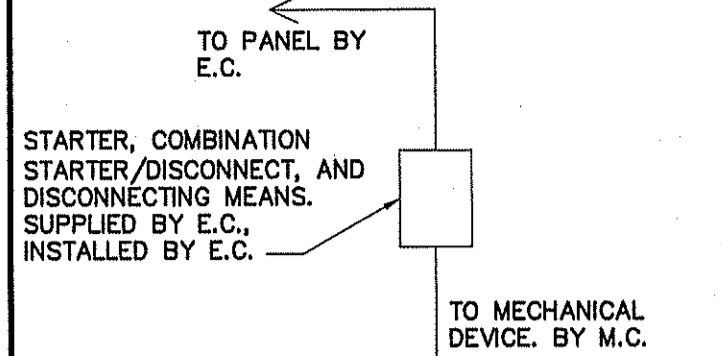
Cruse And Associates, P.A.
C.A.
1115 W. Hargett St.
Durham, North Carolina 27604
TEL: (919) 882-4489
FAX: (919) 882-3182
LICENSE NO.: C-1721

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SHEET NO.
P-3 OF 3

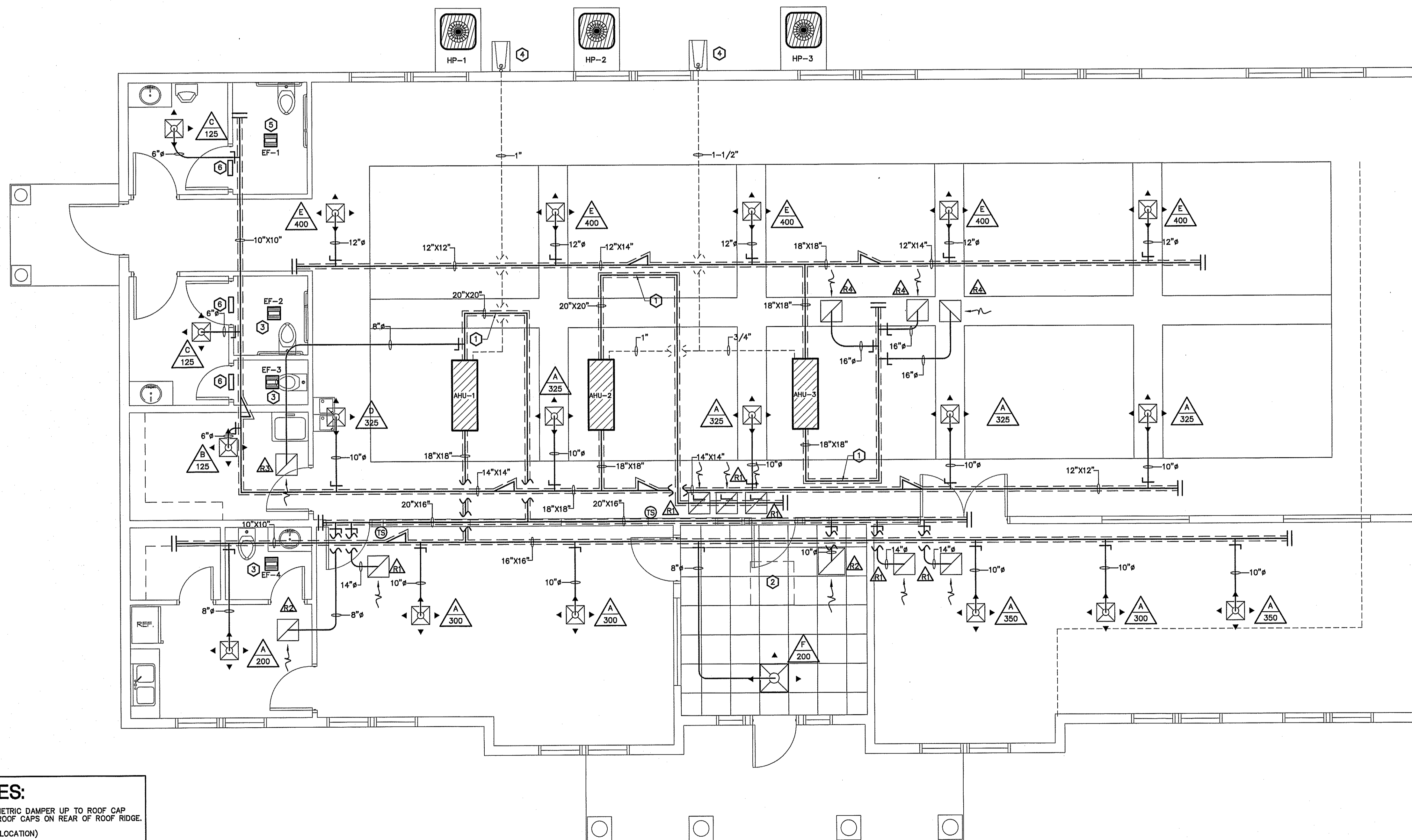
CONNECTION SCHEDULE



ALL STARTERS, COMBINATION STARTER/DISCONNECTS, AND DISCONNECTING MEANS, SUPPLIED BY E.C. FOR MECHANICAL EQUIPMENT AS REQUIRED BY NEC AND MECHANICAL EQUIPMENT MANUFACTURER'S REQUIREMENTS.

MECHANICAL SYMBOL LEGEND

SINGLE LINE	DOUBLE LINE	DESCRIPTION	SINGLE LINE	DOUBLE LINE	DESCRIPTION	SINGLE LINE	DOUBLE LINE	DESCRIPTION
		TAKE OFF TO SUPPLY AIR REGISTER WITH EXT. INSUL. DUCTWORK			VOLUME CONTROL DAMPER (TYP) CEILING DIFFUSER			SUPPLY AIR CEILING DIFFUSER, ARROW INDICATES DIRECTION OF BLOW & ACTIVE DIFFUSER SIDES
		END CAP			F.D.=FIRE DAMPER (1-1/2)=RATED FOR 1-1/2 HRS.			(1)CUSHION HEAD @ BRANCH OR DIFFUSER RUNOUT (2)CUSHION HEAD IS EQUAL TO 1-1/2 WIDTH OF THE BRANCH DUCT OR DIFFUSER RUNOUT
		ACCESS DOOR DOOR SIZE DUCT HEIGHT 8X8 10" 10X10 12" 12X12 14" & LARGER			TWO SIDED TRANSITION			R.A. OR EXHAUST DUCT TURNS DOWN @ 90 DEGS.
		KEY NOTE			KEY NOTE			MARK XXX - CFM-DIFFUSER, REGISTER OR GRILLE (SEE SCHEDULE)
		EXHAUST FAN			EXHAUST FAN			EXHAUST FAN



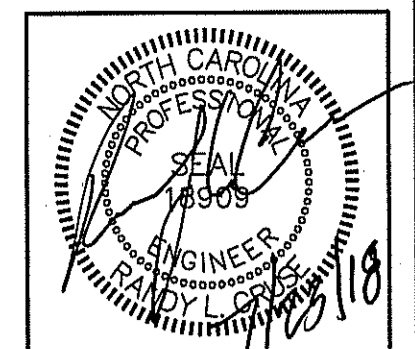
KEY NOTES:

- ① 10" OUTSIDE AIR DUCT WITH VOLUMETRIC DAMPER UP TO ROOF CAP (GREENHECK GR51-10). KEEP ALL ROOF CAPS ON REAR OF ROOF RIDGE.
 - ② ATTIC ACCESS (FIELD COORDINATE LOCATION)
 - ③ 6" EXHAUST AIR DUCT TO ROOF CAP.
 - ④ PVC CONDENSATE FROM AHU-1, 2, & 3. TURN DOWN IN WALL & SPILLS OVER SPLASH BLOCK.
 - ⑤ 8" EXHAUST AIR DUCT TO ROOF CAP.
 - ⑥ 12X6 TRANSFER GRILLE IN WALL ABOVE DOOR
- NOTE:
ROOF CAPS TO BE PLACED ON REAR SIDE OF RIDGE LINE.
MAINTAIN MINIMUM OF 10' SEPARATION BETWEEN EXHAUST & INTAKE.

HVAC MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

NOTE:
MAINTAIN A MINIMUM OF 10' SEPERATION BETWEEN ALL INTAKE & EXHAUST OUTLETS INCLUDING PLUMBING VTR'S.

NOTE:
MAINTAIN 3' BETWEEN HEAT PUMPS. MECHANICAL CONTRACTOR TO VERIFY & MAINTAIN MANUFACTURER'S MINIMUM SEPERATION REQUIREMENTS BEFORE INSTALLATION.



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Cruse And Associates, P.A.

414 E. Blanton St. Raleigh, NC 27604
(919) 882-4430
(919) 882-5182 FAX

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SHEET NO.
M-1 OF 2

AIR HANDLER UNIT														SPLIT SYSTEM HEAT PUMP UNITS													
AHU NO.	MANUFACTURER	MODEL	VOLTAGE	E.S.P.	OUTSIDE AIR (CFM)	CFM	UNIT FLA	REF. LINES		SEER	HTR KW (240)	COOLING CAPACITY (MBH)		HEATING CAPACITY (MBH)		HSPF	MIN. CIRC. AMPACITY	M.O.C.P.	MARK	MANUF.	MODEL	VOLTAGE	# COMP.	MIN. CIRC. AMPACITY	M.O.C.P.	UNIT FLA.	ACCESSORIES
								GAS	LIQ.			TOTAL	SENS.	HIGH	LOW												
AHU-1,2,3	RHEEM	RH1T-6024STAN	240/1/60	.46	*	2000	36.0	7/8	3/8	15.0	7.2	58.0	42.4	56.0	35.6	9.0	45	45	HP-1,2,3	RHEEM	RP1560AJ1	240/1/60	1	31	50	24.7	EXCLUDE 8,18

* SEE OUTSIDE AIR CHART ON MECHANICAL SHEETS
 ** PROVIDE OUTDOOR THERMOSTAT TO LOCK OUT SUPPLEMENTAL ELECTRIC HEAT AT OUTDOOR TEMPERATURES ABOVE 40F.

- ACCESSORIES
- | | | |
|-------------------------------|---|--|
| 1 TIME-DELAY RELAY | 7 LIQUID SOLENOID VALVE | 13 DISCHARGE LINE MUFFLER |
| 2 CYCLE PROTECTOR | 8 LOW-AMBIENT CONTROLLER | 14 SUCTION AND LIQUID LINE SHUT OFF VALVES |
| 3 EVAPORATOR FREEZE PROTECTOR | 9 FILTER DRIER (LIQUID LINE) | 15 THERMOSTAT (SEE NOTE) |
| 4 ISOLATION RELAY | 10 OUTDOOR T-STAT TO LOCK OUT AUX. HT. (SET @ 40° F ADJ.) | 16 SUPPORT FEET |
| 5 TXV | 11 LOW PRESSURE CONTROL | 17 COIL GUARDS |
| 6 HIGH PRESSURE SWITCH | 12 CRANKCASE HEATER | 18 HUMIDISTAT |

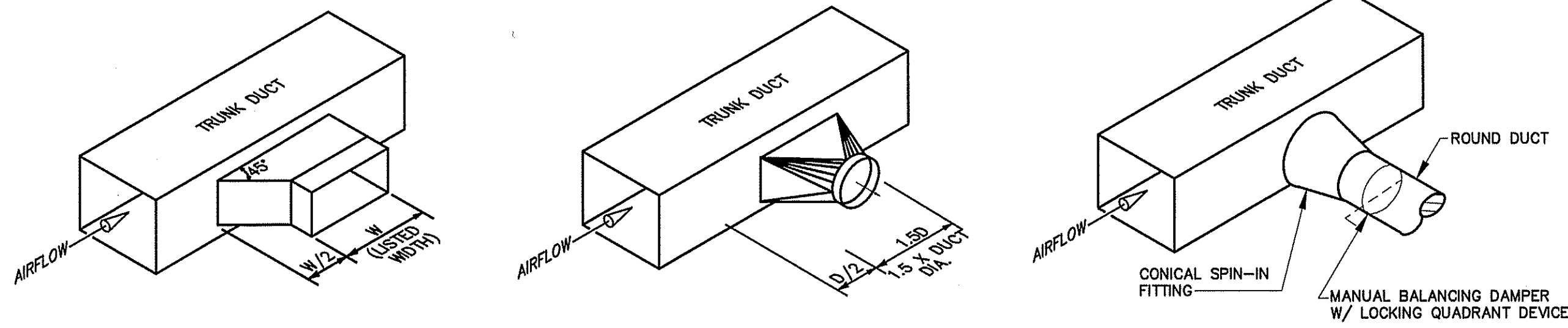
COOLING CAPACITY @ 80 DEG. F DB/67 DEG WB AIR ENTERING INDOOR UNIT & 95 DEG. F DB AIR ENTERING OUTDOOR UNIT
 HEATING CAPACITY: HIGH TEMP = 70 DEG F DB INDOOR EAT & 47 DEG F DB/43 DEG F WB AIR ENTERING OUTDOOR UNIT
 LOW TEMP = 70 DEG F DB INDOOR EAT & 17 DEG F DB/15 DEG F WB ENTERING OUTDOOR UNIT

T-STAT: THE NUMBER OF STAGES OF HEATING/COOLING SHALL MATCH THE NUMBER OF STAGES OF HEAT AVAILABLE IN THE HPU OR THE NUMBER OF STAGES OF COOLING AVAILABLE IN THE HPOU. PROVIDE WITH T-STAT; 7 DAY PROGRAMMABLE, DIGITAL.

REGISTER, GRILLE, & DIFFUSER SCHEDULE*

MARK	DESCRIPTION	MAX. NC	NECK	BORDER TYPE	SIZE	MATERIAL	FINISH	MANUFACTURER	MODEL NUMBER	ACCESSORIES / NOTES
A	DIFFUSER-4-WAY	30	9"X9"	SURFACE	15"X15"	STEEL	WHITE	TITUS	TDC 9X9 1 26 4	SQ-TO-RND
B	DIFFUSER-4-WAY	30	6"X6"	SURFACE	12"X12"	STEEL	WHITE	TITUS	TDC 6X6 1 26 4	SQ-TO-RND
C	DIFFUSER-3-WAY	30	6"X6"	SURFACE	12"X12"	STEEL	WHITE	TITUS	TDC 6X6 1 26 3	SQ-TO-RND
D	DIFFUSER-3-WAY	30	9"X9"	SURFACE	15"X15"	STEEL	WHITE	TITUS	TDC 9X9 1 26 3	SQ-TO-RND
E	DIFFUSER-4-WAY	30	12"X12"	SURFACE	18"X18"	STEEL	WHITE	TITUS	TDC 12X12 1 26 4	SQ-TO-RND
F	DIFFUSER-3-WAY	30	9"X9"	LAY-IN	24"X24"	STEEL	WHITE	TITUS	TDC 9X9 3 26 3	SQ-TO-RND
R1	RETURN GRILLE	30	14"X14"	SURFACE		STEEL	WHITE	TITUS	23RL 14X14 1 26 PFAP	SQ-TO-RND
R2	RETURN GRILLE	30	10"X10"	SURFACE		STEEL	WHITE	TITUS	23RL 10X10 1 26 PFAP	SQ-TO-RND
R3	RETURN GRILLE	30	8"X8"	SURFACE		STEEL	WHITE	TITUS	23RL 8X8 1 26 PFAP	SQ-TO-RND
R4	RETURN GRILLE	30	16"X16"	SURFACE		STEEL	WHITE	TITUS	23RL 16X16 1 26 PFAP	SQ-TO-RND

* VERIFY CEILING TYPE BEFORE ORDERING, NARROW TEE REQUIREMENTS, PLASTER FRAMES, SPACE & SIZE, ETC. TO BE INCLUDED WITH DIFFUSERS AT NO ADDITIONAL COST TO OWNER



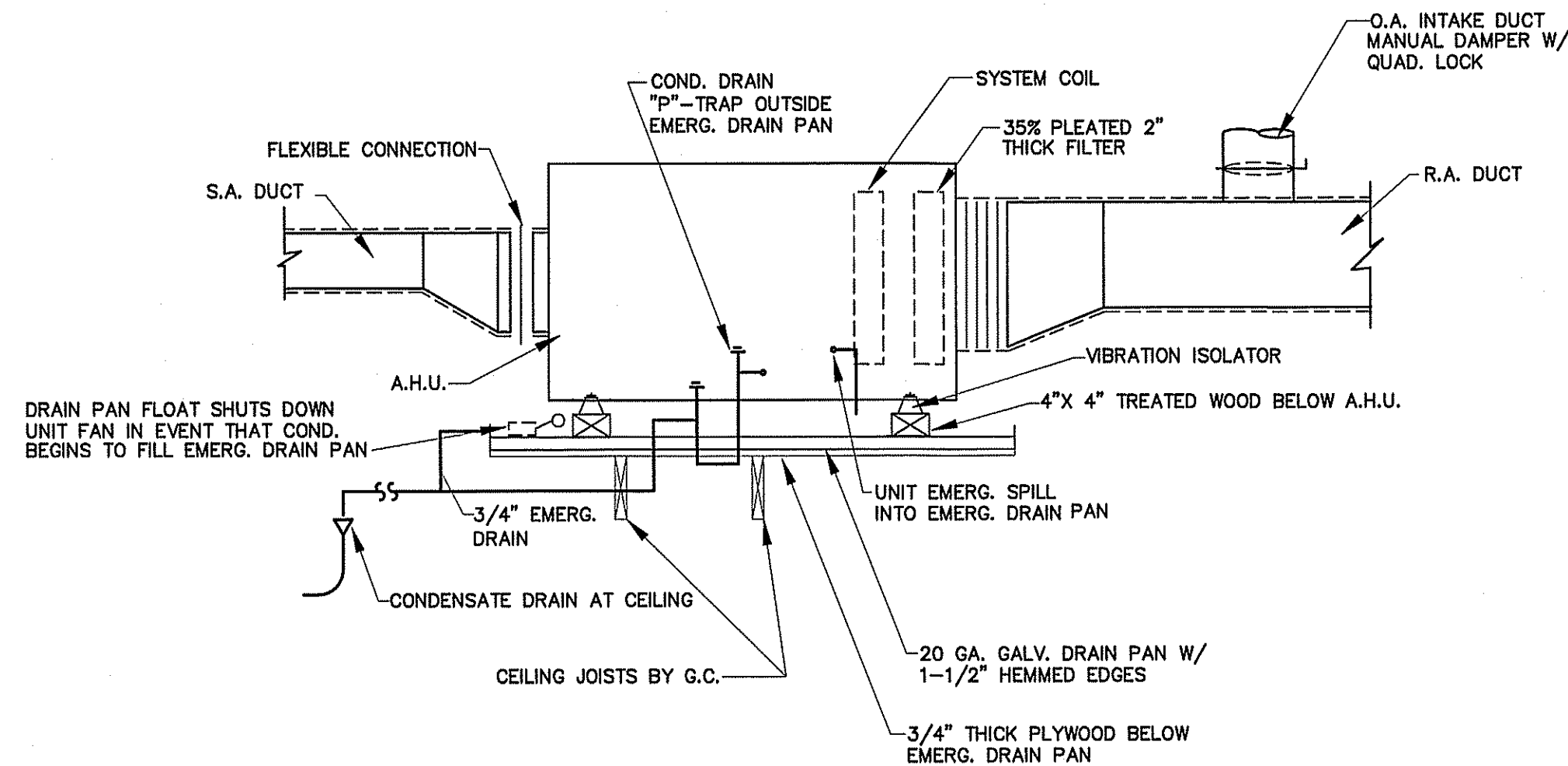
TYPICAL LATERAL TO REGISTER OR BRANCH DUCT

NOT TO SCALE

EXHAUST FAN SCHEDULE								
MARK	DESCRIPTION	CFM	EXTERNAL S.P. IN (W.G.)	WATTS	ELECTRICAL			NOTES
					VOLT	PH	HZ	
EF-1	EXHAUST/FAN LIGHT COMBO	155	.125	80	115	1Ø	60	RCC-7 ROOF CAP, INSECT SCREEN W/BACK DRAFT DAMPER
EF-2,3 & 4	EXHAUST/FAN LIGHT COMBO	75	.25	70	115	1Ø	60	ROOF CAP, INSECT SCREEN, W/BACK DRAFT DAMPER

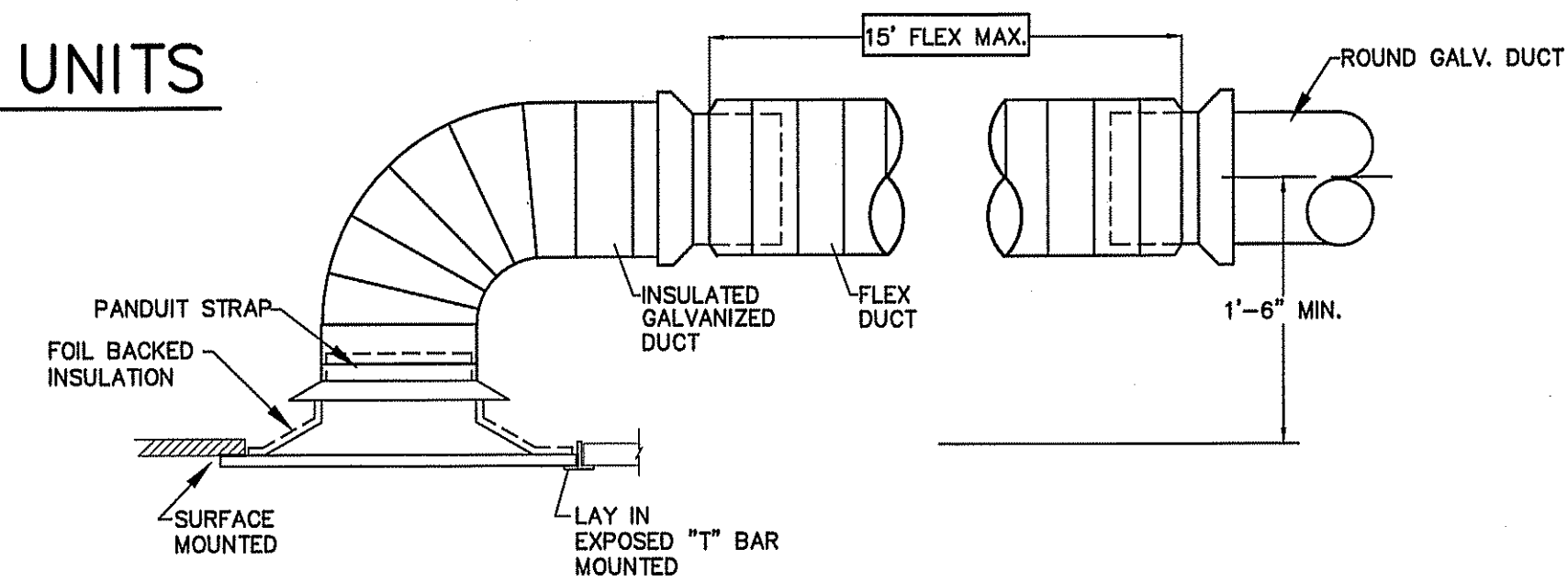
MECHANICAL NOTES (GENERAL)

- DUCTWORK LAYOUTS ARE SCHEMATIC. ALL RISES, DROPS, OFFSETS, AND TRANSITIONS REQUIRED BUT ARE NOT SHOWN SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- DUCTWORK SHALL BE GALVANIZED STEEL AND SHALL BE CONSTRUCTED IN COMPLIANCE WITH SMACNA STANDARDS FOR LOW VELOCITY DUCTWORK. DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. FLEXIBLE RUNOUTS SHALL NOT EXCEED 15' AND SHALL NOT BE USED TO FORM ELBOWS. CONNECTIONS FROM RECTANGULAR TO ROUND DUCT SHALL BE MADE WITH MANUFACTURED 45 DEG. LATERAL TAPS.
- SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED WITH FIBERGLASS INSULATION WITH A MINIMUM THERMAL RESISTANCE OF R-5.0 (IN UNCONDITIONED AREAS) AND AN "FSK" VAPOR BARRIER. DIFFUSERS SHALL BE INSULATED WITH FIBERGLASS INSULATION WITH VAPOR BARRIER. ALL JOINTS SHALL BE TAPED WITH A FOIL BACKED TAPE TO PROVIDE A CONTINUOUS VAPOR BARRIER.
- THE ELECT. CONTRACTOR SHALL SUPPLY, AND MECH. CONTRACTOR SHALL INSTALL A SMOKE DETECTOR IN THE RETURN AIR DUCTWORK, THE EVAPORATOR FAN AND THE COMPRESSOR SHALL BE INTERLOCKED WITH THE SMOKE DETECTORS SO THAT THE COMPRESSOR AND THE EVAPORATOR FAN ARE DE-ENERGIZED WHEN SMOKE IS DETECTED. THE SMOKE DETECTORS SHALL HAVE A SUFFICIENT NUMBER OF CONTACTS TO INTERFACE WITH THE BUILDING FIRE ALARM SYSTEM.
- ALL DUCTWORK SHALL BE SEALED AIR TIGHT WITH SEALING COMPOUND.
- THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER TRADES PRIOR TO INSTALLATION OF ANY OF HIS PIPING, DUCTWORK, OR EQUIPMENT.
- THE MECHANICAL CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE MECHANICAL PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION OF THE MECHANICAL SYSTEMS AND REVIEW ANY CONFLICTS THAT ARE NOTED WITH THE ENGINEER.
- IT WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO ENSURE THAT ITEMS TO BE FURNISHED UNDER HIS CONTRACT WILL FIT THE SPACE AVAILABLE. HE SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS AND SHALL FURNISH SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE AND INTENT MEANING OF THE PLANS AND SPECIFICATIONS. HE SHALL PROVIDE THE ENGINEER SCALED DRAWINGS OF ALL MECHANICAL DRAWINGS.
- ALL EQUIPMENT SHALL BE LOCATED AND INSTALLED TO PROVIDE MAXIMUM SPACE FOR MAINTENANCE AND SERVICE.
- ALL ELBOWS IN DUCTWORK SHALL BE RADIUS ELBOWS, UNLESS NOTED OTHERWISE. WHERE SQUARE ELBOWS ARE SHOWN, INSTALL TURNING VANES.
- MECHANICAL CONTRACTOR TO FIELD COORDINATE LOCATION OF MECHANICAL SYSTEMS WITH ELECTRICAL AND PLUMBING SYSTEMS. COORDINATE WITH ALL OTHER SYSTEMS AS NECESSARY.
- MECHANICAL WORK INCLUDES DEMOLITION, RELOCATION, IN EXISTING & NEW WORK AS APPLICABLE. MECHANICAL CONTRACTOR TO SUPPLY A COMPLETE SYSTEM IN EACH AREA.
- DUCT SIZES SHOWN ARE NET DIMENSIONS.



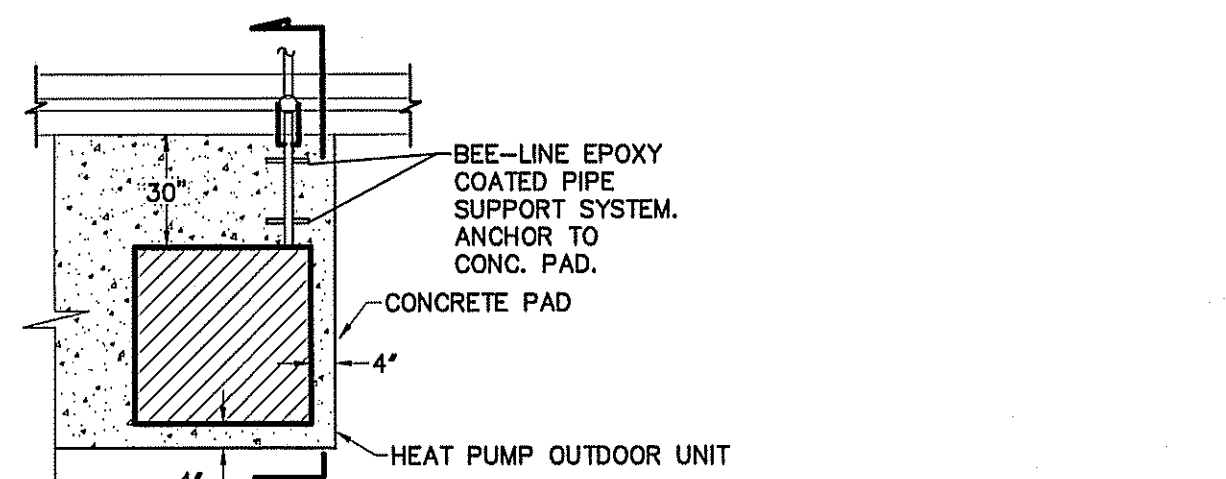
TYPICAL DETAIL AT AIR HANDLING UNITS

NOT TO SCALE



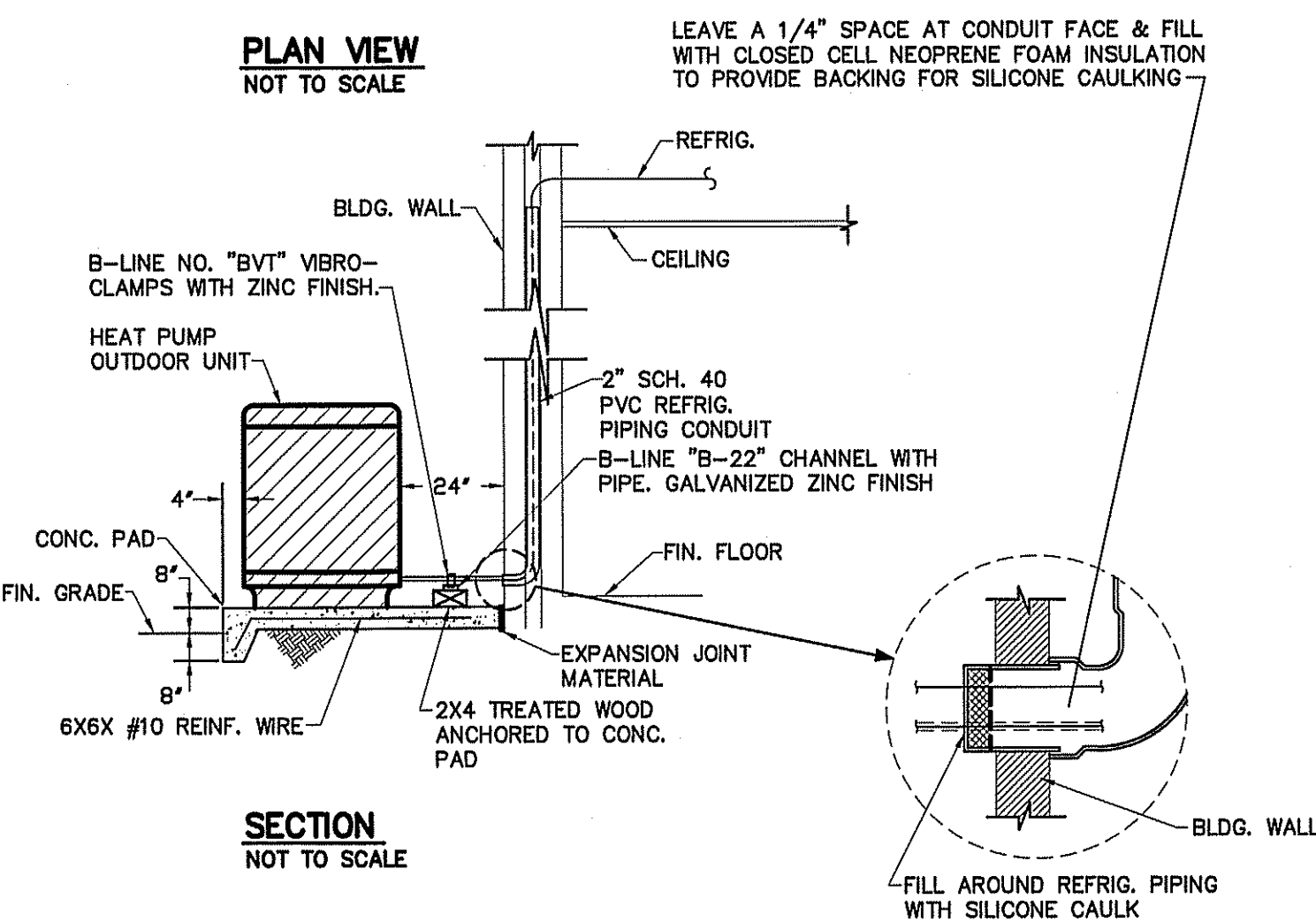
DETAIL-CEILING DIFFUSER CONNECTION

NOT TO SCALE



PLAN VIEW

NOT TO SCALE



SECTION

NOT TO SCALE

DETAIL-TYPICAL HEAT PUMP OUTDOOR UNIT

NOT TO SCALE

METHOD OF COMPLIANCE:

PRESCRIPTIVE ENERGY COST BUDGET
 THERMAL ZONE 4A - HARNETT COUNTY, NC

EXTERIOR DESIGN CONDITIONS

WINTER DRY BULB 22 DEG. F.
 SUMMER DRY BULB 93 DEG. F.

INTERIOR DESIGN CONDITIONS

WINTER DRY BULB 70 DEG. F.
 SUMMER DRY BULB 74 DEG. F.
 RELATIVE HUMIDITY 56%

BUILDING HEATING LOAD 36.3 MBH

BUILDING COOLING LOAD 14.2 TONS

MECHANICAL SPACE CONDITIONING SYSTEM

UNITARY— COOLING — 15.0 SEER

HEATING — 9.0 HSPF

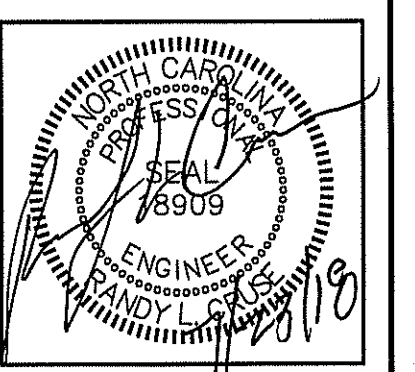
BOILER— NOT APPLICABLE IN THIS PROJECT

CHILLER— NOT APPLICABLE IN THIS PROJECT

LIST EQUIPMENT EFFICIENCIES

EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS)

MOTORS USED ON THIS PROJECT ARE INCLUDED IN THE EFFICIENCY RATING OF THE UNIT. SEE PLANS FOR EFFICIENCIES.



PLANS FOR:
 CAMPBELL PONTE TOWN-HOMES
 OFFICE & GYM FACILITY
 BUJES CREEK, NORTH CAROLINA

REVISIONS	
NO.	

414 E. Edgerton St.
 Raleigh, NC 27604
 Phone: (919) 886-4400
 Fax: (919) 886-4402

Cruse
 And
 Associates, P.A.
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SHEET NO.
 M-2 OF 2

LIGHT FIXTURE SCHEDULE							
MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	BALLASTS	WATTAGE	REMARKS
A	LED FLUSH MOUNT LINEAR LOW PROFILE	LITHONIA	FMLL 9 30840 DFMLL	LED		36.23	
B	6" OPEN CAN DOWN LED LIGHT	LITHONIA	LDN6 35/15 L06AR LSS MVOLT EZ10	LED		20.5	
C	3" LED RECESSED DOWNLIGHT	ACULLUX	AX3 D G4 12LM 35K 80CRI 50D GZ1 120 ICAT 3DP CS SF WET	LED		11.0	TO BE ON PHOTOCELL
D	HANGING PENDANT SELECTED & PURCHASED BY OWNER INSTALLED BY CONTRACTOR			LED		120	
F	CEILING FAN SELECTED & PURCHASED BY OWNER, INSTALLED BY CONTRACTOR					120	
G	LED CHANDELIER SELECTED & PURCHASED BY OWNER, INSTALLED BY CONTRACTOR			LED		240	N/L
EF/LT	EXHAUST FAN/LIGHT COMBO WITH WITH 75 OR 155 CFM (SEE MECHANICAL PLANS FOR CFM & STATIC PRESSURE)			LED		7	
EM	EMERGENCY LIGHT WITH BATTERY BACKUP	SURE-LITES	COBMR2142SM				
EX	LED TYPE EXIT LIGHT WITH BATTERY BACKUP	SURE-LITES	LPX 70 RW 120/277				
EM2	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)	SURE-LITES	12T-12-WMH OR 12T-12-DWMH OR EQUAL				

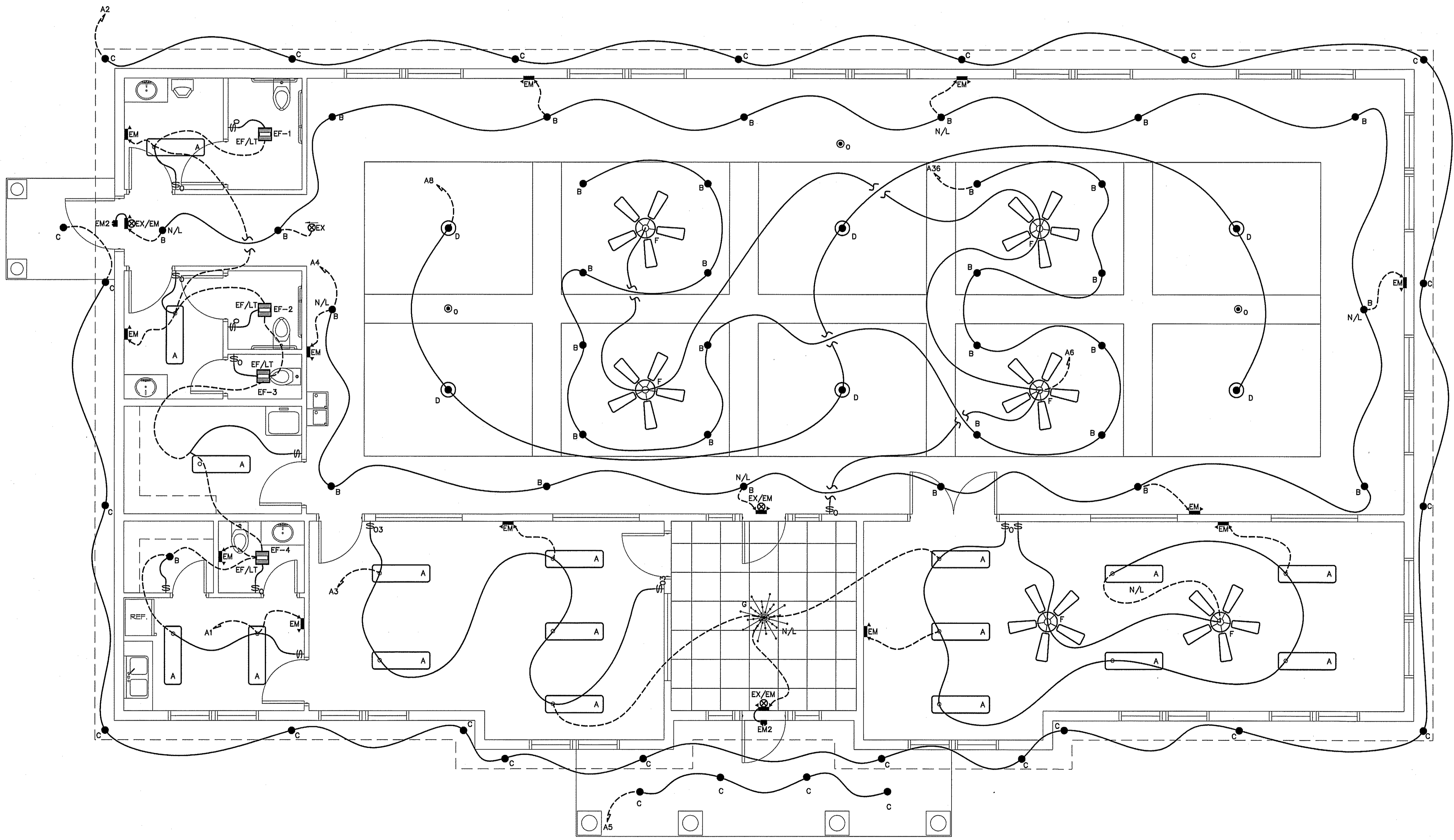
FIXTURES SELECTED BY OWNER AND PURCHASED BY CONTRACTOR

LIGHTING DATA FOR ENERGY CODE					
AREA USE	AREA FT ²	WATTS PER FT ² ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
EXERCISE/GYM	4108	0.72	2958	1847	1111
TOTAL			2958	1847	1111

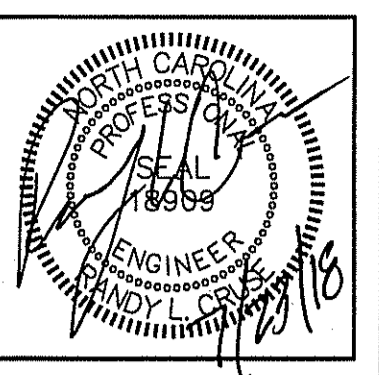
LIGHTING CONTROLS FOR ROOMS 106 & 107

1. PROVIDE WALL MOUNTED OCCUPANCY SENSOR WITH MANUAL SWITCH AT ENTRANCE TO ROOMS 106 AND 107.
2. PROVIDE CEILING MOUNTED OCCUPANCY SENSORS IN ROOM 107.
3. TIE OCCUPANCY SENSORS IN ROOM 107 TO CONTACTOR TO BRING ON CIRCUITS A4, A5, AND A36 UPON ACTIVATION OF ANY OCCUPANCY SENSOR IN THAT SPACE. SET DELAY AS SPECIFIED BY OWNER.
4. SENSORS TO HAVE PIR AND MICROPHONICS CAPABILITY.
5. INSTALL SENSORS PER MANUFACTURER'S RECOMMENDATION.

ELECTRICAL LEGEND	
MARK	DESCRIPTION
Ⓜ	'GFI' DUPLEX WITH WEATHERPROOF COVER
Ⓜ	GROUND FAULT INTERRUPTING RECEPTACLE
Ⓜ	208V OR 240 V RECEPTACLE
Ⓜ	TELEPHONE/DATA OUTLET
Ⓜ	JUNCTION BOX
Ⓜ	FUSED DISCONNECT SWITCH
Ⓜ	"STEEL CITY" FLOOR BOX WITH CAT 5E CABLE FOR DATA
Ⓜ	SWITCHED BRANCH CIRCUIT
Ⓜ	UNSWITCHED BRANCH CIRCUIT
Ⓜ	120/208 VOLT CIRCUIT
Ⓜ	CEILING OR ATTIC MOUNTED DUPLEX RECEPTACLE
Ⓜ	LIGHT FIXTURE (WALL/CEIL.)
Ⓜ	FLUORESCENT FIXTURE
Ⓜ	UNSWITCHED FIXTURE
Ⓜ	'EXIT' LIGHT FIXTURE, TYPE 'EX'
Ⓜ	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
Ⓜ	SINGLE-POLE SWITCH
Ⓜ	3-WAY SWITCH (4-WAY SWITCH)
Ⓜ	DUPLEX RECEPTACLE
Ⓜ	CEILING MOUNTED RECEPTACLE
Ⓜ	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)
Ⓜ	WALL MOUNTED OCCUPANCY SENSOR WITH SWITCH
Ⓜ	CEILING MOUNTED OCCUPANCY SENSOR

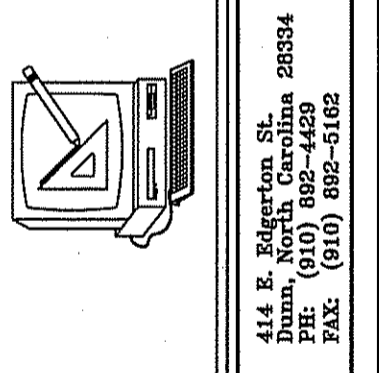


ELECTRICAL LIGHTING PLAN
SCALE: 1/4" = 1'-0"



PLANS FOR:
CAMPBELL PONTE TOWNHOMES
OFFICE & GYM FACILITY
 BUIES CREEK, NORTH CAROLINA

REVISIONS	
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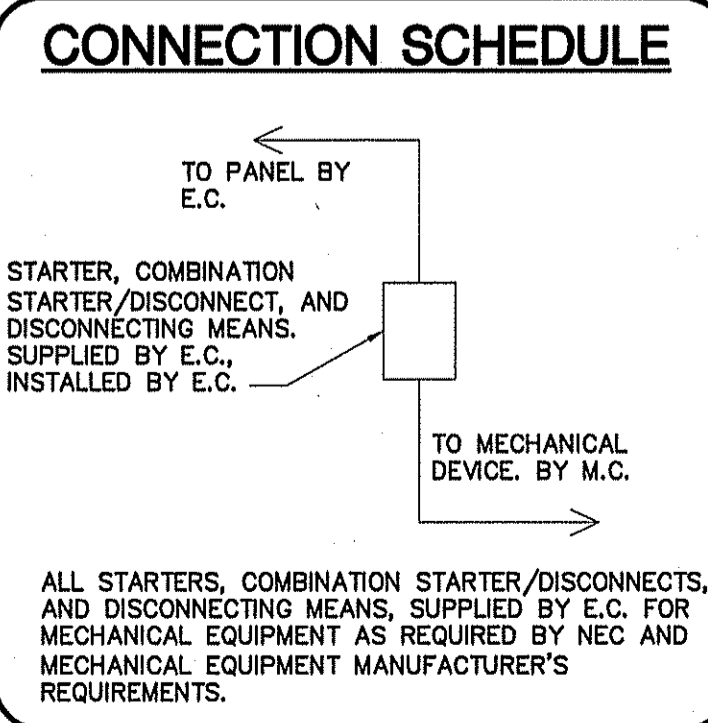
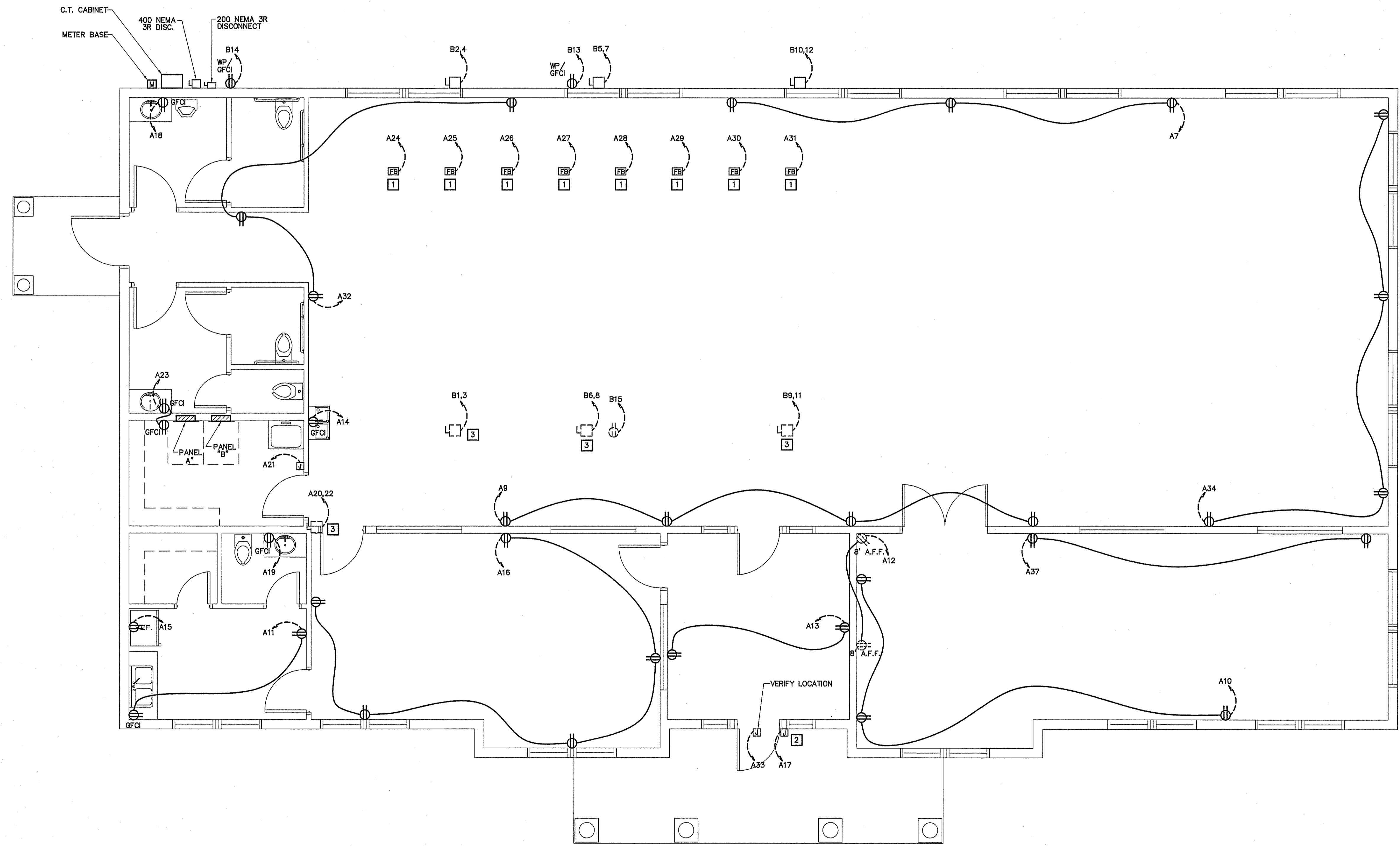
Cruse and Associates, P.A.
 44 E. Williams St.
 Durham, North Carolina 27834
 TEL: (919) 286-5128
 FAX: (919) 286-5128
 LICENSE NO.: C-1721

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ELECTRICAL LEGEND	
MARK	DESCRIPTION
	'GFI' DUPLEX WITH WEATHERPROOF COVER
	GROUND FAULT INTERRUPTING RECEPTACLE
	208V OR 240 V RECEPTACLE
	TELEPHONE/DATA OUTLET
	JUNCTION BOX
	FUSED DISCONNECT SWITCH
	"STEEL CITY" FLOOR BOX WITH CAT 5E CABLE FOR DATA
	SWITCHED BRANCH CIRCUIT
	UNSWITCHED BRANCH CIRCUIT
	120/208 VOLT CIRCUIT
	CEILING OR ATTIC MOUNTED DUPLEX RECEPTACLE
	LIGHT FIXTURE (WALL/CEIL.)
	FLUORESCENT FIXTURE
	UNSWITCHED FIXTURE
	'EXIT' LIGHT FIXTURE, TYPE 'EX'
	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
	SINGLE-POLE SWITCH
	3-WAY SWITCH (4-WAY SWITCH)
	DUPLEX RECEPTACLE
	CEILING MOUNTED RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)
	WALL MOUNTED OCCUPANCY SENSOR WITH SWITCH
	CEILING MOUNTED OCCUPANCY SENSOR

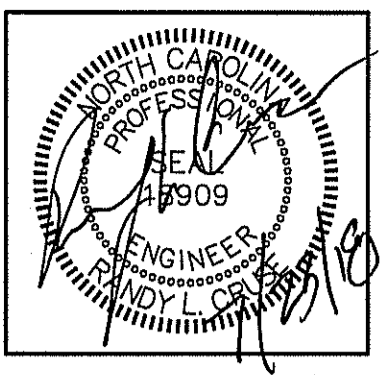


GENERAL NOTE:
ELECTRICAL CONTRACTOR TO VERIFY ALL POWER & DATA OUTLET LOCATIONS BEFORE BEGINNING CONSTRUCTION.

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

- KEY NOTES**
- 1 DEDICATED 20A 115 VOLT CIRCUITS WITH CAT 5E CABLE IN FLOOR BOX.
 - 2 LOW VOLTAGE KEY CAR ACCESS VERIFY WITH OWNER BEFORE INSTALLATION
 - 3 LOCATED IN ATTIC, COORDINATE LOCATION WITH TRUSS LAYOUT.

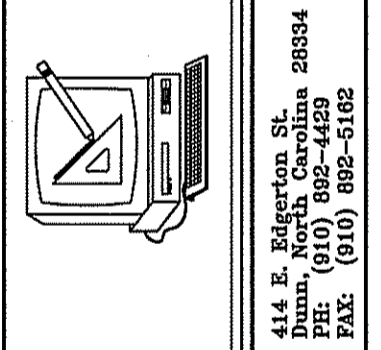
GENERAL NOTE:
SECURITY SYSTEM AND KEYCARD ACCESS SYSTEMS BY OTHERS



PLANS FOR:
**CAMPBELL PONTE TOWNHOMES
OFFICE & GYM FACILITY**
BUJES CREEK, NORTH CAROLINA

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**Cruse
And
Associates, P.A.**

44 E. BALSACON ST., 28834
RTE 101 BOX 4420
FARE, NC 28506
PHONE: (919) 982-4420
FAX: (919) 982-5108

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E-2 OF 3

ELECTRICAL NOTES (GENERAL)

- THE ELECTRICAL INSTALLATION, EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL, AS A MINIMUM, BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), ALL APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES, LAWS, AND ORDINANCES, AND RULINGS OF THE INSPECTION AUTHORITIES HAVING JURISDICTION. ALL FEES, PERMITS, ETC., ASSOCIATED WITH THE ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- THE DRAWINGS GENERALLY INDICATE THE WORK TO BE INSTALLED, BUT DO NOT SHOW ALL BENDS, BOXES, FITTINGS, AND SPECIALTIES WHICH MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SUCH ITEMS REQUIRED TO COMPLETE THE INSTALLATION ACCORDING TO INDUSTRY ACCEPTED PRACTICES SHALL BE INCLUDED IN THE BID.
- ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND LISTED AND LABELED BY UNDERWRITERS LABORATORIES, INC.
- ALL PENETRATIONS OF FIRE WALLS SHALL BE SEALED WITH APPROVED SEALING MATERIALS TO MAINTAIN THE FIRE RATING OF THE WALLS.
- THE CONTRACTOR SHALL VERIFY WIRE AND FUSE/CIRCUIT BREAKER SIZING FOR ALL MECHANICAL EQUIPMENT PRIOR TO PURCHASING MATERIALS AND INSTALLING BRANCH CIRCUITS.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. APPARENT INTERFERENCES OR CONFLICTS SHALL BE REPORTED TO THE PRIME CONTRACTOR AND RESOLVED PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
- THE ELECTRICAL CONTRACTOR SHALL CONNECT BRANCH CIRCUITS TO THE MAIN LINE TERMINALS OF EQUIPMENT FURNISHED BY OTHER CONTRACTORS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY NECESSARY SWITCHES, DISCONNECTS, OR OVERCURRENT PROTECTION AHEAD OF SUCH EQUIPMENT.
- RACEWAYS ARE SHOWN SCHEMATICALLY AND MAY BE ROUTED IN THE FIELD. THEY SHALL BE INSTALLED AT RIGHT ANGLES TO OR PARALLEL WITH BUILDING LINES. THEY SHALL BE RUN CONCEALED WITHIN WALLS OR BUILDING STRUCTURES WHEREVER POSSIBLE.
- ALL RACEWAYS, EQUIPMENT, ETC., ABOVE A SUSPENDED CEILING SHALL BE MOUNTED A MINIMUM OF 18" ABOVE THE CEILING SO AS NOT TO BLOCK ANY TILE OR FIXTURE ACCESS.
- THE MINIMUM ALLOWABLE SIZE FOR ANY CONDUIT, IMC, OR EMT SHALL BE 1/2" AND MAY BE USED FOR 2#12 WIRE SWITCHLEGS ONLY. A SWITCHLEG SHALL BE DEFINED AS THE RUN OF CONDUIT FROM THE SWITCH OUTLET BOX TO THE FIRST OUTLET BEING SWITCHED.
- FULL WEIGHT GALVANIZED RIGID STEEL CONDUIT SHALL BE USED IN THE FOLLOWING AREAS:
 - ON THE EXTERIOR OF THE BUILDING OR ROOF.
 - VERTICAL DROPS WHERE THE CONDUIT CANNOT BE ANCHORED TO WALLS OR OTHER SUPPORT STRUCTURES.
 - WHERE SUBJECT TO MECHANICAL DAMAGE.
- ALL WIRE AND CABLE SHALL BE COPPER AND HAVE 600 VOLT THHN-THWN INSULATION. ALUMINUM WIRING SHALL NOT BE PERMITTED. ROMEX IS ACCEPTABLE WHERE PERMITTED BY CODE.
- THE MINIMUM WIRE SIZE SHALL BE #12 AWG EXCEPT FOR CONTROL WIRING, WHICH MAY BE #14 AWG. CONTROL WIRING SHALL USE STRANDED CONDUCTORS UNLESS OTHERWISE NOTED.
- ALL METAL RACEWAY SYSTEMS SHALL BE MADE ELECTRICALLY CONTINUOUS. THE RACEWAY SYSTEM SHALL NOT BE THE SOLE GROUNDING METHOD. AN INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED FOR ALL FEEDERS AND BRANCH CIRCUITS. AT RECEPTACLES, A GREEN GROUND CONDUCTOR SHALL BE CONNECTED TO THE GROUND TERMINAL OF THE RECEPTACLE.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE FUSE AND DISCONNECT SWITCH SIZES WITH THE MECHANICAL EQUIPMENT SUPPLIER PRIOR TO PURCHASE AND INSTALLATION OF BRANCH CIRCUIT EQUIPMENT. IF EQUIPMENT SIZING CHANGES FROM DESIGN SIZES, CIRCUITS SHALL BE RESIZED ACCORDINGLY.
- LIGHT FIXTURES FOR INSTALLATION IN A SUSPENDED CEILING SHALL BE SECURELY FASTENED TO THE CEILING SUSPENSION SYSTEM IN A MANNER TO PREVENT FIXTURES FROM FALLING. IN ADDITION, 16 GAGE WIRE HANGERS SHALL BE FASTENED TO THE FOUR CORNERS OF THE FIXTURES.
- CONNECTIONS TO FIXTURES INSTALLED IN SUSPENDED CEILINGS SHALL BE MADE WITH FLEXIBLE METAL CONDUIT TO ALLOW THE FIXTURE TO BE LIFTED OUT OF THE GRID AND MOVED TO AN ADJACENT GRID LOCATION.
- BREAKERS SUPPLYING HVAC OR REFRIGERATION EQUIPMENT SHALL BE HACR TYPE.
- 3/4" CONDUIT IS MINIMUM ALLOWABLE SIZE EXCEPT AS INDICATED IN #10. CONDUIT FILL NOT TO EXCEED 40% AS PERMITTED BY THE NATIONAL ELECTRIC CODE.
- ALL CONDUCTORS TO BE INSTALLED IN CONDUIT (EXCEPT WHERE ROMEX IS INSTALLED). EMT FITTINGS TO BE COMPRESSION TYPE, INSULATED THROAT.
- NOT USED
- DATA SECURITY, THEATRICAL AND VIDEO SYSTEMS TO BE PROVIDED BY OWNER. ROUGH-IN OF OUTLETS AND CONDUIT WILL BE BY CONTRACTOR AS SHOWN ON DRAWINGS.
- NOT USED
- NO. 10 AWG CONDUCTORS SHALL BE USED FOR 20 AMP BRANCH CIRCUIT HOME RUNS EXCEEDING 50 FT. TO THE JUNCTION POINT. 20 AMP BRANCH CIRCUIT WIRING SHALL BE NO. 10 AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 100 FEET TOTAL LENGTH.
- CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET. SPLICES WILL NOT BE MADE EXCEPT WITHIN ACCESSIBLE OUTLET OR JUNCTION BOXES, TROUGHS, OR GUTTERS.
- MAKE CONDUCTOR LENGTHS FOR PARALLEL CIRCUITS EQUAL.
- INSTALL TELEPHONE OUTLETS WITH 3/4" EMPTY CONDUIT AND PULL CORD. STUB OUT ABOVE CEILING. PHONE SYSTEM INSTALLED BY OWNER.
- ALL CONDUIT WITHOUT CONDUCTORS SHALL HAVE NYLON PULLCORDS INSTALLED.
- THE CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION, AND REVIEW ANY CONFLICTS THAT ARE NOTED WITH THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES FOR PERMITS AND INSPECTIONS. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR ELECTRIC UTILITY CONNECTION FEES AND LINE EXTENSION FEES.
- ELECTRICAL CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION WHICH DEVELOPS OBJECTIONABLE NOISES SHALL BE MADE FROM THE CONDUIT SYSTEM WITH SHORT LENGTHS OF FLEXIBLE "LIQUID-TITE" CONDUIT.
- ALL WIRE TERMINATIONS AND EQUIPMENT TO BE RATED FOR 75° C MINIMUM.
- ELECTRICAL CONTRACTOR TO MAINTAIN 2" OF SEPARATION ON RECEPTACLES ON OPPOSITE SIDES OF ANY FIRE RATED WALL PER 2017 N.E.C. 300.21.
- WIRING TO DISCONNECT SWITCH AND DISCONNECT SWITCH SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR. WIRING FROM THE DISCONNECT TO THE EQUIPMENT SHALL BE BY THE MECHANICAL CONTRACTOR.

PANEL: A SCHEDULE: _____ MANUFACTURER: SQ.D NO. OF SPACES 42
 VOLTS: 120/240 AMPS: 200 TYPE: 'NQDD' MOUNTING: FLUSH
 ENCLOSURE: NEMA 1 Ø: 1 SHORT CIRCUIT RATING: 22000
 MAIN BS MLD □ TOP FEED □ BOTTOM FEED □ COPPER BUS BS GROUND BAR KIT □ NEUTRAL BAR KIT □

L1	L2	CIRCUIT	POLES	TRIP	ASSIGNMENT	PHASE	ASSIGNMENT	TRIP	POLES	CIRCUIT	L1	L2
7.5		1	1	20	RESTROOM LIGHTS/EX. FANS	o	SOFFIT LIGHTING	20	1	2	3.8	
	5.6	3	1	20	OFFICE & YOGA RM. LTS./FANS	o	EXERCISE RM. PERIMETER LTS.	20	1	4		2.7
		5	1	20	FRONT PORCH DOWNLIGHTS	o	EXERCISE ROOM CEILING FANS	20	1	6	4.0	
	4.5	7	1	20	ROOM 107 WALL RECEPTACLES	o	ROOM 107 HANGING PENDANTS	20	1	8		6.0
		9	1	20	ROOM 107 WALL RECEPTACLES	o	YOGA ROOM RECEPTACLES	20	1	10	4.5	
	3.0	11	1	20	BREAK ROOM RECEPTACLES	o	YOGA RM. TELEVISION OUTLETS	20	1	12		7.0
		13	1	20	FOYER RECEPTACLES	o	DRINKING FOUNTAIN	20	1	14	5.6	
	8.0	15	1	20	REFRIGERATOR	o	OFFICE RECEPTACLES	20	1	16		7.5
		17	1	20	KEY CARD SYSTEM	o	MEN'S RESTROOM GFCI RECEPT.	20	1	18	1.5	
	1.5	19	1	20	BREAKROOM RESTROOM GFCI	o	WATER HEATER	30	2	20		18.8
		21	1	20	BOOSTER PUMP	o				22	18.8	
	3.0	23	1	20	ROOMS 101 & 102 GFCI'S	o	FLOOR BOX TREADMILL REC.	20	1	24		10.0
		25	1	20	FLOOR BOX TREADMILL REC.	o	FLOOR BOX TREADMILL REC.	20	1	26	10.0	
	10.0	27	1	20	FLOOR BOX TREADMILL REC.	o	FLOOR BOX TREADMILL REC.	20	1	28		10.0
		29	1	20	FLOOR BOX ELLIPTICAL REC.	o	FLOOR BOX ELLIPTICAL REC.	20	1	30	10.0	
	10.0	31	1	20	FLOOR BOX ELLIPTICAL REC.	o	ROOM 107 WALL RECEPTACLES	20	1	32		4.5
		33	1	20	BUILDING SIGN	o	ROOM 107 WALL RECEPTACLES	20	1	34	6.0	
	X	35	1	20	SPARE	o	EXERCISE ROOM DOWNLIGHTS	20	1	36		2.8
		37	1	20	YOGA ROOM RECEPTACLES	o	SPARE	20	1	38	X	
	X	39	1	20	SPARE	o	SPARE	20	1	40	X	
X		41	1	20	SPARE	o	SPARE	20	1	42	X	

L1 = 116.7 A
L2 = 114.9 A

NOTE:
VERIFY AIC RATING WITH
UTILITY COMPANY BEFORE
ORDERING PANELS.

PANEL: B SCHEDULE: _____ MANUFACTURER: SQ.D NO. OF SPACES 42
 VOLTS: 120/240 AMPS: 400 TYPE: 'NQDD' MOUNTING: FLUSH
 ENCLOSURE: NEMA 1 Ø: 1 SHORT CIRCUIT RATING: 22000
 MAIN BS MLD □ TOP FEED □ BOTTOM FEED □ COPPER BUS BS GROUND BAR KIT □ NEUTRAL BAR KIT □

L1	L2	CIRCUIT	POLES	TRIP	ASSIGNMENT	PHASE	ASSIGNMENT	TRIP	POLES	CIRCUIT	L1	L2
36.0		1	2	45	AIR HANDLING UNIT #1	o	HEAT PUMP UNIT # 1	50	2	2	24.7	
	36.0	3				o				4		24.7
24.7		5	2	50	HEAT PUMP UNIT 2	o	AIR HANDLING UNIT 2	45	2	6	36.0	
	24.7	7				o				8		36.0
36.0		9	2	45	AIR HANDLING UNIT 3	o	HEAT PUMP UNIT # 3	50	2	10	24.7	
	36.0	11				o				12		24.7
1.5		13	1	20	HEAT PUMP CONV. RECEPT.	o	SERVICE CONVENIENCE RECEPT.	20	1	14	1.5	
	1.5	15	1	20	AHU CONV. RECEPTACLE	o		20	1	16		X
X		17	1	20	SPARE	o	SPARE	20	1	18	X	
X	X	19	1	20	SPARE	o	SPARE	20	1	20	X	X
X	X	21	1	20	SPARE	o	SPARE	20	1	22	X	X
X	X	23	1	20	HOTBOX HEAT TRACE TAPE	o	SPARE	20	1	24	X	X
X	X	25	1	20	SPARE	o	SPARE	20	1	26	X	X
X	X	27	1	20	SPARE	o	SPARE	20	1	28	X	X
X	X	29	1	20	SPARE	o	SPARE	20	1	30	X	X
X	X	31	1	20	SPARE	o	SPARE	20	1	32	X	X
X	X	33	1	20	SPARE	o	SPARE	20	1	34	X	X
X	X	35	1	20	SPARE	o	SPARE	20	1	36	X	X
X	X	37	1	20	SPARE	o	SPARE	20	1	38	X	X
X	X	39	1	20	SPARE	o	SPARE	20	1	40	X	X
X	X	41	1	20	SPARE	o	SPARE	20	1	42	X	X

L1 = 185.1 A
L2 = 184.1 A

COORDINATE
LOCATION
W/ CIVIL PLAN

ELECTRICAL LOAD CALCULATIONS

4108 SQUARE FEET	VA.
NONCONTINUOUS LOADS:	
36 RECEPTACLES @ 180 VA EA.	6480
1ST 10000 REMAINDER @ 50%	6480
TOTAL	6480
CONTINUOUS LOADS:	
GENERAL LIGHTING LOAD VA/SQ. FT.	
4108 SQ. FT. 2.0	8216
8216 x 1.25	10270
AIR HANDLER UNIT	25920
HEAT PUMPS	17784
EQUIPMENT:	17431
25% OF LARGEST MOTOR	1482
GRAND TOTAL	79367
331 AMPS @ 120/240V, 1Ø, 60HZ	

UNIT	FEEDERS	FUSED DISCONNECT	CONDUIT
AIR HANDLER 1,2,3	2#8 CU, 1#10 CU GND	60	3/4"
HEAT PUMP 1,2,3	2#8 CU, 1#10 CU GND	60	3/4"
WATER HEATER	2#10 CU, 1#12 CU GND	30	3/4"

ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE:

ENERGY CODE: PRESCRIPTIVE PERFORMANCE
 ASHRAE 90.1: PRESCRIPTIVE PERFORMANCE

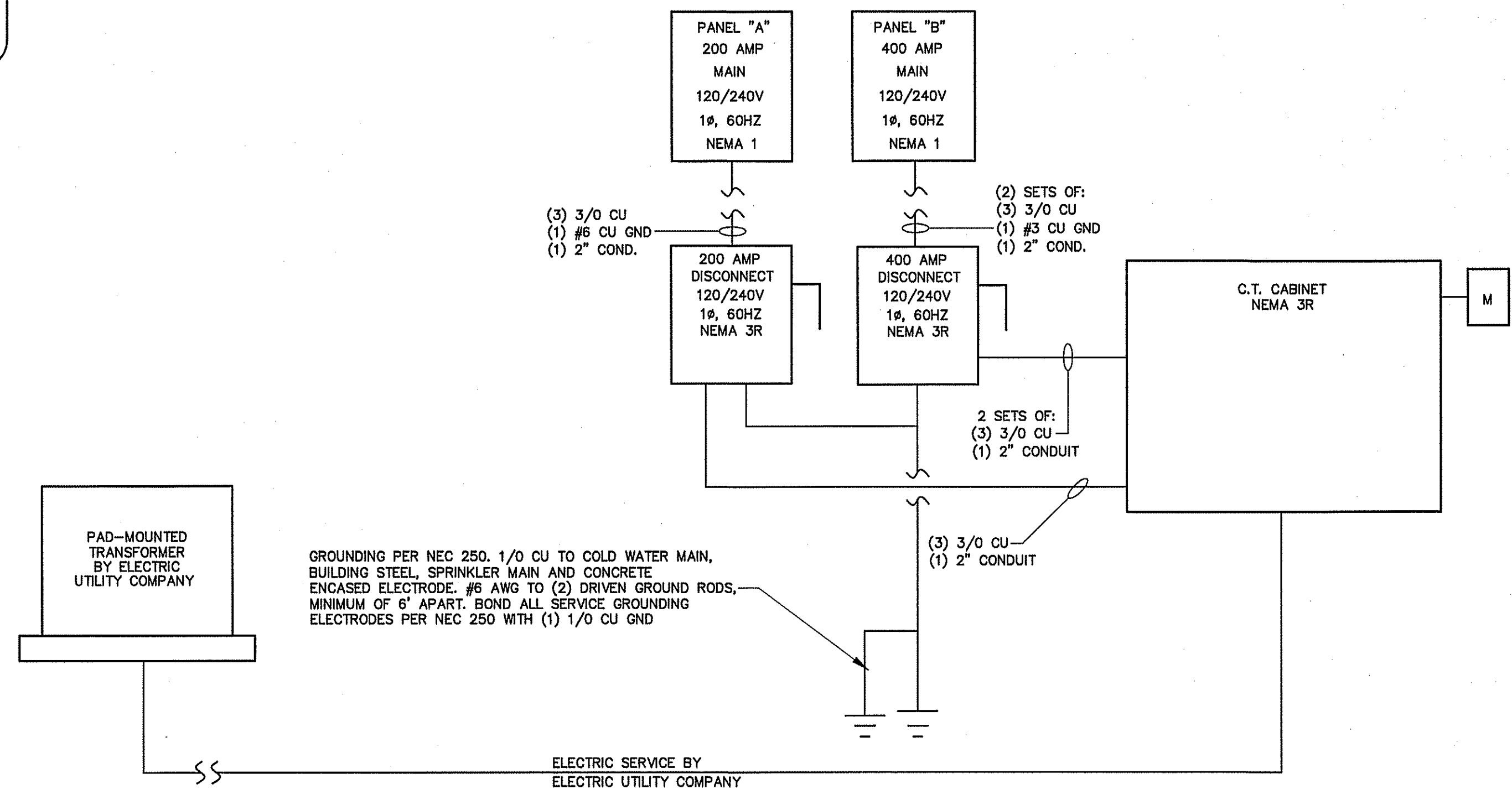
REFER TO DRAWINGS FOR RISER DIAGRAM AND PANEL SCHEDULES

LIGHTING SCHEDULE

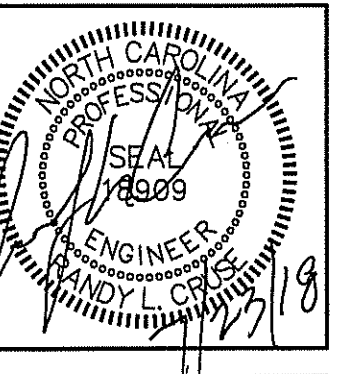
LAMP TYPE REQUIRED IN FIXTURE: SEE SCHEDULE
 NUMBER OF LAMPS IN FIXTURE:
 BALLASTS TYPE USED IN FIXTURE:
 NUMBER OF BALLASTS IN FIXTURE:
 TOTAL WATTAGE PER FIXTURE:
 TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED:
 TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED:

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

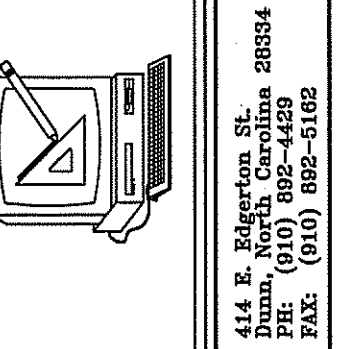


ELECTRICAL RISER DIAGRAM
NOT TO SCALE



PLANS FOR:
CAMPBELL POINTE TOWNHOMES
 OFFICE & GYM FACILITY
 BUIES CREEK, NORTH CAROLINA

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