### **CODE SUMMARY**

2010 ARKANSAS STATE MECHANICAL CODE

2017 NATIONAL ELECTRICAL CODE (NEC)

2006 ARKANSAS STATE GAS CODE

NOTE: REFERENCES NOTED ARE BASED ON THE INTERNATIONAL BUILDING CODE UNLESS NOTED OTHERWISE.

CODE OF ORDINANCES ENFORCED BY THE CITY OF WEST MEMPHIS, ARKANSAS, AND FEDERAL REGULATIONS:

1. APPLICABLE CODES
BUILDINGS COMPRISING THIS PROJECT HAVE BEEN DESIGNED ACCORDING TO THE FOLLOWING ADOPTED REGULATIONS AND

2012 ARKANSAS FIRE PREVENTION CODE: VOL. 1 2012 ARKANSAS FIRE PREVENTION CODE: VOL. 2 - COMMERCIAL 2012 ARKANSAS FIRE PREVENTION CODE: VOL. 3 - RESIDENTIAL 2006 ARKANSAS STATE PLUMBING CODE

2014 ARKANSAS ENERGY CODE (AEC) 2009 - ICC A117.1 LIFE SAFETY CODES AS REFERENCED BY AFPC MOST CURRENT NFPA STANDARDS 2010 - ADA STANDARDS FOR ACCESSIBLE DESIGN(COMMUNITY BUILDING) FAIR HOUSING ACCESSIBILITY GUIDELINES UNIFORM FEDERAL ACCESSIBILITY STANDARDS

#### 2. PROJECT DESCRIPTION

A. THIS PROJECT CONSISTS OF A NEW APARTMENT COMPLEX. THE STRUCTURE IS GENERALLY WOOD STUD FRAMING WITH BRICK VENEER EXTERIOR WALLS ON A POST-TENSIONED CONCRETE SLAB. THE PROJECT CONSISTS OF 2 THREE STORY RESIDENTIAL BUILDINGS, 2 TWO-STORY BUILDINGS, A COMMUNITY BUILDING, A GAZEBO, A MAIL KISOSK, AND A BUS STOP AS FOLLOWS:

BUILDING TYPE	BLDG DESCRIPTION	OCCUPANCY (AFPC 304, 310.4)	CONST. TYPE (503)	SPRINKLERED
Α	APARTMENT	R2	V-B	SPRINKLERED
В	APARTMENT	R2	V-B	SPRINKLERED
С	COMMUNITY BLDG.	В	V-B	UNSPRINKLERED

	36' MAX HT. PER CITY OF
B. BUILDING CALCULATIONS:	

COMMONTLY BLD	G. B	V-B	UNSPRINKLERED
	36' MAX HT. PER CITY OF WE	EST MEMPHIS. AFPC STATE	S 60' MAX WITH SPRINKLERS

BUILDING TYPE	AREA ALLOWED (IBC TABLE 506.2)	AREA PROVIDED		RIES ALLOWED GHT ALLOWED		RIES PROVIDED IGHT PROVIDED
A	7,000 SF	6,199 SF	3*	36' max ht.***	2	25' - 0 1/4"***
В	7,000 SF*	12,362 SF**	3*	36' max ht.***	3	35' - 8 3/4"***
С	9,000 SF	1,671 SF	1	36' max ht.***	1	23'-3"

\*AFPC 2012 TABLE 503, SECTIONS 504.2 AND 506.1 ALLOW AN INCREASE IN BOTH THE MAXIMUM BUILDING HEIGHTS AND AREAS WHEN BUILDING IS SPRINKLERED. BUILDING C IS NOT SPRINKLERED. \*\* AREA IS BASED ON AFPC 506.3 AND IS THE FOOTPRINT, PER LEVEL, AS FORMED BY THE OUTSIDE FACE OF THE EXTERIOR

\*\*\* ALLOWABLE STORIES AND MAXIMUM HEIGHT BASED ON WEST MEMPHIS ZONING REQUIREMENTS. HEIGHTS PROVIDED ARE THE MEAN ROOF HEIGHTS.

#### 3. FIRE RESISTANCE REQUIREMENTS

FIRE RESISTANCE RATINGS PER AFPC (TABLE 601): A.A. NO FIRE RATED SEPARATIONS ARE REQUIRED AT THE COMMUNITY BUILDING. A.B. FIRE SEPARATIONS FOR APARTMENT BUILDINGS AS FOLLOWS:

STRUCTURAL ELEMENT	RATING	G (IN HOURS)	
STRUCTURAL FRAME, COLUMNS, GIRDERS, TRUSSES	0	TABLE 601	
EXTERIOR BEARING WALLS	0	TABLE 601	
INTERIOR BEARING WALLS	0	TABLE 601	
EXTERIOR NON-BEARING WALLS	0	TABLE 602	WITH MIN. FIRE SEPARATION OF 10', CONSTRUCTION TYPE V-B; GROUP R
INTERIOR NON-BEARING WALLS	0	TABLE 601	PAR 602.5 – MAY BE OF ANY MATERIAL PERMITTED BY CODE

FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS

ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS 0 TABLE 601

UNPROTECTED EXTERIOR WALL OPENINGS TABLE 705.8 UNPROTECTED OPENINGS ALLOWED - EACH ELEVATION PER STORY MAY HAVE MAX OF 25% UNPROTECTED

TABLE 601

VERTICAL FLAME BARRIERS N/A PAR 705.8.5, EXCEPTION 1- NOT REQUIRED FOR BUILDINGS THAT ARE 3 STORIES OR LESS IN HEIGHT. N/A TABLE 706.4 TYPE V CONSTRUCTION PERMITTED TO HAVE A 2-HR FIRE WALLS FIRE RESISTANCE RATING

FIRE PARTITIONS (SEPARATING DWELLING UNITS)

DRAFTSTOPPING REQ'D PAR 718.4.2 EXCEPTION 3: NOT TO EXCEED 3,000 SF OR ABOVE EVERY TWO DWELLING UNITS, WHICHEVER SMALLER PAR 708.4, EXCEPTION 5, REQ'D ABOVE FIRE PARTITION. N/A PAR 718.3.2: DRAFTSTOPPING SHALL BE PROVIDED IN

1 PAR 708.3 UL DESIGN #U340 (1 HR)

SEPARATING DWELLING UNITS.

ENCLOSURE REQ'D TO BE 1-HR RATED.

FLOOR/CEILING SPACES AND IN LINE WITH FIRE PARTITION

CONCEALED SPACES

SMOKE BARRIERS N/A PAR 709.4. NOT REQUIRED FOR TYPE V-B CONSTRUCTION. PAR 711.3 REQUIRED AT FLOOR/CEILING AND ROOF/CEILING HORIZONTAL ASSEMBLIES ASSEMBLIES - (UL DESIGN L501/L563/P531)

PENETRATIONS REQ'D PAR 714.3.1.2 RATING OF NOT LESS THAN THE REQ'D FIRE-RESISTANCE RATING OF THE WALL PENETRATED (UL DESIGN #W-L-7042 (1HR) REQ'D TABLE 716.5. DOORS IN A 1-HR RATED FIRE BARRIER EXIT OPENING PROTECTIVES

FIREBLOCKING REQ'D PAR 718.2 SHALL BE INSTALLED TO CUT OFF CONCEALED DRAFT OPENING (BOTH VERTICAL AND HORIZONTAL) AND SHALL FORM AN EFFECTIVE BARRIER FLOORS, BETWEEN THE TOP STORY, AND THE ATTIC SPACE ABOVE.

### 4. EGRESS REQUIREMENTS

#### A. OCCUPANT LOAD (AFPC TABLE 1004.1.2):

BUILDING TYPE	AREA PER OCCUPANT	MAX. AREA PER UNIT	MAX. OCCUPANT (AFPC 1004.1.2)	MAX. OCCUPANT LOAD PROVIDED
A	200 GROSS	1,278 SF	20 PPL/SF	6/UNIT
В	200 GROSS	1,278 SF	20 PPL/SF	5/UNIT
С	100 GROSS	1671 SF	49 PPL/SF	16

#### B. EGRESS CALCULATIONS:

MAX TRAVEL DIST TO	MAX DISTANCE	MAX. COMMON PATH OF	MAX. COMMON PATH
DOORWAY (AFPC 1014.3)	TO DOORWAY PROVIDED	EGRESS DIST.(AFPC 1014.3)	OF EGRESS PROVIDED
125 FT – R-2	65'	125 FT	65'
100 FT – B	33'	N/A	N/A

C. APFC 1009.4 EXCEPTION 1. STAIRWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL HAVE A WIDTH OF NOT LESS THAN 36 INCHES.

EGRESS WIDTH REQ'D	EGRESS WIDTH PROVIDED	MINIMUM CORRIDOR WIDTH REQ'D	CORRIDOR WIDTH
AFPC 1005.3.2)		WITHIN UNIT (1018.2)	PROVIDED
A, B 32 INCHES	36 INCHES	36 INCHES	45 INCHES
32 INCHES	36 INCHES	36 INCHES	45 INCHES

A. PARKING

1.5 SPACE PER DWELLING UNIT = 64 X 1.5 = 96 SPACES 1 GUEST SPACE PER EVERY 4 DWELLING UNITS = 16 SPACES 1 SPACE/300 SF OF CLUBHOUSE = 6 SPACES REQUIRED 118 TOTAL REQUIRED SPACES

2% OF 118 PARKING SPACES (PAR 1106.2) = 3 REQ'D - 8 SPACES PROVIDED

#### 6. ACCESSIBILITY REQUIREMENTS

1 ACCESSIBLE SPACE REQUIRED @ CLUBHOUSE (TABLE 1106.1)

1 VAN ACCESSIBLE SPACE REQUIRED PER 6 STANDARD ACCESSIBLE SPACES (AFPC PAR 1106.5), 4 OF THE 8 HC SPACES ARE VAN ACCESSIBLE SPACES

#### B. ACCESSIBLE ROUTE: ACCESSIBLE ROUTE NOT REQUIRED AT SECOND FLOOR WITH NO ELEVATOR SERVICE (AFPC 1104.4, EXCEPTION 2)

C. DWELLING UNITS 64 TOTAL, 5 TYPE A PROVIDED, 19 TYPE B PROVIDED, 2 SENSORY IMPAIRED TYPE A REQ'D: TYPE B REQ'D:

2% (IBC 1107.6.2.2.1) = 64 \* .02 = 2 5% (UFAS 4.1.4.11) = 64 \* .05 = 3.2 7% (AUSH) = 64 \* .07 = 4.48 BALANCE OF GROUND FLOOR DWELLING UNITS DESIGNED AS TYPE B

(PAR 1107.6.2.2; EXCEPTIONS: 1107.7.1, 1107.1.2, 1107.1.4)

SENSORY IMPAIRED 2% (UFAS) = 64 \* .02 = 1.28

AFPC 1107.6.2.2.1 TYPE A UNITS SHALL BE DISPERSED AMONG THE UNIT TYPES DISPERSION

ELEVATOR ACCESS NOT PROVIDED - SEE IBC 1107.7.1

## **GENERAL NOTES**

- VERIFY THAT DRAWINGS ARE THE LATEST ISSUE PRIOR TO COMMENCING CONSTRUCTION.
- PERFORM WORK PER ALL STATE, FEDERAL AND CITY CODES. NOTIFY ARCHITECT OF ANY CONFLICTS.
- VERIFY ALL DIMENSIONS, GRADES, BOUNDARIES, CONSTRUCTION AND OTHER CONDITIONS.
- APPLY, INSTALL, CONNECT, ERECT, CLEAN, AND/OR CONDITION ALL MANUFACTURED ARTICLES, MATERIALS, AND/OR EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.
- LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE. DETAILS TAKE PRECEDENCE OVER OTHER DRAWINGS.
- WHERE DISCREPANCIES ARE FOUND, OBTAIN WRITTEN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWINGS. OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING WITH
- SET ALL DOOR FRAMES 4" FROM ADJACENT WALL (MEASURED TO INSIDE FACE OF JAMB) AND 4" FROM ADJACENT WALL UNLESS OTHERWISE NOTED OR DIMENSIONED.
- PROVIDE TEMPERED GLASS AT LOCATIONS 18" OR LESS FROM FLOOR LINE OR ADJACENT TO ANY DOOR SWING.
- PROVIDE BLOCKING IN PARTITIONS FOR ALL MILLWORK AND WALL-ATTACHED ITEMS.
- PROVIDE APPROVED FIRESTOPPING SYSTEM AT ALL PENETRATIONS OF FIRE-RATED ASSEMBLIES.

#### TABULATION OF AREA - THE PARK AT BARTON

BUILDINGS				SUB-TOTAL AREA	STAIR/COVERED AREA OF	SUB-TOTAL AREA OF	TOTAL AREA OF BUILDING	
	NET	BALCONY AREA/ UNIT	GROSS (EXCLUDING BRICK VENEER	# OF UNITS PER BUILDING	FOR UNITS (GSF) - EXCLUDING BALCONY	BUILDING (COMMON AREA)	BUILDING (GSF)	(GSF) - INCLUDING BALCONY
			&BALCONY)		NO. OF BUILD	INGS - 2		
BUILDING A (2 BUILDING)						1,692	22,140	23,484
(3-BED/2 BATH END UNIT)	1,266	84	1,278	8	20,448			
BUILDING B (2 BUILDING)								
(3-BED/2 BATH END UNIT)	1,266	84	1,278	24	61,344	3,384	64,728	68,760
BUILDING C (1 BUILDING)						243	1,914	1,914
COMMUNITY BUILDING	-	-	1,671	-	1,671		,,,,,	,,,,,
GAZEBO	-	-	-	-	-	384	-	384
MAIL KIOSK	-	-	-	-	-	174	-	174
BUS STOP	-	-	-	-	-	328	-	328
TOTAL								95,044
02 BUILDING A 02 BUILDING B 01 BUILDING C		6 UNITS (2 HC 8 UNITS (3 HC						
01 GAZEBO 06 BUILDINGS TOTAL	6-	4 UNITS TOTAI	L (5 HC UNITS)					

# THE PARK AT BARTON

## A MULTI-FAMILY HOUSING COMMUNITY

**Sheet Name** 

WEST MEMPHIS PARTNERS II, L.P. MADISON, MS

**DEVELOPER** TCCM DEVELOPMENT, LLC MADISON, MS

CONTRACTOR UNICORP, LLC MADISON, MS

Sheet

Number

OWNER'S SURVEYOR/CIVIL ENGINEER MCMASTER & ASSOCIATES, INC. MADISON, MS

LANDSCAPE ARCHITECT (NOT DETERMINED)

GEOTECHNICAL ENGINEER

(NOT DETERMINED)
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BUILDING B FIRE PROTECTION

**ARCHITECT** HERRINGTON ARCHITECTS, P.C. BIRMINGHAM, AL

STRUCTURAL ENGINEER STRUCTURAL DESIGN GROUP, INC. BIRMINGHAM, AL

MECHANICAL AND PLUMBING ENGINEER ENGINEERING DESIGN TECHNOLOGIES, INC. BIRMINGHAM, AL

**ELECTRICAL ENGINEER** CONSULTING CONSTRUCTION ENGINEERING, INC. BIRMINGHAM, AL

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101 Richard Arrington Jr. Blvd. S. Birmingham, Alabama 35233 T 205.326.1131 F 205.326.1164 www.herringtonarchitects.com

11/20/18 PERMIT SET

PROJECT NUMBER

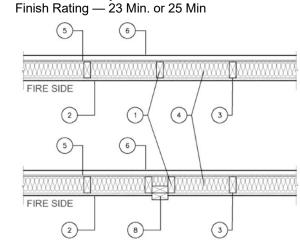
The Park at Barton

900 E Barton Ave West Memphis, AR 72301

SHEET NUMBER

CAD FILE NUMBER :\Users\EBrown\Documents\597-Barton\_MASTER\_ebrown@herringtonarchitects.com.rvt

Bearing Wall Rating - 1 Hr Rating Exposed to Fire on Interior Face Only



1. Wood Studs — Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5). When **Mineral and Fiber Boards\*** (Item 5A) are considered as bracing for the studs, the load is restricted to 76% of allowable axial load. Walls effectively fire stopped at top and bottom of wall.

2. Gypsum Board\* — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or **U305.** Nom 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.

3. **Joints and Fastener Heads** — (Not Shown) — Gypsum board joints covered with tape and joint compound. Fastener heads covered with

joint compound. 4. Batts and Blankets\* — Mineral fiber or glass fiber insulation. 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation

See Batts and Blankets\* (BKNV) Category in the Building Materials Directory and Batts and Blankets\* (BZJZ) Category in the Fire Resistance Directory for names of Classified Companies.

4A,4B,4C,4D – NOT USED

5. Wood Structural Panel Sheathing — Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing". Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs. 5A – NOT USED

6. **Exterior Facings** — Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing:

A - G NOT USED

H. **Fiber-Cement Siding** — Fiber-cement exterior sidings including smooth and patterned panel or lap siding.

I. NOT USED 6A. NOT USED 7. NOT USED 8. NOT USED

\* Bearing the UL Classification Mark.

# Design No. U340

Bearing Wall Rating — 1 Hr. Finish Rating — See Item 2

HORIZONTAL SECTION

1. Wood Studs -- Nom 2 by 4 in. alternating on opposite sides of nom 2 by 6 in. wood plates. Spaced 24 in. OC max on each side of wood plates, staggered 12 in. OC on opposite side.

2. Gypsum Board\* -- 5/8 in. thick wallboard, paper or vinyl faced with beveled, square, tapered or rounded edges. Wallboard nailed to each stud 7 in. OC with 6d cement coated nails, 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam head. As an alternate, No. 6 bugle head drywall screws, 1-7/8 in. long, may be substituted for the 6d cement coated nails. When used in widths other than 48 in., wallboard to be installed horizontally.

When Steel Framing Members\* (Item 5) are used, wallboard attached to furring channels with 1 in. long Type S bugle-head steel screws spaced

See Gypsum Board\* (CKNX) category for names of Classified

2A. Wall and Partition Facings and Accessories\* -- (As an alternate to Item 2, not shown) - Nominal 5/8 in. thick, 4 ft wide panels, applied vertically to studs and bearing plates on one side of the assembly with 1-5/8 in. long Type S screws spaced 12 in. OC at perimeter of panels and 8 in. OC in the field. Horizontal joints of vertically applied panels need not be backed by studs. Panel joints covered with paper tape and two layers of joint compound. Screwheads covered with two layers of joint compound. Batts and Blankets placed in stud cavity as described in Item 4B. Not evaluated for use with Steel Framing Members, Furring Channels or Fiber, Sprayed.

QUIET SOLUTION INC -- Type QuietRock QR-530 (finish rating 23

2B. Gypsum Board\* -- (As an alternate to Item 2) -- 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO -- Type AG-C.

3. Joints and Nailheads -- Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to entire surface of Classified veneer baseboard. Joints reinforced.

4. Batts and Blankets\* -- (Optional) -- 3-1/2 in. max. thickness glass or mineral fiber batt insulation stapled to studs. See Batts and Blankets (BZJZ) category for list of Classified companies.

4A. NOT USED

4B. Batts and Blankets\* -- (Required for use with Wall and Partition Facings and Accessories, Item 2A) -- Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5. NOT USED 5A. NOT USED 5B. NOT USED

6. Wall and Partition Facings and Accessories\* -- (Optional, Not shown) -- Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

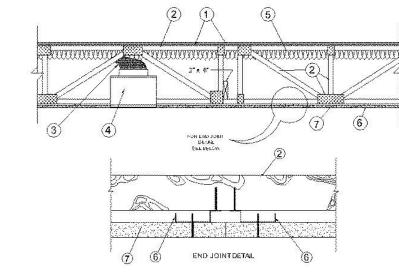
QUIET SOLUTION INC -- Type QuietRock QR-510.

\*Bearing the UL Classification Mark

# Design No. L563

March 14, 2006

Unrestrained Assembly Rating - 1 Hr Finish Rating - 25 Min (See Items 5 or 5A)



1. Flooring System -- The flooring system shall consist of one of the following:

System No. 1 THRU 3 NOT USED

System No. 4 Subflooring -- Min Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be

Vapor Barrier - (Optional) -- Nom 0.030 in. thick commercial asphalt

Floor Mat Materials\* - (Optional) -- Min 3/8 in. to max 3/4 in. thick floor

UNITED STATES GYPSUM CO -- LEVELROCK® Brand Sound

Alternate Floor Mat Materials\* - (Optional) -- Nom 1/4 in. thick floor

mat material loose laid over the subfloor. UNITED STATES GYPSUM CO -- LEVELROCK® Brand Floor

Underlayment SRM-25 Alternate Floor Mat Materials\* - (Optional) -- Nom 3/8 in. thick floor

mat material loose laid over the subfloor. SOLUTIA INC -- Type SC50

substituted for the 6d nails.

mat material loose laid over the subfloor.

Finish Flooring - Floor Topping Mixture\* -- Min 3/4 in. thickness of floor topping mixture installed having a min compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO -- LEVELROCK® Brand 2500, LEVELROCK® Brand RH

System No. 5 thru 14 NOT USED

2. Trusses -- Parallel chord trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Min truss depth is 12 in. Truss members secured together with min 0.036 0356 in. thick galvanized steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tool has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx. 7/8 in. centers with four rows of teeth per inch

3. Air Duct\* -- Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper

4. Ceiling Damper\* - (Optional) -- For use with min 18 in. deep trusses Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 256 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided

AIRE TECHNOLOGIES INC -- Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA

LLOYD INDUSTRIES INC -- Model CRD 50-BT, CRD 50-EA-BT, CRD 55-BT, CRD 55 EA-BT

4A. Alternate Ceiling Damper\* - (Optional) -- For use with min 18 in. deep trusses Max plenum box size nom 13 in. long by 13 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 100 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.

LLOYD INDUSTRIES INC -- Model CRD 50-BT-6, CRD 50-EA-BT-6, CRD 55-BT-6, CRD 55 EA-BT-6

4B. Alternate Ceiling Damper\* - (Optional) -- For use with min 18 in. deep trusses Max size ceiling outlet in plenum box nom 12 in. long by 12 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 144 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturers installation instructions provided with the damper.

AIRE TECHNOLOGIES INC -- Models: CRD model 50 w/Boot CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot.

LLOYD INDUSTRIES INC -- Model CRD 50-95BT, CRD 50-

EA-95BT, CRD 55-95BT, CRD 55 EA-95BT

4C. Alternate Ceiling Damper\* -- (Optional) - For use with min 18 in. deep trusses. Max size ceiling outlet in plenum box nom 16 in. long by 16 in. wide. Aggregate damper openings shall not exceed 256 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.

CROWN PRODUCTS CO INC -- Models CRD50-FGPB-4.2-CP, -6.0-CP; CRD50-FGPB-4.2-EA-CP, -6.0-EA-CP.

LLOYD INDUSTRIES INC -- Models CRD 50- FGPB-4.2, - 4.2 NI, -6.0, -6.0 NI; CRD50-EA-FGPB-4.2, -4.2 NI, -6.0, -6.0 NI.

5. Batts and Blankets\* -- Glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. When the resilient channels (Item 6) are spaced 16 in. OC, the insulation shall be a max of 3-1/2 in. thick, and shall be secured against the subflooring with staples at 12 in. OC or held suspended in the concealed space with 0.090 in. diam galv steel wires attached to the wood trusses at 12 in. OC. When the resilient channels are spaced a max of 12 in. OC or when the Steel Framing Members (Item 6A) are used, there is no limit in the overall thickness of nsulation, and the insulation can be secured against the subflooring, held suspended in the concealed space or draped over the resilient channels (or Steel Framing Members) and gypsum panel membrane. The finished rating has only been determined when the insulation is secured to the subflooring.

5A. NOT USED

6. Resilient Channels -- Formed from min 0.020 in. thick galv steel, 1/2 in. deep by 2 in. wide at the base and 1-1/4 in. wide at the face, spaced 16 in. OC perpendicular to trusses. When insulation (Items 5 or 5A) is applied over the resilient channel/gypsum panel ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to each truss with 1-1/4 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint as shown in the above illustration. Additional channels shall extend min 6 in. beyond each side edge of panel.

6A. NOT USED

7. Gypsum Board\* -- Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Item 6) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from end joints. When insulation (Items 5) is applied over the resilient channel/gypsum panel ceiling membrane the screw spacing shall be reduced to 8 in. OC. End joints secured to both resilient channels as shown in end joint

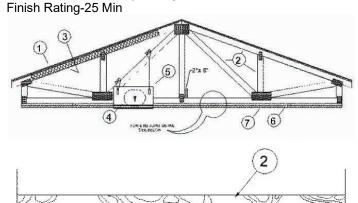
CANADIAN GYPSUM COMPANY -- Types C, IP-X2, IPC-AR

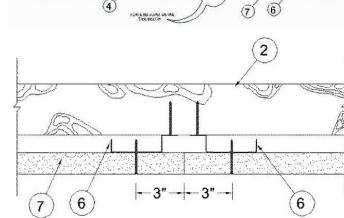
UNITED STATES GYPSUM CO -- Types C, IP-X2, IPC-AR

USG MEXICO S A DE C V -- Types C, IP-X2, IPC-AR Design No. P531

September 29, 2005

Unrestrained Assembly Rating-1 Hr.





1. Roofing System\* — Any UL Class A, B or C Roofing System (TGFU) or Prepared Roof Covering (TFWZ) acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with construction adhesive and No. 6d ringed shank nails. Nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

2. Trusses — Pitch or Parallel chord trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together min.0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth

3. Joints and Nailheads — Wallboard joints covered with paper projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. with a min roof slope of 3/12 and a min. area in the plane of the truss of 21 sg/ft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the ntersection of the bottom chords and the plywood sheathing.

System No. W-L-7042

November 30, 2000 F Ratings — 1 and 2 Hr (See Items 1 and 3)

3. Batts and Blankets\* — (Optional) -Glass fiber insulation, secured

to the wood structural panels with staples spaced 12 in. OC or to the

trusses with 0.090 in, diam galv steel wires spaced 12 in, OC. Any

glass fiber insulation bearing the UL Classification Marking as to

Surface Burning Characteristics and/or Fire Resistance, having a

min density of 0.5 pcf. As an option, the insulation may be fitted in

the concealed space, draped over the resilient channel/gypsum

wallboard ceiling membrane when resilient channels and gypsum

finished rating has only been determined when the insulation is

of loose fill material bearing the UL Classification Marking for

channel/gypsum wallboard ceiling membrane when resilient

accordance with the instructions provided by the damper

5. Damper\* — Max nom 20 in. long by 18 in. wide by 2-1/8 in. high,

fabricated from galvanized steel. Plenum box maximum size nom.

galvanized steel or Classified Air Duct Materials bearing the UL

Class 0 or Class 1 rigid air duct material. Installed in accordance

with the instructions provided by the manufacturer. Max damper

ATLAS AIR CONDITIONING CO L P — Types 0856, 0856D, 0857

openings not to exceed 360 sq in. per 100 sq ft of ceiling area.

CRD-7, -8, -9, -10, -11, followed by suffix AA, NI, RM, or SM.

NAILOR INDUSTRIES INC — Types 0755, 0755A, 0756, 0756D

0757FP, 0757DFP, 0758, 0759, 0760, 0761, 0762, CRD5, CRD5D

ROYAL METAL PRODUCTS INC — Models 241FRD, 243FRD,

6. Furring Channels — Resilient channels, nom. 1/2 in. deep by

SHERER MFG INC — Models FRDB, TTRDB, RDB Type T, SRDB,

2-3/8 in. wide at the base and 1-3/8 in. wide at the face, formed from

0.020 in. thick galv steel, spaced 16 in. OC, installed perpendicular

to trusses. When batt and blanket material, Item 3, is draped over

the resilient channel/gypsum wallboard ceiling membrane, the

spacing shall be 12 in. OC. Channels secured to each truss with

1-1/4 in. long Type S steel screws. Channels overlapped 4 in. at

7. Wallboard, Gypsum\* — Nom 5/8 in. thick, 48 in. wide, installed

with long dimension perpendicular to resilient channels with 1 in.

long Type S screws spaced 12 in. OC and located a min of 1/2 in.

resilient channels are used, extending a min of 6 in. beyond both

ends of the joint. When batt and blanket insulation, Item 3, is draped

from side joints and 3 in. from the end joints. At end joints, two

over the resilient channel/gypsum wallboard ceiling membrane,

CANADIAN GYPSUM COMPANY — Types C, IP-X2, IPC-AR

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

8. Finishing System — (Not Shown)— Vinyl, dry or premixed joint

compound, applied in two coats to joints and screw-heads; paper

tape, 2 in. wide, embedded in first layer of compound over all joints.

As an alternate, nom 3/32 in. thick veneer plaster may be applied to

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

splices. Channels oriented opposite at wallboard butt joints (spaced

MANUFACTURED AIR PRODUCTS — Models

CRD6, CRD6D, CRD6FP, CRD6DFP.

6 in. OC) as shown in the above illustration.

screws shall be installed at 8 in. OC.

the entire surface of gypsum wallboard.

\*Bearing the UL Classification Mark

Design No. U314

Top and Battom of Wall Effectively Firestopped

1. Wood Studs — Nom 2 by 4 in., spaced 24 in. OC, effectively

nailed to stude and bearing plates 7 in. OC with 6d cement coated

nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam head.

CANADIAN GYPSUM COMPANY — Types AR, IP-AR, IP-X1,

UNITED STATES GYPSUM CO — Type AR, FRX-G, IP-AR, IP-

USG MEXICO S A DE C V — Type AR, IP-AR, IP-X1, SCX, SHX

tape and joint compound. Nailheads covered with joint compound.

As an alternate, nom 3/32 in. thick gypsum veneer plaster may be

corners. Channel shaped, 2 in. long by 1 in. high on the back side

channel, fabricated from 24 gauge galv steel. Fasteners applied

spacing 16 in. OC. Nailed to adjacent stud through tab using one

No. 6d cement coated nail per fastener. Corners of wallboard shall

applied to the entire surface of Classified veneer baseboard.

4. Steel Corner Fasteners — (Optional) — For use at wall

with two 1/8 in. wide cleats protruding into the 5/8 in. wide

only to the end or cut edge (not along tapered edges) of the

wallboard, no greater than 2 in. from corner of wallboard, max

be nailed to top and bottom plate using No. 6d cement coated

2. Gypsum Board\* — 5/8 in. thick, 4 ft wide. Gypsum boards

9. NOT USED

10. NOT USED

November 13, 2003

Finish Rating — 26 Min.

fire stopped.

SCX, SHX, WRX.

5. NOT USED

X1, SCX, SHX or WRX.

Bearing Wall Rating — 1 HR.

21 in. long by 18 in. wide by 16 in. high fabricated from either

fitted in the concealed space, draped over the resilient

Surface Burning Characteristics, having a min density of 0.5 pcf,

secured to the decking.

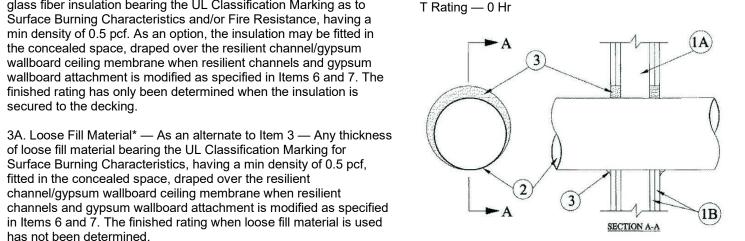
has not been determined.

0857D, 0857FP, 0857DFP.

505RD, 507RD, 509.

RDB Type S.

manufacturer.



4. Air Duct\* — Any UL Class 0 or Class 1 flexible air duct installed in 1. Wall Assembly — The 1 or 2 hr fire rated wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features.

> A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced 24 in. OC.

> B. Gypsum Board\* — For 1 hr assembly, one layer of min 5/8

in. thick wallboard as required in the individual Wall and Partition Design. The hourly F and T Ratings of the firestop system is equal to

the hourly fire rating of the wall assembly in which it is installed. 2. Through Penetrant — Galv steel duct to be installed concentrically or eccentrically within the firestop system. The annular space between the duct and periphery of opening shall be minimum 0 in. (point contact) and max 1-1/2 in. Duct to be

A. NOT USED

B. Sheet Metal Duct — Nom 12 in. diam (or smaller) No. 28 MSG (or heavier) galv sheet steel duct.

rigidly supported on both sides of wall assembly.

3. Fill, Void or Cavity Material\*—Sealant — Min 5/8 in. and 1-1/4 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly for 1 or 2 hr rated walls, respectively. At the point contact location between duct and wallboard, a min 1/2 in. diam bead of sealant shall be applied at the wallboard/duct interface on both surfaces of wall

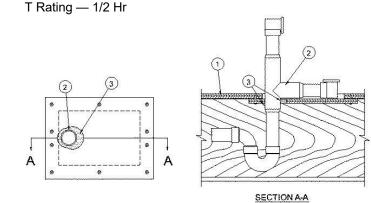
HILTI CONSTRUCTION CHEMICALS, DIV OF

HILTI INC — CP601S Elastomeric Firestop Sealant, FS-ONE Sealant or CP606 Flexible Firestop Sealant

\*Bearing the UL Classification Mark

System No. F-C-2204

F Rating — 1 Hr



1. Floor — Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design. Rectangular cutout in flooring to accommodate the bathtub drain piping (Item 2) to be max 8 in. by 12 in. (203 by 305 mm). Cutout to be patched on underside of subfloor using one layer of min 3/4 in. (19 mm) thick plywood or min 5/8 in. (16 mm) thick gypsum board (Item 1C) sized to lap min 2 in. (51 mm) beyond each edge of rectangular cutout. Patch split into two pieces at opening and hole-sawed for bathtub drain piping. Diam of opening hole sawed through patch to accommodate drain piping (Item 2) to be 1 in. (25 mm) larger than outside diam of drain piping and positioned such that the annular space between drain piping and periphery of opening is min 0 in. (point contact) to max 1 in. (25 mm). Two pieces positioned around drain piping, with cut edges tightly butted, and screwattached to underside of subfloor with 1-1/4 in. (32 mm) long steel screws spaced max 6 in. (152 mm) OC.

B. Wood Joists\* — Nom 10 in. (154 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required and with ends firestopped.

C. **Gypsum Board\*** — Nom 5/8 in. (16 mm) thick, 4 ft (122 cm) wide as specified in the individual Floor-Ceiling Design.

2. **Drain Piping** — Nom 1-1/2 in. (38 mm, or smaller) diam Schedule 40 acrylonitrile butadiene styrene (ABS) or polyvinyl chloride (PVC) pipe and drain fittings cemented together and provided with ABS or PVC bathtub waste/overflow fittings. Annular space shall be min 0 in. (point contact) to max 1 in.

or fill material applied within the annulus, flush with both surfaces of plywood or gypsum board patch. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC —

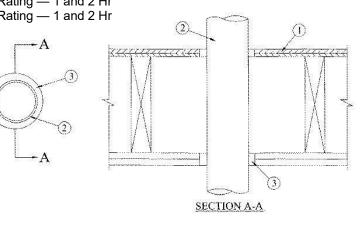
FS-ONE Sealant or FS-ONE-MAX Intumescent Sealant

3. Fill Void or Cavity Materials\* — Min 5/8 in. (16 mm) depth

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or System No. F-C-2160

April 06, 2018

F Rating — 1 and 2 Hr T Rating — 1 and 2 Hr



1. Floor-Ceiling Assembly — The 1 and 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in the individual Floor-Ceiling Design. Diam of opening shall be 2 in. (51 mm) larger than the nom diam of through penetrant (Item 2).

B. Wood Joists\* — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required and with ends firestopped.

C. Furring Channels (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D). Furring channels spaced max 24 in. (610 mm).

D. **Gypsum Board\*** — Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard screw-attached to furring channels. Diam of opening shall be 2 in. (51 mm) larger than the nom diam of through penetrant (Item 2).

1.1 **Chase Wall** — (Optional, not Shown) — The through penetrants (Item No. 2) may be routed through a fire-rated or non-rated single, double or staggered wood stud/gypsum wall board chase wall. The chase wall shall be constructed to include the following construction features:

A. **Studs** — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) or parallel nom 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening shall be 2 in. (51 mm) larger than the nom diam of through penetrant (Item 2).

C. **Top Plate** — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening shall be 2 in. (51 mm) larger than the nom diam of through penetrant (Item 2).

D. Gypsum Board\* — One or two layers of min 1/2 in. (14 mm) gypsum board.

2. **Through Penetrants** — One nonmetallic pipe or conduit to be installed concentrically or eccentrically within the firestop system. Annular space between pipe or conduit and edge of opening to be min 1/2 in. (13 mm) and max 1-1/8 in. (29 mm). Pipe or conduit to be rigidly supported on both sides of floorceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in.

(51 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems. 3. Fill, Void or Cavity Materials\*-Sealant — Fill Material forced into annular space to fill space to max extent possible. Sealant shall be installed flush with top surface of floor or sole plate and bottom surface of ceiling or lower top plate.

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC —

FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

System No. F-C-2263

January 18, 2017 F Rating — 1 Hr T Rating — 1 Hr

1. **Floor-Ceiling Assembly** — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

A. **Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture\*** as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5 in. (127 mm). B. Wood Joists\* — Nom 10 in. (254 mm) deep (or deeper) lumber, steel

or combination lumber and steel joists, trusses or **Structural Wood Members\*** with bridging as required and with ends firestopped. C. **Gypsum Board\*** — Nom 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide as

specified in the individual Floor-Ceiling Design.

2. Closet Flange — Acrylonitrile butadiene styrene (ABS) or polyvinyl chloride (PVC) closet stub sized to accommodate drain pipe. Closet flange installed over drain piping within floor opening with flange secured to plywood floor with steel screws. Annular space between closet flange and periphery of opening shall be 1/4 in. (6 mm).

3. **Drain Piping** — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 acrylonitrile butadiene styrene (ABS) or polyvinyl chloride (PVC) drain pipe and 90 degree elbow for use in vented (drain, waste or vent) piping systems. Pipe installed concentrically within firestop system.

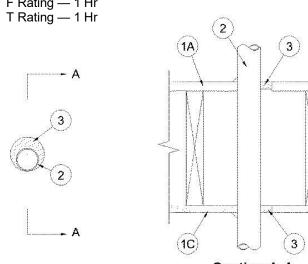
4. Fill, Void or Cavity Materials\* — Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with the bottom surface of floor.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 Flexible Firestop Sealant, FS-ONE Sealant or FS-ONE MAX Intumescent

5. **Water Closet** — (Not Shown) — Floor mounted vitreous china water

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

System No. F-C-2334



1. Floor-Ceiling Assembly — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory, as summarized below:

A. **Flooring System** — Lumber or plywood subfloor with finish floor of

lumber, plywood or **Floor Topping Mixture\*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 2 in. B. Wood Joists — Nom 10 in. (254 mm) deep (or deeper) lumber, steel

**Members\*** with bridging as required and with ends firestopped. C. **Gypsum Board\*** — Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to joists as specified in the individual Floor-Ceiling Design. Max diam of opening is

or combination lumber and steel joists, trusses or **Structural Wood** 

2. **Through Penetrants** — One nonmetallic pipe to be installed either concentrically or eccentrically within the firestop system. The annular space within the firestop system shall be min 0 in. (point contact) to max 7/8 in. (22 mm). Pipe to be rigidly supported on both sides of floorceiling assembly. The following types and sizes of nonmetallic pipes may be used:

A. Crosslinked Polyethylene (PEX) Tubing — Nom 1 in. (25 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. **Firestop System** — The firestop system shall consist of the

A. Fill, Void or Cavity Material\* - Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within annulus, flush with top surface of subfloor. Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with bottom surface of ceiling. At point contact locations, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the penetrant/gypsum board and penetrant/flooring interface.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



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11/20/18 PERMIT SET

PROJECT NUMBER

The Park at Barton

900 E Barton Ave West Memphis, AR 72301

SHEET NUMBER

CAD FILE NUMBER :\Users\EBrown\Documents\597-

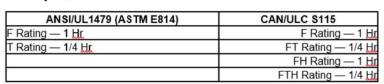
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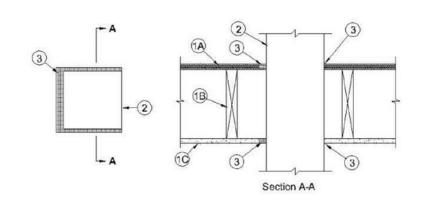
cUL Certification (such as Canada), respectively.

\*Bearing the UL Classification Marking.

## System No. F-C-7043

January 21, 2015





1. Floor-Ceiling Assembly — The 1 hr fire rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:

A. **Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture**\* as specified in the individual Floor-Ceiling Design. Max area of opening shall be 143 in.2 (923 cm<sup>2</sup>) with a max dimension of 13 in. (330mm).

B. Wood Joists\* — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural** Wood Members\* with bridging as required and with ends

C. **Gypsum Board\*** — Min 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max area of opening shall be 143 in.2 (923 cm<sup>2</sup>) with a max dimension of 13 in. (330mm).

2. **Steel Duct** — Max 12 by 10 in. (305 by 254 mm) No. 28 ga. (or heavier) galv steel duct to be installed either concentrically or eccentrically within the firestop system. The space between the steel duct and periphery of opening shall be min 0 in. (point contact) to max 1 in. (25 mm). Steel duct to be rigidly supported on both sides of the floor-ceiling assembly.

3. **Firestop System** — Min 3/4 in. (19 mm) thickness of sealant applied within the annulus flush with the top surface of the floor. Min 5/8 in. (16 mm) thickness of sealant applied within the annulus flush with the bottom surface of gypsum board ceiling.

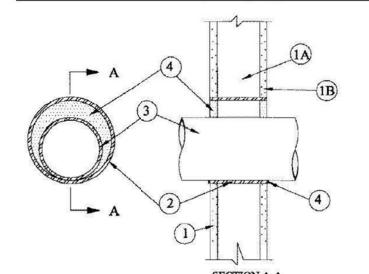
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 Flexible Firestop Sealant or FS-One Sealant or FS-ONE MAX Intumescent Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

## System No. W-L-1164

January 22, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC \$115 F Ratings — 1 and 2 Hr (See Items 1 and 4)	
F Ratings — 1 and 2 Hr (See Ilem 1and 4)		
T Rating — 0 Hr	FT Rating — 0 Hr	
	FH Ratings — 1 and 2 Hr (See Items 1 and 4)	
	FTH Rating — 0 Hr	



1. **Wall Assembly** — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400, V400 or W400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four

B. **Gypsum Board\*** — The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening in steel stud walls is 32 in. (813 mm). Max diam of openings in wood stud walls is 14-1/2 in. (368 mm).

in wood stud walls is 14-1/2 in. (368 mm).

The hourly F, FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Steel Sleeve** — Nom 32 in. (813 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe sleeve friction fit in nom 32 in. (813 mm) diam circular opening cut through gypsum board layers. Length of steel sleeve to be equal to thickness of wall.

3. **Through-Penetrant** — One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and the steel sleeve shall be min of 0 in. (point contact) to max 1-7/8 in. (48 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe** — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 30 in. (762 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe or Class 50 (or heavier) ductile iron pressure pipe.

C. **Conduit** — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing

D. **Copper Tubing** — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

E. **Copper Pipe** — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

4. Fill, Void or Cavity Material\*-Sealant — Min 5/8 in. (16 mm) and 1-1/4 in. (32 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly for 1 or 2 hr rated walls, respectively. Min 1/2 in. (13 mm) diam bead of caulk applied to the penetrant/gypsumboard interface at the point contact location on both sides of wall.

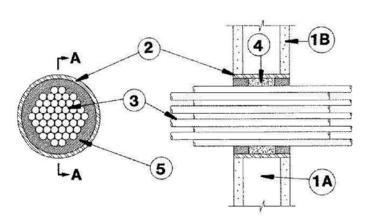
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

# System No. W-L-3046

January 23, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC \$115
Rating — 1 Hr	F Rating — 1 Hr
Rating — 1/2 Hr	FT Rating — 1/2 Hr
	FH Rating — 1 Hr
	FTH Rating — 1/2 Hr



SECTION A-A

1. **Wall Assembly** — The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

B. **Gypsum Board\*** — One layer of 5/8 in. (16 mm) thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 6 in. (152 mm).

2. **Metallic Sleeve** — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 (or thinner) steel pipe cast into wall assembly with joint compound and installed flush with wall surface.

3. **Cables** — Max 7/C No. 12 AWG cables with polyvinyl chloride jacket and insulation. Aggregate cross-sectional area of tightly bundled cable group to be 33 percent of the aggregate cross-sectional area of the opening. Cables to be rigidly supported on both sides of wall assembly.

4. **Packing Material** — Min 2-3/4 in. (70 mm) thickness of min 4.0 (64 kg/m³) pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

5. **Fill, Void or Cavity Material\*** — **Sealant** — Min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.

**HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC** — FS-One Sealant or FS-ONE MAX Intumescent Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

# System No. W-L-5225

January 23, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC \$115	
F Rating — 1 or 2 Hr (See Item 1)	F Rating — 1 or 2 Hr (See Item 1)	
T Rating — 0, 1, 1-1/2 or 2 <u>Hr</u> (See Item 3)	FT Rating — 0, 1, 1-1/2 or 2 Hr (See Item 3)	
+ /-	18 18	
	2 3 40 0	

System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

SECTION A-A

1. **Wall Assembly** — The fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. OC (406 mm). Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.

B. **Gypsum Board\*** — Thickness, type and number of layers as specified in the individual Wall and Partition Design. Max diam of opening is 8-1/2 in. (178 mm).

The hourly F, FH Ratings of the firestop system are equal to the hourly assembly rating of the wall assembly in which it is installed.

2. **Through Penetrants** — One nonmetallic pipe or conduit to be centered within the firestop system. Pipe to be rigidly supported on both sides of wall. The following types and sizes of pipes may be

A. **Polyvinyl Chloride (PVC) Pipe** — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping

B. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 4 in. (102 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.

3. **Pipe Covering\*** — Nom 1-1/2 in. (38 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. A nom annular space of min 0 in. (point contact) to max 1 in. (25 mm) is required within the firestop system.

See **Pipe and Equipment Covering - Materials** (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

3A. Tube Insulation — Plastics+ — (Optional for pipes with nom diam of 2 in. (51 mm) or less) Max 1 in.(25 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The annular space shall be min 1/8 in. to max 1/4 in. (3 to 6 mm).

See **Plastics+** (QMFZ2)category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

The hourly T, FT, FTH rating of the firestop system is equal to the hourly assembly rating of the wall assembly in which it is install unless Item 3 is used and nom pipe size is less than 4 in. (102 mm). For openings with Item 3 glass fiber insulation and pipe sizes less than 4 in (102 mm), when hourly rating for of the wall assembly is 1 hr, the T, FT, FTH rating is 1 hr. and when the hourly rating is of the wall assembly is 2 hr, then the T, FT, FTH Rating is 1-1/2 hr. The T, FT, FTH Rating Is 0 hr if Item 3A is less than 1 in. (25 mm) thick.

4. Firestop System — The firestop system shall consist of the

A. Fill, Void or Cavity Material\* - Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FSONE Sealant or FS-ONE MAX Intumescent Sealant

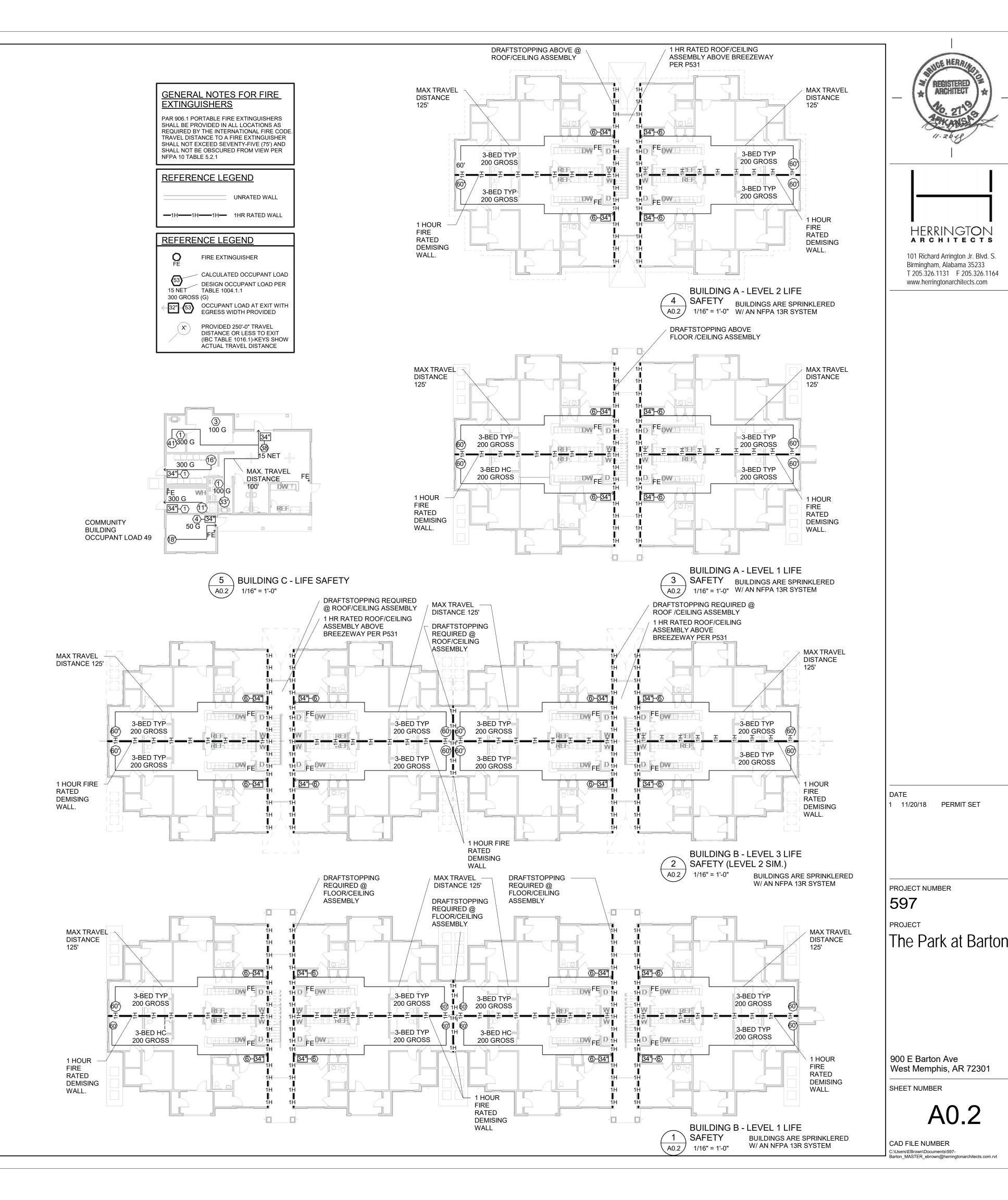
B. **Fill**, **Void or Cavity Material\*** — **Wrap Strip** — Nom 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Layers individually wrapped around the through-penetrant with the ends butted and held in place with tape. Butted ends in successive layers shall be offset. Each wrap strip layer is to be installed flush with both surfaces of wall. Wrap strips are installed on each surface of the

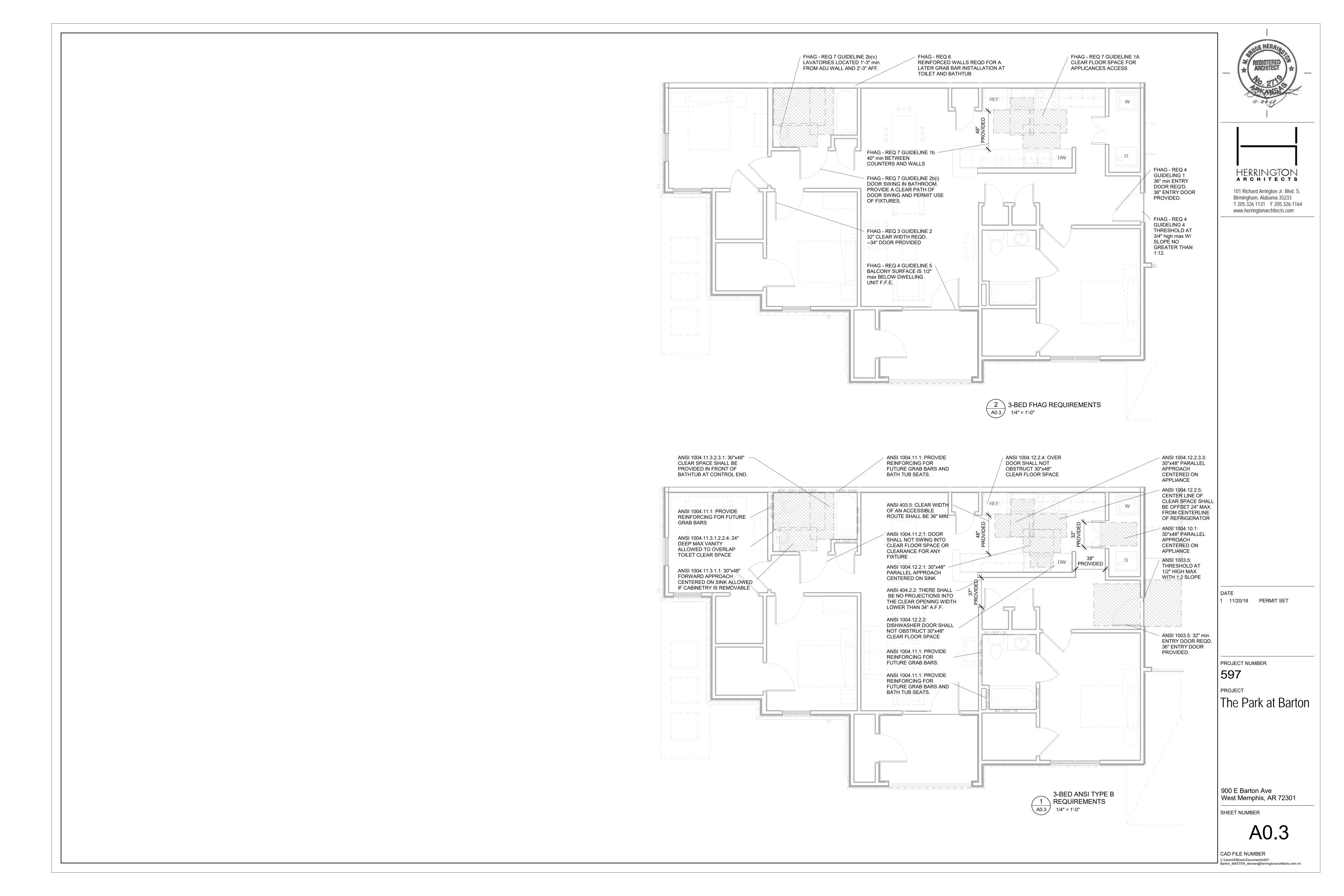
Product	Max Pipe	Number of
Designation	Size, in. (mm)	Layers
CP648-E W25/1-3/4"	2 (51)	1
CP648-E W25/1-3/4"	4 (102)	3

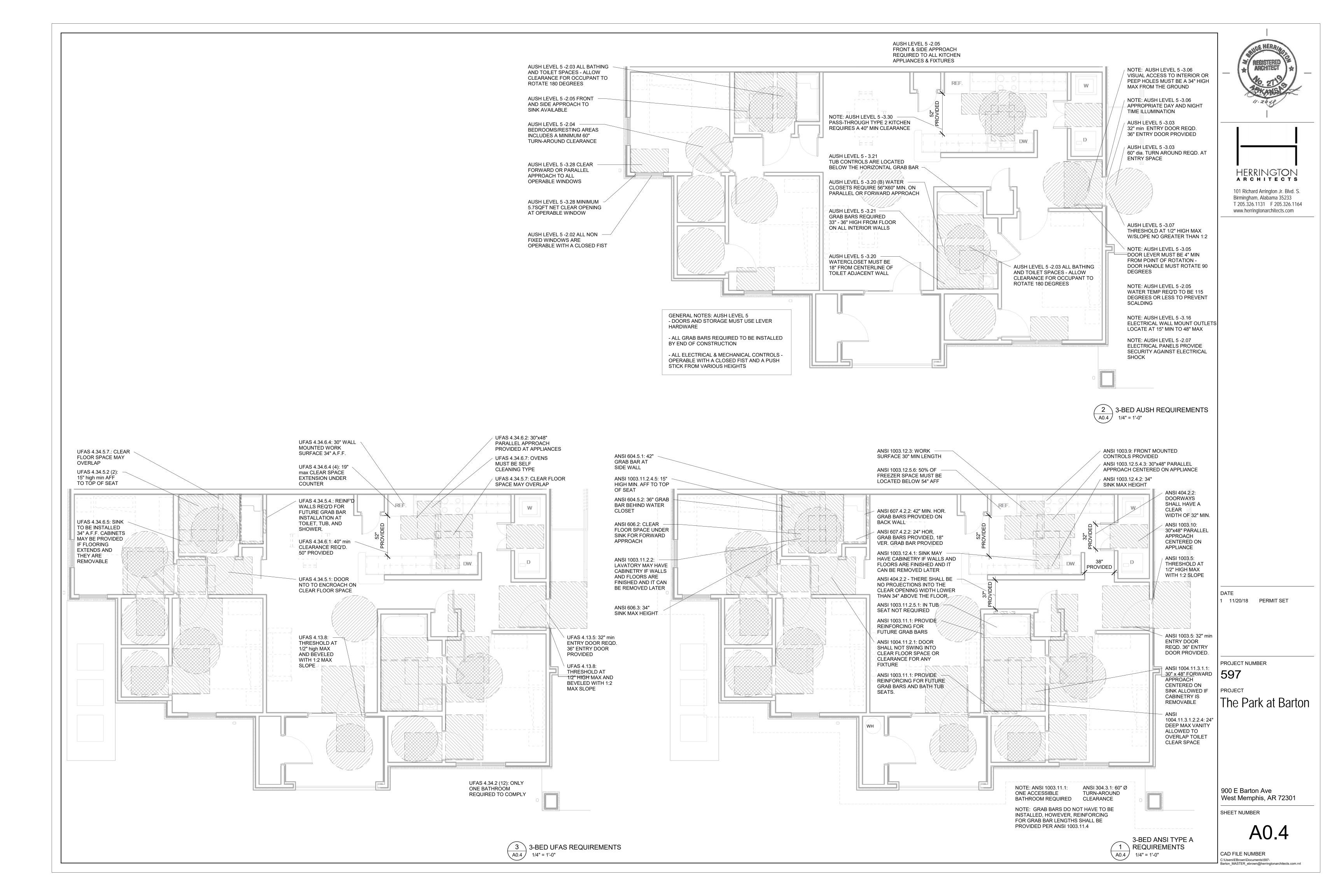
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP-648E Wrap Strip

C. **Steel Collar** — Steel collar fabricated from coils of precut min 0.016 in. (0.4 mm) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be nom 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs on 1-3/4 in. (44 mm) centers for securement to both surfaces of wall. In addition, collars contain retainer tabs 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, located opposite the anchor tabs. Collar shall be tightly wrapped over the wrap strip, overlapping min 1 in. (25 mm) at seam and compressed with a min 0.028 in. (0.7 mm) thick stainless steel band at collar mid-height. The retainer tabs are folded 90 deg towards the pipe to maintain the annular space around the pipe and to retain the wrap strip. Each tab of collar secured to surface of wall by means of nom 1-1/4 in. (32 mm) long steel laminating drywall screws in conjunction with 1-1/4 in. (32 mm) diam steel fender washers.

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



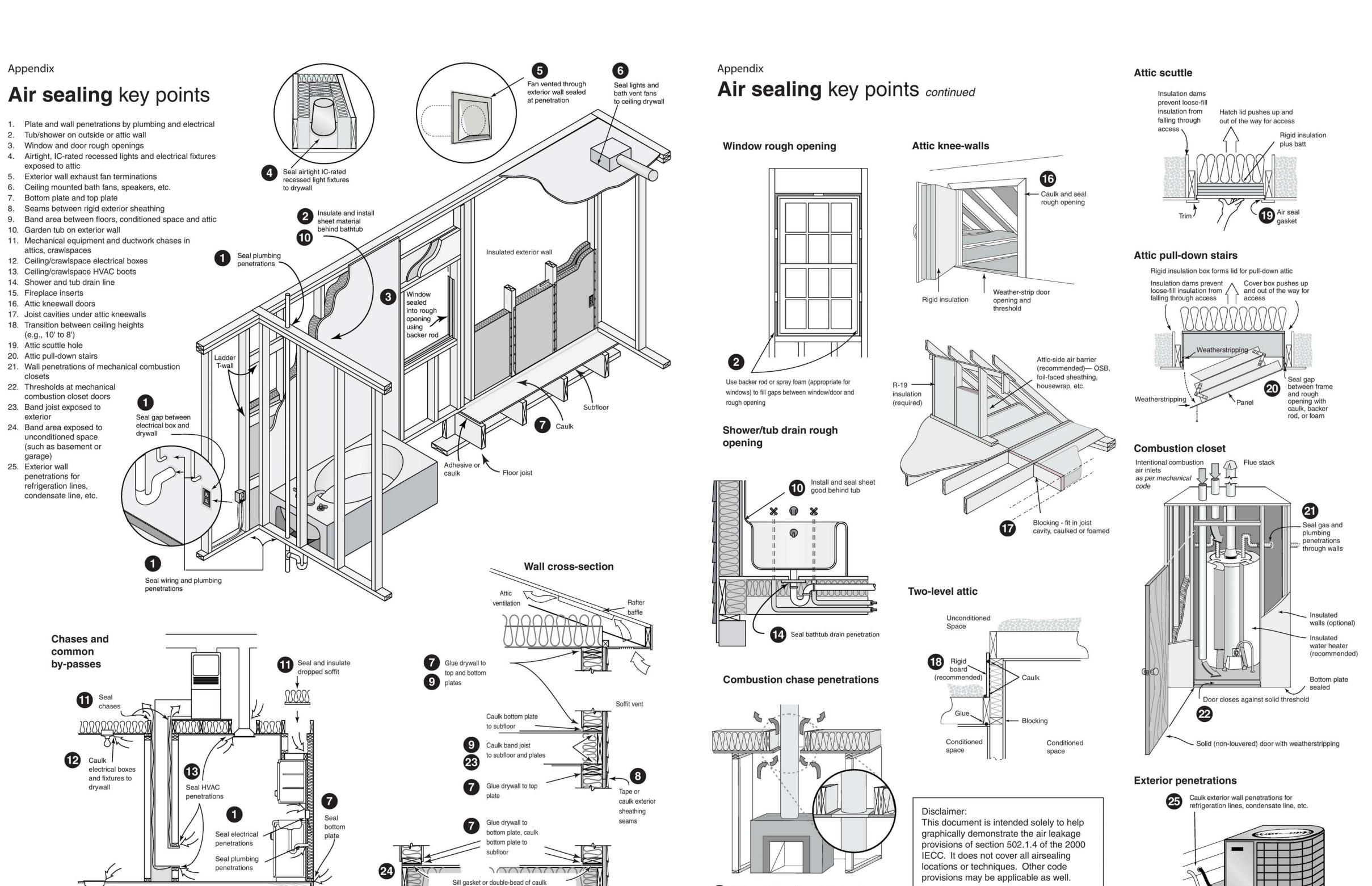








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OUUUUUU

Seal HVAC penetrations

PROJECT

The Park at Barton

PROJECT NUMBER

11/20/18 PERMIT SET

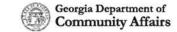
900 E Barton Ave West Memphis, AR 72301

SHEET NUMBER

CAD FILE NUMBER C:\Users\EBrown\Documents\597-Barton\_MASTER\_ebrown@herringtonarchitects.com.rvt

Seal around chimney flues with sheet metal and high temperature caulk









TYVEK INSTALLION GUIDELINES ARE INCLUDED IN THIS SET OF CONTRACT DOCUMENTS FOR CONVENIENCE ONLY. THE ARCHITECT IS NOT RESPONSIBLE FOR INFORMATION INCLUDED IN THESE DRAWINGS OR FOR THEIR ACCURACY, INCLUDING ANY POSSIBLE ERRORS OR

INSTALLATION GUIDELINES

for DuPont™ Flashing Systems™ with integral flanged windows AFTER weatherresistive barrier is installed.

DuPont™ FlexWrap™ and DuPont™ StraightFlash™ are highly engineered flashing tapes designed to be compatible with Tyvek® Weatherization Systems products. For optimal weather-resistive protection, we suggest you use Tyvek® HomeWrap®, Tyvek® StuccoWrap® or Tyvek® CommercialWrap®, DuPont™ Tyvek® Tape, and Tyvek® Wrap Caps.

GENERAL INSTRUCTIONS:

• DuPont™ FlexWrap™ and StraightFlash™ should be installed on clean, dry surfaces. Wipe surfaces to remove moisture, dirt, grease and other debris that could interfere with adhesion.

 Apply pressure along entire surface for a good bond. Remove all wrinkles and bubbles by smoothing surface and repositioning as

• DO NOT STRETCH DuPont™ FlexWrap™ WHEN INSTALLING. DuPont™ FlexWrap™ performs best when installed at temperatures above 40°F

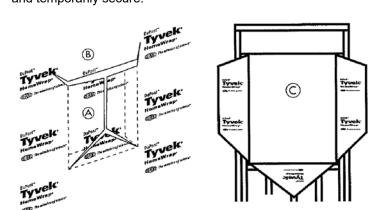
• For additional guidelines and suggested caulks, please call 1-800-44-TYVEK (800-448-9835).

#### STEP 1

PREPARE WEATHER-RESISTIVE BARRIER FOR WINDOW OR DOOR INSTALLATION:

A. Make a modified "I-Cut" in the weather-resistive barrier. Begin with a horizontal cut across the top of the window frame. (For roundtop windows, the cut should begin 2" above the mull joint [see D]). From the center cut straight down about two-thirds of the way then angling the cut to each corner (see A). B. Cut a flap above the rough opening to expose sheathing or framing members and allow head flashing installation. Head flashing should adhere to exposed sheathing or framing members.

C. Fold side and bottom flaps into rough opening and secure. Flip head flap up and temporarily secure.

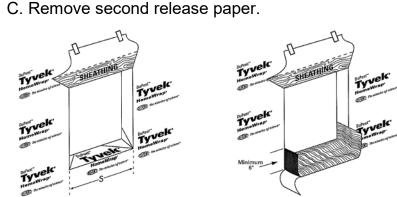


FOR RECTANGULAR WINDOWS

A. Cut DuPont™ FlexWrap™ at least 12" longer than width of rough opening sill (S).

B. Remove first piece of release paper, cover horizontal sill by aligning inside edge of sill, and adhere into rough opening

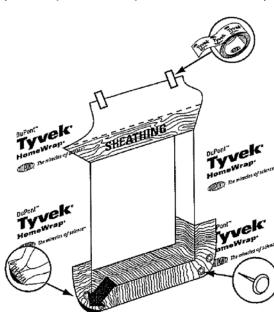
sill and up jambs (min. 6"). Cover horizontal sill by aligning FlexWrap™ edge with inside edge of sill.



A. Fan DuPont™ FlexWrap™ at bottom corners onto face of

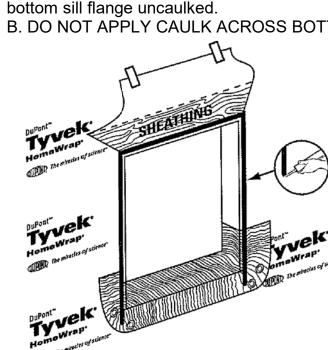
B. Firmly press sill flashing to ensure full adhesion. C. SECURE FANNED EDGES WITH MECHANICAL FASTENERS.

(i.e. CapNails, staples, screws, etc.)



A. Apply continuous bead of caulk to wall or back side of window mounting flange across jambs and head, but leave

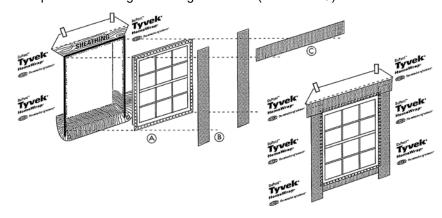
B. DO NOT APPLY CAULK ACROSS BOTTOM SILL FLANGE.



A. Install window/door according to manufacturer's instructions. (illustration

B. Cut two pieces of DuPont™ StraightFlash™ or FlexWrap™ for jamb flashing extending 1" above window head flange and below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame. (illustration B).

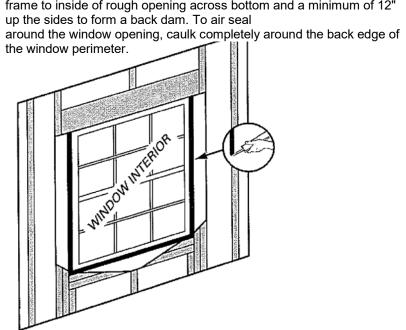
C. Cut a piece of DuPont™ StraightFlash™ or FlexWrap™ for head flashing, which extends beyond outer edges of jamb flashings. Remove release paper and install completely covering mounting flange and adhering to exposed sheathing or framing members. (illustration C)



A. Flip down upper flap of weather-resistive barrier so it lays flat across head flashing.

B. Tape along all cuts in weather-resistive barrier and across head of the window with DuPont™ Tyvek® Tape.

Caulk (using backer rod if necessary) to seal rear of window/ door frame to inside of rough opening across bottom and a minimum of 12" up the sides to form a back dam. To air seal



STEPS 8, 9 AND 10 NOT USED

BUILDINGCODEREPORTS National Evaluation Report NER-642. Meets the ASTM E1677 Type 1 Air Retarder when installed according to Tyvek® Weatherization Systems best practices. See installation instructions on label.

TECHNICAL SPECIFICATIONS Tyvek® used in construction products is made from 100% flash spunbonded high density polyethylene fibers which have been bonded together by heat and pressure, without binders or fillers, into a tough, durable sheet structure. Additives have been incorporated into the polyethylene to provide ultraviolet light resistance. DuPont suggests that Tyvek® be covered within four months (120 days) of installation. DuPont™ FlexWrap™ and StraightFlash™ are made from a synthetic rubber adhesive and a laminate of polyethylene film, elastic fiber, synthetic rubber adhesive, polyurethane adhesive, and a top sheet of flash spunbonded high density polyethylene fibers. Additives have been incorporated into these materials to provide ultraviolet light resistance. DuPont suggests that DuPont™ FlexWrap™ and StraightFlash™ be covered within four months (120 days) of installation.

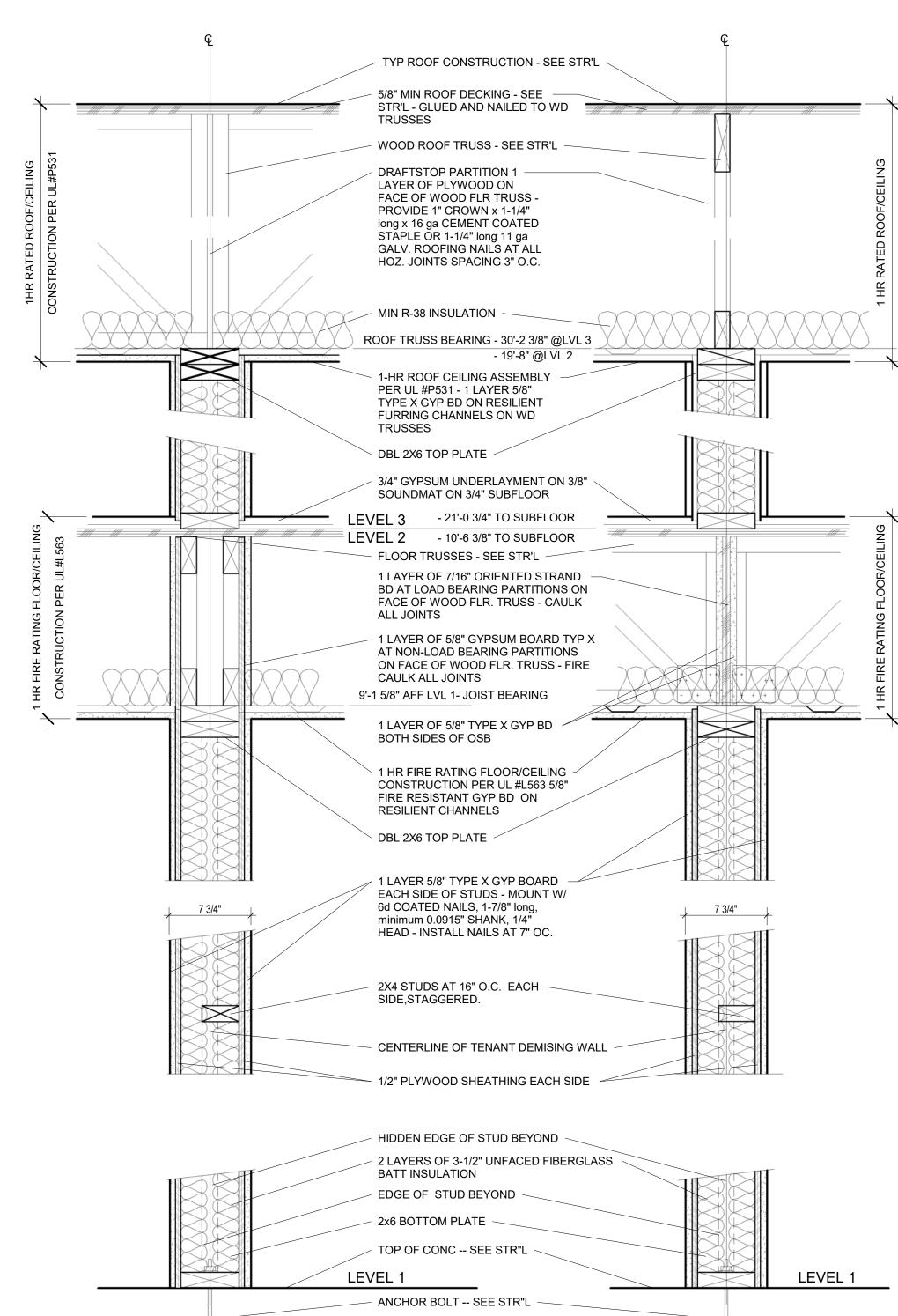
PRODUCT GUARANTEE DuPont will replace any Tyvek® Weatherization System product damaged during installation by weather or normal handling if it is installed according to procedures published by DuPont. If you have any questions, call DuPont™ Tyvek® Weatherization Systems at 1-800-44-TYVEK. If DuPont™ FlexWrap™ and StraightFlash™ product fails to meet published material specifications at the time of shipment, or contains defects created during its production, DuPont will replace defective material at no charge.

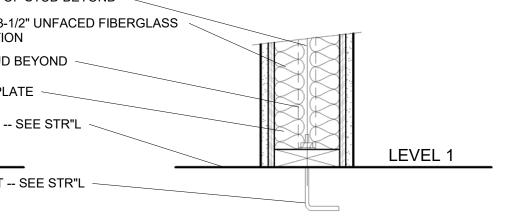
WARNING Tyvek® is slippery and should not be used in any application where it will be walked on. In addition, because it is slippery, DuPont recommends using kickjacks or scaffolding for exterior work above the first floor. If ladders must be used, extra caution must be taken to use them safely by following the requirements set forth in ANSI Standards 14.1, 14.2 and 14.5 for ladders made of wood, aluminum, and fiberglass, respectively. Tyvek® is combustible and should be protected from a flame and other high heat sources. Tyvek® will melt at 275°F (135°C) and if the temperature of Tyvek® reaches 750°F (400°C), it will burn and the fire may spread and fall away from the point of ignition. For more information, call 1-800-44-TYVEK. DuPont™ FlexWrap™ and StraightFlash™ and their release paper are slippery and should not be walked on. Remove release paper from work area immediately. DuPont™ FlexWrap™ and StraightFlash™ will melt at temperatures greater than 250°F (121°C). DuPont<sup>™</sup> FlexWrap™ and StraightFlash™ are combustible and should be protected from flame and other high heat sources. DuPont™ FlexWrap™ and StraightFlash™ will not support combustion if the heat source is removed. However, if burning occurs, ignited droplets may fall away from the point of ignition. For more information, call 1-800-44-TYVEK.

To Achieve greater potential energy savings and weather-resistance, any tears, breaks, holes, etc. created during normal construction should be repaired by taping or patching with Tyvek® weather resistive barriers. When installed in conjunction with other building materials, DuPont™ FlexWrap™ and StraightFlash™ should be properly shingled with these materials, such that water is diverted to the exterior of the wall system. Tyvek® products are weather resistive barriers not the primary water barrier (the outer facade is the primary barrier). Contamination of any Tyvek® weather-resistive barriers and building papers with building site chemicals which increase their wettability (e.g., surfactants) will adversely affect their waterresistance and therefore, their contribution to the overall waterresistance of the wall system. Tyvek® StuccoWrap®, DuPont™ FlexWrap™ and StraightFlash™ are suggested for use as outlined in this brochure. DuPont™ FlexWrap™ and StraightFlash™ are not suggested for use on roof windows. For superior protection against bulk water penetration DuPont suggests a system combining a quality exterior facade, a good secondary weather-resistive membrane and an exterior sheathing, appropriate flashing materials and details; and high quality windows and doors with particular attention to proper installation of each component. In a system where no exterior sheathing is used and Tyvek® is installed directly over the wall studs, exterior facade materials should be selected to ensure maximum protection against water intrusion. Careful workmanship and proper installation of each component is very important.

DuPont believes this information to be reliable and accurate. The information may be subject to revision as additional experience and knowledge is gained. It is the user's responsibility to determine the proper construction materials needed. Because conditions are outside of our control, DUPONT MAKES NO WARRANTIES, EXPRESSED OR IMPLIED. AND ASSUMES NO LIABILITY WHATSOEVER AS TO THE PERFORMANCE OF THE PRODUCTS FOR A PARTICULAR USE. This information is not intended to be used by others for advertising, promotion or other publication for commercial purposes.

For more information: 1-800-44-TYVEK www.Tyvek.com





D2 TENANT DEMISING WALL - 1 HR PARTITION TYPE "D2" UL# U340

1-1/2" = 1-0

2012 IBC 1207.2 REQUIRES STC 50 MIN RATING AT DEMISING WALL ASSEMBLIES. PROVIDED STC 50 RATING

FBC 1207.3 REQUIRED IIC 50 MIN RATING AT FLOOR/CEILING ASSEMBLIES. PROVIDED ICC 58 RATING (PER SOUND SYSTEM 1; REFERENCE UNITED STATES GYPSUM COMPANY CATALOG IG 1503 / 2-04)

TENANT DEMISING WALL - 1HR PARTITION TYPE "D1" UL# U340 1-1/2" = 1-0

2012 IBC 1207.2 REQUIRES STC 50 MIN RATING AT

DEMISING WALL ASSEMBLIES. PROVIDED STC 50 RATING

FBC 1207.3 REQUIRED IIC 50 MIN RATING AT FLOOR/CEILING ASSEMBLIES. PROVIDED ICC 58 RATING (PER SOUND SYSTEM 1; REFERENCE UNITED STATES GYPSUM COMPANY CATALOG IG 1503 / 2-04)



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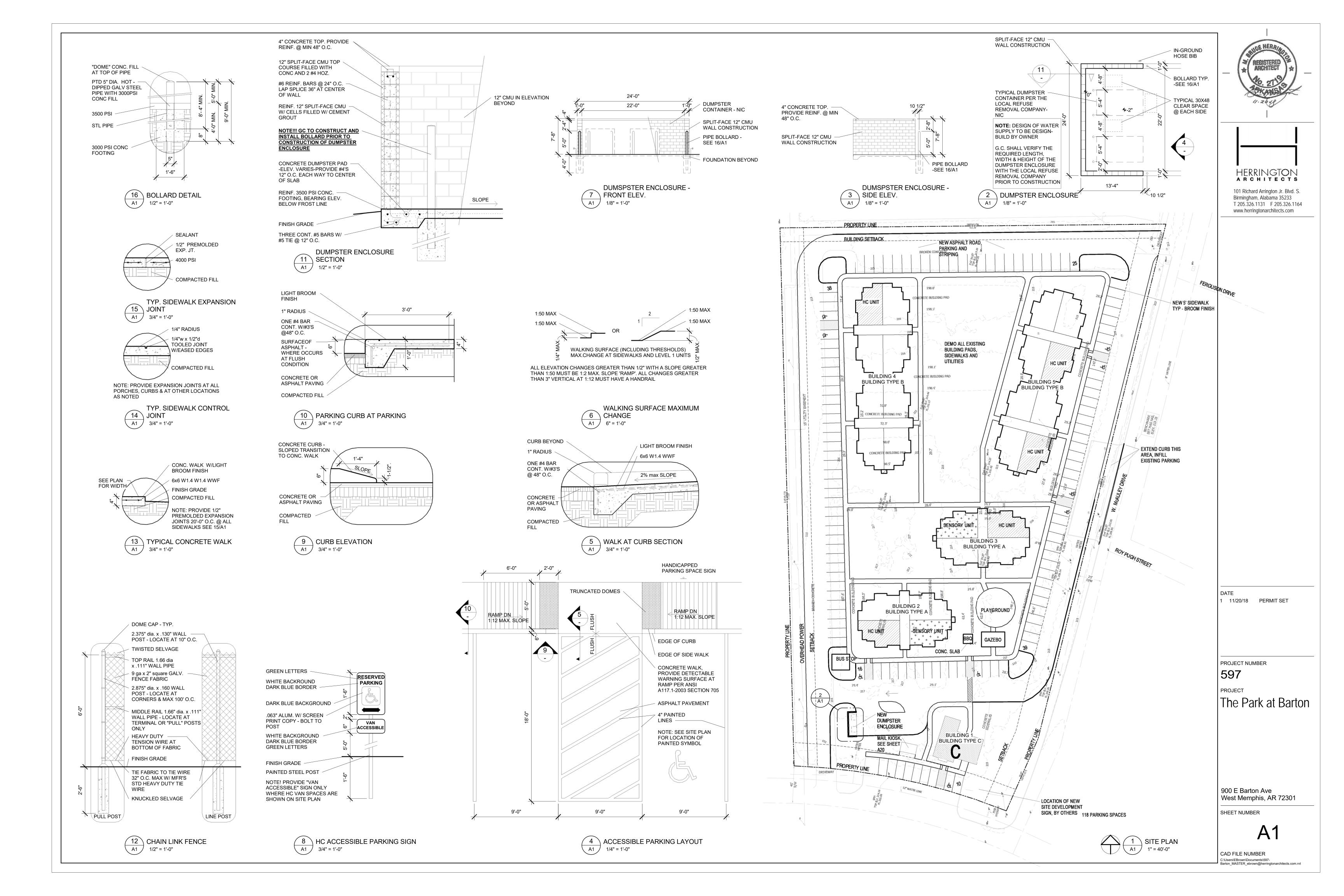
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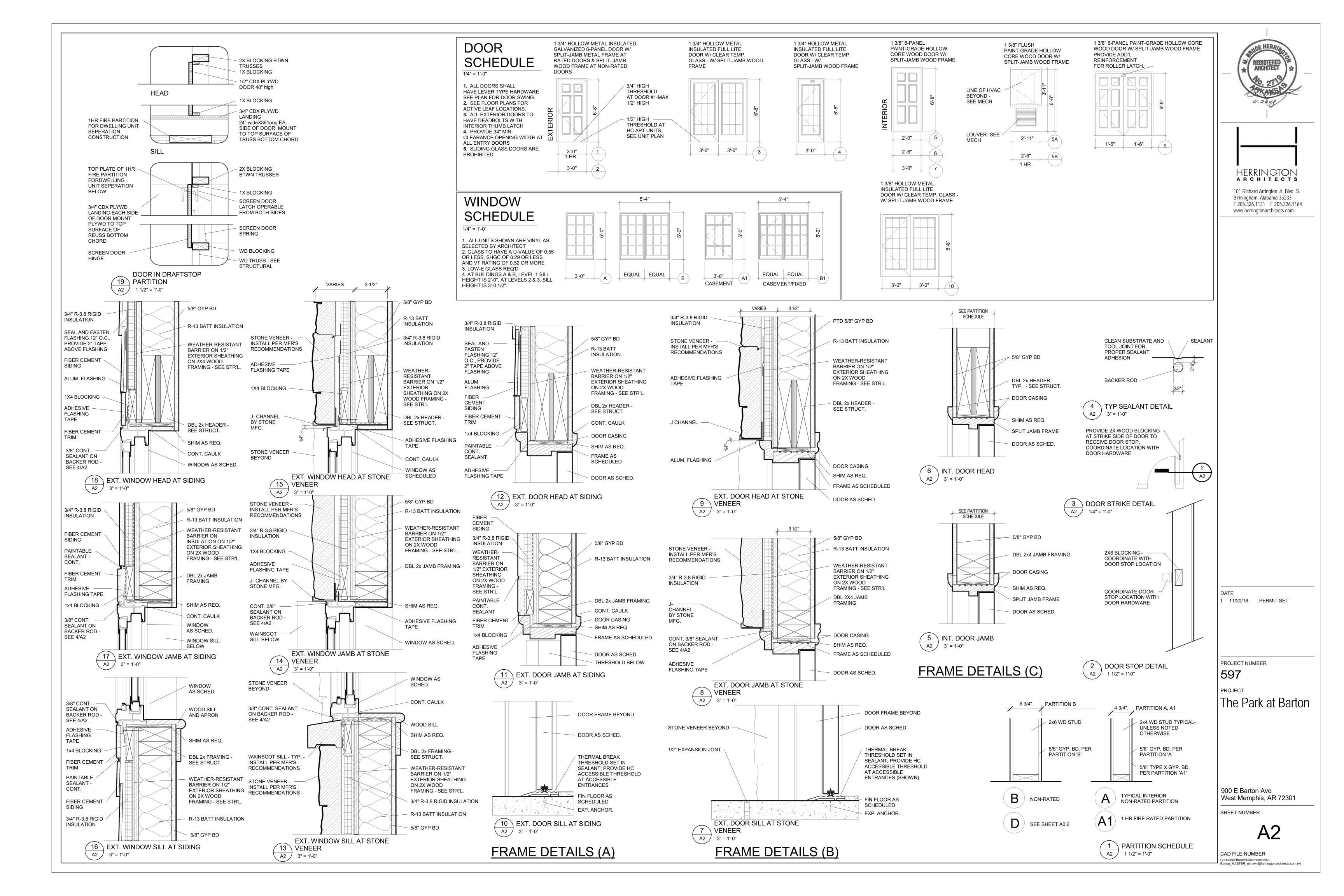
The Park at Barton

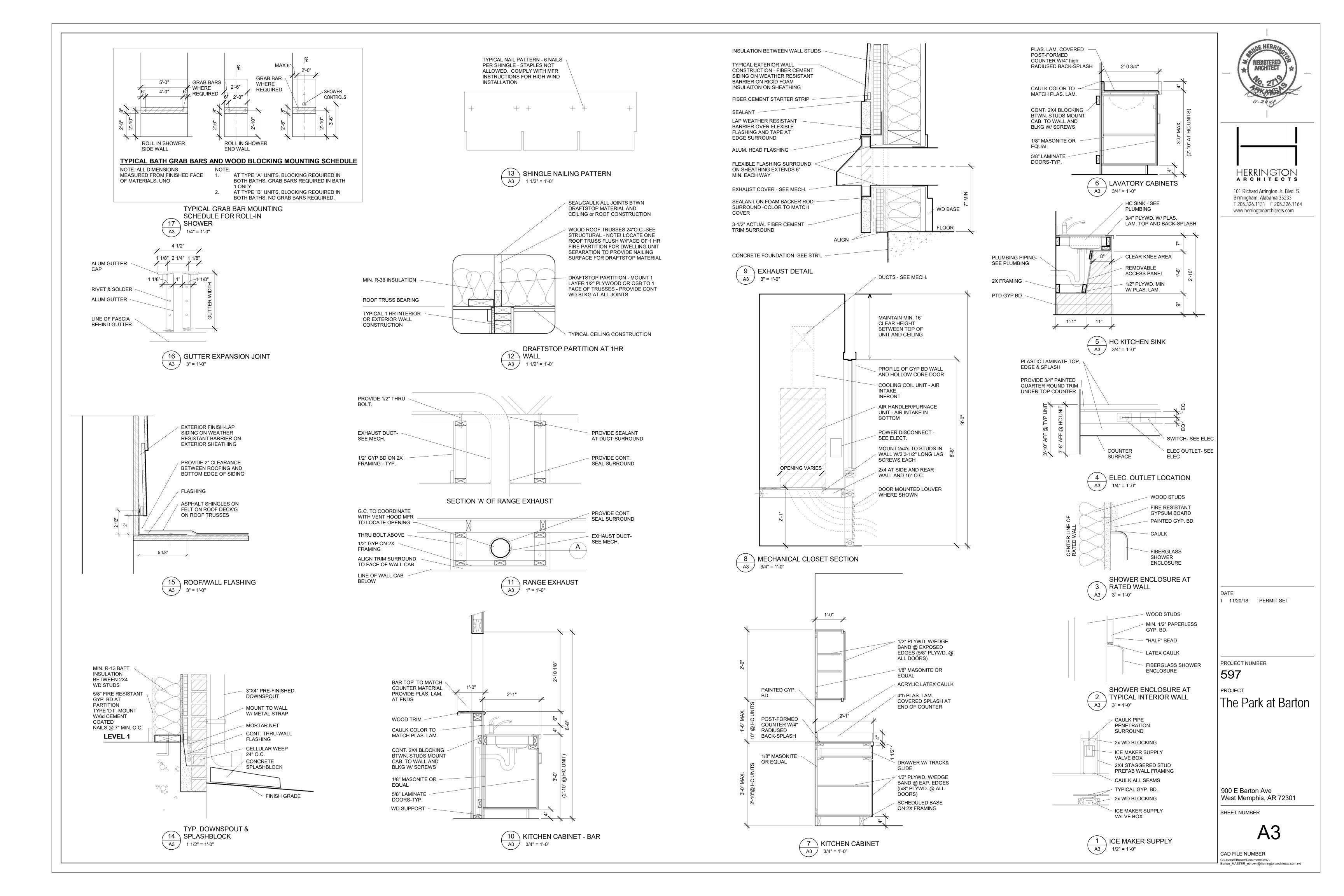
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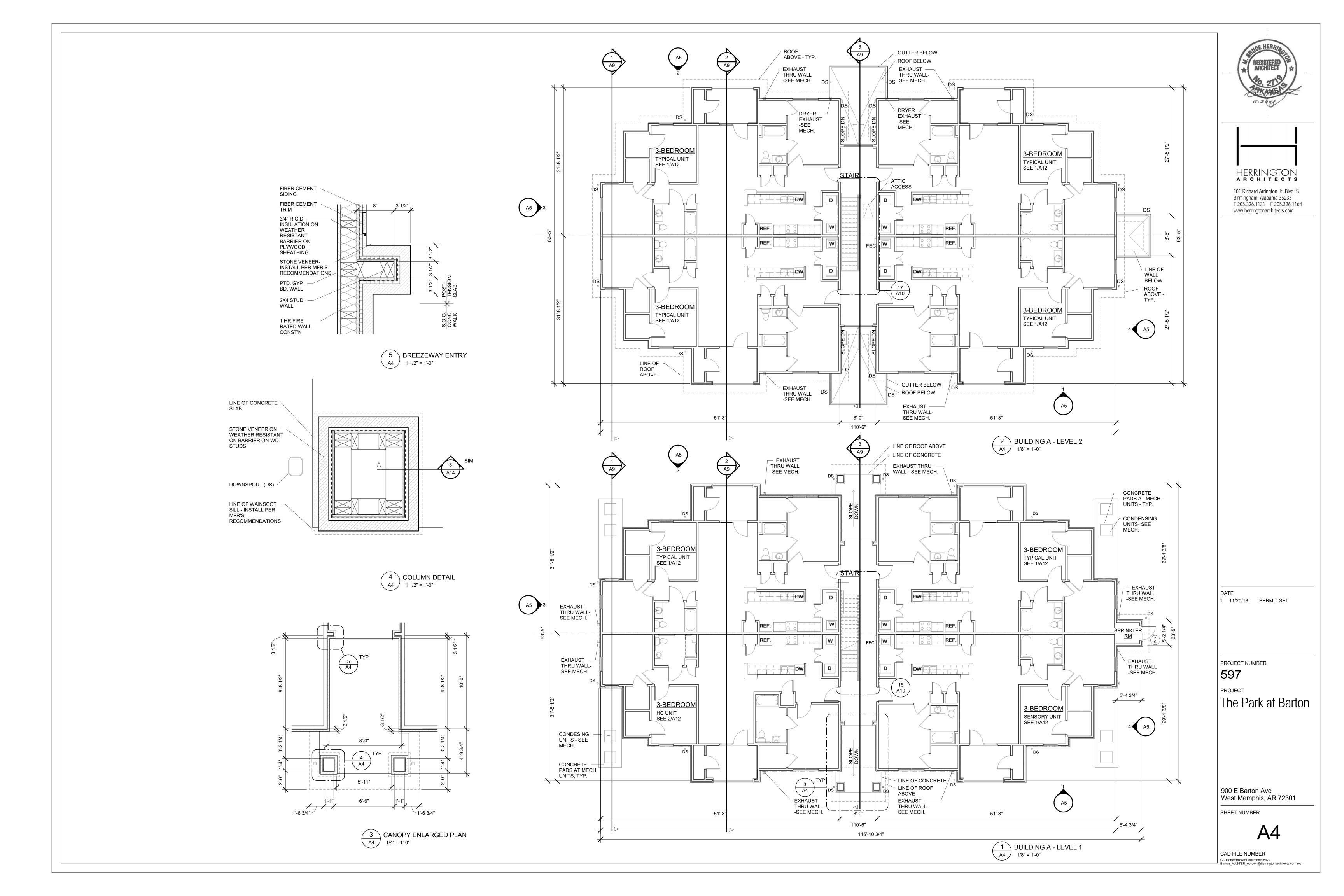
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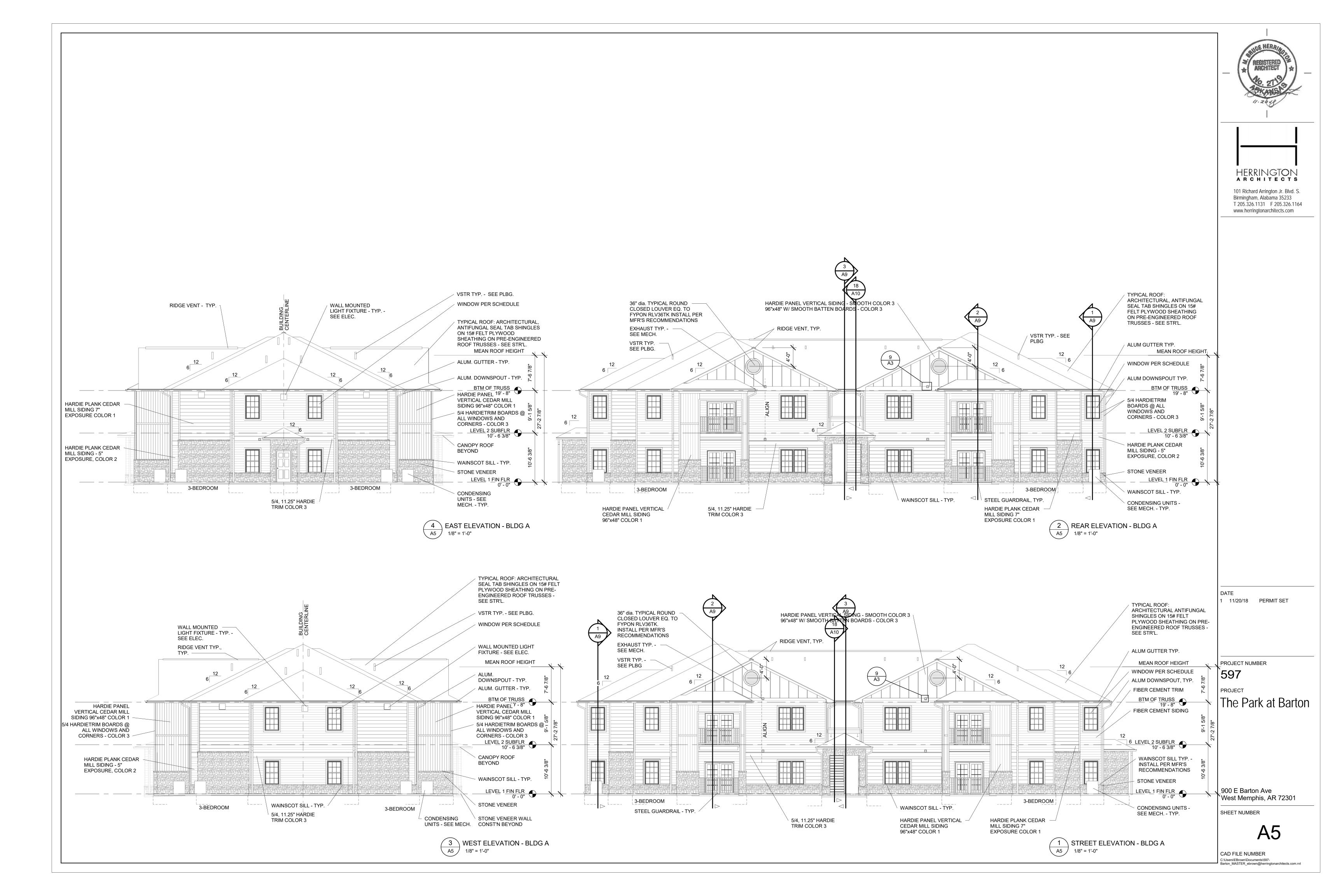
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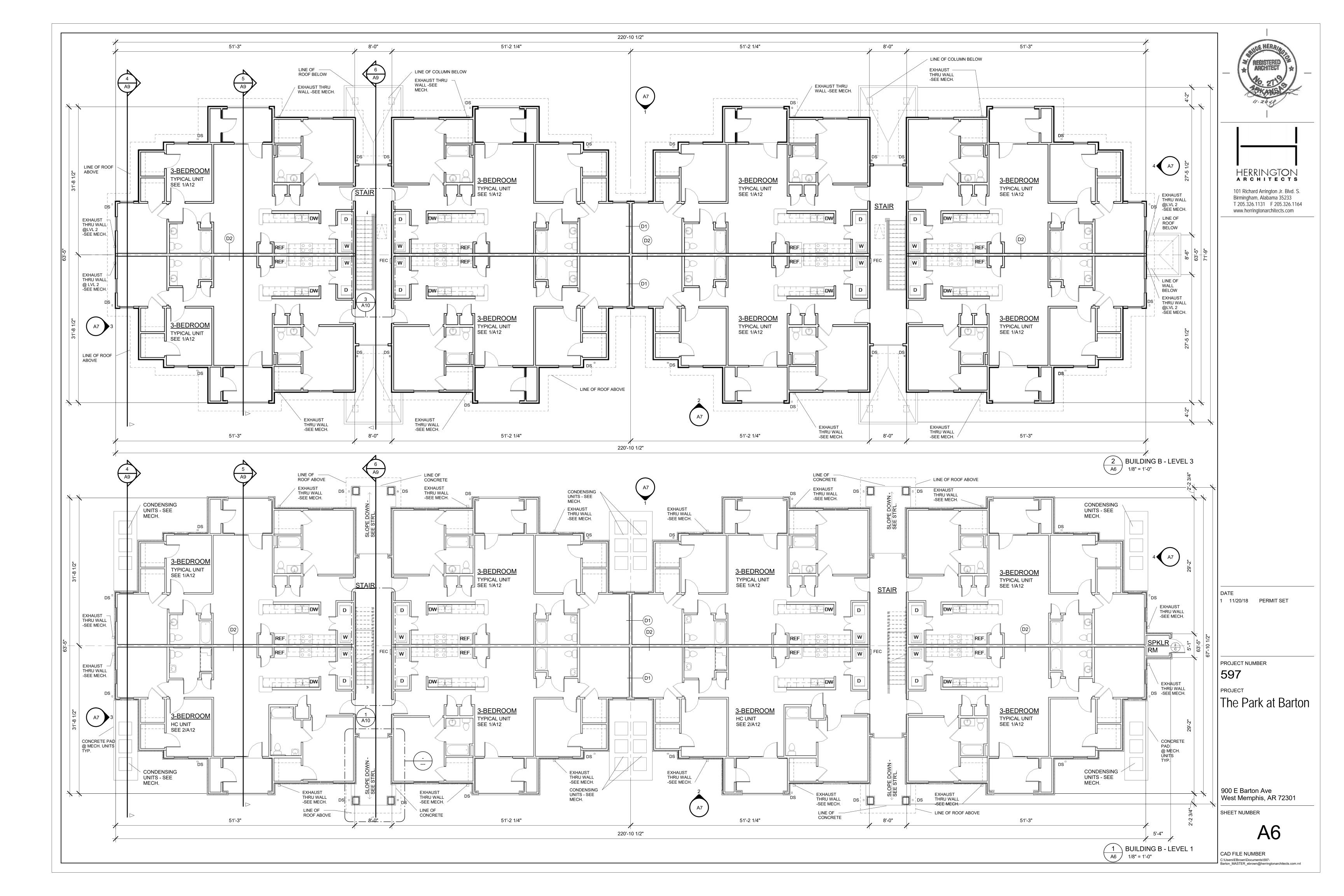


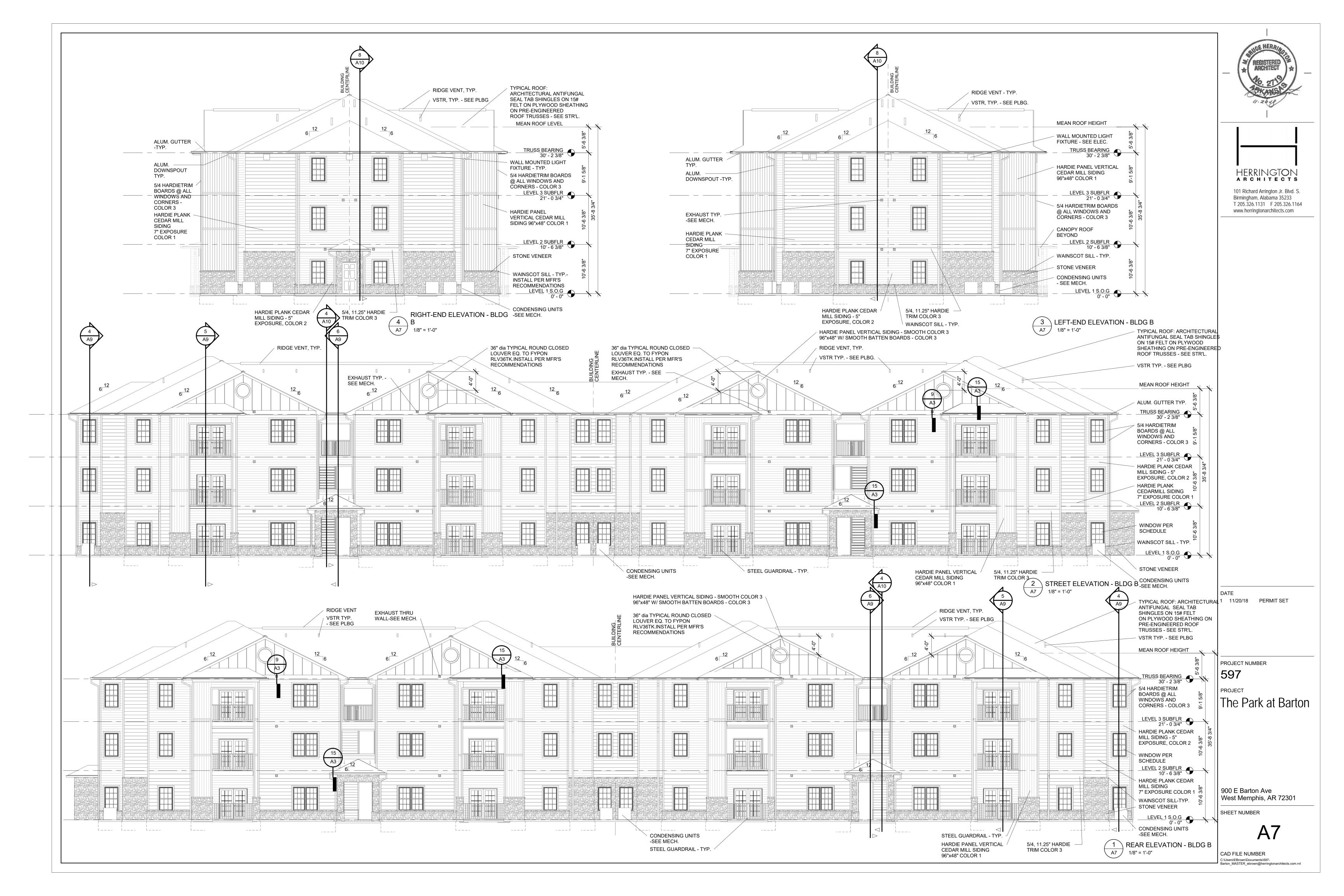


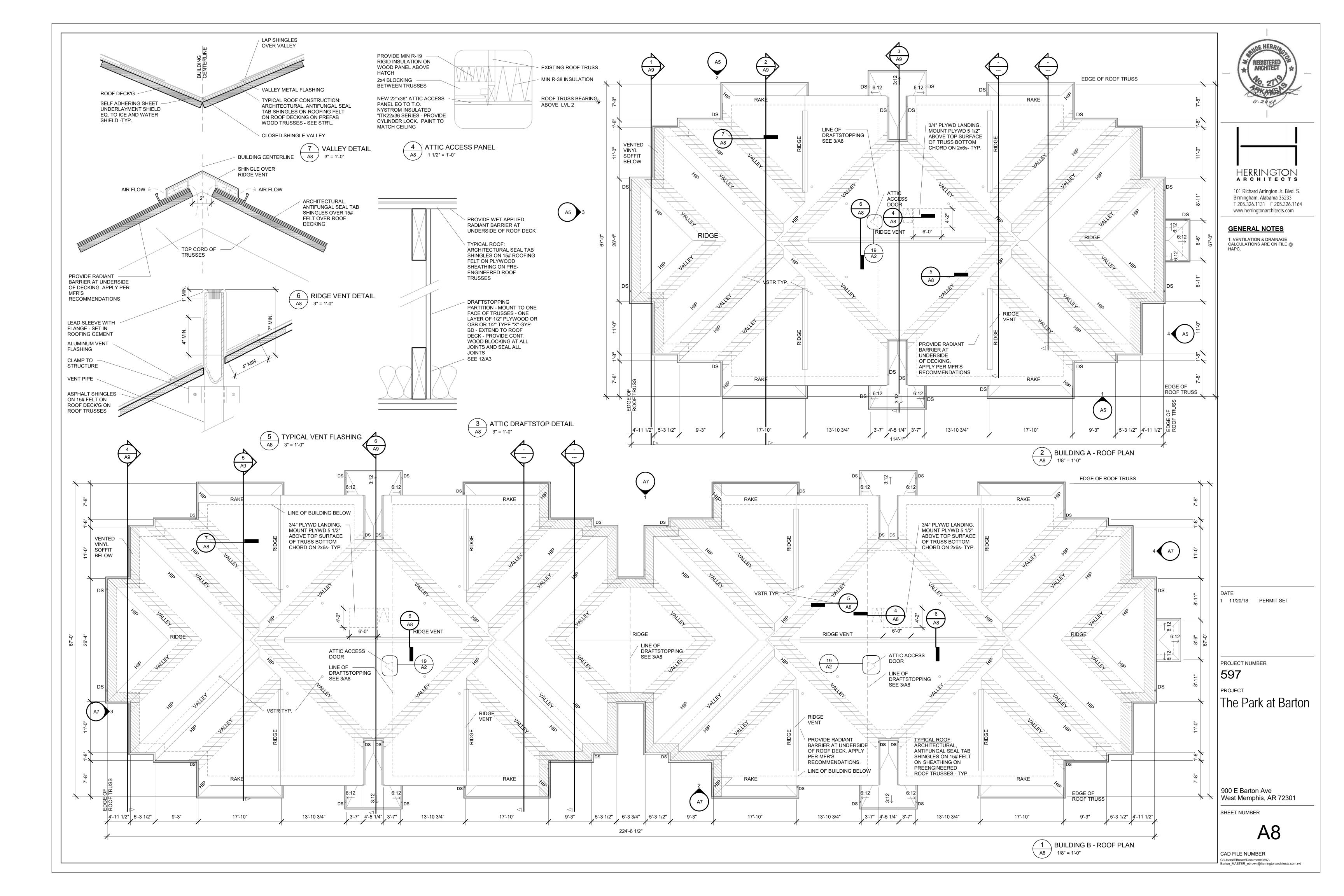


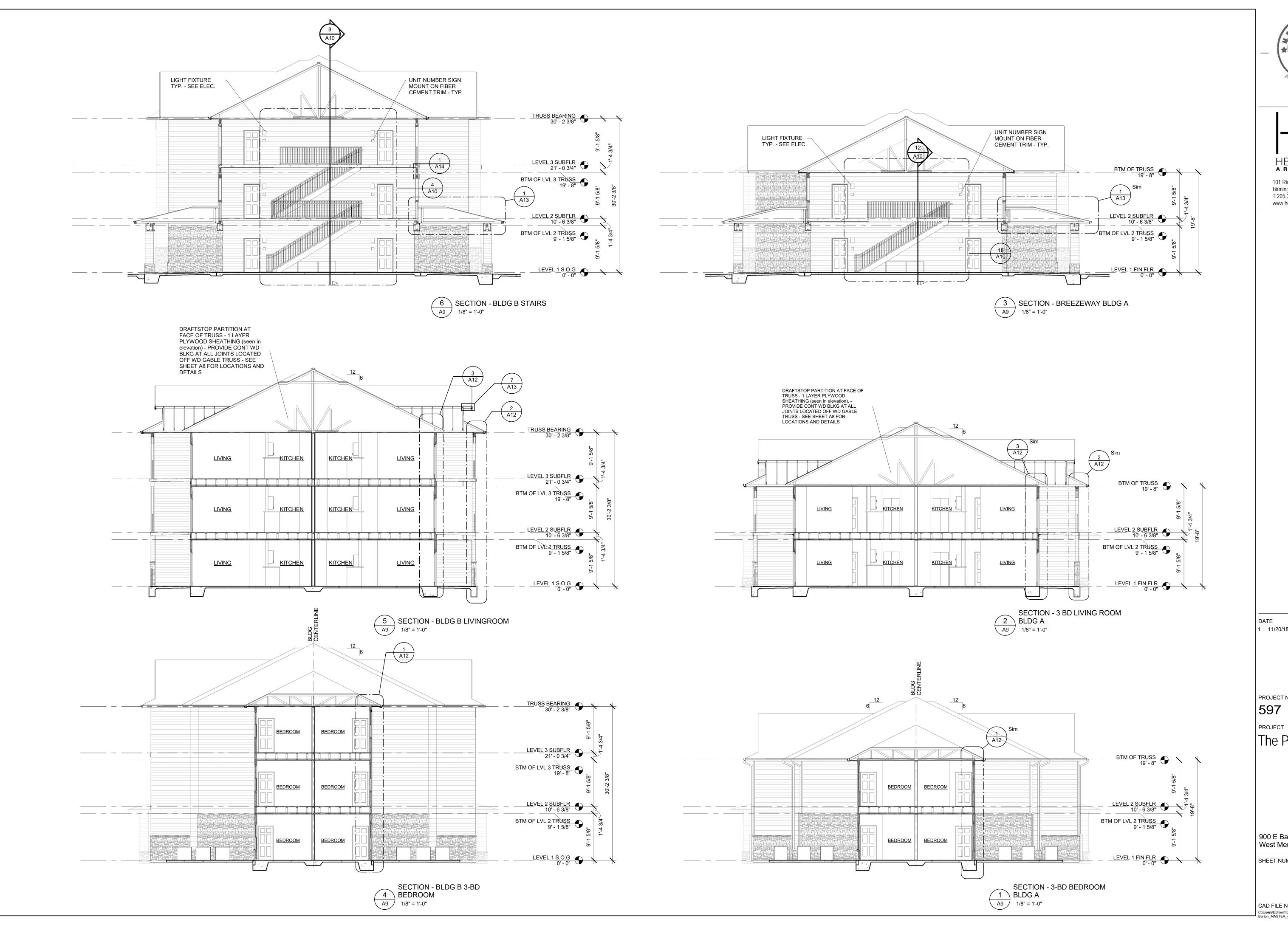
















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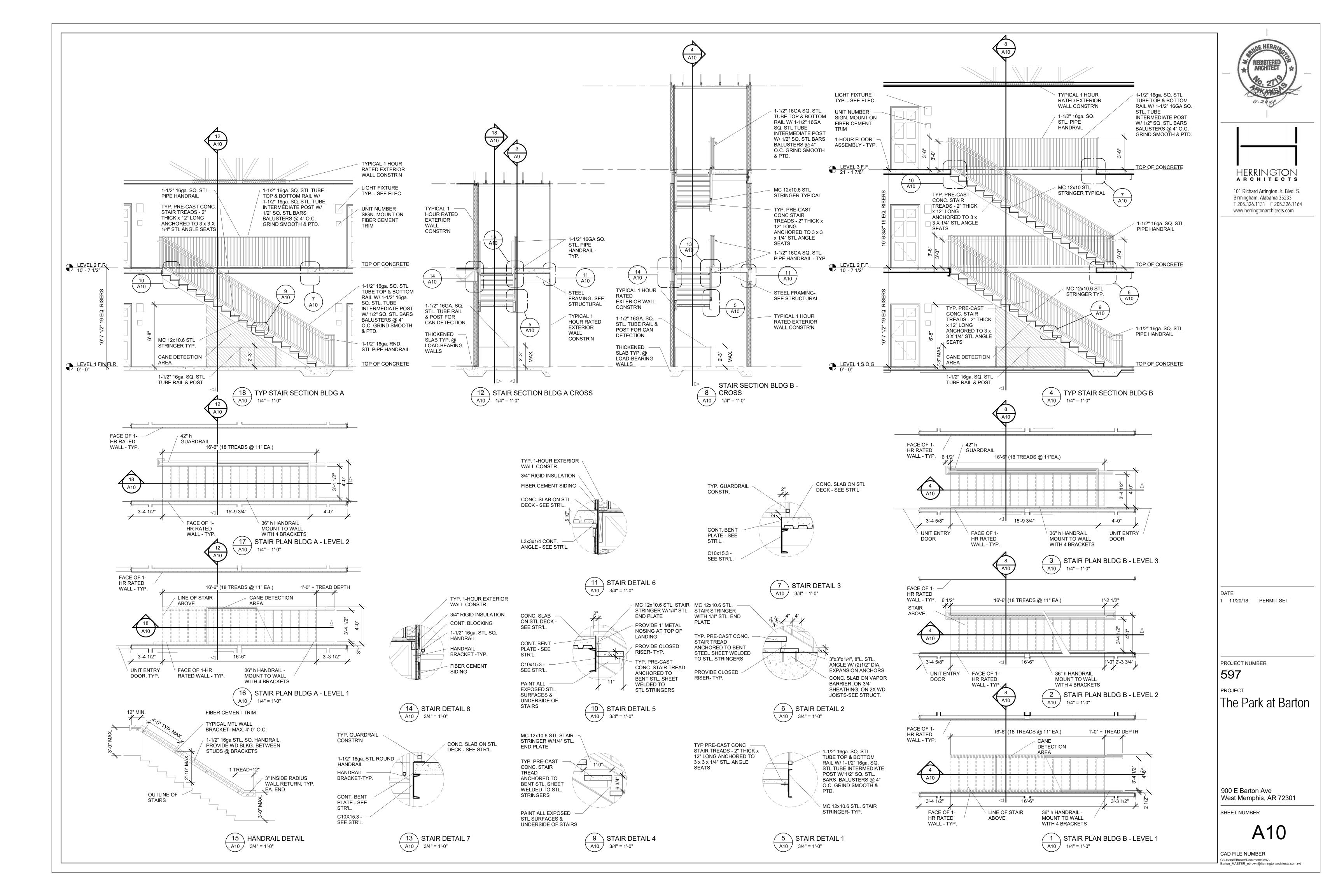
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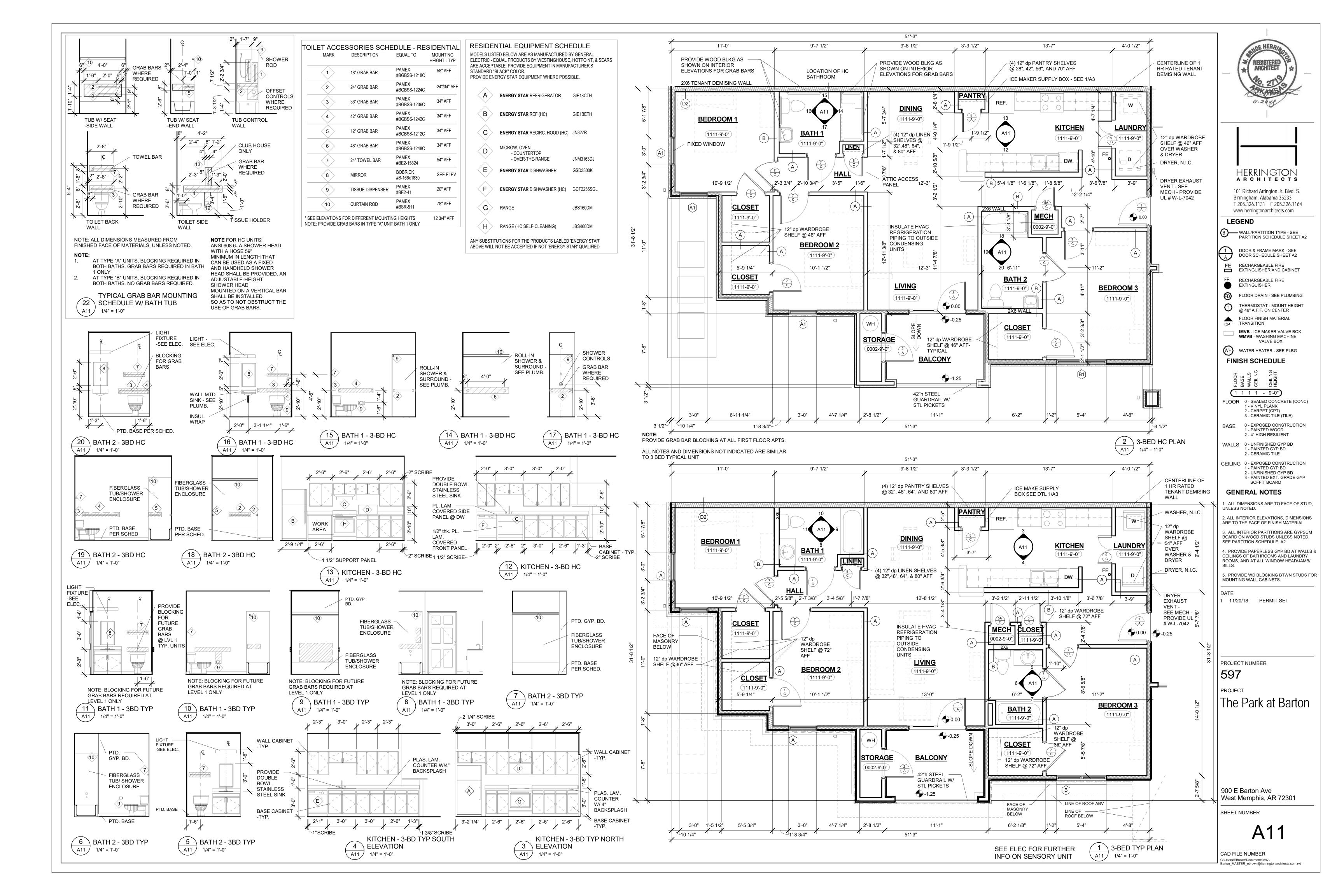
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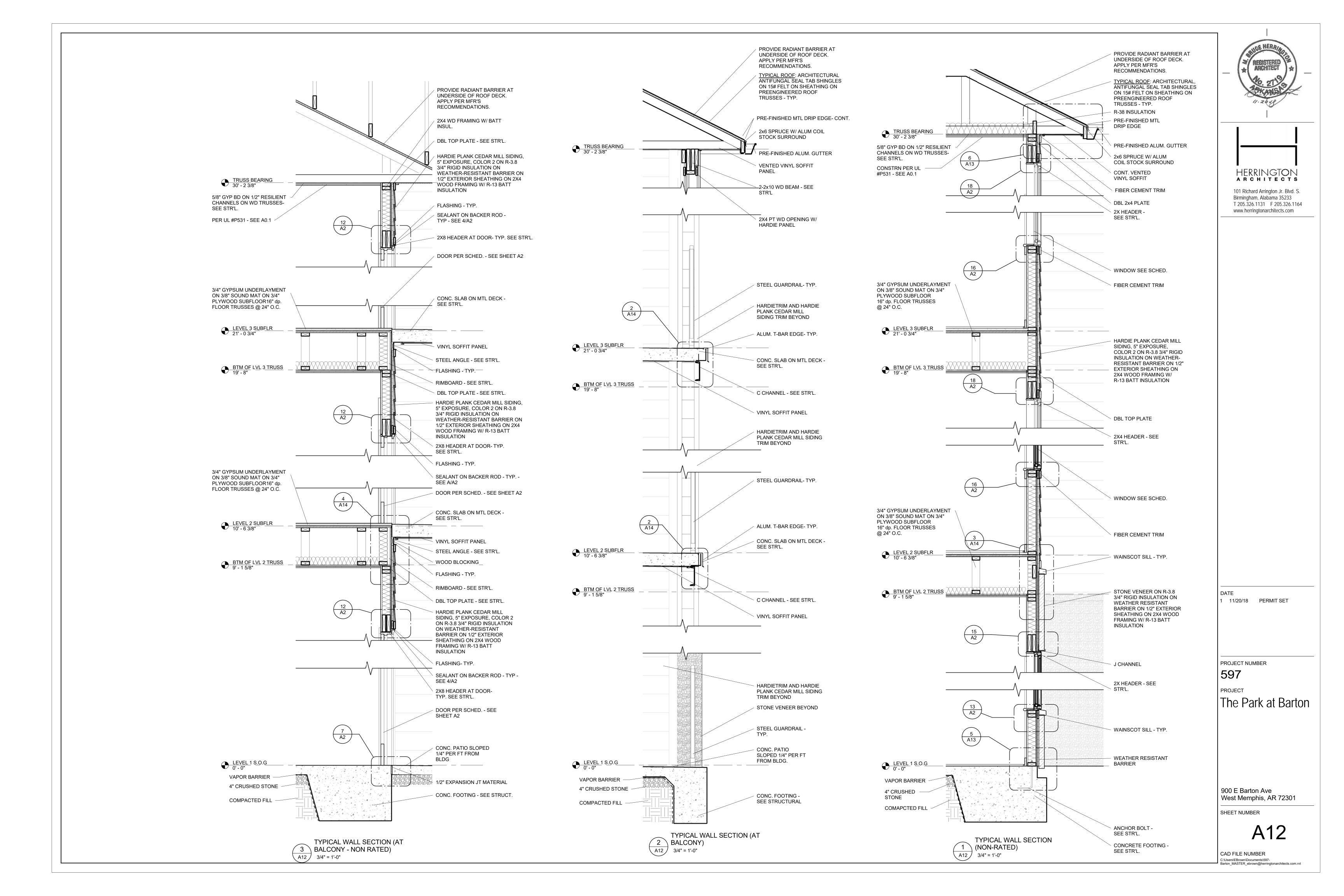
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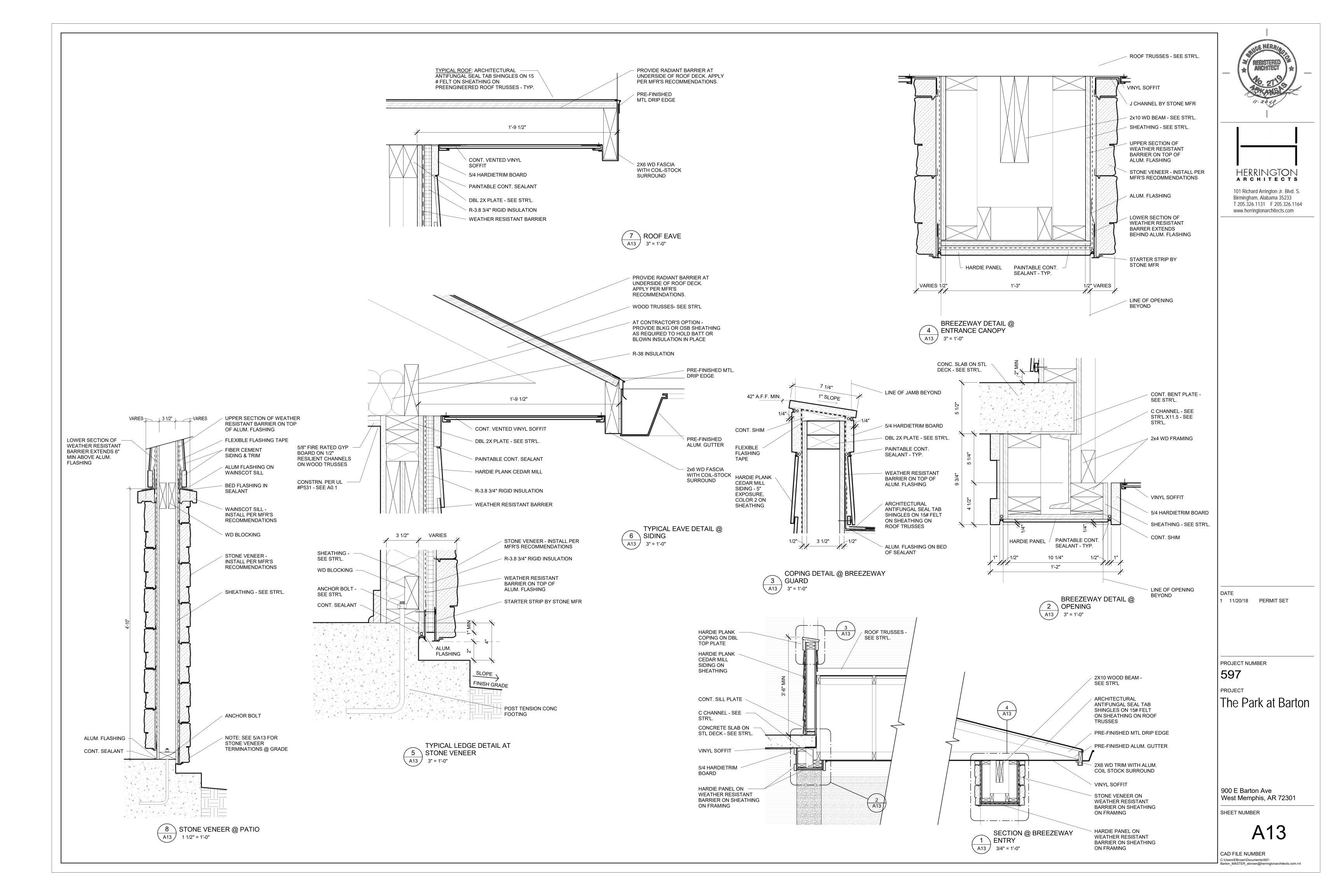
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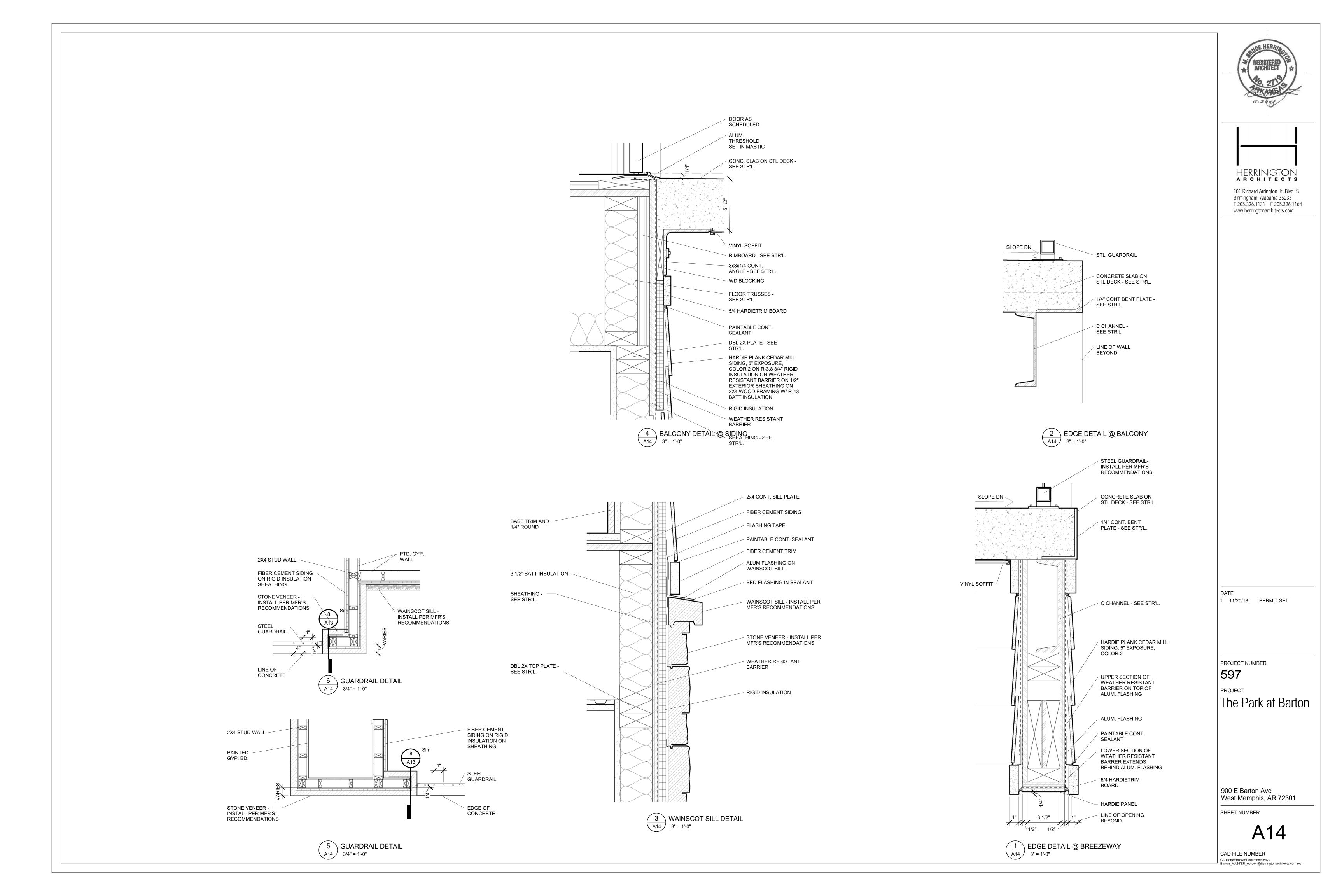
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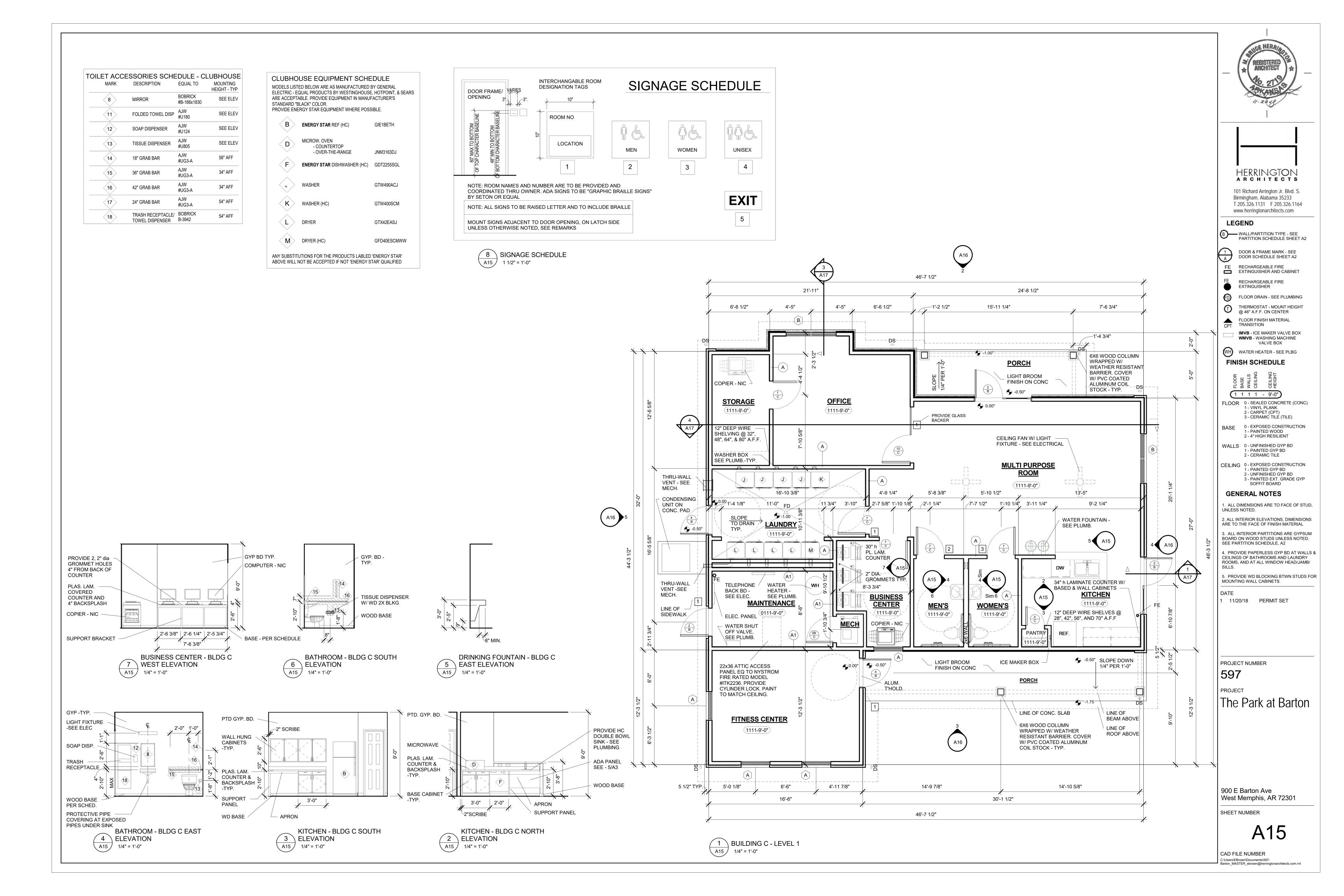


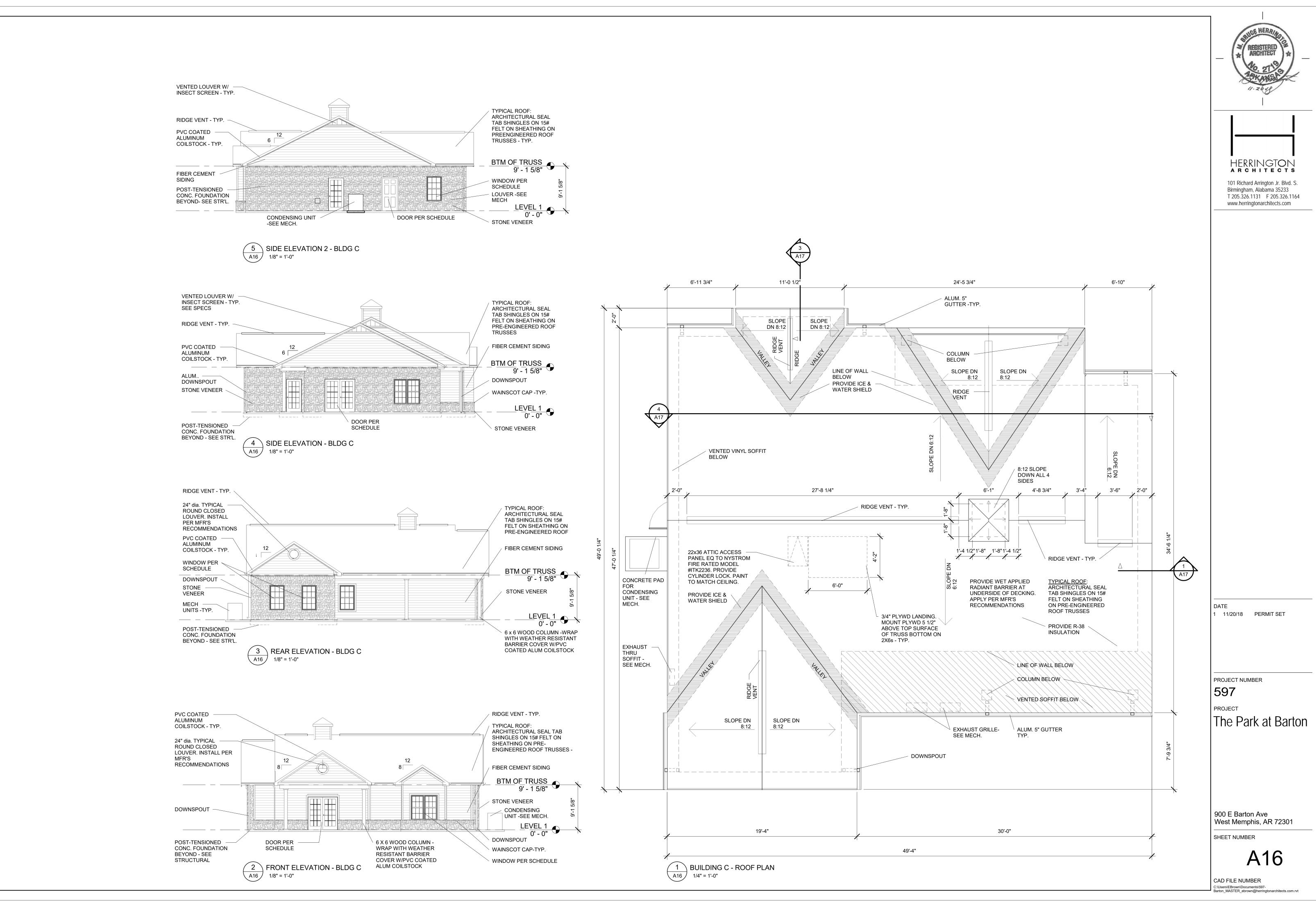




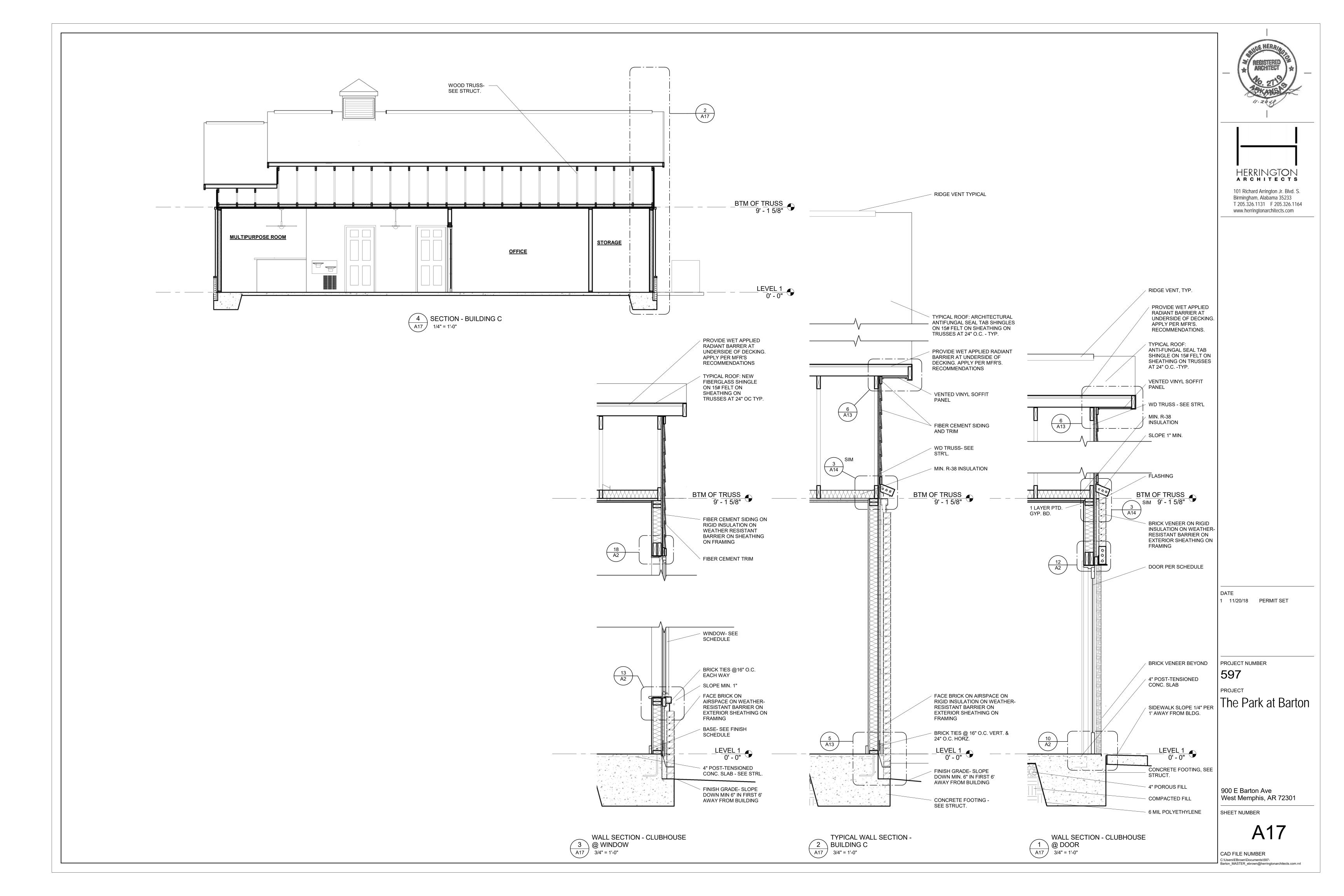


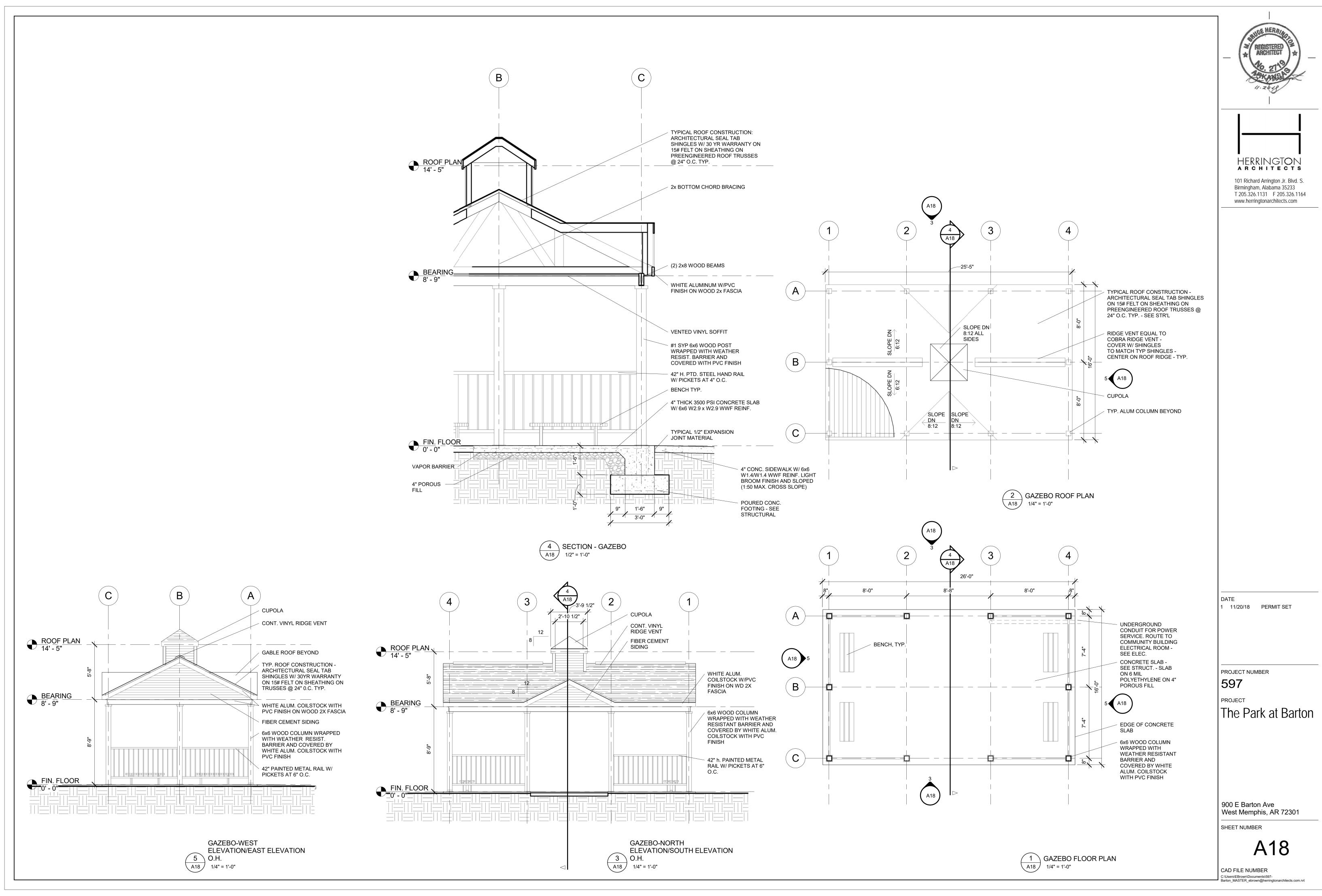




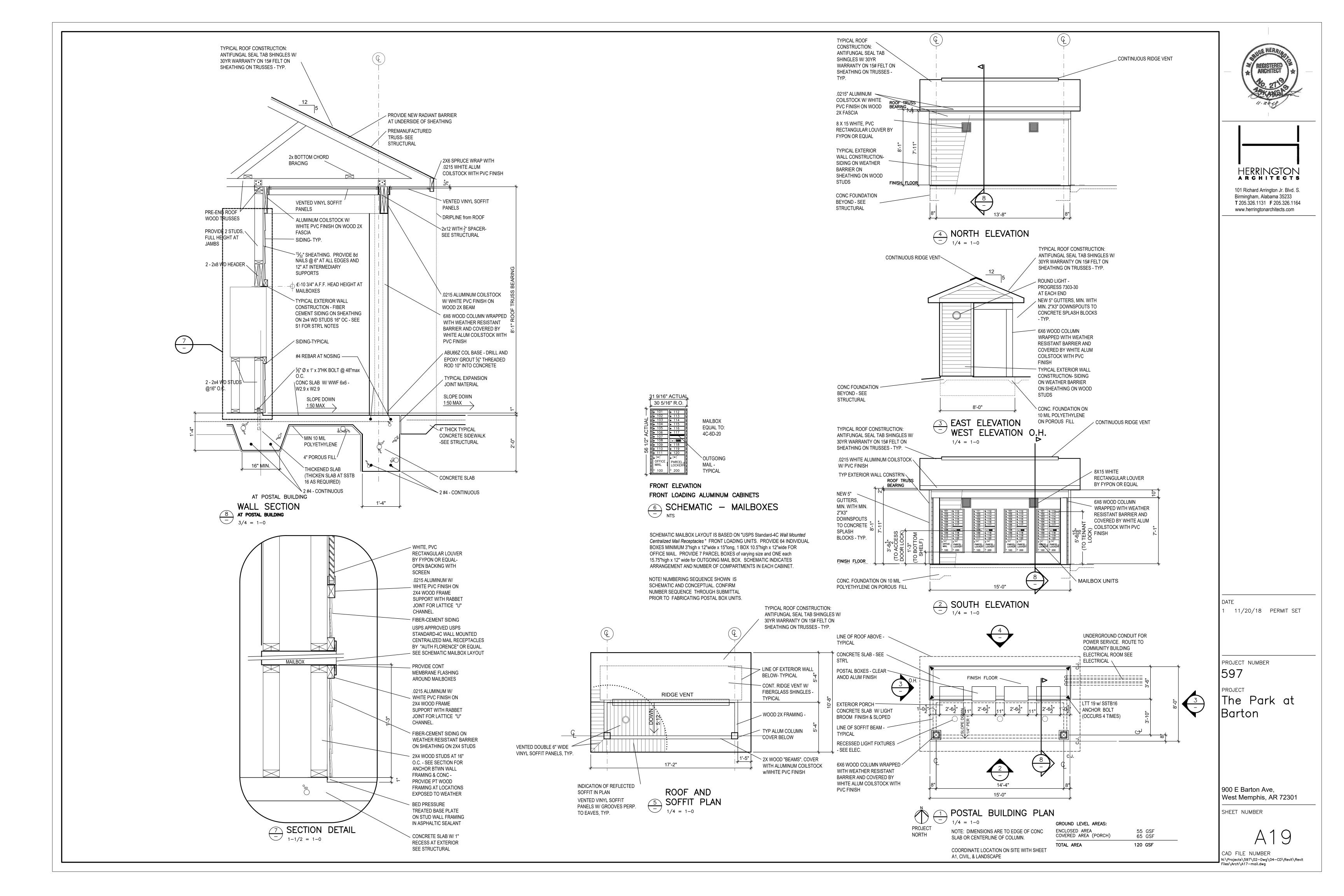


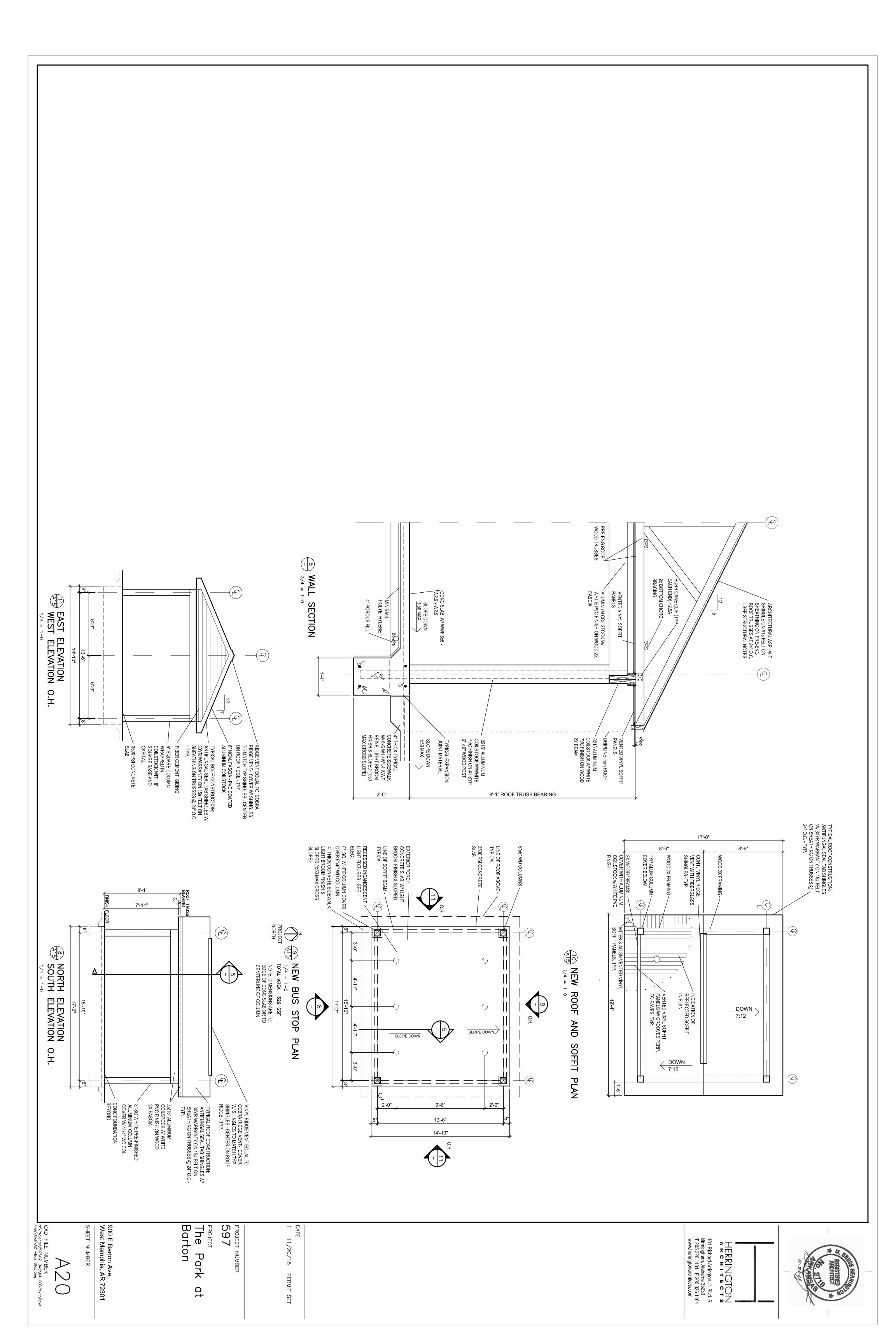












#### STRUCTURAL DESIG 300 Chase Park South, Suite 125 Hoover, Alabama 35244

tel 205-824-5200 fax 205-824-5280 | Job Number **18-130** 

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# 11/20/2018

# HERRINGTON ARCHITECTS

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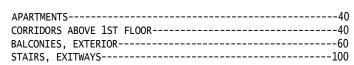
## **GENERAL NOTES**

#### 1.0 DESIGN CRITERIA

- 1.1 CODES AND SPECIFICATIONS:
- A. GENERAL BUILDING CODE: 2012 ARKANSAS FIRE PREVENTION CODE, VOL. 2 - BUILDING CODE.
- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-11)
- SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AMERICAN INSTITUTE OF STEEL CONSTRUCTION (ANSI/AISC 360-10)
- STEEL DECK INSTITUTE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS NO.30, LATEST EDITION.
- NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, AMERICAN FOREST AND PAPER
- .2 DESIGN GRAVITY LOADS (PSF):

ASSOCIATION, LATEST EDITION.

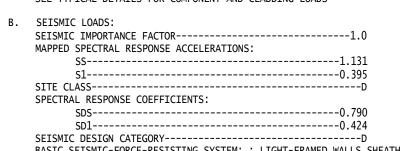
- A. DEAD LOADS: ANY CHANGES IN CONSTRUCTION MATERIALS FROM THOSE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS SHALL BE REPORTED BY THE GENERAL CONTRACTOR TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF LOAD-CARRYING CAPACITY OF THE STRUCTURE.
- B. FLOOR LIVE LOADS:
- LIVE LOAD REDUCTIONS AS DETERMINED BY IBC SECTION 1607.10 HAVE BEEN TAKEN WHERE



- C. ROOF LIVE LOADS: WHERE PERMITTED ROOF LIVE LOADS ARE REDUCED FROM THE BASE VALUE SHOWN BELOW IN ACCORDANCE WITH IBC SECTION 1607.12.
- D. ROOF SNOW LOADS: GROUND SNOW LOAD (Pg) IMPORTANCE FACTOR (I) EXPOSURE FACTOR (Ce)-THERMAL FACTOR (Ct)-

#### ...3 DESIGN LATERAL LOADS:

A. WIND LOADS: ULTIMATE DESIGN WIND SPEED (3-SECOND GUST)---NOMINAL WIND SPEED (3-SECOND GUST)------90 MPH RISK CATEGORY-WIND EXPOSURE CATEGORY--FNCLOSED ENCLOSURE CATEGORY---INTERNAL PRESSURE COEFFICIENTS--+/- 0.18 SEE TYPICAL DETAILS FOR COMPONENT AND CLADDING LOADS



#### BASIC SEISMIC-FORCE-RESISTING SYSTEM: : LIGHT-FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE DESIGN BASE SHEAR--SEISMIC RESPONSE COEFFICIENT. CS----0.1224 RESPONSE MODIFICATION FACTOR, R--ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

#### 2.0 GENERAL CONDITIONS

- $1\,$  THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE A PORTION OF THE CONSTRUCTION DOCUMENTS. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL REFERENCE AND COORDINATE WITH OTHER DISCIPLINE'S DRAWINGS. ANY DISCREPANCIES OR OMISSIONS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND STRUCTURAL DESIGN GROUP
- 2 ALL REPORTS, PLANS, SPECIFICATIONS, COMPUTER FILES, FIELD DATA, NOTES, AND OTHER DOCUMENTS AND INSTRUMENTS PREPARED BY STRUCTURAL DESIGN GROUP AS INSTRUMENTS OF SERVICE SHALL REMAIN THE PROPERTY OF STRUCTURAL DESIGN GROUP. STRUCTURAL DESIGN GROUP SHALL RETAIN ALL COMMON LAW, STATUTORY, AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THERETO
- 3 STRUCTURAL DESIGN GROUP MAY CONSIDER TRANSFERRING COMPUTER AIDED DRAFTING FILES TO THE GENERAL CONTRACTOR'S SUBCONTRACTORS, ON A CASE BY CASE BASIS, FOR THEIR CONVENIENCE IN PREPARING SHOP FABRICATION DRAWINGS AT A COST OF \$75 PER SHEET. FILES CAN BE TRANSFERRED UPON COMPLETION OF A CAD FILE TRANSFER AGREEMENT AND RECEIPT OF FULL PAYMENT
- 2.4 CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO FABRICATION/CONSTRUCTION. NOTIFY STRUCTURAL ENGINEER AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION/CONSTRUCTION.
- .5 ALL DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS, UNLESS NOTED. .6 VERIFY ALL DIMENSIONS AND DETAILS SHOWN ON THESE DRAWINGS. ANY DISCREPANCIES OR OMISSIONS FOUND SHALL BE REPORTED TO THE ENGINEER AND OTHER DESIGN PROFESSIONALS AS APPROPRIATE FOR RESOLUTION PRIOR TO PROCEEDING WITH ANY RELATED WORK.
- THESE DRAWINGS DO NOT INCLUDE PROVISIONS TO SATISFY JOB SITE SAFETY REQUIREMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING SAFETY DURING CONSTRUCTION AND FOR CONFORMANCE TO ALL APPLICABLE OSHA STANDARDS. JOBSITE VISITS BY ENGINEER SHALL NOT CONSTITUTE APPROVAL, AWARENESS OR LIABILITY FOR ANY HAZARDOUS CONDITIONS.
- .8 STRUCTURAL DESIGN GROUP IS NOT RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, SAFTEY PROCEEDURES, CONSTRUCTION SUPERVISION OR SITE SAFETY, AND DOES NOT HAVE THE AUTHORITY TO STOP WORK FOR THESE ITEMS.
- .9 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR BRACING AND SHORING ALL EXCAVATIONS, DEWATERING OF EXCAVATION FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE, TEMPORARY AND EXISTING STRUCTURES, AND PARTIALLY COMPLETED PORTIONS OF THE WORK TO ASSURE THE SAFETY OF ANY PERSON COMING IN CONTACT WITH THE WORK.
- .10 THE STRUCTURAL INTEGRITY OF THE BUILDING IS DEPENDENT UPON COMPLETION ACCORDING TO THE PLANS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER OF RECORD ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. THE METHOD OF CONSTRUCTION AND SEQUENCE OF OPERATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL SUPPLY ANY NECESSARY BRACING. GUYS. ETC. TO PROPERLY BRACE THE STRUCTURE AGAINST WIND. DEAD AND LIVE LOADS UNTIL THE BUILDING IS COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS. ANY QUESTIONS REGARDING TEMPORARY BRACING REQUIREMENTS SHOULD BE FORWARDED TO A STRUCTURAL ENGINEER FOR REVIEW.
- 11 MECHANICAL UNITS AND ANY OTHER EQUIPMENT SUPPORTED BY THE STRUCTURE WITH WEIGHTS IN EXCESS OF 200 LBS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO
- 12 WHERE NOTED IN DRAWINGS AND SPECIFICATIONS TO INSTALL PRODUCTS PER THE MANUFACTURER'S RECOMMENDATIONS IT SHALL BE REQUIRED THAT THE CONTRACTOR FOLLOWS THE MANUFACTURER'S

#### 3.0 FOUNDATIONS

8.1 A GEOTECHNICAL ENGINEER, EMPLOYED BY THE GENERAL CONTRACTOR, SHALL PROVIDE COMPACTED FILL REQUIREMENTS FOR THE BUILDING PAD AND REVIEW THE FOUNDATION BEARING SURFACE TO VERIFY THE ASSUMED ALLOWABLE BEARING PRESSURE AND SEISMIC SITE CLASS NOTED. DO NOT PLACE CONCRETE PRIOR TO GEOTECHNICAL ENGINEER'S APPROVAL.

- 3.2 ASSUMED MAXIMUM ALLOWABLE BEARING PRESSURES (PSF): COLUMN FOOTINGS-----CONTINUOUS WALL FOOTINGS--
- 3.3 ALL FOUNDATION BEARING SURFACES SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE TO INSURE THEIR COMPLIANCE WITH PRESSURES NOTED. ALL FOOTING ELEVATIONS ARE ESTIMATED AND MAY BE ADJUSTED IN THE FIELD BY THE GEOTECHNICAL ENGINEER.
- 3.4 COMPACTED FILL WITHIN THE BUILDING AREA (AND EXTENDING 5'-0" OUTSIDE THE EXTERIOR BUILDING LINE) SHALL MEET THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER.
- 3.5 SUBGRADE AND GRANULAR FILL SUPPORTING SLABS ON GRADE SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND COMPACTED UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER OR HIS APPROVED REPRESENTATIVE. SEE SPECIFICATIONS FOR VAPOR RETARDER BENEATH
- 3.6 NO EXCAVATION SHALL BE CLOSER THAN AT A SLOPE OF 2:1 (TWO HORIZONTAL TO ONE VERTICAL) TO A

#### 4.0 CONCRETE

- 4.1 CONCRETING OPERATIONS SHALL COMPLY WITH ACI STANDARDS.
- 4.2 CONCRETE STRENGTH AND DURABILITY REQUIREMENTS: MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (PSI), TYPE OF CONCRETE, MAXIMUM WATER/CEMENTITIOUS RATIO, AIR CONTENT, SLUMP, AND

#### STRENGTH TYPE MAX W/C AIR SLUMP USE

3500 NORMAL WT. 0.50 ---- 3" TO 5" UNLESS NOTED 3500 NORMAL WT. 0.50 4-6% 3" TO 5" CONCRETE ON METAL DECK

- CONCRETE MIX DESIGN SHALL BE WORKABLE WITH LOWEST TOTAL WATER PER CUBIC YARD USING LARGEST PRACTICAL MAXIMUM SIZE OF COURSE AGGREGATE.
- 4.3 REINFORCING BARS: ASTM A615 GRADE 60.
- 4.4 REINFORCING STEEL SHOWN IN SECTIONS AND DETAILS ARE A SCHEMATIC INDICATION THAT REINFORCING EXISTS. SEE SCHEDULES, SECTION NOTES AND GENERAL NOTES FOR ACTUAL REINFORCING REQUIRED.
- 4.5 REINFORCING BAR PLACING ACCESSORIES IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE. WHERE CONCRETE IS EXPOSED IN FINISHED BUILDING, PROVIDE ACCESSORIES WITH RUSTPROOF LEGS. WHERE CONCRETE IS SAND-BLASTED OR BUSH-HAMMERED. PROVIDE ACCESSORIES OF STAINLESS STEEL.
- 4.6 DETAIL REINFORCEMENT IN ACCORDANCE WITH ACI 315. REINFORCEMENT SHALL NOT BE WELDED UNLESS NOTED OR APPROVED BY THE ENGINEER.
- 4.7 ALL SPLICES SHALL BE CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.
- 4.8 ALL REINFORCING MARKED "CONTINUOUS" SHALL BE SPLICED WITH CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.
- 4.9 PROVIDE CORNER BARS AT ALL CORNERS OF CONTINUOUS REINFORCING IN FOOTINGS, SLABS OR WALLS. CORNER BARS SHALL BE LONG ENOUGH TO PROVIDE A CLASS "B" LAP SPLICE OF REINFORCING
- 4.10 CONCRETE COVERAGE OF REINFORCEMENT, UNLESS NOTED:
- FOOTINGS-----2" TOP & 3" BOTTOM & SIDES SLAB FACES NOT EXPOSED TO WEATHER OR EARTH-----SLAB FACES EXPOSED TO WEATHER A. #5 AND LESS-----
  - POST-TENSIONED SLAB FACES EXPOSED TO WEATHER-----NOTE: SLAB ON GRADE WWR OR REINFORCEMENT EACH WAY SHALL BE 2" CLEAR FROM TOP OF
- SLAB. SEE EARTH SUPPORTED SLABS SECTION BELOW. 4.11 WELDED WIRE REINFORCEMENT (WWR): ASTM A185. MINIMUM LAP AND EMBEDMENT TO BE THE GREATER OF ONE CROSS WIRE SPACING PLUS 2 INCHES OR 6 INCHES.

#### 4.12 EARTH SUPPORTED SLABS:

- 4" THICK, REINFORCED WITH 6X6 W2.9/W2.9 WWR FLAT SHEETS SUPPORTED 2" CLEAR OF TOP OF SLAB, UNLESS NOTED. WWR TO BE CHAIRED AT 36 INCHES EACH WAY MINIMUM.
- EARTH SUPPORTED SLABS SHALL BE MOIST CURED FOR A MINIMUM OF SEVEN DAYS. SEE SPECIFICATIONS. CURING COMPOUINDS, UNLESS NOTED, SHALL BE A MINIMUM OF CLEAR, WATERBORNE. MEMBRANE-FORMING CURING COMPOUND MEETING ASTM C 309. TYPE 1. CLASS B. SELF-DISSIPATING, CERTIFIED BY CURING COMPOUND MANUFACTURER TO NOT INTERFERE WITH BONDING OF FLOOR COVERING.
- PROVIDE 2#4 X 6'-0" BARS MID DEPTH OF SLAB AT REENTRANT CORNERS.
- 4.13 NO CONDUIT OR PIPE SHALL BE CAST IN THE SLAB WITHOUT THE WRITTEN APPROVAL OF STRUCTURAL DESIGN GROUP.

#### 5.0 POST-TENSIONING

- 5.1 STRESSING OF TENDONS MAY COMMENCE WHEN CONCRETE HAS A COMPRESSIVE STRENGTH EQUAL TO 75% OF THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH.
- 5.2 POST-TENSIONING TENDONS: UNBONDED, MONO-STRAND TENDON SYSTEM. LOW RELAXATION STRANDS SHALL CONFORM TO ASTM A416, LATEST REVISION, WITH A GUARANTEED MINIMUM ULTIMATE STRENGTH OF
- 5.3 TENDON DIAMETER SLAB TENDONS--
- ----0.5" DIAMETER
- 5.4 DRILLED CONCRETE ANCHORS, POWER DRIVEN ANCHORS AND CORING OF SLABS WILL NOT BE PERMITTED WITHOUT CONSENT OF THE STRUCTURAL ENGINEER. ALL OPENINGS AND/OR SLEEVES MUST BE SHOWN ON THE SHOP DRAWINGS. ANY ADDITIONAL OPENINGS NOT SHOWN ON THE APPROVED DRAWINGS WILL REQUIRE APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
- 5.5 THE POST-TENSIONING SUPPLIER SHALL DESIGN AND FURNISH ALL ADDITIONAL REINFORCING BARS REQUIRED FOR SUPPORT OF TENDONS AND ANCHORAGES AND TO RESTST BURSTING. SPITTING, AND SPALLING INDUCED BY TENDON ANCHORAGES. SHIFTING OF BEAM STIRRUPS FOR TENDON SUPPORT WILL NOT BE ALLOWED.
- 5.6 THE POST-TENSIONING SUPPLIER SHALL SUBMIT TO THE ENGINEER, FOR RECORD, CALCULATIONS TO SUBSTANTIATE THE STRESSING PROCEDURE. CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. 5.7 STRESSING RECORDS: STRESSING OPERATIONS SHALL BE OBSERVED BY THE TESTING LABORATORY. A
- RECORD OF ALL STRESSING FORCES AND FIELD MEASURED ELONGATIONS SHALL BE SUBMITTED TO THE ENGINEER WITHIN 24 HOURS. 5.8 CUT TENDONS AND PACK ALL POST-TENSIONING POCKETS WITH NON-SHRINK GROUT AFTER REVIEW AND
- ACCEPTANCE OF STRESSING RECORDS
- 5.9 CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE ENGINEER DETAILED CALCULATIONS AND PROCEDURES FOR THE REMEDIAL WORK REQUIRED.

#### 6.0 STRUCTURAL STEEL

- 6.1 FABRICATE AND FRECT ALL STRUCTURAL STEEL IN ACCORDANCE WITH ATSC "SPECIFICATION FOR THE DESIGN. FABRICATION. AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". FABRICATOR SHALL BE QUALIFIED PER AISC QUALITY CERTIFICATION PROGRAM AND DESIGNATED AN AISC-CERTIFIED PLANT,
- 6.2 THE STEEL FRAME IS "NON-SELF-SUPPORTING". ADEQUATE TEMPORARY SUPPORT MUST BE PROVIDED BY THE CONTRACTOR UNTIL REQUIRED CONNECTIONS OR ELEMENTS ARE IN PLACE.
- 6.3 STRUCTURAL STEEL: ASTM A992 FOR WIDE FLANGE BEAMS AND COLUMNS; A36 FOR S, M AND HP SHAPES AND CHANNELS; ASTM A36 FOR STIFFENER PLATES, BASE PLATES, COLUMN CAP PLATES, BEAM CONNECTION PLATES AND STEEL ANGLES.
- 6.4 WELDED CONNECTIONS: E70XX ELECTRODES, MINIMUM SIZE FILLET WELD 3/16". WELDING QUALIFICATION, PROCEDURES AND PERSONNEL SHALL BE CERTIFIED ACCORDING TO AWS D1.1, THE STRUCTURAL WELDING CODE - STEEL.

#### 6.5 ANCHOR BOLTS: ASTM A307.

- A. BEARING TYPE A325-N IN ACCORDANCE WITH RCSC (LRFD OR ASD VERSION) "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". BOLTS THROUGH 4" WIDE BEAM FLANGES
- SHALL BE 5/8" DIAMETER. OTHER BOLTS SHALL BE 3/4" DIAMETER. B. USE SNUG TIGHT BEARING CONNECTIONS FOR ALL BOLTED CONNECTIONS.
- BOLTS SHOWN IN SECTIONS AND DETAILS ARE A SCHEMATIC INDICATION THAT BOLTS MAY BE USED. ACTUAL NUMBER, UNLESS SPECIFIED, TO BE IN ACCORDANCE WITH AISC.
- D. ALL STRUCTURAL STEEL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE DESIGNED TO RESIST FORCES INDICATED, BY THE CONTRACTOR.
- 1. WHERE BEAM REACTIONS ARE SHOWN ON THE DRAWINGS. THE CONNECTIONS SHALL DEVELOP THE REACTIONS SHOWN. WHERE CONNECTIONS ARE SUBJECT TO ECCENTRICITY, SUCH ECCENTRICITY SHALL BE TAKEN INTO ACCOUNT WHEN DESIGNING AND DETAILING THE CONNECTION.
- 2.WHERE BEAM REACTIONS OR DESIGN FORCES ARE NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL DESIGN THE CONNECTIONS TO SUPPORT A REACTION EQUAL TO ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY FROM THE ASD TABLE OF ALLOWABLE UNIFORM LOADS ON BEAMS, MULTIPLIED BY A FACTOR OF 1.2 FOR GIVEN SHAPE, SPAN, AND GRADE OF STEEL.
- E. DESIGN CALCULATIONS FOR THE CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL BE SUBMITTED FOR THE FILES OF THE ARCHITECT AND ENGINEER. CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. SHOP DRAWINGS CONTAINING CONNECTIONS FOR WHICH CALCULATIONS HAVE NOT BEEN RECEIVED WILL BE RETURNED UNCHECKED AS AN INCOMPLETE SUBMITTAL.
- 6.7 ALL STRUCTURAL STEEL, INCLUDING EXPOSED BOLTS, NUTS, WASHERS OR ANCHOR RODS, EXPOSED TO WEATHER IN THE FINAL CONFIGURATION OF THE STRUCTURE SHALL BE HOT-DIP GALVANIZED. UNLESS NOTED, PER ASTM A 123/A 123M. VENT HOLES SHALL BE FILLED AND GROUND SMOOTH AFTER GALVANIZING. DAMAGE TO GALVANIZING SHALL BE PAINTED WITH GALVANIZING REPAIR PAINT, SSPC-PAINT 20. SEE 051200 SPECIFICATIONS FOR PAINT REQUIREMENTS FOR STEEL THAT IS GALVANIZED AND PAINTED.
- 6.8 STEEL STAIRS AND ASSOCIATED EMBEDS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE DESTGNED TO RESIST THE PROJECT DESIGN LOADS INDICATED ABOVE. BY THE CONTRACTOR, UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. STAIRS SHALL BE DESIGNED IN ACCORDANCE WITH THE NAAMM METAL STAIR MANUAL AND AISC, AND AS LISTED BELOW. CALCULATIONS SHALL BEAR THE SEAL OF THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE INCLUDED WITH THE STAIR SHOP DRAWINGS.
- A. STAIR FRAMING SHALL BE CAPABLE OF WITHSTANDING STRESSES RESULTING FROM RAILING LOADS IN ADDITION TO LOADS SPECIFIED ABOVE. LIMIT DEFLECTION OF TREADS, PLATFORMS, AND FRAMING MEMBERS TO L/360 OR 1/4 INCH,
- WHICHEVER IS LESS DESIGN OF STAIR FRAMING SHALL ALSO COMPLY WITH AISC'S "STEEL DESIGN GUIDE

SERIES 11; FLOOR VIBRATIONS DUE TO HUMAN ACTIVITY.

OF THE ARCHITECT AND SHALL BE INCLUDED WITH THE SHOP DRAWINGS.

6.9 ALL HANDRAILS, GUARDRAILS, AND EMBEDS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE DESIGNED IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE NOTED ABOVE, BY THE CONTRACTOR, UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. CALCULATIONS SHALL BEAR THE SEAL OF THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED FOR THE FILES

### 7.0 STEEL DECK

- 7.1 DECK PROPERTIES AND ATTACHMENTS SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE.
- 7.2 FORM DECK: 3 1/2" THICK CONCRETE SLAB ON NON-COMPOSITE STEEL FORM DECK, 18 GAGE, 2" DEEP (5-1/2" TOTAL SLAB THICKNESS). REINFORCED WITH 4X4 W2.9/W2.9 WWR DRAPED, ¾" CLEAR COVER TO TOP OF SLAB AT SUPPORTS AND FLAT ON THE TOP OF THE DECK AT MID-SPAN BETWEEN SUPPORTS. STEEL DECK SHALL BE FASTENED TO SUPPORTS WITH 5/8" PUDDLE WELDS
- 7.3 WELDED CONNECTIONS: E60XX ELECTRODES: WELDING QUALIFICATION, PROCEDURES AND PERSONNEL SHALL BE CERTIFIED ACCORDING TO AWS D1.3, THE STRUCTURAL WELDING CODE - SHEET STEEL.
- 7.4 NO CONDUIT OR PIPE SHALL BE CAST IN THE SLAB WITHOUT THE WRITTEN APPROVAL OF STRUCTURAL DESIGN GROUP.

### 8.0 WOOD CONSTRUCTION

PRESERVATIVE TREATED LUMBER

- 8.1 ALL SAWN LUMBER IN CONTACT WITH SOIL, MASONRY OR CONCRETE, OR EXPOSED TO WEATHER TO HAVE A PRESERVATIVE PRESSURE TREATMENT IN ACCORDANCE WITH AMERICAN WOOD PROTECTION ASSOCIATIONS (AWPA) STANDARD U1 (CURRENT EDITION).
- 8.2 CUT ENDS OR ALL TREATED LUMBER SHALL BE FIELD TREATED WITH AN APPROVED PRESERVATIVE IN
- ACCORDANCE WITH THE TREATMENT MANUFACTURERS INSTRUCTIONS AND AWPA STANDARD M4-08. 8.3 ALL LUMBER SHALL BE KILN DRIED TO A MAXIMUM MOISTURE CONTENT OF 19 PERCENT, INCLUDING
- 8.4 ALL SCREWS, BOLTS, AND NAILS FOR USE WITH PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL. FASTENERS TO BE HOT-DIPPED GALVANIZED SHALL MEET THE REQUIREMENTS OF ASTM A 153, CLASS D FOR 3/8" DIAMETER OR SMALLER AND CLASS C
- FOR FASTENERS WITH DAIMETERS OVER 3/8". 8.5 FASTENERS OTHER THAN NAILS AND TIMBER RIVETS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 695, CLASS 55,
- 8.6 METAL CONNECTORS SHOWN IN DOCUMENTS ARE SIMPSON STRONG TIE CONNECTORS. SUBSTITUTION WITH EQUAL CONNECTORS BY OTHER MANUFACTURERS IS ACCEPTABLE.

GALVANIZED OR SHALL BE STAINLESS STEEL. HARDWARE TO BE HOT-DIPPED PRIOR TO FABRICATION

8.7 ALL HARDWARE (JOIST HANGERS, ETC.) FOR USE WITH PRESERVATIVE TREATED WOOD SHALL BE

- SHALL MEET ASTM A 653, G-185 COATING. HARDWARE TO BE HOT-DIPPED AFTER FABRICATION SHALL MEET ASTM A 123. 8.8 FASTENER AND HARDWARE SELECTION: HOT-DIPPED GALVANIZED MATERIAL SHALL NOT BE USED IN
- CONTACT WITH STAINLESS STEEL MATERIAL 8.9 ALL NAIL SIZES INDICATED IN DOCUMENTS ARE BASED ON COMMON WIRE NAILS. SUBSTITUTION OF
- DIFFERENT STYLE NAILS IS ACCEPTABLE BASED ON ACTUAL DIAMETER ONLY. 8.10 AT A MINIMUM, ALL WOOD FRAMING CONNECTIONS TO COMPLY WITH "TABLE 2304.9.1- FASTENING SCHEDULE" OF THE INTERNATIONAL BUILDING CODE.
- 8.11 WOOD SILL PLATES (NON-SHEAR WALLS): ANCHOR TO FOUNDATION WITH 1/2" DIAMETER X 7" EMBED ANCHOR BOLTS AT 6'-0" MAX SPACING OR ¼"X3¼" TITEN SCREWS AT 32" MAX SPACING. PROVIDE
- 8.12 WOOD SILL PLATES (PART OF SHEAR WALLS): ANCHOR TO FOUNDATION WITH 5/8" DIAMETER X 7" EMBED ANCHOR BOLTS AT 32" MAX SPACING. PROVIDE "x"x3"x3" SQUARE GALVANIZED PLATE WASHERS.
- 8.13 LEAD HOLES FOR LAG SCREWS

ROOF TOP CHORD LIVE LOAD--

- A. CLEARANCE HOLE FOR SHANK WILL BE SAME DIAMETER AS SHANK AND HAVE THE SAME DEPTH OF PENETRATION AS THE LENGTH OF THE UNTHREADED SHANK. LEAD HOLE FOR THREADED PORTION SHALL HAVE A DIAMETER OF 66% OF SHANK AND A LENGTH
- EQUAL TO OR GREATER THAN THE LENGTH OF THE THREADED PORTION. THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE LAG SCREW IN THE LEAD HOLES TO FACILITATE INSERTION AND PREVENT DAMAGE OF THE LAG SCREW.

-10 PSF

-20 PSF

- 8.14 DESIGN, FABRICATE AND ERECT WOOD TRUSSES IN ACCORDANCE WITH THE "DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES" OF THE TRUSS PLATE INSTITUTE. TRUSS ERECTION PLANS AND CALCULATIONS DESIGNED BY THE CONTRACTOR SHALL BE SUBMITTED FOR THE REVIEW OF THE STRUCTURAL ENGINEER. CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
- 8.15 TRUSS MANUFACTURER SHALL DESIGN FOR THE FOLLOWING SUPERIMPOSED LOADS: ROOF TOP CHORD DEAD LOAD----10 PSF ROOF BOTTOM CHORD DEAD LOAD-
  - FLOOR TOP CHORD DEAD LOAD----15 PSF FLOOR BOTTOM CHORD DEAD LOAD--8 PSF --40 PSF FLOOR TOP CHORD LIVE LOAD--FLOOR TRUSS MAXIMUM LIVE LOAD DEFLECTION-------L/480

- 8.16 DESIGN WOOD TRUSSES TO RESIST THE WIND UPLIFT LOADING FROM THE COMPONENT AND CLADDING WIND LOAD TABLE PROVIDED IN THE TYPICAL DETAILS.
- 8.17 IN ADDITION TO THE ABOVE LOADS, WOOD TRUSSES SHALL BE DESIGNED FOR CONCENTRATED LOADS HUNG FROM OR SUPPORTED ON TRUSSES. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR LOADING INFORMATION AND LOCATION. LOADING AS REQUIRED BY OTHER SUBCONTRACTORS, SUCH AS FIRE PROTECTION, SHALL BE COORDINATED BY THE GENERAL CONTRACTOR.
- 8.18 TRUSS DESIGNER DESIGN FLOOR TRUSSES FOR A MAXIMUM TOTAL HANGING DEAD LOAD OF 200 LBS PER TRUSS (ADD LOAD). LOAD MAY BE APPLIED AT ANY POINT ALONG THE TOP OR BOTTOM CHORD. GC COORDINATE HANGER SPACINGS AS REQUIRED.
- 8.19 ALL TRUSS TO TRUSS CONNECTIONS SHALL BE DESIGNED BY THE TRUSS MANUFACTURER FOR THE LOADS
- 8.20 FLOOR TRUSS MANUFACTURER PROVIDE 21" MINIMUM WIDTH DUCT OPENING IN WEB AT TRUSS MIDSPAN. COORDINATE WITH MECHANICAL FOR WIDTH AND LOCATION OF DUCT RUNS.
- 8.21 INSTALL 2X6 STRONGBACKS AT FLOOR TRUSS 1/3 POINTS IN ACCORDANCE WITH MANUFACTURER'S
- 8.22 ALL TEMPORARY AND PERMANENT BRACING MEMBERS AND CONNECTIONS REQUIRED FOR WOOD TRUSSES SHALL BE DESTGNED AND DETAILED ON THE WOOD TRUSS MANUFACTURER'S ERECTION PLANS. BRACING MEMBERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR ACCORDING TO THE TRUSS MANUFACTURER'S ERECTION PLANS AND "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" BY BCSI, 2008.
- 8.23 TEMPORARY BRACING SHALL NOT IMPOSE ANY FORCE ON THE SUPPORTING STRUCTURE. PERMANENT BRACING FORCES SHALL BE TRANSFERRED TO THE ROOF DIAPHRAGM BY THE BRACING DESIGN PROVIDED BY THE TRUSS MANUFACTURER.
- 8.24 ROOF SHEATHING: 1/2" APA STRUCTURAL I OR II RATED SHEATHING EXPOSURE 1, WITH PLY CLIPS AT ALL UNSUPPORTED EDGES PER THE MANUFACTURER'S RECOMMENDATIONS. PANEL IDENTIFICATION INDEX 32/16. LONG DIMENSION OF PANEL PERPENDICULAR TO SUPPORTS.
- 8.25 ROOF SHEATHING NAILING, UNLESS NOTED: 8d NAILS AT 6 INCHES AT ALL FOUR PANEL EDGES AND 12 INCHES AT INTERMEDIATE SUPPORTS 8.26 FLOOR SHEATHING: 3/4" PLYWOOD APA STRUCTURAL RATED SHEATHING EXPOSURE I, TONGUE AND GROOVE
- EDGES. PANEL IDENTIFICATION INDEX 48/24. LONG DIMENSION OF PANEL PERPENDICULAR TO SUPPORTS. GLUE AND NAIL TO SUPPORTING MEMBERS, 10d NAILS AT 6 INCHES AT ALL FOUR PANEL EDGES AND 12 INCHES AT INTERMEDIATE SUPPORTS.
- STUDS IN ACCORDANCE WITH "TABLE 2304.9.1- FASTENING SCHEDULE" OF THE INTERNATIONAL BUILDING

8.27 PLYWOOD, GYPSUM SHEATHING AND WALLBOARD, NOT PART OF SHEAR WALLS, SHALL BE ATTACHED TO

- 8.28 WOOD PANEL SHEAR WALLS: 15/32" PLYWOOD OR OSB, UNLESS NOTED, APA RATED STRUCTURAL I SHEATHING EXPOSURE 1. LONG DIMENSION OF PANEL PARALLEL TO STUDS. ALL PLYWOOD EDGES SHALL BE BACKED WITH TWO-INCH NOMINAL OR WIDER FRAMING. SEE DETAILS.
- 8.29 WOOD PANEL SHEAR WALL NAILING: SEE TYPICAL DETAILS ON SHEET S9.
- 8.30 MANUFACTURED WOOD BEAMS: MICRO-LAMINATED WOOD BEAMS TO BE AS MANUFACTURED BY ILEVEL OF BOISE, IDAHO, OR APPROVED EQUAL. AND HAVE AN ALLOWABLE BENDING STRESS: (Fb) = 2600 PSI OR GREATER FOR 12 INCH DEPTH, AN ALLOWABLE SHEAR PARALLEL TO GRAIN (FV) = 285 PSI OR GREATER AND A MODULUS OF ELASTICITY (E) = 2,000,000 PSI OR GREATER. FOR DEPTHS GREATER THAN 12
- INCHES, ADJUST (Fb) BY  $(12/d)^0.136$ . SIZES ARE SHOWN ON THE PLANS AND DETAILS. 8.31 BUILT UP BEAMS - MANUFACTURED WOOD BEAMS: MULTIPLE MICROLAMS ARE TO BE FASTENED TOGETHER WITH A MINIMUM OF 2 ROWS OF 16d NAILS AT 12 INCHES (STAGGERED); NAILS TO BE SPACED 3
- 8.32 AT ALL ROOF MICROLAM AND 2x HEADER BEARINGS, PROVIDE 2x STUD DIRECTLY UNDER BEARING. AT 2X FLOOR HEADERS, PROVIDE (2) 2x STUDS DIRECTLY UNDER BEARING. AT MICROLAM FLOOR HEADERS. PROVIDE (3) 2x STUDS DIRECTLY LINDER REARING. MAINTAIN STUD CONTINUITY TO FOUNDATION. LOCATE BETWEEN DOUBLE TOP PLATE AND BOTTOM PLATE AT FLOOR FRAMING LEVEL AS REQUIRED.
- 8.33 FLOOR JOISTS AND BEAMS SHALL BE LATERALLY BRACED AT MAXIMUM INTERVALS OF 8'-0" BY SOLID BRIDGING OR TRANSVERSE BEAMS AND THE ENDS AT POINTS OF BEARING SHALL BE LATERALLY SUPPORTED
- 8.35 BUILT UP BEAMS DIMENSIONED LUMBER: NAIL INDIVIDUAL PLIES TOGETHER WITH TWO ROWS OF 10d NAILS AT 16" STAGGERED

8.34 WINDOW AND DOOR HEADERS ARE TO BE (2) 2x10 UNLESS NOTED

INCHES FROM THE TOP AND BOTTOM OF BEAMS.

- 8.36 WOOD STUDS FOR LOAD BEARING WALLS: SEE SCHEDULE ON SHEET S9.
- 8.37 WOOD FRAMING MEMBERS: #2 SOUTHERN PINE UNLESS NOTED. 8.38 VERTICAL STUDS INTERRUPTED BY WALL OPENINGS SHALL BE LOCATED FOUNLY ON EACH SIDE OF THE
- THE FLOOR FRAMING LEVEL. 8.39 SHEETS OF DRYWALL SHOULD BE LAID FLAT ON THE FLOOR. MAXIMUM HEIGHT OF DRYWALL SHOULD BE 10". SHOULD DRYWALL SLEEPS BE USED TO KEEP THE DRYWALL OFF THE FLOOR SHEATHING. A MINIMUM OF FOUR SETS OF SLEEPERS SHOULD BE USED. LONG DIRECTION OF DRYWALL MUST BE

PARALLEL TO THE TRUSSES WITH SLEEPERS BEING PLACED PERPENDICULAR TO THE TRUSSES.

OPENING. SIMILAR STUDS SHALL BE LOCATED BETWEEN THE DOUBLE TOP PLATE AND BOTTOM PLATE AT

- 9.0 POST-INSTALLED REINFORCING, ANCHORS AND FASTENERS 9.1 POST-INSTALLED ANCHORS AND/OR REINFORCING SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS AND/OR REINFORCING IN PLACE OF MISSING OR
- MISPLACED CAST-IN-PLACE ANCHORS AND/OR REINFORCING.
- 9.2 THE BELOW PRODUCTS ARE THE DESIGN BASIS FOR THIS PROJECT. PRODUCT DIAMETER AND EMBEDMENT SHALL BE SHOWN IN THE DETAILS. A. FOR ANCHORING INTO CONCRETE
  - 1.MECHANICAL ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. PRE-APPROVED PRODUCTS INCLUDE: SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713)
  - SIMPSON STRONG-TIE "STRONG-BOLT 2" (ICC-ES ESR-3037)
  - SIMPSON STRONG-TIE "TORQ-CUT" (ICC-ES ESR-2705) SIMPSON STRONG-TIE "TITEN-HD ROD HANGER" (ICC-ES ESR-2713)
  - HILTI KWIK HUS-EZ AND KWIK HUS EZ-I SCREW ANCHORS (ICC ESR-3027)
  - HILTI KWIK BOLT-TZ EXPANSION ANCHORS (ICC ESR-1917) HILTI KWIK BOLT 3 EXPANSION ANCHORS (UNCRACKED CONCRETE ONLY) (ICC ESR-2302)
  - HILTI HDA UNDERCUT ANCHORS (ICC ESR 1546) HILTI HSL-3 EXPANSION ANCHORS (ICC ESR 1545) 2.ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND TCC-FS AC308 FOR CRACKED CONCRETE AND SETSMIC APPLICATIONS. DESIGN ADHESTVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE DRILL BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS

SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2.

- INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.9.2.4. PRE-APPROVED PRODUCTS INCLUDE:
- a. SIMPSON STRONG-TIE "AT-XP" (IAPMO-UES ER-263)

PRE-APPROVED PRODUCTS INCLUDE

- SIMPSON STRONG-TIE "SET-XP" (ICC-ES ESR-2508) SIMPSON STRONG-TIE "ET-HP" (ICC-ES ESR-3372)
- HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z ROD (ICC ESR-3187) e. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM WITH
- HAS-E THREADED ROD OR CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187. F. HILTI HIT-RE 500-SD EPOXY ADHESIVE ANCHORING SYSTEM WITH HAS-E THREADED ROD OR CONTINUOUSLY DEFORMED REBAR (ICC ESR-2322) FOR SLOW CURE APPLICATIONS 3. POWER-ACTUATED FASTENERS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC70.
- b. SIMPSON STRONG-TIE "POWDER ACTUATED PINS" (ICC-ES ESR-2138) c. HILTI "UNIVERSAL KNURLED SHANK FASTENERS" X-U (ICC ESR-2269) 9.3 REFER TO THE PROJECT BUILDING CODE AND/OR EVALUATION REPORT FOR SPECIAL INSPECTIONS AND

a. SIMPSON STRONG-TIE "GAS ACTUATED PINS" (ICC-ES ESR-2811)

PROOF LOAD REQUIREMENTS. 9.4 SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED KBELOWMAY BE SUBMITTED BY THE CONTRACTOR TO THE EOR FOR REVIEW. SUBSTITUTIONS WILL ONLY BE CONSIDERED FOR PRODUCTS HAVING A RESEARCH REPORT RECOGNIZING THE PRODUCT FOR THE APPROPRIATE APPLICATION UNDER THE PROJECT BUILDING CODE. SUBSTITUTION REQUESTS SHALL INCLUDE CALCULATIONS PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATE THE SUBSTITUTED PRODUCT IS CAPARLE OF ACHIEVING THE EQUIVALENT.ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.

- 9.5 INSTALL ANCHORS PER THE MANUFACTURER PRINTED INSTRUCTIONS, OR AS INCLUDED IN THE ANCHOR PACKAGING.
- 9.6 OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE MANUFACTURER INSTRUCTIONS.
- 9.7 THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
- 9.8 ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
- 9.9 EXISTING REINFORCING BARS AND/OR CONDUIT IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS AND/OR REINFORCING TO AVOID CONFLICTS WITH EXISTING REBAR AND/OR CONDUIT. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE

LOCATIONS OF THE CONCRETE ANCHORS. BY HILTI FERROSCAN. GPR. X-RAY. CHIPPING OR OTHER MEANS

#### 10.0 INSPECTIONS

- 10.1 OWNER SHALL RETAIN THE SERVICES OF INDEPENDENT AGENCIES TO PERFORM THE CONSTRUCTION MATERIAL TESTING AND CODE REQUIRED SPECIAL INSPECTIONS, AS CONSTRUCTION PROGRESSES, FORWARD COPIES OF INSPECTION REPORTS TO STRUCTURAL ENGINEER FOR REVIEW. SDG CANNOT ISSUE A CERTIFICATED OF SATISFACTORY COMPLETION WITHOUT REVIEWING THESE REPORTS AND FINAL CERTIFICATES ISSUED BY EACH OF THE INDEPENDENT AGENCIES
- 10.2 STRUCTURAL OBSERVATION BY SDG IS VISUAL OBSERVATION OF THE IN PLACE STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED STRUCTURAL PORTIONS OF THE CONSTRUCTION DOCUMENTS AT THE TIME OF THE OBSERVATION AND SHALL NOT BE CONSTRUED AS INSPECTION OR APPROVAL OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING TESTING AND SPECIAL INSPECTIONS PER
- THE REQUIREMENTS IN THE PROJECT MANUAL. 10.3 OBSERVATION BY THE ENGINEER OF RECORD'S OFFICE DOES NOT REPLACE INSPECTIONS AND TESTING BY

### 11.0 SHOP DRAWINGS (SUBMITTALS)

THE TESTING AGENCY OR SPECIAL INSPECTOR.

- 11.1 SUBMIT ALL SHOP DRAWINGS ELECTRONICALLY. ELECTRONIC COPIES WILL BE RETURNED TO THE ARCHITECT. REPRODUCTIONS REQUIRED BY THE CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE MADE AFTER THE ELECTRONIC COPIES ARE RETURNED.
- 11.2 ALL SHOP DRAWINGS SHALL BE ACCOMPANIED BY A PROPERLY COMPLETED SUBMITTAL CHECKLIST, WHERE REQUIRED BY THE RELEVANT SPECIFICATION SECTION.
- ASSUMES TOTAL RESPONSIBILITY FOR THE DESIGN AND ASSOCIATED WORK. 11.4 ENGINEER'S SHOP DRAWING REVIEW IS LIMITED TO REVIEW FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT REFLECTED IN THE STRUCTURAL PORTION OF THE CONTRACT DOCUMENTS. THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE DRAWINGS, SPECIFICATIONS OR OTHER PROJECT CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED OR IMPLIED FOR THE CORRECTNESS OF DIMENSIONS OR DETAILS. THIS REVIEW DOES NOT AUTHORIZE CHANGES TO THE CONTRACT SUM UNLESS STATED IN A SEPARATE WRITTEN FORM OR CHANGE ORDER. CONTRACTOR SHALL CONFIRM AND CORRELATE ALL QUANTITIES AND DIMENSIONS. SELECT FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION COORDINATE HIS WORK WITH THAT OF OTHER TRADES. AND PERFORM HIS WORK IN A SAFE AND SATISFACTORY MANNER. CONTRACTOR SHALL ALSO REFER TO THE REQUIREMENTS OF THE GENERAL AND

11.3 WHERE SHOP DRAWINGS, CALCULATIONS, OR SUBMITTALS ARE CALLED FOR IN THE PROJECT DOCUMENTS

(DRAWINGS AND SPECIFICATIONS) AND ARE NOT PROVIDED BY THE CONTRACTOR, THE CONTRACTOR

- SUPPLEMENTARY GENERAL CONDITIONS 11.5 ALL SUBMITTALS: IF THERE ARE QUESTIONS, CLARIFICATIONS, MODIFICATIONS, OR ITEMS WHERE INFORMATION. A RESPONSE. OR APPROVAL IS REQUESTED. SUCH ITEMS SHALL BE WRITTEN ON THE TRANSMITTAL OR COVER SHEET. WHERE SUBMITTAL CHECKLISTS ARE REQUIRED BY THE RELEVANT SPECIFICATION, THE AFOREMENTIONED INFORMATION MUST BE INDICATED ON THE SUBMITTAL CHECKLIST IN ACCORDANCE WITH THE RELEVANT SPECIFICATION. INDICATING SUCH ITEMS ON THE SHOP DRAWINGS, WITHIN ANY CALCULATIONS, OR PRODUCT DATA IS NOT SUFFICIENT. WHERE SUCH ITEMS ARE NOT SPECIFICALLY LISTED ON THE TRANSMITTAL, COVER SHEET, OR CHECKLIST IN ACCORDANCE WITH THESE GENERAL NOTES AND THE SPECIFICATIONS. SUCH ITEMS ARE NOT TO BE CONSIDERED APPROVED OR CONSTDERED. TE A QUESTION. CLARIFICATION. MODIFICATION. OR REQUEST FOR INFORMATION IS MADE AND NOT SPECIFICALLY RESPONDED TO BY STRUCTURAL DESIGN GROUP, NO APPROVAL OR CONSENT SHALL BE ASSUMED. THE CONTRACTOR SHALL ASSUME TOTAL LIABILITY AND RESPONSIBILITY IN ALL CASES WHERE SPECIFIC WRITTEN RESPONSE FROM STRUCTURAL DESIGN GROUP IS NOT OBTAINED. REGARDLESS OF
- ANY OTHER ACTIONS TAKEN BY STRUCTURAL DESIGN GROUP. 11.6 SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE GENERAL CONTACTOR AND REVIEWED BY THE S.E.R. SHOULD THE OWNER OR CONTRACTOR FAIL TO OBTAIN THE S.E.R'S REVIEW OF THE SHOP DRAWINGS, THE S.E.R. WILL NOT ACCEPT RESPONSIBILITY FOR THE DESIGN AND CERTIFICATION OF THIS PROJECT. PRIOR TO SUBMISSION. THE CONTRACTOR SHALL REVIEW SHOP DRAWINGS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. SHOP DRAWINGS SHALL NOT BE
- PRODUCED PRIOR TO FINAL CONSTRUCTION SET. 11.7 ENGINEERING DESIGN AND SHOP DRAWINGS FOR FLOOR AND ROOF TRUSS SYSTEM ALONG WITH LAYOUT PLANS ARE REQUIRED TO BE SUBMITTED TO THE BUILDING OFFICIAL FOR REVIEW PRIOR TO

CONSTRUCTION.

11.8 DO NOT FABRICATE PRIOR TO SHOP DRAWINGS REVIEW.

11/20/2018 PERMIT SET

PROJECT NUMBER

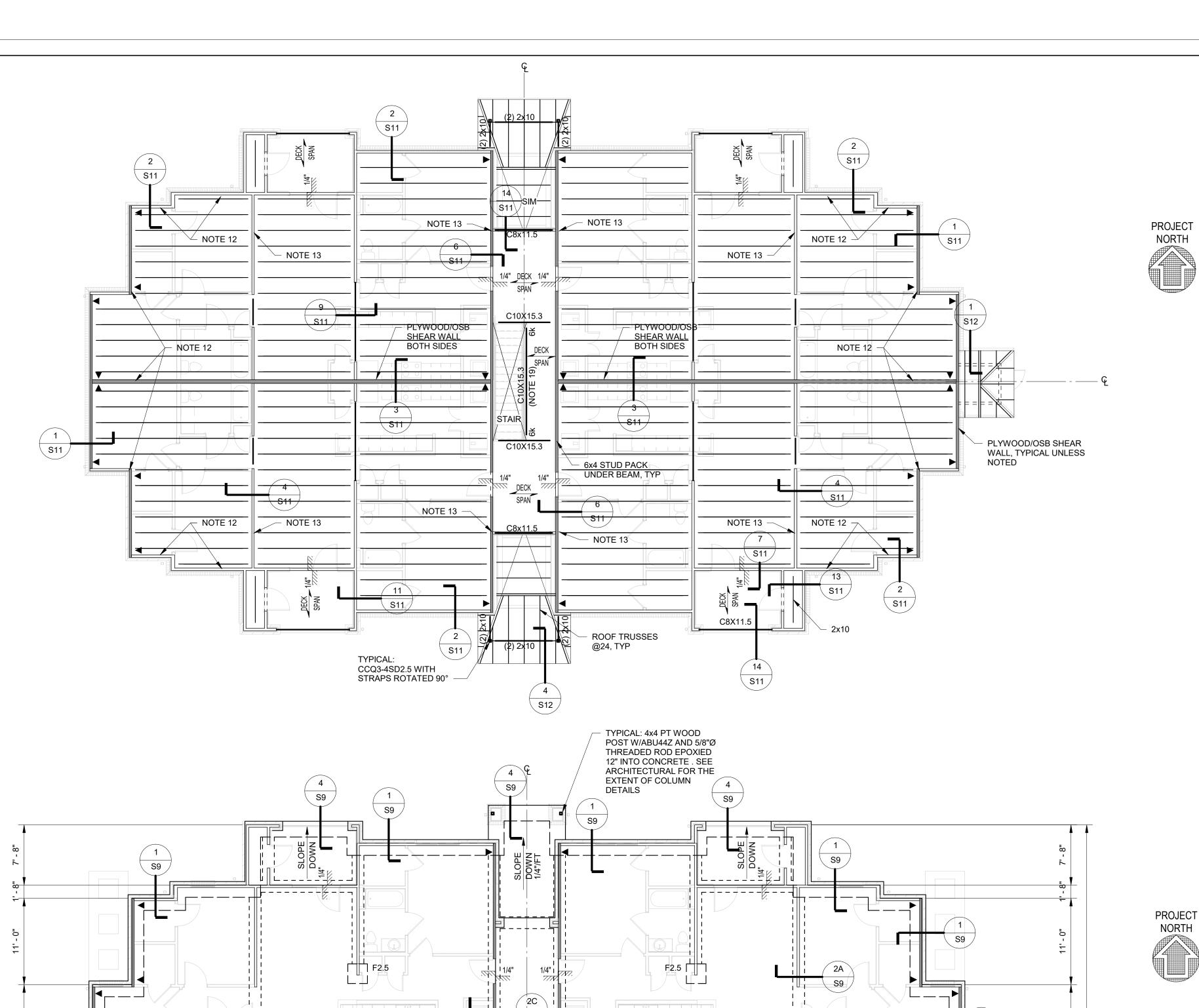
The Park at Bartor

West Memphis, AR 72301

SHEET NUMBER

900 E Barton Ave,

CAD FILE NUMBER \Users\bsmith\Documents\18-130 - Barton - Bldg \_Structural\_R17\_bsmithNDJMY.rvt



PLYWOOD/OSB

SHEAR WALL

**BOTH SIDES** 

THICKENED SLAB AT STAIR SUPPORT,

14' - 4 1/4"

9' - 2 3/4" 5' - 4" 5' - 0"

**TYPICAL** 

17' - 4"

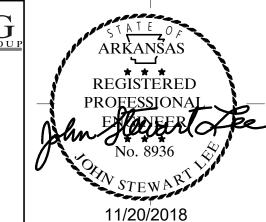
110' - 6"

S9 /

14' - 4 1/4"

5' - 0" | 5' - 4" | 9' - 2 3/4"

Hoover, Alabama 35244 tel 205-824-5200 fax 205-824-5280 Job Number **18-130** 





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# **BUILDING A - LEVEL 2 FRAMING PLAN**

. FLOOR SYSTEM: PREFABRICATED 4x2 16" FLOOR TRUSSES AT 24", UNLESS NOTED.

- 2. FLOOR SHEATHING: 3/4" PLYWOOD, SEE GENERAL NOTES. GLUE AND NAILTO TRUSSES. 3. FINISH SUB-FLOOR ELEVATION 10'-6 3/8" ABOVE FIRST FINISH FLOOR.
- 4. BALCONY ELEVATION 10'-7 1/4" ABOVE FIRST FINISH FLOOR. BREEZEWAY ELEVATION 10'-7 1/4" ABOVE FIRST FINISH FLOOR. 5. FLOOR TRUSS BEARING ELEVATION 9'-1 5/8" ABOVE FIRST FINISH FLOOR.
- 6. POSITION TRUSSES TO AVOID HVAC UNITS AND DUCTS.
- 7. DIMENSIONS SHOWN ARE TO FACE OF STUD.
- 8. DETAILS SHOWN ARE TYPICAL FOR THE ENTIRE BUILDING.
- 9. A DENOTES ANCHOR AT END OF SHEARWALL. FOR DETAIL SEE SHEET S8. 10. DENOTES SHEAR WALL. SEE SHEET S8 FOR SHEAR WALL DETAILS.
- 11. PROVIDE 18" WIDE x 12" DEEP OPENING ON MECHANICAL CLOSET. FOR LOCATION, SEE ARCHITECTURAL. 12. PROVIDE (2) MSTC40 STRAPS TO DOUBLE STUDS SUPPORTING GIRDER TRUSS ABOVE.
- CENTER ON FLOOR FRAMING EXTEND TO DOUBLE STUDS BELOW. GC OPTION TO USE (2) FSC ANCHORS.
- 13. PROVIDE HDU4 ANCHORS INTO TRIPLE 2x4 STUDS ABOVE AND BELOW FLOOR FRAMING. 14. UNLESS NOTED, PROVIDE DOUBLE 2x STUDS UNDER ALL BEAM BEARING POINTS.
- 15. BUILDING SYMMETRICAL ABOUT CENTERLINES, EXCEPT FOR PUMP ROOM. 16. BALCONY AND BREEZEWAY FRAMING: 3-1/2" CONCRETE ON 2.0C18 GALVANIZED NON-COMPOSITE FORM DECK (5-1/2" TOTAL SLAB THICKNESS). REINFORCE WITH 4x4-W2.9xW2.9
- WWR DRAPED AND FIBER MESH. PROVIDE C8x11.5 CHANNEL FRAMING AT PERIMETER, UNLESS NOTED. ALL FRAMING TO BE HOT DIPPED GALVANIZED AFTER FABRICATION. REPAIR ANY BREAKS IN GALVANIZING WITH ZINC RICH PRIMER PRIOR TO PAINTING.
- 17. STEEL PAN STAIRS TO BE DESIGNED BY THE STEEL FABRICATOR, TYPICAL. 18. BEAM REACTIONS ARE INDICATED AT ENDS OF BEAMS AS "Xk" WHERE "X" IS THE MAGNITUDE
- OF THE WORKING LOAD SHEAR REACTION IN KIPS. 19. PROVIDE 1/4"x3"x5-1/2" BENT CLOSURE PLATE AT STAIR OPENING BEAMS, TYPICAL.

PLYWOOD/OSB SHEAR

WALL, TYPICAL UNLESS

# **BUILDING A - LEVEL 1 FOUNDATION PLAN**

- . FINISHED FLOOR ELEVATION VARIES, SEE ARCHITECTURAL DRAWINGS. SLAB CONSTRUCTION: 4" THICK, POST TENSIONED, CAST IN PLACE SLAB. SEE GENERAL NOTES.
- DETAILS SHOWN ARE TYPICAL FOR THE ENTIRE BUILDING.
- 4. DIMENSIONS SHOWN ARE TO FACE OF STUD. 5. APPLY PLYWOOD/OSB SHEATHING TO ALL EXTERIOR WALLS FROM SLAB ON GRADE TO ROOF
- TRUSS BEARING. DENOTES SHEAR WALL. SEE SHEET S8 FOR SHEAR WALL DETAILS.
- ▲ DENOTES ANCHOR AT END OF SHEARWALL.
- 8. F2.5 DENOTES FOOTING 2'-6"x2'-6"x1'-0" DEEP REINFORCED WITH 3#5 EACH WAY BOTTOM. F4.5 DENOTES FOOTING 4'-6"x4'-6"x2'-0" DEEP REINFORCED WITH 5#5 EACH WAY TOP AND BOTTOM.
- 9. BUILDING SYMMETRICAL ABOUT CENTERLINES, EXCEPT FOR PUMP ROOM.

11/20/2018 PERMIT SET

PROJECT NUMBER

The Park at Barton

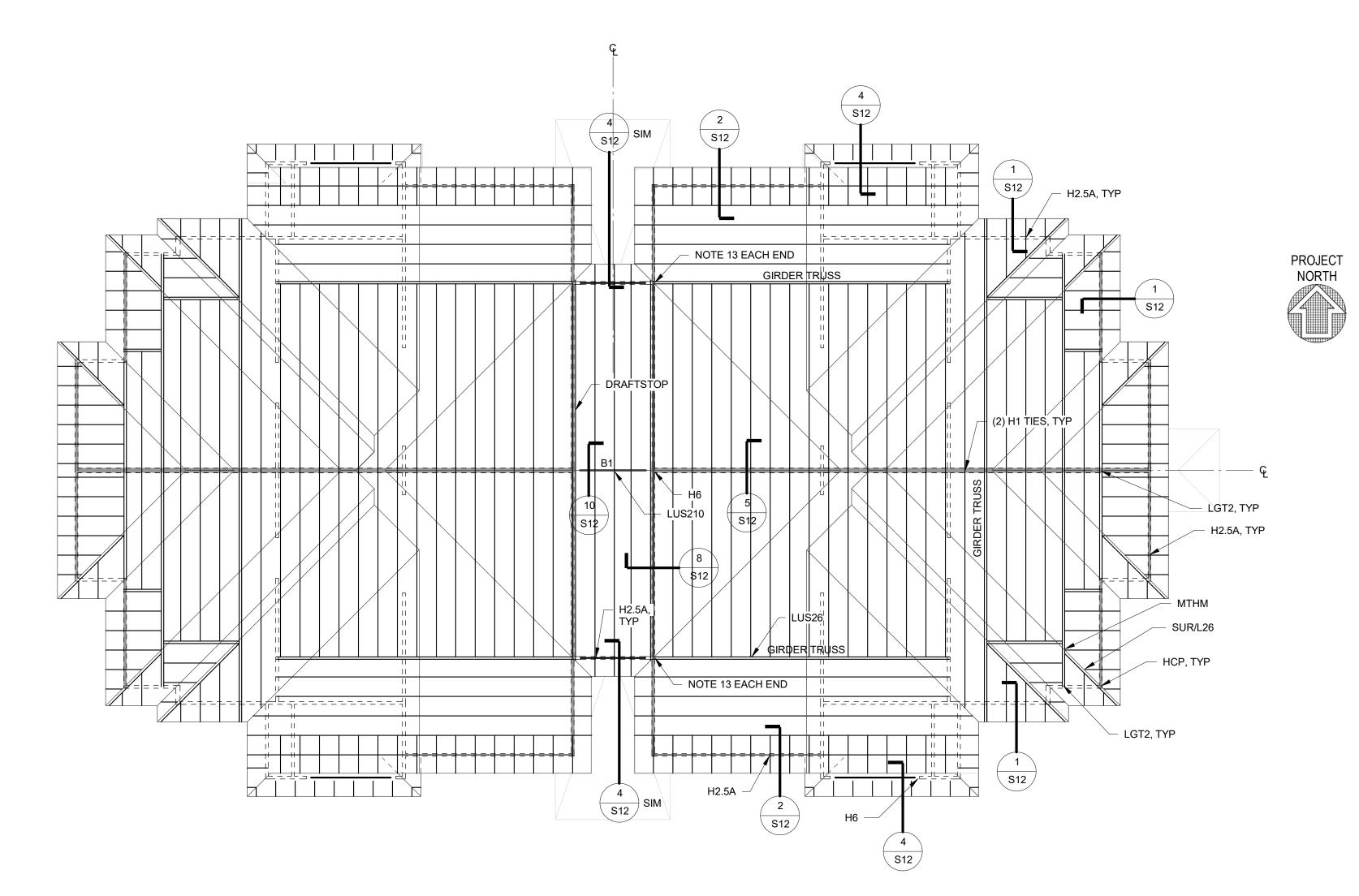
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# BUILDING A - ROOF FRAMING PLAN 1/8" = 1'-0"

- 1. ROOF SYSTEM: PREFABRICATED ROOF TRUSSES AT 24". SEE GENERAL NOTES. TRUSS
- LAYOUTS AND PROFILES BY OTHERS. ROOF SHEATHING: 1/2" OSB OR PLYWOOD, SEE GENERAL NOTES.
- TRUSS BEARING ELEVATION 19'-8", ABOVE FIRST FINISH FLOOR. 4. DETAILS AND ANCHORS SHOWN ARE TYPICAL FOR ENTIRE BUILDING.
- FOR DIMENSIONS SEE FOUNDATION PLAN. 6. ALL HORIZONTAL FRAMING LUMBER TO BE #2 SYP UNLESS NOTED, OR LUMBER WITH EQUAL
- OR GREATER STRUCTURAL PROPERTIES.
- 7. ALL EXTERIOR WALLS SHALL BE LOAD BEARING.
- 8. GIRDER TRUSSES SHALL NOT BEAR ABOVE OPENINGS IN WALL. PROVIDE DOUBLE STUDS AT
- 9. AT DRAFTSTOP TRUSSES, PROVIDE VERTICAL MEMBERS AT 16" IN ADDITION TO REQUIRED WEB MEMBERS. FOR DOOR INFORMATION, SEE ARCHITECTURAL DRAWINGS. FOR LOCATION, SEE ARCHITECTURAL DRAWINGS.
  10. 'B1' DENOTES (2) 1 3/4x9 1/4 LVL. PROVIDE DOUBLE STUD AND (2) H6 ANCHOR AT BEARING.
- 11. SHEARWALLS ÀRE SHOWN ON FLOOR BELOW. PROVIDE ADDITIONAL TRUSS ABOVE SHEARWALLS AND AT DRAFTSTOP AS REQUIRED.
- 12. AT VAULTED CEILING TRUSSES, PROVIDE CONTINUOUS BOTTOM CHORD FROM EXTERIOR BEARING WALL TO INTERIOR BEARING WALL. ATTACH MEMBER(S) TO BOTTOM CHORD AS REQUIRED TO FORM VAULTED CEILING. THIS IS DONE TO ELIMINATE ARCH EFFECT AND HORIZONTAL DISPLACEMENT.
- 13. PROVIDE TRIPLE STUDS AT TRUSS BEARING. PROVIDE MGT ANCHOR ABOVE DOUBLE TOP PLATE. PROVIDE HDU4 BELOW DOUBLE TOP PLATE.
- 14. BUILDING SYMMETRICAL ABOUT CENTERLINES.
- 15. EXTEND DRAFTSTOP SHEATHING TO ROOF SHEATHING. 16. PROVIDE DOUBLE STUDS AT MGT AND LGT ANCHORS.
- 17. PROVIDE (2) 2x FRAMING AT ATTIC ACCESS. SEE ARCHITECTURAL DRAWINGS FOR

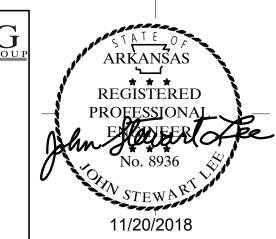
11/20/2018 PERMIT SET

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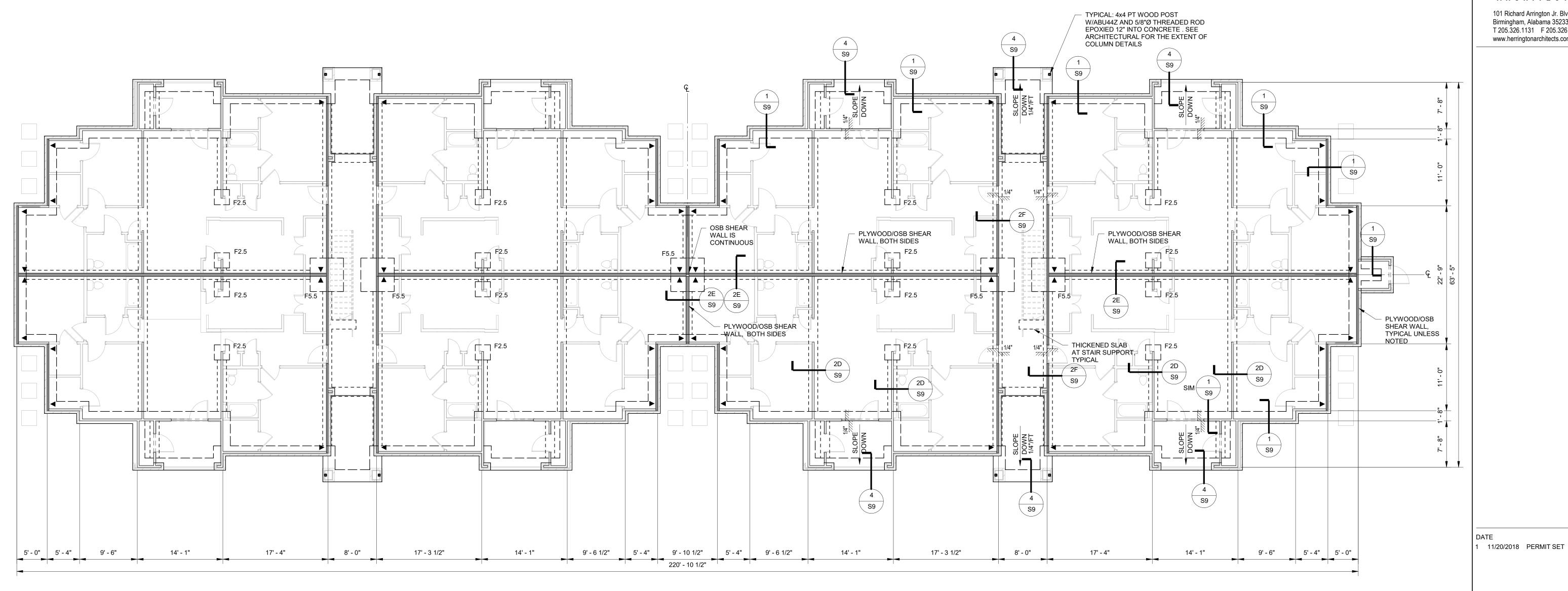
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# BUILDING B - LEVEL 1 FOUNDATION PLAN 1/8" = 1'-0"

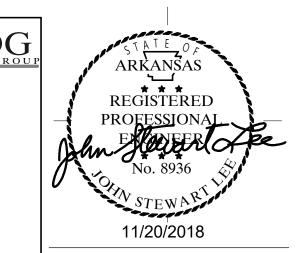
- FINISHED FLOOR ELEVATION VARIES, SEE ARCHITECTURAL DRAWINGS.
- 2. SLAB CONSTRUCTION: 4" THICK, POST TENSIONED, CAST IN PLACE SLAB. SEE GENERAL NOTES. 3. DETAILS SHOWN ARE TYPICAL FOR THE ENTIRE BUILDING.
- 4. DIMENSIONS SHOWN ARE TO FACE OF STUD.
- 5. APPLY PLYWOOD/OSB SHEATHING TO ALL EXTERIOR WALLS FROM SLAB ON GRADE TO ROOF TRUSS
- 6. DENOTES SHEAR WALL. SEE SHEET S8 FOR SHEAR WALL DETAILS.
- 7. ▲ DENOTES ANCHOR AT END OF SHEARWALL.
  8. F2.5 DENOTES FOOTING 2'-6"x2'-6"x1'-0" DEEP REINFORCED WITH 3#5 EACH WAY BOTTOM.
- F5.5 DENOTES FOOTING 5'-6"x5'-6"x2'-0" DEEP REINFORCED WITH 6#5 EACH WAY TOP AND BOTTOM.
- 9. BUILDING SYMMETRICAL ABOUT CENTERLINES, EXCEPT FOR PUMP ROOM.

PROJECT NUMBER

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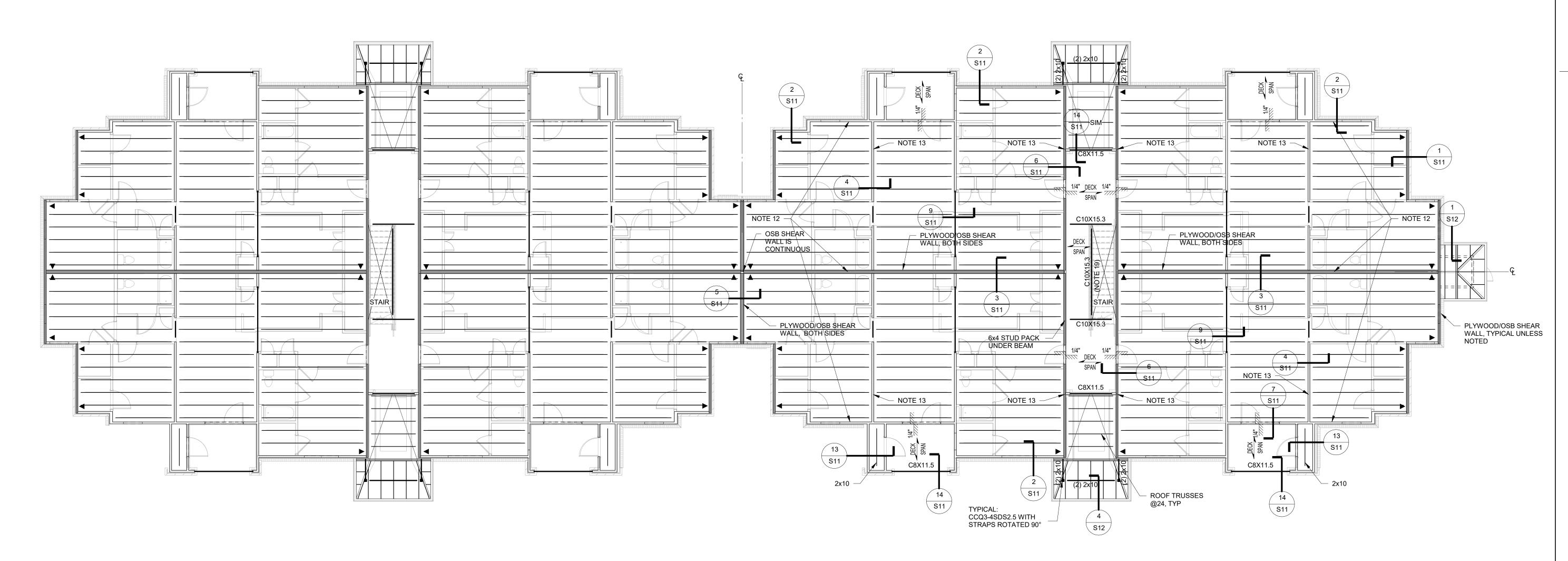
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PROJECT

# **BUILDING B - LEVEL 2 FRAMING PLAN**

- 1. FLOOR SYSTEM: PREFABRICATED 4x2 16" FLOOR TRUSSES AT 24", UNLESS NOTED. 2. FLOOR SHEATHING: 3/4" PLYWOOD, SEE GENERAL NOTES. GLUE AND NAIL TO TRUSSES.
- 3. FINISH SUB-FLOOR ELEVATION 10'-6 3/8" ABOVE FIRST FINISH FLOOR. 4. BALCONY ELEVATION 10'-7 1/4" ABOVE FIRST FINISH FLOOR. BREEZEWAY ELEVATION 10'-7 1/4"
- ABOVE FIRST FINISH FLOOR. 5. FLOOR TRUSS BEARING ELEVATION 9'-1 5/8" ABOVE FIRST FINISH FLOOR.
- 6. POSITION TRUSSES TO AVOID HVAC UNITS AND DUCTS.
- 7. DIMENSIONS SHOWN ARE TO FACE OF STUD. 8. DETAILS SHOWN ARE TYPICAL FOR THE ENTIRE BUILDING.
- 9. ▲ DENOTES ANCHOR AT END OF SHEARWALL. FOR DETAIL SEE SHEET S8. 10. DENOTES SHEAR WALL. SEE SHEET S8 FOR SHEAR WALL DETAILS.
- 11. PROVIDE 18" WIDE x 12" DEEP OPENING ON MECHANICAL CLOSET. FOR LOCATION, SEE ARCHITECTURAL.
- 12. PROVIDE (2) MSTC40 STRAPS TO DOUBLE STUDS SUPPORTING GIRDER TRUSS ABOVE. CENTER ON FLOOR FRAMING EXTEND TO DOUBLE STUDS BELOW. GC OPTION TO USE (2) FSC
- 13. PROVIDE HDU4 ANCHORS INTO TRIPLE 2x4 STUDS ABOVE AND BELOW FLOOR FRAMING.
- 14. UNLESS NOTED, PROVIDE DOUBLE 2x STUDS UNDER ALL BEAM BEARING POINTS.
- 15. BUILDING SYMMETRICAL ABOUT CENTERLINES, EXCEPT FOR PUMP ROOM. 16. BALCONY AND BREEZEWAY FRAMING: 3-1/2" CONCRETE ON 2.0C18 GALVANIZED NON-COMPOSITE FORM DECK (5-1/2" TOTAL SLAB THICKNESS). REINFORCE WITH 4x4-W2.9xW2.9 WWR DRAPED AND FIBER MESH. PROVIDE C8x11.5 CHANNEL FRAMING AT PERIMETER, UNLESS NOTED. ALL FRAMING TO BE HOT DIPPED GALVANIZED AFTER FABRICATION. REPAIR ANY
- BREAKS IN GALVANIZING WITH ZINC RICH PRIMER PRIOR TO PAINTING. 17. STEEL PAN STAIRS TO BE DESIGNED BY THE STEEL FABRICATOR, TYPICAL.
- 18. BEAM REACTIONS ARE INDICATED AT ENDS OF BEAMS AS "Xk" WHERE "X" IS THE MAGNITUDE
- OF THE WORKING LOAD SHEAR REACTION IN KIPS.
- 19. PROVIDE 1/4"x3"x5-1/2" BENT CLOSURE PLATE AT STAIR OPENING BEAMS, TYPICAL.

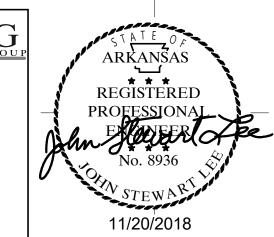
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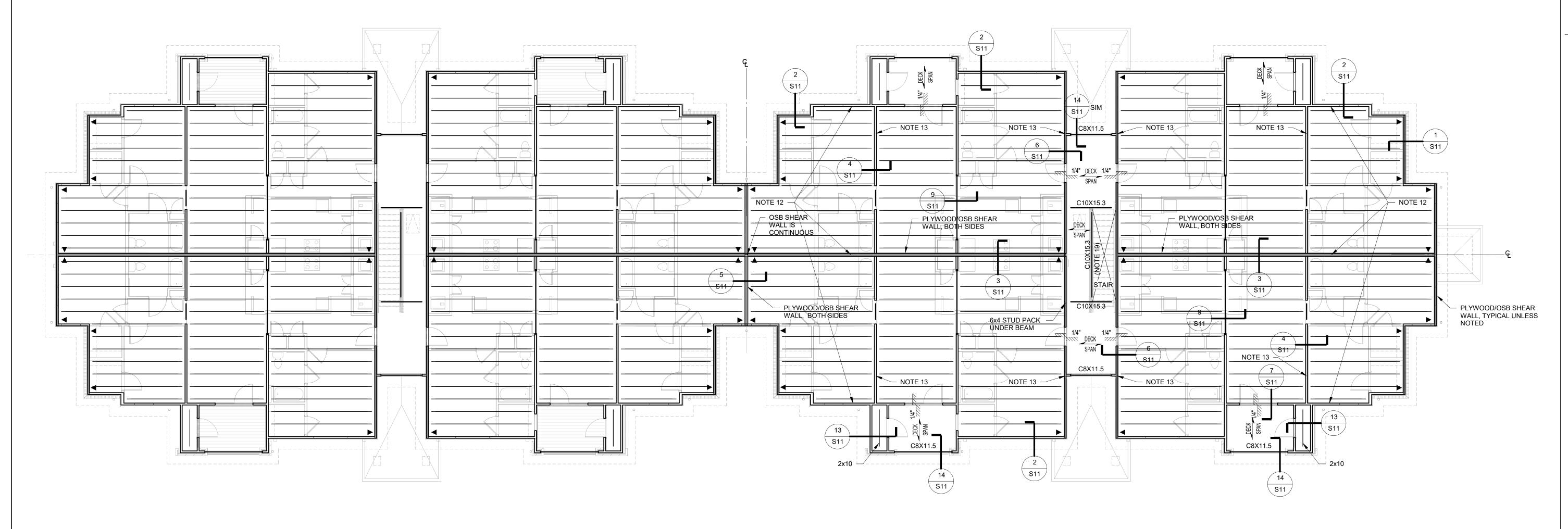
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PROJECT

# **BUILDING B - LEVEL 3 FRAMING PLAN**

. FLOOR SYSTEM: PREFABRICATED 4x2 16" FLOOR TRUSSES AT 24", UNLESS NOTED. 2. FLOOR SHEATHING: 3/4" PLYWOOD, SEE GENERAL NOTES. GLUE AND NAIL TO TRUSSES.

3. FINISH SUB-FLOOR ELEVATION 21'-0 3/4" ABOVE FIRST FINISH FLOOR.

4. BALCONY ELEVATION 21'-1 5/8" ABOVE FIRST FINISH FLOOR. BREEZEWAY ELEVATION 21'-1 5/8" ABOVE FIRST FINISH FLOOR.

5. FLOOR TRUSS BEARING ELEVATION 19'-8" ABOVE FIRST FINISH FLOOR.

6. POSITION TRUSSES TO AVOID HVAC UNITS AND DUCTS. 7. DIMENSIONS SHOWN ARE TO FACE OF STUD.

8. DETAILS SHOWN ARE TYPICAL FOR THE ENTIRE BUILDING. 9. A DENOTES ANCHOR AT END OF SHEARWALL. FOR DETAIL SEE SHEET S8.

ARCHITECTURAL.

10. DENOTES SHEAR WALL. SEE SHEET S8 FOR SHEAR WALL DETAILS. 11. PROVIDE 18" WIDE x 12" DEEP OPENING ON MECHANICAL CLOSET. FOR LOCATION, SEE

12. PROVIDE (2) MSTC40 STRAPS TO DOUBLE STUDS SUPPORTING GIRDER TRUSS ABOVE. CENTER ON FLOOR FRAMING EXTEND TO DOUBLE STUDS BELOW. GC OPTION TO USE (2) FSC

13. PROVIDE HDU4 ANCHORS INTO TRIPLE 2x4 STUDS ABOVE AND BELOW FLOOR FRAMING. 14. UNLESS NOTED, PROVIDE DOUBLE 2x STUDS UNDER ALL BEAM BEARING POINTS.

15. BUILDING SYMMETRICAL ABOUT CENTERLINES, EXCEPT FOR PUMP ROOM.

16. BALCONY AND BREEZEWAY FRAMING: 3-1/2" CONCRETE ON 2.0C18 GALVANIZED NON-COMPOSITE FORM DECK (5-1/2" TOTAL SLAB THICKNESS). REINFORCE WITH 4x4-W2.9xW2.9 WWR DRAPED AND FIBER MESH. PROVIDE C8x11.5 CHANNEL FRAMING AT PERIMETER, UNLESS NOTED. ALL FRAMING TO BE HOT DIPPED GALVANIZED AFTER FABRICATION. REPAIR ANY BREAKS IN GALVANIZING WITH ZINC RICH PRIMER PRIOR TO PAINTING.

17. STEEL PAN STAIRS TO BE DESIGNED BY THE STEEL FABRICATOR, TYPICAL. 18. BEAM REACTIONS ARE INDICATED AT ENDS OF BEAMS AS "Xk" WHERE "X" IS THE MAGNITUDE

OF THE WORKING LOAD SHEAR REACTION IN KIPS. 19. PROVIDE 1/4"x3"x5-1/2" BENT CLOSURE PLATE AT STAIR OPENING BEAMS, TYPICAL.

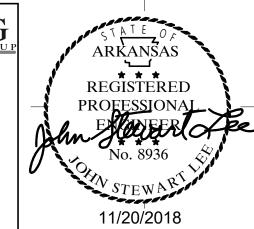
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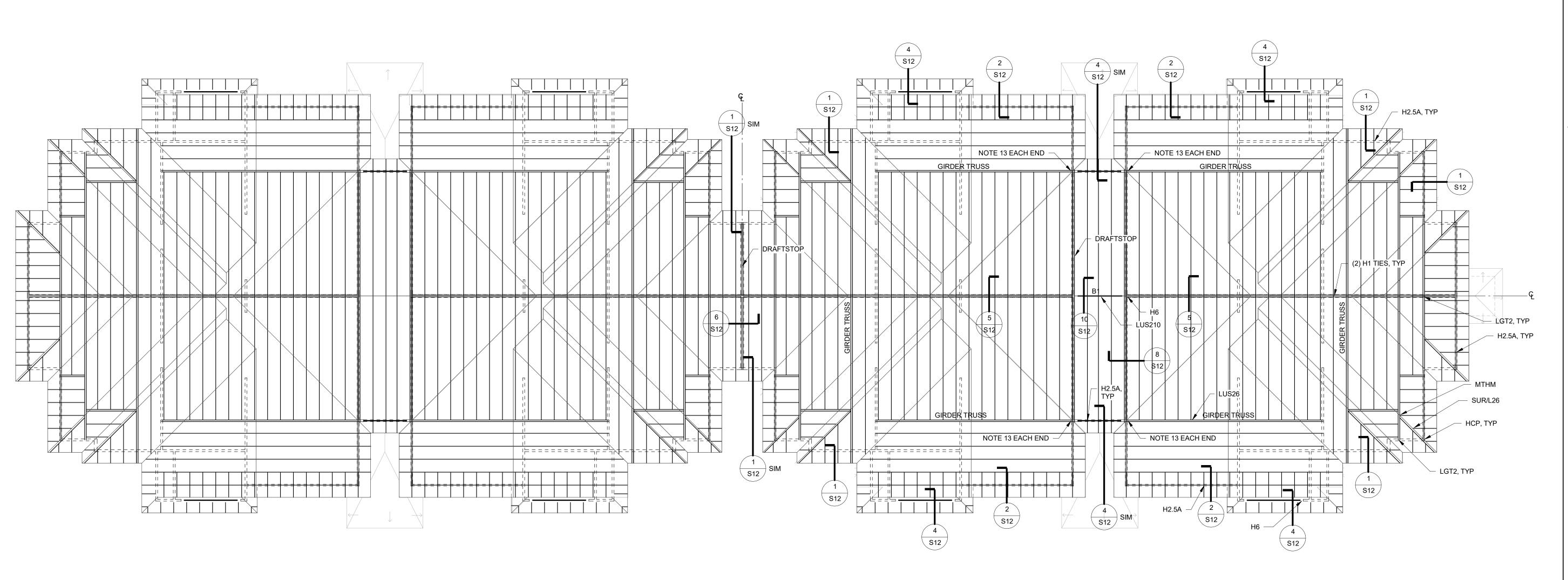
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PROJECT NORTH

# **BUILDING B - ROOF FRAMING PLAN**

- 1. ROOF SYSTEM: PREFABRICATED ROOF TRUSSES AT 24". SEE GENERAL NOTES. TRUSS LAYOUTS AND PROFILES BY OTHERS.
- 2. ROOF SHEATHING: 1/2" OSB OR PLYWOOD, SEE GENERAL NOTES.
- 3. TRUSS BEARING ELEVATION 30'-2 3/8", ABOVE FIRST FINISH FLOOR.
- 4. DETAILS AND ANCHORS SHOWN ARE TYPICAL FOR ENTIRE BUILDING. 5. FOR DIMENSIONS SEE FOUNDATION PLAN.
- 6. ALL HORIZONTAL FRAMING LUMBER TO BE #2 SYP UNLESS NOTED, OR LUMBER WITH EQUAL OR GREATER STRUCTURAL PROPERTIES.
- 7. ALL EXTERIOR WALLS SHALL BE LOAD BEARING.
- 8. GIRDER TRUSSES SHALL NOT BEAR ABOVE OPENINGS IN WALL. PROVIDE DOUBLE STUDS AT
- 9. AT DRAFTSTOP TRUSSES, PROVIDE VERTICAL MEMBERS AT 16" IN ADDITION TO REQUIRED WEB MEMBERS. FOR DOOR INFORMATION, SEE ARCHITECTURAL DRAWINGS. FOR LOCATION, SEE ARCHITECTURAL DRAWINGS.
- 10. **B1** DENOTES (2) 1 3/4x9 1/4 LVL. PROVIDE DOUBLE STUD AND (2) H6 ANCHOR AT BEARING. 11. SHEARWALLS ARE SHOWN ON FLOOR BELOW. PROVIDE ADDITIONAL TRUSS ABOVE
- SHEARWALLS AND AT DRAFTSTOP AS REQUIRED.
- 12. AT VAULTED CEILING TRUSSES, PROVIDE CONTINUOUS BOTTOM CHORD FROM EXTERIOR BEARING WALL TO INTERIOR BEARING WALL. ATTACH MEMBER(S) TO BOTTOM CHORD AS REQUIRED TO FORM VAULTED CEILING. THIS IS DONE TO ELIMINATE ARCH EFFECT AND HORIZONTAL DISPLACEMENT.
- 13. PROVIDE TRIPLE STUDS AT TRUSS BEARING. PROVIDE MGT ANCHOR ABOVE DOUBLE TOP
- PLATE. PROVIDE HDU4 BELOW DOUBLE TOP PLATE. 14. BUILDING SYMMETRICAL ABOUT CENTERLINES.
- 15. EXTEND DRAFTSTOP SHEATHING TO ROOF SHEATHING.
- 16. PROVIDE DOUBLE STUDS AT MGT AND LGT ANCHORS. 17. PROVIDE (2) 2x FRAMING AT ATTIC ACCESS. SEE ARCHITECTURAL DRAWINGS FOR
- LOCATIONS.

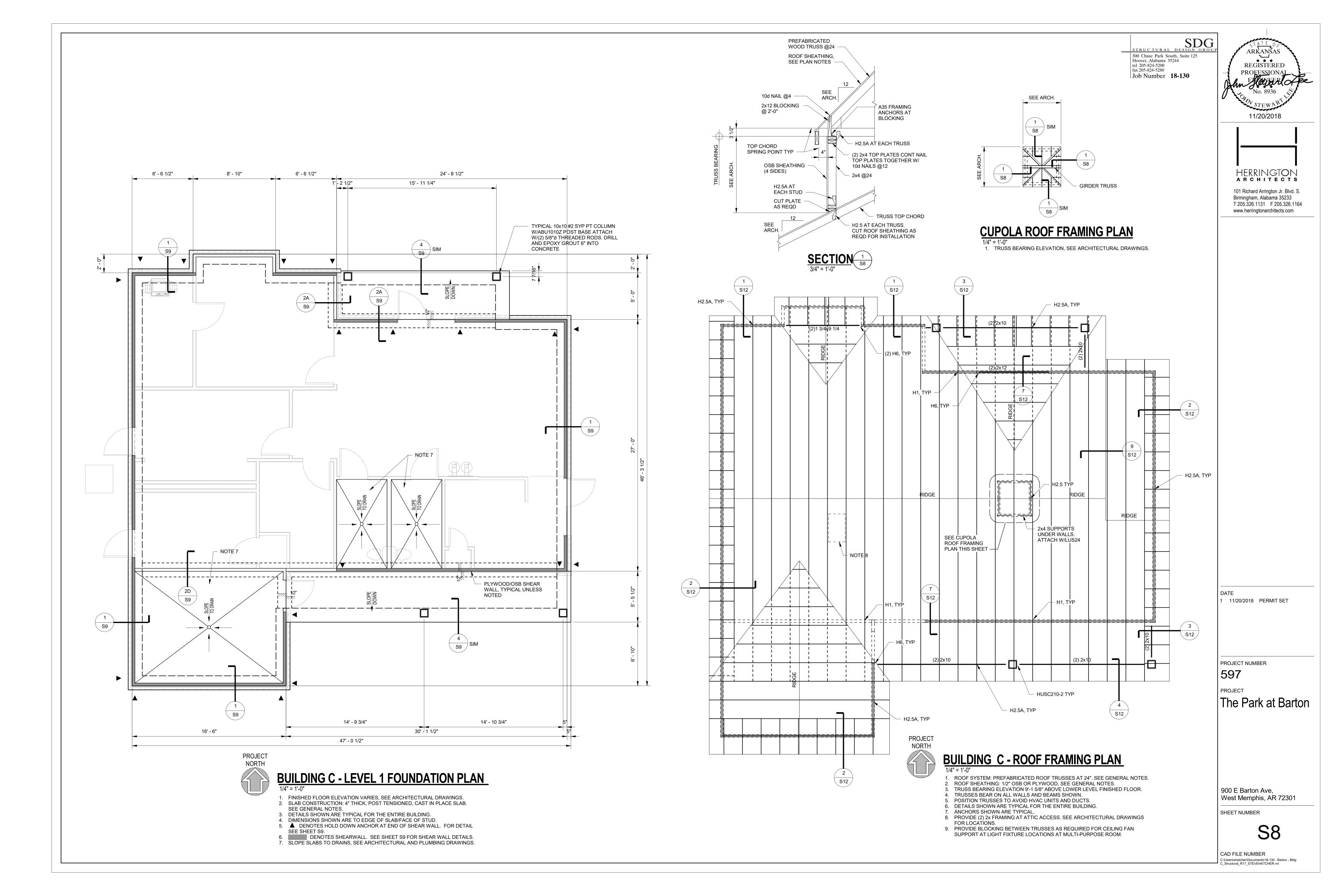
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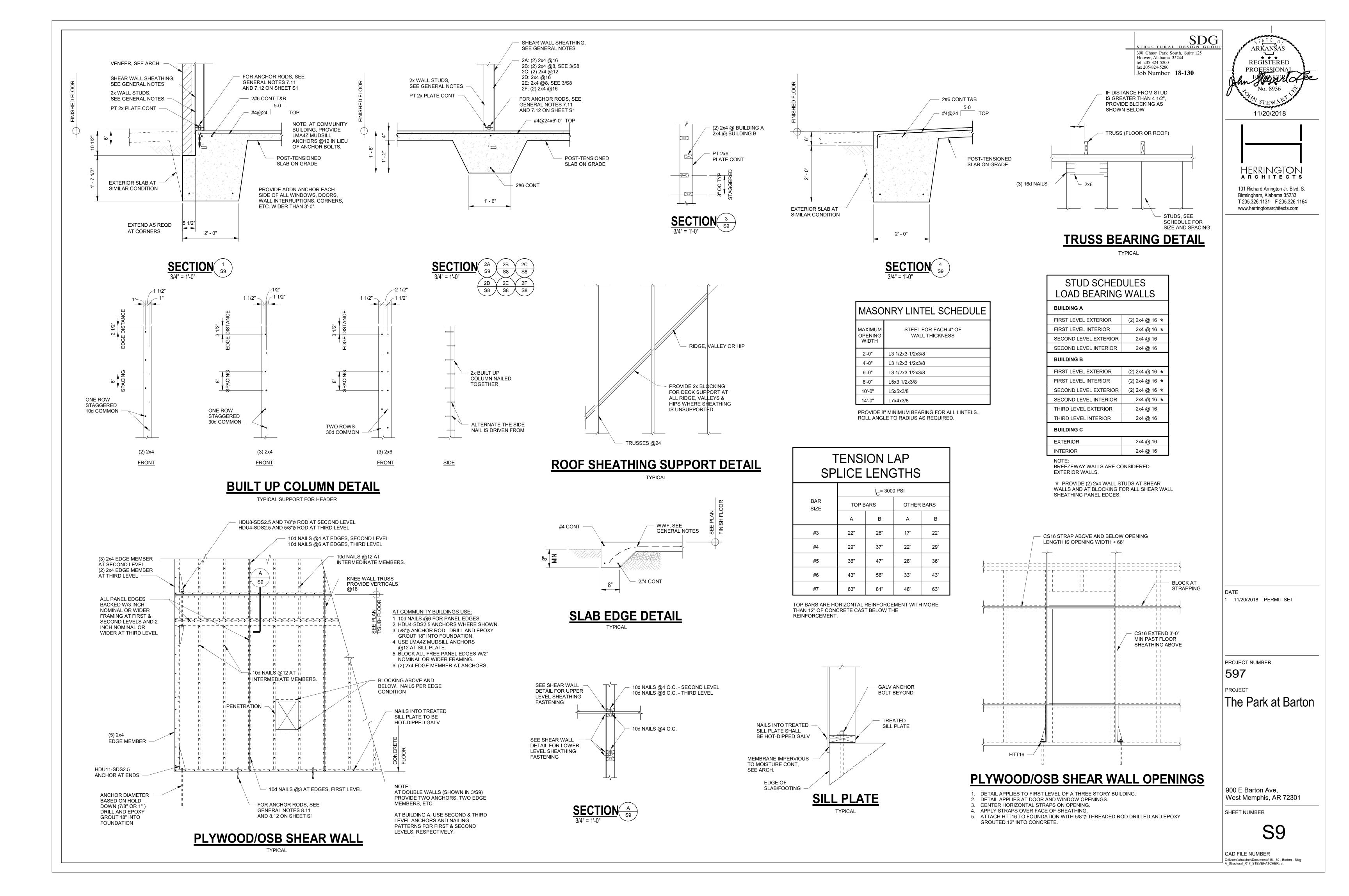
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STRUCTURAL DESIGN GROUP

300 Chase Park South, Suite 125 Hoover, Alabama 35244 tel 205-824-5200

ARKANSAS

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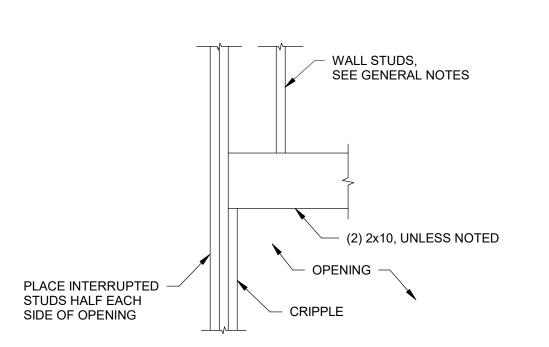
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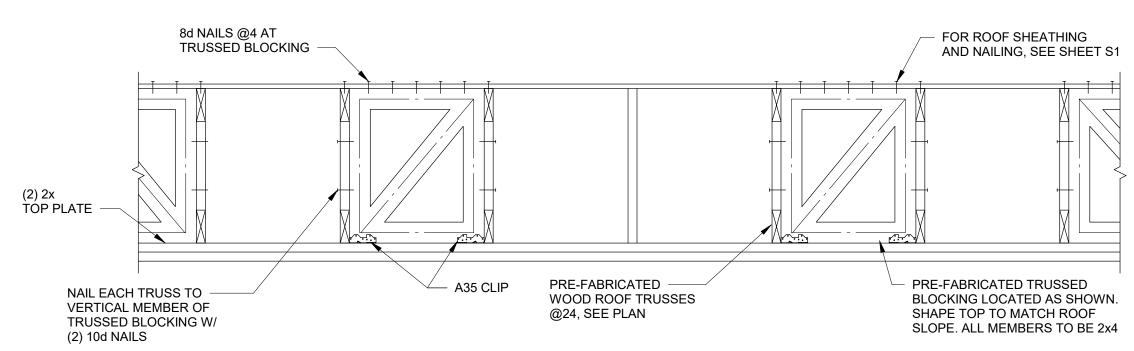


# / DOUBLE TOP PLATE FULL HEIGHT \_\_\_ STUDS -INTERRUPTED STUDS (ONE HALF EACH SIDE HEADER OF OPENING) CRIPPLE INTERRUPTED STUDS

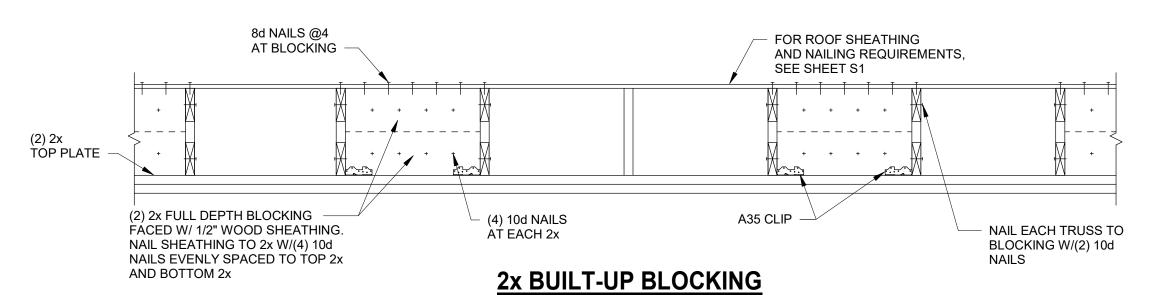
# **OPENING FRAMING**

FOR LOAD BEARING WALLS WITH OPENINGS WIDER THAN 2'-8"

# STUD PLACEMENT AT OPENINGS



# TRUSSED BLOCKING



# TRUSS BLOCKING AT EXTERIOR WALL

CONTRACTORS OPTION TO USE EITHER TRUSSED BLOCKING OR 2x BUILTUP BLOCKING AT AREAS WHERE TRUSS HEEL HEIGHT EXCEEDS THAT WHICH TYPICAL 2x SOLID DEPTH BLOCKING IS PRACTICAL.

# COMPONENTS AND CLADDING WIND LOADS FOR WALLS (PSF)

	EFFECTIVE WIND AREA (FT <sup>2</sup> )		115 MPH WIND SPEED					
	10	36.0	-39.1					
INT ZONE	20	34.4	-37.5					
INT ZONE	50	32.3	-35.3					
	100	30.6	-33.7					
	500	26.9	-29.9					
	10	36.0	-48.2					
EDGE ZONE	20	34.4	-45.0					
EDGE ZONE	50	32.3	-40.7					
	100	30.6	-37.5					
	500	26.9	-29.9					

NOTES:

- 1. WIDTH OF EDGE STRIP a=5'-9".
- 2. VALUES SHOWN ABOVE HAVE BEEN ADJUSTED FOR BUILDING HEIGHT AND EXPOSURE ACCORDING TO ASCE 7-10 STANDARD FIGURE 30.5-1 AND IMPORTANCE FACTOR.
- 3. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE BUILDING SURFACES.
- 4. EFFECTIVE WIND AREA IS THE SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN ONE-THIRD THE SPAN LENGTH.
- 5. WIND PRESSURES IN THESE TABLES SHALL BE MULTIPLIED
- BY 0.6 TO OBTAIN NOMINAL WIND PRESSURES.

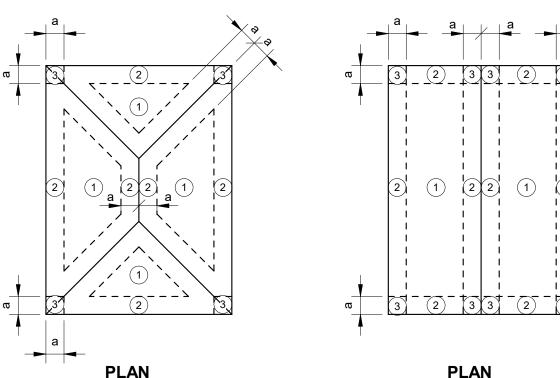
# COMPONENTS AND CLADDING WIND LOADS FOR ROOF (PSF)

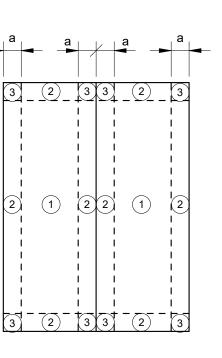
	ID LONDO I	<b>O</b> 1 <i>)</i>							
	EFFECTIVE WIND AREA (FT <sup>2</sup> )	115 MPH WIND SPEED							
	10	20.8	-33.0						
INT ZONE	20	18.9	-32.1						
(1)	50	16.5	-30.9						
	100	16.0	-29.9						
	10	20.8	-57.4						
EDGE ZONE	20	18.9	-52.8						
(2)	50	16.5	-46.7						
	100	16.0	-42.1						
	10	20.8	-84.8						
CORNER ZONE	20	18.9	-79.3						
(3)	50	16.5	-72.0						
	100	16.0	-66.5						

NOTES:

(COMPONENTS & CLADDING HIP ROOF)

- 1. WIDTH OF EDGE STRIP a=5'-9".
- 2. VALUES SHOWN ABOVE HAVE BEEN ADJUSTED FOR BUILDING HEIGHT AND EXPOSURE ACCORDING TO ASCE 7-10 STANDARD
- FIGURE 30.5-1 AND IMPORTANCE FACTOR. 3. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD
- AND AWAY FROM THE BUILDING SURFACES.
- 4. EFFECTIVE WIND AREA IS THE SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN ONE-THIRD THE SPAN LENGTH.
- 5. CONSIDER 5 PSF MINIMUM DEAD LOAD FOR UPLIFT CALCULATIONS FOR ROOF JOISTS AND 2 PSF MINIMUM DEAD LOAD FOR UPLIFT CALCULATIONS FOR ROOF DECK.
- 6. WIND PRESSURES IN THESE TABLES SHALL BE MULTIPLIED
- BY 0.6 TO OBTAIN NOMINAL WIND PRESSURES. 7. RIDGE AND HIPS ARE CONSIDERED TO BE EDGE ZONES.





PLAN (COMPONENTS & CLADDING GABLE ROOF)

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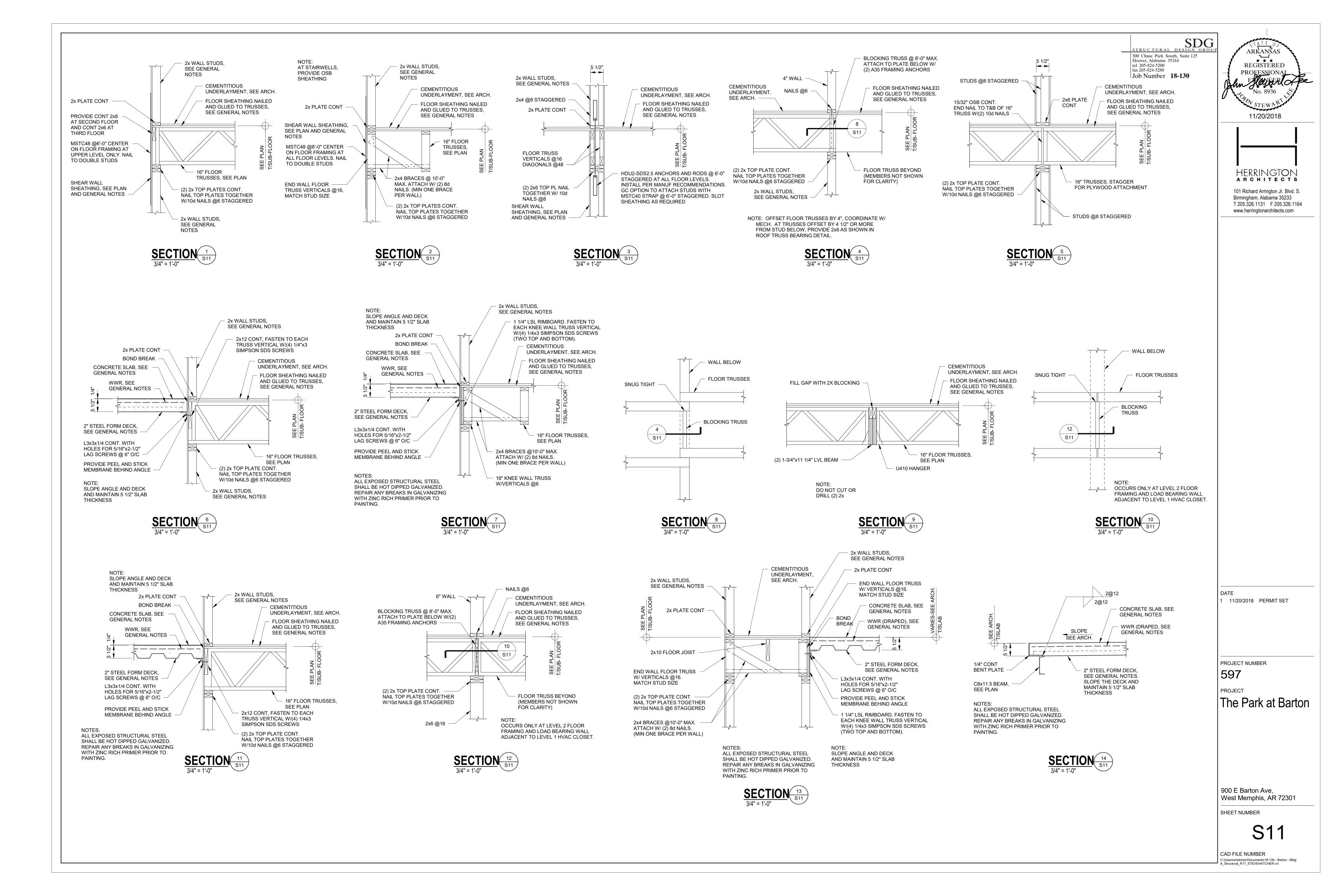
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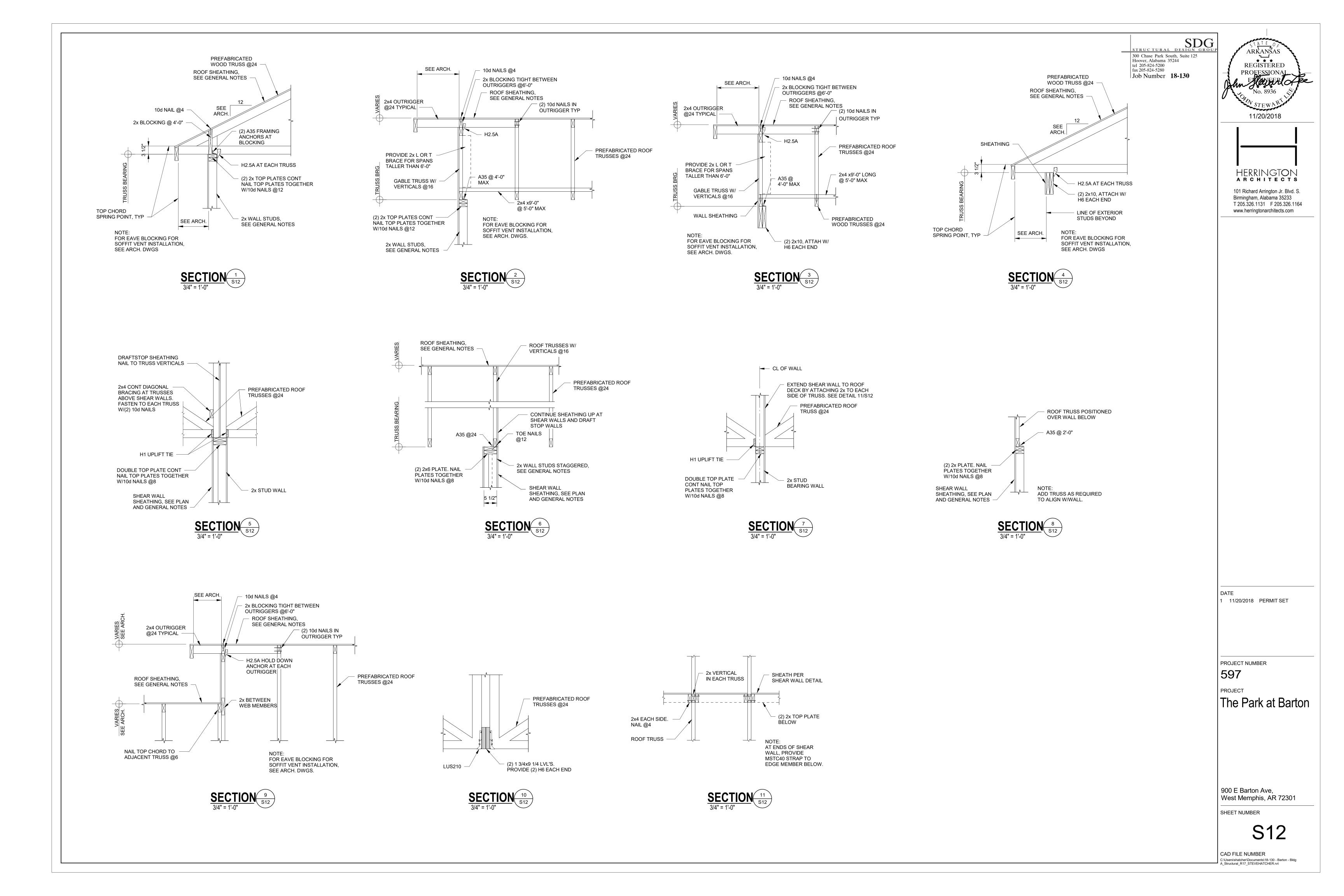
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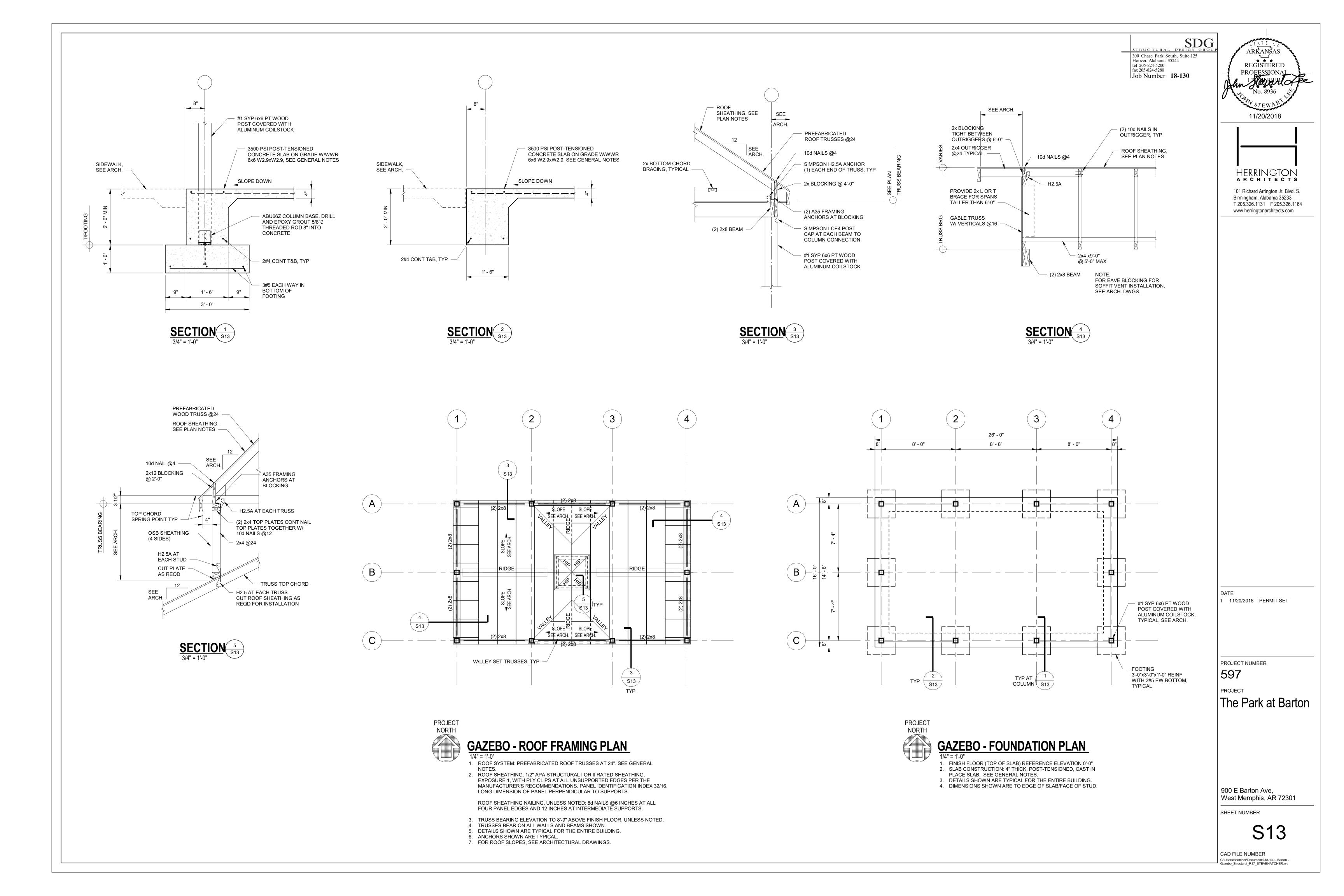
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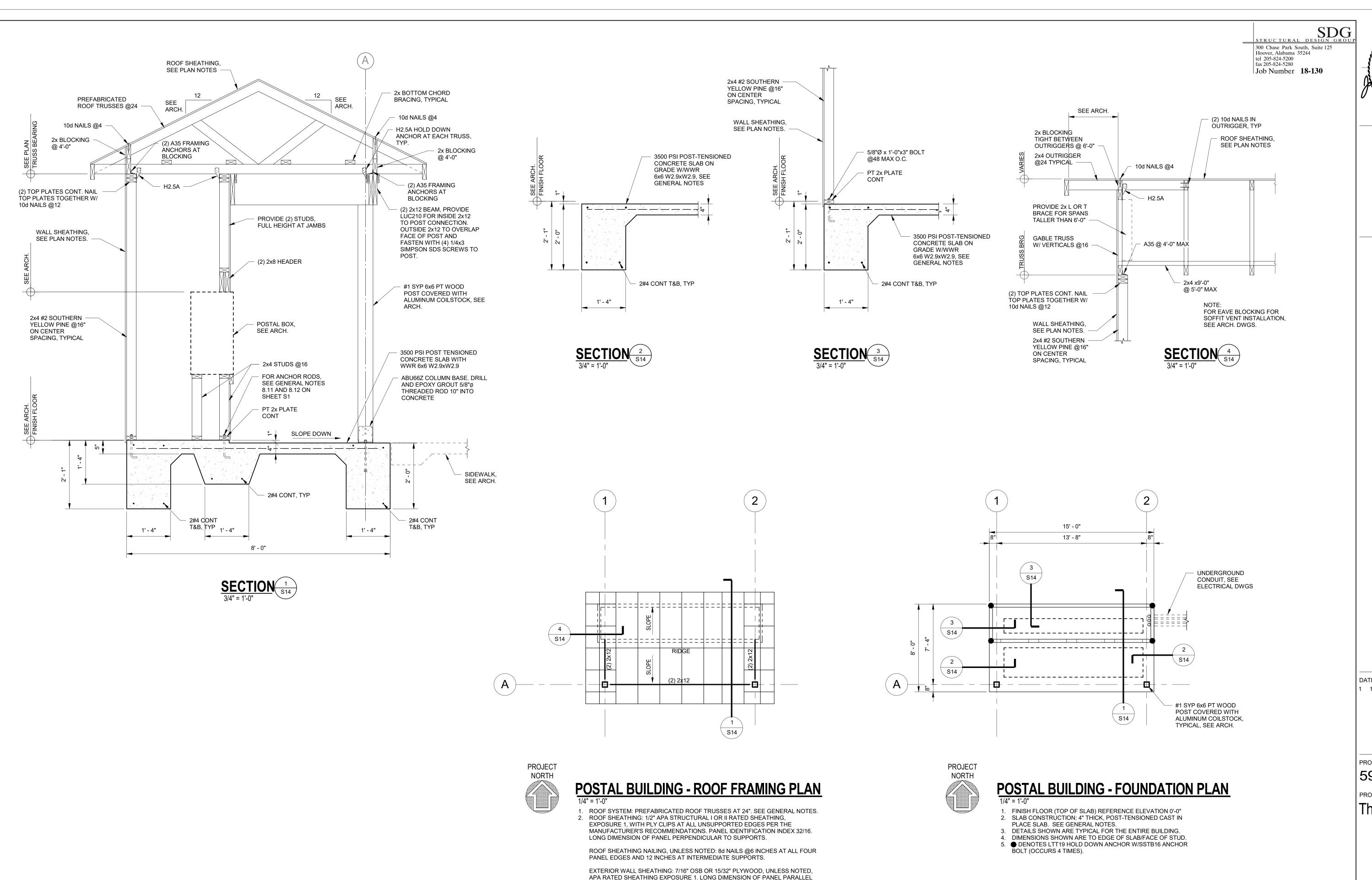
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TO STUDS. ALL PLYWOOD EDGES SHALL BE BACKED WITH TWO-INCH NOMINAL OR WIDER FRAMING. FASTEN WITH 8d NAILS @ 6" AT ALL PANEL EDGES AND 12"

3. TRUSS BEARING ELEVATION TO 8'-1" ABOVE FINISH FLOOR, UNLESS NOTED.

AT INTERMEDIATE SUPPORTS, TYPICAL.

6. ANCHORS SHOWN ARE TYPICAL.

4. TRUSSES BEAR ON ALL WALLS AND BEAMS SHOWN.

7. FOR ROOF SLOPES, SEE ARCHITECTURAL DRAWINGS.

5. DETAILS SHOWN ARE TYPICAL FOR THE ENTIRE BUILDING.

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PROFESSIONAL
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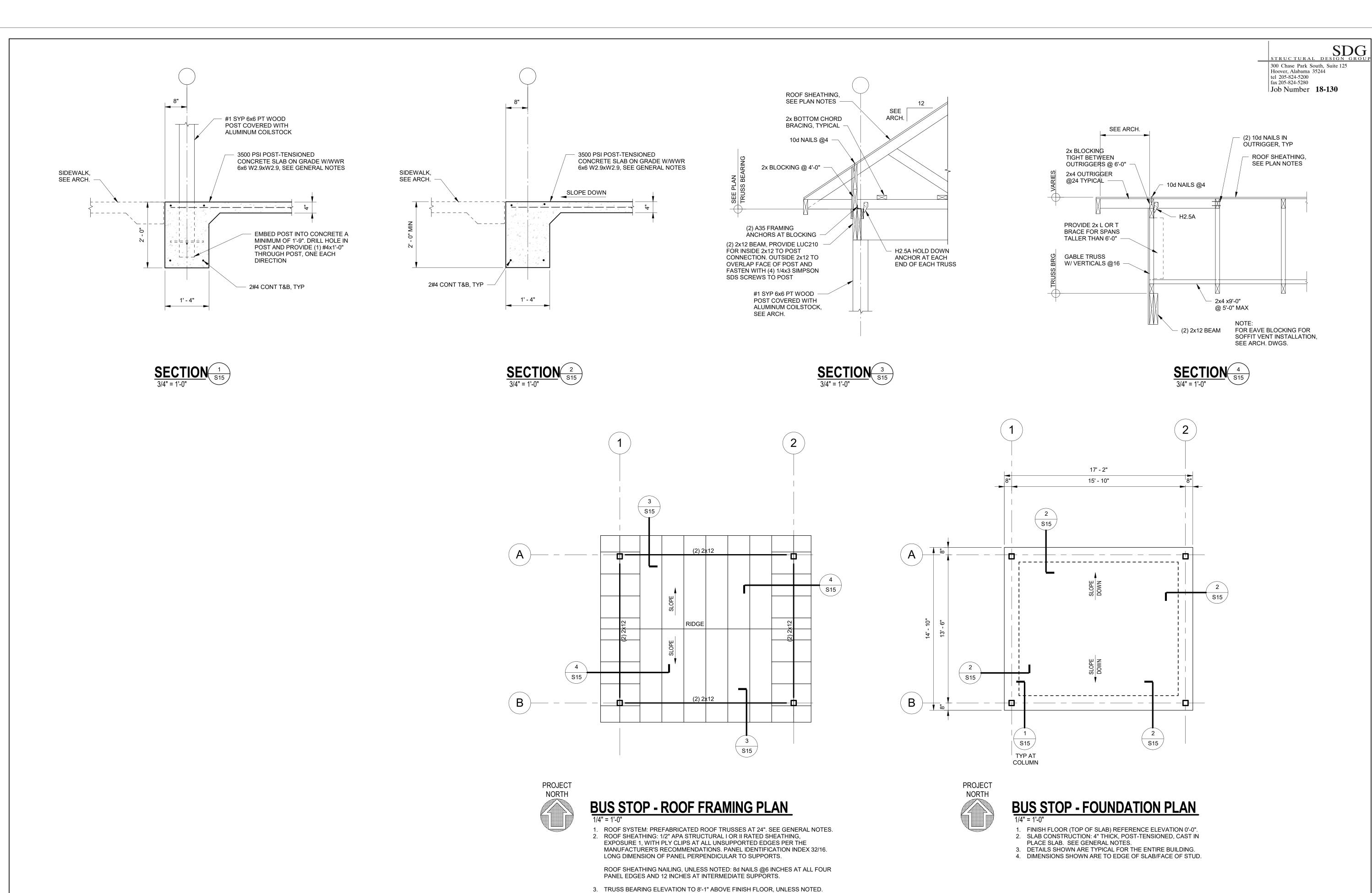
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TRUSSES BEAR ON ALL WALLS AND BEAMS SHOWN.
 DETAILS SHOWN ARE TYPICAL FOR THE ENTIRE BUILDING.

7. FOR ROOF SLOPES, SEE ARCHITECTURAL DRAWINGS.

6. ANCHORS SHOWN ARE TYPICAL.

ARKANSAS

REGISTERED
PROFESSIONAL

EXAMPLE OF
ARKANSAS

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PLUMBING LEGEND S	YMBOLS A	ND ABBREVIATIO	DNS	
DOMESTIC COLD WATER	<b>6</b>	BALL VALVE	ABV	ABOVE
	ঠ	VALVE IN VERTICAL	AFF	ABOVE FINISHED FLOOR
		CAP ON END OF PIPE	INV	INVERT
	O CO	CLEANOUT - FLOOR TYPE	BFF	BELOW FINISHED FLOOR
	OHC0	CLEANOUT - WALL TYPE	CW	COLD WATER
EXISTING DOMESTIC HOT WATER TO REMAIN	$\neg$	P-TRAP	DN	DOWN
— — — DOMESTIC HOT WATER RETURN	——	PIPE TURNING DOWN	EX	EXISTING
	——	PIPE TURNING UP	HW	HOT WATER
	-101-	TEE DOWN	WS	WASTE STACK
— — — — SANITARY VENT	-101-	TEE UP	VS	VENT STACK
	•	TIE NEW INTO EXISTING	AC	ABOVE CEILING
EXISTING SANITARY VENT TO REMAIN	P-1	PLUMBING FIXTURE NUMBER	WHA	WATER HAMMER ARRESTOR
STORM DRAINAGE		RISER NUMBER	BFG	BELOW FINISHED GRADE
	<b></b>	WATER HAMMER ARRESTOR	TMV	THERMOSTATIC MIXING VALVE
	———II	PLUG TYPE CLEANOUT	TP	TRAP PRIMER
SANITARY WASTE	K)	BALANCING VALVE		
——————————————————————————————————————	▶	CHECK VALVE		
ss	內	GATE VALVE		
SHEET MATCH LINE		REDUCED PRESSURE ZONE BFP		
CONSTRUCTION DUST PARTITION	कंक्म	THERMOSTATIC MIXING VALVE		

## DRAWING GENERAL NOTES:

- 1 CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
- 2 SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.

GAS LINE

EXSITING GAS LINE

- 3 PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETE INSTALLATION OF ELEMENTS SHOWN.
- 4) ALL WASTE PIPING SHOWN IS BELOW THE FINISHED FLOOR UNLESS OTHERWISE NOTED. ALL VENT PIPING SHOWN IS ABOVE THE CEILING UNLESS OTHERWISE NOTED.
- (5) COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.

# PLUMBING GENERAL NOTES:

1. ALL HORIZONTAL PRESSURE PIPING SHALL BE RUN ABOVE CEILING ON THE PLAN ON WHICH SHOWN UNLESS OTHERWISE NOTED.

FLOOR SINK

FLOOR DRAIN

- 2. ALL HORIZONTAL GRAVITY PIPING SHALL BE RUN BELOW FLOOR ON THE PLAN ON WHICH SHOWN UNLESS OTHERWISE INDICATED. ALL HORIZONTAL VENT PIPING SHALL BE RUN ABOVE FLOOR ON THE PLAN ON WHICH SHOWN UNLESS OTHERWISE INDICATED. VENT PIPING IS SHOWN OFFSET FOR CLARITY.
- 3. THE LOCATION OF FLOOR DRAINS SHALL BE COORDINATED WITH THE LOCATION OF THE EQUIPMENT BEING SERVED PRIOR TO INSTALLATION.
- 4. COORDINATE ROUTING OF PIPING TO AVOID CONFLICTS WITH STRUCTURAL, MECHANICAL, AND ELECTRICAL WITHIN THE BUILDING PRIOR TO INSTALLATION. ROUTE PIPING IN JOIST SPACE AS MUCH AS POSSIBLE.
- 5. COORDINATE WITH ARCHITECTURAL SITE PLAN FOR THE LOCATION AND ORIENTATION OF THE BUILDINGS.
- 6. ALL WATER PIPING (HOT AND COLD) IN EXTERIOR WALLS SHALL BE INSULATED PER THE SPECIFICATIONS AND INSTALLED ON THE WARM SIDE OF THE WALL TO PREVENT FREEZING. ALL HOT WATER PIPING SHALL BE INSULATED.
- 7. SANITARY WASTE AND VENT PIPING AND FITTING SHALL BE PVC SCHEDULE 40. ALL JOINTS SHALL BE PRIMED PRIOR TO SOLVENT CEMENT BEING APPLIED. SEE SPECIFICATION SECTION 15411 FOR ADDITIONAL REQUIREMENTS..
- 8. WATER DISTRIBUTION PIPING SHALL BE EITHER COPPER TUBING AND FITTING WITH SOLDER JOINT OR PEX PIPING WITH METAL TYPE WITH CRIMP RING. SEE SPECIFICATION SECTION 221116 FOR ADDITIONAL REQUIREMENTS..

	ELECTRIC WATER HEATER SCHEDULE														
EQUIPMENT	MANUFACTURER	SERVICE			LEAVING WATER	RECOVERY RATE	STORAGE CAPACITY	TANK DI	MENSIONS	E	ELECTRIC	REMARKS			
NO.	AND MODEL NO.		FACTOR	TEMP	TEMP	(GPH)	(GAL)	HEIGHT	TILIOTTI   DIAWLILK		ELEMENTS VOLTS/PH/I				
				(°F)	(°F)			(INCHES)	(INCHES)	KW	QNTY				
EWH-1	AO SMITH MODEL ENT-40	DOMESTIC HOT WATER	0.95	55°	110°	30	38	32	24	4.5	1	240/1/60	TALL UNIT W/ TOP CONNECTIONS		
EWH-2	AO SMITH MODEL DRE-52-24	DOMESTIC HOT WATER	0.95	55°	120°	164	50	56	22	18.0	2	240/1/60	TOTAL HEATER KW: 36		

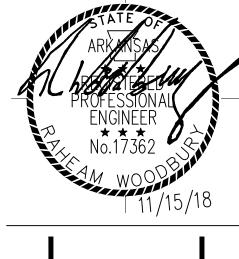


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	PLUMBING FIXTU	RE	CON	NEC	CTIO	N SCHEDULE
EQUIPMEN NO.	DESCRIPTION	HOT WATER	COLD WATER	WASTE	VENT	REMARKS
WC-1	WATER CLOSET		1/2"	4"	3"	FLOOR MOUNTED, TANK TYPE, 1.28 GPF MANSFIELD ALTO ROUND FRONT BOWL W/ CENTOCO 700 ROUND SEAT WITH METAL HINGES
WC-2	WATER CLOSET, ADA COMPLIANT		1/2"	4"	3"	FLOOR MOUNTED, TANK TYPE, 1.28 GPF MANSFIELD ALTO SMARTHEIGHT ROUND FRONT BOWL W/ CENTOCO 700 ROUND SEAT WITH METAL HINGES
LV-1	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	COUNTER TOP MOUNTED. BRIGGS ALTIMA ROUND, 19" W/ 4" CENTERS, AND OVERFLOW. PEERLESS P136LF SERIES FAUCET, 1.5 GPM FLOW, WITHOUT POP-UP DRAIN, AND ADA LEVER HANDLES. MCGUIRE 170 STOPS AND 8902 P-TRAP. FLEXIBLE S.S. BRAID SUPPLY LINES.
LV-2	LAVATORY ADA COMPLIANT	1/2"	1/2"	1-1/2"	1-1/2"	
LV-3	LAVATORY	1/2"	1/2"	1-1/2"	1-1/2"	WALL MOUNTED. BRIGGS MILTON 6620 W/ 4" CENTERS, OVERFLOW AND CONCEAL ARM CARRIER. PEERLESS P136LF SERIES FAUCET, 1.5 GPM FLOW, WITHOUT POP-UP DRAIN, AND ADA LEVER HANDLES. MCGUIRE 170 STOPS AND 8902 P-TRAP. ZURN Z-1231 CARRIER. FLEXIBLE S.S. BRAID SUPPLY LINES.
TS-1	BATHTUB WITH SHOWER AND WALL SURROUND	1/2"	1/2"	1-1/2"	1-1/2"	STERLING 71370110 TUB UNIT, 60"x30"x72", SMOOTH FINISH, GRAB BAR, AND ROD. PEERLESS PTT188750 TUB/SHOWER CONTROL VALVE WITH DELTA PRESSURE BALANCE MIX VALVE, BLADE HANDLE, SPOUT, AND SHOWER HEAD. 1.5 GPM SHOWER HEAD MAXIMUM.
TS-2	BATHTUB WITH SHOWER AND WALL SURROUND ADA COMPLIANT	1/2"	1/2"	1-1/2"	1-1/2"	STERLING 71370110 TUB UNIT, 60"x30"x72", SMOOTH FINISH, GRAB BAR, SEAT AND ROD. PEERLESS PTT188750 TUB/SHOWER CONTROL VALVE WITH DELTA PRESSURE BALANCE MIX VALVE, BLADE HANDLE, SPOUT, HAND HELD SHOWER HEAD W/ 24" SLIDE BAR. 1.5 GPM SHOWER HEAD MAXIMUM.
SH-1	ROLL—IN SHOWER AND WALL SURROUND ADA COMPLIANT	1/2"	1/2"	1-1/2"	1-1/2"	STERLING 62070125 ADA SHOWER UNIT, 63-1/4"x39-3/8"x72", SMOOTH FINISI GRAB BARS, SEAT AND ROD. PEERLESS PTT188750 TUB/SHOWER CONTROL VALVE W/ DELTA PRESSURE BALANCE MIX VALVE, BLADE HANDLE, SPOUT, HAND HELD SHOWER HEAD W/ 24" SLIDE BAR. 1.5 GPM SHOWER HEAD MAXIMUM.
SK-1	TWO COMPARTMENT SINK	1/2"	1/2"	1_1 /2"	1-1/2"	DAYTON 023317 TYPE 304, 22 GAUGE STAINLESS STEEL SINK, 6"
SN−1	COORDINATE GARBAGE DISPOSAL AND DRAIN LOCATIONS.	1/2	1/2	1-1/2	1-1/2	DEEP COMPARTMENTS W/ 4 PUNCH FOR DISHWASHER AIR GAP. PEERLESS P115LF W/ LEVER HANDLE & SPRAY. LK-99 TAILPIECE W/ CONTINUOUS WASTE & P-TRAP. JONES STEPHENS AIR GAP UNIT. FLEXIBLE STAINLESS STEEL BRAID SUPPLY LINES.
SK-2	TWO COMPARTMENT SINK ADA COMPLIANT COORDINATE GARBAGE DISPOSAL AND DRAIN LOCATIONS AT ADA UNITS.	1/2"	1/2"	1-1/2"	1-1/2"	DAYTON GE23321 TYPE 304, 22 GAUGE STAINLESS STEEL SINK, REAR CENTER DRAIN, 5" DEEP COMPARTMENTS W/ 4 PUNCH FOR DISHWASHER AIR GAP. PEERLESS P115LF W/ LEVER HANDLE & SPRAY. LK-99 TAILPIECE W/ CONTINUOUS WASTE & P-TRAP. JONES STEPHENS AIR GAP UNIT. FLEXIBLE STAINLESS STEEL BRAID SUPPLY LINES.
IMVB-1	ICE MAKER VALVE BOX		1/2"			OATEY 12K W/ QUARTER TURN VALVE AND WATER HAMMER ARRESTER
WMVB-1	WASHING MACHINE VALVE BOX	1/2"	1/2"	2"	2"	OATEY 38943, POLYSTYRENE BOX, WITH QUARTER TURN VALVES AND WATER HAMMER ARRESTERS.
DWVB-1	DISHWASHER VALVE BOX	1/2"				OATEY 38202, POLYSTYRENE BOX, WITH SINGLE LEVER VALVE AND WATER HAMMER ARRESTER
ACDB-1	CONDENSATE DRAIN BOX	_	_	2"	2"	GUY GRAY OR APPROVED EQUAL. PROVIDE TRAP GUARD.
WH-1	WALL HYDRANT		1/2"			ZURN Z1320-C, NON-FREEZING WITH LOCKING BOX AND VACUUM BREAKER.
EWC-1	ELECTRIC WATER COOLER- ADA COMPLIANT		1/2"	2"	2"	BI-LEVEL. ELKAY EZTLR8LC W/ PUSH BAR AT FRONT, 8.0 GPH, SAFETY BUBBLER GUARD AND WALL CARRIER. 120/1/60; 370 WATTS; FLA - 4.0. PROVIDE P-TRAP W/ CLEANOUT, ANGLE STOP, AND SUPPLY LINE.
LS-1	LAUNDRY TUB/SINK		1/2"	2"	2"	FIAT TAT1 LAUNDRY TUB W/ FAUCET (4" CENTERSET, BLADE HANDLES, SWING SPOUT, AERATOR AND HOSE ADAPTOR) AND DRAIN/SUPPLY KIT.

PLUMBING SPECIALITY SCHEDULE														
MARK NO.	FIXTURE TYPE	MANUFACTURER'S MODEL NO.	MOUNT	MOUNT HEIGHT	WASTE SIZE	VENT SIZE	C.W. SIZE	H.W. SIZE	MIXED WATER SIZE	NOTES				
FD-1	FLOOR DRAIN	JAY R. SMITH MODEL 2005 OR APPROVED EQUAL	FLOOR	_	4"	2"	1/2"	_	_	6" DIA. NICKEL BRONZE TYPE "B" ADJUSTABLE TOP 1/2" TRAP PRIMER CONNECTION				
HD-1	HUB DRAIN	3"x4" SCHEDULE 40 REDUCER AT 3" PVC PIPING	FLOOR	_	3"	2"	_	-	_	SCHEDULE 40 PVC PIPING AND FITTINGS				
C.O.	FLOOR CLEANOUT	JAY R. SMITH MODEL 4100 SERIES OR APPROVED EQUAL	FLOOR	_	4"	_	_	-	_	COORDINATE TYPE WITH FLOOR FINISH MATERIAL				
W.C.O.	WALL CLEANOUT	JAY R. SMITH MODEL 4400 OR APPROVED EQUAL	WALL	_	4"	2"	_	_	_	7" DIA. STAINLESS STEEL COVER				
BFP-1	BACKFLOW PREVENTER	ZURN MODEL 350XL, DUAL CHECK VALVE TYPE	-	_	-	_	2"	I	_	55 GPM FLOW W/ 6 PSI PRESSURE DROP PROVIDE W/ LEAD-FREE STRAINER				
BFP-2	BACKFLOW PREVENTER	ZURN MODEL 350XL, DUAL CHECK VALVE TYPE	-	_	ı	_	1-1/4"	I	_	29 GPM FLOW W/ 5 PSI PRESSURE DROP PROVIDE W/ LEAD-FREE STRAINER				
BFP-3	BACKFLOW PREVENTER	ZURN MODEL 350DA, DUAL CHECK VALVE TYPE	-	_	ı	_	2-1/2"	ı	_	105 GPM FLOW W/ 9 PSI PRESSURE DROP PROVIDE W/ LEAD-FREE STRAINER				
PRV-1	PRESSURE REDUCING VALVE	ZURN MODEL 500XL	-	_	-	_	2"	ı	_	55 GPM FLOW W/ 7 PSI PRESSURE DROP SET LEAVING PRESSURE TO 60 PSI				
PRV-2	PRESSURE REDUCING VALVE	ZURN MODEL 500XL	-	_	_	_	1-1/4"	_	_	29 GPM FLOW W/ 6 PSI PRESSURE DROP SET LEAVING PRESSURE TO 50 PSI				
PRV-3	PRESSURE REDUCING VALVE	ZURN MODEL 500XL	-	_	_	_	2-1/2"	_	_	105 GPM FLOW W/ 7 PSI PRESSURE DROP SET LEAVING PRESSURE TO 60 PSI				
LI-1	LINT INTERCEPTORS	ZURN Z1185 SIZE 7 OR APPROVED EQUAL	FLOOR	_	3"	2"	_	-	_	PROVIDE W/ VENT CONNECTION & ACCESS TOP EXTENSION AS REQUIRED				
TP-1	TRAP PRIMER	PPP MODEL OR APPROVED EQUAL	SEE DETAIL	_	_	_	1/2"	-	_	TRAP PRIMER TO BE POLISHED BRONZE.				

EQUALS BY J.R. SMITH OR ZURN WILL BE ACCEPTED





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PROJECT NUMBER

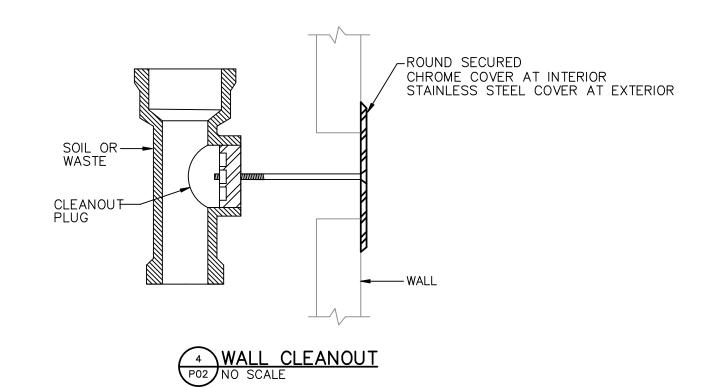
FOT

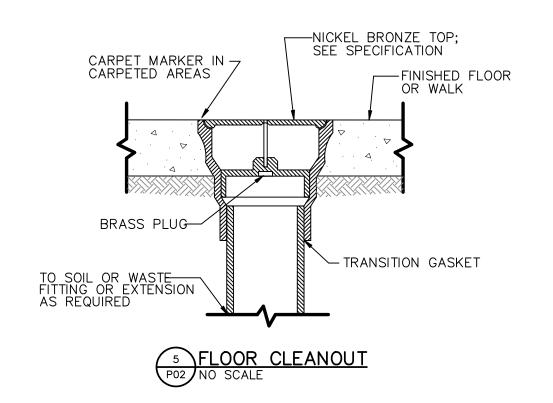
The Park At Barton

900 E Barton Ave. West Memphis, AR 72301

SHEET NUMBER

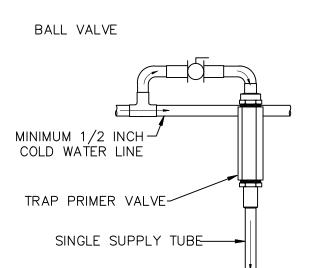
P01





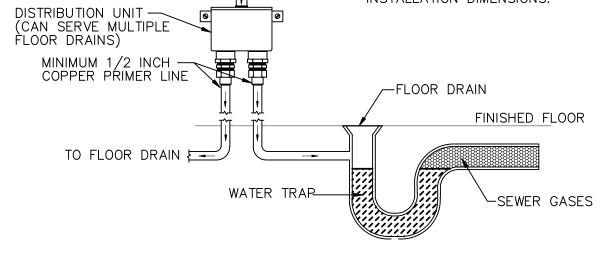


PROJECT NUMBER: 18E-02-06400

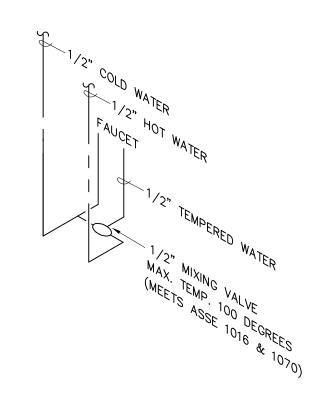


- NOTES:

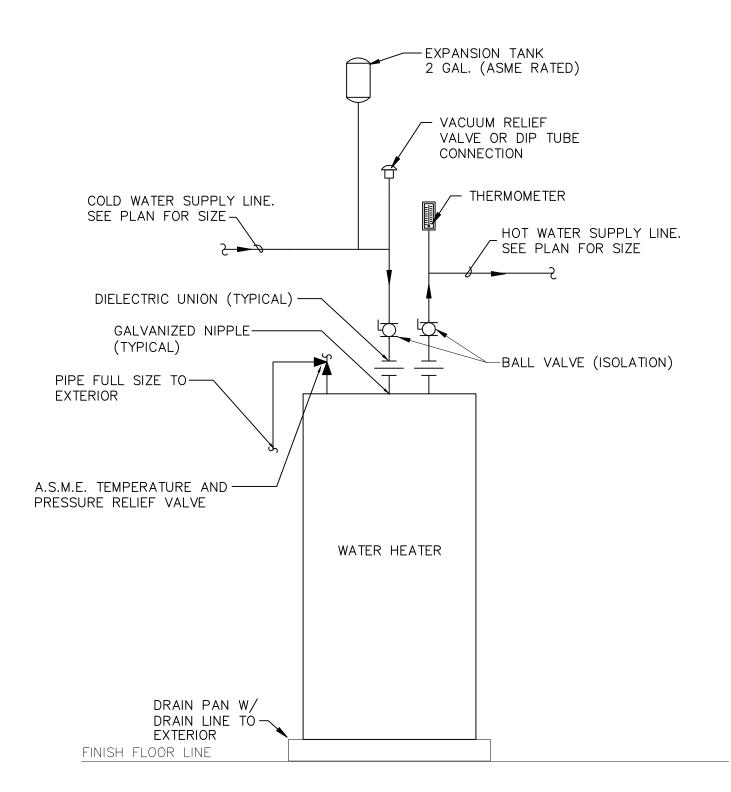
  1. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- 2. INSTALL IN A MANNER WHICH PROVIDES
  EASY ACCESS FOR CLEANING.
  3. SPACE PRIMERS AT A MINIMUM OF 40 FEET
  APART ON COMMON SUPPLY LINE.
- 4. PRIMER VALVE SHALL BE MOUNTED ONE
- FOOT ABOVE THE FINISHED FLOOR FOR EVERY TWENTY FEET OF PRIMER LINE. SEE MANUFACTURER'S CUT SHEETS FOR INSTALLATION DIMENSIONS.



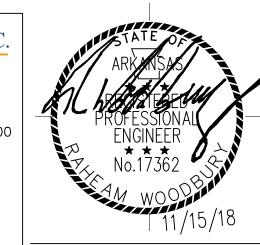
# TRAP PRIMER W/DISTRIBUTION UNIT



# TYPICAL LAVATORY MIXING VALVE (COMMUNITY CENTER) SCALE: NONE



WATER HEATER (FLOOR MOUNTED)
NO SCALE





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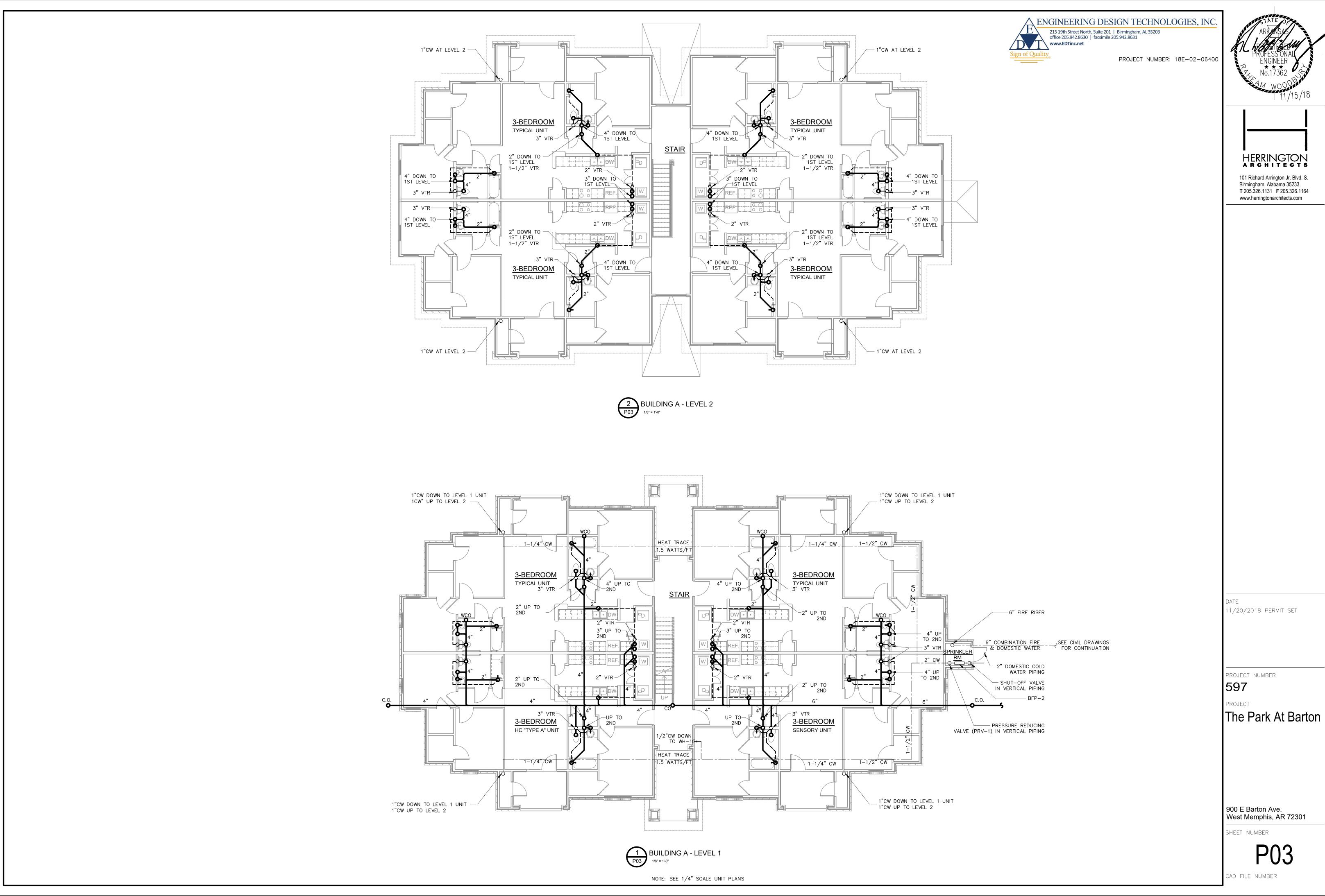
597

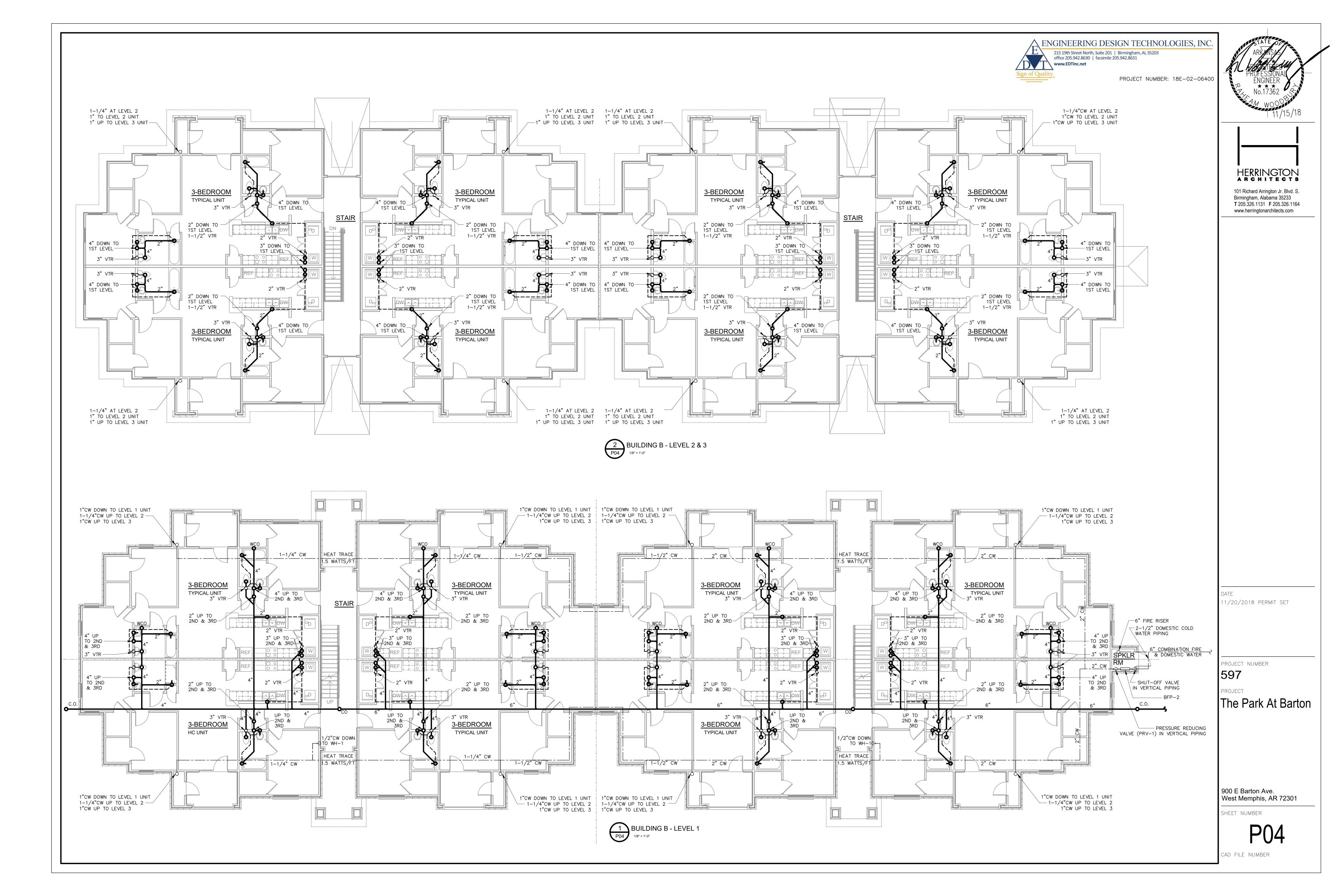
PROJECT

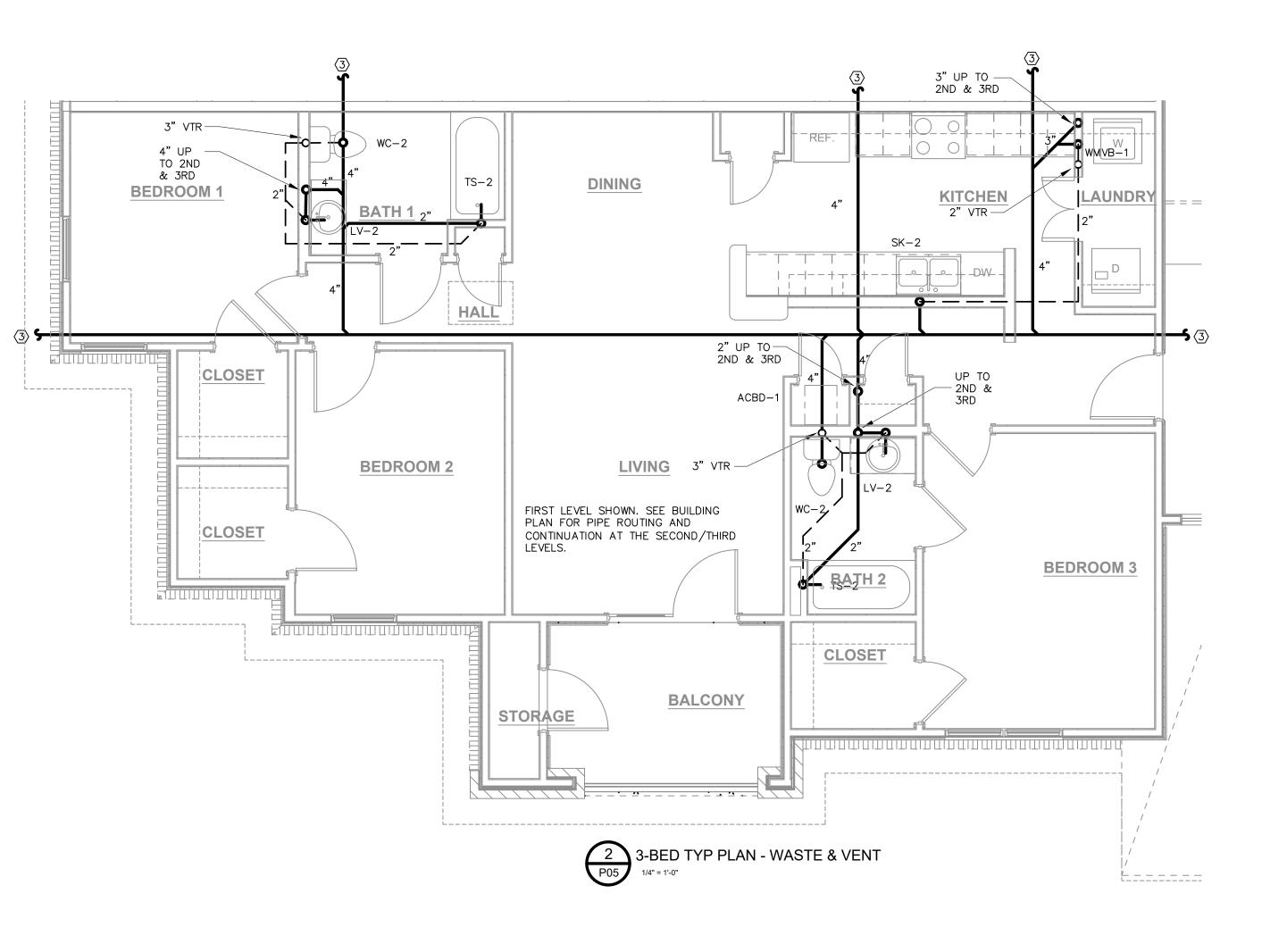
The Park At Barton

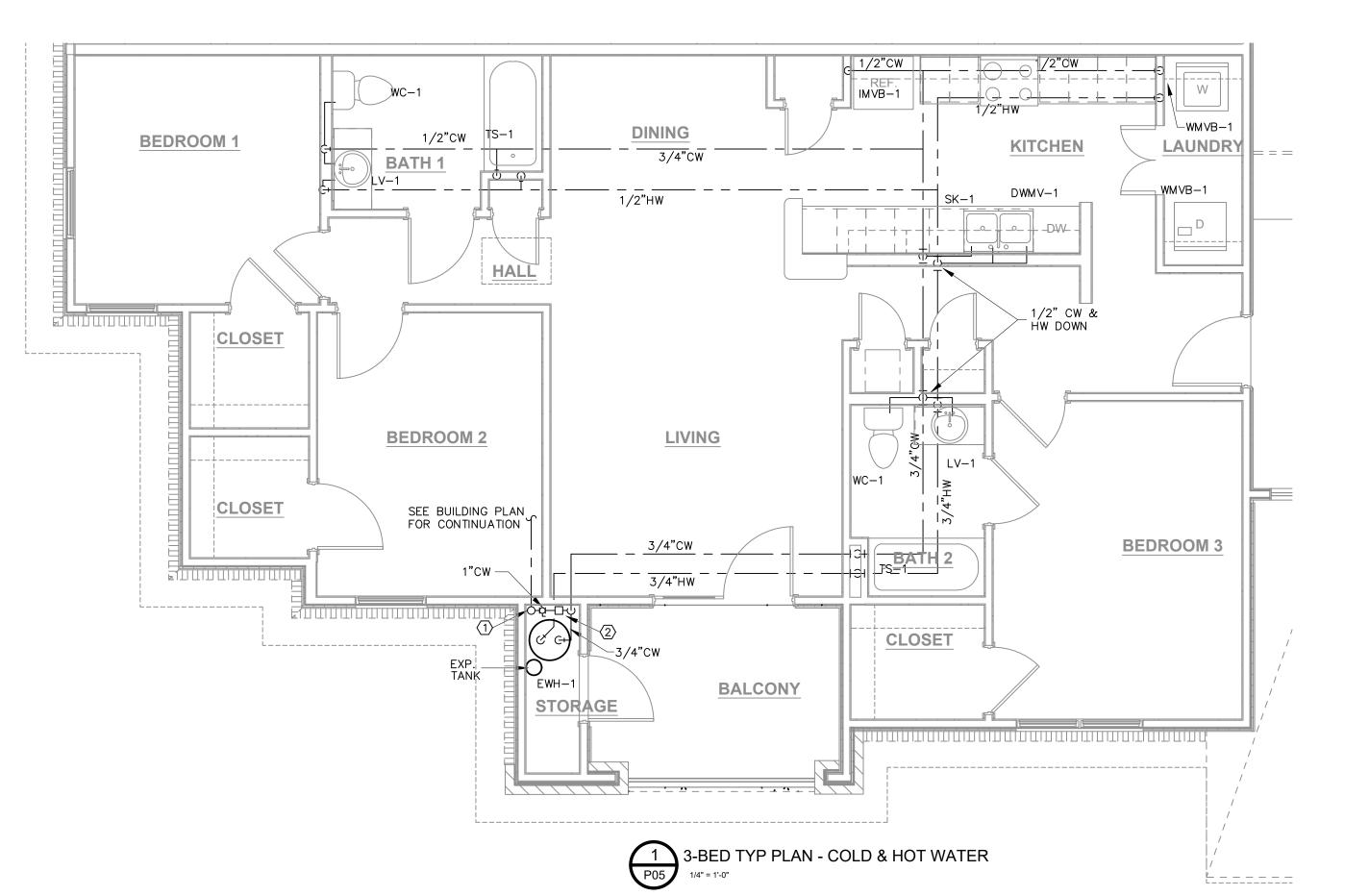
900 E Barton Ave. West Memphis, AR 72301

SHEET NUMBER











1. ROUTE DOMESTIC WATER PIPING WITHIN THE CEILING/FLOOR ASSEMBLY OR ATTIC WITHIN THE

(1) COLD WATER PIPING UP TO SECOND AND THIRD FLOOR AT BUILDING A; UP TO SECOND FLOOR AT BUILDING B.

2 SHUT-OFF VALVE AND SUB-METER AT UNIT. MOUNT ABOVE THE WATER HEATER FOR ACCESS/MAINTENANCE.

INSULATED ENVELOPE OF THE BUILDING.

**GENERAL NOTES:** 

DRAWING KEYNOTES:

3" UP TO 2ND & 3RD ↑

SK-2

3-BED TYP PLAN - - WASTE & VENT

NOT TO SCALE

UP TO 3"VTR 4" UP TO 2ND & 3RD

2ND & 3RD

WC-2

∫● TS-2

PROJECT NUMBER: 18E-02-06400

PROFESSIONAL ENGINEER

No.17362

HERRINGTON ARCHITECTS

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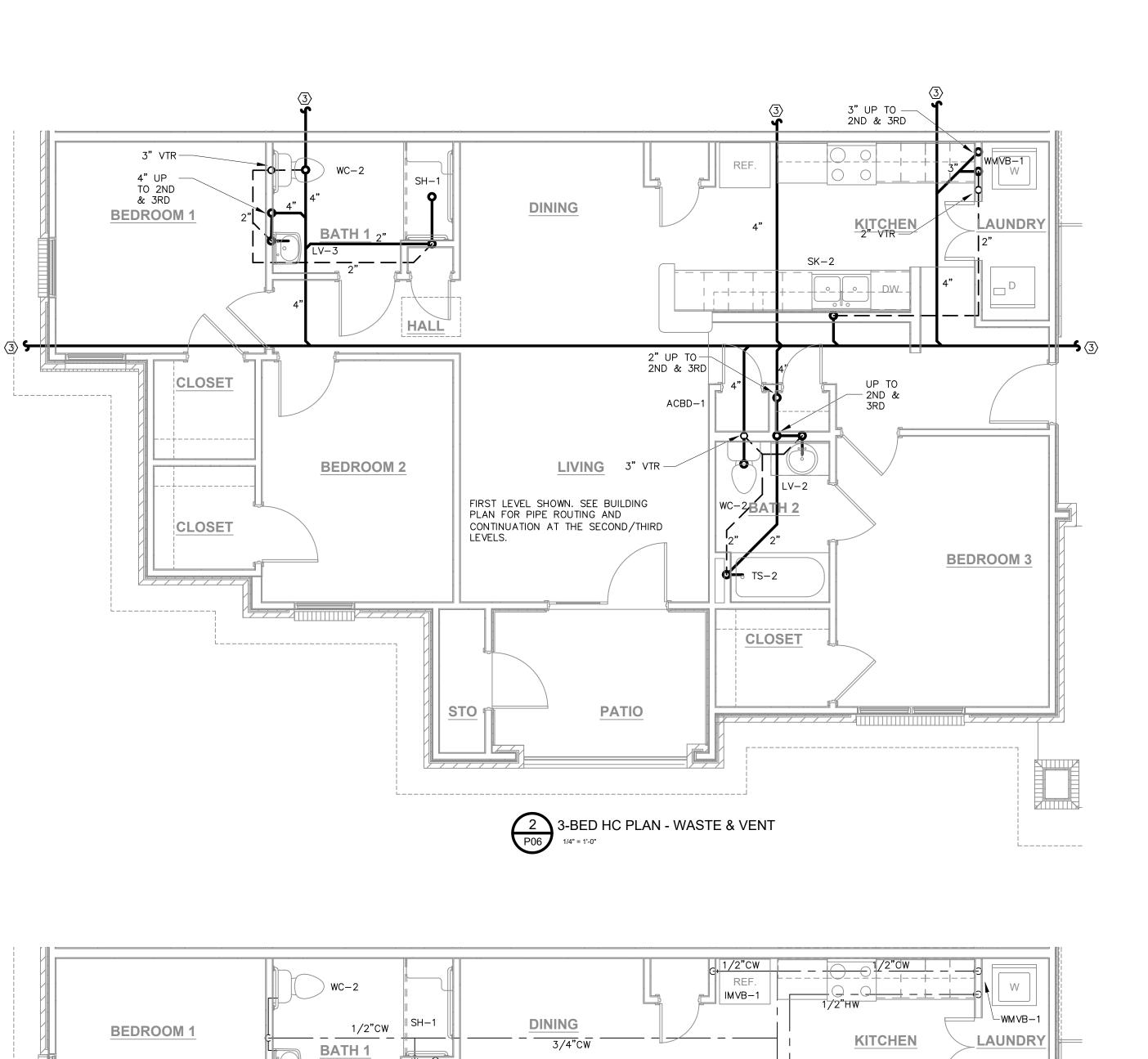
PROJECT NUMBER 597

PROJECT

The Park At Barton

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SHEET NUMBER



1/2"HW

**LIVING** 

**PATIO** 

1 3-BED HC PLAN - COLD & HOT WATER
1/4" = 1'-0"

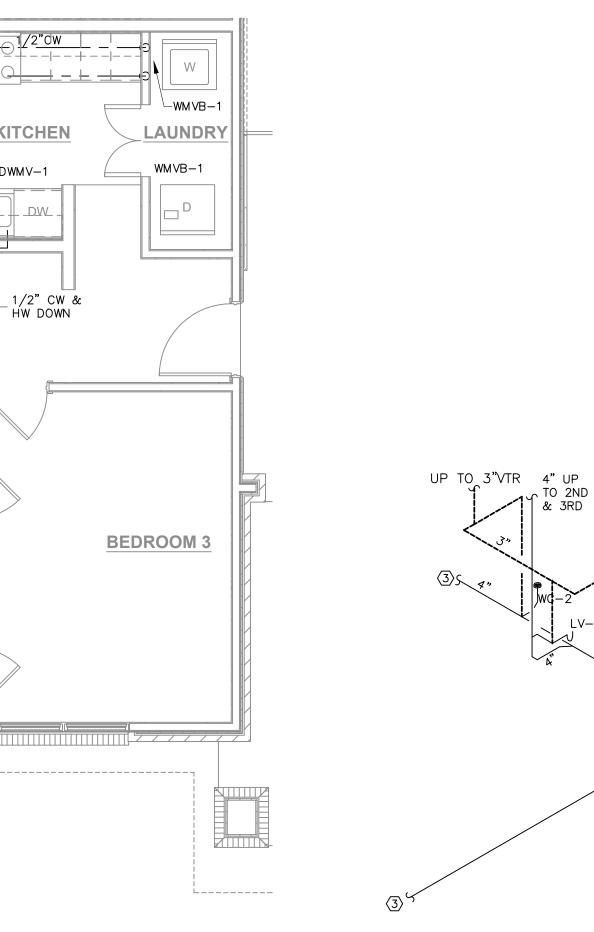
WC-2 BATH ≥

CLOSET

BEDROOM 2

SEE BUILDING PLAN FOR CONTINUATION

CLOSET





PROJECT NUMBER: 18E-02-06400

#### GENERAL NOTES:

1. ROUTE DOMESTIC WATER PIPING WITHIN THE CEILING/FLOOR ASSEMBLY OR ATTIC WITHIN THE INSULATED ENVELOPE OF THE BUILDING.

#### DRAWING KEYNOTES:

- (1) COLD WATER PIPING UP TO SECOND AND THIRD FLOOR AT BUILDING A; UP TO SECOND FLOOR AT BUILDING B.
- ② SHUT-OFF VALVE AND SUB-METER AT UNIT. MOUNT ABOVE THE WATER HEATER FOR ACCESS/MAINTENANCE.

3" UP TO 2" VTR 2ND & 3RD \( \)

SK-2

2" UP TO \_\_\_\_\_\_ 2ND & 3RD

3-BED HC PLAN - WASTE & VENT

NOT TO SCALE

UP TO — 3" VTR



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|597

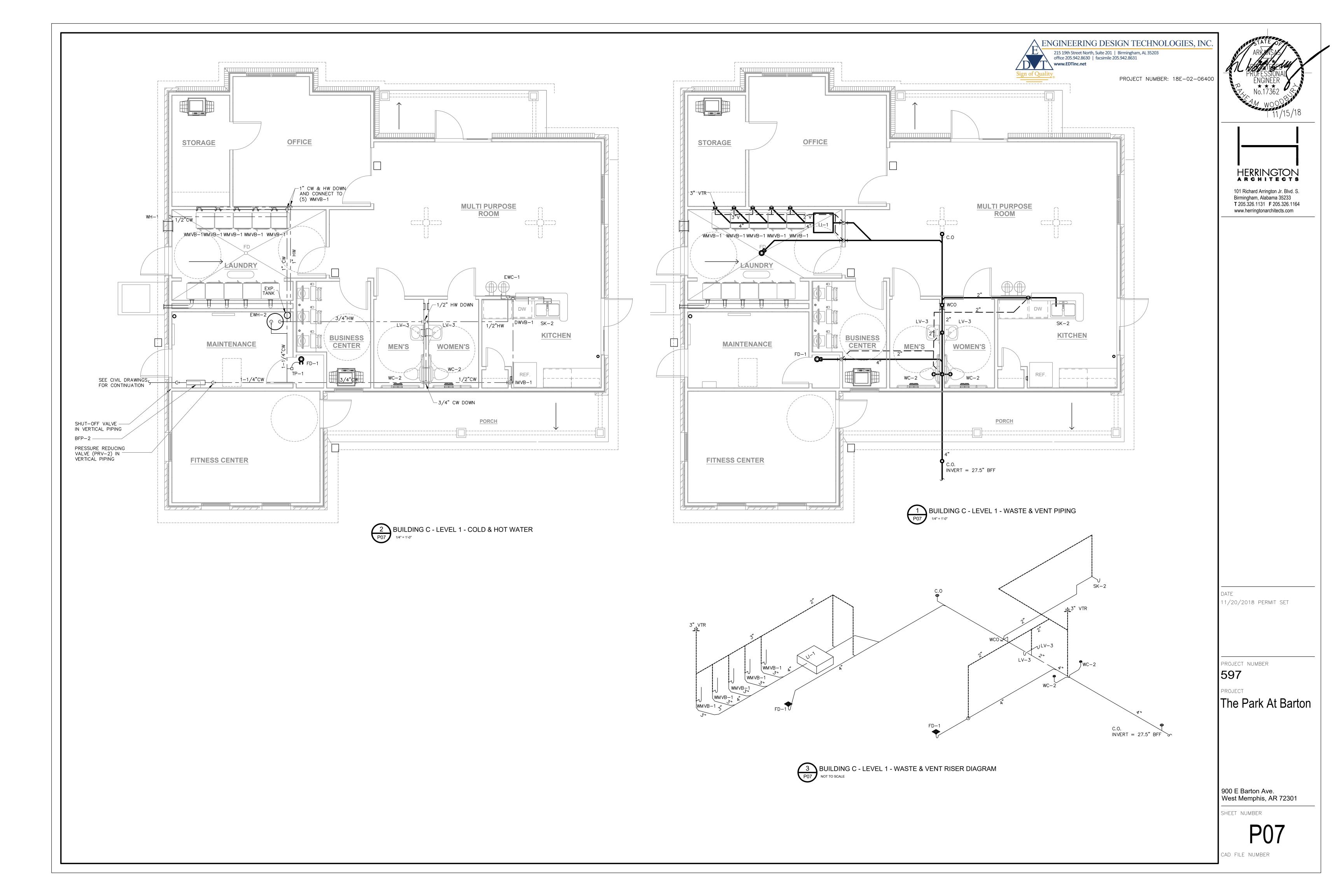
∫ TS-2

The Park At Barton

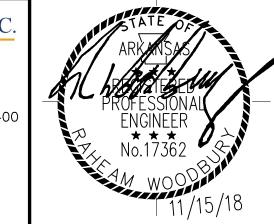
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SHEET NUMBER

P06



PROJECT NUMBER: 18E-02-06400





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3. SEE CIVIL DRAWINGS FOR LOCATION AND PIPING ARRANGEMENT OF FDC AND BACKFLOW PREVENTER. FIRE PROTECTION CONTRACTOR SHALL COORDINATE EXACT LOCATION PRIOR TO INSTALLATION. 4. ALL BRANCH LINES SHALL BE RUN IN JOIST SPACE WHERE POSSIBLE.

COORDINATE WITH ARCHITECTURAL. STRUCTURAL, MECHANICAL, PLUMBING AND

2. ROUTE WET SYSTEM MAIN PIPING OUTSIDE ELECTRICAL AND TELECOM ROOMS.

SPRINKLERS IN ELECTRICAL AND TELECOM ROOMS SHALL BE SUPPLIED BY PIPING

THAT TERMINATES IN THE ROOM AND DOES NOT PASS DIRECTLY OVER ELECTRICAL

FOR THE APARTMENT BUILDINGS AND SPECIFICATION REQUIREMENTS.

ELECTRICAL DRAWINGS. 5. WET SYSTEM PIPING SHALL BE INSTALLED WITHIN THE HEATED ENVELOPE OF THE BUILDING EXCEPT AT APARTMENT BUILDING BREEZEWAY CROSSING - THE WET SYSTEM

PIPING SHALL BE HEAT TRACED FOR FREEZE PROTECTION. 6. FIRE STOP AND SEAL ALL PENETRATIONS IN RATED WALLS IN ACCORDANCE WITH SPECIFICATIONS.

7. ALL MATERIALS, WORKMANSHIP AND TESTING SHALL MEET THE REQUIREMENTS OF APPLICABLE STATE/LOCAL CODES.

8. PROVIDE DRY-SIDEWALL/DRY-PENDENT SPRINKLERS FOR PROTECTION OF EXTERIOR BALCONIES AND GROUND FLOOR PATIOS WHERE REQUIRED BY 2018 IBC.

#### FIRE PROTECTION LEGEND

- —FP— FIRE PROTECTION PIPING

SPRINKLER NOTES:

PANELS (TYPICAL FOR ALL).

- ✓ INSPECTOR'S TEST VALVE
- VALVE WITH TAMPER SWITCH
- PENDENT SPRINKLER HEAD

- O UPRIGHT SPRINKLER HEAD

# OCCUPNCY GUIDELINES

LIGHT HAZARD: ADMINSTRATION AREAS SEMINAR ROOMS

LOBBIES WAITING AREAS

LABORATORIES RESTROOMS CORRIDORS

STAIRWAYS ORDINARY HAZARD GROUP 1

STORAGE ROOM - EQUAL OR LESS THAN 100 SF ELECTRICAL ROOMS

TELEPHONE AND DATA ROOMS

ORDINARY HAZARD GROUP 2 ELECTRICAL SWITCH GEAR AND TRANSFORMER ROOMS

ELEVATOR EQUIPMENT ROOMS

STORAGE ROOM OVER 100 SF CENTRAL MECHANICAL EQUIPMENT ROOMS

# FIRESTOP NOTES:

1. PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS FOR PIPING AND CONDUIT PENETRATIONS THROUGH FIRE-RESISTANCE-RATED ASSEMBLIES:

A. FLOORS

B. ROOFS C. WALLS AND PARTITIONS

2. FIRESTOP SYSTEMS PROVIDED SHALL RESIST SPREAD OF FIRE, RESIST PASSAGE OF SMOKE AND OTHER GASES, AND MAINTAIN ORIGINAL FIRE-RESISTANCE RATING OF ASSEMBLY PENETRATED. WHERE RATING OF EXISTING BUILDING COMPONENT PENETRATED IS NOT KNOWN CONTACT ARCHITECT FOR DETERMINATION.

3. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF SMOKE WALLS WHERE PROVIDED.

STRUCTURE SPRINKLER. SEE SPECIFICATIONS. RECESSED —— ESCUTCHEON - REDUCER CEILING -1 INCH TEE (1/2 INCH TEES NOT ALLOWED) COVER PLATE --SPRINKLER BRANCH LINE 2 UPRIGHT SPRINKLER HEAD FP01 NO SCALE ESCUTCHEON —

TO SPRINKLER

PRESSURE GAUGE (TYP.) —

ALARM CHECK VALVE ASSEMBLY — (

STEEL RISER -

THRUST -

BLOCK (PER

NFPA 24)

TAMPER SWITCH

SYSTEM

ALARM FLOW SWITCH

TO FIRE ALARM SEE ELECTRICAL

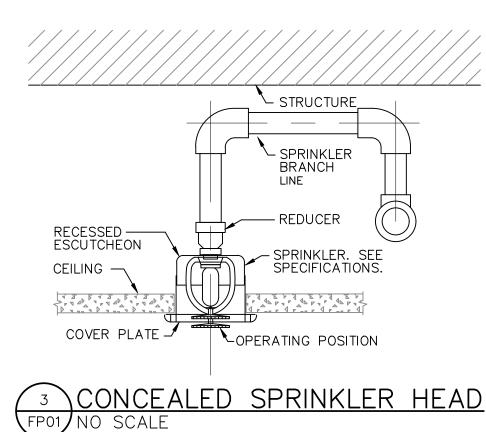
INDICATING CONTROL VALVE WITH -

STEEL FLANGE -

TIE BOLTS & 3/4" A.T. ROD TO

FLANGE AND UNIFLANGE ABOVE

UNIFLANGE



WATER MOTOR GONG DRAIN TO

- RETARDING CHAMBER

2" DRAIN & TEST TO OUTSIDE

BLOCK

GRADE ELEVATION

PROVIDE CONCRETE SPLASH

36" MINIMUM COVER

M.J. SLEEVE W/ RETAINER

J. 90° ELBOW

GLANDS AND 3/4" ROD TO M.

TO VAULT W/ BACK

CONNECTIONS - SEE

CIVIL DRAWINGS

— PIPE CLAMP W/ 3/4"

A.T. ROD TO M.J. SLEEVE

FLOW PREVENTER AND FIRE DEPARTMENTS

OUTSIDE

5'-0"

EXTERIOR WALL

CONC. FOOTING

FIRE PROTECTION ENTRANCE DETAIL VALVE

- M.J. 90° ELBOW W/ RETAINER

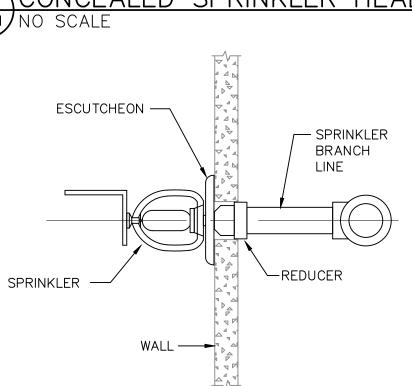
TESTING (TYPICAL).

GLANDS

SHALL BE RESPONSIBLE FOR FINAL

CONTRACTOR INSTALLING INTERIOR PIPING

CONNECTION, FLUSHING AND HYDROSTATIC





# **GENERAL NOTES:**

- 1) FIRE PROTECTION LAYOUTS SHOWN ON PLANS ARE FOR INFOR-MATIONAL PURPOSES ONLY. IT IS THE INTENT OF THESE DRAWINGS TO INDICATE AREAS OF COVERAGE, TYPES OF SPRINKLER HEADS AND FINISHES TO BE USED, TYPES OF FIRE PROTECTION SYSTEMS TO BE INSTALLED AND LOCATIONS OF MAJOR EQUIPMENT AND COMPONENTS. THE FIRE PROTECTION CONTRACTOR SHALL DESIGN A FULL AND COMPLETE FIRE PROTECTION SYSTEM BASED ON HYDRAULIC INFORMATION, LAYOUT OF PIPING SYSTEM AS COORDINATED WITH OTHER TRADES AND SPECIFIC COMPONENTS USED IN FIRE PROTECTION SYSTEM. ALL DESIGNS SHALL BE PER NFPA-13R.
- (2) PIPING LAYOUT SHOWN IS DIAGRAMMATIC AND NOT INTENDED TO SHOW ALL OFFSETS AND CHANGES IN ELEVATION NECESSARY FOR COMPLETE INSTALLATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING BID.
- (3) CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
- (4) REFER TO ARCHITECT'S REFLECTED CEILING PLAN FOR LOCATION OF LIGHTS, DIFFUSERS, GRILLES AND ALL OTHER CEILING MOUNTED DEVICES. COORDINATE WITH THE REFLECTED CEILING PLAN TO DETERMINE ACTUAL LOCATION OF SPRINKLERS.
- (5) ALL NEW FIRE PROTECTION PIPING SHALL BE INSTALLED AS CLOSE TO STRUCTURE ABOVE AS POSSIBLE.
- (6) ALL UNUSED FIRE PROTECTION PIPING, WHETHER NEW OR EXISTING, SHALL BE REMOVED. ALL SPRINKLER HEADS INSTALLED UNDER THIS CONTRACT SHALL BE NEW.
- 7) SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, PLUMBING, STRUCTURE, AND ARCHITECTURAL TRADÉS IS CRITICAL TO COMPLETE INSTALLATION.
- 8) COORDINATION SHOP DRAWINGS SHALL BE PREPARED FOR THE ENTIRE PROJECT DRAWN TO 1/4" = 1'-0" SCALE (MINIMUM). DRAWINGS SHALL BE FULLY DIMENSIONED, INCLUDING ELE-VATIONS OF DUCTWORK, PIPING, MAJOR HANGER SUPPORTS PNEUMATIC TUBING AND MAJOR ELECTRICAL CONDUIT (2" AND LARGER.) CEILING COORDINATION PLANS SHALL ALSO SHOW CEILING GRID, LIGHTING LAYOUT, SPRINKLER LAYOUT AND MECHANICAL GRILLES.
- (9) GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION VERIFICATION AND SUBMITTAL OF SHOP DRAWINGS TO OWNER,
- (10) SYSTEM DESIGN AND INSTALLATION SHALL COMPLY WITH NFPA 72.
- (11) where referenced system shall comply with NFPA 70.
- 12) ALL SPRINKLERS WITHIN THE SCOPE OF THIS PROJECT SHALL BE QUICK RESPONSE TYPE. SPRINKLER HEADS USED SHALL COMPLY WITH REQUIREMENTS OF NFPA-13R (APARTMENT BUILDINGS)
- 13) CONTRACTOR SHALL PROVIDE TEST AND DRAIN CONNECTION IN ACCORDANCE WITH NFPA-13R. DRAIN SHALL DISCHARGE TO A LOCATION CAPABLE OF ACCEPTING FULL FLOW UNDER NORMAL SYSTEM PRESSURE WITHOUT CAUSING WATER DAMAGE.

#### CONTRACTOR SHALL PROVIDE FIELD CONDUCTED FLOW TEST FOR THE SYSTEM DESIGN:

OCATION:	
TATIC PRESSURE:	_
ESIDUAL PRESSURE:	
_OWING:	G.P.M.
ATE OF TEST:	
ME OF DAY:	

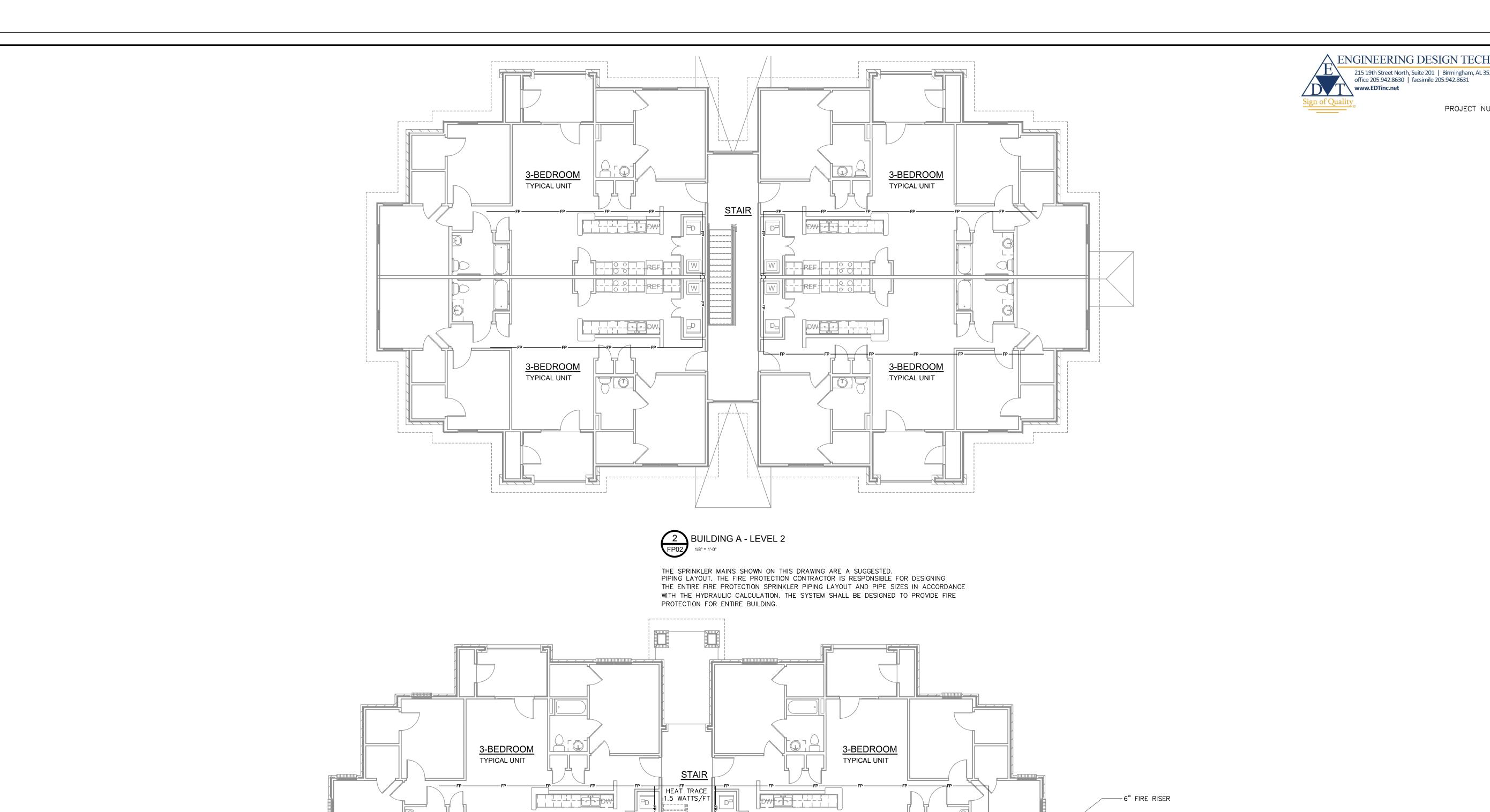
11/20/2018 PERMIT SET

PROJECT NUMBER

The Park At Barton

900 E Barton Ave. West Memphis, AR 72301

SHEET NUMBER



A ENGINEERING DESIGN TECHNOLOGIES, INC 215 19th Street North, Suite 201 | Birmingham, AL 35203 office 205.942.8630 | facsimile 205.942.8631

6" COMBINATION FIRE SEE CIVIL DRAWINGS FOR CONTINUATION

2" DOMESTIC COLD WATER PIPING

PROJECT NUMBER: 18E-02-06400





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CAD FILE NUMBER

THE SPRINKLER MAINS SHOWN ON THIS DRAWING ARE A SUGGESTED.
PIPING LAYOUT. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR DESIGNING THE ENTIRE FIRE PROTECTION SPRINKLER PIPING LAYOUT AND PIPE SIZES IN ACCORDANCE WITH THE HYDRAULIC CALCULATION. THE SYSTEM SHALL BE DESIGNED TO PROVIDE FIRE PROTECTION FOR ENTIRE BUILDING.

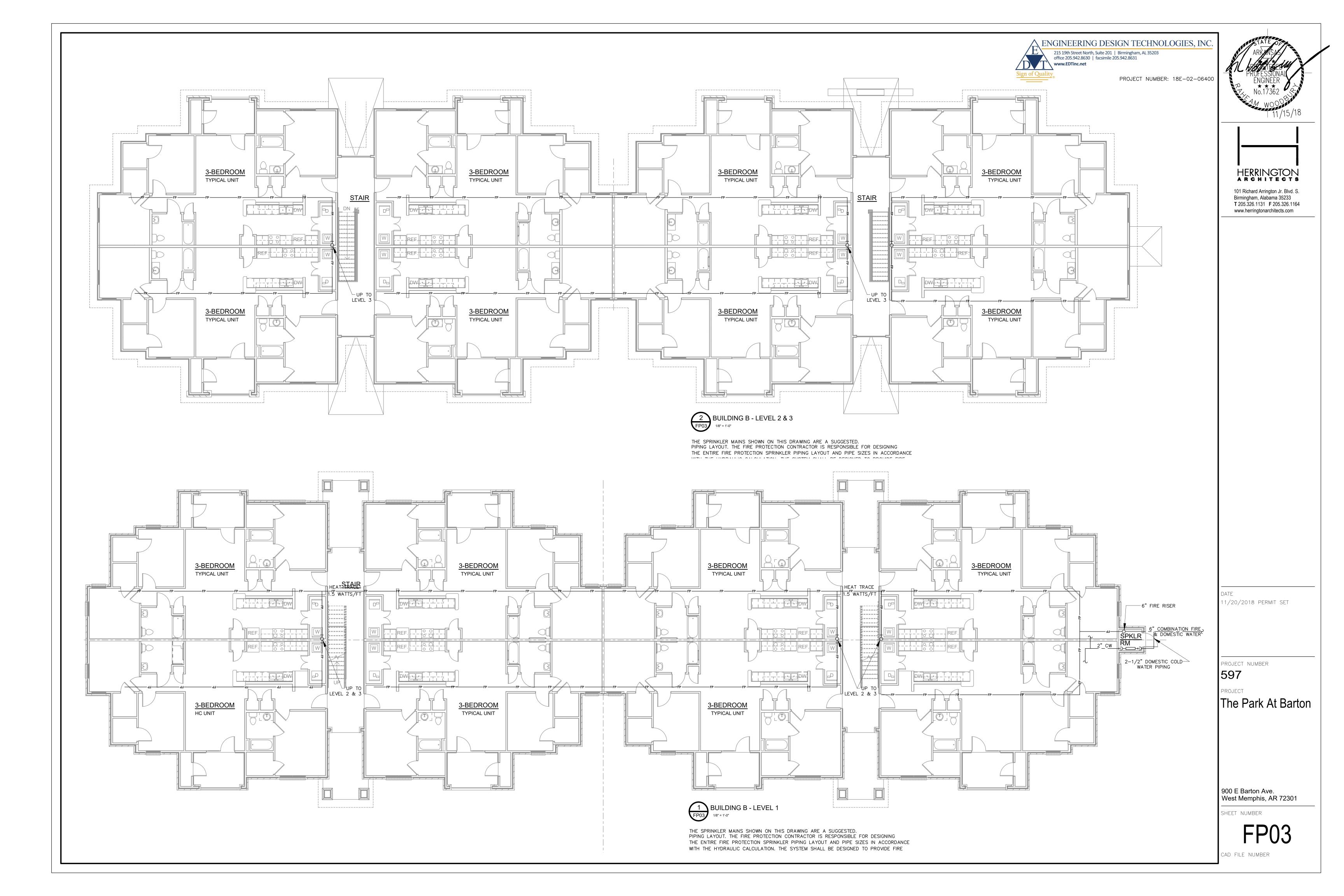
1 BUILDING A - LEVEL 1
1/8" = 1'-0"

3-BEDROOM

SENSORY UNIT

3-BEDROOM

HC "TYPE A" UNIT



#### **HVAC LEGEND**

DUCT RISE

DUCT TRANSITION

12×20

24x12

DUCT SIZE, FIRST FIGURE IS SIDE SHOWN

ROUND (GALVANIZED STEEL)

LOW PRESSURE, RECTANGULAR (GALVANIZED STEEL)

IND	OOR / OUTDOOR DES	SIGN CONDITIO	NS
OUTDOOR SUMMER	INDOOR SUMMER	OUTDOOR WINTER	INDOOR WINTER
94.0°F DB / 77.0°F WB	75°F DB / 63°F WB 50% TO 55% RELATIVE HUMIDITY	21.0°F DB / 19.5 °F WB	70°F DB / 59°F WB



PROJECT NUMBER: 18E-02-064

IC.	ARK MSAS
400	PROFESSIONAL ENGINEER No.17362
	10.17302 M WOOD 8

	I Herrington	
1	ARCHITECT	S

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	SPLI	T SYS	STEM	HEAT	PUMP UNI	ΓS										
HEATIN			HEATING @ 47°F		SUPP. ELECT.	MOTOR FLA	MCA	МОСР	WEIGHT	DESIGN	DEMARKS					
TERIN (°F)	ERING AIR LEAVING AIR  °F) WB (°F) DB (°F) WB (°F)		G AIR WB (°F)	CAPACITY MBH	ENTERING AIR DB (°F)	MIN. HSPF	HEAT, KW				(LBS)	BASIS	REMARKS			
75	63	56	57	57 27.0 70.0		9.0	7	2.8	42	45	95	RHEEM RHMV3617SEAC	123456			

(5) PROVIDE WITH MANUFACTURER'S "ENERGY STAR" COMPLIANT PROGRAMMABLE THERMOSTAT (COMFORTstat MODEL CP2810)

(6) COMPATIBLE WITH R-410A REFRIGERANT

	SPLIT SYSTEM HEAT PUMP UNITS																						
MADIZ	SERVING	NOMIN.	NOMIN.	O.A.	ESP	FAN	COOLING						HEATING @ 47°F			SUPP.	MOTOR FLA	MCA	МОСР	WEIGHT	DESIGN	DEMARKO	
MARK	AREA	CFM	TONAGE	CFM	IN. WG.	MOTOR HP	TOTAL CAP.				ING AIR	LEAVIN		CAPACITY	ENTERING AIR	MIN.	ELECT. HEAT, KW				(LBS)	BASIS	REMARKS
AHU-1	3 BEDROOM BLDG	1000	2.5	NATURAL	0.5	1/2	<b>MBH</b> 29.4	<b>MBH</b> 22.5	<b>SEER</b> 15.0	<b>DB (°F)</b>	<b>WB (°F)</b> 63	<b>DB (°F)</b>	<b>WB (°F)</b>	<b>MBH</b> 27.0	<b>DB (°F)</b> 70.0	HSPF 9.0	7	2.8	12	15	05	RHEEM RHMV3617SEAC	123456
7110 1	3 BEBROOM BEBO	1000	2.0	NATURAL	0.0	1/2	29.4	22.5	10.0	7.0	00	30	- 07	27.0	70.0	3.0	/	2.0	42	40	93	RHEEM RHMVJ01/3EAC	
AHU-2	CLUBHOUSE	1990	5.0	300	0.7	3/4	58.0	42.4	15.0	77.9	65.2	56	57	56.0	62.7	9.0	15	4.9	82	90	160	RHEEM RHMV6024SEAC	123456
1 ELECTRIC	AL CHARACTERISTICS: 2	40/1/60					4 PROVIDE	WITH SINGLE F	POINT POV	WER CONNI	ECTION AND	SINGLE STA	GE OF ELEC	CTRIC HEAT									

(2) VERTICAL UNIT (3) PROVIDE WITH INTERNAL FILTER RACK AND FILTER (MERV 8)

**ABBREVIATIONS** 

ABOVE

ALTERNATE

APPROXIMATELY ARCHITECTURAL AVERAGE

AMPERE

BOILER

CHILLER

APPROX.

CFM

CHWP

CLG

CWP

DEFL

DET

DIA

ELEV.

EWB

EWT

EXH

GPM

FPM

HTR

HVAC

HWP

KWH

MAX

MBH.

MFR.

O.D.

ORIG.

PIU

RTN

RTU

SDC

SENS.

SPLY

S/S

TÉMP

VAV

PRESS

MECH.

EXIST.

ABOVE CEILING

ALTERNATING CURRENT AIR COMPRESSOR ABOVE FINISHED FLOOR AIR HANDLING UNIT

BRITISH THERMAL UNIT

CHILLED WATER PUMP

ENTERING DRY BULB

ENTERING WET BULB

DEGREES FAHRENHEIT

GALLONS PER MINUTE

FEET PER MINUTE FEET PER SECOND

FOOT OR FEET

HORSE POWER

HOT WATER PUMP

HEAT EXCHANGER FREQUENCY (HERTZ)

INSIDE DIAMETER

KILOWATT HOUR

MANUFACTURER

NOT APPLICABLE NOISE CRITERIA

OUTSIDE DIAMETER OUTSIDE AIR

POWERED INDUCTION UNIT

SINGLE SPEED MOTOR

VARIABLE AIR VOLUME

WATER PRESSURE DROP

ROOFTOP AIR HANDLING UNIT

STAND ALONE DIGITAL CONTROLLER

1000 BTU PER HOUR

ENTERING WATER TEMPERATURE

COOLING TOWER

DEFLECTION

DETAIL

DIAMETER

DIAMETER

ELECTRICAL

ELEVATION

**EXHAUST** 

**EXISTING** 

HEAD

HOUR(S)

HEIGHT

INCHES

KILOWATT

MAXIMUM

MINIMUM

NUMBER

ORIGINAL PHASE

PRESSURE

SENSIBLE

SQUARE

SUPPLY

WATT

WITH

TEMPERATURE

RETURN AIR

MECHANICAL

FIRE DAMPER

CUBIC FEET PER MINUTE

CONDENSER WATER PUMP

RECTANGULAR TO ROUND DUCT TRANSITION

	TURNING VANES
■ → FD	FIRE DAMPER AND SLEEVE, PROVIDE ACCESS DOOR
<u></u>	MANUAL VOLUME DAMPER
	STANDARD 45° BRANCH, SUPPLY OR RETURN, NO SPLITTER, WITH MANUAL VOLUME DAMPER

<del> </del>						
<del></del>	CONICAL	SPIN-IN	FITTING	WITH	BUTTERFLY	DAMPER

GRILLE OR REGISTER, CEILING

D	CONDENSATE DRAIN PIPING
——AD——	AUXILIARY CONDENSATE DRAIN PIPING
——R——	REFRIGERANT PIPING (2 LINES TOTAL)
+	ELBOW, 90° (LONG RADIUS)
	TEE
C	ELBOW, TURNED DOWN

GATE VALVE  $\longrightarrow \bigvee \longleftarrow$ BALL VALVE BUTTERFLY VALVE **─**|**└** UNION

1 WALL MOUNTED THERMOSTAT WALL MOUNTED TEMPERATURE SENSOR FOR AVERAGING TEMPERATURE WITHIN THE ZONE

TIE NEW INTO EXISTING UNDERCUT DOOR 3/4 INCHES SUPPLY AIR FLOW RETURN OR EXHAUST AIR FLOW

NOTE: THIS LEGEND IS FOR REFERENCE ONLY. ALL SYMBOLS WHICH APPEAR WITHIN THE LEGEND MAY NOT APPLY TO THIS PROJECT.

			SP	LIT SY	STEM O	UTDO	OR UNI	T (HE	AT PUM	P)					
MARK	ТҮРЕ	SERVICE	DESCRIPTION	TOTAL COOLING CAPACITY MBH	CONDENSER AMBIENT TEMP, °F	TOTAL HEATING CAPACITY MBH	CONDENSER AMBIENT TEMP, °F	FAN MOTOR HP	COMPRESSOR RLA (AMPS)	COMPRESSOR LRA (AMPS)	MCA	МОСР	WEIGHT (LBS)	DESIGN BASIS	REMARKS
HP-1	DIRECT EXP.	AHU-1	HEAT PUMP	29.4	95	27.0	47	1/5	12.8	67.8	18	25	160	RHEEM RP1730AJV	12
HP-2	DIRECT EXP.	AHU-2	HEAT PUMP	58.0	95	56.0	47	1/5	23.7	152.5	31	50	235	RHEEM RP1760AJV	12

(1) ELECTRICAL CHARACTERISTICS: 240/1/60

(2) PROVIDE WITH R-410A REFRIGERANT

					VEI	NTILATI	ON FA	N SCHEDL	JLE			
MARK	CFM TYPE SONES IN. WG		STATIC PRESS. IN. WG	MAX. RPM	MOTOR WATTS	DRIVE	SERVING LOCATION	INTERLOCK	WEIGHT DESIGN BASIS		REMARKS	
EF-1	50	CENTRIFUGAL	1.5	0.1	_	17.5	DIRECT	BATHROOMS	WALL SWITCH	10	NUTONE 50NT	123
FF-2	70	CENTRIFLIGAL	1.5	0.1	_	17.5	DIRECT	COMM BLDG RESTRM	LICUTS	10	NUTONE 80NT	(1)(3)(4)

(1) ELECTRICAL CHARACTERISTICS: 120/1/60

2) PROVIDE WITH BACKDRAFT DAMPER, PLASTIC GRILLE, CEILING RADIATION DAMPER (FIRE DAMPER)

(3) "ENERGY STAR" COMPLIANT

(4) PROVIDE WITH BACKDRAFT DAMPER AND PLASTIC GRILLE

#### **GENERAL NOTES**

1. THE INTENT OF THESE DRAWINGS ARE SUCH THAT THE CONTRACTOR SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, TRANSPORTATION, PERMITS, FEES, LICENSES AND PROPER SUPERVISION NECESSARY TO INSTALL AND COMPLETE THE NECESSARY WORK AS SHOWN ON THE

2. WORK NOT SPECIFICALLY COVERED ON THE DRAWINGS, BUT THAT IS REASONABLY INFERABLE AS BEING NECESSARY TO PRODUCE THE INTENDED RESULTS SHALL BE QUOTED AND/OR PERFORMED AS IF SPECIFICALLY DETAILED HEREIN.

3. THE DRAWINGS ARE INDICATIVE OF THE CHARACTER AND SCOPE OF WORK AND ARE NOT INTENDED TO SHOW ALL THE DETAILS.

4. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR OTHERWISE ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT.

5. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. WHERE INTERNAL INSULATION IS CALLED FOR, DIMENSIONS SHALL BE INCREASED BY THE THICKNESS OF INSULATION.

6. PORTIONS OF THE DUCTS VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.

HEATING, VENTILATION AND AIR CONDITIONING 7. WHERE DUCTWORK IS LINED, NO THERMAL INSULATION IS REQUIRED. WHERE UNLINED DUCT AND LINED DUCT CONNECT, THE INSULATION SHALL OVERLAP LINED SECTION AT LEAST 4".

> 8. EXACT LOCATION OF ALL CEILING DIFFUSERS, GRILLES, AND REGISTERS SHALL BE COORDINATED WITH THE ARCHITECT.

9. CONTRACTOR TO COORDINATE VOLTAGE AND PHASE OF EACH

EQUIPMENT WITH ELECTRICAL CONTRACTOR BEFORE ORDERING.

10. COORDINATE THE LOCATION OF ALL PENETRATIONS OF THE STRUCTURE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

11. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

12. PROVIDE ADEQUATE ACCESS TO ALL EQUIPMENT.

13. VERIFY CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.

14. PROVIDE NECESSARY OFFSETS IN PIPING, ELECTRICAL CONDUIT, AND DUCTWORK AS REQUIRED TO ACCOMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.

15. MOUNT THERMOSTATS 44" (CENTER OF THERMOSTAT) ABOVE FINISHED FLOOR. COORDINATE EXACT LOCATION WITH ARCHITECT.

16. DRYER EXHAUST DUCTWORK SHALL BE CONSTRUCTED OF MINIMUM 26 GAUGE GALVANIZED STEEL. THE INTERIOR SHALL BE SMOOTH WITH NO PROJECTIONS AND JOINTS RUNNING IN THE DIRECTION OF AIR FLOW. PROVIDE GRAVITY BACKDRAFT DAMPER AT TERMINATION OF EXHAUST DUCT.

17. COORDINATE WITH ARCHITECTURAL SITE PLAN FOR THE LOCATION AND ORIENTATION OF THE BUILDINGS.

18. AT THE EXPOSED, EXTERIOR REFRIGERANT PIPING INSULATION, PROVIDE UV PROTECTIVE COATING OR PVC JACKET.

			D	IFFU	SER, G	RILL	-E & R	EGISTE	ER	
MARK	USE	LENGTH IN.	HEIGHT IN.	CONN. DIA.	FACE SIZE	NC MAX.	AIRFLOW MAX. CFM	AIRFLOW PATTERN	DESIGN BASIS	REMARKS
SG1	SUPPLY	_	-	_	8x4	25	70	2 WAY	LIMA 602	12
SG2	SUPPLY	_	-	_	12x6	25	160	2 WAY	LIMA 602	12
SG3	SUPPLY	_	-	_	12x8	25	255	2 WAY	LIMA 602	12
RG1	RETURN	18	18	_	18x18	25	1000	_	LIMA 60GH	12
RG2	RETURN	12	12	_	12x12	25	460	_	LIMA 60GH	12

(1) PROVIDE STANDARD WHITE FINISH

(2) CEILING GRILLE

	EL	ECTRIC	CINU	HEAT	ΓER		
MARK	AREA SERVED	TYPE	FAN MOTOR HP	AIRFLOW CFM	KW	DESIGN BASIS	REMARKS
EUH-1	FIRE RISER ROOM	WALL MTD.		245	2.0	MARKEL 3450 SERIES	12

(1) PROVIDE WITH UNIT MOUNTED THERMOSTAT, TAMPER PROOF COVER, AND SURFACE MOUNTED SLEEVE. MOUNT HEATER 12" ABOVE FINISHED FLOOR.

(2) ELECTRICAL CHARACTERISTICS: 240/1/60

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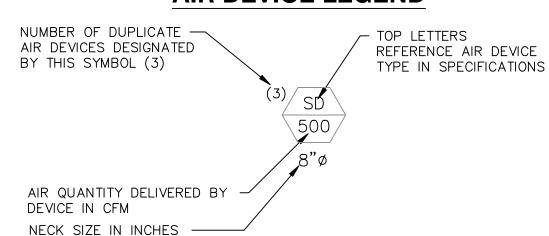
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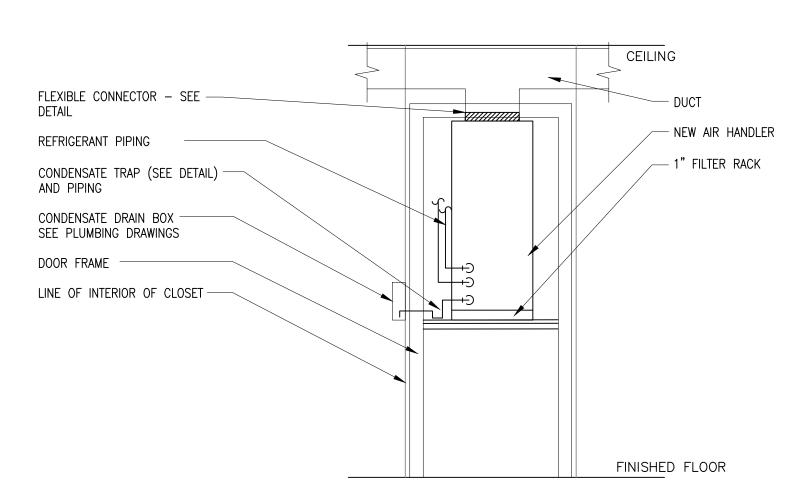
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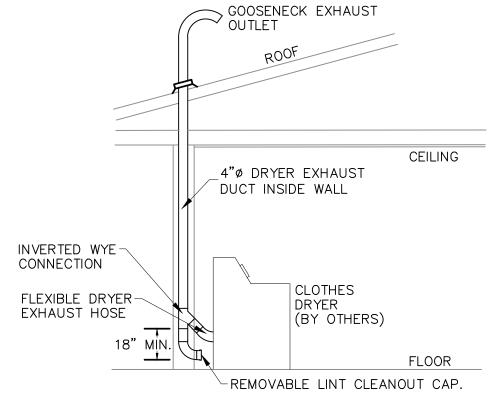
CAD FILE NUMBER

## AIR DEVICE LEGEND

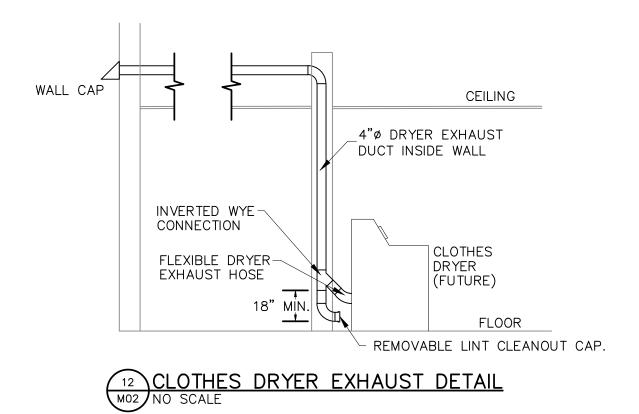




# TYPICAL MECHANICAL CLOSET DETAIL NO SCALE

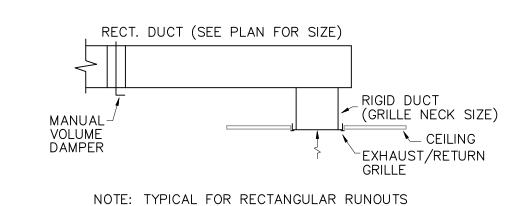


# CLOTHES DRYER EXHAUST DETAIL NO SCALE

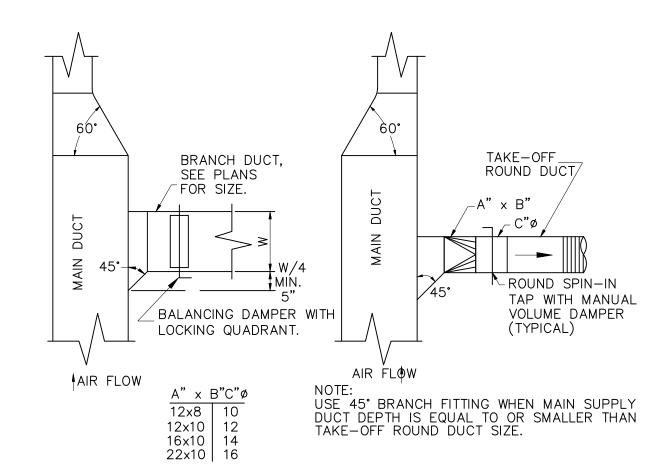


# RIGID ROUND RUNOUT RIGID 45° OR 90° ROUND DUCT CONICAL SPIN-IN FITTING WITH BUTTERFLY DAMPER (COMMUNITY CENTER) DIFFUSER/GRILLE CEILING

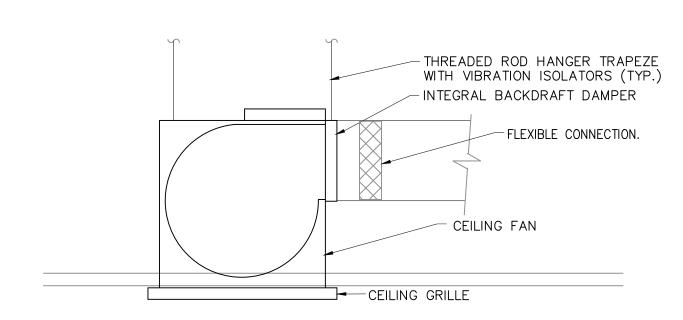
# 5 TYPICAL DIFFUSER RUN-OUT DETAIL M02 NO SCALE



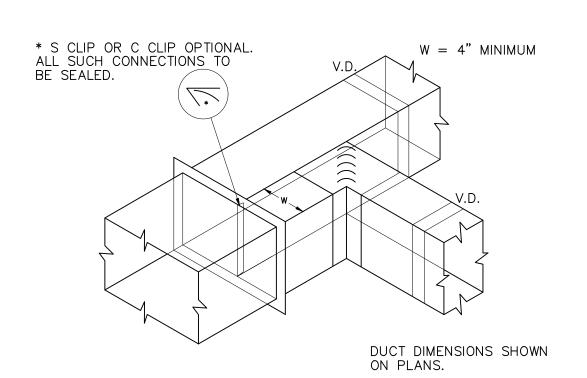
# TYPICAL RETURN AND EXHAUST RUN-OUT DETAIL MO2 NO SCALE



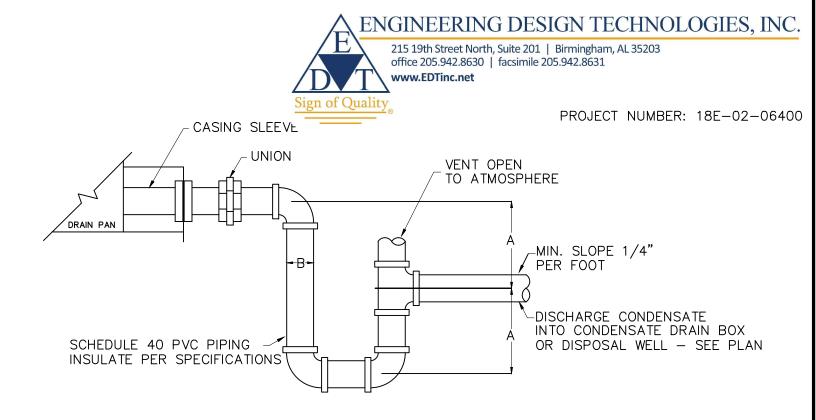
# 7 TYPICAL DUCT TAKEOFF DETAIL M02 NO SCALE



# 8 TYPICAL CEILING MOUNTED FAN INSTALLATION DETAIL NO SCALE

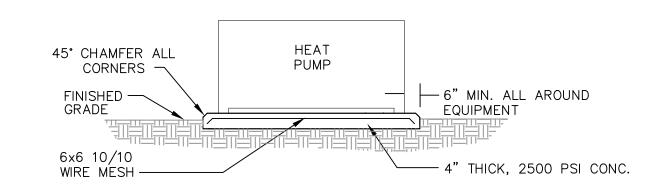


9 TYPICAL DUCT TAKE-OFF DETAIL
NO SCALE

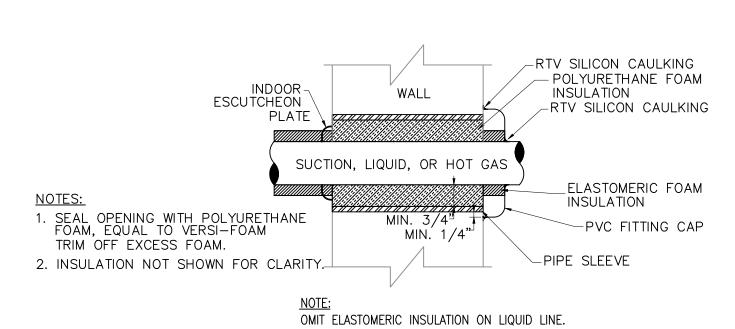


A=B+1/2 FAN STATIC PRESSURE. B=3/4" FOR UNITS LESS THAN 2000 C.F.M.

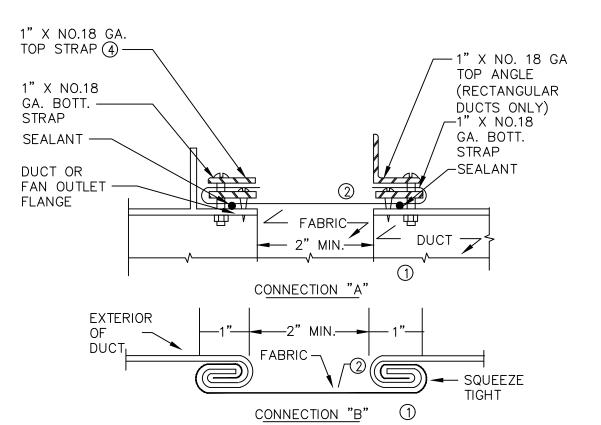
# AIR CONDITIONING UNIT DRAIN TRAP DETAIL NO SCALE



# TYPICAL CONDENSING UNIT PAD DETAIL NO SCALE



# TYPICAL REFRIGERANT PIPING WALL PENETRATION DETAIL MO2 NO SCALE



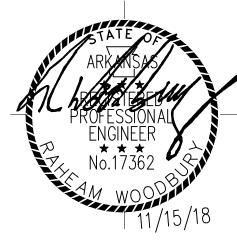
① USE FLEXIBLE CONNECTION "A" FOR RECTANGULAR DUCTS WITH GREATEST DIMENSION 31" OR LARGER, & FOR ALL ROUND DUCTS. USE CONNECTION "B" FOR RECTANGULAR DUCTS. WITH GREATEST DIMENSION LESS THAN 31"

② FABRIC FOR FLEXIBLE CONNECTIONS SHALL BE VENTGLAS AS MANUFACTURED BY VENTFABRICS, INC. MAKE COLLAR FROM ONE CONTINUOUS PIECE OF FABRIC, SEWED ONE CORNER ONLY.

③ FOR ROUND DUCT ONLY USE 1" x NO.18 GA. TOP STRAP.

① USE 1" x 1" x NO.18 GA. TOP ANGLE AT LOCATIONS OTHER THAN CONNECTIONS TO EQUIPMENT.

4 FLEXIBLE DUCT CONNECTION DETAIL
MO2 NO SCALE



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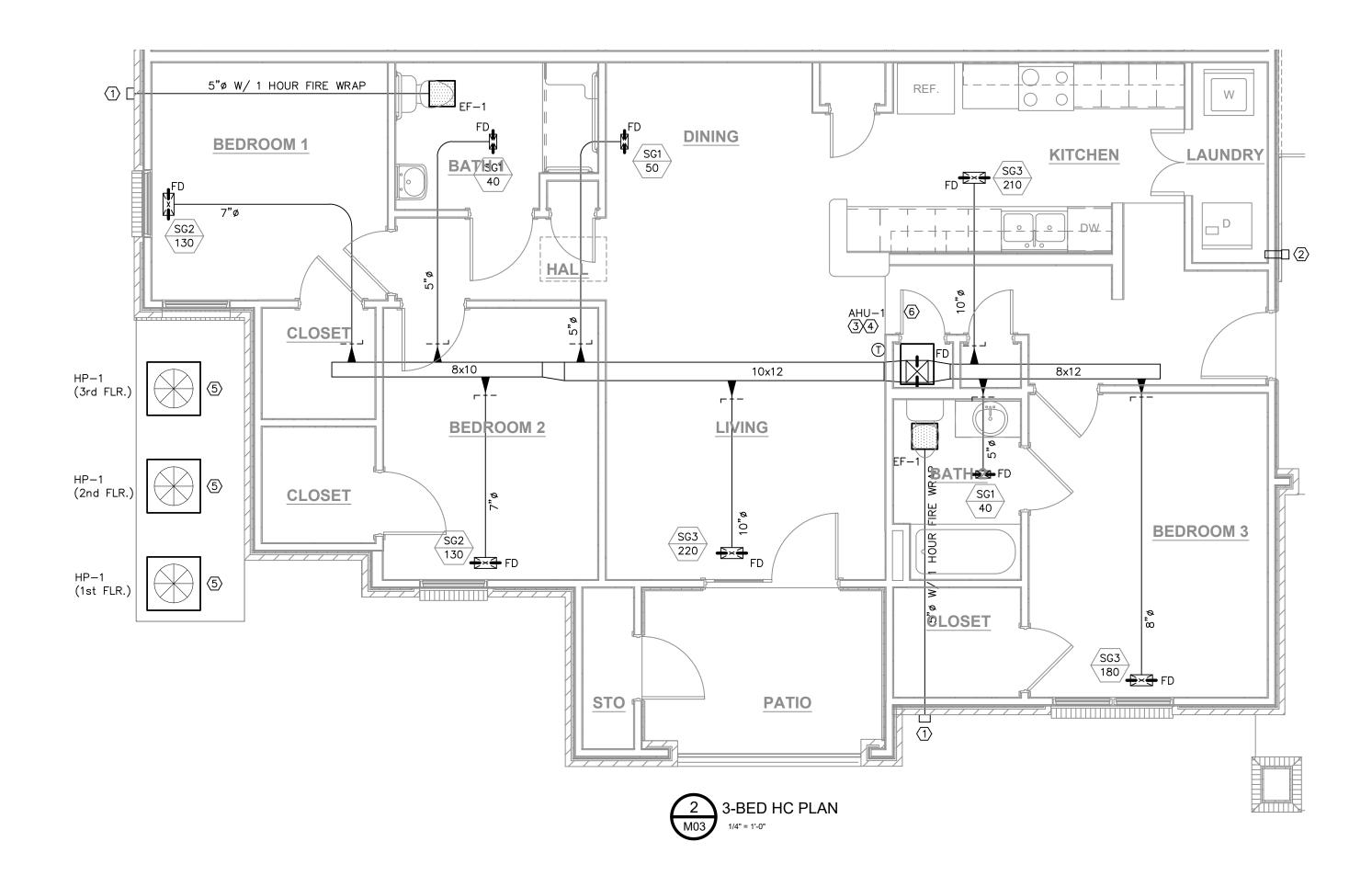
597

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SHEET NUMBER

M02





www.EDTinc.net

PROJECT NUMBER: 18E-02-06400

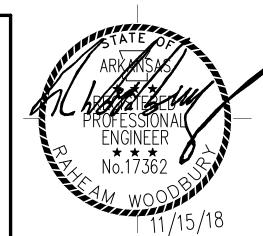
GENERAL NOTE:

1. AT DUCTWORK WALL AND CEILING PENETRATIONS,
SEAL ANNULAR SPACE BETWEEN THE DUCTWORK AND
GYPSUM BOARD TO PREVENT AIR LEAKAGE.

2. SEE ARCHITECTURAL DRAWINGS FOR BUILDING
CONFIGURATIONS. 3. PROVIDE DAMPERS AT SUPPLY GRILLES AND SUPPLY DUCTWORK PENETRATING THE RATED FLOOR/CEILING ASSEMBLY

#### DRAWING KEYNOTES:

- (1) EXHAUST WALL CAP WITH BIRD SCREEN AT BUILDING A 1st & 2nd FLOOR; BUILDING B 1st FLOOR. SOFFIT (EAVE) ELBOW WITH GRILLE (NUTONE MODEL 430 OR 431 LESS BACKDRAFT DAMPER) OR EQUAL AT BUILDING A — 3rd FLOOR; BUILDING B — 2nd FLOOR.
- ② 4" DRYER VENT AND ROUTE TO EXTERIOR WALL WITH 4"
  WALL CAP WITH INTEGRAL BACKDRAFT DAMPER SEE DETAIL.
- 3 SET AHU ON A SUPPORT PLATFORM (NON-COMBUSTIBLE CONSTRUCTION) - SEE ARCHITECTURAL DRAWINGS.
- PROUTE CONDENSATE DRAIN LINE TO CONDENSATE DRAIN BOX SEE PLUMBING.
- 5 HEAT PUMP UNIT. SET UNIT ON CONCRETE EQUIPMENT PAD. SEE DETAIL. COORDINATE ALL HEAT PUMP UNIT PAD LOCATIONS WITH ARCHITECTURAL UNIT PLANS.
- 6 RETURN AIR THROUGH LOUVERED DOOR SEE ARCHITECTURAL DRAWINGS





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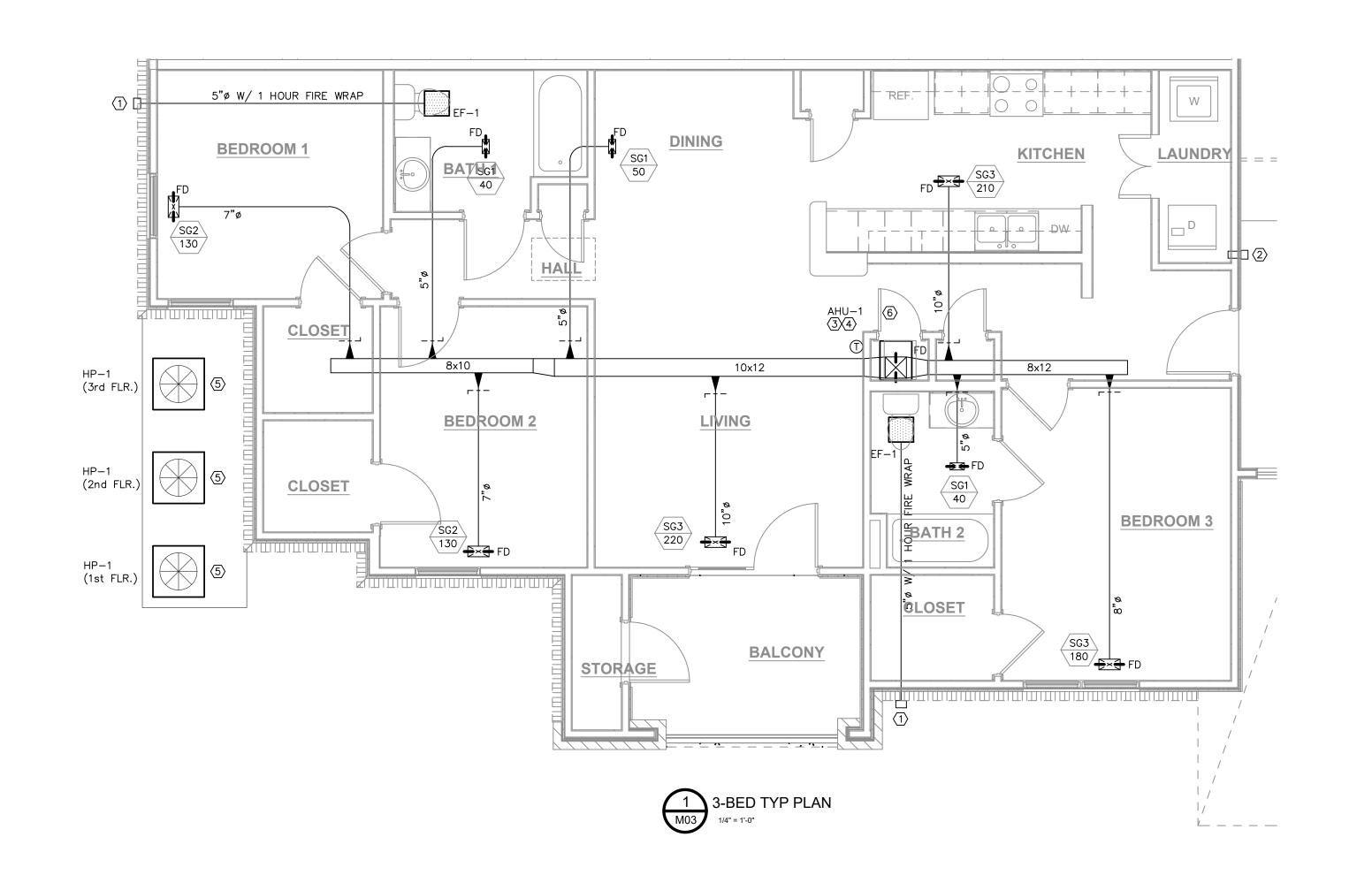
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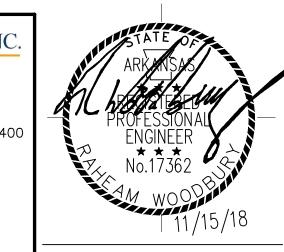
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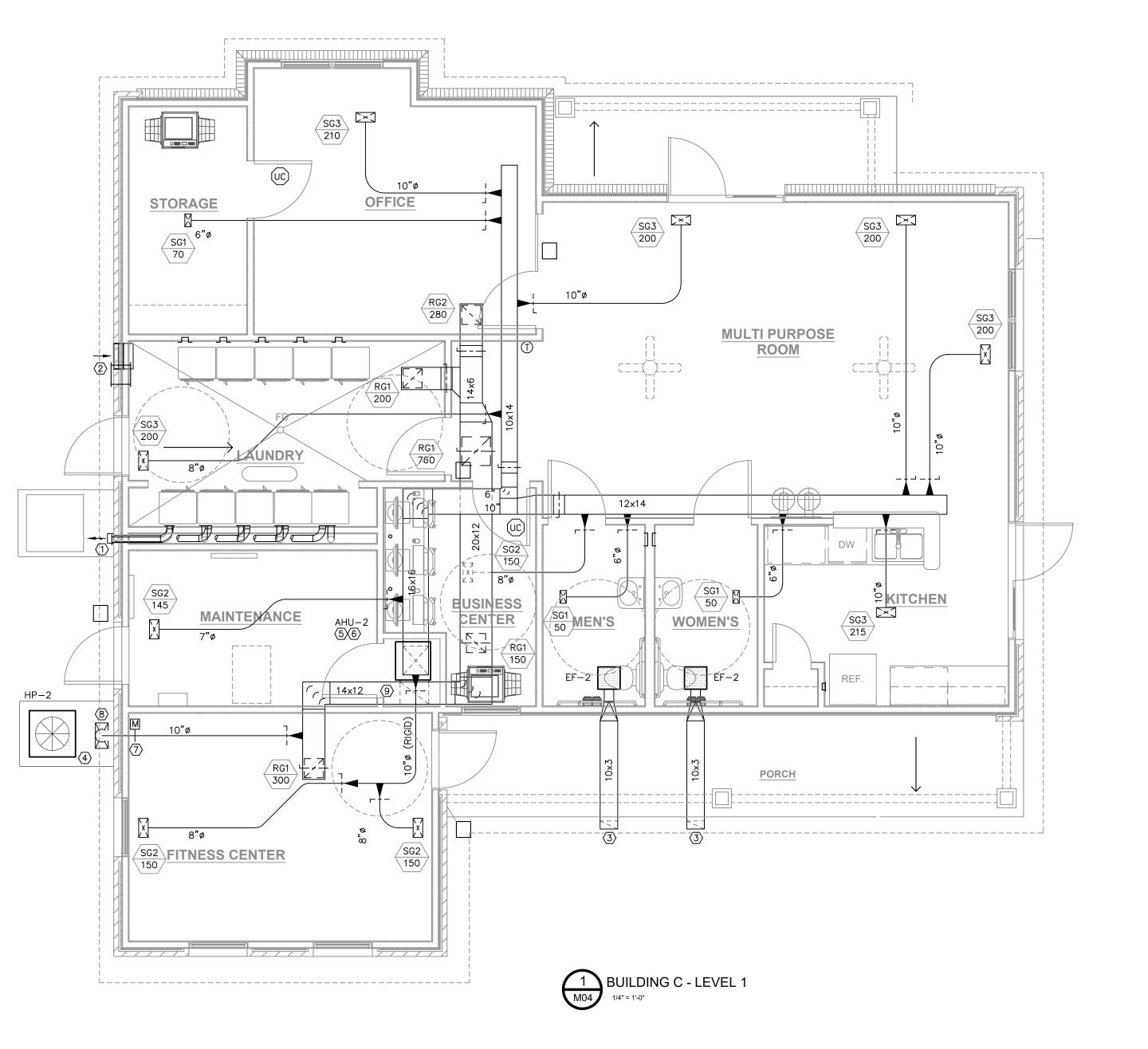


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#### DRAWING KEYNOTES:

- 1 4" DRYER VENT WITH 4" WALL CAP WITH INTEGRAL BACKDRAFT DAMPER. (5 STACKED)
- (2) 16x16 MAKE-UP AIR LOUVER FOR THE DRYER. LOUVER EQUAL TO RUSKIN ELF6375X WITH INSECT SCREEN. MOUNT 8" A.F.F.
- 3 SOFFIT (EAVE) ELBOW WITH GRILLE. NUTONE MODEL 430 OR 431 (LESS BACKDRAFT DAMPER) OR EQUAL.
- (4) HEAT PUMP UNIT. SET UNIT ON CONCRETE EQUIPMENT PAD. SEE DETAIL. COORDINATE ALL HEAT PUMP UNIT PAD LOCATIONS WITH ARCHITECTURAL UNIT PLANS.
- (5) SET AHU ON A 18" HIGH RETURN PLENUM (NON-COMBUSTIBLE CONSTRUCTION). PROVIDE 3" AUXILIARY DRAIN PAN W/ MOISTURE SENSOR FOR UNIT SHUT-DOWN.
- 6 ROUTE CONDENSATE DRAIN LINE TO CONDENSATE DRAIN BOX SEE PLUMBING.
- OUTSIDE AIR DUCT CONNECT TO AHU'S RETURN DUCT.
  PROVIDE MANUAL AND MOTORIZED DAMPER. MOTORIZED
  DAMPER TO OPEN UPON STARTING OF AHU FAN AND CLOSED UPON STOPPING OF AHU FAN.
- 8 12x20 OUTSIDE AIR SOFFIT VENT W/ INSECT SCREEN
- (9) CONNECT RETURN DUCT TO PLENUM BELOW THE AHU

11/20/2018 PERMIT SET

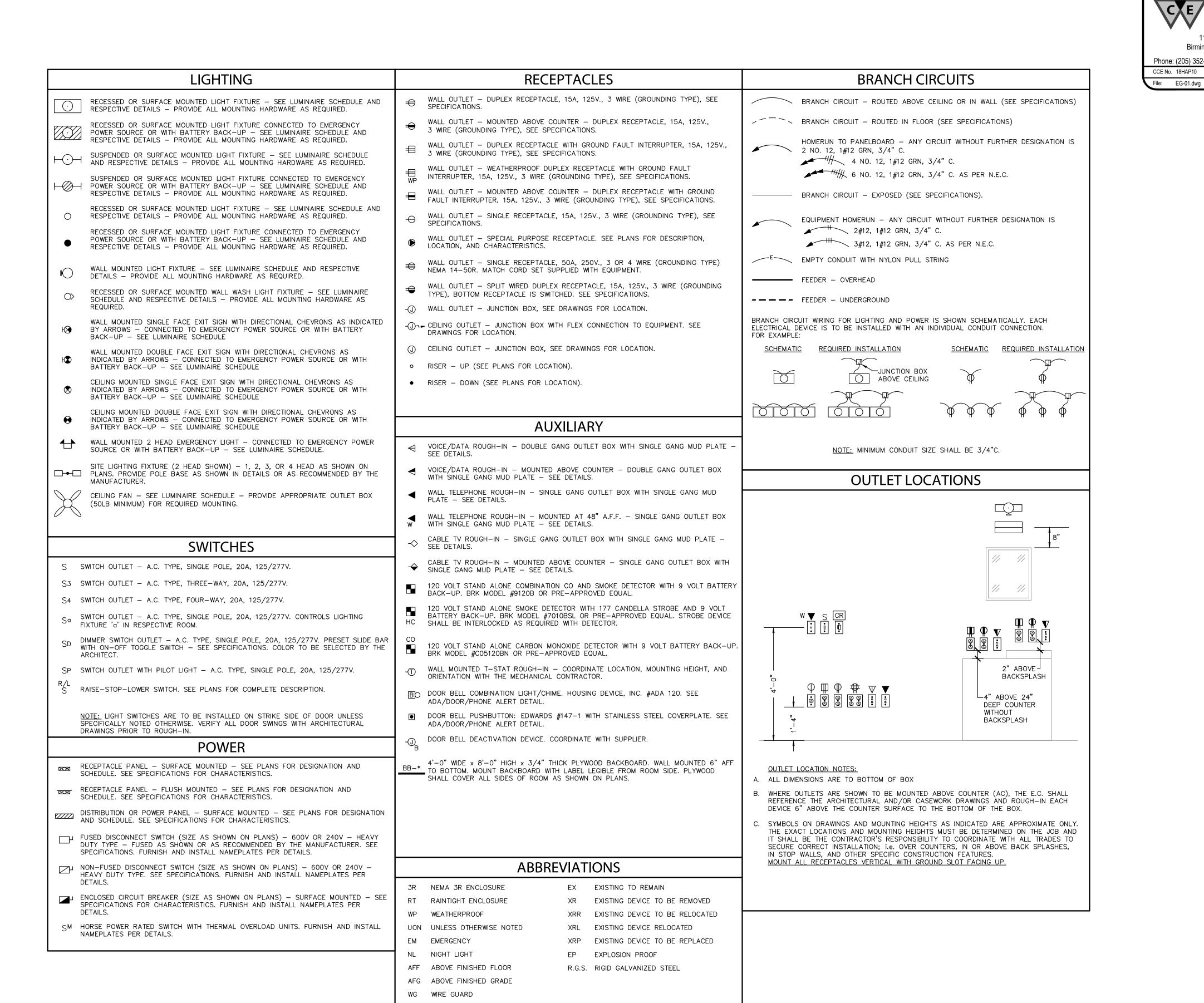
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Time: 7:23:14 am



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DATE

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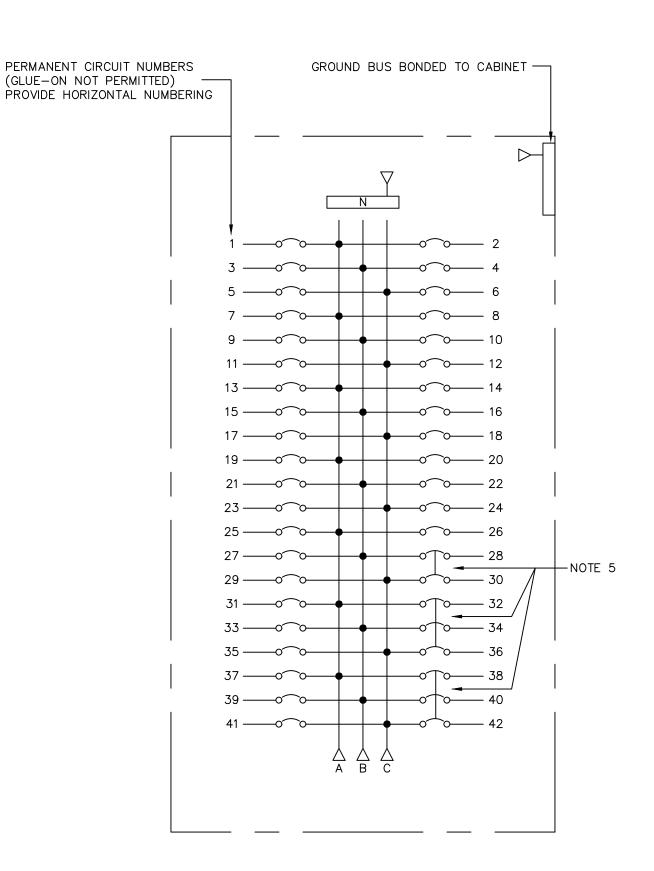
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The Park At Barton

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SHEET NUMBER

E01

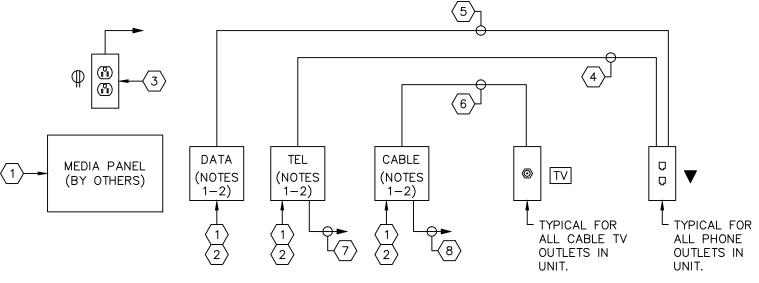


#### **DETAIL: PANELBOARD**

TYPICAL CONNECTION AND NUMBERING SEQUENCE - NO SCALE

#### PANEL NOTES:

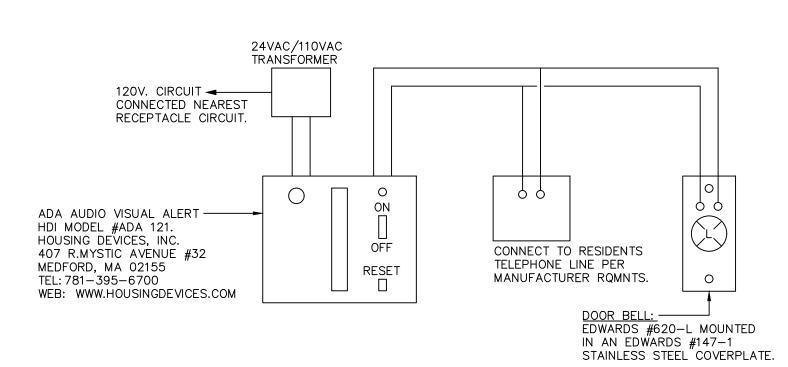
- 1. ALL PANELS TO HAVE DOOR-IN-DOOR (HINGED TRIM) CONSTRUCTION.
- 2. FOR SURFACE MOUNTED PANELS INSTALL ALL NAMEPLATES (PER DETAILS) USING MACHINE SCREWS. FOR FLUSH PANELS IN FINISHED SPACES, INSTALL NAMEPLATES TO INSIDE OF DOOR USING 2 PART EPOXY (12HR)
- FOR ALL FLUSH PANELS, FURNISH AND INSTALL 4EA. 1" EMPTY
  CONDUITS TO ABOVE NEAREST ACCESSIBLE CLG, LABELS AS SPARES AND
  PROVIDE REQUIRED FIRESTOP, PULLWIRE, AND CONDUIT END CAP.
- 4. ALL PANELS TO HAVE WELDED METAL DIRECTORY CARD HOLDERS.
- 5. ALL MULTI-POLE BREAKER SHALL HAVE A COMMON TRIP MECHANISM FOR SIMULTANEOUS OPERATION.



#### (\*) HOUSE TELEPHONE/DATA AND CABLE TV NOTES:

- MEDIA PANEL, CABLE/TEL/DATA JUNCTION BOXES TO BE LOCATED IN LAUNDRY ROOM UP HIGH ON WALL. VERIFY EXACT LOCATION WITH THE OWNER/GENERAL CONTRACTOR.
- 2. DOUBLE GANG OUTLET BOX WITH SINGLE GANG COVERPLATE. COVERPLATES TO BE LABELED AS SHOWN.
- 3. RECEPTACLE WITH 120 VOLT POWER FOR MEDIA PANEL. VERIFY EXACT LOCATION WITH THE GENERAL CONTRACTOR PRIOR TO ROUGHING. CONNECT TO NEAREST 120 VOLT RECEPTACLE CIRCUIT WITH 2#12, 2#12G-MC CABLE.
- 4. TELEPHONE CABLE FROM TELEPHONE JUNCTION BOX TO TELEPHONE OUTLET(S) IN UNIT. TERMINATE AS REQUIRED AT BOTH ENDS AS DIRECTED BY RESPECTIVE UTILITY. CABLE SHALL BE SUPPORTED AS REQUIRED. TYPICAL FOR ALL PHONE OUTLETS IN UNIT.
- 5. DATA CABLE FROM DATA JUNCTION BOX TO TELEPHONE OUTLET(S) IN UNIT. TERMINATE AS REQUIRED AT BOTH ENDS AS DIRECTED BY RESPECTIVE UTILITY. CABLE SHALL BE SUPPORTED AS REQUIRED. TYPICAL FOR ALL PHONE OUTLETS IN UNIT.
- 6. TV CABLE FROM CABLE JUNCTION BOX TO TV OUTLET(S) IN UNIT. TERMINATE AS REQUIRED AT BOTH ENDS AS DIRECTED BY RESPECTIVE UTILITY. CABLE SHALL BE SUPPORTED AS REQUIRED. TYPICAL FOR ALL TV OUTLETS
- 7. TELEPHONE CABLE TO SERVICE BOX ON HOUSE. VERIFY EXACT LOCATION WITH RESPECTIVE UTILITY AND TERMINATE AS REQUIRED.
- 8. TV CABLE TO SERVICE BOX ON HOUSE. VERIFY EXACT LOCATION WITH RESPECTIVE UTILITY AND TERMINATE AS REQUIRED.

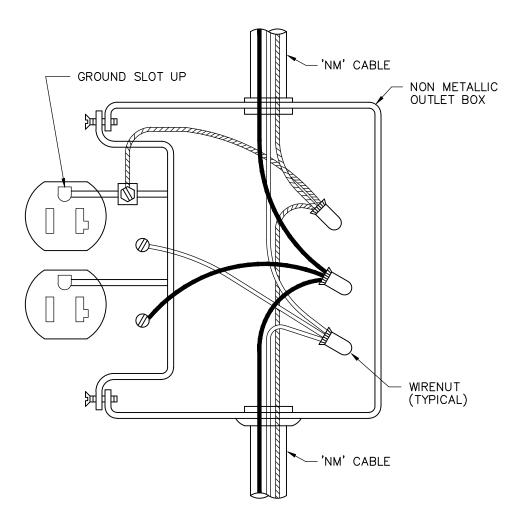
# HOUSE TELEPHONE/DATA AND CABLE TV SCHEMATIC SCALE: NONE



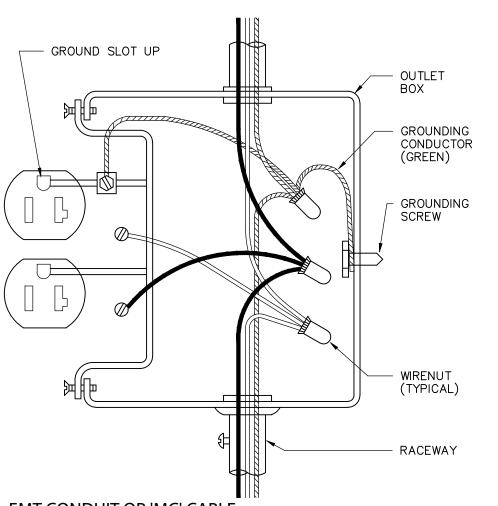
#### ADA DOOR/PHONE ALERT SYSTEM NOTES:

- A. DIAGRAM SHOWN IS DIAGRAMMATIC ONLY. CONTRACTOR TO OBTAIN EXACT WIRING REQUIREMENTS FROM THE MANUFACTURER PRIOR TO ANY WORK.
- B. PROVIDE CONTROLS IN EACH BEDROOM TO DEACTIVATE THE SIGNAL
- C. SYSTEM TO BE PROVIDED AT SENSORY IMPAIRED UNITS ONLY. SEE ARCHITECTURAL SITE PLAN FOR LOCATION(S).

# ADA DOOR/PHONE ALERT SYSTEM SCALE: NONE



NOT TO SCALE



EMT CONDUIT OR 'MC' CABLE

RECEPTACLE INSTALLATION DETAIL

NOT TO SCALE

File: EG-02.dwg

NSULTING	ARKANS
STRUCTION	REGISTERED
EERING, LLC	PROFESSIONAL ENGINEER
North ma 35203	No.16793
eb: www.cce-eng.com	BA
Date: Nov 21, 2018	Wa Oly
Time: 7:26:11 am	(1) 2016

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	LIG	HTIN	G F	IXTURE	SCHEDULE - HO	USES					
TYPE	DESCRIPTION	MOU	NTING	MANUFACTURER	CATALOG NUMBER		LAMPS	_	BALI	LAST / DRIVER	TOTAL
HICK	BESCRIP HON	TYPE	HEIGHT	WANDI AC TOKEK	CA IAEOG NOMBER	QTY	TYPE	VOLTS	QTY	TYPE	WATTS
Α	SURFACE MOUNTED L.E.D. DISK WITH FROSTED LENS. FIXTURE TO BE ENERGY STAR RATED.	SURFACE	CEILING	SUNSET LIGHTING	TF9908-30	1	900 LUMENS	120		N/A	15
В	SURFACE MOUNTED ROUND RESIDENTIAL LUMINAIRE WITH DROP LENS AND 2 LAMPS. PROVIDE ENERGY STAR RATED L.E.D. LAMPS	SURFACE	CEILING	KICHLER	209NI	2	15 WATT L.E.D. A-19	120		SELF	40
С	STEM MOUNTED CEILING FAN WITH LIGHT KIT, 3 SPEED, 5 BLADE, 52" WIDE SPAN, WHITE FINISH.	PENDANT	8'-6" AFF TO BOTTOM	EMERSON KICHLER PROGRESS	FAN: CF712WW  APPROVED EQUAL  APPROVED EQUAL	3	20 WATT L.E.D. CANDELABRA	120		SELF	100

	LIGHTING	FIXT	TURE	SCHED	ULE - COMMUNITY	BUILDING							
TYPE	DESCRIPTION	MOU	NTING	MANUEACTURER	CATALOG NUMBER		LAMPS		BAL	LAST / DRIVER	TOTAL		
ITPE	DESCRIPTION	TYPE	HEIGHT	MANUFACTURER	CATALOG NUMBER	QTY	TYPE	VOLTS	QTY	TYPE	WATTS		
				EMERSON	FAN: CF772								
CF	STEM MOUNTED CEILING FAN, 3 SPEED, 5 BLADE, 52" WIDE	PENDANT	8'-6" AFF TO			NI/A	N/A	120			75		
Oi	SPAN, WHITE FINISH.	LINDAINT	BOTTOM	KICHLER	APPROVED EQUAL	10/7	IVA	120			70		
				PROGRESS	APPROVED EQUAL	LAMPS BALLAST / DRIVER TOTA							
				SUNSET LIGHTING	TF9908-30								
R1	SURFACE MOUNTED L.E.D. DISK WITH FROSTED LENS.	SURFACE	CEILING			1	900 LUMENS	120		N/A	15		
	FIXTURE TO BE ENERGY STAR RATED.	00147102	02.2				000 Z0111 Z110				,,,		
											1		
				SUNSET LIGHTING	TF 9908-30								
R2	SURFACE MOUNTED L.E.D. DISK WITH FROSTED LENS.	SURFACE	CEILING			1	900 LUMENS	120		N/A	15		
	FIXTURE TO BE ENERGY STAR RATED.												
				OWNER	0,000,000,000,000,000								
	1x4 SURFACE MOUNTED FLUORESCENT WRAPAROUND			SIMKAR	SY920-2-32-SR-B11-120								
S1	WITH PRISMATIC LENS, WHITE END CAPS, AND AN	SURFACE	CEILING			2	F32T8/ RE835	120	1	ELECTRONIC	64		
	ELECTRONIC BALLAST.												
				LITLIONIA	0.000 05 040 10 100								
				LITHONIA	C-232-GEB10-IS-WG								
S2	4'-0" FLUORESCENT STRIP FIXTURE WITH WIREGUARD	SURFACE	CEILING			2	F32T8/ RE835	120	1	ELECTRONIC	64		
				NUVO LIGHTING	60-3209								
			SEE	NOVOLIGHTING	60-3209								
W1	2'-0" FLUORESCENT VANITY LIGHT	WALL	ARCHITECT			3	13 WATT GU24	120	1	ELECTRONIC	39		
			DRAWINGS										
				LITHONIA	TWS-26TRT-120								
			6" ABOVE	EIIIOIVIV	1440 2011(1 120								
W2	WALL MOUNTED LIGHT FIXTURE	WALL	DOOR TO			1	26 WATT TRT	120	1	ELECTRONIC	26		
			BOTTOM										
				MORRIS	73010		1						
E144	LE DENT CONTACTOR CONTACTOR DATE	101011	8'-0" AFF			EU DANG	NIED MET LINE	400			_		
EX1	L.E.D. EXIT SIGN WITH SELF CONTAINED BATTERY	Y WALL				FURNIS	SHED WITH UNIT	120		N/A	5		
				MORRIS	73424								
EM1	UNITARY TWIN HEAD EMERGENCY LIGHT WITH INTEGRAL	WALL	8'-0" AFF			ELIDNIK	SHED WITH LINIT	120		NI/A	E		
EIVI I	BATTERY	WALL	0-U AFF			FURINI	DUED MILL OMI	120		N/A	5		
											c		
				MORRIS	73398								
EM2	UNITARY TWIN HEAD EMERGENCY LIGHT WITH INTEGRAL	WALL	8'-0" AFF			FURNIS	SHED WITH LINIT	120		N/A	5		
CIVI Z	BATTERY U.L. LISTED FOR WET LOCATION	WALL	U V AIT			OTANK	J.L.D WITH OINT	120		137/5			
				RAB LIGHTING	EZLED78SF								
FL	GRADE MOUNTED HORIZONTAL FLOOD LIGHT	GROUND	STANCHION			1	8859 LUMENS	120	1	DRIVER	89		
									-				
											<del>                                     </del>		
			1	I	1	1	1	1	1	ı	I		

IXTURE DESIGNATION LEGEND:

R = RECESSED S = SURFACE P = PENDANT W = WALL

PL = POLE BL = BOLLARD GR = GROUND CV = COVE CH = CHAIN HUNG

NOTE: FIXTURES IN DWELLING UNITS ARE IDENTIFIED WITH LETTERS ONLY STARTING WITH 'A', 'B', 'C', ETC.

- A. MANUFACTURER CATALOG NUMBERS ARE SHOWN FOR GENERAL DESCRIPTIVE PURPOSES AND TO ESTABLISH A STANDARD OF QUALITY. MANUFACTURERS LISTED AS "EQUAL" DOES NOT ENSURE NOR GUARANTEE APPROVAL OF ANY PRODUCT BY THE LISTED MANUFACTURER. FOR APPROVAL, FIXTURES MUST PROVIDE EQUAL PERFORMANCE RELATIVE TO DELIVERY OF LIGHTING, ENERGY USE, AND BE OF SIMILAR DESIGN AND CONSTRUCTION. REQUESTS FOR PRIOR APPROVAL OF FIXTURES NOT LISTED IN THIS SCHEDULE MUST BE RECEIVED BY THE ENGINEER A MINIMUM OF 10 DAYS PRIOR TO BID (SEE SPECIFICATIONS) FOR REVIEW BY THE ARCHITECT/ENGINEER.

  MANUFACTURERS APPROVAL THROUGH THIS PROCESS WILL BE LISTED IN AN ADDENDUM PRIOR TO BID. FIXTURES NOT LISTED IN AN ADDENDUM ARE NOT APPROVED.
- B. CONTRACTOR SHALL PROVIDE LUMINAIRES COMPLETE WITH ALL OPTIONS AND ACCESSORIES REQUIRED FOR A COMLPETE INSTALLATION. ALL PRODUCTS SHALL BE U.L. LISTED.
- C. PROVIDE PROPER LAMP FOR REFLECTOR ASSEMBLY SPECIFIED AND AS RECOMMENDED BY LUMINAIRE MANUFACTURER.
- PROVIDE FLUORESCENT LAMPS WITH LOW-MERCURY CONTENT, COMPLIANT WITH FEDERAL EPA TCLP REQUIREMENTS, a.K.a "ECO", "ALTO", OR "ECOLUX"

  VERIFY CONSTRUCTION AND TYPE CEILINGS TO BE INSTALLED AND PROVIDE LUMINAIRES IN APPROPRIATE CONFIGURATION WITH ALL HARDWARE AND ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION.
- F. PROVIDE LUMINAIRES WITH JOINING PLATES, END CAPS, CANOPIES, MOUNTING HARDWARE, ETC., AS REQUIRED FOR COMPLETE INSTALLATION.
- G. EXIT LIGHTS SHALL BE PROVIDED WITH GREEN LETTERS REQUIRED BY LOCAL CODE AUTHORITY. FURNISH WITH CHEVRON DIRECTIONAL INDICATORS AS INDICATED AND/OR AS REQUIRED.

  H. PROVIDE DEVICES FOR SECURING LAY-IN TYPE LUMINAIRES TO CEILING GRID TO COMPLY WITH ARTICLE 410 OF THE NATIONAL ELECTRICAL CODE.
- FURNISH LINEAR LUMINAIRES IN CONTINUOUS ROWS OR PATTERNS AS INDICATED ON DRAWINGS. PROVIDE WITH CORNER, ANGLE, AND END PIECES AS REQUIRED FOR A COMPLETE FINISHED INSTALLATION.

  J. FURNISH LUMINAIRES IN MECHANICAL SPACES COMPLETE WITH PENDANT STEMS OR CHAIN HANGERS AS REQUIRED TO MOUNT BELOW PIPING, DUCT, CONDUIT, ETC., MAINTAIN MINIMUM 7'-6"H. UNIFORM MOUNTING HEIGHT FOR
- ALL LUMINAIRES THROUGHOUT EACH AREA.

  K. PENDANT-MOUNTED LUMINAIRES WITH AIRCRAFT CABLE SUSPENSION SYSTEMS SHALL BE FURNISHED WITH ADJUSTABLE CABLE GRIP HARDWARE. CABLE SIZE SHALL BE SELECTED BY MANUFACTURER TO PROVIDE ADEQUATE SUPPORT OF LUMINAIRE SPECIFIED.

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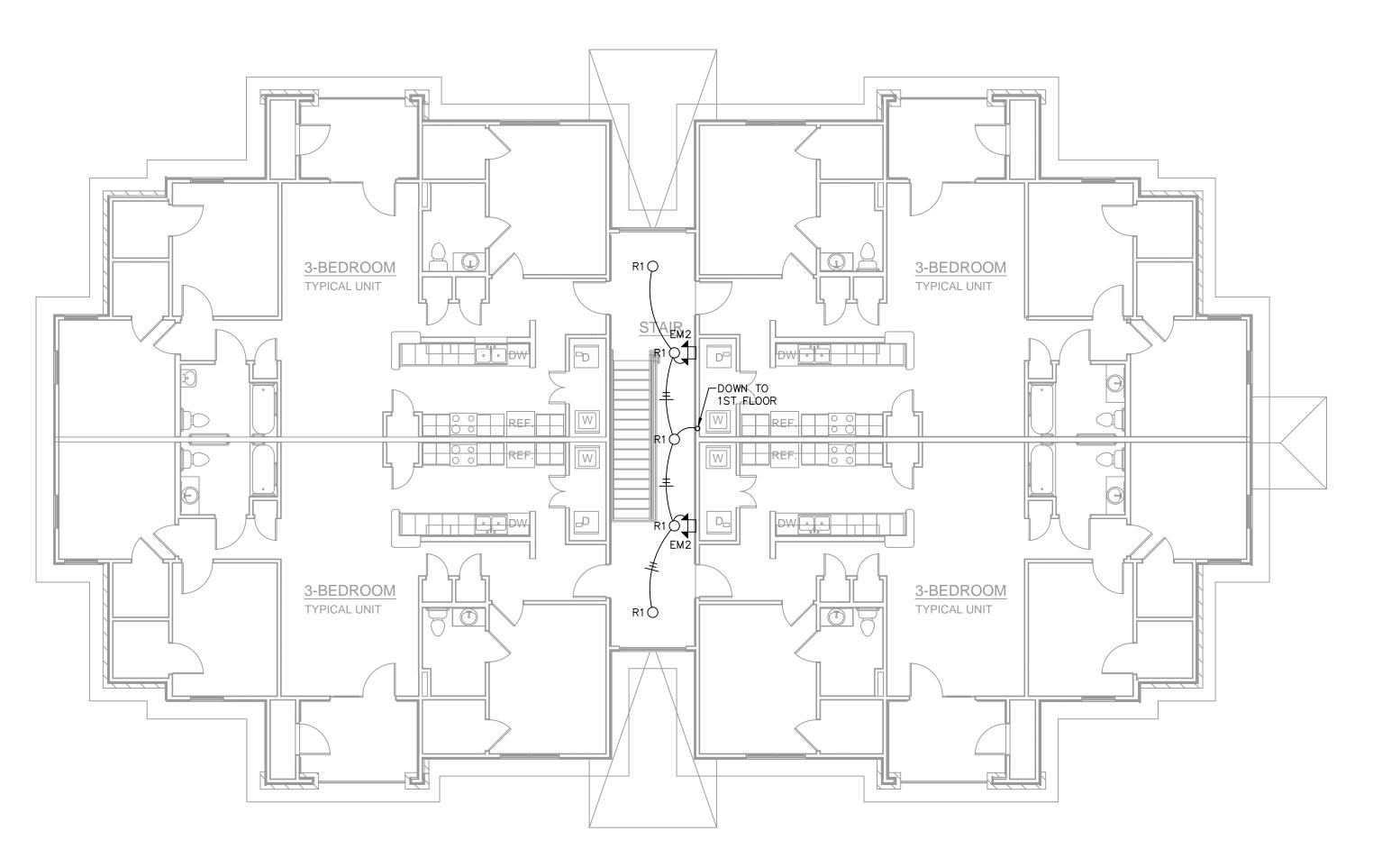
11/20/18 PERMIT SET

PROJECT NUMBER

900 E Barton Ave, West Memphis, AR 72301

SHEET NUMBER

E02



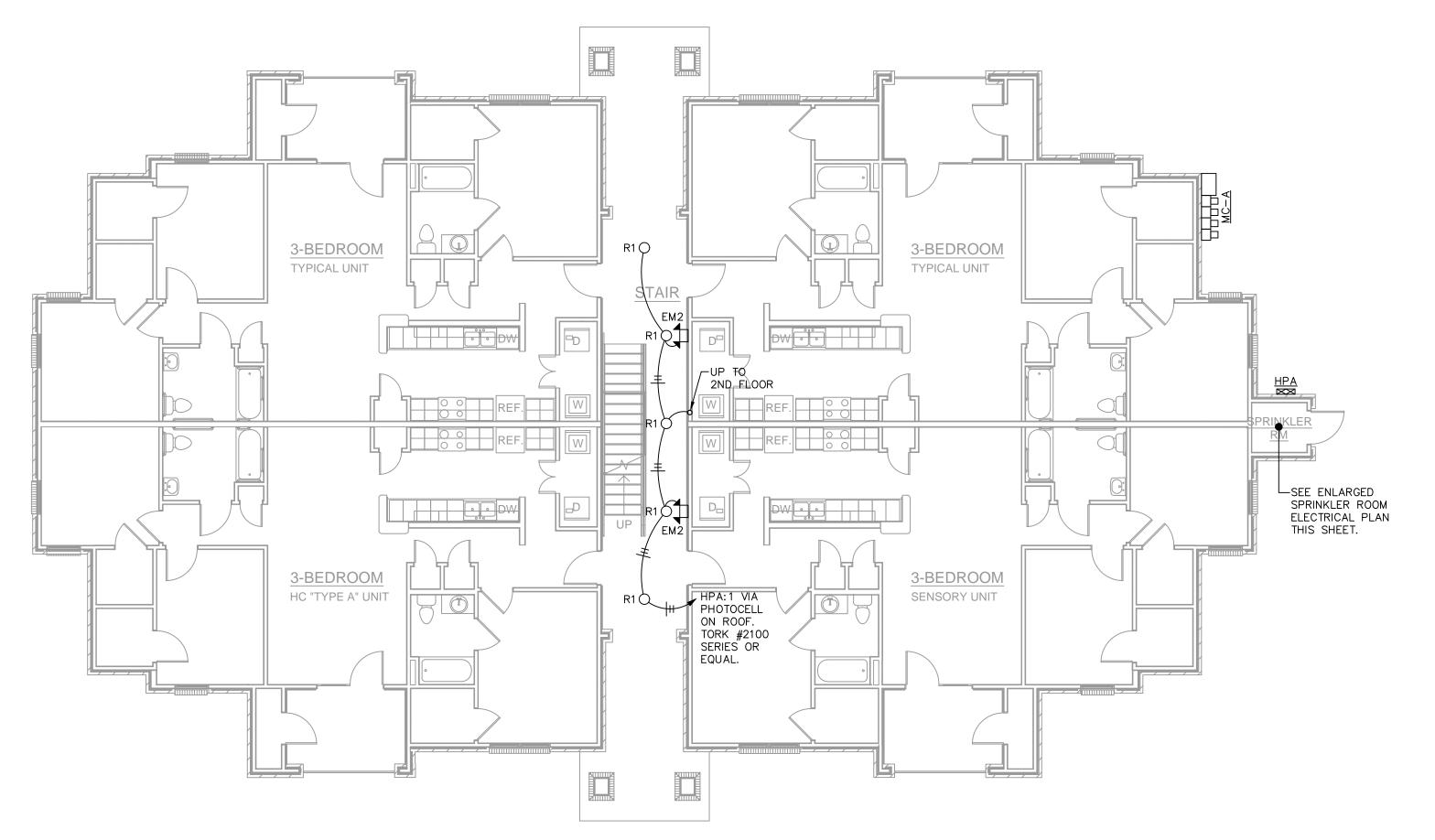






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# BUILDING A - LEVEL 2 - ELECTRICAL SCALE: 1/8" = 1'-0"



BUILDING A - LEVEL 1 - ELECTRICAL

SCALE: 1/8" = 1'-0"

9 FACP F 7

TS

FS

2,4

EUH-1

2KW,
240/1

ENLARGED SPRINKLER ROOM - ELECTRICAL SCALE: 1/4" = 1'-0"

900 E Barton Ave, West Memphis, AR 72301

11/20/18 PERMIT SET

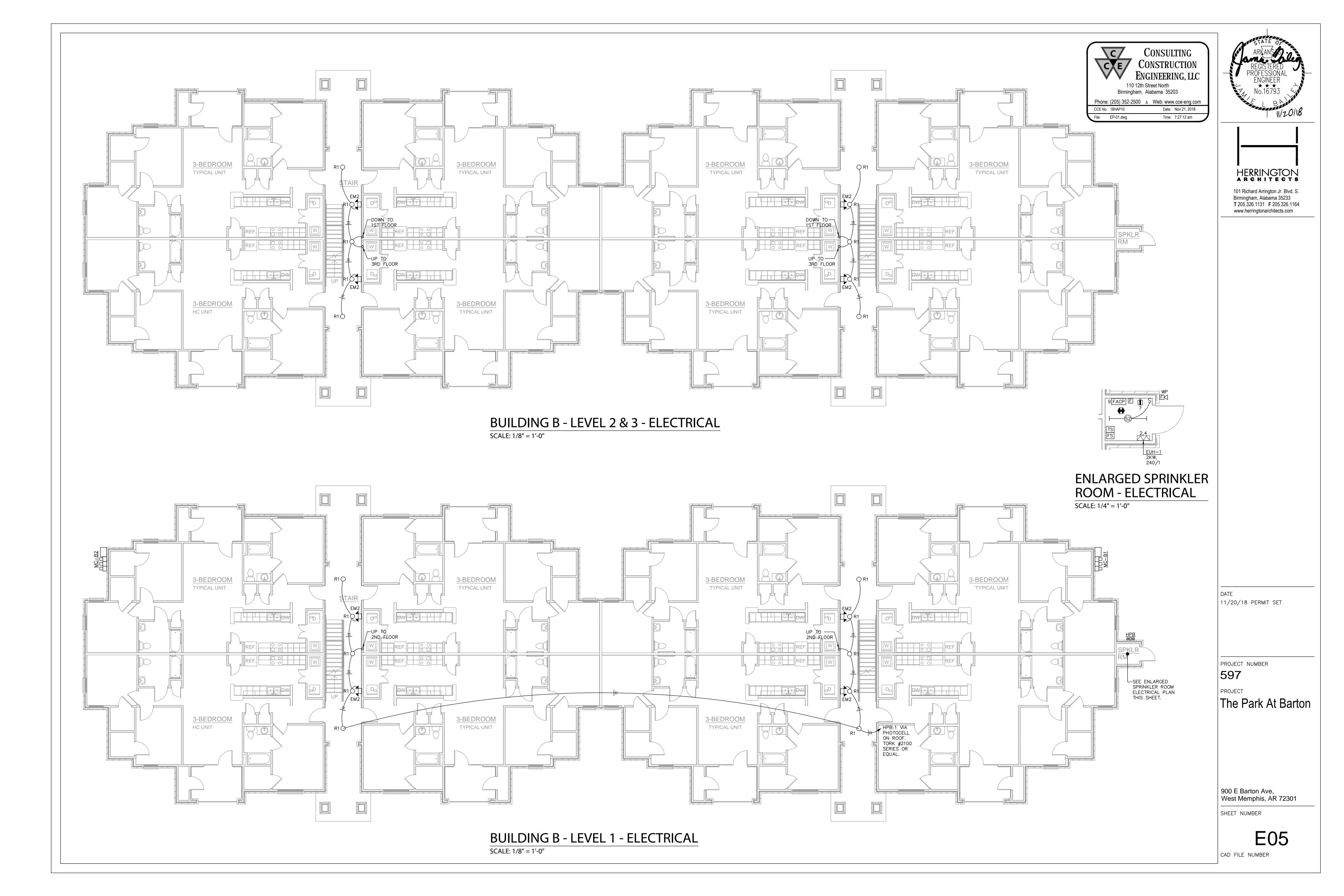
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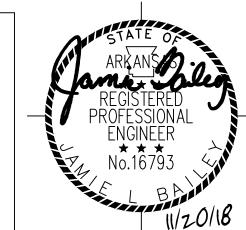
597

SHEET NUMBER











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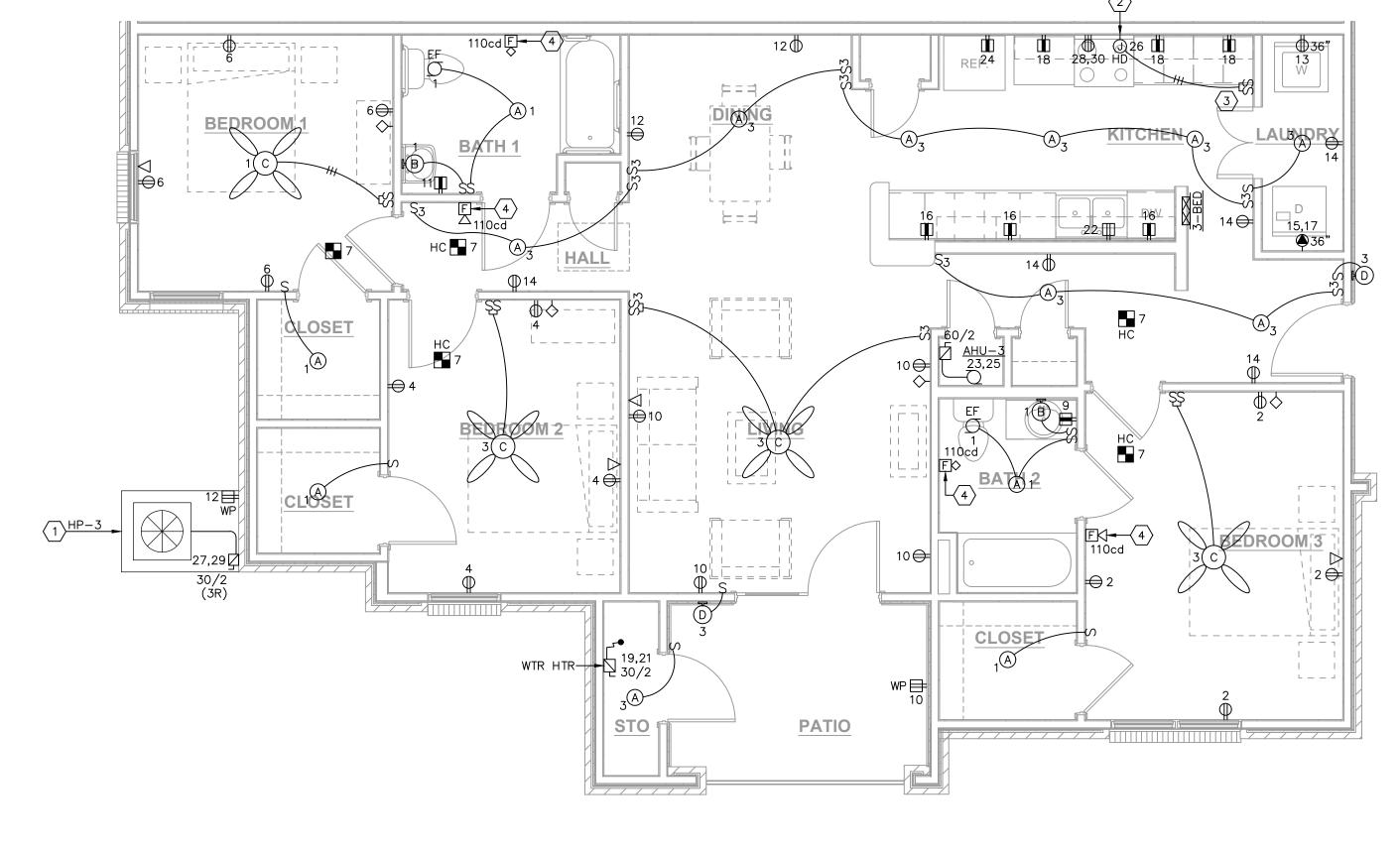
**GENERAL NOTES THIS SHEET:** 

- A. CIRCUITS SERVING ANY RECEPTACLE, LIGHT, SMOKE DETECTOR, OR ANY OTHER 120 VOLT SINGLE PHASE DEVICE SHALL BE SERVED BY AN ARC FAULT BREAKER PER NEC 210.12.
- B. SMOKE DETECTORS LOCATED WITH IN EACH UNIT SHALL BE INTERLOCKED SO THAT ANY DEVICE SENSING SMOKE ACTIVATES ALL SMOKE DETECTORS WITHIN THE UNIT. THE INITIATING SMOKE DETECTOR SHALL BE EQUIPPED WITH A LATCHING ALARM INDICATOR.
- C. ALL GENERAL PURPOSE AND GFI RECEPTACLES LOCATED WITHIN EACH UNIT SHALL BE TAMPER PROOF PER NEC 406.12.
- D. UNLESS NOTED OTHERWISE ALL WIRING SHALL BE 2#12, 1#12G-MC CABLE. NM (ROMEX) WIRING MAY BE USED WHERE ALLOWED BY CODE.
- E. NUMBERING SHOWN AT WIRING DEVICES, LIGHT FIXTURES, AND SMOKE DETECTORS ARE BRANCH CIRCUIT NUMBERS FOR RESPECTIVE PANEL WITH-IN UNIT.
- F. ALL CEILING MOUNTED JUNCTION BOXES SHALL BE RATED TO SUPPORT CEILING FANS WITH LIGHT KITS (50LB MINIMUM).
- G. ALL LIGHT FIXTURES LOCATED IN TRAY CEILING AREAS SHALL BE CENTERED. REFER TO ARCHITECTS REFLECTED CEILING PLANS AS REQUIRED.
- H. PROVIDE NEC REQUIRED WORK SPACE CLEARANCE FOR ALL PANELS AND DISCONNECT SWITCHES.

#### ◆ PLAN NOTES THIS SHEET:

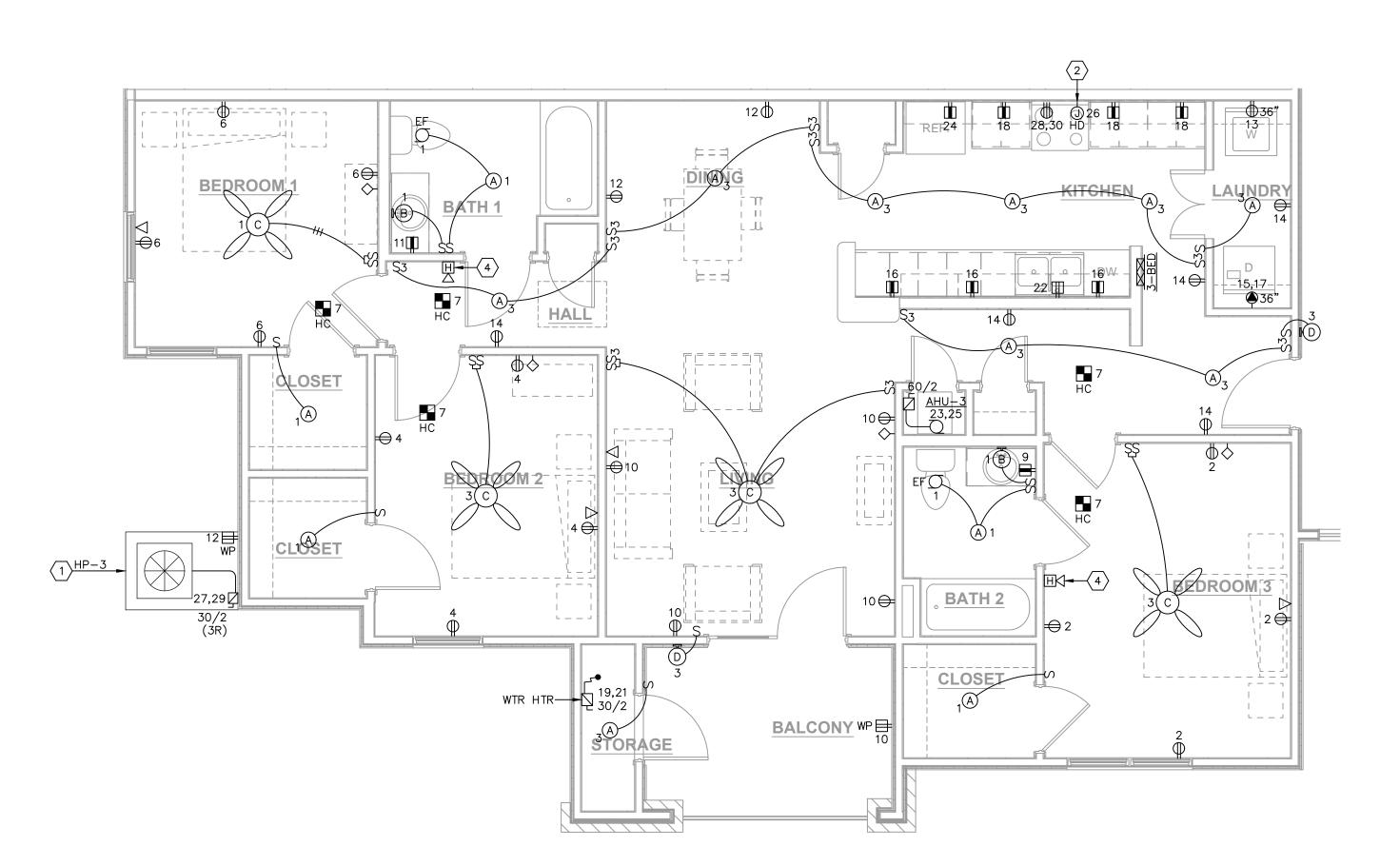
- PROVIDE WEATHERPROOF SEALTITE FLEXIBLE CONDUIT CONNECTION FROM DISCONNECT SWITCH TO HEAT PUMP. CONDUIT SHALL BE ROUTED ADJACENT TO REFRIGERANT PIPING.
- 2. JUNCTION BOX WITH CONNECTION TO HOOD LIGHT AND FAN. VERIFY EXACT LOCATION PRIOR TO ANY ROUGHING.
- 3. SWITCHES FOR HOOD LIGHT AND FAN. VERIFY EXACT LOCATION PRIOR TO
- 4. TYPICAL AT BUILDING 'B' ONLY.

PAN	EL:			PANEL AMPS.		12	25	VOLTAGE:				MOUNTING		FLUSH		
	2 1			MAIN TYPE		M.L	O.	120	/ 240, 1 PHA	SE, 3 WIRE, 6	0 HZ	NEMA RATING		NEMA 1		
	<b>3-</b> l	BED		MAIN BREAKE	R RATING	N	/A	AIC RATING		10,0	000	LOCATION		UNIT		
TYP	E:			SOLID NEUTRA	AL	10	0%	CALC FAUL	T CURRENT:	<10	,000	FED FROM	ME	TER CEN	TER	
	_			GROUND BUS		10	0%	BREAKER F	EATURES:	GFI = GROU	ND FAULT (	CIRCUIT INTERRUPTER; ST = SHUNT	TRIP; <b>TH</b> = T	IE HANDI	.E	
	-	QL								AF - ARC FA	AULT CIRCU	IT INTERRUPTER; LO = LOCK-ON D	EVICE			
	CKT	DDE	NI/ED	10457/05	DECODURTION	14000000	OLCT LOAD	LI	NE	OLCT LOAD	\\!DE 0 7E	DESCRIPTION	LOAD TIPE		LCED	СКТ
	NO	BREA	AKER	LOAD TYPE	DESCRIPTION	WIRESIZE	CKTLOAD	L1	L2	CKTLOAD	WIRESIZE	DESCRIPTION	LOAD TYPE	BREA	KER	NO
	1	20/1	AF	LTG	BEDROOMS, BATHROOM	#12	500	1220		720	#12	BEDROOM	RCPT	20/1	AF	2
	3	20/1	AF	LTG	LIVING, KITCHEN, HALL	#12	500		1220	720	#12	BEDROOM	RCPT	20/1	AF	4
	5	20/1	AF		SPARE			720		720	#12	BEDROOM	RCPT	20/1	AF	6
E	7	15/1	AF	MISC	SMOKE DETECTORS	#12	250		250			SPARE		20/1	AF	8
Z Z	9	15/1		MISC	BATHROOM	#12	180	900		720	#12	LIVING	RCPT	20/1	AF	10
<u>С</u>	11	15/1		MISC	BATHROOM	#12	180		540	360	#12	HALL / DINING	RCPT	20/1	AF	12
0	13	15/1		LAUN	WASHER	#12	1500	1860		360	#12	KITCHEN	RCPT	20/1	AF	14
=	15	30/2		LAUN	DRY ER	#10	2500		3500	1000	#12	APPLIANCE	KIT	20/1	AF	16
ЕС	17	30/2		LAUN	- UKT EK	#10	2500	3500		1000	#12	APPLIANCE	KIT	20/1	AF	18
S	19	30/2		WTR HTR	WATER HEATER	#10	2250		2250			SPARE		15/1	AF	20
Ш Z	21	30/2		WTR HTR	WATER HEATER	#10	2250	3750		1500	#12	DISHWASHER	KIT	15/1	AF	22
0	23	40/2		HTG	INDOOR HVAC UNIT	#8	3912		5352	1440	#12	REFRIGERATOR	KIT	15/1	AF	24
	25	40/2		HTG	INDOON TVAC ONIT	#0	3912	4412		500	#12	HOOD LIGHT, FAN	KIT	15/1		26
	27	30/2		HTG	OUTDOOR HVAC UNIT	#10	1680		6930	5250	3#6,	RANGE	KIT	50/2		28
	29	30/2		HTG	OUTDOOK HVAO UNIT	#10	1680	6930		5250	1#10G	IVANOL	KIT	3012		30
						PHA	SE TOTALS	23292	20042							

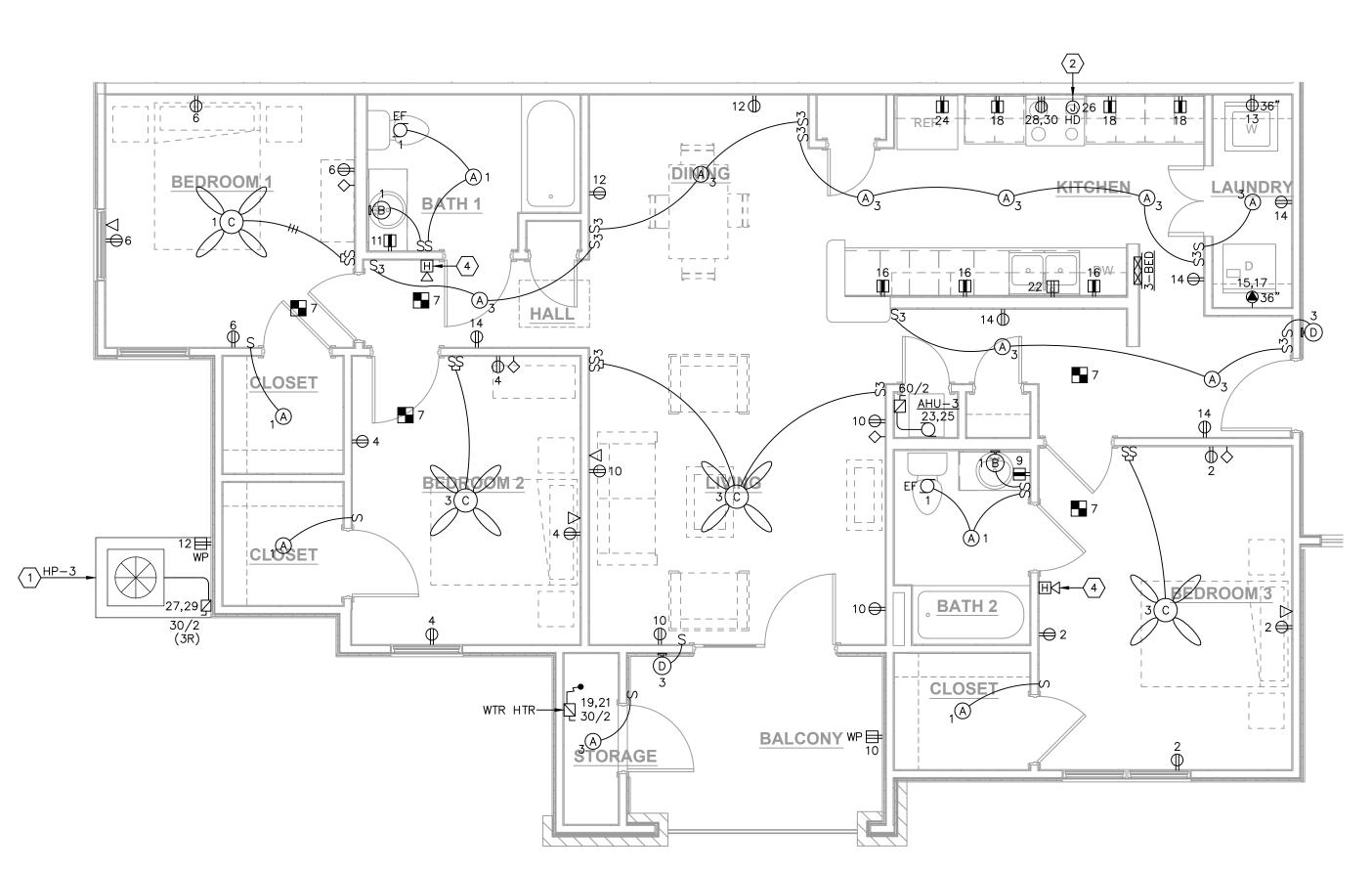


# 3 BED HC UNIT PLAN - ELECTRICAL

SCALE: 1/8" = 1'-0"



3 BED SENSORY UNIT PLAN - ELECTRICAL SCALE: 1/8" = 1'-0"



3 BED UNIT PLAN - ELECTRICAL

SCALE: 1/8" = 1'-0"

SHEET NUMBER E06

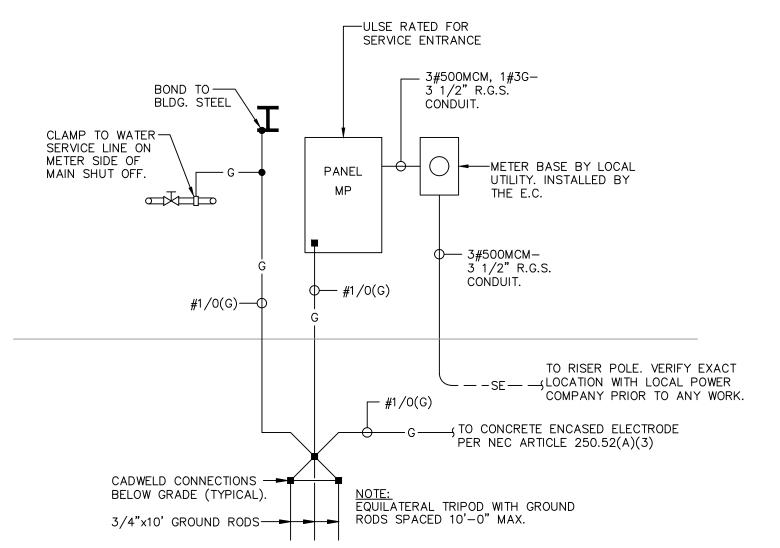
900 E Barton Ave, West Memphis, AR 72301

11/20/18 PERMIT SET

PROJECT NUMBER

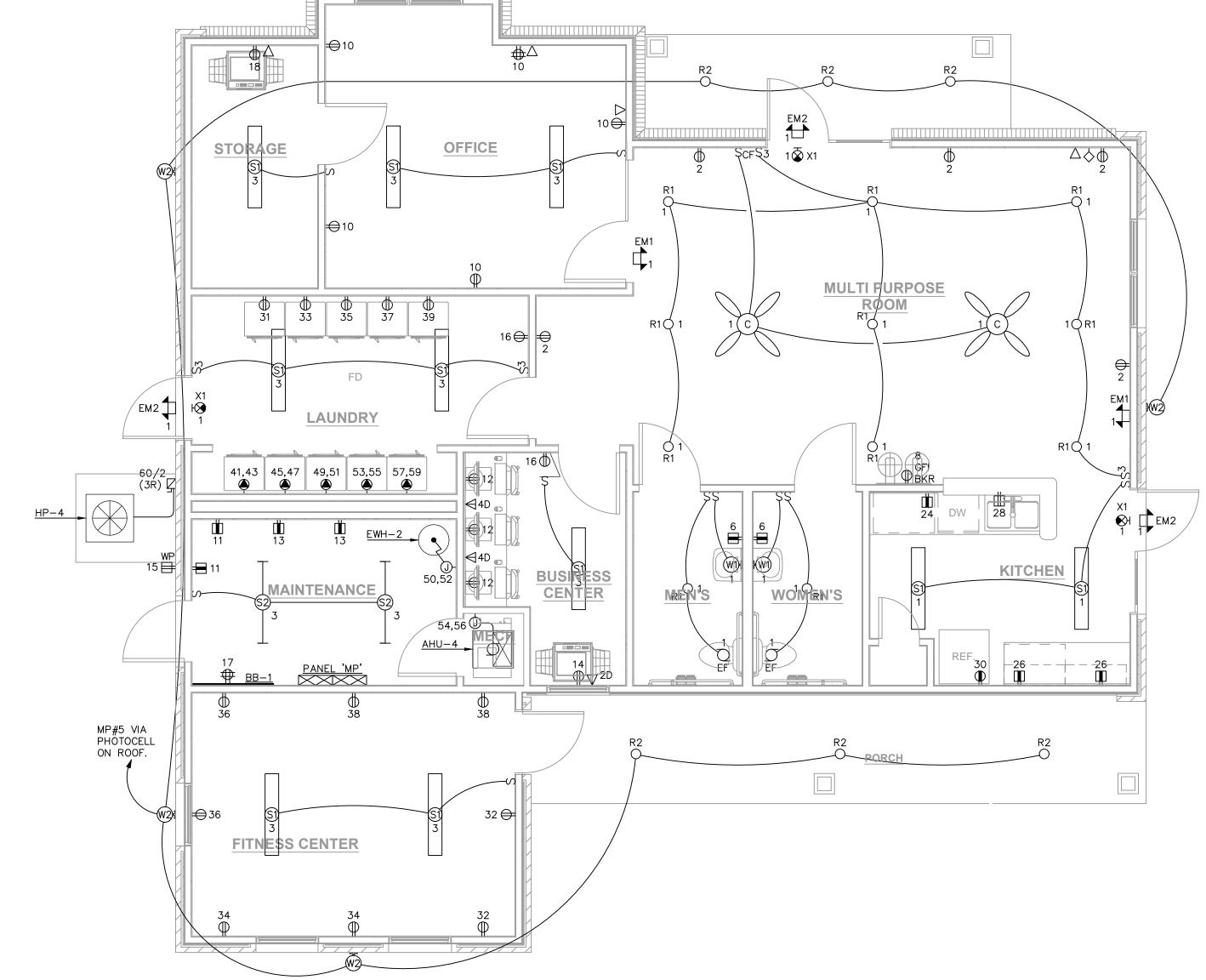
The Park At Barton

597



# SINGLE LINE DIAGRAM - COMMUNITY BUILDING

PANE	<b>1</b> .		PANEL AMPS.		. 4	00	VOLTAGE:				MOUNTING		SURFAC	E	
	N	ИP	MAIN TYPE		. MAIN	BKR	120	240, 1 PHA	SE, 3 WIRE, 6	60 HZ	NEWA RATING		NEMA 1		
		VIF	MAIN BREAKE	RATING	. 4	00	AIC RATING		42,	,000	LOCATION	. MAIN	TENANCE	ROOM	1
TYPE	Ē		SOLID NEUTRA	AL	. 10	0%	CALC FAUL	T CURRENT:	-		FED FROM	SERVIC	ETRANS	FORME	R
	_		GROUND BUS		10	0%	BREAKER F	EATURES:	GFI = GROU	JND FAULT (	CIRCUIT INTERRUPTER; ST = SHUN	IT TRIP; <b>TH</b> = T	IE HAND	LE	
	В	BQL							AF - ARC F	AULT CIRCU	T INTERRUPTER; $LO = LOCK-ONI$	DEVICE			
	CKT NO	BREAKER	LOADTYPE	DESCRIPTION	WIRESIZE	CKTLOAD		VE	CKTLOAD	WIRESIZE	DESCRIPTION	LOAD TYPE	BREA	KER	CK
							L1	L2						I	
	1	20/1	LTG	MULTI-PURPOSE ROOM	#12	1450	2170		720	#12	MULTIPURPOSE ROOM	RCPT	20/1		2
	3	20/1	LTG	LOBBY, OFFICE	#12	825		1545	720	#12	MULTIPURPOSE ROOM	RCPT	20/1		4
	5	20/1	LTG	EXTERIOR	#12	900	1620		720	#12	KITCHEN RESTROOM	RCPT	20/1		6
	7	20/1		SPARE				250	250	#12	WATER COOLER	MISC	20/1	GFI	8
ш	9	20/1		SPARE			1080		1080	#12	OFFICE	RCPT	20/1		10
0	11	20/1	RCPT	MAINTENANCE	#12	540		1080	540	#12	BUSINESS CENTER	RCPT	20/1		1:
z	13	20/1	RCPT	MAINTENANCE	#12	540	1540		1000	#12	BUSINESS CENTER COPIER	MISC	20/1		1
0	15	20/1	RCPT	MAINTENANCE	#12	540		1080	540	#12	BUSINESS CENTER, LAUNDRY	RCPT	20/1		1
CT	17	20/1	RCPT	TELEPHONE BACKBOARD	#12	360	1360		1000	#12	OFFICE COPIER	MISC	20/1		1
SEC	19	20/1		SPARE				0			SPARE		20/1		2
U)	21	20/1		SPARE			0				SPARE		20/1		2
	23	20/1		SPARE				750	750	#12	APPLIANCE	KIT	20/1		2
	25	20/1		SPARE			1500		1500	#12	APPLIANCE	KIT	20/1		20
ŀ	27	20/1	MISC	GAZEBO	#8	500		1700	1200	#12	DISHWASHER	KIT	20/1		2
ľ	29	20/1	MISC	MAIL KIOSK	#8	500	1250		750	#12	REFRIGERA TOR	KIT	20/1		30
	31	20/1	LAUN	WASHER	#12	1200		2200	1000	#12	FITNESS ROOM	MISC	20/1		3:
	33	20/1	LAUN	WASHER	#12	1200	2200		1000	#12	FITNESS ROOM	MISC	20/1		3
ŀ	35	20/1	LAUN	WASHER	#12	1200		2200	1000	#12	FITNESS ROOM	MISC	20/1		3
	37	20/1	LAUN	WASHER	#12	1200	2200		1000	#12	FITNESS ROOM	MISC	20/1		3
0	39	20/1	LAUN	WASHER	#12	1200		1200			SPACE				4
>	41		LAUN		3#10,	2500	2500				SPACE				4:
<b>-</b>	43	30/2	LAUN	DRYER	1#10G-1"C.	2500		2500			SPACE				44
Z 0	45		LAUN		3#10,	2500	2500				SPACE				40
<u>-</u>	47	30/2	LAUN	DRYER	1#10G-1"C.	2500		2500			SPACE				4
E C	49		LAUN		3#10,	2500	11500		9000	3#6,		WTR HTR			5
S	51	30/2	LAUN	DRYER	1#10G-1"C.	2500		11500	9000	1#10G-1"C.	WATER HEATER	WTRHTR	50/2		5
-	53		LAUN		3#10,	2500	11000	11000	8500	3#2, 1#8G		HTG			5
ŀ	55	30/2	LAUN	DRYER	3#10, 1#10G-1"C.	2500	11000	11000	8500	1 1/2"C.	INDOOR HVAC UNIT	HTG	90/2		5
	57		LAUN			2500	6220	11000	3720			HTG			5
-		30/2		DRYER	3#10, 1#10G-1"C.		0220	6220	3720	3#6, 1#10G-1"C.	OUTDOOR HVAC UNIT	HTG	50/2		
	59		LAUN			2500 SE TOTALS	48640	6220 45725	3/20	.,, 100 1 0.		HIG			6



# COMMUNITY BUILDING PLAN - ELECTRICAL

#### **GENERAL NOTES THIS SHEET:**

A. UNLESS NOTED OTHERWISE, ALL BRANCH CIRCUITS SHOWN SHALL HOMERUN TO PANEL

- B. ALL EXIT SIGNS AND EMERGENCY LIGHTS SHALL BE CONNECTED TO THE CIRCUIT SHOWN AHEAD OF THE SWITCHLEG FOR CONTINUOUS POWER.
- C. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE ARCHITECTS REFLECTED PLAN FOR EXACT LOCATION OF EACH FIXTURE. DO NOT SCALE DRAWINGS FOR FIXTURE PLACEMENT.
- D. UNLESS NOTED OTHERWISE ALL WIRING SHALL BE 2#12, 1#12G-MC CABLE.
- E. PROVIDE NEC REQUIRED WORK SPACE FOR PANELS AND DISCONNECT SWITCHES.
- F. PROVIDE NAME PLATE SECURED TO EACH DISCONNECT SWITCH IDENTIFYING UNIT IDENTIFICATION, PANEL, CIRCUIT NUMBER(S), AND BREAKER SIZE. VERIFY EXACT LOCATION OF EACH WITH THE MECHANICAL AND PLUMBING CONTRACTOR(S) PRIOR TO

#### ◆ PLAN NOTES THIS SHEET:

- 1. HP RATED, NEMA 3R, LOCKABLE SWITCH.
- 2. WEATHERPROOF, 1 HOUR ROTARY TYPE TIMER SWITCH.

The Park At Barton

PROJECT NUMBER

11/20/18 PERMIT SET

900 E Barton Ave, West Memphis, AR 72301

SHEET NUMBER

E07 CAD FILE NUMBER

BUS STOP PLAN - ELECTRICAL

TO COMMUNITY BUILDING PANEL MP#27. PROVIDE 2#8, 1#10G-3/4"C. TO 20/1 BREAKER.

TO COMMUNITY BUILDING PANEL MP#29 VIA
PHOTOCELL ON ROOF. PROVIDE 2#8, 1#10G-3/4"C. TO 20/1 BREAKER. CONNECT RECEPTACLE AHEAD OF PHOTOCELL.

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

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

(S1)

CONSULTING

Date: Nov 21, 2018

Time: 7:40:32 am

HERRINGTON ARCHITECTS

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CONSTRUCTION

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CCE No. 18HAP10

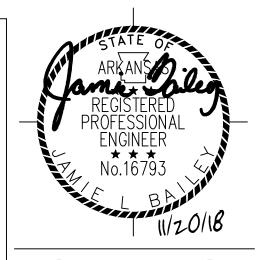
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SCALE: 1/4" = 1'-0"

TO COMMUNITY BUILDING PANEL MP#25 VIA PHOTOCELL ON ROOF. PROVIDE 2#8, 1#10G-3/4"C. TO 20/1 BREAKER

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







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PANEL:				PANEL AMPS.		100		VOLTAGE				MOUNTING	:	SURFACE	
HP*				MAIN TYPE		M.L.O.		120 / 240, 1 PHASE, 3 WIRE, 60 HZ				NEWA RATING		NEMA 3R	
				MAIN BREAKE	100%		A IC RATING		000	LOCATION					
TYPE	TYPE:			SOLID NEUTRA					<10,000				FED FROM		
				GROUND BUS.			BREAKER FEATURES: GFI = GROUND FAULT			IND FAULT C	CIRCUIT INTERRUPTER; ST = SHUNT TRIP; TH = TIE HANDLE				
PQL								AF - ARC FAULT CIRCUIT INTERRUPTER; LO = LOCK-ON DEVICE							
	CKT BREAKER		VED	LOADTYPE	DESCRIPTION	WIDE CIZE	CKTLOAD	LINE		CKTLOAD	MIDE CIZE	DESCRIPTION	LOAD TYPE	BREAKER	CKT
	NO	DRE	NEX.	LOAD IT PE	DESCRIPTION	TION WIRE SIZE CKT LOAD L1 L2 CKT LOAD WIRE SIZE	DESCRIPTION	LOAD IT PE	DREANER	NO					
	1	20/1		LTG	BREEZEWAY LIGHTS	#12	500	1500		1000	#12	SPRINKLER RISER ROOM HEATER	HTG	20/2	2
SECTION PANEL	3	20/1		MISC	SPRINKLER ROOM LTS, RCPT	#12	500		1500	1000	#12	SPRINKLER RISER ROOM HEATER	HTG	20/2	4
	5	20/1	LO	MISC	FIRE A LARM CONTROL PANEL	#12	250	1250		1000	#8	SITE LIGHTING	LTG	20/2	6
	7	20/1			SPARE				1000	1000	#0	SITE LIGHTING	LTG	20/2	8
CTIC	9	20/1			SPARE			1000		1000	#8	SITE LIGHTING	LTG	20/2	10
ONE SE	11	20/1			SPARE				1000	1000	#0	SHELIGHTING	LTG	20/2	12
	13				SPACE			1000		1000	#8	SITE LIGHTING	LTG	20/2	14
	15				SPACE				1000	1000	#0	SITE LIGHTING	LTG	2012	16
	17				SPACE			0							18
PHA SE TOTALS									4500						

ROOF

MC-A TYPE:  METER CENTER				MAIN BREAKER RATING	800 AMP	BUSS RATING:	800	AMP	MOUNTING:	WALL MOUNTED	
				MAIN LUGS ONLY	N/A	VOLTS:	120 / 240 3 WIRE, 60 HZ 22,000		ENCLOSURE	NEMA 3R EXTERIOR PAD MOUNT TRANSFORMER	
				SOLID NEUTRAL	100%	1 PHASE,			LOCATION:		
			₹	GROUND BUS	100%	AIC RATING:			FED FROM:		
METED	CIRCUIT BREAKER			FEEDER SIZE NO. & SIZE	LOAD DESCRIPTION		CONN.	DESIGN	DESIGN		
METER NO.	AMPS	POLE	VOLTS	('SER'CABLE WITH COPPER	UNIT TY PE	UNIT NUMBER	kVA (Note 1)	kVA (Note 3)	AMPS (Note 5)	NOTES	
1	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET	
2	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET	
3	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET	
4	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET	
5	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET	
6	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET	
7	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET	
8	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET	
9	100	2	240	3#2, 1#8G	HOUSE PANEL		10.00	10.00	41.67	125 AMP METER SOCKET	
				TOTAL LOADS		333.90 (Note 2)	149.28 (Note 4)	<b>621.98</b> (Note 6)			

1 CONNECTED KVA IS THE SUM OF PART 'A' AND PART 'B' 100% COOLING LOAD TAKEN FROM THE SINGLE DWELLING UNIT LOAD CALCULATION. 2 TOTAL CONNECTED KVA IS THE SUM OF THE CONNECTED KVA FOR ALL APARTMENTS SERVED BY THIS METER CENTER.

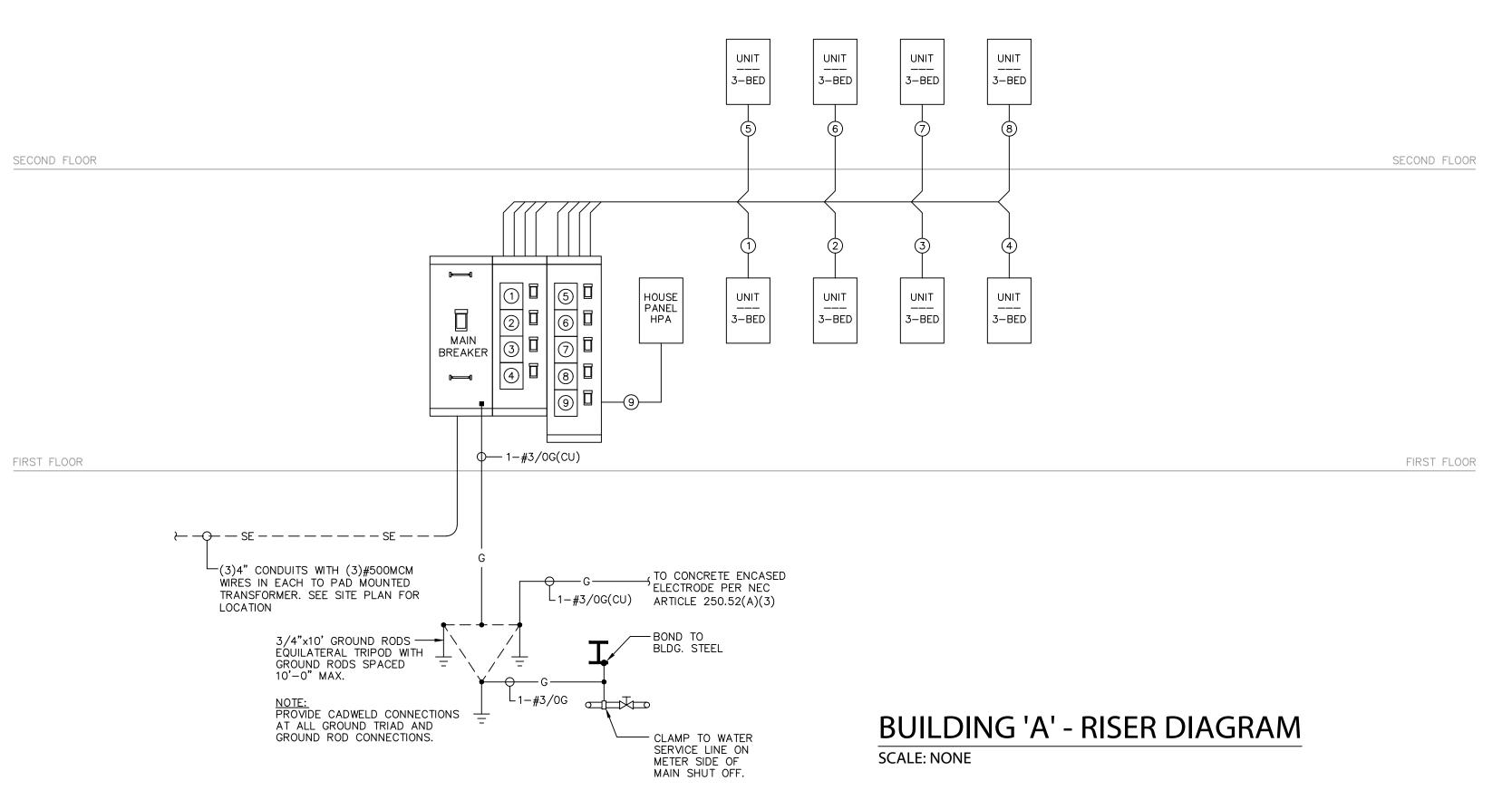
3 DESIGN KVA IS THE SUM OF PART 'A' PARTIAL DEWAND AND PART 'B' A/C LOAD TAKEN FROM THE SINGLE UNIT LOAD CALCULATION. TOTAL DESIGN KVA IS THE SUM OF THE DESIGN KVA FOR ALL APARTMENTS SERVED BY THIS METER CENTER MULTIPLIED BY THE DEMAND FACTOR FROM

TABLE 220-84 OF THE NEC PLUS THE TOTAL LOAD OF THE HOUSE PANEL.

5 DESIGN AMPS IS CALCULATED USING THE DESIGN KVA AND SERVICE VOLTAGE TO THE APARTMENT (120/240. 1 PHASE, 3 WIRE) TOTAL DESIGN AMPS IS CALCULATED USING THE TOTAL CONNECTED KVA AND SERVICE VOLTAGE TO THE METER CENTER (120/240, 1 PHASE, 3 WIRE)

MULTIPLIED BY THE DEMAND FACTOR FROM TABLE 220-84 OF THE NEC

FEEDERS ARE SIZED FOR COPPER CONDUCTORS AT 75°C. ALUMINUM CONDUCTORS MAY BE USED AT THE CONTRACTORS OPTION. CONDUCTORS SHALL BE UPSIZED AS REQUIRED TO MEET THE AMPACITY OF THE FEEDER.



ROOF

11/20/18 PERMIT SET

PROJECT NUMBER

597

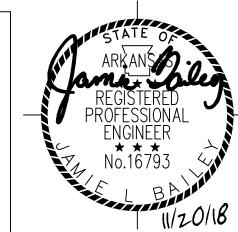
The Park At Barton

900 E Barton Ave, West Memphis, AR 72301

SHEET NUMBER

E08





HERRINGTON ARCHITECTS

101 Richard Arrington Jr. Blvd. S.
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T 205.326.1131 F 205.326.1164
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MC-B1				MAIN BREAKER RATING	1000 AMP	BUSS RATING:	1000	AMP	MOUNTING:	WALL MOUNTED
				MAIN LUGS ONLY	NA	VOLTS:	120 / 240		ENCLOSURE:	: NEMA 3R
YPE:				SOLID NEUTRAL	100%	1 PHASE, 3 WIRE, 60 HZ		LOCATION:	EXTERIOR	
METER CENTER				GROUND BUS	100%	100% AIC RATING:		22,000		PAD MOUNT TRANSFORMER
	CIRCUIT BREAKER			FEEDER SIZE NO. & SIZE	LOAD DESCRIPTION		CONN.	DESIGN	DESIGN	
METER NO.			VOLTS	('SER'CABLE WITH COPPER	UNIT TY PE	UNIT NUMBER	kVA (Note 1)	kVA (Note 3)	AMPS (Note 5)	NOTES
1	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
2	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
3	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
4	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
5	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
6	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
7	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
8	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
9	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
10	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
11	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
12	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
13	100	2	240	3#2, 1#8G	HOUSE PANEL		10.00	10.00	41.67	125 AMP METER SOCKET
					TOTAL	LOADS	495.84	209.20	871.65	
					IOIAL	LOADS	(Note 2)	(Note 4)	(Note 6)	

MULTIPLIED BY THE DEMAND FACTOR FROM TABLE 220-84 OF THE NEC

PANEL:

5 20/1

7 20/1

9 20/1

11 20/1

PANEL AMPS...

SOLID NEUTRAL

GROUND BUS...

LOAD TYPE

MAIN BREAKER RATING..

LTG BREEZEWAY LIGHTS

SPARE

SPACE

SPACE

SPACE

SPRINKLER ROOM LTS, RCPT

FIRE A LARM CONTROL PANEL

MAIN TYPE...

MOUNTING ..

LOCATION...

FED FROM...

BREAKER FEATURES: GFI = GROUND FAULT CIRCUIT INTERRUPTER; ST = SHUNT TRIP; TH = TIE HANDLE AF - ARC FAULT CIRCUIT INTERRUPTER; LO = LOCK-ON DEVICE

#12 SPRINKLER RISER ROOM HEATER

120 / 240, 1 PHASE, 3 WIRE, 60 HZ

<10,000

1000

1000

AIC RATING....

1250

0

PHASE TOTALS 4750

ROOF

CALC FAULT CURRENT:

1500

1000

1000

4500

100%

WIRE SIZE | CKT LOAD |

#12

NEMA RATING..

SURFACE

NEMA 3R

**EXTERIOR** METER CENTER

BUILDING 'B' MC-B1 - RISER DIAGRAM

SCALE: NONE

LTG

LTG

LTG LTG

LTG

LTG

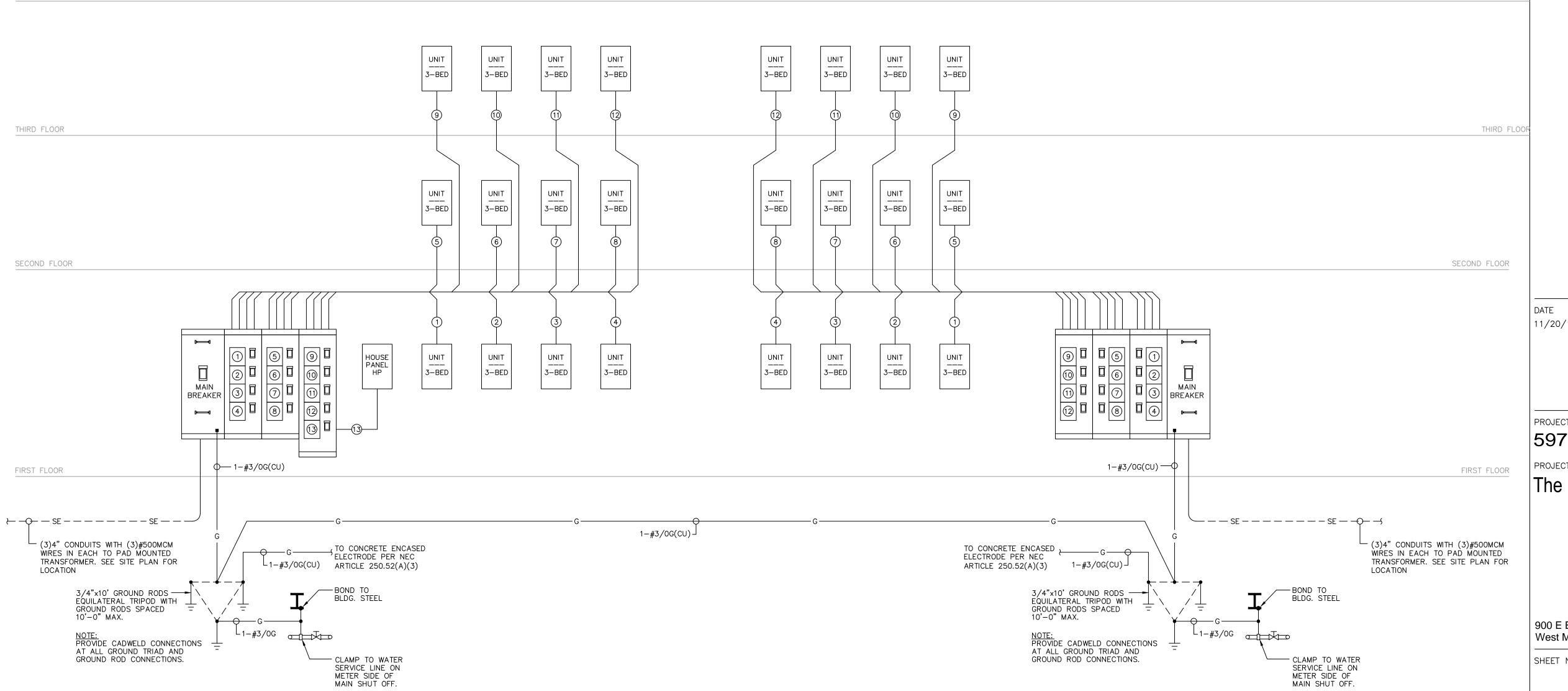
- CONNECTED KVA IS THE SUM OF PART 'A' AND PART 'B' 100% COOLING LOAD TAKEN FROM THE SINGLE DWELLING UNIT LOAD CALCULATION.
- 2 TOTAL CONNECTED KVA IS THE SUM OF THE CONNECTED KVA FOR ALL APARTMENTS SERVED BY THIS METER CENTER. 3 DESIGN KVA IS THE SUM OF PART 'A' PARTIAL DEMAND AND PART 'B' A/C LOAD TAKEN FROM THE SINGLE UNIT LOAD CALCULATION.
- TOTAL DESIGN KVA IS THE SUM OF THE DESIGN KVA FOR ALL A PARTMENTS SERVED BY THIS METER CENTER MULTIPLIED BY THE DEMAND FACTOR FROM
- TABLE 220-84 OF THE NEC PLUS THE TOTAL LOAD OF THE HOUSE PANEL.
- DESIGN AMPS IS CALCULATED USING THE DESIGN KVA AND SERVICE VOLTAGE TO THE APARTMENT (120/240. 1 PHASE, 3 WIRE) TOTAL DESIGN AMPS IS CALCULATED USING THE TOTAL CONNECTED KVA AND SERVICE VOLTAGE TO THE METER CENTER (120/240, 1 PHASE, 3 WIRE)
- FEEDERS ARE SIZED FOR COPPER CONDUCTORS AT 75°C. ALUMINUM CONDUCTORS MAY BE USED AT THE CONTRACTORS OPTION. CONDUCTORS SHALL BE UPSIZED AS REQUIRED TO MEET THE AMPACITY OF THE FEEDER.

METER NO. A  1 2 3 4 5 6 7		<b>ENTER</b> JIT BREA		MAIN BREAKER RATING  MAIN LUGS ONLY  SOLID NEUTRAL  GROUND BUS  FEEDER SIZE NO. & SIZE  ('SER'CABLE WITH COPPER	1000 AMP N/A 100% 100%	BUSS RATING: VOLTS: 1 PHASE, AIC RATING:	120 /	HZ	MOUNTING: ENCLOSURE: LOCATION: FED FROM:	WALL MOUNTED  NEMA 3R  EXTERIOR  PAD MOUNT TRANSFORMER
METER NO. A  1 2 3 4 5 6 7	CIRCU	<b>ENTER</b> JIT BREA	KER	SOLID NEUTRA L	100% 100%	1 PHASE, 3 AIC RATING:	3 WIRE, 60	HZ	LOCATION:	EXTERIOR
METER NO. A  1 2 3 4 5 6 7	CIRCU	JIT BREA	KER	GROUND BUS  FEEDER SIZE NO. & SIZE	100%	AIC RATING:	,			Second (Sr (Coronia), Col (10) (C to)
METER NO. A  1 2 3 4 5 6 7	CIRCU	JIT BREA	KER	FEEDER SIZE NO. & SIZE			22,	000	FED FROM:	PAD MOUNT TRANSFORMER
NO. A  1 2 3 4 5 6 7	AMPS				LOAD DE	SCRIPTION				
NO. A  1 2 3 4 5 6 7		POLE	VOLTS			LOAD DESCRIPTION		DESIGN	DESIGN	
2 3 4 5 6 7	125			CONDUCTORS)	UNIT TY PE	UNIT NUMBER	kVA (Note 1)	kVA (Note 3)	AMPS (Note 5)	NOTES
3 4 5 6 7		2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
4 5 6 7	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
5 6 7	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
6 7	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
7	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
8	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
9	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
10	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
11	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
12	125	2	240	3#1, 1#6G	3-BED		40.49	28.24	117.68	125 AMP METER SOCKET
OTES:					TOTAL	LOADS	<b>485.84</b> (Note 2)	<b>199.20</b> (Note 4)	<b>829.98</b> (Note 6)	

BUILDING 'B' MC-B2 - RISER DIAGRAM

SCALE: NONE

- 1 CONNECTED KVA IS THE SUM OF PART 'A' AND PART 'B' 100% COOLING LOAD TAKEN FROM THE SINGLE DWELLING UNIT LOAD CALCULATION.
- 2 TOTAL CONNECTED KVA IS THE SUM OF THE CONNECTED KVA FOR ALL APARTMENTS SERVED BY THIS METER CENTER. 3 DESIGN KVA IS THE SUM OF PART 'A' PARTIAL DEMAND AND PART 'B' A/C LOAD TAKEN FROM THE SINGLE UNIT LOAD CALCULATION.
- TOTAL DESIGN KVA IS THE SUM OF THE DESIGN KVA FOR ALL A PARTMENTS SERVED BY THIS METER CENTER MULTIPLIED BY THE DEMAND FACTOR FROM
- TABLE 220-84 OF THE NEC PLUS THE TOTAL LOAD OF THE HOUSE PANEL.
- 5 DESIGN AMPS IS CALCULATED USING THE DESIGN KVA AND SERVICE VOLTAGE TO THE APARTMENT (120/240. 1 PHASE, 3 WIRE) TOTAL DESIGN AMPS IS CALCULATED USING THE TOTAL CONNECTED KVA AND SERVICE VOLTAGE TO THE METER CENTER (120/240, 1 PHASE, 3 WIRE)
- MULTIPLIED BY THE DEMAND FACTOR FROM TABLE 220-84 OF THE NEC
- FEEDERS ARE SIZED FOR COPPER CONDUCTORS AT 75°C. ALUMINUM CONDUCTORS MAY BE USED AT THE CONTRACTORS OPTION. CONDUCTORS SHALL BE UPSIZED AS REQUIRED TO MEET THE AMPACITY OF THE FEEDER.



11/20/18 PERMIT SET

PROJECT NUMBER

The Park At Barton

900 E Barton Ave,

West Memphis, AR 72301

SHEET NUMBER

E09