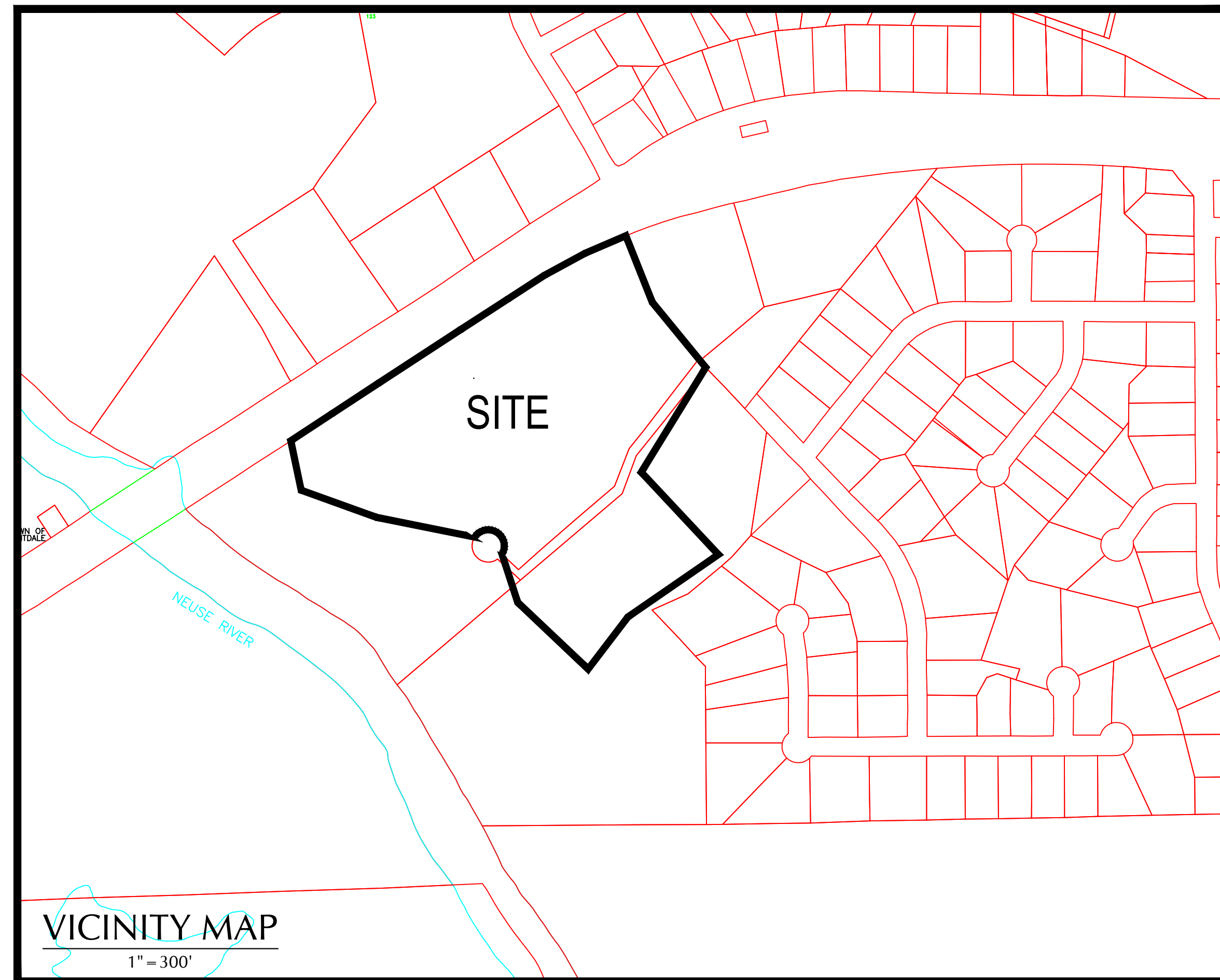
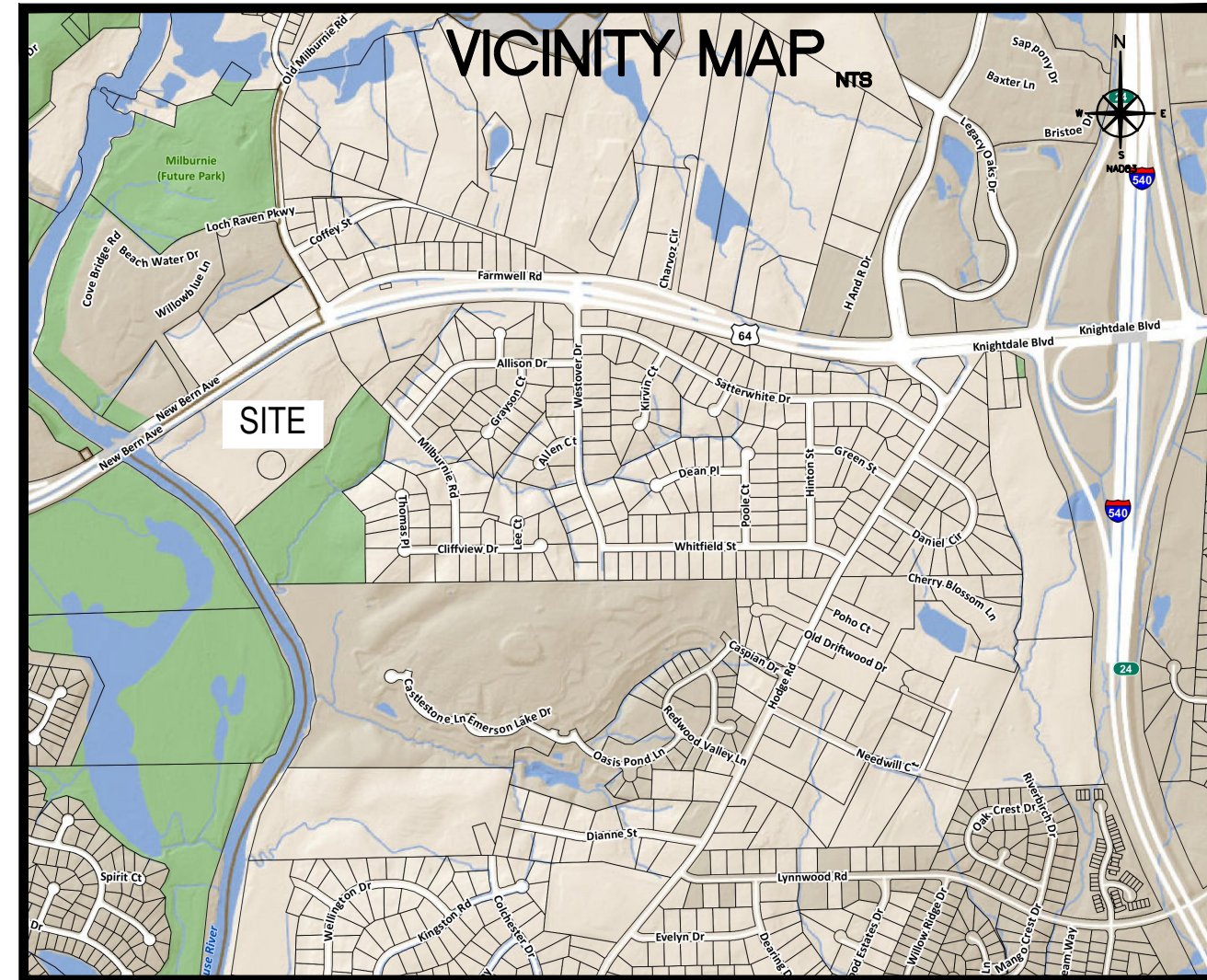


# MASTER PLAN SUBMITTAL

# RIVERS EDGE APARTMENTS

## KNIGHTDALE, NORTH CAROLINA



Sheet List Table	
Sheet Number	Sheet Title
--	COVER
C1.0	EXISTING CONDITIONS
C1.1	EXISTING CONDITIONS-OUTFALL
C2.0	OVERALL SITE PLAN
C2.1	DETAIL SITE PLAN NORTH
C2.3	DETAIL SITE PLAN SOUTH
C2.4	SITE BOUNDARY TABLE-INTERSECTION IMPROVEMENTS
C2.5	OVERALL SITE STRIPING AND SIGNAGE PLAN
C3.1	UTILITY PLAN NORTH
C3.2	UTILITY PLAN SOUTH
C3.3	SEWER OUTFALL
C5.1	DETAIL GRADING NORTH & STORMWATER MANAGEMENT PLAN
C5.2	DETAIL GRADING SOUTH & STORMWATER MANAGEMENT PLAN
C6.0	REQUIRED PLANTING PLAN-BY DRG. PA
C6.1	REQUIRED PLANTING CALCULATIONS AND DETAILS-BY DRG. PA
C6.2	REQUIRED BMP PLANTING PLANS-BY DRG. PA
L1.0	OVERALL LIGHTING PLAN
L1.1	LIGHTING PLAN - NORTH
L1.2	LIGHTING PLAN - SOUTH

SEE ARCHITECTURAL COVER FOR ARCHITECTURAL SHEET LIST

### OWNER

PARKWAY PROPERTIES GROUP, LLC  
 1000 DARRINGTON DR STE 105  
 CARY, NC 27513  
 919-462-0775  
 KYLE WARD

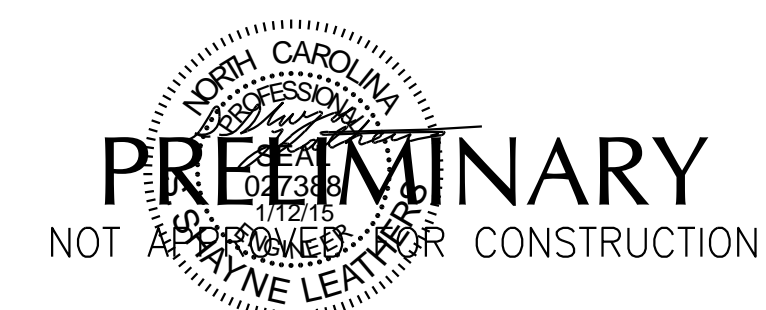
### DEVELOPER

SYMPHONY PROPERTIES  
 103 TORREY PINES DRIVE  
 CARY, NC 27513  
 919-349-8915  
 BLAIR BOOTH

### PREPARED BY:

**WITHERS & RAVENEL**  
 ENGINEERS | PLANNERS | SURVEYORS

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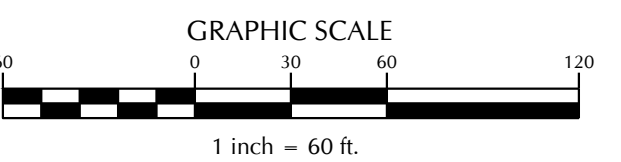
DATE  
 SUBMITTAL 1: JANUARY 12, 2015

US HIGHWAY 64 BUSINESS  
 (148' PUBLIC R/W)  
 NC DOT R/W MAP  
 PROJECT NO. B 14677  
 SHEET NO. 4



TOWN OF KNIGHTDALE  
 D.B. 7977, PG. 915  
 PIN NO.  
 1734.04-73-9691  
 ZONING OSP

**PRELIMINARY**  
 NOT APPROVED FOR CONSTRUCTION



- LEGEND:
- IRON PIPE FOUND ○
  - CONC. MONUMENT FOUND □
  - SEWER MANHOLE ⊙
  - POWER POLE ⊗
  - FIRE HYDRANT \*

No.	Revision	Date	By

Designer	Scale
Drawn By	Date
Checked By	Job No.
	05/05/2014

**RIVERS EDGE APARTMENTS**  
 Knightdale Wake County North Carolina

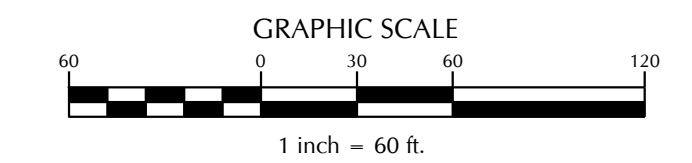
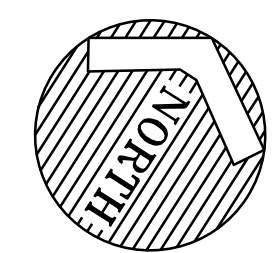
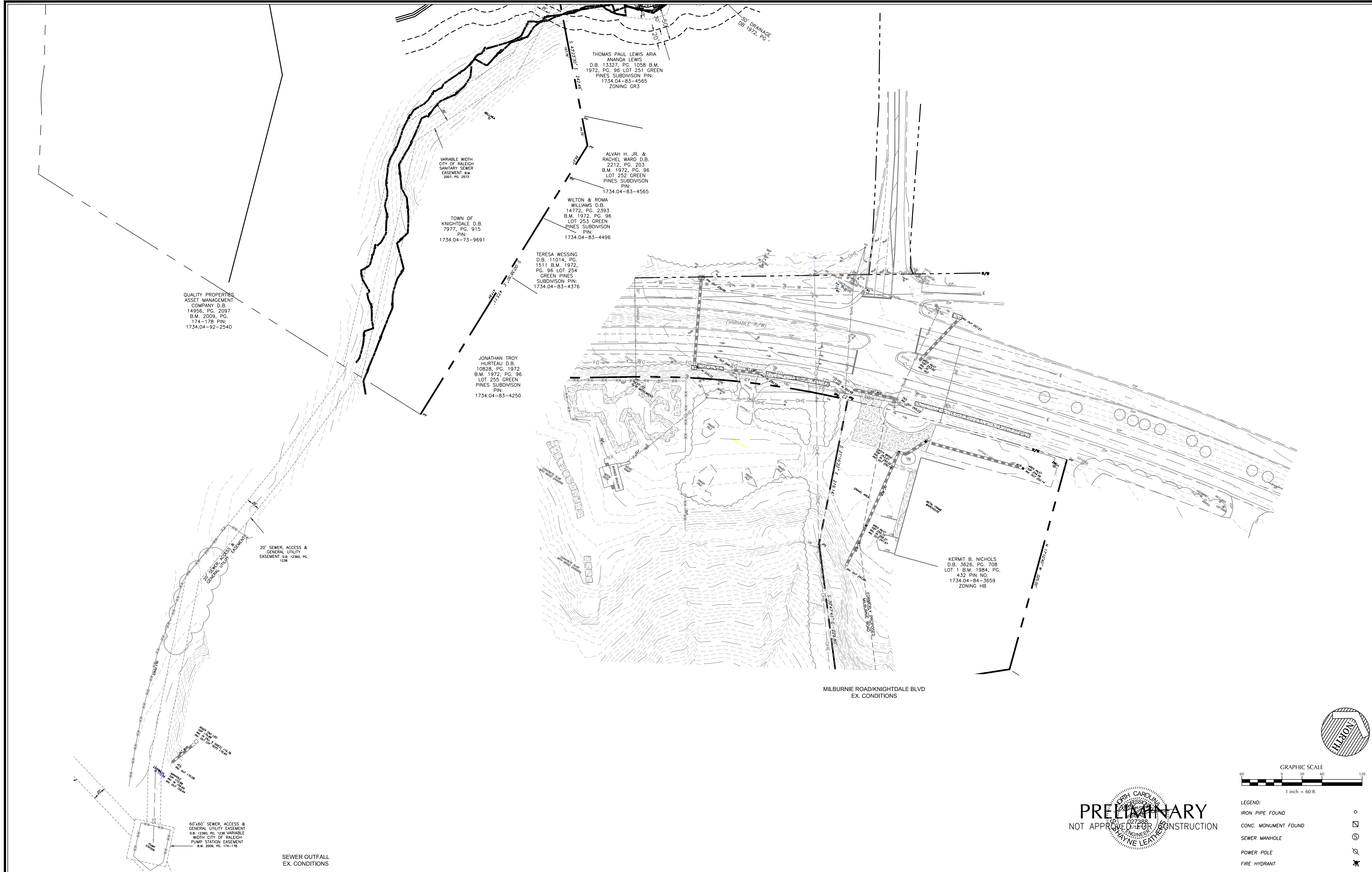
**EXISTING CONDITIONS**

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Sheet No. **C1.0**

K:\14-14-0120\140126-Rivers Edge Apartments\CAD\SWEE B\DWG\Sheet 01-Cadding Conditions.dwg - Monday, January 12, 2015 11:38:37 AM - LEIFHEES, SHANE

K:\14\14-0120\140126-Rivers Edge Apartments\CAD\Sheet 01-Existing Conditions.dwg - Monday, January 12, 2015 11:38:35 AM - LEWIS, SHANE



- PRELIMINARY**  
NOT APPROVED FOR CONSTRUCTION
- LEGEND:
- IRON PIPE FOUND
  - CONC. MONUMENT FOUND
  - SEWER MANHOLE
  - POWER POLE
  - FIRE HYDRANT

No.	Revision	Date	By

Designer	Scale
Drawn By	Date
Checked By	Job No.

**RIVERS EDGE APARTMENTS**

Knightdale Wake County North Carolina

**EXISTING CONDITIONS-OUTFALL**

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Sheet No.  
**C1.1**

**SITE DATA**

**MAIN PARCEL**  
 PIN NO: 1734.04-74-6123  
 REAL ESTATE ID: 0119120  
 DEED BOOK/PAGE: 11743 / 0360  
 TOWNSHIP: ST. MATHEWS  
 COUNTY: WAKE  
 STATE: NC  
 ZONING: HB (HIGHWAY BUSINESS)  
 REZONING TO: OSP (OPEN SPACE PRESERVE)  
 NMX-CD (NEIGHBORHOOD MIXED-USE - CONDITIONAL)  
 OSP (OPEN SPACE PRESERVE)

DEEDED AREA: 21.369 AC

**TOWN OF KNIGHTDALE PROPERTY**  
 PIN NO: 1734.04-73-9691  
 REAL ESTATE ID: 0097726  
 DEED BOOK/PAGE: 00797700915  
 TOWNSHIP: ST. MATHEWS  
 COUNTY: WAKE  
 STATE: NC  
 ZONING: OSP (OPEN SPACE PRESERVE)  
 NMX-CD (NEIGHBORHOOD MIXED-USE - CONDITIONAL)  
 OSP (OPEN SPACE PRESERVE)

DEEDED AREA: 18.08 AC

ROW DEDICATED MILBURNIE ROAD EXTENSION 0.87 AC  
 EXISTING EASEMENT 1.13 AC  
 ROW DEDICATED ROAD A 0.31 AC  
 MAIN PARCEL (74-6123) 0.82 AC  
 KNIGHTDALE PARCEL (73-691) 1.83 AC  
 OUTPARCEL 6.78 AC  
 TRACT A-LAND SWAP PARK AREA 3.59 AC  
 TRACT B-SOUTH APARTMENT PARCEL 12.66 AC  
 TRACT C-NORTH APARTMENT PARCEL 0.72 AC  
 TRACT D-EX WELL PARCEL 10.78 AC  
 TRACT E-SOUTH PARK AREA 2.74 AC  
 TRACT F-KNIGHTDALE POOL AREA

MAXIMUM BUILDING HEIGHT 65'-9"

**CONSTRUCTION TYPE-VA**

NUMBER OF BEDROOMS  
 1 BEDROOM-150 UNITS  
 2 BEDROOM 138 UNITS  
 3 BEDROOM 14 UNITS  
 TOTAL 302 UNITS, 468 BEDROOMS

**PARKING**  
 1 PER BEDROOM MIN, 2 PER UNIT MAX.  
 468 PARKING SPACES MINIMUM  
 604 PARKING SPACES MAXIMUM  
 PROVIDED 474 SPACES  
**COVERED PARKING**  
 10% APARTMENT UNITS, 302 @10%=30 UNITS  
 COVERED PROVIDED 30 SPACES (GARAGE)

**HANDICAP PARKING**  
 9 SPACES REQUIRED  
 13 SPACES PROVIDED  
 1/6 REQUIRED VAN SPACES, 3 REQUIRED  
 4 VAN HANDICAP SPACES PROVIDED

**BICYCLE PARKING**  
 1 PER PARKING SPACES, 24 REQUIRED  
 10 BICYCLE PAD PROVIDED, AT 2 BICYCLE PER PAD,  
 24 PARKING SPACES PROVIDED.

**IMPERVIOUS AREA**  
 OUTPARCEL 1.14 ACRES (FUTURE)  
 BUILDING 2.54 ACRES  
 PAVEMENT 3.3 ACRES  
 SIDEWALK 0.54 ACRES  
 PATIO 0.5 ACRES

**OPEN SPACE CALCULATION**

TOTAL ESTIMATED BEDROOMS = 468 EA  
 DENSITY IS 10+ = 290 SF PER BR

468 \* 290 = 135,720 SF OR 3.12 ACRES

PASSIVE OS = 1.32 ACRES  
 ACTIVE OS = 0.86 ACRES  
 TOTAL OPEN SPACE = 2.18 ACRES

REQUIRED OPEN SPACE = 3.12 ACRES  
 PROVIDED OPEN SPACE = 2.18 ACRES

**TREE SAVE CALCULATION**

TOTAL AREA ACREAGE = 18.08 ACRES  
 (TRACT B,C, & OP)  
 REQUIRED TREE SAVE AREA (10% MAX) = 1.80 ACRES

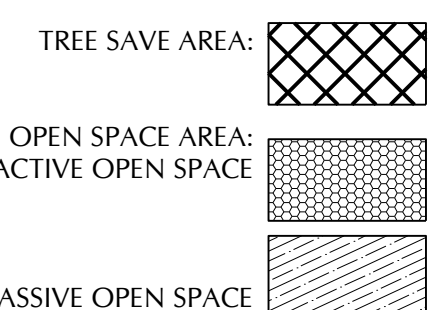
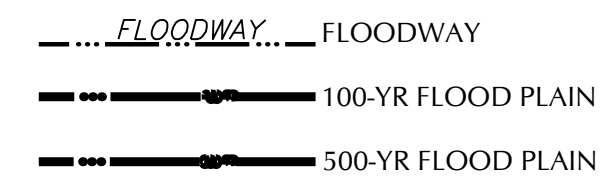
OR

PERIMETER OF AREA:  
 4,584 LF \* 20 LF = 91,680 SF (2.1AC)  
 REQUIRED TREE SAVE AREA (PERIMETER) = 2.1 ACRES

**TREE SAVE AREA PROVIDED:**

TREE SAVE AREA #1 = 0.86 ACRES  
 TREE SAVE AREA #2 = 0.31 ACRES  
 TREE SAVE AREA #3 = 0.69 ACRES  
 TREE SAVE AREA #4 = 0.37 ACRES  
 TOTAL TREE SAVE AREA PROVIDED = 2.23 ACRES

REQUIRED TREE SAVE AREA = 1.80 ACRES  
 TREE SAVE AREA PROVIDED = 2.23 ACRES



No.	Revision	Date	By	Designer	Scale
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				Checked By	05/05/2014
					Job No.

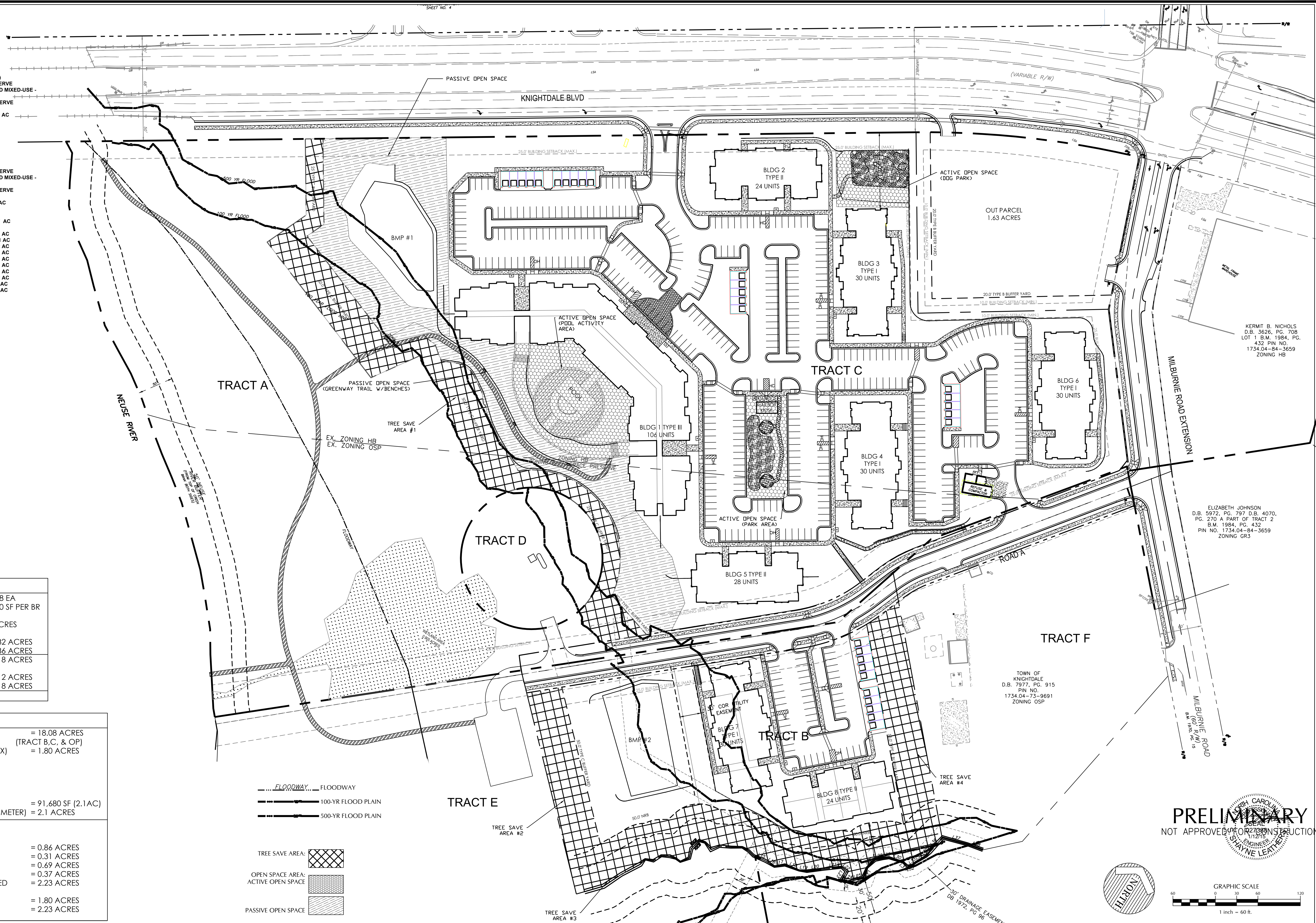
**RIVERS EDGE APARTMENTS**  
 Knightdale Wake County North Carolina

**OVERALL SITE PLAN**

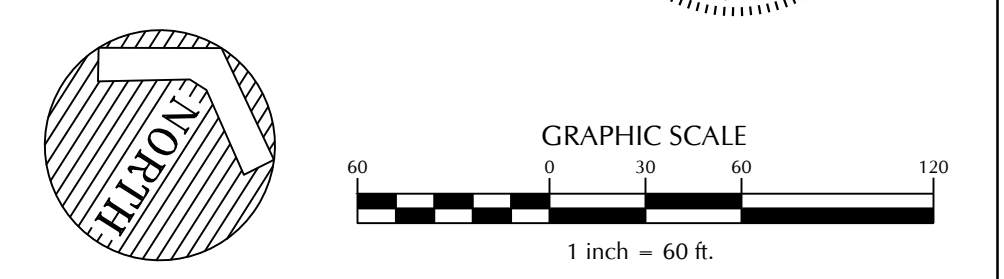
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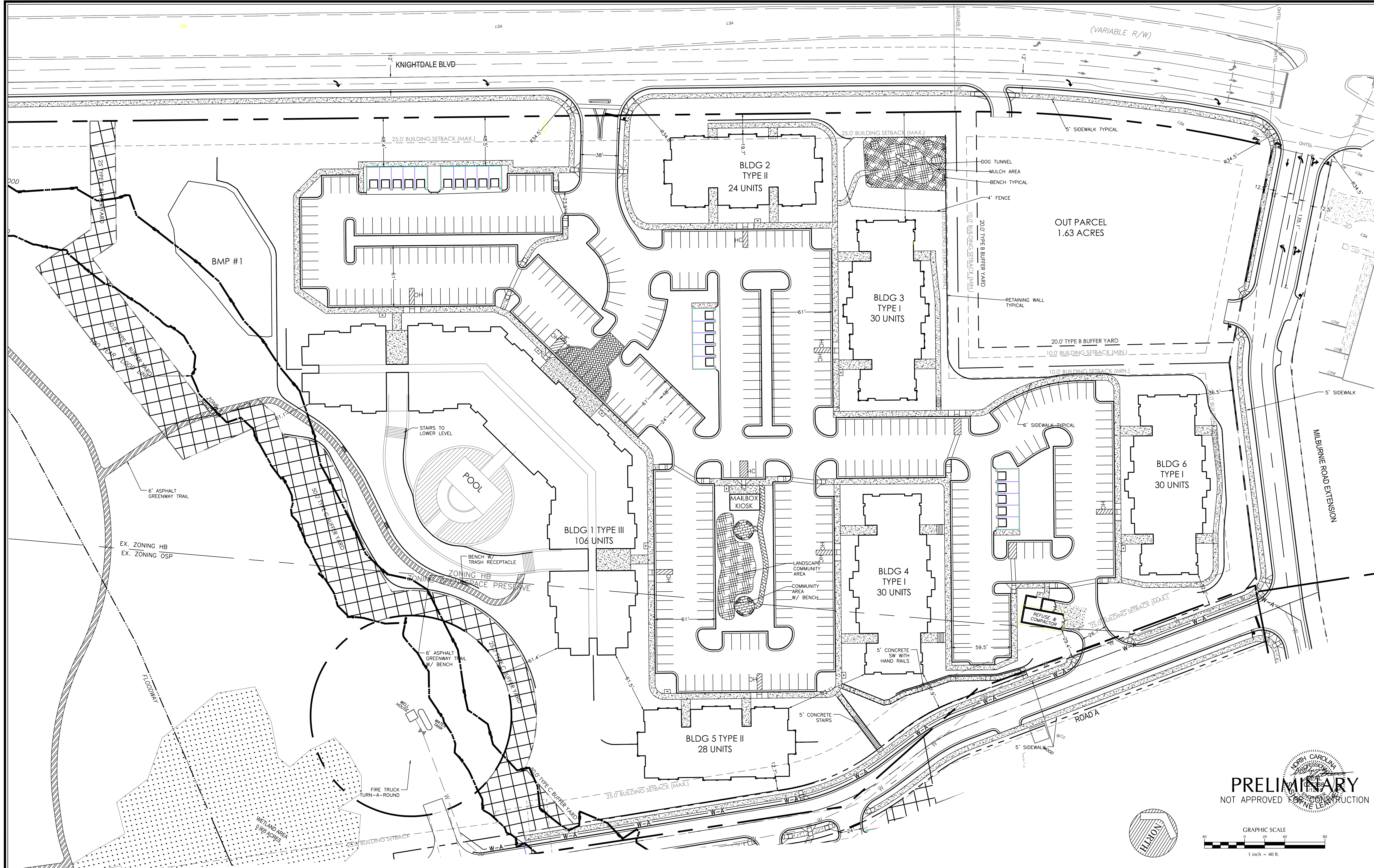
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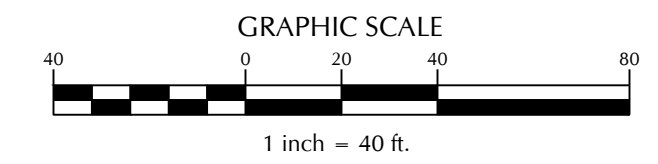
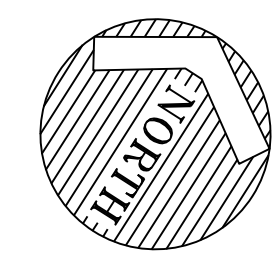


**PRELIMINARY**  
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**PRELIMINARY**  
NOT APPROVED FOR CONSTRUCTION



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Designer	Scale
Drawn By	Date
Checked By	Job No.
	05/05/2014

**RIVERS EDGE APARTMENTS**  
Knightdale Wake County North Carolina

**DETAIL SITE PLAN NORTH**

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Sheet No.  
**C2.1**

K:\14\14-0120\140128-Rivers Edge Apartments\CAD\DWG\DWG\Sheet 02 - Site Plan.dwg - Monday, January 12, 2015 11:38:57 AM - LCH/RSB, SHINE

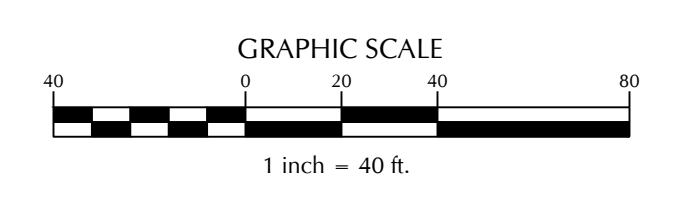
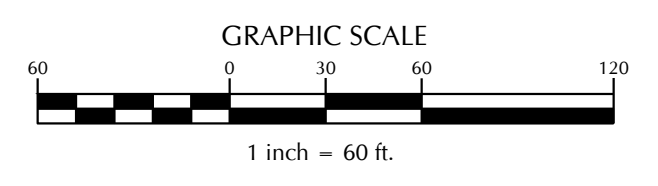
ELIZABETH JOHNS  
 D.B. 5972, PG. 737 D.B.  
 PG. 270 A PART OF T  
 B.M. 1984, PG. 4  
 PIN NO. 1734.04-84  
 ZONING GR3

TOWN OF  
 KNIGHTDALE  
 D.B. 7977, PG. 915  
 PIN NO.  
 1734.04-73-9691  
 ZONING OSP

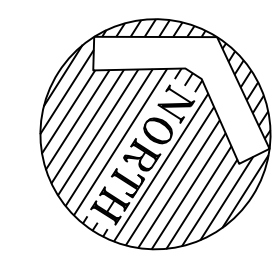
THOMAS PAUL LEWIS ARIA  
 ANANDA LEWIS  
 D.B. 13327, PG. 1058 B.M.  
 1972, PG. 96 LOT 251 GREEN  
 PINES SUBDIVISION PIN:  
 1734.04-83-4565  
 ZONING GR3

ALVAH H. JR. &  
 RACHEL WARD D.B.  
 2212, PG. 203  
 B.M. 1972, PG. 96  
 LOT 252 GREEN  
 PINES SUBDIVISION  
 PIN:  
 1734.04-83-4565

VARIABLE WIDTH  
 CITY OF RALEIGH  
 SANITARY SEWER  
 EASEMENT B.M.  
 2007, PG. 2573



**PRELIMINARY**  
 NOT APPROVED FOR CONSTRUCTION  
 NORTH CAROLINA  
 PROFESSIONAL SURVEYOR  
 11/2/15  
 WYNE LEA



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Sheet No.  
**C2.3**

**DETAIL SITE PLAN SOUTH**

**RIVERS EDGE APARTMENTS**

Knightdale Wake County North Carolina

No.	Revision	Date	By	Designer	Scale
				Drawn By	Date
				Checked By	Job No.
					05/05/2014

K:\14-14-0120\140128-Rivers Edge Apartments\CAD\DWG\DWG\Sheet C2 - Site Plan.dwg - Monday, January 12, 2015 11:38:59 AM - LCH/RSB, SHW/NC

LINE#	BEARING	DISTANCE
L1	S 46°12'31" W	1.77'
L2	N 41°09'58" W	6.56'
L3	N 42°36'07" W	12.33'
L4	N 33°15'12" W	36.01'
L5	N 42°36'04" W	36.60'
L6	N 48°27'11" W	44.94'
L7	N 53°37'43" W	35.18'
L8	N 53°39'02" W	36.72'
L9	N 56°06'14" W	40.09'
L10	N 60°44'54" W	37.18'
L11	N 46°52'48" W	37.32'
L12	N 55°51'11" W	41.21'
L13	N 30°29'09" W	33.68'
L14	N 61°20'20" W	18.16'
L15	N 80°07'02" E	15.43'
L16	N 89°51'24" E	15.49'
L17	N 48°26'15" E	15.03'
L18	N 78°31'44" E	21.49'
L19	N 62°23'58" E	10.95'
L20	N 50°17'40" E	24.16'
L21	N 51°18'54" E	25.20'
L22	S 82°26'33" E	9.45'
L23	S 01°42'37" E	13.90'
L24	N 63°38'08" E	14.20'
L25	N 42°54'18" E	16.77'
L26	N 12°28'55" W	15.77'
L27	N 12°03'35" E	15.93'
L28	N 49°57'40" E	11.34'
L29	N 49°04'16" E	8.62'
L30	N 75°38'22" E	21.32'
L31	S 79°59'21" E	8.04'
L32	N 42°36'29" E	6.97'
L33	N 19°59'31" E	6.28'
L34	N 26°55'22" E	17.05'
L35	N 03°37'31" E	8.07'
L36	N 10°23'29" E	25.93'
L37	N 72°38'50" E	35.99'
L38	N 77°00'44" E	23.41'

LINE	BEARING	DISTANCE
L39	N33°17'45"W	107.52'
L40	N22°36'29"E	67.03'
L41	N70°07'01"W	241.11'
L42	S33°10'03"W	76.27'
L43	N50°25'05"W	8.04'
L45	N71°16'35"W	3.59'
L46	N61°28'32"W	17.17'
L47	N61°18'36"W	3.65'
L48	N40°39'34"W	1.70'
L49	N82°46'45"W	0.79'
L50	N69°43'42"W	21.12'
L51	S76°19'19"W	2.22'
L53	N58°14'58"W	5.33'
L54	N38°47'12"W	8.81'
L55	N12°21'25"W	5.09'
L56	N40°24'00"W	6.75'
L57	N74°23'25"W	7.59'
L60	N55°08'04"W	11.97'
L61	N57°10'52"W	4.94'
L62	N38°51'50"W	2.52'

LINE	BEARING	DISTANCE
L63	N66°37'30"W	6.87'
L64	N57°24'10"W	14.39'
L65	N60°58'45"W	10.38'
L66	N54°29'23"W	7.51'
L67	N78°09'13"W	3.37'
L69	N49°32'51"W	13.94'
L70	N78°03'27"W	13.69'
L71	N88°42'28"W	1.62'
L72	S62°46'48"W	14.47'
L73	S72°32'05"W	12.16'
L74	S71°17'52"W	1.61'
L75	N46°31'57"W	325.28'
L76	S41°16'53"W	40.06'
L77	S23°43'15"W	29.81'
L78	S29°13'33"W	30.39'
L79	S11°51'15"W	10.03'
L80	S67°20'27"W	11.84'
L81	S25°04'37"W	13.20'
L82	S78°12'09"W	9.25'
L83	S60°45'13"W	12.01'

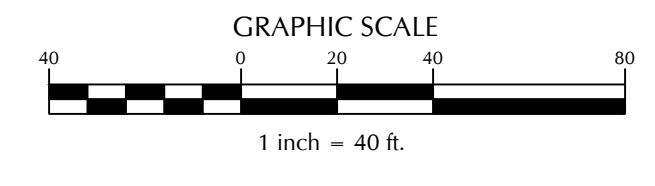
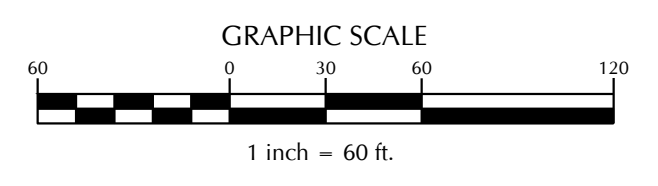
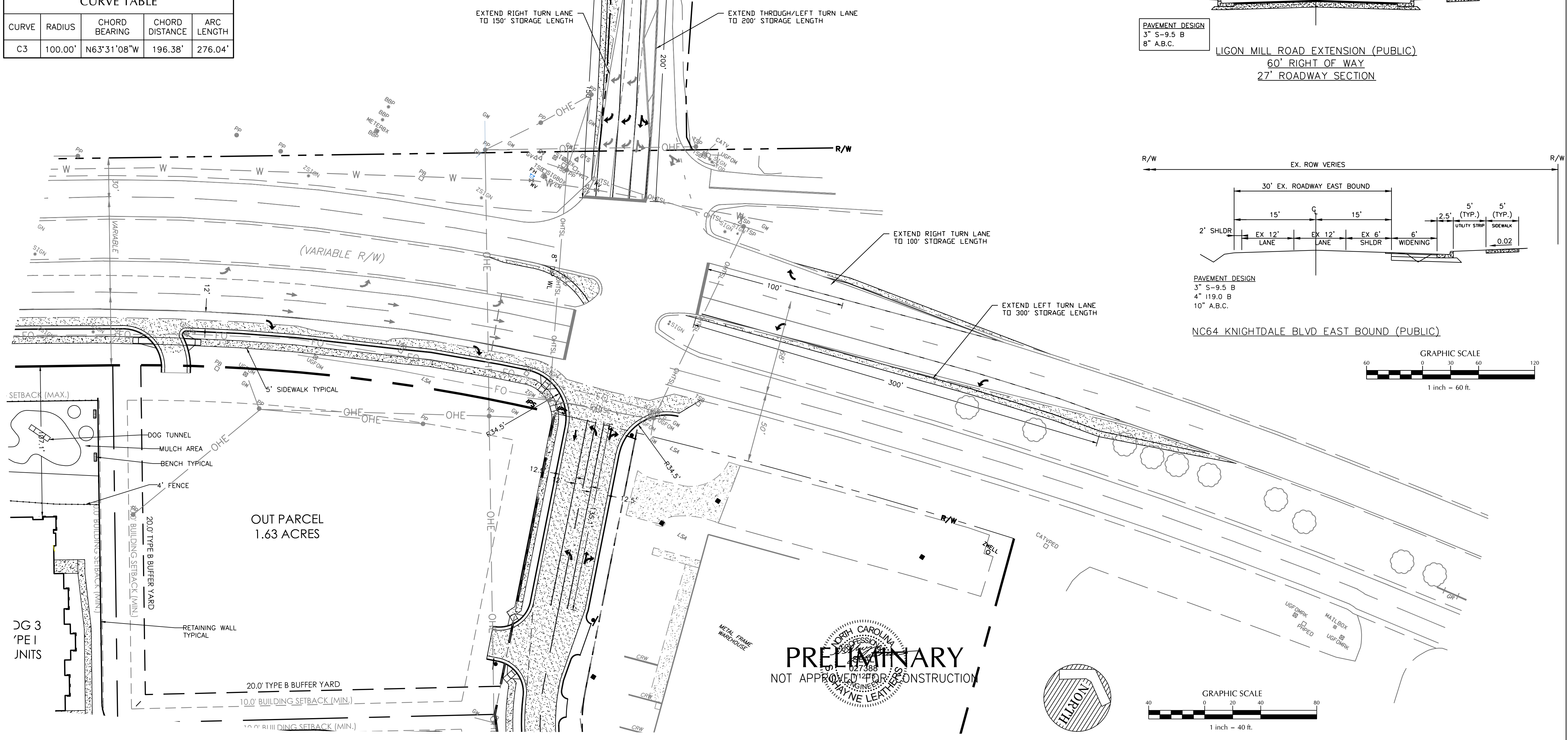
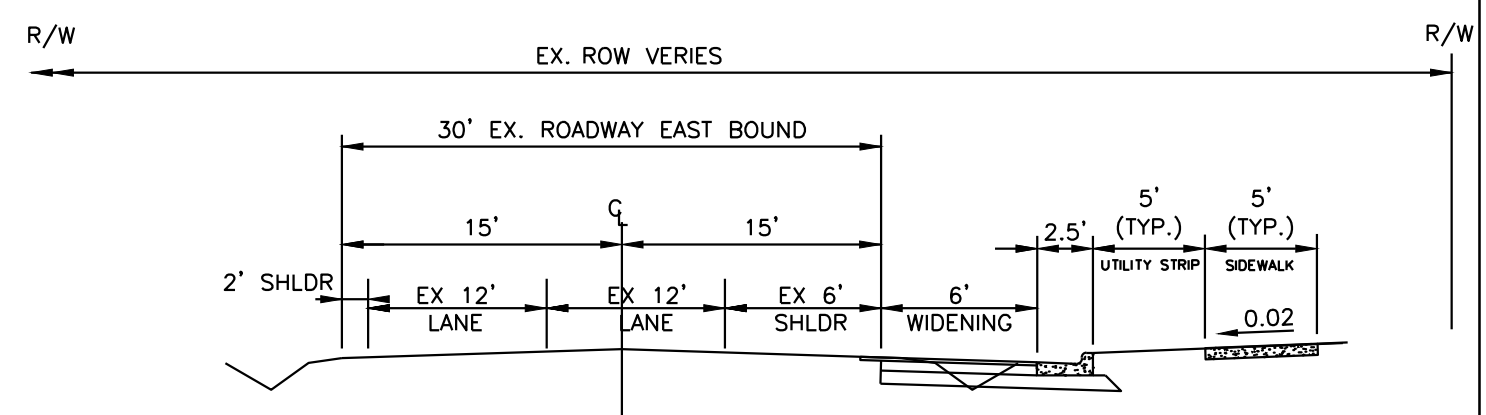
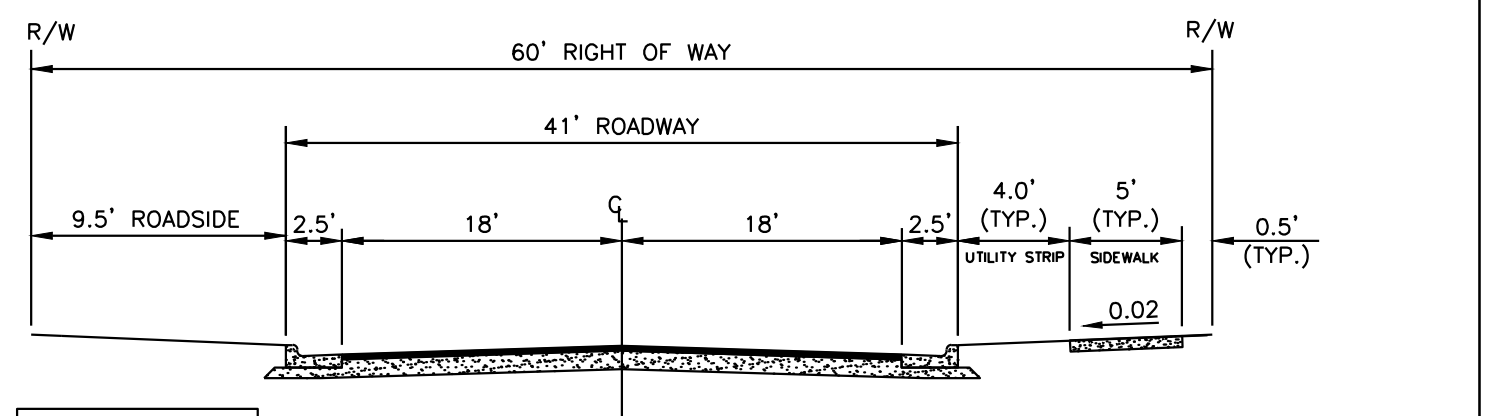
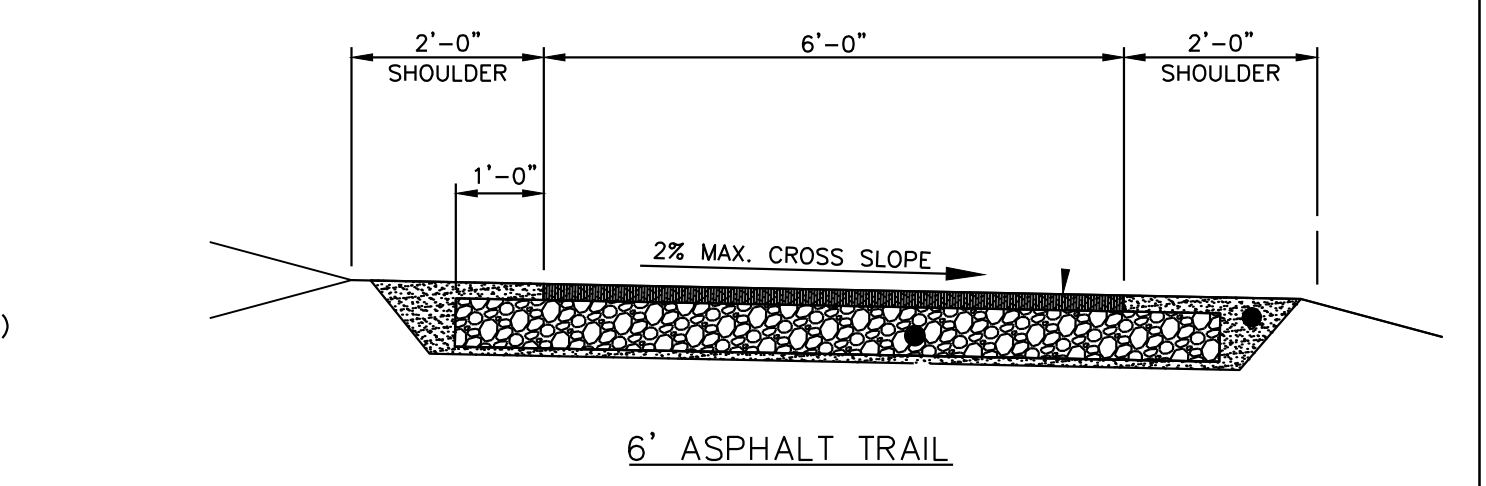
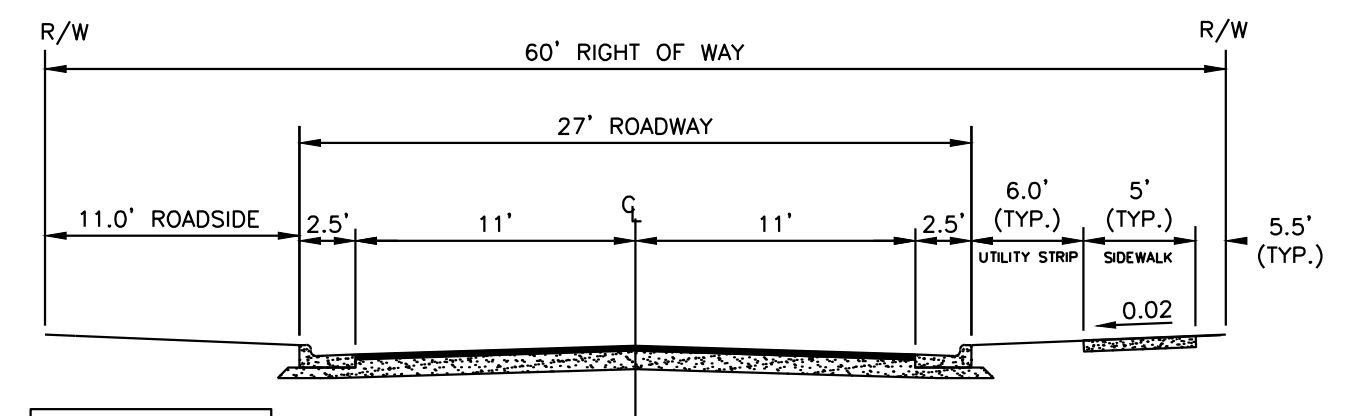
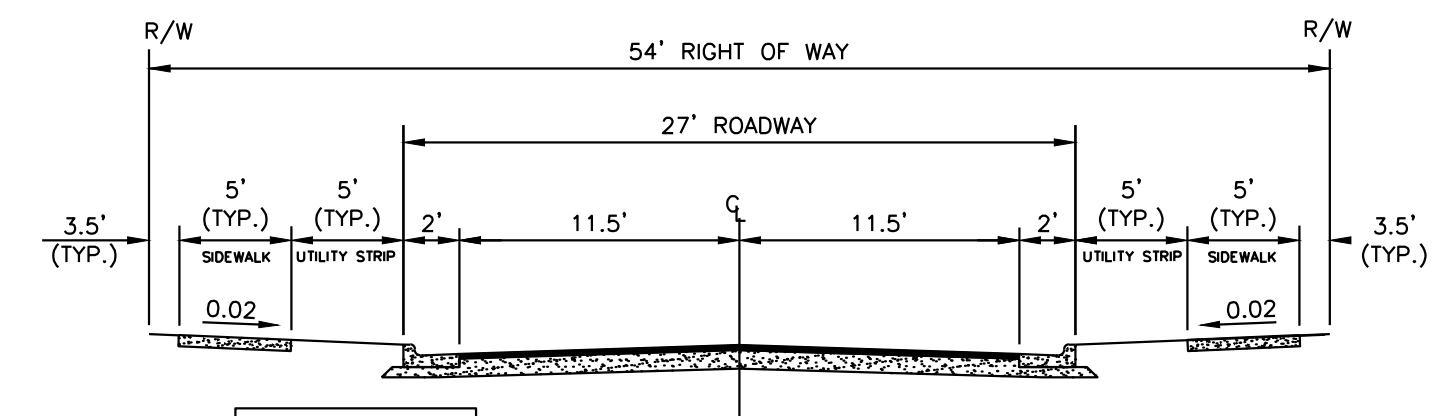
LINE	BEARING	DISTANCE
L84	N86°18'51"W	7.64'
L85	S34°56'06"W	13.81'
L86	S20°43'06"E	13.67'
L87	S11°36'24"W	15.91'
L88	N72°42'01"W	13.02'
L89	S75°27'56"W	8.78'
L90	S35°26'07"W	12.79'
L91	S62°09'00"W	16.14'
L92	S58°19'53"W	16.01'
L93	S86°10'10"W	9.92'
L94	N77°46'52"W	10.20'
L95	S80°07'02"W	2.54'
L96	N80°07'02"E	15.43'
L97	N89°51'24"E	15.49'
L98	N48°26'15"E	15.03'
L99	N78°31'44"E	21.49'
L100	N62°23'58"E	10.95'
L101	N50°17'40"E	24.16'
L102	N51°18'54"E	25.20'
L103	S82°26'33"E	9.45'

CHORD	TANGENT	BEARING
307.75'	154.94'	N 63°26'24" E
10.66'	5.33'	N 70°15'25" E

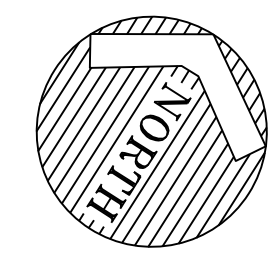
LINE	BEARING	DISTANCE
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L105	N63°38'08"E	14.20'
L106	N42°54'18"E	16.77'
L107	N12°28'55"W	15.77'
L108	N12°03'35"E	15.93'
L109	N49°57'40"E	11.34'
L110	N49°04'16"E	8.62'
L111	N75°38'22"E	21.32'
L112	S79°59'21"E	8.04'
L113	N42°36'29"E	6.97'
L114	N19°59'31"E	6.28'
L115	N26°55'22"E	17.05'
L116	N3°37'31"E	8.07'
L117	N10°23'29"E	25.93'

LINE	BEARING	DISTANCE
L44	N53°36'56"W	5.90'
L52	N58°58'39"W	8.69'
L58	N75°10'21"W	1.83'
L59	N38°20'14"W	1.30'
L64	N57°24'10"W	14.39'
L68	N65°13'53"W	15.60'
L118	S43°06'59"E	380.97'
L119	N56°09'26"E	269.35'
L120	S33°17'45"E	255.50'
L121	S60°26'08"E	9.51'
L122	S35°46'33"E	10.80'
L123	N88°07'30"E	9.39'
L124	S79°35'52"E	18.89'
L125	S51°10'31"E	5.07'
L127	S85°16'09"E	6.06'
L128	S88°18'21"E	18.09'
L129	S38°31'56"E	5.24'

CURVE	RADIUS	CHORD BEARING	CHORD DISTANCE	ARC LENGTH
C3	100.00'	N63°31'08"W	196.38'	276.04'



**PRELIMINARY**  
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No.	Revision	Date	By

Designer	Scale
Drawn By	Date
Checked By	Job No.

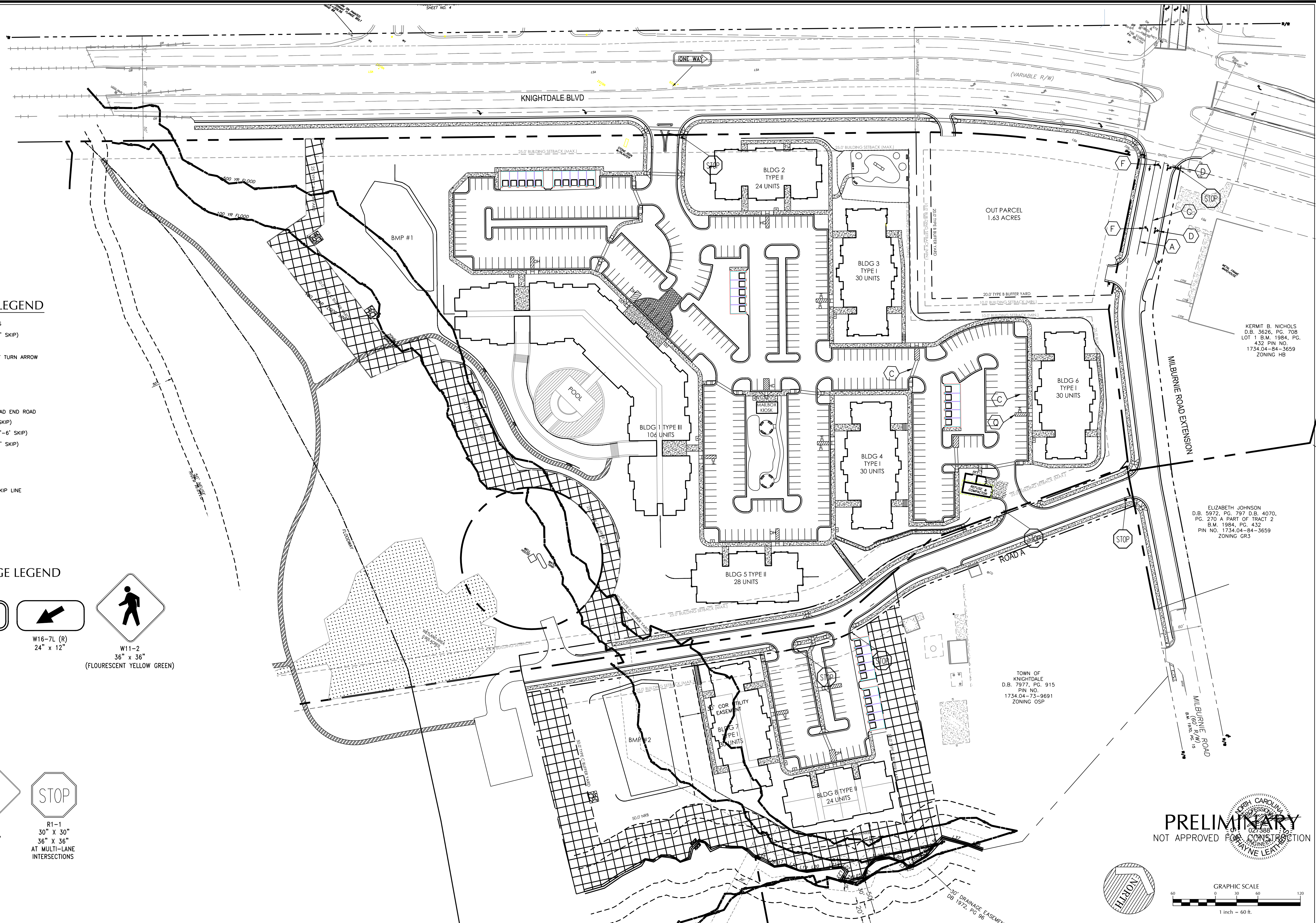
**RIVERS EDGE APARTMENTS**  
Wake County North Carolina

**SITE BOUNDARY TABLE-INTERSECTION IMPROVEMENTS**

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Sheet No. **C2.4**

K:\14-1-0121\14128-Rivers Edge Apartments\CAD\SWEE\DWG\2015\11-30-15\11-30-15.dwg - Site Plan.dwg - Monday, January 12, 2015 11:39:02 AM - LEINTHOS, SHAWN



### PAVEMENT MARKING LEGEND

- (A) 4" SOLID DOUBLE YELLOW LINES
- (B) 4" WHITE MINI-SKIP LINE (3'-9" SKIP)
- (C) 4" WHITE SOLID LINE
- (D) COMBINATION STRAIGHT & RIGHT TURN ARROW
- (E) RIGHT TURN ARROW
- (F) LEFT TURN ARROW
- (G) GORE LINE - 8" YELLOW
- (H) THRU LANE
- (I) TEMPORARY BARRICADE FOR DEAD END ROAD
- (J) 4" WHITE SKIP LINE (10'-30" SKIP)
- (K) 4" YELLOW MINI-SKIP LINE (2'-6" SKIP)
- (L) 4" WHITE MINI-SKIP LINE (2'-6" SKIP)
- (M) 12" WHITE DIAGONAL LINE
- (N) 12" YELLOW DIAGONAL LINE
- (O) WHITE "WIDE" LANE LINE
- (P) WHITE "WIDE" 3'-9"/SP MINI-SKIP LINE
- (Q) GORE LINE - 8" WHITE
- (R) HC DIAGONAL - 4" WHITE

### SIGNAGE LEGEND

- R2-1  
24" X 30"  
30" X 36"  
ON MULTI-LANE FACILITIES
- R6-1R  
36" X 12"
- W16-7L (R)  
24" X 12"
- W11-2  
36" X 36"  
(FLOURESCENT YELLOW GREEN)

NOTE:  
ALL SIGNAGE SHALL BE HIGH INTENSITY PRISM  
GRADE AND MOUNTED ON 3/8" FT POLES

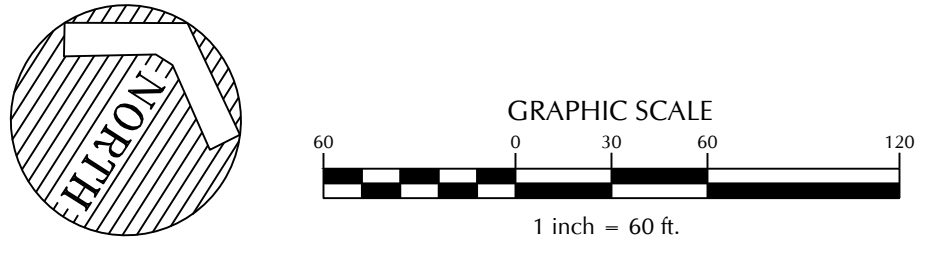
- R4-7  
12" X 18"  
WITH OM 1-1  
18" X 18"
- W1-2L  
30" X 30"
- R1-1  
30" X 30"  
36" X 36"  
AT MULTI-LANE INTERSECTIONS

KERMIT B. NICHOLS  
D.B. 3626, PG. 708  
LOT 1 B.M. 1984, PG.  
432 PIN NO.  
1734.04-84-3659  
ZONING HB

ELIZABETH JOHNSON  
D.B. 5972, PG. 797 D.B. 4070,  
PG. 270 A PART OF TRACT 2  
B.M. 1984, PG. 432  
PIN NO. 1734.04-84-3659  
ZONING GR3

TOWN OF  
KNIGHTDALE  
D.B. 7977, PG. 915  
PIN NO.  
1734.04-73-9691  
ZONING OSP

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Wake County  
North Carolina

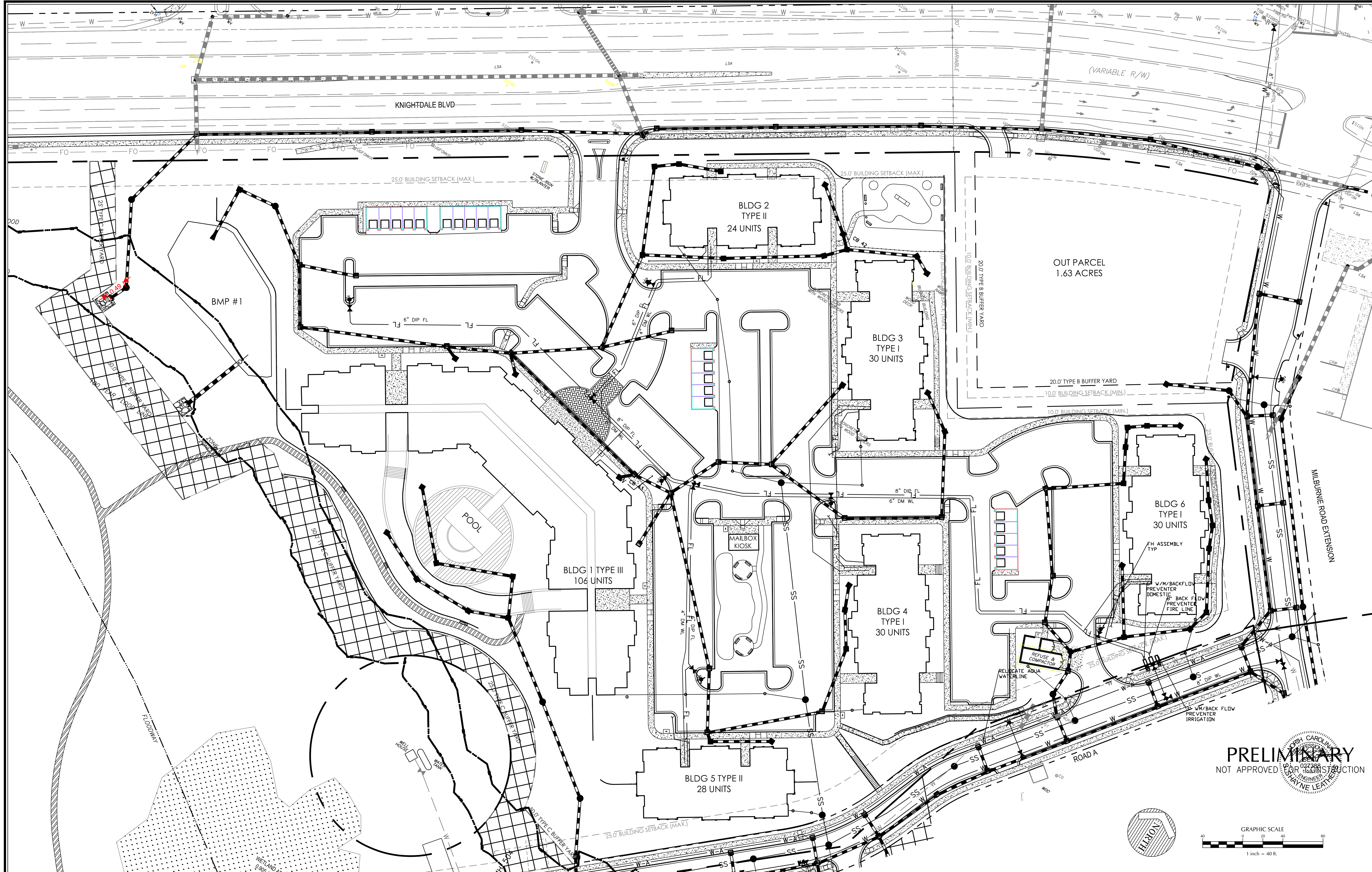
**OVERALL SITE STRIPING AND SIGNAGE PLAN**

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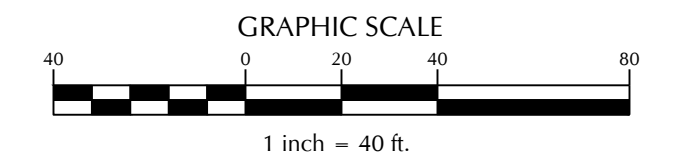
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No.	Revision	Date	By

Designer	Scale
Drawn By	Date
Checked By	Job No.
	05/05/2014

**RIVERS EDGE APARTMENTS**  
Wake County North Carolina

**UTILITY PLAN NORTH**

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Sheet No.  
**C3.1**

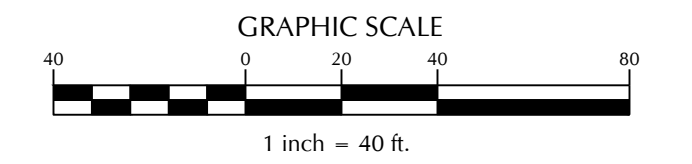
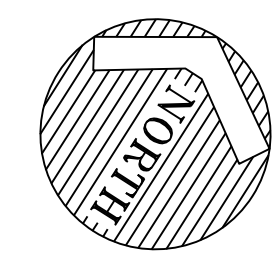
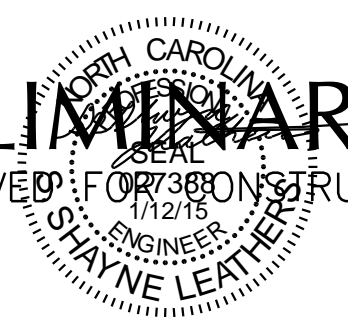
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K:\14\14-0120\140126-Rivers Edge Apartments\140126-SHEET DRAWINGS\Sheet 03 - Utility Plan\Monday, January 12, 2015 11:32:37 AM - LEATHERS, SWAYNE



THOMAS PAUL LEWIS ARIA  
ANANDA LEWIS  
D.B. 13327, PG. 1058 B.M.

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				Drawn By	Date
				Checked By	Job No.

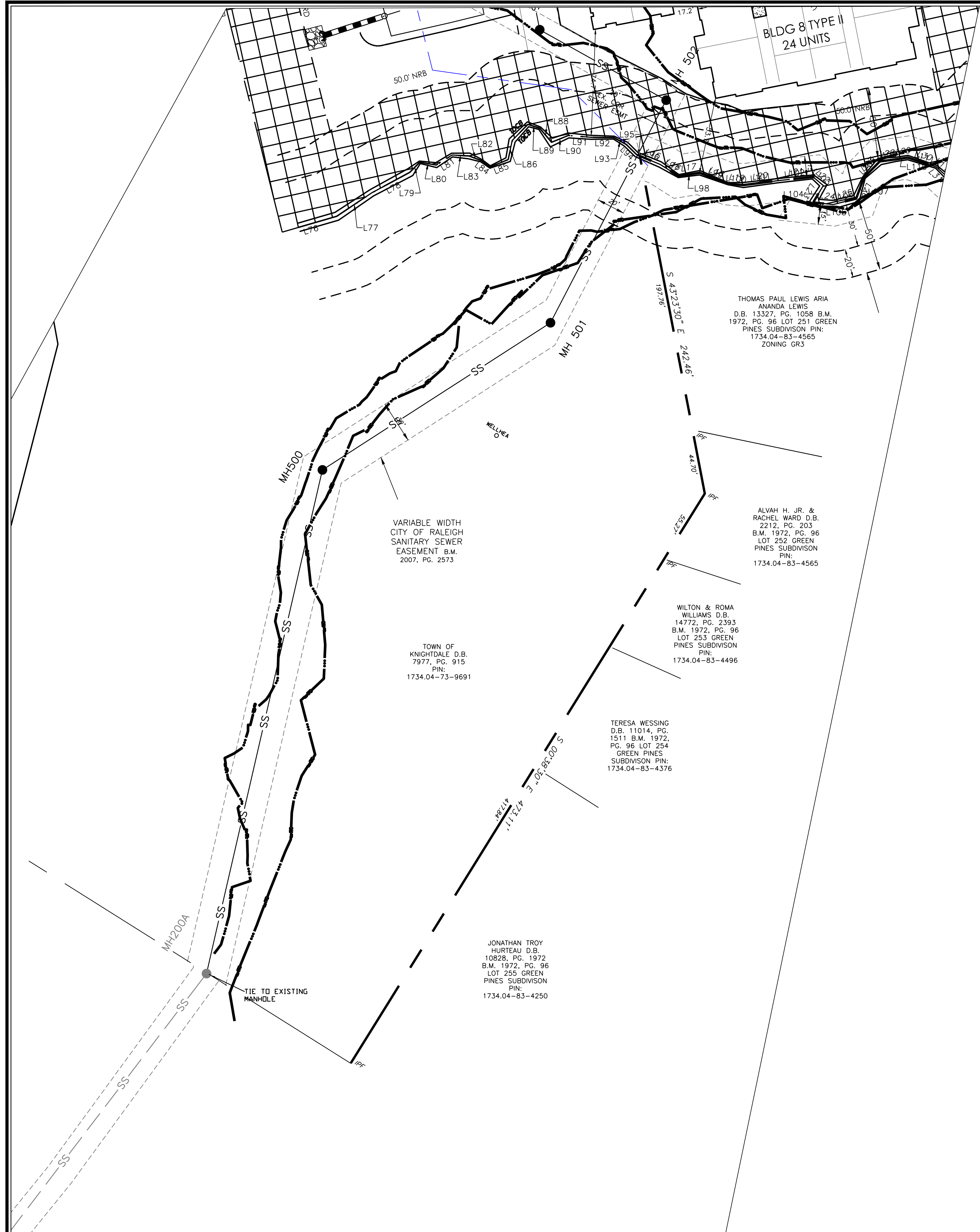
**RIVERS EDGE APARTMENTS**  
Knightdale Wake County North Carolina

**UTILITY PLAN SOUTH**

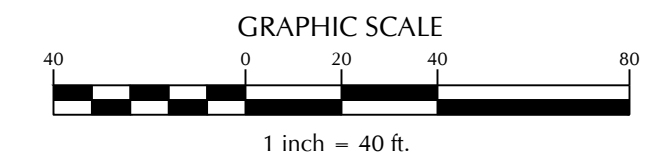
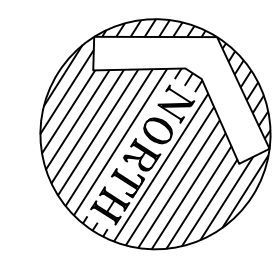
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Sheet No.  
**C3.2**

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**RIVERS EDGE APARTMENTS**  
Wake County North Carolina

**SEWER OUTFALL**

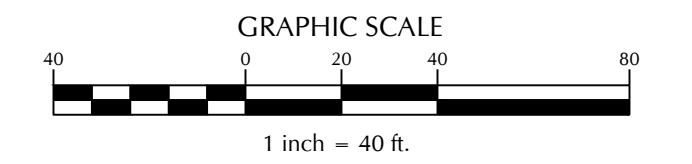
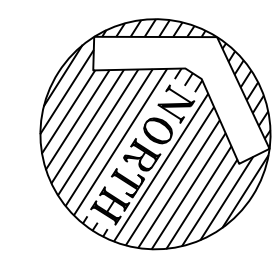
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Sheet No.  
**C3.3**



STORMWATER MANAGEMENT  
REQUIRED 85% TSS REMOVAL  
BMP-1/2 WETPOND DESIGNED  
AT 90% TSS REMOVAL

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Wake County North Carolina

**DETAIL GRADING NORTH & STORMWATER  
MANAGEMENT PLAN**

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Sheet No.  
**C5.1**

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ELIZABETH JOHNS  
 D.B. 5972, PG. 797, D.B.  
 PG. 270 A PART OF T  
 B.M. 1984, PG. 4  
 PIN NO. 1734.04-84  
 ZONING GR3

TOWN OF KNIGHTDALE  
 D.B. 7977, PG. 915  
 PIN NO.  
 1734.04-73-9691  
 ZONING OSP

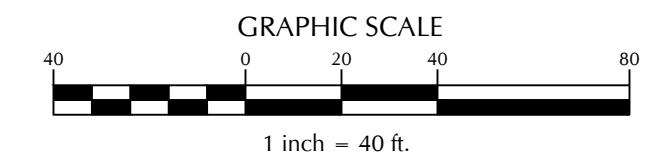
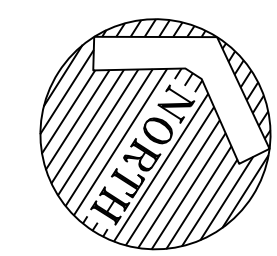
THOMAS PAUL LEWIS ARIA  
 ANANDA LEWIS  
 D.B. 13327, PG. 1058 B.M.  
 1972, PG. 96 LOT 251 GREEN  
 PINES SUBDIVISION PIN:  
 1734.04-83-4565  
 ZONING GR3

ALVAH H. JR. &  
 RACHEL WARD D.B.  
 2212, PG. 203  
 B.M. 1972, PG. 96  
 LOT 252 GREEN  
 PINES SUBDIVISION  
 PIN:  
 1734.04-R3-4565

VARIABLE WIDTH  
 CITY OF RALEIGH  
 SANITARY SEWER  
 EASEMENT B.M.  
 2007, PG. 2573

STORMWATER MANAGEMENT  
 REQUIRED 85% TSS REMOVAL  
 BMP-1/2 WETPOND DESIGNED  
 AT 90% TSS REMOVAL

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No.	Revision	Date	By

Designer	Scale
Drawn By	Date
Checked By	Job No.

**RIVERS EDGE APARTMENTS**  
 Knightdale Wake County North Carolina

**DETAIL GRADING SOUTH & STORMWATER MANAGEMENT PLAN**

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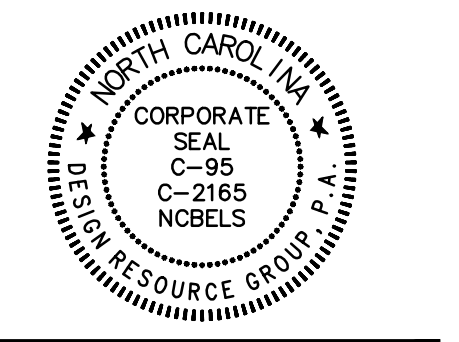
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design resource group

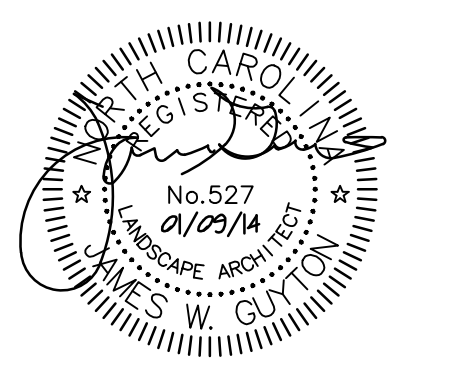
- landscape architecture
- civil engineering
- urban design
- land planning
- traffic engineering
- transportation planning

2459 wilkinson boulevard, suite 200  
 charlotte, nc 28208  
 p 704.343.0608 f 704.358.3093  
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**RIVERS EDGE APARTMENTS**  
 KNIGHTDALE, NORTH CAROLINA  
**SYMPHONY PROPERTIES, LLC.**  
 103 TORREY PINES DRIVE  
 CARY, NC 27513

CONSTRUCTION DOCUMENTS



SCALE: 1" = 60'

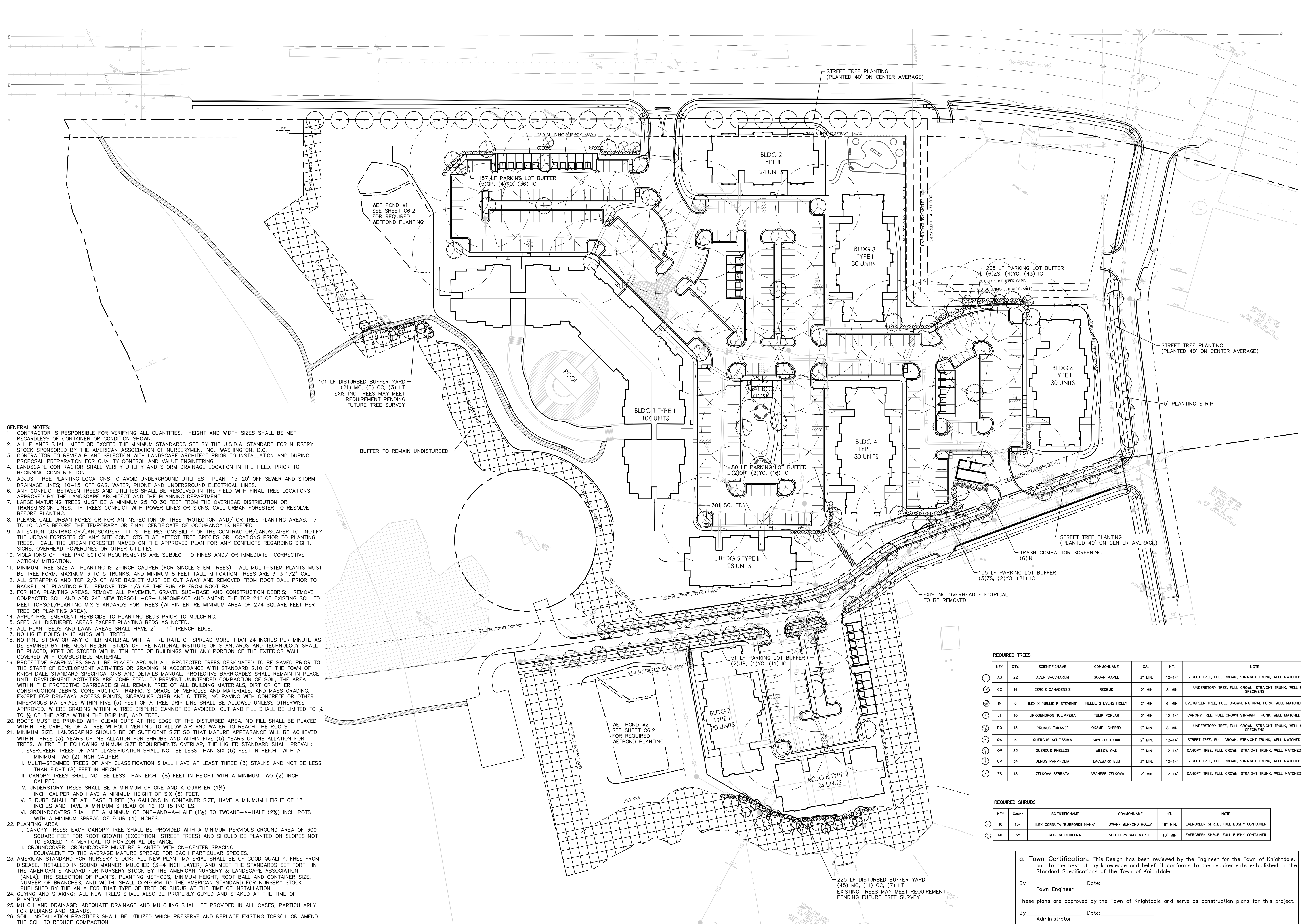
PROJECT #: 364-006  
 DRAWN BY: MB  
 CHECKED BY: SK

# REQUIRED PLANTING PLAN

JANUARY 9, 2015

REVISIONS:

C6.0



- GENERAL NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES. HEIGHT AND WIDTH SIZES SHALL BE MET REGARDLESS OF CONTAINER OR CONDITION SHOWN.
  - ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM STANDARDS SET BY THE U.S.D.A. STANDARD FOR NURSERY STOCK SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., WASHINGTON, D.C.
  - CONTRACTOR TO REVIEW PLANT SELECTION WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION AND DURING PROPOSAL PREPARATION FOR QUALITY CONTROL AND VALUE ENGINEERING.
  - LANDSCAPE CONTRACTOR SHALL VERIFY UTILITY AND STORM DRAINAGE LOCATION IN THE FIELD, PRIOR TO BEGINNING CONSTRUCTION.
  - ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES--PLANT 15--20' OFF SEWER AND STORM DRAINAGE LINES; 10--15' OFF GAS, WATER, PHONE AND UNDERGROUND ELECTRICAL LINES.
  - ANY CONFLICT BETWEEN TREES AND UTILITIES SHALL BE RESOLVED IN THE FIELD WITH FINAL TREE LOCATIONS APPROVED BY THE LANDSCAPE ARCHITECT AND THE PLANNING DEPARTMENT.
  - LARGE MATURING TREES MUST BE A MINIMUM 25 TO 30 FEET FROM THE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.
  - PLEASE CALL URBAN FORESTER FOR AN INSPECTION OF TREE PROTECTION AND/OR TREE PLANTING AREAS, 7 TO 10 DAYS BEFORE THE TEMPORARY OR FINAL CERTIFICATE OF OCCUPANCY IS NEEDED.
  - ATTENTION CONTRACTOR/LANDSCAPER: IT IS THE RESPONSIBILITY OF THE CONTRACTOR/LANDSCAPER TO NOTIFY THE URBAN FORESTER OF ANY SITE CONFLICTS THAT AFFECT TREE SPECIES OR LOCATIONS PRIOR TO PLANTING TREES. CALL THE URBAN FORESTER NAMED ON THE APPROVED PLAN FOR ANY CONFLICTS REGARDING SIGN, SIGNS, OVERHEAD POWERLINES OR OTHER UTILITIES.
  - VIOLATIONS OF TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES AND/OR IMMEDIATE CORRECTIVE ACTION/ MITIGATION.
  - MINIMUM TREE SIZE AT PLANTING IS 2-INCH CALIPER (FOR SINGLE STEM TREES). ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 8 FEET TALL. MITIGATION TREES ARE 3-3 1/2" CAL.
  - ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
  - FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 24" NEW TOPSOIL --OR-- UNCOMPACT AND AMEND THE TOP 24" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES (WITHIN ENTIRE MINIMUM AREA OF 274 SQUARE FEET PER TREE OR PLANTING AREA).
  - APPLY PRE-EMERGENT HERBICIDE TO PLANTING BEDS PRIOR TO MULCHING.
  - SEED ALL DISTURBED AREAS EXCEPT PLANTING BEDS AS NOTED.
  - ALL PLANT BEDS AND LAWN AREAS SHALL HAVE 2" - 4" TRENCH EDGE.
  - NO LIGHT POLES IN ISLANDS WITH TREES
  - NO PINE STRAW OR ANY OTHER MATERIAL WITH A FIRE RATE OF SPREAD MORE THAN 24 INCHES PER MINUTE AS DETERMINED BY THE MOST RECENT STUDY OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY SHALL BE PLACED, KEPT OR STORED WITHIN TEN FEET OF BUILDINGS WITH ANY PORTION OF THE EXTERIOR WALL COVERED WITH COMBUSTIBLE MATERIAL.
  - PROTECTIVE BARRICADES SHALL BE PLACED AROUND ALL PROTECTED TREES DESIGNATED TO BE SAVED PRIOR TO THE START OF DEVELOPMENT ACTIVITIES OR GRADING IN ACCORDANCE WITH STANDARD 2.10 OF THE TOWN OF KNIGHTDALE STANDARD SPECIFICATIONS AND DETAILS MANUAL. PROTECTIVE BARRICADES SHALL REMAIN IN PLACE UNTIL DEVELOPMENT ACTIVITIES ARE COMPLETED. TO PREVENT UNINTENDED COMPACTION OF SOIL, THE AREA WITHIN THE PROTECTIVE BARRICADE SHALL REMAIN FREE OF ALL BUILDING MATERIALS, DIRT OR OTHER CONSTRUCTION DEBRIS, CONSTRUCTION TRAFFIC, STORAGE OF VEHICLES AND MATERIALS, AND MASS GRADING, EXCEPT FOR DRIVEWAY ACCESS POINTS, SIDEWALKS CURB AND GUTTER, NO PAVING WITH CONCRETE OR OTHER IMPERVIOUS MATERIALS WITHIN FIVE (5) FEET OF A TREE DRIP LINE SHALL BE ALLOWED UNLESS OTHERWISE APPROVED. WHERE GRADING WITHIN A TREE DRIPLINE CANNOT BE AVOIDED, CUT AND FILL SHALL BE LIMITED TO 1/4 TO 3/4 OF THE AREA WITHIN THE DRIPLINE, AND TREE.
  - ROOTS MUST BE PRUNED WITH CLEAN CUTS AT THE EDGE OF THE DISTURBED AREA. NO FILL SHALL BE PLACED WITHIN THE DRIPLINE OF A TREE WITHOUT VENTING TO ALLOW AIR AND WATER TO REACH THE ROOTS.
  - MINIMUM SIZE: LANDSCAPING SHOULD BE OF SUFFICIENT SIZE SO THAT MATURE APPEARANCE WILL BE ACHIEVED WITHIN THREE (3) YEARS OF INSTALLATION FOR SHRUBS AND WITHIN FIVE (5) YEARS OF INSTALLATION FOR TREES. WHERE THE FOLLOWING MINIMUM SIZE REQUIREMENTS OVERLAP, THE HIGHER STANDARD SHALL PREVAIL.
    - EVERGREEN TREES OF ANY CLASSIFICATION SHALL NOT BE LESS THAN SIX (6) FEET IN HEIGHT WITH A MINIMUM TWO (2) INCH CALIPER.
    - MULTI-STEMMED TREES OF ANY CLASSIFICATION SHALL HAVE AT LEAST THREE (3) STALKS AND NOT BE LESS THAN EIGHT (8) FEET IN HEIGHT.
    - CANOPY TREES SHALL NOT BE LESS THAN EIGHT (8) FEET IN HEIGHT WITH A MINIMUM TWO (2) INCH CALIPER.
    - UNDERSTORY TREES SHALL BE A MINIMUM OF ONE AND A QUARTER (1 1/4) INCH CALIPER AND HAVE A MINIMUM HEIGHT OF SIX (6) FEET.
    - SHRUBS SHALL BE AT LEAST THREE (3) GALLONS IN CONTAINER SIZE, HAVE A MINIMUM HEIGHT OF 18 INCHES AND HAVE A MINIMUM SPREAD OF 12 TO 15 INCHES.
    - GROUNDCOVERS SHALL BE A MINIMUM OF ONE-AND-A-HALF (1 1/2) TO TWO-AND-A-HALF (2 1/2) INCH POTS WITH A MINIMUM SPREAD OF FOUR (4) INCHES.
  - PLANTING AREA
    - CANOPY TREES: EACH CANOPY TREE SHALL BE PROVIDED WITH A MINIMUM PEROUS GROUND AREA OF 300 SQUARE FEET FOR ROOT GROWTH (EXCEPTION: STREET TREES) AND SHOULD BE PLANTED ON SLOPES NOT TO EXCEED 1:4 VERTICAL TO HORIZONTAL DISTANCE.
    - GROUNDCOVERS: GROUNDCOVER MUST BE PLANTED WITH ON-CENTER SPACING EQUIVALENT TO THE AVERAGE MATURE SPREAD FOR EACH PARTICULAR SPECIES.
  - AMERICAN STANDARD FOR NURSERY STOCK: ALL NEW PLANT MATERIAL SHALL BE OF GOOD QUALITY, FREE FROM DISEASE, INSTALLED IN SOUND MANNER, MULCHED (3-4 INCH LAYER) AND MEET THE STANDARDS SET FORTH IN THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA). THE SELECTION OF PLANTS, PLANTING METHODS, MINIMUM HEIGHT, ROOT BALL AND CONTAINER SIZE, NUMBER OF BRANCHES, AND WIDTH, SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE ANLA FOR THAT TYPE OF TREE OR SHRUB AT THE TIME OF INSTALLATION.
  - GUYPING AND STAKING: ALL NEW TREES SHALL ALSO BE PROPERLY GUYPED AND STAKED AT THE TIME OF PLANTING.
  - MULCH AND DRAINAGE: ADEQUATE DRAINAGE AND MULCHING SHALL BE PROVIDED IN ALL CASES, PARTICULARLY FOR MEDIANS AND ISLANDS.
  - SOIL: INSTALLATION PRACTICES SHALL BE UTILIZED WHICH PRESERVE AND REPLACE EXISTING TOPSOIL OR AMEND THE SOIL TO REDUCE COMPACTION.

**REQUIRED TREES**

KEY	QTY.	SCIENTIFICNAME	COMMONNAME	CAL.	HT.	NOTE
AS	22	ACER SACCCHARUM	SUGAR MAPLE	2" MIN.	12-14'	STREET TREE, FULL CROWN, STRAIGHT TRUNK, WELL MATCHED SPECIMENS
CC	16	CERCIS CANADENSIS	REDBUD	2" MIN	8' MIN	UNDERSTORY TREE, FULL CROWN, STRAIGHT TRUNK, WELL MATCHED SPECIMENS
IN	6	ILEX X NELLE R STEVENS'	NELLE STEVENS HOLLY	2" MIN.	4' MIN	EVERGREEN TREE, FULL CROWN, NATURAL FORM, WELL MATCHED SPECIMENS
LT	10	LIRIODENDRON TULIPIFERA	TULIP POPLAR	2" MIN	12-14'	CANOPY TREE, FULL CROWN STRAIGHT TRUNK, WELL MATCHED SPECIMENS
PD	13	PRUNUS "OKAME"	OKAME CHERRY	2" MIN.	8' MIN	UNDERSTORY TREE, FULL CROWN, STRAIGHT TRUNK, WELL MATCHED SPECIMENS
QA	6	QUERCUS ACUTISSIMA	SAWTOOTH OAK	2" MIN.	12-14'	STREET TREE, FULL CROWN, STRAIGHT TRUNK, WELL MATCHED SPECIMENS
QP	32	QUERCUS PHellos	WILLOW OAK	2" MIN.	12-14'	CANOPY TREE, FULL CROWN, STRAIGHT TRUNK, WELL MATCHED SPECIMENS
UP	34	ULMUS PARVIFLORA	LACEBARK ELM	2" MIN.	12-14'	STREET TREE, FULL CROWN, STRAIGHT TRUNK, WELL MATCHED SPECIMENS
ZS	18	ZELKOVA SERRATA	JAPANESE ZELKOVA	2" MIN	12-14'	CANOPY TREE, FULL CROWN, STRAIGHT TRUNK, WELL MATCHED SPECIMENS

**REQUIRED SHRUBS**

KEY	Count	SCIENTIFICNAME	COMMONNAME	HT.	NOTE
IC	134	ILEX CORNUTA 'BURFORDII NANA'	DWARF BURFORD HOLLY	18" MIN.	EVERGREEN SHRUB, FULL BUSHY CONTAINER
MC	65	MYRTICA CERIFERA	SOUTHERN WAX MYRTLE	18" MIN	EVERGREEN SHRUB, FULL BUSHY CONTAINER

a. Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Administrator

**SECTION 8.6 BUFFERS**

REQUIREMENT: TYPE C BUFFER YARD (3 CANOPY TREES, 5 UNDERSTORY TREES AND 20 SHRUBS PER 100LF)

**NORTHERN PORTION OF SITE**

123.31 LF OF 25' TYPE C BUFFER YARD ALONG SOUTHWESTERN PROPERTY LINE  
 REQUIRED: (4) CANOPY TREES, (6) UNDERSTORY TREES, (25) SHRUBS  
 PROVIDED: EXISTING VEGETATION TO MEET REQUIREMENT

337.83 LF OF 50' TYPE C BUFFER YARD ALONG SOUTHWESTERN PROPERTY LINE  
 REQUIRED: (10) CANOPY TREES, (17) UNDERSTORY TREES, (66) SHRUBS  
 PROVIDED: EXISTING VEGETATION TO MEET REQUIREMENT

101 LF OF 25' TYPE C BUFFER YARD ALONG SOUTHWESTERN PROPERTY LINE  
 REQUIRED: (2) CANOPY TREES, (3) UNDERSTORY TREES, (11) SHRUBS  
 PROVIDED: (3) LT, (5) CC, AND (21) MC + EXISTING VEGETATION

222.83 LF OF 50' TYPE C BUFFER YARD ALONG SOUTHWESTERN PROPERTY LINE  
 REQUIRED: (7) CANOPY TREES, (11) UNDERSTORY TREES, (45) SHRUBS  
 PROVIDED: EXISTING VEGETATION TO MEET REQUIREMENT

276.04 LF OF 10' TYPE C BUFFER YARD ALONG SOUTHWESTERN PROPERTY LINE  
 REQUIRED: (8) CANOPY TREES, (14) UNDERSTORY TREES, (55) SHRUBS  
 PROVIDED: EXISTING VEGETATION TO MEET REQUIREMENT

75.28 LF OF 25' TYPE C BUFFER YARD ALONG SOUTHWESTERN PROPERTY LINE  
 REQUIRED: (2) CANOPY TREES, (4) UNDERSTORY TREES, (15) SHRUBS  
 PROVIDED: EXISTING VEGETATION TO MEET REQUIREMENT

**SOUTHERN PORTION OF SITE**

292.54 LF OF 50' TYPE C BUFFER YARD ALONG SOUTHWESTERN PROPERTY LINE  
 REQUIRED: (9) CANOPY TREES, (15) UNDERSTORY TREES, (59) SHRUBS  
 PROVIDED: EXISTING VEGETATION TO MEET REQUIREMENT

524.00 LF OF 50' TYPE C BUFFER YARD ALONG SOUTHWESTERN PROPERTY LINE  
 REQUIRED: (16) CANOPY TREES, (26) UNDERSTORY TREES, (105) SHRUBS  
 PROVIDED: (7) LT, (11) CC, AND (45) MC (FOR DISTURBED PORTION OF BUFFER) + EXISTING VEGETATION

339.83 LF OF 50' TYPE C BUFFER YARD ALONG NORTHEASTERN PROPERTY LINE  
 REQUIRED: (10) CANOPY TREES, (17) UNDERSTORY TREES, (68) SHRUBS  
 PROVIDED: EXISTING VEGETATION TO MEET REQUIREMENT

**SECTION 8.7A.1. PARKING LOT SCREENING**

REQUIREMENT: TYPE A BUFFER (3 CANOPY TREES, 2 UNDERSTORY TREES AND 20 SHRUBS PER 100LF) ON ALL SIDES OF PARKING LOTS FRONTS PUBLIC RIGHT-OF-WAY AND SIDES NOT OTHERWISE PROTECTED BY A BUFFER YARD SHALL BE SCREENED TO REDUCE NEGATIVE IMPACT OF AUTOMOBILE HEADLIGHTS AND GLARE ON ADJACENT PROPERTIES.

157 LF PARKING FRONTING US HIGHWAY 64  
 REQUIRED: (5) CANOPY TREES, (4) UNDERSTORY TREES, (36) SHRUBS  
 PROVIDED: (5) QP, (4) YO AND (36) IC

205 LF PARKING ALONG OUTPARCEL  
 REQUIRED: (6) CANOPY TREES, (4) UNDERSTORY TREES, (41) SHRUBS  
 PROVIDED: (6) ZS, (4) YO AND (43) IC

105 LF PARKING FRONTING NEW PUBLIC STREET (NORTH SIDE)  
 REQUIRED: (3) CANOPY TREES, (2) UNDERSTORY TREES, (21) SHRUBS  
 PROVIDED: (3) ZS, (2) YO AND (21) IC

80 LF PARKING FRONTING NEW PUBLIC STREET (NORTH SIDE)  
 REQUIRED: (2) CANOPY TREES, (2) UNDERSTORY TREES, (16) SHRUBS  
 PROVIDED: (2) QP, (2) YO AND (16) IC

51 LF PARKING FRONTING NEW PUBLIC STREET (SOUTH SIDE)  
 REQUIRED: (2) CANOPY TREES, (1) UNDERSTORY TREES, (10) SHRUBS  
 PROVIDED: (2) UF, (1) YO AND (11) IC

**SECTION 8.7C ENCLOSED CONTAINMENT AREAS FOR TRASH AND RECYCLABLES**

REQUIREMENT: ENCLOSED CONTAINMENT AREAS FOR TRASH AND RECYCLABLES SHALL BE SCREENED BY THE ELEMENTS OF A TYPE B BUFFER YARD THAT PERTAIN TO SEMI-OPAQUE SCREENS UP TO 6' IN HEIGHT.  
 PROVIDED: (6) 6' NELLIE STEVENS HOLLY

**SECTION 8.8 PARKING LOT LANDSCAPING**

REQUIREMENT: NO PARKING SPACE SHALL BE MORE THAN 60 FT FROM THE BASE OF A DECIDUOUS CANOPY TREE AND A LANDSCAPE AREA SHALL BE PROVIDED AT THE END OF EACH PARKING ROW AND CONTAIN A DECIDUOUS CANOPY TREE. EACH CANOPY TREE PLANTING AREA SHALL BE A MINIMUM OF 300 SQ FT.

PROVIDED: (8) JAPANESE ZELKOVA, 2" CALIPER MIN.  
 (25) WILLOW OAK, 2" CALIPER MINIMUM

**SECTION 8.10 STREET TREES**

REQUIREMENT: CANOPY TREES SHALL BE PLANTED ON THE AVERAGE OF 40' ON CENTER, 5' MINIMUM PLANTING STRIP. UNDERSTORY TREES ARE PERMITTED UNDER EXISTING OVERHEAD UTILITIES. STREET TREES SHALL BE AT LEAST 10' FROM LIGHT POLES AND 12' FROM ELECTRICAL TRANSFORMERS (UNDERSTORY TREES SHALL BE 5' FROM EACH)

US HIGHWAY 64 = 862.31 LF / 40' = 22 CANOPY TREES REQUIRED  
 PROVIDED = (22) SUGAR MAPLES 2" MIN CALIPER.

MILBURNIE ROAD = 223.75 LF / 40' = 6 CANOPY TREES REQUIRED  
 PROVIDED = (6) SAWTOOTH OAKS 2" MIN CALIPER.

NEW PUBLIC STREET (NORTH SIDE) = 773.73 LF / 40' = 20 CANOPY TREES REQUIRED  
 PROVIDED = (20) LACEBARK ELMS 2" MIN CALIPER.

NEW PUBLIC STREET (SOUTH SIDE) = 546.97 LF / 40' = 14 CANOPY TREES REQUIRED  
 PROVIDED = (14) LACEBARK ELMS 2" MIN CALIPER.

**WOOD FENCE DETAIL**

**WARNING SIGN DETAIL**

**PERFORATED PLASTIC FENCE DETAIL**

**NOTES:**

- REMOVE ALL BARRIERS UPON COMPLETION OF PROJECT.
- LANDSCAPING PLANS SHALL SHOW LOCATIONS OF ALL TREE PROTECTION FENCES.
- ALL PLANTS TO BE SAVED SHALL BE PROTECTED BY FENCING AS SHOWN IN THIS DETAIL.
- CONTRACTOR SHALL INSTALL FENCING PRIOR TO BEGINNING ANY CONSTRUCTION OR GRADING ACTIVITY.
- CONTRACTOR SHALL CALL FOR INSPECTION AND APPROVAL OF PROTECTIVE FENCING PRIOR TO BEGINNING ANY CONSTRUCTION OR GRADING.
- PROTECTIVE FENCING SHALL BE LOCATED 5' OUTSIDE DRIPLINE OF TREES AND 1' MINIMUM OUTSIDE SHRUBS OR OTHER PLANTS.

DATE	DESCRIPTION	REVISED BY

TOWN OF KNIGHTDALE STANDARD DETAILS	PLANT PROTECTIVE FENCING	STD. NO. 2.10
-------------------------------------	--------------------------	---------------

**NOTES:**

- REMOVE WIRE OR NYLON TWINE FROM BALL.
- SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION.

**ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI, 1990, PART 1, "SHADE AND FLOWERING TREES")**

FOR EXAMPLE: CALIPER	HEIGHT (RANGE)	MAX. HEIGHT	MIN. ROOT BALL DIA.	MIN. ROOT BALL DEPTH
2"	12-14'	16'	24"	16"
3"	14-16'	18'	32"	21"

DATE	DESCRIPTION	REVISED BY

TOWN OF KNIGHTDALE STANDARD DETAILS	TREE PLANTING (FOR SINGLE AND MULTI-STEM TREES)	STD. NO. 3.25
-------------------------------------	---	---------------

**NOTES:**

- 300 SF MIN. TOTAL REQUIRED AREA PER TREE.
- FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS BEFORE PREPARING SOIL AND PLANTING TREES.
- REMOVE COMPACTED SOIL AND ADD 24" NEW OR TOPSOIL/PLANTING MIX OR UNCOMPACT AND AMEND TOP 24" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES.

DATE	DESCRIPTION	REVISED BY

TOWN OF KNIGHTDALE STANDARD DETAILS	TREE PLANTING ISLAND IN PARKING LOTS	STD. NO. 3.23
-------------------------------------	--------------------------------------	---------------

**NOTES:**

- SCARIFY ROOT MASS OF CONTAINERIZED PLANT MATERIAL.
- INSTALL CONTAINERIZED PLANTS AT FINISHED GRADE.
- TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
- OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
- SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.

DATE	DESCRIPTION	REVISED BY

TOWN OF KNIGHTDALE STANDARD DETAILS	SHRUB PLANTING BED	STD. NO. 3.24
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a. Town Certification. This Design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

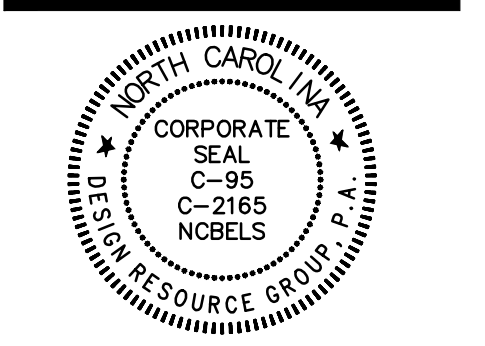
By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Administrator



design resource group

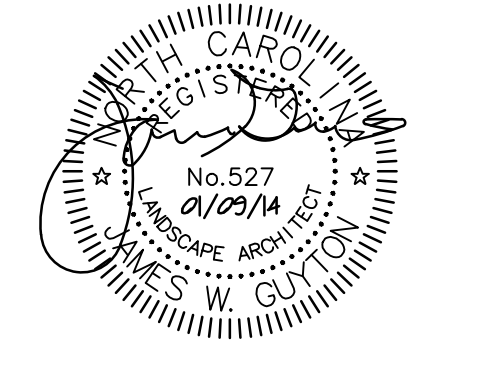
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**RIVERS EDGE APARTMENTS**  
 KNIGHTDALE, NORTH CAROLINA  
**SYMPHONY PROPERTIES, LLC.**  
 103 TORREY PINES DRIVE  
 CARY, NC 27513

CONSTRUCTION DOCUMENTS



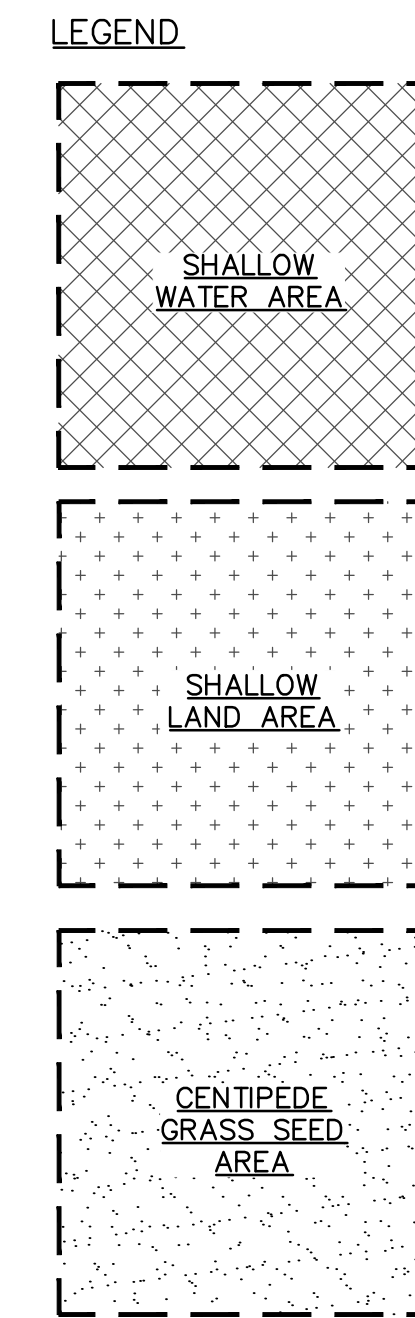
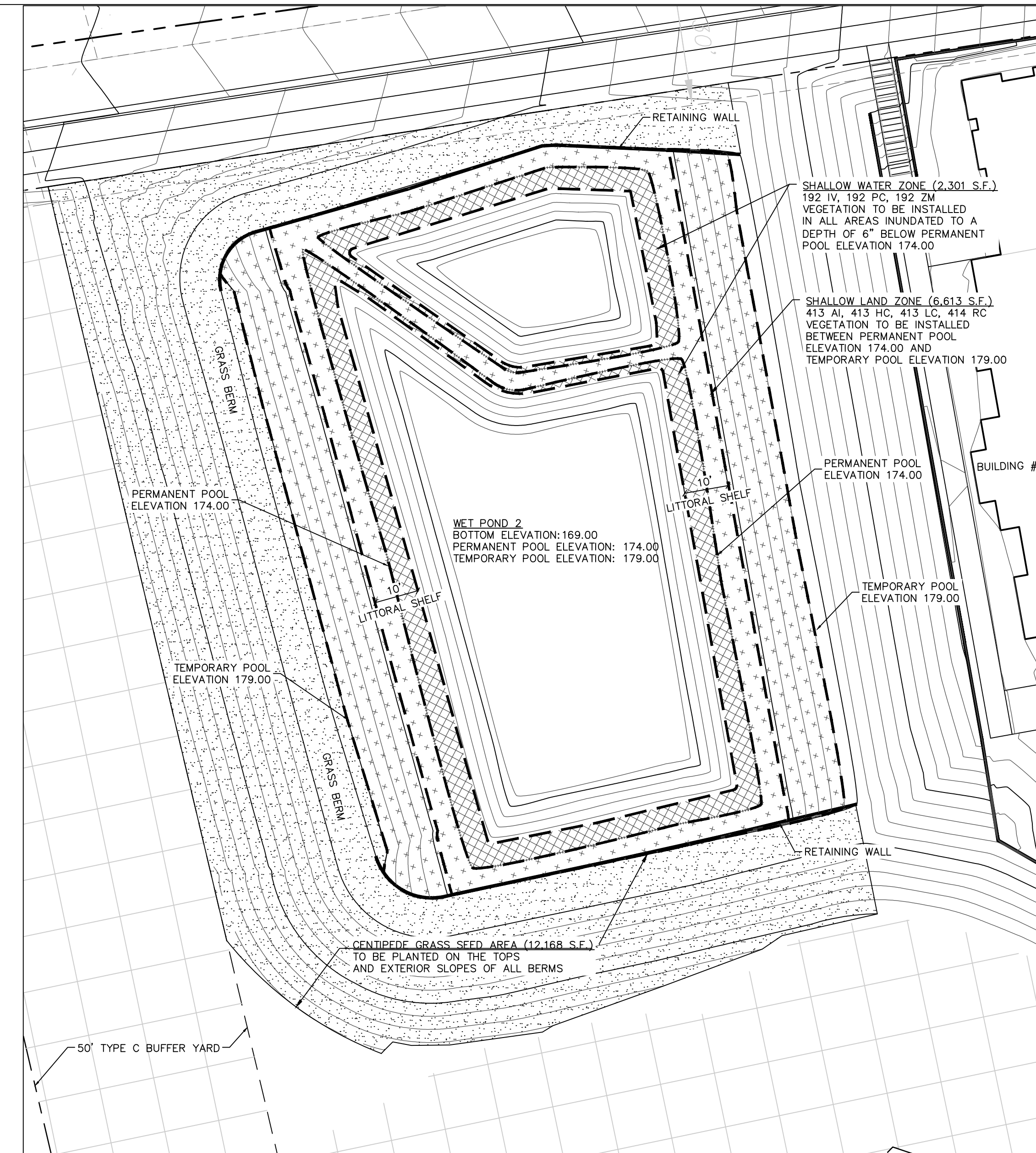
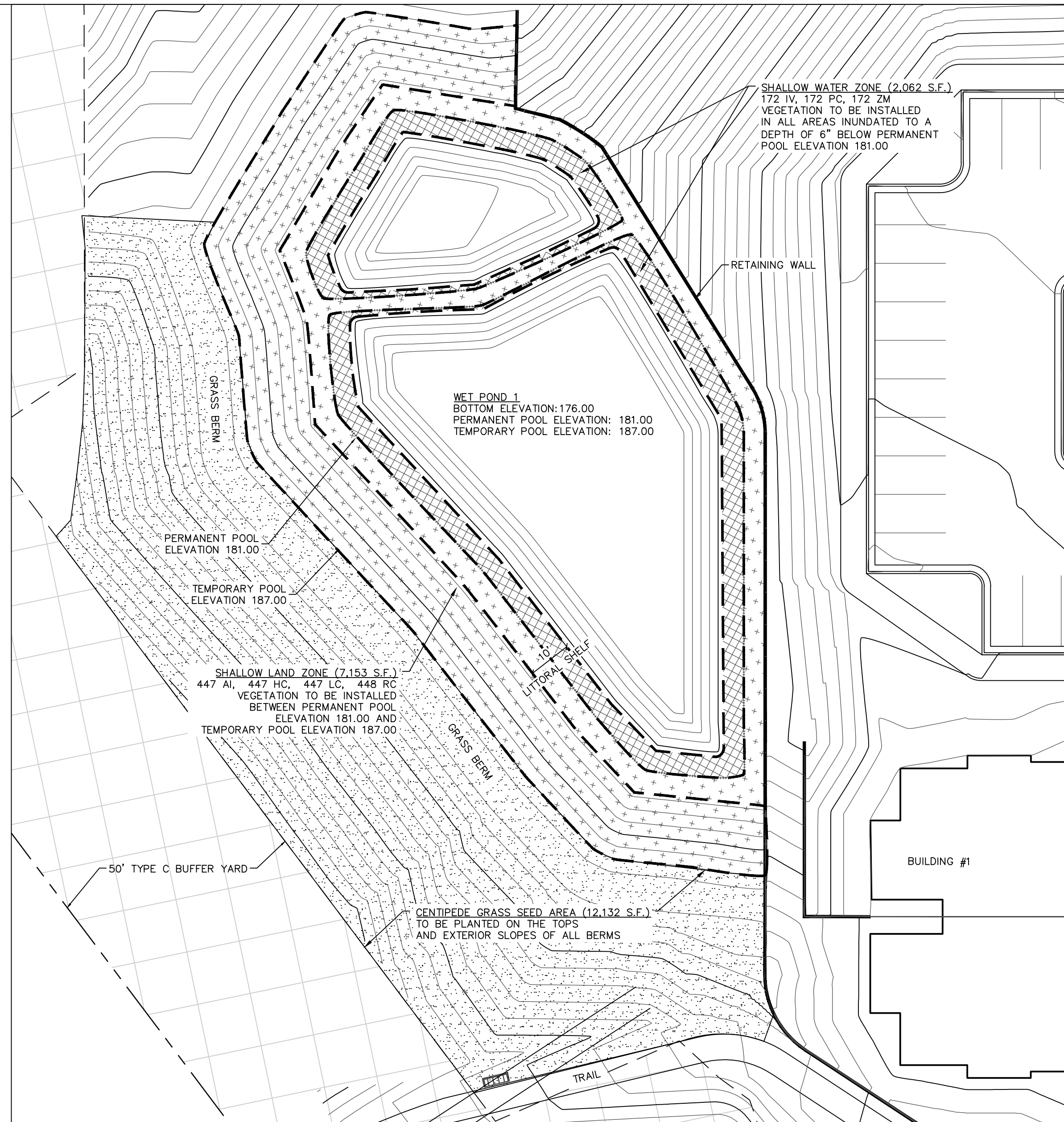
SCALE: NTS

PROJECT #: 364-006  
 DRAWN BY: MB  
 CHECKED BY: SK

**REQUIRED PLANTING CALCULATIONS & DETAILS**

JANUARY 9, 2015

REVISIONS:



BMP #1: REQUIRED PLANTING PLAN

BMP #2: REQUIRED PLANTING PLAN

WET POND 1 LANDSCAPING SCHEDULE

KEY	QTY.	SCIENTIFIC NAME	COMMON NAME	CON.	NOTE	ZONE
IV	172	IRIS VIRGINICA	BLUE FLAG IRIS	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW WATER
PC	172	PONTEREDIA CORDATA	PICKERELWEED	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW WATER
ZM	172	ZIZANIOPSIS MILIACEA	GIANT CUTGRASS	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW WATER
AI	447	ASCLEPIAS INCARNATA	SWAMP MILKWEED	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW LAND
HC	447	HIBISCUS COCCINEUS	SCARLET ROSE MALLOW	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW LAND
LC	447	LOBELIA CARDINALIS	CARDINAL FLOWER	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW LAND
RC	448	RHYNCHOSPORA COLORATA	STARRUSH WHITETOP	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW LAND

WET POND 2 LANDSCAPING SCHEDULE

KEY	QTY.	SCIENTIFIC NAME	COMMON NAME	CON.	NOTE	ZONE
IV	192	IRIS VIRGINICA	BLUE FLAG IRIS	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW WATER
PC	192	PONTEREDIA CORDATA	PICKERELWEED	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW WATER
ZM	192	ZIZANIOPSIS MILIACEA	GIANT CUTGRASS	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW WATER
AI	413	ASCLEPIAS INCARNATA	SWAMP MILKWEED	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW LAND
HC	413	HIBISCUS COCCINEUS	SCARLET ROSE MALLOW	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW LAND
LC	413	LOBELIA CARDINALIS	CARDINAL FLOWER	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW LAND
RC	414	RHYNCHOSPORA COLORATA	STARRUSH WHITETOP	2"φ x 5" PLUG	PLANT 50 PLUGS PER 200 S.F.	SHALLOW LAND

WETPOND PLANTING NOTES:

ALL WET PONDS SHALL BE PLANTED AND MAINTAINED IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE NCDENR STORMWATER BMP MANUAL.

THE SHALLOW WATER ZONE IS DEFINED AS THE AREA FROM THE PERMANENT POOL ELEVATION OF THE POND TO 6" BELOW THE PERMANENT POOL ELEVATION. THIS ZONE SHALL BE PLANTED AT A RATE 50 HERBACEOUS PLANTS PER 200 S.F. OF SHALLOW WATER AREA.

THE SHALLOW LAND ZONE IS DEFINED AS THE TEMPORARY STORAGE VOLUME OF THE WETPOND BETWEEN THE DESIGNED TEMPORARY POOL ELEVATION AND THE PERMANENT POOL ELEVATION. THIS ZONE SHALL BE PLANTED AT A RATE 50 HERBACEOUS PLANTS PER 200 S.F. OF SHALLOW LAND AREA.

HERBACEOUS PLANTS SHALL BE PLANTED IN CLUSTERS OF 30 TO 50 OF A SINGLE SPECIES. CLUSTERS SHALL BE RANDOMLY DISPERSED THROUGHOUT THE APPROPRIATE PLANTING ZONE.

WETPOND PLANTS SHALL BE INSTALLED WITHIN 14 DAYS OF THE WETPOND BEING BROUGHT ONLINE.

TREES OR SHRUBS SHOULD NOT BE PLANTED ON PORTIONS OF WATER IMPOUNDING BERMS TALLER THAN 4 FEET HIGH.

NO CATTAILS SHALL BE PLANTED.

ANY PLANTS PLANTED IN THE LOW ZONES SHALL BE PLANTED HIGH ON SLIGHTLY RAISED MOUNDS TO FACILITATE AERATION OF THE ROOTS.

NO TREES SHALL BE PLANTED WITHIN 10 FEET OF A RELIEF DRAIN.

THE TOPS AND EXTERIOR SLOPES OF ALL CONTAINMENT BERMS SHALL BE SEEDDED WITH CENTIPEEDE GRASS.

TOPSOIL / PLANTING MIX REQUIREMENTS

- EXISTING COMPACTED SOIL MUST BE REMOVED AND REPLACED WITH 24" OF TOPSOIL / PLANTING MIX - OR - EXISTING SOIL MAY BE UNCOMPACTED TO A DEPTH OF 24" AND AMENDED TO MEET TOPSOIL STANDARDS FOR THE ENTIRE PLANTING AREA.
- SOIL IN ALL PLANTING STRIPS OR ISLANDS, WHETHER EXISTING OR NEW (ON NEW OR RENOVATED SITES), MUST MEET THE MINIMUM TOPSOIL/PLANTING MIX SPECIFICATIONS. SOIL AMENDMENTS OR FRESH TOPSOIL / PLANTING MIX AREA OFTEN NEEDED FOR PLANTING AREAS AT SITES WHERE ORIGINAL TOPSOIL IS OF POOR QUALITY, HEAVILY COMPACTED OR WHERE TOPSOIL HAS BEEN COMPLETELY REMOVED DURING GRADING.
- TOPSOIL / PLANTING MIX SHOULD BE NATURAL, FERTILE, AGRICULTURAL SOIL CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. IT SHOULD BE UNIFORM COMPOSITION THROUGHOUT, WITH ADMIXTURE OF SUBSOIL. IT SHOULD BE FREE OF STONES, LUMPS, LIVE PLANTS AND THEIR ROOTS, STICKS AND OTHER EXTRANEIOUS MATTER. TOPSOIL SHOULD NOT BE USED WHILE IN A FROZEN OR MUDDY CONDITION.
- TOPSOIL / PLANTING MIX SHALL HAVE AN ACIDITY RANGE OF PH 5.5-7.0 AND THE FOLLOWING COMPOSITION:  

CLAY (RED CLAY, WELL PULVERIZED)	MINIMUM 10%; MAXIMUM 35%
COMPOST* / ORGANIC	MINIMUM 5%; MAXIMUM 10%
SILT	MINIMUM 30%; MAXIMUM 50%
COARSE SAND (FREE OF ROCKS, 0.5 TO 1.0 MM F)	MINIMUM 30%; MAXIMUM 45%

\*ORGANIC MATERIAL SUCH AS SAWDUST OR LEAF MOLD THAT HAS COMPLETED THE DECOMPOSITION PROCESS

MAINTENANCE PLAN:

A MINIMUM TWO-YEAR WARRANTY PERIOD IS REQUIRED STIPULATING REQUIREMENTS FOR PLANT SURVIVAL AND REPLACEMENT.

REQUIRED PLANTING NOTES:

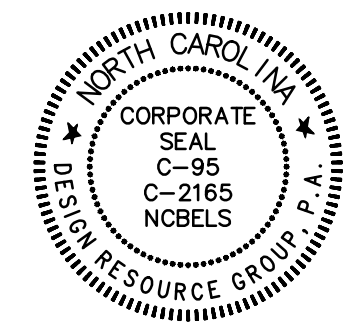
- PRIOR TO DEMOLITION, CLEARING, CONSTRUCTION, GRADING, AND INSTALLATION OF EROSION CONTROL MEASURES; TREE PROTECTIVE BARRIERS MUST BE INSTALLED AROUND ALL TREE SAVE AREAS BY THE DEVELOPER AND APPROVED BY THE TOWN.
- THE TREE PROTECTION FENCE SHALL BE LOCATED ALONG THE PERIMETER OF THE TREE SAVE AREA (DRIP LINE PLUS 5 FEET). TREE PROTECTION FENCING FOR A FOREST CANOPY STANDS AREA IS TO BE LOCATED ALONG THE PERIMETER OF THE TREE SAVE AREA AROUND THE FOREST EDGE. TREE PROTECTION FENCING SHALL CONSIST OF ORANGE SAFETY FENCING OR A COMBINATION OF ORANGE SAFETY FENCING WITH SILT FENCING AT A MINIMUM OF 4 FEET IN HEIGHT ON METAL OR WOOD POSTS.
- ALL TREE PROTECTION AREAS MUST BE DESIGNATED AS SUCH WITH "TREE SAVE AREA SIGNS" POSTED IN ADDITION TO THE REQUIRED PROTECTIVE FENCING. SIGNS REQUESTING SUBCONTRACTOR COOPERATION AND COMPLIANCE WITH TREE PROTECTION STANDARDS ARE RECOMMENDED FOR SITE ENTRANCES.
- NO SOIL DISTURBANCE OR COMPACTION, STOCK PILING OF SOIL OR OTHER CONSTRUCTION MATERIAL, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT AND MATERIALS ARE ALLOWED WITHIN TREE SAVE AREAS.
- NO ROPES, SIGNS, WIRES, UNPROTECTED ELECTRICAL INSTALLATION OR OTHER DEVICE OR MATERIAL, SHALL BE SECURED OR FASTENED AROUND OR THROUGH A TREE OR SHRUB.
- ALL PROTECTIVE MEASURES SHALL BE MAINTAINED THROUGHOUT THE LAND DISTURBING AND CONSTRUCTION PROCESS, AND SHALL NOT BE REMOVED UNTIL FINAL LANDSCAPING IS INSTALLED.



design resource group

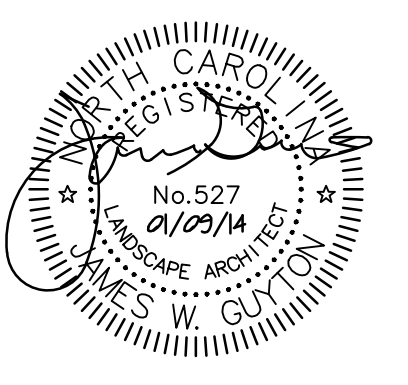
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RIVERS EDGE  
APARTMENTS  
KNIGHTDALE, NORTH CAROLINA  
SYMPHONY PROPERTIES, LLC.  
103 TORREY PINES DRIVE  
CARY, NC 27513

CONSTRUCTION DOCUMENTS



SCALE: 1" = 20'

PROJECT #: 364-006  
DRAWN BY: MB  
CHECKED BY: SK

REQUIRED BMP PLANTING PLANS

JANUARY 9, 2015

REVISIONS:

a. Town Certification. This Design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Administrator





### Outdoor Lighting Shoebox



The Shoebox combines a decorative, contemporary style with versatility and ample lighting effect that is perfect for streets, parking lots, commercial buildings and residential communities. The Shoebox provides excellent color rendition along with a controlled light pattern that reduces glare and keeps the light directed only where you want it. Available in black or dark bronze with one to four fixtures per pole.

High-pressure sodium	250   400 watts 28,500   50,000 lumens
Metal halide	250   350   1,000 watts 20,000   33,000   110,000 lumens
Mounting height	30'
Colors	Black Dark bronze
Pole	Decorative square metal

Note: These dark bronze fixtures and poles are not stocked by Duke Energy Progress. They must be special ordered and require up to eight weeks of lead time for arrival.

For additional information, visit us at [duke-energy.com/OutdoorLighting](http://duke-energy.com/OutdoorLighting) or call us toll free at 800-662-2777.



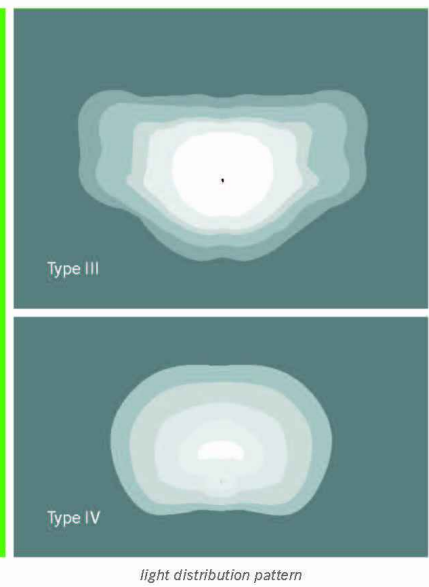
### Outdoor Lighting Shoebox

Light source: High-pressure sodium (golden yellow)  
Wattage: 250 | 400  
Lumens: 28,500 | 50,000

Light source: Metal halide (white)  
Wattage: 250 | 350 | 1,000  
Lumens: 20,000 | 33,000 | 110,000

Light pattern: IESNA Type III (oval)

IESNA cutoff classification: Full cutoff



Pole available:	Mounting height	Color
Decorative square metal	30'	Black Dark bronze

Features	Benefits
Little or no installation cost	Frees up capital for other projects
Design services by lighting professionals included	Meets industry standards and lighting ordinances
Maintenance included	Eliminates high and unexpected repair bills
Electricity included	Less expensive than metered service
Warranty included	Worry-free
One low monthly cost on your electric bill	Convenience and savings for you
Turnkey operation	Provides hassle-free installation and service
Backed by over 40 years of experience	A name you can trust today ... and tomorrow

\*Metal halide also available in IESNA Type IV (forward throw)

† 2" raised foundation available when required

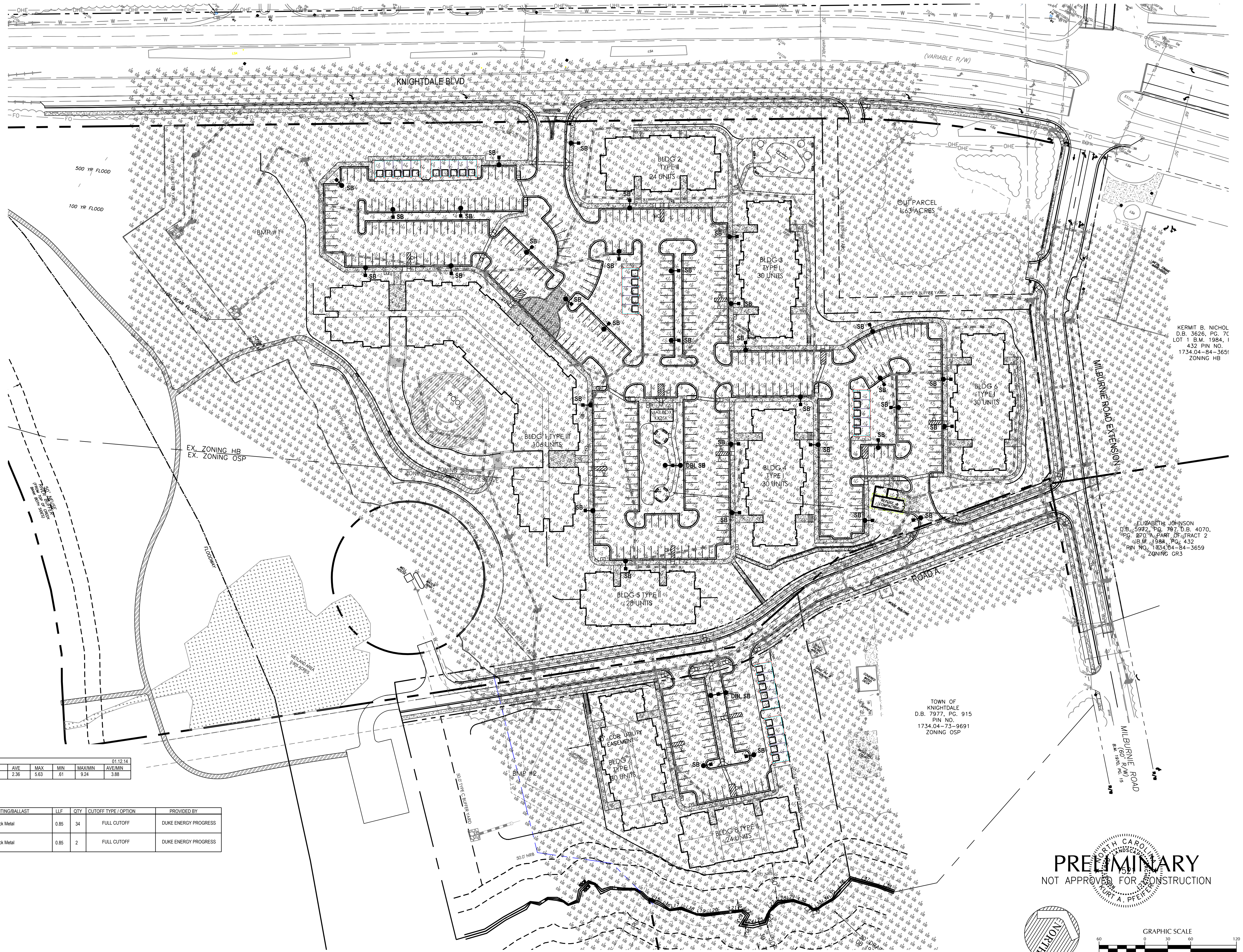
Note: These dark bronze fixtures and poles are not stocked by Duke Energy Progress. They must be special ordered and require up to eight weeks of lead time for arrival.

RIVERS EDGE APARTMENTS CALCULATION SUMMARY										
AREA NAME	DIMENSIONS	GRID / TYPE	# PTS	PAC	GROUP	AVE	MAX	MIN	MAXMIN	AVEMIN
BOUNDARY	1,514.25 X 1,240.50 FT	PARKING / H/H	10,638	10.00	<->	2.36	5.63	61	9.24	3.88

\*AVE, MAXMIN AND MAXMIN AND AVE MIN REPRESENT LIGHT LEVELS WITHIN PARKING LOT.

TYP	SYMBOL	DESCRIPTION	LAMP	LUMENS	MOUNTING/BALLAST	LLF	QTY	CUTOFF TYPE / OPTION	PROVIDED BY
SB		350 WATT METAL HALIDE SHOEBOX TYPE III GE C&I LIGHTING, DSM35P***GMC3**	(1) VENTURE M3350WH/5T15PS/740	33,000	30' Black Metal	0.85	34	FULL CUTOFF	DUKE ENERGY PROGRESS
DBL SB		350 WATT METAL HALIDE SHOEBOX TYPE III GE C&I LIGHTING, DSM35P***GMC3**	(1) VENTURE M3350WH/5T15PS/740	33,000	30' Black Metal	0.85	2	FULL CUTOFF	DUKE ENERGY PROGRESS

NOTE: ALL EXTERIOR SITE LIGHTING A SHALL BE DESIGNED TO PREVENT OFF-SITE GLARE.

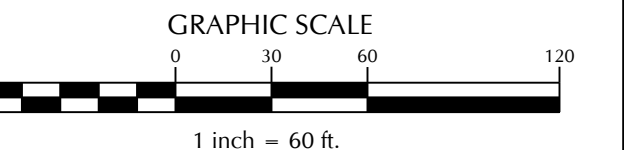
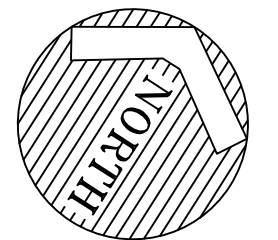


KERMIT B. NICHOL  
D.B. 3626, PG. 7C  
LOT 1 B.M. 1984, I  
432 PIN NO.  
1734.04-84-3659  
ZONING HB

ELIZABETH JOHNSON  
15-5922, PG. 767, D.B. 4070,  
PG. 270, PART OF TRACT 2  
B.M. 1984, PG. 432  
PIN NO. 1834.04-84-3659  
ZONING GR3

TOWN OF KNIGHTDALE  
D.B. 7977, PG. 915  
PIN NO.  
1734.04-73-9691  
ZONING OSP

**PRELIMINARY**  
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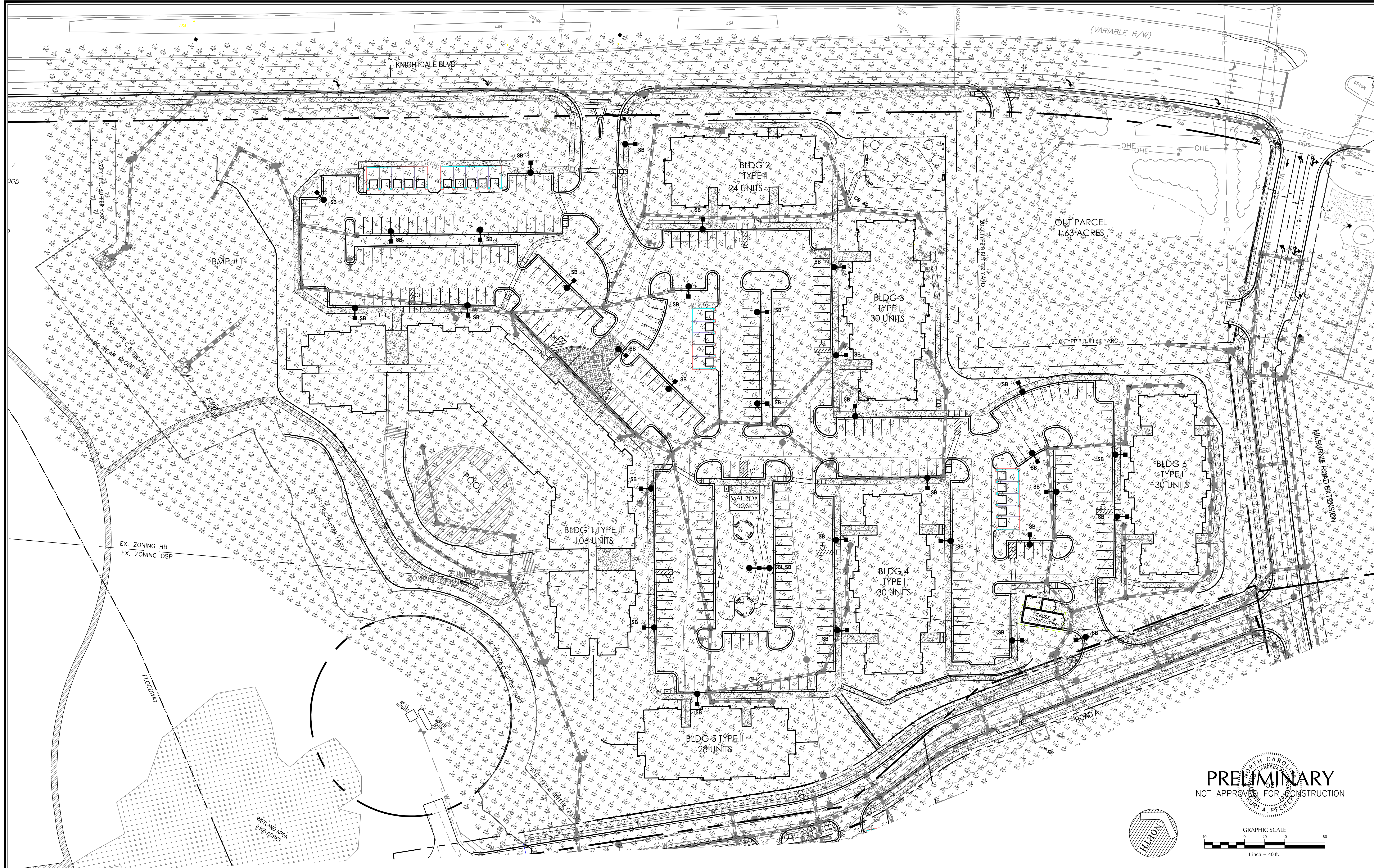
Designer	Scale
Drawn By	Date
Checked By	Job No.

**RIVERS EDGE APARTMENTS**  
Wake County North Carolina

## OVERALL LIGHTING PLAN

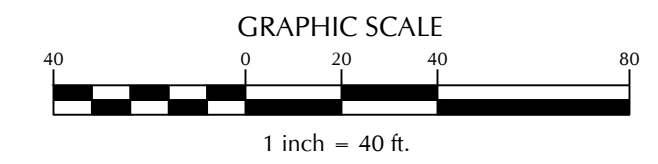
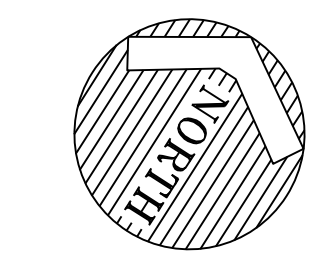
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Sheet No.  
**L1.0**



K:\14-0120\140120-Rivers Edge Apartments\CAD\SET-BROWNS\Sheet 1.0 - Lighting Plan.dwg Monday, January 12, 2015 11:43:43 AM - LEATHER, SWANE

**PRELIMINARY**  
NOT APPROVED FOR CONSTRUCTION



No.	Revision	Date	By	Designer	Scale

**RIVERS EDGE APARTMENTS**  
Wake County North Carolina

**LIGHTING PLAN - NORTH**

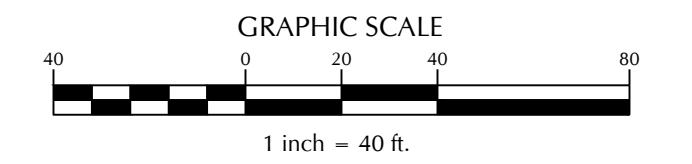
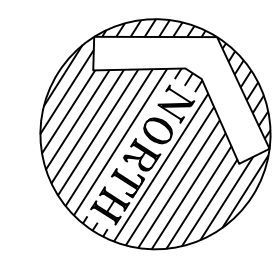
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Sheet No.  
**L1.1**

K:\14\14-0120\140120-Rivers Edge Apartments\CAD\DWG\140120-Rivers Edge Apartments.dwg - Monday, January 12, 2015 11:40:47 AM - LEATHERS, SWANE



PRELIMINARY  
NOT APPROVED FOR CONSTRUCTION



No.	Revision	Date	By

Designer	Scale
Drawn By	Date
Checked By	Job No.
	05/05/2014

**RIVERS EDGE APARTMENTS**  
Wake County North Carolina

**LIGHTING PLAN - SOUTH**

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# R I V E R ' S   E D G E   -   K N I G H T D A L E

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K N I G H T D A L E ,   N O R T H   C A R L I N A

---





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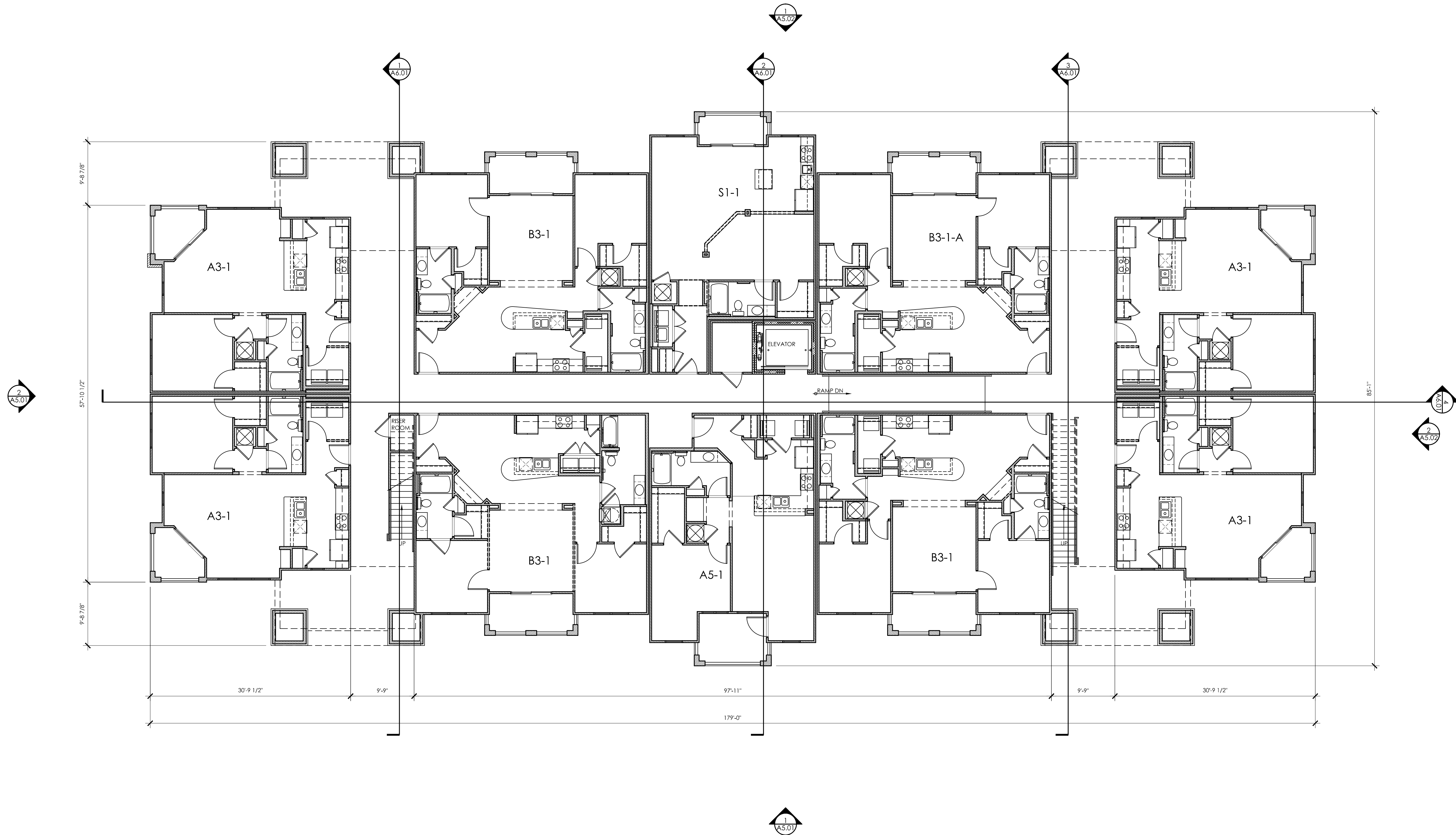
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Key Plan

**BUILDING TYPE 1  
(BUILDINGS  
3,4,6&7) - FIRST  
FLOOR PLAN**

**A3.01**



**1** BLDG TYPE 1 - FIRST FLOOR PLAN  
1/8" = 1'-0"



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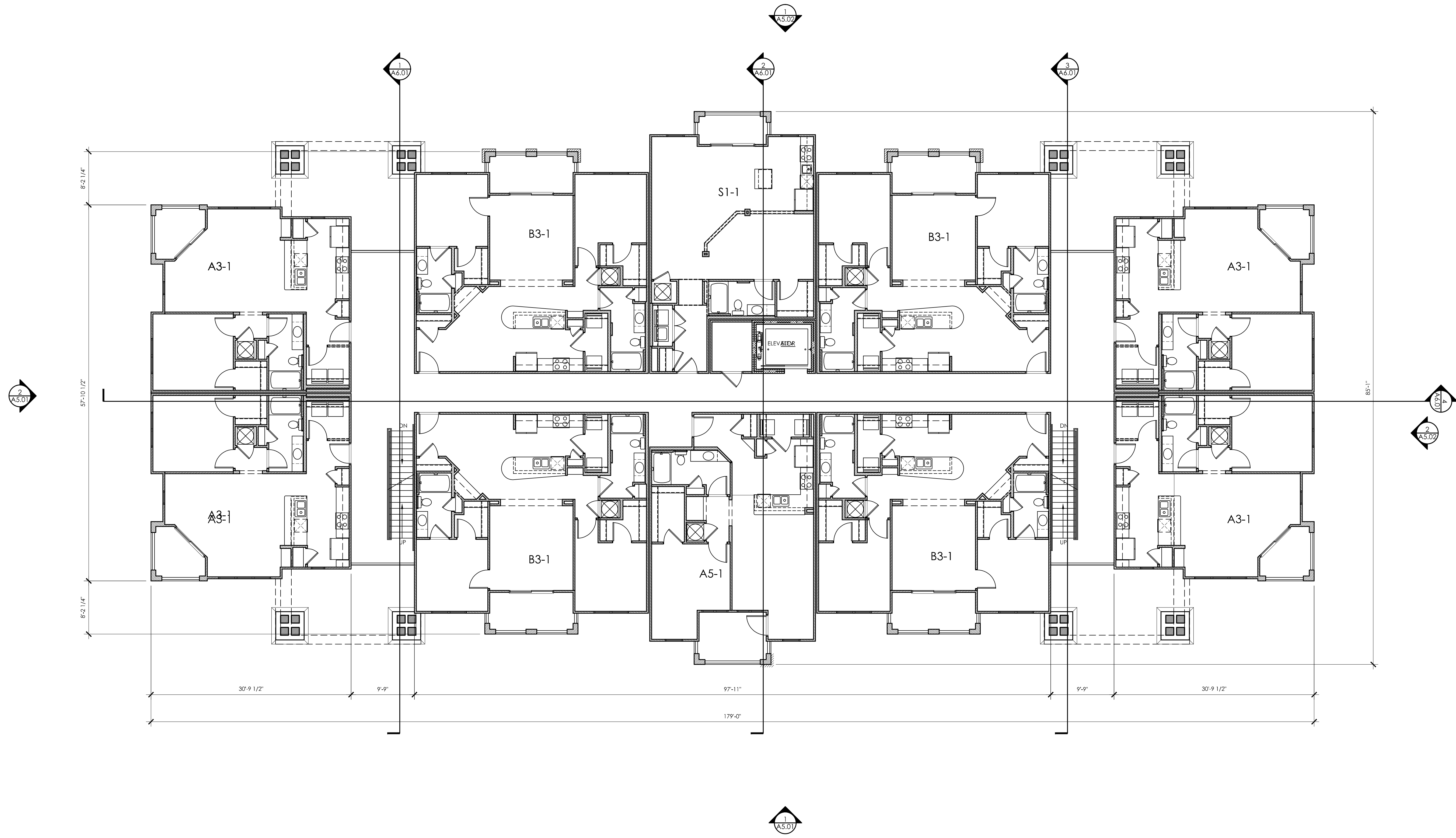
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Key Plan

**BUILDING TYPE 1 (**  
**BUILDINGS 3,4,6&7)**  
**- SECOND FLOOR**  
**PLAN**

**A3.02**



**1** BLDG TYPE 1 - SECOND FLOOR PLAN  
1/8" = 1'-0"



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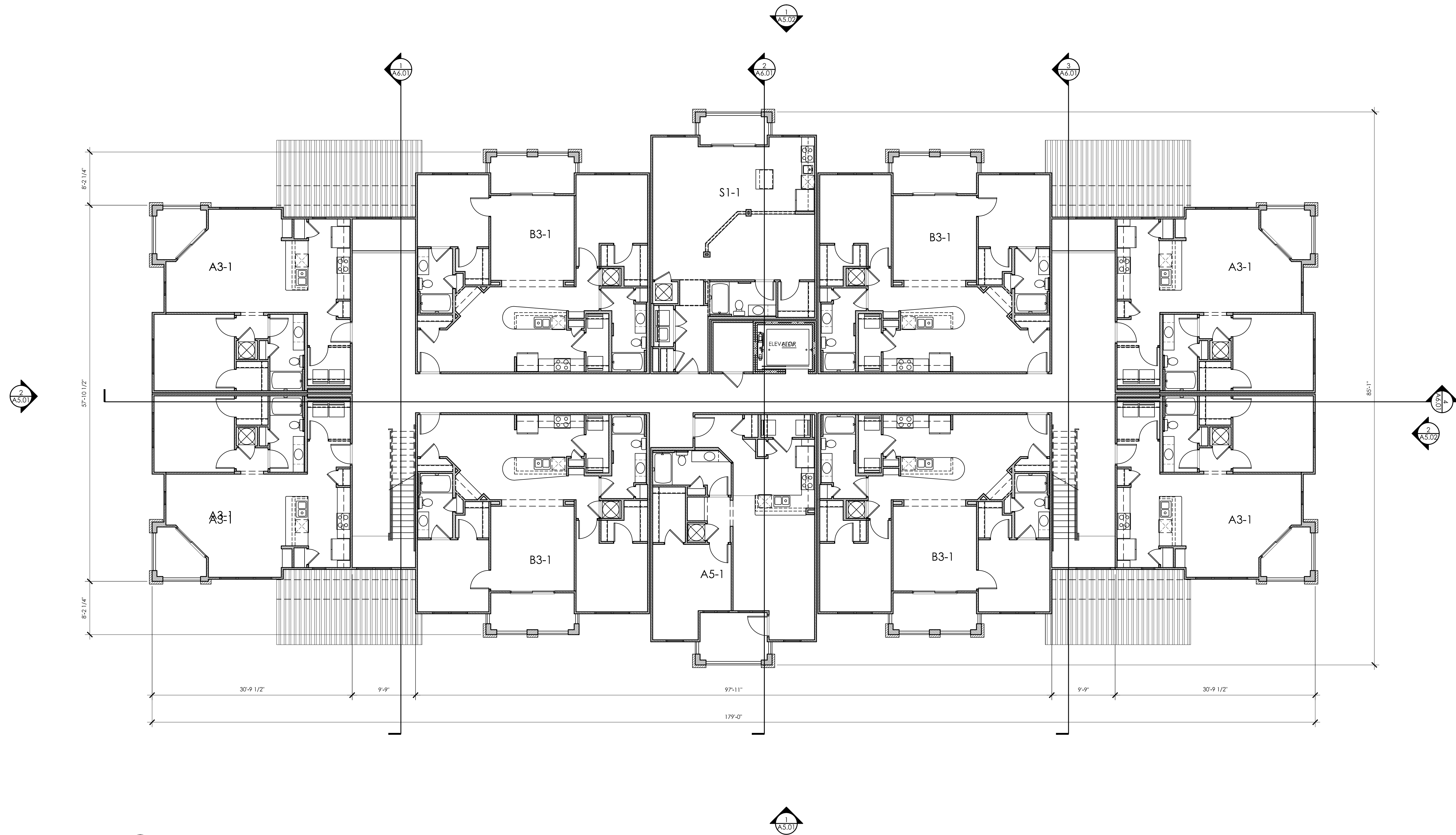
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Key Plan

BUILDING TYPE 1  
(BUILDINGS  
3,4,6&7) - THIRD  
FLOOR PLAN

A3.03



1 BLDG TYPE 1 - THIRD FLOOR PLAN  
1/8" = 1'-0"



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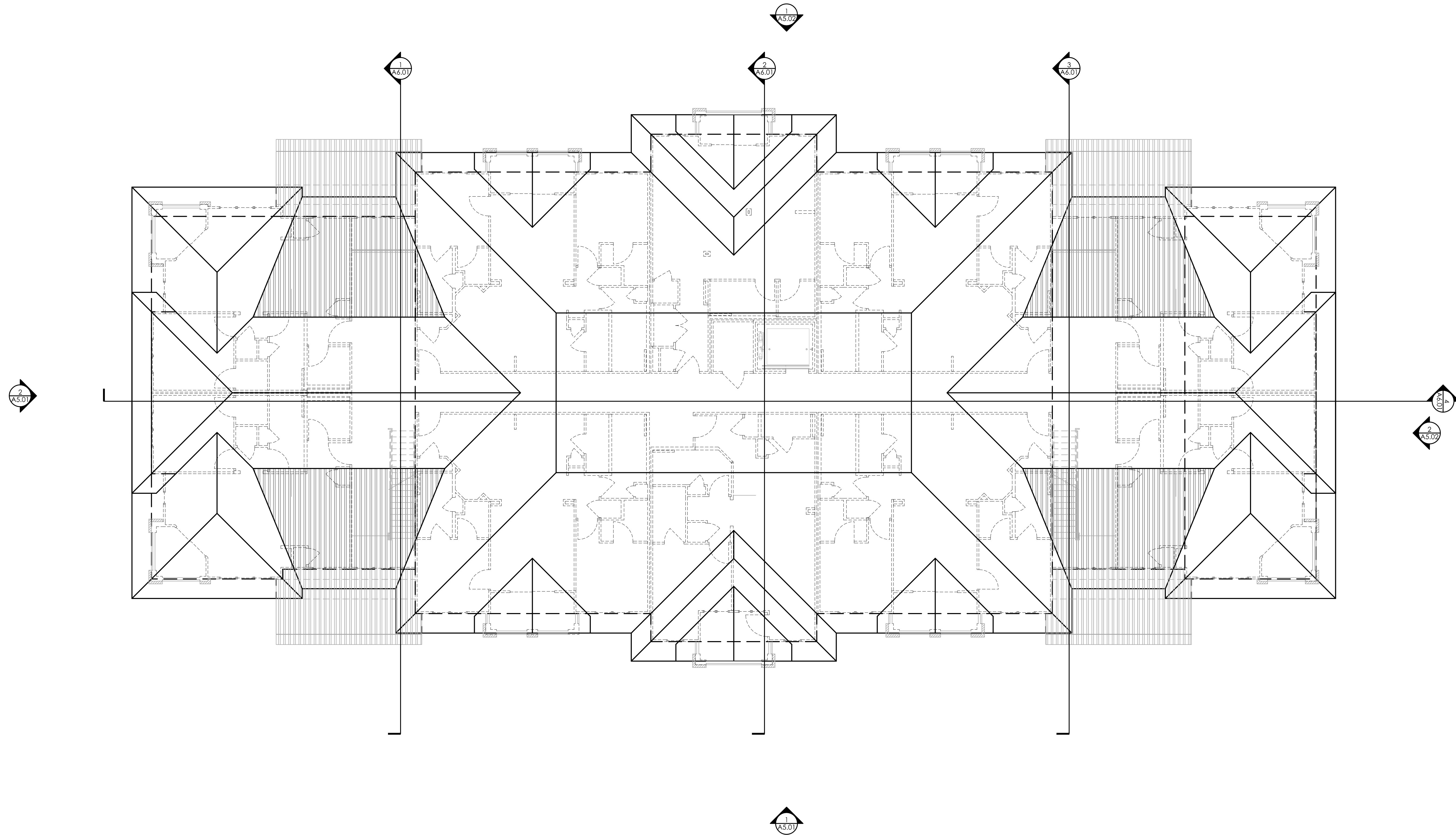
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Key Plan

BUILDING TYPE 1  
(BUILDINGS  
3,4,6&7) - ROOF  
PLAN

A3.04



1 BLDG TYPE 1 - ROOF PLAN  
1/8" = 1'-0"





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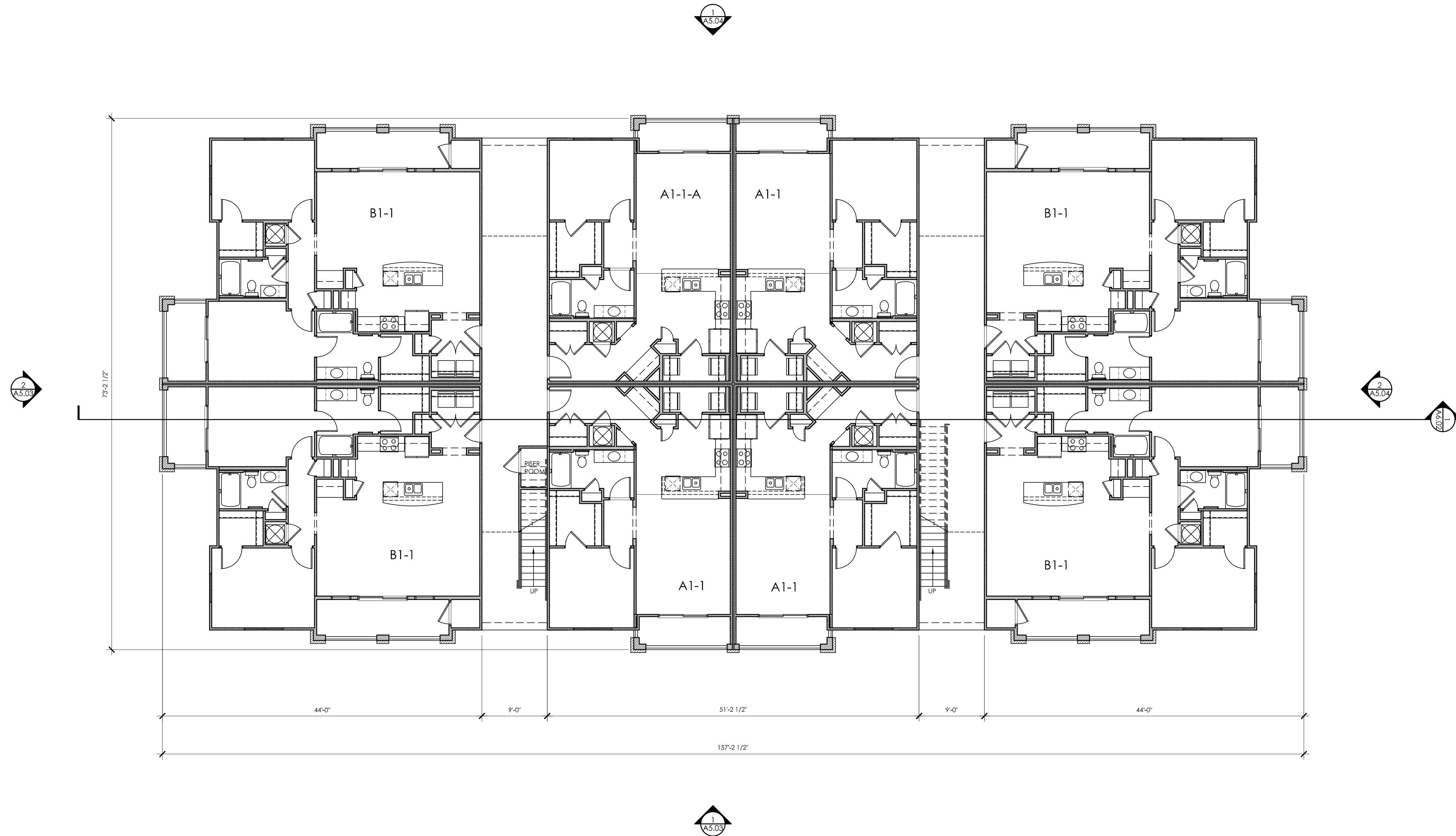
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Key Plan

BUILDING TYPE 2  
(BUILDINGS 2&8) -  
FIRST FLOOR PLAN

A3.05



1 BLDG TYPE 2 - FIRST FLOOR PLAN  
1/8" = 1'-0"



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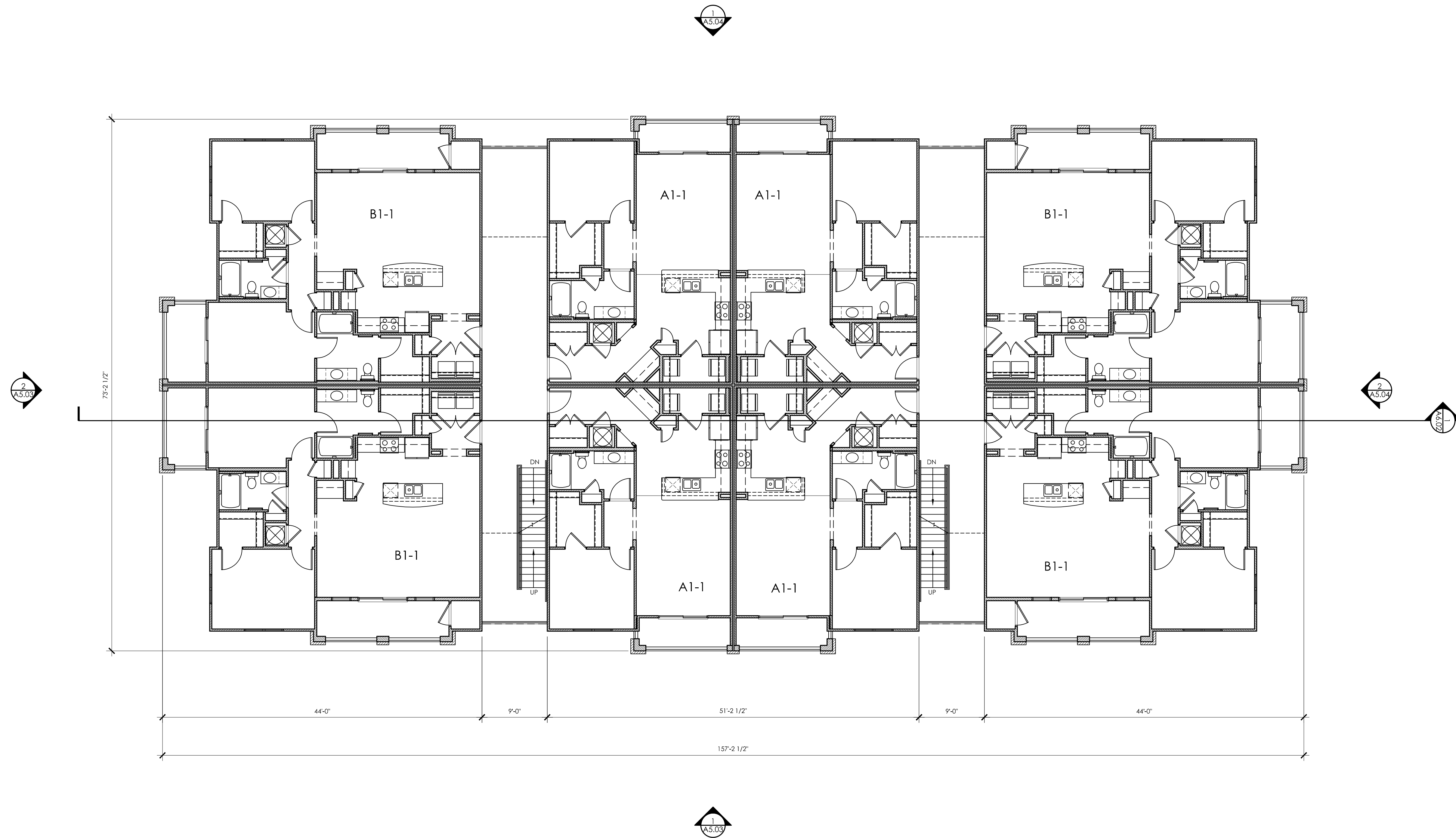
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Key Plan

BUILDING TYPE 2  
(BUILDINGS 2&8) -  
SECOND FLOOR  
PLAN

A3.06



1 BLDG TYPE 2 - SECOND FLOOR PLAN  
1/8" = 1'-0"



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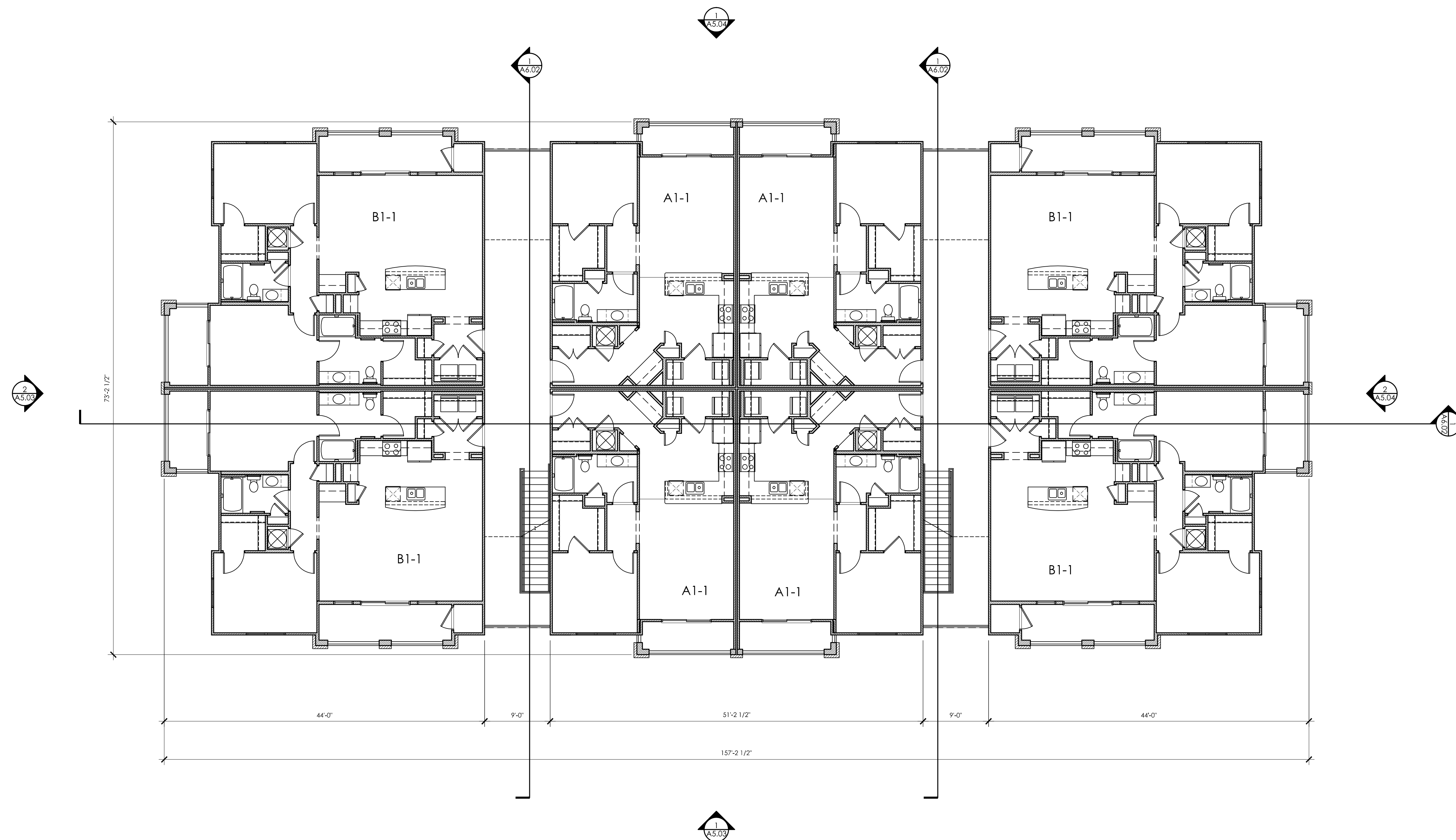
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Key Plan

BUILDING TYPE 2  
(BUILDINGS 2&8) -  
THIRD FLOOR PLAN

A3.07



1 BLDG TYPE 2 - THIRD FLOOR PLAN  
1/8" = 1'-0"



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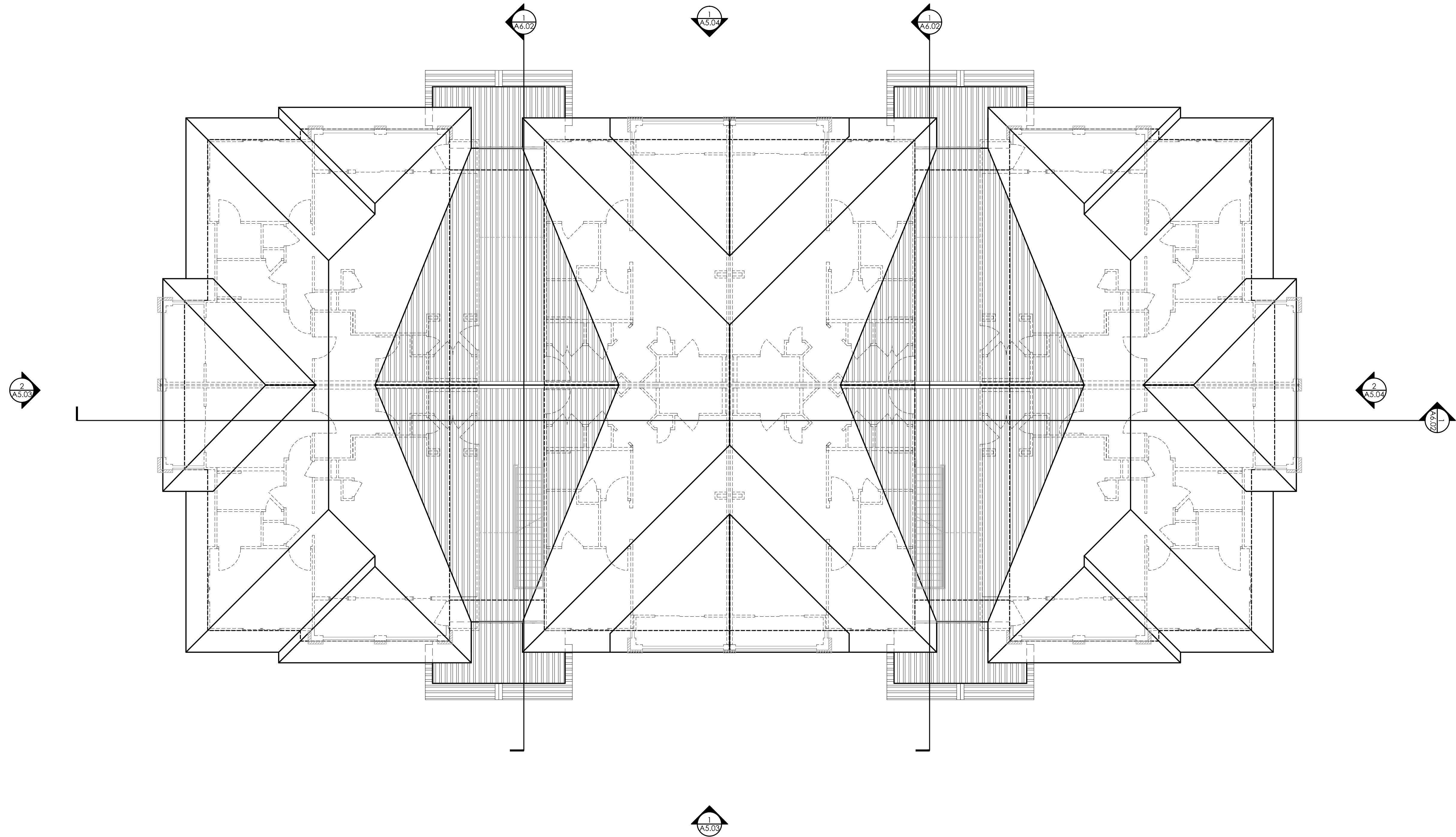
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Key Plan

BUILDING TYPE 2  
(BUILDINGS 2&8) -  
ROOF PLAN

A3.08



1 BUILDING TYPE 2 - ROOF PLAN  
1/8" = 1'-0"



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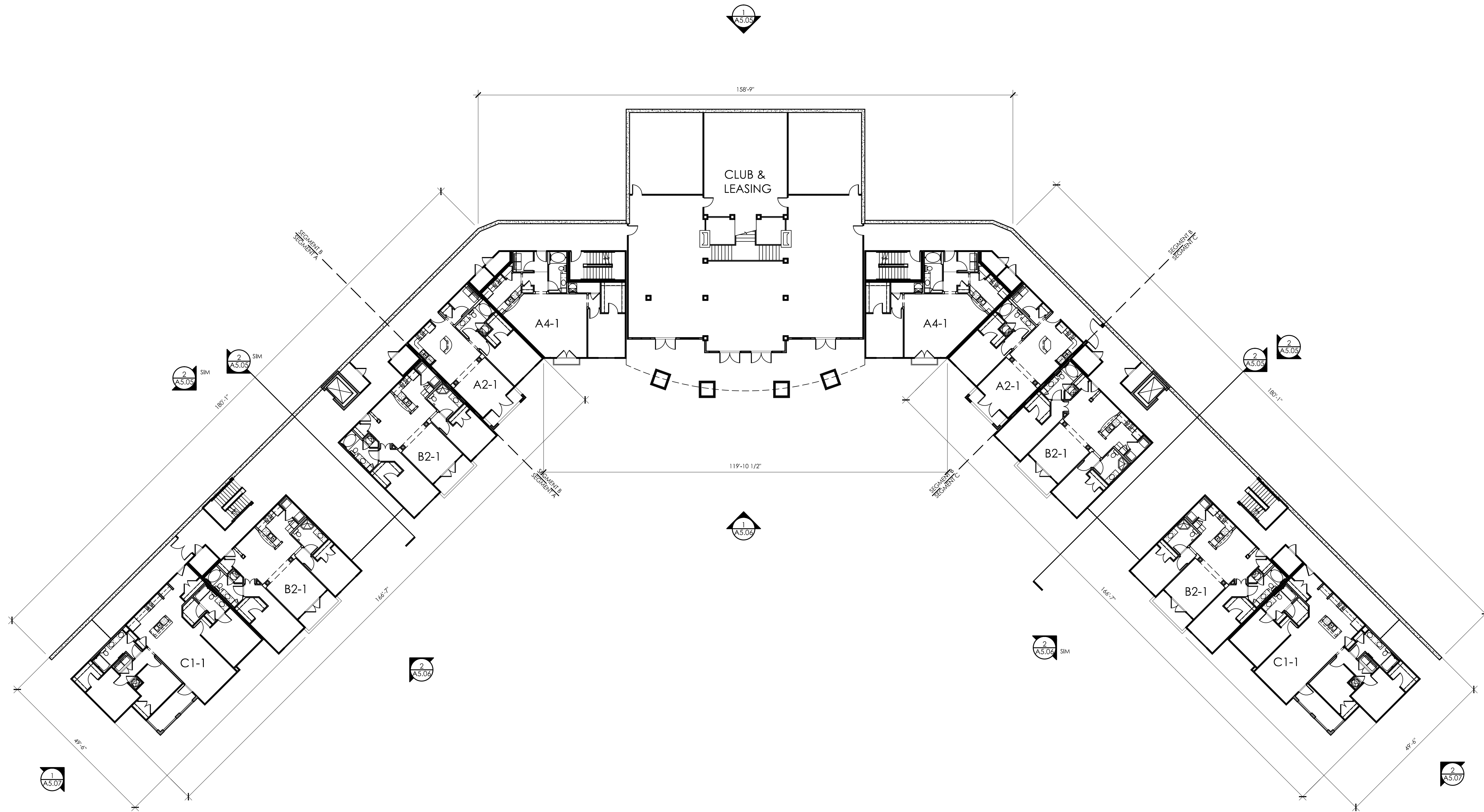
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Key Plan

BUILDING TYPE 3  
(BUILDING 1) -  
BASEMENT FLOOR  
PLAN

A3.09



1 BLDG TYPE 3 - BASEMENT FLOOR  
1/16" = 1'-0"



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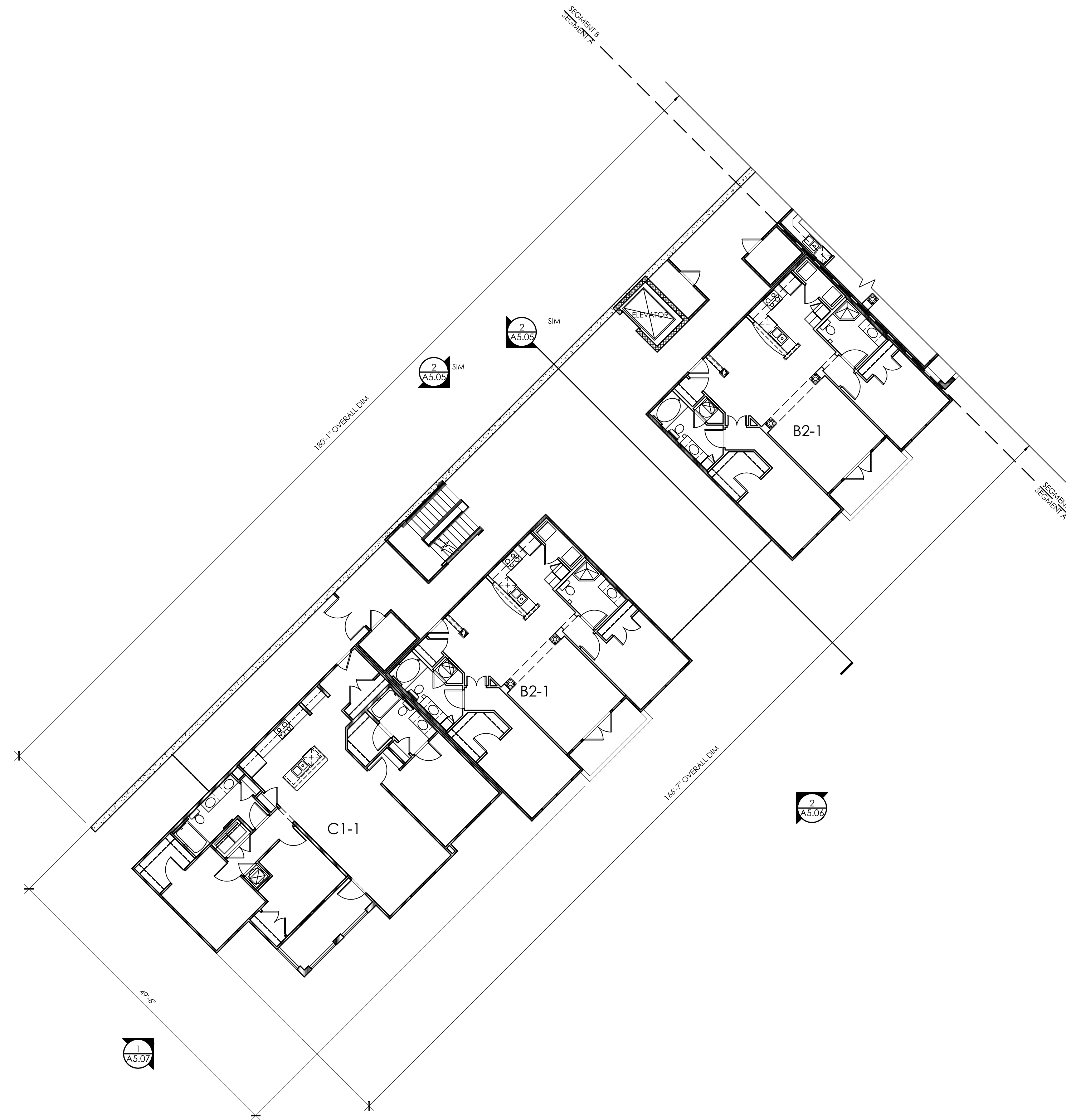
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Key Plan

**BUILDING TYPE 3  
(BUILDING 1) -  
BASEMENT FLOOR  
PLAN SEGMENT A**

**A3.09A**



**1** BLDG TYPE 3 - BASEMENT FLOOR PLAN SEGEMENT A  
3/32" = 1'-0"



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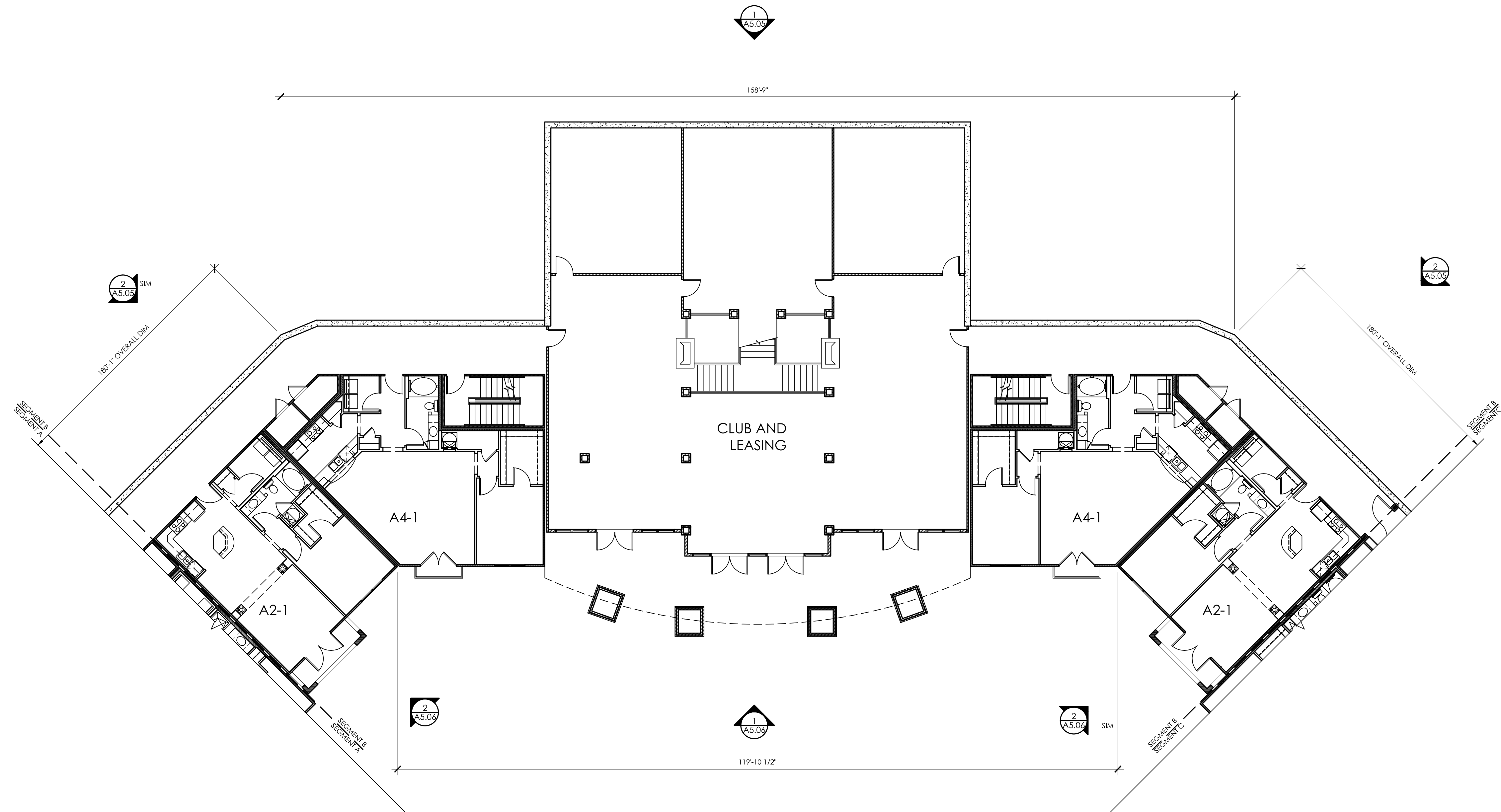
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Key Plan

BUILDING TYPE 3  
(BUILDING 1) -  
BASEMENT FLOOR  
PLAN SEGMENT B

A3.09B



1 BLDG TYPE 3 - BASEMENT FLOOR PLAN SEGMENT B  
3/32" = 1'-0"



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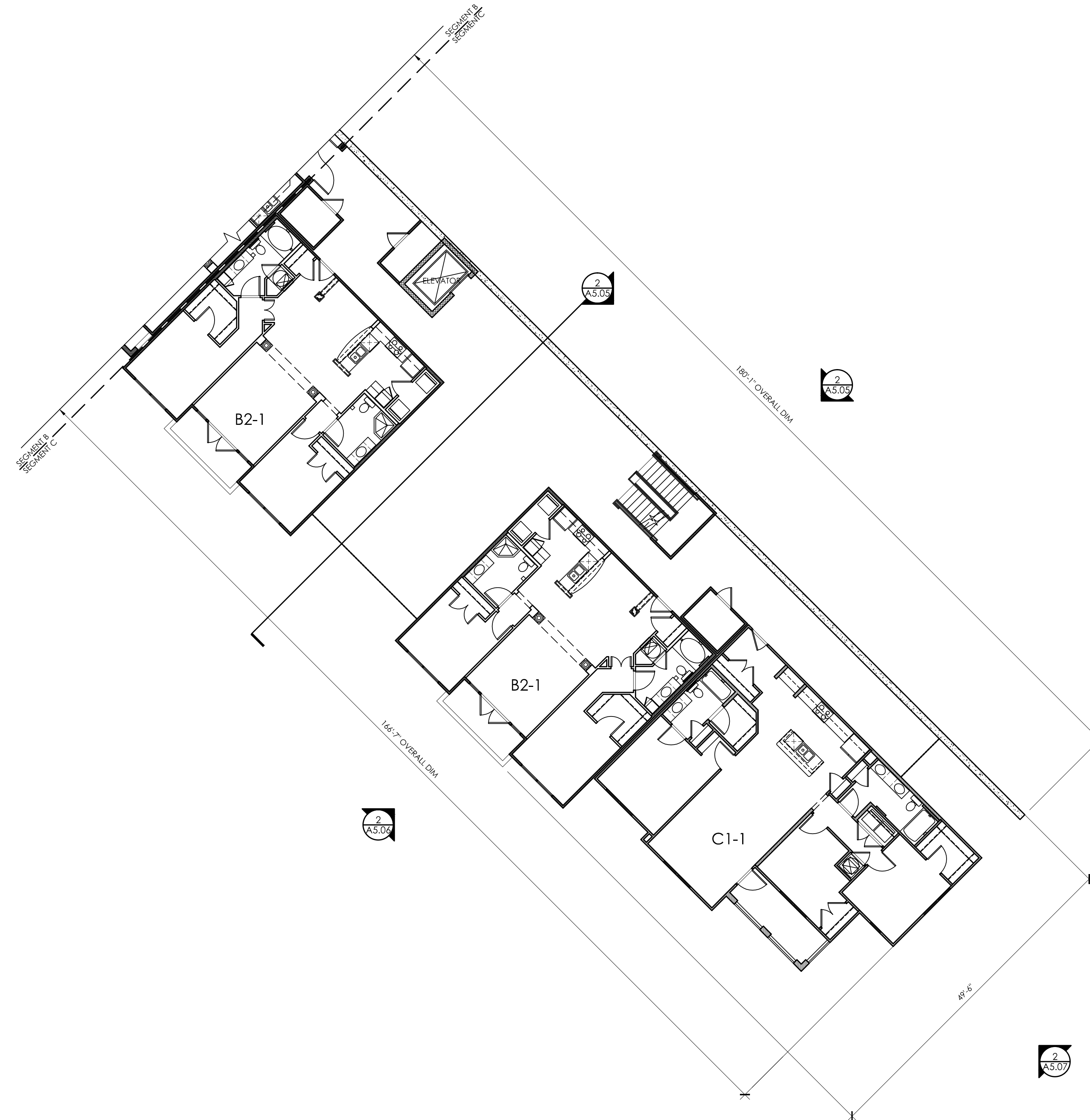
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Key Plan

**BUILDING TYPE 3  
(BUILDING 1) -  
BASEMENT FLOOR  
PLAN SEGMENT C**

**A3.09C**



**1** BLDG TYPE 3 - BASEMENT FLOOR PLAN SEGMENT C  
3/32" = 1'-0"





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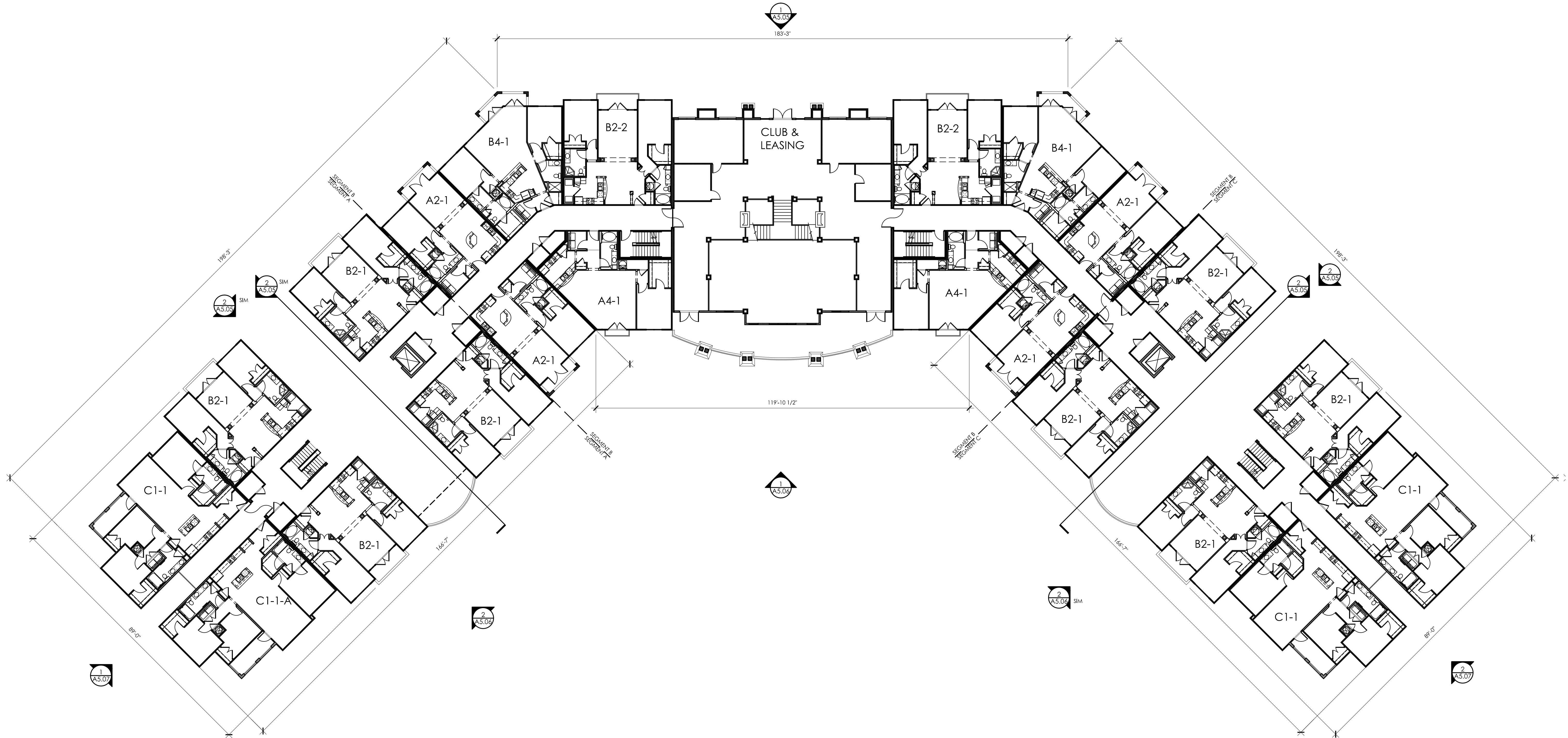
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BUILDING TYPE 3  
(BUILDING 1) - FIRST  
FLOOR PLAN

A3.10



1 BLDG TYPE 3 - FIRST FLOOR PLAN  
1/16" = 1'-0"



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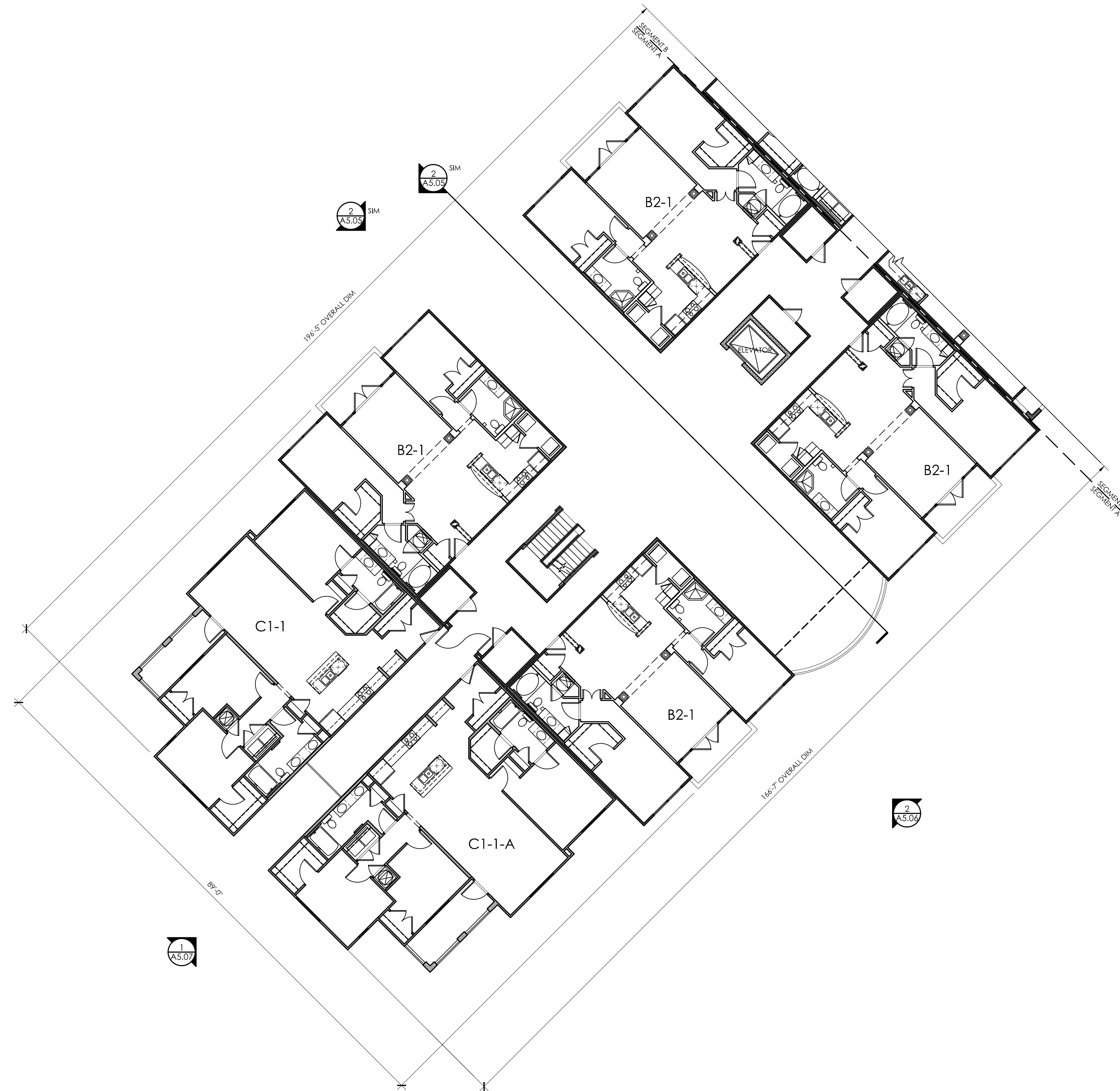
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**BUILDING TYPE 3  
(BUILDING 1) - FIRST  
FLOOR PLAN  
SEGMENT A**

**A3.10A**



**1** BLDG TYPE 3 - FIRST FLOOR PLAN SEGMENT A  
3/32" = 1'-0"



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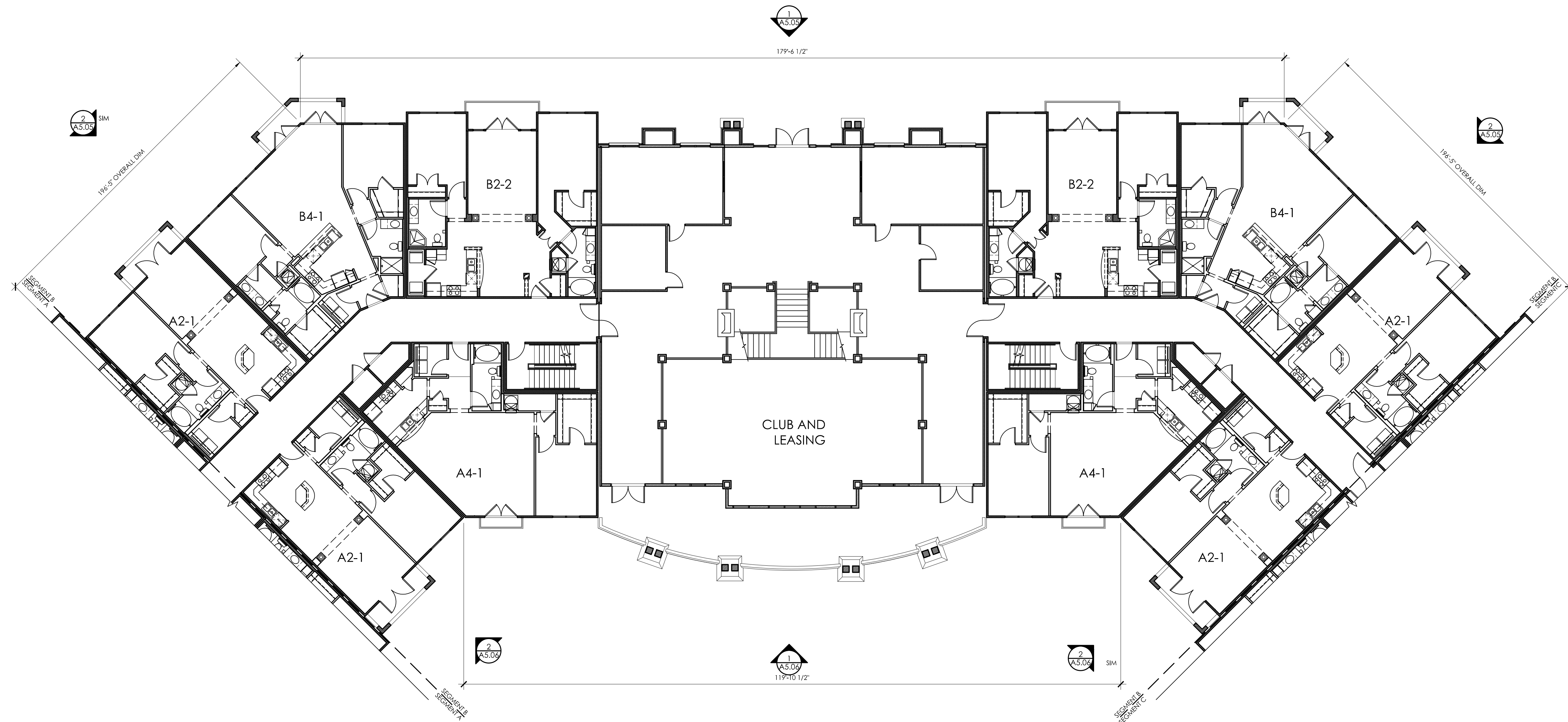
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Key Plan

**BUILDING TYPE 3  
(BUILDING 1) - FIRST  
FLOOR PLAN  
SEGMENT B**

**A3.10B**



**1** BLDG TYPE 3 - FIRST FLOOR PLAN SEGMENT B  
3/32" = 1'-0"



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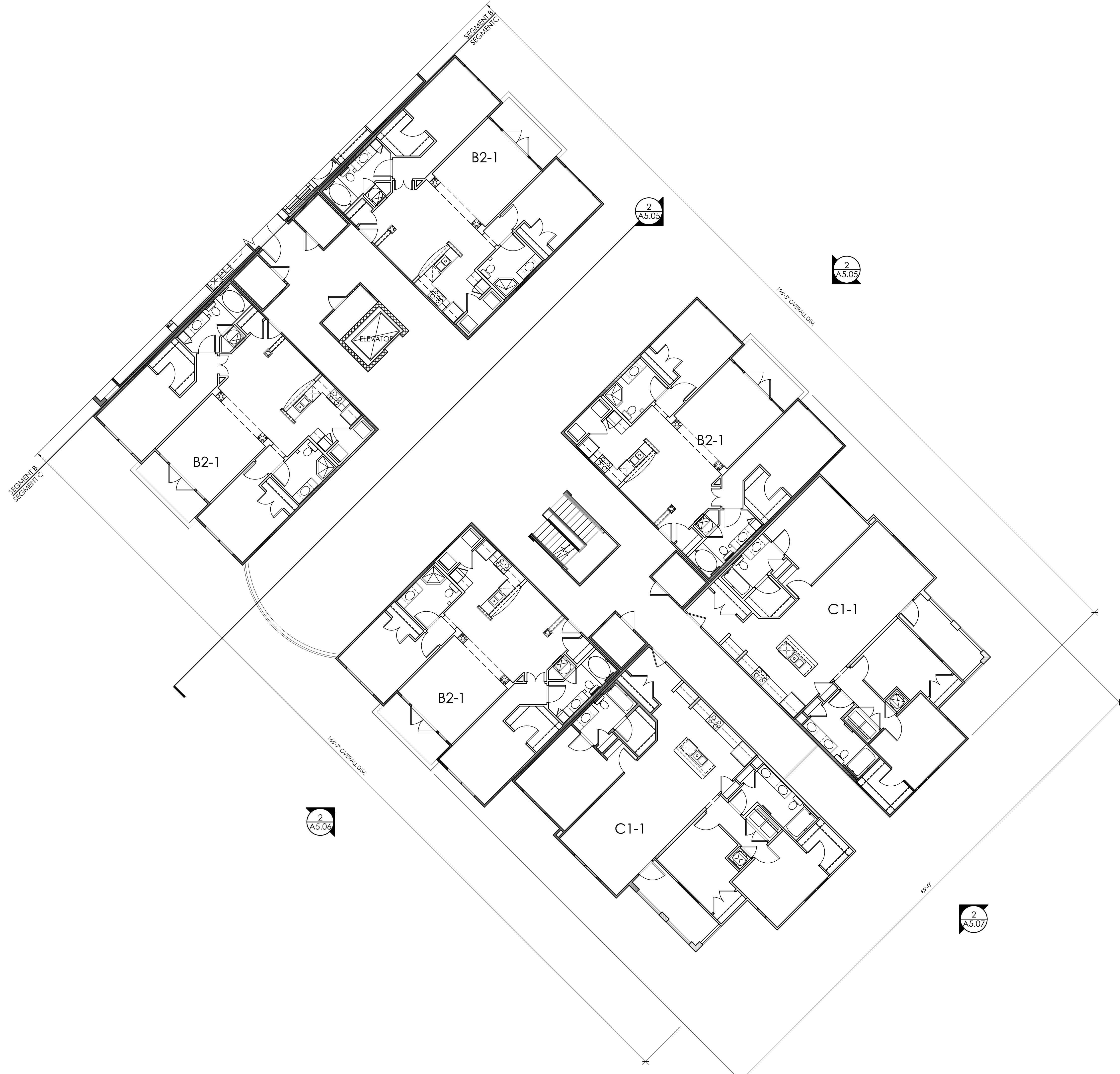
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Key Plan

BUILDING TYPE 3  
(BUILDING 1) - FIRST  
FLOOR PLAN  
SEGMENT C

**A3.10C**



1 BLDG TYPE 3 - FIRST FLOOR PLAN SEGMENT C  
1/8" = 1'-0"



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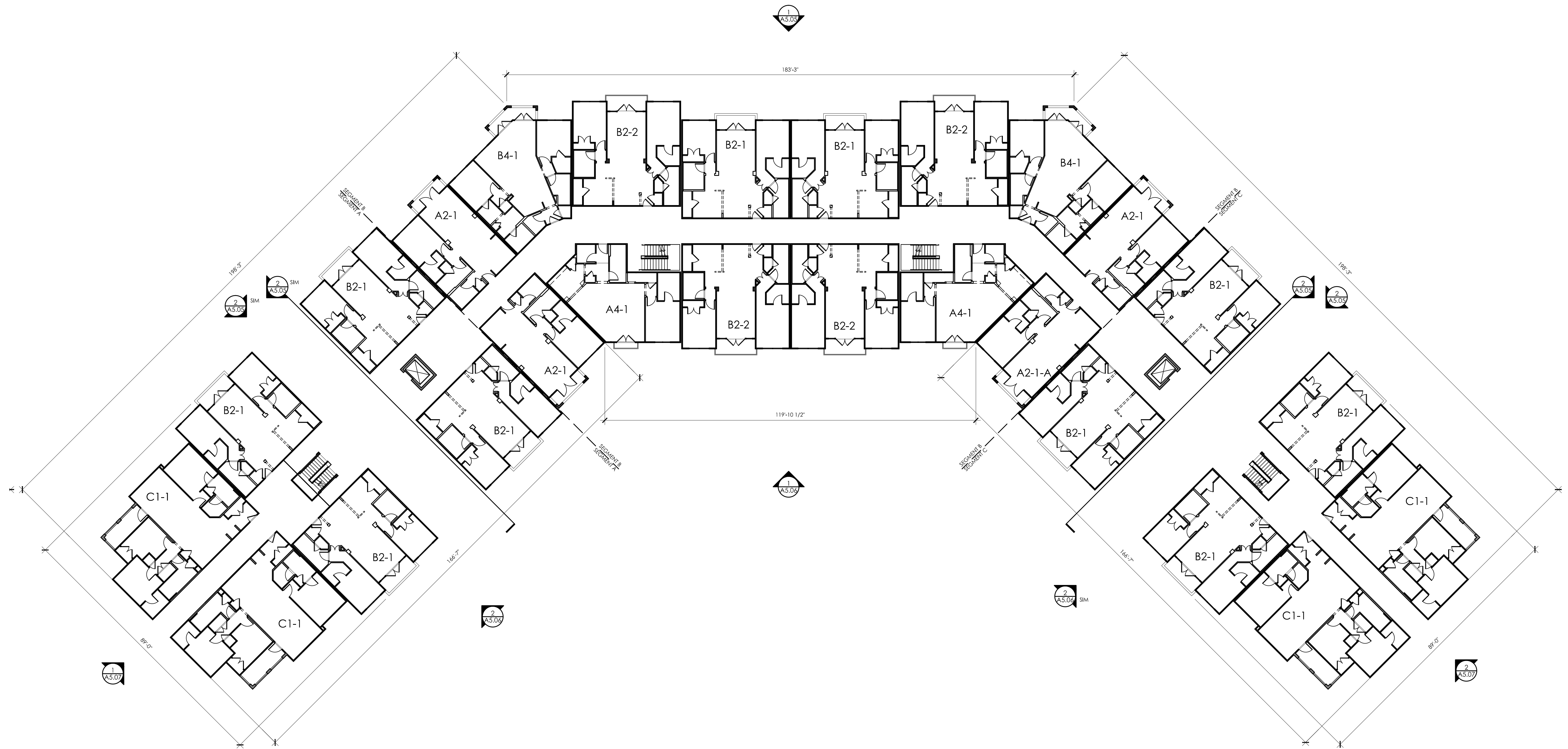
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Key Plan

**BUILDING TYPE 3  
(BUILDING 1) -  
SECOND FLOOR  
PLAN**

**A3.11**



**1** BLDG TYPE 3 - SECOND PLAN  
1/16" = 1'-0"



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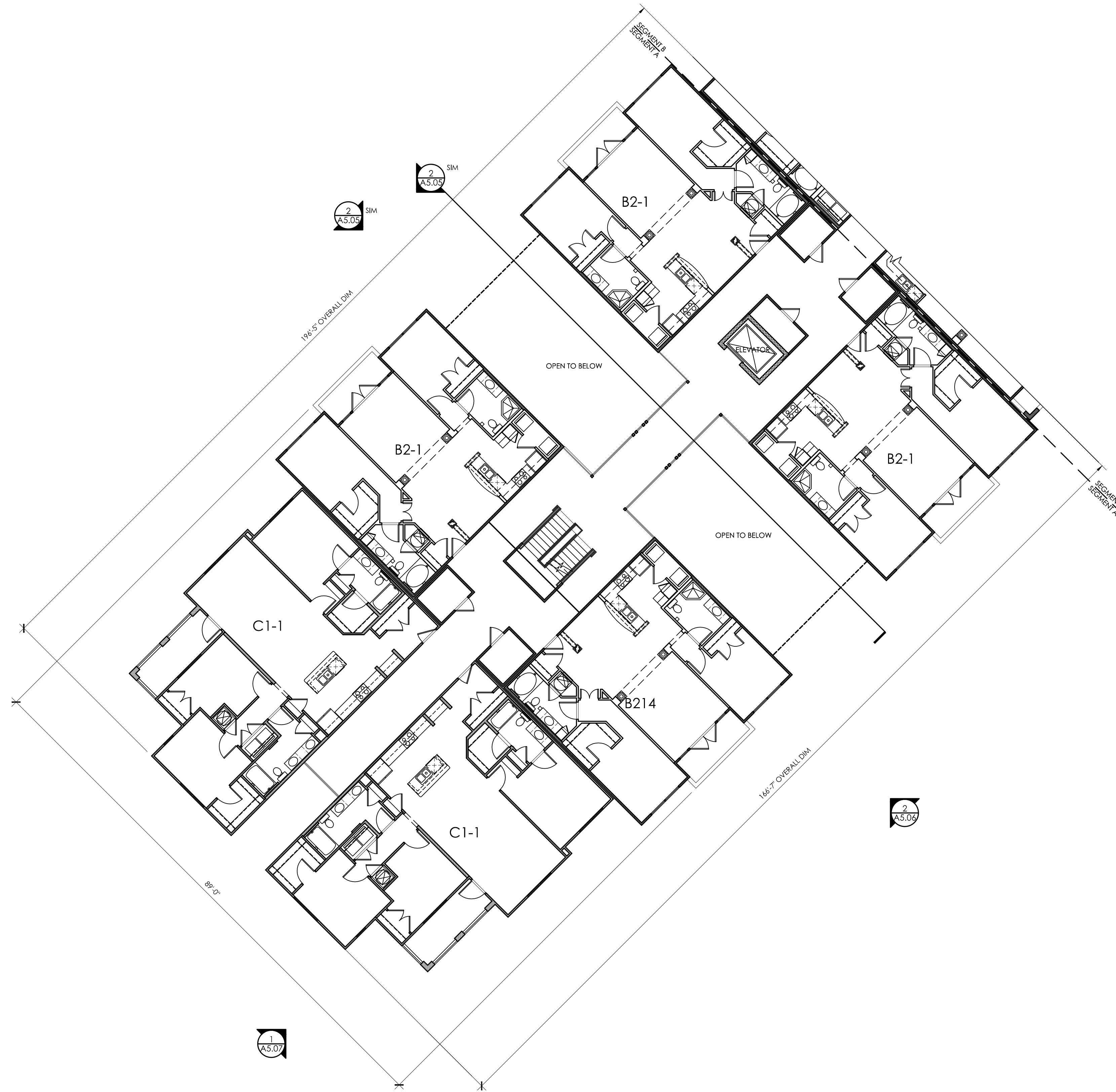
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Key Plan

BUILDING TYPE 3  
(BUILDING 1)-  
SECOND FLOOR  
PLAN SEGMENT A

**A3.11A**



**1** BLDG TYPE 3 - SECOND FLOOR PLAN SEGMENT A  
3/32" = 1'-0"



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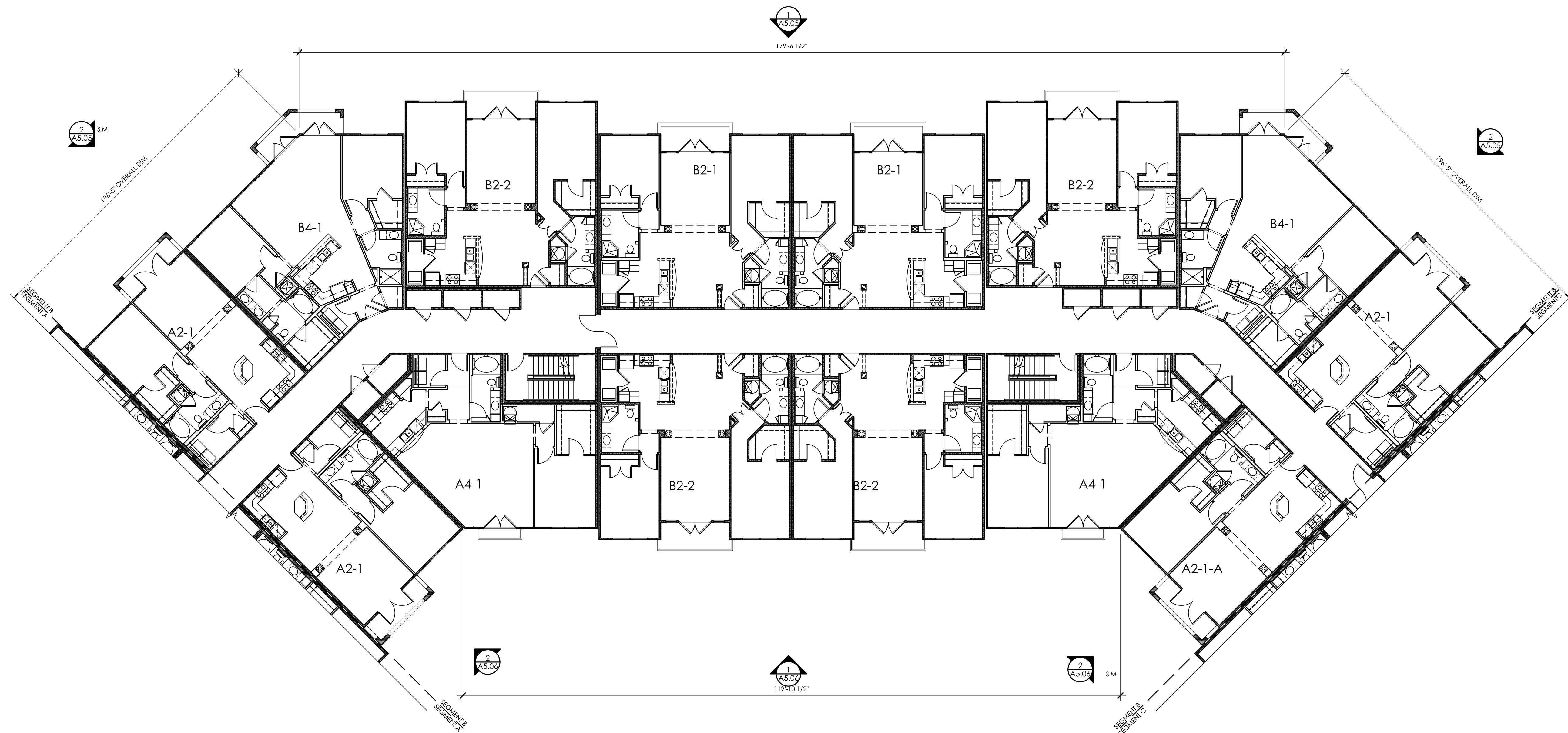
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Key Plan

BUILDING TYPE 3  
(BUILDING 1)-  
SECOND FLOOR  
PLAN SEGMENT B

A3.11B



1 BLDG TYPE 3 - SECOND FLOOR PLAN SEGMENT B  
3/32" = 1'-0"



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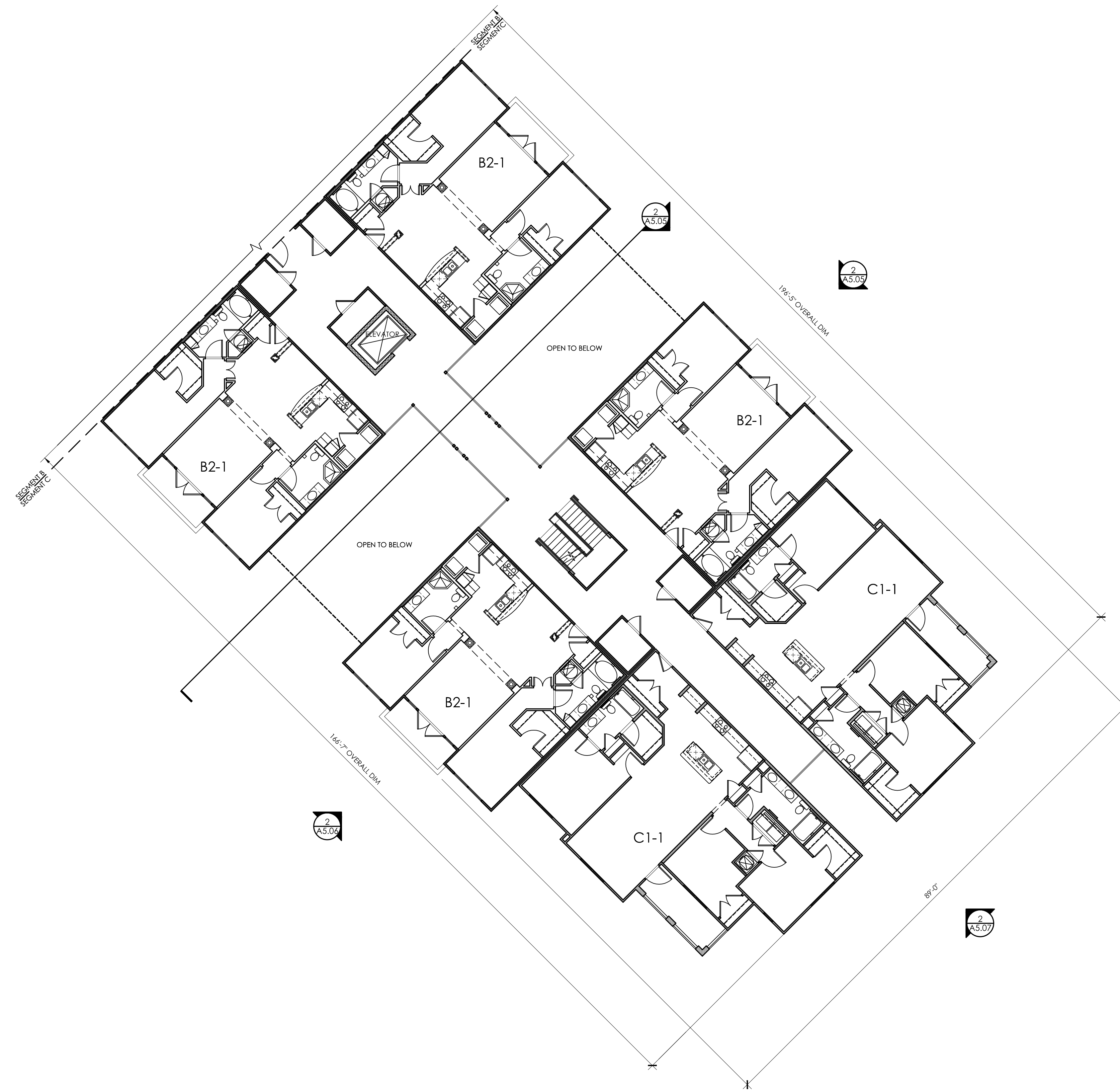
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Key Plan

BUILDING TYPE 3  
(BUILDING 1)-  
SECOND FLOOR  
PLAN SEGMENT C

A3.11C



1 BLDG TYPE 3 - SECOND FLOOR PLAN SEGMENT C  
3/32" = 1'-0"





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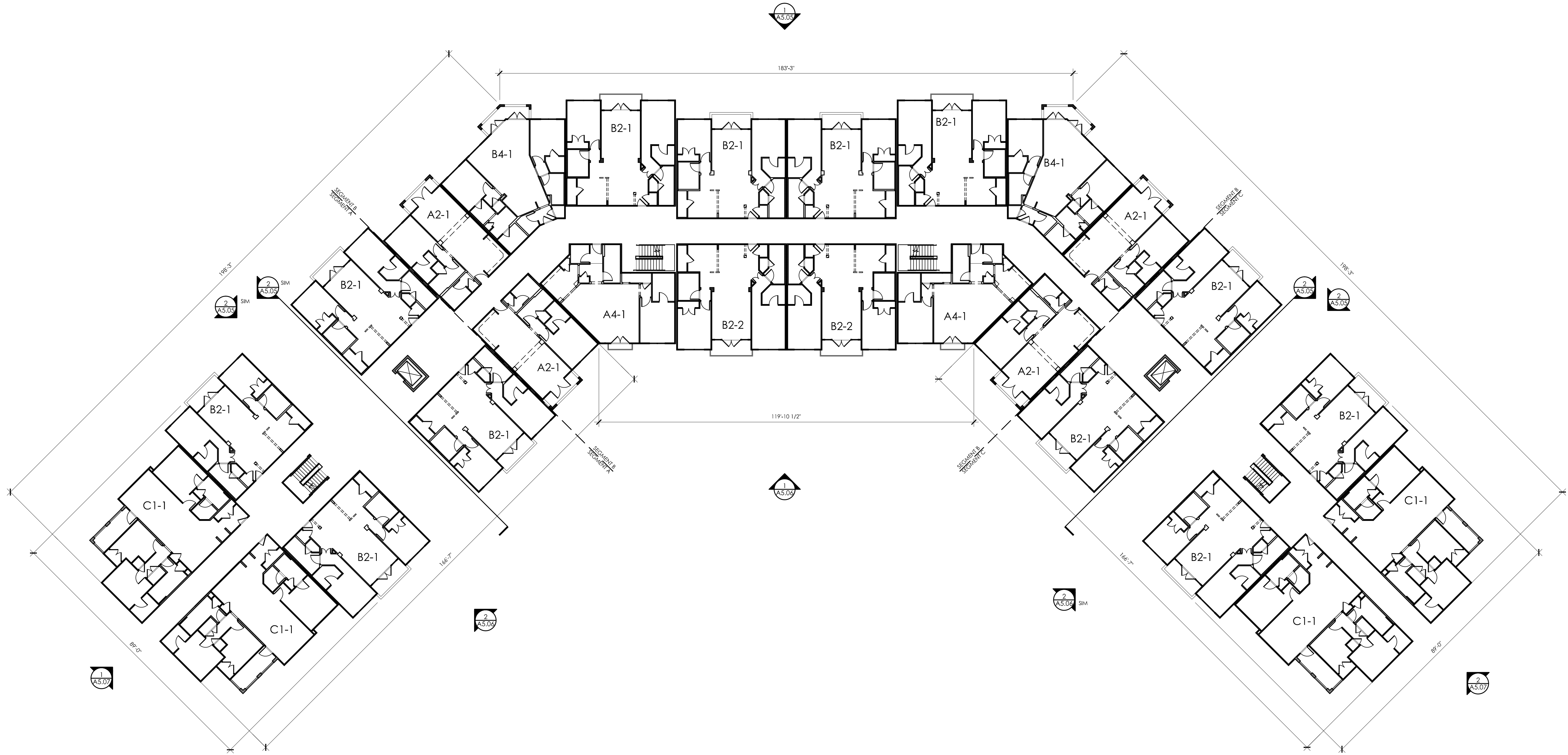
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Key Plan

**BUILDING TYPE 3  
(BUILDING 1) -  
THIRD FLOOR PLAN**

**A3.12**



**1** BLDG TYPE 3 -THIRD FLOOR PLAN  
1/16" = 1'-0"



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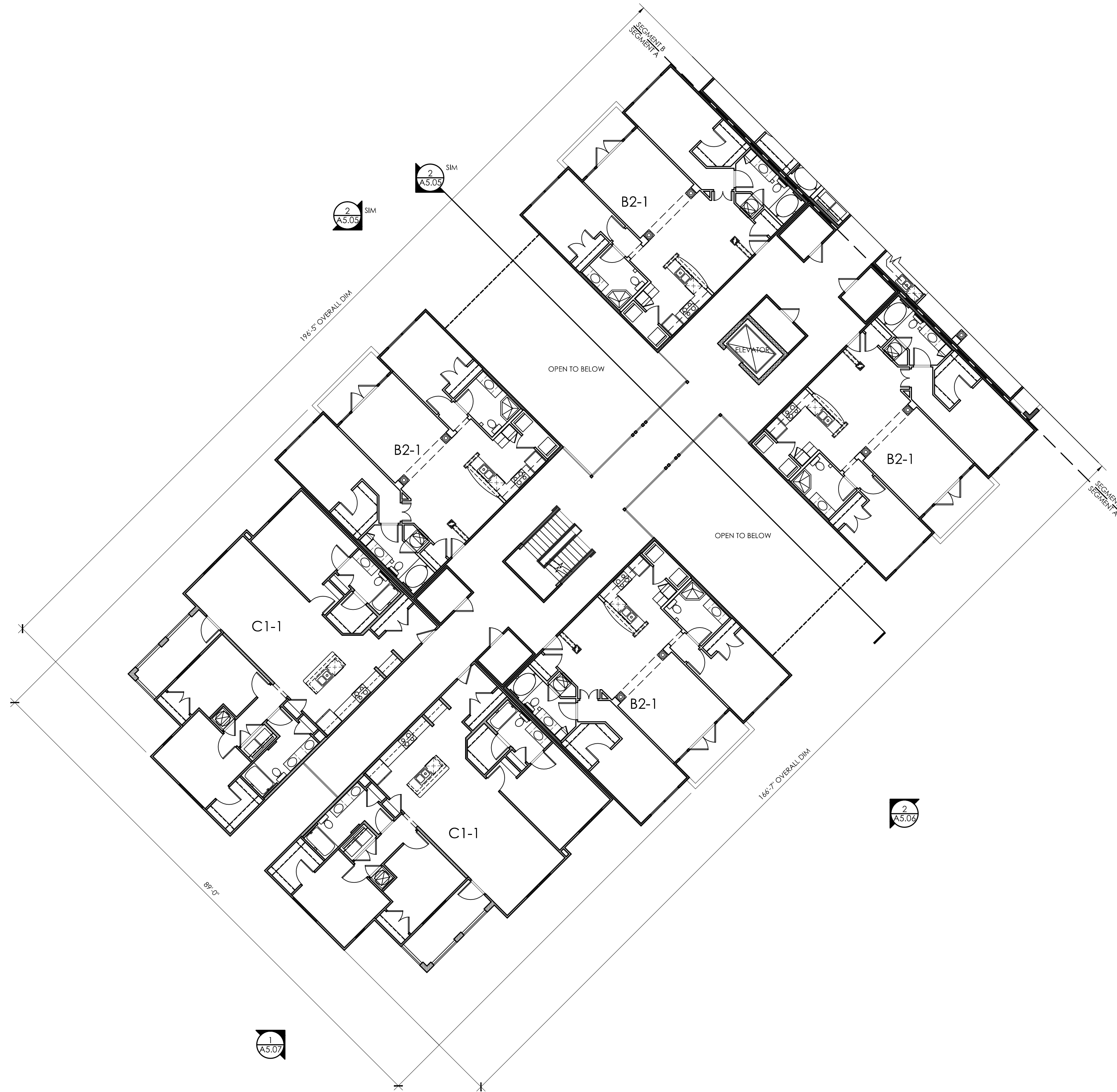
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Key Plan

**BUILDING TYPE 3  
(BUILDING 1) -  
THIRD FLOOR PLAN  
SEGMENT A**

**A3.12A**



**1** BLDG TYPE 3 - THIRD FLOOR SEGMENT A  
3/32" = 1'-0"



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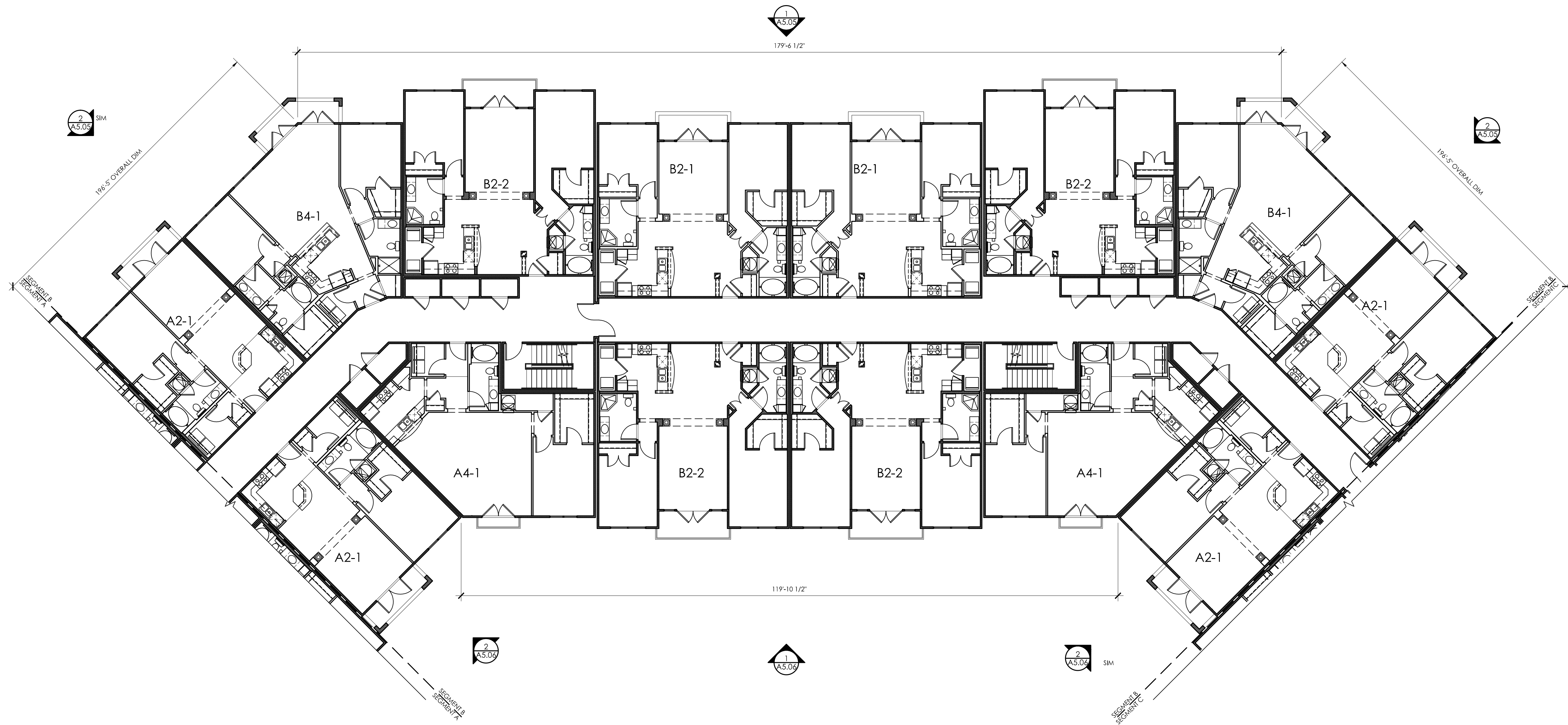
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Key Plan

BUILDING TYPE 3  
(BUILDING 1) -  
THIRD FLOOR PLAN  
SEGMENT B

A3.12B



1 BLDG TYPE 3 - THIRD FLOOR SEGMENT B  
3/32" = 1'-0"



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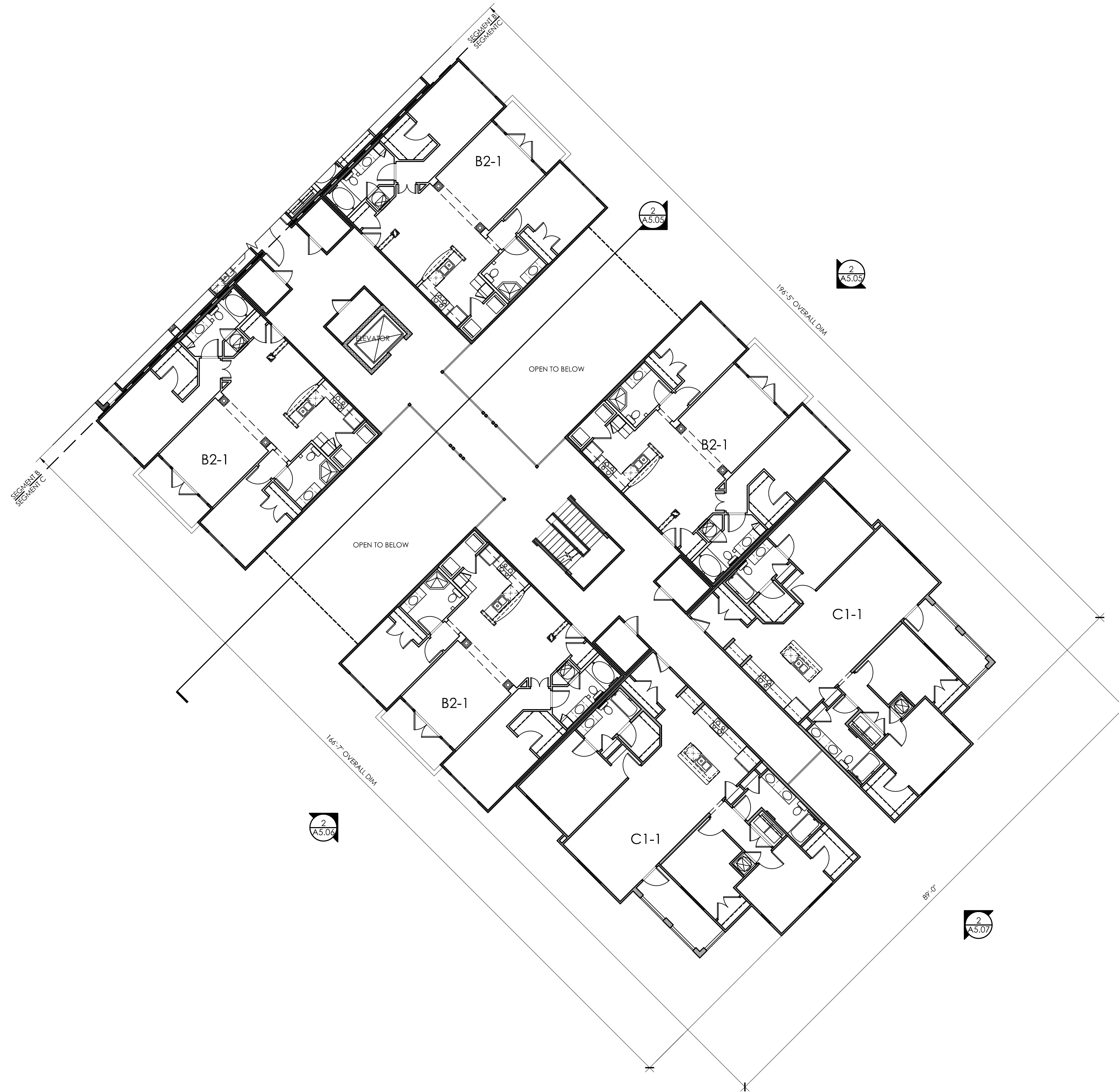
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Key Plan

BUILDING TYPE 3  
(BUILDING 1) -  
THIRD FLOOR PLAN  
SEGMENT C

A3.12C



1 BLDG TYPE 3 - THIRD FLOOR SEGMENT C  
3/32" = 1'-0"



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KNIGHTDALE, NC



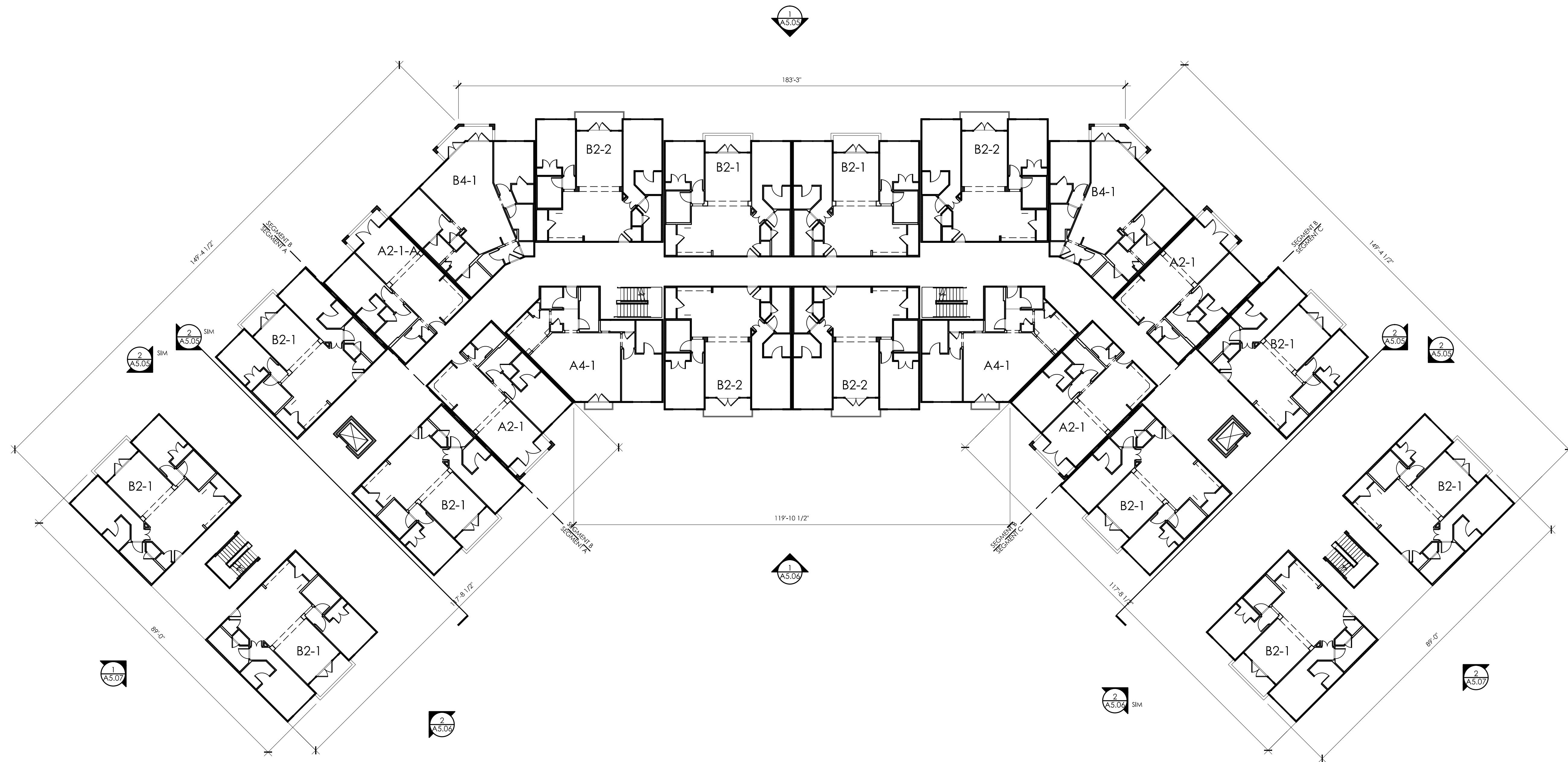
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Key Plan

**BUILDING TYPE 3  
(BUILDING 1) -  
FOURTH FLOOR  
PLAN**

**A3.13**



**1** BLDG TYPE 3 - FOURTH FLOOR PLAN  
1/16" = 1'-0"



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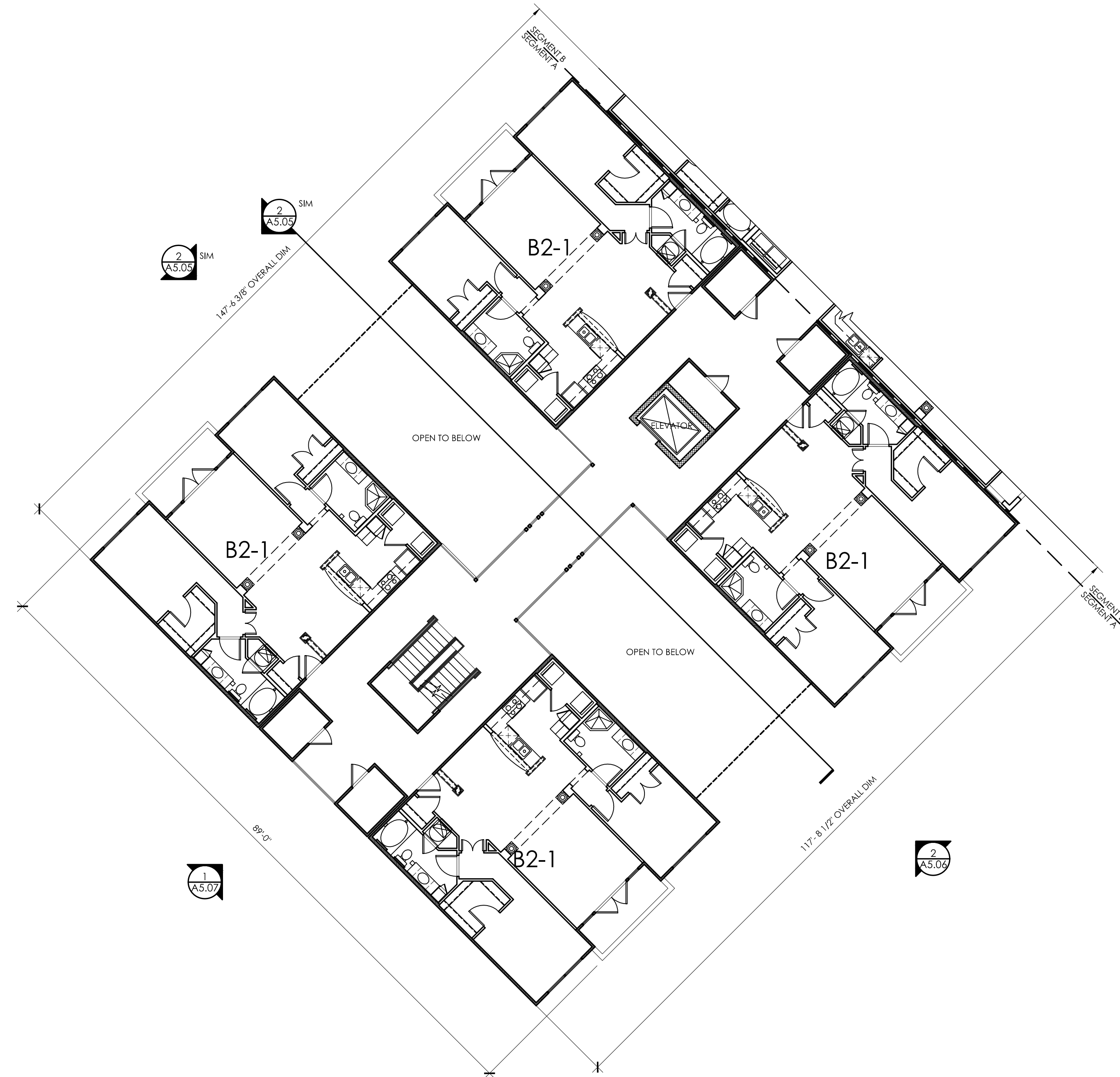
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Key Plan

BUILDING TYPE 3  
(BUILDING 1)-  
FOURTH FLOOR  
PLAN SEGMENT A

**A3.13A**



1 BLDG TYPE 3 - FOURTH FLOOR SEGMENT PLAN A  
3/32" = 1'-0"



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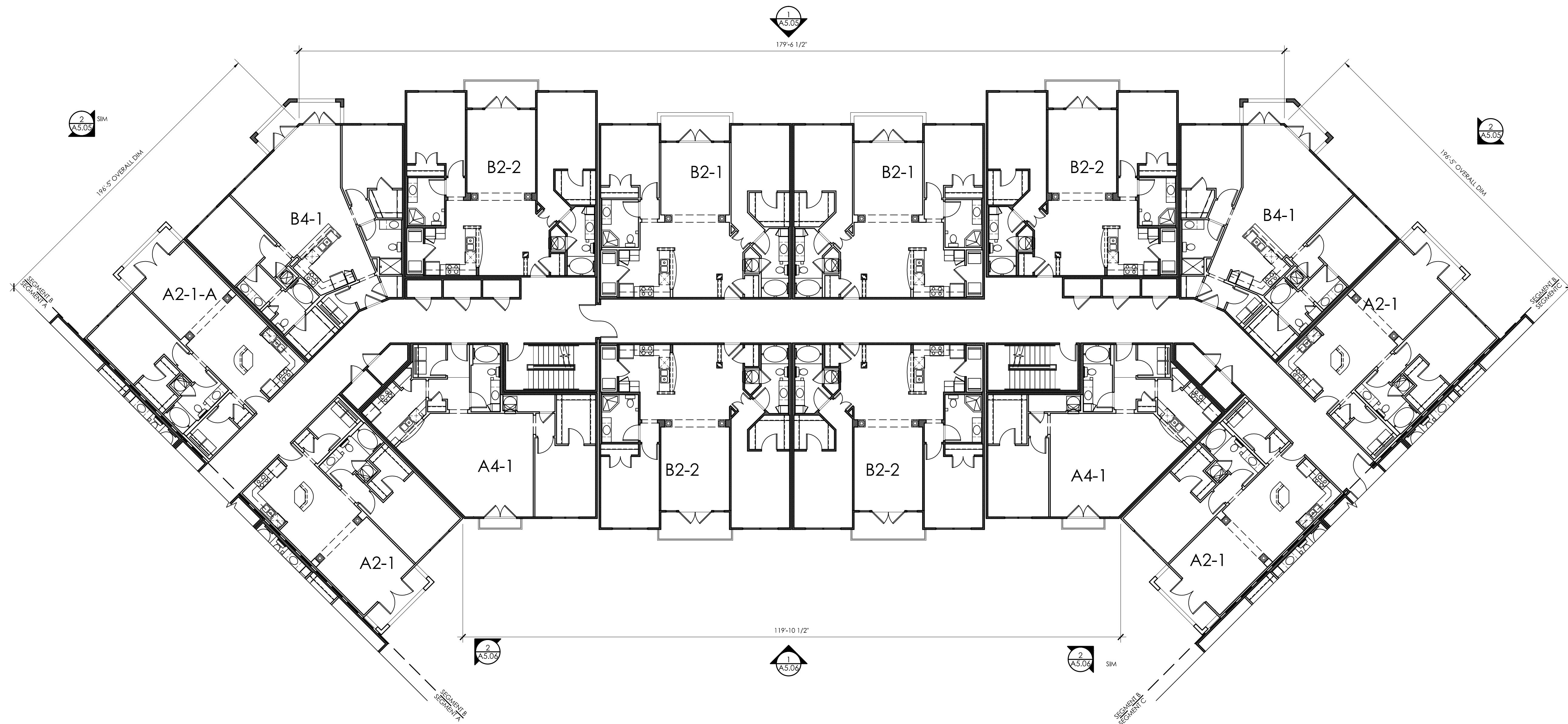
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Key Plan

BUILDING TYPE 3  
(BUILDING 1)-  
FOURTH FLOOR  
PLAN SEGMENT B

A3.13B



1 BLDG TYPE 3 - FOURTH FLOOR SEGMENT PLAN B  
3/32" = 1'-0"



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RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



NOT FOR  
CONSTRUCTION

Project No: 1303  
Issue Date: DEC 12, 2014  
Issued For: CITY OF  
KNIGHTDALE  
SUBMITTAL

Key Plan

BUILDING TYPE 3  
(BUILDING 1)-  
FOURTH FLOOR  
PLAN SEGMENT C

**A3.13C**



1 BLDG TYPE 3 - FOURTH FLOOR SEGMENT PLAN C  
3/32" = 1'-0"





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**RIVER'S EDGE -  
KNIGHTDALE**  
KNIGHTDALE, NC



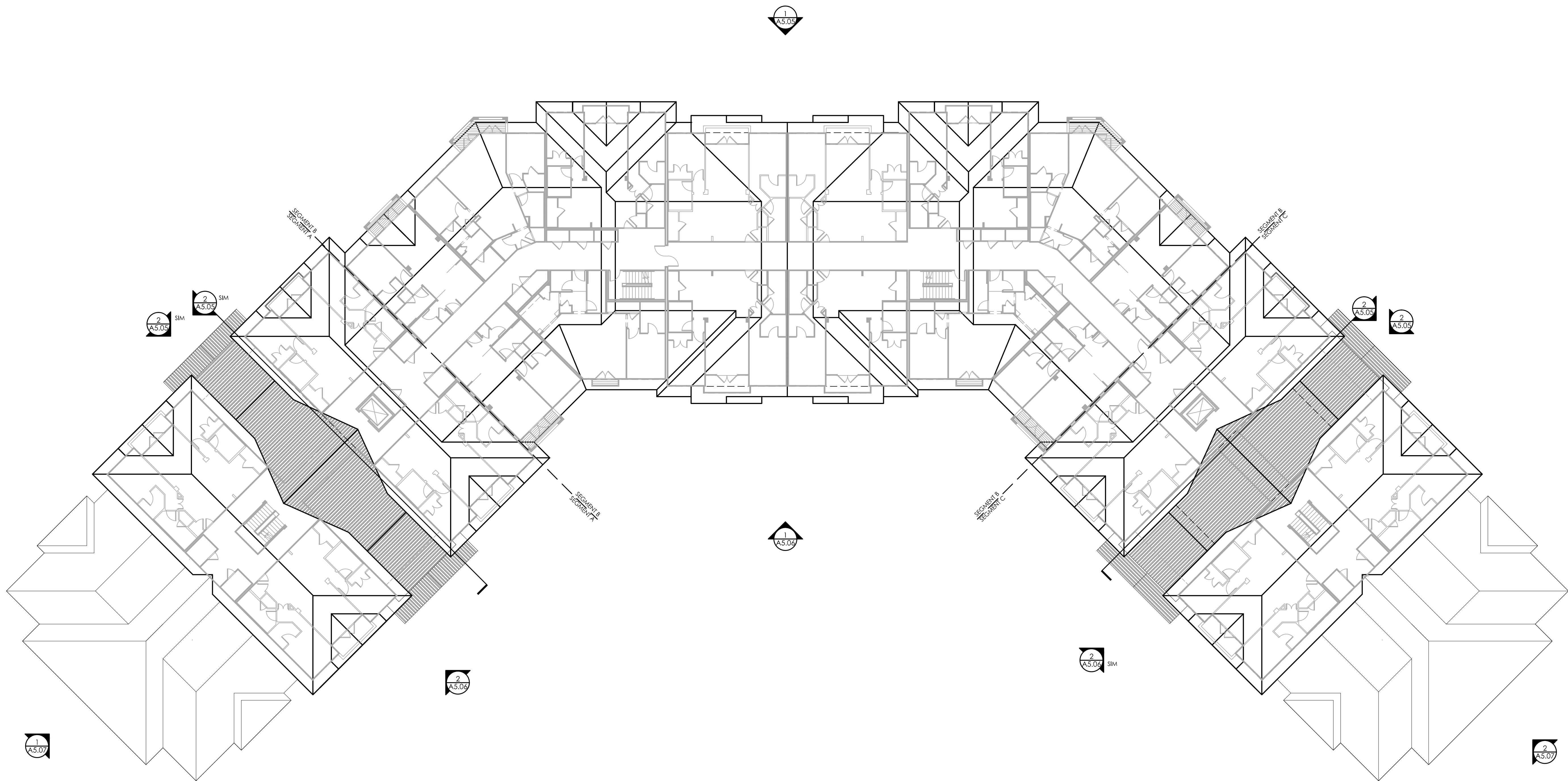
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CONSTRUCTION**

Project No: 1303  
Issue Date: DEC 12, 2014  
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SUBMITTAL

Key Plan

**BUILDING TYPE 3  
(BUILDING 1) -  
ROOF PLAN**

**A3.14**



# #####  
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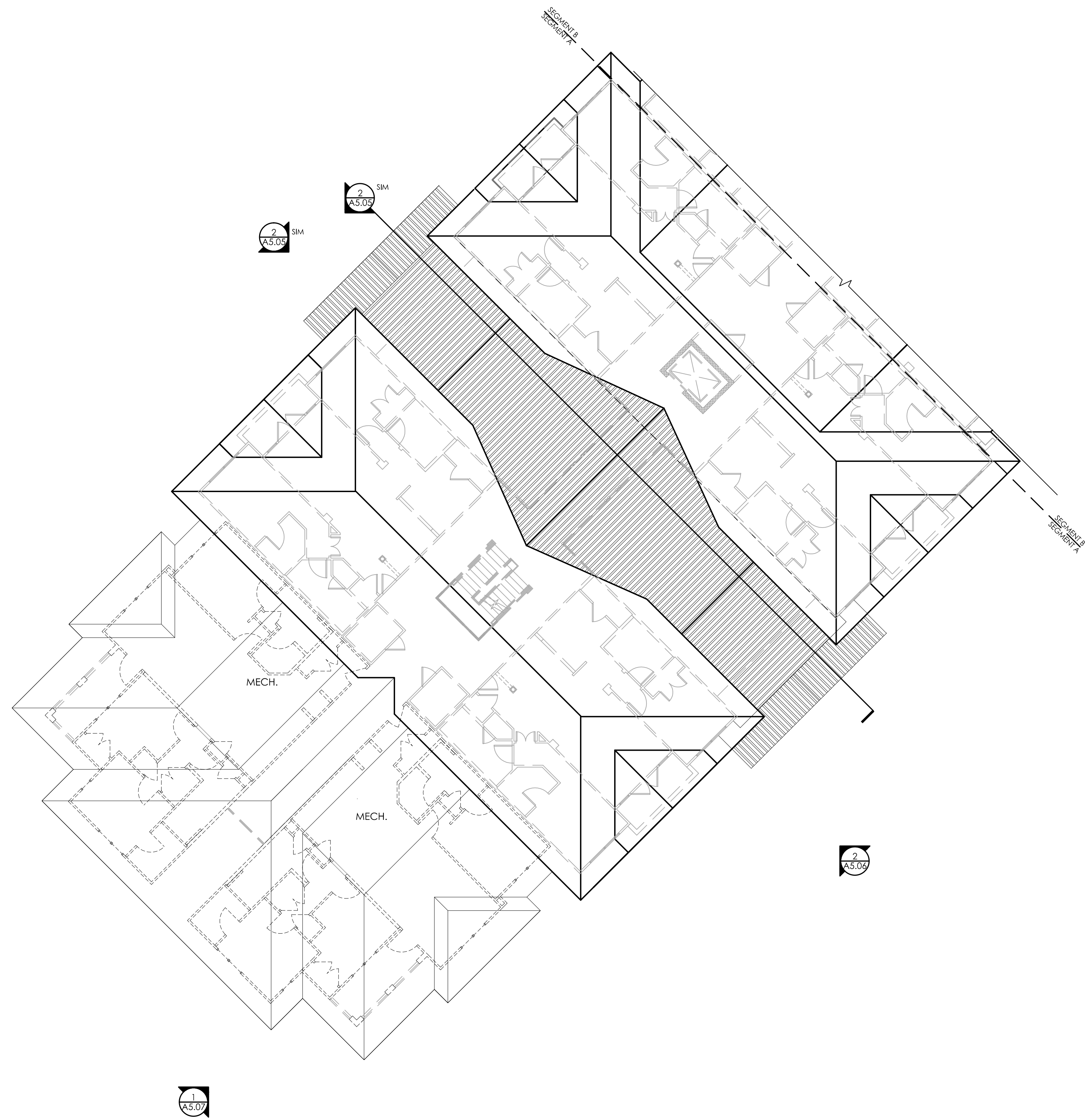
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CONSTRUCTION

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Issue Date: DEC 12, 2014  
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SUBMITTAL

Key Plan

BUILDING TYPE 3  
(BUILDING 1) -  
ROOF PLAN  
SEGMENT A

**A3.14A**



1 BLDG TYPE 3 - ROOF PLAN SEGMENT A  
3/32" = 1'-0"



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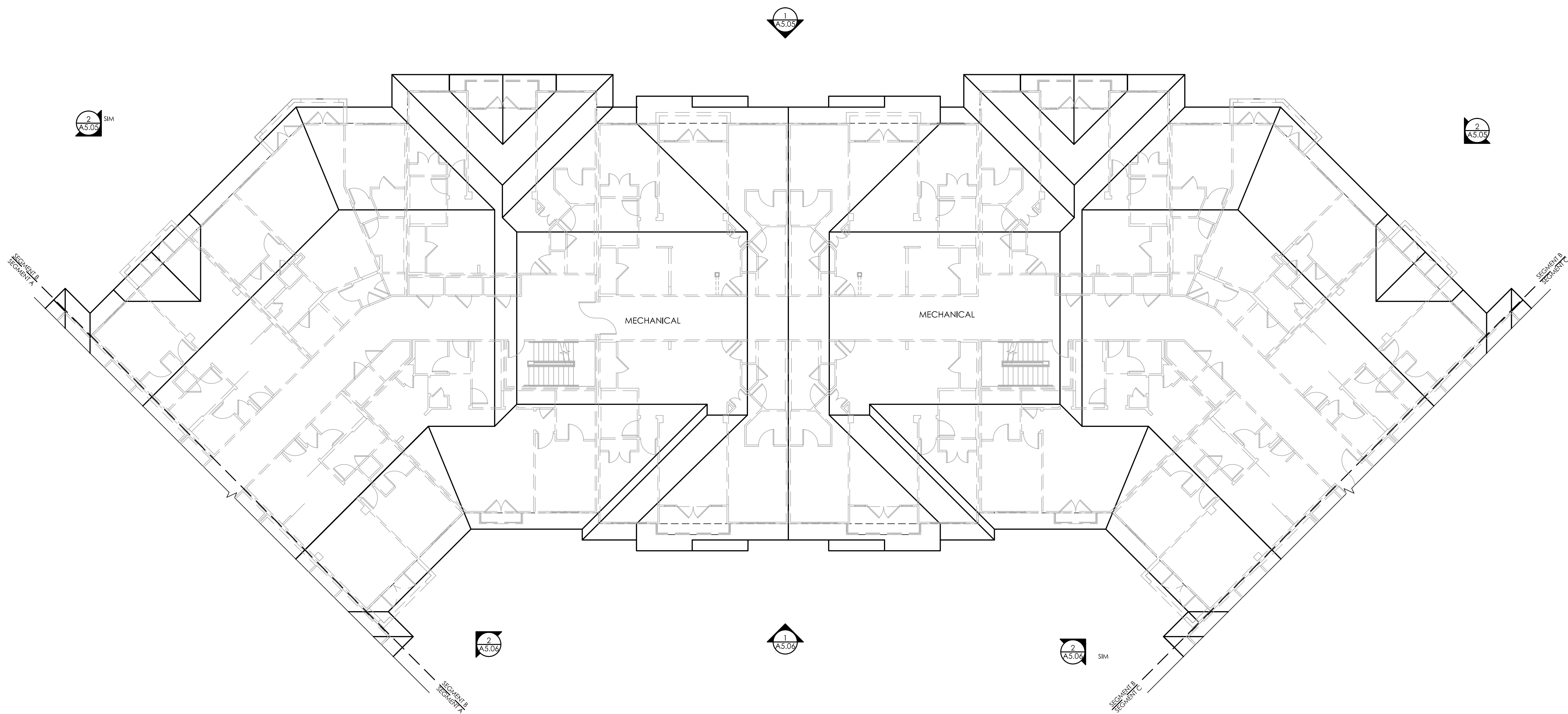
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Issue Date: DEC 12, 2014  
Issued For: CITY OF  
KNIGHTDALE  
SUBMITTAL

Key Plan

BUILDING TYPE 3  
(BUILDING 1) -  
ROOF PLAN  
SEGMENT B

A3.14B



1 BLDG TYPE 3 - ROOF PLAN SEGMENT B  
3/32" = 1'-0"



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RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



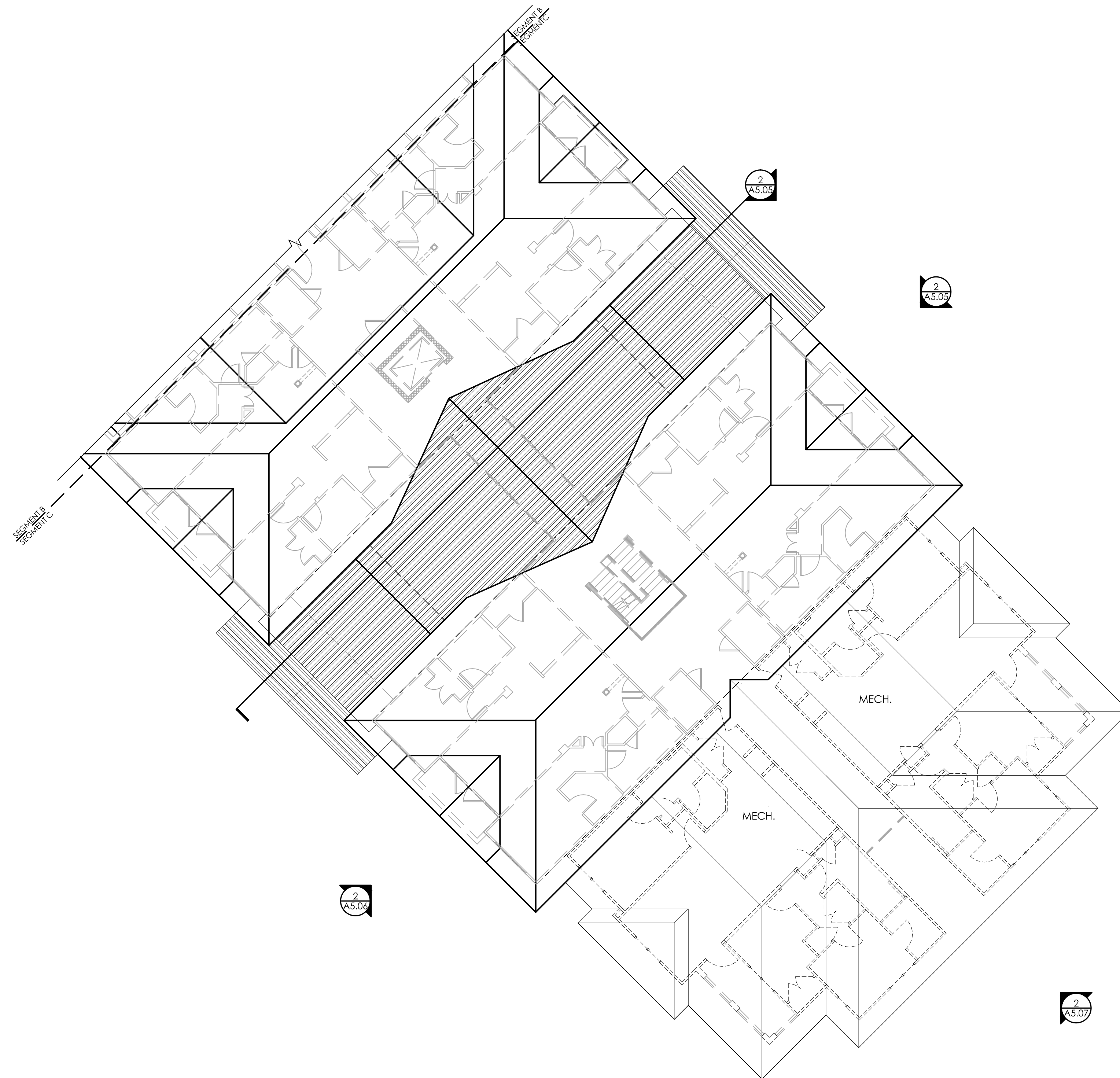
NOT FOR  
CONSTRUCTION

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Issue Date: DEC 12, 2014  
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SUBMITTAL

Key Plan

BUILDING TYPE 3  
(BUILDING 1) -  
ROOF PLAN  
SEGMENT C

**A3.14C**



1 BLDG TYPE 3 - ROOF PLAN SEGMENT C  
3/32" = 1'-0"



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RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



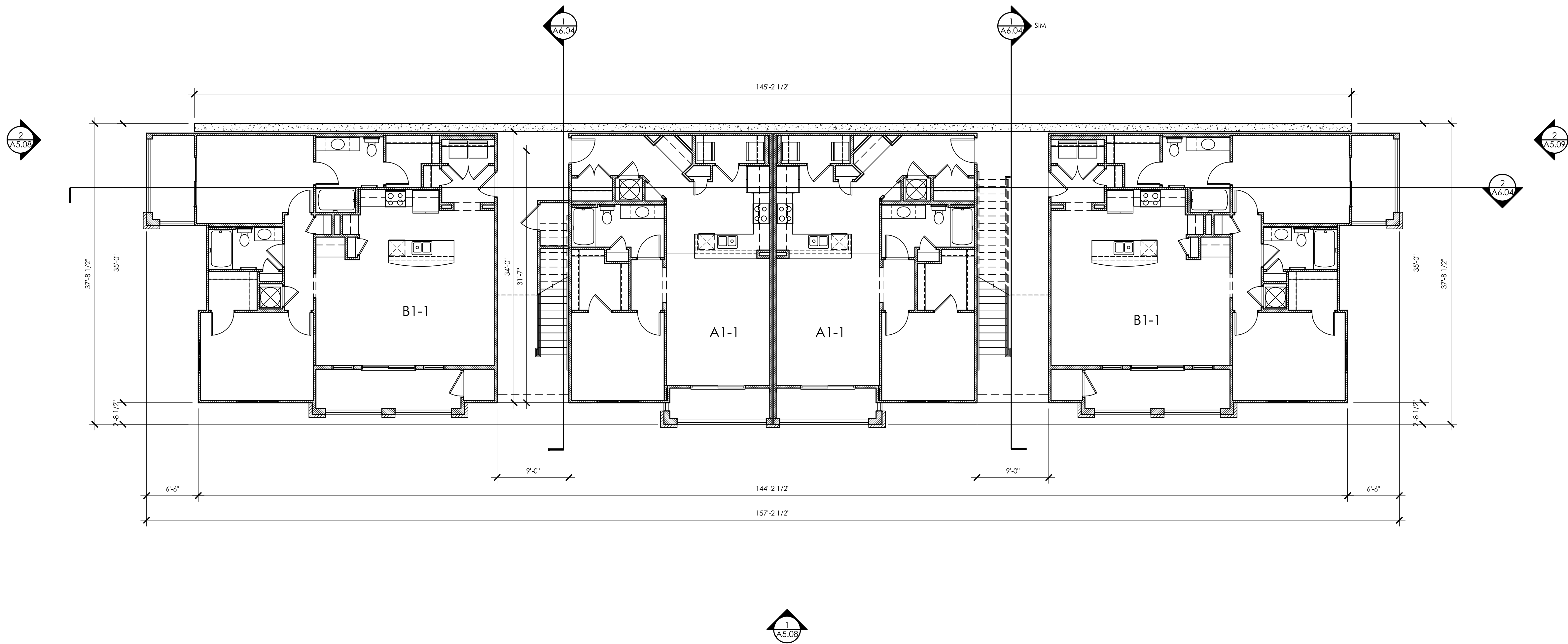
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Key Plan

BUILDING TYPE 4  
(BUILDING 5) -  
BASEMENT FLOOR  
PLAN

A3.15



1 BLDG TYPE 4 - BASEMENT FLOOR  
1/8" = 1'-0"



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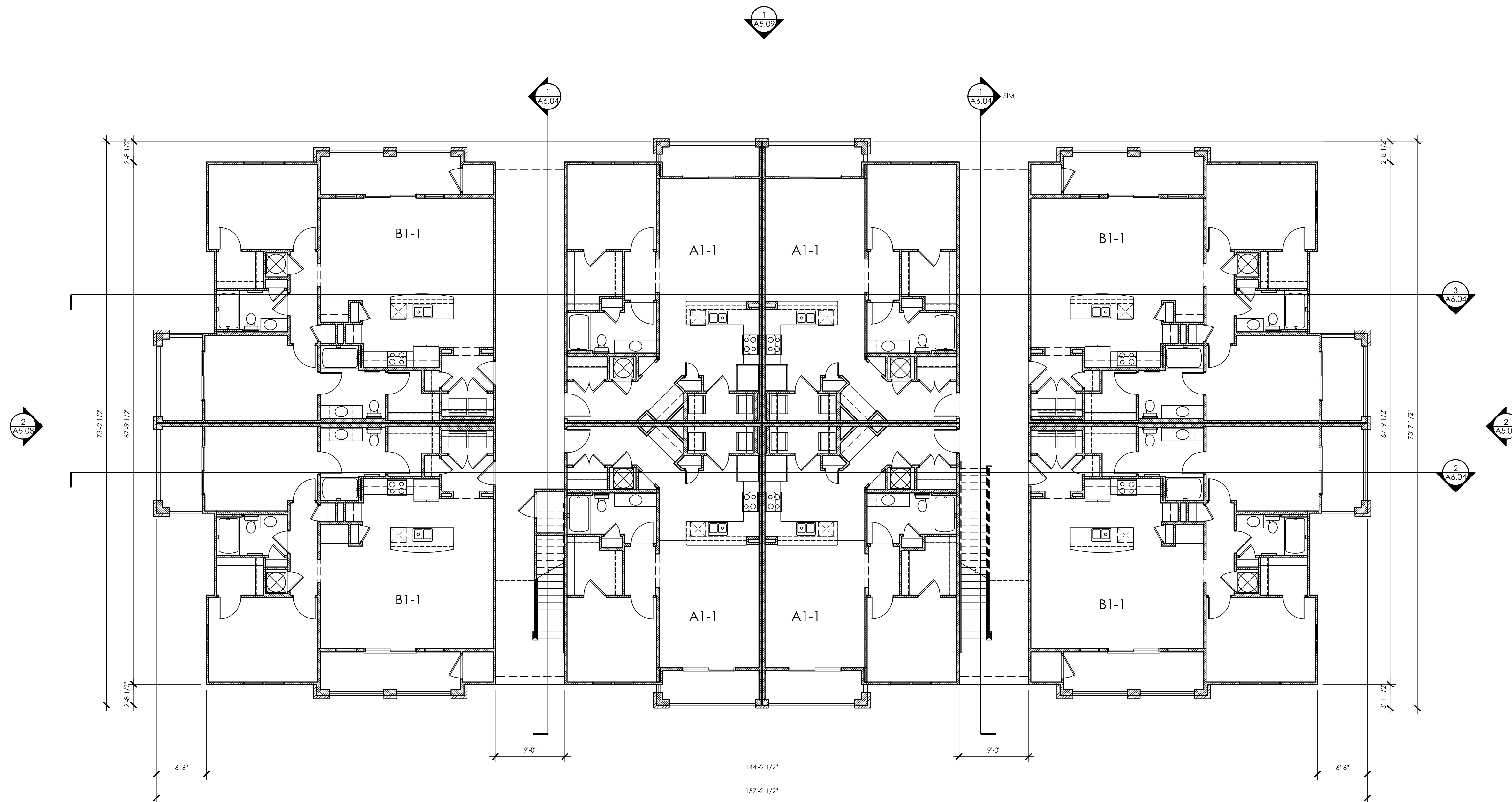
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Key Plan

BUILDING TYPE 4  
(BUILDING 5) FIRST  
FLOOR PLAN

A3.16



1 BLDG TYPE 4 - FIRST FLOOR  
1/8" = 1'-0"



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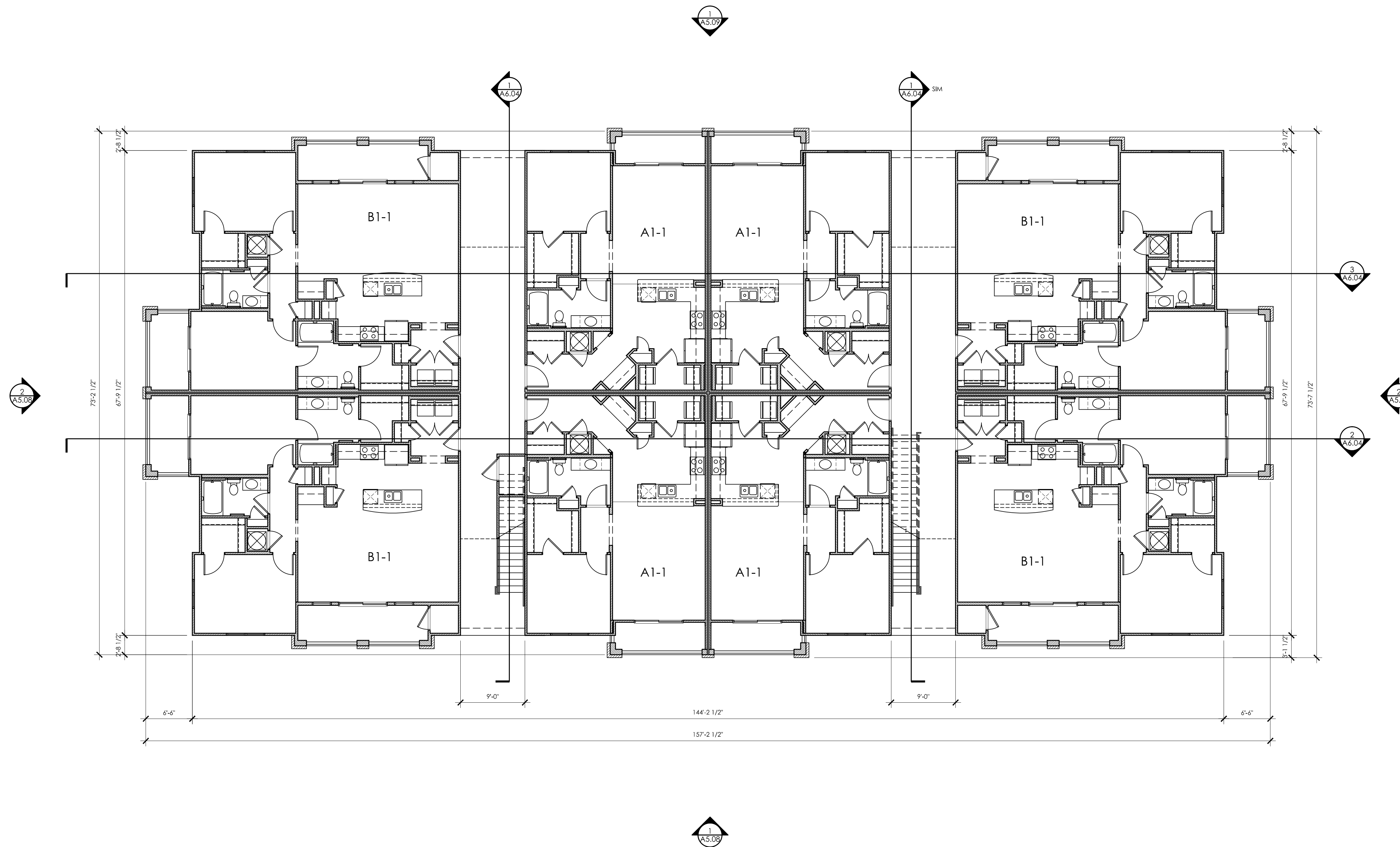
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Key Plan

BUILDING TYPE 4  
(BUILDING 5) -  
SECOND FLOOR  
PLAN

A3.17



1 BLDG TYPE 4 - SECOND FLOOR  
1/8" = 1'-0"



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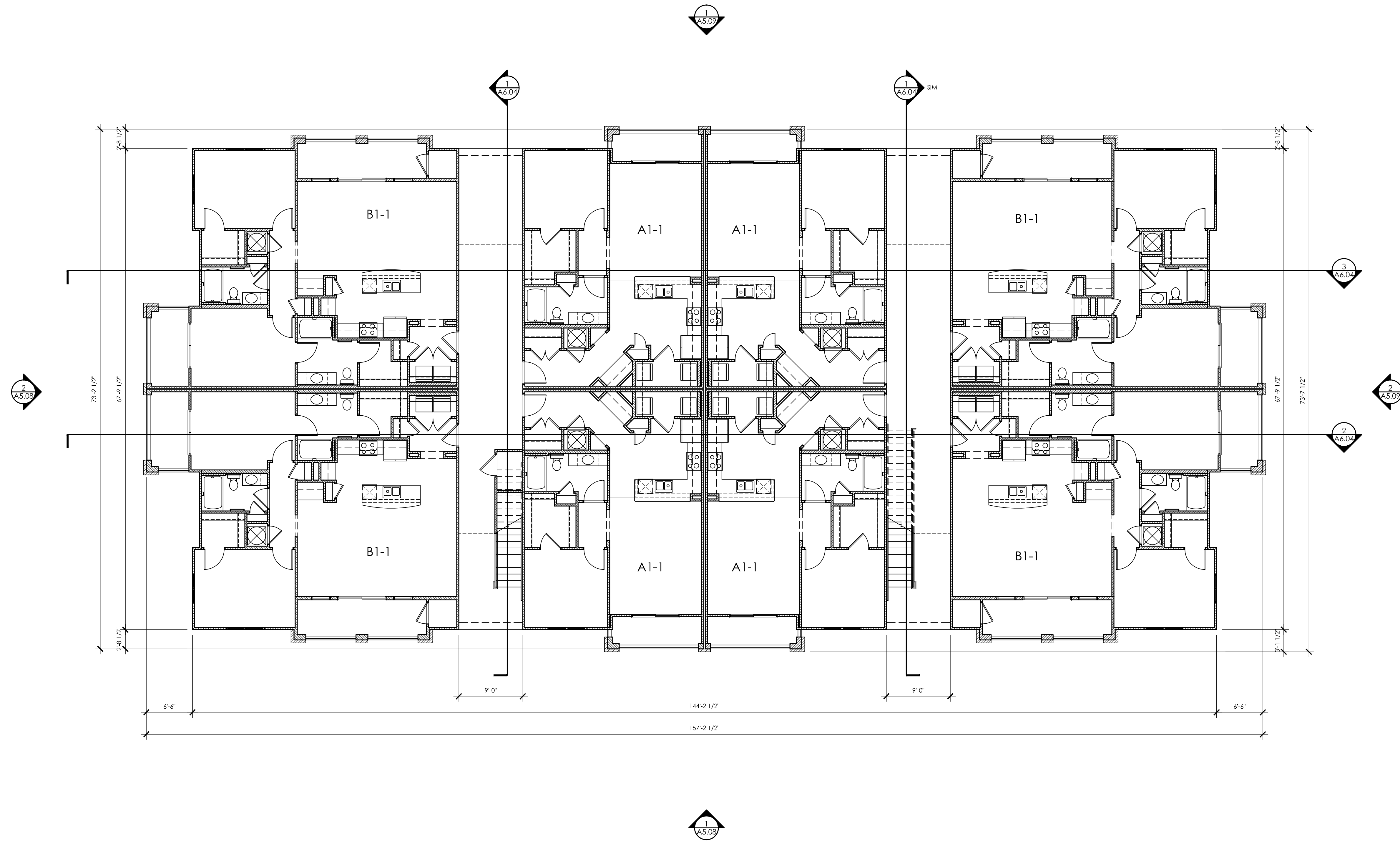
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Key Plan

BUILDING TYPE 4  
(BUILDING 5) -  
THIRD FLOOR PLAN

A3.18



1 BLDG TYPE 4 - THIRD FLOOR  
1/8" = 1'-0"





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RIVER'S EDGE -  
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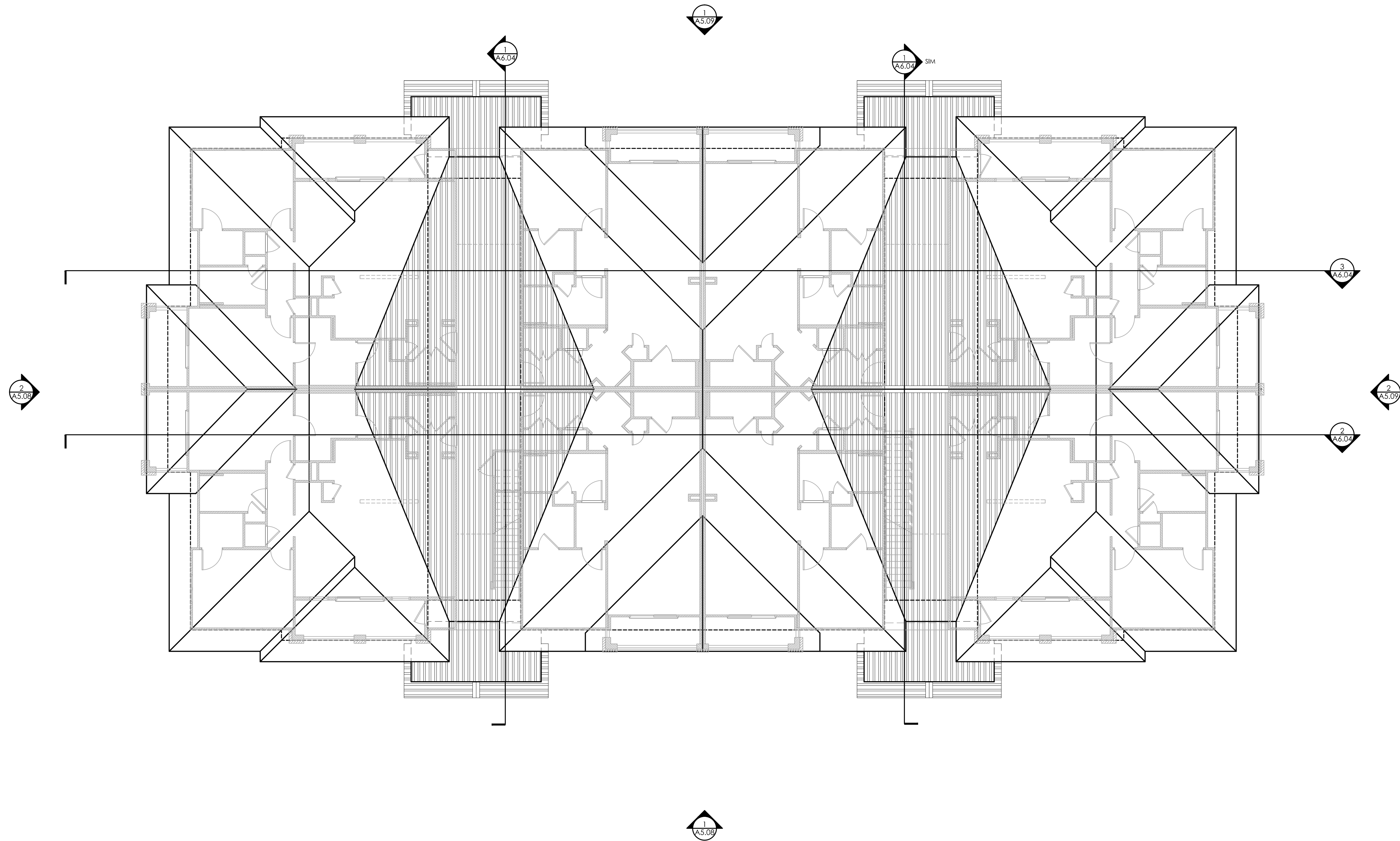


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Key Plan

BUILDING TYPE 4  
(BUILDING 5) -  
ROOF PLAN



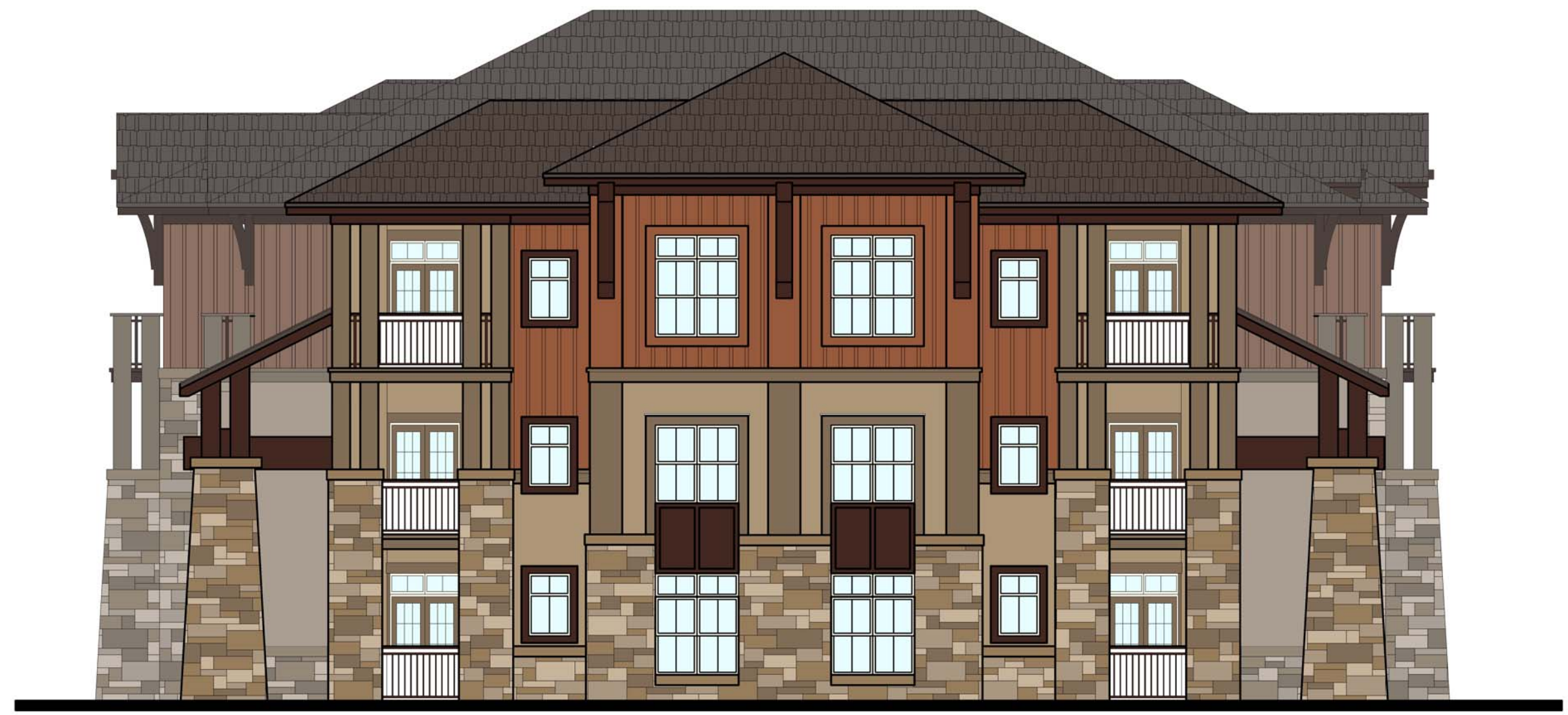
1 BLDG TYPE 4 - ROOF PLAN  
1/8" = 1'-0"



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ELEVATION MATERIAL LEGEND	
	ROOFING- ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER



2 BUILDING TYPE 1 (BUILDINGS 3 4 6 & 7) - LEFT ELEVATION  
1/8" = 1'-0"

RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



1 BUILDING TYPE 1 (BUILDINGS 3 4 6 & 7) - FRONT ELEVATION  
1/8" = 1'-0"

NOT FOR  
CONSTRUCTION

Project No: 1303  
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Key Plan

EXTERIOR  
ELEVATIONS -  
BUILDING TYPE 1 -  
BUILDINGS 3,4,6&7

A5.01



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ELEVATION MATERIAL LEGEND	
	ROOFING- ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER



2 BUILDING TYPE 1 (BUILDINGS 3 4 6 & 7) - RIGHT ELEVATION  
1/8" = 1'-0"

RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



1 BUILDING TYPE 1 (BUILDINGS 3 4 6 & 7) - REAR ELEVATION  
1/8" = 1'-0"

NOT FOR  
CONSTRUCTION

Project No: 1303  
Issue Date: JAN 12, 2015  
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Key Plan

EXTERIOR  
ELEVATIONS -  
BUILDING TYPE 1 -  
BUILDINGS 3,4,6&7

A5.02



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ELEVATION MATERIAL LEGEND	
	ROOFING- ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER



2 BUILDING TYPE 2 (BUILDINGS 2&8) - LEFT ELEVATION  
1/8" = 1'-0"

RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



1 BUILDING TYPE 2 (BUILDINGS 2&8) - FRONT ELEVATION  
1/8" = 1'-0"

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CONSTRUCTION

Project No: 1303  
Issue Date: JAN 12, 2015  
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Key Plan

EXTERIOR  
ELEVATIONS -  
BUILDING TYPE 2 -  
BUILDINGS 2&8

A5.03



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ELEVATION MATERIAL LEGEND	
	ROOFING- ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER



2 BUILDING TYPE 2 (BUILDINGS 2&8) - RIGHT ELEVATION  
1/8" = 1'-0"

RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



1 BUILDING TYPE 2 ( BUILDINGS 2&8) - REAR ELEVATION  
1/8" = 1'-0"

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CONSTRUCTION

Project No: 1303  
Issue Date: JAN 12, 2015  
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Key Plan

EXTERIOR  
ELEVATIONS -  
BUILDING TYPE 2 -  
BUILDINGS 2&8

A5.04



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3 BLDG TYPE 3 - OVERALL ELEVATION - FRONT  
1/16" = 1'-0"



ELEVATION MATERIAL LEGEND

	ROOFING - ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER

RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



2 BUILDING TYPE 3 (BUILDING 1) - FRONT ELEVATION @ WING  
1/8" = 1'-0"



1 BUILDING TYPE 3 (BUILDING 1) - FRONT ELEVATION  
1/8" = 1'-0"

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Key Plan

EXTERIOR ELEVATIONS - BUILDING TYPE 3 - BUILDING 1

A5.05



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3 BLDG TYPE 3 OVERALL ELEVATION - REAR  
1/16" = 1'-0"



2 BUILDING TYPE 3 (BUILDING 1) - REAR ELEVATION @ WING  
1/8" = 1'-0"

ELEVATION MATERIAL LEGEND	
	ROOFING- ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER

RIVER'S EDGE -  
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CONSTRUCTION

Project No: 1303  
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Key Plan

EXTERIOR  
ELEVATIONS -  
BUILDING TYPE 3 -  
BUILDING 1



1 BUILDING TYPE 3 (BUILDING 1) - REAR ELEVATION  
1/8" = 1'-0"



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ELEVATION MATERIAL LEGEND	
	ROOFING- ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER

2 END ELEVATION - LEFT  
1/8" = 1'-0"

RIVER'S EDGE -  
KNIGHTDALE  
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1 END ELEVATION - RIGHT  
1/8" = 1'-0"

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CONSTRUCTION

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Key Plan

EXTERIOR  
ELEVATIONS -  
BUILDING TYPE 3 -  
BUILDING 1

A5.07





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ELEVATION MATERIAL LEGEND	
	ROOFING- ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER

3 BUILDING TYPE 4 (BUILDING 5) - LEFT ELEVATION  
1/8" = 1'-0"

RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



2 BUILDING TYPE 4 (BUILDING 5) - FRONT ELEVATION  
1/8" = 1'-0"

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Key Plan

EXTERIOR  
ELEVATIONS -  
BUILDING TYPE 4 -  
BUILDING 5

A5.08



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ELEVATION MATERIAL LEGEND	
	ROOFING- ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLE
	FIBER CEMENT BOARD & BATTEN SIDING
	SMOOTH FIBER CEMENT BOARD
	MANUFACTURED STONE VENEER

2 BUILDING TYPE 4 (BUILDING 5) - RIGHT ELEVATION  
1/8" = 1'-0"

RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



1 BUILDING TYPE 4 (BUILDING 5) - REAR ELEVATION  
1/8" = 1'-0"

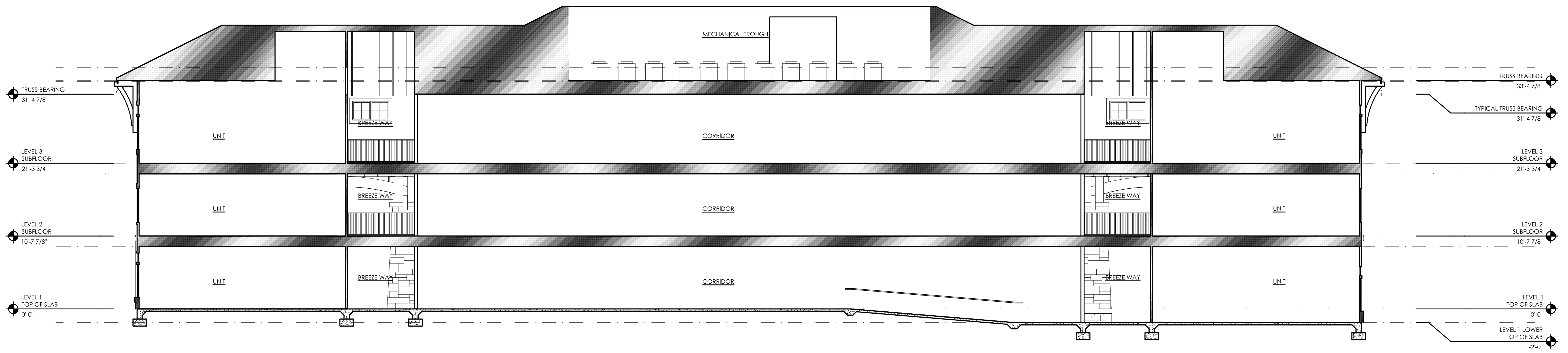
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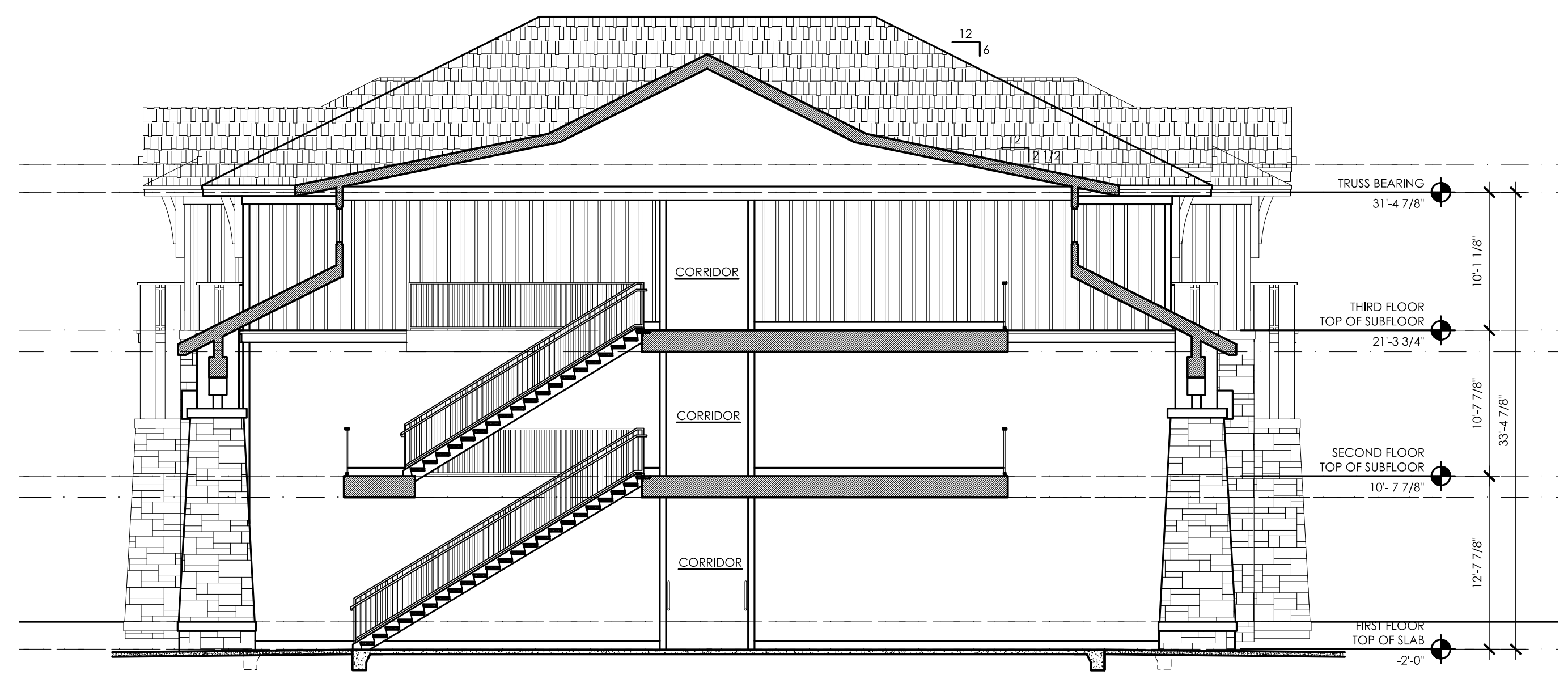
Key Plan

EXTERIOR  
ELEVATIONS -  
BUILDING TYPE 4 -  
BUILDING 5

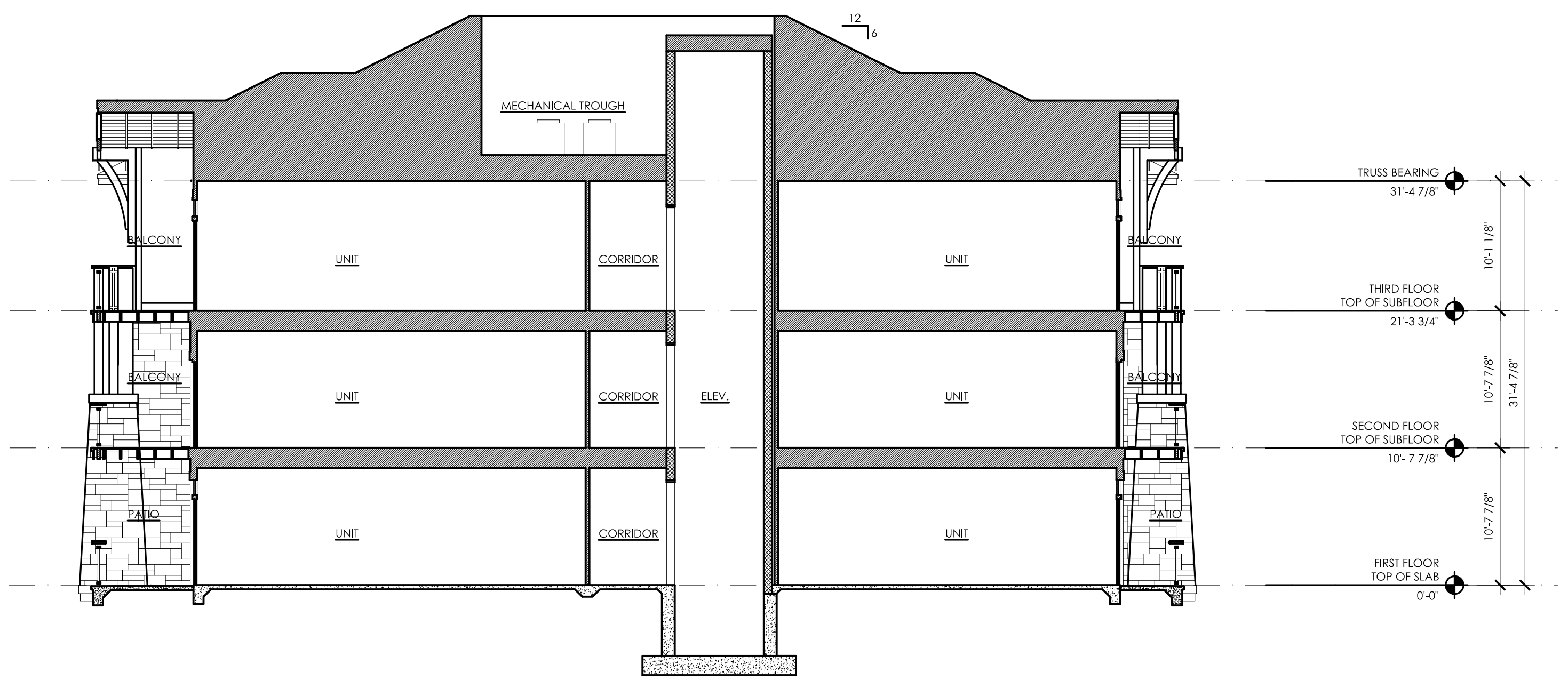
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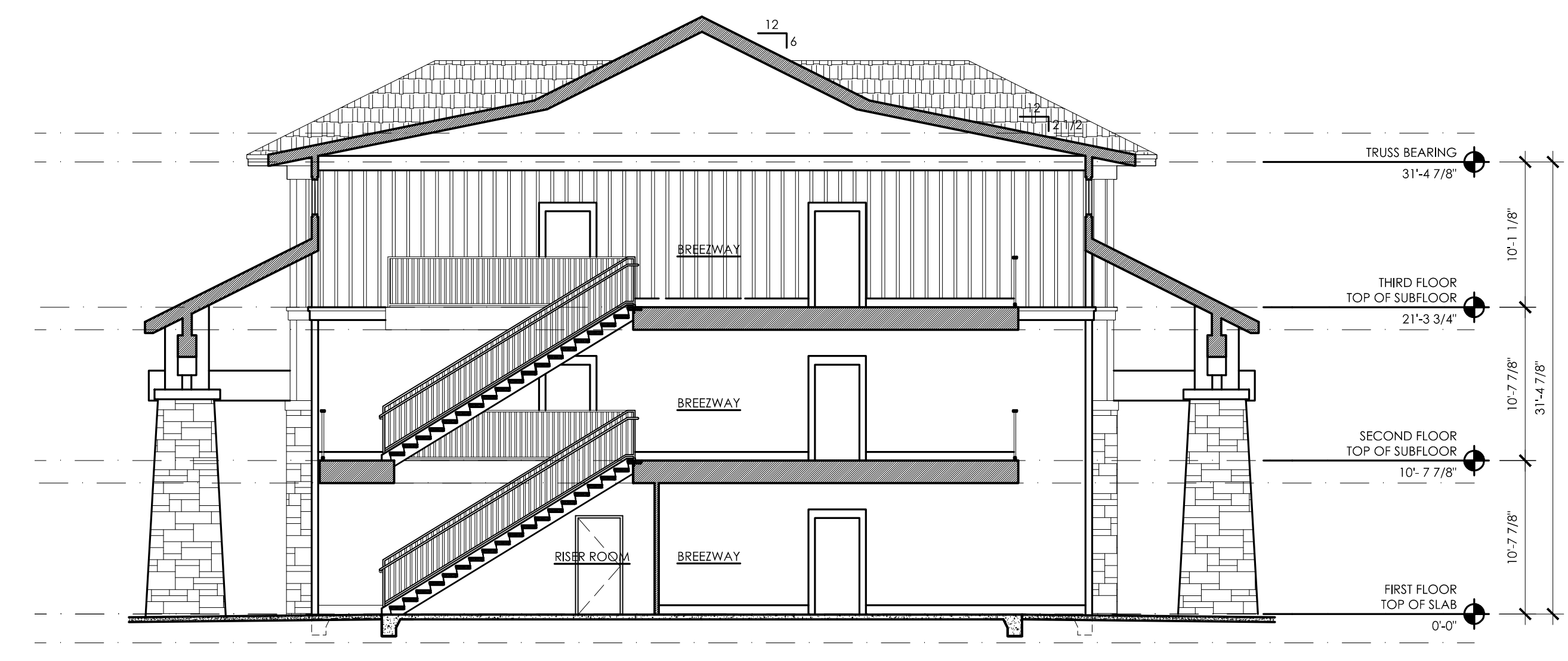
4 BUILDING TYPE 1 (BUILDINGS 3 4 6 7) - BUILDING SECTION @ CORRIDOR  
 1/8" = 1'-0"



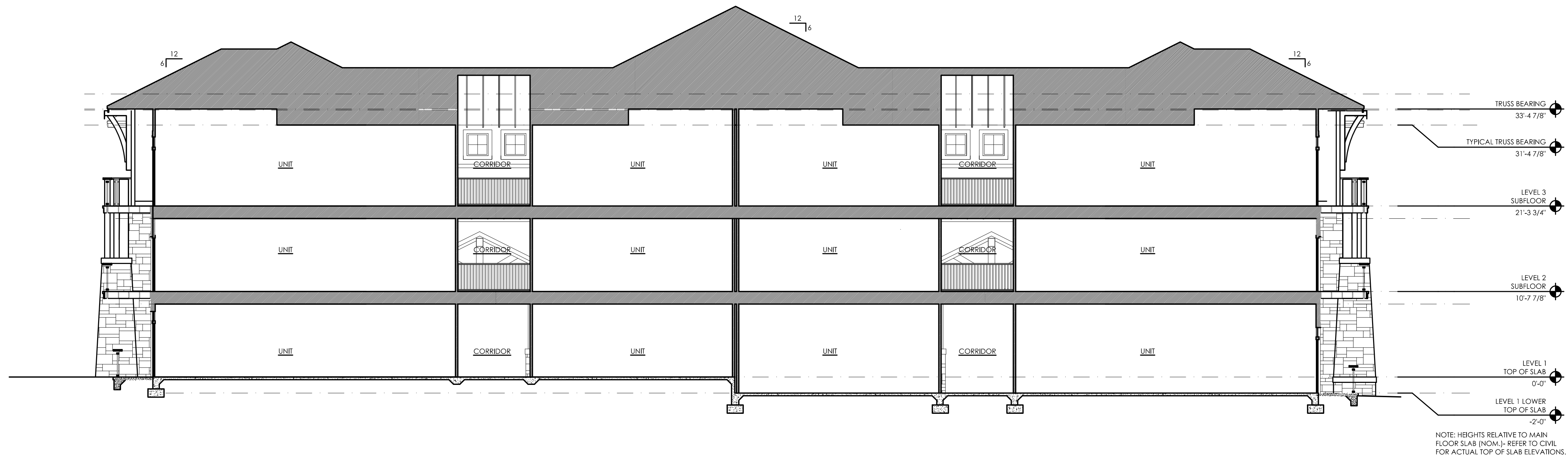
3 BUILDING TYPE 1 (BUILDINGS 3 4 6 7) - BUILDING SECTION @ STAIRS - LOW SIDE  
 1/8" = 1'-0"



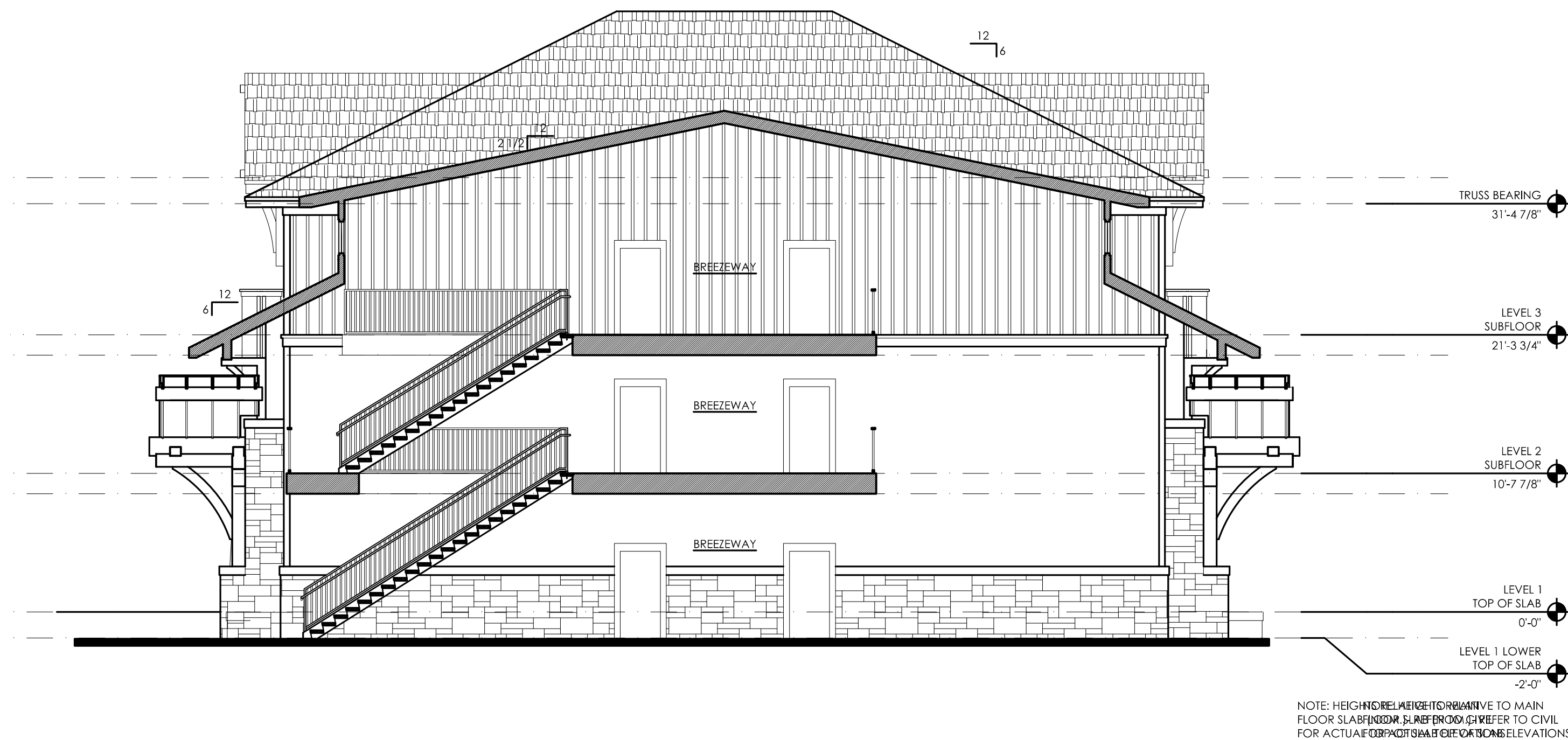
2 BUILDING TYPE 1 (BUILDINGS 3 4 6 7) - BUILDING SECTION @ ELEVATOR  
 1/8" = 1'-0"



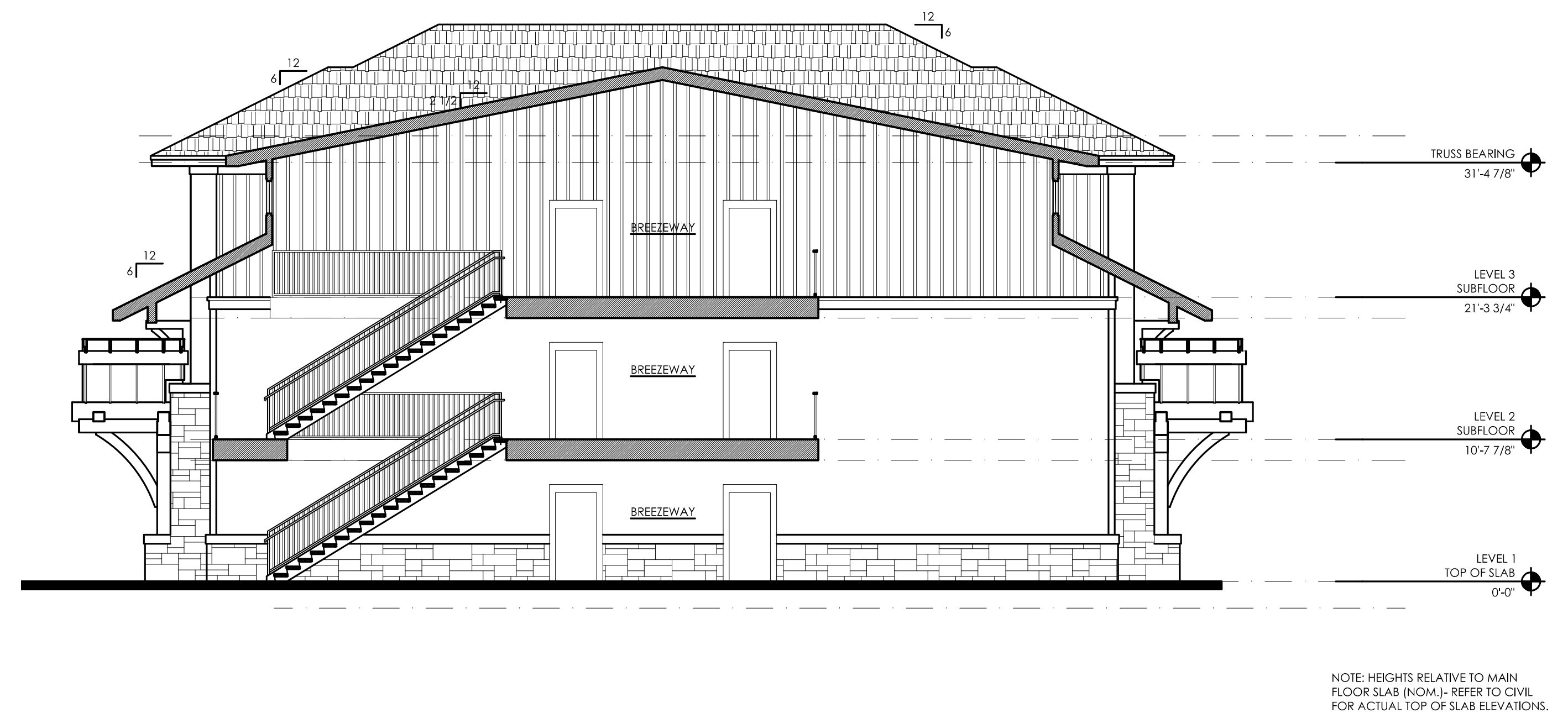
1 BUILDING TYPE 1 (BUILDINGS 3 4 6 7) - BUILDING SECTION @ STAIRS - HIGH SIDE  
 1/8" = 1'-0"



3 BUILDING TYPE 2 - BUILDING SECTION  
 1/8" = 1'-0"



2 BUILDING TYPE 2 - BUILDING SECTION @ STAIR (LOW SIDE)  
 1/8" = 1'-0"



1 BUILDING TYPE 2 - BUILDING SECTION @ STAIR  
 1/8" = 1'-0"



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RIVER'S EDGE -  
KNIGHTDALE  
KNIGHTDALE, NC



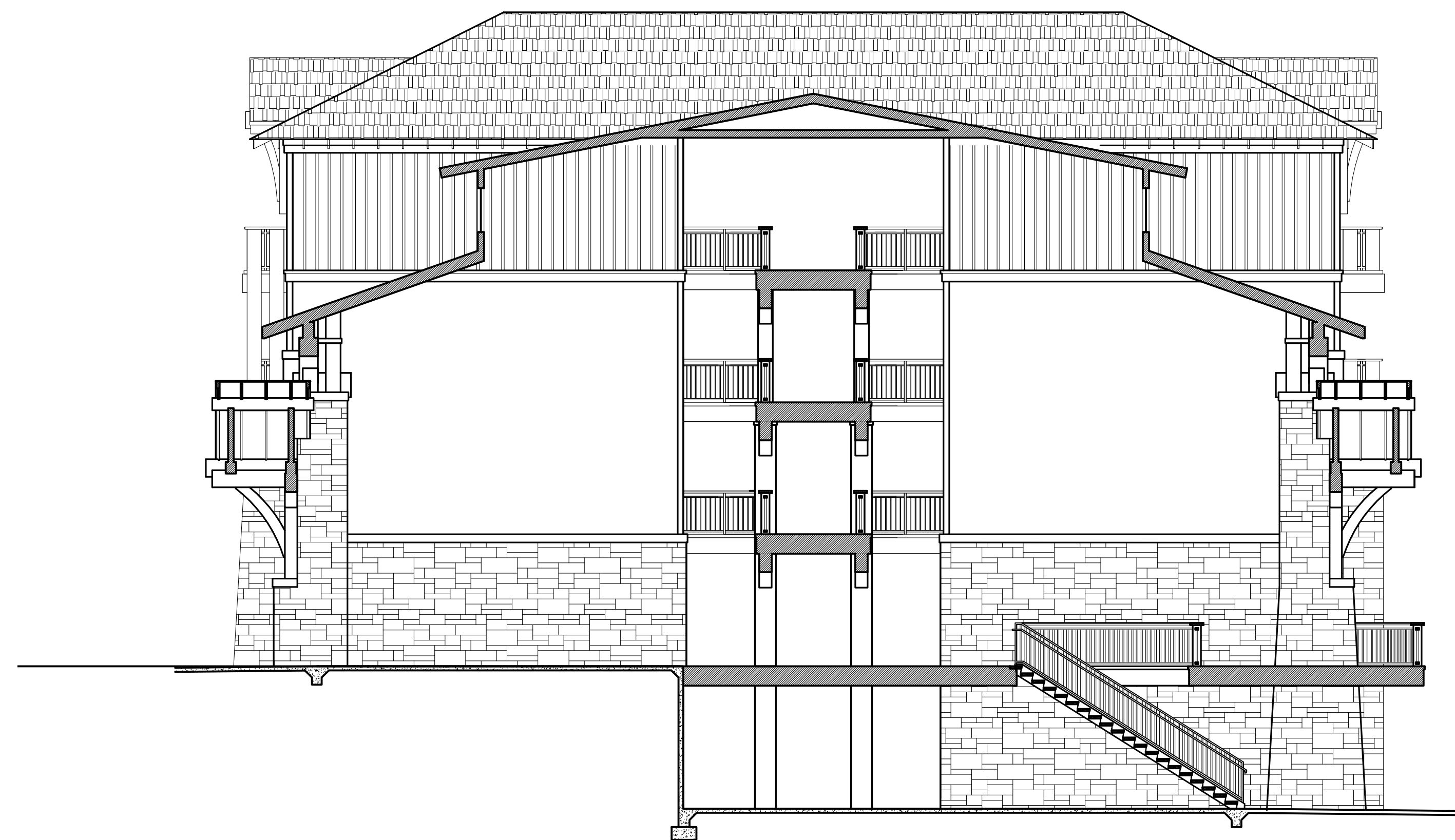
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CONSTRUCTION

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Issue Date: DEC 12, 2014  
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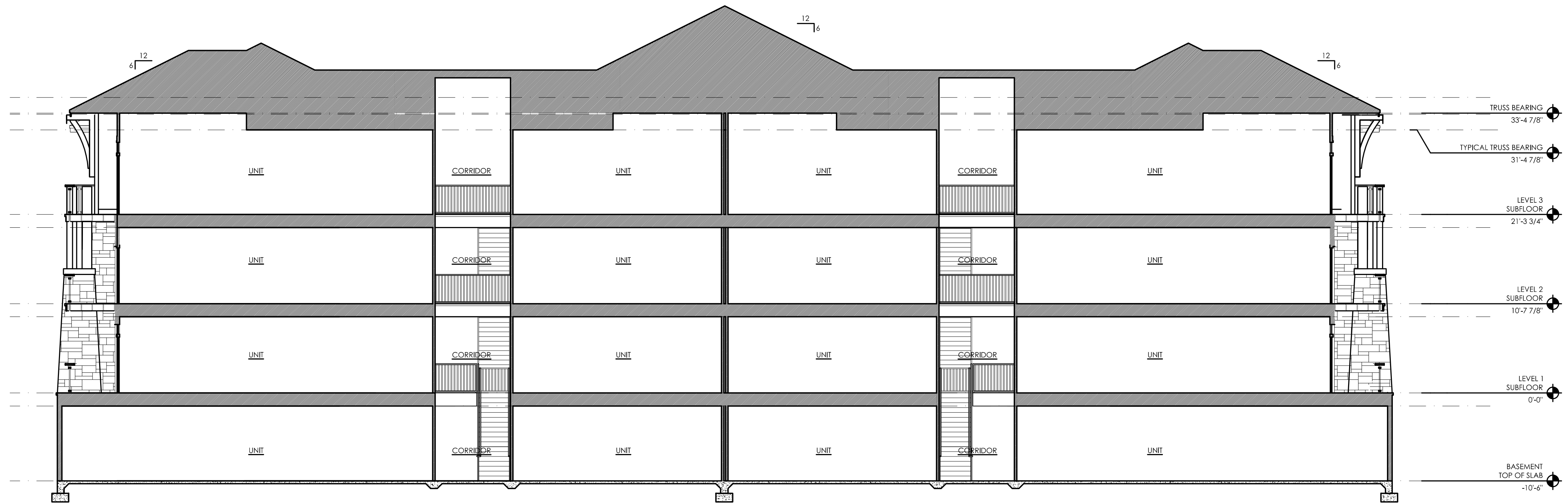
Key Plan

BUILDING  
SECTIONS -  
BUILDING TYPE 3

A6.03

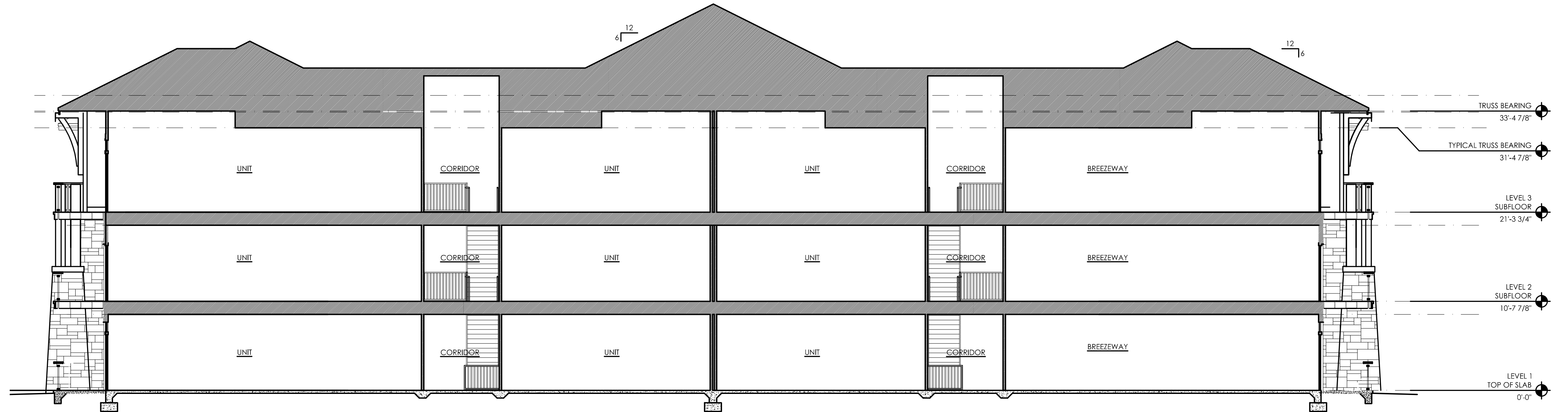


1 BUILDING TYPE 3 - BUILDING SECTION @ BREEZWAY  
1/8" = 1'-0"

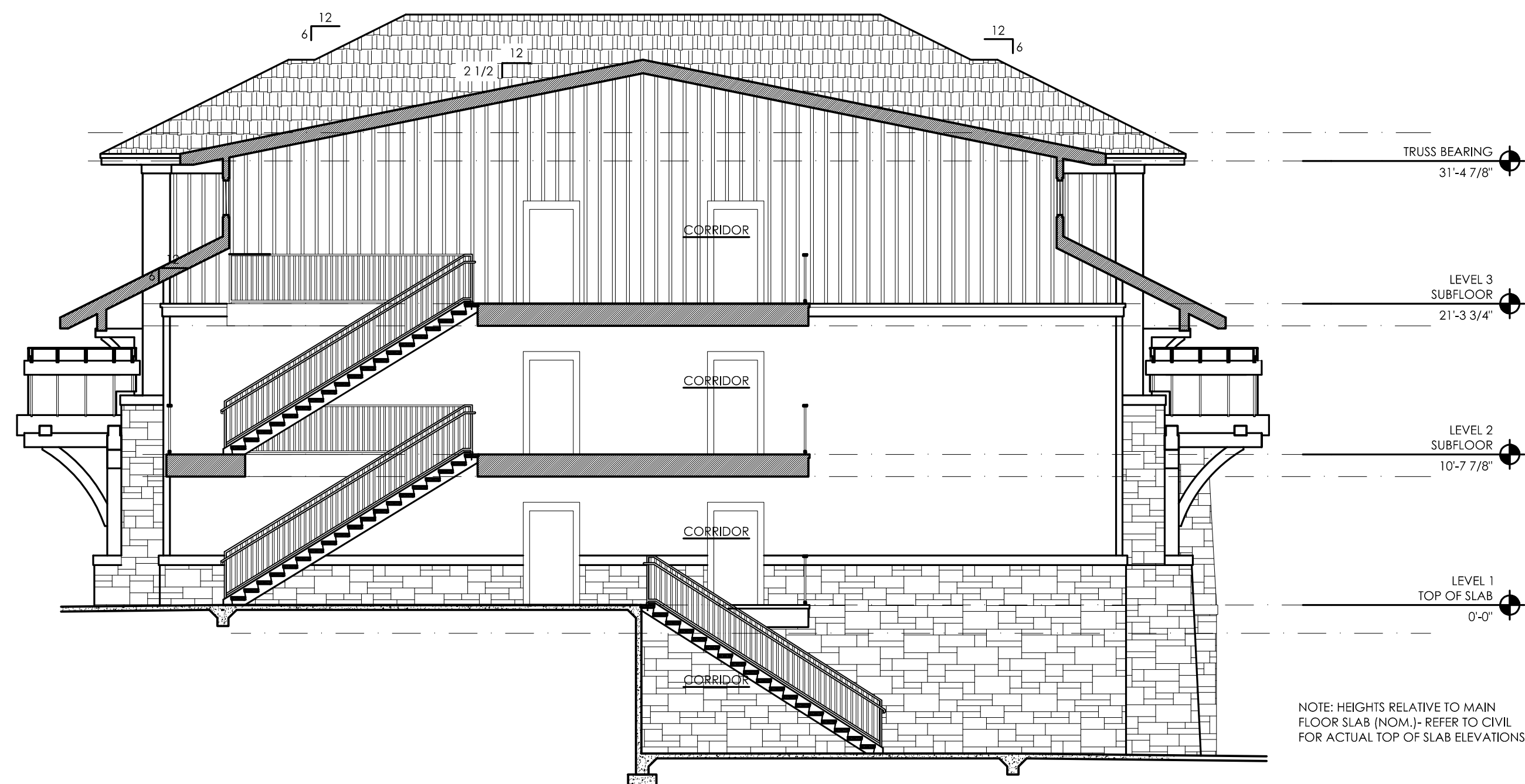


3 BUILDING TYPE 4 - BUILDING SECTION @ BASEMENT SPLIT  
 1/8" = 1'-0"

NOTE: HEIGHTS RELATIVE TO MAIN FLOOR SLAB (NOM.)- REFER TO CIVIL FOR ACTUAL TOP OF SLAB ELEVATIONS.



2 BUILDING TYPE 4 - BUILDING SECTION  
 1/8" = 1'-0"



1 BUILDING TYPE 4 - BUILDING SECTION @ STAIR  
 1/8" = 1'-0"

NOTE: HEIGHTS RELATIVE TO MAIN FLOOR SLAB (NOM.)- REFER TO CIVIL FOR ACTUAL TOP OF SLAB ELEVATIONS.