MASTER PLAN

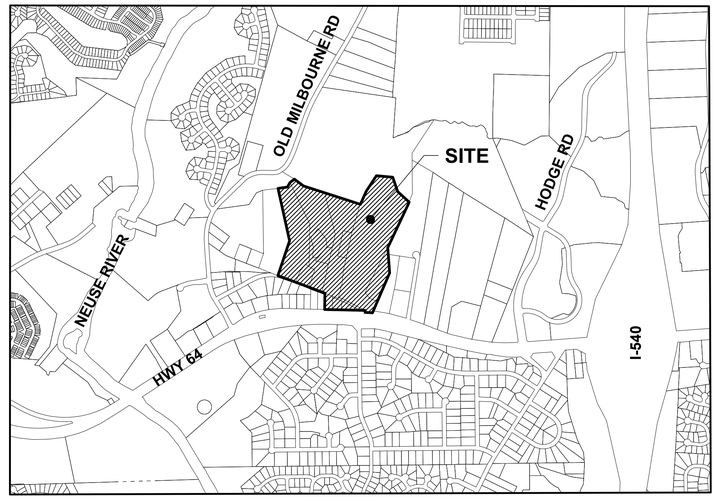
KNIGHTDALE GATEWAY

5901 FARMWELL ROAD

ST. MATTHEW'S TOWNSHIP, KNIGHTDALE, NORTH CAROLINA

ZMA 16-21

WAKE COUNTY



VICINITY MAP

SCALE: 1"=1,000'

GRAPHIC SCALE

1000 0 500 1000 2000 4000

(IN FEET)
1 inch = 1000 ft.

DEVELOPER

BEACON PARTNERS
500 EAST MOREHEAD ST
SUITE 200
CHARLOTTE, NC 28202
PHONE (704) 597-7757

ENGINEER

ADVANCED CIVIL DESIGN, INC.
51 KILMAYNE DRIVE, SUITE 102
CARY, NC 27511
PHONE (919) 481-6290
FAX (919) 336-5127

OWNER

PATRICIA W. SIMMONS
5909 COFFEY ST
RALEIGH, NC 27604

OWNER

JMAK PLANT FARM LLC
PO BOX 453
FAIRVIEW, NC 28730-0453

OWNER

BEVERLY C. MORRIS TRUSTEE &
JULIA HERNANDEZ TRUSTEE
PO BOX 453
FAIRVIEW, NC 28730-0453

OWNER

MARIANNE JEFFREYS PAIR
5845 COFFEY ST
RALEIGH, NC 27604

OWNER

MOTAPARTHY PROPERTIES, LLC
105 CASHWELL DR
GOLDSBORO, NC 27534

INDEX OF DRAWINGS

COVER SHEET	C.1.0
OVERALL EXISTING CONDITIONS PLAN	C.2.0
EXISTING CONDITIONS PLAN	C.2.1 – C.2.2
OVERALL SITE PLAN	C.3.0
SITE PLAN	C.3.1 – C.3.2
NEW ROAD PLAN & PROFILE	C.3.3
SIGNAGE & MARKING PLAN	C.3.4 – C.3.5
OVERALL UTILITY PLAN	C.4.0
UTILITY PLAN	C.4.1 – C.4.2
OVERALL GRADING PLAN	C.5.0
GRADING PLAN	C.5.1 – C.5.2
OVERALL LANDSCAPE PLAN	C.6.0
LANDSCAPE PLAN	C.6.1 – C.6.2
LIGHTING PLAN	C.7.0 – C.7.1
SITE DETAILS	C.8.0
MATERIALS BOARD	A100
BUILDING 1 COLOR ELEVATIONS	A200
BUILDING 2 COLOR ELEVATIONS	A201
WALL SECTIONS	A301
WALL SECTIONS	A302
WALL SECTIONS	A303
WALL SECTIONS	A304

SITE DATA TABLE

SITE ACREAGE:	54.13 ACRES
EXISTING ZONING:	RT (RURAL TRANSITION)
PROPOSED ZONING:	MI-PUD (MANUFACTURING & INDUSTRIAL – PLANNED UNIT DEVELOPMENT)
OVERLAY DISTRICT:	NONE
EXISTING LAND USE:	SINGLE FAMILY
PROPOSED LAND USE:	MANUFACTURING, LIGHT (UDO 5.7.B) RESEARCH AND DEVELOPMENT (UDO 5.7E) STORAGE – WAREHOUSE, INDOOR STORAGE (UDO 5.7G) WHOLESALING AND DISTRIBUTION (UDO 5.7H) BREWERY/WINERY/DISTILLERY (UDO 3.1.C.6) LABORATORY – MEDICAL, ANALYTICAL, RESEARCH & DEVELOPMENT (UDO 3.1.C.6)

WATERSHED:	LOWER NEUSE
PROPOSED NO. BUILDINGS:	2
BUILDING #1 AREA:	221,000 SF
BUILDING #2 AREA:	286,000 SF
TOTAL BUILDING AREA:	507,000 SF
PHASING:	NONE
FRONT SETBACK (MIN.) **:	50 FT
SIDE SETBACK (MIN.) **:	50 FT
REAR SETBACK (MIN.) **:	50 FT

** IF ADJACENT TO RESIDENTIAL DISTRICT, 100 FEET.

REQUIRED RECREATION OPEN SPACE:	0 SF
PROVIDED RECREATION OPEN SPACE:	0 SF

PARKING CALCULATIONS

USE TYPE: MANUFACTURING, LIGHT

MAXIMUM NO. OF PARKING SPACES: 1.5 PER KSF GFA

MINIMUM NO. OF PARKING SPACES: 0.5 X MAXIMUM

**KSF = 1,000 SF; GFA = GROSS FLOOR AREA

BUILDING NO.	GFA (SF)	MAX. SPACES	MIN. SPACES	AUTO SPACES PROVIDED
1	221,000	331	166	200
2	286,000	429	215	248

ELECTRIC VEHICLE REQUIREMENTS:	1 PER 40 SPACES = 11 SPACES
# OF CHARGING STATIONS/DEDICATED SPACES PROVIDED:	11 SPACES
BICYCLE PARKING REQUIRED:	1 PER 10 PARKING SPACES = 45 SPACES
BICYCLE PARKING PROVIDED:	46 SPACES

TREE COVER AREA CALCULATIONS

PERIMETER OF SITE:	6,950 FEET
REQUIRED TREE COVER AREA:	6,950 FT X 20 FT = 139,000 SF
REQUIRED AREA % OF TOTAL LOT AREA:	139,000 SF / 2,358,143 SF = 5.89% 5.89% OF TOTAL LOT AREA (< 10% MAX)
EXISTING TREE COVER AREA TO BE UTILIZED:	521,245 SF
ADDITIONAL SPACE REQUIRED:	0 SF
RE-PLANTED AREA REQUIRED:	0 SF
RE-PLANTED AREA PROVIDED:	25,086 SF

USE STANDARDS

UDO SECTION 5.7.B LIGHT MANUFACTURING:
1. ALL MATERIALS OR EQUIPMENT SHALL BE STORED WITHIN AN ENCLOSED BUILDING OR STORED WITHIN AN OUTDOOR STORAGE AREA THAT COMPLIES WITH ALL REGULATIONS SET FORTH IN SECTION 5.10 AND IS RESTRICTED TO THE REAR YARD.
2. ANY OPERATION WHICH RESULTS IN THE CREATION OF NOXIOUS VIBRATIONS, ODORS, DUST, GLARE, OR SOUND IS PROHIBITED.

UDO SECTION 5.7E RESEARCH AND DEVELOPMENT:
1. ALL MATERIALS OR EQUIPMENT SHALL BE STORED WITHIN AN ENCLOSED BUILDING OR STORED WITHIN AN OUTDOOR STORAGE AREA THAT COMPLIES WITH ALL REGULATIONS SET FORTH IN SECTION 5.10 AND IS RESTRICTED TO THE REAR YARD.
2. ANY OPERATION WHICH RESULTS IN THE CREATION OF NOXIOUS VIBRATIONS, ODORS, DUST, GLARE OR SOUND IS PROHIBITED.

UDO SECTION 5.7G STORAGE – WAREHOUSE, INDOOR STORAGE:
1. AN INDOOR STORAGE WAREHOUSE BUILDING IS LIMITED TO FIVE THOUSAND (5,000) SQUARE FEET PER FLOOR IN THE TC AND RR DISTRICTS.
2. OUTDOOR STORAGE IS NOT PERMITTED.
3. IN THE RR DISTRICT, ALL AREAS SHALL BE SCREENED FROM ANY PRE-EXISTING ADJACENT RESIDENCE (OTHER THAN THE OWNER'S) BY A TYPE-A BUFFER YARD (SECTION 7.4 (I)(2)).

UDO SECTION 5.7H WHOLESALING AND DISTRIBUTION:
1. ALL VEHICLE STORAGE AREAS SHALL BE ENCLOSED BY AN OPAQUE FENCE OR WALL, RESTRICTED TO THE REAR YARD, AND SCREENED FROM OFF-SITE VIEW OF A PUBLIC RIGHT-OF-WAY BY A TYPE-A BUFFER YARD (SECTION 7.4 (I)(2)).
2. NO OUTDOOR PUBLIC ADDRESS SYSTEM SHALL BE PERMITTED WHICH CAN BE HEARD BEYOND THE BOUNDARIES OF THE PROPERTY.

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN ENGINEERS SURVEYORS
51 Kilmayne Drive, Suite 102
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fax 919.336.5127

PLAN PREPARED FOR:
BEACON PARTNERS
500 East Morehead St.
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Charlotte, North Carolina 28269
tel. 704.597.7757
fax 704.598.6335

5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
COVER SHEET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019180 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 1,000'

Drawn By:	Checked By:
JRR	JDW

Project Number:
21-0011-504

Drawing Number:
C.1.0

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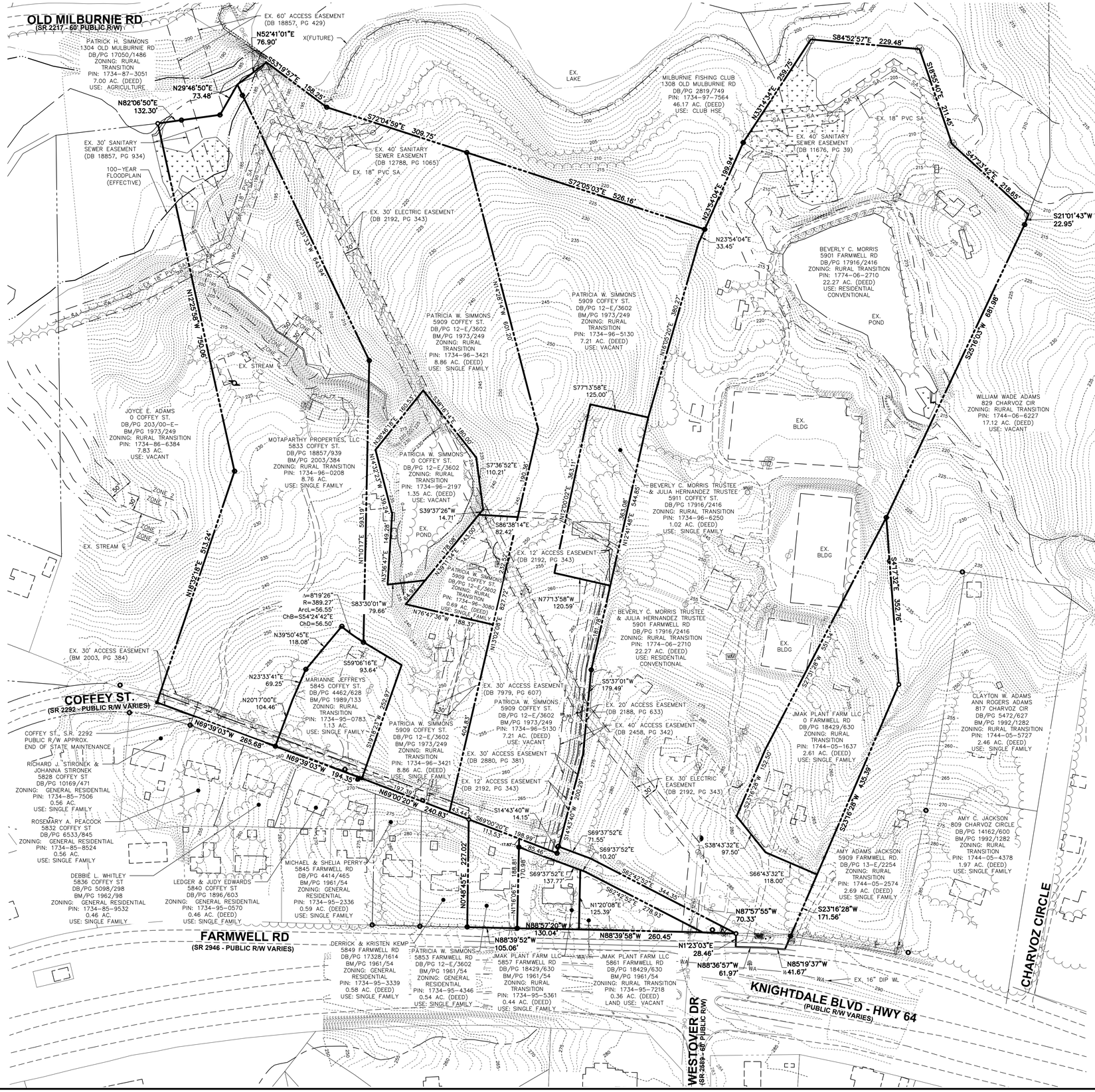

GENERAL NOTES

1. PRELIMINARY WETLAND LOCATIONS, STREAMS, AND PRELIMINARY BUFFER DETERMINATIONS PROVIDED BY ATLAS ENVIRONMENTAL.
2. NO HISTORIC BUILDING OBSERVED ON THE SITE.
3. NO FREE STANDING OR OPEN-GROWN OR FIELD GROWN TREES OBSERVED.
4. BASED ON FIELD OBSERVATIONS AND THE REVIEW OF AVAILABLE DATA, PROTECTED SPECIES WERE NOT IDENTIFIED TO LIKELY OCCUR ON THE SITE.
5. SITE IS HEAVILY WOODED WITH A MIXTURE OF PINES, HARDWOODS, AND UNDERSTORY VEGETATION.

FLOOD NOTE

BY GRAPHIC PLOTTING ONLY A SMALL PORTION OF THIS PROPERTY IS LOCATED IN THE 100 YEAR FLOOD PLAIN AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS NO. 3720173400J AND MAP NO. 3720174400J WITH EFFECTIVE DATE OF MAY 2, 2006, IN WAKE COUNTY NORTH CAROLINA. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE.

LEGEND

- Iron Pipe Found
- Iron Pin Set
- Railroad Spike
- Light Pole
- Fire Hydrant
- Water Valve
- Existing Tree
- Existing Treeline
- Electrical Outlet
- Concrete Bollard
- Sign
- Catch Inlet
- Catch Basin
- Fence Line
- Water Line
- Gas Line
- Overhead Electric Line
- Storm Sewer Line
- Sanitary Sewer Line
- Property Line
- Ex. Property Line
- Ex. Right-of-Way
- Ex. Easement Line
- Setback
- Ex. Wetlands

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

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5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
OVERALL EXISTING CONDITIONS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019180 JOHN D. WHITACRE
PRELIMINARY NOT FOR CONSTRUCTION
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 100'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21-0011-504

Drawing Number: C.2.0

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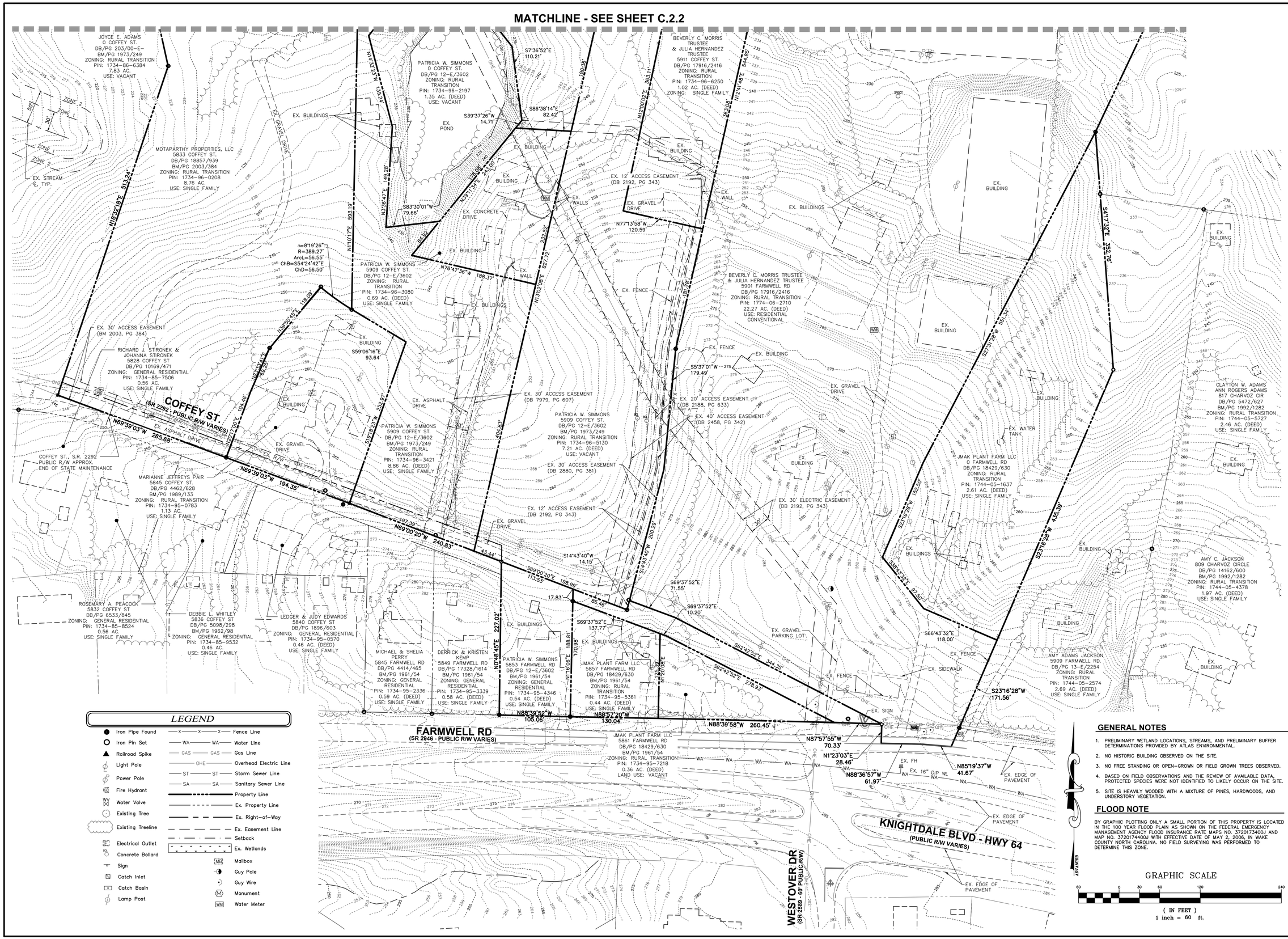

LEGEND

- Iron Pipe Found
- Iron Pin Set
- Railroad Spike
- Light Pole
- Power Pole
- Fire Hydrant
- Water Valve
- Existing Tree
- Existing Treeline
- Electrical Outlet
- Concrete Bollard
- Sign
- Catch Inlet
- Catch Basin
- Lamp Post
- Fence Line
- Water Line
- Gas Line
- Overhead Electric Line
- Storm Sewer Line
- Sanitary Sewer Line
- Property Line
- Ex. Property Line
- Ex. Right-of-Way
- Ex. Easement Line
- Setback
- Ex. Wetlands
- Mailbox
- Guy Pole
- Guy Wire
- Monument
- Water Meter

GENERAL NOTES

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PLAN PREPARED BY:
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ENGINEERS SURVEYORS
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fax 704.598.6335

5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
EXISTING CONDITIONS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030180 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21–0011–504

Drawing Number: C.2.1

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GENERAL NOTES

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GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

LEGEND

- Iron Pipe Found
- Iron Pin Set
- Railroad Spike
- Light Pole
- Power Pole
- Fire Hydrant
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- Setback
- Ex. Wetlands
- Mailbox
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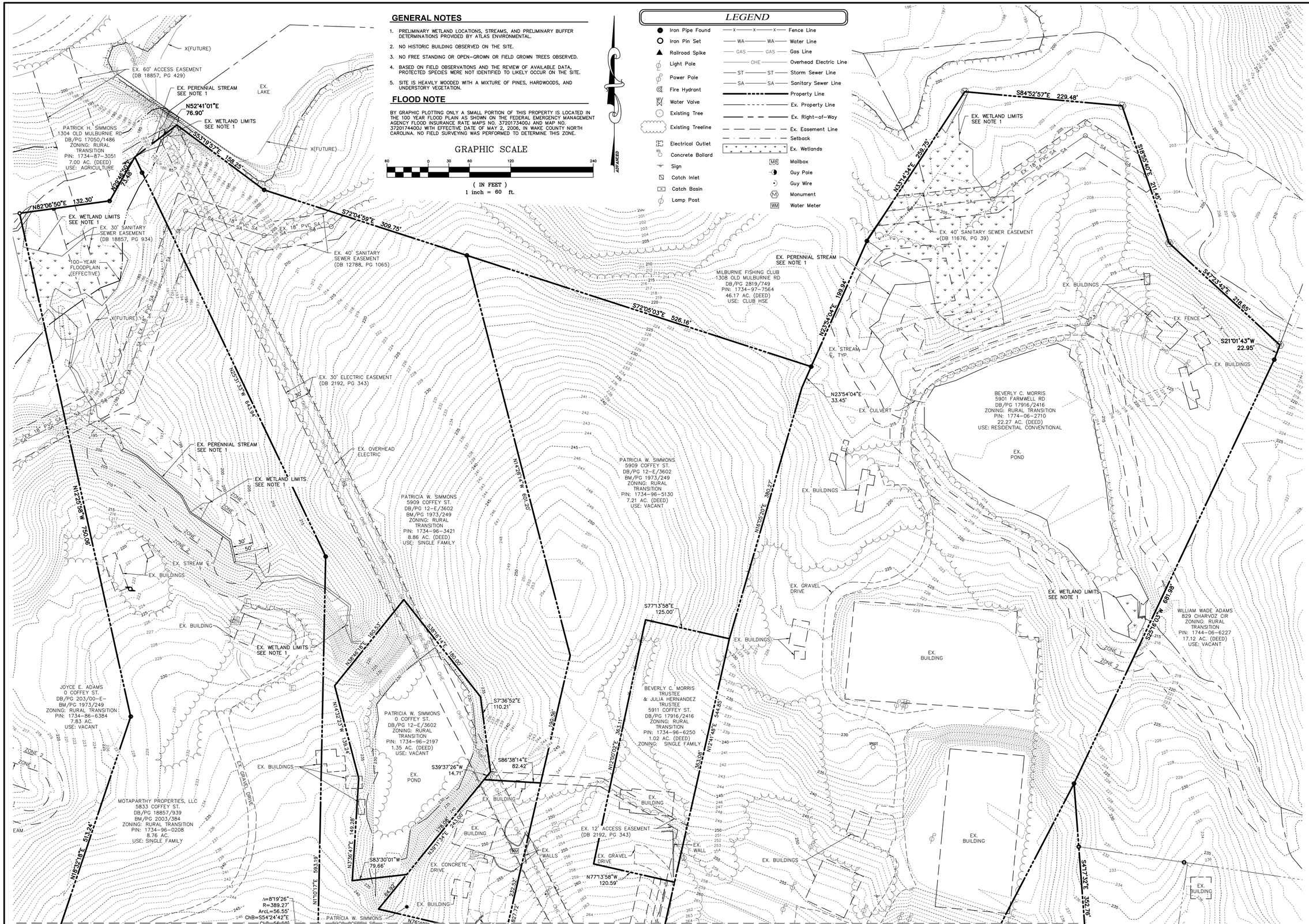
- Water Meter



PLAN PREPARED BY:

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PLAN PREPARED FOR:

BEACON PARTNERS
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5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
EXISTING CONDITIONS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036180 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21–0011–504

Drawing Number: C.2.2

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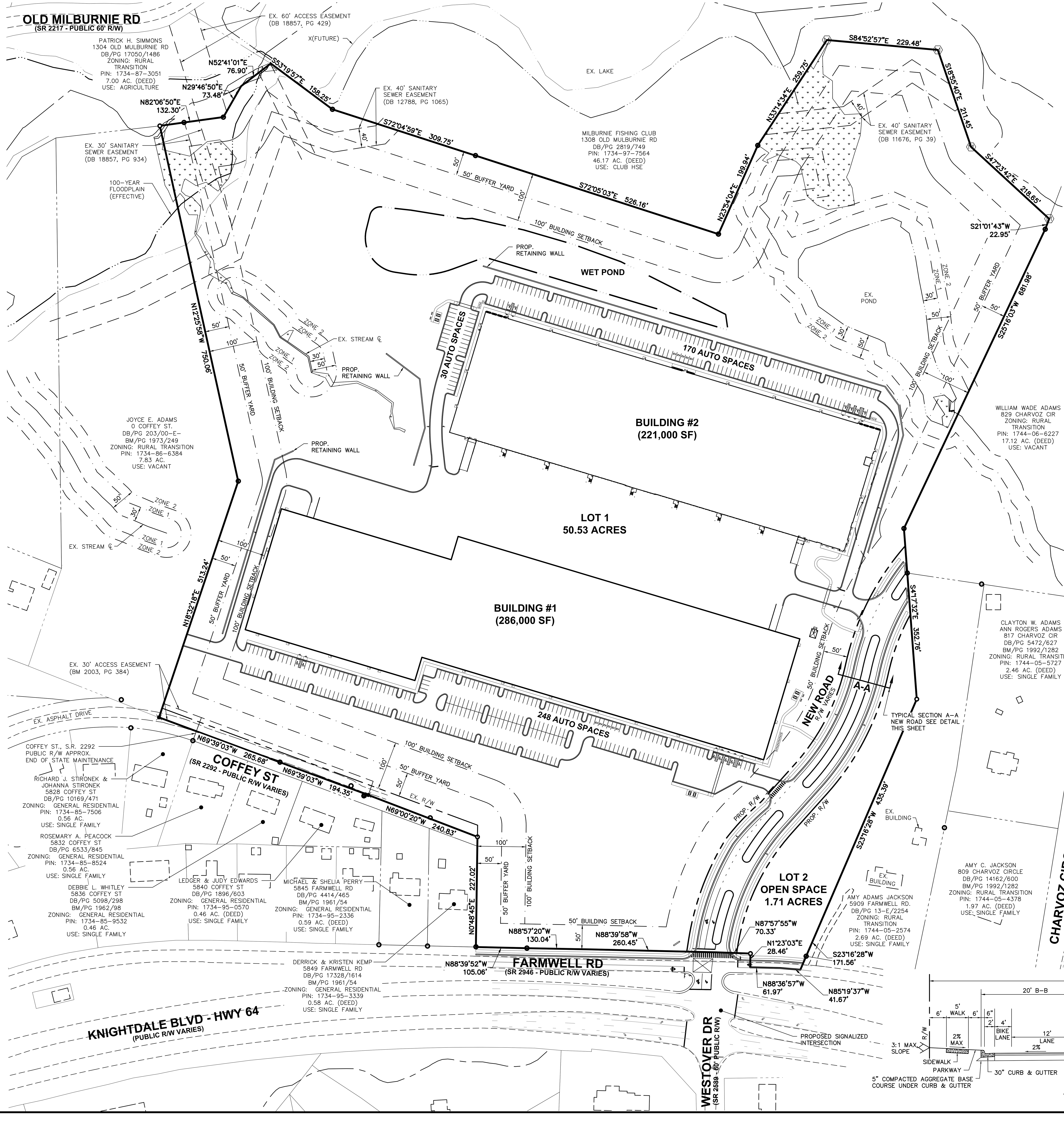


SITE DATA TABLE

SITE ACREAGE:	54.13 ACRES
EXISTING ZONING:	RT (RURAL TRANSITION)
PROPOSED ZONING:	MI–PUD (MANUFACTURING & INDUSTRIAL – PLANNED UNIT DEVELOPMENT)
OVERLAY DISTRICT:	NONE
EXISTING LAND USE:	SINGLE FAMILY
PROPOSED LAND USE:	MANUFACTURING, LIGHT (UDO 5.7.B) RESEARCH AND DEVELOPMENT (UDO 5.7E) STORAGE – WAREHOUSE, INDOOR STORAGE (UDO 5.7G) WHOLESALING AND DISTRIBUTION (UDO 5.7H) BREWERY/WINERY/DISTILLERY (UDO 3.1.C.6) LABORATORY – MEDICAL, ANALYTICAL, RESEARCH & DEVELOPMENT (UDO 3.1.C.6)

WATERSHED:	LOWER NEUSE
PROPOSED NO. BUILDINGS:	2
BUILDING #1 AREA:	221,000 SF
BUILDING #2 AREA:	286,000 SF
TOTAL BUILDING AREA:	507,000 SF
PHASING:	NONE
FRONT SETBACK (MIN.) **:	50 FT
SIDE SETBACK (MIN.) **:	50 FT
REAR SETBACK (MIN.) **:	50 FT

** IF ADJACENT TO RESIDENTIAL DISTRICT, 100 FEET.

REQUIRED RECREATION OPEN SPACE: 0 SF
PROVIDED RECREATION OPEN SPACE: 0 SF

PARKING CALCULATIONS

USE TYPE: MANUFACTURING, LIGHT

MAXIMUM NO. OF PARKING SPACES: 1.5 PER KSF GFA

MINIMUM NO. OF PARKING SPACES: 0.5 X MAXIMUM

**KSF = 1,000 SF; GFA = GROSS FLOOR AREA

BUILDING NO.	GFA (SF)	MAX. SPACES	MIN. SPACES	AUTO SPACES PROVIDED
1	221,000	331	166	200
2	286,000	429	215	248

ELECTRIC VEHICLE REQUIREMENTS: 1 PER 40 SPACES = 11 SPACES
OF CHARGING STATIONS/DEDICATED SPACES PROVIDED: 11 SPACES

BICYCLE PARKING REQUIRED: 1 PER 10 PARKING SPACES = 45 SPACES
BICYCLE PARKING PROVIDED: 46 SPACES

TOWN OF KNIGHTDALE WATER ALLOCATION POLICY

TOWN OF KNIGHTDALE WATER ALLOCATION POLICY CALCULATIONS ARE SHOWN BELOW:

PROPOSED MANUFACTURING/INDUSTRIAL EMPLOYMENT CENTER – 507,000 SF

MANUFACTURING/INDUSTRIAL EMPLOYMENT CENTER
POINTS EARNED: 70 BASE POINTS

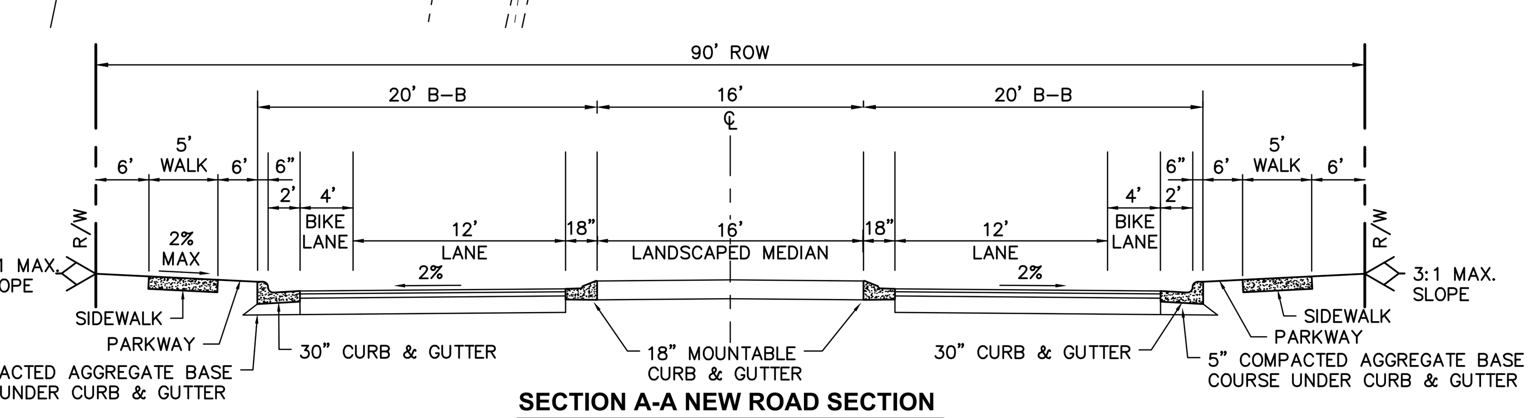
GENERAL NOTES

1. ALL PARKING AREAS MUST BE PAVED AND HAVE STANDARD CURB & GUTTER.
2. DEVELOPMENT WILL NOT BE PHASED.

LEGEND

- Iron Pipe Found
- Calculated Point
- Railroad Spike
- Ex. Fence Line
- Ex. Property Line
- Property Line
- Relocated Underground Electric
- Ex. Wetlands

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.



SECTION A-A NEW ROAD SECTION
NOT TO SCALE

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN ENGINEERS SURVEYORS
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PLAN PREPARED FOR:
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fax 704.598.6335

5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY

MASTER PLAN FOR BEACON PARTNERS

OVERALL SITE PLAN

PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 100'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21-0011-504

Drawing Number: C.3.0

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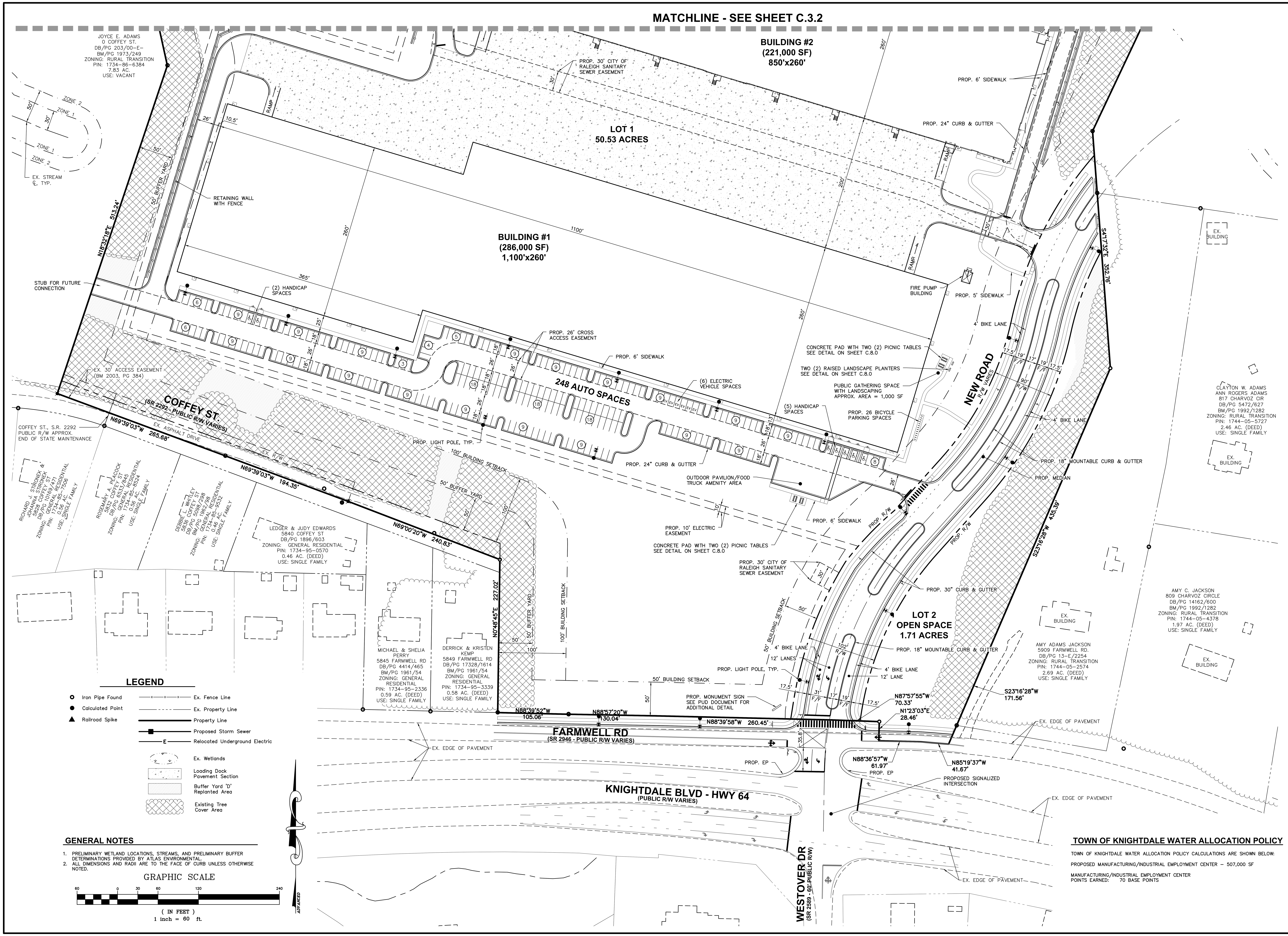

LEGEND

- Iron Pipe Found
- Calculated Point
- Railroad Spike
- Ex. Fence Line
- Ex. Property Line
- Property Line
- Proposed Storm Sewer
- Relocated Underground Electric
- Ex. Wetlands
- Loading Dock Pavement Section
- Buffer Yard 'D' Replanted Area
- Existing Tree Cover Area

GENERAL NOTES

1. PRELIMINARY WETLAND LOCATIONS, STREAMS, AND PRELIMINARY BUFFER DETERMINATIONS PROVIDED BY ATLAS ENVIRONMENTAL.
2. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

TOWN OF KNIGHTDALE WATER ALLOCATION POLICY

TOWN OF KNIGHTDALE WATER ALLOCATION POLICY CALCULATIONS ARE SHOWN BELOW:

PROPOSED MANUFACTURING/INDUSTRIAL EMPLOYMENT CENTER – 507,000 SF

MANUFACTURING/INDUSTRIAL EMPLOYMENT CENTER
POINTS EARNED: 70 BASE POINTS

PLAN PREPARED BY:

ADVANCED CIVIL DESIGN
ENGINEERS SURVEYORS
51 Kilmayne Drive, Suite 102
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ph 919.481.6290
fax 919.336.5127

PLAN PREPARED FOR:

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5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY

MASTER PLAN FOR BEACON PARTNERS

SITE PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER — JAMES D. WHITACRE — PRELIMINARY

08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
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Date: 08/01/2022
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JRR	JDW

Project Number: 21-0011-504

Drawing Number: C.3.1

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GENERAL NOTES

1. PRELIMINARY WETLAND LOCATIONS, STREAMS, AND PRELIMINARY BUFFER DETERMINATIONS PROVIDED BY ATLAS ENVIRONMENTAL.
2. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
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LEGEND

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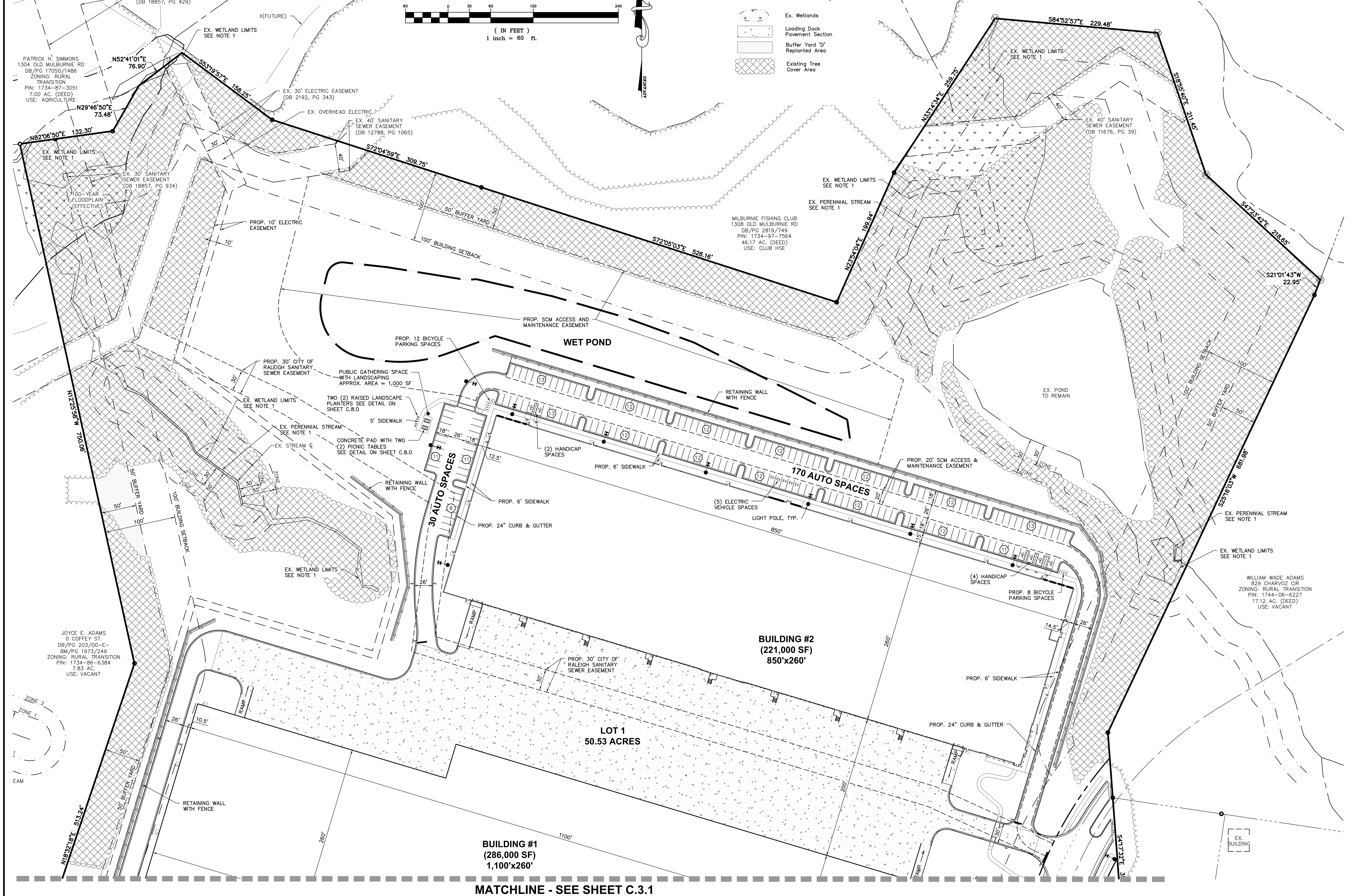
- Calculated Point
- Railroad Spike
- Ex. Fence Line
- Ex. Property Line
- Property Line
- Proposed Storm Sewer
- Relocated Underground Electric
- Ex. Wetlands
- Loading Dock Pavement Section
- Buffer Yard 'D' Replanted Area
- Existing Tree Cover Area



MATCHLINE - SEE SHEET C.3.1

PLAN PREPARED BY:

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PLAN PREPARED FOR:

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5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY

MASTER PLAN
FOR
BEACON PARTNERS

SITE PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031180 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21-0011-504

Drawing Number: C.3.2

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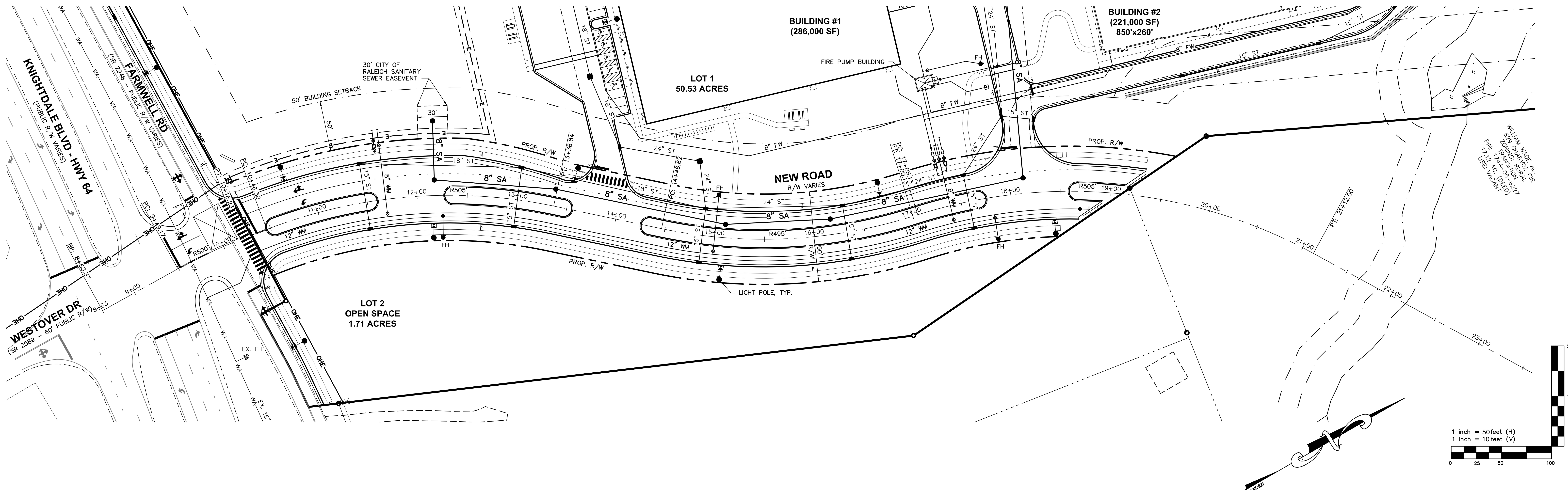

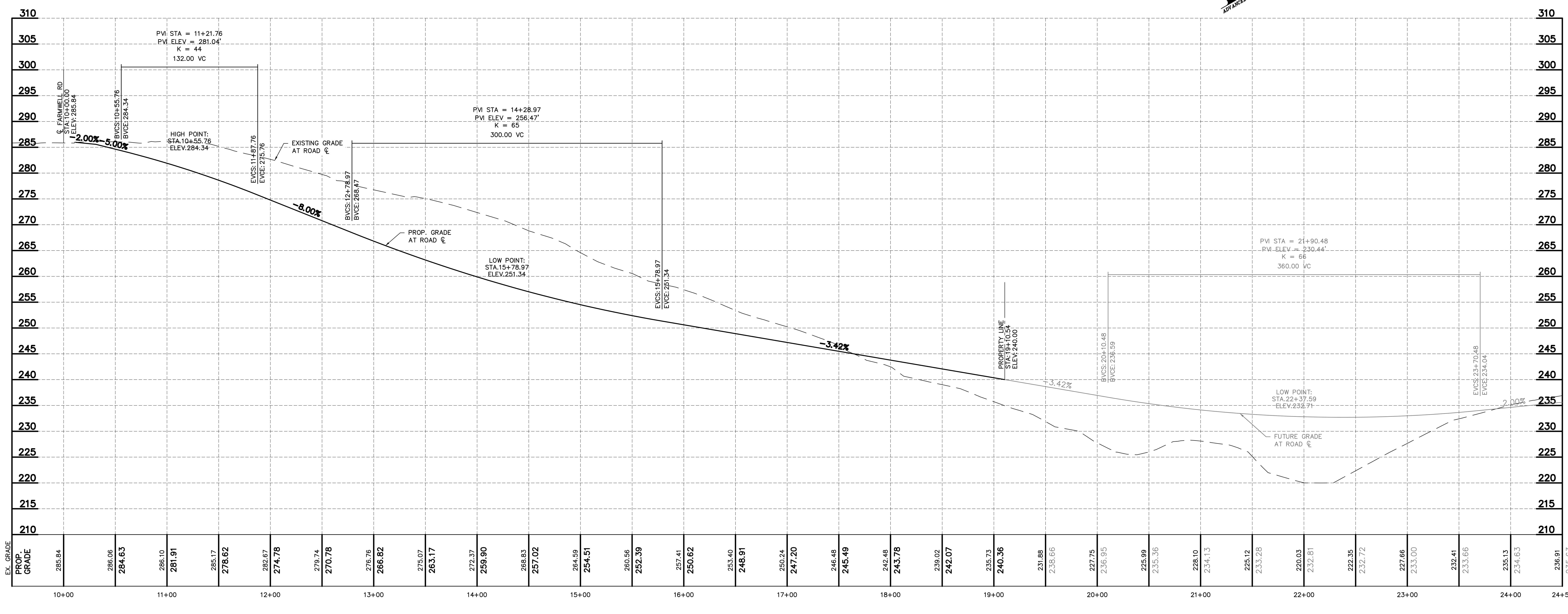

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KNIGHTDALE GATEWAY

MASTER PLAN
FOR
BEACON PARTNERS

NEW ROAD PLAN & PROFILE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 037180 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: H: 1"=50'; V: 1"=10'

Drawn By:	Checked By:
JRR	JDW

Project Number:
21–0011–504

Drawing Number:
C.3.3

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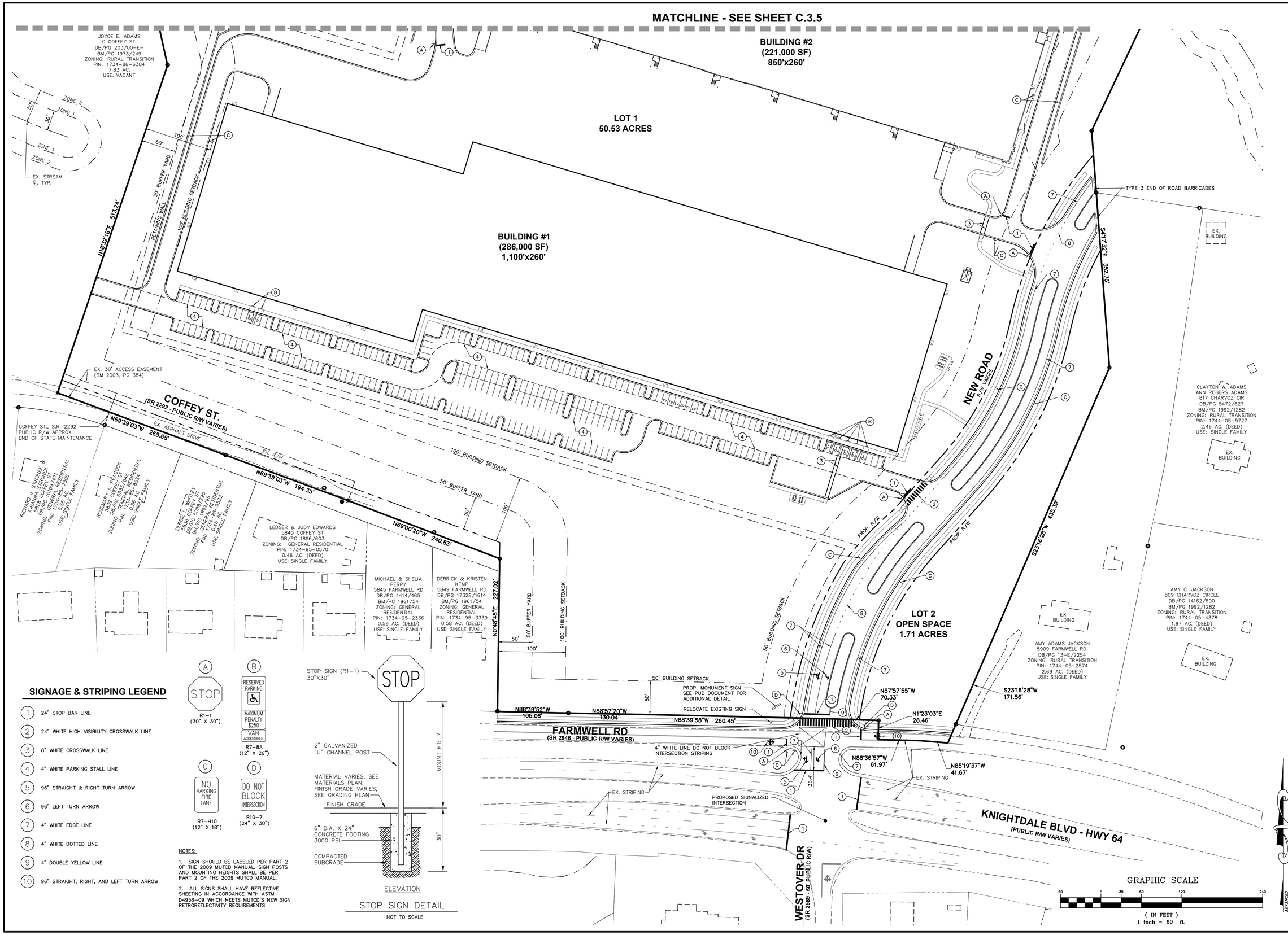

SIGNAGE & STRIPING LEGEND

1. 24" STOP BAR LINE
2. 24" WHITE HIGH VISIBILITY CROSSWALK LINE
3. 8" WHITE CROSSWALK LINE
4. 4" WHITE PARKING STALL LINE
5. 96" STRAIGHT & RIGHT TURN ARROW
6. 96" LEFT TURN ARROW
7. 4" WHITE EDGE LINE
8. 4" WHITE DOTTED LINE
9. 4" DOUBLE YELLOW LINE
10. 96" STRAIGHT, RIGHT, AND LEFT TURN ARROW

A — STOP — R1-1 (30" X 30")

B — RESERVED PARKING — MAXIMUM PENALTY $250 — VAN ACCESSIBLE — R7-8A (12" X 26")

C — NO PARKING FIRE LANE — R7-H10 (12" X 18")

D — DO NOT BLOCK INTERSECTION — R10-7 (24" X 30")

NOTES:

1. SIGN SHOULD BE LABELED PER PART 2 OF THE 2009 MUTCD MANUAL. SIGN POSTS AND MOUNTING HEIGHTS SHALL BE PER PART 2 OF THE 2009 MUTCD MANUAL.
2. ALL SIGNS SHALL HAVE REFLECTIVE SHEETING IN ACCORDANCE WITH ASTM D4956-09 WHICH MEETS MUTCD'S NEW SIGN RETROREFLECTIVITY REQUIREMENTS

STOP SIGN DETAIL

NOT TO SCALE

PLAN PREPARED BY:
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5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
SIGNAGE AND MARKING PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030180 JEFFREY D WHITTACRE
PRELIMINARY
NOT FOR CONSTRUCTION
08/01/2022

Issue Dates:	
05/23/2021	– Master Plan Submittal #1
06/23/2022	– Master Plan Submittal #2
08/01/2022	– Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21-0011-504

Drawing Number: C.3.4

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SIGNAGE & STRIPING LEGEND

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2. 24" WHITE HIGH VISIBILITY CROSSWALK LINE
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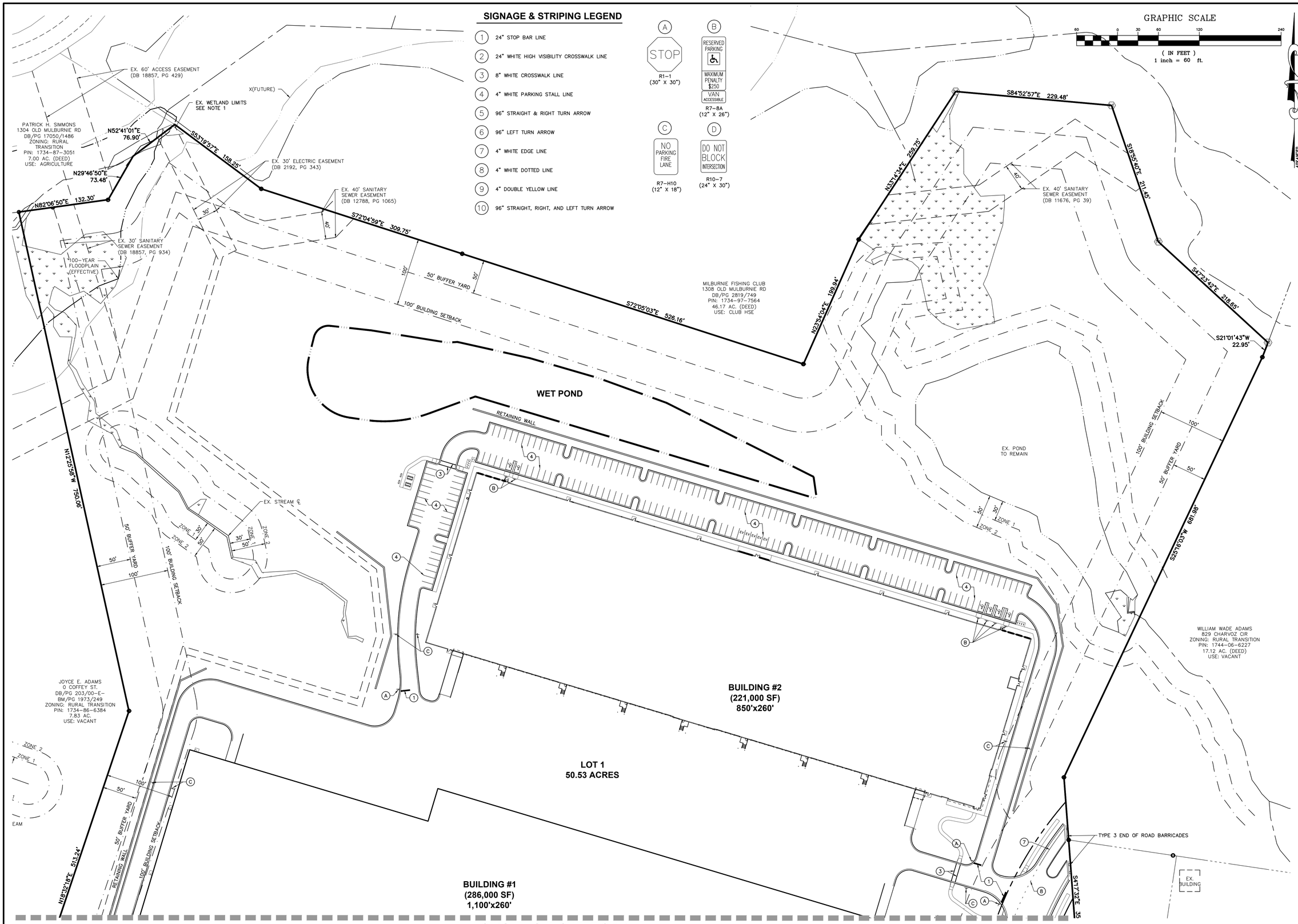
GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.



MATCHLINE - SEE SHEET C.3.4

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KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS

SIGNAGE AND MARKING PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 037180 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:	
05/23/2021	Master Plan Submittal #1
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08/01/2022	Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21-0011-504

Drawing Number: C.3.5

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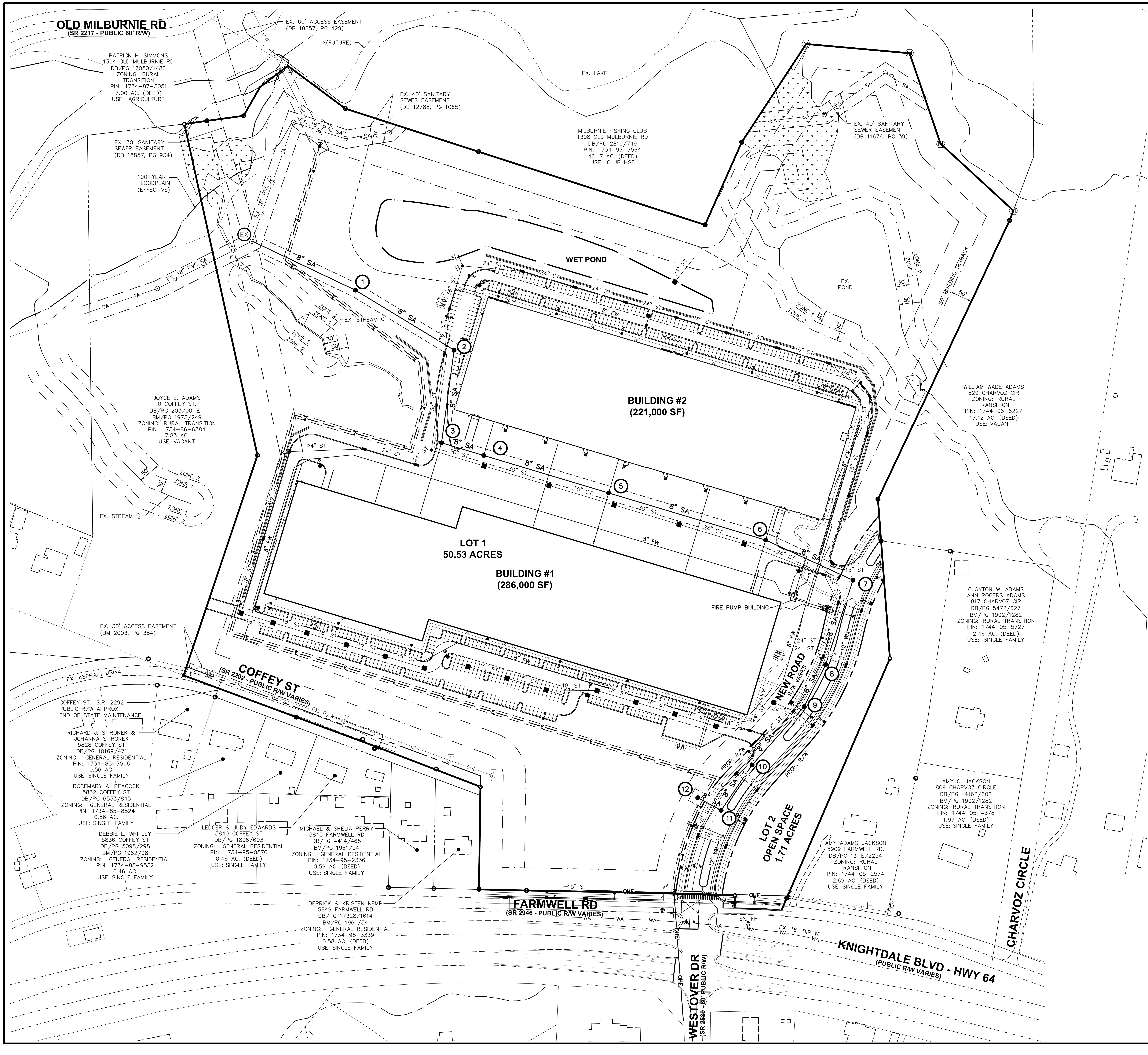

TOWN OF KNIGHTDALE WATER ALLOCATION POLICY

TOWN OF KNIGHTDALE WATER ALLOCATION POLICY CALCULATIONS ARE SHOWN BELOW:

PROPOSED MANUFACTURING/INDUSTRIAL EMPLOYMENT CENTER – 507,000 SF

MANUFACTURING/INDUSTRIAL EMPLOYMENT CENTER
POINTS EARNED: 70 BASE POINTS

WATER & SEWER

1. CONTRACTOR SHALL VERIFY LOCATIONS, ELEVATIONS, AND SIZES OF EXISTING PUBLIC UTILITIES PRIOR TO ANY EXCAVATIONS, GRADING, OR INSTALLATION OF UNDERGROUND UTILITIES ON OR ADJACENT TO THE PROJECT.
2. BUILDING WILL BE CONNECTED TO THE CITY OF RALEIGH WATER AND SANITARY SEWER SYSTEMS.
3. ALL SANITARY SEWER AND WATER LOCATED OUTSIDE THE PROPOSED STREET RIGHT–OF–WAY SHALL PROVIDED WITH STANDARD EASEMENT WIDTHS AS PER CITY OF RALEIGH REQUIREMENTS AND SHALL DEDICATED TO THE CITY OF RALEIGH ON THE FINAL PLAT.
4. NO SERVICES SHALL BE BENT OR INSTALLED IN SUCH A WAY THAT DOES NOT COMPLY WITH CITY STANDARDS.

STANDARD UTILITY NOTES (AS APPLICABLE)

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION).
2. UTILITY SEPARATION REQUIREMENTS:
   a) A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL
   b) WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER
   c) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
   d) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
   e) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W–41 & S–49)
   f) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
5. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
6. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
7. INSTALL $\frac{3}{4}$" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2' X 2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
8. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
9. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
10. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
11. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
12. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 250–7825 OR TIMOTHY.BEASLEY@RALEIGHNC.GOV FOR MORE INFORMATION.
13. CROSS–CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX–B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS–CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HELVEY AT (919) 212–5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV FOR MORE INFORMATION.

LEGEND

- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED WATER MAIN
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN

GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN
ENGINEERS SURVEYORS
51 Kilmayne Drive, Suite 102
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PLAN PREPARED FOR:
BEACON PARTNERS
500 East Morehead St.
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5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY

MASTER PLAN
FOR
BEACON PARTNERS

OVERALL UTILITY PLAN

NORTH CAROLINA PROFESSIONAL SEAL 037180 ENGINEER JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 100'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21–0011–504

Drawing Number: C.4.0

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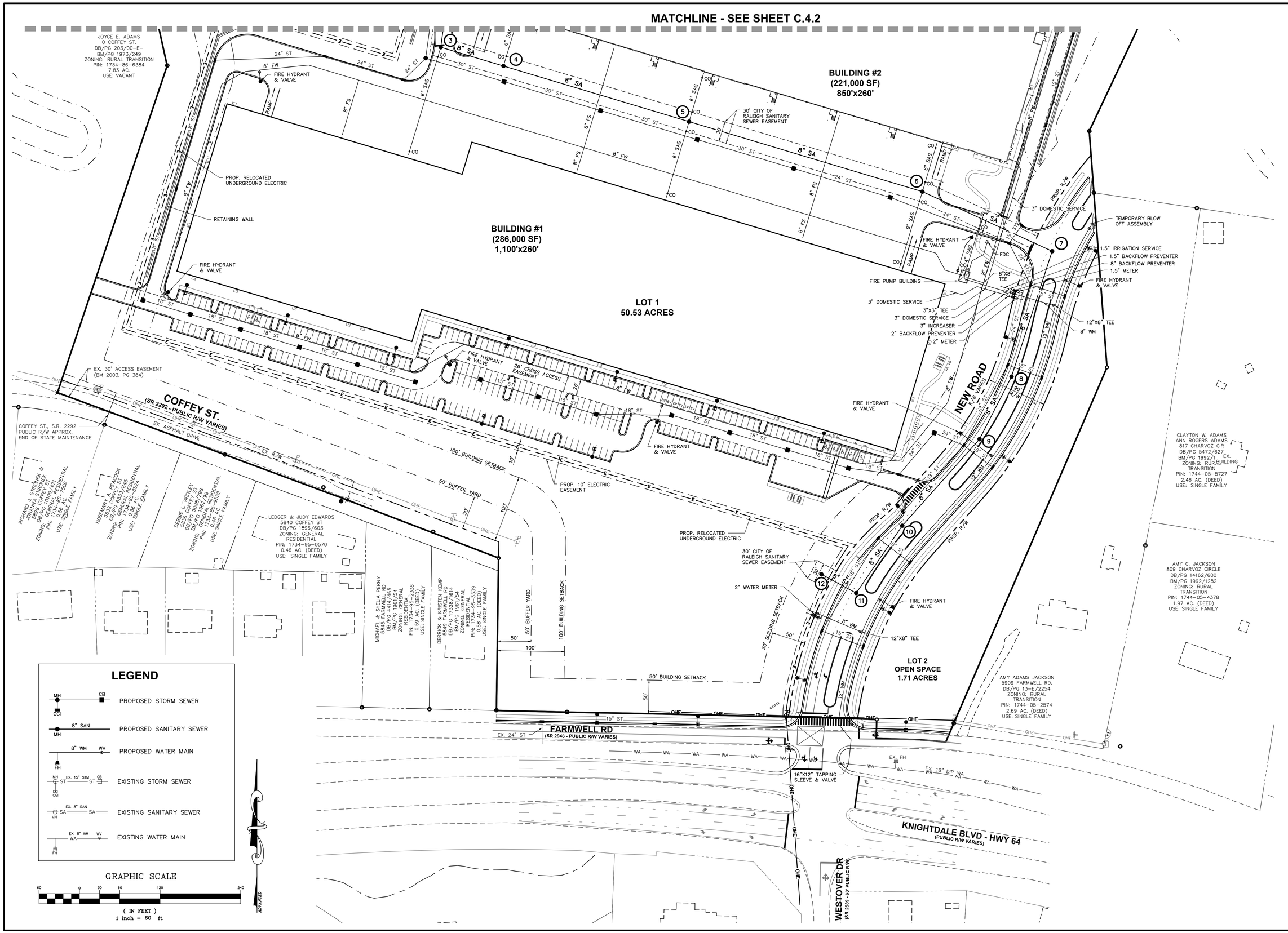

PLAN PREPARED BY:

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5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY

MASTER PLAN FOR BEACON PARTNERS

UTILITY PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036180 JAMES D WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number:
21-0011-504

Drawing Number:
C.4.1

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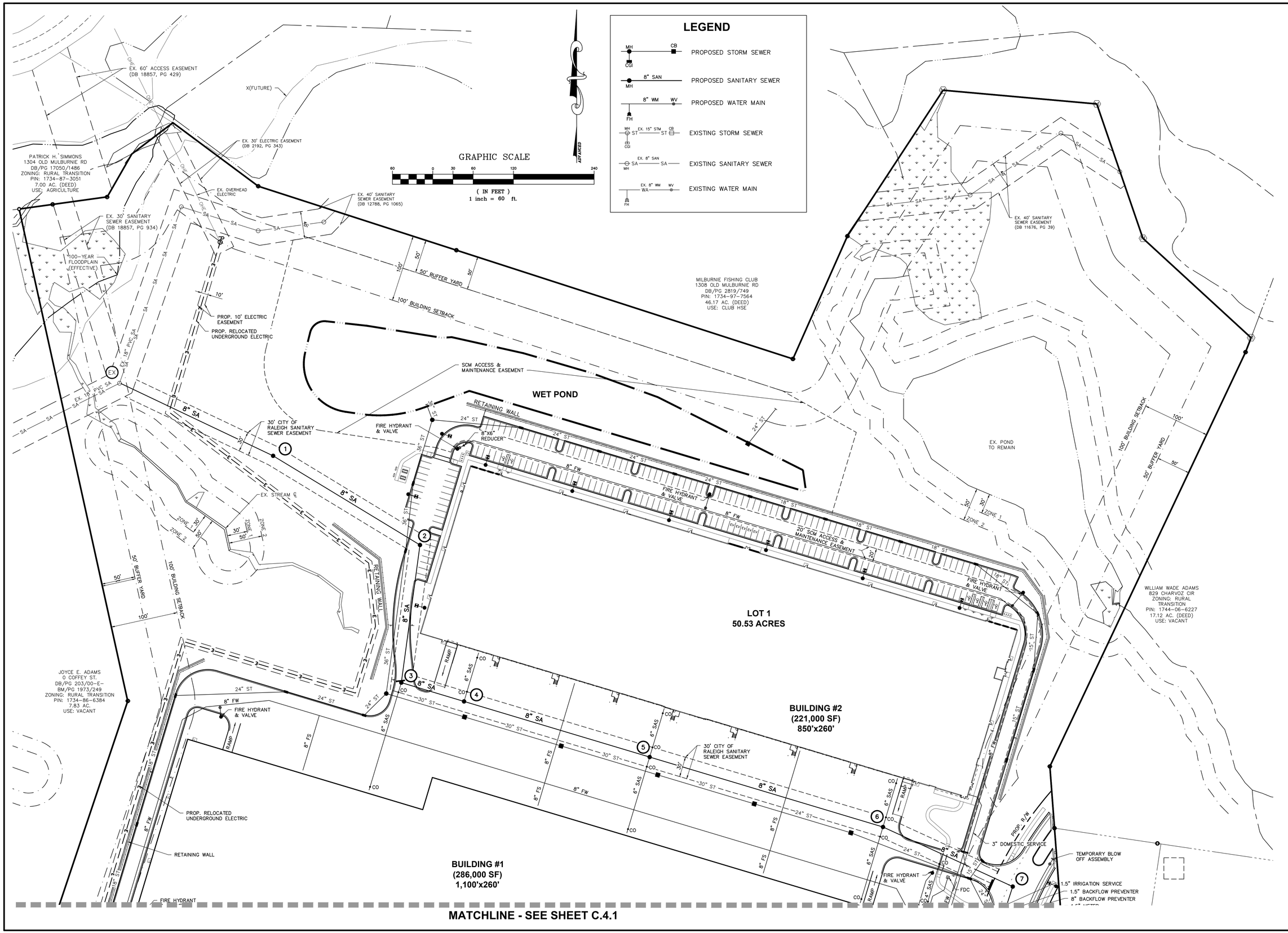

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KNIGHTDALE GATEWAY

MASTER PLAN FOR BEACON PARTNERS

UTILITY PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030180 JAMES D. WHITTACRE

PRELIMINARY

08/01/2022

Issue Dates:
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08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21–0011–504

Drawing Number: C.4.2

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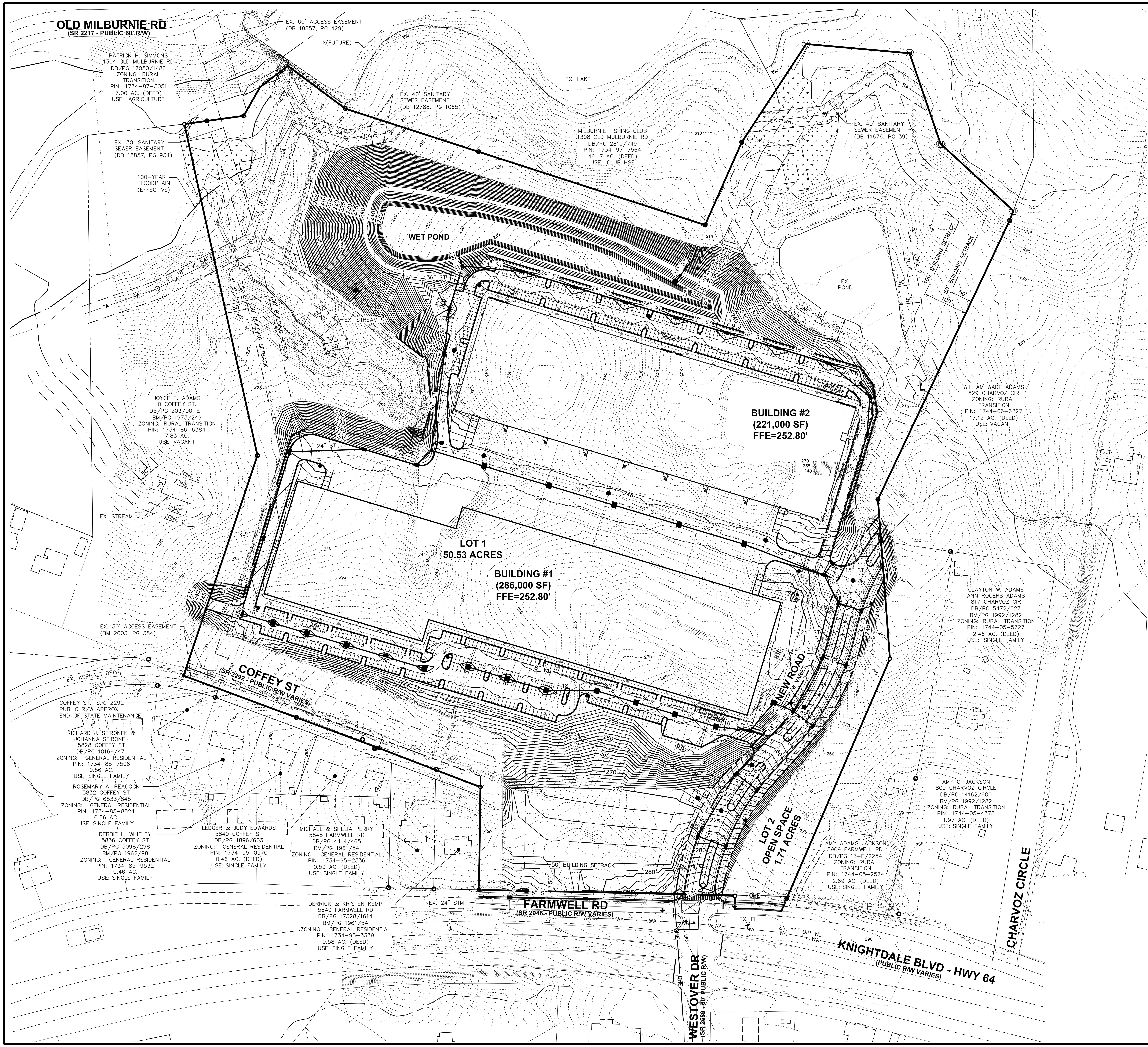

GENERAL NOTES

1. PRELIMINARY WETLAND LOCATIONS, STREAMS, AND PRELIMINARY BUFFER DETERMINATIONS PROVIDED BY ATLAS ENVIRONMENTAL.
2. NO HISTORIC BUILDING OBSERVED ON THE SITE.
3. NO FREE STANDING OR OPEN-GROWN OR FIELD GROWN TREES OBSERVED.
4. BASED ON FIELD OBSERVATIONS AND THE REVIEW OF AVAILABLE DATA, PROTECTED SPECIES WERE NOT IDENTIFIED TO LIKELY OCCUR ON THE SITE.
5. SITE IS HEAVILY WOODED WITH A MIXTURE OF PINES, HARDWOODS, AND UNDERSTORY VEGETATION.

FLOOD NOTE

BY GRAPHIC PLOTTING ONLY A SMALL PORTION OF THIS PROPERTY IS LOCATED IN THE 100 YEAR FLOOD PLAIN AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS NO. 3720173400J AND MAP NO. 3720174400J WITH EFFECTIVE DATE OF MAY 2, 2006, IN WAKE COUNTY NORTH CAROLINA. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE.

LEGEND

Symbol	Description	Line	Description
o	Iron Pipe Found	—WA—WA—	Ex. Water Line
●	Calculated Point	—ST—□—ST—	Ex. Storm Sewer
▲	Railroad Spike	—SA—o—SA—	Ex. Sanitary Sewer
	Electric Power Pole	—x—x—x—	Ex. Fence Line
	Fire Hydrant	—OHE—	Ex. Overhead Electric Line
	Ex. Wetlands		Ex. Property Line
	Dense Vegetation		Right of Way
			Property Line
		—LOD—	Limits of Disturbance

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

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5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY

MASTER PLAN
FOR
BEACON PARTNERS

OVERALL GRADING PLAN

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 100'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21-0011-504

Drawing Number: C.5.0

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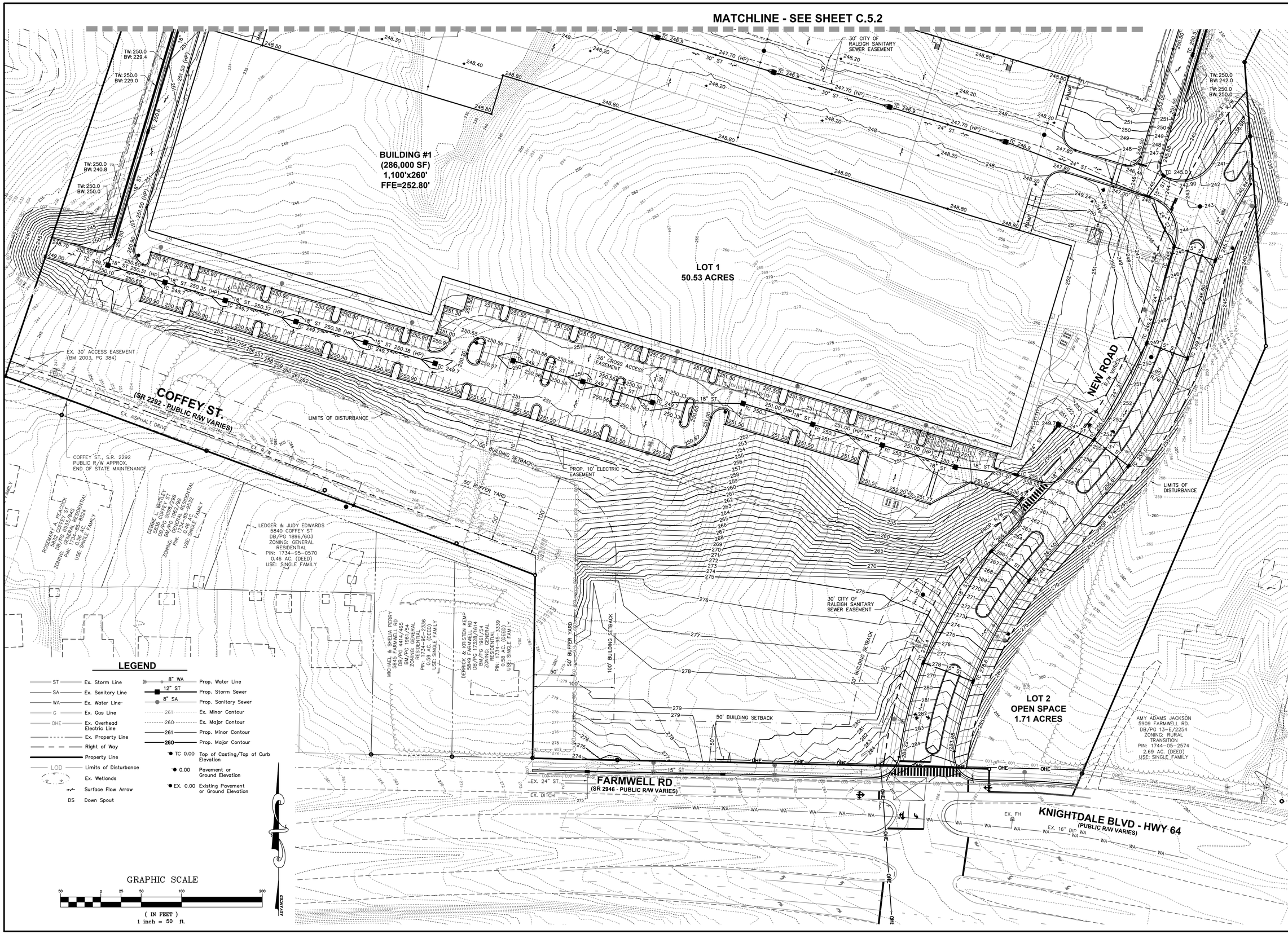

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PLAN PREPARED BY:

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KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
GRADING AND DRAINAGE PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030180 JAMES D. WHITACRE
PRELIMINARY
NOT FOR CONSTRUCTION
08/01/2022

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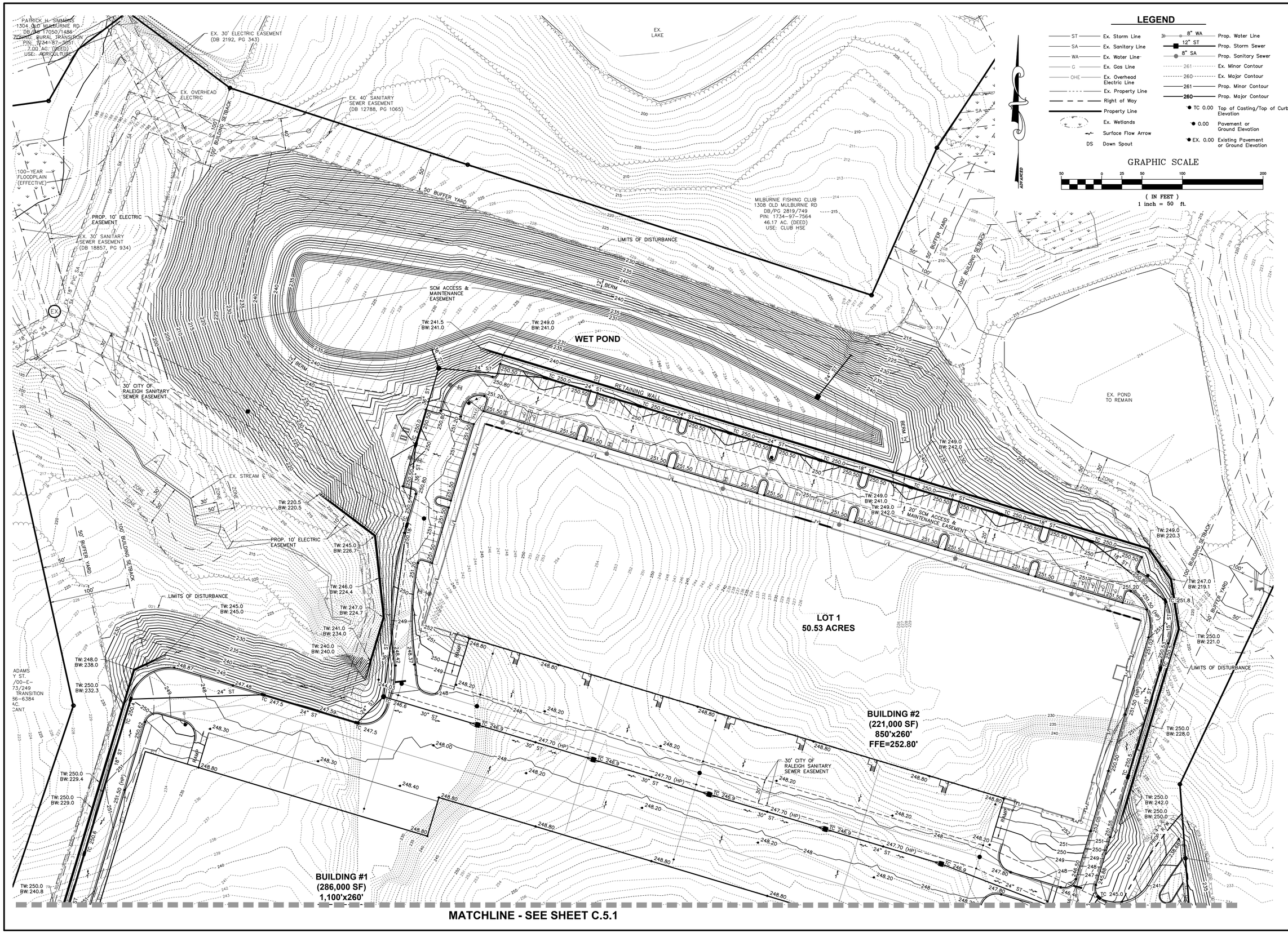
05/23/2021	Master Plan Submittal #1
06/23/2022	Master Plan Submittal #2
08/01/2022	Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 50'

Drawn By:	Checked By:
JRR	JDW

Project Number:
21-0011-504

Drawing Number:
C.5.1



PLAN PREPARED BY:

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PLAN PREPARED FOR:

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KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
GRADING AND DRAINAGE PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036780 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:	
05/23/2021	Master Plan Submittal #1
06/23/2022	Master Plan Submittal #2
08/01/2022	Master Plan Submittal #3

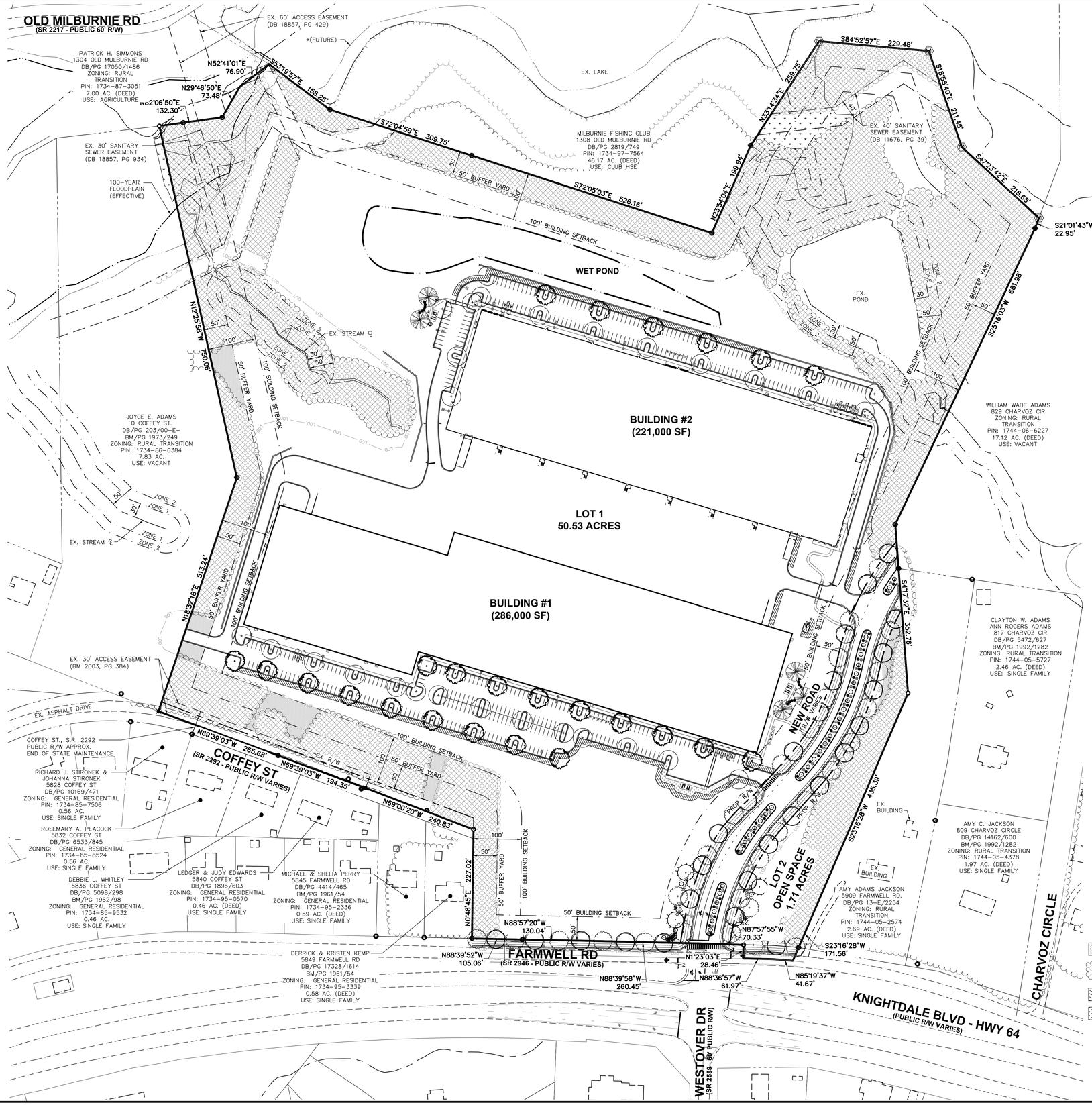
Date: 08/01/2022
Scale: 1" = 50'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21–0011–504

Drawing Number: C.5.2

O:\21-0011-504NC\DWG\Production Drawings\MASTER PLAN\0011-504NC GRADING AND DRAINAGE PLAN.dwg GRADING 2 Jul 29, 2022 – 9:10:54am jroyal



TREE LEGEND

- ALLEE CHINESE ELM (UP)
- RED MAPLE (AR)
- SUGAR MAPLE (AS)
- SAWTOOTH OAK (QA)
- AMERICAN HORNBEAM (AH)

LANDSCAPE NOTES

1. AT TIME OF INSTALLATION, CANOPY TREES SHALL BE A MINIMUM OF 2" CALIPER AND 8' IN HEIGHT; UNDERSTORY TREES SHALL BE A MINIMUM OF 1 1/14" CALIPER AND 6' IN HEIGHT; AND SHRUBS SHALL BE AT LEAST 18" IN HEIGHT AND A 3 GALLON CONTAINER SIZE.
2. ANY ABOVE GROUND UTILITIES HAVE TO BE SCREENED IN ACCORDANCE WITH UDO SECTION 8.7.
3. 40-60% OF CANOPY TREES AND 40-60% OF UNDERSTORY TREES HAVE TO BE EVERGREEN PER UDO SECTION 8.6.

LEGEND

- Iron Pipe Found
- Calculated Point
- Railroad Spike
- Buffer Yard 'D' Replanted Area
- Existing Tree Cover Area
- Type A Buffer Yard (UDO 8.7.A.1)
- Pollinator Garden
- Ex. Fence Line
- Ex. Property Line
- Property Line
- Tree Protection Fence
- Ex. Wetlands

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

PLAN PREPARED BY:
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KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
OVERALL LANDSCAPE PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030780
PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDATION PURPOSES
08/01/2022

Issue Dates:	
05/23/2021	Master Plan Submittal #1
06/23/2022	Master Plan Submittal #2
08/01/2022	Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 100'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21-0011-504

Drawing Number: C.6.0

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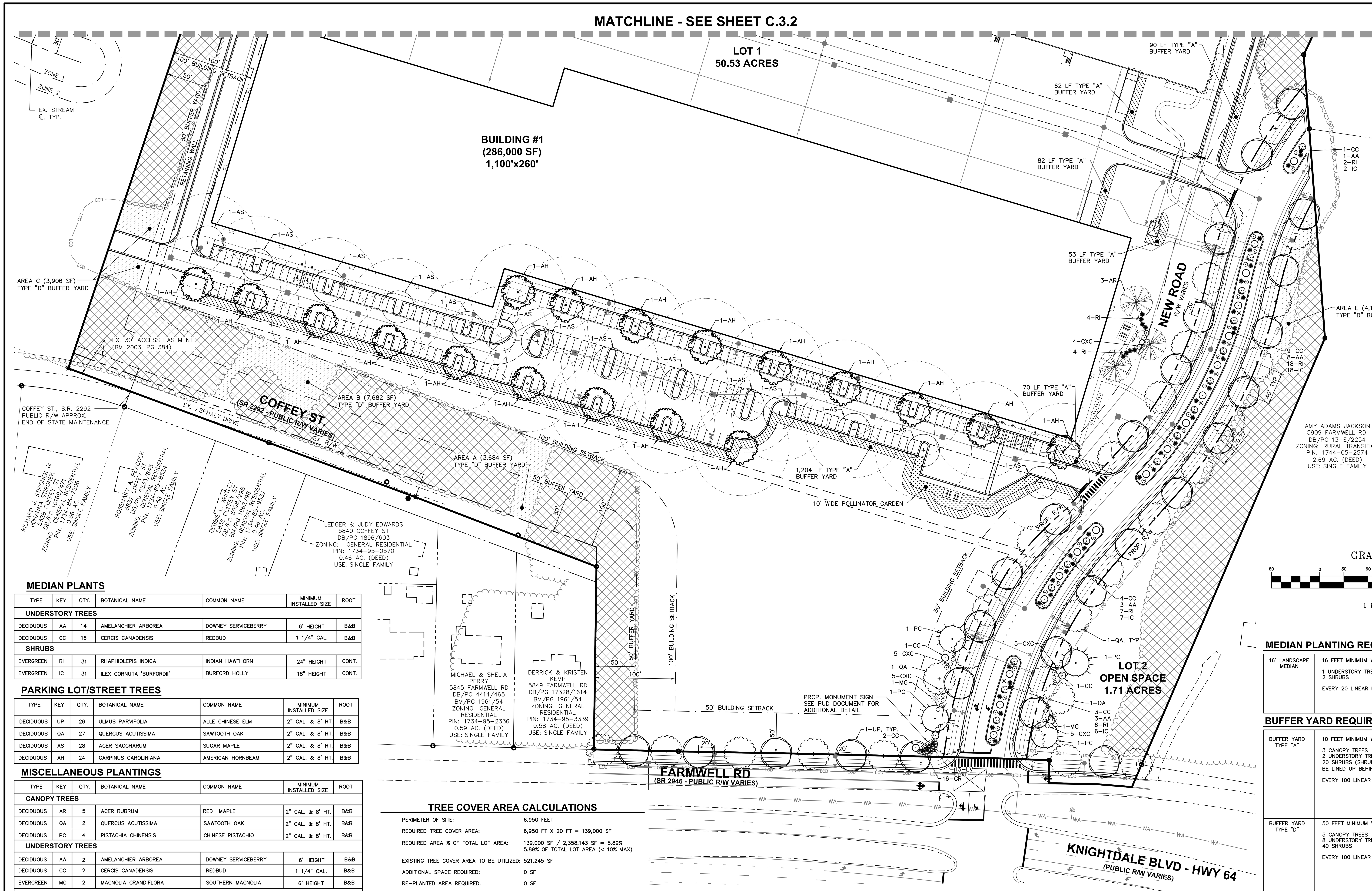
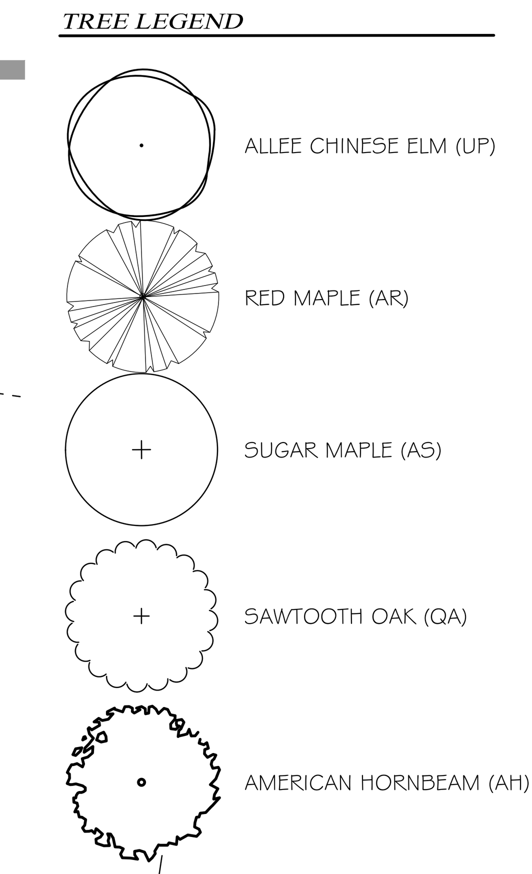




MEDIAN PLANTS

TYPE	KEY	QTY.	BOTANICAL NAME	COMMON NAME	MINIMUM INSTALLED SIZE	ROOT
UNDERSTORY TREES						
DECIDUOUS	AA	14	AMELANCHIER ARBOREA	DOWNEY SERVICEBERRY	6' HEIGHT	B&B
DECIDUOUS	CC	16	CERCIS CANADENSIS	REDBUD	1 1/4" CAL.	B&B
SHRUBS						
EVERGREEN	RI	31	RHAPHIOLEPIS INDICA	INDIAN HAWTHORN	24" HEIGHT	CONT.
EVERGREEN	IC	31	ILEX CORNUTA 'BURFORDII'	BURFORD HOLLY	18" HEIGHT	CONT.

PARKING LOT/STREET TREES

TYPE	KEY	QTY.	BOTANICAL NAME	COMMON NAME	MINIMUM INSTALLED SIZE	ROOT
DECIDUOUS	UP	26	ULMUS PARVIFOLIA	ALLE CHINESE ELM	2" CAL. & 8' HT.	B&B
DECIDUOUS	QA	27	QUERCUS ACUTISSIMA	SAWTOOTH OAK	2" CAL. & 8' HT.	B&B
DECIDUOUS	AS	28	ACER SACCHARUM	SUGAR MAPLE	2" CAL. & 8' HT.	B&B
DECIDUOUS	AH	24	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2" CAL. & 8' HT.	B&B

MISCELLANEOUS PLANTINGS

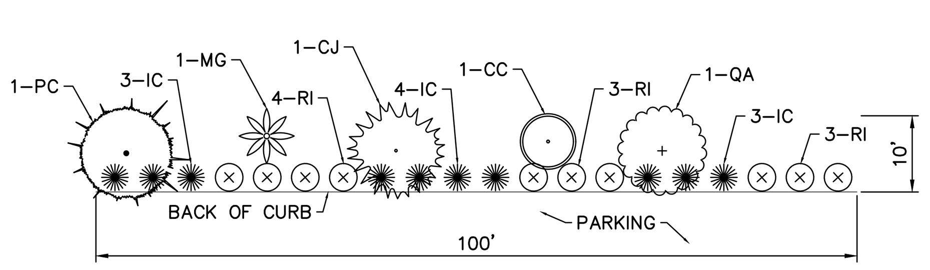
TYPE	KEY	QTY.	BOTANICAL NAME	COMMON NAME	MINIMUM INSTALLED SIZE	ROOT
CANOPY TREES						
DECIDUOUS	AR	5	ACER RUBRUM	RED MAPLE	2" CAL. & 8' HT.	B&B
DECIDUOUS	QA	2	QUERCUS ACUTISSIMA	SAWTOOTH OAK	2" CAL. & 8' HT.	B&B
DECIDUOUS	PC	4	PISTACHIA CHINENSIS	CHINESE PISTACHIO	2" CAL. & 8' HT.	B&B
UNDERSTORY TREES						
DECIDUOUS	AA	2	AMELANCHIER ARBOREA	DOWNEY SERVICEBERRY	6' HEIGHT	B&B
DECIDUOUS	CC	2	CERCIS CANADENSIS	REDBUD	1 1/4" CAL.	B&B
EVERGREEN	MG	2	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	6' HEIGHT	B&B
SHRUBS						
DECIDUOUS	CXC	29	CARYOPTERIS X CLANDONENSIS	BLUE MIST SHRUB	36" HEIGHT	CONT.
EVERGREEN	RI	14	RHAPHIOLEPIS INDICA	INDIAN HAWTHORN	24" HEIGHT	CONT.
EVERGREEN	LV	13	LIRIOPE MUSCARI 'VARIEGATA'	VARIEGATED LIRIOPE	3 GAL.	CONT.
EVERGREEN	GR	16	GARDENIA JASMINOIDES 'RADICANS'	RADICANS DWARF GARDENIA	3 GAL.	CONT.

TREE COVER AREA CALCULATIONS

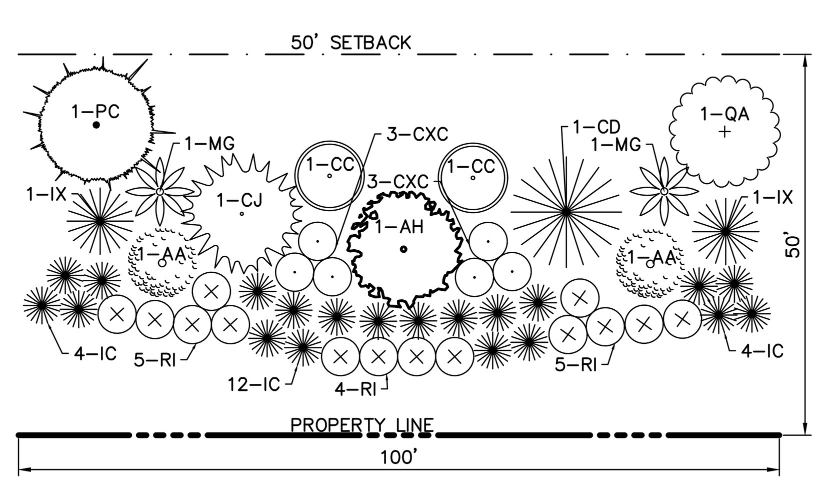
PERIMETER OF SITE:	6,950 FEET
REQUIRED TREE COVER AREA:	6,950 FT X 20 FT = 139,000 SF
REQUIRED AREA % OF TOTAL LOT AREA:	139,000 SF / 2,358,143 SF = 5.89% 5.89% OF TOTAL LOT AREA (< 10% MAX)
EXISTING TREE COVER AREA TO BE UTILIZED:	521,245 SF
ADDITIONAL SPACE REQUIRED:	0 SF
RE-PLANTED AREA REQUIRED:	0 SF
RE-PLANTED AREA PROVIDED:	25,086 SF

BUFFER YARD PLANTS

TYPE	KEY	QTY.	BOTANICAL NAME	COMMON NAME	MINIMUM INSTALLED SIZE	ROOT
CANOPY TREES						
DECIDUOUS	AH	4	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2" CAL. & 8' HT.	B&B
DECIDUOUS	QA	25	QUERCUS ACUTISSIMA	SAWTOOTH OAK	2" CAL. & 8' HT.	B&B
DECIDUOUS	PC	26	PISTACHIA CHINENSIS	CHINESE PISTACHIO	2" CAL. & 8' HT.	B&B
EVERGREEN	CD	8	CEDRUS DEODARA	DEODAR CEDAR	2" CAL. & 8' HT.	B&B
EVERGREEN	CJ	30	CRYPTOMERIA JAPONICA	JAPANESE CRYPTOMERIA	2" CAL. & 8' HT.	B&B
UNDERSTORY TREES						
DECIDUOUS	AA	10	AMELANCHIER ARBOREA	DOWNEY SERVICEBERRY	6' HEIGHT	B&B
DECIDUOUS	CC	33	CERCIS CANADENSIS	REDBUD	1 1/4" CAL.	B&B
EVERGREEN	MG	33	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	6' HEIGHT	B&B
EVERGREEN	IX	10	ILEX X NELLIE R STEVENS	NELLIE R STEVENS HOLLY	6' HEIGHT	B&B
SHRUBS						
DECIDUOUS	CXC	30	CARYOPTERIS X CLANDONENSIS	BLUE MIST SHRUB	36" HEIGHT	CONT.
EVERGREEN	RI	296	RHAPHIOLEPIS INDICA	INDIAN HAWTHORN	24" HEIGHT	CONT.
EVERGREEN	IC	322	ILEX CORNUTA 'BURFORDII'	BURFORD HOLLY	18" HEIGHT	CONT.



10' TYPE "A" BUFFER TYPICAL DETAIL
SCALE: 1" = 20'



TYPE "D" BUFFERYARD TYPICAL DETAIL
SCALE: 1" = 20'

LANDSCAPE NOTES

1. AT TIME OF INSTALLATION, CANOPY TREES SHALL BE A MINIMUM OF 2" CALIPER AND 8' IN HEIGHT; UNDERSTORY TREES SHALL BE A MINIMUM OF 1 1/14" CALIPER AND 6' IN HEIGHT; AND SHRUBS SHALL BE AT LEAST 18" IN HEIGHT AND A 3 GALLON CONTAINER SIZE.
2. ANY ABOVE GROUND UTILITIES HAVE TO BE SCREENED IN ACCORDANCE WITH UDO SECTION 8.7.
3. 40-60% OF CANOPY TREES AND 40-60% OF UNDERSTORY TREES HAVE TO BE EVERGREEN PER UDO SECTION 8.6.

MEDIAN PLANTING REQUIREMENTS

16' LANDSCAPE MEDIAN	16 FEET MINIMUM WIDTH 1 UNDERSTORY TREES 2 SHRUBS EVERY 20 LINEAR FEET	588 TOTAL LF IN MEDIAN LANDSCAPE AREA 1 UNDERSTORY TREES PER 20 FT = 1*(588/20) = 30 TREES REQUIRED 30 TREES PROVIDED 2 SHRUBS PER 20 FT 2*(588/20) = 59 SHRUBS REQUIRED 62 SHRUBS PROVIDED

BUFFER YARD REQUIREMENTS

BUFFER YARD TYPE "A"	10 FEET MINIMUM WIDTH 3 CANOPY TREES 2 UNDERSTORY TREES 20 SHRUBS (SHRUBS MUST BE LINED UP BEHIND CURB) EVERY 100 LINEAR FEET	1,204 LF + 70 LF + 53 LF + 82 LF + 90 LF + 62 LF + 692 LF = 2,253 TOTAL LF 3 CANOPY TREES PER 100 FT = 3*(2,253/100) = 68 TREES REQUIRED 68 TREES PROVIDED 2 UNDERSTORY TREES PER 100 FT 2*(2,253/100) = 46 TREES REQUIRED 46 TREES PROVIDED 20 SHRUBS PER 100 FT 20*(2,253/100) = 451 SHRUBS REQUIRED 451 SHRUBS PROVIDED
BUFFER YARD TYPE "D"	50 FEET MINIMUM WIDTH 5 CANOPY TREES 8 UNDERSTORY TREES 40 SHRUBS EVERY 100 LINEAR FEET	3,684 SF (AREA A) + 7,682 SF (AREA B) + 3,906 SF (AREA C) + 5,127 SF (AREA D) + 4,182 SF (AREA E) = 24,581 TOTAL SF IN BUFFER YARD TYPE "D" TOTAL LF BUFFER YARD TYPE "D" = 24,581 SF / 50 FOOT WIDTH = 492 LF 5 CANOPY TREES PER 100 FT = 5*(492/100) = 25 TREES REQUIRED 25 TREES PROVIDED 8 UNDERSTORY TREES PER 100 FT 8*(492/100) = 40 TREES REQUIRED 40 TREES PROVIDED 40 SHRUBS PER 100 FT 40*(492/100) = 197 SHRUBS REQUIRED 197 SHRUBS PROVIDED

NOTE: THE ABOVE TYPE 'D' BUFFER CALCULATIONS ASSUME EXISTING TREE SAVE AREAS MEET THE MINIMUM PLANTING REQUIREMENTS. IF EXISTING TREE SAVE AREAS SIGNIFICANTLY EXCEED MINIMUM PLANTING REQUIREMENTS IT IS POSSIBLE THE ADDITIONAL PLANTINGS WOULD NOT BE REQUIRED. PLEASE SCHEDULE AN INSPECTION WITH THE TOWN PLANNER TO CONFIRM PRIOR TO PLANTING.

LEGEND

Iron Pipe Found	Ex. Fence Line
Calculated Point	Ex. Property Line
Railroad Spike	Property Line
Buffer Yard 'D' Replanted Area	Proposed Storm Sewer
Existing Tree Cover Area	Limits of Disturbance
Type A Buffer Yard (UDO 8.7.A.1)	Ex. Wetlands

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5901 Farmwell Road, Knightdale, NC 27610 – Wake County
KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
LANDSCAPE PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 037180 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21-0011-504

Drawing Number: **C.6.1**

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LANDSCAPE NOTES

1. AT TIME OF INSTALLATION, CANOPY TREES SHALL BE A MINIMUM OF 2" CALIPER AND 8' IN HEIGHT; UNDERSTORY TREES SHALL BE A MINIMUM OF 1 1/14" CALIPER AND 6' IN HEIGHT; AND SHRUBS SHALL BE AT LEAST 18" IN HEIGHT AND A 3 GALLON CONTAINER SIZE.
2. ANY ABOVE GROUND UTILITIES HAVE TO BE SCREENED IN ACCORDANCE WITH UDO SECTION 8.7.
3. 40–60% OF CANOPY TREES AND 40–60% OF UNDERSTORY TREES HAVE TO BE EVERGREEN PER UDO SECTION 8.6.

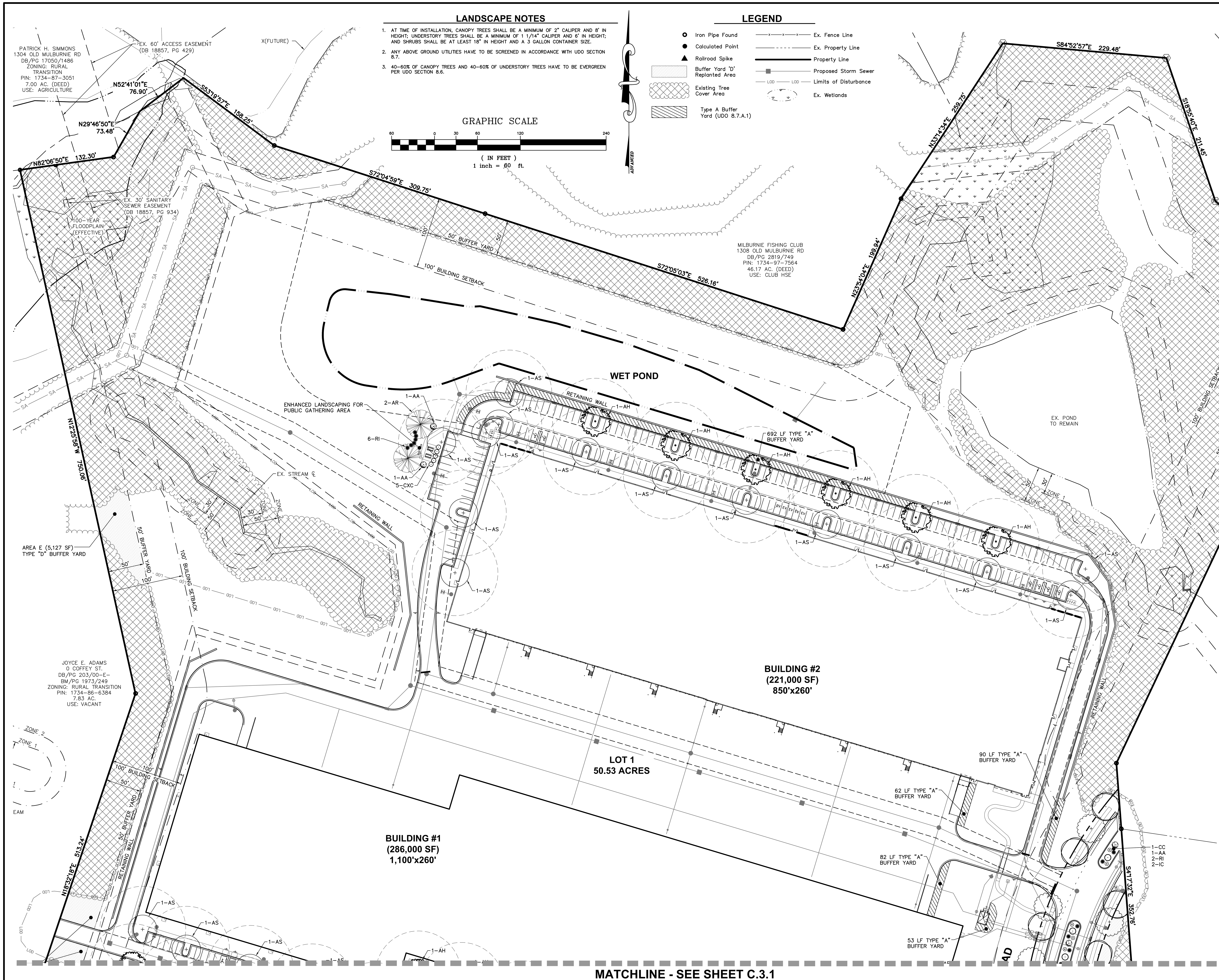
LEGEND

Symbol	Line type
Iron Pipe Found	Ex. Fence Line
Calculated Point	Ex. Property Line
Railroad Spike	Property Line
Buffer Yard 'D' Replanted Area	Proposed Storm Sewer
Existing Tree Cover Area	Limits of Disturbance
Type A Buffer Yard (UDO 8.7.A.1)	Ex. Wetlands

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.



MATCHLINE - SEE SHEET C.3.1

TREE LEGEND

- ALLEE CHINESE ELM (UP)
- RED MAPLE (AR)
- SUGAR MAPLE (AS)
- SAWTOOTH OAK (QA)
- AMERICAN HORNBEAM (AH)

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KNIGHTDALE GATEWAY

MASTER PLAN
FOR
BEACON PARTNERS

LANDSCAPE PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 037180 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
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08/01/2022 – Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21–0011–504

Drawing Number: C.6.2

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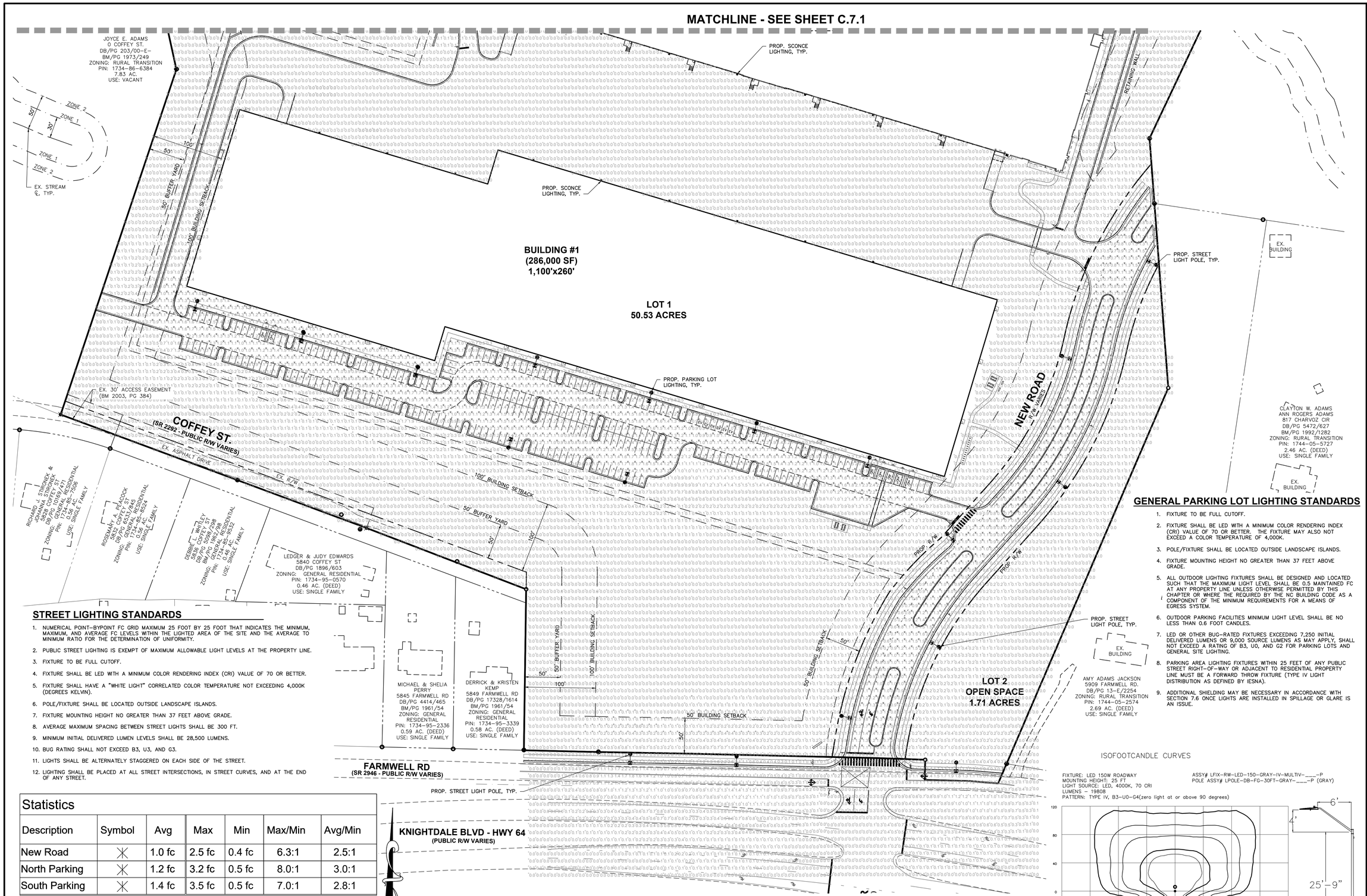


STREET LIGHTING STANDARDS

1. NUMERICAL POINT-BYPOINT FC GRID MAXIMUM 25 FOOT BY 25 FOOT THAT INDICATES THE MINIMUM, MAXIMUM, AND AVERAGE FC LEVELS WITHIN THE LIGHTED AREA OF THE SITE AND THE AVERAGE TO MINIMUM RATIO FOR THE DETERMINATION OF UNIFORMITY.
2. PUBLIC STREET LIGHTING IS EXEMPT OF MAXIMUM ALLOWABLE LIGHT LEVELS AT THE PROPERTY LINE.
3. FIXTURE TO BE FULL CUTOFF.
4. FIXTURE SHALL BE LED WITH A MINIMUM COLOR RENDERING INDEX (CRI) VALUE OF 70 OR BETTER.
5. FIXTURE SHALL HAVE A "WHITE LIGHT" CORRELATED COLOR TEMPERATURE NOT EXCEEDING 4,000K (DEGREES KELVIN).
6. POLE/FIXTURE SHALL BE LOCATED OUTSIDE LANDSCAPE ISLANDS.
7. FIXTURE MOUNTING HEIGHT NO GREATER THAN 37 FEET ABOVE GRADE.
8. AVERAGE MAXIMUM SPACING BETWEEN STREET LIGHTS SHALL BE 300 FT.
9. MINIMUM INITIAL DELIVERED LUMEN LEVELS SHALL BE 28,500 LUMENS.
10. BUG RATING SHALL NOT EXCEED B3, U3, AND G3.
11. LIGHTS SHALL BE ALTERNATELY STAGGERED ON EACH SIDE OF THE STREET.
12. LIGHTING SHALL BE PLACED AT ALL STREET INTERSECTIONS, IN STREET CURVES, AND AT THE END OF ANY STREET.

GENERAL PARKING LOT LIGHTING STANDARDS

1. FIXTURE TO BE FULL CUTOFF.
2. FIXTURE SHALL BE LED WITH A MINIMUM COLOR RENDERING INDEX (CRI) VALUE OF 70 OR BETTER. THE FIXTURE MAY ALSO NOT EXCEED A COLOR TEMPERATURE OF 4,000K.
3. POLE/FIXTURE SHALL BE LOCATED OUTSIDE LANDSCAPE ISLANDS.
4. FIXTURE MOUNTING HEIGHT NO GREATER THAN 37 FEET ABOVE GRADE.
5. ALL OUTDOOR LIGHTING FIXTURES SHALL BE DESIGNED AND LOCATED SUCH THAT THE MAXIMUM LIGHT LEVEL SHALL BE 0.5 MAINTAINED FC AT ANY PROPERTY LINE UNLESS OTHERWISE PERMITTED BY THIS CHAPTER OR WHERE THE REQUIRED BY THE NC BUILDING CODE AS A COMPONENT OF THE MINIMUM REQUIREMENTS FOR A MEANS OF EGRESS SYSTEM.
6. OUTDOOR PARKING FACILITIES MINIMUM LIGHT LEVEL SHALL BE NO LESS THAN 0.6 FOOT CANDLES.
7. LED OR OTHER BUG-RATED FIXTURES EXCEEDING 7,250 INITIAL DELIVERED LUMENS OR 9,000 SOURCE LUMENS AS MAY APPLY, SHALL NOT EXCEED A RATING OF B3, U0, AND G2 FOR PARKING LOTS AND GENERAL SITE LIGHTING.
8. PARKING AREA LIGHTING FIXTURES WITHIN 25 FEET OF ANY PUBLIC STREET RIGHT-OF-WAY OR ADJACENT TO RESIDENTIAL PROPERTY LINE MUST BE A FORWARD THROW FIXTURE (TYPE IV LIGHT DISTRIBUTION AS DEFINED BY IESNA).
9. ADDITIONAL SHIELDING MAY BE NECESSARY IN ACCORDANCE WITH SECTION 7.6 ONCE LIGHTS ARE INSTALLED IN SPILLAGE OR GLARE IS AN ISSUE.

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
New Road	✕	1.0 fc	2.5 fc	0.4 fc	6.3:1	2.5:1
North Parking	✕	1.2 fc	3.2 fc	0.5 fc	8.0:1	3.0:1
South Parking	✕	1.4 fc	3.5 fc	0.5 fc	7.0:1	2.8:1

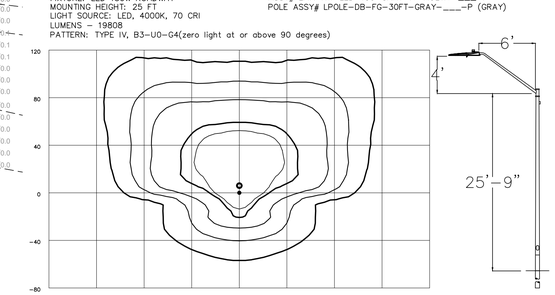
Schedule

Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
	A	18	LED 150w Roadway - Type IV - 4000K - Parking	1	19809	0.85
	B	9	LED 150w Roadway - Type IV - 4000K - Street	1	19809	0.85

ISOFOOTCANDLE CURVES

FIXTURE: LED 150W ROADWAY
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED, 4000K, 70 CRI
LUMENS - 19808
PATTERN: TYPE IV, B3-U0-G4(zero light at or above 90 degrees)

ASSY# LFIX-RW-LED-150-GRAY-IV-MULTIV-____-P
POLE ASSY# LPOLE-DB-FG-30FT-GRAY-____-P (GRAY)



LEGEND (OUTER to INNER): **0.10** , 0.25 , 0.50 , **1.00** , 1.25

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KNIGHTDALE GATEWAY
MASTER PLAN
FOR
BEACON PARTNERS
LIGHTING PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 - Master Plan Submittal #1
06/23/2022 - Master Plan Submittal #2
08/01/2022 - Master Plan Submittal #3

Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number:
21-0011-504

Drawing Number:
C.7.0

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Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
New Road	✳	1.0 fc	2.5 fc	0.4 fc	6.3:1	2.5:1
North Parking	✳	1.2 fc	3.2 fc	0.5 fc	8.0:1	3.0:1
South Parking	✳	1.4 fc	3.5 fc	0.5 fc	7.0:1	2.8:1

Schedule

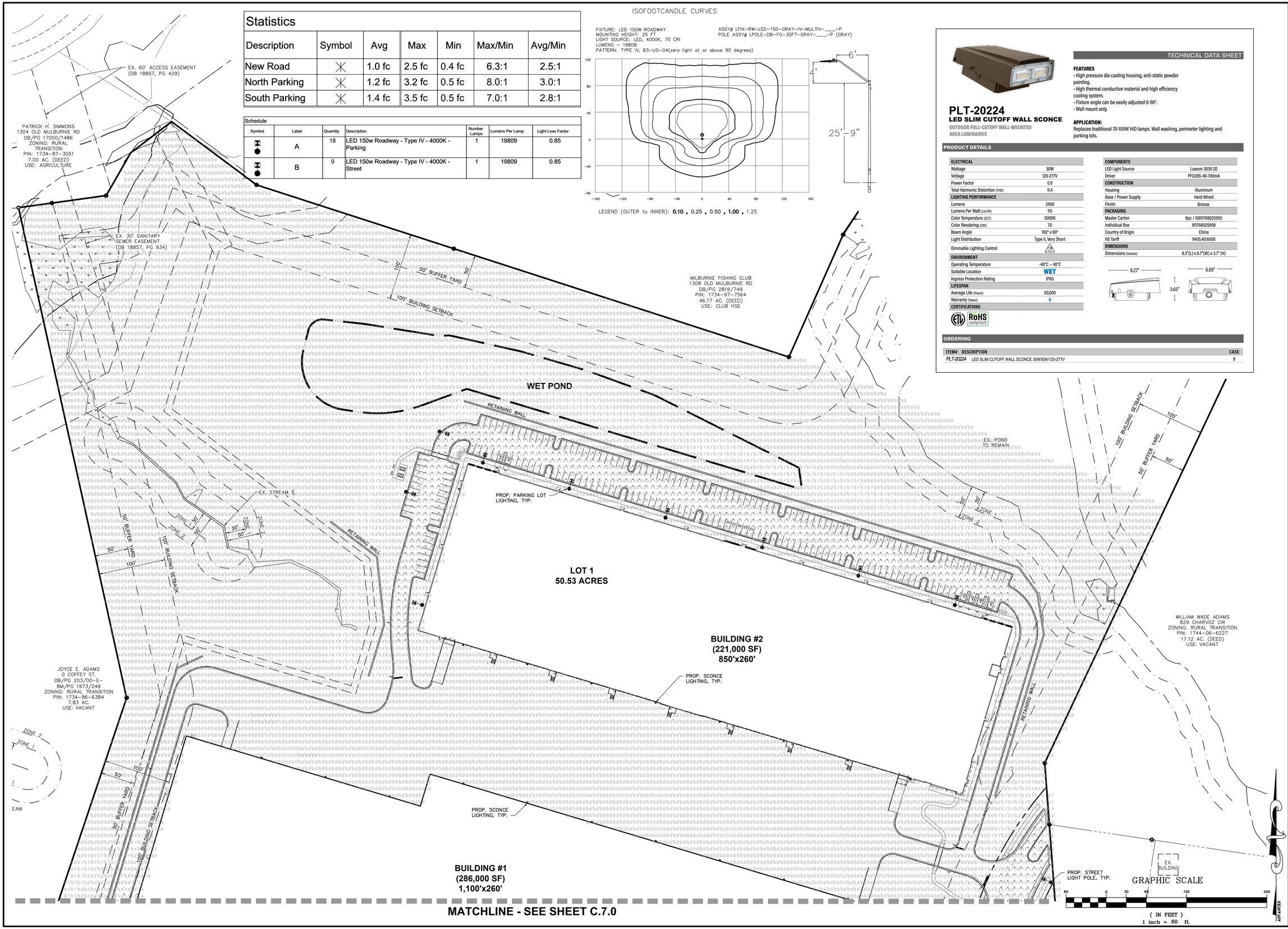
Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
	A	18	LED 150w Roadway - Type IV - 4000K - Parking	1	19809	0.85
	B	9	LED 150w Roadway - Type IV - 4000K - Street	1	19809	0.85

ISOFOOTCANDLE CURVES

FIXTURE: LED 150W ROADWAY
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED, 4000K, 70 CRI
LUMENS – 19808
PATTERN: TYPE IV, B3–U0–G4(zero light at or above 90 degrees)

ASSY# LFIX–RW–LED–150–GRAY–IV–MULTIV–____–P
POLE ASSY# LPOLE–DB–FG–30FT–GRAY–____–P (GRAY)

LEGEND (OUTER to INNER): **0.10** , 0.25 , 0.50 , **1.00** , 1.25



PLT-20224

LED SLIM CUTOFF WALL SCONCE

OUTDOOR FULL-CUTOFF WALL-MOUNTED AREA LUMINAIRES

TECHNICAL DATA SHEET

FEATURES
- High pressure die casting housing, anti-static powder painting.
- High thermal conductive material and high efficiency cooling system.
- Fixture angle can be easily adjusted 0-90°.
- Wall mount only.

APPLICATION:
Replaces traditional 70-100W HID lamps. Wall washing, perimeter lighting and parking lots.

PRODUCT DETAILS

ELECTRICAL	
Wattage	30W
Voltage	120-277V
Power Factor	0.9
Total Harmonic Distortion (THD)	11.4
LIGHTING PERFORMANCE	
Lumens	3450
Lumens Per Watt (Lm/W)	115
Color Temperature (CCT)	5000K
Color Rendering (CRI)	70
Beam Angle	100° x 80°
Light Distribution	Type II, Very Short
Dimmable Lighting Control	
ENVIRONMENT	
Operating Temperature	-40°C – 40°C
Suitable Location	WET
Ingress Protection Rating	IP65
LIFESPAN	
Average Life (Hours)	50,000
Warranty (Years)	5
CERTIFICATIONS	
	RoHS compliant

COMPONENTS	
LED Light Source	Luxeon 3030 2D
Driver	PFU285-40-700mA
CONSTRUCTION	
Housing	Aluminum
Base / Power Supply	Hard Wired
Finish	Bronze
PACKAGING	
Master Carton	8pc / 10811768025955
Individual Box	811768025958
Country of Origin	China
HS Tariff	9405.40.6000
DIMENSIONS	
Dimensions (Inches)	8.3"(L) x 6.7"(W) x 3.7" (H)

ORDERING

ITEM#	DESCRIPTION	CASE
PLT-20224	LED SLIM CUTOFF WALL SCONCE 30W/50K/120-277V	8

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN
ENGINEERS SURVEYORS
51 Kilmayne Drive, Suite 102
Cary, North Carolina 27511
ph 919.481.6290
fax 919.336.5127

PLAN PREPARED FOR:

BEACON PARTNERS
500 East Morehead St.
Suite 200
Charlotte, North Carolina 28269
tel. 704.597.7757
fax 704.598.6335

5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY

MASTER PLAN
FOR
BEACON PARTNERS

LIGHTING PLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030 JAMES D. WHITACRE
PRELIMINARY
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

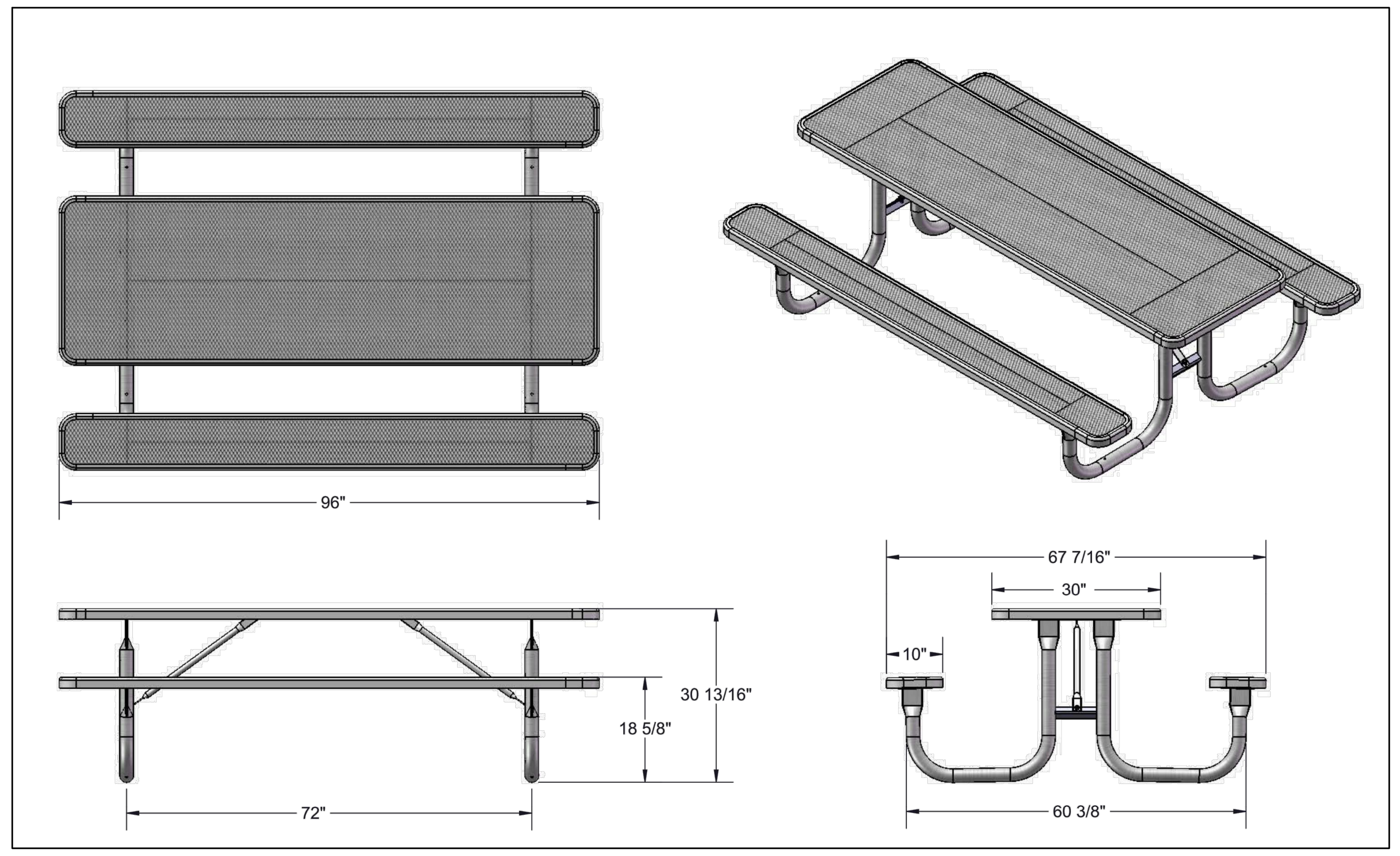
Date: 08/01/2022
Scale: 1" = 60'

Drawn By:	Checked By:
JRR	JDW

Project Number: 21–0011–504

Drawing Number: C.7.1

G:\21-0011-504NC\DWG\Production Drawings\MASTER PLAN\0011-504NC LIGHTING PLAN.dwg LIGHTING 2 Jul 29, 2022 – 9:12:13am jroyal



Top & Seats: 12 gauge die formed angle frame 1"x1-7/8" with 3" radius corners. 3/4" #9 steel expanded metal. 10 gauge x 1-1/2" flat bar center support and mounting bracket understructure. Electrically MIG welded.

Coating: Oven fused functionalized polyethylene copolymer-based thermoplastic. Fluidized bed coating application with superior mechanical performance, impact resistance and UV-stability.

Frame: 2-3/8" O.D. x 12 gauge pre-galvanized structural steel tubing. Cross braces 1" O.D. x 16 gauge pre-galvanized structural steel tubing. Brace attachment points 1-1/2"x1-1/2"x3/16" steel angle. Seat and top mounting points 7 gauge x 1-1/2" die stamped steel flat bar. Legs are bent over a mandrel through the bend radius producing a wrinkle free bend. Holes are predrilled in legs for optional surface mounting. All electrically MIG welded.

Frame Coating: Electrostatic powder coated application oven cured.

Hardware: All stainless steel hardware fasteners.

Dimensions: 8' portable picnic table walk-through design. Top is 30" wide x 96" long and is 30-1/4" high. Seats are 10" wide x 96" long and 18-1/2" high. Outside to outside dimension is 66-1/2" x 96".

PICNIC TABLE DETAIL

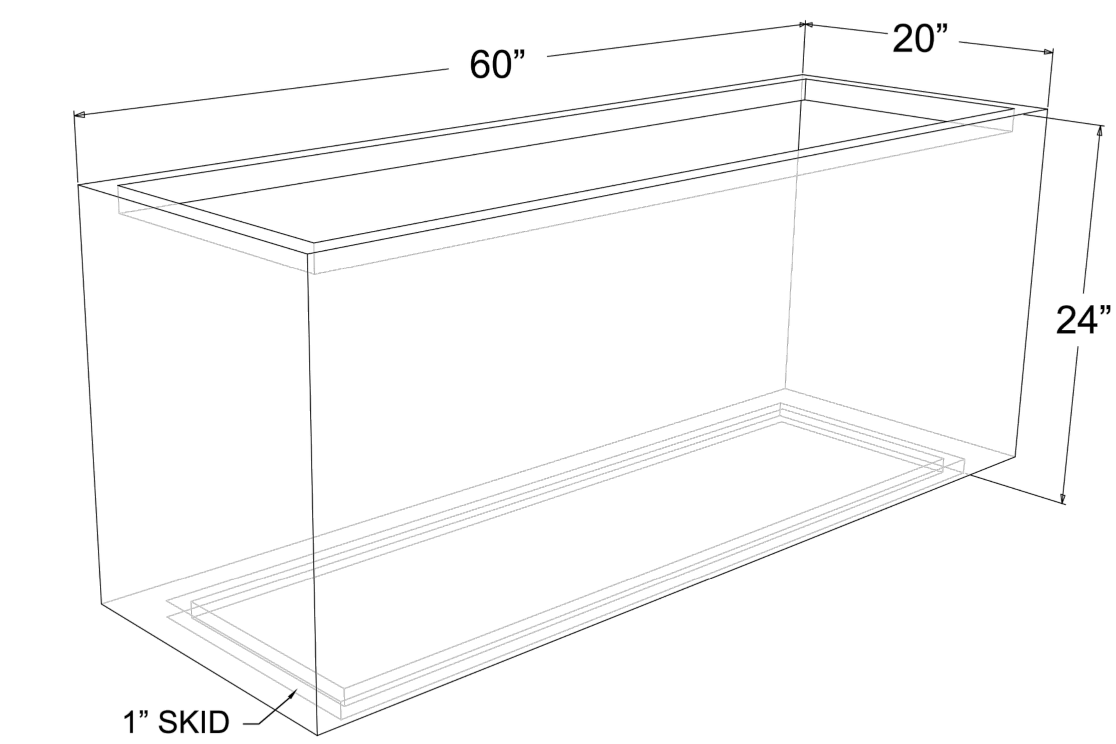
NOT TO SCALE

Tall Rectangular Planter - Large

60"L X 20"W X 24"H

Weight - Steel : 128 lbs. Aluminum : 56 lbs.

Capacity : 15.5 cubic feet



YARDART
uniquegardendecor.com
(866) 382-8600

LANDSCAPE PLANTER DETAIL

NOT TO SCALE

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN
ENGINEERS SURVEYORS
51 Kilmayne Drive, Suite 102
Cary, North Carolina 27511
ph 919.481.6290
fax 919.336.5127

PLAN PREPARED FOR:
BEACON PARTNERS
500 East Morehead St.
Suite 200
Charlotte, North Carolina 28202
tel. 704.597.7757
fax 704.598.6335

5901 Farmwell Road, Knightdale, NC 27610 – Wake County

KNIGHTDALE GATEWAY

MASTER PLAN
FOR
BEACON PARTNERS

SITE DETAILS

PRELIMINARY
NORTH CAROLINA PROFESSIONAL ENGINEER JAMES D. WHITACRE
08/01/2022

Issue Dates:
05/23/2021 – Master Plan Submittal #1
06/23/2022 – Master Plan Submittal #2
08/01/2022 – Master Plan Submittal #3

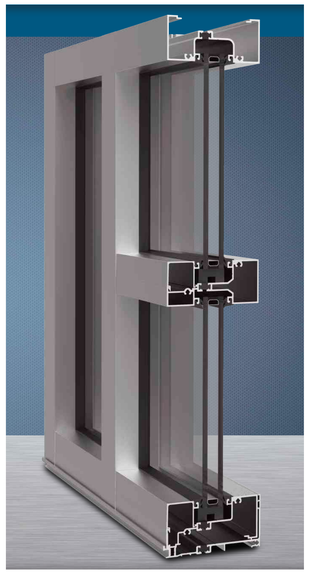
Date: 08/01/2022
Scale: NOT TO SCALE

Drawn By:	Checked By:
JRR	JDW

Project Number: 21–0011–504

Drawing Number: C.8.0

O:\21-0011-504NC\DWG\Production Drawings\MASTER PLAN\0011-504NC SITE DETAILS.dwg SITE DETAILS Jul 29, 2022 – 9:12:35am jroyal



Bronze

WINDOW FRAMES AND DOORS TO BE BRONZE ALUMINUM FINISH

CERAMIC TILE ACCENTS TO BE GIO TILE METALLO IN RUST COLOR

FOR SITE APPROVAL ONLY

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: _____
Development Services Engineer

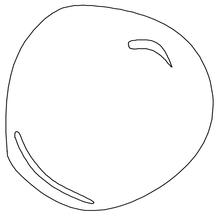
Date: _____

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

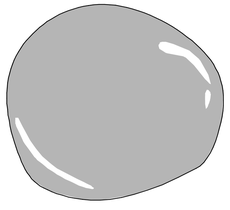
By: _____
Administrator

Date: _____

PAINT COLOR KEY

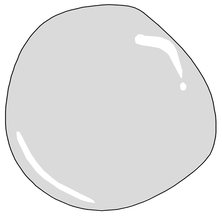


PB - PAINT BASEWALL COLOR - EIDER WHITE SW7014

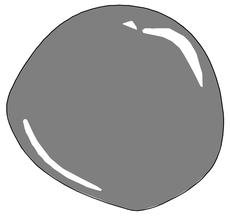


PA2 - PAINT ACCENT 02 - DOVETAIL SW7018

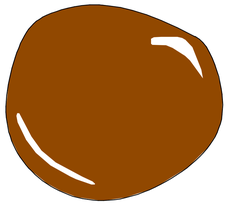
PA4 - PAINT ACCENT 04 - IRON ORE SW7069



PA1 - PAINT ACCENT 01 - LIGHT FRENCH GRAY SW0055



PA3 - PAINT ACCENT 03 - GRIZZLE GRAY SW7068



PA5 - PAINT ACCENT 05 - SMOKEHOUSE SW7040

KNIGHTDALE GATEWAY

BUILDING 1 & 2
Material Board

Knightdale, NC

MAY 17 , 2022

BEACON PARTNERS

architects msa merriman schmitt

1 FRONT ELEVATION - PLAN SOUTH

SCALE: 1" = 20'

2 SIDE ELEVATION - PLAN EAST

SCALE: 1" = 20'

3 REAR ELEVATION - TRUCK COURT - PLAN NORTH

SCALE: 1" = 20'

4 SIDE ELEVATION - PLAN WEST

SCALE: 1" = 20'

FOR SITE APPROVAL ONLY

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: Development Services Engineer

Date: _____

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

By: _____ Administrator

Date: _____

KNIGHTDALE, NC

KNIGHTDALE GATEWAY BUILDING ONE

architects msa merriman schmitt
architecture · planning
interior design
605 LEXINGTON AVENUE
SUITE 300
CHARLOTTE, NC 28203
704.377.1177
704.377.3060 (fax)

BEACON PARTNERS
500 E MOREHEAD ST
SUITE 200
CHARLOTTE, NC 28202
704.597.7757

GENERAL CONTRACTOR:

CLIENT:

KNIGHTDALE GATEWAY

BUILDING ONE

WAKE COUNTY

5901 FARMWELL ROAD KNIGHTDALE, NC 27610

SEALS:

PRELIMINARY
07/29/2022

NOTE:

PROJECT NUMBER: C21161

PERMIT TRACKING:

DRAWING STATUS:

- NOT FOR CONSTRUCTION
- ISSUED FOR BIDDING
- ISSUED FOR CONSTRUCTION

SHEET TITLE: COLOR ELEVATIONS

SHEET NUMBER: A200

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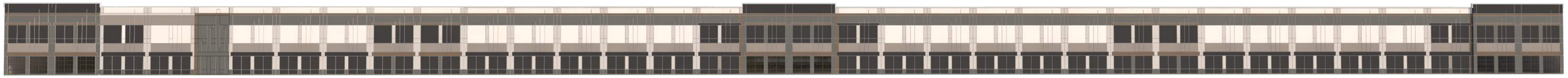
1 FRONT ELEVATION - PLAN SOUTH

SCALE: 1" = 20'

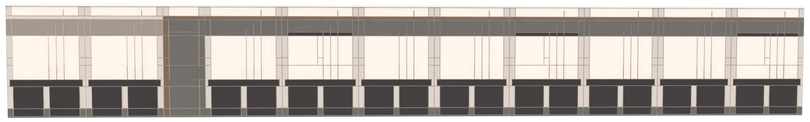
2 SIDE ELEVATION - PLAN EAST

SCALE: 1" = 20'



3 REAR ELEVATION - PLAN NORTH

SCALE: 1" = 20'



4 SIDE ELEVATION - PLAN WEST

SCALE: 1" = 20'

FOR SITE APPROVAL ONLY

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By: _____
Development Services Engineer

Date: _____

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

By: _____
Administrator

Date: _____

KNIGHTDALE, NC

KNIGHTDALE GATEWAY BUILDING TWO

architects msa merriman schmitt
architecture · planning
interior design
605 LEXINGTON AVENUE
SUITE 300
CHARLOTTE, NC 28203
704.377.1177
704.377.3060 (fax)

BEACON PARTNERS
500 E MOREHEAD ST
SUITE 200
CHARLOTTE, NC 28202
704.597.7757

GENERAL CONTRACTOR:

CLIENT:

KNIGHTDALE GATEWAY
BUILDING TWO
WAKE COUNTY

5901 FARMWELL ROAD KNIGHTDALE, NC 27610

SEALS:

PRELIMINARY
05/17/2022

NOTE:

PROJECT NUMBER: C21161

PERMIT TRACKING:

DRAWING STATUS:
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SHEET TITLE: COLOR ELEVATIONS

SHEET NUMBER: A200

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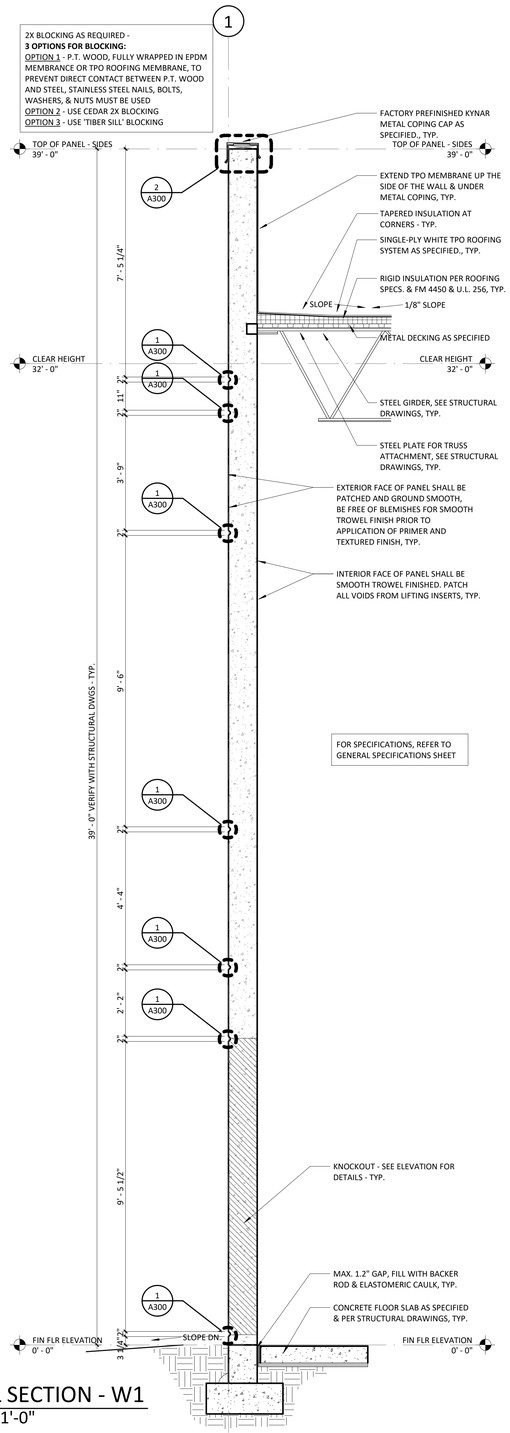
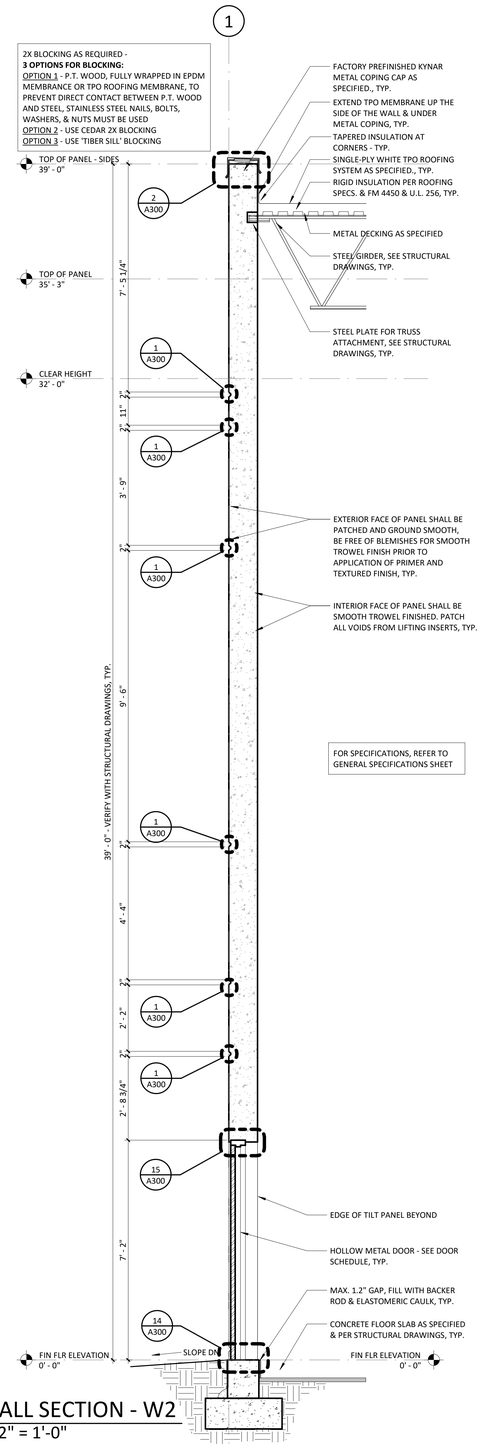
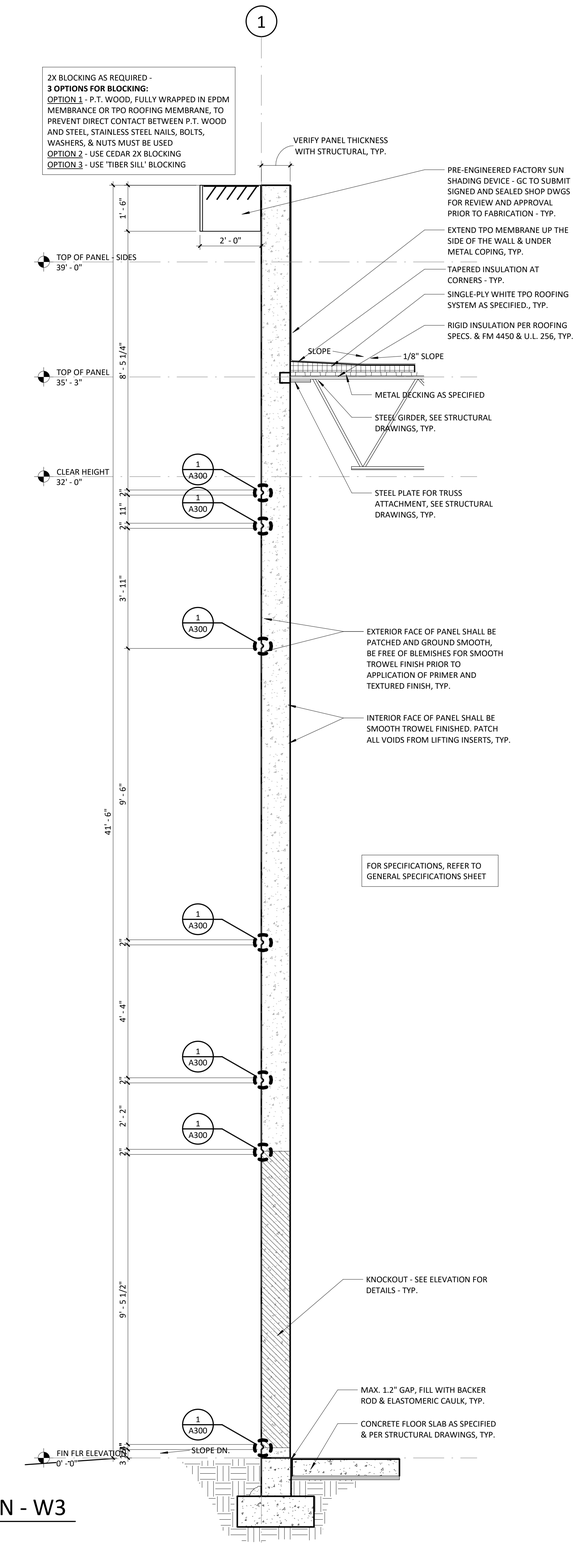


1 WALL SECTION - W1
1/2" = 1'-0"



2 WALL SECTION - W2
1/2" = 1'-0"



3 WALL SECTION - W3
1/2" = 1'-0"

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By: Development Services Engineer

Date: _____

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By: _____ Administrator

Date: _____

KNIGHTDALE, NC

KNIGHTDALE GATEWAY BUILDING ONE & TWO

architects msa merriman schmitt
architecture · planning
interior design
605 LEXINGTON AVENUE
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CHARLOTTE, NC 28203
704.377.1177
704.377.3060 (fax)

BEACON PARTNERS
500 E MOREHEAD ST
SUITE 200
CHARLOTTE, NC 28202
704.597.7757

GENERAL CONTRACTOR:

CLIENT:

KNIGHTDALE GATEWAY
BUILDING ONE & TWO
WAKE COUNTY

5901 FARMWELL ROAD KNIGHTDALE, NC 27610

SEALS:

PRELIMINARY
05/17/2022

NOTE:

PROJECT NUMBER: C21161
PERMIT TRACKING:

DRAWING STATUS:
- NOT FOR CONSTRUCTION
- ISSUED FOR BIDDING
- ISSUED FOR CONSTRUCTION

SHEET TITLE: WALL SECTIONS

SHEET NUMBER: A301

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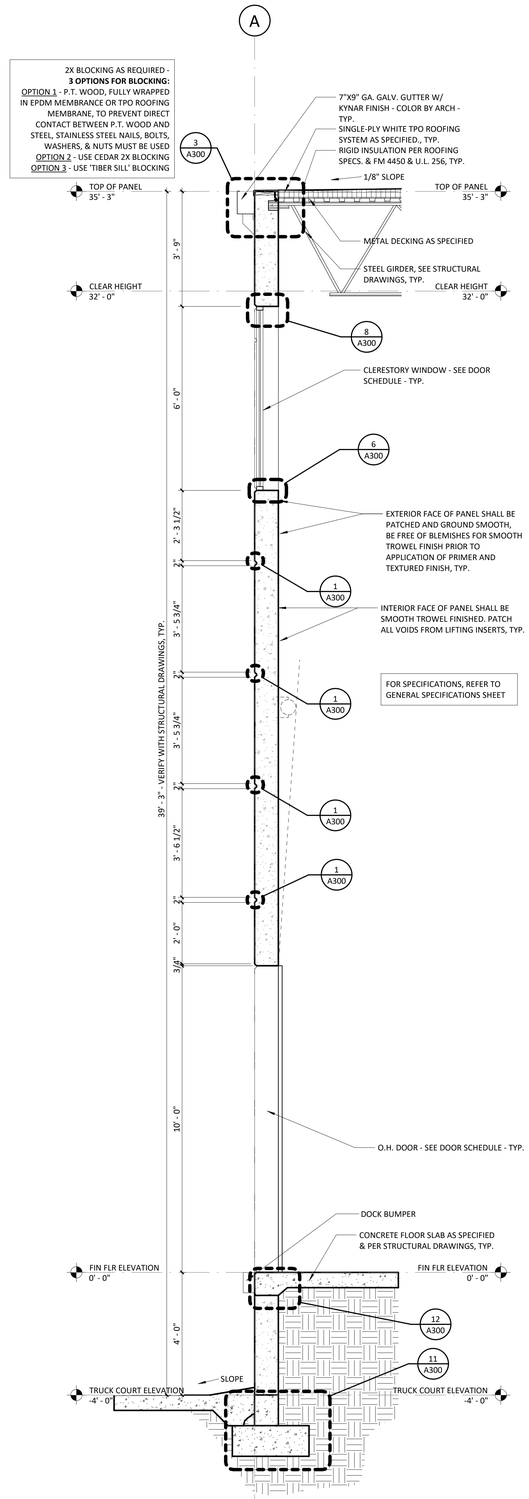
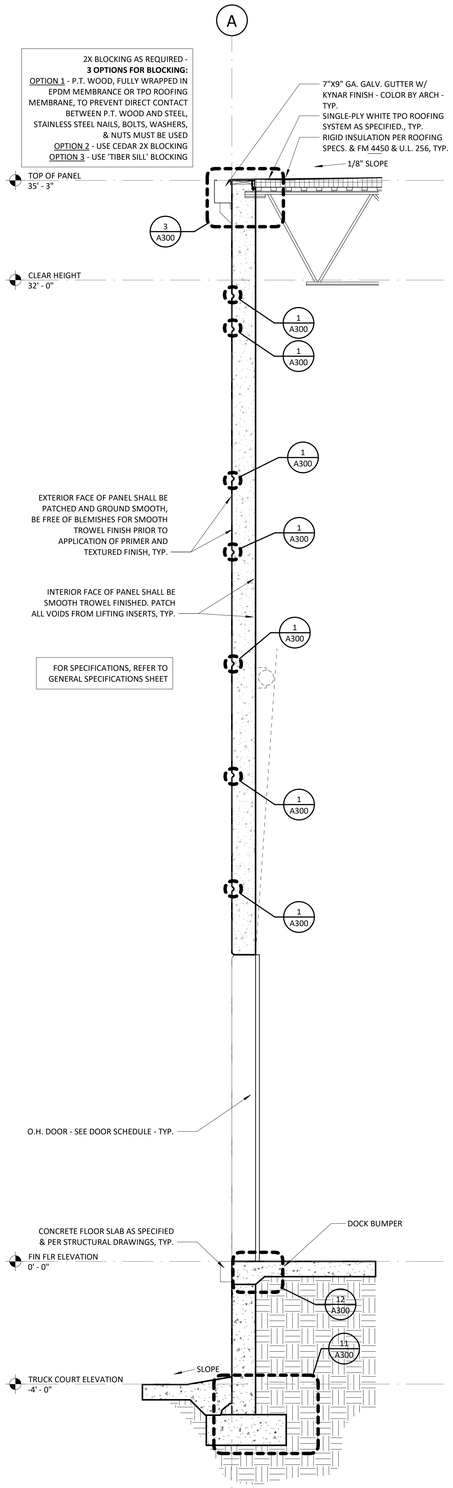
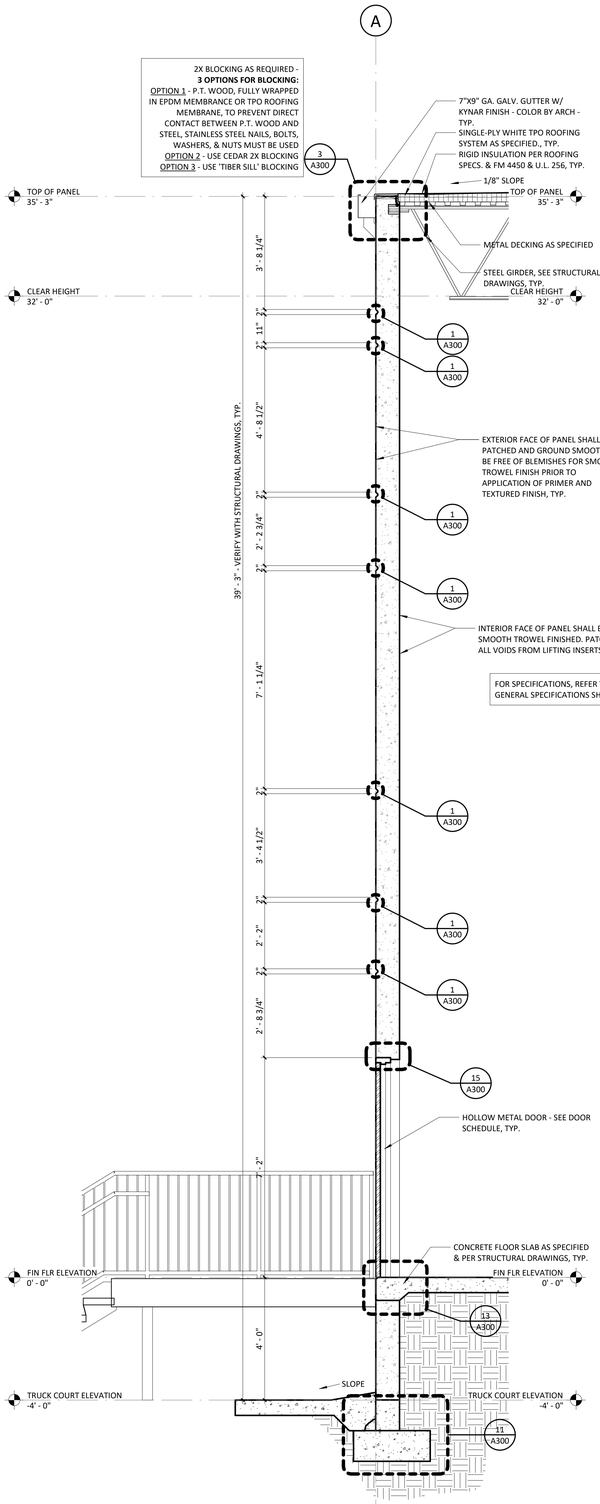


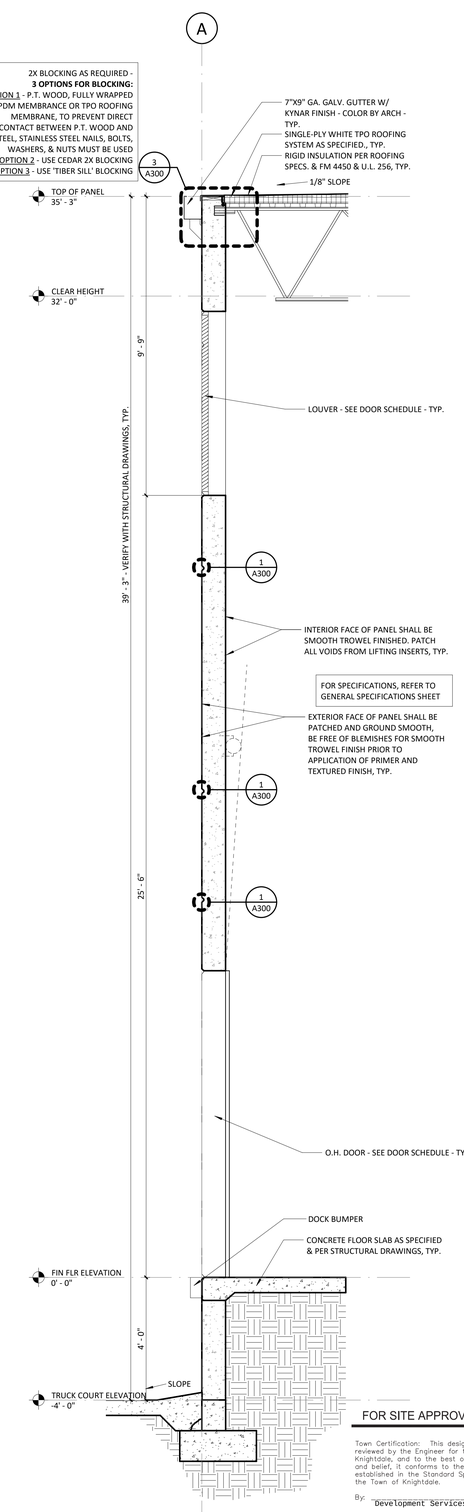
1 WALL SECTION - S1
1/2" = 1'-0"



2 WALL SECTION - S2
1/2" = 1'-0"



3 WALL SECTION - S3
1/2" = 1'-0"



4 WALL SECTION - S4
1/2" = 1'-0"

FOR SITE APPROVAL ONLY

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: Development Services Engineer

Date: _____

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By: _____ Administrator

Date: _____

KNIGHTDALE, NC

KNIGHTDALE GATEWAY BUILDING ONE & TWO

architects msa merriman schmitt
architecture · planning · interior design
605 LEXINGTON AVENUE
SUITE 300
CHARLOTTE, NC 28203
704.377.1177
704.377.3060 (fax)

BEACON PARTNERS
500 E MOREHEAD ST
SUITE 200
CHARLOTTE, NC 28202
704.597.7757

GENERAL CONTRACTOR:

CLIENT:

KNIGHTDALE GATEWAY
BUILDING ONE & TWO
WAKE COUNTY

5901 FARMWELL ROAD KNIGHTDALE, NC 27610

SEALS:

PRELIMINARY
05/17/2022

NOTE:

PROJECT NUMBER: C21161
PERMIT TRACKING:

DRAWING STATUS:
- NOT FOR CONSTRUCTION
- ISSUED FOR BIDDING
- ISSUED FOR CONSTRUCTION

SHEET TITLE: WALL SECTIONS

SHEET NUMBER: A302

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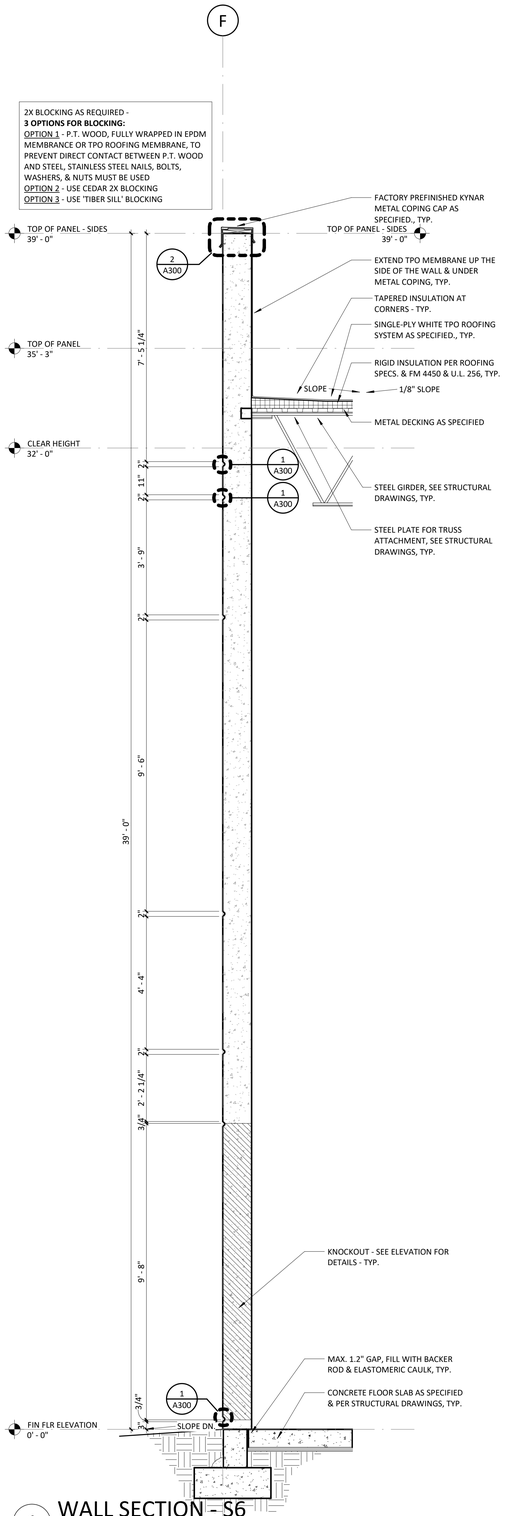

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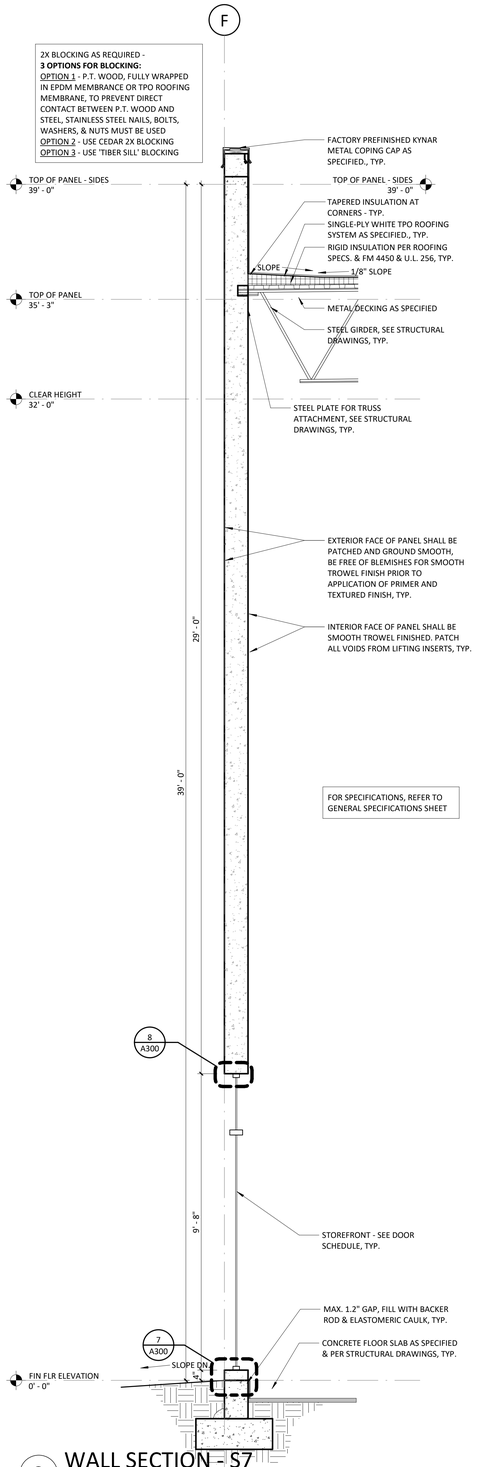

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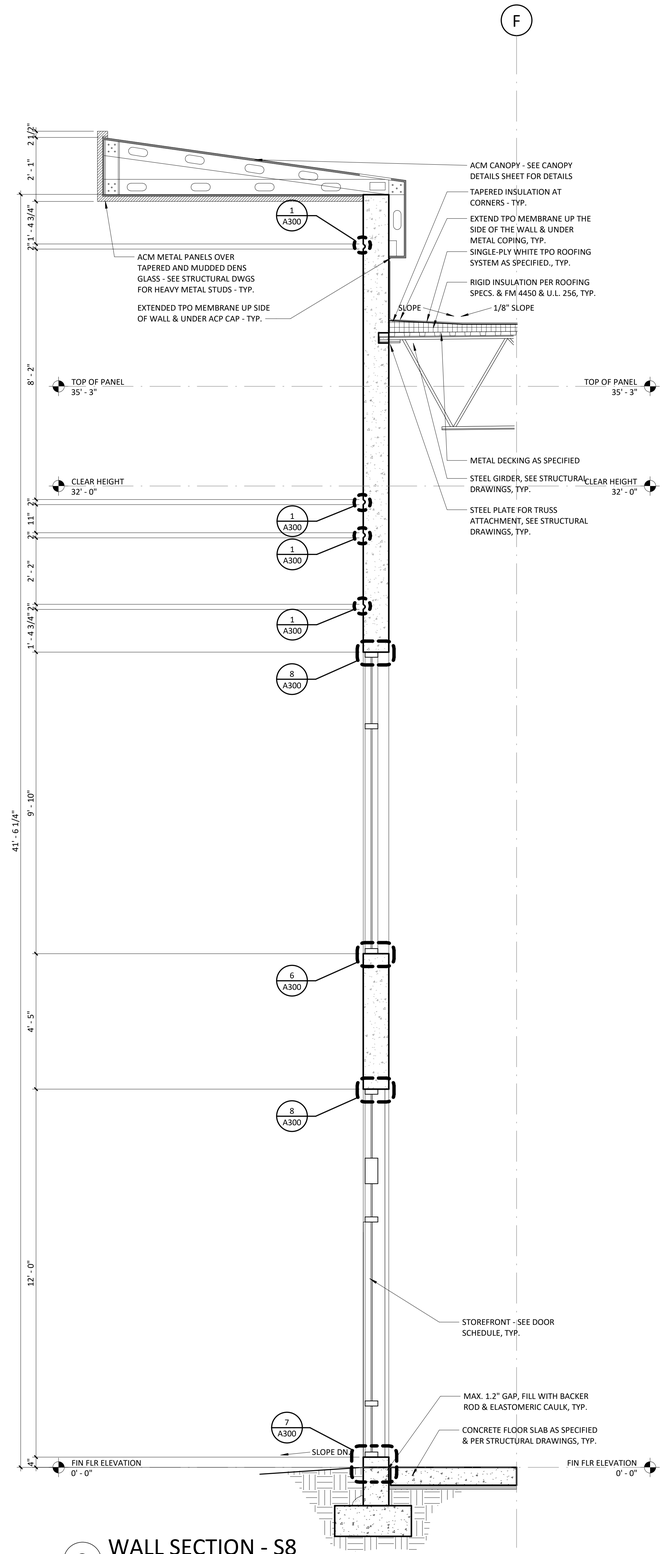
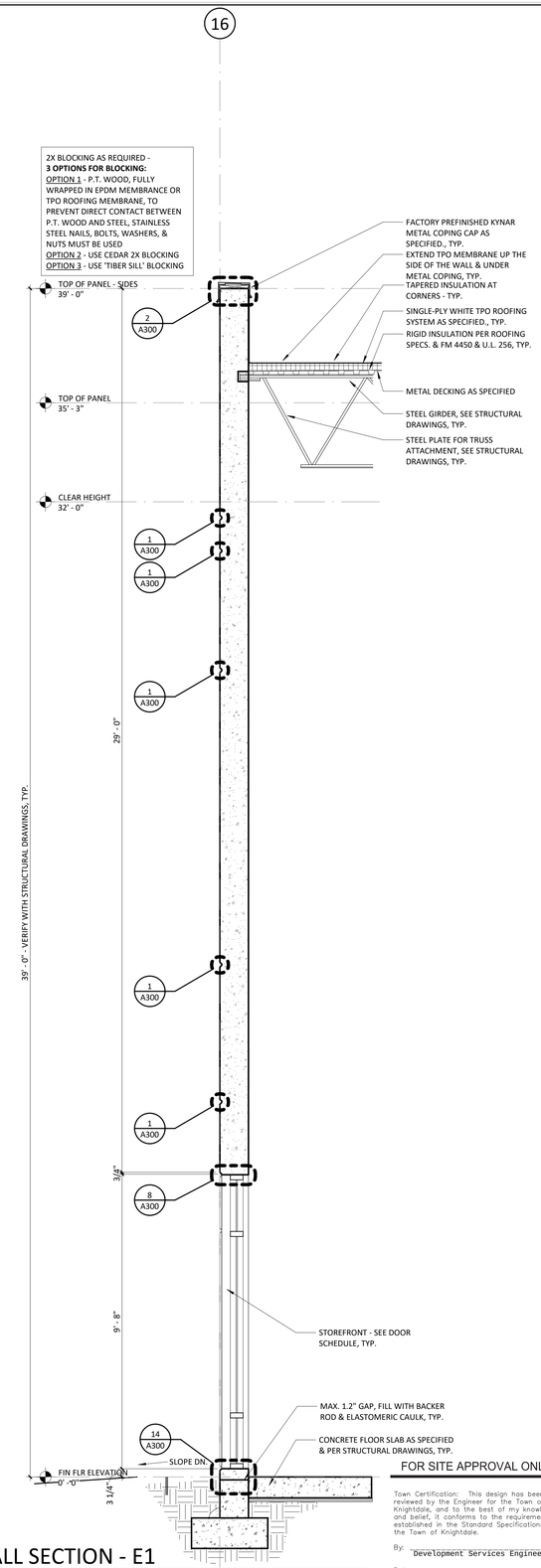


3 WALL SECTION - S8
1/2" = 1'-0"



4 WALL SECTION - E1
1/2" = 1'-0"

FOR SITE APPROVAL ONLY

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: Development Services Engineer

Date: _____

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

By: _____ Administrator

Date: _____

KNIGHTDALE GATEWAY BUILDING ONE & TWO

KNIGHTDALE, NC

architects msa merriman schmitt
architecture · planning
interior design
605 LEXINGTON AVENUE
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704.377.1177
704.377.3060 (fax)

BEACON PARTNERS
500 E MOREHEAD ST
SUITE 200
CHARLOTTE, NC 28202
704.597.7757

GENERAL CONTRACTOR:

CLIENT:

KNIGHTDALE GATEWAY
BUILDING ONE & TWO
WAKE COUNTY

5901 FARMWELL ROAD KNIGHTDALE, NC 27610

SEALS:

PRELIMINARY
05/17/2022

NOTE:

PROJECT NUMBER: C21161
PERMIT TRACKING:

DRAWING STATUS:
- NOT FOR CONSTRUCTION
- ISSUED FOR BIDDING
- ISSUED FOR CONSTRUCTION

SHEET TITLE: WALL SECTIONS

SHEET NUMBER: A303

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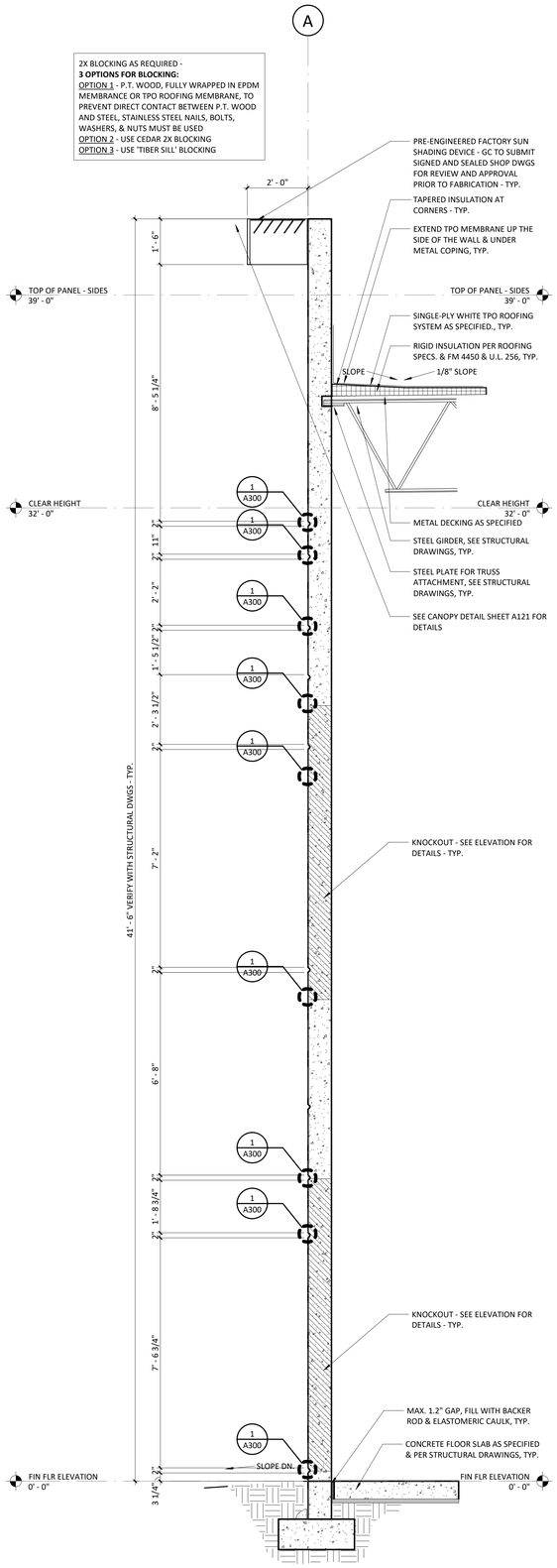
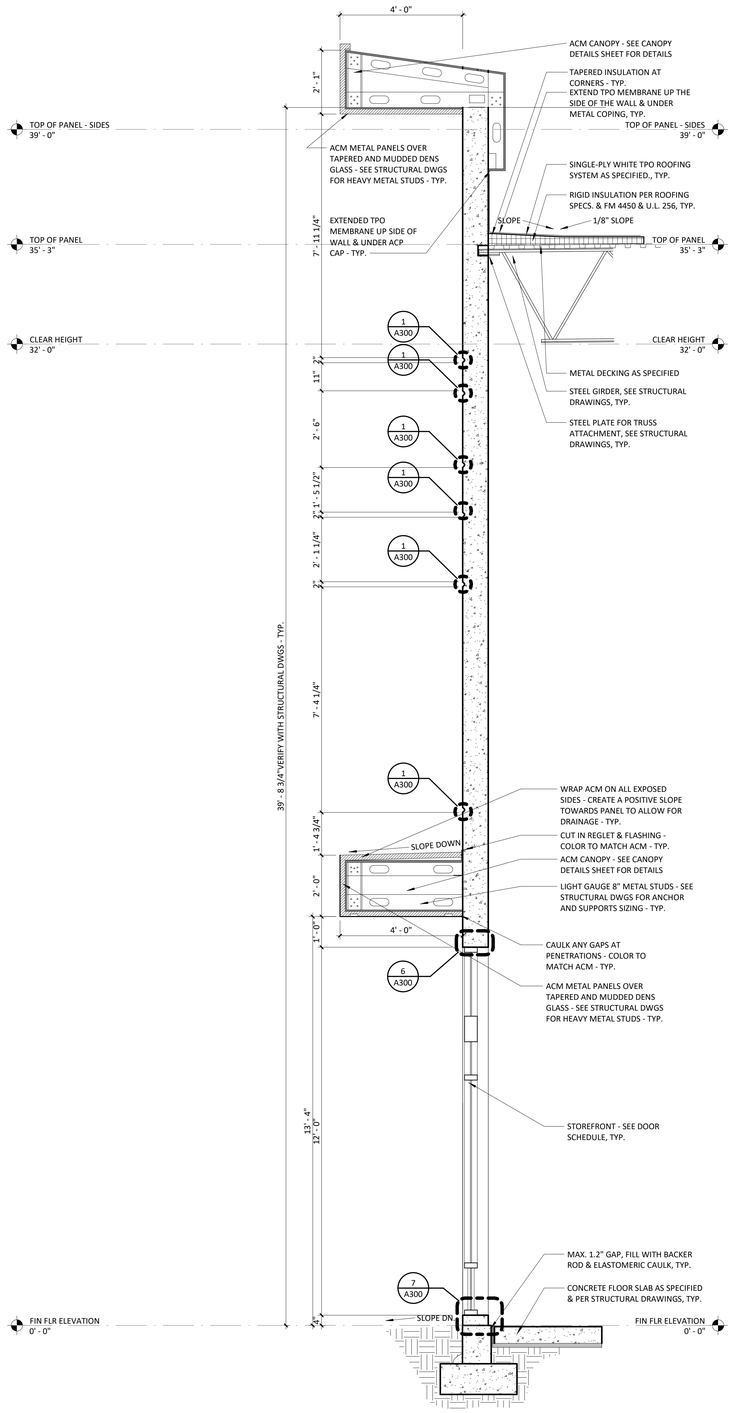


1 WALL SECTION N5
1/2" = 1'-0"



2 WALL SECTION SW1
1/2" = 1'-0"

FOR SITE APPROVAL ONLY

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: Development Services Engineer

Date: _____

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By: _____ Administrator

Date: _____

KNIGHTDALE, NC

KNIGHTDALE GATEWAY BUILDING ONE & TWO

architects msa merriman schmitt
architecture · planning
interior design
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CHARLOTTE, NC 28202
704.597.7757

GENERAL CONTRACTOR:

CLIENT:

KNIGHTDALE GATEWAY
BUILDING ONE & TWO
WAKE COUNTY

5901 FARMWELL ROAD KNIGHTDALE, NC 27610

SEALS:

PRELIMINARY
05/17/2022

NOTE:

PROJECT NUMBER: C21161
PERMIT TRACKING:

DRAWING STATUS:
- NOT FOR CONSTRUCTION
- ISSUED FOR BIDDING
- ISSUED FOR CONSTRUCTION

SHEET TITLE: WALL SECTIONS

SHEET NUMBER: A304

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Knightdale Gateway

Planned Unit Development

Knightdale, North Carolina

Submittal Dates
First Submittal: May 23, 2022
Second Submittal: June 23, 2022
Third Submittal: August 1, 2022

Developer
Beacon Partners
500 East Morehead St, Suite 200
Charlotte, NC 28202

Civil Engineer
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TABLE OF CONTENTS

1. VICINITY MAP 3

2. PROJECT DATA 4

3. EXISTING CONDITIONS 6

4. MASTER PLAN 7

5. VISION STATEMENT 8

6. STATEMENT OF CONSISTENCY: COMPREHENSIVE PLAN 9

7. STATEMENT OF CONSISTENCY: UNIFIED DEVELOPMENT ORDINANCE 11

8. DEVELOPMENT STANDARDS 12

9. INFRASTRUCTURE 14

10. ARCHITECTURAL STANDARDS 15

11. NEIGHBORHOOD MEETING REPORT 17

1. VICINITY MAP

Knightdale Gateway

N

0 400 800 1600 ft

1 inch equals 800 feet

Disclaimer
*iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are **NOT** surveys. No warranties, expressed or implied ,are provided for the data therein, its use,or its interpretation.*

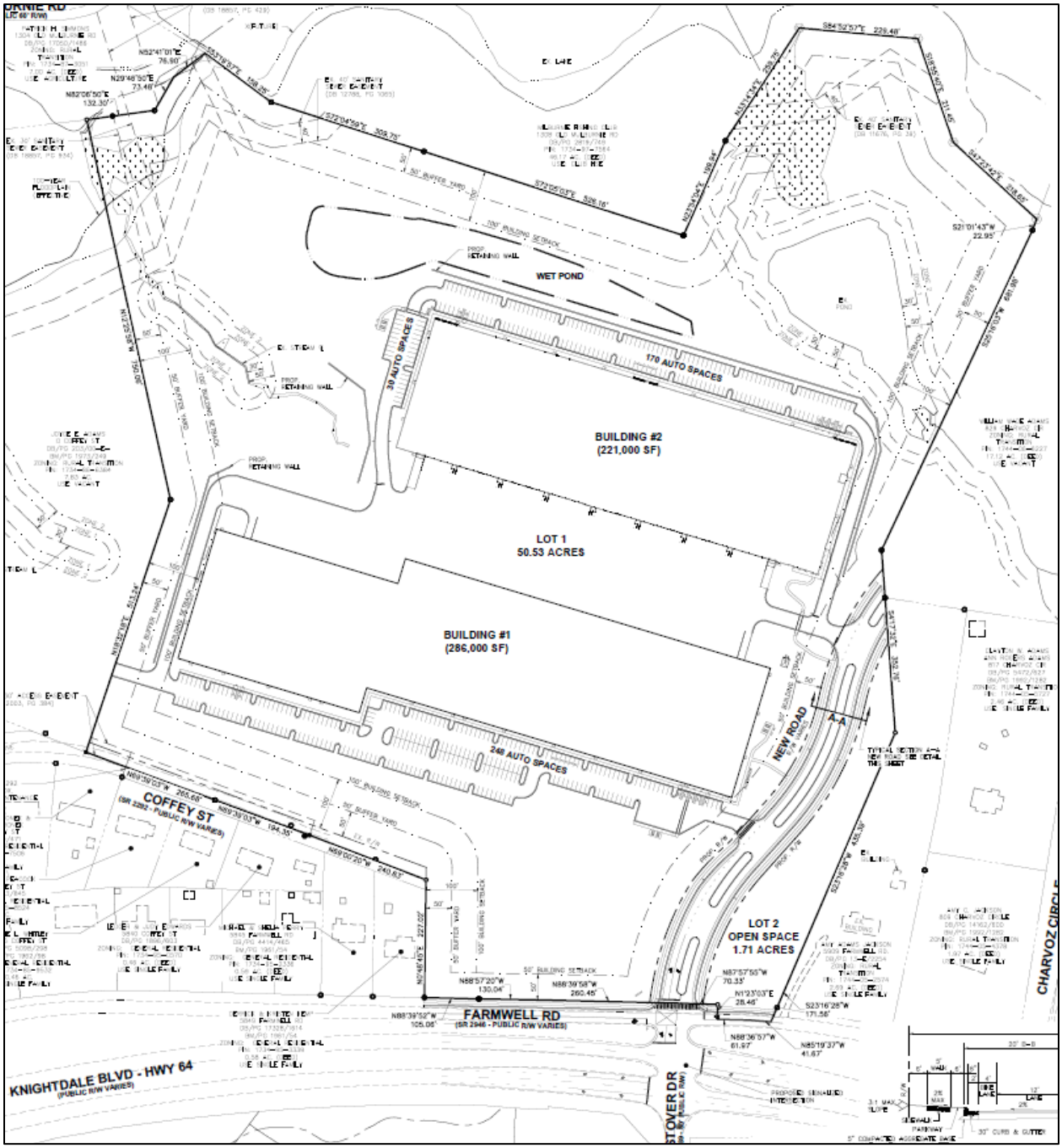
2. PROJECT DATA

Name of Project:	Knightdale Gateway
Property Owners:	Patricia Simmons 5909 Coffey Street, Raleigh, NC 27604 JMAK Plant Farm LLC c/o Beverly C. Morris P.O. Box 453, Fairview, NC 28730 Beverly C. Morris, Trustee and Julia Hernandez, Trustee of the Julia Hernandez Trust c/o Beverly C. Morris P.O. Box 453, Fairview, NC 28730 Marianne Jeffreys Pair 5845 Coffey Street, Raleigh, NC 27604 Motaparthy Properties, LLC 105 Cashwell Drive, Goldsboro, NC 27534
Developer:	**Beacon Partners** 500 East Morehead St, Suite 200 Charlotte, NC 28202
Prepared by:	**Parker Poe Adams & Bernstein LLP** 301 Fayetteville Street, Suite 1400 Raleigh, NC 27601 **Advanced Civil Design, Inc.** 51 Kilmayne Dr., Suite 102 Cary, NC 27511
Current Zoning:	Rural Residential (RR) General Residential Low Density (GR3)
Proposed Zoning:	Manufacturing and Industrial - Planned Unit Development (MI-PUD)
Knightdale Next Growth and Conservation Map Designation:	Retail and Mixed Density Neighborhood
Site Primary Address:	5901 Farmwell Road, Knightdale, NC 27610

Property Identification Numbers:	1744062710, 1734957218, 1734955361, 1734954346, 1744051637, 1734966250, 1734963080, 1734965130, 1734962197, 1734963421, 1734950783, 1734960208
Total Acreage:	54.14 acres
Current Land Use:	Single Family
Proposed Land Use:	Mixed Use Business Park

3. EXISTING CONDITIONS

4. MASTER PLAN

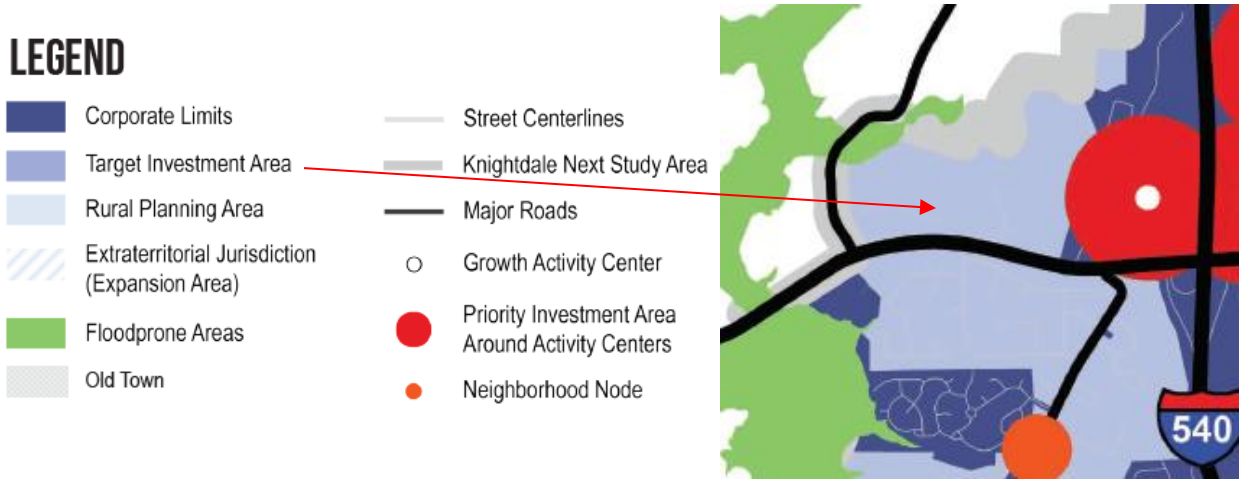


5. VISION STATEMENT

Knightdale Gateway is a proposed class A business park that incorporates high-quality design to offer a unique employment center in a campus setting. Comprised of twelve parcels, the development incorporates the recommendations of the Knightdale Next 2035 Comprehensive Plan and Street Network Plan to create a unique gateway into Knightdale. Ideally situated near the Knightdale Boulevard and 540 interchange, Knightdale Gateway is designed to accommodate a variety of high end users, including life science, research and development, office, and traditional wholesaling and distribution users. As the name suggests and with frontage along Knightdale Boulevard, Knightdale Gateway is designed to create a distinctive entrance to the Town of Knightdale. The master plan places an emphasis on architectural features and landscaping focused on the pedestrian scale. The buildings are designed for the long term in terms of the quality of materials and the ability of the buildings to be easily adapted for future tenant needs and tenant mixes.

6. STATEMENT OF CONSISTENCY: COMPREHENSIVE PLAN

The KnightdaleNext Comprehensive Plan establishes a vision and guiding principles, analyzes existing conditions and emerging trends, describes and illustrates a plan for future development and supporting infrastructure, and outlines steps for implementation. The Comprehensive Plan features the Growth Framework Map, a high-level tool for assisting in the decision making process for development proposals with the intent to prioritize development proposals based on how well each fits within the surrounding area. Knightdale Gateway is within the Target Investment Area, which recommends that future growth should be guided into more compact and efficient development patterns that will help manage the timing, location, and magnitude (length and size) of expensive infrastructure investment.



Knightdale Gateway is consistent with the Target Investment Area recommendations of the Growth Framework Map. The proposed uses and master plan will facilitate a more compact and efficient development pattern along a major transportation corridor into the Town. The site is also near the intersection of Knightdale Boulevard and 540, where future growth is anticipated.

The KnightdaleNext Comprehensive Plan also features the Growth and Conservation Map, which refines the intent and focus of the Growth Framework Map and organizes the community into different place types. The place types are prioritized for varying degrees of land conservation and growth that supports a series of existing and proposed mixed-use, walkable neighborhoods and centers that vary in scale and character. The Map is intended to show, in a general sense, the desired types, locations, patterns, and intensities of future development.

Knightdale Gateway is within the Retail and Mixed-Density Neighborhood place types. Retail place types are intended to serve the daily shopping needs of the region, the community, and surrounding residential neighborhoods, typically located near high-volume roads and key intersections and designed with public spaces throughout. Mixed-Density Neighborhoods are formed as subdivisions or communities with a mix of housing types and densities designed to support a cohesive, well-connected community with a network of open space and gathering places.

The KnightdaleNext Playbook Approach gives guidance to when a parcel may be considered for revisions to the Growth & Conservation Map. The approach describes new realities that may support an amendment. Per KnightdaleNext, "Any changes considered to the Map should be evaluated against the community vision, guiding principles, and the Growth Framework Map to determine if they are in the best long-term interests of the Town and its residents, businesses, and property owners."

Knightdale Gateway is consistent with several aspects of the Retail place type, but inconsistent with the Mixed-Density Neighborhoods place type. However, Knightdale Gateway directly conforms to the definition of the Business Office place type. The Business Office place type provides opportunities to concentrate employment in the Town on normal workdays, and includes both largescale buildings with employees for one business and areas with one or more buildings for multiple businesses that support and serve one another. They are buffered from surrounding development by transitional uses or landscaped areas and are often located in close proximity to major highways or thoroughfares.

In addition, Knightdale Gateway will support and advance the Community Design and Economic Vitality guiding principles of the KnightdaleNext 2035 Comprehensive Plan.

- Knightdale Gateway is consistent with the Community Design guiding principle by providing a quality, distinctive business park. By incorporating street improvements, distinct architectural features, public spaces, and landscaping, Knightdale Gateway will support the Town's identity and reputation as a place for business owners to invest in.

- Knightdale Gateway is consistent with the Economic Vitality guiding principle by promoting a healthy and sustainable business environment by investing in infrastructure and building a campus like setting that is attractive to employers and their workers. Knightdale Gateway will promote Knightdale as a vibrant place with a competitive advantage to attract knowledge-based businesses to the area. Further, Knightdale Gateway will promote economic vitality for businesses and increase access to employment opportunities in the Town.

The KnightdaleNext Street Network Map identifies a proposed Town-Maintained Collector within the project boundary. The Knightdale Gateway master plan is consistent with the Street Network Map by incorporating the segment of the proposed collector that is within the project boundary.

Therefore, a revision of the Growth & Conservation Map to change the rezoning site to the Business Office place type is reasonable and in the public interest because Knightdale Gateway is consistent with the community vision, guiding principles, and Growth Framework Map, and is in the best long-term interests of the Town and its residents, businesses, and property owners.

7. STATEMENT OF CONSISTENCY: UNIFIED DEVELOPMENT ORDINANCE

Knightdale Gateway is proposed to be developed as a Planned Unit Development Overlay District (PUD), according to the base Manufacturing and Industrial zoning district (MI). The Knightdale Gateway master plan is designed to comply with the development standards outlined in the Town of Knightdale's Unified Development Ordinance (UDO), as well as the Town's standards and specifications for the design and construction of the project.

8. DEVELOPMENT STANDARDS

Knightdale Gateway is a master planned class A business park designed to the development standards of the MI zoning district.

8.1 PERMITTED USES

The Knightdale Gateway property may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

Manufacturing/Wholesale/Storage Uses

- Brewery / Winery / Distillery
- Laboratory – medical, analytical, research & development
- Manufacturing, Light
- Research and Development
- Storage – Warehouse, indoor storage
- Wholesaling and Distribution

8.2 OPEN SPACE AND TREE SAVE AREAS

There is no residential component proposed with this development, therefore recreational open space is not required per UDO 11.2.C.

Knightdale Gateway is designed to meet the minimum public gathering space required as described in UDO Section 6.12.

In accordance with UDO Section 7.4(M), Knightdale Gateway provides the following Tree Cover Area:

Perimeter of Site:	6,950 ft
Required Tree Cover Area:	**6,950 ft x 20 = 139,000 sf**
Required Area % of Total Lot Area:	139,000 sf / 2,358,143 sf = 5.89%
	5.89% of total lot area (<10% maximum)
Existing Tree Cover Area to be Utilized:	**521,245 sf**
Additional Tree Cover Area Required:	0 sf
Re-planted Tree Cover Area Required:	0 sf
Re-planted Tree Cover Area Provided:	25,086 sf

8.3 PERIMETER BUFFERS AND ENHANCED LANDSCAPING

In accordance with UDO Section 7.4.I, Knightdale Gateway is designed with 50 ft Type D buffer yards with landscaping to provide an opaque screen.

Knightdale Gateway is providing an additional 10 ft Type A buffer along the northern parking Lot of Building #2. This will add an extra layer of screening between Milburnie Lake and the northern parking lot.

Knightdale Gateway is providing an additional 50 ft of Type D buffer along along Coffey Street, resulting in a 100 ft buffer to preserve the viewshed of existing uses on Coffey Street. The majority of this 100 ft buffer will utilize existing vegetation and tree cover, and approximately 11,200 sf will be re-planted to Type D buffer standards.

8.4 SIGN STANDARDS

Knightdale Gateway, designed as a class A business park that incorporates high-quality design to offer a unique employment center in a campus setting, shall incorporate a monument sign at its main entrance off of the proposed new road (the "Monument Sign"). For purposes of place-making, the Monument Sign shall include a mixture of materials and colors that are consistent with the architecture of buildings. In order to allow additional creative flexibility in the design of the Monument Sign, the Monument Sign shall be exempt from the dimensional standards of UDO Section 8.6(C)(5). The maximum height of the Monument Sign shall be limited to 10 ft, and have a maximum area of no greater than 100 square ft. The exhibits below are examples of monument signs that are intended to create a campus setting. The design of the Knightdale Gateway Monument Sign shall be determined at the site plan stage.

Metrolina Park (Charlotte, NC)

Carolina Logistics Park (Pineville, NC)

9. INFRASTRUCTURE

9.1 STREETS AND SIDEWALKS

Streets and sidewalks within Knightdale Gateway are designed to meet the standards of the Town of Knightdale, including roadway improvements along Farmwell Road.

Consistent with the KnightdaleNext Street Network Map's proposed Town-Maintained Collector street located within the Knightdale Gateway project boundary, the master plan incorporates a segment of the proposed Collector St. The street is proposed as a 2-lane, median divided cross section with bike lanes and sidewalks on both sides, according to UDO Section 10.4.B.2.c.

9.2 PARKING

Knightdale Gateway is designed to meet the parking and loading standards as described in UDO Section 7.1.

Maximum No. of Parking Spaces: 1.5 per ksf GFA
Minimum No. of Parking Spaces: 0.5 x maximum

Building No.	GFA (sf)	Max Spaces	Min Spaces	Auto Spaces Provided
1	221,000	331	166	200
2	286,000	429	215	248

Electric Vehicle Parking Requirements: 1 per 40 spaces = 11 spaces
EV Charging Stations/Dedicated Spaces Provided: 11 spaces

Bicycle Parking Required: 1 per 10 parking spaces = 45 spaces
Bicycle Parking Provided: 46 spaces

9.3 STORMWATER MANAGEMENT

Knightdale Gateway will meet all applicable requirements and standards as described in UDO Chapter 9. The Stormwater Control Measures are designed to meet the stormwater reduction requirements, including limiting the post-development stormwater flows to not exceed the pre-development stormwater runoff for the 1-year, 2-year, and 10-year storm events. The project will use approved devices to control the stormwater sediment runoff. These devices may include wet detention basins, constructed wetlands, bioretention areas, sand filters or any other approved stormwater control measure.

10. ARCHITECTURAL STANDARDS

1. In order to divide and create vertical orientation on building facades and add visual interest, expanses of blank wall shall not exceed seventy (70) feet in width without being interrupted with an architectural feature such as, but not limited to:

    a. columns,
    b. recesses in or projections from the building façade,
    c. piers,
    d. rooflines,
    e. brick patterns, or
    f. reveals in concrete tilt construction with contrasting paint colors.

2. Each building façade shall have architectural features that are repeated through the pattern of walls and openings. Each building façade shall have an identifiable base, body, and cap with horizontal elements separating these components. The body of the building shall constitute a minimum of 50% of the total building height.

3. Buildings shall be architecturally compatible by way of colors and use of materials.

    a. Each building exterior shall have a minimum of two different colors.
    b. Each building exterior shall have a minimum of two different materials.
    c. The primary façade of each building shall include one of the following materials:

        i. Concrete tilt or precast concrete wall panels, with a base wall paint color in conjunction with varying complimentary accent paint colors,
        ii. Brick masonry,
        iii. Stone or Ceramic Tile accents, or
        iv. Aluminum storefronts with anodized or pre-finished colors.

    d. The following exterior building materials shall be prohibited:

        i. Vinyl siding,
        ii. Painted, smooth faced concrete block (decorative blocks are acceptable).

4. EIFS or synthetic stucco shall not be used in the first four feet above grade and shall be limited to only 25% of each building façade.

5. Soffit and fascia materials shall be EIFS, architectural metal panels (ACM), or tongue and groove wood.

6. Windows and storefront glazing shall have mullions that provide rhythm and visual interest.

7. Each building's primary entrance shall emphasize street level, pedestrian focused visual interest through the use of features such as, but not limited to:

    a. columns,
    b. piers,
    c. windows,
    d. recessed entries,
    e. sheltering elements,
    f. rooflines,
    g. trim,
    h. color change,
    i. material change, or
    j. and masonry patterns.

8. Each building's secondary entrances shall emphasize street level, pedestrian focused visual interest through the use of features such as, but not limited to:

    a. recessed entries,
    b. sheltering elements, or
    c. adjacent storefront windows.

9. Building facades facing public streets shall incorporate enhanced architectural features to create visual interest

10. The façade of building corners shall maintain a relation to each other, but are not required to be identical.

11. Each building shall have a minimum of two parapet heights.

12. Simple parapet roof edges with coping shall be used.

13. Roof features may include architectural standing seam metal or canopies using architectural prefinished metal panels (Aluminum Composite Material).

11. NEIGHBORHOOD MEETING REPORT

A virtual neighborhood meeting was held at 6:00 pm on May 3rd, 2022, according to the requirements described in UDO Section 12.2(C)(3) and the Town's Electronic Neighborhood Meeting Guidelines. First-class mail notice was provided to property owners within 200 feet of the property proposed to be rezoned on April 22nd, 2022. Approximately 10 neighbors attended the meeting. Following a presentation by the development team, the following issues were discussed:

- Discussion of the perimeter buffers and the screening along the northern side of Coffey Street. The development team committed to providing enhance landscaping within the perimeter buffer adjacent to Coffey Street.
- Discussion of roadway improvements, traffic, and vehicular access to the site.
- Discussion regarding impacts to property values in the area.
- Discussion of whether blasting will occur during construction.
- Discussion of how large the proposed buildings are.

Neighborhood Meeting Attendance Roster:

- Nelson Edwards
- Chip Bridges
- Clayton Adams
- Debbie Whitley
- Hart Huffines
- James Joyner
- Richard Stironek
- Will McCachren
- Merry Sealy