

MH		EXISTING SANITARY MANHOLE
FH		EXISTING FIRE HYDRANT
	G	EXISTING GUY WIRE
LP		EXISTING LIGHT POLE
LP		PROPOSED LIGHT POLE
		EXISTING TELEPHONE SERVICE
		EXISTING ELECTRIC METER
		EXISTING GAS METER
		EXISTING WATER METER
		EXISTING CABLE BOX
		EXISTING ELECTRIC TRANSFORMER
		PROPOSED ELECTRIC TRANSFORMER
		EXISTING TELEPHONE BOX
PP		EXISTING UTILITY POLE
WV		EXISTING WATER VALVE
		EXISTING STREET SIGN
PB		PLAT BOOK
BK		BOOK
PP		PAGE
		SQUARE FEET
		ACRES
---	X	EXISTING FENCE
---	UE	EXISTING UNDERGROUND ELECTRIC
---	UE	PROPOSED UNDERGROUND ELECTRIC
---	OE	EXISTING OVER-HEAD ELECTRIC
---	UT	EXISTING UNDERGROUND TELEPHONE
---	OT	EXISTING OVER-HEAD TELEPHONE
---	FO	EXISTING FIBER OPTIC CABLE
---	G	EXISTING GAS
---	S	EXISTING SANITARY
---	S	PROPOSED SANITARY LATERAL
---	W	EXISTING WATER MAIN
---	W	PROPOSED WATER SERVICE
---		EXISTING STORM SEWER
---		PROPOSED STORM SEWER
---	CATV	EXISTING CABLE TELEVISION
---		EXISTING FLOWLINE OR WATER EDGE
---		EXISTING CONTOUR

THIS LOT IS SUBJECT TO THE CITY OF COLUMBIA
STORMWATER ORDINANCE, CHAPTER 12A, WATER QUALITY
AND DETENTION REQUIREMENTS. THIS PLAN IS CONCEPTUAL
IN NATURE AND A FULL STORMWATER MANAGEMENT PLAN
WITH BE PROVIDED WITH FUTURE CONSTRUCTION
DOCUMENTS. FUTURE DETENTION SHALL BE DESIGNED TO
LIMIT THE POST-DEVELOPMENT RELEASE RATES TO THE
PRE-DEVELOPMENT RELEASE RATES FOR THE 1, 2, 10, AND
100 YEAR RAINFALL EVENTS

THIS TRACT IS REGULATED BY THE CITY OF COLUMBIA
STREAM BUFFER ORDINANCE AS DETERMINED BY THE USG:
MAP FOR COLUMBIA QUADRANGLE, BOONE COUNTY,
MISSOURI AND ARTICLE X OF CHAPTER 12A OF THE CITY
OF COLUMBIA CODE OF ORDINANCES. NO STREAM BUFFER
EXISTS ON THIS SITE.

A PORTION OF THIS TRACT IS LOCATED WITHIN A FLOOD HAZARD AREA AS DEFINED BY CITY OF COLUMBIA ORDINANCE 29-2.3 (d)(4), PER THE BOONE COUNTY FLOOD INSURANCE RATE MAP (FIRM) PANEL #29019C0280E, DATED APRIL 19, 2017.

SPECIAL FLOOD HAZARD AREA DEFINED AS ZONE X, HAVING 0.2% ANNUAL CHANCE FLOOD HAZARD, OR AREA OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE MILE.

_____, 2021.

SARA LOE, CHAIRMAN

ACCEPTED BY ORDINANCE OF THE CITY COUNCIL
OF COLUMBIA

THIS _____ DAY OF _____, 2021.

BRIAN TREECE, MAYOR

SHEELA AMIN, CITY CLERK

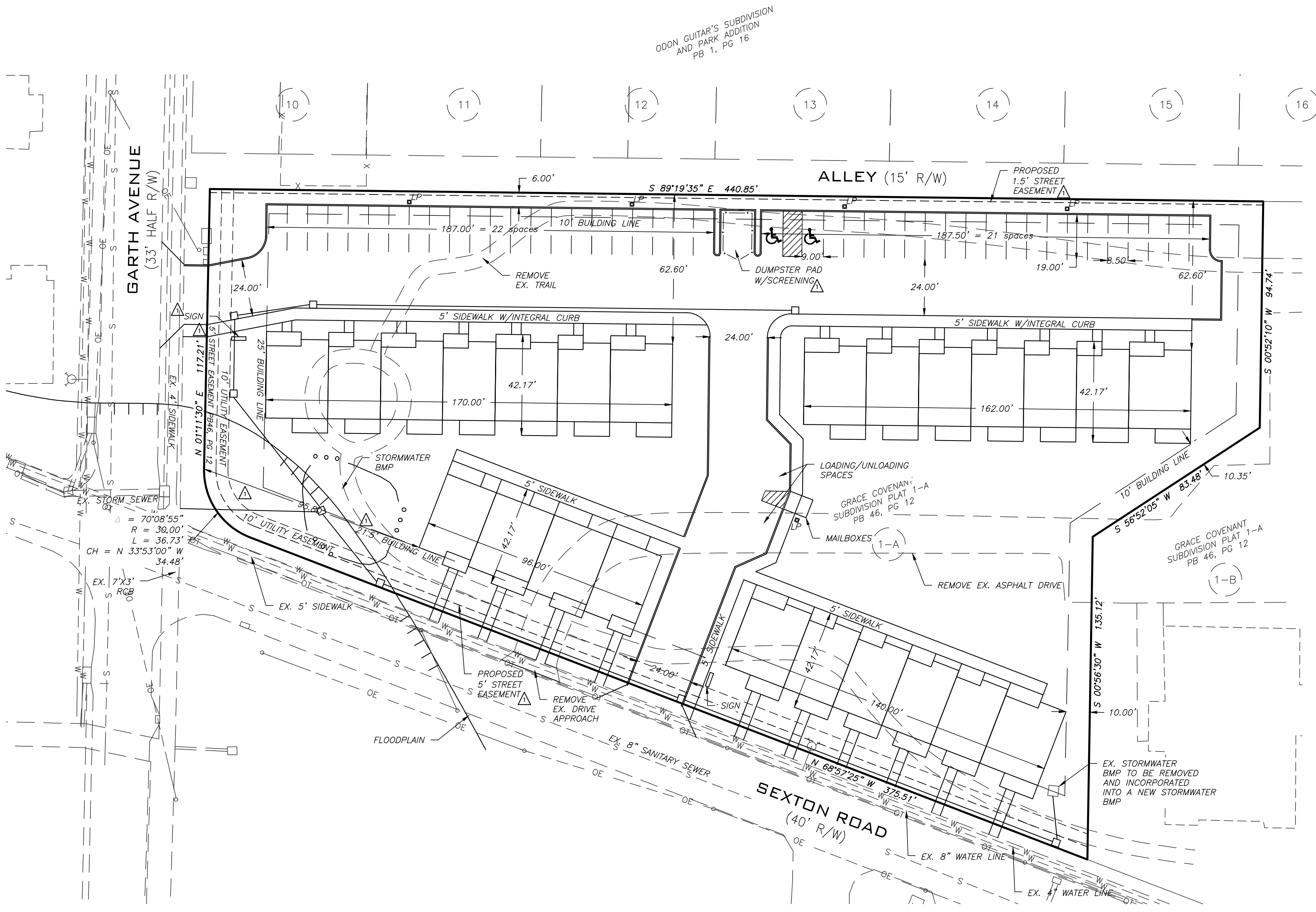
ORDINANCE #

SCALE: 1" = 30'



A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 15, 30, and 60, representing feet.

BEARINGS ARE REFERENCED TO
GRACE COVENANT CHURCH SUBDIVISION,
PLAT 1-A AS RECORDED IN
PLAT BOOK 46, PAGE 12



LOCATION MAP
NOT TO SCALE

ACREAGE: 1.96 ACRES
SEC.-TWN-SHP.-RNG.: NW 1/4 12-48-13
EXISTING ZONING: PD
PROPOSED ZONING: PD

THE HOUSING AUTHORITY OF THE
CITY OF COLUMBIA, MISSOURI
201 SWITZLER STREET
COLUMBIA, MO 65203

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER (NW 1/4) OF SECTION 12, TOWNSHIP 48 NORTH, RANGE 13 WEST, CITY OF COLUMBIA, BOONE COUNTY, MISSOURI, BEING ALL OF LOT 1-A OF GRACE COVENANT CHURCH SUBDIVISION, PLAT 1-A AS RECORDED IN PLAT BOOK 46, PAGE 12, RECORDS OF BOONE COUNTY, MISSOURI.

1. BUILDING SIZE AND DIMENSIONS ARE APPROXIMATE.
2. ALL PROPOSED UTILITIES ARE SHOWN FOR GENERAL LOCATION PURPOSES ONLY AND MAY BE REFINED ON FINAL CONSTRUCTION DOCUMENTS.
3. THIS DEVELOPMENT MAY BE BUILT IN MULTIPLE PHASES.
4. 1 MONUMENT SIGN EACH PROPOSED ALONG BOTH GARTH AVENUE AND SEXTON ROAD BEING A MAXIMUM OF 16 SQUARE FEET IN AREA AND 6' HEIGHT. ALL SIGNAGE TO BE COMPLIANT WITH SECTION 29-4.8 OF THE CITY OF COLUMBIA CODE OF ORDINANCES.
5. ALL LIGHTING SHALL BE IN ACCORDANCE WITH THE CITY OF COLUMBIA LIGHTING ORDINANCE. ALL LIGHTING SHALL BE SHIELDED AND DIRECTED INWARD AND DOWNWARD AWAY FROM RESIDENCES, NEIGHBORING PROPERTIES, PUBLIC STREETS, AND OTHER PUBLIC AREAS.

TOTAL LOT AREA = 1.96 AC.
PROPOSED # OF UNITS = 16
PROPOSED DENSITY = 12.25 UNITS/AC.

TOTAL LOT AREA = 1.96 AC.
EX. IMPERVIOUS AREA CIRCA 1992 = 0.29 AC. (14.8%)
EX. IMPERVIOUS AREA CIRCA 2020 = 0.23 AC. (11.7%)
PROPOSED IMPERVIOUS AREA = 1.13 AC. (57.7%)
PROPOSED PERVIOUS (LANDSCAPE) AREA = 0.83 AC. (42.3%)

REQUIRED:

10 4-BEDROOM UNITS @ 2.5 SPACES/UNIT = 25 SPACES
6 3-BEDROOM UNITS @ 2.5 SPACES/UNIT = 15 SPACES
8 2-BEDROOM UNITS @ 2 SPACES/UNIT = 16 SPACES

TOTAL REQUIRED = 56 SPACES

56 SPACES (3 OF WHICH ARE REQUIRED TO BE ADA ACCESSIBLE SPACES, WITH 1 BEING VAN ACCESSIBLE);

4 REQUIRED BICYCLE SPACES, (MAY BE COUNTED TOWARDS TOTAL REQUIRED SPACES)

PROVIDED:

41 REGULAR SPACES
2 ADA ACCESSIBLE SPACES (BOTH VAN ACCESSIBLE)
4 BICYCLE SPACES

TOTAL PROVIDED = 47 SPACES = 1.96 SPACES/UNIT(24)

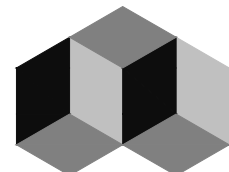
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www.mo1call.com

CITY CASE # PLDV-000127-2020

1	01/06/21	CITY COMMENTS	KPM
	11/16/20	ORIGINAL	KPM

REVISIONS

KINNEY POINT
PD PLAN
COLUMBIA, MO



A CIVIL GROUP
-CIVIL ENGINEERING-
-PLANNING-
-SURVEYING-

3401 BROADWAY
BUSINESS PARK COURT
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FAX: (573) 817-1677

MISSOURI CERTIFICATE OF
AUTHORITY: 2001006116

THIS DOCUMENT HAS BEEN
ELECTRONICALLY
SIGNED, SEALED AND DATED.



JAY GEBHARDT
MO PE-25052
January 7, 202

PROJECT # COHA20.02

DRAWING # COHA20-02

DRAWN BY: KPM

SHEET C101

SHEET 1 OF 2

LANDSCAPING NOTES

1. **PROPOSED AREAS:**
TOTAL AREA OF SITE= 1.96 AC. = 85,226 SQ.FT.
EX. SIDEWALK/DRIVEWAY PAVEMENT= 10,020 SQ.FT. (11.8%)
EX. LANDSCAPING AREA= 75,206 SQ.FT. (88.2%)
PROP. NEW BUILDING AREA= 21,804 SQ.FT.
PROP. NEW PARKING LOT PAVEMENT= 22,622 SQ.FT.
PROP. NEW SIDEWALK PAVEMENT= 4,670 SQ.FT.
TOTAL PROP. IMPERVIOUS AREA= 49,096 SQ.FT. (57.6%)
TOTAL PROP. LANDSCAPING AREA= 36,130 SQ.FT. (42.4%)
2. **TREE PRESERVATION:**
NO CLIMAX FOREST OR SIGNIFICANT TREES EXISTS ON SITE.
THERE ARE 10 EXISTING SIGNIFICANT TREES (20" DBH) ON THE SITE OF WHICH 25% OR 3 SHALL BE PRESERVED DURING DEVELOPMENT. IF A PRESERVED SIGNIFICANT TREE MUST BE REMOVED, IT SHALL BE REPLACED BY 3 MEDIUM TO LARGE DECIDUOUS TREES OF 2" CALIPER OR 2 CONIFEROUS TREES AT 8- FEET IN HEIGHT.
3. **STREET FRONTAGE LANDSCAPING:**
A. IN ACCORDANCE WITH SECTION 29-4.4(D)(1) ALL PARKING PAVED AREAS MORE THAN 40 FEET IN LENGTH WITHIN 25 FEET OF STREET RIGHT-OF-WAY SHALL BE IMPROVED WITH A LANDSCAPING BUFFER STRIP SIX-FOOT WIDE IN ACCORDANCE WITH PROVISIONS OF SECTION 4.4(E)(2). SEE NOTE 5 BELOW FOR COMPLIANCE WITH THIS REQUIREMENT.
B. IN ACCORDANCE WITH SECTION 29-4.4(D)(2) STREET TREE LANDSCAPING SHALL BE INSTALLED AS FOLLOWS:

GARTH AVENUE ROAD FRONTAGE = 136 L.F.
1 TREE/ 60 FT = 136/60 = 2.27 OR 3 TOTAL TREES
30% LARGE TREES = 1 TREE
30% MEDIUM TREES = 1 TREE
REMAINING TREE VARIETIES = 1 TREE
4. **PROPERTY EDGE BUFFERING:**
THE SITE IS ZONED PD AND THE ADJACENT PROPERTY TO THE EAST IS ZONED PD WITH NON-RESIDENTIAL USES THEREFORE A LEVEL 1, 6-FOOT BUFFER IS REQUIRED ON SUBJECT SITE.

LANDSCAPING BUFFER
A. LANDSCAPE BUFFER SHALL BE DESIGNED SO THAT AT LEAST 80% OPACITY IS ACHIEVED, VIEWED HORIZONTALLY, IN THE SPACE BETWEEN ONE FOOT AND FIVE FEET ABOVE GRADE AT THE TIME OF INSTALLATION.
B. THE LANDSCAPE BUFFER SHALL INCLUDE THE FOLLOWING PLANT MIX:

B.o. 4 CATEGORIES CONTAINED IN SECTION 29-4.4(C)(6). 4 CATEGORIES ARE GRASS, SHRUBS, CONIFERS, AND MEDIUM SHADE TREE.

B.o.A. 1 TREE, 10' HEIGHT, 2" CALIPER AT TIME OF INSTALLATION REQUIRED FOR EVERY 200 SQ. FT. OF BUFFER AREA.
TOTAL BUFFER AREA = 313' X 6' = 1,880/200 = 9.4 = 10 TREES (CONIFERS)

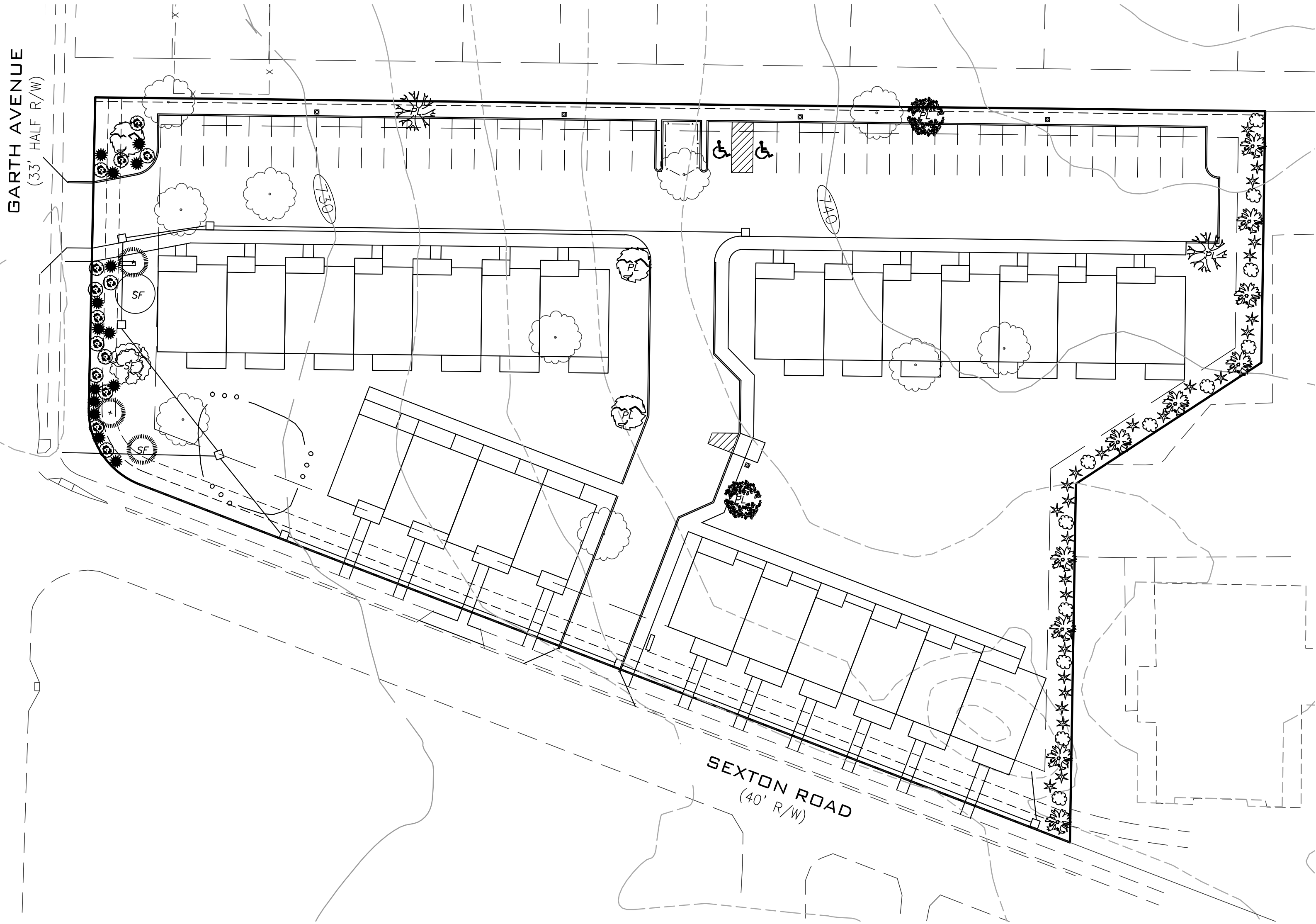
B.o.B. SHRUBS AND FLOWERING PLANTS THAT COVER A MINIMUM OF 50% OF THE REMAINING AREA WITH A MINIMUM OF 25% OF THAT PLANT MATERIAL BEING IN FLOWERING SHRUBS.

50% AREA = 1,880*0.5 = 940 S.F. AREA IN SHRUBS
AT 1 SHRUB/25 S.F. = 940/25 = 28 SHRUBS
25% AREA = 940*0.25 = 235 S.F. FLOWERING SHRUBS
AT 1 SHRUB/25 S.F. = 235/25 = 10 SHRUBS

B.b. SCREENING
THERE ARE EXISTING SCREENING FENCES ON THE NORTH AND WEST SIDES OF THE SITE. SCREEN ON SOUTH SIDE TO BE 6' WOOD FENCE (OR APPROVED EQUAL, VERIFY WITH ARCHITECT AND OWNER, SEPARATE APPROVAL BY ARBORIST REQUIRED FOR DIFFERENT DESIGN).
5. **RIGHT-OF-WAY BUFFERING:**
IN ACCORDANCE WITH SECTIONS 29-4.4(D)(1) AND 29-4.4(E)(2) A SIX-FOOT WIDE LANDSCAPE BUFFER STRIP HAS BEEN PROVIDED ON THIS SITE. EACH BUFFER STRIP SHALL PROVIDE AT LEAST 80% OPACITY, VIEWED HORIZONTALLY, IN THE SPACE BETWEEN ONE FOOT AND FIVE FEET ABOVE GRADE AT THE SCREEN LINE, AT THE TIME OF INSTALLATION, AND SHALL CONTAIN A MINIMUM FOUR CATEGORIES OF PLANTING MATERIAL AS CONTAINED IN SECTION 29-4.4(C)(6). BUFFER STRIP SPECIFICATIONS DETAILS FOLLOW:

RIGHT-OF-WAY BUFFER ZONE (136 L.F.):
136' LENGTH * 6' WIDTH = 816 S.F. BUFFER AREA
CATEGORY 1: 816 S.F./200 S.F. = 4 TREES. 4 TREES PROVIDED
CATEGORY 2: DECIDUOUS FLOWERING SHRUB VARIETY 1 = 14 SHRUBS
CATEGORY 3: DECIDUOUS/EVERGREEN SHRUB VARIETY 2 = 14 SHRUBS
CATEGORY 4: TURF GRASS- MIN. 50% AREA COVERAGE = 128 S.F. (80% OPACITY ACHIEVED WITH 1 SHRUB/ 5 LINEAR FEET.
136 L.F./5 = 28 = 28 SHRUBS TOTAL REQUIRED, SEE CATEGORY 2 & 3)

PERCENTAGE TREES IN BUFFER:
TOTAL TREES IN BUFFER = 4 NEW TREES
4 TREES X 0.3 MED/LARGE TREES = MIN. 2 MEDIUM TREE
2 TREES X 0.3 ONE SPECIES = MAX. 2 TREE PER SPECIES (2 SPECIES SHOWN)
6. **PARKING AREA LANDSCAPING:**
A. IN ACCORDANCE WITH SECTION 4.4(F)(4), 1 TREE REQUIRED PER EVERY 4,000 SQ. FT. OF PARKING PAVED AREA. PARKING PAVED AREA = 22,622 SQ. FT. / 4,000= 5.7 = 6 TREES REQUIRED.
B. IN ACCORDANCE WITH SECTION 4.4(F)(5), OF THE 6 TREES REQUIRED ABOVE, A MINIMUM OF 30% SHALL BE MEDIUM SHADE TREES, AND A MINIMUM OF 40% SHALL BE LARGE SHADE TREES.
30% MEDIUM TREES = 2 MEDIUM TREE
40% LARGE TREES = 2 LARGE SHADE TREE
REMAINING TREE VARIETIES = 2
7. LANDSCAPING CONTRACTOR MAY SUBMIT TO CITY ARBORIST ALTERNATE PLANTING LAYOUTS, TREE, SHRUB AND FLOWER MATERIALS OR SPECIES FOR APPROVAL PRIOR TO INSTALLATION, PROVIDED ANY REVISIONS COMPLY WITH THE CURRENT LANDSCAPING REQUIREMENTS.

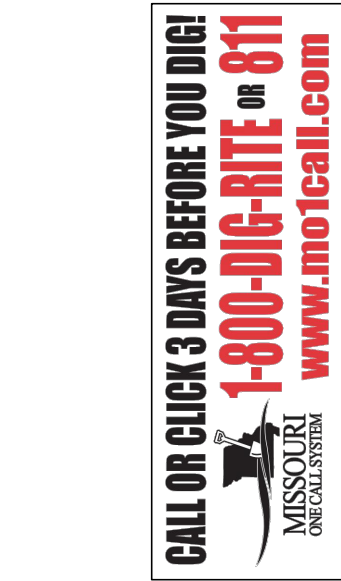


SCALE: 1" = 20'

0 10 20 40

BEARINGS ARE REFERENCED TO
ROCK BRIDGE CHRISTIAN CHURCH PLAT
2 AS RECORDED IN
PLAT BOOK 46, PAGE 18

LANDSCAPING TABLE						
SYMBOL	QUANTITY	COMMON NAME	SCIENTIFIC NAME	CONTAINER/SIZE	SPACING	CATAGORY
STREET FRONTAGE						
	1	KENTUCKY COFFEETREE ESPRESSO	GYMNOCLADUS DIOICA	2" CAL - B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE - MATURE HEIGHT >45'
	1	FRONTIER ELM	ULMUS FRONTIER	2" CAL - B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE - MATURE HEIGHT >45'
	-	EUROPEAN HORNBEAM	CARPINUS BETULUS	2" CAL - B&B	15' CENTERS	MEDIUM DECIDUOUS SHADE TREE - MATURE HEIGHT 30'-45'
	-	SUGAR TYME CRABAPPLE	MALUS SUTYZAM	4' HEIGHT	15' CENTERS	ORNAMENTAL TREE - MATURE HEIGHT < 20'
RIGHT-OF-WAY BUFFERING						
	-	KENTUCKY COFFEETREE ESPRESSO	GYMNOCLADUS DIOICA	2" CAL - B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE - MATURE HEIGHT >45'
	1	DURA-HEAT RIVER BIRCH	BETULA NIGRA	2" CAL - B&B	15' CENTERS	MEDIUM DECIDUOUS SHADE TREE - MATURE HEIGHT 30'-45'
	2	OKLAHOMA REDBUD	CERCIS CANADENSIS	2" CAL - B&B	15' CENTERS	ORNAMENTAL TREE - MATURE HEIGHT < 20'
	-	SUGAR TYME CRABAPPLE	MALUS SUTYZAM	4' HEIGHT	15' CENTERS	ORNAMENTAL TREE - MATURE HEIGHT < 20'
	14	SPICE BUSH	LINDERA BENZOIN	5 GAL	5' CENTERS	DECIDUOUS FLOWERING SHRUB VARIETY 1
	14	TOR BIRCHLEAF SPIREA	SPIRAEA BETULIFOLIA	5 GAL	5' CENTERS	DECIDUOUS/EVERGREEN SHRUB VARIETY 2
PARKING LOT						
	2	RED MAPLE "SUN VALLEY"	ACER RUBRUM	2" CAL - B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE - MATURE HEIGHT >45'
	2	EMER II - ALLEE ELM	ULMUS PARVIFOLIA - EMER II	2" CAL - B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE - MATURE HEIGHT >45'
	2	DURA-HEAT RIVER BIRCH	BETULA NIGRA	2" CAL - B&B	15' CENTERS	MEDIUM DECIDUOUS SHADE TREE - MATURE HEIGHT 30'-45'
	-	OKLAHOMA REDBUD	CERCIS CANADENSIS	4' HEIGHT	15' CENTERS	ORNAMENTAL TREE - MATURE HEIGHT < 20'
PROPERTY EDGE BUFFERING						
	-	EMERALD GREEN ARBORVITAE (THUJA OCCIDENTALIS)	2" CAL - B&B 10" HEIGHT	15' CENTERS	CONIFER OR UPRIGHT EVERGREEN TREE - MATURE HEIGHT >10'	
	10	AMERICAN HOLLY (LLEX OPACA 'CROONENBURG')	2" CAL - B&B 10" HEIGHT	15' CENTERS	CONIFER OR UPRIGHT EVERGREEN TREE - MATURE HEIGHT >10'	
	12	NINEBARK (PHYSOCARPUS OPULOLIFOLIUS)	24"	5' CENTERS	DECIDUOUS FLOWERING SHRUB VARIETY 1	
	26	SPICE BUSH (LINDERA BENZOIN)	5 GAL	5' CENTERS	DECIDUOUS/EVERGREEN SHRUB VARIETY 2	



CITY CASE # PLIV-000127-2020

DATE	BY	REVISIONS
01/06/21	KPM	CITY COMMENTS
6/1/20	CAD	ORIGINAL

KINNEY POINT
PD PLAN
COLUMBIA, MO

A CIVIL GROUP
-CIVIL ENGINEERING-
-PLANNING-
-SURVEYING-

3401 BROADWAY
BUSINESS PARK COURT
SUITE 105
COLUMBIA, MO 65203
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FAX: (573) 817-1677

MISSOURI CERTIFICATE OF
AUTHORITY: 2001006116

THIS DOCUMENT HAS BEEN
ELECTRONICALLY
SIGNED, SEALED AND DATED.

JAY ALAN
GEBHARDT
REGISTERED PROFESSIONAL ENGINEER
NUMBER E-25052
JAY GEBHARDT
MO PE-25052
January 7, 2021

PROJECT # COHA20.02
DRAWING # COHA20-02
DRAWN BY: KPM
SHEET C201
SHEET 2 OF 2