



REZONING AND PRELIMINARY DEVELOPMENT PLANS

LEE'S SUMMIT SENIOR APARTMENTS 830-900 NE DOUGLAS STREET LEE'S SUMMIT, MO



LOCATION MAP



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OWNER:
JIM AND LINDA TUCKER, AS TRUSTEES OF THE
TUCKER FAMILY AND PHILLIP T. AND LAAH M.
TUCKER, AS TRUSTEES OF THE TUCKER FAMILY

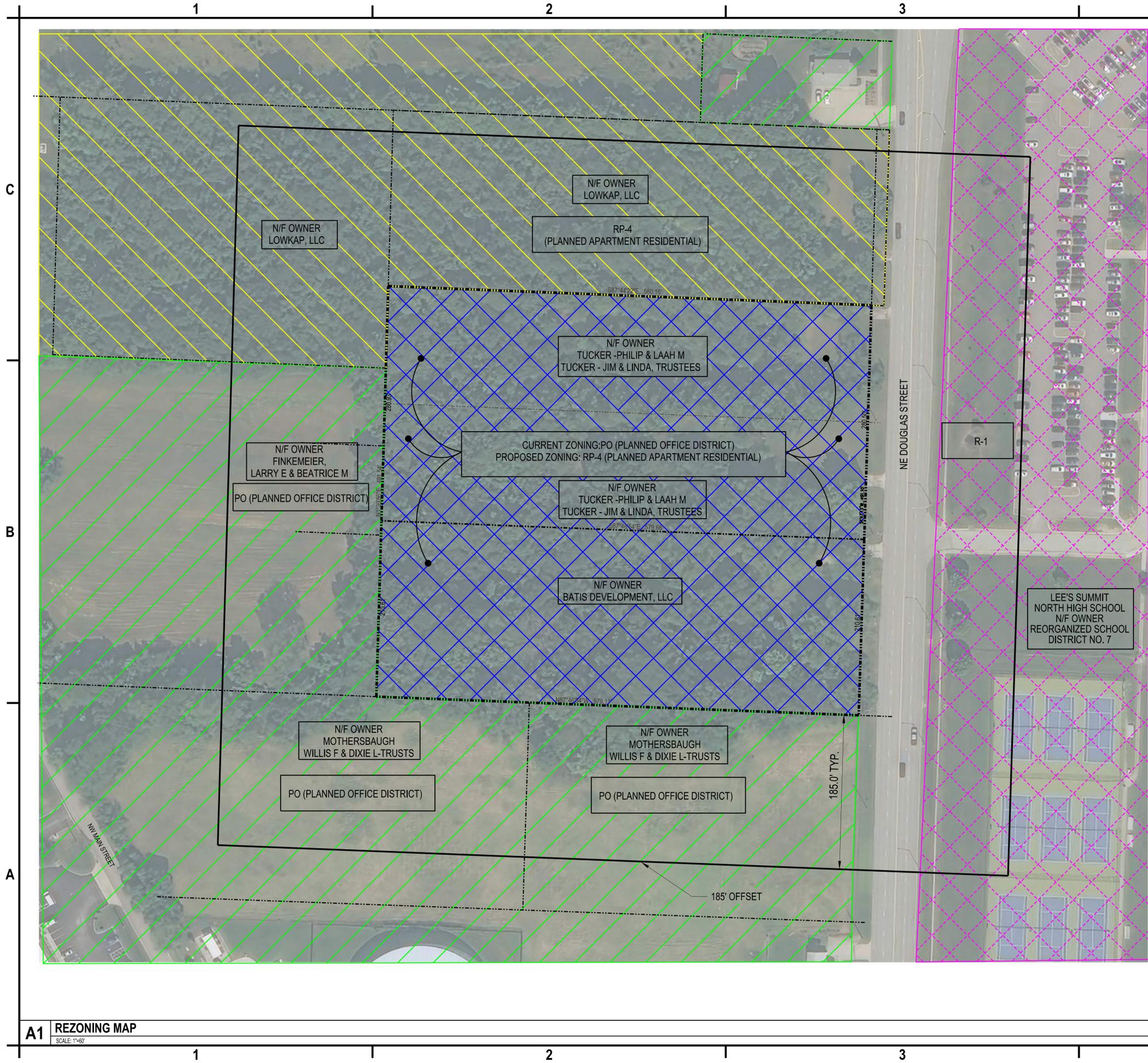
APPLICANT/DEVELOPER:
CLOVER COMMUNITIES LEE'S SUMMIT LLC
348 HARRIS HILL ROAD
WILLIAMSVILLE, NY 14221
CONTACT: RUSSELL CAPLIN, DEVELOPMENT DIRECTOR
PHONE: 314-210-2110

ENGINEER:
ERIC DANIEL, P.E.
C&S ENGINEERS, INC.
141 ELM STREET, SUITE 100
BUFFALO, NEW YORK 14203
716-847-1630

SURVEYOR:
PHELPS ENGINEERING, INC.
1270 N. WINCHESTER
OLATHE, KANSAS 66061
913-393-1155

C&S PROJECT: F53.519.002

AUGUST 2023



LEGAL DESCRIPTION

TRACT 1:
 THE SOUTH 3 ACRES OF THE SOUTH HALF OF LOT 4, SUMMIT PARK, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, MORE SPECIFICALLY DESCRIBED AS BEING ALL OF THE SOUTH 210.6 FEET OF LOT 4, SUMMIT PARK, EXCEPT THAT PART TAKEN OR USED FOR ROADS.

TRACT 2:
 THE NORTH TWO ACRES OF THE SOUTH 1/2 OF LOT 4, SUMMIT PARK, A SUBDIVISION OF LAND IN JACKSON COUNTY, MISSOURI.
 AND
 THE NORTH 1/2 OF LOT 4, EXCEPT THE NORTH 3 ACRES THEREOF, IN SUMMIT PARK, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI.

ZONING LEGEND

-  RP-4 (PLANNED APARTMENT RESIDENTIAL)
-  PROPOSED RP-4 (PLANNED RESIDENTIAL APARTMENT)
-  PO (PLANNED OFFICE)
-  R-1 (SINGLE FAMILY RESIDENTIAL)



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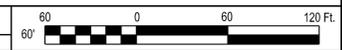
Eric J. Daniel, P.E.
 License No. PE-2023008829
 Date: 08/15/2023

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 SENIOR APARTMENTS
 830-900 NE DOUGLAS STREET
 LEE'S SUMMIT, MO**

MARK	DATE	DESCRIPTION
REVISIONS		
		PROJECT NO: F53.519.002
		DATE: AUGUST 15, 2023
		DRAWN BY: S. SCHIENER
		DESIGNED BY: E. DANIEL
		CHECKED BY: E. DANIEL

**REZONING
 MAP**

G-100





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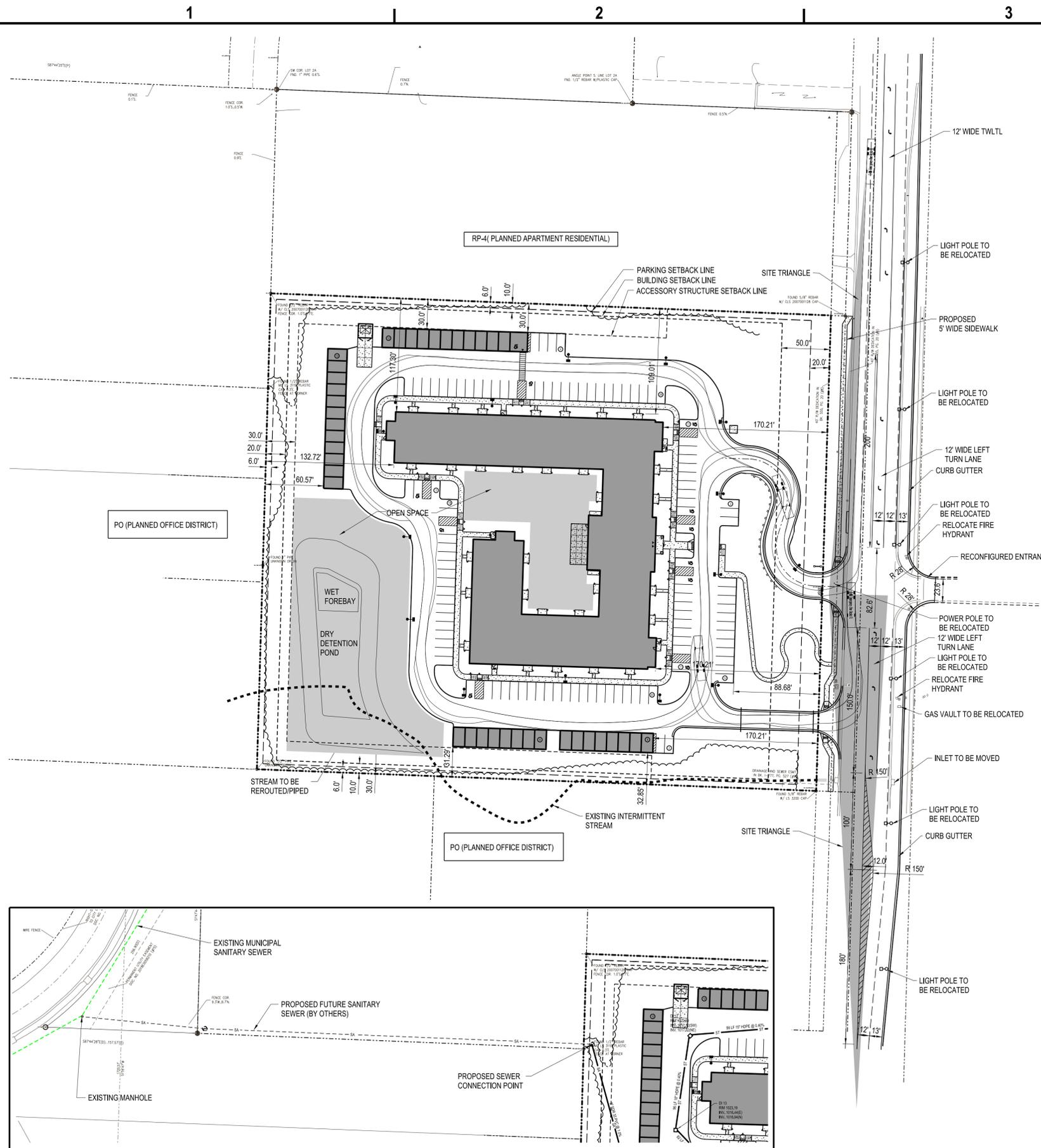
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OVERALL
 SITE PLAN

C-100



LEGAL DESCRIPTION

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SITE PLAN NOTES

1. SURVEY INFORMATION WAS PROVIDED BY PHELPS ENGINEERING, INC. DATED 05/22/2023. C&S ENGINEERS, INC. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.
2. CONTRACTOR TO VERIFY ALL FIELD CONDITIONS AND UTILITY LOCATIONS PRIOR TO THE START OF CONSTRUCTION. CONTACT THE ENGINEER WITH ANY DISCREPANCIES FOUND IN THE FIELD.
3. ALL DIMENSIONS FROM PROPERTY LINES ARE 90° FROM PROPERTY LINE UNLESS OTHERWISE NOTED.
4. ALL DIMENSIONS ARE FROM FACE OF CURB UNLESS OTHERWISE NOTED.
5. COORDINATE EXACT LOCATION OF SIDEWALKS AT DOORWAYS WITH ARCHITECTURAL PLANS.
6. REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS AND LAYOUT.
7. THERE ARE NO ACTIVE OR INACTIVE OIL OR GAS WELLS ON THIS SITE PER THE MISSOURI DEPARTMENT OF NATURAL RESOURCES GIS WEBSITE.

DEVELOPMENT SUMMARY		
DEVELOPER: CLOVER COMMUNITIES LEE'S SUMMIT LLC		
CURRENT ZONING: PO (PLANNED OFFICE DISTRICT)		
PROPOSED ZONING: RP-4 (PLANNED APARTMENT RESIDENTIAL DISTRICT)		
PROPOSED USE: INDEPENDENT SENIOR APARTMENTS		
FLOOD PLAIN: SITE IS OUTSIDE OF 100-YEAR FLOOD PLAIN PER FEMA FIRM MAP NUMBER 29095c0417G		
MINIMUM LOT SIZE PER UNIT:	REQUIRED: 3,500 SF X 119= 41,650 SF	PROVIDED: 284,774 SF (6.53+/-)
LOT WIDTH:	PER APPROVED PLAN	491.10'
LOT COVERAGE:		
IMPERVIOUS COVERAGE	60%	44.43%
INTERIOR GREENSPACE	5%	7.0%
OPEN SPACE	10%	15.80%
MINIMUM PRINCIPAL BUILDING SETBACK		
FRONT YARD	50'	170.21'
SIDE YARD	10'	109.01'
REAR YARD	20'	132.72'
ACCESSORY STRUCTURE SETBACK		
FRONT YARD	NO CLOSER THAN PRINCIPAL BUILDING	170.21
SIDE YARD	30'	30'
REAR YARD	30'	60.57'
DENSITY	12 UNITS/ACRE	19.6/ACRE *
BUILDING HEIGHT (MAX): 50', 4 STORIES		
BUILDING SQUARE FOOTAGE		35,575 SF FIRST FLOOR (142,300 SF TOTAL)
NUMBER OF DWELLINGS		128
GARAGE HEIGHT (MAX): 40'		
GARAGE SQUARE FOOTAGE	250 SF PER 5,000 SF LOT AREA (3500 SF MAX)	240 SF (9,750 TOTAL) *
AUTO PARKING:		
1.5 SPACES PER UNIT (RESIDENT)	(128x1.5=192) 192 SPACES	128*
0.5 SPACES PER UNIT (VISITORS)	(128x0.5=64) 64 SPACES	27*
TOTAL NUMBER OF SPACES	256 SPACES	155*

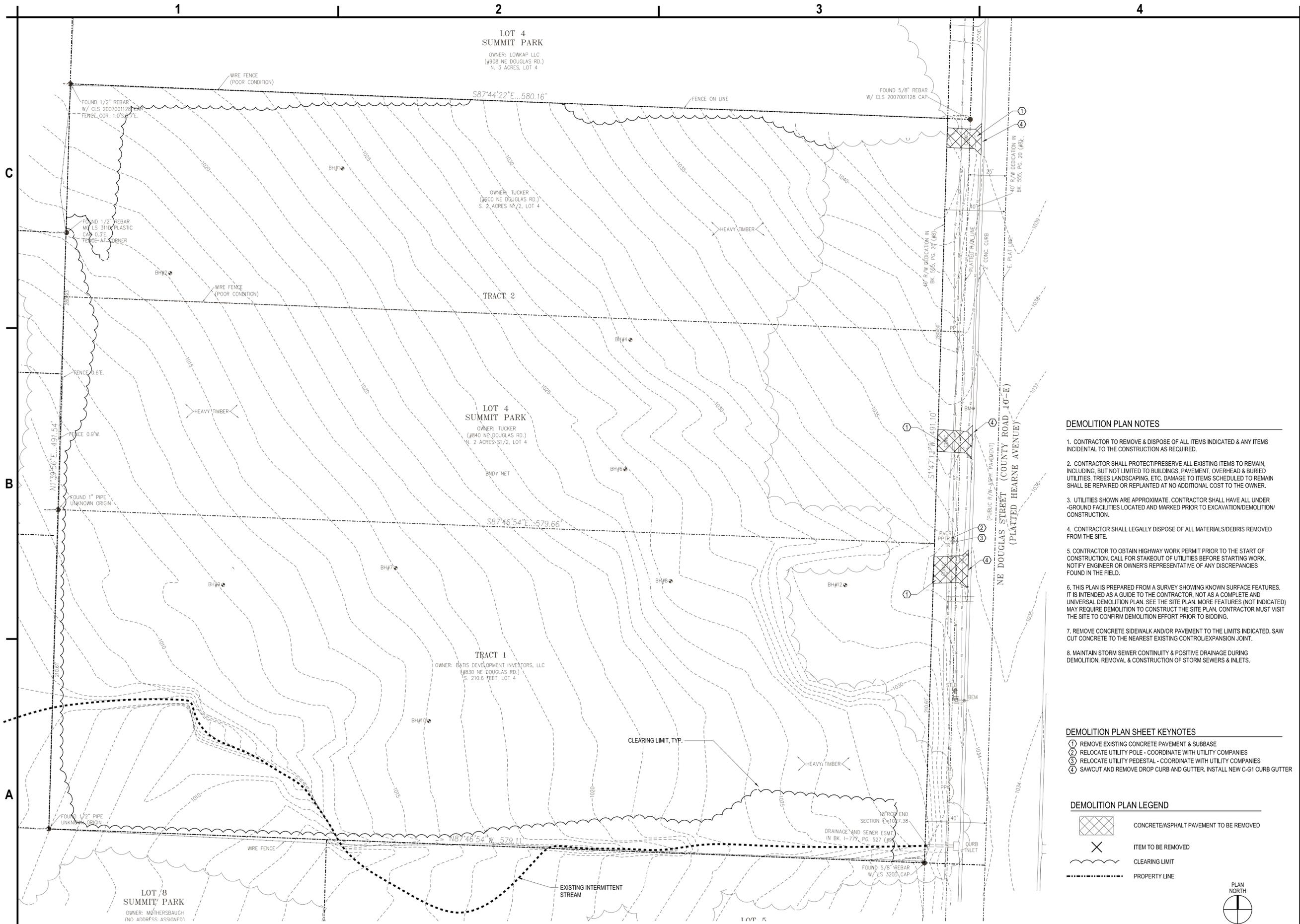
* INDICATES VARIANCE REQUIRED

LEGEND

- PROPERTY LINE
- OPEN SPACE



A1 OVERALL SITE PLAN
 SCALE: 1"=60'



DEMOLITION PLAN NOTES

1. CONTRACTOR TO REMOVE & DISPOSE OF ALL ITEMS INDICATED & ANY ITEMS INCIDENTAL TO THE CONSTRUCTION AS REQUIRED.
2. CONTRACTOR SHALL PROTECT/PRESERVE ALL EXISTING ITEMS TO REMAIN, INCLUDING, BUT NOT LIMITED TO BUILDINGS, PAVEMENT, OVERHEAD & BURIED UTILITIES, TREES LANDSCAPING, ETC. DAMAGE TO ITEMS SCHEDULED TO REMAIN SHALL BE REPAIRED OR REPLANTED AT NO ADDITIONAL COST TO THE OWNER.
3. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL HAVE ALL UNDERGROUND FACILITIES LOCATED AND MARKED PRIOR TO EXCAVATION/DEMOLITION CONSTRUCTION.
4. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS/DEBRIS REMOVED FROM THE SITE.
5. CONTRACTOR TO OBTAIN HIGHWAY WORK PERMIT PRIOR TO THE START OF CONSTRUCTION. CALL FOR STAKEOUT OF UTILITIES BEFORE STARTING WORK. NOTIFY ENGINEER OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES FOUND IN THE FIELD.
6. THIS PLAN IS PREPARED FROM A SURVEY SHOWING KNOWN SURFACE FEATURES. IT IS INTENDED AS A GUIDE TO THE CONTRACTOR, NOT AS A COMPLETE AND UNIVERSAL DEMOLITION PLAN. SEE THE SITE PLAN. MORE FEATURES (NOT INDICATED) MAY REQUIRE DEMOLITION TO CONSTRUCT THE SITE PLAN. CONTRACTOR MUST VISIT THE SITE TO CONFIRM DEMOLITION EFFORT PRIOR TO BIDDING.
7. REMOVE CONCRETE SIDEWALK AND/OR PAVEMENT TO THE LIMITS INDICATED. SAW CUT CONCRETE TO THE NEAREST EXISTING CONTROL/EXPANSION JOINT.
8. MAINTAIN STORM SEWER CONTINUITY & POSITIVE DRAINAGE DURING DEMOLITION, REMOVAL & CONSTRUCTION OF STORM SEWERS & INLETS.

DEMOLITION PLAN SHEET KEYNOTES

- ① REMOVE EXISTING CONCRETE PAVEMENT & SUBBASE
- ② RELOCATE UTILITY POLE - COORDINATE WITH UTILITY COMPANIES
- ③ RELOCATE UTILITY PEDESTAL - COORDINATE WITH UTILITY COMPANIES
- ④ SAWCUT AND REMOVE DROP CURB AND GUTTER. INSTALL NEW C-61 CURB GUTTER

DEMOLITION PLAN LEGEND

- CONCRETE/ASPHALT PAVEMENT TO BE REMOVED
- ITEM TO BE REMOVED
- CLEARING LIMIT
- PROPERTY LINE



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Eric J. Daniel, P.E.
 License No. PE-2023008829
 Date: 08/15/2023

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		DESIGNED BY: E. DANIEL
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**EXISTING
 CONDITIONS AND
 DEMOLITION PLAN**

C-101

A1 EXISTING CONDITIONS AND DEMOLITION PLAN
 SCALE: 1"=30'



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SITE PLAN DETAIL LEGEND

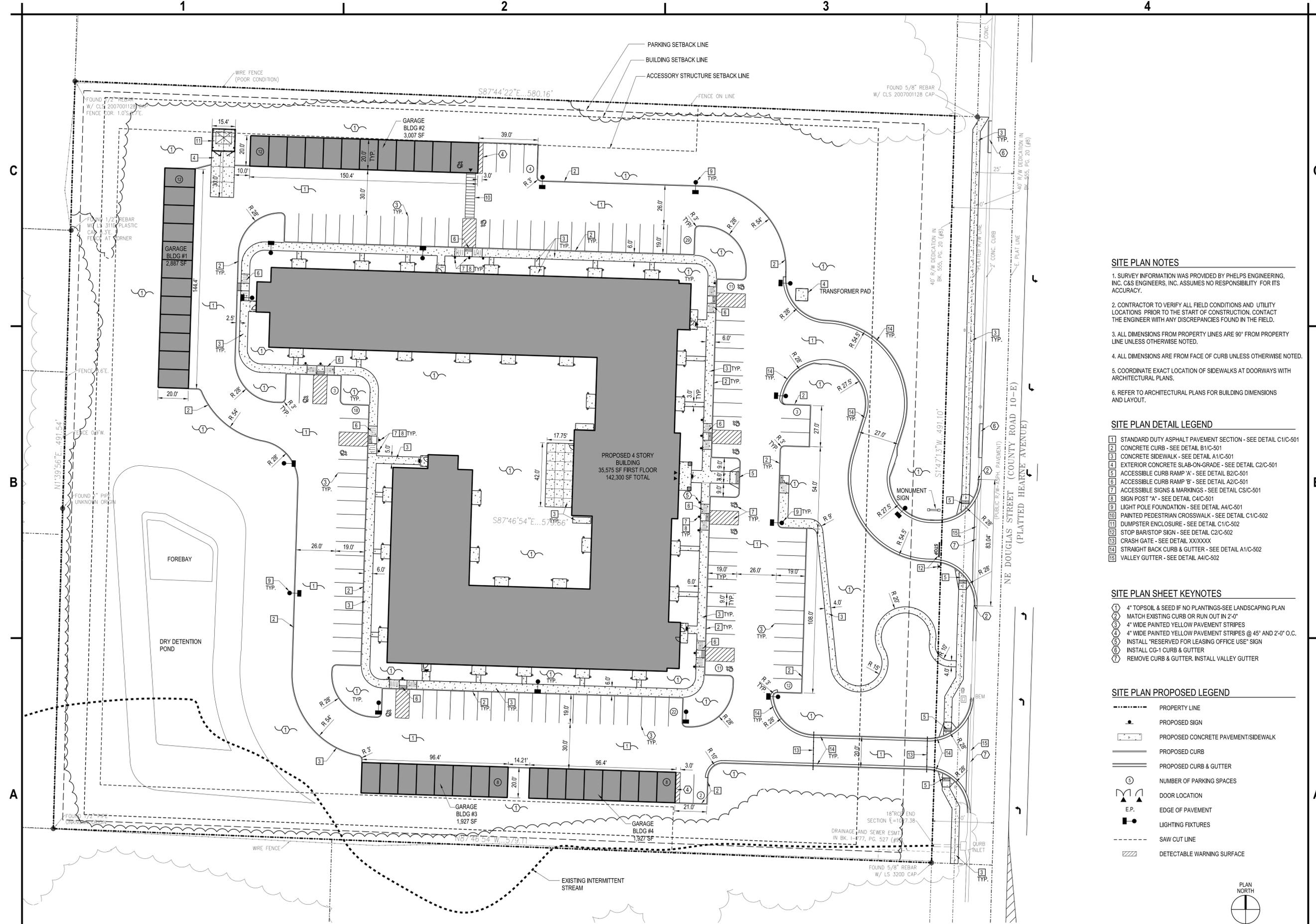
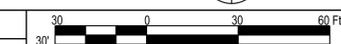
- 1 STANDARD DUTY ASPHALT PAVEMENT SECTION - SEE DETAIL C1/C-501
- 2 CONCRETE CURB - SEE DETAIL B1/C-501
- 3 CONCRETE SIDEWALK - SEE DETAIL A1/C-501
- 4 EXTERIOR CONCRETE SLAB-ON-GRADE - SEE DETAIL C2/C-501
- 5 ACCESSIBLE CURB RAMP 'A' - SEE DETAIL B2/C-501
- 6 ACCESSIBLE CURB RAMP 'B' - SEE DETAIL A2/C-501
- 7 ACCESSIBLE SIGNS & MARKINGS - SEE DETAIL CS/C-501
- 8 SIGN POST 'A' - SEE DETAIL C4/C-501
- 9 LIGHT POLE FOUNDATION - SEE DETAIL A4/C-501
- 10 PAINTED PEDESTRIAN CROSSWALK - SEE DETAIL C1/C-502
- 11 DUMPSTER ENCLOSURE - SEE DETAIL C1/C-502
- 12 STOP BAR/STOP SIGN - SEE DETAIL C2/C-502
- 13 CRASH GATE - SEE DETAIL XX/XXXX
- 14 STRAIGHT BACK CURB & GUTTER - SEE DETAIL A1/C-502
- 15 VALLEY GUTTER - SEE DETAIL A4/C-502

SITE PLAN SHEET KEYNOTES

- 1 4" TOPSOIL & SEED IF NO PLANTINGS-SEE LANDSCAPING PLAN
- 2 MATCH EXISTING CURB OR RUN OUT IN 2'-0"
- 3 4" WIDE PAINTED YELLOW PAVEMENT STRIPES
- 4 4" WIDE PAINTED YELLOW PAVEMENT STRIPES @ 45° AND 2'-0" O.C.
- 5 INSTALL "RESERVED FOR LEASING OFFICE USE" SIGN
- 6 INSTALL CG-1 CURB & GUTTER
- 7 REMOVE CURB & GUTTER. INSTALL VALLEY GUTTER

SITE PLAN PROPOSED LEGEND

- PROPERTY LINE
- PROPOSED SIGN
- ▭ PROPOSED CONCRETE PAVEMENT/SIDEWALK
- PROPOSED CURB
- PROPOSED CURB & GUTTER
- Ⓟ NUMBER OF PARKING SPACES
- ⤴ DOOR LOCATION
- ⬢ E.P. EDGE OF PAVEMENT
- ⬢ LIGHTING FIXTURES
- - - SAW CUT LINE
- ▨ DETECTABLE WARNING SURFACE

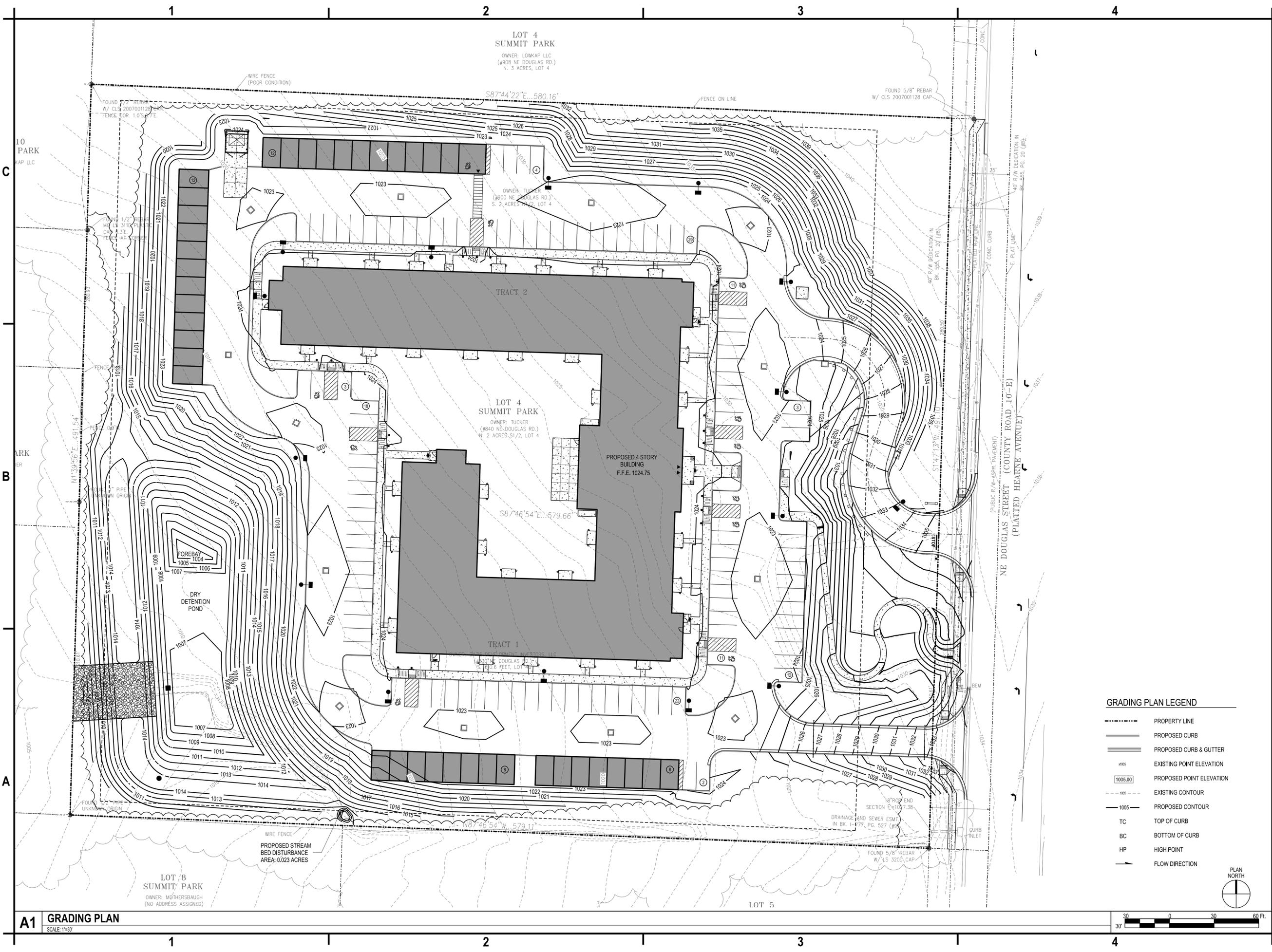


A1 SITE PLAN
 SCALE: 1"=30'

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	DESIGNED BY:	E. DANIEL
	CHECKED BY:	E. DANIEL

SITE PLAN

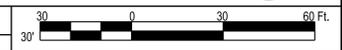
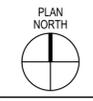
C-102



A1 GRADING PLAN
SCALE: 1"=30'

GRADING PLAN LEGEND

- PROPERTY LINE
- ===== PROPOSED CURB
- ===== PROPOSED CURB & GUTTER
- 1025.00 EXISTING POINT ELEVATION
- 1005.00 PROPOSED POINT ELEVATION
- - - - - EXISTING CONTOUR
- PROPOSED CONTOUR
- TC TOP OF CURB
- BC BOTTOM OF CURB
- HP HIGH POINT
- FLOW DIRECTION



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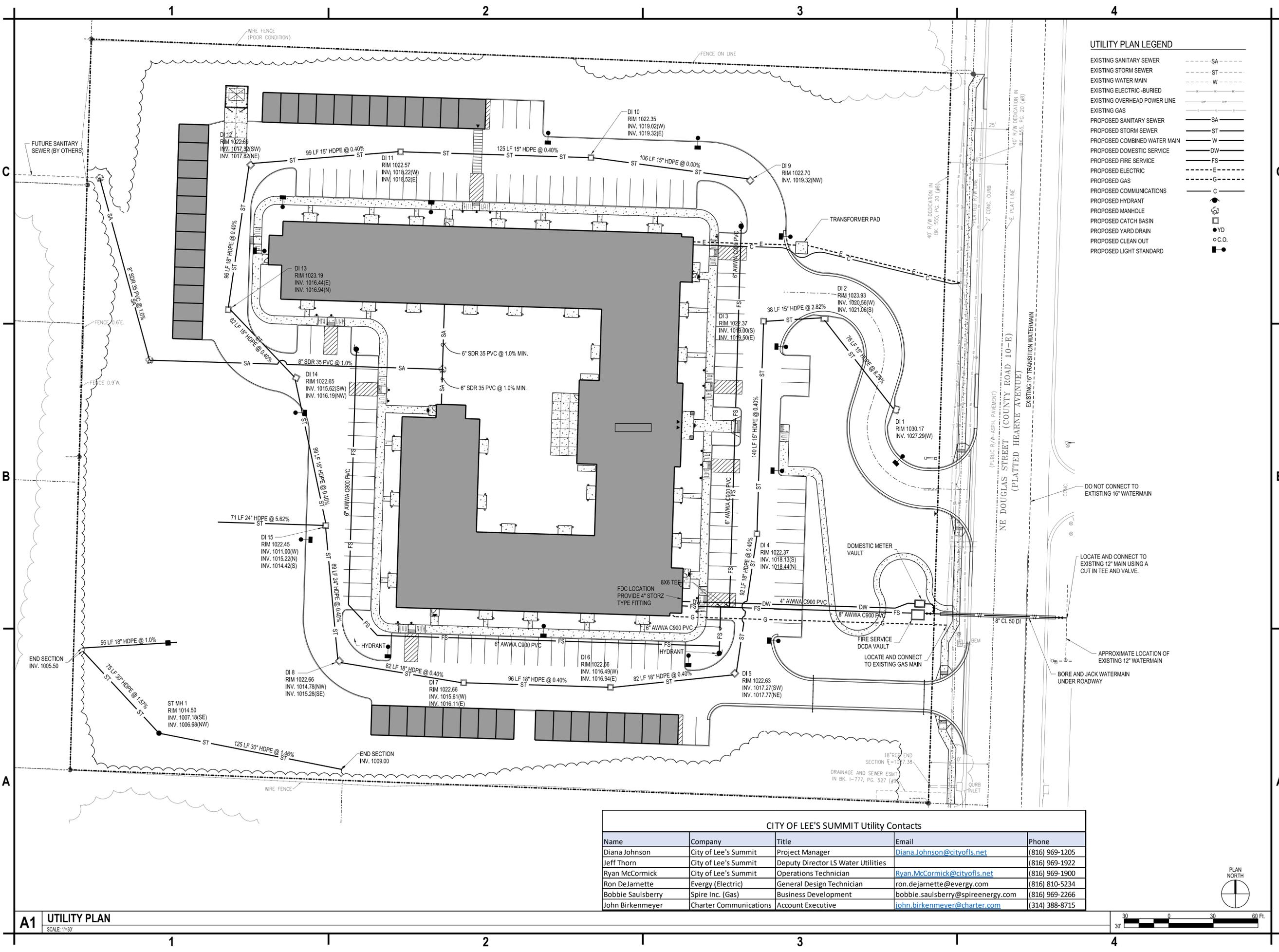
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GRADING PLAN

C-103



UTILITY PLAN LEGEND

EXISTING SANITARY SEWER	--- SA
EXISTING STORM SEWER	--- ST
EXISTING WATER MAIN	--- W
EXISTING ELECTRIC -BURIED	--- E
EXISTING OVERHEAD POWER LINE	--- O
EXISTING GAS	--- G
PROPOSED SANITARY SEWER	--- SA
PROPOSED STORM SEWER	--- ST
PROPOSED COMBINED WATER MAIN	--- W
PROPOSED DOMESTIC SERVICE	--- DW
PROPOSED FIRE SERVICE	--- FS
PROPOSED ELECTRIC	--- E
PROPOSED GAS	--- G
PROPOSED COMMUNICATIONS	--- C
PROPOSED HYDRANT	⊙
PROPOSED MANHOLE	⊠
PROPOSED CATCH BASIN	⊞
PROPOSED YARD DRAIN	⊙
PROPOSED CLEAN OUT	⊙
PROPOSED LIGHT STANDARD	⊙

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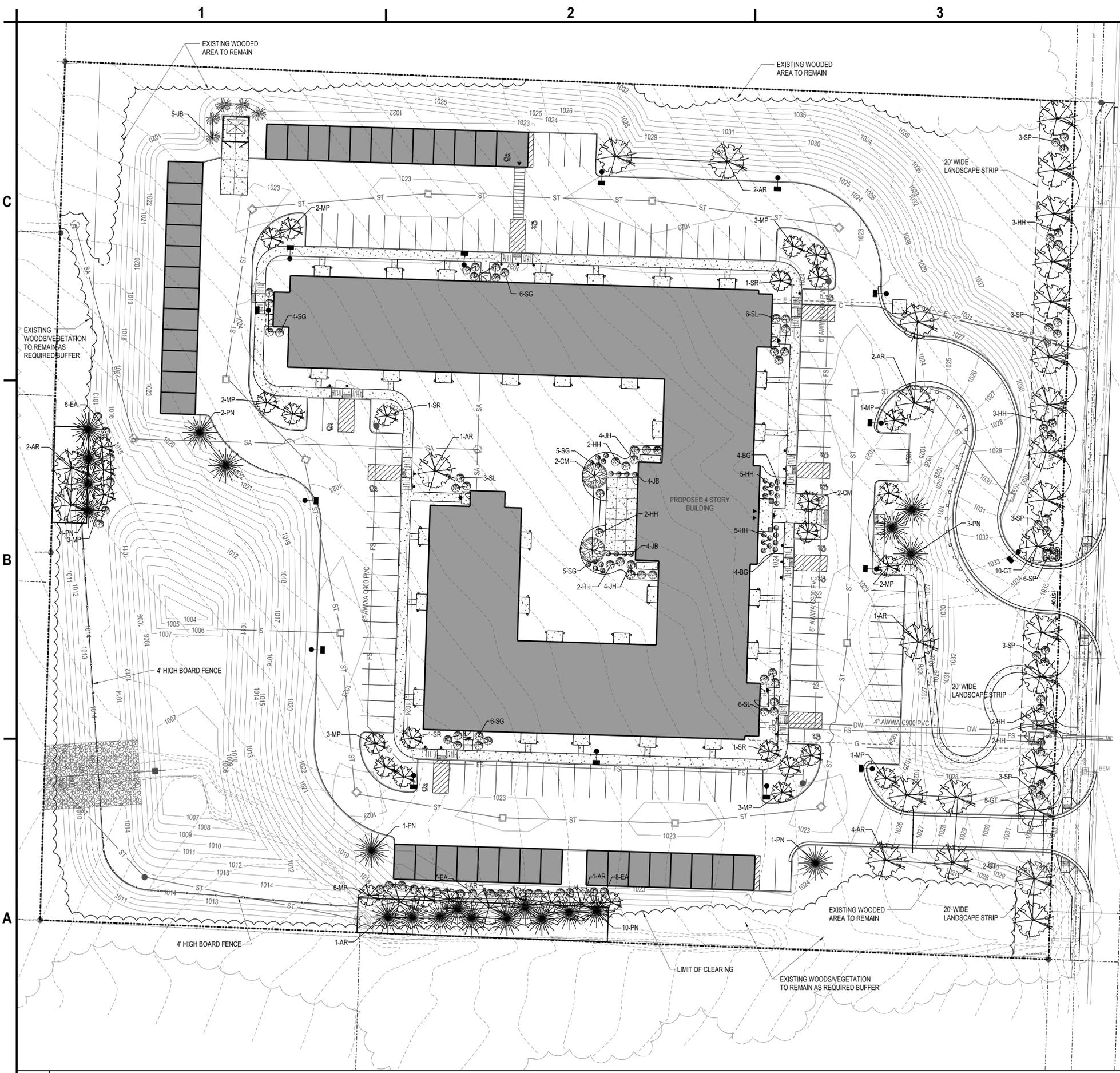
CITY OF LEE'S SUMMIT Utility Contacts

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Ryan McCormick	City of Lee's Summit	Operations Technician	Ryan.McCormick@cityofls.net	(816) 969-1900
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Bobbie Saulsberry	Spire Inc. (Gas)	Business Development	bobbie.saulsberry@spireenergy.com	(816) 969-2266
John Birkenmeyer	Charter Communications	Account Executive	john.birkenmeyer@charter.com	(314) 388-8715



A1 UTILITY PLAN
 SCALE: 1"=30'

C-104



KEY	QTY.	PLANT LIST BOTANICAL NAME	COMMON NAME	MINIMUM SIZE
AR	10	Acer Rubrum	Red Maple	3" Caliper
EA	21	Euonymus alatus "Compactus"	Dwarf Burning Bush	2 Gal. Container
MP	17	Malus "Prairifire"	Prairie Fire Crabapple	1 1/2 - 2" Caliper
PN	7	Pinus Nigra	Austrian Pine	8' Ht.

STREET FRONTAGE PLANTING TABLE				
KEY	QTY.	PLANT LIST BOTANICAL NAME	COMMON NAME	MINIMUM SIZE
GT	17	Gleditsia Tricantosa	Honeylocust	3" Caliper
HH	10	Hydrangea Macrophylla "Jane"	Little Lane Hydrangea	18-24" Ht. (2 Gal. Container)
SP	21	Spiraea Japonica "Little Princess"	Little Princess Spirea	18-24" Ht. (2 Gal. Container)

OPEN YARD AREA PLANTING TABLE				
KEY	QTY.	PLANT LIST BOTANICAL NAME	COMMON NAME	MINIMUM SIZE
AR	10	Acer Rubrum	Red Maple	3" Caliper
BG	16	Buxus "Green Velvet"	Green Velvet Boxwood	18-24" Ht. (2 Gal. Container)
CM	4	Cornus Florida	Flowering Dogwood	1 1/2 - 2" Caliper
HH	16	Hydrangea Macrophylla "Jane"	Little Lane Hydrangea	18-24" Ht. (2 Gal. Container)
JH	4	Juniperus Scopulorum "Blue Muffin"	Blue Muffin Juniper	5-6' Ht.
JH	8	Juniperus Chinesa "Hetzi Columnaris"	Hetz Columnar Chinese Juniper	4' Ht.
MP	17	Malus "Prairifire"	Prairie Fire Crabapple	1 1/2 - 2" Caliper
PN	7	Pinus Nigra	Austrian Pine	8' Ht.
SG	26	Spiraea Bumalda "Gold Flame"	Gold Flame Spirea	18-24"
SR	4	Syringa Reticulata "Topsy Silk"	Woody Silk Tree Lilac	1 1/2" Caliper
SL	14	Spiraea Japonica "Lemon Princess"	Lemon Princess Spirea	18-24" Ht. (2 Gal. Container)

LANDSCAPING CALCULATIONS:

STREET FRONTAGE: (1 TREE PER 30' & 1 SHRUB PER 20')
 491/30=17 TREES, 491/20=25 SHRUBS

OPEN YARD AREA: (1 TREE & 2 SHRUBS PER 5,000 SF)
 284,774 (ACREAGE) - 47,323 (BLDG) = 237,451 - 25,273 (WOODS TO REMAIN) = 212,178
 212,178/5000 = 42 TREES, 84 SHRUBS

INTERIOR GREEN SPACE = 5% REQUIRED, 7.0% PROVIDED

MEDIUM IMPACT SCREENING: (SHADE TREE 1/1000 SF, ORNAMENTAL 1/500 SF, EVERGREEN 1/300, SHRUB 1/200)
 3937/1000=4 SHADE TREES, 3937/500=8 ORNAMENTAL, 3937/300=14 EVERGREEN, 3937/200=20 SHRUBS

LANDSCAPING LEGEND:

-  PROPOSED DECIDUOUS TREE
-  PROPOSED EVERGREEN TREE
-  PROPOSED SHRUB

PLAN NORTH


30' 0 30 60 Ft.




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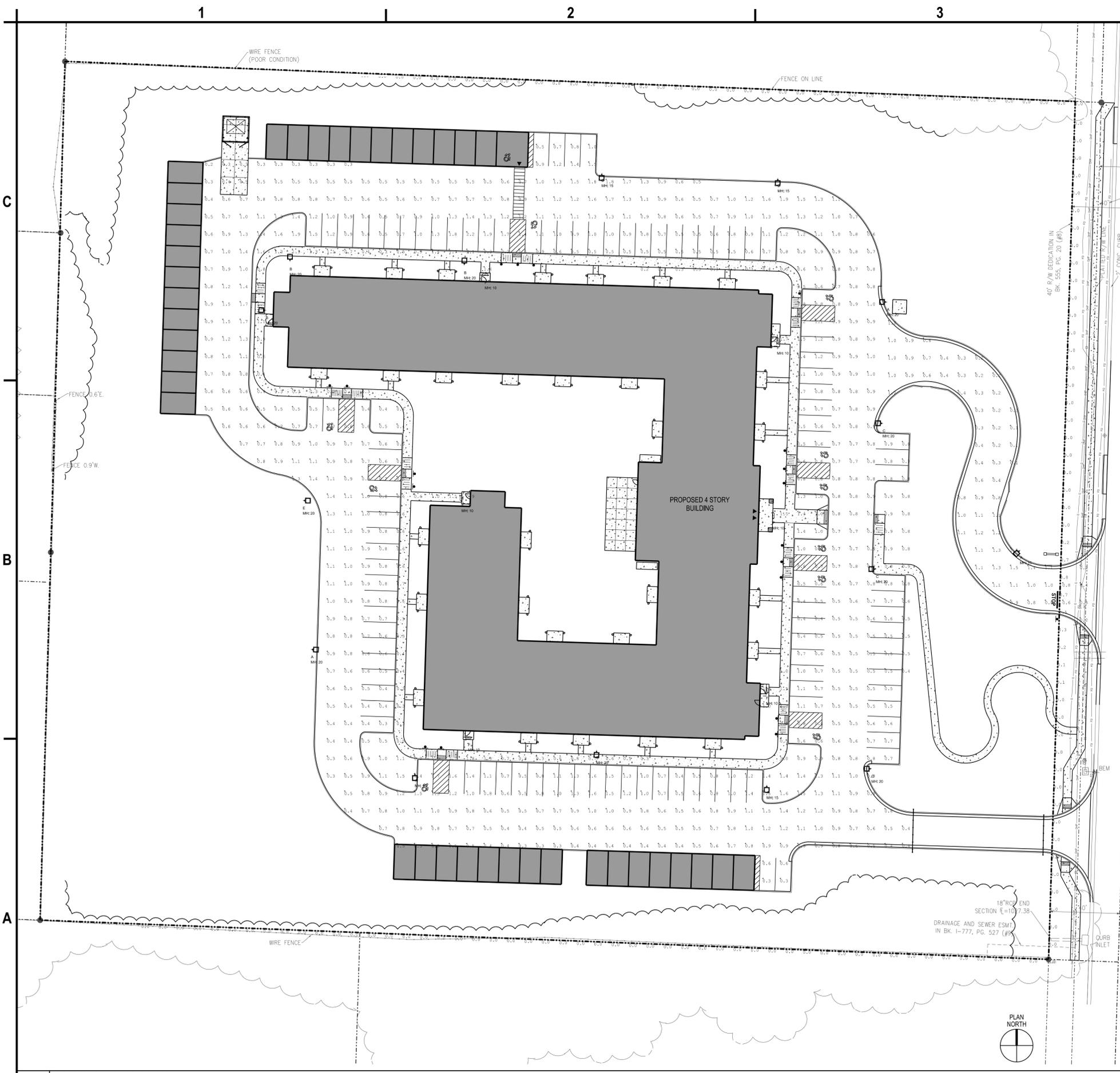
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LANDSCAPING PLAN

C-105



D-Series Size 1 LED Area Luminaire

Specifications

- EPA: 0.69 ft² (0.064)
- Length: 32.71" (836)
- Width: 14.26" (362)
- Height H1: 7.88" (200)
- Height H2: 2.73" (69)
- Weight: 24 lbs (10.9)

Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information EXAMPLE: DSX1 LED P7 40K 70CRI TSM MVOLT SPA NTAIR2 PRHN DBXBD

Series	Options	Color Temperature	Color Rendering	Beam Spread	Mounting	Shipping
DSX1 LED	Forward optics	40K	90CRI	120°	180°	Standard
DSX1 LED	Reverse optics	40K	90CRI	120°	180°	Standard
DSX1 LED	Diffuse optics	40K	90CRI	120°	180°	Standard

Shipping Included

Item	Description	Item	Description
DSX1 LED	Light pole (not included with luminaire)	DSX1 LED	Light pole (not included with luminaire)
DSX1 LED	Light pole (not included with luminaire)	DSX1 LED	Light pole (not included with luminaire)

WDGE2 LED Architectural Wall Sconce Precision Refractive Optic

Specifications

- Depth (D1): 7"
- Depth (D2): 1.5"
- Height: 9"
- Width: 11.5"
- Weight (without options): 13.5 lbs

Introduction

The WDGE2 family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean, modern design comes in four sizes with lumens packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with "light" A+ wireless controls, the WDGE2 family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optic provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

WDGE2 LED Family Overview

Luminaire	Optic	Standard (18, 9")	Color (CRI)	Series	TL	T2	T3	T4	T5	T6
WDGE2 LED	Refractive	18W	90CRI	Standard	1,200	2,400	3,600	4,800	6,000	7,200
WDGE2 LED	Refractive	36W	90CRI	Standard	2,400	4,800	7,200	9,600	12,000	14,400
WDGE2 LED	Refractive	72W	90CRI	Standard	4,800	9,600	14,400	19,200	24,000	28,800

Ordering Information EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DBXBD

Series	Options	Color Temperature	Color Rendering	Beam Spread	Mounting	Shipping
WDGE2 LED	Forward optics	40K	80CRI	120°	180°	Standard
WDGE2 LED	Reverse optics	40K	80CRI	120°	180°	Standard
WDGE2 LED	Diffuse optics	40K	80CRI	120°	180°	Standard

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Entrance Drive	Illuminance	Fc	0.69	1.5	0.1	6.90	15.00
Parking Area	Illuminance	Fc	0.82	2.3	0.2	4.10	11.50
Property Line	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.
ROW Line	Illuminance	Fc	0.07	0.8	0.0	N.A.	N.A.

Luminaire Schedule

Symbol	Tag	Qty	Arrangement	LLF	Description	Lum. Lumens
F	6	SINGLE	1,000	WDGE2 LED P1 40K 80CRI TFTM	1245	
A	5	SINGLE	0,900	DSX1 LED P1 40K 70CRI TSW HS	5473	
B	4	SINGLE	0,900	DSX1 LED P1 40K 70CRI BLC4	5704	
C	3	SINGLE	0,900	DSX1 LED P1 40K 70CRI TSW	8056	
D	2	SINGLE	0,900	DSX1 LED P2 40K 70CRI TSW HS	7036	
E	1	SINGLE	0,900	DSX1 LED P3 40K 70CRI TSW	14602	

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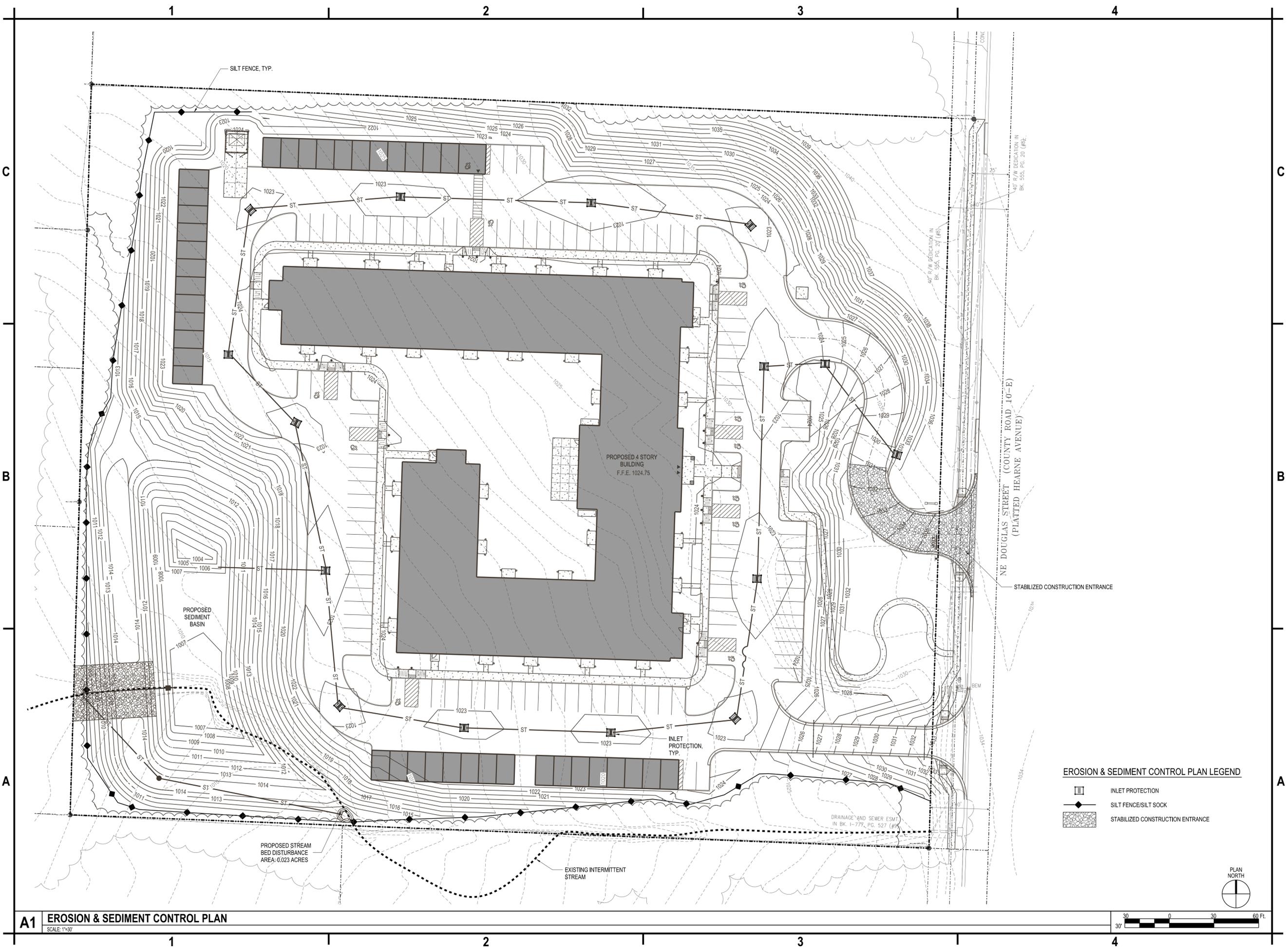
Eric J. Daniel, P.E.
 License No. PE-2023008829
 Date: 08/15/2023

**LEE'S SUMMIT
 SENIOR APARTMENTS
 830-900 NE DOUGLAS STREET
 LEE'S SUMMIT, MO**

MARK	DATE	DESCRIPTION
REVISIONS		
		PROJECT NO: F53.519.002
		DATE: AUGUST 15, 2023
		DRAWN BY: S. SCHIENER
		DESIGNED BY: E. DANIEL
		CHECKED BY: E. DANIEL

PHOTOMETRIC PLAN

C-106



A1 EROSION & SEDIMENT CONTROL PLAN
SCALE: 1"=30'



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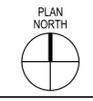


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- EROSION & SEDIMENT CONTROL PLAN LEGEND**
- INLET PROTECTION
 - SILT FENCE/SILT SOCK
 - STABILIZED CONSTRUCTION ENTRANCE



**EROSION &
SEDIMENT
CONTROL
PLAN**

C-107



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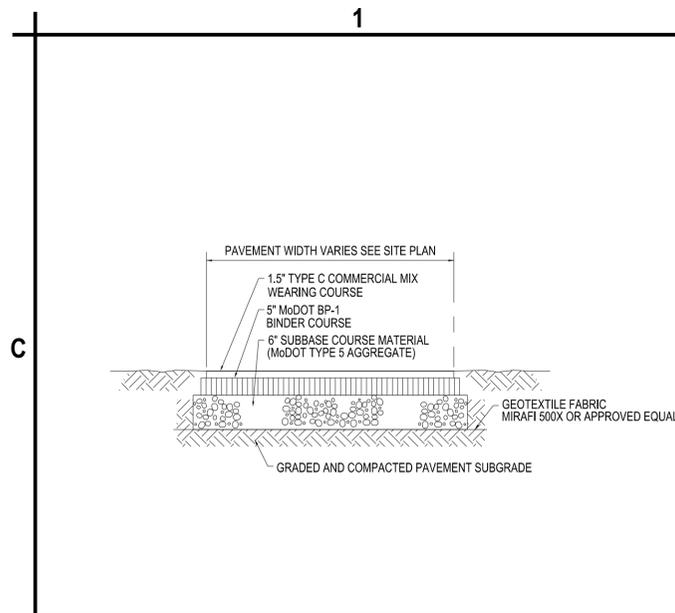
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830-900 NE DOUGLAS STREET
LEE'S SUMMIT, MO**

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DATE: AUGUST 15, 2023		
DRAWN BY: S. SCHIENER		
DESIGNED BY: E. DANIEL		
CHECKED BY: E. DANIEL		

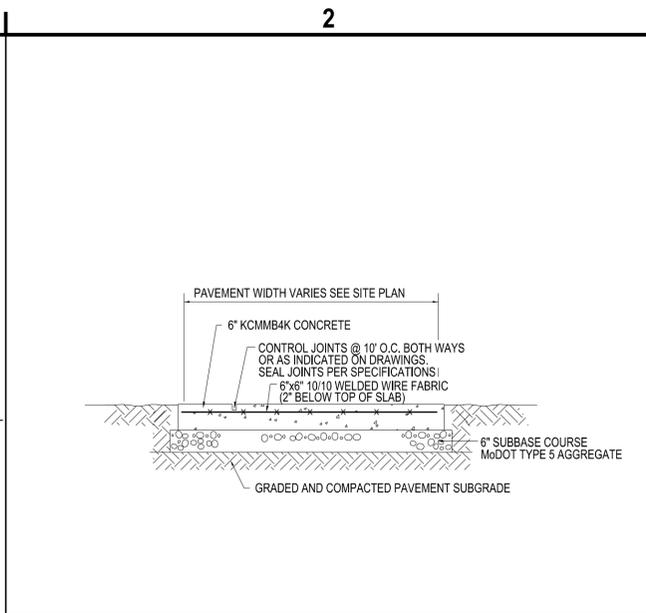
**HIGHWAY
WIDENING
PLAN**

C-108

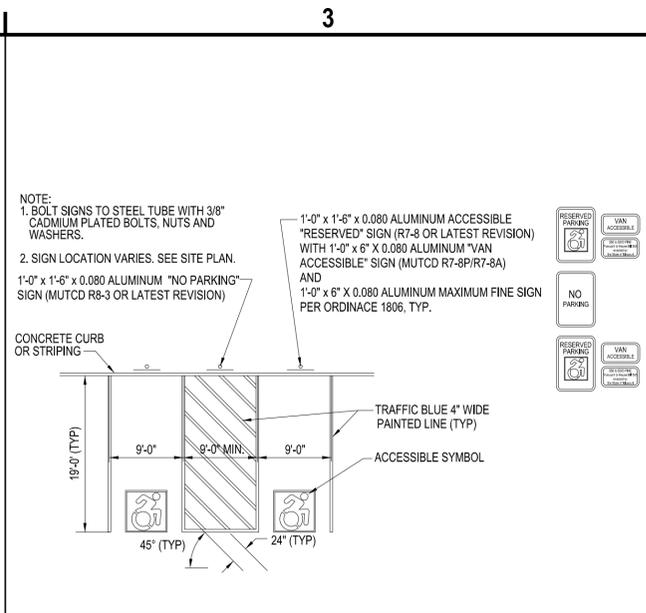
A1 HIGHWAY WIDENING PLAN
SCALE: 1"=40'



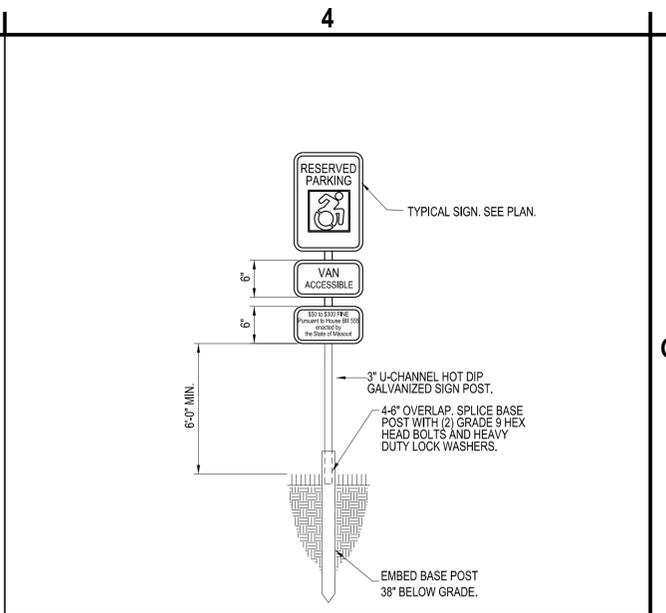
C1 STANDARD DUTY ASPHALT PAVEMENT SECTION
SCALE: NTS



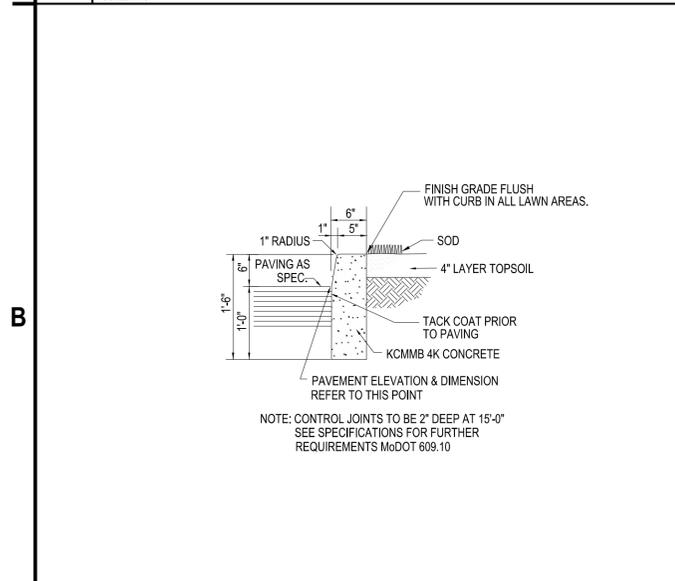
C2 EXTERIOR CONCRETE SLAB-ON-GRADE
SCALE: NTS



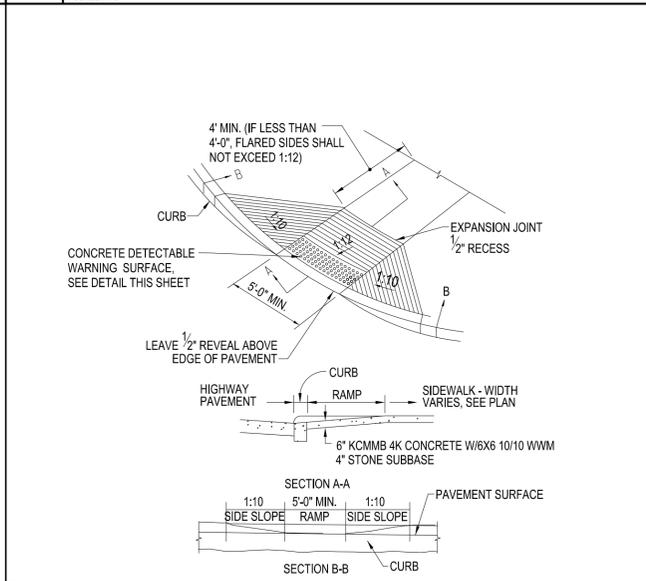
C3 ACCESSIBLE SIGNS & MARKINGS
SCALE: NTS



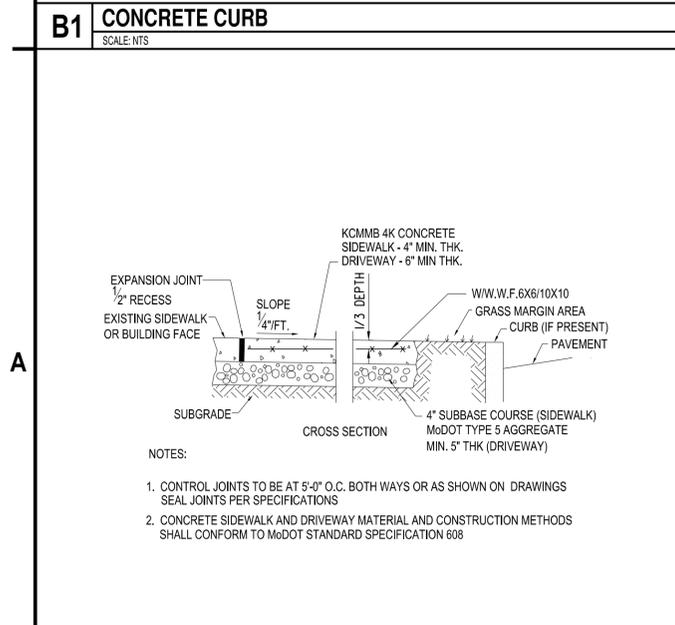
C4 SIGN POST "A"
SCALE: NTS



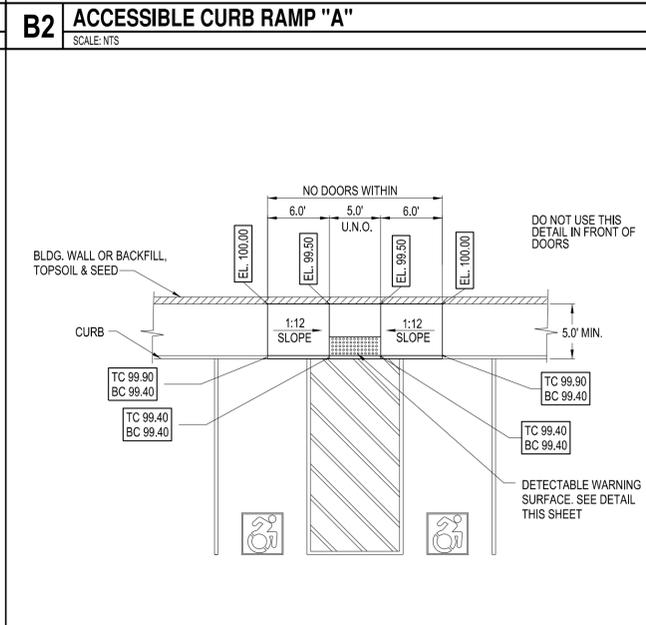
B1 CONCRETE CURB
SCALE: NTS



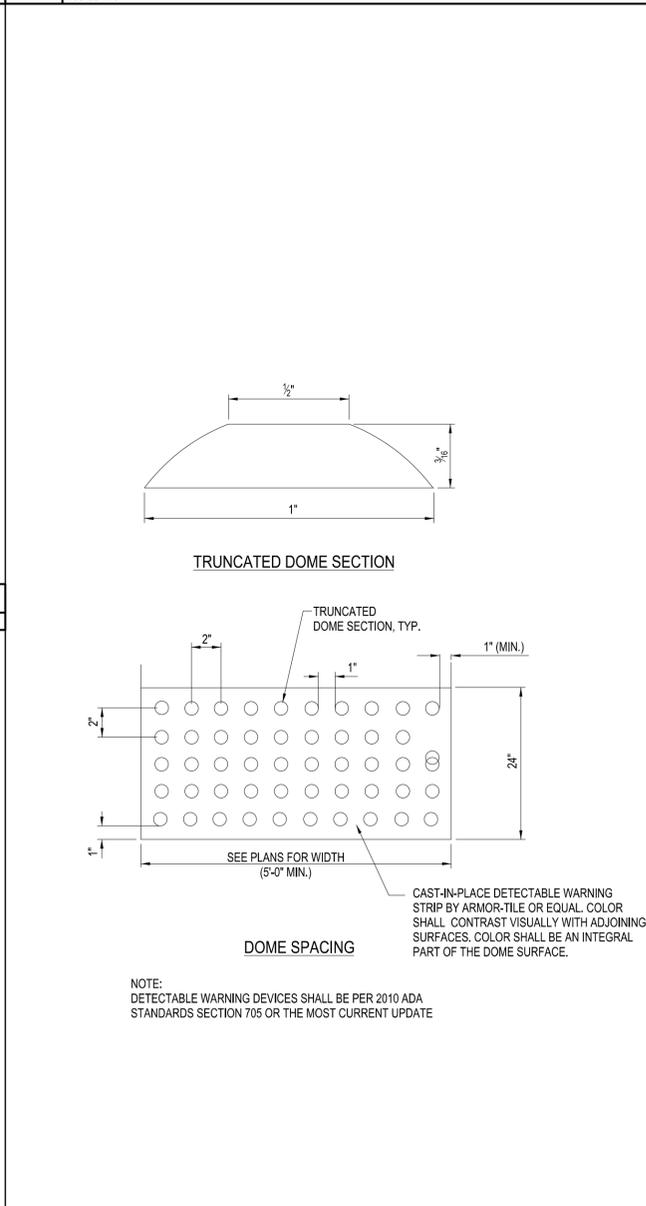
B2 ACCESSIBLE CURB RAMP "A"
SCALE: NTS



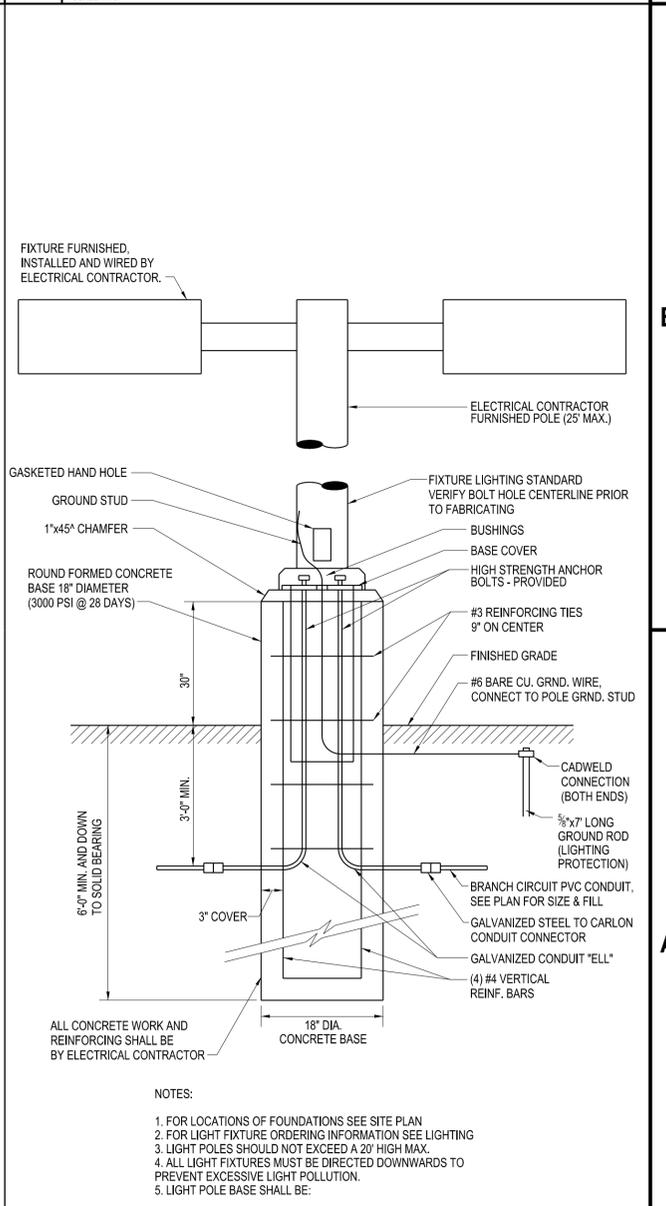
A1 CONCRETE SIDEWALK
SCALE: NTS



A2 ACCESSIBLE CURB RAMP "B"
SCALE: NTS



A3 DETECTABLE WARNING SURFACE
SCALE: NTS



A4 LIGHT POLE FOUNDATION
SCALE: NTS



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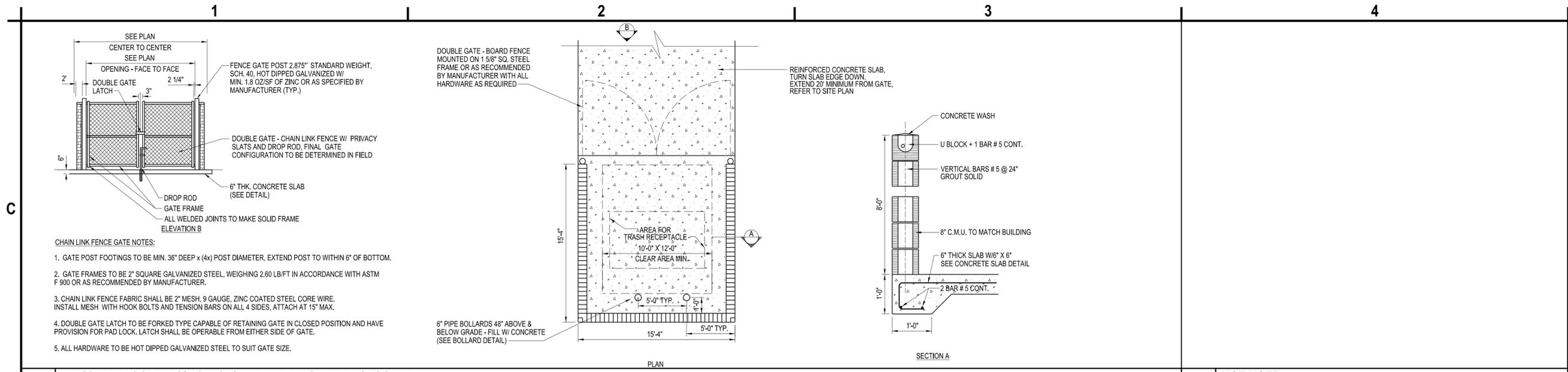
Eric J. Daniel, P.E.
License No. PE-2023008829
Date: 08/15/2023

**LEE'S SUMMIT
SENIOR APARTMENTS
830-900 NE DOUGLAS STREET
LEE'S SUMMIT, MO**

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: F53.519.002		
DATE: AUGUST 15, 2023		
DRAWN BY: S. SCHIENER		
DESIGNED BY: E. DANIEL		
CHECKED BY: E. DANIEL		

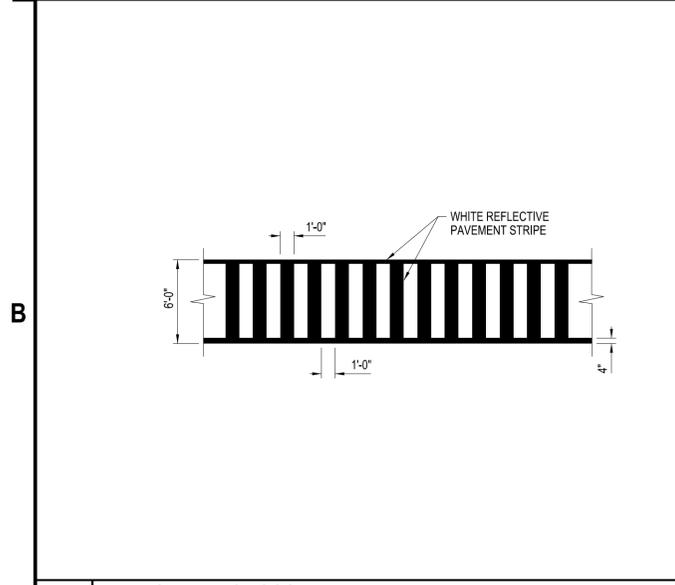
**SITE
DETAILS**

C-501

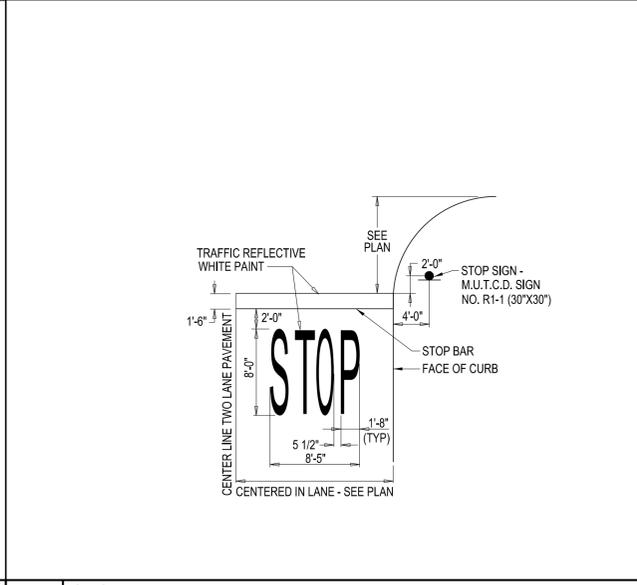


C1 TYPICAL MASONRY SINGLE/DOUBLE DUMPSTER ENCLOSURE
SCALE: NTS

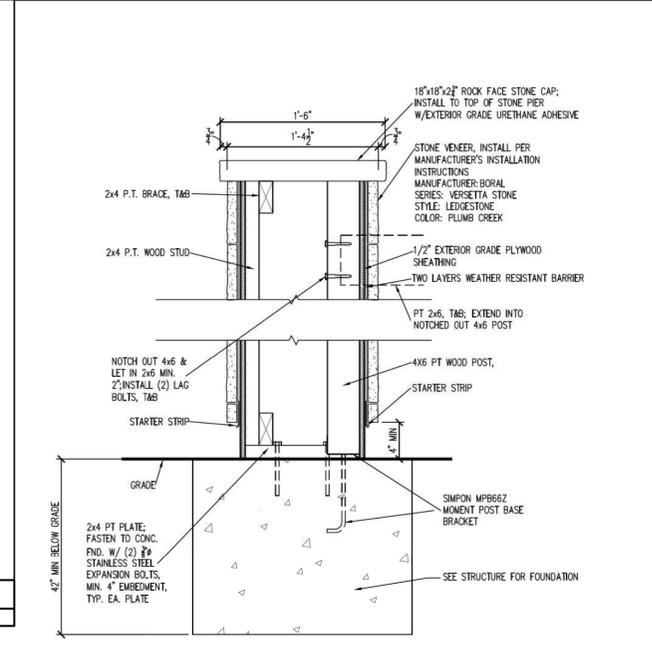
C4 NOT USED
SCALE: NTS



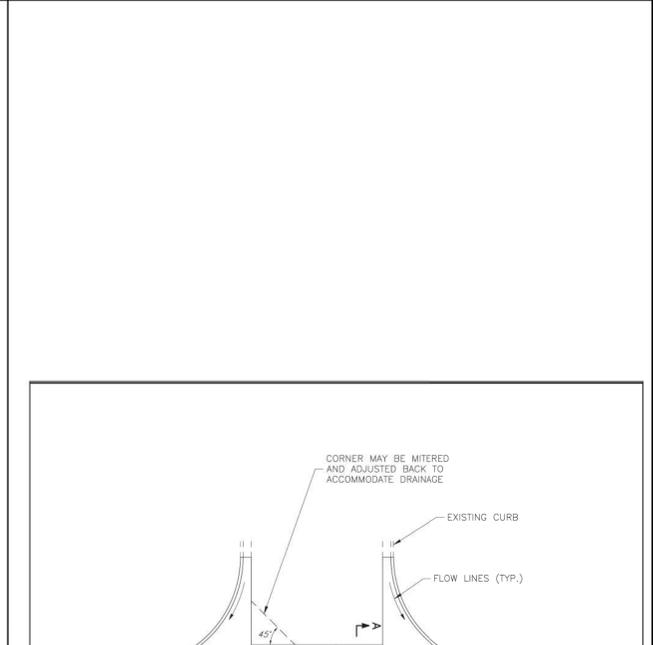
B1 PEDESTRIAN CROSSWALK DETAIL
SCALE: NTS



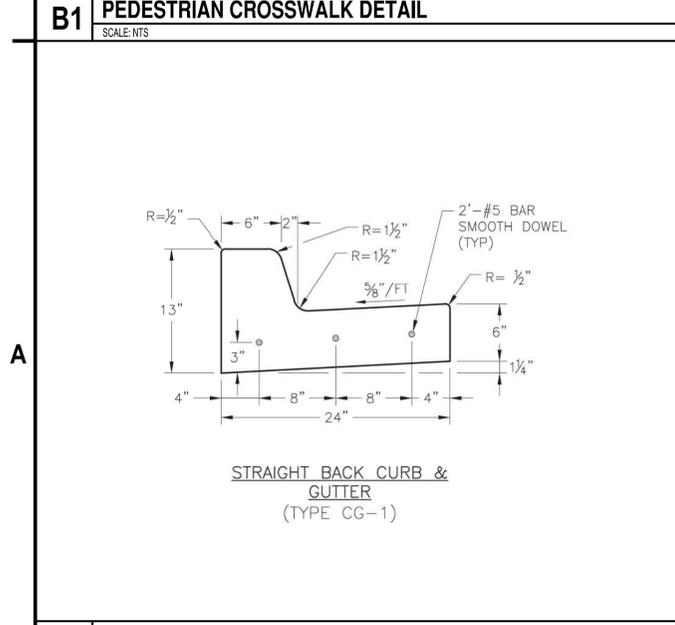
B2 STOP BAR
SCALE: NTS



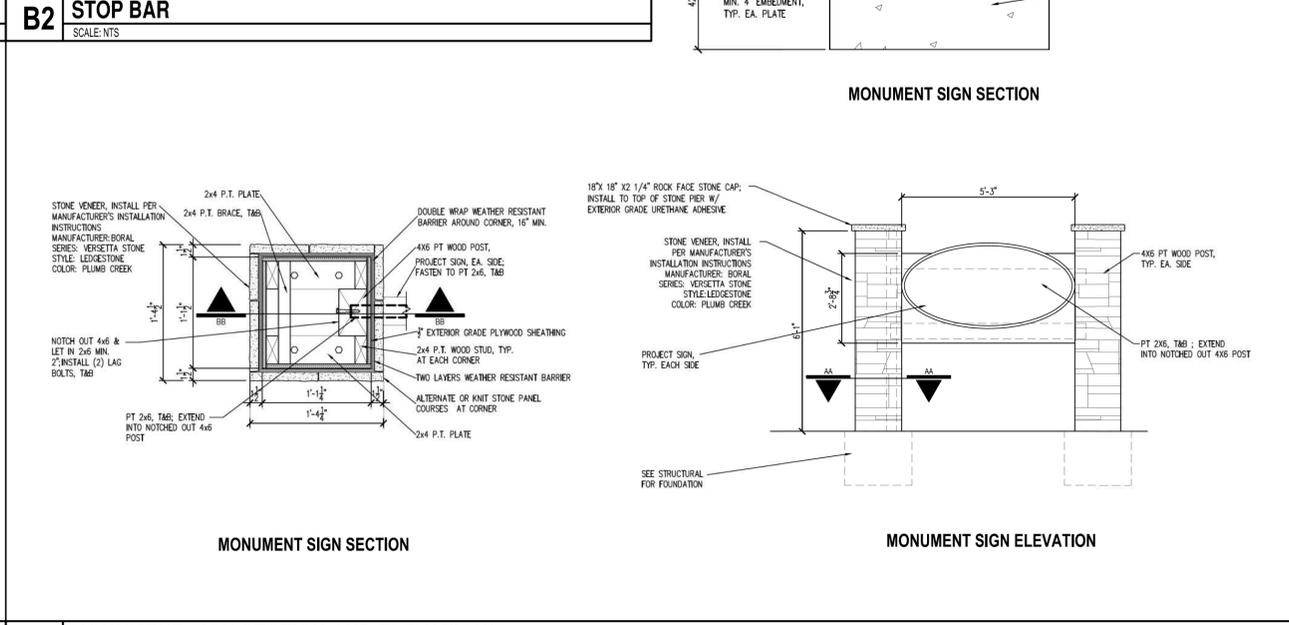
MONUMENT SIGN SECTION



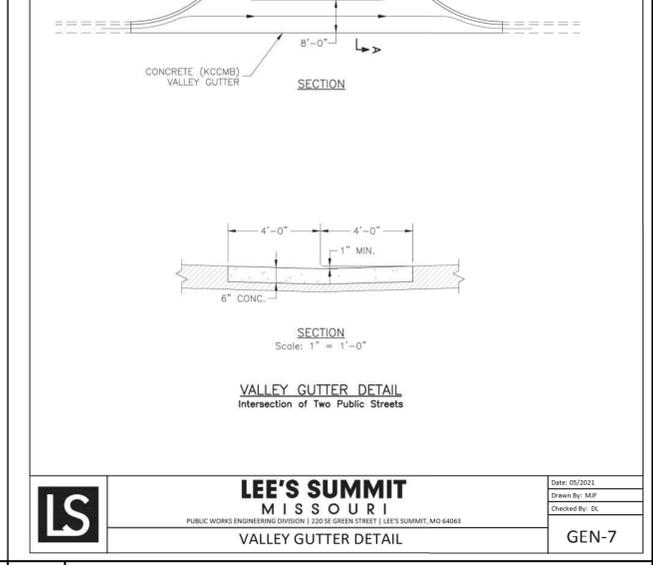
SECTION



A1 STRAIGHT BACK CURB & GUTTER
SCALE: NTS



A2 MONUMENT SIGN SECTION AND ELEVATIONS
SCALE: NTS



SECTION
Scale: 1" = 1'-0"

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64083

DATE: 05/2023
DRAWN BY: MP
CHECKED BY: DL

GEN-7



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**LEE'S SUMMIT
SENIOR APARTMENTS
830-900 NE DOUGLAS STREET
LEE'S SUMMIT, MO**

MARK	DATE	DESCRIPTION

REVISIONS	
PROJECT NO:	F53.519.002
DATE:	AUGUST 15, 2023
DRAWN BY:	S. SCHIENER
DESIGNED BY:	E. DANIEL
CHECKED BY:	E. DANIEL

SITE DETAILS

C-502

PLANTING SPECIFICATION

1. SCOPE OF WORK
 - A. THIS WORK SHALL CONSIST OF PERFORMING, CLEARING, AND GRUBBING, SOIL PREPARATION, FINISH GRADING, PLANTING, DRAINAGE, INCLUDING ALL LABOR MATERIALS, TOOLS, EQUIPMENT, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT.
2. MATERIALS
 - A. PLANTS - ALL PLANTS SHALL BE HEALTHY, OF NORMAL GROWTH, WELL ROOTED FREE FROM DISEASE AND INSECTS, QUALITY AND OF PLANT MATERIAL THAT SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1) AND BE OF NUMBER ONE GRADE.
 - B. VARIETIES AND SIZES OF PLANTS SHALL BE AS SHOWN ON DRAWINGS
3. FERTILIZER
 - A. FERTILIZER SHALL BE MILORGANITE (6-2-0) OR APPROVED EQUAL.
4. GENERAL WORK PROCEDURES
 - A. LANDSCAPE WORK SHALL BE ACCORDING TO THE WORKMANLIKE STANDARDS ESTABLISHED FOR LANDSCAPE CONSTRUCTION AND PLANTING.
5. WEEDING
 - A. BEFORE AND DURING PRELIMINARY GRADING AND FINISH GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
6. SOIL CONDITIONING
 - A. CULTIVATE ALL AREAS TO BE PLANTED TO A DEPTH OF 6". ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
7. PLANTING

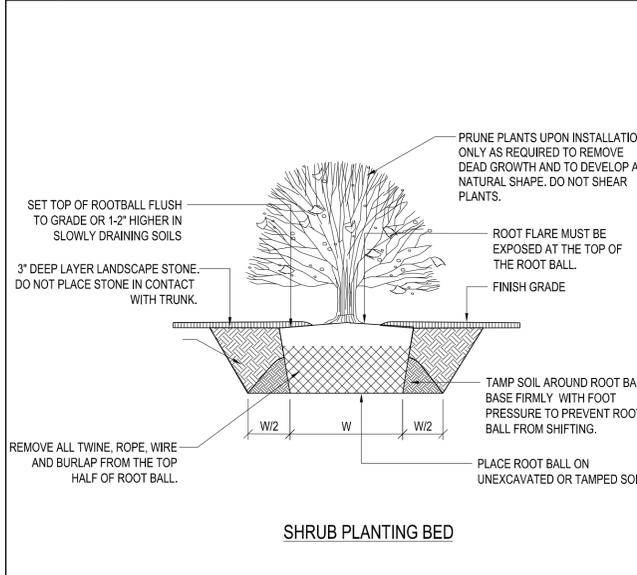
POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.

 - A. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, AS SHOWN ON THE PLANTING DETAILS.
 - 3 PARTS TOPSOIL
 - 1 PART PEAT MOSS OR COMPOST
 - 1/3 PART MILORGANITE FERTILIZER
 - B. PREPARED SOIL SHALL BE TAMPED FIRMLY AT BOTTOM OF PIT. FILL PREPARED SOIL AROUND BALL OF PLAN 1/2 WAY, AND WATER. COMPLETE BACK-FILLING AND WATER THOROUGHLY.
 - C. ALL PLANTS SHALL BE SET SO THAT, WHEN SETTLED, THEY BEAR THE SAME RELATION TO THE REQUIRED GRADE AS THEY BORE TO THE NATURAL BEFORE BEING TRANSPLANTED.
 - D. IMMEDIATELY AFTER PLANTING, STAKE ALL TREES PER PLAN AND AS DIRECTED BY LANDSCAPE ARCHITECT
 - E. PREPARE RAISED EARTH SAUCER AS WIDE AS PLANTING HOLE OF EACH PLANT.
 - F. WATER IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED.
 - G. AFTER SHRUB BEDS AND TREE SAUCERS ARE BACKFILLED AND FINE GRADED, MULCH WITH 3" DEPTH OF DARK, SHREDDED HARDWOOD BARK MULCH.
8. FINISH GRADING
 - A. PLUS/MINUS .1 FOOT OF FINISH GRADE.
 - B. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN, UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE. SOIL AREAS ADJACENT TO THE BUILDING SHALL SLOPE AWAY FROM THE BUILDING.
 - C. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER.
9. GUARANTEE
 - A. CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR.
10. CLEAN-UP
 - A. UPON THE COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT AND DEBRIS RESULTING FROM HIS WORK. ALL ACCEPTABLE CONDITIONS AS APPROVED BY THE OWNERS AUTHORIZED REPRESENTATIVE.
11. MAINTENANCE

MAINTENANCE PERIOD TO COMMENCE AFTER FINAL INSPECTION.

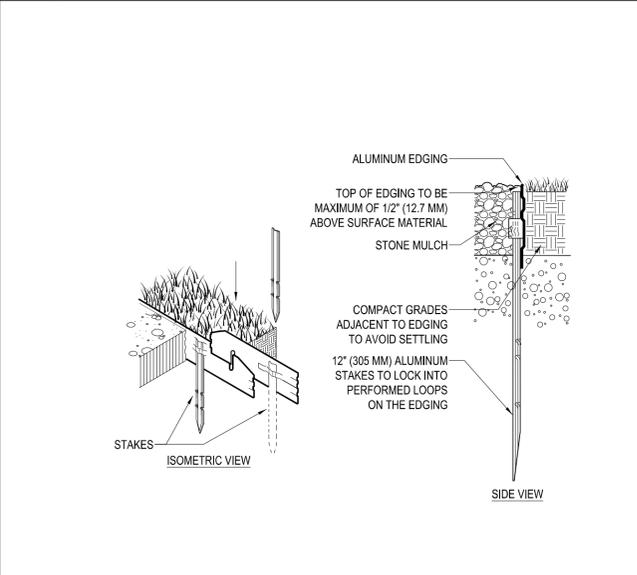
 - A. MAINTENANCE PERIOD FOR THIS CONTRACT SHALL BE 90 CALENDAR DAYS COMMENCING AFTER FINAL INSPECTION OF CONSTRUCTION. MAINTAIN TREES, SHRUBS AND OTHER PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. MAINTAIN LAWNS BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, AND OTHER OPERATIONS SUCH AS ROLLING, REGRADING, AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

C2 NOT USED
SCALE: NTS

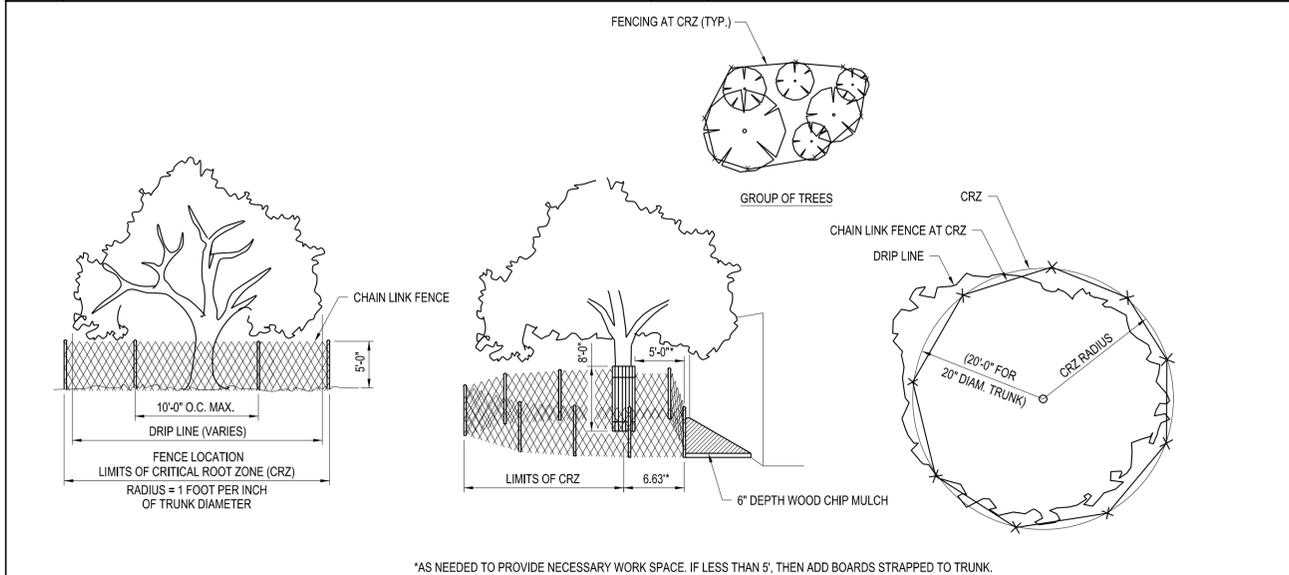


B2 SHRUB PLANTING DETAIL (LANDSCAPE STONE)
SCALE: NTS

C3 STONE MULCH DETAIL
SCALE: NTS



B3 LANDSCAPE EDGING DETAIL
SCALE: NTS

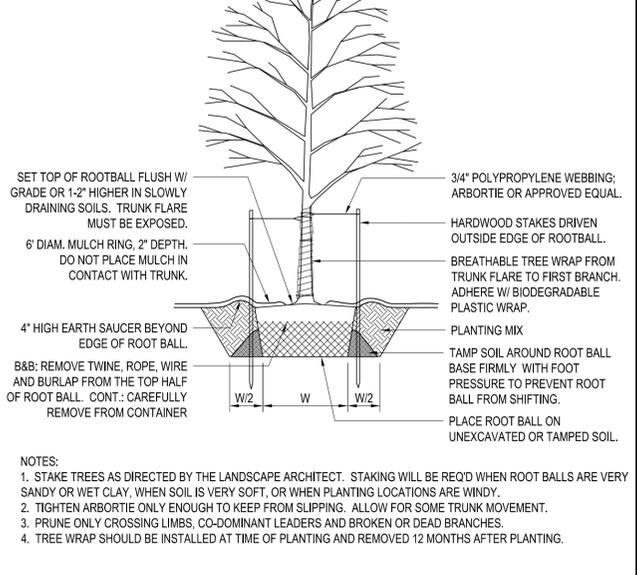


A2 TREE PROTECTION DETAIL
SCALE: NTS

C4 EVERGREEN TREE PLANTING DETAIL
SCALE: NTS



A4 DECIDUOUS TREE PLANTING DETAIL
SCALE: NTS



NOTES:
 1. STAKE TREES AS DIRECTED BY THE LANDSCAPE ARCHITECT. STAKING WILL BE REQ'D WHEN ROOT BALLS ARE VERY SANDY OR WET CLAY. WHEN SOIL IS VERY SOFT, OR WHEN PLANTING LOCATIONS ARE WINDY.
 2. TIGHTEN ARBORTIE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT.
 3. PRUNE ONLY CROSSING LIMBS, CO-DOMINANT LEADERS AND BROKEN OR DEAD BRANCHES.
 4. TREE WRAP SHOULD BE INSTALLED AT TIME OF PLANTING AND REMOVED 12 MONTHS AFTER PLANTING.

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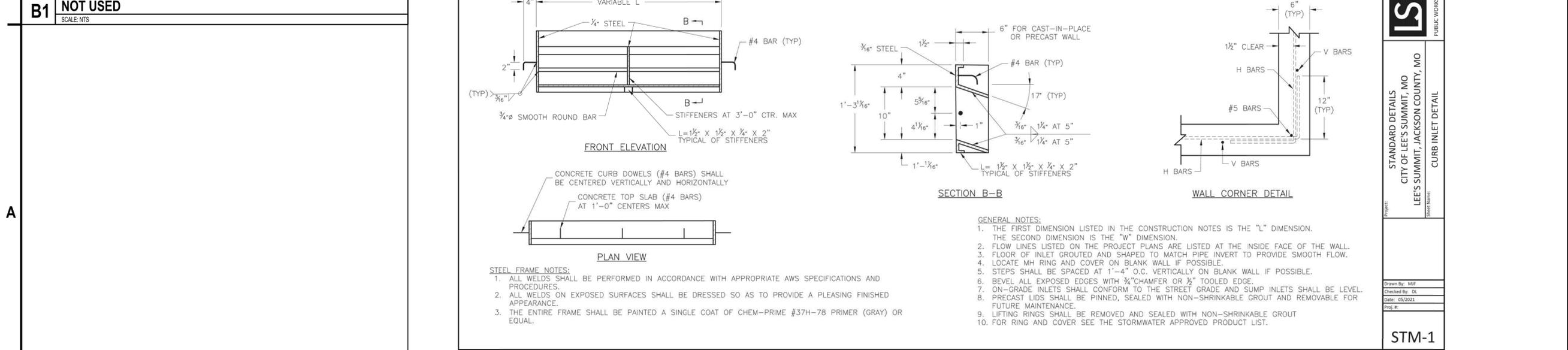
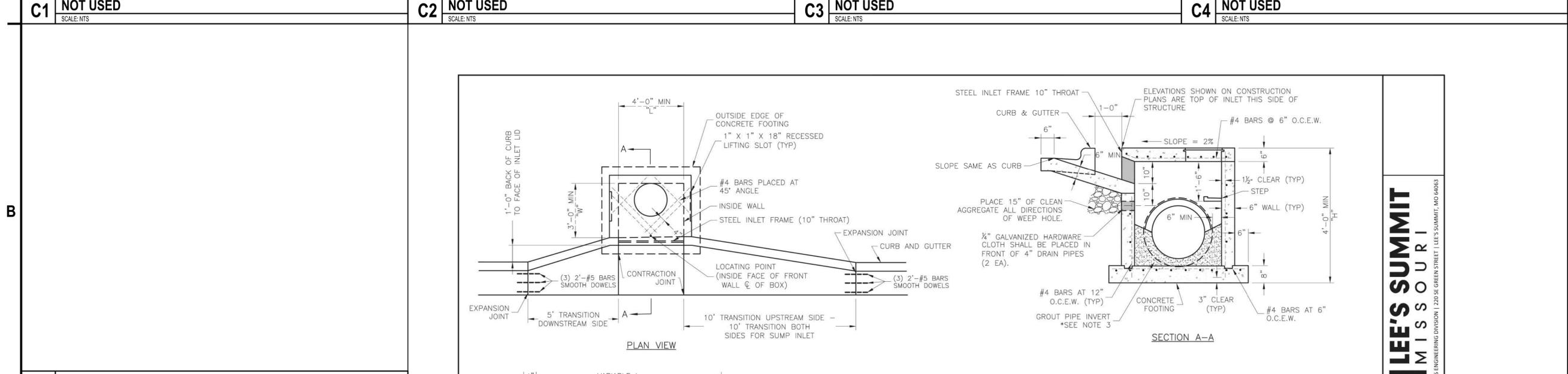
**LEE'S SUMMIT
 SENIOR APARTMENTS
 830-900 NE DOUGLAS STREET
 LEE'S SUMMIT, MO**

MARK	DATE	DESCRIPTION
REVISIONS		
		PROJECT NO: F53.519.002
		DATE: AUGUST 15, 2023
		DRAWN BY: S. SCHIENER
		DESIGNED BY: E. DANIEL
		CHECKED BY: E. DANIEL

**SITE, LANDSCAPING
 DETAILS AND NOTES**

C-503

C1 NOT USED SCALE: NTS	C2 NOT USED SCALE: NTS	C3 NOT USED SCALE: NTS	C4 NOT USED SCALE: NTS



STEEL FRAME NOTES:

1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM-PRIME #37H-78 PRIMER (GRAY) OR EQUAL.

GENERAL NOTES:

1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUDED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
7. ON-GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON-SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 1205 SE GREEN STREET | LEE'S SUMMIT, MO 64083

STANDARD DETAILS

CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Sheet Name: CURB INLET DETAIL

Drawn By: MIF
Checked By: DL
Date: 09/2021
Proj. #:

STM-1

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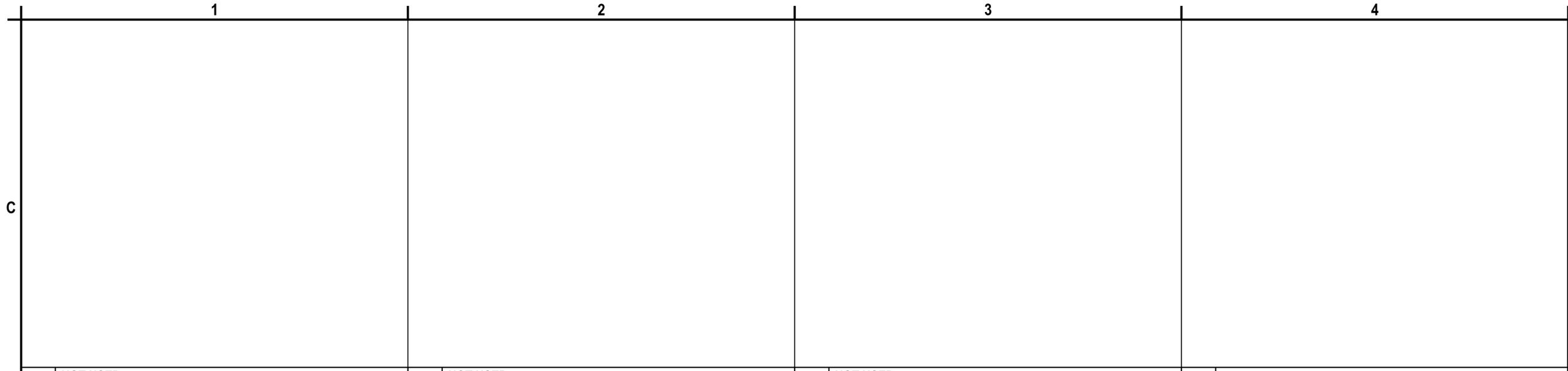
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SENIOR APARTMENTS
830-900 NE DOUGLAS STREET
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: F53.519.002		
DATE: AUGUST 15, 2023		
DRAWN BY: S. SCHIENER		
DESIGNED BY: E. DANIEL		
CHECKED BY: E. DANIEL		

STORM
DETAILS

C-504

A1 NOT USED SCALE: NTS	A2 CURB INLET DETAIL SCALE: NTS		



C&S Engineers, Inc.
 141 Elm Street, Suite 100
 Buffalo, New York 14203
 Phone: 716-847-1630
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 Professional Engineering
 Certificate No. 20080269910



Eric J. Daniel, P.E.
 License No. PE-2023008829
 Date: 08/15/2023

LEE'S SUMMIT
SENIOR APARTMENTS
830-900 NE DOUGLAS STREET
LEE'S SUMMIT, MO

C1 NOT USED
 SCALE: NTS

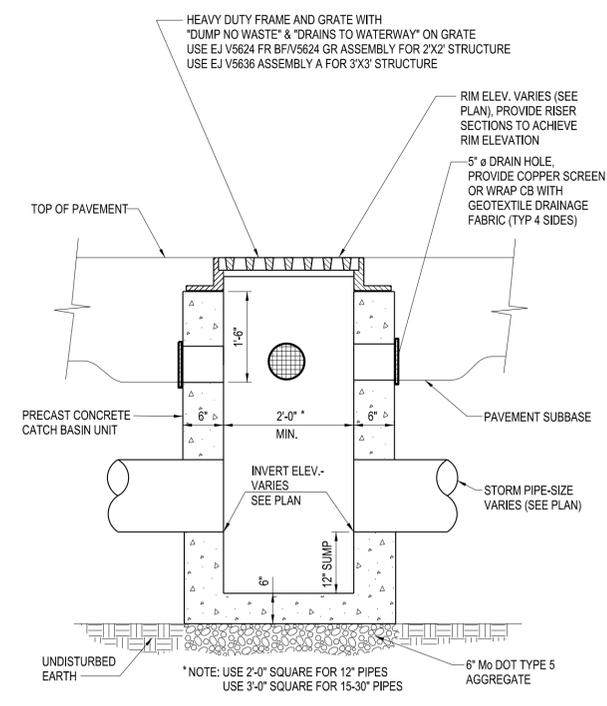
C2 NOT USED
 SCALE: NTS

C3 NOT USED
 SCALE: NTS

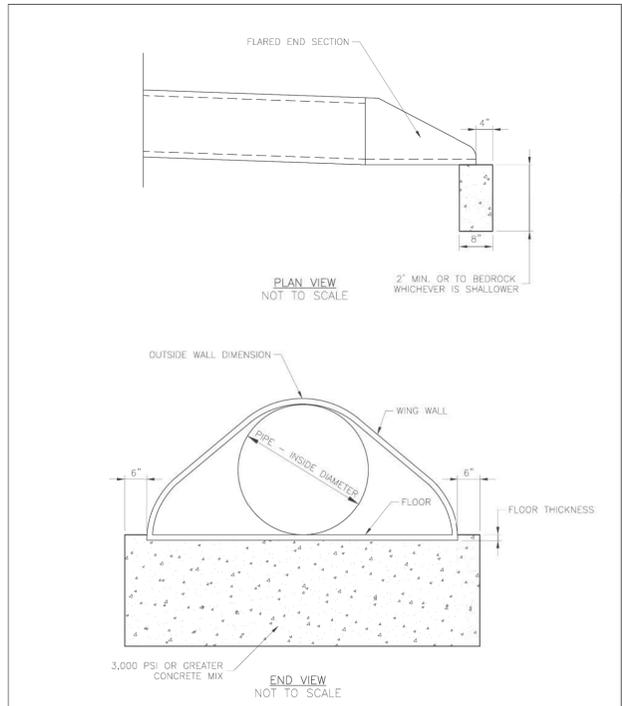
C4 SCALE: NTS

B

A

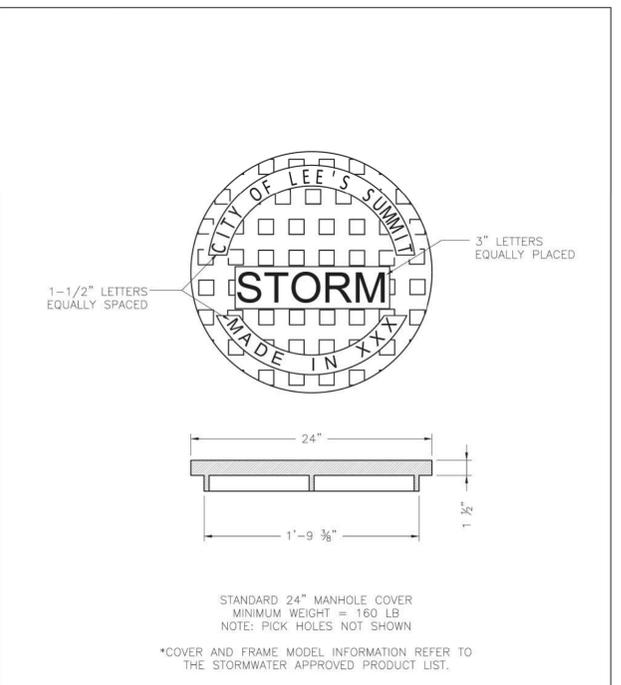


A1 PRECAST CATCH BASIN WITH RISER
 SCALE: NTS



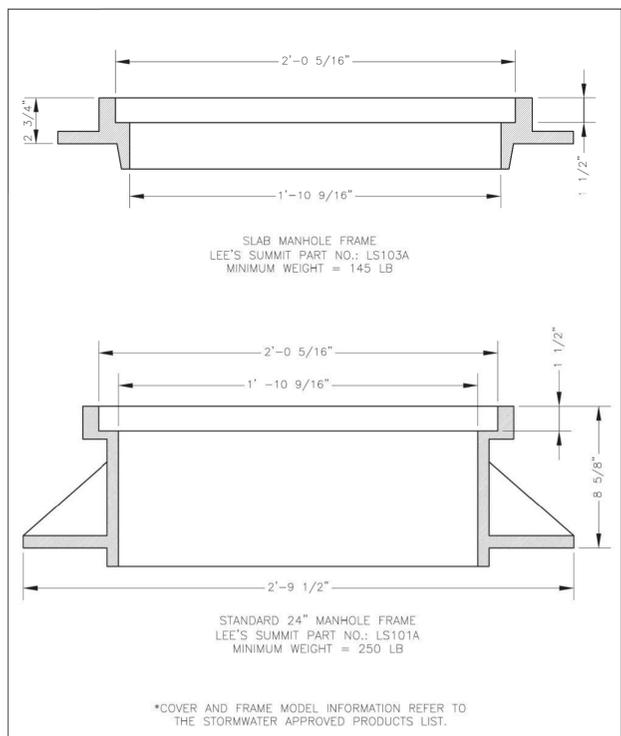
LS **LEE'S SUMMIT MISSOURI**
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
 Date: 05/2021
 Drawn By: MFP
 Checked By: DL
FLARED END SECTION SUPPORT DETAIL STM-5

A2 FLARED END SECTION SUPPORT DETAIL
 SCALE: NTS



LS **LEE'S SUMMIT MISSOURI**
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
 Date: 05/2021
 Drawn By: MFP
 Checked By: DL
STORM MANHOLE COVER DETAIL STM-6

A3 STORM MANHOLE COVER DETAIL
 SCALE: NTS



LS **LEE'S SUMMIT MISSOURI**
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
 Date: 05/2021
 Drawn By: MFP
 Checked By: DL
STORM MANHOLE FRAME DETAIL DWG-7

A4 STORM MANHOLE FRAME DETAIL
 SCALE: NTS

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: F53.519.002		
DATE: AUGUST 15, 2023		
DRAWN BY: S. SCHIENER		
DESIGNED BY: E. DANIEL		
CHECKED BY: E. DANIEL		

STORM
DETAILS

C-505

	1	2	3	4
C				
C1	NOT USED SCALE: NTS	C2 NOT USED SCALE: NTS	C3 NOT USED SCALE: NTS	C4 NOT USED SCALE: NTS



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**LEE'S SUMMIT
SENIOR APARTMENTS
830-900 NE DOUGLAS STREET
LEE'S SUMMIT, MO**

<p style="text-align: center;">REQUIRED CONCRETE BEARING AREA (SQUARE FEET - SF)</p> <table border="1"> <thead> <tr> <th>NOM. DIA. (INCHES)</th> <th>180 TEE, PLUG</th> <th>90 BEND</th> <th>45 BEND</th> <th>22.5 BEND</th> <th>11.25 BEND</th> </tr> </thead> <tbody> <tr><td>6</td><td>4.7</td><td>6.7</td><td>4.0</td><td>4.0</td><td>4.0</td></tr> <tr><td>8</td><td>8.4</td><td>11.8</td><td>6.4</td><td>4.0</td><td>4.0</td></tr> <tr><td>10</td><td>13.1</td><td>18.5</td><td>10.0</td><td>5.1</td><td>4.0</td></tr> <tr><td>12</td><td>18.8</td><td>26.7</td><td>14.4</td><td>7.4</td><td>4.0</td></tr> <tr><td>14</td><td>25.7</td><td>36.3</td><td>19.6</td><td>10.0</td><td>5.0</td></tr> <tr><td>16</td><td>33.5</td><td>47.4</td><td>25.6</td><td>13.1</td><td>6.6</td></tr> <tr><td>18</td><td>42.4</td><td>REST. JT.</td><td>32.5</td><td>16.5</td><td>8.3</td></tr> <tr><td>20</td><td>REST. JT.</td><td>REST. JT.</td><td>40.1</td><td>20.4</td><td>10.3</td></tr> <tr><td>24</td><td>REST. JT.</td><td>REST. JT.</td><td>REST. JT.</td><td>29.4</td><td>14.8</td></tr> </tbody> </table> <p style="text-align: center;">UNDISTURBED EARTH</p> <p style="text-align: center;">BEARING AREA (TYP.)</p> <p style="text-align: center;">BOND BREAKER (TYP. ALL BLOCKS)</p> <p style="text-align: center;">1/4" BOND BREAKER</p> <p style="text-align: center;">1/2" DIAMETER</p> <p style="text-align: center;">SECTION A</p> <p style="text-align: center;">PLAN</p> <p>NOTES: 1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT. 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING. 3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL. 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.</p> <p style="text-align: center;">LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063</p> <p style="text-align: center;">Date: 01/2016 Drawn By: JN Checked By: DL</p> <p style="text-align: center;">WAT-1</p>	NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND	6	4.7	6.7	4.0	4.0	4.0	8	8.4	11.8	6.4	4.0	4.0	10	13.1	18.5	10.0	5.1	4.0	12	18.8	26.7	14.4	7.4	4.0	14	25.7	36.3	19.6	10.0	5.0	16	33.5	47.4	25.6	13.1	6.6	18	42.4	REST. JT.	32.5	16.5	8.3	20	REST. JT.	REST. JT.	40.1	20.4	10.3	24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8	<p style="text-align: center;">REQUIRED CONCRETE VOLUME (CUBIC FEET - CF)</p> <table border="1"> <thead> <tr> <th>NOM. DIA. (INCHES)</th> <th>180 TEE, PLUG</th> <th>90 BEND</th> <th>45 BEND</th> <th>22.5 BEND</th> <th>11.25 BEND</th> </tr> </thead> <tbody> <tr><td>6</td><td>50.5</td><td>71.4</td><td>38.6</td><td>19.7</td><td>9.9</td></tr> <tr><td>8</td><td>89.8</td><td>126.9</td><td>68.7</td><td>35.0</td><td>17.6</td></tr> <tr><td>10</td><td>140.2</td><td>198.3</td><td>107.3</td><td>54.7</td><td>27.5</td></tr> <tr><td>12</td><td>202.0</td><td>REST. JT.</td><td>154.6</td><td>78.8</td><td>39.8</td></tr> <tr><td>14</td><td>REST. JT.</td><td>REST. JT.</td><td>210.4</td><td>107.3</td><td>53.9</td></tr> <tr><td>16</td><td>REST. JT.</td><td>REST. JT.</td><td>REST. JT.</td><td>140.1</td><td>70.4</td></tr> <tr><td>18</td><td>REST. JT.</td><td>REST. JT.</td><td>REST. JT.</td><td>177.3</td><td>89.1</td></tr> <tr><td>20</td><td>REST. JT.</td><td>REST. JT.</td><td>REST. JT.</td><td>REST. JT.</td><td>110.0</td></tr> <tr><td>24</td><td>REST. JT.</td><td>REST. JT.</td><td>REST. JT.</td><td>REST. JT.</td><td>158.4</td></tr> </tbody> </table> <p style="text-align: center;">#4 EPOXY COATED OR 60 REBAR WITH 6" HOOK & MIN. CONCRETE EMBEDMENT DEPTH</p> <p style="text-align: center;">UNDISTURBED EARTH</p> <p>NOTES: 1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT. 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING. 3. BEARING MUST BE AGAINST UNDISTURBED SOIL. 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.</p> <p style="text-align: center;">LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063</p> <p style="text-align: center;">Date: WAT-2 Drawn By: JN Checked By: DL</p> <p style="text-align: center;">WAT-2</p>	NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND	6	50.5	71.4	38.6	19.7	9.9	8	89.8	126.9	68.7	35.0	17.6	10	140.2	198.3	107.3	54.7	27.5	12	202.0	REST. JT.	154.6	78.8	39.8	14	REST. JT.	REST. JT.	210.4	107.3	53.9	16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4	18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1	20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0	24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4	<p style="text-align: center;">18" MIN. 12" 12" 12" 12" MAX. OF 12" EACH SIDE OF JOINT</p> <p style="text-align: center;">STAINLESS STEEL CASING SPACERS AT 12" MAX. OR AS RECOMMENDED BY PIPE MANUFACTURER</p> <p style="text-align: center;">END SEAL CASING PIPE CASING SPACERS CASING PIPE CARRIER PIPE</p> <p>NOTES: 1. REFER TO SPECIFICATION SECTION 3900 FOR ADDITIONAL INFORMATION. 2. LENGTH, DIAMETER, AND WALL THICKNESS TO BE SHOWN ON CONSTRUCTION PLANS.</p> <p style="text-align: center;">LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063</p> <p style="text-align: center;">Date: 01/2016 Drawn By: JN Checked By: DL</p> <p style="text-align: center;">WAT-5</p>	<p style="text-align: center;">2" FROM BACK OF CURB</p> <p style="text-align: center;">BACK OF CURB</p> <p style="text-align: center;">GROUND SURFACE</p> <p style="text-align: center;">MECHANICAL JOINT (TYP.)</p> <p style="text-align: center;">THRUST BLOCK (SEE NOTE 1)</p> <p style="text-align: center;">KEEP WEEP-HOLE FREE OF CONCRETE AND FOREIGN MATERIAL</p> <p style="text-align: center;">24" X 24" X 4" SOLID CONCRETE PAD</p> <p style="text-align: center;">UNDISTURBED EARTH</p> <p style="text-align: center;">PROVIDE MIN. 1/2 CU. YD. OF 3/4" GRANULAR FILL PER AWWA C600 SEC. 4.2.7.2.4</p> <p style="text-align: center;">MJ RESTRAINT FITTINGS (SEE NOTES 1 & 2)</p> <p style="text-align: center;">THRUST BLOCK</p> <p style="text-align: center;">UNDISTURBED EARTH</p> <p>NOTES: 1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED. 2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE. 3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER. 4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE. 5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH. 6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.</p> <p style="text-align: center;">LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063</p> <p style="text-align: center;">Date: 01/2016 Drawn By: JN Checked By: DL</p> <p style="text-align: center;">WAT-7</p>
NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND																																																																																																																						
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A1	HORIZONTAL THRUST BLOCK SCALE: NTS	A2 VERTICAL THRUST BLOCK SCALE: NTS	A3 WATER CASING PIPE DETAIL SCALE: NTS	A4 HYDRANT - STRAIGHT SET SCALE: NTS																																																																																																																							

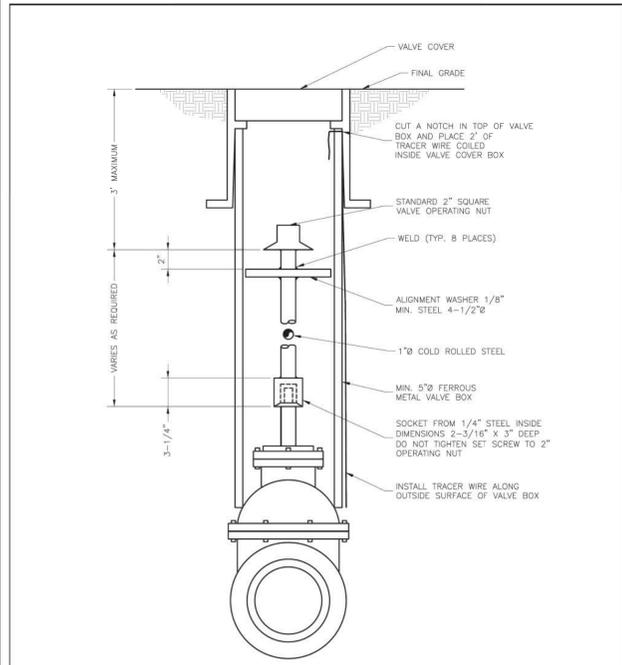
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**WATER
DETAILS**

C-506

	1	2	3	4	
C					
C1	NOT USED SCALE: NTS	C2	NOT USED SCALE: NTS	C3	NOT USED SCALE: NTS
C4	NOT USED SCALE: NTS				

B				
A				

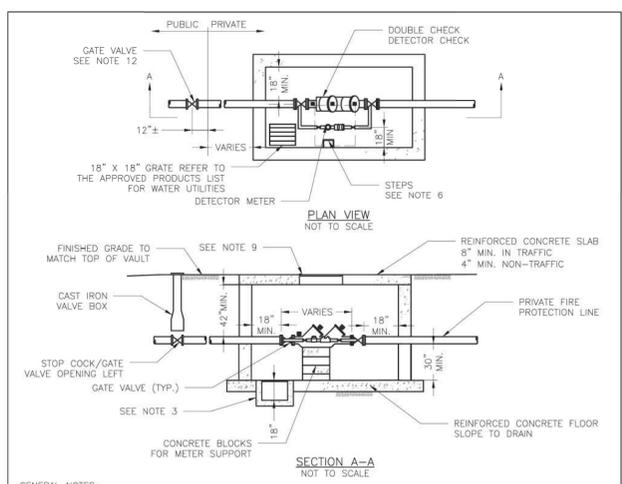


LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Date: 02/2016
 Drawn By: JN
 Checked By: DL

VALVE STEM EXTENSION AND VALVE BOX

WAT-9



GENERAL NOTES:

- METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
- METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
- METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER, PROVIDE CONCRETE SUMP AS A MINIMUM, WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE-GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
- ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
- ALL FITTINGS TO BE BRASS.
- STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
- A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816-969-1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
- ALL VALVES SHALL HAVE RISING STEMS.
- FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON-TRAFFIC CONDITIONS.
- A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
- METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
- IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

LEE'S SUMMIT
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PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Date: 02/2016
 Drawn By: JN
 Checked By: DL

VAULT FOR DOUBLE CHECK DETECTOR CHECK

WAT-12

A1	VALVE STEM EXTENSION AND VALVE BOX SCALE: NTS	A2	VAULT FOR DOUBLE CHECK DETECTOR CHECK SCALE: NTS	A3	NOT USED SCALE: NTS	A4	NOT USED SCALE: NTS
1		2		3		4	



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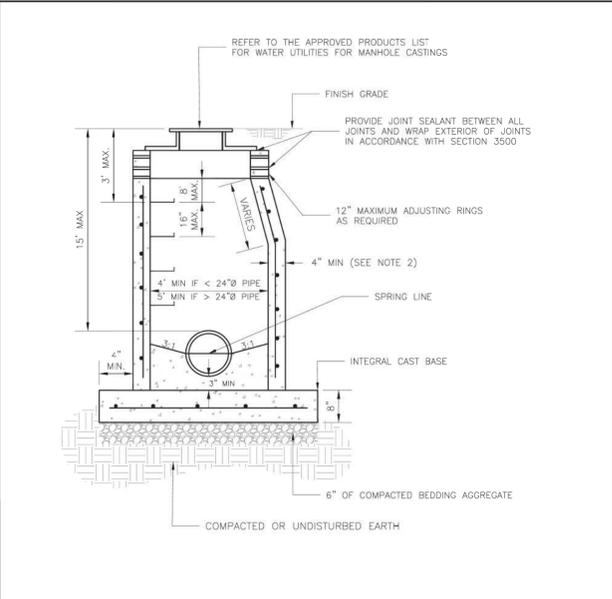
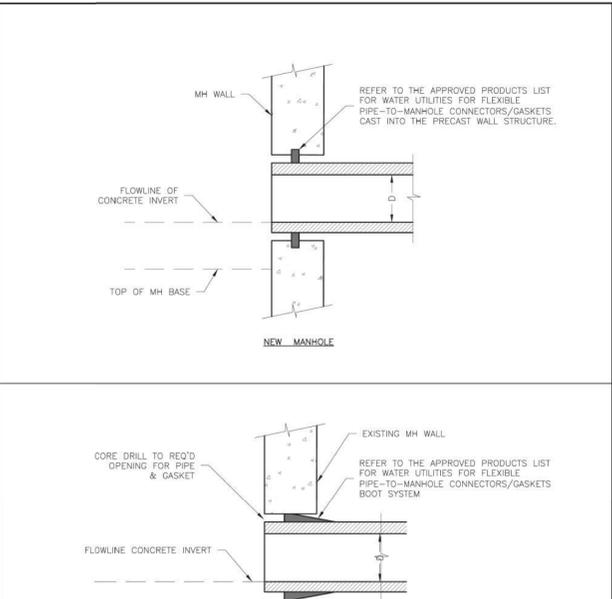
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WATER
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C-507

	1	2	3	4
C				
	C1 NOT USED SCALE: NTS	C2 NOT USED SCALE: NTS	C3 NOT USED SCALE: NTS	C4 NOT USED SCALE: NTS
B				
	B1 NOT USED SCALE: NTS	B2 NOT USED SCALE: NTS		
A			 <p>REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR MANHOLE CASTINGS</p> <p>FINISH GRADE</p> <p>PROVIDE JOINT SEALANT BETWEEN ALL JOINTS AND WRAP EXTERIOR OF JOINTS IN ACCORDANCE WITH SECTION 3500</p> <p>12" MAXIMUM ADJUSTING RINGS AS REQUIRED</p> <p>4" MIN (SEE NOTE 2)</p> <p>SPRING LINE</p> <p>INTEGRAL CAST BASE</p> <p>6" OF COMPACTED BEDDING AGGREGATE</p> <p>COMPACTED OR UNDISTURBED EARTH</p> <p>NOTES:</p> <ol style="list-style-type: none"> 1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS. 2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THAN 15'. 3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS. OF BITUMINOUS COATING. 4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. 5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE. 6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS. 7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS. <p>LS LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 STANDARD SANITARY PRECAST MANHOLE SAN-2</p>	 <p>REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR MANHOLE CASTINGS</p> <p>REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FLEXIBLE PIPE-TO-MANHOLE CONNECTORS/GASKETS CAST INTO THE PRECAST WALL STRUCTURE.</p> <p>NEW MANHOLE</p> <p>EXISTING MANHOLE</p> <p>LS LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 MANHOLE WALL CONNECTION SAN-5</p>
	A1 NOT USED SCALE: NTS	A2 NOT USED SCALE: NTS	A3 STANDARD SANITARY PRECAST MANHOLE SCALE: NTS	A4 MANHOLE WALL CONNECTION SCALE: NTS
	1	2	3	4



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**SANITARY SEWER
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C-508