



## 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

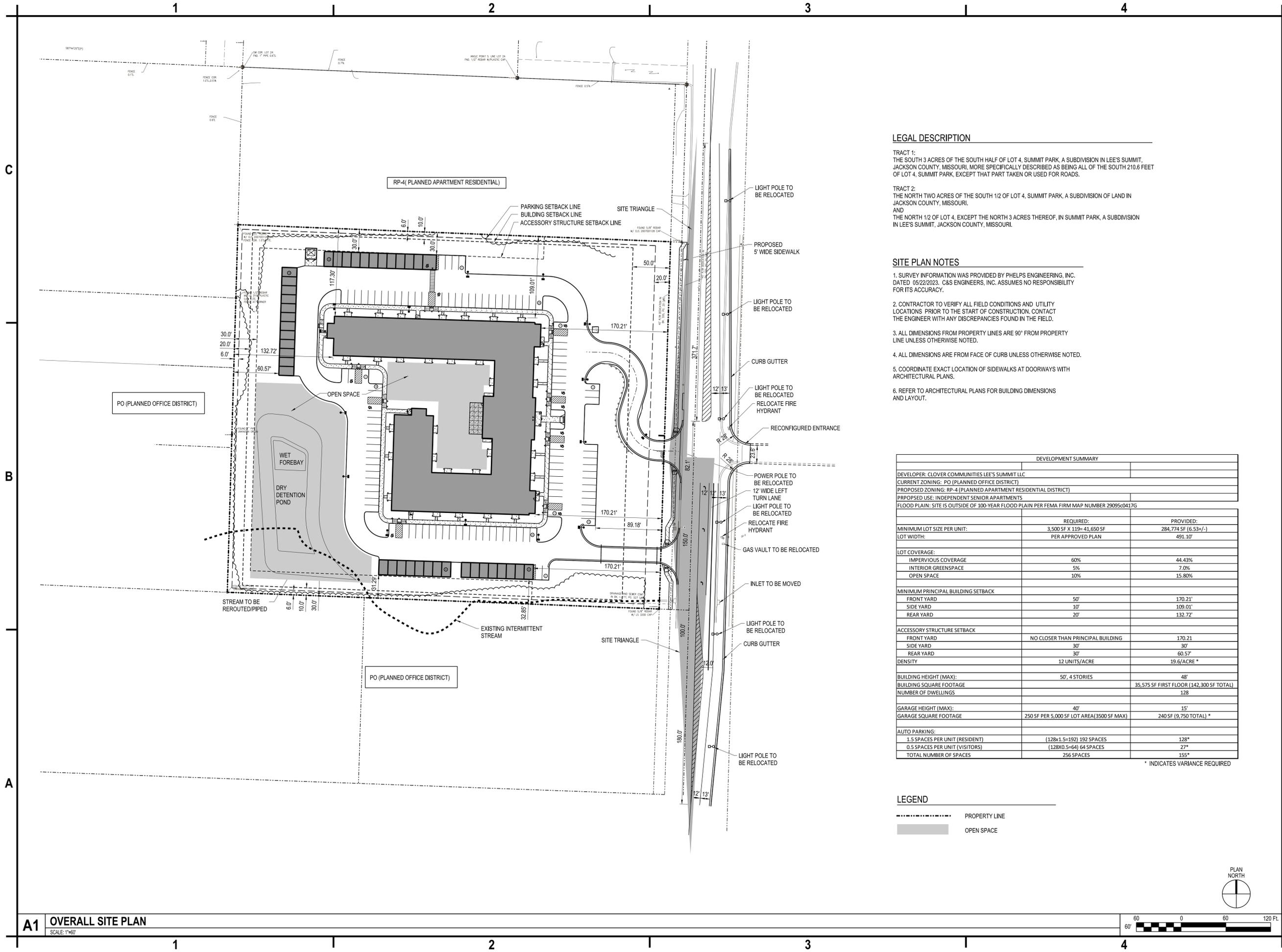
ENGINEER:  
ERIC DANIEL, P.E.  
C&S ENGINEERS, INC.  
141 ELM STREET, SUITE 100  
BUFFALO, NEW YORK 14203  
716-847-1630

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

C&S PROJECT: F53.519.002

**JULY 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.

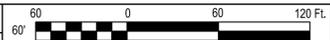
**SITE PLAN NOTES**

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.

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		
	REQUIRED:	PROVIDED:
MINIMUM LOT SIZE PER UNIT:	3,500 SF X 119= 41,650 SF	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*

**LEGEND**

- PROPERTY LINE
- OPEN SPACE



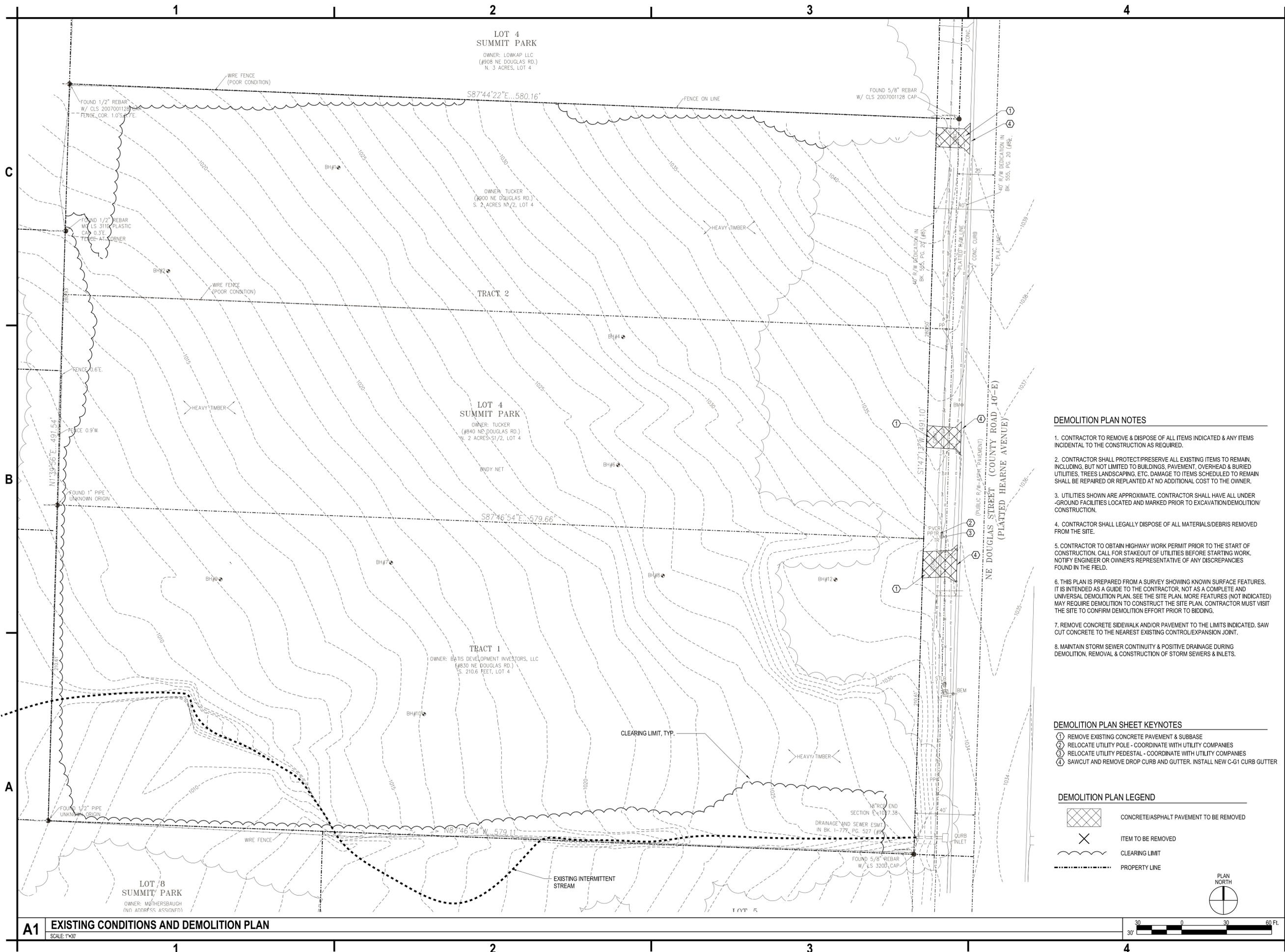
Eric J. Daniel, P.E.  
License No. PE-2023008829  
Date: 03/30/2023

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

MARK	DATE	DESCRIPTION
REVISIONS		
	PROJECT NO:	F53.519.002
	DATE:	JULY 13, 2023
	DRAWN BY:	S. SCHIENER
	DESIGNED BY:	E. DANIEL
	CHECKED BY:	E. DANIEL

**OVERALL  
SITE PLAN**

**C-100**



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

**DEMOLITION PLAN NOTES**

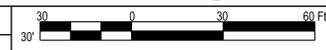
1. CONTRACTOR TO REMOVE & DISPOSE OF ALL ITEMS INDICATED & ANY ITEMS INCIDENTAL TO THE CONSTRUCTION AS REQUIRED.
2. CONTRACTOR SHALL PROTECT/PRESERVE ALL EXISTING ITEMS TO REMAIN, INCLUDING, BUT NOT LIMITED TO BUILDINGS, PAVEMENT, OVERHEAD & BURIED UTILITIES, TREES LANDSCAPING, ETC. DAMAGE TO ITEMS SCHEDULED TO REMAIN SHALL BE REPAIRED OR REPLANTED AT NO ADDITIONAL COST TO THE OWNER.
3. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL HAVE ALL UNDER-GROUND 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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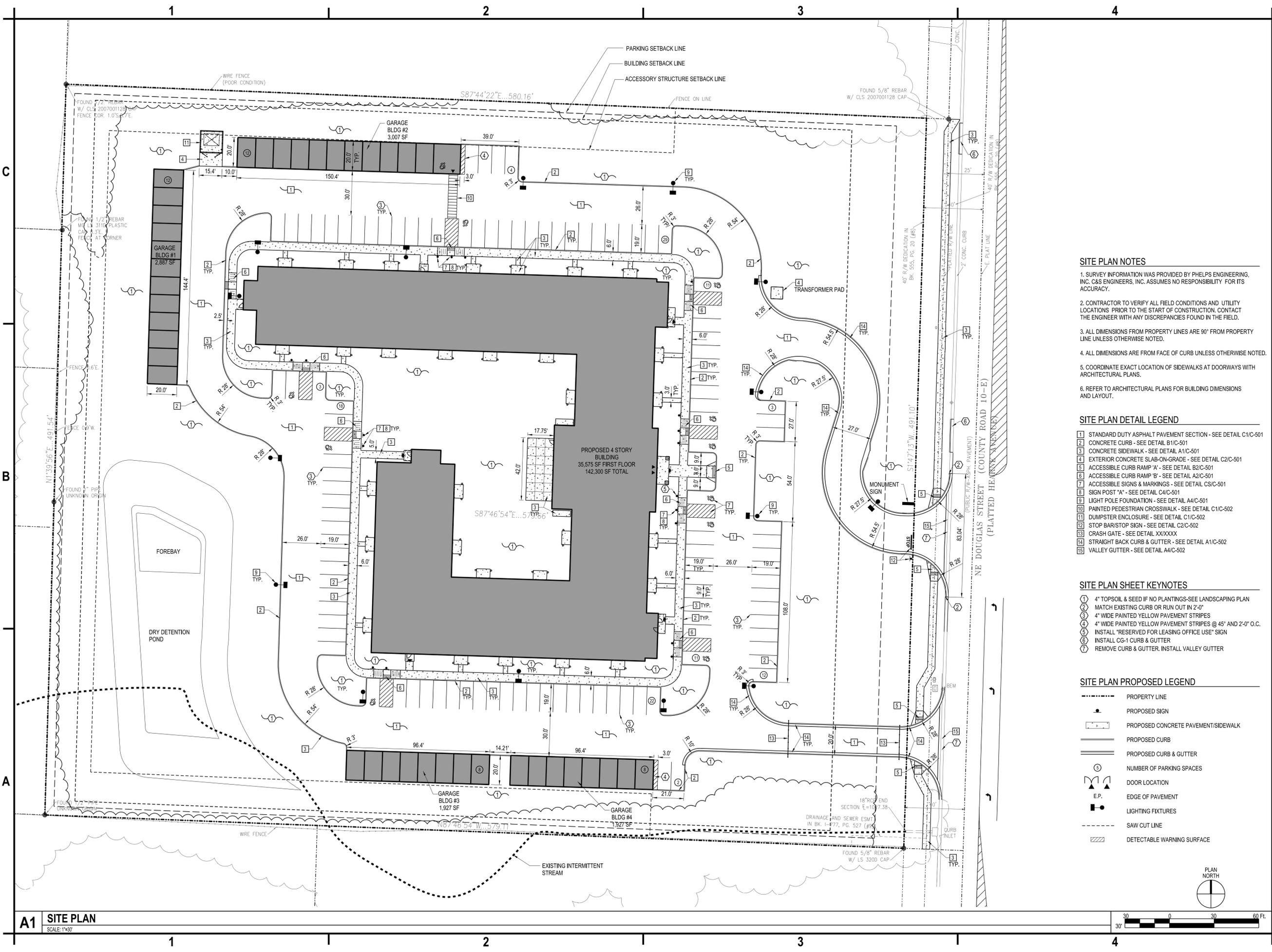
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**EXISTING  
CONDITIONS AND  
DEMOLITION PLAN**

C-101



**A1 SITE PLAN**  
SCALE: 1"=30'

**SITE PLAN NOTES**

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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



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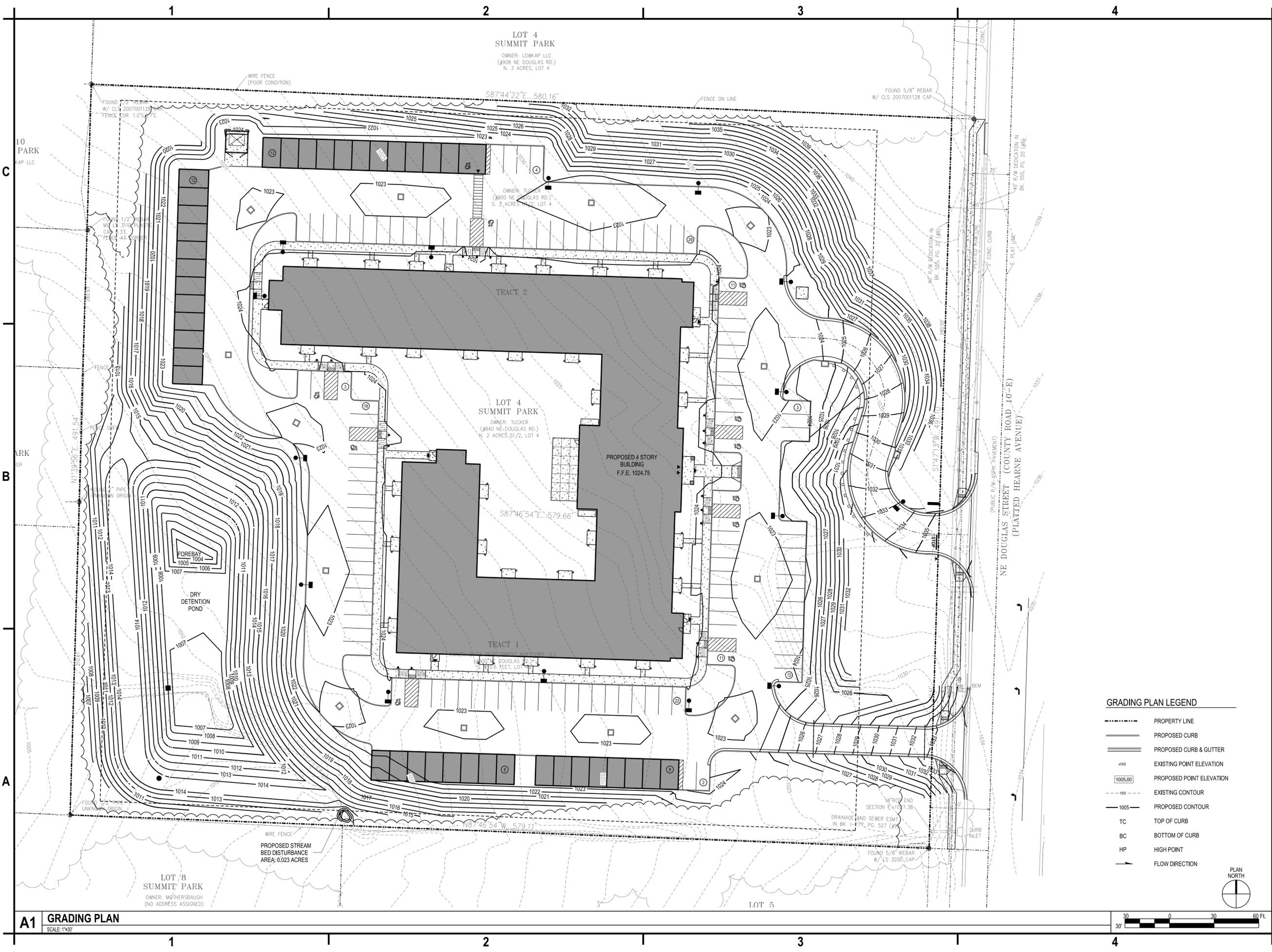
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**SITE PLAN**

**C-102**



**GRADING PLAN LEGEND**

---	PROPERTY LINE
---	PROPOSED CURB
---	PROPOSED CURB & GUTTER
1025	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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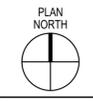
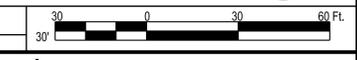
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**GRADING PLAN**

**C-103**

**A1 GRADING PLAN**  
 SCALE: 1"=30'





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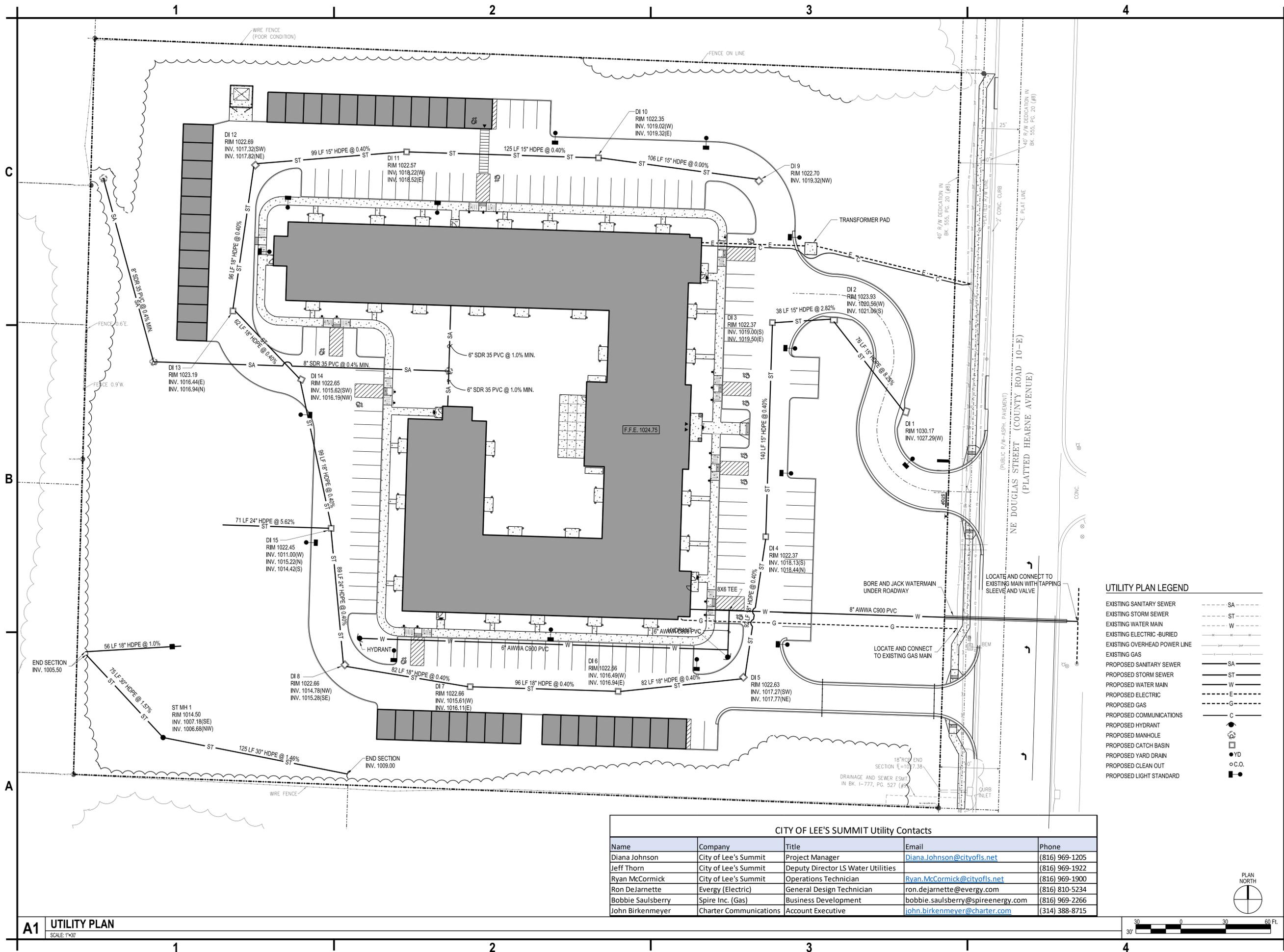
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UTILITY PLAN

C-104



**UTILITY PLAN LEGEND**

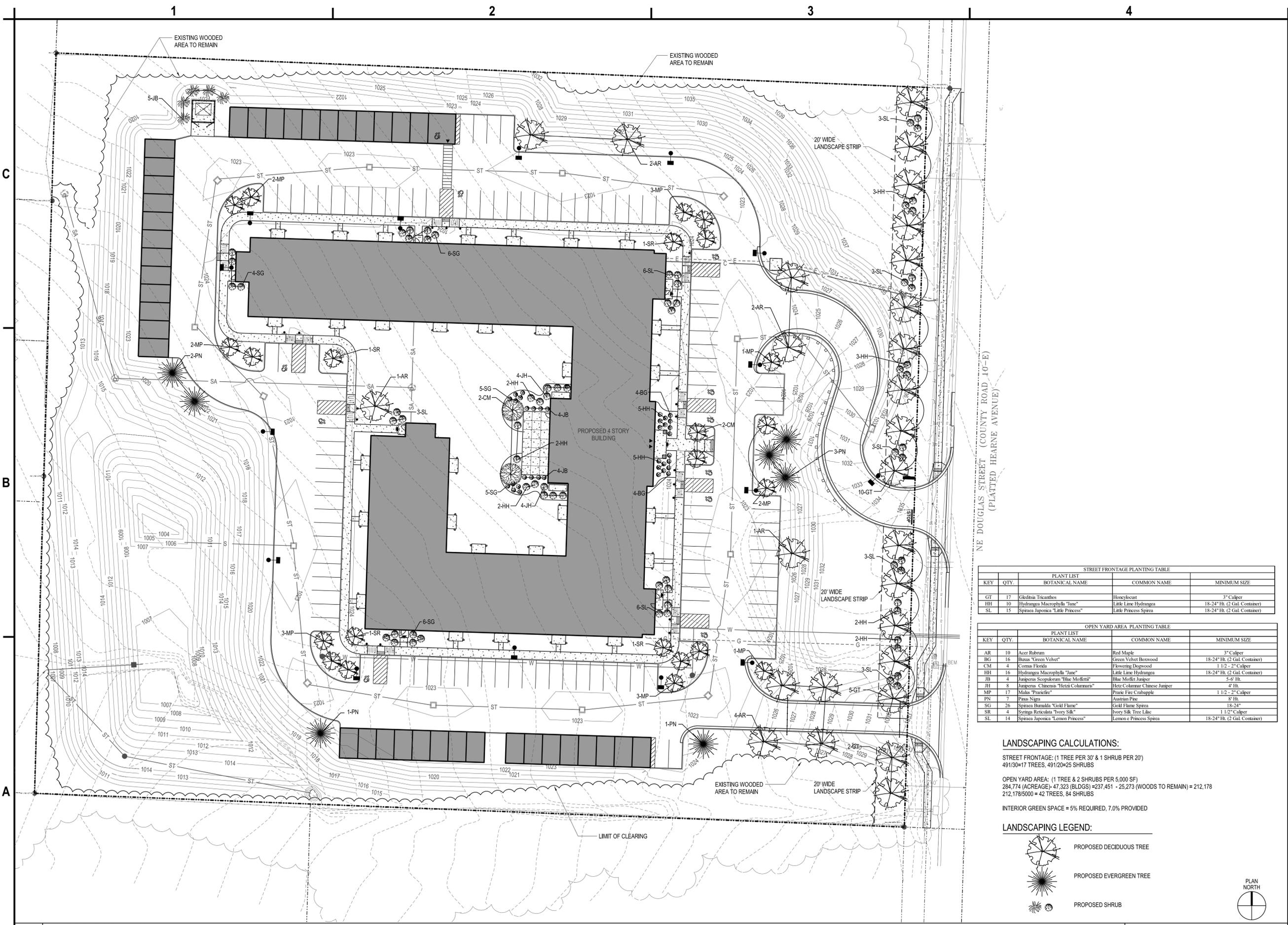
EXISTING SANITARY SEWER	---	SA
EXISTING STORM SEWER	---	ST
EXISTING WATER MAIN	---	W
EXISTING ELECTRIC-BURIED	---	E
EXISTING OVERHEAD POWER LINE	---	G
EXISTING GAS	---	C
PROPOSED SANITARY SEWER	---	SA
PROPOSED STORM SEWER	---	ST
PROPOSED WATER MAIN	---	W
PROPOSED ELECTRIC	---	E
PROPOSED GAS	---	G
PROPOSED COMMUNICATIONS	---	C
PROPOSED HYDRANT	⊙	HY
PROPOSED MANHOLE	⊙	DI
PROPOSED CATCH BASIN	⊙	CB
PROPOSED YARD DRAIN	⊙	YD
PROPOSED CLEAN OUT	⊙	CO
PROPOSED LIGHT STANDARD	⊙	LS

**CITY OF LEE'S SUMMIT Utility Contacts**

Name	Company	Title	Email	Phone
Diana Johnson	City of Lee's Summit	Project Manager	<a href="mailto:Diana.Johnson@cityofls.net">Diana.Johnson@cityofls.net</a>	(816) 969-1205
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Ryan McCormick	City of Lee's Summit	Operations Technician	<a href="mailto:Ryan.McCormick@cityofls.net">Ryan.McCormick@cityofls.net</a>	(816) 969-1900
Ron DeJarnette	Evergy (Electric)	General Design Technician	<a href="mailto:ron.dejarnette@evergy.com">ron.dejarnette@evergy.com</a>	(816) 810-5234
Bobbie Saulsberry	Spire Inc. (Gas)	Business Development	<a href="mailto:bobbie.saulsberry@spireenergy.com">bobbie.saulsberry@spireenergy.com</a>	(816) 969-2266
John Birkenmeyer	Charter Communications	Account Executive	<a href="mailto:john.birkenmeyer@charter.com">john.birkenmeyer@charter.com</a>	(314) 388-8715

A1 UTILITY PLAN  
 SCALE: 1"=30'





STREET FRONTAGE PLANTING TABLE

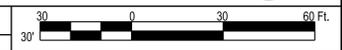
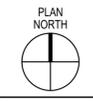
KEY	QTY.	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE
GT	17	Gleditsia Tricanthos	Honeylocust	3" Caliper
HH	10	Hydrangea Macrophylla "Jane"	Little Leaf Hydrangea	18-24" Ht. (2 Gal. Container)
SL	15	Spiraea Japonica "Little Princess"	Little Princess Spiraea	18-24" Ht. (2 Gal. Container)

OPEN YARD AREA PLANTING TABLE

KEY	QTY.	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 Leaf Hydrangea	18-24" Ht. (2 Gal. Container)
JB	4	Juniperus Scurularum "Blue Muffet"	Blue Muffet Juniper	3-6' Ht.
JH	8	Juniperus Chinensis "Hetzi Columnaris"	Hetz Columnar Chinese Juniper	4' Ht.
MP	17	Maka "Pranctific"	Pranic Fire Crabapple	1 1/2 - 2" Caliper
PN	7	Pinus Nigra	Austrian Pine	8' Ht.
SG	26	Spiraea Bumalda "Gold Flame"	Gold Flame Spiraea	18-24"
SR	4	Syringa Reticulata "Ivory Silk"	Ivory Silk Tree Lilac	1 1/2" Caliper
SL	14	Spiraea Japonica "Lemon Princess"	Lemon e Princess Spiraea	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

- LANDSCAPING LEGEND:**
- PROPOSED DECIDUOUS TREE
  - PROPOSED EVERGREEN TREE
  - PROPOSED SHRUB



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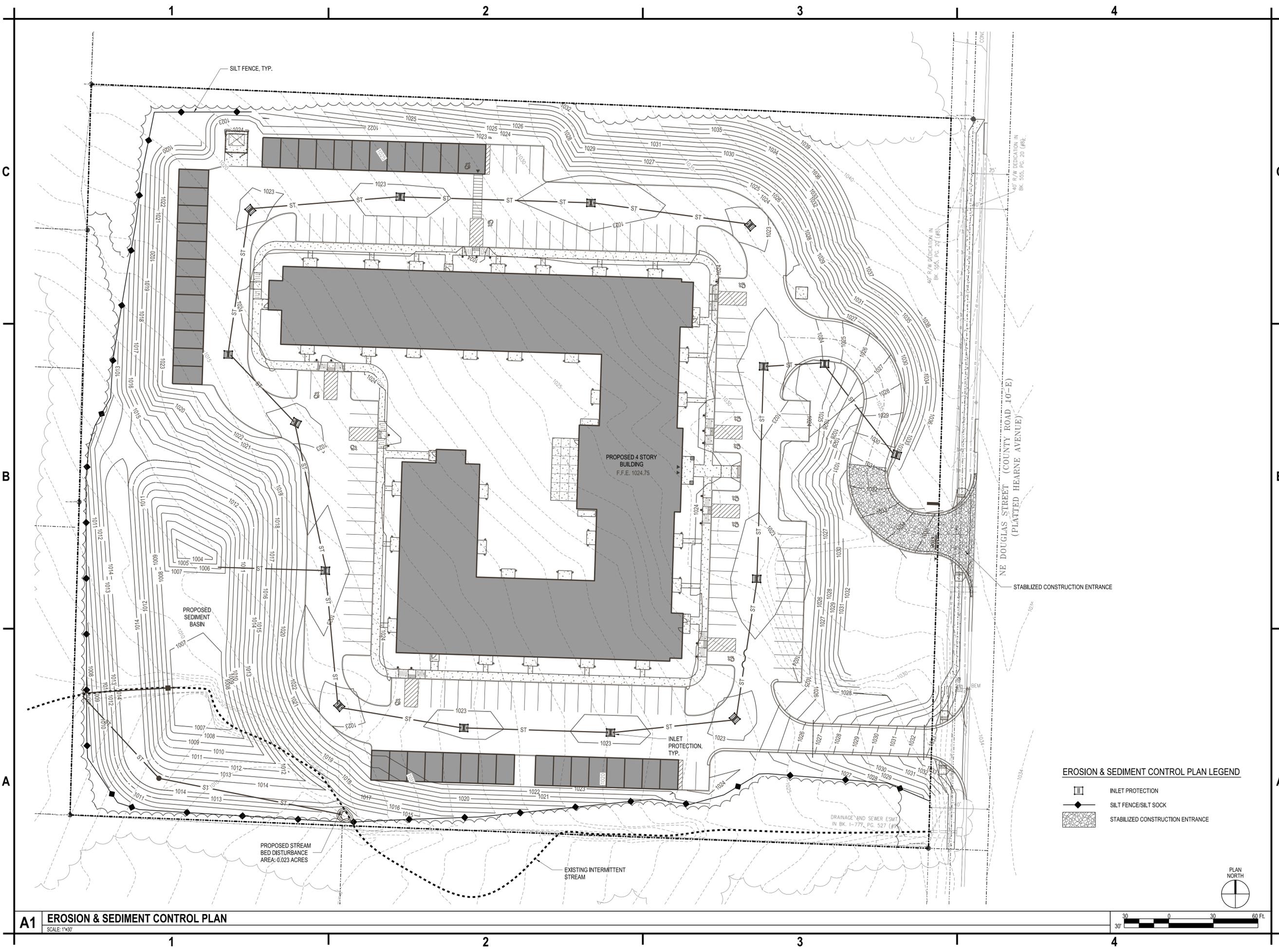
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**LANDSCAPING PLAN**

C-105





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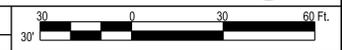
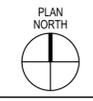


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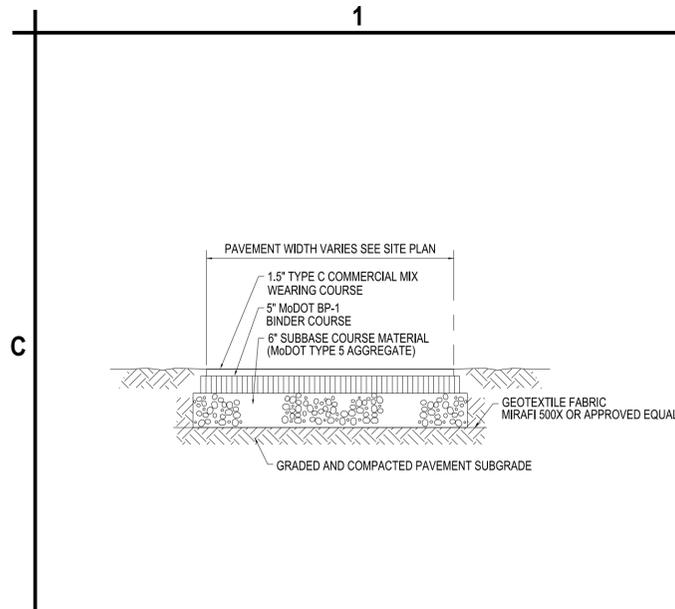
- EROSION & SEDIMENT CONTROL PLAN LEGEND**
- INLET PROTECTION
  - SILT FENCE/SILT SOCK
  - STABILIZED CONSTRUCTION ENTRANCE



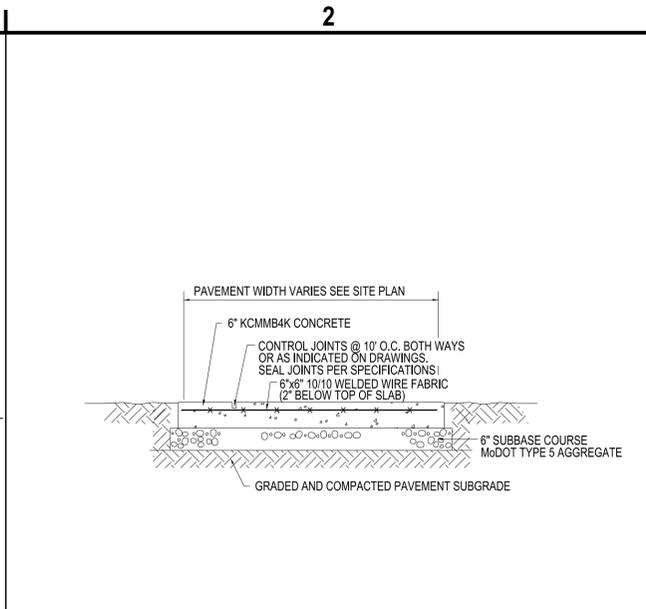
**A1 EROSION & SEDIMENT CONTROL PLAN**  
 SCALE: 1"=30'

**EROSION &  
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 CONTROL  
 PLAN**

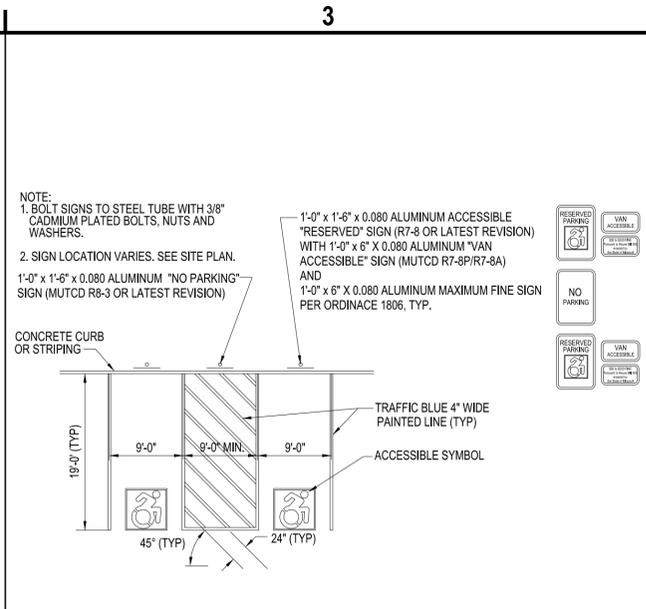
**C-107**



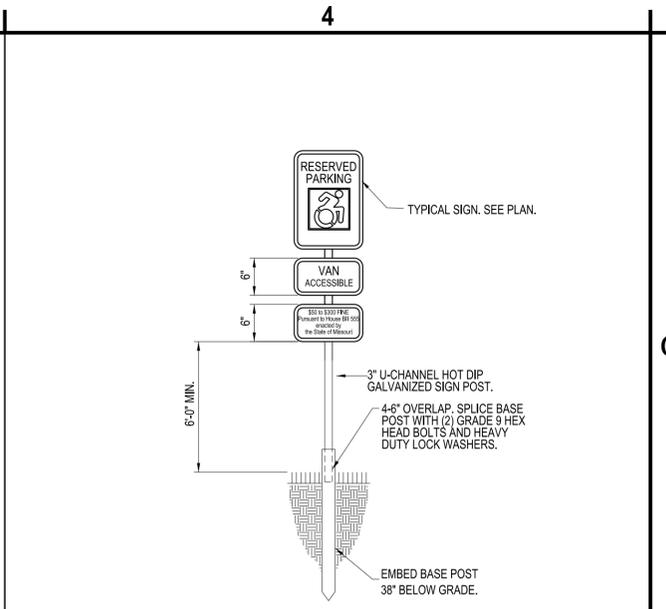
**C1** STANDARD DUTY ASPHALT PAVEMENT SECTION  
SCALE: NTS



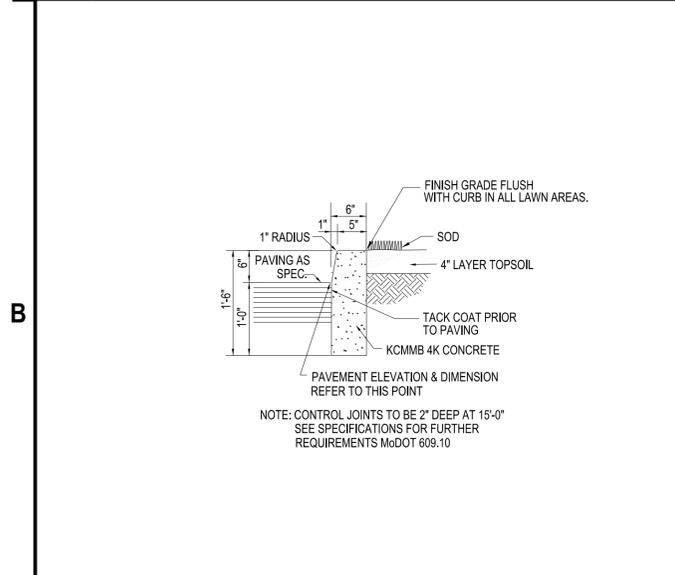
**C2** EXTERIOR CONCRETE SLAB-ON-GRADE  
SCALE: NTS



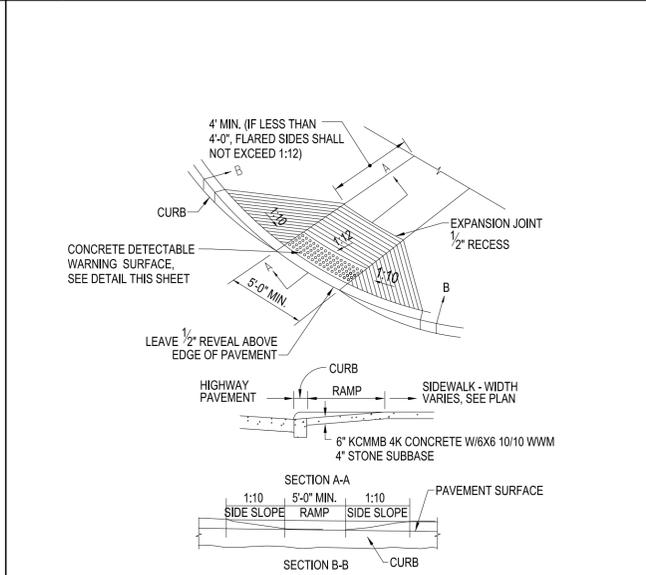
**C3** ACCESSIBLE SIGNS & MARKINGS  
SCALE: NTS



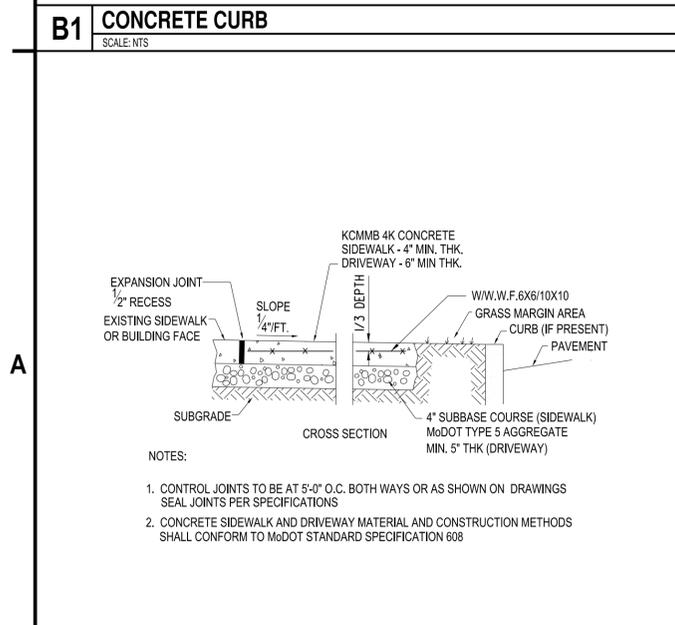
**C4** SIGN POST "A"  
SCALE: NTS



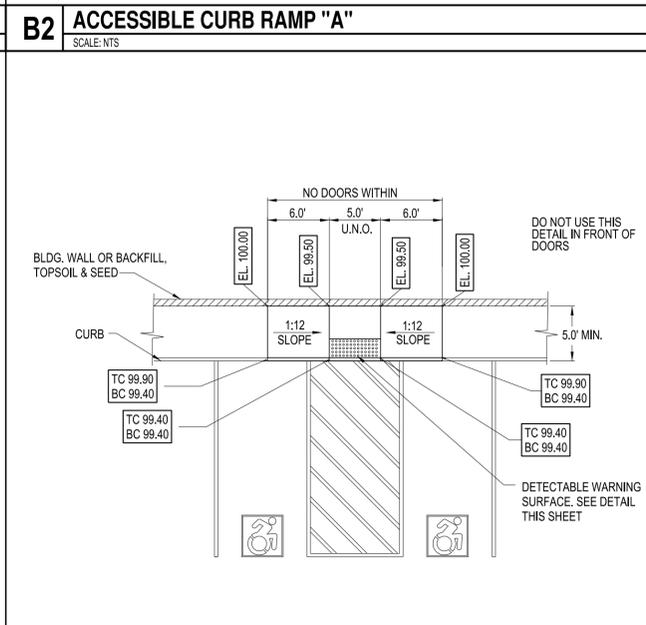
**B1** CONCRETE CURB  
SCALE: NTS



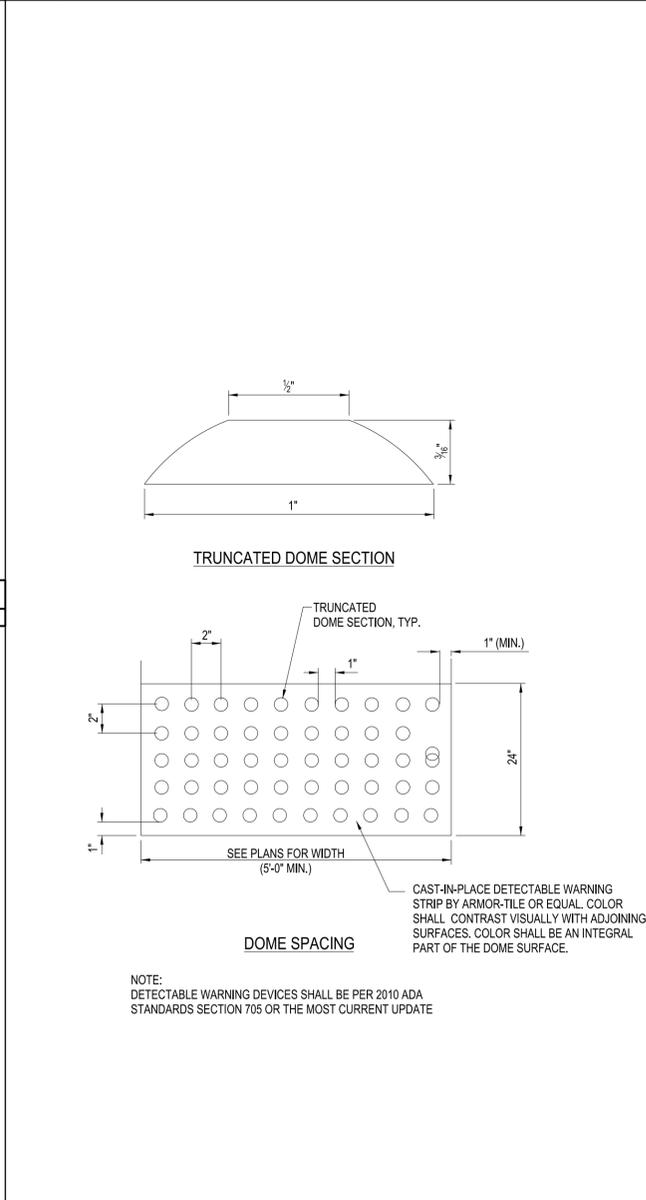
**B2** ACCESSIBLE CURB RAMP "A"  
SCALE: NTS



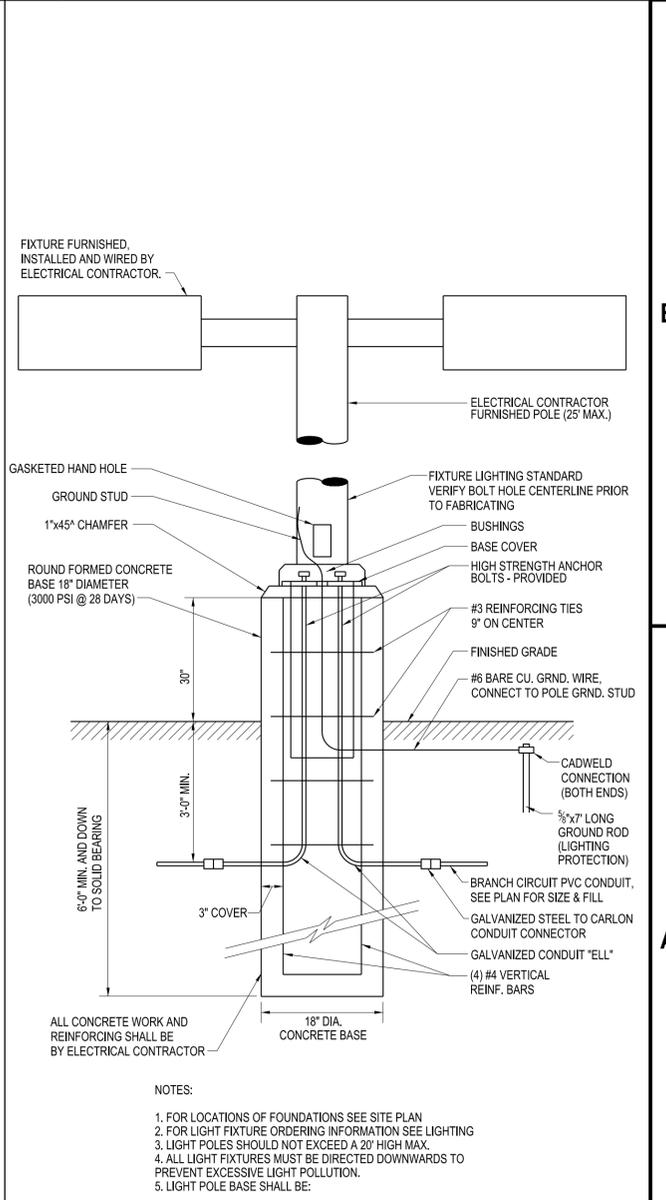
**A1** CONCRETE SIDEWALK  
SCALE: NTS



**A2** ACCESSIBLE CURB RAMP "B"  
SCALE: NTS



**A3** DETECTABLE WARNING SURFACE  
SCALE: NTS



**A4** LIGHT POLE FOUNDATION  
SCALE: NTS



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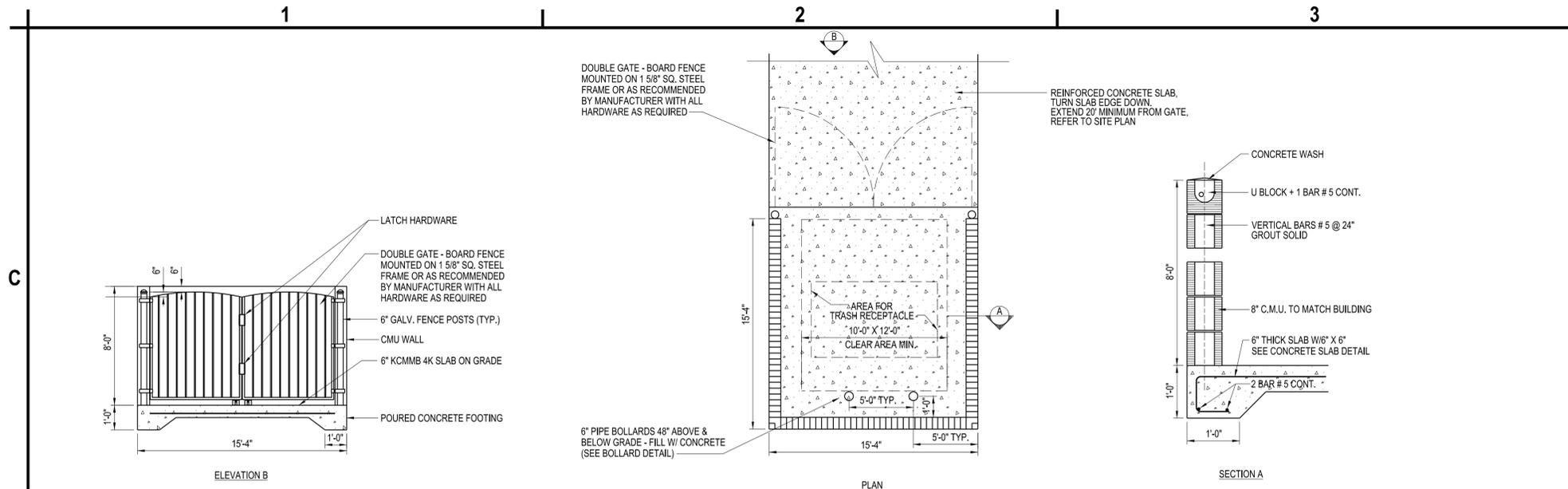
Eric J. Daniel, P.E.  
License No. PE-2023008829  
Date: 03/30/2023

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

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: F53.519.002		
DATE: JULY 13, 2023		
DRAWN BY: S. SCHIENER		
DESIGNED BY: E. DANIEL		
CHECKED BY: E. DANIEL		

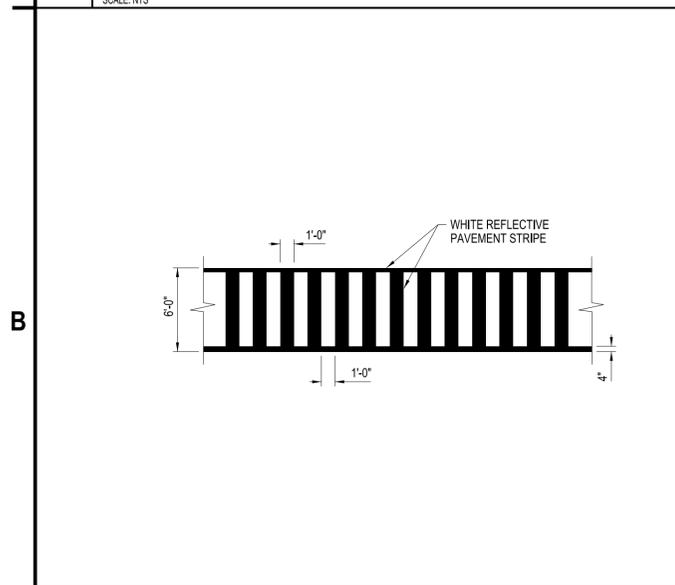
**SITE  
DETAILS**

**C-501**

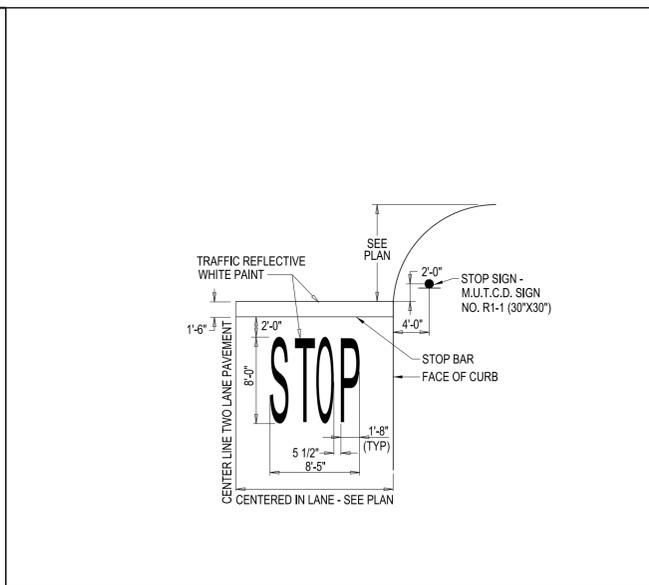


**C1 TYPICAL MASONRY SINGLE/DOUBLE DUMPSTER ENCLOSURE**  
SCALE: NTS

**C4 NOT USED**  
SCALE: NTS



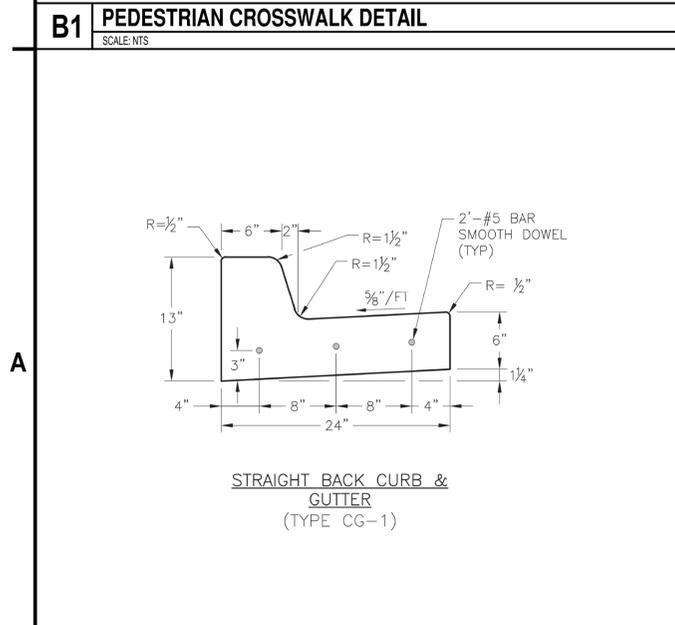
**B1 PEDESTRIAN CROSSWALK DETAIL**  
SCALE: NTS



**B2 STOP BAR**  
SCALE: NTS



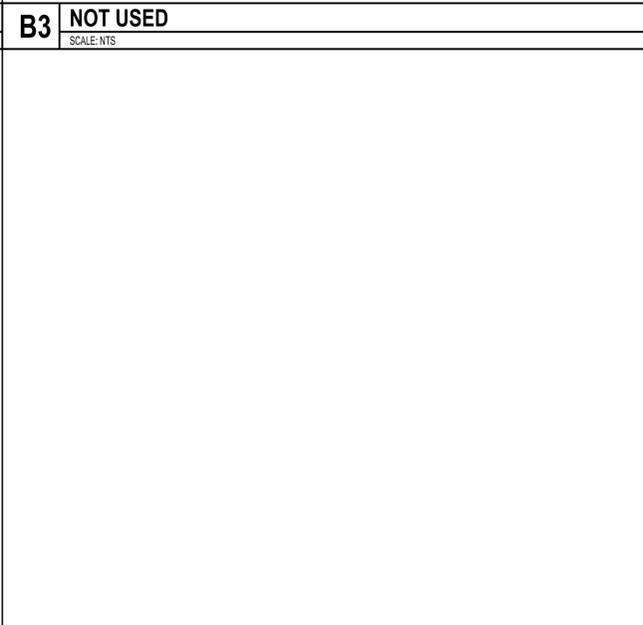
**B3 NOT USED**  
SCALE: NTS



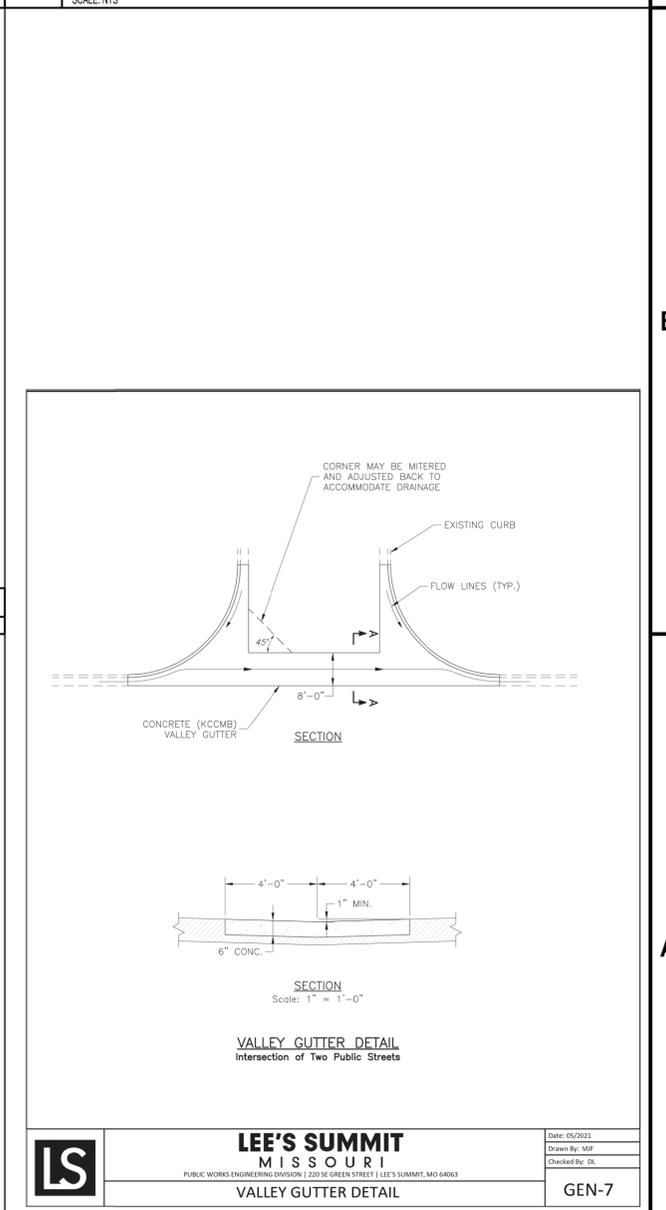
**A1 STRAIGHT BACK CURB & GUTTER**  
SCALE: NTS



**A2 NOT USED**  
SCALE: NTS



**A3 NOT USED**  
SCALE: NTS



**A4 VALLEY GUTTER DETAIL**  
SCALE: NTS



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Date: 03/30/2023

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

MARK	DATE	DESCRIPTION
REVISIONS		
		PROJECT NO: F53.519.002
		DATE: JULY 13, 2023
		DRAWN BY: S. SCHIENER
		DESIGNED BY: E. DANIEL
		CHECKED BY: E. DANIEL

**SITE  
DETAILS**

**C-502**

**LS** **LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 2201 SE GREEN STREET | LEE'S SUMMIT, MO 64083  
VALLEY GUTTER DETAIL  
Date: 05/2023  
Drawn By: MS  
Checked By: DL  
GEN-7

**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
 

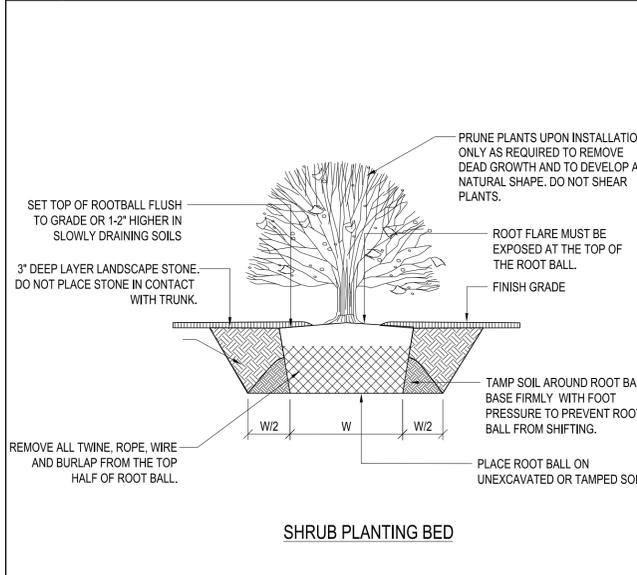
POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.

  - 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.

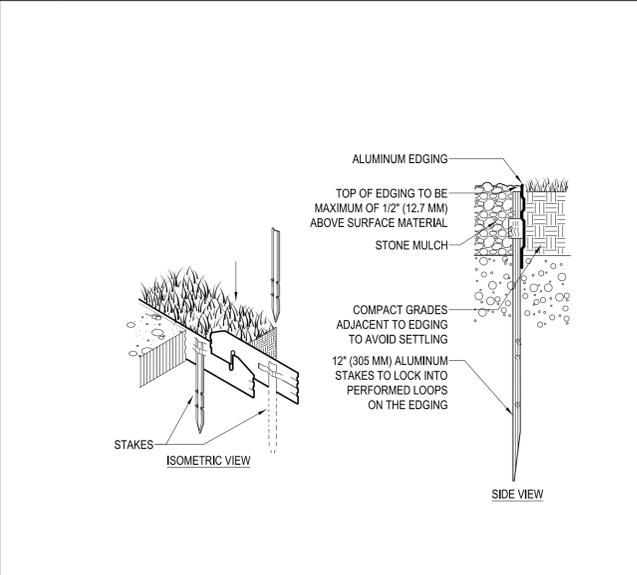
  - A. MAINTENANCE PERIOD FOR THIS CONTRACT SHALL BE 90 CALENDAR DAYS COMMENCING AFTER FINAL INSPECTION OF CONSTRUCTION. MAINTAIN TREES, SHRUBS AND OTHER PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET 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, MOVING, 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

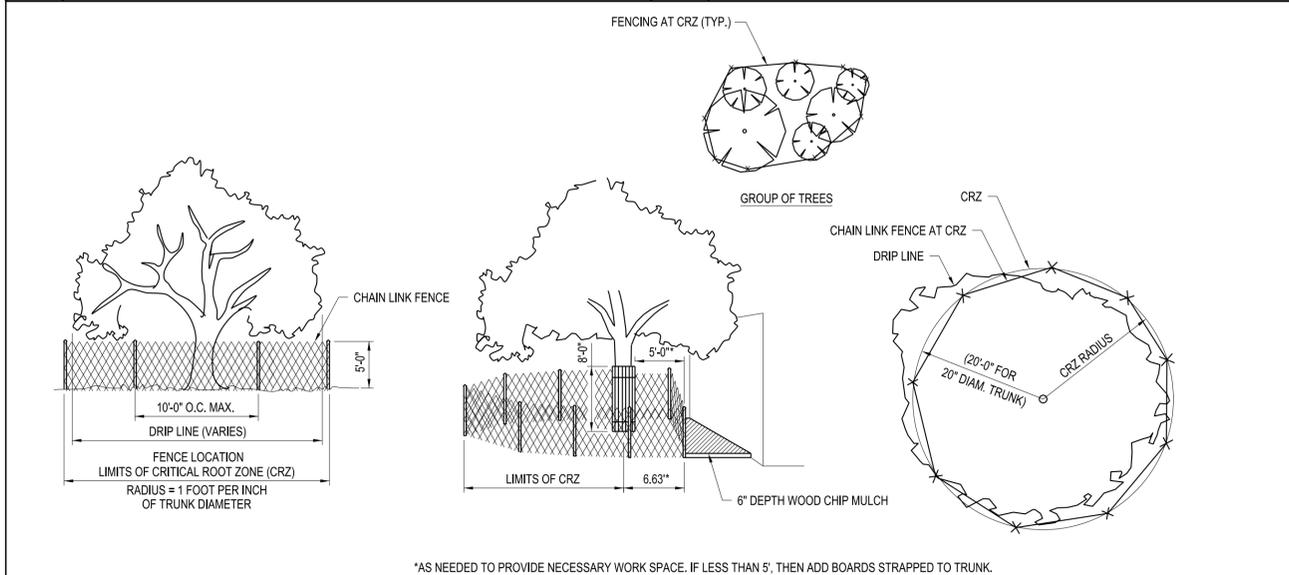


**B2 SHRUB PLANTING DETAIL (LANDSCAPE STONE)**  
SCALE: NTS

**C3 STONE MULCH DETAIL**  
SCALE: NTS



**B3 LANDSCAPE EDGING DETAIL**  
SCALE: NTS

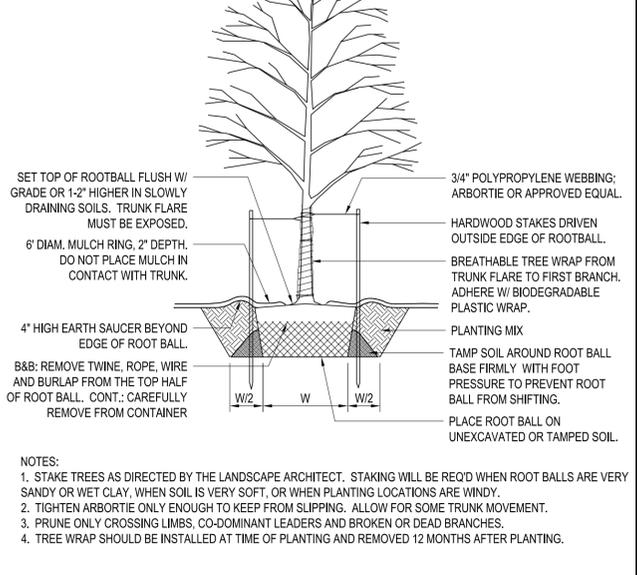


**A2 TREE PROTECTION DETAIL**  
SCALE: NTS

**C4 EVERGREEN TREE PLANTING DETAIL**  
SCALE: NTS

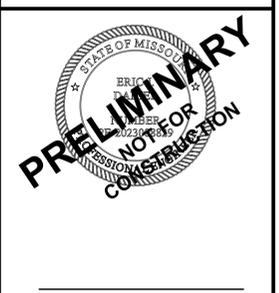


**A4 DECIDUOUS TREE PLANTING DETAIL**  
SCALE: NTS



**A4 DECIDUOUS TREE PLANTING DETAIL**  
SCALE: NTS

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Date: 03/30/2025

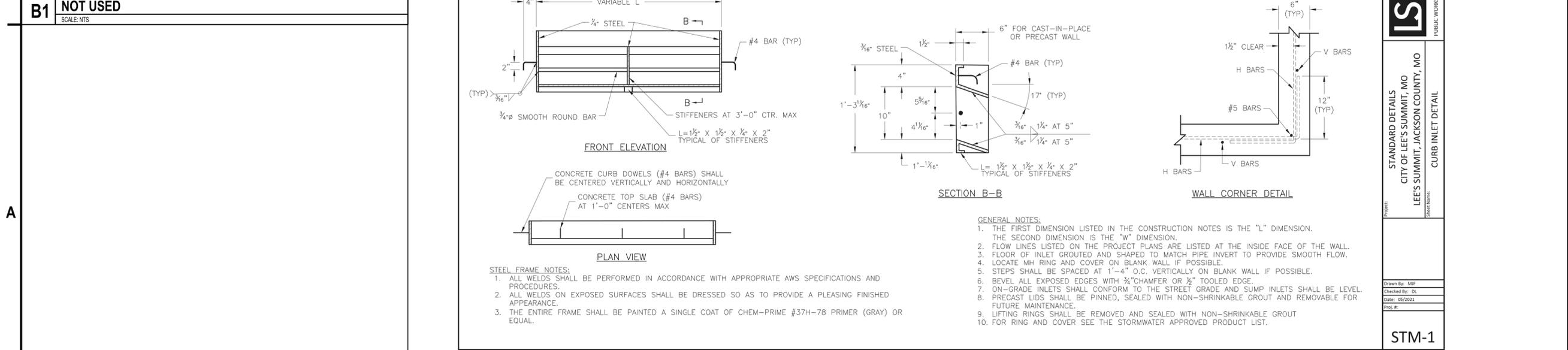
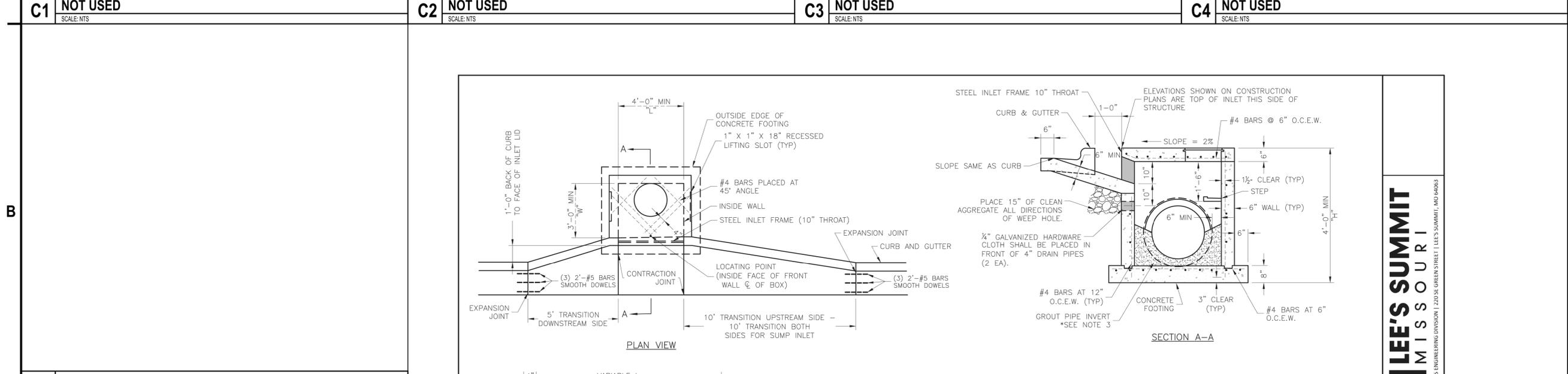
**LEE'S SUMMIT  
SENIOR APARTMENTS  
830-900 NE DOUGLAS STREET  
LEE'S SUMMIT, MO**

MARK	DATE	DESCRIPTION
REVISIONS		
		PROJECT NO: F53.519.002
		DATE: JULY 13, 2023
		DRAWN BY: S. SCHIENER
		DESIGNED BY: E. DANIEL
		CHECKED BY: E. DANIEL

**SITE, LANDSCAPING  
DETAILS AND NOTES**

**C-503**

<b>C1</b> NOT USED SCALE: NTS	<b>C2</b> NOT USED SCALE: NTS	<b>C3</b> NOT USED SCALE: NTS	<b>C4</b> NOT USED SCALE: NTS



**STEEL FRAME NOTES:**

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

**GENERAL NOTES:**

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

<b>A1</b> NOT USED SCALE: NTS	<b>A2</b> CURB INLET DETAIL SCALE: NTS		
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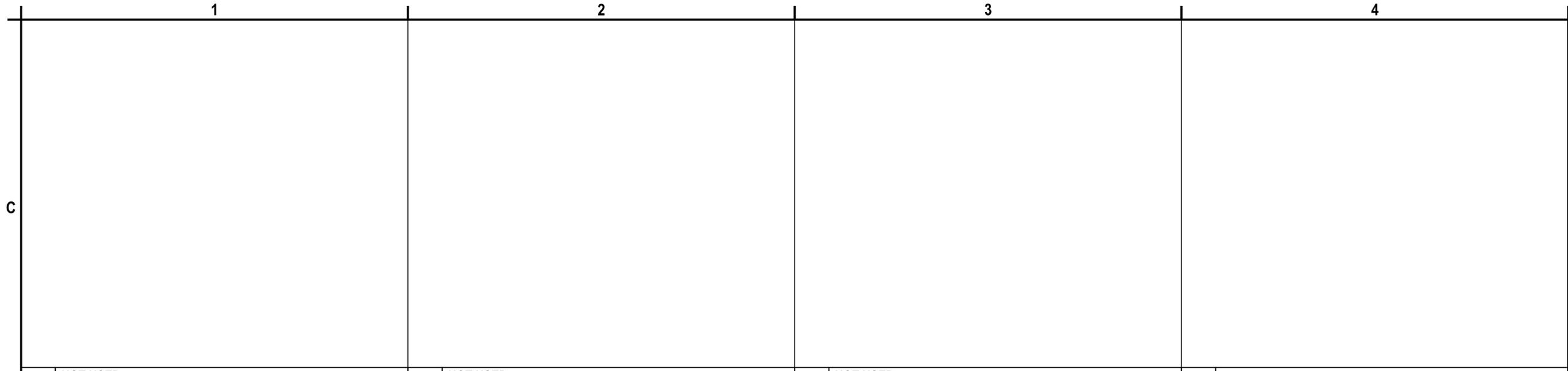
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Date: 03/30/2023

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

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: F53.519.002		
DATE: JULY 13, 2023		
DRAWN BY: S. SCHIENER		
DESIGNED BY: E. DANIEL		
CHECKED BY: E. DANIEL		

**STORM**  
**DETAILS**

**C-504**



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

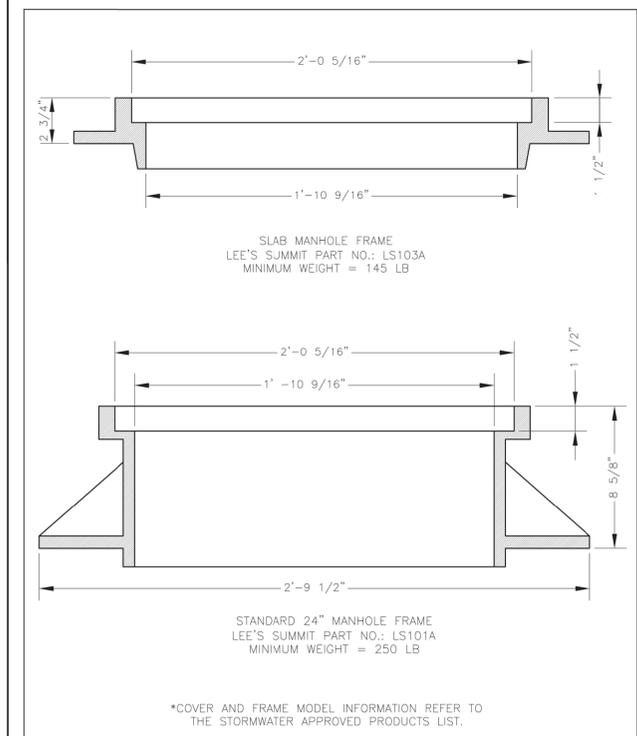
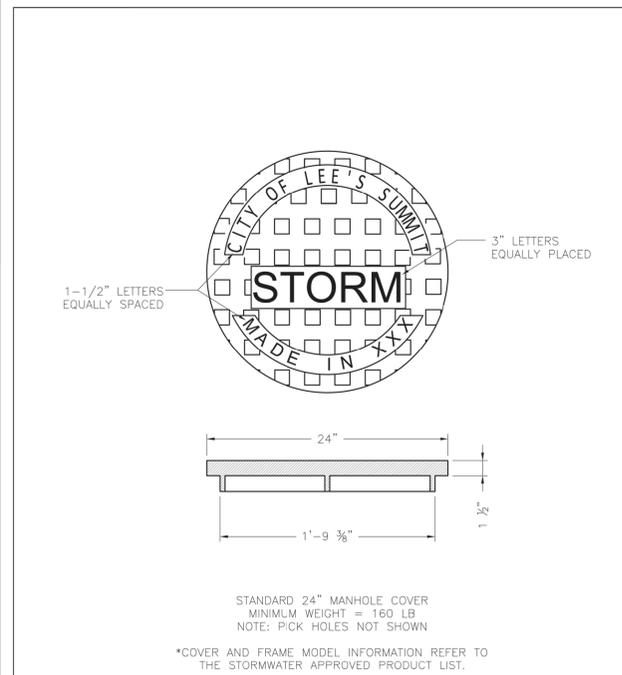
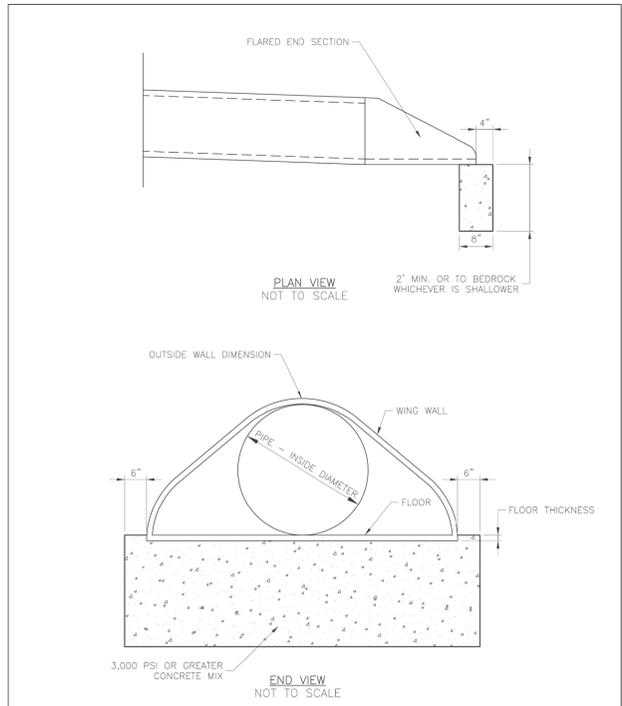
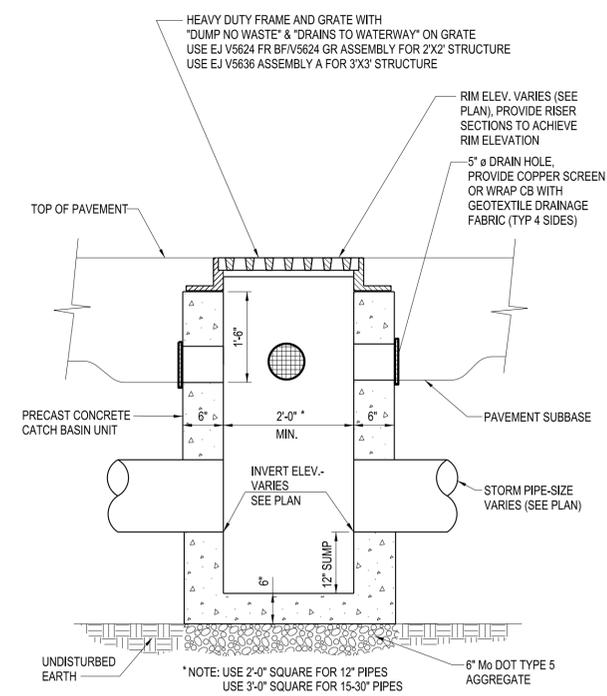
**C1** NOT USED  
SCALE: NTS

**C2** NOT USED  
SCALE: NTS

**C3** NOT USED  
SCALE: NTS

**C4** SCALE: NTS

B



**A1** PRECAST CATCH BASIN WITH RISER  
SCALE: NTS

**A2** FLARED END SECTION SUPPORT DETAIL  
SCALE: NTS

**A3** STORM MANHOLE COVER DETAIL  
SCALE: NTS

**A4** STORM MANHOLE FRAME DETAIL  
SCALE: NTS

MARK	DATE	DESCRIPTION
REVISIONS		
		PROJECT NO: F53.519.002
		DATE: JULY 13, 2023
		DRAWN BY: S. SCHIENER
		DESIGNED BY: E. DANIEL
		CHECKED BY: E. DANIEL

STORM  
DETAILS

C-505

1

C

2

3

4



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License No. PE-2023008829  
Date: 03/30/2023

**C1 NOT USED**  
SCALE: NTS

**C2 NOT USED**  
SCALE: NTS

**C3 NOT USED**  
SCALE: NTS

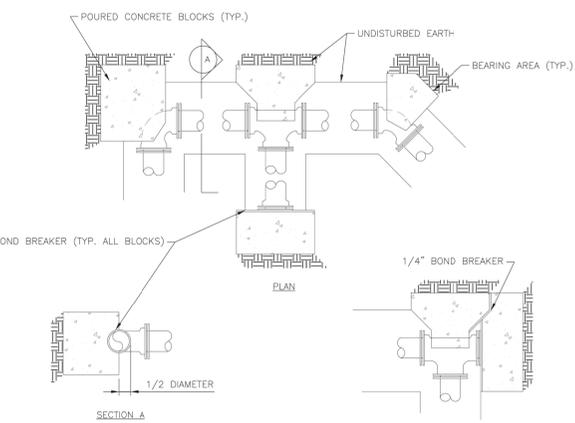
**C4 NOT USED**  
SCALE: NTS

B

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

REQUIRED CONCRETE BEARING AREA (SQUARE FEET - SF)

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



- NOTES:
- ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
  - MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
  - BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
  - DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

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

**LS** HORIZONTAL THRUST BLOCK

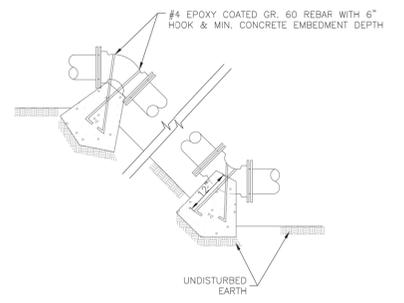
Date: 01/2016  
Drawn By: JN  
Checked By: DL

WAT-1

**A1 HORIZONTAL THRUST BLOCK**  
SCALE: NTS

REQUIRED CONCRETE VOLUME (CUBIC FEET - CF)

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	39.6
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



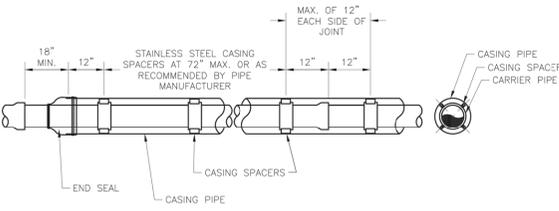
- NOTES:
- ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
  - MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
  - BEARING MUST BE AGAINST UNDISTURBED SOIL.
  - DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

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

**LS** VERTICAL THRUST BLOCK

Date: WAT-2  
Drawn By: JN  
Checked By: DL

**A2 VERTICAL THRUST BLOCK**  
SCALE: NTS



- NOTES:
- REFER TO SPECIFICATION SECTION 3900 FOR ADDITIONAL INFORMATION.
  - LENGTH, DIAMETER, AND WALL THICKNESS TO BE SHOWN ON CONSTRUCTION PLANS.

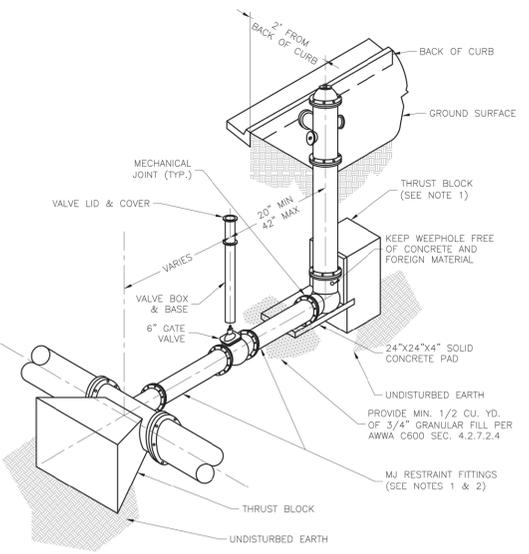
**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**LS** WATER CASING PIPE DETAIL

Date: 01/2016  
Drawn By: JN  
Checked By: DL

WAT-5

**A3 WATER CASING PIPE DETAIL**  
SCALE: NTS



- NOTES:
- WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
  - GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
  - SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
  - BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
  - 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.
  - HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

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

**LS** HYDRANT - STRAIGHT SET

Date: 01/2016  
Drawn By: JN  
Checked By: DL

WAT-7

**A4 HYDRANT - STRAIGHT SET**  
SCALE: NTS

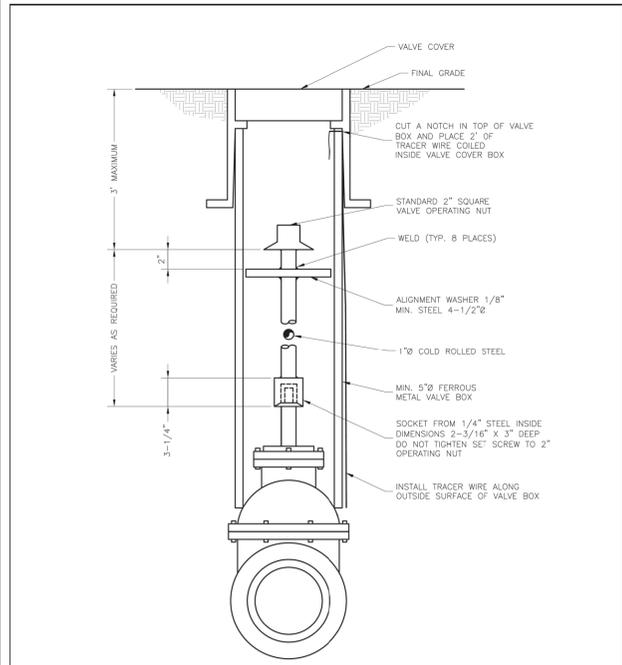
MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: F53.519.002		
DATE: JULY 13, 2023		
DRAWN BY: S. SCHIENER		
DESIGNED BY: E. DANIEL		
CHECKED BY: E. DANIEL		

WATER  
DETAILS

C-506

	1	2	3	4	
C					
<b>C1</b>	<b>NOT USED</b> SCALE: NTS	<b>C2</b>	<b>NOT USED</b> SCALE: NTS	<b>C3</b>	<b>NOT USED</b> SCALE: NTS
<b>C4</b>	<b>NOT USED</b> SCALE: NTS				

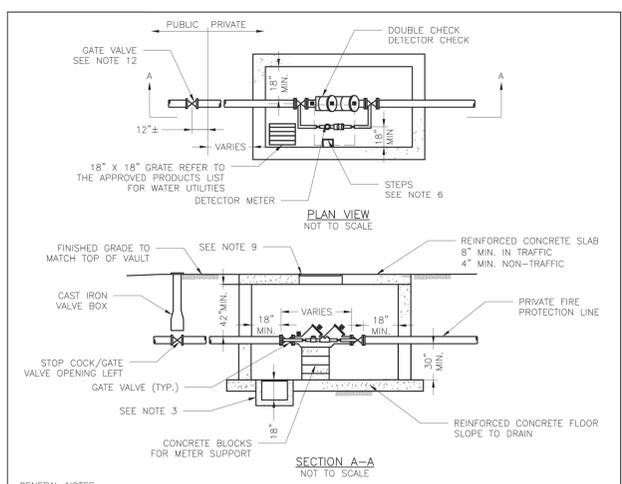
B					
A					
<b>A1</b>	<b>VALVE STEM EXTENSION AND VALVE BOX</b> SCALE: NTS	<b>A2</b>	<b>VAULT FOR DOUBLE CHECK DETECTOR CHECK</b> SCALE: NTS	<b>A3</b>	<b>NOT USED</b> SCALE: NTS
<b>A4</b>	<b>NOT USED</b> SCALE: NTS				



**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

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

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

**WAT-12**



**C&S Engineers, Inc.**  
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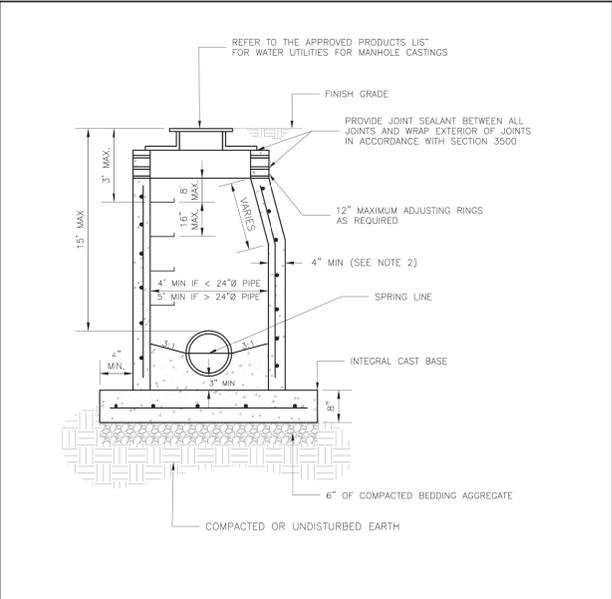
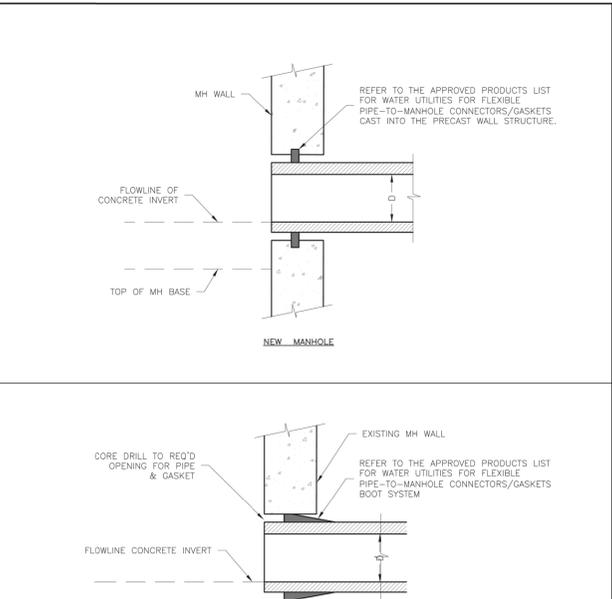
Eric J. Daniel, P.E.  
License No. PE-2023008829  
Date: 03/30/2023

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

MARK	DATE	DESCRIPTION
REVISIONS		
		PROJECT NO: F53.519.002
		DATE: JULY 13, 2023
		DRAWN BY: S. SCHIENER
		DESIGNED BY: E. DANIEL
		CHECKED BY: E. DANIEL

**WATER  
DETAILS**

**C-507**

	1	2	3	4
C				
	<b>C1</b> NOT USED SCALE: NTS	<b>C2</b> NOT USED SCALE: NTS	<b>C3</b> NOT USED SCALE: NTS	<b>C4</b> NOT USED SCALE: NTS
B				
	<b>B1</b> NOT USED SCALE: NTS	<b>B2</b> NOT USED SCALE: NTS		
A			 <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.</li> <li>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".</li> <li>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.</li> <li>4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.</li> <li>5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.</li> <li>6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.</li> <li>7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.</li> </ol>	
	<b>A1</b> NOT USED SCALE: NTS	<b>A2</b> NOT USED SCALE: NTS	<b>A3</b> STANDARD SANITARY PRECAST MANHOLE SCALE: NTS	<b>A4</b> MANHOLE WALL CONNECTION SCALE: NTS
	1	2	3	4



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

**SANITARY SEWER  
DETAILS**

C-508