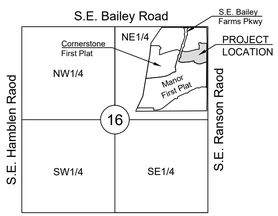
STREET, STORMWATER, AND MASTER DRAINAGE PLAN
FOR
RETREAT AT BAILEY FARMS, FIRST PLAT

IN THE CITY OF LEE'S SUMMIT
JACKSON COUNTY, MISSOURI

LEGEND:

A/E	-	ACCESS EASEMENT
BC	-	BACK OF CURB
B/B	-	BACK TO BACK
BM	-	BENCHMARK
BL or B.L.	-	BUILDING LINE
CO	-	CLEANOUT
TJB	-	TELEPHONE JUNCTION BOX
C&G	-	CURB AND GUTTER
D/E	-	DRAINAGE EASEMENT
E/E	-	ELECTRICAL EASEMENT
EL	-	ELEVATION
FL	-	FLOW LINE
G/E	-	GAS LINE EASEMENT
HDPE	-	HIGH-DENSITY POLYETHYLENE
L/E	-	LANDSCAPE EASEMENT
MSFE	-	MINIMUM SERVICEABLE FLOOR ELEVATION
PVC	-	POLYVINYL CHLORIDE
P/L	-	PROPERTY LINE
PUB/E	-	PUBLIC EASEMENT
RCP	-	REINFORCED CONCRETE PIPE
ROW or R/W	-	RIGHT-OF-WAY
S/E	-	SANITARY SEWER EASEMENT
SL	-	SERVICE LINE
S/W	-	SIDEWALK
TE	-	TOP ELEVATION
U/E	-	UTILITY EASEMENT
WSE	-	WATER SURFACE ELEVATION
W/E	-	WATERLINE EASEMENT

ASPHALT PAVEMENT - EXISTING
ASPHALT PAVEMENT - PROPOSED
CONCRETE PAVEMENT - EXISTING
CONCRETE SIDEWALK - EXISTING
CONCRETE SIDEWALK - PROPOSED
CURB & GUTTER
CURB & GUTTER - EXISTING
TREELINE
EXISTING LOT AND R/W LINES
EXISTING PLAT LINES
P/L — PROPERTY LINES
ROW — RIGHT-OF-WAY
SANITARY SEWER MAIN
SANITARY SEWER MAIN - EXIST.
STO — STORM SEWER
STORM SEWER - EXISTING
$CATV_X$ — CABLE TV - EXISTING
FOC_X — FIBER OPTIC CABLE - EXISTING
T_X — TELEPHONE LINE - EXIST.
E_X — ELECTRIC LINE - EXISTING
OHP_X — OVERHEAD POWER LINE - EXIST.
UGE_X — UNDERGROUND ELECTRIC - EX.
G_X — GAS LINE - EXISTING
W_X — WATERLINE - EXISTING
LIGHT - EXISTING
EXISTING MANHOLE
CO — CLEANOUT
EXISTING SANITARY MANHOLE
PROPOSED SANITARY MANHOLE
AI — EXISTING AREA INLET
CI — EXISTING CURB INLET
GI — EXISTING GRATE INLET
JB — EXISTING JUNCTION BOX
D — EXISTING STORM MANHOLE



SECTION 16-47-31

LOCATION MAP
SCALE 1" = 2000'

BASIS OF BEARINGS:
MISSOURI COORDINATE SYSTEM 1983, WEST ZONE

UTILITY CONTACTS:

MISSOURI DEPARTMENT OF TRANSPORTATION (MODOT)
Steve Holloway
600 NE Colbern Road
Lee's Summit, MO 64086
(816) 607-2186

MISSOURI GAS ENERGY (MGE)
Brent Jones
3025 SE Clover Drive
Lee's Summit, MO 64082
(816) 399-9633
brent.jones@spireenergy.com

KANSAS CITY POWER & LIGHT COMPANY (KCP&L)
Ron Dejarnette
1300 SE Hamblin Road
Lee's Summit, MO 64081
Office: (816) 347-4316
Cell: (816) 810-5234
ron.dejarnette@kcpl.com

CITY OF LEES SUMMIT PUBLIC WORKS
Dena Mezger
220 SE Green Street
Lee's Summit, MO 64063
(816) 969-1800

AT&T
Mark Manion or Marty Loper
500 E. 8th Street, Room 370
Kansas City, MO 64106
(816) 275-2341 or (816) 275-1550

COMCAST CABLE
John Meadows
4700 Little Blue Parkway
Independence, MO 64057
(816) 795-2257

CITY OF LEE'S SUMMIT WATER UTILITIES
Mark Schaufler
1200 SE Hamblen Road
Lee's Summit, MO 64081
(816) 969-1900

GENERAL NOTES:

1. ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
3. LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.
4. NO GEOLOGICAL INVESTIGATION HAS BEEN PERFORMED ON THE SITE.
5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT OF WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. THE CONTRACTOR MAY ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC.": 1-800-DIG-RITE. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
7. PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. AFTER APPROVAL OF THE SHOP DRAWINGS, A COPY OF THE APPROVED AND SIGNED SHOP DRAWINGS SHALL BE PROVIDED TO THE CITY INSPECTOR UPON REQUEST.
8. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
9. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
10. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.
11. ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
12. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASED OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
13. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
14. THE CONTRACTOR SHALL CONTACT DEVELOPMENT SERVICES INSPECTIONS AT: 816-969-1200 TO OBTAIN A DEVELOPMENT SERVICES CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE.
15. THE CONTRACTOR SHALL CONTACT THE RIGHT OF WAY INSPECTOR AT 816-969-1800 PRIOR TO ANY LAND DISTURBANCE ACTIVITIES WITHIN THE RIGHT OF WAY. THESE ACTIVITIES MAY REQUIRE A PERMIT.
16. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD-LATEST EDITION).

STREET NOTES:

1. ALL STREET CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL. ALL APPLICABLE AASHTO STANDARDS HAVE BEEN MET.
2. ALL INSPECTION OF STREET CONSTRUCTION TO BE PERFORMED BY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING.
3. CURB RETURN RADII SHALL BE 25' AT BACK OF CURB UNLESS OTHERWISE NOTED.
4. SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
5. ASSUMED DESIGN SPEED = 25 MPH (COLLECTOR).
6. MINIMUM STOPPING SIGHT DISTANCE = 155 FEET.
7. MINIMUM K, SAG CURVE = 26 (14 WITH LIGHTING), CREST CURVE = 12.
8. GRADE INTERSECTIONS TO DRAIN AS SHOWN.
9. SSD = STOPPING SIGHT DISTANCE.
10. ALL ADA SIDEWALK RAMPS SHALL BE CONSTRUCTED BY THE DEVELOPER WITH THE PUBLIC INFRASTRUCTURE.

SUMMARY OF QUANTITIES

	ITEM	QUANTITY	UNITS
1	CLEARING AND GRUBBING	1	LS
2	GRADING	1	LS
3	6" ASPHALT PAVEMENT - LOCAL-RESIDENTIAL STREET	3,100	SY
4	FLY-ASH OR COMPACTED AGGREGATE BASE	3,743	SY
5	TYPE CG-2 CURB AND GUTTER (INLET TRANSITIONS NOT INCLUDED) SUBIDIARY TO CG-2 IS ALL CG-2 DRY NEEDED	1,771	LF
6	TYPE A SIDEWALK RAMP	2	EA
7	5' CONCRETE SIDEWALK	36	LF
8	10' CONCRETE TRAIL	174	LF
9	4'X4' JUNCTION BOX	1	EA
10	6'X4' CURB INLET	8	EA
11	4'x4' FIELD INLET	1	EA
12	18" RCP	108	LF
13	15" HDPE	360	LF
14	18" HDPE	172	LF
15	24" HDPE	106	LF
16	TURF REINFORCEMENT MAT	206	SY
17	END OF ROAD MARKERS (OM 4-1)	6	EA
18	SIGNAGE	1	LS
19	EROSION CONTROL	1	LS
20	SEEDING AND MULCHING	1	LS

EARTHWORK:

1. It is recommended that a Geotechnical Engineer observe and document all earthwork activities.
2. Contours have been shown at 1-foot or 2-foot intervals, as indicated. Grading shall consist of completing the earthwork required to bring the physical ground elevations of the existing site to the finished grade (or sub-grade) elevations provided on the plans as spot grades, contours or others means as indicated on the plans.
3. The existing site topography depicted on the plans by contouring has been established by aerial photography and field verified by g.p.s. observation near 2-20-19.The contour elevations provided may not be exact ground elevations, but rather interpretations of such. Accuracy shall be considered to be such that not more than 10 percent of spot elevation checks shall be in error by more than one-half the contour interval provided, as defined by the National Map Accuracy Standards. Any quantities provided for earthwork volumes are established using this topography contour accuracy, and therefore the inherent accuracy of any earthwork quantity is assumed from the topography accuracy.
4. Proposed contours are to approximate finished grade.
5. Unless otherwise noted, payment for earthwork shall include backfilling of the curb and gutter, sidewalk and further manipulation of utility trench spoils. The site shall be left in a mowable condition and positive drainage maintained throughout.
6. Unless otherwise noted, all earthwork is considered Unclassified. No additional compensation will be provided for rock or shale excavation, unless specifically stated otherwise.
7. Prior to earthwork activities, pre-disturbance erosion and sediment control devices shall be in place per the Storm Water Pollution Prevention plan and/or the Erosion and Sediment Control Plan prepared for this site.
8. All topsoil shall be stripped from all areas to be graded and stockpiled adjacent to the site at an area specified by the project owner or his appointed representative. Vegetation, trash, trees, brush, tree roots and limbs, rock fragments greater than 6-inches and other deleterious materials shall be removed and properly disposed of offsite or as directed by the owner or his appointed representative.
9. Unless otherwise specified in the Geotechnical Report, all fills shall be placed in maximum 6-inch lifts and compacted to 95-percent of maximum density as defined using a standard proctor test (AASHTO T99/ASTM 698).
10. Fill materials shall be per Geotechnical Report and shall not include organic matter, debris or topsoil. All fills placed on slopes greater than 6:1 shall be benched.
11. The Contractor shall be responsible for redistributing the topsoil over proposed turf and landscaped areas to a minimum depth of 6-inches below final grade.
12. All areas shall be graded for positive drainage. Unless noted otherwise the following grades shall apply:
    a. Turf Areas – 2.5% Minimum, 4H:1V Maximum
    b. Paved Areas – 1.2% Minimum, 5% Maximum
13. All disturbed areas shall be fertilized, seeded and mulched immediately after earthwork activities have ceased. Seeding shall be per the Erosion and Sediment Control Plan and/or Landscape Plan. If not specified seeding shall be per APWA Section 2400, latest edition. Unless otherwise noted, seeding shall be subsidiary to the contract price for earthwork and grading activities.
14. All disturbed areas in the right-of-way shall be sodded.
15. Underdrains are recommended for all paved areas adjacent to irrigated turf and landscaped beds.
16. Contractor shall adhere to the reporting requirements outlined in the Storm Water Pollution Prevention Plan (SWPPP) prepared for this project. Erosion and Sediment control devices shall be properly maintained and kept clean of silt and debris and in good working order. Additional erosion and sediment control measures shall be installed as required.

UTILITIES:

1. Existing utilities have been shown to the greatest extent possible based upon information provided to the Engineer. The contractor is responsible for contacting the respective utility companies and field locating utilities prior to construction and identifying any potential conflicts. All conflicts shall immediately be brought to the attention of the Engineer.
2. The contractor shall be responsible for coordinating any required utility relocations. Utilities damaged through the negligence of the contractor shall be repaired at the contractor's expense.
3. Contractor shall verify flow-lines and structure tops prior to construction, and shall notify Engineer of any discrepancies. Provide shop drawings for all precast and manufactured utility structures for review by the Engineer prior to construction of the structures.
4. Utility Separation: Waterlines shall have a minimum of 10 feet horizontal and 2 feet vertical separation from all sanitary sewer lines, manholes, and sanitary sewer service laterals, as measured from edge to edge. If minimum separations can not be obtained, concrete encasement of the sanitary line shall be required 10 feet in each direction of the conflict.
5. Payment for trenching, backfilling, pipe embedment, flowable fill, backfill materials, clean up, seeding, sodding and any other items necessary for the construction of the utility line shall be included in the contract price for the utility installation.
6. The Contractor shall be responsible for contacting respective utility companies 48-hours in advance for the inspection of any proposed utility main extension or service line or service connection to any existing main.
7. Trench spoils shall be neatly placed onsite adjacent to the trench, and compacted to prevent saturation and excess sediment runoff. Unsuitable materials, excess rock and shale, asphalt, concrete, trees, brush etc. shall be properly disposed of offsite. Materials may be wasted onsite at the direction of the Owner or his appointed representative.
8. All excavation is considered unclassified, unless noted otherwise. Unclassified excavation for utility trenching is subsidiary to the unit price provided for the pipe. Any quantity provided for rock excavation is estimated based on the best information provided to the Project Engineer. The Engineer has the authority to identify and define the physical characteristics to determine the classification. Unit price quantities for rock excavation will be paid at a trench width of the nominal pipe diameter of the installed main plus 18 inches. Contractor is required to dispose of excess rock from their trenches by disposing it in areas as specified by the Project Engineer.

New City Requirements:

Flowable fill required per City specifications at all storm structures.

KCMMB Asphalt specification required for all lifts of street pavement. Fly ash is no longer an option for chemical stabilization. Other acceptable options are cement, lime.

Sheet List Table

APPROVED BY:

CITY ENGINEER — DATE
APPROVED FOR ONE YEAR FROM THIS DATE

OWNER/DEVELOPER:

CLAYTON PROPERTIES GROUP INC., DBA SUMMIT HOMES
BRADLEY KEMPF
120 SE 30TH STREET
LEE'S SUMMIT, MO 64082
p (816) 246-6700
BRADLEY@SUMMITHOMESKC.COM

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP-CALL BEFORE YOU DIG!

MISSOURI ONE CALL SYSTEM

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

RECORD DRAWING

The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information obtained by Schlagel and Associates.

"~~100.00~~ 100.10", "~~1.00%~~ 1.15% slope", or "8-inch ~~HDPE~~ PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 04/01/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
14920 W. 107th Street • Lenexa, Kansas 66215
(913) 492-6161 • Fax (913) 492-0400
WWW.SCHLAGEL.COM
Missouri State Certificates of Authority
#E2000030800-F #LA2001005237 #LS2000208859-F

PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2010010195
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

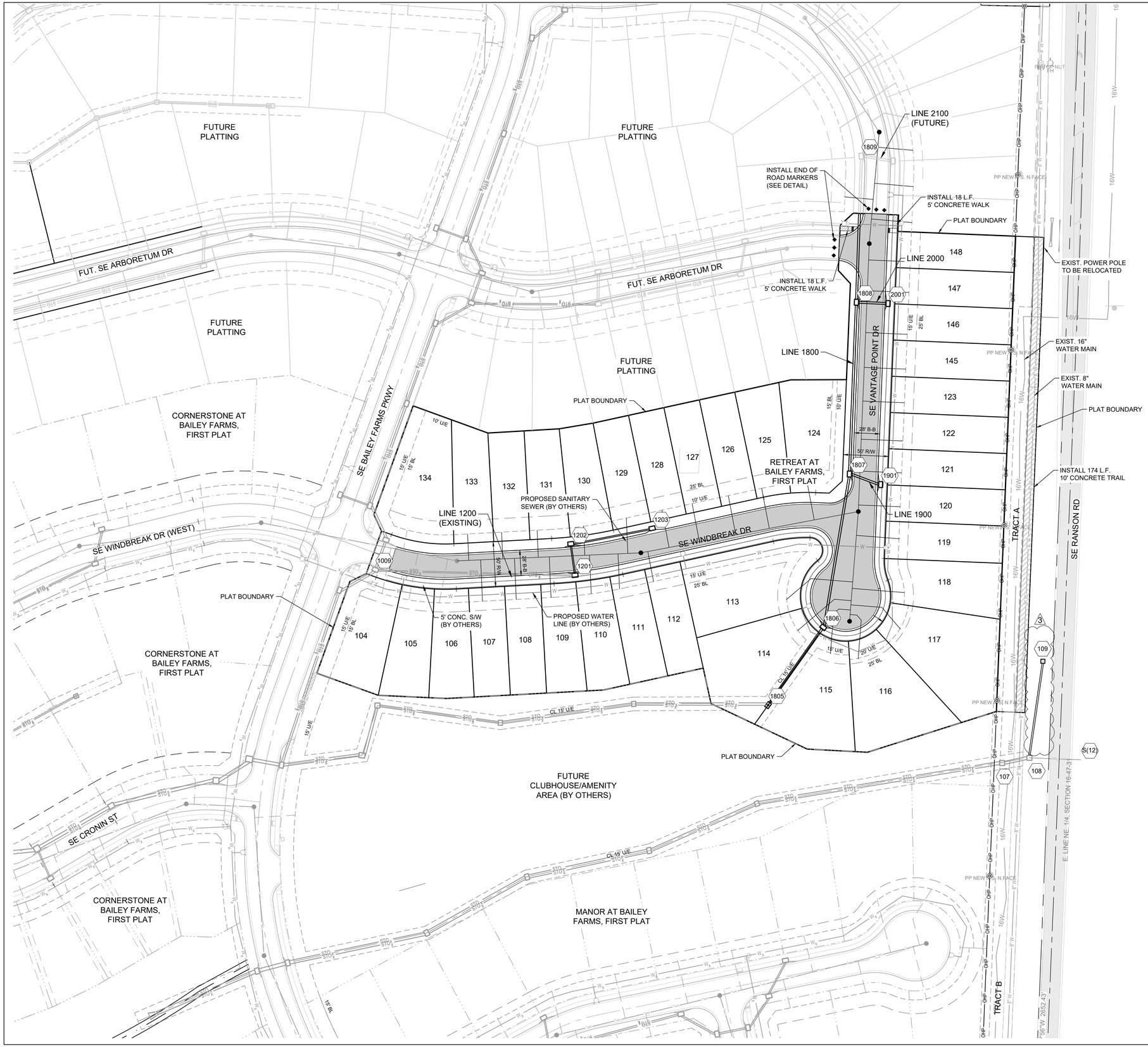
RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
03/21/2022	PER CITY COMMENTS
04/20/2022	PER CITY COMMENTS DATED 03/25/2022
06/25/2022	ADD FIELD INLET
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 109 TO MoDOT S1 INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-133

COVER SHEET

SHEET 1



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BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM
(NAD) 1983, MISSOURI, WEST ZONE

NOTES:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEES SUMMIT TECHNICAL SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

STREET LEGEND:

RESIDENTIAL LOCAL

RECORD DRAWING

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Date: 04/01/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

0 50' 100'
SCALE: 1" = 50'

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PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010195
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT STREET, STORMWATER, AND MASTER DRAINAGE PLAN

SE BAILEY ROAD AND SE RANSON ROAD LEE'S SUMMIT, MISSOURI

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DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
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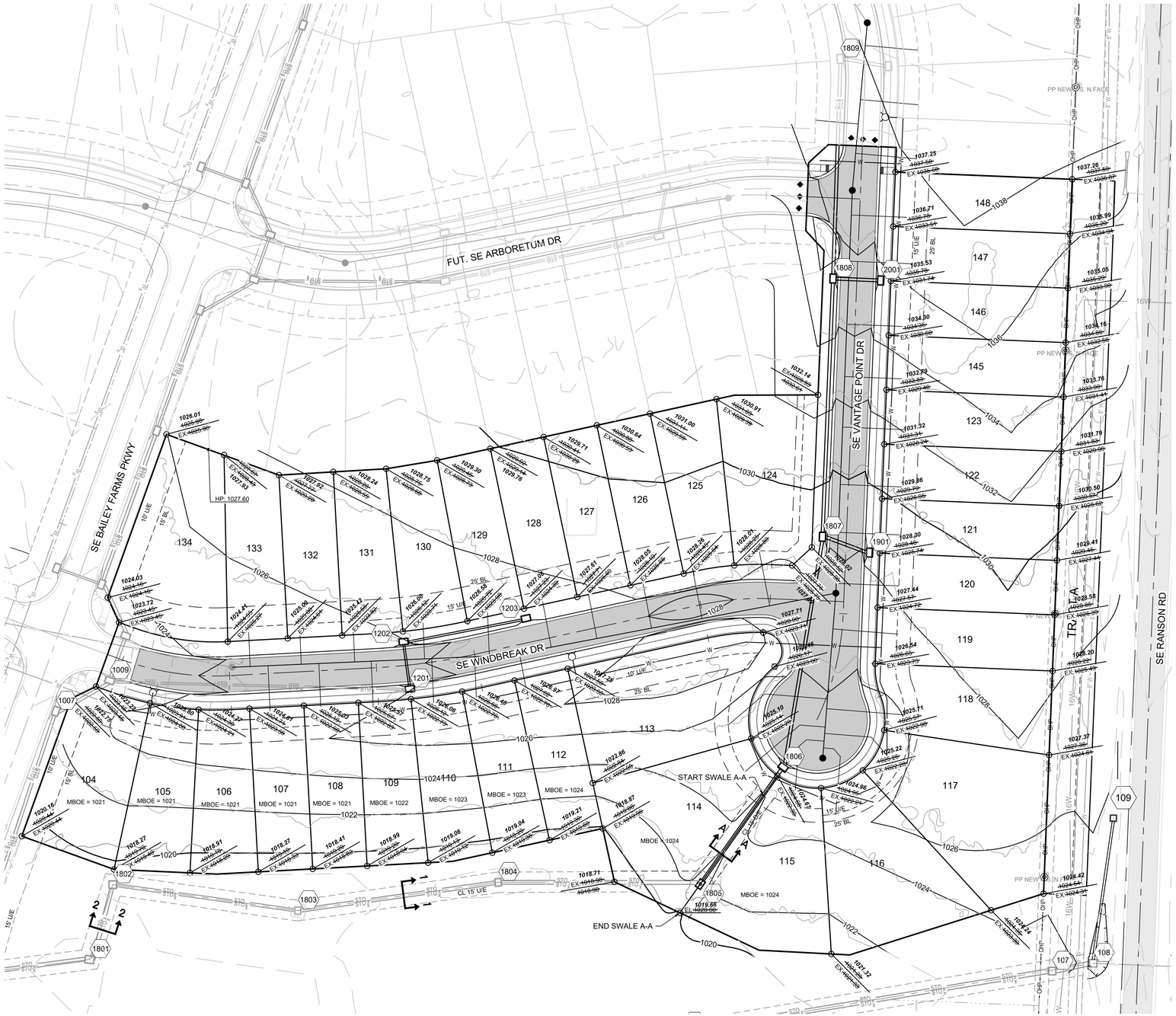
GENERAL LAYOUT

SHEET 2



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ELEV. = 1046.25

GRADING LEGEND:

- A A — DENOTES OVERFLOW SWALE
- 000.00 — DENOTES FINISHED AS-BUILT GRADE ELEVATION
- EL:000.00 — DENOTES FINISHED GRADE ELEVATION
- EL:000.00 (EX.) — DENOTES EXISTING GRADE ELEVATION
- HP 000.00 — DENOTES LOT HIGH POINT ELEVATION
- 1023 — DENOTES PROPOSED MAJOR CONTOUR
- 1023 — DENOTES PROPOSED MINOR CONTOUR
- 1023 — DENOTES EXISTING MAJOR CONTOUR
- 1023 — DENOTES EXISTING MINOR CONTOUR
- 1023 — DENOTES AS-BUILT MAJOR CONTOUR
- 1023 — DENOTES AS-BUILT MINOR CONTOUR
- MWSE

BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM (NAD) 1983, MISSOURI, WEST ZONE

NOTES:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEES SUMMIT TECHNICAL SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

LOT TYPE TABLE		
LOT NUMBER	BASEMENT TYPE	MBOE
104	DAYLIGHT	1021
105	DAYLIGHT	1021
106	DAYLIGHT	1021
107	DAYLIGHT	1021
108	DAYLIGHT	1021
109	DAYLIGHT	1022
110	DAYLIGHT	1023
111	DAYLIGHT	1023
112	DAYLIGHT	1024
113	STANDARD	1026
114	STANDARD	1024
115	STANDARD	1024
116	STANDARD	
117	STANDARD	
118	STANDARD	
119	STANDARD	
120	STANDARD	
121	STANDARD	
122	STANDARD	
123	STANDARD	
145	STANDARD	
146	STANDARD	
147	STANDARD	
148	STANDARD	
124	STANDARD	
125	STANDARD	
126	STANDARD	
127	STANDARD	
128	STANDARD	
129	STANDARD	
130	STANDARD	
131	STANDARD	
132	STANDARD	
133	STANDARD	
134	STANDARD	

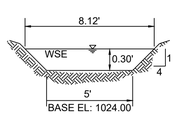
NOTES:

1. MBOE = MINIMUM BUILDING OPENING ELEVATION FOR HOUSES ADJACENT TO ENGINEERED OVERFLOW SWALES SHALL BE MINIMUM 2 FEET ABOVE THE 100 YR WATER SURFACE ELEVATION.
2. EGL = ENERGY GRADE LINE (100 YR)
3. WSE = WATER SURFACE ELEVATION (100 YR)
4. ENGINEERED SWALES TO BE GRADED TO NORMAL DEPTH OF FLOW (WATER SURFACE ELEVATION) OR 1.0 FT, WHICHEVER IS GREATER. MINIMUM SLOPE OF ENGINEERED SWALES SHALL BE AS NOTED.
5. MBOE'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1 FOOT ABOVE TOP OF ADJACENT BERM.

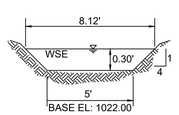
WEIR CALCULATIONS (Q = CLH^(3/2))								
SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	DESIGN OVERFLOW (CFS)	WEIR ELEVATION	WEIR COEFFICIENT	LENGTH	HEAD REQ'D	WSE
1	4.07	34.65	34.65	1018.50	3.33	10'-0"	1.03	1019.53
2	5.12	43.60	43.60	1018.50	3.33	10'-0"	1.20	1019.70

100 YEAR OVERFLOW SWALES											
SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	Q10 (CFS)	DESIGN OVERFLOW (CFS)	BED SLOPE (%)	BASE WIDTH (FT.)	SIDE SLOPE	TOP WIDTH (FT.)	NORMAL DEPTH (FT.)	VELOCITY (FPS)	VELOCITY HEAD (FT.)	EGL (FT.)
A-A	3.11	26.50	15.10	11.40	3.80	5	4:1	8.12	0.39	4.45	0.31	0.70

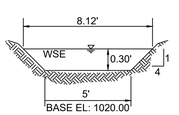
RUNOFF CALCULATIONS:
Q = K * C * I * A
K_{10} = 1.0 K_{100} = 1.25 C = 0.66 I = INTENSITY
DESIGN OVERFLOW=$Q_{OVERFLOW} = Q_{100} - Q_{10}$
MANNINGS "n" = 0.030 FOR SWALES



100 YEAR OVERFLOW SWALE SECTIONS
START A-A



100 YEAR OVERFLOW SWALE SECTIONS
A-A



100 YEAR OVERFLOW SWALE SECTIONS
END A-A

RECORD DRAWING

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Date: 04/01/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

0 40' 80'
SCALE: 1" = 40'

SCHLAGEL
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WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2000030800-F #LA2001005237 #LS2002008859-F

PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

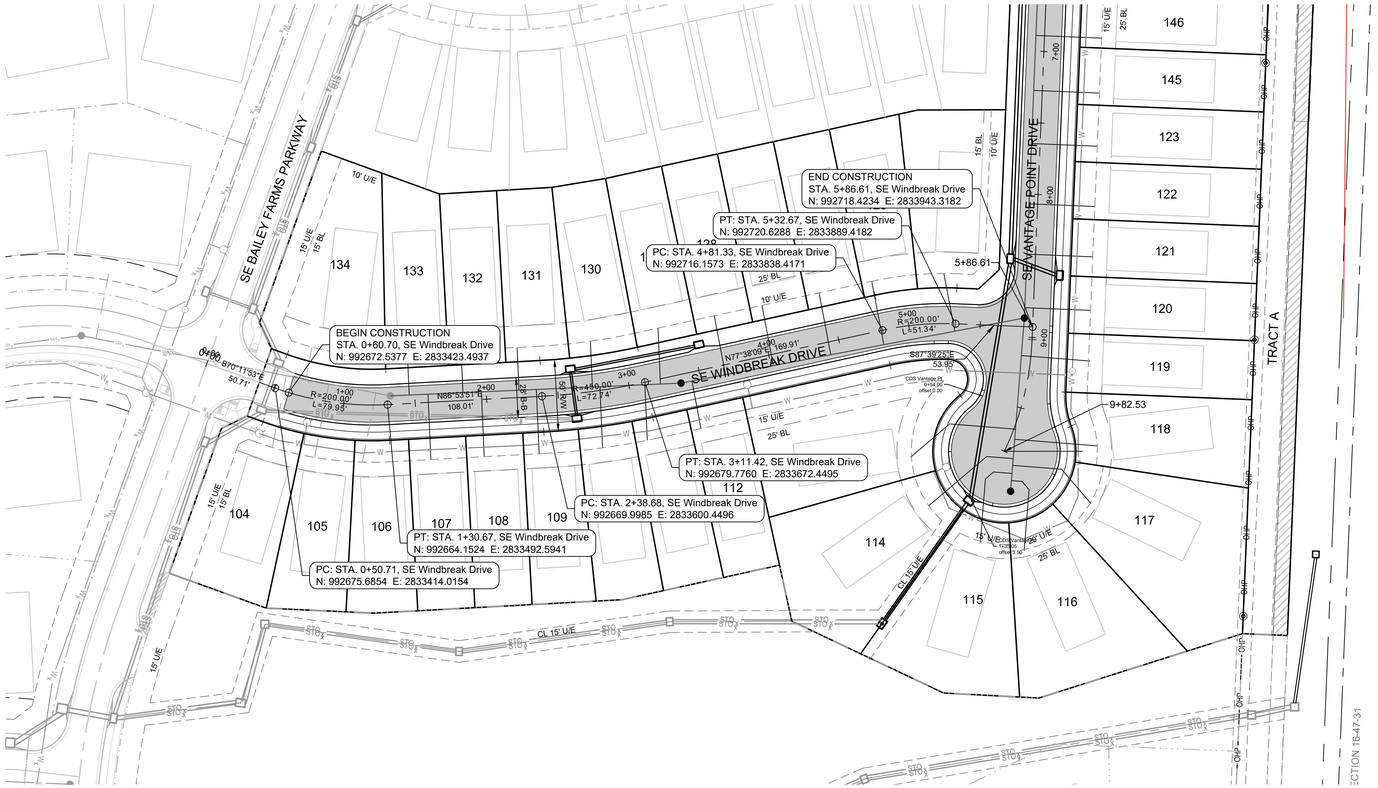
RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
03/21/2022	PER CITY COMMENTS
04/20/2022	PER CITY COMMENTS DATED 02/25/2022
08/25/2022	ADD FIELD INLET
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 100 TO MoDOT S1 INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY:	CHECKED BY:	DATE PREPARED:	PROJ. NUMBER:
JRJ	JLL	02/09/2022	21-133

MASTER DRAINAGE PLAN-GRADING PLAN

SHEET 3



MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

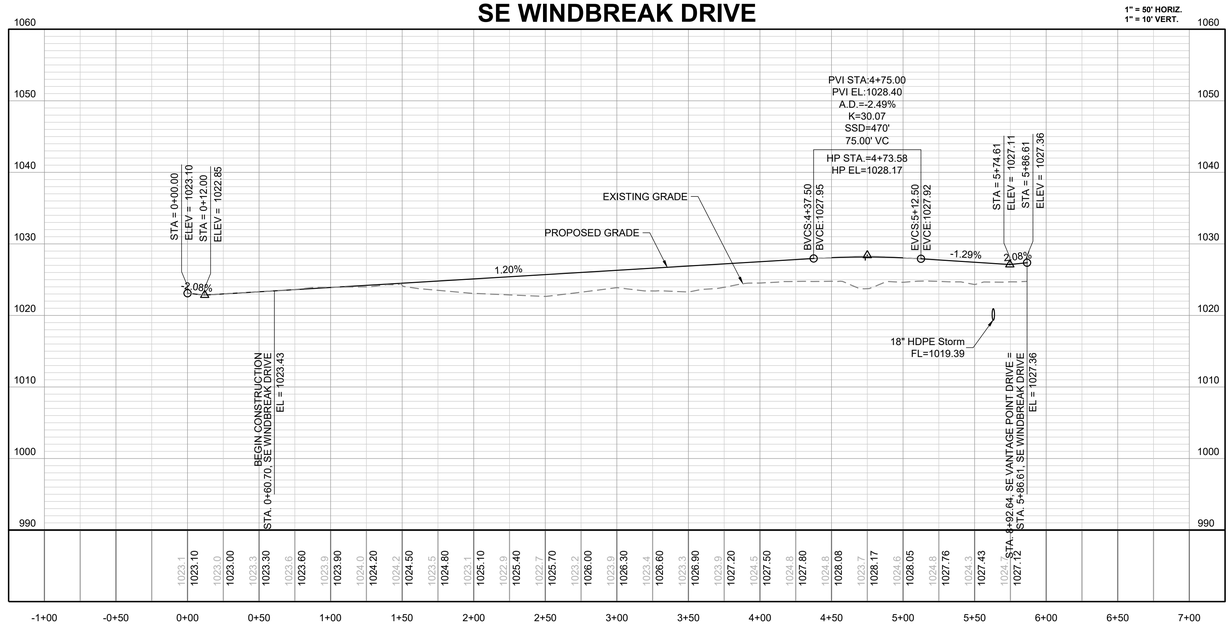
ELEV. = 1046.25

NOTES:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEES SUMMIT TECHNICAL SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

SCALE: 1" = 50'



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PREPARED BY:

STATE OF MISSOURI
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER
4/6/2025

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN

SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
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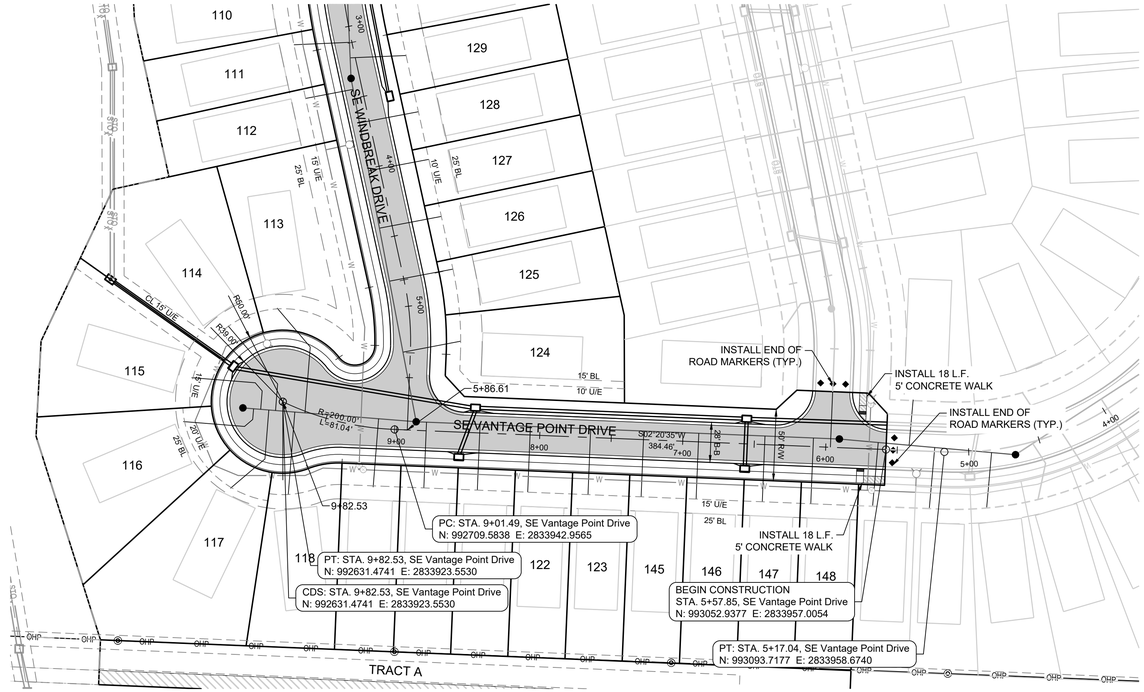
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 109 TO MoDOT SI INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/28/2022
PROJ. NUMBER: 21-153

SE WINDBREAK DR PLAN AND PROFILE

SHEET 4



MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

NOTES:

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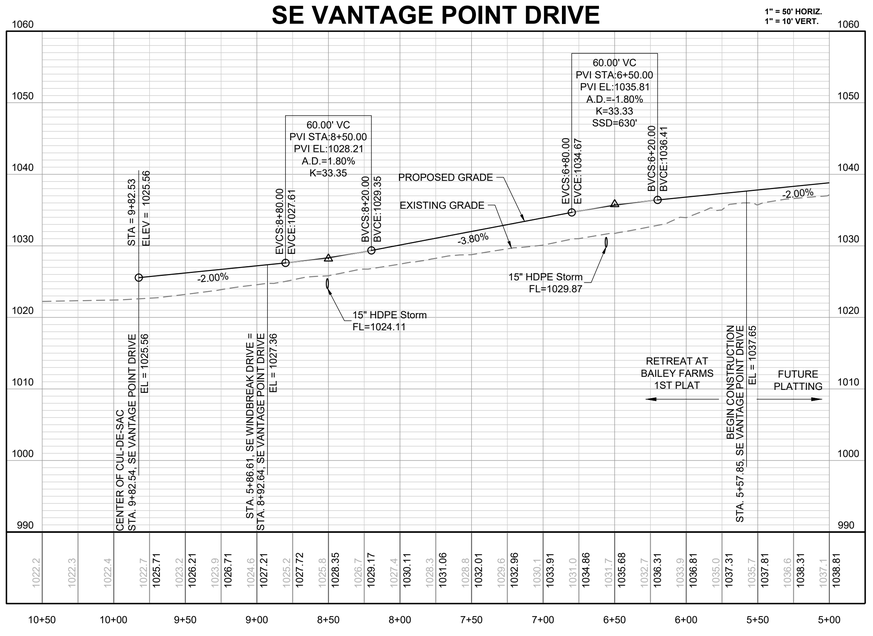
SCALE: 1" = 50'



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Date: 04/01/2025
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PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT STREET, STORMWATER, AND MASTER DRAINAGE PLAN

SE BAILEY ROAD AND SE RANSON ROAD LEE'S SUMMIT, MISSOURI

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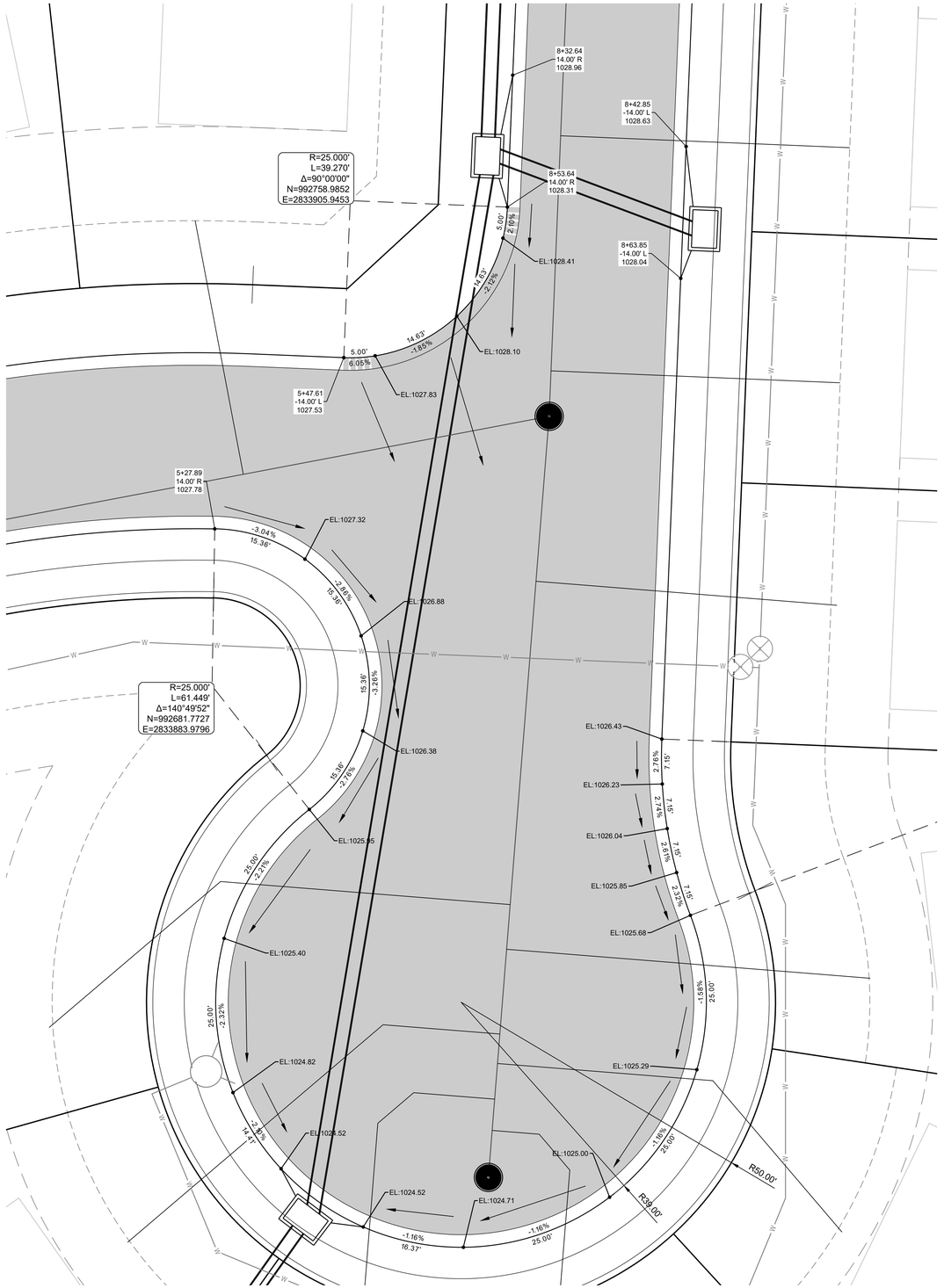
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-153

SE VANTAGE POINT DR PLAN AND PROFILE

SHEET 5



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Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

CURB LEGEND

- CURB & GUTTER - EXISTING
- TYPE "CG-2" CURB & GUTTER
- TYPE "CG-2" DRY CURB & GUTTER
- TRANSITION "CG-2" TO "CG-2 DRY"

0 10' 20'

SCALE: 1" = 10'

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STATE OF MISSOURI
JAMES L. LONG
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4/6/2025

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER DRAINAGE PLAN
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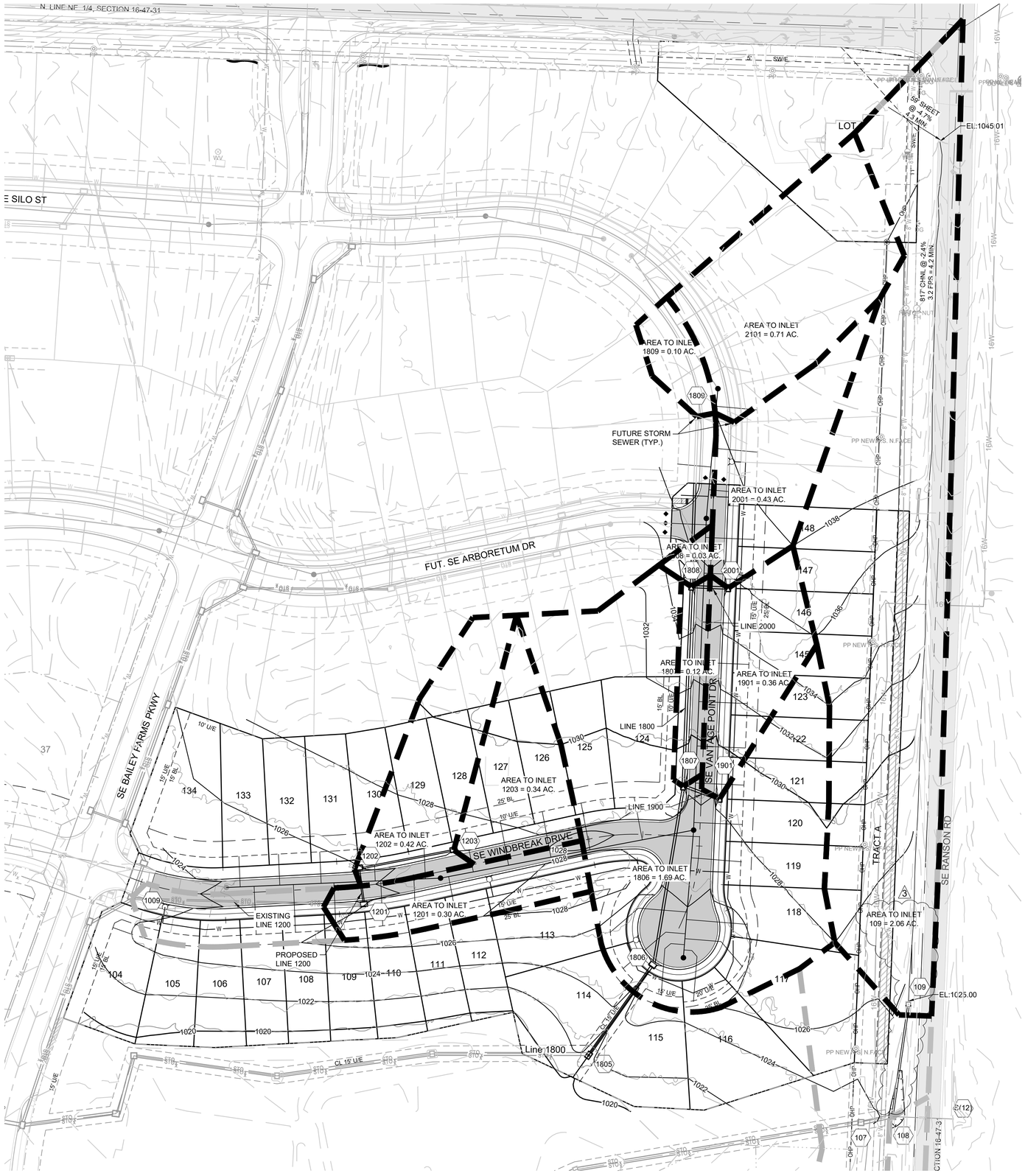
DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-153

INTERSECTION DETAILS

SHEET 6



MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

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ELEV. = 1046.25

BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM
(NAD) 1983, MISSOURI, WEST ZONE

NOTES:

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LEGEND

EXISTING DRAINAGE AREA

PROPOSED DRAINAGE AREA

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Date: 04/01/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

0 50' 100'

SCALE: 1" = 50'

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PROFESSIONAL ENGINEER

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04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-133

MASTER DRAINAGE PLAN-DRAINAGE MAP

SHEET 7

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

10-YEAR RUNOFF CALCULATIONS

Design Storm:	10
"K" Value:	1.00
"F" Factor:	1.00

Runoff Calculations															Pipe Properties											
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlet 1	Up Piped Inlet 2	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top
LINE 100																								DS TAILWATER @ STR #100	
108	13.00	0.51	15.06	7.66	15.0	5.18	34.33	39.66	81.69	11.56			0.00	0.00	108	107	RCP	0.013	36	30.70	1.50	0.50	1018.77	1018.31	1024.32
109	2.06	0.50	2.06	1.03	8.5	6.41	6.60	6.60	27.66	8.80			0.00	0.00	109	108	RCP	0.013	24	107.57	1.50	N/A	1020.88	1019.27	1026.00
LINE 1200																	Drop in Inlet 1009					0.50			
1201	0.30	0.66	1.06	0.70	5.0	7.35	1.46	5.14	16.09	9.11			0.00	0.00	1201	1009	HDPE	0.012	18	220.44	2.00	0.50	1019.15	1014.74	1023.40
1202	0.42	0.66	0.76	0.50	5.2	7.29	2.02	3.66	12.12	9.88			0.00	0.00	1202	1201	HDPE	0.012	15	34.53	3.00	0.50	1020.68	1019.65	1025.95
1203	0.34	0.66	0.34	0.22	5.0	7.35	1.65	1.65	9.90	8.06			0.00	0.00	1203	1202	HDPE	0.012	15	91.48	2.00	N/A	1023.01	1021.18	1027.08
LINE 1800																	Drop in Inlet 1007					0.20			
1805	0.00	0.66	3.42	2.26	6.5	6.92	0.00	15.63	29.00	9.23			0.00	0.00	1805	1804	HDPE	0.012	24	148.37	1.40	0.50	1015.30	1013.22	1020.98
1806	1.69	0.66	3.42	2.26	6.2	6.99	7.79	15.77	23.25	7.40			0.00	0.00	1806	1805	HDPE	0.012	24	105.15	0.90	0.50	1016.74	1015.80	1024.53
1807	0.12	0.66	1.73	1.14	5.8	7.11	0.56	8.12	12.04	6.82	1901		0.36	0.24	1807	1806	HDPE	0.012	18	171.66	1.12	4.00	1019.17	1017.24	1028.61
1808	0.03	0.66	1.25	0.83	5.4	7.22	0.14	5.96	9.90	8.06	2001		0.43	0.28	1808	1807	HDPE	0.012	15	189.72	2.00	0.50	1026.96	1023.17	1035.63
1809	0.10	0.66	0.79	0.52	5.0	7.35	0.49	3.83	7.67	6.25	2101		0.69	0.46	1809	1808	HDPE	0.012	15	161.32	1.20	N/A	1029.40	1027.46	1039.10
LINE 1900																	Drop in Inlet 1807					4.00			
1901	0.36	0.66	0.36	0.24	5.0	7.35	1.75	1.75	7.00	5.70			0.00	0.00	1901	1807	HDPE	0.012	15	36.46	1.00	0.20	1024.29	1023.93	1028.40
LINE 2000																	Drop in Inlet 1808					2.00			
2001	0.43	0.66	0.43	0.28	5.0	7.35	2.09	2.09	7.00	5.70			0.00	0.00	2001	1808	HDPE	0.012	15	35.00	1.00	0.20	1029.31	1028.96	1035.54

100-YEAR RUNOFF CALCULATIONS

Design Storm:	100
"K" Value:	1.25
"F" Factor:	1.00

Runoff Calculations															Pipe Properties											
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlet 1	Up Piped Inlet 2	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top
LINE 100																								DS TAILWATER @ STR #100	
108	13.00	0.51	15.06	7.66	15.0	7.36	60.97	70.44	81.69	11.56			0.00	0.00	108	107	RCP	0.013	36	30.70	1.50	0.50	1018.77	1018.31	1024.32
109	2.06	0.50	2.06	1.03	8.5	9.05	11.65	11.65	27.66	8.80			0.00	0.00	109	108	RCP	0.013	24	107.57	1.50	N/A	1020.88	1019.27	1026.00
LINE 1200																	Drop in Inlet 1009					0.50			
1201	0.30	0.66	1.06	0.70	5.0	10.32	2.55	9.03	16.09	9.11			0.00	0.00	1201	1009	HDPE	0.012	18	220.44	2.00	0.50	1019.15	1014.74	1023.40
1202	0.42	0.66	0.76	0.50	5.2	10.24	3.55	6.42	12.12	9.88			0.00	0.00	1202	1201	HDPE	0.012	15	34.53	3.00	0.50	1020.68	1019.65	1025.95
1203	0.34	0.66	0.34	0.22	5.0	10.32	2.90	2.90	9.90	8.06			0.00	0.00	1203	1202	HDPE	0.012	15	91.48	2.00	N/A	1023.01	1021.18	1027.08
LINE 1800																	Drop in Inlet 1007					0.20			
1805	0.00	0.66	3.42	2.26	6.5	9.74	0.00	27.49	29.00	9.23			0.00	0.00	1805	1804	HDPE	0.012	24	148.37	1.40	0.50	1015.30	1013.22	1020.98
1806	1.69	0.66	3.42	2.26	6.2	9.83	13.71	27.74	23.25	7.40			0.00	0.00	1806	1805	HDPE	0.012	24	105.15	0.90	0.50	1016.74	1015.80	1024.53
1807	0.12	0.66	1.73	1.14	5.8	9.99	0.99	14.26	12.04	6.82	1901		0.36	0.24	1807	1806	HDPE	0.012	18	171.66	1.12	4.00	1019.17	1017.24	1028.61
1808	0.03	0.66	1.25	0.83	5.4	10.15	0.25	10.46	9.90	8.06	2001		0.43	0.28	1808	1807	HDPE	0.012	15	189.72	2.00	0.50	1026.96	1023.17	1035.63
1809	0.10	0.66	0.79	0.52	5.0	10.32	0.85	6.73	7.67	6.25	2101		0.69	0.46	1809	1808	HDPE	0.012	15	161.32	1.20	N/A	1029.40	1027.46	1039.10
LINE 1900																	Drop in Inlet 1807					4.00			
1901	0.36	0.66	0.36	0.24	5.0	10.32	3.07	3.07	7.00	5.70			0.00	0.00	1901	1807	HDPE	0.012	15	36.46	1.00	0.20	1024.29	1023.93	1028.40
LINE 2000																	Drop in Inlet 1808					2.00			
2001	0.43	0.66	0.43	0.28	5.0	10.32	3.66	3.66	7.00	5.70			0.00	0.00	2001	1808	HDPE	0.012	15	35.00	1.00	0.20	1029.31	1028.96	1035.54

GUTTER SPREAD AND INLET CAPACITY CALCULATIONS - RETREAT AT BAILEY FARMS, FIRST PLAT

DESIGN STORM	10
"K" FACTOR	1.00

CURB TYPE "A" = LAZY BACK
CURB TYPE "B" = HIGH BACK

RUNOFF CALCULATIONS												INLET DESIGN							GUTTER DESIGN			
INLET #	COMPOSITE "C"	AREA	INLET Tc	INTENSITY	RUNOFF	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	BYPASS FROM UPSTREAM INLET	TOTAL RUNOFF	STREET GRADE	STREET CROSS SLOPE	CURB TYPE	INLET LENGTH	EFFECTIVE LENGTH 80% CAP	INLET INTERCEPTION	BYPASS TO DOWNSTREAM INLET	STREET GRADE	STREET CROSS SLOPE	DEPTH AT CURB	SPREAD OF FLOW
LINE 1200																						
1201	0.66	0.30	5	7.35	1.46					0.00	1.46	1.20	2.08	A	6	4.8	1.32	0.14	1.20	2.08	0.15	**7.94**
1202	0.66	0.42	5	7.35	2.04	1203				0.18	2.22	1.20	2.08	A	6	4.8	1.89	0.32	1.20	2.08	0.18	**9.22**
1203	0.66	0.34	5	7.35	1.65					0.00	1.65	1.20	2.08	A	6	4.8	1.47	0.18	1.20	2.08	0.16	**8.30**
LINE 1800																						
1806	0.66	1.69	5	7.35	8.20	1807	1901			0.67	8.87	SUMP	2.08	A	6	4.8	13.44	0.00	SUMP	2.08	< 0.21	**< 10.50**
1807	0.66	0.12	5	7.35	0.58	1808				0.00	0.58	3.80	2.08	A	6	4.8	0.53	0.05	3.80	2.08	0.09	**4.75**
1808	0.66	0.03	5	7.35	0.15					0.00	0.15	2.00	2.08	A	6	4.8	0.14	0.00	2.00	2.08	0.06	**3.35**
1809	0.66	0.10	5	7.35	0.49					0.00	0.49	2.00	2.08	A	6	6	0.47	0.01	2.00	2.08	0.09	**4.98**
LINE 1900																						
1901	0.66	0.36	5	7.35	1.75	2001				0.40	2.15	3.80	2.08	A	6	4.8	1.53	0.62	3.80	2.08	0.14	**7.44**
LINE 2000																						
2001	0.66	0.43	5	7.35	2.09					0.00	2.09	2.00	2.08	A	6	4.8	1.68	0.40	2.00	2.08	0.16	**8.24**

NOTES:
1. CAPACITY OF INLETS ON GRADE DETERMINED USING ROUTINE OUTLINED ON PGS 56-95 TO 56-97, SECTION 5600 APWA
2. CAPACITY OF SUMP INLETS CALCULATED USING FIGURE 5604-21, SECTION 5600 APWA
3. MANNINGS "n" VALUE FOR COMBINED ASPHALT PAVEMENT AND CONCRETE CURB - 0.014

RECORD DRAWING

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"~~100.00~~ 100.10", "~~1.00%~~ 1.15% slope", or "8-inch ~~HDPE~~ PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 04/01/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
14920 Metcalf | Overland Park, Kansas 66223 | (913) 492-5158 | Fax (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2000030800-F #LA2001005237 #LS2000208859-F

PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
03/21/2022	PER CITY COMMENTS
04/20/2022	PER CITY COMMENTS DATED 02/25/2022
06/25/2022	ADD FIELD INLET
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 109 TO MoDOT S1 INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-153

MASTER DRAINAGE PLAN-DRAINAGE CALCS

SHEET 8

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM
(NAD) 1983, MISSOURI, WEST ZONE

NOTES:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEES SUMMIT TECHNICAL SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

Storm Sewer Construction Notes	
Structure	Notes
109	STA 11+18.60, LINE 100 INSTALL 4'X4' MODOT TYPE S-1 DOUBLE GRATE DROP INLET N 992559.4871 E 2834141.2360
1201	STA 2+20.44, LINE 1200 INSTALL 6 X 4 CURB INLET N 992654.3986 E 2833624.9486
1202	STA 2+54.97, LINE 1200 INSTALL 6 X 4 CURB INLET N 992688.6205 E 2833620.3630
1203	STA 3+46.45, LINE 1200 INSTALL 6 X 4 CURB INLET N 992705.6873 E 2833710.2379
1805	STA 5+80.78, LINE 1800 INSTALL 4 X 4 JUNCTION BOX N 992511.0888 E 2833838.0784
1806	STA 6+85.93, LINE 1800 INSTALL 6 X 4 CURB INLET N 992596.8865 E 2833898.8588
1807	STA 8+57.59, LINE 1800 INSTALL 6 X 4 CURB INLET N 992766.0995 E 2833927.7543
1808	STA 10+47.31, LINE 1800 INSTALL 6 X 4 CURB INLET N 992955.6599 E 2833935.5105
1901	STA 0+36.46, LINE 1900 INSTALL 6 X 4 CURB INLET N 992754.4673 E 2833962.3077
2001	STA 0+35.00, LINE 2000 INSTALL 6 X 4 CURB INLET N 992954.2290 E 2833970.4812

New City Requirements:

Flowable fill required per City specifications at all storm structures.

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SCALE: 1" = 50'

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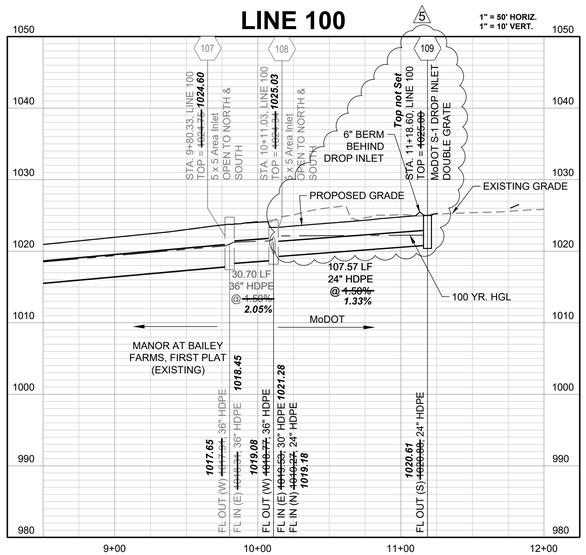
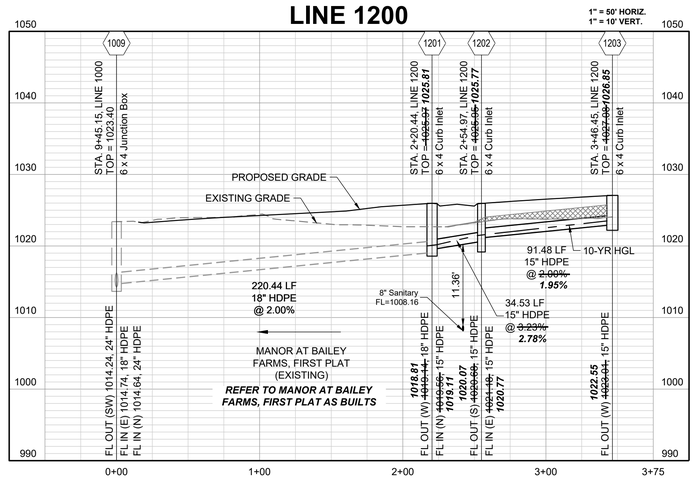
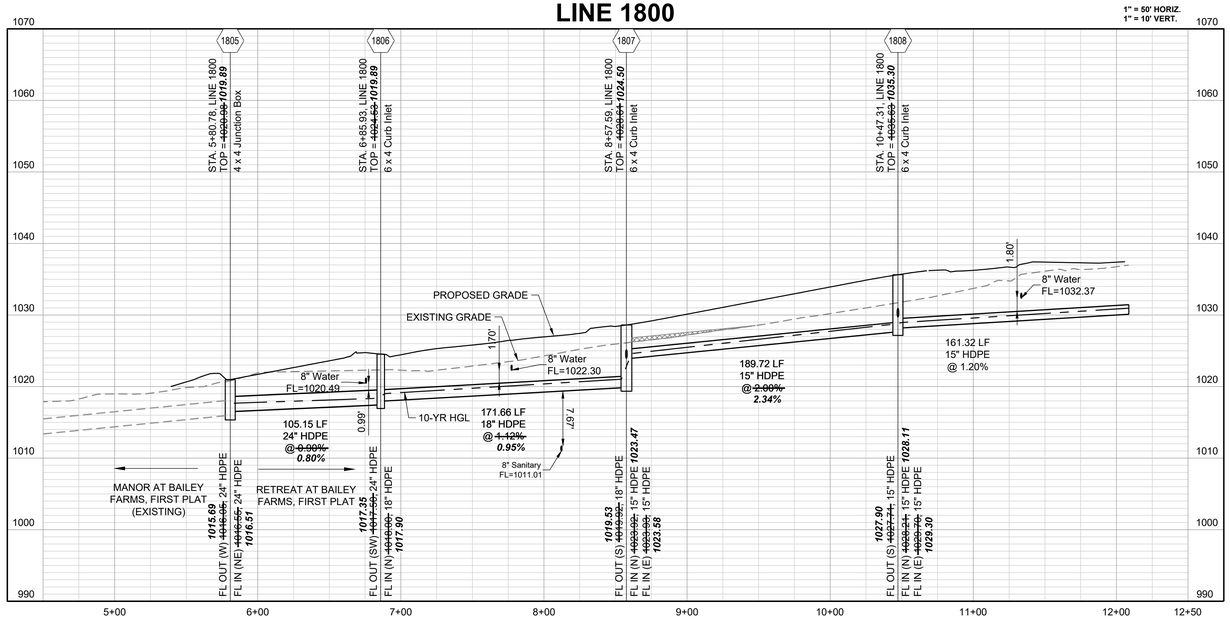
DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-133

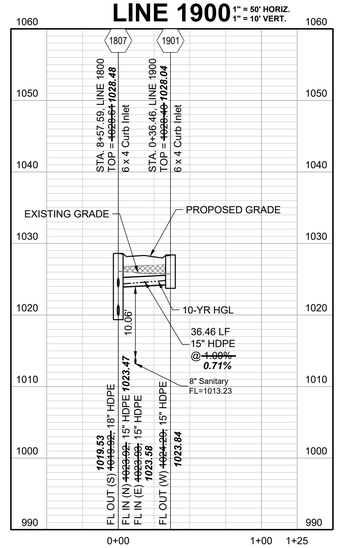
STORM PLAN

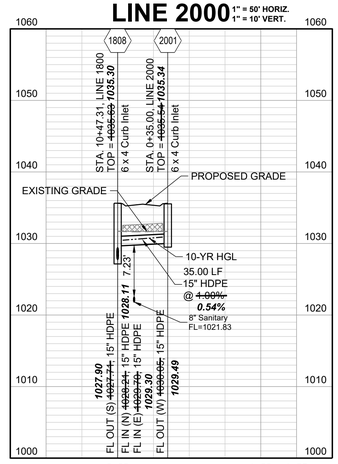
SHEET 9











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COMPACTED FILL TO BE PLACED A MINIMUM OF 1.5 FEET ABOVE TOP OF PIPE ELEVATION PRIOR TO PIPE INSTALLATION.

10-YEAR HGL

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PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER

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DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-133

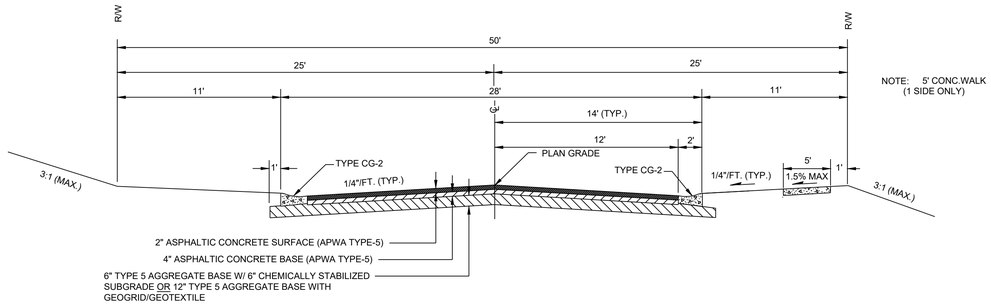
STORM PROFILE

SHEET 10

TABLE LS-2: MINIMUM ASPHALT PAVEMENT THICKNESSES

Street Classification	Pavement Option	AC Surface (in.)	AC Base (in.)	Aggregate Base (in.)	Chemical Subgrade Stabilization (in.)	Geogrid / Geotextile[1]
Residential Local/Access	A	2	4	6	6	--
	B	2	4	12	--	Geogrid / Geotextile
Residential Collector	A	2	5.5	6	9	--
	B	2	5.5	12	--	Geogrid / Geotextile
Commercial Industrial Local/Collector	A	2	7.5	6	9	--
	B	2	7.5	12	--	Geogrid / Geotextile

Notes:
(1) Geogrid shall be polypropylene material and Geotextile shall be woven, polypropylene as shown in the City's Approved Products List



RESIDENTIAL LOCAL/ACCESS

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Firm: Schlagel and Associates, P.A.

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PREPARED BY:

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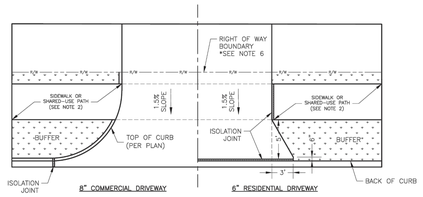
DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-133

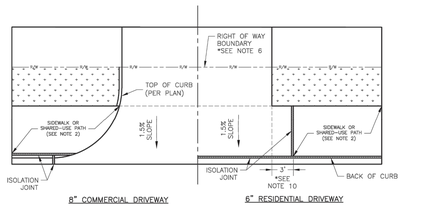
STREET DETAILS

SHEET 11



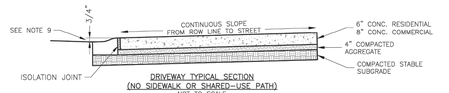
8" COMMERCIAL DRIVEWAY — 6" RESIDENTIAL DRIVEWAY

DRIVEWAY WITH BUFFER
NOT TO SCALE

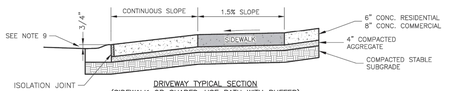


8" COMMERCIAL DRIVEWAY — 6" RESIDENTIAL DRIVEWAY

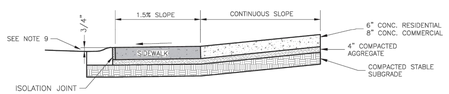
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

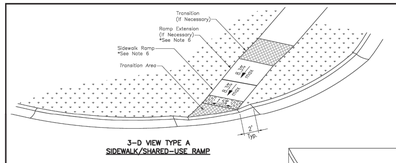
GENERAL NOTES
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CC-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

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

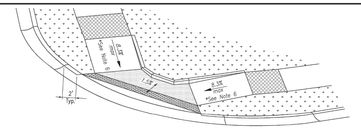
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

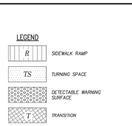
GEN-1

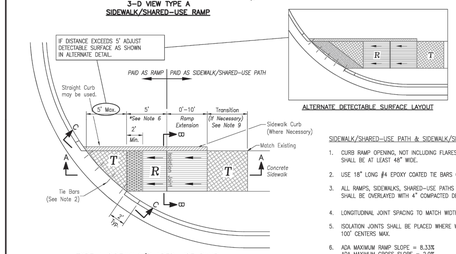


3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

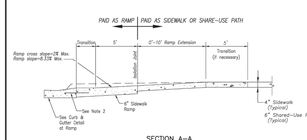




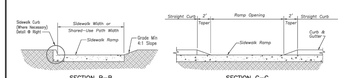
TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

ALTERNATE DETECTABLE SURFACE LAYOUT

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
ADA MAXIMUM CROSS SLOPE = 2.0%
*ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

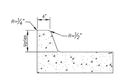


SECTION A-A

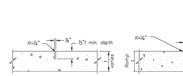


SECTION B-B — SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale



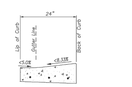
SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT

ISOLATION JOINT

JOINT DETAILS
Not to Scale



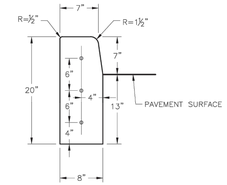
CURB & GUTTER DETAIL AT RAMP
Not to Scale

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

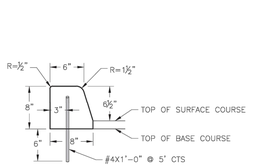
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

GEN-3A

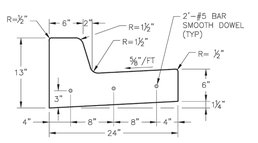


STRAIGHT CURB
(TYPE C-1)

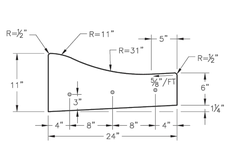


DOWELLED CURB
(TYPE DC)

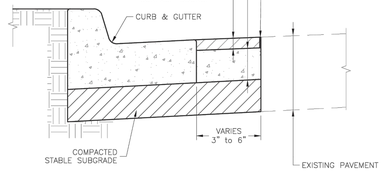
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



ROLL BACK CURB & GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL

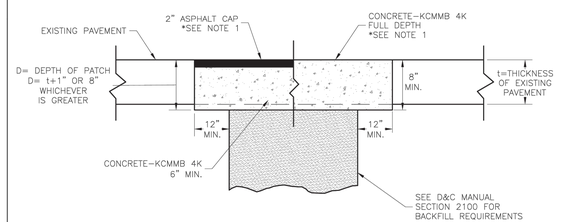
GENERAL NOTES
1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.

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

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

GEN-4



TRENCHING/PATCHING DETAIL
NOT TO SCALE

NOTE:
1. ASPHALT CAP OR FULL DEPTH CONCRETE SHALL BE DETERMINED BY CITY INSPECTOR.

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

TRENCHING/PATCHING ROADWAYS DETAIL

Date: 05/2021
Drawn By: MJF
Checked By: DL

GEN-5

RECORD DRAWING

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Date: 04/01/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

SCHLAGEL
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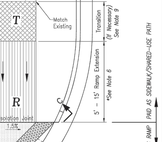
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2000030800-F #LA2001005237 #LS2000208859-F

PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A.

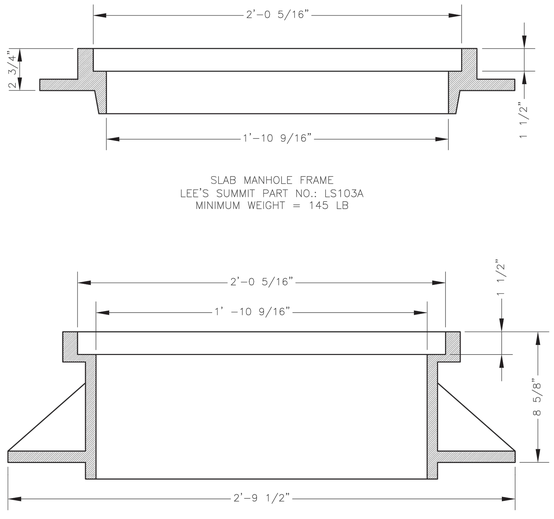
RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER DRAINAGE PLAN
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
03/21/2022	PER CITY COMMENTS
04/20/2022	PER CITY COMMENTS DATED 02/25/2022
08/25/2022	ADD FIELD INLET
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 109 TO MoDOT SI INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/08/2022
PROJ. NUMBER: 21-153

STREET DETAILS

SHEET 12

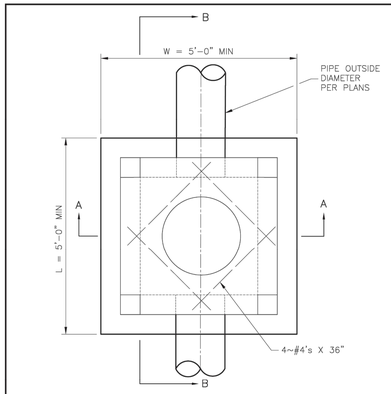


LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

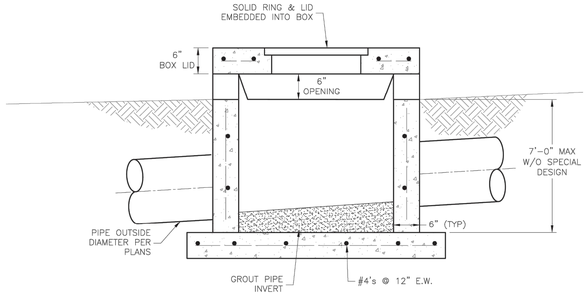
STORM MANHOLE FRAME DETAIL

Date: 05/2021
Drawn By: MJF
Checked By: DL

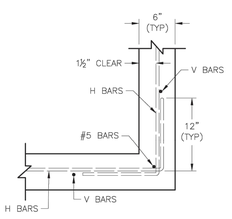
DWG-7



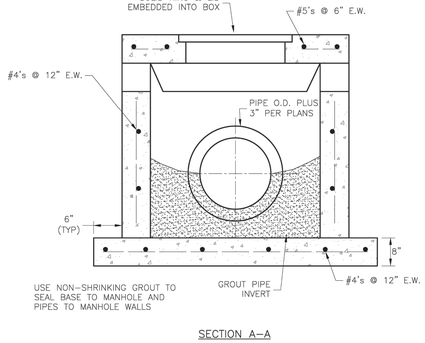
PLAN VIEW



SECTION B–B



WALL CORNER DETAIL



USE NON–SHRINKING GROUT TO SEAL BASE TO MANHOLE AND PIPES TO MANHOLE WALLS

SECTION A–A

GENERAL NOTES:

1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE ¾" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
5. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
6. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIDE OF OPENINGS.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

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

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

Project:
Sheet Name: FIELD INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

STM-2

RECORD DRAWING

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Title: Senior Project Engineer
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#E2000030800-F #LA2001005237 #LS2002008859-F

PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN

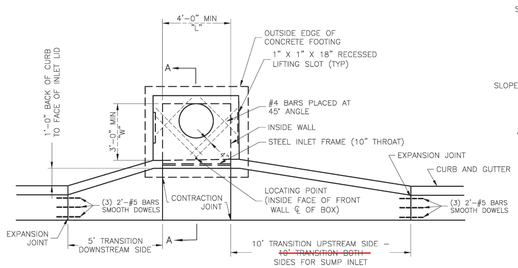
SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
02/21/2022	PER CITY COMMENTS
04/20/2022	PER CITY COMMENTS DATED 02/25/2022
06/25/2022	ADD FIELD INLET
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 109 TO MoDOT S1 INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

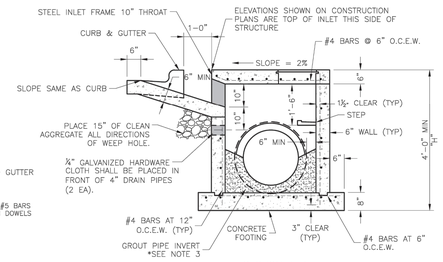
DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-153

STORM DETAILS

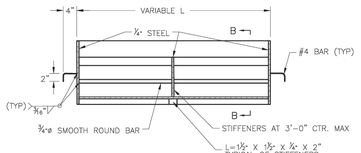
SHEET
13



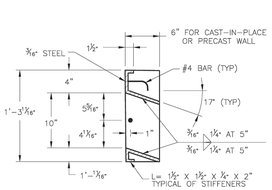
PLAN VIEW



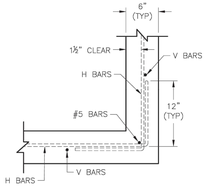
SECTION A–A



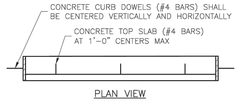
FRONT ELEVATION



SECTION B–B



WALL CORNER DETAIL



PLAN VIEW

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.

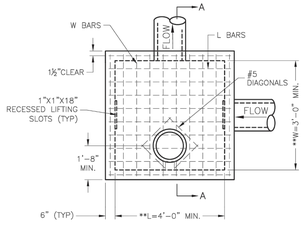
GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
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 ¾"CHAMFER OR ½" 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 | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

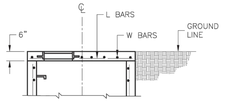
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #

STM-1



PLAN

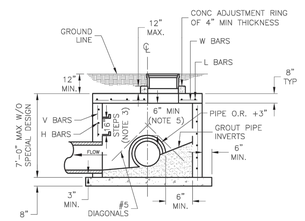


SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

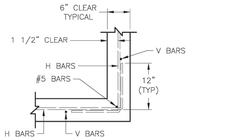
** INCREASE IN MULTIPLES OF 6" (7'-0") MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)

REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6



SECTION A–A



WALL CORNER DETAIL

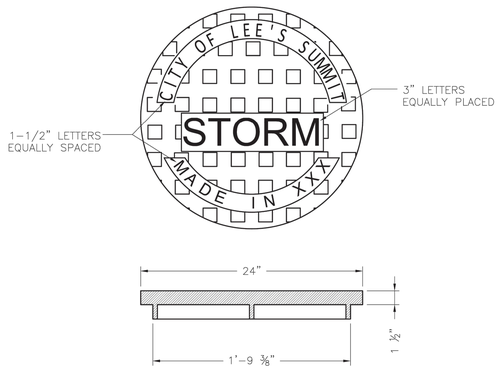
GENERAL NOTES:
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE ¾" CHAMFER STRIP OR ½" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

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

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: JUNCTION BOX DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #

STM-3



STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

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

STORM MANHOLE COVER DETAIL

Date: 05/2021
Drawn By: MJF
Checked By: DL

STM-6

RECORD DRAWING

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Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

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PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN

SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
03/21/2022	PER CITY COMMENTS
04/20/2022	PER CITY COMMENTS DATED 02/25/2022
08/25/2022	ADD FIELD INLET
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 109 TO MoDOT S1 INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/08/2022
PROJ. NUMBER: 21-153

STORM DETAILS

SHEET
14

MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCHMARK:

BM JA-45, IS A KC METRO ALUMINUM GRS DISK SET IN CONCRETE AND ABOUT 3 INCHES BELOW THE PAVEMENT ON THE SHOULDER OF SE RANSON ROAD. IT IS STAMPED JA45, 1987.

ELEV. = 1046.25

BASIS OF BEARINGS:

MISSOURI STATE PLANE COORDINATE SYSTEM
(NAD) 1983, MISSOURI, WEST ZONE

NOTES:

ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEES SUMMIT TECHNICAL SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

RECORD DRAWING

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Title: Senior Project Engineer
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N

0 50' 100'

SCALE: 1" = 50'

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PREPARED BY:

STATE OF MISSOURI
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER
4/6/2025

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT STREET, STORMWATER, AND MASTER DRAINAGE PLAN

SE BAILEY ROAD AND SE RANSON ROAD LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
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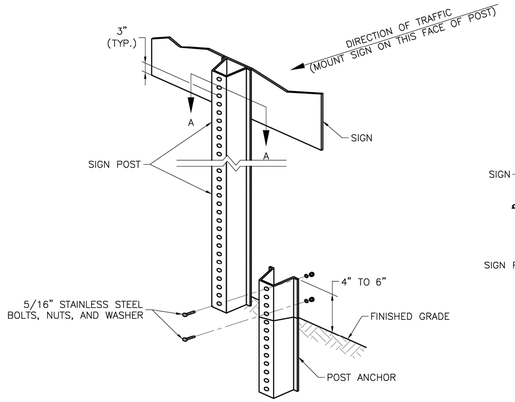
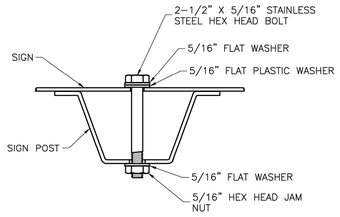
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 199 TO MoDOT S1 INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-133

SIGNAGE PLAN

SHEET 15





SECTION A–A

U–STEEL POST DETAILS

NOTES:

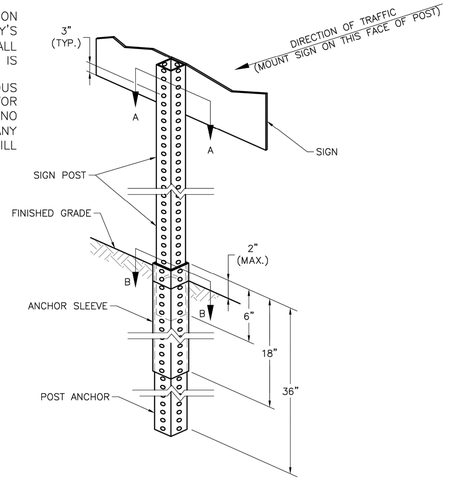
1. SPLICE SHALL BE POSITIONED ENTIRELY BETWEEN FINISHED GRADE LINE AND 18" ABOVE FINISHED GRADE LINE. ONLY ONE SPLICE WILL BE ALLOWED PER POST.
2. U–STEEL POST SHALL BE 3 LB./FT., GALVANIZED ACCORDING TO ASTM A123.
3. U–STEEL POST CAN BE USED FOR INSTALLATION OF SIGNS WITH AN AREA OF LESS THAN 2.5 SQUARE FEET.
4. ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 3 FEET.

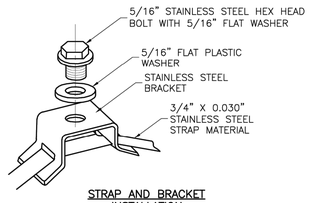
PERMANENT SIGNING GENERAL NOTES:

1. ALL SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. THE CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY AND ALL UTILITIES WHEN INSTALLING SIGN POSTS, WHETHER THE UTILITY IS INDICATED ON THE PLANS OR NOT.
3. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE PUBLIC WORKS DEPARTMENT OF THE CITY OF LEE'S SUMMIT.
4. THE CONTRACTOR SHALL STAKE THE LOCATION OF ALL SIGN POSTS TO BE INSTALLED. THE CITY INSPECTOR SHALL INSPECT THE STAKING PRIOR TO INSTALLATION. MINOR RELOCATION TO AVOID CONFLICTS MAY BE ALLOWED WITH THE APPROVAL OF THE CITY TRAFFIC ENGINEER.
5. SIGNS SHOWN TO BE INSTALLED ON THE SIDE OF METAL POLES SHALL BE MOUNTED WITH STAINLESS STEEL STRAPS OR WING BRACKETS AS DETAILED. NO SIGNS ARE TO BE INSTALLED ON WOOD POLES. SEE TRAFFIC SIGNAL STANDARD DRAWINGS FOR THE INSTALLATION OF SIGNS ON MAST ARMS.
6. ALL POST MOUNTED SIGNS SHALL BE INSTALLED WITH BREAKAWAY ANCHORS ACCORDING TO THE STANDARD DRAWINGS.
7. ALL EXISTING SIGNS WILL BE USED IN PLACE DURING CONSTRUCTION AND PROTECTED FROM DAMAGE UNLESS OTHERWISE INDICATED IN THE PLANS. IF THE CONTRACTOR DAMAGES ANY EXISTING SIGN OR POSTS DURING CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED TO REPLACE THE DAMAGED MATERIALS WITH NEW SIGNS OR POSTS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND STORING ANY SIGNS THAT ARE TO BE REINSTALLED ON THE PROJECT. ALL EQUIPMENT SHALL BE REINSTALLED IN GOOD CONDITION.
8. EXISTING PERMANENT SIGNS AND POSTS REMOVED BY THE CONTRACTOR FOR CONSTRUCTION PURPOSES WHICH ARE NOT TO BE REINSTALLED SHALL BE DELIVERED TO THE CITY'S PUBLIC WORKS MAINTENANCE FACILITY (1971 SE HAMBLEN ROAD). THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND STORING EQUIPMENT IN GOOD CONDITION AND IS FULLY RESPONSIBLE FOR THE EQUIPMENT UNTIL IT IS DELIVERED.
9. ALL STOP, YIELD, OR STREET NAME SIGNS SHALL BE MAINTAINED IN A CONSPICUOUS LOCATION FOR THE DRIVING PUBLIC. ALL STOP AND YIELD SIGNS REMOVED FOR CONSTRUCTION PURPOSES CAN BE TEMPORARILY ERECTED IN REFLECTORIZED DRUMS (NO LESS THAN 7 FEET ABOVE THE PAVEMENT SURFACE) UNTIL THEY CAN BE REINSTALLED. ANY TEMPORARY STOP OR YIELD SIGN INSTALLATION TO BE LEFT IN PLACE OVERNIGHT WILL REQUIRE PRIOR APPROVAL FROM THE CITY INSPECTOR.

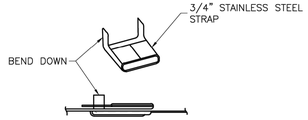
SQUARE STEEL POST INSTALLATION SEQUENCE:

1. SIGN POST ANCHOR DRIVEN PARTIALLY INTO THE GROUND USING A DRIVE CAP WITH A SLEDGE OR POWER EQUIPMENT.
2. ANCHOR SLEEVE SLIPPED OVER ANCHOR AND DRIVE INTO THE GROUND TOGETHER WITH THE SIGN POST ANCHOR.
3. INSERT SIGN POST INTO THE POST ANCHOR AND BOLT IN PLACE.

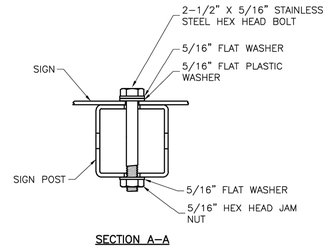




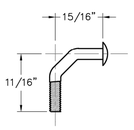
STRAP AND BRACKET INSTALLATION



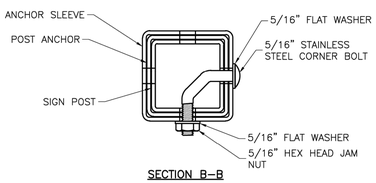
ENDS OF STRAP CLAMPED IN SEAL



SECTION A–A



CORNER BOLT



SECTION B–B

STRAP TYPE SIGN SUPPORT DETAILS

NOTES:

1. SIGNS ON METAL POLES SHALL BE ATTACHED WITH TWO BRACKETS AND STAINLESS STEEL BANDS.
2. HOLES IN SIGN FOR ATTACHMENT TO THE MOUNTING BRACKETS SHALL BE OFFSET A MINIMUM OF 2 INCHES FROM THE EDGE OF THE SIGN.
3. HOLES IN SIGN SHALL BE LOCATED SUCH THAT THE SIGN IS LEVEL.
4. ALL STRAP, BRACKET, AND SEAL MATERIALS SHOULD BE TYPE 201 STAINLESS STEEL.

SQUARE STEEL POST DETAILS

NOTES:

1. SQUARE STEEL SIGN POSTS AND BREAK–AWAY ANCHOR SHALL CONSIST OF THE FOLLOWING MATERIALS:
   SIGN POST – 14 GA. 2" X 2" SQUARE STEEL POST
   POST ANCHOR – 12 GA. 2 ¼" X 2 ¼" X 36" SQUARE STEEL POST
   ANCHOR SLEEVE – 12 GA. 2 ½" X 2 ½" X 18" SQUARE STEEL POST
2. 14 GA. POSTS MUST MEET A CERTIFIED MINIMUM YIELD STRENGTH OF 60,000 PSI.
3. IN ALL INSTALLATIONS THE FIRST HOLE ABOVE THE FINISHED GRADE LINE ON THE SIGN POST, ANCHOR, AND ANCHOR SLEEVE MUST BE IN LINE FOR THE INSERTION OF THE CORNER BOLT.
4. THE MAXIMUM AREA FOR ONE SIGN POST IS 9.0 SQUARE FEET. A SIGN OR COMBINATION OF SIGNS WITH AN AREA GREATER THAN 9.0 SQUARE FEET WILL REQUIRE TWO POSTS. ALSO, SIGNS WITH A WIDTH GREATER THAN OR EQUAL TO 48" (NOT INCLUDING 36" X 36" DIAMOND SHAPED SIGNS) WILL REQUIRE TWO POSTS.

RECORD DRAWING

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"~~100.00~~ 100.10", "~~1.00%~~ 1.15% slope", or "8-inch ~~HDPE~~ PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

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Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

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Missouri State Certificate of Authority #E2002003800-F #LA2001005237 #LS2002008859-F

PREPARED BY:

STATE OF MISSOURI
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER
4/6/2025

SCHLAGEL & ASSOCIATES, P.A.

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

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Sheet Name: POST DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

SN-2

RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN

SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
03/21/2022	PER CITY COMMENTS
04/20/2022	PER CITY COMMENTS DATED 02/25/2022
08/25/2022	ADD FIELD INLET
09/08/2022	REVISE FIELD INLET
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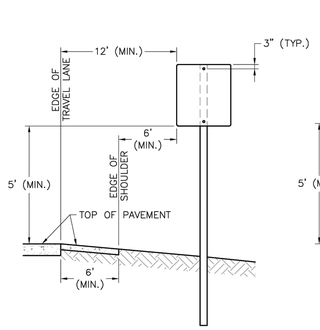
04/02/2025	As-Builts

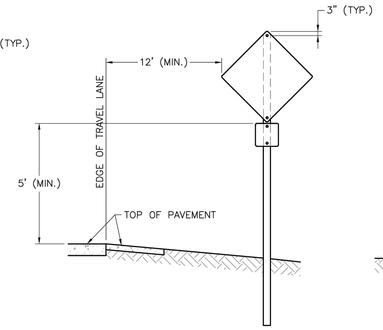
DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-153

SIGN POST DETAILS

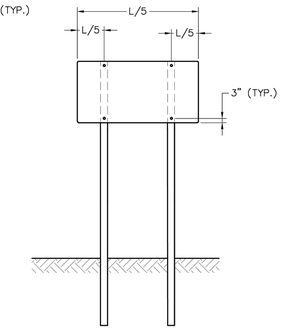
SHEET 16



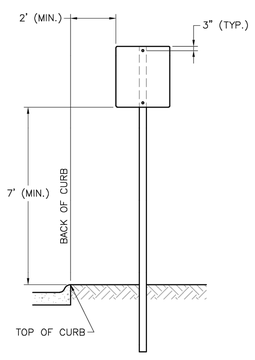
SIGN INSTALLATION FOR NON-CURBED STREET



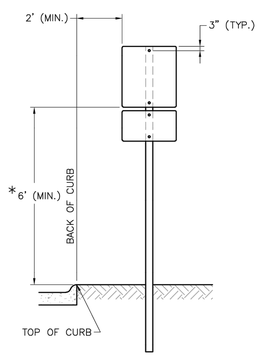
SIGN INSTALLATION WITH AUXILIARY SIGN FOR NON-CURBED STREET



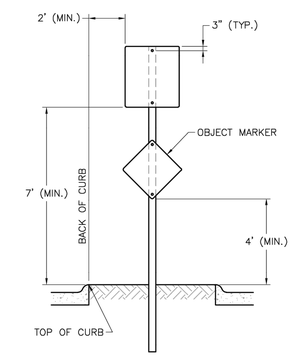
SIGN INSTALLATION WITH TWO SIGN POSTS



SIGN INSTALLATION FOR CURBED STREET



SIGN INSTALLATION WITH AUXILIARY SIGN FOR CURBED STREET

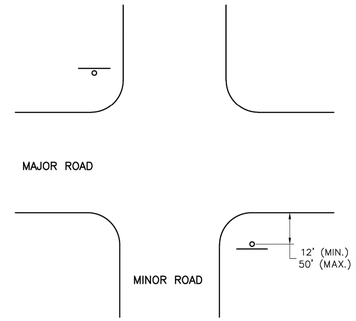


SIGN INSTALLATION FOR RAISED MEDIANS

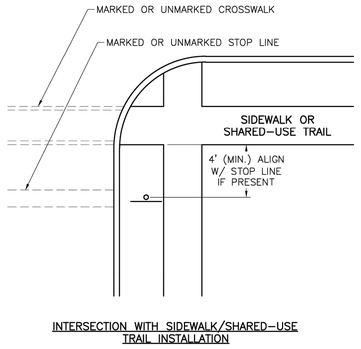
SIGN MOUNTING DETAILS

NOTES:

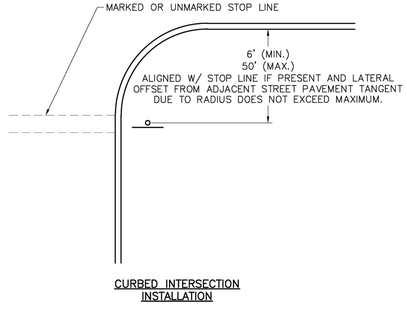
1. GENERALLY, THE SIGN MOUNTING HEIGHT SHOULD NOT BE MORE THAN 1' GREATER THAN THE MINIMUM MOUNTING HEIGHT.
2. *THE HEIGHT TO THE BOTTOM OF A SIGN WHEN IT IS LOCATED IN A PEDESTRIAN WALKWAY OR EXTENDS INTO A WALKWAY SHALL BE A MINIMUM OF 80 INCHES ABOVE THE WALKWAY.



NON-CURBED INTERSECTION INSTALLATION

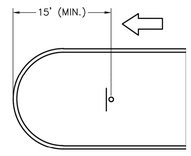


INTERSECTION WITH SIDEWALK/SHARED-USE TRAIL INSTALLATION



CURBED INTERSECTION INSTALLATION

CONTROL SIGN LOCATION



TYPICAL MEDIAN SIGN LOCATION

MEDIAN SIGN LOCATION

NOTES:

1. A 4" P.V.C. SLEEVE SHALL BE INSTALLED IN NEW CONCRETE MEDIANS AT EACH LOCATION WHERE A SIGN IS TO BE INSTALLED.
2. FOR EXISTING CONCRETE MEDIANS, A 4" HOLE SHALL BE CORED INTO THE CONCRETE.

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Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

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

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Sheet Name: SIGN MOUNTING DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

SN-1

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PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

RETREAT AT BAILEY FARMS, FIRST PLAT
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DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-153

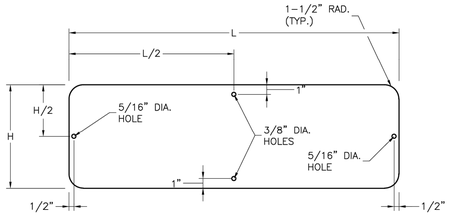
SIGN MOUNTING DETAILS

SHEET 17

STANDARD ABBREVIATION LISTS

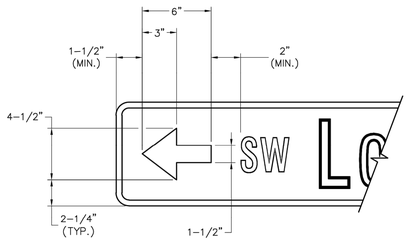
NAMED STREETS	
AVENUE	Ave
BOULEVARD	Blvd
CIRCLE	Cir
CREEK	Cr
COURT	Ct
CROSSING	Xing
DRIVE	Dr
HIGHWAY	Hwy
LANE	Ln
PARKWAY	Pkwy
PLACE	Pl
ROAD	Rd
STREET	St
TERRACE	Ter
TRAIL	Trl
WAY	Way

NUMBERED STREETS	
FIRST	ST
SECOND	ND
THIRD	RD
FOURTH TO TENTH	TH

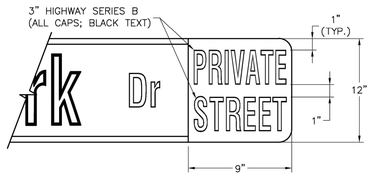


STREET NAME SIGN BLANK DETAILS

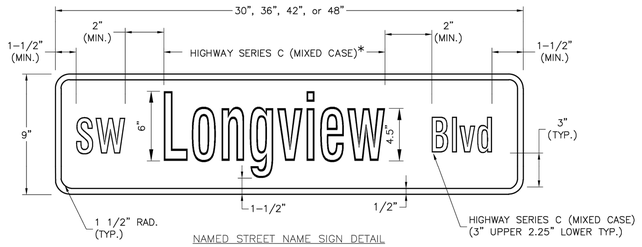
FOR MOUNTING ON SQUARE STEEL POSTS



ARROW DETAIL



PRIVATE STREET TAG DETAIL

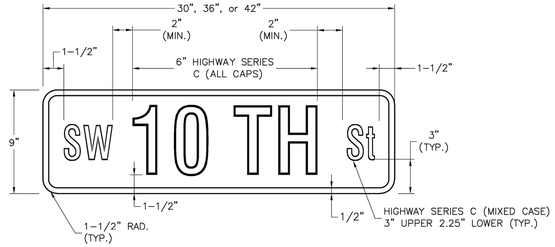


NAMED STREET NAME SIGN DETAIL

* USE HIGHWAY SERIES B (MIXED CASE) IN LIEU OF SERIES C IF NECESSARY TO FIT TEXT ON A 36" SIGN BLANK.

STREET NAME SIGN FACE DETAILS

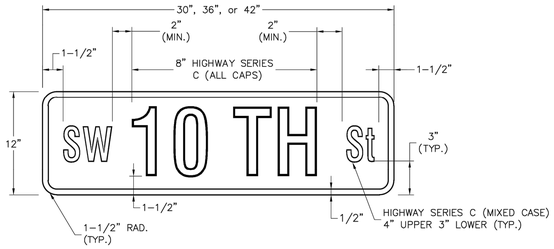
POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH



NUMBERED STREET NAME SIGN DETAIL

STREET NAME SIGN FACE DETAILS

POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH



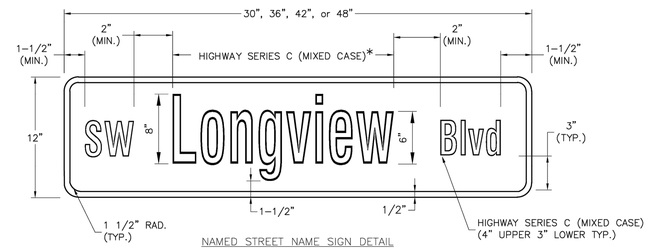
NUMBERED STREET NAME SIGN DETAIL

STREET NAME SIGN FACE DETAILS

POST MOUNTED MULTI-LANE GREATER THAN 40 MPH

NOTES:

1. FOR ALL STREET NAME SIGNS, THE LEGEND SHALL BE WHITE AND THE BACKGROUND SHALL BE GREEN.
2. ARROWS SHALL BE ADDED TO STREET NAME SIGNS WHERE THE NAME OF A STREET CHANGES AT AN INTERSECTION. STREET NAME SIGNS WITH ARROWS ARE TO BE INSTALLED ON EACH SIDE OF THE INTERSECTION TO INDICATE THE CHANGE IN NAMES. ARROWS SHALL BE WHITE.
3. THE "PRIVATE STREET" TAG SHOULD BE ADDED TO THE END OF STREET NAME SIGNS TO INDICATE WHERE A STREET THAT IS OUTSIDE THE RIGHT-OF-WAY INTERSECTS A PUBLIC STREET. THE BACKGROUND FOR THE "PRIVATE STREET" TAG SHALL BE YELLOW.
4. MULTI-LANE IS DEFINED AS HAVING 2 LANES OR MORE IN EACH DIRECTION, EXCLUDING TURN LANES.
5. OVERHEAD SIGN DETAILS MAY BE FOUND ON THE SIGNAL HEAD MOUNTING DETAIL.



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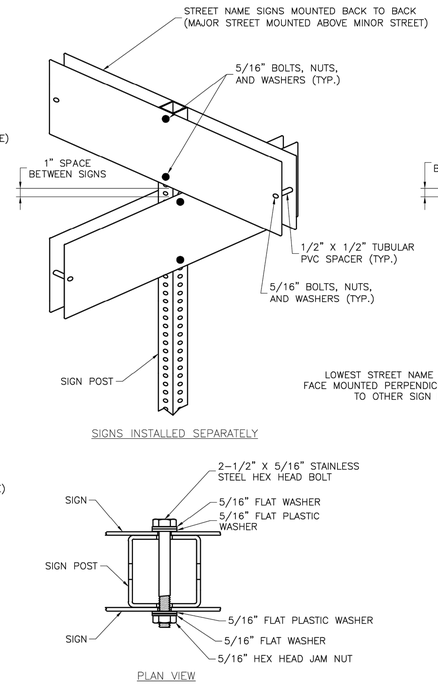
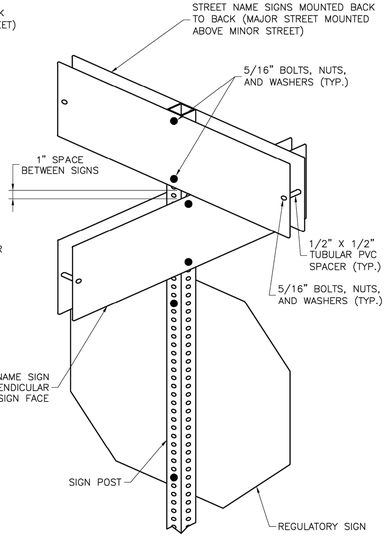
STREET NAME SIGN FACE DETAILS

POST MOUNTED MULTI-LANE GREATER THAN 40 MPH



SIGNS INSTALLED SEPARATELY

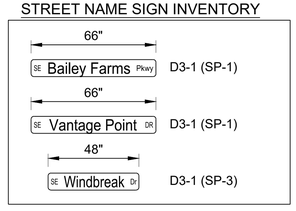


SIGNS INSTALLED WITH OTHER SIGNS

PLAN VIEW

SQUARE STEEL POST MOUNTING DETAILS

STREET NAME SIGN INVENTORY



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ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
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WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2000030800-F #LA2001005237 #LS2000088859-F

PREPARED BY:

STATE OF MISSOURI
4/6/2025
JAMES L. LONG
NUMBER PE-2014010495
PROFESSIONAL ENGINEER

SCHLAGEL & ASSOCIATES, P.A.

LEE'S SUMMIT MISSOURI

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

Project:
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Sheet Name:
STREET NAME SIGN DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

SN-3

RETREAT AT BAILEY FARMS, FIRST PLAT
STREET, STORMWATER, AND MASTER
DRAINAGE PLAN

SE BAILEY ROAD AND SE RANSON ROAD
LEE'S SUMMIT, MISSOURI

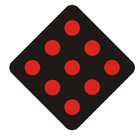
REVISION DATE	DESCRIPTION
03/21/2022	PER CITY COMMENTS
04/20/2022	PER CITY COMMENTS DATED 02/25/2022
08/25/2022	ADD FIELD INLET
09/08/2022	REVISE FIELD INLET
11/01/2022	REVISED INLET 109 TO MoDOT S1 INLET
10/27/2023	Updated City Details to 2023 Details
11/30/2023	Added "New City Requirements" Note
04/02/2025	As-Builts

DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-133

STREET NAME SIGN DETAILS

SHEET 18

OM4-1



OM4-2

OM4-2 COLORS:

REFLECTORS – RED (RETROREFLECTIVE)
BACKGROUND – BLACK

OM4-3

OM4-3 COLORS:

SIGN PANEL – RED (RETROREFLECTIVE)

OM4-1 COLORS:

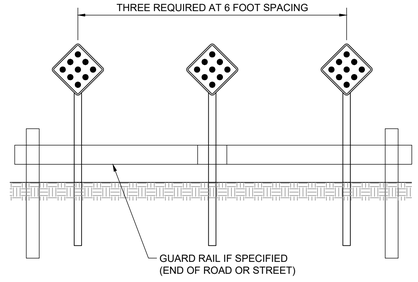
REFLECTORS – RED (RETROREFLECTIVE)
BACKGROUND – RED
BORDER – RED (RETROREFLECTIVE)

R1-1

STOP SIGN

OM4-1
(3)

NOTE:
THICKNESS OF FLAT SHEET FOR END OF ROAD MARKERS SHALL BE 0.0063". RED REFLECTORS ON RED BACKGROUND.



RECORD DRAWING

The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information obtained by Schlagel and Associates.

"~~100.00~~ 100.10", "~~1.00%~~ 1.15% slope", or "8-inch ~~HDPE~~ PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 04/01/2025
Certified by: JLL
Title: Senior Project Engineer
Firm: Schlagel and Associates, P.A.

SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
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PREPARED BY:

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4/6/2025
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DRAWN BY: JRJ
CHECKED BY: JLL
DATE PREPARED: 02/09/2022
PROJ. NUMBER: 21-133

OM-4 SIGN DETAILS

SHEET 19