CITY OF OVERLAND PARK **PLANNING AND DEVELOPMENT SERVICES**

INTRACITY COMMUNICATION

February 13, 2020

Rhonda Clark – SPS

CENTURY FARMS, 2ND PLAT
PIP2018-00025

NOTE: ***Building Permits will not be issued until the applicant produces a Sanitary Sewer Connection Permit from Johnson County Wastewater.***

SWALE GRADING

The following lots include, or are adjacent to engineered swales designed for purposes of stormwater conveyance. An engineered plot plan is required for these lots in conformance with City requirements.

Minimum Low Openings must be a minimum of 1 foot above the 100-year storm energy grade line as measured perpendicular to the swale.

LOT	SWALE	EGL DEPTH (FEET)
69	DD	0.27
70	DD	0.27
71	DD	0.27
72	DD	0.27
73	DD	0.27
74	DD	0.27
75	DD	0.27
76	DD	0.27
87	AA	0.32
88	AA	0.32
89	AA	0.32
90	AA	0.32
91	AA	0.32
92	BB	0.24
93	BB	0.24
97	CC	0.20

98	CC	0.20
99	CC	0.20
100	CC	0.20

MLO SET BY ENGINEER

The following lots are adjacent to large open stormwater conveyances which require freeboard for all building openings and tops of foundation walls. An engineered plot plan is required for these lots which show the minimum low opening established on the subdivision as-built grading plan and actual proposed building openings and top of foundation wall elevations.

LOT	**MLO (All Building Openings)**
60	1006.7
61	1006.7

BERM GRADING

The following lots include berms designed to direct stormwater runoff. An engineered plot plan is required for these lots that show preserving or constructing berms as shown on the subdivision as-built grading plan.

LOT
87
89
92

LOT GRADING

The following lots require specific grading to ensure proper drainage paths between lots. An engineered plot plan is required for these lots which show the drainage paths based upon grading specified by the Engineer.

Lot

46
47
48
56
57
99
100

If you have any questions, please contact me.

Stephanie Byard

Stephanie Byard, Senior Planning Technician

c: Paul Woodard, P.E., Schlagel & Associates
Anne Hays, P.E, Review Engineer
Tony Meyers, P.E., Manager, Engineering Services
Mark Zarda, Inspector
Jeff Hunt - Supervisor, Public Works Maintenance
Irina Idelson-Senior Technician, Public Works
Permit Services
Century Farms Development LC, Developer
Energov File: PIP2018-00025
City website

JOHNSON COUNTY BENCHMARK:

2" DIA. DOME TOP ALUMINUM MONUMENT STAMPED "JO CO PUBLIC WORKS BM 316, LOCATED 0.9 MILES SOUTH OF INTERSECTION OF 159TH AND QUIVIRA, 2' NORTH OF SOUTH END OF EAST CURB.

ELEV. 967.07

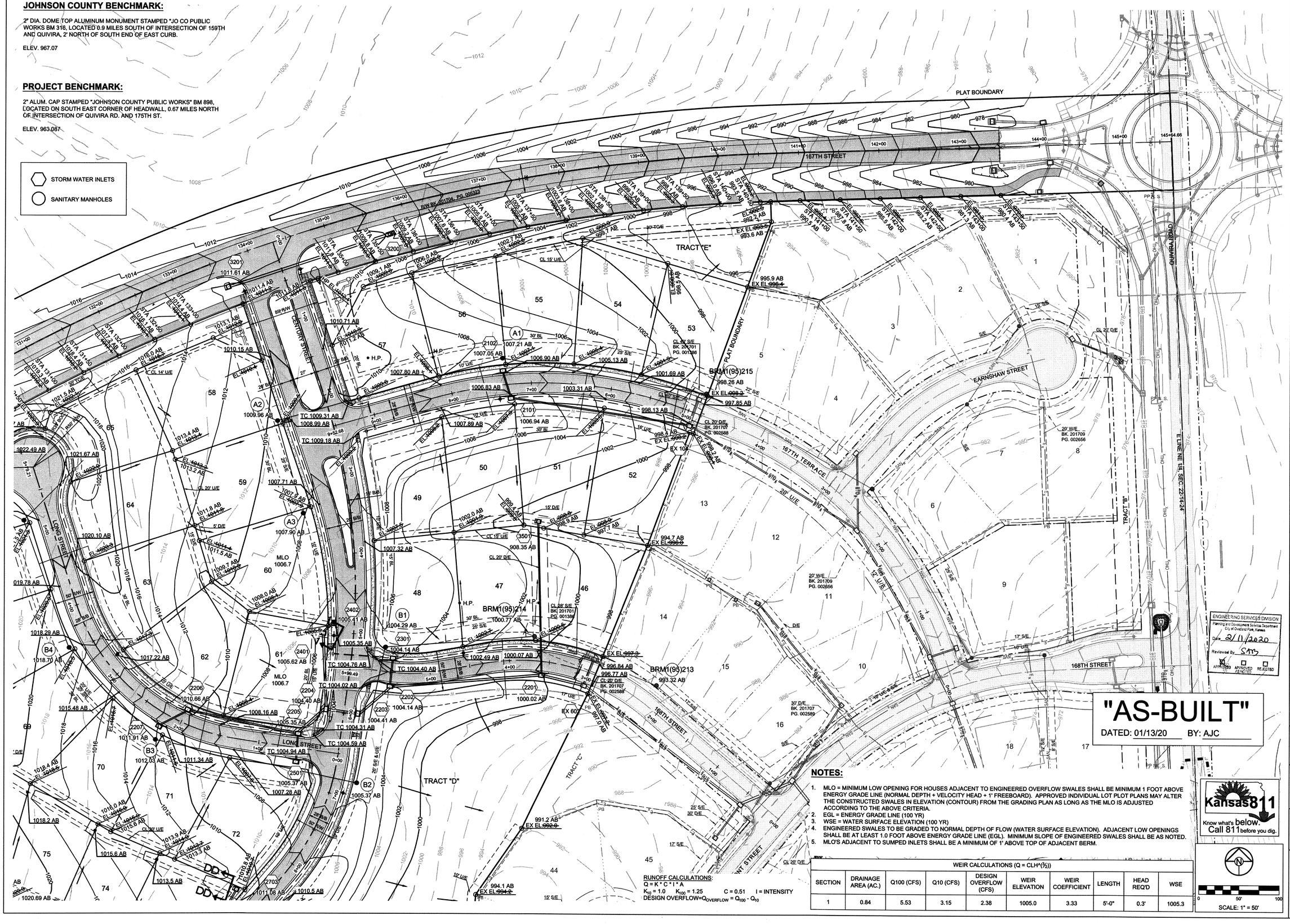
PROJECT BENCHMARK:

2" ALUM. CAP STAMPED "JOHNSON COUNTY PUBLIC WORKS" BM 898, LOCATED ON SOUTH EAST CORNER OF HEADWALL, 0.67 MILES NORTH OF INTERSECTION OF QUIVIRA RD. AND 175TH ST.

ELEV. 963.087

STORM WATER INLETS

SANITARY MANHOLES



NOTES:

1. MLO = MINIMUM LOW OPENING FOR HOUSES ADJACENT TO ENGINEERED OVERFLOW SWALES SHALL BE MINIMUM 1 FOOT ABOVE ENERGY GRADE LINE (NORMAL DEPTH + VELOCITY HEAD + 1' FREEBOARD). APPROVED INDIVIDUAL LOT PLOT PLANS MAY ALTER THE CONSTRUCTED SWALES IN ELEVATION (CONTOUR) FROM THE GRADING PLAN AS LONG AS THE MLO IS ADJUSTED ACCORDING TO THE ABOVE CRITERIA.
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). ADJACENT LOW OPENINGS SHALL BE AT LEAST 1.0 FOOT ABOVE ENERGY GRADE LINE (EGL). MINIMUM SLOPE OF ENGINEERED SWALES SHALL BE AS NOTED.
5. MLO'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM.

RUNOFF CALCULATIONS:
Q = K * C * I * A
K_{10} = 1.0 K_{100} = 1.25 C = 0.51 I = INTENSITY
DESIGN OVERFLOW=$Q_{OVERFLOW}$ = Q_{100} - Q_{10}

WEIR CALCULATIONS (Q = CLH^(3/2))

SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	Q10 (CFS)	DESIGN OVERFLOW (CFS)	WEIR ELEVATION	WEIR COEFFICIENT	LENGTH	HEAD REQ'D	WSE
1	0.84	5.53	3.15	2.38	1005.0	3.33	5'-0"	0.3'	1005.3

ENGINEERING SERVICES DIVISION
Planning and Development Services Department
City of Overland Park, Kansas
Date 2/11/2020
Reviewed By SMB
APPROVED / APPROVED AS NOTED / REJECTED

Kansas811 Know what's below. Call 811 before you dig.

N

0 50' 100
SCALE: 1" = 50'

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Kansas State Certificates of Authority
#E-296 #LA-29 #LS-54

DAVID A. RINNERT LICENSED 02-10-2020 1268 KANSAS LAND SURVEYOR

CENTURY FARMS, 2ND PLAT
STREET, STORM & STREET LIGHTING PLANS
W. 167TH STREET OVERLAND PARK, KANSAS

DESCRIPTION	REVISION DATE
OVERLAND PARK ENG. REVIEW	1/14/2019
OVERLAND PARK ENG. REVIEW	2/28/2019
OVERLAND PARK ENG. REVIEW	4/19/2019
AS-BUILT GRADING PLAN	12/17/2019
AS-BUILT GRADING PLAN	2/5/2020

DRAWN BY: PW
CHECKED BY: JFB
DATE PREPARED: 10/8/2018
PROJ. NUMBER: 17-187

GRADING PLAN - NORTHEAST

SHEET 3 OF 48

FEB 11 2020

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2" DIA. DOME TOP ALUMINUM MONUMENT STAMPED "JO CO PUBLIC WORKS BM 316, LOCATED 0.9 MILES SOUTH OF INTERSECTION OF 159TH AND QUIVIRA, 2' NORTH OF SOUTH END OF EAST CURB.

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"AS-BUILT"

DATED: 01/13/20 BY: AJC

ENGINEERING SERVICES DIVISION
Planning and Development Services Department
City of Overland Park, Kansas
Date: 2/11/2020
Reviewed By: SMB
APPROVED / APPROVED AS NOTED / RE-SUBMIT

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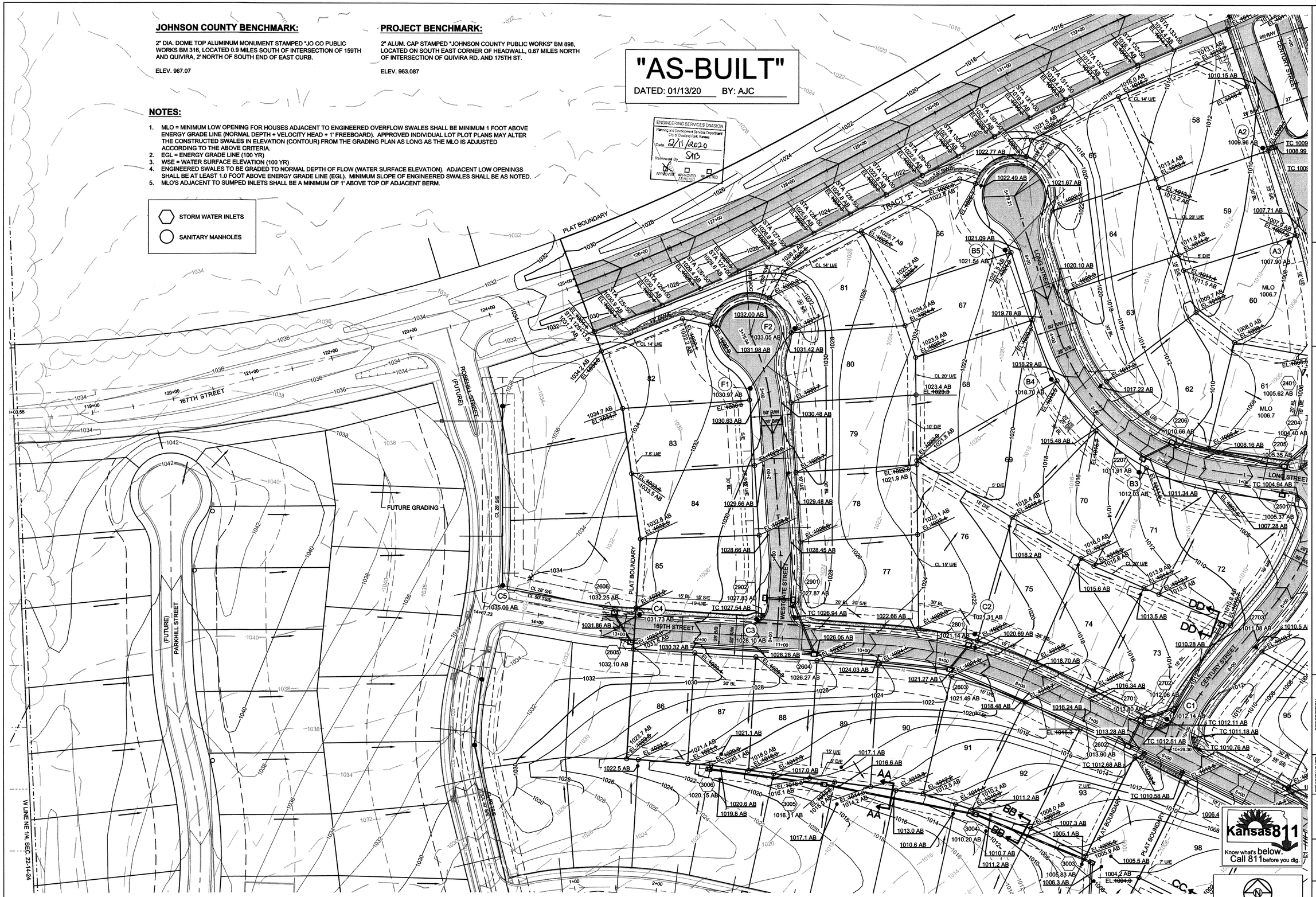
STORM WATER INLETS

SANITARY MANHOLES



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Kansas E-2-39 LS-34

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4/16/2019	OVERLAND PARK ENG. REVIEW
12/17/2019	AS-BUILT GRADING PLAN
2/5/2020	AS-BUILT GRADING PLAN

DRAWN BY:	PW
CHECKED BY:	JPB
DATE PREPARED:	10/8/2018
PROJ. NUMBER:	17-187

Kansas811 Know what's below. Call 811 before you dig.

GRADING PLAN - WEST

SCALE: 1" = 50'

SHEET 4 OF 48

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DATED: 01/13/20 BY: AJC

ENGINEERING SERVICES DIVISION
Planning and Development Services Department
City of Overland Park, Kansas
Date: 2/11/2020
By: PB
Reviewed By: SAB
APPROVED / APPROVED AS NOTED / REJECTED

100-YEAR OVERFLOW SWALE CHANNEL

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.)	SHEAR STRESS (LB/FT²)
AA	1.66	10.92	6.22	4.70	2.66	8	3:1	9.92	0.18	3.00	0.14	0.32	0.305
BB	1.01	6.64	3.78	2.86	3.33	8	3:1	9.44	0.13	2.66	0.11	0.24	0.266
CC	0.78	5.13	2.92	2.21	2.50	8	3:1	9.18	0.12	2.21	0.08	0.20	0.187
DD	1.59	10.46	5.96	4.50	2.50	8	3:1	11.07	0.18	2.39	0.09	0.27	0.279

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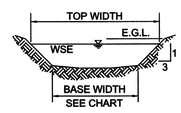

100-YR OVERFLOW SWALE SECTIONS

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GRADING PLAN - SOUTH

SHEET 5 OF 48