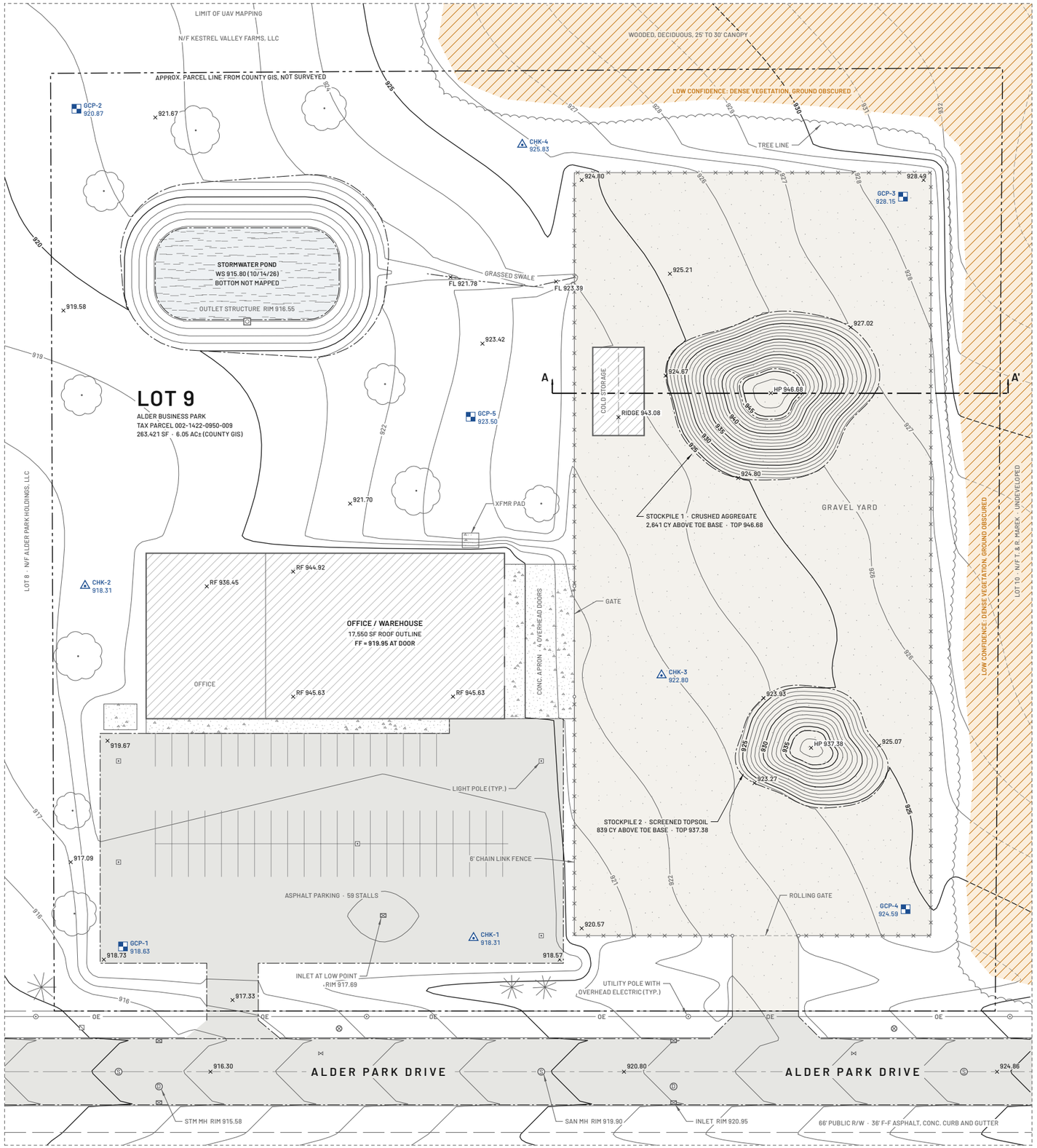
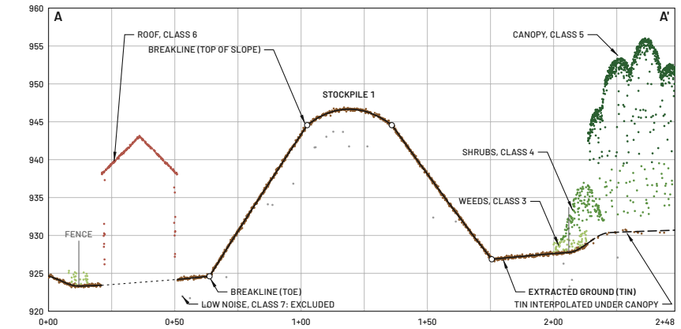


A SECTION A-A' · POINT CLOUD TO TIN

CLASSIFIED UAV POINTS WITHIN 1.5' OF LINE A-A' · HORIZ. 1" = 60' · VERT. 1" = 20' (3X EXAGGERATION)



ASPRS LAS 1.4 CLASS: 2 GROUND · 3 LOW VEG. · 4 MEDIUM VEG. · 5 HIGH VEG. · 6 BUILDING · 7 LOW NOISE

DATA ACQUISITION AND PROCESSING	
FLIGHT DATE	10/14/2026 · 10:40 TO 11:25 CDT · OVERCAST, WIND 6 MPH
PLATFORM	RTK MULTIROTOR UAV (CAMERA POSITIONS RTK FIXED)
SENSOR	45 MP FULL-FRAME CAMERA, 35 MM LENS, MECHANICAL SHUTTER
FLIGHT	200 FT AGL · NADIR GRID, 12 LINES · 348 IMAGES
GROUND SAMPLE DIST.	0.30 IN (0.76 CM) PER PIXEL
OVERLAP	80% FRONT · 70% SIDE
PROCESSING	CLIENT PHOTOGRAMMETRY SOFTWARE (BY CLIENT)
POINT CLOUD	LAS 1.4, CLASSIFIED · ≈400 PTS/SQ FT DENSE CLOUD
TIN INPUT	CLASS 2 GROUND THINNED TO 1.5' GRID + BREAKLINES
HORIZONTAL DATUM	KESTREL COUNTY COORD. SYSTEM, NAD 83 (2011), US FT
VERTICAL DATUM	NAVD 88 (GEOID18), US SURVEY FEET
CONTROL	5 GCPS + 4 CHECKPOINTS, RTK GNSS SURVEY BY CLIENT

GROUND CONTROL AND CHECKPOINTS · US SURVEY FEET						
POINT	NORTHING	EASTING	ELEV.	RES. N	RES. E	RES. Z
GCP-1	386,516.55	642,191.05	918.63	–	–	–
GCP-2	386,972.10	642,165.70	920.87	–	–	–
GCP-3	386,924.32	642,615.46	928.15	–	–	–
GCP-4	386,536.76	642,616.91	924.59	–	–	–
GCP-5	386,804.61	642,380.22	923.50	–	–	–
CHK-1	386,521.19	642,381.77	918.31	+0.03	-0.04	+0.06
CHK-2	386,712.73	642,170.41	918.31	-0.05	+0.03	-0.09
CHK-3	386,664.04	642,484.08	922.80	+0.02	+0.05	+0.05
CHK-4	386,952.58	642,408.29	925.83	+0.04	-0.02	-0.07
RMSE				0.037	0.037	0.069

ACCURACY, ASPRS POSITIONAL ACCURACY STANDARDS FOR DIGITAL GEOSPATIAL DATA, ED. 2 (2023): RESIDUALS ARE CHECKPOINT SURVEY MINUS MODEL. WITH THE CHECKPOINT SURVEY ERROR INCLUDED AS ED. 2 REQUIRES, RMSEH = 0.060 FT (1.8 CM) AND NON-VEGETATED RMSEV = 0.080 FT (2.4 CM), 4 CHECKPOINTS ARE FEWER THAN THE 30 THE STANDARD CALLS FOR, SO NO ACCURACY CLASS IS CLAIMED; THE VALUES DESCRIBE THE FIT AT THESE CHECKPOINTS ONLY. VEGETATED AND OBSCURED GROUND WAS NOT TESTED.

STOCKPILE VOLUMES · 10/14/2026						
STOCKPILE	MATERIAL (BY CLIENT)	BASE SURFACE	BASE AREA	SURFACE AREA	HEIGHT	VOLUME
STOCKPILE 1	CRUSHED AGGREGATE	TIN THROUGH TOE	8,074 SF	9,129 SF	20.9'	2,641 CY
STOCKPILE 2	SCREENED TOPSOIL	TIN THROUGH TOE	4,130 SF	4,536 SF	13.2'	839 CY
TOTAL			12,204 SF	13,665 SF		3,480 CY

CUT VOLUME ABOVE A TIN BASE THROUGH THE TOE BREAKLINE, FROM THE SURFACE SHOWN. SURFACE AREA IS 3D. NO SWELL, SHRINK OR DENSITY APPLIED.

DELIVERABLES

- CIVIL 3D DWG: EXISTING GROUND TIN SURFACE (EG-UAV) BUILT FROM CLASS 2 POINTS, BREAKLINES AND OUTER BOUNDARY; BUILDINGS AS HIDE BOUNDARIES
- 1' CONTOURS WITH 5' INDEX FROM THE TIN, LABELED AS SHOWN
- PLANIMETRIC LAYERS IN THE CLIENT'S TEMPLATE (V-TOPO, V-BLDG, V-PVMT, V-UTIL-VISIBLE, V-VEG)
- COGO POINT GROUPS: GCP, CHK, SPOT ELEVATIONS; STOCKPILE SURFACES AND VOLUME REPORT
- ORTHOMOSAIC ATTACHED AS A GEOREFERENCED IMAGE REFERENCE (GEOTIFF); LANDXML OF EG-UAV
- PDF PLOT OF SHEETS V-101 AND V-102

GENERAL NOTES

1. AERIAL IMAGERY, GROUND CONTROL, CHECKPOINT SURVEY, PHOTOGRAMMETRIC PROCESSING AND POINT CLASSIFICATION WERE BY KESTREL AERIAL MAPPING, LLC (THE CLIENT). DK DRAFTING DID NOT FLY, SURVEY OR PROCESS THE DATA.
2. THE EXISTING GROUND SURFACE WAS BUILT BY DK DRAFTING IN CIVIL 3D FROM THE CLIENT'S CLASS 2 GROUND POINTS AND BREAKLINES DIGITIZED FROM THE ORTHOMOSAIC AND POINT CLOUD. CONTOURS ARE GENERATED FROM THAT TIN AND SPOT ELEVATIONS ARE READ FROM IT.
3. ACCURACY IS STATED AT THE CHECKPOINTS ONLY. GROUND UNDER TREE CANOPY AND DENSE BRUSH WAS NOT VISIBLE TO THE CAMERA: IT IS HATCHED AS LOW CONFIDENCE AND ITS CONTOURS ARE DASHED. THE POND BOTTOM WAS NOT MAPPED; THE WATER SURFACE IS AS FLOWN.
4. PLANIMETRIC FEATURES ARE DIGITIZED FROM THE ORTHOMOSAIC. BUILDINGS ARE ROOF OUTLINES; FINISHED FLOOR IS AT THE DOOR THRESHOLD FROM THE POINT CLOUD AND SHOULD BE FIELD VERIFIED.
5. UTILITIES: VISIBLE FEATURES ONLY (COVERS, GRATES, VALVE BOXES, HYDRANTS, POLES, PEDESTALS). UNDERGROUND UTILITIES WERE NOT LOCATED. CALL 811 AT LEAST THREE WORKING DAYS BEFORE EXCAVATING.
6. PARCEL LINES ARE APPROXIMATE, FROM KESTREL COUNTY GIS, FOR ORIENTATION ONLY. THIS IS NOT A BOUNDARY SURVEY.
7. FOR REVIEW AND CERTIFICATION BY THE CLIENT'S LICENSED LAND SURVEYOR WHERE A CERTIFIED TOPOGRAPHIC SURVEY IS REQUIRED.

CIVIL 3D SURFACE EG-UAV · PROPERTIES			
2D AREA	7.97 AC (LIMIT OF MAPPING)	3D AREA	8.02 AC
ELEVATION RANGE	913.61 TO 946.67	TIN POINTS	≈130,000 (CLASS 2, 1.5' THINNED)
BREAKLINES	14 (EOP, FLOWLINES, TOP, TOE, WS)	BOUNDARIES	1 OUTER, 2 HIDE (BUILDINGS)

N

0 50 100 150 FEET

PLAN SCALE: 1" = 60' · CONTOUR INTERVAL 1 FOOT, INDEX 5 FEET

SITE BENCHMARK: GCP-1, MAG NAIL AT CENTER OF TARGET, ELEV. 918.63 (NAVD 88)

DK DRAFTING
CAD DRAFTING SERVICES
DKDRAFTING.COM (608) 617-9074

PREPARED FOR

KESTREL AERIAL MAPPING, LLC

UAV MAPPING AND PHOTOGRAMMETRY

PROJECT

ALDER BUSINESS PARK
LOT 9

EXISTING CONDITIONS
TOWN OF ALDER, KESTREL COUNTY, WI

LEGEND

- INDEX CONTOUR (5')
- INTERMEDIATE CONTOUR (1')
- CONTOUR IN OBSCURED AREA
- BREAKLINE: EOP, FLOWLINE, TOP/TOE
- BACK OF CURB, EDGE OF FEATURE
- BUILDING (ROOF OUTLINE)
- ASPHALT PAVEMENT
- GRAVEL
- CONCRETE
- LOW CONFIDENCE (OBSCURED)
- TREE LINE (CANOPY EDGE)
- DECIDUOUS / CONIFER TREE
- CHAIN LINK FENCE
- OVERHEAD ELECTRIC
- UTILITY POLE / LIGHT POLE
- SANITARY / STORM MANHOLE
- INLET / HYDRANT
- VALVE BOX / PEDESTAL
- GROUND CONTROL POINT
- CHECKPOINT (NOT IN SOLUTION)
- SPOT ELEVATION (FROM TIN)
- PARCEL LINE, APPROX. (GIS)
- RIGHT-OF-WAY LINE
- LIMIT OF UAV MAPPING
- SECTION LINE

ABBREVIATIONS

AGL	ABOVE GROUND	GSD	GROUND SAMPLE DIST.
CHK	CHECKPOINT	N/F	NOW OR FORMERLY
CY	CUBIC YARDS	RF	ROOF
EOP	EDGE OF PAVEMENT	RMSE	ROOT MEAN SQ. ERROR
F-F	FACE TO FACE	R/W	RIGHT OF WAY
FF	FINISHED FLOOR	TIN	TRIANGULATED NETWORK
FL	FLOWLINE	WS	WATER SURFACE
GCP	GROUND CONTROL	XFMR	TRANSFORMER

SURVEYOR'S SEAL

SEAL

REVIEWED AND CERTIFIED BY THE CLIENT'S LICENSED LAND SURVEYOR WHERE REQUIRED

SAMPLE
FICTITIOUS SITE · NOT A SURVEY

REVISIONS

NO.	DATE	DESCRIPTION	BY
0	10/23/26	ISSUED FOR CLIENT REVIEW	DK
1	11/06/26	CHECKPOINTS AND VOLUMES ADDED	DK

DRAWN BY	CHECKED BY
DK DRAFTING	CLIENT P.L.S.
DATE	SCALE
11/06/2026	1" = 60'
PROJECT NO.	FLIGHT DATE
KAM-26-118	10/14/2026

SHEET TITLE

TOPOGRAPHIC BASE MAP FROM UAV DATA

SHEET NO.

V-101

SHEET 1 OF 2

DK DRAFTING · KAM26-118-TOPO.DWG · LAYOUT: V-101 · PLOTTED 11/06/2026 15:02 · ANSI B (17.00 x 11.00 IN) · 1:1