



STAFF REPORT

Planning Commission Meeting: April 14, 2025

Application:	RZ25-0002: Rezoning from CTY AG (County Agricultural) to AG (Agricultural) District and a Preliminary Site Development Plan for the Olathe Range
Location:	Northwest of 167 th Street and Interstate 35
Owner:	City of Olathe
Applicant/Engineer:	Matthew Murphy, Treanor Inc.
Staff Contact:	Nathan Jurey, AICP, Senior Planner

Site Area:	<u>95.63 acres</u>	Proposed Use:	<u>Public Safety Service</u>
Existing Zoning:	<u>CTY AG</u>	Proposed Zoning:	<u>AG (Agricultural) District</u>
Building Area:	<u>25,570 sq. ft.</u>	Plat:	<u>Unplatted</u>
Lots:	<u>1</u>	Tracts:	<u>0</u>

	Plan Olathe Land Use Category	Existing Use	Existing Zoning
Site	Employment Area and Greenway	Agricultural	County (CTY) AG
North	Employment Area and Greenway	Quarry, Electrical Substation, & Agricultural	AG & CTY PEC-2
South	Employment Area, Industrial Area, and Greenway	Agricultural	CTY RUR & CTY PRB3
East	Employment Area and Greenway	Shooting Range, Weigh Station, & Warehousing	M-2
West	Employment Area and Greenway	Large Lot Residential	CTY RLD

1. Introduction

The City of Olathe has initiated a rezoning from the CTY AG (County Agricultural) District to the AG (Agricultural) District and a preliminary site development plan for the Olathe Range development. The subject 95.63-acre property is located northwest of Interstate 35 and 167th Street. The development is for a public safety training facility that includes a 23,570 sq. ft. training facility built in two (2) phases, a 2,000 sq. ft. shoot house, an outdoor shooting range, and an emergency vehicle driver training course. Rezoning to a City zoning district is required prior to development.

2. History

The subject property was annexed into Olathe in 2023 (ANX23-0002), and no other zoning or development application has been submitted or approved on this site. Prior to annexation, the site was used for agricultural purposes.

3. Existing Conditions

The subject property is located between Interstate 35 to the southeast and the BNSF railroad to the northwest. 167th Street is located to the south and is currently unpaved. There are two (2) tributary streams that flow across this property from south to north and flow into Cedar Creek, which runs along the northwest boundary of this site. Both Cedar Creek and the tributary streams are in the floodplain and largely wooded, which splits the property into three (3) separate areas predominantly used for agricultural purposes.

The site takes access from 167th Street via an existing driveway that runs through the property. An existing WaterOne waterline runs along 167th Street. Johnson County Wastewater provides sanitary sewer with a line located along Cedar Creek and City of Olathe operates a sewer line along the northern tributary stream.



View of subject property looking north from 167th Street.



Subject property outlined in red.

4. Zoning Standards

- a. **Land Use** – The proposed public safety training facility and shooting range is categorized under the Public Safety Service land use, which is permitted by right in the AG District. There are very limited land uses permitted within the AG District and the City intends to maintain ownership of the overall property.
- b. **Lot Standards** – The property is over 95 acres in size and over 1,000 feet wide, complying with the minimum lot area of 40 acres and minimum lot width of 600 feet.
- c. **Building Height** – Buildings in the AG District may be up to 2½ stories and 35 feet tall and the proposed buildings are one-story and less than 20 feet tall.

- d. **Setbacks** – All buildings and paved areas are setback at least 160 feet and 50 feet from all property lines respectively, exceeding the minimum building and paving setbacks of the AG District.

5. Development Standards

- a. **Phasing** – The development is planned to be constructed in three (3) phases. Phase 1 includes the outdoor shooting range, a 2,000 sq. ft. shoot house, and a small 2,400 sq. ft. training facility. Phase 2 expands the training facility with 21,170 sq. ft. of added building area for an indoor shooting range and additional training facilities. Phase 3 consists of the emergency vehicle drivers training course and associated restroom facility.
- b. **Access/Streets** – The City is improving 167th Street from the east to the existing access drive on this property and the existing drive will be paved with this development. No further improvements are required for 167th Street.
- c. **Parking** – According to UDO 18.30.160, public safety service uses must provide a minimum of one (1) stall per 800 square feet of building area. The development includes a total of 83 stalls, exceeding the minimum requirement of 32 stalls. The additional parking stalls are needed to accommodate the outdoor shooting range and the vehicle driving course.
- d. **Landscaping/Screening** – Landscaping similar to other nonresidential developments is proposed, exceeding all landscape standards for the AG District. The existing tree line along 167th Street will be preserved and a landscape buffer will be added along Interstate 35. Within the site, parking lot and building foundation landscaping is provided.
- e. **Tree Preservation** – The property is covered by 38.3 acres of woodland area, 98% of which will be preserved. Less than 2% of this woodland area will be removed for a driveway and the utilities needed to access and develop the northeast side of the property.
- f. **Noise Ordinance** – The noise study prepared by Avant Acoustics in September 2023 is included in the agenda packet. The study calculated the anticipated noise impacts of the outdoor shooting range and measured existing ambient noise found on the property. The study found that the anticipated noise level of the outdoor shooting range as measured at the property line is similar to the existing ambient noise found on site, which complies with the City's Noise Ordinance.

The noise study contemplated two scenarios: Scenario 1 reviewed a shooting range with a typical target backstop and side walls and Scenario 2 reviewed that same range with additional noise-reducing strategies. The anticipated noise levels for Scenario 1 reach around 60 to 70 dBA at the closest residential and agricultural areas, as shown on Sheet NS-01 of the noise study. Scenario 2 is shown on Sheet NS-02 and found noise levels are expected to be around 55 to 65 dBA on the closest properties, which is similar to the existing ambient noise level of 66 dBA measured on site.

The proposed range models the noise barriers from Scenario 1 and introduces sound-absorbing materials recommended in Scenario 2. The shooting range will use a 30-foot-tall target backstop and 10-foot-tall side berms and walls. Additionally, sound-absorbing rubber pellets will be used within the range, significant tree preservation areas will provide added sound buffering, and the proposed building will create a noise buffer behind the range.

- g. **Stormwater/Detention** – The proposal includes a stormwater detention basin that will collect stormwater from the development as required by Title 17. Additionally, BMPs will

be constructed as required by Title 17 to improve water quality before it is discharged into Cedar Creek.

- h. **Floodplain** – All Phase 1 and 2 development is located outside of the designated floodplain and required stream corridor areas. Phase 3 includes a driveway and utility crossing over the floodplain and stream corridor to provide access to the emergency vehicle driver training course and restroom facilities. Stream corridors will be dedicated with the final plat and a floodplain development permit will be submitted to the City and FEMA, as required, prior to development within the floodplain.
- i. **Public Utilities** – This site is in the WaterOne service area and will connect to the existing water line located along 167th Street, which will be upgraded as needed to serve the development. The property is split between the City of Olathe and the Johnson County Wastewater sanitary sewer service areas. Phases 1 and 2 will connect to JCW's existing sewer line that runs along Cedar Creek. Phase 3 will connect to the City of Olathe's existing sewer line that runs along the northern tributary stream.
- j. **Johnson County Airport** - The subject property is located within one mile of the New Century AirCenter, which is identified in the Johnson County Airport Land Use Compatibility Plan. All development applications within one mile of the airport are subject to review by the Johnson County Airport Commission and the Board of County Commissioners. The Johnson County Planning Department has provided preliminary comments and County staff has no objections regarding the proposed rezoning and preliminary site development plan.

6. Site Design Standards

The property is subject to Site Design Category 5 based on the Employment Area designation in the PlanOlathe Future Land Use Map. The following is a summary of the applicable site design requirements:

- a. **Parking Pod Size** – Parking lots must be broken up into parking pods with no more than 160 stalls and the largest proposed parking pod is 72 stalls.
- b. **Drainage Feature** – Both Cedar Creek and the smaller tributary stream located on site will be preserved as natural drainage features. The one (1) proposed dry detention area is completely surrounded by existing woodland area and the shooting range and will not be visible to the public or from adjacent property, complying with UDO standards.

7. Building Design Standards

Buildings located within the AG District are not subject to building design standards. However, Phase 1 of the proposed 2,400 sq. ft. training facility utilizes quality building design, exceeding UDO standards as is standard for all City of Olathe projects. The proposed building includes a masonry veneer base, windows, architectural quality metal paneling, and a Class 1 standing seam metal roof. Color elevations are provided in the agenda packet for this small Phase 1 training facility.

Building elevations for the larger Phase 2 addition are not included at this time, as a revised preliminary site development plan will be submitted for review prior to development of the over 21,000 sq. ft. building addition.

8. Public Notification and Neighborhood Meeting

City staff sent the required public notification letters to surrounding properties within 200 feet and 1,000 feet in unincorporated Johnson County by certified mail and posted a sign on the

subject property as required by UDO. Neighborhood notice was also sent to property owners within 500 feet of the property, and a neighborhood meeting was held on March 20, 2025 with 5 attendees. The primary questions posed by the attendees were regarding the general operations of the outdoor shooting range, traffic, and impacts to Cedar Creek. Staff corresponded with two (2) nearby property owners, a resident and Evergy, and responded with the requested project details, and no additional inquiries were made.

9. UDO Rezoning Criteria

The future land use map of the PlanOlathe Comprehensive Plan identifies the subject property as split between an Employment Area and Primary/Secondary Greenways. Employment Areas are characterized by office uses, research facilities, other light industrial uses, with limited complimentary commercial uses. Primary and Secondary Greenways preserve streamways, passive open space, provide recreational opportunities and are often publicly owned and maintained.

The majority of the property will preserve natural areas and streamways and will be owned and maintained by the City. While not directly aligned with the Employment Area future land use designation, the AG District is intended to *serve as a “holding zone” for land where future urban expansion is possible, but not yet appropriate, due to the unavailability of urban-level facilities and services.* The AG District allows limited commercial and industrial uses, such as the proposed public safety service facility, that are both compatible with this property’s designation as an Employment Area and possible with the current level of public facilities and service available on this property.

The application was reviewed against the UDO criteria for considering rezoning applications listed in UDO Section 18.40.090.G as detailed below.

A. ***The conformance of the proposed use to the Comprehensive Plan and other adopted planning policies.***

The requested AG District will serve as a ‘holding zone’ that allows limited commercial and industrial uses that conform with the Employment Area future land use designation until the current level of public facilities and services available to this property is improved. In addition, the proposed development protects existing streams and woodland areas and helps maintain an adequate police force, achieving the following policies of PlanOlathe.

LUCC-6.3: Resource Protection. Designate land use patterns and intensities so as to minimize adverse impacts on valued resources, wildlife habitats and historic sites.

CF-3.1: Adequate Police Force. Remain committed to maintaining the police force level of service to ensure the safety of the community.

B. ***The character of the neighborhood including but not limited to: land use, zoning, density (residential), architectural style, building materials, height, structural mass, siting, open space and floor-to-area ratio (commercial and industrial).***

Generally, the surrounding area transitions from heavy industrial uses in the northwest, to agricultural and rural residential uses to the northeast and southwest, and back to industrial uses to the southeast. To the northwest, there is a railroad and a heavy industrial area that is predominantly used for quarrying activities, which is comprised of large open spaces with relatively small buildings. To the northeast and southwest, large open land areas are used for agricultural purposes with some single-family rural residential. To the east, there is the existing Kansas Highway Patrol outdoor shooting range, Interstate 35 and an industrial area, which is comprised of large warehouse buildings.

C. ***The zoning and uses of nearby properties, and the extent to which the proposed use would be in harmony with such zoning districts and uses.***

The proposed AG (Agricultural) District use is in harmony with the nearby agricultural and rural residential properties and is compatible with the nearby industrial zoning and uses.

D. ***The suitability of the property for the uses to which it has been restricted under the applicable zoning district regulations.***

The property must be rezoned to a City zoning district before it may be developed.

E. ***The length of time the property has remained vacant as zoned.***

The property has retained County AG (Agricultural) zoning since it was annexed in 2023. The site is currently undeveloped and was used for agricultural purposes well before the property was annexed.

F. ***The extent to which approval of the application would detrimentally affect nearby properties.***

Staff has not received information indicating the proposed project will detrimentally affect nearby properties. Rezoning from County AG (Agricultural) to the AG (Agricultural) District will not result in a significantly different development pattern as both the existing and proposed zoning districts require a rural development pattern, which is embodied by large lots with relatively small buildings.

G. ***The extent to which development under the proposed district would substantially harm the value of nearby properties.***

The development as proposed is not anticipated to have any detrimental impact on the value of nearby properties as this development abuts both the railroad and the interstate along two property lines. Additionally, the proposed AG District requires a large-lot development pattern that is similar to the rural residential and agricultural areas that abut on the other two sides.

H. ***The extent to which the proposed use would adversely affect the capacity or safety of that portion of the road network influenced by the use, or present parking problems in the vicinity of the property.***

The proposed public safety training facility will not generate enough traffic to adversely affect the capacity or safety of the road network as use will be limited to public safety personnel. Additionally, on-site parking will be installed to accommodate the proposed use.

I. ***The extent to which the proposed use would create air pollution, water pollution, noise pollution or other environmental harm.***

The development will follow all regulations and codes pertaining to stormwater, air quality, noise, and other impacts on the environment. The noise study prepared by Avant Acoustics in September 2023 found that the proposed outdoor shooting range will comply with the City's Noise Ordinance.

J. ***The economic impact of the proposed use on the community.***

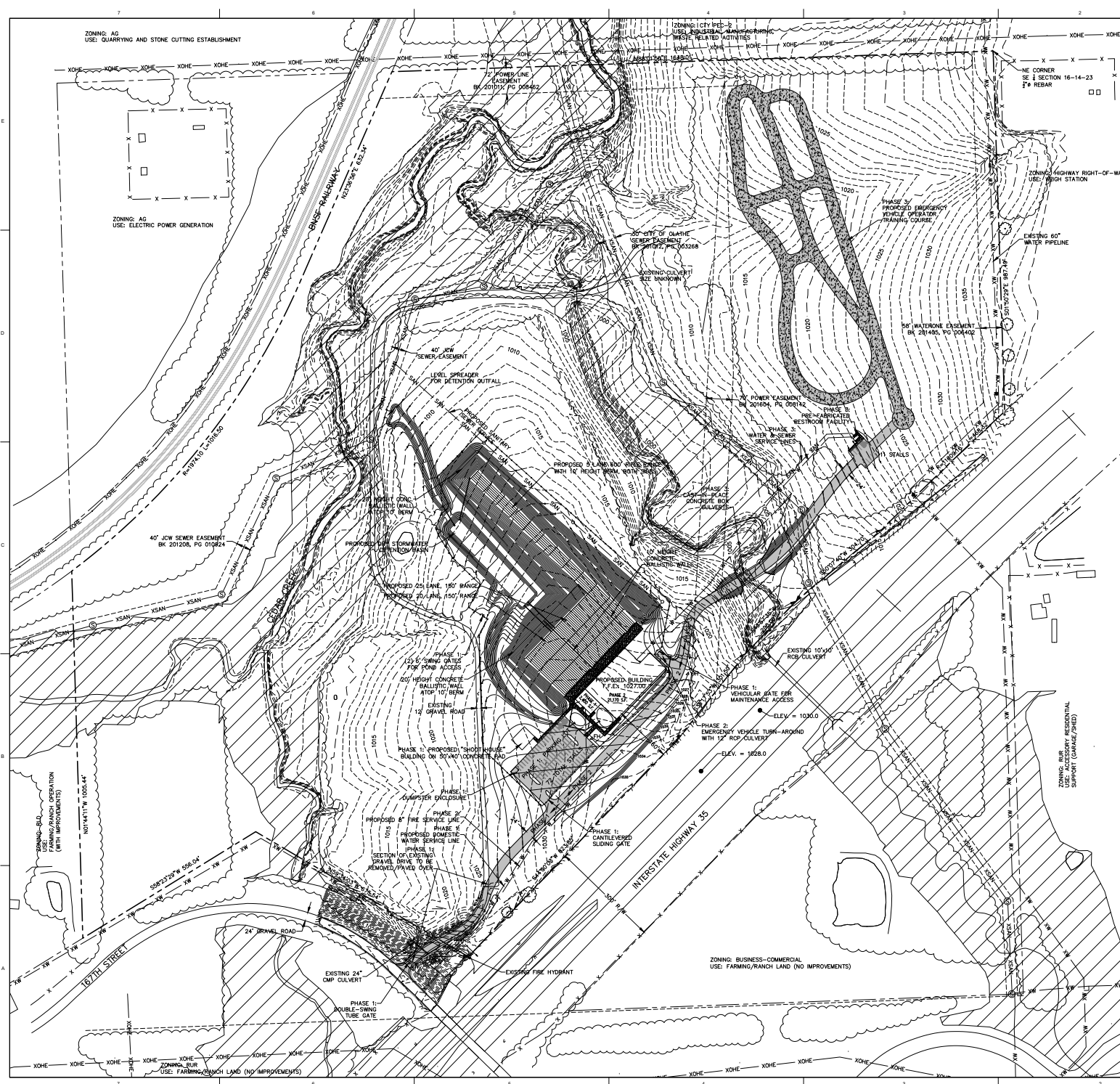
The proposed facility will provide training for public safety personnel and further enhance the safety of the community and economy.

- K. ***The gain, if any, to the public health, safety and welfare due to denial of the application as compared to the hardship imposed upon the landowner, if any, as a result of denial of the application.***

There is no gain to the public health, safety, or welfare if the application to rezone from CTY AG to the AG District were denied. If the application were denied, the property would be restricted to the agricultural uses permitted in the CTY AG District and the public safety facility could not be developed on this property.

10. Staff Recommendation

- A. Staff recommends approval of RZ25-0002, Olathe Range, for the following reasons:
1. The proposed development complies with the policies and goals of the PlanOlathe Comprehensive Plan.
 2. The requested zoning meets the Unified Development Ordinance criteria for considering zoning applications.
- B. Staff recommends approval of the rezoning request with no stipulations.
- C. Staff recommends approval of the preliminary site development plan request with the following stipulation:
1. The Johnson County Airport Commission and Board of County Commissioners must approve the development prior to issuance of a building permit.



ZONING AND USE

EXISTING ZONING: PEC2 PLANNED RESTRICTED INDUSTRIAL
(ZONED BY JOHNSON COUNTY PRIOR TO ANNEXATION)
EXISTING USE: FARMING / RANCH LAND (NO IMPROVEMENTS)
PROPOSED ZONING: AG AGRICULTURAL
PROPOSED USE: PUBLIC SAFETY SERVICES AND TRAINING

AG DISTRICT STANDARDS:
BUILDING HEIGHT - 2.5 STORIES/ 35' MAXIMUM
BUILDING SETBACK - 50' (MIN) FOR FRONT & REAR YARD
PAVING SETBACK - 35' (MIN) FROM ROW
10' (MIN) FROM OTHER PROPERTY LINES

LEGAL DESCRIPTION

THAT PART OF THE SOUTHEAST QUARTER OF SECTION 16, TOWNSHIP 14,
RANGE 35, JOHNSON COUNTY, KANSAS, LYING SOUTH AND EAST OF THE
A.T.&S.F. RAILROAD,
EXCEPT FOR RAILROAD RIGHT-OF-WAY AND THAT PART IN HIGHWAY,
AND EXCEPT ALL THAT PART LYING EAST/SOUTH OF INTERSTATE HIGHWAY
35, EXCEPT THAT PART IN STREETS.

PROJECT PHASING

- PHASE 1 (3) OUTDOOR RANGES
2,400 S.F. TRAINING BUILDING
ACCESS ROADWAY
DIGITAL PARKING
PERIMETER FENCING AND GATES
1/4\"
- PHASE 2 EXPANDED TRAINING CENTER AND INDOOR RANGE
EXTENDED ROADWAY
FIRE SERVICE LINE AND HYDRANTS
- PHASE 3 TRIBUTARY ROADWAY CROSSING
EVO TRAINING COURSE
TRAINING COURSE PARKING
RESTROOM BUILDING
UTILITY CONNECTIONS FOR RESTROOM

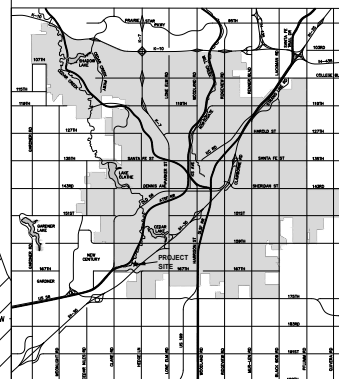
PARKING INFORMATION

TOTAL PARKING STALLS PROVIDED: 83
TOTAL ADA STALLS PROVIDED: 4
VAN ACCESSIBLE STALLS PROVIDED: 2
PARKING STALL DIMENSIONS:
20'x60' (STANDARD)
18'x36' (ADA)
* EXCEPT WHERE ADJACENT TO LANDSCAPING
OR SUFFICIENT OVERLAP IS PROVIDED
DRIVE AISLE WIDTH: 24'

LEGEND

- X - EXISTING BARBED WIRE FENCE
- XOHE - EXISTING OVERHEAD POWER LINES
- XSAN - EXISTING SANITARY SEWER MAIN
- XW - EXISTING WATER MAIN
- F - PROPOSED FIRE SERVICE LINE
- SAN - PROPOSED SANITARY SEWER SERVICE LINE
- W - PROPOSED WATER SERVICE LINE
- - - - - EXISTING ELEVATION CONTOUR
- PH - EXISTING TREE LINE
- 100-YEAR FLOODPLAIN ZONE
- PROPOSED 4\"
- PROPOSED 7\"
- PROPOSED 7\"

SCALE: 1\"



VICINITY MAP

(NOT TO SCALE)

THIS PRELIMINARY
DEVELOPMENT PLAN
IS FOR SITE PLANNING
PURPOSES ONLY.

NOT FOR
CONSTRUCTION



Olathe Police Department
FIRING RANGE
WEST 167TH STREET, OLATHE, KS 66061

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Issued For: Planning

Date: 2/19/2025

REVISIONS

NO	DESCRIPTION	DATE
1	CITY COMMENTS	1/13/25
2	CITY COMMENTS	2/19/25

SITE LAYOUT PLAN

PDP1

SITE LAYOUT PLAN

PDP1

Treanor No. JST13085-2401-04

THIS PRELIMINARY
DEVELOPMENT PLAN
IS FOR SITE PLANNING
PURPOSES ONLY.

NOT FOR
CONSTRUCTION



Olathe Police Department
FIRING RANGE
WEST 167TH STREET, OLATHE, KS 66061

This drawing is for information only and does not constitute a contract. The drawings and the contents are subject to change without notice. The drawings are the property of Treasnor, Inc. and shall remain the property of Treasnor, Inc. unless the written consent of Treasnor, Inc. is obtained.

Issued For: Planning

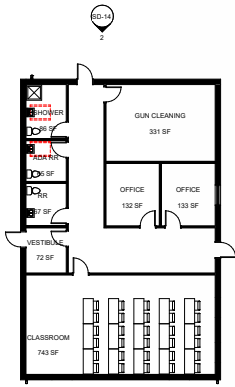
Date: 2/19/2025

REVISIONS		
NO.	DESCRIPTION	DATE
1	CITY COMMENTS	03/17/25

FLOOR PLAN &
BUILDING
ELEVATIONS
PHASE 1

PDP3

Treasnor No. 2575865-2401-04



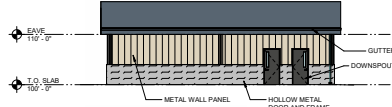
LEVEL 1 - 2400 GSF
1" = 10'-0"

6



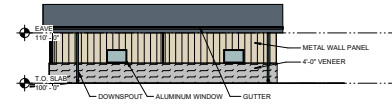
NE ELEVATION - 2400 GSF
1" = 10'-0"

4



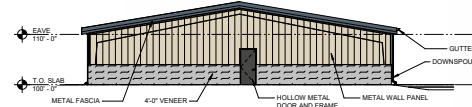
NW ELEVATION - 2400 GSF
1" = 10'-0"

2



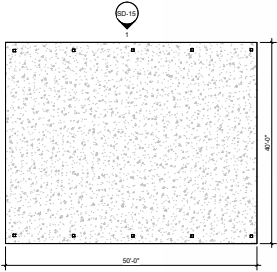
SE ELEVATION - 2400 GSF
1" = 10'-0"

3



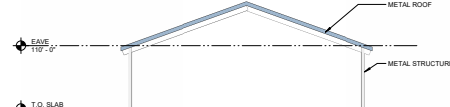
SW ELEVATION - 2400 GSF
1" = 10'-0"

1



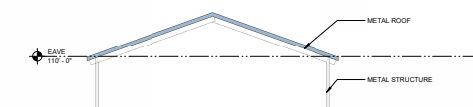
FLOOR PLAN - SHOOTHOUSE
1" = 10'-0"

5



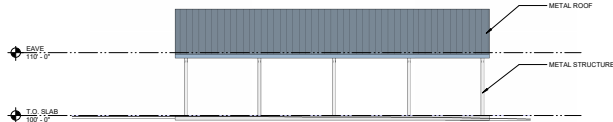
SHOOT HOUSE ELEV NE
1/8" = 1'-0"

2



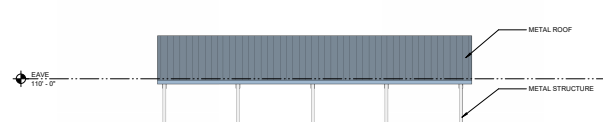
SHOOT HOUSE ELEV SW
1/8" = 1'-0"

4



SHOOT HOUSE ELEV SE
1/8" = 1'-0"

3



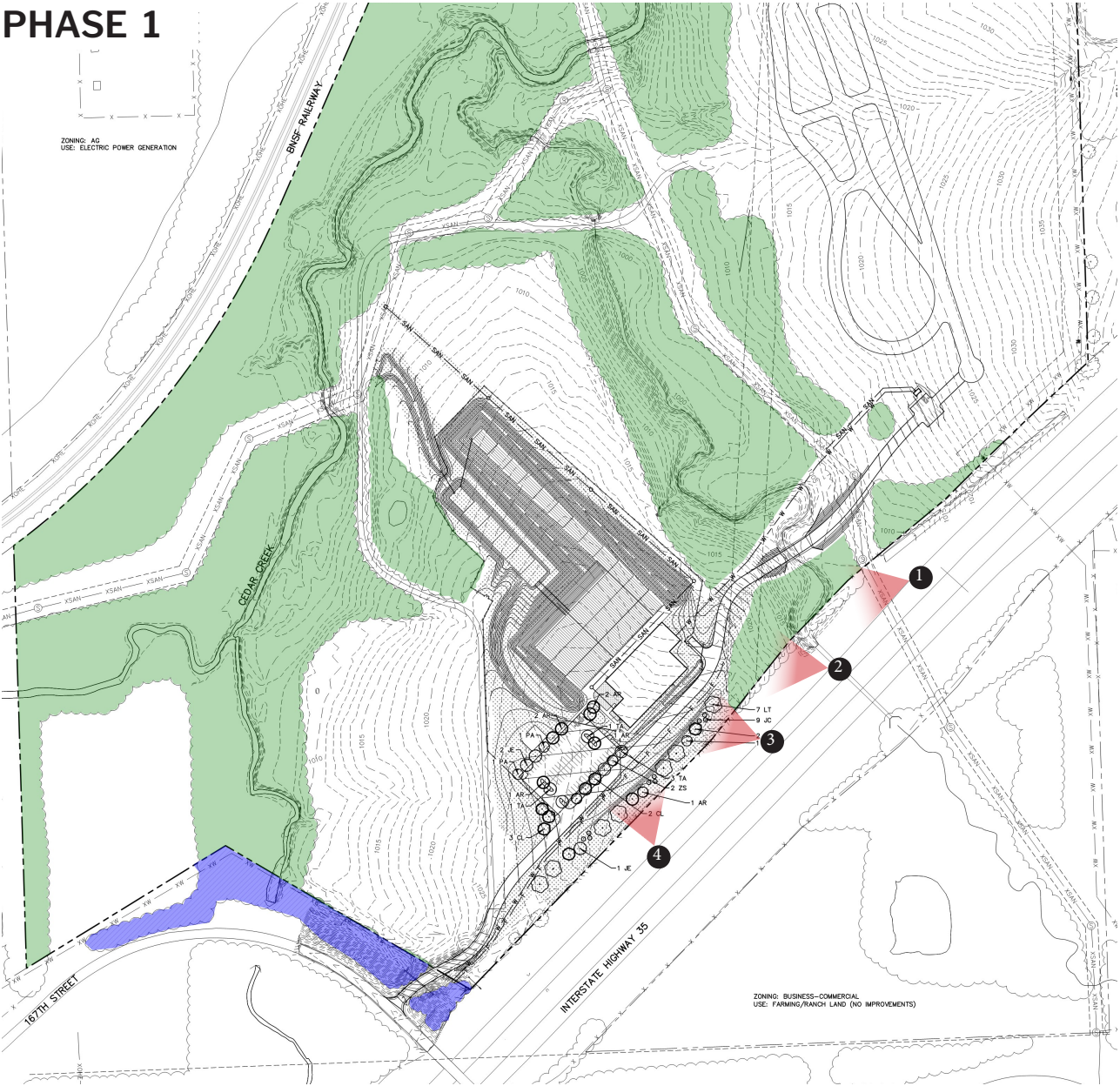
SHOOT HOUSE ELEV NW
1/8" = 1'-0"

1

PHASE 1

3/17/2025 10:01:36 AM

PHASE 1



September 7, 2023

Mr. Brandt Elwell
TRS Range Services
1025 South Bridgeway Place
Suite 290
Eagle, ID 83616

Re: City of Olathe Firing Range – Site 2
Olathe, Kansas
AVANT File: C2034.a

Dear Brandt:

We have reviewed the prospective firing range site and range layout in regard to noise levels produced in the surrounding areas. This report summarizes our observations on the site, our calculations, and the conclusions drawn from our calculations.

Observations

1. The prospective range site is situated in a currently empty field near the intersection of 167th street and I-35. The areas immediately neighboring the site are mostly industrial or agricultural, however, there are residential areas to the east and west. The nearest residential zone to the site is east of the range site approximately 1,500 feet distant. The nearest agricultural zone to the site is to the south and is approximately 1,000 feet distant. A map of the zoning of areas surrounding the prospective range site is attached at the end of this report for reference.
2. Interstate 35 runs diagonally along the southeast boundary of the proposed range property and railway line runs along the northwest boundary of the proposed range property. These are likely the most prevalent background noise sources in the area.

Calculations

1. Calculations were performed to develop a basic model of how sound emanates from the proposed range. These calculations are based on estimated firing activity at the range and include the expected noise attenuation and reflections due to barriers around the range and from noise propagation over distance.
2. The proposed range includes two 50-yard ranges with 20 lanes each and one 200-yard range with 5 lanes. The target position for all lanes remains fixed while the firing position can shift to various distances along the lanes (the noise model calculations assume the firing position is at the furthest distance from the target). The 50-yard ranges have 6-foot berms with 10-foot concrete ballistic walls on each side. A 30-foot-high target barrier, composed of a 20-foot berm topped with a 10-foot ballistic wall, is located beyond the target line of the 50-yard lanes. A 10-foot high ballistic concrete wall divides the two 50-yard ranges from each other. 10-foot-high dirt berms are located on either side of the 200-yard range and a 30-foot-high target barrier, composed of a 20-foot berm topped with a 10-foot ballistic wall, is located beyond the target line. See the attached Draft Range Concept detail R1.



3. The attached detail NS-01 shows calculated noise levels due to firing activity at the proposed range. The noise levels are reported as A-weighted equivalent continuous sound level (LA_{EQ}). A-weighting refers to a standardized set of adjustments to the measured sound levels at certain frequencies to account for changes in sensitivity in human hearing across the audible frequency range. The equivalent continuous sound level is a time-weighted averaging of the noise levels throughout the duration of a measurement. The calculations are based on a period of one hour of firing activity. The following assumptions were made in this calculation based on the provided expected worst-case range activity:
 - a. Thirteen shooters per 50-yard range with 9mm pistols firing at a rate of 170 rounds per hour.
 - b. Two shooters at the 200-yard range with .223 rifles firing at a rate of 170 rounds per hour.
 - c. All firing activity mentioned above occurring concurrently.
4. The noise mapping does not take into account noise attenuation or amplification due to structures like nearby buildings and houses, topography, foliage, or varying atmospheric conditions.

Conclusions

1. The calculations shown in detail NS-01 show the anticipated noise levels from the expect worst case firing scenario from a noise perspective based on the information provided. This indicates that noise levels in the closest residential areas could reach 60 to 70 dBA. Note that the nearest residential zone to the west is highlighted with a yellow boundary. This area is not currently part of Olathe. Noise levels in nearby agricultural zones could also reach levels of 60 to 70 dBA.
2. For reference, the City of Olathe noise ordinance sets a daytime noise level limit received by residential and agricultural land categories of 55 dBA or 5 dB above the ambient noise (if the ambient noise level is above the 55 dBA limit). The ordinance also calls for a 5 dB penalty applied to the measured sound level (in LA_{EQ}) for impulsive noise sources. This penalty helps to account for the higher degree of annoyance caused by impulsive noises compared to steady-state noise sources (some sources suggest a higher penalty of 8 to 12 dB for gunfire noise). This would indicate a noise level goal for residential and agricultural areas of less than 50 dBA from impulsive gunfire at the range. A portion of the Municipal Code is included below for reference and a map of the zoning in the area around the proposed range site is attached at the end of this report.

6.18.060 Sound Levels by Receiving Land Use.

(A) No person shall operate or cause to be operated on private property any source of sound in such a manner as to create a sound level which exceeds the limits set forth for the receiving land use category shown following when measured at or within the property boundary of the receiving land use:



Sound Levels by Receiving Land Use

Receiving land-use category	Time	Sound level limit, dba
R-A, R-A-1, R-1, R-2, R-3, R-4, R-5, PUD, A (Residential, public space, open space or agricultural or institutional)	7:00 a.m.-11:00 p.m. 11:00 p.m.-7:00 a.m.	55 50
C-O, C-1, C-2, C-3 (Commercial or business)	At all times	65
M-1, M-2, M-3 (Industrial)	At all times	70

(B) For any source of sound which emits a pure tone or impulsive sound, the maximum sound level limits set forth in subparagraph (a) preceding shall be reduced by 5 dba.

(C) The provisions of this section shall not apply to the unamplified human voice, interstate railway locomotives and railway cars, and any agricultural activity.

(D) When background sound levels exceed those Sound Level Limits identified by the table in [6.18.060\(A\)](#) due to indistinguishable noise sources (such as but not limited to; freeways, wind, birds, crickets, etc.) a particular sound is not a violation of this Noise Control Ordinance unless it exceeds a Leq of 5 dB(A) above the background sound level. Appropriate noise level measurements will be taken on the receiving property to determine the background noise level and the level of the suspect sound. If the suspect sound is determined to exceed a Leq of 5 dB(A) above the background sound level, the creation of this sound is a violation of the ordinance. (Ord. 00-89 § 5, 2000; Ord. 85-13 § 1, 1985.)

3. It is our experience that some people are particularly sensitive to gunfire noise. Once they have the perception of gunfire noise in their neighborhood, it can be difficult to satisfy their complaints with remediation, since the noise may still be audible even if it is below the noise ordinance goals. With this in mind, we recommend that strategies be implemented with the construction of the range to attenuate noise levels transmitted to the surrounding areas.
4. There are a number of strategies that can be utilized to minimize the noise leaving the shooting range. These include:
 - a. Adding a rear barrier wall behind the firing lines to attenuate noise traveling towards the south. This barrier would connect with the side walls/berms surrounding each range. This wall could also have sound absorbing characteristics that would reduce further reflections back towards the north.
 - b. Adding sound absorbing material to the wall behind the target line. This would reduce sound being reflected back towards the south. Reflections from this wall may be perceived as an echo in some instances as the reflected sound may arrive later than the sound traveling directly from the noise source (the shooters).
 - c. Adding sound absorbing material to the side walls of the range. This material will absorb sound before it is reflected out of the range. Reductions from this treatment would be most noticeable to the east and west of the range.



- d. Increasing the height of the side walls would marginally reduce the noise to the east and west but likely not to the level required by the noise ordinance. The side walls in the draft design are already fairly high and a significant increase in height (e.g., doubling of the current height) would likely be required to make a significant difference.
5. Even implementing all of the strategies above, there is a practical limit to the noise attenuation that can be achieved of about 10 dB. A second calculation was made with these noise reduction measures included, see NS-02. This calculation is presented to illustrate what would typically be achievable with the types of treatments recommended above. Note that the nearest residential zone to the west is highlighted with a yellow boundary.
6. As can be seen on NS-02, noise levels in the nearest residential areas are expected to be above 50 dBA and some agricultural areas will still likely exceed 60 dBA. Consideration should also be given to areas that are zoned residential but do not currently have houses on them or areas that may be rezoned to residential in the future.
7. Note that atmospheric conditions can have a significant impact on how sound travels over long distances. Vertical wind gradients or inversion conditions can cause sound to travel much further than during more typical atmospheric conditions and there may be days when gunfire is heard more loudly or at greater distances than anticipated in this report.
8. We will be following up this report with further information on ambient noise levels after we have performed noise measurements at the proposed site. These measurements will give us a better understanding of the current noise levels near the proposed site from the nearby highway, railway, and KHP firing range. The measured ambient noise levels may also increase the noise level allowable by the City of Olathe noise ordinance if the ambient noise level at the site exceeds the allowable noise limit.

Please let us know if you have any questions.

Very truly yours,

AVANT ACOUSTICS, LLC

— 
Amber J. VanFelt
Senior Associate

Enclosures:

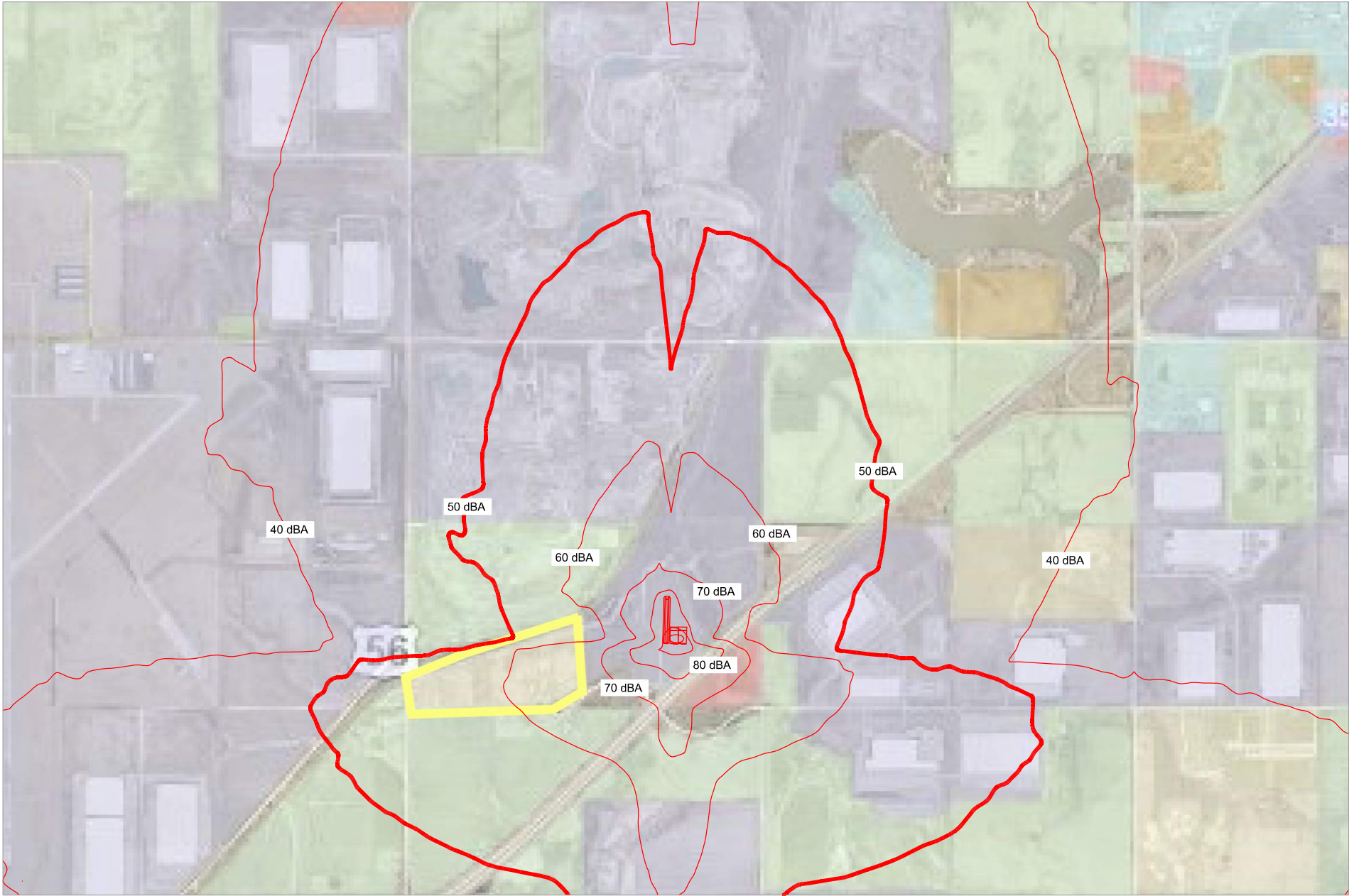
NS-01 – Anticipated Noise Levels for Proposed Range

NS-02 – Anticipated Noise Levels for Range with Acoustical Treatments

R1 – Draft Range Concept

Zone Map of Area





SHEET:
NS-01

OLATHE RANGE - SITE 2
OLATHE, KS
LAEQ NOISE CONTOUR
MAP

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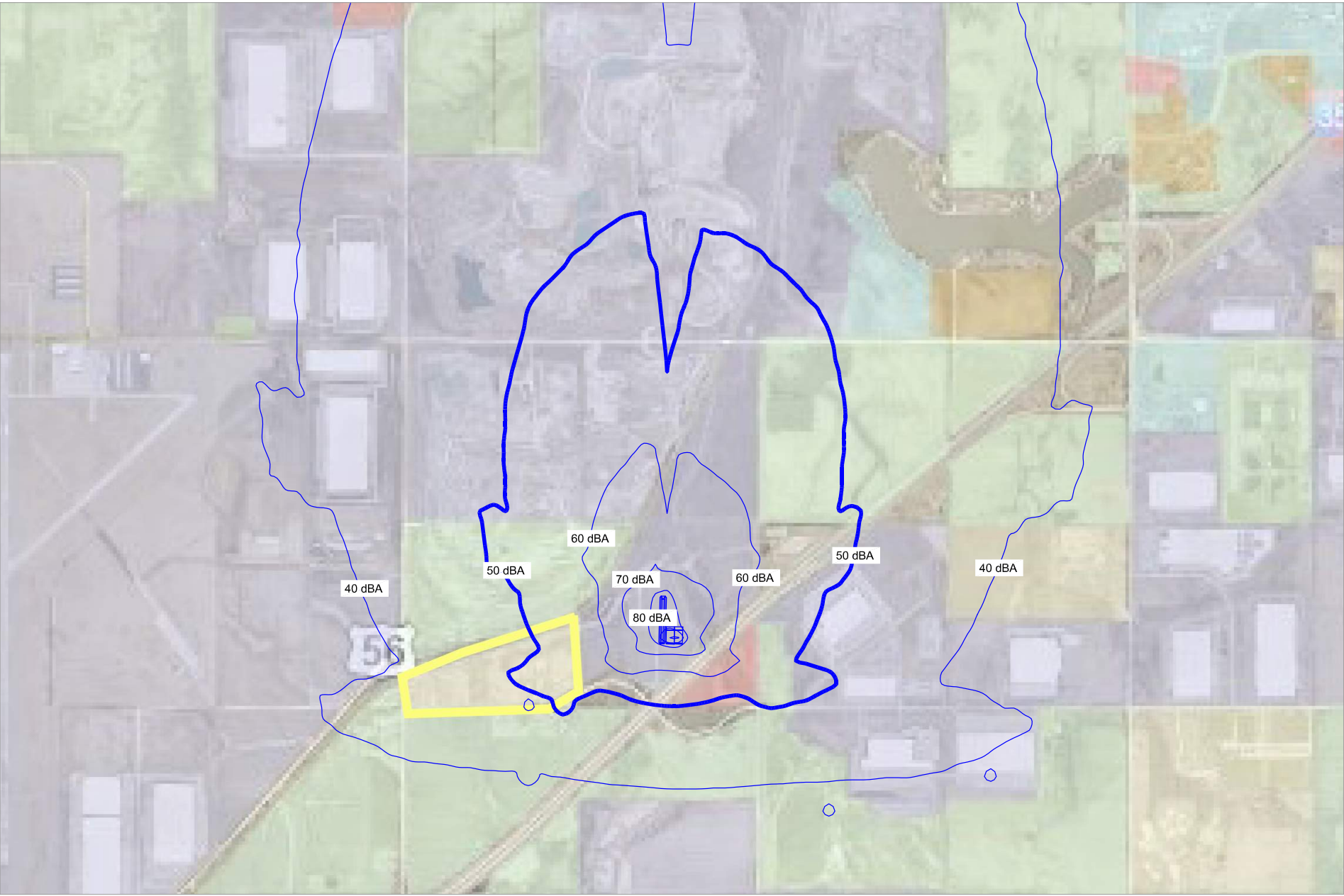
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LENEXA, KS 66215 USA
913.888.9111

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DATE: 9/7/23

BY: AJV

FILE: C2034.a



SHEET:
NS-02

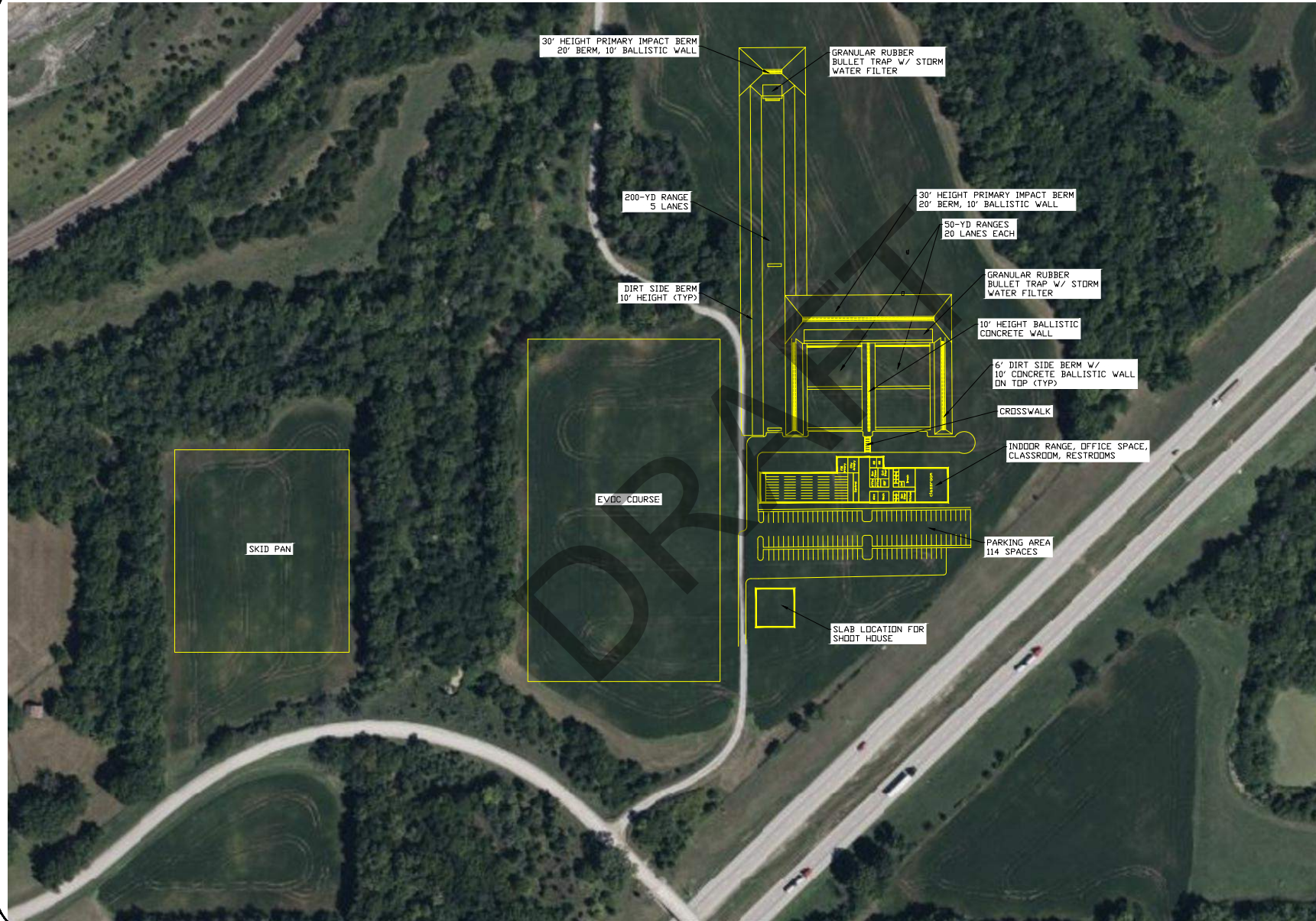
OLATHE RANGE - SITE 2
OLATHE, KS
LAEQ NOISE CONTOUR
MAP - WITH RANGE TREATMENTS



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913.888.9111

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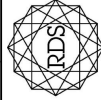
DATE: 9/7/23
BY: AJV
FILE: C2034.a



Range Design Services

Range Design Services

Disadvantaged Minority Owned Small Business



RANGE DESIGN
SERVICES

Disclaimer:
All measurements require field verification prior to installation of design. Field adjustments may be required to ensure safety and should be completed by experienced installation staff.

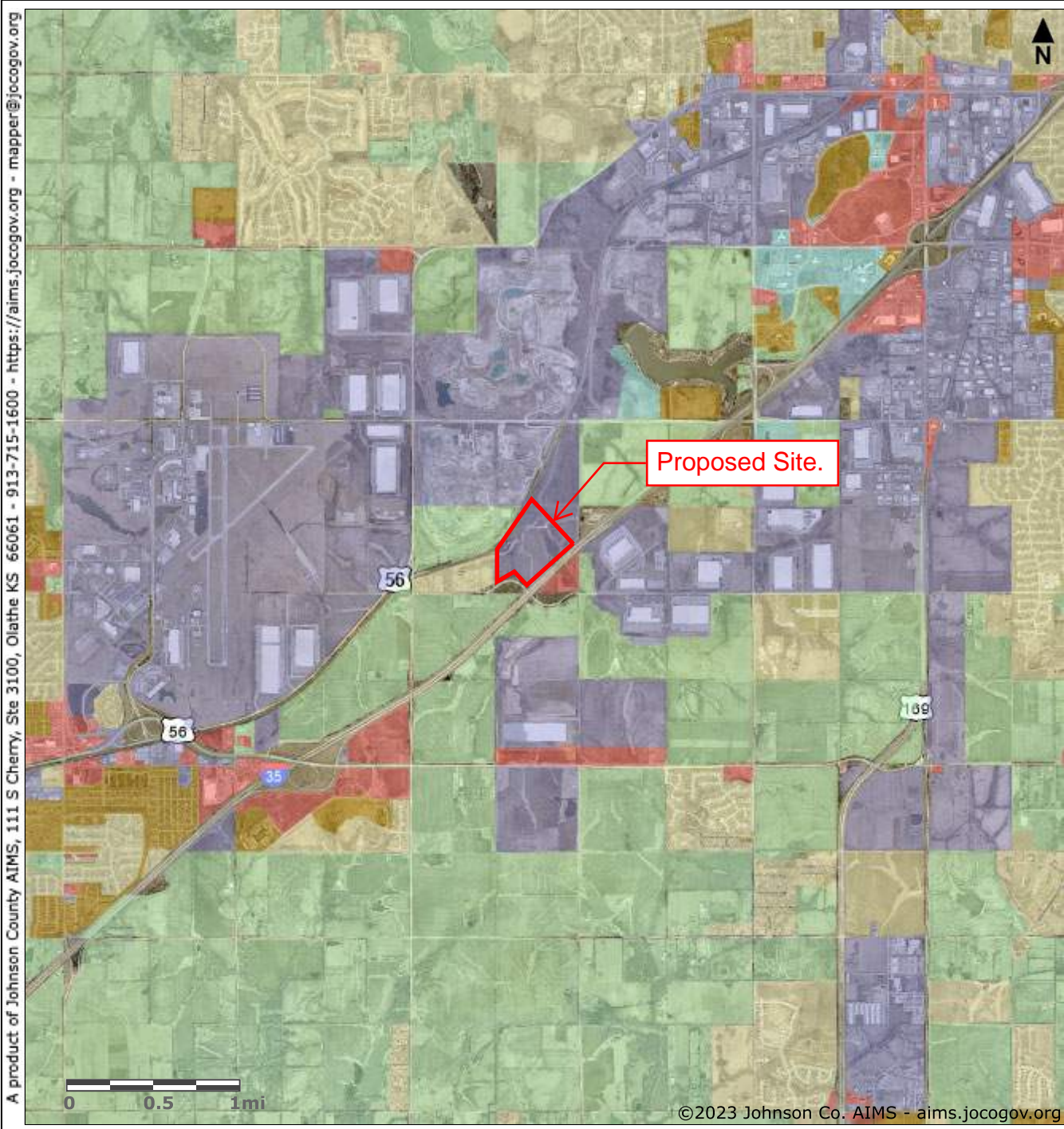
1025 S Bridgeway PL., Suite 290
Eagle Idaho 83616
208.332.4533

4		
3		
2		
1		
No.	Revision/Issue	Date

City of Olathe
Outdoor Shooting Ranges
167th Street
Olathe, KS

Outdoor Shooting Ranges
DRAFT
Range Concept

PROJECT: 0R21006	SHEET: R1
DATE: 8-2023	
SCALE: As Shown	



Johnson Co AIMS Map

LEGEND

Proposed Zoning

Zoning (Countywide)

- | | |
|-----------------|---------------------------|
| Agricultural | Business-Commercial |
| Business-Office | Civic/Parks |
| Industrial | Multi-Family Residential |
| Multi-Use | Single-Family Residential |



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JOHNSON COUNTY
KANSAS
AIMS GIS & Mapping

8/29/2023

September 19, 2023

Mr. Kerry O'Neal
TRS Range Services
1025 South Bridgeway Place
Suite 290
Eagle, ID 83616

Re: City of Olathe Firing Range – Site 2
Olathe, Kansas
AVANT File: C2034.a

Dear Kerry:

We visited the prospective site for the new City of Olathe Firing Range to take measurements of the existing ambient noise. Measurements were taken over a 24-hour period starting on September 8, 2023, and ending on September 9, 2023. This report lists our measurement results, and conclusions regarding the data we collected.

Measurements

1. Measurements were taken using an NTI XL2 sound level meter with an M2211 Type 1 microphone with a 4-inch diameter windscreen and weatherproof enclosure. The microphone was mounted to a stand during the measurements. The meter was calibrated before and after the measurements. Wind speed readings were taken at the measurement points and online meteorological data for the measurement period was reviewed to ensure that the sound level measurements were not compromised.
2. The primary noise metric evaluated from our measurements is the A-weighted equivalent continuous sound level (LA_{EQ}). A-weighting refers to a standardized set of adjustments to the measured sound levels at certain frequencies to account for changes in sensitivity in human hearing across the audible frequency range. The equivalent continuous sound level is a time-weighted averaging of the noise levels for a specified time period.
3. Long-Term Ambient Noise Measurement
 - a. To get a clear understanding of the noise levels and characteristics in the area around the prospective firing range, we took a 24-hour noise measurement at the range site. The location of the measurement is indicated on the attached detail NS-03. The location was selected to be near the more noise sensitive residential areas to the west. Audio recordings were also taken during the measurement for further analysis and identifying noise sources throughout the measurement period. The primary noise sources that were captured in our measurements include wildlife noise (birds and insects), trains, motor vehicles, and firing activity from the nearby Kansas Highway Patrol (KHP) firing range. Descriptions of each of these contributing sources are listed below.
 - i. Wildlife noise – Wildlife noise was prevalent throughout most of the 24-hour measurement. The noise was mostly made up of insects (primarily cicadas) noise and some birdsong. This noise varied somewhat throughout the measurement with levels loudest in the morning and evening and quietest around midday. The levels varied somewhere between 59 and 76 dBA.

- ii. Trains – Numerous trains passed the site along the rail line to the northwest. The trains produced noise levels at the measurement location between 60 and 65 dBA. Trains passed through the area during both the daytime and nighttime.
 - iii. Motor Vehicles – Vehicular activity, mostly associated with I-35, also contributed to the noise levels at the site. The noise from vehicles was around 55 to 60 dBA and varied with the level of traffic. Some aircraft noise was also present in our recordings.
 - iv. KHP Range Noise – Noise from the nearby KHP firing range was similar in level to the motor vehicle noise but, due to the impulsive nature of the noise, was discernable in our audio recordings. Noise levels during the firing activity were around 55 to 60 dBA. Range activity was audible in the recordings from around 10 to 11 AM.
- b. The overall LA_{EQ} rating from our long-term ambient measurement was 66 dBA. This is would typically be considered high for a non-industrial area.

Conclusions

1. For reference, the City of Olathe noise ordinance sets a daytime noise level limit received by residential and agricultural land categories of 55 dBA or 5 dB above the ambient noise (if the ambient noise level is above the 55 dBA limit). The ordinance also calls for a 5 dB penalty applied to the measured sound level (in LA_{EQ}) for impulsive noise sources. This penalty helps to account for the higher degree of annoyance caused by impulsive noises compared to steady-state noise sources (some sources suggest a higher penalty of 8 to 12 dB for gunfire noise). This would indicate a noise level goal for residential and agricultural areas of less than 50 dBA from impulsive gunfire at the range. A portion of the Municipal Code is included below for reference and a map of the zoning in the area around the proposed range site is attached at the end of this report.

6.18.060 Sound Levels by Receiving Land Use.

(A) No person shall operate or cause to be operated on private property any source of sound in such a manner as to create a sound level which exceeds the limits set forth for the receiving land use category shown following when measured at or within the property boundary of the receiving land use:



Sound Levels by Receiving Land Use

Receiving land-use category	Time	Sound level limit, dba
R-A, R-A-1, R-1, R-2, R-3, R-4, R-5, PUD, A (Residential, public space, open space or agricultural or institutional)	7:00 a.m.-11:00 p.m. 11:00 p.m.-7:00 a.m.	55 50
C-O, C-1, C-2, C-3 (Commercial or business)	At all times	65
M-1, M-2, M-3 (Industrial)	At all times	70

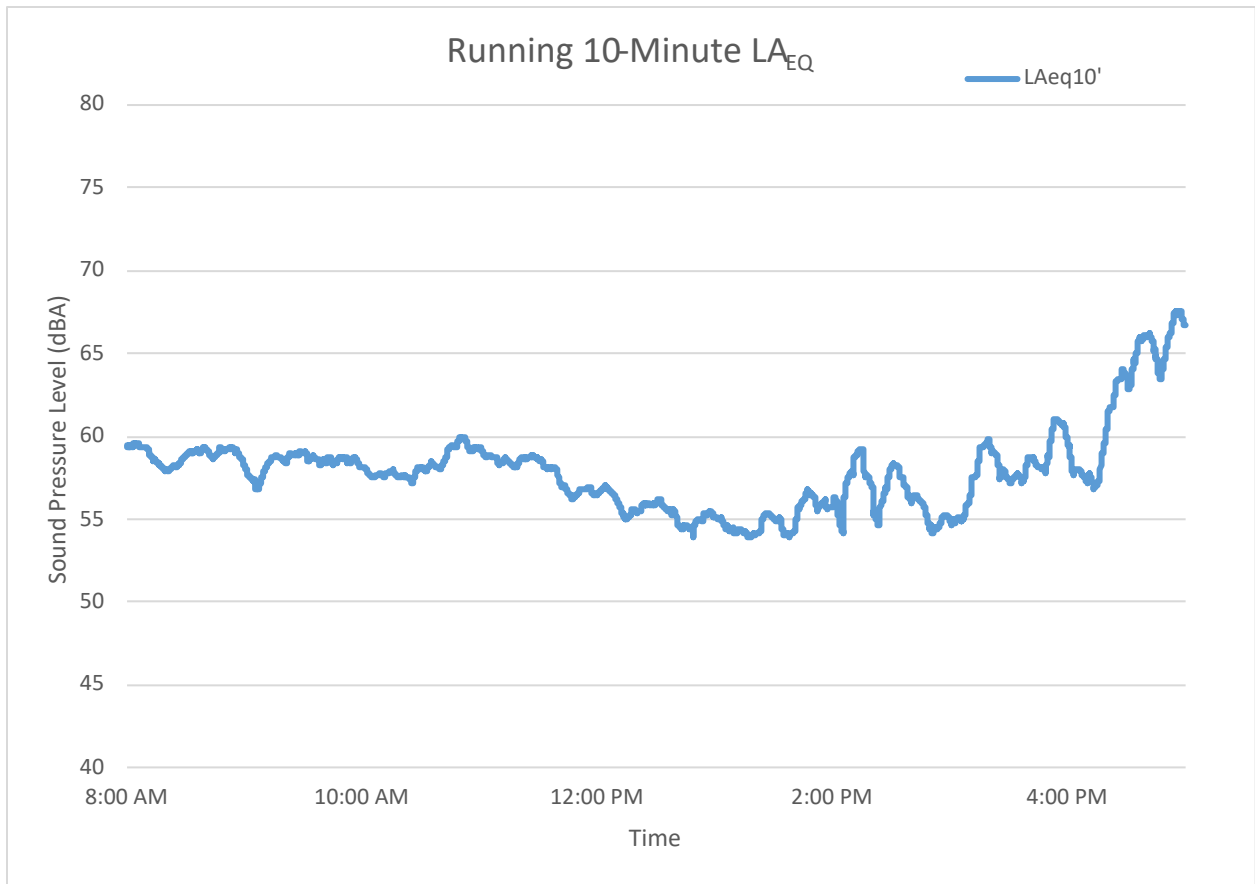
(B) For any source of sound which emits a pure tone or impulsive sound, the maximum sound level limits set forth in subparagraph (a) preceding shall be reduced by 5 dba.

(C) The provisions of this section shall not apply to the unamplified human voice, interstate railway locomotives and railway cars, and any agricultural activity.

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2. In cases where the ambient noise level at a site from traffic, wildlife, and other "indistinguishable" sources exceed the maximum allowable sound level limit, the ordinance provides that a sound does not violate the ordinance if it does not exceed a level 5 dB more than the background noise level.
3. The overall (24-hour) LA_{EQ} measurement for background noise at this site was around 66 dBA. Our understanding is that the range will typically be used during daytime hours. The measured overall daytime LA_{EQ} was 67 dBA. In general, the measured noise levels were between 55 to 60 dBA in the morning. At midday the insect noise decreased, reducing the measured noise levels to around 55 dBA. The noise level then increased through the afternoon to levels up to around 65 to 67 dBA around rush hour. The following graph shows a running 10-minute averaged LA_{EQ} noise level from 8 AM to 5 PM and illustrates how the noise levels varied throughout the day.





4. The noise levels at the quietest part of the day hovered around 54 to 55 dBA. This could potentially allow for an allowable ordinance noise limit of about 60 dBA. Applying the previously discussed 5 dB penalty for impulsive noise, this would result in a target maximum noise level of around 55 dBA for residential and agricultural adjacencies during daytime hours. This is a slight increase from the target maximum noise level indicated in our previous report.

Please let us know if you have any questions.

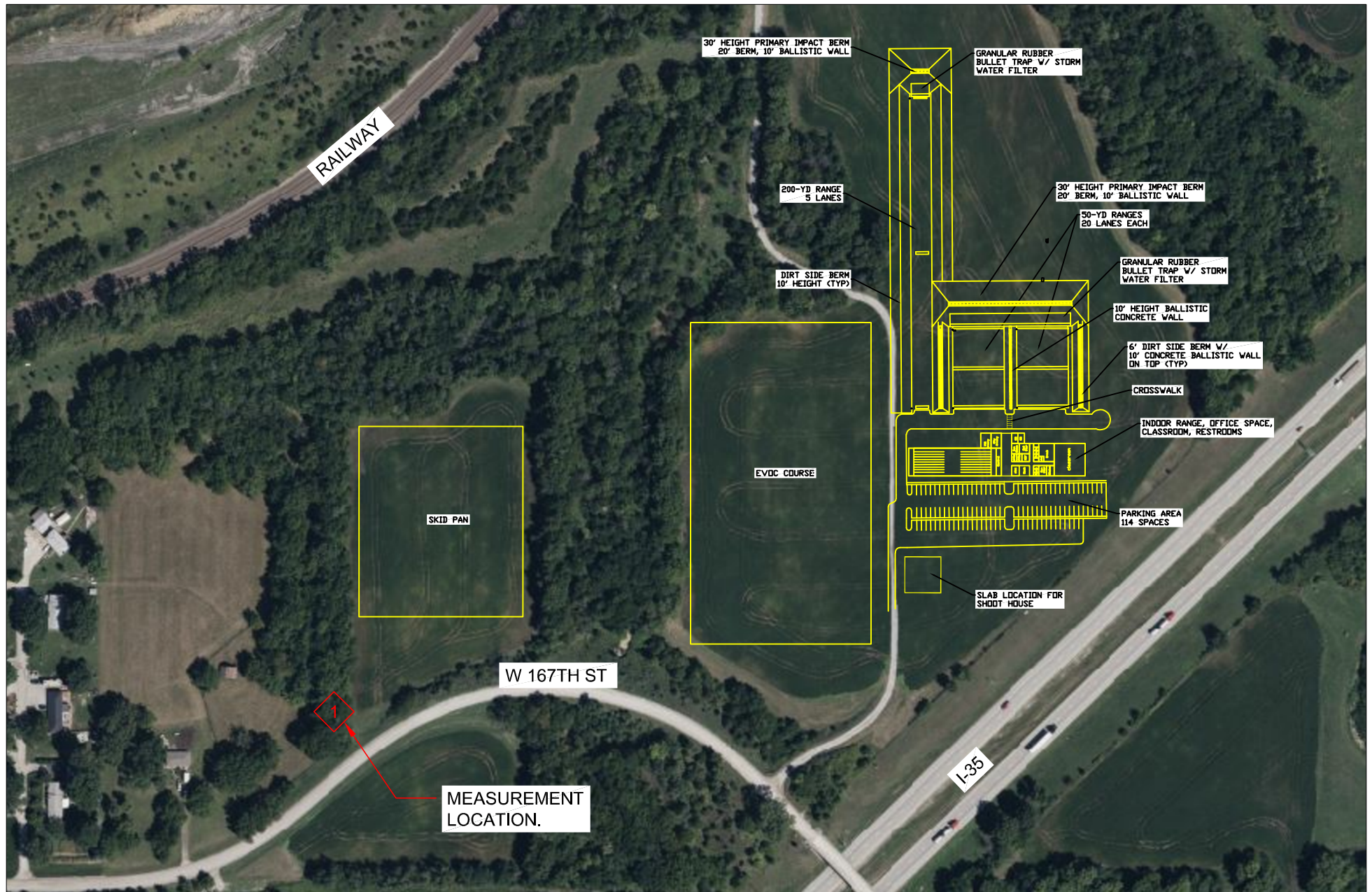
Very truly yours,

AVANT ACOUSTICS, LLC

— *Andrea J. VanFelt*

Ar
Senior Associate

Enclosures:
NS-03 – Measurement Location Map
Zone Map of Area



NS-03

OLATHE RANGE - SITE 2 OLATHE, KS 24-HOUR MEASUREMENT LOCATION

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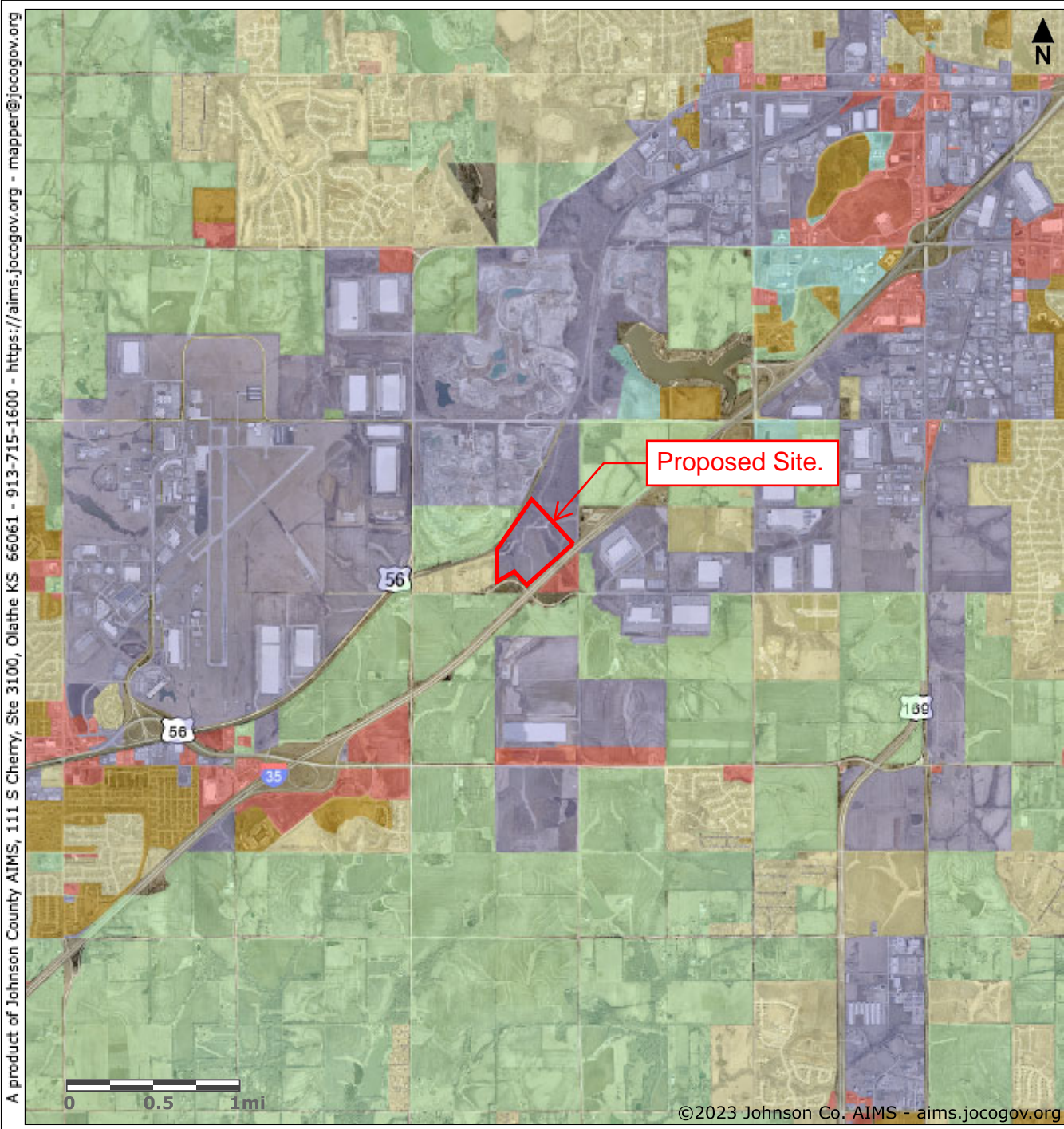
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 LENEXA, KS 66215 USA
 913.888.9111

WWW.AVANTACOUSTICS.COM

DATE: 9/19/23

BY: AJV

FILE: C2034.a



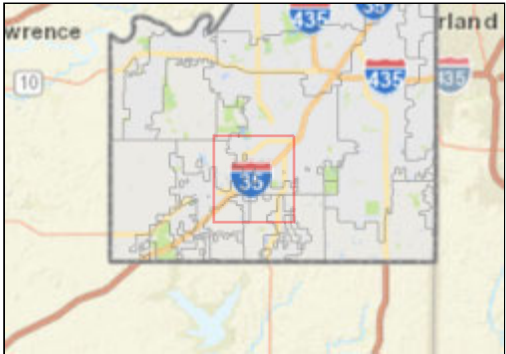
Johnson Co AIMS Map

LEGEND

Proposed Zoning

Zoning (Countywide)

- | | |
|-----------------|---------------------------|
| Agricultural | Business-Commercial |
| Business-Office | Civic/Parks |
| Industrial | Multi-Family Residential |
| Multi-Use | Single-Family Residential |



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JOHNSON COUNTY
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8/29/2023

NEIGHBORHOOD MEETING OLATHE FIRING RANGE

March 20, 2025

NAME	ADDRESS
Michale Kaiser - Bismarck M. Med	8675 W. Glen St Overland Park KS 66212
CHRIS NIKILAKIS TREASURER	18th & Baltimore KC MO
Heidi Heinz turner construction	12600 W. 119th St Overland Park MO 66211
Dave Schroeder P.D.	501 E. Old SE Hwy Olathe KS 66061
Rick Parsons P.D.	501 E. Old SE Hwy Olathe KS 66061
m. k. Butkus PD	501 E. Old SE Hwy Olathe, KS 66061
GORDON WALLER	16605 S. ORCHARD DR. OLATHE, KS 66061
Robert Dingus	16605 S. Orchard Dr. Olathe, KS 66061
Detroy Williams	23000 W. 161st Olathe, KS 66061
Brett Mason	23775 W 159th St Olathe KS 66061
Josh Davis	"

NEIGHBORHOOD MEETING FOR CITY OF OLATHE
Building Preliminary Plan and Rezoning (Case RZ25-002)
I35 & 167th Street Olathe, KS
MEETING MINUTES

Date: March 20, 2025
Limits: 5:00-6:00pm
Location: 501 E. Highway 56, Olathe, KS 66061

The meeting started at 5:05pm

1. Project team introductions
2. Treanor Architects discussed the why behind the project. This project will allow the Olathe Police Department to have the ability to train at their own facility. This training provides them the confident and efficient with their equipment. Police are required to complete annual training and are currently leasing spaces to accommodate this training. By leasing space, they are limited to completing training in a timely manner and subject to other range availability.
3. Site plan – Treanor presented an overview of the project site. The first phase includes a 25 & 50-yard range, and a 200 yard range. Ranges will be bermed with natural berms, and baffles. Green areas shown on parcel will remain. Natural environment will also assist with site and sound. First phase will also include a 2,400 SF training building.
4. Project is multiple phases – First phase - outdoor range and small 2400 SF training building
5. Phase 2 – add indoor range
6. Phase 3 – driving training course – for city departments
7. Reviewed building elevations of first phase 2,400 SF building- general metal building
8. Reviewed proposed larger indoor range elevations and floor plan. Concept only not fully developed. Tying first phase building into 2nd phase larger building
9. Smaller precast building for restrooms to be located at driving course in phase three
10. Reviewed timeline of an early summer start. Anticipated construction timeline is 9 months.

Questions

1. Verifying first phase is the outdoor range
 - a. yes
2. Which way will shooting occur?
 - a. NW orientation of shooting stand
 - b. Range includes baffles. A sound study was completed and design meets or exceeds recommendations in the sound study.
 - c. Trees will assist with sound baffle
3. Who will be using this range? Will KHP range still be in use?
 - a. Exclusive for city of Olathe use
 - b. We cannot comment on use of KHP range
4. Hours of operation
 - a. Chief – yet to be determined. Not intended to be used in evening hours or overnight. If so, it would be occasionally and before 11:00pm
 - b. Typical use would be not past 5:00pm

5. Concern about Increase of traffic from westbound on gravel road, already creates a lot of dust
 - a. Traffic to site should be minimal and would primarily come from off the Hwy from the east
 - b. Typically will be small groups of people at one training time
6. Question about road improvements
 - a. We are unaware of any road improvement. City has confirmed fiber will be added this year
7. Will this project disturb cedar creek?
 - a. No
 - b. There will be a small bridge crossing once the driving course is constructed
8. Timing of driving range
 - a. Undetermined at this time
9. Will this remain Ag land on west side of site?
 - a. Yes, Zoning of property is Ag, which is the current zoning through the county
 - b. There is no planned use for agricultural property to the west
10. Is this site in the city limits of Olathe?
 - a. Yes - the site has been annexed into city of Olathe city limits
 - b. The limits of the site annexation include only the 96-acre parcel

Meeting concluded at 5:30pm.