



Ada County Transmittal
Division of Community and Environmental Health

Return to:

- ACZ
- Boise
- Eagle
- Garden City
- Meridian
- Kuna
- Star

Rezone # AZ-21-12

Conditional Use # DA 21-20

Preliminary / Final / Short Plat PAUD-21-02

Willowbrook

- 1. We have No Objections to this Proposal.
- 2. We recommend Denial of this Proposal.
- 3. Specific knowledge as to the exact type of use must be provided before we can comment on this Proposal.
- 4. We will require more data concerning soil conditions on this Proposal before we can comment.
- 5. Before we can comment concerning individual sewage disposal, we will require more data concerning the depth of:
 - high seasonal ground water
 - bedrock from original grade
 - waste flow characteristics
 - other _____
- 6. This office may require a study to assess the impact of nutrients and pathogens to receiving ground waters and surface waters.
- 7. This project shall be reviewed by the Idaho Department of Water Resources concerning well construction and water availability.
- 8. After written approvals from appropriate entities are submitted, we can approve this proposal for:
 - central sewage
 - interim sewage
 - individual sewage
 - community sewage system
 - central water
 - individual water
 - community water well
- 9. The following plan(s) must be submitted to and approved by the Idaho Department of Environmental Quality:
 - central sewage
 - sewage dry lines
 - community sewage system
 - central water
 - community water
- 10. This Department would recommend deferral until high seasonal ground water can be determined if other considerations indicate approval.
- 11. If restroom facilities are to be installed, then a sewage system MUST be installed to meet Idaho State Sewage Regulations.
- 12. We will require plans be submitted for a plan review for any:
 - food establishment
 - beverage establishment
 - swimming pools or spas
 - grocery store
 - child care center
- 13. Infiltration beds for storm water disposal are considered shallow injection wells. An application and fee must be submitted to CDH.
- 14.

Reviewed By: _____

[Signature]
Date: 9/10/21

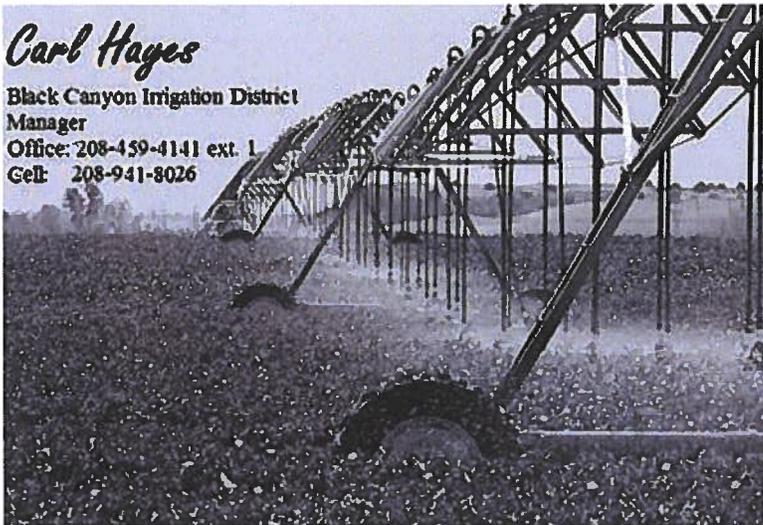
Shawn Nickel

From: Carl Hayes <carl@blackcanyonirrigation.com>
Sent: Thursday, January 13, 2022 8:13 AM
To: Shawn Nickel; farmers.union.ditch@gmail.com; bvidc1@gmail.com
Cc: Tyler Chamberlain; Kent Gingrich
Subject: RE: Willowbrook Development Agency Workshop

Shawn,

Thank you for the information, BCID will be requiring piping of the Willow Creek Pump Lateral. BCID requires in addition to piping that all easements be recorded. BCID has a November 1st plan approval deadline and a construction deadline of March 1st a full size set of plans must be submitted to BCID and Kent Gingrich with Heco Engineers in Nampa for review. BCID has a review fee of \$2500, \$500 of which is non-refundable. Piping plans must be approved by BCID and the BOR prior to piping and piping must be complete and approved by BCID prior to lots being sold in the phase adjacent to the lateral.

Thanks again,





STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 N Orchard Street, Boise, ID 83706
(208) 373-0550

Brad Little, Governor
Jess Byrne, Director

February 18, 2022

By e-mail: snickel@staridaho.org

City of Star
P.O. Box 130
Idaho City, ID 83669

Subject: Willowbrook Master Planned Development, AZ-21-12/DA-21-20/PUD-21-02

Dear Mr. Nickel:

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at:
<https://www.deq.idaho.gov/public-information/assistance-and-resources/outreach-and-education/>.

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. AIR QUALITY

- Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776).
- All property owners, developers, and their contractor(s) must ensure that reasonable controls to prevent fugitive dust from becoming airborne are utilized during all phases of construction activities per IDAPA 58.01.01.651.
- DEQ recommends the city/county require the development and submittal of a dust prevention and control plan for all construction projects prior to final plat approval. Dust prevention and control plans incorporate appropriate best management practices to control fugitive dust that may be generated at sites.
- Citizen complaints received by DEQ regarding fugitive dust from development and construction activities approved by cities or counties will be referred to the city/county to address under their ordinances.

- Per IDAPA 58.01.01.600-617, the open burning of any construction waste is prohibited. The property owner, developer, and their contractor(s) are responsible for ensuring no prohibited open burning occurs during construction.
- For questions, contact David Luft, Air Quality Manager, at (208) 373-0550.

2. WASTEWATER AND RECYCLED WATER

- DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and willingness to serve this project.
- IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department.
- All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects require separate permits as well.
- DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water.
- DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

For questions, contact Valerie Greear, Water Quality Engineering Manager at (208) 373-0550.

3. DRINKING WATER

- DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project.
- IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems. Please review these rules to determine whether this or future projects will require DEQ approval.
- All projects for construction or modification of public drinking water systems require preconstruction approval.

- DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at: <https://www.deq.idaho.gov/water-quality/drinking-water/>). For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite.
- If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter.
- DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources.
- DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.

For questions, contact Valerie Greear, Water Quality Engineering Manager at (208) 373-0550.

4. SURFACE WATER

- Please contact DEQ to determine whether this project will require an Idaho Pollutant Discharge Elimination System (IPDES) Permit. A Construction General Permit from DEQ may be required if this project will disturb one or more acres of land, or will disturb less than one acre of land but are part of a common plan of development or sale that will ultimately disturb one or more acres of land.
- For questions, contact James Craft, IPDES Compliance Supervisor, at (208) 373-0144.
- If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.
- The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call (208) 334-2190 for more information. Information is also available on the IDWR website at: <https://idwr.idaho.gov/streams/stream-channel-alteration-permits.html>
- The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits.

For questions, contact Lance Holloway, Surface Water Manager, at (208) 373-0550.

5. SOLID WASTE, HAZARDOUS WASTE AND GROUND WATER CONTAMINATION

- **Solid Waste.** No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards (IDAPA 58.01.06), Rules and Regulations for Hazardous Waste (IDAPA 58.01.05), and Rules and Regulations for the Prevention of Air Pollution (IDAPA 58.01.01). Inert and other approved materials are also defined in the Solid Waste Management Regulations and Standards
- **Hazardous Waste.** The types and number of requirements that must be complied with under the federal Resource Conservation and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.
- **Water Quality Standards.** Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852). Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850.
- **Ground Water Contamination.** DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."

For questions, contact Rebecca Blankenau, Waste & Remediation Manager, at (208) 373-0550.

6. ADDITIONAL NOTES

- If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at (208) 373-0550, or visit the DEQ website <https://www.deq.idaho.gov/waste-management-and-remediation/storage-tanks/leaking-underground-storage-tanks-in-idaho/> for assistance.

Response to Request for Comment

February 18, 2022

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- If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.

We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any of our technical staff at (208) 373-0550.

Sincerely,

A handwritten signature in black ink that reads "Aaron Scheff". The signature is written in a cursive, flowing style.

Aaron Scheff
Regional Administrator
DEQ-Boise Regional Office

EDMS#: 2022AEK325



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Boise District Office
3948 Development Avenue
Boise, Idaho 83705



In Reply Refer To:
2800 (ID110)

MAR 3 2022



Willow Brook Development Inc.
Attn: Richard Phillips
210 Murray St.
Garden City, ID 83714

Dear Mr. Phillips,

We have been informed of your proposed expansion of the Willow Brook Community located in T. 5 N., R. 1 W. Your "Overall Roadway and Traffic Plan map denotes a future road expansion that would cross BLM managed lands in sections 20, 21, and 29. At this time, we do not have any questions; however, consistent with the Federal Land Policy and Management Act of 1976, as amended and 43 CFR 2800, any proposed use or encumbrance of Public Land requires prior application and evaluation to determine whether a Public Land right-of-way (ROW) is appropriate. Use or encumbrance of Public Land, without prior authorization, is subject to Unauthorized Use procedures, which can include fines, removal, and reclamation. We would like to avoid unauthorized uses, therefore, if potential use of Public Land as a result of your proposed development becomes a consideration, then you should contact us at your earliest awareness.

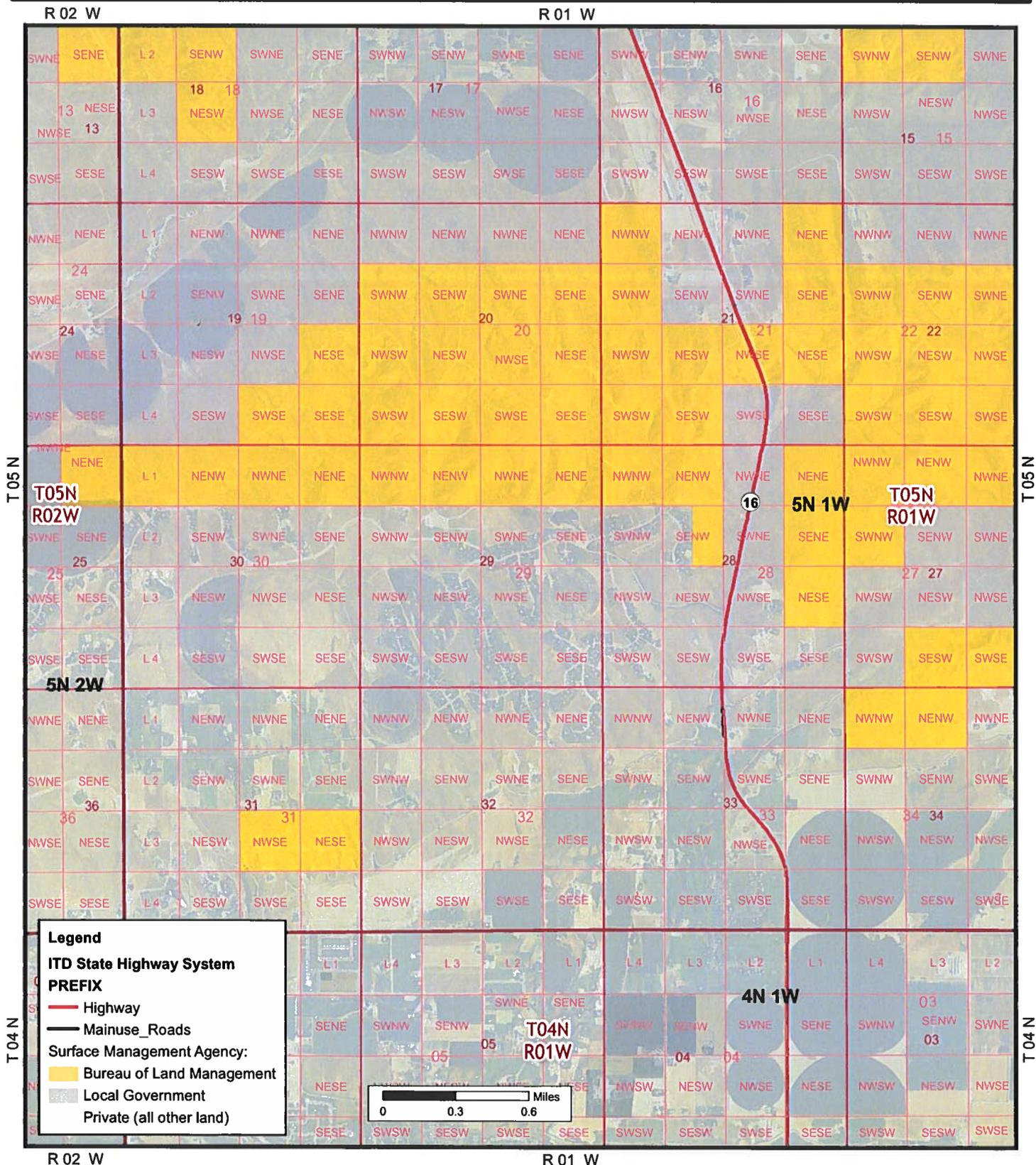
If you have any questions please contact the BLM, Four Rivers Field Office Supervisory Natural Resource Specialist, Natalie Cooper, via email ncooper@blm.gov or at (208) 384-3309.

Sincerely,

Brent Ralston
Field Manager
Four Rivers Field Office

cc: City of Star

Willow Brook Community



U.S. Department of the Interior
 Bureau of Land Management, Idaho
 Boise District Office
 Map date: March 02, 2022



No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed. This map cannot be made Section 508 compliant. For help with its data or information, please contact the BLM Idaho State Office webmaster at (208) 373-4000.



West Ada

SCHOOL DISTRICT

January 5, 2023

RE: Willowbrook

Dear Planners:

West Ada School District has experienced sustained growth in student enrollment during the last ten years. Based on current enrollment data specific to new development (within the last 5 years) in proximity to this proposed development, we estimate this development consisting of 1094 single-family homes could house approximately **1006 school aged children**. Approval of this application will affect enrollments at the following schools in West Ada School District based on attendance areas for the 2022-23 school year. For your information, included in this data is the number of approved lots and multi-family units approved by this and other agencies.

	<u>Enrollment</u>	<u>Capacity</u>	<u>Approved lots per attendance area</u>	<u>Approved MF units per attendance area</u>	<u>Projected Students from Approved Dev.</u>
Star Elementary	651	650	2782	37	506
Star Middle School	895	1000	9609	372	876
Eagle High School	1798	1800	6332	357	837
<u>School of Choice Options</u>					
Galileo STEM Academy	753	775	N/A	N/A	

West Ada School District supports economic growth. Based on future enrollment forecasts, the enrollment of the elementary school is projected to exceed the maximum capacity of the school. The middle and high schools are also projected to be operating above building capacity upon the completion of the previously approved lots. Future developments will continue to have an impact on the district's capacity.

To meet the need for additional school capacity in this area one or more of the following may need to be accomplished:

- Transporting students to an alternate school with available classrooms.
- Attendance area adjustments if there is availability in a nearby school.
- Portable classrooms placed on the property.
- Passage of a bond to build new schools to fit the enrollment needs.

If a developer chooses to donate land, West Ada School District may accept the donation of land appropriate for a school site. Passage of a bond issue will be required prior to the commencement of new school construction.

Please encourage the developer to provide safe walkways, bike paths and pedestrian access for our students.

Sincerely,

Marci Horner
Planning and Development Administrator



March 27, 2023

City of Star Planning & Zoning
PO Box 130
Star, Idaho 83669
Attention: Shawn Nickel, Administrator

Kittelson & Associates
101 S. Capitol Blvd Suite 600
Boise, Idaho 83702
Attention: Jamie Markosian, P.E.

RE: Willow Brook Golf Community Updated TIS- January 25, 2023

Canyon Highway District No. 4 (CHD4) has reviewed the updated TIS (Jan 25, 2023) prepared for Willow Brook Golf Community, and offers the following comments on this matter:

Jurisdiction

By agreement with the City (*Canyon 4/Star Public Agency Coordination Agreement, June 6th, 2007*), CHD4 acts as the supervisory authority for all public roads within the City limits that also lie within Canyon County (except those highways under the jurisdiction of Idaho Transportation Department). This supervisory authority includes highway planning, the establishment of design and use standards, access controls, review and approval of plats and development plans, and other operations and management duties assigned to highway districts under Idaho Code.

General

1. A final version of the TIS sealed by a professional engineer should be provided to public agencies for permanent records.
2. The proximity of this development to roads maintained by and under jurisdiction of CHD4 (including Purple Sage Rd and Deep Canyon Drive) will place demand on the CHD4 road system, and CHD4 reserves the right to review and comment on development plans and land use actions that may affect those roads, and to require mitigation of traffic impacts from the proposed development even if the development is located outside of CHD4 boundaries. CHD4 requests the City of Star place conditions on the approval of the development to satisfy traffic mitigation requested below.

Traffic Mitigation

1. SH 44 & Can Ada Rd intersection: CHD4 recommends the City collect a proportionate share of costs to improve the intersection, either through an established per-lot fee or by collection of 18% of the intersection cost proportion in the report. This intersection is not eligible for funding through impact fees, nor is it currently funded for improvement by ITD. The intersection currently operates at LOS F in the pm peak hour; CHD4 recommends improvements providing a LOS D or better **shall** be operating prior to issuance of building permits for any phase of the development. The development may choose to construct these improvements to allow issuance of building permits, and would

be eligible for reimbursement of costs in excess of their proportionate share via a reimbursement agreement or similar mechanism.

2. Purple Sage/Can Ada Intersection: With traffic contributions from this development and other adjacent development, this intersection is likely to be included on future updates to the Mid-Star CIP, and may be eligible for impact fee funding and/or reimbursement agreements. Improvements to this intersection should be planned as operational warrants and/or safety thresholds are met. This development may be conditioned to improve the intersection as a condition of future phases. Consideration for allowing construction of the intersection improvements with initial phases (at developer's discretion) should be made to minimize impacts to the public in the future when traffic volumes are much higher (roundabouts operate very efficiently at lower volumes, and also provide an amenity to the project entrance). Can Ada Rd north of the intersection should be re-aligned to connect to the roundabout. As shown the north leg of Can Ada appears to create a 3-leg intersection approximately 100-feet west of the roundabout on Purple Sage Rd; this intersection spacing is undesirable.
3. Can Ada Rd- Purple Sage to Lanktree Gulch: Reclassification of this segment from collector to minor arterial may be approved provided additional right-of-way to accommodate an arterial street standard is provided. This segment is included on the Mid-Star CIP with partial mitigation (construct left-turn lanes as public road intersections). A full 3-lane section will be required at all locations serving private roads or private driveways. CHD4 recommends the City require a proportionate share contribution from the development (34% of total 2045 traffic) for costs of additional right-of-way and travel lanes.
4. Can Ada Rd- Lanktree Gulch to New Hope: Reclassification of this segment from collector to minor arterial may be approved provided additional right-of-way to accommodate an arterial street standard is provided. This segment is included on the Mid-Star CIP with partial mitigation (construct left-turn lanes as public road intersections). A full 3-lane section will be required at all locations serving private roads or private driveways. CHD4 recommends the City require a proportionate share contribution from the development (34% of total 2045 traffic) for costs of additional right-of-way and travel. The existing alignment and grade of Can Ada Rd between New Hope and Lanktree Gulch is not suitable for increases in development traffic, including construction haul trucks. CHD4 recommends this segment be improved coincident with development of the site. CHD4 has developed a concept for re-alignment and regrading of portions of this segment that may be useful to the developer.
5. Purple Sage Rd- Blessinger to Can Ada: This segment is included on the Mid-Star CIP with partial mitigation (construct left-turn lanes as public road intersections). A complete 3-lane section will be required to accommodate left turn movements at the private driveways fronting the majority of the segment. Timing for this work is not included in the TIS mitigation evaluation; CHD4 recommends the City require amendment of the TIS to include the timing, development threshold, and proportionate share of cost for this

work. At a minimum, the development should be conditioned to improve this segment to 3-lanes with the final phases.

6. Deep Canyon Drive- Purple Sage Rd to Canyon County line: This segment has been excluded from consideration for trips from the development. Due to the existing front-on residential development, horizontal and vertical geometry, and limited right-of-way width traffic from the development should be discouraged from using this segment. CHD4 recommends the City require the development to provide construction of traffic calming measures on this segment (speed humps or other measures approved by CHD4 and affected property owners) to minimize cut through traffic on the portion of Deep Canyon Drive within Canyon County.

The CHD4 Board strongly requests the City condition the proposed development with the conditions outlined above, as CHD4 does not have direct jurisdiction over the development, but will experience impacts from it nonetheless.

Please feel free to contact me with and questions on these recommended conditions, and thank you for the opportunity to review.

Respectfully,



Chris Hopper, P.E.
District Engineer
Canyon Highway District No. 4

File: Development/Star/Willowbrook



Alexis Pickering, President
Jim D. Hansen, Vice-President
Kent Goldthorpe, Commissioner
Dave McKinney, Commissioner
Miranda Gold, Commissioner

April 20, 2023

Development Services

TO: Nathan Mitchell
A + E Construction, LLC

FROM: Mindy Wallace, AICP
Planning Review Supervisor

SUBJECT: Willowbrook Master Planned Development
Annexation-Zoning and Development Agreement with the City of Star

North of Lanktree Gulch Road between Can Ada Road and SH-16

Introduction

Willowbrook Development Inc. is requesting approval of an annexation-zoning application to allow for the future development of the Willowbrook Master Planned Development, this application also includes a development agreement with the City of Star.

The development is proposed on approximately 720 acres of undeveloped land located north of Lanktree Gulch Road between Can Ada Road and SH-16 north of the existing city limits of Star, Idaho. The master planned development is proposed to consist of: 948 single family dwelling units, 146 townhomes, 18-hole public golf course, and 75,000 square feet of shopping center.





The intent of this memo is to establish standards and guidelines for future preliminary plat phases. As individual preliminary plats are submitted under this Master Planned Development, the Ada County Highway District (ACHD) will provide detailed analysis of street layout, street design and construction, and will be a signatory on the plat.

This application is for annexation and rezoning only. For the current application, ACHD is a recommending body to the City of Star.

ACHD Comments and Recommendations

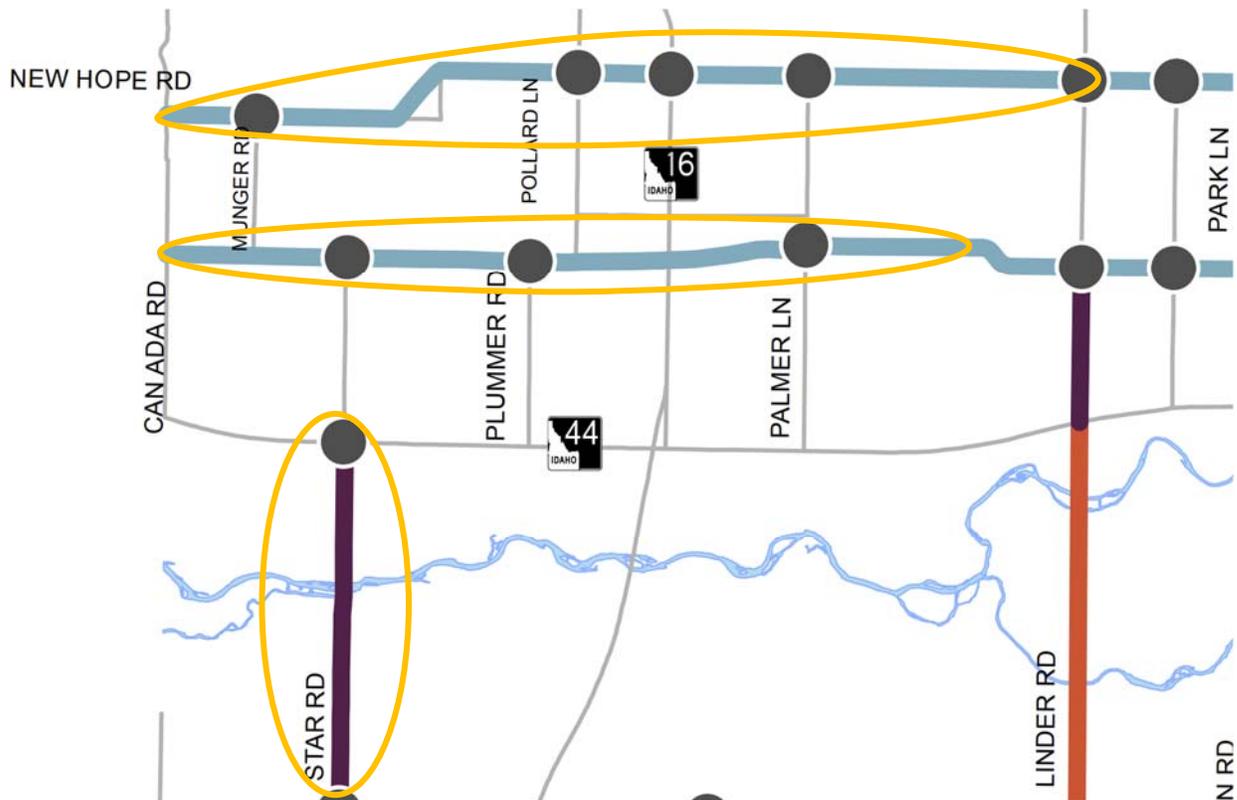
1. Capital Improvement Plan (CIP)/Integrated Five Year Work Plan (IFYWP)

The following improvements are scheduled in ACHD's IFYWP or listed in the CIP:

- Beacon Light Road from SH-16 to Ballantyne Road is scheduled for roadway and ADA improvements in 2023.
- Floating Feather Road/Pollard Lane from Brandon Road to Hornback Avenue is scheduled for roadway and ADA improvements in 2025.
- Floating Feather Road/Pollard Lane from Hornback Avenue to Broken Arrow Lane is scheduled for roadway and ADA improvements beyond 2026.
- Star Road from Hidden Brook Drive to Borealis Street is scheduled to conduct a concept study to identify and recommend corridor improvements for all users beyond 2026.
- Star Road from State Street (SH 44) to Otter Lane is scheduled for roadway and ADA improvements in 2025.
- The New Hope Road/Munger Road intersection is listed in the CIP to be widened to a single lane roundabout between 2036 to 2040 (Project #0710).
- The Beacon Light Road/SH-16 intersection is listed in the CIP to be widened to 4 lanes on the north, south, east, and west approaches and signalized between 2036 to 2040 (Project #0130).
- The Beacon Light Road/Palmer Lane intersection is listed in the CIP to be widened to a single lane roundabout between 2036 to 2040 (Project #0150).
- The Beacon Light Road/Pollard Lane intersection is listed in the CIP to be widened to a single lane roundabout between 2036 to 2040 (Project #0170).
- The Floating Feather Road/Palmer Lane intersection is listed in the CIP to be widened to a single lane roundabout in 2036 to 2040 (Project #0400).
- The Floating Feather Road/Plummer Road intersection is listed in the CIP to be widened to a single lane roundabout in 2036 to 2040 (Project #0420).
- The Floating Feather Road/Star Road intersection is listed in the CIP to be widened to a single lane roundabout in 2036 to 2040 (Project #0430).
- The State Street (SH 44)/Star Road intersection is listed in the CIP to be widened to 4 lanes on the north/south legs and 6 lanes on the east/west legs in 2026 to 2030 (Project #0830).
- New Hope Road from Can Ada Road to Munger Road is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #1070).

- New Hope Road/Beacon Light Road from Munger Road to Pollard Lane is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #0070).
- Beacon Light Road from Pollard Lane to SH-16 is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #0080).
- Beacon Light Road from SH-16 to Palmer Lane is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #0090).
- Beacon Light Road from Palmer Lane to Linder Road is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #0100).
- Floating Feather Road from Can Ada Road to Star Road is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #0510).
- Floating Feather Road from Star Road to Plummer Road is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #0520).
- Floating Feather Road from Plummer Road to SH-16 is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #0530).
- Floating Feather Road from SH-16 to Palmer Lane is listed in the CIP to be widened to 3 lanes in 2036-2040 (Project #0540).
- Star Road from State Street (SH 44) to Chinden Boulevard (US 20/26) is listed in the CIP to be widened to 5 lanes in 2031-2035 (Project #1210).

CIP Project Map



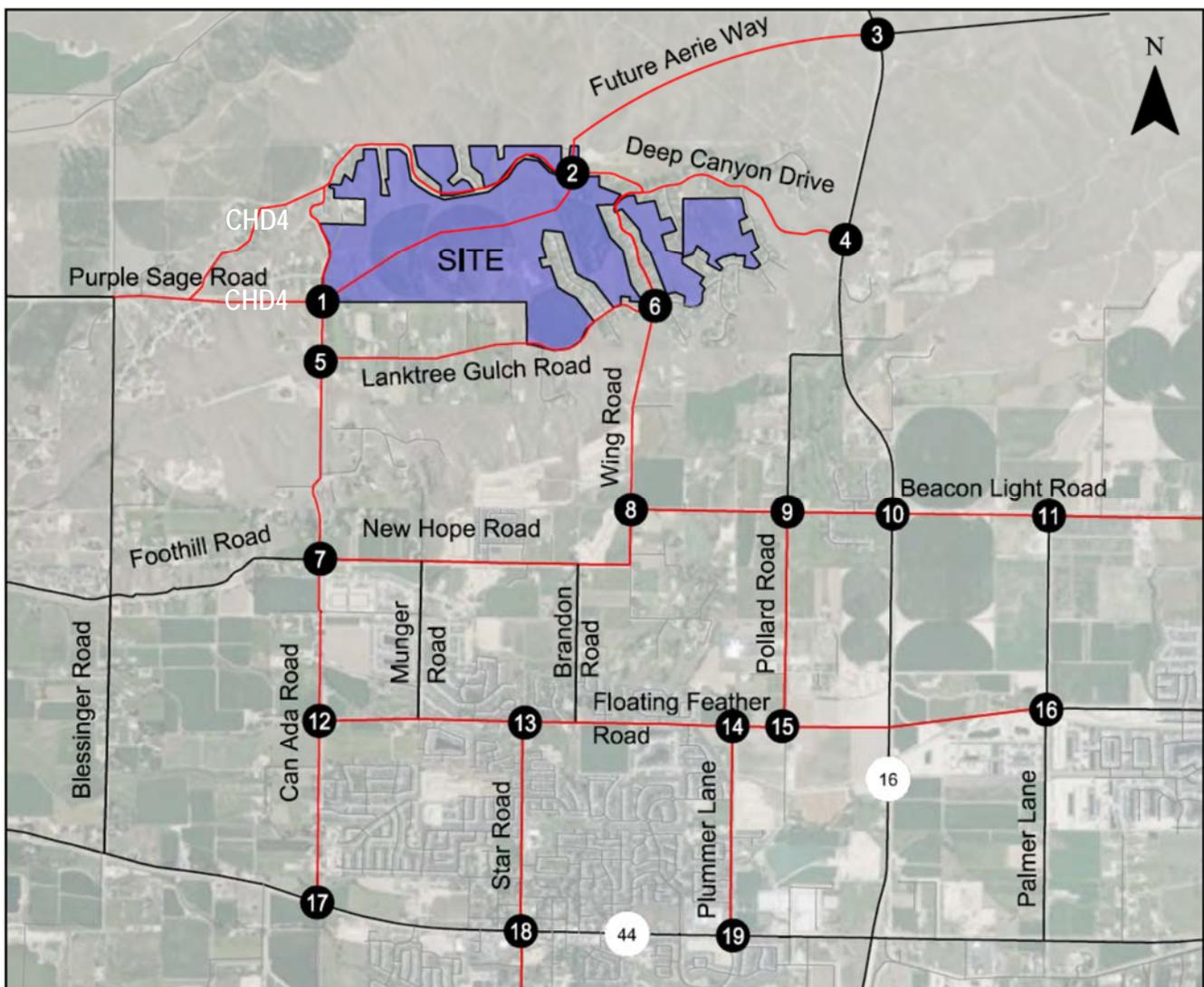
2. Traffic Impact Study

Kittelson & Associates prepared a TIS for the proposed development. The TIS was accepted as meeting the technical requirements of ACHD's TIS policy; however, ACHD may not agree with all findings and recommendations.

The TIS included 2 different scenarios, an analysis of the first phase of the proposed development and a planning level roadway and intersection analysis for the full build out of the development and to highlight roadway and intersection improvements due to site-generated traffic at Phase 1 and full build out of the site. The summary below is specific to total traffic conditions.

TIS Area

The TIS area was extended to beyond the roadways within and adjacent to the development to allow for analysis of all the traffic impacts. The extended study area included 19 offsite intersections and 26 roadway segments (two under the exclusive jurisdiction of Canyon Highway District No. 4) as shown below.





The TIS analyzed the impacts of the subject development and identified the street and intersection improvements necessary to address the projected impacts. A complete executive summary of the study is included in attachment 3. Below is an identification of the scope:

- Trip Generation of the proposed developments
- Site traffic distribution and traffic assignment
- Planning level threshold roadway and intersection capacity analysis
- Recommended roadway sizes and intersection improvements to serve the site in 2045

TIS

a. Build-Out Year and Off-Site Traffic Projections

The projected build-out year for the Development is 2045, and the year 2045 was used as a horizon year. The study provides an analysis of the 2045 traffic conditions with and without the master planned development and provides a comparison of the improvements necessary to mitigate the site-generated traffic impacts to the improvement listed in ACHD's CIP.

b. Offsite Improvements

- i. The TIS includes 26 roadway segments and 19 intersections in the study area. The current CIP has improvements planned through 2040 and only has planned improvements for 6 miles of New Hope Road/Beacon Light Road between Can Ada Road and Linder Road, 3.5 miles of Floating Feather Road between Can Ada Road and Palmer Lane, 2 miles of Star Road between State Street (SH-44) and Chinden Boulevard (US 20/26), 5 study area intersections along the Beacon Light Road corridor, 3 study area intersections along the Floating Feather corridor, and the Star Road and State Street (SH-44) intersection. No other study area roadway or intersections are currently planned for improvements.

The table below identifies the study intersections and roadway segments, the number of lanes the roadways are anticipated to have in 2045 based on the CIP and notes whether the intersections and roadways will be over capacity at the build out of the Planned Community. This table is based on total traffic conditions in 2045 (background and site-generated traffic). With select improvements made which include the following assumed improvements:

- Construction of Aerie Way between SH-16 and Deep Canyon
- Construction of Wing Road between Beacon Light and Lanktree Gulch Road
- Construction of Floating Feather Road between Munger Road and Can-Ada Road
- Construction of Floating Feather Road between Pollard Lane and Palmer Lane



Table 1. 2045 Willowbrook Master Planned Development Roadway Segments Improvement Summary

Roadway Segment	Segment	Classification ¹	Existing Travel Lanes ²	ACHD CIP Travel Lanes ²	Future 2045 Travel Lanes without Willow Brook ²	Future 2045 Travel Lanes with Willow Brook ²	2045 Background or Project Need
Deep Canyon Dr	Purple Sage Rd to Can Ada Rd	Local	2	N/A	2	2	Project Need
	Can Ada Rd to Aerie Wy		2	N/A	2	2	No Need
	Aerie Wy to SH-16		2	N/A	2	2	No Need
Aerie Wy	Deep Canyon Dr to SH-16	Minor Arterial	N/A	N/A	N/A	2	No Need
Lanktree Gulch Rd	Can Ada Rd to Wing Rd	Local	2	N/A	2	2	No Need
Purple Sage Rd	Blessinger Rd to Can Ada Rd	Collector	2	N/A	2	3 ⁴ (CHD4)	Project Need ⁴
Can Ada Rd	Deep Canyon Dr to Purple Sage Rd	Local	2	N/A	2	2	No Need
	Purple Sage Rd to Lanktree Gulch Rd	Collector	2	2	2	3 or Reclassification	Project Need
	Lanktree Gulch Rd to New Hope Rd		2	2	2	3 or Reclassification	Project Need
	New Hope Rd to Floating Feather Rd	Minor Arterial	2	2	2	2	No Need
	Floating Feather Rd to SH-44		2	2	2	2	No Need
Wing Rd	Lanktree Gulch Rd to Beacon Light Rd	Local	2	N/A	2	3 or Reclassification	Project Need
New Hope Rd / Beacon Light Rd	Can Ada Rd to Wing Rd	Minor Arterial	2/3	3	2	2	No Need
	Wing Rd to Pollard Ln		2	3	5 ³	5 ³	Background
	Pollard Ln to SH-16		3	3	5 ³	5 ³	Background
	SH-16 to Palmer Rd		2	3	5 ³	5 ³	Background
	Palmer Rd to Linder Rd		2	3	5 ³	5 ³	Background
Pollard Rd	Beacon Light Rd to Floating Feather Rd	Collector	2	3	3	3	Background
Floating Feather Rd	Can Ada Rd to Star Rd	Minor Arterial	Partial 2	3	2	2	No Need
	Star Rd to Plummer Ln		2	3	5 ³	5 ³	Background
	Plummer Rd to Pollard Ln		2	3	3	3	Background
	Pollard Ln to SH-16		2	3	2	2	No Need
	SH-16 to Palmer Rd		2	3	2	2	No Need
Star Rd	Floating Feather Rd to SH-44	Collector	3	3	5 ³	5 ³	Background
	SH-44 to Joplin Rd	Minor Arterial	2	5	5	5	Background
Plummer Rd	SH-44 to Floating Feather Rd	Collector	2	3	3	3	Background

Notes: ¹ Per COMPASS 2040 Functional Street Classification Map; ²Travel lanes include the total number of lanes across the roadway’s respective cross section; ³Roadway constrained to less lanes for preservation on the ACHD Master Street Map; ⁴Five lanes is needed on the east end of segment near SH 55; Two lanes remains under capacity without access and five lanes is needed to meet ACHD Segment LOS standards. ⁶ CHD4 segment exceeds CHD4 collector thresholds but meets ACHD collector peak hour peak direction thresholds; ADT exceeds 5,000 ADT recommended guideline.

The TIS identifies the following intersections and roadway segments as needing improvements to accommodate development build-out, forecasted in 2045:

- Purple Sage Road / Can Ada Road
- Deep Canyon Drive / SH-16
- Beacon Light Road / Pollard Road
- Beacon Light Road / SH-16
- Beacon Light Road / Palmer Lane
- Floating Feather Road / Star Road
- Floating Feather Road / Plummer Road
- SH-44 / Can Ada Road



- SH-44 / Star Road
- SH-44 / Plummer Road
- Deep Canyon Drive between Aerie Way and SH-16 (1.5 miles)
- Lanktree Gulch Road between Can Ada Road and Wing Road (1.7 miles)
- Purple Sage Road between Blessinger Road and Can Ada Road (1 mile)
- New Hope Road/Beacon Light Road between Can Ada Road and Palmer Lane (5.1 miles)
- Floating Feather Road between Star Road and Pollard Road (1.25 miles)
- Star Road between Floating Feather Road and Joplin Road (2.5 miles)
- Plummer Road between SH-44 and Floating Feather Road (1 mile)

If the applicant is unable to make improvements to impacted intersections and roadway segments when needed to serve the site, the applicant may need to wait for ACHD to make them before proceeding with future phases of the development. All intersection and roadway improvements necessary to serve the site will be verified through traffic impact studies submitted with future preliminary plat applications.

The TIS states that additional lanes or widening beyond what is listed in ACHD's CIP and MSM are needed at the following intersections:

- Purple Sage Road / Can Ada Road, convert to single-lane roundabout.
- Deep Canyon Drive / SH-16, disconnection at SH-16.
- Beacon Light Road / Pollard Lane, convert from single lane roundabout to multi-lane roundabout.
- Beacon Light Road / SH-16, widen SH-16 to five lanes + dual westbound right-turn lanes.
- Beacon Light Road / Palmer Lane, convert from single-lane to multi-lane roundabout.
- SH-44 / Can Ada Road, convert from two-way stop to signal or RCUT
 - Based on the ITD SH 44 Corridor Plan, an RCUT is planned at the intersection
- SH-44 / Star Road, add turn lanes beyond the CIP's signalized intersection configuration
- SH-44 / Plummer Road, add turn lanes beyond the ITD SH 44 Corridor Plan configuration

Based on this information, the land uses may need to be revised, or a request to modify the MSM may be necessary to change the lane configurations at the intersections listed above to allow for right-of-way preservation necessary to accommodate future impacts from preliminary plats within the development. As part of the preliminary plat application the applicant can request a modification to the MSM.

The TIS states the future number of lanes needed on Beacon Light Road is 5 lanes. At this time, ACHD has no plans to widen Beacon Light Road between Can Ada Road and SH-55 beyond the 3 lanes currently listed in ACHD's MSM and CIP. To accommodate the future traffic impacts, the city may need to consider a revision to the land uses, request a change to the MSM to accommodate the future traffic impacts from the preliminary plats within the development, or accept high levels of traffic congestions in area of the city impacted by the traffic generated by the Willowbrook Master Planned Community.



Deep Canyon Drive, Star Road north of State Street (SH-44), the SH-44 / Can Ada Road intersection, and the SH-44 / Plummer Road intersection are not currently listed in ACHD's CIP and IFYWP for capacity improvements.

3. Trip Generation and Trip Capture

a. Phase 1 Land Use Assumptions

- i. 330 dwellings units
 1. 285 single family dwelling units
 2. 45 townhomes
- ii. 18-hole public golf course

b. Build-Out Trip Generation

- i. Phase 1 is anticipated to generate:
 1. 3,535 vehicle trips per day, and
 2. 358 vehicle trips per hour during the PM peak hour

c. Build-Out Land Use Assumptions

- i. 1,094 dwellings units
 1. 948 single family dwelling units
 2. 146 townhomes
- ii. 18-hole public golf course
- iii. 75,000 square feet of commercial/shopping center

d. Build-Out Trip Generation

- i. At the time of full build-out in 2045 the Development is anticipated to generate:
 1. 12,821 vehicle trips per day, and
 2. 1,097 vehicles per hour during the PM peak hour

e. Proposed Build-Out Trip Capture Percentages

- i. The submitted TIS estimates that with build-out of the master planned development, approximately 7% of the daily trips, 3% of the AM peak hour trips, and 11% of the PM peak hour trips will be retained within the development due to the proposed mix of uses.

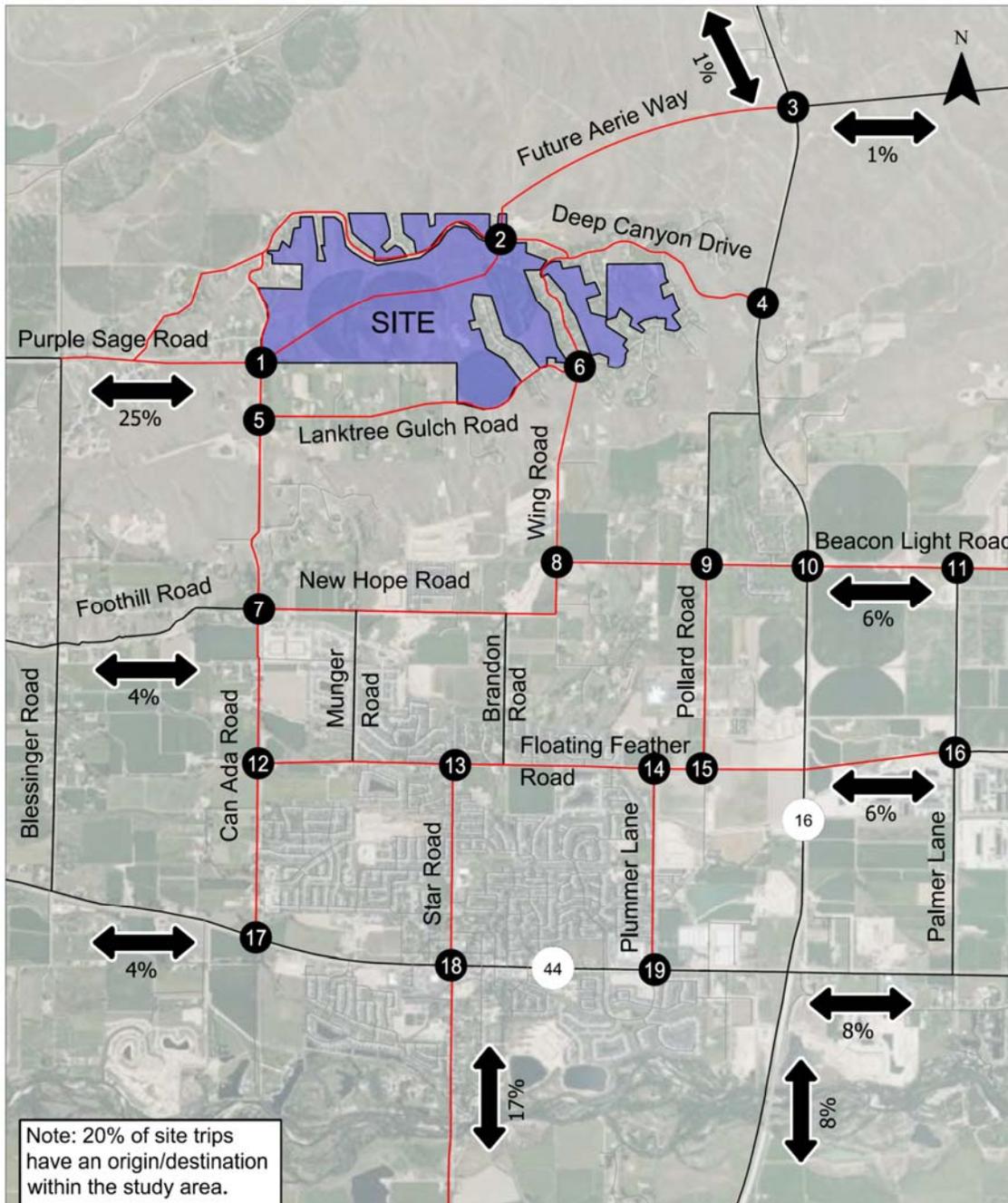
ACHD Comment: ACHD has reviewed the methodology utilized by Kittelson & Associates, Inc for the trip capture, and is supportive of the methodology utilized, as the applicant's engineer used the procedure outlined in the ITE Trip Generation Handbook for calculating the trip capture as required by ACHD. ACHD agrees with the trip capture rates presented by the applicant's engineer. The actual trip capture rates will need to be verified with each revised TIS.

4. Trip Distribution

a. The submitted TIS estimates that 33% of the site-generated traffic will travel east/west from Canyon County, 26% of the site-generated traffic will travel north/south on SH-16 and Star Road, and the remaining 41% will travel east/west from north Eagle and SH-44, from those points the traffic was distributed based on COMPASS's 2045 regional travel demand model.

b. **ACHD Comment:** ACHD will require that the site traffic distribution be reviewed with each phase and preliminary plat submittal as part of the required future traffic impact studies. This will allow ACHD to evaluate whether additional mitigation measures are necessary if site traffic distribution is not as estimated in TIS by the applicant's engineer.

Trip Distribution



5. Phasing Plan/Future Traffic Impact Studies

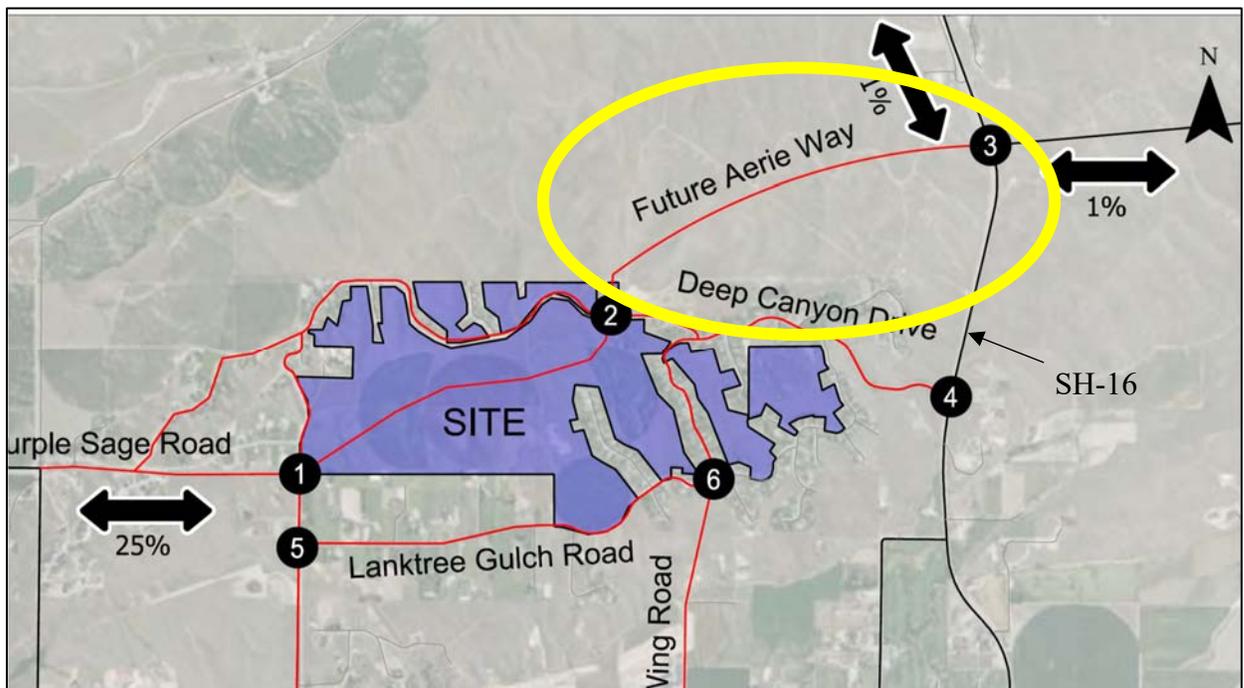
- a. A full phasing plan was not provided as part of this application; however, the application materials indicate that the development is proposed to be constructed in multiple phases over the next 20+ years depending on market conditions. The first preliminary plats are anticipated to correlate to the first phase as discussed within the TIS, which consists of 285 single-family and 45 townhouse residential lots, an 18-hole public golf course. However, the City of Star has indicated that approval of the public golf course will be included as part of the development agreement associated with the current annexation and rezone applications and will not be subject to a separate development application.

District policy 7106.7.2 states that for large scale developments, like planned communities or specific area plans, ACHD will require that a phasing analysis be submitted with the initial TIS or with the first preliminary plat submittal. This phasing analysis shall include the size and type of the proposed land uses within each phase and the anticipated mitigation measures necessary with each phase. Prior to the approval for each subsequent phase of the development, the applicant shall submit an updated TIS. The updated TIS shall include information from the built environment to date including actual traffic counts and actual trip capture; projected traffic for the current phase and anticipated trip capture based on development of applicable land uses, and necessary mitigation measures for the current phase. In addition, the updated TIS shall include updated traffic counts for the impacted roadway segments and intersections consistent with Section 7106.6.

- b. **Comments/Recommendations:** Consistent with District policy, the applicant should be required to provide an updated TIS with each phase of the development. In addition, a TIS should be required with all development applications that include a change to Master Planned Development that may alter traffic impact projections at the sole discretion of ACHD. All TIS submittals, including updates to the TIS, must meet ACHD policy requirements at the time of submittal.

6. Aerie Way – New Arterial

The applicant has proposed to construct a new arterial roadway, Aerie Way to provide access to the site. This roadway is proposed to extend from SH-16 to intersect Deep Canyon Drive. Aerie Way is not currently shown on ACHD’s Master Street Map or planned to be constructed in the CIP and would require the applicant to acquire property from an adjacent landowner and BLM to accommodate the construction of a roadway in this location. The study assumed that this roadway would be constructed under background conditions in 2045 (under the select roadway improvement scenario). The TIS also notes that Aerie Lane would need to be constructed as a 2-lane minor arterial roadway.



ACHD is supportive of the applicant’s proposal to construct a new arterial roadway to provide access to the site, as it reduces the impacts to the existing local street network. The applicant will be responsible to acquire all of the right-of-way necessary to construct a public street through



the adjacent parcels, this includes acquiring perpetual right-of-way Grants to ACHD from the BLM, that include the entire roadway prism for Aerie Way. If the applicant is unable to obtain the right-of-way from private property owners or perpetual right-of-way easements from BLM, then the land uses proposed within the master planned community should be reevaluated and the site should be redesigned to reduce the impacts to the existing local street network. No connection to Deep Canyon Drive will be considered until Aerie Way is constructed and provides access to the site.

7. Deep Canyon Drive

Deep Canyon Drive is an existing rural residential local roadway which was constructed as part of Hillsdale Estates Subdivision, which first final platted in 1995. This roadway is improved with 30-feet of pavement, gravel or grass shoulders, barrow ditches and no pedestrian improvements, consistent with ACHD's policies for rural residential roadways in effect at the time of development.

District policy 7207.3.1 Average Daily Traffic (ADT), limits the average daily traffic on new and existing local streets to less than 2,000 trips per day and reads as follows: *ADT on new and existing local streets should typically be less than 2,000. This ADT applies to both existing and new streets. For new streets that are stubbed to connect to adjacent land that is not fully developed, the allowable ADT for the new street will typically be no more than 1,000 ADT, to accommodate future additional traffic from the adjacent land, depending on the location and type of the stub street and the location and size of the adjacent undeveloped land. When stub streets are connected and properties fully developed, local streets should not exceed 2,000 ADT.*

Based on the information provided in the TIS and concept plan, the applicant has proposed to use Deep Canyon Drive to provide primary access to the site. Deep Canyon currently has an average daily traffic count of 1,260.

The TIS included a scenario which assumed the construction of some key roadway connections, including a new arterial roadway, Aerie Way, which is proposed to extend from SH-16 to intersect Deep Canyon Drive. Aerie Way is not currently shown on ACHD's Master Street Map or planned to be constructed in the CIP and would require the applicant to acquire property from an adjacent landowner and BLM to accommodate the construction of a roadway in this location. The study assumed that this roadway would be constructed under background conditions in 2045 and that Deep Canyon would be disconnected from SH-16 to maintain local traffic volumes.

Without the construction of Aerie Way, Deep Canyon Drive is anticipated to carry an ADT of over 3,800 under phase 1 total traffic conditions and over 7,000 trips per day under total traffic conditions for build-out of the proposed development; far exceeding ACHD's threshold of 2,000 trips per day on local roadways.

To mitigate traffic volumes on Deep Canyon Drive, the applicant is proposing to re-classify from the rural local, to a collector roadway, to allow additional capacity based on definition only. ACHD does not accept this as mitigation and will not reclassify Deep Canyon Drive to a collector roadway to accommodate traffic generated by the proposed development. Widening of Deep Canyon Drive will also not be considered as acceptable mitigation, as this roadway was constructed to rural local residential street standards and has limited right-of-way, making improvements infeasible anyway.

To reduce the impacts of this development on Deep Canyon Drive and to ensure that traffic volumes remain below 2,000 vehicle trips per day, ACHD will not consider a connection to Deep Canyon Drive until Aerie Way is constructed and provides access to the site. ACHD recommends that the City of Star include this in the development agreement. See finding 13.



Once Aerie way is constructed and provides access to the site ACHD may consider allowing a connection to Deep Canyon Drive based on information provided in updated traffic impact studies, site design, and any other information applicable at the time of a future development applications.

8. Lanktree Gulch Road

Lanktree Gulch Road is an existing rural residential local roadway which was constructed as part of Hillsdale Estates Subdivision and Monument Ridge Ranch, which first final platted starting in 1993. This roadway is improved with either 24 or 30-feet of pavement (depending on location), gravel or grass shoulders, barrow ditches and no pedestrian improvements, consistent with ACHD's policies for rural residential roadways in effect at the time of development.

District policy 7207.3.1 Average Daily Traffic (ADT), limits the average daily traffic on new and existing local streets to less than 2,000 trips per day and reads as follows: ADT on new and existing local streets should typically be less than 2,000. This ADT applies to both existing and new streets. For new streets that are stubbed to connect to adjacent land that is not fully developed, the allowable ADT for the new street will typically be no more than 1,000 ADT, to accommodate future additional traffic from the adjacent land, depending on the location and type of the stub street and the location and size of the adjacent undeveloped land. When stub streets are connected and properties fully developed, local streets should not exceed 2,000 ADT.

Based on the information provided in the TIS and concept plan, the applicant has proposed to use Lanktree Gulch Road to access the site at full build out. Lanktree Gulch Road currently has an average daily traffic count of 740 trips per day, which is within ACHD's policy thresholds. Under 2045 total traffic conditions, Landtree Gulch is anticipated to carry an ADT of 2,760 trips per day exceeding ACHD's threshold of 2,000 trips per day on local roadways.

To mitigate traffic volumes on Lanktree Gulch Road, the applicant has proposed to re-classify from a rural local, to a collector roadway, to allow additional capacity based on definition only. ACHD does not accept this as mitigation and will not reclassify Lanktree Gulch Road to a collector roadway to accommodate traffic generated by the proposed development. Widening of Lanktree Gulch Road will also not be considered as acceptable mitigation, as this roadway was to rural local residential street standards and has limited right-of-way, making improvements infeasible anyway.

ACHD recommends that the site be redesigned to reduce the impacts to Lanktree Gulch Road, or the density of the proposed land uses be reduced to ensure that Lanktree Gulch remains within local street thresholds. This will be verified through future traffic impact studies and ACHD may require changes to development applications to ensure Lanktree Gulch Road remains at less than 2,000 trips per day.

9. New East/West Collector Roadway

The concept plan provided in the annexation and rezone application and in the TIS shows a new east/west collector roadway that is proposed to intersect Deep Canyon Drive/Aerie Way and extend west thought the site to intersect Can Ada Road. This roadway is not shown on ACHD's Master Street Map.



*Proposed collector in Red

If, the new east/west collector is proposed to be a public street, then it should be designed and constructed meeting ACHD policies and standards, as no cross section or phasing plan was provided as part of this application. The design and construction of the collector roadway will be evaluated as part of a future preliminary plat application and the collector will be restricted at Deep Canyon Drive until Aerie Way is constructed and provides access to the site.

Based on the concept plan, this roadway is proposed to provide access to the first phase of the development including the golf course. The City of Star has indicated that the golf course will be approved under the development agreement included as part of this application, without a subsequent development application. Because of this ACHD is unable to establish conditions of approval for the new collector roadway or any public streets proposed to provide access to the golf course. To provide access to the golf course, the applicant should be required to apply for a driveway approach permit for a driveway or private road onto Can Ada Road to provide access to the site. ACHD will not approve or accept any new public street within the site without the review and approval through a preliminary plat application. See finding 12.

10. Can-Ada Road

Can-Ada Road is currently classified as a minor arterial roadway between SH-44 and New Hope Road and as a collector roadway from New Hope Road north to Purple Sage Drive in Canyon County. This roadway is on the Ada/Canyon County line and this roadway is under the jurisdiction of both ACHD and Canyon Highway District 4. This roadway is generally improved with 2 travel lanes, gravel shoulders, barrow ditches, and limited sidewalks and turn lanes between SH-44 and the site.

The TIS recommends the reclassification of the collector portion of Can-Ada Road (between New Hope Road and Purple Sage Road) to a minor arterial roadway to accommodate the site generated traffic. ACHD is supportive of this proposal and recommends that the City of Star work with COMPASS and Canyon Highway District 4 to facilitate the reclassification of roadway.

Improvements to Can-Ada Road, adjacent to, and off-site, will be evaluated as part of future traffic impact studies and preliminary plat applications. ACHD also recommends that the site be designed to put more traffic on Can-Ada Road, a minor arterial/collector roadway instead of impacting the existing local residential street network.



11. Roundabouts

The concept plans show the construction of 2 roundabouts, one dog bone style roundabout at the Aerie Way/Deep Canyon/new collector intersection and a standard roundabout at the Can-Ada/Purple Sage/new collector intersection. The roundabouts, or other improvements at this intersection should be constructed by the applicant when warranted. ACHD has concerns regarding the constructability of roundabouts in the proposed locations due to the topography in the area. Any roundabouts or any other intersection improvement should be designed to meet all of ACHD's policies and standards.

12. Public Streets

The concept plan for the proposed development includes a network of new streets to serve the site. ACHD is not approving any new public streets or approaches onto existing public streets as part of this annexation and rezone application and will not approve any new public streets without a preliminary plat application. All public streets should be designed and constructed to meet ACHD's policies and standards, and pre-application meetings are recommended., All new right-of-way to support the construction of new public streets within the development should be dedicated as part of the final plat process, as individual warranty deeds will not be accepted within the master planned development area.

13. Recommendation to City of Star/Recommended Conditions

ACHD is a recommending body for an annexation and rezone application and is not party to the City of Star's Development Agreement with the applicant. The City of Star has indicated that the golf course will be approved under the development agreement included as part of this application and ACHD is unclear of when additional development additional development applications including, but not limited to preliminary plats, conditional use permit, and design review applications would be transmitted for review and comment. Because of this ACHD recommends that the City of Star include the following site specific conditions as part of their action on the annexation and rezone application and development agreement OR that the City require development applications for all future phases that will be transmitted to ACHD for review and approval, allowing ACHD to establish site specific conditions of approval at that time.

1. *No connection (public or private) to Deep Canyon Drive will be considered until Aerie Way is constructed and open to provide access to the site.*
2. *To provide access to the golf course, apply for a driveway approach permit for a driveway or private road onto Can Ada Road to provide access to the site.*
3. *ACHD will not approve or accept any new public streets within the site without the review and approval through a preliminary plat application. All new public streets shall be designed and constructed to ACHD standards.*
4. *All new right-of-way to support the construction of new public streets within the development shall be dedicated as part of the final plat process. Individual warranty deeds for right-of-way dedication will not be accepted within the master planned development area.*
5. *City of Star shall work with COMPASS and Canyon Highway District 4 to facilitate the reclassification of Can-Ada Road from New Hope Road north to Purple Sage Road as a minor arterial roadway.*
6. *The applicant shall be required to make all of the improvements needed to mitigate the traffic impacts of the development, except for local streets, as outlined in the executive summary of the traffic impact study (attachment 3).*



- a. *ACHD will provide a detailed analysis of when improvements are warranted as part of the review of future preliminary plat applications.*
7. *Provide the City of Star a detailed phasing plan which identifies the number of units or commercial square footage proposed for each phase, and where access is proposed.*
 - a. *ACHD will review the phasing plan and provide comments to the City of Star based on the trip thresholds and proposed access locations.*
8. *If roadway improvements assumed to be constructed under the select improvements scenario in the TIS are not constructed when needed to serve the site then the applicant shall submit a revised master plan application that reduces the density to keep the exiting roadway network at acceptable level of service planning thresholds, based on ACHD policy.*

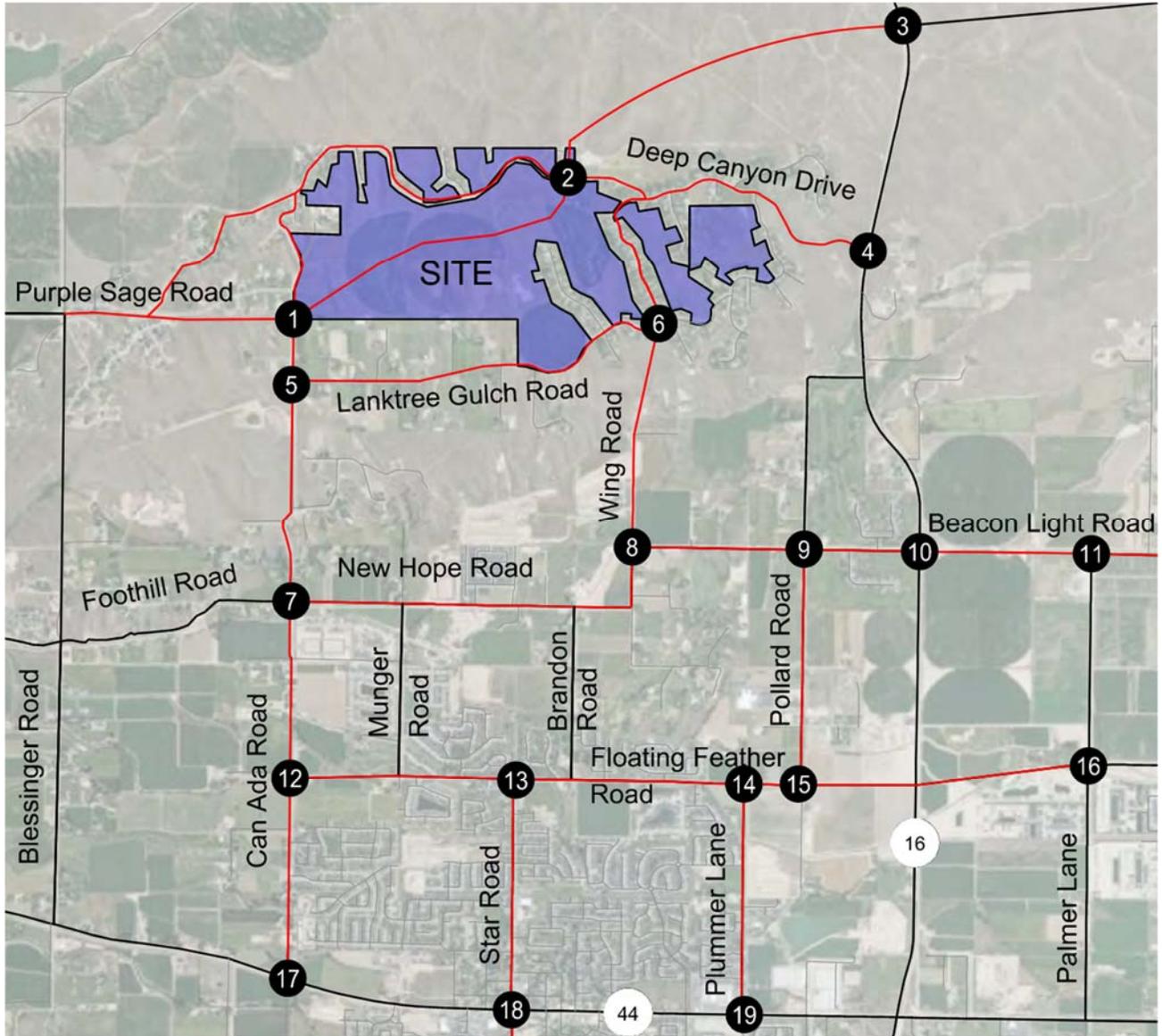
14. Summary/Disclaimer

- a. Below is a summary of the primary issues that will be required to be addressed with future preliminary plats:
 - i. Traffic Impact Studies –Updated traffic impact studies will be required with each phase of the development to verify assumptions and establish conditions.
 - ii. Disclaimer: No waiver or modification of policy is approved or recommended unless specifically called out by policy section and specifically approved in this report. Additional requirements may be required at each preliminary plat phase.

Attachments

1. Vicinity Map
2. Concept Plan Phase 1
3. Concept Plan Build Out
4. TIS Executive Summary

Vicinity Map



Concept Plan – Phase 1



Concept Plan – Build Out



EXECUTIVE SUMMARY

Willowbrook Development Inc. is proposing to develop the Willow Brook Golf Community, a mixed-use development situated on approximately 720 acres of currently vacant land in Ada County, Idaho. The site is loosely bounded by SH 16 to the east, Can Ada Road to the west, Deep Canyon Drive to the north, and Lanktree Gulch Road to the south. The development will fill areas of vacant land around existing residential developments. Currently the site is in unincorporated Ada County but will be annexed into the City of Star upon development approval.

The Willow Brook Golf Community will be constructed in phases throughout the next 20+ years. The first phase of construction will consist of the following land uses:

- 285 Single Family Houses
- 45 Townhomes
- 18-hole Public Golf Course

Full buildout of the Willow Brook Golf Community will consist of the following land uses:

- 948 Single Family Houses
- 146 Townhomes
- 75,000 Sq. Ft. of Commercial Shopping Plaza
- 18-hole Public Golf Course

Access to the development is proposed via Can Ada Road, Purple Sage Road, Deep Canyon Drive, and Lanktree Gulch Road. Additionally, there are potential planned access connections at Wing Road and Aerie Way. Due to the infill nature of the development, site accesses are not exclusive to the proposed development and will carry traffic from adjacent existing residences. The main internal collector of the development will connect Deep Canyon Drive to Can Ada Road. The proposed site plan for phase 1 of development is shown in Figure 2. The site plan for full buildout of the Willow Brook Golf Community is shown in Figure 3.

The development is planned to be fully built-out by the year 2045, with phase 1 being completed by 2030. The TIS addresses the existing traffic conditions, background (2030 & 2045) traffic conditions, and the development's impacts in the build-out years (2030 & 2045) and necessary mitigation measures.

The TIS for Willow Brook Golf Community resulted in the following findings and recommendations.

FINDINGS

EXISTING CONDITIONS

The study evaluated 19 off-site intersections and 23 roadway segments during the AM and PM peak period of a typical weekday. All study intersections and roadway segments were found to meet ACHD and ITD operating standards under 2022 existing conditions during the AM and PM peak hours.

YEAR 2030 BACKGROUND CONDITIONS

The 2030 phase 1 portion of the study evaluated 5 off-site intersections and 8 roadway segments during the AM and PM peak period of a typical weekday.

All study intersections were found to meet ACHD and ITD operating standards under 2030 background conditions during the AM and PM peak hours except for:

■ **SH 44 & Can Ada Road**

- The southbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.
- This intersection is in the Mid-Star CIP as a future traffic signal to be constructed by 2025. ITD's SH 44 Corridor Plan shows this intersection as a future RCUT with SH 44 widened to 4 lanes. The City of Star is leading a project that will widen SH 44 to the east of Can Ada Road in 2023
- The CHD4 identified improvement of a traffic signal with left and right turn lanes will serve as acceptable mitigation for the intersection. Alternatively, the ITD identified improvement of an RCUT will also serve as acceptable mitigation for the intersection.

All ACHD study roadway segments operate at acceptable levels of service under 2030 background conditions except for:

■ **Beacon Light Road (SH 16 to Palmer)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.

YEAR 2045 BACKGROUND CONDITIONS

The 2045 background conditions analysis evaluated 19 off-site intersections and 23 roadway segments during the AM and PM peak period of a typical weekday assuming no background roadway improvements were completed.

The following study intersections were found to exceed ACHD and ITD operating standards under 2045 background conditions during the AM and/or PM peak hours:

■ **Beacon Light Road & Pollard Road**

- The minor street approaches operate over capacity and at LOS F during the weekday PM peak hour.
- The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040. This improvement does not bring the intersection to within ACHD operating standards.
- A multi-lane roundabout with 2 lanes on Beacon Light Road will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes and a westbound right turn lane will also serve as acceptable mitigation for the intersection.

■ **Beacon Light Road & SH 16**

- The intersection operates over capacity and at LOS E during the weekday AM and PM peak hours.
- The Spring Valley development was conditioned with making capacity improvements to this intersection.
- Widening SH 16 at the intersection and adding a westbound right turn overlap will serve as acceptable mitigation for the intersection.

■ **Beacon Light Road & Palmer Lane**

- The northbound approach operates over capacity and at LOS F during the weekday PM peak hour.
- The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040. This improvement does not bring the intersection to within ACHD operating standards.
- A multi-lane roundabout with 2 lanes on Beacon Light Road will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left and right turn lanes and Beacon Light Road widened to 2 through lanes will also serve as acceptable mitigation for the intersection.

■ **Floating Feather Road & Star Road**

- The northbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.
- The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040.
- The ACHD identified improvement of a single-lane roundabout will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes will also serve as acceptable mitigation for the intersection.

■ **Floating Feather Road & Plummer Road**

- The northbound approach operates over capacity and at LOS F during the weekday PM peak hour.
- The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040.
- The ACHD identified improvement of a single-lane roundabout will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes will also serve as acceptable mitigation for the intersection.

■ **SH 44 & Can Ada Road**

- The southbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.
- This intersection is in the Mid-Star CIP as a future traffic signal to be constructed by 2025. ITD's SH 44 Corridor Plan shows this intersection as a future RCUT with SH 44 widened to 4 lanes. The City of Star is leading a project that will widen SH 44 to the east of Can Ada Road in 2023.
- The CHD4 identified improvement of a traffic signal with left and right turn lanes will serve as acceptable mitigation for the intersection. Alternatively, the ITD identified improvement of an RCUT will also serve as acceptable mitigation for the intersection.

■ **SH 44 & Star Road**

- The intersection operates over capacity and at LOS E during the weekday AM and PM peak hours.
- This intersection is in the ACHD CIP to have the signal replaced/modified and approaches widened. The lane configuration identified by ACHD does not fully mitigate the intersection.
- Widening SH 44 at the intersection and adding dual northbound left turn lanes will serve as acceptable mitigation for the intersection.

■ **SH 44 & Plummer Road**

- The intersection operates over capacity and at LOS F during the weekday AM and PM peak hours.
- This intersection is not currently programmed for improvements by ACHD. ITD's draft SH 44 Corridor Plan shows this intersection as signalized with SH 44 widened to 4 lanes. The lane configuration shown in the Corridor Plan does not fully mitigate the intersection.
- A traffic signal with left and right turn lanes, the eastbound and westbound approaches widened to two through lanes, and dual southbound left turn lanes will serve as acceptable mitigation for the intersection.

The following study roadway segments operate above ACHD level of service volume thresholds under 2045 background conditions:

■ **Deep Canyon Drive (Aerie Way to SH 16)**

- The segment is projected to exceed the ACHD local road ADT volume threshold.
- This segment would meet the AM and PM peak hour LOS D volume thresholds if Deep Canyon Drive were upgraded to a collector roadway.
- Constructing Aerie Way and the Wing Road extension would bring Deep Canyon Drive to within the ACHD local road ADT threshold as shown in the 2045 background (with select roadway improvements) conditions scenario.

■ **Lanktree Gulch Road (Can Ada to Wing)**

- The segment is projected to exceed the ACHD local road ADT volume threshold.
- This segment would meet the AM and PM peak hour LOS D volume thresholds if Lanktree Gulch Road were upgraded to a collector roadway.

■ **Wing Road (Lanktree Gulch to Beacon Light)**

- The segment is projected to exceed the ACHD local road ADT volume threshold.
- This segment would meet the AM and PM peak hour LOS D volume thresholds if Wing Road were upgraded to a collector roadway.

■ **Beacon Light Road (Wing to Pollard)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.

■ **Beacon Light Road (Pollard to SH 16)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.

■ **Beacon Light Road (SH 16 to Palmer)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Beacon Light Road (Palmer to Linder)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Pollard Road (Beacon Light to Floating Feather)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.
 - To bring this segment to within standards, Pollard Road would need to be widened to a 3-lane section.
- **Floating Feather Road (Star to Plummer)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Floating Feather Road would need to be widened to a 5-lane section.
- **Star Road (Floating Feather to SH 44)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.
 - To bring this segment to within standards, Star Road would need to be widened to a 5-lane section.
- **Star Road (SH 44 to Joplin)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 5-lane section in the 2031-2035 timeframe. This would bring the segment to within standards.
- **Plummer Road (Floating Feather to SH 44)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.

- To bring this segment to within standards, Plummer Road would need to be widened to a 3-lane section.

YEAR 2045 BACKGROUND (WITH SELECT ROADWAY IMPROVEMENTS) CONDITIONS

The 2045 background (with select roadway improvements) conditions analysis evaluated 19 off-site intersections and 23 roadway segments during the AM and PM peak period of a typical weekday assuming select background roadway improvements were constructed. The assumed improvements include:

- Floating Feather Road constructed between Munger Road and Can Ada Road
- Floating Feather Road realignment constructed between Pollard Road and Palmer Lane
- Wing Road constructed between Beacon Light Road and Lanktree Gulch Road
- Aerie Way constructed between SH 16 and Deep Canyon Drive

The following study intersections were found to exceed ACHD and ITD operating standards under 2045 background (with select roadway improvements) conditions during the AM and/or PM peak hours:

■ **Beacon Light Road & Pollard Road**

- The minor street approaches operate over capacity and at LOS F during the weekday PM peak hour.
- The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040. This improvement does not bring the intersection to within ACHD operating standards.
- A multi-lane roundabout with 2 lanes on Beacon Light Road will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes and a westbound right turn lane will also serve as acceptable mitigation for the intersection.

■ **Beacon Light Road & SH 16**

- The intersection operates over capacity and at LOS E during the weekday AM and PM peak hours.
- The Spring Valley development was conditioned with making capacity improvements to this intersection.
- Widening SH 16 at the intersection and adding a westbound right turn overlap will serve as acceptable mitigation for the intersection.

■ **Beacon Light Road & Palmer Lane**

- The northbound approach operates over capacity and at LOS F during the weekday PM peak hour.
- The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040. This improvement does not bring the intersection to within ACHD operating standards.
- A multi-lane roundabout with 2 lanes on Beacon Light Road will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left and right turn lanes and Beacon Light Road widened to 2 through lanes will also serve as acceptable mitigation for the intersection.

■ **Floating Feather Road & Star Road**

- The northbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.

- The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040.
- The ACHD identified improvement of a single-lane roundabout will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes will also serve as acceptable mitigation for the intersection.
- **Floating Feather Road & Plummer Road**
 - The northbound approach operates over capacity and at LOS F during the weekday PM peak hour.
 - The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040.
 - The ACHD identified improvement of a single-lane roundabout will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes will also serve as acceptable mitigation for the intersection.
- **SH 44 & Can Ada Road**
 - The southbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.
 - This intersection is in the Mid-Star CIP as a future traffic signal to be constructed by 2025. ITD's SH 44 Corridor Plan shows this intersection as a future RCUT with SH 44 widened to 4 lanes. The City of Star is leading a project that will widen SH 44 to the east of Can Ada Road in 2023.
 - The CHD4 identified improvement of a traffic signal with left and right turn lanes and SH 44 widened to 4 lanes will serve as acceptable mitigation for the intersection. Alternatively, the ITD identified improvement of an RCUT will also serve as acceptable mitigation for the intersection.
- **SH 44 & Star Road**
 - The intersection operates over capacity and at LOS E during the weekday AM and PM peak hours.
 - This intersection is in the ACHD CIP to have the signal replaced/modified and approaches widened. The lane configuration identified by ACHD does not fully mitigate the intersection.
 - Widening SH 44 at the intersection and adding dual northbound left turn lanes will serve as acceptable mitigation for the intersection.
- **SH 44 & Plummer Road**
 - The intersection operates over capacity and at LOS F during the weekday AM and PM peak hours.
 - This intersection is not currently programmed for improvements by ACHD. ITD's draft SH 44 Corridor Plan shows this intersection as signalized with SH 44 widened to 4 lanes. The lane configuration shown in the Corridor Plan does not fully mitigate the intersection.
 - A traffic signal with left and right turn lanes, the eastbound and westbound approaches widened to two through lanes, and dual southbound left turn lanes will serve as acceptable mitigation for the intersection.

The following study roadway segments operate above ACHD level of service volume thresholds under 2045 background (with select roadway improvements) conditions:

- **Wing Road (Lanktree Gulch to Beacon Light)**
 - The segment is projected to exceed the ACHD local road ADT volume threshold.

- This segment would meet the AM and PM peak hour LOS D volume thresholds if Wing Road were upgraded to a collector roadway.
- **Beacon Light Road (Wing to Pollard)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Beacon Light Road (Pollard to SH 16)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Beacon Light Road (SH 16 to Palmer)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Beacon Light Road (Palmer to Linder)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Pollard Road (Beacon Light to Floating Feather)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.
 - To bring this segment to within standards, Pollard Road would need to be widened to a 3-lane section.
- **Floating Feather Road (Star to Plummer)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.

- To bring this segment to within standards, Floating Feather Road would need to be widened to a 5-lane section.
- **Floating Feather Road (Plummer to Pollard)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe. This would bring the segment to within standards.
- **Star Road (Floating Feather to SH 44)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.
 - To bring this segment to within standards, Star Road would need to be widened to a 5-lane section.
- **Star Road (SH 44 to Joplin)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 5-lane section in the 2031-2035 timeframe. This would bring the segment to within standards.
- **Plummer Road (Floating Feather to SH 44)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.
 - To bring this segment to within standards, Plummer Road would need to be widened to a 3-lane section.

TRIP GENERATION & DISTRIBUTION

- The golf course only of the proposed Willow Brook Golf Community is estimated to generate a total of 526 daily net new trip ends, of these, 30 are estimated to occur in the weekday a.m. peak hour (24 inbound / 6 outbound), and 52 are estimated to occur in the weekday p.m. peak hour (27 inbound / 25 outbound).
- Phase 1 of the proposed Willow Brook Golf Community is estimated to generate a total of 3,535 daily net new trip ends, of these, 260 are estimated to occur in the weekday a.m. peak hour (83 inbound / 177 outbound), and 358 are estimated to occur in the weekday p.m. peak hour (220 inbound / 138 outbound).
- Full buildout of the proposed Willow Brook Golf Community is estimated to generate a total of 12,821 daily net new trip ends, of these, 789 are estimated to occur in the weekday a.m. peak hour (262 inbound / 527 outbound), and 1,097 are estimated to occur in the weekday p.m. peak hour (658 inbound / 439 outbound).
- The distribution pattern for site-generated trips was developed by evaluating a select zone analysis from COMPASS' regional travel demand model.

YEAR 2030 TOTAL TRAFFIC CONDITIONS

The 2030 phase 1 portion of the study evaluated 5 off-site intersections and 8 roadway segments during the AM and PM peak period of a typical weekday with the inclusion of phase 1 trips from the Willow Brook Golf Community.

All study intersections were found to meet ACHD and ITD operating standards under 2030 background conditions during the AM and PM peak hours except for:

■ **SH 44 & Can Ada Road**

- The southbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.
- This intersection is in the Mid-Star CIP as a future traffic signal to be constructed by 2025. ITD's SH 44 Corridor Plan shows this intersection as a future RCUT with SH 44 widened to 4 lanes. The City of Star is leading a project that will widen SH 44 to the east of Can Ada Road in 2023.
- The CHD4 identified improvement of a traffic signal with left and right turn lanes will serve as acceptable mitigation for the intersection. Alternatively, the ITD identified improvement of an RCUT will also serve as acceptable mitigation for the intersection.

All ACHD study roadway segments operate at acceptable levels of service under 2030 total traffic conditions except for:

■ **Deep Canyon Drive (Purple Sage to SH 16)**

- The segment is projected to exceed the ACHD local road ADT volume threshold.
- This segment would meet the AM and PM peak hour LOS D volume thresholds if Deep Canyon Drive were upgraded to a collector roadway.
- To limit through traffic on this local road, Deep Canyon Drive would need to be disconnected from SH 16. This option is discussed in the 2045 total traffic (with select roadway improvements) conditions scenario.

■ **Beacon Light Road (SH 16 to Palmer)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.

YEAR 2045 TOTAL TRAFFIC CONDITIONS

The 2045 total traffic conditions analysis evaluated 19 off-site intersections and 23 roadway segments during the AM and PM peak period of a typical weekday assuming no background roadway improvements were completed and includes site traffic from full buildout of the Willow Brook Golf Community.

The following study intersections were found to exceed ACHD and ITD operating standards under 2045 total traffic conditions during the AM and/or PM peak hours:

■ **Purple Sage Road & Can Ada Road**

- The minor street approaches operate over capacity and at LOS F during the weekday PM peak hour.

- The Mid-Star CIP includes adding turn lanes to this intersection in the 2030-2040 timeframe, but that will not mitigate the intersection in this scenario.
- A single lane roundabout or a traffic signal with left turn lanes will serve as acceptable mitigation for the intersection.
- **Deep Canyon Drive & SH 16**
 - The eastbound approach operates over capacity and at LOS F during the weekday AM peak hour.
 - The future configuration of this section of SH 16 is currently being determined by an ITD Corridor Plan. A traffic signal with one through lane in the northbound and southbound direction does not mitigate the intersection.
 - A traffic signal with left and right turn lanes and SH 16 widened to two through lanes in each direction will serve as acceptable mitigation for the intersection.
- **Beacon Light Road & Pollard Road**
 - No Willow Brook site trips are assigned to this intersection under 2045 total traffic conditions. Therefore, the mitigations needed at this intersection are the same as identified in 2045 background conditions.
- **Beacon Light Road & SH 16**
 - The intersection operates over capacity and at LOS E during the weekday AM and PM peak hours.
 - The Spring Valley development was conditioned with making capacity improvements to this intersection.
 - Widening SH 16 at the intersection and adding a second westbound right turn lane will serve as acceptable mitigation for the intersection.
- **Beacon Light Road & Palmer Lane**
 - The northbound approach operates over capacity and at LOS F during the weekday PM peak hour.
 - The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040. This improvement does not bring the intersection to within ACHD operating standards.
 - A multi-lane roundabout with 2 lanes on Beacon Light Road will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left and right turn lanes and Beacon Light Road widened to 2 through lanes will also serve as acceptable mitigation for the intersection.
- **Floating Feather Road & Star Road**
 - No Willow Brook site trips are assigned to this intersection under 2045 total traffic conditions. Therefore, the mitigations needed at this intersection are the same as identified in 2045 background conditions.
- **Floating Feather Road & Plummer Road**
 - No Willow Brook site trips are assigned to this intersection under 2045 total traffic conditions. Therefore, the mitigations needed at this intersection are the same as identified in 2045 background conditions.
- **SH 44 & Can Ada Road**
 - The southbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.

- This intersection is in the Mid-Star CIP as a future traffic signal to be constructed by 2025. ITD's SH 44 Corridor Plan shows this intersection as a future RCUT with SH 44 widened to 4 lanes. The City of Star is leading a project that will widen SH 44 to the east of Can Ada Road in 2023. The ITD identified improvement of an RCUT does not bring the intersection to within ACHD or ITD operating standards.
- The CHD4 identified improvement of a traffic signal with left and right turn lanes and SH 44 widened to 4 lanes will serve as acceptable mitigation for the intersection.
- **SH 44 & Star Road**
 - The intersection operates over capacity and at LOS E during the weekday AM and PM peak hours.
 - This intersection is in the ACHD CIP to have the signal replaced/modified and approaches widened. The lane configuration identified by ACHD does not fully mitigate the intersection.
 - Widening SH 44 at the intersection and adding dual northbound left turn lanes will serve as acceptable mitigation for the intersection.
- **SH 44 & Plummer Road**
 - The intersection operates over capacity and at LOS F during the weekday AM and PM peak hours.
 - This intersection is not currently programmed for improvements by ACHD. ITD's draft SH 44 Corridor Plan shows this intersection as signalized with SH 44 widened to 4 lanes. The lane configuration shown in the Corridor Plan does not fully mitigate the intersection.
 - A traffic signal with left and right turn lanes, the eastbound and westbound approaches widened to two through lanes, and dual southbound left turn lanes will serve as acceptable mitigation for the intersection.

The following study roadway segments receive site traffic and operate above ACHD level of service volume thresholds under 2045 total traffic conditions:

- **Deep Canyon Drive (Aerie to SH 16)**
 - The segment is projected to exceed the ACHD local road ADT volume threshold.
 - This segment would meet the AM and PM peak hour LOS D volume thresholds if Deep Canyon Drive were upgraded to a collector roadway.
 - To limit through traffic on this local road, Deep Canyon Drive would need to be disconnected from SH 16. This option is discussed in the total traffic (with select roadway improvements) conditions scenario.
- **Lanktree Gulch Road (Can Ada to Wing)**
 - The segment is projected to exceed the ACHD local road ADT volume threshold.
 - This segment would meet the AM and PM peak hour LOS D volume thresholds if Lanktree Gulch Road were upgraded to a collector roadway.
- **Purple Sage Road (Blessinger to Can Ada)**
 - The segment is projected to exceed the CHD4 LOS D volume threshold for collectors in the PM peak hour.
 - To bring this segment to within standards, Purple Sage Road would need to be widened to a 3-lane section.
- **Can Ada Road (Purple Sage to Lanktree Gulch)**

- The segment is projected to exceed the ACHD LOS D volume threshold for collectors in the PM peak hour.
- To bring this segment to within standards, Can Ada Road can be designated as a minor arterial, which it is already classified as between SH 44 and New Hope Road.
- **Can Ada Road (Lanktree Gulch to New Hope)**
 - The segment is projected to exceed the ACHD LOS D volume threshold for collectors in the PM peak hour.
 - To bring this segment to within standards, Can Ada Road can be designated as a minor arterial, which it is already classified as between SH 44 and New Hope Road.
- **Beacon Light Road (SH 16 to Palmer)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Beacon Light Road (Palmer to Linder)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Star Road (SH 44 to Joplin)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 5-lane section in the 2031-2035 timeframe. This would bring the segment to within standards.

YEAR 2045 TOTAL TRAFFIC (WITH SELECT ROADWAY IMPROVEMENTS) CONDITIONS

The 2045 total traffic (with select roadway improvements) conditions analysis evaluated 19 off-site intersections and 23 roadway segments during the AM and PM peak period of a typical weekday assuming select background roadway improvements were constructed and includes site traffic from full buildout of the Willow Brook Golf Community. The assumed background improvements include:

- Floating Feather Road constructed between Munger Road and Can Ada Road
- Floating Feather Road realignment constructed between Pollard Road and Palmer Lane
- Wing Road constructed between Beacon Light Road and Lanktree Gulch Road
- Aerie Way constructed between SH 16 and Deep Canyon Drive

The following study intersections were found to exceed ACHD and ITD operating standards under 2045 total traffic (with select roadway improvements) conditions during the AM and/or PM peak hours:

- **Purple Sage Road & Can Ada Road**

- The minor street approaches operate over capacity and at LOS F during the weekday PM peak hour.
 - The Mid-Star CIP includes adding turn lanes to this intersection in the 2030-2040 timeframe, but that will not mitigate the intersection in this scenario.
 - A single lane roundabout or a traffic signal with left turn lanes will serve as acceptable mitigation for the intersection.
- **Beacon Light Road & Pollard Road**
- The minor street approaches operate over capacity and at LOS F during the weekday PM peak hour.
 - The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040. This improvement does not bring the intersection to within ACHD operating standards.
 - A multi-lane roundabout with 2 lanes on Beacon Light Road will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes and a westbound right turn lane will also serve as acceptable mitigation for the intersection.
- **Beacon Light Road & SH 16**
- The intersection operates over capacity and at LOS E during the weekday AM and PM peak hours.
 - The Spring Valley development was conditioned with making capacity improvements to this intersection.
 - Widening SH 16 at the intersection and adding a second westbound right turn lane will serve as acceptable mitigation for the intersection.
- **Beacon Light Road & Palmer Lane**
- The northbound approach operates over capacity and at LOS F during the weekday PM peak hour.
 - The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040. This improvement does not bring the intersection to within ACHD operating standards.
 - A multi-lane roundabout with 2 lanes on Beacon Light Road will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left and right turn lanes and Beacon Light Road widened to 2 through lanes will also serve as acceptable mitigation for the intersection.
- **Floating Feather Road & Star Road**
- The northbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.
 - The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040.
 - The ACHD identified improvement of a single-lane roundabout will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes will also serve as acceptable mitigation for the intersection.
- **Floating Feather Road & Plummer Road**
- The northbound approach operates over capacity and at LOS F during the weekday PM peak hour.

- The intersection is programmed in the ACHD CIP as a future single-lane roundabout to be constructed in 2036-2040.
- The ACHD identified improvement of a single-lane roundabout will serve as acceptable mitigation for the intersection. Alternatively, a traffic signal with left turn lanes will also serve as acceptable mitigation for the intersection.
- **SH 44 & Can Ada Road**
 - The southbound approach operates over capacity and at LOS F during the weekday AM and PM peak hours.
 - This intersection is in the Mid-Star CIP as a future traffic signal to be constructed by 2025. ITD's SH 44 Corridor Plan shows this intersection as a future RCUT with SH 44 widened to 4 lanes. The City of Star is leading a project that will widen SH 44 to the east of Can Ada Road in 2023. The ITD identified improvement of an RCUT does not bring the intersection to within ACHD or ITD operating standards.
 - The CHD4 identified improvement of a traffic signal with left and right turn lanes and SH 44 widened to 4 lanes will serve as acceptable mitigation for the intersection.
- **SH 44 & Star Road**
 - The intersection operates over capacity and at LOS E during the weekday AM and PM peak hours.
 - This intersection is in the ACHD CIP to have the signal replaced/modified and approaches widened. The lane configuration identified by ACHD does not fully mitigate the intersection.
 - Widening SH 44 at the intersection and adding dual northbound left turn lanes will serve as acceptable mitigation for the intersection.
- **SH 44 & Plummer Road**
 - The intersection operates over capacity and at LOS F during the weekday AM and PM peak hours.
 - This intersection is not currently programmed for improvements by ACHD. ITD's draft SH 44 Corridor Plan shows this intersection as signalized with SH 44 widened to 4 lanes. The lane configuration shown in the Corridor Plan does not fully mitigate the intersection.
 - A traffic signal with left and right turn lanes, the eastbound and westbound approaches widened to two through lanes, and dual southbound left turn lanes will serve as acceptable mitigation for the intersection.

The following study roadway segments operate above ACHD level of service volume thresholds under 2045 background conditions:

- **Deep Canyon Drive (Aerie to SH 16)**
 - The segment is projected to exceed the ACHD local road ADT volume threshold.
 - This segment would meet the AM and PM peak hour LOS D volume thresholds if Deep Canyon Drive were upgraded to a collector roadway.
 - With the construction of Aerie Way and the Wing Road extension, Deep Canyon Drive could be disconnected from SH 16. This would limit through traffic on the roadway and would allow it to meet the ACHD local road ADT volume threshold.
 - Disconnecting Deep Canyon Drive from SH 16 will not require any additional intersection mitigations beyond those already identified under 2045 total traffic (with select roadway improvements) conditions.

■ **Purple Sage Road (Blessinger to Can Ada)**

- The segment is projected to exceed the CHD4 LOS D volume threshold for collectors in the PM peak hour.
- To bring this segment to within standards, Purple Sage Road would need to be widened to a 3-lane section.

■ **Can Ada Road (Purple Sage to Lanktree Gulch)**

- The segment is projected to exceed the ACHD LOS D volume threshold for collectors in the PM peak hour.
- To bring this segment to within standards, Can Ada Road can be designated as a minor arterial, which it is already classified as between SH 44 and New Hope Road.

■ **Can Ada Road Lanktree Gulch to New Hope)**

- The segment is projected to exceed the ACHD LOS D volume threshold for collectors in the PM peak hour.
- To bring this segment to within standards, Can Ada Road can be designated as a minor arterial, which it is already classified as between SH 44 and New Hope Road.

■ **Wing Road (Lanktree Gulch to Beacon Light)**

- The segment is projected to exceed the ACHD local road ADT volume threshold.
- This segment would meet the AM and PM peak hour LOS D volume thresholds if Wing Road were upgraded to a collector roadway.

■ **Beacon Light Road (Wing to Pollard)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.

■ **Beacon Light Road (Pollard to SH 16)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.

■ **Beacon Light Road (SH 16 to Palmer)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.

■ **Beacon Light Road (Palmer to Linder)**

- The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
- The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
- To bring this segment to within standards, Beacon Light Road would need to be widened to a 5-lane section.
- **Pollard Road (Beacon Light to Floating Feather)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.
 - To bring this segment to within standards, Pollard Road would need to be widened to a 3-lane section.
- **Floating Feather Road (Star to Plummer)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe.
 - To bring this segment to within standards, Floating Feather Road would need to be widened to a 5-lane section.
- **Floating Feather Road (Plummer to Pollard)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is listed in the ACHD CIP to be widened to a 3-lane section in the 2036-2040 timeframe. This would bring the segment to within standards.
- **Star Road (Floating Feather to SH 44)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.
 - To bring this segment to within standards, Star Road would need to be widened to a 5-lane section.
- **Star Road (SH 44 to Joplin)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the AM and PM peak hours.
 - The roadway segment is listed in the ACHD CIP to be widened to a 5-lane section in the 2031-2035 timeframe. This would bring the segment to within standards.
- **Plummer Road (Floating Feather to SH 44)**
 - The segment is projected to exceed the ACHD LOS E volume threshold for minor arterials in the PM peak hour.
 - The roadway segment is not currently listed in the ACHD CIP to be widened.
 - To bring this segment to within standards, Plummer Road would need to be widened to a 3-lane section.

SITE ACCESSES

- With approval from ACHD, construct all accesses to the development to allow full access on the public street approaches with the following designations:
 - All local streets within the development should be constructed with one travel lane in each direction.
 - Site driveways with access to public streets should provide sufficient stacking distance for four vehicles (100 feet) to ensure acceptable operation and accommodate larger vehicles, including utility service and delivery vehicles.
 - Site accesses should match the existing grade of road to which they access to ensure the best possible sight distance.
 - All accesses and internal streets should be designed to provide adequate intersection site distance. Shrubbery and landscaping near the intersection and site access point should be maintained to ensure adequate sight distance is maintained.
- Site Access A on Can Ada Road just north of Purple Sage Road should be relocated to the north to allow for at least 280' of clear sight distance before any horizontal curve.
- Site Access C on Deep Canyon Drive does not provide adequate intersection spacing for a 35 mph local road. The segment of Deep Canyon Drive that is currently posted at 35 mph is recommended to be reduced to 25 mph to provide adequate intersection spacing and improve safety as development increases.

RECOMMENDATIONS

Based on the report's analyses and evaluation findings, recommendations were developed accordingly for each analysis scenario.

EXISTING CONDITIONS

No mitigations are recommended to accommodate the year 2022 existing traffic volumes and meet ACHD and ITD standards.

YEAR 2030 BACKGROUND CONDITIONS

The following mitigations are recommended to accommodate the year 2030 background traffic volumes and meet ACHD and ITD standards:

- **SH 44 & Can Ada Road**
 - Construct an RCUT with SH 44 widened to a 4-lane section or a traffic signal with left and right turn lanes.
- **Beacon Light Road (SH 16 to Palmer)**
 - Widen to a 5-lane section.

YEAR 2045 BACKGROUND CONDITIONS

The following mitigations are recommended to accommodate the year 2045 background traffic volumes and meet ACHD and ITD standards:

- **Beacon Light Road & Pollard Road**

- Construct a multi-lane roundabout with 2 lanes on Beacon Light Road or a traffic signal with left turn lanes and a westbound right turn lane.
- **Beacon Light Road & SH 16**
 - Widen SH 16 at the intersection and add a westbound right turn overlap.
- **Beacon Light Road & Palmer Lane**
 - Construct a multi-lane roundabout with 2 lanes on Beacon Light Road or a traffic signal with left and right turn lanes and Beacon Light Road widened to 2 through lanes.
- **Floating Feather Road & Star Road**
 - Construct a single-lane roundabout or a traffic signal with left turn lanes.
- **Floating Feather Road & Plummer Road**
 - Construct a single-lane roundabout or a traffic signal with left turn lanes.
- **SH 44 & Can Ada Road**
 - Construct an RCUT with SH 44 widened to a 4-lane section or a traffic signal with left and right turn lanes.
- **SH 44 & Star Road**
 - Widen SH 44 at the intersection and add dual northbound left turn lanes
- **SH 44 & Plummer Road**
 - Expand the traffic signal to include left and right turn lanes, the eastbound and westbound approaches widened to two through lanes, and dual southbound left turn lanes.
- **Deep Canyon Drive (Aerie to SH 16)**
 - Construct Aerie Way and the Wing Road extension.
- **Lanktree Gulch Road (Can Ada to Wing)**
 - Upgrade to a collector roadway.
- **Wing Road (Lanktree Gulch to Beacon Light)**
 - Upgrade to a collector roadway.
- **Beacon Light Road (Wing to Pollard)**
 - Widen to a 5-lane section.
- **Beacon Light Road (Pollard to SH 16)**
 - Widen to a 5-lane section.
- **Beacon Light Road (SH 16 to Palmer)**
 - Widen to a 5-lane section.
- **Beacon Light Road (Palmer to Linder)**
 - Widen to a 5-lane section.
- **Pollard Road (Beacon Light to Floating Feather)**
 - Widen to a 3-lane section.
- **Floating Feather Road (Star to Plummer)**
 - Widen to a 5-lane section.

- **Star Road (Floating Feather to SH 44)**
 - Widen to a 5-lane section.
- **Star Road (SH 44 to Joplin)**
 - Widen to a 5-lane section.
- **Plummer Road (Floating Feather to SH 44)**
 - Widen to a 3-lane section.

YEAR 2045 BACKGROUND (WITH SELECT ROADWAY IMPROVEMENTS) CONDITIONS

The following mitigations are recommended to accommodate the year 2045 background (with select roadway improvements) traffic volumes and meet ACHD and ITD standards:

- **Beacon Light Road & Pollard Road**
 - Construct a multi-lane roundabout with 2 lanes on Beacon Light Road or a traffic signal with left turn lanes and a westbound right turn lane.
- **Beacon Light Road & SH 16**
 - Widen SH 16 at the intersection and add a westbound right turn overlap.
- **Beacon Light Road & Palmer Lane**
 - Construct a multi-lane roundabout with 2 lanes on Beacon Light Road or a traffic signal with left and right turn lanes and Beacon Light Road widened to 2 through lanes.
- **Floating Feather Road & Star Road**
 - Construct a single-lane roundabout or a traffic signal with left turn lanes.
- **Floating Feather Road & Plummer Road**
 - Construct a single-lane roundabout or a traffic signal with left turn lanes.
- **SH 44 & Can Ada Road**
 - Construct an RCUT with SH 44 widened to a 4-lane section or a traffic signal with left and right turn lanes.
- **SH 44 & Star Road**
 - Widen SH 44 at the intersection and add dual northbound left turn lanes
- **SH 44 & Plummer Road**
 - Expand the traffic signal to include left and right turn lanes, the eastbound and westbound approaches widened to two through lanes, and dual southbound left turn lanes.
- **Wing Road (Lanktree Gulch to Beacon Light)**
 - Upgrade to a collector roadway.
- **Beacon Light Road (Wing to Pollard)**
 - Widen to a 5-lane section.
- **Beacon Light Road (Pollard to SH 16)**
 - Widen to a 5-lane section.
- **Beacon Light Road (SH 16 to Palmer)**

- Widen to a 5-lane section.
- **Beacon Light Road (Palmer to Linder)**
 - Widen to a 5-lane section.
- **Pollard Road (Beacon Light to Floating Feather)**
 - Widen to a 3-lane section.
- **Floating Feather Road (Star to Plummer)**
 - Widen to a 5-lane section.
- **Floating Feather Road (Plummer to Pollard)**
 - Widen to a 3-lane section.
- **Star Road (Floating Feather to SH 44)**
 - Widen to a 5-lane section.
- **Star Road (SH 44 to Joplin)**
 - Widen to a 5-lane section.
- **Plummer Road (Floating Feather to SH 44)**
 - Widen to a 3-lane section.

YEAR 2030 TOTAL TRAFFIC CONDITIONS

The following mitigations beyond those identified in 2030 background conditions are recommended to accommodate the year 2030 total traffic volumes and meet ACHD and ITD standards:

- **Deep Canyon Drive (Aerie to SH 16)**
 - Construct Aerie Way and the Wing Road extension.

YEAR 2045 TOTAL TRAFFIC CONDITIONS

The following mitigations beyond those identified in 2045 background conditions are recommended to accommodate the year 2045 total traffic volumes and meet ACHD and ITD standards:

- **Purple Sage Road & Can Ada Road**
 - Construct a single lane roundabout or a traffic signal with left turn lanes.
- **Deep Canyon Drive & SH 16**
 - Construct Aerie Way and the Wing Road extension or add a traffic signal with left and right turn lanes and SH 16 widened to two through lanes in each direction.
- **Beacon Light Road & SH 16**
 - Add a second westbound right turn lane
- **SH 44 & Can Ada Road**
 - Construct a traffic signal with left and right turn lanes and SH 44 widened to 4 lanes.
 - An RCUT was recommended under 2045 background conditions but is no longer recommended under 2045 total traffic conditions
- **Purple Sage Road (Blessinger to Can Ada)**
 - Widen to a 3-lane section.

- **Can Ada Road (Purple Sage to Lanktree Gulch)**
 - Upgrade to a minor arterial.
- **Can Ada Road (Lanktree Gulch to New Hope)**
 - Upgrade to a minor arterial.

YEAR 2045 TOTAL TRAFFIC (WITH SELECT ROADWAY IMPROVEMENTS) CONDITIONS

The following mitigations beyond those identified in 2045 background (with select roadway improvements) conditions are recommended to accommodate the year 2045 total traffic (with select roadway improvements) volumes and meet ACHD and ITD standards:

- **Purple Sage Road & Can Ada Road**
 - Construct a single lane roundabout or a traffic signal with left turn lanes.
- **Beacon Light Road & SH 16**
 - Add a second westbound right turn lane
- **SH 44 & Can Ada Road**
 - Construct a traffic signal with left and right turn lanes and SH 44 widened to 4 lanes.
 - An RCUT was recommended under 2045 background (with select roadway improvements) conditions but is no longer recommended under 2045 total traffic (with select roadway improvements) conditions.
- **Purple Sage Road (Blessinger to Can Ada)**
 - Widen to a 3-lane section.
- **Can Ada Road (Purple Sage to Lanktree Gulch)**
 - Upgrade to a minor arterial.
- **Can Ada Road (Lanktree Gulch to New Hope)**
 - Upgrade to a minor arterial.

SITE ACCESSES

- **Purple Sage Road & Can Ada Road**
 - This intersection should be constructed as a two way stop control in the near term. A single lane roundabout or a traffic signal with left turn lanes is warranted in 2043. Right of way should be preserved now for a future roundabout.
- **Deep Canyon Drive & Aerie Way**
 - Although shown as a dogbone roundabout on the site plan, a two way stop controlled intersection is shown to operate acceptably for this intersection. The roundabout may be preferred to provide proper alignment with Aerie Way and the main internal collector.
- **Site Access A**
 - Relocate to the north to allow for at least 280' of clear sight distance before any horizontal curve.
- **Site Access C**
 - Reduce speed limit on this section of Deep Canyon Drive to 25 mph.

RECOMMENDED NEW CONNECTIONS

■ **Aerie Way**

- Recommended to be constructed between Deep Canyon Drive and SH 16 to provide alternate access to SH 16 from the development and to reduce demand on Deep Canyon Drive. This connection should be constructed in conjunction with the Wing Road extension described below.
- Deep Canyon Drive is projected to exceed ACHD's local road ADT threshold by 2024. Constructing these new connections will extend the timeline of reaching this threshold to 2027. Operations at the intersection of Deep Canyon Drive / SH 16 are not projected to exceed capacity until 2040.
- The timing of constructing Aerie Way should be determined with the understanding that the local road ADT threshold of Deep Canyon Drive will be exceeded by 2024 but there are no capacity deficiencies in the near term.
- The construction of Aerie Way and the Wing Road extension alone will not relieve pressure from Deep Canyon Drive beyond 2027. It is also recommended that Deep Canyon Drive be disconnected from SH 16 upon completion of these connections as described below.
- The construction of Aerie Way will require land acquisition from the Bureau of Land Management and private landowners. The developer is currently in discussions with these landowners regarding logistics of making this land acquisition for right of way.

■ **Wing Road Extension**

- Recommended to be constructed between Lanktree Gulch Road and Beacon Light Road to provide alternate access to SH 16 from the development and to reduce demand on Deep Canyon Drive. This connection should be constructed in conjunction with Aerie Way described above.
- Deep Canyon Drive is projected to exceed ACHD's local road ADT threshold by 2024. Constructing these new connections will extend the timeline of reaching this threshold to 2027. Operations at the intersection of Deep Canyon Drive / SH 16 are not projected to exceed capacity until 2040.
- The timing of constructing the Wing Road extension should be determined with the understanding that the local road ADT threshold of Deep Canyon Drive will be exceeded by 2024 but there are no capacity deficiencies in the near term.
- The construction of Aerie Way and the Wing Road extension alone will not relieve pressure from Deep Canyon Drive beyond 2027. It is also recommended that Deep Canyon Drive be disconnected from SH 16 upon completion of these connections as described below.
- The construction of the Wing Road extension will require land acquisition from private landowners. Some of the land required for this extension is already owned by Willow Brook Development.

■ **Can Ada Road**

- Recommended to be improved between Purple Sage Road and New Hope Road. Improvements should include upgrading Can Ada Road to a minor arterial, flattening steep grades, and improving sight distance. The road should be improved to accommodate design standards for a minor arterial where possible and should include advisory sections where necessary.

■ **Deep Canyon Drive Recommendations**

- Deep Canyon Drive is projected to exceed ACHD's local road ADT threshold of 2,000 by 2024 (with 9% of the Willow Brook site built out). Constructing Aerie Way and the Wing Road extension will extend the timeline of reaching this threshold to 2027.

- With the construction of Aerie Way and the Wing Road extension, it becomes feasible to disconnect Deep Canyon Drive from SH 16. Traffic will divert to Aerie Way or Beacon Light Road to reach SH 16. This will bring the 2045 total traffic ADT on Deep Canyon Drive to within ACHD local road thresholds and will not further impact operations on other intersections and roadway segments.



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April 20, 2023

Kittelson & Associates, Inc.
Jamie Markosian, PE
101 S Capitol Blvd., Ste. 600
Boise, ID 83702

Re: Willow Brook Golf Community – Amended TIS Acceptance Letter

Dear Mr. Markosian,

The Idaho Transportation Department (ITD) has reviewed the response to ITD's comments on Willow Brook Golf Community's Traffic Impact Study (TIS) dated December 11, 2022. The proposed development is located east of the intersection of Purple Sage Road and N Can-Ada Road, Star, Idaho. This TIS is for the first phase of the development, consisting of 285 residential lots, 45 townhomes, and an 18-hole public golf course. This letter acknowledges ITD's acceptance of Willow Brook Golf Community's TIS.

Since the applicant is not currently requesting any direct access from ITD, the following are ITD's comments and recommendations to the City of Star.

State Highway 44 (SH-44)

The City of Star is widening one mile of State Highway (SH-44) to a 5-lane cross-section from Star Road to Can-Ada Road, with the outside eastbound lane introduced to the east of the intersection. The outside westbound lane will trap as a right turn at Can-Ada Road, and there will be a two-way left turn lane through the intersection.

The TIS indicates that per a SH-44 Corridor Plan, ITD will construct improvements at the Can Ada Road/SH-44 intersection in 2025. The referenced plan was being developed at the time and never adopted by the department, or approved by the Federal Highway Administration (FHWA). ITD does not have an approved corridor plan for this section of the roadway. ITD has started a new SH-44 Planning and Environmental Linkage (PEL) Study from Interstate 84 to Can Ada Road. It could be several years before a plan is adopted. Based on the future needs identified in the TIS, ITD recommends that the applicant design and build a signalized intersection at the corner of SH-44 and Can Ada Road to mitigate this development.

Aerie Way and SH-16

Once the Applicant builds and extends the local road Aerie Way to SH-16, ITD will recommend Applicant design and build the following improvements on the west side of the highway:

- The Applicant shall design and construct a 14-foot-wide southbound SH-16 acceleration lane to meet current AASHTO Policy on Geometric Design of Highways and Streets Standards.
- Applicant shall design and construct a southbound right turn lane onto Aerie Way to ITD's right turn lane design standards for 65 MPH. (See Figure 3B-4 of the ITD Traffic Manual).



DATE: April 24, 2023

TO: City of Star – Planning and Zoning

FROM: Victor Islas, Deputy Chief

SUBJECT: Fire District Review

PROJECT NAME: Willowbrook Development Annexation
File AZ-21-12

Fire District Summary Report:

1. **Overview:** This is a report regarding the Willowbrook Development Annexation project. The Star Fire Protection District will service the development. The development must comply with the most recent adopted International Fire Code and Code of the City of Star.
2. **Services:** The Star Fire Protection District provides 24-hour Fire and EMS services to the citizens of the district. The district utilizes the County Ambulance services for Advanced Life Support and Transport.
3. **Response Time/Station Coverage:**
 - a. Primary – This development will be served by the Star Fire Protection District Station 51, located at 11665 W. State St., Star, Idaho 83669. Station 51 is primary response station located 3.8 miles from the proposed entrance off N. Can Ada Rd and Purple Sage Rd. Station 51 travel time under ideal driving conditions is 6 minutes.
 - b. Secondary – Star Fire Protection District Station 52 is the secondary response station located at 22585 Kingsbury Rd., Middleton, Idaho 83644. Station 52 is 5.2 miles from the proposed entrance off N. Can Ada Rd and Purple Sage Rd. Station 52 travel time under ideal driving conditions is 8 minutes.
 - c. Future – The Willowbrook development is proposing to dedicate a site that will be used for a future expansion of emergency services. This dedicated site would decrease the response time to the development itself and established developments and homes currently north of Foothill Road , West of Can Ada Rd. and East of Can Ada Rd.
 - d. Future – Star Fire Protection District Station 55 will be located on Floating Feather Rd, west of N. Pollard Ln. When construction is complete, and the station is in service, the development entrance will be 4.9 miles with a travel time of 7 minutes under ideal driving conditions.
 - e. Response times are subject to change as road infrastructure is improved.



4. **Insurance Service Office (ISO):** The ISO Fire Score is a rating that determines how well the fire department can protect a community and home. Insurance companies use the score to help set home insurance rates.
 - a. The dedicated site for future expansion of emergency services would decrease the current ISO rating in the area. This decrease would not only be for the development and established developments and homes currently north of Foothill Road, West of Can Ada Rd. and East of Can Ada Rd.
5. **Side Setback:** *Side Setback for this development shall be as per Star City Code with no modification.*
6. **Accessibility:** Roadway Access, Traffic, Radio Coverage
 - a. Access roads shall be provided and maintained following Appendix D and Section 503 of the IFC. Access shall include adequate roadway widths, signage, turnarounds, and turning radius for fire apparatus.
7. **Water Supply:** Requirements for water supply/fire flow will be followed as described in Appendix B of the 2018 International Fire Code unless agreed upon by the Fire District.
8. **Impact Fees:** Impact fees provide funding for essential public safety infrastructure that Star Fire Protection District needs to manage the increase in calls for service created by growth.
 - a. This project will be subject to the impact fee set forth by the fire district.
9. **Fire Mitigation Plan:** This development will sit within the Ada County Wildland Urban Interface Area. A Wildland Urban Interface Fire Mitigation Plan be submitted to the Fire District for review and approval.
10. **Additional Comments:**
 - a. Additional review, comment, and approval are required by the Fire District for preliminary plat and final plat.
 - b. It shall be the responsibility of the applicant to submit appropriate applications and supporting documents to the Fire District for review.
 - c. Review of the proposed golf course and associated amenities will be reviewed for fire code compliance at the CZC application.
 - d. Any overlooked hazardous condition and/or violation of the International Fire Code does not imply approval of such condition or violation. The applicant will mitigate the hazardous condition and/or violation as per Code working with the Fire Code Official.



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- Right-of-way dedication/donation will be required as necessary for all the above improvements to accommodate pavement widening and drainage needs that do not fit into ITD's existing right-of-way.
- Coordinate with the Spring Valley Development to construct these improvements for access at Aerie Way and SH-16. Design and construction of the planned grade separated bridge over SH-16 will need to be done in conjunction with permitting the right-in, right-out (RIRO) access off Aerie Way.

ITD would recommend developing a Transportation Mitigation Agreement (TMA) with the Applicant that would include all mitigations to SH-16 and SH-44, along with any applicable extraordinary share and proportionate share agreements developed in conjunction with the City of Star. In addition, all future phases of Willowbrook will need an updated TIS to be reviewed and approved by ITD.

In addition, it's important to note that the department will soon begin the evaluation of the 2004 State Highway 16 (SH-16) environmental study from SH-44 to SH-52 in Emmett. This process is estimated to take approximately 24 months to complete. Given the growth during the last 20 years, we expect the analysis to result in an official corridor plan, particularly within the four miles north of the SH-44 and SH-16 intersection in Star. A new corridor plan may result in updated access mitigation in the future.

Maintaining safety and mobility for Idaho's motorists is of utmost importance to ITD. Your development will bring a significant impact to the transportation system within the Star community and surround areas. We appreciate your consideration of our recommendations, as we want all residents to travel safely and efficiently around the Treasure Valley. If you have any questions, please get in touch with me at vincent.trimboli@itd.idaho.gov.

Sincerely,

Vincent Trimboli
ITD – District 3
Planning and Development Services Manager

cc: Mindy Wallace, Planner III, Ada County Highway District (ACHD)
Shawn Nickel, P&Z Administrator, City of Star
Chris Hopper, District Engineer, Canyon Highway District 4 (CHD4)

Policing Impact Analysis: Willowbrook Development

Presented to

Trevor Chadwick

Mayor

City of Star

&

Zachary Hessing

Chief of Police

Star Police Department

Prepared by

Christopher J Saunders, M.S.

Manager

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Lead Crime Analyst

Richard Kepler, B.S.

Crime Analyst

Ada County Center for Data Analytics & Intelligence

Ada County Sheriff's Office

Originally Report Submitted: February 8th, 2022

Updated Report Submitted: April 26th, 2023

Willowbrook Development Policing Report

Introduction

Chief Zachary Hessing of the Star Police Department contacted the Ada County Center for Data Analytics & Intelligence, Crime Analysis Unit, to complete an analysis and forecast potential policing impacts resulting from the Willowbrook Development. In particular, we were asked to focus our analysis on the following areas:

1. Population Growth
2. Calls for Service
3. Response Times
4. Crime Rate

The original analysis was provided to Chief Hessing on February 8th, 2022. On April 19th, 2023, Chief Hessing informed us that the proposed development was changed and asked for an update to our original analysis. The following is a culmination of this updated analysis along with our recommendations for policing services for the City of Star.

Updated Development Characteristics

The Willowbrook Development is a large multi-use development in the northern foothills of the Treasure Valley within Ada County (Willowbrook Development Inc., 2023). The conceptual master plan for this development (Appendix A) includes an 18-hole championship golf course, 1,094 single-family detached homes and approximately 110,000 square feet of neighborhood commercial and retail space.

The location of the development is loosely bounded on the east by state highway 16, on the north by Chaparral Road, on the west by Can Ada Road and on the south loosely by Lanktree Gulch.

Population Growth

Since 2015, the population of the City of Star has increased 122% (Appendix B). At this pace, the population of the City of Star will surpass 26,000 residents by 2030. According to the Historic Population Estimates by City Limits (COMPASS, 2023), the population estimate for the City of Star in 2023 is 17,690 (including residents currently residing in Canyon County). To project total population growth resulting from the Willowbrook Development, we utilized an average household size of 2.6 to 2.9, as referenced in the Historic Population Estimates by City Limits (COMPASS, 2023) for the City of Star. As a result, the

addition of 1,094 homes within the Willowbrook Development will increase the population of the City of Star by approximately 2,844 – 3,172 residents.

Calls for Service

A call for service is defined as a citizen placing a call, via either 911 or the non-emergency line, and requesting assistance from a first responding agency. In Ada County, all citizen calls for service are handled by the Ada County Dispatch Center. This measure is widely utilized by all first responding entities including law enforcement, fire and emergency medical services as a way of measuring workload and system utilization. As population increases, an increase in calls for service is generally expected.

For the Star Police Department, citizen calls for services have steadily increased along with the city's population. In 2022, Star Police responded to 12,612 calls for service, an increase of 85.3% from the 6,806 calls responded to in 2018. During that same period, the population of the City of Star increased by 71.6%. Since a disparity exists between the increases in these two measures, a ratio of calls per citizen is often utilized to better predict the rate of increase. In 2018, the City of Star had a call per citizen measure of 0.66, while in 2022, this measure increased 25.7% to .83 calls per citizen. The five-year average for this measure is .74.

Without including population growth related to the Willowbrook development, the number of citizens calls for Star Police would increase to approximately 19,000 by 2030. When including this project's projected population that projection increases to over 21,000 calls. This 66.5% increase in calls due to population growth by 2030 assumes no additional large residential projects, similar to the Willowbrook Development.

Response Times

Response time is calculated by measuring the time it takes an officer to arrive on scene after he/she is assigned the call. The target established for the Star Police is less than 4 minutes. Since 2015, the average response time for the Star Police department on Code 3 emergency calls has been 3 minutes and 12 seconds (Appendix C). This is due in large part to the following factors:

- Small geographic area
- Street connectivity
- Concentrated call volumes
- Staffing increases to keep up with population growth

Appendix D shows two maps for the City of Star: the 7,934 calls for service in 2021, and the 12,612 calls in 2022 along with their corresponding call density (green to red for low to high concentration). On the map you can clearly see the areas of the city where call volume is the highest, namely the downtown corridor, Star Middle School, the intersection of state highways 16 and 44 and Star Elementary School. As the City of Star continues to expand outward away from the city center, the distance an officer will travel to arrive at a call will increase subsequently increasing the amount of time it takes to arrive on scene. The 2022 map in Appendix D illustrates this exact phenomenon. New, or increased, hot spots of call activity appeared that were not present on the 2021 map. These areas are as follows:

- The area along Star Road between W Joplin and W Chinden
- The Star River Ranch development west of Bent Ln and south of Hwy 44
- The intersection of Beacon Light and Hwy 16

Officers will naturally spend a majority of their time in the areas of a jurisdiction where call volume is the highest. The Willowbrook Development expands the call area for the City of Star beyond its current northern boundary. Responding from the city's central corridor to the Willowbrook Development will add anywhere from 1 – 2 miles of additional travel resulting in an increased response time of 1.5 – 4 minutes. Appendix E illustrates how this phenomenon has the potential of dramatically increasing response times. Additional staffing would allow for officers to disperse more evenly within the city's boundaries subsequently minimizing any increase in response times due to population growth and greater geographic spread. What will be of importance is to correctly evaluate response times when there are access limitations, as currently the proposed area is limited to two street access points off Highway 16 and Can Ada Rd. Additional response time could be applied for when call volume is high, there is a limit of street connectivity, and these locations fall outside of the city and police response core.

Crime Rate

The City of Star utilizes the National Incident Based Reporting System (NIBRS) to measure crime within the city. This system provides a national standard for how crimes are counted and allows a fair comparison to be drawn between jurisdictions. The City of Star has one of the lowest crime rates in the Treasure Valley. The report to our citizens shows a steady decrease in the crime rate beginning in 2017 and stabilizing in 2020.

One of the best ways to maintain low crime rates is using proactive policing. Proactive policing is defined as police work initiated by law enforcement that is intended to deter crime, reduce disorder, reduce citizen's fear of crime or remedy other specific concerns (National Academies, 2018). Proactive policing can only be done when an officer is not responding to a citizen call for service. In 2017, the ratio of proactive policing calls to citizen calls for service in the City of Star was 5.38 to 1. In 2020 this ratio dropped to 2.57 to 1, then rebounded in 2022 to 3.91 to 1, the five-year average was 3.59 to 1 (Appendix F). This rebound was due in large part to the increased number of officers added to the Star Police Department over the past 2 years.

Over time, a decrease in law enforcement proactivity could be attributed to a rise crime rate. This is largely seen when developments first start, as there is often a limit to citizen interaction and overwatching activity in the area, this can create an increased opportunity for crimes to go unseen/unreported (Opportunity-Reduction Model). With less proactive policing the deterring effect creates a greater likelihood of property crime. In growing communities, like the City of Star, this is concentrated in newer developments where construction related thefts are common. The Willowbrook Development will require routine proactive checks by law enforcement to reduce the impact of this type of crime. The outlying geography of the development will require a more significant dedication of time to complete these necessary proactive checks to minimize the impact of crime.

Officers per 1,000

The Star Police Department currently has 13 sworn officers. With the current population of the City of Star at 17,690, this places the current officer per 1,000 ratio at .73. If this current level of police to citizen ratio were to be maintained, a new officer would need to be added for every 1,370 new residents in the City of Star. The stated goal of the City of Star is to achieve and maintain an officer per 1,000 residents ratio of 1. An additional 5 officers are currently needed to achieve this goal based on the current population of the city.

Conclusion

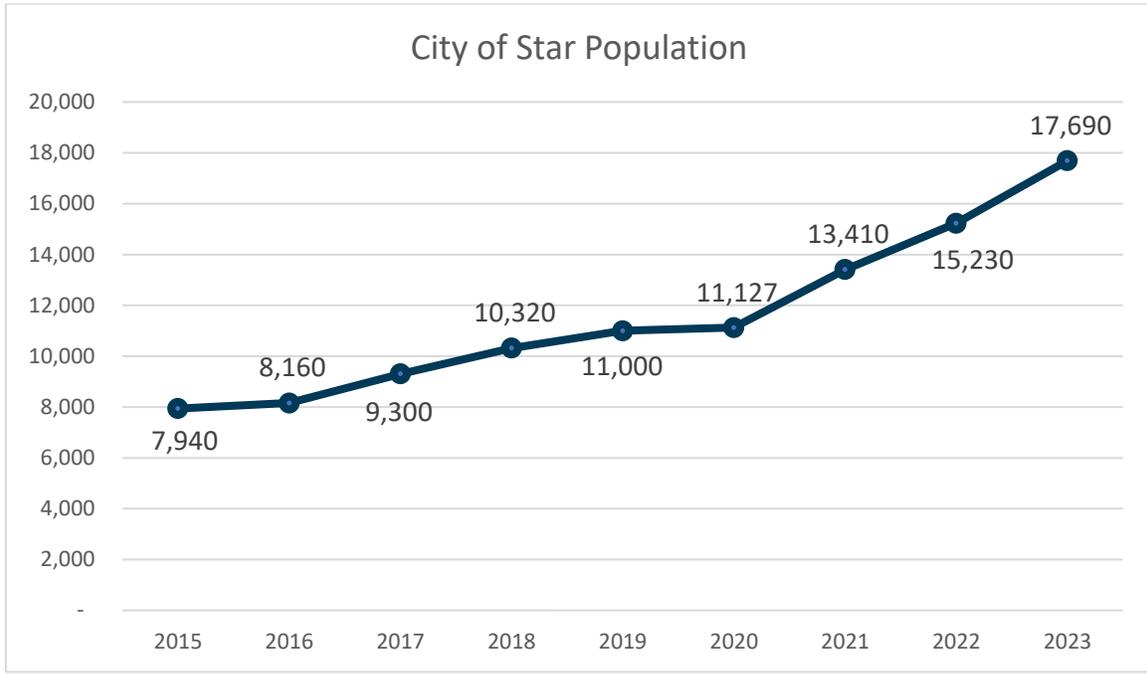
Growth is happening all around us in the Treasure Valley. As the population continues to increase, so must the services available to our citizens if we desire to maintain the quality of life that has attributed to this record growth. Among those services is the need for law enforcement.

By 2030, based on current available estimates the City of Star is expected to eclipse 26,000. This represents a 50% increase from the city's current population. The proposed project would result in an additional 2,844 – 3,172 people into the City of Star. This increases the estimated population of the city to approximately 29,000 by 2030. Recent additions to the Star Police Department have resulted in an increase in police proactivity and a stabilizing of code 3 response times. If this level of service is to be maintained while the city of Star continues to grow, then growth within the department needs to be maintained as well.

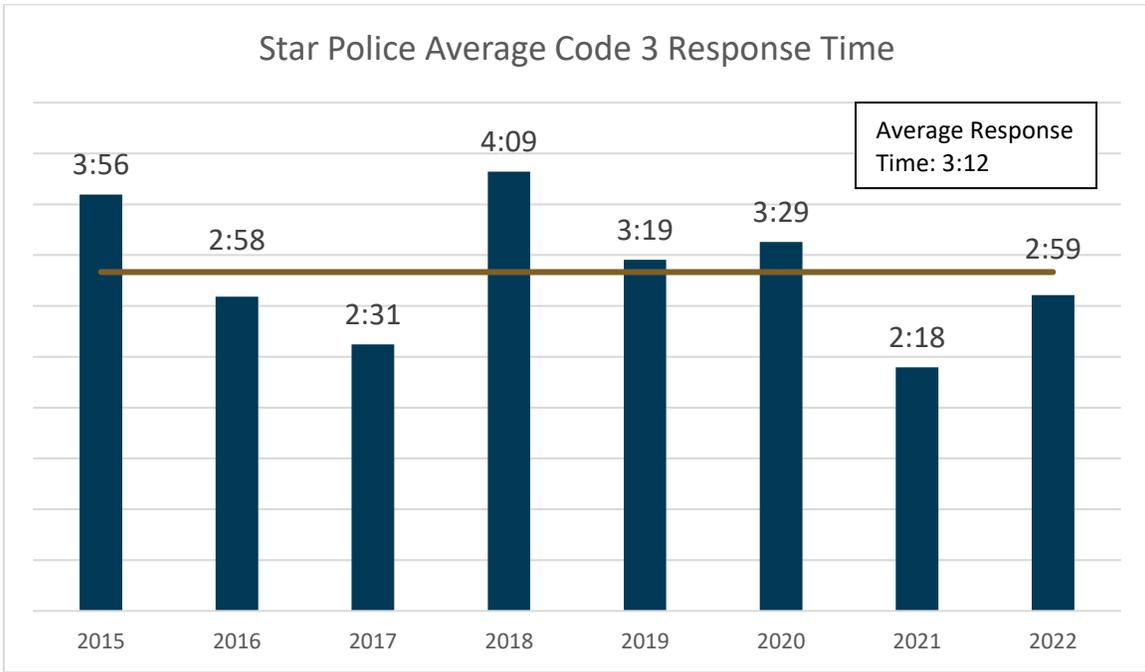
Based on our analysis, an additional 4 patrol officers/deputies would need to be added to the City of Star Police Department to provide the same level of service with the addition of the Willowbrook development. This is the result of both the addition of approximately 3,000 residents, but also the expansion of the area of responsibility for the Star Police Department. More residents result in more call for service and additional outlying areas requiring both proactive and reactive responses from the Star Police Department.

Appendix A



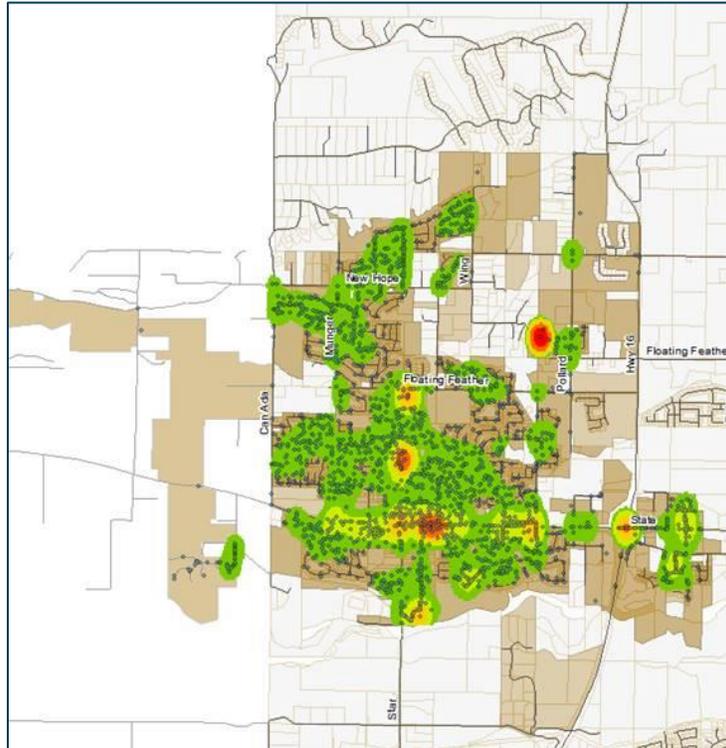
Appendix B

Appendix C

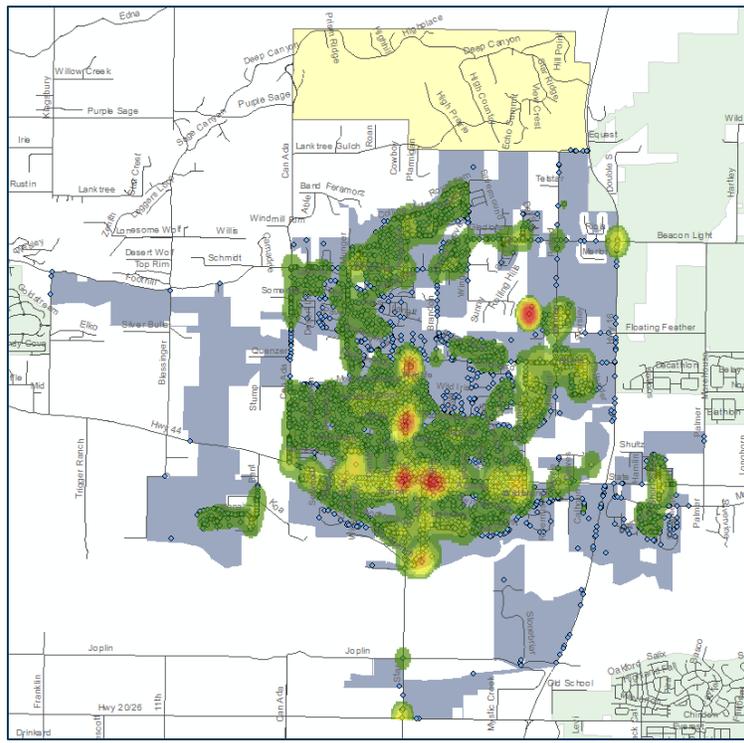


Appendix D

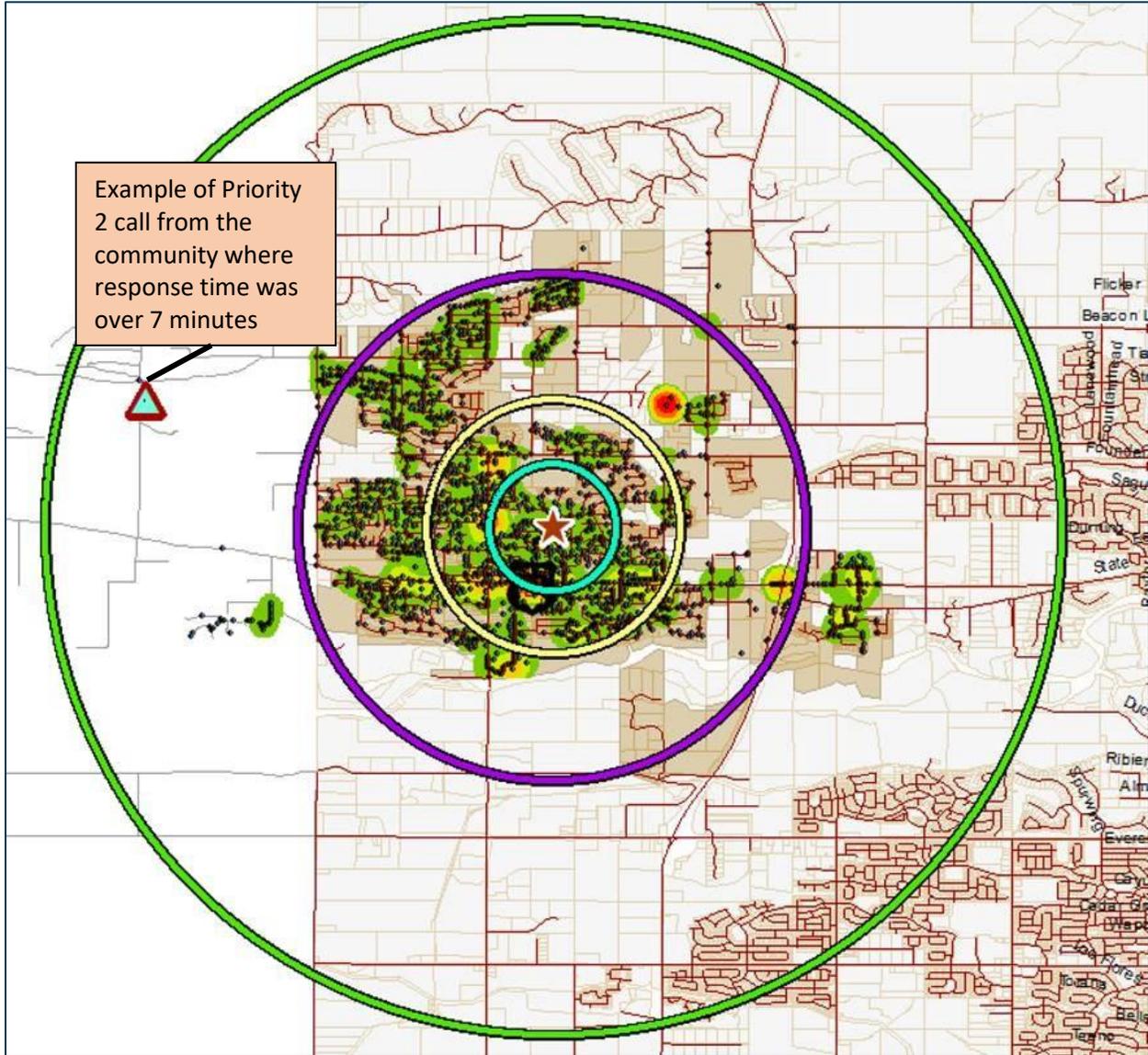
2021



2022

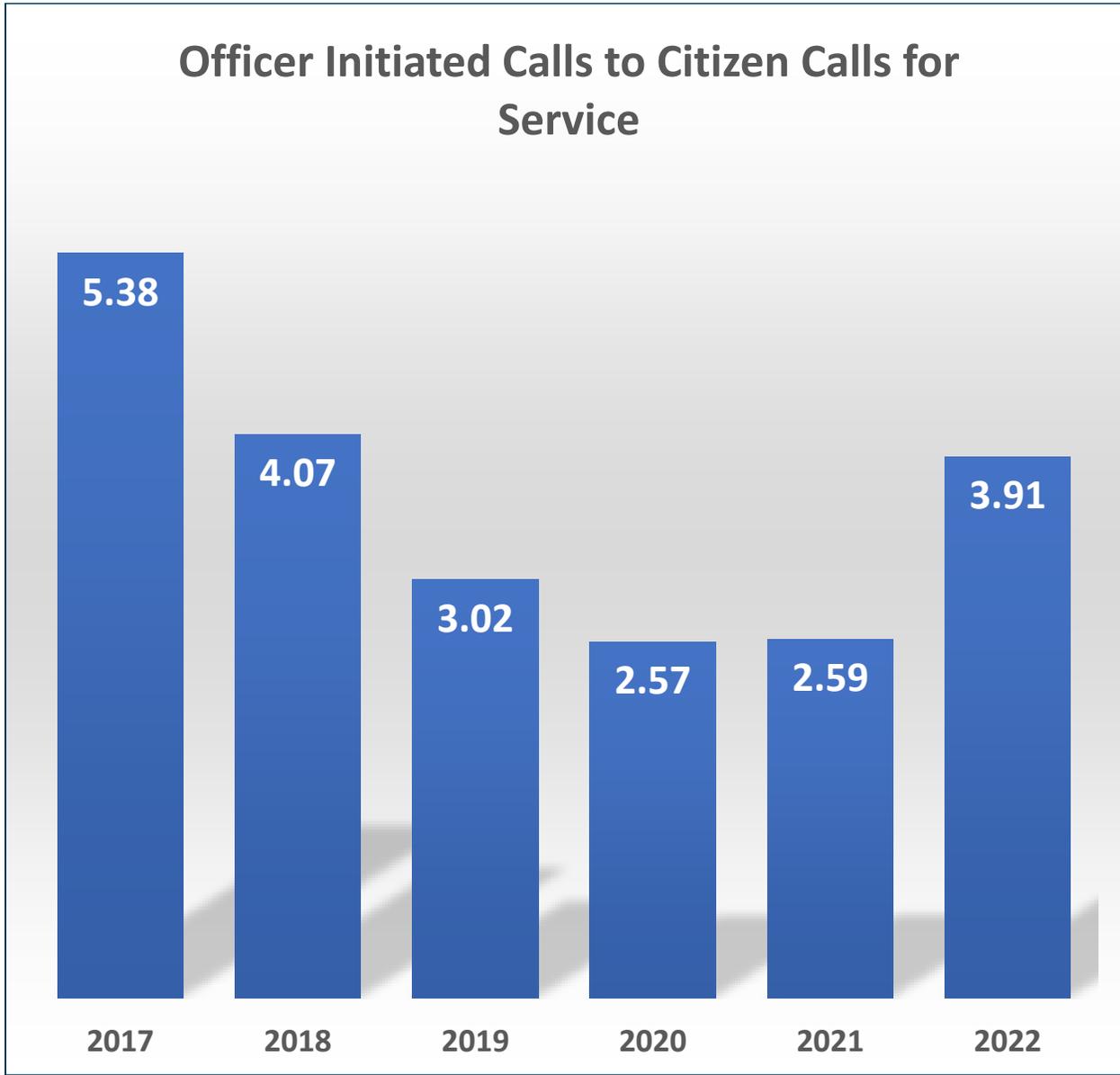


Appendix E



	Distance	P2#	P2 Response	P3#	P3 Response
Teal Band	½ mile	411	2 min : 51 sec	8	2 min : 03 sec
Yellow Band	1 mile	1084	3 min : 28 sec	11	1 min : 54 sec
Purple Band	2 miles	963	3 min : 26 sec	14	2 min : 22 sec
Green Band	4 miles	83	2 min : 08 sec	1	1 min : 45sec

Appendix F



References

- Willowbrook Development Inc. (2023). Updated Narrative for Willowbrook Golf Community Annexation, Zoning, and Development Agreement.
- Community Planning Association of Southwest Idaho. (2023). *Historic Population Estimates by City Limits: Ada County*. Released April, 2023.
- National Academies of Sciences, Engineering and Medicine. (2018). *Proactive Policing: Effects on Crime and Communities*. Washington, D.C.: The National Academies Press.
<https://doi.org/10.17226/24928>.



STAR SEWER AND WATER DISTRICT

April 26, 2023

Shawn L. Nickel
Planning Director and Zoning Administrator
City of Star
10769 W. State St
Star, ID 83669

Re: **Willowbrook Development**

Dear Mr. Nickel

CONDITIONS OF ANNEXATION

The Star Sewer and Water District (District) has been in discussion with the Willowbrook Development Team (Willowbrook) regarding annexation into the District. At this time there has been no formal application submitted to the District, so all talks have been preliminary. However, Willowbrook and the District have reached an understanding on several items and when an application is received by the District, the District's conditions of annexation will include multiple items, many of which are noted below.

WATER RIGHTS

The Willowbrook Development currently has 21.33 cubic feet per second (cfs) of diversion water rights. This water right is currently utilized mainly for irrigation water for existing agricultural fields. As part of the annexation agreement Willowbrook will be required to transfer 5 cfs to the District for utilization by the District for District customers. For reference the District currently has 14.53 cfs of total water rights reserved but only 7.22 cfs is active for the 6,349 existing connections within the District. The additional 5 cfs of water rights transferred to the District will provide the District with more than two times the amount of water rights required to serve the proposed 1094 new homes included with the current Willowbrook application.

AQUIFER

The existing Willowbrook water rights are all located within Township 5N Ranges 1W and 2W, the same diversion locations at the Hillsdale Development. These water rights will continue to be utilized in these township and ranges while adding the additional areas for the rest of the District's boundaries. This means that no additional water will be pumped from the existing aquifer than is currently being utilized for irrigation water in the area.

WATER SYSTEM IMPROVEMENTS

The annexation agreement will require several water system improvements. The first improvements required will be to extend the existing District water system to the

Willowbrook development. This will include the construction of a minimum 12-inch water main from the existing water system improvements to the Willowbrook property. Additionally, because the Willowbrook development is located at higher elevations than the rest of the current system improvements, they will be required to construct improvements for a new distribution pressure zone. These improvements will include a new booster station, pressure-reducing valves between all connections to the existing system, a new 500,000-gallon minimum water tank and development of two new water wells. The new wells may be the improvement of existing irrigation wells to District standards, or the drilling and construction of new wells, at the discretion of the District. Most of these improvements will be required prior to the construction of any new residential or commercial structures. At the determination of the District the water tank may be delayed until a certain number of residences have been constructed. All improvements shall be constructed to District and Idaho Department of Environmental Quality (IDEQ) standards. Willowbrook will be allowed by the District to construct and operate the proposed golf course prior to the completion of these new improvements utilizing existing irrigation water rights and irrigation wells.

Willowbrook will also be required to construct all water distribution improvements within the Willowbrook development. Improvements will be constructed to District standards at the time of road and other improvements. The distribution system may be constructed in phases as the development builds out over several years. Each phase of development will be required to extend water improvements to phase boundaries for connection by future phases or future developments. Additionally, stubs will be required to adjacent boundaries of existing developments for future connection opportunities for those developments, should they elect to annex into the District at some future date. Water lines are required to be pressure tested and disinfected prior to approval and acceptance by the District. After improvements are accepted by the District, the District will own, operate, and maintain the water system.

SEWER

Several sewer system improvements will be required by the District as part of the annexation agreement. Prior to construction of any new residential or commercial building Willowbrook will be required to construct a new sewer lift station and pressure sewer line to the existing District sewer collection system. The lift station shall be constructed to District and IDEQ standards including the installation of a diesel generator for emergency operation. After the construction of 200 to 300 new residential homes as determined by the District, Willowbrook will be required to construct a new wastewater treatment plant. This treatment plant will be a new membrane plant constructed inside a new structure designed to meet the City of Stars mountain modern commercial standards.

In addition to these improvements the District will work with Willowbrook to construct a recycled water system for irrigation of the proposed golf course. Improvements for the recycled water system will include upgrades to the existing District wastewater treatment plant and the construction of a new recycled water main from the existing treatment plant on Tempe Lane to the Willowbrook Development. All improvements will be reviewed and approved by IDEQ prior to construction.

In addition to the above sewer improvements Willowbrook will be required to construct all gravity sewer improvements required for the development. These improvements shall be constructed in phases as development is built out. Sewer mains shall be extended to phase boundaries for future phases and other developments. Sewer mains will be constructed to adjacent existing subdivision boundaries for future connection opportunities for those developments should they elect to annex into the District at some future date.

Very truly yours,



Hank Day,
Public Works Director



CITY OF STAR

ENGINEER DEPARTMENT MEMO

TO: Shawn Nickel, Planning Director
FROM: Ryan V. Morgan, P.E., City Engineer
DATE: **April 26, 2023**
RE: **Willowbrook Development**

ACTION

The Willowbrook Development has currently only submitted a conceptual master plan for their proposed development. This plan provides enough information for annexation decisions; however, several requirements should be included in the conditions of annexation for the development.

Prior to construction of any improvements, or the approval of a preliminary plat a hillside application shall be submitted to the City for review. This application shall include existing topography, highlighting areas with slopes ranging between 10 and 25 percent, and areas exceeding 25 percent. Application materials shall also include a geotechnical report, preliminary stormwater management plan, and preliminary gradings plans that include grading for the proposed golf course. Final construction drawings shall be required prior to any earthmoving activities. Should the development wish to start earthwork activities prior to submittal of final construction drawings the applicant may submit a Grading Permit Application as outlined by the City Code.

As the City Engineer I have no objections to the Conceptual Master Plan.



Alexis Pickering, President
Jim D. Hansen, Vice-President
David McKinney, Commissioner
Kent Goldthorpe, Commissioner
Miranda Gold, Commissioner

April 27, 2023

To: Nathan Mitchell
A + E Construction, LLC

From: Mindy Wallace, AICP
Planning Review Supervisor

Subject: Review of Supplemental Information - Willowbrook Master Planned Development

On April 19, 2023, Kittelson & Associates submitted supplemental traffic information regarding the first phase of the proposed Willowbrook Master Planned Development, the extension of Wing Road, and ACHD policy thresholds for trips on local roadways (see attached). While ACHD appreciates the additional information, no changes will be made to ACHD's April 20, 2023, project report for the development based on the supplemental information.

Additionally, not discussed in the project report, but important to the discussion, is the difference between the types of trips (residential vs Residential trips are generated by residential land uses (single family homes and townhomes) and commercial trips are generated by commercial land uses, which include the proposed golf course. In accordance with ACHD Policy, local residential streets should not be used to access commercial uses, as a mix of commercial and residential traffic is undesirable and residential roadways are not constructed to accommodate commercial traffic.

This further supports ACHD's recommendations that, *"No connection to Deep Canyon Drive be considered until Aerie Way is constructed and open to provide access to the site and that to provide access to the golf course, the applicant may apply for a driveway approach permit for a driveway or private road onto Can Ada Road to provide access to the site."*

connecting you to more

From: Jamie Markosian <jmarkosian@kittelso.com>

Sent: Wednesday, April 19, 2023 12:40 PM

To: Mindy Wallace <Mwallace@achdidaho.org>

Cc: Deborah E. Nelson <den@givenspursley.com>; Sonia Daleiden <sdaleiden@kittelso.com>; Sam Mantsch <smantsch@kittelso.com>

Subject: Willowbrook Golf Community - ACHD Staff Report

Good afternoon, Mindy!

Hope you are well. We understand ACHD is considering conditions of approval related to future residential development impacts from the Willowbrook Development on Deep Canyon Drive. The current applications include annexation and zoning with a development agreement that, if approved, allow only the golf course and related golf amenities to be developed. Residential and additional commercial uses are in future phases that cannot proceed until future preliminary plat and planned unit development applications are submitted and approved.

The golf course uses do not cause trips to exceed planning level ADT thresholds on Deep Canyon Drive.

Beyond the golf course, the development can construct the following residential unit counts until the segment exceeds the planning level threshold for its local street designation (i.e., 2,000 ADT):

- In year 2026, without the Wing Road Connection
 - 71 units (plus the golf course uses)
- In year 2026, with the Wing Road Connection
 - 213 units (plus the golf course uses)
- The Wing Road extension proposed with the Willowbrook Development is shown on the ACHD Master Street Map as a proposed residential collector. Based on the flexibility in the public right-of-way and the adjacent privately owned land held by the applicant, Wing Road could be considered for elevation in functional classification to provide additional ADT threshold capacity while maintaining the appropriate section for a collector roadway vs a local street. This elevation in functional classification could provide additional capacity to where additional units could be constructed with the development before Deep Canyon Drive exceeds its planning level ADT threshold.
- After these two connections (Deep Canyon Drive & Wing Road) have met their respective ADT thresholds, the Aerie Way connection needs to be constructed and access to SH 16 from Deep Canyon Drive severed to meet local street ADT thresholds.

Hopefully this information assists in the development of ACHD's staff report. Please let us know if you have any questions or need additional information.

Thanks!

Jamie

Jamie Markosian, PE
Senior Engineer

Kittelson & Associates, Inc.

Transportation Engineering / Planning

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Boise, ID 83702

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208.472.9813 (direct)