

DEVELOPMENT ENGINEER STAFF REPORT

To: Planning Commission
Cc: Jill Spencer, AICP / City Planner
Travis Jockumsen, P.E. / City Engineer – Public Works Director
From: Nestor Gallo, P.E. / Development Review Engineer
Date: October 8, 2020
Subject: The Villages at Arrowhead Trail – Phases 5 and 6

This is a summary of the Engineering Division plan review comments from the Technical Review meeting:

1. Project name:
The Villages at Arrowhead Trail Phases 5 and 6
2. Project address:
1200 East 1600 North
3. Developer / applicant's name:
Terry Harward
4. Plan Review date:
October 6, 2020
5. **Development Engineer recommendation:** The Engineering Division recommends APPROVAL of the proposed development subject to the following conditions:
 - a. The DEVELOPER must submit a Road Dedication Plat or record an Access and Public Utility Easement showing two point of connections from Phases 1-4 to Phase 6.
6. **Applicant is requesting a waiver to the following engineering standards:**
 - A. None.
7. **Vicinity Map:**

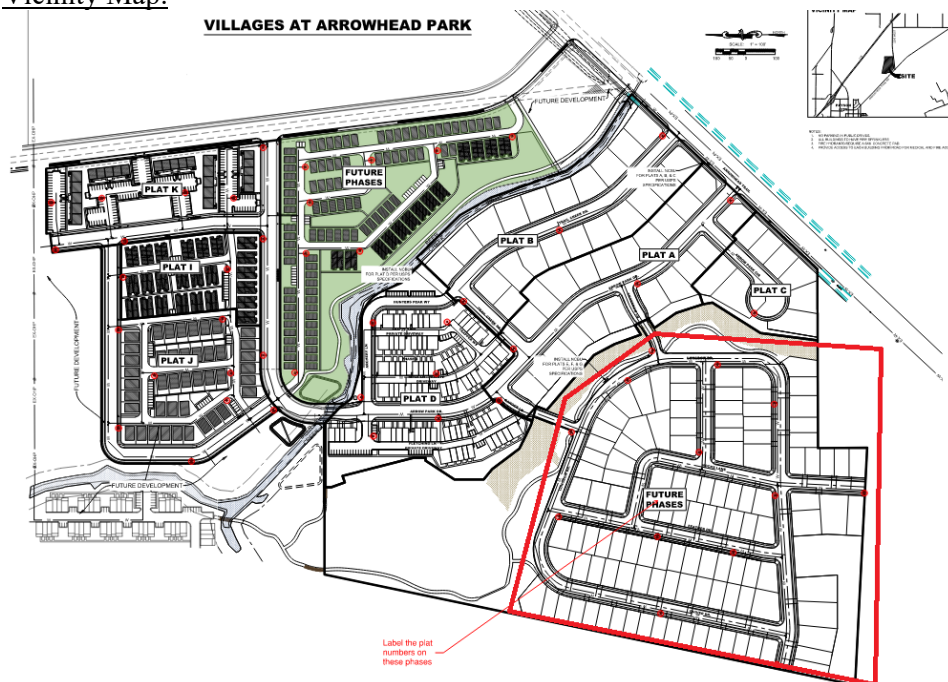


Figure 1: Site location

Discussion on the recommendation:

8. Standard conditions of approval:

- A. **Title Report**: The developer shall submit an updated Title Report not older than 30 days old.
- B. **Property taxes and liens**: All the property taxes for the current and/ or previous years, liens and agricultural land use roll over fees for the past five years must be paid in full.
- C. **Water Rights**: All the required water rights shall be conveyed to the City of American Fork.
- D. **Performance Guarantee Bond**: The developer shall post a performance guarantee bond for all the necessary public improvements before requesting a pre-construction meeting and/ or applying for a building permit.
- E. **Easements and Agreements**: The Developer must submit a Post Construction Storm Water Pollution Prevention Maintenance Agreement signed and dated by the property owner before scheduling a pre-construction meeting.
- F. **Land Disturbance Permit**: The Developer must submit a Land Disturbance Permit before scheduling a pre-construction meeting.

9. Land Use Research information:

- a. The recommendations expressed on this staff report include information recorded at the Utah County Recorder's Office.
- b. A Title Report was submitted by the Developer as part of the plan review process.

10. Historic Buildings Preservation Commission comments:

- a. *Historic Building Address*: Not applicable
- b. *Evaluation Code*: Not applicable
- c. *Year Built*: Not applicable
- d. *Materials*: Not applicable
- e. *Architectural styles*: Not applicable
- f. *Original Use*: Not applicable
- g. *Survey year*: Not applicable
- h. *US Historic Preservation Office ID#*: Not applicable
- i. *Approved by the Historic Building Preservation Commission*: Not applicable

Source: Utah State Historic Buildings Registry database.

11. Geotechnical information:

- a. *Subsurface water depth:* Groundwater was not encountered at depths of 2.5 to 8.5 feet deep below the existing ground surface.
- b. *Liquefaction:* High Potential.
- c. *Fault Lines:* The nearest active fault is the Provo Section of the Wasatch Fault located approximately 2 miles east of the site (page 14, GSH geotechnical report dated April 11, 2012)
- d. *Identify Geologic Hazards:* The nearest mapped fault trace is the Wasatch Fault located about 1.5 miles west of the site.
- e. *Percolation rates:* 2.5 minutes per inch.

Source: *EarthTec Geotechnical report dated December 19, 2017.*

12. Sensitive Land Overlay Zone comments:

- a. *Identified on one or more of the Sensitive Land Maps, including the following:*
- b. *Depth of groundwater:* Groundwater was not encountered at depths of 2.5 to 8.5 feet deep below the existing ground surface.
- c. *Liquefaction Hazard map:* High Potential
- d. *Wetlands:* There are delineated wetlands near this proposed development.
- e. *USACE Permit:* The proposed development includes an approved USACE Certificate of Compliance with an expiration date on 2024.
- f. *Stream Alteration Permit:* A Stream Alteration Permit has been issued by the Utah State Department of Water Rights.

13. American with Disabilities Act compliance:

- a. *Accessibility route cross-slope:* Building design must comply with the American National Standard, Accessible and Usable Building and Facilities, 2010 edition.
- b. *Accessibility route fore-slope:* Building design must comply with the American National Standard, Accessible and Usable Building and Facilities, 2010 edition
- c. *Accessibility route width:* 5 foot wide sidewalks on both sides of the street
- d. *Required parking stalls:* Not applicable for residential development.
- e. *Provided parking stalls:* Not applicable for residential development.
- f. *Required ADA parking stalls:* Not applicable for residential development.
- g. *Provided ADA parking stalls:* Not applicable for residential development.

Source: *2010 ADA Standards for Accessible Design; United States Department Of Justice, September 15 210; Adopted March 15 2012*

14. Transportation Master Plan comments:

- a. *Impact on existing transportation system:* The proposed development projected gross trip generation for all phases of the expansion is as follow:
 - I. Daily trips: 1,160 new trips per day
 - II. AM Peak Hour Trips: 122 vehicles per hour
 - III. PM peak Hour trips: 174 vehicles per hour
- b. *Compliance with the Transportation Master Plan:* The proposed improvements comply with the recommendations and guidelines set by the adopted Transportation Master Plan.
- c. *Compliance with AASHTO:* The public road design complies with the AASHTO guidelines
- d. *Traffic modeling:* A Traffic Impact Study was submitted for review and analysis.
- e. *Sight Distance Triangle:* The sight distance triangle has been verified at each intersections. Proposed driveways will need to be placed as recommended by the City Engineer.

Source: Trip Generation, 6th Edition, Institute of Transportation Engineers

Source: A Policy on Geometric Design of Highways and Streets, AASHTO 2004 Edition, Exhibit 3-17

Source: 2020 Payson City Transportation Master Plan, Avenue Consultants

15. Utah Department Of Transportation Access Management comments:

- a. *State Road access location:* The proposed development is not adjacent to a UDOT's owned or maintained road.
- b. *Number of approved driveways:* Not applicable
- c. *Approved access width:* Not applicable
- d. *Type of approved access movement:* Not applicable
- e. *Driveway centerline offset from the End of the Curb Return:* Not applicable
- f. *Letter of approval from UDOT:* Not applicable

(*) Source: Utah Department Of Transportation website: <http://www.udot.utah.gov>

16. Sanitary Sewer System comments:

- a. *Sanitary sewer system:* the proposed development will connect to an existing 15" PVC sanitary sewer main
- b. *New Laterals:* 116 commercial new sanitary sewer lateral
- c. *Sanitary sewer lateral pipe size:* 4" PVC residential laterals
- d. *Sanitary sewer pipe slope:* 2.00 % for residential
- e. *Standard Detail:* Standard Detail 15.15 and 15.19
- a. *Sanitary Sewer Easements:* Not required

Source: 2020 Payson City Sanitary Sewer Master Plan, Bowen and Collins Engineers

17. Culinary Water System comments:

- b. *Culinary water system:* the proposed development will connect to an existing 8" PVC water main
- c. *New water meter:* 116 new water meters for commercial use
- d. *Culinary water meter size:* 1" water meter
- e. *Standard Detail:* Drawing No. 15.5
- f. *Culinary Water Easement:* Not additional easements are required

Source: 2020 Payson City Culinary Water System Master Plan, Hansen Allen and Luce Engineers

18. Pressurized Irrigation System comments:

- a. *Pressurized irrigation system:* The proposed development will connect to an existing 8" pressurized irrigation line.
- b. *New Connections:* 116 new PI commercial connections
- c. *New Pressurized Irrigation meter size:* 1" new pressurized irrigation residential connection
- g. *Pressurized Irrigation Easements:* Not additional easements are required

Source: 2020 Payson City Pressurized Irrigation Master Plan, Hansen Allen and Luce Engineers

19. Storm Drainage System comments:

- a. *Storm Drainage system:* The proposed storm drainage runoff collection consist of storm drain inlets, 15 inch RCP pipes draining into an oil/ water separator before discharging into the existing wetlands
- b. *Allowable release rate:* The allowable release rate is 0.20 cfs per acre or greater based on soil percolation rate
- c. *Storm drain detention system design criteria:* 100 year storm, 24 hour event
- d. *Standard Detail:* Std. 15.2; Std. 15.22 and any APWA 2012 Edition applicable details
- e. *Storm Drain Easements:* No additional easements are required

Source: 2020 Payson City Storm Drain Master Plan, Bowen and Collins Engineers.

20. Flood Irrigation System comments:

- a. *Flood Irrigation System:* The proposed development does not impact the existing flood irrigation system.
- b. *Type of irrigation conduit:* Not applicable
- c. *Classification of the flood irrigation conduit:* Not applicable
- d. *Flood Irrigation Easements:* Not applicable
- e. *Letter of Approval from the Ditch Master:* Not applicable
- f. *Stream Alteration Permit:* Not applicable

Source: 2020 Payson City Pressurized Irrigation Master Plan, Hansen Allen and Luce Engineers

21. Wastewater Treatment requirements:

- a. *Type of sanitary sewer discharge:* The sanitary sewer system discharges into the Salem City Wastewater Treatment Plant.
- b. *Products generated by the facility:* regular sanitary sewer discharges currently non-classified as illicit discharges.
- c. *Equipment using culinary water:* Not applicable
- d. *Grease/ trap requirements:* Not required.
- e. *Sampling manhole requirements:* Not required
- f. *Type of facility:* Residential.

Source: 2020 Payson City Sanitary Sewer Master Plan, Bowen and Collins Engineers

22. Power and Telecommunications Utilities

- a. *Power Company Provider:* Payson Power and Light
- b. *Field Conditions:* Underground
- c. *Gas Company Provider:* Dominion Energy
- d. *Field Conditions:* Underground
- e. *Telephone Company Provider:* Century Link
- f. *Field Conditions:* Underground
- g. *Cable Company Provider:* Comcast or Utopia Cable
- h. *Field Conditions:* Underground
- i. *Underground of existing overhead power lines:* Not applicable
- j. *Subdivision/ Site plan utility notification form:* Not applicable

Source: Field inspection conducted by Nestor Gallo, P.E./Development Engineer

23. Storm Water Pollution Prevention comments:

- a. *Disturbed area:* Over one acre
- b. *Part of a common development:* Not applicable
- c. *Submittal of a Notice Of Intent:* A Notice Of Intent (NOI) is required
- d. *Submittal of a SWPPP:* A SWPPP has been submitted to the Engineering Division

Source: Payson City Title 22 – Storm Water Management and Discharge Control

24. Flood Hazard Information:

- a. *Zone:* Not applicable
- b. *Definition of Zone:* Not applicable.
- c. *Community Panel Number:* Not applicable
- d. *Effective Date:* Not applicable

Source: FIRM, Flood Insurance Rate Map, National Flood Insurance Program, Federal Emergency Management Agency, Federal Insurance Administration.

Website Link: <http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=23704013&IFIT=1>