



TOWN COUNCIL

WORKSHOP AGENDA DOCUMENTATION

PREPARATION DATE: September 14, 2016 **SUBMITTING DEPARTMENT:** Public Works / Engineering
MEETING DATE: September 19, 2016 **DEPARTMENT DIRECTOR:** Larry Pardee
PRESENTER: Jeremy Parker, & Larry Pardee

SUBJECT: Westview Townhomes Development (1255 West Highway 22)

PURPOSE OF WORKSHOP ITEM

Present and discuss the development of 1255 West highway 22 (Westview Townhomes) and the proposed connection of the project to Town of Jackson utilities and infrastructure.

DESIRED OUTCOME

The desired outcome of this discussion is to educate the Town Council on the proposals of the development in order to make an informed decision about the Applicant's requests of the Town of Jackson.

BACKGROUND/ALTERNATIVES

Westview Townhomes is a proposed development consisting of 20-townhome units on 1.1 acres located at the Corporate Limits to the Town of Jackson and is entitled to connection to Town of Jackson potable water and sanitary sewer utility systems. However, challenges exist with these connections.

The Town of Jackson's potable water system currently runs along the north side of West Broadway Avenue (US Hwy 26,89,189,191) and around the corner along West Highway 22, to a point approximately 335 feet southeast of the property corner. This is the proposed connection point for extension of the water main to the development. The existing water main is 6" ductile iron pipe and is a "dead-end" main line. The development proposal, in its current form, is able to temporarily meet fire flow demand at an acceptable level through provision of new fire hydrants and use of fire sprinklers within the buildings. Future capacity upgrades to the Town of Jackson's water system to address the existing 6" water main from the connection point, back to the tie-in with the 12" water main, approximately 1125' east along the highway, will be the responsibility of the Town of Jackson and completed at a later date. These improvements will be necessary to meet DEQ and fire flow requirements. A potential opportunity may also exist for a future connection of the existing system terminus through Budge Drive, allowing the water system to "loop". This would be the desired outcome if the opportunity were to present itself and if utility easements were to be granted by property owners.

The Town of Jackson's sanitary sewer system currently runs along the north side of West Broadway (US Hwy 26,89,189,191) and around the corner along West Highway 22, to a manhole located approximately 655 feet southeast of the property corner. There is also a "force main", owned by Spring Creek Ranch, which conveys wastewater from Spring Creek Ranch, Amangani, and Jackson Golf and Tennis (with proposed future connection of the Airport) past the frontage of 1255 West Highway 22. The property is currently connected to this force main, however, Spring Creek Ranch will not allow future connection of the proposed development. Discussions between Town of Jackson and Spring Creek Ranch regarding transfer of ownership of the force main and associated sections of the sanitary sewer system in the

vicinity have been ongoing. With the Town of Jackson will be taking ownership of the force main as per the recently approved MOU, the proposed development would be allowed to utilize the existing connection to the force main through use of an on-site “storage and dosing” system. Alternatively, the applicant is requesting that the gravity system be extended to the property from the manhole located 655 linear feet southeast, thus eliminating the need for an on-site “storage and dosing” system. Potential benefits of this proposal would be greater ability to maintain and clean the sewer mains, opportunity for future development of nearby properties to connect to the sewer main, and the potential to eliminate a downstream section of the existing force main.

Town Council has a few options for consideration which include:

- The developers of Westview Townhomes are responsible for the cost of construction to connect to the Town’s water and sewer utility systems.
- The Town of Jackson will fund the cost of construction to connect the new development to the Town’s water and sewer utility systems.
- The Town of Jackson and owners of the Westview Townhomes development will work together and share in the cost of construction to connect to Town water and sewer utility systems.

ALIGNMENT WITH COUNCIL'S STRATEGIC INTENT

This request aligns with the Town Council strategic intent: To foster partnerships to solve problems & more effectively use public resources for the greater good of the community.

STAKEHOLDER ANALYSIS

The stakeholders identified include the Developer, our Community and the Town of Jackson. This project has the potential to help achieve one of our community’s highest priorities which is deed restricted housing units.

FISCAL IMPACT

The current Town of Jackson Capital Improvement budget for FY-2017 does not include funding to complete proposed improvements to extend existing potable water or sanitary sewer systems to the property line of the development.

Water System

The point of connection to the Town’s existing potable water system from the corner of 1255 West Highway 22 is approximately 335 linear feet. At a cost of approximately \$300 per linear foot to construct and extend a new waterline given the location, anticipated challenges, and a 25% contingency for design and inspection, the expected construction cost would be approximately \$125,625. Additionally, capacity fees for meters and fire lines (TOJ Municipal Code – Title 13, Utilities) will need to be assessed. Those fees are listed below.

Water Meter Cost

- | | |
|---------------------------|------------|
| • ¾-inch Meter | \$420.00 |
| • 1-inch Meter | \$583.00 |
| • 1 ½-inch Meter | \$647.25 |
| • 2-inch Meter (straight) | \$834.50 |
| • 2-inch Meter (compound) | \$1,874.00 |

Water Meter Capacity Fee

- | | |
|------------------|------------|
| • ¾-inch Meter | \$690.00 |
| • 1-inch Meter | \$1,227.00 |
| • 1 ½-inch Meter | \$2,761.00 |
| • 2-inch Meter | \$4,909.00 |

Fire Line Capacity Fee

- 2-inch Fire Line \$1,000.00
- 4-inch Fire Line \$2,100.00

Sewer System

The point of connection to the Town's existing gravity sewer system from the corner of 1255 West Highway 22 is approximately 655 linear feet. At a cost of approximately \$300 per linear foot to construct and extend a new gravity sewer main given the location, anticipated challenges, and a 25% contingency for design and inspection, the expected construction cost would be approximately \$245,625. Additionally, wastewater capacity fees for sewer service (TOJ Municipal Code – Title 13, Utilities) will need to be assessed. Those fees are listed below.

Wastewater Capacity Fees

- Townhouse (Per Unit) \$2,172.00

STAFF IMPACT

No Staff impact at this time. Should the Town Council wish to direct Staff to proceed with any option discussed today or in this staff report, we would then address the expected Staff impact moving forward.

LEGAL ISSUES

None at this time.

ATTACHMENTS

Please see attached copy of the Westview Townhomes Development Utility Request Letter and a screenshot of the Town of Jackson GIS showing utilities in the vicinity of the proposed project.

RECOMMENDATION/CONDITIONS OF APPROVAL

Staff makes no recommendations at this time. Council reserves the right to provide Staff with input and direction on the next steps relating to items discussed today in this staff report. Should Council wish to direct staff to proceed with the following? _____

SUGGESTED MOTIONS

Staff makes no suggested motion at this time. Council reserves the right to make a motion and direct Staff to proceed as desired. The Town Council makes the motion to direct staff to proceed with? _____

Synopsis for PowerPoint (120 words max):

Purpose:

Present and discuss the development of 1255 West highway 22 (Westview Townhomes) and the proposed connection of the project to Town of Jackson utilities and infrastructure.

Background:

Westview Townhomes is a proposed development consisting of 20-townhome units on 1.1 acres located at the Corporate Limits to the Town of Jackson and is entitled to connection to Town of Jackson potable water and sanitary sewer utility systems. However, challenges exist with these connections.

Fiscal Impact:

The current Town of Jackson Capital Improvement budget for FY-2017 does not include funding to complete proposed improvements to extend existing potable water or sanitary sewer systems to the property line of the development.



Westview Townhome
Development Site

1255

986

988

1000

990

Water System Connection Point approx. 335'

1225

1175

984

1250

982

980

1220

1127 1121 1117 1111

1085

Sewer System Connection Point approx. 655'

private water

1055

975

1150

private water

1075

1035

1140

0 100
US Survey feet
Scale: 1:1,370



JORGENSEN
It's About People, Trust and Know How

PO Box 9550 · 1315 HWY 89 S., Suite 201
Jackson, WY 83002
PH: 307.733.5150
www.jorgeng.com

September 14, 2016

Mr. Tyler Sinclair, Planning Director
Town of Jackson
P.O. Box 1687/ 150 East Pearl Avenue
Jackson, Wyoming 83001

Via email: tsinclair@ci.jackson.wy.us

RE: Westview Town Homes, 1255 West Highway 22
Town of Jackson Water and Sewer Service Request
JA Project No. 09040.03

Dear Tyler,

On behalf of the applicant for the Westview Town Home Project, please allow this letter to serve as a Statement of Request for the Town of Jackson to serve the property located at 1255 West Highway 22 with Town of Jackson water and sewer service.

Background: The property located at 1255 West Highway 22 is located within the Town of Jackson city limits. Recent uses of the property have included a gas station/convenience store, a grocery/meat store, and a rental car facility. Water for the parcel is provided by a domestic well and sewer is served by a connection to the Spring Creek Ranch pressure sewer line. The nearest Town of Jackson water main is located approximately 500 feet south of the subject parcel. The Town of Jackson has developed a memorandum of understanding with Spring Creek Ranch that includes assuming ownership of the sewer main from the lift station at the Spring Gulch intersection into the Town of Jackson. The other nearest Town of Jackson sewer main is located near Cuttys at the Y-intersection, approximately 850 feet south of the subject parcel.

Proposed Conditions: FSD Investments, LLC (Eric Grove and Charlie Schwartz) are proposing to redevelop the property to a Planned Unit Development consisting of 20 town home units contained in 6 buildings. Four of these units will be market units, and 16 of the units will be workforce housing units with deed restricted leases to Teton County employers for their employees. The development will be served by Town of Jackson water and sewer. In order for these connections to occur, the Town of Jackson water and sewer infrastructure requires extensions and/or modifications in order to serve the subject parcel.

Statement of Request: An Engineer's Report detailing the water and sewer requirements of the development, connection options, and estimated costs to meet these requirements is enclosed. In summary, the request to the town of Jackson by FSD is as follows:

1. Extend the water main the 500 feet to the subject parcel to facilitate connection of the town homes. The estimated cost for the design, permitting, and construction of this extension is approximately \$150,000.
2. Convert the pressure sewer to a gravity sewer to facilitate connection of the town homes. The estimated cost for the design, permitting, and construction of this extension is approximately \$125,000 (Note: If the pressure sewer line is not converted to gravity, a pressure sewer connection could be constructed from the town homes. However, the cost of this facility would be in the range of \$50,000 and require significant operation and maintenance which may not be appropriate for the development if alternative solutions exist).

-or-

Provide a sewer main connection to the main near Cutty's at the Y-Intersection. The estimated cost for the design, permitting, and construction of this extension is approximately \$150,000.

We recognize that the Town has a capital improvement program in place. However, by providing these improvements, the Town will allow 16 units of work force housing to come on line in this next year for a cost of less than \$20,000 per unit for the required water and sewer upgrades. The units will also be providing revenues to the town's water and sewer fund through monthly usage fees.

Thank you for the opportunity to provide recommendations for infrastructure connections for this project. Please feel free to contact me directly with any questions or to discuss the options further. On behalf of the applicant, we look forward to moving forward with this project considering the best interest of all parties involved.

Sincerely,
JORGENSEN ASSOCIATES, P.C.



Reed Armijo, P.E.
Principal Engineer

cc: Eric Grove, Westview
Larry Pardee, Town of Jackson

WESTVIEW TOWNHOMES – UTILITY STUDY

Prepared by: Jorgensen Associates, P.C.

This utility study for the Westview Townhomes Project is intended to provide engineering basis and recommendations for water and sanitary sewer connections to the Town of Jackson infrastructure facilities. It is recommended that the existing Town of Jackson water and sanitary sewer lines along Highway 22 extend to the Westview Project boundary for connection by the development. The recommendation is based upon information in the following narrative for each utility.

WATER SYSTEM CONNECTION:

The proposed water system for the development consists of water mains and fire hydrants with individual service connections to the buildings. The maximum domestic water demand for the development is estimated based on the current building program and expected irrigation to be approximately 19,600 gallons per day. This equates to a peak hour flow of approximately 82 gallons per minute (Peak Factor 6). This is based upon Wyoming DEQ standards by bedroom count and an average of 0.25" per square foot per day for irrigation. The expected water demand for the buildings was also calculated based on fixture counts using the AWWA M22 method and estimated at 68 gpm. The lower value of the M22 is likely due to the peak factor 6 being above average and the irrigation demand not included in the M22 calculation. The detailed water demand calculations are included for reference.

The required fire flow demand is calculated to be 1500 gpm for 2 hours from Appendix B, Table 105.1 of the 2006 International Fire Code based on the proposed building area and Type V-B construction. The code allows the required fire flow value to be reduced with an approved automatic sprinkler system installed with the 1500 gpm value considered to be a minimum flow. Discussions with the Fire Marshall suggest that 1000 gpm at the hydrant in an interim basis would be acceptable for this site given all buildings have an automatic sprinkler system which complies with current codes.

Currently, the Town of Jackson water system does not extend to the boundary of the proposed development. There is a 12" line that extends from the new pump house on Karns hillside to the old pump house location between the Bank of Jackson Hole and Spring Creek Animal Hospital. From this location, a 6" waterline extends approximately 1000' around the free-right turn to the terminus of the line along Highway 22 across from Teton Gables / Old West Storage access road. The terminus of the 6" line is approximately 500' from the Westview Project boundary. The 1000' section of 6" line creates the pressure drop in the main under fire flow demands and does not currently meet the Wyoming DEQ Regulations for water mains.

A water model analysis was performed for the above criteria. At the request of the TOJ Public Works Department, the system was analyzed with a 500' section of 12" water main extending from the existing terminus of the 6" line to the project boundary. This section of new main would meet the demands of the Westview Project with an 8" line, but the 12" line was included to incorporate future expansion in the vicinity. Within the project boundary, an 8" water main network was modeled to a proposed hydrant on the upper lot near the Search and Rescue Facility as shown on the FDP plans. The expected maximum demand for the proposed development was added to the new line, including an estimate for an automatic sprinkler system for one building. The model was run under this scenario with the maximum daily demand included for all properties connected to the proposed line based on recent data collected by TOJ. The model calculates a residual pressure of 99 psi at the SAR hydrant and 116 psi at the property boundary. Using an additional demand of 1000 gpm at the SAR hydrant, the model calculates a pressure of 44 psi. As previously stated, the velocity in the existing 6" line along West Broadway / Highway 22 creates the majority of the pressure drop in the line as the velocity approaches 13 fps under

the maximum day plus 1000 gpm fire flow. In the event that the existing 6" line were replaced with a 12" line, the available water flow and pressure would increase significantly and provide adequate fire flow for future developments in the vicinity, while meeting the regulations of the Wyoming DEQ.

In summary, it is recommended that in the interim state, a new 12" line extend from the existing 6" line to the Westview Project boundary to allow an adequate water service connection to the project. It is recommended that the existing 6" line be replaced at a later date with a 12" line in order to provide adequate fire flow to this vicinity and meet the regulations of the Wyoming DEQ.

Ultimately, the extension and replacement of the lines within the TOJ system to the Westview Project and the internal pipe network within the project will require a permit to construct through the Wyoming DEQ and must meet the current Rules and Regulations. It is expected that the new water main network within the property will be owned and operated by the development and all maintenance will be the responsibility of the development.

The cost associated with the 12" waterline extension is estimated to be **\$150,000**. The 8" waterline extension is estimated to be **\$135,000**.

SANITARY SEWER SYSTEM CONNECTION:

The proposed wastewater collection system for the development consists of sanitary sewer mains and sewer manholes throughout the site with service lines connecting the buildings. The maximum sanitary sewer demand is estimated based on the current building program to be approximately 6,600 gallons per day with a peak hour flow of approximately 15 gallons per minute (Peak Factor 3). These values are based upon Wyoming DEQ standards for the bedroom count within the project. The design plan incorporates the Town of Jackson Standards and Wyoming DEQ Rules and Regulations for construction. Wastewater demand calculations are included for reference.

As a part of the FDP submittal process, alternatives were evaluated for the sanitary sewer connection to the Town of Jackson. Alternative 1 considers a pressure connection from the proposed development to the existing Spring Creek Ranch (SCR) pressurized sewer main. Alternate 2 considers a gravity connection from the proposed development to an extension of the existing gravity main approximately 850' south of the to the project boundary. A more detailed description of each alternative is included for reference.

ALTERNATIVE 1 – PRESSURE CONNECTION:

Alternative 1 considers a pressure connection from the proposed development to the existing Spring Creek Ranch (SCR) pressurized sewer main that passes along the property within the WY 22 right-of-way. The pressure main is currently owned and maintained by the Spring Creek Homeowners Association. The Spring Creek HOA has expressed a concern with the amount of development other than SCR that is served by the line. There have been discussions with the Town of Jackson and Spring Creek Ranch for TOJ to take over this line, which supports the potential connection for the Westview Project.

Due to the shallow depth of the existing pressure sewer line, a holding tank system with intermittent gravity discharge is not feasible under the current conditions. The pressure sewer connection will likely require a duplex pumping system with a grinder to lift the collected wastewater from the development. The lift station components will be sized to accommodate additional storage and regulate discharge. The disadvantages of a lift station and pressure sewer connection include long term maintenance and cost

with the system. The pressure connection does not accommodate future connections of the existing and proposed developments in the vicinity.

The cost associated with **Alternative 1 – Pressure Sewer Connection** is estimated to be **\$50,000**.

ALTERNATIVE 2 – GRAVITY CONNECTION:

Alternative 2 considers a gravity connection from the proposed development to the Town of Jackson system. This alternative involves extending the existing gravity main approximately 850 feet to the Westview Project. The extension of the existing line provides service to the Westview Project and allows connection by other existing and future developments. The gravity extension could also include a connection for the SCR line. When compared with the pressure connection, there is less long term cost and maintenance associated with the gravity connection.

The cost associated with **Alternative 2 – Gravity Sewer Connection** is estimated to be **\$150,000**.