City of Palmer
Action Memorandum No. 15-058

Subject: Authorize an Extension of the City Wastewater Utility to Serve Springer Park Subdivision

Agenda of: June 9, 2015

Council Action: Authorized

Originator Information:			
Originator:	Tom Healy, Public Works Director		
Date:	May 15, 2015	**Requested agenda date:**	June 9, 2015

Department Information:			
Route to:	**Department Director:**	**Signature:**	**Date:**
	Community Development		
x	Finance		
	Public Safety		
x	Public Works		5/15/14

Approved for presentation by:		
	Signature:	**Remarks:**
City Manager		
City Attorney		
City Clerk		

Certification of Funds:

Total amount of funds listed in this legislation: $

This legislation (√):

[X] Has no fiscal impact
[ ] Creates a positive impact in the amount of: $
[ ] Negative impact in the amount of: $

Funds are (√):

[ ] Budgeted — Line item(s):
[ ] Not budgeted — Affected line item(s):

General fund assigned balance (after requested budget modification): $

Enterprise unrestricted net position (after requested budget modification): $

Director of Finance Signature:

Attachment(s):

- Holler Engineering letter dated April 1, 2015

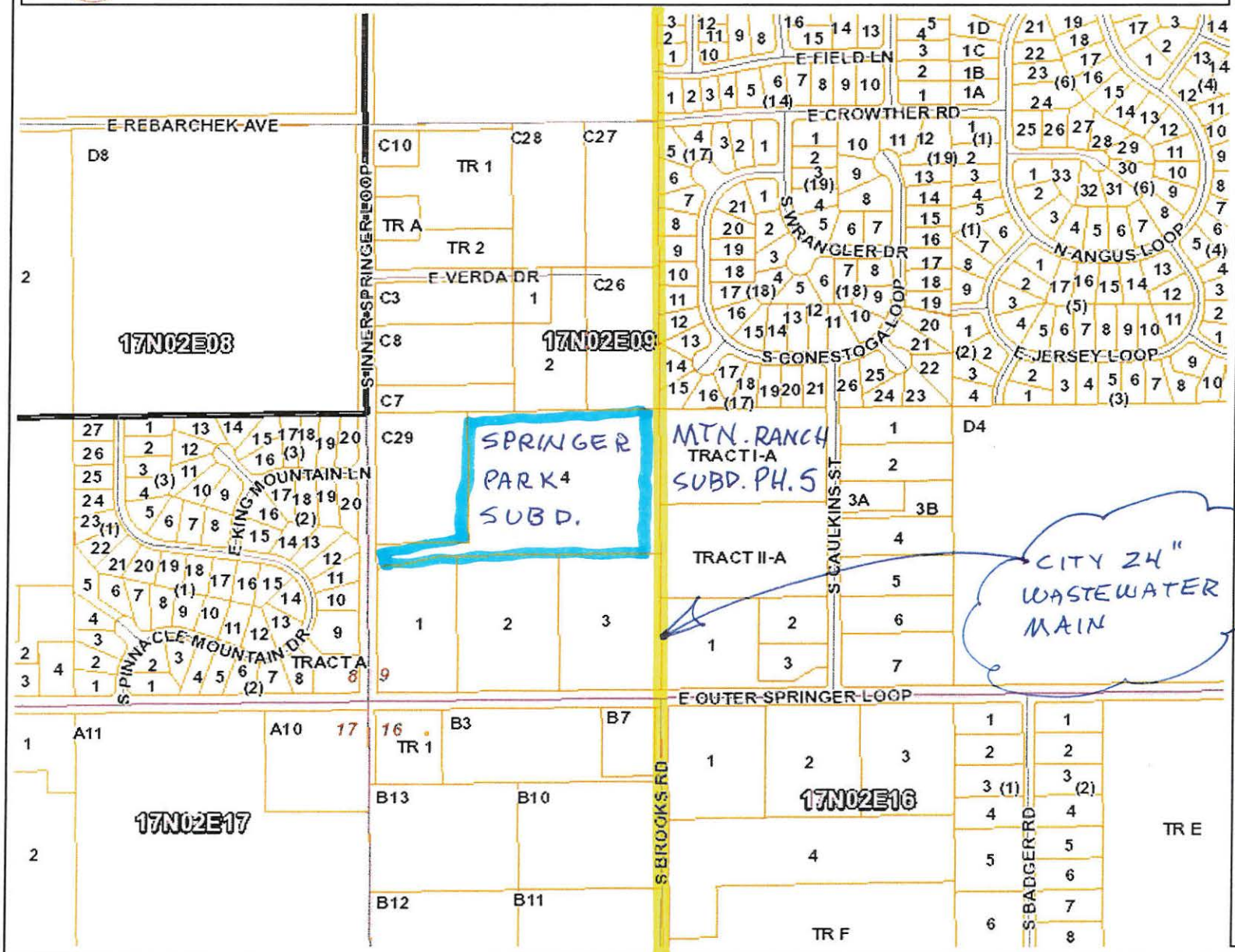
Summary statement:

City Code Section 13.08.070 states that “no property located outside the limits of the city shall be served directly or indirectly by the city utility systems unless such connection has been authorized by the city council...”

Approval of this action memorandum will grant City Council approval to the extension of the City wastewater collection system to and throughout Springer Park Subdivision. This 23-lot subdivision is located at the intersection of Inner and Outer Springer Loop Road east of Majestic Hills Subdivision. The owner and developer is Glacier Ridge LLC. The developer will construct the wastewater collection system under a utility extension agreement with the City. Large diameter wastewater mains in the area are adequate to handle the additional flows from this subdivision.

Administration recommendation: Approve Action Memorandum No. 15-058.

Matanuska-Susitna Borough



Legend

Public Facilities

- Administrative
- Animal Control
- City Hall or Courthouse
- Community Center
- Landfill or Transfer Statior
- Library
- Medical
- Post Office
- Public Safety Fire and/or E
- Public Safety Law Enforce
- School

Alaska Railroad

Streets

- Highway
- Major Street
- Medium Street
- Minor Street
- Primitive Road
- Private Road

Mat-Su Borough Bound:

Incorporated Cities

Parcels

Flood Zone

1: 7,797

0.2 0 0.12 0.2 Miles

NAD_1983_StatePlane_Alaska_4_FIPS_5004_Feet

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Reported on 05/27/2015 09:35 AM

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

This map was automatically genera using Geocortex Essentials.

HOLLER ENGINEERING
Water, Wastewater & Soils Consulting 3375 N Sams Dr. Wasilla, Alaska 99654 • 376-0410

April 1, 2015

Tom Healy
Director, Public Works Department
City of Palmer
231 W. Evergreen Ave.
Palmer, AK 99645

Re: *Springer Park Subdivision;* Sewer Main Extension; Plan Drawings for Review
HE Project # 10007

Dear Mr. Healy:

On behalf of project owner Glacier Ridge LLC, we are submitting plan information and requesting your review of the referenced sewer main extension project. The mains will serve a new, 23-lot residential subdivision and one other commercial lot located just to the west. A concurrent submittal will be under review by ADEC Wastewater Discharge Program. ADEC will approve the system for construction contingent on your department's approval and written verification of hydraulic adequacy downstream to the proposed tie-in. Please see the attached drawings for the location and layout of the new improvements.

Main Sewer Lines

Plan and profile plan drawings of the proposed conventional gravity collection system are attached. Standard construction specifications and details from the city specifications are incorporated by reference and are not included with this submittal. Holler Engineering will be on site multiple times during construction to ensure construction meets ADEC/PW standards for materials and installation practices.

Wastewater flows. Using traditional methods to model wastewater flows in larger systems would result in a per-lot flow rate of 0.6 GPM to 1.3 GPM, however the small size of the new collection system would in our opinion warrant a higher peaking factor. We estimate a max peak flow rate of 2.5 GPM per lot, or 23 homes x 2.5 GPM/home = 58 GPM. The project also includes a 6" stub for a proposed church located on the lot just west of the new subdivision. According to the church project civil engineer, the worship hall will not have a school or other high water use, and their design peak flow rate will be less than 40 GPM. The meeting times are typically Sunday mornings and one weeknight, which do not align with expected peak demand hours for the residential lots. Tract G is designated green space and will not require service. The design expected total peak wastewater flow rate is nonetheless conservatively estimated to be 100 GPM. The

planned 8" diameter DIP with the total load runs in one section only, with a slope of 0.8%. Using a Manning's roughness coefficient of 0.012 and limiting the flow depth to 4", the section of pipe would have an estimated capacity of 0.59 CFS or 260 GPM and 3.4 ft/second velocity.

Main and service line pipe materials. The new main lines will be constructed of 8" diameter class 50 ductile iron pipe matching city specifications, with plan gradients varying from 0.5% to 1.5%. Depth of cover will vary from 8' to 11', with extruded polystyrene insulation placed as necessary to meet city minimum cover standards. Residential service lines will be 4" DIP with minimum cover of 4', more commonly over 6'. A single 6" service stub is planned at the west end of the project to provide future service for a church project which is in the design stage; the design and location was coordinated with the church project civil engineer.

Manholes. Standard concrete manhole bases, sections, cones, frames and covers will be installed in 5 locations as shown on the attached plan. Two short sections of main line have simple cleanouts, a design detail approved by Public Works.

At this point, we are requesting your written verification that your sewer piping system downstream of the tie-in point can handle the additional hydraulic load, which will need to be forwarded to ADEC staff prior to their approval to construct. Any comments or concerns you have with the plan would also be appreciated. Thank for your assistance, and please feel free to call with any questions or concerns you may have.

Sincerely,

Curtis Holler, PE

c: Glacier Ridge, LLC w/enclosures