MORGAN CIVIL ENGINEERING, INC.

PO Box 358, Manzanita, OR 97130
ph: 503-801-6016
www.morgancivil.com

August 9, 2022

Riverview Meadows Development, LLC
Alex Reverman areverman@gmail.com

RE: Water System Improvements for Tax Lot 3600, Map 03N 10W 23B, Nehalem, Tillamook County, Oregon (Riverview Meadows, Phase 2)
Project #19-10-Riv

Dear Mr. Reverman:

At your request, I have prepared a preliminary design for the water distribution system to be serving the proposed subdivision of Riverview Meadows Phase 2.

Storage

We propose to install a new storage tank at the northwestern corner of the new development, with a ground elevation of about 160 feet. The City tank is at an elevation of 220 feet, so the new tank can be fed by gravity.

The proposed tank will include 60,000 gallons of water storage for fire-fighting (1000 gpm for 60 minutes) and about 20,000 for domestic use (240 gallons per house for 90 homes). The average City residential usage is 141 gallons per day. The total tank size will be about 80,000 gallons.

The new tank will be filled with treated water from the City System, with a dedicated feed line beginning near Lot 13. The feeding pipe will be in a shared trench with a new distribution pipe. A pressure reducing valve (PRV) will need to be installed at the tank in order to prevent overflowing.

The feeder line, tank, and PRV are shown on the attached drawing in red.

Distribution

Water from the new reservoir will be pumped to a pressure of about 60 psi (140 ft gauge pressure/300 feet total pressure). The water will then be distributed in a looped system in order to serve the residents of Phase 2 and Phase 1 of the subdivision (not including Lots 1-2, and 12-13).

Lot 75 is located at elevation 155 feet. Lot 14 is at elevation of 120 feet. Therefore, the service pressure will be between roughly 60 psi and 85 psi.

Connection

In the roadway near Lot 14, a second PRV will be used in order to connect to the City system. The pressurized system will tie into the city system in order to allow flow when needed. This PRV is shown in red on the drawing.

There is a gap in the map in order to show both ends of the new system. Further design of these improvements will be necessary before construction.

If you have any questions, please contact me at jason@morgancivil.com or 503-801-6016.

Sincerely,

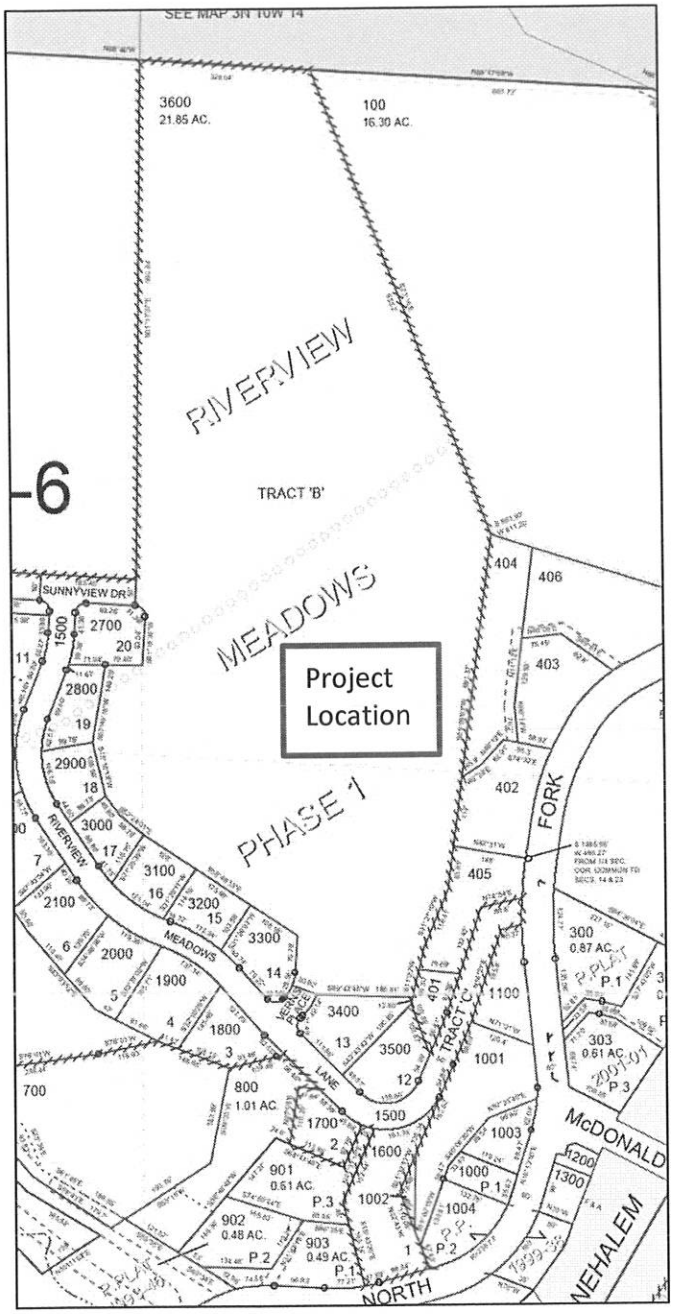
MORGAN CIVIL ENGINEERING, INC.

Jason R. Morgan, PE
Professional Engineer

RENEWAL DATE: DECEMBER 31, 2022

cc: Project File #19-10-Riv

<V:\19-10-Riv\Reports\Riverview Meadows-2 Water System.docx>



Tax Lot 3600, Map 3N 10W 23B
RIVERVIEW MEADOWS PHASE 2
Nehalem, Tillamook County Oregon

RIVERVIEW MEADOWS
PHASE 2
74 LOT SUBDIVISION
TENTATIVE PLAN

MAP 3N R10W SECTION 23B

GRAPHIC SCALE

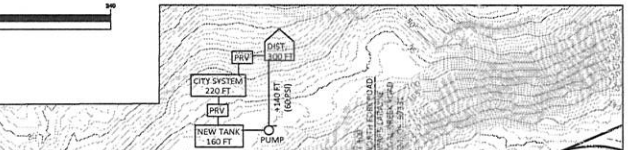
(IN FEET)
1 inch = 60 ft.

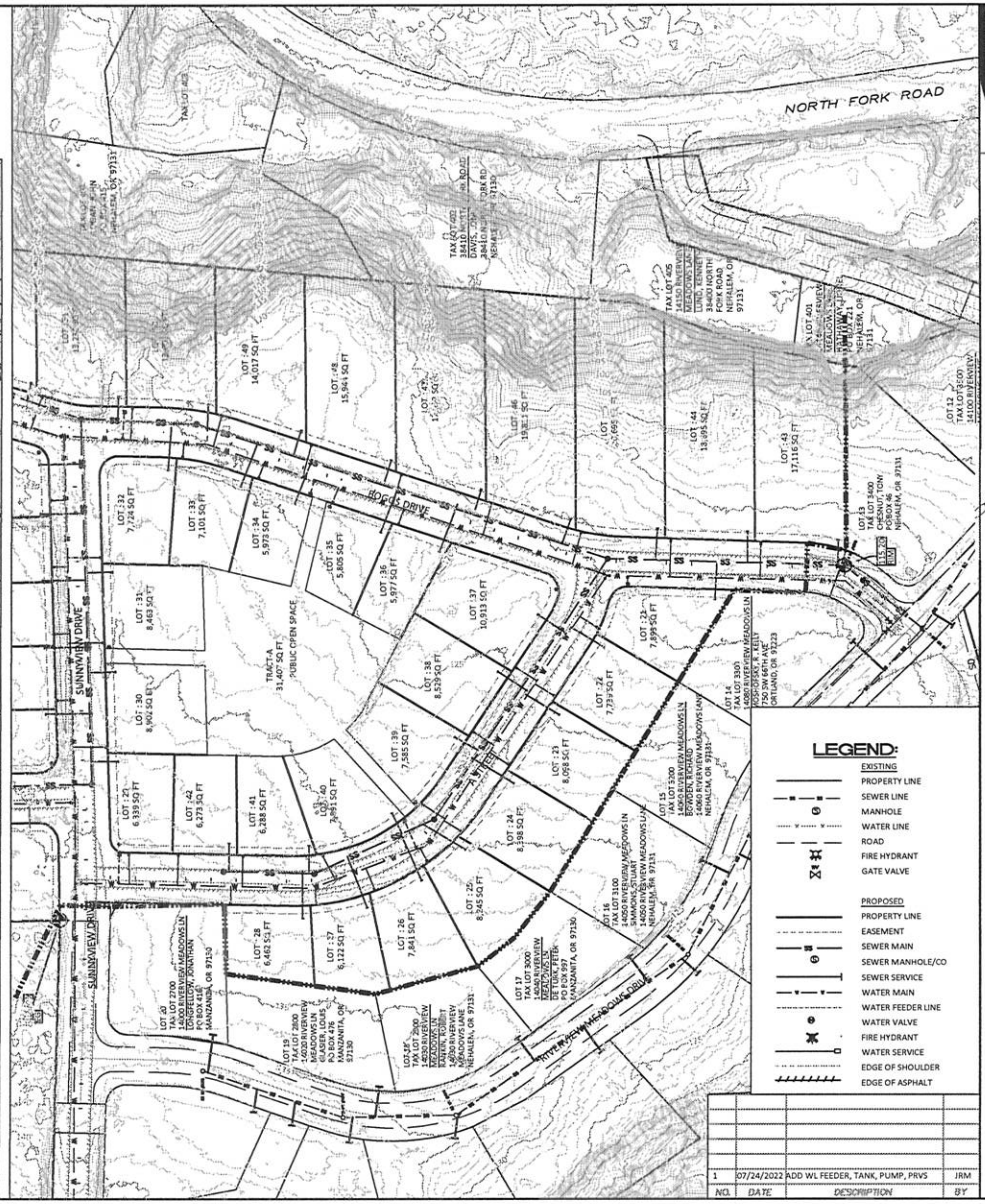
N

S

ELEVATIONS:
CITY TANK - 220 FT
PROPOSED TANK - 160 FT
LOT 75 - 155 FT
LOT 3 - 120 FT
USE PUMP AT ~300 FT EQ
(ADD 140 FEET = 60 PSI)

WATERLINE:
1) INSTALL NEW TEE ON MAINLINE AT LOT 14.
2) INSTALL FEEDER PIPE TO TANK SITE. L=2100 FT.
3) INSTALL PRESSURE REDUCING VALVE.
4) STORE WATER IN TANK. MIN 80,000-GALLON.
5) DISCHARGE THROUGH PUMP STATION. ADD ±60 PSI.
6) AT LOT 14, INSTALL PRV TO REDUCE TO CITY PRESSURE.





LEGEND:

EXISTING
- PROPERTY LINE
- SEWER LINE
- MANHOLE
- WATER LINE
- ROAD
- FIRE HYDRANT
- GATE VALVE

PROPOSED
- PROPERTY LINE
- EASEMENT
- SEWER MAIN
- SEWER MANHOLE/CO
- SEWER SERVICE
- WATER MAIN
- WATER FEEDER LINE
- WATER VALVE
- FIRE HYDRANT
- WATER SERVICE
- EDGE OF SHOULDER
- EDGE OF ASPHALT

NO.	DATE	DESCRIPTION	BY
1	07/24/2022	ADD WL FEEDER, TANK, PUMP, PRVS	JRM

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• CIVIL ENGINEERING
• INSPECTION
• PLANNING

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 19, 2007
JASON R. MORGAN
RENEWAL DATE: SEPTEMBER 30, 2022

JOB NO. 472-19-HV
DATE MAY 31, 2022

RIVERVIEW MEADOWS DEVELOPMENT, LLC
RIVERVIEW MEADOWS PHASE 2
UTILITY LAYOUT
NEHALEM, MAP 3N 10W 23B

SHEET
3b
OF TWENTY