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RENEWS: 12/31/2023

Technical Memorandum

To: Carey Sheldon,
Riverview Meadows, LLC

From: Michael Ard, PE

Date: October 13, 2022

Re: Riverview Meadows – Single Site Access Analysis Update

Following submittal of the Riverview Meadows Traffic Impact Study dated October 7, 2022, a question was raised regarding whether the proposed development would operate safely and efficiently if only the existing (northerly) access formed by River View Meadows Lane was utilized for site access. This supplemental analysis memorandum is written to provide updated analysis and recommendations for this “single-access” development scenario.

This updated analysis assumes that the “South Site Access” will remain in place, but that site trips from the proposed development will not access this existing roadway. Rather, the southerly access would serve existing users and emergency access only. As such, all site trips from the 20 homes which will be completed within Phase 1 as well as the future trips associated with the 74 homes within Phases 2 and 3 were assumed to exclusively use River View Meadows Lane for access under this analysis scenario.

A diagram showing the assignment of site trips from the future homes within the proposed Phase 2 and 3 development is provided in Figure 1 of the attached technical appendix. Figures 2 and 3 show the projected turning movement volumes at the study intersections under year 2025 background conditions and year 2025 background plus site trips conditions respectively, again assuming a single point of access for the proposed development.

OPERATIONAL ANALYSIS UPDATE

The operational analysis for the updated traffic volumes was again conducted using Synchro 11 software, with outputs based on the methodologies identified in the *HIGHWAY CAPACITY MANUAL, 6th Edition*, published by the Transportation Research Board.

The results of the operational analysis are summarized in Table 3 on the following page. Detailed analysis worksheets are also included in the technical appendix.



Table 3 - Operational Analysis Summary: Year 2025 Future Conditions

Intersection	AM Peak Hour			PM Peak Hour		
	Delay	LOS	v/c	Delay	LOS	v/c
Northfork Rd at South Site Access						
2025 Background Conditions	8.9	A	0.01	8.6	A	0.01
2025 Background plus Site	9.1	A	0.01	8.7	A	0.01
Northfork Rd at McDonald Dike Rd						
2025 Background Conditions	9.2	A	0.03	9.2	A	0.04
2025 Background Plus Site	9.5	A	0.04	9.5	A	0.05
Northfork Rd at Riverview Meadows Ln						
2025 Background Conditions	8.8	A	0.02	8.6	A	0.01
2025 Background plus Site	9.0	A	0.07	8.8	A	0.04

Based on the results of the updated operational analysis, again the study intersections are projected to operate acceptably with a single point of access either with or without the addition of site trips from the proposed development. This result is not surprising given that the intersections are projected to operate at well below 10 percent of capacity, indicating that there will be no vehicles waiting to make turning movements during the vast majority of the peak hours. No operational mitigations are necessary or recommended in conjunction with the single-access scenario for the proposed development.

WARRANT ANALYSIS UPDATE

The traffic signal and turn-lane warrants analyses were also updated for the study intersections. Based on the updated analysis, again no traffic signal or turn lane warrants are projected to be satisfied upon completion of the proposed development. Accordingly, no new traffic signals or turn lanes are recommended. Detailed analysis worksheets are included in the attached technical appendix.

OPERATIONAL IMPACTS OF SIGHT DISTANCE UPDATE

The calculated delays associated with limited sight lines at the site access intersection remain applicable when considering analysis with a single point of access. Since the delays are a function of sight distance and roadway geometry, the maximum induced delay would remain at 1.07 seconds per vehicle when a conflict occurs.

Based on the increased volume of traffic entering Northfork Road from River View Meadows Lane as well as the traffic volumes on Northfork Road, the expected total induced delay per day would be approximately 4 seconds per day. The total induced delays remain very low because the amount of induced delay per vehicle is low (between 0.0 and 1.07 seconds) and because the odds of a conflict



occurring with a vehicle just beyond the limits of the available sight distance are also low (approximately 1.5 percent of exiting vehicles would be expected to turn onto Northfork Road while a vehicle is approaching and may be subject to delay.

Based on the negligible calculated induced delays of 4 seconds per day, again any requirement for mitigation for the limited sight distance would be expected to result in costs exceeding the resulting benefits. Accordingly, the available intersection sight distance is adequate for the River View Meadows Lane approach to Northfork Road and no operational or safety mitigations are recommended.

LOCAL STREET TRAFFIC VOLUMES

Using a single point of access, the projected traffic volumes on River View Meadows Lane would be expected to increase as compared to a two-access scenario. Based on the updated analysis, the average daily traffic volume on this roadway is projected to be 940 vehicles per day if River View Meadows Lane is the only roadway that serves daily traffic traveling to and from the proposed development. This traffic volume remains within the nominal capacity of a local residential queuing street since it is fewer than 1,000 vehicles per day.

CONCLUSIONS

Based on the updated operational analysis, the study intersections are again projected to continue to operate acceptably under year 2025 traffic conditions with the addition of all site trips from the proposed development using River View Meadows Lane for site access.

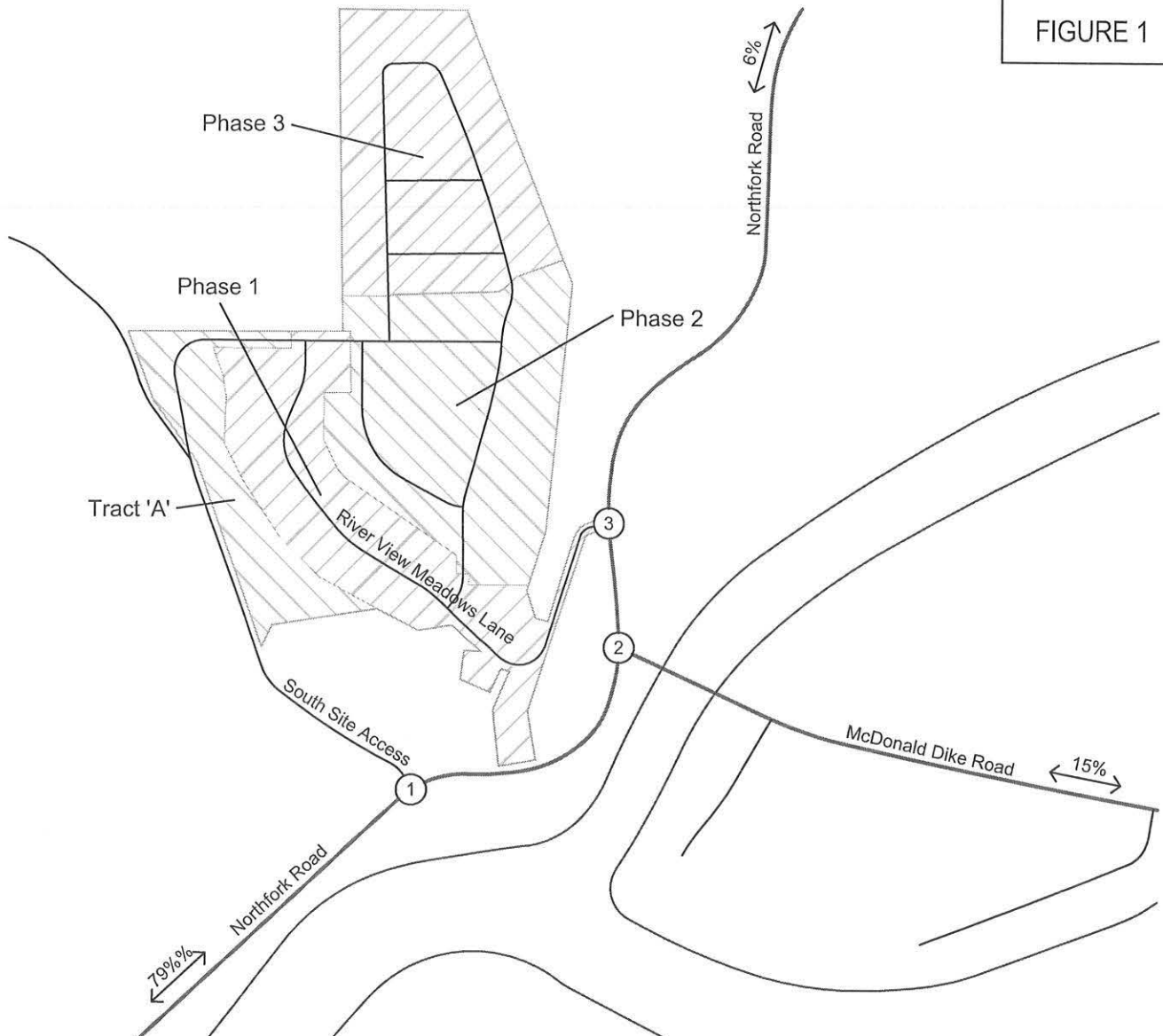
Based on the updated warrant analysis, again no new traffic signals or turn lanes are recommended in conjunction with the proposed development.

The available sight distances remain adequate to ensure safe operation of the area intersections. Delays to through traffic on Northfork Road at River View Meadows Lane would be projected to increase from 3 seconds per day to 4 seconds per day if River View Meadows Lane serves as the sole access for the proposed development. Regardless, the delays to through traffic remain negligible. Accordingly, no sight distance improvements are necessary or recommended in conjunction with the proposed development.

Based on the prior analysis of River View Meadows Lane's road width and geometry, large vehicles may have difficulty navigating the roadway and require both travel lanes to negotiate the curves in the vicinity of Northfork Road. Very large trucks may also trailer off the roadway surface. However, the road width is sufficient to approximately 1,000 passenger vehicles per day despite the narrow width, similar to the capacity of a residential queuing street. The projected future traffic volumes on this roadway remain within this effective roadway capacity.

Appendix

FIGURE 1



	AM
	PM

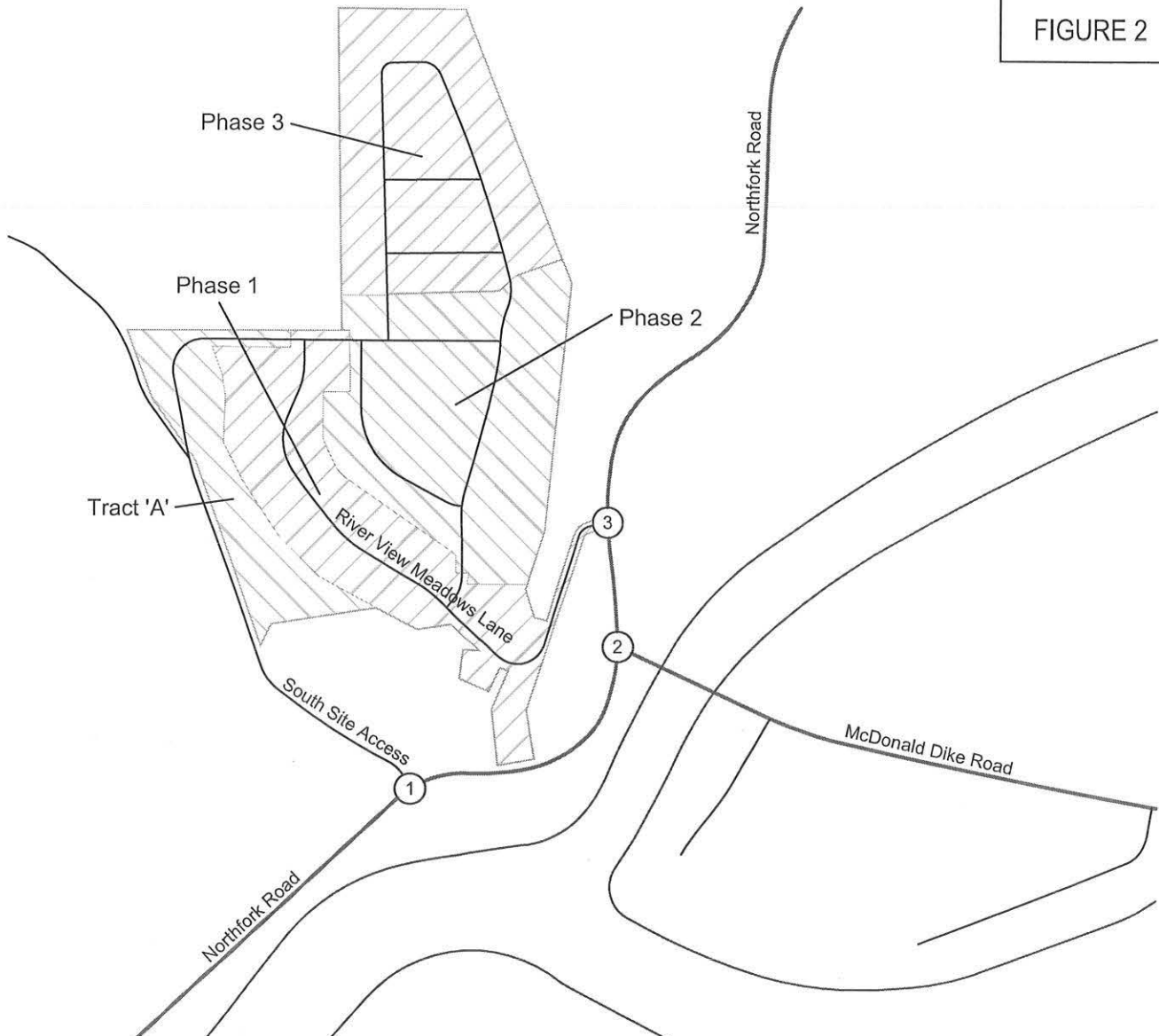
	AM
	PM

	AM
	PM



TRAFFIC VOLUMES
 Proposed Development - Site Trips
 Morning and Evening Peak Hours

FIGURE 2



<p>1</p> <p>5 0 38</p>	AM
<p>1</p> <p>4 5 82</p>	PM

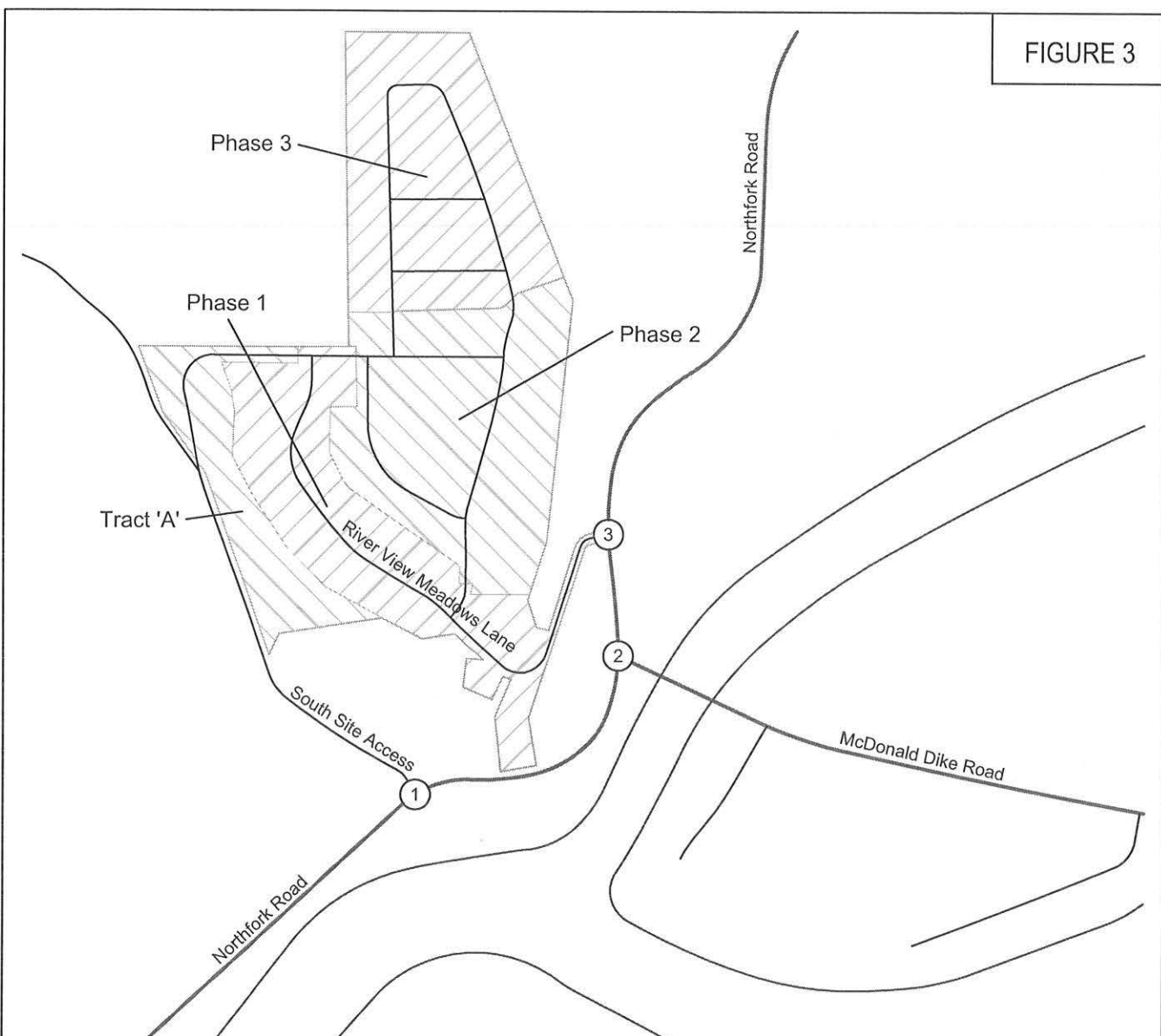
<p>2</p> <p>32 6 3 22 30 10</p>	AM
<p>2</p> <p>31 11 8 22 57 17</p>	PM

<p>3</p> <p>0 29 1 12 9 28</p>	AM
<p>3</p> <p>1 37 8 14 51</p>	PM

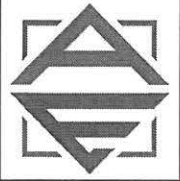


TRAFFIC VOLUMES
 2025 Background Conditions - Single Access
 Morning and Evening Peak Hours

FIGURE 3



<p>1</p> <p>AM</p>	<p>2</p> <p>AM</p>	<p>3</p> <p>AM</p>
<p>1</p> <p>PM</p>	<p>2</p> <p>PM</p>	<p>3</p> <p>PM</p>



TRAFFIC VOLUMES
 2025 Background Plus Site Trips - Single Access
 Morning and Evening Peak Hours

HCM 6th TWSC
1: Northfork Road & South Site Access

10/13/2022

Intersection

Int Delay, s/veh 0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	0	5	1	38	57	0
Future Vol, veh/h	0	5	1	38	57	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	33	33	13	13	9	9
Mvmt Flow	0	6	1	44	66	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	112	66	66	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.23	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.317	-	-	-
Pot Cap-1 Maneuver	815	918	1469	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	814	918	1469	-	-	-
Mov Cap-2 Maneuver	814	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1469	-	918	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Control Delay (s)	7.5	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
 2: Northfork Road & McDonald Dike Road

10/13/2022

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	22	3	30	10	6	32
Future Vol, veh/h	22	3	30	10	6	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	25	3	34	11	7	37

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	91	40	0	0	45
Stage 1	40	-	-	-	-
Stage 2	51	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263
Pot Cap-1 Maneuver	881	998	-	-	1531
Stage 1	952	-	-	-	-
Stage 2	942	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	877	998	-	-	1531
Mov Cap-2 Maneuver	877	-	-	-	-
Stage 1	952	-	-	-	-
Stage 2	937	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	890	1531
HCM Lane V/C Ratio	-	-	0.032	0.005
HCM Control Delay (s)	-	-	9.2	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
 3: Northfork Road & River View Meadows Lane

10/13/2022

Intersection

Int Delay, s/veh 2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	12	9	28	29	0
Future Vol, veh/h	1	12	9	28	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	25	25	13	13	7	7
Mvmt Flow	1	15	11	34	35	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	91	35	35	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	56	-	-	-	-	-
Critical Hdwy	6.65	6.45	4.23	-	-	-
Critical Hdwy Stg 1	5.65	-	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-	-
Follow-up Hdwy	3.725	3.525	2.317	-	-	-
Pot Cap-1 Maneuver	856	976	1508	-	-	-
Stage 1	931	-	-	-	-	-
Stage 2	911	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	850	976	1508	-	-	-
Mov Cap-2 Maneuver	850	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	911	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1508	-	965	-	-
HCM Lane V/C Ratio	0.007	-	0.016	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
 1: Northfork Road & South Site Access

10/13/2022

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y ^Y			↑	↑	
Traffic Vol, veh/h	0	4	2	82	52	0
Future Vol, veh/h	0	4	2	82	52	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	4	4	3	3
Mvmt Flow	0	4	2	92	58	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	154	58	58	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.14	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.236	-	-	-
Pot Cap-1 Maneuver	838	1008	1533	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	837	1008	1533	-	-	-
Mov Cap-2 Maneuver	837	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1533	-	1008	-	-
HCM Lane V/C Ratio	0.001	-	0.004	-	-
HCM Control Delay (s)	7.4	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
2: Northfork Road & McDonald Dike Road

10/13/2022

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↙		↕			↖↗
Traffic Vol, veh/h	22	8	57	17	11	31
Future Vol, veh/h	22	8	57	17	11	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	3	3	6	6
Mvmt Flow	24	9	62	18	12	34

Major/Minor	Minor1	Major1	Major2	Major3	Major4
Conflicting Flow All	129	71	0	0	80
Stage 1	71	-	-	-	-
Stage 2	58	-	-	-	-
Critical Hdwy	6.44	6.24	-	-	4.16
Critical Hdwy Stg 1	5.44	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-
Follow-up Hdwy	3.536	3.336	-	-	2.254
Pot Cap-1 Maneuver	861	986	-	-	1493
Stage 1	947	-	-	-	-
Stage 2	959	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	854	986	-	-	1493
Mov Cap-2 Maneuver	854	-	-	-	-
Stage 1	947	-	-	-	-
Stage 2	951	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	886	1493
HCM Lane V/C Ratio	-	-	0.037	0.008
HCM Control Delay (s)	-	-	9.2	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
 3: Northfork Road & River View Meadows Lane

10/13/2022

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	1	8	14	51	37	1
Future Vol, veh/h	1	8	14	51	37	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	3	3	7	7
Mvmt Flow	1	10	17	63	46	1

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	144	47	47	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	97	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	849	1022	1554	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	840	1022	1554	-	-	-
Mov Cap-2 Maneuver	840	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	1.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1554	-	998	-	-
HCM Lane V/C Ratio	0.011	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
 1: Northfork Road & South Site Access

10/13/2022

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			U	U	
Traffic Vol, veh/h	0	5	1	49	87	0
Future Vol, veh/h	0	5	1	49	87	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	33	33	13	13	9	9
Mvmt Flow	0	6	1	56	100	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	158	100	100	0	-	0
Stage 1	100	-	-	-	-	-
Stage 2	58	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.23	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.317	-	-	-
Pot Cap-1 Maneuver	766	877	1426	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	765	877	1426	-	-	-
Mov Cap-2 Maneuver	765	-	-	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	891	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1426	-	877	-	-
HCM Lane V/C Ratio	0.001	-	0.007	-	-
HCM Control Delay (s)	7.5	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
 2: Northfork Road & McDonald Dike Road

10/13/2022

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗			↗
Traffic Vol, veh/h	22	5	41	10	12	62
Future Vol, veh/h	22	5	41	10	12	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	25	6	47	11	14	71

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	152	53	0	0	58
Stage 1	53	-	-	-	-
Stage 2	99	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263
Pot Cap-1 Maneuver	812	981	-	-	1515
Stage 1	940	-	-	-	-
Stage 2	896	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	804	981	-	-	1515
Mov Cap-2 Maneuver	804	-	-	-	-
Stage 1	940	-	-	-	-
Stage 2	887	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	832	1515
HCM Lane V/C Ratio	-	-	0.037	0.009
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
 3: Northfork Road & River View Meadows Lane

10/13/2022

Intersection

Int Delay, s/veh 4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
----------	-----	-----	-----	-----	-----	-----

Lane Configurations	↙↘			↕	↕	
Traffic Vol, veh/h	3	48	22	28	29	1
Future Vol, veh/h	3	48	22	28	29	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	25	25	13	13	7	7
Mvmt Flow	4	59	27	34	35	1

Major/Minor	Minor2	Major1	Major2		
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Conflicting Flow All	124	36	36	0	0
Stage 1	36	-	-	-	-
Stage 2	88	-	-	-	-
Critical Hdwy	6.65	6.45	4.23	-	-
Critical Hdwy Stg 1	5.65	-	-	-	-
Critical Hdwy Stg 2	5.65	-	-	-	-
Follow-up Hdwy	3.725	3.525	2.317	-	-
Pot Cap-1 Maneuver	819	974	1507	-	-
Stage 1	930	-	-	-	-
Stage 2	881	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	804	974	1507	-	-
Mov Cap-2 Maneuver	804	-	-	-	-
Stage 1	913	-	-	-	-
Stage 2	881	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	9	3.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
-----------------------	-----	-----	-------	-----	-----

Capacity (veh/h)	1507	-	962	-	-
HCM Lane V/C Ratio	0.018	-	0.065	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

HCM 6th TWSC
1: Northfork Road & South Site Access

10/13/2022

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	0	4	2	117	72	0
Future Vol, veh/h	0	4	2	117	72	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	4	4	3	3
Mvmt Flow	0	4	2	131	81	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	216	81	81	0	-	0
Stage 1	81	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.14	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.236	-	-	-
Pot Cap-1 Maneuver	772	979	1504	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	771	979	1504	-	-	-
Mov Cap-2 Maneuver	771	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	891	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1504	-	979	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
 2: Northfork Road & McDonald Dike Road

10/13/2022

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕			↕
Traffic Vol, veh/h	22	14	92	17	15	51
Future Vol, veh/h	22	14	92	17	15	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	3	3	6	6
Mvmt Flow	24	15	100	18	16	55

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	196	109	0	0	118
Stage 1	109	-	-	-	-
Stage 2	87	-	-	-	-
Critical Hdwy	6.44	6.24	-	-	4.16
Critical Hdwy Stg 1	5.44	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-
Follow-up Hdwy	3.536	3.336	-	-	2.254
Pot Cap-1 Maneuver	788	939	-	-	1446
Stage 1	911	-	-	-	-
Stage 2	931	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	779	939	-	-	1446
Mov Cap-2 Maneuver	779	-	-	-	-
Stage 1	911	-	-	-	-
Stage 2	921	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	834	1446
HCM Lane V/C Ratio	-	-	0.047	0.011
HCM Control Delay (s)	-	-	9.5	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
 3: Northfork Road & River View Meadows Lane

10/13/2022

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	3	32	55	51	37	4
Future Vol, veh/h	3	32	55	51	37	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	3	3	7	7
Mvmt Flow	4	40	68	63	46	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	248	49	51	0	-	0
Stage 1	49	-	-	-	-	-
Stage 2	199	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	740	1020	1549	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	707	1020	1549	-	-	-
Mov Cap-2 Maneuver	707	-	-	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	835	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1549	-	983	-	-
HCM Lane V/C Ratio	0.044	-	0.044	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Preliminary Traffic Signal Warrant Analysis



Project Name: Riverview Meadows

Intersection: Northfork Road at South Site Access

Scenario: 2025 Background Plus Site Trips

Number of Major Street Lanes: 1

PM Peak Hour Volume 191 (sum of both approaches)

Number of Minor Street Lanes 1

PM Peak Hour Volume 3 (highest-volume approach)^a

Posted or 85th percentile speed > 40 mph: Yes

Isolated Population Less than 10,000: Yes

Warrant 1, Eight-Hour Vehicular Volume

Condition A - Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on minor street (total of both approaches)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B - Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on minor street (total of both approaches)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant Analysis Calculations

	8th Highest Hour ^b	Minimum Volume	Warrant Satisfied?
Condition A - Minimum Vehicular Volume			
Major Street Volume	108	350	
Minor Street Volume	2	105	No
Condition B - Interruption of Continuous Traffic			
Major Street Volume	108	525	
Minor Street Volume	2	53	No
Combination Warrant^c			
Major Street Volume	108	420	
Minor Street Volume	2	84	No

^a Minor-Street right turn volumes are reduced to account for the impact of right-turns on red.

^b Eighth-highest hour volumes are calculated as 5.65 percent of the expected daily traffic volume.

^c This warrant should be used only after adequate trial of other alternatives has failed to solve traffic problems.

Preliminary Traffic Signal Warrant Analysis



Project Name: Riverview Meadows
 Intersection: Northfork Road at McDonald Dike Road
 Scenario: 2025 Background Plus Site Trips

Number of Major Street Lanes: 1 PM Peak Hour Volume 175 (sum of both approaches)
 Number of Minor Street Lanes 1 PM Peak Hour Volume 33 (highest-volume approach)^a
 Posted or 85th percentile speed > 40 mph: Yes
 Isolated Population Less than 10,000: Yes

Warrant 1, Eight-Hour Vehicular Volume

Condition A - Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on minor street (total of both approaches)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B - Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on minor street (total of both approaches)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant Analysis Calculations

	8th Highest Hour ^b	Minimum Volume	Warrant Satisfied?
Condition A - Minimum Vehicular Volume			
Major Street Volume	99	350	
Minor Street Volume	19	105	No
Condition B - Interruption of Continuous Traffic			
Major Street Volume	99	525	
Minor Street Volume	19	53	No
Combination Warrant^c			
Major Street Volume	99	420	
Minor Street Volume	19	84	No

^a Minor-Street right turn volumes are reduced to account for the impact of right-turns on red.

^b Eighth-highest hour volumes are calculated as 5.65 percent of the expected daily traffic volume.

^c This warrant should be used only after adequate trial of other alternatives has failed to solve traffic problems.

Preliminary Traffic Signal Warrant Analysis



Project Name: Riverview Meadows

Intersection: Northfork Road at River View Meadows Lane

Scenario: 2025 Background Plus Site Trips

Number of Major Street Lanes: 1 PM Peak Hour Volume 147 (sum of both approaches)
 Number of Minor Street Lanes 1 PM Peak Hour Volume 27 (highest-volume approach)^a
 Posted or 85th percentile speed > 40 mph: Yes
 Isolated Population Less than 10,000: Yes

Warrant 1, Eight-Hour Vehicular Volume

Condition A - Minimum Vehicular Volume

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on minor street (total of both approaches)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B - Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on minor street (total of both approaches)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

Warrant Analysis Calculations

	8th Highest Hour ^b	Minimum Volume	Warrant Satisfied?
Condition A - Minimum Vehicular Volume			
Major Street Volume	83	350	
Minor Street Volume	15	105	No
Condition B - Interruption of Continuous Traffic			
Major Street Volume	83	525	
Minor Street Volume	15	53	No
Combination Warrant^c			
Major Street Volume	83	420	
Minor Street Volume	15	84	No

^a Minor-Street right turn volumes are reduced to account for the impact of right-turns on red.

^b Eighth-highest hour volumes are calculated as 5.65 percent of the expected daily traffic volume.

^c This warrant should be used only after adequate trial of other alternatives has failed to solve traffic problems.

Left-Turn Lane Warrant Analysis (ODOT Methodology)

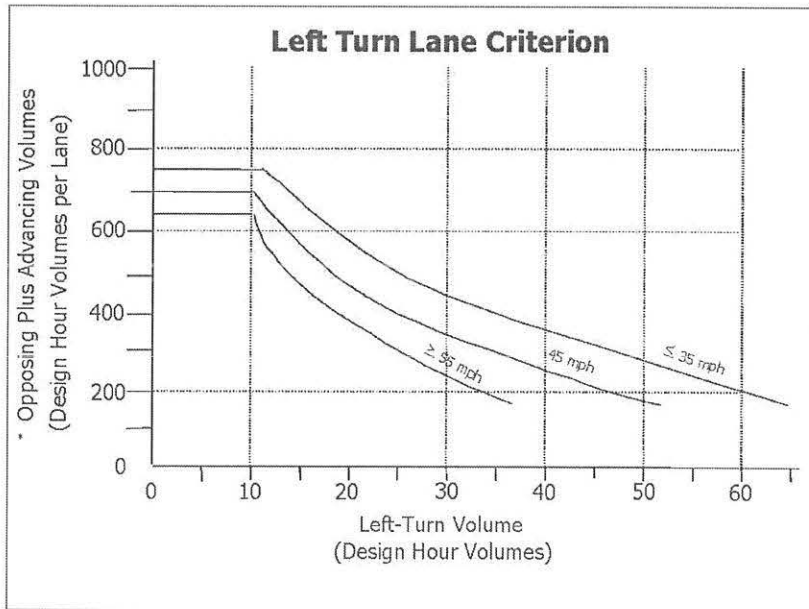


Project Name: Riverview Meadows
 Approach: Northbound Northfork Road at South Site Access
 Scenario: 2025 Background Plus Site Trips

Number of Advancing Lanes: 1
 Number of Opposing Lanes: 1
 Major-Street Design Speed: 45 mph

	AM Volume	PM Volume
Advancing Volume for Design Hour:	50	119
Opposing Volume for Design Hour:	87	72
Design Hour Volume Per Lane:	137	191
Number of Left Turns per Hour:	1	2
Left-turn lane warrants satisfied?	NO	NO

Exhibit 7-1 Left Turn Lane Criterion (TTI)



*(Advancing Volume/Number of Advancing Through Lanes) + (Opposing Volume/Number of Opposing Through Lanes)

Left-Turn Lane Warrant Analysis (ODOT Methodology)

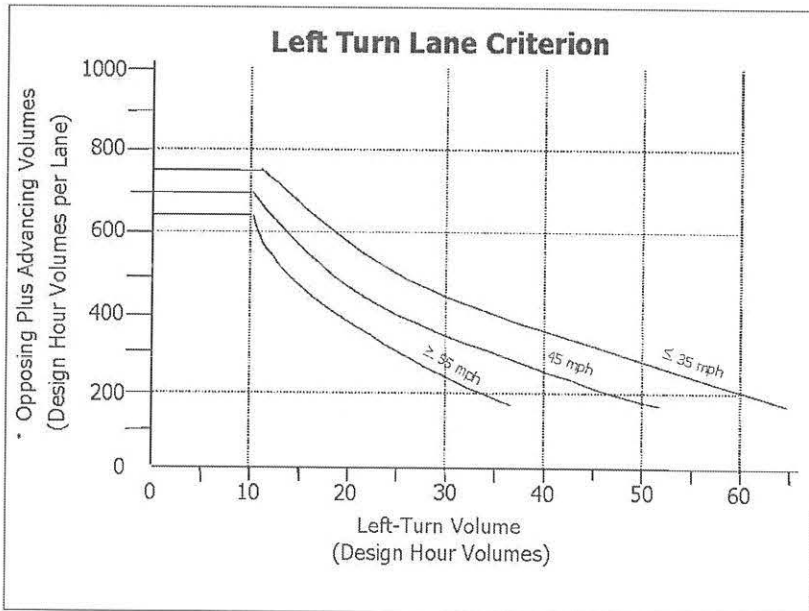


Project Name: Riverview Meadows
 Approach: Southbound Northfork Road at McDonald Dike Road
 Scenario: 2025 Background Plus Site Trips

Number of Advancing Lanes: 1
 Number of Opposing Lanes: 1
 Major-Street Design Speed: 45 mph

	AM Volume	PM Volume
Advancing Volume for Design Hour:	74	66
Opposing Volume for Design Hour:	51	109
Design Hour Volume Per Lane:	125	175
Number of Left Turns per Hour:	12	15
Left-turn lane warrants satisfied?	NO	NO

Exhibit 7-1 Left Turn Lane Criterion (TTI)



*(Advancing Volume/Number of Advancing Through Lanes) + (Opposing Volume/Number of Opposing Through Lanes)

Left-Turn Lane Warrant Analysis (ODOT Methodology)



Project Name: Riverview Meadows

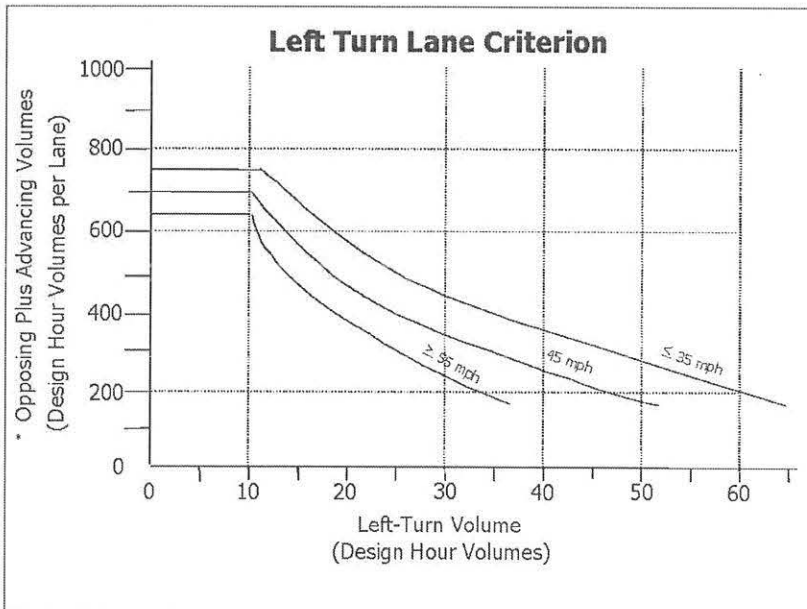
Approach: Northbound Northfork Road at River View Meadows Lane

Scenario: 2025 Background Plus Site Trips

Number of Advancing Lanes: 1
 Number of Opposing Lanes: 1
 Major-Street Design Speed: 45 mph

	AM Volume	PM Volume
Advancing Volume for Design Hour:	50	106
Opposing Volume for Design Hour:	30	41
Design Hour Volume Per Lane:	80	147
Number of Left Turns per Hour:	22	55
Left-turn lane warrants satisfied?	NO	NO

Exhibit 7-1 Left Turn Lane Criterion (TTI)



*(Advancing Volume/Number of Advancing Through Lanes) + (Opposing Volume/Number of Opposing Through Lanes)

Right-Turn Lane Warrant Analysis (ODOT Methodology)



Project Name: Riverview Meadows
 Approach: Southbound Northfork Road at South Site Access
 Scenario: 2025 Background plus Site Trips

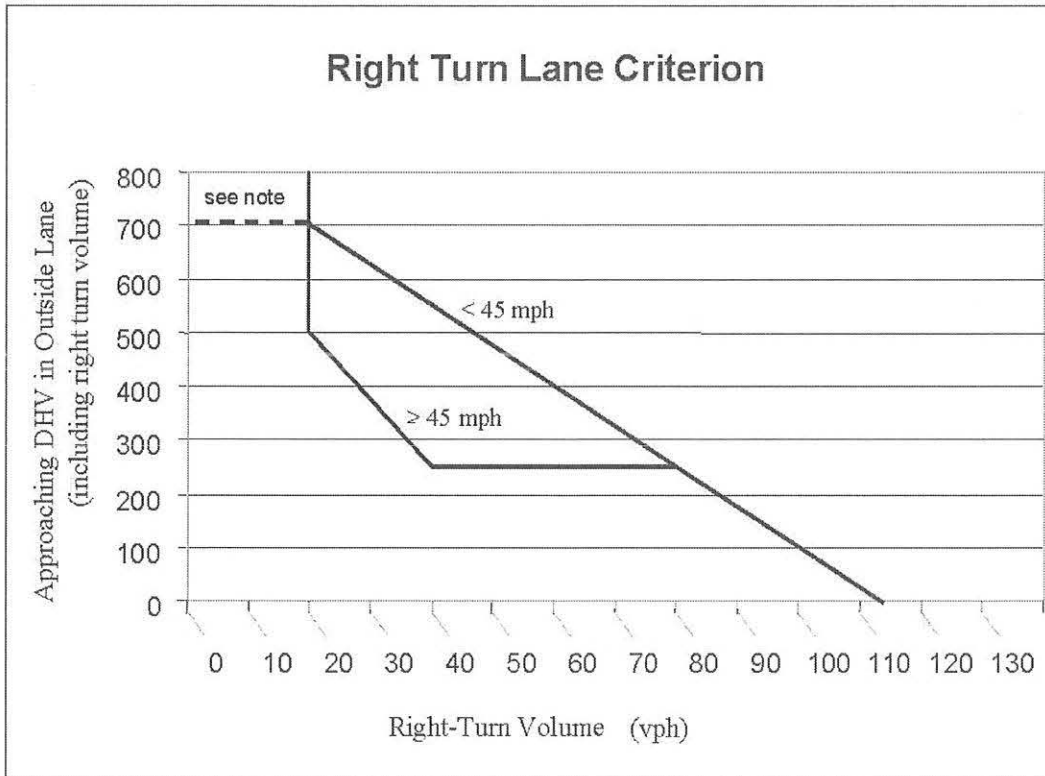
Major-Street Design Speed: 45 mph

	AM Volume	PM Volume
Number of Right Turns per Hour:	0	0
Approaching DVH in Outside Lane:	87	72
Calculated Turn Volume Threshold:	101	103
Right Turn Volume Exceeds Threshold?	NO	NO

Criterion 1: Vehicular Volume

The vehicular volume criterion is intended for application where the volume of intersecting traffic is the principal reason for considering installation of a right turn lane. The vehicular volume criteria are determined using the curve in Exhibit 7-2.

Exhibit 7-2 Right Turn Lane Criterion



Note: If there is no right turn lane, a shoulder needs to be provided. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

Right-Turn Lane Warrant Analysis (ODOT Methodology)



Project Name: Riverview Meadows
 Approach: Northbound Northfork Road at McDonald Dike Road
 Scenario: 2025 Background plus Site Trips

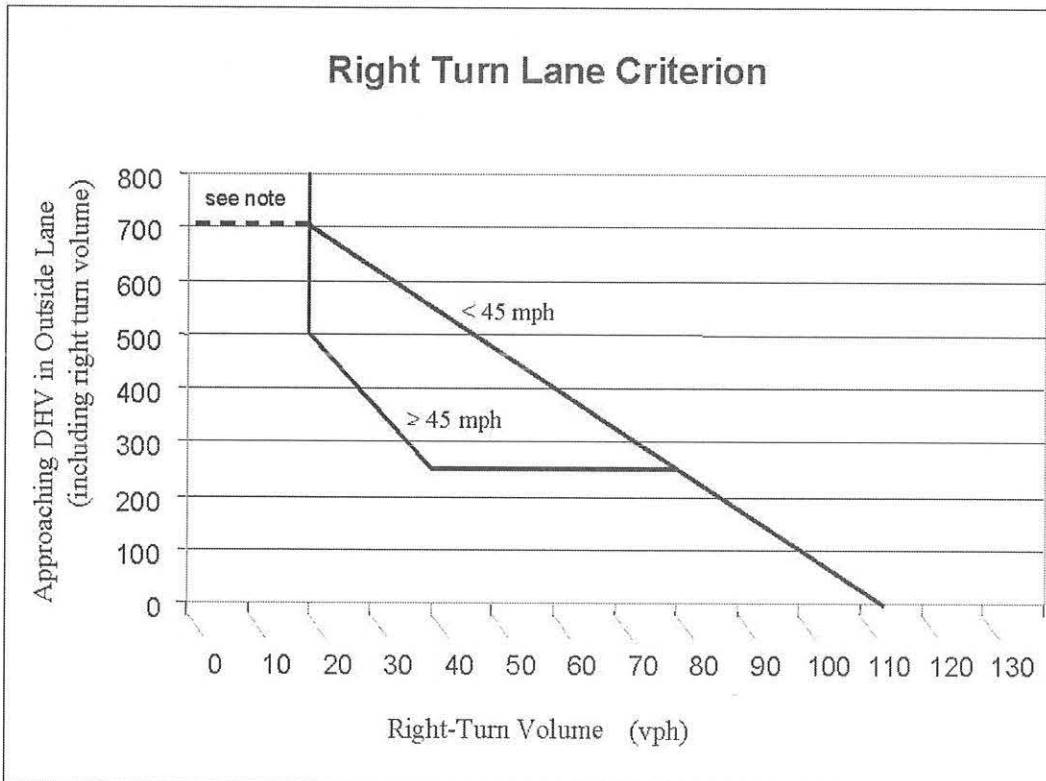
Major-Street Design Speed: 45 mph

	AM Volume	PM Volume
Number of Right Turns per Hour:	10	17
Approaching DVH in Outside Lane:	51	109
Calculated Turn Volume Threshold:	106	99
Right Turn Volume Exceeds Threshold?	NO	NO

Criterion 1: Vehicular Volume

The vehicular volume criterion is intended for application where the volume of intersecting traffic is the principal reason for considering installation of a right turn lane. The vehicular volume criteria are determined using the curve in Exhibit 7-2.

Exhibit 7-2 Right Turn Lane Criterion



Note: If there is no right turn lane, a shoulder needs to be provided. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

Right-Turn Lane Warrant Analysis (ODOT Methodology)



Project Name: Riverview Meadows

Approach: Southbound Northfork Road at River View Meadows Lane

Scenario: 2025 Background plus Site Trips

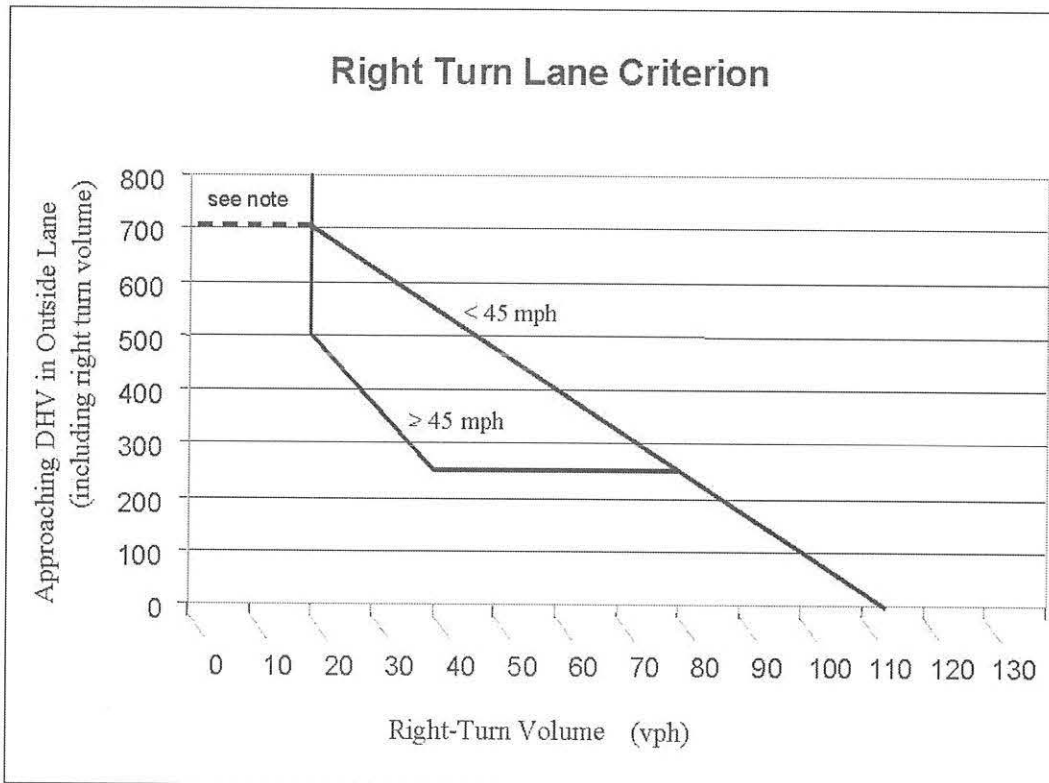
Major-Street Design Speed: 45 mph

	AM Volume	PM Volume
Number of Right Turns per Hour:	1	4
Approaching DVH in Outside Lane:	30	41
Calculated Turn Volume Threshold:	109	108
Right Turn Volume Exceeds Threshold?	NO	NO

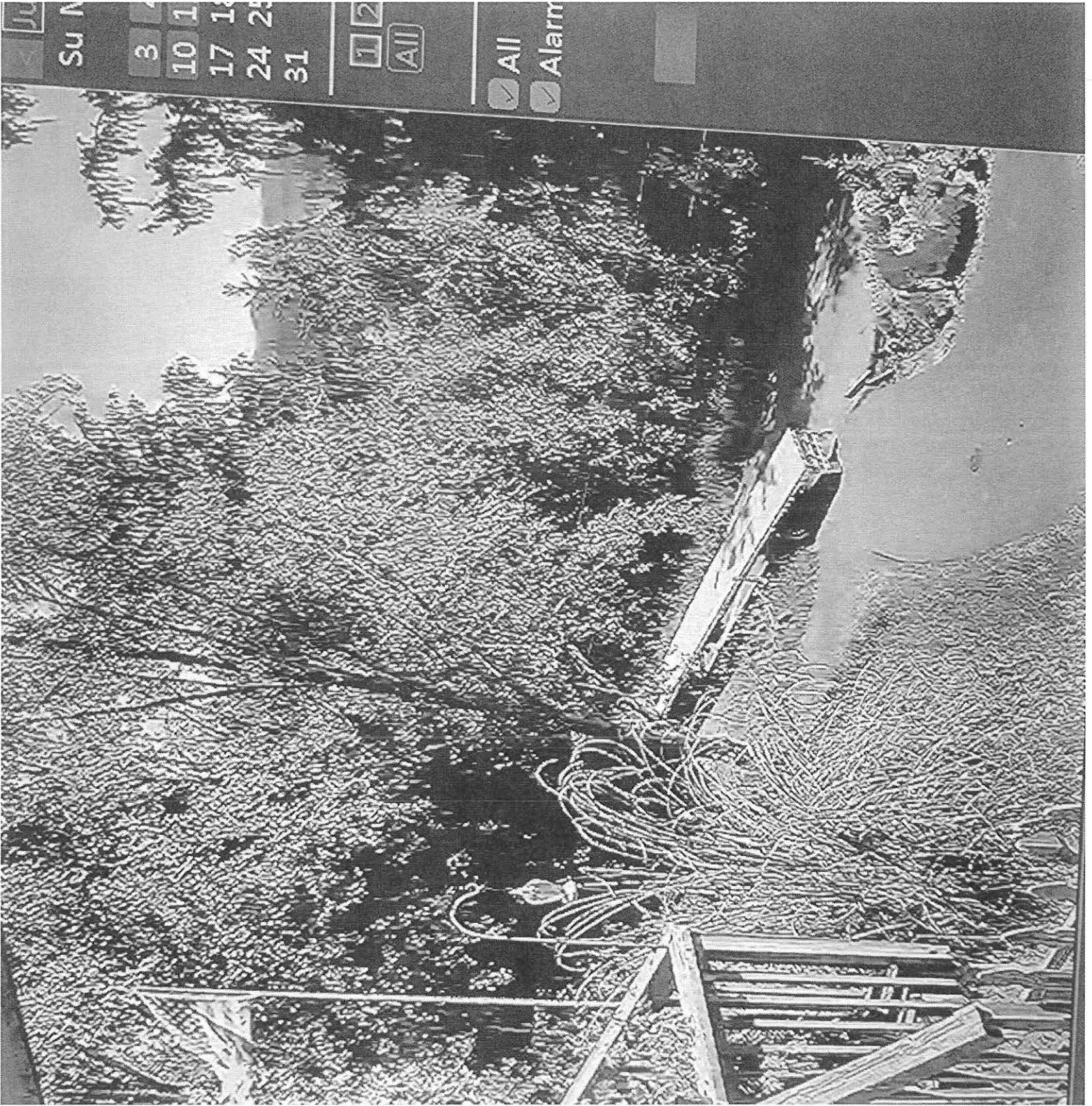
Criterion 1: Vehicular Volume

The vehicular volume criterion is intended for application where the volume of intersecting traffic is the principal reason for considering installation of a right turn lane. The vehicular volume criteria are determined using the curve in Exhibit 7-2.

Exhibit 7-2 Right Turn Lane Criterion



Note: If there is no right turn lane, a shoulder needs to be provided. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.





Points of Interest

What is sight distance?

Types of sight distance.

Stopping sight distance.

Intersection sight
distance.

Deviations from sight
distance standards.

✓ A fast moving vehicle needs more distance to stop safely than a slow moving vehicle.

✓ Stopping sight distance increases as speed increases and on down grades.

✓ It decreases as speed decreases and on upgrades.

Sight Distance

Sight Distance is one of three approach permit approval standards.

What is Sight Distance?

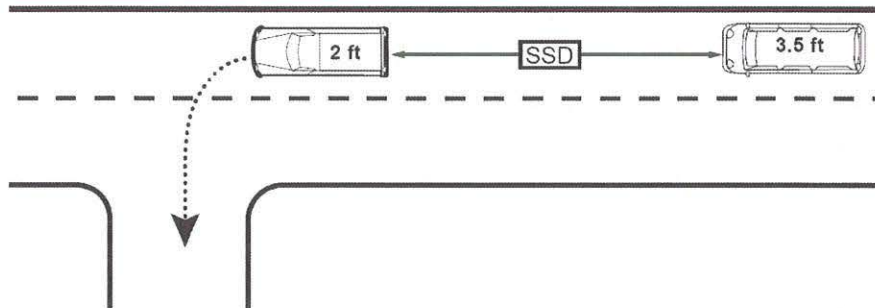
Sight distance is the length of highway a driver needs to be able to see clearly. It is important for drivers on a highway to see far enough down the highway to recognize an object in the path and react appropriately to avoid a crash. It is equally important for drivers entering the highway to have a clear line of sight in both directions to see oncoming traffic and to be visible to other drivers on the highway.

Two Types of Sight Distance

1. **Stopping Sight Distance** measures the distance between a vehicle on the highway and an object in the travel path.
2. **Intersection Sight Distance** measures the length of the line of sight between a vehicle entering the highway from a driveway or crossroad and vehicles on the highway approaching from the right and left.

Stopping Sight Distance (SSD)

Stopping sight distance is the minimum length of unobstructed roadway a driver needs to see in order to identify an object in the roadway, brake and quickly stop or take other appropriate action to avoid crashing. It is also described as minimum braking distance.

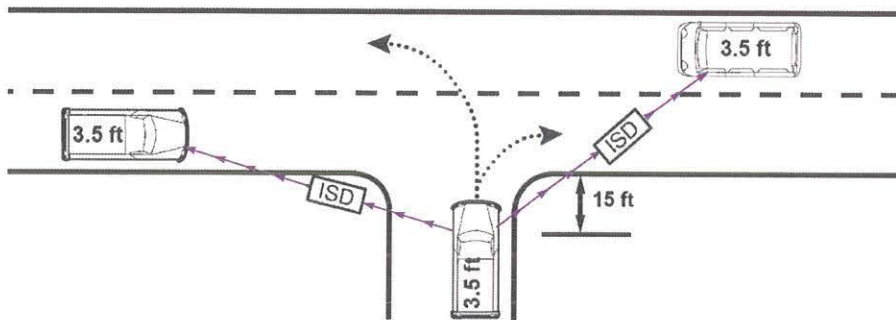


Stopping sight distance (SSD) is measured from the height of a driver's eye (3.5 feet) to an object 2 feet high or more in the roadway.

Intersection Sight Distance (ISD)

Intersection sight distance is the minimum length of unobstructed line of sight between a driver entering a highway and vehicles approaching from the right and left on the highway. It is as important for drivers entering the highway to see traffic coming from both directions and to be visible to the on-coming traffic.

A driver entering a highway needs to see far enough down the highway in both directions to judge travel speed and find an acceptable gap in the traffic before turning right or turning left across travel lanes and merging into the traffic. Intersection sight distance is intended to allow a driver to enter the highway safely while allowing traffic on the highway to maintain normal travel speed.



Intersection sight distance (ISD) measures a line of sight from the height of driver's eye (3.5 feet), seated 15 feet back from the fog line or edge of the traveled way, to the right and to the left, to an object in the highway that is 3.5 feet high.

Deviations from Intersection Sight Distance

The sight distance standards ODOT uses to evaluate approach applications are based on intersection sight distance. If it is not possible to meet intersection sight distance standards, then ODOT may be able to adjust:

- The assumed speed of the oncoming traffic; or
- The point in the driveway where intersection sight distance is measured.

In most situations, intersection sight distance is greater than stopping sight distance. ODOT may be able to consider approving a sight distance deviation by using stopping sight distance in place of intersection sight distance. ODOT may require the applicant to provide mitigation in order to approve a deviation from intersection sight distance standards.



Coast Printing <coastprintingoffice@gmail.com>

Fwd: Placement of Water Tower for Riverview Meadows

1 message

PriniLee K. McCord <prinilee@trevallygroup.us>
To: Coast Printing <coastprintingoffice@gmail.com>

Wed, Oct 19, 2022 at 3:06 PM

Please make 10 copies of this email.

Thank you!

----- Forwarded message -----

From: **Melissa Thompson-Kiefer** <mthompson@nehalem.gov>
Date: Fri, Oct 7, 2022 at 2:14 PM
Subject: RE: Placement of Water Tower for Riverview Meadows
To: Sarah Absher <sabsher@co.tillamook.or.us>
CC: Prini Lee McCord <prinilee@trevallygroup.us>

Hello Sarah,

I have conferred with our City Planner and can confirm that the city would allow the construction of the water tower and installation of the water line in the areas depicted in part of future Phase 3 of Riverview Meadows at the time of construction of the Phase 2 subdivision.

Thanks,

Melissa Thompson-Kiefer
City Manager
City of Nehalem
503-368-5627

From: Sarah Absher <sabsher@co.tillamook.or.us>
Sent: Friday, October 7, 2022 11:53 AM
To: Melissa Thompson-Kiefer <mthompson@nehalem.gov>
Cc: Prini Lee McCord <prinilee@trevallygroup.us>
Subject: Placement of Water Tower for Riverview Meadows

Good Morning Melissa,

Thank you for taking my call. As discussed, the applicants of Riverview Meadows Phase 2 would like to confirm it would be allowed to continue with construction of the water tower and waterline to serve Phase 2 as it is reflected on the submitted plats. The water tower and line installation would be installed upon approval of Phase 2 for future use of Phase 2 and 3. The line would be installed in the location of the future right of way for road improvements in Phase 3.

The City's zoning code is silent on placement of water towers. Please confirm if the city would allow the construction of the water tower and installation of the water line in the areas depicted part of future Phase 3 of Riverview Meadows at the time of construction of the Phase 2 subdivision.

Thank You,



Sarah Absher, CBO, CFM, Director

TILLAMOOK COUNTY | Community Development

1510-B Third Street

Tillamook, OR 97141

Phone (503) 842-3408 x3317

sabsher@co.tillamook.or.us

Regards,
PriniLee K. McCord | Partner
Trevally Group, LLC.
Trevally International S. DE R.L. DE C.V.
PO Box 872495, Vancouver, WA 98687
971.808.7611 | PriniLee@TrevallyGroup.us

This message may contain confidential or proprietary information intended only for the use of the addressee(s) named above or may contain information that is legally privileged. If you are not the intended addressee, you are hereby notified that reading, disseminating, distributing or copying this message is strictly prohibited.



I hereby certify that the within instrument was received for record and recorded in the County of Tillamook, State of Oregon.

Tassi O'Neil, Tillamook County Clerk

AFTER RECORDING RETURN TO:

Riverview Meadows Development LLC
23765 SE Highway 212
Damascus, OR 97089

SEND TAX STATEMENT TO:

NO CHANGE

SPACE ABOVE RESERVED FOR RECORDING LABEL

EASEMENT

Know by all persons present, that Vern Scovell ("Grantor"), for consideration of the mutual promises exchanged herein and other good and valuable consideration exchanged with Riverview Meadows Development LLC, ("Grantee"), does hereby grant a non-exclusive easement for public access over, under and across the real property described herein, for the benefit of the real property as described herein, all being more particularly described herein.

EASEMENT RECITALS

A. Grantor is the owner of the real property ("Parcel 1") being legally described, and pictorially described, in the attached **Exhibit A**.

B. Grantee is the owner of the real property ("Parcel 2") being legally described as follows:

Tract B, RIVERVIEW MEADOWS PHASE I, situated in the Northwest quarter of Section 23, Township 3 North, Range 10 West, Willamette Meridian, County of Tillamook, State of Oregon, recorded July 26, 2010 as Instrument No. 2010-004288, Tillamook County Records.

C. Parcel 1 and Parcel 2 are in close proximity to each other and are, or will be, connected by way of an additional public easement.

D. It is the intent of the parties herein named to create a non-exclusive, public access, and permanent right to enter, re-enter, and use Parcel 1, subject to conditions as set forth herein, for the benefit of Grantee's Parcel 2, and the general public.

E. The non-exclusive easement will be used for public and private ingress and egress purposes by the general public, by Grantee, and by Grantee's successors in ownership of Grantee's Parcel 2.

Consideration 0 Zero

F. Additionally, the non-exclusive easement for public access and public and/or private utilities, shall also include the right to lay, construct, and maintain streets, water mains, sewer mains, storm drainage lines, and all related appurtenances, to be constructed and located on, across, under or over Parcel 1.

G. The parties agree that any unknown defect in the above Easement Area due to inaccuracy will not hinder the intent of the parties.

IT IS FURTHER UNDERSTOOD and AGREED:

1. The foregoing Easement Recitals paragraphs are contractual and not merely recitals, and are incorporated by this reference.
2. The rights and obligations of all the easements herein shall run with and be appurtenant to those parcels of land as described, and shall not be personal to any person, except that the obligation to pay for the costs and expenses (for costs and expenses incurred while a person was an owner) shall be personal to the owners of the described parcels, as well as run with the described parcels.
3. Grantee, and the general public shall have a non-exclusive, public access, and permanent right to enter, re-enter, and use Parcel 1 being legally described, and pictorially described, in the attached **Exhibit A**, subject to conditions as set forth herein, for the benefit of Grantee's Parcel 2. The easement shall include the right of the Grantor or Grantee to reasonably improve the surface of the easement area herein described; costs of any improvements to the easement area shall be borne by Grantee, their successors and assigns. Any improvement to the easement area shall be in compliance with all applicable local, state, and federal law.
4. Grantee shall have a non-exclusive easement for public access and public and/or private utilities, to include the right to lay, construct, and maintain streets, water mains, sewer mains, storm drainage lines, and all related appurtenances, to be constructed and located on, across, under or over Parcel 1.
5. Grantor agrees that the consideration recited herein is just compensation for the property rights herein granted.
6. Grantor represents and warrants that Grantor has the authority to grant the easement and that the easement area is free from all liens and encumbrances that would materially affect the easement grant, and that they will defend this easement grant against all lawful claims and demands of all persons whomsoever with respect to any liens or encumbrances that would materially affect the easement grant.

[SIGNATURE PAGE FOLLOWS]

The parties above named have hereunto set their hands this 19 day of October, 2022.

GRANTOR:

GRANTEE:

Riverview Meadows Development LLC

Vern Scovell
Vern Scovell

Vern Scovell
Vern Scovell, Member

Carey Sheldon
Carey Sheldon, President of
Sheldon Development Inc., Member

STATE OF OREGON

County of Tillamook

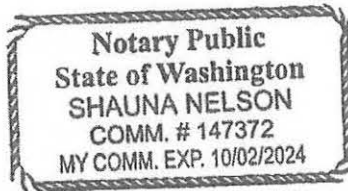
This instrument was acknowledged before me on October 19th, 2022, by Vern Scovell, the above-named Grantor, and Member of Grantee.



[Signature]
Notary Public for Oregon
My Commission expires: March 7, 2025

STATE OF ^{Washington} ~~OREGON~~
County of Clatsop

This instrument was acknowledged before me on October 18, 2022, by Carey Sheldon, President of Sheldon Development Inc., Member of the above-named Grantee.



[Signature]
Notary Public for ~~Oregon~~ Washington
My Commission expires: 10/2/2024

EXHIBIT A

EASEMENT SITUATED IN THE NORTHWEST ONE-QUARTER OF SECTION 23, TOWNSHIP 3 NORTH, RANGE 10 WEST, OF THE WILLAMETTE MERIDIAN, CITY OF NEHALEM, TILLAMOOK COUNTY, OREGON;

BEGINNING AT THE MOST EASTERLY SOUTHEAST CORNER OF PARCEL 2, PARTITION PLAT NO. 1994-58, TILLAMOOK COUNTY PLAT RECORDS; THENCE NORTH 61°24'25" WEST ALONG THE EAST LINE OF SAID PARTITION PLAT NO. 1994-58, A DISTANCE OF 165.96 FEET; THENCE NORTH 45°07'05" WEST CONTINUING ALONG SAID EAST LINE, A DISTANCE OF 228.41 FEET; THENCE NORTH 15°49'59" WEST CONTINUING ALONG SAID EAST LINE, A DISTANCE OF 275.39 FEET; THENCE NORTH 16°45'30" WEST CONTINUING ALONG SAID EAST LINE, A DISTANCE OF 338.59 FEET; THENCE NORTH 11°37'10" WEST CONTINUING ALONG A PORTION OF SAID EAST LINE, A DISTANCE OF 89.07 FEET TO THE WEST LINE OF THAT PROPERTY DESCRIBED IN DOCUMENT NO. 2005-011393, TILLAMOOK COUNTY DEED RECORDS; THENCE SOUTH 36°55'01" EAST ALONG THE WEST LINE OF SAID DOCUMENT NO. 2005-011393, A DISTANCE OF 121.94 FEET; THENCE SOUTH 16°45'30" EAST ALONG SAID WEST LINE OF DOCUMENT NO. 2005-011393, A DISTANCE OF 313.23 FEET; THENCE SOUTH 15°49'59" EAST ALONG SAID WEST LINE OF DOCUMENT NO. 2005-011393, A DISTANCE OF 262.73 FEET TO THE MOST WESTERLY CORNER OF THAT PROPERTY DESCRIBED IN BOOK 614, PAGE 807, TILLAMOOK COUNTY DEED RECORDS; THENCE SOUTH 45°07'05" EAST ALONG THE SOUTHWESTERLY LINE OF SAID PROPERTY DESCRIBED IN BOOK 614, PAGE 807, A DISTANCE OF 208.19 FEET; THENCE SOUTH 61°24'25" EAST CONTINUING ALONG SAID SOUTHWESTERLY LINE OF PROPERTY DESCRIBED IN BOOK 614, PAGE 807, A DISTANCE OF 183.79 FEET TO THE MOST SOUTHWESTERLY CORNER OF THAT PROPERTY DESCRIBED IN BOOK 211, PAGE 52, TILLAMOOK COUNTY DEED RECORDS; THENCE SOUTH 60°03'55" EAST ALONG THE SOUTHWESTERLY LINE OF SAID PROPERTY DESCRIBED IN BOOK 211, PAGE 52, A DISTANCE OF 120.81 FEET TO THE MOST WESTERLY CORNER OF PARTITION PLAT NO. 1993-46, TILLAMOOK COUNTY PLAT RECORDS; THENCE SOUTH 59°58'05" EAST ALONG THE SOUTHERLY LINE OF SAID PARTITION PLAT NO. 1993-46, A DISTANCE OF 130.92 FEET TO THE WEST RIGHT-OF-WAY LINE FOR NORTH FORK COUNTY ROAD; THENCE ALONG 250.37 FOOT RADIUS NON-TANGENT CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 14°32'27", A LENGTH OF 63.54 FEET, THE LONG CHORD OF WHICH BEARS SOUTH 67°12'31" WEST 63.37 FEET; THENCE NORTH 60°03'55" WEST, A DISTANCE OF 237.03 FEET TO THE POINT OF BEGINNING

EMERGENCY VEHICLE ACCESS EASEMENT EXHIBIT
 SITUATED IN THE N.W. 1/4 OF SEC. 23, T.3N, R.10W, W.M.
 CITY OF NEHALEM, TILLAMOOK COUNTY, OREGON

**REGISTERED
 PROFESSIONAL
 LAND SURVEYOR**

Thomas G. Nelson

OREGON
 JULY 26, 1988
THOMAS G. NELSON
 #2351

RENEWAL 12/31/10

SURVEYED FOR:

VERN SCOVELL
 P.O. BOX 151
 NEHALEM, OR 97131
 PHONE: 503-368-7788

DOCUMENT NO.
 2005-011393

PARTITION PLAT
 1994-58

BOOK 614,
 PAGE 807

PARCEL 2

BOOK 211,
 PAGE 52

PARTITION
 PLAT
 1993-46

POINT OF BEGINNING

R=250.37', L=63.54'
 Δ=14°32'27"
 CH=S67°12'31"W 63.37'

NORTH FORK
 COUNTY ROAD

N11°37'10"W
 89.07'

S56°05'01"E
 121.94'

PARCEL 1

N19°44'30"W 328.89'

S16°45'30"E 313.23'

N11°54'49"W 275.39'

S15°49'59"E 262.73'

S45°07'05"E 208.19'
 EMERGENCY VEHICLE
 ACCESS EASEMENT

N45°07'05"W 228.41'

S61°24'25"E
 183.79'

N61°24'25"W
 165.96'

S60°03'55"E
 120.81'

N60°03'55"W 237.03'

S59°58'05"E
 130.92'



SCALE: NOT TO SCALE

Tom Nelson & Associates, L.L.C.

1001 SE WATER AVE. SUITE 300
 PORTLAND, OREGON 97214
 PHONE: (503) 239-1632
 FAX: (503) 239-1982



Tillamook County Public Works

503 Marolf Loop Road, Tillamook, OR 97141

County Road Phone: 503-842-3419

Solid Waste Phone: 503-815-3975

Fax: 503-842-6473

Email: pubwks@co.tillamook.or.us

TTY Oregon Relay Service

Trees, Cheese, and Ocean Breeze

October 13, 2022

To: Sarah Absher, Planning Department Director
Tillamook County Planning Department
From: Ronald E. Newton, Engineering Technician III
Tillamook County Public Works

Subject: Partition Request #851-21-000415-PLNG
Sheldon Development, Inc.

Sarah,

Recently received correspondence from counsel advising Riverview Meadows Inc. indicates some question of authority to require a fully functional secondary access road to support future development of the planned unit development known as River View Meadows.

As you now, the proposed development is located outside the city limits of The City of Nehalem, but within the associated Urban Growth Boundary, (UGB). This presents the situation where city ordinance language is based on development within the grid system of the city street plan and will not provide adequate safe transportation planning to the limits of the UGB. In these situations, authority is supported by Oregon Revised Statute, (ORS) Chapter 368. ORS chapter 368.016 provides for the County Engineer to take action in regards to local city streets at times when the city consents to the action. In this case, city ordinance does not provide adequate transportation design guidance, and both city and county agree that county standards should be applied. The result is that the County Engineer's evaluation of transportation requirements becomes the controlling authority.

ORS Ch. 368.039 provides that county has the authority to require design standards that "*shall supersede and prevail over any specifications and standards for roads and streets that are set forth in a uniform fire code adopted by the State Fire Marshal, a municipal fire department or a county firefighting agency.*" This clearly provides the County Engineer authority to require safe, effective public transportation in situations where otherwise inadequate or nonexistent options otherwise exist.

Tillamook County Ordinance #55 references the Oregon Department of Transportation *Standard Specifications for Highway Construction*, The American Association of State Highway Transportation Officials Manual *A Policy on Geometric Design of Highways and Streets* and the Federal Highway Administrations *Manual on Uniform Traffic Control Devices* as adopted by the Oregon Department of Transportation. These documents become the controlling standards and specifications adopted by Tillamook County.

The section of Riverview Meadows Drive adjacent to North Fork Nehalem River Road represents little more than a single lane paved alignment and fails to meet any applicable AASHTO standard for lane width, shoulder width, adjacency of immovable obstructions, etc. In

this first section of roadway there are four private residences located at the very edge of the existing Right of Way line. Please note the aerial image below to assist in viewing the limited width of the existing roadway showing a single vehicle traveling through this section. This image provides evidence of the inadequate capacity of the existing roadway.



The Traffic Impact Study, (TIS), provided by the applicants suggest that the intersection at the end of this section of roadway contains adequate carrying capacity to support the full buildout of the Riverview Meadows development. The TIS suggests that there will be times when vehicles leaving the development will queue in this same section of roadway. It is the determination of the County Engineer that this creates an unsafe point of congestion even in normal daily traffic. With commuters queued to enter the North Fork County Road, there is no safe way for vehicular movement by adjacent land owners to enter or leave the existing roadway.

Public Works finds additional issues with the TIS. Section 160(1)(a). identifies that the standard to be used is "A Policy on Geometric Design on Highway and Streets" (referred hereinafter as the Green Book). The "Riverview Meadows Traffic Impact Study" dated August 12, 2022 (hereinafter referred to as the Study) used these standards. The Intersection Sight Distance section of the report identifies that the standards are not met.

The Study reported "... a minimum of 500 ft of intersection sight distance is generally desired in each direction for each point of access. However, horizontal curves in the site vicinity limit both the available sight lines and the approach speeds of vehicles at the limits of sight distance." The 500 ft distance listed is published sight distance using a Design Speed of 45 mph and passenger cars.

Per the Study: "For the existing site access on River View Meadows Lane, the available intersection sight distance was measured to be 428 feet to the north and 378 feet to the south."

The study uses a speed study to lower the acceptable sight distance. Please note the following excerpts from the Green Book:

“Posted speed limits, as a matter of policy, are not the highest speeds that might be used by drivers. Instead, such limits are usually set to approximate the 85th percentile speed of traffic as determined by measuring the speeds of a sizeable sample of vehicles.”

“Operating speed is the speed at which drivers are observed operating their vehicles during free-flow conditions. The 85th percentile of the distribution of observed speeds is the most frequently used measure of the operating speed associated with a particular speed associated with a particular location or geometric feature.”

“Design speed is the selected speed used to determine the various geometric design features of the roadway. The selected design speed should be a logical one with respect to the anticipated operating speed, topography, the adjacent land use, and the functional classification of the highway.”

The Study states *“Typically, the 85th percentile speed is used for design.”* is not correct. However, the Study did identify that reducing the design speeds to match the 85th percentile speed did not produce an acceptable sight distance. *“Again, the available intersection sight distance was less than the desired intersection distance.”* The Study then deviates from utilizing the intersection sight distance standard and uses stopping sight distance and the 85th percentile speed.

The proposed project does not meet the standard for Intersection Sight Distance. Please note 500-ft is based on a Design Speed of 45 mph and passenger cars. The distance increases to 630-ft for single unit trucks.

In the River View Meadows Lane – Roadway Geometry section, the Study identifies that *“...single-unit trucks, garbage trucks, and fire apparatus... require the full width of River View Meadows Lane for maneuvering in the vicinity of North Fork Road.”* It is not acceptable to place additional traffic on this road as the risk of collision increases.

The combination of the lack of sight distance and the above-described vehicle maneuvering issues in the vicinity of North Fork Road is not acceptable.

Based on the above, and in concurrence with the City of Nehalem, Tillamook County Public Works will require that a full developed, two-lane roadway built to county road standards shall be a requirement for approval of any future buildout of the Riverview Meadows residential development.

Please feel free to contact we directly with any questions.

Thank you,



Ronald E. Newton, LSI
Eng. Tech. III, Tillamook County Public Works

AFTER RECORDING RETURN TO:

Riverview Meadows Development LLC
23765 SE Highway 212
Damascus, OR 97089

Tillamook County, Oregon
10/20/2022 02:40:51 PM
DEED-ESMAT
2022-006452

\$30.00 \$11.00 \$61.00 \$10.00 - Total = \$112.00



I hereby certify that the within instrument was received for record and recorded in the County of Tillamook, State of Oregon.

Tassi O'Neil, Tillamook County Clerk

SEND TAX STATEMENT TO:

NO CHANGE

SPACE ABOVE RESERVED FOR RECORDING LABEL

EASEMENT

Know by all persons present, that Donald E. Dillard ("Grantor"), for consideration of the mutual promises exchanged herein and other good and valuable consideration exchanged with Riverview Meadows Development LLC, ("Grantee"), which Grantor hereby acknowledges, does hereby grant a non-exclusive easement for public access over, under and across the real property described herein, and for public and/or private utilities, for the benefit of the real property as described herein, all being more particularly described herein.

EASEMENT RECITALS

A. Grantor is the owner of the real property ("Parcel 1") being legally described as:

Tract A, RIVERVIEW MEADOWS PHASE I, in the County of Tillamook, State of Oregon, recorded July 26, 2010 in Plat Cabinet B1142-0, Tillamook County Records.

B. Grantee is the owner of the real property ("Parcel 2") being legally described as follows:

Tract B, RIVERVIEW MEADOWS PHASE I, situated in the Northwest quarter of Section 23, Township 3 North, Range 10 West, Willamette Meridian, County of Tillamook, State of Oregon, recorded July 26, 2010 as Instrument No. 2010-004288, Tillamook County Records.

C. Parcel 1 and Parcel 2 are adjacent to each other.

D. It is the intent of the parties herein named to create a non-exclusive, public access, and permanent right to enter, re-enter, and use Parcel 1, subject to conditions as set forth herein, for the benefit of Grantee's Parcel 2, and the general public.

Consideration up to 50,000.00

E. The non-exclusive easement will be used for public and private ingress and egress purposes by the general public, by Grantee, and by Grantee's successors in ownership of Grantee's Parcel 2.

F. Additionally, the non-exclusive easement for public access and public and/or private utilities, shall also include the right to lay, construct, widen and maintain streets, water mains, sewer mains, storm drainage lines, and all related appurtenances, to be constructed and located on, across, under or over Parcel 1.

G. The parties agree that any unknown defect in the above Easement Area due to inaccuracy will not hinder the intent of the parties.

IT IS FURTHER UNDERSTOOD and AGREED:

1. The foregoing Easement Recitals paragraphs are contractual and not merely recitals, and are incorporated by this reference.
2. The rights and obligations of all the easements herein shall run with and be appurtenant to those parcels of land as described, and shall not be personal to any person, except that the obligation to pay for the costs and expenses (for costs and expenses incurred while a person was an owner) shall be personal to the owners of the described parcels, as well as run with the described parcels.
3. Grantee and the general public shall have a non-exclusive, public access, and permanent right to enter, re-enter, and use a portion of Parcel 1 being legally described in the attached **EXHIBIT "A"**, and pictorially described in the attached **EXHIBIT "B"**, subject to conditions as set forth herein, for the benefit of Grantee's Parcel 2 and the general public. The easement shall include the right of the Grantor or Grantee to reasonably improve the surface of the easement area herein described; costs of any improvements to the easement area shall be borne by Grantee, their successors and assigns. Any improvement to the easement area shall be in compliance with all applicable local, state, and federal law. In the event such applicable local, state, and federal law shall require broader access to Parcel 1 for the purposes set forth herein, then the portion of Parcel 1 being legally described in the attached **EXHIBIT "A"**, and pictorially described in the attached **EXHIBIT "B"**, shall increase in scope, and shall be geographically or otherwise broadened to meet such applicable local, state, and federal law without affecting the validity of the easement granted herein.
4. Grantee shall have a non-exclusive easement for public access and public and/or private utilities, to include the right to lay, construct, and maintain streets, water mains, sewer mains, storm drainage lines, and all related appurtenances, to be constructed and located on, across, under or over Parcel 1. Any improvement to the easement area shall be in compliance with all applicable local, state, and federal law.

5. Grantor agrees that the consideration recited herein is just compensation for the property rights herein granted. Specifically, Grantor has granted this easement in consideration of an Easement Agreement dated September 20, 2022 wherein Grantee agrees to pay Grantor the sum of \$25,000.00 upon execution of this Agreement, and Grantee agrees, if practicable, to install two access gates for security purposes. If it is not practicable to install the access gates, Grantee shall pay Grantor an additional sum of \$25,000.00.

6. Grantor represents and warrants that Grantor has the authority to grant the easement and that the easement area is free from all liens and encumbrances that would materially affect the easement grant, and that they will defend this easement grant against all lawful claims and demands of all persons whomsoever with respect to any liens or encumbrances that would materially affect the easement grant.

[SIGNATURE PAGE FOLLOWS]

The parties above named have hereunto set their hands this 19 day of October, 2022.

GRANTOR:

GRANTEE:

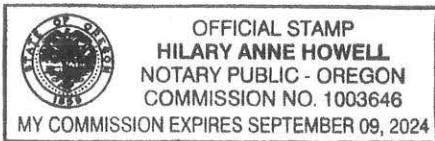
Riverview Meadows Development LLC

Donald E. Dillard
Donald E. Dillard

Carey Sheldon
Carey Sheldon, President of
Sheldon Development Inc., Member

STATE OF OREGON
County of TILLAMOOK

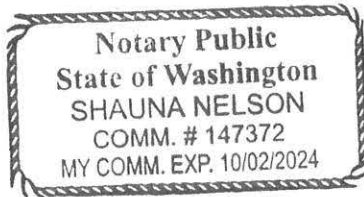
This instrument was acknowledged before me on OCTOBER 19, 2022,
by Donald E. Dillard, the above-named Grantor.



Hilary Anne Howell
Notary Public for Oregon
My Commission expires: 09/09/2024

Washington
STATE OF OREGON
County of CLATSOP

This instrument was acknowledged before me on October 18, 2022,
by Carey Sheldon, President of Sheldon Development Inc., Member of the above-named
Grantee.



Shauna Nelson
Notary Public for ~~Oregon~~ Washington
My Commission expires: 10/02/2024



All County Surveyors & Planners, Inc.

PO Box 955 • Sandy, Oregon 97055 • Phone: 503-668-3151 • Fax: 503- 668-4730

EXHIBIT "A"

Legal Description over a portion of Tract 'A', "Riverview Meadows Phase 1"

A TRACT OF LAND SITUATED IN THE NW 1/4 OF SECTION 23, TOWNSHIP 3 NORTH, RANGE 10 WEST, W.M., SHOWN AS AN "EMERGENCY VEHICLE ACCESS EASEMENT" IN "RIVERVIEW MEADOWS PHASE 1", RECORDED AS DOCUMENT NUMBER 2010-4288, TILLAMOOK COUNTY PLAT RECORDS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

Commencing at the Northwest corner of Tract 'A' of "Riverview Meadows Phase 1"; thence South $88^{\circ}34'29''$ East, along the North line of said Tract 'A' of said "Riverview Meadows Phase 1", a distance of 531.12 feet, to the most Northeasterly corner of said Tract 'A' of said "Riverview Meadows Phase 1", said point also being the most Northwesterly corner of the right of way of Sunnyview Drive, as dedicated in said "Riverview Meadows Phase 1", said point also being the **True Point of Beginning**; thence South $01^{\circ}25'31''$ West, along the West line of the said right of way of said Sunnyview Drive, a distance of 50.00 feet, to the Southwesterly corner of the said right of way of said Sunnyview Drive, said point also being on the North line of Lot 11 of said "Riverview Meadows Phase 1"; thence North $88^{\circ}34'29''$ West, along the North line of said Lot 11 and the North line of Lot 10 of said "Riverview Meadows Phase 1" and the westerly extension thereof, a distance of 245.17 feet, to a point of curvature, said point is the beginning of a curve that will be referred to as Curve 1 from hereon; thence along said Curve 1, an 86.29 foot radius tangent curve to the left, an arc distance of 155.19 feet through a central angle of $103^{\circ}02'41''$ (chord bears South $39^{\circ}54'11''$ West 135.10 feet) to a point of tangency, said point is the beginning of a line that will be referred to as Line 1 from hereon; thence along said Line 1, South $11^{\circ}37'10''$ East, a distance of 272.73 feet, to an angle point; thence leaving said Line 1, South $16^{\circ}45'30''$ East, a distance of 23.52 feet more or less, to a point on the West line of said Tract 'A' of said "Riverview Meadows Phase 1", said point being marked with a 5/8" iron rod with a yellow plastic cap marked "PLS 2351"; thence North $36^{\circ}55'01''$ West, along the said West line of said Tract 'A' of said "Riverview Meadows Phase 1", a distance of 121.86 feet more or less, to a point that is 50 feet from, when measured at right angles to, the previously described Line 1; thence leaving the said West line of said Tract 'A' of said "Riverview Meadows Phase 1", 50 feet from and parallel with said Line 1, North $11^{\circ}37'10''$ West, a distance of 185.81 feet to a point of curvature; thence along a 136.29 foot radius tangent curve to the right, 50 feet from and parallel with said Curve 1, an arc distance of 245.11 feet through a central angle of $103^{\circ}02'36''$ (long chord bears North $39^{\circ}54'08''$ East 213.39 feet), to a point on the said North line of said Tract 'A' of said "Riverview Meadows Phase 1"; thence South $88^{\circ}34'29''$ East, along the said North line of said Tract 'A' of said "Riverview Meadows Phase 1", a distance of 245.17 feet, to the **True Point of Beginning**.

Containing 32,711 square feet, more or less.

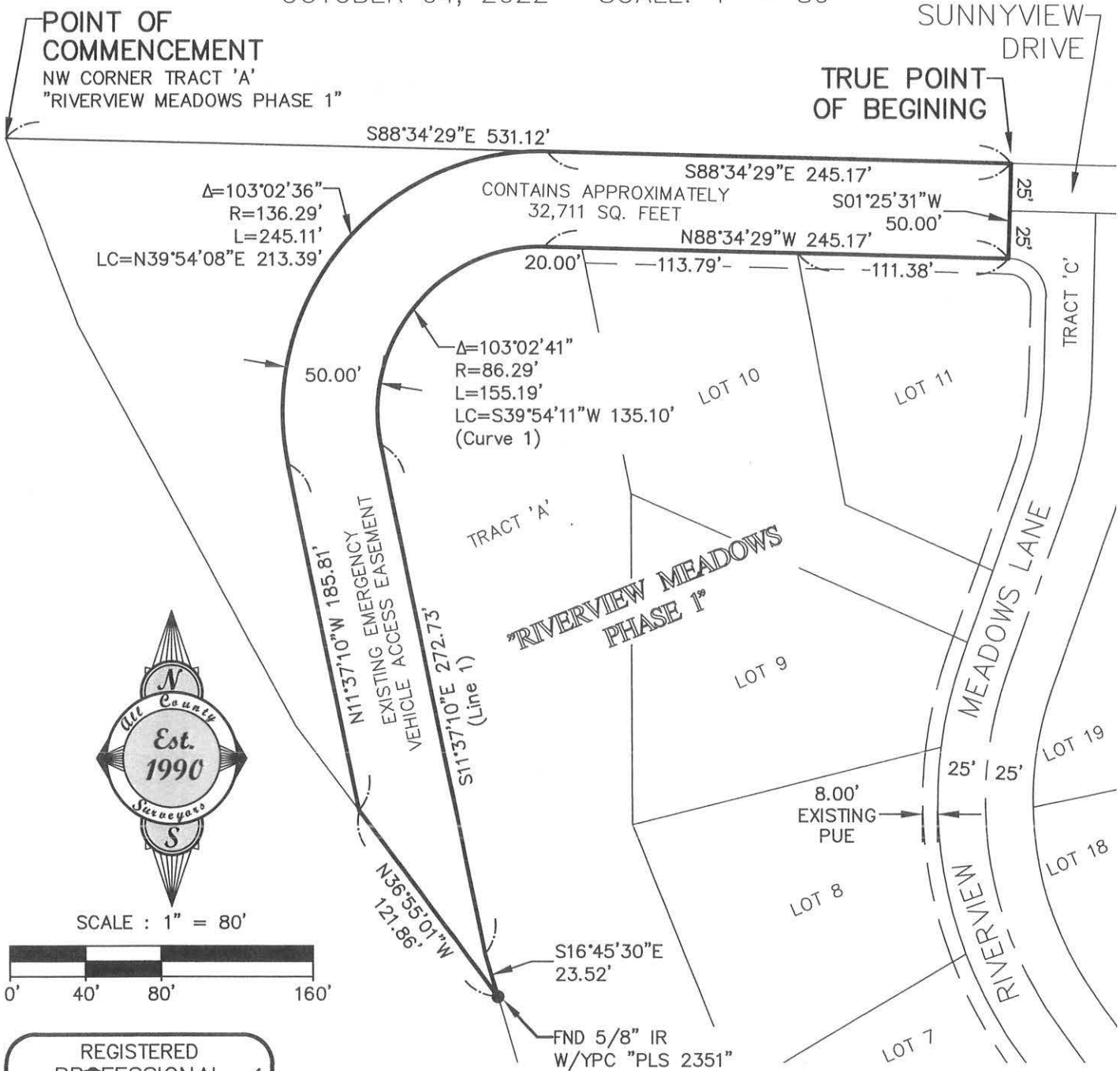
Basis of bearings for this description is from Document Number 2010-4288, Tillamook County Plat Records.



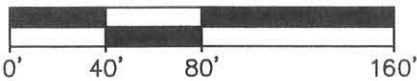
RENEWS 07/01/23

EXHIBIT "B"

SITUATED IN THE N.W. 1/4 OF SECTION 23, TOWNSHIP 3 NORTH,
 RANGE 10 WEST, W.M., CITY OF NEHALEM, TILLAMOOK COUNTY OREGON
 OCTOBER 04, 2022 SCALE: 1" = 80'



SCALE : 1" = 80'



REGISTERED
 PROFESSIONAL
 LAND SURVEYOR

Dale L. Hult
 OREGON
 JANUARY 23, 1990
 DALE L. HULT
 2427

RENEWS 07/01/23

DATE OF PLOT: 10-04-22
 DRAWING NO.: 22-181.dwg

LEGEND

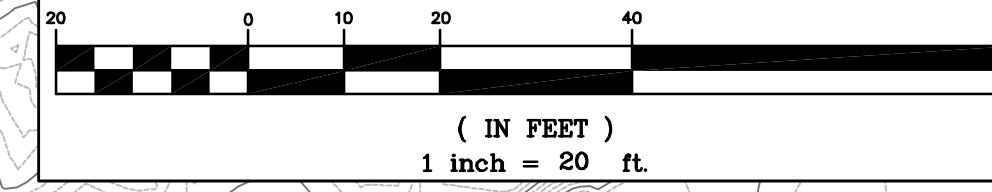
- FOUND MONUMENT AS NOTED HEREON
- W/YPC INDICATES WITH YELLOW PLASTIC CAP, MARKED
- IR INDICATES IRON ROD, OUTER DIAMETER

RIVERVIEW MEADOWS PHASE 2 38 LOT SUBDIVISION

MAP 3N 10W SECTION 23B

EXISTING GRAVEL ROAD. UPDATE TO COUNTY STANDARDS AND PAVE.
CROWN TO DRAIN TO BOTH SIDES.
NEW MAIN ENTRANCE TO DEVELOPMENT.
WATERLINE TO BE AT CITY PRESSURE.

GRAPHIC SCALE



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MANZANITA, OR 97130
(503) 801-6016
www.morgancivil.com

JOB NO. 1019-10-RV
DATE OCT. 9, 2022



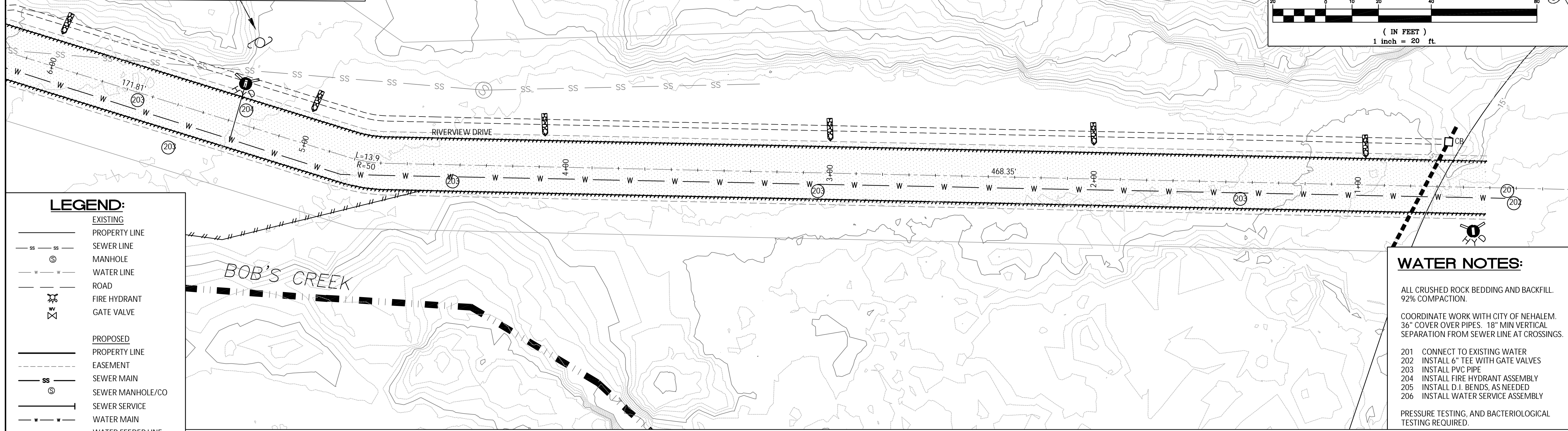
RIVERVIEW MEADOWS DEVELOPMENT, LLC
RIVERVIEW MEADOWS PHASE 2
ENTRANCE ROAD

NEHALEM, MAP 3N 10W 23B

SHEET

11

OF -21-



LEGEND:

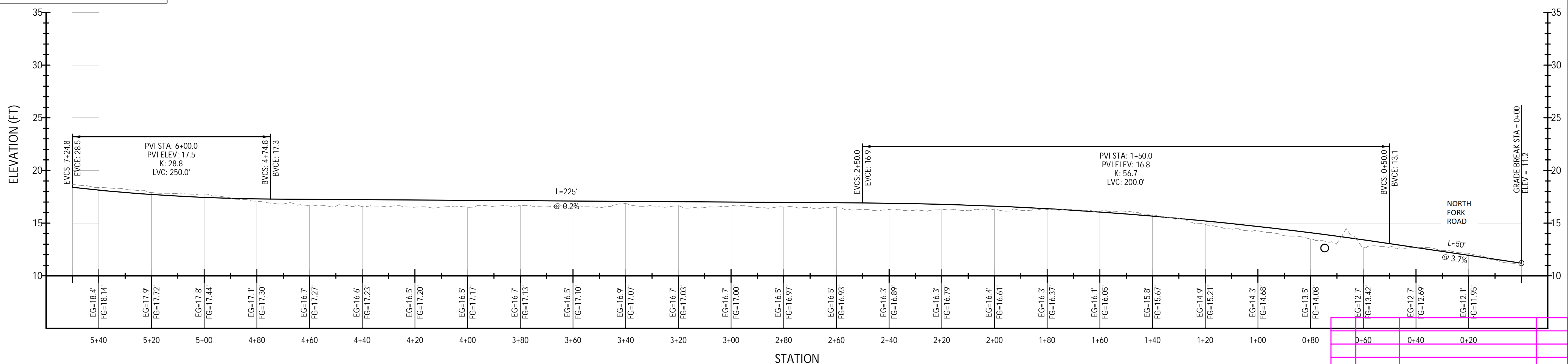
- EXISTING
 - PROPERTY LINE
 - SEWER LINE
 - MANHOLE
 - WATER LINE
 - ROAD
 - FIRE HYDRANT
 - GATE VALVE
- PROPOSED
 - PROPERTY LINE
 - EASEMENT
 - SEWER MAIN
 - SEWER MANHOLE/CO
 - SEWER SERVICE
 - WATER MAIN
 - WATER FEEDER LINE
 - WATER VALVE
 - FIRE HYDRANT
 - WATER SERVICE
 - EDGE OF SHOULDER
 - EDGE OF ASPHALT
 - GRAVEL CHECK DAM

- EXISTING GRADE
- FINAL GRADE
- CULVERT

WATER NOTES:

- ALL CRUSHED ROCK BEDDING AND BACKFILL. 92% COMPACTION.
- COORDINATE WORK WITH CITY OF NEHALEM. 36" COVER OVER PIPES. 18" MIN VERTICAL SEPARATION FROM SEWER LINE AT CROSSINGS.
- 201 CONNECT TO EXISTING WATER
- 202 INSTALL 6" TEE WITH GATE VALVES
- 203 INSTALL PVC PIPE
- 204 INSTALL FIRE HYDRANT ASSEMBLY
- 205 INSTALL D.I. BENDS, AS NEEDED
- 206 INSTALL WATER SERVICE ASSEMBLY
- PRESSURE TESTING, AND BACTERIOLOGICAL TESTING REQUIRED.

1 RIVERVIEW DRIVE SCALE: 1"=20'

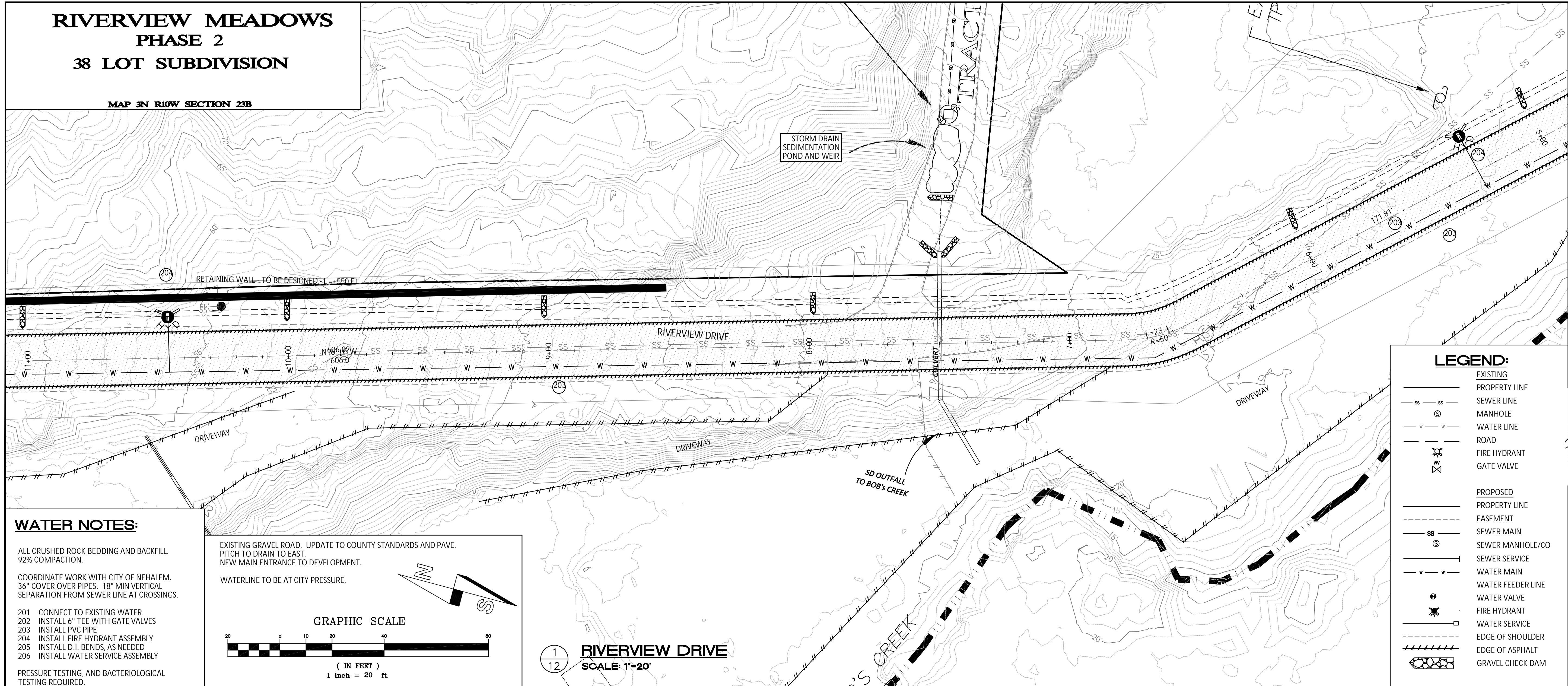


2 RIVERVIEW DRIVE PROFILE SCALE: 1"=20' VERT: 1"=5'

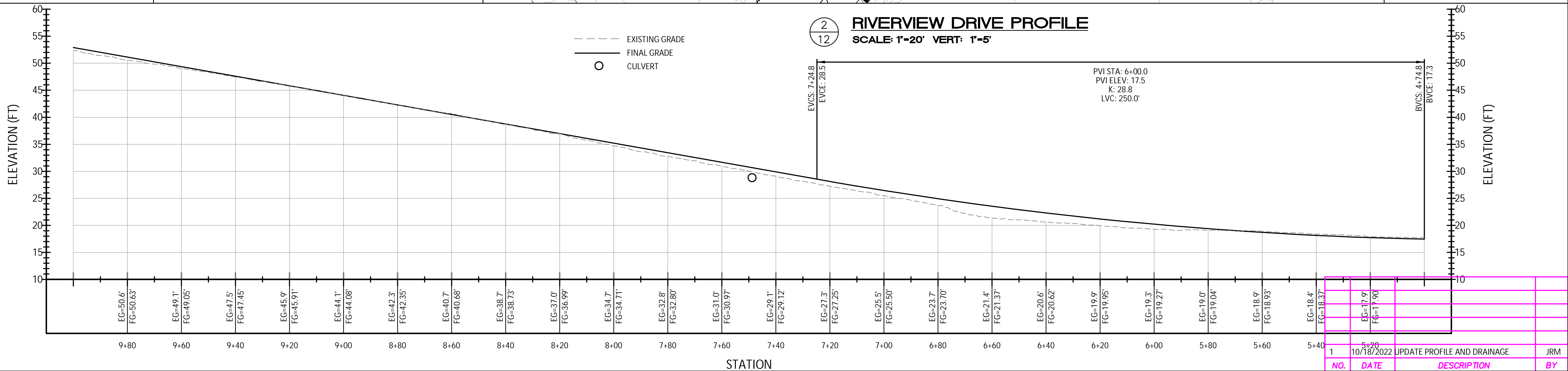
NO.	DATE	DESCRIPTION	BY
1	10/18/2022	UPDATE PROFILE AND DRAINAGE	JRM

RIVERVIEW MEADOWS PHASE 2 38 LOT SUBDIVISION

MAP 3N RI0W SECTION 23B



RIVERVIEW DRIVE PROFILE
SCALE: 1"=20' VERT: 1"=5'



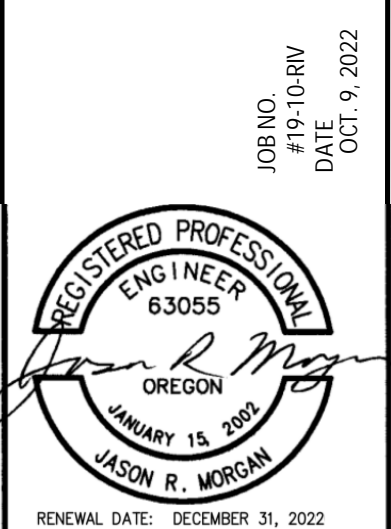
NO.	DATE	DESCRIPTION	BY
1	10/18/2022	UPDATE PROFILE AND DRAINAGE	JRM



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 PLANNING

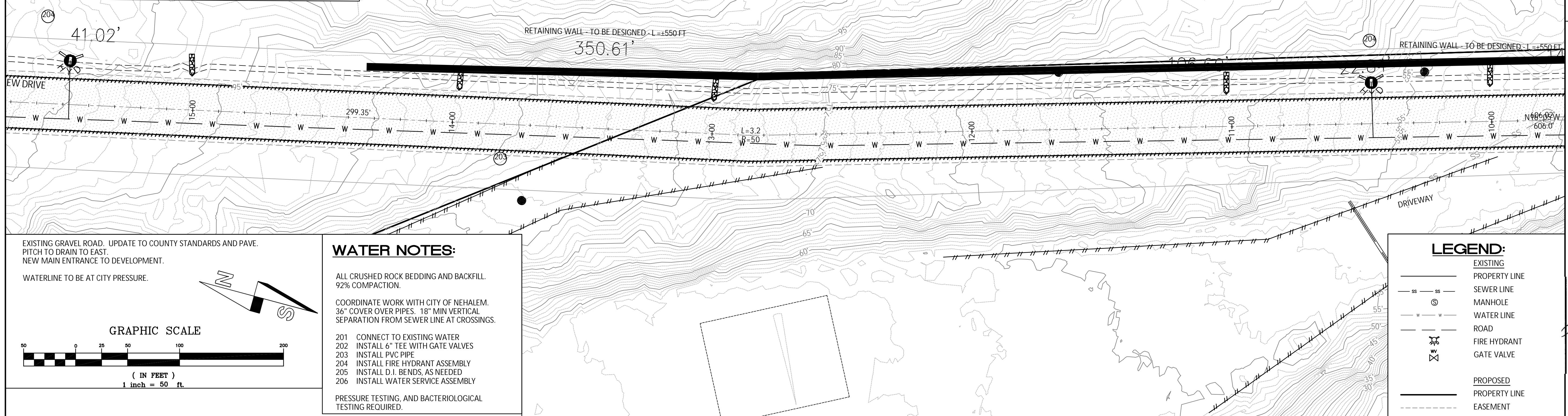


RENEWAL DATE: DECEMBER 31, 2022

RIVERVIEW MEADOWS DEVELOPMENT, LLC
 RIVERVIEW MEADOWS PHASE 2
 ENTRANCE ROAD-2

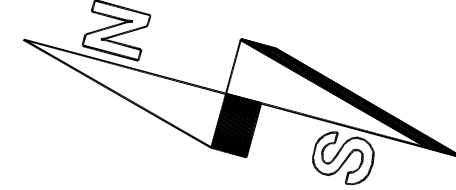
**RIVERVIEW MEADOWS
PHASE 2
38 LOT SUBDIVISION**

MAP 3N 10W SECTION 23B

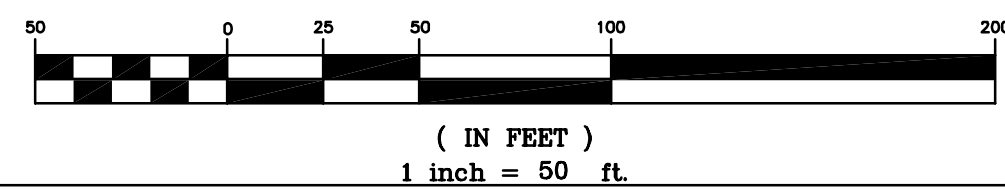


EXISTING GRAVEL ROAD. UPDATE TO COUNTY STANDARDS AND PAVE.
PITCH TO DRAIN TO EAST.
NEW MAIN ENTRANCE TO DEVELOPMENT.

WATERLINE TO BE AT CITY PRESSURE.



GRAPHIC SCALE



WATER NOTES:

ALL CRUSHED ROCK BEDDING AND BACKFILL.
92% COMPACTION.

COORDINATE WORK WITH CITY OF NEHALEM.
36" COVER OVER PIPES. 18" MIN VERTICAL
SEPARATION FROM SEWER LINE AT CROSSINGS.

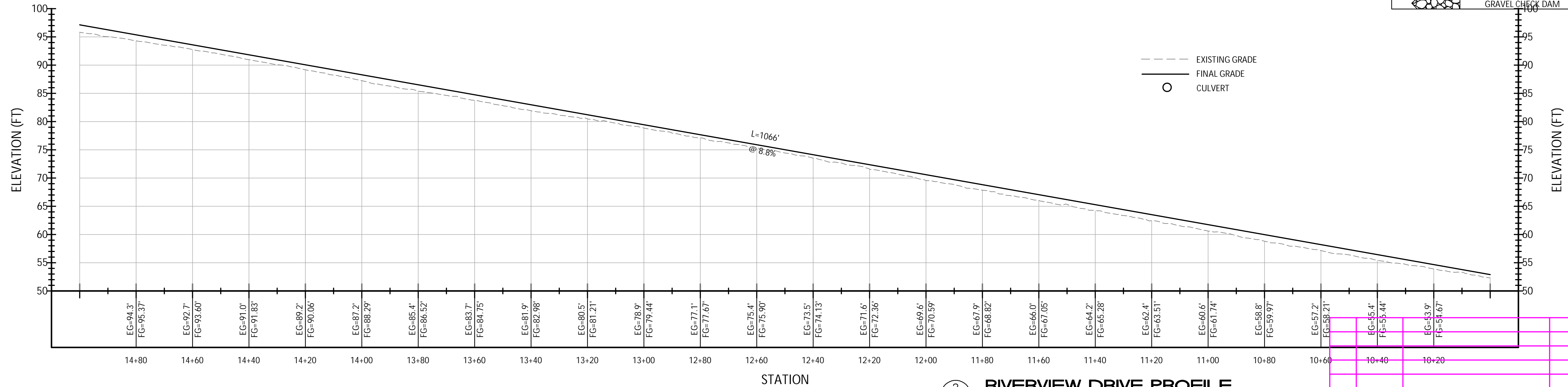
- 201 CONNECT TO EXISTING WATER
- 202 INSTALL 6" TEE WITH GATE VALVES
- 203 INSTALL PVC PIPE
- 204 INSTALL FIRE HYDRANT ASSEMBLY
- 205 INSTALL D.I. BENDS, AS NEEDED
- 206 INSTALL WATER SERVICE ASSEMBLY

PRESSURE TESTING, AND BACTERIOLOGICAL
TESTING REQUIRED.

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
 - GRAVEL CHECK DAM

**1
13 RIVERVIEW DRIVE
SCALE: 1"=20'**



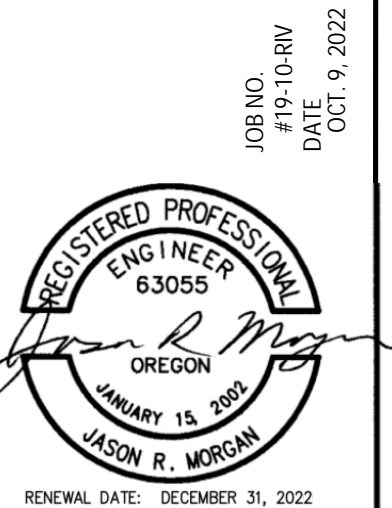
**2
13 RIVERVIEW DRIVE PROFILE
SCALE: 1"=20' VERT: 1"=5'**

NO.	DATE	DESCRIPTION	BY
1	10/18/2022	UPDATE PROFILE AND DRAINAGE	JRM



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RENEWAL DATE: DECEMBER 31, 2022

**RIVERVIEW MEADOWS DEVELOPMENT, LLC
RIVERVIEW MEADOWS PHASE 2
ENTRANCE ROAD-3**

SHEET
13
OF -21-

NEHALEM, MAP 3N 10W 23B

RIVERVIEW MEADOWS PHASE 2 38 LOT SUBDIVISION

MAP 3N 10W SECTION 23B

RIVERVIEW DRIVE
SCALE: 1"=20'

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
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 - WATER VALVE
 - FIRE HYDRANT
 - WATER SERVICE
 - EDGE OF SHOULDER
 - EDGE OF ASPHALT
 - GRAVEL CHECK DAM

WATER NOTES:

ALL CRUSHED ROCK BEDDING AND BACKFILL.
92% COMPACTION.

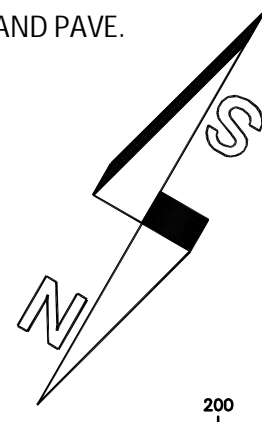
COORDINATE WORK WITH CITY OF NEHALEM.
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SEPARATION FROM SEWER LINE AT CROSSINGS.

201 CONNECT TO EXISTING WATER
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204 INSTALL FIRE HYDRANT ASSEMBLY
205 INSTALL D.I. BENDS, AS NEEDED
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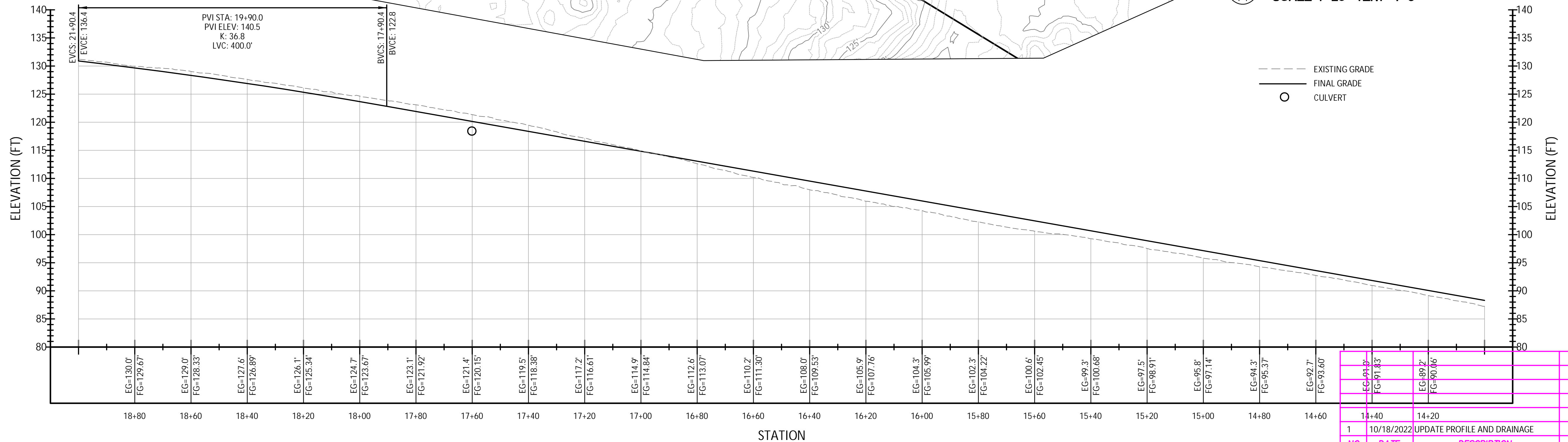
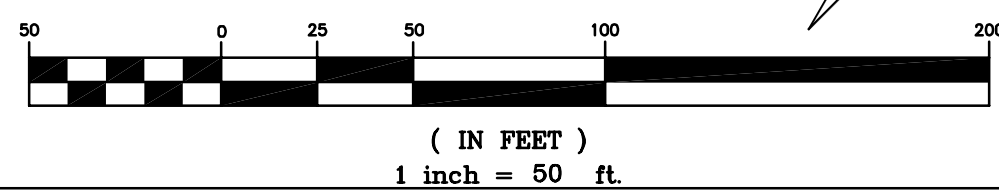
PRESSURE TESTING, AND BACTERIOLOGICAL
TESTING REQUIRED.

EXISTING GRAVEL ROAD. UPDATE TO COUNTY STANDARDS AND PAVE.
PITCH TO DRAIN TO EAST.
NEW MAIN ENTRANCE TO DEVELOPMENT.

WATERLINE TO BE AT CITY PRESSURE.



GRAPHIC SCALE



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CIVIL ENGINEERING
INSPECTION
PLANNING

JOB NO. 1912-10-RV
DATE: OCT 9, 2022

REGISTERED PROFESSIONAL
ENGINEER
63055
OREGON
JANUARY 15, 2009
JASON R. MORGAN

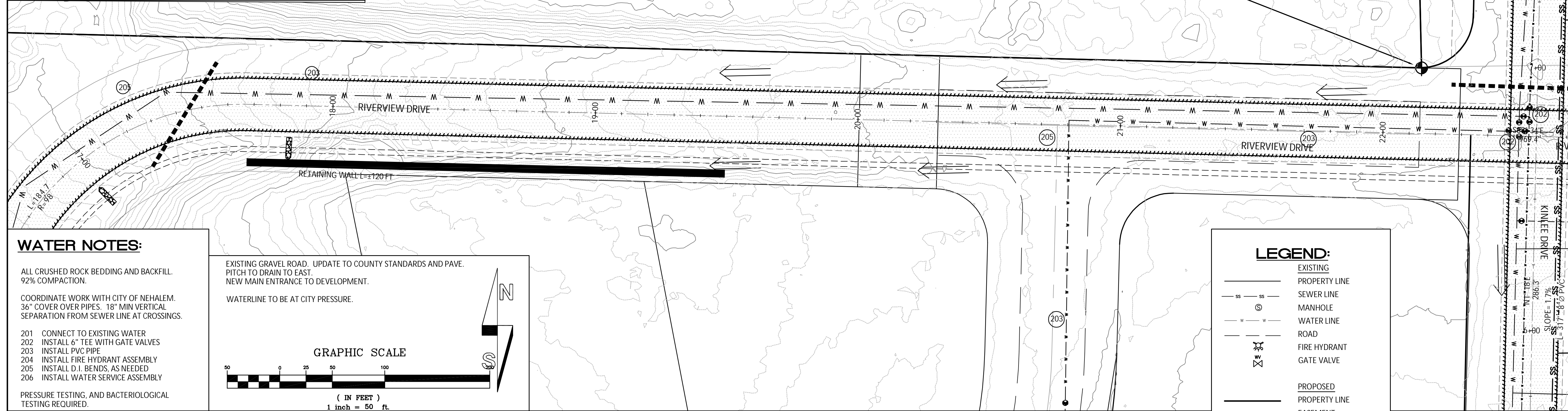
RENEWAL DATE: DECEMBER 31, 2022

RIVERVIEW MEADOWS DEVELOPMENT, LLC
RIVERVIEW MEADOWS PHASE 2
ENTRANCE ROAD-4

NEHALEM, MAP 3N 10W 23B

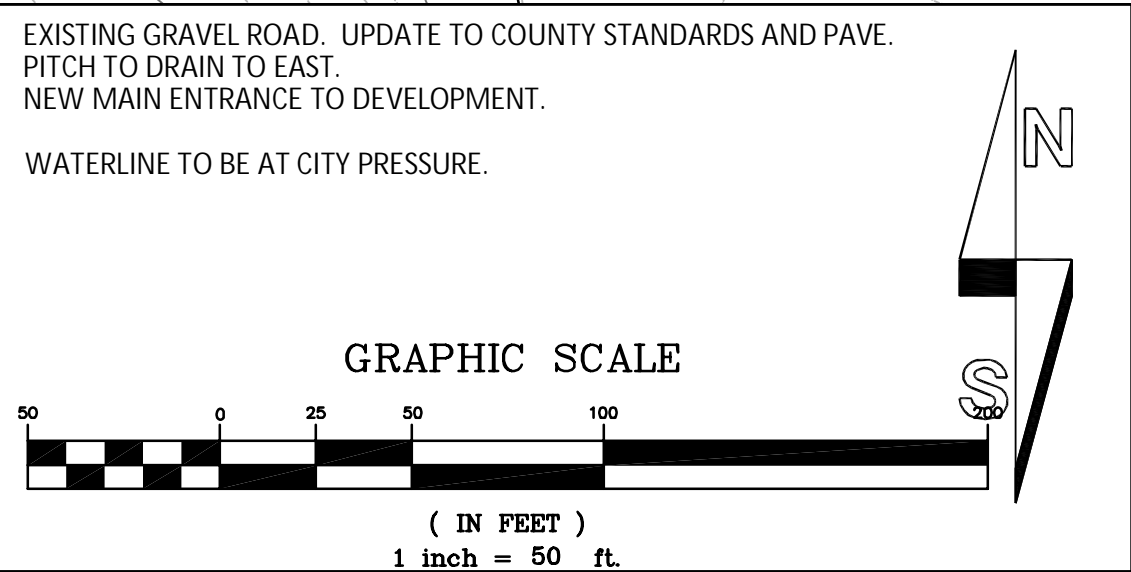
RIVERVIEW MEADOWS PHASE 2 38 LOT SUBDIVISION

MAP 3N RI0W SECTION 23B



WATER NOTES:

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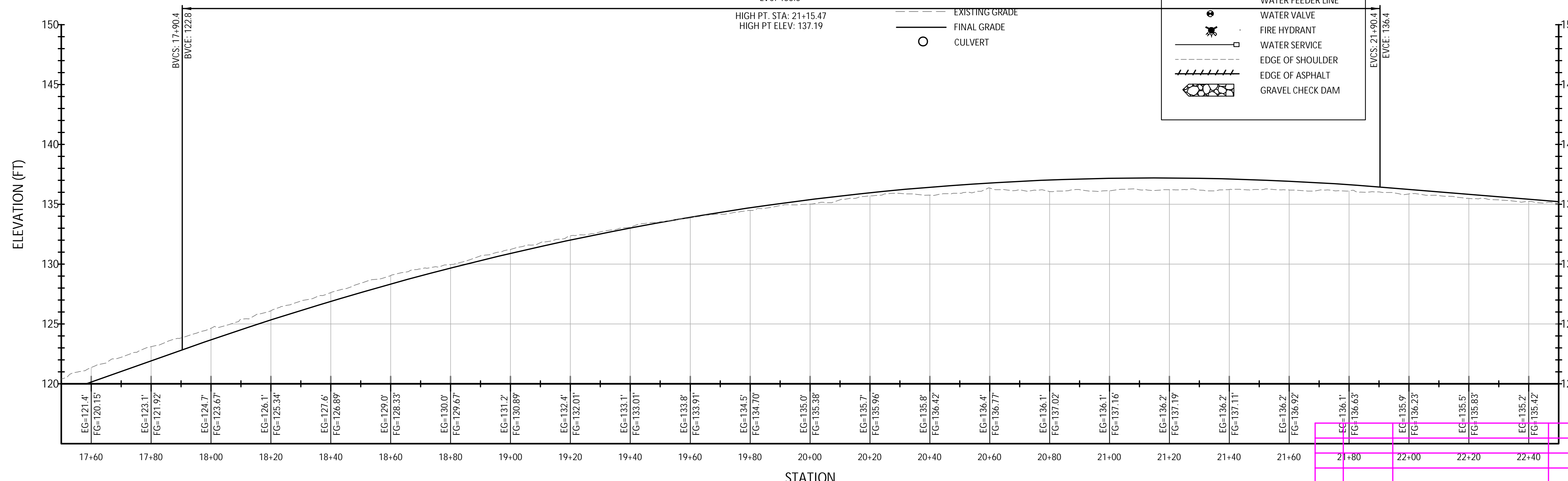
LEGEND:

	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
	GRAVEL CHECK DAM

1 RIVERVIEW DRIVE SCALE: 1"=20'

PVI STA: 19+90.0
PVI ELEV: 140.5
K: 36.8
LVC: 400.0'

HIGH PT. STA: 21+15.47
HIGH PT ELEV: 137.19



2 RIVERVIEW DRIVE PROFILE SCALE: 1"=20' VERT: 1"=5'

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RIVERVIEW MEADOWS DEVELOPMENT, LLC
RIVERVIEW MEADOWS PHASE 2
ENTRANCE ROAD-5

NEHALEM, MAP 3N 10W 23B

**RIVERVIEW MEADOWS
PHASE 2
38 LOT SUBDIVISION**

MAP 3N 10W SECTION 23B



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JRM:JRM
10/18/2022
OCT 9, 2022



**RIVERVIEW MEADOWS DEVELOPMENT, LLC
RIVERVIEW MEADOWS PHASE 2
ENTRANCE ROAD PROFILE**

NEHALEM, MAP 3N 10W 23B

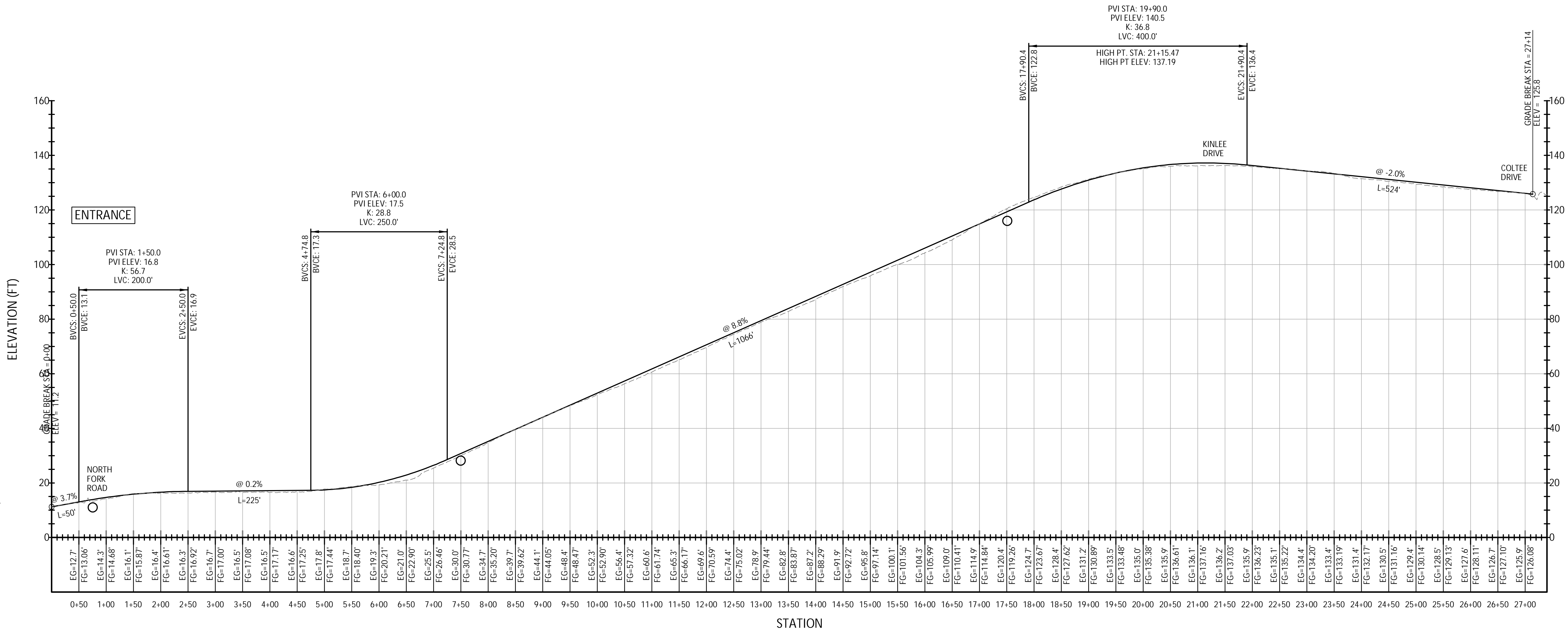
SHEET

16

OF -21-

ENTRANCE ROAD PROFILE
SCALE: 1"=100' VERT: 1"=20' (5 X EXAGGERATION)

- EXISTING GRADE
- FINAL GRADE
- CULVERT



NO.	DATE	DESCRIPTION	BY
1	10/18/2022	UPDATE PROFILE AND DRAINAGE	JRM