



2024 Street
Improvement Final
Design Review
w/meeting
updates

1/30/2024

Agenda

- Final Design Review Stakeholder Roles & Responsibilities
- Project Overview
- Road Project Design Overview
- Updated Cost Estimate
- Milestone Schedule
- Comments/Conclusion

Stakeholder Roles & Responsibilities

Responsibility Assignment Matrix												
Road Project Annual Process Task Name	Stakeholder Name											
	Engineering Firm	Road Construction Contractor	Town Council (All)	Town Council President	Town Council Infrastructure Member	Community	Street Superintendent	Clerk Treasurer	Billing Clerk	Zoning Administrator	Marshall	
1.0 Prioritization Tool Updates	R	-	-	-	I	R	R/A	-	-	R	R	
2.0 Update Prioritization Tool	R/A	-	-	-	-	-	R	-	-	-	-	
3.0 Publish Road Project Forecast	R	-	R	I	R	I	R/A	I	R	I	I	
4.0 Finalize & Publish Road Project Forecast	R	-	-	-	-	I	A	-	R	-	-	
5.0 Identification of Project Constraints & Design Concepts	R/A	-	-	-	C/I	-	R	-	-	-	-	
6.0 Present Project Design Concepts & Budget Estimates	R/A	-	C	C	C	C	R	C	-	I	I	
7.0 Preliminary Design	R/A	-	R	I	R	I	C/I	I	R	I	I	
8.0 Intermediate Design	R/A	-	R	I	R	I	C/I	I	R	I	I	
9.0 Final Design	R/A	-	R	I	R	I	C/I	I	R	I	I	
10.0 Project Bids	R	I	R	R	R	I	I	A	I	I	I	
11.0 Project Construction	R	A	I	R	R/I	I	C/I	I	I	I	I	
12.0 Post Construction Lessons Learned	R/A	C	C	C	C	C	C	I	R	I	C	

R- Responsible	A-Accountable	C-Consulted	I-Informed
Responsible:	person who performs an activity or does the work		
Accountable:	person who is ultimately accountable and has Yes/No/Veto		
Consulted:	person that needs to feedback and contribute to the activity.		
Informed:	person that needs to know of the decision or action.		

Responsible Parties:

- Town Council (TC) et all: Review final design & vote on motion to approve advertisement of projects for bid at February Council.
- Billing Clerk: Post final design review action item responses on TOCL web page and notify community on REACH ALERT

Informed Parties:

- Clerk Treasurer: Review final design for changes to budget estimates and post bid advertisement after council approval.
- Community: Review final design for changes
- Marshall: Review detour plan
- Zoning: Inform Engineering firm of any ILPs planned in area under construction

2024 Street Improvement Project

- 2024 street improvement includes all Lakeview Dr road segments
- Notification of CCMG award received 11/03/2023
- Project Estimate \$1.1M
 - INDOT CCMG \$825,000
 - TOCL \$275,000



Lessons Learned

Item #	Originator	LL Description	Status	Phase	Action Taken	Actionee
1	Rippe, Thurber, Rodgers	Document new TOCL Drainage System components, Road edges, Road ROW and Public & Private utilities on TOCL GIS system	Open	Operational		Rodgers
2	Rippe, Thurber, Rodgers	Inform Contractors of damage responsibilities & Locate TOCL drainage system components prior to ILP approval	Open	Construction		Hawley Rodgers
3	Rippe, Thurber, Rodgers	Ensure Construction Schedule considers asphalt plant operational hours end at 5pm due to noise ordinance	Open	Construction		Thurber
4	Rippe, Thurber, Rodgers	Ensure Construction Schedule considers if utility (NIPSCO, etc) work will interfere with access to Asphalt Plant	Open	Construction		Thurber
5	Rippe, Thurber, Rodgers	Flags marking utility locations were removed by residents	Open	Construction	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Nothing Currently, Condo L.S. should be completed prior to road construction </div>	Thurber Thurber Rodgers
6	Rippe, Thurber, Rodgers	Mediacom did not mark their utility in timely manner	Open	Construction		Thurber
7	Rippe, Thurber, Rodgers	Secure Easements 2-months prior to start of construction	Open	Construction		Rippe Thurber
8	Rippe, Thurber, Rodgers	Identify any outstanding Resident commitments associated with completed ILPs	Open	Design	Meet with TOCL Zoning Administrator upon return to office prior to final design review	Hawley Rodgers
9	Rippe, Thurber, Rodgers	Gather Resident interest in contracting additional work on private driveway & coordinate w/ Asphalt Contractor	Open	Construction		Rippe Thurber
10	Rippe, Thurber, Rodgers	Improve process for locating Private Utilities and place	Open	Construction	<div style="border: 1px solid black; padding: 5px; text-align: center;"> Sod to be used per recommendation of Road Committee </div>	Rodgers
11	Rippe, Thurber, Rodgers	Establish an application process for new private utilities passing under road	Open	Operational		Rodgers Rippe
12	Rippe, Thurber, Rodgers	Restoration should consider using sod vs grass seed due to fall leaf vac collection	Open	Design	Get comparison quote for sod vs seed for final desi	Thurber Rodgers
13	Rippe, Thurber, Rodgers	Geo Grid & Geo Mesh worked well and should be in baseline design	Open	Design	Specify Geo Grid under 100% of road length and Geo Fabric under 25% of road length	Thurber
14	Rippe, Thurber, Rodgers	Road closure signs were moved by persons without authority	Open	Construction	<div style="border: 1px solid black; padding: 5px; text-align: center;"> In Bidding Docs </div>	Thurber

Lessons Learned

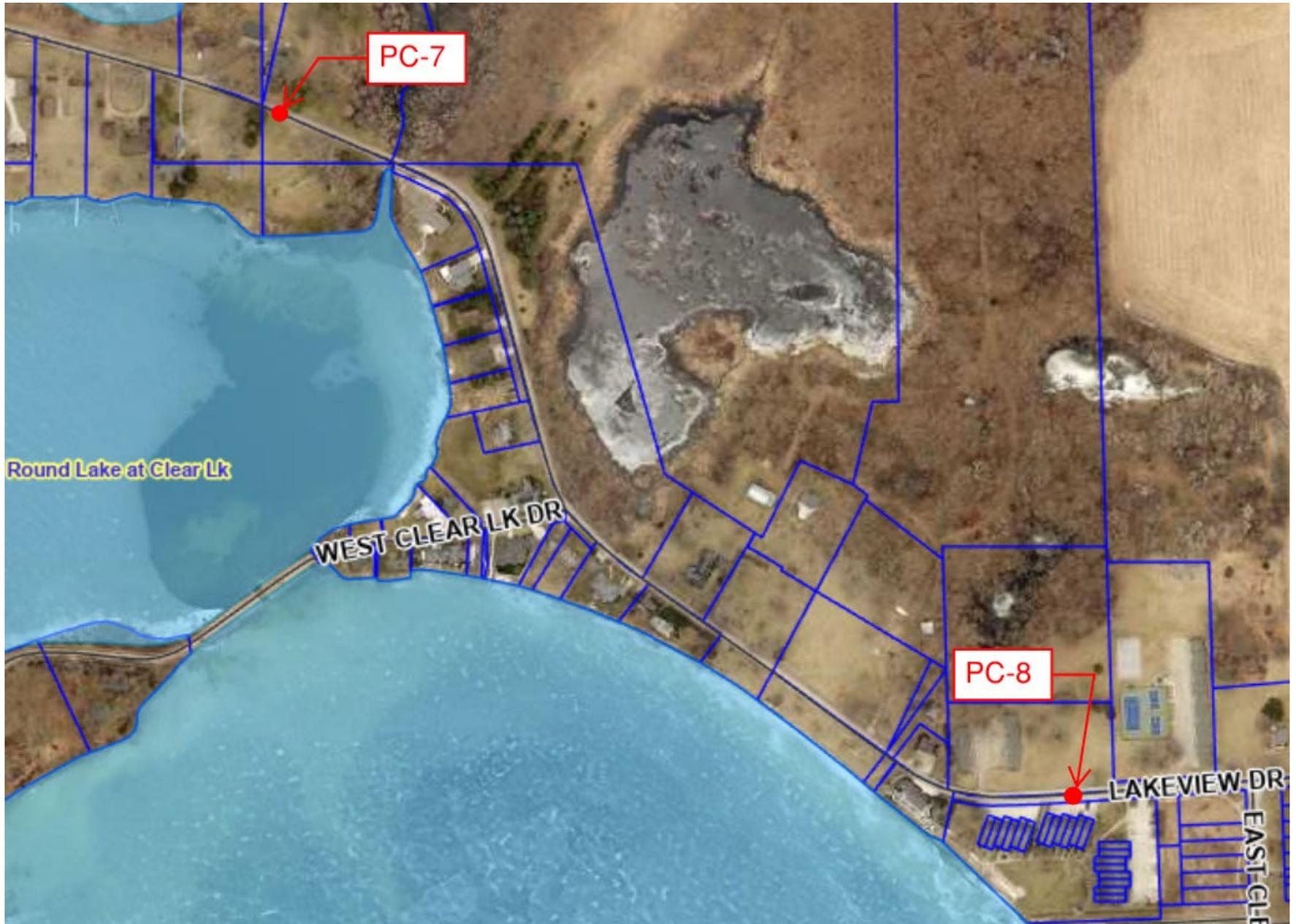
Item #	Originator	LL Description	Status	Phase	Action Taken	Actionee
15	Billing Clerk Sattison	Improve coordination of trash/recycling pickup with road closure	Open	Construction		Thurber Sattison
16	John Wilhelm	Consider communicating additional details to impacted homeowners' regarding the work being done on the segment of road where they own homes	Open	Construction	Consider a One Page Flyer outlining several topics. -Timeline of the project by segment - Proposed detours - When they should expect utilities to be marked, when they can remove the flags, suggest that if flags are removed before work is completed it could directly impact their homes. Homeowners should communicate this to their lawn service providers who may remove flags for convenience. - Swales – why we install them, why they need to remain clear, and when they can remove the seeding nets.	Thurber Rodgers Rippe
17	Brian Woodward	Miscommunication resulted in road & driveway sloping to the west vs east	Open	Construction	Gathering information regarding the miscommunication and escalation paths for future interactions with residents during construction	Thurber Rodgers Rippe
18	Brent Schlosser	Consider developing an approach to prevent grass buildup along road edges leading to drainage problems	Open	Operational		Rodgers
19	George Schenkel	Consider developing informational and policing guidelines for drainage swales to prevent destruction and/or filling with debris	Open	Operational		Rodgers
20	Chris Gartner	Muddy trench has developed from the mailman driving off road to access deliver the mail	Open	Construction	After review of pre and post photos it appears the mailbox is set back off road further than post office regulations and there was stone for the mailman to drive on that was inadvertently removed during excavation and not replaced. Action is for TOCL Street Superintendent to remove the mud and replace the stone	Rodgers
21	John Wilhelm	Recommends town implement a road maintenance program to extend the lifespan of raods	Open	Operational	TOCL Street Supervisor will develop a road maintenance plan and include in 2024/5 budget	Rodgers
22	Kathy Schenkel	Cars seem to be running off road. Is there any prevention that can be taken as part of the project?	Open	Construction	Add a task for each project to identify any spots where traffic is running off edge of raod and consider mitigation steps	Thurber

Design Overview – Technical Considerations

- Lakeview Drive Core Sample Results – Inadequate Subgrade ([Reference November 9, 2022, GME Test Report #C22-101495](#))

Street Name	Coring Number	Average Pavement Core Thickness, inches (Figures 1.1 through 1.6 Show approximate Core Locations)		
		Total Asphalt Pavement Thickness	Aggregate Thickness	Remarks
Quiet Harbor	PC-1	±2.4	±10.5	Brown, Sandy Gravel Product
Quiet Harbor	PC-2	±2.6	±11.25	Brown, Sandy Gravel Product
West Clear Lake Dr	PC-3	±5.1	±3	Brown, Sandy Gravel Product
West Clear Lake Dr	PC-4	±4.2	±12	Brown, Sandy Gravel Product
West Clear Lake Dr	PC-5	±7.9	±57	Brown, Fine Sand
West Clear Lake Dr	PC-6	±4.1	±14	Brown, Sandy Gravel Product
Lakeview Dr	PC-7	±4.8	±53	Brown, Fine Sand
Lakeview Dr	PC-8	±4.2	±10	Brown, Sandy Gravel Product
East Clear Lake Dr	PC-9	±2.7	±15	Brown, Sandy Gravel Product
Outer Dr	PC-10	±4	±7	Brown, Sandy Gravel Product
South Clear Lake Dr	PC-11	±3.8	±16	Brown, Sandy Gravel Product
South Clear Lake Dr	PC-12	±6	±7	Brown, Sandy Gravel Product

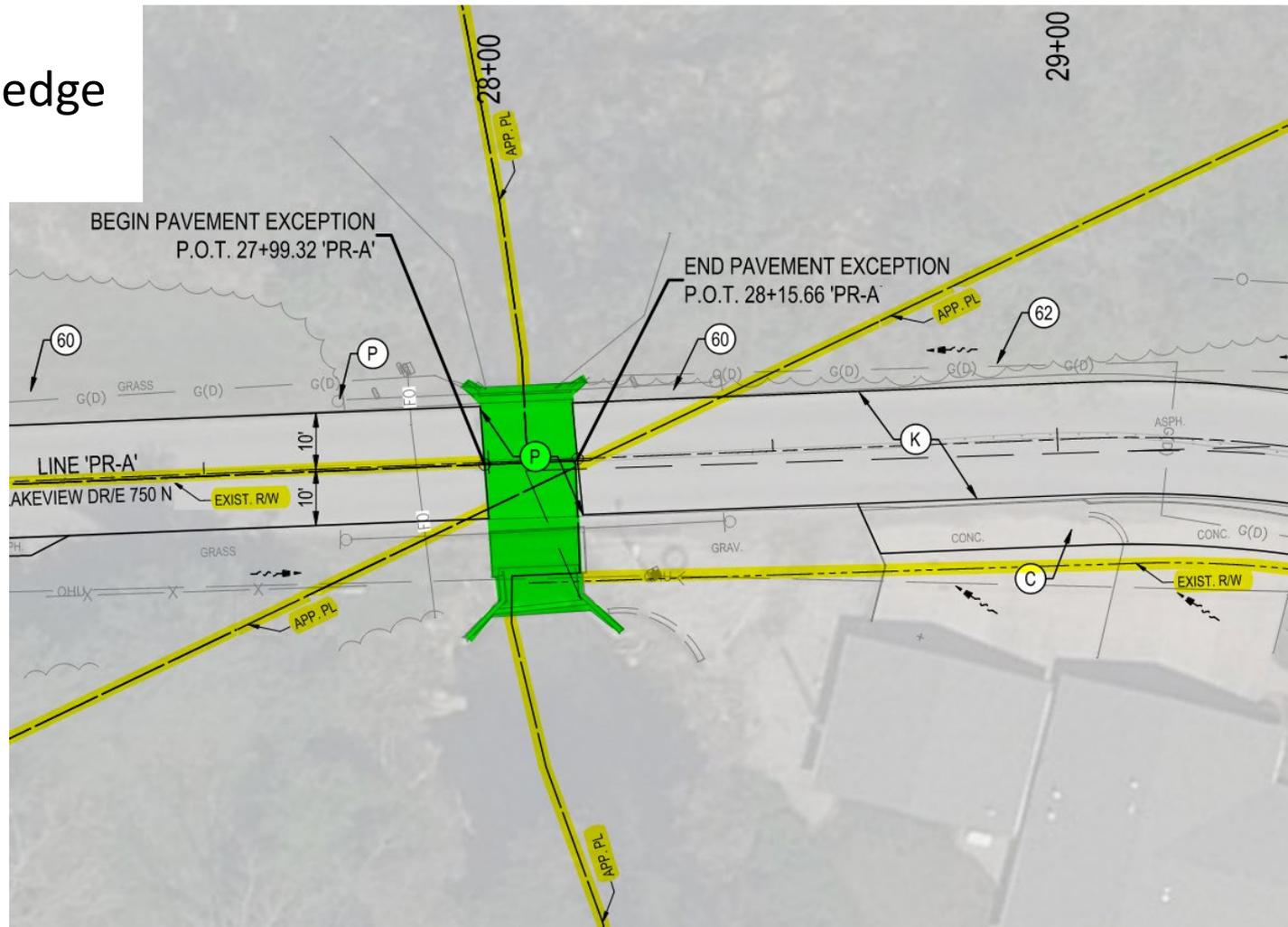
- Lakeview Drive Core Sample Locations:



Design Overview – Technical Considerations

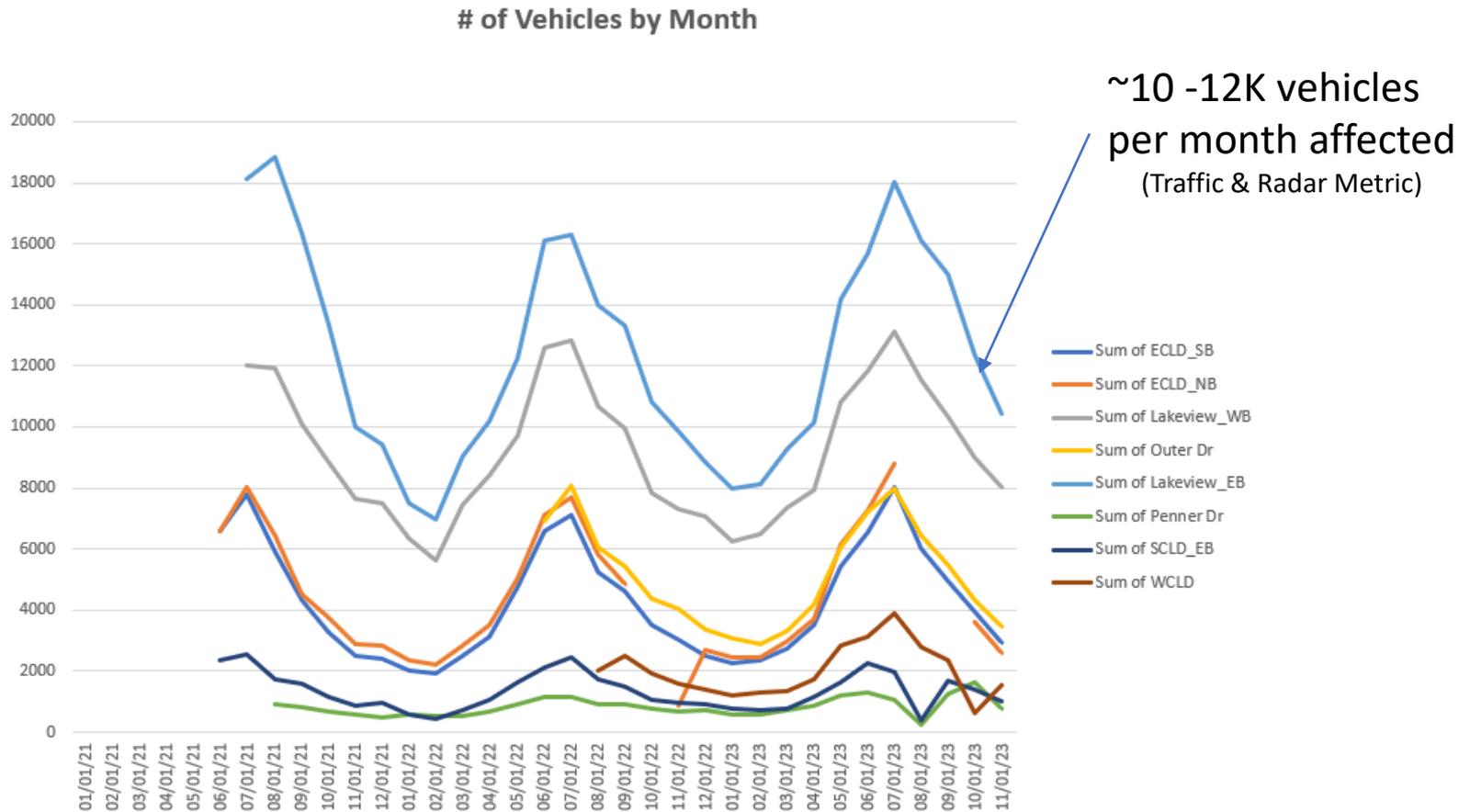
Right of Way Variables:

- Bridge
- R/W as pavement edge
- R/W established

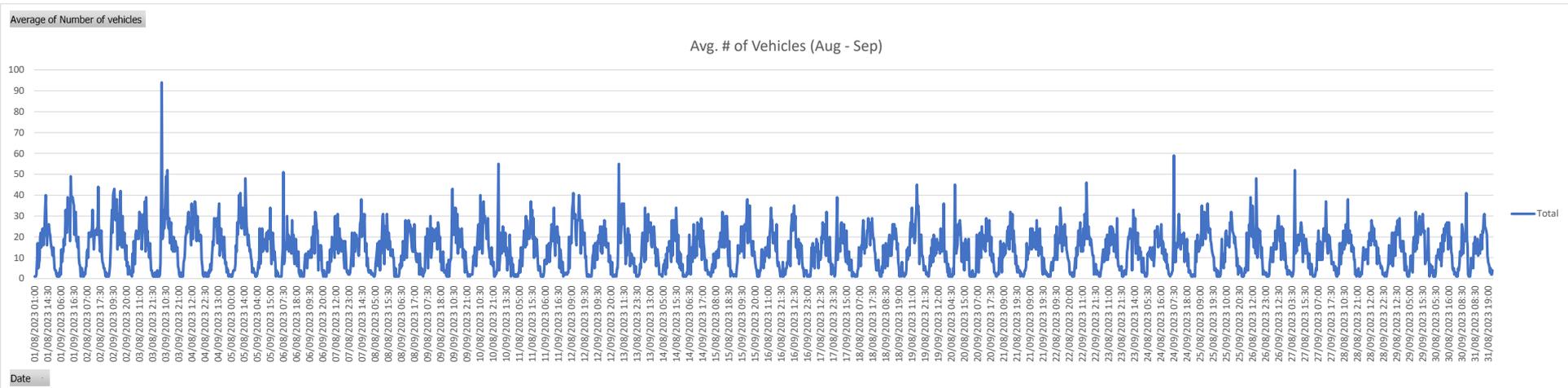


Design Overview – Technical Considerations

- Traffic



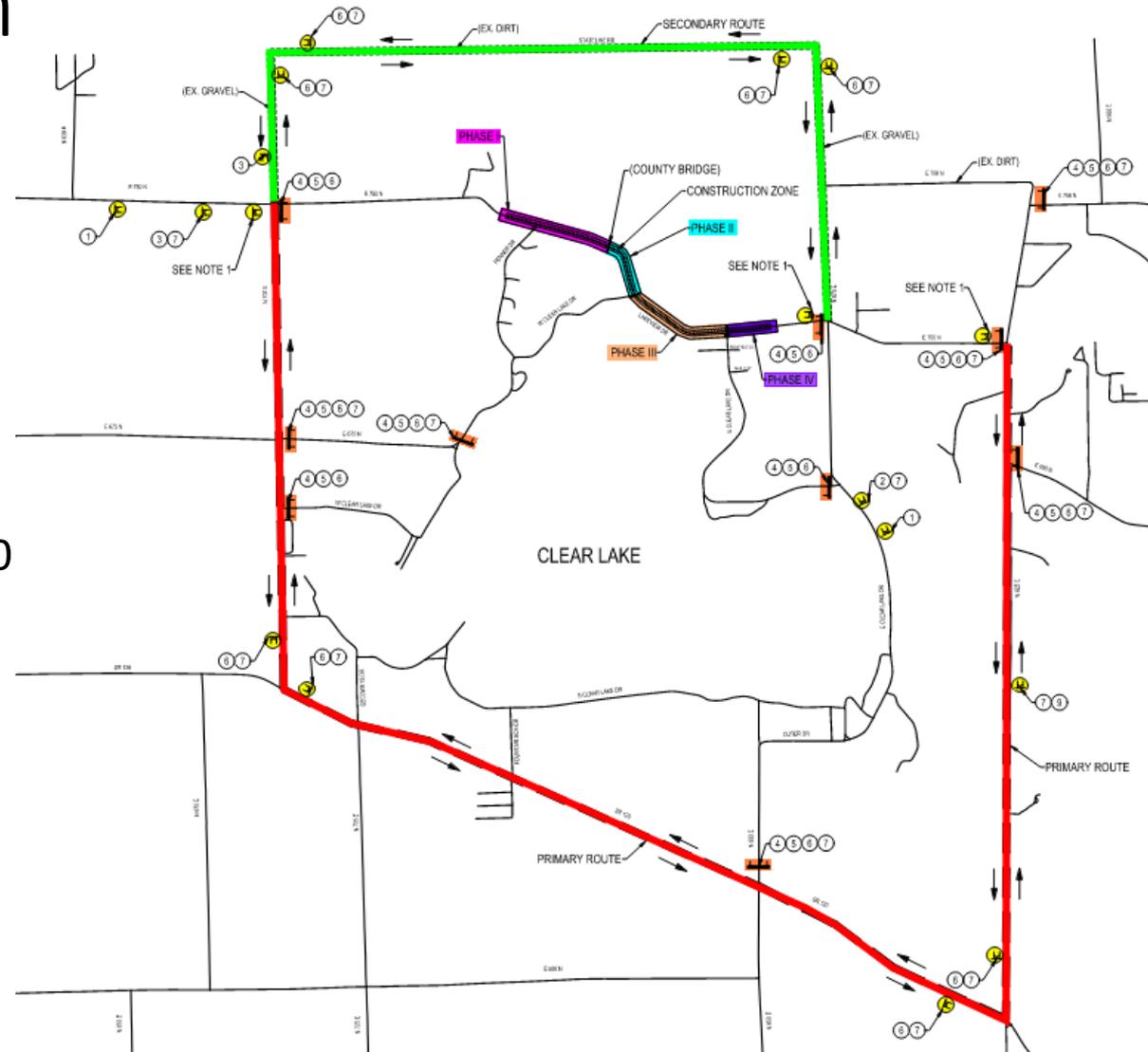
Hourly Traffic by Day (Aug & Sept 2023)



- Traffic is heaviest (~35 vehicles/hr) from 9AM – 3PM
- September has the most instances of spikes in # of Vehicles

Design Overview – Technical Consideration

- Preliminary Traffic Detour Plan as recommended by residents
 - Primary: 
 - CR 925 to SR 120
 - Secondary: 
 - CR 875 to CR 800 (Stateline) to CR 700

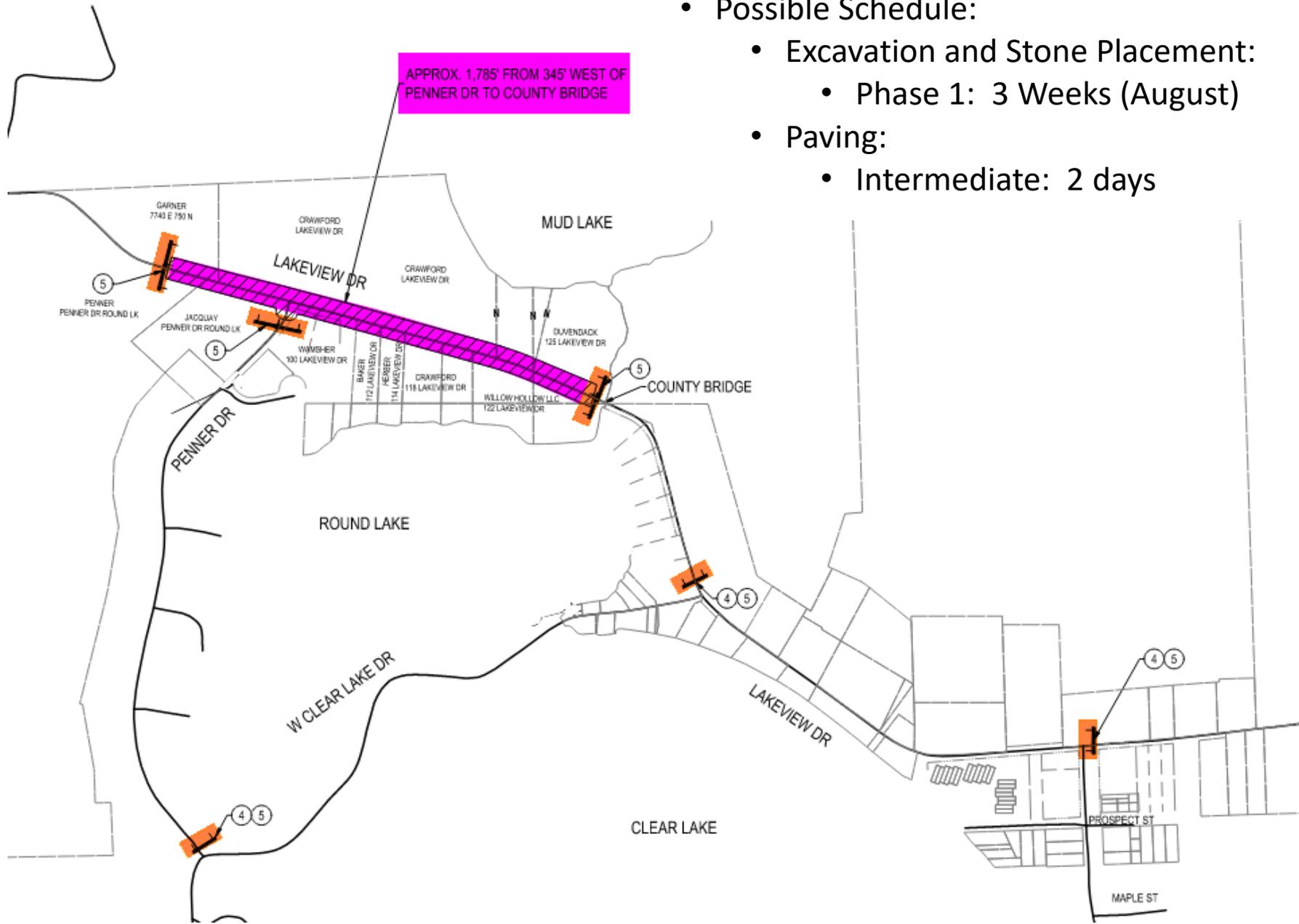


Property Ingress & Egress During Construction

- Property Owners will have access each evening
- Roadway will be stoned up to allow access to driveways and ramps to driveways
- Property Owners will be able to access from either direction depending on where the equipment is.
- Typical Construction time – 7am-4pm M-F and possibly 7am -12pm on Sat.

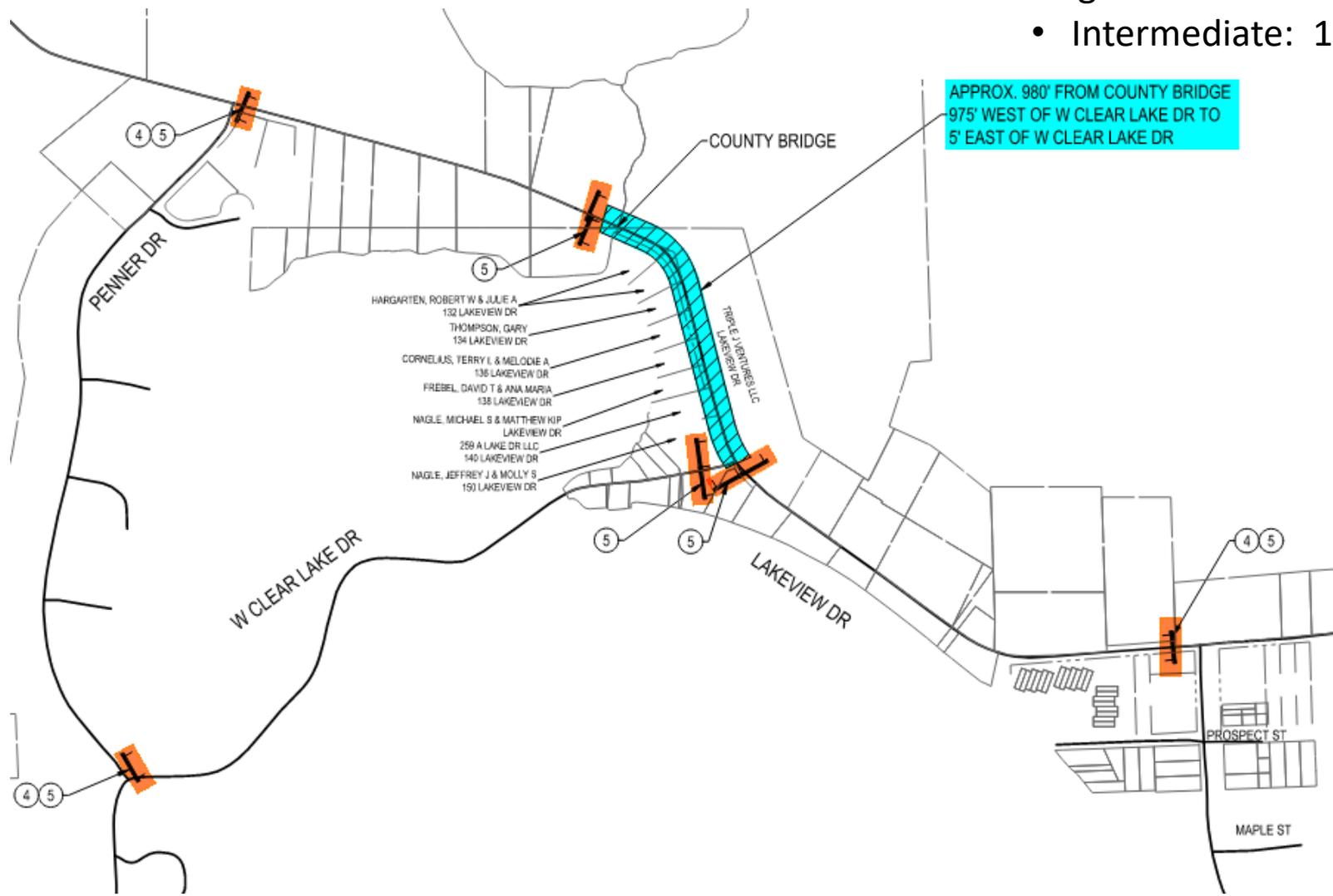
Traffic Plan – Phase 1: Excavation, Stone, and Intermediate Asphalt

- Possible Schedule:
 - Excavation and Stone Placement:
 - Phase 1: 3 Weeks (August)
 - Paving:
 - Intermediate: 2 days



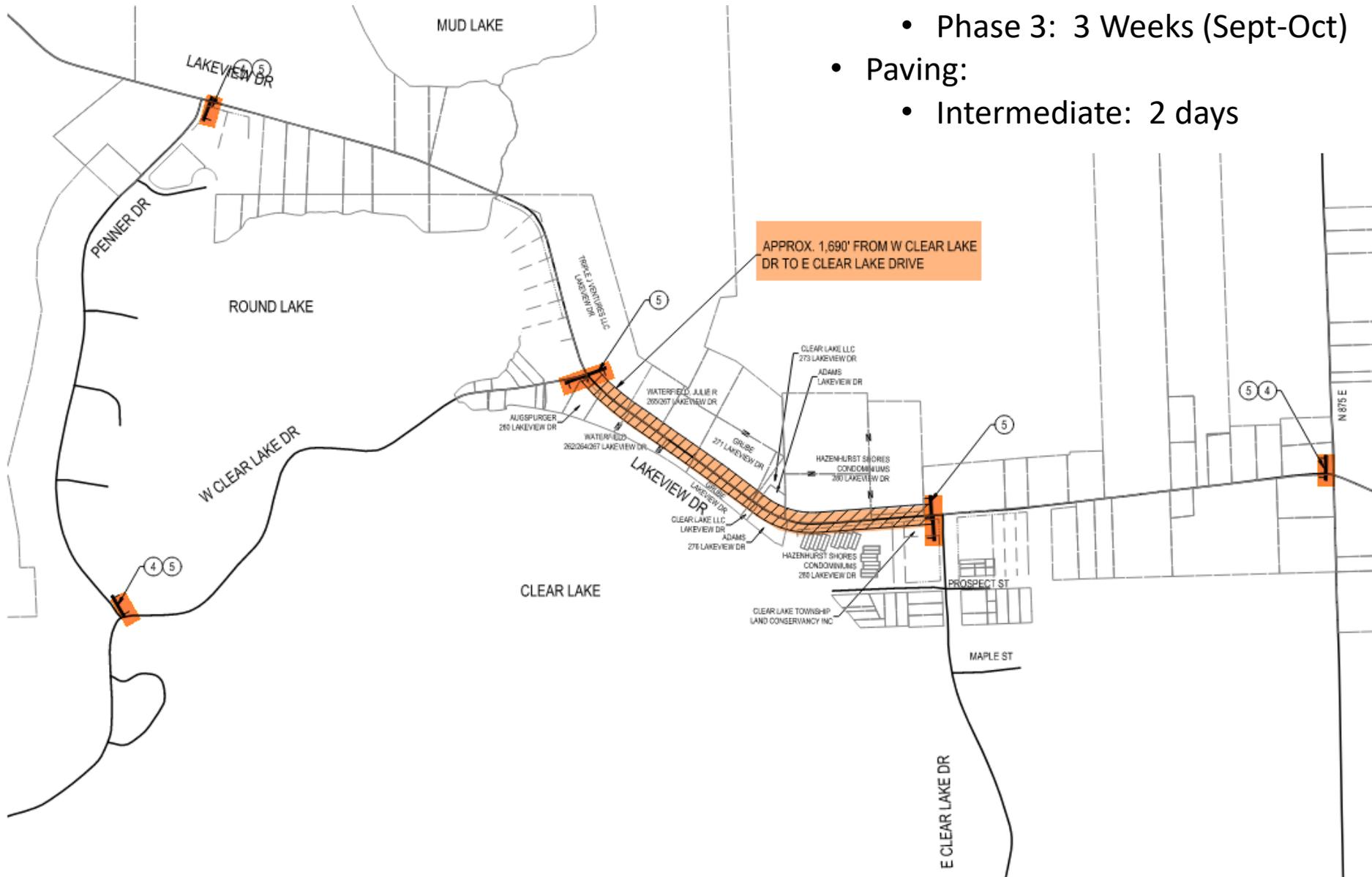
Traffic Plan – Phase 2: Excavation, Stone, and Intermediate Asphalt

- Possible Schedule:
 - Excavation and Stone Placement:
 - Phase 2: 2 Weeks (Aug -Sept)
 - Paving:
 - Intermediate: 1 day



Traffic Plan – Phase 3: Excavation, Stone, and Intermediate Asphalt

- Possible Schedule:
 - Excavation and Stone Placement:
 - Phase 3: 3 Weeks (Sept-Oct)
 - Paving:
 - Intermediate: 2 days



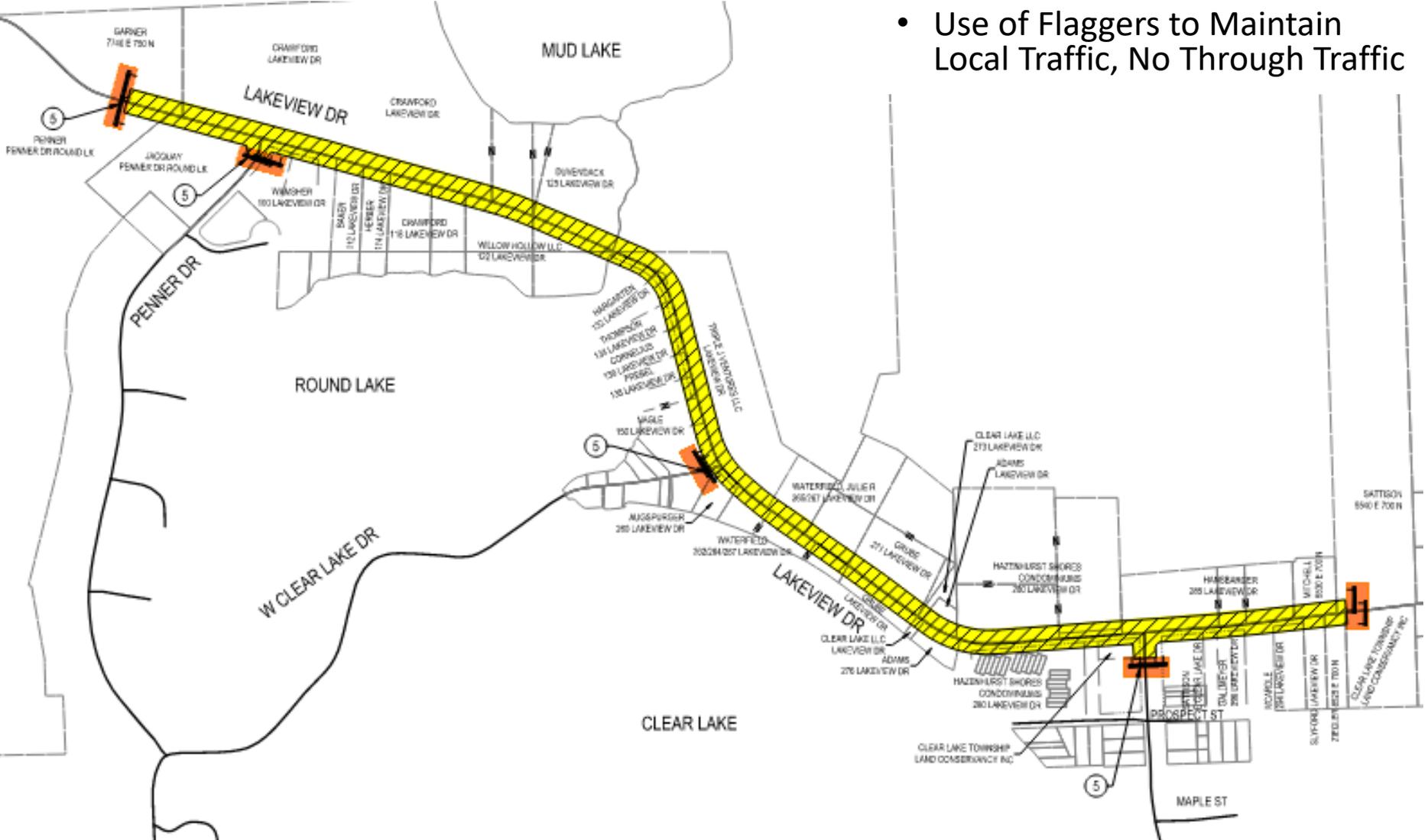
Traffic Plan – Phase 4: Excavation, Stone, and Intermediate Asphalt

- Possible Schedule:
 - Excavation and Stone Placement:
 - Phase 4: 1 Weeks (Oct)
 - Paving:
 - Intermediate: 1 day



Traffic Plan – Phase 5: Surface Asphalt

- Possible Schedule:
 - Paving:
 - Surface: 2-3 days
 - Use of Flaggers to Maintain Local Traffic, No Through Traffic



Final Design Overview

- Full Reconstruction (what it entails)
 - Excavation Depth (18")
 - Reconstruction design cross section thicknesses

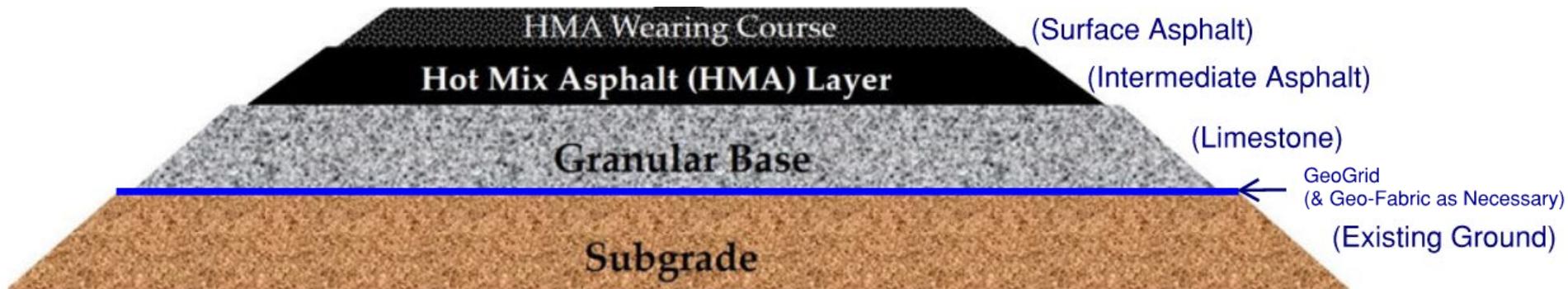
Same as last year:

1.5" of Surface Asphalt

4" of Intermediate Asphalt

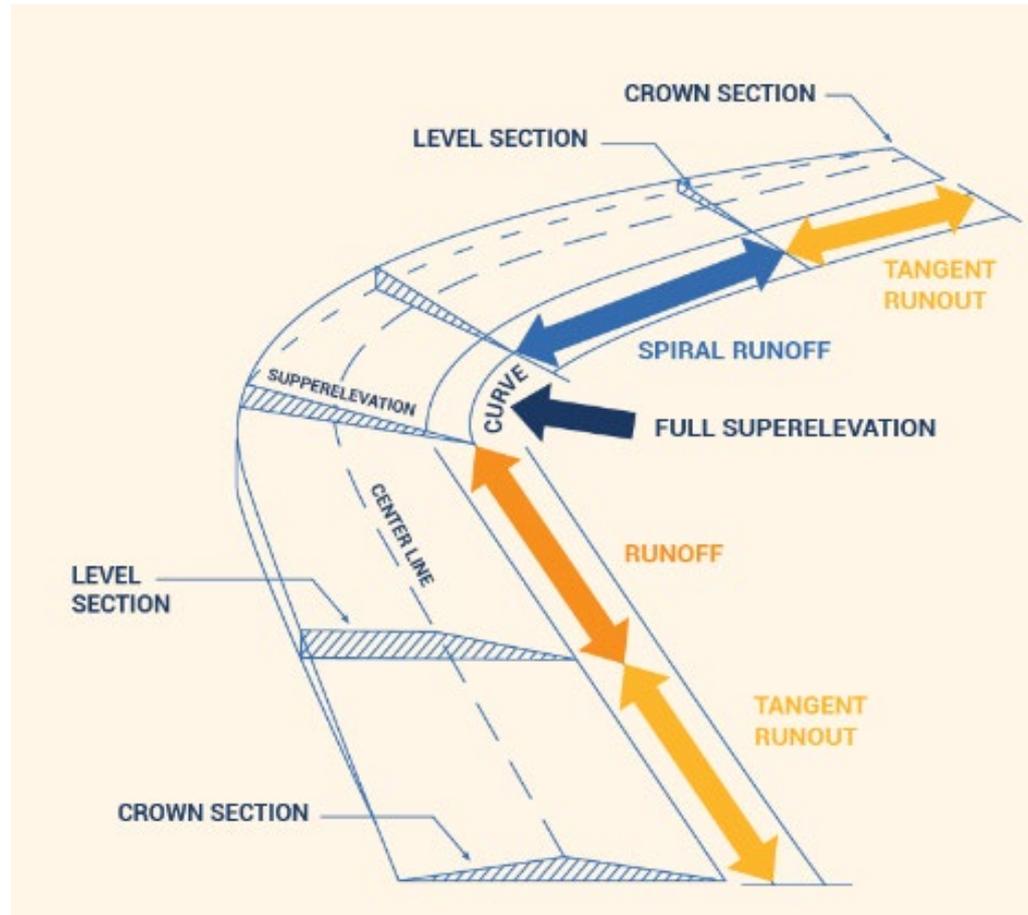
12" of Limestone

Geogrid



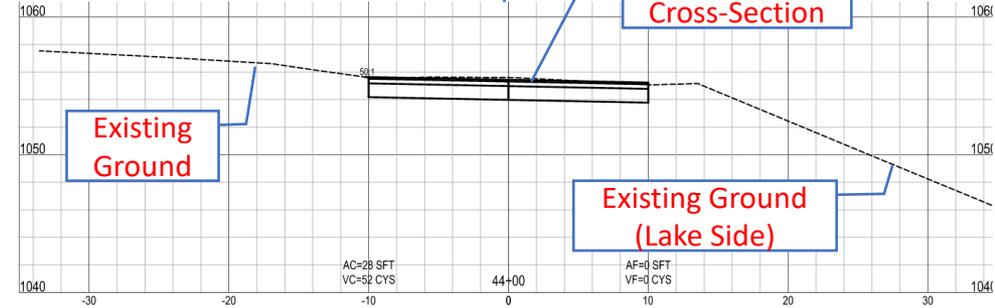
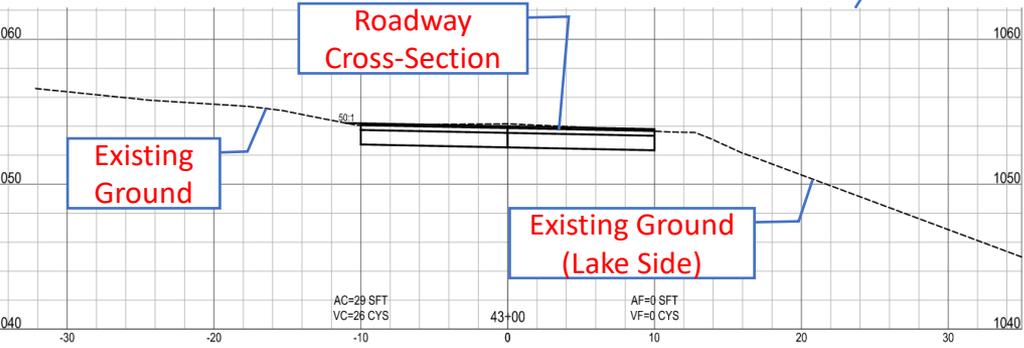
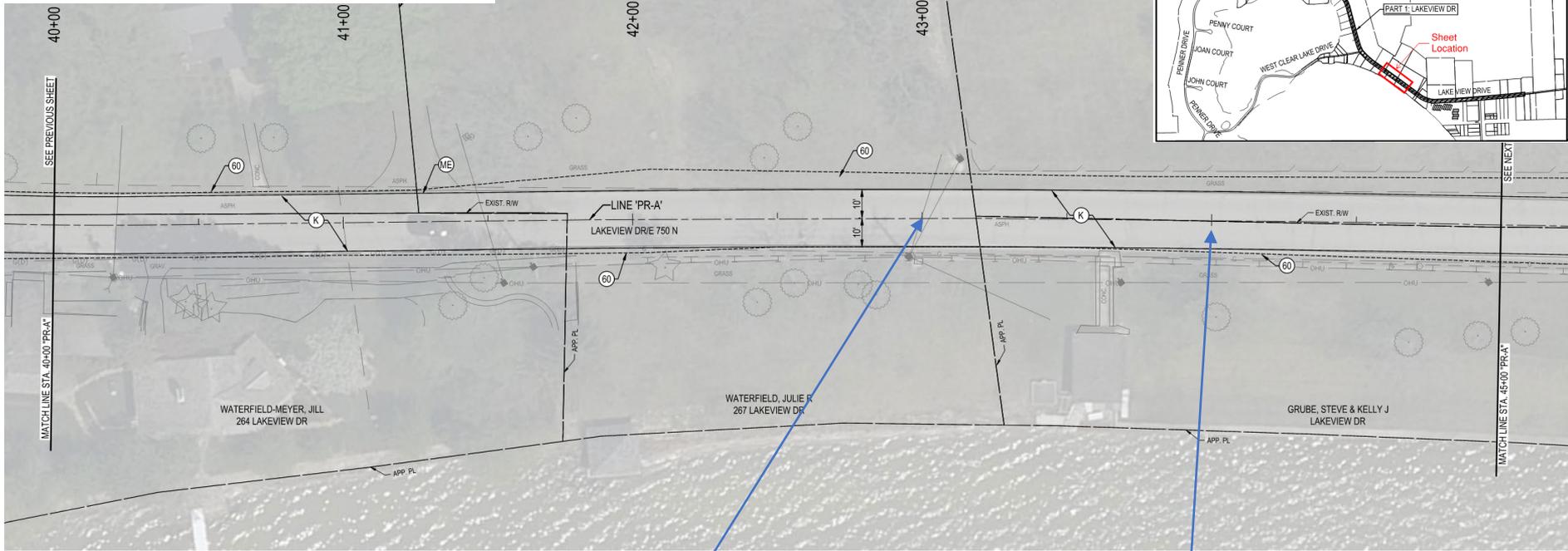
Final Design Overview

- Design includes the following road contours: Crown and super elevation (Preserving Existing Road Contours)



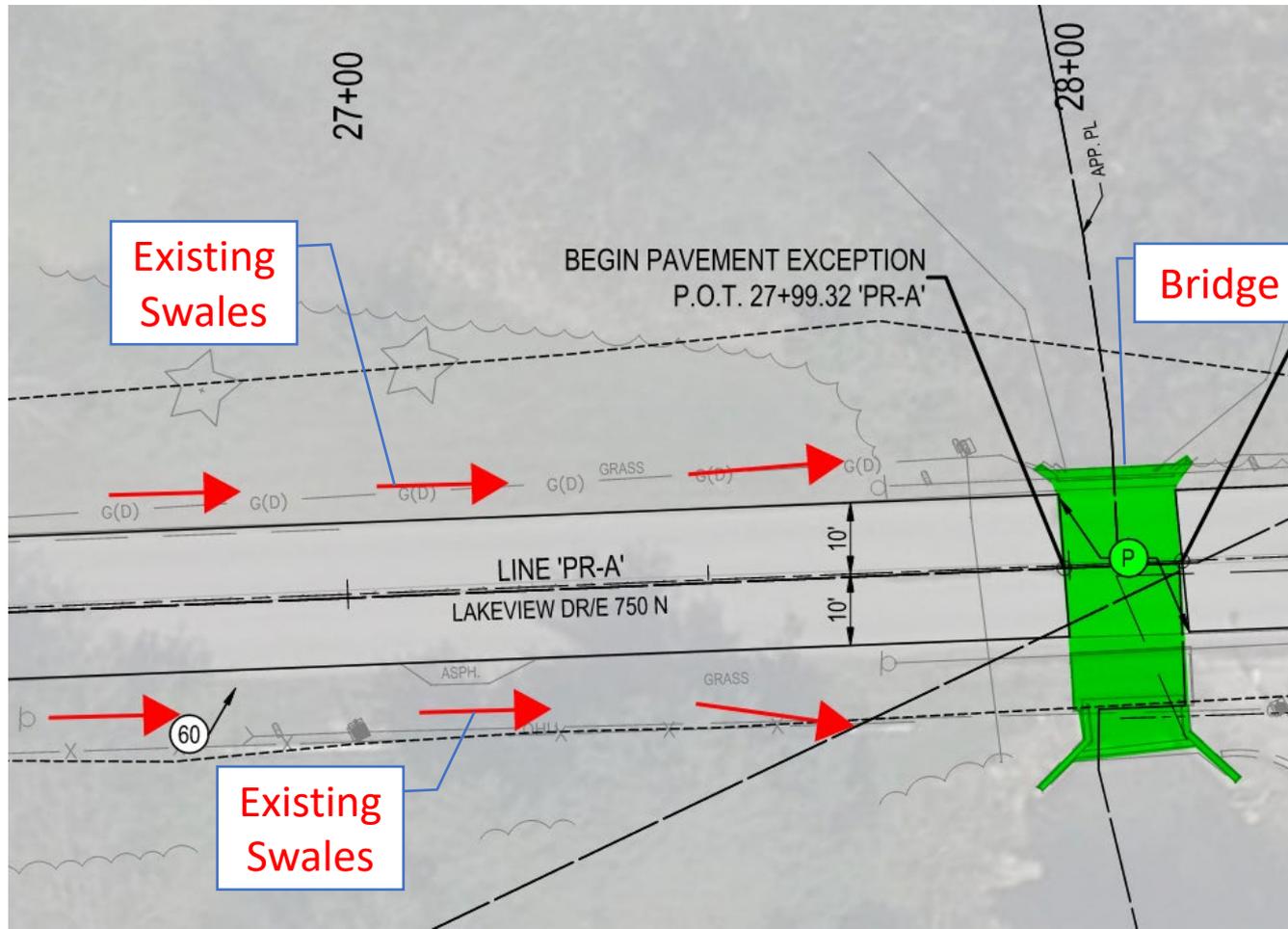
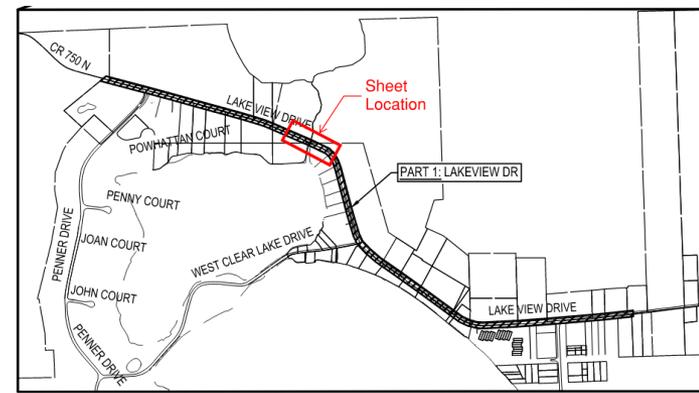
Super Elevation Locations

(Bridge & at 267 Lakeview Drive)



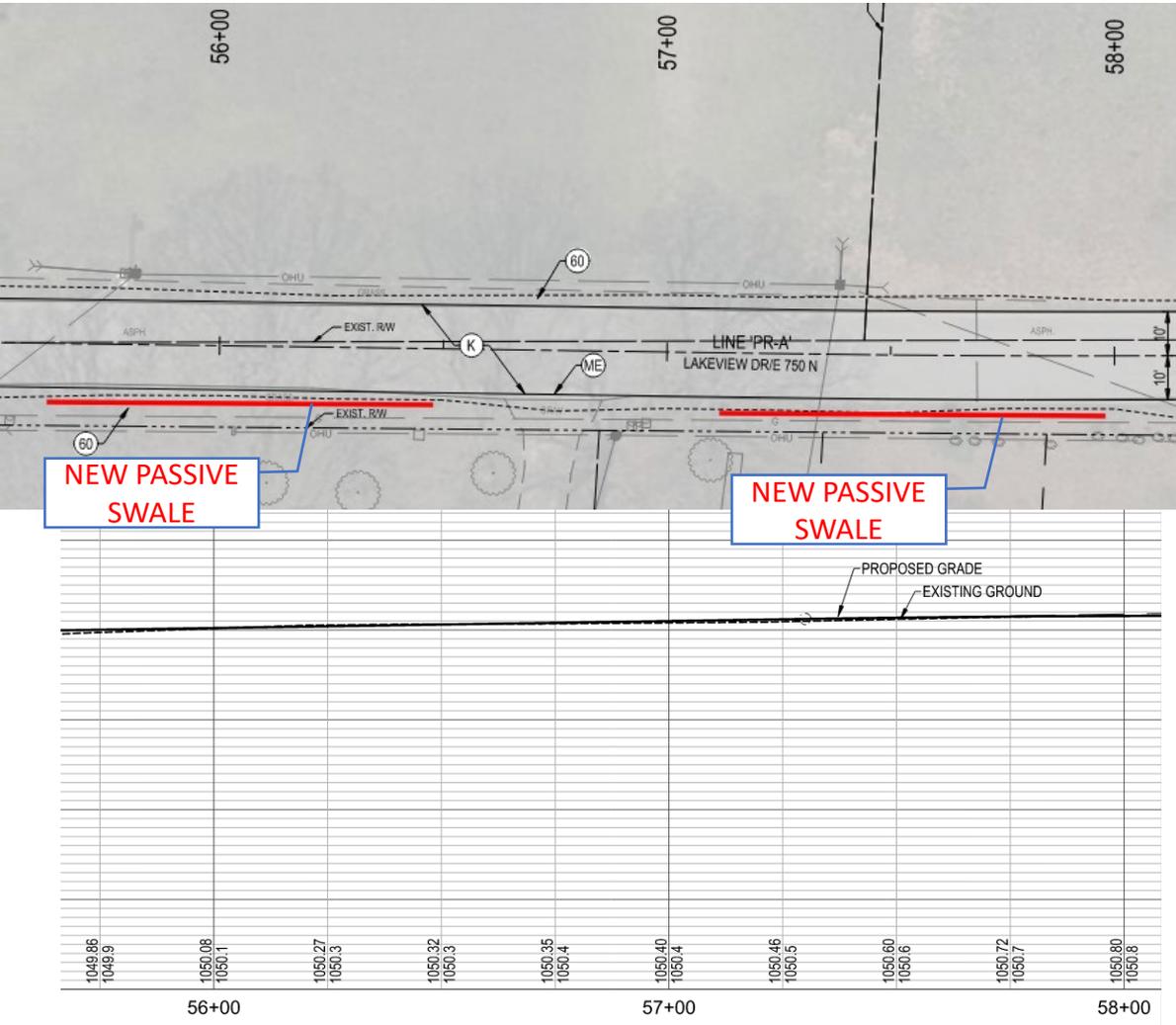
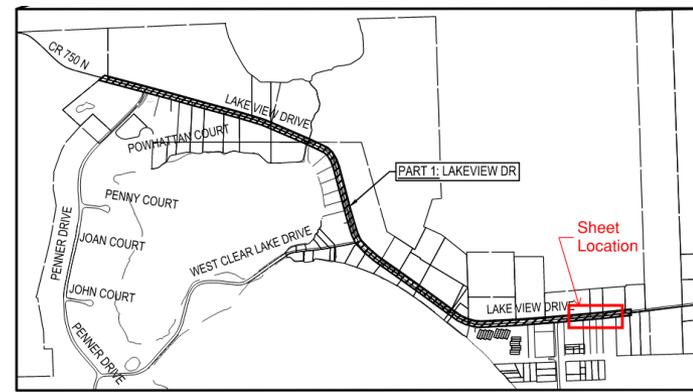
Final Design Overview

- Drainage Approach
 - Existing Swales



Final Design Overview

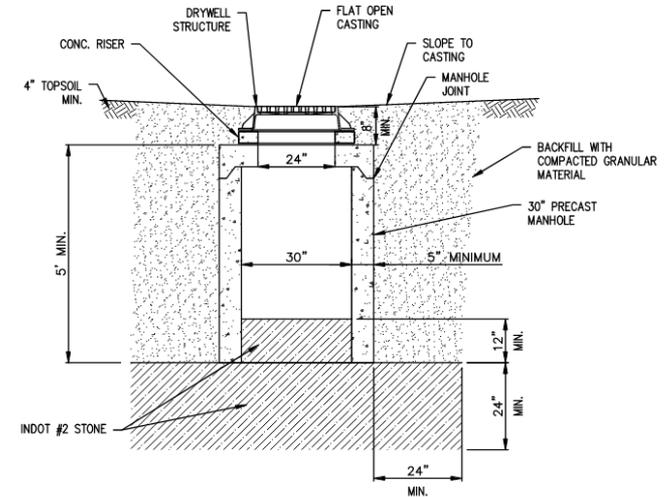
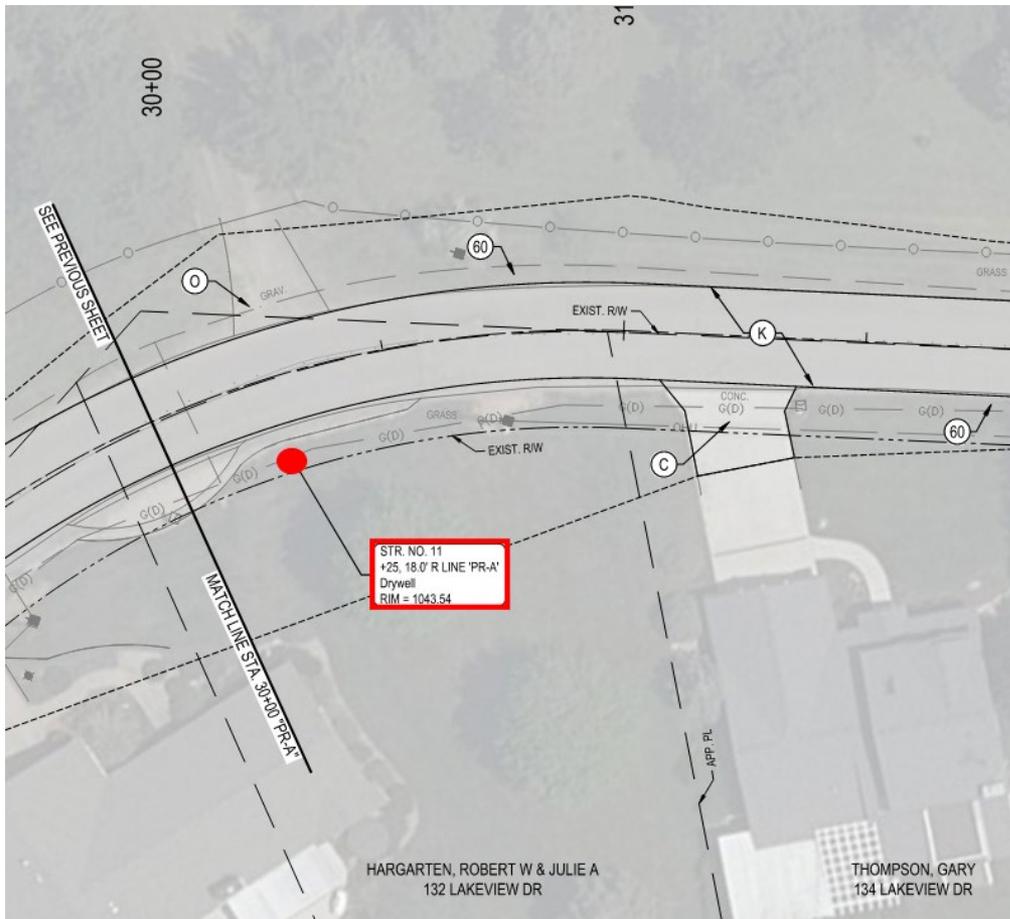
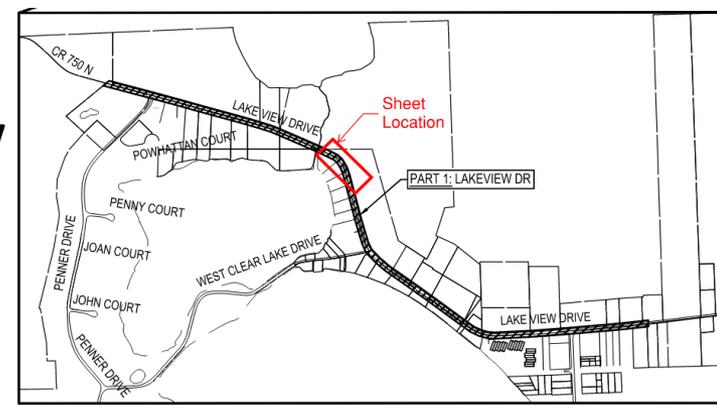
- Drainage Approach
 - New Passive Swales



(Example Passive Swale)

Final Design Overview

- Drainage Approach
 - New Drywells

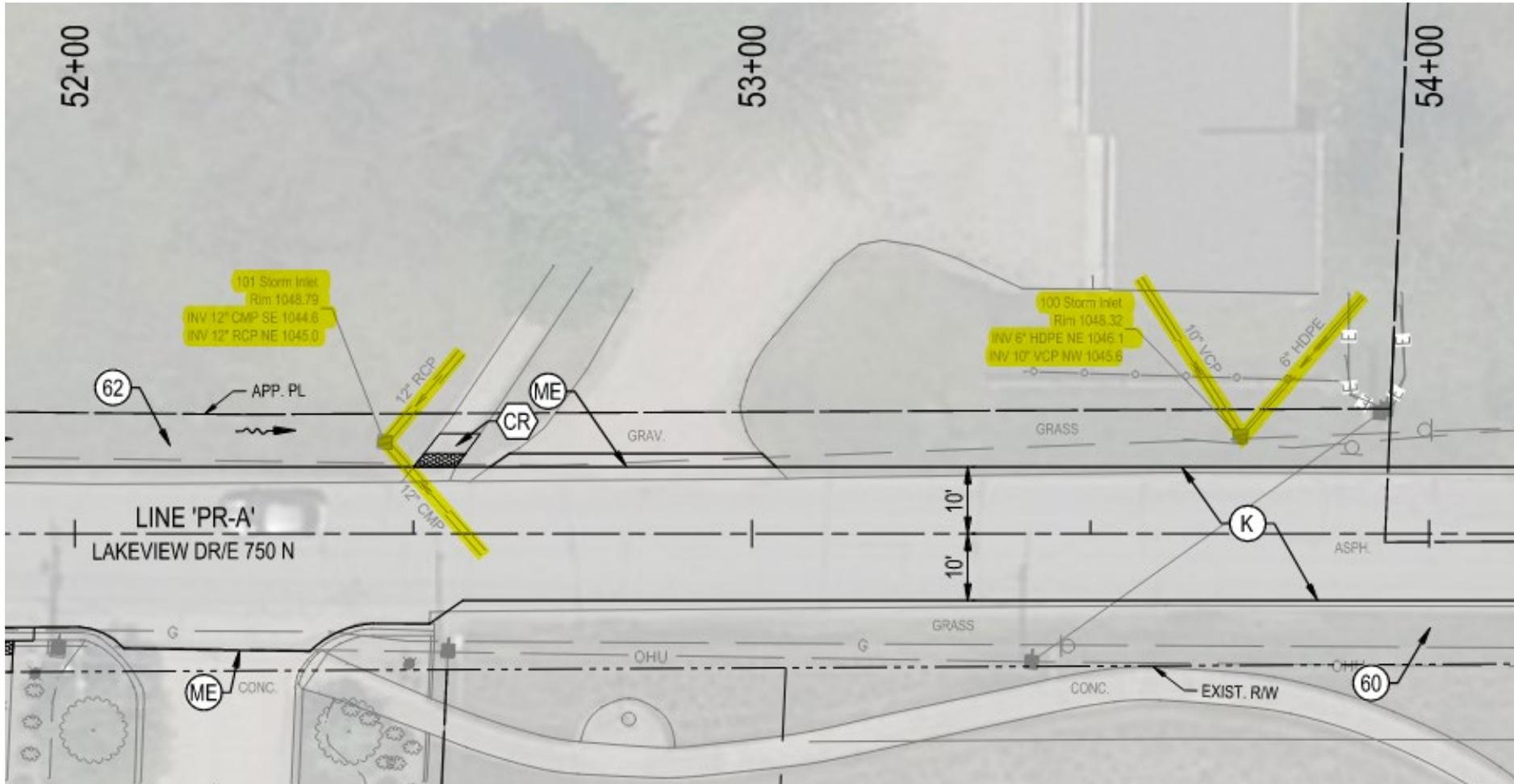
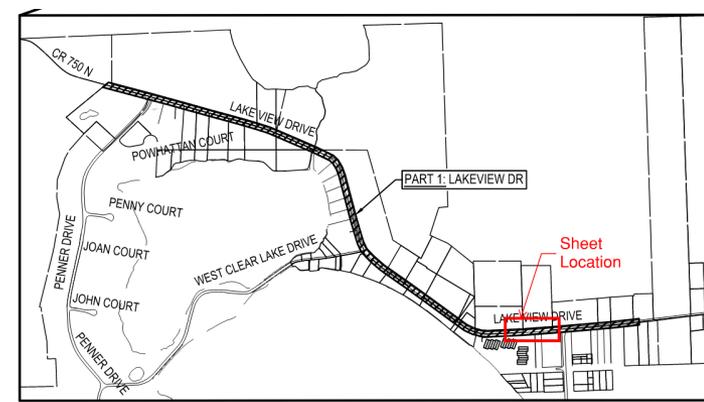


DRYWELL STRUCTURE DETAIL

SCALE: NOT TO SCALE

Final Design Overview

- Drainage Approach
 - Existing Inlets/Drainage (Condos)



Final Design Overview

- Compliance assessment

TOCL Road Policy Req	Governing Requirement	Included		
		Yes	No	N/A
3.01	The road surface shall be asphalt.	X		
3.02	Project shall include all necessary design elements to establish a road segment lifespan of >15-Years.	X		
3.03	Design shall be adequate for Indiana temperature extremes and repeated winter freeze/thaw cycles.	X		
3.04	Road segments shall include a drainage system that shall have the following requirements.			
3.04a	a capacity to manage a 10-year storm (1.91 in/hr) event.	X		
3.04b	be durable, easily maintained, retard sedimentation, and retard erosion.	X		
3.04c	maximize the use of passive swales alongside the road where sufficient Right-of-Way (ROW) exists and minimize use of drains in applications where design constraints leave no other cost-effective solution.	X		
3.04d	exist within the road ROW.	X		
3.04e	Include filtering elements (i.e storm drains, sump features to settle particulates, rip raft to slow flow of water,etc.) on all drainage conveyed via pipe directly to the lake.			X
3.04f	require a drainage easement for any portion located on private property.			X
3.04g	ensure surface water falling on the roadway enters the drainage system in a manner to prevent water and/or sedimentation from flowing onto adjacent private property lots.	X		
3.04h	maintain roadway free of standing water following a storm event.	X		
3.04i	prevent ponding along roadway from seeping back onto road surface.	X		
3.04j	use roadbed structural components which dissipate moisture.	X		
3.04k	account for all pre-existing additional drainage loads.	X		
3.05	Road's structural components shall be designed for a maximum vehicular load of 80,000 lbs.	X		
3.06	Road finish asphalt layer shall be a thickness adequate for a mill and resurface maintenance operation.	X		

Final Design Overview

- Risk assessment and mitigation approach

Item #	Originator	Risk Description	Mitigation Actions
1	Thurber	If Construction does not start prior to Labor Day then weather (temperature) may prevent completion of project in 2024 resulting in TOCL not qualifying for CCMG in 2025 and loosing access to the 75% cost share worth ~\$750,000+	Start construction prior to Labor Day
2	Thurber	If road closures prevent access to condominium garages for extended periods of time then residents will not be able to place watercraft in storage resulting in delayed storage activities and degrading weather conditions	Work with Condominium President to coordinate road closure and watercraft storage activities

Updated Cost Estimate

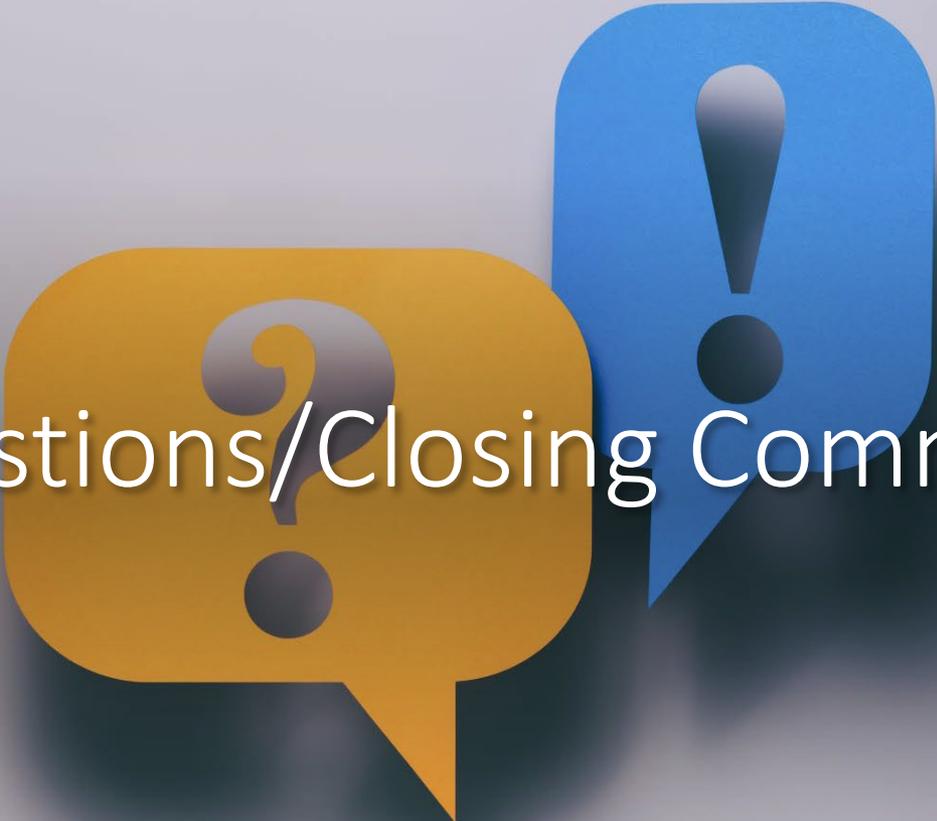
- No significant update from Community Crossings Matching Grant (CCMG) application estimate of \$1.1M

Schedule Considerations

- Mitigate risk of TOCL not qualifying for CCMG in 2025 and loosing access to the 75% cost share worth ~\$750,000+ (reference item #1 on slide 27) by starting prior to Labor Day due to longer overall road length
- Coordinate road closure to accommodate weekend access for boat storage in the Condominium Garages
- Anticipated Schedule (Final Schedule Determined at Pre-Construction Meeting):
 - Excavation and Stone Placement:
 - Phase 1: 3 Weeks (August)
 - Phase 2: 2 Weeks (August-September)
 - Phase 3: 3 Weeks (September-October)
 - Phase 4: 1 Week (October)
 - Paving:
 - Intermediate: 1-2 days per phase
 - Surface (Phase 5): 2-3 days entire stretch (October)
 - Restoration:
 - 2 Weeks (November)

Upcoming Milestone Schedule

- ✓ 1/30/24: Final Design Review
- 2/2 & 9/24: Advertise for Bids
- 2/19/24: Bid Opening
- 2/20/24: Award Project
- 3/1/24: Submit Documents to INDOT
- TBD: Pre-Construction Meeting

The image features two stylized speech bubbles. The one on the left is yellow and contains a question mark. The one on the right is blue and contains an exclamation mark. Both bubbles have a drop shadow effect. The text 'Questions/Closing Comments' is centered over the space between the two bubbles.

Questions/Closing Comments

Attendee Comments/Questions

Backup Slides

Annual Process Timeline

January	February	March	April	May	June
9. Develop Final Design per Roadway Design Standards Document	1. Gather Prioritization Tool updates (except 1.2) 10. Bidding per Roadway Design Standards Document	1.2. Perform Annual PASER Assessment 2. Update Prioritization Tool per Update Instructions (see instruction Tab in spreadsheet) 3. Publish Road Project Forecast	4. Update Prioritization Tool Following Town Council Meeting if Necessary 5. Identify Constraints and Recommended Approach (TOCL Input to Road Engineering Firm for projects approved in 3.3)	6. Provide next (current year +1 approved in 3.3) year's Road Budget Estimates to Town Council & Zoning Administrator	7. Develop Preliminary Design per Roadway Design Standards Document

July	August	September	October	November	December
7.3 Council Approval to Proceed with CCMG Application	11. Construction (Previous Years CCMG projects)	11. Construction (Previous Years CCMG projects)	5.2. Engineering Firm Assesses Road Segment Projects Compliance to Governing Requirements	8. Develop Intermediate Design per Roadway Design Standards Document 12. Post Construction Review	

Prioritization Tool Update

Project Forecast	CCMG Year/ *Recom mended	Ref #	Priority	# of Vehicles	Designation	Roadway	From	To
5-Year Plan (Starting 2023)	2024	13	27	5	Lakeview Drive-1	Lakeview Drive	Town Limits	132 Lakeview Drive
	2024	14	26	5	Lakeview Drive-2	Lakeview Drive	132 Lakeview Drive	West Clear Lake Drive
	2024	15	26	5	Lakeview Drive-3	Lakeview Drive	West Clear Lake Drive	Town Limits
	2025*	47	26	1	Sand Point Road	Sand Point Road	East Clear Lake Drive	Town Limits
	2025*	3	24	2	West Clear Lake Drive-4	West Clear Lake Drive	192 West Clear Lake Dr	Bridge
	2026*	25	23	4	East Clear Lake Drive-1	East Clear Lake Drive	South Clear Lake Drive	572 East Clear Lake Drive
	2027*	24	23	4	East Clear Lake Drive-2	East Clear Lake Drive	572 East Clear Lake Drive	520 East Clear Lake Drive
	2027*	19	23	4	East Clear Lake Drive-6	East Clear Lake Drive	356 East Clear Lake Drive	Maple Street
	2027*	34	23	2	South Clear Lake Drive-2	South Clear Lake Drive	891 South Clear Lake Dr	770 South Clear Lake Dr
10-Year Plan		40	23	2	South Clear Lake Drive-9	South Clear Lake Drive	Elm Street	Paradise Point
		38	23	2	Elm Street	Elm Street	South Clear Lake Drive	South Clear Lake Drive
		7	22	2	Penner Drive-1	Penner Drive	West Clear Lake Drive	Penny Court
		35	22	2	South Clear Lake Drive-1	South Clear Lake Drive	Fountain Beach Drive	891 South Clear Lake Dr
		33	22	2	South Clear Lake Drive-3	South Clear Lake Drive	770 South Clear Lake Dr	Buck Point Drive
		32	22	2	South Clear Lake Drive-4	South Clear Lake Drive	Buck Point Drive	Terrace Drive
		37	22	2	Paradise Point	Paradise Point	South Clear Lake Drive	Dead End
		17	21	4	Maple Street	Maple Street	East Clear Lake Drive	Dead End
		20	21	4	East Clear Lake Drive-5	East Clear Lake Drive	384 East Clear Lake Drive	356 East Clear Lake Drive
		18	21	4	East Clear Lake Drive-7	East Clear Lake Drive	Maple Street	Lakeview Drive
		26	21	4	Outer Drive	Outer Drive	Buck Point Drive	South Clear Lake Drive
		41	21	2	Gecowets Drive	Gecowets Drive	State Road 120	South Clear Lake Drive
		31	21	2	South Clear Lake Drive-5	South Clear Lake Drive	Terrace Drive	East Clear Lake Drive
		40	21	2	South Clear Lake Drive-8	South Clear Lake Drive	Gecowets Drive	Elm Street
		23	20	4	East Clear Lake Drive-3	East Clear Lake Drive	520 East Clear Lake Drive	Sand Point Road
		11	20	1	Penny Court	Penny Court	Penner Drive	Cul-de-sac
		12	20	1	Powhattan Court	Powhattan Court	Penner Drive	Cul-de-sac
		46	20	1	Rieke Drive	Rieke Drive	Town Limits	West Clear Lake Drive
		9	20	1	John Court	John Court	Penner Drive	Cul-de-sac
		10	20	1	Joann Court	Joann Court	Penner Drive	Cul-de-sac
		29	19	1	Chapel Drive	Chapel Drive	Outer Drive	South Clear Lake Drive
		27	17	3	Lakeside Court	Lakeside Court	South Clear Lake Drive	East Clear Lake Drive
		43	17	2	South Clear Lake Drive-6	South Clear Lake Drive	CR 700 E	Clear Lake Cove
	42	17	2	South Clear Lake Drive-7	South Clear Lake Drive	Clear Lake Cove	Gecowets Drive	

