



VILLAGE OF RIVER FOREST TRAFFIC AND SAFETY COMMISSION MEETING

Wednesday, November 15, 2023 – 7:30 PM

AGENDA

Physical attendance at this public meeting is limited to 50 individuals, with Committee members, staff and consultants having priority over members of the public. Public comments will be shared with the Committee. You may submit written public comments via email in advance of the meeting to: bkoclanis@vrf.us. You may listen to the meeting by participating in a Zoom conference call as follows: dial-in number: 312-626-6799 with meeting ID: 833 5080 7173 and passcode 202850 or by clicking here:

<https://us02web.zoom.us/j/83350807173?pwd=dklvanBtZHluWitRdzBjNnl5cHYzZz09> If you would like to speak during public comment or if you wish to participate in-person at Village Hall, please email bkoclanis@vrf.us by 4:00 PM on Wednesday, November 15, 2023.

1. Call to Order/Roll Call
2. Adoption of minutes from the Traffic and Safety Commission meeting held on September 20, 2023.
3. Public Comment
4. Update on traffic count and speed study in the northeast corner. – **NO ACTION TAKEN**
5. Discussion of the current Truck Ordinance
6. Discussion of the Village Wide Traffic Study pertaining to Washington Street.
7. Adjournment



VILLAGE OF RIVER FOREST TRAFFIC AND SAFETY COMMISSION MEETING MINUTES

Wednesday, September 20, 2023 – 6:30 PM

A regular meeting of the River Forest Traffic and Safety Commission was held on Wednesday, September 20, 2023, at 6:30 P.M.

ROLL CALL AND CALL TO ORDER

The meeting was called to order at 6:30 P.M. Present at this meeting were Chairman Rees, Commissioner Chase, (came in late) Commissioner Gillis, Commissioner Hoyt & Commissioner Karrow.

Chairman Rees indicates that representatives from Thomas Engineering are here tonight and will be giving a presentation on the Village Wide Traffic Study.

MOTION to adopt minutes from last meeting. Commissioner Hoyt seconds.

VOTE TAKEN ON MINUTES

Chairman Rees – yes, Commissioner Gillis – yes. Motion passes.

Chairman Rees talks about agenda items tonight. A presentation by Thomas Engineering group for the work done regarding the Village Wide Traffic Study and talk about issues on Clinton and Bonnie Brae. This portion was excluded from this report as KLOA previously done a comprehensive study of that northeast quadrant. We will talk about the repercussions of that. We will see where to go from there in respect to Clinton and Bonnie Brae.

Jim, Senior Project Manager from Thomas Engineering, summarizes Traffic Study (see attached summary at the end of the minutes).

Chairman Rees indicates that the Study is listed on our website and labeled Draft. He asks Director Loster if it will remain a Draft or changed from Draft status?

Director Loster indicates that it will be changed but wanted to get it out to The Public for consumption as quickly as possible. There are some items that Staff has not edited yet due to text answers that will be buttoned up and posted on the website.

Chairman Rees asks Jim, Senior Project Manager from Thomas Engineering, if he can comment on the method that TEG used to do the counts, collect the speed data and what type of methodology they used to collect data.

Jim, with Thomas Engineering indicates that they used Miovision video traffic counting software with mounted pole cameras. Data is then annualized by a computer. This only captures volumes. Speed data is acquired utilizing high star pavement counters collection.

Chairman Rees asks Jim if data is obscure as motorists may not know then are being monitored?

Jim, with Thomas Engineering, responds yes as any data collection they do is obscure especially when it comes to the speed collection without influencing the speed of the driver.

Chairman Rees had a couple of questions related to the recommendations. Is there an opinion or philosophy due to the step approach? How do we contemplate considering implementing the recommendations as we would like to act on them promptly to give people notice for the affected area.

Director Loster indicates that part of the goal tonight was to get the general findings of this Study out there for consumption and consideration. Anything that The Commission would be considering pursuing when it becomes sites specific, is something that we would ask The Commission to discuss as a group and make known it is your intention to discuss the bump-outs at Lake and Park. We would notify accordingly for a future meeting so a more concise conversation can take place regarding that specific location. This is more of a broader picture to get it all out there and start to gather some feedback.

Chairman Rees asks if Jim or Director Loster can you identify some of these areas that we should prioritize if we were to decide to take a piece at a time. Do you think there are areas that we, as a Commission, should consider prioritizing above others?

Director Loster indicated that again that was part of the goal tonight to see from the Public to see what so we as a Commission to see where we would like to focus the conversation for future meetings. But at this point, nothing has been identified specifically as a priority.

Chairman Rees to ask a couple more questions and then turn it over to see if other Commissioners have questions. I noted at the beginning the northeast quadrant was excluded from this. On these 2 pages that I printed out are the prior KLOA Study. Jim, as part of your work, did you look at the KLOA Study?

Jim, with Thomas Engineering, indicated that they read through it but didn't focus on any excluded areas. We were somewhat aware of what was going on there regarding the changes of the right in right out and cul-de-sac locations.

Chairman Rees states that one reason that I am asking about that is KLOA collected similar data. I don't know if they collected data in the same manner. You mentioned that they may have used different manners to collect some of the data. We do have from KLOA speed data, crash data and volume data on the streets that are at issue. For example, Bonnie Brae, Clinton, William and Monroe. I looked at their data and plugged it into your point matrix. Do you have an opinion, or do you know if that would be a valid methodology for us going forward as we have KLOA data? This was data collected in March of 2022, included in a report prepared in June 2022 and which was discussed in a meeting of September of 2022. Using your point methodology, it looks like we can take data from the KLOA Study and assign points using your methodology to determine that on the KLOA Study see that speed was not seen as an issue with respect to Bonnie Brae. Under your study, that would be 0 to 5 points if the speed was within the appropriate range. They measured volume at 900 cars based on their period of collection and you guys put a certain

number of points based on that volume of 900 that would be 5 points. There is crash data that they collected. None of the intersections they looked had more than 3 crashes in a period and that would also get points under your methodology and doing that we would be able to identify that based on the KLOA data that Bonnie Brae, for example, or Clinton Place would qualify as either Level 1 or Level 2. Do we take your point methodology, we collect the data, we apply the data, measure and assign the points and based on points it identifies if that particular area of study qualifies for Level 1, Level 2, Level 3, Level 4 type interventions?

Jim, with Thomas Engineering, indicates yes. This is not the purpose here but is something that The Village can continue using in the future once it is an accepted document it can be used by applying previous collected data from the KLOA Study or the next project that comes up next year that is collected and see where it falls. Each location is treated and scored by the same system. The higher the score, the more improvement it would be like closing off a road or whatever.

Director Loster indicates that the only clarifier I would add is this is part of the Traffic Calming Toolbox which is part of the Village Wide Study. The goal is to have that completed. This is a split off appendix this group can apply to any situation. Don't just think of it as the context of the Study is to be used for years in the future.

Commissioner Hoyt asks if this is TEG proprietary methodology or is it broader than that?

Jim, with Thomas Engineering, no, you can look around at other communities as there are a lot of similar things with the exact counter measure. We try to tailor the ones we listed as to the ones that were acceptable within The Village Wide Survey. We think this is the best option but there are other options that can effectively do the same thing. We did not develop this one specifically but is very similar.

Commissioner Hoyt asks if related to that, are we formally adopting us to approve this methodology to help us or The Village improving it in a way that we can use it or do we need to have an opinion on whether we should do that?

Matt Walsh, Village Administrator, indicates that yes, the intent for that would be formally adopted as it adds legitimacy to the process moving forward to help out The Commission and The Village Board to treating any petitions or requests or anything else that comes forward and direct it to that process. That is not the intent tonight as this is coming in as a huge document that Chairman Rees pointed out, but that is the goal.

Chairman Rees asks I don't know if this was a focus of your presentation, but you also have in here a cost matrix which is helpful as you identify at each level, Level 1, Level 2, Level 3, the different kinds of interventions or actions that might be taken. Then you have notes on implementation, not only what the cost is but what the desired outcome is as some things are better for speed. Can you comment on what you call the cost matrix, how to use that?

Jim, with Thomas Engineering, indicates commenting back to your earlier questions about starting a smaller improvement and stepping in, that is how we would do it or how we would recommend. You are at a high- level score. That is something that is more involved and is needed but is ok to go there. The intent of the cost matrix is to help guide this. We think these are

a couple options that we are considering where options A, B & C are going to give us a similar benefits. If A is half the cost and easier to implement and meets the needs of what we are trying to do, and this one is easier for speed, and that is what we are trying to address, that would be the appropriate amount of measure to start with.

Chairman Rees asks if you can comment on the use of speed humps or bumps verses the speed tables that people may or may not understand where one verses the other might be appropriate?

Jim, with Thomas Engineering, indicates that generally they are all the same and get bigger as you go. A speed bump is going to be a couple of inches raised off the pavement and guessing a foot or so wide. Whereas the speed hump is maybe 3 or 4 feet wide. A speed table gets even wider than that and at a raised intersection is essentially a speed table across the entire intersection.

Chairman Rees asks if a speed table could be in the intersection or it can be in the middle of the block?

Jim, with Thomas Engineering, indicates correct.

Commissioner Hoyt indicates that the pictures of the table were only in the intersection. When I think of table I think not in the intersection. Am I understanding it right?

Jim, with Thomas Engineering, sometimes you will see it at crosswalk or at a big cross walking where you will have that raised intersection, the difference between a speed hump and speed table is if it is wide enough to be considered a table? One of the advantages of the speed table or as a raised intersection speed table over a bump or hump location is you can actually have more control of the design of the ramp flow on all the approach sides of that. You can make it a shell or angled slope on a road where you don't want to lower the speed too much. For example, for a residential minor street, you maybe don't mind that the traffic doesn't have to slow down to 15 mph even though it is a 25 mph speed limit area. If you are on Thatcher, you probably don't want to slow down traffic down to 15 but you do want to slow down the speed limit and that is where a speed table would be designed at the raised intersection. This way a driver can comfortably progress over that intersection at 25 mph.

Chairman Rees indicates that he has seen in some study's that the term vertical deflection verses horizontal deflection. Are those terms you use? Are vertical deflections are like speed humps, bumps table things that are vertical verses horizontal deflections you were talking about with respect to Thatcher and Washington which is narrowing the street horizontally. Is that part of the terms you use?

Jim, with Thomas Engineering, indicates there are options. The verticals are the ones you mentioned. In addition to the horizontal there are options where you can curve them out alternating where the curve out on one side of the road at one of the blocks and at the other so you almost create a weaving pattern for the traffic. You visually change the roadway for them.

Chairman Rees indicates within your levels, 1,2,3,4 do you have any that include closing off the street which is one of the things we have been talking about on Bonnie Brae and Clinton or partial or full closures like cul-de-sacs or barriers like that. Would those be considered Level 4 or

what level would you consider something like a cul-de-sac or a barrier to stopping traffic from entering the street?

Jim, with Thoms Engineering, considers those a Level 4 on the magnitude of impact that they are going to have due to traffic. Putting in a speed bump, you are affecting all the traffic but you are not changing traffic pattern. Putting a sign up is pretty small. Changing the control at an intersection those are mainly like Level 3 taken from an all way stop to a signalized intersection. If you are blocking a road off completely with cul-de-sac or converting to right in right out or you are eliminating different turn movements available, that would be at Level 4 impact.

Chairman Rees asks if any other Commissioners or Staff have questions for Jim?

Commissioner Karrow asks when you mention bike lanes on Thatcher and I also think you suggested something on Washington, are those protected bike lanes? There is no curb between the street and the bike lane.

Jim, with Thomas Engineering indicates that their initial recommendation was a two-foot striped buffer offset from the lanes so you are not directly up against the travel lane but not a physical barrier. That is an alternative option that can be expanded onto what we are recommending. It could be addressed if the project moves forward.

Commissioner Karrow indicates that the intent with that is to address speed not volume?

Jim, with Thomas Engineering indicates yes, the intent to that is to address speed. When you have these wide- open roadways where you have two lanes on Washington and then you have these parking lanes which have low utilization rates mostly under 50%. Some blocks 0% parking. It has the feel of a faster road. By narrowing lanes and closing lanes in on traffic, it has the traffic calming effect which has the intent of reducing driver's speed. Obviously, traffic volume does need to be considered in this is that you do not want to eliminate lanes.

Commissioner Gillis indicates on Washington, we were talking about that. I like the idea in Chicago where you have parking and bike traffic going both ways. In Chicago where you see that green stripe, I understand what you mean by thinning it out. It does seem to work. I like that a lot. I was actually surprised by some of these numbers on Washington at 38? That is a big number. On Thatcher 41. Again, I know they speed, but that is fast. Jeff, on Thatcher, there was something that came through about a preliminary recommendation about a bike where they were going to reconfigure on a state road park, from North Avenue to Chicago. If I remember right, the traffic, traffic and two bike lanes on the residential side.

Director Loster indicates the Des Plaines River Trail is mostly North Avenue way up north. Several communities are involved in that project. The County is moving the bike path along the river out of the flood plain so it is more usable. River Forest, a couple years ago, worked our way into the project as originally Forest Park and River Forest were not part of it. That idea was to continue it down to the Transit Center in Forest Park. So yes, that is something that The Village is still involved with and still a project that is in the works. The consultant that is running that project last year secured funding to complete Phase 1 Engineering for River Forest portion of that path and later on this year The Village will need to make a local match payment to continue that going which is already budgeted. The general idea would be to put consensual plans together

for a two -lane bike path on the west side of the pavement so on the Forest Preserve side, but that would eat up one of the southbound lanes thus reducing it down to one lane. That is something that is running down a parallel track and continues to do so.

Commissioner Gillis asks if we can do that on a temporary basis if they recommend a bike lane in that area?

Director Loster indicates that would change things especially on a highly utilized road like that. It is also still under IDOT Jurisdiction so permitting for any of this is tricky or at least a lengthier process. Trying to do that twice over might not be prudent but if that is something that The Village were interested in striking something in the meantime but doing it on a more permanent basis down the line would be something The Village would seek permits from IDOT for.

Commissioner Gillis asks Jeff with some of these options regarding the Toolbox, is there a way that we could get some sort of cost associated with these rough numbers? If you are putting in a bump out or curve extension, there is in some cases, heavy engineering for the future. I know Chicago does less expensive bump outs where they keep that gap between the original curve as a new bump out so they don't have to reengineer the water flow or everything. Correct? The speed cameras that we love with the flashing lights at 15 to 20 grand a pop, we can't throw those up everywhere. Just being realistic about costs.

Director Loster indicates that the radar things are not quite that expensive so to put that out there. The cost matrix does run 0 to 6, 6 to 15, kind of provide the high medium low- cost thing. A lot of that stuff is going to be site specific if you are talking about physical infrastructure at a particular location. If The Commission is considering bump outs at Washington and Ashland, this is completely hypothetical. If that is information that The Commission would like a little more kind of honed on as far as the cost of that, that is something Staff could put together for rough costs on a case -by -case basis.

Chairman Rees asks if there any more questions.

Commissioner Hoyt asks if the cul-de-sac, or the dead end that we're considering, is not even on here as one of the options? Is there a reason why?

Jim, with Thomas Engineering indicates that I do not think that it was intentionally excluded as not to be considered. This document was recently provided to Village Staff so we have not had a full time chance vet it, we can definitely incorporate additional improvements into the Toolbox or eliminate some that aren't desired.

Commissioner Hoyt asks when we adopt the Toolbox is to make sure it included everything we would you would ever consider.

Chairman Rees indicates if The Village is looking for some kind of motion, I propose the motion that we approve the use of the Thomas Engineering Group scoring matrix and the up and coming Toolbox as tools to use along with Commissioner Hoyt's former suggestion when tis draft is finalized to ask TEG to include the use of either cul-de-sac or barriers to be placed at the appropriate level where you think you would recommend placing that. It sounds like it was a

Level 4 type intervention if that is your recommendation that you put it in the final. That's my motion.

Commissioner Hoyt seconds the motion.

Chairman Rees asks if there is there any discussion before we vote on that motion?

Commissioner Karrow asks if you can restate the motion that we are adopting?

Chairman Rees indicates that it is a pretty modest motion that I am proposing that we adopt use of the Scoring Matrix and Calming Toolbox as articulated in this draft plan and to ask when Thomas Engineering Group finalizes this that they include the discussion to add to the level the cul-de-sac or barriers at the appropriate level they see fit. Any discussion on that motion? I think we can vote on that.

VOTE TAKEN

Chairman Rees – yes, Commissioner Gillis – yes, Commissioner Hoyt – yes, Commissioner Karrow – yes. Motion passes.

Chairman Rees thanks Jim and Kyle with Thomas Engineering for their great work and excuses them from the meeting.

Chairman Rees states that we will not open up public questions to TEG with regards to the Village Wide Traffic Study. The public comments will be to address Clinton and Bonnie Brae.

Chairman Rees talks about another agenda item which is a broadly worded statement discussion about Clinton and North Avenue, Bonnie Brae and North Avenue regarding cul-de-sacs, the temporary barriers that exist. I missed the last meeting but is my understanding that this Commission recommended after discussion was some of it heated. The removal of the barrier at Clinton Place that went to The Village Board and they rejected that recommendation in large part that they wanted to make sure that the recommendation was considered in conjunction with Bonnie Brae. This was put back on the agenda for that reason. What is difficult, for better or worse, no use debating it, the section that The Village addresses this corner of Bonnie Brae and Clinton is excluded from this particular study. We do have the KLOA study which I do not know if it is still available on the website. We do have data from KLOA which was collected last March. Just to recap, there were several neighbors that expressed concern about pass through traffic that KLOA study included the volumes on Bonnie Brae, Clinton Place, William and Monroe, were within the respected volumes of approximately 900 cars. The speeds on Bonnie Brae and Clinton were also in the expected ranges and there was evidence of access speeding particularly on William and Monroe. The accidents at the intersections in that area were studied. If you accept that data, that put the streets at Bonnie Brae and Clinton at Level 1 may be hard to get to Level 2.

This is available and you should be aware that either this Commission or The Village Board adopt a recommendation that goes beyond what is recommended within these guidelines. The reason for having The Village spend more money and collect this information is to see if we can try to be more uninformed and try to have a more evidence-based approach to what we are recommending. I think it is fair to say that this is a divisive issue where we have people in the

community that lived there that have stronger opinions both ways, both for and against keeping the barriers in place. KLOA, at the time, did recognize that cut-through traffic was an issue during their counts as there was a greater number of southbound cars that were turning left on Greenfield and Le Moyne. Even with that cut-through traffic, they were within the expected volumes which have been generally seen in The Village. I would like to get a count as to how many people are here from Bonnie Brae –How many people out of that 9 would like to support keeping the barrier at Bonnie Brae? (There was a show of hands - 8)

How many people are here from Clinton? There was 11. How many of you support keeping the barrier at Clinton? (There was a show of hands)

From the support of numbers, people on Bonnie Brae are generally happy with the barrier and the people on Clinton are generally unhappy with the barriers.

Discussion breaks out regarding barriers on certain blocks of Clinton.

Chairman Reese states that I think to me, the room is going to remain divided. We can take these things one at a time to decide if we are going to doing anything on this tonight. Are there people here who want to address something with respect to Bonnie Brae and Clinton? The topic on the agenda is the cul-de-sacs and barriers. I would like to keep the agenda limited to that topic.

When you go back to the KLOA Study, there were other methods that were recommended along the lines of what we just heard here tonight with respect to an incremental approach that were not used. For example, adding parking on the west side on both of those streets to reduce, to basically constrict the width of the street and add two-hour parking on the west sides of Clinton and Bonnie Brae, at least on that first block between North Avenue and Le Moyne. That would have the effect of slowing down cut-through traffic. Is it already done on the west side now? By adding parking, this is one of those things in the Toolbox that is at Level 2 for street parking by impeding traffic through that kind of a method. It is one of the things in the Toolbox that can be used as an incremental approach. We would like to move on from this topic and come up with a recommendation that The Village can decide what it wants to do.

Why don't I stop here and ask if any of the Commissioners have any questions on this issue.

Commissioner Hoyt refers to the KLOA Study that was done in March of 2022.

Chairman Rees states that the data was collected then.

Commissioner Hoyt restates that the KLOA Study was collected in March of 2022 and that changes were made to the area on Harlem since that data was collected. Should we consider using that data and apply it to the Toolbox or would we be better advised to redo the numbers as I don't want to delay this further?

Commissioner Karrow indicates that he thinks that the changes we have would reduce the traffic, counts and speeds if anything. We can still use the numbers, even if they were wrong in the direction that we were too conservative to over- estimate the traffic there. That would be my thoughts.

Chairman Rees indicates that one of his observations is that if we accept the KLOA data I think that Bonnie Brae and Clinton would be Level 1. I think that William was identified by KLOA which happens to be increased in speed and there would be some things that could be considered with respect to speed present on William and Monroe. At least it is my view that if these barriers

fall into the category of being sort of extraordinary measures that may be determined to be in the best interest of The Village, even if they don't meet the criteria under the Study. The challenge I have is whether this is something this Commission would want to weigh in or make a recommendation or let The Village Board make that decision. My question to The Commission is that are we prepared tonight to recommend any changes with respect to Bonnie Brae and Clinton Place with respect to the cul-de-sacs or the barriers. Or do we think there needs to be additional information which needs to be collected?

Commissioner Gillis indicates I think that what you had mentioned earlier to take a look at the data that we do have and agree that it is probably Level 1. I think overwhelmingly most people on Bonnie Brae appreciate that barrier there. We have not heard from either business for the last eight months. I think in this case that is fine to keep that barrier there. With the Clinton one, I think you are right we could remove that as we recommended. Let's look at some of the other options that we have in our new Toolbox. Likewise, need to go down into William Street which is another speeding problem and increased traffic. Let's go back and review our Toolbox to see what we can do there.

Chairman Rees asks if other Commissioners have any comments.

Commissioner Karrow indicates that he has one comment. If we leave the barriers, what are we leaving them for. Are we leaving them and anticipating making them permanent or what else are we going to do there? I think that the barriers are overkill for the problem, expensive to put up and more than we need. Do we leave the barriers up as a temporary measure until we find a permanent solution that is more scaled to the size of the problem, or do we take the barriers down now while we look for a scaled solution or implement a scaled solution?

Chairman Rees indicates regarding your question what is the problem that we are trying to solve? If we are only trying to solve cut-through traffic, regardless as we don't want any cut-through traffic, then obviously barriers work. If the problem is speed, this Thomas Engineering study shows there are different ways to address speed.

Commissioner Karrow indicates that I think most of the comments and letters have mentioned volume but all of them have mentioned speed. Slow moving voluminous traffic would be better than any real fast traffic.

Chairman Rees points out that with respect to the volume at 900 which was the volume measured by KLOA, that puts it in the lower threshold volume.

So, when they measure using their scoring matrix, if it is under 750 it is 0 points on their scale. If the volume is 751 to 1,350, it is 5 points. If it is over 1,351 it is 10 points. Over 1,951 it is 15 points. Even at 900 points, if you say that it was undercounting by over 100, 200 or even 300, it would still only be at the 5- point threshold. With limited crash history, limited speeding, with volume being around 900 cars, then there are other areas on this matrix that would generate points. We would be looking at whether there is a school, park, library, church, station or other things like that in the area, there is high community interest somewhat divided even you say it is supported by a petition that would get another 10 points. Bottom line is that I do not think that we are going to get to another result where it can be above 1. People have commented that in the

northwest corner in the suburb for 30-40 years, whatever, we have streets that are closed and people seem to like that and they have adjusted. This was done before any of our time, but we can assume that people like it and adjusted. At the end of the day, we make a recommendation and this is a hard one. Our decision needs to be made and everyone is not going to be happy with it. I am troubled because my opinion is that we have jumped the gun. We installed barriers, in my opinion, on a temporary basis. Installed them trying to do something that we think was for the best. Should we keep trying some other things to prevent like add parking or if speed is an issue or do we go back and do another set of counts using some of the tools that Thomas Engineering done. In my opinion, this is going to get us in the same place that we are tonight.

Commissioner Karrow indicates that speed is an issue. I do not love the KLOA measurement technique. I also think if you look at the responses from the survey here that 75% of the respondents said that speed is an issue in general on any street that they were asked about and I do not think that barricades are the right solution.

Chairman Rees indicates right and in respect to speed, KLOA did recommend some of the things that happen to be in this Thomas Engineering for Level 1. For example, signage and other things about flashing signs and other measures that can be used to try and address speed before you get to more radical things that are vertical that don't need to be justified. There were some things that were recommended and they were not done. Part of my concern is that we jumped to the barriers without adding on street parking on those two blocks.

Discussion breaks out regarding street parking.

Chairman Rees indicates that what I am telling you is there are other methods that can be used and recommended that we didn't use. If you are going to push me, then I am going to suggest that we remove the barriers and that we go back to putting in incremental changes that would include signage and on street parking on the west side of the street to reduce speeding down the street. The question that I am struggling with is that I am trying to be respectful to everybody and everybody's views here. At the end of the day, what we are trying to figure out is what is the most appropriate way to go forward with all the information that we collected and with all the different viewpoints we collected. At least, the direction from The Village Board, I'm not saying it doesn't have to be the same, but the conclusion is that we keep Bonnie Brae and alter Clinton. There are effects on doing that and one of the effects identified by KLOA and by Thomas Engineering is that of course, when you restrict one you have potential knock on effects to another and we have to accept that reality. The issue is if we are going to have public comment, I want it to be respectful and limited. We will limit public- comment no more than a minute each and I would like people to say if you are in support of keeping the barrier to say that and limit your comment. At this point, I am going to open it up for public comment.

PUBLIC COMMENT

Dan Wasiolek, 1400 Bonnie Brae Place – Supports barriers. Northeast side needs it more than northwest corner due to many driveways, Fenwick practice fields, and popular school route.

Pat Berg, 1415 Clinton Place – For getting rid of the barricades. Also is representing Dr. Nucifora who is in Italy she is for removing the barricades.

Sari Enschede, 1518 Bonnie Brae Place – Supports barriers. Make a huge difference for kids and walking the dog. Does not think parking will slow down traffic.

Mary Stamatakos, 1507 Clinton Place – Support barriers. Would stop sign back as it is unsafe due to speeding. Parking on both sides of the street will cause more problems.

Marta Kozbur, 1235 Monroe Avenue – Against barriers. Traffic has increased 300% and safety is a concern as cars race down Monroe.

Georgia Politis, 1224 Ashland Avenue – Against barriers. Her husband Dr. Politis has a Dental practice on North Avenue. Destroyed ability to access dental practices.

Cathy O'Rourke, 1511 Bonnie Brae Place – Support barriers.

Betsy O'Rourke, 1511 Bonnie Brae Place – Supports barriers. Cars speed down their street during rush hour and is very dangerous.

Constatine Politis, 7327 North Avenue – Against barriers. Thank you for putting up stop signs back up at corner Clinton and Le Moyne and at alley ways. Wants the barricade at Clinton to be removed.

Tanju Sofu, 1407 Clinton Place – Against barriers. Does traffic modeling for his job, barriers are always the last resort there is a very strong public safety argument against them and there are other calming measure to that would address concern our neighbors of other streets.

Karen Neal, 1407 Clinton Place – Against barriers.

Jess Hwang, 1526 Clinton Place – Supports barriers.

Kate Byrne, 1411 Clinton Place – Against barriers. They are extreme.

Rene Hermes, 1446 Bonnie Brae Place – Supports barriers. Would like more data from study.

Greg Abcarian, 1226 William Street – Against barriers. Would like them all removed.

Kelly Abcarian, 1226 William Street – Against barriers. Would like the meeting minutes to be accurate. Would like the script the engineer read posted. Would like to know when you use barriers in a Level 4. Data should tell you how to make decisions.

Jill McMahon, 7329 W. North Avenue – Against barriers.

Darshana Novick, 7351 W. North Avenue – Against barriers.

Dennis McMurray, 1429 Jackson Avenue – Against all barriers. All you are doing is shifting traffic. No proof for cut-through traffic.

Forrest Stampley, 1534 Bonnie Brae Place – Against barriers. I am located by an alley in which all traffic from Bonnie Brae has shifted to go down the alley which is dangerous.

Christopher Cook, 1510 Bonnie Brae Place – Supports keeping barriers on Bonnie Brae and on Clinton. Has seen dramatic difference for public safety as well.

Rob Armalas, Le Moyne and Bonnie Brae – Supports barriers. Wants the commission to expanding protection all the way down the North Avenue corridor.

Colin Hanes, 1506 Clinton Place – Supports barriers. Especially for keeping cars entering from North Avenue.

Chairman Rees thanks everybody and makes a motion to remove both barriers, to enlist Thomas Engineering Group to collect additional data for the streets that were excluded from their report and allow us to consider other incremental approaches to address the issue. Whether it be cut-through traffic or speed in that area. That is my motion. I will ask if there is a second.

Commissioner Karrow seconds the motion.

Chairman Rees asks if there is any discussion?

Commissioner Hoyt asks if we are recommending remove the barriers for the purpose of gathering data?

Chairman Rees indicates that his motion suggests, I don't know at this meeting or at another meeting, that there were questions raised about the methodology used by KLOA by some Commissioners and by the public. Data was collected in March of 2022, which is not that old, but it was collected during the pandemic and with other methods that I think are not the same methods used by Thomas Engineering Group. There are some residents who question the methods. I think through the passage of time, we don't need to spend any more money on this project, but I think with the strong feelings and the meanings for us to have accurate data it is my suggestion to return to this to the status quo without the barriers, collect data without the barriers and then based on that data, we can assess using the Toolbox. We can then address speeding on William and Monroe and maybe these other streets. It will be interesting to see what the volume setting is at the 900 level and see if the volume is different.

My recommendation is to remove the barriers, collect new data without the barriers and then determine what appropriate actions to take based on that additional data that is collected.

Commissioner Hoyt would like to be sure that we are in agreement that something needs to be done. By removing the barriers, can sound like just remove them and move on. That is not what I want to recommend. I think for certain we need to know that this is a speed issue. If it is a speed issue, or volume issue, then Level 1 and Level 2 according to the new Toolbox our the methodologies we should be trying first. But to say that we are going to remove them and not have the study done for 18 months, that I am less comfortable with unless we are all - or we should have a discussion based on that. Is this something that is short term or long term?

Director Loster indicates that I don't think that it is that long term. Obviously, we don't know what Thoms Engineering schedule is but within a couple few months I would imagine the general timeframe they would operate on would not be 18 months.

Chairman Rees indicates that he would defer to them to what extent to use the KLOA data that it is at a point because that data is there but I am interested to know if they accept the data then maybe there is a way they could.

Commissioner Hoyt indicates that maybe there is another option to remove the barriers and do X at the same time so we don't have a period of months or a year having nothing. But if the data can be done quickly, then we believe that the data gathered by the Engineering Group is going to be more accurate for using the tool kit. My personal opinion would be to remove them and get data quickly.

Chairman Rees indicates that it sounds like what we heard tonight and the comments there would be some opposition at least to keep the one KLOA recommendation as it is consistent which is to add on street parking. I know this is a strategy under Level 2 under the Thomas Engineering Group, but we also heard objections to that. Consistent with KLOA are things like signage, flashing signs and it seems to me that it would be inconsistent to at least add some of those measures if the idea is to collect data primarily for volume and to also assess speed and then determine based on that additional collection whether additional actions need to be taken. At least that is where I am leaning towards.

Commissioner Chase indicates to Chairman Rees that we received a lot of emailed letters from the residents who could not be here this evening. Every email that was received is for keeping the barriers.

Chairman Rees indicates that he told John Osga that I would report that he couldn't be here tonight and not in a place where he does not have access to the internet. He did say that he is in favor of keeping the barriers. Considering speed mitigation on William if I am accurately recording this. Dave or Rick do you have any comments on the motion?

Commissioner Karrow agrees about the idea of removing the barriers and collecting new data so we can compare apples to apples. I do feel that whatever decision that we make, if we are going to be making it with data, we should be making it with the best data we can find. I think that is a couple of bumps that's agreeable.

Commissioner Gilles indicates that if we remove the barriers and you talk about some of the signage, I think the KLOA signage there were issues with that and would affect businesses that there is no right turn on those streets, etc. I think if we leave everything the way it was and remove the barriers and do new counts, it would be very interesting to see what happens. Likewise with William, William is going to go down. We know that and Clinton is going to go back up and Bonnie Brae will probably go back up as far as traffic. That is what we need to find out.

Chairman Rees indicates so that the suggestions that KLOA made with respect to signage, and again I do not know if it would affect the counts or that we care, but one was installing yellow bordered speed limit signs on southbound to get more visibility to the signs and also to utilize

portable or permanent speed awareness to systems that are on some street. Obviously if you put those in, especially the portable one, might potentially affect numbers that you are trying to get an accurate count on speed. You might not want to do that yet to try and get an accurate sense of what the speed is. Those are two of the suggestions that they made. Rick is right, they weren't recommending it but I think what in part led to the barriers, they did recognize that one option would to install no right turn signs on North Avenue between the hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. That is another alternative that would be short of barriers - I think there was a concern as those types of signs are honored in the breach, but that remains an option to try and add limited signs to North Avenue and try to add enforcement on that issue. So those are some of the recommendations that are in the KLOA Study and they recognized in noting that at least we would need to consider the potential knock on effects there is potential diversion to Monroe and William and other streets. Any other comments or suggestions by The Commission? I agree Commissioner Hoyt that the goal here is to do something and make sure we are addressing the right problem. If the problem is volume - I know one individual I think it is was Dennis. The evidence that I saw with cut-through traffic besides what people observed and said they seen is that the counts then by KLOA did show a substantially higher number of southbound traffic cars were then turning left on Le Moyne or on Greenfield which suggests that is evidence of cut-through traffic. The question is, is the amount of volume within a level that should be tolerated or is the issue then speed and is there a different way that speed and is there a better way to address speed. We are trying to figure out if this volume issue is a speed issue or both and what is the best way to address that problem.

Commissioner Chase apologizes for being late and indicates that she encountered numerous speed bumps on her way here and two roundabouts. I slowed down for absolutely every one of them. The first one I didn't see. The sign was hidden behind a tree so I couldn't see it. The speedbumps got higher. I do not know if that's normal. Normally they are kind of a little bit flattened where you need to slow down but were humps and two roundabouts where you had to slow down. My street had a stop sign and the other side of the cross traffic did not have a stop sign so I had to actually stop and make sure nobody was coming. They work.

Chairman Rees indicates that obviously those are the Toolbox and are the mitigations to be considered as appropriate. I know that folks have there hands up I am really kind of loathed to reopening to the public comment. I just don't want to open it up to everybody.

Chairman Rees makes a comment indicating that suggestion of that section was excluded because the Village paid money and had KLOA did the detailed study that they did. At least the recommendation that is in the motion is that we remove the barriers for now, collect new data and then come back and based on that data address the issue. I don't want to reopen this up.

Chairman Rees indicates that he understands the point. This is not nothing that discussed today that will affect the diverted turning traffic on Harlem from Le Moyne and Greenfield.

Chairman Rees indicates that they will certainly defer to the engineers that The Village is to determine if our proposal is even adopted. First of all we haven't voted to accept it here at The Commission level and what we would recommend is non-binding and will be up to The Village Board to decide whether they are going to accept what we recommend. Any other comments from The Commissioners?

Chairman Rees indicates that it was not a question I don't think. It was a comment if I am accurately stating it in asking that we use care in sequencing if that decision is made to remove the barrier and collect more data, that is done in a smart way and a limited way to limit any impact to the change. It can also suggest in the meantime if speed is seen as an issue to put in a speed bump that is not part of the recommendation because anything like that is going to depend on the data that is collected. I think that is close enough I hope. Any other comments from The Commissioners?

Commissioner Hoyt indicates that she realizes that we're – as I said before that I am worried about being taken down for too long. In my view we have two choices to either follow the recommendation or we can take down the barriers and at the same time put something else up if we are concerned about speed and safety. I don't know how long that would agree to your recommendation but timing is very important to me. Normally, we take down the barriers and do X or take them down and do nothing. As long as the count is going to be quick. Also, we can act quickly on results of those counts.

Chairman Rees indicates that he don't know if we can change the motion or maybe we could ask The Village to what you are suggesting is to keep the barriers in place and to remove them as needed when it is time to take the count and defer to Thomas Engineering as to how long they should be removed to get an accurate count. The goal is to get accurate data.

Commissioner Hoyt responds upon receiving the data we will have at least a Level 1 solution to ensure we don't wait 6 more months for a recommended solution.

VOTE TAKEN ON THE MOTION

Chairman Rees – yes, Commissioner Chase – no, Commissioner Gillis – yes, Commissioner Hoyt – yes, Commission Karrow – yes, the vote is 4-1.

Chairman Rees states the motion carries and will go to the Village Board. The Village Board may or may not approve the motion. The public is welcome to attend the Village Board Meeting to express their view. We are trying to move as quickly as we can. The Village Board may vote to keep the barriers in place and that is their prerogative. Chairman Rees would like to hear from the other Commissioners about TEG recommendation to the Village Wide Traffic Study.

Commissioner Rees states the commission has been hearing about Washington for a long time. That is something we need to look at.

Chairman Rees states we could put Washington on the next agenda and decide if there are other issues to discuss.

Commissioner Hoyt asks if it is the responsibility of the Commission to decide what is the most important or does the Village make recommendations.

Chairman Rees states it could be either. We have heard of the areas for a while. We could pick any the areas as it was brought up by the survey. The Village would probably want the commission to prioritize areas.

Village Administrator Matt Walsh states the Commission would prioritize areas with input from TEG.

Chairman Ress is recommending taking up Washington at the next meeting.

Commissioner Hoyt would abstain from the vote as she has not gone through the report in detail.

Chairman Rees states Village staff with TEG could prioritize the areas.

Commission Karrow indicates that at Division and Lathrop there is not as much to discuss as they made a recommendation.

The Commission states they would like to keep the meeting start time at 7:30 pm.

A motion was made and seconded to adjourn the meeting at 8:45 P.M. All Commissioners voted in favor of the motion. Motion passed.

Respectfully Submitted:

Bill Koclanis, Secretary

Doug Rees, Chairman
Traffic & Safety Commission

Date: _____

Introduction

Good evening and thank you for allowing me the opportunity to present tonight. My name is Jim Yuratovac, and I hold the position of Senior Project Manager at Thomas Engineering Group. I am a licensed Professional Engineer, certified as a Professional Traffic Operations Engineer (PTOE) and Road Safety Professional (RSP). I'm here to share the findings of our Village-wide Traffic Study. This study is not just a collection of data; it's a roadmap that aims to guide us toward a safer and more efficient transportation environment for the community. Our goal is to provide actionable insights that will serve as a foundation for future planning and infrastructure improvements.

Objectives and Methodology

The primary objective of this Study was to offer a comprehensive analysis of the current traffic conditions in the Village. Our overarching aim was to identify high-risk locations, assess the efficiency of existing traffic controls, and offer actionable recommendations for both immediate and long-term improvements.

All roadways in the Village were categorized into three distinct types: Arterial, Primary, and Local. Local streets are predominantly minor residential roads, whereas Primary streets are engineered to accommodate higher traffic volumes. Arterial routes are marked state routes with higher speeds. We did not review these locations in order to focus our effort on internal Village roads.

We performed traffic counts at 17 primary intersections, and supplemented those with counts at 6 additional intersections and multiple speed data collection locations.

By combining data-driven insights with practical solutions and community input, we aim to improve road safety, optimize traffic flow, and enhance the overall quality of life for Village residents.

Resident Feedback and Community Engagement

Community engagement played a pivotal role in shaping the objectives and outcomes of our Study. Early in the project, we issued a Survey Monkey survey to gather resident feedback on various traffic and safety topics. The survey served multiple purposes: it helped us identify focus areas and provided valuable insights into residents' concerns.

The survey results revealed a strong community interest in specific traffic calming measures, speed control, and pedestrian safety. This feedback was instrumental in refining our recommendations for improvements. Additionally, the survey provided valuable insights into the community's acceptance of various countermeasures, ensuring that our proposed solutions are not only effective but also closely aligned with the needs and preferences of Village residents.

In summary, the resident feedback gathered through the survey has been a cornerstone in our study. It has enabled us to create a more community-centric approach, ensuring that our recommendations are both data-driven and aligned with the values and concerns of the community. This dual focus ensures that our study's outcomes are not just technically sound but also socially acceptable, thereby increasing the likelihood of successful implementation.

Traffic Calming Toolbox

One of the standout components of our Village-wide Traffic Study is the development of a Traffic Calming Toolbox or TCT. This toolbox is a compilation of proven strategies and interventions designed to address a variety of traffic and safety concerns within the Village. It serves as a practical guide, offering solutions that range from simple signage adjustments to more complex engineering measures.

The toolbox was developed with a focus on flexibility and adaptability, allowing the Village to tailor solutions to specific issues or locations. Moreover, the TCT is not just a static document; it's designed to evolve. As the Village's needs evolve or new traffic management methods emerge, the toolbox can be adapted to incorporate these updated strategies. This ensures that the Village has a living, adaptable resource for addressing both current and future traffic and safety challenges.

The creation of this toolbox was guided by both data-driven insights from our comprehensive traffic and crash analyses, as well as community input gathered through our resident survey. By combining these elements, we've created a toolbox that is not only effective but also aligned with the needs and concerns of Village residents.

To utilize the TCT, a location is scored based on speeds, crash data, road characteristics and resident petitions. The toolbox provides four levels of improvements based upon the score. The more a countermeasure impacts the roadway the higher the level. For example, a level 1 improvement may be a sign installation, whereas a level 4 improvement might be a forced turn island.

The Traffic Calming Toolbox serves as a cornerstone for the Village's traffic management strategy, providing a robust set of tools for improving road safety, optimizing traffic flow, and enhancing the overall quality of life for residents.

Capacity Analysis

Another major component of our effort was to develop a comprehensive traffic model for the Village. The model's strength lies in its ability to simulate how intersections interact with each other, providing a holistic view of the Village's traffic system.

The model allows us to assess both the Level of Service (LOS) and delay, thereby identifying bottlenecks and areas of concern. For example, the all-way stop (AWS) intersection at Lathrop Ave and Division St, exhibited a failing LOS of E during the AM peak hour and LOS of D during the PM peak hour. Our simulations showed that converting this AWS to a signalized intersection could improve the LOS to a B. On the positive side, most intersections in the Village were found to be operating smoothly, although some individual movements were failing, particularly at minor leg stop locations or those with high numbers of left turns.

One of the key advantages of a Village-wide model is the ability to foresee how changes at one intersection can impact the broader network. This enables the Village to implement more effective countermeasures and avoid unintended consequences, like pushing traffic toward routes already operating near capacity.

Our capacity analysis serves as a dynamic tool for both immediate interventions and long-term planning. It allows the Village to identify traffic issues proactively and offers a data-driven foundation for future traffic management and infrastructure improvements.

Crash Analysis

Our crash analysis was conducted using 2016-2021 crash data from IDOT and encompassed every intersection and segment within the Village. Utilizing a proprietary in-house crash processing program, we categorized crashes based on various factors such as type, year, and injury severity.

To ensure a comprehensive understanding of the traffic safety landscape, we employed different peer groups in our analysis. For intersections, these included signalized, all-way stops, minor stop 3-leg, and minor stop 4-leg. For segments, we divided them into three categories: local, primary, and arterial, as previously mentioned. The peer groups allowed us to capture a representative cross-section of both intersection and segment types in the Village.

We then used a weighted scoring system, based on frequency and severity, to assign a score for every location. We identified 22 locations (or roughly the top 10%)—comprised of 9 segments and 13 intersections—for a more detailed analysis.

I won't go into all the crash details here, but many of the segments were found to be satisfactory and only 2 had recommended action. One is at Thatcher from Augusta to Division, which is covered separately and the other is at Division from Monroe to Bonnie Brae for which we are recommending a Speed Study.

4 of the intersections were also found to be satisfactory and 5 were on Thatcher or Washington which I will get to shortly. For Chicago & William we recommended a speed study. For the remaining 3 we are recommending a speed study in addition to: traffic count at Ashland & Lake to determine if a change in traffic control is appropriate. upgrading the crosswalk striping associated with the nearby school for Chicago & Jackson, and lastly for Lathrop & Division we are recommending the installation of a traffic signal.

Two-Block Span Analysis

There are numerous uncontrolled two-block spans in the Village that have concerns related to speeding and cut-through traffic. We focused on Ashland Ave between Madison St and Washington Blvd due to its high crash rate and resident complaints about speeding. The study aims to determine if changes are needed to make these spans less appealing for speeders and cut-through traffic.

We collected speed and volume data over a 24-hour period on all four legs of the intersection of Ashland Ave and Vine St. Analyzing the traffic volumes, we found directional split between NB and SB to be fairly even. The volumes are well within the range of what a residential road is capable of handling and no cause of concern for potential cut-through traffic. The 85th percentile speed was 22mph for northbound and 25mph for southbound, which are at/below the speed limit. Digging in a little deeper, we found there to be several hours of the day with speeding in the southbound direction. In particular, the afternoon hours had a cluster of speeding with 85th percentile values around 30mph. The crash analysis found a relatively low number of crashes within the corridor related to Ashland Ave. The crashes were all isolated events with no patterns or recurring issues.

We recommend a stepped approach starting with Level 1 improvements, such as a Speed Feedback sign and targeted speed enforcement. These measures are anticipated to address the limited speeding in the corridor. We anticipate that these conditions apply to other two-block span locations.

Washington Blvd

Washington Blvd, a major collector road in River Forest, has been a focal point for community concerns about speeding and underutilized parking. To address this, we conducted a focused study on the Washington corridor that included traffic volume and speed data collection, crash data analysis, and incorporated the resident survey. The road features one lane in each direction with on-street parking. There is a variety of traffic control including AWS, minor stop and signalized intersections. The surrounding area is primarily residential along with three nearby parks. Our study aims to identify an appropriate roadway cross-section, provide traffic calming measures, and improve safety and traffic flow.

We analyzed peak-hour traffic volumes at Thatcher Ave, Franklin Ave and Lathrop Ave. Washington Blvd is one of a limited number of bridges crossing the DesPlaines River and serves as an alternative to busier routes like North Ave and Madison Ave. Speed data showed that the 85th percentile speed was 38 mph, significantly above the 25 mph speed limit. This indicates a severe disparity between driver perception of the road and its intended design.

Our detailed crash analysis for the corridor found there were 101 crashes with Angle by far the most prominent type. Notably, Thatcher, Gale, Keystone, Ashland and Lathrop all had elevated crash rates. The crash analysis revealed varying patterns across different intersections. The frequency of angle crashes at AWS and signalized intersections raises significant concern regarding speeding and adherence to the traffic control. Overall, the analysis suggests a need for diverse safety measures, to address the unique challenges at each intersection.

We then incorporated the survey responses related to Washington. The majority of residents are open to eliminating some parking in order to provide traffic calming improvements. Speeding and disobeying stop signs were identified by most respondents as issues along the road.

Based on the analysis, we propose two new roadway cross-sections for Washington Blvd, with a transition point at Park Ave. The western cross section maintains parking along the north side of Washington Blvd, narrows the lanes to 11' in each direction, and

provides a 3' bike lane with 2' buffer on the north and south side of the street. The eastern cross section will keep the current lane configuration from Park Ave to Lathrop Ave, but lanes will be reduced to 11' widths with a 2-foot striped median and off-street multi-use paths. In addition, we recommend taking steps to mitigate speeding along this route by implementing some form of traffic calming. Our preference is to install raised intersections at Thatcher, Keystone, Franklin, and Lathrop. These physical obstacles force drivers to slow down and create more awareness at the intersection. Curb bump outs are also recommended at various intersections throughout the corridor and should be designed to not impact bike facilities.

DRAFT

Thatcher Ave

Thatcher Ave is a three-lane perimeter road in the Village. There are two southbound lanes and one northbound lane with parking along the east side of the road. Based on survey responses and crash rates we selected the northern portion of Thatcher Ave, between Division St and Augusta St, for in depth study as a representative sample for the corridor.

Both termini intersections were counted as part of our initial data gathering process and speed data was collected as part of this focus. Our study revealed that the 85th percentile speed was 41 mph, significantly higher than the posted speed limit of 25 mph. This discrepancy is particularly alarming as it indicates that a majority of drivers are comfortable driving at speeds well above the limit, posing safety risks for other road users.

The study also highlighted that the speed issue are more pronounced in the southbound lanes, with the 85th percentile speed reaching up to 44 mph. This could be attributed to the road's imbalanced lane configuration and the absence of features that naturally calm traffic.

To address these issues, we recommend several countermeasures. These include reducing southbound traffic to one through-lane, installing a bike lane as per the 2019 Comprehensive Plan, and introducing periodic raised intersections through the corridor. These measures aim to change the road's character, thereby encouraging drivers to adhere to the speed limit. We also considered the addition of a southbound auxiliary left turn lane to allow drivers to turn left at intersections or into their driveways without disrupting through traffic.

Our review determined Thatcher Ave will need a more focused corridor study to verify these issues continue through the corridor. Crash patterns at intersections along Thatcher Ave beyond the studied area are indicative of speeding issues remaining consistent through the corridor.

Conclusion

In summary, this study provides a comprehensive analysis of the traffic conditions and traffic safety in the Village. Outside of a few problem locations, most roads and intersections operate well and do not have existing safety concerns. Speeding definitely seems to be an issue at several locations and heavily influences many of our recommendations. Our recommendations aim to improve road safety and traffic flow, benefiting both residents and visitors to River Forest.

DRAFT

9-2-6: TRUCK AND BUS ROUTES:

It shall be unlawful to drive any truck or bus on any streets named in schedule 6, section9-3-6 of this title or in any alley. Vehicles may, however, use said streets for the sole purpose of crossing said streets at intersections and of making deliveries and pick ups on said streets. Vehicles may also use said alleys for the sole purpose of making deliveries and pick ups on said alleys, provided that the loading facility is not accessible via a street. Operators of emergency vehicles and of government owned vehicles are exempt from the provisions of this section. (Ord. 2397, 7-23-1990)

9-3-6: SCHEDULE 6, TRUCK AND BUS ROUTES, LIMITED LOAD STREETS:

Through truck and bus traffic shall be prohibited, pursuant to the provisions of section 9-2-6 of this title, on the following streets:

Augusta Street

Bonnie Brae

Chicago Avenue

Jackson Avenue

Lathrop Street

Monroe Avenue

Oak Avenue

Quick Avenue

THATCHER AVENUE, between North Avenue and Madison Street.

WASHINGTON BOULEVARD.

WILLIAM STREET, between Lake Street and North Avenue.

(1981 Code; amd. Ord. 2114, 2-28-1983; Ord. 2510, 8-10-1992)

WASHINGTON BLVD CORRIDOR STUDY

Introduction

The Village has had many complaints of speeding along the corridor of Washington Blvd and considering a past study's findings that parking was severely underutilized throughout Washington Blvd the Village Traffic and Safety Commission wanted to consider either a road diet or installing other traffic calming measures to mitigate speeding.

Initially TEG assessed existing conditions throughout the corridor. TEG began by collecting traffic volumes on the road at Thatcher Ave, Franklin Ave, and Lathrop Ave to understand how the road operates at peak hour times. TEG then gathered all crash data along the intersections and segments and analyzed it to determine patterns throughout the corridor and to locate segments/intersections that pose a hazard to driver safety. Lastly resident survey data was incorporated into the decision-making process with more emphasis being placed on responses from those living along and/or near the road. These three components were combined to develop overall recommendations for the corridor along with specific recommendations for intersections as TEG deemed necessary.

Existing Conditions Assessment

Washington Blvd is a 2-lane bidirectional Major Collector in the Village of River Forest. The ADT as of 2022 is 5,700 vehicles and the speed limit is 25mph. Speed limit signs are posted for both directions periodically through the corridor including a driver feedback sign for eastbound drivers. There is striped on-street parking provided on both sides of the road throughout the corridor. Washington Blvd is designated as a bike path within the Village. Bike facilities along Washington Blvd include on-street pavement markings for shared lane usage but no dedicated bike lane. In total there are two signalized intersections, two all-way stop intersections, and four minor leg stop intersections where Washington Blvd is the non-stopping route.

The typical cross section of Washington Blvd is two 12' lanes with 8' of parking on either side. The total width of the road is 40'. The road narrows to 36' at a railroad overpass located between Park and Forest Ave with 12'-7" of overhead clearance. The speed along all crossroads is 25 mph.

Notable off-road features include lighting throughout the corridor and sidewalks along both sides of the road with periodic crosswalks at intersections. There are two parks (Washington Square Park and Washington Commons Park) near Forest Ave north and south of Washington Blvd. East of Park Ave there is a third park south of Washington Blvd (Washington Triangle Park). The corridor is primarily residential with no businesses in the area. The road is designated as a bike route per the Village's bike plan and painted bike symbols have been placed throughout the corridor to make drivers aware cyclists may be using the road.

Currently, the Washington Blvd bridge is about to be reconstructed with a two-lane cross section and dedicated bike lanes on either side. – Regardless of the bridge cross section Washington Blvd should have a standardized cross section that ties into the proposed bridge cross section cleanly and does not result in drivers/cyclists/pedestrians crossing into or out of the Village to find their lane/path abruptly ends with no recourse. Any lane addition or subtraction should be done using standard taper lengths and should be signed in advance. As noted above the existing condition at the bridge is a four-lane cross section with no transition to the two-lane cross section used along Washington Blvd in the Village. TEG summarized any notable features we discovered through analyzing each intersection in the corridor:

Washington Blvd @ Thatcher Ave

- All way stop intersection
- The west leg of the intersection is a 4-lane cross section with no transition to the 2-lane cross section on the east leg.
- Ladder style crosswalk on east leg

This is the second highest volume intersection along Washington Blvd and is the highest unsignalized volume. Recent traffic counts at the intersection show lower ADT volumes than what is listed on IDOT's IRoads System. Thatcher Ave was shown to have an ADT over 4,500 from TEG's recent traffic counts vs. an ADT of approximately 11,000 in 2022 IDOT counts. We believe the IRoads count was conducted closer to the intersection between Thatcher Ave and North Ave where volumes are much higher. Washington Blvd ADT matched what IDOT had in their system (5,300 in TEG count and 5,700 on IRoads). The intersection was analyzed with Thatcher Ave as the minor leg.

Washington Blvd @ Gale Ave

- Minor leg stop intersection (North/South legs stop)
- Both northbound and southbound traffic have compromised sightlines of the far lane of traffic due to trees and vegetation
- Ladder style crosswalks on north and south legs

This is a standard minor stop intersection with Washington Blvd as the non-stopping route. There are no apparent geometric issues with the intersection. It appears driver sightlines on the north and south leg may be compromised seeing traffic approaching from the right (far lane). Sidewalk with ADA compliant tiles are present on all four corners but there is no corresponding crosswalk leading across Washington Blvd on the east and west legs. Without any crosswalk drivers may not be expecting pedestrians crossing at this location.

Washington Blvd @ Keystone Ave

- All way stop intersection
- Stop sign warning sign on eastbound approach
- Keystone Ave may have slightly compromised visibility of oncoming traffic due to trees near the intersection
- Eastbound and westbound stop signs have spinning reflective markers
- Continental crosswalks on all four legs

Keystone Ave is a standard all way stop intersection. Any sightline issues should be mitigated by the stop warning sign or spinning reflective markers. TEG did not feel stop signs were difficult to see on any of the approaches and saw no reason for operational issues due to geometry or sightlines. All cars at the intersection should be coming to a complete stop and once at the intersection it is not difficult to see drivers on the other three legs regardless of approach direction.

Washington Blvd @ Forest Ave

- 3-leg minor stop intersection (South leg stop)
- Ladder style crosswalk on south and east leg with pedestrian crossing sign in each direction for east leg
- Parks are located north and south of the intersection

Forest Ave is a standard 3-leg minor leg stop intersection where drivers on the south leg stop. Due to the proximity of the parks the pedestrian crossing with additional warning signs will help keep drivers aware of pedestrians at this location. The south leg appears to have adequate sightlines in both directions. Trees in the eastbound parkway may block some visibility of oncoming traffic, but in use TEG felt visibility was adequate to safely complete a turn at posted speeds.

Washington Blvd @ Park Ave

- Minor stop intersection (North/South legs stop)
- Park located in the southeast corner of the intersection
- Continental crosswalks on all four legs

Park Ave is a standard minor leg stop intersection where north and south traffic stops. There is a small park in the southeast corner of the intersection. Within the past few years there was a radar speed sign installed behind the crosswalk for eastbound traffic. There is an existing pedestrian crossing warning sign just east of the intersection. This sign appears to apply to the crosswalk at Franklin Ave. TEG felt the sign was unclear as to which crosswalk was being referred to – TEG recommends the Village confirm with their signing and striping plan to relocate this sign as needed.

Washington Blvd @ Franklin Ave

- 5-leg Signalized intersection (Park Dr is fifth leg; One-way southwest)
- Continental crosswalks on all 5 legs

Franklin Ave is a 5-leg signalized intersection. The fifth leg heads southwest and is one-way away from the intersection. It is unclear if the signal was warranted due to traffic volumes, elevated crashes, or as a form of traffic calming. The signal has been in place since at least 2010 based on review of historic imagery. The sidewalk is set back over 40' from the road southeast of the intersection due to the layout of the fifth leg. The south leg of the intersection does not appear to have any sight distance issues, but cars are stopped over 40' away from the east-west route. The unique geometry of this intersection may result in a higher risk for crashes involving drivers on the south leg.

Washington Blvd @ Ashland Ave

- Minor Stop intersection (North/South legs stop)
- Ladder style crosswalks on south, east, and west leg with pedestrian crossing warning signs for west leg
- Drivers on Ashland Ave must wait further away from the intersection than is standard

Ashland Ave is a minor leg stop where north and south traffic stops. Due to sidewalks north and south of Washington Blvd being offset ~25' drivers on the north and south leg need to stop over 25' from the intersection. This coupled with trees in the area reducing the visibility of oncoming traffic on Washington

Blvd. The sidewalks being offset so far back also reduces the visibility of pedestrians for drivers on Washington Blvd. The intersection is located directly between two signalized intersections and drivers may not be expecting the minor intersection with Ashland Ave.

Washington Blvd @ Lathrop Ave

- Signalized intersection
- Lathrop's ADT is 5,800 (Compared to IDOT's counted 7,700)
- Shared bike line markings on north and south legs
- Ladder style crosswalk on the west leg and standard crosswalks on the other three legs.
- East leg is not under Village jurisdiction

Lathrop Ave is a signalized intersection and is the highest volume intersection in the corridor. The east leg of the intersection is not in Village jurisdiction so all improvements will be targeted at the Village legs. There are crosswalks on all four legs, TEG noted the crosswalks were not consistent; there was one ladder style on the west leg and standard transverse striping on the other three legs. There are no apparent sight distance issues at the intersection. The parking lane striping on the west leg of the intersection may appear to be a second lane to drivers unfamiliar with the area. This is supported by the "No Driving in Parking Lane" sign. Narrowing the west leg may help mitigate these issues.

Volume & Speed Study Assessment

Volumes were gathered for the peak hour times of three intersections throughout the corridor. The intersections were chosen to get a good representation of where drivers enter and exit the road. The three intersections chosen were the two primary intersections (Thatcher Ave and Lathrop Ave) and the third counted intersection was Franklin Ave at Washington Blvd which was chosen due to the signalization and five leg geometry. Please refer to Appendix C.01: Volumes & Level of Service for volume data – AM and Appendix C.02: Volumes & Level of Service for volume data – PM.

Based on an analysis of the Volumes during both AM and PM peak hour TEG came to several conclusions:

- Traffic volumes are highest at the corridor termini at Thatcher Ave and Lathrop Ave
- There is an imbalance between EB and WB traffic volumes with eastbound traffic being greater in both the AM and PM peak hours.
 - o Volumes are more balanced in the PM hour potentially from traffic coming from Des Plaines Ave/I-290 heading west into the Village to get home. Eastbound traffic is still the primary direction drivers are heading.
- For drivers traveling east or west there are a limited number of bridge crossings over the Des Plaines River making Washington Blvd appealing to drivers looking to avoid busier streets like North Ave or Madison Ave.
 - o backups on Madison Ave (as TEG field engineers observed during both peak hours) is likely causing traffic to spill over to Washington Blvd since it is the next closest road with a river crossing.

Speed data was taken at the midway point of the corridor near the railroad overpass. This location was deliberately analyzed away from stopping intersections to ensure that the speed of drivers in the corridor was not impacted by traffic stopping/slowing to turn onto intersections. In traffic engineering the 85th percentile is expected to be the speed limit of a road. Seeing 85th percentile speeds significantly above the

speed limit could indicate that road conditions do not reflect the posted speed limit. The average 85th percentile speed along Washington Blvd across all time periods was 38 mph. This was 13 mph above the posted speed limit. Based on these speeds TEG would recommend making changes to either geometry or operating conditions to force drivers to travel at safer speeds. At the AM and PM peak hour times the 85th percentile speed was 15 mph above the posted limit. This indicates that even during the peak periods traffic conditions do not slow drivers down. The high speeds coupled with higher volumes at the peak hour make the road much more dangerous for pedestrians, bicyclists and cross-street vehicular traffic. See Appendix F.01: Speed Data for a full breakdown of driver speeds.

85th percentile speeds 15 mph over the posted limit indicate a severe disparity between driver perception of the road and Village perception. We recommend taking steps to mitigate speeding along this route by installing some form of traffic calming.

Crash Analysis

Crashes through the corridor were analyzed over a six-year period from 2016-2021. Due to the higher speeds along the route, there is a higher chance of severe injury in the case a crash does happen. A lack of crashes does not necessarily signify a safe corridor and due to the parks located between Forest Ave and Park Ave (where speed data was gathered) there is a high likelihood for pedestrian interaction with a vehicle at a crosswalk or a mid-block crossing.

Segment Crashes

There was a single fixed object crash on Washington Blvd in the analysis period. It was a fixed object crash on the segment between Forest Ave and Park Ave and did not have any injuries. There were no reported crashes in any of the other segments.

Intersection Crashes

There were 101 total crashes at intersections along Washington Blvd including 1 A-injury, 19 B-injuries, and 10 C-injuries.

Intersections included in this analysis are as follows: Thatcher Ave, Gale Ave, Keystone Ave, Forest Ave, Park Ave, Franklin Ave, Ashland Ave, and Lathrop Ave

Overall Crash Breakdown (All Intersections):

56 Angle: 1 A-injury, 10 B-injuries, 4 C-injuries

20 Rear End: 6 B-injuries, 3 C-injuries

7 Other Object: 2 B-injuries

7 Sideswipe Same Direction

4 Fixed Object: 1 C-injury

3 Pedalcyclist: 1 B-injury, 2 C-injuries

2 Turning Left

1 Head On

1 Animal

Angle crashes are by far the most prominent crash type at the intersections and have a high rate of injury. This is typically seen in cases where drivers misjudge oncoming traffic speed or make risky decisions due to a lack of a gap in traffic.

The intersections between Washington Blvd and Forest Ave, Park Ave, and Franklin Ave had very low crash rates at 2, 3, and 7 crashes, respectively. At Forest Ave and Park Ave no conclusions or patterns could be gathered based on such small numbers of crashes. TEG noted that at both locations there was an injury crash (1 B-injury and 1 C-injury). At Franklin Ave there were 7 crashes including one C-injury and 3 B-injuries. Four of the seven crashes involved either rear end or sideswipe same direction crashes and accounted for two B-injuries and one C-injury. The remaining 3 crashes are all different types and not indicative of a pattern. It is unclear why these intersections have such low crash rates compared to other intersections in the corridor. Perhaps it is due to lower volumes using all three streets, but despite the lack of crashes in this area, it remains true that drivers are exceeding the appropriate speed limits in this corridor. In the event of any crashes occurring, there is a significantly greater chance of severe injuries. This is observed that 50% out of 12 total crashes at the three intersections resulted in an injury.

The remaining five intersections will be analyzed in greater detail due to their higher crash volumes to determine if there are any patterns. Crash patterns are indicative of an underlying problem, either geometric or operational, that can be addressed through new safety measures or changing how the intersection operates.

Thatcher Ave Total: 28 Crashes 1 A-injury, 4 B-injuries, 3 C-injuries

17 Angle: 1 A-injury, 2 B-injuries, 1 C-injury

3 Rear End: 1 B-injury, 1 C-injury

4 Sideswipe Same Direction

2 Pedalcyclist: 1 B-injury, 1 C-injuries

1 Fixed Object

1 Head On

Thatcher Ave at Washington Blvd had by far the most crashes at 28 as well as the most frequent and severe injuries. Due to high volumes and all-way stop control the intersection may have issues handling the daily traffic volumes at peak hours. Delays along the intersection may result in impatient drivers not properly stopping at the intersection. Similar intersections along Thatcher Ave at Lake St and Chicago Ave are both signalized rather than all-way stop.

The non-angle crashes align with typical intersection related crashes primarily consisting of sideswipe same direction and rear end crashes (7). The number of angle crashes is atypical for an all way stop intersection. For an angle crash to occur typically one driver needs to not obey the stop sign. There may be cases where two stopped vehicles both move forward at the same time, but drivers can typically avoid these collisions and the four injuries caused by angle crashes suggests drivers were colliding at a higher rate of speed.

The primary directions of vehicles involved in collisions was between southbound and eastbound drivers (6) and northbound and westbound drivers (8). The collisions appear to primarily be occurring due to

drivers heading eastbound and westbound not stopping or not being seen by drivers headed north and southbound. Based on the existing configuration with drivers on the west leg having two lanes per direction this can be confusing to eastbound approaching drivers not realizing the right lane ends past the intersection. Similarly having two westbound lanes on the west leg encourages drivers to use the parking lane to continue straight onto Washington. Maintaining a consistent cross section up to and past the intersection or providing updated pavement marking/signage would likely help reduce driver confusion and improve safety.

There are Stop Ahead Warning signs on all approaches and there were no sight distance issues observed at the intersection. Since 2019 there has been only one angle crash (*data in 2020 and 2021 were significantly skewed by traffic reductions on all roads during the COVID-19 pandemic*), but a lack of new angle crashes suggests the problem was somewhat resolved with the lower traffic volumes. With traffic returning to pre-pandemic levels, it is possible that there will be a resurgence of angle crashes at this intersection.

A signal warrant was performed for this intersection but not met due to traffic volumes falling below the minimum threshold. This number of angle crashes is uncommon at all way stop intersections and suggests safety measures should be taken. TEG would suggest installing flashers on the Stop Ahead Warning signs to draw further attention to the all-way stop condition. This location is being recommended for a raised intersection due to the number of angle crashes and speed issues in the area.

Gale Ave Total: 14 Crashes 3 B-injuries, 3 C-injuries

11 Angle: 2 B-injuries, 2 C-injuries

1 Rear End: 1 B-injury

1 Pedal cyclist: 1 C-injury

1 Animal

Gale Ave is a minor leg stop intersection where the north and south legs stop. The high rate of angle crashes indicates there is an underlying problem at the intersection. At minor leg stop intersections a high rate of angle crashes is typically caused by drivers moving at a higher rate of speed than the waiting driver expects, drivers feeling pressure to fit in smaller gaps due to high road volumes, and/or sight distance issues for waiting drivers.

Angle crashes accounted for almost 80% of the total crashes at the intersection, which is higher than expected. TEG looked at the directional breakdown of drivers and discovered that drivers from the south and north leg were being struck at similar rates. This indicated that issues at the intersection effected both minor legs equally.

Looking at the intersection from the perspective of a driver on the minor leg, TEG observed that southbound drivers had issues seeing eastbound traffic while sitting at the stop sign and northbound had similar sight distance issues with westbound traffic. Both directions have compromised sightlines due to vegetation blocking visibility. To resolve crash issues TEG recommends removing the vegetation and trees blocking visibility. Other improvements will be implemented at nearby intersections along Washington Blvd that will also improve conditions at this intersection.

Keystone Ave Total: 14 Crashes 2 B-injuries, 1 C-injury

11 Angle: 2 B-injuries

3 Rear End: 1 C-injury

Keystone Ave is an all way stop similar to Thatcher Ave, but with far lower north-south volumes (500 ADT along Keystone Ave per IDOTs 2022 data). The high rate of angle crashes at the intersection is unexpected since all drivers should be coming to a complete stop. The two B-injury angle crashes at this location suggest that drivers are colliding at high rates of speed. There is a Stop Ahead Warning sign placed in the eastbound direction with no matching sign for westbound.

The directional breakdown of angle crashes is the same as at both Thatcher Ave and Gale Ave. TEG has not identified any geometric reasons that would be causing elevated angle crashes. It is possible vehicles approaching from east-west may have difficulty seeing drivers waiting on Keystone, but the stop sign is clearly visible in all directions and is not easily overlooked by drivers. It seems likely that the high speeds in the corridor coincide with a large number of drivers 'rolling' stop signs or not obeying them at all.

Based on the low minor street volumes a signal would not be appropriate, but changes should be made to mitigate both the speed and the lack of driver awareness as they approach intersections. TEG would suggest installing a Stop Ahead Warning sign in both directions, possibly with flashers or flashing LED border. TEG also suggests installing a raised intersection to force drivers to slow down. Placement of multiple raised intersections through the corridor may help to avoid a situation where drivers speed after passing the raised intersection.

Ashland Ave Total: 21 Crashes 4 B-injuries, 1 C-injury

13 Angle: 3 B-injuries, 1 C-injury

4 Rear End: 1 B-injury

2 Other Object

1 Fixed Object

1 Turning Left

Ashland Ave is also seeing elevated rates of angle crashes with multiple injuries for a minor leg stop intersection. Northbound vs westbound is the primary direction impacted (8 of the 13 total angle crashes). The location of the intersection between two signalized intersections may surprise drivers on Washington Blvd who are not expecting drivers to be entering in front of them before they reach the signal at Franklin Ave. The combination of the two signalized intersections with a minor stop-controlled intersection in between is made even worse by the location of stop bars for drivers waiting to turn from Ashland Ave. Both stop bars are set 40' back from the edge of the traveled way due to the location of the sidewalk crossing. This forces drivers to cover more distance before executing their turn than is typical at standard minor stop locations. The large offset makes drivers on Ashland Ave less visible to drivers on Washington Blvd and vice versa.

To improve visibility at the intersection, TEG recommends realigning the sidewalk to bring it closer to the intersection. This will reduce the offset of the stop bar and allow drivers a better view of oncoming traffic. Similar to the rest of the intersections, reducing driver speeds along Washington Blvd would likely decrease

angle crashes by giving waiting drivers more time to react to oncoming traffic. This would also reduce the severity of crashes due to drivers moving at lower speeds at the time of collision.

Lathrop Ave Total: 12 Crashes 2 B-injuries

5 Rear End: 1 B-injury

2 Angle: 1 B-injury

2 Other Object

2 Sideswipe Same Direction

1 Turning Left

Lathrop Ave is a signalized intersection and is the end of the Village owned portion of Washington Blvd. Based on the crash breakdown There are no recurring crash patterns or unexpected crash types. The much lower rate of angle crashes is more in line with what a signalized intersection might experience under normal traffic conditions.

Over the six-year period there were an average of two crashes per year and two injuries in the entire analysis period. Although there is not an existing crash problem, TEG still recommends geometric and operational improvements at the intersection in line with other improvements in the corridor.

Crash Recommendations

It is clear that along with several potential geometric issues, the primary factor causing elevated rates of angle crashes throughout the corridor is the high vehicle speeds along Washington Blvd. Speeding increases the potential to have severe crashes even when both drivers are paying attention. The large number of angle crashes at both of the all-way stop intersections clearly indicates that either drivers are rolling stop signs or not stopping at all even though stop signs are extremely visible through the corridor.

Conditions along the road will need to change to reduce the average speed of drivers. TEG suggests implementing countermeasures from our Traffic Calming Toolbox throughout the corridor to address the high rates of speed. In areas lacking sight distance it may be appropriate for the Village to perform a full sight distance assessment and make modifications as needed.

Survey Response Analysis & Evaluation

As part of the Village-wide survey TEG asked specific questions to gauge residents' feelings about Washington Blvd. These questions have been analyzed along with answers to several other survey questions to create a profile of resident opinions based on their proximity and usage of the road. These responses will be considered in any future improvements. TEG recommendations will not solely be determined based on resident preferences, but all opinions will be given weight when deciding on the optimal solutions. To create a safer road, drastic change will need to be made to effectively alter driver behavior.

Introduction

TEG asked seven questions specifically targeted towards the Washington Blvd corridor. The first question was a screening question to determine how often respondents used the road or if they lived on the road. More weight was given to the responses of residents who lived on the road or used the road often. Any

respondent who said they did not use Washington Blvd in the first question was not presented the following six questions. The frequency of roadway use was also incorporated into analysis of the remaining six questions. Analysis begins at question 2 because usage of the roadway is only applicable when paired with the follow-up questions.

Question 2 Analysis

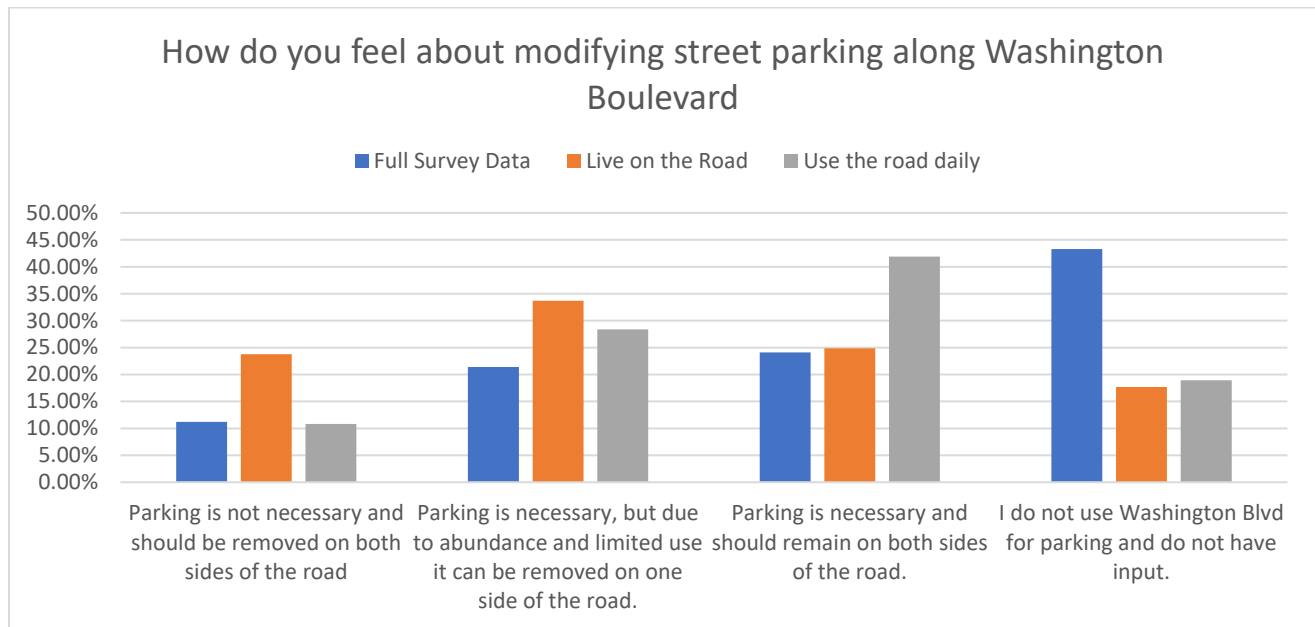


Figure 5. How do you feel about modifying street parking along Washington Boulevard to allow for traffic calming/bike accommodations to be implemented? (Percent Breakdown)

In analyzing data from the second Washington Blvd question, TEG noted that for the overall response data most respondents did not use parking on Washington Blvd and had no input (43%). Of the group who did have input on parking most of those people believe parking is required (45% combined responses that parking is necessary on one or both sides). Of the two groups who say parking is necessary, over half of them feel parking is required on both sides of the road.

The purpose of the question was to follow up from the 2019 parking study that found parking along Washington Blvd was less than 50% utilized from Thatcher Ave to Park Ave, and in some cases was used less than 15%. Unused parking lanes effectively become another lane for drivers trying to bypass traffic backups and creates more danger for cyclists who might want to ride in the open parking lane to avoid taking a full lane of traffic. The surrounding residential streets have less parking overall, but TEG believes the small number of drivers currently parking on Washington Blvd will be able to find nearby spots without issue. When the parking lane is completely empty drivers can illegally use the road as if each direction is a 20' lane which further promotes speeding and unsafe driving.

Looking at the bars representing responses from residents living on Washington Blvd or using it daily it becomes apparent that those residents most effected want to keep at least some parking on Washington Blvd. The figure shows that the percentage of drivers wanting to keep parking is much higher in both cases where drivers regularly use Washington Blvd, but residents who live on Washington Blvd are more open

to removing parking on one or both sides. Knowing this, TEG will try to maintain parking on one side in the recommended alternatives along Washington Blvd. It is likely some parking will be removed to avoid providing an overabundance of parking like in the existing conditions, and to make room for more effective traffic calming improvements.

Question 3 Analysis

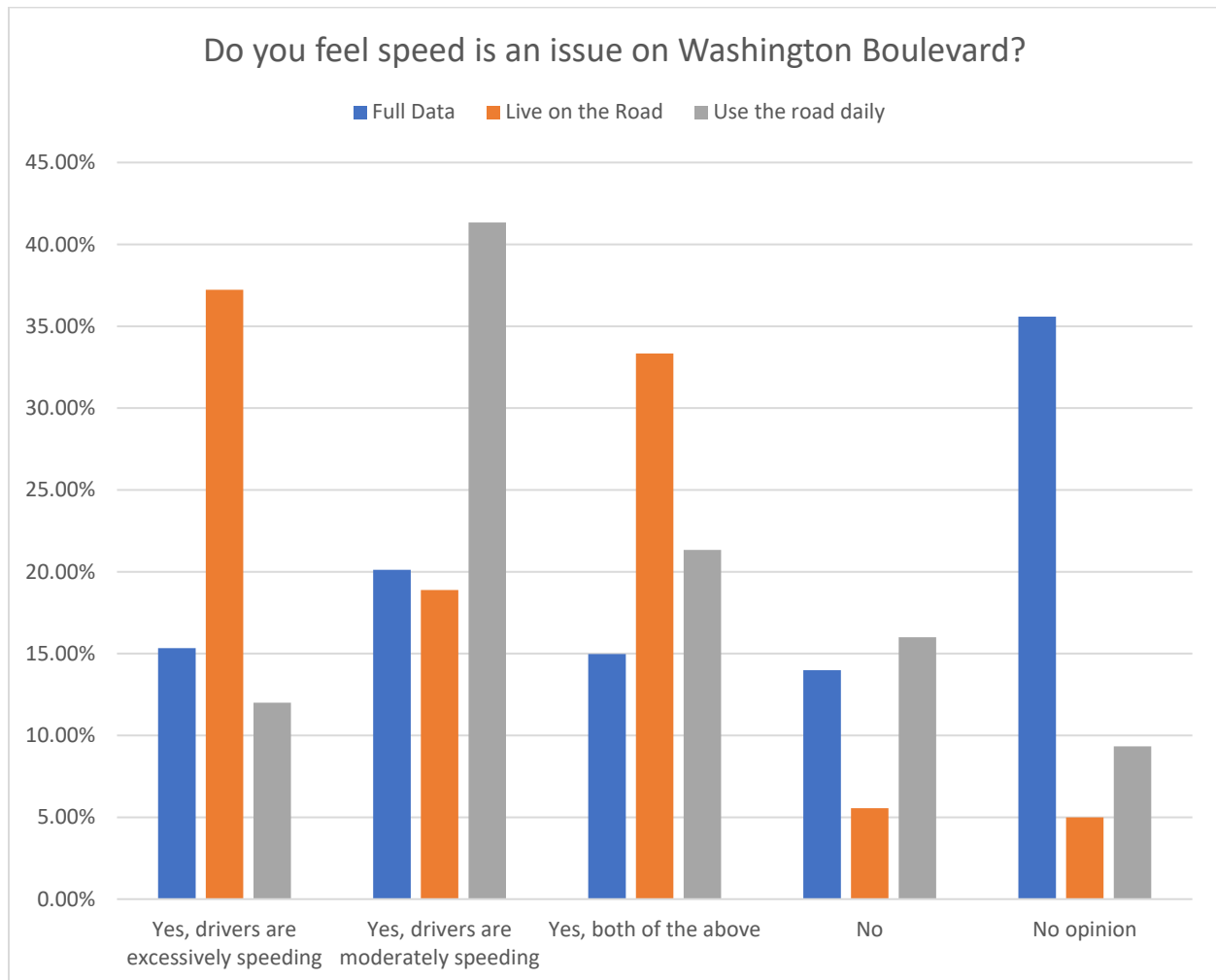


Figure 6. Do you feel speed is an issue on Washington Boulevard? (Percent Breakdown)

When answering this question 50% of respondents (or 75% of those who offered an opinion) felt speed was an issue (moderate and/or excessive) on Washington Blvd. The overwhelming majority of road users feel speeding is an issue or have no opinion on it.

Those residents with more experience with the road feel more strongly that speeding is a significant issue along Washington Blvd. In figure 6 it is apparent that residents using the road daily are more likely to believe drivers are either moderately or excessively speeding compared to the full data set. The residents who live on the road followed a similar trend with the exception that these respondents thought drivers were excessively speeding as opposed to moderately speeding. Residents who live along Washington Blvd

responded "No" or "No opinion" 10% of the time compared to the overall data set where 50% of respondents had no opinion on speeding issues.

It was seen that the 85th percentile speed during the peak hour time periods was 15 mph faster than the posted limit. The survey response data by those familiar with the roadway is supported by the speed data which shows that speeding is prevalent in the area.

Question 4 Analysis

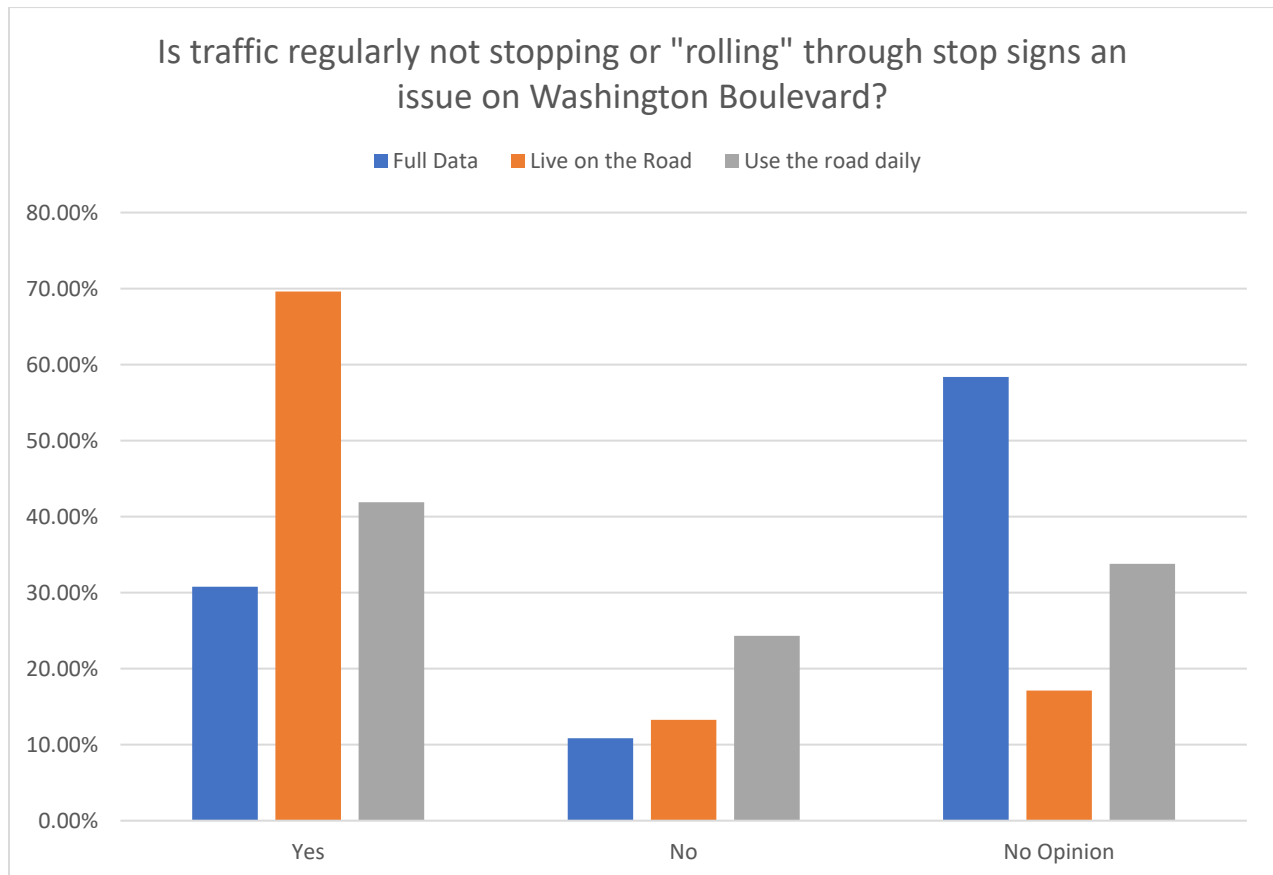


Figure 7. Is traffic regularly not stopping or "rolling" through stop signs an issue on Washington Boulevard? (Percent Breakdown)

When asked about stopping along Washington, 30% of all respondents felt drivers were either not stopping or rolling through stop signs. This is alarming because this perceived behavior might discourage pedestrians and cyclists from using the road or the nearby parks for safety reasons. 11% of respondents did not feel lack of stopping was an issue, with over 50% of respondents having no opinion. This is expected because drivers who don't often use the road have less of a chance to observe this driver behavior compared to drivers regularly using Washington Blvd.

Respondents who live on the road are the most likely to observe non-stopping behavior and make note of it, especially if they live in a household with kids. Based on ~70% of these respondents saying traffic is regularly not stopping, it is clear that there is a problem. TEG felt that the fact that daily road users notice non-stopping at a much lower rate than those who live on the road indicates that either daily road users are part of the problem or they simply have less time to observe improper behavior either due to only

briefly using Washington Blvd or using intersections along Washington Blvd where not stopping isn't as common. The high rate of angle crashes at all-way stop intersections on Washington Blvd caused TEG to believe there is a large number of drivers disregarding stop signs.

The open-ended response section allowed drivers to specify which intersections they believed cars didn't stop the most. TEG only included responses data for intersections along Washington Blvd.



Figure 8. Open ended response data in response to the prior question.

The survey results clearly show that residents believe there are issues at both Thatcher Ave and Keystone Ave. Crash data supports this and indicates that more severe traffic calming may need to be considered at these two intersections.

The moderate spike in residents saying drivers were rolling the stop signs on Ashland Ave (14) may be an effect of the setback geometry of the minor legs. Drivers approaching Washington Blvd from Ashland may go past the stop bar while stopping to get a better view of oncoming traffic. Currently drivers are stopped over 40' away from Washington Blvd which is more than double the setback of intersections in the western half of the corridor. Geometric modifications would improve functionality and driver behavior without requiring further traffic calming.

Question 5, 6, 7 Analysis

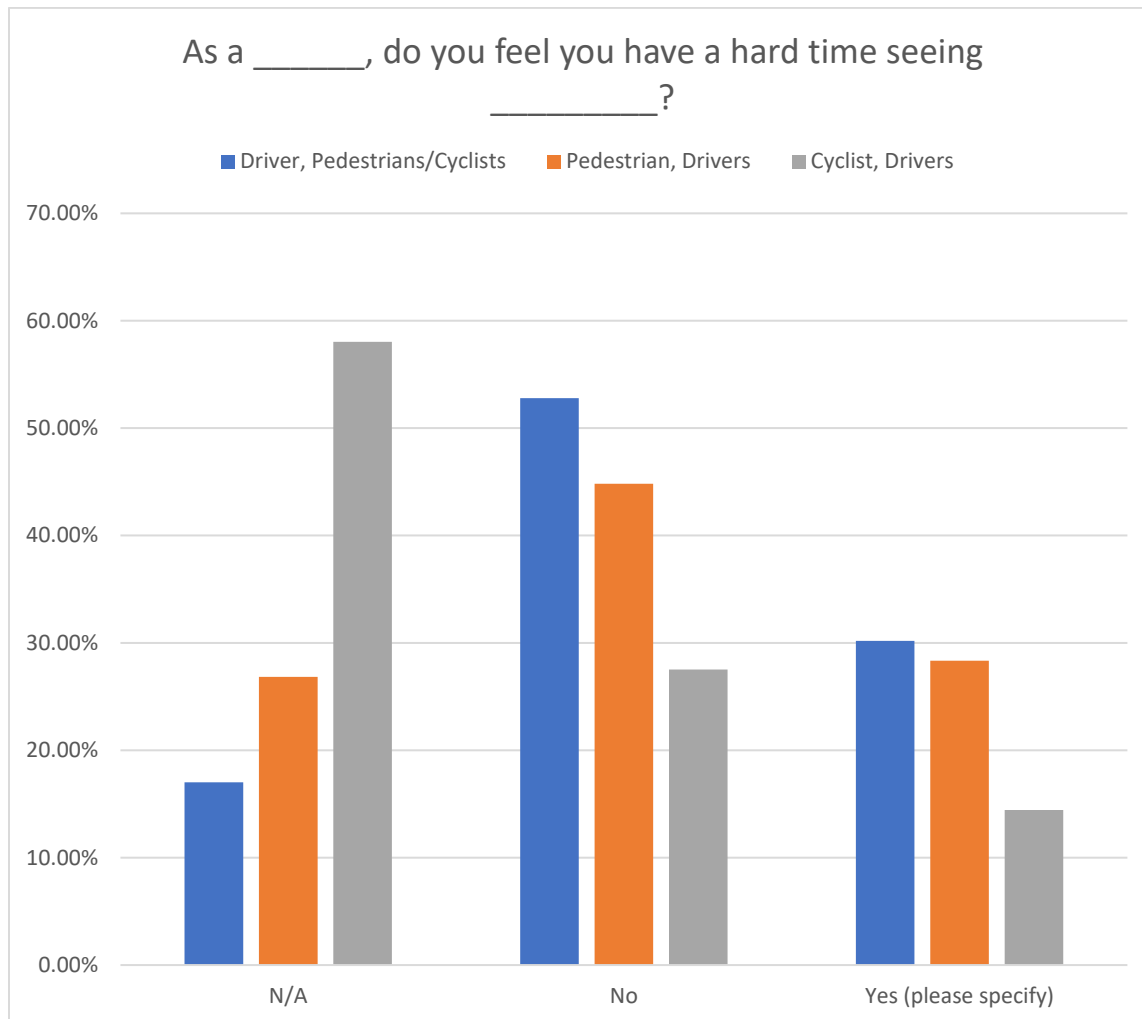


Figure 9. Drivers, Pedestrians, and Cyclists response regarding being seen along Washington Blvd.

The final three questions seek to understand the average experience using Washington Blvd from the perspective of a driver seeing pedestrians and cyclists, a pedestrian seeing oncoming vehicles, and a cyclist seeing oncoming vehicles. All three questions had an open response section to try and narrow down the specific intersections drivers and pedestrians feel most at risk.

In the case of pedestrians and drivers roughly 30% of both groups felt they had a hard time being seen or seeing the other. To get a better idea if pedestrians and drivers have issues on the same streets we looked at the open response data and compared the two questions. Cyclists were not used for this comparison due to the much smaller data set of open ended responses to work with.

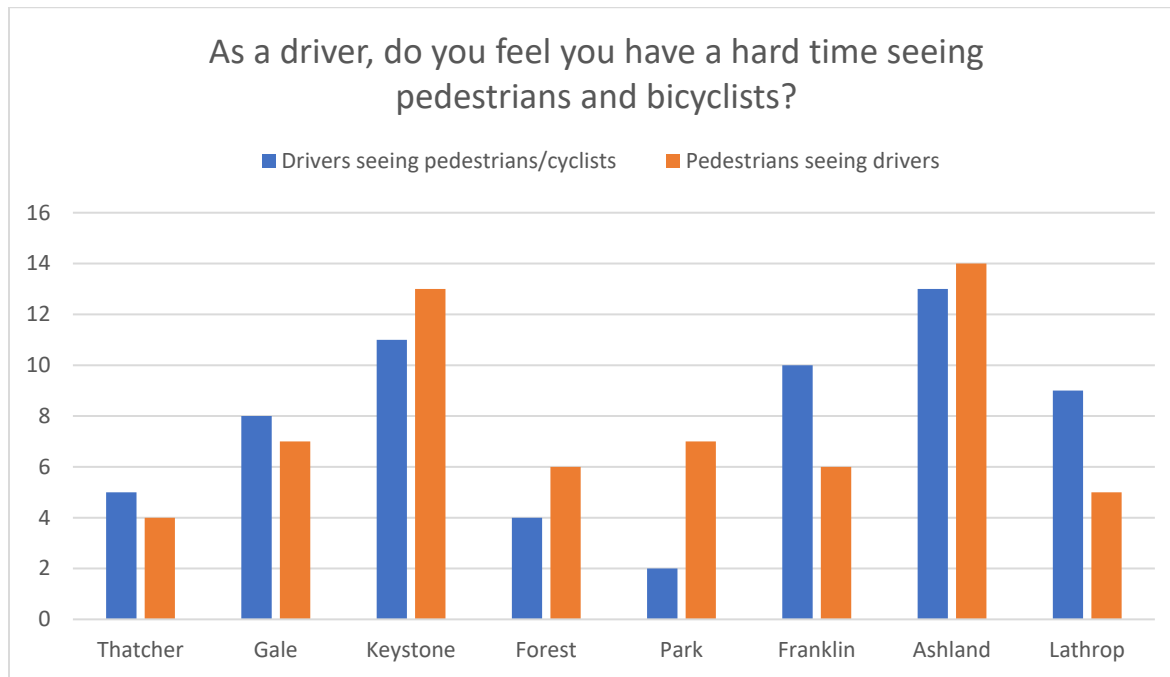


Figure 10. Open ended responses by Drivers and Pedestrians from the previous question.

Based on the side-by-side charts it is clear there is an overlap between pedestrian and driver perception of the areas where sightlines may be compromised. For both open-ended response sections 62 residents left feedback. While the overall distributions may be different the clear pattern is that Keystone and Ashland are perceived as intersections where sight distances are compromised.

At Ashland Ave, this was what we would expect to see based on the extreme setback of the sidewalk from the road. This pattern is more pronounced looking at the drivers responses where both Franklin Ave and Lathrop Ave also had elevated response rates. This was likely due to the odd sidewalk setback continuing at both nearby intersections. From the perspective of pedestrians, the two neighboring signalized intersections may provide a greater sense of safety as they can utilize a marked crosswalk during a pedestrian walk phase. Thus, those roads were not considered as dangerous by pedestrians responding.

The responses claiming Keystone has compromised sightlines were surprising for TEG. Knowing that drivers often roll through the stop at the intersection may explain some of the responses, but TEG did not feel the trees and landscaping around the intersection would impact drivers' ability to spot pedestrians approaching to that extent. This is especially true if a driver came to a complete stop and assessed their surroundings before continuing forward.

The remaining responses were spread across the corridor. The next most mentioned intersection was at Gale Ave with 15 respondents mentioning concerns on Gale between pedestrian and driver responses. This makes sense based on the density of trees and landscaping around the intersection. The fact that drivers on Washington Blvd do not need to stop makes it harder for them to register a pedestrian crossing or waiting to cross amongst the other visual clutter. Currently there is sidewalk crossing Washington Blvd on the east and west legs with no crosswalk to indicate to drivers that pedestrians may be crossing in the area.

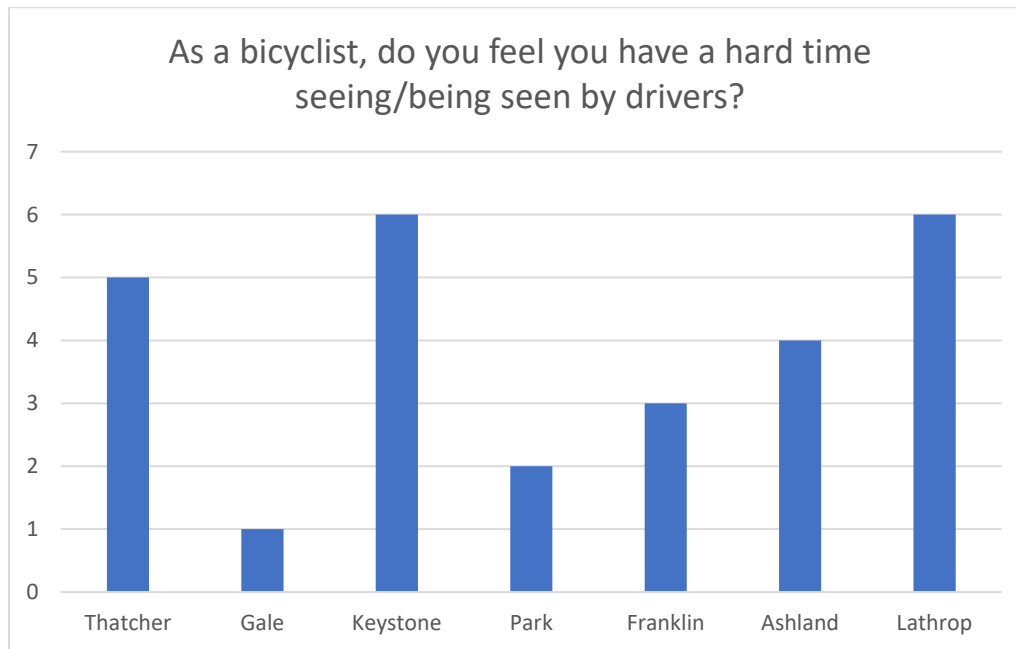


Figure 11. Open ended responses by Cyclists to the previous question.

Cyclists had a much smaller pool of open-ended responses (27) due to less residents regularly cycling on Washington Blvd. Their responses may be from the perspective of a rider entering Washington Blvd from a side street or a rider navigating Washington Blvd. Clearly, the two all-way stop intersections of Thatcher Ave and Keystone Ave are concerning to cyclists. This may correspond with the perception that drivers regularly do not stop at those two intersections. More cyclists felt they couldn't be seen as we head east through the intersections of Park Ave, Franklin Ave, Ashland Ave, and Lathrop Ave. TEG speculates that this is due to the unique geometry in that portion of the corridor and cyclists feeling less safe/seen at signalized intersections generally. Providing protected bike facilities would be the best way to give bicyclists a designated place on the road where drivers can expect cyclists.

In all situations, the majority of residents did not feel they had any issues being seen or seeing oncoming traffic. Breaking data down by how often each respondent uses the road creates a similar distribution as above with the primary difference being a higher percentage of residents feel they are having a hard time being seen the more often they use the road. Summary of data and individual tables can be seen in Appendix B.01: Survey Response Graphs & Data. The primary value in resident responses was to gather which intersections residents feel are most dangerous. This allows us to focus our efforts and suggest changes that will positively impact all road users.

Recommendations/Alternatives

Washington Blvd had all segments scored using the Traffic Calming Toolbox (TCT) designed for the Village as part of this project. Please refer to Appendix F.04: Traffic Calming Toolbox Scoring Sheets for individual scores. Every segment fell into the Level 3 category of improvements, meaning the roadway is eligible for improvements up to Level 3 of the improvement matrix (See below).

Available Traffic Calming Measures	Primary Issue Addressed		
	Speed	Volume	Pedestrian Safety
Level 1 - No Traffic Flow Changes (25-39 points)			
Targeted Speed Enforcement	X		
Speed Radar Trailer	X		
Speed Feedback Sign	X		
Centerline/Edgeline Markings	X		
Updated Signage (New/Larger/Refreshed)	X		X
Speed Limit Signage	X		
Flashing Signs	X		X
Pavement Legend	X		X
High Visibility Crosswalks			X
Educations/Community Outreach	X		X
Level 2 - Some Traffic Flow Changes (40-59 points)			
Sign Turn Restrictions/Turn Movement Restrictions		X	
On-street Parking Strategies	X		
Parking Lane Markings	X		
Textured Pavement	X		
Rumble Strip	X		
Rapid Rectangular Flashing Beacon			X
Left-turn Improvements			X
Level 3 - Significant Traffic Flow Changes (60-79 points)			
Curb Extensions	X		X
Mid-Block Chokers	X		X
Center Island Narrowing/Pedestrian Refuge			X
Stop Signage		X	
Traffic Circle	X	X	
Roundabout	X	X	
Realigned Intersection	X	X	
Speed Hump/Speed Cushion	X	X	
Speed Table/Raised intersections	X	X	

Table 5. Traffic Calming Toolbox Levels of Improvement.

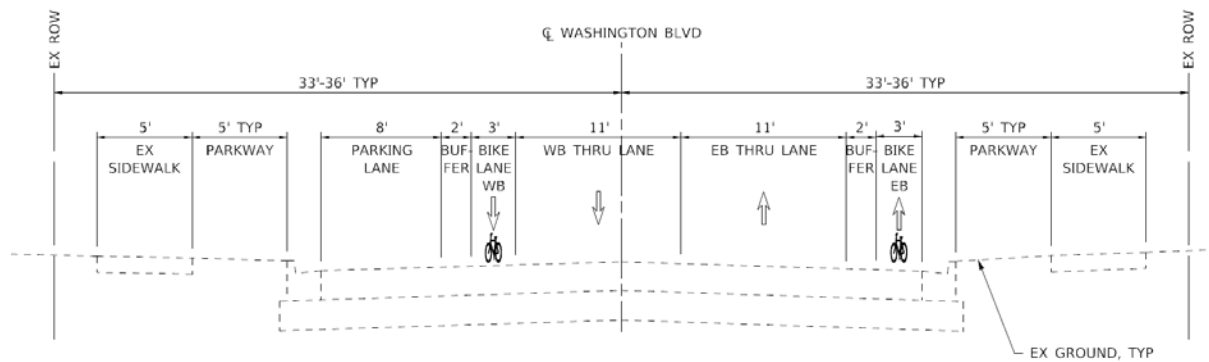
Since the corridor is a half mile there are multiple segments with changing characteristics and roadside conditions throughout. Analysis and scoring were done on the segments between each intersection to verify the tier of improvements available at each location. All segments within Washington Blvd had a score of between 65-75 which fell into the tier 3 improvement category.

A typical cross section of the road where parking is removed on one or both sides and protected bike lane(s) are installed would be the preferred option from TEG's perspective. This would allow more room for additional traffic calming features and would make the roadway much more accommodating for bicyclists who are at risk trying to share lanes with cars going 15 mph over the speed limit. At the Washington Blvd bridge there is a road diet project that is reducing the four-lane cross section down to two lanes with a protected bike path. If possible this cross section should be tied into any improvements along Washington Blvd.

Based on conversations with Village staff, as well as survey responses, TEG understands that removing parking will be unpopular with some residents in the area. TEG plans to focus on maintaining parking along one side of the road while eliminating parking on the opposite side to make room for an on-street bike lane. As mentioned previously, parking along the corridor was at 50% or less utilization in the parking and commuter study previously done by the Village. This indicates that while residents feel parking is necessary there is clearly an overabundance in the corridor that may be negatively impacting the roadway. By consolidating parking to one side of the road TEG would like to repurpose the existing southern parking lane for bike facilities while increasing the utilization of the remaining parking.

Alternative 1 (Preferred)

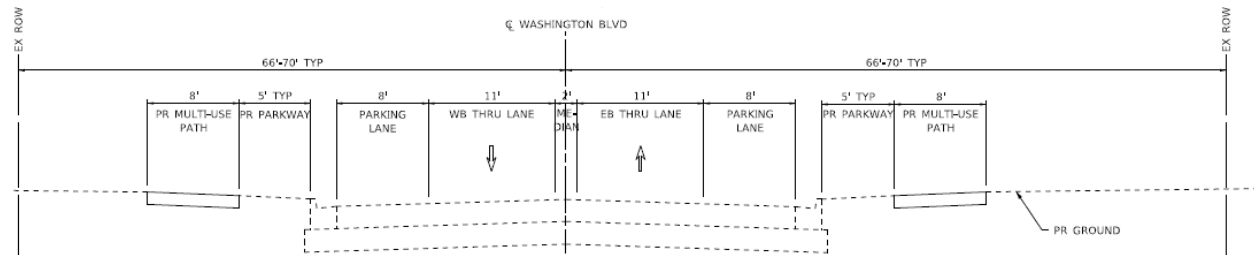
All recommendations discussed above have been compiled and drafted into a proposed exhibit for Washington Blvd and can be seen in Appendix F.05: Washinton Blvd Exhibits. Within the exhibits TEG used the preferred design and cross section as detailed above. TEG is proposing an alternative roadway cross section throughout the corridor. We have developed two new typical sections, one for the east half and one for the west half with the transition point at Park Ave. The western cross section maintains all parking along the north side of Washington Blvd, narrows the lanes to 11' in each direction, and provides a 3' bike lane with 2' buffer on the north and south side of the street (See figure 12 below). The eastern cross section will keep the current lane configuration from Park Ave to Lathrop Ave, but lanes will be reduced to 11' widths and a two-foot striped median will be installed (See figure 13 below). Throughout the eastern section, cyclists will be provided 8' multi-use paths north and south of Washington Blvd. TEG updated our capacity model to function without right-turn slip lanes at the intersections and found only minor changes in the overall capacity of the road (See Appendix C.03: Alternative Volumes & Level of Service – AM and Appendix C.04: Alternative Volumes & Level of Service – PM).



WESTERN ALTERNATIVE 1

THATCHER AVE - PARK AVE
(FACING EAST)

Figure 12. Proposed Western Typical Section Washington Blvd.



EASTERN ALTERNATIVE 1

PARK AVE - LATHROP AVE
(FACING EAST)

Figure 13. Proposed Eastern Typical Section Washington Blvd.

Speeding is considered an issue throughout the entire project; intersection or segment specific concerns and countermeasures are detailed below:

Thatcher Ave Intersection:

- Install Sign Mounted 8" Flashing Beacon on stop warning signs along Thatcher Ave.
- Install a raised intersection.
- Install curb extensions on the northeast corner.
- Provide dotted lines showing cyclists path from the west leg to the east leg to stay within bike lanes.
- Redesign Existing crosswalk to be a raised crosswalk.

The intersection with Thatcher Ave has an elevated angle crash rate unexpected at an all way stop intersection. Speed is likely a contributing factor increasing the severity of all crash types. Residents have stated that drivers often do not stop at the stop signs at this intersection. While TEG did not feel the stop signs on any approach were hard to see it is possible that speeding drivers don't notice the stop warning signs prior to the intersection and also miss the stop signs at the intersection. To combat this 8" flashing

beacons should be placed on the Stop Ahead Warning signs or the signs should be replaced with flashing LED bordered warning signs

TEG also proposes to install a raised intersection. This physical obstacle forces drivers to slow down and creates more awareness at the intersection. Since this intersection is a gateway to the rest of the Village and speeding appears to be common TEG felt aggressive countermeasures were necessary at this location.

The east leg of the intersection should be restriped using the new proposed cross section. This will provide facilities for cyclists that can tie into the new cross section west of Thatcher Ave.

Gale Ave:

- Install curb extensions along the north side of the road.
- Provide dotted lines showing cyclists path from the west leg to the east leg to stay within bike lanes.
- Provide striped crosswalks across Washington Blvd.

Gale Ave suffers from the same elevated angle crash rate as Thatcher Ave including one pedalcyclist crash. Since Washington Blvd is not stopping at this intersection TEG theorizes that sight distance issues and speeding are the primary causes of the angle crashes. Residents verified this in survey response data. To increase visibility while decreasing visual clutter at the intersection parking on the south side of the road should be removed in favor of bike lanes. Curb extensions should be provided along the north side of Washington Blvd to bring pedestrians closer to oncoming traffic. Parking is available on Gale Ave and the north side of Washington Blvd for residents who can no longer park on the south side.

Crosswalks are currently striped on the north and south legs at Gale Ave. To create more visibility for the intersection and to connect existing sidewalks, crosswalks should be striped on the east and west legs. Pedestrian warning signs should be installed with the crosswalks for consistency with other parts of the corridor.

Keystone Ave:

- Install a raised intersection.
- Install curb extensions along the north side of the road.
- Provide dotted lines showing cyclists' path from the west leg to the east leg to stay within bike lanes.
- Redesign Existing crosswalks to be raised crosswalks.

Keystone Ave saw the same elevated angle crash rate as both Thatcher Ave and Gale Ave. Since this location is an all way stop similar improvements were recommended to those at Thatcher Ave. Sight distance seems to be worse for all legs of the intersection than Thatcher Ave due to large trees and landscaping near the intersection. TEG recommend installing a raised intersection to provide multiple points of traffic calming as a driver moves along Washington Blvd.

TEG recommends removing street parking along the south side of the road to provide bike lanes. Curb extensions should be provided along the north side of Washington Blvd to bring pedestrians closer to oncoming traffic. Signs to not drive in the parking lane are a result of unused parking in the area and evidence that drivers attempt to improperly use the parking lane as a second lane. At the all way stop intersection this can be dangerous if drivers on the other legs are not expecting a second lane of traffic.

This behavior is even more dangerous at Keystone Ave due to the compromised sightlines. Removing parking and adding curb extensions will eliminate the possibility for drivers to incorrectly use the intersection.

Forest Ave:

- Install a curb bump out along the north side of the road.
- Provide dotted lines showing cyclists path from the west leg to the east leg to stay within bike lanes.
- Redesign Existing east crosswalk to be a raised crosswalk.

While this intersection has not seen many crashes, it is the crossing point between two parks. High speed traffic may discourage residents from using the area as it was intended. To slow drivers down while continuing to allow parking along the north side of Washington Blvd, TEG suggests installing a raised crosswalk on the east leg. This will provide greater safety for pedestrians and will force drivers to slow down even though there is no traffic control at this location. Since the parks may have residents visiting by car, parking will remain in the area with the exception that parking on the south side of Washington Blvd which will be removed to install a bike lane.

Due to the number of parks in the area TEG feels prioritizing pedestrian access in this area will benefit the corridor and community.

Park Ave:

- Transition on-street bike lanes to off-street multi-use paths.
- Provide restriped crosswalks using zebra striping to signify any bike crossing locations.
- Fix pedestrian crossing sign location.
 - o Move closer to the Franklin Ave crosswalk.
- Install curb extensions on all four corners.

Park Ave has a low crash rate similar to Forest Ave and in this case, TEG recommends transitioning away from the cross section starting at Thatcher Ave to a new cross section that matches the existing conditions with the addition of narrower 11' lanes and a 2' striped median. All four legs should have their crosswalk striping updated to zebra striping. Signing in the area includes a "Stop here for pedestrians" sign for the crosswalk on Franklin Ave. It is unclear that the sign is referring to the crosswalk on Franklin Ave based on how far it is placed from that intersection. TEG suggests relocating the sign consistent with other areas of the Village.

The park in the southeast corner along with the two parks at Forest Ave may attract more pedestrians than other portions of the corridor, so ensuring safe pathways in this area is a priority. Sightlines are adequate up to the intersection in all directions and the lack of crashes even with drivers speeding in the area supports this analysis. TEG suggests maintaining some form of cycling infrastructure through the intersection using a multi-use path along the north and south side of Washington Blvd. The path should be located closer to the existing roadway consistent with sidewalk offsets west of Park Ave.

Franklin Ave:

- Install a raised intersection.
- Remove existing sidewalk and install multi-use path closer to Washington Blvd.
 - o Restripe south crosswalk and move stop bar closer to Washington Blvd.
 - o Remove unnecessary sidewalk and existing crossings along north and south side of Washington Blvd.
- Install curb extensions on all four corners.
- Redesign Existing crosswalks to be raised crosswalks.
 - o Use zebra striping as applicable.

Franklin Ave is a relatively safe intersection with the main crash type being rear ends. Both drivers and cyclists complained about sight distance issues at Franklin Ave in the resident survey. This may be due to the unique 5-leg intersection geometry and the 40' set back of the sidewalk beginning in the southeast. TEG suggests replacing the sidewalk in the area with a multi-use path setback a maximum of 10' from Washington Blvd. This will ensure pedestrians don't feel disconnected from the street. When drivers can't see pedestrians, they can't make alterations to their driving patterns to account for the possibility a person on foot could come into the road from any angle.

Providing off-street bicycle accommodations will encourage more residents to cycle. It is important to provide facilities considered Level of Traffic Stress 1 (LTS1) by IDOT to allow beginners a safe place to avoid riding in traffic. LTS1 facilities are typically off-road and can comfortably be used by all residents including children, unlike some on-street facilities.

Ashland Ave:

- Remove existing sidewalk and install multi-use path closer to Washington Blvd.
 - o Restripe south crosswalk and move stop bar closer to Washington Blvd.
 - o Remove unnecessary sidewalk and existing crossings along north and south side of Washington Blvd.
- Install curb extensions on all four corners.
- Provide restriped crosswalks using zebra striping to signify any bike crossing locations.

Ashland Ave saw an extreme number of angle crashes over the analysis period. All groups surveyed agreed that visibility at Ashland Ave is lacking. TEG believes this is primarily due to the large offset of the sidewalks along the north and south side of Washington Blvd that push back the stop bars for drivers waiting to turn onto Washington Blvd.

To correct the problems at this intersection TEG suggests maintaining the on-street cross section and multi-use paths installed beginning at Park Ave. This will relocate the crosswalk closer to Washington Blvd and allow the Village to move the existing stop bar closer to the traveled way. Installing curb extensions on all four corners will make it apparent to drivers on Washington Blvd that there is an intersection at this location.

Lathrop Ave:

- TEG recommend as few changes as possible that will impact the eastern leg
- Install a raised intersection.
- Install curb extensions on the northwest and southwest corners.
- Redesign Existing crosswalks to be raised crosswalks.

The intersection is high volume, and all crash types correspond to what is standard for a signalized intersection. TEG would suggest installing curb extensions to make it clear the road is one-lane per direction as drivers enter the Village. Cyclist considerations should include the termination of the MUP into the existing sidewalk network.

TEG recommends installing a raised intersection at this location as well to slow drivers as they enter the Village. Additionally, multiple raised intersections throughout the corridor are more effective than a single placement. In this case raised intersections at Thatcher Ave and Lathrop Ave will address speeding as drivers enter the Village and the raised intersection at Keystone Ave will help to address speeding within the corridor.

Other Alternative Designs

TEG is proposing alternative cross sections in addition to the preferred alternative. These include both alternative cross-sections that may be implemented throughout the corridor. Below is a listing of these alternative options along with how they fit into the corridor wide improvement.

Western Alternative 2

The Western Alternative 2 proposes two 11' through lanes along the north side of the road, an 8' parking lane, 2' buffer, and an 8' bi-directional bike lane. At Park Ave the cross section would transition to an off-street multi-use path and lanes would shift back to the south. Curb extensions may not be compatible with this cross-section design.

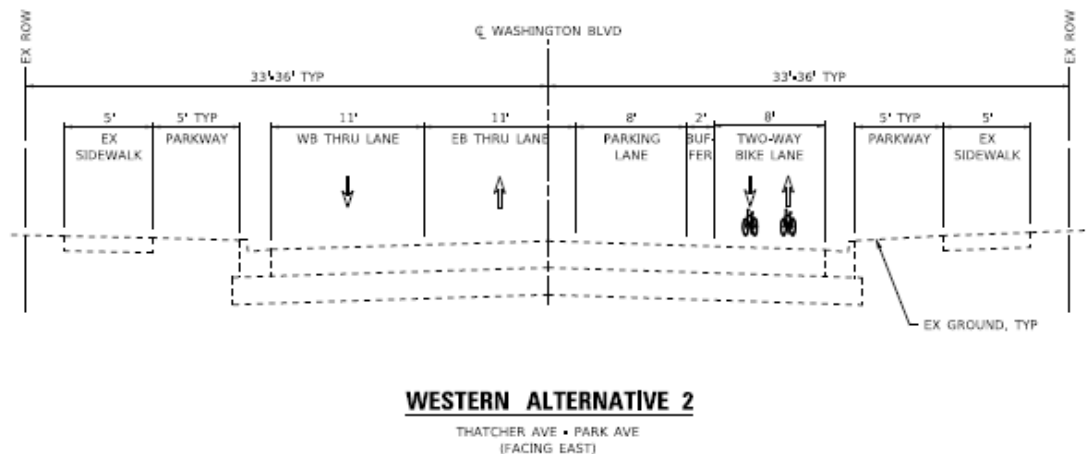


Figure 14. Western Typical Section Alternative 2 Washington Blvd.

Western Alternative 3

The Western Alternative 3 proposes an 8' parking lane along the north side of the road, two 11' through lanes, a 2' buffer, and an 8' bi-directional bike lane. At Park Ave the cross section would transition to an off-street multi-use path. Curb extensions can still be provided at the northern corners using this design.

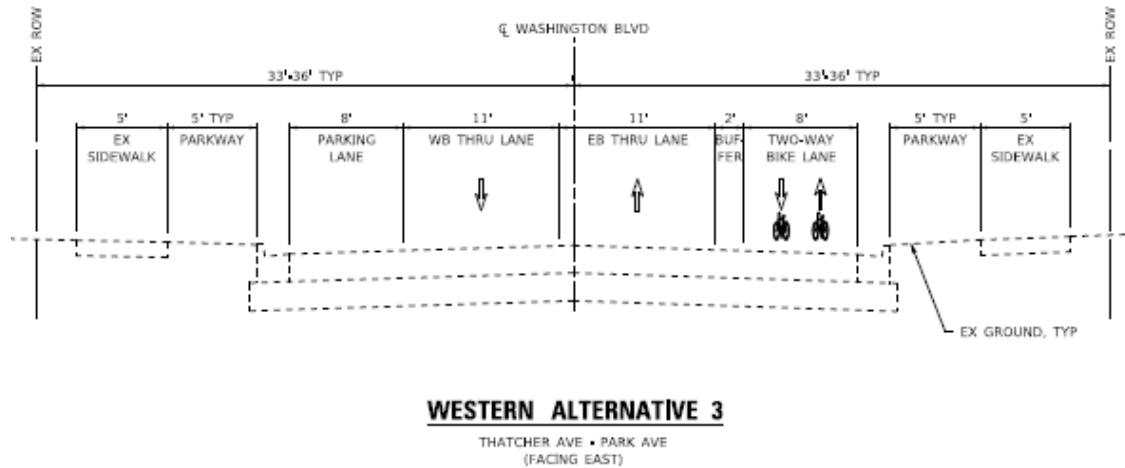


Figure 15. Western Typical Section Alternative 3 Washington Blvd.

Eastern Alternative 2

Eastern Alternative 2 is identical to West Alternative 1. Parking will remain in place along the north side of the road and will be removed from the south side of the road. The cross section provides 8' of parking along the north side of the road, a 2' buffer, a 3' westbound bike lane, two 11' through lanes, a 2' buffer, and 3' eastbound bike lane. Curb extensions will still be provided along the north side of the road and sidewalks will still be realigned at the intersections to be closer to Washington Blvd.

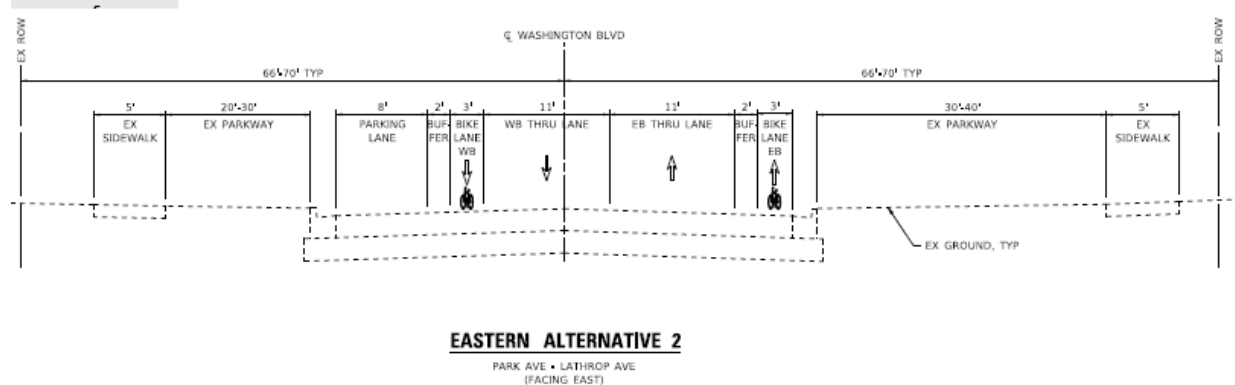


Figure 16. Eastern Typical Section Alternative 2 Washington Blvd.

The intention of providing multiple lane configurations is to allow the Village to select the design they feel is most appropriate in the area. Sample exhibits using alternative cross sections are provided and drafted at sample intersections (Washington Blvd and Gale Ave, Washington Blvd and Ashland Ave) and can be viewed in Appendix F.05: Washinton Blvd Exhibits.

Washington Blvd Exhibits

* LABELS ARE PROVIDED AT LOCATIONS WITH SIGNIFIGANT CHANGES TO PARKING OR PEDESTRIAN FACILITIES

** APPROXIMATELY 35 EASTBOUND PARKING SPOTS ARE BEING REMOVED FROM THE ROAD OR 45% OF ALL EASTBOUND PARKING. IT IS ASSUMED THE REMAINING PARKING SPACES, AS WELL AS, SIDE STREET PARKING WILL ACCOMODATE DRIVERS LOOKING TO PARK IN THE AREA



WASHINGTON BLVD EXISTING

PROPOSED IMPROVEMENTS WEST SECTION:

1. RAISED INTERSECTIONS: THATCHER AVE & KEYSTONE AVE
2. A NEW CROSS SECTION BETWEEN THATCHER AVE AND PARK AVE THAT INCLUDES REMOVING PARKING ALONG THE SOUTH SIDE OF WASHINGTON BLVD AND ADDING ON-STREET BIKE LANES.
3. CURB EXTENSIONS WILL BE PROVIDED ON THE NORTH SIDE OF ALL INTERSECTIONS FROM THATCHER AVE TO FOREST AVE.
4. FOREST AVE WILL HAVE A RAISED CROSSWALK INSTALLED ALONG ITS EAST LEG.

PROPOSED IMPROVEMENTS EAST SECTION:

1. RAISED INTERSECTIONS: FRANKLIN AVE & LATHROP AVE
2. FROM PARK AVE TO LATHROP AVE THE CROSS SECTION WILL REMAIN THE SAME WITH THE ADDITION OF A 2' STRIPED CENTER MEDIAN ALONG WITH CURB EXTENSIONS AT ALL INTERSECTIONS.
3. STARTING AT PARK AVE TO THE EAST THE ON-STREET BIKE LANES WILL BE MOVED TO AN OFF-STREET MULTI-USE PATH. TEG CURRENTLY SHOWS THE PATH ON BOTH SIDES OF THE ROAD,
4. THE EXISTING SIDEWALK STARTING AT PARK AVE TO THE EAST WILL BE REMOVED IN FAVOR OF THE PR MULTI-USE PATH PLACED 5' FROM THE BACK CURB. STRIPING WILL BE REPLACED WITH NEW ZEBRA STRIPING.



WASHINGTON BLVD PROPOSED

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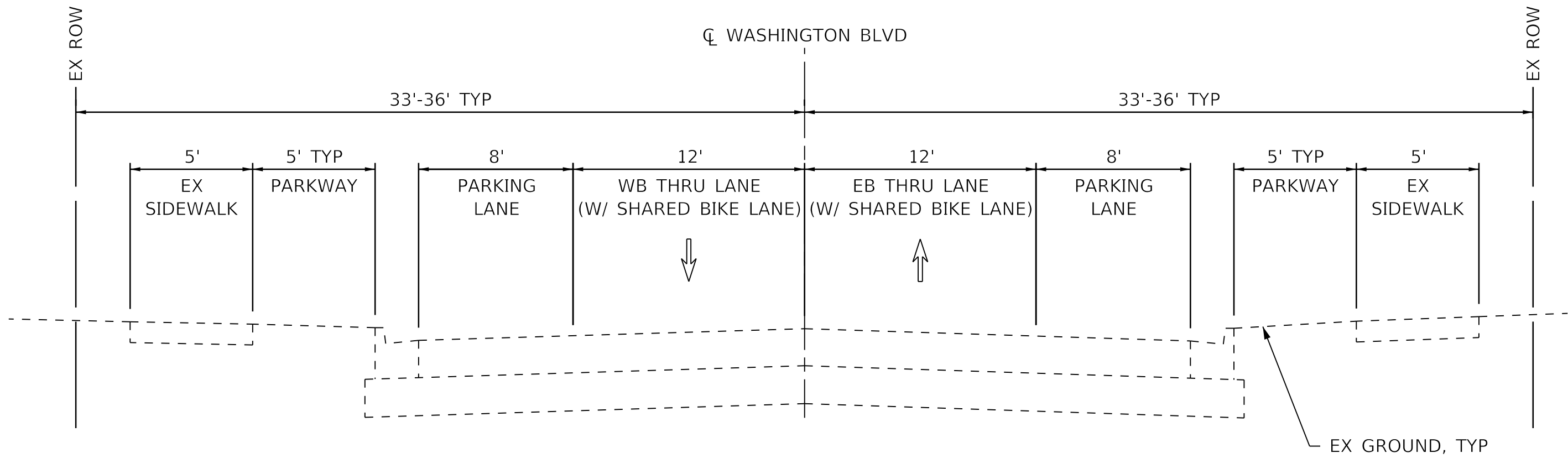
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WASHINGTON BLVD OVERVIEW

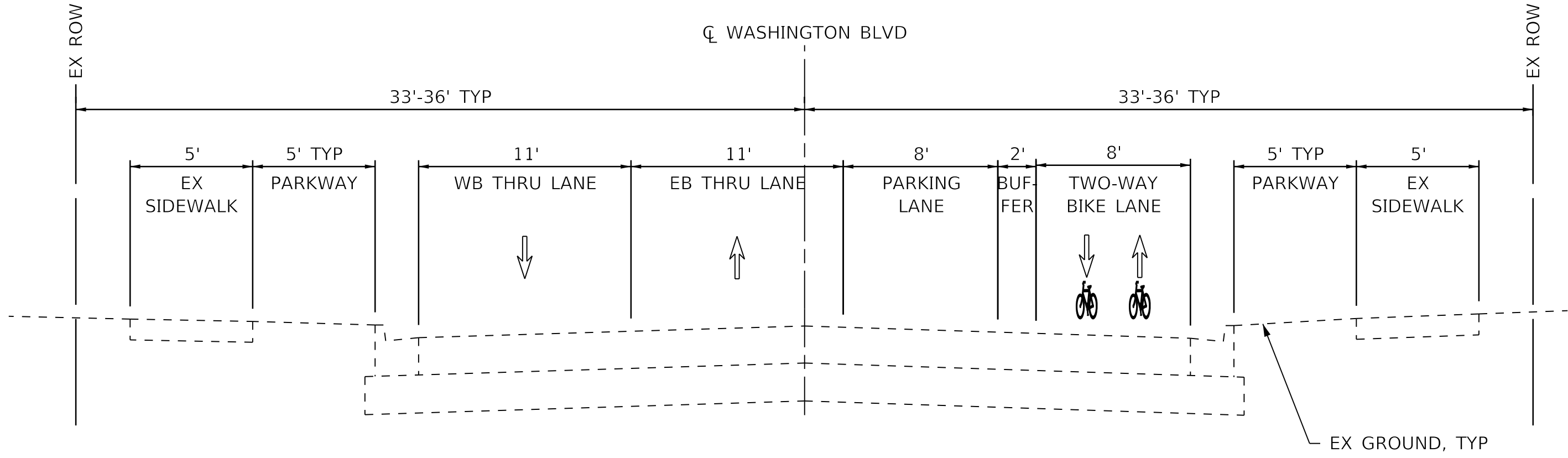
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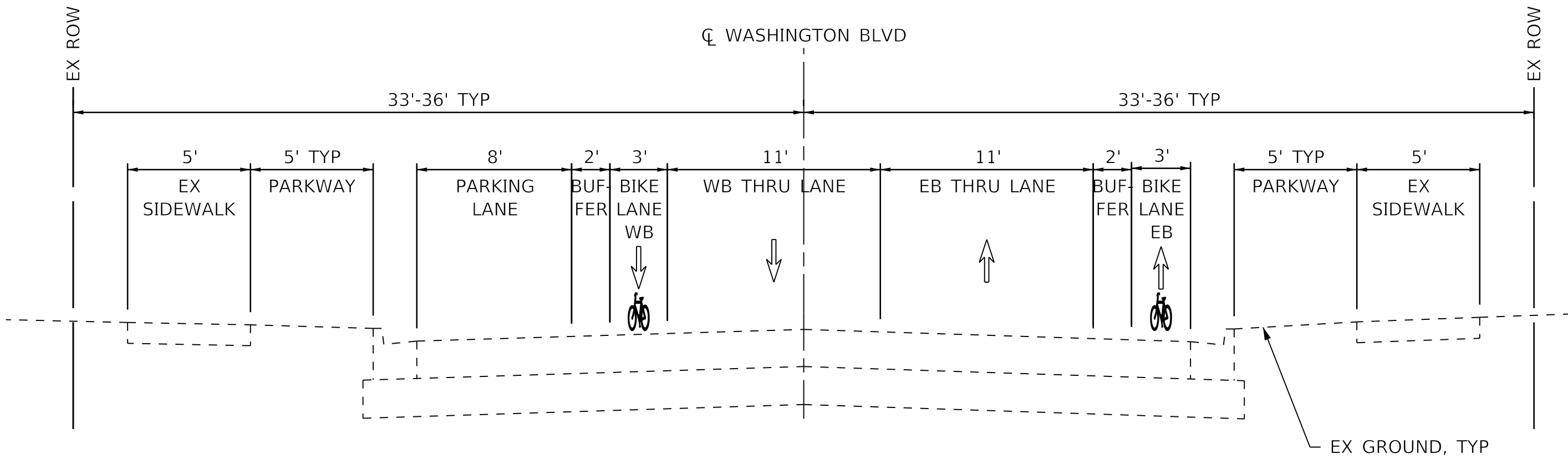
EXISTING WESTERN TYPICAL SECTION

THATCHER AVE - PARK AVE
(FACING EAST)



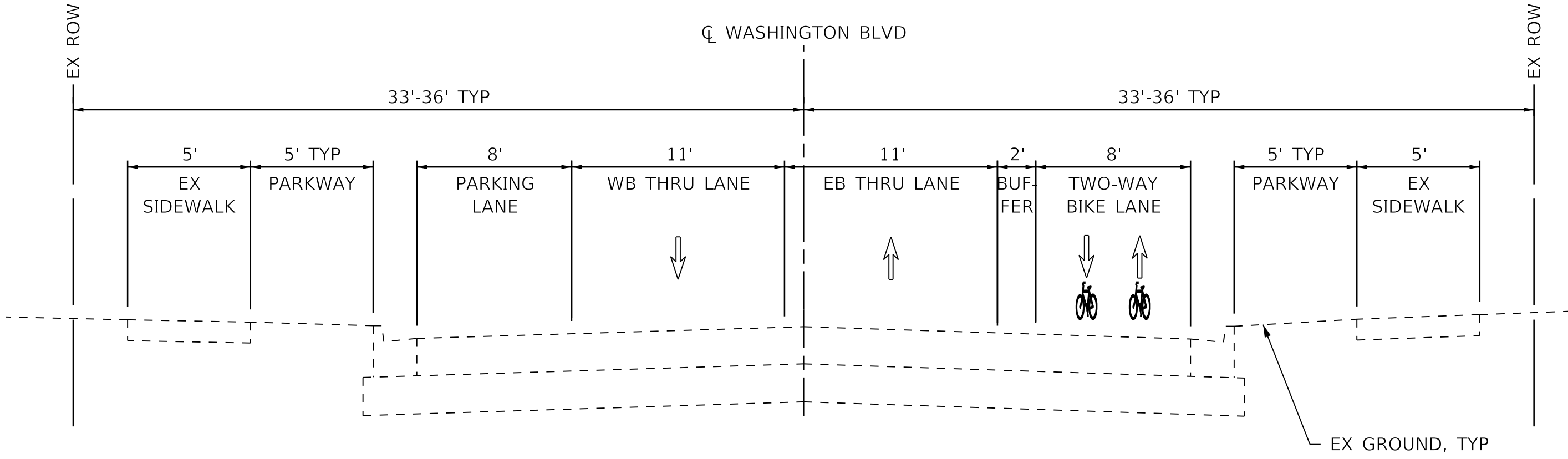
WESTERN ALTERNATIVE 2

THATCHER AVE - PARK AVE
(FACING EAST)



WESTERN ALTERNATIVE 1

THATCHER AVE - PARK AVE
(FACING EAST)

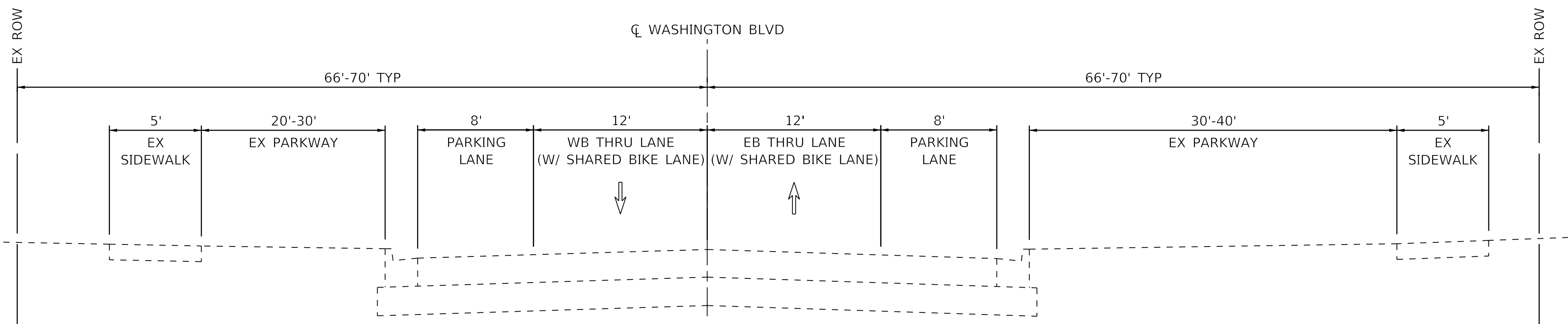


WESTERN ALTERNATIVE 3

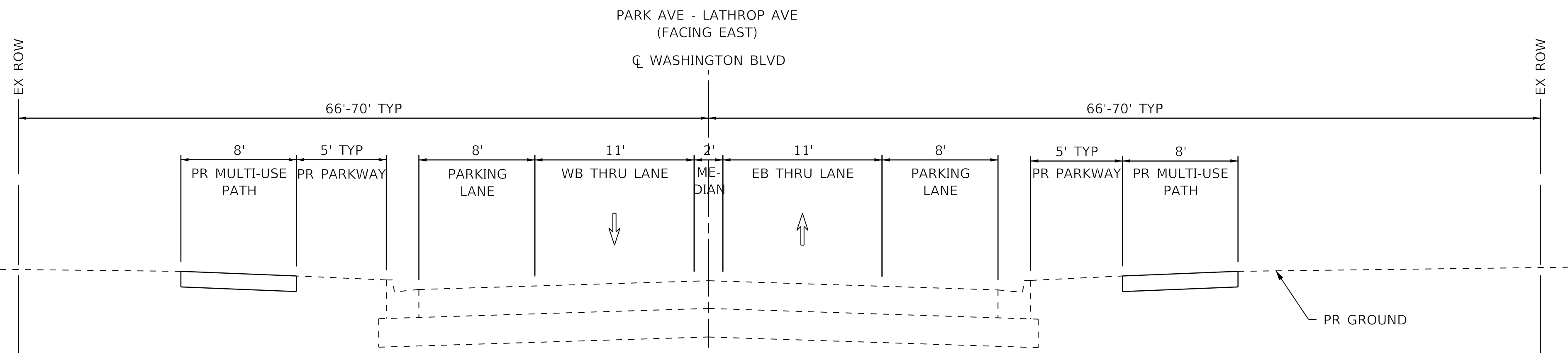
THATCHER AVE - PARK AVE
(FACING EAST)

NOTES

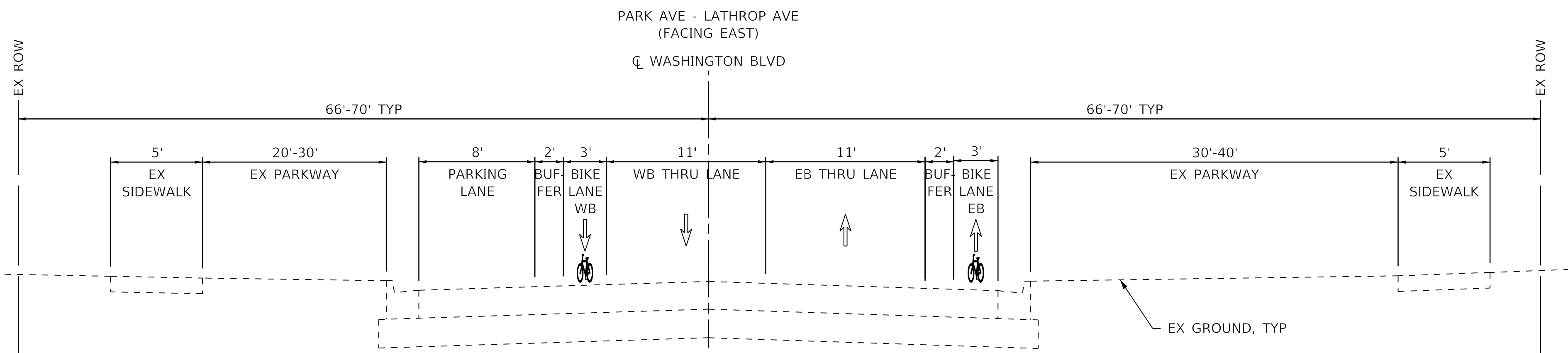
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2. PARKING AND BIKE LANES ARE SHOWN IN TEG'S PREFERRED ORIENTATION, BUT WE CAN ACCOMODATE PARKING AND BIKE ON EITHER SIDE PER VILLAGE PREFERENCE.
3. PARKING IS INTERMITENT AND BREAKS FOR DRIVEWAY AND INTERSECTIONS. TEG IS NOT PROPOSING ANY NEW PARKING SPACES BEYOND WHAT IS STRIPED IN THE EXISTING CONDITIONS.
4. STARTING AT PARK AVE TO THE EAST THE ON-STREET BIKE LANES WILL BE MOVED TO AN OFF-STREET MULTI-USE PATH IF THE OFF-STREET ALTERNATIVE IS CHOSEN.



EXISTING EASTERN TYPICAL SECTION



EASTERN ALTERNATIVE 1



EASTERN ALTERNATIVE 2

NOTES

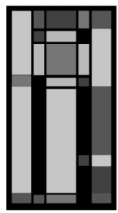
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3. PARKING IS INTERMITENT AND BREAKS FOR DRIVEWAY AND INTERSECTIONS. TEG IS NOT PROPOSING ANY NEW PARKING SPACES BEYOND WHAT IS STRIPED IN THE EXISTING CONDITIONS.
4. STARTING AT PARK AVE TO THE EAST THE ON-STREET BIKE LANES WILL BE MOVED TO AN OFF-STREET MULTI-USE PATH IF THE OFF-STREET ALTERNATIVE IS CHOSEN.

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**WASHINGTON BLVD EASTERN
TYPICAL SECTIONS**

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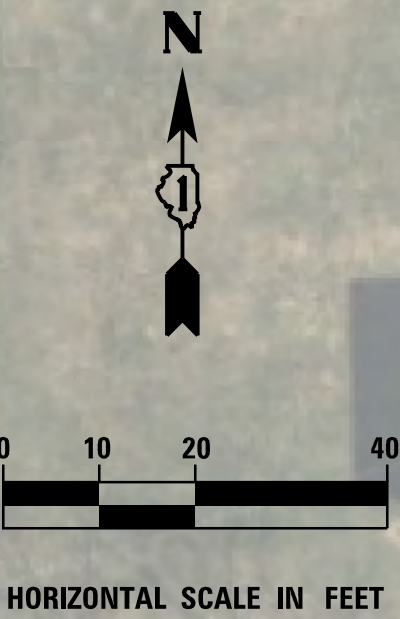


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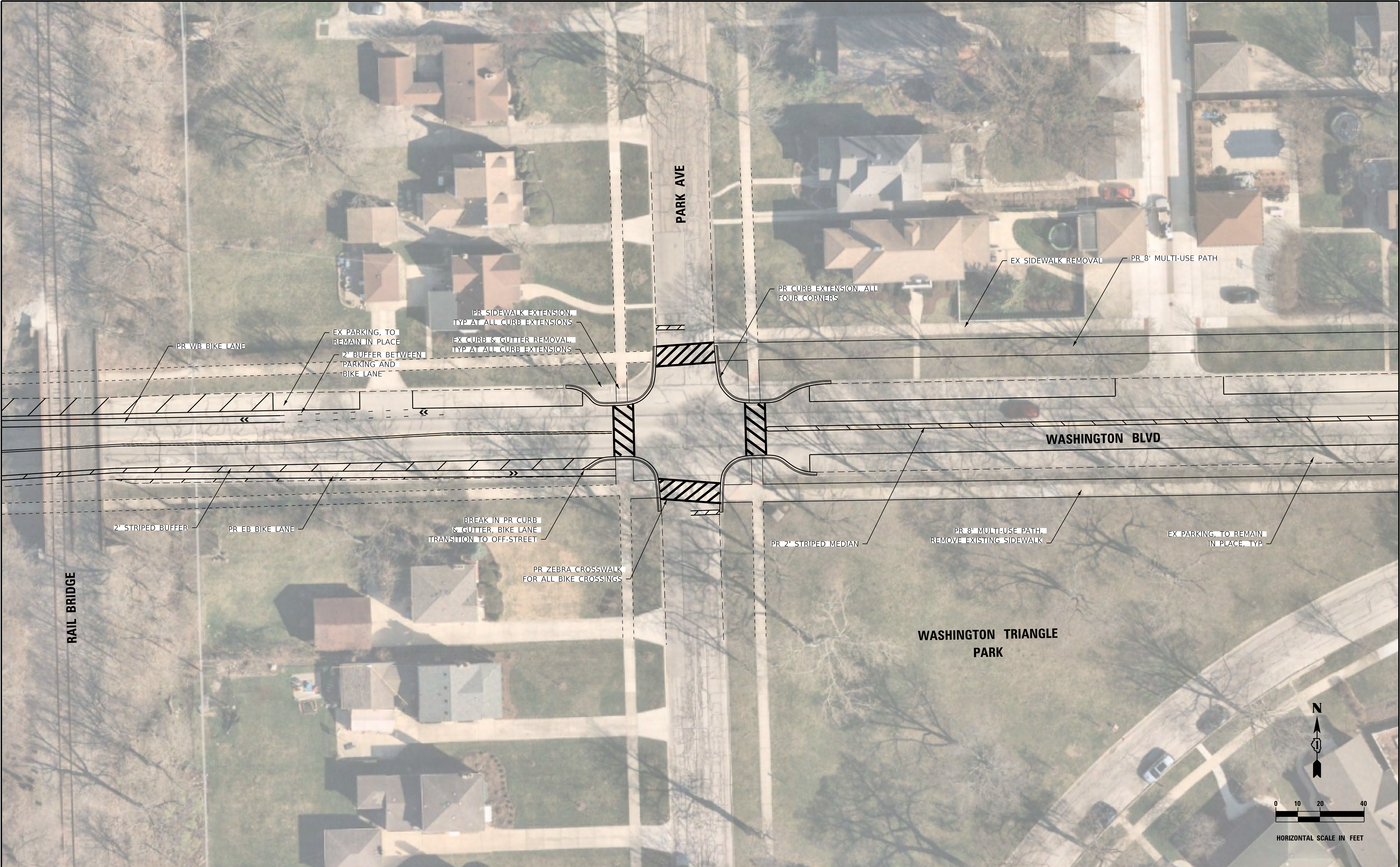
**WASHINGTON AT THATCHER
ALTERNATIVE 1**

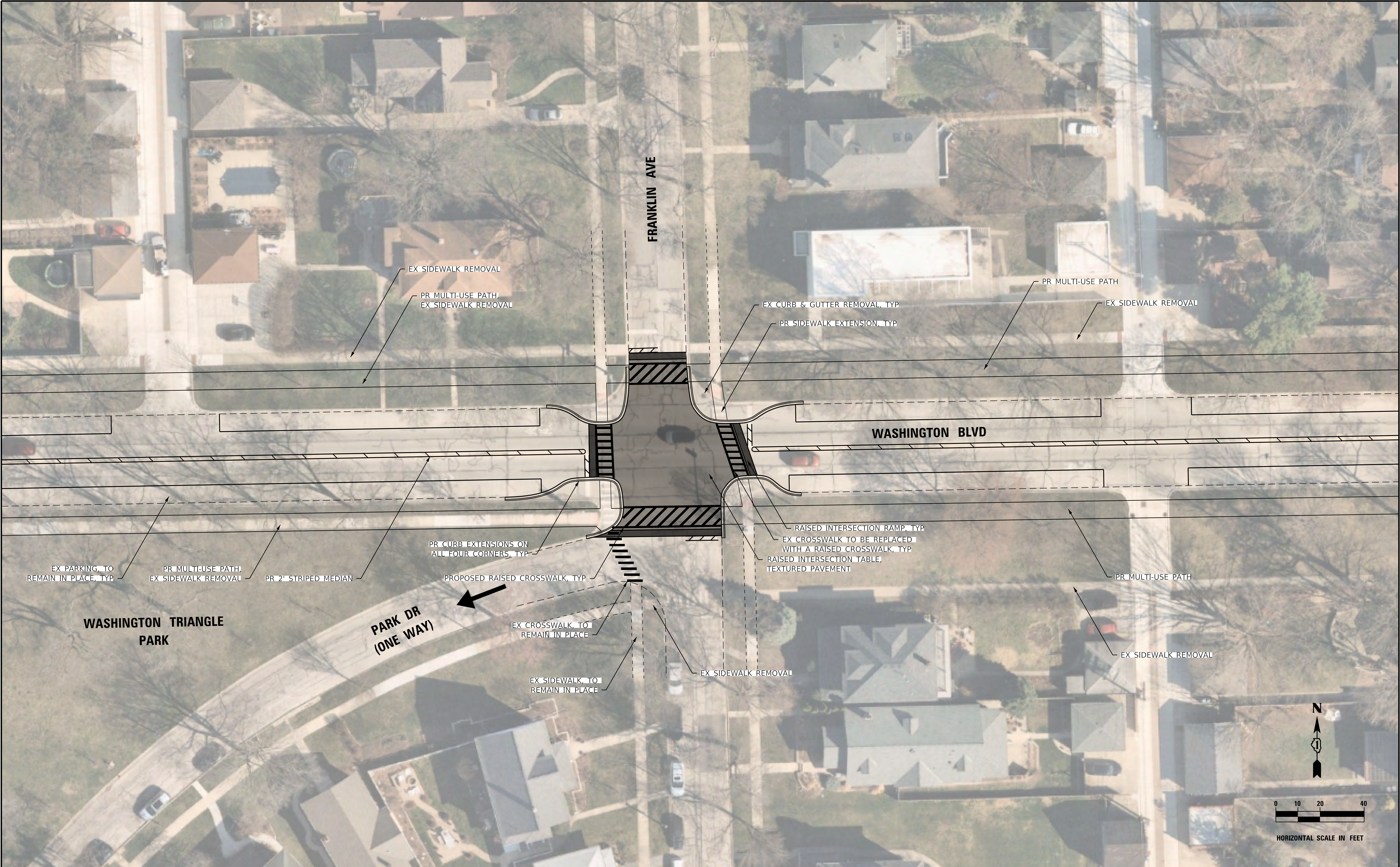






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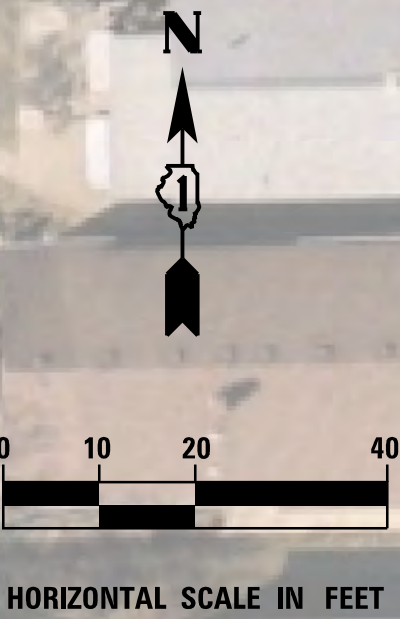
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WASHINGTON AT ASHLAND
ALTERNATIVE 1

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WASHINGTON AT LATHROP
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**WESTERN TYPICAL SECTION
ALTERNATIVE 2**

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**WESTERN TYPICAL SECTION
ALTERNATIVE 3**

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