

## Town Council Meeting Comments - Submission #110531

Date Submitted: 4/6/2021



### April 6, 2021 Town Council Meeting Comments

Thank you for your interest in Town Council's upcoming discussions. Please use the form below to submit your comments no later than 1 p.m. Tuesday, April 6. Comments received by that time will be forwarded to Council and included as part of the public record for the meeting, just as if you had come to comment in person. All listed fields are required.

#### Agenda item on which to comment\*

13. Ordinance Approving The View at Castle Rock Redevelopment and Financing Agreement Between the Town of Castle Rock, the C ▼

Please pick one. To comment on more than one item, please submit an additional form.

#### Comment\*

To the Castle Rock Town Council,

I have lived in Castle Rock for over 30 years.

Until now I have not spoken up about the relentless upheaval that is occurring in downtown Castle Rock spurred by developers, which in turn is being supported by several members of the town council, town manager, and town planners. It feels like it is almost too late to put an end to this disastrous downtown development precedent that has been ramrodded through by the council and the town planners.

Or perhaps this is a point where the events and vision can be shifted.

The current project of the 'View' needs to be halted and reevaluated.

It is a monstrous building, far too overwhelming to the area that it's proposed to occupy. This is a project for an environment like the Meadows or a large subdivision, not a squeezed-in segment of a small town.

What is allowing this to happen?

Are the members of the council who have short term retail interests just too darn greedy to care about the long term impacts on this community? Why is it always more, bigger, uglier when it comes to building in this town?

As it is, the huge parking garage that is attached to the new Wilcox monstrosity looks like something that should be attached to Coors Field, not a condominium complex in a small Colorado town, which is what Castle Rock used to be. It is truly design gone awry.

Everyone keeps talking about the attraction of 'small town Castle Rock'. Doesn't anyone realize that this kind of development has totally shattered that narrative?

Has any other small town in the area decided to scour and rebuild their downtown with a mass of oversized buildings in order to preserve quaintness. The downtown area has 'grown' from small and interesting buildings and establishments to large and lumbering behemoths. If people want to live in a place like LoDo in downtown Denver, let them live there. Why does it have to be recreated here?

The View developers say they're providing 100 public parking spaces (in exchange for huge tax subsidies by Castle Rock). So they're anticipating people are going to want to park there and then walk to the real downtown? And traffic, traffic, traffic. A significant and ongoing concern. A small downtown weekly summer event already ties up traffic disproportionately. What will an influx of this magnitude do to those traffic situations, besides the day to day backups and congestion.

And will all of these new residents be working in Castle Rock? Or are they going to be depleting our local natural resources on a daily basis so that they can go work in Denver or Colorado Springs. The developer says the ideal renter will be a young professional who will fall in love with Castle Rock, start a family, and buy a home in the area. So this complex then becomes a cramped funnel for the creation of more claustrophobic big box condominiums and development tracts. And meanwhile, of course, more and more and more traffic problems.

It feels like the town planners, manager, and council are agreeably and helpfully allowing the developers of these projects to pull the wool over their eyes. They exhibit a total lack of backbone, and a silent complicit agreement to greed.

And are any of these projects attempting to bring any more inclusivity and diversity into this town? It doesn't appear that the town cares about anything other than high rent & high mortgage taxpayers. It's a real shame and a betrayal to what a small town is all about. A person used to be able to walk anywhere in downtown Castle Rock and be able to see 'The Rock', the icon that this town was named for. Now you have 6 and 7 story building obstacles all over the town, and that namesake view is lost to 'progress'.

Most folks in the area are against this and other similar downtown projects. The town is not doing nearly enough outreach to the community to get opinions about this growth. And it feels like any negative feedback is being swept under a very large rug. Has any of the council read comments on Next Door? More than 80% of people responding to a survey are against the type of development occurring in downtown. And the accompanying comments to that survey are mainly disparaging about this current project and the motivations of those allowing it to occur. However it appears the council doesn't care. Apparently they never have. They are building monuments to themselves. And council members that have unabashed retail interests in projects that will enhance their businesses should be recusing themselves from any input in these development decisions. It is a blatant conflict of interest.

The Wild West credence that people can do whatever they want with what they own has never been more outlandishly demonstrated than by the kind of thoughtless development that has gone on in downtown Castle Rock. It is an insult to all the long time residents who have been living in, and supporting Castle Rock for decades, never expecting government officials to flagrantly upend the historic continuity and aesthetics that have made this town unique.

It feels like this current immoderately sized project is being created, modified, and seamlessly ushered into town during the crisis and confusion of a public pandemic, when nearly everyone is spending their time and their energy worrying about how to stay alive, and not rigorously concerned about what's being built in their quaint downtown. Hearings began in March 2020, at the beginning of the pandemic, and are now wrapping up in the spring of 2021, as the pandemic is hopefully winding down.

I've heard that there is 'concern' that this development might be the best the town can negotiate for this property. What about the radical idea of not developing something 4 or more stories tall, that doesn't house hundreds of people in a small area, that doesn't inevitably increase traffic and congestion, and doesn't decrease the quality of life within the environs of a small downtown. When did the idea of oversized buildings become the 'Idol' that the town council and planners need to hang their hat on?

I am against the continued consideration by the town for developing the View.

It is an ungainly, despicably designed, cramped, and ill-conceived proposal for a small area in a small part of a small downtown. Every single aspect of its vision is overblown and misleading. Try to think of the future. Try to imagine what it will be like to have hundreds of people coming and going daily along that short segment of Jerry Street.

Over 400 hundred residents plus the incorporated retail and businesses will end up a logistical catastrophe and nightmare.

Why are you letting these Kansas City developers so blatantly hoodwink you and the planners and town manager into allowing this project to proceed?

Please open your eyes to the distress that your decisions are causing the community.

Regards,  
Shari Janger  
Castle Rock Heights

First Name\*

Shari

Last Name\*

Janger

Address1\*

[REDACTED]

City\*

Castle Rock

State\*

Co

Zip\*

80104

Do you wish to address Council on this item live during the online meeting?\*

- ☐ Yes  
☒ No  
☐ In-Person

If yes, visit <http://www.CRGov.com/CouncilMeeting> to get connected, and be prepared to speak during the virtual meeting. Please unmute your microphone when Mayor Gray calls your name (or phone-in callers press \*3).

What is your affiliation?\*

Check all that apply.

- ☒ Resident  
☐ Nonresident representing Castle Rock business  
☐ Nonresidents and businesses outside the Town of Castle Rock

**From:** cdf heikes [REDACTED]  
**Sent:** Tuesday, April 6, 2021 10:09 AM  
**To:** TownCouncil Mailbox  
**Cc:** Julie Kirkpatrick  
**Subject:** Downtown Castle Rock

April 6, 2021

To members of the Castle Rock Town Council:

It has been frustrating for me to listen to numerous Castle Rock Town Council members, Design Review Board members and downtown business owners continually defend construction of and fawn over the current and proposed massive, modern and multi-story buildings being added to our downtown. More people than you realize are not fans of this new look that is changing forever the face of our unique downtown, myself included. I hate what is being done to downtown Castle Rock.

Castle Rock "leaders" have missed several real opportunities to ensure that this new construction fits in with existing Castle Rock style, which has been spelled out more specifically in several of the town's own guidelines, including the Downtown Master Plan and Downtown Development Alliance documents. Shouldn't these guiding principles be followed and enforced as closely as all other regulations for new construction? Decisions could have been made by the Design Review Board to limit the massiveness or step back building heights during the design stage, and encourage architectural detail or additions that reflect a more historic look. Members of the Town Council could have and should have questioned some of these decisions before voting to approve these projects. Don't we want to respect the heritage of our town, and to keep the scope and appearance more in step with the character and charm of historic downtown Castle Rock?

More recently, I have heard again and again about how great the 6-story structure known as The View will be. When anyone speaks against the project, members of the Castle Rock Town Council and Design Review Board ask "would the people of Castle Rock rather have the horrible storage units there instead? Why are they against growth?" No one is saying we dispute the inevitable growth of our town. Instead, we ask why has there not been more effort made to do it in a reasonable, complementary manner? I think you are completely and purposely missing the point so that you won't have to respond to the real issue at hand. Many residents of Castle Rock and opponents of these high-rises lament that these out-of-place multi-level buildings are devoid of local character or historic architecture and have just been "plunked" into our formerly quaint downtown. Instead of having new development that fits in smoothly with the scale of existing buildings and our small-town atmosphere, these

structures stick out like sore thumbs, limit views of our most important landmark, the Castle Rock itself, and can basically be found in Anytown, USA.

A DRB member voiced concerns similar to mine at their March 10, 2021 meeting, regarding the mass and size of the View building. He wondered if they were allowed to bring up the 2008 Master Plan and asked if they could at least discuss it. He feared that this could end up leading to a precedent of a more urban look throughout the entire downtown region. Unfortunately, his lone voice was overshadowed by other clearly biased members who praised the look of the building and voted to move forward, saying it was “a great fit for our town.”

What did we expect? After all, the DRB had already approved The Riverwalk and Encore buildings. And add to that list the ultra-modern, not-in-the-least historical Wild Blue Yonder Brewing Company and the building on the corner of SE corner of 6<sup>th</sup> and Jerry – both will leave you scratching your head as to how they were approved given the Castle Rock design standards.

Failing to capture the uniqueness and respect the history of this former railroad stop, rhyolite quarry and rural farming community are grievous errors by those in charge. Remember years ago, when Castle Rock encouraged construction which captured the appropriate look, size and scale of historic structures, such as the clock tower/Siena building on the corner of 4<sup>th</sup> and Perry, or the downtown fire station? The parking garage with its historic façade, adjacent to the Phillip S. Miller building on 3<sup>rd</sup> Street and Jerry, is an excellent example of how to build something new while respecting the historic past. More recently, the Water Tower and Depot buildings between 5<sup>th</sup> and 6<sup>th</sup> Streets on Perry also give a nod to our town’s age and history. All of these buildings are great additions to our downtown, and their appearances and heights blend in well with what is here. When did we turn away from encouraging more appropriate architectural designs like this and decide that these big brick boxes, also known as Riverwalk and Encore, should become the norm?

At the most recent council meeting, the voices of the developers and downtown property owners seem to have been given the most weight. Is it coincidental that these same people who support the new super-sized buildings stand to benefit the most from their development? Council members Caryn Johnson, Laura Cavey, and Tim Dietz spoke of their constituents’ concerns at that meeting, just to be told that what happens in downtown should be decided only by those who live or own businesses there. Councilmember Cavey asked, “what of the other 70,000 residents of this town? People don’t like what is being done with the new building downtown.”

I agree with Ms. Cavey – please don’t treat us like we are ignorant or unimportant. The other 70,000 residents of this community should have a say. That includes the people of Crystal Valley, the Meadows, Cobblestone Ranch, Glovers, Founders, and all other areas of Castle Rock. A historic downtown area belongs to the people of the entire town. It is the heartbeat and soul of our city. Our downtown corridor is small, and in my view, sacred. Because Castle Rock has become such a large, spread-out city, surely there are other areas to place these large buildings

where they will not impact and overtake the specialness of our downtown. Many of us came here for the bygone charm and the small-town atmosphere of Castle Rock. Please don't continue to erase it with the addition of more oversized construction that could easily be built elsewhere.

It shouldn't matter if you have lived here three years, thirty years, or were born here. We all have a vested interest in the history and the future of our town, and support it with our activities, dollars and very presence – downtown businesses will not survive without us. Growth will continue, but we can be smarter about how we manage it. Ways to complement what is here without building overwhelming structures or ignoring chances to honor our past are always an option. Look at downtown Littleton, Arvada, or Golden – they are prime examples of smart, harmonizing growth that is respectful of history. It can be done.

I realize it is a bit late in the game to undo what has been done, but wiser decisions can be made to ensure our historic downtown will retain its historic charm – it will survive without all of the massive buildings. Going forward, both the Design Review Board and the Town of Castle Rock should certainly give a harder look at the aesthetics of any new construction proposed for our downtown corridor and follow their own directives with the downtown Master Plan in hand – because “these codes and guidelines provide advanced focus on architecture and design in the Downtown area.” (taken directly from the Spring 2021 Castle Rock ‘Outlook’ magazine mailed to residents of Castle Rock.)

Sadly, unless some changes are made, the majority of us will just have to live with the results of these decisions every time we walk through the sky-high, bland, brick tunnel that is becoming our downtown. Instead of being proud of the small-town charm and historic character Castle Rock once had, soon we may look at Castle Rock and no longer recognize it. Saddest of all is that someday we may not even be able to see our namesake, the Castle Rock, from these very downtown streets.

Cynthia Favero

Castle Rock

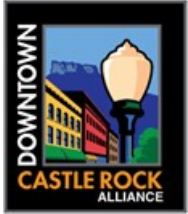
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**From:** Kevin Tilson <kevint@downtowncastlerock.com>  
**Sent:** Tuesday, April 6, 2021 10:02 AM  
**To:** TownCouncil Mailbox <towncouncil@crgov.com>  
**Cc:** Dave Corliss <DCorliss@crgov.com>  
**Subject:** Downtown Castle Rock

Town Council,

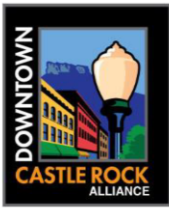
Please see the two attached letters from the members of the Downtown Merchants Association in support of a vibrant Downtown and The View project. Thank you for your continued partnership with the small businesses in Downtown Castle Rock and consideration of this project.

Best,  
Kevin



Kevin Tilson  
Director  
Castle Rock Downtown Alliance  
18 South Wilcox Street, Suite 202  
Castle Rock, Colorado 80104  
303.688.7488

*A partnership between the Downtown Development Authority and Downtown Merchants Association.*



## Castle Rock Downtown Alliance

*A partnership between the Downtown Development Authority and Downtown Merchants Association*

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Castle Rock Downtown Merchants Association  
18 S. Wilcox Street, Suite 202  
Castle Rock, CO 80104

April 6, 2021

Castle Rock Town Council  
100 Wilcox Street  
Castle Rock, CO 80104

Dear Castle Rock Town Council,

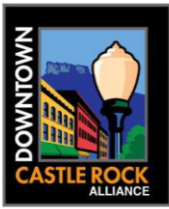
This letter represents the voice of Downtown Castle Rock business owners and is written to express our support of a vital and strong downtown community. We believe The View project embodies those goals.

We want to thank you and your predecessors for supporting the downtown district and helping transform it into a vibrant, thriving area that benefits everyone in Town. Over the last year, many of us have had our resilience tested proving to be one of our most difficult years ever. The majority of Downtown businesses are locally owned-and-operated, proudly serving as the bedrock of our community. While we welcome all who come Downtown, the addition of more people living and working here has increased foot traffic and that has been a great thing.

We recognize how important it is to maintain our character and preserve our historic buildings. Many of us operate our businesses in those cherished structures. However, we also acknowledge the danger of stagnation if we do not adapt and evolve. We support finding a balance between preserving our history while proactively attracting new energy and investment. To date, The Mercantile Commons, Riverwalk and Encore projects have transformed areas of the district that had begun to decay and deteriorate, revitalizing those areas and providing the district with much-needed shots in the arm. The View development will add to that successful mix.

It has been exciting to see the investments and customers from the larger projects mentioned above, attract new, smaller-scale investments in Downtown, including the following:

- RNK Running and Walking (new interior buildout)
- The Fort CPAs (façade renovation)
- Copperfalls (interior investment)
- Mountain Mod
- Sugar Spoon Candies
- House of Cards Sports TCG
- Mercantile by Farmgirl Foods
- Several food and beverage operations including The Cake Co. (new interior buildout, Provision (façade and new interior buildout), Ecclesia (exterior and interior buildout with seven new, small businesses), The Backyard, Wild Blue Yonder Brewery (two expansions in four years), Great Divide, The Office Restaurant, Glacier Ice Cream & Gelato, Tribe, and Perry Street Social District (recently announced)



## **Castle Rock Downtown Alliance**

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Like the other Downtown mixed-use developments, your approval of The View project will revitalize an area of downtown that is in need of investment. It will bring daytime and weekday customers while adding 100 much-needed public parking spaces to the district.

Please support The View at Castle Rock project.

Sincerely,

A handwritten signature in blue ink that reads "KC Neel".

KC Neel

President, Downtown Merchants Association





## Castle Rock Downtown Alliance

*A partnership between the Downtown Development Authority and Downtown Merchants Association*

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Castle Rock Downtown Merchants Association  
18 S. Wilcox Street, Suite 202  
Castle Rock, CO 80104

April 6, 2021

Castle Rock Town Council  
100 Wilcox Street  
Castle Rock, CO 80104

Castle Rock Town Council,

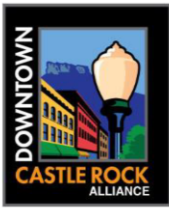
This letter is written to give the restaurant owners in Downtown Castle Rock a collective voice of support for a vibrant downtown, and for The View development project, which we believe will serve as an integral part of the district's long-term success.

As restaurateurs, our mission is to provide wonderful dining experiences to our customers as an expression of our love of food. Some of us have been in Castle Rock for decades while some of us are new to the district. Regardless of our tenure, we share the same passion for food and as we do for Castle Rock.

We can't begin to express our gratitude for the support of our Town, Town Council, Mayor Gray, county leaders, and the residents who have worked so hard over the last year to keep us going. The past year has been the most difficult of our careers. We appreciate everything you have done to help keep us afloat.

What you might not know is how important weekday foot traffic is to us. Weekend traffic is essential and although currently below pre-pandemic levels, remains relatively stable. But the weekday traffic, which has been historically weaker, has dropped even more precipitously since the pandemic began a year ago. Efforts to increase foot traffic have been helpful. But the biggest impact on our businesses has been the fact that more people than ever live and work in Downtown Castle Rock. In fact, were it not for the development of mixed-use projects in the last three years, many of us wouldn't be here today to sign this letter.

The history of Castle Rock is filled with an extensive list of great restaurants. From the stalwart histories of Castle Cafe, B&B Cafe, Angie's, Pegasus, and Union American Bistro to the transformations of the Old Stone Church now brought to life as Scileppi's and the old Journey Church into Ecclesia, our town is famous for its restaurants. We also believe we are an integral part of Castle Rock's future. Newer entrants including Great Divide, The Office Restaurant, Tribe, Wild Blue Yonder, and others add to our eclectic mix of epicurean and entertainment offerings. We want you to know that your efforts to revitalize Downtown Castle Rock have enticed people to live and work in the district. And that, in turn, has enabled us to fulfill our professional and creative passions as well as provide for our families.



## Castle Rock Downtown Alliance

*A partnership between the Downtown Development Authority and Downtown Merchants Association*

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We recognize that all downtowns require balance. That means following a plan that includes a mix of old and new buildings, projects and businesses. We cherish Castle Rock's old, historic buildings — many of us operate in one — but we also acknowledge Downtown must continue to evolve and adapt.

We believe The View project enriches that necessary equilibrium of new and old. The unique location of this development project will be home to daytime employees and residents. Moreover, the public parking component proposed in the agreement is a strong, strategic part of this plan that will provide much-needed parking on the northern end of Downtown. We hope you will support this project as much as we do.

Thank you for your consideration of this project.

Sincerely,

Z'Abbracci Pizza, Pasta & Tap House  
John Johnson

Wild Blue Yonder Brewing Company  
Andrew Wasson

Castle Café  
Dillon Walls

Great Divide Brewery and Roadhouse  
Dan Shipp

Angie's Restaurant  
Mike and April McCaffrey

Brit Stop Café  
Susan Egan

Yolanda's Tacos  
Matt Schroepfer

B&B Café  
Robert Shoen

Pegasus  
John DeLay

Romo's Tacos  
Jorge Romo

Ecclesia Market / Sinners & Saints  
Dave Schutte

Union American Bistro  
Kim Heideman

The Office Bar & Kitchen  
Miguel and Pablo Hernandez

The Backyard  
Matt Frary

Tribe at Riverwalk  
Vanessa Auclair

Scileppi's at the Old Stone Church  
Lou Scileppi

Perry Street Social District  
Byron Wheeler

Provision  
John Egbert and Sarah Miles

Robert Burley  
Garlic & Spice Kitchen

Granelli's Pizzeria  
Angie Trano Wurm

**From:** Larissa [REDACTED]  
**Date:** April 6, 2021 at 2:22:15 AM MDT  
**To:** Jason Gray <JGray@crgov.com>, Ryan Hollingshead <RHollingshead@crgov.com>, Laura Cavey <LCavey@crgov.com>, Kevin Bracken <KBracken@crgov.com>, Desiree LaFleur <DLaFleur@crgov.com>, Caryn Johnson <CJohnson@crgov.com>, Tim Dietz <TDietz@crgov.com>, TownCouncil Mailbox <towncouncil@crgov.com>  
**Cc:** Julie Kirkpatrick <JKirkpatrick@crgov.com>  
**Subject:** 6 Apr Town Council Mtg - The View

Town Council, Julie,  
Please find attached a petition and comments from residents on the View. Please include in the packets and public comments for tonight's Town Council meeting.  
Thank you!  
Larissa Sbarbori  
443-418-8021

Recipient: Castle Rock Town Council

Letter: Greetings,

Dear Castle Rock Town Council,

We, the Residents of Castle Rock, do not approve of the use of Town tax dollars to finance the downtown development project "The View." We demand the Castle Rock Town Council not approve the use of public funds to finance this project.

The following are reasons why we find this project inadequate to receive public financing:

- Realistically, provides inadequate parking for apartment complex in commuter community
- No plan for protecting public parking from being used by residences
- Public parking inadequate for needs of downtown
- Parking garage located in alleyway
- Minimal road improvements
- More congestion on Wilcox/Interstate access affecting current residents ability to commute
- Cost of long term traffic and water impacts falls on taxpayers
- Does not conform to Downtown Castle Rock Master Plan
- Does not fit in with size of surrounding buildings
- Incorporates little historic architecture
- Does not create distinct town identity
- Does not create small town charm
- Does not provide public land dedication

We, the people of Castle Rock, support smart and beneficial development and redevelopment of our Town. However, this project in its current state does not meet the standards needed to fit our Master Plan and make us a world class community. This project burdens taxpayers and creates more financial and infrastructure problems than it solves for our community. Thus, we require this project be revised and reimagined before it is financed by our Town.

# Comments

Name	Location	Date	Comment
Sandra StClair	Castle Rock, CO	2021-04-02	"Enough with the huge ugly buildings, enough with the parking and overpriced Apts. We don't need anymore retail, support the businesses we have downtown already!"
Hellen Swanson	Castle Rock, CO	2021-04-02	"This town is becoming overdeveloped with businesses and underdeveloped with reasonable housing! The people you want to work in these businesses cannot afford to live here! With no public transportation, this town is headed towards failure."
Susan Flesher	Castle Rock, CO	2021-04-02	"WHY are TAXPAYERS funding a private developer?????"
Jim Robinson	Castle Rock, US	2021-04-02	"Why did council approve this knowing it's against city plan? WE citizens should have a say where tax money is invested...my vote: HELL NO!"
Jonathan Umland	Castle Rock, CO	2021-04-02	"Another poorly thought out project. Reducing parking and increasing occupancy downtown at the tax payers expense."
Joseph Brock	Castle Rock, CO	2021-04-02	"I'm signing because you're destroying the face of castle rock!"
Charlene Evans	Castle Rock, CO	2021-04-03	"There's already too much development going on . Let's keep Castle Rock the town that it is. If I wanted to live in the BIG City I would of moved to New York! I pay a lot of taxes and I feel we should not fund a private developers project!!"
Donell Browning	Castle Rock, CO	2021-04-03	"Castle rock has always had a parking issue for the types of businesses that are on our main and side streets. The towns lack of planning is abundantly clear each and every time you go downtown. I do not want my tax dollars used to support any more development of the Castle Rock downtown area until our streets, our parking and our usage and impact of growth is dealt with, with the citizens and tax payer of this community in mind. We've been loyal, now it's time our town council shows us the same respect."
Catherine McMullin	Catle Rock, CO	2021-04-04	""Historic" my ass. I'm a native from Parker and moved to Castle Rock years ago because it was a wonderful, quite, and beautiful place. Now it's just minny Denver and we can't afford the amount of taxes and can't stand the traffic. Sad to say I'm leaving my native state. Thanks for also ruining all of the wild life's homes."
Tia Matheson	Castle Rock, CO	2021-04-04	"Jill Matheson"
Shirley Leensvaart	Castle Rock, CO	2021-04-05	"Agree with all of the above comments. Historic Castle Rock is being destroyed by buildings that do not conform with what had always been loved, becoming over-developed, and causing terrible traffic congestion."
Lynn Nord	Denver, CO	2021-04-05	"Let the town infrastructure catch up to our population first."

Recipient: Castle Rock Town Council

Letter: Greetings,

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- Does not fit in with size of surrounding buildings
- Incorporates little historic architecture
- Does not create distinct town identity
- Does not create small town charm
- Does not provide public land dedication

We, the people of Castle Rock, support smart and beneficial development and redevelopment of our Town. However, this project in its current state does not meet the standards needed to fit our Master Plan and make us a world class community. This project burdens taxpayers and creates more financial and infrastructure problems than it solves for our community. Thus, we require this project be revised and reimagined before it is financed by our Town.

# Signatures

Name	Location	Date
Larissa Sbarbori	US	2021-04-02
Kelly Miller	Castle Rock, CO	2021-04-02
Dennis Blanchard	Castle Rock, CO	2021-04-02
Dawn Ivis	Castle Rock, CO	2021-04-02
Victor Maldonado	Castle Rock, CO	2021-04-02
Ismael Hernandez	Castle Rock, CO	2021-04-02
Carolyn Cline	Castle Rock, CO	2021-04-02
Debbie Iepson	Castle Rock, CO	2021-04-02
Sandra StClair	Castle Rock, CO	2021-04-02
Reese Iepson	Castle Rock, CO	2021-04-02
Noelle Schettler	Castle Rock, CO	2021-04-02
Elizabeth Spring	Castle Rock, CO	2021-04-02
Andrew Schettler	Castle Rock, CO	2021-04-02
Kyle Iepson	Castle rock, CO	2021-04-02
Thomas Hermes	Castle rock, CO	2021-04-02
James Weckbaugh	Castle Rock, CO	2021-04-02
Christine Grimes	Aurora, CO	2021-04-02
Melodie Knotts	Castle Rock, CO	2021-04-02
William Larsen	Castle Rock, CO	2021-04-02
Ree Thompson	Castle Rock, CO	2021-04-02

Name	Location	Date
Lydia Goodland	Denver, CO	2021-04-02
Katie Wamsley-Yavuz	Castle Rock, CO	2021-04-02
LEE HIGH	Castle Rock, CO	2021-04-02
Darcie Hartman	Denver, CO	2021-04-02
Sarah Clark	Castle Rock, CO	2021-04-02
Staci Kelemen	CASTLE ROCK, CO	2021-04-02
Chris Milne	Castle Rock, CO	2021-04-02
Hellen Swanson	Castle Rock, CO	2021-04-02
Mark Turnet	Castle Rock, CO	2021-04-02
Anne Elwell	Castle Rock, CO	2021-04-02
Christine Melton	Castle Rock, CO	2021-04-02
Gina Miller	Castle Rock, CO	2021-04-02
Jennifer Church	Los Angeles, CA	2021-04-02
Kris Trierweiler	Castle Rock, CO	2021-04-02
Julie Wood	Castle Rock, CO	2021-04-02
Esther Wilkinson	Castle Rock, CO	2021-04-02
Cheryl Stacy	Castle Rock, CO	2021-04-02
George Rabatin	Castle Rock, CO	2021-04-02
Abbie Zanetell	Castle Rock, CO	2021-04-02
Susan Flesher	Castle Rock, CO	2021-04-02
Jim Robinson	Castle Rock, CO	2021-04-02
Jon Hewitt	Castle Rock, CO	2021-04-02



Name	Location	Date
Danette Fossceco	Castle Rock, CO	2021-04-02
Barbara Brown	Castle Rock, CO	2021-04-02
John Shipley	Castle Rock, CO	2021-04-02
Debra Josephs	Denver, CO	2021-04-02
Barbara Hannington	Castle Rock, CO	2021-04-02
Joseph Robinson	Castle Rock, CO	2021-04-02
Rachel Vilt	Castle Rock, CO	2021-04-02
Beth McCarley	CASTLE ROCK, CO	2021-04-02
Dona Lente-Watts	Denver, CO	2021-04-02
Nancy Berk	Castle Rock, CO	2021-04-02
Melanie Griffin	Castle Rock, CO	2021-04-02
Becki Umland	Castle Rock, CO	2021-04-02
Qais Rahmani	Sacramento, US	2021-04-02
Carol Johnson	Denver, CO	2021-04-02
Jonathan Umland	Castle Rock, CO	2021-04-02
Sam Garabrandt	Castle Rock, CO	2021-04-02
Jeanette McAllister	Castle Rock, CO	2021-04-02
Lucy Gamboa	Castle Rock, CO	2021-04-02
Kathryn Armstrong	Castle Rock, CO	2021-04-02
Kathleen Morrison	Castle Rock, CO	2021-04-02
David Clark	Castle Rock, CO	2021-04-02
Ricky Cortes	Castle Rock, CO	2021-04-02

Name	Location	Date
Chelsea Smith	Castle Rock, CO	2021-04-02
Amanda Gilbert-Levenson	Castle Rock, CO	2021-04-02
Jennifer Hunsinger	Castle Rock, CO	2021-04-02
Dusti Stanton	Castle Rock, CO	2021-04-02
Karen Engebretson	Castle Rock, CO	2021-04-02
Alicia Wantuch	Castle Rock, CO	2021-04-02
Linda Angus	Castle Rock, CO	2021-04-02
Brittany Harker	Castle Rock, CO	2021-04-02
Jennifer Kajander	Castle Rock, CO	2021-04-02
Sarah Brock	Englewood, CO	2021-04-02
Sarah Faaborg	Castle Rock, CO	2021-04-02
Shari Janger	Castle Rock, CO	2021-04-02
Heather Nelson	Castle rock, CO	2021-04-02
Joseph Brock	Castle Rock, CO	2021-04-02
Curt Miller	Castle Rock, CO	2021-04-02
Ian Clark	Castle Rock, CO	2021-04-02
Margaret Hupp	Castle Rock, CO	2021-04-02
Mike Rector	Denver, CO	2021-04-02
Juli Watkins	Castle Rock, CO	2021-04-02
Jayden Johnson	Killeen, US	2021-04-03
Dawne Hirsbrunner	Castle Rock, CO	2021-04-03
Caroline Schkade	Castle Rock, CO	2021-04-03

Name	Location	Date
Debra Olschansky	Castle Rock, CO	2021-04-03
Cathy Brady	Denver, CO	2021-04-03
Sharon Dishuck	Castle Rock, CO	2021-04-03
Natalie Murray	Castle Rock, CO	2021-04-03
Kim Byrne	Castle Rock, CO	2021-04-03
Della Ingrando	Castle Rock, CO	2021-04-03
Jude Guerrier	Pompano Beach, US	2021-04-03
Charles Baratta	Castle Rock, CO	2021-04-03
Adam Lewis	Castle Rock, CO	2021-04-03
Byron Gross	Farmington, US	2021-04-03
Dena Whited	Castle rock, CO	2021-04-03
Brad Redfern	Castle Rock, CO	2021-04-03
Zoe Gibbs	Denver, CO	2021-04-03
Melvin Jackfet	Castle Rock, CO	2021-04-03
Jerry Fawns	Castle Rock, CO	2021-04-03
Bill Jancouskas	Castle Rock, CO	2021-04-03
Vanessa LeVan	Castle Rock, CO	2021-04-03
Tamara Honegger	Castle Rock, CO	2021-04-03
Rick Podorski	Castle Rock, CO	2021-04-03
Paul Tharp	Castle Rock, CO	2021-04-03
Mary Tyra	Castle Rock, CO	2021-04-03
Nate Christiansen	Castle Rock, CO	2021-04-03

Name	Location	Date
Robert Dichard	Castle Rock, CO	2021-04-03
Deb Martin	Castle Rock, CO	2021-04-03
Agata Hardin	Castle Rock, CO	2021-04-03
John Baldyga	Castle Rock, CO	2021-04-03
Matthew Snow	Castle Rock, CO	2021-04-03
Charlie Patin	Castle Rock, CO	2021-04-03
Erin Schaper	Castle Rock, CO	2021-04-03
Joseph Partoll	Castle Rock, CO	2021-04-03
Vasiliki Bieber	Castle Rock, CO	2021-04-03
Karen Baker	Castle Rock, CO	2021-04-03
Jason Hohler	Castle Rock, CO	2021-04-03
Mike Everhart	Glenrock, US	2021-04-03
Jillian Steyne	Hitchin, UK	2021-04-03
Ellen Bearly	Castle Rock, CO	2021-04-03
David Heller	Castle Rock, CO	2021-04-03
Alex Heller	Castle Rock, CO	2021-04-03
Chuck Medema	Denver, CO	2021-04-03
Kathleen Miller	Castle Rock, CO	2021-04-03
Sandy Schenecker	Castle rock, CO	2021-04-03
Leslie Siefers	Castle Rock, CO	2021-04-03
Aron Hajde	Castle Rock, CO	2021-04-03
Sabrina DeRamus	Castle Rock, CO	2021-04-03

Name	Location	Date
Kevin Bearly	Castle Rock, CO	2021-04-03
Acacia Langmade	Minneapolis, US	2021-04-03
Alexandra Frierhood	Castle Rock, CO	2021-04-03
James Duffy	Castle Rock, CO	2021-04-03
Charlene Evans	Castle Rock, CO	2021-04-03
Gregory Evans	Castle Rock, CO	2021-04-03
Kathy Mcqueary	Castle Rock, CO	2021-04-03
Sarah Goedecke	Castle Rock, CO	2021-04-03
Mike Bennett	Castle Rock, CO	2021-04-03
Donell Browning	Castle Rock, CO	2021-04-03
Paul Phipps	Castle Rock, CO	2021-04-03
Marge Lamoreaux	Denver, CO	2021-04-03
Amanda Duncan	Colorado springs, CO	2021-04-03
Jodi Hodge	Castle Rock, CO	2021-04-04
Elisabeth Dwiningsih	Longmont, US	2021-04-04
Jennifer Cancino	Castle Rock, CO	2021-04-04
CJ B	Castle Rock, CO	2021-04-04
Patricia Kakenmaster	Castle Rock, CO	2021-04-04
Randi Gauthreaux	Castle Rock, CO	2021-04-04
Laura Zumwalt	Castle Rock, CO	2021-04-04
Sara Gonzalez	Castle Rock, CO	2021-04-04
Catherine McMullin	Catle Rock, CO	2021-04-04

Name	Location	Date
Christopher Fisher	Castle Rock, CO	2021-04-04
Jennifer Boatner	Castle Rock, CO	2021-04-04
Richard High	Castle Rock, CO	2021-04-04
Randall Miller	Castle Rock, CO	2021-04-04
Jerry & Patty Croft	Castle Rock, CO	2021-04-04
George Tocquigny	Denver, CO	2021-04-04
Ivonne Acevedo	Denver, CO	2021-04-04
Margaret Brost	Larkspur, CO	2021-04-04
James Maple	Castle Rock, CO	2021-04-04
Barbara Rohrich	Denver, CO	2021-04-04
Tia Matheson	Castle Rock, CO	2021-04-04
Dawn DeSchamp	Castle Rock, CO	2021-04-04
Laura Donovan	Castle Rock, CO	2021-04-04
Erin Ahrens	Aurora, CO	2021-04-04
Eileen Woodzell	Castle Rock, CO	2021-04-04
Steven Goedecke	Miramar Beach, FL	2021-04-04
David Kovacs	Highlands Ranch, CO	2021-04-04
Heidi Cook	Castle Rock, CO	2021-04-04
Kerri Goodrich	Castle Rock, CO	2021-04-04
Sheila Castillo	Castle Rock, CO	2021-04-04
Hannah McDowell	Castle Rock, CO	2021-04-04
Jessica Platz	Castle Rock, CO	2021-04-04

Name	Location	Date
Ada Gomez	Castle Rock, CO	2021-04-04
Erik Lagerlof	Castle Rock, CO	2021-04-04
Steve Thompson	Castle Rock, CO	2021-04-04
Adrienne Doubrava	Albuquerque, NM	2021-04-04
Tom Anderson	Castle Rock, CO	2021-04-04
Mike Aguilar	Castle Rock, CO	2021-04-04
Ali Treadway	Castle Rock, CO	2021-04-04
Daniel McGuire	Castle Rock, CO	2021-04-04
Charles Hylan	Castle Rock, CO	2021-04-04
Rob Chambers	Castle Rock, CO	2021-04-04
Danielle Garbo	Castle Rock, CO	2021-04-04
Kelly Nesbit	Parker, CO	2021-04-04
Erica Breitenstein	Castle Rock, CO	2021-04-04
Kathy Blea	Castle Rock, CO	2021-04-04
Kathleen Speicher	Denver, CO	2021-04-04
Tanya Hodder	Castle Rock, CO	2021-04-04
Alex Guillen	Texas, US	2021-04-04
Norman Baker	Los Angeles, US	2021-04-04
INGRID WARD	castle rock, CO	2021-04-04
Al Paulsen	Castle Rock, CO	2021-04-04
Ray Woodzell	Castle Rock, CO	2021-04-04
Joanne Underwood	Castle Rock, CO	2021-04-04

Name	Location	Date
Sherri Budge	Denver, CO	2021-04-04
Roberta Krull	Castle Rock, CO	2021-04-04
David Klaff	Denver, CO	2021-04-04
Mike oneill	Littleton, CO	2021-04-04
Vivian Jones	Castle Rock, CO	2021-04-04
Eric Allen	Castle Rock, CO	2021-04-04
Rebecca Jorenby	Castle Rock, CO	2021-04-04
Steve Pospisil	Castle Rock, CO	2021-04-04
Brad Schneider	Castle Rock, CO	2021-04-04
Jody Murphy	Denver, CO	2021-04-04
Ira Simon	Castle Rock, CO	2021-04-04
Alicia Boykin	Castle Rock, CO	2021-04-04
Jesse S	Castle Rock, CO	2021-04-04
Lisa Strand	Carbondale, CO	2021-04-04
Janey Blakely	Riverdale, US	2021-04-04
Paula Bray	Castle Rock, CO	2021-04-04
Bryan Mannlein	Castle Rock, CO	2021-04-04
Robert Adamson	Castle Rock, CO	2021-04-05
Traci Hawkins	Castle Rock, CO	2021-04-05
Jean Hallmark	Castle Rock, CO	2021-04-05
Dawn Bigford	Denver, CO	2021-04-05
Sandra Rognerud	Castle Rock, CO	2021-04-05



Name	Location	Date
Nicole Kline	Castle Rock, CO	2021-04-05
Shirley Leensvaart	Castle Rock, CO	2021-04-05
Daymen Rycroft	Castle Rock, CO	2021-04-05
Anna Ching	Arcadia, US	2021-04-05
Joni Fell	Commerce City, CO	2021-04-05
Anne McKeehan	Castle Rock, CO	2021-04-05
Ruby Martinez	Denver, CO	2021-04-05
Carolyn Haught	Castle Rock, CO	2021-04-05
Richard Fell	Commerce City, CO	2021-04-05
Loni Snell	Sedalia, CO	2021-04-05
Allison Minnick	Castle Rock, CO	2021-04-05
Susan Ridosko	Castle Rock, CO	2021-04-05
april brown	Dixie, US	2021-04-05
Nadine Shriver	Sedalia, CO	2021-04-05
Linda Carrico	Castle Rock, CO	2021-04-05
Jamie White	Castle pines, CO	2021-04-05
Steffani Montgomery	Castle Rock, CO	2021-04-05
Rita Maczka	Castle Rock, CO	2021-04-05
Jeri Brown	Castle Rock, CO	2021-04-05
Jose Mendez	Castle Rock, CO	2021-04-05
Lynn Nord	Denver, CO	2021-04-05
Robb Barban	Littleton, CO	2021-04-05

Name	Location	Date
Kim Heberlein	Castle Rock, CO	2021-04-05
richard harding	Castle Rock, CO	2021-04-05
David Patterson	Castle Rock, CO	2021-04-05
Nick Walker	Castle Rock, CO	2021-04-05
Tamara Voshchullo	Castle Rock, CO	2021-04-05
Richard Eddy	Castle Rock, CO	2021-04-05
Dave Gonzalez	Castle Rock, CO	2021-04-05
John Brown	Castle Rock, CO	2021-04-05
B R	Castle Rock, CO	2021-04-05
Cathy Rogers	Castle Rock, CO	2021-04-05
Brenda Beatty	Sedalia, CO	2021-04-05
LeAnna Gonzales	Castle Rock, CO	2021-04-05
Mindy Jordan	Castle Rock, CO	2021-04-05
Carolyn Kalbaugh	Denver, CO	2021-04-05
Norman Snell	Sedalia, CO	2021-04-05
Judith Houser	Castle Rock, CO	2021-04-05
BARBARA BACH	Castle Rock, CO	2021-04-05
Marlene Ledoux	Castle Rock, CO	2021-04-05
Adolfo Jimenez	Bronx, US	2021-04-05
Valerie Bentien	Castle Rock, CO	2021-04-05
Rebecca Holm	Denver, CO	2021-04-05
Lori Waldrip	Castle Rock, CO	2021-04-05

Name	Location	Date
Danielle Shriver	Parker, CO	2021-04-05
Kim Bauer	Castle Rock, CO	2021-04-05
Lexi Shriver	Castle Rock, CO	2021-04-05
Heather Minke	Castle Rock, CO	2021-04-05
Cindy Klepper	Castle Rock, CO	2021-04-05
Aspen Rasmussen	Fountain, CO	2021-04-05
Kimberley Blagg	Castle Rock, CO	2021-04-05
Mark Knutson	Denver, CO	2021-04-05
Bryan Scott	Castle Rock, CO	2021-04-05
Brent Zimmerman	Castle Rock, CO	2021-04-05
Theresa Metts	Castle Rock, CO	2021-04-05
Skylar Roberts	Castle Rock, CO	2021-04-05
janet bartlett	Denver, CO	2021-04-05
Michael Friedmann	Bronx, US	2021-04-06
Candace Rawson	Castle Rock, CO	2021-04-06
Jennifer Yarborough	Castle Rock, CO	2021-04-06
Kim Gauthier	Castle Rock, CO	2021-04-06
Lori Levigne	Dallas, TX	2021-04-06
NICK COTHRAN	Denver, CO	2021-04-06
Jackson Klenzman	Saint Marys, GA	2021-04-06
Shirley Sattler	Castle Rock, CO	2021-04-06
Jeff Vedovelli	Castle Rock, CO	2021-04-06

Name	Location	Date
Donna Burdick	Castle Rock, CO	2021-04-06
Marlene Lammers	Castle Rock, CO	2021-04-06
Baruchai Mosheyev	Queens, US	2021-04-06
Abba Hatcher	South Fork, US	2021-04-06
Chris Allan	Castle Rock, CO	2021-04-06
Molly Rowells	Castle Rock, CO	2021-04-06
Amber Hall	US	2021-04-06
Doug Fell	Seattle, CO	2021-04-06

**From:** DJ TEDESCO [REDACTED]  
**Sent:** Monday, April 5, 2021 1:43 PM  
**To:** TownCouncil Mailbox  
**Subject:** The View Redevelopment Project

Dear Mayor Gray and Castle Rock Town Council Members,

The purpose of my letter is to inform you of my and request your support for The View Project located at 610 Jerry Street, Castle Rock, Colorado 80104. As you know, the redevelopment project will include construction of a building containing 218 for-rent residential units, 14,500 and 5,000 square feet, respectively, of office and retail space, and 400 parking spaces. Of the 400 parking spaces, the project provides for the Town of Castle Rock to own 100 spaces.

Some background information about myself, I have worked in downtown Castle Rock for 23 years at the same location, 501 Wilcox Street. Additionally, my family and I have been residents of Castle Rock for 19 years, all of that time at 1787 Peninsula Circle, which is located in District 6. My wife and I consider ourselves very fortunate to have raised three children in such a wonderful community.

For much of the time that I have worked and lived in Castle Rock, redevelopment activity in downtown Castle Rock was minimal. However, and within the last five to ten years, downtown redevelopment funded by private and public investment has improved Castle Rock's downtown significantly. Such projects include The Mercantile mixed-use building, The Move office building, Wild Blue Yonder Brewing Company bar and restaurant, Ecclesia bar, restaurant, and retail complex, SRP Dental Building, Riverwalk and Encore mixed-use buildings, and Festival Park. Given the success of these projects, continued redevelopment of Castle Rock's downtown should be embraced. The View project offers the Town of Castle Rock an exceptional redevelopment opportunity. Listed below are a few of the reasons why I support The View project:

- The proposed building is an ideal economic use for the property located at 6<sup>th</sup> and Jerry Street and is a significant improvement to the structures currently situated on the property
- Individuals and their families, who will reside at The View, will support businesses and restaurants located in downtown Castle Rock. Additionally, these residents will also purchase other goods and services from businesses located in Castle Rock, but not in downtown Castle Rock
- Adds 14,000 square feet of office space, which is needed in Castle Rock and will be leased to businesses that will employ residents of Castle Rock. These employees will also patronize businesses and restaurants located in and out of downtown Castle Rock
- Includes restaurant space located at the north end of the downtown area, giving Castle Rock residents and guests even more dining alternatives
- Together with the Town of Castle Rock, adds 100 public parking spaces that will be owned by the Town of Castle Rock and be available to Castle Rock residents and guests visiting the downtown area during the evening on weekdays and all day on weekends and holidays. This is a strategic for the Town as this location is one of a few potential locations suited for a large parking garage located on the north end of downtown Castle Rock
- The Town of Castle Rock and Douglas County will benefit from increased sale and property tax receipts compared to amounts derived from the property given its current use
- Approval of The View Project will encourage future investment in redevelopment projects located in Castle Rock

Most of the reasons noted above are economic in nature and, as such, support the success and viability of businesses located in Castle Rock ***and*** our town government's ability to maintain exceptional public safety services, roads, and parks and recreational facilities. More importantly, however, downtown Castle Rock is more inviting to and safer for residents, families, and guests given recent redevelopment. I believe the same will be offered by The View project.

Thank you for your consideration of my comments and please contact me if you have any questions related to the contents of this letter. In closing, I request of you to vote in support of The View redevelopment project at your upcoming meetings.

Respectfully,

D. J. Tedesco

**From:** Byron Wheeler [REDACTED]  
**Sent:** Saturday, April 3, 2021 4:52 PM  
**To:** TownCouncil Mailbox  
**Subject:** My thoughts on the View Development

**Categories:** AGENDA

Leaders,

First, my sincere thank you for selflessly serving our community the way you do.

My name is Byron Wheeler. I'm a resident in District 1, and I own a handful of businesses in Castle Rock from restaurants and food trucks to development companies. As some of you know, two weeks ago I closed on the property on 4th and Perry Street, with the goal of eventually opening some start up restaurant concepts on the property, while continuing to offer ice skating to the community during the winter months. While my redevelopment will not include massive site overhauls such as the View, I wanted to share with you my support for the View, and for similar redevelopment opportunities in our downtown:

A huge part of why I invested the money I did into my property is in hopes that the downtown population would grow. Thriving downtowns always have a daytime population that shops, eats, and supports local downtown businesses. The View will add to that daytime population, and all downtown businesses will benefit from it.

Parking is obviously a huge opportunity our downtown faces. Projects like the View not only provide parking for their own residents and users, but provide additional parking to alleviate congestion for the rest of downtown.

I love the charm and history in our down town. My upcoming project actually pays homage to three different aspects of our town's history, but that's a different meeting at a different time. I do NOT want to see my beloved downtown turn into a skyline full of multistory buildings, but having targeted redevelopment in specific locations in downtown is great for our community, and great for our existing historical buildings and businesses. The View is the ideal location for 6 story mixed use project given the topography and surrounding buildings at 6th and Jerry Street.

I'm proud of how far our down town area has come in the 8 years I've lived here. The mixed development of new buildings like the Great Divide building next to redevelopments of businesses like Provisions and the Backyard make our downtown diverse, thriving, and healthy. I can't wait to be a part of and see the growth and excitement of the northern part of our downtown redevelopment, anchored by great projects like the View.

Thank you for your time and your service.

Byron Wheeler  
[REDACTED]  
[REDACTED]

**From:** Gregory Evans [REDACTED]  
**Sent:** Saturday, April 3, 2021 3:33 PM  
**To:** TownCouncil Mailbox  
**Subject:** I find there is Absolutely no reason taxpayer dollars should be used to help fund a private development of any kind. I don't know what you guys are thinking but then again I don't have much faith in politicians and there Ability to think beyond their o...

Thank you,

Greg K. Evans



**From:** Sean Hakes [REDACTED]  
**Sent:** Friday, April 2, 2021 3:49 PM  
**To:** TownCouncil Mailbox <towncouncil@crgov.com>  
**Subject:** re: Downtown Development Projects

Castle Rock Town Councilmembers,

I'd like to take this opportunity to express my support for the development efforts in Downtown Castle Rock. I am so excited with the direction of downtown that I decided to invest a significant amount of my personal savings in Downtown Castle Rock on the Perry Street Social project located at 4th and Perry Street.

Riverwalk turned out better than I could ever have imagined. I really like the look of the Encore project and I'm excited to see what's next with The View.

I grew up in the area and officially moved to Castle Rock in 2012. Back then, there wasn't much going on. Today, Castle Rock is a thriving town full of amazing restaurants, pubs, shops, parks, and things to do for the entire family.

I'd like to extend my personal thanks to all past and current councilmembers who support what I consider is smart & healthy growth that is happening in Downtown Castle Rock. It's truly an exciting time for Castle Rock!

Thank you for your time.

Warm regards,

**Sean Hakes | CRCO**

[REDACTED]  
w. [castlerockco.com](http://castlerockco.com)

-----Original Message-----

From: Chris Demarest [REDACTED]  
Sent: Friday, April 2, 2021 9:11 AM  
To: TownCouncil Mailbox <towncouncil@crgov.com>  
Subject: Downtown growth

Council,

Re the 25 March article in the CR News-Press concerning downtown growth. We're not fools, Gray/Bracken/Hollingsworth. It's not just "some differences". There is a reason to change it, because it's broken. The DRB is in fact self-serving and needs to be reined in. It's clearly a conflict of interest. They're mostly business owners. The powers they have should be remanded back to Council. I know of no other community in Colorado that has delegated this type of authority to an entity such as this. Most of you are beholden to the business community, because this is Douglas County after all. All you care about, Gray, is downtown growth, since you're a business owner.

I recently attended an online mtg concerning the View. It was clear that the DRB is going full-speed ahead without any consideration for the detrimental effects, including traffic congestion. The traffic study that was done by town staff essentially said "no problem". It was clearly pencil-whipped to appease the DRB and the developers.

As an aside, how interesting it is that BOCC complains about unelected officials at TCHD making unpopular decisions related to COVID, yet Council is ok with the unelected DRB making decisions that affect the whole city, which is what we are now. Don't fool yourselves and think we're still this quaint little town. That notion was destroyed years ago by greedy developers. It's funny, one of the View developers corrected himself on the call about referring to CR as a city instead of a town. They know what reality is, but they have to appease people.

CR gov't is all about growth at any cost. You ignore what the community has been saying in survey after survey about out of control growth, congestion, traffic and loss of what many of us moved here for. The argument that communities have to continue to grow or they die is specious. I certainly don't expect Castle Rock, or any community, to be static, but I didn't expect what it has turned into when I moved here 20+ years ago. I'm fine with downtown growth such as Festival Park and how Perry St has evolved. I'm also fine with how parts of Wilcox are changing. What I'm not fine with is Riverwalk and Encore. It's an eyesore and it's creating a concrete jungle.

I loved seeing Hickenlooper and AOC tell Amazon to go pound sand and build HQ2 elsewhere. We need to stand-up to detrimental development. We need more government oversight, not less. We need to keep self-serving interests in-check.

So, you can have your ugly ginormous bldgs, which block views and don't fit into the character of the city. I won't patronize any of these establishments, just like the Promenade and everything else I disagree with, and I will encourage others to do the same.

Chris



# CASTLE ROCK

## CHAMBER OF COMMERCE

March 12, 2021

Mayor Gray & Town Council members  
Town of Castle Rock  
100 N. Wilcox Street  
Castle Rock CO 80104

Re: Support for Downtown Development and The View project

The Castle Rock Chamber of Commerce is a business organization whose focus is to be a:

- Catalyst for Business Growth
- Convener of Leaders & Influencers
- Champion for a Stronger Community

As an advocate for businesses throughout our community, we believe in a strong and vibrant downtown to be essential for our local economy to continue to flourish. Chamber business leaders were an active participant many years ago in research and support in the creation of the Downtown Development Authority (DDA). We believed the strategic path was to create excitement and activity in our downtown with residential living as well as retail and office which would be essential to our economic vibrancy into the future.

The Chamber believes that the multi-use development projects of the Riverwalk, Encore and the newly proposed The View are the type of quality ventures most communities would wish to have come to their downtowns. The View project will give the opportunity for the northern portion of downtown to begin revitalization and assist in future projects being developed outside of the downtown core.

We also believe history needs to be protected in the downtown and Craig & Gould areas, as the Chamber has owned the property of one of the oldest historically designated buildings in Castle Rock since 1992, the Victoria House & Carriage House (est. 1889) and deem such buildings should be preserved. However, the three above mentioned buildings were not significant, and their appearance was dilapidated and, in our opinion, should be redeveloped.

Thank you for your consideration. We appreciate your leadership through the last year in unprecedented times for our community, and we would encourage your vote in favor of The View multi-use project.

Sincerely,

Pam Ridler, CCE  
President/CEO



From: [Begley, Jeremy J.](#)  
To: [Keith Johnston](#); [Tara Vargish](#); [Julie Kirkpatrick](#); [Dave Corliss](#)  
Cc: [Design Review Board](#); [TownCouncil Mailbox](#)  
Subject: RE: The View - Traffic Study  
Date: Monday, March 15, 2021 2:09:38 AM  
Attachments: [The View-SDP20-0038-TIA.pdf](#)  
[2040 AssignedVolumes RTP-2018.pdf](#)

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Hello Mr. Johnston and Town Staff,

Thank you for reaching out to me regarding my questions from the DRB meeting on March 10<sup>th</sup>. I have compiled several of my questions, mostly regarding traffic and some regarding parking. I appreciate your taking the time to look into these. I apologize about the delay, but it has been an extremely busy week/weekend. Questions are **bolded**. The additional information is the reasoning/supporting information for my questions. I did include some of my professional (and unprofessional) opinions on the matters. I have attached the LSC Traffic Consultants, Inc. traffic study dated February 17, 2021 to this email.

- **Growth Rate**
  - **Why is the background growth rate so low at 0.5%?**
    - Typically 0.5% is used as a minimum acceptable value for determining the forecast traffic
    - Usually considered reasonable for built-out areas
    - I believe this should be a higher value considering the Downtown overlay allowing 6 story buildings in north and south downtown (with the potential of a variance to a maximum height of 8 stories).
    - Considering the amount of interest in the last few years in multi-use developments, we are very likely to see more of this trend in the near and far future.
      - Even public comment during this past meeting shows the interest in property owners considering the possibility of multi-story developments (See DRB packet on The View – Mr. Ogden)
    - I would like to see an appropriate larger background growth rate used in developments that accounts for additional traffic due to the current and future larger multi-use projects. With so much recent development in an area not originally zoned or planned for this, I don't believe 0.5% reasonably accounts for the growth rate. I would assume somewhere around 1.0-1.5% would be more appropriate.
  - **Was this background applied uniformly? Was nonlinear or linear growth applied?**
    - The background traffic growth from 2023 to 2040 do not appear to be applied uniformly after reviewing some of the movements.
    - **If nonlinear growth rate was applied as the numbers seem to indicate, this assumption should be stated in the LSC traffic study and reference the source(s) to validate the assumption. Maybe I missed it in the report, but I want to confirm.**
- **Wilcox Street & Alternative Routes**
  - 2017 Transportation Master Plan (TMP) shows Wilcox (specifically north of 5<sup>th</sup> Street) is "slightly overcapacity" with an average daily traffic (ADT) count of 18,400. This was prior to any major residential development in the Downtown area.
  - Per the 2008 Downtown Castle Rock Master Plan (2008 DCRMP, Page 6), it states that traffic and parking will "respect the constraints of future traffic, offering build-out scenarios that will not overwhelm and burden the area with congestion". **How does this development accomplish this strategy and objective considering the size and number of people and associated traffic volume it will bring to a street already considered slightly overcapacity and cannot be widened due to constraints of historic nature and existing infrastructure/structures?**
  - **How is this DCRMP strategy and objective implemented for the multi-use residential/business overlay throughout the regions in north and south Downtown?**
  - **Is there a new strategy differing from this 2008 plan? If there is a new strategy, what is the new plan for Wilcox at final build-out according to the Downtown overlay?**
    - **I am concerned if a new strategy is implemented that makes Wilcox a heavily congested and fairly inaccessible route for those living within District 4 and the areas east of Founders/Ridge from Fifth Street, what will be the new/alternative major arterial roadway for these residents to use?**
      - Founders, Plum Creek/Ridge, and Plum Creek/Gilbert will likely become the new potential alternatives as Wilcox exceeds capacity further. Founders is already near capacity as of 2017 and the intersection at Founders/Allen is one of the worst intersections in Castle Rock. Adding additional traffic to this area will be problematic. I know many of these areas are in the plan to be widened, but these major arterials now become of even higher priority if the Wilcox arterial becomes congested.
  - **Just as a note of interest:** I noticed that the projections per Dr. COG show the 2040 ADT forecast levels at approximately 16,000, which interestingly enough is ~2400 average vehicles a day less than the 2017 traffic count data shows. (Attached 2040 Assigned Volumes PDF for your records)
- **Traffic Counts**
  - **Why was 2018 traffic data used?**
    - LSC Traffic Study counts were based on 2018 traffic data provided by Town Staff and grown at an annual rate of 0.5%. I also read that these values were supplemented with true traffic counts taken during 2020 (COVID pandemic with lower traffic volumes) and were attempted to be adjusted/balanced appropriately for peak-hour volumes within the area of study.
    - **Does this account for Riverwalk and Encore developments at full capacity? 2018 data was prior to Riverwalk, and Encore is still currently being constructed and should be completed this year.**
      - This study should have these developments taken into account at full capacity to provide a reasonable estimate.

- Pandemic counts are not an accurate reflection either.
- As mentioned previously, the 0.5% growth rate seems low to pro-rate the 2018 traffic data
- **Does this traffic count account for an assumption of the vast majority of north and south downtown being developed to multi-use residential/commercial buildings (6 or more stories) per the Downtown Overlay District?**
  - I believe these assumptions should be used for traffic studies extending out to 2040. Again, I strongly believe the 0.5% growth rate is too low to account for this extensive of development within Downtown Castle Rock.
- **Traffic Study Discrepancies**
  - The LSC traffic study shows several of the Eastbound (EB) and Westbound (WB) and sometimes Southbound (SB) and Northbound (NB) movements do not match those shown in the Exhibits. **Why are some of these movements not matching?**
    - I am slightly concerned that the data inputs in the HCM report were not input into the Synchro model correctly. Perhaps it is just wrong on the exhibits, but correct in the Synchro modeling, but I wanted verification of this and see where the error is. I mainly want to confirm that the LOS predictions are accurate for the intersections.
    - Since the modeling growth rate of 0.5% appears to be applied nonlinearly for the traffic movements, I could not use the 2018 traffic data to verify which was correct between Exhibits and HCM model inputs.
    - Most intersections are not off by a lot (1-3 cars), hence why I am only slightly concerned. However, it should have gone through a rigorous QA/QC process prior to finalization of the report.
    - From what I saw through my glancing at the results (and by no means thorough inspection), it seems like Fifth and Jerry was the one that was off by the most
      - Sometimes 13-14 cars, which is pretty significant percentage wise, especially for an important intersection after the development is built.
      - The exhibits overall seemed to show larger numbers than what the model inputs were.
    - **Here is one example at Fifth and Jerry**, but there are a few others I saw. I just spot-checked a few intersections and did not look at all of them in detail **so please verify the others:**

HCM 6th TWSC		2040 Total AM.syn											
5: Jerry St & Fifth St		08/16/2018											
<b>Intersection</b>													
Int Delay, s/veh	3.3												
<b>Movement</b>		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>			↔		↔	↔			↔			↔	
Traffic Vol, veh/h		15	266	90	90	365	11	31	8	43	2	17	12
Future Vol, veh/h		15	266	90	90	365	11	31	8	43	2	17	12

HCM 6th TWSC		2040 Total PM.syn											
5: Jerry St & Fifth St		08/16/2018											
<b>Intersection</b>													
Int Delay, s/veh	12.3												
<b>Movement</b>		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>			↔		↔	↔			↔			↔	
Traffic Vol, veh/h		22	362	107	26	379	49	70	20	110	53	29	43
Future Vol, veh/h		22	362	107	26	379	49	70	20	110	53	29	43

- Figure 9 : **Fifth and Jerry** – **Yellow** designates Good/Match and **Red** designates it does not match HCM Synchro model inputs.



- Other questions previously discussed regarding linear/nonlinear modeling and 0.5% growth rate still apply.
- **Fifth and Jerry Roundabout**
  - The LSC traffic study suggested a roundabout is necessary in the future.
    - **Is this work on the docket in the Town's plan in the near future?** 2040 seems like it is too far down the stretch to upgrade from the current stop-controlled intersection.
- **Transportation Maintenance**
  - **Has the Town accounted for the additional traffic and maintenance needs (wear and tear on the roads) that this development will have?**
  - **Is the Town requiring the associated funding needed for these large developments?**
- **Pedestrian Traffic**



- **Will additional foot traffic impede vehicle traffic as more pedestrians are crossing streets?**
- **Was this accounted for in Town traffic studies as well as the LSC study?**
- I ask these questions because I foresee potential backups in traffic with additional residents on the north end of Town leading to traffic backing up to I-25 interchange at Wolfensburger. I also know this area well from experience as I drive through the area daily for my work commute to/from the DTC.
- Proposed future roundabouts are great for helping to enhance free-flowing traffic; however, heavy pedestrian traffic across Wilcox could reduce efficiencies gained in traffic flow.
- **I-25 Interchange at Wilcox/Wolfensburger**
  - **What is the Town's plan if traffic gets to I-25 intersection? Has there been detailed discussion with CDOT about the Town's development plans?**
  - **Has CDOT provided input due to the impact on the Wolfensburger interchange?**
    - Many of the proposed residents and current District 4 residents (possibly even further east in Terrain area) will use this interchange to commute everyday so there will be some impact on the interchange.
    - Castle Rock would be a good partner by giving CDOT a chance to look at this along with future proposed Downtown development plans.
- **Average Vehicle Trips**
  - **Is it reasonable for the study to assume 30% of restaurant trips are expected to be internal trips from residential and office uses or alternative transportation?**
    - Unsure. Perhaps the data from other nearby places like Encore and Riverwalk validates this assumption. Just wanted to double check.
  - **Why is the average vehicle trips per day for the traffic study so low for the residents?**
    - **5.4 trips per unit** (1197 trips / 221 units = 5.4 trips per day) – See Table 2 of the LSC Traffic Study
      - Assuming a unit as a household (even though it is likely to consist of multiple residents/commuters with their own vehicle in 2-3 bedroom units)
  - Most residents are likely to be commuters to Denver considering these are luxury apartments and primary employment opportunities in the technology, engineering, financial, etc. sectors are not widely available in Castle Rock. Most readily available jobs are in the retail/service markets that seems to attract many from outside Castle Rock. Data from the 2017 TMP seems to indicate this. It seems doubtful that majority of Downtown residents will be working within walking distances in Castle Rock in its current working economy that is heavily weighted in service/retail/trades jobs.
  - Current transportation system/infrastructure does not eliminate the use of a car completely: grocery store, schools, work commute, north CR trips, recreational trips to mountains, etc.
    - Lack of a public transit system within Town
      - In 2019 the Town completed the Downtown Mobility Master Plan (DMMP), which recommends improvements to the road network in downtown. In 2020 the Town completed a Transit Feasibility Study (TFS), which makes recommendations for transit.
        - **Have either of these plans (DMMP and TFS) been funded so they can be implemented soon to help alleviate traffic congestion?**
      - Bike lanes (as proposed in the mobility study/plan) may help reduce some of these trips, but grocery store trips are not very convenient with Safeway over a mile away as well as some nearby schools
      - Local bus/transit system likely needed to limit trips and lessen traffic load on streets (similar to Transit measures in Fort Collins)
    - Lack of mass transit to neighboring communities and connections to RTD
      - Bustang is step in right direction, but needs to be implemented sooner rather than later to cut down on commuter traffic along the interstate and alleviate traffic along our local arterials during peak hours.
  - Typical rule of thumb is ~10 trips per day for average households
    - 2017 [Energy.gov](#) data corroborates this by stating 5 trips average (one-way)
    - [FHWA](#) assumes the average US household to have approximately 9.5 trips per day
    - [US Census data](#) – 6 OR More trips per day per household for our area
      - Link is to map of average weekday household vehicle-miles traveled by U.S. Census Tract (per day) as estimated in Local Area Transportation Characteristics by Household dataset.
- **Parking**
  - There are a total of 399 parking spaces in the garage and 33 on-street spaces. 100 garage spots will be owned by the Town as much-needed public parking spaces.
    - 1.3 spots per unit including 2-3 bedrooms units. Nearly 50% of units are 2-3 bedrooms.
  - Many of these households will likely have multiple cars per unit as discussed in previous questions. I am concerned about these residents spilling over into Town-paid spots. **How is the Town going to enforce this given the already understaffed police force?**
    - The applicant stated that it will be in the lease documents to enforce this via a fee/fine. **Where do these fines/fees go? Will they be paid to the Town since it is the Town that will be losing its paid spots?**
    - **How do we propose that most residences will not have multiple cars given that many will likely be commuters? Will the lease documents have limitations on the number of cars a unit household can have?**
    - **Has the Town considered working with applicant to have them hire full-time security staff to patrol the area and ensure public parking is not being used by residents?**
      - This could help ensure the Town is not paying more money for employing staff/police just to enforce the spots they currently own.
  - I know this meets Municipal Code Chapter 17.54 as shown in snippet below, but I do not believe this is working for our Town. It seems far too low for 2-3 bedroom units.

**Section 2. Amendment.** Table 64-1 set forth in Section 17.54.040 of the Castle Rock Municipal Code is amended to add the following requirement under Residential Dwellings:

Use Category	Description	Requirement and permitted parking spaces
Multifamily – Downtown overlay District	For: Studio unit 1-bedroom unit 2 and 3-bedroom unit	1 on-site parking space per unit

- I know this out of the purview of the DRB, but I firmly believe this parking requirement should be amended to a more reasonable value like that written in the Municipal Code for other areas outside the Downtown Overlay District. Speaking as a concerned resident, I highly encourage Town Staff and Council to consider altering this to avoid having additional unnecessary and future parking issues. I included a snippet below of multifamily units outside of the Downtown Overlay District. These seem much more reasonable given the reasons I have mentioned earlier in this email.

Multifamily	For: Studio unit 1-bedroom unit 2- and 3-bedroom units  <i>Any 1-bedroom unit with den, office or loft shall be classified as a 2-bedroom unit.</i>	1.0 space for unit 1.5 spaces per unit 2.0 spaces per unit  Plus 1 space per 4 dwelling units for visitor parking
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- Additional justification for a change to the Municipal Code for additional parking spaces (probably also office in addition to multifamily) was evident in the Public Comment provided by Mr. Trede at The Move building (see DRB packet). He stated “We currently do not have enough parking in the garages at the Move and around the outside of the building. We have over 35 employees and the ones who are not lucky enough to have a parking pass have to find parking 2-3 blocks away and move their vehicle every two hours to avoid a ticket.” Primary employers like that of Mr. Trede’s company need to have adequate parking that should be supplied in the office he is leasing. **Why would a recent development like The Move building already not have enough designated parking? If the same code adherence that was used to determine parking for The Move building are used at The View, then won’t we run into the same parking issues? Is the Town donating public parking spots just to help alleviate the parking issues that were not solved in previous developments? The 100 spots will fill quickly if the Town is paying for parking spaces for existing buildings and developments for employees, staff, and potentially overflow from residents in The View. The Town will be supplementing parking for past developments that should have been adequately addressed, thus rendering the purpose of the parking spaces useless. These new 100 spots should be dedicated for new public parking only as they are sorely needed.**
- Again, I highly stress the need to re-evaluate and alter the Municipal Code Chapter 17.54 for the Downtown Overlay District.

Thank you for your time in reading this. I look forward to hearing answers back to these questions. As a member of the DRB, I want to ensure that we are adequately planning for our Town’s growth and accounting for accurate and adequate traffic and parking considerations in the Downtown area. Stay warm and safe out there with the weather! Thanks again.

Kind Regards,

Jeremy

Jeremy J. Begley, PE | Civil Structural Engineer  
Gannett Fleming, Inc.

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February 17, 2021

Mr. Connor Treanor  
Treanor HL  
1755 Blake Street, Suite 400  
Denver, CO 80202

Re: The View at Castle Rock  
Traffic Impact Analysis  
Castle Rock, CO  
LSC #200310

Dear Mr. Treanor:

In response to your request, LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the proposed The View at Castle Rock development to address Town comments. As shown on Figure 1, the site is located north of Sixth Street and east of Jerry Street in Castle Rock, Colorado.

## **REPORT CONTENTS**

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected short-term and long-term background and resulting total traffic volumes on the area roadways; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the growth in background traffic and from trips generated by the site.

## **LAND USE AND ACCESS**

The site is proposed to include about 220 apartment dwelling units; about 14,500 square feet of office space; and about 5,000 square feet of restaurant space. Access is proposed to the local street system as shown in the conceptual site plan in Figures 2a, 2b, and 2c.

## **ROADWAY AND TRAFFIC CONDITIONS**

### **Area Roadways**

The major roadways in the site's vicinity are shown on Figure 1 and are described below.



- **Wilcox Street** is a north-south, three-lane major arterial roadway east of the site. The intersections with Fifth Street and Sixth Street are signalized with auxiliary turn lanes. The intersection with Jerry Street is stop-sign controlled.
- **Fifth Street** is an east-west, two-lane collector roadway south of the site. The intersection with Wilcox Street is signalized with auxiliary turn lanes. The intersection with Jerry Street is stop-sign controlled and planned to be a modern roundabout by 2040.
- **Sixth Street** is an east-west, two-lane local roadway south of the site. The intersection with Wilcox Street is signalized with auxiliary turn lanes and the intersection with Jerry Street is stop-sign controlled.
- **Jerry Street** is a north-south, local roadway west of the site. The intersection with Wilcox Street is unsignalized with auxiliary turn lanes and the intersection with Jerry Street is stop-sign controlled but planned to be a modern roundabout by 2040.

### **Existing Traffic Conditions**

Figure 3 shows the existing traffic volumes, lane geometry, and traffic control in the site's vicinity on a typical weekday. The weekday peak-hour traffic volumes at Intersections #3, #4, and #5 are from the attached 2018 traffic data provided by Town staff and grown at an annual rate of 0.5 percent. These counts were supplemented by the attached traffic counts conducted by Counter Measures in May, 2020. The May, 2020 traffic counts were balanced with those at Intersections #3, #4, and #5 to estimate the pandemic adjusted peak-hour volumes within the study area.

### **2023 and 2040 Background Traffic**

Figure 4 shows the estimated 2023 background traffic and Figure 5 shows the estimated 2040 background traffic. The projected traffic volumes at the intersections of Wilcox Street/Sixth Street (#3), Fifth Street/Jerry Street (#4), and Wilcox Street/Fifth Street (#5) were provided by the Town. The traffic volumes at the intersections counted by Counter Measures, Inc. were balanced with these volumes as appropriate. The 2023 background traffic was prorated between the existing traffic volumes in Figure 3 and the 2040 background traffic volumes in Figure 5.

### **Existing, 2023, and 2040 Background Levels of Service**

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for signalized and unsignalized intersections.

The intersections in Figures 3 through 5 were analyzed to determine the existing, 2023, and 2040 background levels of service using Synchro. Table 1 shows the level of service analysis results. The level of service reports are attached.

1. **Wilcox Street/Jerry Street:** All movements at this stop-controlled intersection currently operate at LOS "C" or better during both morning and afternoon peak-hours with the ex-

ception of the eastbound and westbound approaches which operate at LOS “E” in the afternoon peak-hour. By 2023, the eastbound and westbound approaches are expected to operate at LOS “F” in the afternoon peak-hour and are expected to do so in both peak-hours by 2040.

2. **Jerry Street/Sixth Street:** All movements at this stop-controlled intersection currently operate at LOS “A” and are expected to do so through 2040.
3. **Wilcox Street/Sixth Street:** This signalized intersection currently operates at an overall LOS “A” during both morning and afternoon peak-hour and is expected to do so through 2023. In 2040, the morning peak-hour is expected to operate at LOS “A” and the afternoon peak-hour is expected to operate at LOS “B”.
4. **Jerry Street/Fifth Street:** All movements at this stop-controlled intersection currently operate at LOS “C” or better and are expected to do so through 2023. By 2040, this intersection is expected to be converted to a modern roundabout and operate at LOS “A” during both peak-hours.
5. **Wilcox Street/Fifth Street:** This signalized intersection currently operates at an overall LOS “C” during both morning and afternoon peak-hours and is expected to do so through 2023. In 2040, the morning peak-hour is expected to operate at LOS “C” and the afternoon peak-hour is expected to operate at LOS “E”.

## **BICYCLE AND PEDESTRIAN OPPORTUNITIES**

### **Bicycle Opportunities**

The *Town of Castle Rock Transportation Master Plan* (TMP) was updated in 2017 and includes Figure ES-10 in the Executive Summary “Existing and Proposed Bike Network”. The plan shows both Fifth Street and Wilcox Street proposed as sharrows routes for on-street bicycle accommodation. In addition, Town staff has indicated Jerry Street as a shared use facility with sharrows to accommodate bikes. Bikes can also be accommodated in the alley between Jerry Street and Wilcox Street.

### **Pedestrian Opportunities**

The site should provide pedestrian connections to the existing sidewalk on the north side of Sixth Street between Jerry Street and Perry Street and the existing sidewalk on the east side of Jerry Street from Sixth Street to Fifth Street. This will accommodate future residents who desire to walk to other employment and retail locations in the downtown area. The future roundabout planned at Fifth Street/Jerry Street will provide an additional enhanced pedestrian crossing of Fifth Street.

## **TRIP GENERATION**

Table 2 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the proposed site based on the rates from *Trip Generation, 10<sup>th</sup> Edition, 2017* by the Institute of Transportation Engineers (ITE).

The site is projected to generate about 1,731 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 54 vehicles would enter and about 76 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 83 vehicles would enter and about 65 vehicles would exit. Table 2 shows how these volumes will be reduced by the removal of the self storage use on the property.

The net increase in trip generation potential is expected to be about 1,669 average weekday trips, about 51 entering and 74 exiting trips in the morning peak-hour, and about 80 entering and 61 exiting trips in the afternoon peak-hour.

### **TRIP DISTRIBUTION**

Figure 6 shows the estimated directional distribution of site-generated traffic volumes on the area roadways. The estimates were based on the location of the site with respect to the regional population, employment, activity centers, the site's proposed land use; and through coordination with the Town.

### **TRIP ASSIGNMENT**

Figures 7a and 7b show the estimated residential and non-residential site-generated traffic volumes based on the directional distribution percentages (from Figure 6) and the trip generation estimate (from Table 2).

### **2023 AND 2040 TOTAL TRAFFIC**

Figure 8 shows the 2023 total traffic which is the sum of the 2023 background traffic volumes (from Figure 4) and the site-generated traffic volumes (from Figures 7a and 7b). Figure 8 also shows the recommended 2023 lane geometry and traffic control.

Figure 9 shows the 2040 total traffic which is the sum of the 2040 background traffic volumes (from Figure 5) and the site-generated traffic volumes (from Figures 7a and 7b). Figure 9 also shows the recommended 2040 lane geometry and traffic control.

Figure 10 shows the reassignment of the 2040 total traffic volumes assuming the intersection of Wilcox Street/Jerry Street (#1) is converted to three-quarter movement by 2040.

### **PROJECTED LEVELS OF SERVICE**

The intersections in Figures 8 and 9 were analyzed to determine the 2023 and 2040 total traffic levels of service. Table 1 shows the level of service analysis results.

- 1. Wilcox Street/Jerry Street:** All movements at this stop-controlled intersection are expected to operate at LOS "D" or better during both morning and afternoon peak-hours through 2040 with the exception of the eastbound and westbound approaches which are expected to operate at LOS "F" in the 2023 afternoon peak-hour and in both peak-hours by 2040 with or without the addition of site traffic. A traffic signal warrant is not likely to

be met but drivers will have the option to use the traffic signal at Sixth Street to turn north on Wilcox Street. Table 1 shows a mitigated option with this intersection converted to three-quarter movement by 2040. With this conversion, all movements are expected to operate at LOS “C” or better through 2040.

2. **Jerry Street/Sixth Street:** All movements at this stop-controlled intersection are expected to operate at LOS “B” or better during both morning and afternoon peak-hours through 2040.
3. **Wilcox Street/Sixth Street:** This signalized intersection is expected to operate at an overall LOS “B” or better during both morning and afternoon peak-hour through 2040 both with and without the potential mitigation of converting Wilcox Street/Jerry Street to three-quarter movement by 2040.
4. **Jerry Street/Fifth Street:** All movements at this stop-controlled intersection are expected to operate at LOS “C” or better through 2023. By 2040, this intersection is expected to be converted to a modern roundabout and operate at LOS “A” during both peak-hours. The applicant should work with the Town to stripe an eastbound right-turn lane on Fifth Street approaching Jerry Street. This should only require the addition of pavement markings and is recommended to occur in Year 1 of the project.
5. **Wilcox Street/Fifth Street:** This signalized intersection is expected to operate at an overall LOS “C” during both morning and afternoon peak-hours through 2023. In 2040, the morning peak-hour is expected to operate at LOS “C” and the afternoon peak-hour is expected to operate at LOS “E” with or without the addition of site traffic.

## CONCLUSIONS AND RECOMMENDATIONS

### Trip Generation

1. The site is projected to generate about 1,731 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, about 54 vehicles would enter and about 76 vehicles would exit the site. During the afternoon peak-hour, about 83 vehicles would enter and about 65 vehicles would exit. Table 2 shows how these volumes will be reduced by the removal of the self storage use on the property. The net increase in trip generation potential is expected to be about 1,669 average weekday trips, about 51 entering and 74 exiting trips in the morning peak-hour, and about 80 entering and 61 exiting trips in the afternoon peak-hour.

### Projected Levels of Service

2. All movements at the unsignalized intersections analyzed are expected to operate at LOS “D” or better through 2040 with the following exception: The eastbound and westbound approaches at the Wilcox Street/Jerry Street intersection (#1) are expected to operate at LOS “F” in the future with or without the addition of site traffic. A traffic signal warrant is not likely to be met but drivers will have the option to use the traffic signal at Sixth Street (#3) to turn north on Wilcox Street. The study includes a mitigated option to restrict

this intersection to three-quarter movement by 2040. With this conversion, all movements are expected to operate at LOS “C” or better through 2040.

3. All of the signalized intersections analyzed are expected to operate at overall LOS “C” or better through 2040 with the following exception: The afternoon peak-hour at the Wilcox Street/Fifth Street intersection (#5) is expected to operate at LOS “E” in the 2040 afternoon peak-hour with or without the addition of site traffic.

### **Conclusions**

4. The impact of The View at Castle Rock can be accommodated by the existing roadway network with implementation of the recommendations below.

### **Recommendations**

5. The applicant should provide pedestrian connections to the existing sidewalk on the north side of Sixth Street between Jerry Street and Perry Street and the existing sidewalk on the east side of Jerry Street from Sixth Street to Fifth Street.
6. The applicant should work with Town staff to determine if shared bike sharrow markings should be provided on Jerry Street west of the site and on the alley east of the site.
7. The Town of Castle Rock should construct a modern roundabout at the intersection of Fifth Street/Jerry Street (#4) by 2040. The site-generated traffic is estimated to comprise about 3.6 percent of 2040 peak-hour intersection traffic so the site impact is minimal.
8. The Wilcox Street/Jerry Street intersection may need to be limited to three-quarter movement over time to mitigate poor levels of service. This conversion would be done at the Town’s discretion.
9. The applicant should work with the Town to strip an eastbound right-turn lane on Fifth Street approaching Jerry Street. This should only require the addition of pavement markings and is recommended to occur in Year 1 of the project.

\* \* \* \* \*

We trust our findings will assist you in gaining approval of The View at Castle Rock. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By

  
\_\_\_\_\_  
Christopher S. McGranahan, PE, PTOE  
Principal



CSM/wc

2-17-21

Enclosures: Tables 1 and 2  
Figures 1 - 10  
Capacity Analysis Sheets provided by Town Staff (used for Estimating Existing  
and 2040 Background Traffic)  
Traffic Counts  
Level of Service Definitions  
Level of Service Reports

**Table 1**  
**Intersection Levels of Service Analysis**  
**The View at Castle Rock**  
**Castle Rock, CO**  
**LSC #200310; February, 2021**

Intersection Location	Traffic Control	Existing Traffic		2023 Background		2023 Total		2040 Background		2040 Total		2040 Total Mitigated <sup>(1)</sup>	
		Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM
<u>Wilcox Street/Jerry Street</u>	TWSC												
NB Left		A	A	A	A	A	A	A	B	A	B	A	B
EB Approach		C	E	C	F	D	F	F	F	F	F	B	C
WB Approach		C	E	C	F	C	F	F	F	F	F	C	C
SB Left		A	A	A	A	A	A	B	B	B	B	B	B
Critical Movement Delay		18.7	45.2	23.8	82.6	33.3	185.0	>240	168.6	>240	>240	17.6	21.2
<u>Jerry Street/Sixth Street</u>	TWSC												
NB Approach		A	A	A	A	A	A	A	A	A	A		
EB Approach		A	A	A	A	A	A	A	A	A	A		
WB Approach		A	A	A	A	A	A	A	A	A	B		
SB Approach		A	A	A	A	A	A	A	A	A	A		
Critical Movement Delay		8.9	9.1	8.9	9.3	9.4	9.7	9.0	9.7	9.5	10.2		
<u>Wilcox Street/Sixth Street</u>	Signalized												
EB Left		A	D	A	D	D	D	A	D	D	E	E	E
EB Through/Right		D	C	D	C	C	C	D	C	C	B	C	B
WB Left		D	D	D	D	D	D	D	D	D	D	D	D
WB Through/Right		B	C	B	C	C	C	B	C	C	C	C	C
NB Left		A	A	A	A	A	A	A	A	A	A	A	A
NB Through/Right		A	A	A	A	A	A	A	A	A	A	A	A
SB Left		A	A	A	A	A	A	A	A	A	A	A	A
SB Through/Right		A	A	A	A	A	A	A	B	A	B	A	B
Enire Intersection Delay (sec /veh)		6.0	8.7	6.1	9.3	10.0	11.0	7.5	13.6	11.4	14.9	12.7	16.5
Enire Intersection LOS		A	A	A	A	B	B	A	B	B	B	B	B
<u>Jerry Street/Fifth Street</u>	TWSC												
NB Approach		B	B	B	C	B	C	--	--	--	--		
EB Approach		A	A	A	A	A	A	--	--	--	--		
WB Left		A	A	A	A	A	A	--	--	--	--		
SB Approach		B	C	B	C	B	C	--	--	--	--		
Critical Movement Delay		12.6	15.0	13.1	16.4	14.2	18.1	--	--	--	--		
<u>Jerry Street/Fifth Street</u>	Roundabout												
EB Approach		--	--	--	--	--	--	A	A	A	A		
WB Approach		--	--	--	--	--	--	A	A	A	A		
NB Approach		--	--	--	--	--	--	A	A	A	A		
SB Approach		--	--	--	--	--	--	A	A	A	A		
Enire Intersection Delay (sec /veh)		--	--	--	--	--	--	6.3	7.3	6.4	7.6		
Enire Intersection LOS		--	--	--	--	--	--	A	A	A	A		
<u>Wilcox Street/Fifth Street</u>	Signalized												
EB Left		C	C	C	C	C	C	C	C	C	C		
EB Through/Right		E	E	E	E	E	E	E	F	E	F		
WB Left		D	D	D	D	D	D	D	F	D	F		
WB Through		D	D	D	D	C	D	D	D	D	D		
WB Right		A	A	A	A	A	A	A	A	A	A		
NB Left		B	B	B	B	B	B	B	B	B	B		
NB Through		B	C	C	D	C	D	C	E	C	E		
NB Right		A	A	A	A	A	A	A	C	A	C		
SB Left		B	C	B	C	B	C	C	F	C	F		
SB Through/Right		B	C	B	C	B	C	C	C	C	C		
Enire Intersection Delay (sec /veh)		23.3	29.7	23.5	31.8	21.4	33.0	27.6	66.0	29.0	67.4		
Enire Intersection LOS		C	C	C	C	C	C	C	E	C	E		

(1) Potential mitigation is to convert the Wilcox Street/Jerry Street intersection to three-quarter movement. This would be done at the discretion of the Town.

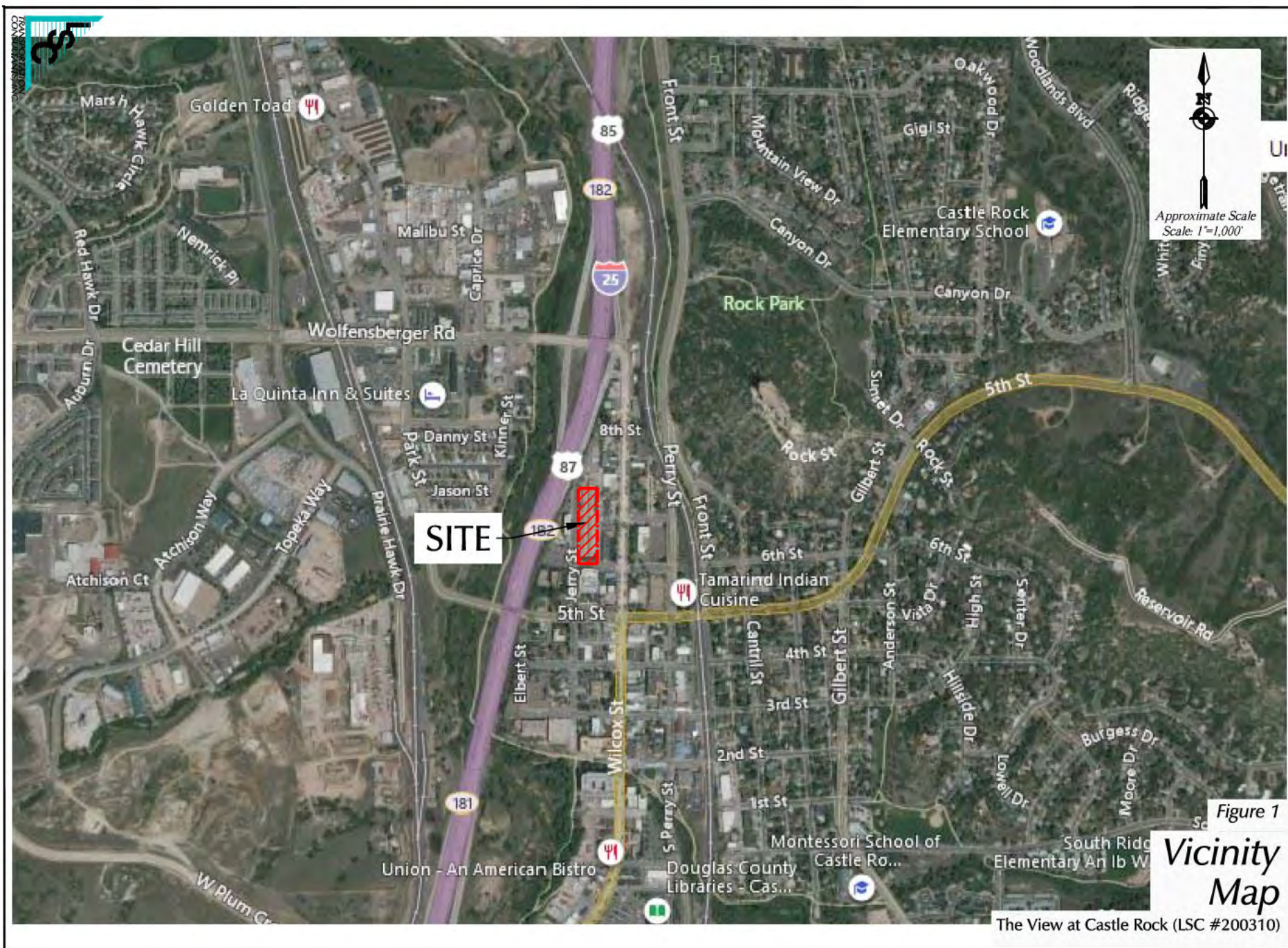
**Table 2**  
**ESTIMATED TRAFFIC GENERATION**  
**The View at Castle Rock**  
**Castle Rock, CO**  
**LSC #200310; February, 2021**

Trip Generating Category	Quantity	Trip Generation Rates <sup>(1)</sup>					Vehicle-Trips Generated				
		Average Weekday	AM Peak-Hour		PM Peak-Hour		Average Weekday	AM Peak-Hour		PM Peak-Hour	
			In	Out	In	Out		In	Out	In	Out
<b>EXISTING LAND USE</b>											
Self Storage <sup>(2)</sup>	41 KSF <sup>(3)</sup>	1.51	0.060	0.040	0.080	0.090	62	3	2	3	4
<b>CURRENTLY PROPOSED LAND USE</b>											
Apartments <sup>(4)</sup>	220 DU <sup>(5)</sup>	5.44	0.094	0.266	0.268	0.172	1,197	21	59	59	38
Office <sup>(6)</sup>	14.5 KSF <sup>(3)</sup>	9.74	0.998	0.162	0.184	0.966	141	14	2	3	14
Restaurant <sup>(7)</sup>	5.0 KSF	112.18	5.467	4.473	6.057	3.713	561	27	22	30	19
<b>Total =</b>							<b>1,899</b>	<b>62</b>	<b>83</b>	<b>92</b>	<b>71</b>
Internal Trips <sup>(8)</sup> =							168	8	7	9	6
<b>Net External Trips =</b>							<b>1,731</b>	<b>54</b>	<b>76</b>	<b>83</b>	<b>65</b>
Credit for Existing Land Use Trips =							62	3	2	3	4
<b>Net New Trips =</b>							<b>1,669</b>	<b>51</b>	<b>74</b>	<b>80</b>	<b>61</b>

Notes:

- (1) Source: *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2017.
- (2) ITE Land Use No. 151 - Mini-Warehouse
- (3) KSF = 1,000 square feet
- (4) ITE Land Use No. 221 - Multifamily Housing (Mid-Rise)
- (5) DU = Dwelling Units
- (6) ITE Land Use No. 710 - General Office Building
- (7) ITE Land Use No. 932 - High Turnover (Sit-Down) Restaurant
- (8) Thirty percent of restaurant trips are expected to be either internal trips from the residential and office uses or alternative travel mode trips (walk, bike, etc.) from the surrounding area.









Approximate Scale  
Scale: NTS

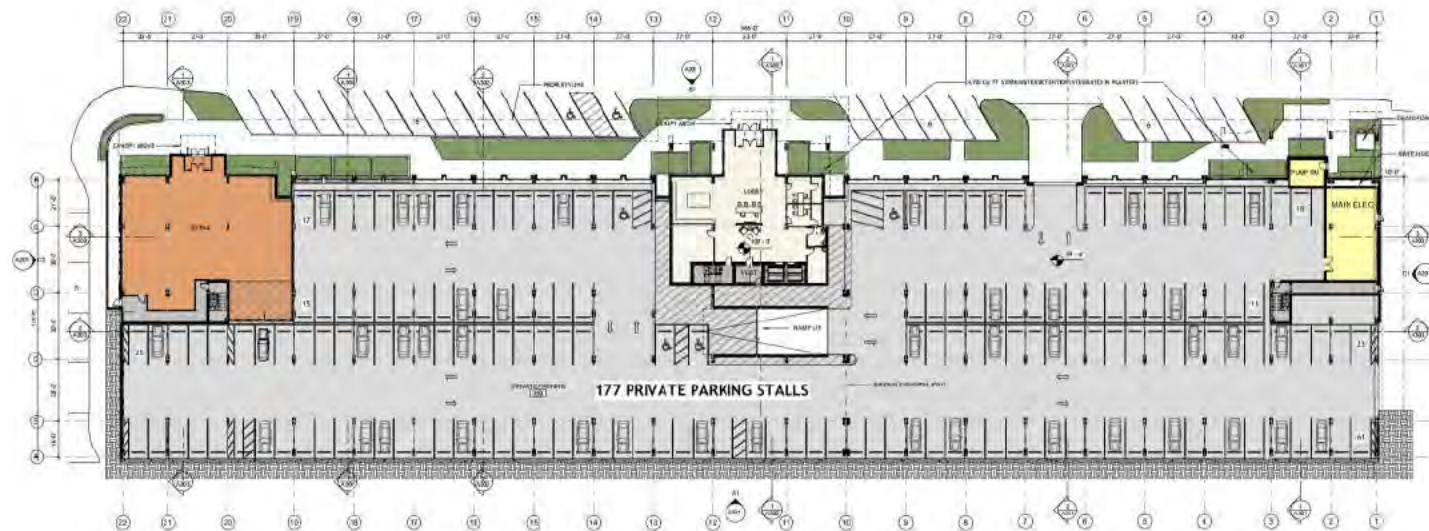


Figure 2a

## Site Plan (Level 1)

The View at Castle Rock (LSC #200310)

Figure 2b

**Site Plan (Level 2)**

The View at Castle Rock (LSC #200310)



Approximate Scale  
Scale: NTS

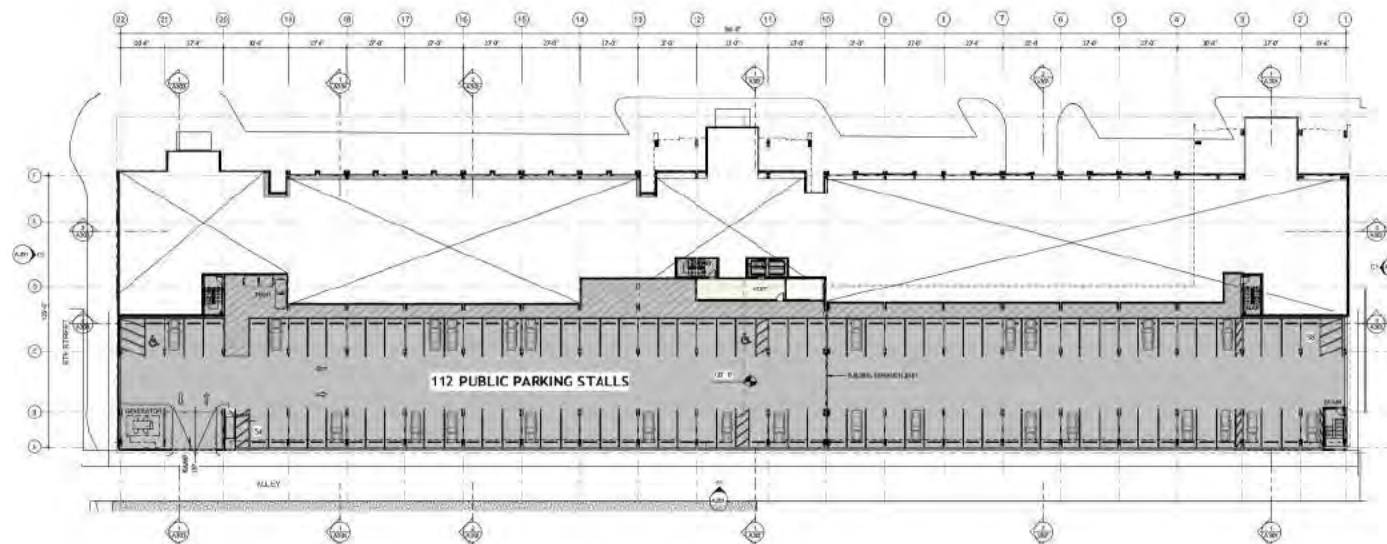
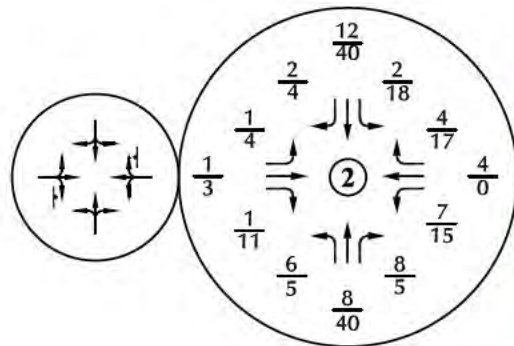
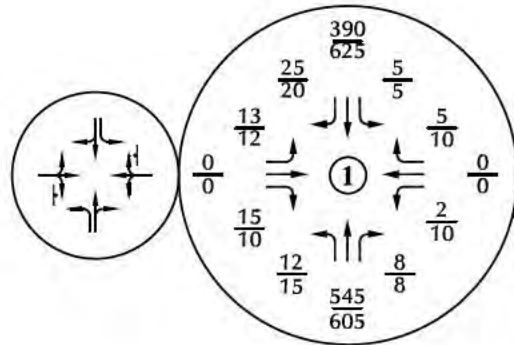


Figure 2c

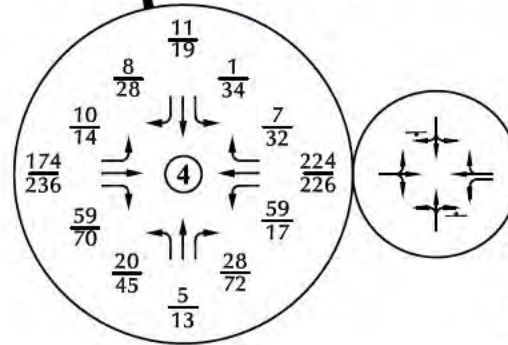
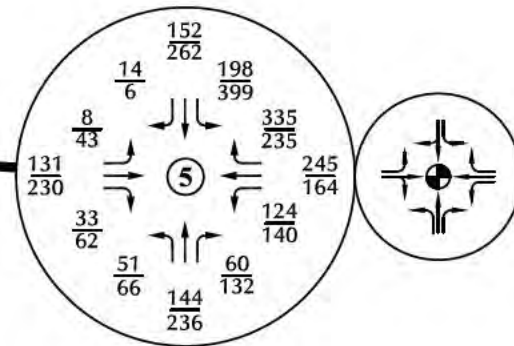
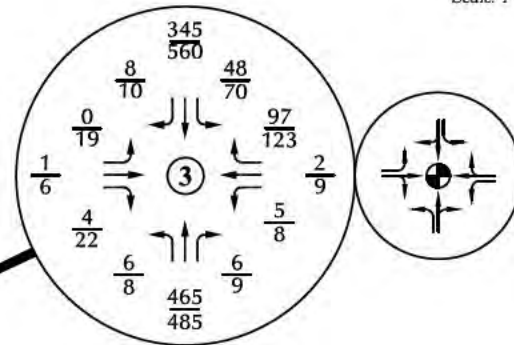
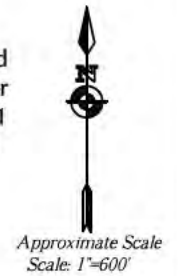
## Site Plan (Level 3)

The View at Castle Rock (LSC #200310)





Note: Existing 2018 traffic volumes provided by Town staff at #3, #4, #5 and grown at an annual rate of 0.5 percent per direction from Town staff. Intersection #1 and #2 were counted and balanced with the other three intersections.



# LEGEND:

⊥ = Stop Sign

⦿ = Traffic Signal

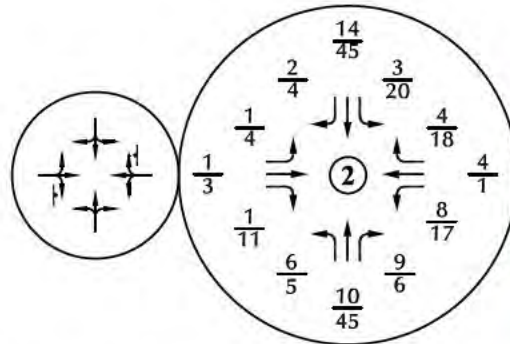
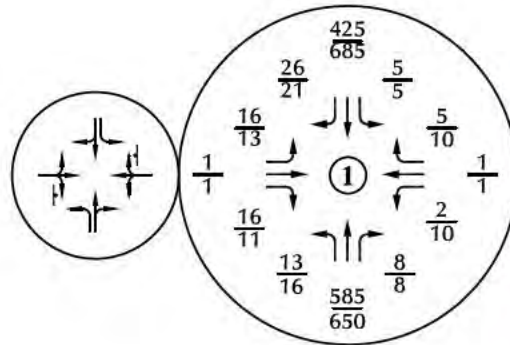
= Speed Limit

$\frac{26}{35}$  = AM Peak Hour Traffic  
PM Peak Hour Traffic

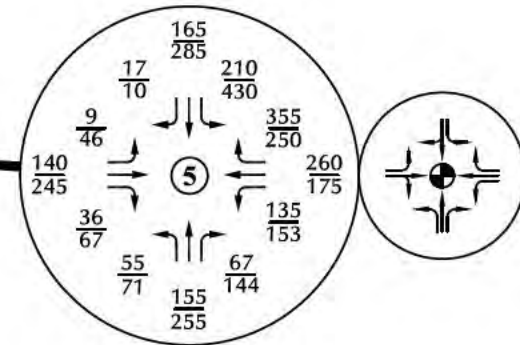
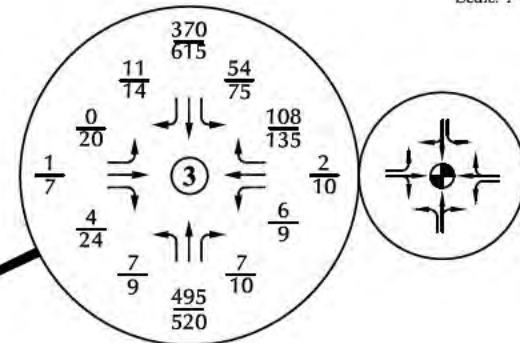
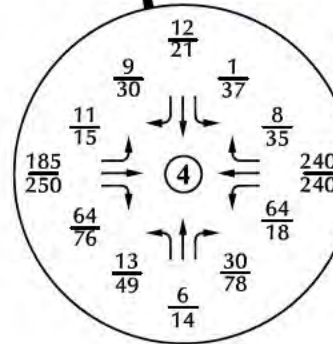
Figure 3

## Existing Traffic, Lane Geometry and Traffic Control

The View at Castle Rock (LSC #200310)



Note: The projected traffic volumes were prorated between the existing traffic volumes in Figure 3 and the 2040 background traffic volumes in Figure 5.



#### LEGEND:

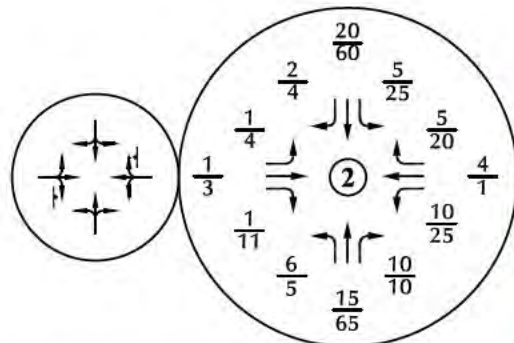
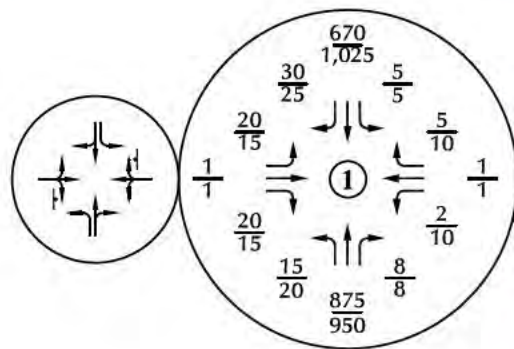
- ⬇ = Stop Sign
- ⬆ = Traffic Signal
- $\frac{26}{35}$  = AM Peak Hour Traffic / PM Peak Hour Traffic

## Year 2023 Background Traffic, Lane Geometry and Traffic Control

The View at Castle Rock (LSC #200310)

Figure 4





\* The projected volumes at intersections #3, #4 and #5 were provided by the Town of Castle Rock. The other intersections were balanced with these as appropriate.

#### LEGEND:

- = Stop Sign
- = Traffic Signal
- = Modern Roundabout
- $\frac{26}{35}$  =  $\frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$

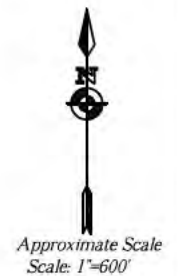
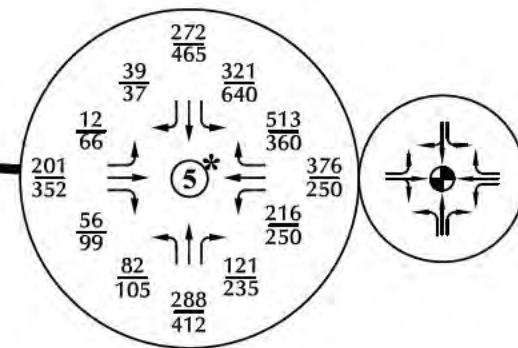
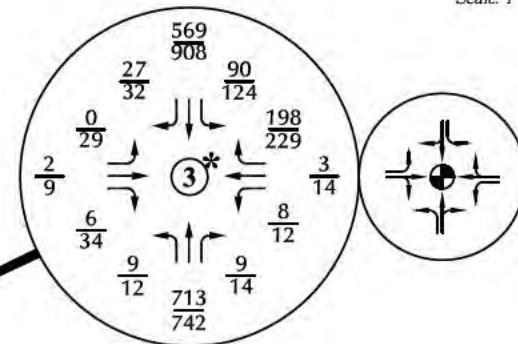
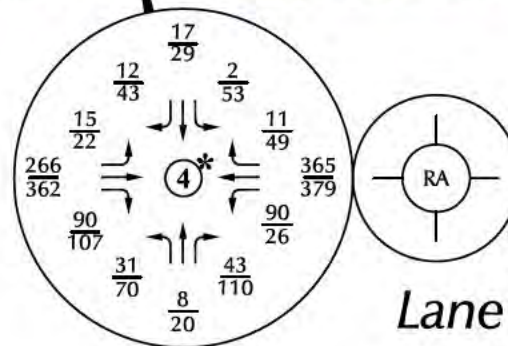


Figure 5  
**Year 2040 Background Traffic,  
Lane Geometry and Traffic Control**

The View at Castle Rock (LSC #200310)





Approximate Scale  
Scale: 1"=1,000'

**LEGEND:**

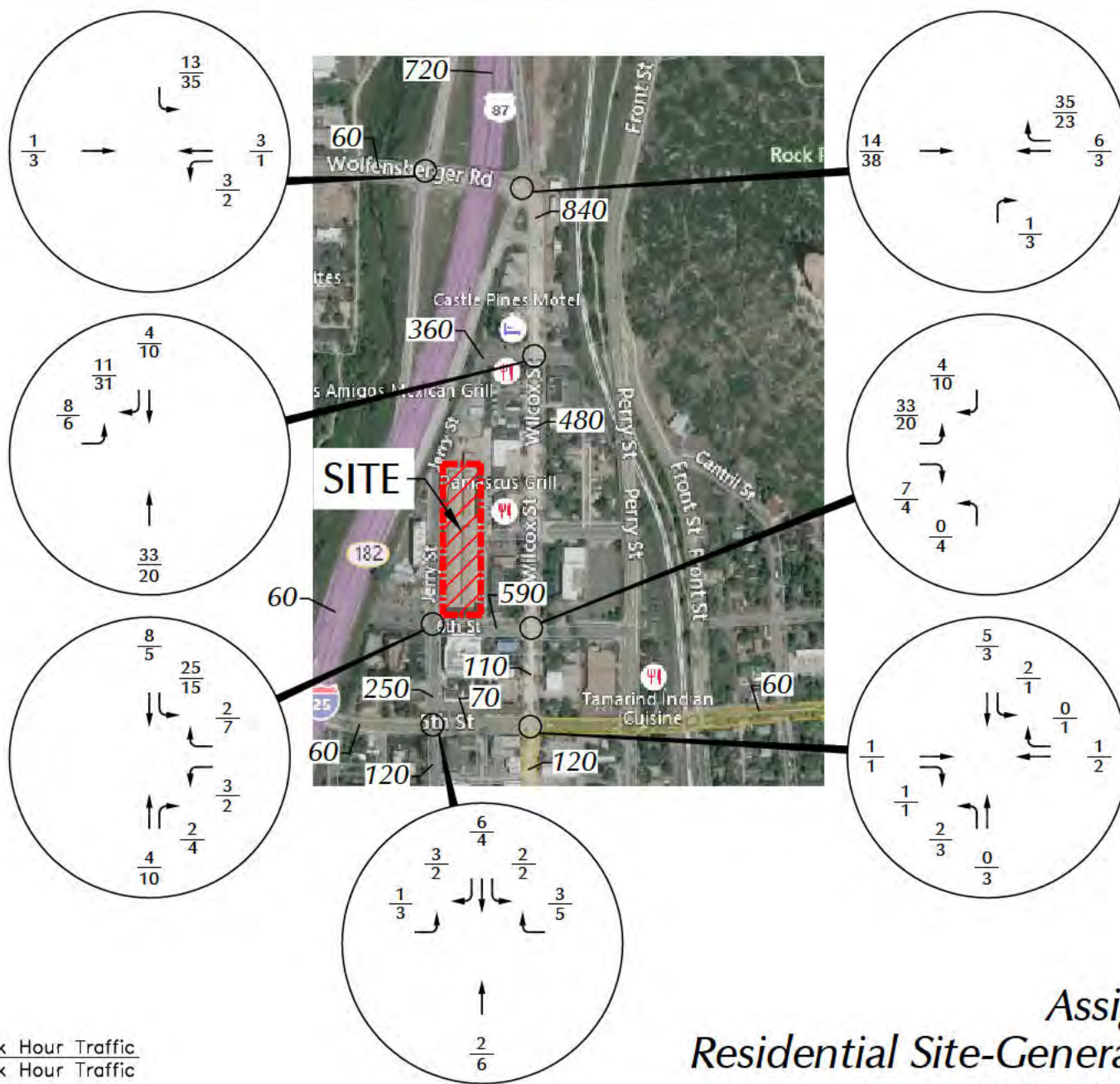
$\frac{5\%}{5\%}$  =  $\frac{\text{Residential Percent Directional Distribution}}{\text{Non-Residential Percent Directional Distribution}}$

Figure 6

## Directional Distribution of Site-Generated Traffic

The View at Castle Rock (LSC #200310)

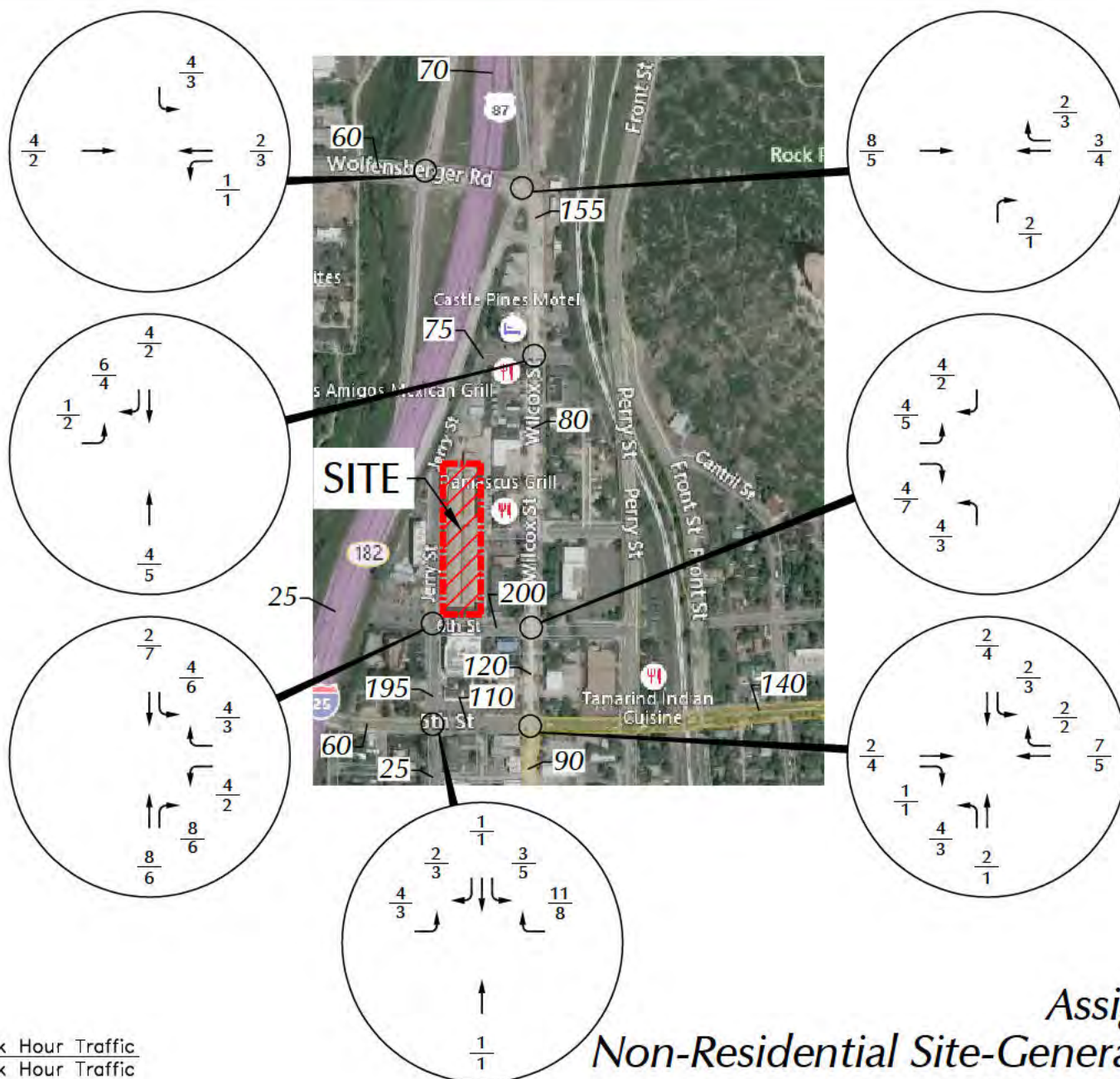




Approximate Scale  
Scale: 1"=600

LEGEND:  
 $\frac{26}{35}$  = AM Peak Hour Traffic  
 $\frac{35}{23}$  = PM Peak Hour Traffic  
 2,500 = Average Daily Traffic

Figure 7a  
**Assignment of  
 Residential Site-Generated Traffic**  
 The View at Castle Rock (LSC #200310)

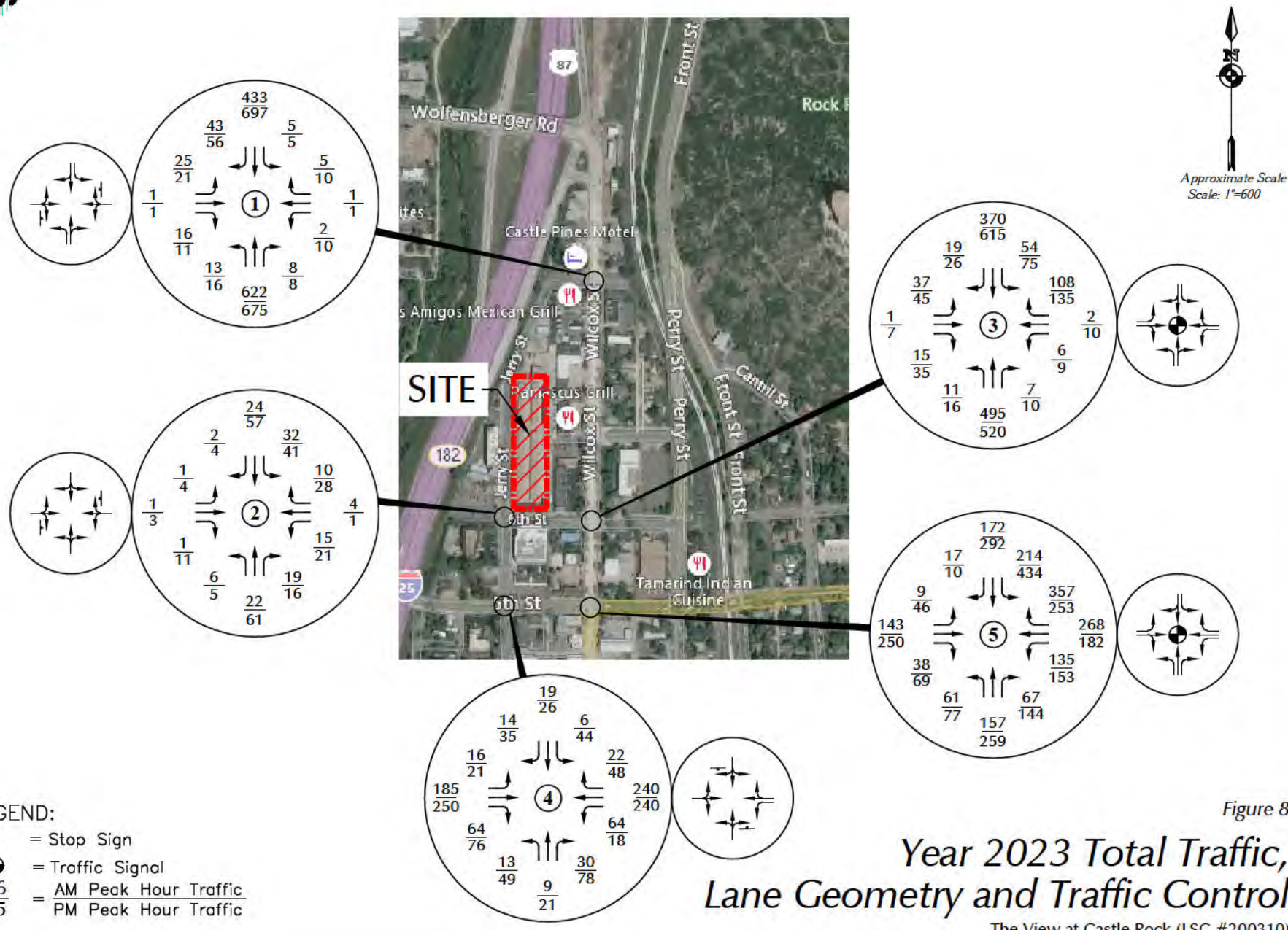


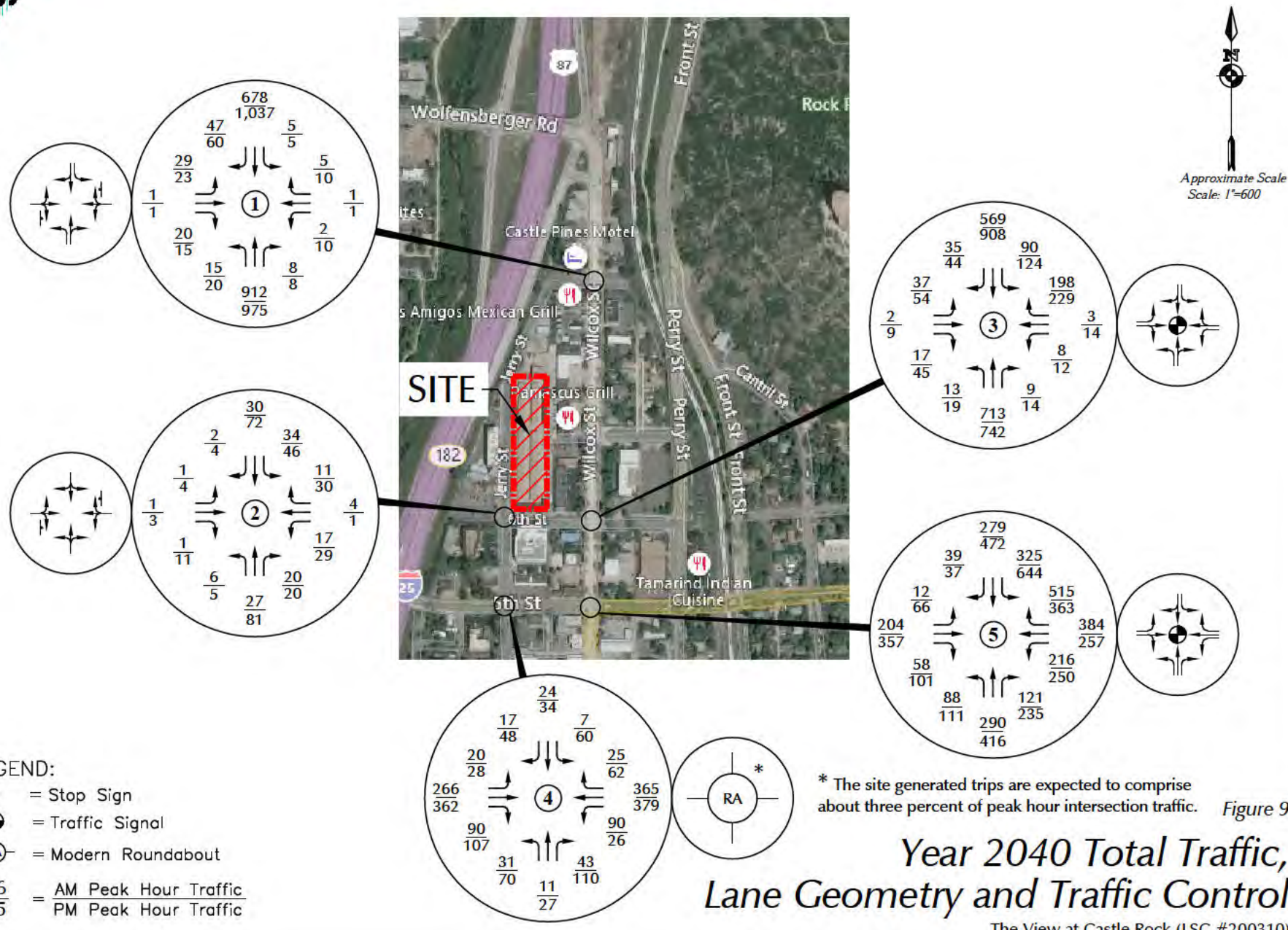
Approximate Scale  
Scale: 1"=600

LEGEND:  
 $\frac{26}{35}$  = AM Peak Hour Traffic  
 = PM Peak Hour Traffic  
 2,500 = Average Daily Traffic

Figure 7b  
**Assignment of  
 Non-Residential Site-Generated Traffic**  
 The View at Castle Rock (LSC #200310)





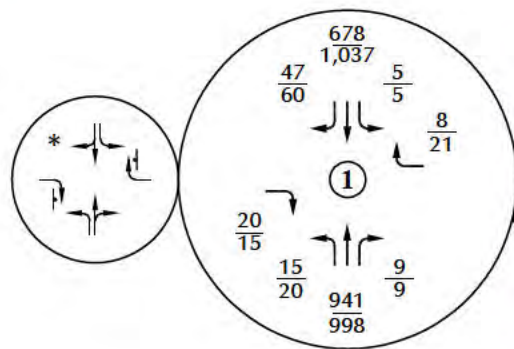


**Year 2040 Total Traffic,  
Lane Geometry and Traffic Control**

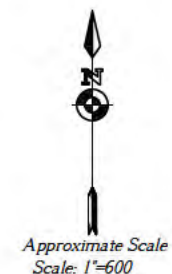
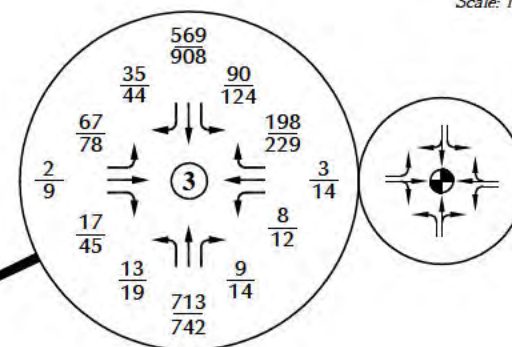
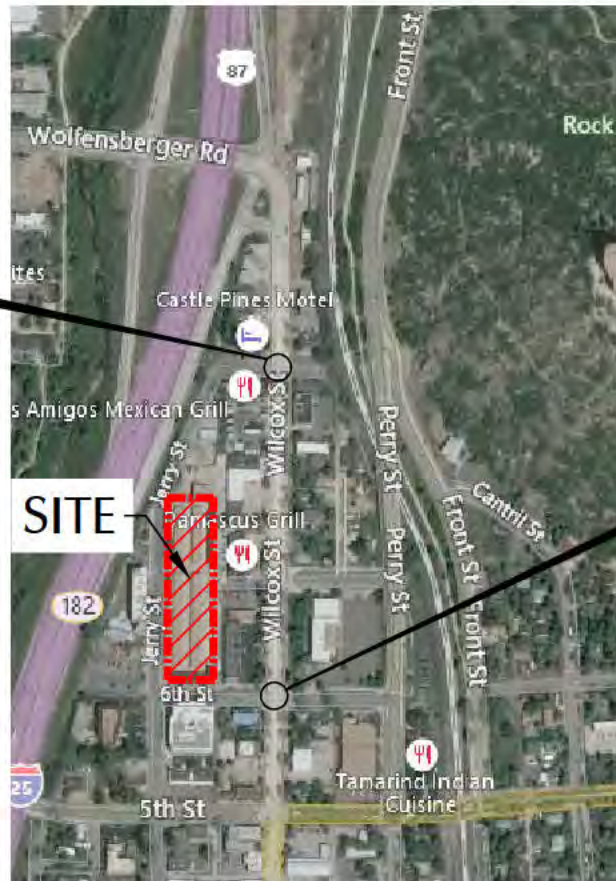
The View at Castle Rock (LSC #200310)

Figure 9





\* Potential mitigation would be to convert this intersection to three-quarter movement.



**LEGEND:**

- = Stop Sign
- = Traffic Signal
- = Modern Roundabout
- $\frac{26}{35}$  = AM Peak Hour Traffic / PM Peak Hour Traffic

Figure 10

## Year 2040 Total Traffic, Lane Geometry and Traffic Control - Mitigated





















The View at Castle Rock (LSC #200310)

# HCM 6th Signalized Intersection Summary

## 3: Wilcox St & Sixth St

2018 Existing AM.syn

08/16/2018





















													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	0	1	4	5	2	96	6	461	6	48	342	8	
Future Volume (veh/h)	0	1	4	5	2	96	6	461	6	48	342	8	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	0	4	8	12	4	100	12	501	12	64	428	12	
Peak Hour Factor	0.92	0.25	0.50	0.42	0.50	0.96	0.50	0.92	0.50	0.75	0.80	0.67	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	80	49	97	193	5	134	742	1478	35	744	1355	38	
Arrive On Green	0.00	0.09	0.09	0.09	0.09	0.09	0.03	1.00	1.00	0.75	0.75	0.75	
Sat Flow, veh/h	1290	557	1113	1402	61	1533	1781	1819	44	887	1810	51	
Grp Volume(v), veh/h	0	0	12	12	0	104	12	0	513	64	0	440	
Grp Sat Flow(s),veh/h/ln	1290	0	1670	1402	0	1594	1781	0	1863	887	0	1861	
Q Serve(g_s), s	0.0	0.0	0.6	0.7	0.0	5.7	0.1	0.0	0.0	1.8	0.0	7.0	
Cycle Q Clear(g_c), s	0.0	0.0	0.6	1.3	0.0	5.7	0.1	0.0	0.0	1.8	0.0	7.0	
Prop In Lane	1.00		0.67	1.00		0.96	1.00		0.02	1.00		0.03	
Lane Grp Cap(c), veh/h	80	0	146	193	0	139	742	0	1514	744	0	1393	
V/C Ratio(X)	0.00	0.00	0.08	0.06	0.00	0.75	0.02	0.00	0.34	0.09	0.00	0.32	
Avail Cap(c_a), veh/h	290	0	417	421	0	399	845	0	1514	744	0	1393	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	0.90	0.00	0.90	1.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	0.0	37.8	38.4	0.0	40.1	2.5	0.0	0.0	3.1	0.0	3.7	
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.1	0.0	7.7	0.0	0.0	0.5	0.2	0.0	0.6	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	0.3	0.0	2.5	0.0	0.0	0.2	0.3	0.0	2.2	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	0.0	0.0	38.0	38.5	0.0	47.8	2.5	0.0	0.5	3.3	0.0	4.3	
LnGrp LOS	A	A	D	D	A	D	A	A	A	A	A	A	
Approach Vol, veh/h	12			116				525				504	
Approach Delay, s/veh	38.0			46.9				0.6				4.2	
Approach LOS	D			D				A				A	
Timer - Assigned Phs	2			4		5		6		8			
Phs Duration (G+Y+Rc), s	77.6			12.4		5.8		71.8		12.4			
Change Period (Y+Rc), s	4.5			4.5		4.5		4.5		4.5			
Max Green Setting (Gmax), s	58.5			22.5		6.5		47.5		22.5			
Max Q Clear Time (g_c+l1), s	2.0			2.6		2.1		9.0		7.7			
Green Ext Time (p_c), s	3.8			0.0		0.0		3.5		0.5			
Intersection Summary													
HCM 6th Ctrl Delay	7.2												
HCM 6th LOS	A												






# HCM 6th Signalized Intersection Summary

## 3: Wilcox St & Sixth St

2018 Existing PM.syn

08/16/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	6	22	8	9	122	8	480	9	69	555	10
Future Volume (veh/h)	19	6	22	8	9	122	8	480	9	69	555	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	12	32	12	16	152	12	533	16	105	610	16
Peak Hour Factor	0.95	0.50	0.69	0.67	0.56	0.80	0.67	0.90	0.56	0.66	0.91	0.62
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	62	166	227	21	200	551	1395	42	684	1294	34
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	1.00	1.00	0.71	0.71	0.71
Sat Flow, veh/h	1217	451	1203	1362	153	1455	1781	1806	54	858	1814	48
Grp Volume(v), veh/h	20	0	44	12	0	168	12	0	549	105	0	626
Grp Sat Flow(s),veh/h/ln	1217	0	1654	1362	0	1608	1781	0	1861	858	0	1862
Q Serve(g_s), s	1.6	0.0	2.4	0.8	0.0	10.1	0.2	0.0	0.0	4.0	0.0	14.5
Cycle Q Clear(g_c), s	11.7	0.0	2.4	3.1	0.0	10.1	0.2	0.0	0.0	4.0	0.0	14.5
Prop In Lane	1.00		0.73	1.00		0.90	1.00		0.03	1.00		0.03
Lane Grp Cap(c), veh/h	117	0	228	227	0	221	551	0	1437	684	0	1328
V/C Ratio(X)	0.17	0.00	0.19	0.05	0.00	0.76	0.02	0.00	0.38	0.15	0.00	0.47
Avail Cap(c_a), veh/h	211	0	356	333	0	346	624	0	1437	684	0	1328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.94	0.00	0.94	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.1	0.0	38.2	39.6	0.0	41.5	4.5	0.0	0.0	4.7	0.0	6.2
Incr Delay (d2), s/veh	0.7	0.0	0.4	0.1	0.0	5.3	0.0	0.0	0.7	0.5	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.0	0.3	0.0	4.3	0.1	0.0	0.3	0.7	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	0.0	38.6	39.7	0.0	46.8	4.5	0.0	0.7	5.2	0.0	7.4
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	64			180			561			731		
Approach Delay, s/veh	41.5			46.3			0.8			7.1		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4	5	6	8					
Phs Duration (G+Y+Rc), s	81.7			18.3	5.9	75.8	18.3					
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	69.5			21.5	5.5	59.5	21.5					
Max Q Clear Time (g_c+l1), s	2.0			13.7	2.2	16.5	12.1					
Green Ext Time (p_c), s	4.2			0.1	0.0	5.8	0.6					
Intersection Summary												
HCM 6th Ctrl Delay	10.8											
HCM 6th LOS	B											

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	172	58	58	222	7	20	5	28	1	11	8
Future Vol, veh/h	10	172	58	58	222	7	20	5	28	1	11	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	62	70	66	69	65	58	71	62	78	25	69	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	246	88	84	342	12	28	8	36	4	16	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	354	0	0	334	0	0	852	844	290	860	882	348
Stage 1	-	-	-	-	-	-	322	322	-	516	516	-
Stage 2	-	-	-	-	-	-	530	522	-	344	366	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1205	-	-	1225	-	-	280	300	749	276	285	695
Stage 1	-	-	-	-	-	-	690	651	-	542	534	-
Stage 2	-	-	-	-	-	-	533	531	-	671	623	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1205	-	-	1225	-	-	246	275	749	241	261	695
Mov Cap-2 Maneuver	-	-	-	-	-	-	246	275	-	241	261	-
Stage 1	-	-	-	-	-	-	679	641	-	533	497	-
Stage 2	-	-	-	-	-	-	472	494	-	621	613	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.6			16.8			16.9		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	376	1205	-	-	1225	-	-	335				
HCM Lane V/C Ratio	0.192	0.013	-	-	0.069	-	-	0.095				
HCM Control Delay (s)	16.8	8	0	-	8.2	-	-	16.9				
HCM Lane LOS	C	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.7	0	-	-	0.2	-	-	0.3				



Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔			↔	
Traffic Vol, veh/h	14	234	69	17	224	32	45	13	71	34	19	28
Future Vol, veh/h	14	234	69	17	224	32	45	13	71	34	19	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	86	82	61	90	73	56	46	59	71	68	58
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	272	84	28	249	44	80	28	120	48	28	48
























Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	293	0	0	356	0	0	727	711	314	763	731	271
Stage 1	-	-	-	-	-	-	362	362	-	327	327	-
Stage 2	-	-	-	-	-	-	365	349	-	436	404	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1269	-	-	1203	-	-	339	358	726	321	349	768
Stage 1	-	-	-	-	-	-	657	625	-	686	648	-
Stage 2	-	-	-	-	-	-	654	633	-	599	599	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1269	-	-	1203	-	-	287	342	726	242	333	768
Mov Cap-2 Maneuver	-	-	-	-	-	-	287	342	-	242	333	-
Stage 1	-	-	-	-	-	-	641	610	-	670	633	-
Stage 2	-	-	-	-	-	-	572	618	-	465	585	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.7	22.3	20.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	433	1269	-	-	1203	-	-	360
HCM Lane V/C Ratio	0.529	0.019	-	-	0.023	-	-	0.345
HCM Control Delay (s)	22.3	7.9	0	-	8.1	-	-	20.2
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	3	0.1	-	-	0.1	-	-	1.5

HCM 6th Signalized Intersection Summary  
6: Fifth St & Wilcox St

2018 Existing AM.syn  
08/16/2018
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	130	33	123	243	332	50	143	59	196	150	14
Future Volume (veh/h)	8	130	33	123	243	332	50	143	59	196	150	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	169	43	148	293	400	60	172	71	276	211	20
Peak Hour Factor	0.77	0.77	0.77	0.83	0.83	0.83	0.83	0.83	0.83	0.71	0.71	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	299	76	347	521	441	566	797	675	694	784	74
Arrive On Green	0.01	0.21	0.21	0.14	0.46	0.46	0.09	0.85	0.85	0.03	0.15	0.15
Sat Flow, veh/h	1781	1438	366	1781	1870	1585	1781	1870	1585	1781	1682	159
Grp Volume(v), veh/h	10	0	212	148	293	400	60	172	71	276	0	231
Grp Sat Flow(s),veh/h/ln	1781	0	1804	1781	1870	1585	1781	1870	1585	1781	0	1842
Q Serve(g_s), s	0.4	0.0	9.5	5.6	10.2	21.0	1.6	1.5	0.7	7.5	0.0	10.0
Cycle Q Clear(g_c), s	0.4	0.0	9.5	5.6	10.2	21.0	1.6	1.5	0.7	7.5	0.0	10.0
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	226	0	376	347	521	441	566	797	675	694	0	859
V/C Ratio(X)	0.04	0.00	0.56	0.43	0.56	0.91	0.11	0.22	0.11	0.40	0.00	0.27
Avail Cap(c_a), veh/h	352	0	612	349	634	537	637	797	675	694	0	859
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	27.6	0.0	32.0	22.6	20.1	23.0	12.7	3.9	3.9	12.9	0.0	24.5
Incr Delay (d2), s/veh	0.1	0.0	1.3	0.6	0.7	12.8	0.1	0.6	0.3	0.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.2	2.2	3.8	7.5	0.6	0.7	0.3	3.2	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	0.0	33.3	23.1	20.8	35.8	12.8	4.5	4.2	13.2	0.0	25.3
LnGrp LOS	C	A	C	C	C	D	B	A	A	B	A	C
Approach Vol, veh/h		222			841			303			507	
Approach Delay, s/veh		33.1			28.3			6.1			18.7	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	42.8	11.9	23.2	8.4	46.5	5.6	29.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	26.5	7.5	30.5	7.5	26.5	7.5	30.5				
Max Q Clear Time (g_c+I1), s	9.5	3.5	7.6	11.5	3.6	12.0	2.4	23.0				
Green Ext Time (p_c), s	0.0	1.2	0.0	1.1	0.0	1.1	0.0	2.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

# HCM 6th Signalized Intersection Summary

## 6: Fifth St & Wilcox St

2018 Existing PM.syn

08/16/2018





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	228	61	139	162	233	65	234	131	395	259	6
Future Volume (veh/h)	43	228	61	139	162	233	65	234	131	395	259	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	278	74	148	172	248	71	254	142	449	294	7
Peak Hour Factor	0.82	0.82	0.82	0.94	0.94	0.94	0.92	0.92	0.92	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	315	84	251	495	420	610	826	700	556	862	21
Arrive On Green	0.04	0.22	0.22	0.14	0.44	0.44	0.04	0.44	0.44	0.13	0.79	0.79
Sat Flow, veh/h	1781	1423	379	1781	1870	1585	1781	1870	1585	1781	1819	43
Grp Volume(v), veh/h	52	0	352	148	172	248	71	254	142	449	0	301
Grp Sat Flow(s),veh/h/ln	1781	0	1802	1781	1870	1585	1781	1870	1585	1781	0	1863
Q Serve(g_s), s	2.2	0.0	18.9	6.2	6.1	11.8	2.1	8.8	5.5	7.5	0.0	4.6
Cycle Q Clear(g_c), s	2.2	0.0	18.9	6.2	6.1	11.8	2.1	8.8	5.5	7.5	0.0	4.6
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	338	0	399	251	495	420	610	826	700	556	0	883
V/C Ratio(X)	0.15	0.00	0.88	0.59	0.35	0.59	0.12	0.31	0.20	0.81	0.00	0.34
Avail Cap(c_a), veh/h	385	0	514	328	645	547	916	826	700	556	0	883
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00	0.92	0.00	0.92
Uniform Delay (d), s/veh	28.2	0.0	37.7	26.0	22.2	23.8	13.8	18.0	17.1	21.9	0.0	6.0
Incr Delay (d2), s/veh	0.2	0.0	13.6	2.1	0.4	1.3	0.1	1.0	0.7	8.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	9.7	2.6	2.5	3.9	0.9	3.9	2.1	7.1	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	0.0	51.2	28.1	22.6	25.1	13.9	19.0	17.8	29.9	0.0	6.9
LnGrp LOS	C	A	D	C	C	C	B	B	B	C	A	A
Approach Vol, veh/h		404			568			467			750	
Approach Delay, s/veh		48.3			25.1			17.8			20.7	
Approach LOS		D			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	48.7	12.7	26.7	8.8	51.9	8.3	31.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	33.5	12.5	28.5	21.5	19.5	6.5	34.5				
Max Q Clear Time (g_c+l1), s	9.5	10.8	8.2	20.9	4.1	6.6	4.2	13.8				
Green Ext Time (p_c), s	0.0	1.9	0.1	1.3	0.1	1.4	0.0	1.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			26.3									
HCM 6th LOS			C									

# HCM 6th Signalized Intersection Summary

## 3: Wilcox St & Sixth St

2040 Total AM.syn

08/16/2018





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2	6	8	3	198	9	713	9	90	569	27
Future Volume (veh/h)	0	2	6	8	3	198	9	713	9	90	569	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	2	7	9	3	215	10	775	10	98	618	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	60	209	304	4	257	493	1356	17	544	1194	56
Arrive On Green	0.00	0.16	0.16	0.16	0.16	0.16	0.02	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	1163	365	1276	1406	22	1567	1781	1842	24	689	1772	83
Grp Volume(v), veh/h	0	0	9	9	0	218	10	0	785	98	0	647
Grp Sat Flow(s),veh/h/ln	1163	0	1641	1406	0	1588	1781	0	1866	689	0	1855
Q Serve(g_s), s	0.0	0.0	0.4	0.5	0.0	12.0	0.1	0.0	0.0	4.9	0.0	15.7
Cycle Q Clear(g_c), s	0.0	0.0	0.4	0.9	0.0	12.0	0.1	0.0	0.0	4.9	0.0	15.7
Prop In Lane	1.00		0.78	1.00		0.99	1.00		0.01	1.00		0.04
Lane Grp Cap(c), veh/h	80	0	269	304	0	260	493	0	1374	544	0	1250
V/C Ratio(X)	0.00	0.00	0.03	0.03	0.00	0.84	0.02	0.00	0.57	0.18	0.00	0.52
Avail Cap(c_a), veh/h	180	0	410	425	0	397	600	0	1374	544	0	1250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	0.74	0.00	0.74	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	31.6	32.0	0.0	36.5	5.5	0.0	0.0	5.6	0.0	7.4
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	9.3	0.0	0.0	1.3	0.7	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	0.2	0.0	5.2	0.0	0.0	0.5	0.7	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	31.7	32.1	0.0	45.7	5.6	0.0	1.3	6.3	0.0	8.9
LnGrp LOS	A	A	C	C	A	D	A	A	A	A	A	A
Approach Vol, veh/h	9			227			795			745		
Approach Delay, s/veh	31.7			45.2			1.3			8.5		
Approach LOS	C			D			A			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	70.7			19.3			5.6			65.1		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	58.5			22.5			6.5			47.5		
Max Q Clear Time (g_c+l1), s	2.0			2.4			2.1			17.7		
Green Ext Time (p_c), s	7.3			0.0			0.0			6.0		
Intersection Summary												
HCM 6th Ctrl Delay	10.1											
HCM 6th LOS	B											






# HCM 6th Signalized Intersection Summary






## 3: Wilcox St & Sixth St

2040 Total PM.syn

08/16/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	9	34	12	14	229	12	742	14	124	908	32
Future Volume (veh/h)	29	9	34	12	14	229	12	742	14	124	908	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	10	37	13	15	249	13	807	15	135	987	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	63	232	284	16	271	246	1336	25	518	1203	43
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.03	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	1115	349	1290	1359	91	1508	1781	1830	34	666	1795	64
Grp Volume(v), veh/h	32	0	47	13	0	264	13	0	822	135	0	1022
Grp Sat Flow(s),veh/h/ln	1115	0	1638	1359	0	1599	1781	0	1864	666	0	1859
Q Serve(g_s), s	1.8	0.0	2.4	0.8	0.0	16.2	0.2	0.0	0.0	8.4	0.0	40.3
Cycle Q Clear(g_c), s	18.0	0.0	2.4	3.2	0.0	16.2	0.2	0.0	0.0	8.4	0.0	40.3
Prop In Lane	1.00		0.79	1.00		0.94	1.00		0.02	1.00		0.03
Lane Grp Cap(c), veh/h	92	0	295	284	0	288	246	0	1361	518	0	1245
V/C Ratio(X)	0.35	0.00	0.16	0.05	0.00	0.92	0.05	0.00	0.60	0.26	0.00	0.82
Avail Cap(c_a), veh/h	92	0	295	284	0	288	308	0	1361	518	0	1245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.80	0.00	0.80	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.4	0.0	34.6	36.0	0.0	40.3	13.3	0.0	0.0	6.8	0.0	12.1
Incr Delay (d2), s/veh	2.2	0.0	0.2	0.1	0.0	32.3	0.1	0.0	1.6	1.2	0.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.0	0.3	0.0	8.9	0.1	0.0	0.6	1.2	0.0	16.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	0.0	34.9	36.0	0.0	72.6	13.4	0.0	1.6	8.1	0.0	18.3
LnGrp LOS	D	A	C	D	A	E	B	A	A	A	A	B
Approach Vol, veh/h	79			277			835			1157		
Approach Delay, s/veh	41.7			70.9			1.8			17.1		
Approach LOS	D			E			A			B		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	77.5			22.5			6.0			71.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	73.0			18.0			5.0			63.5		
Max Q Clear Time (g_c+I1), s	2.0			20.0			2.2			42.3		
Green Ext Time (p_c), s	8.0			0.0			0.0			10.2		
Intersection Summary												
HCM 6th Ctrl Delay	18.8											
HCM 6th LOS	B											

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	266	90	90	365	11	31	8	43	2	17	12
Future Vol, veh/h	15	266	90	90	365	11	31	8	43	2	17	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	289	98	98	397	12	34	9	47	2	18	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	409	0	0	387	0	0	985	975	338	997	1018	403
Stage 1	-	-	-	-	-	-	370	370	-	599	599	-
Stage 2	-	-	-	-	-	-	615	605	-	398	419	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1150	-	-	1171	-	-	227	251	704	223	237	647
Stage 1	-	-	-	-	-	-	650	620	-	488	490	-
Stage 2	-	-	-	-	-	-	479	487	-	628	590	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1150	-	-	1171	-	-	192	226	704	187	213	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	192	226	-	187	213	-
Stage 1	-	-	-	-	-	-	638	609	-	479	449	-
Stage 2	-	-	-	-	-	-	412	446	-	568	579	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.6			20.7			19.4		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	318	1150	-	-	1171	-	-	284				
HCM Lane V/C Ratio	0.28	0.014	-	-	0.084	-	-	0.119				
HCM Control Delay (s)	20.7	8.2	0	-	8.4	-	-	19.4				
HCM Lane LOS	C	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	1.1	0	-	-	0.3	-	-	0.4				

Intersection												
Int Delay, s/veh	12.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	362	107	26	379	49	70	20	110	53	29	43
Future Vol, veh/h	22	362	107	26	379	49	70	20	110	53	29	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	85	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	393	116	28	412	53	76	22	120	58	32	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	465	0	0	509	0	0	1033	1020	451	1065	1052	439
Stage 1	-	-	-	-	-	-	499	499	-	495	495	-
Stage 2	-	-	-	-	-	-	534	521	-	570	557	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1096	-	-	1056	-	-	211	237	608	200	227	618
Stage 1	-	-	-	-	-	-	554	544	-	556	546	-
Stage 2	-	-	-	-	-	-	530	532	-	506	512	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1096	-	-	1056	-	-	166	223	608	142	214	618
Mov Cap-2 Maneuver	-	-	-	-	-	-	166	223	-	142	214	-
Stage 1	-	-	-	-	-	-	537	527	-	539	531	-
Stage 2	-	-	-	-	-	-	449	518	-	378	496	-
























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.5			47.3			46.3		
HCM LOS							E			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	289	1096	-	-	1056	-	-	216
HCM Lane V/C Ratio	0.752	0.022	-	-	0.027	-	-	0.629
HCM Control Delay (s)	47.3	8.4	0	-	8.5	-	-	46.3
HCM Lane LOS	E	A	A	-	A	-	-	E
HCM 95th %tile Q(veh)	5.6	0.1	-	-	0.1	-	-	3.7

# HCM 6th Signalized Intersection Summary 6: Fifth St & Wilcox St

2040 Total AM.syn  
08/16/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	201	56	216	376	513	82	288	121	321	272	39
Future Volume (veh/h)	12	201	56	216	376	513	82	288	121	321	272	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	218	61	235	409	558	89	313	132	349	296	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	381	107	379	634	537	420	678	574	505	635	90
Arrive On Green	0.02	0.27	0.27	0.14	0.57	0.57	0.10	0.72	0.72	0.06	0.27	0.27
Sat Flow, veh/h	1781	1406	393	1781	1870	1585	1781	1870	1585	1781	1602	227
Grp Volume(v), veh/h	13	0	279	235	409	558	89	313	132	349	0	338
Grp Sat Flow(s),veh/h/ln	1781	0	1800	1781	1870	1585	1781	1870	1585	1781	0	1829
Q Serve(g_s), s	0.5	0.0	12.0	7.5	13.5	30.5	2.8	6.2	2.5	7.5	0.0	13.9
Cycle Q Clear(g_c), s	0.5	0.0	12.0	7.5	13.5	30.5	2.8	6.2	2.5	7.5	0.0	13.9
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	218	0	488	379	634	537	420	678	574	505	0	725
V/C Ratio(X)	0.06	0.00	0.57	0.62	0.65	1.04	0.21	0.46	0.23	0.69	0.00	0.47
Avail Cap(c_a), veh/h	338	0	610	379	634	537	480	678	574	505	0	725
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00	0.90	0.00	0.90
Uniform Delay (d), s/veh	23.4	0.0	28.3	22.0	15.8	19.5	16.2	8.8	8.2	20.4	0.0	25.1
Incr Delay (d2), s/veh	0.1	0.0	1.1	2.0	1.5	42.0	0.2	2.3	0.9	3.6	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	5.2	3.4	4.5	13.7	1.1	2.3	0.9	2.7	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	0.0	29.4	24.0	17.3	61.6	16.5	11.0	9.2	24.0	0.0	27.0
LnGrp LOS	C	A	C	C	B	F	B	B	A	C	A	C
Approach Vol, veh/h		292			1202			534			687	
Approach Delay, s/veh		29.1			39.2			11.5			25.5	
Approach LOS		C			D			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	37.1	12.0	28.9	9.0	40.2	5.9	35.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	26.5	7.5	30.5	7.5	26.5	7.5	30.5				
Max Q Clear Time (g_c+I1), s	9.5	8.2	9.5	14.0	4.8	15.9	2.5	32.5				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.5	0.0	1.5	0.0	0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			29.2									
HCM 6th LOS			C									


























# HCM 6th Signalized Intersection Summary

2040 Total PM.syn

## 6: Fifth St & Wilcox St

08/16/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	352	99	250	250	360	105	412	235	640	465	37
Future Volume (veh/h)	66	352	99	250	250	360	105	412	235	640	465	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	383	26	272	272	228	114	448	0	696	505	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	338	23	241	457	388	503	870	737	596	892	0
Arrive On Green	0.05	0.19	0.19	0.03	0.08	0.08	0.11	0.93	0.00	0.11	0.80	0.00
Sat Flow, veh/h	1781	1732	118	1781	1870	1585	1781	1870	1585	1781	1870	0
Grp Volume(v), veh/h	72	0	409	272	272	228	114	448	0	696	505	0
Grp Sat Flow(s),veh/h/ln	1781	0	1849	1781	1870	1585	1781	1870	1585	1781	1870	0
Q Serve(g_s), s	3.2	0.0	19.5	9.5	14.0	13.9	3.3	3.2	0.0	6.5	10.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	19.5	9.5	14.0	13.9	3.3	3.2	0.0	6.5	10.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	247	0	361	241	457	388	503	870	737	596	892	0
V/C Ratio(X)	0.29	0.00	1.13	1.13	0.59	0.59	0.23	0.52	0.00	1.17	0.57	0.00
Avail Cap(c_a), veh/h	370	0	361	241	457	388	721	870	737	596	892	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.91	0.91	0.91	1.00	1.00	0.00	0.65	0.65	0.00
Uniform Delay (d), s/veh	30.5	0.0	40.3	33.3	41.2	41.1	12.1	2.0	0.0	25.5	6.3	0.0
Incr Delay (d2), s/veh	0.6	0.0	89.0	94.0	1.9	2.1	0.2	2.2	0.0	87.7	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	17.6	7.6	7.3	6.1	1.2	1.2	0.0	26.2	3.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	0.0	129.3	127.3	43.1	43.2	12.4	4.2	0.0	113.2	8.0	0.0
LnGrp LOS	C	A	F	F	D	D	B	A	A	F	A	A
Approach Vol, veh/h		481			772			562			1201	
Approach Delay, s/veh		114.6			72.8			5.8			69.0	
Approach LOS		F			E			A			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	51.0	14.0	24.0	9.8	52.2	9.0	29.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	46.5	9.5	19.5	17.5	35.5	11.5	17.5				
Max Q Clear Time (g_c+I1), s	8.5	5.2	11.5	21.5	5.3	12.0	5.2	16.0				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	0.2	3.4	0.1	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			65.5									
HCM 6th LOS			E									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

# COUNTER MEASURES INC.

1889 YORK STREET  
DENVER.COLORADO  
303-333-7409

N/S STREET: JERRY  
E/W STREET: 6TH  
CITY: CASTLE ROCK  
COUNTY: DOUGLAS

File Name : JERR6TH  
Site Code : 00000025  
Start Date : 5/19/2020  
Page No : 1

## Groups Printed- VEHICLES

	JERRY Southbound				Westbound				JERRY Northbound				6TH Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	4
06:45 AM	0	1	0	0	2	0	1	0	0	0	0	0	0	0	0	0	4
Total	0	1	0	0	2	1	1	0	1	1	0	0	0	0	1	0	8
07:00 AM	0	3	0	0	1	0	2	0	1	0	1	0	0	0	0	0	8
07:15 AM	0	3	2	0	0	1	0	0	3	2	1	0	0	0	0	0	12
07:30 AM	1	1	0	0	2	1	1	0	0	1	1	0	0	0	0	0	8
07:45 AM	0	3	0	0	0	2	1	0	1	1	2	0	0	1	0	0	11
Total	1	10	2	0	3	4	4	0	5	4	5	0	0	1	0	0	39
08:00 AM	1	3	0	0	3	0	2	0	0	2	2	0	1	0	0	0	14
08:15 AM	0	2	0	0	3	0	2	0	0	4	1	0	0	0	0	0	12
Total	1	5	0	0	6	0	4	0	0	6	3	0	1	0	0	0	26
04:00 PM	2	5	0	0	3	0	3	0	1	3	1	0	0	2	0	0	20
04:15 PM	2	6	1	0	0	0	3	0	0	6	3	0	0	0	0	0	21
04:30 PM	1	3	1	0	0	0	0	0	1	4	2	0	1	2	3	0	18
04:45 PM	5	4	2	0	2	0	2	0	0	7	1	0	1	2	0	0	26
Total	10	18	4	0	5	0	8	0	2	20	7	0	2	6	3	0	85
05:00 PM	4	13	0	0	1	0	4	0	0	5	0	0	1	1	3	0	32
05:15 PM	4	8	2	0	2	0	2	0	1	5	1	0	1	0	2	0	28
05:30 PM	5	5	0	0	1	0	9	0	2	9	1	0	1	0	1	0	34
05:45 PM	0	7	1	0	0	0	1	0	0	4	2	0	1	0	0	0	16
Total	13	33	3	0	4	0	16	0	3	23	4	0	4	1	6	0	110
06:00 PM	3	5	0	0	2	0	1	0	1	6	1	0	1	0	0	0	20
06:15 PM	0	10	0	0	0	0	2	0	1	9	1	0	0	0	2	0	25
Grand Total	28	82	9	0	22	5	36	0	13	69	21	0	8	8	12	0	313
Apprch %	23.5	68.9	7.6	0.0	34.9	7.9	57.1	0.0	12.6	67.0	20.4	0.0	28.6	28.6	42.9	0.0	
Total %	8.9	26.2	2.9	0.0	7.0	1.6	11.5	0.0	4.2	22.0	6.7	0.0	2.6	2.6	3.8	0.0	

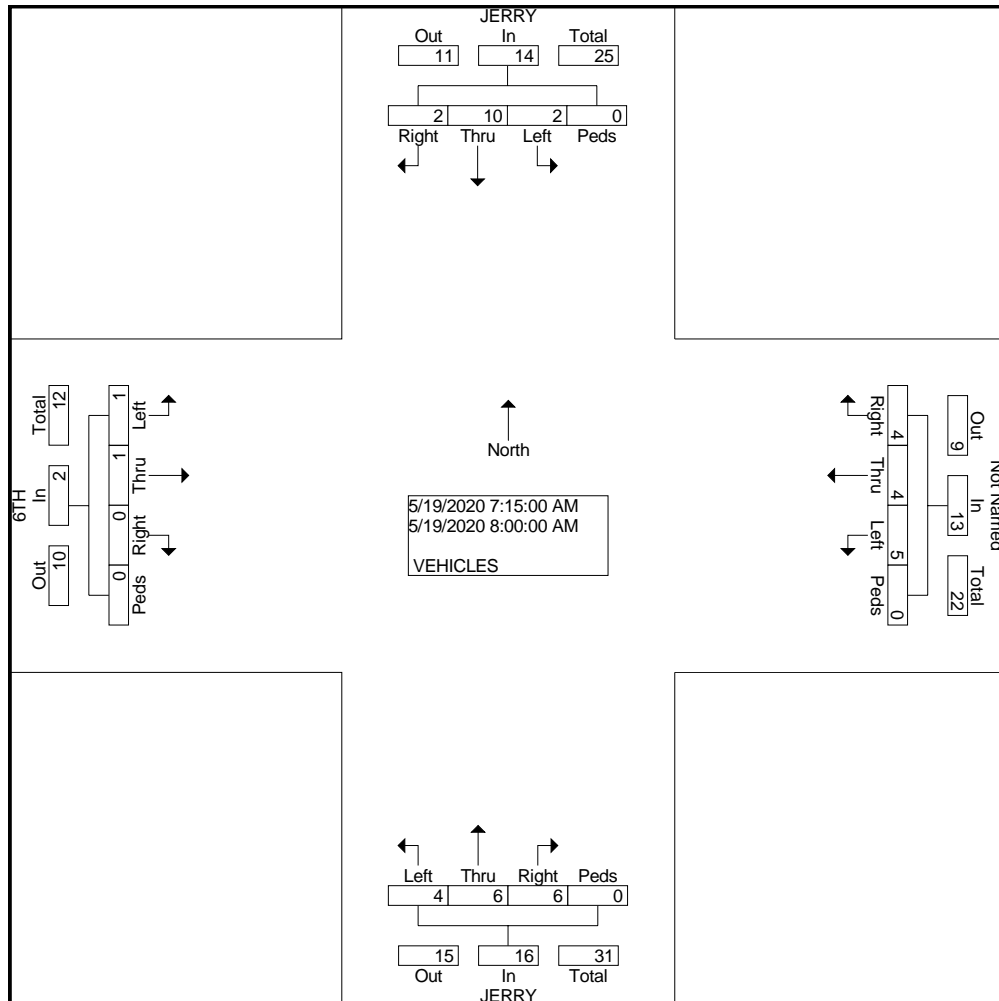
# COUNTER MEASURES INC.

1889 YORK STREET  
DENVER.COLORADO  
303-333-7409

N/S STREET: JERRY  
E/W STREET: 6TH  
CITY: CASTLE ROCK  
COUNTY: DOUGLAS

File Name : JERR6TH  
Site Code : 00000025  
Start Date : 5/19/2020  
Page No : 2

	JERRY Southbound					Westbound					JERRY Northbound					6TH Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1	07:15 AM																				
Intersection	07:15 AM																				
Volume	2	10	2	0	14	5	4	4	0	13	4	6	6	0	16	1	1	0	0	2	45
Percent	14.	71.	14.	0.0		38.	30.	30.	0.0		25.	37.	37.	0.0		50.	50.	0.0	0.0		
	3	4	3			5	8	8			0	5	5			0	0				
08:00																					
Volume	1	3	0	0	4	3	0	2	0	5	0	2	2	0	4	1	0	0	0	1	14
Peak Factor																					0.804
High Int.	07:15 AM					08:00 AM					07:15 AM					07:45 AM					
Volume	0	3	2	0	5	3	0	2	0	5	3	2	1	0	6	0	1	0	0	1	
Peak Factor	0.70					0.65					0.66					0.50					
	0					0					7					0					



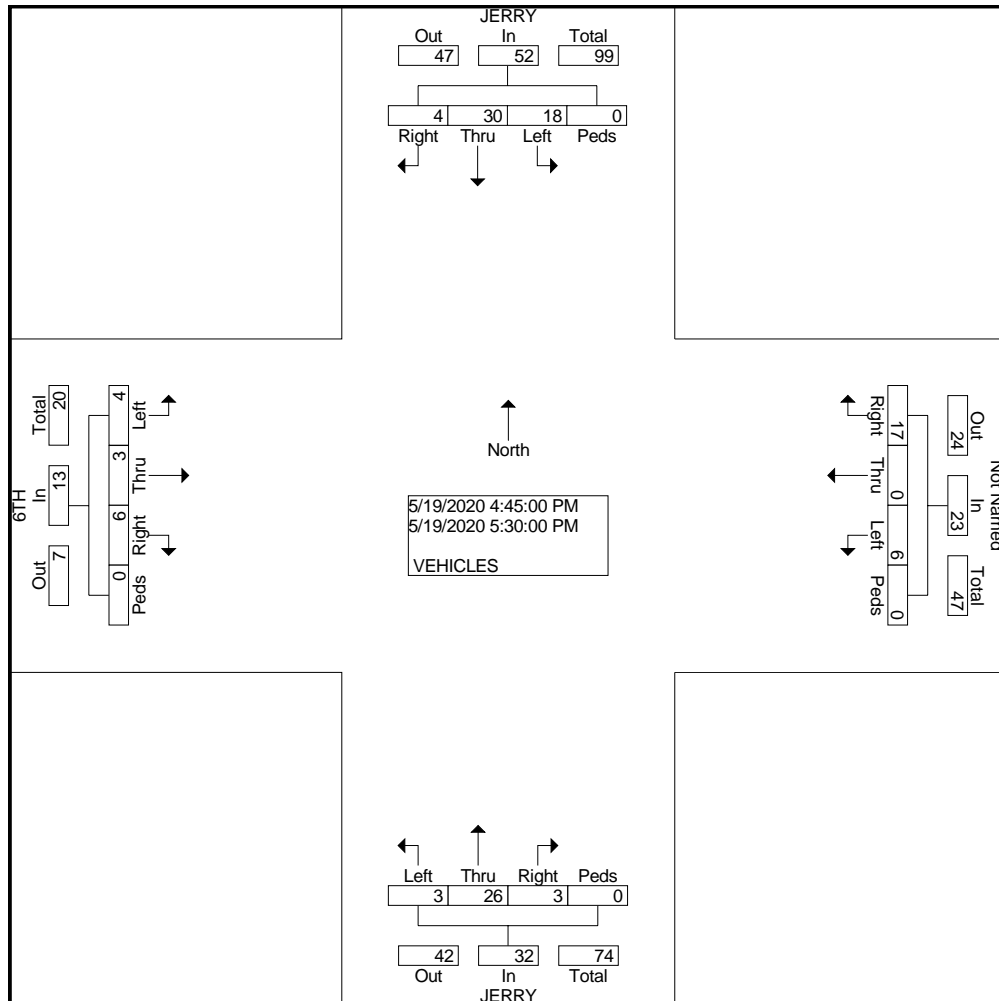
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DENVER.COLORADO  
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	JERRY Southbound					Westbound					JERRY Northbound					6TH Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 06:15 PM - Peak 1 of 1																					
Intersection	04:45 PM																				
Volume	18	30	4	0	52	6	0	17	0	23	3	26	3	0	32	4	3	6	0	13	120
Percent	34.6	57.7	7.7	0.0		26.1	0.0	73.9	0.0		9.4	81.3	9.4	0.0		30.8	23.1	46.2	0.0		
05:30																					
Volume	5	5	0	0	10	1	0	9	0	10	2	9	1	0	12	1	0	1	0	2	34
Peak Factor																					0.882
High Int.	05:00 PM																				
Volume	4	13	0	0	17	1	0	9	0	10	2	9	1	0	12	1	1	3	0	5	
Peak Factor	0.76					0.57					0.66					0.65					0
	5					5					7					0					



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1889 YORK STREET  
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N/S STREET: WILCOX  
E/W STREET: JERRY  
CITY: CASTLE ROCK  
COUNTY: DOUGLAS

File Name : WILCJERR  
Site Code : 00000000  
Start Date : 5/19/2020  
Page No : 1

## Groups Printed- VEHICLES

	WILCOX Southbound				Westbound				WILCOX Northbound				JERRY Eastbound				Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	1	36	1	0	1	0	3	0	2	73	2	3	1	0	0	0	123
06:45 AM	1	53	4	0	1	0	2	0	0	75	2	2	0	0	0	0	140
Total	2	89	5	0	2	0	5	0	2	148	4	5	1	0	0	0	263
07:00 AM	2	45	4	0	2	0	2	0	1	81	3	0	1	0	1	0	142
07:15 AM	2	46	5	0	0	0	5	0	2	89	3	0	3	0	0	0	155
07:30 AM	1	59	1	1	1	0	1	0	5	79	0	0	3	0	2	0	153
07:45 AM	1	90	8	0	0	0	2	0	1	107	3	0	3	0	5	0	220
Total	6	240	18	1	3	0	10	0	9	356	9	0	10	0	8	0	670
08:00 AM	0	79	8	0	0	0	0	0	3	89	0	0	1	0	2	0	182
08:15 AM	1	78	7	1	0	0	1	0	2	93	3	0	5	0	5	0	196
Total	1	157	15	1	0	0	1	0	5	182	3	0	6	0	7	0	378
04:00 PM	1	125	4	0	2	0	0	0	1	128	2	0	4	1	3	0	271
04:15 PM	0	142	6	1	4	0	1	0	0	127	2	0	3	0	0	0	286
04:30 PM	1	146	2	1	3	0	0	0	3	134	2	0	2	0	2	0	296
04:45 PM	3	148	6	2	0	0	4	0	5	121	2	6	1	0	3	0	301
Total	5	561	18	4	9	0	5	0	9	510	8	6	10	1	8	0	1154
05:00 PM	1	138	5	2	0	0	2	0	6	120	0	2	5	0	4	3	288
05:15 PM	0	145	4	0	1	0	0	0	1	119	0	0	4	0	2	0	276
05:30 PM	2	123	2	5	0	0	1	2	6	85	0	0	5	0	3	1	235
05:45 PM	0	118	2	0	0	0	3	0	0	71	5	0	4	0	5	0	208
Total	3	524	13	7	1	0	6	2	13	395	5	2	18	0	14	4	1007
06:00 PM	2	99	1	0	0	0	2	1	2	89	1	0	2	0	2	0	201
06:15 PM	0	101	1	0	0	0	2	1	2	73	1	0	9	0	1	0	191
Grand Total	19	1771	71	13	15	0	31	4	42	1753	31	13	56	1	40	4	3864
Apprch %	1.0	94.5	3.8	0.7	30.0	0.0	62.0	8.0	2.3	95.3	1.7	0.7	55.4	1.0	39.6	4.0	
Total %	0.5	45.8	1.8	0.3	0.4	0.0	0.8	0.1	1.1	45.4	0.8	0.3	1.4	0.0	1.0	0.1	



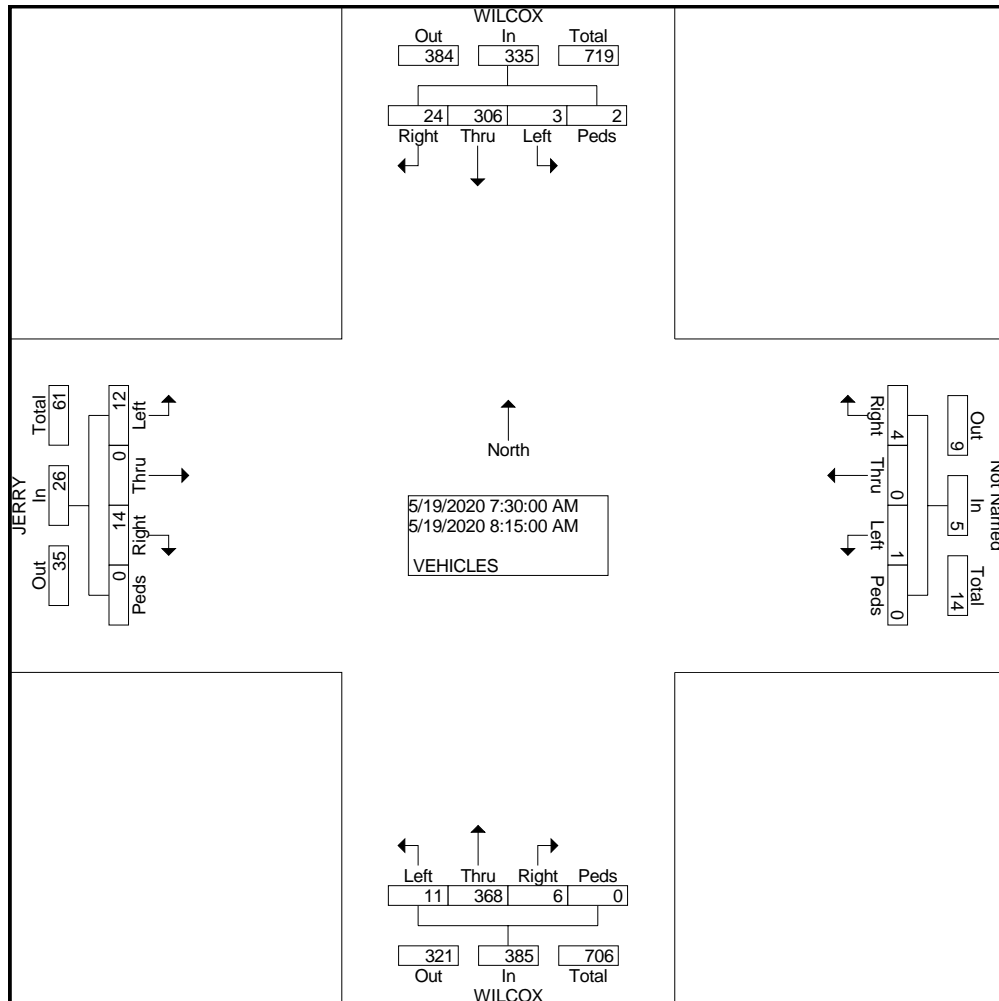
# COUNTER MEASURES INC.

1889 YORK STREET  
DENVER.COLORADO  
303-333-7409

N/S STREET: WILCOX  
E/W STREET: JERRY  
CITY: CASTLE ROCK  
COUNTY: DOUGLAS

File Name : WILCJERR  
Site Code : 00000000  
Start Date : 5/19/2020  
Page No : 2

	WILCOX Southbound					Westbound					WILCOX Northbound					JERRY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1	07:30 AM																				
Intersection	07:30 AM																				
Volume	3	306	24	2	335	1	0	4	0	5	11	368	6	0	385	12	0	14	0	26	751
Percent	0.9	91.3	7.2	0.6		20.0	0.0	80.0	0.0		2.9	95.6	1.6	0.0		46.2	0.0	53.8	0.0		
07:45 Volume Peak Factor	1	90	8	0	99	0	0	2	0	2	1	107	3	0	111	3	0	5	0	8	220
High Int. Volume Peak Factor	07:45 AM					07:30 AM					07:45 AM					08:15 AM					0.853
	1	90	8	0	99	1	0	1	0	2	1	107	3	0	111	5	0	5	0	10	
	0.84					0.62					0.86					0.65					
	6					5					7					0					



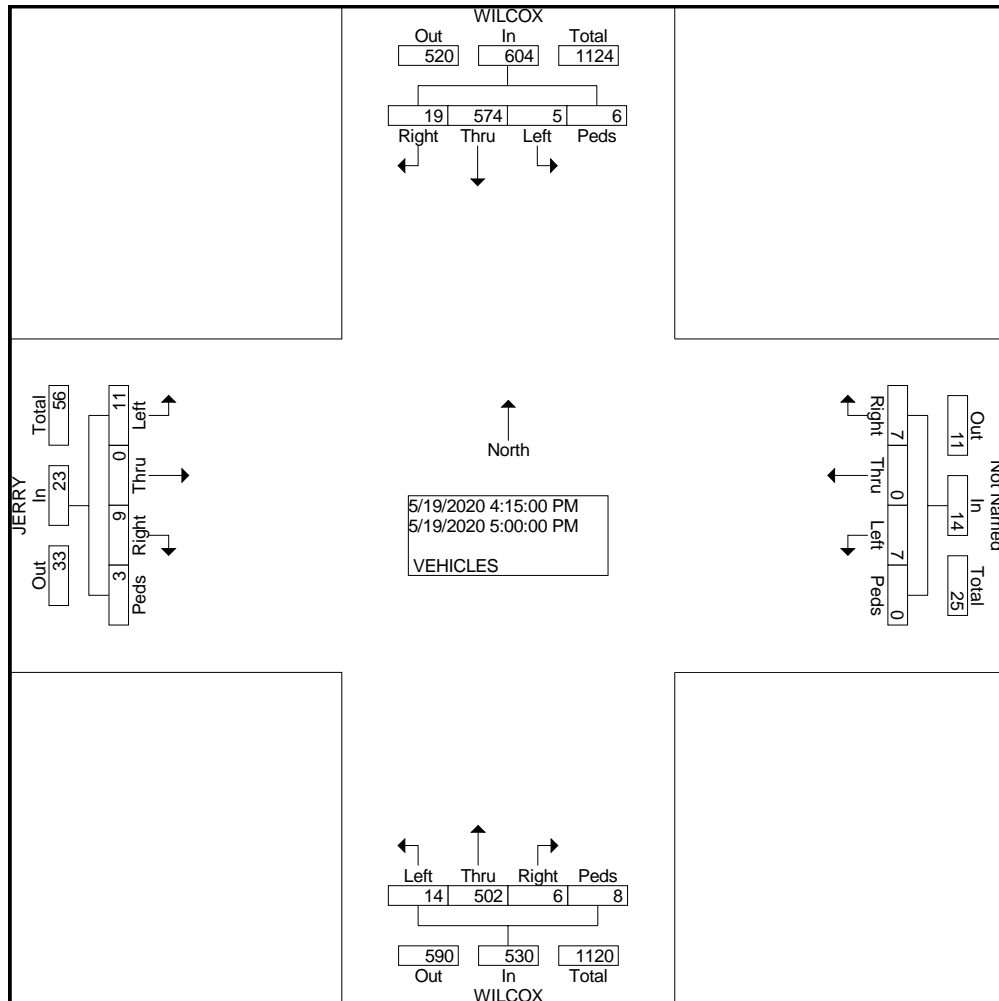
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1889 YORK STREET  
DENVER.COLORADO  
303-333-7409

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	WILCOX Southbound					Westbound					WILCOX Northbound					JERRY Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 06:15 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	5	574	19	6	604	7	0	7	0	14	14	502	6	8	530	11	0	9	3	23	1171
Percent	0.8	95.0	3.1	1.0		50.0	0.0	50.0	0.0		2.6	94.7	1.1	1.5		47.8	0.0	39.1	13.0		
04:45 Volume	3	148	6	2	159	0	0	4	0	4	5	121	2	6	134	1	0	3	0	4	301
Peak Factor	0.973																				
High Int.	04:45 PM																				
Volume	3	148	6	2	159	4	0	1	0	5	3	134	2	0	139	5	0	4	3	12	
Peak Factor	0.95					0.70					0.95					0.47					9
	0					0					3										



## LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual*, Transportation Research Board, 2016, 6th Edition

### SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

<b>LOS</b>	<b><u>Average Vehicle Delay</u> sec/vehicle</b>	<b><u>Operational Characteristics</u></b>
<b>A</b>	<10 seconds	Describes operations with low control delay, up to 10 sec/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
<b>B</b>	10 to 20 seconds	Describes operations with control delay greater than 10 seconds and up to 20 sec/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
<b>C</b>	20 to 35 seconds	Describes operations with control delay greater than 20 and up to 35 sec/veh. These higher delays may result from only fair progression, longer cycle length, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
<b>D</b>	35 to 55 seconds	Describes operations with control delay greater than 35 and up to 55 sec/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
<b>E</b>	55 to 80 seconds	Describes operations with control delay greater than 55 and up to 80 sec/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.
<b>F</b>	>80 seconds	Describes operations with control delay in excess of 80 sec/veh. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

## LEVEL OF SERVICE DEFINITIONS

From *Highway Capacity Manual*, Transportation Research Board, 2016, 6th Edition







### UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

Applicable to Two-Way Stop Control, All-Way Stop Control, and Roundabouts

LOS	Average Vehicle Control Delay	Operational Characteristics
A	<10 seconds	Normally, vehicles on the stop-controlled approach only have to wait up to 10 seconds before being able to clear the intersection. Left-turning vehicles on the uncontrolled street do not have to wait to make their turn.
B	10 to 15 seconds	Vehicles on the stop-controlled approach will experience delays before being able to clear the intersection. <u>The delay could be up to 15 seconds.</u> Left-turning vehicles on the uncontrolled street may have to wait to make their turn.
C	15 to 25 seconds	Vehicles on the stop-controlled approach can expect delays in the range of 15 to 25 seconds before clearing the intersection. Motorists may begin to take chances due to the long delays, thereby posing a safety risk to through traffic. <u>Left-turning vehicles on the uncontrolled street will now be required to wait to make their turn causing a queue to be created in the turn lane.</u>
D	25 to 35 seconds	<u>This is the point at which a traffic signal may be warranted for this intersection.</u> The delays for the stop-controlled intersection are not considered to be excessive. The length of the queue may begin to block other public and private access points.
E	35 to 50 seconds	The delays for all critical traffic movements are considered to be unacceptable. The length of the queues for the stop-controlled approaches as well as the left-turn movements are extremely long. <u>There is a high probability that this intersection will meet traffic signal warrants.</u> The ability to install a traffic signal is affected by the location of other existing traffic signals. Consideration may be given to restricting the accesses by eliminating the left-turn movements from and to the stop-controlled approach.
F	>50 seconds	The delay for the critical traffic movements are probably in excess of 100 seconds. The length of the queues are extremely long. Motorists are selecting alternative routes due to the long delays. <u>The only remedy for these long delays is installing a traffic signal or restricting the accesses.</u> The potential for accidents at this intersection are extremely high due to motorist taking more risky chances. If the median permits, motorists begin making two-stage left-turns.

HCM 6th TWSC  
1: Wilcox Street & Jerry Street

Existing  
AM Peak

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	0	15	2	0	5	12	545	8	5	390	25
Future Vol, veh/h	13	0	15	2	0	5	12	545	8	5	390	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	0	16	2	0	5	13	592	9	5	424	27
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1073	1075	438	1079	1084	597	451	0	0	601	0	0
Stage 1	448	448	-	623	623	-	-	-	-	-	-	-
Stage 2	625	627	-	456	461	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	186	193	619	*183	*189	*633	1109	-	-	*947	-	-
Stage 1	590	573	-	*597	*523	-	-	-	-	-	-	-
Stage 2	596	520	-	*584	*565	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	182	189	619	*176	*185	*633	1109	-	-	*947	-	-
Mov Cap-2 Maneuver	182	189	-	*176	*185	-	-	-	-	-	-	-
Stage 1	583	570	-	*590	*517	-	-	-	-	-	-	-
Stage 2	584	514	-	*566	*562	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	18.7		15.1			0.2			0.1			
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1109	-	-	293	363	*947	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.104	0.021	0.006	-	-				
HCM Control Delay (s)	8.3	-	-	18.7	15.1	8.8	-	-				
HCM Lane LOS	A	-	-	C	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			



HCM 6th TWSC  
2: Jerry Street & 6th Street

Existing  
AM Peak

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	1	1	7	4	4	6	8	8	2	12	2
Future Vol, veh/h	1	1	1	7	4	4	6	8	8	2	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1	8	4	4	7	9	9	2	13	2
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	50	50	14	47	47	14	15	0	0	18	0	0
Stage 1	18	18	-	28	28	-	-	-	-	-	-	-
Stage 2	32	32	-	19	19	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	950	841	1066	954	845	1066	1603	-	-	1599	-	-
Stage 1	1001	880	-	989	872	-	-	-	-	-	-	-
Stage 2	984	868	-	1000	880	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	939	837	1066	948	841	1066	1603	-	-	1599	-	-
Mov Cap-2 Maneuver	939	837	-	948	841	-	-	-	-	-	-	-
Stage 1	997	879	-	985	869	-	-	-	-	-	-	-
Stage 2	971	865	-	997	879	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	8.9		8.9			2			0.9			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1603	-	-	938	944	1599	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.003	0.017	0.001	-	-				
HCM Control Delay (s)	7.3	0	-	8.9	8.9	7.3	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-				

# Timings 3: Wilcox Street & 6th Street

Existing  
AM Peak

	→	↖	←	↙	↑	↘	↓	
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø7
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	
Traffic Volume (vph)	1	5	2	6	465	48	345	
Future Volume (vph)	1	5	2	6	465	48	345	
Turn Type	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	
Protected Phases	4	3	8	5	2	1	6	7
Permitted Phases		8		2		6		
Detector Phase	4	3	8	5	2	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	22.5	9.5	22.5	9.5	22.5	9.5
Total Split (s)	23.6	9.6	23.2	9.6	73.8	13.0	77.2	10.0
Total Split (%)	19.7%	8.0%	19.3%	8.0%	61.5%	10.8%	64.3%	8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	None	C-Max	None
Act Effect Green (s)	6.3	8.2	8.2	98.7	94.3	102.2	100.8	
Actuated g/C Ratio	0.05	0.07	0.07	0.82	0.79	0.85	0.84	
v/c Ratio	0.06	0.05	0.52	0.01	0.35	0.07	0.25	
Control Delay	38.8	49.8	19.1	2.5	5.0	2.0	3.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	38.8	49.8	19.1	2.5	5.0	2.0	3.2	
LOS	D	D	B	A	A	A	A	
Approach Delay	38.8		20.5		4.9		3.1	
Approach LOS	D		C		A		A	

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 6.0

Intersection LOS: A

Intersection Capacity Utilization 46.4%

ICU Level of Service A






Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 6th Street

↙ Ø1	↖ Ø2 (R)	↘ Ø3	↗ Ø4
13 s	73.8 s	9.6 s	23.6 s
↙ Ø5	↖ Ø6 (R)	↘ Ø7	↗ Ø8
9.6 s	77.2 s	10 s	23.2 s





















HCM 6th TWSC  
4: Jerry Street & 5th Street

Existing  
AM Peak

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	174	59	59	224	7	20	5	28	1	11	8
Future Vol, veh/h	10	174	59	59	224	7	20	5	28	1	11	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	189	64	64	243	8	22	5	30	1	12	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	251	0	0	253	0	0	629	622	221	636	650	247
Stage 1	-	-	-	-	-	-	243	243	-	375	375	-
Stage 2	-	-	-	-	-	-	386	379	-	261	275	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1345	-	-	1312	-	-	425	419	819	420	402	894
Stage 1	-	-	-	-	-	-	761	705	-	702	641	-
Stage 2	-	-	-	-	-	-	691	637	-	744	683	-
Platoon blocked, %	1	-	-	-	-	-	1	1	-	1	1	1
Mov Cap-1 Maneuver	1345	-	-	1312	-	-	393	395	819	382	379	894
Mov Cap-2 Maneuver	-	-	-	-	-	-	393	395	-	382	379	-
Stage 1	-	-	-	-	-	-	753	698	-	695	609	-
Stage 2	-	-	-	-	-	-	638	606	-	704	676	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.6			12.4			12.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	542	1345	-	-	1312	-	-	493				
HCM Lane V/C Ratio	0.106	0.008	-	-	0.049	-	-	0.044				
HCM Control Delay (s)	12.4	7.7	0	-	7.9	-	-	12.6				
HCM Lane LOS	B	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.1				

# Timings 5: Wilcox Street & 5th Street

Existing  
AM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	8	131	124	245	335	51	144	60	198	152
Future Volume (vph)	8	131	124	245	335	51	144	60	198	152
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	9.5	32.0	21.0	43.5	43.5	10.5	39.0	39.0	28.0	56.5
Total Split (%)	7.9%	26.7%	17.5%	36.3%	36.3%	8.8%	32.5%	32.5%	23.3%	47.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	21.5	16.5	33.6	31.7	31.7	68.0	61.1	61.1	77.2	67.9
Actuated g/C Ratio	0.18	0.14	0.28	0.26	0.26	0.57	0.51	0.51	0.64	0.57
v/c Ratio	0.04	0.69	0.45	0.54	0.53	0.08	0.17	0.07	0.28	0.17
Control Delay	28.1	60.1	36.7	41.6	6.4	10.5	19.2	0.2	10.8	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	60.1	36.7	41.6	6.4	10.5	19.2	0.2	10.8	14.8
LOS	C	E	D	D	A	B	B	A	B	B
Approach Delay		58.5		24.0			13.0			12.6
Approach LOS		E		C			B			B

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 23.3

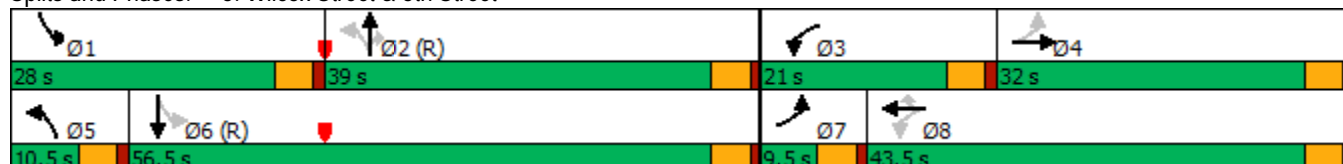
Intersection LOS: C

Intersection Capacity Utilization 50.6%

ICU Level of Service A

Analysis Period (min) 15

## Splits and Phases: 5: Wilcox Street & 5th Street



HCM 6th TWSC  
1: Wilcox Street & Jerry Street

Existing  
PM Peak

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	12	0	10	10	0	10	15	605	8	5	625	20
Future Vol, veh/h	12	0	10	10	0	10	15	605	8	5	625	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	11	11	0	11	16	658	9	5	679	22

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1400	1399	690	1401	1406	663	701	0	0	667	0	0
Stage 1	700	700	-	695	695	-	-	-	-	-	-	-
Stage 2	700	699	-	706	711	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	72	85	445	*72	*84	*581	896	-	-	*869	-	-
Stage 1	430	441	-	*548	*480	-	-	-	-	-	-	-
Stage 2	544	478	-	*427	*436	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	70	83	445	*69	*82	*581	896	-	-	*869	-	-
Mov Cap-2 Maneuver	70	83	-	*69	*82	-	-	-	-	-	-	-
Stage 1	422	438	-	*538	*471	-	-	-	-	-	-	-
Stage 2	524	469	-	*414	*433	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	45.2		40.4		0.2		0.1	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	896	-	-	113	123	*869	-
HCM Lane V/C Ratio	0.018	-	-	0.212	0.177	0.006	-
HCM Control Delay (s)	9.1	-	-	45.2	40.4	9.2	-
HCM Lane LOS	A	-	-	E	E	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.6	0	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th TWSC  
2: Jerry Street & 6th Street

















Existing  
PM Peak

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	3	11	15	0	17	5	40	5	18	40	4
Future Vol, veh/h	4	3	11	15	0	17	5	40	5	18	40	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	12	16	0	18	5	43	5	20	43	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	150	143	45	149	143	46	47	0	0	48	0	0
Stage 1	85	85	-	56	56	-	-	-	-	-	-	-
Stage 2	65	58	-	93	87	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	818	748	1025	819	748	1023	1560	-	-	1559	-	-
Stage 1	923	824	-	956	848	-	-	-	-	-	-	-
Stage 2	946	847	-	914	823	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	793	736	1025	797	736	1023	1560	-	-	1559	-	-
Mov Cap-2 Maneuver	793	736	-	797	736	-	-	-	-	-	-	-
Stage 1	920	813	-	953	845	-	-	-	-	-	-	-
Stage 2	926	844	-	888	812	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.1		9.1		0.7		2.1					
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1560	-	-	907	903	1559	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.022	0.039	0.013	-	-				
HCM Control Delay (s)	7.3	0	-	9.1	9.1	7.3	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-				



# Timings 3: Wilcox Street & 6th Street

Existing  
PM Peak



								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	19	6	8	9	8	485	70	560
Future Volume (vph)	19	6	8	9	8	485	70	560
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	9.8	23.0	9.6	22.8	9.6	75.2	12.2	77.8
Total Split (%)	8.2%	19.2%	8.0%	19.0%	8.0%	62.7%	10.2%	64.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	10.9	9.8	9.9	7.8	94.7	90.2	98.8	97.1
Actuated g/C Ratio	0.09	0.08	0.08	0.06	0.79	0.75	0.82	0.81
v/c Ratio	0.19	0.20	0.07	0.63	0.01	0.38	0.12	0.41
Control Delay	49.6	25.8	44.4	23.0	3.8	5.6	3.3	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	25.8	44.4	23.0	3.8	5.6	3.3	6.0
LOS	D	C	D	C	A	A	A	A
Approach Delay		35.4		24.3		5.6		5.7
Approach LOS		D		C		A		A

## Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
Natural Cycle: 75  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.63  
Intersection Signal Delay: 8.7  
Intersection Capacity Utilization 61.3%  
Analysis Period (min) 15






Intersection LOS: A  
ICU Level of Service B

## Splits and Phases: 3: Wilcox Street & 6th Street

							
Ø1	Ø2 (R)	Ø3	Ø4	Ø5	Ø6 (R)	Ø7	Ø8
12.2 s	75.2 s	9.6 s	23 s	9.6 s	77.8 s	9.8 s	22.8 s





















HCM 6th TWSC  
4: Jerry Street & 5th Street

Existing  
PM Peak

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	236	70	17	226	32	45	13	72	34	19	28
Future Vol, veh/h	14	236	70	17	226	32	45	13	72	34	19	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	257	76	18	246	35	49	14	78	37	21	30
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	281	0	0	333	0	0	650	642	295	671	663	264
Stage 1	-	-	-	-	-	-	325	325	-	300	300	-
Stage 2	-	-	-	-	-	-	325	317	-	371	363	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1315	-	-	1226	-	-	416	411	744	400	397	893
Stage 1	-	-	-	-	-	-	687	649	-	799	708	-
Stage 2	-	-	-	-	-	-	770	693	-	649	625	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1315	-	-	1226	-	-	377	399	744	341	386	893
Mov Cap-2 Maneuver	-	-	-	-	-	-	377	399	-	341	386	-
Stage 1	-	-	-	-	-	-	677	640	-	788	697	-
Stage 2	-	-	-	-	-	-	711	682	-	560	616	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.5			14.4			15		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	523	1315	-	-	1226	-	-	449				
HCM Lane V/C Ratio	0.27	0.012	-	-	0.015	-	-	0.196				
HCM Control Delay (s)	14.4	7.8	0	-	8	-	-	15				
HCM Lane LOS	B	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.7				

# Timings 5: Wilcox Street & 5th Street

Existing  
PM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	43	230	140	164	235	66	236	132	399	262
Future Volume (vph)	43	230	140	164	235	66	236	132	399	262
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	10.2	32.0	16.0	37.8	37.8	11.4	34.0	34.0	38.0	60.6
Total Split (%)	8.5%	26.7%	13.3%	31.5%	31.5%	9.5%	28.3%	28.3%	31.7%	50.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	29.9	24.3	39.7	31.6	31.6	51.5	44.7	44.7	71.3	62.0
Actuated g/C Ratio	0.25	0.20	0.33	0.26	0.26	0.43	0.37	0.37	0.59	0.52
v/c Ratio	0.14	0.85	0.63	0.36	0.42	0.14	0.37	0.20	0.66	0.30
Control Delay	27.4	65.6	40.3	38.3	6.3	14.7	32.4	3.0	24.7	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	65.6	40.3	38.3	6.3	14.7	32.4	3.0	24.7	22.5
LOS	C	E	D	D	A	B	C	A	C	C
Approach Delay		60.7		24.9			20.8			23.8
Approach LOS		E		C			C			C

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 29.7

Intersection LOS: C

Intersection Capacity Utilization 73.2%

ICU Level of Service D







Analysis Period (min) 15

## Splits and Phases: 5: Wilcox Street & 5th Street



HCM 6th TWSC  
1: Wilcox Street & Jerry Street

2023 Background  
AM Peak

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	1	16	2	1	5	13	585	8	5	425	26
Future Vol, veh/h	16	1	16	2	1	5	13	585	8	5	425	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	1	17	2	1	5	14	636	9	5	462	28
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1158	1159	476	1164	1169	641	490	0	0	645	0	0
Stage 1	486	486	-	669	669	-	-	-	-	-	-	-
Stage 2	672	673	-	495	500	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	*147	*157	589	*145	*153	*581	1073	-	-	*869	-	-
Stage 1	*563	*551	-	*548	*480	-	-	-	-	-	-	-
Stage 2	*548	*480	-	*556	*543	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*143	*154	589	*138	*150	*581	1073	-	-	*869	-	-
Mov Cap-2 Maneuver	*143	*154	-	*138	*150	-	-	-	-	-	-	-
Stage 1	*556	*548	-	*541	*473	-	-	-	-	-	-	-
Stage 2	*534	*473	-	*535	*540	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	23.8		18.8		0.2		0.1					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1073	-	-	227	269	*869	-	-				
HCM Lane V/C Ratio	0.013	-	-	0.158	0.032	0.006	-	-				
HCM Control Delay (s)	8.4	-	-	23.8	18.8	9.2	-	-				
HCM Lane LOS	A	-	-	C	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th TWSC  
2: Jerry Street & 6th Street

2023 Background  
AM Peak

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	1	1	8	4	4	6	10	9	3	14	2
Future Vol, veh/h	1	1	1	8	4	4	6	10	9	3	14	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1	9	4	4	7	11	10	3	15	2
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	56	57	16	53	53	16	17	0	0	21	0	0
Stage 1	22	22	-	30	30	-	-	-	-	-	-	-
Stage 2	34	35	-	23	23	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	941	834	1063	946	838	1063	1600	-	-	1595	-	-
Stage 1	996	877	-	987	870	-	-	-	-	-	-	-
Stage 2	982	866	-	995	876	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	929	829	1063	939	833	1063	1600	-	-	1595	-	-
Mov Cap-2 Maneuver	929	829	-	939	833	-	-	-	-	-	-	-
Stage 1	992	875	-	983	867	-	-	-	-	-	-	-
Stage 2	969	863	-	991	874	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	8.9		8.9			1.7			1.1			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1600	-	-	931	937	1595	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.004	0.019	0.002	-	-				
HCM Control Delay (s)	7.3	0	-	8.9	8.9	7.3	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-				

# Timings 3: Wilcox Street & 6th Street

2023 Background  
AM Peak

	→	↖	←	↙	↑	↘	↓	
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø7
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	
Traffic Volume (vph)	1	6	2	7	495	54	370	
Future Volume (vph)	1	6	2	7	495	54	370	
Turn Type	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	
Protected Phases	4	3	8	5	2	1	6	7
Permitted Phases		8		2		6		
Detector Phase	4	3	8	5	2	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	22.5	9.5	22.5	9.5	22.5	9.5
Total Split (s)	23.6	9.6	23.2	9.6	73.8	13.0	77.2	10.0
Total Split (%)	19.7%	8.0%	19.3%	8.0%	61.5%	10.8%	64.3%	8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	None	C-Max	None
Act Effect Green (s)	6.3	8.2	8.2	98.6	94.1	102.2	100.7	
Actuated g/C Ratio	0.05	0.07	0.07	0.82	0.78	0.85	0.84	
v/c Ratio	0.06	0.07	0.55	0.01	0.37	0.09	0.27	
Control Delay	38.4	50.5	19.0	2.6	5.1	2.0	3.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	38.4	50.5	19.0	2.6	5.1	2.0	3.4	
LOS	D	D	B	A	A	A	A	
Approach Delay	38.4		20.8		5.0		3.2	
Approach LOS	D		C		A		A	

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 6.1

Intersection LOS: A

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15






Splits and Phases: 3: Wilcox Street & 6th Street

↙ Ø1	↖ Ø2 (R)	↘ Ø3	↗ Ø4
13 s	73.8 s	9.6 s	23.6 s
↙ Ø5	↖ Ø6 (R)	↘ Ø7	↗ Ø8
9.6 s	77.2 s	10 s	23.2 s























HCM 6th TWSC  
4: Jerry Street & 5th Street

2023 Background  
AM Peak

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	185	64	64	240	8	13	6	30	1	12	9
Future Vol, veh/h	11	185	64	64	240	8	13	6	30	1	12	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	201	70	70	261	9	14	7	33	1	13	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	270	0	0	271	0	0	677	670	236	686	701	266
Stage 1	-	-	-	-	-	-	260	260	-	406	406	-
Stage 2	-	-	-	-	-	-	417	410	-	280	295	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1329	-	-	1292	-	-	396	393	803	389	374	891
Stage 1	-	-	-	-	-	-	745	693	-	683	623	-
Stage 2	-	-	-	-	-	-	672	620	-	727	669	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1329	-	-	1292	-	-	362	368	803	350	350	891
Mov Cap-2 Maneuver	-	-	-	-	-	-	362	368	-	350	350	-
Stage 1	-	-	-	-	-	-	737	685	-	675	589	-
Stage 2	-	-	-	-	-	-	615	587	-	683	662	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.6			12.3			13.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	547	1329	-	-	1292	-	-	466				
HCM Lane V/C Ratio	0.097	0.009	-	-	0.054	-	-	0.051				
HCM Control Delay (s)	12.3	7.7	0	-	7.9	-	-	13.1				
HCM Lane LOS	B	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0.2	-	-	0.2				

# Timings 5: Wilcox Street & 5th Street

2023 Background  
AM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	9	140	135	260	355	55	155	67	210	165
Future Volume (vph)	9	140	135	260	355	55	155	67	210	165
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	9.5	32.0	21.0	43.5	43.5	10.5	39.0	39.0	28.0	56.5
Total Split (%)	7.9%	26.7%	17.5%	36.3%	36.3%	8.8%	32.5%	32.5%	23.3%	47.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	22.4	17.4	35.0	33.1	33.1	66.3	59.1	59.1	75.9	66.4
Actuated g/C Ratio	0.19	0.14	0.29	0.28	0.28	0.55	0.49	0.49	0.63	0.55
v/c Ratio	0.04	0.71	0.47	0.55	0.54	0.09	0.18	0.08	0.30	0.19
Control Delay	27.4	60.2	36.4	40.9	6.1	11.1	20.5	0.2	11.5	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	60.2	36.4	40.9	6.1	11.1	20.5	0.2	11.5	15.7
LOS	C	E	D	D	A	B	C	A	B	B
Approach Delay		58.6		23.7			13.7			13.5
Approach LOS		E		C			B			B

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 23.5

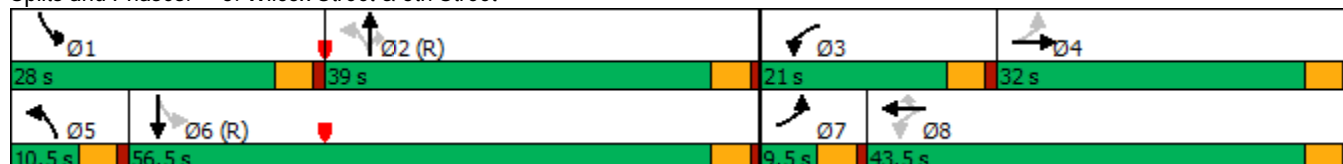
Intersection LOS: C

Intersection Capacity Utilization 52.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Wilcox Street & 5th Street



Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	13	1	11	10	1	10	16	650	8	5	685	21
Future Vol, veh/h	13	1	11	10	1	10	16	650	8	5	685	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1	12	11	1	11	17	707	9	5	745	23

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1519	1517	757	1519	1524	712	768	0	0	716	0	0
Stage 1	767	767	-	746	746	-	-	-	-	-	-	-
Stage 2	752	750	-	773	778	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	*46	*57	408	*46	*56	*529	846	-	-	*791	-	-
Stage 1	*395	*411	-	*499	*437	-	-	-	-	-	-	-
Stage 2	*499	*437	-	*392	*407	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*43	*55	408	*43	*54	*529	846	-	-	*791	-	-
Mov Cap-2 Maneuver	*43	*55	-	*43	*54	-	-	-	-	-	-	-
Stage 1	*387	*409	-	*489	*428	-	-	-	-	-	-	-
Stage 2	*477	*428	-	*377	*405	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	82.6		69.2		0.2		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	846	-	-	72 78	* 791	-	-
HCM Lane V/C Ratio	0.021	-	-	0.377 0.293	0.007	-	-
HCM Control Delay (s)	9.3	-	-	82.6 69.2	9.6	-	-
HCM Lane LOS	A	-	-	F F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4 1.1	0	-	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th TWSC  
2: Jerry Street & 6th Street

2023 Background  
PM Peak

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	3	11	17	1	18	5	45	6	20	45	4
Future Vol, veh/h	4	3	11	17	1	18	5	45	6	20	45	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	12	18	1	20	5	49	7	22	49	4
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	168	161	51	166	160	53	53	0	0	56	0	0
Stage 1	95	95	-	63	63	-	-	-	-	-	-	-
Stage 2	73	66	-	103	97	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	796	731	1017	798	732	1014	1553	-	-	1549	-	-
Stage 1	912	816	-	948	842	-	-	-	-	-	-	-
Stage 2	937	840	-	903	815	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	769	718	1017	775	719	1014	1553	-	-	1549	-	-
Mov Cap-2 Maneuver	769	718	-	775	719	-	-	-	-	-	-	-
Stage 1	909	804	-	945	839	-	-	-	-	-	-	-
Stage 2	915	837	-	875	803	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.1		9.3			0.7			2.1			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1553	-	-	891	876	1549	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.022	0.045	0.014	-	-				
HCM Control Delay (s)	7.3	0	-	9.1	9.3	7.4	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-				

2023 Background  
PM Peak

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	

12.2 s	75.2 s	9.6 s	23 s
9.6 s	77.8 s	9.8 s	22.8 s

HCM 6th TWSC  
4: Jerry Street & 5th Street





















2023 Background  
PM Peak

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	
Traffic Vol, veh/h	15	250	76	18	240	35	49	14	78	37	21	30
Future Vol, veh/h	15	250	76	18	240	35	49	14	78	37	21	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	272	83	20	261	38	53	15	85	40	23	33
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	299	0	0	355	0	0	694	685	314	716	707	280
Stage 1	-	-	-	-	-	-	346	346	-	320	320	-
Stage 2	-	-	-	-	-	-	348	339	-	396	387	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1291	-	-	1204	-	-	383	384	726	368	371	872
Stage 1	-	-	-	-	-	-	670	635	-	776	690	-
Stage 2	-	-	-	-	-	-	745	675	-	629	610	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1291	-	-	1204	-	-	342	372	726	307	359	872
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	372	-	307	359	-
Stage 1	-	-	-	-	-	-	659	625	-	764	679	-
Stage 2	-	-	-	-	-	-	681	664	-	533	600	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.5			15.7			16.4		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	489	1291	-	-	1204	-	-	412				
HCM Lane V/C Ratio	0.313	0.013	-	-	0.016	-	-	0.232				
HCM Control Delay (s)	15.7	7.8	0	-	8	-	-	16.4				
HCM Lane LOS	C	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	1.3	0	-	-	0.1	-	-	0.9				



# Timings 5: Wilcox Street & 5th Street

2023 Background  
PM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	46	245	153	175	250	71	255	144	430	285
Future Volume (vph)	46	245	153	175	250	71	255	144	430	285
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	10.2	32.0	16.0	37.8	37.8	11.4	34.0	34.0	38.0	60.6
Total Split (%)	8.5%	26.7%	13.3%	31.5%	31.5%	9.5%	28.3%	28.3%	31.7%	50.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	30.9	25.2	40.8	32.7	32.7	48.3	41.6	41.6	70.2	61.1
Actuated g/C Ratio	0.26	0.21	0.34	0.27	0.27	0.40	0.35	0.35	0.58	0.51
v/c Ratio	0.15	0.88	0.70	0.38	0.43	0.17	0.43	0.24	0.73	0.34
Control Delay	27.1	67.5	44.4	37.9	6.2	15.7	35.6	4.6	29.7	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.1	67.5	44.4	37.9	6.2	15.7	35.6	4.6	29.7	23.6
LOS	C	E	D	D	A	B	D	A	C	C
Approach Delay		62.3		25.9			23.1			27.2
Approach LOS		E		C			C			C

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 31.8



Intersection LOS: C

Intersection Capacity Utilization 77.7%

ICU Level of Service D

Analysis Period (min) 15

## Splits and Phases: 5: Wilcox Street & 5th Street

			
Ø1	Ø2 (R)	Ø3	Ø4
38 s	34 s	16 s	32 s
			
Ø5	Ø6 (R)	Ø7	Ø8
11.4 s	60.6 s	10.2 s	37.8 s

HCM 6th TWSC  
1: Wilcox Street & Jerry Street

2023 Total  
AM Peak

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵		↵	↵	
Traffic Vol, veh/h	25	1	16	2	1	5	13	622	8	5	433	43
Future Vol, veh/h	25	1	16	2	1	5	13	622	8	5	433	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1	17	2	1	5	14	676	9	5	471	47
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1217	1218	495	1223	1237	681	518	0	0	685	0	0
Stage 1	505	505	-	709	709	-	-	-	-	-	-	-
Stage 2	712	713	-	514	528	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	*123	*133	575	*121	*127	*555	1048	-	-	*830	-	-
Stage 1	*549	*540	-	*523	*458	-	-	-	-	-	-	-
Stage 2	*523	*458	-	*543	*528	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*120	*131	575	*115	*125	*555	1048	-	-	*830	-	-
Mov Cap-2 Maneuver	*120	*131	-	*115	*125	-	-	-	-	-	-	-
Stage 1	*542	*537	-	*516	*452	-	-	-	-	-	-	-
Stage 2	*510	*452	-	*522	*525	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	33.3		21		0.2		0.1					
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1048	-	-	172	233	*830	-	-				
HCM Lane V/C Ratio	0.013	-	-	0.265	0.037	0.007	-	-				
HCM Control Delay (s)	8.5	-	-	33.3	21	9.4	-	-				
HCM Lane LOS	A	-	-	D	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	1	0.1	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

















HCM 6th TWSC  
2: Jerry Street & 6th Street

2023 Total  
AM Peak

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	1	1	15	4	10	6	22	19	32	24	2
Future Vol, veh/h	1	1	1	15	4	10	6	22	19	32	24	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1	16	4	11	7	24	21	35	26	2
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	153	156	27	147	147	35	28	0	0	45	0	0
Stage 1	97	97	-	49	49	-	-	-	-	-	-	-
Stage 2	56	59	-	98	98	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	814	736	1048	821	744	1038	1585	-	-	1563	-	-
Stage 1	910	815	-	964	854	-	-	-	-	-	-	-
Stage 2	956	846	-	908	814	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	785	715	1048	802	723	1038	1585	-	-	1563	-	-
Mov Cap-2 Maneuver	785	715	-	802	723	-	-	-	-	-	-	-
Stage 1	905	796	-	959	850	-	-	-	-	-	-	-
Stage 2	936	842	-	885	795	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.4		9.4			0.9			4.1			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1585	-	-	827	856	1563	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.004	0.037	0.022	-	-				
HCM Control Delay (s)	7.3	0	-	9.4	9.4	7.4	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0.1	-	-				

# Timings 3: Wilcox Street & 6th Street

2023 Total  
AM Peak

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	37	1	6	2	11	495	54	370
Future Volume (vph)	37	1	6	2	11	495	54	370
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	10.0	23.6	9.6	23.2	9.6	73.8	13.0	77.2
Total Split (%)	8.3%	19.7%	8.0%	19.3%	8.0%	61.5%	10.8%	64.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	14.5	13.4	11.4	7.3	91.4	86.8	94.4	91.5
Actuated g/C Ratio	0.12	0.11	0.10	0.06	0.76	0.72	0.79	0.76
v/c Ratio	0.31	0.09	0.05	0.58	0.02	0.41	0.10	0.30
Control Delay	51.9	24.2	43.0	21.3	3.9	7.3	3.7	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.9	24.2	43.0	21.3	3.9	7.3	3.7	6.4
LOS	D	C	D	C	A	A	A	A
Approach Delay		43.6		22.5		7.2		6.0
Approach LOS		D		C		A		A

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 10.0









Intersection LOS: B

Intersection Capacity Utilization 50.6%

ICU Level of Service A






Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 6th Street

				
Ø1	Ø2 (R)		Ø3	Ø4
13 s	73.8 s		9.6 s	23.6 s
				
Ø5	Ø6 (R)		Ø7	Ø8
9.6 s	77.2 s		10 s	23.2 s





















HCM 6th TWSC  
4: Jerry Street & 5th Street

2023 Total  
AM Peak

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	185	64	64	240	22	13	9	30	6	19	14
Future Vol, veh/h	16	185	64	64	240	22	13	9	30	6	19	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	201	70	70	261	24	14	10	33	7	21	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	285	0	0	271	0	0	701	695	236	705	718	273
Stage 1	-	-	-	-	-	-	270	270	-	413	413	-
Stage 2	-	-	-	-	-	-	431	425	-	292	305	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1309	-	-	1292	-	-	379	378	803	375	365	881
Stage 1	-	-	-	-	-	-	736	686	-	676	618	-
Stage 2	-	-	-	-	-	-	658	609	-	716	662	-
Platoon blocked, %	1	-	-	-	-	-	1	1	-	1	1	1
Mov Cap-1 Maneuver	1309	-	-	1292	-	-	337	352	803	334	340	881
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	352	-	334	340	-
Stage 1	-	-	-	-	-	-	725	676	-	666	584	-
Stage 2	-	-	-	-	-	-	590	576	-	667	652	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			1.6			12.9			14.2		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	512	1309	-	-	1292	-	-	435				
HCM Lane V/C Ratio	0.11	0.013	-	-	0.054	-	-	0.097				
HCM Control Delay (s)	12.9	7.8	0	-	7.9	-	-	14.2				
HCM Lane LOS	B	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.3				

Timings  
5: Wilcox Street & 5th Street

2023 Total  
AM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	9	143	135	128	357	61	157	67	214	172
Future Volume (vph)	9	143	135	128	357	61	157	67	214	172
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	9.5	32.0	21.0	43.5	43.5	10.5	39.0	39.0	28.0	56.5
Total Split (%)	7.9%	26.7%	17.5%	36.3%	36.3%	8.8%	32.5%	32.5%	23.3%	47.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	22.7	17.7	35.2	33.3	33.3	65.9	58.6	58.6	75.6	65.9
Actuated g/C Ratio	0.19	0.15	0.29	0.28	0.28	0.55	0.49	0.49	0.63	0.55
v/c Ratio	0.04	0.72	0.48	0.27	0.54	0.10	0.19	0.08	0.31	0.20
Control Delay	27.2	60.3	36.3	34.2	6.1	11.3	20.9	0.2	11.6	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	60.3	36.3	34.2	6.1	11.3	20.9	0.2	11.6	15.8
LOS	C	E	D	C	A	B	C	A	B	B
Approach Delay		58.7		18.5			14.0			13.6
Approach LOS		E		B			B			B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 21.4

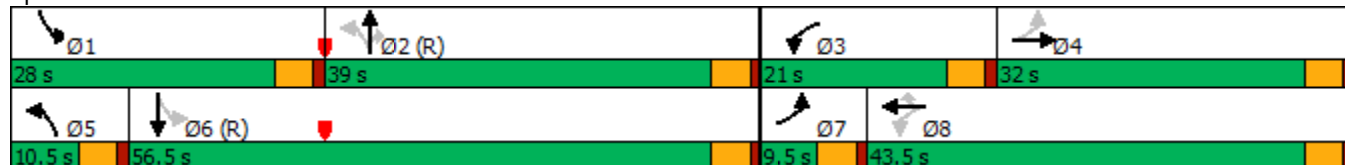
Intersection LOS: C

Intersection Capacity Utilization 52.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Wilcox Street & 5th Street





HCM 6th TWSC  
1: Wilcox Street & Jerry Street

2023 Total  
PM Peak

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	21	1	11	10	1	10	16	675	8	5	697	56
Future Vol, veh/h	21	1	11	10	1	10	16	675	8	5	697	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	1	12	11	1	11	17	734	9	5	758	61

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1578	1576	789	1578	1602	739	819	0	0	743	0	0
Stage 1	799	799	-	773	773	-	-	-	-	-	-	-
Stage 2	779	777	-	805	829	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	*36	*45	391	*36	*41	*503	810	-	-	*752	-	-
Stage 1	*379	*398	-	*474	*415	-	-	-	-	-	-	-
Stage 2	*474	*415	-	*376	*385	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*34	*44	391	*33	*40	*503	810	-	-	*752	-	-
Mov Cap-2 Maneuver	*34	*44	-	*33	*40	-	-	-	-	-	-	-
Stage 1	*371	*395	-	*464	*406	-	-	-	-	-	-	-
Stage 2	*453	*406	-	*361	*382	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	185		97.9		0.2		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	810	-	-	49	60	*752	-
HCM Lane V/C Ratio	0.021	-	-	0.732	0.38	0.007	-
HCM Control Delay (s)	9.5	-	-	185	97.9	9.8	-
HCM Lane LOS	A	-	-	F	F	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.9	1.4	0	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

















HCM 6th TWSC  
2: Jerry Street & 6th Street

2023 Total  
PM Peak

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	3	11	21	1	28	5	61	16	41	57	4
Future Vol, veh/h	4	3	11	21	1	28	5	61	16	41	57	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	12	23	1	30	5	66	17	45	62	4
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	254	247	64	247	241	75	66	0	0	83	0	0
Stage 1	154	154	-	85	85	-	-	-	-	-	-	-
Stage 2	100	93	-	162	156	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	699	655	1000	707	660	986	1536	-	-	1514	-	-
Stage 1	848	770	-	923	824	-	-	-	-	-	-	-
Stage 2	906	818	-	840	769	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	659	633	1000	678	638	986	1536	-	-	1514	-	-
Mov Cap-2 Maneuver	659	633	-	678	638	-	-	-	-	-	-	-
Stage 1	845	746	-	920	822	-	-	-	-	-	-	-
Stage 2	874	816	-	801	745	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.5		9.7		0.4		3					
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1536	-	-	825	821	1514	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.024	0.066	0.029	-	-				
HCM Control Delay (s)	7.4	0	-	9.5	9.7	7.5	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	-	-				

# Timings 3: Wilcox Street & 6th Street

2023 Total  
PM Peak

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	7	9	10	16	520	75	615
Future Volume (vph)	45	7	9	10	16	520	75	615
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	9.8	23.0	9.6	22.8	9.6	75.2	12.2	77.8
Total Split (%)	8.2%	19.2%	8.0%	19.0%	8.0%	62.7%	10.2%	64.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	15.0	13.9	12.1	8.0	90.6	85.9	94.1	90.9
Actuated g/C Ratio	0.12	0.12	0.10	0.07	0.76	0.72	0.78	0.76
v/c Ratio	0.40	0.21	0.07	0.65	0.03	0.43	0.14	0.50
Control Delay	54.4	21.1	42.6	23.0	3.8	6.5	4.1	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	21.1	42.6	23.0	3.8	6.5	4.1	8.9
LOS	D	C	D	C	A	A	A	A
Approach Delay		38.3		24.1		6.4		8.4
Approach LOS		D		C		A		A

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 11.0











Intersection LOS: B

Intersection Capacity Utilization 66.1%

ICU Level of Service C






Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 6th Street

								
Ø1	Ø2 (R)					Ø3	Ø4	
12.2 s	75.2 s					9.6 s	23 s	
								
Ø5	Ø6 (R)					Ø7	Ø8	
9.6 s	77.8 s					9.8 s	22.8 s	





















HCM 6th TWSC  
4: Jerry Street & 5th Street

2023 Total  
PM Peak

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	250	76	18	240	48	49	21	78	44	26	35
Future Vol, veh/h	21	250	76	18	240	48	49	21	78	44	26	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	272	83	20	261	52	53	23	85	48	28	38
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	313	0	0	355	0	0	720	713	314	741	728	287
Stage 1	-	-	-	-	-	-	360	360	-	327	327	-
Stage 2	-	-	-	-	-	-	360	353	-	414	401	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1272	-	-	1204	-	-	365	367	726	351	359	863
Stage 1	-	-	-	-	-	-	658	626	-	768	684	-
Stage 2	-	-	-	-	-	-	731	664	-	616	601	-
Platoon blocked, %	1	-	-	-	-	-	1	1	-	1	1	1
Mov Cap-1 Maneuver	1272	-	-	1204	-	-	317	352	726	286	344	863
Mov Cap-2 Maneuver	-	-	-	-	-	-	317	352	-	286	344	-
Stage 1	-	-	-	-	-	-	643	612	-	750	673	-
Stage 2	-	-	-	-	-	-	659	653	-	512	587	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.5			17			18.1		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	460	1272	-	-	1204	-	-	389				
HCM Lane V/C Ratio	0.35	0.018	-	-	0.016	-	-	0.293				
HCM Control Delay (s)	17	7.9	0	-	8	-	-	18.1				
HCM Lane LOS	C	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0.1	-	-	1.2				

# Timings 5: Wilcox Street & 5th Street

2023 Total  
PM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	46	250	153	182	253	77	259	144	434	292
Future Volume (vph)	46	250	153	182	253	77	259	144	434	292
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	10.2	32.0	16.0	37.8	37.8	11.4	34.0	34.0	38.0	60.6
Total Split (%)	8.5%	26.7%	13.3%	31.5%	31.5%	9.5%	28.3%	28.3%	31.7%	50.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	31.1	25.5	41.0	32.9	32.9	47.9	41.2	41.2	70.0	60.8
Actuated g/C Ratio	0.26	0.21	0.34	0.27	0.27	0.40	0.34	0.34	0.58	0.51
v/c Ratio	0.15	0.89	0.71	0.39	0.43	0.18	0.44	0.24	0.74	0.35
Control Delay	27.0	69.1	45.4	38.1	6.2	15.9	36.1	4.6	32.0	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	69.1	45.4	38.1	6.2	15.9	36.1	4.6	32.0	25.8
LOS	C	E	D	D	A	B	D	A	C	C
Approach Delay		63.8		26.3			23.4			29.5
Approach LOS		E		C			C			C

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 33.0







Intersection LOS: C

Intersection Capacity Utilization 78.5%

ICU Level of Service D

Analysis Period (min) 15

## Splits and Phases: 5: Wilcox Street & 5th Street

			
Ø1	Ø2 (R)	Ø3	Ø4
38 s	34 s	16 s	32 s
			
Ø5	Ø6 (R)	Ø7	Ø8
11.4 s	60.6 s	10.2 s	37.8 s

HCM 6th TWSC  
1: Wilcox Street & Jerry Street

2040 Background  
AM Peak

Intersection												
Int Delay, s/veh	33.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	20	1	20	2	1	5	15	875	8	5	670	30
Future Vol, veh/h	20	1	20	2	1	5	15	875	8	5	670	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	1	22	2	1	5	16	951	9	5	728	33

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1746	1747	745	1754	1759	956	761	0	0	960	0	0
Stage 1	755	755	-	988	988	-	-	-	-	-	-	-
Stage 2	991	992	-	766	771	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	*~ 9	*13	414	*9	*12	*346	851	-	-	*518	-	-
Stage 1	*401	*417	-	*327	*286	-	-	-	-	-	-	-
Stage 2	*327	*286	-	*395	*410	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*~ 8	*12	414	*7	*12	*346	851	-	-	*518	-	-
Mov Cap-2 Maneuver	*~ 8	*12	-	*7	*12	-	-	-	-	-	-	-
Stage 1	*393	*413	-	*320	*281	-	-	-	-	-	-	-
Stage 2	*314	*281	-	*370	*406	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 1297.6		266.7	0.2	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	851	-	-	16 21	* 518	-	-
HCM Lane V/C Ratio	0.019	-	-	2.785 0.414	0.01	-	-
HCM Control Delay (s)	9.3	-	-	\$ 1297.6 266.7	12	-	-
HCM Lane LOS	A	-	-	F F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	6.2 1.2	0	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



HCM 6th TWSC  
2: Jerry Street & 6th Street

2040 Background  
AM Peak

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	1	1	10	4	5	6	15	10	5	20	2
Future Vol, veh/h	1	1	1	10	4	5	6	15	10	5	20	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1	11	4	5	7	16	11	5	22	2
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	73	74	23	70	70	22	24	0	0	27	0	0
Stage 1	33	33	-	36	36	-	-	-	-	-	-	-
Stage 2	40	41	-	34	34	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	918	816	1054	922	821	1055	1591	-	-	1587	-	-
Stage 1	983	868	-	980	865	-	-	-	-	-	-	-
Stage 2	975	861	-	982	867	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	905	810	1054	916	815	1055	1591	-	-	1587	-	-
Mov Cap-2 Maneuver	905	810	-	916	815	-	-	-	-	-	-	-
Stage 1	979	865	-	976	862	-	-	-	-	-	-	-
Stage 2	961	858	-	977	864	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9		9			1.4			1.3			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1591	-	-	912	924	1587	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.004	0.022	0.003	-	-				
HCM Control Delay (s)	7.3	0	-	9	9	7.3	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-				

# Timings 3: Wilcox Street & 6th Street

2040 Background  
AM Peak

	→	↖	←	↙	↑	↘	↓	
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT	Ø7
Lane Configurations	↰	↰	↰	↰	↰	↰	↰	
Traffic Volume (vph)	2	8	3	9	713	90	569	
Future Volume (vph)	2	8	3	9	713	90	569	
Turn Type	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA	
Protected Phases	4	3	8	5	2	1	6	7
Permitted Phases		8		2		6		
Detector Phase	4	3	8	5	2	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	9.5	22.5	9.5	22.5	9.5	22.5	9.5
Total Split (s)	23.6	9.6	23.2	9.6	73.8	13.0	77.2	10.0
Total Split (%)	19.7%	8.0%	19.3%	8.0%	61.5%	10.8%	64.3%	8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	None	C-Max	None
Act Effect Green (s)	6.6	8.5	8.5	97.0	91.4	102.0	100.4	
Actuated g/C Ratio	0.06	0.07	0.07	0.81	0.76	0.85	0.84	
v/c Ratio	0.09	0.09	0.70	0.02	0.55	0.20	0.42	
Control Delay	35.4	50.5	19.3	2.2	6.5	2.7	4.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	35.4	50.5	19.3	2.2	6.5	2.7	4.5	
LOS	D	D	B	A	A	A	A	
Approach Delay	35.4		20.6		6.5		4.2	
Approach LOS	D		C		A		A	

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 7.5

Intersection LOS: A

Intersection Capacity Utilization 66.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 6th Street

↙ Ø1	↖ Ø2 (R)	↘ Ø3	↗ Ø4
13 s	73.8 s	9.6 s	23.6 s
↙ Ø5	↖ Ø6 (R)	↘ Ø7	↗ Ø8
9.6 s	77.2 s	10 s	23.2 s





















HCM 6th Roundabout  
4: Jerry Street & 5th Street

2040 Background  
AM Peak

Intersection				
Intersection Delay, s/veh 6.3				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	403	507	90	33
Demand Flow Rate, veh/h	411	517	92	33
Vehicles Circulating, veh/h	120	60	313	540
Vehicles Exiting, veh/h	453	345	218	37
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.2	6.7	4.5	5.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	411	517	92	33
Cap Entry Lane, veh/h	1221	1298	1003	796
Entry HV Adj Factor	0.981	0.981	0.976	0.989
Flow Entry, veh/h	403	507	90	33
Cap Entry, veh/h	1198	1273	979	787
V/C Ratio	0.337	0.398	0.092	0.041
Control Delay, s/veh	6.2	6.7	4.5	5.0
LOS	A	A	A	A
95th %tile Queue, veh	1	2	0	0

# Timings 5: Wilcox Street & 5th Street

2040 Background  
AM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	12	201	216	376	513	82	288	121	321	272
Future Volume (vph)	12	201	216	376	513	82	288	121	321	272
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	9.5	32.0	21.0	43.5	43.5	10.5	39.0	39.0	28.0	56.5
Total Split (%)	7.9%	26.7%	17.5%	36.3%	36.3%	8.8%	32.5%	32.5%	23.3%	47.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	27.7	22.7	42.7	38.9	38.9	52.4	45.7	45.7	68.3	57.1
Actuated g/C Ratio	0.23	0.19	0.36	0.32	0.32	0.44	0.38	0.38	0.57	0.48
v/c Ratio	0.06	0.80	0.71	0.68	0.63	0.18	0.44	0.19	0.62	0.39
Control Delay	23.9	61.3	39.9	41.5	6.0	15.9	33.1	2.3	23.9	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	61.3	39.9	41.5	6.0	15.9	33.1	2.3	23.9	22.1
LOS	C	E	D	D	A	B	C	A	C	C
Approach Delay		59.6		24.7			22.6			23.0
Approach LOS		E		C			C			C

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 27.6

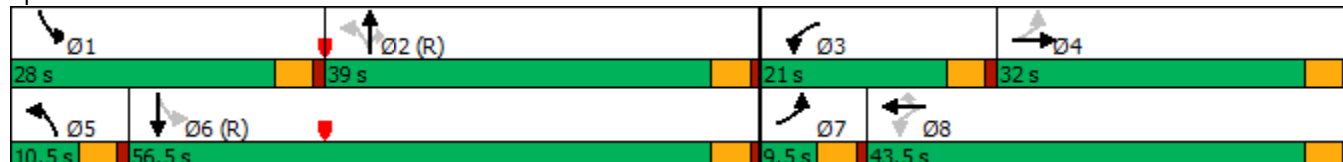
Intersection LOS: C

Intersection Capacity Utilization 73.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: Wilcox Street & 5th Street



HCM 6th TWSC  
1: Wilcox Street & Jerry Street

2040 Background  
PM Peak

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	15	1	15	10	1	10	20	950	8	5	1025	25
Future Vol, veh/h	15	1	15	10	1	10	20	950	8	5	1025	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	1	16	11	1	11	22	1033	9	5	1114	27

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2226	2224	1128	2228	2233	1038	1141	0	0	1042	0	0
Stage 1	1138	1138	-	1082	1082	-	-	-	-	-	-	-
Stage 2	1088	1086	-	1146	1151	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	31	43	249	31	43	280	612	-	-	667	-	-
Stage 1	245	276	-	263	294	-	-	-	-	-	-	-
Stage 2	261	292	-	242	272	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	28	41	249	27	41	280	612	-	-	667	-	-
Mov Cap-2 Maneuver	28	41	-	27	41	-	-	-	-	-	-	-
Stage 1	236	274	-	254	283	-	-	-	-	-	-	-
Stage 2	241	281	-	224	270	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	168.6		131		0.2		0	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	612	-	-	50	49	667	-
HCM Lane V/C Ratio	0.036	-	-	0.674	0.466	0.008	-
HCM Control Delay (s)	11.1	-	-	168.6	131	10.4	-
HCM Lane LOS	B	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0.1	-	-	2.7	1.7	0	-

HCM 6th TWSC  
2: Jerry Street & 6th Street

















2040 Background  
PM Peak

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	3	11	25	1	20	5	65	10	25	60	4
Future Vol, veh/h	4	3	11	25	1	20	5	65	10	25	60	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	12	27	1	22	5	71	11	27	65	4
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	219	213	67	216	210	77	69	0	0	82	0	0
Stage 1	121	121	-	87	87	-	-	-	-	-	-	-
Stage 2	98	92	-	129	123	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	737	684	997	740	687	984	1532	-	-	1515	-	-
Stage 1	883	796	-	921	823	-	-	-	-	-	-	-
Stage 2	908	819	-	875	794	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	708	669	997	716	672	984	1532	-	-	1515	-	-
Mov Cap-2 Maneuver	708	669	-	716	672	-	-	-	-	-	-	-
Stage 1	880	781	-	918	821	-	-	-	-	-	-	-
Stage 2	884	817	-	845	779	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.3		9.7			0.5			2.1			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1532	-	-	850	811	1515	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.023	0.062	0.018	-	-				
HCM Control Delay (s)	7.4	0	-	9.3	9.7	7.4	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	-	-				



# Timings 3: Wilcox Street & 6th Street

2040 Background  
PM Peak

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	29	9	12	14	12	742	124	908
Future Volume (vph)	29	9	12	14	12	742	124	908
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	9.8	23.0	9.6	22.8	9.6	75.2	12.2	77.8
Total Split (%)	8.2%	19.2%	8.0%	19.0%	8.0%	62.7%	10.2%	64.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	13.2	11.1	12.1	9.1	89.7	84.0	95.4	91.9
Actuated g/C Ratio	0.11	0.09	0.10	0.08	0.75	0.70	0.80	0.77
v/c Ratio	0.26	0.25	0.08	0.75	0.04	0.63	0.33	0.72
Control Delay	47.6	22.7	41.7	21.8	4.0	8.4	5.8	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	22.7	41.7	21.8	4.0	8.4	5.8	14.9
LOS	D	C	D	C	A	A	A	B
Approach Delay		32.8		22.7		8.3		13.9
Approach LOS		C		C		A		B

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 13.6















Intersection LOS: B

Intersection Capacity Utilization 88.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 6th Street

								
Ø1	Ø2 (R)					Ø3	Ø4	
12.2 s	75.2 s					9.6 s	23 s	
								
Ø5	Ø6 (R)					Ø7	Ø8	
9.6 s	77.8 s					9.8 s	22.8 s	





















HCM 6th Roundabout  
4: Jerry Street & 5th Street

2040 Background  
PM Peak

Intersection				
Intersection Delay, s/veh 7.3				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	533	493	218	137
Demand Flow Rate, veh/h	543	503	222	140
Vehicles Circulating, veh/h	121	124	484	527
Vehicles Exiting, veh/h	546	582	180	100
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.6	7.2	7.2	6.4
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	543	503	222	140
Cap Entry Lane, veh/h	1220	1216	842	806
Entry HV Adj Factor	0.982	0.980	0.980	0.981
Flow Entry, veh/h	533	493	218	137
Cap Entry, veh/h	1197	1191	825	791
V/C Ratio	0.445	0.414	0.264	0.174
Control Delay, s/veh	7.6	7.2	7.2	6.4
LOS	A	A	A	A
95th %tile Queue, veh	2	2	1	1

# Timings 5: Wilcox Street & 5th Street

2040 Background  
PM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	66	352	250	250	360	105	412	235	640	465
Future Volume (vph)	66	352	250	250	360	105	412	235	640	465
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	11.0	31.0	15.0	35.0	35.0	10.0	35.0	35.0	39.0	64.0
Total Split (%)	9.2%	25.8%	12.5%	29.2%	29.2%	8.3%	29.2%	29.2%	32.5%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	36.9	28.5	43.5	34.7	34.7	40.0	32.5	32.5	71.5	61.5
Actuated g/C Ratio	0.31	0.24	0.36	0.29	0.29	0.33	0.27	0.27	0.60	0.51
v/c Ratio	0.23	1.13	1.11	0.51	0.53	0.33	0.89	0.48	1.12	0.58
Control Delay	27.6	123.5	122.8	40.4	6.3	18.1	63.0	20.0	108.2	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	123.5	122.8	40.4	6.3	18.1	63.0	20.0	108.2	28.1
LOS	C	F	F	D	A	B	E	C	F	C
Approach Delay		111.2		50.1			43.4			72.4
Approach LOS		F		D			D			E

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 66.0

Intersection LOS: E

Intersection Capacity Utilization 108.9%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 5: Wilcox Street & 5th Street



HCM 6th TWSC  
1: Wilcox Street & Jerry Street

2040 Total  
AM Peak

Intersection												
Int Delay, s/veh	104.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	29	1	20	2	1	5	15	912	8	5	678	47
Future Vol, veh/h	29	1	20	2	1	5	15	912	8	5	678	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	1	22	2	1	5	16	991	9	5	737	51

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	1804	1805	763	1812	1826	996	788	0	0	1000	0	0
Stage 1	773	773	-	1028	1028	-	-	-	-	-	-	-
Stage 2	1031	1032	-	784	798	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	*~ 6	*8	404	*5	*7	*320	831	-	-	*479	-	-
Stage 1	*392	*409	-	*302	*264	-	-	-	-	-	-	-
Stage 2	*302	*264	-	*386	*398	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*~ 5	*8	404	*4	*7	*320	831	-	-	*479	-	-
Mov Cap-2 Maneuver	*~ 5	*8	-	*4	*7	-	-	-	-	-	-	-
Stage 1	*385	*405	-	*296	*259	-	-	-	-	-	-	-
Stage 2	*290	*259	-	*360	*394	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 3512.1		\$ 561.9	0.2	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	831	-	-	8 12	* 479	-	-
HCM Lane V/C Ratio	0.02	-	-	6.793 0.725	0.011	-	-
HCM Control Delay (s)	9.4	-	-	\$ 3512.1\$ 561.9	12.6	-	-
HCM Lane LOS	A	-	-	F F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	8.3 1.6	0	-	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

















HCM 6th TWSC  
2: Jerry Street & 6th Street

2040 Total  
AM Peak

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	1	1	17	4	11	6	27	20	34	30	2
Future Vol, veh/h	1	1	1	17	4	11	6	27	20	34	30	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1	18	4	12	7	29	22	37	33	2
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	170	173	34	163	163	40	35	0	0	51	0	0
Stage 1	108	108	-	54	54	-	-	-	-	-	-	-
Stage 2	62	65	-	109	109	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	794	720	1039	802	729	1031	1576	-	-	1555	-	-
Stage 1	897	806	-	958	850	-	-	-	-	-	-	-
Stage 2	949	841	-	896	805	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	764	699	1039	783	708	1031	1576	-	-	1555	-	-
Mov Cap-2 Maneuver	764	699	-	783	708	-	-	-	-	-	-	-
Stage 1	893	787	-	953	846	-	-	-	-	-	-	-
Stage 2	929	837	-	872	786	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.5		9.5			0.8			3.8			
HCM LOS	A		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1576	-	-	810	841	1555	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.004	0.041	0.024	-	-				
HCM Control Delay (s)	7.3	0	-	9.5	9.5	7.4	0	-				
HCM Lane LOS	A	A	-	A	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0.1	-	-				

# Timings 3: Wilcox Street & 6th Street

2040 Total  
AM Peak

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	37	2	8	3	13	713	90	569
Future Volume (vph)	37	2	8	3	13	713	90	569
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	10.0	23.6	9.6	23.2	9.6	73.8	13.0	77.2
Total Split (%)	8.3%	19.7%	8.0%	19.3%	8.0%	61.5%	10.8%	64.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	15.3	14.2	12.2	8.1	89.0	83.2	94.0	90.7
Actuated g/C Ratio	0.13	0.12	0.10	0.07	0.74	0.69	0.78	0.76
v/c Ratio	0.33	0.10	0.06	0.71	0.03	0.61	0.23	0.47
Control Delay	49.8	21.8	41.8	20.3	3.9	9.6	5.0	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	21.8	41.8	20.3	3.9	9.6	5.0	8.8
LOS	D	C	D	C	A	A	A	A
Approach Delay		40.4		21.1		9.5		8.3
Approach LOS		D		C		A		A

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 11.4









Intersection LOS: B

Intersection Capacity Utilization 74.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 6th Street

				
Ø1	Ø2 (R)		Ø3	Ø4
13 s	73.8 s		9.6 s	23.6 s
				
Ø5	Ø6 (R)		Ø7	Ø8
9.6 s	77.2 s		10 s	23.2 s

HCM 6th Roundabout  
4: Jerry Street & 5th Street





















2040 Total  
AM Peak

Intersection				
Intersection Delay, s/veh	6.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	409	522	93	52
Demand Flow Rate, veh/h	417	533	95	53
Vehicles Circulating, veh/h	135	69	325	540
Vehicles Exiting, veh/h	458	351	227	62
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	6.9	4.6	5.2
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	417	533	95	53
Cap Entry Lane, veh/h	1202	1286	991	796
Entry HV Adj Factor	0.981	0.979	0.976	0.990
Flow Entry, veh/h	409	522	93	52
Cap Entry, veh/h	1180	1260	967	788
V/C Ratio	0.347	0.414	0.096	0.067
Control Delay, s/veh	6.4	6.9	4.6	5.2
LOS	A	A	A	A
95th %tile Queue, veh	2	2	0	0



# Timings 5: Wilcox Street & 5th Street

2040 Total  
AM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	12	204	216	384	513	88	290	121	325	279
Future Volume (vph)	12	204	216	384	513	88	290	121	325	279
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	9.5	32.0	21.0	43.5	43.5	10.5	39.0	39.0	28.0	56.5
Total Split (%)	7.9%	26.7%	17.5%	36.3%	36.3%	8.8%	32.5%	32.5%	23.3%	47.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	27.9	22.9	42.9	39.1	39.1	52.1	45.3	45.3	68.1	56.8
Actuated g/C Ratio	0.23	0.19	0.36	0.33	0.33	0.43	0.38	0.38	0.57	0.47
v/c Ratio	0.06	0.81	0.71	0.69	0.63	0.20	0.45	0.19	0.63	0.40
Control Delay	23.9	62.1	40.1	41.8	6.0	16.0	33.5	2.3	28.5	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	62.1	40.1	41.8	6.0	16.0	33.5	2.3	28.5	26.0
LOS	C	E	D	D	A	B	C	A	C	C
Approach Delay		60.4		24.9			22.8			27.2
Approach LOS		E		C			C			C

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 29.0

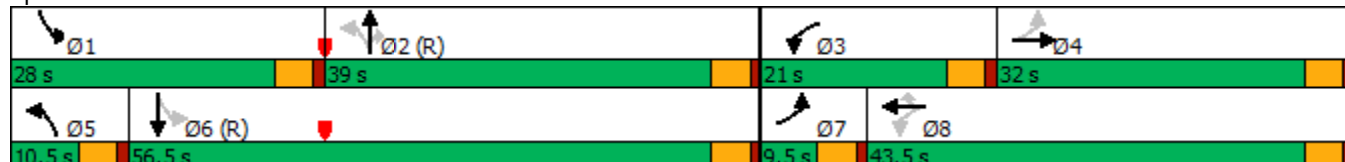
Intersection LOS: C

Intersection Capacity Utilization 74.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 5: Wilcox Street & 5th Street



HCM 6th TWSC  
1: Wilcox Street & Jerry Street

2040 Total  
PM Peak

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	23	1	15	10	1	10	20	975	8	5	1037	60
Future Vol, veh/h	23	1	15	10	1	10	20	975	8	5	1037	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	1	16	11	1	11	22	1060	9	5	1127	65

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2285	2283	1160	2287	2311	1065	1192	0	0	1069	0	0
Stage 1	1170	1170	-	1109	1109	-	-	-	-	-	-	-
Stage 2	1115	1113	-	1178	1202	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	28	40	238	28	38	270	586	-	-	652	-	-
Stage 1	235	267	-	254	285	-	-	-	-	-	-	-
Stage 2	252	284	-	233	258	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	25	38	238	25	36	270	586	-	-	652	-	-
Mov Cap-2 Maneuver	25	38	-	25	36	-	-	-	-	-	-	-
Stage 1	226	265	-	244	274	-	-	-	-	-	-	-
Stage 2	232	273	-	214	256	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s\$ 330.3			148.9		0.2		0	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	586	-	-	39	45	652	-
HCM Lane V/C Ratio	0.037	-	-	1.087	0.507	0.008	-
HCM Control Delay (s)	11.4	-	-	\$ 330.3	148.9	10.6	-
HCM Lane LOS	B	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0.1	-	-	4.2	1.9	0	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

















HCM 6th TWSC  
2: Jerry Street & 6th Street

2040 Total  
PM Peak

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	3	11	29	1	30	5	81	20	46	72	4
Future Vol, veh/h	4	3	11	29	1	30	5	81	20	46	72	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	3	12	32	1	33	5	88	22	50	78	4
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	306	300	80	297	291	99	82	0	0	110	0	0
Stage 1	180	180	-	109	109	-	-	-	-	-	-	-
Stage 2	126	120	-	188	182	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	646	612	980	655	619	957	1515	-	-	1480	-	-
Stage 1	822	750	-	896	805	-	-	-	-	-	-	-
Stage 2	878	796	-	814	749	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	605	588	980	625	595	957	1515	-	-	1480	-	-
Mov Cap-2 Maneuver	605	588	-	625	595	-	-	-	-	-	-	-
Stage 1	819	724	-	892	802	-	-	-	-	-	-	-
Stage 2	844	793	-	772	723	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.7		10.2			0.3			2.8			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1515	-	-	785	755	1480	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.025	0.086	0.034	-	-				
HCM Control Delay (s)	7.4	0	-	9.7	10.2	7.5	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-				

# Timings 3: Wilcox Street & 6th Street

2040 Total  
PM Peak

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	54	9	12	14	19	742	124	908
Future Volume (vph)	54	9	12	14	19	742	124	908
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	9.8	23.0	9.6	22.8	9.6	75.2	12.2	77.8
Total Split (%)	8.2%	19.2%	8.0%	19.0%	8.0%	62.7%	10.2%	64.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	15.2	13.1	13.1	9.1	87.8	81.9	93.4	89.8
Actuated g/C Ratio	0.13	0.11	0.11	0.08	0.73	0.68	0.78	0.75
v/c Ratio	0.47	0.27	0.08	0.75	0.08	0.65	0.34	0.75
Control Delay	55.3	19.7	41.2	21.8	4.1	8.8	6.4	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	19.7	41.2	21.8	4.1	8.8	6.4	16.4
LOS	E	B	D	C	A	A	A	B
Approach Delay		37.5		22.7		8.7		15.2
Approach LOS		D		C		A		B

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 14.9







Intersection LOS: B

Intersection Capacity Utilization 88.7%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Wilcox Street & 6th Street

								
Ø1	Ø2 (R)		Ø3	Ø4		Ø5	Ø6 (R)	Ø7
12.2 s	75.2 s		9.6 s	23 s		9.6 s	77.8 s	9.8 s
								22.8 s





















HCM 6th Roundabout  
4: Jerry Street & 5th Street

2040 Total  
PM Peak

Intersection				
Intersection Delay, s/veh 7.6				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	539	507	225	154
Demand Flow Rate, veh/h	550	517	230	157
Vehicles Circulating, veh/h	133	139	498	527
Vehicles Exiting, veh/h	551	589	185	129
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.9	7.5	7.5	6.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	550	517	230	157
Cap Entry Lane, veh/h	1205	1197	830	806
Entry HV Adj Factor	0.980	0.980	0.980	0.983
Flow Entry, veh/h	539	507	225	154
Cap Entry, veh/h	1181	1174	814	792
V/C Ratio	0.457	0.432	0.277	0.195
Control Delay, s/veh	7.9	7.5	7.5	6.6
LOS	A	A	A	A
95th %tile Queue, veh	2	2	1	1

# Timings 5: Wilcox Street & 5th Street

2040 Total  
PM Peak

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	66	357	250	257	363	111	416	235	644	472
Future Volume (vph)	66	357	250	257	363	111	416	235	644	472
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	11.0	31.0	15.0	35.0	35.0	10.0	35.0	35.0	39.0	64.0
Total Split (%)	9.2%	25.8%	12.5%	29.2%	29.2%	8.3%	29.2%	29.2%	32.5%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)	36.9	28.5	43.5	34.7	34.7	40.0	32.5	32.5	71.5	61.5
Actuated g/C Ratio	0.31	0.24	0.36	0.29	0.29	0.33	0.27	0.27	0.60	0.51
v/c Ratio	0.23	1.14	1.11	0.52	0.54	0.35	0.90	0.48	1.13	0.58
Control Delay	27.7	128.9	122.8	40.7	6.3	18.5	64.1	20.0	111.4	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	128.9	122.8	40.7	6.3	18.5	64.1	20.0	111.4	28.3
LOS	C	F	F	D	A	B	E	C	F	C
Approach Delay		116.1		50.0			43.9			74.1
Approach LOS		F		D			D			E

## Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 67.4

Intersection LOS: E

Intersection Capacity Utilization 109.7%

ICU Level of Service H

Analysis Period (min) 15

## Splits and Phases: 5: Wilcox Street & 5th Street



HCM 6th TWSC  
1: Wilcox Street & Jerry Street







2040 Total - mitigated  
AM Peak

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↰			↰	↰	↰		↰	↰	
Traffic Vol, veh/h	0	0	20	0	0	8	15	941	9	5	678	47
Future Vol, veh/h	0	0	20	0	0	8	15	941	9	5	678	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	0	0	9	16	1023	10	5	737	51
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	763	-	-	1028	788	0	0	1033	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	404	0	0	*294	831	-	-	*440	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %						1		-	-	1	-	-
Mov Cap-1 Maneuver	-	-	404	-	-	*294	831	-	-	*440	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14.4		17.6		0.1		0.1					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	831	-	-	404	294	*440	-	-				
HCM Lane V/C Ratio	0.02	-	-	0.054	0.03	0.012	-	-				
HCM Control Delay (s)	9.4	-	-	14.4	17.6	13.3	-	-				
HCM Lane LOS	A	-	-	B	C	B	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-	-				
Notes												
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon												



















HCM 6th TWSC  
1: Wilcox Street & Jerry Street

2040 Total - mitigated  
PM Peak

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	15	0	0	21	20	998	8	5	1037	60
Future Vol, veh/h	0	0	15	0	0	21	20	998	8	5	1037	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	16	0	0	23	22	1085	9	5	1127	65
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1160	-	-	1090	1192	0	0	1094	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	238	0	0	262	586	-	-	638	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	238	-	-	262	586	-	-	638	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	21.2		20		0.2		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	586	-	-	238	262	638	-	-				
HCM Lane V/C Ratio	0.037	-	-	0.069	0.087	0.009	-	-				
HCM Control Delay (s)	11.4	-	-	21.2	20	10.7	-	-				
HCM Lane LOS	B	-	-	C	C	B	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.3	0	-	-				

Timings  
3: Wilcox Street & 6th Street




2040 Total - mitigated  
AM Peak

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	67	2	8	3	13	713	90	569
Future Volume (vph)	67	2	8	3	13	713	90	569
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	10.0	23.6	9.6	23.2	9.6	73.8	13.0	77.2
Total Split (%)	8.3%	19.7%	8.0%	19.3%	8.0%	61.5%	10.8%	64.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	15.3	14.2	12.2	8.1	89.0	83.2	94.0	90.7
Actuated g/C Ratio	0.13	0.12	0.10	0.07	0.74	0.69	0.78	0.76
v/c Ratio	0.59	0.10	0.06	0.71	0.03	0.61	0.23	0.47
Control Delay	64.6	21.6	41.8	20.3	3.9	9.6	5.0	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.6	21.6	41.8	20.3	3.9	9.6	5.0	8.8
LOS	E	C	D	C	A	A	A	A
Approach Delay		55.3		21.1		9.5		8.3
Approach LOS		E		C		A		A

Intersection Summary

















Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 12.7
Intersection Capacity Utilization 74.6%
Analysis Period (min) 15
Intersection LOS: B
ICU Level of Service D

Splits and Phases: 3: Wilcox Street & 6th Street

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	73.8 s	9.6 s	23.6 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
9.6 s	77.2 s	10 s	23.2 s

Timings  
3: Wilcox Street & 6th Street

2040 Total - mitigated  
PM Peak


								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	78	9	12	14	19	742	124	908
Future Volume (vph)	78	9	12	14	19	742	124	908
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	9.8	23.0	9.6	22.8	9.6	75.2	12.2	77.8
Total Split (%)	8.2%	19.2%	8.0%	19.0%	8.0%	62.7%	10.2%	64.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	17.4	15.3	14.4	9.3	85.6	79.7	91.1	87.6
Actuated g/C Ratio	0.14	0.13	0.12	0.08	0.71	0.66	0.76	0.73
v/c Ratio	0.67	0.24	0.07	0.75	0.08	0.67	0.37	0.77
Control Delay	70.1	19.2	40.8	22.1	4.2	9.3	7.0	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.1	19.2	40.8	22.1	4.2	9.3	7.0	17.4
LOS	E	B	D	C	A	A	A	B
Approach Delay		49.2		23.0		9.2		16.2
Approach LOS		D		C		A		B

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 16.5  
 Intersection Capacity Utilization 88.8%  
 Analysis Period (min) 15

Intersection LOS: B  
 ICU Level of Service E

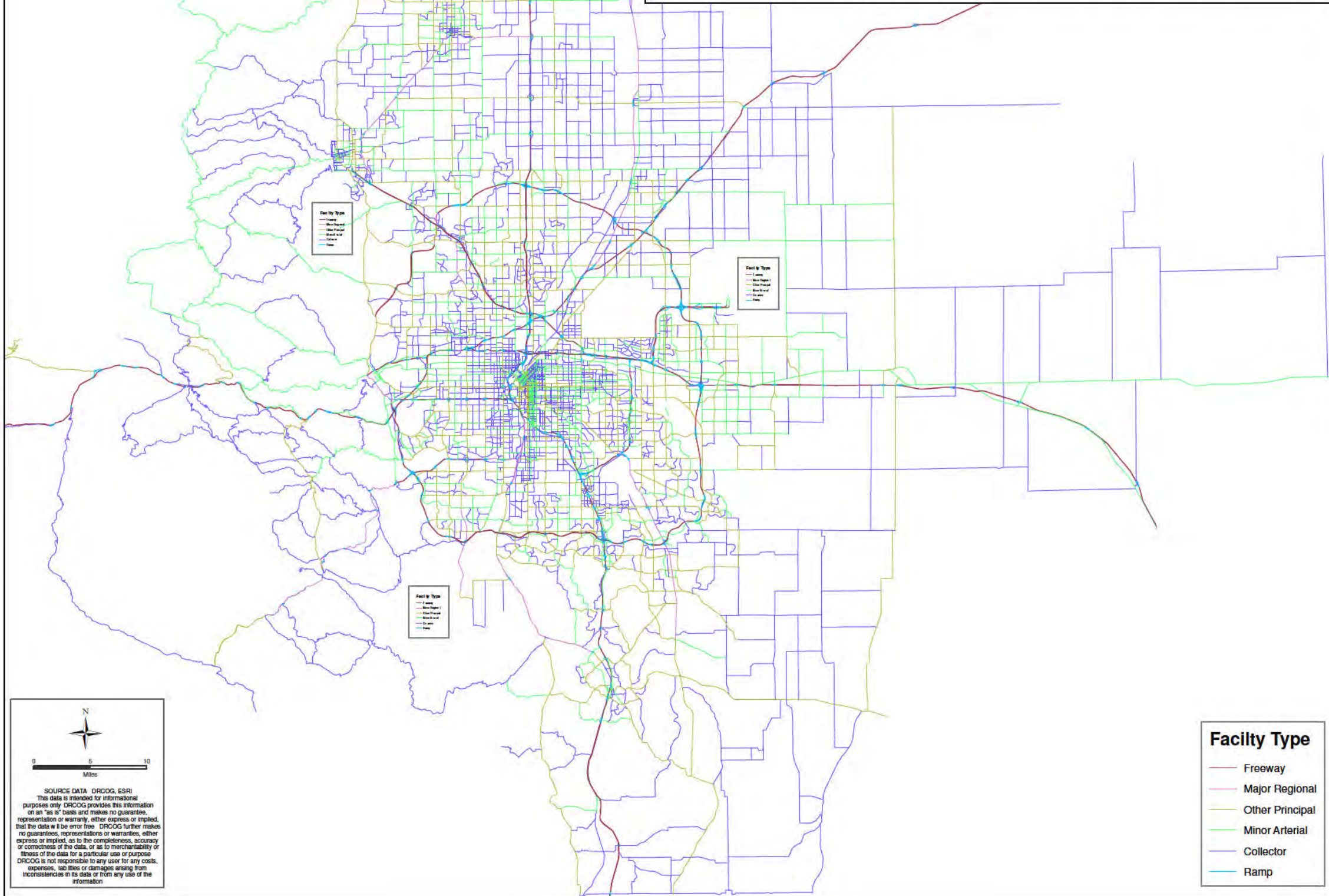
Splits and Phases: 3: Wilcox Street & 6th Street

			
Ø1	Ø2 (R)	Ø3	Ø4
12.2 s	75.2 s	9.6 s	23 s
			
Ø5	Ø6 (R)	Ø7	Ø8
9.6 s	77.8 s	9.8 s	22.8 s

# 2040 All Day Focus2.2 Model Assigned Traffic Volumes (in thousands)

Use data with 2015 assigned volume map to derive growth.

(RTP-2018: March 2019)



**SOURCE DATA** DRCOG, ESRI  
This data is intended for informational purposes only. DRCOG provides this information on an "as is" basis and makes no guarantee, representation or warranty, either express or implied, that the data will be error free. DRCOG further makes no guarantees, representations or warranties, either express or implied, as to the completeness, accuracy or correctness of the data, or as to merchantability or fitness of the data for a particular use or purpose. DRCOG is not responsible to any user for any costs, expenses, lost time or damages arising from inconsistencies in its data or from any use of the information.



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From: John Brown [REDACTED]  
Sent: Wednesday, March 10, 2021 12:45:17 PM  
To: TownCouncil Mailbox; Larissa J. Sbarbori [REDACTED]  
Cc: Jeri Brown  
Subject: The View Testimony

Dear Castle Rock Town Council Members,

Please, accept this testimony for your consideration and add it to the official record for the next Town Council meeting:

I am John Brown and have resided in Castle Rock since 1994.

Many people have already weighed in and will no doubt continue to weigh in with their legitimate and serious concerns about various aspects of this proposed project. I will not reiterate the concerns of the many in this testimony, but I do recognize and agree with their legitimacy and importance. Instead, I will address my underlying and deep concerns with the conduct of the business of the people of Castle Rock by too many elected and appointed officials alike.

### **Elected and Appointed Officials in Government Hold Their Positions "in Trust"**

What does that mean? It means that the positions held by elected and appointed officials must not be used for any personal gain of any kind ... re-election, personal ambitions, friendship or cronyism, to enhance one's own business, etc. ... but must instead consider all the needs of all the people of Castle Rock. That is admittedly a tough job, but one that all officials signed up for when they entered "service" to the Town.

When I hear such things as "I want people to be able to walk to my store [in the downtown area]" or "I knew so-and-so from my days in Kansas", I start to sense self-dealing going on. And who is to say that (effectively) Castle Rock was ugly but started to get better with the building of the ice rink on Perry? Honestly, my family found Castle Rock lovely when we moved here ... friendly, quiet, quaint, healthy for people to live and grow here, with few traffic problems. What makes a Town nice or beautiful? Growth is an interesting idea, but at what cost?

### **Castle Rock is Becoming Its Very Own Potemkin Village**

Empress Catherine II and her lover Grigory Potemkin would be proud of us. But in a more modern sense in law Potemkin Village is a phrase that has been used by American judges, especially members of a multiple-judge panel who dissent from the majority's opinion on a particular matter, *to refer to an inaccurate or tortured interpretation and-or application of a particular legal doctrine to the specific facts at issue* (emphasis mine). In only that way can Town ordinances be twisted to what we often see these days in development in the Town. Our very own "Ministry of Truth" seems to be ascendent in Castle Rock. To refer to this proposed development as "The View" would do a Stalinist era Communist Party Apparatchik proud. But referring to it as "The View" does not necessarily make it so.

### **Conclusion**

The illicit relationship between government officials and the ruling elites in Washington has been referred to as "The Swamp." But Samuel Francis would say that it is never limited to just the federal

level of government; a "swamp" can develop at any level when officials forget or ignore that their positions are held in trust. It starts to feel like we are developing our very own version of "The Swamp" here in Castle Rock. Too many cozy relationships, open and casual mention of how something would make 'my' business better, using official sounding words to blur the reality ... none of this feels particularly good to a citizen, this citizen.

It is my hope that there would be someone in official capacity in the Town that might stand up to this souring situation. We ask you to deny this proposed development, and that the Town reconsider its head-long rush into "growth for growth's sake."

Sincerely,



John

John R. Brown



Castle Rock, CO 80104



**From:** Nick Lucey  
**Sent:** Wednesday, March 10, 2021 4:02 PM  
**To:** TownCouncil Mailbox  
**Cc:** Julie Kirkpatrick; Kevin Tilson  
**Subject:** The View Project

Dear Mayor and Town Councilmembers,

I wanted to take a moment to write to you to express my support for The View project in downtown Castle Rock. As a business owner, I appreciate the increased population density, which, of course, translates to increased numbers of consumers patronizing downtown businesses, and contributes to a vibrant downtown in general.

I have looked at The View's architectural renderings, and I believe the project amply fits into our downtown aesthetic. Having moved here from Savannah, Georgia, a historic city that just celebrated its 288th birthday, I fully understand the need for buildings to blend harmoniously with their urban environment. Truth be told, I have yet to fully comprehend what the "Castle Rock architectural aesthetic" is exactly, as there seem to be several buildings downtown which do not seem to meet such standards. I believe that a modern, well thought-out, and cleverly designed building such as The View would seem to me, at least, to be an improvement to some of the storefronts we observe around town, and particularly, a substantial improvement over the buildings currently occupying the site.

Furthermore, it's well established that 2020 was a difficult year for so many business in Castle Rock and across the country, and as 2021 is proving to be a slight improvement (though sales have still been rather soft), in my humble opinion, it would be foolhardy to suppress the economic momentum, and to block a project that could inject much-needed capital into the downtown business ecosystem.

I am a firm believer that "small-town charm" is a state of mind, one that our wonderful community fully embraces and espouses, regardless of its architecture.

Thank you for your time and consideration.

Respectfully submitted,  
Nick Lucey

--

NickLucey.com

[REDACTED]

Castle Rock CO 80104

[REDACTED]

web [www.nicklucey.com](http://www.nicklucey.com)



**From:** Jeri Brown  
**Sent:** Wednesday, March 10, 2021 10:10 AM  
**To:** TownCouncil Mailbox  
**Subject:** The View Testimony

Dear Castle Rock Town Council Members,

Please, accept this testimony for your consideration and add it to the official record for the Town Council meeting tonight.


I have lived in Castle Rock (1280 Canyon Drive) for more than 26 years. The town that I fell in love with in 1994 has been slowly destroyed by developers and others who have made lots of money by overdevelopment and development that does not fit with Castle Rock. Why? For greed only. It was once such an attractive and welcoming town. We loved going downtown, but not anymore. Early on in my residence here, I was impressed that the new structures were being built to blend in with the old. But this has definitely changed. I think it started back when we citizens were promised we would not be able to see the new homes being built on the ridges. And of course, we can see those homes, and the Town allowed that without apology or explanation. I did not think it could get worse, but it has. The new, very tall, ugly structures in our once quaint downtown have not only made our downtown ugly and uninviting, but they violate the town plan and the designs agreed upon.

I have had dealings in recent years with the Town Council and its staff. The Town Council and staff totally ignored the plain meaning of the ordinances in order to allow the developer full reign. For instance, we citizens were told that the ordinances for set-backs for development did not really mean what they actually said in plain English. When we brought up the increased traffic, we were told there was a study. Come by Castle Rock Elementary School every afternoon around 3:00 and see what the residents must endure daily. But there was a traffic study! And we still cannot get out of our driveways despite that wonderful traffic study so relied upon. Traffic in Castle Rock is horrible and getting worse every day. I hear people complain about driving through town on Perry Street all the time.

Now when I must drive through the downtown, I cringe. The tall buildings are so very ugly, and they block the beauty of the front range that always enhanced the beauty of the town. How can you approve such ugliness in our town? The building behind what was once Augustine Grill is like something out of a third world country. It does not fit with Castle Rock. Nor does the Wild Blue Yonder that replaced the wonderful and peaceful Augustine Grill. And all the new building is even worse. Maybe we can become the ugliest small town in America?? And now you want to give us more traffic problems and further ruin our view by giving people in a high rise the view you are denying to the rest of us! All for greed.

Please, do not further destroy our Town and give away our view by voting to allow "The View" to proceed.

Jeri E. Brown, Esq.

  
Castle Rock, CO 80104

Sent from [Mail](#) for Windows 10

**From:** Larissa  
**Sent:** Tuesday, March 9, 2021 12:02 PM  
**To:** Julie Kirkpatrick  
**Cc:** Jason Gray; Ryan Hollingshead; Laura Cavey; Kevin Bracken; Desiree LaFleur; Caryn Johnson; Tim Dietz; TownCouncil Mailbox  
**Subject:** Inputs for the View proposal DRB Meeting  
**Attachments:** the\_view2.pdf

Hiya Julie,

I am strongly opposed to the proposed "View" project. Please pass the attached briefing to the Design Review Board, and add it to the public comments record.

I would like to speak at the DRB tomorrow as well. Please let me know if you have any issues accessing the attachment.

Thank you,

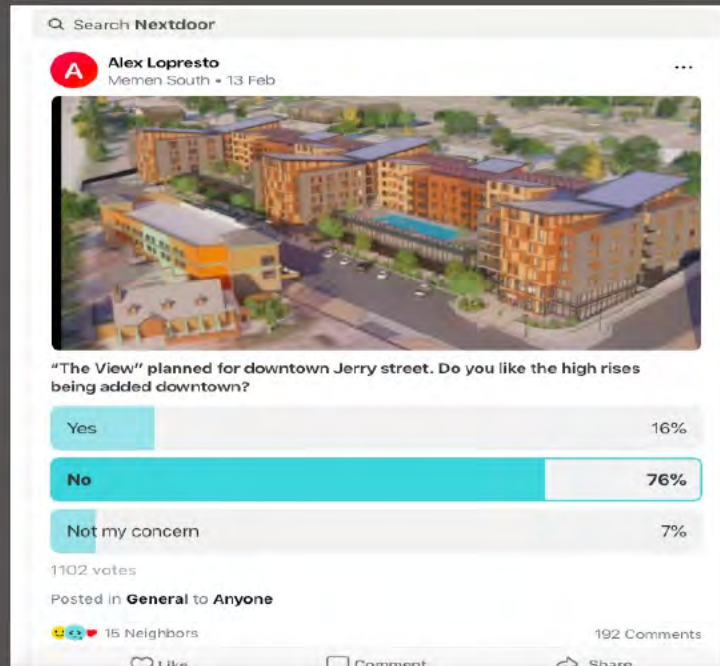
Larissa Sbarbori

# The View?

“Something is rotten in the state of [the View]”  
- Hamlet

# Public Finance Agreement/PIF

- Call it whatever you want – fee or tax – it’s directing We The People’s money towards something We The People do not support.



## THE VIEW PROJECT OVERVIEW

### PROPOSED REDEVELOPMENT AGREEMENT TERMS

- **Property Tax Increment:** Share back 55% of the Property Tax Increment through 2038, with a cap of \$3,250,000
- **Sales Tax Increment:** Share back 55% of the Sales Tax Increment through 2038, with a cap of \$1,000,000
- **Fee Waiver:** The Town will purchase 100 public parking spaces through the waiver of \$3,000,000 in fees and use tax (\$30,000/space)
  - Town funds will be repaid in future years by the DDA Special Fund to be made whole
- **IREA Credit:** The Town will allow use of up to \$100,000 of existing credits specifically for burying off-site utilities
- **PIF (Public Improvement Fee):** Town will approve a 1% PIF that will be captured by the development



# *Perception is Reality*

- The Town Staff and Elected Officials with these conflicts of interest should have at the very least recused themselves from voting on this project!
- In God We Trust – all others we verify! Where are the financial disclosures for those and their families involved?

Conflict of Interest = Personal Gain from decisions made from government service /position of authority

*Statements Made during 1 Sept Town Council Mtg:*

*Dave Corliss - although he's worked with these construction companies in Lawrence KS in the past, and people might say hey isn't that where Corliss is from, and that's true, but "I have no financial interests in this"*

*Mayor Gray's comments that "I need people walking to and from my store"*

*Jason Bower - earlier in the Town Council Mtg, touting "the best music store in Castle Rock" a few blocks away*

*George Teal - "We all know Mark and his wife, have dinner with them" - I'm guessing these are the owners of the property? - he goes on to say "we all know it's not the ritzy part of town.....people don't live there" - Could that be because it's right next to I-25?*

# ***Perception is Reality...***

Downtown Projects are to “achieve the goals and objectives of the Downtown Master Plan....”

-This proposal fails on “small-scale mixed use”, fails on “comparable in size and scale to existing structures”, fails on “architectural styling that ties to historic Downtown structures and connection to our Western past”, fails to “incorporate interesting detail and quality building materials such as stone and/or masonry facades” etc...

***-This proposal obviously does not meet the goals of the Downtown Master Plan***

The DRB is composed of 2 members from the DDA

-The DDA encourages downtown developments

-The DDA then sits on a board that approves them?!

***Does this represent a Conflict of Interest?***

I certainly hope members of this board that may have ANY conflicts of interest recuse themselves from this vote, We The People are watching.



# RTD Trojan Horse

- Traffic study is suspect [COVID lock down timeframe / developer funded]
- Town's own DRP study acknowledged most comparables are along the RTD line



Development Research Partners

## Gap Funding Analysis

### Rental Rates

The indicated range of market rents by unit type is validated by comparing to competing properties within the town of Castle Rock. Rental rates for The View are not out of line with the local market, however they do define the current upper end. This can be attributable to rents being asked for the top floor units which is planned to have relatively large unit sizes, oversized windows and panoramic views, and loft-design.

The rental rates estimated for The View is primarily based on comparisons with its closest competitor, Riverwalk, and a market study completed in support of informing this project. The market study was reviewed and found reasonable. **It is worth noting that the market study includes many comparables located in the regional market, and many of those projects are in transit-oriented (TOD) development locations near RTD light rail stations. Castle Rock does not have light rail service to Metro Denver and rent projections may be overstated;** however, the proximity of southeast Denver business parks and transit stations somewhat offsets the lack of a TOD location. The risk of missing this forecast is that revenues maybe overstated.





***Does this look “vibrant”?***



# ***Building for 2000 in the 2020's?!***

- This last year has seen the way many of us work change forever
  - Folks that may have never worked from home before now do and many are expected to continue – meaning commercial office space is now wholly overstocked – *why are we investing public funds to build more?*
- How likely are those who work from home to choose to live in an expensive apartment right next to a highway?
- Is this the best use of this space?
- Is the Town really going to realize 100 parking spots when all other factors are considered?
- Building costs have increased considerable in the last year, how will that affect the build or the look, and how much will that cost the Town (us)?



# 10 lbs in a 5 lb Bag....

- The View designs, despite the inclusion of trees that will not exist in most of our lifetimes if ever, and the exclusion of I-25, is an anathema to the Town's Downtown Master Plan in both **size** and **design**.

This might be I-25, but to downplay the overly Urban look of this design we're going to place it in what looks like a rural setting! And don't worry - if we can get RTD here it'll take out the rest of the trees!



These trees will likely never survive - but they look pretty here!

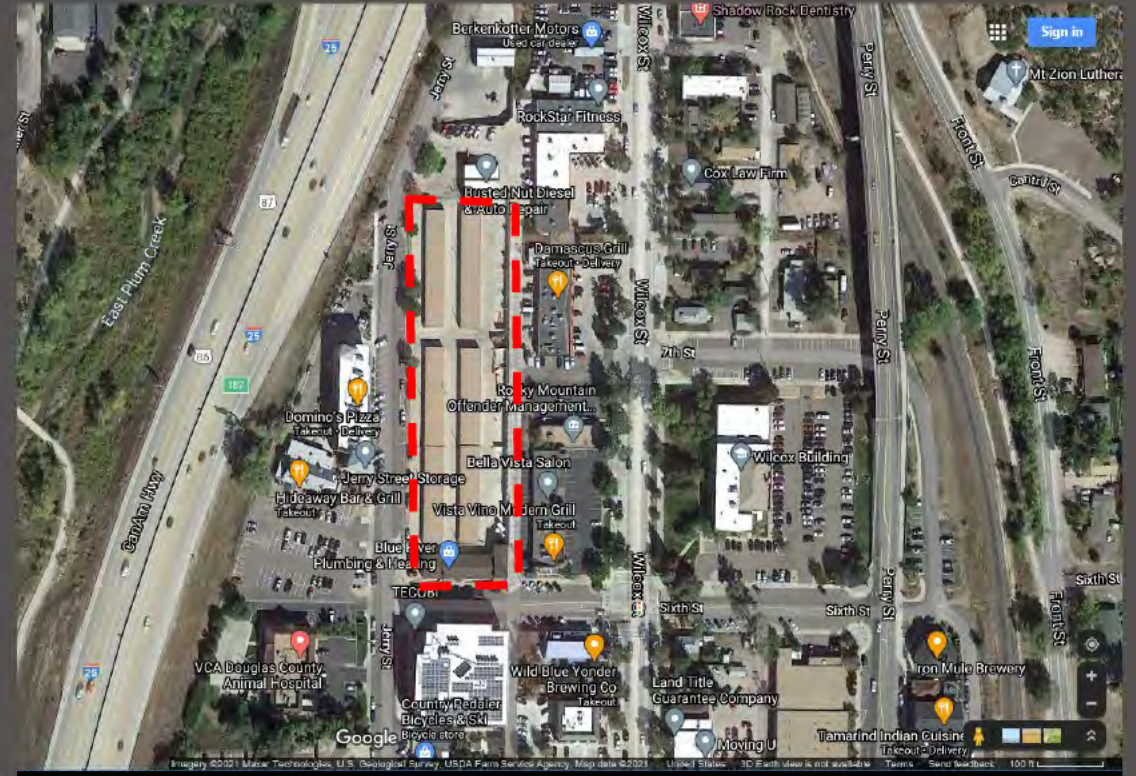


# *Or shown another way...*

CR Hospital, 212k sq ft 4-story Bldg, 297 parking spots



Proposed "View", 375k sq ft 6-story Bldg, ~429 spots



Same 100 ft scale on both images, the hospital takes up roughly 3 times the space as the proposed "View"

# ***Best Use of Resources?***

- In a 17 Sept 2020 call-in neighborhood meeting about the View the Town Manager Dave Corliss said that the town does not have a plan yet for the management of the town's parking spaces at the Encore (read more PIF and taxpayer funded parking)– one of the options he said that's under consideration is using the CRPD to ensure Residents aren't using the 'public' spaces, and that the same might be considered for the View
- I am sure there are much better uses of our CRPD, and this shows a lack of forethought and planning from those entrusted with our town finances




**From:** Dillon Walls  
**Sent:** Tuesday, March 9, 2021 1:47 PM  
**To:** Julie Kirkpatrick; TownCouncil Mailbox  
**Subject:** The View -Feed Back

Julie & Friends,

Dillon Walls here with the Castle Cafe. I would like to voice my support in favor of The View project. The growth of Castle Rock is inevitable and smart developments like this one that take much needed parking concerns into consideration for businesses like mine are a win-win. Being a resident of Denver, I know all too well what parking problems can look like for a business such as a restaurant. Please let me know if I can be of assistance to the council in any way going forward.

Warm regards,

--

Dillon E. Walls  


**From:** Mike Trede [REDACTED]  
**Sent:** Monday, March 8, 2021 9:57 PM  
**To:** Julie Kirkpatrick  
**Cc:** TownCouncil Mailbox  
**Subject:** Parking at The View

Julie & Town Council,

I wanted to reach out regarding the upcoming decision on parking at The View project. I am a business owner who rents half of the 4<sup>th</sup> floor in the Move building and used to own the property at 240 Wilcox. Having officed in downtown Castle Rock for over 13 years I am aware of the state of parking situation and how it has become an issue.

We currently do not have enough parking in the garages at the Move and around the outside of the building. We have over 35 employees and the ones who are not lucky enough to have a parking pass have to find parking 2-3 blocks away and move their vehicle every two hours to avoid a ticket.

If we want to continue to promote business in downtown and attract more to consider setting up headquarters in our town we have to continue to provide access to parking for employees. Having another 100 public parking spots on the north side of town will only help further development. Without the additional public parking we are only making the situation worse for our downtown businesses.

Please feel free to have anyone concerned reach out to discuss further if needed.

Thanks,

Mike Trede | **Innovative Business Solutions** | Managing Partner | [REDACTED]



**From:** Paul Epstein [REDACTED]  
**Sent:** Monday, March 8, 2021 6:28 PM  
**To:** TownCouncil Mailbox; Julie Kirkpatrick; Paul Epstein  
**Subject:** The View at Castle Rock

To Whom it May Concern,

My name is Paul Epstein and I am the owner of Vista Vino Modern Grill in downtown Castle Rock. I wanted to take a moment to let the board know why I'm in favor of the View at Castle Rock.

Downtown Castle Rock is very dependent upon nearby residents to support evening hour businesses and quite frankly, there hasn't been enough. Even with the opening of the Riverwalk, we only saw slight increases and since Covid, it's been worse. Small businesses have taken a huge hit and are in need of a serious revival. It's hard to think that the status quo will accommodate that need without additional residences nearby. We have a solid reputation and I can state from my own experience that having the products is not enough. At some point, we need more people living nearby.

This project is the best thing for us and for downtown. It will bring many more people within walking distance to many options of shopping, dining, finance, medical etc., ALL downtown. I am proud to be a business owner in downtown Castle Rock, and love the feel. More people and more architecture can only enhance our appearance and all of our well-being.

Thank you in advance for considering this project. You have my blessings and support in anything we can do.

With gratitude

Chef Paul Epstein CEC MBA

**From:** Tony DeSimone [REDACTED]  
**Sent:** Saturday, March 6, 2021 4:42 PM  
**To:** TownCouncil Mailbox  
**Cc:** Julie Kirkpatrick  
**Subject:** Support of the View at Castle Rock

Dear Castle Rock Town Council,

As a downtown Castle Rock business owner, I'm writing in support of the View at Castle Rock, the proposed redevelopment of 610 Jerry St. There are a lot of reasons to be supportive of a redevelopment project that brings high quality rental housing to Downtown Castle Rock. The project redevelops a worn-out storage facility, brings additional housing choices, constructs much needed public parking to the north end of Downtown, and redevelops the site within the current Downtown zoning code. Targeted redevelopment projects like this are exactly what our Downtown needs to continue thriving.

Upon completion of the Riverwalk project, we saw a tremendous positive impact to the Downtown economy. Riverwalk with the addition of Encore have allowed more than 600 new residents to live in our Downtown, created 879 new parking spaces, 80,000 sf of commercial space, allowing 20 new "mom & pop" retail businesses and 42 new office businesses to open & operate in downtown Castle Rock. The economic benefits to the community are tremendous, generating more than \$8,000,000 for our parks, police, fire, and schools and generating more than \$33,176,402 in property and sales tax over the next 25 years. All of these contributions will benefit every resident of Castle Rock, not just Downtown.

I expect the View at Castle Rock to have similar positive benefits to the north end of Downtown and Castle Rock as a whole. With the construction of high quality housing units, the project will allow people to walk to the local retail businesses just blocks away. The success we've experienced at Riverwalk with 100% occupancy, shows there is a need for more housing choices in Downtown Castle Rock. The market is a reflection of how much residents love the walkability, access to nearby office space, retail shopping, and local restaurant choices that projects like this will bring to Town. We've seen many Castle Rock residents who already live within our many great suburban neighborhoods, sell their homes, in favor of the walkability and lock & leave convenience of living in Downtown Castle Rock. The addition of these new Downtown residents has allowed many of our Downtown small businesses to thrive this past year while businesses in other locations have struggled. Most importantly, this project satisfies two of the Castle Rock - 2030 Master Plan's key goals:

1. Continue creating a vibrant Downtown, coordinated with the Downtown Alliance.
2. Focus on quality development and reach out and encourage great projects.

We look forward to another thoughtfully planned redevelopment in Downtown Castle Rock!

Thank you,  
Tony



**Anthony De Simone**  
Principal, Confluence Companies

[REDACTED]  
[www.confluenceco.com](http://www.confluenceco.com)

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**From:** K.C. Neel [REDACTED]  
**Sent:** Friday, March 5, 2021 6:30 PM  
**To:** Julie Kirkpatrick; TownCouncil Mailbox  
**Subject:** The View and Downtown  
**Attachments:** Appendix C.png; Appendix A.png; Appendix B.png

Dear Town Council members,

I would like to formally express my support and enthusiasm for The View project at 5<sup>th</sup>/Jerry St. This development meets all criteria established in the Downtown Plan of Development and will serve as a welcome addition to the downtown landscape. Developments like The View are vital in making sure our downtown meets the needs of all Castle Rock residents. More residents mean more people in the district during the day and the evening. This creates a vitality that benefits every Castle Rock resident. It also means outside dollars are more likely to be generated as visitors come to the district to shop, dine and be entertained.

My husband, Mark Neel, and I opened our business in downtown Castle Rock two decades ago. We could have gone anywhere but we chose Castle Rock and specifically downtown as the place we wanted to do business. To be sure, the charm of the district and the promise of new opportunities lured us in. But there were also challenges. Boarded up and empty storefronts dotted the landscape like dandelions. Many buildings and properties were in disrepair with some looking like they were ready to fall down at any moment.

At the time, the town's attention and resources were focused on our northern boundaries, and rightfully so. The two largest master-planned communities were on that side of town. Town planners and leaders were intent on making sure Castle Rock was a self-sustained community. But all this came at an expense to the downtown area. The district was suffering from benign neglect.

Luckily, the town manager at the time, Mark Stevens, and the Town Council recognized the peril our downtown was experiencing, and they got to work. A collection of stakeholders – business owners, property owners, residents, and representatives from the various taxing entities (the town, the county, the school district and the library district) – were tasked with assessing the situation and came up with a plan to save and revitalize the downtown district before it became too late.

The result of that three-year endeavor resulted in a roadmap to success that included, among other things, the introduction of residents living in the district. Numerous studies have shown that full-time residents are a key component in any prosperous and productive downtown district.

A statistical survey conducted for the town in 2007 found that over a quarter of the residents living in Castle Rock would seriously consider living downtown if the option existed. Younger people yearned for a more urban environment that didn't exist in our suburban, bedroom community.

At the same time, many older residents whose children were grown and had moved out were eager for the opportunity to live downtown. They had done the tricycle-in-the-cul de sac thing and were looking to downsize. Others were moving here to be closer to their kids, who had families of their own. These folks didn't want to leave Castle Rock. Their friends were here. Their kids were here. They went to church here. They did business here. They owned businesses here. Yet, three-story apartment complexes on the edge of town held

little allure. The ability to live in downtown with its strong sense of community and walkability near services and businesses they already patronized was -- and is -- alluring.

All that is clearly apparent given the fact that The Riverwalk is fully leased; Encore is almost completely sold out and it's not even completely constructed yet; and The Mercantile has a waiting list for people wanting to live in that building. A project like The View positively adds to that mix.

It is also worth noting that all these developments have transformed dilapidated or ill-suited properties.

- The Mercantile filled in an empty dirt lot.
- The Riverwalk project replaced a decaying, two-story strip mall as well as a building that was home to a biker gang and heroin depot. (see Appendix A)
- The Encore development is replacing a ramshackle liquor store and two oil change buildings with high-end condos and 300 public parking spaces (not to mention funds to quiet the railroad horns). (see Appendix B)
- The View will replace storage units with existing structural issues and will add more public parking on the northern end of the downtown district. (see Appendix C)

All these projects include retail and restaurant space, which will benefit the town's sales tax coffers, as well as much-needed commercial office space for coveted primary employers.

As many of you might be aware, I wear a lot of different hats here in Castle Rock. In the spirit of full disclosure, Mark and I opened Castle Rock Bike & Ski in 2000 and have run our business in three different downtown spaces during that time. Mark was one of the founders of the Downtown Merchants Association and I currently serve as president of that group. I also was part of the Downtown Advisory Commission and the Downtown Development Authority. We do not live within the confines of Castle Rock's official boundaries, but we have a Castle Rock address and 80104 zip code. We consider Castle Rock our home and while we have lived here for 20 years, my family's history in Castle Rock goes back almost a half century.

It's an understatement to say the town has changed dramatically during that time. Homesteaded ranches now are home to tens of thousands of residents living in Founders, The Meadows, Plum Creek and Crystal Valley. It's unrealistic to assume the downtown district isn't going to morph as well. I strongly believe providing folks with different housing options is crucial to the vitality of not only the downtown district, but the community as a whole. A strong, vibrant and thriving downtown benefits everyone. It's good for the businesses that operate here. It's good for the residents who want to have a great meal or shop for something unique. It's good for the folks who want to live in a friendly, walkable and beautiful environment. It's good for tourism. Everybody wins.

I certainly appreciate how hard your job is as a Town Council member. You are juggling full-time jobs, families and the immense time and energy it takes to make good decisions for your constituents as well as other residents and businesses in town. It requires looking at issues from every angle.

Along those lines, I would like you to know my door is always open if you ever want to talk to me about an issue or ask a question. If I don't know the answer, I will do my best to find it and I will always listen to your points of view. We're all in this together. If we all work together, we will continue to make Castle Rock the best place to live, work and play in Colorado (heck, anywhere really).

Thank you for your consideration and service.

Sincerely,

KC Neel



**From:** Chris Haugen  
**Sent:** Friday, March 5, 2021 3:02 PM  
**To:** Julie Kirkpatrick; TownCouncil Mailbox  
**Subject:** The View - Public Feedback

Hello,

I just wanted to express my support of the proposed View building on Jerry Street. As a Castle Rock-based business owner, the View will offer a number of things we are looking for, such as office options, relatively affordable housing for young employees, the potential for additional food and beverage options downtown and much needed additional parking. I have some ownership in a food hall in downtown Denver, and I will tell you, that a healthy mix of residential and office uses can only help the downtown business community in Castle Rock. Furthermore, the developer is looking to utilize a Kansas City based contractor for this project, so we have no vested interest in this project's construction. Replacing a worn, self-storage facility in the heart of downtown with a well-designed, mixed-use project will be a welcome upgrade to both the viability of downtown business and the curb appeal of Castle Rock from I-25. If I can be of any help in relaying the importance of key redevelopment projects like this in Castle Rock, please feel free to reach out.

Sincerely,

CHRIS HAUGEN  
PRESIDENT



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**From:** Matt Frary | DMS [REDACTED]  
**Sent:** Friday, March 5, 2021 11:43 AM  
**To:** TownCouncil Mailbox; Julie Kirkpatrick  
**Subject:** The View Project Feedback - Matt Frary

Dear Council and Julie Kirkpatrick,

Thank you for welcoming feedback from the community and downtown stakeholders on the proposed project The View. I'm in complete favor of The View, and any project that brings parking, employment, a place for residents to live downtown, a more vibrant downtown, and a positive economic structure that benefits the town. To me, this is all the recipe for success. We can't ask for more.....growth and movement is like a flywheel that promotes more prosperity. As a resident of Castle Rock for 16 years, a downtown business owner, a Primary Employer, and a citizen I would like to provide my point of view. It wouldn't be wise for us to stick a wrench in that flywheel.

The economic engine of Castle Rock has always been in the Core of downtown, and within our community. Recently that engine has been tested due to COVID as well as pressure on downtown with drive-to destinations outside of the Core to chain restaurants and to businesses with headquarters and large corporate structures "elsewhere." If we did not have The Riverwalk as a development downtown, or some of the other new developments, our businesses would not have survived the pandemic. We need people living downtown, spending dollars locally in downtown, and we need people working in buildings downtown. I own The Backyard, a local Tap Room and Music/Events Venue that is struggling during the pandemic, but managing to stay open with people that walk downtown and support us. Very few people drive just to come have a beer at The Backyard, but many walk in as they circulate downtown. To thrive downtown, we'll need many more people circulating downtown to attend our events, to hang out in our backyard and to buy more food and beer to support the paychecks of our workers.

I also own 2 buildings in downtown at 240 Wilcox, as well as 330-350 Third St. Our tenants also depend on a vibrant downtown just like The Backyard. For those people that want Castle Rock to "go back to the way it is," that's just not a realistic view point as we see more and more people discover how beautiful our community is to live, work, and play. For our buildings to be able to get occupancy, and for us to pay taxes and to cover our mortgages, we need to be able to attract amazing businesses that will also need more people circulating downtown. The flywheel in the economic engine downtown needs to continue to cycle and produce more and more.

Lastly, I've built SmarterChaos which recently sold to Digital Media Solutions, a public company on the NYSE. Over the last 10 years we had a difficult time attracting talent to come work for us in Castle Rock, which made it difficult to be a Primary Employer. The Primary Employers that are imperative to the lifeblood of a town, bringing in the dollars from outside the community to spend into the community, won't be able to survive if talent can't park, play, live, and work in downtown. Any project that produces more parking, more living space, more office space, and more retail....is a great project. Sounds like a win to me.

I implore Town Council and our local government to take into account the heavy weight of employers, small businesses, and those of us just struggling to keep our citizens employed and a high quality of life. It would help us greatly if you would get behind projects like this that make it a little easier for us to provide those paychecks, healthcare, and substantive jobs for the citizens of Castle Rock.

Finally, it is not enough for us to hear only the louder voices of private citizens that just don't "like the look" of the buildings, or want to "go back to the way it was." It's easier to complain and provide negative feedback, than it is to step up and support or architect a plan. I always say, it's easy to edit, difficult to author. We need a realistic growth plan for this city that benefits all of the stakeholders to keep our economic engine running and our citizens thriving, even if they don't like that we have a little taller buildings in downtown. We are a benefactor of our success, not a victim.

Thank you, and if you have any questions you can always reach out to me on my cell phone at 623-523-2244.

Matt Frary

[REDACTED]

Co-Founder, The Backyard

Co-Founder, SmarterChaos

Co-Founder, Jones Brothers Holdings and Real Estate

--

Cheers,

Matt

--

**Matt Frary**

*Executive Vice President, Brand Strategy*

[REDACTED]

[REDACTED]



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**From:** Peggy Hupp [REDACTED]  
**Sent:** Thursday, March 4, 2021 5:27 PM  
**To:** TownCouncil Mailbox  
**Subject:** The view

I won't be able to attend the .eating but wanted to add my input. 6 stories is way to tall and more people then the streets can handle traffic wise. I understand wanting to improve people coming into businesses but this is just to much for our downtown area I choose to live here and not downtown Denver for a reason and I'm sad to see that reason evaporating please scale down this project please!

**From:** Bernie Greenberg [REDACTED]  
**Sent:** Thursday, March 4, 2021 3:27 PM  
**To:** TownCouncil Mailbox  
**Subject:** The View Project

Dear Mayor Gray and Town Council:

I write to provide feedback on the View project in Downtown Castle Rock. This project has important and significant impact on the downtown area and District 4 and in my opinion is critical to the future of Downtown Castle Rock.

First, please be aware that I own a residence with my wife Julie in District 6. I also own one of the largest law firms in Douglas County and we are located in Downtown Castle Rock on Wilcox Street just south of the B&B Cafe. Our firm has been a fixture downtown for approximately 50 years. During that time we have watched and evolved right along with the downtown area.

Additionally, our firm represents a significant number of downtown businesses including several of the restaurants. However, my remarks here are my own personal opinions and are not influenced by our firm's legal work.

Here is why I support The View project and believe it to be so important to the future of Downtown Castle Rock:

1. A vital downtown requires that people be able to live and walk downtown. As is known from both Riverwalk and Encore two dramatically different demographics live now downtown: Older people downsizing their residences who desire to live near their favored restaurants; and younger teck type folks who just want to live downtown in Castle Rock. The View will provide another option for these demographics and enhance the livability of Downtown Castle Rock.
1. Downtown Castle Rock office space is in extremely short supply. Not only is beneficial to have people living downtown, it is also important to have work options in Downtown Castle Rock. Projects such as Riverwalk, Encore and The View bring more office space and more work options to downtown.
2. A large percentage of Castle Rock's residence leave each day to commute to their jobs. I believe it should be a goal for Castle Rock to grow primary employment and the economy of the town so we can recapture those jobs. What could be better than a Castle Rock resident working in Castle Rock? This is why my law firm is proud to employ mostly Castle Rock residents. Bringing The View to downtown will make this better and be a solid economic driver for not only downtown but for all of Castle Rock.

3. An enemy of Downtown Castle Rock has been previously blighted areas and properties. We have begun the revitalization of downtown recently with our award winning Festival Park, award winning The Move building, Riverwalk and Encore. All of these properties were blighted and in some cases sites of criminal activity. Now they are all family and pedestrian friendly areas where people gather in safety.

Thank you for allowing me to express my opinion and support for The View project and I respectfully request that my letter be included in the record of your proceedings this evening. While I cannot attend this evening, I am available to answer questions about my opinions should that be desired.

Respectfully yours,

Bernie Greenberg

-----  
Bernard H. Greenberg, Attorney at Law  
KOKISH, GOLDMANIS & GREENBERG, P.C.

██████████  
Castle Rock, CO 80104  
██  
██

Web: [www.kgattys.com](http://www.kgattys.com)

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**From:** Daniel Price [REDACTED]  
**Sent:** Wednesday, March 3, 2021 4:17 PM  
**To:** Julie Kirkpatrick; TownCouncil Mailbox  
**Subject:** Feed back on Proposed "View at Castle Rock"

Julie and Co,

Just wanted to offer up some feedback on the proposed "View at Castle Rock"

I think this is a great project that will spur the redevelopment of the north end of downtown much like the riverwalk is doing to Central Wilcox and everything south of there. I honestly can't think of a better way to kick start the north end of town, which is an eyesore as you enter Downtown Castle Rock, than a project of this quality that will bring that many new residents directly into this area. As far as layout, concept, mixed-use percentages, etc, I think the proposed 5k of retail/restaurant, 14.5k of office, and 215 units is a great mix.

The additional parking is a huge perk but the main perk is continuing to turn downtown into a destination for local Castle Rock residents that live in the surrounding neighborhoods. No longer do they have to go to DTC, or downtown Denver, or Park Meadows even, now, we can all stay here and come enjoy downtown Castle Rock. I have 4 kids 8 and under and there is nothing my family enjoys more than coming to downtown Castle Rock for ice cream, picnics, bikes, festivals, etc. While we live in the Village, we are still under contract on a condo at the Encore just to have something downtown cause we love it so much.

I hope this helps. Downtown Castle Rock is getting better every month it seems and this project only solidifies that what is happening down here is working and what people want.

Thanks!

Warmest Regards,

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