



PLANNING COMMISSION

Work Session

September 01, 2021

6:00 PM

Call to order, roll call

Approve minutes of August 4, 2021

Public Hearing-Planned Development, Rezoning, Preliminary Plat and Plan for a Mixed Use Development at Block 57/Former Golddigger Field and Bus Barn.

Community Development Monthly Report

The Public will be able to view and hear this meeting remotely at the following address:

<https://www.colorado.gov/pacific/idahospings/city-council-live>

The Planning Commission Meeting will be held remotely via Zoom. Comments can be given remotely through Zoom. **To provide public comment, please contact Community Development Planner Jerad Chipman at planning@idahospingsco.com no later than 4:00 P.M. the day of the meeting.** Please click the link below to join the webinar:

<https://us02web.zoom.us/j/83981188107?pwd=UHpsenRnajlEMW44WCtXV2k5U2ljUT09>

Passcode: 127216

Or Telephone:

Dial (for higher quality, dial a number based on your current location):

US: +1 253 215 8782 or +1 346 248 7799 or +1 669 900 9128 or +1 301 715 8592 or +1 312 626 6799 or +1 646 558 8656

Webinar ID: 839 8118 8107

Passcode: 127216



**PLANNING COMMISSION
MINUTES
August 04, 2021**

ROLL CALL

Chairman Cindy Olson called the meeting to order at 6:01 p.m. Commissioners present were Cindy Olson, Kate Collier, Chuck Howard, and Tracy Stokes Other staff present are City Planner Jerad Chipman City Clerk Diane Breece, Assistant City Administrator Jon Cain and Joe Rivera from the City Attorney's office.

APPROVAL OF MINUTES

Kate Collier moved to approve the minutes from April 28, 2021. Chuck Howard seconded and the motion carried by unanimous voice vote.

NEW BUSINESS

Public Hearing- Rezoning of the Idaho Springs Cemetery

Chairman Olson opened the public hearing at 6:03 p.m.

Jerad Chipman presented the staff report outlining the request to rezone the property. At the May 24, 2021 City Council meeting, the City Council approved the annexation of the Idaho Springs Cemetery. It is required that the City rezone the property within 90 days. Staff is proposing that the property be rezoned to (P) Park and Recreation. Chairman Olson closed the public hearing at 6:10 pm Kate Collier moved to approve the rezoning of the Idaho Springs Cemetery to (P) Park & Recreation. Chuck Howard seconded and the motion passed with a unanimous roll call vote.

Acceptance of the Post-Construction alignment of Colorado Blvd. Public Comment-

This is a clean-up item from when the Colorado Blvd. project was completed. The document is important as it provides clear understanding of the location of the property lines for those parcels that abut Colorado Blvd.

Kate Collier moved to recommend to the City Council the approval of the ordinance accepting the post-construction alignment of Colorado Blvd. Chuck Howard seconded and the motion passed with a unanimous roll call vote.

ADJOURN

With no further business before the Commission, Chairman Olson adjourned the regular meeting at 6:27 p.m.

CITY OF IDAHO SPRINGS

Planning Commission Communication



REPORT DATE: AUGUST 26, 2021

MEETING DATE: SEPTEMBER 1, 2021

PRESENTED BY: JERAD CHIPMAN, AICP
COMMUNITY DEVELOPMENT PLANNER

ITEM: PLANNED DEVELOPMENT, REZONING, PRELIMINARY PLAT AND PLAN
FOR A MIXED-USE DEVELOPMENT AT BLOCK 57/FORMER
GOLDDIGGER FIELD AND BUS BARN

PETITIONER: Four Points Funding

PROPERTY OWNER: Clear Creek School District

GENERAL LOCATION: Block 57 of Idaho Springs – Former Golddigger Field and the Bus Barn
bounded by Miner and Idaho Streets to the north, 12th Avenue to the
east, 9th Avenue to the west, and Interstate 70 to the south.



REQUEST: Planned Development (PD)
Rezoning
Preliminary Plat and Plan

CURRENT ZONING: Park & Recreation (P) and Commercial Two (C-2)

PROPOSED ZONING: Planned Development (PD)

DEVELOPMENT ACERAGE: The acreage of Area 1 is 2.75 acres including the former Golddigger Field. The acreage of Area 2 is 0.56 acres including the former bus maintenance facility.
Total acreage of the site is 3.31 Acres.

COMPREHENSIVE PLAN: The proposed development is within the Exit 240 Gateway Area.
The Comprehensive Plan indicates the area as Regional Commercial.

BACKGROUND:

The Petitioner is under contract to purchase from the Clear Creek School District the former Golddigger field and the Clear Creek School District Bus Barn and intends to combine the sites into one development. The Petitioner is requesting approval of a PD that would contain the framework for a potential subsequent Final Development Plan (FDP) and Final Plat. The goal of that proposed framework is to allow for a mixed-use development for the construction of a maximum of 120 residential units, 12,000 square feet of commercial space, and a park site. Procedurally, the application has two (2) elements; (1) the rezoning of the property from Park & Recreation (P) and Commercial Two (C-2) to Planned Development (PD), and (2) a preliminary subdivision plat and plan that indicates parcel areas and areas to be dedicated and vacated.

ZONING AND CONFORMANCE WITH THE COMPREHENSIVE PLAN:

The property is currently zoned a combination of Park & Recreation (P) and Commercial Two C-2. Section 21-107 of the Idaho Springs Municipal Code (Code) outlines the City's procedures for reviewing and granting PDs. The City is able to rezone property to PD, which allows for the applicant and the City to be more flexible in the design of a development, seek innovative or unique designs that would not otherwise be allowed by existing zoning districts, and to be more efficient in the utilization of land.

The Comprehensive Plan contemplates a mix of uses for this site focusing on commercial uses, but does not preclude residential uses as outlined in the below excerpt from the Comprehensive Plan. This excerpt provides further detail for the area beyond the Regional Commercial designation and describes the potential future land uses as follows: "In 2016, Idaho Springs and Clear Creek County Economic Development Corporation contracted with a consultant to complete the Highest and Best Use Economic Feasibility Study for the Interstate 70 Economic Hub at Exit 240. This market analysis recommended development scenarios including mixed uses, hotels, multifamily residential, office and the possibility of a mountain adventure center."

SUBDIVISION REGULATIONS AND LAND DONATION:

A portion of this proposal is a request to review a Preliminary Plat and Plan. This is a procedural portion of the Subdivision Regulations that requires a review of the newly proposed parcels and design prior to

the Final Plat that is intended to be reviewed at the same time as the potential FDP. The attached PD contains a legal description on page 1, an ALTA/NSPS Land Title Survey on page 2, and a preliminary plan for the layout of the parcels and areas.

The Subdivision Regulations contain provisions regarding land dedication. The PD discusses the land dedication in depth on page 3. The Subdivision Regulations require a minimum of eighteen percent (18%) of land dedicated to public purposes. There are two elements to this eighteen percent. The first is a minimum of eight (8) percent of land to be used by the City for some purpose *other than* open space. The Petitioner is proposing to fulfill this requirement through the dedication of additional Miner Street right-of-way. The second element of required public land dedication is a minimum of ten (10) percent of land for public open space. The Petitioner is proposing to fulfill this requirement through creating a park. The park is to be located at Area 1, the former bus barn site. The park is proposed to be improved and ownership to be retained by the Petitioner, however, Staff recommends requiring a deed restriction for the site to ensure that it remains a publicly-accessible park in perpetuity.

LAND USE:

The site is divided in the plan set into two areas/parcels. Area 1 is the site of the proposed residential and commercial development and Area 2 is the proposed park site. The PD section of the Code allows the Planning Commission and City Council to determine the land uses on the site. The proposed land uses are as follows:

Area 1 is proposed by the applicant to have the following allowed uses:

- Commercial uses per the C-2 section of the Code.
- Pop Up kiosks, booths or trucks occupying space.
- Home Occupation/Live/Work Spaces.
- A maximum of 120 multi-family residential units.
- Lumber storage accessory to the retail commercial use and screened.
- Sixty (60) foot tall communication towers, or six (6) foot tall tower if located on top of a building.
- Roof top solar arrays.
- Prohibits automotive service stations.

Staff recommends adding language to both the “pop up kiosk, booths and trucks” use category and home occupation uses that they remain “subject to all other applicable permits, licenses and approvals”. For example, a mobile vendor may still need to obtain a City peddler’s permit, depending on proposed location, and a food truck may still require County health food safety permitting and approval. Staff is requesting additional information regarding the text of the Home Occupation uses being proposed and the density described within that bullet point. Additionally, the term “Property Administrator” needs to be defined. Mobile telecommunications facilities are largely subject to federal regulations with many local regulations being preempted. Wireless telecommunications facilities are allowed in all zone districts within the City under federal law. Due to this, Staff recommends removing that category of uses entirely.

Solar arrays are already allowed within the C-2 section of the Code. Staff recommends adding a condition requiring solar arrays to be installed parallel to the slope of the roof of a pitched roof building and not to exceed one (1) foot of separation from that roof. Staff recommends updating the language pertaining to the screening of the lumber storage to include a provision that the screening be composed of an opaque fence with a minimum height of six (6) feet tall.

Area 2 is proposed by the applicant to have the following allowed uses:

- Open Space containing uses allowed in the Parks and Recreation (P) section of the Code.
- Pop Up kiosks, booths or trucks occupying space.
- Sales and rental of recreational materials
- Communication towers mounted on appropriate street furniture.

Staff recommends adding the same qualifying language as above to the “pop up kiosk, booth and truck” use category. Staff recommends not allowing permanent and immobile retail sales on Area 2, but rather would support temporary uses through permits licenses and approvals. It is staff’s opinion that the park in Area 2 must operate similarly to any other public park found within the City to fulfill the intent of the public land dedication requirement of the Code. Staff has the same recommendation as above to remove the communication tower use category because it is mostly driven by and preempted by federal law.

ZONING STANDARDS:

The PD section of the Code grants authority to the Planning Commission and City Council to deviate from the lot size, open space, building setbacks, building height, parking ratios and more. This section of the staff report will discuss these bulk standards individually.

LOT SIZE:

The PD Section of the Code requires that a PD be a minimum of one (1) acre. The proposed development is over three acres, complying with the Code. There is no size restriction for the individual lots.

DENSITY:

The Code does not specify a maximum density and the PD allows for a maximum density to be established. The Petitioner is requesting a maximum of 120 residential units of various sizes. This results in a density of approximately thirty-six (36) units per acre. This also results in approximately 1,200 square feet per unit for gross acres of Areas 1 and 2, and approximately 1,000 square feet per unit for the acreage of Area 1. This density is less than the minimum densities of many of the residential districts, however, the R-2 and R-3 districts allow for a minimum lot size for single family attached units of 400 square feet. The proposed density is more than double that of the 400 square feet minimum provision.

LOT COVERAGE AND BUILDING COVERAGE:

The Code requires a minimum percentage of lot area to be unoccupied by buildings and structures across a development. This is separate and distinct from the public land dedication requirements found in the Chapter 24 of the Code (Subdivision Regulations), covered above. Staff recommends, and the PD reflects, a 15% open space/landscaped area requirement to match the requirement found in the C-2 district. The Petitioner is proposing to meet this requirement by utilizing the landscaped areas around the buildings, the detention area, the staircase located between Buildings 1 and 2, and the space in excess of the subdivision dedication requirements for the park and Miner Street dedication.

The Petitioner is also proposing a maximum building coverage of 50% in Area 1 and 10% in Area 2. These restrictions will ensure that Area 2 remains 90% open space for outdoor recreation.

SETBACKS:

The Petitioner is proposing varying setbacks for Area 1, which contains the commercial and residential structures. Buildings 1 and 2 are proposed to address the indicated reconstruction of Miner Street. The intent is to create an inviting pedestrian streetscape, and to cut back on the amount of fill that will be needed to create the building foundations as the site dramatically slopes to the south of Miner Street. The proposed setback is a zero (0) lot line at the western most portion of Building 1 and then widens to a regulated minimum of three (3) feet along the north side of Buildings 1 and 2. The Petitioner is proposing an additional setback of twenty (20) feet for twenty (20) percent of the Miner Street frontage. This allows for a greater amount of variation in the façade.

It is staff's opinion that a three (3) foot setback is very narrow. The Historic District is the only location that allows for a front yard setback of less than ten (10) feet. The PD process provides great flexibility regarding setbacks; however, staff recommends a minimum front yard setback of five (5) feet, with the exception of the small area to the west that is current right-of-way. This allows for a greater landscape area and creates additional space for the installation of any potential entrances into the buildings, resident outdoor space, and the location of possible utilities such as electric meters and air conditioners. Note that sight triangles shall be observed per the Standards and Specifications Manual for all driveways accessing public streets.

The PD indicates a twenty (20) foot setback along the eastern portion of Building 2. The PD also states that parking is allowed to encroach into the setbacks, perimeter landscaping is required, and a minimum landscape area of two (2) feet. Landscaping will be addressed later in this report; however, it is staff's opinion that an opaque screening fence be located adjacent to the neighboring residential units in this area.

TRAFFIC STUDY:

A traffic study has recently been submitted by the applicant. The City has engaged a traffic engineer to review the study. The traffic engineer's findings are not a part of this packet, but are intended to be added to the packet as an addendum prior to the Planning Commission Meeting.

PARKING:

The Petitioner has indicated in the PD that the site will be parked in compliance with the Code, and has provided calculations based on the proposed maximum build out of 120 residential units and 12,000 square feet of commercial space. The majority of parking is proposed to be located south of the main buildings, to the east of Buildings 2 and 3 and the south sides of Miner Street and Idaho Street as the new construction will include installing on-street parking in those areas. An example residential unit bedroom mix has also been provided to provide specifics to the example parking count. The parking count example yields 222 potential parking spaces. The Code also contains a reduction factor for mixed-use developments. The reduction factor for this mix of uses is 1.2 or twenty percent (20%). This would result in 178 total parking spaces. However, the proposed development would remove parking for the Clear Creek Municipal Recreation District (CCRMD) that was previously required as a part of the CCRMD's 2014 expansion. The CCRMD's parking that would be removed is located on the former practice field west of the bus barn. In order to address some of the loss of parking for the CCRMD, the Petitioner is proposing to utilize a lesser reduction factor of 1.1 or ten percent (10%). This results in twenty-two (22) additional spaces being required for the development totaling 200 spaces in the example provided. The CCRMD will still be deficient in its parking requirements and will be required to make alternate parking arrangements, however, the CCRMD is working with the Clear Creek School District (CCSD) to find additional off-site parking especially for its fleet vehicles.

Staff has reviewed the example residential unit bedroom mix and agrees that it meets the Code requirements. It is staff's opinion that utilizing the lower reduction factor is beneficial not only in providing parking for the CCRMD, but for generating more parking spaces for the two (2) and four (4) bedroom units that are counted at a lower rate in the Code than staff prefers.

Staff is not opposed to allowing for any newly created on-street parking spaces constructed as part of this development to be included in the parking counts. Staff recommends placing the additional condition in any recommendation that only the newly created spaces on the south side of Miner Street and Idaho Street would count and that any existing spaces that are removed and replaced during construction not be allowed to count towards the site's parking. An example of this is that there are currently parallel parking spaces along the south side of Idaho Street. If those spaces are reconfigured to a diagonal or ninety (90) degree configuration, only the net increase in spaces would count towards the parking space requirement.

LIGHTING:

Staff is in support of the landscape provisions found on page 5 of the PD. The provisions focus on maintaining darker skies and shielding neighboring property owners from light spillage.

BUILDING DESIGN STANDARDS:

The Petitioner has indicated on page 4 of the PD their intent to comply with the provisions of the design standards found within the Code with a few proposed exemptions. Those exemptions pertain to an increase in the maximum building length from 150 feet to 210 feet, and an unbroken wall and roof plane surface of fifty (50) feet rather than thirty (30) feet. Staff is amenable to these design deviations.

FEES:

The Petitioner is requesting that the transportation impact fee be utilized in the reconstruction of Miner Street. The transportation impact fee is required to be utilized to address the infrastructure related to the growth of the City. The reconstruction of Miner Street is addressing the growth of the City, will take considerable resources including substantial fill and retaining walls, will widen Miner Street to accommodate two-way traffic, and will result in a corresponding increase in parking on both sides of the street. Therefore, staff recommends that the transportation impact fee be allowed to be incorporated into the reconstruction of Miner Street. Procedurally, this would result in the transportation impact fee not being paid to the City, but rather allowing the Developer to expend those funds as a part of the road reconstruct.

PROPERTY TO BE VACATED OR DEDICATED:

Page 3 of the PD indicates the areas to be acquired by the Petitioner and the areas to be donated or deed restricted. Staff supports these property ownership changes as they serve to consolidate the site into a usable area, provide additional right-of-way for the Petitioner to enhance with additional parking, and ensure that the park site is reserved as permanent open space.

LANDSCAPING:

Staff is in support of the landscape provisions found on page 5 of the PD with the exception of a minimum width of landscape area of two (2) feet. Staff is concerned that two (2) feet is insufficient for creating a healthy and enhanced site landscape. Staff recommends a minimum width of landscape area of five (5) feet with the exceptions of the area south of Building 1 adjacent to Interstate 70 and the area to the east of Building 2. The Petitioner is requesting the installation of xeriscaping in all landscape areas. Staff encourages the Planning Commission to contemplate the proposed use of xeriscaping in all landscape areas.

CONSIDERATION FOR REVIEW AND APPROVAL;

REZONING – PD ZONING DESIGNATION

Section 21-107 (F) of the Code addresses elements that a PD shall promote and provide. Those elements are as follows:

- (1) Flexibility in design and permit planned diversification in the location of structures;
- (2) Innovative or unique design that would not otherwise be allowed by an existing zone district;
- (3) The efficient use of land to facilitate a more economic arrangement of buildings, circulation systems, land use and utilities;
- (4) The combination and coordination of architectural styles, building forms and relationships within the PUD; and
- (5) A higher quality of construction that will be compatible with other developments within the City.

It is staff's opinion that the proposed development contains these elements with the recommended additional conditions that staff has discussed in the report. The Petitioner has noted a number of deviations to the Code, and in turn the proposed development contains an innovative, unique, and efficient site design.

The Code provides the following review and approval criteria in Section 21-107 (J)

(J) Considerations for review and approval. Considerations for review and approval will be the same as is required for a rezoning with the following addition:

- (1) Whether the proposed PD adequately mitigates any adverse impacts it causes, including without limitation adverse impacts on traffic, view corridors, noise, property values and the provision of public services.

It is staff's opinion that the Petitioner has considered these factors and has worked to address concerns regarding view corridors by providing a two-story frontage on Miner Street with a break between Buildings 1 and 2 for the purpose of added open space and maintained views for the properties on the north side of Miner Street. A traffic study has been submitted, and staff has engaged a consultant to verify the findings of the traffic study. Increased public services are proposed in the form of a new park site for the community. It is staff's opinion that the site should not generate a substantial increase in noise. Property values may not be adversely affected as the new development will shield existing residential properties from the traffic on Interstate 70.

(2) Whether deviations from the requirements of the underlying zone district are warranted by virtue of the improved design and/or amenities provided in the PD.

It is staff's opinion that the provisions in the PD will create an attractive and innovative use of land that is in keeping with the intent of the PD Code. The addition of the proposed park site will provide amenities to the community at-large and fulfill the amenity component of the PD Code.

As indicated above, the PD zoning is also subject to the "same [criteria] as is required for a rezoning". Those criteria are in Section 21-108(F) and are as follows:

- a. Whether the proposed zoning is in conformity with the Comprehensive Plan.
- b. Whether there have been material changes in the character of the neighborhood such as to justify a change in the zoning.
- c. Whether the proposed rezoning will tend to preserve and promote property values in the neighborhood.
- d. Whether development of the property in accordance with the proposed rezoning will be in harmony and compatible with surrounding land uses and present development in the area.
- e. Whether the proposed rezoning will affect traffic congestion in the area.
- f. Whether the proposed rezoning will promote the public welfare.
- g. Whether denial of the proposed rezoning would impose an undue hardship on the owner.

The above criteria for rezoning focus on conformity to community character and ensuring public welfare. The Petitioner has committed, on page 4 of the PD, to building designs that complement the historic context of the Victorian Industrial Age Architecture located in the vicinity. It is staff's opinion that the provisions found within the PD are acceptable, and staff shall review the architectural designs more closely through the FDP process.

SUBDIVISION: THE PRELIMINARY PLAT AND PLAN

Section 24-97 of the Code provides standards for approval for proposed Preliminary Plat and Plans. Those standards are as follows:

- (1) Is in conformance with all applicable requirements of these subdivision regulations;
- (2) Is in conformance with all requirements of the zone districts in which the property described in the preliminary plat is located;
- (3) Is in general conformance with the applicable goals and policies of the Comprehensive Plan; and
- (4) Is in compliance with the City's regulations for areas and activities of state interest.

It is staff's opinion that the proposed PD complies with the standards for approval. Standard number two (2) is enforced to a different standard when the property is requesting a PD process and zoning. The PD allows for deviations to the zoning regulations as previously discussed.

COMMUNITY ENGAGEMENT MEETINGS:

The Petitioner held several Community Engagement Meetings over the summer. Those meetings were held on May 18th, May 25th, June 3rd, and June 23rd. Staff attended one of the meetings and heard concerns from the public regarding the potential height of the structures along Miner Street, the additional traffic especially on Miner Street, and the potential parking impacts. The Petitioner has described in their cover letter how they intend to address these concerns. The discussion points outlined in the cover letter have been reflected in the proposed PD document.

REFERRALS:

Referrals were sent to the following individuals and entities for review and comment:

- Administrator Marsh
- City Clerk Breece
- Police Chief Buseck
- Public Works Superintendent Bordoni
- City Attorney Beery
- City Engineer Lawless and a Traffic Engineering Sub-Consultant
- Building Inspector Wester
- Fire Chief Babeon
- Xcel Energy
- The Clear Creek School District
- Clear Creek County Community Development Office

STAFF SUMMARY:

It is staff's opinion that the proposed PD meets the criteria set forth in the PD section of the Code, with the exceptions previously discussed in this report. The development would create needed workforce housing in the community with a focus on providing teacher housing for the CCSD. Additional residential units allow for the operating costs of the water and sewer system to be spread out among users. The addition of a park site is a benefit to the community that lacks flat open space. The design standards, site design requirements, and landscaping standards promote enhanced aesthetics that are highly sought after by the City. These factors result in staff's recommendation for approval with conditions.

PLANNING STAFF RECOMMENDATION:

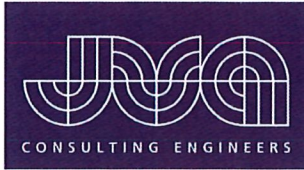
Staff recommends **APPROVAL** of the proposed Planned Development, Rezoning and Preliminary Plat and Plan for the mixed-use development at Block 57/Former Golddigger Field to include the following conditions:

Planned Development (PD), Rezoning, Preliminary Plat and Plan for a Mixed-Use Development
Block 57/Gold Digger Field and Bus Barn
Page 11

- The permitted uses set forth in the PD be amended per this staff report dated August 26, 2021.
- The minimum front yard setback be increased to five (5) feet.
- The minimum width of landscape areas are five (5) feet with the exceptions of the area south of Building 1 adjacent to Interstate 70, the primary entrance area north of Building 3 and the area to the east of Building 2.
- The net gain of newly created parking spaces on the south side of Miner Street and Idaho Street are allowed to be counted towards the parking requirements.

Attached Documents:

- Referral Responses
- Planned Development (PD) Document
- Planned Development (PD) Cover Letter



JVA, Incorporated
1319 Spruce Street
Boulder, CO 80302
303.444.1951
info@jvajva.com

August 26, 2021

Mr. Jerad Chipman, City Planner
City of Idaho Springs
1711 Miner Street
Idaho Springs, CO 80452

www.jvajva.com

RE: Digger Field / Block 57
Review of Application for Rezoning and Planned Development
JVA Job No. 1529.45c

Dear Jerad:

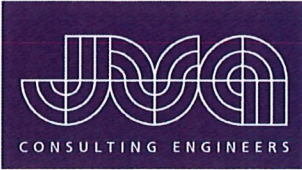
JVA has reviewed a referral package for the above referenced project in Idaho Springs, Colorado, forwarded on August 19, 2021, as requested. The purpose of this letter is to comment to civil engineering related issues and compliance with the City of Idaho Springs Municipal Code (Code) and Standards and Specifications for Design and Construction (Standards). The submittal included the following documents:

- City Referral Letter dated August 19, 2021
- Four Points Funding – Block 57, Planned Development Document dated August 18, 2021
- Block 57 Mixed Use Development – Planned Development Drawings dated August 18, 2021

Our review has generated the following comments:

Planned Development Document:

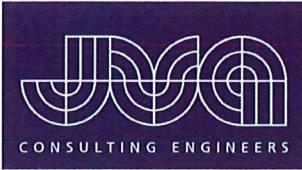
1. Design Intent - Section 4.0 Parking & Circulation. It is indicated that the developer intends to widen Miner Street to provide on-street parking along the south side. It is recommended that on-street parking on the south side of Miner be parallel parking. The existing parallel parking for local residents on the north side of Miner is to be maintained as well. City Standards call for roadway cross section having 2, 12' driving lanes and an attached 6' wide sidewalk for a collector street. In addition to the above, it is recommended to provide 8' parking lanes on each side of the roadway to accommodate the existing and proposed parallel parking.
2. Design Intent - Section 5.0 Open Space / Community Space. The developer recognizes the requirement to provide a total of 18% open space which by their calculations provided equates to 27,686 s.f. It is mentioned that open space requirement is intended to be met through park space, dedicated ROW and small landscaped zones. It is mentioned that the planned open space (park) is planned on the present bus barn property and is to be developed, constructed and maintained by the developer.



3. Impact Statement – Section 2.0 Traffic & Parking. A Traffic Study will be required which evaluates the impact of traffic generated by the development and identifies any streets or intersections requiring improvement to maintain an acceptable level of service. No discussion of parking is presented in this section.
4. Impact Statement – Section 3.0 Utility Service. This section provides some general information regarding the dry utilities to serve the property. Applicant is responsible for obtaining will serve letters from all utility agencies.
5. Impact Statement – Section 4.0 Environmental Mitigation Plans. This section presents an overview of historical land use at the site and mentions potential contamination of site soils. If a Phase I Environmental Assessment has been conducted on the site, this report should be submitted with FDP documents.
6. Impact Statement – Section 6.0 Water Demand / Service. This section identifies the potential need for an 8-inch water line in Miner Street.
7. Impact Statement – Section 7.0 Sanitary Sewer Demand / Service. This section identifies that a lift station will be required to pump wastewater generated at the development to the public sanitary sewer system. An assessment of the impact to the City's wastewater treatment plant needs to be provided.
8. Impact Statement – Section 8.0 Stormwater / Drainage. This section mentions that a stormwater detention basin will be provided to meet water quality requirements and attenuate stormwater discharge to historic levels.

Planned Development Drawings:

9. The drawings provided are conceptual in nature, detailed drawings will be submitted and reviewed in the FDP phase.
10. Sheet 5 – Site Plan. Proposed parallel parking is called out for the south side of Miner Street. Preserving the present resident parallel parking on the north side of Miner Street will be required.



JVA has no further comments currently. In general, the documents provided with this submittal are general/conceptual in nature. Detailed drawings and a thorough engineering review will be part of a future FDP submittal and review process. At that time, we will perform a detailed review of proposed water and sanitary sewer extensions, modifications and services, stormwater drainage and management system, traffic impacts and roadway improvements, parking requirements and parking provided, erosion control, and other civil engineering related attributes of the project. Please contact me at (720) 975-1461 with any questions.

Sincerely,
JVA, INCORPORATED

By: 
Tracy M. Lawless, P.E., S.E.
Senior Project Manager

Scope of Services

JVA Inc.'s review of the submittals listed in this review letter was performed within the following limitations and parameters:

The plan and document review by the City of Idaho Springs does not necessarily include confirmation of design calculations, project approach or every project design element. Therefore, authorization from the City of Idaho Springs to proceed with construction of the project does not constitute unconditional acceptance or approval of the submitted plans or documents, particularly if specific aspects are later discovered to not be in compliance with the City of Idaho Springs municipal code, standards or regulations in effect at the time such authorization was granted. The responsibility for compliance with the City of Idaho Springs municipal code, standards, and regulations rests solely with the developer, their design engineer, and their engineer's consultants. Neither the City of Idaho Springs nor JVA, Inc, accept responsibility for the project design and/or construction of this development nor any other design consideration or standard utilized in the project.



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: 303.571.3306
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

August 26, 2021

Idaho Springs Community Development Planning Department
1711 Miner Street – PO Box 907
Idaho Springs, CO 80452

Attn: Jerad Chipman

Re: Block 57 Digger Field – 2nd referral

As previously expressed for **Block 57 Digger Field**, Public Service Company of Colorado (PSCo) has existing overhead electric distribution facilities within the proposed project area and requests that the property owner/developer/contractor completes the application process for any new natural gas or electric service, or *modification* to existing facilities via [xcelenergy.com/InstallAndConnect](https://www.xcelenergy.com/InstallAndConnect).

If additional easements need to be acquired by separate PSCo document, a Right-of-Way Agent will need to be contacted.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

From: [Karen Quanbeck](#)
To: [Jerad Chipman](#)
Cc: [Mitch Houston](#)
Subject: comments for second review
Date: Thursday, August 19, 2021 1:28:11 PM

Hello,

While you may see this letter within the application, I am highlighting it here so that our comments are explicit regarding Block 57 Digger Field Review. This is the same information we submitted previously, just re-sending so it's part of the second review.

School-age children from the Project will be served by schools as determined at the discretion of the Clear Creek School District (CCSD). A development in Idaho Springs, located on the former football field and transportation & maintenance facility properties, will provide five positive impacts for CCSD. 1. A development will provide housing for current and future families, thus bringing sustained growth of more young families with children in the area. We are a declining enrollment district, dropping from over 1200 students to just over 600 students currently. Economics shows adults are living longer in their homes and reducing the supply for young adults and young families. Additional housing will provide needed enrollment for CCSD.

2. Provide adequate, safe housing. Currently we have students who live in local hotels, double up with family on a short-term basis, share living rooms, or simply move around as space becomes available. In some cases these situations are fire and public health concerns. 3. A development will provide housing for employees. Over half of our employees live outside of Clear Creek, often driving through one to two other school districts/counties to come to work in CCSD. We lose potential hires due to lack of affordable housing in the area. As the Applicant of the Project, CCSD will negotiate Dwelling Units for CCSD staff to be attainable by first year teacher salary based per bedroom in multi-bedroom units.

4. This Project will provide increased retail, in turn increasing the overall tax base for the city and county. Every bit helps as we track assessed value in Clear Creek for our Schools. 5. This Project will provide a well-maintained park with a variety of activities for families and youth in the area. Rotating activities, programmed with, and by the Recreation Center will capture the interest of children and educators alike. The location of the park provides adequate adult supervision given its proximity to housing and the recreation center. Access to the park will provide another element for teachers, classrooms or small student groups to enrich the outdoor learning experience. While not a negative nor positive impact, one to be acknowledged is the likely increased traffic in the area. The traffic study for the development will be reviewed by CCSD so that we will be better equipped to plan accordingly as we consider student drop off and pick up.

Thank you for all that you do for the community,
Karen

--

Karen Quanbeck
Superintendent & Lead Learner
Clear Creek School District

Block 57 /Former Golddigger Field – Planned Development Submittal

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Planned Development Application

Executive Summary / Cover Letter

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Design Intent

Impact Statements

Exhibit

Attached:

Planned Development Drawings



Staff Use Only
Application Number: _____
Received By: _____
Date: _____

Idaho Springs Land Use

Application

1. This is the master land use form for the City of Idaho Springs. Please use to apply for:

(Please select one of the following as appropriate)

- | | | |
|---|--|---|
| ☐ Administrative (Subdivision) | ☐ Annexation | ☐ Conditional Use Waiver |
| ☒ Plat Major Subdivision | ☐ Variance or Appeal | ☐ RV Park |
| ☒ Planned Development Overlay | ☐ Minor Subdivision | ☐ Site Plan |
| ☐ Sign Permit | ☒ Rezoning | |
| ☐ Temporary Use | ☒ Other: <u>Alley Vacation</u> | |

2. Project Name: Block 57 Miner Street

Please print or type legibly

3. Contact information: (a list of additional contacts may be attached)

Owner Name: Clear Creek School Dist

Applicant Name: Four Points Funding / St

Address: PO Box 3399, Idaho Springs,

Address: 250 Fillmore St. #225, Denver, C

Telephone: 303.567.38 Fax: _____

Telephone: 303.522.66 Fax: _____

E-mail: Karen.Quanbeck@CCSDRE1.

E-mail: stephanie@fourpointsfunding.coi

4. Property Description:

Address or Location: Gold Digger Field between 8th and 11th Avenue on Miner Street

Existing Zoning: R1,P,C2 Existing Use: Football field and bus barn

Proposed Zoning: PD/C2 Proposed Use: Mixed Use

5. Purpose: (describe intent of this application in 1-2 sentences)

To entitle the property to make development feasible.

6. Certification: (must be signed in blue ink)

I certify that I am the lawful owner of the parcel(s) of land affected by this application and hereby consent to this action.

Owner: [Signature] Date: 3-1-21 AND

I certify that the information and attachments I have submitted are true and correct to the best of my knowledge. In filing this application, I am acting with the knowledge and consent of the property owner(s). I understand that all materials and fees required by the City of Idaho Springs must be submitted prior to processing this application.

Applicant: [Signature] Date: March 1, 2021

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

FOUR POINTS FUNDING CONNECTED. COLORADO. CAPITAL

Building the path for
investing at scale across
Colorado's emerging
communities

*rental housing for
middle-income earners*

EXECUTIVE SUMMARY & COVER LETTER

Four Points Funding is under contract with Clear Creek School District for the purchase of Golddigger Field and their Bus Barn properties as of December 10, 2020. The contiguous project site includes an existing vacation of 9th and 10th Avenues through the existing field, a vacation of the portion of Miner Street where the existing bleachers sit, and a portion of the determined land known as Nancarrow Placer (Parcel H) acquired by the CCSD in 1960 to be included in the sale noted above. Additionally, Four Points intends to purchase the portion of the Center Alley right of way existing through the field to best complete this project. The City has expressed interest in vacating 11th Avenue south of Idaho Street. The total project area consists of 2.75 acres of unimproved land, currently zoned P-Park, and .56 acres of improved land, currently zoned C2-Commercial 2. The Idaho Springs Comprehensive Plan conducted in 2017 plans this land to be zoned C2-Commercial 2 in its entirety. Four Points Funding and Clear Creek School District are requesting the land be rezoned Planned Development to accomplish the intent of the Comprehensive Plan as a thriving residential community and park.

The site is known to have been home to a mill in the later 1800s -early 1900s. In the year 1957 it began being used as a football field for the Clear Creek School District. In 2019, the last high school football game was played at this location as construction began on a new state of the art, regulation size field near the current high school on Floyd Hill. The Project site currently has no identified address, though the primary city block where it resides is documented as city block 57 and therefore the project for entitlement reasons will be referred to as Block 57.

Following months of negotiations with the City of Idaho Springs and the community at large, Four Points is submitting Block 57 for the Planned Development (PD) process. The project is intended as a Mixed-Use Development with attainable Multi-Family Dwelling Units as rental housing for the residents/workers of Idaho Springs and Clear Creek County; as well as General Retail; and Park Uses programmed, in part, with the Clear Creek Metropolitan Recreation District. As part of approval of a Final Development Plan (FDP), additional documents may be necessary to set forth all Terms and Conditions: the obligations of all parties; the standards and conditions that will govern the development. The first step in the process is rezoning of the property to the requested Planned Development to allow housing and retail in conjunction with a fully constructed and operated park for the residents of Idaho Springs.

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

LETTERS OF COMMENT

- Clear Creek Economic Development Corporation (CCEDC),
Lindsey Valdez, President & CEO
- Clear Creek Metropolitan Recreation District,
Cameron Marlin, General Manager
- Freeport-McMoRan Foundation and Climax Molybdenum Company,
Lalitha Christian, Strategic Community Development Manager
- Tommyknocker Brewery,
Steve Indrehus, President
- Keller Williams Foothills Realty (former CCEDC President, County
Commissioner, School Board Member), Peggy Stokstad



FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



August 12, 2021

City of Idaho Springs
Attn: Mayor Mike Hillman
1711 Miner Street
Idaho Springs, CO 80452

RE: Four Points Funding Block 57 Zoning Change

Dear Mayor Hillman, Council and Planning Commission,

This letter is written on behalf of the Clear Creek Economic Development Corporation (CCEDC) Board of Directors in support of Four Points Funding's Block 57 zoning change request. We believe the request for a Planned Development designation supports the City's Comprehensive Plan, the mission and goals of the CCEDC, and overall positive growth for the Idaho Springs community.

Housing, specifically workforce housing, is a top priority for the CCEDC. We have seen first hand how businesses are suffering as a result of the workforce shortage. Businesses continue to post signs urging their customers to be patient with the few employees they have. This is currently a nationwide problem; however, this is a problem we can assist with by providing housing opportunities for those wanting to live and work in our beautiful communities.

The additional housing proposed in Four Point's planned development will provide for Clear Creek's workforce and families. What is more, Four Points has made significant efforts to work with the surrounding residents and provide consistent updates to the community. They have created a plan that is aesthetically appropriate, thoughtfully designed, and inclusive of gathering spaces in partnership with the adjacent recreation center.

We look forward to seeing this project move forward and will continue to work closely with the City and the Four Points team. Please feel free to contact us at president@clearcreekcdc.org, 303-710-9218. Note that Mayor Mike Hillman, CCEDC Chairman, has recused himself and is not represented in this letter.

Sincerely,

Lindsey Valdez
President & CEO

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



CLEAR CREEK METRO RECREATION DISTRICT

Aug 6, 2021

To the Members of the Idaho Springs City Council,

This letter is to certify that the Clear Creek Metro Recreation District is in support of the effort to change the zoning of the Digger Field property to allow for residential and the bus barn property to allow for park space. The change in zoning to swap the open park space of Digger Field with that of the bus barn would bring significant benefit to the Idaho Springs community as well as to CCMRD specifically.

In our continued partnership with Four Points Funding, we see multiple opportunities for direct benefit to our operations and our financial viability via the proposed development.

- Green space adjacent to our rec center facility would provide CCMRD with additional outdoor resources we could leverage for recreational purposes, which ultimately benefits the entire community via quality of life and enhanced health and wellness.
- Adjacent green space would be regularly utilized by our childcare program as our younger community members would have the chance to run, play, and flourish in an outdoor space that is safe and easily accessible.
- The overall aesthetics of our space (and that of one of the major entry points to our City) would be enhanced by park/green space, via a celebration of one of things we all value and can agree about, which is the love of the outdoors.
- An expansion of housing availability would provide direct benefit to CCMRD as well. More residents directly adjacent to the rec center would correlate to an increase in property taxes and an increase in the number of potential CCMRD members. More middle-income apartments means more space for young residents starting families, thus more kids to fill out our youth sport teams (everything from baseball to swim team), and therefore more young people would potentially fall in love with sports at a young age, and ultimately grow into student athletes at the high school level (and beyond!). More families translate into more opportunities for high-quality programming, be it for our wellness offerings or our group fitness classes.
- Local housing targeting our workforce will help to ease the pressures of the labor shortage that every business in Clear Creek County is currently feeling, including us at CCMRD.
- We see big opportunities that could come from the connection with the Greenway Trail, and the proposed CDOT pedestrian bridge. The requested change in zoning provides the linkage of activated outdoor spaces which will ultimately enhance the experience for the end user and could also be of a direct benefit to CCMRD as well. (Our monthly fun runs have been growing in popularity - imagine a run beginning at the rec center, meandering through the park space, over the footbridge, and connecting to the Greenway!) And even bigger and potentially more impactful: the

www.clearcreekrecreation.com

98 12th Avenue • P. O. Box 1149 • Idaho Springs, CO 80452 • 303.567.4822

FOUR POINTS FUNDING
BLOCK 57 | PLANNED DEVELOPMENT
IDAHO SPRINGS, CO 80452



CLEAR CREEK METRO RECREATION DISTRICT

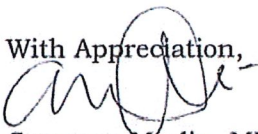
success of the Slacker Half Marathon, the Georgetown to Idaho Springs Half Marathon, the Bob Cook Memorial Bike Ride, and others lead me to believe that this enhancement could be an asset that could be leveraged to attract recreational enthusiasts from near and far. (We are eager to maximize revenue generation to offset our reliance on the Henderson Mine.)

We are gearing up for our inaugural grass volleyball league, and the response we're seeing makes me truly believe that our local community is eager to spend time recreating and connecting outdoors. We are confident in the substantial benefit that the rezoning of these properties to their best-size and use, as proposed, would bring to all of us who call this amazing place home.

Our local leaders are faced with difficult decisions as we navigate the challenges of housing, parking, tax revenue, and a rapidly changing social landscape. The development proposed and specifically the rezoning proposed by Four Points Funding presents answers to these issues and opportunities that offer game-changing outcomes.

Thank you for your sincere consideration of this development and the requisite rezoning.

I am happy to discuss this perspective further with any of you at any point in time.

With Appreciation,


Cameron Marlin, MBA
General Manager
Clear Creek Metropolitan Recreation District
303.921.9596
cameron@ccmrd.com

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



COLORADO OPERATIONS

P.O. Box 68
Empire, CO 80438
Phone (303) 569-3221

August 16, 2021

City of Idaho Springs
Attn: Mayor Mike Hillman
1711 Miner Street
Idaho Springs, CO 80452

RE: Four Points Funding Block 57 Zoning Change

Dear Mayor Hillman, Council and Planning Commission,

The Freeport-McMoRan Foundation and Climax Molybdenum Company, Henderson Operations have been working closely with Clear Creek County to find a way to bring affordable and attainable housing to the community and surrounding counties. We do this with the ultimate goal to partner to build long-term resiliency within the community that drives economic progress, creating opportunities for citizens that can be sustained or transferred post-mining.

The creation of economic opportunity and progress through affordable housing is critical to sustaining community and individual wellbeing post-mining. However, economic growth alone does not truly represent the strength or success of a community and its citizens. Nor are traditional economic activities, like business attraction and job creation, the sole driver of economic development. Rather growth must take people and their wellbeing into account.

As members of this community and the largest employer in Clear Creek County, we understand the impact the lack of affordable and attainable housing is doing to this community. Our employees feel it and so does our business which is why we want to support initiatives and decisions that can help address this issue.

We encourage the Town of Idaho Springs to support the additional housing proposed in Four Point's planned development. Four Points has made a conscious effort to engage our community in thoughtful discussions, shared a well-designed plan that will be inclusive of our community needs. The Town of Idaho Springs holds a special place in our hearts. We feel this project is one step in the right direction towards addressing this challenge and it will help drive long-term economic wellbeing for the Town of Idaho Springs.

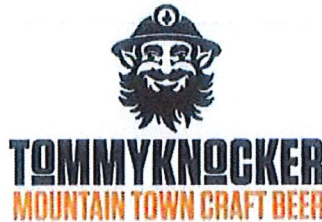
We look forward to seeing this project move forward and will continue to work closely with our community partners and the Four Points team. Please feel free to contact us at lchristi1@fmi.com, (720) 965-8523.

Sincerely,

A handwritten signature in black ink that reads 'Lalitha Christian'.

Lalitha Christian
Strategic Community Development Manager, Henderson Operations

**FOUR POINTS FUNDING
BLOCK 57 | PLANNED DEVELOPMENT
IDAHO SPRINGS, CO 80452**



August 7, 2021

To Whom it May Concern:

Please accept this letter as an indication of support from Tommyknocker Brewery for the change in zoning as requested from Four Points Funding Project. The rezoning of the specified property outlined in their development project into multi-family/mixed-use development will positively impact the community and economic success of Idaho Springs and its residents.

The Four Points Project is based on providing multi-family housing for middle-income earners. Tommyknocker Brewery employs an average of 100 people, predominantly community-based. The necessity for affordable workforce housing is a longtime issue and even more critical throughout the pandemic. Creating this type of housing and other recreational use promotes a community-oriented lifestyle we value.

The lack of permanent workforce housing negatively impacts businesses' ability to maintain consistent employees. The current housing challenge directly affects many local enterprises' capability to provide services, stunting opportunities and impeding an increase in the tax base. In addition, the ability to add mid-level income housing opens up prospects of mobility for others, leaving low-income housing open for the appropriate income bracket.

Tommyknocker Brewery aims to maintain business as a community-based employer. Supporting our community members through employment, community events, and contributions continues to be an essential aspect of our business model. After participating in presentations by Four Points, we are confident that with continued collaboration with the City of Idaho Springs, the best interests of all community members will be represented.

Respectfully,

A handwritten signature in blue ink that reads "Steve Indrehus".

Steve Indrehus, President
Tommyknocker Brewery

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

August 15, 2021

Idaho Springs Planning Commission
Members, Idaho Springs City Council
1711 Miner St., PO Box 907
Idaho Springs, CO 80452

Re: Four Points Funding, Block 57|Planned Development

Dear Planning Commission and City Council Members,

I would like to offer my strong support for Four Points Funding as it seeks City approval for the development of Block 57|Planned Development collaborative housing project. Over the years many housing studies have been completed and all with similar outcomes for the need of attainable housing in the community. Idaho Springs identifies housing as an important community goal in their Comprehensive Plan seeking to induce healthy development, retain small businesses, provide healthy housing options, and maintain active participation from the citizenry. The first step in the approval process is a rezoning to Planned Development to allow for housing, retail and a park. With the backing of important stakeholders to move forward with a new concept, Four Points Funding is well positioned to make this a reality.

Having seen projects come and go over the years, I have great confidence in Four Points Funding and their ability to deliver a high quality and successful housing/retail development and park on the "Digger Field" and Bus Barn in Idaho Springs. In-depth thought has been given to the impacts including traffic, environmental mitigation, natural resources, visual and education. With the guidance and meaningful input of the City and citizens Four Points will be able to implement a sustainable development contributing to the positive economic future of the City and taxpayers.

I know each of you care immensely about the future of Idaho Springs. As you move forward, I hope that you will provide valuable input to this outstanding project and the impacts that have been carefully considered so that it is truly a reflection of the community as a whole. Thank you in advance for your kind consideration and approval.

Best regards,



Peggy Stokstad
Keller Williams Foothills Realty (and former President of CCEDC, County Commissioner, School Board Member)

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

DESIGN INTENT

- Introduction
- Height, Coverage, & Setbacks
- Design & Materials
- Parking & Circulation
- Open Space / Community Space

1.0 INTRODUCTION

This document is intended to provide readers with a conceptual understanding of the design of the intended project that complements Idaho Springs and provides benefits to its community and residents. The 2017, Economic @ Planning Systems (EPS), Inc. study estimated 150 additional housing units would be needed in the next 10 years. Idaho Springs is 6 years away from meeting that goal. The Project's location just off Exit 240 from a major arterial transportation connection, I-70, provides an ideal location for the placement of a significant number of these units. Block 57 will include a mix of uses: up to 120 Multi-Family Dwelling Units; up to 12k square feet of Community Centric General Retail; over 24k square feet of Park Land for Recreational Use. Its easy on-and-off access to the interstate is optimal as it reduces the to-and-from traffic impact this Project will have vs. a location in Idaho Springs city center.

Partnering with the neighboring recreation center will provide benefit to the development as well as the community at large. Open space will be designed, constructed, and maintained by the developer providing benefit to all users of the recreation facility. Additionally, 8-16 'attainable rent bedrooms shall be dedicated to housing solutions for School District staff. While the Project will be parked to meet local municipal code regulations, a partnership with the local managed parking team intends to provide overflow parking spaces to the recreation center and Historic District when residents are typically away from their units.

The 2017 City of Idaho Springs Comprehensive Plan Goals include 'provide a diversity of housing to promote a complete community, and accommodate all needs to allow people to live in Idaho Springs throughout their lives'. This vision includes low and moderate income groups, and contributes to meeting the city's goal of 'ensuring its economic future through responsible development'. The Block 57 Development is focused on creating solutions through prioritizing the City's economically diverse population. A successful project will incorporate middle-income earners with



Artist Rendering of the Project from a neighbor's porch looking south. – Milagro Designs

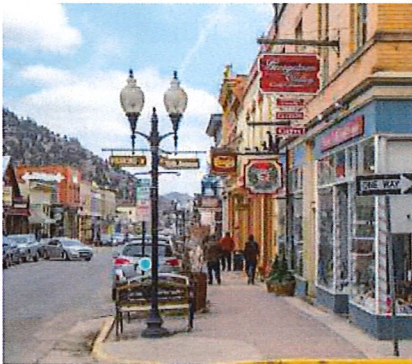


Artist Rendering of Block 57 facing the proposed park in front of the recreation center, looking west. – Milagro Designs

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

CITY OF IDAHO SPRINGS VISION STATEMENT

“Idaho Springs is dedicated to preserving its culture as a historic mining community, ensuring quality of life and its economic future through both preservation and responsible development, striving for an inclusive community, designing a complete transportation system, promoting recreational opportunities and implementing the wise use of community and natural resources.”



Miner Street height precedent

safe, accessible units for rent, easy access to a healthful lifestyle, while providing the community at large open space to enjoy year round.

“redevelopment sites within the City where high density multifamily should be encouraged”

City of Idaho Springs Housing Study

2.0 HEIGHT & COVERAGE

The Project is made up of 3 buildings. The site steps down approximately 20-12 feet where the buildings face the I-70 corridor. Therefore, the buildings will each provide additional ground level units under the primary stories at street level. This will make the structures 1 additional story on the I-70 facing sides. For the purpose of clarity, the Project refers to “street level” as the existing level of Idaho Street and Miner Street (an 8 foot difference) where the Project faces town on the north and east perimeters of the site.

Due to the unique grade conditions present on this site, Building Height shall be measured vertically from the original adjacent grade of primary adjacent road. A Miner Street Zone Lot Line is added to shape the building form and reduce the effect of massing and shadow on the pedestrian environment and neighboring properties at Miner Street and address the low grade to the south.

Existing houses facing the Project on the north side of Miner Street and the south side of Idaho Street range from 1-story to 3-story structures. Per code any new structure in this R-1 zone could be build to a height of 35 feet. The CCMRD structure, which resides in the neighboring Commercial-2 Zoning, currently measures 39'-6" to its tallest point. Block 57 will be primarily 2-story structures as they face the existng Miner Street neighborhood. Designed with a gabled roof they would be approximately 24 feet from the existing street level to the bottom of the gable. The intent is to provide a pedestrian-friendly atmosphere that fits into the existing neighborhood fabric existing in other areas of Idaho Springs.

The building closest to I-70, the recreation center and proposed park at the Bus Barn property to the east, will be 3-stories from street level as it faces town and therefore, 4 stories facing I-70. Setbacks to the neighboring residences along the south side of Idaho Street are a minimum of 20 feet to eliminate shading of these existing structrues for the majority of the year.

Final massing, design and placement of proposed buildings will be provided

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

PLAN ELEMENT GOALS FROM 2017 CITY OF IDAHO SPRINGS COMPREHENSIVE PLAN

LAND USE: maintain and enhance community character and quality of life, while lessening the adverse effects of growth and directing new development to appropriate locations that are cost effective to serve.

HOUSING: Respect existing single-family neighborhoods, provide a diversity of housing to promote a complete community, and accommodate all needs to allow people to live in Idaho Springs throughout their lives.

PARKS, OPEN SPACE, TRAILS & RECREATION: Aspire to be an active, healthy community that appreciates the outdoors, our connection to the natural environment and fosters sustainable recreational opportunities within our mountain community for all ages and abilities.

HISTORIC RESOURCES: Celebrate and preserve our mining history and resources to provide future generations a sense of place and connection to our past.

at Final Development Plan. Building Coverage is proposed as 50% for Area 1 (mixed-use) and 10% for Area 2 (park) as the City of Idaho Springs Municipal Code does not provide a restriction.

3.0 DESIGN & MATERIALS

Site Design shall encourage dog friendly and bike friendly options. Public spaces shall be inclusive and encourage a multitude of activities while providing safe and attractive design elements. Designer shall establish consistent use of similar street furniture, lighting, trees and pavement. As well, the site design shall conform to standards set forth in the City of Idaho Springs Development Regulation, unless otherwise noted.

Landscaping and Lighting shall be chosen to enhance the human scale while complementing the mass and height of the adjacent buildings. Outdoor community spaces will be well lit to accommodate pedestrian activity and promote the use of space throughout the year and evenings. Care will be taken to address dark sky concerns while maintaining public safety for residents and the community.

Site Design shall incorporate the ability for bicycles and pedestrians to potentially connect to the Greenway Trail via a Colorado Department of Transportation proposed pedestrian bridge that will land on or near the site.

Building Design will evoke a sense of place. Buildings shall be reminiscent of the language of mill and mine vernacular, in terms of form or materiality. Per the Idaho Springs Municipal Code the Project is located in the Gateway area of the City and shall 'reflect the historic mining heritage of the community'. Massing and color shall be complementary of surrounding houses and larger structures in and around Idaho Springs. New Construction shall enhance the historic feel of the larger community.

Minimal setback along Miner Street from the sidewalk promotes real interactions, and are consistent with the historical context of the nearby Historic District. Residents and shops will enter individual units at street level to better promote a sense of single family homes and active public spaces. Weather protection using awnings, canopies or building overhangs may be provided to add articulation to the street frontage of the buildings.

Rooftops clearly visible, shall be designed to screen utilities, infrastructure housing, HVAC, etc. Passive activities on rooftops, such as green roofs, solar panels, art and or signage to make them visually interesting may be considered. Waste enclosures within the Project shall be centrally located throughout the property and screened.

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

COMMUNITY BENEFITS

- ✓ Bedroom accommodations for workers making the Idaho Springs area median income (AMI) of \$47k or more. In some cases lower.
- ✓ Safe, Accessible, well maintained, healthful units at attainable rates for families and seniors.
- ✓ Year-round access to approx. 24,000 sf of park space for the community (developed, constructed & maintained by the developer) and programmed in conjunction with Clear Creek Metropolitan District.
- ✓ Honor the historic high school football field and games played in the location of the site.
- ✓ Economic and community generator – providing community members a residence in Idaho Springs.
- ✓ Cooperative parking spaces during off-peak residential parking hours Up to 12,000 sf of retail space, generating jobs and sales tax.
- ✓ Designed to reinforce the historic, mining culture adjacent to the historic district.
- ✓ Extension of Miner Street and the neighborhood fabric to better connect the west side with the city center.

The Project shall comply with the architectural standards set forth in the City of Idaho Springs Development Regulations, unless otherwise noted.

4.0 PARKING & CIRCULATION

While vehicular circulation is necessary for residential and commercial spaces, pedestrians and bicycles shall be encouraged through and around the Project Site. Where necessary, bollards, borders, or a change in material shall delineate vehicular and pedestrian zones in the newly developed areas. Stairs and balustrades shall be designed to contribute to the character of the Project.

Parking is a key role in mixed-use developments. The Project shall widen Miner Street to create a pedestrian and vehicular friendly environment elsewhere in the City. By doing so, the Project will be able to provide on-street parking along the south side of Miner Street which shall be counted as required parking for the Project as the land within the existing property line. Additional parking will be provided between the recreation center and proposed park at the eastern edge of the site. The majority of the parking for the Project will be centrally located along the I-70 side of the site.

Bicycle parking shall be provided in safe, visible locations. Alternate transportation options for residents will be considered as appropriate.

5.0 OPEN SPACE/ COMMUNITY SPACE

The Project is located within 1 mile of 22.76 acres of City owned space spread throughout and around the city center of Idaho Springs not including the 422 acre Virginia Canyon Mountain Park to the north side of town.



City of Idaho Springs existing open space

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

SITE / PROPERTY SQUARE FOOTAGE	
Parcel A minus Dedication	20,321
Parcel B	18,713
Parcel C	8,504
Parcel D	29,050
Parcel E	8,795
Parcel F	4,839
Parcel G	7,254
Parcel H	16,342
9th Ave Existing Vacation	4,474
10th Ave Existing Vacation	5,006
11th Ave Vacation	4,012
Miner St Existing Vacation	1,784
Alley through site Vacation	14,042
Idaho St Vacation @ Miner	1,051
TOTAL AMMEDED PARCEL	144,187
10% of Total for Subdivision	
Open Space	14,419
13% Open Space Required per Planned Development	18,744
Open Space Proposed	33,500
Miner Street Dedication to City	8,819
Idaho Street Dedication to City	7,196

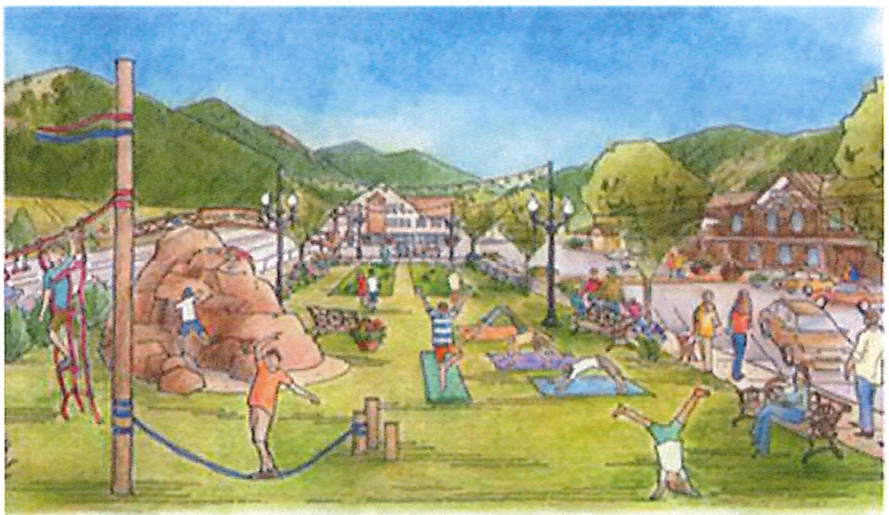
*Block 57 Open Space Calculations per the
Idaho Springs Municipal Code*

Pursuant to section 24.72 of the Idaho Springs Municipal Code, the Project is required to provide a minimum of 18% open space to meet future major subdivision requirements as calculated in the chart to the left. Additionally, 15% is being proposed through the Planned Development.

Community Space in a small community serves many functions: it is an outdoor room where social interaction creates a sense of belonging, provides variety in the built environment, and employees and residents can get outside even if their unit does not have its own outdoor space. Neither work nor home, it provides the “third place”, an essential component of neighborhood livability. Community Space serves as a focal point and assists in orientation through a development or neighborhood. It should be pedestrian friendly and create meaningful public Open Space. Adjacent buildings and structures will engage the space to ensure vibrant use.

The Project's Open Space will consist of park community gathering space, dedicated right of way, and small landscape zones as allowed and will exceed the requirement defined by the municipal code. Flexible programming, as well as the community park use elements shall be designed in conjunction with Clear Creek Metropolitan Recreation Center and designed to be enjoyed by people of all ages and abilities.

The Project's planned Open Space shall be located east of the housing structure in anticipation of The Colorado Department of Transportation's (CDOT) proposed pedestrian bridge landing on or adjacent to the Project Site. This pedestrian bridge will bring connectivity between the north and south sides of the highway thus connecting residents to Forest Service open space, Clear Creek water front, and child enrichments centers (like Mountain Youth Network, TREK, and the Rock House) in and near Building 103.



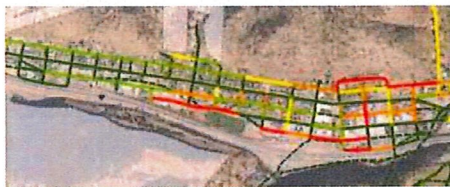
FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



Site view from the top of the AVA Zipline

Capital Improvement Rating

CIP Rating



Preliminary Findings, Infrastructure Assessment by HDR



Artist Rendering of proposed Block 57 at Miner Street - Milagro Designs

IMPACT STATEMENT

- 1.0 Purpose
- 2.0 Traffic & Parking
- 3.0 Utility Service
- 4.0 Environmental Mitigation Plans
- 5.0 Natural Resources
- 6.0 Water Demand/ Service
- 7.0 Sanitary Sewer Demand / Service
- 8.0 Stormwater / Drainage
- 9.0 Visual Impacts
- 10.0 Education
- 11.0 Emergency Services
- 12.0 Historic Preservation

1.0 PURPOSE

The purpose of the Former Digger Field/ Block57 Project is to provide middle-income housing to the workforce of Idaho Springs while participating in the economic growth of the city. The vision is a collaborative effort between Developer, City, School District, the recreation district and large employers to support vibrant, sustainable growth in Idaho Springs.

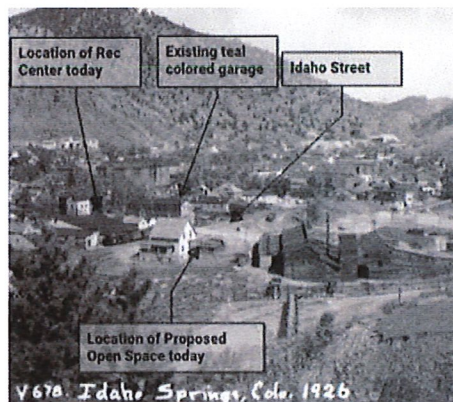
2.0 TRAFFIC & PARKING

The 2017 Preliminary Findings, Infrastructure Assessment for the City of Idaho Springs by HDR reports Miner Street bordering the north edge of the site with a grade "F", 'Pavement Conditions' in relatively poor condition.

The road standards applicable to the Project, and specifically the widening of Miner Street, are set forth by the Municipal Code. Two-way traffic passing lanes per an engineered certified traffic study and parallel parking and sidewalks on the north and south sides of Miner Street between 8th and 12th Avenues and street lighting shall be provided by the Developer. Improvements are estimated to cost (\$1.2M) one million two hundred thousand dollars. Extensive soil import is necessary to widen Miner Street due to existing grades on Site. Modification of standards for roads within the Project shall be determined by the City pursuant to the approval of a Final Development Plan.

Traffic for the proposed maximum 120 multi-family residential units and 12,000 square feet of retail equates to a maximum of 90 trips per hour during Saturday peak traffic times in Idaho Springs. Two access points at Miner/9th Avenue and Idaho Street at 11th Avenue would therefore see 45 cars per hour at this peak time. Although, this number is expected to be less because

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



Courtesy of the Idaho Springs Historical Society

as workforce housing, residents who work in town are expected to walk or ride a bicycle during peak traffic times of summer when the weather is nice.

Impacts along Colorado Boulevard are minimal. Idaho Street at 13th Avenue currently requires improvements with the amount of traffic, spacing of intersections and number of pedestrians crossing from the public lot on the west side to the downtown area. Further analysis is needed. Idaho/13th intersection would be a good candidate for implementing a 3/4 movement island restricting lefts and through movements from Idaho Street, and still allowing right turns and left/right turns from 13th Avenue. It is important to know the Colorado Department of Transportation has completed studies at this intersection in the past. There has previously been thought a traffic circle would help to manage and calm traffic accordingly and the addition of a new mixed-use development nearby may further make this need a reality.

Additional parking, crosswalk, traffic calming, and street amenities such as lighting and street scape will be provided along Idaho Street near the recreation center by the Developer. Improvements estimated to a cost of (\$80,000.00) eighty thousand dollars.

The Developer will provide land for and fund design and construction of agreed transportation improvements on and along Miner Street between 8th and 11th Avenues and Idaho Street between 11th and 12th Avenues. Additionally, cross walks and safety lighting shall be provided by the Developer. Design and construction must occur in concert with the project development to complete the Project do to grading and impact of overall circulation.

3.0 UTILITY SERVICE

Electricity and gas to the Project site will be served by Xcel Energy. Xcel currently has overhead power lines on the Project site which are expected to be placed underground with development of this project. Century Link is expected to provide telecom and internet services. The design of viable electrical, gas, telecom, and internet services of the Site will be completed for the Final Development Plan.

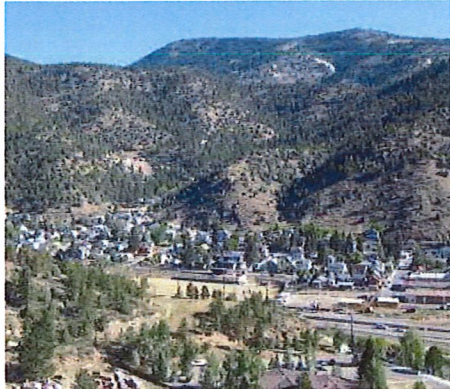
4.0 ENVIRONMENTAL MITIGATION PLANS

1. The Site was occupied by several single- and multi-family homes, garages, and sheds for several decades beginning in the late 1880s. None of these structures remained on-Site past the 1950s. It is possible that when these structures were demolished, the debris, potentially containing asbestos or lead paint, was buried on-Site (see Item 3, below).

FOUR POINTS FUNDING

BLOCK 57 | PLANNED DEVELOPMENT

IDAHO SPRINGS, CO 80452



I-70 & Former Golddigger Field

2. The Site was occupied by at least two ore treatment plants (from at least 1931 but no later than the early 1960s). Heavy metals at concentrated values, which are typically contained in ore slag, can be a byproduct of ore treatment plants. Other contaminants are also possible.

3. The Terracon geotechnical investigation indicates that fill has been placed on the Site. It is not clear what the fill contains, but there is no indication of hazardous waste. From what I know of the area, I would assume that the fill is probably made up of a mixture of mill tailings (from the former ore treatment plants), wood, trash, and construction debris.

4. There have been several underground storage tanks in use at the Site. Of the tanks we know about (the records prior to 1970-ish can be spotty), only one is still active and in service. The others appear to have been removed or closed in accordance with the regulations existing at the time. The remaining diesel tank is currently in use to fuel the School District's buses and other maintenance vehicles.

5. There is an oil/water separator on the outside of the western edge of the Bus Barn; it received wash-water from inside the Bus Barn via a central floor grate. The oil/water separator could not be inspected because there was a bus parked over it, but the floor grate leading to the oil/water separator did appear to contain oily solids.

6. Overall, the interior of the Bus Barn was remarkably clean and well kept. They do store a lot of routine motor oil, engine cleaner, windshield wiper fluid, etc., but everything was very well organized and secured (including the waste materials such as waste oil, used batteries, etc.).

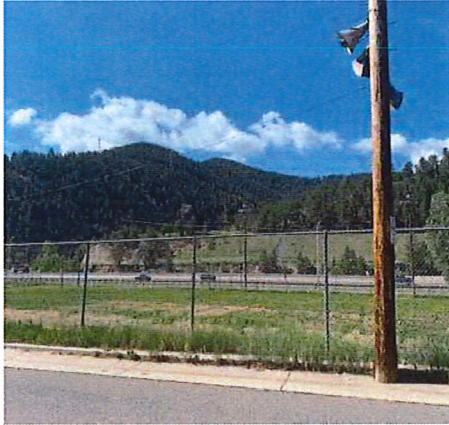
7. While not a part of a typical Phase I, there will likely be some asbestos in the Site structures based solely on the age of construction. I did not observe anything that would indicate an immediate hazard; it's just something that may need to be addressed as part of Site redevelopment.

The developer is required to manage impacts during construction:

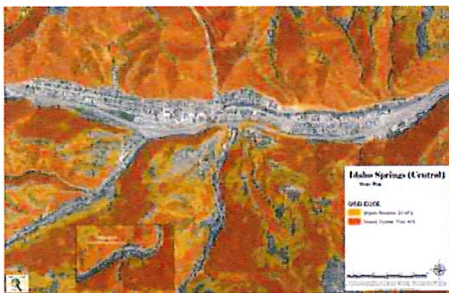
1. As a best management practice, outreach to the State prior to construction. The Site is located near the Clear Creek Superfund Site, next to a mine/mill impacted creek, and there is history of ore treatment on the property.

2. Any fill disturbed or excavated will be assessed and appropriately managed. Any mill tailings can be reused on-Site (under certain guidelines) or excavated and disposed of at a permitted facility. If the fill contains construction debris that contains asbestos, lead paint, or has indications of

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



View of former Digger Field requiring fertilizer and water for maintenance.



Slope Map of Idaho Springs from the Idaho Springs Comprehensive Plan – Envision Idaho Springs 2017.

Orange indicates slopes greater than 45%.

GOLDDIGGER FIELD MAINTENANCE

- ✓ \$1,000 to turn on the outdated lighting system per use
- ✓ \$1,500 water per month
- ✓ \$400 paint lines per month
- ✓ \$50 gas per month
- ✓ \$800 labor to mow per month
- ✓ \$1,000 fertilizer per season
- ✓ \$500 grass seed per season

chemical impact (e.g., petroleum products from the Bus Barn, etc.) that material will be disposed of at an appropriate landfill.

3. The existing diesel tank will be eligible for Policy 29 funds which provides reimbursement for the removal of operating tanks (and any associated hardscape, soil, or water impacts) that will not be replaced with another tank. The oil/water separator may be able to be removed as well.

4. All motor oil, engine cleaner, windshield wiper fluid, waste fluids, etc. must be removed from the Bus Barn. The oil/water separator and floor grate must be removed as well if not completed with Policy 29 funds.

Susan Borden, PG, Partner & Principal Geologist, Indigo B2B, LLC

5.0 NATURAL RESOURCES

There are measurable shortages of fertile land, water, and fossil energy that currently exist in many regions of the world. Strategically planning for density and growth will help to manage the use of some, if not all these resources.

Construction does have an impact on land, water, energy, and biological resources. Construction of a new multi-unit development can address existing growth in population while providing the much more energy efficient systems and healthy living environments in Idaho Springs. This project is intended to house the workers already existing in Idaho Springs. While construction of the site expends energy, the completed Project will house over 150 people in up to 120 units who will be within walking distance to the multitude of restaurant jobs, education jobs, and other work opportunities. Providing housing within walking distance to work is a primary way to reduce energy consumption in today's world. Much of the land in and around Idaho Springs and Clear Creek County slopes greater than 45% which is considered "steep slope conditions" as documented in the 2017 Comprehensive Plan. See image to the left. Construction to house +150 residents most anywhere else in the county could cause devastating erosion and expend a much greater amount of energy use during construction.

The green space of the former Golddigger Field is not fertile land. The soil is expected to contain mill tailings (different than mine waste) and possibly hazardous building debris. The field costs an estimated \$20,000 per year to maintain the grass alone as open space. While Park land is important to the residents of Idaho Springs, the Project will construct a more efficient and environmentally sensitive Park space nearby to address the desire of the citizens and responsibility to the environment.

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

The existing electrical and lighting systems on Site are technology from the 1970s or earlier. All new electrical will meet today's energy codes and dark sky regulations to reduce light pollution. Solar power will be discussed with potential partners to further contribute to a savings on natural resources.

6.0 WATER DEMAND/ SERVICE

Water systems shall be designed and constructed in accordance with current City design regulations and standards. A development on this site will connect to the existing water transmission and distribution system in Miner Street. The Developer shall pay for all connections to the public system, 1 building tap per each of the 3 total buildings. Tap fees are to be assessed by the Building and Engineering Divisions. While providing much needed housing to the region, the addition of 120 Dwelling Units adds users to the currently robust treatment facility, potentially offsetting overall user price increases. Per the December 2016 Raftelis Report page 28 "If significant users are added, may reduce future rate increases with more users sharing O&M costs".

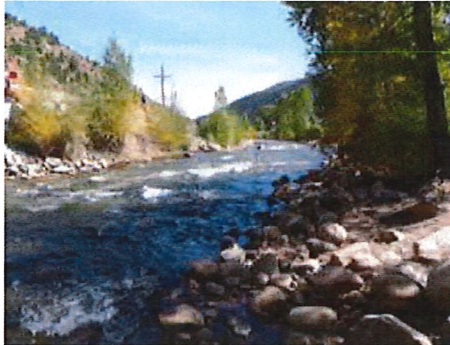
The proposed Project will require approximately 52,400 gallons per day of potable water, for both the residential and retail portion (peak day with 2.0 peaking factor). The existing waterline is a 6" ductile piping. A city the size of Idaho Springs typically utilizes 8" piping. The reconstruction of Miner Street, in this location, would allow the replacement of the existing 6" DIP main with a more ideal 8" DIP water main. The Project will connect to the existing main in Miner Street and loop a proposed water main through the Project to provide water quality and system strength. Sizing of the waterlines shall be reviewed by the Building and Engineering Divisions.

The Project will ensure an adequate, safe, and reasonable supply of potable water for public consumption, fire protection and irrigation for its residents. Alternate means of achieving utility service to and within the Project Site on a temporary or permanent basis will be considered at the time of a Utility Permit application. See Exhibit A, Technical Memo attached for initial calculations.

7.0 SANITARY SEWER DEMAND / SERVICE

The goal is to ensure the adequate, safe, and reliable collection of sewage or contaminated water and the conveyance of that sewage to off-site treatment systems. The Developer will provide, at their cost, sewer availability to serve up to 120 Dwelling Units and 12,000 SF of general retail as defined in the Planned Development.

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



View of Clear Creek through Idaho Springs

A lift station, to lift wastewater to the elevation of the City sewer system, is necessary for development to occur on the Project site. The Developer shall design and construct the lift station to serve the Project, consistent with the City's adopted level of service. All new sewer system facilities shall be designed and constructed in accordance with all State and City policies and standards. The proposed sewer system would be pumped in a forcemain and connect into the existing sewer manhole at the interception of Idaho Street and 11th Street.

Sanitary sewer demand is expected to be within typical average flows for the following uses: residential and retail. The proposed Project would require approximately 32,500 gallons per day of wastewater treatment capacity for both the residential and retail portion (peak day with 1.5 peaking factor).

The location and type of utility facilities will be shown on a Conceptual Civil Plan for approval at Final Development Plan provided the intent of the plans is met as reasonably determined by the Designated Official. See Exhibit A, Technical Memo attached for initial calculations.

8.0 STORMWATER / DRAINAGE

Constructing a stormwater system on this particular site, which is below the typical elevation of the City of Idaho Springs, does not burden the City with excess maintenance costs other sites may impact. The goal is to ensure the collection, treatment, and conveyance of stormwater to prevent public nuisances or hazards, protect the environment, and preserve resources.

The majority of the Project is located outside the 500-year flood plain. The western and southern areas, where the 500-year flood plain occurs, are intended as paved access into and out of the site and landscaping. A detention pond engineered to sufficiently contain necessary overflow from large rain storms or spring run-off will be used to manage stormwater for the Site. The stormwater detention pond will be designed at the lowest elevation of the site, in the southwest corner of the property. Stormwater will be detained then released to meet historic runoff of the 100 year storm event. Stormwater will be treated to ensure water quality and best practices.

The following mechanisms may be utilized where feasible in the Project applications to integrate Low Impact Development techniques:

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452

- Reduced roadway widths
- Infiltration wells
- Rain gardens
- Bioswales
- Media filter strips
- Pervious asphalt and concrete in alleys
- Pervious pavers
- Install pet waste stations in common areas

The design and viability of sustainable drainage techniques will be completed for the Final Development Plan.

9.0 SENSITIVE AREAS

At the time of construction, sensitive areas and their established buffers shall be clearly identified and marked in the field.

Impact to Wetlands is not anticipated.

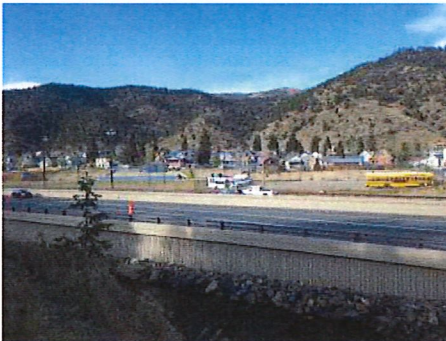
Impact to Fish and Wildlife Habitat Conservation Areas is not anticipated.

Mine Hazard Areas were evaluated as there was a mill on site in the early 1900s. If during construction, it is discovered the mitigation that may be conducted at the Project, is the responsibility of the Colorado Department of Public Health and Environment (CDPHE) in cooperation with the United States Environmental Protection Agency (USEPA). Copies of the environmental mitigation plans that document CDPHE and USEPA responsibilities can be found at <https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0800257>

Stormwater Hot Spots are areas where stormwater discharges from activities where higher potential pollutant loading may be present such as vehicle fueling stations, vehicle service and maintenance facilities, fleet storage areas, public works storage areas, etc. All uses noted, are current on Area 2 of the Site, otherwise known as the Bus Barn property. Remediation and reclamation of Area 2, as Park, would provide the community with an environmentally healthy space for recreation.

Steep Slopes and Geologic Conditions are being investigated but are not expected to present dangers or issues to the Site or neighboring community.

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



*Former Bus Barn and Digger Field
existing site photos from 2020.*

9.0 VISUAL IMPACTS

The Site is a prominent feature from I-70 and the Exit 240 westbound on and off ramps. View sheds from critical vantage points will be carefully considered. Motorists on I-70 generally have concentrated views with reduced acuity and a fairly narrow cone of vision before and after crossing under the Exist 240 overpass. These viewers have a relatively lower sensitivity to their surroundings because of their movement, speed and short viewing duration. Motorists heading eastbound are more likely to notice the new development.

Recreationalists such as runners and bicyclists will view the development from Idaho Street and 11th Avenue and the Greenway Trail across the highway. The Park/Open Space will provide a richer visual effect than the existing Bus Barn property.

Additionally, the Project will become a prominent view from the houses and recreation center along Miner Street and Idaho Street between 8th and 12th Avenues. While some neighbors on Miner St. will experience a loss of view of mountain landscape and highway that will be blocked by buildings in their foreground, the view is expected to be vibrant and interesting with new street scape and landscape along the Site's northern edge. As well, the grand stair Community Space is expected to present nearby residents with light, air, and access to these views they are accustomed to currently.

10.0 EDUCATION

School-age children from the Project will be served by schools as determined at the discretion of the Clear Creek School District (CCSD). A development in Idaho Springs, located on the former football field and transportation & maintenance facility properties, will provide five positive impacts for CCSD.

1. A development will provide housing for current and future families, thus bringing sustained growth of more young families with children in the area. We are a declining enrollment district, dropping from over 1200 students to just over 600 students currently. Economics shows adults are living longer in their homes and reducing the supply for young adults and young families. Additional housing will provide needed enrollment for CCSD.
2. Provide adequate, safe housing. Currently we have students who live in local hotels, double up with family on a short-term basis, share living rooms, or simply move around as space becomes available. In some cases, these situations are fire and public health concerns.

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



Elementary school students raising their hands in class – Google search

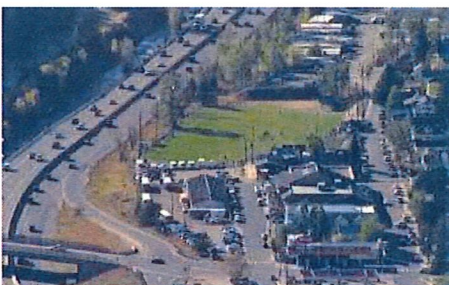
3. A development will provide housing for employees. Over half of our employees live outside of Clear Creek, often driving through one to two other school districts/counties to come to work in CCSD. We lose potential hires due to lack of affordable housing in the area. As the Applicant of the Project, CCSD will negotiate Dwelling Units for CCSD staff to be attainable by first year teacher salary based per bedroom in multi-bedroom units.

4. This Project will provide increased retail, in turn increasing the overall tax base for the city and county. Every bit helps as we track assessed value in Clear Creek for our Schools.

5. This Project will provide a well-maintained park with a variety of activities for families and youth in the area. Rotating activities, programmed with, and by the Recreation Center will capture the interest of children and educators alike. The location of the park provides adequate adult supervision given its proximity to housing and the recreation center. Access to the park will provide another element for teachers, classrooms or small student groups to enrich the outdoor learning experience.

While not a negative nor positive impact, one to be acknowledged is the likely increased traffic in the area. The traffic study for the development will be reviewed by CCSD so that we will be better equipped to plan accordingly as we consider student drop off and pick up.

Karen Quanbeck, Clear Creek School District Superintendent



Aerial view of I-70 & former Digger Field – Google image search

11.0 EMERGENCY SERVICES

The City of Idaho Springs and Clear Creek County Fire Authority will be responsible for emergency services for the Project. The addition of 120 residential units to the area will have a significant impact although it is anticipated many of the unit dwellers work in town and therefore part of the general population on any regular day. The walk-up building configuration is similar to other structures in the City of Idaho Springs. It is not anticipated that special equipment or training will be required for emergency situations.

The further design and coordination of viable access in and out of the Site for emergency services will be completed for the Final Development Plan

FOUR POINTS FUNDING BLOCK 57 | PLANNED DEVELOPMENT IDAHO SPRINGS, CO 80452



*View of former Digger Field 1957 game
– Google image search*

12.0 HISTORIC PRESERVATION

The former football field, while being in place since the later 1950s, is not currently nominated or designated as a historic site. The Developer for Block57 recognizes it is a special place to the Idaho Springs community. Current designs include a tiered Community Space that harkens back to the existing grand stands of the field. Design of exterior and interior spaces may further pay tribute the legacy of the former football field.

FOUR POINTS FUNDING
BLOCK 57 | PLANNED DEVELOPMENT
IDAHO SPRINGS, CO 80452

EXHIBIT A

**TECHNICAL MEMO:
925 Miner Street, Idaho Springs, Gold Digger Field
Public Facilities Impact Report**

To: City of Idaho Springs
From: Matt Wadey, AEI
Date: July 20, 2021

Project Introduction

The proposed Project at 925 Miners St, in the City of Idaho Springs is a mixed-use development which consists of high density residential and retail. The Project is located on the existing Gold Digger football field. The proposed density is for 120 residential units and 12,00 sf of commercial/retail. The residential breakdown is as follows: (41) studios, (43) 1 bedroom, (32) 2 bedroom and (4) 4 bedroom.

Sanitary Sewer:

Projected sewer effluent volumes are shown in the Table below.

Retail Use

Density Type	Square Footage	Sewage GPD/1000 SF Gross Building	Average Daily Volume (Gallons)	Peaking Factor	Peak Day Volume (Gallons)
Retail/Office	12000	200*	2400	1.5	3600

* Flowrates taken from City of Denver Public Works

Residential Use

Density Type	Unit Count	Persons Per Unit	Sewage Volume Per Capita Daily (Gallons)	Average Daily Volume (Gallons)	Peaking Factor	Peak Day Volume (Gallons)
studio	41	1.5	81	4982	1.5	7,473
1 bedroom	43	1.5	81	5225	1.5	7,838
2 bedroom	32	3.0	81	7776	1.5	11,664
4 bedroom	4	4.0	81	1296	1.5	1,944
total						28,919

Treated Water System:

Projected water demand volumes are shown in the Table below.

Retail Use

Density Type	Square Footage	Water GPD/ SF Gross Building	Average Daily Volume (Gallons)	Peaking Factor	Peak Day Volume (Gallons)
Retail/Office	12000	0.2	2400	2.0	4,800

Residential Use

Density Type	Unit Count	Persons Per Unit	Volume Per Capita Daily (Gallons)	Average Daily Volume (Gallons)	Peaking Factor	Peak Day Volume (Gallons)
Studio	41	1.5	100	6150	2.0	12,300
1 bedroom	43	1.5	100	6450	2.0	12,900
2 bedroom	32	3.0	100	9600	2.0	19,200
4 bedroom	4	4.0	100	1600	2.0	3,200
total						47,600

Thank you,



Matt Wadey, Principal
Alpine Engineering, Inc.
 Phone: (970) 926-3373
www.alpinecivil.com

**CITY OF IDAHO SPRINGS, COLORADO
CERTIFICATE OF NOTICE: MINERAL ESTATE OWNERS**

APPLICANTS: If your application anticipates new surface development, you must submit this completed form to the City prior to the first public hearing on your application. Failure to complete and submit this Certificate of Notice shall constitute sufficient grounds to deny your application.

I, Stephanie Copeland, as Partner of/with _____
(Print name) (Position/Job Title)

Four Points Funding (hereinafter, the "Applicant"), do
(Entity applying for permit/approval, if applicable)

hereby certify the following in reference to the Applicant's application for

Block 57 / Former Golddigger Field set for public hearing on
(Specify type of Development Application)

September 1, 2021 :

(CHECK ALL THAT APPLY):

☐

Notice has been sent to all mineral estate owners at least thirty (30) days before the public hearing, as required by § 24-65.5-103(1), C.R.S.

☒

The records of the Clear Creek County Clerk and Recorder do not identify any mineral estate owners of any portion of the property subject to the above-referenced application.

☐

Certain mineral estate owners entitled to notice of the above-referenced public hearing pursuant to § 24-65.5-103(1)(a) have waived their rights to notice in writing. A copy of each such written waiver is attached to this Certificate of Notice.

(ATTACH A COPY OF ALL WRITTEN WAIVERS TO THIS CERTIFICATE.)

I hereby further certify that I am authorized by the Applicant to make the representations contained herein and act as the Applicant's agent for purposes of this Certificate of Notice and bind the Applicant to these representations by my signature below.

Dated this 25 day of September, 2021,



/signature/

CITY OF IDAHO SPRINGS, COLORADO

AFFIDAVIT - OWNER CONSENT TO APPLICATION

In re the following property: Former Golddigger Field / Block 57 with a legal description
(street address(es), if applicable)

of see attached (or attach legal description, if necessary) (the "Property").

Type of Application filed with City: Rezoning, Planned Development, Preliminary Plat

Named Applicant (party other than Owner): Four Points Funding

I, James Houston, being first duly sworn and under oath, do hereby state and affirm that I, or the entity on whose behalf I am signing, am/is the record owner of the Property, and do hereby consent to the Application filed by the above-named Applicant with the City of Idaho Springs and do authorize the same. I hereby further certify that I am authorized by the Owner to make the representations contained herein and act as the Owner's agent for purposes of this Affidavit of Consent and bind the Owner to these representations by my signature below.

James M Houston, President
Clear Creek Board of Education
26 August 2021

/sig./ Print Name Date

STATE OF COLORADO)
COUNTY OF Clear Creek) ss.

Subscribed and sworn to before me this 26 day of August, 2021, by
James Houston.

Witness my hand and official seal.

My Commission Expires: June 1, 2022

Ranee J Weldy
Notary Public

[SEAL]

RANEE J WELDY
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20074004965
MY COMMISSION EXPIRES JUN 1, 2022

11TH AVENUE AND IDAHO STREET, IDAHO SPRINGS, CO 80452

DATE ISSUED: AUGUST 18, 2021
DATE REVISED:
PREPARED BY: SPACE INC
CONTACT: CARLA POKRYWKA COLE
PHONE: 720.234.6121

2.4 COMMUNITY USE

1.1. DEFINITIONS

The following capitalized terms shall have the following meanings. All definitions include both the singular and plural form.

"Allowable Development" shall mean the Project as approved by Council and Planning Commission during the

paid made and paid for by
of a fee is paid throu

① VICINITY MAP
NOT TO SCALE

1.8 ATTAINABLE HOUSING

C. COOPERATIVE DEVELOPMENT WITH COMMUNITY BASED ORGANIZATIONS

1. Purpose. To develop and maintain affordable housing rates for the workers in Idaho Springs and Clear Creek County.

SHEET NOTE:

STREET ALIGNMENTS SHOWN ARE CONCEPTUAL. STREET ALIGNMENTS SHALL BE

PLANNED DEVELOPMENT
CITY OF IDAHO
THE BUILDING DEPARTMENT

- A. FINAL ROAD ALIGNMENT
- B. FINAL CONFIGURATION OF LOT AND TRACT SIZES AND SHAPES
- C. FINAL BUILDING ENVELOPES AND SPECIFIC LOCATIONS
- D. FINAL ACCESS AND PARKING LOCATIONS
- E. FINAL LANDSCAPING DESIGN AND LOCATION

250 FILLMORE STREET, UNIT #225
DENVER, CO 80205
CONTACT: STEPHANIE COPELAND

1000000

1. COMMUNITY BENEFITS AGREEMENT, DATED JULY 2,
2. VACATION OF A PORTION OF THE CENTRAL ALLEY,
3. VACATION OF A PORTION OF 11TH AVENUE AS DET

1 OF 6	COVER SHEET
2 OF 6	SURVEY SHEET
3 OF 6	ADDITIONAL ENVELOPMENTS
4 OF 6	REGIONS PLAN
5 OF 6	LIFE PLAN
6 OF 6	BUILDING HEIGHTS

PROPERTY OWNER:
CLEAR CREEK SCHOOL DISTRICT

MITCH HOUSTON - BOARD PRESIDENT

DATE

DEVELOPMENT, WAS ACCEPTED AND APPROVED THE _____ DAY OF _____, 2021, BY THE IDAHO SPRINGS CITY COUNCIL.

NOTARY PUBLIC

WITNESS MY HAND AND OFFICIAL SEAL.

NOTARY PUBLIC

CLERK AND RECORDER:

DIAMOND SPRINGS CLERK

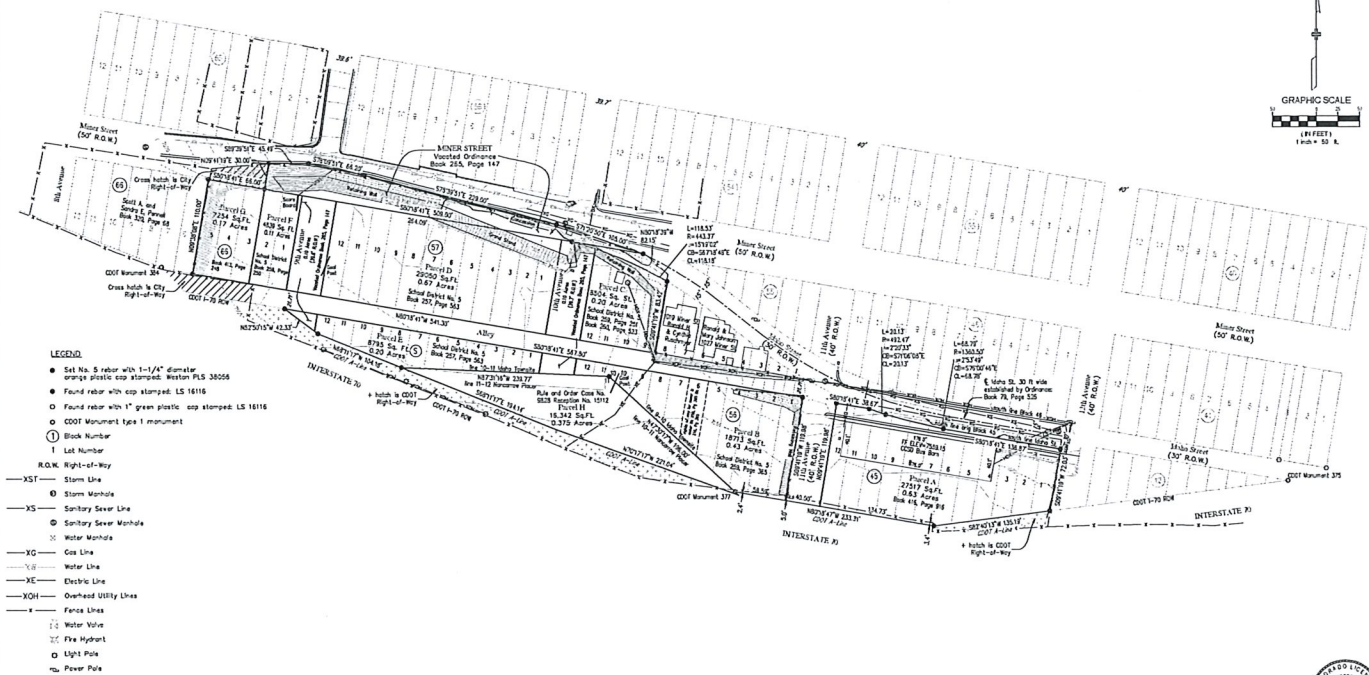
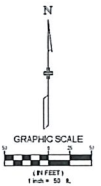
By _____

TO THE CLEAR CREEK METROPOLITAN RECREATION CENTER.

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© 19/2021

ALTA/NSPS LAND TITLE SURVEY **BLOCK 57, PARTS OF BLOCK 45, 55, 56, 66 AND S AND THE VACATED STREETS THEREIN,** **AND A PART OF THE NANCARROW PLACER M.S. NO. 1345** **CITY OF IDAHO SPRINGS, COUNTY OF CLEAR CREEK, STATE OF COLORADO**



LEGEND

- Set No. 5 rebar with 1-1/4" diameter orange plastic cap stamped: W-15 30056
- Found rebar with cap stamped: LS 16116
- Found rebar with 1" green plastic cap stamped: LS 16116
- COOT Monument type 1 monument
- ① Block Number
- 1 Lot Number
- R.O.W. Right-of-Way
- XST— Storm Line
- Storm Manhole
- XS— Sanitary Sewer Line
- Sanitary Sewer Manhole
- W— Water Manhole
- WG— Gas Line
- WE— Electric Line
- XOH— Overhead Utility Lines
- F— Fence Lines
- Water Valve
- Fire Hydrant
- Light Pole
- Power Pole

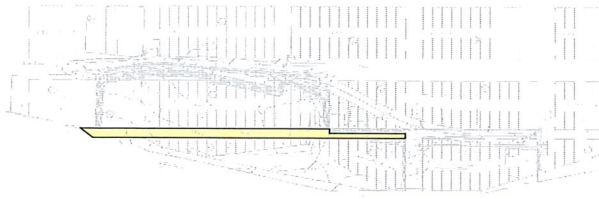


REVISIONS DATE: 2/22/2021 BY: WJS DESCRIPTION: JAGGERSVILLE SUBDIVISION DATE: _____ BY: _____ DESCRIPTION: _____ DATE: _____ BY: _____ DESCRIPTION: _____		FIELD DATE: _____ DRAWN BY: _____ PARTY CHECK: _____ CHECKED BY: _____ PLS: JAGS	TITLE ALTA/NSPS LAND TITLE SURVEY 832 MINER STREET AND 1120 IDAHO STREET IDAHO SPRINGS, CO 80402 SEC 35, T35, R27W OF THE 6TH P.M.	CLIENT: FOUR POINTS FUNDING, LLC	CLEAR CREEK SURVEYING P.O. BOX 3164 IDAHO SPRINGS, CO 80402 970.938.1519	PROJECT NO. 2021-001	SHEET NO. 2 OF 2
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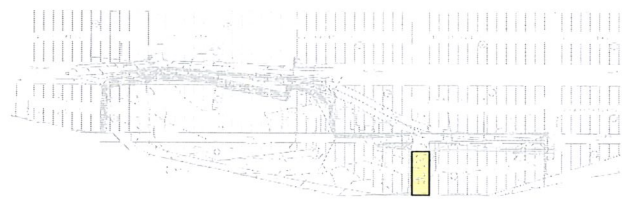
PLANNED DEVELOPMENT
BLOCK 57 MIXED-USE DEVELOPMENT
FORMER GOLDDIGGER FIELD
11TH AVENUE AND IDAHO STREET, IDAHO SPRINGS, CO 80402

OWNER:
CLEAR CREEK SCHOOL DISTRICT
PO BOX 3339
IDAHO SPRINGS, CO
80402

DATE ISSUED: AUGUST 18, 2021
DATE REVISED:
PREPARED BY: SPACE INC
CONTACT: CARLA POKRYVKA COLE
PHONE: 720.224.6121



1 EXHIBIT A - CENTRAL ALLEY VACATION APPROX. 14,042 SF
SCALE: 1" = 100'-0"



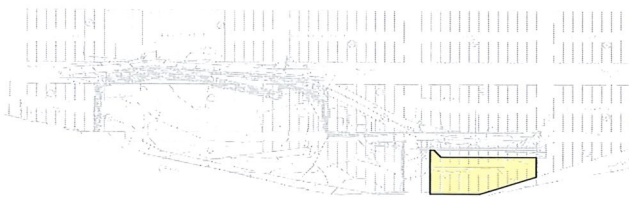
2 EXHIBIT B - 11TH AVENUE VACATION APPROX. 4,012 SF
SCALE: 1" = 100'-0"



3 EXHIBIT C - MINER & IDAHO STREETS DEDICATION APPROX. 16,015 SF
SCALE: 1" = 100'-0"



4 EXHIBIT D - IDAHO STREET VACATION APPROX. 1,051 SF
SCALE: 1" = 100'-0"



5 EXHIBIT E - DEED RESTRICTION @ PARK APPROX. 18,316 SF
SCALE: 1" = 100'-0"

The following conditions of entitlement are a request for action and will run concurrently to the Final Development Plan.

ADDITIONAL CONDITIONS OF ENTITLEMENT

OPTIONAL: the City of Idaho Springs, Colorado (CITY) recognizes the following conditions be associated with the approval of a Planned Development associated with a development on the former Golddigger Field and CCSD Bus Barn in Idaho Springs, Colorado (SITE).

OPTIONAL: the CITY agrees to Vacate the Central Alley (EXHIBIT A) right of way, approximately 14,042 SF, as a condition of an approved Final Development Plan and development of the SITE, in exchange for a particular value determined in conjunction with an approved Final Development Plan.

OPTIONAL: the CITY agrees to Vacate a portion of 11th Avenue (EXHIBIT B) right of way, approximately 4,012 SF, as a condition of an approved Final Development Plan and development of the SITE, in exchange for a particular value determined in conjunction with an approved Final Development Plan.

OPTIONAL: the SITE Owner agrees to Dedicate approximately 16,015 SF, a portion of previously vacated Miner Street (EXHIBIT C) back to the CITY as a condition of an approved Final Development Plan and development of the SITE.

OPTIONAL: the SITE Owner agrees to Vacate a portion of 11th Avenue (EXHIBIT D) right of way, approximately 1,051 SF, as a condition of an approved Final Development Plan and development of the SITE.

OPTIONAL: the CITY agrees to Vacate the Central Alley (EXHIBIT E) right of way, approximately 18,316 SF, as a condition of an approved Final Development Plan and development of the SITE, in exchange for a particular value determined in conjunction with an approved Final Development Plan.

OPTIONAL: the CITY agrees to Vacate a portion of 11th Avenue (EXHIBIT B) right of way, approximately 4,012 SF, as a condition of an approved Final Development Plan and development of the SITE, in exchange for a particular value determined in conjunction with an approved Final Development Plan.

OPTIONAL: the CITY agrees to Vacate a portion of 11th Avenue (EXHIBIT B) right of way, approximately 4,012 SF, as a condition of an approved Final Development Plan and development of the SITE, in exchange for a particular value determined in conjunction with an approved Final Development Plan.

OPTIONAL: the CITY agrees to Vacate a portion of 11th Avenue (EXHIBIT B) right of way, approximately 4,012 SF, as a condition of an approved Final Development Plan and development of the SITE, in exchange for a particular value determined in conjunction with an approved Final Development Plan.

OPTIONAL: the CITY agrees to Vacate a portion of 11th Avenue (EXHIBIT B) right of way, approximately 4,012 SF, as a condition of an approved Final Development Plan and development of the SITE, in exchange for a particular value determined in conjunction with an approved Final Development Plan.

QUANTIFIED ADDITIONAL LAND ENTITLEMENTS

OPEN SPACE
TOTAL: 10,000 SQUARE FOOTAGE OF AMOVED + 1,311
FOOTAGE (11,311 SF)

SECTION 1412 (UN DEDICATED TO CITY FOR RIGHT
REQUIREMENT) 11,311 SF

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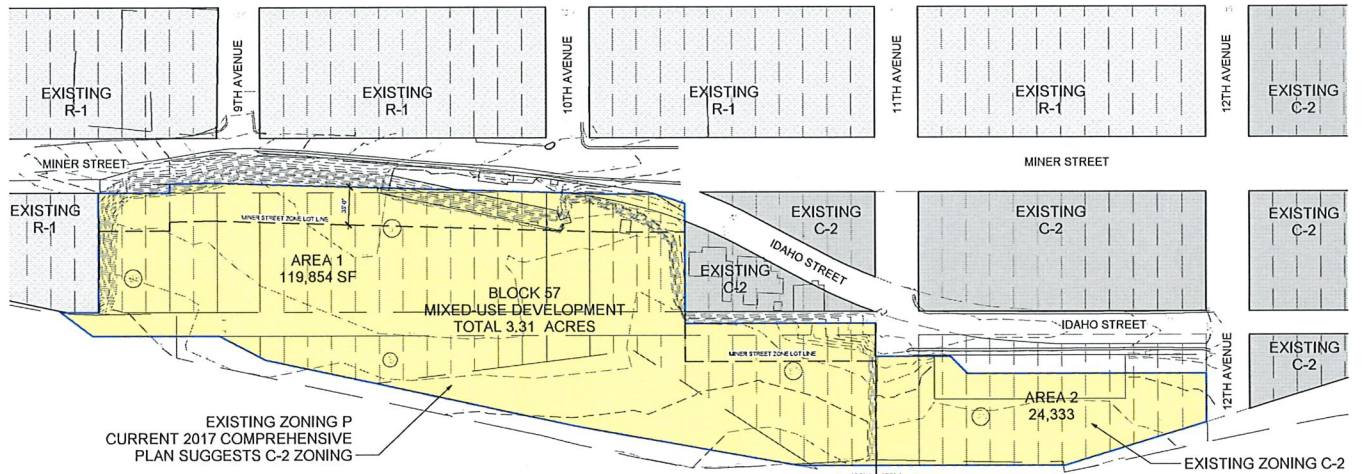
PROPOSED 11% OF SITE
11,311 SF

PLANNED DEVELOPMENT BLOCK 57 MIXED-USE DEVELOPMENT FORMER GOLDDIGGER FIELD

11TH AVENUE AND IDAHO STREET, IDAHO SPRINGS, CO 80452

OWNER:
CLEAR CREEK SCHOOL DISTRICT
PO BOX 3333
IDAHO SPRINGS, CO
80452

DATE ISSUED: AUGUST 18, 2021
DATE REVISED:
PREPARED BY: SPACE INC.
CONTACT: CARLA KOPRYNYKA COLE
PHONE: 720.234.6121



1 COIS REZONING PLAN - GROUND LEVEL

SCALE: 1"=40'

ALLOWED USES
Use Regulations and Development Regulations for more information per zoning.
No building shall be used and no building shall be hereafter erected, converted or structurally altered unless otherwise provided herein, except for one or more of the following uses:

A. Area 1: Residential
C2 Commercial Use per the City of Idaho Springs Municipal Code and
Idaho Springs, Inc. Ordinance 100000.
Other uses are permitted on lots zoned C2 that are not subject to the City of Idaho Springs, Inc. Ordinance 100000.
Other uses are permitted on lots zoned C2 that are not subject to the City of Idaho Springs, Inc. Ordinance 100000.
Other uses are permitted on lots zoned C2 that are not subject to the City of Idaho Springs, Inc. Ordinance 100000.
Other uses are permitted on lots zoned C2 that are not subject to the City of Idaho Springs, Inc. Ordinance 100000.

B. Area 2: Open Space
No building shall be used and no building shall be hereafter erected, converted or structurally altered unless otherwise provided herein, except for one or more of the following uses:
Other uses are permitted on lots zoned C2 that are not subject to the City of Idaho Springs, Inc. Ordinance 100000.
Other uses are permitted on lots zoned C2 that are not subject to the City of Idaho Springs, Inc. Ordinance 100000.
Other uses are permitted on lots zoned C2 that are not subject to the City of Idaho Springs, Inc. Ordinance 100000.

LOT SIZE
Lot size shall comply with the C2, Commercial 2 zoning standards set forth in the City of Idaho Springs Development Regulations, unless otherwise noted.

DENSITY
Density shall comply with the C2 zoning standards set forth in the City of Idaho Springs Development Regulations, unless otherwise noted.

ENVIRONMENTAL RESTRICTIONS
Columbia Department of Public Health and Environment (CDPHE) in compliance with the federal Superfund Remedial Action Agency (SRA) may be required due to the site's proximity to known and suspected contamination. Any SRA-related restrictions or requirements shall be followed and appropriately managed. The existing site use shall be maintained.

A detailed geological report shall be provided for approval of the Final Development Plan.

BUILDING COVERAGE
Building Coverage for the purpose of this Planned Development is defined as the area covered by buildings or other structures on the lot. Impervious cover shall be included in building coverage.
Maximum Building Coverage shall be based on Percentage per Area:
Area 1: 119,854 SF shall be 25% Building Coverage (29,963 SF)
Area 2: 24,333 SF shall be 75% Building Coverage (18,249 SF)

BUILDING HEIGHT
Building Height is measured vertically from the original natural grade of primary adjacent lot to the top of the parapet or highest roof line.
Building Height shall be measured from the original natural grade of primary adjacent lot to the top of the parapet or highest roof line.

METHODS OF MAXIMUM HEIGHT DETERMINATION
Building Height is measured vertically from the original natural grade of primary adjacent lot to the top of the parapet or highest roof line.
Building Height shall be measured from the original natural grade of primary adjacent lot to the top of the parapet or highest roof line.

MINOR STREET ZONE LOT LINE
The Zone Lot Line for the purpose of this Planned Development is defined as the line that separates the Zone Lot from the lot on the opposite side of the street and is parallel to the street. The Zone Lot Line shall be 30 feet wide and parallel to the street. The Zone Lot Line shall be 30 feet wide and parallel to the street.

MAXIMUM BUILDING HEIGHT
No building in Area 1 shall be more than 35 feet and 25 feet north of the Zone Lot Line shall be 25 feet or less. No building in Area 2 shall be more than 35 feet and 25 feet north of the Zone Lot Line shall be 25 feet or less.

EXCEPTIONS TO BUILDING HEIGHT RULES
The following building uses and features shall not be subject to the height limitations. Signs or features above the roofline as a sign or feature shall be an exception to height rules. These signs shall be reviewed as part of the building department's review of the Final Development Plan.

EXCEPTIONS TO BUILDING HEIGHT RULES
The following building uses and features shall not be subject to the height limitations. Signs or features above the roofline as a sign or feature shall be an exception to height rules. These signs shall be reviewed as part of the building department's review of the Final Development Plan.

DESIGN STANDARDS

BUILDING MATERIALS AND COLORS
Building materials shall be complementary and consistent with the historical character of the historic district and the surrounding area.

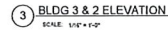
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11TH AVENUE AND IDAHO STREET, IDAHO SPRINGS, CO 80452

DATE ISSUED: AUGUST 18, 2021
DATE REVISED:
PREPARED BY: SPACE INC
CONTACT: CARLA POKRYWKA COLE
PHONE: 720.234.6121



BUILDING HEIGHTS
6 OF 6
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TRAFFIC IMPACT STUDY

Proposed Block 57 Development

Idaho Springs, Colorado

August 19, 2021

20210011

Prepared by:



PO Box 150335
Lakewood, CO 80215
(303) 653-9200

This report has been prepared by the staff of CivTrans Engineering Inc. on behalf of Space Inc. under the direction of the undersigned professional engineer whose seal and signature appears hereon.



Craig A. MacPhee, P.E

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TECHNICAL APPENDIX

*Raw Traffic Counts; Trip Generation Calculations; Pandemic Data Calculation
Level of Service Calculations*

*Existing; Short-Term without Project; Short-Term with Project; Long-range
without Project; Long-range with Project*

EXECUTIVE SUMMARY

This Traffic Impact Study (TIS) document has been prepared to assess and identify the traffic impacts related to a proposed residential development within the Idaho Springs, Colorado. The following is a summary of the traffic information and findings included in this report.

1. The proposed Block 57 (former Golddigger Field) development is located along the south side of Miner Street and Idaho Street west of 12th Avenue, north of Interstate 70. The site has historically been used by Clear Creek School District for a football field and bus barn. A vicinity map is included as **Exhibit 1**.
2. The proposed development will include up to 120 residential dwelling units and 12,000 square feet of retail space. The site will provide four accesses to the adjacent roadways, one to Miner Street west of 9th Avenue, one to Miner Street east of 10th Avenue, and two at the intersection of 11th Avenue & Idaho Street that will form the south and west legs of the intersection. Off-street parking will be provided within the development and additional on-street parking will be added along Miner Street and Idaho Street as part of frontage improvements. The project is anticipated to begin construction in 2022 and be complete by 2024. A conceptual site plan for the development is included as **Exhibit 2** and an aerial of the study area is included as **Exhibit 3**.
3. The site is anticipated to generate 1,096 trips on a weekday and 1,144 trips on a Saturday. Of these trips, approximately 54 will occur on a weekday during the AM peak hour, 99 on a weekday during the PM peak hour and 107 during the Saturday midday peak hour. The trips will be made up of vehicular, pedestrian, bicycle and transit trips to access the site. It is estimated that approximately 15% of the overall trips will be pedestrian, bicycle or transit oriented. The remaining 85% are estimated to be vehicular, which corresponds to 46 AM peak, 84 PM peak, 91 Saturday peak, 940 weekday average daily trips (ADT) and 972 Saturday trips.
4. The study area was identified to include the followings intersections.
 - 9th Avenue & Colorado Boulevard
 - 13th Avenue & Miner Street
 - 13th Avenue & Idaho Street

These intersections were analyzed for the weekday AM and PM peak hours and Saturday midday peak hour.

5. The analysis horizons considered and evaluated in this report include:
 - Existing Conditions (Year 2020)
 - Short-Term without Project Conditions (Year 2025)
 - Short-Term with Project Conditions (Year 2025)
 - Long-range without Project Conditions (Year 2041)
 - Long-range with Project Conditions (Year 2041)

Each of these analysis horizons included intersection capacity and queuing analysis. Sight distance evaluation is included for the future “with project” analysis scenario.

6. The traffic counts for the study area intersections were collected on Saturday, July 17, 2021 and Wednesday, July 21, 2021. The counts were collected during a global pandemic that has seen a reduction in traffic volumes during weekday commuting times (AM and PM peak hours). Therefore, adjustment factors were applied to these counts to account for the pandemic impacts.

While there is potential for a continued reduction in traffic due to the “pandemic effect” to persist as more people trend towards telecommuting (working from home), to be conservative this study assumes traffic volumes will return to pre-pandemic levels when the pandemic is over.

7. There are no known transportation improvements planned in the study area. However, Miner Street east of 14th Avenue is currently closed to vehicles to provide outdoor space for businesses to deal with restrictions associated with the pandemic. It is unclear if this will become a permanent closure moving forward. It should be noted that traffic counts were collected during this configuration, which likely impacts traffic volumes along Miner Street and Idaho Street at the study area intersections.
8. The City of Idaho Springs has established level of service (LOS) D as the minimum acceptable operating conditions within their jurisdiction. Most of the study area intersections are currently operating at LOS B or better, which is an acceptable level. The westbound approach at 13th Avenue & Idaho Street is currently operating at LOS E during the Saturday peak hour. This deficient level of service could be due to the closure of Miner Street east of 14th Avenue. If the closure of Miner Street becomes a permanent configuration, improvements will be required at the intersection of 13th Avenue & Idaho Street regardless of whether the Block 57 project moves forward or not.
9. The City of Idaho Springs or CDOT (if applicable) should consider modifying the 13th Avenue & Idaho Street intersection to restrict left turns from the westbound approach. This can be accomplished by installing a median to restrict left turns entirely (right-in/right-out) or restrict left turns and crossing maneuvers from Idaho Street ($\frac{3}{4}$ movement). Converting Idaho Street to one-way (eastbound) would also accomplish this. Installing a median is the preferred alternative as it also can function as a safety improvement for the pedestrian crossings at this intersection. These crossings are frequently used by visitors traveling between the public parking lot at the southwest corner of the intersection and downtown.
10. In addition to the capacity analysis, the queue results were reviewed to determine if the vehicle stacking along the approaches to the study area intersections are currently extending back to adjacent intersections. The 95th percentile queue for each movement is reported within the Highway Capacity Manual report as number of vehicles. An average vehicle length of 25' was used to convert number of

vehicles to length. The existing calculated 95th percentile queues for the study area intersections are well within available vehicle lane storage.

11. An ambient traffic growth rate of 1.5% was used for estimating future traffic at the study area intersections. This rate is based on CDOT projected values along Colorado Boulevard and input from the City of Idaho Springs staff.
12. Background projects are development projects that are planned, but not yet built. Therefore, their traffic is not yet on the roadways and was not captured in the traffic counts. No background projects were identified for this study.
13. With the anticipated increase in traffic (1.5% annual ambient growth) over the next four years, all of the intersections within the study area are anticipated to continue to operate within acceptable levels except 13th Avenue & Idaho Street, which is anticipated to fall to LOS F on the westbound approach. The added traffic from the proposed expansion project is not anticipated to significantly impact the capacity of the study area intersections.
14. Per Figure 8 of the City of Idaho Springs Standards and Specification for Design and Construction, the required sight triangles for the proposed site driveways were determined. Miner Street, Idaho Street and 11th Avenue are classified as low volume roadways. Therefore, per Figure 8 of the City's standards, L1 = 30' and L2'=10'.

Per 3.7.6 of the Standards, "any object within the sight triangle that is greater than 12" in diameter between three feet (3') and eight feet (8') above the roadway elevation of the adjacent street shall constitute a sight obstruction, and shall be removed. Such objects include: snow, buildings, cut slopes, hedges, trees, bushes, utility cabinets or tall crops."

Driveways should also meet the American Association of State Highway and Transportation Officials (AASHTO) sight distance criteria as outlined in their reference, A Policy on Geometric Design of Highways and Streets. Miner Street is posted at 15 mph with a design speed of 20 mph, which means Block 57 access to Miner Street will require 225' of intersection sight distance for vehicles turning left (looking right) and 195' for vehicles turning right (looking left). These sight triangles should be shown on the civil and landscape plans to ensure that no obstructions are placed within the triangle.

15. Long-range conditions with and without the project are anticipated to operate at acceptable levels assuming the 13th Avenue & Idaho Street improvements are completed.

Based upon the analysis, field observations, assumptions, methodologies and results, which are provided in the body of this document, **this project is not anticipated to have significant impacts on the study area that warrant mitigation.**

It should be noted; this traffic study was completed in accordance with the City of Idaho Springs standards as well as standard traffic engineering practices. Results are

quantitative and based on Highway Capacity Manual methodologies and City criteria for capacity of intersections and roadways. It does not, nor could it, address subjective measurements such as quality of life.

INTRODUCTION

Project Overview

A residential development is proposed for a site within the City of Idaho Springs that has historically been used by the Clear Creek School District for a sports (football) field and vehicle storage and maintenance (bus barn). The development proposes up to 120 residential dwelling units and 12,000 square feet of retail. It is located along the south side of Miner Street and Idaho Street west of 12th Avenue, north of Interstate 70. The site will provide four accesses to the adjacent roadways, one to Miner Street west of 9th Avenue, one to Miner Street east of 10th Avenue, and two at the intersection of 11th Avenue & Idaho Street that will form the south and west legs of the intersection. Off-street parking will be provided within the development and additional on-street parking will be added along Miner Street and Idaho Street as part of frontage improvements. Proposed parking will meet City of Idaho Springs requirements minus a reduction that is allowed for mixed-use developments. The project is anticipated to begin construction in 2022 and be completed by 2024.

The site is an irregular shape that is bound to the north by Miner Street, several existing residential parcels and Idaho Street. To the south, the site is bound by Interstate 70. To the east is City of Idaho Springs property used for public parking and to the west are existing mobile homes. Areas to the north and west are predominantly residential. The Clear Creek Metropolitan Recreation Center is at the northeast corner of 11th Avenue & Idaho Street. Three gasoline stations are located at three of the four corners for the intersection of 13th Avenue & Miner Street and the fourth corner is occupied by Carlson Elementary School. City of Idaho Springs downtown is east of the site along Miner Street east of 14th Avenue.

Local access to the site is accommodated by Miner Street, Idaho Street and 11th Avenue. These roadways connect to 13th Avenue and Colorado Boulevard, which provide access to Interstate 70 for regional access. Colorado Boulevard serves as an east-west major collector and 13th Avenue serves as a north-south collector.

Purpose of Report

The purpose of this study is to review, assess and identify potential traffic related impacts that the proposed project may have on the transportation network and recommend mitigation to minimize these impacts where necessary and possible. **Exhibit 1** shows the general vicinity of the project. The current project site plan is included as **Exhibit 2**, which shows the general layout of the proposed site in relation to existing features. **Exhibit 3** shows an aerial view of the study area.

The assumptions utilized in conducting the traffic analysis are based on coordination with the City of Idaho Springs planning staff and the City's traffic engineering consultant, JVA, Inc. The traffic impact study (TIS) was completed in accordance with the current traffic guidelines for the City of Idaho Springs as established in the *City of Idaho Springs*

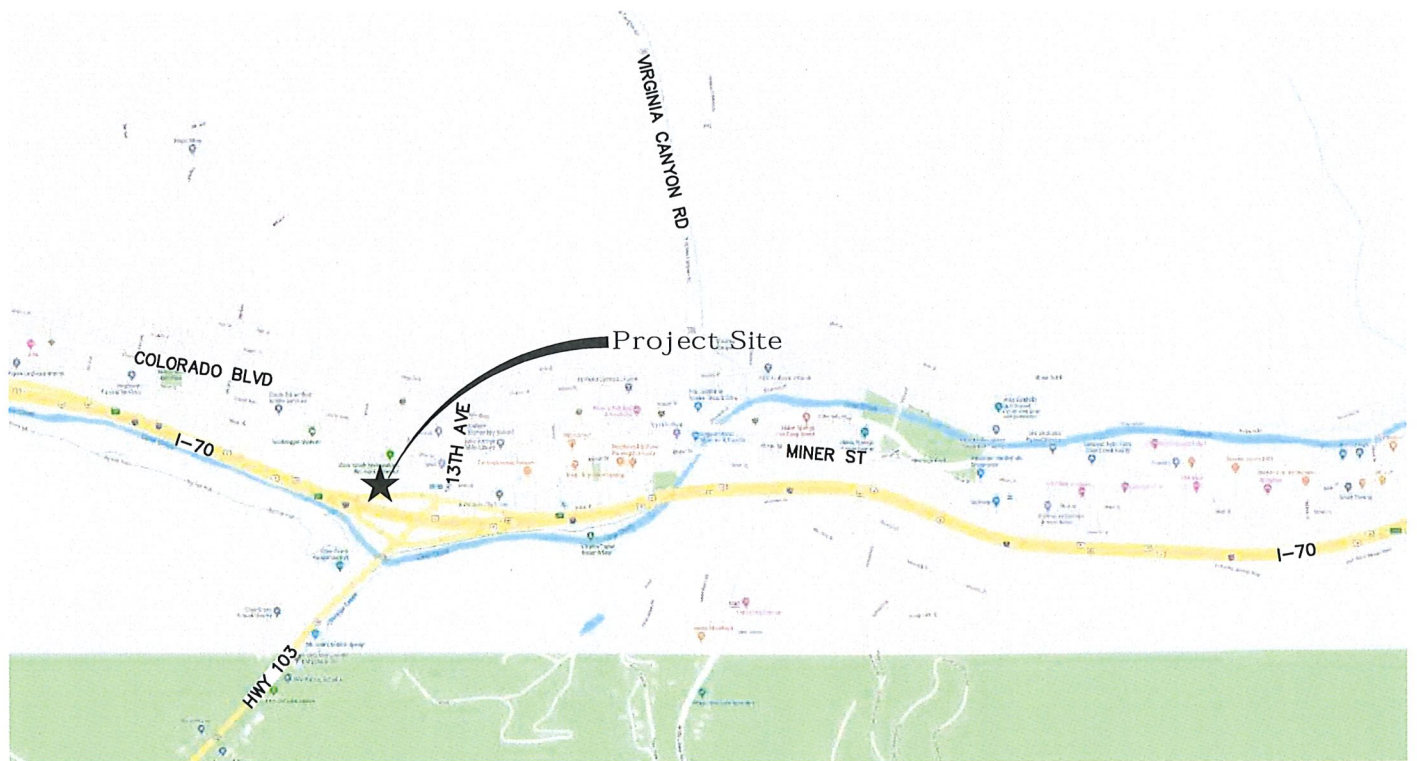
Standards and Specifications for Design and Construction (November 2018) and standard traffic engineering practices.

This report includes an evaluation and assessment of the study area for the existing conditions, short-term conditions and the long-range conditions. The short-term condition considers the transportation network shortly after the completion and opening of the project. The long-range conditions considered the potential growth in traffic within the study area and how the existing transportation system will handle those volumes with and without the proposed build-out of the project approximately 20 years into the future (Year 2041). The weekday AM and PM and Saturday midday peak hours of traffic operations were used as the basis of this study.

Resources

The key resources referenced in this TIS included the following:

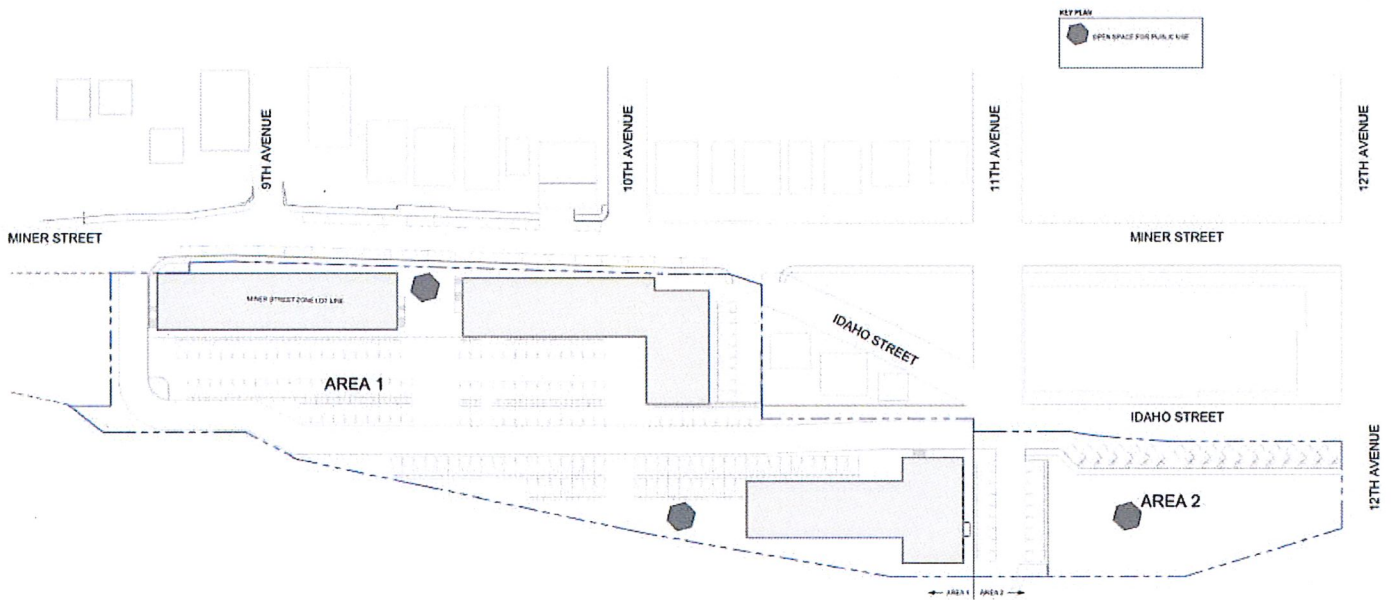
1. *A Policy on Geometric Design of Highways and Streets* (2018) published by AASHTO. This provides intersection sight distance criteria.
2. The City of Idaho Springs' *Standards and Specifications for Design and Construction* (2018), which provides traffic impact study and sight distance criteria.
3. Colorado Department of Transportation's (CDOT) *Online Transportation Information System (OTIS)*, which provides traffic count data for nearby continuous counting stations. This data was used to determine pandemic adjustment factors.
4. *The Trip Generation Manual, 10th Edition* (2017) published by the Institute of Transportation Engineers. This reference was used to determine the number of trips generated by the proposed land use.
5. *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board provides methodology for determining delay and capacity at intersections.



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EXHIBIT 1
Vicinity Map

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SITE PLAN PROVIDED BY SPACE INC.

EXHIBIT 2
Current Site Plan

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Source: Google Maps (2020 Aerial)



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EXHIBIT 3
Existing Aerial

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ANALYSIS METHODOLOGY

The various analyses conducted and reported in this document include intersection capacity, queuing and sight distance.

Capacity Analysis

The analyses described in this report were performed in accordance with the procedures in the *Highway Capacity Manual* (HCM) and as described below. The analyses and procedures conducted are based upon the worst-case conditions that occur during a typical weekday. Therefore, most of each weekday and the weekends will experience traffic conditions better than those described within this document, which represent the peak hours of operation only.

Level of Service (LOS) is an empirical premise developed by the transportation profession to quantify driver perception for such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles afforded to drivers who utilize the transportation network. LOS has been defined by the Transportation Research Board in the *6th Edition Highway Capacity Manual*. This document has quantified level of service into a range from “A” which indicates little, if any, vehicle delay, to “F” which indicates significant vehicle delay and traffic congestion that may lead to system breakdown due to volumes that may far exceed capacity.

The *Highway Capacity Manual* defines the level of service for a signalized intersection as the average delay per vehicle (amount of time a vehicle must spend at the intersection) for the overall intersection. For unsignalized intersections that include both stop-controlled and uncontrolled approaches (known as through/stop controlled), the *Highway Capacity Manual* defines the level of service as the average delay per vehicle for the worst approach, not the overall intersection.

The level of service letter grades as defined by the Transportation Research Board and the associated amount of delay in seconds per vehicle, as well as a brief description of the operating condition, for both signalized and unsignalized intersections are included for reference in **Table 1** on the next page.

The City of Idaho Springs has established level of service D as the minimum acceptable intersection operating condition. Analysis results indicating operations worse than the minimum acceptable level were considered for mitigation measures. In the cases where existing conditions currently operate at or future background conditions are projected to operate at states poorer than the minimum acceptable level, the future with project conditions will be evaluated to maintain the current or projected operating conditions.

Table 1 – Intersection Analysis Criteria**Signalized Intersection Level of Service Criteria**

Level of Service	Delay Range (seconds/vehicle)	Expected Delay at Intersection
A	≤ 10	Very low delay. Most vehicles do not stop.
B	> 10 and ≤ 20	Generally good progression of vehicles. Slight delays.
C	> 20 and ≤ 35	Fair progression. Increased number of stopped vehicles.
D	> 35 and ≤ 55	Noticeable congestion. Large portion of vehicles stopped.
E	> 55 and ≤ 80	Poor progression. High delays and frequent cycle failure.
F	> 80	Oversaturation. Forced flow. Extensive queuing.

Unsignalized Intersection Level of Service Criteria

Level of Service	Delay Range (seconds/vehicle)	Expected Delay to Minor Street Traffic
A	≤ 10	Little or no conflicting traffic for minor street approach.
B	> 10 and ≤ 15	Minor street approach begins to notice absence of available gaps.
C	> 15 and ≤ 25	Minor street approach begins experiencing delays for available gaps.
D	> 25 and ≤ 35	Minor street approach experiences queuing due to a reduction in available gaps.
E	> 35 and ≤ 50	Extensive minor street queuing due to insufficient gaps.
F	> 50	Insufficient gaps of suitable size to allow minor street traffic demand to cross safely through a major traffic stream.

Source: *Highway Capacity Manual* (Transportation Research Board, 2000).

Queuing Analysis

The study area intersections were evaluated for vehicle queuing. For unsignalized, stop-controlled intersections, the 95th percentile queues are reported within the Highway Capacity Manual report generated by Synchro traffic software. Queues are reported in number of vehicles. In order to compare the calculated queues to available storage, the number of vehicles was multiplied by 25 feet per vehicle.

Sight Distance Analysis

Intersection and driveway sight distance criteria are outlined within section 3.7 of the City of Idaho Springs *Standards and Specifications for Design and Construction*. Figure 8 within these standards provides corner sight triangle length requirements based on roadway classification of the two intersecting roadways.

Per 3.7.6 of the Standards, “any object within the sight triangle that is greater than 12” in diameter between three feet (3’) and eight feet (8’) above the roadway elevation of the adjacent street shall constitute a sight obstruction, and shall be removed. Such objects include: snow, buildings, cut slopes, hedges, trees, bushes, utility cabinets or tall crops.”

Analysis Horizons

The following scenarios were analyzed as part of this study during both the weekday AM and PM peak hours and Saturday midday peak hour, with the corresponding volume and network configurations as indicated:

1. Existing Conditions

Analysis of the existing conditions at the study area intersections was based on the traffic counts collected in July 2021. A pandemic adjustment factor was applied to account for the ongoing reduction in traffic volumes due to the COVID-19 pandemic. Traffic volumes during weekday AM and PM peak hours continue to experience impact from the pandemic with the AM peak at 20% lower volume than in 2019 and PM peak at 10% lower volume. The existing condition intersection geometry and traffic control were based on field observations.

2. Short-term without Project Conditions

The short-term future year analysis assumes the study area intersections have the same roadway geometry as the existing conditions. The forecast volumes were calculated by applying an annual growth rate to the existing traffic volumes.

3. Short-term with Project Conditions

The short-term “build” analysis includes the same roadway geometry as for the short-term no-project conditions. The forecast volumes were calculated by adding the short-term no-project traffic and the trips associated with the proposed project.

4. Long-range without Project Conditions

The long-range conditions included the best available information for projecting the traffic volumes approximately 20 years into the future for the study area to the Year 2041. A long-range no-project condition analysis, without the proposed project and associated trip additions, was performed as a comparison for the condition with the project (build).

5. Long-range with Project Conditions

The long-range future year analysis included the same roadway geometry as for the long-range no-project conditions. The forecast volumes were calculated by combining the long-range no-project volumes with the project-generated trips.

EXISTING CONDITIONS

Existing Conditions within the Study Area

The purpose of this section is to document the existing conditions within the study area for the proposed project.

Land Use

The project site has historically been used as a football field and a bus barn for the Clear Creek School District. The bus barn is still in use, but will be demolished as a part of the project. The site lies on the border of residential and commercial uses with the Clear Creek Recreation Center and downtown to the east, residential uses to the north and west and I-70 to the south.

Existing Roadways

As shown on the vicinity map, the site is currently accessed directly from Miner Street, Idaho Street and 11th Avenue. The following is a list of the surrounding streets, their functional classification, and general geometry.

Miner Street is a two-lane, two-way, east-west minor collector roadway extending from 8th Avenue to Colorado Boulevard. It provides access primarily for a mix of residential and commercial uses along its length including the Historic Core (downtown) area from 14th to 17th Avenues. It provides on-street parallel parking along most of its length. Along the site frontage, Miner Street narrows and only allows parking on one side of the street for a portion and no parking for a segment. The roadway is signed at 15 mph within the study area.

Colorado Boulevard is an east-west, two-lane, two-way major collector roadway with an I-70 business loop designation. It begins east of the site at a roundabout interchange access for I-70 and continues westerly through a commercial corridor and the heart of Idaho Springs before terminating west of Stanley Road at an eastbound I-70 on-ramp. Colorado Boulevard has on-street parallel or angled parking along most of its length. The road is posted at 25 mph within the study area and has a 20-mph school zone speed limit between 11th Avenue and 15th Avenue for the Carlson Elementary School.

13th Avenue is a north-south, two-lane, two-way major collector roadway. It begins at Interstate 70 aligning with Highway 103 (Mt Evans Road) and terminates just north of Virginia Street (a little over a block north of Colorado Boulevard). It provides an interchange access with Interstate 70 and access for several businesses along its short length. It is posted at 15 mph south of Colorado Blvd for the southbound travel lane. Northbound, the roadway is not posted with a speed limit except for a 15-mph school zone (when flashing) north of Idaho Street. Highway 103 is posted at 30 mph for the northbound direction about ½ mile south of I-70.

9th Avenue is a north-south, two-way local access roadway. Within the study area it extends three blocks from Miner Street to Virginia Street. It serves residential uses along its length. It has no posted speed limit

Idaho Street is an east-west, two-way local access roadway. Within the study area it extends four blocks from 11th Avenue to 15th Avenue. East of 13th Avenue, it provides access for the downtown businesses. West of 13th Avenue, it provides access for a public parking lot, the recreation center, the bus barn and several other properties. Boulevard to Wall Street. Near Miner Street, it narrows to one lane. It is posted at 15-mph east of 13th Avenue.

Study Area Intersections

The project study area intersections were identified through conversations with the City of Idaho Springs staff. The study area includes the following intersections:

- 9th Avenue & Colorado Boulevard
- 13th Avenue & Miner Street
- 13rd Avenue & Idaho Street

These intersections have been analyzed for level of service (LOS) for the weekday AM and PM peaks and Saturday midday peak hours and form the basis of this document.

Traffic Control and Descriptions

9th Avenue & Colorado Boulevard is an unsignalized, two-way stop-controlled intersection. 9th Avenue forms the northbound and southbound approaches, which are stop-controlled. Colorado Boulevard forms the eastbound and westbound approaches and operates freely. Each approach has one approach lane and one receiving lane. There are no dedicated turn lanes at the intersection.

13th Avenue & Miner Street is an unsignalized, all-way stop-controlled intersection. 13th Avenue forms the northbound and southbound approaches and Miner Street forms the eastbound and westbound approaches. All approaches are stop-controlled. Each approach has one approach lane and one receiving lane except the northbound approach which has a dedicated right turn lane. Pedestrian crosswalks are provided on all four legs of the intersection.

13th Avenue & Idaho Street is an unsignalized, two-way stop-controlled intersection. Idaho Street forms the eastbound and westbound approaches, which are stop-controlled. 13th Avenue forms the northbound and southbound approaches and operates freely. Each approach has one approach lane and one receiving lane. There are no dedicated turn lanes at the intersection. Pedestrian crosswalks are provided on all four legs of the intersection. However, the north-south crosswalk on the west leg connects does not connect to a sidewalk or ramp on either the northwest or southwest corner. Two pedestrian ramps have recently been installed on the southwest and southeast corners of the intersection to connect the east-west crosswalk on the south leg.

The existing geometry at each of the study area intersections is depicted in **Exhibit 4**, which follows.

Traffic Volumes and Peak Hours of Operation

The traffic counts for the study area intersections were collected on Saturday, July 17, 2021 (10:00 AM – 1:00 PM), Wednesday, July 21, 2021 (7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM) by CivTrans Engineering staff. The peak hour turning movements from the traffic counts are shown on **Exhibit 5**. Since the counts were collected during 2021 amidst a global pandemic, an adjustment factor was applied to account for the pandemic impact. The pandemic adjustment factors were calculated using continuous traffic count data at the CDOT station #000120 (I-70 east of Idaho Springs). The representative “existing” peak hour volumes from these counts are shown in **Exhibit 6**. The raw count data including pedestrian volumes are provided in the Technical Appendix.

Pandemic Traffic Adjustment

During the COVID-19 pandemic, traffic volumes have seen a decrease. July 21, 2021 (Wednesday) traffic volumes were approximately 20% lower during the AM peak and 10% lower during the PM peak than what occurred on a Wednesday in mid-July in 2019. This was determined based on traffic volumes at the CDOT counting station #000120. Therefore, a pandemic adjustment of 1.20 and 1.10 was multiplied by the existing weekday AM and PM peak hour traffic counts respectively to account for the pandemic impact. While there is potential for this reduction in traffic to be permanent as more people trend towards telecommuting (working from home), to be conservative this study assumes traffic volumes will return to pre-pandemic levels when the pandemic is over. More detail on the pandemic adjustment factor calculation and supporting data can be found in the technical appendix. Saturday volumes have essentially returned to pre-pandemic levels and no adjustment was applied to the Saturday count volumes.

Background Projects

Background projects are development projects that are planned, but not yet built. Therefore, their traffic is not yet on the roadways and was not captured in the traffic counts. No background projects were identified for this study.

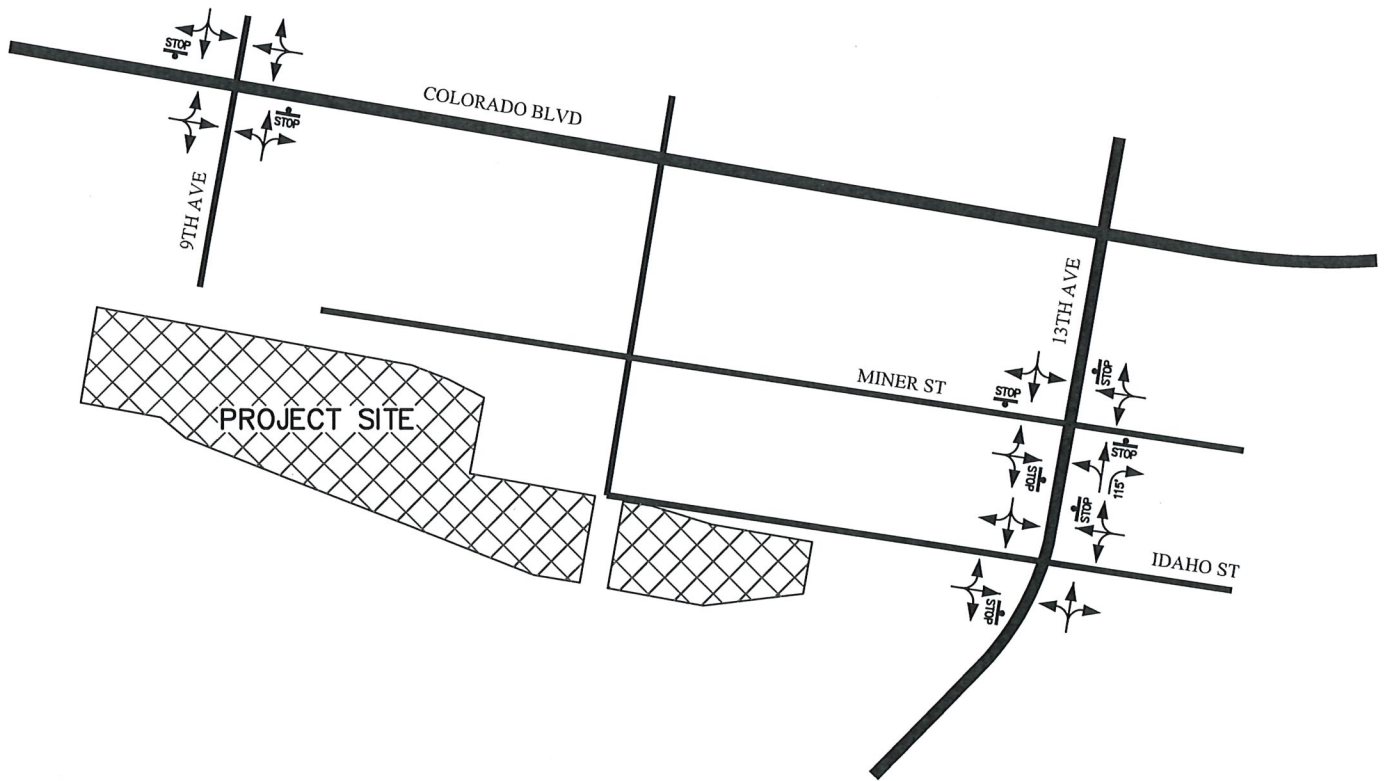
Ambient Traffic Growth

Based on review of CDOT historic counts along Colorado Boulevard (I-70 business loop) and their projected growth over the next twenty years (as defined in their OTIS data program), a growth rate of 1.0% per year is projected along this corridor. Through coordination with the City of Idaho Springs, a higher annual growth rate of 1.5% was used to account for the potential of significant development within the City. There were no historic counts for Miner Street, Idaho Street or 9th Avenue readily available. Therefore, the 1.5% annual growth rate was also applied to Miner Street and Idaho Street. No growth

was applied to 9th Avenue as it has little potential for growth in traffic due to limiting terrain. A 1.5% annual growth rate results in a growth factor of 1.06 for short-term (year 2025) conditions and 1.35 for long-range (year 2041) conditions.

Planned Transportation Improvements

There are no known transportation improvements planned in the study area. However, Miner Street east of 14th Avenue is currently closed to vehicles to increase dining and shopping area through downtown during the pandemic. It is unclear if this will become a permanent closure moving forward. It should be noted that traffic counts were collected during this configuration, which likely impacts traffic volumes along Miner Street and Idaho Street at the study area intersections.



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-  - Signalized intersection
-  - Stop controlled intersection
- XXX' - Approximate storage length of turn lane without transition taper
- AUX - Auxiliary lane where through lane from previous intersection becomes a turn lane

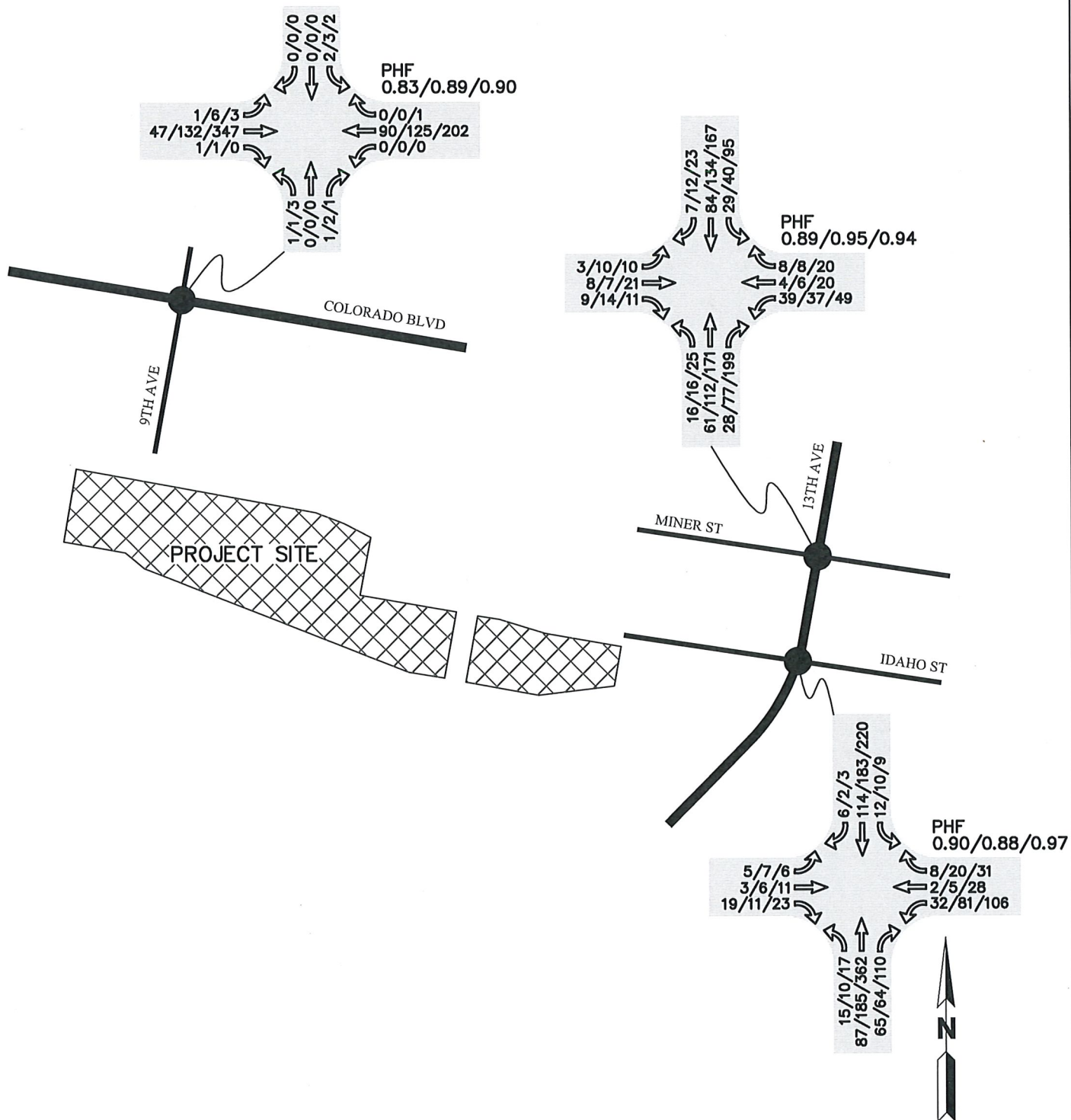
EXHIBIT 4

Existing Lane Geometry

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12/34/56 – AM/PM/Saturday Peak Hour
PHF – Peak Hour Factor

Source: Traffic counts collected by CivTrans Engineering on July 17 (Saturday) and 21 (Wednesday), 2021.

EXHIBIT 5

Intersection Traffic Counts

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EXISTING LEVEL OF SERVICE AND TRAFFIC ANALYSIS

Level of Service

The existing levels of service at the subject intersections were calculated using the methods from the *6th Edition Highway Capacity Manual* as implemented in Synchro, Version 10. The existing levels of service (LOS) for the intersections within the study area are summarized on the following table. The existing traffic volumes used for this report are shown on Exhibit 6.

Table 2 -2021 Existing Intersections Levels of Service

INTERSECTION (S)ignalized (U)nsignalized		Overall or Approach	AM Peak		PM Peak Hour		Saturday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
9 th Avenue & Colorado Blvd	U	NB	9.2	A	9.7	A	13.3	B
		SB	9.8	A	10.9	B	14.1	B
13 th Avenue & Miner Street	U	Ovr	8.0	A	8.7	A	10.1	B
		EB	7.5	A	8.1	A	9.1	A
		WB	8.0	A	8.5	A	9.6	A
		NB	8.3	A	9.0	A	10.3	B
		SB	8.2	A	9.2	A	11.3	B
13 th Avenue & Idaho Street	U	EB	10.0	B	12.5	B	16.0	C
		WB	11.3	B	17.0	C	39.8	E

*delay and LOS shown in parentheses associated with improvements

Per the City of Idaho Springs, level of service (LOS) D should be used as a guideline to maintain for operations on side street approaches at two-way stop-controlled intersections. Mitigation measures should be considered for unsignalized approaches or overall signalized intersections reported to be operating at LOS E or F. All of the study area intersections are currently operating at acceptable levels of service except the westbound approach on Idaho Street at 13th Avenue during the Saturday peak hour. The level of service reports for the existing conditions are provided in the Technical Appendix.

The 13th Avenue corridor from the eastbound I-70 ramps to Colorado Boulevard is a series of closely spaced stop-controlled intersections. The area is busy with vehicular and pedestrian traffic most weekends during the summer (and winter) with visitors to the city for shopping, eating at local restaurants, fueling at one of the three gas stations along this segment or experiencing whitewater rafting or one of the many other offerings of the city. Rafting outfitters will stage guests at buildings along Idaho Street for orientation and distributing equipment prior to commencing their on-water float. The pedestrian crossings at the study area intersections are heavily traveled during weekends from the whitewater activities and visitors parking in the public parking lot at the southwest corner of Idaho & 13th and walking to/from downtown.

The westbound approach at 13th Avenue & Idaho Street is currently operating at LOS E during the Saturday peak hour. This is largely due to the relatively high number of left turning vehicles on this approach and the volume of traffic on 13th Avenue, which could

be a result of closing Miner Street east of 14th Avenue. The intersection is unlikely to meet MUTCD warrants for signalization to mitigate this deficiency. Therefore, the City of Idaho Springs or CDOT (if applicable) should consider modifying this intersection to restrict left turns from this approach. This intersection may be a good candidate for being restricted to right-in/right-out or $\frac{3}{4}$ movement operation or converted to a one-way (eastbound) east of 13th Avenue. There is sufficient capacity at the intersection of 13th Avenue & Miner Street to accommodate the rerouted left-turning traffic through that intersection.

Right-in/right-out operation would prohibit all left turns and minor street crossing maneuvers at the intersection by installing a median. A $\frac{3}{4}$ movement operation would prohibit left turns and crossing maneuvers from the minor street only. Left turns from 13th Avenue would still be permitted. A $\frac{3}{4}$ movement operation would be accomplished by installing a modified median to allow left turns from 13th Avenue. A median for a $\frac{3}{4}$ movement intersection may require widening 13th Avenue to accommodate left turn lanes at the intersection. The median could be mountable for larger fueling trucks to be able to supply the shell gas station on the west side of 13th Avenue.

Regardless of whether Miner Street east of 14th Avenue is reopened to vehicular traffic, which might alleviate the delay currently experience on the westbound approach of Idaho Street, improvements to the 13th Avenue & Idaho Street intersection should be considered. With the high volume of pedestrian movements at Idaho Street & 13th Avenue, installing a median would also serve to improve the safety of the 13th Avenue crossings at this location and the corridor as a whole.

Queuing Analysis

In addition to the capacity analysis, the queue results were reviewed to determine if the vehicle stacking along the approaches to the study area intersections are currently extending back to adjacent intersections. The 95th percentile queue for each movement is reported within the Highway Capacity Manual report as number of vehicles. An average vehicle length of 25' was used to convert number of vehicles to length. The following table shows the reported queues for each of the study area intersections

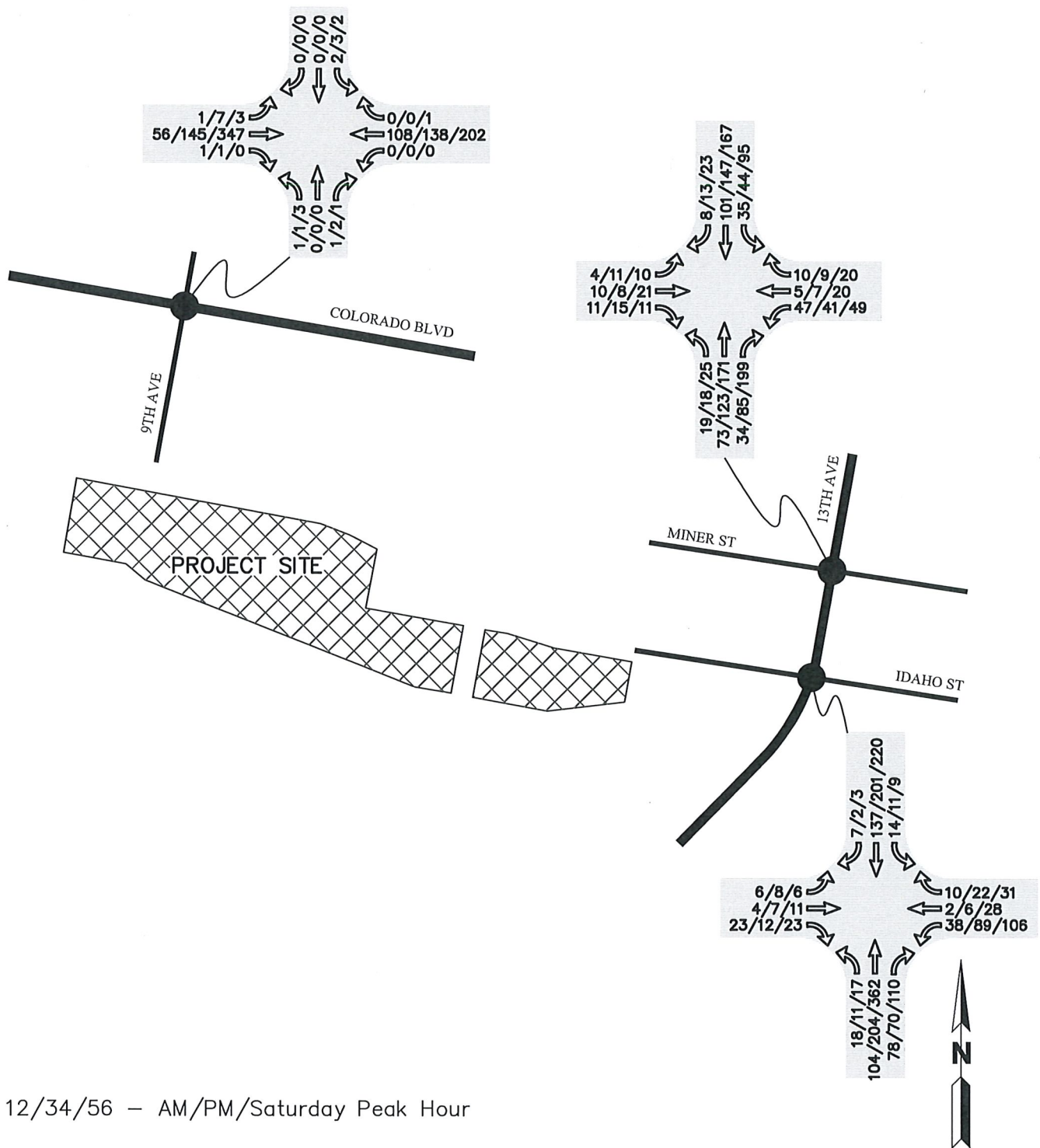
Table 3 -2021 Existing Intersections 95th Percentile Queues (in feet)

Intersection	Time	Eastbound	Westbound	Northbound	Southbound
9 th Avenue & Colorado Boulevard	AM	0	0	0	0
	PM	0	0	0	0
	SAT	0	0	0	0
13 th Avenue & Miner Street	AM	3	5	10	15
	PM	5	8	20	28
	SAT	5	13	33	50
13 th Avenue & Idaho Street	AM	3	5	0	0
	PM	5	33	0	0
	SAT	10	100	0	0

As shown in the table above, the existing 95th percentile queues for the study area intersections are well within available storage. The westbound approach at 13th Avenue & Idaho Street is the longest at four vehicles (100'). During observations, the northbound queue at 13th Avenue & Miner Street occasionally spilled back to Idaho Street. The 95th percentile queue for stop-controlled intersections is shown within the Highway Capacity Manual (HCM) results within the technical appendix.

Intersection Sight Distance

Sight distance appears to be adequate at all of the existing study area intersections.



12/34/56 – AM/PM/Saturday Peak Hour

Note: Traffic volumes include an adjustment to account for pandemic impact. AM counts increased by 20% and PM counts increased by 10%. Saturday counts are no longer impacted. These volumes were used for "Existing Conditions" capacity analysis.

EXHIBIT 6

Existing Conditions (2021)
Traffic Volumes

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TRIP GENERATION AND DISTRIBUTION

Trip Generation

The proposed project is anticipated to include up to 120 residential dwelling units and 12,000 square feet of retail uses. The *Trip Generation Manual, 10th Edition* published by the Institute of Transportation Engineers (ITE) is typically used to determine the number of trips generated by a proposed land use. The purpose of the Trip Generation Manual (TGM) is to compile and quantify empirical trip generation rates for specific land uses within the US, UK and Canada. The proposed project falls under land use categories 221 "Multifamily Housing (Mid-rise)" and 820 "Shopping Center." The trip generation for the proposed project is shown in the table below

Table 4 – Project Trip Generation (TGM calculated, unadjusted)

Land Use	ITE Code	Size	Units *	Daily Trips	Sat. Trips	AM Peak			PM Peak			Saturday Peak		
						In	Out	Tot	In	Out	Tot	In	Out	Tot
Multifamily Housing	221	120	DU	652	590	11	32	43	32	21	53	26	27	53
Retail	820	12.0	KSF	454	554	7	4	11	22	24	46	28	26	54
Total	-	-	-	1,096	1,144	18	36	54	54	45	99	54	53	107

*DU = Dwelling Units, KSF = 1,000 square feet

As shown in the table above, the proposed project is estimated to generate 1,096 weekday trips with 54 occurring during the AM peak hour and 99 during the PM peak hour. On a Saturday, the proposed project is anticipated to generate 1,144 trips with 107 occurring during the midday peak hour.

Trip Types

Nearly all developments are made up of the following six trip types: new (destination) trips, pass-by trips, diverted trips, shared (internal) trips, multi-modal (non-vehicular) trips, and transit-oriented trips. In order to better understand the trip types available for land access and how they relate to this project, a description of each specific type follows.

New (Destination) Trips – These types of trips occur to access a specific land use such as a new retail development or a new residential subdivision. These types of trips will travel to and from the new site and a single other destination such as home or work. This is the only trip type that will result in a net increase in the total amount of traffic within the study area. The reason primarily is that these trips represent planned trips to a specific destination that never took trips to that part of the City prior to the development being constructed and occupied. This project will develop new trips.

Pass-by Trips – These trips represent vehicles which currently use adjacent roadways providing primary access to new land uses or projects. These trips, however, have an ultimate destination other than the project in question. They should be viewed as drop-in

customers who stop in on their way home from work. A good example is a quick stop at the grocery store to pick up an ingredient for dinner on the way home from work or at a latte stand to grab a coffee on the way to work. This can make this trip pre-determined, but the stop is still on the way by. Another example would be on payday, where an individual generally drives by their bank every day without stopping, except on payday. On that day, this driver would drive into the bank, perform the prerequisite banking and then continue home. In this example, the trip started from work with a destination of home, however on the way, the driver stopped at the grocery store/latte stand and/or bank directly adjacent to their path. Pass-by trips are most always associated with commercial/retail types of developments. Therefore, pass-by trips would only be anticipated for the retail portion of the project. However, the adjacent roadway (Idaho Street) does not carry sufficient traffic volume to result in significant pass-by traffic.

Diverted (Linked) Trips - Diverted trips are like pass-by trips, but diverted trips occur from roadways that do not provide direct access to the site. Instead, one or more streets must be utilized to get to and from the site. Similar to pass-by trips, diverted trips are most always associated with commercial/retail type developments. For this project, diverted trips are anticipated to occur for the retail portion of the site from 13th Avenue, Colorado Boulevard, and I-70. Since the diverted trips would pass through the study area intersections, there is no point in calculating them separately. These trips, which could comprise 40% of the retail trips, already exist on these roadways, but will divert from their original path to access the retail along Idaho Street.

Shared (internal) Trips - Internal trips are the portion of trips generated by a mixed-use development that both begin and end within the development. When estimating trip generation for a development with several uses, each use will generate its own trips. If those trips occur between two of the onsite uses without using the external roadway system, it is considered a shared or internal trip. This trip type reduces the number of new trips generated on the public road system and is most commonly used for commercial or mix-use developments. Determining these trip types is more difficult to quantify and without specific guidance are usually determined by engineering judgment on a project-by-project basis. For this project, the residential and retail uses may experience shared trips that could result in an overall trip reduction for the site. However, for the purposes of this study, no shared (internal) trip reduction was applied to this project.

Multi-Modal Trips - These are non-vehicular trips to and from the site, mostly comprised of pedestrian and bicycle trips. Generally, they are local trips from the surrounding neighborhood or adjacent businesses. If a development is in an area with a high amount of bicycle and pedestrian activity, such as a downtown setting or college campus, a reduction of vehicular trips would be anticipated. During the traffic count, a significant number of pedestrians or bicycles were observed in the vicinity of the site. Residents within several blocks of the Idaho Springs Historic Core (downtown) will walk or ride their bicycle between their home and their destination. Multi-modal trips are likely to make up a significant portion of the peak hour trips for this site.

Transit Trip – The Idaho Springs area is served by Clear Creek County Transit with public bus that operates Monday through Friday. The nearest bus route to the site is along at the public parking lot at the southwest corner of 13th Avenue & Idaho Street less than two blocks from the site. The transit route operates on a loop between Idaho Springs and Georgetown with stops every hour and 15 minutes. It operates from 7:00 AM to 6:30 PM. The proximity of the transit stop to the site should allow for people visiting the retail or residents to utilize transit. The number of users is not anticipated to be substantial, but a reduction to the trip generation estimate is proposed to account for transit trips.

Based on the various trip types depicted above and the nature of the proposed project, a 15% reduction was applied to the trip generation estimates shown in Table 4 to account for multi-modal and transit trips associated with the project, but the actual percentage of trips for this site that are non-vehicular may end up being higher since the residential will primarily serve as workforce housing for the school district and restaurant workers within the City. The following table shows a breakdown of the various trips accessing the site.

Table 5 - Project Trip Generation: Breakdown of Trip Type (adjusted)

Trip Type	Weekday ADT	Saturday ADT	AM Peak			PM Peak			Saturday Peak		
			In	Out	Tot	In	Out	Tot	In	Out	Tot
New (per TGM)	1,096	1,144	18	36	54	54	45	99	54	53	107
Multi-modal and Transit	166	172	3	5	8	8	7	15	8	8	16
Vehicular	940	972	15	31	46	46	38	84	46	45	91

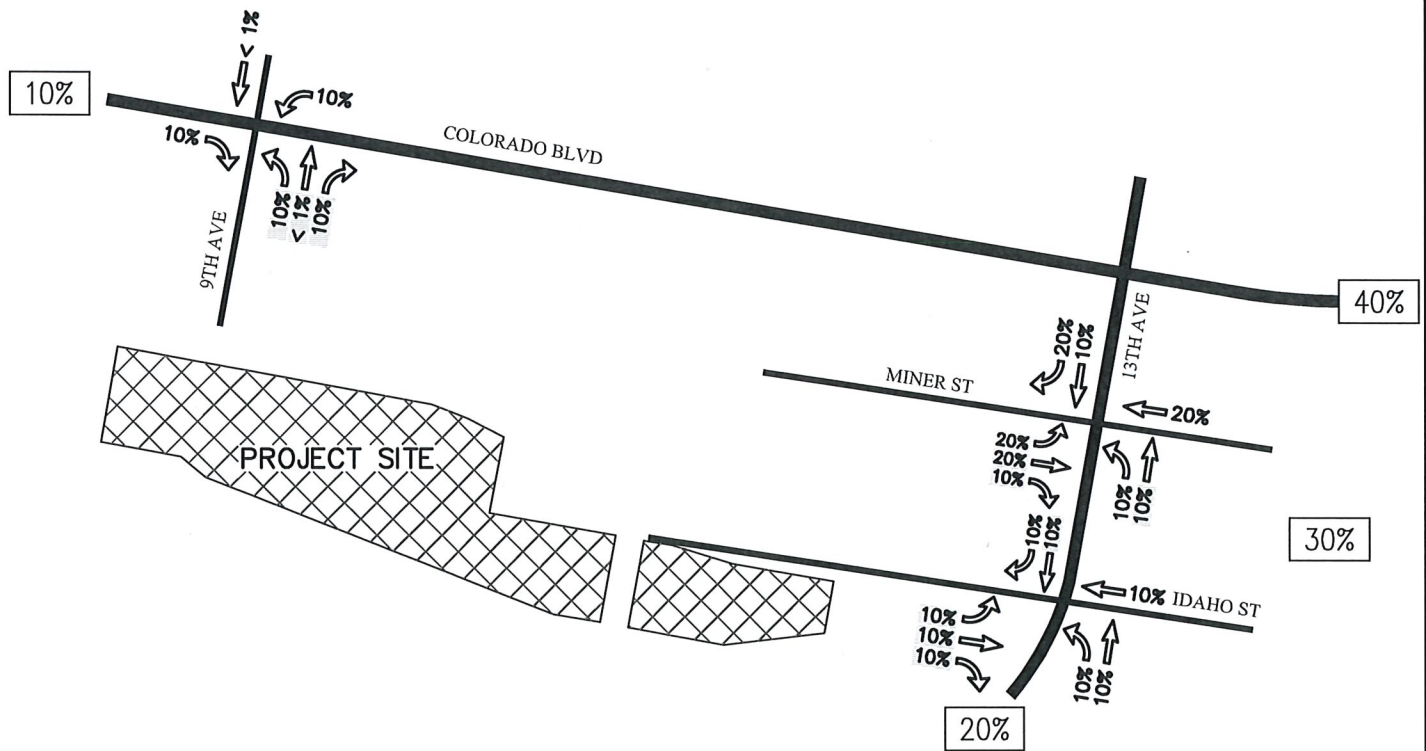
In the table above, the total vehicular trips to/from the site are anticipated to be 940 on a weekday, 972 on a Saturday, 46 during the weekday AM peak, 84 during the PM peak hour and 91 during the Saturday peak hour. These trips will be utilized in determining impacts to the surrounding transportation system.

Trip Distribution

As shown on the site plan, the site is accessed from Miner Street west of 9th Avenue, Idaho Street at 11th Avenue and 11th Avenue at Idaho Street. The project is expected to have a mix of local and regional trips, but mostly local for the residential portion. Considering many factors such as the surrounding transportation facilities, exiting travel patterns, local destinations (places of business, dining, grocery, etc.) and the geography of the area, traffic for the proposed development is anticipated as follows.

- Colorado Boulevard / I-70 west of the site – 10%
- Colorado Boulevard east of 13th Avenue – 40%
- Idaho Springs downtown – 30%
 - Via Miner Street – 20%
 - Via Idaho Street – 10%
- 13th Avenue-Highway 103 / I-70 south of the site – 20%

These trip distribution percentages are illustrated in **Exhibit 7**. The site generated trips for the proposed project are shown on **Exhibit 8**.



NOT TO SCALE

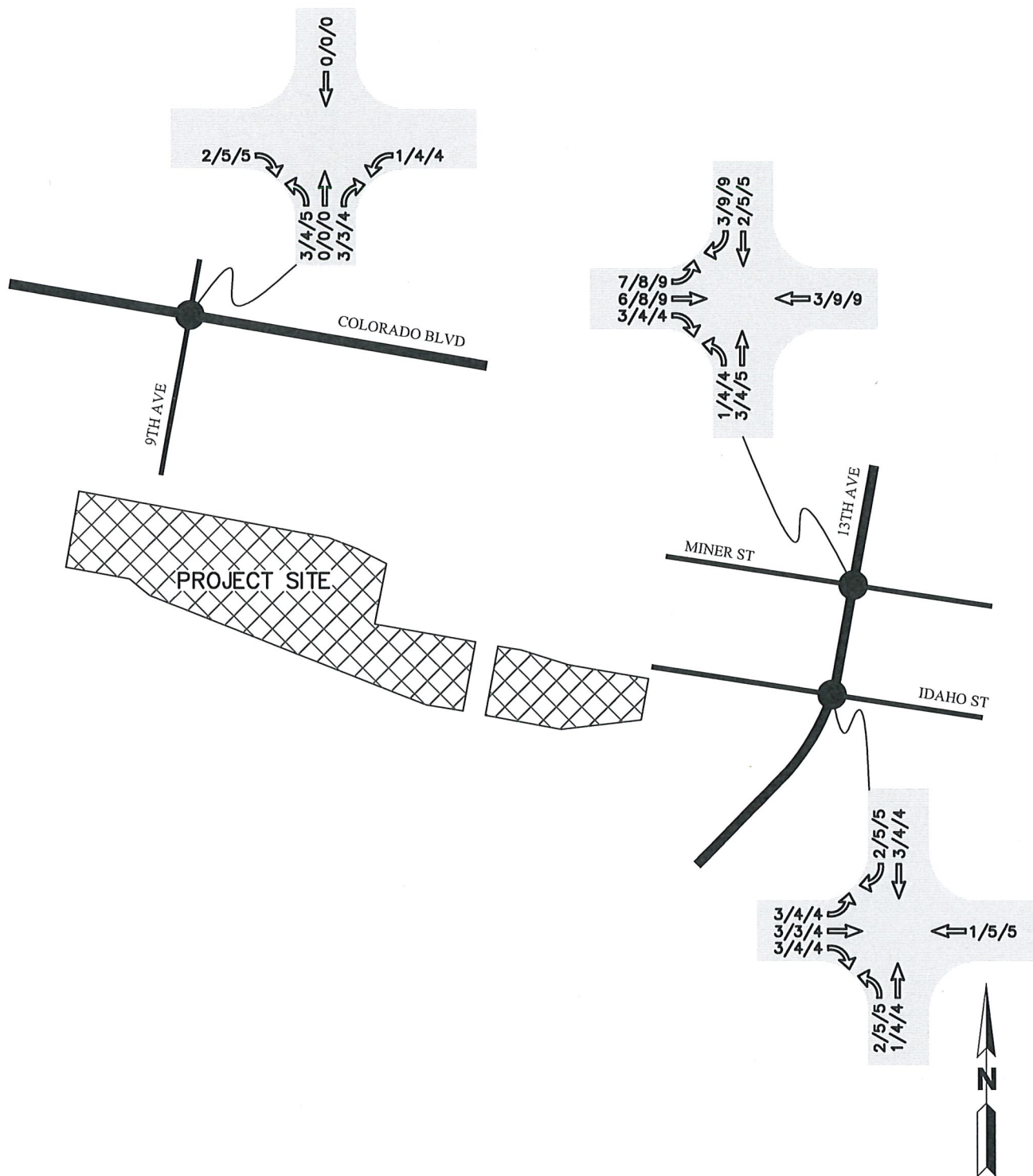
AUGUST 19, 2021

XX% - REGIONAL DISTRIBUTION

↩ - DISTRIBUTION AT INTERSECTION
 X% - PERCENTAGE OF INGRESS
 X% - PERCENTAGE OF EGRESS

EXHIBIT 7

Project Trip Distribution



NOT TO SCALE

AUGUST 19, 2021

12/34/56 — AM/PM/Saturday Peak Hour

EXHIBIT 8

Site-generated Vehicle Trips

FUTURE YEAR TRAFFIC IMPACT ANALYSIS

Level of service calculations for the short-term (Year 2025) and long-range (2041) conditions assumed that the existing traffic volumes as shown on Exhibit 6 experience a background increase above the 2021 volumes at 1.5% per year at the study area intersections. Two scenarios were examined for the each of the future conditions, one without the project and one with the project completed. A list of the future scenarios follows.

- Short-term Condition (Year 2025) without Project
- Short-term Condition (Year 2025) with Project
- Long-range Condition (Year 2041) without Project
- Long-range Condition (Year 2041) with Project

These scenarios will allow a specific comparison of impacts to the study area intersections and allow a determination to be made as to the extent of the project's impact and if any mitigation measures will be required.

Short-Term Condition (Year 2025) without Project

The traffic volumes for this scenario include the existing (Year 2021) traffic volumes as shown on Exhibit 6 with four years of ambient growth applied (1.5% annually). The total traffic volumes anticipated under this condition are shown on Exhibit 9. A summary of the results is shown in Table 6, which follow.

Table 6 - Year 2025 Levels of Service without Project

INTERSECTION (S)ignalized (U)nsignalized		Overall or Approach	AM Peak		PM Peak Hour		Saturday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
9 th Avenue & Colorado Blvd	U	NB	9.3	A	9.8	A	13.7	B
		SB	9.9	A	11.1	B	14.6	B
13 th Avenue & Miner Street • Mitigated – ¾ movement at 13 th & Idaho	U	Ovr	8.4	A	8.9	A	10.5	B
		EB	7.7	A	8.2	A	9.2	A
		WB	8.3	A	8.7	A	9.8	A
		NB	8.6	A	9.2	A	10.6	B
		SB	8.7	A	9.5	A	11.8	B
		(Ovr)	(8.6)	(A)	(9.7)	(A)	(12.7)	(B)
		(EB)	(8.0)	(A)	(8.7)	(A)	(10.3)	(B)
		(WB)	(8.8)	(A)	(10.1)	(B)	(13.5)	(B)
		(NB)	(8.4)	(A)	(9.1)	(A)	(11.4)	(B)
		(SB)	(8.9)	(A)	(10.2)	(B)	(14.4)	(B)
13 th Avenue & Idaho Street • Mitigated – ¾ movement	U	EB	10.5	B	12.8	B	16.8	C
		WB	12.5	B	18.4	C	51.4	F
		(EB)	(9.7)	(A)	(10.6)	(B)	(12.1)	(B)
		(WB)	(9.2)	(A)	(10.1)	(B)	(12.8)	(B)

*delay and LOS within parentheses are associated with mitigated intersection

With the anticipated increase in traffic over the next four years, the westbound approach for the intersection of 13th Avenue & Idaho Street is anticipated to fall to LOS F during the Saturday midday peak hour. All of the other intersections within the study area are anticipated to continue to operate within acceptable levels. The level of service reports for the short-term without the project are provided in the Technical Appendix.

As stated in the existing conditions section, implementing a right-in / right-out or ¾ movement median at 13th Avenue & Idaho Street should be considered to mitigate the deficient westbound approach and improve the intersection safety. As shown in the table above, a ¾ movement mitigation option would improve the 13th Avenue & Idaho Street intersection and the 13th Avenue & Miner Street intersection would continue to operate at acceptable levels with the additional diverted traffic from Idaho to Miner.

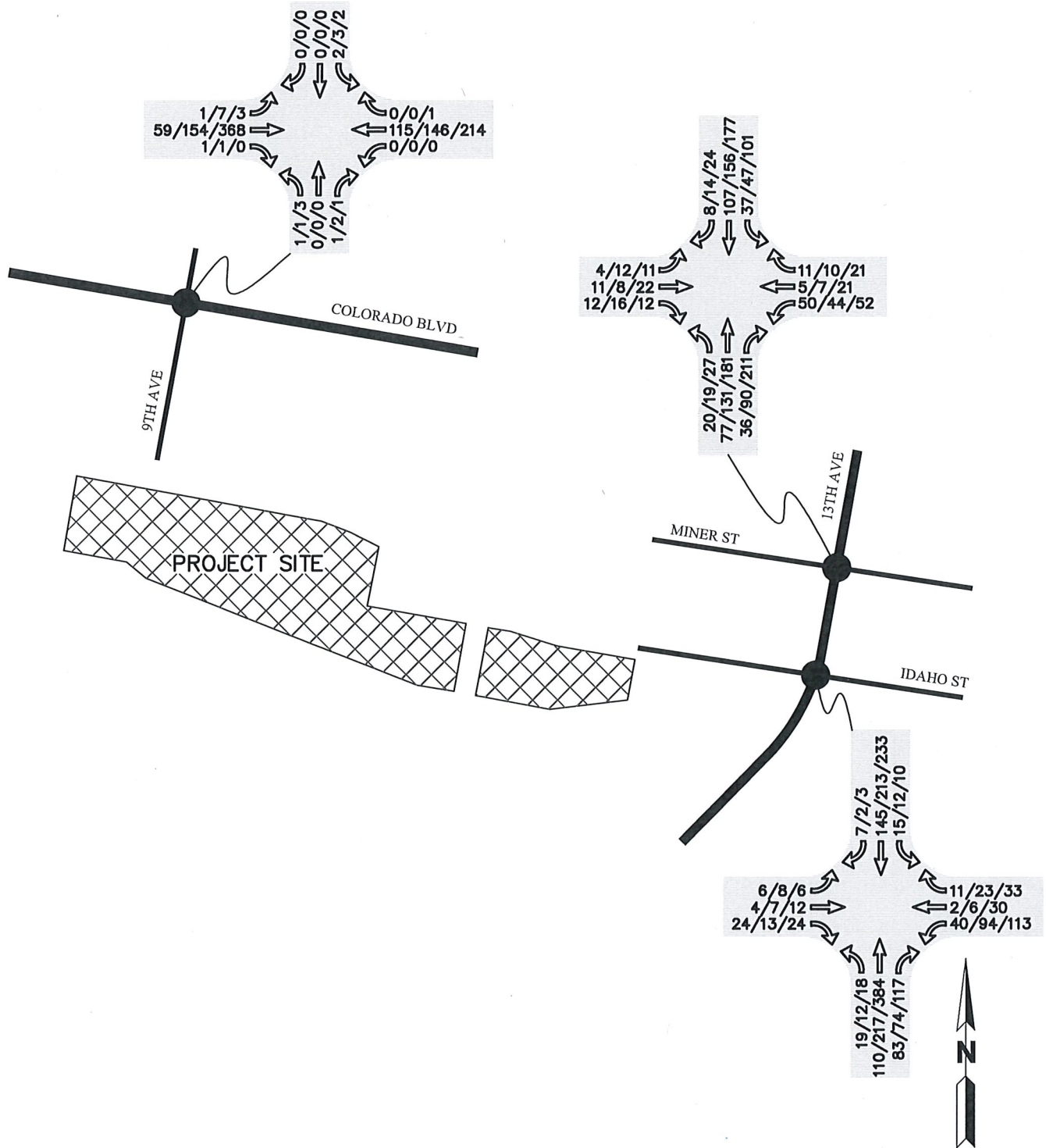
Queuing Analysis

The following table shows the reported queues for each of the study area intersections assuming no improvements to the intersections (3/4 movement) have been implemented.

Table 7 – Year 2025 95th Percentile Queues (in feet) without Project

Intersection	Time	Eastbound	Westbound	Northbound	Southbound
9 th Avenue & Colorado Boulevard	AM	0	0	0	0
	PM	0	0	0	0
	SAT	0	0	0	0
13 th Avenue & Miner Street	AM	5	5	13	20
	PM	5	8	20	25
	SAT	5	13	35	55
13 th Avenue & Idaho Street	AM	5	10	0	0
	PM	5	38	0	0
	SAT	10	128	0	0

As shown in the table above, the short-term without project condition 95th percentile queues for the study area intersections are anticipated to continue to be well within available storage. The 95th percentile queue for stop-controlled intersections is shown within the Highway Capacity Manual (HCM) results within the technical appendix.



NOT TO SCALE

12/34/56 – AM/PM/Saturday Peak Hour

AUGUST 19, 2021

EXHIBIT 9

Short-term (2025) No Project
Traffic Volumes

CivTRANS

Engineering Inc.

P.O. BOX 150335 • LAKEWOOD, CO 80215 • 303-653-9200

Short-Term Condition (Year 2025) with Project

The traffic volumes included in this scenario include the short-term (Year 2025) traffic volumes as shown on Exhibit 9 with the additional traffic from the proposed project, as shown on Exhibit 8. The total traffic volumes anticipated under this condition are shown on Exhibit 10. A summary of the results is shown in Table 8, which follow.

Table 8 - Year 2025 Levels of Service with Project

INTERSECTION (S)ignalized (U)nsignalized		Overall or Approach	AM Peak		PM Peak Hour		Saturday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
9 th Avenue & Colorado Blvd	U	NB	9.3	A	10.3	B	13.5	B
		SB	9.9	A	11.2	B	14.9	B
13 th Avenue & Miner Street • Mitigated – ¾ movement at 13 th & Idaho	U	Ovr	8.5	A	9.2	A	11.2	B
		EB	8.0	A	8.5	A	9.7	A
		WB	8.4	A	8.9	A	10.2	B
		NB	8.8	A	9.5	A	11.3	B
		SB	8.8	A	9.8	A	12.8	B
		(Ovr)	(8.8)	(A)	(10.1)	(B)	(13.8)	(B)
		(EB)	(8.3)	(A)	(9.2)	(A)	(11.2)	(B)
		(WB)	(8.9)	(A)	(10.5)	(B)	(14.7)	(B)
		(NB)	(8.6)	(A)	(9.4)	(A)	(12.1)	(B)
		(SB)	(9.1)	(A)	(10.7)	(B)	(16.0)	(C)
13 th Avenue & Idaho Street • Mitigated – ¾ movement	U	EB	10.9	B	13.5	B	18.8	C
		WB	12.7	B	19.7	C	61.3	F
		(EB)	(9.8)	(A)	(10.7)	(B)	(12.2)	(B)
		(WB)	(9.2)	(A)	(10.1)	(B)	(12.8)	(B)

*delay and LOS shown in parentheses associated with improvements

With the additional traffic from the proposed project, all of the intersections within the study area are anticipated to continue to operate within acceptable levels except 13th Avenue & Idaho Street. If improvements by others are completed as described in the existing conditions section of this report, all of the study area intersection are anticipated to operate at acceptable levels. **The proposed project is not anticipated to significantly impact the capacity of the study area intersections.**

Queuing Analysis

The following table shows the reported queues for each of the study area intersections

Table 9 – Year 2025 95th Percentile Queues (in feet) with Project

Intersection	Time	Eastbound	Westbound	Northbound	Southbound
9 th Avenue & Colorado Boulevard	AM	0	0	0	0
	PM	0	0	0	0
	SAT	0	0	3	0
13 th Avenue & Miner Street	AM	5	8	15	20
	PM	8	10	23	33
	SAT	10	15	40	65
13 th Avenue & Idaho Street	AM	5	10	3	0
	PM	8	43	0	0
	SAT	15	148	3	0

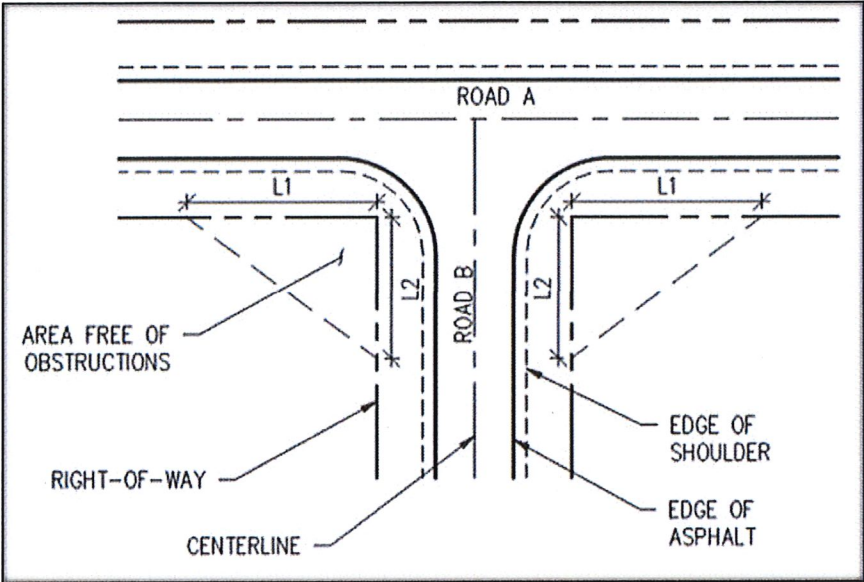
As shown in the table above, the short-term with project condition 95th percentile queues for the study area intersections are anticipated to continue to be well within available storage and **the additional traffic from the proposed project is not anticipated to significantly impact the intersection queues**. The 95th percentile queue for stop-controlled intersections is shown within the Highway Capacity Manual (HCM) results within the technical appendix.

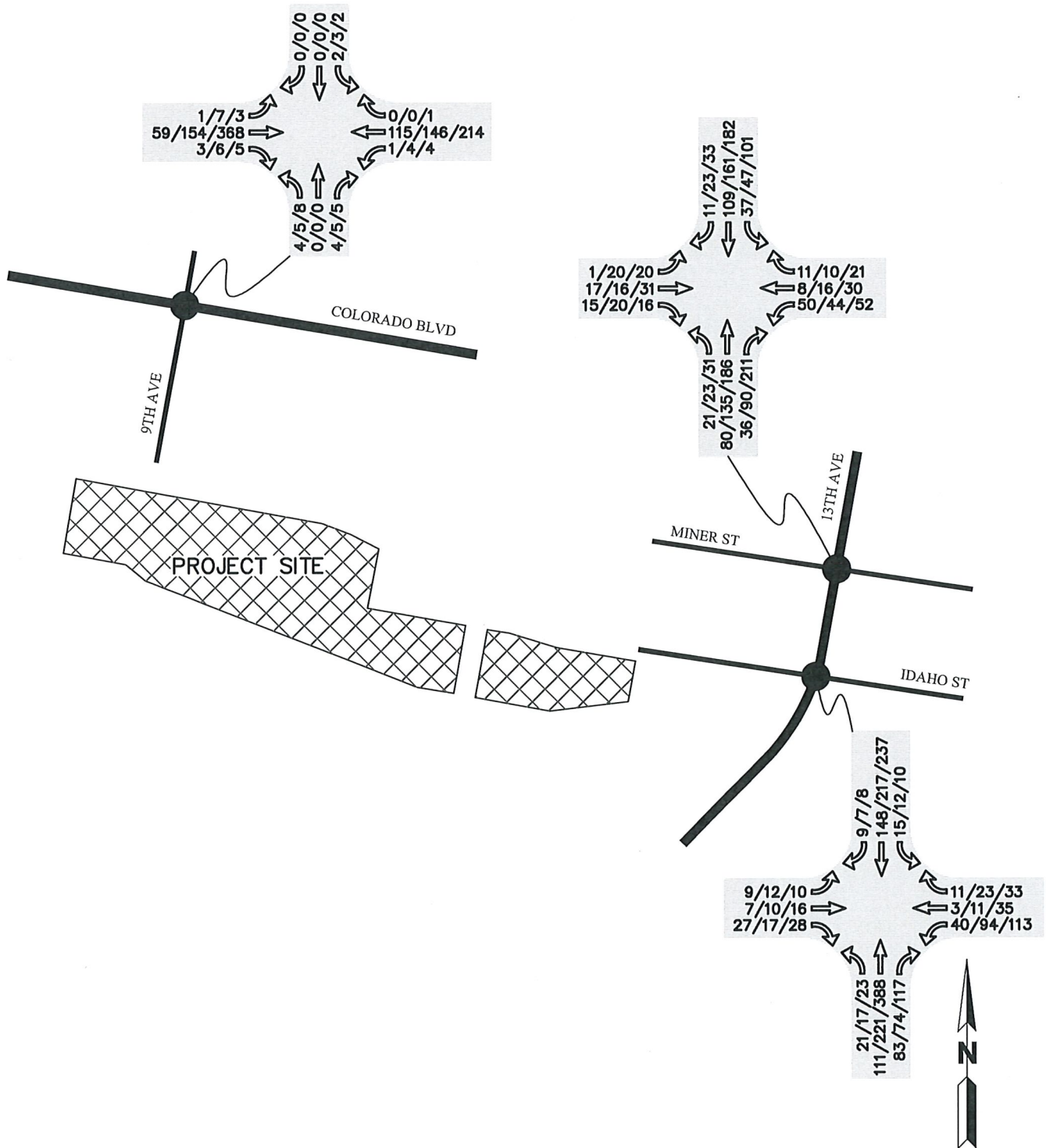
Sight Distance

Per Figure 8 of the City of Idaho Springs Standards and Specification for Design and Construction, the required sight triangles for the proposed site driveways were determined. Miner Street, Idaho Street and 11th Avenue are classified as low volume roadways. Therefore, per the clip from Figure 8 (below), L1 = 30' and L2=10'.

Driveways should also meet the American Association of State Highway and Transportation Officials (AASHTO) sight distance criteria as outlined in their reference, A Policy on Geometric Design of Highways and Streets. Miner Street is posted at 15 mph with a design speed of 20 mph, which means Block 57 access to Miner Street will require 225' of intersection sight distance for vehicles turning left (looking right) and 195' for vehicles turning right (looking left). These sight triangles should be shown on the civil and landscape plans to ensure that no obstructions are placed within the triangle.

Figure 1 – Driveway Sight Distance (City of Idaho Springs Standards)





NOT TO SCALE

12/34/56 — AM/PM/Saturday Peak Hour

AUGUST 19, 2021

EXHIBIT 10

Short-term (2025) Build
Traffic Volumes

Long-range Condition (Year 2041) without the Project

This section focuses on the long-range scenario of the year 2041 without traffic from the project. This scenario assumes that the proposed project has not developed, but ambient growth along the major roadways has continued at 1.5% per year over the next 20 years. This analysis will show how the traffic volumes will be handled by the transportation facilities and what impacts the proposed project will have on the overall operations. The traffic volumes for this scenario are shown in Exhibit 11. A summary of the level of service results are shown in Table 10, which follows.

Table 10 - Year 2041 Levels of Service Without the Project

INTERSECTION (S)ignalized (U)nsignalized		Overall or Approach	AM Peak		PM Peak Hour		Saturday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
9 th Avenue & Colorado Blvd	U	NB	9.5	A	10.3	B	16.3	C
		SB	10.3	B	12.0	B	17.6	C
13 th Avenue & Miner Street • Mitigated – ¾ movement at 13 th & Idaho	U	Ovr	9.0	A	9.8	A	13.1	B
		EB	8.1	A	8.7	A	10.1	B
		WB	8.8	A	9.2	A	11.1	B
		NB	9.2	A	10.0	A	12.8	B
		SB	9.4	A	10.7	B	16.1	C
		(Ovr)	(9.3)	(A)	(11.2)	(B)	(19.2)	(B)
		(EB)	(8.4)	(A)	(9.6)	(A)	(12.2)	(B)
		(WB)	(9.5)	(A)	(11.5)	(B)	(20.0)	(B)
		(NB)	(8.9)	(A)	(10.2)	(B)	(15.5)	(B)
		(SB)	(9.8)	(A)	(12.3)	(B)	(25.0)	(C)
13 th Avenue & Idaho Street • Mitigated – ¾ movement	U	EB	11.3	B	15.5	C	22.5	C
		WB	14.7	B	31.3	D	230.4	F
		(EB)	(10.1)	(B)	(11.5)	(B)	(13.3)	(B)
		(WB)	(9.5)	(A)	(10.7)	(B)	(14.5)	(B)

*delay and LOS shown in parentheses associated with improvements

With the anticipated growth in traffic at the study area intersections, all of the intersections are anticipated to operate at acceptable levels of service for the long-range conditions assuming improvements are completed at the intersection of 13th Avenue & Idaho Street as described previously. Intersection capacity reports are provided in the technical appendix for the long-range no project condition.

Queuing Analysis

The following table shows the reported queues for each of the study area intersections

Table 11 – Year 2041 95th Percentile Queues (in feet) without Project

Intersection	Time	Eastbound	Westbound	Northbound	Southbound
9 th Avenue & Colorado Boulevard	AM	0	0	0	0
	PM	0	0	0	0
	SAT	0	0	0	0
13 th Avenue & Miner Street	AM	5	10	18	28
	PM	5	10	30	45
	SAT	10	20	58	100
13 th Avenue & Idaho Street	AM	8	15	3	3
	PM	10	85	0	0
	SAT	20	335	3	0

As shown in the table above, the long-range no project condition 95th percentile queues for the study area intersections are anticipated increase as growth in traffic continues. The southbound approach queue at 13th Avenue & Miner Street is anticipated to reach 100' (4 vehicles). The westbound approach on Idaho Street at 13th Avenue is anticipated to exceed 330', which would spill back to 14th Avenue. With the turn restrictions / median improvement at 13th Avenue & Idaho Street and the left turning and crossing traffic from this approach redistributed to Miner Street, the queue is drastically reduced. The additional traffic through the 13th Avenue & Miner Street intersection would result in longer queues at that intersection, but would be acceptable lengths to spill back to adjacent intersections. The 95th percentile queue for stop-controlled intersections is shown within the Highway Capacity Manual (HCM) results within the technical appendix.

Long-range Conditions (Year 2041) with the Project

The traffic volumes for this scenario include the Long-range No Project (Year 2041) traffic volumes as shown on Exhibit 11 and the additional traffic from the proposed project, as shown on Exhibit 8. The total traffic volumes anticipated under this condition are shown on Exhibit 12. A summary of the results is shown in Table 12, which follows.

Table 12 - Year 2041 Levels of Service with the Project

INTERSECTION (S)ignalized (U)nsignalized		Overall or Approach	AM Peak		PM Peak Hour		Saturday Peak	
			Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
9 th Avenue & Colorado Blvd	U	NB	9.6	A	10.9	B	16.0	C
		SB	10.4	A	12.2	B	18.0	C
13 th Avenue & Miner Street • Mitigated – ¾ movement at 13 th & Idaho	U	Ovr	9.1	A	10.2	B	14.1	B
		EB	8.3	A	10.4	B	10.7	B
		WB	8.9	A	8.1	A	11.5	B
		NB	9.3	A	9.1	A	13.7	B
		SB	9.6	A	11.2	B	17.8	C
		(Ovr)	(9.5)	(A)	(11.8)	(B)	(22.5)	(C)
		(EB)	(8.7)	(A)	(10.2)	(B)	(13.7)	(B)
		(WB)	(9.7)	(A)	(12.4)	(B)	(23.3)	(C)
		(NB)	(9.1)	(A)	(10.6)	(B)	(17.2)	(C)
		(SB)	(10.1)	(B)	(13.2)	(B)	(31.2)	(D)
13 th Avenue & Idaho Street • Mitigated – ¾ movement	U	EB	11.8	B	16.3	C	26.4	D
		WB	15.0	C	34.6	D	282.2	F
		(EB)	(10.2)	(B)	(11.5)	(B)	(13.4)	(B)
		(WB)	(9.5)	(A)	(10.7)	(B)	(14.5)	(B)

*delay and LOS shown in parentheses associated with improvements

As shown in the table above, the study area intersections are anticipated to operate at acceptable levels of service for this condition with the project completed assuming the improvements anticipated to be required due to ambient traffic growth over the next twenty years are completed. The project traffic is not anticipated to worsen the levels of service significantly for this condition. The level of service reports for the long-range with the project condition (Year 2041) are provided in the Technical Appendix.

Queuing Analysis

The following table shows the reported queues for each of the study area intersections

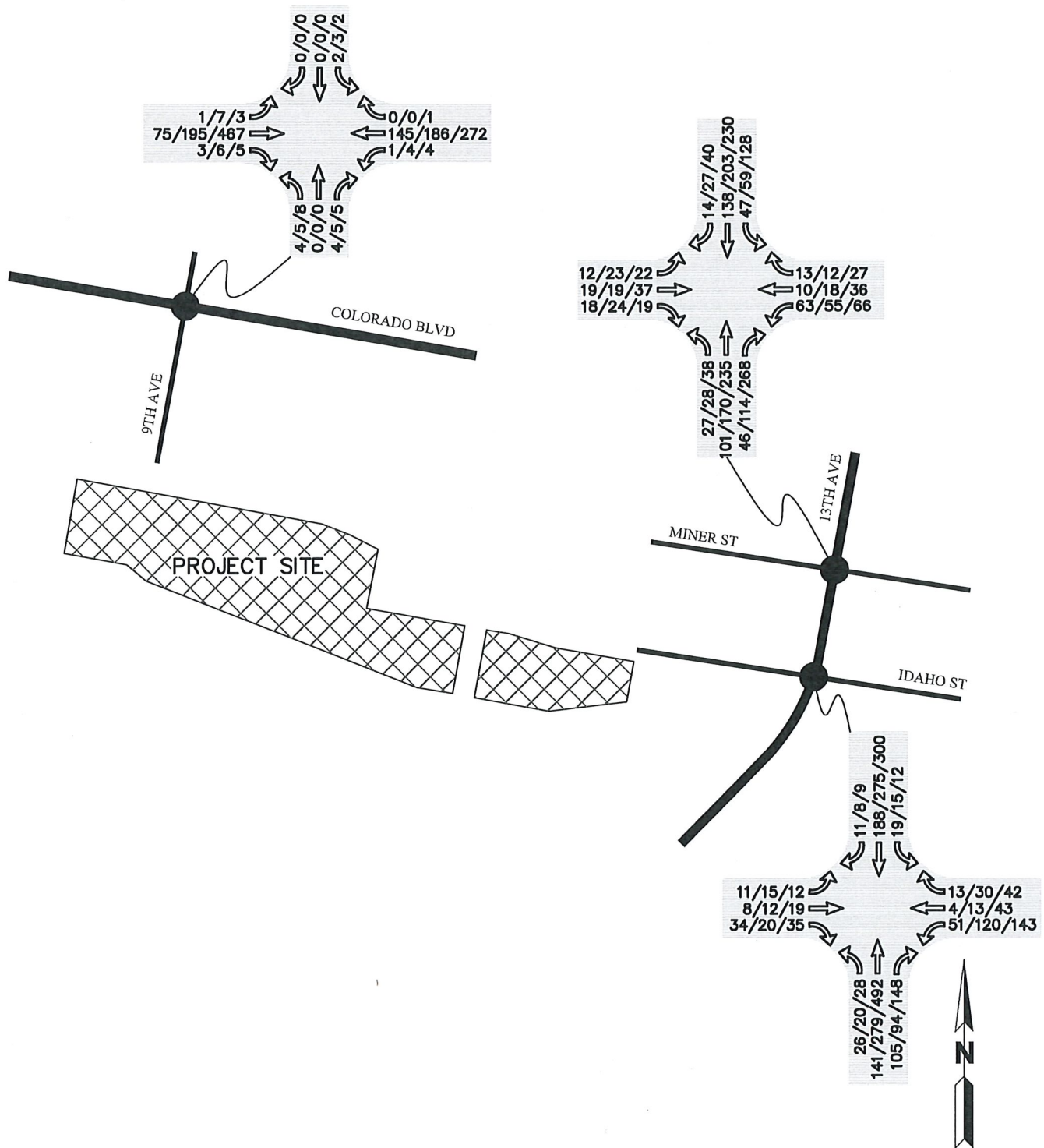
Table 13 – Year 2041 95th Percentile Queues (in feet) with Project

Intersection	Time	Eastbound	Westbound	Northbound	Southbound
9 th Avenue & Colorado Boulevard	AM	0	0	0	0
	PM	0	0	3	0
	SAT	0	0	3	0
13 th Avenue & Miner Street	AM	5	13	20	30
	PM	8	13	33	50
	SAT	13	25	63	115
13 th Avenue & Idaho Street	AM	8	15	3	3
	PM	13	90	3	0
	SAT	30	373	3	0

As shown in the table above, the long-range with project condition 95th percentile queues for the study area intersections are slightly higher than the no-project condition. The proposed project is not anticipated to have a significant impact on the queues at the study area intersections. The 95th percentile queue for stop-controlled intersections is shown within the Highway Capacity Manual (HCM) results within the technical appendix.

Sight Distance

The site distance evaluation included in the short-term with project conditions applies to the long-range conditions as well.



12/34/56 — AM/PM/Saturday Peak Hour

AUGUST 19, 2021

EXHIBIT 12

Long-range (2041) Build
Traffic Volumes

CONCLUSIONS & RECOMMENDATIONS

Based upon the analysis, field observations, assumptions, methodologies and results, which are provided in the body of this document, **this project is not anticipated to have significant impacts on the study area that warrant mitigation.**

The study area intersections are currently operating at acceptable levels of service except the westbound approach at 13th Avenue & Idaho Street, which is operating at LOS E during the Saturday peak hour. This deficient level of service could be due to the closure of Miner Street east of 14th Avenue, which was recently completed to provide outdoor space for businesses to deal with restrictions associated with the pandemic. It is unclear if Miner Street will be reopened to vehicular traffic in the future or if the closure will become permanent. If it remains, improvements will be required at the intersection of 13th Avenue & Idaho Street to mitigate the deficient level of service. If Miner Street is reopened, improvement should still be considered at 13th Avenue & Idaho Street to improve pedestrian safety. These improvements should eliminate the ability to turn left from Idaho Street at 13th Avenue. This can be accomplished by installing a median to restrict left turns entirely (right-in/right-out) or restrict left turns and crossing maneuvers from Idaho Street (¾ movement). Converting Idaho Street to one-way (eastbound) would also accomplish this. The improvements at the intersection of 13th Avenue & Idaho Street are required to address existing and future traffic. The proposed project's impact to this intersection is not significant and no improvements should be required by the proposed development.

Queuing was also evaluated at the study area intersection for existing and future conditions with and without the proposed project. There are no anticipated queuing issues at the study area intersections assuming intersection improvements are completed at 13th Avenue & Idaho Street. If improvements are not completed, 95th percentile queues are anticipated to spill back to 14th Avenue on Idaho Street by the long-range time period regardless of whether the proposed development project moves forward or not.

Sight Distance

Per Figure 8 of the City of Idaho Springs Standards and Specification for Design and Construction, the required sight triangles for the proposed site driveways were determined. Miner Street, Idaho Street and 11th Avenue are classified as low volume roadways. Therefore, per the clip from Figure 8 in the standards, L1 = 30' and L2'=10'.

Driveways should also meet the American Association of State Highway and Transportation Officials (AASHTO) sight distance criteria as outlined in their reference, A Policy on Geometric Design of Highways and Streets. Miner Street is posted at 15 mph with a design speed of 20 mph, which means Block 57 access to Miner Street will require 225' of intersection sight distance for vehicles turning left (looking right) and 195' for vehicles turning right (looking left). These sight triangles should be shown on the civil and landscape plans to ensure that no obstructions are placed within the triangle.

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**Traffic Impact Study
Block 57 – Idaho Springs**

**TECHNICAL APPENDIX
August 19, 2021**



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RAW TRAFFIC COUNTS

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PM PEAK HOUR	Colorado Blvd Eastbound				Colorado Blvd Westbound				9th Ave Northbound				9th Ave Southbound				Int. Total
	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	
16:00	3	30	0	0	0	34	0	0	0	0	1	0	2	0	0	0	70
16:15	0	34	1	1	0	40	0	0	0	0	1	0	0	0	0	0	76
16:30	2	37	0	0	0	28	0	1	1	0	0	0	0	0	0	0	68
16:45	1	31	0	0	0	23	0	0	0	0	0	0	1	0	0	0	56
Hr Total	6	132	1	1	0	125	0	1	1	0	2	0	3	0	0	0	270
HV= 0.7% PHF= 0.89																	

PEAK HOUR	Colorado Blvd Eastbound				Colorado Blvd Westbound				9th Ave Northbound				9th Ave Southbound				Int. Total
	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	
11:45	0	81	0	1	0	56	1	0	1	0	1	0	0	0	0	0	140
12:00	1	103	0	2	0	50	0	0	1	0	0	0	1	0	0	0	156
12:15	0	67	0	0	0	52	0	1	0	0	0	0	0	0	0	0	119
12:30	2	96	0	1	0	44	0	1	1	0	0	0	1	0	0	0	144
Hr Total	3	347	0	4	0	202	1	2	3	0	1	0	2	0	0	0	559

HV=1.1%

PHF=0.90



Ped-Bike Count

Intersection: 9th Avenue & Colorado Boulevard

Date: Wednesday, July 21, 2021

Start Time	Colorado Blvd East Leg				Colorado Blvd West Leg				9th Avenue North Leg				9th Avenue South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	2	2
7:30	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0
7:45	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	3	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2

AM PEAK HOUR	Colorado Blvd East Leg				Colorado Blvd West Leg				9th Avenue North Leg				9th Avenue South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
7:45	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	3	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Hr Total	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	1	3	2

Intersection: 9th Avenue & Colorado Boulevard

Date: Wednesday, July 21, 2021

Start Time	Colorado Blvd East Leg				Colorado Blvd West Leg				9th Avenue North Leg				9th Avenue South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM PEAK HOUR	Colorado Blvd East Leg				Colorado Blvd West Leg				9th Avenue North Leg				9th Avenue South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
	16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0



Ped-Bike Count

Intersection: 9th Avenue & Colorado Boulevard

Date: Saturday, July 17, 2021

Start Time	Colorado Blvd East Leg				Colorado Blvd West Leg				9th Avenue North Leg				9th Avenue South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	3
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:00	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	0	3	1
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:30	0	0	0	0	0	0	0	0	0	0	0	8	0	0	4	0	0	12
11:45	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	2
12:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	2	3
12:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
12:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	4	4
12:45	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4	0

PEAK HOUR	Colorado Blvd East Leg				Colorado Blvd West Leg				9th Avenue North Leg				9th Avenue South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
11:45	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	2
12:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	2	3
12:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
12:30	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	4	4
Hr Total	0	0	0	0	0	0	0	0	0	0	0	3	7	0	8	0	7	11

HV= 0.2% PHF= 0.95



Peak-Hour Turning Movement Count

Intersection: **13th Avenue & Miner Street**

Date: Saturday, July 17, 2021

Start Time	Miner Street Eastbound				Miner Street Westbound				13th Ave Northbound				13th Ave Southbound				Int. Total
	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	
10:00	0	2	6	0	7	5	8	0	3	25	18	1	13	37	2	0	126
10:15	1	2	4	0	12	0	4	0	4	33	18	0	6	41	5	1	130
10:30	2	1	3	0	11	1	4	0	0	26	24	1	15	29	5	1	121
10:45	1	5	8	0	12	7	3	0	7	41	35	1	9	40	7	0	175
11:00	2	5	14	0	20	4	5	0	6	47	35	1	20	38	4	0	200
11:15	3	4	3	0	19	1	3	0	8	38	24	1	14	25	4	0	146
11:30	3	2	4	0	12	2	8	0	9	37	54	0	23	32	5	0	191
11:45	1	2	0	0	18	5	7	0	3	38	54	0	21	49	4	0	202
12:00	1	6	3	0	14	2	2	0	6	38	42	0	18	41	4	0	177
12:15	2	1	4	0	12	5	5	0	6	36	54	0	33	46	6	0	210
12:30	3	8	1	0	16	8	6	0	5	46	56	0	20	39	7	0	215
12:45	4	6	3	0	7	5	7	0	8	51	47	0	24	41	6	1	209

PEAK HOUR	Miner Street Eastbound				Miner Street Westbound				13th Ave Northbound				13th Ave Southbound				Int. Total
	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	
12:00	1	6	3	0	14	2	2	0	6	38	42	0	18	41	4	0	177
12:15	2	1	4	0	12	5	5	0	6	36	54	0	33	46	6	0	210
12:30	3	8	1	0	16	8	6	0	5	46	56	0	20	39	7	0	215
12:45	4	6	3	0	7	5	7	0	8	51	47	0	24	41	6	1	209
Hr Total	10	21	11	0	49	20	20	0	25	171	199	0	95	167	23	1	811

HV= 0.1% PHF= 0.94



Ped-Bike Count

Intersection: 13th Avenue & Miner Street

Date: Wednesday, July 21, 2021

Start Time	Miner St East Leg				Miner St West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
7:45	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	0
8:00	2	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0	6	0
8:15	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM PEAK HOUR	Miner St East Leg				Miner St West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
7:45	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	0
8:00	2	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0	6	0
8:15	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0
Hr Total	2	0	0	0	1	2	0	0	4	3	0	0	3	1	0	0	16	0

Intersection: 13th Avenue & Miner Street

Date: Wednesday, July 21, 2021

Start Time	Miner St East Leg				Miner St West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
16:00	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0	0	5	0
16:15	1	0	1	0	0	0	0	0	0	3	0	1	5	2	0	0	11	2
16:30	0	0	0	0	0	2	0	1	0	7	0	0	0	2	0	0	11	1
16:45	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	6	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	2	0	0	0	0	0	0	3	3	0	0	1	2	0	0	11	0
17:30	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0

PM PEAK HOUR	Miner St East Leg				Miner St West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
16:00	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0	0	5	0
16:15	1	0	1	0	0	0	0	0	0	3	0	1	5	2	0	0	11	2
16:30	0	0	0	0	0	2	0	1	0	7	0	0	0	2	0	0	11	1
16:45	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	6	0
Hr Total	1	0	1	0	0	2	0	1	2	11	0	1	12	5	0	0	33	3



Ped-Bike Count

Intersection: 13th Avenue & Miner Street

Date: Saturday, July 17, 2021

Start Time	Miner St East Leg				Miner St West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
10:00																	0	0
10:15																	0	0
10:30																	0	0
10:45																	0	0
11:00																	0	0
11:15																	0	0
11:30																	0	0
11:45															0	0		
12:00	2	0	0	0	0	1	0	0	6	5	0	2	25	4	0	0	43	2
12:15	0	0	1	0	2	5	0	1	2	7	0	0	21	2	0	0	39	2
12:30	0	0	0	0	0	0	0	0	12	2	0	1	50	8	1	0	72	2
12:45	0	1	0	0	0	0	0	0	1	4	0	0	13	12	0	0	31	0

PEAK HOUR	Miner St East Leg				Miner St West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
12:00	2	0	0	0	0	1	0	0	6	5	0	2	25	4	0	0	43	2
12:15	0	0	1	0	2	5	0	1	2	7	0	0	21	2	0	0	39	2
12:30	0	0	0	0	0	0	0	0	12	2	0	1	50	8	1	0	72	2
12:45	0	1	0	0	0	0	0	0	1	4	0	0	13	12	0	0	31	0
Hr Total	2	1	1	0	2	6	0	1	21	18	0	3	109	26	1	0	185	6

PM PEAK HOUR	Idaho Street Eastbound				Idaho Street Westbound				13th Avenue Northbound				13th Avenue Southbound				Int. Total
	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	
16:00	1	1	2	0	22	1	7	0	3	47	10	1	4	49	1	0	148
16:15	0	1	4	1	28	1	6	1	2	55	18	1	3	47	0	0	165
16:30	5	2	2	0	12	2	2	0	2	36	21	0	1	45	1	0	131
16:45	1	2	3	0	19	1	5	0	3	47	15	0	2	42	0	0	140
Hr Total	7	6	11	1	81	5	20	1	10	185	64	2	10	183	2	0	584

HV=

0.7%

PHF=

0.88

PEAK HOUR	Idaho Street Eastbound				Idaho Street Westbound				13th Ave Northbound				13th Ave Southbound				Int. Total
	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	
12:00	3	2	11	0	21	7	9	0	1	75	24	0	4	55	1	0	213
12:15	0	3	5	0	25	10	6	0	4	91	35	0	2	58	0	0	239
12:30	3	3	4	0	30	3	10	0	6	96	23	0	0	57	2	0	237
12:45	0	3	3	0	30	8	6	0	6	100	28	0	3	50	0	1	237
Hr Total	6	11	23	0	106	28	31	0	17	362	110	0	9	220	3	1	926
													HV=	0.1%		PHF=	0.97



Ped-Bike Count

Intersection: 13th Avenue & Idaho Street

Date: Wednesday, July 21, 2021

Start Time	Idaho Street East Leg				Idaho Street West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	
7:30	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	
7:45	0	0	0	0	1	1	0	0	1	3	0	0	0	1	0	1	1	
8:00	0	0	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	
8:15	0	0	0	0	1	3	0	0	0	0	0	0	1	0	0	0	0	
8:30	0	0	0	0	0	0	1	0	0	0	0	0	5	2	1	0	2	
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

AM PEAK HOUR	Idaho Street East Leg				Idaho Street West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
7:45	0	0	0	0	1	1	0	0	1	3	0	0	0	1	0	1	7	1
8:00	0	0	0	0	2	1	0	0	0	0	0	0	4	0	0	0	7	0
8:15	0	0	0	0	1	3	0	0	0	0	0	0	1	0	0	0	5	0
8:30	0	0	0	0	0	0	1	0	0	0	0	0	5	2	1	0	7	2
Hr Total	0	0	0	0	4	5	1	0	1	3	0	0	10	3	1	1	26	3

Intersection: 13th Avenue & Idaho Street

Date: Wednesday, July 21, 2021

Start Time	Idaho Street East Leg				Idaho Street West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
16:00	0	0	0	0	1	0	0	0	1	0	0	0	6	3	0	0	11	0
16:15	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	2	1
16:30	4	0	0	0	0	0	1	2	0	0	0	0	4	5	0	0	13	3
16:45	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	3	0
17:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1
17:15	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	2	1
17:30	0	0	0	0	0	2	0	0	0	0	0	0	1	1	0	0	4	0
17:45	1	0	0	0	1	2	0	0	0	2	0	0	4	1	0	0	11	0

PM PEAK HOUR	Idaho Street East Leg				Idaho Street West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
16:00	0	0	0	0	1	0	0	0	1	0	0	0	6	3	0	0	11	0
16:15	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	2	1
16:30	4	0	0	0	0	0	1	2	0	0	0	0	4	5	0	0	13	3
16:45	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	3	0
Hr Total	4	0	1	0	3	0	1	2	2	1	0	0	11	8	0	0	29	4



Ped-Bike Count

Intersection: 13th Avenue & Idaho Street

Date: Saturday, July 17, 2021

Start Time	Idaho St East Leg				Idaho St West Leg				13th Ave North Leg				13th Ave South Leg					
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB	Ped Total	Bike Total
10:00																	0	0
10:15																	0	0
10:30																	0	0
10:45																	0	0
11:00																	0	0
11:15																	0	0
11:30																	0	0
11:45															0	0		
12:00	14	17	0	0	3	1	0	0	0	0	0	0	11	18	0	0	64	0
12:15	5	0	0	0	1	0	0	0	1	0	0	0	13	0	0	0	20	0
12:30	10	8	0	0	39	5	0	1	12	4	0	0	3	8	0	0	89	1
12:45	0	0	2	1	3	8	0	0	3	11	0	0	0	0	0	1	25	4

PEAK HOUR	Idaho St East Leg				Idaho St West Leg				13th Ave North Leg				13th Ave South Leg				Ped Total	Bike Total
	Ped		Bike-other		Ped		Bike-other		Ped		Bike-other		Ped		Bike-other			
	NB	SB	NB	SB	NB	SB	NB	SB	EB	WB	EB	WB	EB	WB	EB	WB		
12:00	14	17	0	0	3	1	0	0	0	0	0	0	11	18	0	0	64	0
12:15	5	0	0	0	1	0	0	0	1	0	0	0	13	0	0	0	20	0
12:30	10	8	0	0	39	5	0	1	12	4	0	0	3	8	0	0	89	1
12:45	0	0	2	1	3	8	0	0	3	11	0	0	0	0	0	1	25	4
Hr Total	29	25	2	1	46	14	0	1	16	15	0	0	27	26	0	1	198	5

TRIP GENERATION DATA

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Trip Generation for Proposed Block 57 Development

The current project is proposing to construct up to 120 multi-family residential units and 12,000 SF of retail. The residential is anticipated to mostly be three-story buildings with portions of the buildings dedicated to retail on the street level. LUC 221, Multifamily Housing (Mid-Rise), will be used for the residential portion of the project and LUC 820, Shopping Center, will be used for the retail portion.

Trip Generation

Per Trip Generation Manual, the following land use categories were applied.

LUC 221 - Multifamily Housing (Mid-rise)

	Fitted curve equation	Rate	R ²	% in	%out
AM Peak:	$LN(T)=0.98*LN(X)-0.98$	0.36	0.67	26%	74%
PM Peak:	$LN(T)=0.96*LN(X)-.63$	0.44	0.72	61%	39%
Sat Peak:	$T=0.42(X)+6.73$	0.44	0.89	49%	51%
ADT:	$T=5.45(X)-1.75$	5.44	0.77		
Sat ADT:	$T=3.04(X)+417.11$	4.91	0.73		

Low R² value. Therefore, average rate used.

			<u>Total</u>	<u>In</u>	<u>Out</u>
For X=	120.0	AM Peak=	43	11	32
		PM Peak=	53	32	21
		Sat Peak=	53	26	27
		ADT=	652		
		Sat ADT=	590		

		<u>rate</u>	<u>R²</u>	<u>% in</u>	<u>%out</u>
AM Peak:	$T=0.50(X)+151.78$	0.94	0.50	62%	38%
PM Peak:	$LN(T)=0.74*LN(X)+2.89$	3.81	0.82	48%	52%
Sat Peak:	$LN(T)=0.79*LN(X)+2.79$	4.50	0.87	52%	48%
ADT:	$LN(T)=0.68*LN(X)+5.57$	37.75	0.76		
Sat ADT:	$LN(T)=0.62*LN(X)+6.24$	46.12	0.71		

Low X value. Therefore, average rate used.

			<u>Total</u>	<u>In</u>	<u>Out</u>
For X=	12.0	AM Peak=	11	7	4
		PM Peak=	46	22	24
		Sat Peak=	54	28	26
		ADT=	454		
		Sat ADT=	554		

TRIP REDUCTION (MULTI-MODAL and TRANSIT) - 15% Overall Reduction due to proximity to City Center and that housing will be primarily for workforce

	<u>Total</u>	<u>In</u>	<u>Out</u>
Multi-Modal and Transit Trips-->			
AM Peak=	8	3	5
PM Peak=	15	8	7
Sat Peak=	16	8	8
ADT=	166		
Sat ADT=	172		

VEHICLE TRIPS FOR ENTIRE SITE - Sum of land uses per Trip Generation Manual calculation minus "trip reduction" value.

	<u>Total</u>	<u>In</u>	<u>Out</u>
Vehicle Trips-->			
AM Peak=	46	15	31
PM Peak=	84	46	38
Sat Peak=	91	46	45
ADT=	940		
Sat ADT=	972		

PANDEMIC ADJUSTMENT CALCULATIONS

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PANDEMIC ADJUSTMENT CALCULATION

ON I-70 E/O SH 70 BUS RT, COLORADO BLVD AT IDAHO SPRINGS TWIN TUNNELS (Station Id: 000120)

Wednesday, July 21, 2021

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
EB	102	70	89	109	143	312	515	798	1,046	1,356	1,557	1,739	1,902	1,920	2,105	2,089	2,056	1,859	1,667	1,076	813	598	412	317
WB	175	108	109	131	289	648	1,059	1,389	1,253	1,816	2,020	1,937	1,824	2,046	1,889	1,739	1,506	1,524	1,205	930	715	460	354	266
Combined	277	178	198	240	432	960	1574	2187	2299	3172	3577	3676	3726	3966	3994	3828	3562	3383	2872	2006	1528	1058	766	583

Saturday, July 17, 2021

EB	230	133	110	108	135	266	450	836	1,221	1,881	2,340	2,976	2,884	3,024	3,170	3,298	3,214	3,113	2,362	2,083	1,474	1,159	742	506
WB	263	180	174	314	490	845	1,426	2,316	3,118	3,022	2,938	2,860	2,820	2,602	2,460	2,481	2,454	1,618	1,259	1,017	832	641	551	423
Combined	493	313	284	422	625	1111	1876	3152	4339	4903	5278	5836	5704	5626	5630	5779	5668	4731	3621	3100	2306	1800	1293	929

Wednesday, July 17, 2019

EB	202	137	108	130	136	328	665	903	1,118	1,472	1,642	1,813	1,920	2,054	2,228	2,311	2,146	2,020	1,589	1,342	979	709	586	398
WB	213	166	123	154	252	602	1,054	1,278	1,681	2,135	2,371	2,302	2,058	1,900	2,036	1,983	1,825	1,588	1,302	1,002	809	559	428	387
Combined	415	303	231	284	388	930	1719	2181	2799	3607	4013	4115	3978	3954	4264	4294	3971	3608	2891	2344	1788	1268	1014	785

Saturday, July 20, 2019

EB	237	140	134	131	164	280	445	811	1,237	1,779	2,248	2,513	2,670	2,259	2,745	2,416	2,432	2,304	2,844	3,348	2,861	1,418	831	502
WB	325	218	174	237	556	925	1,612	2,500	3,189	3,356	3,229	3,139	3,073	2,872	2,796	2,995	2,117	1,475	1,314	1,007	752	665	474	339
Combined	562	358	308	368	720	1205	2057	3311	4426	5135	5477	5652	5743	5131	5541	5411	4549	3779	4158	4355	3613	2083	1305	841

Pandemic Adjustment Factor	AM	1.2
	PM	1.1
	Sat	1.0

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**LEVEL OF SERVICE
CALCULATIONS
EXISTING CONDITIONS**

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HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

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	1	56	1	0	108	0	1	0	1	2	0	0
Future Vol, veh/h	1	56	1	0	108	0	1	0	1	2	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	67	1	0	130	0	1	0	1	2	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	130	0	0	71	0	0	203	203	71	200	203	130
Stage 1	-	-	-	-	-	-	73	73	-	130	130	-
Stage 2	-	-	-	-	-	-	130	130	-	70	73	-
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	1455	-	-	1529	-	-	755	693	991	759	693	920
Stage 1	-	-	-	-	-	-	937	834	-	874	789	-
Stage 2	-	-	-	-	-	-	874	789	-	940	834	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1455	-	-	1525	-	-	752	690	988	757	690	920
Mov Cap-2 Maneuver	-	-	-	-	-	-	752	690	-	757	690	-
Stage 1	-	-	-	-	-	-	933	831	-	873	789	-
Stage 2	-	-	-	-	-	-	874	789	-	938	831	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			9.2			9.8		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	854	1455	-	-	1525	-	-	757				
HCM Lane V/C Ratio	0.003	0.001	-	-	-	-	-	0.003				
HCM Control Delay (s)	9.2	7.5	0	-	0	-	-	9.8				
HCM Lane LOS	A	A	A	-	A	-	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↗	↖		↔	
Traffic Vol, veh/h	3	8	9	39	4	8	16	61	28	29	84	7
Future Vol, veh/h	3	8	9	39	4	8	16	61	28	29	84	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	9	10	44	4	9	18	69	31	33	94	8
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.5	8	8	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	0%	15%	76%	24%
Vol Thru, %	79%	0%	40%	8%	70%
Vol Right, %	0%	100%	45%	16%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	77	28	20	51	120
LT Vol	16	0	3	39	29
Through Vol	61	0	8	4	84
RT Vol	0	28	9	8	7
Lane Flow Rate	87	31	22	57	135
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.117	0.035	0.027	0.073	0.16
Departure Headway (Hd)	4.848	4.042	4.344	4.6	4.275
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	731	873	829	783	825
Service Time	2.632	1.825	2.346	2.601	2.372
HCM Lane V/C Ratio	0.119	0.036	0.027	0.073	0.164
HCM Control Delay	8.3	7	7.5	8	8.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-ile Q	0.4	0.1	0.1	0.2	0.6

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	5	3	19	32	2	8	15	87	65	12	114	6
Future Vol, veh/h	5	3	19	32	2	8	15	87	65	12	114	6
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	3	21	36	2	9	17	97	72	13	127	7
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	343	369	153	349	336	137	143	0	0	169	0	0
Stage 1	166	166	-	167	167	-	-	-	-	-	-	-
Stage 2	177	203	-	182	169	-	-	-	-	-	-	-
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	611	560	893	606	585	911	1440	-	-	1409	-	-
Stage 1	836	761	-	835	760	-	-	-	-	-	-	-
Stage 2	825	733	-	820	759	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	585	542	874	571	566	908	1428	-	-	1409	-	-
Mov Cap-2 Maneuver	585	542	-	571	566	-	-	-	-	-	-	-
Stage 1	818	747	-	824	750	-	-	-	-	-	-	-
Stage 2	801	723	-	779	745	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	10		11.3		0.7			0.7				
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1428	-	-	754	614	1409	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.04	0.076	0.009	-	-				
HCM Control Delay (s)	7.6	0	-	10	11.3	7.6	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-				

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

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	7	145	1	0	138	0	1	0	2	3	0	0
Future Vol, veh/h	7	145	1	0	138	0	1	0	2	3	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	163	1	0	155	0	1	0	2	3	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	155	0	0	167	0	0	338	338	167	336	338	155
Stage 1	-	-	-	-	-	-	183	183	-	155	155	-
Stage 2	-	-	-	-	-	-	155	155	-	181	183	-
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	1425	-	-	1411	-	-	616	583	877	618	583	891
Stage 1	-	-	-	-	-	-	819	748	-	847	769	-
Stage 2	-	-	-	-	-	-	847	769	-	821	748	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1425	-	-	1407	-	-	612	578	874	614	578	891
Mov Cap-2 Maneuver	-	-	-	-	-	-	612	578	-	614	578	-
Stage 1	-	-	-	-	-	-	812	741	-	842	769	-
Stage 2	-	-	-	-	-	-	847	769	-	814	741	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			9.7			10.9		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	765	1425	-	-	1407	-	-	614				
HCM Lane V/C Ratio	0.004	0.006	-	-	-	-	-	0.005				
HCM Control Delay (s)	9.7	7.5	0	-	0	-	-	10.9				
HCM Lane LOS	A	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	8.7											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	11	8	15	41	7	9	18	123	85	44	147	13
Future Vol, veh/h	11	8	15	41	7	9	18	123	85	44	147	13
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	8	16	43	7	9	19	129	89	46	155	14
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	8.1			8.5			8.4			9.2		
HCM LOS	A			A			A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	32%	72%	22%
Vol Thru, %	87%	0%	24%	12%	72%
Vol Right, %	0%	100%	44%	16%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	141	85	34	57	204
LT Vol	18	0	11	41	44
Through Vol	123	0	8	7	147
RT Vol	0	85	15	9	13
Lane Flow Rate	148	89	36	60	215
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.206	0.105	0.048	0.084	0.27
Departure Headway (Hd)	5.005	4.237	4.828	5.04	4.53
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	718	846	741	710	795
Service Time	2.727	1.96	2.862	3.072	2.553
HCM Lane V/C Ratio	0.206	0.105	0.049	0.085	0.27
HCM Control Delay	9	7.5	8.1	8.5	9.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.8	0.4	0.2	0.3	1.1

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	8	7	12	89	6	22	11	204	70	11	201	2
Future Vol, veh/h	8	7	12	89	6	22	11	204	70	11	201	2
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
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	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	8	14	101	7	25	13	232	80	13	228	2
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	575	600	251	587	561	279	233	0	0	316	0	0
Stage 1	258	258	-	302	302	-	-	-	-	-	-	-
Stage 2	317	342	-	285	259	-	-	-	-	-	-	-
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	429	415	788	421	436	760	1335	-	-	1244	-	-
Stage 1	747	694	-	707	664	-	-	-	-	-	-	-
Stage 2	694	638	-	722	694	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	400	402	772	391	422	755	1331	-	-	1239	-	-
Mov Cap-2 Maneuver	400	402	-	391	422	-	-	-	-	-	-	-
Stage 1	736	684	-	696	653	-	-	-	-	-	-	-
Stage 2	654	628	-	680	684	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	12.5		17		0.3			0.4				
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1331	-	-	510	432	1239	-	-				
HCM Lane V/C Ratio	0.009	-	-	0.06	0.308	0.01	-	-				
HCM Control Delay (s)	7.7	0	-	12.5	17	7.9	0	-				
HCM Lane LOS	A	A	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	1.3	0	-	-				

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	347	0	0	202	1	3	0	1	2	0	0
Future Vol, veh/h	3	347	0	0	202	1	3	0	1	2	0	0
Conflicting Peds, #/hr	0	0	7	7	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	386	0	0	224	1	3	0	1	2	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	225	0	0	393	0	0	624	624	393	618	624	225
Stage 1	-	-	-	-	-	-	399	399	-	225	225	-
Stage 2	-	-	-	-	-	-	225	225	-	393	399	-
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	1344	-	-	1166	-	-	398	402	656	402	402	814
Stage 1	-	-	-	-	-	-	627	602	-	778	718	-
Stage 2	-	-	-	-	-	-	778	718	-	632	602	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1344	-	-	1158	-	-	394	398	652	400	398	814
Mov Cap-2 Maneuver	-	-	-	-	-	-	394	398	-	400	398	-
Stage 1	-	-	-	-	-	-	621	596	-	776	718	-
Stage 2	-	-	-	-	-	-	778	718	-	629	596	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			13.3			14.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	437	1344	-	-	1158	-	-	400				
HCM Lane V/C Ratio	0.01	0.002	-	-	-	-	-	0.006				
HCM Control Delay (s)	13.3	7.7	0	-	0	-	-	14.1				
HCM Lane LOS	B	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	10	21	11	49	20	20	25	171	199	95	167	23
Future Vol, veh/h	10	21	11	49	20	20	25	171	199	95	167	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	22	12	52	21	21	27	182	212	101	178	24
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	9.1			9.6			9.5			11.3		
HCM LOS	A			A			A			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	24%	55%	33%
Vol Thru, %	87%	0%	50%	22%	59%
Vol Right, %	0%	100%	26%	22%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	199	42	89	285
LT Vol	25	0	10	49	95
Through Vol	171	0	21	20	167
RT Vol	0	199	11	20	23
Lane Flow Rate	209	212	45	95	303
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.304	0.263	0.069	0.146	0.409
Departure Headway (Hd)	5.244	4.474	5.546	5.534	4.862
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	682	798	639	643	737
Service Time	3.001	2.231	3.638	3.614	2.922
HCM Lane V/C Ratio	0.306	0.266	0.07	0.148	0.411
HCM Control Delay	10.3	8.8	9.1	9.6	11.3
HCM Lane LOS	B	A	A	A	B
HCM 95th-tile Q	1.3	1.1	0.2	0.5	2

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	11	23	106	28	31	17	362	110	9	220	3
Future Vol, veh/h	6	11	23	106	28	31	17	362	110	9	220	3
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60
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	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	11	24	109	29	32	18	373	113	9	227	3
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	834	883	342	837	828	515	290	0	0	540	0	0
Stage 1	307	307	-	520	520	-	-	-	-	-	-	-
Stage 2	527	576	-	317	308	-	-	-	-	-	-	-
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	288	285	701	286	306	560	1272	-	-	1028	-	-
Stage 1	703	661	-	539	532	-	-	-	-	-	-	-
Stage 2	535	502	-	694	660	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	221	247	628	233	265	516	1199	-	-	975	-	-
Mov Cap-2 Maneuver	221	247	-	233	265	-	-	-	-	-	-	-
Stage 1	649	617	-	501	494	-	-	-	-	-	-	-
Stage 2	449	466	-	616	616	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	16		39.8		0.3		0.3					
HCM LOS	C		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1199	-	-	369	266	975	-	-				
HCM Lane V/C Ratio	0.015	-	-	0.112	0.639	0.01	-	-				
HCM Control Delay (s)	8	0	-	16	39.8	8.7	0	-				
HCM Lane LOS	A	A	-	C	E	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	4	0	-	-				

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**LEVEL OF SERVICE
CALCULATIONS
YEAR 2025 CONDITIONS
WITHOUT PROJECT**

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HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	59	1	0	115	0	1	0	1	2	0	0
Future Vol, veh/h	1	59	1	0	115	0	1	0	1	2	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	71	1	0	139	0	1	0	1	2	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	139	0	0	75	0	0	216	216	75	213	216	139
Stage 1	-	-	-	-	-	-	77	77	-	139	139	-
Stage 2	-	-	-	-	-	-	139	139	-	74	77	-
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	1445	-	-	1524	-	-	740	682	986	744	682	909
Stage 1	-	-	-	-	-	-	932	831	-	864	782	-
Stage 2	-	-	-	-	-	-	864	782	-	935	831	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1445	-	-	1520	-	-	737	679	983	743	679	909
Mov Cap-2 Maneuver	-	-	-	-	-	-	737	679	-	743	679	-
Stage 1	-	-	-	-	-	-	928	828	-	863	782	-
Stage 2	-	-	-	-	-	-	864	782	-	933	828	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			9.3			9.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	842	1445	-	-	1520	-	-	743				
HCM Lane V/C Ratio	0.003	0.001	-	-	-	-	-	0.003				
HCM Control Delay (s)	9.3	7.5	0	-	0	-	-	9.9				
HCM Lane LOS	A	A	A	-	A	-	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection		
Intersection Delay, s/veh	8.4	
Intersection LOS	A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	4	11	12	50	5	11	20	77	36	37	107	8
Future Vol, veh/h	4	11	12	50	5	11	20	77	36	37	107	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	12	13	56	6	12	22	87	40	42	120	9
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB		WB		NB		SB					
Opposing Approach	WB		EB		SB		NB					
Opposing Lanes	1		1		1		2					
Conflicting Approach Left	SB		NB		EB		WB					
Conflicting Lanes Left	1		2		1		1					
Conflicting Approach Right	NB		SB		WB		EB					
Conflicting Lanes Right	2		1		1		1					
HCM Control Delay	7.7		8.3		8.2		8.7					
HCM LOS	A		A		A		A					

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	0%	15%	76%	24%
Vol Thru, %	79%	0%	41%	8%	70%
Vol Right, %	0%	100%	44%	17%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	36	27	66	152
LT Vol	20	0	4	50	37
Through Vol	77	0	11	5	107
RT Vol	0	36	12	11	8
Lane Flow Rate	109	40	30	74	171
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.152	0.047	0.038	0.098	0.212
Departure Headway (Hd)	5.022	4.216	4.532	4.762	4.472
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	716	851	791	754	804
Service Time	2.739	1.932	2.554	2.781	2.487
HCM Lane V/C Ratio	0.152	0.047	0.038	0.098	0.213
HCM Control Delay	8.6	7.1	7.7	8.3	8.7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.1	0.3	0.8

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	6	4	24	40	2	11	19	110	83	15	145	7
Future Vol, veh/h	6	4	24	40	2	11	19	110	83	15	145	7
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	4	27	44	2	12	21	122	92	17	161	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	429	464	187	438	422	172	178	0	0	214	0	0
Stage 1	208	208	-	210	210	-	-	-	-	-	-	-
Stage 2	221	256	-	228	212	-	-	-	-	-	-	-
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	536	495	855	529	523	872	1398	-	-	1356	-	-
Stage 1	794	730	-	792	728	-	-	-	-	-	-	-
Stage 2	781	696	-	775	727	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	508	476	837	490	503	869	1386	-	-	1356	-	-
Mov Cap-2 Maneuver	508	476	-	490	503	-	-	-	-	-	-	-
Stage 1	774	713	-	779	716	-	-	-	-	-	-	-
Stage 2	752	684	-	726	710	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	12.5	0.7	0.7
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1386	-	-	695 539	1356	-	-
HCM Lane V/C Ratio	0.015	-	-	0.054 0.109	0.012	-	-
HCM Control Delay (s)	7.6	0	-	10.5 12.5	7.7	0	-
HCM Lane LOS	A	A	-	B B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2 0.4	0	-	-

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

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	7	154	1	0	146	0	1	0	2	3	0	0
Future Vol, veh/h	7	154	1	0	146	0	1	0	2	3	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	173	1	0	164	0	1	0	2	3	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	164	0	0	177	0	0	357	357	177	355	357	164
Stage 1	-	-	-	-	-	-	193	193	-	164	164	-
Stage 2	-	-	-	-	-	-	164	164	-	191	193	-
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	1414	-	-	1399	-	-	598	569	866	600	569	881
Stage 1	-	-	-	-	-	-	809	741	-	838	762	-
Stage 2	-	-	-	-	-	-	838	762	-	811	741	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1414	-	-	1395	-	-	594	564	864	596	564	881
Mov Cap-2 Maneuver	-	-	-	-	-	-	594	564	-	596	564	-
Stage 1	-	-	-	-	-	-	802	734	-	833	762	-
Stage 2	-	-	-	-	-	-	838	762	-	804	734	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	9.8	11.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	750	1414	-	-	1395	-	-	596
HCM Lane V/C Ratio	0.004	0.006	-	-	-	-	-	0.006
HCM Control Delay (s)	9.8	7.6	0	-	0	-	-	11.1
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	8.9											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	12	8	16	44	7	10	19	131	90	47	156	14
Future Vol, veh/h	12	8	16	44	7	10	19	131	90	47	156	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	8	17	46	7	11	20	138	95	49	164	15
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	8.2			8.7			8.6			9.5		
HCM LOS	A			A			A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	33%	72%	22%
Vol Thru, %	87%	0%	22%	11%	72%
Vol Right, %	0%	100%	44%	16%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	90	36	61	217
LT Vol	19	0	12	44	47
Through Vol	131	0	8	7	156
RT Vol	0	90	16	10	14
Lane Flow Rate	158	95	38	64	228
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.221	0.112	0.052	0.091	0.29
Departure Headway (Hd)	5.035	4.268	4.9	5.105	4.564
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	714	839	729	701	788
Service Time	2.763	1.996	2.941	3.143	2.592
HCM Lane V/C Ratio	0.221	0.113	0.052	0.091	0.289
HCM Control Delay	9.2	7.5	8.2	8.7	9.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.8	0.4	0.2	0.3	1.2

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	8	7	13	94	6	23	12	217	74	12	213	2
Future Vol, veh/h	8	7	13	94	6	23	12	217	74	12	213	2
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
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	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	8	15	107	7	26	14	247	84	14	242	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	611	637	265	623	596	296	247	0	0	335	0	0
Stage 1	274	274	-	321	321	-	-	-	-	-	-	-
Stage 2	337	363	-	302	275	-	-	-	-	-	-	-
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	406	395	774	398	417	743	1319	-	-	1224	-	-
Stage 1	732	683	-	691	652	-	-	-	-	-	-	-
Stage 2	677	625	-	707	683	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	377	382	758	368	403	738	1315	-	-	1219	-	-
Mov Cap-2 Maneuver	377	382	-	368	403	-	-	-	-	-	-	-
Stage 1	720	672	-	679	641	-	-	-	-	-	-	-
Stage 2	636	614	-	664	672	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	18.4	0.3	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1315	-	-	494	408	1219	-	-
HCM Lane V/C Ratio	0.01	-	-	0.064	0.343	0.011	-	-
HCM Control Delay (s)	7.8	0	-	12.8	18.4	8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.5	0	-	-

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	368	0	0	214	1	3	0	1	2	0	0
Future Vol, veh/h	3	368	0	0	214	1	3	0	1	2	0	0
Conflicting Peds, #/hr	0	0	7	7	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	409	0	0	238	1	3	0	1	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	239	0	0	416	0	0	661	661	416	655	661	239
Stage 1	-	-	-	-	-	-	422	422	-	239	239	-
Stage 2	-	-	-	-	-	-	239	239	-	416	422	-
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	1328	-	-	1143	-	-	376	383	637	379	383	800
Stage 1	-	-	-	-	-	-	609	588	-	764	708	-
Stage 2	-	-	-	-	-	-	764	708	-	614	588	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1328	-	-	1135	-	-	373	379	633	377	379	800
Mov Cap-2 Maneuver	-	-	-	-	-	-	373	379	-	377	379	-
Stage 1	-	-	-	-	-	-	603	582	-	762	708	-
Stage 2	-	-	-	-	-	-	764	708	-	611	582	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	13.7	14.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	416	1328	-	-	1135	-	-	377
HCM Lane V/C Ratio	0.011	0.003	-	-	-	-	-	0.006
HCM Control Delay (s)	13.7	7.7	0	-	0	-	-	14.6
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection

Intersection Delay, s/veh 10.5

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	11	22	12	52	21	21	27	181	211	101	177	24
Future Vol, veh/h	11	22	12	52	21	21	27	181	211	101	177	24
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	23	13	55	22	22	29	193	224	107	188	26
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	9.2	9.8	9.8	11.8
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	24%	55%	33%
Vol Thru, %	87%	0%	49%	22%	59%
Vol Right, %	0%	100%	27%	22%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	211	45	94	302
LT Vol	27	0	11	52	101
Through Vol	181	0	22	21	177
RT Vol	0	211	12	21	24
Lane Flow Rate	221	224	48	100	321
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.326	0.282	0.077	0.156	0.439
Departure Headway (Hd)	5.296	4.525	5.755	5.632	4.92
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	675	788	626	630	726
Service Time	3.063	2.292	3.755	3.727	2.989
HCM Lane V/C Ratio	0.327	0.284	0.077	0.159	0.442
HCM Control Delay	10.6	9.1	9.2	9.8	11.8
HCM Lane LOS	B	A	A	A	B
HCM 95th-tile Q	1.4	1.2	0.2	0.5	2.2

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	10.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	12	24	113	30	33	18	384	117	10	233	3
Future Vol, veh/h	6	12	24	113	30	33	18	384	117	10	233	3
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60
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	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	12	25	116	31	34	19	396	121	10	240	3
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	880	931	355	882	872	542	303	0	0	571	0	0
Stage 1	322	322	-	549	549	-	-	-	-	-	-	-
Stage 2	558	609	-	333	323	-	-	-	-	-	-	-
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	268	267	689	267	289	540	1258	-	-	1002	-	-
Stage 1	690	651	-	520	516	-	-	-	-	-	-	-
Stage 2	514	485	-	681	650	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	202	231	617	215	250	497	1186	-	-	950	-	-
Mov Cap-2 Maneuver	202	231	-	215	250	-	-	-	-	-	-	-
Stage 1	635	607	-	482	478	-	-	-	-	-	-	-
Stage 2	425	450	-	601	606	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	16.8		51.4		0.3			0.4				
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1186	-	-	348	247	950	-	-				
HCM Lane V/C Ratio	0.016	-	-	0.124	0.735	0.011	-	-				
HCM Control Delay (s)	8.1	0	-	16.8	51.4	8.8	0	-				
HCM Lane LOS	A	A	-	C	F	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.4	5.1	0	-	-				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	10	15	12	90	7	11	20	71	36	37	107	8
Future Vol, veh/h	10	15	12	90	7	11	20	71	36	37	107	8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	17	13	101	8	12	22	80	40	42	120	9
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8	8.8	8.4	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	0%	27%	83%	24%
Vol Thru, %	78%	0%	41%	6%	70%
Vol Right, %	0%	100%	32%	10%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	91	36	37	108	152
LT Vol	20	0	10	90	37
Through Vol	71	0	15	7	107
RT Vol	0	36	12	11	8
Lane Flow Rate	102	40	42	121	171
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.147	0.049	0.054	0.163	0.219
Departure Headway (Hd)	5.191	4.377	4.693	4.832	4.621
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	691	818	762	743	777
Service Time	2.919	2.105	2.728	2.86	2.649
HCM Lane V/C Ratio	0.148	0.049	0.055	0.163	0.22
HCM Control Delay	8.8	7.3	8	8.8	8.9
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.5	0.2	0.2	0.6	0.8

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	24	0	0	11	19	110	83	15	185	7
Future Vol, veh/h	0	0	24	0	0	11	19	110	83	15	185	7
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	27	0	0	12	21	122	92	17	206	8
Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	-	-	232	-	-	172	223	0	0	214	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	807	0	0	872	1346	-	-	1356	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	790	-	-	869	1334	-	-	1356	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB		SB		SB	
HCM Control Delay, s	9.7		9.2		0.7		0.6		0.6		0.6	
HCM LOS	A		A		A		A		A		A	
Minor Lane/Major Mvmt	NBL		NBT		NBR		EBLn1WBLn1		SBL		SBT	
Capacity (veh/h)	1334		-		-		790		869		1356	
HCM Lane V/C Ratio	0.016		-		-		0.034		0.014		0.012	
HCM Control Delay (s)	7.7		0		-		9.7		9.2		7.7	
HCM Lane LOS	A		A		-		A		A		A	
HCM 95th %tile Q(veh)	0		-		-		0.1		0		0	

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	20	15	16	138	13	10	19	125	90	47	156	14
Future Vol, veh/h	20	15	16	138	13	10	19	125	90	47	156	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	16	17	145	14	11	20	132	95	49	164	15
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8.7	10.1	9.1	10.2
HCM LOS	A	B	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	39%	86%	22%
Vol Thru, %	87%	0%	29%	8%	72%
Vol Right, %	0%	100%	31%	6%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	144	90	51	161	217
LT Vol	19	0	20	138	47
Through Vol	125	0	15	13	156
RT Vol	0	90	16	10	14
Lane Flow Rate	152	95	54	169	228
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.228	0.122	0.078	0.247	0.312
Departure Headway (Hd)	5.406	4.634	5.199	5.256	4.92
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	661	767	682	678	726
Service Time	3.172	2.399	3.286	3.327	2.985
HCM Lane V/C Ratio	0.23	0.124	0.079	0.249	0.314
HCM Control Delay	9.8	8.1	8.7	10.1	10.2
HCM Lane LOS	A	A	A	B	B
HCM 95th-tile Q	0.9	0.4	0.3	1	1.3

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	0	0	13	0	0	23	12	217	74	12	307	2
Future Vol, veh/h	0	0	13	0	0	23	12	217	74	12	307	2
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	15	0	0	26	14	247	84	14	349	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	372	-	-	296	354	0	0	335	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	674	0	0	743	1205	-	-	1224	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	660	-	-	738	1202	-	-	1219	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	10.1	0.3	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1202	-	-	660	738	1219	-	-
HCM Lane V/C Ratio	0.011	-	-	0.022	0.035	0.011	-	-
HCM Control Delay (s)	8	0	-	10.6	10.1	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	17	34	12	165	51	21	27	175	211	101	177	24
Future Vol, veh/h	17	34	12	165	51	21	27	175	211	101	177	24
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	36	13	176	54	22	29	186	224	107	188	26
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	10.3			13.5			11.4			14.4		
HCM LOS	B			B			B			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	27%	70%	33%
Vol Thru, %	87%	0%	54%	22%	59%
Vol Right, %	0%	100%	19%	9%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	211	63	237	302
LT Vol	27	0	17	165	101
Through Vol	175	0	34	51	177
RT Vol	0	211	12	21	24
Lane Flow Rate	215	224	67	252	321
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.362	0.33	0.119	0.424	0.506
Departure Headway (Hd)	6.063	5.285	6.373	6.056	5.674
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	591	678	559	592	633
Service Time	3.817	3.038	4.451	4.113	3.729
HCM Lane V/C Ratio	0.364	0.33	0.12	0.426	0.507
HCM Control Delay	12.2	10.6	10.3	13.5	14.4
HCM Lane LOS	B	B	B	B	B
HCM 95th-tile Q	1.6	1.4	0.4	2.1	2.9

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	0	0	24	0	0	33	18	384	117	10	346	3		
Future Vol, veh/h	0	0	24	0	0	33	18	384	117	10	346	3		
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60		
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free		
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None		
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-		
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-		
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-		
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	0	25	0	0	34	19	396	121	10	357	3		
Major/Minor	Minor2		Minor1		Major1		Major2							
Conflicting Flow All	-	-	472	-	-	542	420	0	0	571	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	592	0	0	540	1139	-	-	1002	-	-		
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-		
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-		
Platoon blocked, %								-	-		-	-		
Mov Cap-1 Maneuver	-	-	530	-	-	497	1074	-	-	950	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-		
Approach	EB		WB		NB		SB							
HCM Control Delay, s	12.1		12.8		0.3		0.2							
HCM LOS	B		B											
Minor Lane/Major Mvmt	NBL		NBT		NBR		EBLn1WBLn1		SBL		SBT		SBR	
Capacity (veh/h)	1074		-		-		530		497		950		-	
HCM Lane V/C Ratio	0.017		-		-		0.047		0.068		0.011		-	
HCM Control Delay (s)	8.4		0		-		12.1		12.8		8.8		0	
HCM Lane LOS	A		A		-		B		B		A		A	
HCM 95th %tile Q(veh)	0.1		-		-		0.1		0.2		0		-	

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**LEVEL OF SERVICE
CALCULATIONS
YEAR 2025 CONDITIONS
WITH PROJECT**

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HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	59	3	1	115	0	4	0	4	2	0	0
Future Vol, veh/h	1	59	3	1	115	0	4	0	4	2	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	71	4	1	139	0	5	0	5	2	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	139	0	0	78	0	0	219	219	76	219	221	139
Stage 1	-	-	-	-	-	-	78	78	-	141	141	-
Stage 2	-	-	-	-	-	-	141	141	-	78	80	-
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	1445	-	-	1520	-	-	737	679	985	737	678	909
Stage 1	-	-	-	-	-	-	931	830	-	862	780	-
Stage 2	-	-	-	-	-	-	862	780	-	931	828	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1445	-	-	1516	-	-	734	676	982	733	675	909
Mov Cap-2 Maneuver	-	-	-	-	-	-	734	676	-	733	675	-
Stage 1	-	-	-	-	-	-	927	827	-	861	779	-
Stage 2	-	-	-	-	-	-	861	779	-	926	825	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			9.3			9.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	840	1445	-	-	1516	-	-	733				
HCM Lane V/C Ratio	0.011	0.001	-	-	0.001	-	-	0.003				
HCM Control Delay (s)	9.3	7.5	0	-	7.4	0	-	9.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	11	17	15	50	8	11	21	80	36	37	109	11
Future Vol, veh/h	11	17	15	50	8	11	21	80	36	37	109	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	19	17	56	9	12	24	90	40	42	122	12
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8	8.4	8.4	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	0%	26%	72%	24%
Vol Thru, %	79%	0%	40%	12%	69%
Vol Right, %	0%	100%	35%	16%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	36	43	69	157
LT Vol	21	0	11	50	37
Through Vol	80	0	17	8	109
RT Vol	0	36	15	11	11
Lane Flow Rate	113	40	48	78	176
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.16	0.048	0.062	0.104	0.222
Departure Headway (Hd)	5.086	4.278	4.646	4.812	4.523
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	707	838	771	745	796
Service Time	2.808	2	2.675	2.839	2.543
HCM Lane V/C Ratio	0.16	0.048	0.062	0.105	0.221
HCM Control Delay	8.8	7.2	8	8.4	8.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.6	0.2	0.2	0.3	0.8

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	9	7	27	40	3	11	21	111	83	15	148	9
Future Vol, veh/h	9	7	27	40	3	11	21	111	83	15	148	9
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	8	30	44	3	12	23	123	92	17	164	10
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	439	473	191	450	432	173	183	0	0	215	0	0
Stage 1	212	212	-	215	215	-	-	-	-	-	-	-
Stage 2	227	261	-	235	217	-	-	-	-	-	-	-
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	528	490	851	519	516	871	1392	-	-	1355	-	-
Stage 1	790	727	-	787	725	-	-	-	-	-	-	-
Stage 2	776	692	-	768	723	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	499	470	833	476	495	868	1380	-	-	1355	-	-
Mov Cap-2 Maneuver	499	470	-	476	495	-	-	-	-	-	-	-
Stage 1	769	710	-	772	711	-	-	-	-	-	-	-
Stage 2	744	679	-	713	706	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.9		12.7		0.7		0.7					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1380	-	-	658	525	1355	-	-				
HCM Lane V/C Ratio	0.017	-	-	0.073	0.114	0.012	-	-				
HCM Control Delay (s)	7.7	0	-	10.9	12.7	7.7	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.4	0	-	-				

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	154	6	4	146	0	5	0	5	3	0	0
Future Vol, veh/h	7	154	6	4	146	0	5	0	5	3	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	173	7	4	164	0	6	0	6	3	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	164	0	0	183	0	0	368	368	180	368	371	164
Stage 1	-	-	-	-	-	-	196	196	-	172	172	-
Stage 2	-	-	-	-	-	-	172	172	-	196	199	-
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	1414	-	-	1392	-	-	588	561	863	588	559	881
Stage 1	-	-	-	-	-	-	806	739	-	830	756	-
Stage 2	-	-	-	-	-	-	830	756	-	806	736	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1414	-	-	1388	-	-	582	554	861	580	552	881
Mov Cap-2 Maneuver	-	-	-	-	-	-	582	554	-	580	552	-
Stage 1	-	-	-	-	-	-	799	732	-	825	754	-
Stage 2	-	-	-	-	-	-	828	754	-	796	729	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	10.3	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	695	1414	-	-	1388	-	-	580
HCM Lane V/C Ratio	0.016	0.006	-	-	0.003	-	-	0.006
HCM Control Delay (s)	10.3	7.6	0	-	7.6	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection		
Intersection Delay, s/veh	9.2	
Intersection LOS	A	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	20	16	20	44	16	10	23	135	90	47	161	23
Future Vol, veh/h	20	16	20	44	16	10	23	135	90	47	161	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	17	21	46	17	11	24	142	95	49	169	24
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8.5	8.9	8.8	9.8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	36%	63%	20%
Vol Thru, %	85%	0%	29%	23%	70%
Vol Right, %	0%	100%	36%	14%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	158	90	56	70	231
LT Vol	23	0	20	44	47
Through Vol	135	0	16	16	161
RT Vol	0	90	20	10	23
Lane Flow Rate	166	95	59	74	243
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.238	0.115	0.082	0.106	0.314
Departure Headway (Hd)	5.15	4.372	5.038	5.196	4.643
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	697	819	708	687	773
Service Time	2.885	2.107	3.091	3.247	2.678
HCM Lane V/C Ratio	0.238	0.116	0.083	0.108	0.314
HCM Control Delay	9.5	7.7	8.5	8.9	9.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.9	0.4	0.3	0.4	1.3

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	10	17	94	11	23	17	221	74	12	217	7
Future Vol, veh/h	12	10	17	94	11	23	17	221	74	12	217	7
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
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	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	11	19	107	13	26	19	251	84	14	247	8
Major/Minor	Minor2		Minor1		Major1				Major2			
Conflicting Flow All	636	659	273	648	621	300	258	0	0	339	0	0
Stage 1	282	282	-	335	335	-	-	-	-	-	-	-
Stage 2	354	377	-	313	286	-	-	-	-	-	-	-
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	391	384	766	383	403	740	1307	-	-	1220	-	-
Stage 1	725	678	-	679	643	-	-	-	-	-	-	-
Stage 2	663	616	-	698	675	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	357	369	750	348	388	735	1303	-	-	1215	-	-
Mov Cap-2 Maneuver	357	369	-	348	388	-	-	-	-	-	-	-
Stage 1	710	667	-	664	629	-	-	-	-	-	-	-
Stage 2	614	602	-	648	664	-	-	-	-	-	-	-
Approach	EB		WB		NB				SB			
HCM Control Delay, s	13.5		19.7		0.4				0.4			
HCM LOS	B		C									
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1303	-	-	468	388	1215	-	-			
HCM Lane V/C Ratio		0.015	-	-	0.095	0.375	0.011	-	-			
HCM Control Delay (s)		7.8	0	-	13.5	19.7	8	0	-			
HCM Lane LOS		A	A	-	B	C	A	A	-			
HCM 95th %tile Q(veh)		0	-	-	0.3	1.7	0	-	-			

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

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	3	368	5	4	214	1	8	0	5	2	0	0
Future Vol, veh/h	3	368	5	4	214	1	8	0	5	2	0	0
Conflicting Peds, #/hr	0	0	7	7	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	409	6	4	238	1	9	0	6	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	239	0	0	422	0	0	672	672	419	668	675	239
Stage 1	-	-	-	-	-	-	425	425	-	247	247	-
Stage 2	-	-	-	-	-	-	247	247	-	421	428	-
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	1328	-	-	1137	-	-	370	377	634	372	376	800
Stage 1	-	-	-	-	-	-	607	586	-	757	702	-
Stage 2	-	-	-	-	-	-	757	702	-	610	585	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1328	-	-	1129	-	-	366	372	630	367	371	800
Mov Cap-2 Maneuver	-	-	-	-	-	-	366	372	-	367	371	-
Stage 1	-	-	-	-	-	-	601	580	-	755	699	-
Stage 2	-	-	-	-	-	-	754	699	-	603	579	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			13.5			14.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	436	1328	-	-	1129	-	-	367
HCM Lane V/C Ratio	0.033	0.003	-	-	0.004	-	-	0.006
HCM Control Delay (s)	13.5	7.7	0	-	8.2	0	-	14.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	11.2											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	20	31	16	52	30	21	31	186	211	101	182	33
Future Vol, veh/h	20	31	16	52	30	21	31	186	211	101	182	33
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	33	17	55	32	22	33	198	224	107	194	35
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	9.7			10.2			10.4			12.8		
HCM LOS	A			B			B			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	0%	30%	50%	32%
Vol Thru, %	86%	0%	46%	29%	58%
Vol Right, %	0%	100%	24%	20%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	217	211	67	103	316
LT Vol	31	0	20	52	101
Through Vol	186	0	31	30	182
RT Vol	0	211	16	21	33
Lane Flow Rate	231	224	71	110	336
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.355	0.296	0.117	0.179	0.479
Departure Headway (Hd)	5.532	4.753	5.902	5.872	5.129
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	653	759	607	611	706
Service Time	3.239	2.46	3.941	3.909	3.137
HCM Lane V/C Ratio	0.354	0.295	0.117	0.18	0.476
HCM Control Delay	11.3	9.4	9.7	10.2	12.8
HCM Lane LOS	B	A	A	B	B
HCM 95th-tile Q	1.6	1.2	0.4	0.6	2.6

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	12.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	16	28	113	35	33	23	388	117	10	237	8
Future Vol, veh/h	10	16	28	113	35	33	23	388	117	10	237	8
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60
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	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	16	29	116	36	34	24	400	121	10	244	8
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	903	951	361	907	895	546	312	0	0	575	0	0
Stage 1	328	328	-	563	563	-	-	-	-	-	-	-
Stage 2	575	623	-	344	332	-	-	-	-	-	-	-
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	258	260	684	257	280	538	1248	-	-	998	-	-
Stage 1	685	647	-	511	509	-	-	-	-	-	-	-
Stage 2	503	478	-	671	644	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	189	223	612	202	241	495	1177	-	-	947	-	-
Mov Cap-2 Maneuver	189	223	-	202	241	-	-	-	-	-	-	-
Stage 1	627	603	-	471	469	-	-	-	-	-	-	-
Stage 2	407	440	-	583	600	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	18.8		61.3			0.4			0.3			
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1177	-	-	317	235	947	-	-				
HCM Lane V/C Ratio	0.02	-	-	0.176	0.794	0.011	-	-				
HCM Control Delay (s)	8.1	0	-	18.8	61.3	8.8	0	-				
HCM Lane LOS	A	A	-	C	F	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.6	5.9	0	-	-				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection

Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	20	24	15	90	11	11	21	71	36	37	109	11
Future Vol, veh/h	20	24	15	90	11	11	21	71	36	37	109	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	27	17	101	12	12	24	80	40	42	122	12
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	8.3			8.9			8.6			9.1		
HCM LOS	A			A			A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	0%	34%	80%	24%
Vol Thru, %	77%	0%	41%	10%	69%
Vol Right, %	0%	100%	25%	10%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	36	59	112	157
LT Vol	21	0	20	90	37
Through Vol	71	0	24	11	109
RT Vol	0	36	15	11	11
Lane Flow Rate	103	40	66	126	176
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.152	0.05	0.088	0.171	0.23
Departure Headway (Hd)	5.281	4.462	4.781	4.886	4.69
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	678	801	747	734	764
Service Time	3.017	2.198	2.824	2.923	2.725
HCM Lane V/C Ratio	0.152	0.05	0.088	0.172	0.23
HCM Control Delay	9	7.4	8.3	8.9	9.1
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.5	0.2	0.3	0.6	0.9

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	27	0	0	11	21	111	83	15	188	9
Future Vol, veh/h	0	0	27	0	0	11	21	111	83	15	188	9
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	30	0	0	12	23	123	92	17	209	10
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	236	-	-	173	228	0	0	215	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	803	0	0	871	1340	-	-	1355	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	786	-	-	868	1329	-	-	1355	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.8			9.2			0.8			0.5		
HCM LOS	A			A								
Minor Lane/Major Mvmt	NBL		NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1329		-	-	786	868	1355	-	-			
HCM Lane V/C Ratio	0.018		-	-	0.038	0.014	0.012	-	-			
HCM Control Delay (s)	7.8		0	-	9.8	9.2	7.7	0	-			
HCM Lane LOS	A		A	-	A	A	A	A	-			
HCM 95th %tile Q(veh)	0.1		-	-	0.1	0	0	-	-			

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	32	26	20	138	27	10	23	123	90	47	161	23
Future Vol, veh/h	32	26	20	138	27	10	23	123	90	47	161	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	27	21	145	28	11	24	129	95	49	169	24
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	9.2			10.5			9.4			10.7		
HCM LOS	A			B			A			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	0%	41%	79%	20%
Vol Thru, %	84%	0%	33%	15%	70%
Vol Right, %	0%	100%	26%	6%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	146	90	78	175	231
LT Vol	23	0	32	138	47
Through Vol	123	0	26	27	161
RT Vol	0	90	20	10	23
Lane Flow Rate	154	95	82	184	243
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.237	0.126	0.124	0.274	0.34
Departure Headway (Hd)	5.563	4.777	5.433	5.346	5.028
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	638	740	664	665	708
Service Time	3.359	2.572	3.433	3.443	3.122
HCM Lane V/C Ratio	0.241	0.128	0.123	0.277	0.343
HCM Control Delay	10.1	8.3	9.2	10.5	10.7
HCM Lane LOS	B	A	A	B	B
HCM 95th-ile Q	0.9	0.4	0.4	1.1	1.5

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	17	0	0	23	17	221	74	12	311	7
Future Vol, veh/h	0	0	17	0	0	23	17	221	74	12	311	7
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	19	0	0	26	19	251	84	14	353	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	379	-	-	300	364	0	0	339	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	668	0	0	740	1195	-	-	1220	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	654	-	-	735	1192	-	-	1215	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	10.1	0.4	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1192	-	-	654	735	1215	-	-
HCM Lane V/C Ratio	0.016	-	-	0.03	0.036	0.011	-	-
HCM Control Delay (s)	8.1	0	-	10.7	10.1	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	30	47	16	165	65	21	31	176	211	101	182	33
Future Vol, veh/h	30	47	16	165	65	21	31	176	211	101	182	33
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	50	17	176	69	22	33	187	224	107	194	35
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB		WB		NB		SB					
Opposing Approach	WB		EB		SB		NB					
Opposing Lanes	1		1		1		2					
Conflicting Approach Left	SB		NB		EB		WB					
Conflicting Lanes Left	1		2		1		1					
Conflicting Approach Right	NB		SB		WB		EB					
Conflicting Lanes Right	2		1		1		1					
HCM Control Delay	11.2		14.7		12.1		16					
HCM LOS	B		B		B		C					

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	32%	66%	32%
Vol Thru, %	85%	0%	51%	26%	58%
Vol Right, %	0%	100%	17%	8%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	211	93	251	316
LT Vol	31	0	30	165	101
Through Vol	176	0	47	65	182
RT Vol	0	211	16	21	33
Lane Flow Rate	220	224	99	267	336
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.386	0.344	0.183	0.463	0.549
Departure Headway (Hd)	6.308	5.52	6.672	6.244	5.883
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	566	646	541	574	608
Service Time	4.09	3.301	4.672	4.329	3.966
HCM Lane V/C Ratio	0.389	0.347	0.183	0.465	0.553
HCM Control Delay	13.1	11.2	11.2	14.7	16
HCM Lane LOS	B	B	B	B	C
HCM 95th-tile Q	1.8	1.5	0.7	2.4	3.3

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	28	0	0	33	23	388	117	10	350	8
Future Vol, veh/h	0	0	28	0	0	33	23	388	117	10	350	8
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	29	0	0	34	24	400	121	10	361	8
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	478	-	-	546	429	0	0	575	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	587	0	0	538	1130	-	-	998	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	526	-	-	495	1065	-	-	947	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	12.2			12.8			0.4			0.2		
HCM LOS	B			B								
Minor Lane/Major Mvmt	NBL			NBT			NBR			EBLn1WBLn1		
Capacity (veh/h)	1065			-			526			495		
HCM Lane V/C Ratio	0.022			-			0.055			0.069		
HCM Control Delay (s)	8.5			0			12.2			12.8		
HCM Lane LOS	A			A			B			B		
HCM 95th %tile Q(veh)	0.1			-			0.2			0.2		

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**LEVEL OF SERVICE
CALCULATIONS
YEAR 2041 CONDITIONS
WITHOUT PROJECT**

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HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	75	1	0	145	0	1	0	1	2	0	0
Future Vol, veh/h	1	75	1	0	145	0	1	0	1	2	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	90	1	0	175	0	1	0	1	2	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	175	0	0	94	0	0	271	271	94	268	271	175
Stage 1	-	-	-	-	-	-	96	96	-	175	175	-
Stage 2	-	-	-	-	-	-	175	175	-	93	96	-
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	1401	-	-	1500	-	-	682	636	963	685	636	868
Stage 1	-	-	-	-	-	-	911	815	-	827	754	-
Stage 2	-	-	-	-	-	-	827	754	-	914	815	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1401	-	-	1496	-	-	679	633	960	684	633	868
Mov Cap-2 Maneuver	-	-	-	-	-	-	679	633	-	684	633	-
Stage 1	-	-	-	-	-	-	907	812	-	826	754	-
Stage 2	-	-	-	-	-	-	827	754	-	912	812	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			9.5			10.3		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	795	1401	-	-	1496	-	-	684				
HCM Lane V/C Ratio	0.003	0.001	-	-	-	-	-	0.004				
HCM Control Delay (s)	9.5	7.6	0	-	0	-	-	10.3				
HCM Lane LOS	A	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	9											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	5	13	15	63	7	13	26	98	46	47	136	11
Future Vol, veh/h	5	13	15	63	7	13	26	98	46	47	136	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	15	17	71	8	15	29	110	52	53	153	12
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	8.1			8.8			8.7			9.4		
HCM LOS	A			A			A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	0%	15%	76%	24%
Vol Thru, %	79%	0%	39%	8%	70%
Vol Right, %	0%	100%	45%	16%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	124	46	33	83	194
LT Vol	26	0	5	63	47
Through Vol	98	0	13	7	136
RT Vol	0	46	15	13	11
Lane Flow Rate	139	52	37	93	218
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.199	0.062	0.049	0.129	0.278
Departure Headway (Hd)	5.144	4.335	4.771	4.988	4.594
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	698	826	749	718	783
Service Time	2.872	2.063	2.811	3.023	2.621
HCM Lane V/C Ratio	0.199	0.063	0.049	0.13	0.278
HCM Control Delay	9.2	7.4	8.1	8.8	9.4
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.2	0.2	0.4	1.1

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	5	31	51	3	13	24	140	105	19	185	9
Future Vol, veh/h	8	5	31	51	3	13	24	140	105	19	185	9
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	6	34	57	3	14	27	156	117	21	206	10
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	543	589	233	555	536	219	225	0	0	273	0	0
Stage 1	262	262	-	269	269	-	-	-	-	-	-	-
Stage 2	281	327	-	286	267	-	-	-	-	-	-	-
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	451	421	806	442	451	821	1344	-	-	1290	-	-
Stage 1	743	691	-	737	687	-	-	-	-	-	-	-
Stage 2	726	648	-	721	688	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	421	400	789	400	428	818	1332	-	-	1290	-	-
Mov Cap-2 Maneuver	421	400	-	400	428	-	-	-	-	-	-	-
Stage 1	719	672	-	719	671	-	-	-	-	-	-	-
Stage 2	690	632	-	663	669	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.3			14.7			0.7			0.7		
HCM LOS	B			B								
Minor Lane/Major Mvmt	NBL		NBT	NBR		EBLn1WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1332		-	-		622 445	1290	-	-			
HCM Lane V/C Ratio	0.02		-	-		0.079 0.167	0.016	-	-			
HCM Control Delay (s)	7.8		0	-		11.3 14.7	7.8	0	-			
HCM Lane LOS	A		A	-		B B	A	A	-			
HCM 95th %tile Q(veh)	0.1		-	-		0.3 0.6	0.1	-	-			

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

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	7	195	1	0	186	0	1	0	2	3	0	0
Future Vol, veh/h	7	195	1	0	186	0	1	0	2	3	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	219	1	0	209	0	1	0	2	3	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	209	0	0	223	0	0	448	448	223	446	448	209
Stage 1	-	-	-	-	-	-	239	239	-	209	209	-
Stage 2	-	-	-	-	-	-	209	209	-	237	239	-
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	1362	-	-	1346	-	-	521	506	817	523	506	831
Stage 1	-	-	-	-	-	-	764	708	-	793	729	-
Stage 2	-	-	-	-	-	-	793	729	-	766	708	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1362	-	-	1342	-	-	517	501	815	519	501	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	517	501	-	519	501	-
Stage 1	-	-	-	-	-	-	756	701	-	787	729	-
Stage 2	-	-	-	-	-	-	793	729	-	759	701	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			10.3			12		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	684	1362	-	-	1342	-	-	519				
HCM Lane V/C Ratio	0.005	0.006	-	-	-	-	-	0.006				
HCM Control Delay (s)	10.3	7.7	0	-	0	-	-	12				
HCM Lane LOS	B	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	9.8											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	15	11	20	55	9	12	24	166	114	59	198	18
Future Vol, veh/h	15	11	20	55	9	12	24	166	114	59	198	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	12	21	58	9	13	25	175	120	62	208	19
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8.7	9.2	9.2	10.7
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	33%	72%	21%
Vol Thru, %	87%	0%	24%	12%	72%
Vol Right, %	0%	100%	43%	16%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	114	46	76	275
LT Vol	24	0	15	55	59
Through Vol	166	0	11	9	198
RT Vol	0	114	20	12	18
Lane Flow Rate	200	120	48	80	289
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.288	0.147	0.07	0.12	0.38
Departure Headway (Hd)	5.179	4.411	5.223	5.411	4.721
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	692	810	681	658	758
Service Time	2.925	2.156	3.295	3.477	2.766
HCM Lane V/C Ratio	0.289	0.148	0.07	0.122	0.381
HCM Control Delay	10	7.9	8.7	9.2	10.7
HCM Lane LOS	A	A	A	A	B
HCM 95th-tile Q	1.2	0.5	0.2	0.4	1.8

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	9	16	120	8	30	15	275	94	15	271	31
Future Vol, veh/h	11	9	16	120	8	30	15	275	94	15	271	31
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
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	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	10	18	136	9	34	17	313	107	17	308	35
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	788	821	348	798	785	374	346	0	0	424	0	0
Stage 1	363	363	-	405	405	-	-	-	-	-	-	-
Stage 2	425	458	-	393	380	-	-	-	-	-	-	-
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	309	309	695	304	325	672	1213	-	-	1135	-	-
Stage 1	656	625	-	622	598	-	-	-	-	-	-	-
Stage 2	607	567	-	632	614	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	277	295	680	274	311	668	1210	-	-	1131	-	-
Mov Cap-2 Maneuver	277	295	-	274	311	-	-	-	-	-	-	-
Stage 1	642	611	-	608	584	-	-	-	-	-	-	-
Stage 2	555	554	-	583	600	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	15.5		31.3			0.3			0.4			
HCM LOS	C		D									
Minor Lane/Major Mvmt	NBL		NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1210		-	-	384	311	1131	-	-			
HCM Lane V/C Ratio	0.014		-	-	0.107	0.577	0.015	-	-			
HCM Control Delay (s)	8		0	-	15.5	31.3	8.2	0	-			
HCM Lane LOS	A		A	-	C	D	A	A	-			
HCM 95th %tile Q(veh)	0		-	-	0.4	3.4	0	-	-			

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	467	0	0	272	1	3	0	1	2	0	0
Future Vol, veh/h	3	467	0	0	272	1	3	0	1	2	0	0
Conflicting Peds, #/hr	0	0	7	7	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	519	0	0	302	1	3	0	1	2	0	0
Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	303	0	0	526	0	0	835	835	526	829	835	303
Stage 1	-	-	-	-	-	-	532	532	-	303	303	-
Stage 2	-	-	-	-	-	-	303	303	-	526	532	-
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	1258	-	-	1041	-	-	287	304	552	290	304	737
Stage 1	-	-	-	-	-	-	531	526	-	706	664	-
Stage 2	-	-	-	-	-	-	706	664	-	535	526	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1258	-	-	1034	-	-	284	301	548	289	301	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	284	301	-	289	301	-
Stage 1	-	-	-	-	-	-	526	521	-	704	664	-
Stage 2	-	-	-	-	-	-	706	664	-	532	521	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	0.1		0		16.3		17.6					
HCM LOS					C		C					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	323	1258	-	-	1034	-	-	289				
HCM Lane V/C Ratio	0.014	0.003	-	-	-	-	-	0.008				
HCM Control Delay (s)	16.3	7.9	0	-	0	-	-	17.6				
HCM Lane LOS	C	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	13	28	15	66	27	27	34	230	268	128	225	31
Future Vol, veh/h	13	28	15	66	27	27	34	230	268	128	225	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	30	16	70	29	29	36	245	285	136	239	33
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	10.1	11.1	11.7	16.1
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	23%	55%	33%
Vol Thru, %	87%	0%	50%	22%	59%
Vol Right, %	0%	100%	27%	23%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	264	268	56	120	384
LT Vol	34	0	13	66	128
Through Vol	230	0	28	27	225
RT Vol	0	268	15	27	31
Lane Flow Rate	281	285	60	128	409
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.442	0.388	0.105	0.221	0.602
Departure Headway (Hd)	5.666	4.893	6.342	6.235	5.301
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	635	736	564	576	682
Service Time	3.397	2.623	4.395	4.28	3.332
HCM Lane V/C Ratio	0.443	0.387	0.106	0.222	0.6
HCM Control Delay	12.8	10.7	10.1	11.1	16.1
HCM Lane LOS	B	B	B	B	C
HCM 95th-tile Q	2.3	1.8	0.4	0.8	4

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	42.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	15	31	143	38	42	23	488	148	12	296	4
Future Vol, veh/h	8	15	31	143	38	42	23	488	148	12	296	4
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60
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	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	15	32	147	39	43	24	503	153	12	305	4
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1091	1149	420	1090	1075	665	369	0	0	710	0	0
Stage 1	391	391	-	682	682	-	-	-	-	-	-	-
Stage 2	700	758	-	408	393	-	-	-	-	-	-	-
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	192	198	633	193	220	460	1190	-	-	889	-	-
Stage 1	633	607	-	440	450	-	-	-	-	-	-	-
Stage 2	430	415	-	620	606	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	127	168	567	~ 146	187	423	1122	-	-	843	-	-
Mov Cap-2 Maneuver	127	168	-	~ 146	187	-	-	-	-	-	-	-
Stage 1	576	563	-	403	412	-	-	-	-	-	-	-
Stage 2	327	380	-	531	562	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	22.5		230.4		0.3			0.4				
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1122	-	-	261	174	843	-	-				
HCM Lane V/C Ratio	0.021	-	-	0.213	1.321	0.015	-	-				
HCM Control Delay (s)	8.3	0	-	22.5	230.4	9.3	0	-				
HCM Lane LOS	A	A	-	C	F	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.8	13.4	0	-	-				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	9.3											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	13	18	15	114	10	13	26	90	46	47	136	11
Future Vol, veh/h	13	18	15	114	10	13	26	90	46	47	136	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	20	17	128	11	15	29	101	52	53	153	12
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	8.4			9.5			8.9			9.8		
HCM LOS	A			A			A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	0%	28%	83%	24%
Vol Thru, %	78%	0%	39%	7%	70%
Vol Right, %	0%	100%	33%	9%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	46	46	137	194
LT Vol	26	0	13	114	47
Through Vol	90	0	18	10	136
RT Vol	0	46	15	13	11
Lane Flow Rate	130	52	52	154	218
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.194	0.065	0.071	0.217	0.29
Departure Headway (Hd)	5.371	4.553	4.971	5.067	4.796
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	666	783	716	705	745
Service Time	3.122	2.304	3.034	3.118	2.845
HCM Lane V/C Ratio	0.195	0.066	0.073	0.218	0.293
HCM Control Delay	9.4	7.6	8.4	9.5	9.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.2	0.2	0.8	1.2

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection														
Int Delay, s/veh	1.4													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Vol, veh/h	0	0	31	0	0	13	24	140	105	19	236	9		
Future Vol, veh/h	0	0	31	0	0	13	24	140	105	19	236	9		
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9		
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free		
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None		
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-		
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-		
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-		
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	0	34	0	0	14	27	156	117	21	262	10		
Major/Minor	Minor2		Minor1		Major1		Major2							
Conflicting Flow All	-	-	289	-	-	219	281	0	0	273	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	750	0	0	821	1282	-	-	1290	-	-		
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-		
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	-	-	734	-	-	818	1271	-	-	1290	-	-		
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-		
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-		
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-		
Approach	EB		WB		NB		SB							
HCM Control Delay, s	10.1		9.5		0.7		0.6							
HCM LOS	B		A											
Minor Lane/Major Mvmt	NBL		NBT		NBR		EBLn1WBLn1		SBL		SBT		SBR	
Capacity (veh/h)	1271		-		-		734 818		1290		-		-	
HCM Lane V/C Ratio	0.021		-		-		0.047 0.018		0.016		-		-	
HCM Control Delay (s)	7.9		0		-		10.1 9.5		7.8		0		-	
HCM Lane LOS	A		A		-		B A		A A		A		-	
HCM 95th %tile Q(veh)	0.1		-		-		0.1 0.1		0.1		-		-	

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	11.2											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↑		↔	
Traffic Vol, veh/h	26	20	20	175	17	12	24	155	114	59	198	18
Future Vol, veh/h	26	20	20	175	17	12	24	155	114	59	198	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	21	21	184	18	13	25	163	120	62	208	19
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	9.6			11.7			10.2			12.3		
HCM LOS	A			B			B			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	39%	86%	21%
Vol Thru, %	87%	0%	30%	8%	72%
Vol Right, %	0%	100%	30%	6%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	179	114	66	204	275
LT Vol	24	0	26	175	59
Through Vol	155	0	20	17	198
RT Vol	0	114	20	12	18
Lane Flow Rate	188	120	69	215	289
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.304	0.168	0.112	0.341	0.428
Departure Headway (Hd)	5.814	5.038	5.786	5.72	5.324
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	618	712	618	629	677
Service Time	3.545	2.768	3.83	3.755	3.353
HCM Lane V/C Ratio	0.304	0.169	0.112	0.342	0.427
HCM Control Delay	11.1	8.8	9.6	11.7	12.3
HCM Lane LOS	B	A	A	B	B
HCM 95th-tile Q	1.3	0.6	0.4	1.5	2.1

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	16	0	0	30	15	275	94	15	391	31
Future Vol, veh/h	0	0	16	0	0	30	15	275	94	15	391	31
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	18	0	0	34	17	313	107	17	444	35
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	484	-	-	374	482	0	0	424	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	583	0	0	672	1081	-	-	1135	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	571	-	-	668	1078	-	-	1131	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.5		10.7		0.3		0.3					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1078	-	-	571	668	1131	-	-				
HCM Lane V/C Ratio	0.016	-	-	0.032	0.051	0.015	-	-				
HCM Control Delay (s)	8.4	0	-	11.5	10.7	8.2	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	19.2											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	21	43	15	209	65	27	34	222	268	128	225	31
Future Vol, veh/h	21	43	15	209	65	27	34	222	268	128	225	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	46	16	222	69	29	36	236	285	136	239	33
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	12.2			20			15.5			25		
HCM LOS	B			C			C			C		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	0%	27%	69%	33%
Vol Thru, %	87%	0%	54%	22%	59%
Vol Right, %	0%	100%	19%	9%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	256	268	79	301	384
LT Vol	34	0	21	209	128
Through Vol	222	0	43	65	225
RT Vol	0	268	15	27	31
Lane Flow Rate	272	285	84	320	409
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.518	0.48	0.176	0.608	0.73
Departure Headway (Hd)	6.851	6.067	7.537	6.84	6.437
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	526	593	474	528	560
Service Time	4.602	3.818	5.611	4.888	4.485
HCM Lane V/C Ratio	0.517	0.481	0.177	0.606	0.73
HCM Control Delay	16.8	14.3	12.2	20	25
HCM Lane LOS	C	B	B	C	C
HCM 95th-tile Q	2.9	2.6	0.6	4	6.1

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↕			↕	
Traffic Vol, veh/h	0	0	31	0	0	42	23	488	148	12	439	4
Future Vol, veh/h	0	0	31	0	0	42	23	488	148	12	439	4
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	32	0	0	43	24	503	153	12	453	4
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	568	-	-	665	517	0	0	710	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	522	0	0	460	1049	-	-	889	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	467	-	-	423	989	-	-	843	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13.3			14.5			0.3			0.2		
HCM LOS	B			B								
Minor Lane/Major Mvmt	NBL			NBT			NBR			EBLn1WBLn1		
Capacity (veh/h)	989			-			-			467 423 843		
HCM Lane V/C Ratio	0.024			-			0.068 0.102 0.015			-		
HCM Control Delay (s)	8.7			0			13.3 14.5 9.3			0		
HCM Lane LOS	A			A			-			B B A A		
HCM 95th %tile Q(veh)	0.1			-			0.2 0.3 0			-		

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**LEVEL OF SERVICE
CALCULATIONS
YEAR 2041 CONDITIONS
WITH PROJECT**

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HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	75	3	1	145	0	4	0	4	2	0	0
Future Vol, veh/h	1	75	3	1	145	0	4	0	4	2	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	90	4	1	175	0	5	0	5	2	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	175	0	0	97	0	0	274	274	95	274	276	175
Stage 1	-	-	-	-	-	-	97	97	-	177	177	-
Stage 2	-	-	-	-	-	-	177	177	-	97	99	-
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	1401	-	-	1496	-	-	678	633	962	678	632	868
Stage 1	-	-	-	-	-	-	910	815	-	825	753	-
Stage 2	-	-	-	-	-	-	825	753	-	910	813	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1401	-	-	1492	-	-	675	630	959	673	629	868
Mov Cap-2 Maneuver	-	-	-	-	-	-	675	630	-	673	629	-
Stage 1	-	-	-	-	-	-	906	812	-	824	752	-
Stage 2	-	-	-	-	-	-	824	752	-	905	810	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			9.6			10.4		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	792	1401	-	-	1492	-	-	673				
HCM Lane V/C Ratio	0.012	0.001	-	-	0.001	-	-	0.004				
HCM Control Delay (s)	9.6	7.6	0	-	7.4	0	-	10.4				
HCM Lane LOS	A	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection

Intersection Delay, s/veh 9.1

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	12	19	18	63	10	13	27	101	46	47	138	14
Future Vol, veh/h	12	19	18	63	10	13	27	101	46	47	138	14
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	21	20	71	11	15	30	113	52	53	155	16
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8.3	8.9	8.8	9.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	0%	24%	73%	24%
Vol Thru, %	79%	0%	39%	12%	69%
Vol Right, %	0%	100%	37%	15%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	46	49	86	199
LT Vol	27	0	12	63	47
Through Vol	101	0	19	10	138
RT Vol	0	46	18	13	14
Lane Flow Rate	144	52	55	97	224
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.208	0.063	0.075	0.135	0.289
Departure Headway (Hd)	5.21	4.4	4.881	5.044	4.649
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	687	812	732	709	771
Service Time	2.948	2.137	2.927	3.087	2.685
HCM Lane V/C Ratio	0.21	0.064	0.075	0.137	0.291
HCM Control Delay	9.3	7.4	8.3	8.9	9.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.8	0.2	0.2	0.5	1.2

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	11	8	34	51	4	13	26	141	105	19	188	11
Future Vol, veh/h	11	8	34	51	4	13	26	141	105	19	188	11
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	9	38	57	4	14	29	157	117	21	209	12
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	553	598	237	568	546	220	230	0	0	274	0	0
Stage 1	266	266	-	274	274	-	-	-	-	-	-	-
Stage 2	287	332	-	294	272	-	-	-	-	-	-	-
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	444	416	802	434	445	820	1338	-	-	1289	-	-
Stage 1	739	689	-	732	683	-	-	-	-	-	-	-
Stage 2	720	644	-	714	685	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	413	394	785	388	421	817	1327	-	-	1289	-	-
Mov Cap-2 Maneuver	413	394	-	388	421	-	-	-	-	-	-	-
Stage 1	714	670	-	713	665	-	-	-	-	-	-	-
Stage 2	682	627	-	650	666	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	11.8		15		0.7			0.7				
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1327	-	-	587	434	1289	-	-				
HCM Lane V/C Ratio	0.022	-	-	0.1	0.174	0.016	-	-				
HCM Control Delay (s)	7.8	0	-	11.8	15	7.8	0	-				
HCM Lane LOS	A	A	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.6	0.1	-	-				

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	195	6	4	186	0	5	0	5	3	0	0
Future Vol, veh/h	7	195	6	4	186	0	5	0	5	3	0	0
Conflicting Peds, #/hr	0	0	3	3	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	219	7	4	209	0	6	0	6	3	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	209	0	0	229	0	0	459	459	226	459	462	209
Stage 1	-	-	-	-	-	-	242	242	-	217	217	-
Stage 2	-	-	-	-	-	-	217	217	-	242	245	-
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	1362	-	-	1339	-	-	512	499	813	512	497	831
Stage 1	-	-	-	-	-	-	762	705	-	785	723	-
Stage 2	-	-	-	-	-	-	785	723	-	762	703	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1362	-	-	1335	-	-	507	493	811	505	491	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	507	493	-	505	491	-
Stage 1	-	-	-	-	-	-	754	698	-	780	721	-
Stage 2	-	-	-	-	-	-	783	721	-	751	696	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	10.9	12.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	624	1362	-	-	1335	-	-	505
HCM Lane V/C Ratio	0.018	0.006	-	-	0.003	-	-	0.007
HCM Control Delay (s)	10.9	7.7	0	-	7.7	0	-	12.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection

Intersection Delay, s/veh 10.2

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	23	19	24	55	18	12	28	170	114	59	203	27
Future Vol, veh/h	23	19	24	55	18	12	28	170	114	59	203	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	20	25	58	19	13	29	179	120	62	214	28
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	9.1	9.5	9.6	11.2
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	0%	35%	65%	20%
Vol Thru, %	86%	0%	29%	21%	70%
Vol Right, %	0%	100%	36%	14%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	198	114	66	85	289
LT Vol	28	0	23	55	59
Through Vol	170	0	19	18	203
RT Vol	0	114	24	12	27
Lane Flow Rate	208	120	69	89	304
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.307	0.151	0.103	0.137	0.407
Departure Headway (Hd)	5.3	4.523	5.358	5.511	4.812
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	675	787	662	644	742
Service Time	3.061	2.284	3.447	3.597	2.871
HCM Lane V/C Ratio	0.308	0.152	0.104	0.138	0.41
HCM Control Delay	10.4	8.1	9.1	9.5	11.2
HCM Lane LOS	B	A	A	A	B
HCM 95th-tile Q	1.3	0.5	0.3	0.5	2

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection

Int Delay, s/veh 7.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	12	20	120	13	30	20	279	94	15	275	8
Future Vol, veh/h	15	12	20	120	13	30	20	279	94	15	275	8
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
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	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	14	23	136	15	34	23	317	107	17	313	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	799	829	340	810	780	378	325	0	0	428	0	0
Stage 1	355	355	-	421	421	-	-	-	-	-	-	-
Stage 2	444	474	-	389	359	-	-	-	-	-	-	-
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	304	306	702	298	327	669	1235	-	-	1131	-	-
Stage 1	662	630	-	610	589	-	-	-	-	-	-	-
Stage 2	593	558	-	635	627	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	268	291	687	263	311	665	1231	-	-	1127	-	-
Mov Cap-2 Maneuver	268	291	-	263	311	-	-	-	-	-	-	-
Stage 1	643	617	-	592	572	-	-	-	-	-	-	-
Stage 2	533	542	-	579	614	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.3	34.6	0.4	0.4
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1231	-	-	372	300	1127	-	-
HCM Lane V/C Ratio	0.018	-	-	0.144	0.617	0.015	-	-
HCM Control Delay (s)	8	0	-	16.3	34.6	8.2	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	3.8	0	-	-

HCM 6th TWSC
1: 9th Avenue & Colorado Blvd

08/18/2021

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	3	467	5	4	272	1	8	0	5	2	0	0
Future Vol, veh/h	3	467	5	4	272	1	8	0	5	2	0	0
Conflicting Peds, #/hr	0	0	7	7	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	519	6	4	302	1	9	0	6	2	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	303	0	0	532	0	0	846	846	529	842	849	303
Stage 1	-	-	-	-	-	-	535	535	-	311	311	-
Stage 2	-	-	-	-	-	-	311	311	-	531	538	-
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	1258	-	-	1036	-	-	282	299	550	284	298	737
Stage 1	-	-	-	-	-	-	529	524	-	699	658	-
Stage 2	-	-	-	-	-	-	699	658	-	532	522	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1258	-	-	1029	-	-	278	295	546	279	294	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	278	295	-	279	294	-
Stage 1	-	-	-	-	-	-	524	519	-	697	655	-
Stage 2	-	-	-	-	-	-	696	655	-	525	517	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	16	18
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	343	1258	-	-	1029	-	-	279
HCM Lane V/C Ratio	0.042	0.003	-	-	0.004	-	-	0.008
HCM Control Delay (s)	16	7.9	0	-	8.5	0	-	18
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection												
Intersection Delay, s/veh	14.1											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↑		↔	
Traffic Vol, veh/h	22	37	19	66	36	27	38	235	268	128	230	40
Future Vol, veh/h	22	37	19	66	36	27	38	235	268	128	230	40
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	39	20	70	38	29	40	250	285	136	245	43
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	10.7			11.5			12.5			17.8		
HCM LOS	B			B			B			C		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	0%	28%	51%	32%
Vol Thru, %	86%	0%	47%	28%	58%
Vol Right, %	0%	100%	24%	21%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	273	268	78	129	398
LT Vol	38	0	22	66	128
Through Vol	235	0	37	36	230
RT Vol	0	268	19	27	40
Lane Flow Rate	290	285	83	137	423
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.472	0.401	0.15	0.244	0.642
Departure Headway (Hd)	5.849	5.069	6.509	6.41	5.457
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	616	710	548	559	661
Service Time	3.592	2.812	4.577	4.471	3.498
HCM Lane V/C Ratio	0.471	0.401	0.151	0.245	0.64
HCM Control Delay	13.7	11.2	10.7	11.5	17.8
HCM Lane LOS	B	B	B	B	C
HCM 95th-tile Q	2.5	1.9	0.5	1	4.6

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	51.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	19	35	143	43	42	28	492	148	12	300	9
Future Vol, veh/h	12	19	35	143	43	42	28	492	148	12	300	9
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60
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	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	20	36	147	44	43	29	507	153	12	309	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1114	1170	427	1115	1098	669	378	0	0	714	0	0
Stage 1	398	398	-	696	696	-	-	-	-	-	-	-
Stage 2	716	772	-	419	402	-	-	-	-	-	-	-
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	185	193	628	185	213	458	1180	-	-	886	-	-
Stage 1	628	603	-	432	443	-	-	-	-	-	-	-
Stage 2	421	409	-	612	600	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	118	163	562	~ 135	180	422	1113	-	-	840	-	-
Mov Cap-2 Maneuver	118	163	-	~ 135	180	-	-	-	-	-	-	-
Stage 1	567	559	-	393	403	-	-	-	-	-	-	-
Stage 2	313	372	-	516	556	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.4	282.2	0.3	0.3
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1113	-	-	235	163	840	-	-
HCM Lane V/C Ratio	0.026	-	-	0.29	1.442	0.015	-	-
HCM Control Delay (s)	8.3	0	-	26.4	282.2	9.3	0	-
HCM Lane LOS	A	A	-	D	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.2	14.9	0	-	-

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

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	23	27	18	114	14	13	27	90	46	47	138	14
Future Vol, veh/h	23	27	18	114	14	13	27	90	46	47	138	14
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	30	20	128	16	15	30	101	52	53	155	16
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	8.7			9.7			9.1			10.1		
HCM LOS	A			A			A			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	0%	34%	81%	24%
Vol Thru, %	77%	0%	40%	10%	69%
Vol Right, %	0%	100%	26%	9%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	46	68	141	199
LT Vol	27	0	23	114	47
Through Vol	90	0	27	14	138
RT Vol	0	46	18	13	14
Lane Flow Rate	131	52	76	158	224
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.2	0.067	0.107	0.226	0.303
Departure Headway (Hd)	5.464	4.642	5.055	5.128	4.871
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	653	766	703	695	733
Service Time	3.229	2.406	3.132	3.193	2.932
HCM Lane V/C Ratio	0.201	0.068	0.108	0.227	0.306
HCM Control Delay	9.6	7.7	8.7	9.7	10.1
HCM Lane LOS	A	A	A	A	B
HCM 95th-tile Q	0.7	0.2	0.4	0.9	1.3

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection

Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↔			↔	
Traffic Vol, veh/h	0	0	34	0	0	13	26	141	105	19	239	11
Future Vol, veh/h	0	0	34	0	0	13	26	141	105	19	239	11
Conflicting Peds, #/hr	4	0	13	13	0	4	9	0	0	0	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	38	0	0	14	29	157	117	21	266	12

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	294	-	-	220	287	0	0	274	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	745	0	0	820	1275	-	-	1289	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								0	0		-	-
Mov Cap-1 Maneuver	-	-	729	-	-	817	1264	-	-	1289	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9.5	0.8	0.6
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1264	-	-	729	817	1289	-	-
HCM Lane V/C Ratio	0.023	-	-	0.052	0.018	0.016	-	-
HCM Control Delay (s)	7.9	0	-	10.2	9.5	7.8	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0.1	-	-

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection

Intersection Delay, s/veh 11.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	38	31	24	175	31	12	28	155	114	59	203	27
Future Vol, veh/h	38	31	24	175	31	12	28	155	114	59	203	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	33	25	184	33	13	29	163	120	62	214	28
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	10.2	12.4	10.6	13.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	41%	80%	20%
Vol Thru, %	85%	0%	33%	14%	70%
Vol Right, %	0%	100%	26%	6%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	114	93	218	289
LT Vol	28	0	38	175	59
Through Vol	155	0	31	31	203
RT Vol	0	114	24	12	27
Lane Flow Rate	193	120	98	229	304
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.322	0.174	0.162	0.374	0.464
Departure Headway (Hd)	6.019	5.232	5.956	5.866	5.486
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	597	684	600	613	657
Service Time	3.764	2.976	4.015	3.915	3.529
HCM Lane V/C Ratio	0.323	0.175	0.163	0.374	0.463
HCM Control Delay	11.6	9.1	10.2	12.4	13.2
HCM Lane LOS	B	A	B	B	B
HCM 95th-tile Q	1.4	0.6	0.6	1.7	2.5

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

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	0	0	20	0	0	30	20	279	94	15	395	8
Future Vol, veh/h	0	0	20	0	0	30	20	279	94	15	395	8
Conflicting Peds, #/hr	3	0	19	19	0	3	3	0	4	4	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	23	0	0	34	23	317	107	17	449	9
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	476	-	-	378	461	0	0	428	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	589	0	0	669	1100	-	-	1131	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	577	-	-	665	1097	-	-	1127	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.5		10.7		0.4		0.3					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1097	-	-	577	665	1127	-	-				
HCM Lane V/C Ratio	0.021	-	-	0.039	0.051	0.015	-	-				
HCM Control Delay (s)	8.4	0	-	11.5	10.7	8.2	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	0	-	-				

HCM 6th AWSC
2: 13th Avenue & Miner St

08/18/2021

Intersection

Intersection Delay, s/veh	22.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	34	56	19	209	79	27	38	223	268	128	230	40
Future Vol, veh/h	34	56	19	209	79	27	38	223	268	128	230	40
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	60	20	222	84	29	40	237	285	136	245	43
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB	WB		NB		SB						
Opposing Approach	WB	EB		SB		NB						
Opposing Lanes	1	1		1		2						
Conflicting Approach Left	SB	NB		EB		WB						
Conflicting Lanes Left	1	2		1		1						
Conflicting Approach Right	NB	SB		WB		EB						
Conflicting Lanes Right	2	1		1		1						
HCM Control Delay	13.7	23.3		17.2		31.2						
HCM LOS	B	C		C		D						

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	31%	66%	32%
Vol Thru, %	85%	0%	51%	25%	58%
Vol Right, %	0%	100%	17%	9%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	261	268	109	315	398
LT Vol	38	0	34	209	128
Through Vol	223	0	56	79	230
RT Vol	0	268	19	27	40
Lane Flow Rate	278	285	116	335	423
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.556	0.508	0.256	0.664	0.794
Departure Headway (Hd)	7.206	6.413	7.956	7.132	6.749
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	497	559	455	503	533
Service Time	4.993	4.2	5.956	5.214	4.831
HCM Lane V/C Ratio	0.559	0.51	0.255	0.666	0.794
HCM Control Delay	18.7	15.7	13.7	23.3	31.2
HCM Lane LOS	C	C	B	C	D
HCM 95th-tile Q	3.3	2.9	1	4.8	7.5

HCM 6th TWSC
3: 13th Avenue & Idaho St

08/18/2021

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗		↔			↔	
Traffic Vol, veh/h	0	0	35	0	0	42	28	492	148	12	443	9
Future Vol, veh/h	0	0	35	0	0	42	28	492	148	12	443	9
Conflicting Peds, #/hr	31	0	53	53	0	31	60	0	54	54	0	60
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	36	0	0	43	29	507	153	12	457	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	575	-	-	669	526	0	0	714	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	518	0	0	458	1041	-	-	886	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	464	-	-	422	982	-	-	840	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.4	14.5	0.4	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	982	-	-	464	422	840	-	-
HCM Lane V/C Ratio	0.029	-	-	0.078	0.103	0.015	-	-
HCM Control Delay (s)	8.8	0	-	13.4	14.5	9.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.3	0	-	-

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Community Development Planner Communication

Document Date: August 26, 2021
Meeting Date: September 1, 2021
To: Planning Commission Members
Cc: Andrew Marsh, City Administrator
From: Jerad Chipman, AICP, Community Development Planner

RE: Community Development Monthly Report

The Community Development Planner has been working on the following recent, current, and upcoming projects.

Development applications and pre-applications:

- **Habitat for Humanity Development at 1628 Virginia Street.** City Council conditionally approved the Final Development Plan for a residential townhome project. Staff has been in communication with Habitat for Humanity regarding the necessary documents required prior to construction.
- **Annexation and Rezoning of the Idaho Springs Cemetery.** City Council accepted the Planning Commission's recommendation and approved the rezoning of the Idaho Springs Cemetery.
- **Post Construction Alignment of Colorado Boulevard.** City Council accepted the Planning Commission's recommendation and approved the post construction alignment plat for Colorado Boulevard.
- **Redevelopment of Block 57/Golddigger Field and the School Bus Maintenance Facility.** The Planning Commission is being asked to review the proposed Planned Development, Rezoning, and Preliminary Plat and Plan on September 1, 2021.
- **Code Updates.** Staff is reviewing additional updates to the Zoning Section of the Idaho Springs Municipal Code. The code updates will not be on the September 1, 2021 Planning Commission Agenda due to the size and scope of the Block 57/Golddigger Field request.

Other Activities:

- **Proposed housing at 2800 Miner Street.** Staff is in communications with the owner of the property regarding potential redevelopment plans.

- **Soda Creel Highlands.** Staff is in communication with the owner and developer of the property regarding an updated subdivision improvement agreement for the construction of forty-five (45) single family homes.
- **HPRC.** The HPRC approved two Certificates of Appropriateness (COA) at its August Meeting. The first COA was granted for the amended landscaping and site work proposed for the grounds of the Library. The second COA was granted for the renovations of Hose House #2.
- **Administrative Plat Amendment Inquiries.** Staff has received several preliminary requests for Administrative Plat Amendments, and is guiding the interested parties through the process.
- **Inquiries.** Staff continues to respond to a variety of planning and zoning inquiries from residents and developers.