

Traffic Impact Study

# Widefield Recreation Center

El Paso County, Colorado

PCD File No. PPR-2213

Prepared for:

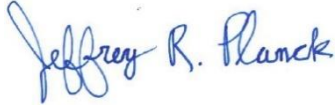
**Widefield School District #3**

**Kimley»Horn**

# T R A F F I C   I M P A C T   S T U D Y

## Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



\_\_\_\_\_  
Jeffrey R. Planck, P.E., PE #53006

\_\_\_\_\_  
June 7, 2022  
Date

## Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

\_\_\_\_\_  
Mr. Dave Gish  
Widefield School District #3  
1820 Main Street  
Colorado Springs, CO 80911

\_\_\_\_\_  
Date

## Widefield Recreation Center

PCD File No. PPR-2213

El Paso County, Colorado

**Prepared for**  
**Widefield School District #3**  
1820 Main Street  
Colorado Springs, Colorado 80911

**Prepared by**  
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June 2022

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## 1.0 EXECUTIVE SUMMARY

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The Widefield Recreation Center expansion project is located at the southwest corner of the Widick Street and Modell Drive intersection in El Paso County, Colorado. The site currently consists of the existing Security Public Library, Widefield Parks and Recreation Pool, and existing ball fields and tennis courts. The Widefield Recreation Center is planning to demolish an existing baseball field and construct an approximately 63,196 square foot recreation center. For analysis purposes, it was assumed that the Widefield Recreation Center will be completed in the next year; therefore, analysis was conducted for the 2023 buildout year. However, the buildout year is not critical as the studied intersections are in a fully built out area and future traffic growth is not expected along the local streets other than the new recreation center; therefore, only a buildout scenario was evaluated in this traffic study.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study in accordance with El Paso County standards and requirements:

- Aspen Drive/Hackberry Drive Access (#1)
- Modell Drive/Access and Widick Street (#2)

It should be noted that the adjacent intersections connecting with the surrounding arterial street system and external major collector systems were evaluated to determine if they need to be incorporated for evaluation based on El Paso County Standards. The intersections of Wageman Drive/Grinnell Boulevard and Crawford Avenue/Grinnell Boulevard do not meet the County criteria of project traffic contributing a 30 percent increase in traffic volumes. Further, project traffic is not anticipated to contribute an increase of 30 percent at the intersections of Crawford Avenue/Security Boulevard and Norman Drive/Main Street. The project site currently primarily serves the neighborhoods surrounding the site; therefore, limited regional access is currently provided from Interstate 25 (I-25), US-85, and Powers Boulevard (SH-21). Primary access is provided by Bradley Road and Crawford Avenue while direct access is provided by Aspen Drive, Hackberry Drive, Widick Street, and Modell Drive.

The Widefield Recreation Center expansion is expected to generate approximately 1,822 weekday daily trips, with 121 of these trips occurring during the morning peak hour and 158 of these trips occurring during the afternoon peak hour.

Based on the analysis presented in this report, Kimley-Horn believes the Widefield Recreation Center expansion project will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following conclusions and recommendations:

- With the addition of project traffic, the study area intersections are expected to operate acceptably with the existing lane configurations and control. Therefore, no offsite improvements are recommended in association with the Widefield Recreation Center expansion.
- Based on the El Paso County road impact fee schedule guidelines, the fee per thousand square feet is \$3,372 for public or institutional uses. Therefore, the road impact fee for the proposed 63,196 square feet of recreation center is expected to be \$213,097.

## 2.0 INTRODUCTION

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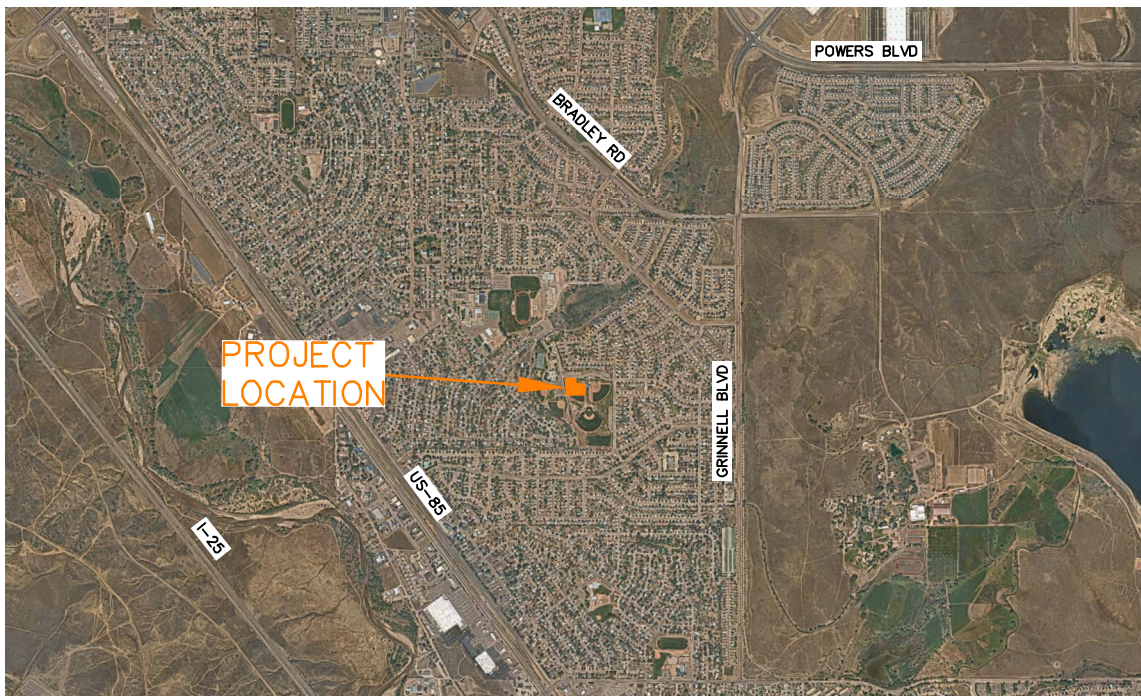
Kimley-Horn and Associates, Inc. has prepared this report to document the results of a Traffic Impact Study for the proposed Widefield Recreation Center expansion project located at the southwest corner of the Widick Street and Modell Drive intersection in El Paso County, Colorado. A vicinity map illustrating the Widefield Recreation Center location is shown in **Figure 1**. The site currently consists of the existing Security Public Library, Widefield Parks and Recreation Pool, and existing ball fields and tennis courts. Widefield Recreation Center is planning to demolish an existing baseball field and construct an approximately 63,196 square foot recreation center. A conceptual site plan is attached in **Appendix D**. For analysis purposes, it was assumed that the Widefield Recreation Center will be completed in the next year; therefore, analysis was conducted for the 2023 buildout year. However, the buildout year is not critical as the studied intersections are in a fully built out area and future traffic growth is not expected along the local streets other than the new recreation center; therefore, only a buildout scenario was evaluated in this traffic study.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study in accordance with El Paso County standards and requirements:

- Aspen Drive/Hackberry Drive Access (#1)
- Modell Drive/Access and Widick Street (#2)

The Widefield Parks and Recreation site currently primarily serves the neighborhoods surrounding the site; therefore, limited regional access is currently provided from Interstate 25 (I-25), US-85, and Powers Boulevard (SH-21). Primary access is provided by Bradley Road and Crawford Avenue while direct access is provided by Aspen Drive, Hackberry Drive, Widick Street, and Modell Drive.





WIDEFIELD RECREATION CENTER  
EL PASO COUNTY, COLORADO  
VICINITY MAP

FIGURE 1



### 3.0 EXISTING AND FUTURE CONDITIONS

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#### 3.1 Existing Study Area

The site currently consists of the existing Security Public Library, Widefield Parks and Recreation Pool, and existing ball fields and tennis courts. Widefield Recreation Center is planning to demolish an existing baseball field and construct an approximately 63,196 square foot recreation center. Single family residential homes are located in the immediate surrounding area. Widefield High School is located to the north of the site. Santa Fe Avenue (US-85) is located in the extended area to the west while Powers Boulevard (SH-21) is located in the extended area to the north.

#### 3.2 Existing and Future Roadway Network

Hackberry Drive, Aspen Drive, and Widick Street primarily extend in the north-south direction as two-lane roadways. Modell Drive extends eastbound and westbound and provides one through lane in each direction with a posted speed limit of 25 miles per hour. The access road internal to the Widefield Parks and Recreation site has one through lane in each direction and a speed limit of 15 miles per hour. Based on the average daily traffic volumes and the roadway characteristics of the aforementioned roadways, they are all classified as urban local roadways according to the El Paso County Engineering Criteria Manual. It should be noted that the El Paso County Major Transportation Corridors Plan does not identify any improvements at the study area roadways.

Widefield High School and the Widefield Elementary School of the Arts are located northwest of the proposed site. The sidewalks along Widefield Drive and Hackberry Drive will provide access from the proposed recreation center to the schools. Additionally, there is a gated sidewalk that extends behind the schools and provides access from Hackberry Drive to the schools. There is a small portion of the west access that does not provide sidewalks on either side of the roadway and interrupts the sidewalk connection from the two schools to the proposed recreation center. Crosswalks are provided along Widefield Drive to access the two schools.

The surrounding streets of Crawford Avenue, Main Street, and Wageman Drive are all categorized as collector streets in the El Paso County Major Transportation Corridors Plan (MTCP). Grinnell Boulevard is classified as a minor arterial in the MTCP. The MTCP does not identify any roadway improvements at aforementioned collector streets. However, Grinnell

Boulevard between Powers Boulevard and Bradley Road is planned to be widened from two lanes to four lanes by 2040.

It should be noted that the adjacent intersections connecting with the surrounding arterial street system and external major collector systems were evaluated to determine if they need to be incorporated for evaluation based on El Paso County Standards. The intersections of Wageman Drive/Grinnell Boulevard and Crawford Avenue/Grinnell Boulevard do not meet the County criteria of project traffic contributing a 30 percent increase in traffic volumes. Further, project traffic is not anticipated to contribute an increase of 30 percent at the intersections of Crawford Avenue/Security Boulevard and Norman Drive/Main Street.

The following shows the reasoning the major intersections around the project were not included based on the project contributing less than a 30 percent increase in traffic volumes.

Crawford Avenue and Grinnell Boulevard: Assuming all project traffic traveling to and from the south leg of Widick Street at Modell Drive were to use the intersection of Crawford Avenue and Grinnell Boulevard, which is conservative, this project would add 30 trips at this intersection during the morning peak hour and 40 trips during the afternoon peak hour. Grinnell Boulevard at the intersection of Crawford Road has 952 vehicles passing through the intersection during the morning peak hour and 1,115 vehicles during the afternoon peak hour. Therefore, project traffic accounts for an increase of 3.1% ( $30/952$ ) in the morning peak hour and 3.6% ( $40/1,115$ ) during the afternoon peak hour which is far below the 30% threshold. The volumes at this intersection were based off of 2021 counts from the Crawford Apartments project.

Wageman Drive and Grinnell Boulevard: Assuming all project traffic traveling to and from the north leg of Widick Street at Modell Drive and the east leg of Modell Drive at Widick Street were to use the intersection of Wageman Drive and Grinnell Boulevard, which is conservative, this project would add 24 trips at this intersection during the morning peak hour and 33 trips during the afternoon peak hour. The intersection of Grinnell Boulevard and Crawford Road, which is directly to the south of the intersection of Wageman Drive and Grinnell Boulevard, has 840 vehicles utilizing the north leg of the intersection during the morning peak hour and 990 vehicles utilizing the north leg during the afternoon peak hour. It was assumed that these volumes would also pass through the intersection of Wageman Drive and Grinnell Boulevard since there are no

other intersections between these two intersections. Therefore, project traffic accounts for an increase of 2.9% (24/840) in the morning peak hour and 3.3% (33/990) during the afternoon peak hour which is far below the 30% threshold. The volumes at this intersection were based off of 2021 counts from the Crawford Apartments project.

Crawford Avenue and Security Boulevard: Assuming all project traffic traveling southbound along Widick Street were to use the intersection of Crawford Avenue and Security Boulevard, which is conservative, this project would add 30 trips at this intersection during the morning peak hour and 40 trips during the afternoon peak hour. If this traffic were to increase existing traffic volume by 30% or more there would need to be less than 100 morning peak hour trips and 133 afternoon peak hour trips at this intersection. Since Security Boulevard is a collector roadway for this neighborhood it is believed this intersection currently exceeds 100 morning peak hour trips and 133 afternoon peak hour trips. Therefore, evaluation of this intersection is not believed to be necessary.

Norman Drive and Main Street: Assuming all project traffic traveling along Hackberry Drive were to use the intersection of Norman Drive and Main Street, which is conservative, this project would add 48 trips at this intersection during the morning peak hour and 64 trips during the afternoon peak hour. If this traffic were to increase existing traffic volume by 30% or more there would need to be less than 160 morning peak hour trips and 213 afternoon peak hour trips at this intersection. Since Main Street is a collector roadway for this neighborhood that already warrants signalization, it is believed this intersection currently exceeds 160 morning peak hour trips and 213 afternoon peak hour trips. Therefore, evaluation of this intersection is not believed to be necessary.

The unsignalized 'T'- intersection of the Aspen Drive/Hackberry Drive Access (#1) operates with stop control on the westbound access approach. For purposes of providing configurations that align with HCM methodologies, the northwest Hackberry Drive leg of this intersection is defined as the north leg in this traffic study. As such, the westbound access approach consists of a shared left/right turn lane. The northbound Aspen Drive approach consists of a shared through/right turn lane while the southbound Hackberry Drive approach consists of a shared left turn/through lane. An aerial photo of the existing intersection configuration is below (north is up - typical).



*Aspen Drive/Hackberry Drive Access (#1)*

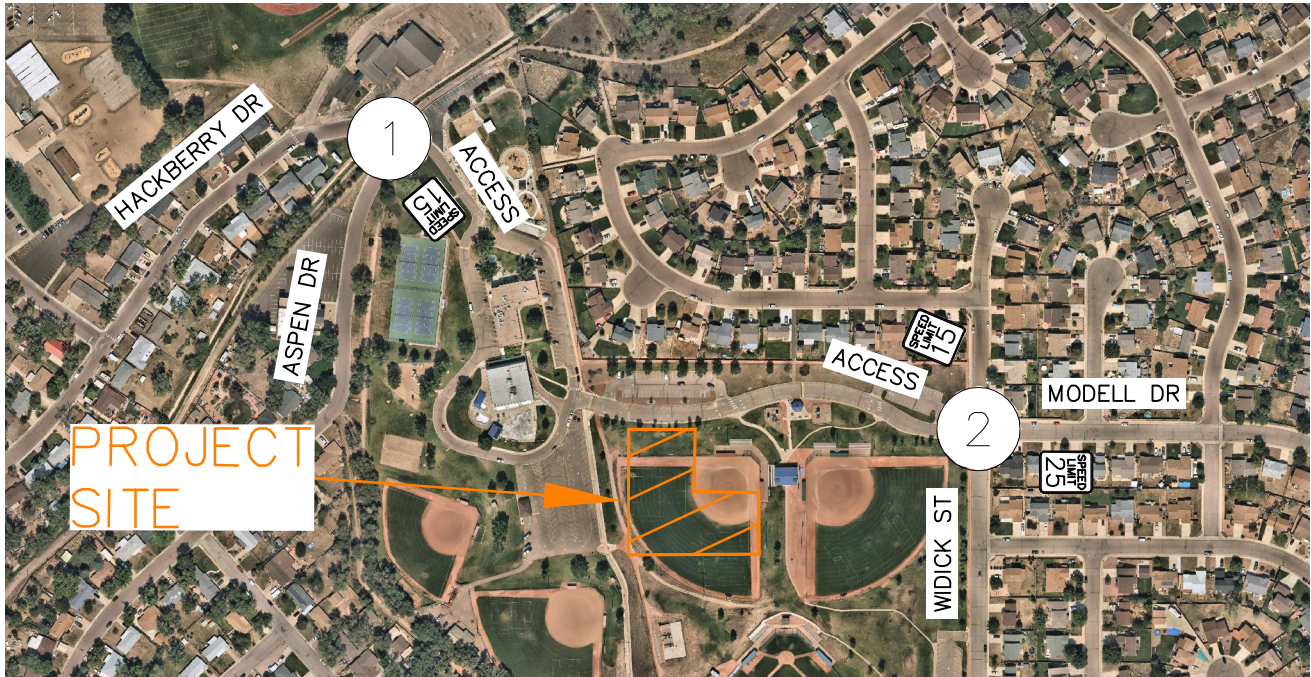
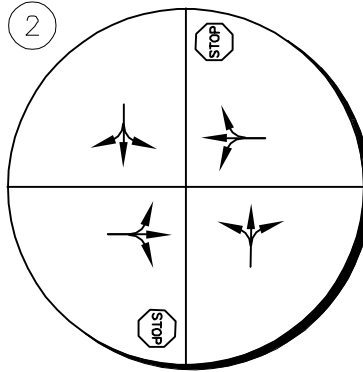
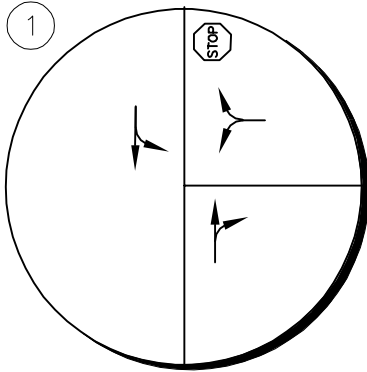


The unsignalized intersection of Modell Drive/Access and Widick Street (#2) operates with stop control on the eastbound and westbound approaches. All four approaches provide a single lane shared with all movements. An aerial photo of the existing intersection configuration is below.



*Modell Drive/Access & Widick Street (#2)*

The intersection lane configuration and control for the study area intersections are shown in **Figure 2**.



LEGEND	
	Study Area Key Intersection
	Stop Controlled Approach
	Roadway Speed Limit

WIDEFIELD RECREATION CENTER  
EL PASO COUNTY, COLORADO  
EXISTING GEOMETRY AND CONTROL

FIGURE 2

### 3.3 Existing Traffic Volumes

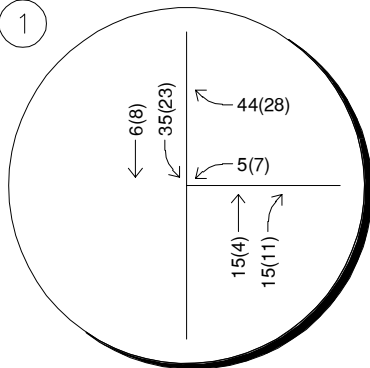
Existing turning movement counts were conducted at the study area key intersections on Tuesday, January 11, 2022 during the morning and afternoon peak hours. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on this count date. The existing intersection traffic volumes are shown in **Figure 3** with count sheets provided in **Appendix A**.

### 3.4 Unspecified Development Traffic Growth

The buildout year is not critical as the studied intersections are in a fully built out area and future traffic growth is not expected along the local streets other than the Widefield Recreation Center expansion; therefore, future volumes at the studied intersections consist of existing plus net increase of recreation center traffic.

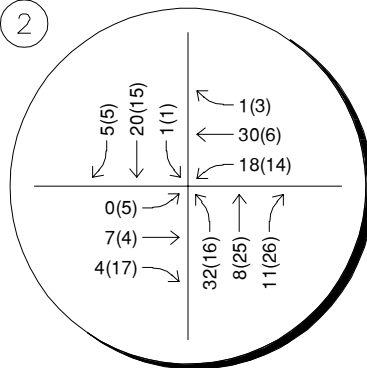


1

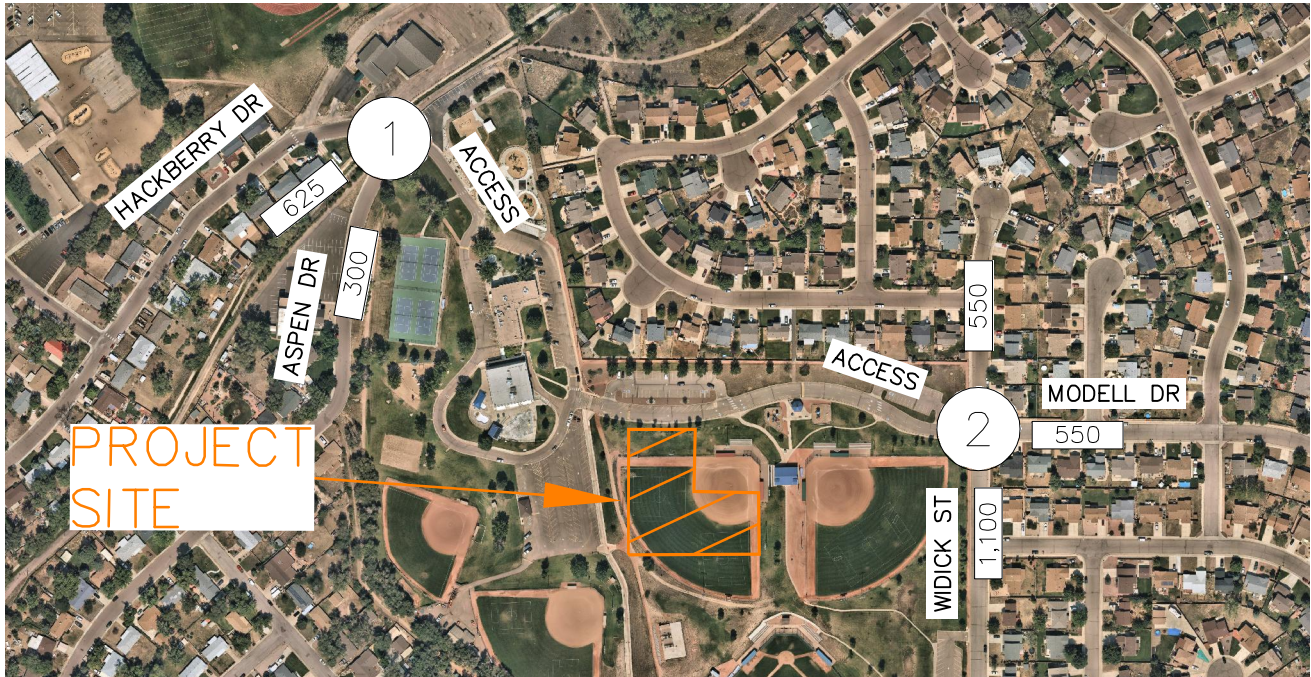


Tuesday, January 11, 2022  
8:00 to 9:00AM (4:30 to 5:30PM)

2



Tuesday, January 11, 2022  
7:00 to 8:00AM (4:15 to 5:15PM)



### LEGEND

- (X) Study Area Key Intersection
- xxx(XXX) Weekday AM(PM)  
Peak Hour Traffic Volumes
- [xx,x00] Estimated Daily Traffic Volume

WIDEFIELD RECREATION CENTER  
EL PASO COUNTY, COLORADO  
2022 EXISTING TRAFFIC VOLUMES

FIGURE 3



## 4.0 PROJECT TRAFFIC CHARACTERISTICS

### 4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*<sup>1</sup> published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rate equations that apply to Recreational Community Center (ITE Land Use Code 495), for traffic associated with the development.

The Widefield Recreation Center expansion project is expected to generate approximately 1,822 weekday daily trips, with 121 of these trips occurring during the morning peak hour and 158 of these trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 11<sup>th</sup> Edition – Volume 1: User's Guide and Handbook*, 2021. **Table 1** summarizes the estimated trip generation for the Widefield Recreation Center. The trip generation worksheets are included in **Appendix B**.

**Table 1 – Widefield Recreation Center Traffic Generation**

Land Use and Size	Weekday Vehicle Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Recreational Community Center (ITE 495) – 63,196 Square Feet	1,822	80	41	121	74	84	158

It should be noted that typical traffic engineering practices are to evaluate the 30th highest design hour. ITE provides average trip rates for the land use identified. It is not anticipated that the recreation center will have more than thirty events higher than the peak hour counts. The existing baseball fields are not part of the project and previously went through a site development plan application process. Of note, there is significant amount of reserved capacity (documented later in Section 5) at the study area key intersections as all movements operate at level of service B or better.

<sup>1</sup> Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2021.

## 4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. It should be noted that facilities for the Widefield Recreation Center expansion are expected to primarily serve the local neighborhoods and nominal trips are expected to and from the surrounding arterial street system. The small number of project trips traveling to and from external arterial street system are expected to be near a net neutral with number of trips previously traveling outside of the community for recreational uses now remaining within the community at the new facility. The project trip distribution for the proposed development is illustrated in **Figure 4**.

## 4.3 Traffic Assignment

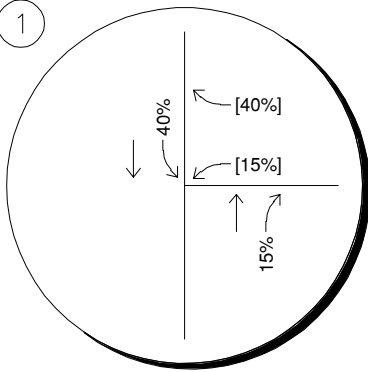
Widefield Recreation Center traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. Traffic assignment is shown in **Figure 5**. It should be noted that typical traffic engineering practices are to evaluate the 30th highest design hour. ITE provides average trip rates for the land use identified. It is not anticipated that the recreation center will have more than thirty events higher than the peak hour counts. The existing baseball fields are not part of the project and previously went through a site development plan application process. Of note, there is significant amount of reserved capacity (documented later in Section 5) at the study area key intersections as all movements operate at level of service B or better.

## 4.4 Total (Background Plus Project) Traffic

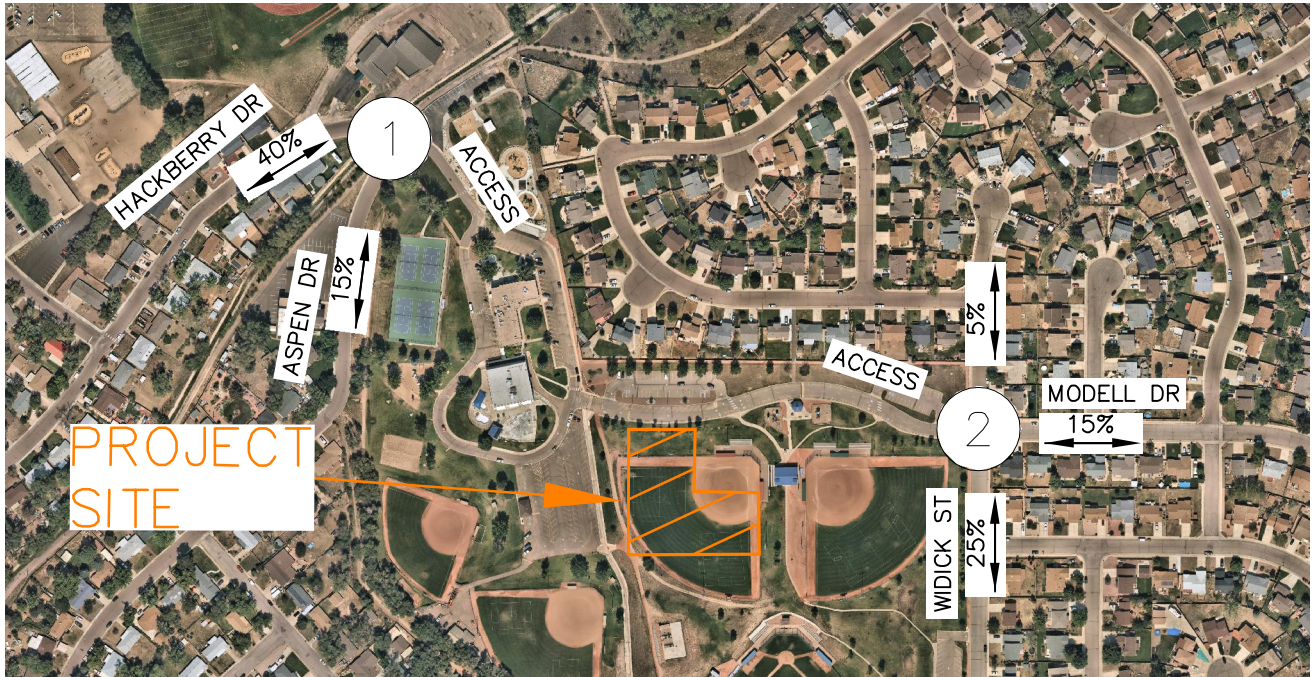
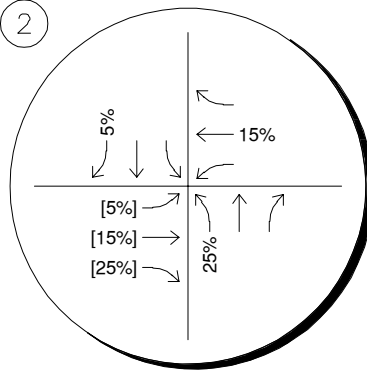
Site generated traffic volumes associated with the Widefield Recreation Center expansion were added to the existing traffic volumes to represent estimated traffic conditions for 2023 buildout. These total vehicle traffic volumes for the study area are illustrated for the opening 2023 year in **Figure 6**.



1



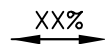
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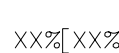
# LEGEND



Study Area Key Intersection



External Trip Distribution Percentage



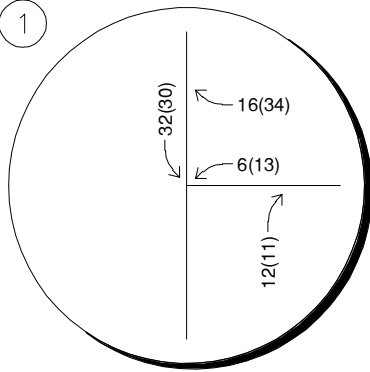
Entering[Exiting]  
Trip Distribution Percentage

WIDEFIELD RECREATION CENTER  
EL PASO COUNTY, COLORADO  
PROJECT TRIP DISTRIBUTION

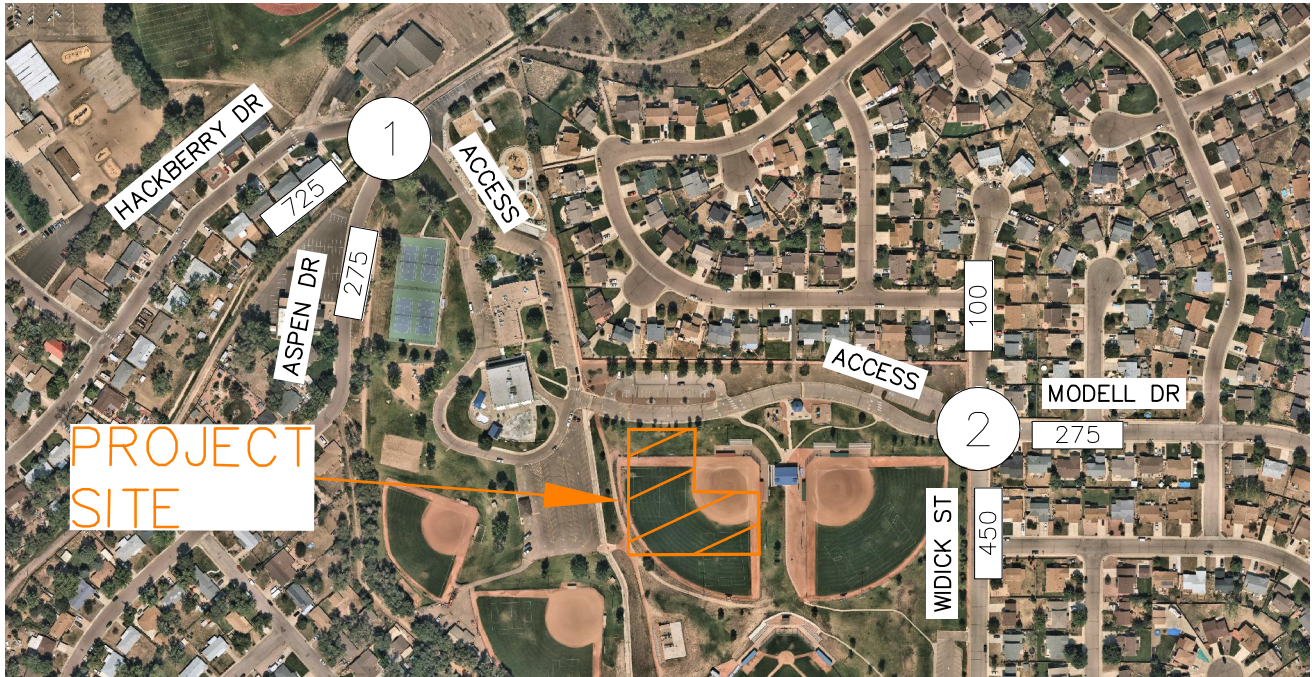
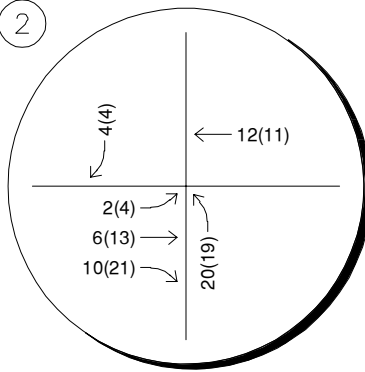
FIGURE 4



1



2



### LEGEND

- (X) Study Area Key Intersection
- XXX(XXX) Weekday AM(PM)  
Peak Hour Traffic Volumes
- [XX,X00] Estimated Daily Traffic Volume

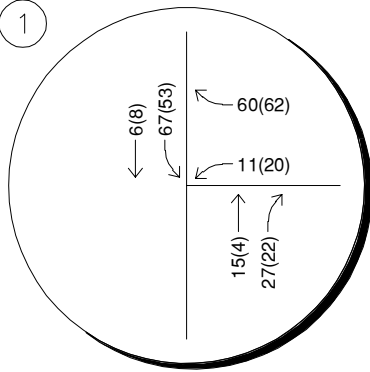
WIDEFIELD RECREATION CENTER  
EL PASO COUNTY, COLORADO  
PROJECT TRAFFIC ASSIGNMENT

FIGURE 5

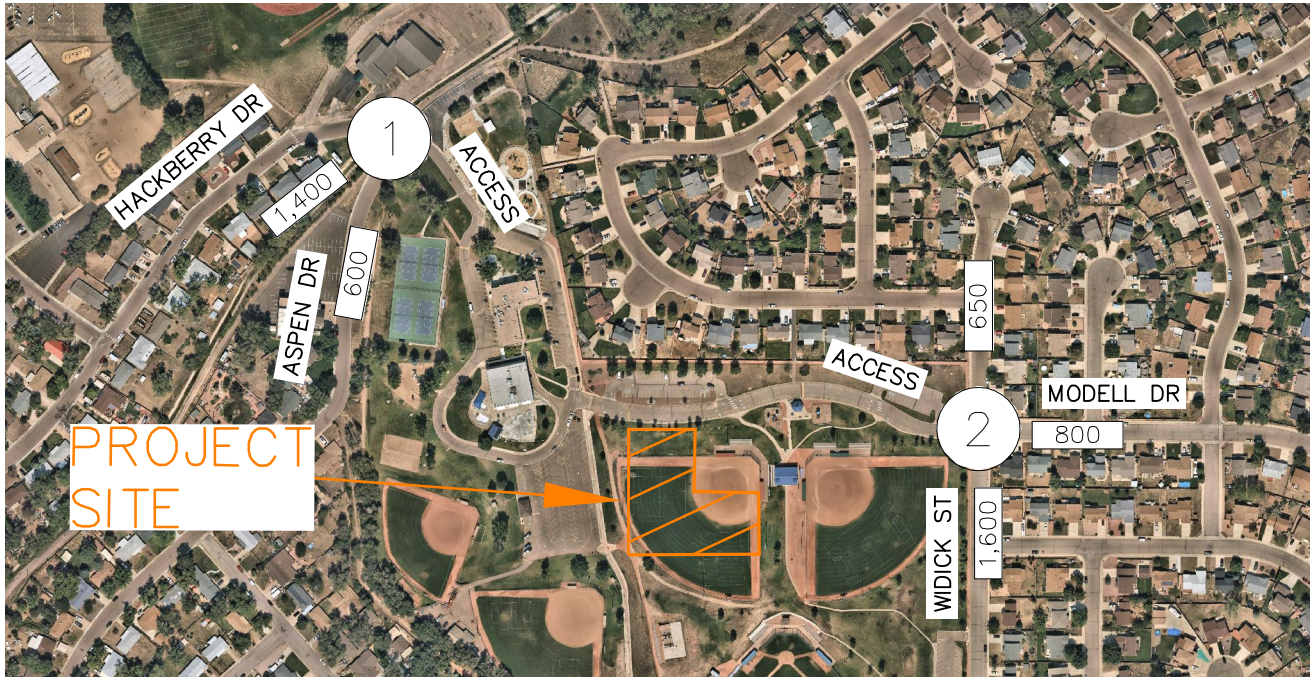
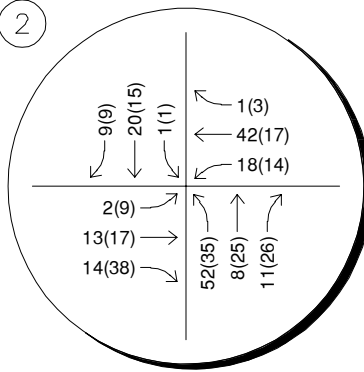




1



2



### LEGEND

- (X) Study Area Key Intersection
- XXX(XXX) Weekday AM(PM)  
Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

WIDEFIELD RECREATION CENTER  
EL PASO COUNTY, COLORADO  
2023 TOTAL TRAFFIC VOLUMES

FIGURE 6



## 5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2023 development horizon at the identified key intersections. The acknowledged source for determining overall capacity is the current edition of the *Highway Capacity Manual (HCM)*<sup>2</sup>.

### 5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). Based on El Paso County standards, the threshold for acceptable LOS is not less than LOS D during peak hours. **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

**Table 2 – Level of Service Definitions**

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Definitions provided from the Highway Capacity Manual, Sixth Edition, Transportation Research Board, 2016.

Study area intersections were analyzed based on average total delay analysis unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole. LOS for signalized, roundabout, and all-way stop controlled intersections are defined for each approach and for the overall intersection.

<sup>2</sup> Transportation Research Board, *Highway Capacity Manual*, Sixth Edition, Washington DC, 2016.



## 5.2 Key Intersection Operational Analysis

Calculations for the operational level of service at the key intersections for the study area are provided in **Appendix C**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2**. Existing peak hour factors were utilized in the existing and 2023 horizon analysis years. Synchro traffic analysis software was used to analyze the unsignalized key intersections for HCM level of service.

### Aspen Drive/Hackberry Drive Access (#1)

The unsignalized 'T'- intersection of the Aspen Drive/Hackberry Drive Access (#1) operates with stop control on the westbound access approach. For purposes of providing configurations that align with HCM methodologies, the northwest Hackberry Drive leg of this intersection is defined as the north leg in this traffic study. As such, the westbound access approach consists of a shared left/right turn lane. The northbound Aspen Drive approach consists of a shared through/right turn lane while the southbound Hackberry Drive approach consists of a shared left turn/through lane. The east leg of this intersection currently provides access to the project site. The intersection movements operate acceptably at LOS A during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable LOS A during the peak hours throughout the 2023 horizon. Therefore, no modifications to the existing control or lane configurations are proposed at this intersection. **Table 3** provides the results of the LOS analysis conducted at this intersection.

**Table 3 – Aspen Drive/Hackberry Drive Access (#1) LOS Results**

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>2022 Existing</b>				
Westbound Approach	8.8	A	8.6	A
Southbound Left	7.4	A	7.3	A
<b>2023 Background Plus Project</b>				
Westbound Approach	9.2	A	9.1	A
Southbound Left	7.5	A	7.4	A

### Widick Street and Modell Drive/Access (#2)

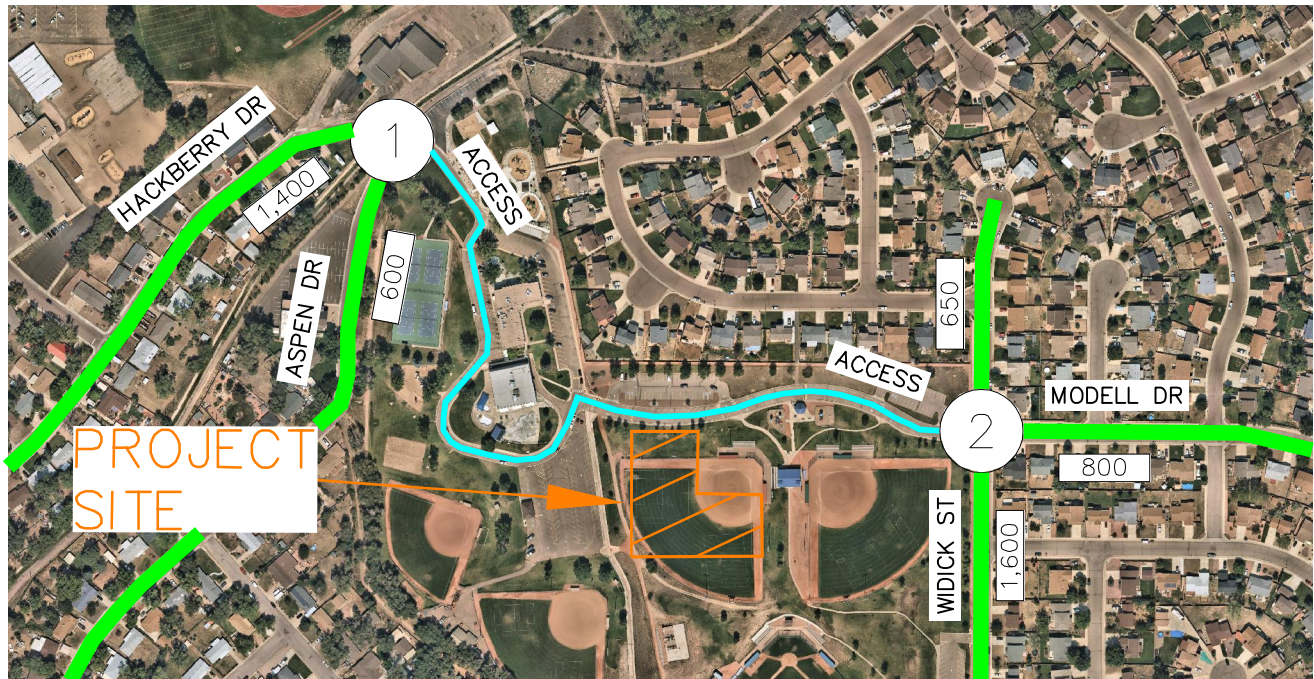
The unsignalized intersection of Modell Drive/Access and Widick Street (#2) operates with stop control on the eastbound and westbound approaches. The west leg currently provides access to the project site. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable LOS B or better during the peak hours throughout the 2023 horizon. Therefore, no modifications to the existing control or lane configurations are recommended at this intersection. **Table 4** provides the results of the LOS analysis conducted at this intersection.

**Table 4 – Widick Street & Modell Drive/Access (#2) LOS Results**

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
<b>2022 Existing</b>				
Northbound Left	7.4	A	7.3	A
Eastbound Approach	9.6	A	9.0	A
Westbound Approach	10.4	B	9.7	A
Southbound Left	7.3	A	7.4	A
<b>2023 Background Plus Project</b>				
Northbound Left	7.4	A	7.4	A
Eastbound Approach	9.9	A	9.7	A
Westbound Approach	11.5	B	10.6	B
Southbound Left	7.3	A	7.4	A

### 5.3 Internal Roadway Classifications and Turn Lane Evaluation

The studied roadways all meet the characteristics of an urban local street. The traffic volume threshold criteria for an urban local street within the El Paso County Engineering Criteria Manual (ECM) is less than 3,000 vehicles per day. The average daily traffic (ADT) among the studied roadways is expected to be less than 3,000 vehicles per day. **Figure 7** illustrates the street classification map for the surrounding area. In addition, exclusive left turn lanes are warranted for ingress turning volumes of 25 vehicles per hour or greater whereas exclusive right turn lanes are warranted for ingress turning volumes of 50 vph or greater along “Minor Arterial and Lower Classification”. Of note, the surrounding roadway network primarily consists of local streets without the implementation of any designated left and right turn lanes; therefore, auxiliary turn lanes are not recommended at the studied intersections. Further, all movements at studied intersections are expected to operate at LOS B or better during the peak hours.



WIDEFIELD RECREATION CENTER  
EL PASO COUNTY, COLORADO  
ROADWAY CLASSIFICATION MAP

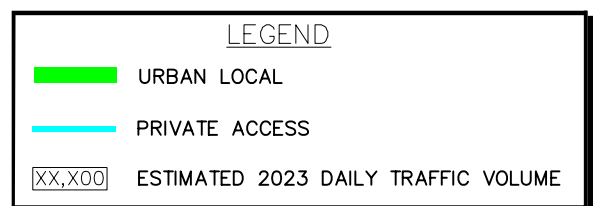


FIGURE 7

## 5.4 Sight Distance Evaluation

It is recommended that sight triangles be provided at all site access points to give drivers exiting the site a clear view of oncoming traffic. Landscaping and objects within sight triangles must not obstruct drivers' views of the adjacent travel lanes. ECM design intersection sight distances for left turn from stop at all the study intersection is recommended to provide an intersection sight distance of 280 feet. Of note, because the intersections are between two local roadways or a local and an access, the distance from the driver's eye to the edge of pavement can be reduced to 10 feet and the sight distance can be measured to the centerline of the road. It is believed that all existing intersections provide the necessary sight distance.

## 5.5 Bicycle and Pedestrian Access

Sidewalks are provided along both sides of Widick Street and Modell Drive. A sidewalk is provided on the east side of Hackberry Drive and on the west side of Aspen Drive. Sidewalks are provided throughout the Widefield Parks and Recreation site. Adjacent to the site, there are not any designated bicycle lanes along Widick Street, Modell Drive, Aspen Drive, or Hackberry Drive. Widefield High School and the Widefield Elementary School of the Arts are located northwest of the proposed site. The sidewalks along Widefield Drive and Hackberry Drive will provide access from the proposed recreation center to the schools. Additionally, there is a gated sidewalk that extends behind the schools and provides access from Hackberry Drive to the schools. There is a small portion of the west access that does not provide sidewalks on either side of the roadway and interrupts the sidewalk connection from the two schools to the proposed recreation center. Crosswalks are provided along Widefield Drive to access the two schools.

## 5.6 Road Impact Fees

Road impact fees were evaluated based on the El Paso County Road Impact Fee Schedule. Based on these fee schedule guidelines, the fee per thousand square feet is \$3,372 for public or institutional uses. Therefore, the road impact fee for the proposed 63,196 square feet of recreation center is expected to be \$213,097. Road impact fee calculations are shown in **Table 5**. The project team will determine payment methods with the final plat.

**Table 5 – Road Impact Fees**

Use	Square Feet	Fee / KSF	Total Fee
Public/Institutional	63,196	\$3,372	\$213,097

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

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Based on the analysis presented in this report, Kimley-Horn believes the Widefield Recreation Center expansion project will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following conclusions and recommendations:

- With the addition of project traffic, the study area intersections are expected to operate acceptably with the existing lane configurations and control. Therefore, no offsite improvements are recommended in association with the Widefield Recreation Center expansion.
- Based on the El Paso County road impact fee schedule guidelines, the fee per thousand square feet is \$3,372 for public or institutional uses. Therefore, the road impact fee for the proposed 63,196 square feet of recreation center is expected to be \$213,097.

# APPENDICES

# APPENDIX A

## Intersection Count Sheets





Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
AM Peak  
Hackberry Dr and Aspen Dr

File Name : Hackberry and Aspen AM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

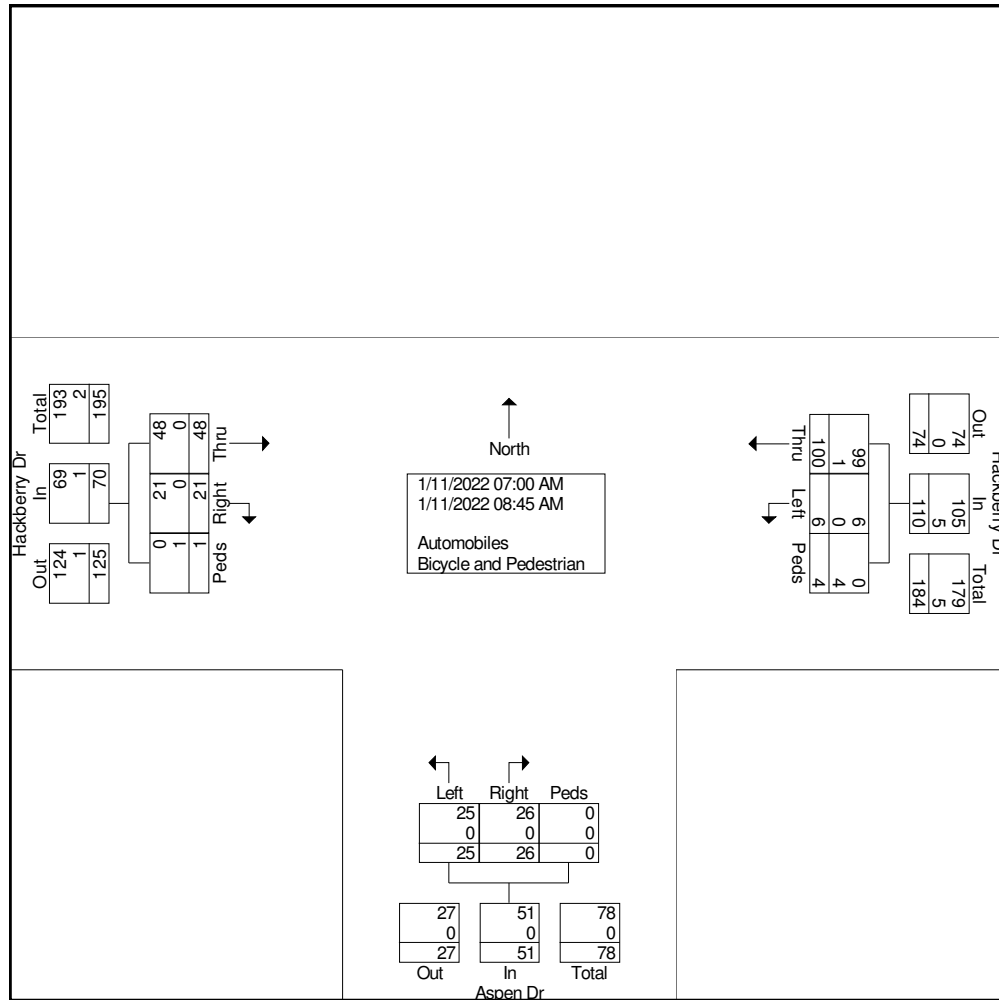
Start Time	Hackberry Dr Eastbound				Hackberry Dr Westbound				Aspen Dr Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
07:00 AM	5	0	1	6	0	35	0	35	4	0	0	4	45
07:15 AM	5	5	0	10	0	13	1	14	2	1	0	3	27
07:30 AM	1	8	0	9	1	1	2	4	1	5	0	6	19
07:45 AM	2	2	0	4	0	7	1	8	3	5	0	8	20
Total	13	15	1	29	1	56	4	61	10	11	0	21	111
08:00 AM	17	3	0	20	0	13	0	13	2	8	0	10	43
08:15 AM	8	2	0	10	1	13	0	14	1	1	0	2	26
08:30 AM	7	0	0	7	2	10	0	12	0	3	0	3	22
08:45 AM	3	1	0	4	2	8	0	10	12	3	0	15	29
Total	35	6	0	41	5	44	0	49	15	15	0	30	120
Grand Total	48	21	1	70	6	100	4	110	25	26	0	51	231
Apprch %	68.6	30	1.4		5.5	90.9	3.6		49	51	0		
Total %	20.8	9.1	0.4	30.3	2.6	43.3	1.7	47.6	10.8	11.3	0	22.1	
Automobiles	48	21	0	69	6	99	0	105	25	26	0	51	225
% Automobiles	100	100	0	98.6	100	99	0	95.5	100	100	0	100	97.4
Bicycle and Pedestrian	0	0	1	1	0	1	4	5	0	0	0	0	6
% Bicycle and Pedestrian	0	0	100	1.4	0	1	100	4.5	0	0	0	0	2.6



Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
AM Peak  
Hackberry Dr and Aspen Dr

File Name : Hackberry and Aspen AM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 2



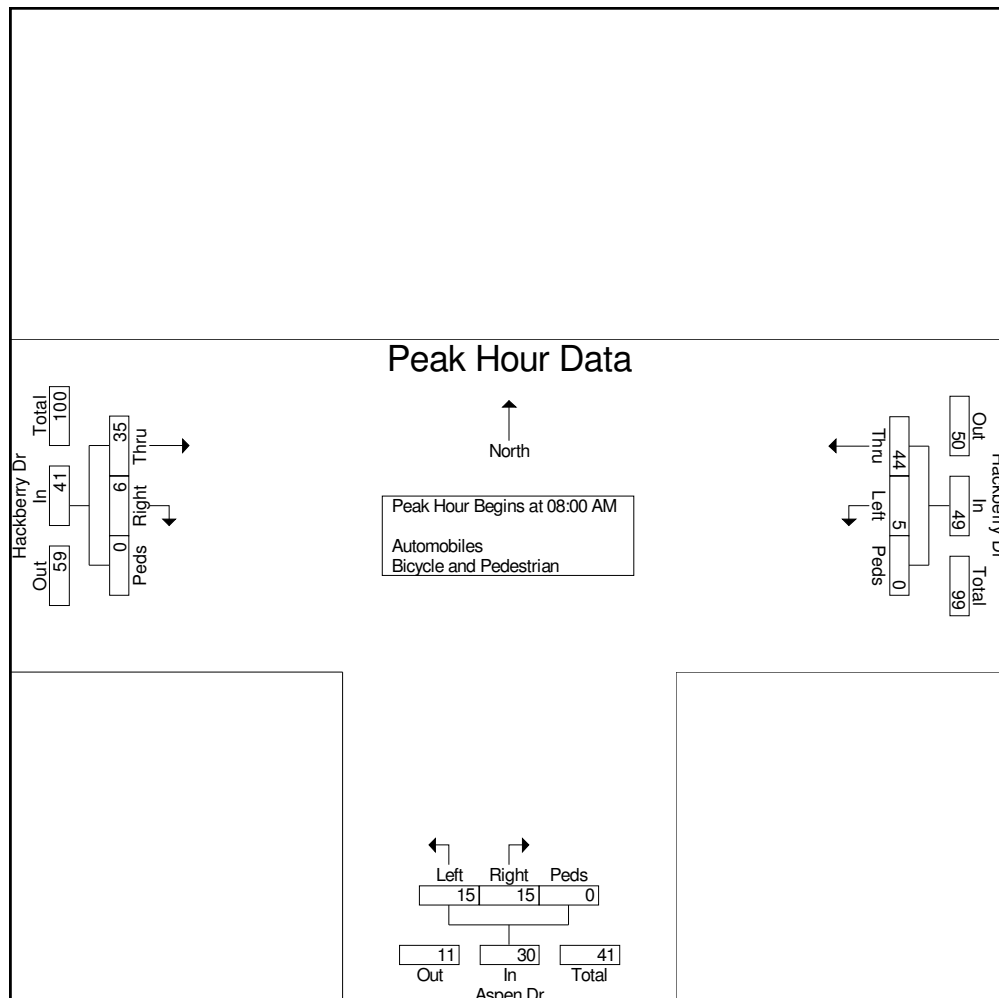


Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
AM Peak  
Hackberry Dr and Aspen Dr

File Name : Hackberry and Aspen AM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 3

	Hackberry Dr Eastbound				Hackberry Dr Westbound				Aspen Dr Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	17	3	0	20	0	13	0	13	2	8	0	10	43
08:15 AM	8	2	0	10	1	13	0	14	1	1	0	2	26
08:30 AM	7	0	0	7	2	10	0	12	0	3	0	3	22
08:45 AM	3	1	0	4	2	8	0	10	12	3	0	15	29
Total Volume	35	6	0	41	5	44	0	49	15	15	0	30	120
% App. Total	85.4	14.6	0		10.2	89.8	0		50	50	0		
PHF	.515	.500	.000	.513	.625	.846	.000	.875	.313	.469	.000	.500	.698





Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
PM Peak  
Hackberry Dr and Aspen Dr

File Name : Hackberry and Aspen PM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

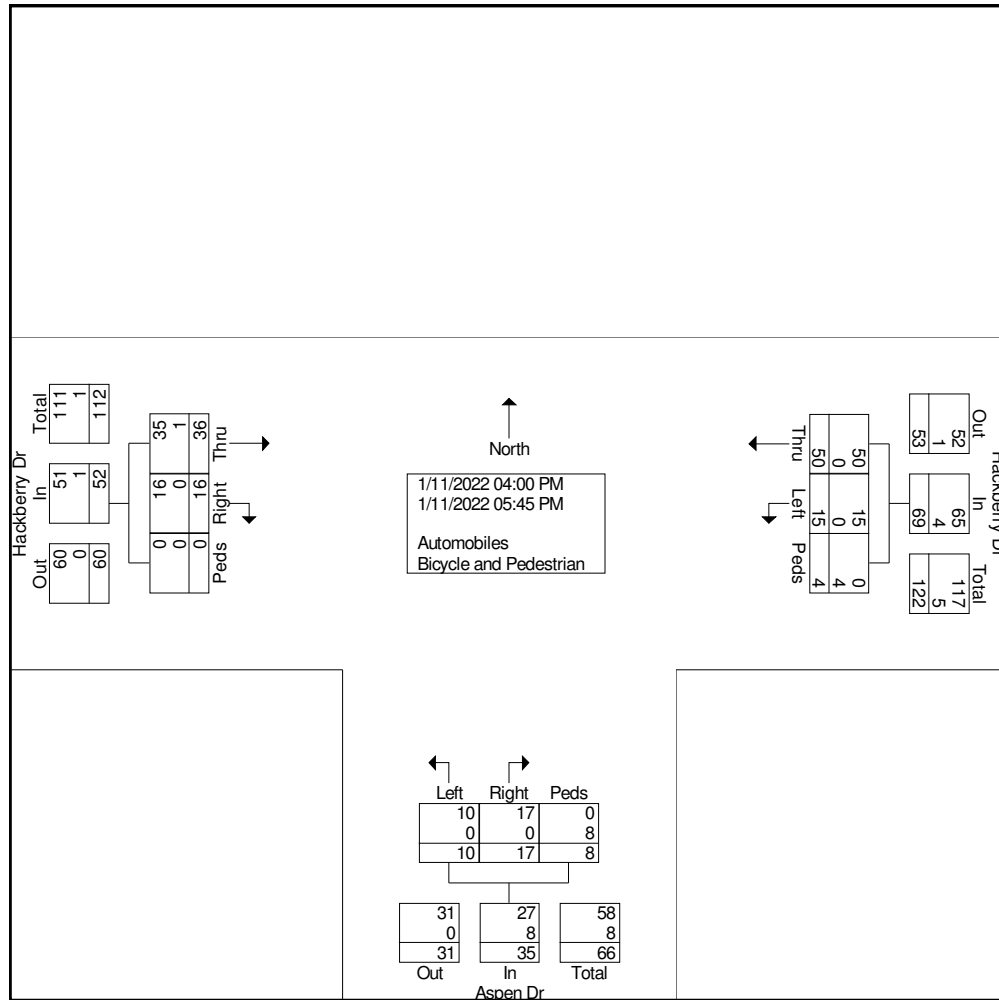
Start Time	Hackberry Dr Eastbound				Hackberry Dr Westbound				Aspen Dr Northbound				Int. Total
	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	
04:00 PM	3	2	0	5	1	7	0	8	2	1	3	6	19
04:15 PM	4	3	0	7	0	7	0	7	0	2	2	4	18
04:30 PM	2	4	0	6	0	3	2	5	2	0	0	2	13
04:45 PM	9	0	0	9	2	4	0	6	0	4	2	6	21
Total	18	9	0	27	3	21	2	26	4	7	7	18	71
05:00 PM	9	1	0	10	0	6	0	6	1	7	0	8	24
05:15 PM	3	3	0	6	5	15	0	20	1	0	0	1	27
05:30 PM	0	2	0	2	2	3	1	6	3	0	1	4	12
05:45 PM	6	1	0	7	5	5	1	11	1	3	0	4	22
Total	18	7	0	25	12	29	2	43	6	10	1	17	85
Grand Total	36	16	0	52	15	50	4	69	10	17	8	35	156
Apprch %	69.2	30.8	0		21.7	72.5	5.8		28.6	48.6	22.9		
Total %	23.1	10.3	0	33.3	9.6	32.1	2.6	44.2	6.4	10.9	5.1	22.4	
Automobiles	35	16	0	51	15	50	0	65	10	17	0	27	143
% Automobiles	97.2	100	0	98.1	100	100	0	94.2	100	100	0	77.1	91.7
Bicycle and Pedestrian	1	0	0	1	0	0	4	4	0	0	8	8	13
% Bicycle and Pedestrian	2.8	0	0	1.9	0	0	100	5.8	0	0	100	22.9	8.3



Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
PM Peak  
Hackberry Dr and Aspen Dr

File Name : Hackberry and Aspen PM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 2



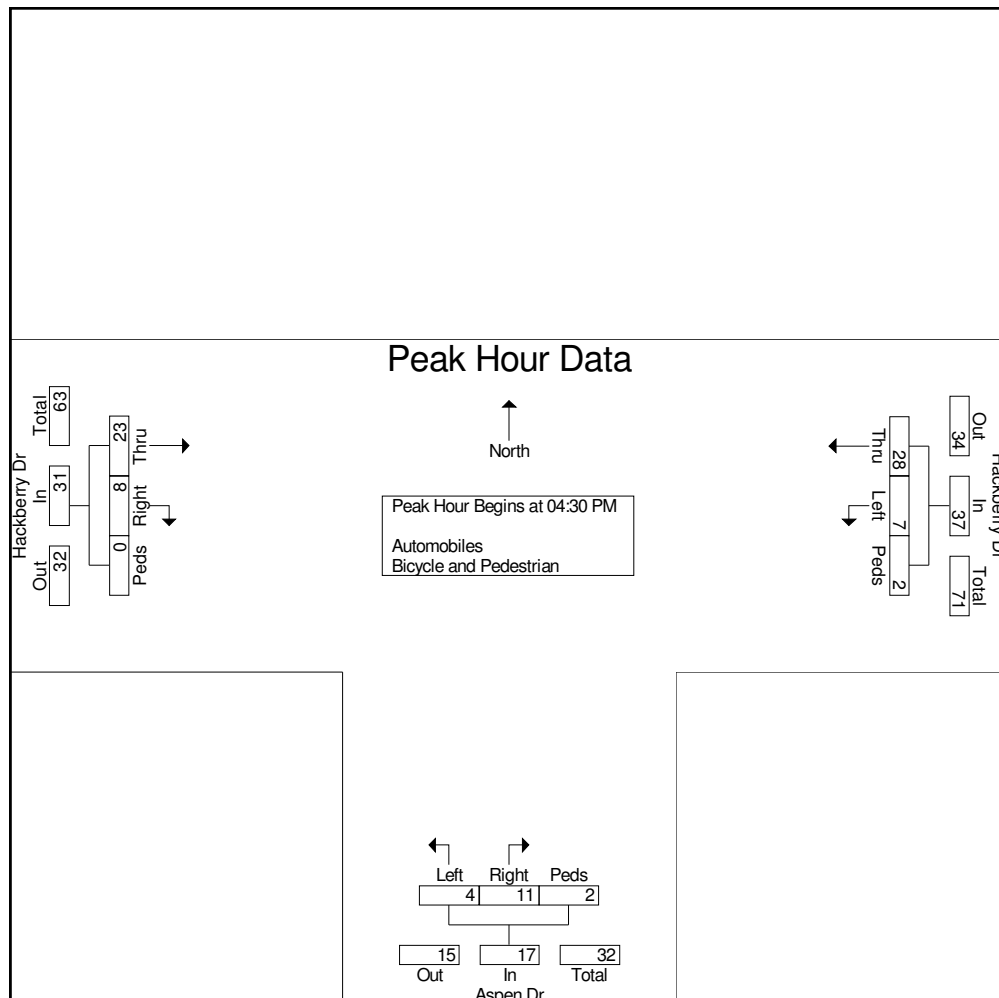


Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
PM Peak  
Hackberry Dr and Aspen Dr

File Name : Hackberry and Aspen PM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 3

	Hackberry Dr Eastbound				Hackberry Dr Westbound				Aspen Dr Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	2	4	0	6	0	3	2	5	2	0	0	2	13
04:45 PM	9	0	0	9	2	4	0	6	0	4	2	6	21
05:00 PM	9	1	0	10	0	6	0	6	1	7	0	8	24
05:15 PM	3	3	0	6	5	15	0	20	1	0	0	1	27
Total Volume	23	8	0	31	7	28	2	37	4	11	2	17	85
% App. Total	74.2	25.8	0		18.9	75.7	5.4		23.5	64.7	11.8		
PHF	.639	.500	.000	.775	.350	.467	.250	.463	.500	.393	.250	.531	.787





Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
AM Peak  
Modell Dr and Widick St

File Name : Modell and Widick AM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

	Widefield Recreation Center Drive Eastbound					Modell Dr Westbound					Widick St Northbound					Widick St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	3	1	0	4	4	15	1	0	20	17	1	2	0	20	1	7	2	0	10	54
07:15 AM	0	4	1	2	7	3	5	0	0	8	6	4	6	1	17	0	4	2	0	6	38
07:30 AM	0	0	0	1	1	6	3	0	0	9	6	1	3	0	10	0	4	0	0	4	24
07:45 AM	0	0	2	1	3	5	7	0	0	12	3	2	0	1	6	0	5	1	0	6	27
Total	0	7	4	4	15	18	30	1	0	49	32	8	11	2	53	1	20	5	0	26	143
08:00 AM	0	6	3	0	9	4	9	0	0	13	13	2	3	0	18	1	8	2	0	11	51
08:15 AM	0	3	13	0	16	5	3	0	0	8	4	2	2	0	8	0	4	1	0	5	37
08:30 AM	1	3	7	0	11	1	1	0	0	2	2	2	1	0	5	0	2	0	0	2	20
08:45 AM	0	0	2	1	3	2	3	0	0	5	1	3	0	1	5	0	1	1	0	2	15
Total	1	12	25	1	39	12	16	0	0	28	20	9	6	1	36	1	15	4	0	20	123
Grand Total	1	19	29	5	54	30	46	1	0	77	52	17	17	3	89	2	35	9	0	46	266
Apprch %	1.9	35.2	53.7	9.3		39	59.7	1.3	0		58.4	19.1	19.1	3.4		4.3	76.1	19.6	0		
Total %	0.4	7.1	10.9	1.9	20.3	11.3	17.3	0.4	0	28.9	19.5	6.4	6.4	1.1	33.5	0.8	13.2	3.4	0	17.3	
Automobiles	1	19	29	0	49	30	46	1	0	77	52	17	17	0	86	2	35	9	0	46	258
% Automobiles	100	100	100	0	90.7	100	100	100	0	100	100	100	100	0	96.6	100	100	100	0	100	97
Bicycle and Pedestrian	0	0	0	5	5	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	8
% Bicycle and Pedestrian	0	0	0	100	9.3	0	0	0	0	0	0	0	0	100	3.4	0	0	0	0	0	3

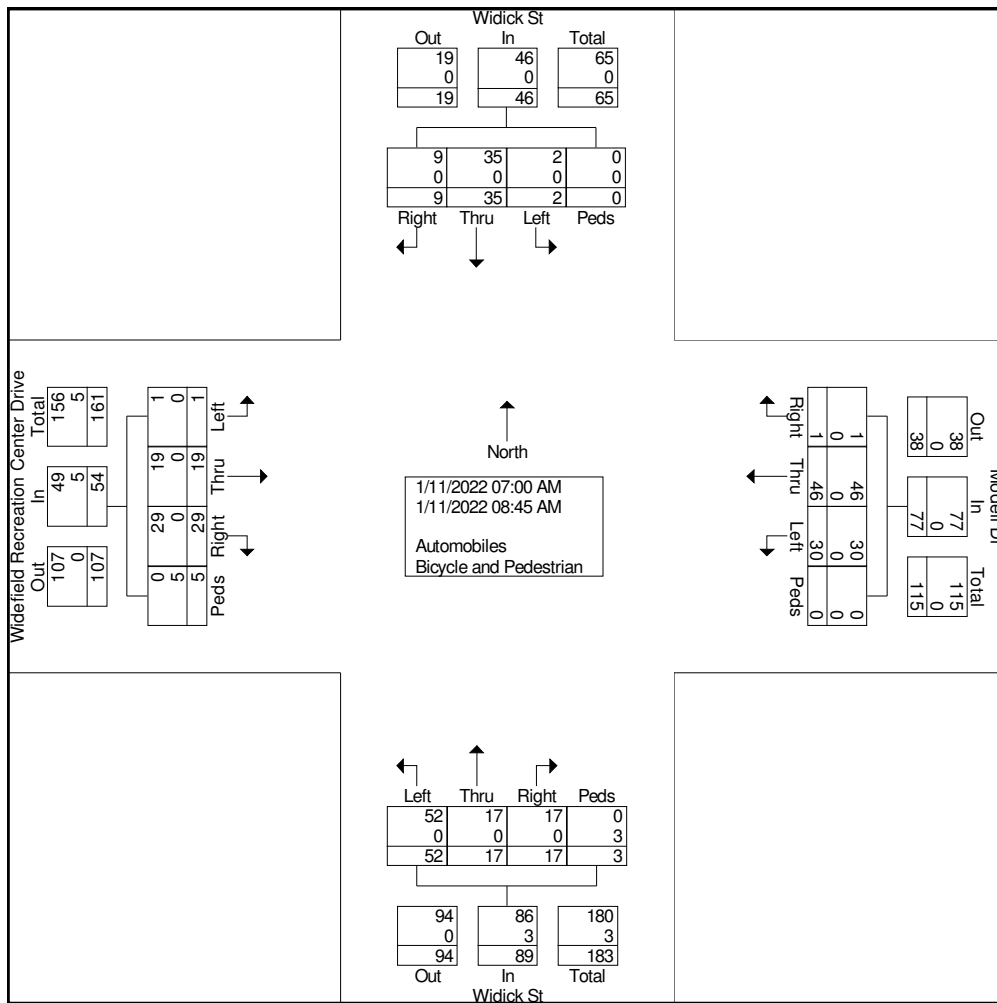




Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
AM Peak  
Modell Dr and Widick St

File Name : Modell and Widick AM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 2



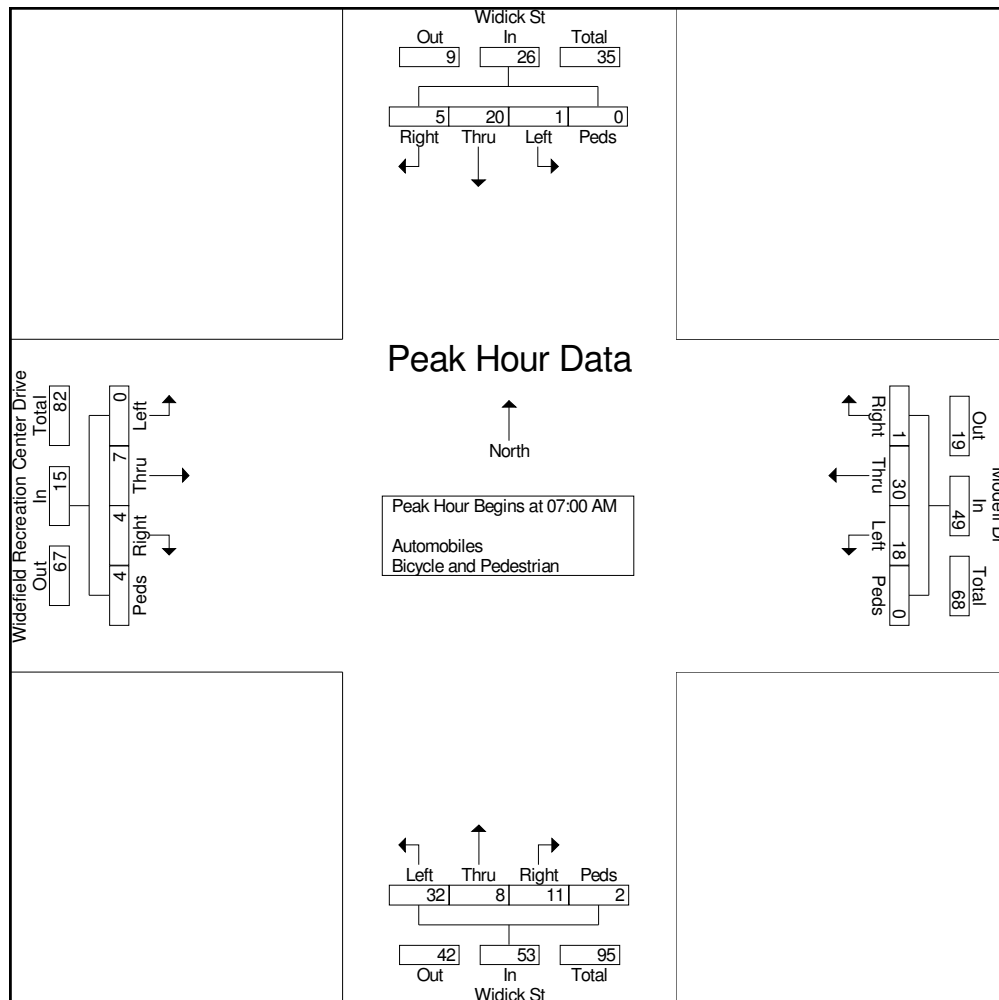


Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
AM Peak  
Modell Dr and Widick St

File Name : Modell and Widick AM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 3

	Widefield Recreation Center Drive Eastbound					Modell Dr Westbound					Widick St Northbound					Widick St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	3	1	0	4	4	15	1	0	20	17	1	2	0	20	1	7	2	0	10	54
07:15 AM	0	4	1	2	7	3	5	0	0	8	6	4	6	1	17	0	4	2	0	6	38
07:30 AM	0	0	0	1	1	6	3	0	0	9	6	1	3	0	10	0	4	0	0	4	24
07:45 AM	0	0	2	1	3	5	7	0	0	12	3	2	0	1	6	0	5	1	0	6	27
Total Volume	0	7	4	4	15	18	30	1	0	49	32	8	11	2	53	1	20	5	0	26	143
% App. Total	0	46.7	26.7	26.7		36.7	61.2	2	0		60.4	15.1	20.8	3.8		3.8	76.9	19.2	0		
PHF	.000	.438	.500	.500	.536	.750	.500	.250	.000	.613	.471	.500	.458	.500	.663	.250	.714	.625	.000	.650	.662





Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
PM Peak  
Modell Dr and Widick St

File Name : Modell and Widick PM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

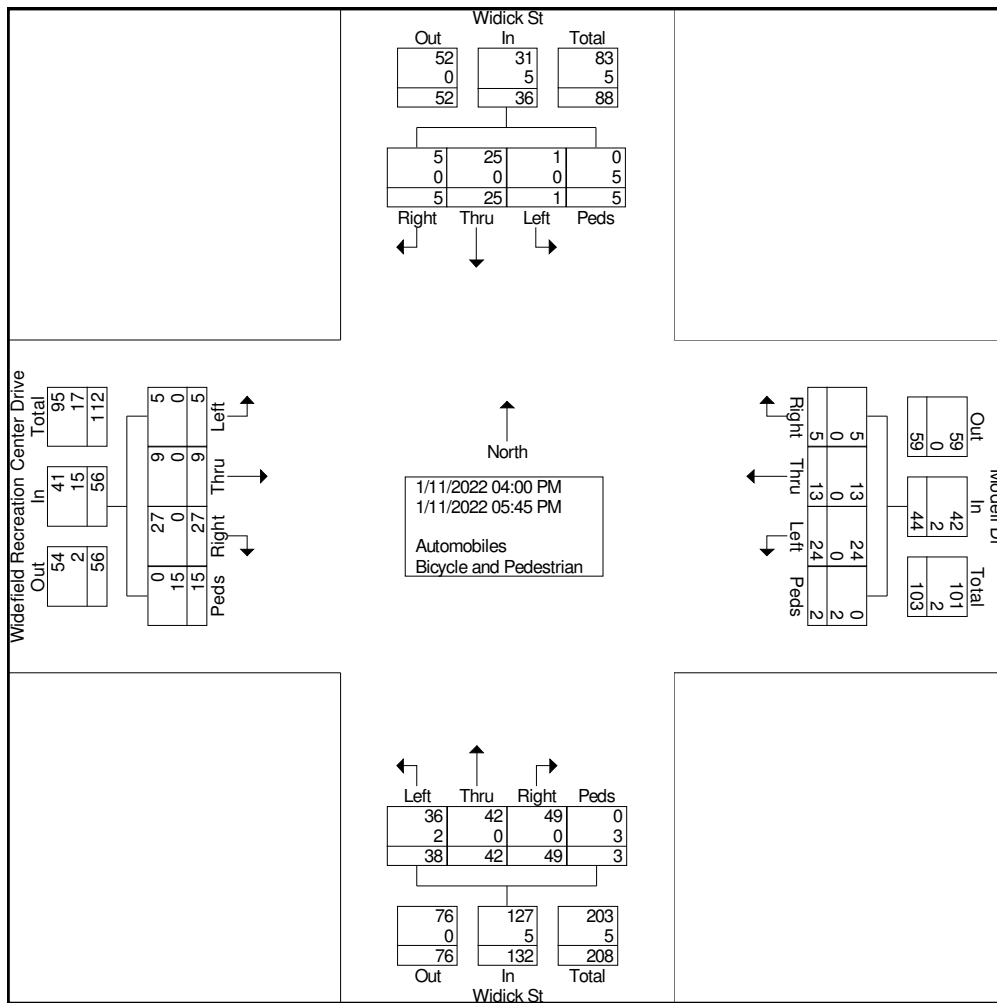
	Widefield Recreation Center Drive Eastbound					Modell Dr Westbound					Widick St Northbound					Widick St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	0	1	2	6	9	1	1	1	0	3	4	4	10	1	19	0	3	0	2	5	36
04:15 PM	1	0	4	3	8	4	1	1	0	6	2	6	2	0	10	1	6	1	2	10	34
04:30 PM	0	3	3	0	6	2	0	0	0	2	1	3	8	0	12	0	1	1	0	2	22
04:45 PM	2	0	4	4	10	5	3	2	0	10	8	8	9	0	25	0	5	1	1	7	52
Total	3	4	13	13	33	12	5	4	0	21	15	21	29	1	66	1	15	3	5	24	144
05:00 PM	2	1	6	0	9	3	2	0	0	5	5	8	7	0	20	0	3	2	0	5	39
05:15 PM	0	3	4	2	9	2	4	0	2	8	4	4	4	2	14	0	2	0	0	2	33
05:30 PM	0	1	0	0	1	7	1	0	0	8	4	5	4	0	13	0	1	0	0	1	23
05:45 PM	0	0	4	0	4	0	1	1	0	2	10	4	5	0	19	0	4	0	0	4	29
Total	2	5	14	2	23	12	8	1	2	23	23	21	20	2	66	0	10	2	0	12	124
Grand Total	5	9	27	15	56	24	13	5	2	44	38	42	49	3	132	1	25	5	5	36	268
Apprch %	8.9	16.1	48.2	26.8		54.5	29.5	11.4	4.5		28.8	31.8	37.1	2.3		2.8	69.4	13.9	13.9		
Total %	1.9	3.4	10.1	5.6	20.9	9	4.9	1.9	0.7	16.4	14.2	15.7	18.3	1.1	49.3	0.4	9.3	1.9	1.9	13.4	
Automobiles	5	9	27	0	41	24	13	5	0	42	36	42	49	0	127	1	25	5	0	31	241
% Automobiles	100	100	100	0	73.2	100	100	100	0	95.5	94.7	100	100	0	96.2	100	100	100	0	86.1	89.9
Bicycle and Pedestrian	0	0	0	15	15	0	0	0	2	2	2	0	0	3	5	0	0	0	5	5	27
% Bicycle and Pedestrian	0	0	0	100	26.8	0	0	0	100	4.5	5.3	0	0	100	3.8	0	0	0	100	13.9	10.1



Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
PM Peak  
Modell Dr and Widick St

File Name : Modell and Widick PM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 2



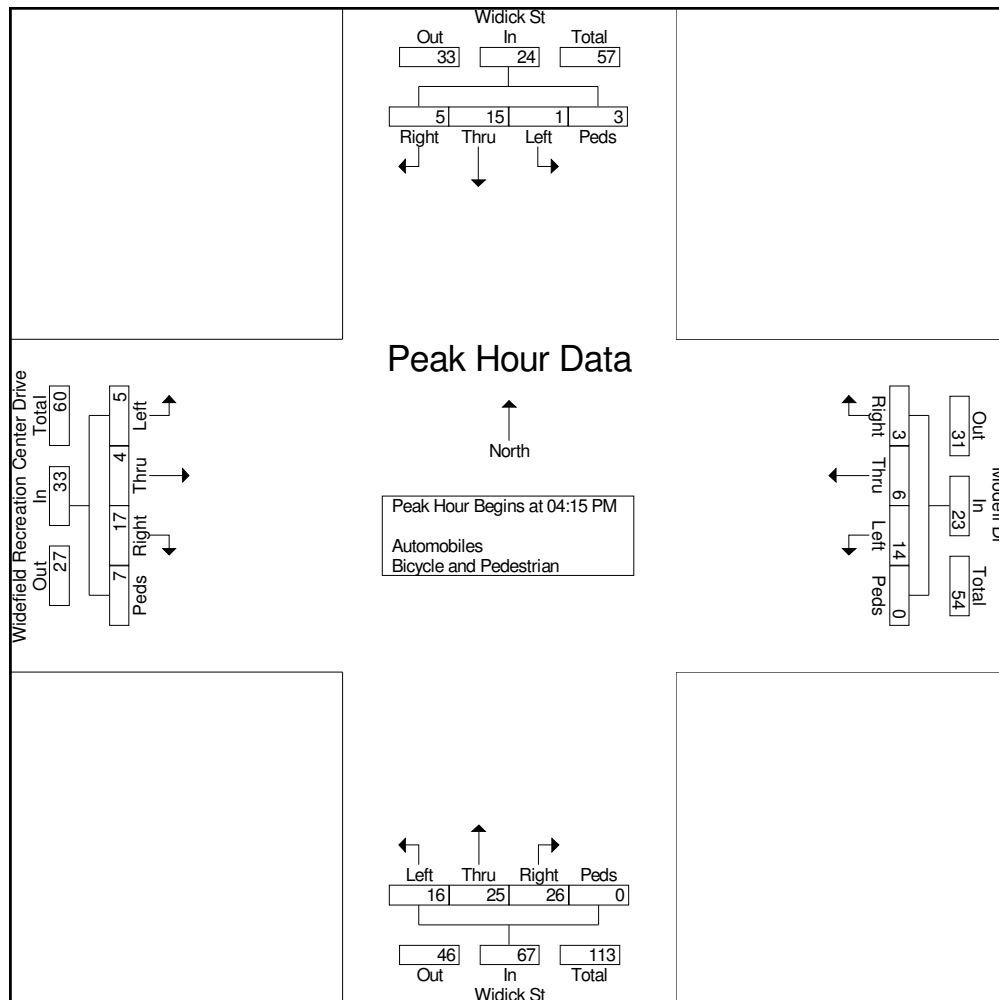


Ridgeview Data  
Collection

El Paso County, CO  
Widefield Recreation Center  
PM Peak  
Modell Dr and Widick St

File Name : Modell and Widick PM  
Site Code : IPO 586  
Start Date : 1/11/2022  
Page No : 3

	Widefield Recreation Center Drive Eastbound					Modell Dr Westbound					Widick St Northbound					Widick St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	1	0	4	3	8	4	1	1	0	6	2	6	2	0	10	1	6	1	2	10	34
04:30 PM	0	3	3	0	6	2	0	0	0	2	1	3	8	0	12	0	1	1	0	2	22
04:45 PM	2	0	4	4	10	5	3	2	0	10	8	8	9	0	25	0	5	1	1	7	52
05:00 PM	2	1	6	0	9	3	2	0	0	5	5	8	7	0	20	0	3	2	0	5	39
Total Volume	5	4	17	7	33	14	6	3	0	23	16	25	26	0	67	1	15	5	3	24	147
% App. Total	15.2	12.1	51.5	21.2		60.9	26.1	13	0		23.9	37.3	38.8	0		4.2	62.5	20.8	12.5		
PHF	.625	.333	.708	.438	.825	.700	.500	.375	.000	.575	.500	.781	.722	.000	.670	.250	.625	.625	.375	.600	.707



# APPENDIX B

## Trip Generation Worksheets

Project Widefield Recreation Center  
 Subject Trip Generation - Recreational Community Center  
 Designed by TES Date January 25, 2022 Job No. 196341001  
 Checked by \_\_\_\_\_ Date \_\_\_\_\_ Sheet No. \_\_\_\_\_ of \_\_\_\_\_

## **TRIP GENERATION MANUAL TECHNIQUES**

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Recreational Community Center (495)

Independent Variable - 1000 Square Feet Gross Leasable Area (X)

Gross Leasable Area = 63,196 Square Feet

X = 63.196

T = Average Vehicle Trip Ends

### **Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (400 Series Page 284)**

Directional Distribution: 66% ent. 34% exit.  
 (T) = 1.91 (X)  
 (T) = 1.91 \* (63.2)  
 T = 121 Average Vehicle Trip Ends  
 80 entering 41 exiting  
 80 + 41 = 121

### **Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (400 Series Page 285)**

Directional Distribution: 47% ent. 53% exit.  
 (T) = 2.50 (X)  
 (T) = 2.50 \* (63.2)  
 T = 158 Average Vehicle Trip Ends  
 74 entering 84 exiting  
 74 + 84 = 158

### **Weekday (400 Series Page 307)**

Daily Weekday  
 (T) = 28.82 (X)  
 (T) = 28.82 \* (63.2)  
 Directional Distribution: 50% ent. 50% exit.  
 T = 1822 Average Vehicle Trip Ends  
 911 entering 911 exiting  
 911 + 911 = 1822






# APPENDIX C

## Intersection Analysis Worksheets

Intersection

Int Delay, s/veh 5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	44	15	15	35	6
Future Vol, veh/h	5	44	15	15	35	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	63	21	21	50	9




Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	141	32	0
Stage 1	32	-	-
Stage 2	109	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	852	1042	-
Stage 1	991	-	-
Stage 2	916	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	825	1042	-
Mov Cap-2 Maneuver	825	-	-
Stage 1	991	-	-
Stage 2	887	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	6.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1015	1567
HCM Lane V/C Ratio	-	-	0.069	0.032
HCM Control Delay (s)	-	-	8.8	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Intersection




Int Delay, s/veh 5.8




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	28	4	11	23	8
Future Vol, veh/h	7	28	4	11	23	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	35	5	14	29	10

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	80	12	0
Stage 1	12	-	-
Stage 2	68	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	922	1069	-
Stage 1	1011	-	-
Stage 2	955	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	905	1069	-
Mov Cap-2 Maneuver	905	-	-
Stage 1	1011	-	-
Stage 2	938	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	5.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1032	1597
HCM Lane V/C Ratio	-	-	0.043	0.018
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	6.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	60	15	27	67	6
Future Vol, veh/h	11	60	15	27	67	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	86	21	39	96	9
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	242	41	0	0	60	0
Stage 1	41	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	746	1030	-	-	1544	-
Stage 1	981	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	700	1030	-	-	1544	-
Mov Cap-2 Maneuver	700	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.2	0		6.9		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 960		1544	-	
HCM Lane V/C Ratio	-	- 0.106		0.062	-	
HCM Control Delay (s)	-	- 9.2		7.5	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0.4		0.2	-	

Intersection						
Int Delay, s/veh	6.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	62	4	22	53	8
Future Vol, veh/h	20	62	4	22	53	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	78	5	28	67	10
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	163	19	0	0	33	0
Stage 1	19	-	-	-	-	-
Stage 2	144	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	828	1059	-	-	1579	-
Stage 1	1004	-	-	-	-	-
Stage 2	883	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	792	1059	-	-	1579	-
Mov Cap-2 Maneuver	792	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.1	0		6.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	979	1579	-	
HCM Lane V/C Ratio	-	-	0.106	0.042	-	
HCM Control Delay (s)	-	-	9.1	7.4	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-	

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	7	4	18	30	1	32	8	11	1	20	5
Future Vol, veh/h	0	7	4	18	30	1	32	8	11	1	20	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	6	27	45	2	48	12	17	2	30	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	178	163	34	164	159	21	38	0	0	29	0	0
Stage 1	38	38	-	117	117	-	-	-	-	-	-	-
Stage 2	140	125	-	47	42	-	-	-	-	-	-	-
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	784	729	1039	801	733	1056	1572	-	-	1584	-	-
Stage 1	977	863	-	888	799	-	-	-	-	-	-	-
Stage 2	863	792	-	967	860	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	727	706	1039	768	710	1056	1572	-	-	1584	-	-
Mov Cap-2 Maneuver	727	706	-	768	710	-	-	-	-	-	-	-
Stage 1	947	862	-	860	774	-	-	-	-	-	-	-
Stage 2	786	767	-	949	859	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.6		10.4		4.6		0.3	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1572	-	-	799	735	1584	-
HCM Lane V/C Ratio	0.031	-	-	0.021	0.101	0.001	-
HCM Control Delay (s)	7.4	0	-	9.6	10.4	7.3	0
HCM Lane LOS	A	A	-	A	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.3	0	-

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	4	17	14	6	3	16	25	26	1	15	5
Future Vol, veh/h	5	4	17	14	6	3	16	25	26	1	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	6	24	20	8	4	23	35	37	1	21	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	133	145	25	142	130	54	28	0	0	72	0	0
Stage 1	27	27	-	100	100	-	-	-	-	-	-	-
Stage 2	106	118	-	42	30	-	-	-	-	-	-	-
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	839	746	1051	828	761	1013	1585	-	-	1528	-	-
Stage 1	990	873	-	906	812	-	-	-	-	-	-	-
Stage 2	900	798	-	972	870	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	818	734	1051	795	749	1013	1585	-	-	1528	-	-
Mov Cap-2 Maneuver	818	734	-	795	749	-	-	-	-	-	-	-
Stage 1	975	872	-	892	800	-	-	-	-	-	-	-
Stage 2	873	786	-	943	869	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9		9.7		1.7		0.4	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1585	-	-	937	805	1528	-
HCM Lane V/C Ratio	0.014	-	-	0.039	0.04	0.001	-
HCM Control Delay (s)	7.3	0	-	9	9.7	7.4	0
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	2	13	14	18	42	1	52	8	11	1	20	9
Future Vol, veh/h	2	13	14	18	42	1	52	8	11	1	20	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	20	21	27	64	2	79	12	17	2	30	14
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	253	228	37	241	227	21	44	0	0	29	0	0
Stage 1	41	41	-	179	179	-	-	-	-	-	-	-
Stage 2	212	187	-	62	48	-	-	-	-	-	-	-
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	700	671	1035	713	672	1056	1564	-	-	1584	-	-
Stage 1	974	861	-	823	751	-	-	-	-	-	-	-
Stage 2	790	745	-	949	855	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	620	636	1035	655	637	1056	1564	-	-	1584	-	-
Mov Cap-2 Maneuver	620	636	-	655	637	-	-	-	-	-	-	-
Stage 1	924	860	-	781	713	-	-	-	-	-	-	-
Stage 2	682	707	-	907	854	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.9		11.5			5.4			0.2			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1564	-	-	780	646	1584	-	-				
HCM Lane V/C Ratio	0.05	-	-	0.056	0.143	0.001	-	-				
HCM Control Delay (s)	7.4	0	-	9.9	11.5	7.3	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.5	0	-	-				

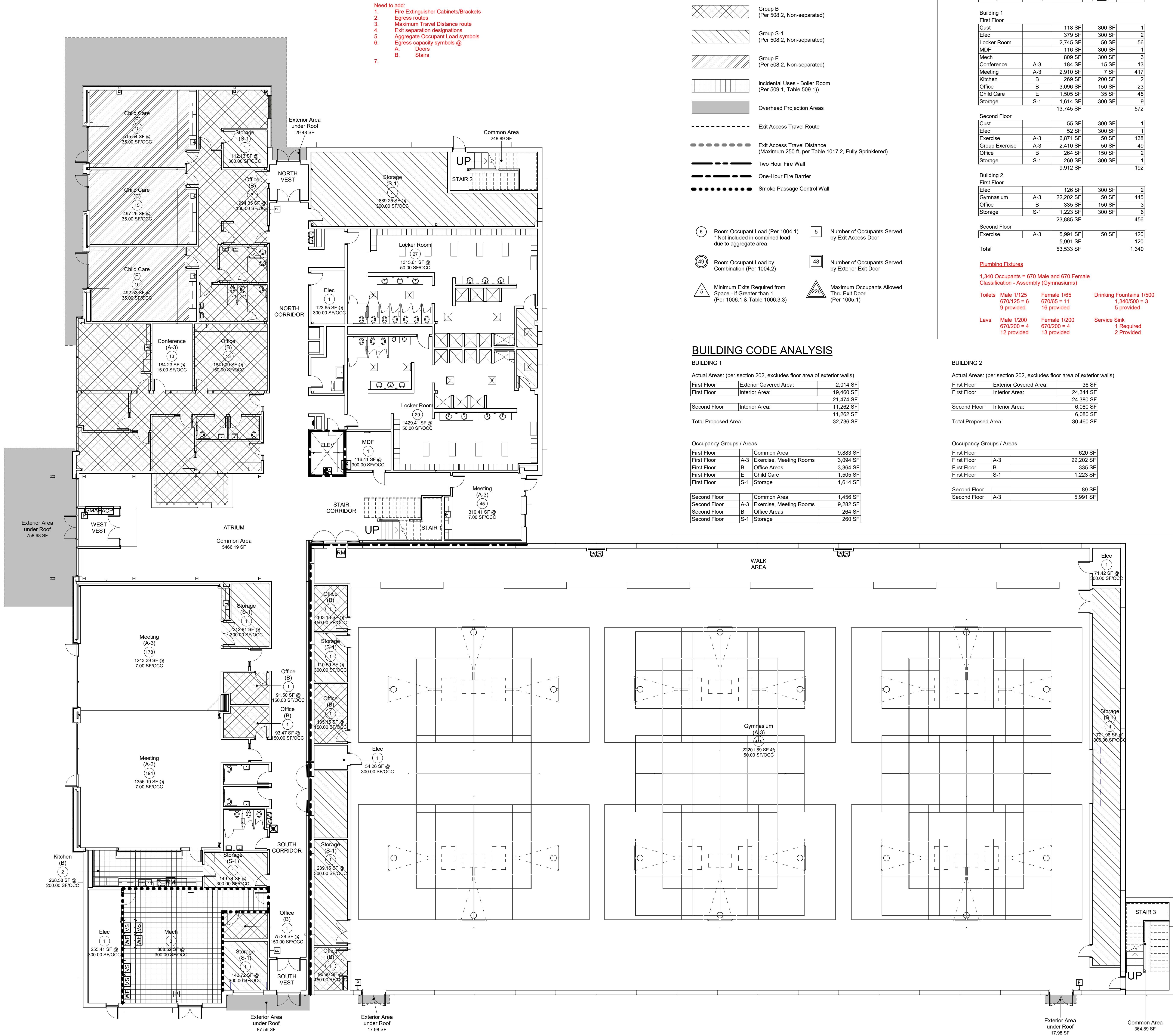


Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	17	38	14	17	3	35	25	26	1	15	9
Future Vol, veh/h	9	17	38	14	17	3	35	25	26	1	15	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	24	54	20	24	4	49	35	37	1	21	13
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	196	200	28	221	188	54	34	0	0	72	0	0
Stage 1	30	30	-	152	152	-	-	-	-	-	-	-
Stage 2	166	170	-	69	36	-	-	-	-	-	-	-
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	763	696	1047	735	707	1013	1578	-	-	1528	-	-
Stage 1	987	870	-	850	772	-	-	-	-	-	-	-
Stage 2	836	758	-	941	865	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	721	673	1047	662	684	1013	1578	-	-	1528	-	-
Mov Cap-2 Maneuver	721	673	-	662	684	-	-	-	-	-	-	-
Stage 1	955	869	-	823	747	-	-	-	-	-	-	-
Stage 2	780	734	-	867	864	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	9.7		10.6			3			0.3			
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1578	-	-	864	694	1528	-	-				
HCM Lane V/C Ratio	0.031	-	-	0.104	0.069	0.001	-	-				
HCM Control Delay (s)	7.4	0	-	9.7	10.6	7.4	0	-				
HCM Lane LOS	A	A	-	A	B	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	0	-	-				

# APPENDIX D

## Conceptual Site Plan





LEGEND

	Group A-3
	Group B (Per 508.2, Non-separated)
	Group S-1 (Per 508.2, Non-separated)
	Group E (Per 508.2, Non-separated)
	Incidental Uses - Boiler Room (Per 508.1, Table 509.1)
	Overhead Projection Areas
	Exit Access Travel Route
	Exit Access Travel Distance (Maximum 250 ft, per Table 1017.2, Fully Sprinklered)
	Two Hour Fire Wall
	One-Hour Fire Barrier
	Smoke Passage Control Wall

	Room Occupant Load (Per 1004.1) Not included in combined load due to aggregate area		Number of Occupants Served by Exit Access Door
	Room Occupant Load by Combination (Per 1004.2)		Number of Occupants Served by Exterior Exit Door
	Minimum Exit Required from Space - if Greater than 1 (Per 1006.1 & Table 1006.3.3)		Maximum Occupants Allowed Thru Exit Door (Per 1005.1)

BUILDING CODE ANALYSIS

BUILDING 1

Actual Areas: (per section 202, excludes floor area of exterior walls)

First Floor	Exterior Covered Area:	2,014 SF
First Floor	Interior Area:	19,460 SF
		21,474 SF
Second Floor	Interior Area:	11,262 SF
		11,262 SF
Total Proposed Area:		32,736 SF

Occupancy Groups / Areas

First Floor	Common Area	9,883 SF
First Floor	A-3 Exercise, Meeting Rooms	3,094 SF
First Floor	B Office Areas	3,364 SF
First Floor	E Child Care	1,505 SF
First Floor	S-1 Storage	1,614 SF
Second Floor	Common Area	1,456 SF
Second Floor	A-3 Exercise, Meeting Rooms	9,282 SF
Second Floor	B Office Areas	264 SF
Second Floor	S-1 Storage	260 SF

OCCUPANT LOAD

Function of Space	Occupancy Group	Occupied Floor Area	Occupant Load Factor (1/___)	Occupant Load
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Building 1

First Floor

Cust		118 SF	300 SF	1
Elec		379 SF	300 SF	2
Locker Room		2,745 SF	50 SF	56
MDF		116 SF	300 SF	1
Mech		809 SF	300 SF	3
Conference	A-3	184 SF	15 SF	13
Meeting	A-3	2,910 SF	7 SF	417
Kitchen	B	269 SF	200 SF	2
Office	B	3,096 SF	150 SF	23
Child Care	E	1,505 SF	35 SF	45
Storage	S-1	1,614 SF	300 SF	9
		13,745 SF		572

Second Floor

Cust		55 SF	300 SF	1
Elec		52 SF	300 SF	1
Exercise	A-3	6,871 SF	50 SF	138
Group Exercise	A-3	2,410 SF	50 SF	49
Office	B	264 SF	150 SF	2
Storage	S-1	260 SF	300 SF	1
		9,912 SF		192

Building 2

First Floor

Elec		126 SF	300 SF	2
Gymnasium	A-3	22,202 SF	50 SF	445
Office	B	335 SF	150 SF	3
Storage	S-1	1,223 SF	300 SF	6
		23,885 SF		456

Second Floor

Exercise	A-3	5,991 SF	50 SF	120
		5,991 SF		120
Total		53,533 SF		1,340

Plumbing Fixtures

1,340 Occupants = 670 Male and 670 Female

Classification - Assembly (Gymnasiums)

Toilets	Male 1/125	Female 1/65	Drinking Fountains 1/500
	670/125 = 6	670/65 = 11	1,340/500 = 3
	9 provided	16 provided	5 provided
Lavs	Male 1/200	Female 1/200	Service Sink
	670/200 = 4	670/200 = 4	1 Required
	12 provided	13 provided	2 Provided

BUILDING 2

Actual Areas: (per section 202, excludes floor area of exterior walls)

First Floor	Exterior Covered Area:	36 SF
First Floor	Interior Area:	24,344 SF
		24,380 SF
Second Floor	Interior Area:	6,080 SF
		6,080 SF
Total Proposed Area:		30,460 SF

Occupancy Groups / Areas

First Floor	Common Area	620 SF
First Floor	A-3	22,202 SF
First Floor	B	335 SF
First Floor	S-1	1,223 SF
Second Floor		89 SF
Second Floor	A-3	5,991 SF

GENERAL BUILDING INFORMATION

CODE BASIS: 2021 INTERNATIONAL BUILDING CODE (IBC)  
2021 INTERNATIONAL FIRE CODE (IFC)  
2018 INTERNATIONAL PLUMBING CODE (IPC)  
2021 INTERNATIONAL MECHANICAL CODE (IMC)  
2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)  
2020 NATIONAL ELECTRICAL CODE (NEC)

CH 3 Occupancy Types: (Non-Separated)

A-3	Exercise, Meeting Rooms
B	Office areas
E	Child Care
S-1	Storage

CH 5 Building Height and Areas

Table 504.3 Allowable Height

A	75 ft	Actual Height:	34 ft
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Table 504.4 Allowable Stories

A-3	3	Actual Stories:	2
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506.2 Allowable Area determination

506.2.2 Non-Separated Mixed Occupancy, single story buildings.

Table 506.2 Allowable Area Factor (At per story):

A 38,000 sf (One Story)

28,500 sf (Multi-story)

Equation 5-3:

Aa = [At + (Ns x If)]

Aa = [28,500 + (9,500 x 0.50)] = 33,250 sf

Aa: Allowable Area (sf) per floor  
At: Tabular area factor - Sprinklered building 28,500 sf  
Ns: Tabular area - Non-sprinklered building 9,500 sf  
If: Area Factor increase due to frontage (per Table 506.3.3)  
50-75% open for 30 ft or greater 0.50

NOTE: Total Area of 63,196 sf exceeds allowable area. A fire wall shall be included in order to create separate buildings: Building 1 and Building 2. See Building Code Analysis for each Building.

Section 508 - Mixed Use and Occupancy

- Each portion of a building shall be individually classified in accordance with Section 302.1.
- 508.3 Nonseparated Occupancies. The requirements of the Code shall apply to each portion of the building based on the occupancy classification of that space.
- The most restrictive provisions of Chapter 9 that apply to the nonseparated occupancies shall apply to the total area.
- Section 508.3 - Nonseparated occupancies. Allowable area and height shall be based on the most restrictive occupancy group: A-3.
- 508.3.3 No separation is required between nonseparated occupancies.

CH 6 Types of Construction

Construction Type: Type II-B, Fully Sprinklered

An automatic sprinkler system shall be installed in accordance with IBC Section 903, the International Fire Code and local codes.

Table 601 Fire resistance rating requirements for building elements (hours)

Type II-B	Primary Structural Frame	0
	Bearing Walls	0
	Non-bearing walls and partitions (interior)	0
	Floor Construction and secondary members	0
	Roof Construction and secondary members	0

CH 8 Interior Finishes

Table 803.13 Interior Wall and Ceiling Finish Requirements by Occupancy

	Exit Stairways	Corridors	Rooms
Group A-3	B	B	C
Group B, E	B	B	C
Group S	C	C	C

CH 9 Fire Protection Systems

Section 906 - Portable fire extinguishers

- Portable fire extinguishers shall be installed

Section 912 - Fire Department Connections

- Fire Department Connections shall be installed in accordance with the NFPA

CH 10 Means of Egress

Occupant Loads and required Egress (Table 1004.5 and Table 1006.3.3)

- See Building Code Analysis for each Building

Section 1005 - Egress Width factor per occupant

- Stairways: 0.20 inches
- Other components: 0.15 inches

Section 1006 - Exit Access

- Common Path of Travel  
A, E 75'  
B, S 100'  
Maximum occupant load for one exit or exit access:  
A, B, E 49  
S 29

Section 1007 - Exit and exit access doorway configuration

- 1007.1.1, Exception 2: Exit access doorways shall be placed a distance apart equal to or not less than 1/3 the length of the maximum overall diagonal of the space served.

Table 1017.2 Exit Access Travel Distance:

A, E, S	250 feet
B	300 feet

Table 1020.2 Corridor Fire Resistance Rating in Sprinklered Buildings

A, B, E, S	0 hours required.
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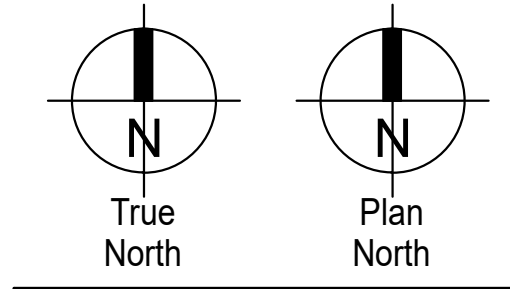
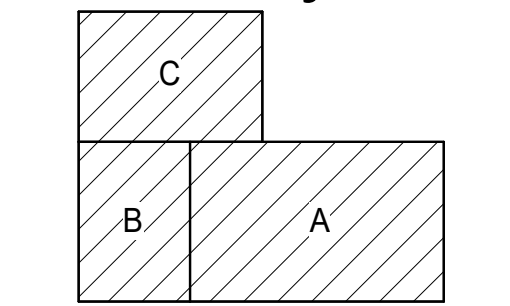
Section 1021

- All spaces within each story shall have access to the minimum number of approved independent exits as specified in Table 1021.1. The required number of exits from any story shall be maintained until arrival at grade.

CH 16 Structural Design

Table 1604.5 - Structural Design Risk

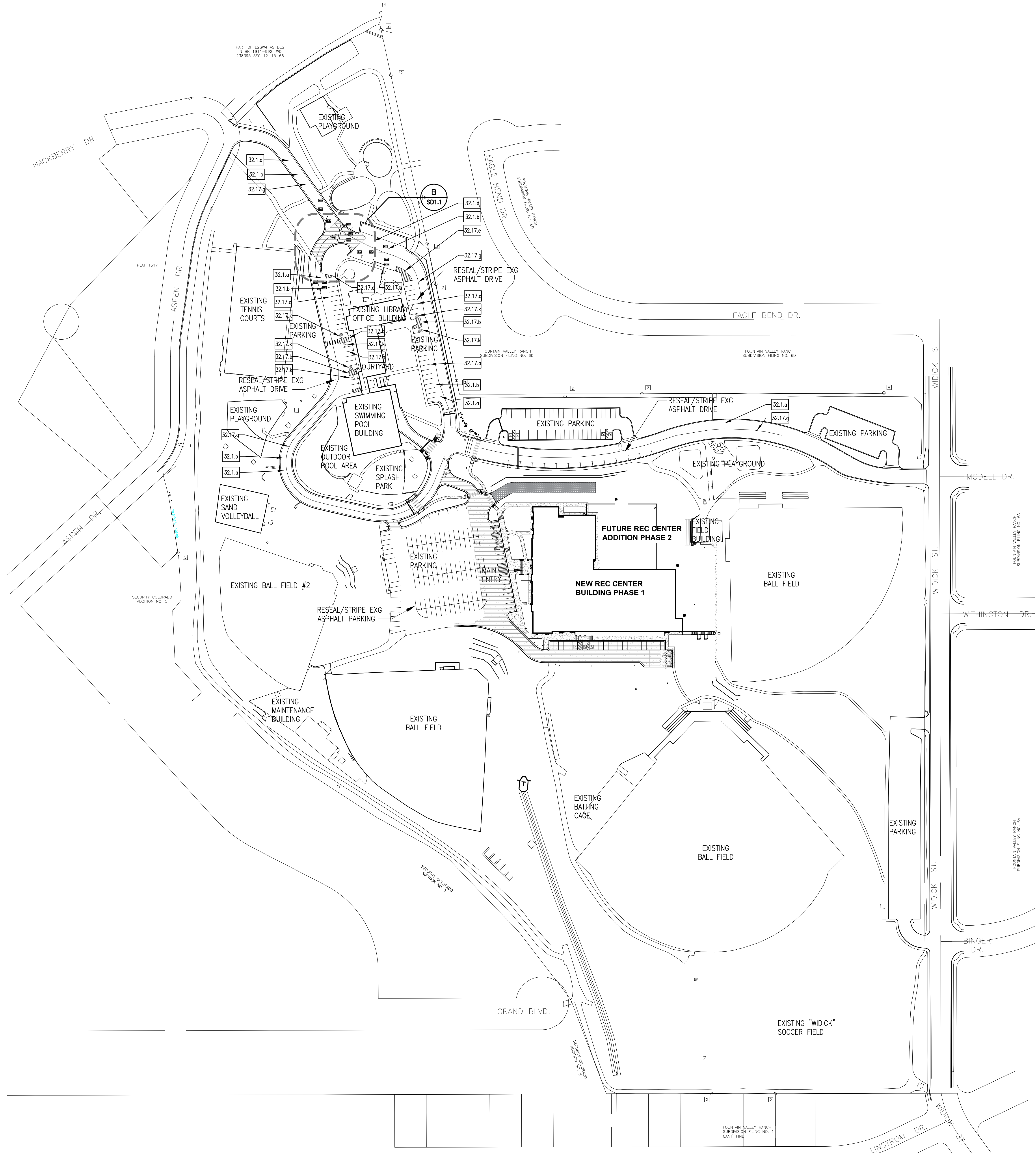
- Category III







B ENLARGED SITE PLAN – NORTH DRIVE REVISIONS  
1" = 20'-0"



A OVERALL SITE PLAN – BASE BID  
1" = 80'-0"

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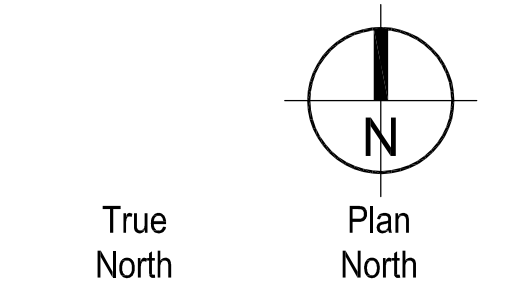
**Widefield Parks and Recreation Facility Expansion**  
705 Aspen Drive, Colorado Springs, CO 80911  
Widefield School District 3  
1820 Main Street  
Colorado Springs, CO. 80911



**Bid Set**  
*Not for Construction*

Drawn: \_\_\_\_\_ TAH  
Checked: \_\_\_\_\_ DKO  
Issued: \_\_\_\_\_ 28 January 2022  
Revised: \_\_\_\_\_

**Area Key Plan**



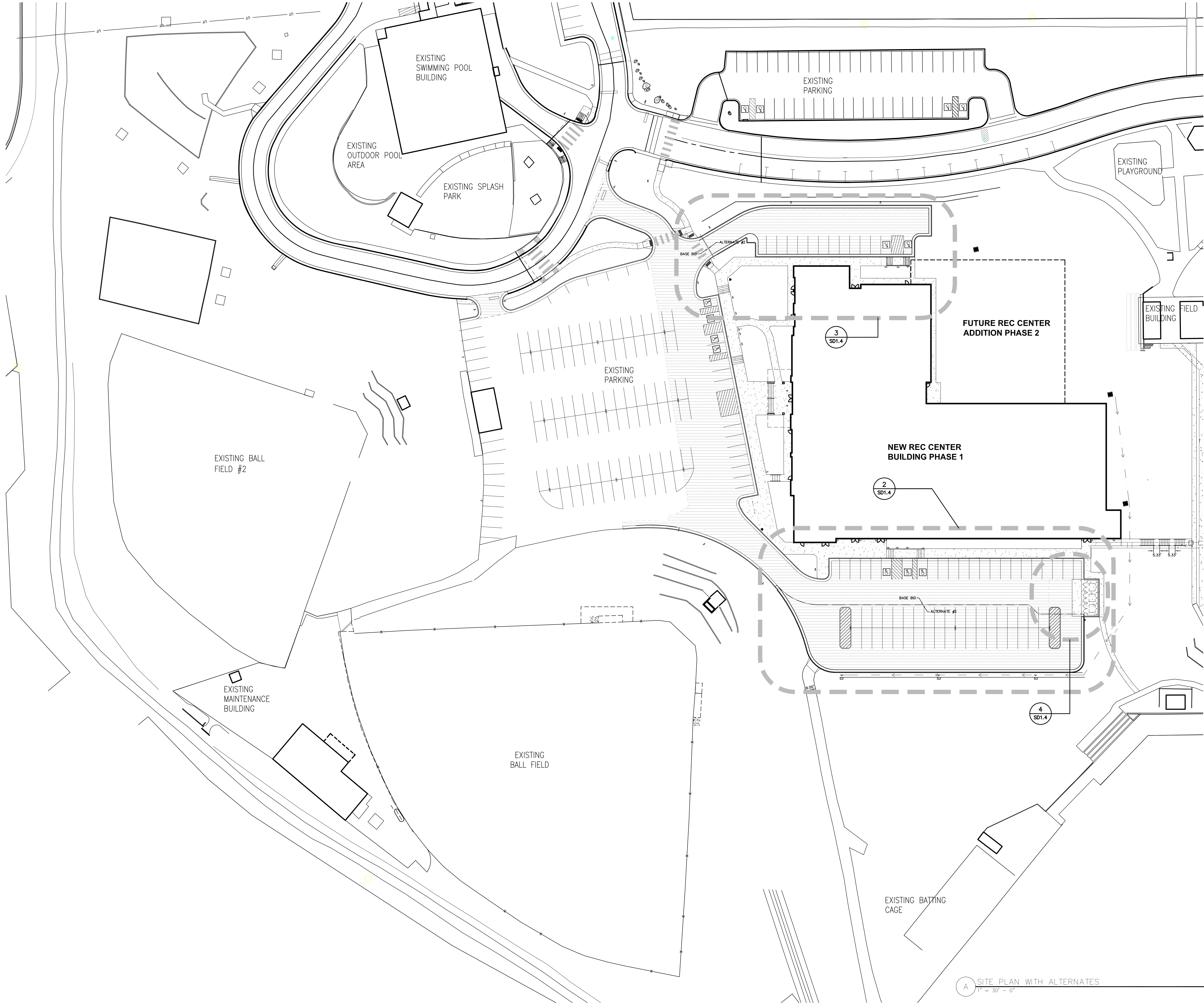
**Base Site Plan**

**SD1.1**

Project No. \_\_\_\_\_ 21-004  
The LKA Partners Incorporated

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**Area Key Plan**

