NEC ELLIOT ROAD
& POWER ROAD

Rezone, Site Plan Review and Design Review Narrative

East of the NEC of Power Road and Elliot Road

Case No. ZON21-00746

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A. Purpose of Request

The purpose of this request is to process Rezone, Site Plan Review (SPR) and Design Review (DR) applications for a new employment/industrial business park. The subject site is comprised of roughly 26.49 acres located approximately 590 feet east of the northeast corner of Elliot Road and Power Road, and immediately next to the Flood Control District of Maricopa County (the "Property").

The application requests to rezone property from RS-43 to Planned Area Development (PAD) Light Industrial (LI). The LI zoning will provide a base of desired uses and development standards for the project, while the PAD Overlay will provide for appropriate modifications for the specific site and intended uses.

B. General Plan & Sub Areas

The Mesa General Plan map designates the site as Mixed-Use Activity/Employment. This type of designation is consistent with the surrounding industrial zoning and uses planned for this area. Examples of employment districts include large manufacturing facilities, business parks and warehousing. The development, as proposed, meets the intent of the General Plan.

The Property is also located in the Inner Loop of the Gateway Strategic Development Plan. Per the Gateway Strategic Plan, the Inner Loop District contains a wide variety of uses which includes employment industrial as proposed in this application. Due to the Inner Loop District's proximity to the airport and association with increasing over-flight activities, supportive employment should be provided. The proposed development meets the intent of the Mesa Gateway Strategic Development Plan.

The subject site is also located within the Mixed-Use Activity District - Community Scale District of the Inner Loop Land Use Study. The goal of this character type is to provide high quality opportunities for commercial and employment activities consistent with the needs of today's consumer. The proposed development is consistent with the intent of the Mixed-Use Activity District when considering the balance of other commercial and employment uses planned at this corner of the intersection.

The subject site is also located within the Airfield Overlay Area 3 (AOA 3). The proposed development complies with the provisions of Chapter 19 of the MZO.

C. Existing and Surrounding Zoning

The Property is currently zoned Agricultural (AG). To the north of the property is a storage facility zoned LI. To the west is vacant land zoned LC. To the east is a large wash owned by the Flood Control District of Maricopa County. Further east is land zoned LI for a planned data center. To the south are the offices of the Roosevelt Water Conservation District.

D. Project Overview

i.) <u>Site Layout</u>

The proposed project includes the development of roughly 456,889 square feet of new, industrial, manufacturing and employment space. The preliminary site plan distributes the space amongst four (4) buildings which are oriented to provide visual interest from the adjacent right-of-way while also screening

or back-of-house activities such as loading, truck maneuvering, utility equipment and refuse containers.

Building A fronts onto Elliot Road which will be beautified with new landscaping and streetscape improvements. The remaining buildings are internal to the site and maintain similar orientation, design, and circulation throughout the business park with loading and docks between the buildings. Pedestrian connects are included onto Elliot Road from this building. Vehicle parking is efficiently dispersed throughout the site, while loading, refuse and storage areas are strategically centered within the site and screened from view.

The driveway entry points along Elliot Road are broken down to provide a clear distinction and minimize the impact of truck traffic to auto traffic. Drive entry points are also designed with the city standard deceleration lanes to help with the flow of traffic. Access to the site will be provided by Elliot Road which will be improved per city standards. These improvements will include the installation of curb, gutter, paving and sidewalk as well as streetlights and frontage landscaping.

The site has been strategically designed to meet the high-quality design and development standards the City of Mesa strives while providing an appropriate development capable of meeting the needs of today's industrial market and discerning tenants. The project provides building depths, ceiling heights and dock configurations appealing to a wide range of tenants interested in locating in the Phoenix Mesa Gateway area to help support the population growth in Mesa and the broader Southeast Valley.

ii.) Building Design

The buildings are designed to have 30' and 32' feet clear height between speed bays with a top of parapet height around 40-42' feet. Exterior wall design is concrete tilt panel construction, with large semi-uninterrupted volumes, with focus on the corners of the building for the suite and office entry points. Suite entry points have large, recessed storefronts with canopy that overhang the envelope of the building. These entry points are ideal for placement of signage. The short sides (non-dock area) building panels will have articulated panels to help break up the building mass. On the long sides of the building, the panels are broken up with articulation near the entry points. At the loading dock doors, the exterior panels are enhanced using paint colors, reveals and segmented parapet design. The building colors been selected to create a modern design that will last for years. All fire department fire risers and roof access ladders are located inside the buildings. Roof downspouts are internalized near the office entry points and street view. All other roof drains that are in the dock area shall be exterior downspouts painted to match paint design scheme to help hide.

iii.) **Landscape Concept**

The landscape design is devised to compliment the building architecture and overall site layout while providing an attractive, low water landscaping solution. Landscape buffers are provided along the street frontages and complimented with parking lot screen walls. The spacing and concentration of required planting quantities will be strategic to enable desired views into the site while screening parking and other undesirable views.

Internal landscape and hardscape design has been enhanced to help create a better environment for the employee with common areas for relaxing and gathering, adequate landscape island in the parking areas and foundation base around buildings. The preliminary landscape plan illustrates the potential to divide the common open space amenity into many featured areas throughout the site that can be improved for

the benefit of the employees and guests. The defined areas will provide seating and tables for coffee and lunch breaks, and shade trees for additional seasonal comfort. Plant material will be selected for color, texture, scale, and seasonal flowering placed in a thematic pattern to reinforce the landscape theme throughout the project.

iv.) Infrastructure / Utilities & Drainage

Water will be provided to the site by the City of Mesa and is available within the existing main located within Elliot Road. There will be a looped on-site water system that will connect to the existing 20-inch main within Elliot Road. The on-site water loop is anticipated to be an 8-inch water main.

Sewer will be provided to the site by the City of Mesa and is available within the existing main located within Elliot Road. There will be an 8-inch public on-site sewer system that will service all the buildings within this development. The existing main in Elliot Road is an 8-inch sewer line.

The grading and drainage for the site will be designed to retain the 100yr-2hour storm event in accordance with the City of Mesa drainage design guidelines. Storm drainage will be conveyed via internal drain or downspouts and overland flow across the parking lots and truck dock areas into either catch basins or curb openings which will outfall to a combination of surface and/or underground retention areas. The required storage volume will dissipate within 36 hours via a combination of natural percolation and a pumped bleed-off. Any off-site drainage impacts to the site will be routed through the site to maintain its historical drainage pattern.

E. Planned Area Development (PAD)

The purpose of this request is to provide for reasonable and appropriate development of the Property for a variety of sought after, high-quality employment uses including, but not limited to e-commerce, aerospace, logistics, industrial and manufacturing uses. The Unbound Gateway PAD is specifically tailored to provide assurances of a high-quality project while also providing the required flexibility to accommodate potential end users – some of which may be unknown at this time.

i) Permitted Uses:

All uses allowed under the current City of Mesa General Industrial (GI) zoning district are permitted within this PAD.

ii) Development Standards Table:

The development standards of the Light Industrial (LI) district shall apply unless otherwise modified by this PAD and specifically this section. Further detail and justification for the deviations are provided in Section C below.

Standard	LI Zoning Ordinance Standards	Proposed PAD Overlay Standards
Employment District – LI (Table 11-7-3)		

Lot and Density Standards		
Minimum Site Area (acre)	**1.0**	**1.0**
Minimum Lot Width (ft)	**100**	**100**
Minimum Lot Depth (ft)	**100**	**100**
Lot Coverage	**90%**	**90%**
Building Form and Location		
Maximum Height (ft)	40’	42’
Minimum Setback along Property Lines or Building and Parking Areas (11-7-3)		
Front and Street-Facing Side Interior Side and Rear: Adjacent to LC and LI District	**Arterial:** 15 ft **Side:** 1 ft. of setback for each foot of building height with minimum 20 ft. setback next to LC zoning. **Rear:** no setback required next to LI zoning	**Arterial:** 15 ft Side (West): 10 ft Side (East): 10-15 ft Rear: 29 ft
Supplemental Standards – This Development complies with all supplemental standards except as modified below:		
On-site Parking, Loading and Circulation (11-32)		
Parking Spaces Required	**Table 11-32-3.A: Group Industrial Buildings and Uses:** 75% at 1 space per 500 sqft plus 25% at 1 space per 375 sqft (Required: 990 spaces)	**Table 11-32-3.A: Group Industrial Buildings and Uses:** 75% at 1 space per 975 sqft plus 25% at 1 space per 375 sqft (Provided: 656 spaces)
General Site Development Standards (11-30) / (11-15-5(B))		
Screening:	**Parking Areas:** **11-30-9(H):** Parking Areas and drive aisles shall be screened form street(s) with masonry wall,	**Parking Areas:** **11-30-9(H):** Parking Areas and drive aisles shall be screened form street(s) with masonry wall,

	berm or combination of walls/berms **11-30-9(H).7:** When using a screen wall there shall be a landscaped setback of at least 5 feet between the screen wall and the parking area.	berm or combination of walls/berms **11-30-9(H).7:** When using a screen wall there shall be a landscaped setback of at least 5 feet between the screen wall and the parking area.
Truck Docks, Loading and Service Areas:	**Screening:** **11-30-13(C):** Docks, loading and service areas in any district except the GI and HI districts shall be screened from public view. Screening shall consist of a solid masonry wall at least 8 feet in height or opaque automated gates.	**Screening:** **11-30-13(C):** Docks, loading and service areas in any district except the GI and HI districts shall be screened from public view. Screening shall consist of a solid masonry wall at least 8 feet in height or opaque automated gates.
Outdoor Storage:	**Table 11-30-7:** Not permitted in front or street-facing side yards. Permitted in interior side and rear yards, or outside of required yards, subject to the standards of this Section	**Table 11-30-7:** Not permitted in front or street-facing side yards. Permitted in interior side and rear yards, or outside of required yards, subject to the standards of this Section
Bicycle Parking 11-32-8		
Bicycle Parking	**11-32-8:** 1 bike space per every 10 vehicles spaces provided for the first 50 bike space; 1 per 20 above the first 50 bike spaces.	**11-32-8:** 1 bike space per every 10 vehicles spaces provided for the first 50 bike space; 1 per 20 above the first 50 bike spaces.
Landscaping (11-33) / (11-15-5(B))		
Interior Parking Lot Landscaping	**11-33-4 (A)** **Applicability.** The interior parking lot landscaping	**11-33-4 (A)** **Applicability.** The interior parking lot landscaping

	standards of this Section apply to all off-street parking lots containing 10 or more parking spaces. They do not apply to vehicle / equipment storage lots or vehicle and equipment sales lots. In addition, refer to Chapter 32 for additional parking lot standards	standards of this Section apply to all off-street parking lots containing 10 or more parking spaces. They do not apply to vehicle / equipment storage lots, vehicle and equipment sales lots, or truck loading areas or the parking spaces provided in such truck loading areas. In addition, refer to Chapter 32 for additional parking lot standards.
Perimeter Landscaping	**11-33-3** Non-single residence uses adjacent to other non-single residence uses or districts shall provide a 15-foot landscape yard.	**11-33-3** 10-foot landscape yard on west side; 10 to 15-foot landscape yard on east side.
Interior Parking Lot Landscaping	**11-33-4** Non-single residence uses adjacent to other non-single residence uses or districts shall provide a 15-foot landscape yard.	**11-33-4** 10-foot landscape yard on west side; 10 to 15-foot landscape yard on east side.
Foundation Base Landscaping	**11-33-5** A 15-foot-wide foundation base shall be provided, measured from face of building to face of curb along the entire length of the exterior wall. For buildings with corner entries, both adjacent walls require a 15-foot-wide foundation base. An additional foundation base shall be provided at the entrance to create an entry plaza area. The plaza area shall have a minimum width and depth of 20 feet, and a	**11-33-5** A 8-foot-wide foundation base shall be provided, measured from face of building to face of curb along the entire length of the exterior wall. For buildings with corner entries, both adjacent walls require a 15-foot-wide foundation base. An additional foundation base shall be provided at the entrance to create an entry plaza area. The plaza area shall have a minimum width

	minimum area of 900 square feet. A minimum 10-foot-wide foundation base shall be provided, measured from face of building to face of curb along the entire length of the exterior wall adjacent to parking stalls. A minimum 5-foot-wide foundation base shall be provided, measured from face of building to face of curb along the entire length of the exterior wall adjacent to drive aisles as illustrated.	and depth of 20 feet, and a minimum area of 900 square feet. A minimum 8-foot-wide foundation base shall be provided, measured from face of building to face of curb along the entire length of the exterior wall adjacent to parking stalls. A minimum 5-foot-wide foundation base shall be provided, measured from face of building to face of curb along the entire length of the exterior wall adjacent to drive aisles as illustrated.

iii) Amendment to Design LI Standards

Below is a summary of the development standard modifications being requested for this PAD application along with a justification for each deviation.

1. Landscaping Foundation Base on Exterior Walls. A 15-foot-wide foundation base is called for from the face of building to face of curb along the entire length of the exterior wall. A deviation is requested to reduce this measurement to 8-feet. This minor request enables adequately sized drive-aisles, parking spaces and parking landscape islands and will have minimal, if any, effect on the overall visual appearance or feel of the site.

2. Perimeter Landscape Reduction. Normally a 15' side yard landscape setback would be required for the west side next to vacant land zoned LC. This application requests a reduction to 10' in order to accommodate a looped drive aisle.

3. Interior Parking Lot Landscape Reduction. Normally a 15' side yard landscape setback would be required for the west side next to vacant land zoned LC. This application requests a reduction to 10' in order to accommodate a looped drive aisle.

4. Building setback Reduction. This application satisfies the required building setback. However, due to the looped drive aisle, a 10' setback is requested along the west; 29' along the north, and 10' along the east side.

5. Height Increase. This application requests a height increase to 42' feet. The extra 2 feet of height is consistent with the City's General Plan designation of Employment. Employment districts may include some taller retail and commercial uses that support the employment uses. The use is

consistent with the LI zoning district, building and safety standards. This requested height provides the greatest flexibility for potential and anticipated uses and is in keeping with the height already afforded to the area with the ERTC. Thus, it will have no detrimental impact on the adjacent or surrounding properties in the area.

6. Parking Reduction. Mesa Code requires "Group Industrial Buildings" parking be provided at: 75% at 1 space per 500 square feet plus 25% at 1 space per 375 square feet. Using this computation, over 990 parking spaces would be required for this site. Such an excess of parking represents a massive waste of resources and space and would blanket a vast amount of the site with asphalt. The SUP proposes a more realistic ratio of 75% at 1 space per 975 square feet plus 25% at 1 space per 375 square feet, equating to 656 spaces required under the current design. This is more than adequate to serve the project. This parking ratio is also consistent with newer industrial and employment centers.

F. Quality Development Design Guidelines

This application has been prepared to be consistent with the goals and objectives of the City of Mesa Quality Development Design Guidelines dated December 2019 pertaining to Industrial developments:

1. Site Design:

Building Placement & Orientation

The buildings have been oriented to provide a strong relationship with the street while screening internal truck loading dock areas from public right-of-way. Outdoor public spaces for sitting, eating, gathering, etc. have been provided within the site. Buildings have been placed on the site in a coordinated manner to provide order to employees and visitors.

Parking, Loading, & Vehicular Access

Parking is dispersed throughout the site to provide convenience for employees and visitors, while also avoiding a "sea of asphalt" where parking is a dominant feature. A decorative masonry screen wall is provided along Elliot Road to screen parking from public view and identify public entry and access. Landscaping is also provided throughout the parking areas (except in loading areas). The loading and service areas for the project are internal to the site, screened from public view by the buildings. Loading and service areas are clearly delineated to avoid conflicts with pedestrians, employee/visitor vehicles or bikes.

Employee and Visitor Amenity Areas

Employee and visitor amenities areas are shown on the site plan at 1% of building gross area. The minimum size of any common open space is 300 sf with a minimum dimension of 15 feet in any direction. At least 50 percent (50%) of the common open space is open to the sky and at least 75 percent (75%) of the open space is landscaped and maintains live plant materials.

Landscaping & Shading

Landscape design of streetscape along Elliot Road and throughout the development consists of native vegetation found in dry desert climates meeting Mesa landscape design standards. Proposed landscape concepts are consistent throughout the development which will help visually tie the development together. An automatic irrigation system for all landscaping includes sustainable drip irrigation systems to minimize excess overwatering and wasting of precious resources.

Average foundation base landscaping at the perimeter of industrial buildings is provided per City of Mesa standards and coordinated with the city's fire department for arial access roads, arial access points and design guidelines for industrial buildings.

Employee and visitor Amenity spaces (1% of gross building area) as required by City of Mesa for industrial buildings have been provided. Employee and Visitor Amenity spaces include landscaping, tree shading and site furnishings for use by employees and visitors.

Screening

Low perimeter masonry screen walls are provided where parking along Elliot Road is proposed. Industrial buildings are oriented to screen loading dock areas from public view and are oriented to provide primary facades facing Elliot Road. Loading and service yards for industrial buildings are internal to the site and screened from public view. Enclosed service areas for buildings are concealed from public view via 8'-0" high decorative masonry screen walls, motorized sliding gates and by adjacent buildings. Motorized sliding gates will be normally closed until tenant allows access to drivers. Gates automatically open and close on departure from site. Gates will be equipped with required standard Fire Dept access requirements such as "Knox Boxes" and FD signage.

Refuse

Refuse is anticipated to be provided within the service yards away from public view with bollard protection. Refuse containers outside of enclosed truck courts, if used, will be enclosed within masonry enclosures with swinging gate per Mesa standards.

Generally, the project will be served by several double bin refuse enclosures, which will be located between, and behind, the industrial buildings in the loading area. The enclosures will be screened from the street by the buildings and the 8-foot-tall masonry screen walls at each end of the loading area.

Preliminary solid waste locations have been provided however, Ownership would like the opportunity to discuss this requirement further being that solid waste collection and recycling is unique and specific to this type of development. Office/warehouse tenants typically provide individual waste and recycling receptacles for their operations vs. and office project scenario with common use solid waste and recycling stations.

Exterior Lighting

Building lighting will comply with Ordinance Section 11-30-5 and the fixture design will complement the architectural theme. The building entry areas will be accentuated with accent lighting to help create a focal point. Energy efficient lighting, such as LED, will be used throughout the project and glare will be minimized through the use of soft or reflected lighting. Combined, this will help create a sense of security, but also enhances the pedestrian experience. Lighting will also be down faced so as not to cause night sky pollution or flood onto adjacent properties.

2. Architectural Design:

General Design

The highest level of architectural details for the project are focused on the building public frontage but consistent features are shared with all the entry sides of the Project. The nature of the anticipated industrial uses requires large buildings with tall internal clear storage capacity. The facade design has buildings that are visually broken up into smaller components by wall details including, material changes, shadows and changes to the roof line. Weather and sun protection, as well as shade and shadow interest, are provided by adjustments in the building elevations and metal shade canopies. At the pedestrian level, decorative masonry is provided for scale on all of the buildings, to provide visual ties to the site features, and is concentrated near public and employee entrances.

Entrances

As previously noted, building entrances are oriented towards the predominant public view and street frontage. This includes Building A orientation towards Elliot Road. Building entrances are served by pedestrian walkways and are also clearly defined by building design elements including storefront designs and metal shade canopies. The primary vehicular entrance to the site from Elliot Road will be enhanced by use of a consistent tree palette and future monument signage.

Massing & Scale

Although the nature of the proposed use requires large buildings, the building massing is reduced by vertical or horizontal wall offsets / articulated details around entrances or other method of visual relief. The differing building heights of the buildings also provides variation across the full site.

Façade Articulation

Façade articulation is provided along the visible, more public facades including roofline variation, changes in materials and plane changes.

Materials & Colors

Building colors and materials reinforce the overall building design. An architectural mix of decorative masonry and concrete is provided along with metal canopies and metal window frames with insulated glazing.

Signage

The proposed signage design is simple and easy to navigate while also complimenting the overall building architecture. Directional signs and future monument signs will comply with the Mesa Zoning Ordinance. Individual tenant signage will be submitted for review and approval as part of the tenant improvement building permit process and will be in conformance with the Sign Ordinance.

Service Areas & Utilities

The overall site layout has been designed and oriented to keep service, loading and utility areas screened from public view. These areas are located centrally within the site between buildings. Mechanical equipment, including roof-mounted systems and roof drainage systems are architecturally screened and designed to be integral to the buildings.

G. Adherence with Site Plan Review Criteria

The project has been designed to adhere to the SPR criteria specifically noted in Ordinance Section 11-69-5 - Review Criteria.

1. **The project is consistent with and conforms to the adopted General Plan and any applicable sub-area or neighborhood area plans (except no analysis of the use if it is permitted in the zoning district on the property), is consistent with the development standards of this Ordinance, and is consistent with and meets the intent of any applicable design guidelines.**

Response:
The General Plan Character Area designation for this property is Employment. The proposed industrial use is consistent with the focus of the Employment character area. The Property is also located in the Gateway Strategic Development Plan Mixed Use Activity District. Per the Gateway Strategic Plan, the main goals of the Mixed-Use Activity District are to provide high quality opportunities for commercial and employment activities. Development is intended to be intense, of high quality and provide for pedestrian orientation with unique and attractive public spaces and building and site design that supports a pedestrian orientation.

The site plan and building design incorporate pedestrian orientation in the following manners:

- Pedestrian connections/walkways are at least five feet in width paved with a hard, durable surface from the main building entries to a public sidewalk on the street frontage of the site.
- A system of pedestrian walkways connect all buildings on a site to each other, to on-site automobile and bicycle parking areas, and to open space areas or pedestrian amenities.
- Pedestrian connections/walkways that cross drive aisles are differentiated from the drive aisle by composition, texture or through the use of a differing color that is integral to the material.
- At customer entrances, pedestrian walkways are provided with weather protection such as canopies, awnings, arcades, and trellises.

2. **The project is consistent with all conditions of approval imposed on the property whether by ordinance, resolution or otherwise.**

Response:
There is no prior zoning or entitlement history on this Property, but the site complies with City code as described above.

3. **The overall design of the project, including but not limited to the site layout, architecture of the buildings or structures, scale, massing, exterior design, landscaping, lighting, and signage, will enhance the appearance and features of the site and surrounding natural and built environment.**

Response:
The project is designed with features that enhance the appearance. Although the nature of the proposed use requires large buildings, the building massing is reduced by vertical or horizontal wall offsets / articulated details around entrances, cornice treatments or other method of visual relief. The differing building heights of the buildings also provides variation across the full site.

4. **The project site plan is appropriate to the function of the project and will provide a suitable environment for occupants, visitors, and the general community.**

Response:
The site plan is designed, and buildings are placed to most efficiently use the site while providing a suitable environment for occupants, visitors and the general community. Building A provides a strong relationship to the street and visual interest is provided in other areas visible from public view. Service, loading and utility areas are centrally located within the site and oriented so as to be screened from public view.

5. **Project details, colors, materials, and landscaping, are internally consistent, fully integrated with one another, and used in a manner that is visually consistent with the proposed architectural design.**

Response:
Project details, colors, materials and landscaping are consistent throughout the site and among the buildings. Building colors and materials reinforce the overall building design. An architectural mix of decorative masonry and concrete is provided along with metal canopies and metal window frames with insulated glazing. Landscaping is internally consistent for a design theme.

6. **The project is compatible with neighboring development by avoiding big differences in building scale and character between developments on adjoining lots in the same zoning district and providing a harmonious transition in scale and character between different districts.**

Response:
While most of the surrounding area is vacant land, the site is compatible with existing and proposed development in the immediate vicinity. The general building pattern for this area features industrial buildings of similar heights and massing.

7. **The project contributes to the creation of a visually interesting built environment that includes a variety of building styles and designs with well-articulated structures**

that present well designed building facades, rooflines, and building heights within a unifying context that encourages increased pedestrian activity and promotes compatibility among neighboring land uses within the same or different districts.

Response:
As previously noted, the buildings include vertical or horizontal wall offsets / articulated details around entrances, roofline variation, changes in materials or other methods of visual relief and interest. Pedestrian activity is encouraged through sidewalks which connect the buildings to the adjacent street network.

8. **The streetscapes, including street trees, lighting, and pedestrian furniture, are consistent with the character of activity centers, commercial districts and nearby residential neighborhoods.**

Response:
New landscaping and streetscape improvements will provide a more pedestrian friendly frontage along Elliot Road. A 15-foot landscape zone has been provided along Elliot Road.

9. **Street frontages are attractive and interesting for pedestrians and provide for greater safety by allowing for surveillance of the street by people inside buildings and elsewhere.**

Response:
As noted above, new landscaping and streetscape improvements will provide a more pedestrian friendly frontage along Elliot Road.

10. **The proposed landscaping plan is suitable for the type of project and site conditions and will improve the appearance of the community by enhancing the building and site design; and the landscape plan incorporates plant materials that are drought-tolerant, will minimize water usage, and are compatible with Mesa's climate.**

Response:
The landscaping is suitable for this type of industrial development. Particular attention has been paid to the more publicly visible street frontage along Elliot Road. Low maintenance, drought tolerant plants will be utilized in the project landscaping.

H. Adherence with Design Review Criteria

The project has been designed to adhere to the DR criteria specifically noted in Ordinance Section 11-71-6 - Review Criteria. Several overlapping criteria exist between SPR and DR applications and therefore the responses to this section will be condensed somewhat to avoid duplication.

1. **The project is consistent with the applicable goals, objectives and policies of the general plan and any applicable sub-area or neighborhood area plans; all of the development standards of this ordinance; other adopted Council policies, as may**

be applicable; and any specific conditions of approval placed on the zoning of the property

Response:
The project is consistent with the Mixed-Use Activity District and Employment designations of the General Plan. The project adheres to the applicable ordinance development standards except where otherwise altered and approved by the Planned Area Development (PAD) overlay.

2. **The overall design of the project including its scale, massing, site plan, exterior design, and landscaping will enhance the appearance and features of the project site, the street type, and surrounding natural and built environment.**

Response:
(See response in Section D.3 above)

3. **The overall design will create a distinctive and appealing community by providing architectural interest in areas visible from streets, sidewalks, and public areas.**

Response:
The design team has worked hard to provide an attractive and appealing design with particular attention paid to the more publicly visible aspects of the project including a 15-foot landscape zone along Elliot Road. Building entrances are oriented towards the predominant public view along Elliot Road. Building entrances are clearly defined by building design elements including storefront designs and metal shade canopies. Service, loading and utility areas are centrally located within the site and oriented so as to be screened from public view.

4. **The project site plan is appropriate to the function of the project and will provide a suitable environment for occupants, visitors, and the general community.**

Response:
(See response in Section D.4 above)

5. **Project details, colors, materials, and landscaping, are internally consistent, fully integrated with one another, and used in a manner that is visually consistent with the proposed architectural design and creates a safe, attractive and inviting environment at the ground floor of buildings on sides used by the public**

Response:
(See response in Section D.5 above)

6. **The project is compatible with neighboring development by avoiding big differences in building scale and character between developments on adjoining lots in the same zoning district and providing a harmonious transition in scale and character between different districts.**

Response:
(See response in Section D.6 above)

7. **The project contributes to the creation of a visually interesting built environment that includes a variety of building styles and designs with well-articulated structures that present well designed building facades on all sides, rooflines, and building heights within a unifying context that encourages increased pedestrian activity and promotes compatibility among neighboring land uses within the same or different districts.**

Response:
(See response in Section D.7 above)

8. **The project creates visual variety and relief in building and avoids a large-scale, bulky, or box-like appearance.**

Response:
Although the nature of the proposed use requires large buildings, the building massing is reduced by vertical or horizontal wall offsets / articulated details around entrances, cornice treatments or other method of visual relief to avoid a boxy appearance.

9. **The streetscapes, including street trees, lighting, and pedestrian furniture, are consistent with the character of activity centers, commercial districts and nearby residential neighborhoods.**

Response:
(See response in Section D.8 above)

10. **Street frontages are attractive and interesting for pedestrians and provide for greater safety by allowing for surveillance of the street by people inside buildings and elsewhere.**

Response:
(See response in Section D.9 above)

11. **The proposed landscaping plan is suitable for the type of project and site conditions and will improve the appearance of the community by enhancing the building and site design; and the landscape plan incorporates plant materials that are drought-tolerant, will minimize water usage, and are compatible with Mesa's climate.**

Response:
(See response in Section D.10 above)

12. **The project has been designed to be energy efficient including, but not limited to, building siting, and landscape design. The project also mitigates the effects of solar exposure for users and pedestrians. For purposes of this criterion, buildings that meet environmental standards such as LEED™, Green Globes, or equivalent third-party certification are considered to be energy efficient.**

Response:

Environmental components regarding sustainability are also included within this development. Proposed development includes sustainable elements such as:

As noted in Ordinance Section 11-7-3.B.6, *"Conditions may exist where strict compliance to Site Planning and Design Standards of this Chapter are impractical or impossible…*" Such is the case with this project.

- Employee and Visitor Amenities to increase human comfort.
- Project is currently providing an additional foundation base, primarily at main entry facades to enhance the human scale environment in addition to providing cooler non-heat island coverage of site at the public level.
- Efficient automatic drip irrigation systems and appropriate landscape plantings for desert environments to reduce water consumption.
- Efficient low energy LED lighting on automatic timers.
- Predominant use of site cast concrete tilt panels. Use of this material complies with sustainable practices for locally sourced and fabricated materials, reducing the overall carbon footprint of the buildings as precast panels are fabricated on site from locally sourced concrete suppliers.
- Aluminum framed window systems of various sizes and heights with tinted insulated glass to enhance natural daylighting and views and to address acoustical considerations due to the proximity to the Mesa Gateway airport overlay district.
- Shade canopies over entry and office components of the building increases natural daylighting and views to the exterior while reducing adverse heat gain to the interior environment.
- Highly reflective TPO roof systems and appropriate landscaping reducing heat island effect.
- Roof skylights to enhance the interior environment with natural day lighting which has the added benefit of reducing lighting needs and electrical usage within the facilities.

I. Adherence with Alternative Design Criteria

As noted in Ordinance Section 11-7-3.B.6, *"Conditions may exist where strict compliance to Site Planning and Design Standards of this Chapter are impractical or impossible…*" Such is the case with this project.

By virtue of the construction type (tilt-up construction) and the functional use (large, warehouse and industrial tenants) strict adherence to all Design Standards is not practical. Specifically, per Ordinance Section 11-7-3, not more than 50% of the total façade may be covered within one (1) single material. Obviously, this is an impossibility for a series of large, concrete, tilt-up construction buildings. The building structural perimeter is composed entirely of concrete except for openings for doorways, glazing, loading doors, etc. Any alternative materials would need to be "veneered;" applied as an exterior finish on top of the structural concrete panels. On such large building, with single elevations running in excess of 600' feet long, 50% veneer coverage is both cost-prohibitive and counter to the preferred aesthetic appeal or context of the area.

Our team has worked hard to provide an acceptable alternative design solution that meets the intent of the Ordinance while providing a more appropriate design for the ultimate project and use. This innovation occurs at an overall site level with creative landscaped screen walls and hardscape along the most visible frontages and continues at the building level with creative details and design decisions.

Publicly visible facades include offsetting planes and varying parapet heights to further reduce building massing and to create a more human scale aspect to each building. It should be noted that facilities of this nature are predominantly precast concrete in nature.

Building entries are clearly defined with facade variations in color and texture, recesses or projections in building plane, aluminum framed storefront systems with insulated glazing, accent lighting, decorative steel accents and shade canopies with perforated steel panels which create both shade for tenants and shadow for further design interest on building facades.

Building paint colors are comprised of lighter cooler color tones with complimentary gray tones and accent colors to provide a distinctive and individual identity to the development, providing diversity in design in the Mesa community, and complementary to surrounding architecture of the area.

Buildings are strategically positioned to screen the internal truck court and loading areas. The buildings also use complimentary techniques in their elevations, continuing the patterning established by the more prominent Building A.

As required by the Alternative Compliance requirements, the proposed alternative design for this project is aesthetically more complementary to the site, better fits into the context of the area, improves the overall architectural appeal of the area and meets or exceeds the design objectives as described in the City's General Plan.

J. Phasing

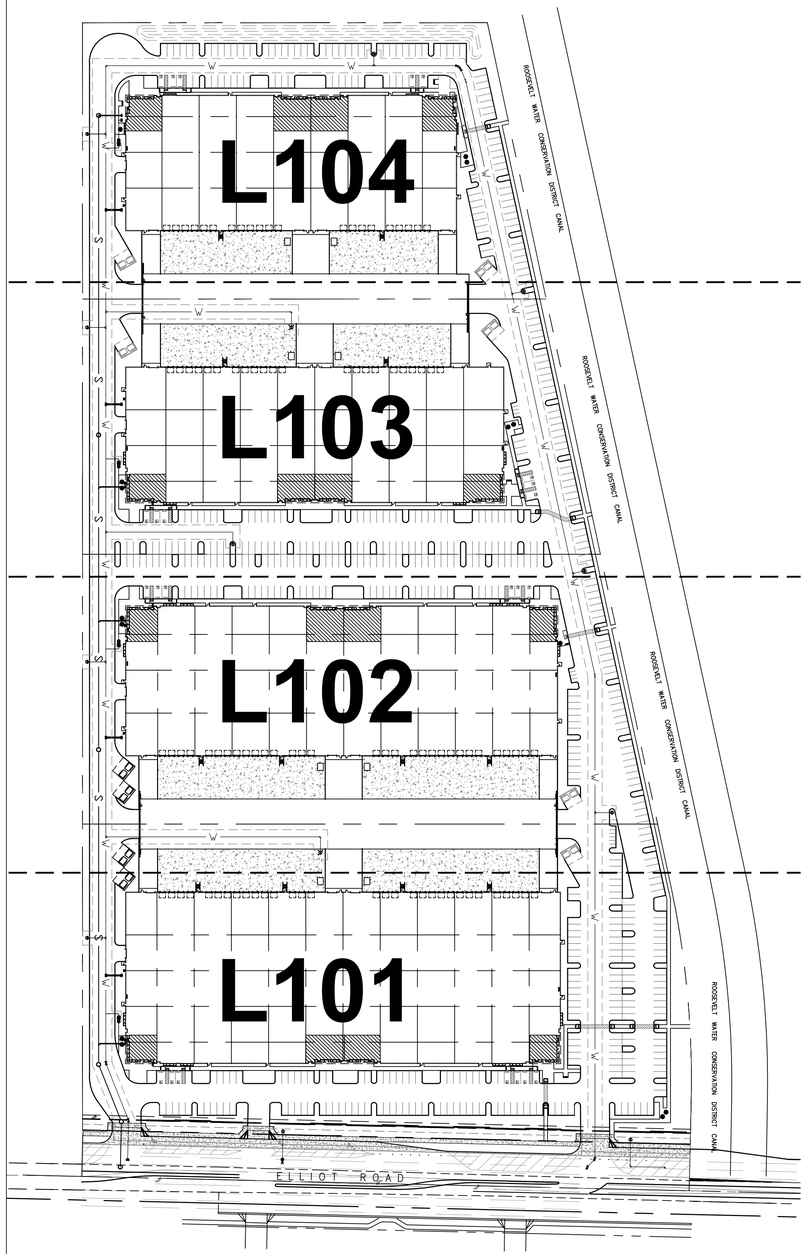
The Property may be developed in multiple phases as market conditions warrant. However, it is expected that the developer will be developing the industrial buildings at one time upon receipt of permits. The commercial PADs will be developed as user interest surfaces. Plans for each phase will be submitted to the City of Mesa to ensure proper and orderly development.

K. Summary

The Property will be zoned Light Industrial (LI) consistent with the General Plan. The minor deviations from standards through the proposed PAD overlay and site plan are consistent with other industrial land use entitlements in this area and help create a better designed project. The development will complement the surrounding area and provide substantial benefits and commerce/industrial related employment opportunities to the City of Mesa.

The Site Plan and Design Review approval will enable the development of this dynamic development that features a mix of uses consistent with the General Plan, Quality Development Design Guidelines for Industrial projects and associated Sub-Area Plans.

The design has been thoughtfully laid out to provide connectivity and compatibility to adjacent sites, while ensuring appropriate buffers to protect all users within the development. The proposed development will benefit future users and the community by providing a diverse set of uses that are all in high demand within this high growth area.



LANDSCAPE COVER SHEET

Ref. North

NOT TO SCALE

MASTER PLANT LIST

	TREES	SIZE/COMMENT/QTY
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12. ALL UNDERGROUND CONDUITS/PIPES/UTLITIES ARE TO BE LOCATED PRIOR TO DIGGING.
13. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SLEEVING WHETHER IT IS SHOWN ON THE PLANS OR NOT.
14. LANDSCAPE CONTRACTOR RESPONSIBLE TO DEMO ALL EXISTING PLANT MATERIAL NOT SHOWN TO REMAIN.
15. STEEL HEADER TO SEPARATE ALL FRACTURED GRANITE AND DECOMPOSED GRANITE BANDS. ALL STEEL HEADER TO BE 3/16" DEPTH COLD ROLLED STEEL.

CITY NOTES:

1. ALL EXISTING VEGETATION, WEEDS, DEBRIS, ETC..., ARE TO BE REMOVED FROM THE PROJECT AREA AND DISPOSED OF PROPERLY OFFSITE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL THEN SCARIFY EXISTING SUBGRADE, TO A MINIMUM 8-INCH DEPTH.
2. SOIL TEST FOR FERTILITY AND ADDITIVE RECOMMENDATIONS (FOR TURF AND ORNAMENTALS) SHALL BE MADE SEVEN (7) DAYS PRIOR TO ANTICIPATED PLANTING TO DETERMINE IF ADDITIVES ARE REQUIRED. CONTRACTOR SHALL PROVIDE AND INCORPORATE SUCH ADDITIVES PRIOR TO OR AT THE TIME OF PLANTING.
3. CONTRACTOR SHALL STAKE TREE AND SHRUB LOCATIONS FOR 5-GALLON PLANTS AND LARGER. STAKES SHALL BE MARKED WITH PLANT NAME OR PLANT NAME OF PLANT LEGEND ITEM NUMBER FROM PLANS.
4. CONTRACTOR SHALL NOTIFY CITY ENGINEERING DIVISION (480-644-2253) 24-HOURS IN ADVANCE FOR APPROVAL OF STAKED PLANT LOCATIONS.
5. PLANT PITS MUST BE INSPECTED BY CITY LANDSCAPE INSPECTOR PRIOR TO PLANTING BY CONTRACTOR. CONTRACTOR TO REQUEST INSPECTION 48-HOURS IN ADVANCE.
6. WHERE CALICHE IS ENCOUNTERED IN PLANT PITS, DEPTH AND WIDTH OF PIT SHALL BE INCREASED BY (1/3) ONE-THIRD OVER SPECIFICATION, AND A LIQUID PENETRATE, "AL-KALICHE" OR APPROVED EQUAL, SHALL BE INCORPORATED FOR EACH PIT PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL ALSO COMPLY WITH SOIL TEST RECOMMENDATIONS.
7. ALL TOP SOIL MIXTURE FOR PLANTS SHALL BE FREE OF GRASS AND NOXIOUS WEEDS. SEE SECTION 795 OF THE M.A.G. SPECIFICATIONS.
8. PLANT SOIL MIXTURE SHALL CONSIST OF 3 1/2-PARTS NATURAL FERTILE, FRIABLE SOIL AND ONE PART HUMUS BY VOLUME, THOROUGHLY MIXED PRIOR TO BACKFILLING IN PITS. BACKFILLING SHALL BE IN 6-INCH LIFTS. EACH LIFT SHALL BE WATER SETTLED, WITHOUT PUDDLING.
9. ALL PLANT MATERIAL SHALL CONFORM TO GRADING, TYPE, ETC.., AS SET FORTH IN THE AMERICAN ASSOCIATION OF NURSERYMEN AND BY THE ARIZONA NURSERY ASSOCIATION RECOMMENDED TREE SPECIFICATIONS.
10. THE CITY OF MESA RESERVES THE RIGHT TO INSPECT SHRUBS AND CONTAINER TREES FOR CONDITION OF ROOT BALLS. FOR ANY SUCH INSPECTIONS FOR CONDITIONS WHICH MAY DESTROY ROOT BALL, CONTRACTOR SHALL SUPPLY ADDITIONAL PLANT AT NO COST.
11. 120 VOLT POWER FOR SPRINKLER SYSTEM CONTROLLER IS TO BE ORDERED FROM APPROPRIATE POWER UTILITY BY CONTRACTOR. CONTRACTOR ACTS AS OWNER AND PAYS RELATED COSTS. IF METER IS INSTALLED, METER IS TO BE IN CONTRACTOR'S NAME UNTIL FINAL APPROVAL AND/OR ACCEPTANCE OF THE PROJECT AND THEN TRANSFERED TO THE MAINTAINING PARTY.
12. THE CONTRACTOR SHALL PROVIDE ALL THE MATERIALS AND LABOR NECESSARY TO INSTALL THE COMPLETE AUTOMATIC SPRINKLER SYSTEM INCLUDING THE WATER SERVICE AND METER. THE CONTRACTOR SHALL ORDER THE WATER METER AND PAY ALL RELATED CHARGES AT THE PUBLIC WORKS SERVICES. THE CITY MAY INSTALL THE WATER SERVICE AND METER AND CHARGE THE CONTRACTOR AT THE CITY'S DISCRETION.
13. THE PLANT GUARANTEE AND MAINTENANCE SHALL BE AS PER SECTION 430.8 OF M.A.G. SPECIFICATIONS UNTIL PROJECT APPROVAL AND/OR ACCEPTANCE.
14. UNLESS SPECIFIED ON THE PLANS FOR REMOVAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
    1. DAMAGES TO EXISTING WALKS, WALLS, DRIVES, CURBS, ETC....
    2. DAMAGES TO UTILITIES CAUSED AS A RESULT OF HIS WORK.
    3. INSPECTING THE SITE IN ORDER TO BE FULLY AWARE OF EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
15. THE CONTRACTOR SHALL MAINTAIN UNCOVERED, ALL EXISTING UTILITY COVERS, BOXES, LIDS, AND MANHOLES.
16. ALL EQUIPMENT AND MATERIALS NOT SHOWN OR SPECIFIED IN THE PLANS OR IN THE SPECIFICATION WHICH ARE REQUIRED TO COMPLETE THE INSTALLATION, SHALL BE SUPPLIED BY THE CONTRACTOR AS PART OF HIS CONTRACT WORK.

LANDSCAPE / PLANTING CALCULATIONS:

TOTAL SITE AREA: 1,138,981 S.F.	TOTAL OPEN SPACE AREA: 129,846 S.F. = 11.4% SITE AREA		64,923 S.F. LIVE COVERAGE REQUIRED 70,859 S.F. LIVE COVERAGE PROVIDED		
	TOTAL TREES	36" TREES	24" BOX	TOTAL SHRUBS	5 GALLON SHRUBS
ELLIOT ROAD FRONTAGE REQUIREMENTS 1 TREE/ 6 SHRUB PER 25 L.F.	34 TREES REQUIRED 34 TREES PROVIDED	9 TREES REQUIRED 12 TREES PROVIDED	17 TREES REQUIRED 22 TREES PROVIDED	204 SHRUBS REQUIRED 283 SHRUBS PROVIDED	102 SHRUBS REQUIRED 163 SHRUBS PROVIDED
PARKING LOT REQUIREMENTS 1 TREE / 3 SHRUB PER ISLAND	113 TREES REQUIRED 118 TREES PROVIDED	28 TREES REQUIRED 42 TREES PROVIDED	REMAINDER REQ. 76 TREES PROVIDED	339 SHRUBS REQUIRED 587 SHRUBS PROVIDED	N / A
WEST PERIMETER REQUIREMENTS 3 TREE / 20 SHRUB PER 100 LF	46 TREES REQUIRED 47 TREES PROVIDED	N / A	23 TREES REQUIRED 47 TREES PROVIDED	306 SHRUBS REQUIRED 446 SHRUBS PROVIDED	N / A
NORTH PERIMETER REQUIREMENTS 3 TREE / 20 SHRUB PER 100 LF	17 TREES REQUIRED 21 TREES PROVIDED	N / A	9 TREES REQUIRED 21 TREES PROVIDED	113 SHRUBS REQUIRED 299 SHRUBS PROVIDED	N / A
EAST PERIMETER REQUIREMENTS 3 TREE / 20 SHRUB PER 100 LF	48 TREES REQUIRED 50 TREES PROVIDED	N / A	24 TREES REQUIRED 50 TREES PROVIDED	319 SHRUBS REQUIRED 495 SHRUBS PROVIDED	N / A
FOUNDATION PLANTING REQUIREMENTS - 3,850 LF 1 TREE PER 50 L.F.	77 TREES REQUIRED 82 TREES PROVIDED	8 TREES REQUIRED 31 TREES PROVIDED	REMAINDER REQ. 51 TREES PROVIDED	N / A	N / A

G.K. FLANAGAN ASSOCIATES
4626 N. 44th Street
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fax: 949•863•0851
email: hpa@hparchs.com

REGISTERED LANDSCAPE ARCHITECT CERTIFICATE 20066 GREGORY K. FLANAGAN 10.18.21 ARIZONA, U.S.A.

EXPIRES 12/31/2023

Owner:

MIG Real Estate

MIG
REAL STATE

660 Newport Center Drive
Suite 1300
Newport Beach, CA 92660

Project:

ELLIOT ROAD &
POWER ROAD

Mesa, AZ

Consultants:

Civil:	KIMLEY-HORN
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	G.K. FLANAGAN
Fire Protection:	-
Soils Engineer:	-

Title:
LANDSCAPE
COVER SHEET

Project Number: 21247
Drawn by:
Date: 10/18/21
Revision:

Sheet:

L100

MASTER PLANT LIST

	TREES	SIZE/COMMENT/QTY
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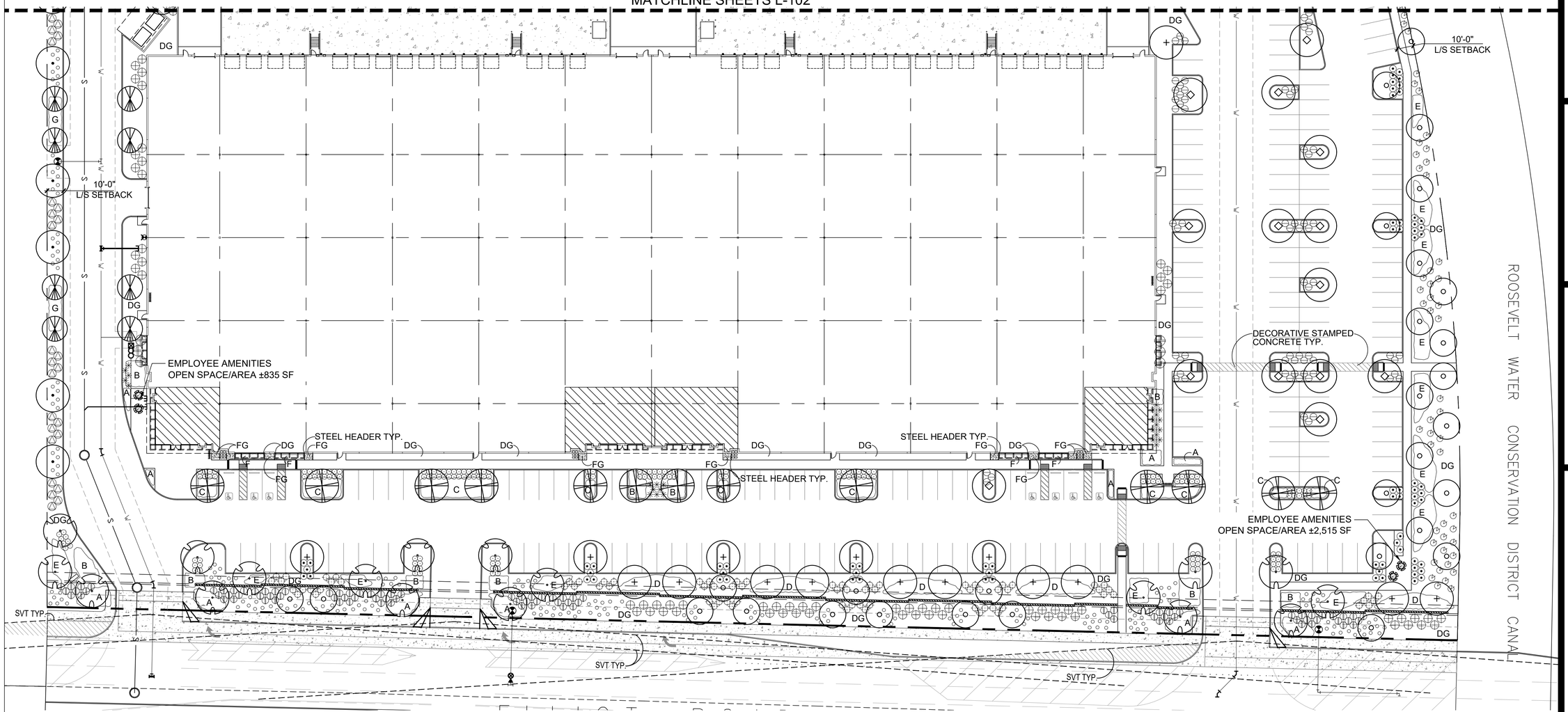
MATCHLINE SHEETS L-102



PLANTING PLAN

0 15' 30' 60'

Ref. North

SCALE: 1"=30'-0"

G.K. FLANAGAN ASSOCIATES
4626 N. 44th Street
PHOENIX, AZ 85018
602 . 912 . 9691
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HPA architecture
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18831 bardeen avenue - ste. #100
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email: hpa@hparchs.com

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Soils Engineer:	-

Title: PLANTING PLAN

Project Number: 21247

Drawn by:

Date: 10/18/21

Revision:

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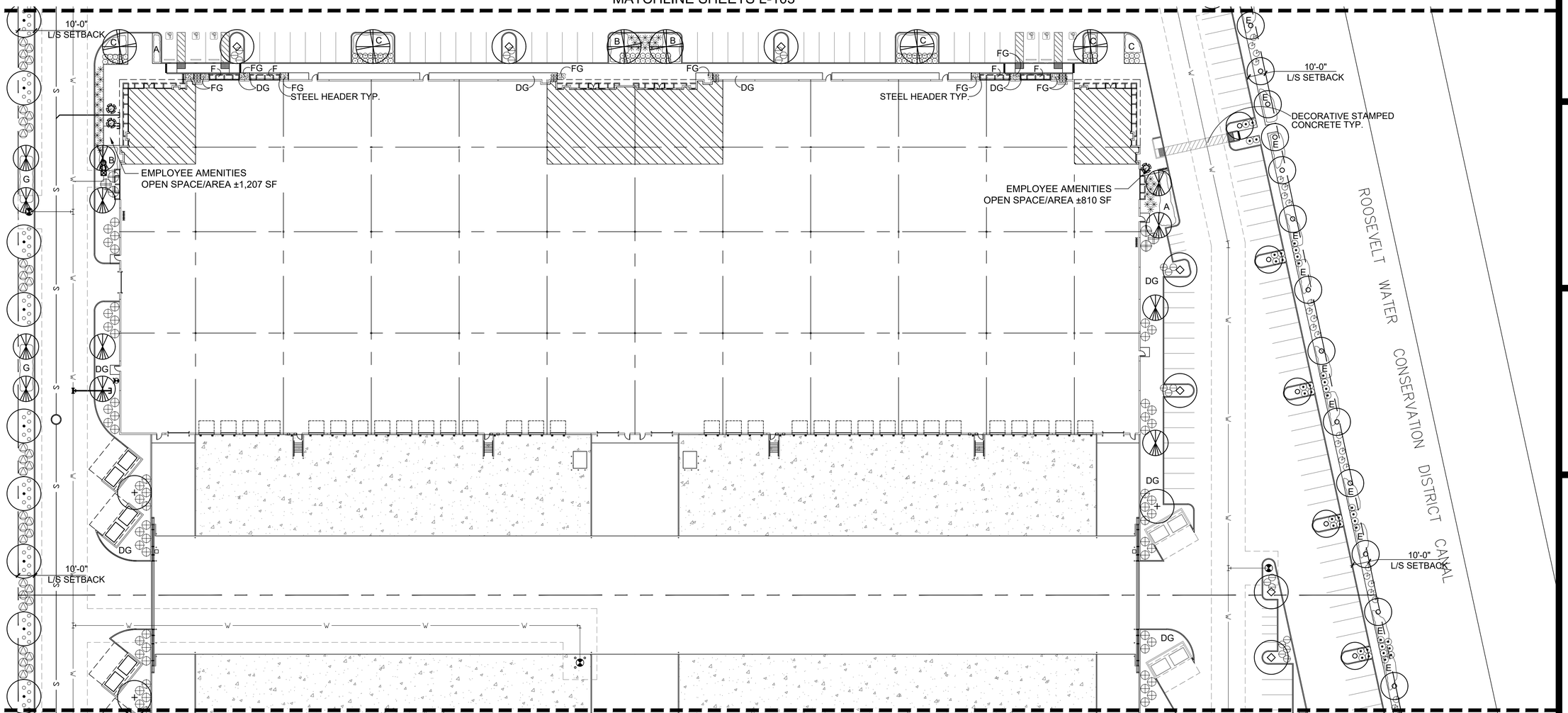
MATCHLINE SHEETS L-103



MATCHLINE SHEETS L-101

PLANTING PLAN

0 15' 30' 60'

Ref. North

SCALE: 1"=30'-0"

G.K. FLANAGAN ASSOCIATES
4626 N. 44th Street
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602 . 912 . 9691
602 . 912 . 9693 fax

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hpa, inc.
18831 bardeen avenue - ste. #100
irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 20066 GREGORY K. FLANAGAN 10.15.21 Date Signed ARIZONA, U.S.A.

EXPIRES 12/31/2023

Owner:

MIG Real Estate
MIG REAL STATE
660 Newport Center Drive
Suite 1300
Newport Beach, CA 92660

Project:

ELLIOT ROAD & POWER ROAD

Mesa, AZ

Consultants:

Civil:	KIMLEY-HORN
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	-
Landscape:	G.K. FLANAGAN
Fire Protection:	-
Soils Engineer:	-

Title: PLANTING PLAN

Project Number:	21247
Drawn by:	
Date:	10/18/21

Revision:

Sheet: **L102**

MASTER PLANT LIST

TREES	SIZE/COMMENT/QTY
CERCIDIUM PRAECOX 'AZT #5' AZT HYBRID PALO BREA	36" BOX / 37 QTY / LOW-BREAKING / MATCHED
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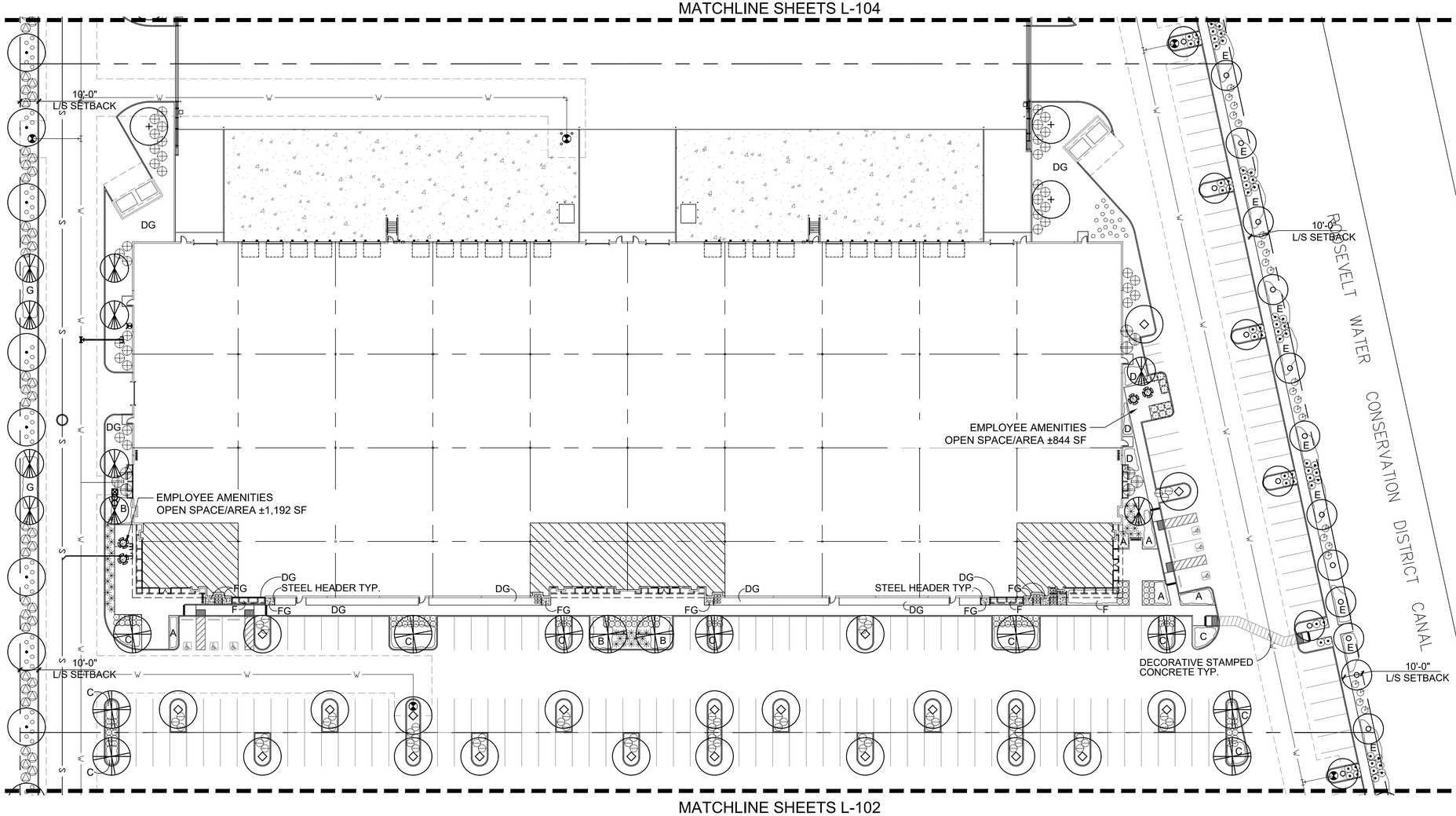
MATCHLINE SHEETS L-104



MATCHLINE SHEETS L-102

PLANTING PLAN

SCALE: 1"=30'-0"

0 15' 30' 60'

Ref. North

HPA architecture
hpa, inc.
18831 bardeen avenue - ste. #100
irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

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ELLIOT ROAD & POWER ROAD

Mesa, AZ

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Fire Protection:	-
Soils Engineer:	-

Title: PLANTING PLAN

Project Number:	21247
Drawn by:	
Date:	10/18/21
Revision:	

Sheet:

L103

G.K. FLANAGAN ASSOCIATES
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PHOENIX, AZ 85018
602 . 912 . 9691
602 . 912 . 9693 fax

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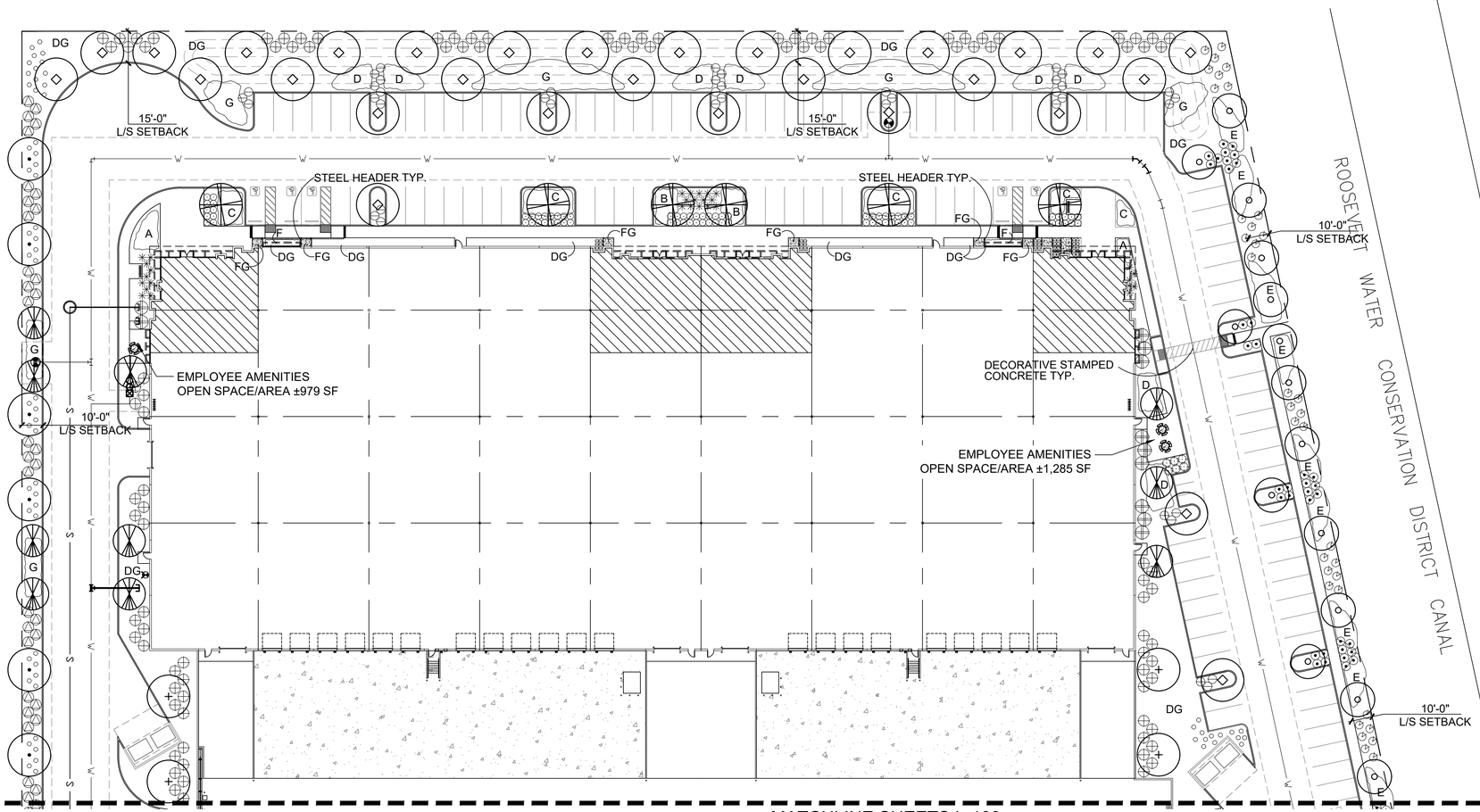

PLANTING PLAN

SCALE: 1"=30'-0"

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Ref. North

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Title:
PLANTING
PLAN

Project Number:	21247
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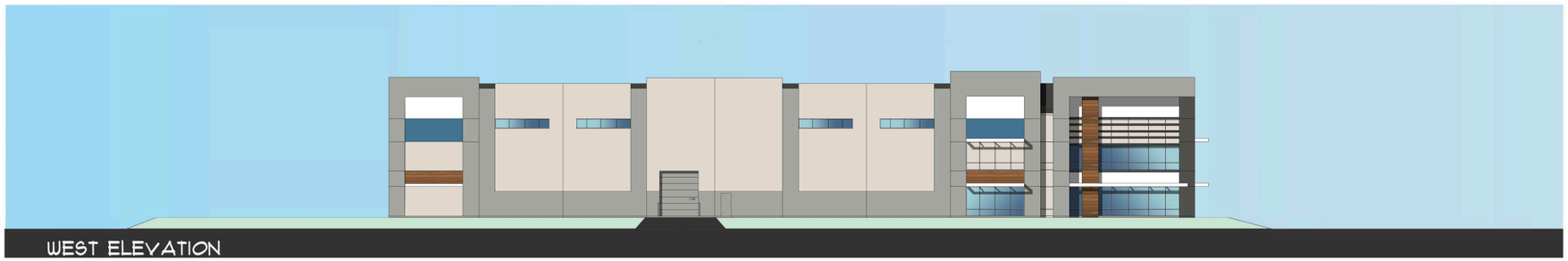
Revision:	

Sheet:

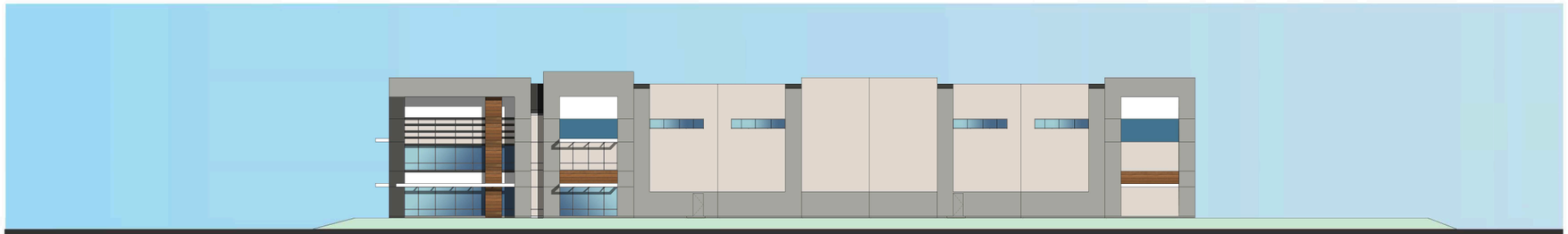
L104

NORTH ELEVATION



WEST ELEVATION

SOUTH ELEVATION - ELLIOT ROAD



EAST ELEVATION - ROOSEVELT WATER CONSERVATION DISTRICT CANAL

HPA architecture

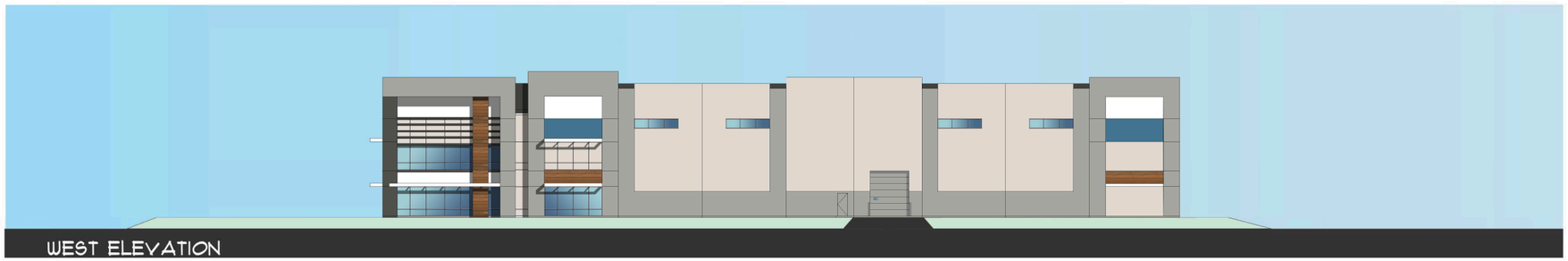
ELLIOT RD. & POWER RD.

City of Mesa, Arizona

MIG Real Estate

MIG Real Estate

NORTH ELEVATION



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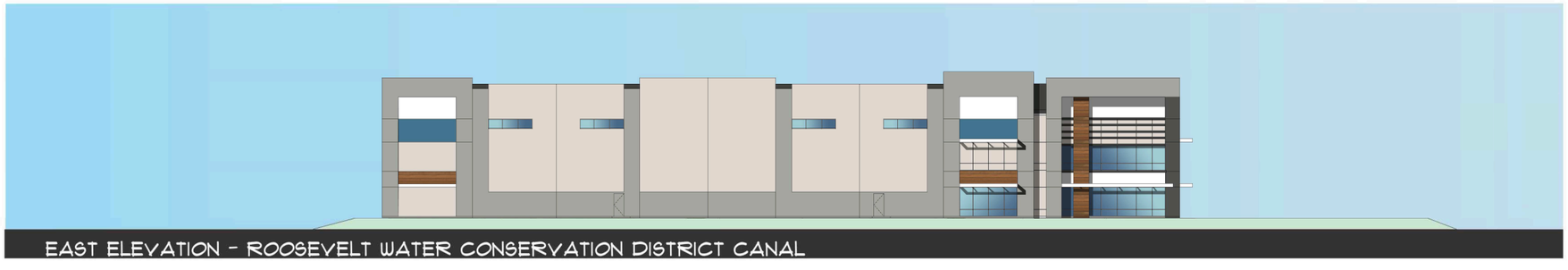

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HPA architecture

ELLIOT RD. & POWER RD.

City of Mesa, Arizona

MIG Real Estate

MIG Real Estate

NEC ELLIOT ROAD

& POWER ROAD

East of the NEC of Power Road and Elliot Road

Case No. PRS21-00516

Rezone, Site Plan Review and Design Review

Citizen Participation Plan

Submitted: August 5, 2021

I. Introduction

The purpose of this Citizen Participation Plan is to inform citizens, property owners, neighbor associations, agencies, schools and businesses in the vicinity of the site. The Applicant is requesting a Rezone, Site Plan Review (SPR) and Design Review (DR) for the development of new employment / industrial business park. The subject site is comprised of roughly 26-acres located at the northeast corner of Elliot Road and Power Road (the "Property"). See attached aerial map.

The project is consistent with the City's General Plan designation and compatible with the surrounding uses. This plan will ensure that those affected by this application will have an adequate opportunity to learn about and comment on the proposal.

II. Contact

Adam Baugh
Withey Morris, PLC
2525 East Arizona Biltmore Circle
Phoenix, Arizona 85016
602-230-0600
Email: George@witheymorris.com

III. Contact List

Parties affected by the applications may include properties owners within 500-feet of the Property as identified by the Maricopa County Assessor's Map, residents, registered neighborhoods, homeowners' associations and other neighborhood entities identified by the City of Mesa and interested parties which may request to be placed on the Contact List. To provide additional outreach, the Applicant has decided to expand the notification to 1,000-feet. A copy of the contact list and map of the mailing area are attached.

IV. Notification Technique / Notice of Meetings

Citizens, registered neighborhoods, homeowners' associations, and other interested parties affected by the rezone / SPR / DR applications will be notified of the application through an informational mailing to be sent in late August. The letter will introduce the Applicant, provide information on the project, provide contact information for the City and the Applicant and encourage the recipient to contact the City or the Applicant with any questions or comments.

The letter will also invite neighbors to attend a future neighbor meeting to discuss the proposal.

Once hearings are scheduled, another mailing will be sent out with detailed information on the hearing and how to participate. The hearing notification letter will again encourage the recipient to contact the City or the Applicant with any questions or comments.

Additionally, once the SPR / DR application is scheduled for consideration by the Planning & Zoning Commission, new letters will be distributed with hearing information and a sign posted on site – as directed by the City.

V. Response Procedures

The Applicant will be available to discuss the project with any and all citizens expressing interest in the project. Phone conversations are typically the most efficient and appreciated means of discussing projects, but Individual meetings (virtual or otherwise) will be conducted upon request. The City of Mesa is also available to answer questions regarding the review and public hearing process.

VI. Status Procedures

The Applicant shall keep the City of Mesa informed of the status of its citizen participation efforts through a Citizen Participation Report or other correspondence with the assigned City Staff. Copies of the applications containing the complete details of the requests shall be kept on file with the City of Mesa.

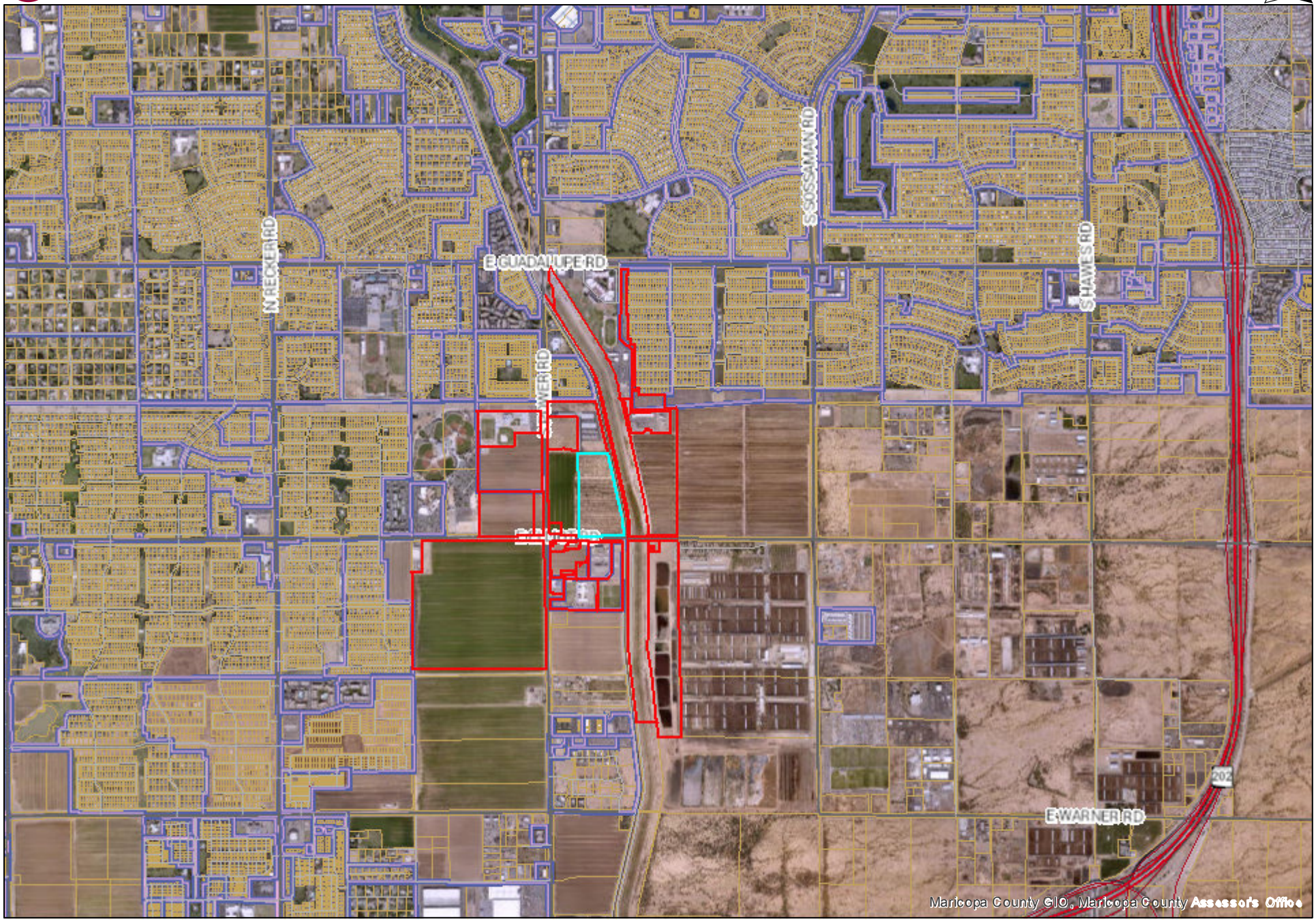
VII. Inquiries

Information regarding project inquiries will be documented in the Citizen Participation Report and/or provided to the assigned City Staff.

VIII. Schedule for Implementation

1. Rezone / SPR / DR Submittal	Early August
2. PAD/DR/SPR notification letters	Late August
3. PAD/DR/SPR virtual open house	Early September
4. DR hearing notification letters	October
5. DR Design Review Board hearing	October/Nov
6. PAD/SPR Planning & Zoning notifications	November
7. PAD/SPR/DR Planning & Zoning Board hearing	November
8. PAD/SPR/DR City Council hearing	December

Map



8/5/2021 10:35:42 AM

Parcel Number	Owner	Mailing Address
304-05-017C	SAIA FAMILY LP	2120 E SIXTH ST STE 16 TEMPE AZ 85281
304-05-017D	ELLIOT POWER OZB LLC	5501 E ESTRID AVE SCOTTSDALE AZ 85254
304-05-017H	GARAGE TOWN USA LLC	1950 W BELLERIVE LN SUITE 107 COEUR D ALENE ID 83814
304-05-017J	GARVIN HOLDINGS L L C	7405 E MONTE CRISTO AVE SCOTTSDALE AZ 85260
304-05-017L	LANGLEY PROPERTIES I LP	2738 E GUADALUPE RD GILBERT AZ 85234-5100
304-05-017M	BETENBOUGH CLINTON G/KATHERINE M	PO BOX 50655 PHOENIX AZ 85076
304-05-018K	STONE APPLICATIONS LLC	2801 CENTERVILLE RD 1ST FL PMB 811 WILMINGTON DE 19808
304-05-018L	STONE APPLICATIONS LLC	2801 CENTERVILLE RD 1ST FL PMB 811 WILMINGTON DE 19808
304-05-018M	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	2801 W DURANGO ST PHOENIX AZ 85009
304-05-018N	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	2801 W DURANGO ST PHOENIX AZ 85009
304-05-018Q	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	2801 W DURANGO ST PHOENIX AZ 85009
304-05-020E	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	2801 W DURANGO ST PHOENIX AZ 85009
304-05-020T	GILBERT UNIFIED SCHOOL DISTRICT NO 41	140 S GILBERT RD GILBERT AZ 85296
304-05-020X	STONE APPLICATIONS LLC	2801 CENTERVILLE RD 1ST FL PMB 811 WILMINGTON DE 19808
304-05-394A	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	2801 W DURANGO ST PHOENIX AZ 85009
304-16-007C	MBR LAND II	3180 E ELLIOT RD GILBERT AZ 85234
304-16-007D	MBR LAND II	3180 E ELLIOT RD GILBERT AZ 85234
304-16-953	SAN TAN MONTESSORI SCHOOL INC	3959 E ELLIOT RD GILBERT AZ 85234
304-16-954	MBR LAND I LLP	3180 E ELLIOT RD GILBERT AZ 85234
304-17-001B	ROOSEVELT WATER CONSERVATION DISTRICT	PO BOX 100 HIGLEY AZ 85236
304-17-001M	ROOSEVELT WATER CONSERVATION DISTRICT	2344 S HIGLEY RD GILBERT AZ 85212
304-17-008S	EVO 2 LAND HOLDINGS LLC	2161 E PECOS RD GILBERT AZ 85295
304-17-014D	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	2801 W DURANGO ST PHOENIX AZ 85009
304-17-014E	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	2801 W DURANGO ST PHOENIX AZ 85009
304-17-014M	B & K LAND & INV CO	11611 S HIGLEY RD HIGLEY AZ 85236
304-17-014N	MESA CITY OF	PO BOX 1466 MESA AZ 85211

304-17-014P	MORRISON RANCH INC	3180 E ELLIOT RD GILBERT AZ 85234
304-17-211	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-212	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-213	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-214	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-215	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-216	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-217	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-218	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-219	LESUEUR INVEST VI LLC/ETAL	1223 S CLEARVIEW AVE STE 103 MESA AZ 85209
304-17-770	GRHH PERFORMANCE MESA LLC	855 W BROAD ST STE 300 BOISE ID 83702
304-17-771	ROOSEVELT WATER CONSERVATION DISTRICT	PO BOX 100 HIGLEY AZ 85236
304-18-005C	THE DALE C MORRISON TRUST	1733 N GREENFIELD RD STE 101 MESA AZ 85205
312-08-778	DESERT PLACE AT MORRISON RANCH HOA	8360 E VIA DE VENTURA BLDG L STE 100 SCOTTSDALE AZ 85258

NEC ELLIOT ROAD

& POWER ROAD

East of the NEC of Power Road and Elliot Road

Rezone, Site Plan Review and Design Review

Citizen Participation Report

Submitted: November 3, 2021

I. Introduction

This report provides results of the implementation of the Citizen Participation Plan for proposed industrial development. The Applicant is requesting a Rezone, Site Plan Review (SPR) and Design Review (DR) for the development of new employment / industrial business park. The subject site is comprised of roughly 26-acres located at the northeast corner of Elliot Road and Power Road (the "Property").

This report provides evidence that citizens, neighbors, public agencies and interested persons have had adequate opportunity to learn about and comment on the proposed plans and actions addressed in the application. All outreach and notice materials are attached.

II. Contact

Adam Baugh
Withey Morris, PLC
2525 East Arizona Biltmore Circle
Phoenix, Arizona 85016
602-230-0600
Email: adam@witheymorris.com

III. Neighborhood Meeting

We hosted a virtual neighborhood meeting on September 30, 2021 via Zoom at 5:30pm, and there were three people who registered and attended the meeting. The discussions revolved around the project and traffic improvements required for the proposed development. There were no concerns regarding the proposal.

IV. Correspondence

- September 14, 2021: Neighborhood letters are sent to property owners and neighborhood associations within 1,000 feet of the site.
- September 27, 2021: Design Review letters are sent to property owners and neighborhood associations within 1,000 feet of the site.
- November 1, 2021: Hearing Notices letters are sent to property owners and neighborhood associations within 1,000 feet of the site.
- November 1, 2021: Hearing Notice sign postings are posted on the site.

Attachment A has copies of all the mailings and sign postings attached.

V. Results

There are currently 22 people on the mailing list. See contact list attached in Attachment A. There have been no issues raised by residents or neighborhood associations.

Attachment A

WITHEY MORRIS PLC
ATTORNEYS AT LAW

September 14, 2021

Notice of Project & Neighborhood Meeting

Dear Property Owner or Resident:

Our firm represents MIG Real Estate, regarding a +/-26 acres of vacant land located at the northeast corner of Elliot Road and Power Road in Mesa (the "Property"), as shown on the enclosed map. The site is currently vacant and zoned Single Residence (RS-43).

We wanted to inform you that we have filed a Rezoning and Design Review application with the City of Mesa. Our client is requesting to rezone the site to Light Industrial (LI) with a Planned Area Development (PAD) overlay. The proposed project includes the development of roughly 456,889 square feet of new, industrial, manufacturing and employment space. The preliminary site plan distributes the space amongst four (4) buildings which are oriented to provide visual interest from the adjacent right-of-way while also screening or back-of-house activities such as loading, truck maneuvering, utility equipment and refuse containers. This development will create many employment opportunities and is ideally situated to provide commerce/manufacturing related employment uses. The conceptual site plan is attached to this letter.

We are hosting a virtual neighborhood meeting to discuss the proposal. At this meeting, we will make a live presentation via web conference to share the project. After the presentation, anyone who is interested will be able to submit questions and the development team will answer via live webcam. The virtual meeting will be held as follows:

Date: Thursday, September 30, 2021
Time: 5:30 pm
Location: Virtual*

*To participate in the meeting, please email Hannah Bleam at hannah@witheymorris.com and request a link to the meeting. The only way to access the meeting will be via the link from Ms. Bleam.

When hearing dates are scheduled, we will send out another mailing notifying you of those dates and times. If you have any questions or would like to meet with the applicant or the development team, please feel free to contact me at 602-230-0600 or adam@witheymorris.com.

Thank you for your courtesy and consideration.

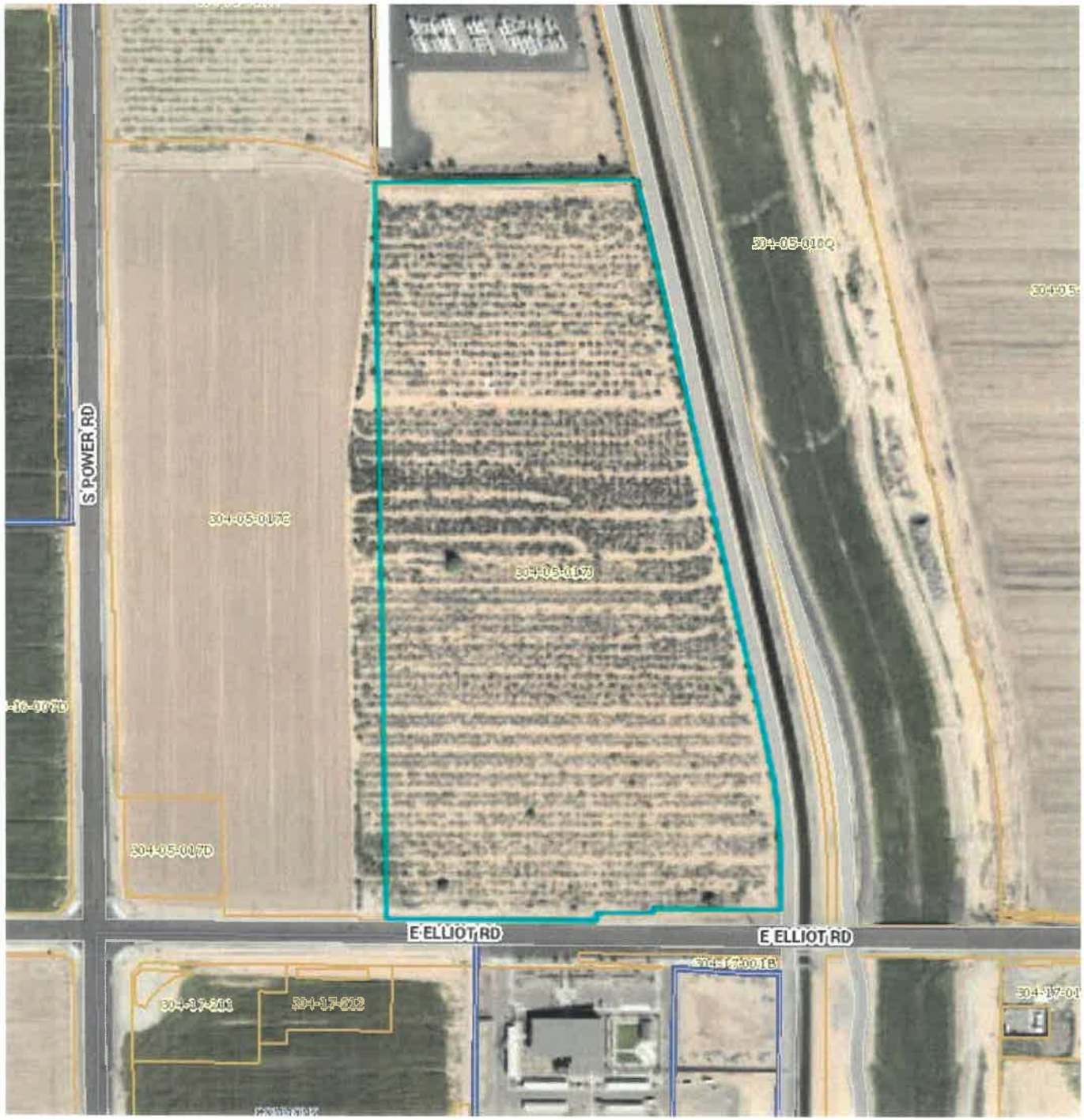
Sincerely,

WITHEY MORRIS P.L.C.

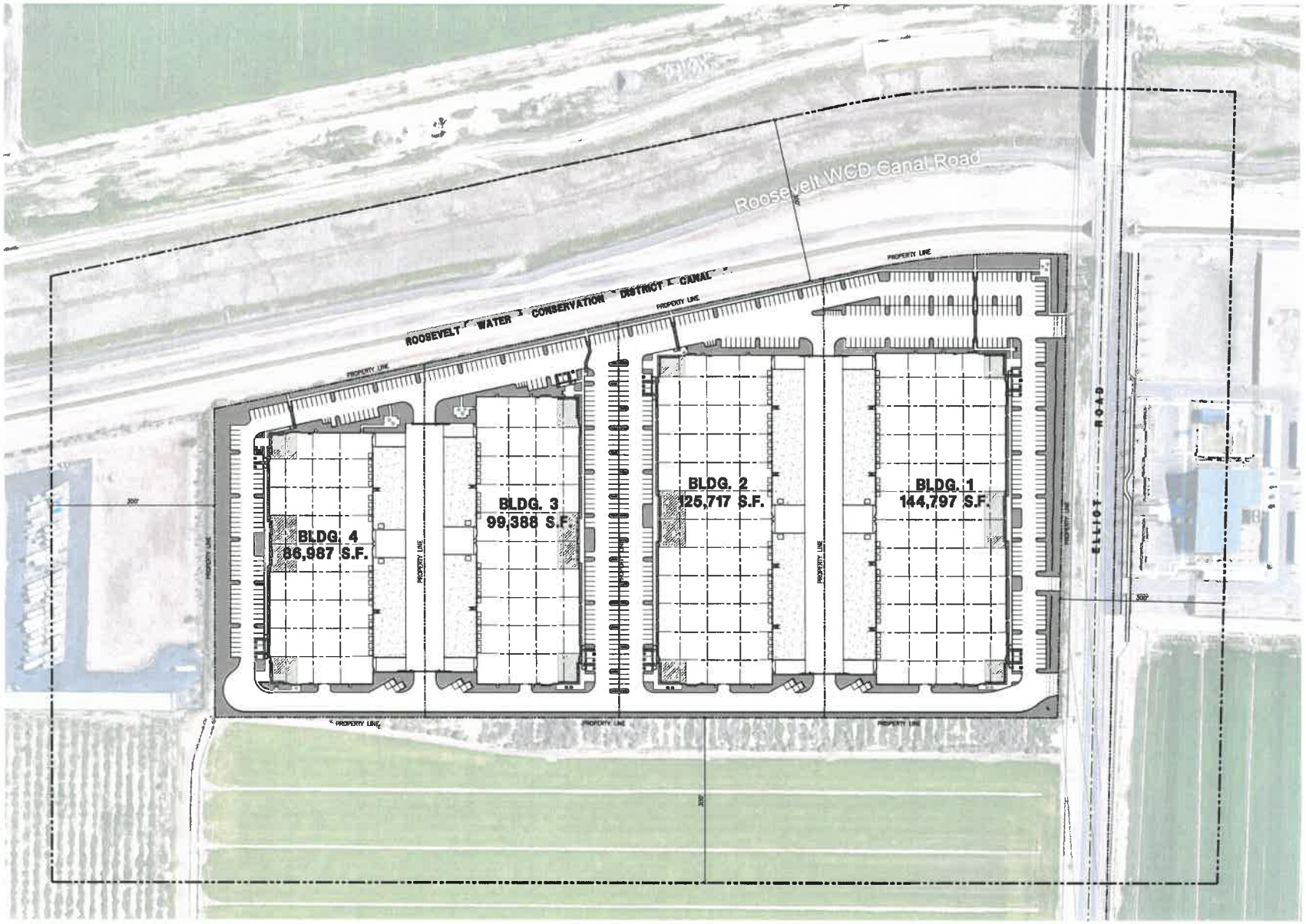
By
G. Adam Baugh

Enclosures

PHONE: 602-230-0600 FAX: 602-212-1787 2525 E. Arizona Biltmore Circle, Suite A-212, Phoenix, AZ 85016



East of the NEC of Power Road and Elliot Road



300' RADIUS SITE MAP (A)
scale: 1" = 80'-0"

SCALE: 1" = 80'-0"
0 80' 160' 240'
TRUE NORTH

HPA architecture
hpa, inc.
18831 bardeen avenue - ste. #100
irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0851
email: hpa@hparchs.com

Owner:
MIG
MIG REAL STATE
640 Newport Center Drive
Suite 1300
Newport Beach, CA 92660

Project:
ELLIOT ROAD & POWER ROAD
NEC POWER ROAD & ELLIOT ROAD
MESA, AZ 85212

Consultants:

Civil	KIMLEY-HORN
Structural	-
Mechanical	-
Plumbing	-
Electrical	RPM
Landscape	GLK, FLANAGAN
Fire Protection	-
Soils Engineer	-

Title: 300' RADIUS SITE MAP

Project Number:	21247
Drawn by:	CR
Date:	08/02/21
Revision:	

Sheet:
DAB-A1.0

B & K LAND & INV CO

11611 S HIGLEY RD

HIGLEY, AZ 85236

ELLIOT POWER OZB LLC

5501 E ESTRID AVE

SCOTTSDALE, AZ 85254

GARAGE TOWN USA LLC

1950 W BELLERIVE LN SUITE 107

COEUR D ALENE, ID 83814

GRHH PERFORMANCE MESA LLC

855 W BROAD ST STE 300

BOISE, ID 83702

MBR LAND I LLP

3180 E ELLIOT RD

GILBERT, AZ 85234

MORRISON RANCH INC

3180 E ELLIOT RD

GILBERT, AZ 85234

SAIA FAMILY LP

2120 E SIXTH ST STE 16

TEMPE, AZ 85281

THE DALE C MORRISON TRUST

1733 N GREENFIELD RD STE 101

MESA, AZ 85205

BETENBOUGH CLINTON G/KATHERINE M

PO BOX 50655

PHOENIX, AZ 85076

EVO 2 LAND HOLDINGS LLC

2161 E PECOS RD

GILBERT, AZ 85295

GARVIN HOLDINGS L L C

7405 E MONTE CRISTO AVE

SCOTTSDALE, AZ 85260

LANGLEY PROPERTIES I LP

2738 E GUADALUPE RD

GILBERT, AZ 85234

MBR LAND II

3180 E ELLIOT RD

GILBERT, AZ 85234

ROOSEVELT WATER CONSERVATION DISTRICT

PO BOX 100

HIGLEY, AZ 85236

SAN TAN MONTESSORI SCHOOL INC

3959 E ELLIOT RD

GILBERT, AZ 85234

DESERT PLACE AT MORRISON RANCH HOA

8360 E VIA DE VENTURA BLDG L STE 100

SCOTTSDALE, AZ 85258

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

2801 W DURANGO ST

PHOENIX, AZ 85009

GILBERT UNIFIED SCHOOL DISTRICT NO 41

140 S GILBERT RD

GILBERT, AZ 85296

LESUEUR INVEST VI LLC/ETAL

1223 S CLEARVIEW AVE STE 103

MESA, AZ 85209

MESA CITY OF

PO BOX 1466

MESA, AZ 85211

ROOSEVELT WATER CONSERVATION DISTRICT

2344 S HIGLEY RD

GILBERT, AZ 85212

STONE APPLICATIONS LLC

2801 CENTERVILLE RD 1ST FL PMB 811

WILMINGTON, DE 19808

WITHEY MORRIS PLC
ATTORNEYS AT LAW

September 27, 2021

RE: Notice of Hearing
DRB21-00749
East of the NEC Power Road and Elliot Road

Dear Property Owner or Resident:

Our firm represents MIG Real Estate, regarding +/-26 acres of vacant land located east of the northeast corner of Elliot Road and Power Road in Mesa (the "Property"), as shown on the enclosed map. The site is currently vacant and zoned RS-43 (Single Residence). The request is for a rezone property from RS-43 (Single Residence) to Planned Area Development (PAD) Light Industrial (LI). The LI zoning will provide a base of desired uses and development standards for the project, while the PAD Overlay will provide for appropriate modifications for the specific site and intended uses. The design review case number assigned to this project is DRB21-00749.

This letter is being sent to all property owners within 1,000 feet of the property at the request of the City of Mesa Planning Division. Enclosed for your review is a copy of the site plan and elevations of the proposed development. If you have any questions regarding this proposal, please call me at 602-230-0600 or e-mail me at adam@witheymorris.com

This application will be scheduled for consideration by the Mesa Design Review Board at their meeting held on **October 12, 2021** in the Lower Level of the City Council Chambers. The meeting will begin at 4:30 p.m. You are invited to attend this meeting and provide any input you may have regarding this proposal.

The public can attend the meeting either in-person or electronically and telephonically. The live meeting may be watched via a video conferencing platform at https://mesa11.zoom.us/j/5301232921 or listened to by calling 888-788-0099 or 877-853-5247 (toll free) using meeting ID 530 123 2921 and following the prompts. If you want to provide a written comment or speak telephonically at the meeting, please submit an **online comment card** online comment card at **least 1 hour prior to the start of the meeting.** If you want to speak at the meeting, you will need to indicate on the comment card that you would like to speak during the meeting, and you will need to call **888-788-0099 or 877-853-5247 (toll free) using meeting ID 530 123 2921 and following the prompts, prior to the start of the meeting.** You will be able to listen to the meeting; and when the item you have indicated that you want to speak on is before the Board, your line will be taken off mute and you will be given an opportunity to speak.

For help with the online comment card, or for any other technical difficulties, please call 480-644-2099.

PHONE: 602-230-0600 FAX: 602-212-1787 2525 E. Arizona Biltmore Circle, Suite A-212, Phoenix, AZ 85016

The City of Mesa has assigned this case to Cassidy Welsh of their Planning Division staff. He can be reached at 480-644-2591 or cassidy.welch@mesaaz.gov, should you have any questions regarding the public hearing process. If you have sold this property in the interim, please forward this correspondence to the new owner.

If you have any questions or would like to meet with the applicant or the development team, please feel free to contact me at 602-230-0600 or adam@witheymorris.com.

Thank you for your courtesy and consideration.

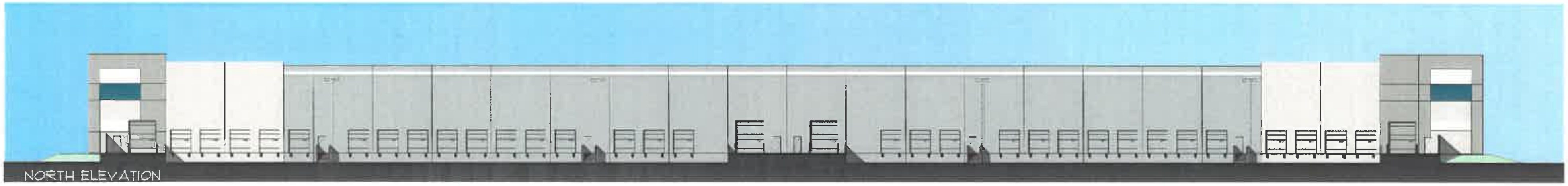
Sincerely,

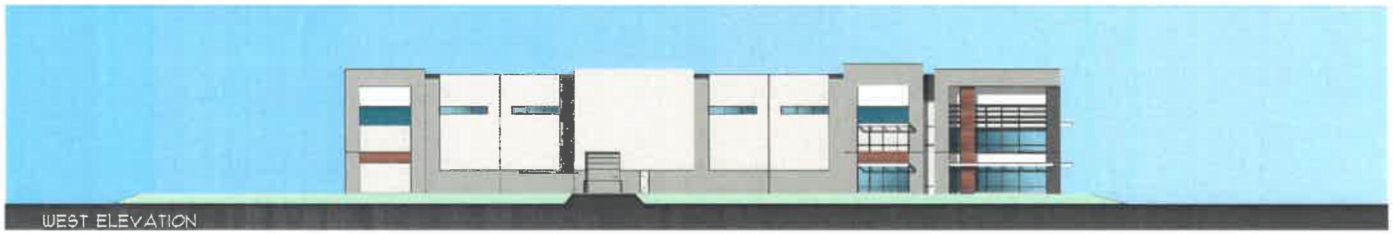
WITHEY MORRIS P.L.C.

By
Adam Baugh

Enclosures

East of the NEC of Power Road and Elliot Road





HPA architecture

Building Elevations Material Calculations

		West		South		East	
		Area	%	Area	%	Area	%
BLDG 1	Tilt Concrete	8,306	[illegible] %	17,240	70 %	8,300	[illegible] %
	Tilt Concrete Accent Color	350	4 %	1,268	5 %	350	4 %
	Glass	893	9 %	3,969	16 %	893	9 %
	Steel	80	1 %	328	1 %	80	1 %
	Tresspa Pura NFC Siding	306	3 %	1,875	8 %	300	3 %
	Total	9,919		24,674		9,915	

ELLIOT RD. & POWER RD.

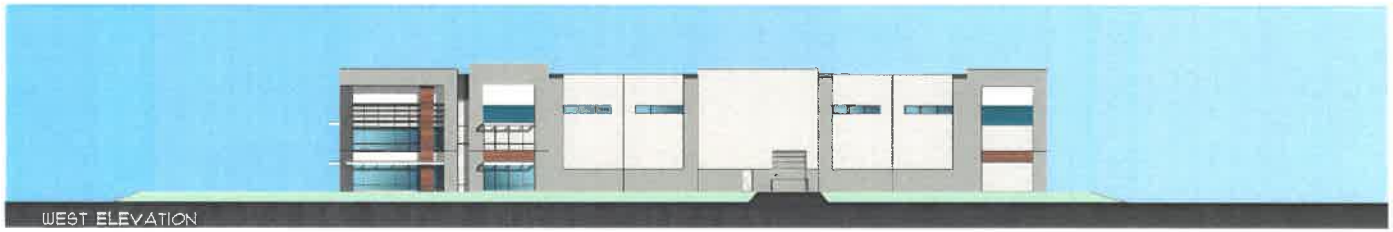
City of Mesa, Arizona

MIG Real Estate

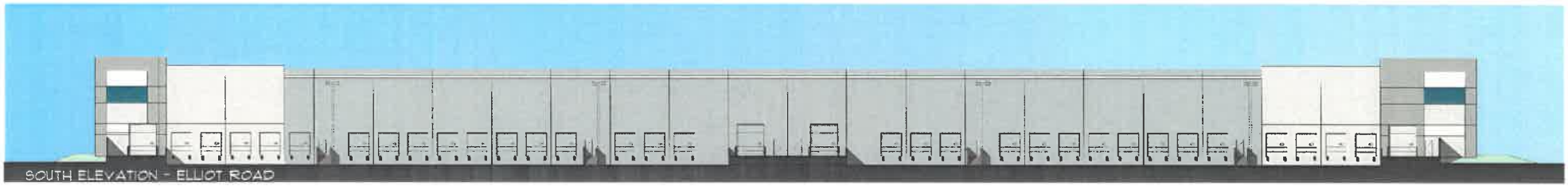
MIG Real Estate

Job No. 21247.00 CONCEPTUAL COLORED ELEVATIONS - BUILDING 1 - 32' CLEAR 09.22.2021

NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION - ELLIOT ROAD

EAST ELEVATION - ROOSEVELT WATER CONSERVATION DISTRICT CANAL

Building Elevations Material Calculations

		North		West		East	
		Area	%	Area	%	Area	%
BLDG 2	Tilt Concrete	17,010	68 %	6,755	88 %	6,756	80 %
	Tilt Concrete Accent Color	1,120	5 %	253	3 %	253	3 %
	Glass	3,725	15 %	1,023	12 %	1,020	12 %
	Steel	320	1 %	75	1 %	75	1 %
	Trespa Pura NFC Siding	2,343	10 %	354	4 %	354	4 %
	Total	24,520		8,457		8,457	

HPA architecture

ELLIOT RD. & POWER RD.

City of Mesa, Arizona

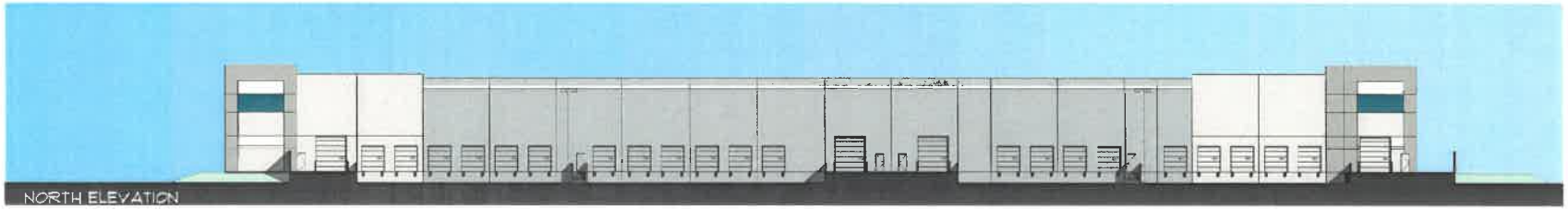
MIG Real Estate

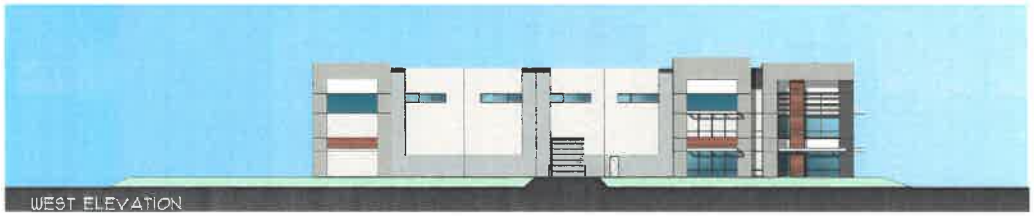
MIG Real Estate

Job No. 21247.00

CONCEPTUAL COLORED ELEVATIONS - BUILDING 2 - 32' CLEAR

09.22.2021





HPA architecture

Building Elevations Material Calculations

		West		South		East	
		Area	%	Area	%	Area	%
BLDG 3	Tilt Concrete	2,708	37 %	14,739	69 %	2,729	37 %
	Tilt Concrete Accent Color	268	3 %	918	4 %	268	3 %
	Glass	4,140	54 %	4,329	20 %	4,140	54 %
	Steel	79	1 %	329	2 %	75	1 %
	Trespa Pura NFC Siding	399	5 %	1,131	5 %	399	5 %
	Total	7,698		21,326		7,698	

ELLIOT RD. & POWER RD.

City of Mesa, Arizona

MIG Real Estate

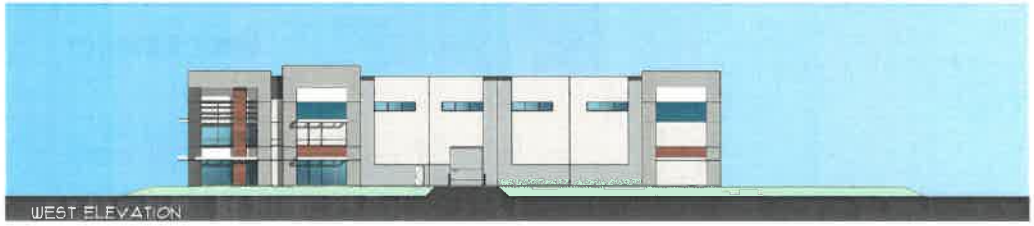
MIG Real Estate

Job No. 21247.00

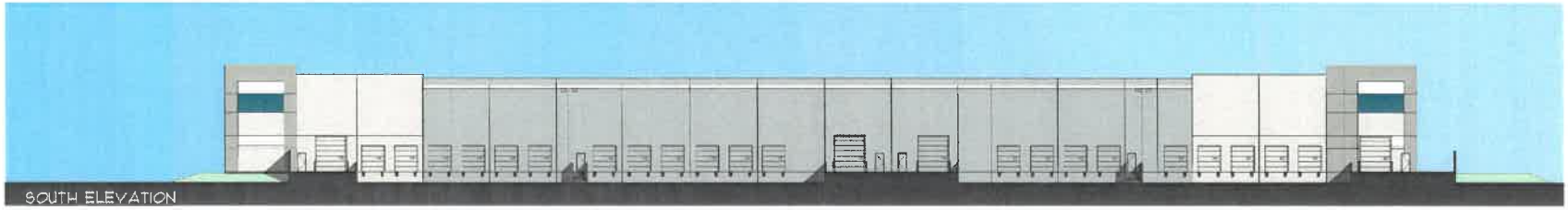
CONCEPTUAL COLORED ELEVATIONS - BUILDING 3 - 30' CLEAR

09.22.2021

NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION

EAST ELEVATION - ROOSEVELT WATER CONSERVATION DISTRICT CANAL

Building Elevations Material Calculations

		North		West		East	
		Area	%	Area	%	Area	%
BLDG 4	TS Concrete	13,465	72 %	6,410	90 %	6,410	90 %
	TS Concrete Accent Color	797	4 %	185	3 %	185	3 %
	Glass	3,171	17 %	607	8 %	607	8 %
	Steel	253	1 %	45	1 %	45	1 %
	Temple Pure RPC Siding	1,115	6 %	384	4 %	334	4 %
	Total	18,771		7,580		7,580	

HPA architecture

ELLIOT RD. & POWER RD.

City of Mesa, Arizona

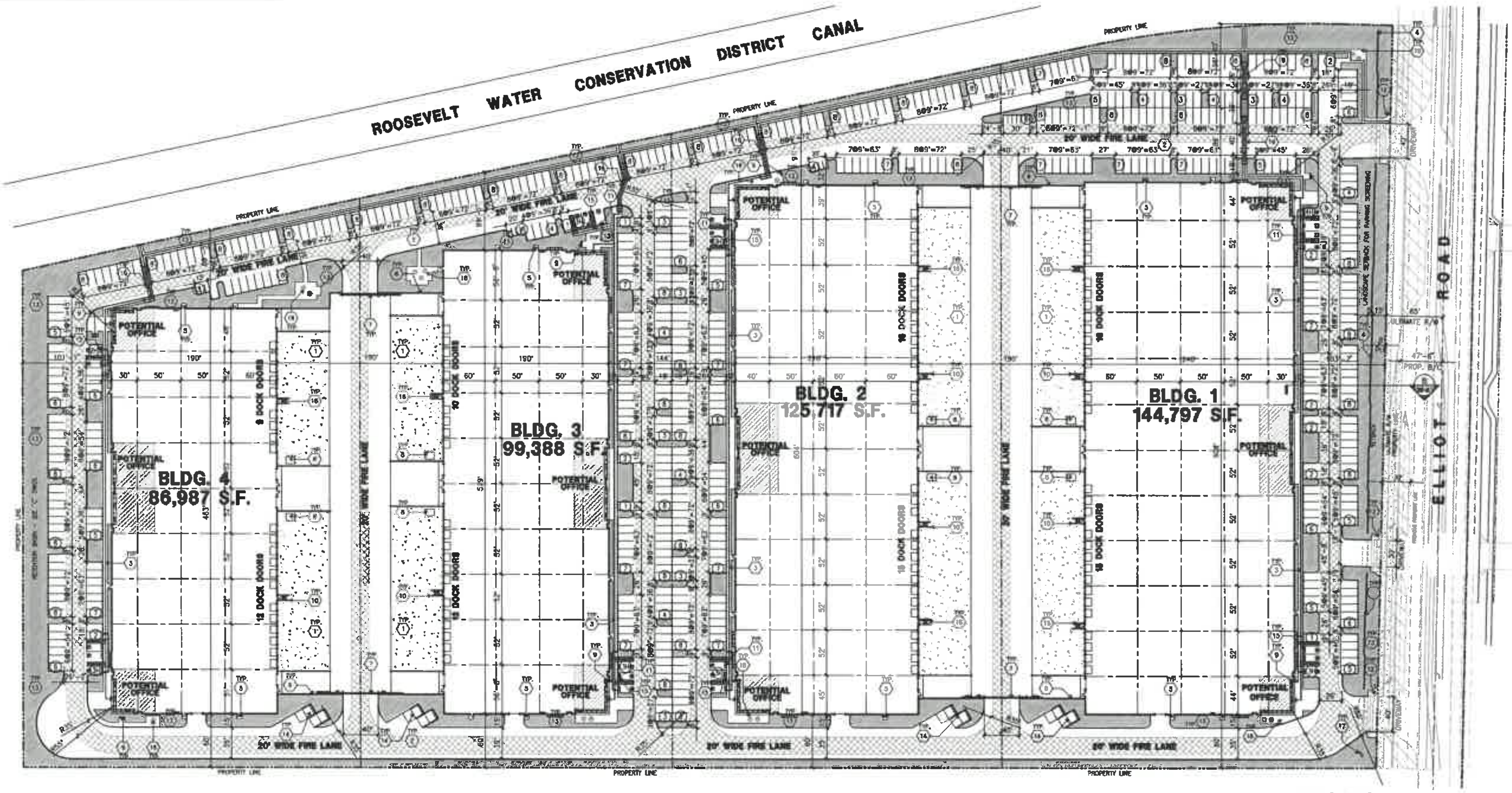
MIG Real Estate

MIG Real Estate

Job No. 21247.00

CONCEPTUAL COLORED ELEVATIONS - BUILDING 4 - 30' CLEAR

09.22.2021



MASTER SITE PLAN (A)
scale: 1" = 60'-0"

SCALE: 1" = 60'-0"
0 60' 120' 180'
TRUE NORTH

PROPERTY OWNER

MIG REAL STATE
660 NEWPORT CENTER DRIVE
SUITE 1300
NEWPORT BEACH, CA 92660
ATTN: COLIN BAGWELL

ADDRESS OF THE PROPERTY

TBD

ASSESSOR'S PARCEL NUMBER

304-05-017J

ZONING

CURRENT ZONING DESIGNATION: RESIDENTIAL (RS-43)
PROPOSED ZONING DESIGNATION: LIGHT INDUSTRIAL (LI)

APPLICANT

MIG REAL STATE
660 NEWPORT CENTER DRIVE
SUITE 1300
NEWPORT BEACH, CA 92660
ATTN: COLIN BAGWELL

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVE SUITE 100
IRVINE CA 92612
TEL: 949-862-2116
ATTN: HOON KEUN PARK

SITE PLAN KEYNOTES

1. HEAVY BROOM FINISH CONCRETE PAVEMENT – PER CIVIL DRAWINGS.
2. PAVEMENT – PER CIVIL.
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH.
4. PARKING SCREEN WALL
5. 5'-6"X5'-6"X4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY AS REQ. BY CITY INSPECTOR.
6. 14' H SCREEN WALL
7. PROVIDE 8' H METAL MANUAL OPERATED GATES W/ KNOX-PAD LOCK PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY.
8. SES TRANSFORMER
9. BICYCLE RACK
10. CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
11. HANDICAPPED PARKING STALL SIGN
12. HANDICAPPED ENTRY SIGN
13. LANDSCAPE. ALL LANDSCAPE AREAS INDICATED BY SHADING.
14. TRASH ENCLOSURE PER CITY STANDARDS
15. PRE-CAST CONC. WHEEL STOP
16. EXTERIOR CONCRETE STAIRS.
17. MONUMENT SIGN, SEE D/DAB-A4.1
18. COMMON OPEN SPACE. SEE SHEET DAB-A1.2
19. PEDESTRIAN WALKWAY TO BE 3" ABOVE THE VEHICLE LANE. PROVIDE DECORATIVE STAMPED CONCRETE. SEE "L" DWGS.

SITE LEGEND

- CONCRETE PAVING SEE "C" DRWGS. FOR THICKNESS
- LANDSCAPED AREA
- STANDARD PARKING STALL (9' X 18')
- HANDICAP PARKING STALL (9' X 18') + 5' W/ ACCESSIBLE AISLE
- HANDICAP PARKING (VAN) STALL (11' X 18') + 5' W/ ACCESSIBLE AISLE
- PROPERTY LINE
- PATH OF TRAVEL 5% MAX SLOPE 2% MAX CROSS-SLOPE
- 20' FIRE LANE PROVIDE RED CURBS AND SIGNAGE PER FIRE DEPT REQUIREMENT

PROJECT DATA

	BLDG. 1	BLDG. 2	BLDG. 3	BLDG. 4	TOTAL
SITE AREA					
In s.f.	366,420	287,884	244,785	234,260	1,133,372 s.f.
In acres	8.41	6.61	5.62	5.38	26.02 ac
BUILDING AREA					
Office	6,000	6,000	6,000	6,000	24,000 s.f.
Warehouse	138,797	119,717	93,388	80,987	432,889 s.f.
TOTAL	144,797	125,717	99,388	86,987	456,889 s.f.
COVERAGE	39.5%	43.7%	40.6%	37.1%	40.3%
AUTO PARKING REQUIRED					
Office: 1/375 s.f.	16	16	16	16	64 stalls
Whse: 1:500 s.f.	154	133	104	90	481 stalls
TOTAL	170	149	120	106	545 stalls
AUTO PARKING PROVIDED					
Standard (9' x 18')	207	149	139	105	600 stalls
Standard Accessible (9' x 18')	5	4	4	3	16 stalls
Van Accessible (12' x 18')	2	2	2	2	8 stalls
TOTAL	214	155	145	113	627 stalls
BICYCLE/MOTORCYCLE PARKING PROVIDED					
Bicycle	28	28	28	28	112 stalls
Motorcycle (5' x 9')	6	4	4	3	17 stalls
COMMON OPEN SPACE REQUIRED					
1% per building gross floor area	1,448	1,257	994	870	4,569 s.f.
COMMON OPEN SPACE PROVIDED					
Common space provided	3,350	2,017	4,670	4,272	14,309 s.f.
ZONING ORDINANCE FOR CITY					
Current Zoning Designation - Residential (RS-43)					
Proposed Zoning Designation - Light Industrial (LI)					
MAXIMUM BUILDING HEIGHT ALLOWED					
Height - 50'					
MAXIMUM LOT COVERAGE					
FAR - 90%					
SETBACKS					
Front - 15'					
Side/Rear - 0'					

VICINITY MAP

OFFICIAL USE ONLY

HPA architecture
hpa, inc.
18831 bardeen avenue - ste. #100
Irvine, ca
92612
tel: 949-863-1770
fax: 949-863-0851
email: hpa@hparchs.com

Owner:
MIG
REAL STATE
660 Newport Center Drive
Suite 1300
Newport Beach, CA 92660

Project:
ELLIOT ROAD & POWER ROAD
NEC POWER ROAD & ELLIOT ROAD
MESA, AZ 85212

Consultants:

Civil	KIMLEY-HORN
Structural	-
Mechanical	-
Plumbing	-
Electrical	RPM
Landscape	G.K. FLANAGAN
Fire Protection	-
Soils Engineer	-

Title: OVERALL SITE PLAN
Project Number: 21247
Drawn by: CR
Date: 09/23/21
Revision:

Sheet:
DAB-A1.1

B & K LAND & INV CO
11611 S HIGLEY RD
HIGLEY, AZ 85236

ELLIOT POWER OZB LLC
5501 E ESTRID AVE
SCOTTSDALE, AZ 85254

GARAGE TOWN USA LLC
1950 W BELLERIVE LN SUITE 107
COEUR D ALENE, ID 83814

GRHH PERFORMANCE MESA LLC
855 W BROAD ST STE 300
BOISE, ID 83702

MBR LAND I LLP
3180 E ELLIOT RD
GILBERT, AZ 85234

MORRISON RANCH INC
3180 E ELLIOT RD
GILBERT, AZ 85234

SAIA FAMILY LP
2120 E SIXTH ST STE 16
TEMPE, AZ 85281

THE DALE C MORRISON TRUST
1733 N GREENFIELD RD STE 101
MESA, AZ 85205

BETENBOUGH CLINTON G/KATHERINE M
PO BOX 50655
PHOENIX, AZ 85076

EVO 2 LAND HOLDINGS LLC
2161 E PECOS RD
GILBERT, AZ 85295

GARVIN HOLDINGS L L C
7405 E MONTE CRISTO AVE
SCOTTSDALE, AZ 85260

LANGLEY PROPERTIES I LP
2738 E GUADALUPE RD
GILBERT, AZ 85234

MBR LAND II
3180 E ELLIOT RD
GILBERT, AZ 85234

ROOSEVELT WATER CONSERVATION DISTRICT
PO BOX 100
HIGLEY, AZ 85236

SAN TAN MONTESSORI SCHOOL INC
3959 E ELLIOT RD
GILBERT, AZ 85234

DESERT PLACE AT MORRISON RANCH HOA
8360 E VIA DE VENTURA BLDG L STE 100
SCOTTSDALE, AZ 85258

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
2801 W DURANGO ST
PHOENIX, AZ 85009

GILBERT UNIFIED SCHOOL DISTRICT NO 41
140 S GILBERT RD
GILBERT, AZ 85296

LESUEUR INVEST VI LLC/ETAL
1223 S CLEARVIEW AVE STE 103
MESA, AZ 85209

MESA CITY OF
PO BOX 1466
MESA, AZ 85211

ROOSEVELT WATER CONSERVATION DISTRICT
2344 S HIGLEY RD
GILBERT, AZ 85212

STONE APPLICATIONS LLC
2801 CENTERVILLE RD 1ST FL PMB 811
WILMINGTON, DE 19808

WITHEY MORRIS PLC
ATTORNEYS AT LAW

November 1, 2021

RE: Notice of P&Z Hearing
ZON21-00746
East of the NEC Power Road and Elliot Road

Dear Property Owner or Resident:

Our firm represents MIG Real Estate, regarding +/-26 acres of vacant land located east of the northeast corner of Elliot Road and Power Road in Mesa (the "Property"), as shown on the enclosed map. The site is currently vacant and zoned RS-43 (Single Residence). The request is to rezone the Property from Single Residence 43 (RS-43) to Light Industrial with a Planned Area Development overlay (LI-PAD); and Site Plan Review. The LI zoning will provide a base of desired uses and development standards for the project, while the PAD Overlay will provide for appropriate modifications for the specific site and intended uses.

The proposed project includes the development of roughly 456,889 square feet of new, industrial, manufacturing and employment space. The preliminary site plan distributes the space amongst four (4) buildings which are oriented to provide visual interest from the adjacent right-of-way while also screening or back-of-house activities such as loading, truck maneuvering, utility equipment and refuse containers. This development will create many employment opportunities and is ideally situated to provide commerce/manufacturing related employment uses. The case number assigned to this project is ZON21-00746.

This letter is being sent to all property owners within 1,000 feet of the property at the request of the City of Mesa Planning Division. Enclosed for your review is a copy of the site plan and elevations of the proposed development. If you have any questions regarding this proposal, please call me at 602-230-0600 or e-mail me at adam@witheymorris.com.

This application will be scheduled for consideration by the Mesa Planning and Zoning Board at the meeting held on **November 17, 2021** in the City Council Chambers located at 57 East First Street. The meeting will begin at 4:00 p.m. You are invited to attend this meeting and provide any input you may have regarding this proposal.

The public can attend the meeting either in-person or electronically and telephonically. The live meeting may be watched on local cable Mesa channel 11, online at Mesa11.com/live or www.youtube.com/user/cityofmesa11/live, or listened to by **calling 888-788-0099 or 877-853-5247 (toll free) using meeting ID 530 123 2921 and following the prompts**. If you want to provide a written comment or speak telephonically at the meeting, please submit an **online comment card** at https://www.mesaaz.gov/government/advisory-boards-committees/planning-zoning-board/online-meeting-comment-card at **least 1 hour prior to the start of the meeting.** If you want to speak at the

meeting, you will need to indicate on the comment card that you would like to speak during the meeting, and you will need to call **888-788-0099 or 877-853-5247 (toll free) using meeting ID 530 123 2921 and following the prompts, prior to the start of the meeting.** You will be able to listen to the meeting; and when the item you have indicated that you want to speak on is before the Board, your line will be taken off mute and you will be given an opportunity to speak.

For help with the online comment card, or for any other technical difficulties, please call 480-644-2099.

The City of Mesa has assigned this case to Cassidy Welsh of their Planning Division staff. He can be reached at 480-644-2591 or Cassidy.Welch@MesaAZ.gov should you have any questions regarding the public hearing process. If you have sold this property in the interim, please forward this correspondence to the new owner.

Thank you for your courtesy and consideration.

Sincerely,

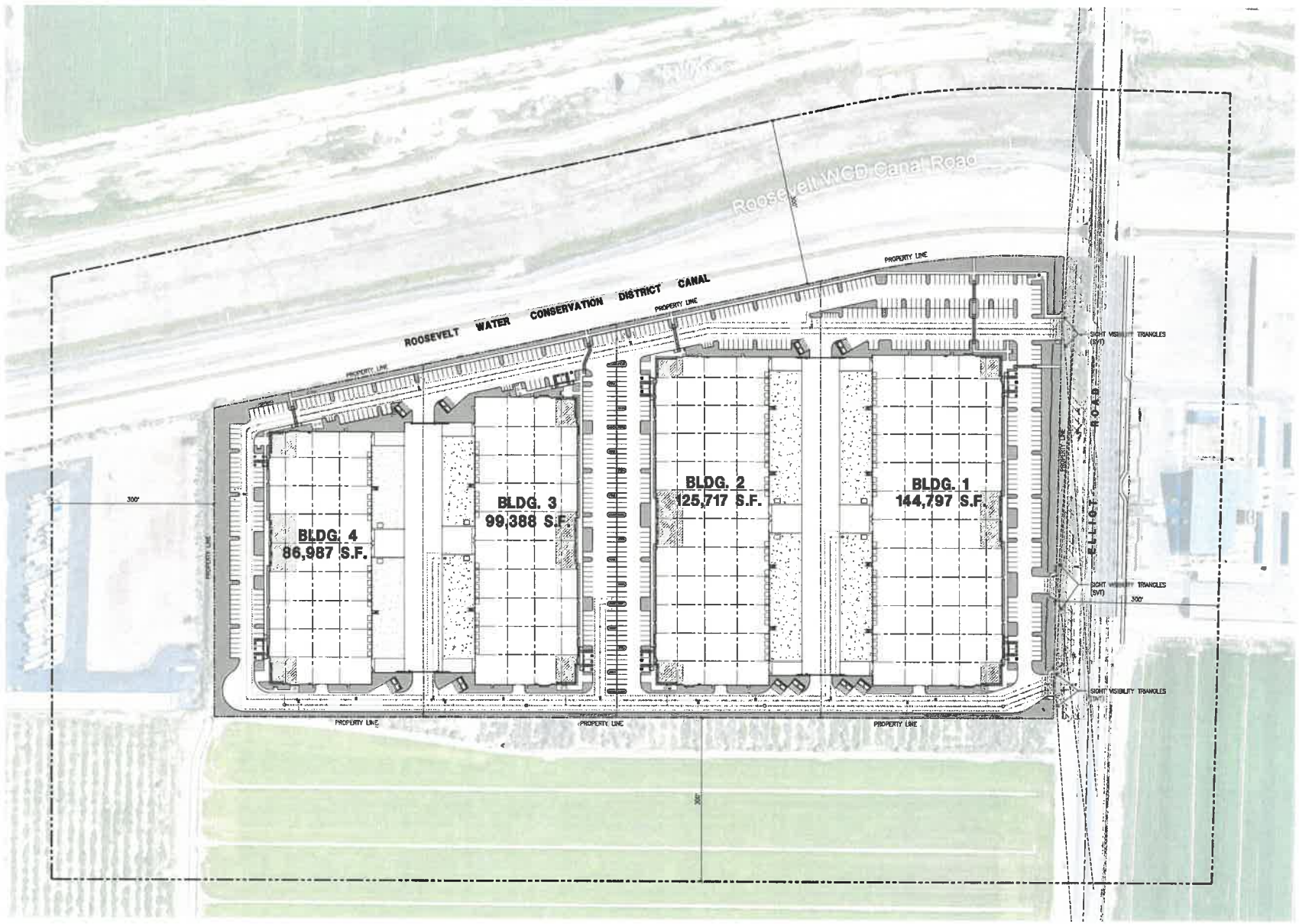
WITHEY MORRIS P.L.C.

By 

G. Adam Baugh

Enclosures

East of the NEC of Power Road and Elliot Road



300' RADIUS SITE MAP (A)
scale: 1" = 80'-0"

SCALE: 1" = 80'-0"
0 80' 160' 240'
TRUE NORTH

HPA architecture
hpa, inc.
18831 bardeen avenue - ste. #100
irvine, ca
92612
tel: 949•863•1770
fax: 949•863•0651
email: hpa@hparchs.com

Owner:
MIG
MIG REAL STATE
660 Newport Center Drive
Suite 1300
Newport Beach, CA 92660

Project:
ELLIOT ROAD & POWER ROAD
NEC POWER ROAD & ELLIOT ROAD
MESA, AZ 85212

Consultants:

Civil:	KIMLEY-HORN
Structural:	-
Mechanical:	-
Plumbing:	-
Electrical:	RPM
Landscape:	G.K. FLANAGAN
Fire Protection:	-
Soils Engineer:	-

Title: 300' RADIUS SITE MAP

Project Number:	21247
Drawn by:	CR
Date:	10/18/21
Revision:	

Sheet:
DAB-A1.0

B & K LAND & INV CO

11611 S HIGLEY RD

HIGLEY, AZ 85236

ELLIOT POWER OZB LLC

5501 E ESTRID AVE

SCOTTSDALE, AZ 85254

GARAGE TOWN USA LLC

1950 W BELLERIVE LN SUITE 107

COEUR D ALENE, ID 83814

GRHH PERFORMANCE MESA LLC

855 W BROAD ST STE 300

BOISE, ID 83702

MBR LAND I LLP

3180 E ELLIOT RD

GILBERT, AZ 85234

MORRISON RANCH INC

3180 E ELLIOT RD

GILBERT, AZ 85234

SAIA FAMILY LP

2120 E SIXTH ST STE 16

TEMPE, AZ 85281

THE DALE C MORRISON TRUST

1733 N GREENFIELD RD STE 101

MESA, AZ 85205

BETENBOUGH CLINTON G/KATHERINE M

PO BOX 50655

PHOENIX, AZ 85076

EVO 2 LAND HOLDINGS LLC

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GILBERT, AZ 85212

STONE APPLICATIONS LLC

2801 CENTERVILLE RD 1ST FL PMB 811

WILMINGTON, DE 19808

City of Mesa Planning Division

AFFIDAVIT OF PUBLIC POSTING

Date: 11/01/21

I, Meghan Liggett, being the owner or authorized agent for the zoning case below, do hereby affirm that I have posted the property related to case # ZON21-00746, on NEC Elliot Rd and Power Rd. The posting was in one place with one notice for each quarter mile of frontage along perimeter right-of-way so that the notices were visible from the nearest public right-of-way.

SUBMIT PHOTOGRAPHS OF THE POSTINGS MOUNTED ON AN 8.5" BY 11" SHEET OF PAPER WITH THIS AFFIDAVIT.

Applicant's/Representative's signature: Meghan Liggett

SUBSCRIBED AND SWORN before me on 11/01/21

MaryBeth Conrad
Notary Public

MARYBETH CONRAD
Notary Public - Arizona
Maricopa County
Commission # 591461
My Comm. Expires Oct 25, 2024


CITY OF MESA
PUBLIC NOTICE
ZONING HEARING
PLANNING & ZONING BOARD
57 EAST FIRST STREET
MESA, ARIZONA
TIME: 4:00 PM DATE: November 17, 2021
CASE: ZON21-00746
REQUEST: Rezone from Single Residence 43 (RS-43) to Light Industrial with a Planned Area Development overlay (LI-PAD); and Site Plan Review. This request will allow for an industrial development.
APPLICANT: Adam Baugh - Withey Morris, PLC
PHONE: 602-230-0600
Planning Division 480-644-2385
Posting date: 11/01/2021
S POWER RD
Maps
Nov 1, 2021 at 9:14:37 AM
N 33° 21' 2", W 111° 41' 2"
6960–6980 E Elliot Rd
Mesa AZ 85212

When recorded, return to:

City of Mesa

AIRCRAFT OPERATION, SOUND AND AVIGATION EASEMENT AND RELEASE FOR PHOENIX-MESA GATEWAY AIRPORT

WHEREAS, _____ company, hereinafter called "Owner," is the owner of that certain parcel of land situated in the City of Mesa, Maricopa County, Arizona, consisting of approximately _____acres, legally described on the attached Exhibit A, and incorporated by reference herein, which is hereinafter referred to as the "**Land**," and which the Owner desires to develop as a mixed use community which will include both residential and non-residential uses.

WHEREAS, the Owner is aware that the Land lies in an area that is subject to aircraft overflights and operations for aircraft utilizing airspace in connection with "Phoenix-Mesa Gateway Airport" (formerly known as Williams Air Force Base), which is hereinafter referred to as the "**Airport**."

WHEREAS, the Owner recognizes that all airspace is governed by the U.S. Code, and the U.S. Government has exclusive sovereignty of airspace in the United States. Owner is willing to develop such Land as a mixed-use community subject to the sovereign authority of the U.S. Government subject to the plans and policies developed by the Federal Aviation Administration ("**FAA**") for use of the navigable airspace including the right of flight and other airspace uses over the Land and all effects flowing therefrom.

NOW THEREFORE, for and in consideration of the sum of TEN DOLLARS ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby fully acknowledged, Owner and its heirs, administrators, executors, occupants, users, developers, successors and assigns (collectively referred to herein as "**Owner**"), does hereby give and grant to the Airport, the Phoenix-Mesa Gateway Airport Authority (the "**Authority**") and the City of Mesa, a municipal corporation, and its respective administrators, successors and assigns (“City”) and Aircraft users of the Airport and Airport facilities ("**Aircraft Users**"), a perpetual, nonexclusive easement for all avigation purposes and uses over and across the Land in connection with flights, airspace usage, passage, operations, testing, development of Aircraft (the term "**Aircraft**" shall include any device that is used or intended to be used for flight in the air or space, existing or future, that is regulated by the FAA), and other related uses and flight or airspace activities, in, to, over, across and through all navigable airspace above the surface of the

Owner's Land in such flight patterns, routes, uses, the above purposes and altitudes that are in conformance with FAA regulations and to an infinite height above such Owner's Land, which easement shall include, but not be limited to, the right of flight of all Aircraft above, across and over the Land in such flight patterns, routes, uses, the foregoing purposes and altitudes that are in conformance with FAA regulations, together with its related inconvenience, smoke, attendant sound and noise, vibrations, fumes, dust, fuel, gas and lubricant particles, and dripping and all other effects that may be caused by the operation of Aircraft including for the purposes and uses described above and also landing at, or taking off from, or operating in relation to, on, from or around the Airport. The Owner does further release and discharge the City, the Authority, the Airport, Aircraft Users, The Boeing Company, a Delaware corporation, and its affiliates ("**Boeing**"), and other third party beneficiaries (as described below) of and from any liability for any and all claims for damages of any kind to persons or property that may arise now or at any time in the future over or in connection with the Owner's Land above, in, to, over and through all navigable air space above Owner's Land, and on and to the surface of the Land and on and to all structures now existing or hereafter constructed on the Land, or any portion of the Land, whether such damage shall originate from smoke, noise, vibration, fumes, dust, fuel and lubricant particles, and all other effects that may be caused by the operation of Aircraft landing at, or taking off from, or operating at or around the Airport.

This easement is granted for the above purpose and uses for the passage of all Aircraft, specifically including but not limited to military and developmental and test aircraft, present or future, by whomever owned or operated on, from, around or to the Airport and any other airport or air facility which is or may be located at or near the site of said Airport, including any future change or increase in the boundaries of the Airport or air facility(ies), the volume or nature of operation of the Airport or air facility(ies), or noise or pattern of air traffic thereof; and these Aircraft Users, Boeing, Aircraft owners, operators, and users are and shall be third party beneficiaries of this Easement and the rights granted.

Owner shall give notice of this Easement to invitees, occupants, and tenants (collectively referred to herein as “Property Users”) of the Land, or any portion thereof, and the Property Users, to the fullest extent permitted by law, are bound by the terms of this Easement.

This instrument does not release the owners and operators of Aircraft from liability for damage or injury to person or property caused by falling Aircraft or falling physical objects from such Aircraft, except as stated herein with respect to inconvenience, smoke, attendant sound and noise, vibrations, fumes, dust, fuel and lubricant particles. This Aircraft Operation, Sound and Avigation Easement and Release shall be binding upon said Owner and successors in interest to the Land, and any part thereof, and it is further agreed that this instrument shall be a covenant running with the Land and shall be recorded in the office of the County Recorder of Maricopa County,

Arizona and other counties as applicable. This Easement may not be amended, terminated or retracted without the prior written consent of City, Owner, and Boeing.

[Signatures appear on following page]

EXECUTED this _____ of _____, 2020.

OWNER:

_____

_____

By_____

Name_____

Its_____

____

STATE OF ARIZONA)
) ss.
County of Maricopa)

The foregoing instrument was acknowledged before me this ___ day of _____, 2018, by _____, the _____of _____corporation or limited liability company, in his/her capacity as _____ of and on behalf of said entity.

_____

Notary Public

My commission expires:

THE BOEING COMPANY, a
Delaware corporation

By_____

Name_____

Its_____

____

STATE OF ARIZONA)
) ss.
County of Maricopa)

The foregoing instrument was acknowledged before me this ___ day of _____, 2020, by _____, the _____of The Boeing Company, a Delaware corporation, in his/her capacity as _____ of and on behalf of such corporation.

_____
Notary Public

My commission expires:

Exhibit A

Legal Description

TRAFFIC IMPACT STUDY

Warehouse/Manufacturing Facility
Elliot Road East of Power Road
Mesa, Arizona

August 5, 2021

PREPARED FOR
MIG Real Estate
660 Newport Center Drive, Suite 1300
Newport Beach California 92660

PREPARED BY
UCG
United Civil Group

TRAFFIC IMPACT STUDY

Warehouse/Manufacturing Development
Elliot Road East of Power Road
Mesa, Arizona

August 5, 2021

PREPARED FOR

MIG Real Estate
660 Newport Center Drive, Suite 1300
Newport Beach California 92660

PREPARED BY

United Civil Group
2803 N. 7th Avenue
Phoenix, Arizona 85007

UCG Project Number: TR21046

Conducted by: Sarah Simpson, PhD, PE
President

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I. Executive Summary

A. Project Summary

United Civil Group (UCG) was retained by MIG Real Estate to perform this Traffic Impact Study (TIS) for the planned warehouse/manufacturing facility development located on the north side of Elliot Road east of Power Road and west of the Roosevelt Canal in Mesa, Arizona. The site is approximately 26.6 acres of vacant land, Maricopa County Assessor's parcel (304-05-017J). The site will be developed as four warehouse/manufacturing buildings totaling 456,900 square feet and will be developed in one phase and occupied by year 2023.

The proposed facility is planned to have three driveways located on Elliot Road. The driveway spacing is shown on the site plan and the distances are measured driveway centerline to centerline. Access A located on the western side of the property is located approximately 550 feet east of the centerline of Power Road. Traversing east, Access A is 205 feet from the existing access on the south side of the roadway. Access B into the site is proposed to align with the existing access on the south. The spacing between Access B and a second access on the southern property is 260 feet. The eastern southern access is located approximately 95 feet west of Access C.

Because Elliot Road is under the jurisdiction of the City of Mesa, this TIS has been performed in general conformance with the City of Mesa Engineering and Design Standards dated 2021 and per scoping information provided by City of Mesa Planning Division Rezone and Site Plan 1st Review comments dated June 22, 2021, locally accepted standards, and industry practice.

Per the Mesa Engineering and Design Standards Section 204.4, this TIS for the planned warehouse/manufacturing facility development is required as part of the site development documents. As such, based on the Design Standards, this TIS is completed as a Category I TIS because the development is anticipated to generate fewer than 500 vehicle trips during any peak hour. The study horizon years for this development are opening year, 2023, plus 5 years after opening, 2028.

B. Study Objectives

This study is intended to investigate the existing and future traffic conditions and identify any potential roadway improvements necessary to serve the proposed development. Major study objectives of this traffic report are as follows:

- Analyze the existing intersections within ¼ mile of the site: Power Road/Elliot Road, Elliot Road/RWCD Eastern Driveway and Elliot Road/RWCD Western Driveway and the site accesses for the development.

- Determine the site traffic volumes generated by the proposed development and their impacts on the surrounding study area and roadway network.

- Where applicable, recommend intersection and/or roadway improvements, sufficient to meet the needs of the development and adjacent roadway network due to the additional site generated traffic volumes.

C. Conclusions and Recommendations

The overall plan for the approximate 26.6-acre development consists of four warehouse/manufacturing buildings totaling 456,900 square feet. The project will be constructed in one phase by 2023. Five years after opening, horizon year 2028, was analyzed within this TIS as per the City of Mesa Engineering and Design Standards dated 2021.

Site ingress and egress is planned via three driveways. Access A, located on Elliot Road is approximately 550 feet east of the centerline of Power Road. In the future roadway buildout condition with the installation of a raised median, Access A is proposed as right in/right out. Access B is located on Elliot Road and aligns with the existing western RWCD driveway on the south side of Elliot Road. Access B is proposed as a full movement driveway. Access C is located approximately 350 feet east of Access B and is proposed as a right in/left in/right out access when the median is ultimately installed on Elliot Road.

The forecasted trip generation was calculated based on data provided within the ITE Trip Generation Manual. On a weekday, after full build-out of the warehouse/manufacturing facility, the development is estimated to generate a total of 195 trips in the morning peak hour, 208 trips in the evening peak hour, and 1,304 daily trips.

Using the forecasted total traffic volumes for years 2023 and 2028 and interim condition geometrics, the study area intersections of Power Road/Elliot Road, Elliot Road/RWCD Eastern Driveway and Elliot Road/RWCD Western Driveway and the site accesses for the development are anticipated to operate at acceptable levels of service, LOS D or better, during the morning and evening peak hours. When Elliot

Road is constructed to its ultimate configuration, 3 lanes in each direction separated by a raised median, the study area intersections will operate at a LOS C or better during the morning and evening peak hours.

Based on this Traffic Impact Study, the following recommendations apply:

- Construct ½ street improvements on the north side of Elliot Road along the site's frontage.
- As an interim condition, stripe a two way left turn lane on Elliot Road until geometric roadway improvements have been made east of the site to allow for the median installation.
- Construct westbound right turn deceleration lanes on Elliot Road at Accesses A and B. The storage should be designed as 150 feet with a 100-foot taper.
- Proper intersection sight distance and sight triangles shall be provided and maintained at the site accesses and intersections of the proposed development to give drivers exiting the accesses a clear view of oncoming traffic. To ensure adequate sight distances and sight distance triangles, AASHTO's *A Policy on Geometric Design of Highways and Streets* Section 9.5 and the City of Mesa Design Standard Section 211 sight triangle standards should be followed when designing the accesses and landscaping.
- In the future when the median is constructed on Elliot Road, provide a median opening at Access B which aligns with the RWCD's western site access to provide full turning movements.
- In the future when the median is constructed on Elliot Road, provide a partial median opening (3/4 access) at Access C to allow right in/left in/right out only.
- In the future when Elliot Road is widened to its ultimate configuration, provide a right turn deceleration lane for westbound traffic at Access C.

II. PROPOSED DEVELOPMENT

A. Site Location

The proposed warehouse/manufacturing facility development is planned on an approximate 26.6-acre site located on the north side of Elliot Road east of Power Road and west of the Roosevelt Canal in Mesa, Arizona. **Figures 1 and 2** present the location of the proposed development within the context of the immediate area and its location within the City of Mesa.

B. Land Use

The overall plan for the 26.6-acre site consists of four warehouse/manufacturing buildings totaling 456,900 square feet as shown on **Figure 3**.

C. Phasing and Timing

This project will be developed in one phase with full build-out of the site assumed to be year 2023.

Per the City of Mesa Engineering and Design Standards Section 204.4, traffic conditions were analyzed (5 years after site buildout) based on the Category I TIS.

Therefore, the phases of development are as follows:

Year 2023 - site buildout of the warehouse/manufacturing facility
Year 2028 - 5 years after full buildout

D. Site Accessibility

The warehouse/manufacturing facility development will be accessed locally by Elliot Road. Regional access is expected to be provided via State Route 202 Loop (SR 202L) to the south and east of the site and US 60 to the north of the site.

All vehicles will access the warehouse/manufacturing facility from three accesses.

Access A is the western access into the site located on Elliot Road. Access A is planned to be constructed as a right in/right out access that will be limited by a future raised median. Access A is approximately located 550 feet east of the Power Road, measured centerline to centerline.

Access B is the primary access into the site on Elliot Road and will serve passenger vehicles. Access B will align with the existing western RWCD driveway. Access B is planned to be constructed as a full access and is located approximately 205 feet east of planned Access A, measured centerline to centerline.

Access C is located on Elliot Road approximately 355 feet east of Access B. Access C will serve the heavy vehicles as well as passenger vehicles. Access C is proposed as right in/left in/right out and will be limited in the future by a raised median.

The site accesses are discussed in more detail in this TIS within the Traffic and Improvement Analysis section of the report.

E. Site Circulation

Access locations, building location, site circulation, and parking are interrelated as each one influences the others. Therefore, the design of the on-site circulation system shall be an integral part of the overall site and access design.

The site planning as shown in Figure 3 places the warehouse/manufacturing facility within the center of the site. On the western boundary, access is provided to the truck yards between the buildings and the parking areas. On the eastern boundary of the site, primarily employee parking is provided, with access to the RWCD canal pathways. The southern boundary of the site faces Elliot Road and provides access to parking areas and potential offices. Site circulation is provided between the assesses and through the parking area aisles.

Based on an initial review of the site plan, site circulation for this development is acceptable and allows for the movement of multimodal transportation through pedestrian walkways, bicycle access and vehicular needs.

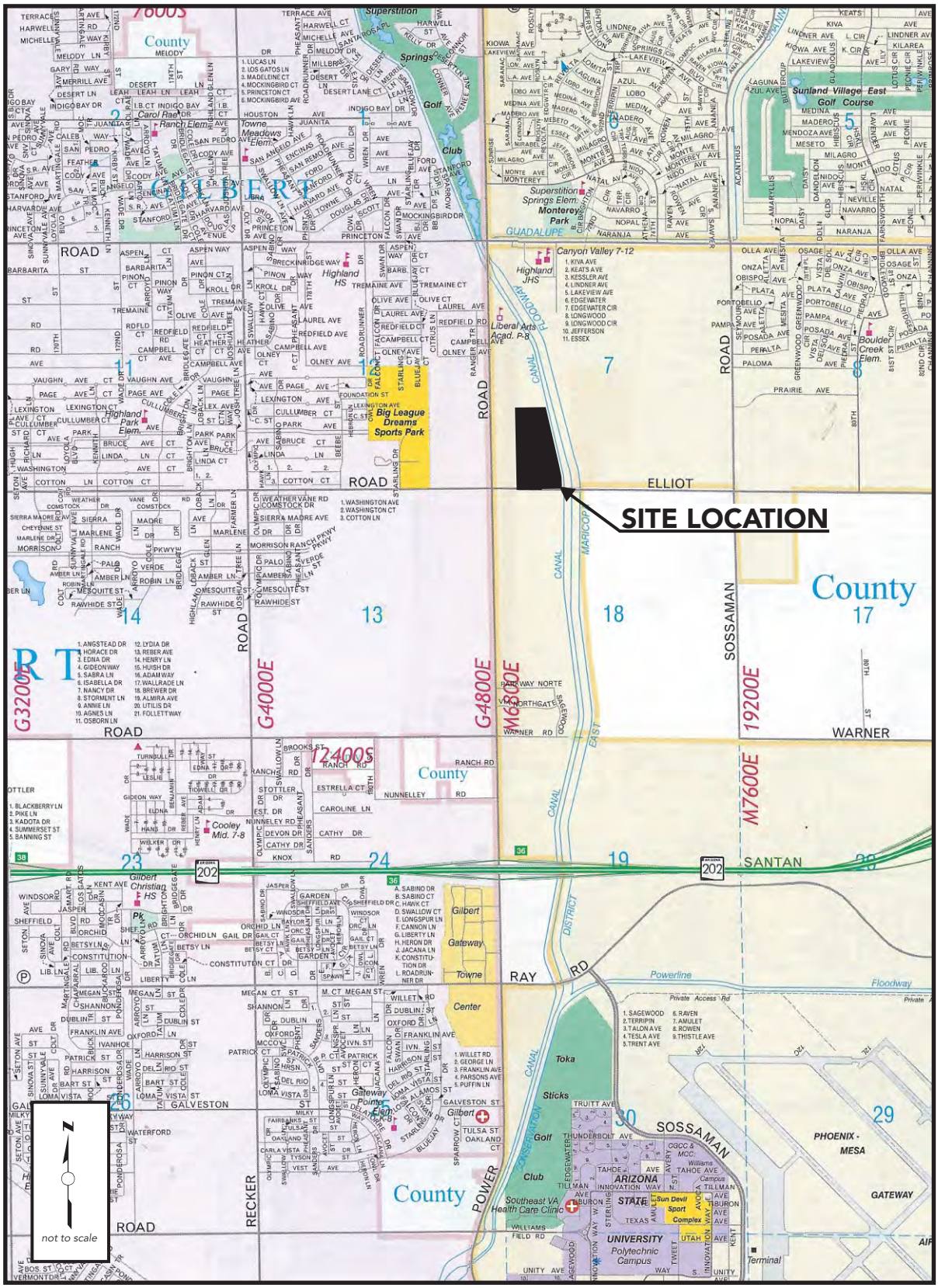

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Figure 1: Vicinity Map

United Civil Group

Permission for commercial use granted by Google Earth

Figure 2: Aerial View

UCG
United Civil Group

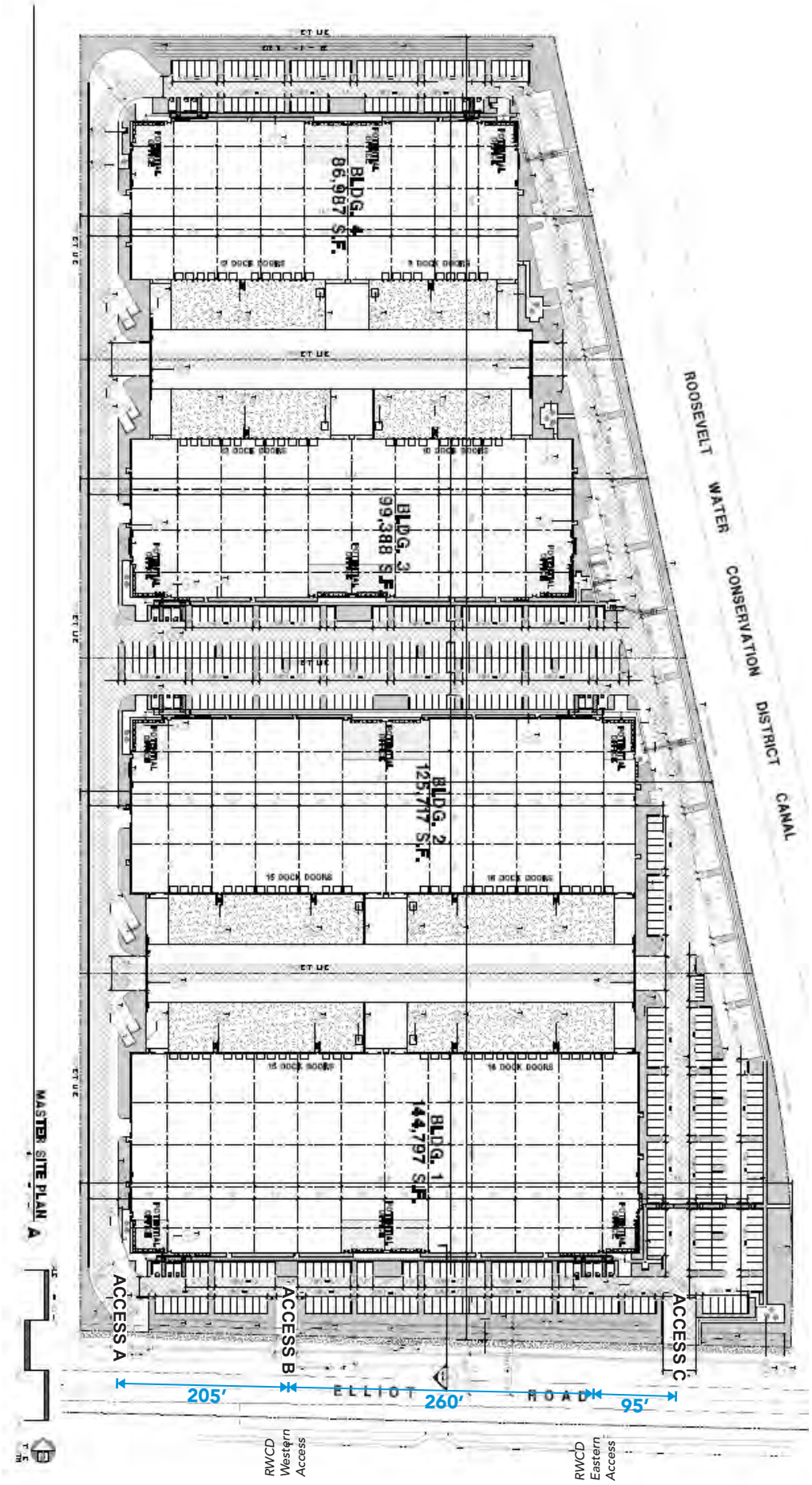


Figure 3: Site Plan

III. STUDY AREA CONDITIONS

A. Study Area

Based on the forecasted trip generation of the proposed warehouse/manufacturing facility development, the minimum study area is defined by the City of Mesa criteria for a Category I TIS. Therefore, based on these criteria and through discussions with the City staff during the first review of the site planning comments dated June 22, 2021, the study area includes:

- Elliot Road/Power Road
- Elliot Road/existing western RWCD driveway
- Elliot Road/existing eastern RWCD driveway

B. Study Area Land Use

The following describes the existing land uses of the subject site and surrounding area:

SUBJECT SITE: vacant land
NORTH: Existing industrial development
SOUTH: Elliot Road followed by existing industrial development and vacant land
EAST: RWCD canal followed by agricultural land
WEST: Agricultural land followed by Power Road

C. Anticipated Future Development and Planned Improvements

No known development is anticipated in the near future that was included in this TIS.

The City of Mesa Capital Improvement Program for Fiscal Years 2021 to 2025 shows roadway improvements on Elliot Road from Sossaman to Ellsworth, project code CP0982, in fiscal year 2022/2023. This project begins approximately ¾ mile east of the proposed development and continues for approximately 2 miles to the east.

IV. LEVEL OF SERVICE METHODOLOGY

The roadway system's ability to accommodate traffic demand is typically limited by the capacity. The level of service (LOS) concept is used in traffic engineering to describe the degree of delay a driver can expect. The concept defines a near-capacity condition as LOS E while a free flow condition under which a driver would experience minimal delay is defined as LOS A.

Intersection capacity analysis is a principal tool used in traffic engineering. Operation is characterized according to the amount of delay at an intersection approach and quantified into a level of service ("LOS"). The intersection LOS was determined using the methodologies presented in the Transportation Research Board's Highway Capacity Manual ("HCM"). The LOS grades quantify and categorize a driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. Per the HCM, the signalized and unsignalized (all-way stop controlled or two-way stop-controlled intersection) delay and associated LOS is presented in **Table 1**. City of Mesa guidelines strive to obtain a level of service D or better for both signalized and unsignalized intersection overall operations. Intersections having a LOS E or LOS F may warrant improvements or traffic reductions.

Table 1: Intersection Levels of Service and Delay

Level of Service	Description	Signalized Delay (Sec/Veh)	Unsignalized Delay (Sec/Veh)
A	Minimal control delay, traffic operates at primary free flow conditions, unimpeded movement within traffic stream	≤ 10	≤ 10
B	Minor control delay at signalized intersections, traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream	> 10 and ≤ 20	> 10 and ≤ 15
C	Moderate control delay, movement within traffic stream more restricted than LOS B, formation of queues contributes to lower average travel speeds	> 20 and ≤ 35	> 15 and ≤ 25
D	Considerable control delay that may be substantially increased by small increases in flow, average travel speeds continue to decrease.	> 35 and ≤ 55	> 25 and ≤ 35
E	High control delay, average travel speed no more than 22 percent of free flow speed	> 55 and ≤ 80	> 35 and ≤ 50
F	Extremely high control	> 80	> 50

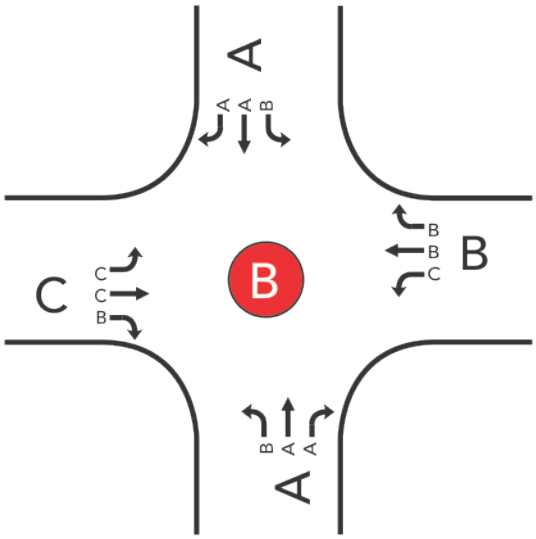
Source: Highway Capacity Manual 2010

For signalized and all-way stop controlled intersections, LOS is calculated for a movement (e.g., left, through, right), for the approach (e.g., northbound, southbound, eastbound, westbound) and for the overall intersection.

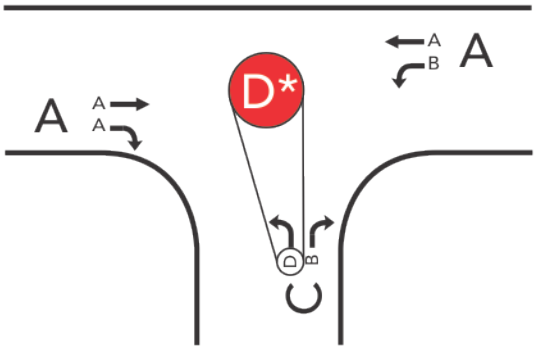
For two-way stop-controlled intersections, LOS is calculated for a movement and for the approach. However, for the overall intersection, LOS is reported as the lowest movement within the intersection. This is because most drivers are on the major roadway and do not experience delay traversing through the intersection. The example below illustrates the various LOS calculations completed for intersections.

EXAMPLE:

Signalized & All-Way Stop Controlled



Two-Way Stop Controlled



*Reported as lowest movement LOS

Source: United Civil Group, 2019

V. EXISTING ROADWAY CONDITIONS

A. Physical Characteristics

The existing roadway network within the study area includes Elliot Road. **Figure 4** graphically depicts the existing roadway and intersection geometry within the study area at the study intersections.

Elliot Road has an east/west alignment and is classified as an arterial roadway per the City of Mesa's 2040 Transportation Plan. At full buildout, Elliot Road will be constructed as a 6-lane arterial adjacent to the site per Mesa detail M-46.03.2. Currently, Elliot Road consists of one travel lane in both the east- and westbound directions. Elliot Road widens with ½ street improvements in front of the industrial development on the south side of the roadway. Elliot Road is posted at 45mph within the vicinity of the site.

The intersection of **Power Road/Elliot Road** operates as a signalized intersection with protective/permissive left turn phasing on all approaches. The north- and southbound approaches consist of an exclusive left turn lane, a through lane and a shared through right turn lane. The east- and westbound approaches consist of an exclusive left turn lane and a shared through-right turn lane.

B. Existing Traffic Volumes

Existing turning movement counts (TMC) in 15-minute intervals were collected at the study area intersections of Power Road/Elliot Road, Elliot Road/RWCD Eastern Driveway and Elliot Road/RWCD Western Driveway on Tuesday July 13, 2021, during the morning (7:00AM – 9:00AM) and evening (4:00PM – 6:00PM) peak periods. Complete traffic count data can be found in **Appendix A**.

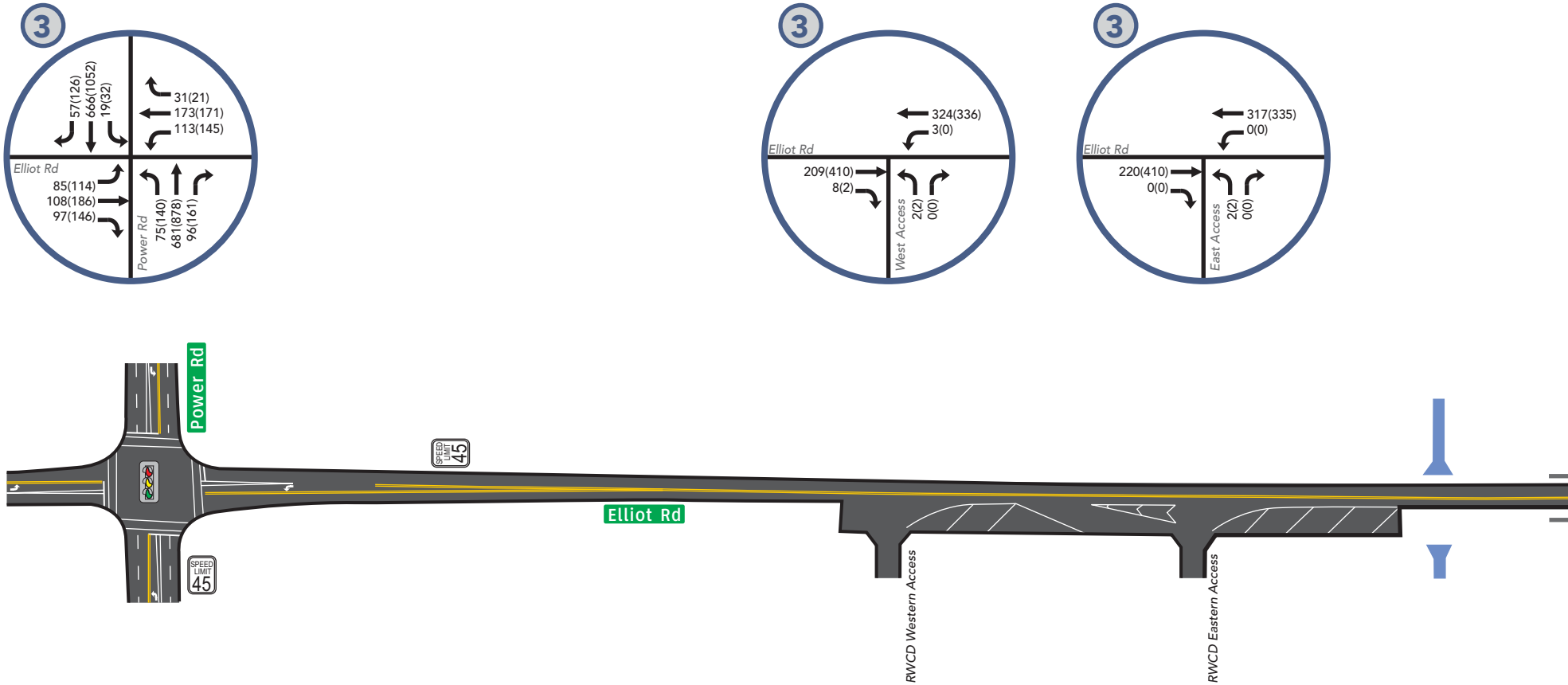
Due to Covid 19 and summer traffic conditions, a 10% adjustment factor was added to the 2021 traffic volumes to estimate average traffic conditions.

Figure 4 presents the existing turning movement counts at the study intersections.

Average daily traffic volumes were obtained from the City of Mesa's 2020 Traffic Volume Map. For Elliot Road, the data was collected in 2019. The traffic volume, collected on Elliot Road between Power Road and Sossaman Road was 9,500 vehicles per day.

C. Existing Traffic Observations

Traffic conditions and operations were observed during the study's weekday morning and evening peak periods. No major traffic issues were noted.



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United Civil Group

Figure 4: Existing Conditions

D. Crash Analysis

The most recent three years of available crash data (1/1/2018 – 12/31/2020) for the study area intersections were obtained from the Arizona Department of Transportation (ADOT) Arizona Crash Information System (ACIS). **Table 2** summarizes the total number of crashes at the intersection by severity. Crash severity is determined by the reporting officer at the time of the crash or soon thereafter based on the most severe injury sustained by an involved party. Crashes are shown from most severe (Fatal) to least severe (No Injury).

Table 2: Injury Severity 2018-2020

Year	Fatal	Suspected Serious Injury	Suspected Minor Injury	Possible Injury	No Injury	Total
Elliot Road/Power Road						
2018			1	5	6	12
2019			3	2	13	18
2020			2	2	10	14
Total			**6**	**9**	**29**	**44**

Table 3 summarizes the total number of crashes at the intersection by type. Crash type categories include Rear End, Left Turn, Angle (front to side, other than left turn), and Other/unknown.

Table 3: Collision Manner 2018-2020

Year	Single Vehicle	Angle	Left Turn	Rear End	Head On	Sideswipe Same Direction	Sideswipe Opposite Direction	Rear to Side	Other/ Unknown	Total
Elliot Road/Power Road										
2018	1	1	4	1	1				4	12
2019	1	2	4	9		1			1	18
2020	2		5	6		1				14
Total	**4**	**3**	**13**	**16**	**1**	**2**			**5**	**44**

Tables 2 and 3 show that at the study area intersection, a total of 44 reportable crashes occurred over the three-year period. Of the 44 crashes, nearly half, 16, were rear end crashes. Sixty-six percent of the crashes, 29, were reported as no injury, where 6 were classified as suspected minor injury.

E. Existing Intersection Level of Service Analyses

The level of service (LOS) and average delay at the existing study area intersections were evaluated using the 2021 adjusted intersection volumes and the existing lane geometry and traffic control as presented in Figure 4. PTV Vistro traffic modeling software, employing the methodologies as presented in the *Highway Capacity Manual* (HCM), was utilized for the capacity analyses to obtain the existing conditions levels of service. Summaries of the Vistro output calculations are included in

Appendix B. The results of the existing levels of service analysis are presented in Table 4.

Table 4: Existing Conditions Intersection Levels of Service

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Elliot Road/Power Road – Signalized with 90 second cycle																	
AM Peak Hour	A	B	B	B	A	B	B	B	C	D	D	D	C	D	D	D	18.54 B
PM Peak Hour	B	B	C	B	B	C	C	C	C	D	D	C	C	C	C	C	24.60 C
Elliot Road/Western RWCD Driveway – Stop Controlled																	
AM Peak Hour	B	-	-	B	-	-	-	-	-	A	A	A	A	A	-	A	12.71 B*
PM Peak Hour	C	-	-	C	-	-	-	-	-	A	A	A	-	A	-	A	15.39 C*
Elliot Road/Eastern RWCD Driveway – Stop Controlled																	
AM Peak Hour	B	-	-	B	-	-	-	-	-	A	-	A	-	A	-	A	12.63 B*
PM Peak Hour	C	-	-	C	-	-	-	-	-	A	-	A	-	A	-	A	15.36 C*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

The existing study area intersections currently operate at acceptable levels of service, LOS C or better, during the morning and evening peak hours.

VI. BACKGROUND TRAFFIC VOLUMES

Non-site or background traffic volumes representing the amount of traffic estimated to be on the area roadway network without the proposed development within the study area are projected for the horizon years of the development: year 2023 and year 2028 (5 years after full site buildout). The yearly growth trends coupled with the site generated traffic of any known proposed developments in the study area are used to forecast the background traffic.

Figures 5 and 6 present the 2023 and 2028 background traffic volumes for this study.

A. Background Growth Rate

Because of the unknown future growth in the area, a 4% growth rate was used to estimate background trips from the 2021 adjusted data to 2028.

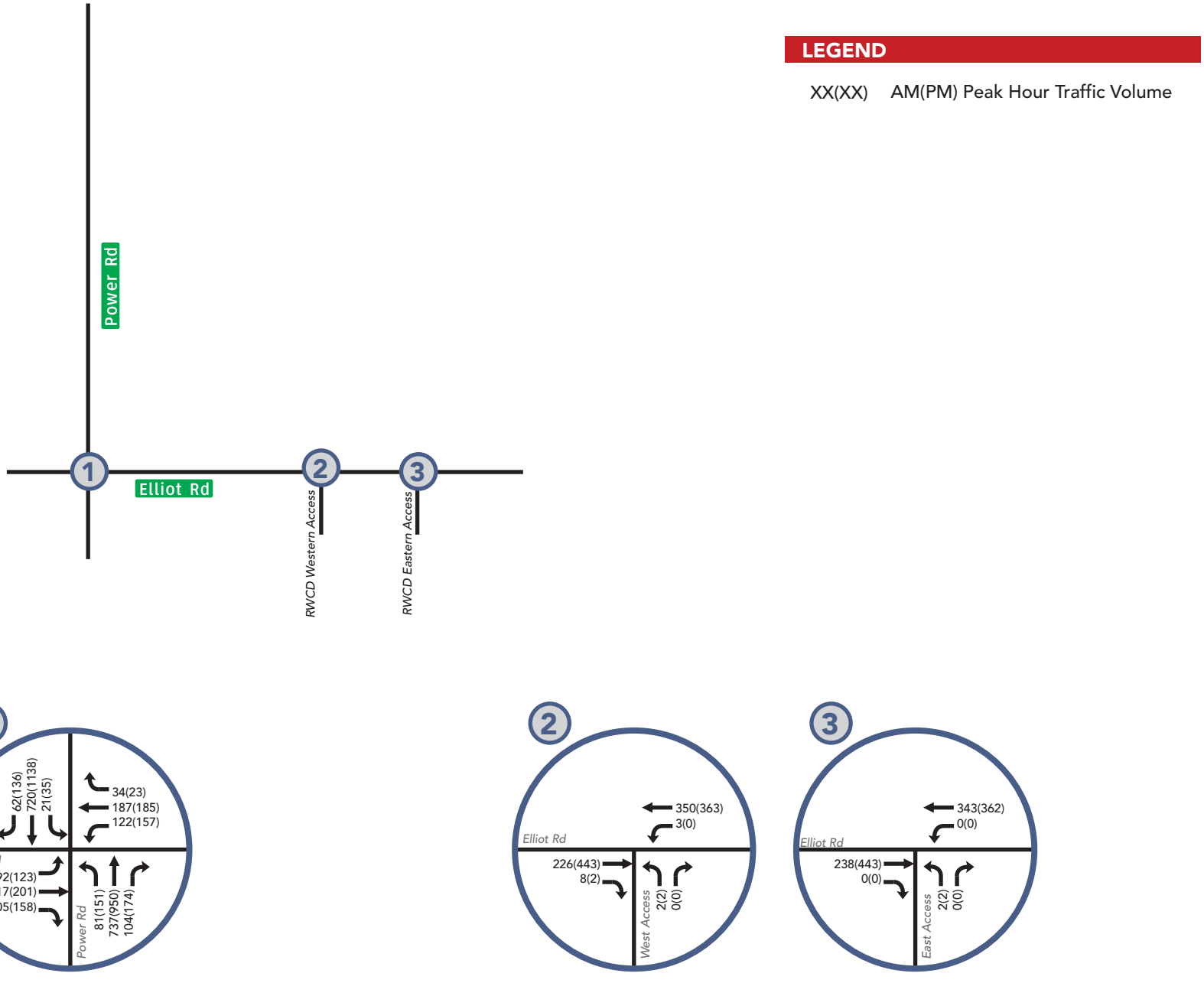


Figure 5: Background Traffic - Year 2023

United Civil Group

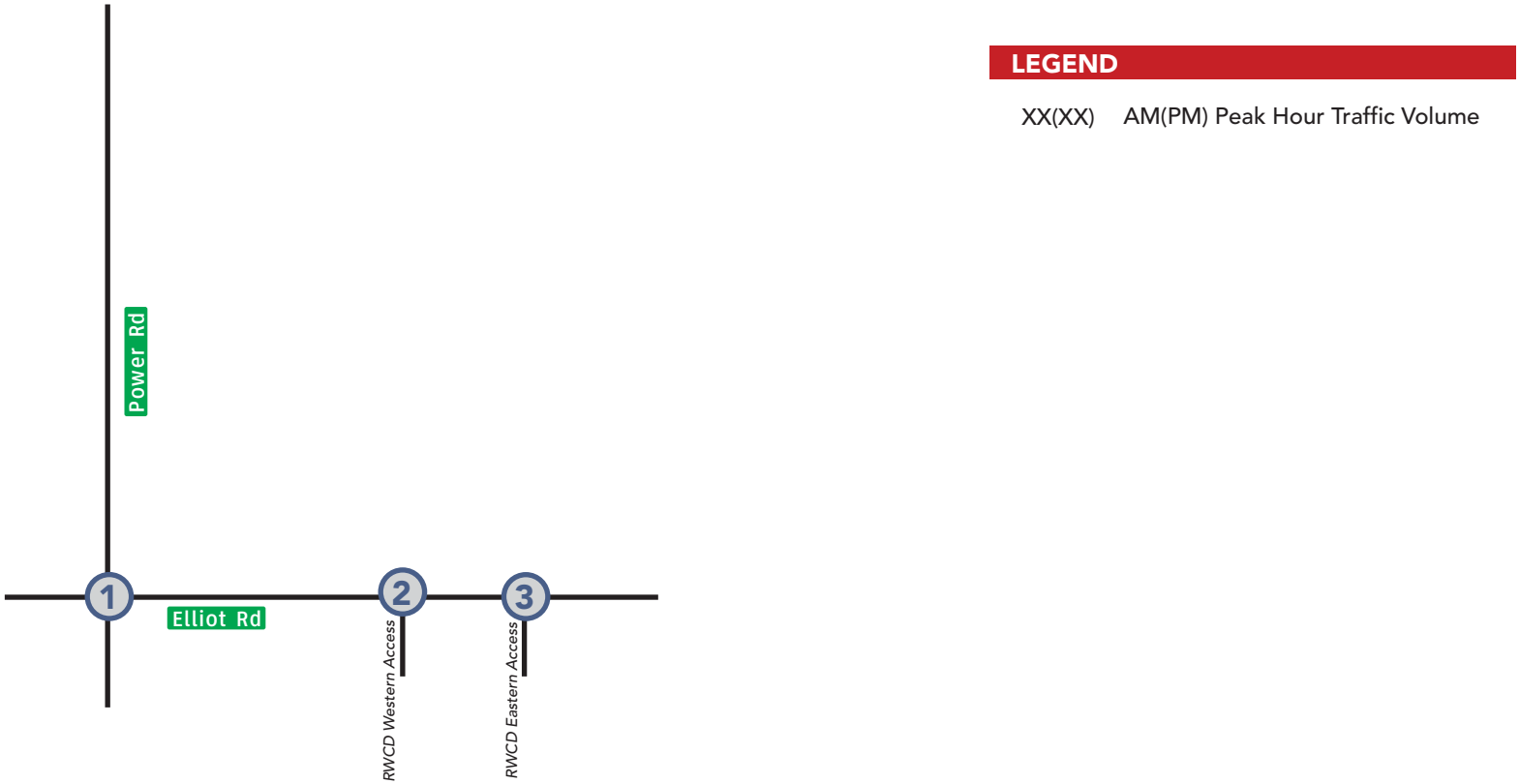


Figure 6: Background Traffic - Year 2028

United Civil Group

B. Background Traffic Levels of Service

Capacity analyses at the existing study area intersections were performed for the forecasted background traffic (with other surrounding development but without the warehouse/manufacturing facility development) utilizing the roadway geometries for the horizon year of the study (2023 and 2028) as presented. **Tables 5 and 6** present the background levels of service at the study area intersections without the proposed development.

Table 5: 2023 Background Traffic Intersection Levels of Service

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Elliot Road/Power Road – Signalized with 90 second cycle																	
AM Peak Hour	A	B	B	B	A	B	B	B	C	D	D	D	C	D	D	D	19.30 B
PM Peak Hour	C	C	C	C	B	C	C	C	C	D	D	C	C	C	C	C	27.90 C
Elliot Road/Western RWCD Driveway – Stop Controlled																	
AM Peak Hour	B	-	-	B	-	-	-	-	-	A	A	A	A	A	-	A	13.21 B*
PM Peak Hour	C	-	-	C	-	-	-	-	-	A	A	A	-	A	-	A	16.38 C*
Elliot Road/Eastern RWCD Driveway – Stop Controlled																	
AM Peak Hour	B	-	-	B	-	-	-	-	-	A	-	A	-	A	-	A	13.14 B*
PM Peak Hour	C	-	-	C	-	-	-	-	-	A	-	A	-	A	-	A	16.33 C*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

For background traffic conditions in year 2023, the existing study area intersections are forecasted to operate at acceptable levels of service, LOS C or better, during the morning and evening peak hours.

Table 6: 2028 Background Traffic Intersection Levels of Service

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Elliot Road/Power Road – Signalized with 90 second cycle																	
AM Peak Hour	A	B	B	B	A	B	B	B	C	D	D	D	C	D	D	C	21.49 C
PM Peak Hour	D	C	D	D	B	E	E	E	C	E	E	E	C	C	C	C	49.22 D
Elliot Road/Western RWCD Driveway – Stop Controlled																	
AM Peak Hour	B	-	-	B	-	-	-	-	-	A	A	A	A	A	-	A	14.88 B*
PM Peak Hour	C	-	-	C	-	-	-	-	-	A	A	A	-	A	-	A	19.79 C*
Elliot Road/Eastern RWCD Driveway – Stop Controlled																	
AM Peak Hour	B	-	-	B	-	-	-	-	-	A	-	A	-	A	-	A	14.77 B*
PM Peak Hour	C	-	-	C	-	-	-	-	-	A	-	A	-	A	-	A	19.75 C*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

As traffic continues to increase, delay is slightly increased at the study area intersections in the background traffic conditions in year 2028. The existing study area intersections are forecasted to continue to operate at acceptable levels of service, LOS D or better, during the morning and evening peak hours.

VII. PROJECTED TRAFFIC

A. Trip Generation

Estimates of the traffic volumes that will be generated by the warehouse/manufacturing facility development were determined from transportation planning data taken from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition, 2017*. The ITE rates are based on studies that measure trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of land use type. ITE Land Use Code 150 – Warehousing and Land Code 140 - Manufacturing were utilized for trip generation purposes. As defined by ITE:

Land Use Code 150 – Warehousing is primarily devoted to the storage of materials, but it may also include office and maintenance areas. If different functions are performed inside the proposed facility, such as manufacturing, hub, or fulfillment center type activities, then the site generated traffic volumes will change, and most likely increase.

Land Use Code 140 – Manufacturing is an area where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to the actual production of goods, manufacturing facilities generally also have office, warehouse, research, and associated functions.

Because the occupants of the facility are unknown at this time, 50% of the site was assumed to be warehousing and the other 50% was assumed to be manufacturing.

Table 7 presents the forecasted daily and peak hour vehicle trips generated for warehouse/manufacturing facility for a typical weekday upon full build out.

Table 7: Trip Generation

Land Use	Units	Size	Daily	AM Peak			PM Peak		
				in	out	total	in	out	total
Warehousing	1,000 Sq Ft	228.4	406	41	12	53	15	40	55
Manufacturing	1,000 Sq Ft	228.5	898	109	33	142	47	106	153
		Total	1,304	150	45	195	62	146	208

Warehouse – ITE LUC 150		
AM Peak Hour	T = 0.12(X) + 25.32	77% entering, 23% exiting
PM Peak Hour	T = 0.12(X) + 27.82	27% entering, 73% exiting
Daily	T = 1.58(X) + 45.54	50% entering, 50% exiting

Manufacturing – ITE LUC 140		
AM Peak Hour	T = 0.62(X)	77% entering, 23% exiting
PM Peak Hour	T = 0.67(X)	31% entering, 69% exiting
Daily	T = 3.93(X)	50% entering, 50% exiting

Once the site is fully built out and occupied, the warehouse/manufacturing facility is expected to generate approximately 1,304 trips daily with 195 trips in the morning peak hour and 208 trips in the evening peak hour.

B. Trip Distribution

The trip distribution procedure determines the general pattern of travel for vehicles entering and leaving the study area. These percentages are based on the location of the site, the connectivity of the site to the region, the recently collected existing traffic volumes, and consider the character of the types of land uses of the development. Predominantly, the trips generated by this site will arrive and depart via Elliot Road. Using a 10-mile radius around the site, home based work trips to the site were assumed. **Table 8** shows the trip distribution percentages of vehicles that will arrive and depart the site based on land use and roadway network connectivity.

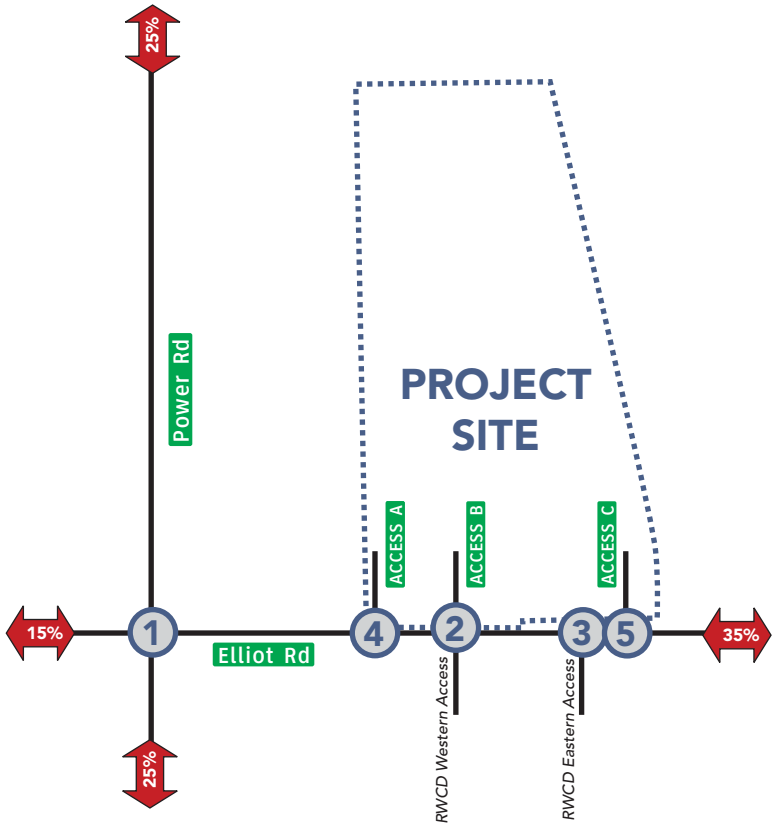
Table 8: Trip Distribution Percentages

Direction	Trip Distribution Percentage (arriving from and departing to the site at full build-out)
Power Road north of Elliot Road	25%
Power Road south of Elliot Road	25%
Elliot Road west of Power Road	15%
Elliot Road east of the site	35%

Figure 7 presents the assigned site generated traffic to and from the development for the interim condition. **Figure 8** presents the site generated traffic when Elliot Road is constructed to its ultimate configuration with the raised medians and access control.

C. Total Traffic

Total traffic projections for the horizon years of the development were determined by adding the proposed development's site generated traffic to the forecasted horizon background traffic volumes for the full build-out horizon year. The total traffic volumes are illustrated on **Figures 9 through**.



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

X% Trip Distribution Percentage

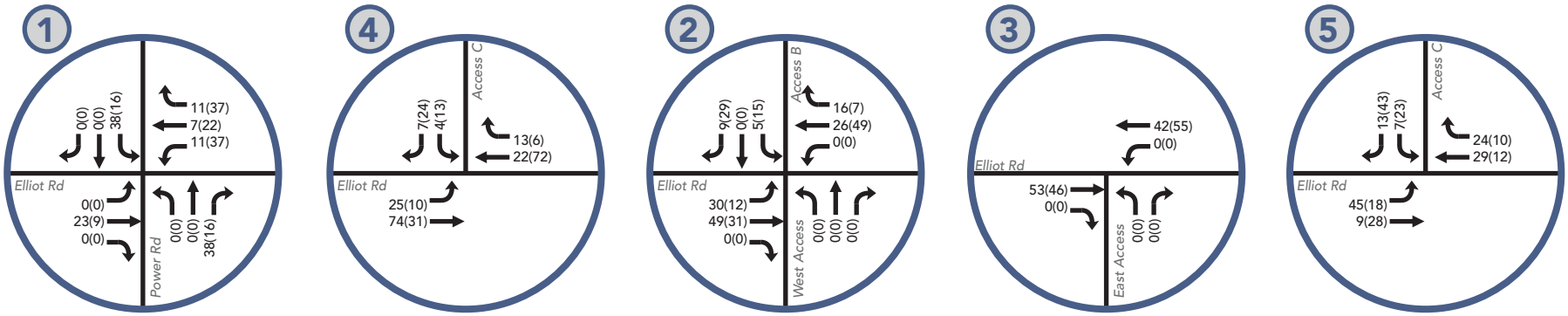


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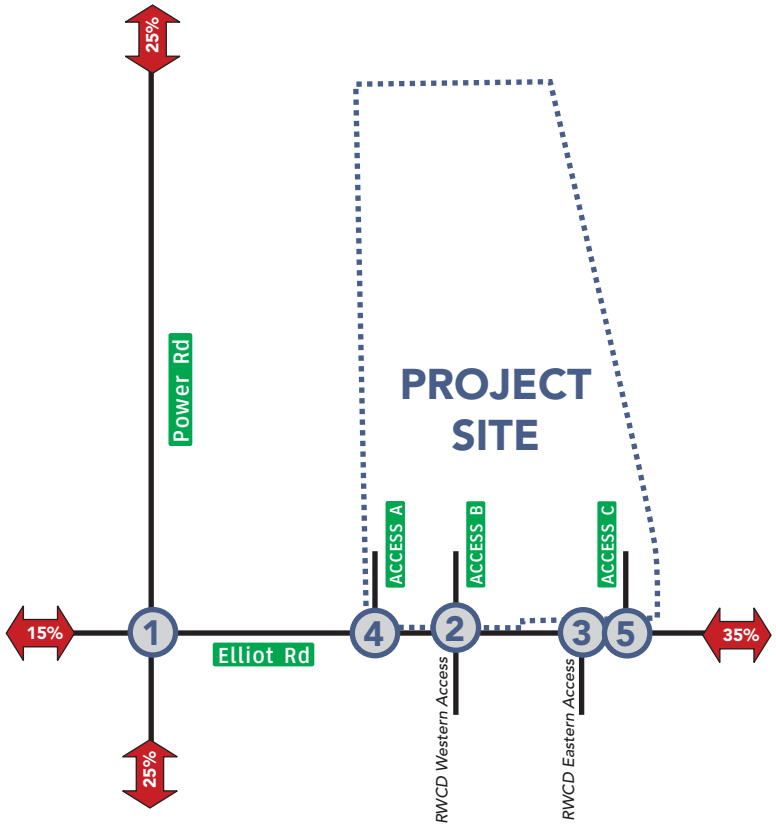
Figure 7: Site Generated Traffic and Trip Distribution - Interim Condition



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

X% Trip Distribution Percentage

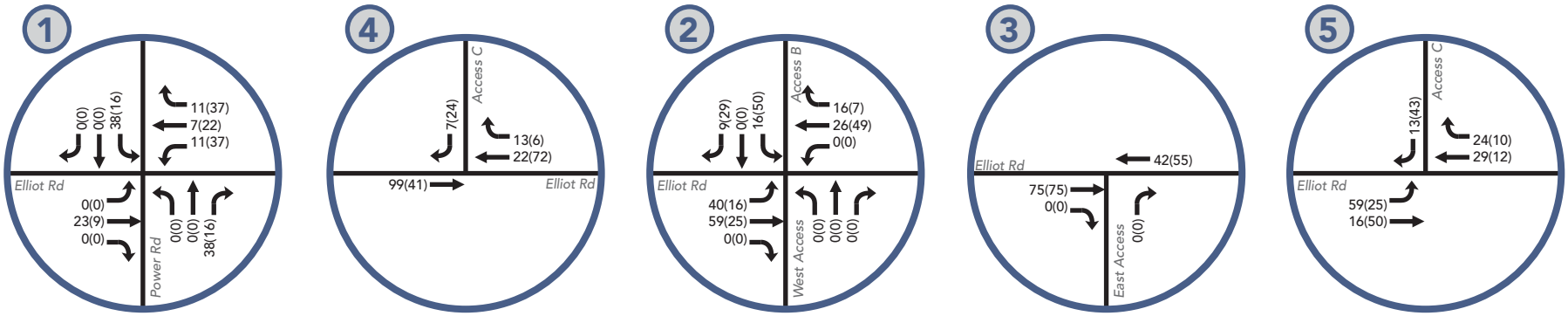


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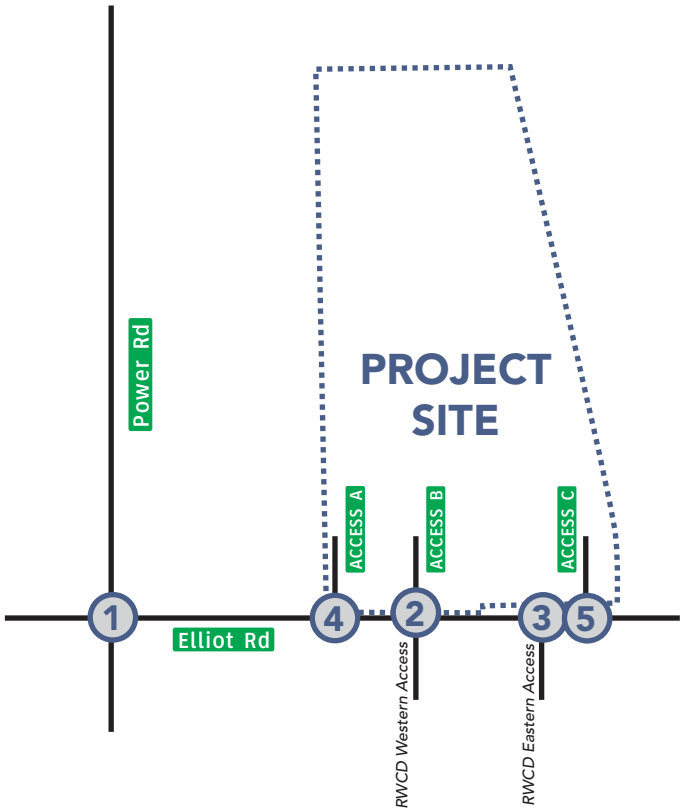
Figure 8: Site Generated Traffic and Trip Distribution



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

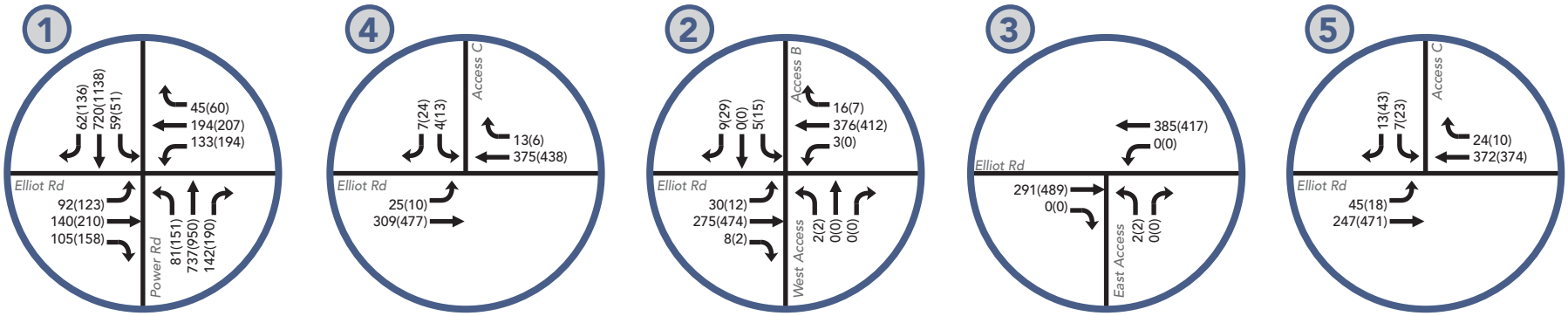


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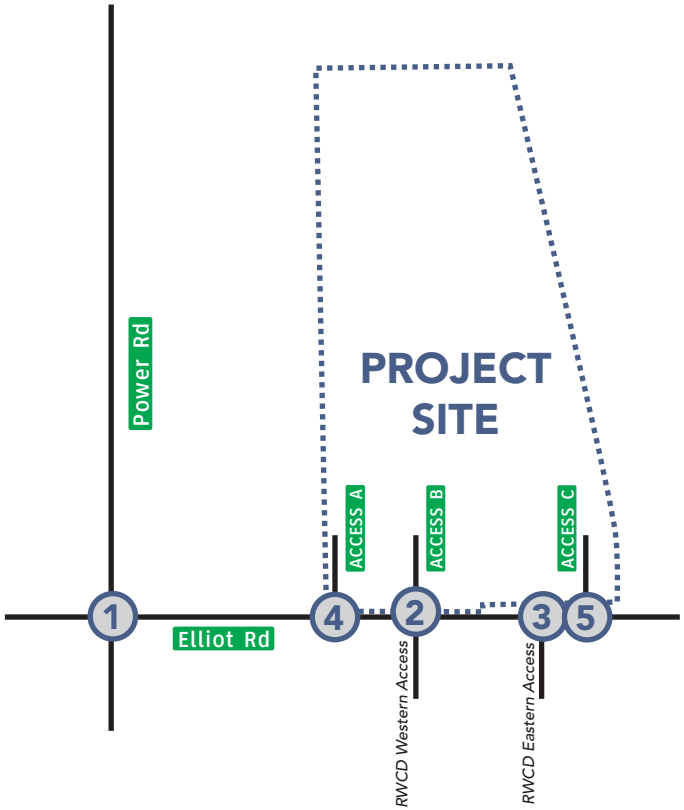
Figure 9: Total Traffic - Year 2023



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

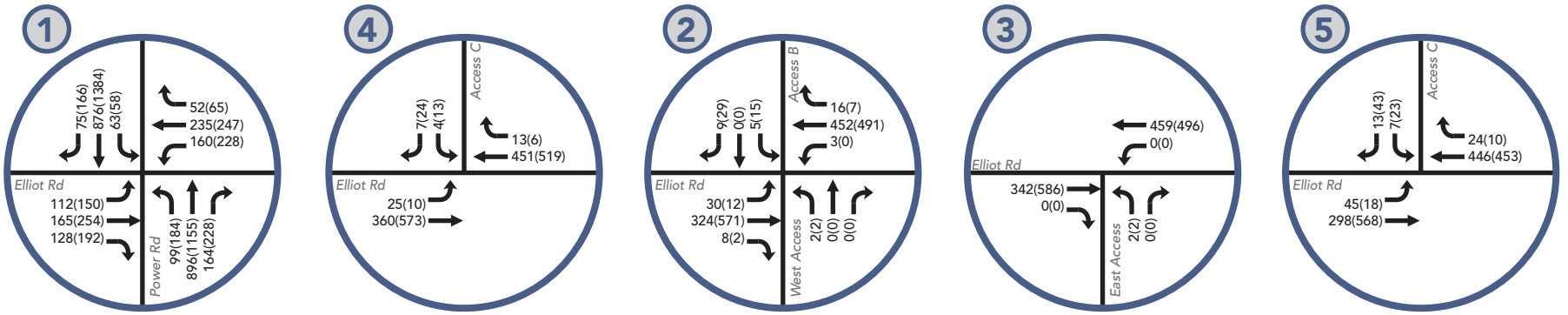


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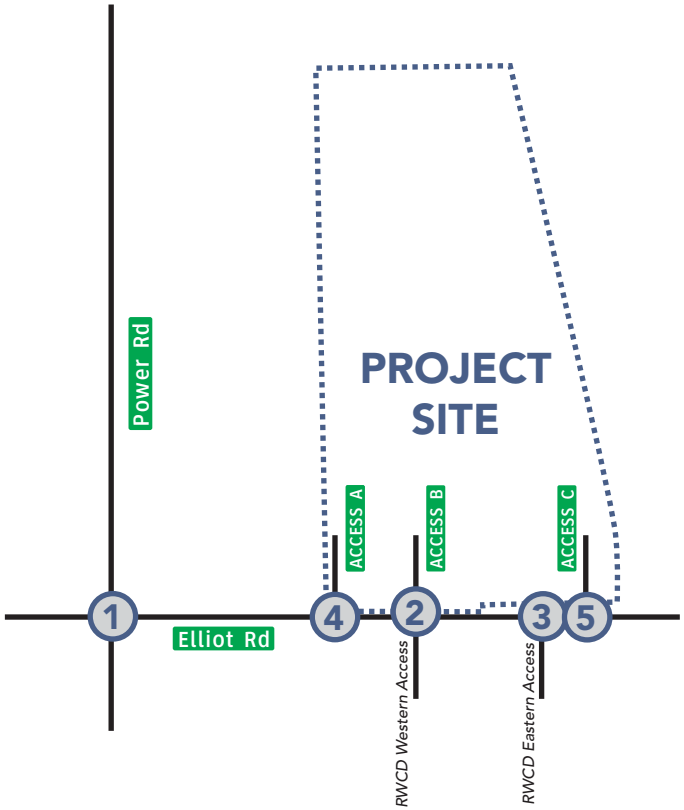
Figure 10: Total Traffic - Interim Year 2028



LEGEND

XX(XX) AM(PM) Peak Hour Traffic Volume

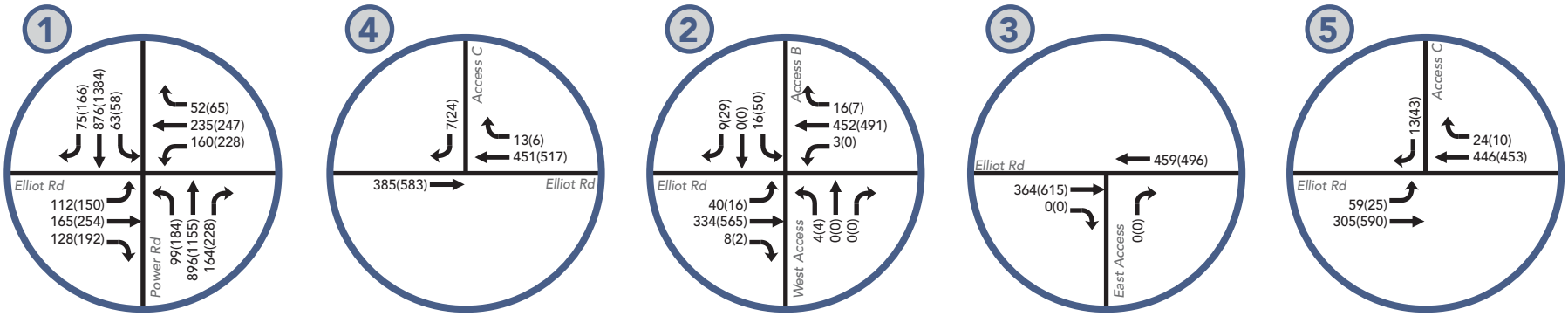


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Figure 11: Total Traffic - Year 2028

VIII. TRAFFIC AND IMPROVEMENT ANALYSIS

The purpose of this section is to show the relations between traffic operations and roadway geometrics; identify needs pertaining to progressive traffic flow and safety; and identify alternatives for further consideration, where applicable. Using the analyses from the following sections, Figure 12 presents the recommendations for off-site improvements.

A. Right of Way and Roadway Widening

Elliot Road is planned as a 6-lane section with a raised median in 130 feet of right of way per the Mesa Transportation Plan. Elliot Road will be designed and constructed in accordance with the City of Mesa Standard Detail M46-03.2. The pavement section is shown as 47 feet with a detached 6-foot sidewalk. Along the site's frontage, street lighting may be required by the City.

Per the 2040 Transportation Master Plan Map 2.2.13, raised medians are proposed for Elliot Road adjacent to the site, when the roadway is fully built out. Therefore, Section 212 Raised Medians of the Engineering and Design Standards 2021 apply. Careful consideration is given to requests for median cuts to ensure that the purpose of the median is not compromised. In general, full access median openings may be provided at 880-foot points along an arterial street. Additional median openings will be considered, but should be designed as partial movements, right in/right out/left in only.

As an interim condition, prior to the installation of a median, a two way left turn lane should be striped adjacent to the site on Elliot Road to allow vehicles making a left into the site refuge prior to their turn. In order to construct the two way left turn lane, additional asphalt tapers outside the project limits may be required to transition improvements back to the existing conditions. If the two-way left turn is designed symmetrically, then a minimum of 360-foot tapers will be required (6' shift x design speed of 60mph). Most likely, asymmetrical shifts will be required which will lengthen the tapers. Ultimately, the length of the asphalt tapers will be based on the pavement widening plans and striping design.

B. Site Accessibility

The warehouse/manufacturing facility development will be accessed locally via Elliot Road. Regional access is expected to be provided south and east of the site from SR 202L and US 60 north of the site.

All vehicles will access the warehouse/manufacturing facility from three accesses. Based on a review of the City of Mesa Engineering and Design Standards dated 2021, Section 219 discusses access to public streets. For commercial driveways, one driveway will be allowed per abutting street. Two additional driveways may be allowed for the site with continuous frontage of 600 feet or more. Because the site has an approximate street frontage of 770 feet, three accesses should be granted to

the property. It should be noted that driveway locations will be evaluated with respect to the site plan and are subject to the approval of the Transportation Department.

The City's minimum recommended driveway spacing is 60 feet between adjacent driveways serving the same development, as shown in Standard Detail M-42. Based on the driveway spacing, the minimum requirements are met.

Access A is the western access into the site located on Elliot Road. Access A is planned to be constructed as a right in/right out access that will be limited in the future by a raised median. As an interim condition, Access A will provide full access until the median is installed. The half-street roadway widening proposed on Elliot Road along the site's southern boundary should accommodate a two way left turn lane to allow for left turning vehicles into the site. Access A is located approximately 550 feet east of the Power Road, measured centerline to centerline.

Access B is the primary access into the site on Elliot Road and will serve passenger vehicles, primarily. Access B will align with the existing western RWCD driveway. Access B is planned to be constructed as a full access and is located approximately 205 feet east of planned Access A, measured centerline to centerline. In the future, a median break at this location should be warranted and granted. This access is located approximately 860 feet east of Power Road and meets the City's Engineering and Design Standards 2021 median break criteria of 880 feet.

Access C is located on Elliot Road approximately 355 feet east of Access B. Access C will serve the heavy vehicles as well as passenger vehicles. Access C is proposed as right in/left in/right out and will be limited in the future by a raised median. Because this site is constrained by the RWCD canal on the eastern boundary of the site, access is limited. Therefore, in order for the site to maintain proper accessibility, a ¾ median break is requested.

C. Turn Lane Analysis

C.1. Right-Turn Deceleration Lanes

Right turn lanes are often recommended on roadways were right turning vehicle create delays or safety concerns for other traffic movements. The need for a right turn lane depends on the speed of traffic on the road, the volume of traffic making a right turn and the through traffic volume in the same direction as the right turning traffic.

Dedicated right turn lanes are warranted at all site accesses per Section 208.4.1 of the Mesa Engineering and Design Standards. Per the Standards, dedicated right turn lanes should be provided for industrial parks with 200,000 gross square feet or more of building area. Because the site is greater than 200,000 square feet of industrial use, dedicated right turn lanes should be considered at the site Accesses, A, B, and C, per Mesa's Design Standards.

Due to the existing geometric roadway constraint on Elliot Road east of the site's boundary, a westbound right turn lane at Access C cannot be constructed until the headwall of the RWCD canal is relocated and bridge over the RWCD canal is widened.

Therefore, right turn deceleration lanes are recommended at Accesses A and B. When Elliot Road is widened to the ultimate roadway section east of the site, a right turn deceleration lane should be considered at Access C.

Per AASHTO's *A Policy on Geometric Design of Highways and Streets* a deceleration lane should be sufficiently long to store the number of vehicles likely to accumulate in a queue during the critical period. The storage should be sufficient to avoid spillback of turning vehicles into the through travel lanes. For unsignalized conditions, the deceleration lane storage length was calculated by taking the higher number of turning vehicles during the morning or evening peak hour for a 2-minute interval and multiplying by 25 feet for a typical length of a vehicle. Per Section 208.4.2 the right turn lanes should be a minimum of 150 feet of storage and a 100-foot taper with a 12-foot-wide lane. **Table 9** presents the recommended storage lengths.

Table 9: Right-Turn Deceleration Lane Storage Lengths

Location		Turn Volume 2028	Traffic Control	95% Queue Vistro	Calculated Storage (feet)	Recommended Storage	Taper
On	At						
Elliot Road	Access A	WB Right: 13 | 10	Free	0 feet| 0 feet	11 feet	120 feet	-
Elliot Road	Access B	WB Right: 16 | 7	Free	0 feet| 0 feet	13 feet	150 feet	100 feet
Elliot Road*	Access C	WB Right: 24 | 7	Free	0 feet| 0 feet	20 feet	150 feet	100 feet

* The right turn lane at Access C should be designed and constructed when Elliot Road is designed and constructed to its ultimate configuration.

Due to the spacing of driveways and the alignment of Access B with the RWCD western access on the south side of Elliot Road, a continuous right turn lane should be provided between Access B and Access A with 120 feet of storage.

C.2. Left-Turn Deceleration Lanes

As an interim condition, a two way left turn lane should be provided to allow vehicles to store on Elliot Road within the lane prior to making their left turn into the site.

Once the median is installed, the left turn lanes should accommodate traffic wanting to make a left into the site. As with right turn lanes, AASHTO's *A Policy on Geometric Design of Highways and Streets* should be used to determine the left turn lengths. **Table 10** presents the recommended left turn storage lengths.

Table 10: Left-Turn Deceleration Lane Storage Lengths

Location		Turn Volume 2028	Traffic Control	95% Queue Vistro	Calculated Storage (feet)	Recommended Storage	Taper
On	At						
Elliot Road	Access B	EB Left: 40 | 16	Free	6 feet|2 feet	33 feet	150 feet	100 feet
Elliot Road	Access C	EB Left: 59 | 25	Free	8 feet|3 feet	50 feet	150 feet	100 feet

D. Total Traffic Levels of Service

Capacity analyses at the existing study area intersection and at the site accesses assumed as part of this TIS per initial conceptual planning were performed for the forecasted total traffic and recommended roadway geometries for the horizon years of the study, 2023 and 2028. **Tables 11 and 12** present the total traffic levels of service at the study area intersections with the proposed development.

Table 11: 2023 Total Traffic Intersection Levels of Service

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Elliot Road/Power Road – Signalized with 90 second cycle																	
AM Peak Hour	A	B	B	B	A	B	B	B	C	D	D	D	C	D	D	D	20.26 C
PM Peak Hour	C	C	C	C	B	D	D	D	B	C	C	C	C	C	C	C	34.87 C
Elliot Road/Western RWCD Driveway/Access B – Stop Controlled																	
AM Peak Hour	C	-	-	C	C	-	B	B	A	A	A	A	A	A	A	A	17.41 C*
PM Peak Hour	C	-	-	C	C	-	B	C	A	A	A	A	-	A	A	A	22.72 C*
Elliot Road/Eastern RWCD Driveway – Stop Controlled																	
AM Peak Hour	B	-	-	B	-	-	-	-	-	A	-	A	-	A	-	A	14.34 B*
PM Peak Hour	C	-	-	C	-	-	-	-	-	A	-	A	-	A	-	A	18.18 C*
Elliot Road/Access A Driveway – Stop Controlled																	
AM Peak Hour	-	-	-	-	C	-	B	B	A	A	-	A	-	A	A	A	12.34 B*
PM Peak Hour	-	-	-	-	C	-	B	B	A	A	-	A	-	A	A	A	14.55 B*
Elliot Road/Access C Driveway – Stop Controlled																	
AM Peak Hour	-	-	-	-	C	-	B	B	A	A	-	A	-	A	A	A	12.55 B*
PM Peak Hour	-	-	-	-	C	-	B	B	A	A	-	A	-	A	A	A	14.52 B*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

Table 12: 2028 Total Traffic Intersection Levels of Service – Interim Condition

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Elliot Road/Power Road – Signalized with 90 second cycle																	
AM Peak Hour	B	B	B	B	B	B	B	B	C	D	D	D	C	D	D	C	22.82 C
PM Peak Hour	D	D	D	D	C	E	E	E	C	E	E	E	D	C	C	D	54.46 D
Elliot Road/Western RWCD Driveway/Access B – Stop Controlled																	
AM Peak Hour	C	-	-	C	C	-	B	B	A	A	A	A	A	A	A	A	20.39 C*
PM Peak Hour	D	-	-	D	D	-	B	C	A	A	A	A	-	A	A	A	29.24 D*
Elliot Road/Eastern RWCD Driveway – Stop Controlled																	
AM Peak Hour	C	-	-	C	-	-	-	-	-	A	-	A	-	A	-	A	16.27 C*
PM Peak Hour	C	-	-	C	-	-	-	-	-	A	-	A	-	A	-	A	22.19 C*
Elliot Road/Access A Driveway – Stop Controlled																	
AM Peak Hour	-	-	-	-	C	-	B	B	A	A	-	A	-	A	A	A	13.53 B*
PM Peak Hour	-	-	-	-	C	-	B	C	A	A	-	A	-	A	A	A	16.88 C*
Elliot Road/Access C Driveway – Stop Controlled																	
AM Peak Hour	-	-	-	-	C	-	B	B	A	A	-	A	-	A	A	A	13.81 B*
PM Peak Hour	-	-	-	-	C	-	B	C	A	A	-	A	-	A	A	A	17.03 C*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

Table 13: 2028 Total Traffic Intersection Levels of Service

Intersection Location	NB LOS				SB LOS				EB LOS				WB LOS				Overall Intersection
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	AvgDelay/ LOS*
Elliot Road/Power Road – Signalized with 90 second cycle																	
AM Peak Hour	A	B	B	B	A	B	B	B	C	C	D	C	C	D	D	C	19.43 B
PM Peak Hour	C	C	C	C	B	D	D	D	C	C	C	C	C	C	C	C	31.11 C
Elliot Road/Western RWCD Driveway/Access B – Stop Controlled																	
AM Peak Hour	B	-	-	B	C	-	B	B	B	A	A	A	A	A	A	A	14.63 B*
PM Peak Hour	C	-	-	C	C	-	B	C	B	A	A	A	-	A	A	A	17.77 C*
Elliot Road/Eastern RWCD Driveway – Stop Controlled																	
AM Peak Hour	-	-	-	-	-	-	-	-	-	A	-	A	-	A	-	A	0.00 A*
PM Peak Hour	-	-	-	-	-	-	-	-	-	A	-	A	-	A	-	A	0.00 A*
Elliot Road/Access A Driveway – Stop Controlled																	
AM Peak Hour	-	-	-	-	-	-	B	B	-	A	-	A	-	A	A	A	10.66 B*
PM Peak Hour	-	-	-	-	-	-	B	B	-	A	-	A	-	A	A	A	11.16 B*
Elliot Road/Access C Driveway – Stop Controlled																	
AM Peak Hour	-	-	-	-	-	-	B	B	B	A	-	A	-	A	A	A	10.81 B*
PM Peak Hour	-	-	-	-	-	-	B	B	B	A	-	A	-	A	A	A	11.10 B*

*The overall LOS letter grade for two-way stop-controlled intersections is shown as the worst approach.

As traffic increases, delay is slightly increased at the study area intersections in the total traffic conditions in years 2023 and 2028. The existing study area intersections are forecasted to continue to operate at acceptable levels of service, LOS D or better, using the interim condition geometry during the morning and evening peak hours as shown in Tables 11 and 12.

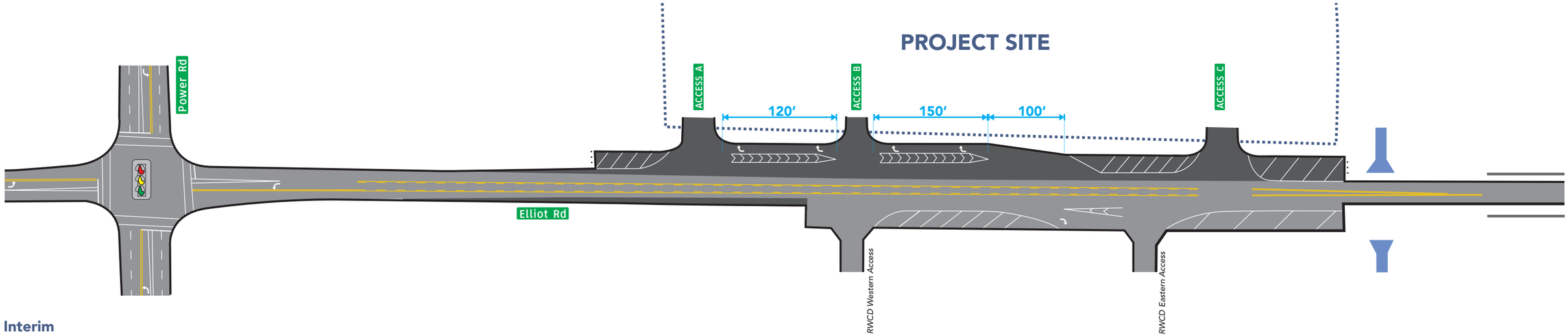
Once Elliot Road is constructed to its ultimate configuration and the intersection of Power Road/Elliot Road is improved, the study area intersections will operate at a LOS C or better as shown in Table 13.

E. Site Circulation and Throat Length

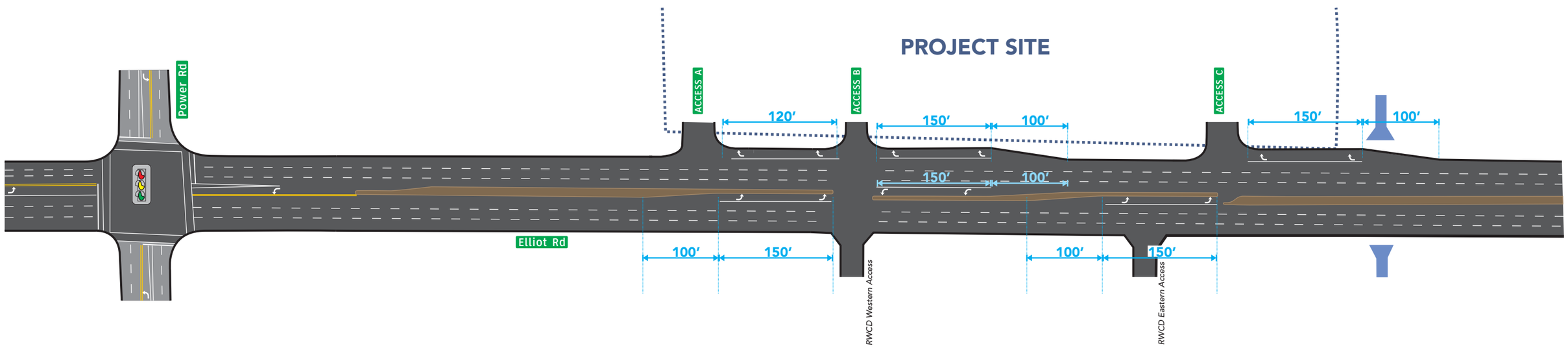
In order to provide efficient ingress and egress to the proposed development, all site driveways should be constructed with appropriate throat lengths. Provision of sufficient throat lengths at all site driveways will prevent entering vehicles from obstructing traffic flow on the adjacent public street system and provide adequate on-site storage for exiting vehicles.

F. Intersection Sight Distance

Proper intersection sight distance and sight triangles shall be provided and maintained at the site accesses and intersections of the proposed development to give drivers exiting the accesses a clear view of oncoming traffic. The landscape and hardscape within the sight triangles must not obstruct the driver's view of the adjacent travel lanes. To ensure adequate sight distances and sight distance triangles, AASHTO's *A Policy on Geometric Design of Highways and Streets* Section 9.5 and the City of Mesa's Engineering Design Standard Section 211 sight triangles should be followed as appropriate when designing the accesses and landscaping.



Interim



Ultimate

LEGEND

Existing

Recommended

SCHEMATIC ONLY

Civil design will be required for striping plan

not to scale

United Civil Group

Figure 12: Recommendations

IX. CONCLUSIONS AND RECOMMENDATIONS

The overall plan for the approximate 26.6 acre development consists of four warehouse/manufacturing buildings totaling 456,900 square feet and will be developed in one phase and occupied by year 2023. Five years after opening, horizon year 2028, was analyzed within this TIS as per the City of Mesa's Mesa Engineering and Design Standards dated 2021.

The proposed facility is planned to have three driveways located on Elliot Road. The driveway spacing is shown on the site plan and the distances are measured driveway centerline to centerline. Access A located on the western side of the property is located approximately 550 feet east of the centerline of Power Road. Traversing east, Access A is 205 feet from the existing access on the south side of the roadway. Access B into the site is proposed to align with the existing access on the south. The spacing between Access B and a second access on the southern property is 260 feet. The eastern southern access is located approximately 95 feet west of Access C.

The forecasted trip generation was calculated based on data provided within the ITE Trip Generation Manual. On a weekday, after full build-out of the warehouse/manufacturing facility, the development is estimated to generate a total of 195 trips in the morning peak hour, 208 trips in the evening peak hour, and 1,304 daily trips.

Using the forecasted total traffic volumes for years 2023 and 2028 and interim condition geometrics, the study area intersections of Power Road/Elliot Road, Elliot Road/RWCD Eastern Driveway and Elliot Road/RWCD Western Driveway and the site accesses for the development are anticipated to operate at acceptable levels of service, LOS D or better, during the morning and evening peak hours. When Elliot Road is constructed to its ultimate configuration, 3 lanes in each direction separated by a raised median, the study area intersections will operate at a LOS C or better during the morning and evening peak hours.

Based on this Traffic Impact Study, the following recommendations apply:

- Construct ½ street improvements on the north side of Elliot Road along the site's frontage.
- As an interim condition, stripe a two way left turn lane on Elliot Road until geometric roadway improvements have been made east of the site to allow for the median installation.
- Construct westbound right turn deceleration lanes on Elliot Road at Accesses A and B. The storage should be designed as 150 feet with a 100-foot taper.
- Proper intersection sight distance and sight triangles shall be provided and maintained at the site accesses and intersections of the proposed development to give drivers exiting the accesses a clear view of oncoming

traffic. To ensure adequate sight distances and sight distance triangles, AASHTO's *A Policy on Geometric Design of Highways and Streets* Section 9.5 and the City of Mesa Design Standard Section 211 sight triangle standards should be followed when designing the accesses and landscaping.

- In the future when the median is constructed on Elliot Road, provide a median opening at Access B which aligns with the RWCD's western site access to provide full turning movements.
- In the future when the median is constructed on Elliot Road, provide a partial median opening (3/4 access) at Access C to allow right in/left in/right out only.
- In the future when Elliot Road is widened to its ultimate configuration, provide a right turn deceleration lane for westbound traffic at Access C.

X. LIMITATIONS

Our professional services have been performed using the degree of skill ordinarily exercised, under similar circumstances, by reputable transportation engineering firms practicing in this locality. No other warranty, expressed or implied, is made.

The contents of this report are intended for the sole use of the addressee and his/her designees. In completing this report, data was obtained from a variety of sources (i.e., City, County, State and Federal sources); United Civil Group has assumed these sources to be reliable and accurate. Should deviations from this report be noted, this firm shall be contacted for review of the area of concern.

A reasonable attempt was made to acquire recent traffic impact studies, traffic projections and/or data that may be helpful in more accurately projecting traffic volumes. United Civil Group is not responsible for incorporating data made available after this document has been finalized.

This report is issued with the understanding that it is the responsibility of the owner to see that its provisions are carried out or brought to the attention of those concerned. If any changes of the proposed project are planned, the conclusions and recommendations contained in this report shall be reviewed and the report shall be modified or supplemented, as necessary.

XI. SOURCES

A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 7th Edition, 2019.

City of Mesa Engineering and Design Standards March 2021.

Manual on Uniform Traffic Control Devices, Federal Highway Administration, MUTCD 2009.

Highway Capacity Manual, HCM, Transportation Research Board.

Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.

Appendix A

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Turning Movement Count

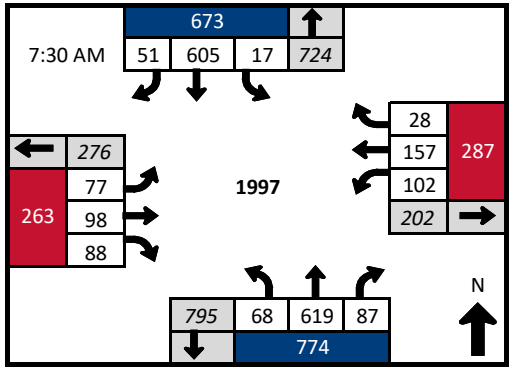
Project No: TR21046

Location: Power Road and Elliot Road

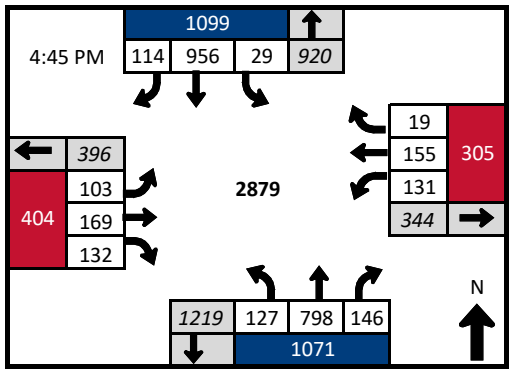
Intersection Configuration: Signalized

July 13, 2021 (Tuesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	45	1		1	1			
Southbound	45	1		1	1			
Eastbound	45	1			1			
Westbound	45	1			1			



	Power Road Northbound				Power Road Southbound				Elliot Road Eastbound				Elliot Road Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	21	117	15	0	2	123	10	0	18	17	12	0	33	27	4	0	399	
7:15 AM	17	147	21	0	3	136	14	0	11	23	23	0	28	33	7	2	463	
7:30 AM	11	176	18	0	6	181	6	0	13	26	22	0	33	39	8	0	539	
7:45 AM	18	149	19	0	3	156	14	0	27	31	26	0	33	42	12	0	530	1931
8:00 AM	17	145	23	0	5	143	14	0	7	19	12	0	20	34	6	0	445	1977
8:15 AM	22	149	27	0	3	125	17	0	30	22	28	0	16	42	2	0	483	1997
8:30 AM	8	164	13	0	1	163	10	0	28	24	23	0	40	30	10	0	514	1972
8:45 AM	20	156	20	0	4	138	16	0	14	25	16	0	29	30	9	0	477	1919
Peak Hour Total	**68**	**619**	**87**	**0**	**17**	**605**	**51**	**0**	**77**	**98**	**88**	**0**	**102**	**157**	**28**	**0**	**1997**	
10% Increase	**75**	**681**	**96**	**0**	**19**	**666**	**57**	**0**	**85**	**108**	**97**	**0**	**113**	**173**	**31**	**0**		



	Power Road Northbound				Power Road Southbound				Elliot Road Eastbound				Elliot Road Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	30	180	53	1	10	187	13	0	26	38	30	0	36	30	9	0	642	
4:15 PM	27	221	45	0	8	235	15	0	24	34	29	0	33	43	8	0	722	
4:30 PM	28	194	42	0	7	203	19	0	24	41	35	0	28	38	2	0	661	
4:45 PM	33	172	39	0	7	215	22	0	26	49	34	0	30	42	7	0	676	2701
5:00 PM	34	188	34	0	8	249	24	0	24	44	40	0	34	41	5	0	725	2784
5:15 PM	33	248	43	0	6	256	42	0	30	53	34	0	29	33	5	0	812	2874
5:30 PM	27	190	30	0	8	236	26	0	23	23	24	0	38	39	2	0	666	2879
5:45 PM	32	152	25	0	26	209	24	0	26	16	24	0	36	48	7	0	625	2828
Peak Hour Total	**127**	**798**	**146**	**0**	**29**	**956**	**114**	**0**	**103**	**169**	**132**	**0**	**131**	**155**	**19**	**0**	**2879**	
10% Increase	**140**	**878**	**161**	**0**	**32**	**1052**	**126**	**0**	**114**	**186**	**146**	**0**	**145**	**171**	**21**	**0**		

United Civil Group

Turning Movement Count

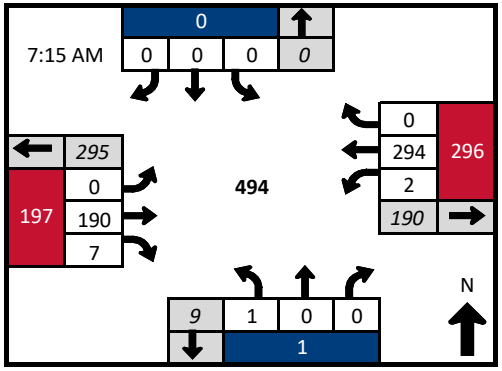
Project No: TR21046

Location: RWCD Western Driveway and Elliot Road

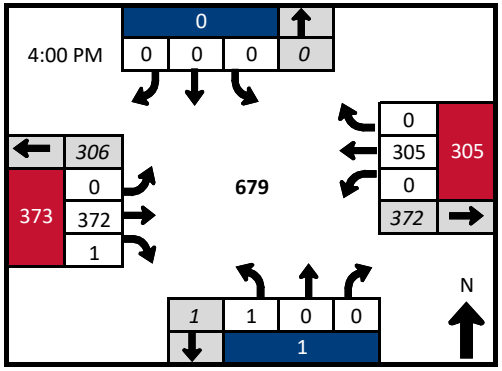
Intersection Configuration: Unsignalized

July 13, 2021 (Tuesday)

	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	25							1
Southbound								
Eastbound	45				1			
Westbound	45		1					



	RWCD Western Driveway				RWCD Western Driveway				Elliot Road				Elliot Road					
	Northbound				Southbound				Eastbound				Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	0	0	0	0	0	34	0	0	1	64	0	0	99	
7:15 AM	1	0	0	0	0	0	0	0	0	41	6	0	0	67	0	0	115	
7:30 AM	0	0	0	0	0	0	0	0	0	50	0	0	0	80	0	0	130	
7:45 AM	0	0	0	0	0	0	0	0	0	52	1	0	1	87	0	0	141	485
8:00 AM	0	0	0	0	0	0	0	0	0	47	0	0	1	60	0	0	108	494
8:15 AM	0	0	1	0	0	0	0	0	0	50	2	0	0	60	0	0	113	492
8:30 AM	0	0	0	0	0	0	0	0	0	38	0	0	0	80	0	0	118	480
8:45 AM	0	0	0	0	0	0	0	0	0	48	1	0	0	68	0	0	117	456
Peak Hour Total	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**190**	**7**	**0**	**2**	**294**	**0**	**0**	**494**	
10% Increase	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**209**	**8**	**0**	**3**	**324**	**0**	**0**		



	RWCD Western Driveway				RWCD Western Driveway				Elliot Road				Elliot Road					
	Northbound				Southbound				Eastbound				Westbound				Total	Peak Hour
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	1	0	0	0	0	0	0	0	0	101	0	0	0	74	0	0	176	
4:15 PM	0	0	0	0	0	0	0	0	0	87	0	0	0	84	0	0	171	
4:30 PM	0	0	0	0	0	0	0	0	0	90	0	0	0	68	0	0	158	
4:45 PM	0	0	0	0	0	0	0	0	0	94	1	0	0	79	0	0	174	679
5:00 PM	4	0	0	0	0	0	0	0	0	84	2	0	0	76	0	0	166	669
5:15 PM	1	0	0	0	0	0	0	0	0	101	1	0	0	66	0	0	169	667
5:30 PM	1	0	0	0	0	0	0	0	0	61	0	0	0	78	0	0	140	649
5:45 PM	1	0	0	0	0	0	0	0	0	67	0	0	0	90	0	0	158	633
Peak Hour Total	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**372**	**1**	**0**	**0**	**305**	**0**	**0**	**679**	
10% Increase	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**410**	**2**	**0**	**0**	**336**	**0**	**0**		

United Civil Group

Turning Movement Count

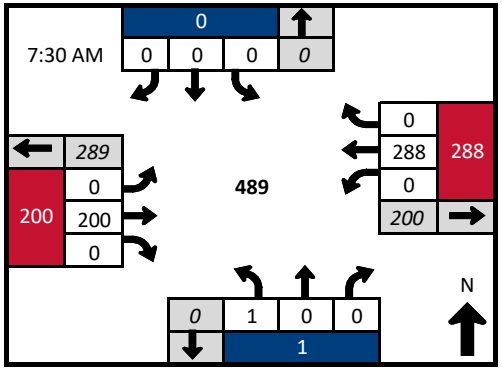
	Speed Limit	Lt	Lt\T	T	T/Rt	Rt	Lt/T/Rt	Lt/Rt
Northbound	25							1
Southbound								
Eastbound	45			1		1		
Westbound	45		1					

Project No: TR21046

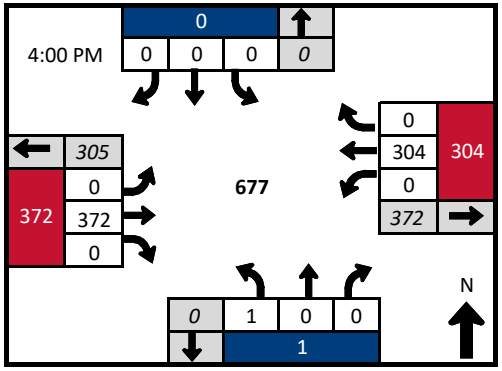
Location: RWCD Eastern Driveway and Elliot Road

Intersection Configuration: Unsignalized

July 13, 2021 (Tuesday)



	RWCD Eastern Driveway				RWCD Eastern Driveway				Elliot Road				Elliot Road				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	0	0	0	0	0	34	0	0	0	65	0	0	99	
7:15 AM	0	0	0	0	0	0	0	0	0	41	0	0	0	67	0	0	108	
7:30 AM	0	0	0	0	0	0	0	0	0	50	0	0	0	80	0	0	130	
7:45 AM	1	0	0	0	0	0	0	0	0	52	0	0	0	87	0	0	140	477
8:00 AM	0	0	0	0	0	0	0	0	0	47	0	0	0	61	0	0	108	486
8:15 AM	0	0	0	0	0	0	0	0	0	51	0	0	0	60	0	0	111	489
8:30 AM	0	0	0	0	0	0	0	0	0	37	1	0	0	80	0	0	118	477
8:45 AM	0	0	0	0	0	0	0	0	0	48	0	0	0	68	0	0	116	453
Peak Hour Total	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**200**	**0**	**0**	**0**	**288**	**0**	**0**	**489**	
10% Increase	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**220**	**0**	**0**	**0**	**317**	**0**	**0**		



	RWCD Eastern Driveway				RWCD Eastern Driveway				Elliot Road				Elliot Road				Total	Peak Hour
	Northbound				Southbound				Eastbound				Westbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
4:00 PM	0	0	0	0	0	0	0	0	0	101	0	0	0	74	0	0	175	
4:15 PM	1	0	0	0	0	0	0	0	0	87	0	0	0	83	0	0	171	
4:30 PM	0	0	0	0	0	0	0	0	0	90	0	0	0	68	0	0	158	
4:45 PM	0	0	0	0	0	0	0	0	0	94	0	0	0	79	0	0	173	677
5:00 PM	0	0	0	0	0	0	0	0	0	83	1	0	0	76	1	0	161	663
5:15 PM	0	0	2	0	0	0	0	0	0	101	0	0	0	66	0	0	169	661
5:30 PM	1	0	0	0	0	0	0	0	0	61	0	0	0	77	0	0	139	642
5:45 PM	0	0	0	0	0	0	0	0	0	67	0	0	0	90	0	0	157	626
Peak Hour Total	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**372**	**0**	**0**	**0**	**304**	**0**	**0**	**677**	
10% Increase	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**410**	**0**	**0**	**0**	**335**	**0**	**0**		

Appendix B

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

Name	Power Road			Power Road			Elliot Road					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road					
Base Volume Input [veh/h]	75	681	96	19	666	57	85	108	97	113	173	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	681	96	19	666	57	85	108	97	113	173	31
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	185	26	5	181	15	23	29	26	31	47	8
Total Analysis Volume [veh/h]	82	740	104	21	724	62	92	117	105	123	188	34
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	14	0	9	14	0	9	58	0	9	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	59	53	53	59	51	51	23	14	23	14
g / C, Green / Cycle	0.66	0.59	0.59	0.66	0.56	0.56	0.26	0.16	0.26	0.16
(v / s)_i Volume / Saturation Flow Rate	0.10	0.23	0.23	0.03	0.21	0.21	0.07	0.13	0.09	0.12
s, saturation flow rate [veh/h]	808	1870	1790	732	1870	1819	1349	1726	1350	1821
c, Capacity [veh/h]	559	1096	1050	510	1048	1020	334	269	325	284
d1, Uniform Delay [s]	6.50	10.03	10.03	6.30	11.06	11.06	26.91	36.88	27.51	36.60
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	1.06	1.11	0.15	1.05	1.08	0.44	6.35	0.73	4.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.39	0.39	0.04	0.38	0.38	0.28	0.83	0.38	0.78
d, Delay for Lane Group [s/veh]	6.62	11.09	11.14	6.45	12.11	12.14	27.35	43.23	28.24	41.31
Lane Group LOS	A	B	B	A	B	B	C	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.45	4.11	3.95	0.13	4.05	3.95	1.50	4.95	2.15	4.99
50th-Percentile Queue Length [ft/ln]	11.32	102.64	98.63	3.22	101.16	98.69	37.56	123.80	53.65	124.68
95th-Percentile Queue Length [veh/ln]	0.82	7.39	7.10	0.23	7.28	7.11	2.70	8.60	3.86	8.65
95th-Percentile Queue Length [ft/ln]	20.38	184.76	177.53	5.80	182.08	177.65	67.61	215.04	96.56	216.25

Movement, Approach, & Intersection Results

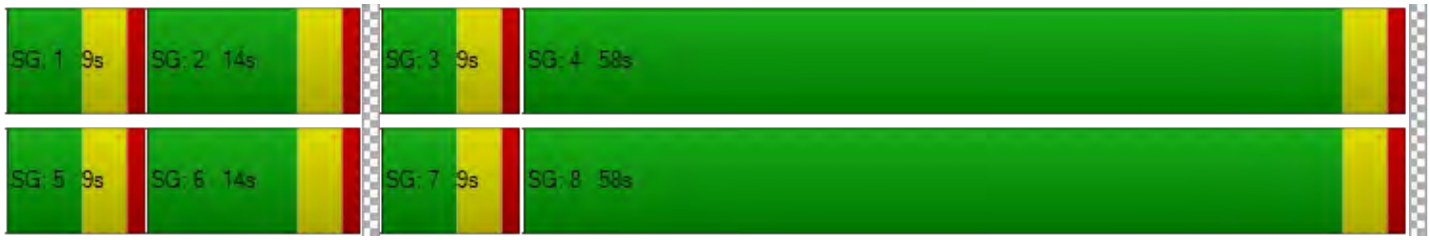
d_M, Delay for Movement [s/veh]	6.62	11.11	11.14	6.45	12.12	12.14	27.35	43.23	43.23	28.24	41.31	41.31
Movement LOS	A	B	B	A	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	10.72			11.97			38.58			36.65		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	18.54											
Intersection LOS	B											
Intersection V/C	0.421											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	222	1199	1199
d_b, Bicycle Delay [s]	35.60	35.60	7.23	7.23
l_b,int, Bicycle LOS Score for Intersection	2.324	2.225	2.078	2.129
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: RWCD Western Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	209	8	3	324
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	209	8	3	324
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	57	2	1	88
Total Analysis Volume [veh/h]	2	0	227	9	3	352
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.71	9.49	0.00	0.00	7.71	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.32	0.32	0.00	0.00	0.17	0.17
d_A, Approach Delay [s/veh]	12.71		0.00		0.07	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	220	0	0	317
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	220	0	0	317
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	60	0	0	86
Total Analysis Volume [veh/h]	2	0	239	0	0	345
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.63	9.53	0.00	0.00	7.71	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.32	0.32	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.63		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.666

Intersection Setup

Name	Power Road			Power Road			Elliot Road					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road					
Base Volume Input [veh/h]	140	878	161	32	1052	126	114	186	146	145	171	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	878	161	32	1052	126	114	186	146	145	171	21
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	239	44	9	286	34	31	51	40	39	46	6
Total Analysis Volume [veh/h]	152	954	175	35	1143	137	124	202	159	158	186	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	14	0	9	14	0	12	58	0	9	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	52	45	45	52	43	43	30	21	30	20
g / C, Green / Cycle	0.57	0.50	0.50	0.57	0.47	0.47	0.34	0.24	0.34	0.22
(v / s)_i Volume / Saturation Flow Rate	0.25	0.31	0.31	0.06	0.35	0.35	0.09	0.21	0.13	0.11
s, saturation flow rate [veh/h]	617	1870	1771	624	1870	1801	1338	1735	1197	1834
c, Capacity [veh/h]	345	926	877	357	883	851	457	412	322	410
d1, Uniform Delay [s]	15.08	16.64	16.68	11.18	19.25	19.30	21.72	33.13	23.78	30.67
k, delay calibration	0.26	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.12	3.18	3.40	0.55	5.45	5.74	0.32	6.08	1.16	0.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.62	0.63	0.10	0.74	0.74	0.27	0.88	0.49	0.51
d, Delay for Lane Group [s/veh]	17.19	19.82	20.08	11.73	24.70	25.04	22.03	39.22	24.93	31.65
Lane Group LOS	B	B	C	B	C	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.38	8.38	8.04	0.31	10.92	10.65	1.78	7.78	2.48	4.02
50th-Percentile Queue Length [ft/ln]	34.54	209.49	201.10	7.69	272.98	266.24	44.41	194.47	62.00	100.42
95th-Percentile Queue Length [veh/ln]	2.49	13.13	12.70	0.55	16.34	16.00	3.20	12.35	4.46	7.23
95th-Percentile Queue Length [ft/ln]	62.16	328.17	317.38	13.83	408.46	400.04	79.93	308.82	111.60	180.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.19	19.92	20.08	11.73	24.84	25.04	22.03	39.22	39.22	24.93	31.65	31.65
Movement LOS	B	B	C	B	C	C	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	19.62			24.52			34.82			28.76		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.60											
Intersection LOS	C											
Intersection V/C	0.666											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	222	1199	1132
d_b, Bicycle Delay [s]	35.60	35.60	7.23	8.48
l_b,int, Bicycle LOS Score for Intersection	2.616	2.644	2.360	2.165
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: RWCD Western Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	2	0	336
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	410	2	0	336
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	111	1	0	91
Total Analysis Volume [veh/h]	2	0	446	2	0	365
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.39	10.95	0.00	0.00	8.24	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.43	0.43	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.39		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	0	0	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	410	0	0	335
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	111	0	0	91
Total Analysis Volume [veh/h]	2	0	446	0	0	364
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.36	10.94	0.00	0.00	8.23	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.43	0.43	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.36		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.455

Intersection Setup

Name	Power Road			Power Road			Elliot Road					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road					
Base Volume Input [veh/h]	75	681	96	19	666	57	85	108	97	113	173	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	737	104	21	720	62	92	117	105	122	187	34
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	200	28	6	196	17	25	32	29	33	51	9
Total Analysis Volume [veh/h]	88	801	113	23	783	67	100	127	114	133	203	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	14	0	9	14	0	10	58	0	9	57	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	58	52	52	58	50	50	24	15	24	15
g / C, Green / Cycle	0.64	0.57	0.57	0.64	0.55	0.55	0.27	0.17	0.27	0.16
(v / s)_i Volume / Saturation Flow Rate	0.11	0.25	0.25	0.03	0.23	0.23	0.07	0.14	0.10	0.13
s, saturation flow rate [veh/h]	777	1870	1790	698	1870	1819	1340	1726	1327	1820
c, Capacity [veh/h]	524	1072	1026	474	1025	997	337	289	325	295
d1, Uniform Delay [s]	7.16	10.95	10.95	6.93	11.96	11.96	26.35	36.34	26.99	36.45
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	1.29	1.35	0.19	1.27	1.30	0.49	6.28	0.83	5.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.44	0.44	0.05	0.42	0.42	0.30	0.83	0.41	0.81
d, Delay for Lane Group [s/veh]	7.31	12.24	12.30	7.13	13.23	13.26	26.84	42.63	27.82	41.82
Lane Group LOS	A	B	B	A	B	B	C	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.52	4.79	4.60	0.15	4.67	4.56	1.61	5.35	2.30	5.44
50th-Percentile Queue Length [ft/ln]	12.91	119.74	115.04	3.75	116.85	113.93	40.27	133.66	57.41	136.06
95th-Percentile Queue Length [veh/ln]	0.93	8.38	8.12	0.27	8.22	8.06	2.90	9.14	4.13	9.27
95th-Percentile Queue Length [ft/ln]	23.23	209.47	203.00	6.75	205.49	201.46	72.49	228.47	103.33	231.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.31	12.27	12.30	7.13	13.24	13.26	26.84	42.63	42.63	27.82	41.82	41.82
Movement LOS	A	B	B	A	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	11.83			13.08			38.00			36.83		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	19.30											
Intersection LOS	B											
Intersection V/C	0.455											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	222	1199	1177
d_b, Bicycle Delay [s]	35.60	35.60	7.23	7.63
l_b,int, Bicycle LOS Score for Intersection	2.386	2.280	2.122	2.175
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: RWCD Western Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	209	8	3	324
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0816	1.0000	1.0000	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	226	8	3	350
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	61	2	1	95
Total Analysis Volume [veh/h]	2	0	246	9	3	380
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.21	9.60	0.00	0.00	7.75	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.34	0.34	0.00	0.00	0.17	0.17
d_A, Approach Delay [s/veh]	13.21		0.00		0.06	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	220	0	0	317
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0816	1.0000	1.0000	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	238	0	0	343
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	65	0	0	93
Total Analysis Volume [veh/h]	2	0	259	0	0	373
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.14	9.65	0.00	0.00	7.76	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.34	0.34	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.14		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

Intersection Setup

Name	Power Road			Power Road			Elliot Road					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road					
Base Volume Input [veh/h]	140	878	161	32	1052	126	114	186	146	145	171	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	151	950	174	35	1138	136	123	201	158	157	185	23
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	258	47	10	309	37	33	55	43	43	50	6
Total Analysis Volume [veh/h]	164	1033	189	38	1237	148	134	218	172	171	201	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	14	0	9	14	0	9	58	0	9	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	50	43	43	50	41	41	32	23	32	23
g / C, Green / Cycle	0.56	0.48	0.48	0.56	0.46	0.46	0.35	0.25	0.35	0.25
(v / s)_i Volume / Saturation Flow Rate	0.28	0.33	0.34	0.06	0.38	0.38	0.10	0.22	0.15	0.12
s, saturation flow rate [veh/h]	587	1870	1771	594	1870	1801	1293	1735	1168	1834
c, Capacity [veh/h]	311	891	844	322	851	820	460	441	321	466
d1, Uniform Delay [s]	18.17	18.56	18.65	12.92	21.43	21.54	20.82	32.35	23.24	28.60
k, delay calibration	0.33	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.20	4.59	4.98	0.75	8.97	9.64	0.35	6.03	1.37	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.70	0.71	0.12	0.83	0.83	0.29	0.88	0.53	0.48
d, Delay for Lane Group [s/veh]	22.38	23.15	23.64	13.66	30.41	31.18	21.16	38.38	24.61	29.38
Lane Group LOS	C	C	C	B	C	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.72	10.05	9.73	0.36	13.42	13.21	1.87	8.34	2.63	4.17
50th-Percentile Queue Length [ft/ln]	43.04	251.15	243.26	8.97	335.42	330.35	46.75	208.55	65.85	104.30
95th-Percentile Queue Length [veh/ln]	3.10	15.24	14.85	0.65	19.42	19.18	3.37	13.08	4.74	7.51
95th-Percentile Queue Length [ft/ln]	77.47	381.10	371.15	16.14	485.60	479.39	84.15	326.96	118.53	187.74

Movement, Approach, & Intersection Results

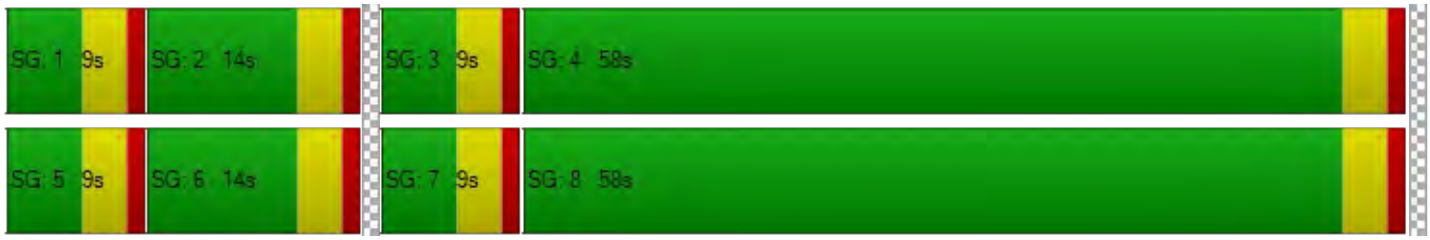
d_M, Delay for Movement [s/veh]	22.38	23.34	23.64	13.66	30.74	31.18	21.16	38.38	38.38	24.61	29.38	29.38
Movement LOS	C	C	C	B	C	C	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	23.27			30.33			33.98			27.33		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.90											
Intersection LOS	C											
Intersection V/C	0.721											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	222	1199	1199
d_b, Bicycle Delay [s]	35.60	35.60	7.23	7.23
l_b,int, Bicycle LOS Score for Intersection	2.703	2.734	2.424	2.215
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: RWCD Western Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	2	0	336
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0816	1.0000	1.0000	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	443	2	0	363
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	120	1	0	99
Total Analysis Volume [veh/h]	2	0	482	2	0	395
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	16.38	11.24	0.00	0.00	8.34	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.47	0.47	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.38		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	0	0	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0816	1.0000	1.0000	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	443	0	0	362
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	120	0	0	98
Total Analysis Volume [veh/h]	2	0	482	0	0	393
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	16.33	11.23	0.00	0.00	8.33	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.47	0.47	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.33		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.551

Intersection Setup

Name	Power Road			Power Road			Elliot Road					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road					
Base Volume Input [veh/h]	75	681	96	19	666	57	85	108	97	113	173	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	896	126	25	876	75	112	142	128	149	228	41
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	243	34	7	238	20	30	39	35	40	62	11
Total Analysis Volume [veh/h]	108	974	137	27	952	82	122	154	139	162	248	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	14	0	9	14	0	9	58	0	9	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	55	49	49	55	46	46	27	18	27	18
g / C, Green / Cycle	0.61	0.54	0.54	0.61	0.52	0.52	0.30	0.20	0.30	0.20
(v / s)_i Volume / Saturation Flow Rate	0.15	0.30	0.30	0.04	0.28	0.28	0.10	0.17	0.13	0.16
s, saturation flow rate [veh/h]	697	1870	1790	613	1870	1818	1269	1726	1269	1821
c, Capacity [veh/h]	436	1008	965	386	962	936	335	342	324	361
d1, Uniform Delay [s]	9.50	13.76	13.77	9.09	14.76	14.76	24.92	34.89	25.73	34.52
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	2.27	2.38	0.35	2.21	2.28	0.66	6.15	1.19	4.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.56	0.56	0.07	0.54	0.54	0.36	0.86	0.50	0.81
d, Delay for Lane Group [s/veh]	9.79	16.03	16.16	9.44	16.98	17.04	25.58	41.04	26.92	38.91
Lane Group LOS	A	B	B	A	B	B	C	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.74	7.09	6.84	0.21	6.82	6.65	1.89	6.41	2.72	6.44
50th-Percentile Queue Length [ft/ln]	18.49	177.22	171.05	5.14	170.39	166.15	47.36	160.27	68.07	161.06
95th-Percentile Queue Length [veh/ln]	1.33	11.46	11.13	0.37	11.10	10.87	3.41	10.56	4.90	10.61
95th-Percentile Queue Length [ft/ln]	33.28	286.38	278.30	9.25	277.43	271.85	85.25	264.08	122.52	265.13

Movement, Approach, & Intersection Results

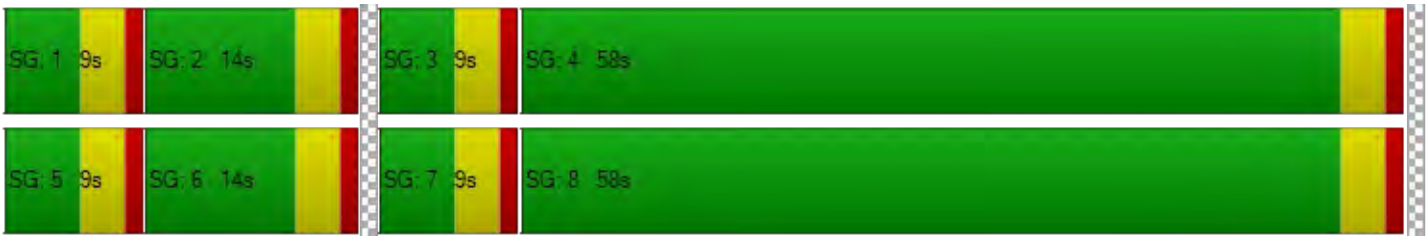
d_M, Delay for Movement [s/veh]	9.79	16.08	16.16	9.44	17.00	17.04	25.58	41.04	41.04	26.92	38.91	38.91
Movement LOS	A	B	B	A	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	15.53			16.81			36.50			34.64		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	21.49											
Intersection LOS	C											
Intersection V/C	0.551											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	222	1199	1199
d_b, Bicycle Delay [s]	35.60	35.60	7.23	7.23
l_b,int, Bicycle LOS Score for Intersection	2.565	2.435	2.244	2.310
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: RWCD Western Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	209	8	3	324
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	275	8	3	426
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	75	2	1	116
Total Analysis Volume [veh/h]	2	0	299	9	3	463
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.88	9.94	0.00	0.00	7.88	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.41	0.41	0.00	0.00	0.18	0.18
d_A, Approach Delay [s/veh]	14.88		0.00		0.05	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	220	0	0	317
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	289	0	0	417
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	79	0	0	113
Total Analysis Volume [veh/h]	2	0	314	0	0	453
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.77	10.01	0.00	0.00	7.89	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.41	0.41	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.77		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	49.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.881

Intersection Setup

Name	Power Road			Power Road			Elliot Road					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road					
Base Volume Input [veh/h]	140	878	161	32	1052	126	114	186	146	145	171	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	1155	212	42	1384	166	150	245	192	191	225	28
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	314	58	11	376	45	41	67	52	52	61	8
Total Analysis Volume [veh/h]	200	1255	230	46	1504	180	163	266	209	208	245	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	44	0	9	44	0	18	28	0	9	19	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	49	42	42	49	40	40	33	24	33	21
g / C, Green / Cycle	0.54	0.46	0.46	0.54	0.44	0.44	0.37	0.27	0.37	0.24
(v / s)_i Volume / Saturation Flow Rate	0.40	0.40	0.41	0.09	0.45	0.46	0.12	0.27	0.19	0.15
s, saturation flow rate [veh/h]	505	1870	1772	513	1870	1802	1306	1735	1102	1835
c, Capacity [veh/h]	264	866	820	266	833	802	444	461	281	430
d1, Uniform Delay [s]	21.99	21.72	22.15	16.83	24.96	24.96	20.94	33.05	25.28	31.03
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.32	0.13	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	18.16	11.52	14.24	1.41	35.96	43.16	0.51	41.49	4.68	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.87	0.89	0.17	1.02	1.04	0.37	1.03	0.74	0.64
d, Delay for Lane Group [s/veh]	40.15	33.23	36.38	18.24	60.92	68.13	21.45	74.54	29.96	32.62
Lane Group LOS	D	C	D	B	F	F	C	F	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.09	15.19	15.59	0.47	23.80	24.53	2.27	14.60	3.42	5.44
50th-Percentile Queue Length [ft/ln]	77.34	379.66	389.73	11.83	595.00	613.35	56.65	364.90	85.43	136.09
95th-Percentile Queue Length [veh/ln]	5.57	21.58	22.06	0.85	32.25	33.67	4.08	21.24	6.15	9.27
95th-Percentile Queue Length [ft/ln]	139.20	539.43	551.62	21.29	806.30	841.85	101.97	530.88	153.77	231.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.15	34.50	36.38	18.24	64.06	68.13	21.45	74.54	74.54	29.96	32.62	32.62
Movement LOS	D	C	D	B	E	E	C	E	E	C	C	C
d_A, Approach Delay [s/veh]	35.43			63.27			60.98			31.48		
Approach LOS	D			E			E			C		
d_I, Intersection Delay [s/veh]	49.22											
Intersection LOS	D											
Intersection V/C	0.881											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	889	889	533	333
d_b, Bicycle Delay [s]	13.89	13.89	24.20	31.25
l_b,int, Bicycle LOS Score for Intersection	2.950	2.987	2.612	2.357
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 6: RWCD Western Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Western Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	2	0	336
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	540	2	0	442
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	147	1	0	120
Total Analysis Volume [veh/h]	2	0	587	2	0	480
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	19.79	12.20	0.00	0.00	8.65	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.62	0.62	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.79		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	0	0	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	540	0	0	441
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	147	0	0	120
Total Analysis Volume [veh/h]	2	0	587	0	0	479
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	19.75	12.19	0.00	0.00	8.64	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.61	0.61	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.75		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	75	681	96	19	666	57	85	108	97	113	173	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	38	38	0	0	0	23	0	11	7	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	737	142	59	720	62	92	140	105	133	194	45
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	200	39	16	196	17	25	38	29	36	53	12
Total Analysis Volume [veh/h]	88	801	154	64	783	67	100	152	114	145	211	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	14	0	9	14	0	9	58	0	9	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	57	49	49	57	48	48	25	16	25	16
g / C, Green / Cycle	0.63	0.54	0.54	0.63	0.54	0.54	0.28	0.18	0.28	0.18
(v / s)_i Volume / Saturation Flow Rate	0.11	0.26	0.26	0.09	0.23	0.23	0.08	0.15	0.11	0.14
s, saturation flow rate [veh/h]	779	1870	1767	716	1870	1819	1304	1738	1300	1810
c, Capacity [veh/h]	513	1009	953	467	1000	972	336	315	324	327
d1, Uniform Delay [s]	7.69	12.96	12.97	7.98	12.69	12.69	25.54	35.72	26.41	35.33
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	1.68	1.78	0.61	1.36	1.40	0.49	6.22	0.97	4.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.49	0.49	0.14	0.43	0.43	0.30	0.85	0.45	0.79
d, Delay for Lane Group [s/veh]	7.84	14.64	14.74	8.60	14.05	14.09	26.03	41.94	27.38	39.70
Lane Group LOS	A	B	B	A	B	B	C	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.55	5.74	5.45	0.46	4.88	4.76	1.57	5.87	2.47	5.75
50th-Percentile Queue Length [ft/ln]	13.71	143.61	136.37	11.42	122.05	118.97	39.37	146.65	61.83	143.75
95th-Percentile Queue Length [veh/ln]	0.99	9.68	9.28	0.82	8.51	8.34	2.83	9.84	4.45	9.68
95th-Percentile Queue Length [ft/ln]	24.68	241.88	232.12	20.55	212.64	208.41	70.87	245.95	111.29	242.06

Movement, Approach, & Intersection Results

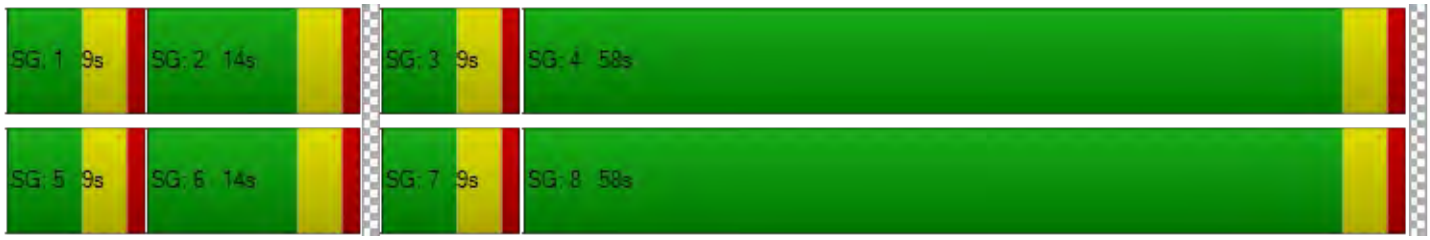
d_M, Delay for Movement [s/veh]	7.84	14.68	14.74	8.60	14.07	14.09	26.03	41.94	41.94	27.38	39.70	39.70
Movement LOS	A	B	B	A	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	14.11			13.69			37.59			35.29		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	20.26											
Intersection LOS	C											
Intersection V/C	0.496											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	222	1199	1199
d_b, Bicycle Delay [s]	35.60	35.60	7.23	7.23
l_b,int, Bicycle LOS Score for Intersection	2.420	2.314	2.164	2.228
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: RWCD Western Driveway_Access B & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	2	0	0	0	0	0	0	209	8	3	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0816	1.0000	1.0000	1.0816	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	9	30	49	0	0	26	16
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	0	5	0	9	30	275	8	3	376	16
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	1	0	2	8	75	2	1	102	4
Total Analysis Volume [veh/h]	2	0	0	5	0	10	33	299	9	3	409	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.41	16.79	9.97	17.13	16.77	10.86	8.27	0.00	0.00	7.88	0.00	0.00
Movement LOS	C	C	A	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.10	0.10	0.10	0.09	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.52	0.52	0.52	2.48	2.48	2.48	2.25	0.00	0.00	0.18	0.00	0.00
d_A, Approach Delay [s/veh]	17.41			12.95			0.80			0.06		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	0.67											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	220	0	0	317
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0816	1.0000	1.0000	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	53	0	0	42
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	291	0	0	385
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	79	0	0	105
Total Analysis Volume [veh/h]	2	0	316	0	0	418
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.34	10.02	0.00	0.00	7.89	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.39	0.39	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.34		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 16: Access A & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Access A		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access A		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	217	326	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0816	1.0816	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	7	25	74	22	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	7	25	309	375	13
Peak Hour Factor	1.0000	0.9200	1.0000	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	6	84	102	4
Total Analysis Volume [veh/h]	4	8	25	336	408	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.49	10.77	8.24	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.83	1.83	1.69	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.34		0.57		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.45					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Access C & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name	Access C		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access C		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	220	317	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0816	1.0816	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	13	45	9	29	24
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	13	45	247	372	24
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	4	12	67	101	7
Total Analysis Volume [veh/h]	7	14	49	268	404	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.02	0.04	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.70	10.98	8.33	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.14	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.30	3.30	3.40	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.55		1.29		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.87					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	34.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.741

Intersection Setup

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	140	878	161	32	1052	126	114	186	146	145	171	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	16	16	0	0	0	9	0	37	22	37
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	151	950	190	51	1138	136	123	210	158	194	207	60
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	258	52	14	309	37	33	57	43	53	56	16
Total Analysis Volume [veh/h]	164	1033	207	55	1237	148	134	228	172	211	225	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	38	0	10	39	0	12	33	0	9	30	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	46	38	38	46	37	37	36	27	36	26
g / C, Green / Cycle	0.51	0.42	0.42	0.51	0.41	0.41	0.40	0.30	0.40	0.29
(v / s)_i Volume / Saturation Flow Rate	0.27	0.34	0.34	0.09	0.38	0.38	0.11	0.23	0.19	0.16
s, saturation flow rate [veh/h]	604	1870	1764	616	1870	1801	1244	1738	1138	1799
c, Capacity [veh/h]	283	787	742	294	761	733	477	529	378	524
d1, Uniform Delay [s]	19.92	22.85	22.98	16.13	25.36	25.49	18.19	28.30	20.92	26.94
k, delay calibration	0.31	0.50	0.50	0.50	0.50	0.50	0.11	0.22	0.12	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.40	8.66	9.61	1.40	18.55	20.16	0.32	4.54	1.49	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.81	0.82	0.19	0.92	0.93	0.28	0.76	0.56	0.55
d, Delay for Lane Group [s/veh]	25.32	31.51	32.59	17.53	43.91	45.65	18.50	32.84	22.41	27.85
Lane Group LOS	C	C	C	B	D	D	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.01	12.37	12.03	0.61	16.59	16.47	1.68	7.85	3.03	5.26
50th-Percentile Queue Length [ft/ln]	50.14	309.34	300.85	15.29	414.73	411.86	42.11	196.36	75.82	131.58
95th-Percentile Queue Length [veh/ln]	3.61	18.14	17.72	1.10	23.27	23.13	3.03	12.45	5.46	9.03
95th-Percentile Queue Length [ft/ln]	90.25	453.56	443.08	27.52	581.72	578.28	75.80	311.27	136.47	225.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.32	31.92	32.59	17.53	44.66	45.65	18.50	32.84	32.84	22.41	27.85	27.85
Movement LOS	C	C	C	B	D	D	B	C	C	C	C	C
d_A, Approach Delay [s/veh]	31.25			43.73			29.24			25.56		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	34.87											
Intersection LOS	C											
Intersection V/C	0.741											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	756	778	644	578
d_b, Bicycle Delay [s]	17.42	16.81	20.67	22.76
l_b,int, Bicycle LOS Score for Intersection	2.718	2.748	2.441	2.386
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 6: RWCD Western Driveway_Access B & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	22.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	2	0	0	0	0	0	0	410	2	0	336	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0816	1.0000	1.0000	1.0816	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	29	12	31	0	0	49	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	0	15	0	29	12	474	2	0	412	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	4	0	8	3	129	1	0	112	2
Total Analysis Volume [veh/h]	2	0	0	16	0	32	13	515	2	0	448	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.07	0.00	0.05	0.01	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	22.72	20.12	11.61	22.43	21.12	12.21	8.30	0.00	0.00	8.43	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.42	0.42	0.42	0.04	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.74	0.74	0.74	10.51	10.51	10.51	0.89	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.72			15.61			0.20			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	0.87											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	18.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	0	0	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0816	1.0000	1.0000	1.0816
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	46	0	0	55
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	489	0	0	417
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	133	0	0	113
Total Analysis Volume [veh/h]	2	0	532	0	0	453
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	18.18	11.67	0.00	0.00	8.48	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.55	0.55	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.18		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 16: Access A & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

Intersection Setup

Name	Access A		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access A		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	412	338	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0816	1.0816	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	24	10	31	72	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	24	10	477	438	6
Peak Hour Factor	1.0000	0.9200	1.0000	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	7	3	130	119	2
Total Analysis Volume [veh/h]	13	26	10	518	476	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.04	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	19.64	12.01	8.37	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.31	0.31	0.03	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	7.71	7.71	0.70	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.55		0.16		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.62					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Access C & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.083

Intersection Setup

Name	Access C		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access C		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	410	335	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0816	1.0816	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	43	18	28	12	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	43	18	471	374	10
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	12	5	128	102	3
Total Analysis Volume [veh/h]	23	47	20	512	407	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.07	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	19.43	12.11	8.21	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.55	0.55	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.73	13.73	1.34	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.52		0.31		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	1.16					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

Intersection Setup

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	75	681	96	19	666	57	85	108	97	113	173	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	38	38	0	0	0	23	0	11	7	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	896	164	63	876	75	112	165	128	160	235	52
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	243	45	17	238	20	30	45	35	43	64	14
Total Analysis Volume [veh/h]	108	974	178	68	952	82	122	179	139	174	255	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	14	0	15	19	0	11	52	0	9	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	59	51	51	59	50	50	23	14	14	23	13	13
g / C, Green / Cycle	0.65	0.56	0.56	0.65	0.56	0.56	0.26	0.16	0.16	0.26	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.16	0.32	0.32	0.11	0.28	0.28	0.09	0.05	0.09	0.14	0.06	0.06
s, saturation flow rate [veh/h]	686	1870	1771	622	1870	1818	1334	3560	1589	1279	3560	1705
c, Capacity [veh/h]	476	1053	997	430	1041	1012	399	562	251	358	497	238
d1, Uniform Delay [s]	7.35	12.57	12.59	7.68	12.30	12.30	26.80	33.62	34.99	28.07	35.41	35.50
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	2.16	2.30	0.79	1.74	1.79	0.43	0.32	1.91	1.02	0.56	1.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.56	0.56	0.16	0.50	0.50	0.31	0.32	0.55	0.49	0.42	0.44
d, Delay for Lane Group [s/veh]	7.59	14.73	14.90	8.46	14.04	14.10	27.22	33.95	36.90	29.08	35.97	36.76
Lane Group LOS	A	B	B	A	B	B	C	C	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.62	6.99	6.70	0.46	5.99	5.84	2.01	1.67	2.80	3.12	2.10	2.14
50th-Percentile Queue Length [ft/ln]	15.50	174.70	167.46	11.39	149.64	145.96	50.24	41.82	69.90	78.04	52.43	53.51
95th-Percentile Queue Length [veh/ln]	1.12	11.32	10.94	0.82	10.00	9.80	3.62	3.01	5.03	5.62	3.78	3.85
95th-Percentile Queue Length [ft/ln]	27.90	283.09	273.57	20.50	249.95	245.02	90.43	75.28	125.83	140.47	94.38	96.31

Movement, Approach, & Intersection Results

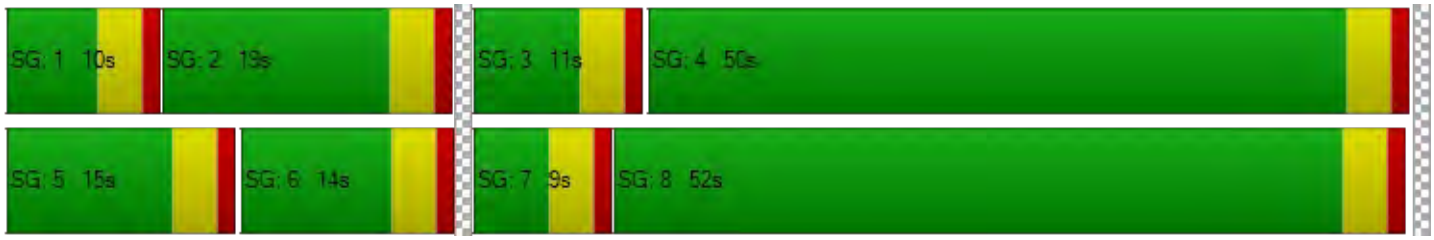
d_M, Delay for Movement [s/veh]	7.59	14.79	14.90	8.46	14.07	14.10	27.22	33.95	36.90	29.08	36.12	36.76
Movement LOS	A	B	B	A	B	B	C	C	D	C	D	D
d_A, Approach Delay [s/veh]	14.19			13.72			33.02			33.67		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.43											
Intersection LOS	B											
Intersection V/C	0.501											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	333	1066	1022
d_b, Bicycle Delay [s]	35.57	31.26	9.81	10.76
I_b,int, Bicycle LOS Score for Intersection	2.599	2.469	1.802	1.827
Bicycle LOS	B	B	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: RWCD Western Driveway_Access B & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.049

Intersection Setup

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	4	0	0	0	0	0	0	209	8	3	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	16	0	9	40	59	0	0	26	16
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	0	16	0	9	40	334	8	3	452	16
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	4	0	2	11	91	2	1	123	4
Total Analysis Volume [veh/h]	4	0	0	17	0	10	43	363	9	3	491	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.05	0.00	0.02	0.06	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.63	20.39	10.23	15.91	20.62	11.19	10.73	0.00	0.00	9.65	0.00	0.00
Movement LOS	B	C	B	C	C	B	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.21	0.21	0.21	0.20	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.80	0.80	0.80	5.13	5.13	5.13	5.12	0.00	0.00	0.29	0.00	0.00
d_A, Approach Delay [s/veh]	14.63			14.16			1.11			0.06		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	0.97											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	220	0	0	317
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	75	0	0	42
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	364	0	0	459
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	99	0	0	125
Total Analysis Volume [veh/h]	2	0	396	0	0	499
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.22	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.22		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 16: Access A & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	Access A		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	2	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	100.00	0.00	0.00
Speed [mph]	25.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access A		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	217	326	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.3159	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	99	22	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	7	0	385	451	13
Peak Hour Factor	1.0000	0.9200	1.0000	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	0	105	123	4
Total Analysis Volume [veh/h]	0	8	0	418	490	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.66	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.94	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.66		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 21: Access C & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.096

Intersection Setup

Name	Access C		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access C		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	220	317	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.3159	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	59	16	29	24
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	13	59	305	446	24
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	4	16	83	121	7
Total Analysis Volume [veh/h]	0	14	64	332	485	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.81	10.95	0.00	0.00	0.00
Movement LOS		B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.07	0.32	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.69	7.90	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.81		1.77		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	31.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.749

Intersection Setup

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	140	878	161	32	1052	126	114	186	146	145	171	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	16	16	0	0	0	9	0	37	22	37
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	1155	228	58	1384	166	150	254	192	228	247	65
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	314	62	16	376	45	41	69	52	62	67	18
Total Analysis Volume [veh/h]	200	1255	248	63	1504	180	163	276	209	248	268	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	49	0	9	49	0	17	23	0	9	15	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	54	46	46	54	45	45	28	19	19	28	16	16
g / C, Green / Cycle	0.60	0.51	0.51	0.60	0.50	0.50	0.31	0.21	0.21	0.31	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.41	0.41	0.42	0.12	0.45	0.46	0.12	0.08	0.13	0.22	0.06	0.07
s, saturation flow rate [veh/h]	485	1870	1766	507	1870	1802	1314	3560	1589	1129	3560	1681
c, Capacity [veh/h]	286	959	906	302	938	904	463	746	333	358	616	291
d1, Uniform Delay [s]	19.79	18.00	18.41	14.13	20.46	20.87	23.82	30.49	32.39	29.41	32.89	32.97
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.20	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.29	6.72	8.17	1.56	13.71	16.55	0.46	0.31	1.95	4.40	0.37	0.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.79	0.82	0.21	0.90	0.93	0.35	0.37	0.63	0.69	0.37	0.38
d, Delay for Lane Group [s/veh]	33.08	24.71	26.58	15.69	34.17	37.42	24.28	30.80	34.33	33.81	33.26	33.80
Lane Group LOS	C	C	C	B	C	D	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.50	12.86	13.09	0.55	17.39	18.06	2.51	2.45	4.07	4.58	2.19	2.19
50th-Percentile Queue Length [ft/ln]	62.52	321.42	327.25	13.74	434.83	451.45	62.85	61.32	101.87	114.42	54.80	54.72
95th-Percentile Queue Length [veh/ln]	4.50	18.74	19.02	0.99	24.23	25.03	4.52	4.42	7.33	8.09	3.95	3.94
95th-Percentile Queue Length [ft/ln]	112.54	468.43	475.59	24.73	605.83	625.68	113.12	110.38	183.37	202.13	98.63	98.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.08	25.45	26.58	15.69	35.58	37.42	24.28	30.80	34.33	33.81	33.34	33.80
Movement LOS	C	C	C	B	D	D	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	26.51			35.06			30.30			33.59		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	31.11											
Intersection LOS	C											
Intersection V/C	0.749											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	1000	422	244
d_b, Bicycle Delay [s]	11.25	11.25	28.01	34.67
l_b,int, Bicycle LOS Score for Intersection	2.965	3.001	1.916	1.882
Bicycle LOS	C	C	A	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 6: RWCD Western Driveway_Access B & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.168

Intersection Setup

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	4	0	0	0	0	0	0	410	2	0	336	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	50	0	29	16	25	0	0	49	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	0	0	50	0	29	16	565	2	0	491	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	14	0	8	4	154	1	0	133	2
Total Analysis Volume [veh/h]	4	0	0	54	0	32	17	614	2	0	534	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.17	0.00	0.05	0.03	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	17.77	25.05	11.31	18.75	27.24	13.33	10.71	0.00	0.00	11.03	0.00	0.00
Movement LOS	C	D	B	C	D	B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.82	0.82	0.82	0.08	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.06	1.06	1.06	20.61	20.61	20.61	2.02	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.77			16.73			0.29			0.00		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	1.34											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	0	0	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	75	0	0	55
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	615	0	0	496
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	167	0	0	135
Total Analysis Volume [veh/h]	2	0	668	0	0	539
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	11.37	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.37		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 16: Access A & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	Access A		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access A		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	412	338	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.3159	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	41	72	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	24	0	583	517	6
Peak Hour Factor	1.0000	0.9200	1.0000	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	7	0	158	140	2
Total Analysis Volume [veh/h]	0	26	0	634	562	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	11.16	0.00	0.00	0.00	0.00
Movement LOS		B		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.13	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	3.33	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.16		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.24					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 21: Access C & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.074

Intersection Setup

Name	Access C		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access C		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	410	335	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.3159	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	43	25	50	12	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	43	25	590	453	10
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	12	7	160	123	3
Total Analysis Volume [veh/h]	0	47	27	641	492	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.07	0.04	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	11.10	10.55	0.00	0.00	0.00
Movement LOS		B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.24	0.12	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	5.95	3.12	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.10		0.43		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.66					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

Intersection Setup

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	75	681	96	19	666	57	85	108	97	113	173	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	38	38	0	0	0	23	0	11	7	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	896	164	63	876	75	112	165	128	160	235	52
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	243	45	17	238	20	30	45	35	43	64	14
Total Analysis Volume [veh/h]	108	974	178	68	952	82	122	179	139	174	255	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	14	0	9	14	0	9	58	0	9	58	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	54	46	46	54	45	45	28	19	28	19
g / C, Green / Cycle	0.60	0.51	0.51	0.60	0.50	0.50	0.31	0.21	0.31	0.21
(v / s)_i Volume / Saturation Flow Rate	0.15	0.32	0.32	0.11	0.28	0.28	0.10	0.18	0.14	0.17
s, saturation flow rate [veh/h]	701	1870	1771	637	1870	1818	1247	1736	1242	1812
c, Capacity [veh/h]	426	949	899	382	937	911	337	368	323	384
d1, Uniform Delay [s]	10.13	15.99	16.02	10.63	15.60	15.60	24.18	34.28	25.23	33.82
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	3.07	3.28	1.02	2.41	2.48	0.65	6.10	1.39	4.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.62	0.63	0.18	0.56	0.56	0.36	0.86	0.54	0.81
d, Delay for Lane Group [s/veh]	10.44	19.06	19.30	11.64	18.00	18.08	24.83	40.38	26.62	38.00
Lane Group LOS	B	B	B	B	B	B	C	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.78	8.34	7.99	0.56	7.10	6.92	1.85	6.92	2.89	6.80
50th-Percentile Queue Length [ft/ln]	19.49	208.39	199.86	14.12	177.41	173.07	46.24	172.97	72.24	169.91
95th-Percentile Queue Length [veh/ln]	1.40	13.07	12.63	1.02	11.47	11.24	3.33	11.23	5.20	11.07
95th-Percentile Queue Length [ft/ln]	35.08	326.77	315.78	25.41	286.63	280.94	83.23	280.82	130.04	276.80

Movement, Approach, & Intersection Results

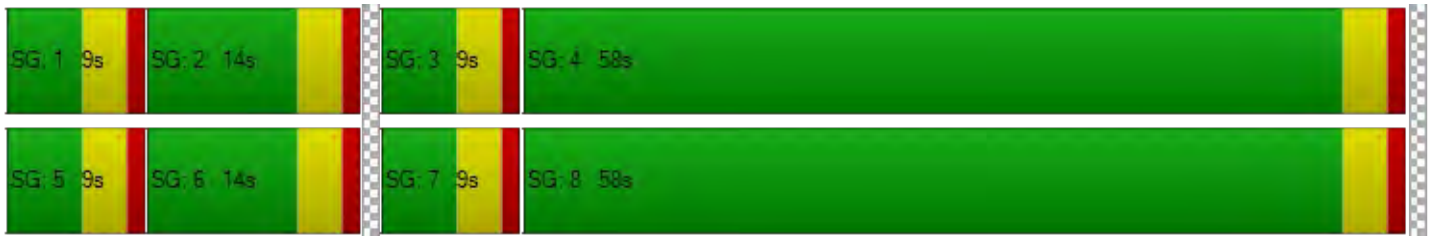
d_M, Delay for Movement [s/veh]	10.44	19.15	19.30	11.64	18.04	18.08	24.83	40.38	40.38	26.62	38.00	38.00
Movement LOS	B	B	B	B	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	18.43			17.65			36.07			33.92		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	22.82											
Intersection LOS	C											
Intersection V/C	0.593											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	222	222	1199	1199
d_b, Bicycle Delay [s]	35.60	35.60	7.23	7.23
l_b,int, Bicycle LOS Score for Intersection	2.599	2.469	2.286	2.362
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: RWCD Western Driveway_Access B & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	20.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	2	0	0	0	0	0	0	209	8	3	324	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	9	30	49	0	0	26	16
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	0	5	0	9	30	324	8	3	452	16
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	1	0	2	8	88	2	1	123	4
Total Analysis Volume [veh/h]	2	0	0	5	0	10	33	352	9	3	491	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.00	0.02	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	20.39	19.19	10.37	20.04	19.18	11.59	8.52	0.00	0.00	8.01	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.03	0.12	0.12	0.12	0.10	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.64	0.64	0.64	2.93	2.93	2.93	2.42	0.00	0.00	0.19	0.00	0.00
d_A, Approach Delay [s/veh]	20.39			14.40			0.71			0.05		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	0.61											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	220	0	0	317
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	53	0	0	42
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	342	0	0	459
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	93	0	0	125
Total Analysis Volume [veh/h]	2	0	372	0	0	499
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	16.27	10.41	0.00	0.00	8.03	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.47	0.47	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.27		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 16: Access A & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Access A		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access A		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	217	326	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.3159	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	7	25	74	22	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	7	25	360	451	13
Peak Hour Factor	1.0000	0.9200	1.0000	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	6	98	123	4
Total Analysis Volume [veh/h]	4	8	25	391	490	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.68	11.46	8.48	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.13	2.13	1.81	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.53		0.51		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.40					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Access C & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name	Access C		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access C		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	220	317	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.3159	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	13	45	9	29	24
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	13	45	298	446	24
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	4	12	81	121	7
Total Analysis Volume [veh/h]	7	14	49	324	485	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.02	0.05	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.98	11.72	8.58	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.15	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.84	3.84	3.65	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.81		1.13		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Power Road & Elliot Road

Control Type:	Signalized	Delay (sec / veh):	54.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.902

Intersection Setup

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	160.00	100.00	100.00	160.00	100.00	100.00	105.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Power Road			Power Road			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	140	878	161	32	1052	126	114	186	146	145	171	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	16	16	0	0	0	9	0	37	22	37
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	1155	228	58	1384	166	150	254	192	228	247	65
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	314	62	16	376	45	41	69	52	62	67	18
Total Analysis Volume [veh/h]	200	1255	248	63	1504	180	163	276	209	248	268	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	20	0	32	43	0	14	29	0	9	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	48	40	40	48	39	39	34	25	34	22
g / C, Green / Cycle	0.53	0.45	0.45	0.53	0.43	0.43	0.38	0.28	0.38	0.25
(v / s)_i Volume / Saturation Flow Rate	0.39	0.41	0.42	0.12	0.45	0.46	0.13	0.28	0.23	0.19
s, saturation flow rate [veh/h]	510	1870	1766	527	1870	1802	1252	1738	1091	1803
c, Capacity [veh/h]	264	834	788	263	813	783	404	480	281	445
d1, Uniform Delay [s]	21.67	23.28	23.81	18.68	25.45	25.45	20.99	32.58	30.26	31.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.33	0.22	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	18.24	15.97	20.66	2.14	43.34	51.80	0.65	36.04	16.02	3.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.91	0.94	0.24	1.04	1.07	0.40	1.01	0.88	0.76
d, Delay for Lane Group [s/veh]	39.91	39.25	44.48	20.83	68.78	77.25	21.64	68.62	46.29	34.74
Lane Group LOS	D	D	D	C	F	F	C	F	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	3.16	16.92	17.70	0.68	25.01	25.93	2.23	14.43	4.91	7.05
50th-Percentile Queue Length [ft/ln]	78.97	422.93	442.46	17.11	625.13	648.29	55.70	360.78	122.71	176.35
95th-Percentile Queue Length [veh/ln]	5.69	23.66	24.60	1.23	34.26	35.97	4.01	20.79	8.54	11.41
95th-Percentile Queue Length [ft/ln]	142.14	591.56	614.94	30.80	856.59	899.22	100.27	519.81	213.55	285.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.91	41.31	44.48	20.83	72.48	77.25	21.64	68.62	68.62	46.29	34.74	34.74
Movement LOS	D	D	D	C	E	E	C	E	E	D	C	C
d_A, Approach Delay [s/veh]	41.61			71.10			56.80			39.62		
Approach LOS	D			E			E			D		
d_I, Intersection Delay [s/veh]	54.46											
Intersection LOS	D											
Intersection V/C	0.902											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	356	867	555	444
d_b, Bicycle Delay [s]	30.43	14.45	23.48	27.23
l_b,int, Bicycle LOS Score for Intersection	2.965	3.001	2.629	2.528
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report

Intersection 6: RWCD Western Driveway_Access B & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	29.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	RWCD Western Driveway			Access B			Elliot Road			Elliot Road		
Base Volume Input [veh/h]	2	0	0	0	0	0	0	410	2	0	336	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	29	12	31	0	0	49	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	0	15	0	29	12	571	2	0	491	7
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	4	0	8	3	155	1	0	133	2
Total Analysis Volume [veh/h]	2	0	0	16	0	32	13	621	2	0	534	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.10	0.00	0.06	0.01	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	29.24	24.76	12.72	28.96	26.39	13.73	8.55	0.00	0.00	8.76	0.00	0.00
Movement LOS	D	C	B	D	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.04	0.54	0.54	0.54	0.04	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.01	1.01	1.01	13.59	13.59	13.59	0.96	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	29.24			18.81			0.17			0.00		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	0.87											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 11: RWCD Eastern Driveway & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	22.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	RWCD Eastern Driveway		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	2	0	410	0	0	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.3159	1.0000	1.0000	1.3159
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	46	0	0	55
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	0	586	0	0	496
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	159	0	0	135
Total Analysis Volume [veh/h]	2	0	637	0	0	539
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	22.19	12.71	0.00	0.00	8.80	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.72	0.72	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.19		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 16: Access A & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	24.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.065

Intersection Setup

Name	Access A		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access A		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	412	338	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.3159	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	24	10	31	72	6
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	24	10	573	517	6
Peak Hour Factor	1.0000	0.9200	1.0000	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	7	3	156	140	2
Total Analysis Volume [veh/h]	13	26	10	623	562	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.05	0.01	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	24.26	13.19	8.62	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.38	0.38	0.03	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.56	9.56	0.75	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.88		0.14		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.60					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 21: Access C & Elliot Road

Control Type:	Two-way stop	Delay (sec / veh):	24.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.108

Intersection Setup

Name	Access C		Elliot Road		Elliot Road	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Access C		Elliot Road		Elliot Road	
Base Volume Input [veh/h]	0	0	0	410	335	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.3159	1.3159	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	43	18	28	12	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	43	18	568	453	10
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	12	5	154	123	3
Total Analysis Volume [veh/h]	23	47	20	617	492	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.08	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	24.12	13.56	8.46	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.69	0.69	0.06	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	17.24	17.24	1.44	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.03		0.27		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.12					
Intersection LOS	C					