



To: Plan Commission

From: Daniel Ritter, AICP, Community and Economic Development Director
Ronald Mentzer, Community and Economic Development Consultant

Date: February 12, 2026

Re: 1610 Plainfield Road, Proposed QuikTrip Redevelopment of Former Crest Hill City Hall - City Code and Zoning Ordinance Variation Requests and Preliminary/Final Plat of Subdivision – Plan Commission Case # V-26-2-2-1

Project Details

Project:	New QuikTrip Convenience Store/Gas Station #4452 and Adjacent Future Commercial Project
Applicant:	QuikTrip Corporation
Requests:	Zoning variations for increased driveway widths on Plainfield Road/Route 30 and Knapp Drive, City Code Sign Code variations for an off-premises sign with an increased sign area, an increased number of wall signs, and adjustments to the permitted locations for wall signs. A Preliminary and Final Plat of Subdivision that resubdivides the 4.9-acre site into three separate lots.
Location:	1610 Plainfield Road/U.S. Highway Route (the "Subject Property")

Site Details

Lot Size:	Approximately 4.9 acres
Existing Zoning:	B-3, Business Service District
Existing Improvements:	Former two-story City of Crest Hill City Hall, Public Works, and Police Department Building, stormwater detention pond, and approximately 66 parking spaces.

Surrounding Zoning and Land Use Summary

	Land Use	Comp Plan	Zoning
Subject Parcel	Vacant former Municipal Building and a Vacant Development Parcel	Community Facilities and Local Commercial	B-3
North	Bank	Local Commercial	B-1
South	U.S. Route 30/City of Joliet.	Unknown	Unknown
East	Senior Living Facility	Multi-Family Residential	R-2
West	Bank, Misc. Commercial and Route 30	Local and Regional Commercial	B-1 and City of Joliet

Site Location Map



APPLICATION MATERIALS

The application materials submitted for this project/case and reviewed by City staff/consultants are listed on attached Exhibit A and have been distributed with this report.

APPLICATION BACKGROUND AND PROJECT SUMMARY

The Subject Property is owned by the City of Crest Hill. The eastern portion of the 4.9 +/- acre site is improved with the former City Hall/Public Works/Police Department Building which has been vacant since the City took occupancy of its new Public Works Building on Oakland Avenue and the new City Hall on City Center Boulevard. The western portion of the site is a vacant future commercial development site.

In the summer of 2024, the City of Crest Hill executed a purchase and sale agreement for the Subject Property with QuikTrip Corporation (QT). QT is proposing to demolish the existing building and pavement improvements on the Subject Property, resubdivide it into three lots, and develop each lot as follows:

- **Lot 1** (eastern lot): Construct a new 6,445 square foot QT convenience store, an eight pump island fueling canopy, 48 parking spaces, a right-in/right-out driveway on Route 30, and a new full access driveway on Knapp Drive.
- **Lot 2** (western lot): Construct a new full-access driveway on Route 30 at the very west edge of the lot, a new internal cross-access driveway between it and Lot 1 and prepare the lot for future sale and development. It is anticipated to be marketed for a quick-serve restaurant or a multi-tenant commercial building.
- **Lot 3** (northern lot): Expand the existing stormwater detention facility in this area of the Subject Property.

Collectively, these improvements comprise the “Project”.

QT’s purchase and redevelopment of the Subject Property is contingent on securing acceptable driveway permits from the Illinois Department of Transportation and obtaining City of Crest Hill approval of the variations outlined in this report.

REQUESTED VARIATIONS

QT has requested City approval of the following specific variations for the Project:

- 1. Increased Driveway Widths:** Section 11.6-7.2 of the Zoning Ordinance limits the maximum width of commercial driveways to 40 feet measured at the property line. QT is proposing to eliminate the large northern-most driveway on Knapp Drive and has requested approval of variations that allow for:
 - a. The remaining proposed full-access Knapp Drive driveway on Lot 1 to be 81 feet wide
 - b. The proposed eastern Route 30 right-in/right-out driveway on Lot 1 to be 95 feet wide
 - c. The proposed western Route 30 full-access driveway on Lot 2 to be 47 feet wide
- 2. A Multi-Tenant Off-Premises Monument Sign with Increased Sign Area**
 - a. Section 15.12.067 of the City’s Sign Code specifically prohibits off-premises signs “except when approved by the City Council”. QT has requested a variation that allows for a 15-foot-tall, multi-tenant, vertical monument sign (MV-E2PQ-CC-65-BB) to be installed on the very west edge of proposed

Lot 2, adjacent to the Project's only full-access drive on Route 30. As reflected in the application materials for this sign, it will include a tenant panel for the future business that operates on Lot 2 and miscellaneous advertising and gas pricing information for the proposed Lot 1 QT store.

- b. Section 15.12.080 (D)(1)(d) of the Sign Code limits the area of a freestanding commercial sign on the Subject Property, excluding electronic gas pricing components, to 50 sq. ft. per face. QT has requested a variation that allow for the proposed multi-tenant monument sign on Lot 2 to have a combined sign face area, excluding the electronic gas price component, of approximately 67 sq. ft.

3. Increased Number of Commercial Wall Signs

- a. Section 15.12.080 (C)(1) of the Sign Code allows one wall sign per public right of way and no more than two wall signs along each street frontage. QT has requested approval of a variation that allow for the following wall signs to be installed on Lot 1:
 - i. **Knapp Drive Frontage:** An IDB 56 sq. ft. QT wall sign on the QT building and an IDC 20 sq. ft. QT wall sign on the gas pump island canopy.
 - ii. **Route 30 Frontage:** An IDB-56 sq. ft. QT wall sign and a 43.5 sq. ft. Gen4-CL60 Quick Trip Wall sign on the building and an IDC 20 sq. ft. QT wall sign on the gas pump island canopy.
 - iii. **West Interior Side Property Line:** An IDC 20 sq. ft. QT wall sign on the gas pump island canopy.

4. Location of Wall/Canopy Signs

- a. Section 15.12.080 (C)(2) of the Sign Code prohibits a wall sign from projecting above the top of the façade/wall it is attached to. QT has requested a variation that allows each of the three IDC 20 QT wall signs proposed on the gas pump island canopy to extend four inches above the top edge of the canopy.

5. Increased Area of Commercial Wall Signs

- a. Section 15.12.080 (C)(3) prohibits the area of individual wall signs from exceeding 15% of the wall/façade surface the sign is mounted to. QT has requested a variation that allows the IDC 20 QT wall signs proposed on the east and west façades of the gas pump island canopy to cover approximately 17.1% of the canopy face they are mounted to.

OVERALL STAFF ANALYSIS

Overall, staff believes the QT's proposed Final Plat of Subdivision and project plans reflect the desirable redevelopment of a tax-exempt, obsolete governmental facility with a new high-quality, tax-generating QT convenience store and fueling station and a separate, yet to be identified, stand-alone complimentary commercial project. The proposed site circulation, driveway, and landscaping improvements will enhance the commercial character and desirability of the area while effectively managing the projected new traffic the Project will generate on the adjacent roadways. Staff is of the opinion that the requested variations are reasonable and acceptable given the underlying zoning of

the property, similar approvals the City has granted for other comparable projects in the community, and the character of the Subject Property and the adjacent commercial corridors. The resubdivision of the property and the creation of two adjacent commercial lots interconnected by an internal shared access drive that accommodates desirable private commercial development and businesses.

STAFF INPUT ON SPECIFIC PROJECT COMPONENTS

Traffic and Circulation

The Illinois Department of Transportation (IDOT) controls access onto the segment of Route 30 adjacent to the Subject Property. Late in 2025, IDOT finalized its review of the concept plans for this project and indicated the conceptual location and configuration of the project's Route 30 access driveways were acceptable.

The Lockport Fire Protection District has reviewed the application documents for the Project and has no objections or requested revisions at this time.

An attorney representing the Willow Falls Townhouse Association (the Association) submitted the September 16, 2025, letter attached as Exhibit B to formally document the Association's position regarding the proposed project and its request that all vehicular access to it be limited to Route 30 (no access allowed on Knapp Drive). This position is consistent with recent concerns Willow Falls residents have expressed regarding the speed, volume, and level of cut-through traffic on Knapp Drive. Knapp Drive is operated and maintained by the City of Crest Hill.

At the January 26, 2026, City Council Work Session meeting, the City's Director of Engineering presented a study summarizing traffic calming options that the City's traffic engineering consultant prepared for Knapp Drive in December of 2025. The detailed agenda packet backup information for this presentation can be accessed by clicking on agenda item 1. on the January 26, 2026, City Council Work Session agenda available on the City's Website [here](#). The City Council ultimately concurred with Staff's recommendation to install:

- All-way stop signs at the Willow Circle South/Knapp Drive intersection.
- A barrier median on Theodore Street at the Knapp Drive intersection that prohibits left turns from eastbound Theodore Street to northbound Knapp Drive.
- Signage on Knapp Drive that prohibits left turns from southbound Knapp Drive to eastbound Theodore Street during the evening peak traffic hours of 3:30-7 PM Monday through Friday.
- Signage at the Knapp Drive driveway entrance to El Guero Fresh Market which will prohibit cut-thru traffic.

The Applicant prepared and submitted a detailed traffic impact study for the proposed Project. The City's Director of Engineering has reviewed the study and concurs with the following key study conclusions and staff recommendations:

- The traffic projected to be generated by the Project will be reduced due to the volume of pass-by traffic.
- The signalized intersections of Plainfield Road with Theodore Street and Larkin Avenue have sufficient reserve capacity to accommodate Project-generated traffic.

- The intersection of Theodore Street with Knapp Drive can accommodate the additional traffic this Project will generate once the staff recommended Knapp Drive traffic calming improvements are in place.
- Vehicular access to the Project will be provided via a right-in/right-out access drive on Route 30 and a full-access driveway on Route 30 and Knapp Drive.
- Inbound left-turn movements at the proposed full movement access drive on Route 30 can be accommodated within the existing two-way left-turn median.
- A new continuous right-turn lane will be constructed to serve both of the Project's planned Plainfield Road driveways.
- The planned full-movement access driveway on Plainfield Road will connect to an internal private drive and access easement that serves both the Lot 1 QT Project and the adjacent future commercial development on Lot 2.
- The proposed access system will adequately accommodate the traffic estimated to be generated by the Project and will ensure that efficient and flexible access is provided.

Driveway Width Variations

The Director of Engineering has also reviewed the various engineering-related site plans submitted for the project and has concluded that the design/width of the proposed access drives are substantially consistent with sound engineering principles and approved City of Crest Hill construction details and therefore has no objection to the City's approval of the requested driveway width variations. Community Development Department Staff believes the width and configuration of proposed driveways support safe and efficient vehicular access to and from the Project. Reductions to the width of these driveways compromise the ability of the Subject Property to support quality commercial end users and have a negative impact on the operational efficiency and safety of these driveways. It is important to note that the final configuration and alignment of these driveways will be determined during the final engineering review and permitting processes for this project.

Sign Code Variations

In general, the City's Sign Code does not effectively allow a reasonable level of gasoline pump island canopy signage or multi-tenant monument signs for adjacent commercial lots with a shared driveway configuration like what is proposed in this Project. Overall, the number, size, and location of proposed signs in this Project is generally consistent with the signage packages the City has approved for other gas/convenience store projects. The proposed signs will be constructed of high-quality materials, have a desirable coordinated design, and be appropriately located, given the amount of elevation change and somewhat irregular corner lot configuration of the Subject Property.

VARIATION APPROVAL STANDARDS AND FINDINGS

Section 12.6-2 of the Zoning Ordinance states the Plan Commission shall recommend, and the City Council shall grant a variation only when it shall have been determined, and recorded in writing, that all of the following standards are complied with. Staff has drafted the following findings of fact identified in bold italic font. These drafted findings can be modified or changed as the Plan Commission deems fit and based on the specific findings from the public hearing. The Applicant has also included its responses to these standards in the supporting application materials distributed to the Plan Commission for this case.

1. That the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone.

The Subject Property cannot yield a reasonable return if it is limited solely to the uses and development standards permitted under the existing Zoning Ordinance and Sign Code regulations. Without approval of the requested driveway width variations, vehicular access to the site will be severely constrained and potentially less safe than the proposed design. Without the approval of the requested Sign Code variations, the quantity and placement of shared monument, wall, and canopy signage is less than the City has approved for other combined convenience and fueling facilities and adjacent commercial lot configurations within the community.

These limitations would place the Subject Property at a competitive disadvantage, diminish its desirability, and negatively affect its overall value. Approval of the requested variations is necessary to allow the Project to be developed as proposed, ensuring that the property can operate safely and efficiently while yielding a reasonable return.

2. That the plight of the owner is due to unique circumstances.
The plight of QT is due to unique circumstances specific to the property. The irregular corner-lot configuration, coupled with the existing configuration of adjacent roadway improvements, the operational requirements of the proposed commercial uses, and the necessity of shared internal driveway improvements, creates site-specific conditions not generally applicable to other properties in the zoning district. These unique circumstances justify approval of the requested variations.
3. That the variations, if granted, will not alter the essential character of the locality.
QT proposes to eliminate an existing excessively wide driveway on Knapp Drive and reconstruct the remaining three existing driveways serving the Subject Property in a manner consistent with sound engineering principles and the approved City of Crest Hill construction details.

The number, size, and placement of the proposed signs are generally consistent with signage packages previously approved by the City for other gas and convenience store developments. The proposed signage will be constructed of high-quality materials, feature an aesthetically pleasing and coordinated design, and be appropriately located given the site's elevation changes and irregular corner-lot configuration.

Accordingly, the requested variations will not negatively impact the overall commercial character of the adjacent commercial corridors.

In addition, Section 12.6-2 of the Zoning Ordinance further suggests the Plan Commission supplement the above standards by taking into consideration the extent to which the facts listed on Exhibit C have been established by the evidence presented during the public hearing process and further support the approval of the Applicant's requests.

STAFF RECOMMENDATION

Based on the drafted findings reflected in this staff report, Staff recommend the following motion to provide a recommendation to City Council. This motion may be amended by any Plan Commission member making the motion based upon the findings of the public hearing. Staff recommends that any motion be made in the positive form to correspond with the applicant's request and avoid confusion on the recommendation.

The Plan Commission recommends that the City Council approve the QuikTrip No. 4452 Final Plat Subdivision and the Zoning Ordinance and Sign Code variations outlined in the February 12, 2026, Plan Commission staff report for Case # V-26-2-2-1, subject to the following conditions and requirements:

- 1. The final plat of subdivision shall satisfy all applicable City ordinance, staff, and City Attorney requirements and shall include (either on the plat or in a separate document recorded with the Final Plat) appropriate cross-access easement and maintenance provisions for shared site improvements (pond, sign, and roadway). Any separate agreements/covenants shall be approved and recorded prior to any building occupancies or sale of any lots.***
- 2. All final engineering plans, related supporting information, and development security for the project shall be submitted for the Director of Engineering's review and approval in conjunction with the formal building permit application submitted for the project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #V-26-2-2-1.***
- 3. All final architectural, signage, and landscape plans for the project shall be submitted for Community Development Department staff review and approval in conjunction with the formal building permit application submitted for the project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #V-26-2-2-1.***
- 4. No new permanent driveway improvements shall be constructed onto the adjacent public roadways until proper permits have been issued by the authority having jurisdiction over the adjacent public roadway.***
- 5. The final design for the 15-foot-tall, multi-tenant, vertical monument sign (MV-E2PQ-CC-65-BB) installed on the very west edge of proposed Lot 2 shall be updated so that the tenant panel for the yet-to-be identified future commercial tenant on Lot 2 is located at the top of the sign face. A private agreement and covenant for this sign shall be approved by the city and recorded prior to issuance of a sign permit.***

Exhibit A

QuikTrip Application Materials for Store #4452

Misc. Application Materials

- 1/16/2026 Application for Development/Variations and Plat of Subdivision
- Undated Applicant “Development Request” Responses to Standards for Variations
- 12/24/2025 Traffic Impact Study Proposed QuikTrip Convenience Store
- 12/19/2024 Final Plat QuikTrip No. 4452 Subdivision (Sheets 1-3)
- Preliminary Stormwater Drainage Report for QuikTrip Store #4452 sealed 1/9/2026

Building Elevations and Floor Plan

- 02/04/2025 Building Elevations Sheet BE001
- 12/17/2025 Rough Dimension Floor Plan Sheet A110

Engineering/Site Plans

- 01/09/2026 Overall Development Plan Sheet C010
- 01/09/2026 Demolition Plan Sheet C030
- 01/09/2026 Overall Site Plan Sheet C100
- 01/09/2026 Site Plan Sheet C101
- 01/09/2026 Vehicle Tracking Delivery Trucks Sheet C103
- 01/16/2026 Emergency Vehicle Tracking Exhibit
- 01/09/2026 Overall Grading Plan Sheet C110
- 01/09/2026 Grading Plan Sheet C111
- 01/09/2026 Storm Sewer Plan Sheet C120

Signage

- 01/09/2026 Signage Plan Sheet C102
- 12/22/2025 4452 G4 Vertical 8 Gas Canopy drawing
- 03/06/2025 Approved IDB-56 SF Building ID Sign Plans (3 Sheets)
- 04/08/20 IDC-20 SF Building ID Sign (3 Sheets)
- 01/08/2026 MH-E2PGQ-CC-38-BB Horizontal Monument Sign (7 Sheets)
- 01/08/2026 MV-E2PQ-CC-65-BB 12'-0" Vertical Monument Sign (9 Sheets)
- 3/27/25 Approved Gen4 – CL60 Building Channel Letter Sign (4 Sheets)

Lighting

- 01/09/2026 Photometric Site Plan C160
- QuikTrip Store 4452 Lighting Cut Sheets for LSI Site Lights (8 pages), LSI Fuel Canopy Lights (6 pages), LSI Building Canopy Lights (4 pages), LSI Building Wall Sconces (5 pages), and LSI Light Poles (8 pages)

Landscaping

- 01/09/2026 Overall Landscape Impervious Surface Plan Sheet L100
- 01/09/2026 Landscape Plan Sheet L101

Exhibit B
Willow Falls Townhome Association Letter



NAPERVILLE
114 East Van Buren Avenue
Naperville, IL 60540
phone 630 369 2700
facsimile 630 369 9279

CHICAGO
181 W. Madison, Suite 4700
Chicago, IL 60601
phone 312 899 9989
www.kmlegal.com

Writer's Direct Dial
Writer's Email

(630) 369-2700
rrb@kmlegal.com

Correspondence response to be sent to the Naperville office.

September 16, 2025

VIA EMAIL, REGULAR AND CERTIFIED MAIL

rsoliman@cityofcresthill.com

Mayor Raymond R. Soliman
City of Crest Hill
20600 City Center Blvd.
Crest Hill, IL 60403

Re: Quick Trip Development – Knapp Corridor

Dear Mayor Soliman:

Our firm represents the Willow Falls Townhome Association (the "Association"), which consists of 104 Townhomes located near the intersection of Knapp Drive and Willow Circle Drive in Crest Hill. This correspondence is sent on behalf of the Association to formally express its position regarding the proposed Quick Trip Development between U.S. Route 30 and Knapp Drive.

While the Association is encouraged by the City of Crest Hill's continued efforts to support economic development, it has significant concerns regarding the increased vehicular and pedestrian traffic, and the resulting safety impacts, that the proposed development is likely to bring to the surrounding residential area. These concerns, however, would likely be substantially mitigated by restricting vehicle access to the development from Knapp Drive. Accordingly, the Association respectfully requests that all vehicular access to the Quick Trip Development be limited to U.S. Route 30.

As you are aware, Knapp Drive currently experiences a high volume of non-local traffic using the corridor to bypass major intersections, including those at Larkin/Weber, IL Route 7, and U.S. Route 30. Residents have frequently observed this non-local traffic, as well as patrons of local businesses, disregarding the clearly posted 25 mph speed limit, creating serious safety concerns for other vehicles and pedestrians within the area. It is our understanding, however, that the City is seeking to reduce or eliminate the issues caused by this cut-through traffic, as evidenced by the recently approved resolution authorizing a Traffic Impact and Calming Analysis along the Knapp Corridor, from IL Route 7 (Theodore Street) to Larkin Avenue/Weber Road. The Association appreciates and supports this proactive initiative as it has been a cause of concern for quite some time.

KEOUGH & MOODY, P.C.

To further support the City's initiative to reduce cut-through traffic, the Association urges the City to restrict vehicular access to the Quick Trip Development from Knapp Drive and require all ingress and egress to be routed exclusively via U.S. Route 30. Allowing access from Knapp Drive will likely undermine the City's efforts to mitigate cut-through traffic by providing another route for non-local traffic – thereby exacerbating congestion and safety concerns along the Knapp Corridor.

Conversely, directing all traffic to and from the development through U.S. Route 30 would provide patrons with efficient access immediately after the intersection of IL Route 7 and U.S. Route 30. Given the already elevated traffic volumes and speeding issues along Knapp Drive, the introduction of commercial traffic from a high-volume establishment such as Quick Trip would only intensify the existing challenges.

Accordingly, the Association strongly urges the City to restrict access to the development from Knapp Drive and to require all ingress and egress be routed exclusively through U.S. Route 30. Doing so would not only help preserve the character of the Knapp Corridor and the safety of its residents but may also support the City's broader goals of mitigating cut-through traffic.

We would like to be notified of any updates related to the Traffic Study and the Quick Trip Development. Please direct all notifications and correspondences regarding this matter via email to rrb@kmlegal.com.

Thank you for your attention to this matter.

Very truly yours,



REBECKA R. BRONKEMA
Attorney at Law

cc: Willow Falls Townhome Association

Exhibit C
Supplemental Variation Approval Facts to Consider Per
Zoning Ordinance Section 12.6-2

1. *That the particular physical surroundings, shape, or topographical condition of the specific property involved will result in a particular hardship upon the owner, as distinguished from a mere inconvenience, if the strict letter of the regulations were carried out.*
2. *The conditions upon which the petition for a variation is based are unique to the property owner for which the variation is sought and are not applicable, generally, to the other property within the same zoning classification.*
3. *That the alleged difficulty or hardship is caused by the Ordinance and has not been created by any person presently having an interest in the property.*
4. *That the proposed variation will not impair an adequate supply of light and air to adjacent property or substantially increase congestion in the public streets or increase the danger of fire, or endanger the public safety, or substantially diminish or impair property values within the adjacent neighborhood.*
5. *That the variation does not permit a use otherwise excluded from the particular zone except for uses authorized by the Plan Commission, subject to the approval of the City Council, as “similar and compatible uses.”*
6. *That the variation granted is the minimum adjustment necessary for the reasonable use of the land.*
7. *That the granting of any variation is in harmony with the general purposes and intent of the Zoning Ordinance, and will not be injurious to the neighborhood, be detrimental to the public welfare, alter the essential character of the locality, or be in conflict with the Comprehensive Plan for development of the City.*
8. *That, for reasons fully set forth in the recommendations of the Plan Commission, and the report of the City Council, the aforesaid circumstances or conditions are such that the strict application of the provisions of the Zoning Ordinance deprives the applicant of any reasonable use of his land. Mere loss in value shall not justify a variation; there must be a deprivation of beneficial use of land.*

Application for Development

For Office Use Only: **Case Number:** V-26-2-2-1

Project Name: QuikTrip 4452
Owner: City of Crest Hill **Correspondence To:** Ron Mentzer
Street No: 20600 City Center BLV **Street No:** _____
City, State, Zip: Crest Hill, IL 60403 **City, State, Zip:** _____
Phone: 815-741-5107 **Phone:** _____
Email or fax: rmentzer@cityofcresthill.com **Email or fax:** _____

Property Address:	Property Information:		
	Lot 1	Lot 2	Outlot A
Street No: <u>1610 Plainfield RD</u>	<u>402.51'</u>	<u>212.73'</u>	<u>455.06'</u>
City, State, Zip: <u>Crest Hill, IL 60403</u>	<u>336.33'</u>	<u>336.33'</u>	<u>343.91</u>
PIN: <u>11-04-31-405-051-0000, 11-04-31-407-003-0000, 11-04-31-405-050-0000</u>	<u>87,200.56fs</u>	<u>71,685.79sf</u>	<u>53,529.01sf</u>

* Attach a copy of the legal description of the property and applicable fees.

* Submit electronic version of the legal description to:

mdeharo@cityofcresthill.com and lthrasher@cityofcresthill.com.

Existing Zoning: B3 **Existing Land Use:** Vacant city building
Requested Zoning: B3 **Proposed Land Use:** New QuikTrip Convenience store with fuel offer on Lot one
 And yet to be determined commercial or quick service restaurant on lot 2

Adjoining Properties Zoning and Uses:

North of Property: B-1 Chase Bank
South of Property: Theodore Street
East of Property: B2- senior living
West of Property: Unknown out of Crest Hill limits

Purpose Statement (intended use and approval sought): The requested zoning and sign ordinance Variations would allow for the former city hall building building and related site improvements to be demolished and overdeveloped with anew QuikTrip convenience store with fuel on lot 1 and a yet to be determined future commercial or a quick service restaurant.

Development Request: Please check all that apply and describe:

___ Rezoning: _____

*Please attach written responses to items listed in Section 12.8-5 of the Zoning Ordinance.

___ Special Use: _____

* Please attach written responses to items listed in Section 12.7, 6 of the Zoning Ordinance sign, and increased number of

X Variance: freestanding sign and increased area of freestanding sing _____

* Please attach written responses to items listed in Section 12.6-2 of the Zoning Ordinance.

___ Planned Unit Development: _____

* Please attach written responses to items listed in Sections 10.0-4 & 10.5 of the Zoning Ordinance.

___ Annexation: _____

X Plat: Preliminary and final plat, subdivision and easement dedication _____

___ Other: _____

Contact Information -- If not yet known, please indicate as TBD. Check those parties in which copies of all correspondences should be forwarded.

___ Civil Engineer	Darla Holman	Phone Number	_____
Company	MDG	Email Address	_____
___ Contractor	TBD	Phone Number	_____
Company	_____	Email Address	_____
___ Architect	Amanda Spitzer	Phone Number	_____
Company	Lickle	Email Address	_____
___ Builder	TBD	Phone Number	_____
Company	_____	Email Address	_____

I agree to be present (in person or by counsel) when the Plan Commission and City Council hear this development request.

1-16-2025

Signature of the Applicant

Date

If you (the applicant) are not the owner of record, please provide the owner's signature.

Signature of the Owner

Date

Development Request

12.6-2 STANDARDS FOR VARIATIONS The Plan Commission shall recommend, and the City Council shall grant a variation only when it shall have been determined, and recorded in writing, that all of the following standards are complied with:

1. That the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone;

Due to the need for delivery truck it enter the site safely we are requesting a variance from the standard 30' maximum drive width to 41.08' and 80.85'. We are also requesting of an offsite signage for a multi-tenant.

2. That the plight of the owner is due to unique circumstances;

of the location of the site and the amount of space needed for trucks to make safe turning movements.

3. That the variation, if granted, will not alter the essential character of the locality.

The variance, if granted, will not alter the essential character of the locality and will also for safer turning movements for bigger trucks at our ingress and egress

CREST HILL, ILLINOIS – STORE #4452
DESCRIPTION OF PROPERTY

PARCEL 1:

THAT PART OF THE SOUTHEAST QUARTER OF SECTION 31, IN TOWNSHIP 36 NORTH, AND IN RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS, AS HEREINAFTER DESCRIBED: BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 31; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE THAT IS A RIGHT ANGLE TO THE AFORESAID CENTER LINE OF SAID RIGHT OF WAY OF SAID HIGHWAY, 541.1 FEET, TO THE EAST LINE OF SAID SECTION 31; THENCE SOUTH ALONG THE EAST LINE OF SAID SECTION 31, 736.9 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30 (PLAINFIELD ROAD) AND WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NO. 0138, CONDEMNED IN CASE NO. W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 2:

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST DESCRIBED LINE 541.10 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 157.04 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 156.16 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 729.37 FEET TO THE NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 106.00 FEET; THENCE NORTHEASTERLY 615.01 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, IN TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST

DESCRIBED LINE 41.10 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON THE NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30; THENCE CONTINUE NORTHEASTERLY ALONG THE PROLONGATION OF THE LAST DESCRIBED LINE 500.00 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4 157.04 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 615.01 FEET TO THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 106.60 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W773G 1751 ED, IN WILL COUNTY, ILLINOIS.

Traffic Impact Study

Proposed QuikTrip Convenience Store

Crest Hill, Illinois



Prepared For:



December 24, 2025

1. Introduction

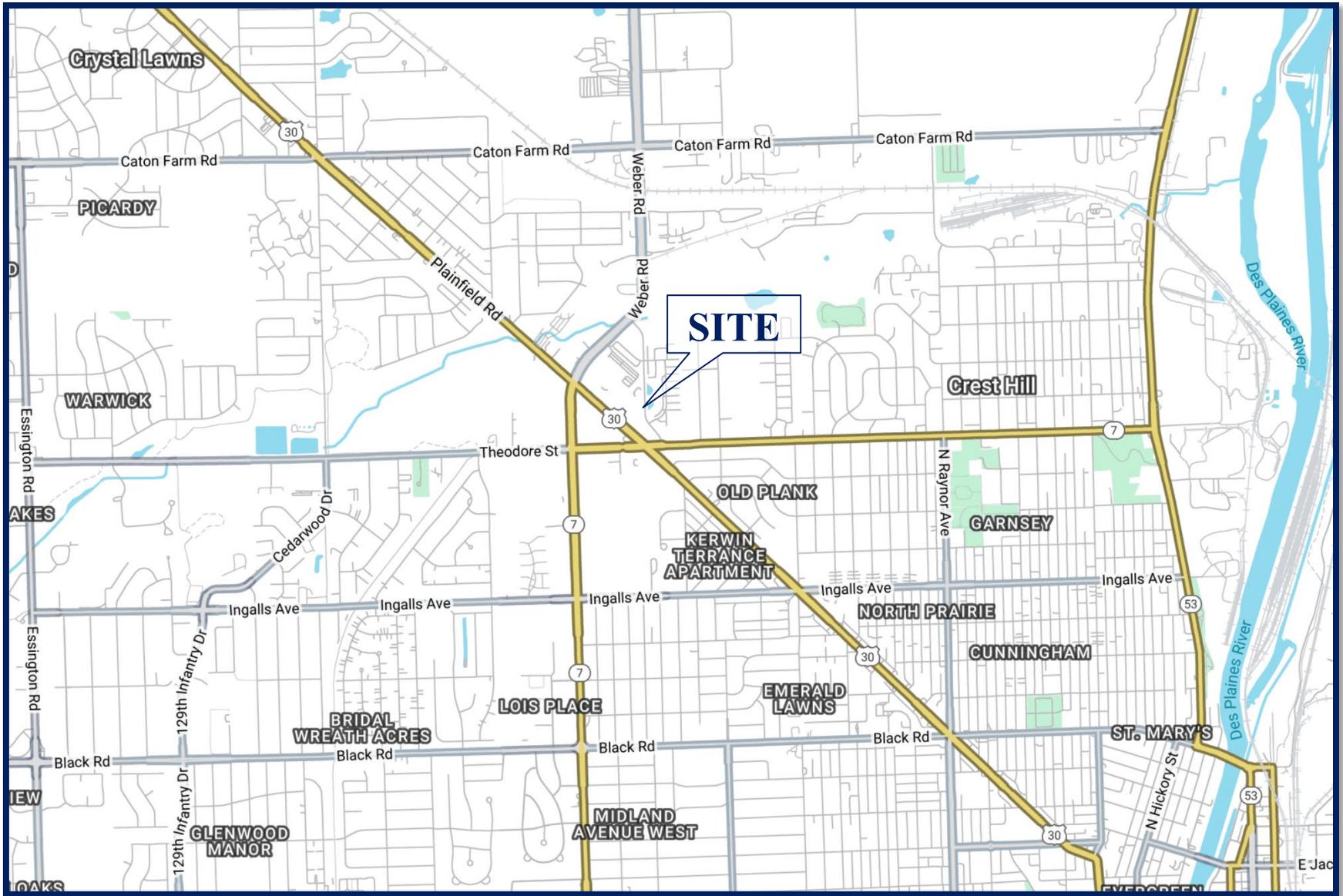
This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O’Hara, Aboona, Inc. (KLOA, Inc.) for a proposed QuikTrip Convenience Store to be located in Crest Hill, Illinois. The site, which currently contains a vacant Crest Hill Police Department building, is located in the north corner of the intersection of Plainfield Road (U.S. Route 30) with Theodore Street (Illinois Route 7). As proposed, the site will be developed with sixteen passenger vehicle fueling positions and an approximately 5,312 square-foot convenience store. In addition, the north parcel of the site has the potential to be developed with an approximately 3,000 square-foot fast-food restaurant with a drive-through. Access to the proposed development will be provided via a right-in/right-out access drive and a full movement access drive on Plainfield Road and a full movement access drive on Knapp Drive.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site. The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning, weekday evening, and Saturday midday peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning, weekday evening, and Saturday midday peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes from traffic counts conducted in 2024.
2. Year 2030 No-Build Conditions – Analyzes the capacity of the future roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development and the traffic that could be generated by the vacant parcel north of the site when it is occupied.
3. Year 2030 Total Projected Conditions – Analyzes the capacity of the future roadway system assuming the projected traffic volumes that include the Year 2030 No-Build volumes and the traffic estimated to be generated by the proposed development.



Site Location

Figure 1

*QuikTrip Convenience Store
Crest Hill, Illinois*





Aerial View of Site

Figure 2

*QuikTrip Convenience Store
Crest Hill, Illinois*

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which currently contains a vacant Crest Hill Police building, is bounded by Chase Bank to the north, Knapp Street to the east, Theodore Street to the south, and Plainfield Road to the west. Land uses within the vicinity of the site are primarily residential to the east and commercial to the west.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development site are described below and illustrated in **Figure 3**.

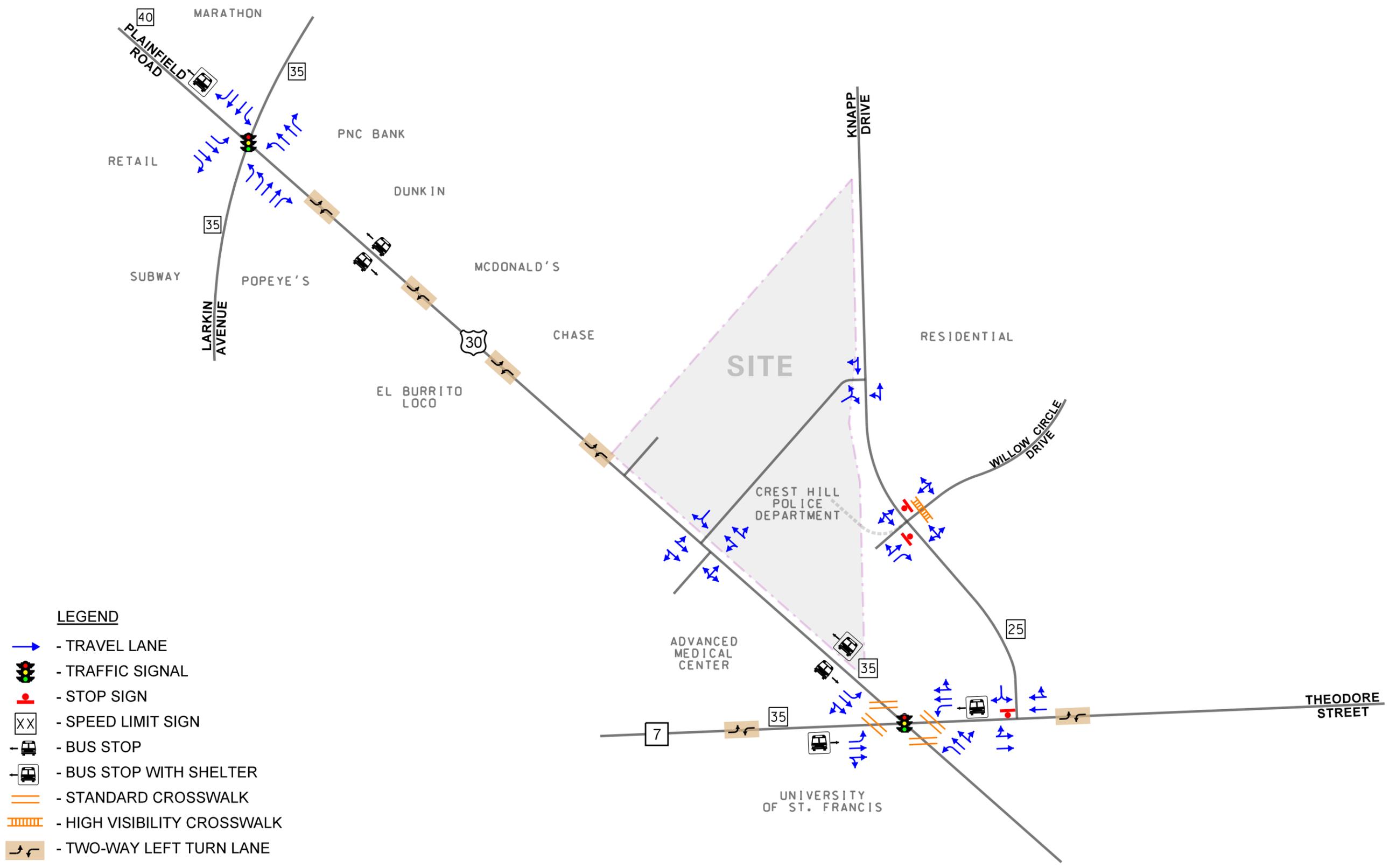
Plainfield Road (U.S. Route 30) is a northwest-southeast other principal arterial roadway that generally provides two through lanes in each direction. At its signalized intersection with Theodore Street provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. At its signalized intersection with Larkin Avenue, Plainfield Road provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on both approaches. Plainfield Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is not designated as a Strategic Regional Arterial (SRA), and carries an Annual Average Daily Traffic (AADT) volume of 19,900 vehicles (IDOT 2023). Plainfield Road has a posted speed limit of 40 miles per hour west of Larkin Avenue and 35 miles per hour east of Larkin Avenue.

Theodore Street is an east-west other principal arterial roadway that provides two lanes in each direction. At its signalized intersection with Plainfield Road, Theodore Street provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on both approaches. At its unsignalized intersection with Knapp Drive, Theodore Street provides two lanes in each direction. Theodore Street is under the jurisdiction of IDOT, is not designated as an SRA, carries an AADT volume of 15,600 vehicles (IDOT 2023), and has a posted speed limit of 35 miles per hour.

Larkin Avenue is a north-south other principal arterial roadway that provides two lanes in each direction. At its signalized intersection with Plainfield Road, Theodore Street provides dual left-turn lanes, two through lanes, and an exclusive right-turn lane on both approaches. Larkin Avenue is under the jurisdiction of IDOT south of Plainfield Road and the Will County Division of Transportation north of Plainfield Road. Larkin Avenue is designated as an SRA, carries an AADT volume of 24,800 vehicles (IDOT 2023), and has a posted speed limit of 35 miles per hour.



NOT TO SCALE



QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

EXISTING ROADWAY CHARACTERISTICS

Knapp Drive is a north-south local roadway that extends north from Theodore Street and provides one lane in each direction. At its unsignalized intersection with Theodore Street, Knapp Drive provides a shared left-turn/right-turn lane on the southbound approach and is under stop sign control. Knapp Drive is under the jurisdiction of the City of Crest Hill and has a posted speed limit of 25 miles per hour.

Willow Circle Drive is a north-south local roadway that extends north from Knapp Drive and provides one lane in each direction. At its unsignalized intersection with Knapp Drive, Willow Circle Drive is aligned opposite a site access drive, provides a shared left-turn/through/right-turn lane on the southbound approach, and is under stop sign control. Knapp Drive is under the jurisdiction of the City of Crest Hill and has a posted speed limit of 25 miles per hour.

Traffic Signal Interconnect

The signalized intersections of Plainfield Road with Larkin Avenue and Theodore Street are part of a six-intersection interconnect system that extends along Plainfield Road from Larkin Avenue in the west and to Arbor Lane in the east and along Larkin Avenue from the North Ridge Plaza entrance in the south to Plainfield Road in the north. The interconnect system is maintained by IDOT.

Existing Traffic Volumes

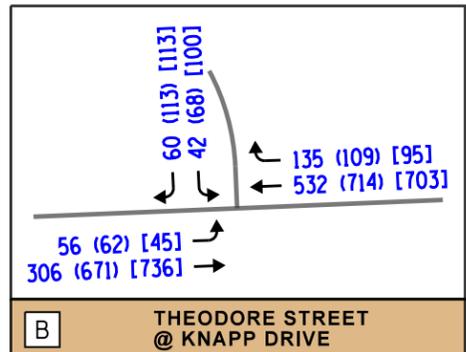
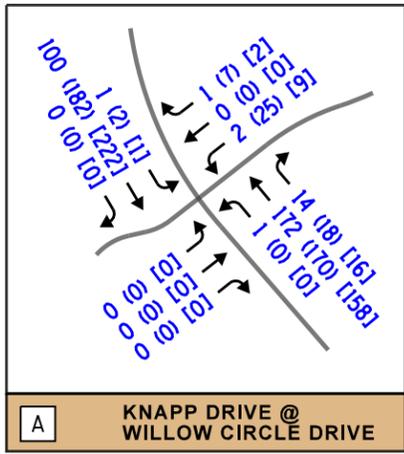
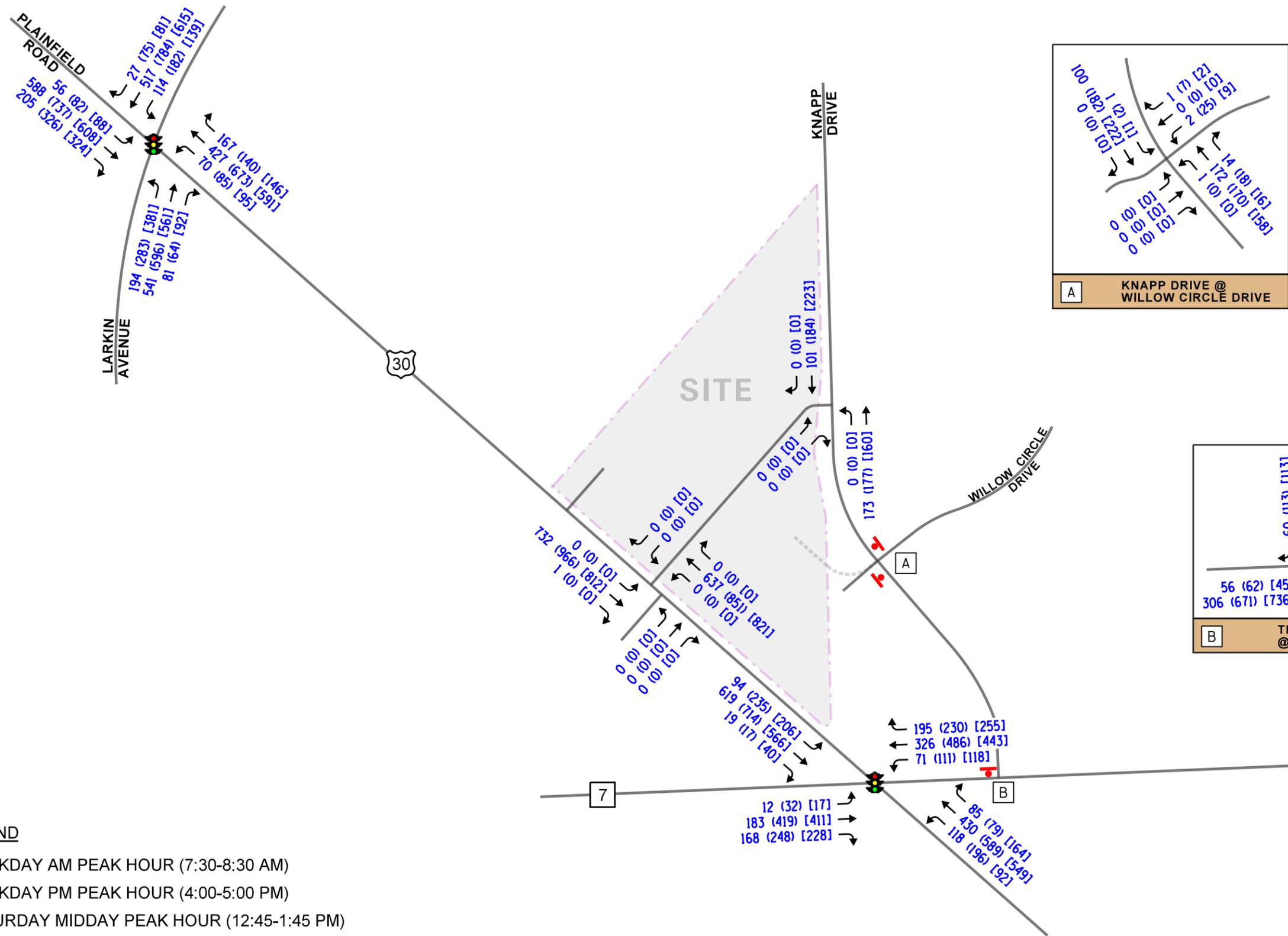
In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts at the following intersections:

- Plainfield Road Theodore Street
- Plainfield Road with Larkin Avenue
- Plainfield Road with the existing site access drive
- Theodore Street with Knapp Drive
- Knapp Drive with Willow Circle Drive and the existing site access drive

The traffic counts were conducted on Thursday, September 5, 2024 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods and on Saturday, September 7, 2024 during the Saturday midday (12:00 P.M. to 2:00 P.M.) peak period. The peak hours of traffic occurred from 7:30 A.M. to 8:30 A.M. during the weekday morning peak hour, from 4:00 P.M. to 5:00 P.M. during the weekday evening peak hour, and from 12:45 P.M. to 1:45 P.M. during the Saturday midday peak hour. The existing peak hour traffic volumes are illustrated in **Figure 4**.



NOT TO SCALE



LEGEND

- 00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)
- (00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

EXISTING TRAFFIC VOLUMES



Crash Analysis

KLOA, Inc. obtained crash data¹ from IDOT for the most recent available five years (2019 to 2023) for the study area intersections. A review of the crash data revealed only one crash was reported at the intersection of Knapp Drive with Willow Circle Drive during the review period. Further, no fatalities were reported at any of the study area intersections during the review period. The crash data incidents are summarized by year and crash type in **Tables 1** through **3**.

Table 1
PLAINFIELD ROAD WITH THEODORE STREET – CRASH SUMMARY

Year	Type of Crash Frequency							Total
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	
2019	0	0	1	7	1	1	0	10
2020	0	2	0	6	1	6	0	15
2021	1	0	0	2	0	1	0	4
2022	1	0	0	5	1	6	1	14
2023	<u>0</u>	<u>0</u>	<u>0</u>	<u>6</u>	<u>1</u>	<u>4</u>	<u>0</u>	<u>11</u>
Total	2	2	1	26	4	18	1	54
Average	<1.0	<1.0	<1.0	5.2	<1.0	3.6	<1.0	10.8

Table 2
PLAINFIELD ROAD WITH LARKIN AVENUE – CRASH SUMMARY

Year	Type of Crash Frequency							Total
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	
2019	1	0	0	12	1	17	0	31
2020	3	0	0	9	1	18	0	31
2021	0	0	0	8	0	11	0	19
2022	3	0	0	4	4	4	0	15
2023	<u>3</u>	<u>0</u>	<u>0</u>	<u>8</u>	<u>1</u>	<u>5</u>	<u>0</u>	<u>17</u>
Total	10	0	0	41	7	55	0	113
Average	2.0	--	--	8.2	1.4	11.0	--	22.6

¹ IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

Table 3
 THEODORE STREET WITH KNAPP DRIVE – CRASH SUMMARY

Year	Type of Crash Frequency							Total
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	
2019	0	0	0	1	0	4	0	5
2020	0	0	0	1	2	4	0	7
2021	1	0	0	2	2	4	0	9
2022	0	0	1	0	1	6	0	8
2023	0	0	0	1	0	1	0	2
Total	1	0	1	5	5	19	0	31
Average	<1.0	--	<1.0	1.0	1.0	3.8	--	6.2

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Development Plan

As proposed, the site is proposed to be developed with a QuikTrip Convenience Store that is to contain the following:

- Sixteen (16) passenger vehicle fueling positions
- An approximately 5,312 square-foot convenience store

In addition, the north parcel of the site will be developed in the future with a retail use. For the purposes of this study, it was assumed that the parcel will contain an approximately 3,000 square-foot fast-food restaurant with a drive-through lane. It should be noted that a fast-food restaurant typically generates a higher volume of traffic than other retail uses that could occupy this site, and, as such, provides for a conservative analysis. A copy of the proposed site plan is included in the Appendix.

Site Access

Access to the development site will be provided via the following two access drives:

- A full movement access drive on Plainfield Road located approximately 665 feet west of Theodore Street.
 - The access drive will provide one inbound lane and one outbound lane.
 - Outbound movements should be placed under stop sign control.
 - Inbound left-turn movements can be accommodated within the existing two-way left-turn lane median on Plainfield Road.
 - A continuous right-turn lane will be provided on Plainfield Road serving this access drive and the proposed right-in/right-out access drive.
 - This access drive will be part of a permanent access easement between the south parcel (convenience store site) and the north parcel (future commercial use).
 - The access drive is located as far west as practically possible within the site area.
- A right-in/right-out access drive on Plainfield Road located approximately 465 feet west of Theodore Street.
 - The access drive will provide one inbound lane and one outbound lane
 - Left-turn movements will be restricted via striping, signage, and channelization.
 - Outbound movements should be placed under stop sign control.
 - A continuous right-turn lane will be provided on Plainfield Road serving this access drive and the proposed right-in/right-out access drive.

- A full movement access drive on Knapp Drive located approximately 440 feet north of Theodore Street aligned opposite Willow Circle Drive.
 - The access drive will continue to provide one inbound lane and two outbound lanes striped for a shared left-turn/through lane and an exclusive right-turn lane.
 - Outbound movements will continue to be under stop sign control.

It should be noted that the proposed access system will replace the existing access system serving the site which consists of two full movement access drives on Plainfield Road and two full movement access drives on Knapp Drive.

Directional Distribution

The directional distribution of future site-generated trips on the roadway system is a function of several variables, including the operational characteristics of the roadway system and the ease with which drivers can travel over various sections of the roadway system. This is particularly true for pass-by traffic. The directions from which patrons and employees of the proposed development will approach and depart the site are illustrated in **Figure 5**. Figure 5 also shows the distances between the existing and proposed access intersections.

Peak Hour Traffic Volumes

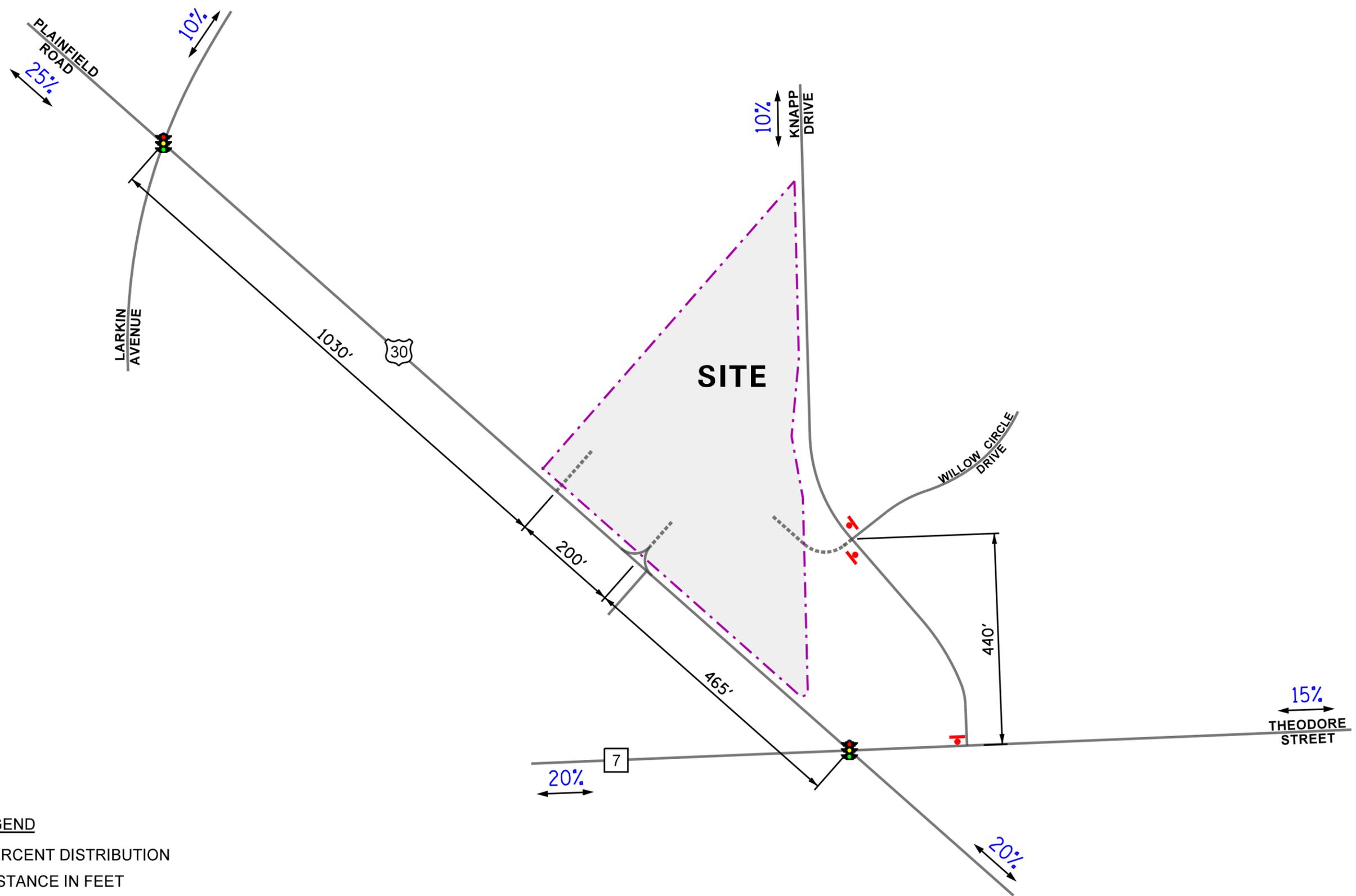
The number of peak hour trips estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The “Convenience Store/Gas Station” (Land-Use Code 945) rate was used for the passenger vehicle fueling positions and convenience store and the “Fast-Food Restaurant with Drive-Through Window” (Land-Use Code 934) rate was used for the restaurant.

It is important to note that surveys conducted by ITE have shown that approximately 60 percent of trips made to gas stations, fuel centers, and convenience stores are diverted from the existing traffic on the roadway system as well as approximately 50 percent of trips made to fast-food restaurants with drive-throughs. This is particularly true during the weekday morning and weekday evening peak hours when traffic is diverted from the home-to-work and work-to-home trips. As such, the number of new trips to be generated by the development were reduced to account for pass-by traffic.

Table 4 summarizes the trips projected to be generated by the proposed development during the peak hours.



NOT TO SCALE



LEGEND

- 00% - PERCENT DISTRIBUTION
- 00' - DISTANCE IN FEET

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

DIRECTIONAL DISTRIBUTION

Table 4

ESTIMATED PEAK HOUR VEHICLE TRIP GENERATION

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
945	Convenience Store (16 positions, 5,312 s.f. Store)	216	217	433	182	182	364	167	160	327
	<i>Pass-By Reduction (60%)</i>	-130	-130	-260	-109	-109	-218	-98	-98	-196
	New Convenience Store Trips	86	87	173	73	73	146	69	62	131
934	Fast-Food Restaurant (3,000 s.f)	68	66	134	52	47	99	85	81	166
	<i>Pass-By Reduction (50%)</i>	-34	-34	-68	-25	-25	-50	-42	-42	-84
	New Restaurant Trips	34	32	66	27	22	49	43	39	82
	Development New Trips	120	119	239	100	95	195	112	101	213
	Development Pass-by Trips	164	164	328	134	134	268	140	140	280
	Total Development Trips	284	283	567	234	229	463	252	241	493

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed development.

Site Traffic Assignment

The estimated weekday morning and weekday evening traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the traffic assignment of new vehicle trips and the pass-by traffic assignment is illustrated in **Figure 7**. To provide a conservative analysis of the site access drives, no traffic was assumed to use the cross access connection.

Background (No-Build) Traffic Volumes

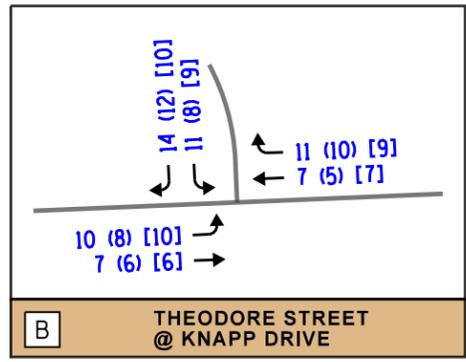
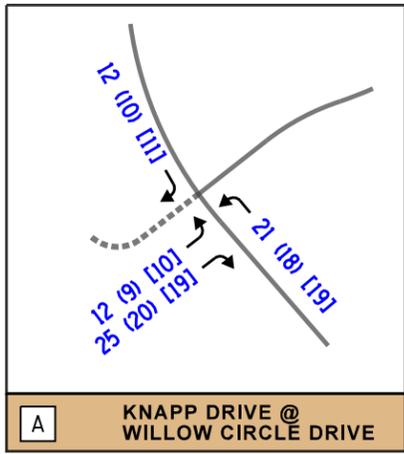
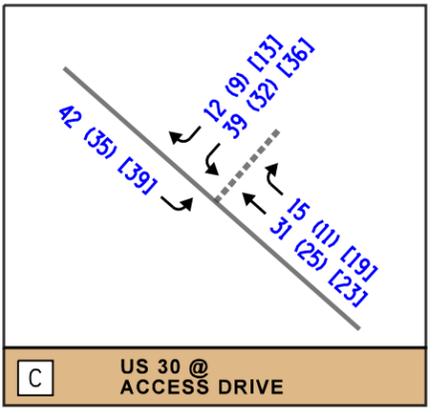
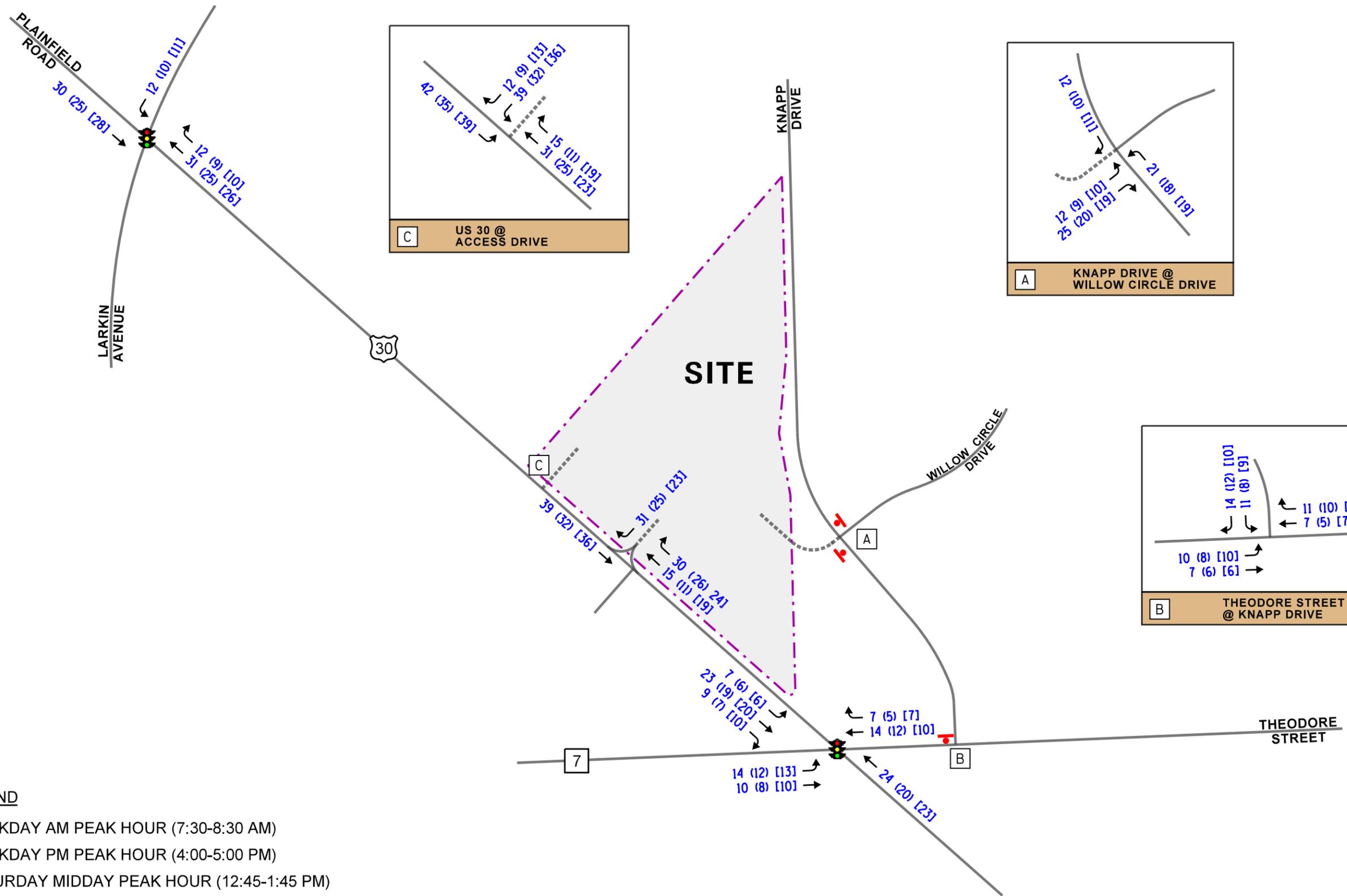
Under no-build and total projected conditions, the existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on AADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the area roadways are projected to experience a compounded growth rate of approximately 0.6 percent per year. As such, a total background growth of 3.7 was added to project Year 2030 conditions. A copy of the CMAP projections letter is included in the Appendix. The Year 2030 no-build traffic volumes are illustrated in **Figure 8**.

Total Projected Traffic Volumes

The total projected traffic volumes include the existing Year 2030 volumes (Figure 8) and the volume of traffic expected to be generated by the proposed development (Figures 6 and 7). The Year 2030 total projected traffic volumes are illustrated in **Figure 9**.



NOT TO SCALE



LEGEND

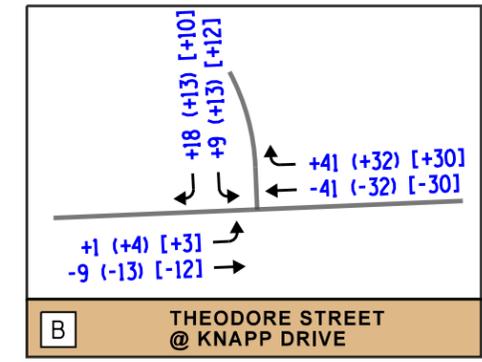
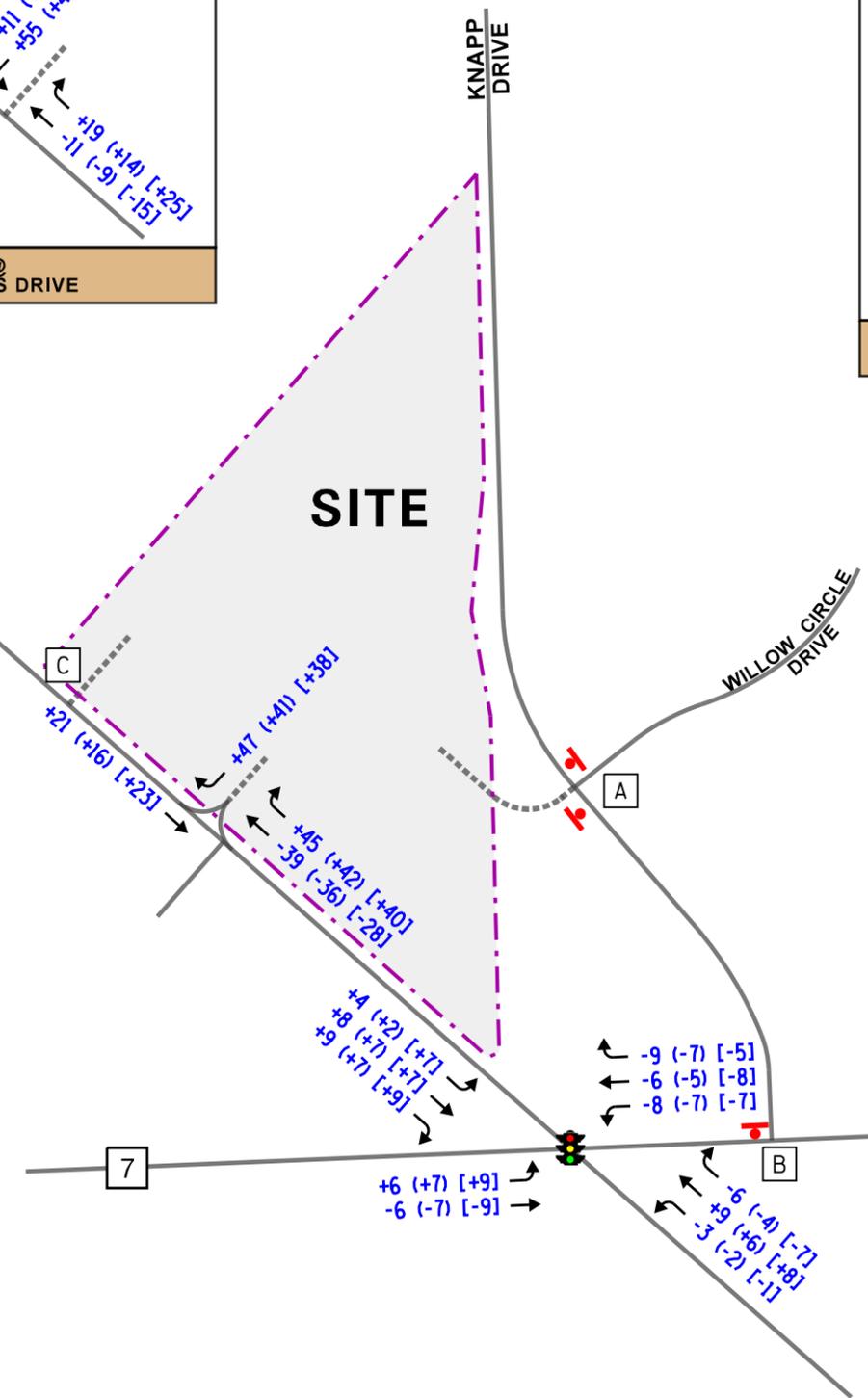
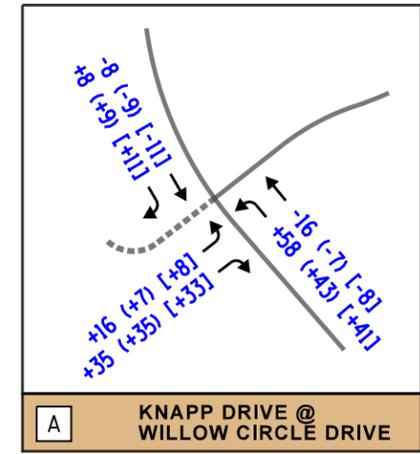
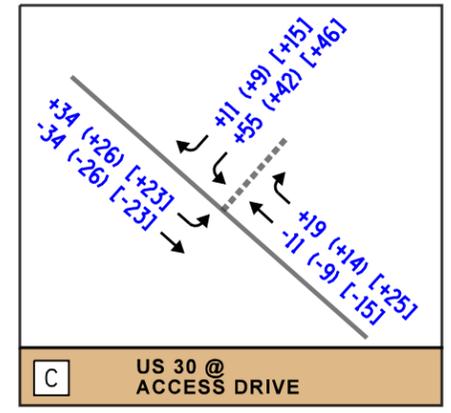
- 00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)
- (00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

NEW SITE TRAFFIC VOLUMES



NOT TO SCALE



LEGEND

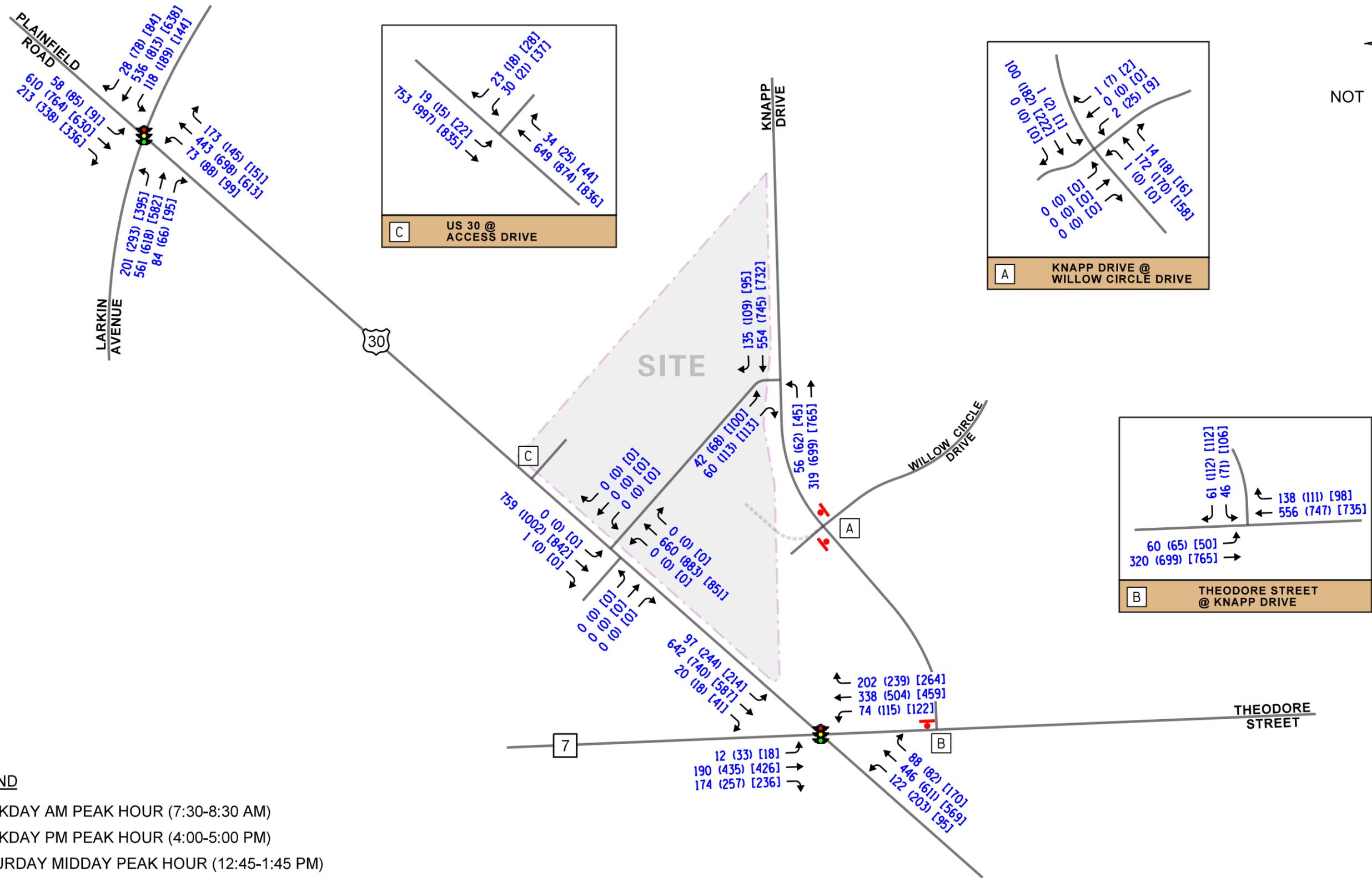
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- (00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

PASS-BY TRAFFIC VOLUMES



NOT TO SCALE



LEGEND

- 00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)
- (00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

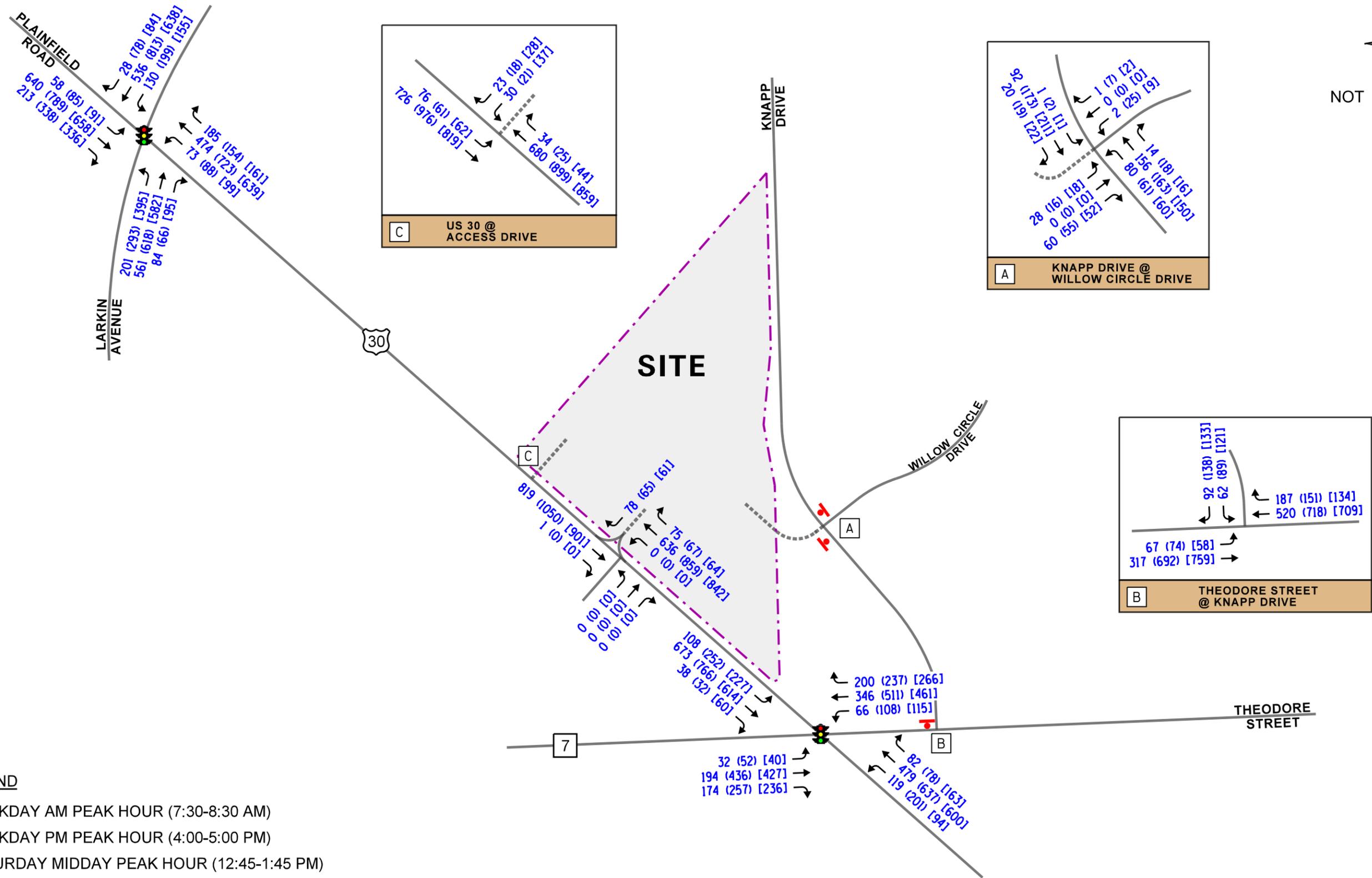
QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

YEAR 2030 NO-BUILD TRAFFIC VOLUMES





NOT TO SCALE



LEGEND

- 00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)
- (00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

YEAR 2030 TOTAL TRAFFIC VOLUMES



5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning, weekday evening, and Saturday midday peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday evening, and Saturday midday peak hours for the existing, no-build, and total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the traffic signal-controlled intersections were performed using actual cycle lengths, phasings, and offsets to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, no-build, total projected conditions are presented in **Tables 5 through 9**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5

CAPACITY ANALYSIS RESULTS – PLAINFIELD ROAD WITH THEODORE STREET– SIGNALIZED

	Peak Hour	Eastbound (Theodore Street)		Westbound (Theodore Street)		Southeast-bound (Plainfield Road)		Northwest-bound (Plainfield Road)		Overall
		L	T/R	L	T/R	L	T/R	L	T/R	
Existing Conditions	Weekday Morning	B 16.1	C 27.4	B 17.4	C 24.8	A 6.5	C 22.3	C 22.0	C 31.9	C 24.9
		C - 27.0		C - 23.9		C - 20.3		C - 30.1		
	Weekday Evening	B 19.3	C 34.8	C 22.5	C 31.2	D 41.8	E 58.1	C 31.9	D 46.1	D 41.1
		C - 34.1		C - 30.1		D - 42.7		D - 42.8		
	Saturday Midday	B 18.4	C 35	C 22.3	C 29.1	C 16.5	C 21.9	B 20	D 41.9	C 30.4
		C - 34.5		C - 28.1		C - 31.3		D - 39.4		
No-Build Conditions	Weekday Morning	B 15.9	C 27.5	B 17.4	C 25.0	A 6.8	C 22.3	C 22.9	C 32.3	C 25.1
		C - 27.2		C - 24.1		C - 20.3		C - 30.5		
	Weekday Evening	B 19.7	D 36.3	C 23.7	C 32.4	D 42.1	E 58.4	C 32.3	D 46.1	D 41.8
		D - 35.5		C - 31.2		D - 54.4		D - 43		
	Saturday Midday	B 18.4	D 35.4	C 22.6	C 29.5	C 18.1	C 22.0	C 20.3	D 43.2	C 31.0
		C - 34.9		C - 28.5		C - 21.0		D - 40.6		
Projected Conditions	Weekday Morning	B 16.6	C 27.8	B 17.4	C 27.6	B 10.3	C 24.6	C 23.2	C 32.3	C 26.5
		C - 26.9		C - 26.5		C - 22.7		C - 30.7		
	Weekday Evening	C 20.3	D 36.1	C 23.1	C 34.6	D 43.4	E 58.6	D 35.2	D 47.6	D 43.0
		D - 35.0		C - 33.2		D - 55.0		D - 44.9		
	Saturday Midday	B 19.3	D 35.6	C 22.5	C 33.8	B 20.1	C 20.6	C 20.6	D 44.3	C 32.0
		C - 34.7		C - 32.3		C - 20.4		D - 41.7		
Letter denotes Level of Service L – Left Turn R – Right Turn Delay is measured in seconds. T – Through										

Table 6

CAPACITY ANALYSIS RESULTS – PLAINFIELD ROAD WITH LARKIN AVENUE– SIGNALIZED

	Peak Hour	Northbound (Larkin Avenue)			Southbound (Larkin Avenue)			Southeast-bound (Plainfield Road)			Northwest-bound (Plainfield Road)			Overall
		L	T	R	L	T	R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning	E	C	C	F	C	C	C	C	C	B	C	B	C 32.6
		63.7	31.2	25.7	88.7	30.5	23.7	20.1	32.5	20.6	15.3	25.9	16.9	
	D - 38.4			D - 40.3			C - 28.8			C - 22.5			D 39.0	
	Weekday Evening	E	C	C	F	D	C	C	D	C	C	C		B
		61.1	31.5	25.3	119.1	37	28.8	29.5	45.4	26.0	24.0	26.5	14.8	
	D - 40			D - 50.8			D - 38.8			C - 24.5			D 35.7	
Saturday Midday	E	C	C	F	D	C	C	D	C	B	C	B		
	59.1	29.8	25.8	85.0	36.6	30.3	25.4	38.6	21.6	17.6	30.2	14.6		
D - 40.3			D - 44.1			C - 32.1			C - 26.0			C 33.0		
Weekday Morning	E	C	C	F	C	C	C	C	C	B	C		B	
	65.0	31.1	25.6	91.3	30.4	23.5	20.3	33.4	21.1	15.6	26.3		17.0	
D - 38.6			D - 40.6			C - 29.6			C - 22.8				D 40.6	
Weekday Evening	E	C	C	F	D	C	C	D	C	C	C			B
	61.1	30.9	25.1	137.3	37.1	28.8	30.7	47.5	26.7	29.3	28.4		15.6	
D - 39.5			D - 54.1			D - 40.3			C - 26.5			D 36.2		
Saturday Midday	E	C	C	F	D	C	C	D	C	C	D		C	
	60.1	29.7	25.7	87.6	36.6	30.2	26.2	39.7	22.2	18.2	30.7	14.8		
D - 40.5			D - 44.5			C - 33.0			C - 26.5			C 33.9		
Weekday Morning	E	C	C	F	C	C	C	C	C	B	C		B	
	65.0	31.1	25.6	98.2	30.1	23.5	20.5	34.2	21.2	17.5	28.8		17.4	
D - 38.6			D - 42.6			C - 30.3			C - 24.8				D 42.4	
Weekday Evening	E	C	C	F	D	C	C	D	C	C	C			B
	61.1	30.9	25.1	153.1	37.1	28.8	31.2	48.4	26.7	26.7	31.9		16.4	
D - 39.5			E - 57.7			D - 41.1			C - 29.5			D 37.5		
Saturday Midday	E	C	C	F	D	C	C	D	C	C	C		B	
	60.1	29.8	25.7	94.7	36.6	30.2	26.5	40.3	22.2	21.9	34.6	16.0		
D - 40.6			D - 46.3			C - 33.5			C - 29.9					

Letter denotes Level of Service L – Left Turn R – Right Turn
 Delay is measured in seconds. T – Through

Table 7

CAPACITY ANALYSIS RESULTS – UNSIGNALIZED – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Theodore Street with Knapp Drive						
• Eastbound Left Turn	A	9.3	B	10.0	A	9.7
• Southbound Approach	B	14.4	C	23.3	D	26.8
Knapp Drive with Willow Circle Drive and the Existing Site Access Drive						
• Eastbound Approach	--	--	--	--	--	--
• Westbound Approach	B	10.3	B	11.2	B	11.5
• Northbound Left Turn	A	7.4	--	--	--	--
• Southbound Left Turn	A	7.6	A	7.6	A	7.6
LOS = Level of Service Delay is measured in seconds.			1 – All-way stop control 2 – Two-way stop control			

Table 8

CAPACITY ANALYSIS RESULTS – UNSIGNALIZED – NO BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Theodore Street with Knapp Drive						
• Eastbound Left Turn	A	9.3	B	10.2	A	9.9
• Southbound Approach	B	14.7	C	24.8	D	28.7
Knapp Drive with Willow Circle Drive and the Existing Site Access Drive						
• Eastbound Approach	--	--	--	--	--	--
• Westbound Approach	B	10.3	B	11.2	B	11.5
• Northbound Left Turn	A	7.4	--	--	--	--
• Southbound Left Turn	A	7.6	A	7.6	A	7.6
LOS = Level of Service Delay is measured in seconds.			1 – All-way stop control 2 – Two-way stop control			

Table 9

CAPACITY ANALYSIS RESULTS – UNSIGNALIZED – NO BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Theodore Street with Knapp Drive						
• Eastbound Left Turn	A	9.5	B	10.4	B	10.0
• Southbound Approach	C	16.6	D	34.2	E	39.6
Plainfield Road with the West Site Access Drive (Full Movement)						
• Southbound Approach	A	8.2	A	8.5	A	8.4
• Eastbound Left-Turn	C	15.0	C	18.0	C	22.7
Plainfield Road with the East Access Drive (Right-in/Right-out)						
• Southbound Approach	B	11.4	B	12.5	B	12.3
Knapp Drive with Willow Circle Drive and the South Site Access Drive						
• Eastbound Approach	B	10.5	B	10.5	B	11.0
• Westbound Approach	B	12.4	B	13.6	B	14.0
• Northbound Left Turn	A	7.6	A	9.6	A	7.9
• Southbound Left Turn	A	7.6	A	7.7	A	7.6
LOS = Level of Service Delay is measured in seconds.			1 – All-way stop control 2 – Two-way stop control			

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the site-generated traffic.

Plainfield Road with Theodore Street

The results of the capacity analyses indicate that the intersection currently operates at an overall Level of Service (LOS) C during the weekday morning and Saturday midday peak hours and LOS D during the weekday evening peak hour. Further, all movements operate at LOS E or better during all three peak hours. Under Year 2030 no-build conditions, this intersection is projected to continue to operate at an overall LOS C during the weekday morning and Saturday midday peak hours and LOS D during the weekday evening peak hour.

Under Year 2030 total projected conditions, this intersection is projected to continue to operate at the same LOS during all three peak hours with increases in delay of less than two seconds over no-build conditions. Further, all movements are projected to continue to operate at LOS E or better.

Overall, the proposed development is projected to increase the volume of traffic traversing this intersection by approximately four percent or less. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Plainfield Road with Larkin Avenue

The results of the capacity analyses indicate that the intersection currently operates at an overall LOS C during the weekday morning peak hour and LOS D during the weekday evening and Saturday midday peak hours. Further, all movements operate at LOS D or better during all three peak hours with the exception of the northbound and southbound left-turn movements. This is the result of the long cycle length (110 to 130 seconds) and the protected only operations of these movements. Under Year 2030 no-build conditions, this intersection is projected to continue to operate at an overall LOS C during the weekday morning peak hour and LOS D during the weekday evening and Saturday midday peak hour.

Under Year 2030 total projected conditions, this intersection is projected to continue to operate at the same LOS during all three peak hours with increases in delay of less than two seconds over no-build conditions.

Overall, the proposed development is projected to increase the volume of traffic traversing this intersection by less than three percent. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Theodore Street with Knapp Drive

The results of the capacity analyses indicate that turning movements from Knapp Drive operate at LOS B during the weekday morning peak hour, LOS C during the weekday evening peak hour, and LOS D during the Saturday midday peak hour. Under Year 2030 no-build conditions, turning movements from Knapp Drive are projected to operate at LOS C during the weekday morning peak hour and LOS D during the weekday evening and Saturday midday peak hours.

Under Year 2030 total projected conditions turning movements from Knapp Drive are projected to operate at LOS C during the weekday morning peak hour, LOS D during the weekday evening peak hour, and LOS E during the Saturday midday peak hour. The following should be noted:

- Westbound queues from the signalized intersection of Plainfield Road with Theodore Street extend to this intersection and are projected to continue to do so.
 - These queues were observed to clear this intersection with each green phase
 - SimTraffic Simulation of projected conditions indicate that queues will continue to clear the intersection with each green phase and the intersection will be blocked approximately 15 percent of the time or less.
 - This intersection is located between two signalized intersections on a coordinated system. These signals will create gaps in the traffic stream allowing vehicles to turn.
- Southbound vehicles will continue to be able to turn left onto Theodore Street from Knapp Drive
 - This movement is projected to operate at LOS E or better during all three peak hours with a volume to capacity (v/c) ratio of less than one.
 - As discussed above, gaps in the Theodore Street traffic will be available for vehicles to exit.
 - A two-way left-turn lane is provided on Theodore Street which outbound vehicles can utilize to perform a two-part left-turn.
- Eastbound vehicles will continue to be able to turn left onto Knapp Drive from Theodore Street.
 - This movement is projected to operate at LOS B or better during all three peak hours with a volume to capacity (v/c) ratio of less than one.
 - These vehicles can utilize the existing median while waiting to turn. Further, Theodore Street provides two eastbound lanes allowing eastbound traffic to bypass vehicles waiting to turn.

- Westbound left-turn 95th percentile queues at the intersection of Theodore Street and with Plainfield Road are not projected to exceed 100 feet and can be accommodated within the existing 125-foot turn lane and, as such, will not block this movement utilizing the median.
- The 95th percentile queue for vehicles waiting to turn onto Theodore Street is only one to two vehicles.
- The proposed development is projected to increase this volume by less than 10 vehicles during the peak hours. The primary entrance for the proposed development is on Plainfield Road and it is anticipated that a majority of traffic approaching from the north, south, or west will use this entrance.

As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Plainfield Street with the West Site Access Drive (Full Movement)

The results of the capacity analyses indicate that under Year 2030 total projected conditions turning movements from the access drive are projected to operate at LOS C during the weekday morning, weekday evening, and Saturday midday peak hours. The following should be noted:

- Outbound left-turning vehicles can utilize the two-way left-turn lane to perform a two-part left-turn turn maneuver.
- This intersection is located between two signalized intersections on a coordinated system. These signals will create gaps in the traffic stream allowing vehicles to turn. The location of this intersection is a key factor in its acceptable operation.
- Southeast-bound 95th percentile queues from the signalized intersection of Plainfield Road with Theodore Street are not projected to extend to this intersection.
- Vehicles turning into the site from Plainfield Road are able to queue within the existing two-way left-turn median on Plainfield Road. Southbound left-turn vehicles at the intersection of Plainfield Road with Theodore Street are projected to be accommodated within the existing turn lane and will not block this movement.
- All movements are projected to operate with a volume to capacity (v/c) ratio of less than one.
- SimTraffic Simulation of this intersection under projected conditions indicated the following:
 - Queues on Plainfield Road from the signalized intersections to the east and west will not block this access drive

- Outbound vehicles will experience some delay during peak periods but will generally be able to exit the site as the signals on Plainfield Road consistently create gaps in the traffic stream.

When the total projected traffic volumes are compared to the right-turn lane guidelines in Chapter 36 of IDOT's Bureau of Design and Environment (BDE) Manual, a right-turn lane on Plainfield Road will not be warranted serving this access drive.

As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Plainfield Street with the East Site Access Drive (Right-in/Right-out)

The results of the capacity analyses indicate that under Year 2030 total projected conditions turning movements from the access drive are projected to operate at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours. The following should be noted:

- Southeast-bound queues from the signalized intersection of Plainfield Road with Theodore Street were observed to occasionally extend to this intersection during the weekday evening peak hour and are projected to continue to do so. However, these queues will not block right-turn movements and this access drive will be restricted to right-turn only movements.
- This intersection is located between two signalized intersections on a coordinated system. These signals will create gaps in the traffic stream allowing vehicles to turn.
- The restriction of this access drive will allow for future improvements by IDOT on Plainfield Road at its intersection with Theodore Street (such as southeast-bound dual left-turn lanes) to be provided without impacting this intersection.

As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Knapp Drive with Willow Circle Drive and the Site Access Drive

The results of the capacity analysis indicate that all critical movements at this intersection currently operates at LOS B or better during the weekday morning, weekday evening, and Saturday midday peak hours. Under no-build and total projected conditions, all critical movements are projected to continue to operate at LOS B or better during all three peak hours. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and the access drive will adequately accommodate the traffic estimated to be generated by the proposed development.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The traffic projected to be generated by the proposed development will be reduced due to the volume of pass-by traffic.
- The signalized intersections of Plainfield Road with Theodore Street and Larkin Avenue have sufficient reserve capacity to accommodate site-generated traffic.
- The intersection of Theodore Street with Knapp Drive can accommodate site-generated traffic. Restriction of this intersection is not recommended.
- Access to the proposed development will be provided via a right-in/right-out access drive and a full movement access drive on Plainfield Road and a full movement access drive on Knapp Drive
 - Inbound left-turn movements at the full movement site access drive on Plainfield Road can be accommodated within the existing two-way left-turn median.
 - A continuous right-turn lane will be provided on Plainfield Road serving the site access drives.
 - The full movement access drive on Plainfield Road will be part of a permanent access easement between the south parcel (convenience store site) and the north parcel (future commercial use).
- The proposed access system will adequately accommodate the traffic estimated to be generated by the proposed development and will ensure that efficient and flexible access is provided.

Appendix

Traffic Count Summary Sheets

Site Plan

CMAP 2050 Projections Letter

ITE Trip Generation Sheets

Level of Service Criteria Capacity

Analysis Summary Sheets

Traffic Count Summary Sheets



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Count Name: Knapp Drive with Willow Circle
Drive TMC
Site Code:
Start Date: 09/05/2024
Page No: 1

Turning Movement Data

Start Time	Access Drive Eastbound						Willow Circle Drive Westbound						Knapp Street Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	1	0	1	1	2	0	0	21	0	0	21	0	1	14	0	0	15	38
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	28	1	0	29	0	1	12	0	0	13	43
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	37	1	0	38	0	0	24	0	0	24	64
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	38	1	0	39	0	1	28	0	0	29	69
Hourly Total	0	0	0	0	0	0	0	4	0	2	1	6	0	0	124	3	0	127	0	3	78	0	0	81	214
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	7	0	49	0	0	26	0	0	26	75
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	56	5	0	62	0	0	22	0	0	22	84
8:30 AM	0	0	0	0	0	0	1	1	0	0	0	2	0	0	38	5	0	43	1	1	31	0	0	33	78
8:45 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	24	5	0	29	0	1	31	0	0	32	64
Hourly Total	0	0	0	0	0	0	1	4	0	0	0	5	1	0	160	22	0	183	1	2	110	0	0	113	301
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	0	0	0	0	6	0	1	0	7	0	0	41	2	0	43	0	0	55	0	0	55	105
4:15 PM	0	0	0	0	0	0	0	5	0	1	0	6	0	0	45	6	0	51	0	0	52	0	0	52	109
4:30 PM	0	0	0	0	0	0	0	7	0	1	0	8	0	0	40	6	0	46	0	1	44	0	0	45	99
4:45 PM	0	0	0	0	1	0	0	7	0	4	0	11	0	0	44	4	0	48	0	1	31	0	0	32	91
Hourly Total	0	0	0	0	1	0	0	25	0	7	0	32	0	0	170	18	0	188	0	2	182	0	0	184	404
5:00 PM	0	0	0	0	0	0	0	4	0	2	0	6	0	0	49	5	0	54	0	0	45	0	0	45	105
5:15 PM	0	0	0	1	0	1	0	8	0	1	0	9	0	1	47	7	0	55	0	0	40	0	0	40	105
5:30 PM	0	0	0	0	0	0	0	5	0	2	0	7	0	0	35	3	0	38	0	1	54	0	0	55	100
5:45 PM	0	0	0	0	0	0	0	7	0	3	1	10	0	1	38	3	0	42	0	0	47	0	0	47	99
Hourly Total	0	0	0	1	0	1	0	24	0	8	1	32	0	2	169	18	0	189	0	1	186	0	0	187	409
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	0	0	0	0	0	0	0	3	0	3	0	6	0	0	31	1	0	32	0	0	41	0	0	41	79
12:15 PM	0	0	0	0	0	0	0	7	0	0	1	7	0	0	40	6	0	46	0	0	38	0	0	38	91
12:30 PM	0	0	0	0	0	0	0	2	0	0	1	2	0	0	39	3	0	42	0	0	48	0	0	48	92
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	42	3	0	45	0	0	45	0	0	45	91
Hourly Total	0	0	0	0	0	0	0	13	0	3	2	16	0	0	152	13	0	165	0	0	172	0	0	172	353
1:00 PM	0	0	0	0	0	0	0	6	0	0	0	6	0	0	36	3	0	39	0	1	70	0	0	71	116
1:15 PM	0	0	0	0	0	0	0	2	0	1	0	3	0	0	49	6	0	55	0	0	48	0	0	48	106
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	31	4	0	35	0	0	59	0	0	59	95
1:45 PM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	28	7	0	35	0	0	53	0	0	53	91
Hourly Total	0	0	0	0	0	0	0	11	0	2	0	13	0	0	144	20	0	164	0	1	230	0	0	231	408
Grand Total	0	0	0	1	1	1	1	81	0	22	4	104	1	2	919	94	0	1016	1	9	958	0	0	968	2089
Approach %	0.0	0.0	0.0	100.0	-	-	1.0	77.9	0.0	21.2	-	-	0.1	0.2	90.5	9.3	-	-	0.1	0.9	99.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	3.9	0.0	1.1	-	5.0	0.0	0.1	44.0	4.5	-	48.6	0.0	0.4	45.9	0.0	-	46.3	-



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Count Name: Knapp Drive with Willow Circle
Drive TMC
Site Code:
Start Date: 09/05/2024
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Access Drive Eastbound						Willow Circle Drive Westbound						Knapp Street Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	37	1	0	38	0	0	24	0	0	24	64
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	38	1	0	39	0	1	28	0	0	29	69
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	7	0	49	0	0	26	0	0	26	75
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	56	5	0	62	0	0	22	0	0	22	84
Total	0	0	0	0	0	0	0	2	0	1	0	3	1	0	173	14	0	188	0	1	100	0	0	101	292
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	66.7	0.0	33.3	-	-	0.5	0.0	92.0	7.4	-	-	0.0	1.0	99.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.7	0.0	0.3	-	1.0	0.3	0.0	59.2	4.8	-	64.4	0.0	0.3	34.2	0.0	-	34.6	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.500	0.000	0.250	-	0.375	0.250	0.000	0.772	0.500	-	0.758	0.000	0.250	0.893	0.000	-	0.871	0.869
Lights	0	0	0	0	-	0	0	2	0	1	-	3	1	0	166	13	-	180	0	1	99	0	-	100	283
% Lights	-	-	-	-	-	-	-	100.0	-	100.0	-	100.0	100.0	-	96.0	92.9	-	95.7	-	100.0	99.0	-	-	99.0	96.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	1	0	-	1	4
% Buses	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.0	-	1.7	0.0	-	1.6	-	0.0	1.0	-	-	1.0	1.4
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	1	-	4	0	0	0	0	-	0	4
% Single-Unit Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.0	-	1.7	7.1	-	2.1	-	0.0	0.0	-	-	0.0	1.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.0	-	0.6	0.0	-	0.5	-	0.0	0.0	-	-	0.0	0.3
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
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Count Name: Knapp Drive with Willow Circle
Drive TMC
Site Code:
Start Date: 09/05/2024
Page No: 4

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Access Drive Eastbound						Willow Circle Drive Westbound						Knapp Street Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	0	0	0	0	0	0	6	0	1	0	7	0	0	41	2	0	43	0	0	55	0	0	55	105
4:15 PM	0	0	0	0	0	0	0	5	0	1	0	6	0	0	45	6	0	51	0	0	52	0	0	52	109
4:30 PM	0	0	0	0	0	0	0	7	0	1	0	8	0	0	40	6	0	46	0	1	44	0	0	45	99
4:45 PM	0	0	0	0	1	0	0	7	0	4	0	11	0	0	44	4	0	48	0	1	31	0	0	32	91
Total	0	0	0	0	1	0	0	25	0	7	0	32	0	0	170	18	0	188	0	2	182	0	0	184	404
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	78.1	0.0	21.9	-	-	0.0	0.0	90.4	9.6	-	-	0.0	1.1	98.9	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	6.2	0.0	1.7	-	7.9	0.0	0.0	42.1	4.5	-	46.5	0.0	0.5	45.0	0.0	-	45.5	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.893	0.000	0.438	-	0.727	0.000	0.000	0.944	0.750	-	0.922	0.000	0.500	0.827	0.000	-	0.836	0.927
Lights	0	0	0	0	-	0	0	25	0	7	-	32	0	0	169	18	-	187	0	2	180	0	-	182	401
% Lights	-	-	-	-	-	-	-	100.0	-	100.0	-	100.0	-	-	99.4	100.0	-	99.5	-	100.0	98.9	-	-	98.9	99.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Buses	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.6	0.0	-	0.5	-	0.0	0.0	-	-	0.0	0.2
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	2
% Single-Unit Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	1.1	-	-	1.1	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Count Name: Knapp Drive with Willow Circle
Drive TMC
Site Code:
Start Date: 09/05/2024
Page No: 5

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Access Drive Eastbound						Willow Circle Drive Westbound						Knapp Street Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	42	3	0	45	0	0	45	0	0	45	91
1:00 PM	0	0	0	0	0	0	0	6	0	0	0	6	0	0	36	3	0	39	0	1	70	0	0	71	116
1:15 PM	0	0	0	0	0	0	0	2	0	1	0	3	0	0	49	6	0	55	0	0	48	0	0	48	106
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	31	4	0	35	0	0	59	0	0	59	95
Total	0	0	0	0	0	0	0	9	0	2	0	11	0	0	158	16	0	174	0	1	222	0	0	223	408
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	81.8	0.0	18.2	-	-	0.0	0.0	90.8	9.2	-	-	0.0	0.4	99.6	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	2.2	0.0	0.5	-	2.7	0.0	0.0	38.7	3.9	-	42.6	0.0	0.2	54.4	0.0	-	54.7	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.375	0.000	0.500	-	0.458	0.000	0.000	0.806	0.667	-	0.791	0.000	0.250	0.793	0.000	-	0.785	0.879
Lights	0	0	0	0	-	0	0	9	0	2	-	11	0	0	158	16	-	174	0	1	221	0	-	222	407
% Lights	-	-	-	-	-	-	-	100.0	-	100.0	-	100.0	-	-	100.0	100.0	-	100.0	-	100.0	99.5	-	-	99.6	99.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Single-Unit Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.5	-	-	0.4	0.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Count Name: Plainfield Road with Access Drive
(south) TMC
Site Code:
Start Date: 09/05/2024
Page No: 1

Turning Movement Data

Start Time	Access Drive Eastbound						Police Department Access Drive Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109	0	0	109	0	0	118	1	0	119	228
7:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	144	0	0	144	0	0	174	0	0	174	319
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	171	0	0	171	0	0	201	0	0	201	372
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	179	0	0	179	0	0	197	0	0	197	376
Hourly Total	0	0	0	1	0	1	0	0	0	0	3	0	0	0	603	0	0	603	0	0	690	1	0	691	1295
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	0	134	0	0	169	1	0	170	304
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	0	0	149	0	0	165	0	0	165	314
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	0	0	147	0	0	161	0	0	161	308
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	0	0	147	0	0	163	0	0	163	310
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	577	0	0	577	0	0	658	1	0	659	1236
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	214	0	0	272	0	0	272	486
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194	0	0	194	0	0	245	0	0	245	439
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	216	0	0	216	0	0	226	0	0	226	442
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	214	0	0	224	0	0	224	438
Hourly Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	838	0	0	838	0	0	967	0	0	967	1805
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182	0	0	182	0	0	228	0	0	228	410
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202	0	0	202	0	0	196	0	0	196	398
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	184	0	0	184	0	0	211	0	0	211	395
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	203	0	0	203	0	0	226	0	0	226	429
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	771	0	0	771	0	0	861	0	0	861	1632
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	204	0	0	204	0	0	171	0	0	171	375
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216	0	0	216	0	0	220	0	0	220	436
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	205	0	0	205	0	0	174	0	0	174	379
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	0	200	0	0	232	0	0	232	432
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	825	0	0	825	0	0	797	0	0	797	1622
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209	0	0	209	0	0	193	0	0	193	402
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	224	0	0	224	0	0	213	0	0	213	437
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	188	0	0	188	0	0	174	0	0	174	362
1:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	204	0	0	204	0	0	208	0	0	208	412
Hourly Total	0	0	0	0	0	0	0	0	0	0	3	0	0	0	825	0	0	825	0	0	788	0	0	788	1613
Grand Total	0	0	0	1	1	1	0	0	0	0	8	0	0	0	4439	0	0	4439	0	0	4761	2	0	4763	9203
Approach %	0.0	0.0	0.0	100.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	48.2	0.0	-	48.2	0.0	0.0	51.7	0.0	-	51.8	-



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Count Name: Plainfield Road with Access Drive
(south) TMC
Site Code:
Start Date: 09/05/2024
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Access Drive Eastbound						Police Department Access Drive Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	171	0	0	171	0	0	201	0	0	201	372
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	179	0	0	179	0	0	197	0	0	197	376
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	0	134	0	0	169	1	0	170	304
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	0	0	149	0	0	165	0	0	165	314
Total	0	0	0	0	0	0	0	0	0	0	3	0	0	0	633	0	0	633	0	0	732	1	0	733	1366
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	99.9	0.1	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	46.3	0.0	-	46.3	0.0	0.0	53.6	0.1	-	53.7	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.884	0.000	-	0.884	0.000	0.000	0.910	0.250	-	0.912	0.908
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	604	0	-	604	0	0	705	1	-	706	1310
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95.4	-	-	95.4	-	-	96.3	100.0	-	96.3	95.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	4	0	-	4	7
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.5	-	-	0.5	0.0	-	0.5	0.5
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	23	0	-	23	0	0	17	0	-	17	40
% Single-Unit Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	-	3.6	-	-	2.3	0.0	-	2.3	2.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	6	0	-	6	9
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.5	-	-	0.8	0.0	-	0.8	0.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Count Name: Plainfield Road with Access Drive
(south) TMC
Site Code:
Start Date: 09/05/2024
Page No: 4

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Access Drive Eastbound						Police Department Access Drive Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	214	0	0	272	0	0	272	486
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194	0	0	194	0	0	245	0	0	245	439
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	216	0	0	216	0	0	226	0	0	226	442
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	214	0	0	224	0	0	224	438
Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	838	0	0	838	0	0	967	0	0	967	1805
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	46.4	0.0	-	46.4	0.0	0.0	53.6	0.0	-	53.6	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.970	0.000	-	0.970	0.000	0.000	0.889	0.000	-	0.889	0.928
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	819	0	-	819	0	0	947	0	-	947	1766
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97.7	-	-	97.7	-	-	97.9	-	-	97.9	97.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	6	0	-	6	0	0	5	0	-	5	11
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	0.7	-	-	0.5	-	-	0.5	0.6
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	7	0	-	7	10
% Single-Unit Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	0.4	-	-	0.7	-	-	0.7	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	10	0	-	10	0	0	7	0	-	7	17
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	1.2	-	-	0.7	-	-	0.7	0.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	-	-	0.1	-	-	0.1	0.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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9575 W. Higgins Rd., Suite 400

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Count Name: Plainfield Road with Access Drive
(south) TMC
Site Code:
Start Date: 09/05/2024
Page No: 5

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Access Drive Eastbound						Police Department Access Drive Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	0	200	0	0	232	0	0	232	432
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209	0	0	209	0	0	193	0	0	193	402
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	224	0	0	224	0	0	213	0	0	213	437
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	188	0	0	188	0	0	174	0	0	174	362
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	821	0	0	821	0	0	812	0	0	812	1633
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	50.3	0.0	-	50.3	0.0	0.0	49.7	0.0	-	49.7	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.916	0.000	-	0.916	0.000	0.000	0.875	0.000	-	0.875	0.934
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	812	0	-	812	0	0	793	0	-	793	1605
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98.9	-	-	98.9	-	-	97.7	-	-	97.7	98.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	4	0	-	4	5
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1	-	-	0.5	-	-	0.5	0.3
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	10	0	-	10	13
% Single-Unit Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	0.4	-	-	1.2	-	-	1.2	0.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	5	0	-	5	0	0	5	0	-	5	10
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	0.6	-	-	0.6	-	-	0.6	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Count Name: Plainfield Road with Larkin Avenue
TMC
Site Code:
Start Date: 09/05/2024
Page No: 1

Turning Movement Data

Start Time	Larkin Avenue Eastbound						Larkin Avenue Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	12	83	34	0	129	0	11	102	52	0	165	0	25	92	5	0	122	0	26	111	8	0	145	561
7:15 AM	0	16	97	32	0	145	0	11	141	51	0	203	0	30	134	1	0	165	0	39	116	14	0	169	682
7:30 AM	0	16	82	53	0	151	0	11	166	57	0	234	0	24	148	5	0	177	1	37	160	23	0	221	783
7:45 AM	0	22	123	52	0	197	0	18	149	61	0	228	0	29	144	11	0	184	0	59	143	22	0	224	833
Hourly Total	0	66	385	171	0	622	0	51	558	221	0	830	0	108	518	22	0	648	1	161	530	67	0	759	2859
8:00 AM	0	14	103	29	0	146	0	13	149	53	0	215	0	31	117	7	0	155	0	43	116	18	0	177	693
8:15 AM	0	18	119	33	0	170	0	14	124	34	0	172	0	30	108	4	0	142	0	54	122	18	0	194	678
8:30 AM	0	19	89	26	0	134	0	15	134	44	0	193	0	30	118	15	0	163	0	38	128	20	0	186	676
8:45 AM	0	20	103	27	0	150	0	19	131	73	0	223	0	22	154	5	1	181	0	51	131	20	0	202	756
Hourly Total	0	71	414	115	0	600	0	61	538	204	0	803	0	113	497	31	1	641	0	186	497	76	0	759	2803
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	18	168	40	0	226	0	19	202	101	0	322	0	50	195	16	0	261	0	69	133	14	0	216	1025
4:15 PM	0	27	148	34	0	209	0	18	190	83	0	291	0	42	190	20	0	252	0	90	169	18	0	277	1029
4:30 PM	0	18	165	34	0	217	0	24	164	74	0	262	0	46	197	19	0	262	0	69	159	16	0	244	985
4:45 PM	0	22	192	32	0	246	0	21	181	68	0	270	0	44	202	20	0	266	0	55	135	16	0	206	988
Hourly Total	0	85	673	140	0	898	0	82	737	326	0	1145	0	182	784	75	0	1041	0	283	596	64	0	943	4027
5:00 PM	0	17	143	44	0	204	0	19	160	72	0	251	0	50	190	18	0	258	2	89	168	10	1	269	982
5:15 PM	0	16	165	42	0	223	0	21	148	74	0	243	0	45	168	13	0	226	0	69	163	16	0	248	940
5:30 PM	0	23	133	26	0	182	0	16	158	65	0	239	0	38	188	26	0	252	1	93	159	19	0	272	945
5:45 PM	1	28	137	28	0	194	0	18	171	85	0	274	0	34	153	16	0	203	1	71	144	21	0	237	908
Hourly Total	1	84	578	140	0	803	0	74	637	296	0	1007	0	167	699	73	0	939	4	322	634	66	1	1026	3775
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	0	22	113	41	0	176	0	24	119	79	0	222	0	31	132	23	0	186	0	105	144	23	0	272	856
12:15 PM	0	22	136	40	0	198	0	19	167	101	0	287	0	19	144	11	0	174	0	108	145	27	0	280	939
12:30 PM	0	21	181	26	0	228	0	23	139	90	0	252	0	40	136	18	0	194	0	100	135	21	0	256	930
12:45 PM	0	17	134	47	0	198	0	24	158	90	0	272	0	37	141	19	0	197	0	92	148	20	0	260	927
Hourly Total	0	82	564	154	0	800	0	90	583	360	0	1033	0	127	553	71	0	751	0	405	572	91	0	1068	3652
1:00 PM	0	26	164	36	0	226	0	14	154	78	0	246	0	33	146	18	0	197	0	97	121	17	0	235	904
1:15 PM	0	29	135	29	1	193	0	23	151	99	0	273	0	33	160	22	0	215	0	89	130	31	0	250	931
1:30 PM	0	23	159	34	0	216	0	27	145	57	0	229	0	36	168	22	0	226	0	103	162	24	0	289	960
1:45 PM	0	23	148	36	0	207	0	18	147	83	0	248	0	26	141	22	0	189	0	91	143	22	0	256	900
Hourly Total	0	101	606	135	1	842	0	82	597	317	0	996	0	128	615	84	0	827	0	380	556	94	0	1030	3695
Grand Total	1	489	3220	855	1	4565	0	440	3650	1724	0	5814	0	825	3666	356	1	4847	5	1737	3385	458	1	5585	20811
Approach %	0.0	10.7	70.5	18.7	-	-	0.0	7.6	62.8	29.7	-	-	0.0	17.0	75.6	7.3	-	-	0.1	31.1	60.6	8.2	-	-	-
Total %	0.0	2.3	15.5	4.1	-	21.9	0.0	2.1	17.5	8.3	-	27.9	0.0	4.0	17.6	1.7	-	23.3	0.0	8.3	16.3	2.2	-	26.8	-

Lights	1	488	3155	842	-	4486	0	426	3567	1689	-	5682	0	798	3497	344	-	4639	5	1711	3217	456	-	5389	20196
% Lights	100.0	99.8	98.0	98.5	-	98.3	-	96.8	97.7	98.0	-	97.7	-	96.7	95.4	96.6	-	95.7	100.0	98.5	95.0	99.6	-	96.5	97.0
Buses	0	0	13	4	-	17	0	3	24	2	-	29	0	3	15	2	-	20	0	4	28	0	-	32	98
% Buses	0.0	0.0	0.4	0.5	-	0.4	-	0.7	0.7	0.1	-	0.5	-	0.4	0.4	0.6	-	0.4	0.0	0.2	0.8	0.0	-	0.6	0.5
Single-Unit Trucks	0	1	30	7	-	38	0	7	44	29	-	80	0	16	77	7	-	100	0	16	71	1	-	88	306
% Single-Unit Trucks	0.0	0.2	0.9	0.8	-	0.8	-	1.6	1.2	1.7	-	1.4	-	1.9	2.1	2.0	-	2.1	0.0	0.9	2.1	0.2	-	1.6	1.5
Articulated Trucks	0	0	21	2	-	23	0	4	15	4	-	23	0	8	76	2	-	86	0	6	69	1	-	76	208
% Articulated Trucks	0.0	0.0	0.7	0.2	-	0.5	-	0.9	0.4	0.2	-	0.4	-	1.0	2.1	0.6	-	1.8	0.0	0.3	2.0	0.2	-	1.4	1.0
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	0	0	1	1	-	2	0	0	0	0	-	0	3
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.3	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Plainfield Road with Larkin Avenue
TMC
Site Code:
Start Date: 09/05/2024
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Larkin Avenue Eastbound						Larkin Avenue Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	16	82	53	0	151	0	11	166	57	0	234	0	24	148	5	0	177	1	37	160	23	0	221	783
7:45 AM	0	22	123	52	0	197	0	18	149	61	0	228	0	29	144	11	0	184	0	59	143	22	0	224	833
8:00 AM	0	14	103	29	0	146	0	13	149	53	0	215	0	31	117	7	0	155	0	43	116	18	0	177	693
8:15 AM	0	18	119	33	0	170	0	14	124	34	0	172	0	30	108	4	0	142	0	54	122	18	0	194	678
Total	0	70	427	167	0	664	0	56	588	205	0	849	0	114	517	27	0	658	1	193	541	81	0	816	2987
Approach %	0.0	10.5	64.3	25.2	-	-	0.0	6.6	69.3	24.1	-	-	0.0	17.3	78.6	4.1	-	-	0.1	23.7	66.3	9.9	-	-	-
Total %	0.0	2.3	14.3	5.6	-	22.2	0.0	1.9	19.7	6.9	-	28.4	0.0	3.8	17.3	0.9	-	22.0	0.0	6.5	18.1	2.7	-	27.3	-
PHF	0.000	0.795	0.868	0.788	-	0.843	0.000	0.778	0.886	0.840	-	0.907	0.000	0.919	0.873	0.614	-	0.894	0.250	0.818	0.845	0.880	-	0.911	0.896
Lights	0	70	413	165	-	648	0	51	568	199	-	818	0	109	485	24	-	618	1	188	496	80	-	765	2849
% Lights	-	100.0	96.7	98.8	-	97.6	-	91.1	96.6	97.1	-	96.3	-	95.6	93.8	88.9	-	93.9	100.0	97.4	91.7	98.8	-	93.8	95.4
Buses	0	0	3	1	-	4	0	2	4	1	-	7	0	0	4	1	-	5	0	1	5	0	-	6	22
% Buses	-	0.0	0.7	0.6	-	0.6	-	3.6	0.7	0.5	-	0.8	-	0.0	0.8	3.7	-	0.8	0.0	0.5	0.9	0.0	-	0.7	0.7
Single-Unit Trucks	0	0	7	1	-	8	0	2	14	5	-	21	0	3	16	2	-	21	0	3	24	1	-	28	78
% Single-Unit Trucks	-	0.0	1.6	0.6	-	1.2	-	3.6	2.4	2.4	-	2.5	-	2.6	3.1	7.4	-	3.2	0.0	1.6	4.4	1.2	-	3.4	2.6
Articulated Trucks	0	0	4	0	-	4	0	1	2	0	-	3	0	2	12	0	-	14	0	1	16	0	-	17	38
% Articulated Trucks	-	0.0	0.9	0.0	-	0.6	-	1.8	0.3	0.0	-	0.4	-	1.8	2.3	0.0	-	2.1	0.0	0.5	3.0	0.0	-	2.1	1.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
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Count Name: Plainfield Road with Larkin Avenue
TMC
Site Code:
Start Date: 09/05/2024
Page No: 4

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Larkin Avenue Eastbound						Larkin Avenue Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	18	168	40	0	226	0	19	202	101	0	322	0	50	195	16	0	261	0	69	133	14	0	216	1025
4:15 PM	0	27	148	34	0	209	0	18	190	83	0	291	0	42	190	20	0	252	0	90	169	18	0	277	1029
4:30 PM	0	18	165	34	0	217	0	24	164	74	0	262	0	46	197	19	0	262	0	69	159	16	0	244	985
4:45 PM	0	22	192	32	0	246	0	21	181	68	0	270	0	44	202	20	0	266	0	55	135	16	0	206	988
Total	0	85	673	140	0	898	0	82	737	326	0	1145	0	182	784	75	0	1041	0	283	596	64	0	943	4027
Approach %	0.0	9.5	74.9	15.6	-	-	0.0	7.2	64.4	28.5	-	-	0.0	17.5	75.3	7.2	-	-	0.0	30.0	63.2	6.8	-	-	-
Total %	0.0	2.1	16.7	3.5	-	22.3	0.0	2.0	18.3	8.1	-	28.4	0.0	4.5	19.5	1.9	-	25.9	0.0	7.0	14.8	1.6	-	23.4	-
PHF	0.000	0.787	0.876	0.875	-	0.913	0.000	0.854	0.912	0.807	-	0.889	0.000	0.910	0.970	0.938	-	0.978	0.000	0.786	0.882	0.889	-	0.851	0.978
Lights	0	85	659	137	-	881	0	80	721	322	-	1123	0	175	747	74	-	996	0	281	565	64	-	910	3910
% Lights	-	100.0	97.9	97.9	-	98.1	-	97.6	97.8	98.8	-	98.1	-	96.2	95.3	98.7	-	95.7	-	99.3	94.8	100.0	-	96.5	97.1
Buses	0	0	5	2	-	7	0	0	4	0	-	4	0	1	4	1	-	6	0	0	15	0	-	15	32
% Buses	-	0.0	0.7	1.4	-	0.8	-	0.0	0.5	0.0	-	0.3	-	0.5	0.5	1.3	-	0.6	-	0.0	2.5	0.0	-	1.6	0.8
Single-Unit Trucks	0	0	4	0	-	4	0	1	7	4	-	12	0	4	13	0	-	17	0	2	6	0	-	8	41
% Single-Unit Trucks	-	0.0	0.6	0.0	-	0.4	-	1.2	0.9	1.2	-	1.0	-	2.2	1.7	0.0	-	1.6	-	0.7	1.0	0.0	-	0.8	1.0
Articulated Trucks	0	0	5	1	-	6	0	1	5	0	-	6	0	2	20	0	-	22	0	0	10	0	-	10	44
% Articulated Trucks	-	0.0	0.7	0.7	-	0.7	-	1.2	0.7	0.0	-	0.5	-	1.1	2.6	0.0	-	2.1	-	0.0	1.7	0.0	-	1.1	1.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Count Name: Plainfield Road with Larkin Avenue
TMC
Site Code:
Start Date: 09/05/2024
Page No: 5

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Larkin Avenue Eastbound						Larkin Avenue Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:45 PM	0	17	134	47	0	198	0	24	158	90	0	272	0	37	141	19	0	197	0	92	148	20	0	260	927
1:00 PM	0	26	164	36	0	226	0	14	154	78	0	246	0	33	146	18	0	197	0	97	121	17	0	235	904
1:15 PM	0	29	135	29	1	193	0	23	151	99	0	273	0	33	160	22	0	215	0	89	130	31	0	250	931
1:30 PM	0	23	159	34	0	216	0	27	145	57	0	229	0	36	168	22	0	226	0	103	162	24	0	289	960
Total	0	95	592	146	1	833	0	88	608	324	0	1020	0	139	615	81	0	835	0	381	561	92	0	1034	3722
Approach %	0.0	11.4	71.1	17.5	-	-	0.0	8.6	59.6	31.8	-	-	0.0	16.6	73.7	9.7	-	-	0.0	36.8	54.3	8.9	-	-	-
Total %	0.0	2.6	15.9	3.9	-	22.4	0.0	2.4	16.3	8.7	-	27.4	0.0	3.7	16.5	2.2	-	22.4	0.0	10.2	15.1	2.5	-	27.8	-
PHF	0.000	0.819	0.902	0.777	-	0.921	0.000	0.815	0.962	0.818	-	0.934	0.000	0.939	0.915	0.920	-	0.924	0.000	0.925	0.866	0.742	-	0.894	0.969
Lights	0	95	585	143	-	823	0	87	594	323	-	1004	0	137	591	80	-	808	0	376	553	91	-	1020	3655
% Lights	-	100.0	98.8	97.9	-	98.8	-	98.9	97.7	99.7	-	98.4	-	98.6	96.1	98.8	-	96.8	-	98.7	98.6	98.9	-	98.6	98.2
Buses	0	0	0	0	-	0	0	0	4	0	-	4	0	0	0	0	-	0	0	0	1	0	-	1	5
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.7	0.0	-	0.4	-	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	-	0.1	0.1
Single-Unit Trucks	0	0	2	2	-	4	0	1	9	1	-	11	0	0	19	1	-	20	0	4	4	0	-	8	43
% Single-Unit Trucks	-	0.0	0.3	1.4	-	0.5	-	1.1	1.5	0.3	-	1.1	-	0.0	3.1	1.2	-	2.4	-	1.0	0.7	0.0	-	0.8	1.2
Articulated Trucks	0	0	4	1	-	5	0	0	1	0	-	1	0	2	5	0	-	7	0	1	3	1	-	5	18
% Articulated Trucks	-	0.0	0.7	0.7	-	0.6	-	0.0	0.2	0.0	-	0.1	-	1.4	0.8	0.0	-	0.8	-	0.3	0.5	1.1	-	0.5	0.5
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.2	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Count Name: Theodore Street with Knapp Street
TMC
Site Code:
Start Date: 09/05/2024
Page No: 1

Turning Movement Data

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Access Drive Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	8	82	1	0	91	0	0	102	11	1	113	0	1	0	0	2	1	0	6	0	10	0	16	221
7:15 AM	0	6	72	1	0	79	0	0	126	25	0	151	0	0	0	0	0	0	0	7	0	6	0	13	243
7:30 AM	0	12	67	0	0	79	0	0	133	30	0	163	0	0	0	0	1	0	0	10	0	18	0	28	270
7:45 AM	0	16	85	0	1	101	0	1	144	22	0	167	0	0	0	0	0	0	0	16	0	13	0	29	297
Hourly Total	0	42	306	2	1	350	0	1	505	88	1	594	0	1	0	0	3	1	0	39	0	47	0	86	1031
8:00 AM	0	16	68	0	0	84	0	0	128	33	0	161	0	1	0	0	0	1	0	9	0	14	0	23	269
8:15 AM	0	13	83	2	0	98	1	0	123	50	0	174	0	1	0	0	0	1	0	7	0	15	1	22	295
8:30 AM	0	15	77	0	0	92	0	0	98	21	0	119	0	1	0	1	1	2	0	16	0	16	0	32	245
8:45 AM	0	8	66	3	0	77	0	0	126	24	0	150	0	0	0	0	0	0	0	17	2	14	0	33	260
Hourly Total	0	52	294	5	0	351	1	0	475	128	0	604	0	3	0	1	1	4	0	49	2	59	1	110	1069
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	13	170	3	0	186	0	0	178	30	0	208	0	1	0	0	0	1	0	21	0	31	1	52	447
4:15 PM	0	20	193	1	0	214	0	1	171	20	0	192	0	1	1	0	1	2	0	16	0	31	0	47	455
4:30 PM	0	15	143	0	0	158	0	0	168	31	0	199	0	1	0	0	0	1	0	17	0	30	0	47	405
4:45 PM	0	14	158	3	0	175	0	0	171	28	0	199	0	0	0	1	0	1	0	14	0	21	1	35	410
Hourly Total	0	62	664	7	0	733	0	1	688	109	0	798	0	3	1	1	1	5	0	68	0	113	2	181	1717
5:00 PM	0	14	197	1	0	212	0	1	167	30	0	198	0	3	2	4	0	9	0	16	0	30	1	46	465
5:15 PM	0	13	160	2	0	175	0	0	195	31	0	226	0	1	1	1	0	3	0	25	0	21	1	46	450
5:30 PM	1	12	174	0	0	187	0	1	152	24	1	177	0	1	0	0	1	1	0	31	0	27	0	58	423
5:45 PM	0	12	159	0	0	171	0	0	172	27	0	199	0	2	0	0	0	2	0	21	0	27	0	48	420
Hourly Total	1	51	690	3	0	745	0	2	686	112	1	800	0	7	3	5	1	15	0	93	0	105	2	198	1758
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	0	13	151	3	0	167	0	0	161	21	0	182	0	0	0	1	0	1	0	17	0	20	0	37	387
12:15 PM	0	16	151	1	1	168	0	0	154	28	0	182	0	2	0	0	1	2	0	15	0	22	0	37	389
12:30 PM	0	11	155	3	0	169	0	0	160	19	0	179	0	0	0	2	3	2	0	18	0	22	0	40	390
12:45 PM	0	10	159	1	0	170	0	1	165	31	0	197	0	5	0	2	0	7	0	21	1	28	0	50	424
Hourly Total	0	50	616	8	1	674	0	1	640	99	0	740	0	7	0	5	4	12	0	71	1	92	0	164	1590
1:00 PM	0	9	172	1	0	182	0	0	162	18	0	180	0	3	1	0	0	4	0	25	0	37	1	62	428
1:15 PM	0	14	168	1	0	183	0	0	183	34	0	217	0	0	0	1	0	1	0	25	0	20	0	45	446
1:30 PM	0	12	163	2	0	177	0	0	173	12	0	185	0	2	0	0	0	2	0	28	0	28	0	56	420
1:45 PM	0	18	172	1	0	191	0	0	154	14	0	168	0	1	1	1	0	3	0	20	0	23	2	43	405
Hourly Total	0	53	675	5	0	733	0	0	672	78	0	750	0	6	2	2	0	10	0	98	0	108	3	206	1699
Grand Total	1	310	3245	30	2	3586	1	5	3666	614	2	4286	0	27	6	14	10	47	0	418	3	524	8	945	8864
Approach %	0.0	8.6	90.5	0.8	-	-	0.0	0.1	85.5	14.3	-	-	0.0	57.4	12.8	29.8	-	-	0.0	44.2	0.3	55.4	-	-	-
Total %	0.0	3.5	36.6	0.3	-	40.5	0.0	0.1	41.4	6.9	-	48.4	0.0	0.3	0.1	0.2	-	0.5	0.0	4.7	0.0	5.9	-	10.7	-

Lights	1	307	3176	29	-	3513	1	4	3576	600	-	4181	0	27	6	14	-	47	0	414	3	519	-	936	8677
% Lights	100.0	99.0	97.9	96.7	-	98.0	100.0	80.0	97.5	97.7	-	97.6	-	100.0	100.0	100.0	-	100.0	-	99.0	100.0	99.0	-	99.0	97.9
Buses	0	1	23	0	-	24	0	0	26	6	-	32	0	0	0	0	-	0	0	1	0	1	-	2	58
% Buses	0.0	0.3	0.7	0.0	-	0.7	0.0	0.0	0.7	1.0	-	0.7	-	0.0	0.0	0.0	-	0.0	-	0.2	0.0	0.2	-	0.2	0.7
Single-Unit Trucks	0	1	29	1	-	31	0	0	31	7	-	38	0	0	0	0	-	0	0	2	0	4	-	6	75
% Single-Unit Trucks	0.0	0.3	0.9	3.3	-	0.9	0.0	0.0	0.8	1.1	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.5	0.0	0.8	-	0.6	0.8
Articulated Trucks	0	0	17	0	-	17	0	0	33	1	-	34	0	0	0	0	-	0	0	1	0	0	-	1	52
% Articulated Trucks	0.0	0.0	0.5	0.0	-	0.5	0.0	0.0	0.9	0.2	-	0.8	-	0.0	0.0	0.0	-	0.0	-	0.2	0.0	0.0	-	0.1	0.6
Bicycles on Road	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Bicycles on Road	0.0	0.3	0.0	0.0	-	0.0	0.0	20.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	10	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Theodore Street with Knapp Street
TMC
Site Code:
Start Date: 09/05/2024
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Access Drive Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	12	67	0	0	79	0	0	133	30	0	163	0	0	0	0	1	0	0	10	0	18	0	28	270
7:45 AM	0	16	85	0	1	101	0	1	144	22	0	167	0	0	0	0	0	0	0	16	0	13	0	29	297
8:00 AM	0	16	68	0	0	84	0	0	128	33	0	161	0	1	0	0	0	1	0	9	0	14	0	23	269
8:15 AM	0	13	83	2	0	98	1	0	123	50	0	174	0	1	0	0	0	1	0	7	0	15	1	22	295
Total	0	57	303	2	1	362	1	1	528	135	0	665	0	2	0	0	1	2	0	42	0	60	1	102	1131
Approach %	0.0	15.7	83.7	0.6	-	-	0.2	0.2	79.4	20.3	-	-	0.0	100.0	0.0	0.0	-	-	0.0	41.2	0.0	58.8	-	-	-
Total %	0.0	5.0	26.8	0.2	-	32.0	0.1	0.1	46.7	11.9	-	58.8	0.0	0.2	0.0	0.0	-	0.2	0.0	3.7	0.0	5.3	-	9.0	-
PHF	0.000	0.891	0.891	0.250	-	0.896	0.250	0.250	0.917	0.675	-	0.955	0.000	0.500	0.000	0.000	-	0.500	0.000	0.656	0.000	0.833	-	0.879	0.952
Lights	0	56	288	2	-	346	1	1	508	128	-	638	0	2	0	0	-	2	0	41	0	60	-	101	1087
% Lights	-	98.2	95.0	100.0	-	95.6	100.0	100.0	96.2	94.8	-	95.9	-	100.0	-	-	-	100.0	-	97.6	-	100.0	-	99.0	96.1
Buses	0	0	4	0	-	4	0	0	9	3	-	12	0	0	0	0	-	0	0	1	0	0	-	1	17
% Buses	-	0.0	1.3	0.0	-	1.1	0.0	0.0	1.7	2.2	-	1.8	-	0.0	-	-	-	0.0	-	2.4	-	0.0	-	1.0	1.5
Single-Unit Trucks	0	0	5	0	-	5	0	0	5	4	-	9	0	0	0	0	-	0	0	0	0	0	-	0	14
% Single-Unit Trucks	-	0.0	1.7	0.0	-	1.4	0.0	0.0	0.9	3.0	-	1.4	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	1.2
Articulated Trucks	0	0	6	0	-	6	0	0	6	0	-	6	0	0	0	0	-	0	0	0	0	0	-	0	12
% Articulated Trucks	-	0.0	2.0	0.0	-	1.7	0.0	0.0	1.1	0.0	-	0.9	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	1.1
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	1.8	0.0	0.0	-	0.3	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Theodore Street with Knapp Street
TMC
Site Code:
Start Date: 09/05/2024
Page No: 4

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Access Drive Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	13	170	3	0	186	0	0	178	30	0	208	0	1	0	0	0	1	0	21	0	31	1	52	447
4:15 PM	0	20	193	1	0	214	0	1	171	20	0	192	0	1	1	0	1	2	0	16	0	31	0	47	455
4:30 PM	0	15	143	0	0	158	0	0	168	31	0	199	0	1	0	0	0	1	0	17	0	30	0	47	405
4:45 PM	0	14	158	3	0	175	0	0	171	28	0	199	0	0	0	1	0	1	0	14	0	21	1	35	410
Total	0	62	664	7	0	733	0	1	688	109	0	798	0	3	1	1	1	5	0	68	0	113	2	181	1717
Approach %	0.0	8.5	90.6	1.0	-	-	0.0	0.1	86.2	13.7	-	-	0.0	60.0	20.0	20.0	-	-	0.0	37.6	0.0	62.4	-	-	-
Total %	0.0	3.6	38.7	0.4	-	42.7	0.0	0.1	40.1	6.3	-	46.5	0.0	0.2	0.1	0.1	-	0.3	0.0	4.0	0.0	6.6	-	10.5	-
PHF	0.000	0.775	0.860	0.583	-	0.856	0.000	0.250	0.966	0.879	-	0.959	0.000	0.750	0.250	0.250	-	0.625	0.000	0.810	0.000	0.911	-	0.870	0.943
Lights	0	62	645	7	-	714	0	1	673	108	-	782	0	3	1	1	-	5	0	67	0	112	-	179	1680
% Lights	-	100.0	97.1	100.0	-	97.4	-	100.0	97.8	99.1	-	98.0	-	100.0	100.0	100.0	-	100.0	-	98.5	-	99.1	-	98.9	97.8
Buses	0	0	9	0	-	9	0	0	4	1	-	5	0	0	0	0	-	0	0	0	0	0	-	0	14
% Buses	-	0.0	1.4	0.0	-	1.2	-	0.0	0.6	0.9	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.8
Single-Unit Trucks	0	0	7	0	-	7	0	0	5	0	-	5	0	0	0	0	-	0	0	1	0	1	-	2	14
% Single-Unit Trucks	-	0.0	1.1	0.0	-	1.0	-	0.0	0.7	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	-	1.5	-	0.9	-	1.1	0.8
Articulated Trucks	0	0	3	0	-	3	0	0	6	0	-	6	0	0	0	0	-	0	0	0	0	0	-	0	9
% Articulated Trucks	-	0.0	0.5	0.0	-	0.4	-	0.0	0.9	0.0	-	0.8	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Theodore Street with Knapp Street
TMC
Site Code:
Start Date: 09/05/2024
Page No: 5

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Access Drive Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:45 PM	0	10	159	1	0	170	0	1	165	31	0	197	0	5	0	2	0	7	0	21	1	28	0	50	424
1:00 PM	0	9	172	1	0	182	0	0	162	18	0	180	0	3	1	0	0	4	0	25	0	37	1	62	428
1:15 PM	0	14	168	1	0	183	0	0	183	34	0	217	0	0	0	1	0	1	0	25	0	20	0	45	446
1:30 PM	0	12	163	2	0	177	0	0	173	12	0	185	0	2	0	0	0	2	0	28	0	28	0	56	420
Total	0	45	662	5	0	712	0	1	683	95	0	779	0	10	1	3	0	14	0	99	1	113	1	213	1718
Approach %	0.0	6.3	93.0	0.7	-	-	0.0	0.1	87.7	12.2	-	-	0.0	71.4	7.1	21.4	-	-	0.0	46.5	0.5	53.1	-	-	-
Total %	0.0	2.6	38.5	0.3	-	41.4	0.0	0.1	39.8	5.5	-	45.3	0.0	0.6	0.1	0.2	-	0.8	0.0	5.8	0.1	6.6	-	12.4	-
PHF	0.000	0.804	0.962	0.625	-	0.973	0.000	0.250	0.933	0.699	-	0.897	0.000	0.500	0.250	0.375	-	0.500	0.000	0.884	0.250	0.764	-	0.859	0.963
Lights	0	45	654	5	-	704	0	1	670	95	-	766	0	10	1	3	-	14	0	99	1	112	-	212	1696
% Lights	-	100.0	98.8	100.0	-	98.9	-	100.0	98.1	100.0	-	98.3	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	99.1	-	99.5	98.7
Buses	0	0	1	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	-	0.0	0.2	0.0	-	0.1	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	4	0	-	4	0	0	5	0	-	5	0	0	0	0	-	0	0	0	0	1	-	1	10
% Single-Unit Trucks	-	0.0	0.6	0.0	-	0.6	-	0.0	0.7	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.9	-	0.5	0.6
Articulated Trucks	0	0	3	0	-	3	0	0	7	0	-	7	0	0	0	0	-	0	0	0	0	0	-	0	10
% Articulated Trucks	-	0.0	0.5	0.0	-	0.4	-	0.0	1.0	0.0	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



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Count Name: Theodore Street with Plainfield
Road TMC
Site Code:
Start Date: 09/05/2024
Page No: 1

Turning Movement Data

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	2	51	29	0	82	0	19	60	33	0	112	0	9	84	11	2	104	0	20	99	3	0	122	420
7:15 AM	0	2	43	36	0	81	0	14	74	51	0	139	0	17	92	12	1	121	0	21	153	6	0	180	521
7:30 AM	0	3	44	59	0	106	0	18	95	47	0	160	0	28	127	22	0	177	0	18	172	5	0	195	638
7:45 AM	0	6	43	46	0	95	0	20	85	48	1	153	0	41	125	24	0	190	0	26	160	7	0	193	631
Hourly Total	0	13	181	170	0	364	0	71	314	179	1	564	0	95	428	69	3	592	0	85	584	21	0	690	2210
8:00 AM	0	2	43	37	0	82	0	17	70	53	0	140	0	28	81	18	0	127	0	23	145	3	0	171	520
8:15 AM	0	1	53	26	0	80	0	16	76	47	0	139	0	21	97	21	0	139	0	27	141	4	1	172	530
8:30 AM	0	1	51	34	0	86	0	12	62	35	0	109	1	23	108	20	1	152	0	21	137	5	0	163	510
8:45 AM	0	2	44	37	0	83	0	18	92	43	1	153	0	29	102	17	0	148	0	27	134	4	0	165	549
Hourly Total	0	6	191	134	0	331	0	63	300	178	1	541	1	101	388	76	1	566	0	98	557	16	1	671	2109
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	5	87	62	0	154	0	23	128	71	0	222	0	40	143	22	0	205	0	69	192	7	0	268	849
4:15 PM	0	4	123	70	0	197	0	38	122	50	0	210	0	41	145	21	1	207	0	63	171	3	0	237	851
4:30 PM	0	17	91	66	0	174	0	34	111	51	0	196	0	61	142	16	0	219	0	47	169	3	1	219	808
4:45 PM	0	6	95	50	0	151	0	16	125	58	0	199	0	54	159	20	0	233	0	56	177	4	0	237	820
Hourly Total	0	32	396	248	0	676	0	111	486	230	0	827	0	196	589	79	1	864	0	235	709	17	1	961	3328
5:00 PM	0	3	127	41	0	171	0	28	118	51	0	197	0	61	123	25	0	209	0	60	150	4	0	214	791
5:15 PM	0	6	112	50	0	168	0	14	130	73	0	217	0	36	144	20	0	200	0	50	145	6	0	201	786
5:30 PM	0	3	96	58	0	157	0	19	106	48	0	173	0	43	108	13	1	164	0	67	151	7	1	225	719
5:45 PM	0	5	106	40	0	151	0	24	135	71	0	230	0	39	138	23	0	200	0	55	158	4	0	217	798
Hourly Total	0	17	441	189	0	647	0	85	489	243	0	817	0	179	513	81	1	773	0	232	604	21	1	857	3094
Grand Total	0	68	1209	741	0	2018	0	330	1589	830	2	2749	1	571	1918	305	6	2795	0	650	2454	75	3	3179	10741
Approach %	0.0	3.4	59.9	36.7	-	-	0.0	12.0	57.8	30.2	-	-	0.0	20.4	68.6	10.9	-	-	0.0	20.4	77.2	2.4	-	-	-
Total %	0.0	0.6	11.3	6.9	-	18.8	0.0	3.1	14.8	7.7	-	25.6	0.0	5.3	17.9	2.8	-	26.0	0.0	6.1	22.8	0.7	-	29.6	-
Lights	0	68	1175	731	-	1974	0	316	1550	808	-	2674	1	562	1880	300	-	2743	0	630	2400	72	-	3102	10493
% Lights	-	100.0	97.2	98.7	-	97.8	-	95.8	97.5	97.3	-	97.3	100.0	98.4	98.0	98.4	-	98.1	-	96.9	97.8	96.0	-	97.6	97.7
Buses	0	0	10	9	-	19	0	8	12	5	-	25	0	5	15	4	-	24	0	10	14	0	-	24	92
% Buses	-	0.0	0.8	1.2	-	0.9	-	2.4	0.8	0.6	-	0.9	0.0	0.9	0.8	1.3	-	0.9	-	1.5	0.6	0.0	-	0.8	0.9
Single-Unit Trucks	0	0	14	1	-	15	0	4	15	9	-	28	0	3	15	0	-	18	0	6	30	3	-	39	100
% Single-Unit Trucks	-	0.0	1.2	0.1	-	0.7	-	1.2	0.9	1.1	-	1.0	0.0	0.5	0.8	0.0	-	0.6	-	0.9	1.2	4.0	-	1.2	0.9
Articulated Trucks	0	0	10	0	-	10	0	2	12	8	-	22	0	1	8	1	-	10	0	4	10	0	-	14	56
% Articulated Trucks	-	0.0	0.8	0.0	-	0.5	-	0.6	0.8	1.0	-	0.8	0.0	0.2	0.4	0.3	-	0.4	-	0.6	0.4	0.0	-	0.4	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0

% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	2	-	-	-	-	6	-	-	-	-	-	3	-	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-



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Count Name: Theodore Street with Plainfield
Road TMC
Site Code:
Start Date: 09/05/2024
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	3	44	59	0	106	0	18	95	47	0	160	0	28	127	22	0	177	0	18	172	5	0	195	638
7:45 AM	0	6	43	46	0	95	0	20	85	48	1	153	0	41	125	24	0	190	0	26	160	7	0	193	631
8:00 AM	0	2	43	37	0	82	0	17	70	53	0	140	0	28	81	18	0	127	0	23	145	3	0	171	520
8:15 AM	0	1	53	26	0	80	0	16	76	47	0	139	0	21	97	21	0	139	0	27	141	4	1	172	530
Total	0	12	183	168	0	363	0	71	326	195	1	592	0	118	430	85	0	633	0	94	618	19	1	731	2319
Approach %	0.0	3.3	50.4	46.3	-	-	0.0	12.0	55.1	32.9	-	-	0.0	18.6	67.9	13.4	-	-	0.0	12.9	84.5	2.6	-	-	-
Total %	0.0	0.5	7.9	7.2	-	15.7	0.0	3.1	14.1	8.4	-	25.5	0.0	5.1	18.5	3.7	-	27.3	0.0	4.1	26.6	0.8	-	31.5	-
PHF	0.000	0.500	0.863	0.712	-	0.856	0.000	0.888	0.858	0.920	-	0.925	0.000	0.720	0.846	0.885	-	0.833	0.000	0.870	0.898	0.679	-	0.937	0.909
Lights	0	12	176	164	-	352	0	65	317	189	-	571	0	115	418	85	-	618	0	90	601	19	-	710	2251
% Lights	-	100.0	96.2	97.6	-	97.0	-	91.5	97.2	96.9	-	96.5	-	97.5	97.2	100.0	-	97.6	-	95.7	97.2	100.0	-	97.1	97.1
Buses	0	0	2	4	-	6	0	3	4	3	-	10	0	1	3	0	-	4	0	2	3	0	-	5	25
% Buses	-	0.0	1.1	2.4	-	1.7	-	4.2	1.2	1.5	-	1.7	-	0.8	0.7	0.0	-	0.6	-	2.1	0.5	0.0	-	0.7	1.1
Single-Unit Trucks	0	0	2	0	-	2	0	1	2	2	-	5	0	2	6	0	-	8	0	0	12	0	-	12	27
% Single-Unit Trucks	-	0.0	1.1	0.0	-	0.6	-	1.4	0.6	1.0	-	0.8	-	1.7	1.4	0.0	-	1.3	-	0.0	1.9	0.0	-	1.6	1.2
Articulated Trucks	0	0	3	0	-	3	0	2	3	1	-	6	0	0	3	0	-	3	0	2	2	0	-	4	16
% Articulated Trucks	-	0.0	1.6	0.0	-	0.8	-	2.8	0.9	0.5	-	1.0	-	0.0	0.7	0.0	-	0.5	-	2.1	0.3	0.0	-	0.5	0.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



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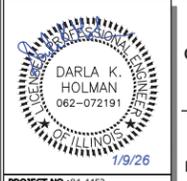
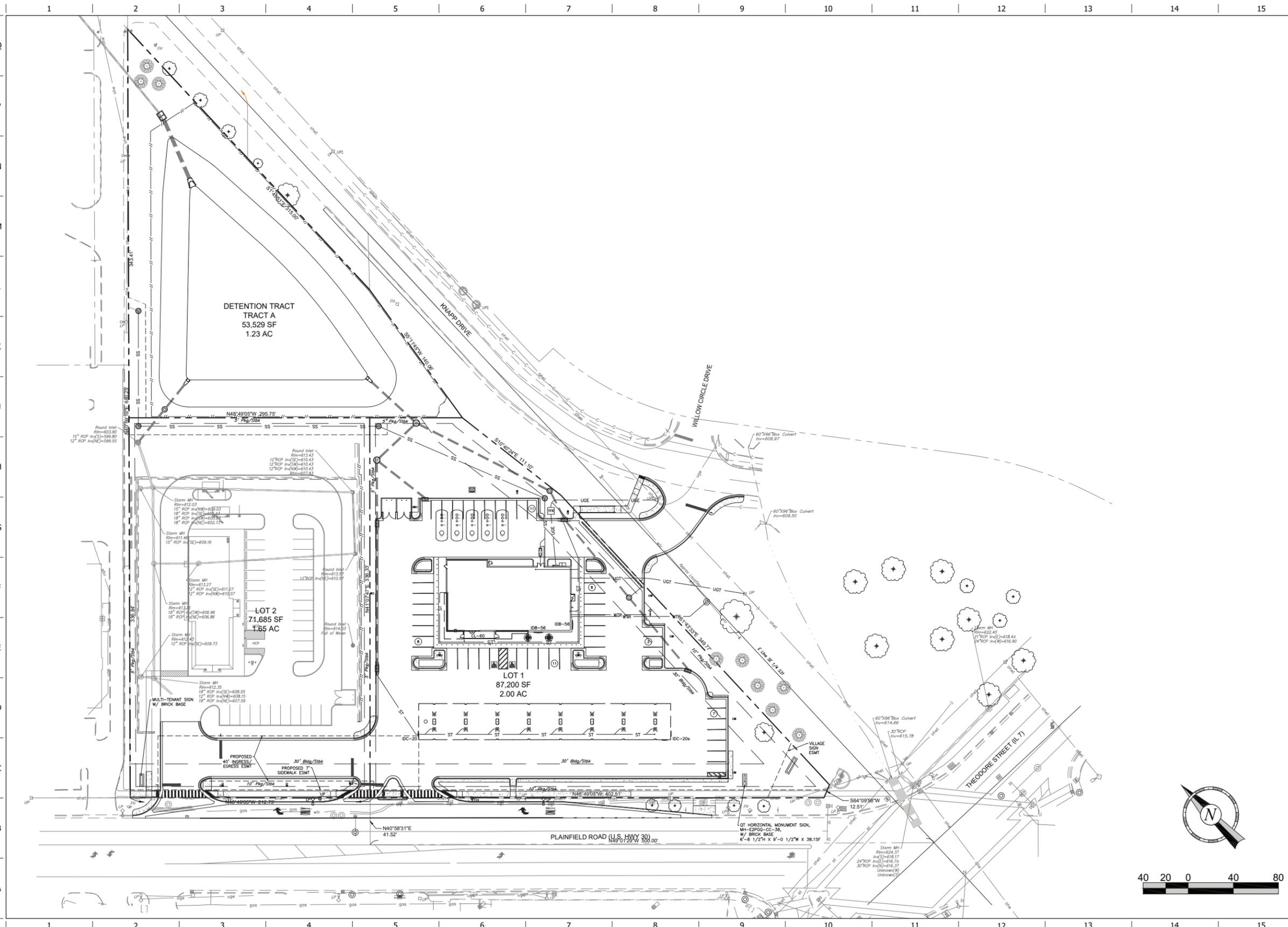
Count Name: Theodore Street with Plainfield
Road TMC
Site Code:
Start Date: 09/05/2024
Page No: 4

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	5	87	62	0	154	0	23	128	71	0	222	0	40	143	22	0	205	0	69	192	7	0	268	849
4:15 PM	0	4	123	70	0	197	0	38	122	50	0	210	0	41	145	21	1	207	0	63	171	3	0	237	851
4:30 PM	0	17	91	66	0	174	0	34	111	51	0	196	0	61	142	16	0	219	0	47	169	3	1	219	808
4:45 PM	0	6	95	50	0	151	0	16	125	58	0	199	0	54	159	20	0	233	0	56	177	4	0	237	820
Total	0	32	396	248	0	676	0	111	486	230	0	827	0	196	589	79	1	864	0	235	709	17	1	961	3328
Approach %	0.0	4.7	58.6	36.7	-	-	0.0	13.4	58.8	27.8	-	-	0.0	22.7	68.2	9.1	-	-	0.0	24.5	73.8	1.8	-	-	-
Total %	0.0	1.0	11.9	7.5	-	20.3	0.0	3.3	14.6	6.9	-	24.8	0.0	5.9	17.7	2.4	-	26.0	0.0	7.1	21.3	0.5	-	28.9	-
PHF	0.000	0.471	0.805	0.886	-	0.858	0.000	0.730	0.949	0.810	-	0.931	0.000	0.803	0.926	0.898	-	0.927	0.000	0.851	0.923	0.607	-	0.896	0.978
Lights	0	32	387	246	-	665	0	107	480	225	-	812	0	193	577	78	-	848	0	228	697	16	-	941	3266
% Lights	-	100.0	97.7	99.2	-	98.4	-	96.4	98.8	97.8	-	98.2	-	98.5	98.0	98.7	-	98.1	-	97.0	98.3	94.1	-	97.9	98.1
Buses	0	0	4	2	-	6	0	1	3	0	-	4	0	3	5	1	-	9	0	3	2	0	-	5	24
% Buses	-	0.0	1.0	0.8	-	0.9	-	0.9	0.6	0.0	-	0.5	-	1.5	0.8	1.3	-	1.0	-	1.3	0.3	0.0	-	0.5	0.7
Single-Unit Trucks	0	0	3	0	-	3	0	3	1	1	-	5	0	0	4	0	-	4	0	2	6	1	-	9	21
% Single-Unit Trucks	-	0.0	0.8	0.0	-	0.4	-	2.7	0.2	0.4	-	0.6	-	0.0	0.7	0.0	-	0.5	-	0.9	0.8	5.9	-	0.9	0.6
Articulated Trucks	0	0	2	0	-	2	0	0	2	4	-	6	0	0	3	0	-	3	0	2	4	0	-	6	17
% Articulated Trucks	-	0.0	0.5	0.0	-	0.3	-	0.0	0.4	1.7	-	0.7	-	0.0	0.5	0.0	-	0.3	-	0.9	0.6	0.0	-	0.6	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Site Plan

FILE LOCATION: C:\Civil 3D Projects\04452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME: Overall Site USER: dkh01 SAVED: 1/9/2026 2:18 PM PLOTTED: 1/9/2026 2:19 PM



PROJECT NO.: 89-4452
MDG
 Midwest Design Group
 Kansas City
 PO Box 860015
 Shawnee, KS 66286-0015
 P 913.248.9385

QuikTrip No. 4452
 1610 PLAINFIELD ROAD
 CREST HILL, WILL COUNTY, ILLINOIS 60403



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PROTOTYPE: P-122
 DIVISION: 84
 VERSION: 001
 DESIGNED BY: DKH
 DRAWN BY: CSH
 REVIEWED BY: CIC

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C100

CMAP 2050 Projections Letter

August 13, 2024

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: Plainfield Road @ Larkin Avenue and @ Theodore Street
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated August 9, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT (2023)	Year 2050 ADT
Larkin Ave E of Plainfield Rd	21,100	26,100
Larkin Ave W of Plainfield Rd	24,800	30,700
Plainfield Rd, @ Larkin Ave	19,900	23,000
Theodore St east of Plainfield Rd	15,600	18,000
Theodore St west of Plainfield Rd	12,600	14,500

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2024 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov



Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
\\2024_TrafficForecasts\CrestHill\wi-33-24\wi-33-24.docx

ITE Trip Generation Sheets

Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 18

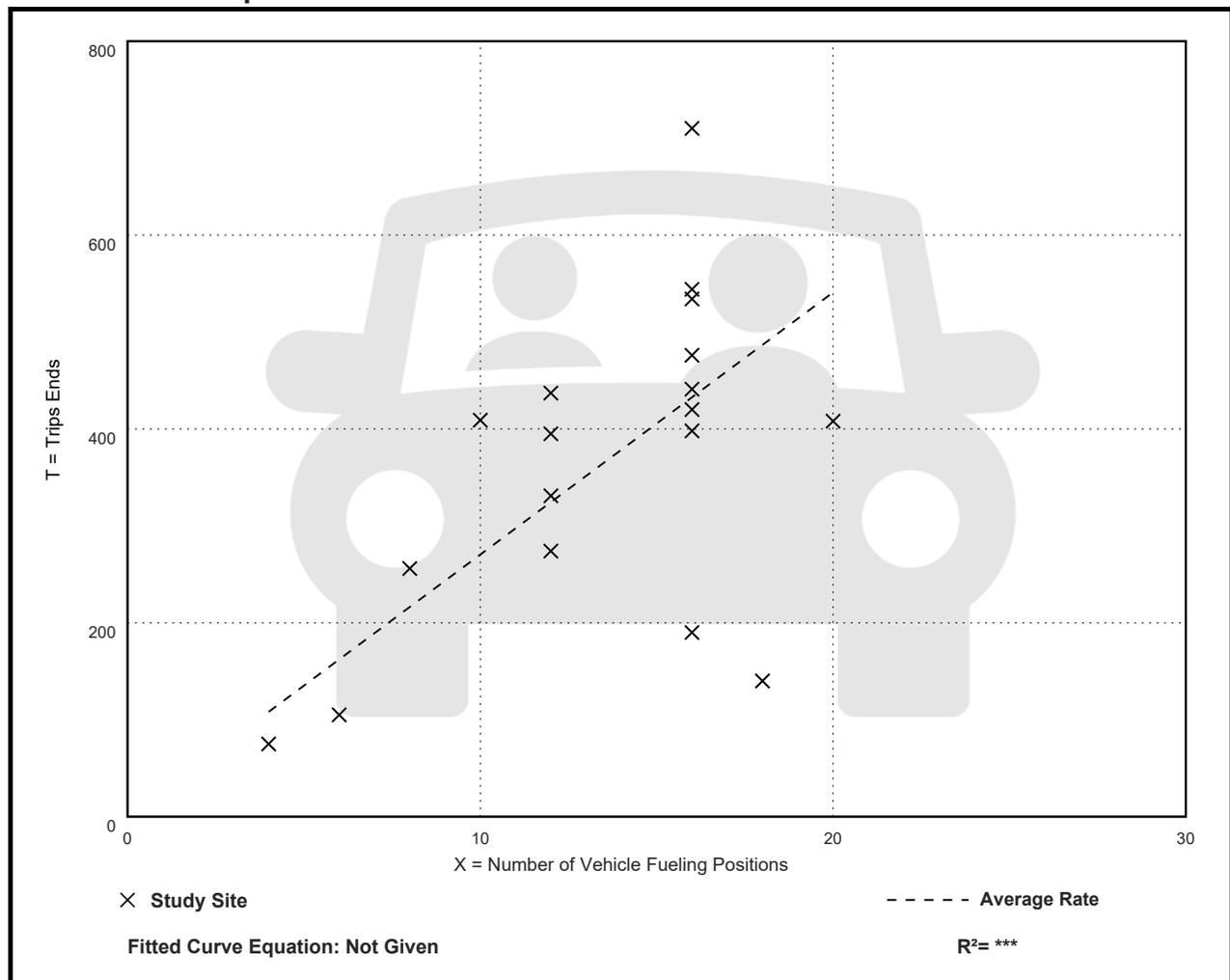
Avg. Num. of Vehicle Fueling Positions: 13

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
27.04	7.78 - 44.38	9.88

Data Plot and Equation



Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 23

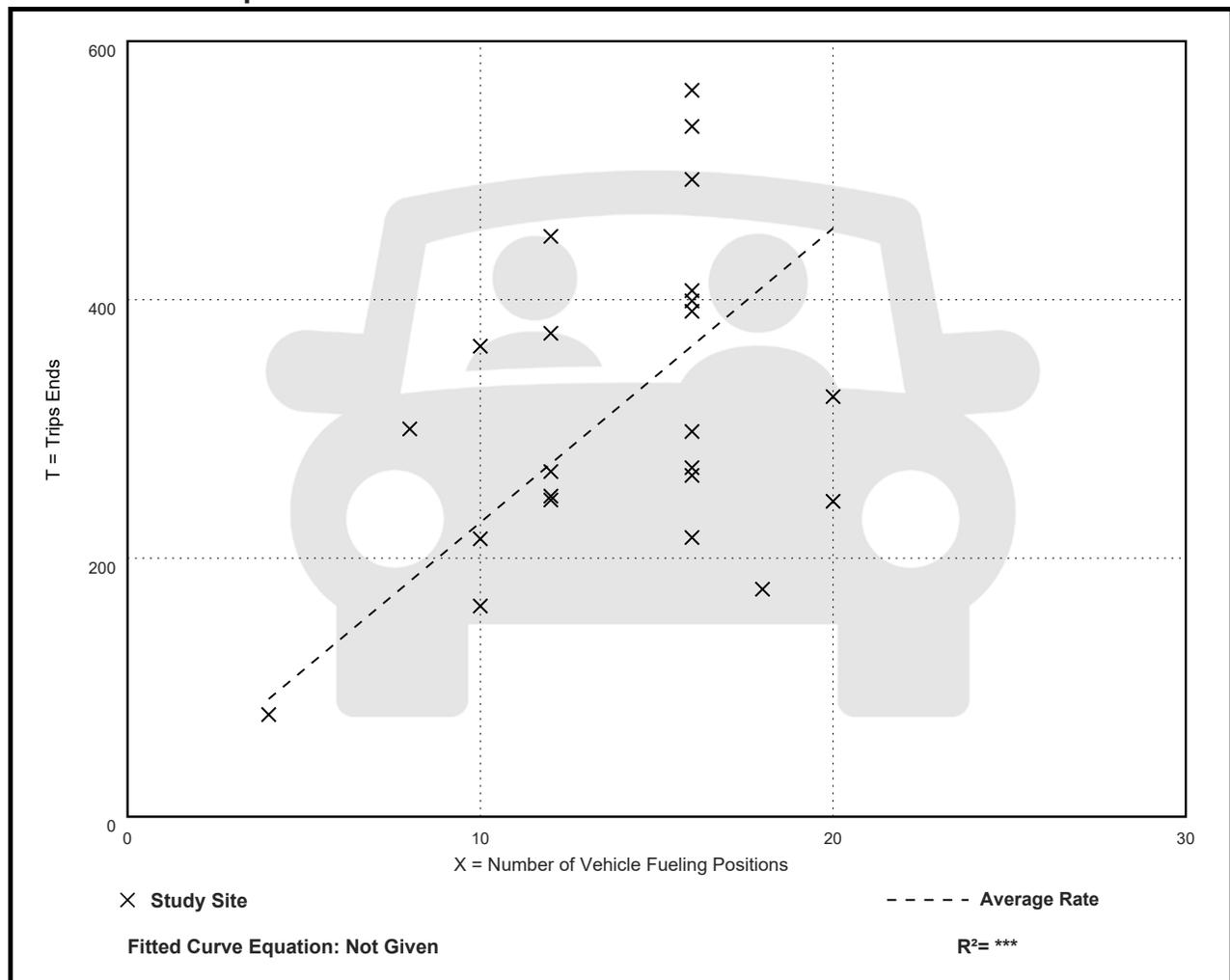
Avg. Num. of Vehicle Fueling Positions: 14

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
22.76	9.78 - 37.50	8.49

Data Plot and Equation



Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 7

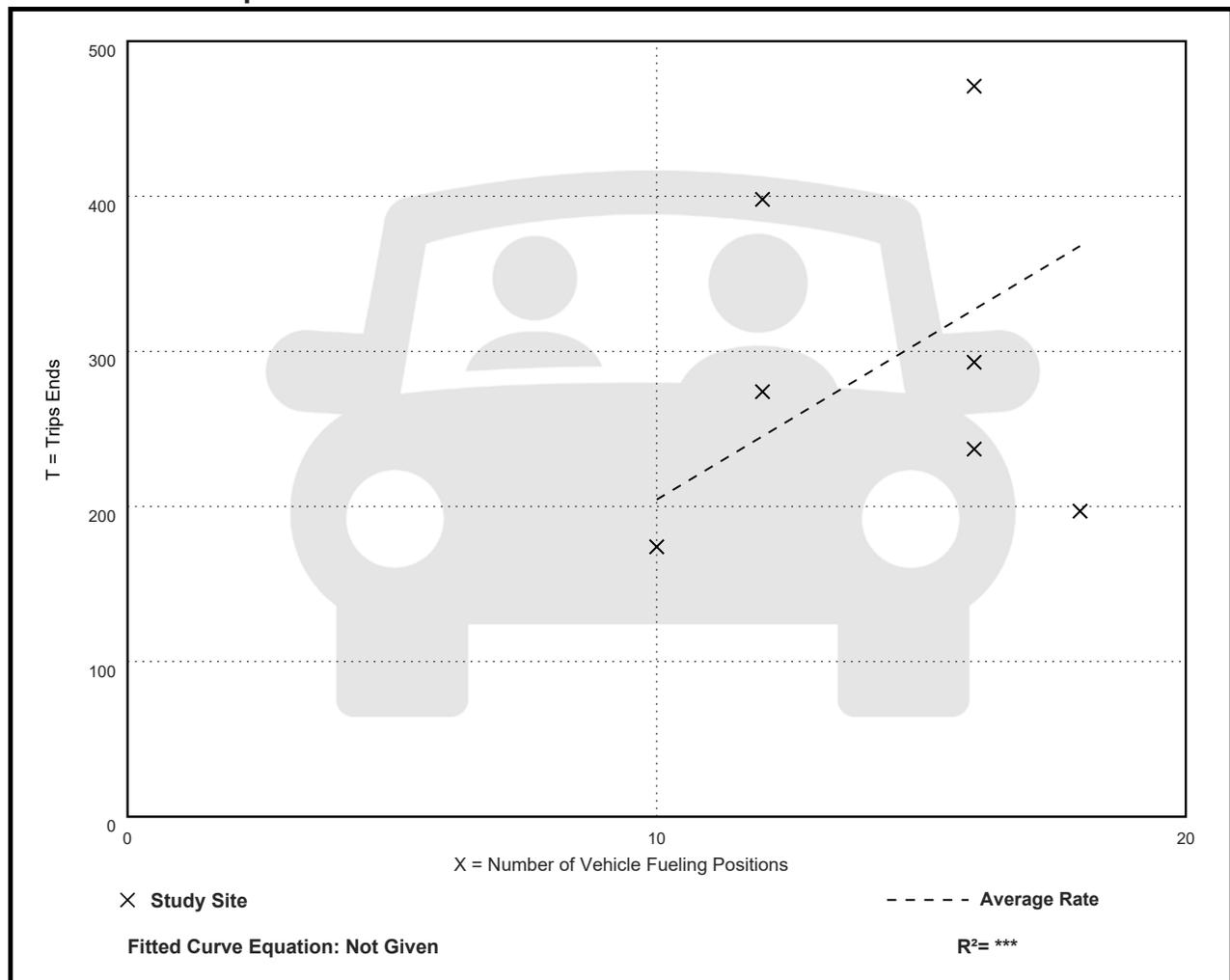
Avg. Num. of Vehicle Fueling Positions: 14

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
20.44	10.94 - 33.17	8.08

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 96

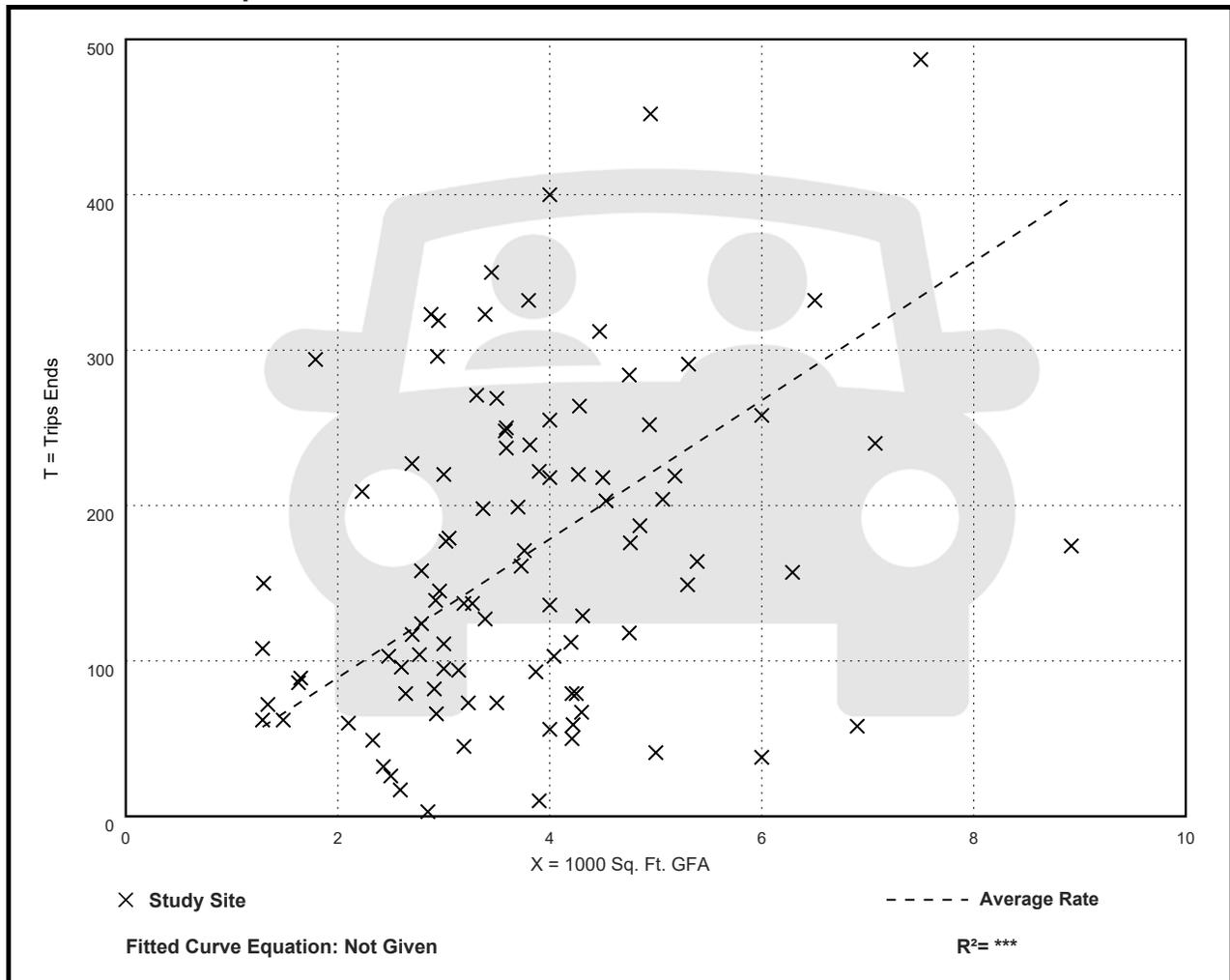
Avg. 1000 Sq. Ft. GFA: 4

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
44.61	1.05 - 164.25	27.14

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 190

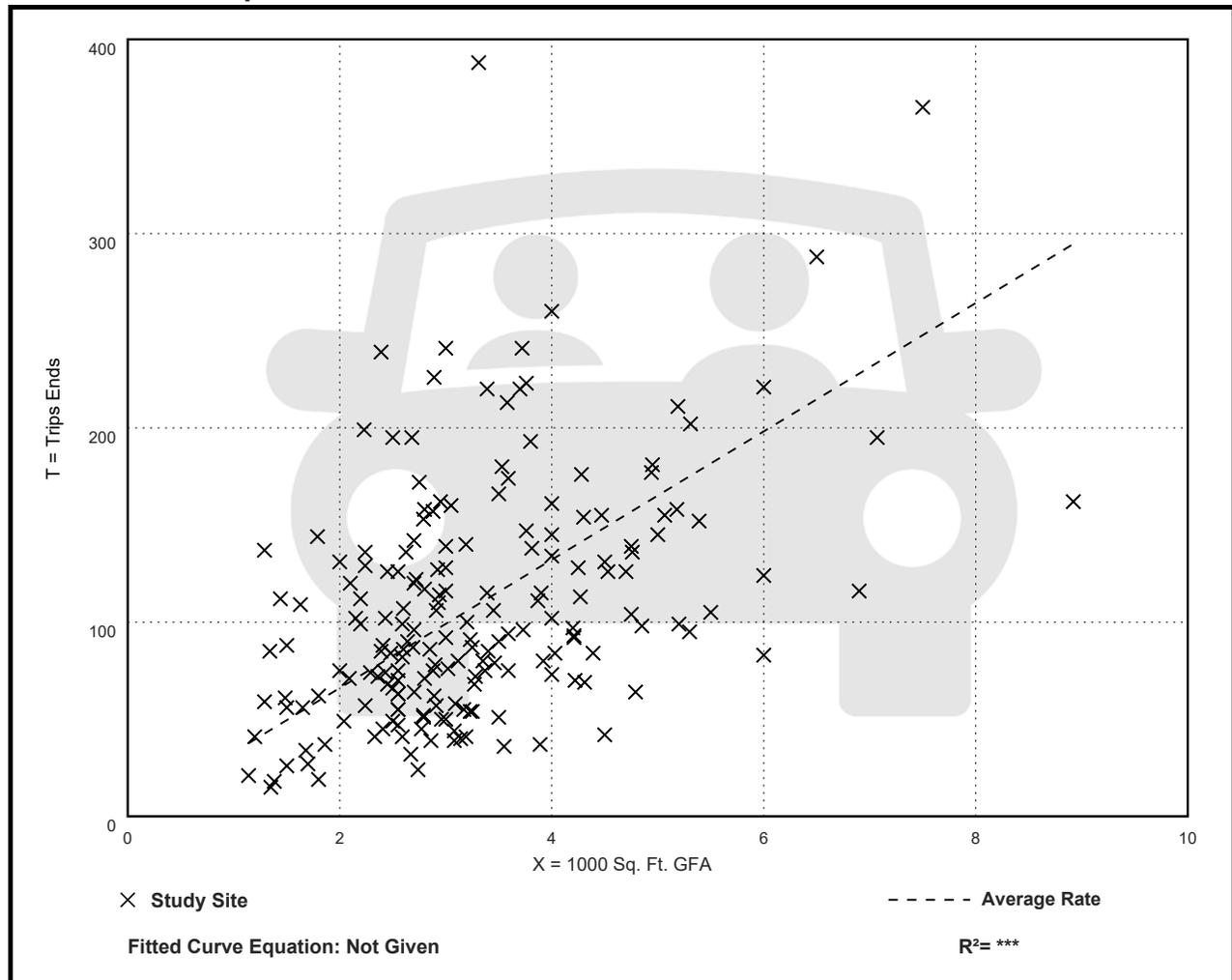
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
33.03	8.77 - 117.22	17.59

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 53

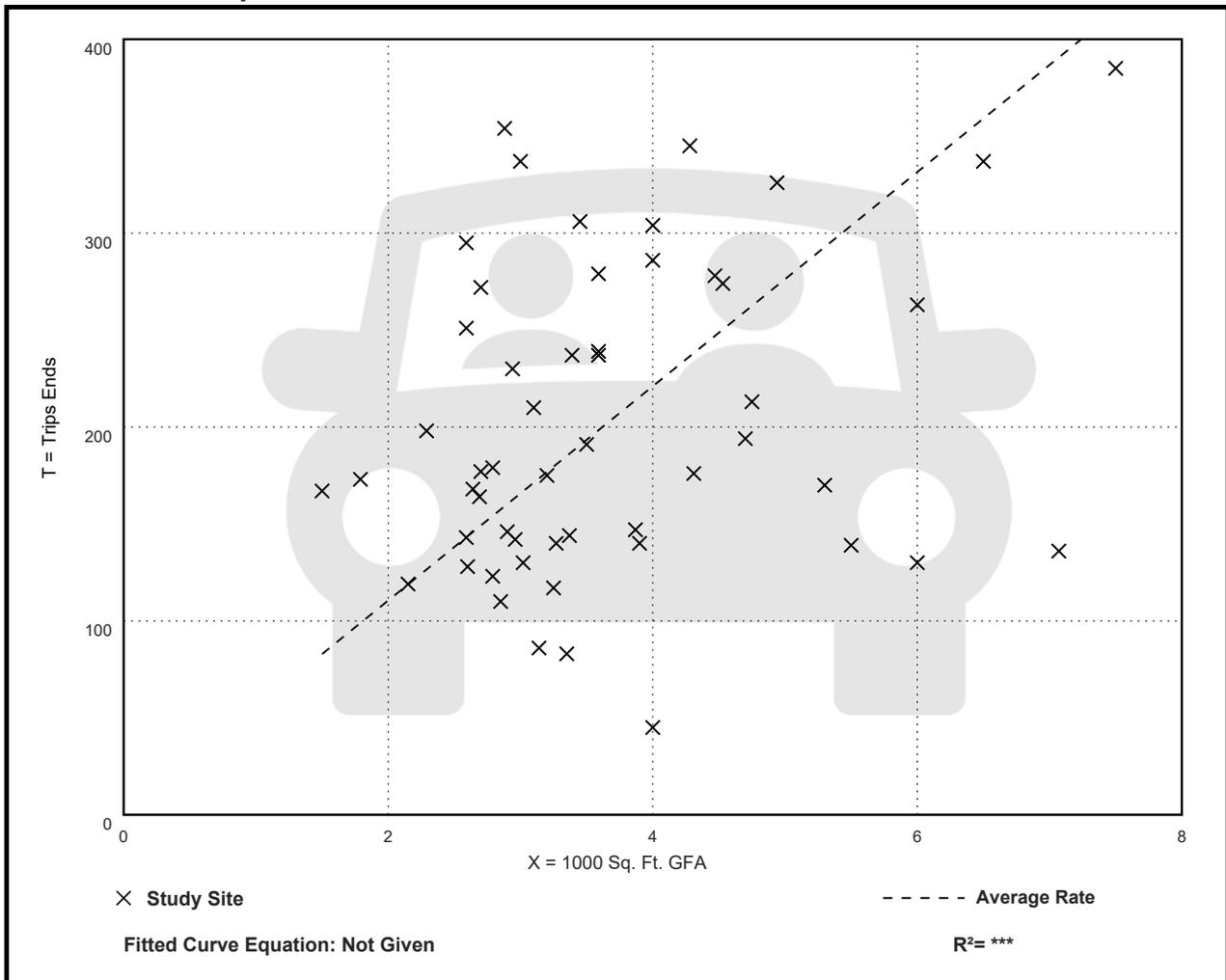
Avg. 1000 Sq. Ft. GFA: 4

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
55.25	11.25 - 122.92	24.62

Data Plot and Equation



Level of Service Criteria

LEVEL OF SERVICE CRITERIA

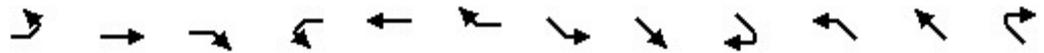
Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0
Unsignalized Intersections		
Level of Service	Average Total Delay (SEC/VEH)	
A	0 - 10	
B	> 10 - 15	
C	> 15 - 25	
D	> 25 - 35	
E	> 35 - 50	
F	> 50	

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets
Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

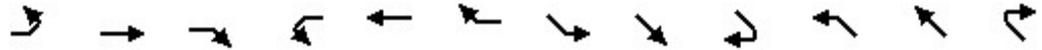
11/08/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	12	183	168	71	326	195	94	619	19	118	430	85
Future Volume (vph)	12	183	168	71	326	195	94	619	19	118	430	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.928			0.944			0.996			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3251	0	1671	3309	0	1736	3494	0	1752	3434	0
Flt Permitted	0.405			0.445			0.336			0.238		
Satd. Flow (perm)	770	3251	0	783	3309	0	614	3494	0	439	3434	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	2%	8%	3%	3%	4%	3%	0%	3%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	386	0	78	572	0	103	701	0	130	566	0
Turn Type	pm+pt	NA										
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	42.9		13.2	42.7		13.2	40.7		13.2	40.7	
Total Split (%)	12.0%	39.0%		12.0%	38.8%		12.0%	37.0%		12.0%	37.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	47.8	40.4		52.5	46.2		46.4	35.2		47.3	35.7	
Actuated g/C Ratio	0.43	0.37		0.48	0.42		0.42	0.32		0.43	0.32	

Lanes, Volumes, Timings
 1: Plainfield Road & Theodore Street

11/08/2024

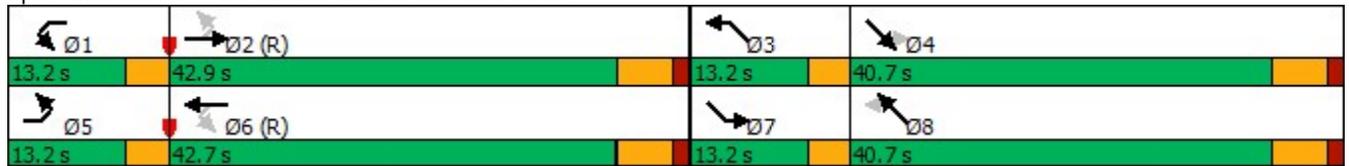


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.03	0.32		0.18	0.41		0.30	0.63		0.44	0.51	
Control Delay	16.1	27.4		17.4	24.8		6.5	22.3		22.0	31.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.1	27.4		17.4	24.8		6.5	22.3		22.0	31.9	
LOS	B	C		B	C		A	C		C	C	
Approach Delay		27.0			23.9			20.3			30.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	5	113		32	148		3	220		48	157	
Queue Length 95th (ft)	15	150		57	214		m8	287		90	227	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	445	1216		452	1389		364	1145		308	1135	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.32		0.17	0.41		0.28	0.61		0.42	0.50	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 11 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 24.9 Intersection LOS: C
 Intersection Capacity Utilization 59.5% ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 	 			 			 			 	
Traffic Volume (vph)	194	541	81	114	517	27	56	588	205	70	427	167
Future Volume (vph)	194	541	81	114	517	27	56	588	205	70	427	167
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3519	1599	1736	3585	1455	1656	3689	1568	1805	3689	1599
Flt Permitted	0.950			0.950			0.411			0.282		
Satd. Flow (perm)	3400	3519	1599	1736	3585	1455	716	3689	1568	536	3689	1599
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	1%	4%	6%	11%	9%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	601	90	127	574	30	62	653	228	78	474	186
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	14.3	46.2	46.2	14.3	46.2	46.2	13.2	36.3	14.3	13.2	36.3	14.3
Total Split (%)	13.0%	42.0%	42.0%	13.0%	42.0%	42.0%	12.0%	33.0%	13.0%	12.0%	33.0%	13.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	9.6	36.0	36.0	9.7	36.1	36.1	47.3	38.1	53.7	47.7	38.3	54.0
Actuated g/C Ratio	0.09	0.33	0.33	0.09	0.33	0.33	0.43	0.35	0.49	0.43	0.35	0.49

Lanes, Volumes, Timings
 2: Larkin Avenue & Plainfield Road

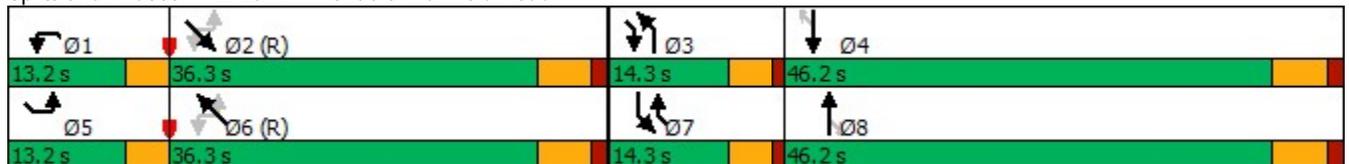
11/08/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.73	0.52	0.17	0.83	0.49	0.06	0.17	0.51	0.30	0.24	0.37	0.24
Control Delay	63.7	31.2	25.7	88.7	30.5	23.7	20.1	32.5	20.6	15.3	25.9	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	31.2	25.7	88.7	30.5	23.7	20.1	32.5	20.6	15.3	25.9	16.9
LOS	E	C	C	F	C	C	C	C	C	B	C	B
Approach Delay		38.4			40.3			28.8			22.5	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	77	171	43	90	161	14	26	207	104	36	137	94
Queue Length 95th (ft)	#127	222	79	#195	210	35	53	276	170	62	223	157
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	302	1286	584	154	1310	531	397	1277	768	348	1284	786
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.47	0.15	0.82	0.44	0.06	0.16	0.51	0.30	0.22	0.37	0.24

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 16.5 (15%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 32.6 Intersection LOS: C
 Intersection Capacity Utilization 56.9% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
 3: Theodore Street & Knapp Street

11/08/2024

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	56	306	532	135	42	60
Future Vol, veh/h	56	306	532	135	42	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	5	4	5	2	0
Mvmt Flow	59	322	560	142	44	63

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	702	0	-	0	910 351
Stage 1	-	-	-	-	631 -
Stage 2	-	-	-	-	279 -
Critical Hdwy	4.1	-	-	-	6.84 6.9
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.2	-	-	-	3.52 3.3
Pot Cap-1 Maneuver	905	-	-	-	274 651
Stage 1	-	-	-	-	492 -
Stage 2	-	-	-	-	743 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	905	-	-	-	252 651
Mov Cap-2 Maneuver	-	-	-	-	360 -
Stage 1	-	-	-	-	453 -
Stage 2	-	-	-	-	743 -

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	905	-	-	-	488
HCM Lane V/C Ratio	0.065	-	-	-	0.22
HCM Control Delay (s)	9.3	0.3	-	-	14.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8

Intersection												
Int Delay, s/veh	0											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↖↗			↔			↔	
Traffic Vol, veh/h	0	732	1	0	637	0	0	0	0	0	0	0
Future Vol, veh/h	0	732	1	0	637	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	0	804	1	0	700	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	700	0	0	805	0	0	1155	1505	403	1102	1505	350
Stage 1	-	-	-	-	-	-	805	805	-	700	700	-
Stage 2	-	-	-	-	-	-	350	700	-	402	805	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	906	-	-	828	-	-	154	122	603	169	122	652
Stage 1	-	-	-	-	-	-	347	398	-	401	444	-
Stage 2	-	-	-	-	-	-	645	444	-	601	398	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	906	-	-	828	-	-	154	122	603	169	122	652
Mov Cap-2 Maneuver	-	-	-	-	-	-	154	122	-	169	122	-
Stage 1	-	-	-	-	-	-	347	398	-	401	444	-
Stage 2	-	-	-	-	-	-	645	444	-	601	398	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	828	-	-	906	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	0
HCM Lane LOS	A	A	-	-	A	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-

Intersection												
Int Delay, s/veh	0.1											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	1	100	0	1	172	14	0	0	0	2	0	1
Future Vol, veh/h	1	100	0	1	172	14	0	0	0	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	3	7	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	115	0	1	198	16	0	0	0	2	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	115	0	0	326	333	115	325	325	206
Stage 1	-	-	-	-	-	-	117	117	-	208	208	-
Stage 2	-	-	-	-	-	-	209	216	-	117	117	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1368	-	-	1487	-	-	631	590	943	632	596	840
Stage 1	-	-	-	-	-	-	892	803	-	799	734	-
Stage 2	-	-	-	-	-	-	798	728	-	892	803	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1368	-	-	1487	-	-	629	589	943	631	595	840
Mov Cap-2 Maneuver	-	-	-	-	-	-	629	589	-	631	595	-
Stage 1	-	-	-	-	-	-	891	802	-	798	733	-
Stage 2	-	-	-	-	-	-	796	727	-	891	802	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.1	0	0	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	-	1487	-	-	1368	-	688
HCM Lane V/C Ratio	-	-	0.001	-	-	0.001	-	0.005
HCM Control Delay (s)	0	0	7.4	0	-	7.6	0	10.3
HCM Lane LOS	A	A	A	A	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	0

Capacity Analysis Summary Sheets
Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Traffic Volume (vph)	32	419	248	111	486	230	235	714	17	196	589	79	
Future Volume (vph)	32	419	248	111	486	230	235	714	17	196	589	79	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)		0%			0%			0%			0%		
Storage Length (ft)	180		0	125		0	310		0	270		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	115			115			220			150			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	
Ped Bike Factor		0.944			0.952			0.997			0.982		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1805	3321	0	1719	3369	0	1736	3525	0	1752	3442	0	
Flt Permitted	0.293			0.259			0.202			0.191			
Satd. Flow (perm)	557	3321	0	469	3369	0	369	3525	0	352	3442	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		35			35			35			35		
Link Distance (ft)		933			319			463			1681		
Travel Time (s)		18.2			6.2			9.0			32.7		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	3%	2%	5%	2%	2%	4%	2%	6%	3%	3%	3%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Shared Lane Traffic (%)													
Lane Group Flow (vph)	33	681	0	113	731	0	240	746	0	200	682	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA		
Protected Phases	5	2		1	6		7	4		3	8		
Permitted Phases	2			6			4			8			
Detector Phase	5	2		1	6		7	4		3	8		
Switch Phase													
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0		
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0		
Total Split (s)	13.0	52.0		13.0	52.0		24.7	40.3		24.7	40.3		
Total Split (%)	10.0%	40.0%		10.0%	40.0%		19.0%	31.0%		19.0%	31.0%		
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5		
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0		
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		
Recall Mode	None	C-Min		None	C-Min		None	None		None	None		
Act Effct Green (s)	57.9	48.6		62.5	54.3		57.8	38.7		54.4	37.0		
Actuated g/C Ratio	0.45	0.37		0.48	0.42		0.44	0.30		0.42	0.28		

Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 	 			 			 			 	
Traffic Volume (vph)	283	596	64	182	784	75	82	737	326	85	673	140
Future Volume (vph)	283	596	64	182	784	75	82	737	326	85	673	140
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3519	1615	1736	3619	1568	1770	3689	1599	1805	3689	1553
Flt Permitted	0.950			0.950			0.219			0.179		
Satd. Flow (perm)	3467	3519	1615	1736	3619	1568	408	3689	1599	340	3689	1553
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40				35
Link Distance (ft)		853			840			808				1222
Travel Time (s)		16.6			16.4			13.8				23.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	8%	0%	4%	5%	3%	2%	3%	1%	0%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	608	65	186	800	77	84	752	333	87	687	143
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	27.3	58.5	58.5	18.2	49.4	49.4	13.0	40.3	27.3	13.0	40.3	18.2
Total Split (%)	21.0%	45.0%	45.0%	14.0%	38.0%	38.0%	10.0%	31.0%	21.0%	10.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	16.5	48.6	48.6	14.2	46.3	46.3	49.7	38.6	61.1	49.7	38.6	58.9
Actuated g/C Ratio	0.13	0.37	0.37	0.11	0.36	0.36	0.38	0.30	0.47	0.38	0.30	0.45

Lanes, Volumes, Timings
 2: Larkin Avenue & Plainfield Road

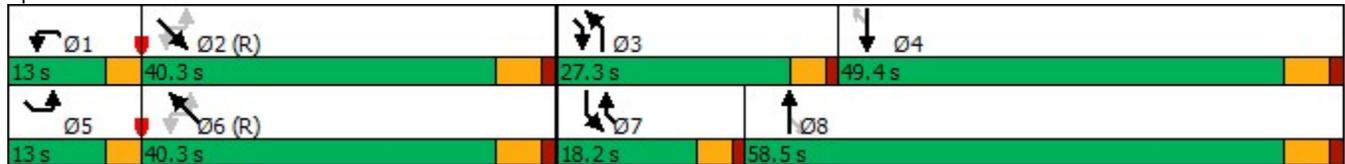
11/08/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.66	0.46	0.11	0.98	0.62	0.14	0.34	0.69	0.44	0.38	0.63	0.20
Control Delay	61.1	31.5	25.3	119.1	37.0	28.8	29.5	45.4	26.0	24.0	26.5	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	31.5	25.3	119.1	37.0	28.8	29.5	45.4	26.0	24.0	26.5	14.8
LOS	E	C	C	F	D	C	C	D	C	C	C	B
Approach Delay		40.0			50.8			38.8			24.5	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	121	192	34	~163	277	42	45	310	197	27	138	39
Queue Length 95th (ft)	162	244	66	#320	367	83	83	384	265	m49	168	m58
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	608	1421	652	189	1311	568	258	1095	829	239	1096	703
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.43	0.10	0.98	0.61	0.14	0.33	0.69	0.40	0.36	0.63	0.20

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 6.5 (5%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 39.0 Intersection LOS: D
 Intersection Capacity Utilization 69.8% ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
 3: Theodore Street & Knapp Street

11/08/2024

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕↕	↕↕		↕	
Traffic Vol, veh/h	62	671	714	109	68	113
Future Vol, veh/h	62	671	714	109	68	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	4	3	2	1	1
Mvmt Flow	66	714	760	116	72	120

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	876	0	-	0	1307 438
Stage 1	-	-	-	-	818 -
Stage 2	-	-	-	-	489 -
Critical Hdwy	4.1	-	-	-	6.82 6.92
Critical Hdwy Stg 1	-	-	-	-	5.82 -
Critical Hdwy Stg 2	-	-	-	-	5.82 -
Follow-up Hdwy	2.2	-	-	-	3.51 3.31
Pot Cap-1 Maneuver	779	-	-	-	153 569
Stage 1	-	-	-	-	397 -
Stage 2	-	-	-	-	585 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	779	-	-	-	132 569
Mov Cap-2 Maneuver	-	-	-	-	251 -
Stage 1	-	-	-	-	341 -
Stage 2	-	-	-	-	585 -

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	23.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	779	-	-	-	386
HCM Lane V/C Ratio	0.085	-	-	-	0.499
HCM Control Delay (s)	10	0.6	-	-	23.3
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	2.7

Intersection												
Int Delay, s/veh	2.2											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↖↗			↕			↕	
Traffic Vol, veh/h	0	966	0	0	851	0	0	0	0	50	0	0
Future Vol, veh/h	0	966	0	0	851	0	0	0	0	50	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	1039	0	0	915	0	0	0	0	54	0	0

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	915	0	0	1039	0	0	1497	1954	520	1435	1954	458
Stage 1	-	-	-	-	-	-	1039	1039	-	915	915	-
Stage 2	-	-	-	-	-	-	458	915	-	520	1039	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	754	-	-	677	-	-	86	65	506	96	65	555
Stage 1	-	-	-	-	-	-	250	310	-	298	354	-
Stage 2	-	-	-	-	-	-	557	354	-	512	310	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	754	-	-	677	-	-	86	65	506	96	65	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	65	-	96	65	-
Stage 1	-	-	-	-	-	-	250	310	-	298	354	-
Stage 2	-	-	-	-	-	-	557	354	-	512	310	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	82.3
HCM LOS			A	F

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	677	-	-	754	-	96
HCM Lane V/C Ratio	-	-	-	-	-	-	0.56
HCM Control Delay (s)	0	0	-	-	0	-	82.3
HCM Lane LOS	A	A	-	-	A	-	F
HCM 95th %tile Q(veh)	-	0	-	-	0	-	2.6

Intersection												
Int Delay, s/veh	0.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	2	182	0	0	170	18	0	0	0	25	0	7
Future Vol, veh/h	2	182	0	0	170	18	0	0	0	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	2	196	0	0	183	19	0	0	0	27	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	202	0	0	196	0	0	397	402	196	393	393	193
Stage 1	-	-	-	-	-	-	200	200	-	193	193	-
Stage 2	-	-	-	-	-	-	197	202	-	200	200	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1382	-	-	1389	-	-	567	540	850	570	546	854
Stage 1	-	-	-	-	-	-	806	739	-	813	745	-
Stage 2	-	-	-	-	-	-	809	738	-	806	739	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1382	-	-	1389	-	-	561	539	850	569	545	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	561	539	-	569	545	-
Stage 1	-	-	-	-	-	-	804	738	-	811	745	-
Stage 2	-	-	-	-	-	-	802	738	-	804	738	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.1	0	0	11.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1	
Capacity (veh/h)	-	-	1389	-	-	1382	-	-	614
HCM Lane V/C Ratio	-	-	-	-	-	0.002	-	-	0.056
HCM Control Delay (s)	0	0	0	-	-	7.6	0	-	11.2
HCM Lane LOS	A	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.2

Capacity Analysis Summary Sheets
Existing Saturday Midday Peak Hour

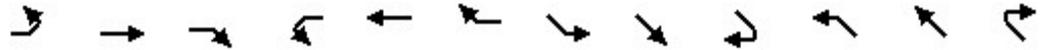
Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Traffic Volume (vph)	17	411	228	118	443	255	206	566	40	92	549	164	
Future Volume (vph)	17	411	228	118	443	255	206	566	40	92	549	164	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)		0%			0%			0%			0%		
Storage Length (ft)	180		0	125		0	310		0	270		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	115			115			220			150			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	
Ped Bike Factor		0.947			0.945			0.990			0.966		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1805	3363	0	1787	3353	0	1787	3476	0	1787	3437	0	
Flt Permitted	0.314			0.255			0.181			0.353			
Satd. Flow (perm)	597	3363	0	480	3353	0	340	3476	0	664	3437	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		35			35			35			35		
Link Distance (ft)		933			319			463			1681		
Travel Time (s)		18.2			6.2			9.0			32.7		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	2%	1%	1%	1%	3%	1%	3%	0%	1%	1%	3%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Shared Lane Traffic (%)													
Lane Group Flow (vph)	18	659	0	122	720	0	212	625	0	95	735	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA		
Protected Phases	5	2		1	6		7	4		3	8		
Permitted Phases	2			6			4			8			
Detector Phase	5	2		1	6		7	4		3	8		
Switch Phase													
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0		
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0		
Total Split (s)	13.2	45.6		13.2	45.6		21.6	48.0		13.2	39.6		
Total Split (%)	11.0%	38.0%		11.0%	38.0%		18.0%	40.0%		11.0%	33.0%		
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5		
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0		
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		
Recall Mode	None	C-Min		None	C-Min		None	None		None	None		
Act Effct Green (s)	50.1	41.4		56.1	49.7		56.6	42.1		47.2	36.2		
Actuated g/C Ratio	0.42	0.34		0.47	0.41		0.47	0.35		0.39	0.30		

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

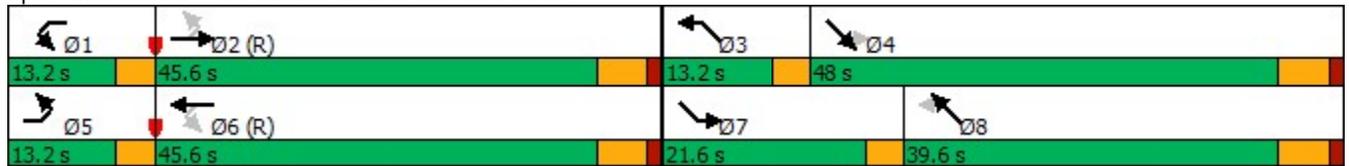


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.06	0.57		0.38	0.52		0.63	0.51		0.28	0.71	
Control Delay	18.4	35.0		22.3	29.1		16.5	21.9		20.0	41.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.4	35.0		22.3	29.1		16.5	21.9		20.0	41.9	
LOS	B	C		C	C		B	C		B	D	
Approach Delay		34.5			28.1			20.5			39.4	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	7	223		53	205		100	207		39	262	
Queue Length 95th (ft)	21	285		92	306		m130	273		71	348	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	364	1163		329	1389		378	1241		358	1036	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.57		0.37	0.52		0.56	0.50		0.27	0.71	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 7.2 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 30.4 Intersection LOS: C
 Intersection Capacity Utilization 73.7% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 	 			 			 			 	
Traffic Volume (vph)	381	561	92	139	615	81	88	608	324	95	591	146
Future Volume (vph)	381	561	92	139	615	81	88	608	324	95	591	146
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3762	1599	1787	3654	1599	1787	3725	1615	1805	3762	1583
Flt Permitted	0.950			0.950			0.284			0.269		
Satd. Flow (perm)	3467	3762	1599	1787	3654	1599	534	3725	1615	511	3762	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	4%	1%	1%	2%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	393	578	95	143	634	84	91	627	334	98	609	151
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	24.0	52.8	52.8	16.8	45.6	45.6	13.2	37.2	24.0	13.2	37.2	16.8
Total Split (%)	20.0%	44.0%	44.0%	14.0%	38.0%	38.0%	11.0%	31.0%	20.0%	11.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	17.9	42.8	42.8	11.9	36.8	36.8	47.6	36.6	60.4	47.9	36.7	54.6
Actuated g/C Ratio	0.15	0.36	0.36	0.10	0.31	0.31	0.40	0.30	0.50	0.40	0.31	0.46

HCM 6th TWSC
 3: Theodore Street & Knapp Street

11/08/2024

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	45	736	703	95	100	113
Future Vol, veh/h	45	736	703	95	100	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	47	767	732	99	104	118

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	831	0	-	0	1260 416
Stage 1	-	-	-	-	782 -
Stage 2	-	-	-	-	478 -
Critical Hdwy	4.1	-	-	-	6.8 6.92
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.31
Pot Cap-1 Maneuver	810	-	-	-	165 588
Stage 1	-	-	-	-	417 -
Stage 2	-	-	-	-	595 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	810	-	-	-	148 588
Mov Cap-2 Maneuver	-	-	-	-	273 -
Stage 1	-	-	-	-	375 -
Stage 2	-	-	-	-	595 -

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	26.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	810	-	-	-	381
HCM Lane V/C Ratio	0.058	-	-	-	0.582
HCM Control Delay (s)	9.7	0.4	-	-	26.8
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	3.5

Intersection												
Int Delay, s/veh	0											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↖↗			↕			↕	
Traffic Vol, veh/h	0	812	0	0	821	0	0	0	0	0	0	0
Future Vol, veh/h	0	812	0	0	821	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	873	0	0	883	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	883	0	0	873	0	0	1315	1756	437	1320	1756	442
Stage 1	-	-	-	-	-	-	873	873	-	883	883	-
Stage 2	-	-	-	-	-	-	442	883	-	437	873	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	775	-	-	781	-	-	118	86	573	117	86	569
Stage 1	-	-	-	-	-	-	316	370	-	311	367	-
Stage 2	-	-	-	-	-	-	570	367	-	574	370	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	775	-	-	781	-	-	118	86	573	117	86	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	86	-	117	86	-
Stage 1	-	-	-	-	-	-	316	370	-	311	367	-
Stage 2	-	-	-	-	-	-	570	367	-	574	370	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	781	-	-	775	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	0
HCM Lane LOS	A	A	-	-	A	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-

Intersection												
Int Delay, s/veh	0.3											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	1	222	0	0	158	16	0	0	0	9	0	2
Future Vol, veh/h	1	222	0	0	158	16	0	0	0	9	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	252	0	0	180	18	0	0	0	10	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	252	0	0	444	452	252	443	443	189
Stage 1	-	-	-	-	-	-	254	254	-	189	189	-
Stage 2	-	-	-	-	-	-	190	198	-	254	254	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1387	-	-	1325	-	-	528	506	792	528	512	858
Stage 1	-	-	-	-	-	-	755	701	-	817	748	-
Stage 2	-	-	-	-	-	-	816	741	-	755	701	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1387	-	-	1325	-	-	526	505	792	527	511	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	526	505	-	527	511	-
Stage 1	-	-	-	-	-	-	754	700	-	816	748	-
Stage 2	-	-	-	-	-	-	814	741	-	754	700	-

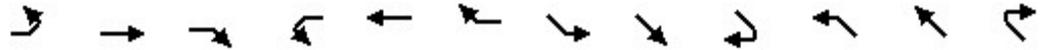
Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	11.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	-	1325	-	-	1387	-	-
HCM Lane V/C Ratio	-	-	-	-	-	0.001	-	-
HCM Control Delay (s)	0	0	0	-	-	7.6	0	-
HCM Lane LOS	A	A	A	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-

Capacity Analysis Summary Sheets
Year 2030 No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

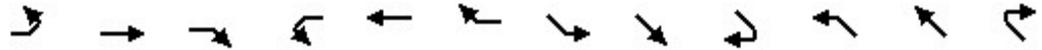
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	12	190	174	74	338	202	97	642	20	122	446	88
Future Volume (vph)	12	190	174	74	338	202	97	642	20	122	446	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.928			0.944			0.995			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3251	0	1671	3309	0	1736	3490	0	1752	3434	0
Flt Permitted	0.391			0.435			0.322			0.222		
Satd. Flow (perm)	743	3251	0	765	3309	0	588	3490	0	410	3434	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	2%	8%	3%	3%	4%	3%	0%	3%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	400	0	81	593	0	107	727	0	134	587	0
Turn Type	pm+pt	NA										
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	42.9		13.2	42.7		13.2	40.7		13.2	40.7	
Total Split (%)	12.0%	39.0%		12.0%	38.8%		12.0%	37.0%		12.0%	37.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	47.6	40.3		52.4	46.1		46.4	35.3		47.4	35.8	
Actuated g/C Ratio	0.43	0.37		0.48	0.42		0.42	0.32		0.43	0.33	

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

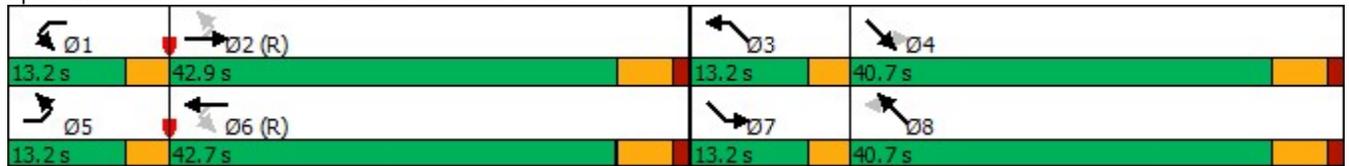


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.03	0.34		0.19	0.43		0.32	0.65		0.47	0.53	
Control Delay	15.9	27.5		17.4	25.0		6.8	22.3		22.9	32.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.9	27.5		17.4	25.0		6.8	22.3		22.9	32.3	
LOS	B	C		B	C		A	C		C	C	
Approach Delay		27.2			24.1			20.3			30.5	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	5	116		33	152		3	234		50	168	
Queue Length 95th (ft)	15	154		58	223		m8	m296		93	236	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	435	1205		445	1387		355	1142		298	1134	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.33		0.18	0.43		0.30	0.64		0.45	0.52	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 11 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 25.1 Intersection LOS: C
 Intersection Capacity Utilization 61.0% ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	201	561	84	118	536	28	58	610	213	73	443	173
Future Volume (vph)	201	561	84	118	536	28	58	610	213	73	443	173
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3519	1599	1736	3585	1455	1656	3689	1568	1805	3689	1599
Flt Permitted	0.950			0.950			0.396			0.262		
Satd. Flow (perm)	3400	3519	1599	1736	3585	1455	690	3689	1568	498	3689	1599
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40				35
Link Distance (ft)		853			840			808				1222
Travel Time (s)		16.6			16.4			13.8				23.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	1%	4%	6%	11%	9%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	623	93	131	596	31	64	678	237	81	492	192
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	14.3	46.2	46.2	14.3	46.2	46.2	13.2	36.3	14.3	13.2	36.3	14.3
Total Split (%)	13.0%	42.0%	42.0%	13.0%	42.0%	42.0%	12.0%	33.0%	13.0%	12.0%	33.0%	13.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	None	C-Min	None						
Act Effct Green (s)	9.7	36.5	36.5	9.8	36.6	36.6	46.6	37.4	53.1	47.1	37.6	53.5
Actuated g/C Ratio	0.09	0.33	0.33	0.09	0.33	0.33	0.42	0.34	0.48	0.43	0.34	0.49

Lanes, Volumes, Timings
 2: Larkin Avenue & Plainfield Road

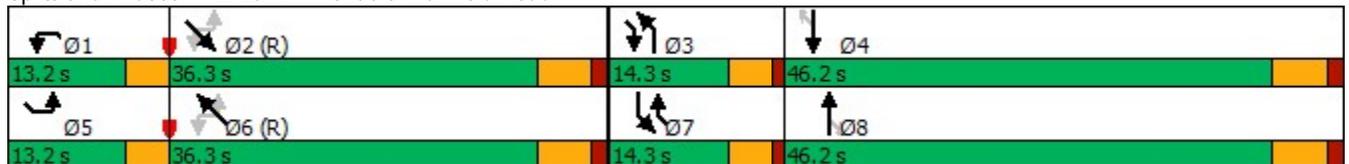
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Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.75	0.53	0.18	0.85	0.50	0.06	0.18	0.54	0.31	0.26	0.39	0.25
Control Delay	65.0	31.1	25.6	91.3	30.4	23.5	20.3	33.4	21.1	15.6	26.3	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	31.1	25.6	91.3	30.4	23.5	20.3	33.4	21.1	15.6	26.3	17.0
LOS	E	C	C	F	C	C	C	C	C	B	C	B
Approach Delay		38.6			40.6			29.6			22.8	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	80	176	44	93	166	14	27	220	110	37	145	99
Queue Length 95th (ft)	#134	230	82	#203	218	35	55	288	177	64	231	161
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	302	1286	584	154	1310	531	383	1253	757	331	1262	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.48	0.16	0.85	0.45	0.06	0.17	0.54	0.31	0.24	0.39	0.25

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 16.5 (15%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 33.0 Intersection LOS: C
 Intersection Capacity Utilization 58.4% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
 3: Theodore Street & Knapp Street

11/08/2024

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	56	319	554	135	42	60
Future Vol, veh/h	56	319	554	135	42	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	5	4	5	2	0
Mvmt Flow	59	336	583	142	44	63

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	725	0	0	940	363
Stage 1	-	-	-	654	-
Stage 2	-	-	-	286	-
Critical Hdwy	4.1	-	-	6.84	6.9
Critical Hdwy Stg 1	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	5.84	-
Follow-up Hdwy	2.2	-	-	3.52	3.3
Pot Cap-1 Maneuver	887	-	-	262	640
Stage 1	-	-	-	479	-
Stage 2	-	-	-	737	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	887	-	-	241	640
Mov Cap-2 Maneuver	-	-	-	350	-
Stage 1	-	-	-	440	-
Stage 2	-	-	-	737	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	887	-	-	-	477
HCM Lane V/C Ratio	0.066	-	-	-	0.225
HCM Control Delay (s)	9.3	0.3	-	-	14.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9

Intersection												
Int Delay, s/veh	6.7											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↖↗			↕			↕	
Traffic Vol, veh/h	0	759	1	0	660	0	0	0	0	0	0	0
Future Vol, veh/h	0	759	1	0	660	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	0	834	1	0	725	0	0	0	0	0	0	0

Major/Minor	Minor2		Minor1			Major1			Major2		
Conflicting Flow All	364	1	1	419	1	0	1	0	0	0	0
Stage 1	1	1	-	0	0	-	-	-	-	-	-
Stage 2	363	0	-	419	1	-	-	-	-	-	-
Critical Hdwy	7.1	6.54	6.2	7.1	6.55	6.2	4.1	-	-	4.1	-
Critical Hdwy Stg 1	6.1	5.54	-	6.1	5.55	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.54	-	6.1	5.55	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.036	3.3	3.5	4.045	3.3	2.2	-	-	2.2	-
Pot Cap-1 Maneuver	596	891	1090	548	889	-	1635	-	-	-	-
Stage 1	1027	891	-	-	-	-	-	-	-	-	-
Stage 2	660	-	-	616	889	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	891	1090	94	889	-	1635	-	-	-	-
Mov Cap-2 Maneuver	-	891	-	94	889	-	-	-	-	-	-
Stage 1	1027	891	-	-	-	-	-	-	-	-	-
Stage 2	660	-	-	39	889	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	12.6		0	0
HCM LOS	B	-		

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SELn2	SELn3	SWL	SWT	SWR
Capacity (veh/h)	1635	-	-	889	-	-	891	891	-	-
HCM Lane V/C Ratio	-	-	-	0.408	-	-	0.468	0.469	-	-
HCM Control Delay (s)	0	-	-	11.8	-	0	12.5	12.6	0	-
HCM Lane LOS	A	-	-	B	-	A	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	2	-	-	2.5	2.5	-	-

Intersection

Int Delay, s/veh 0.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	1	100	0	1	172	14	0	0	0	2	0	1
Future Vol, veh/h	1	100	0	1	172	14	0	0	0	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	3	7	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	115	0	1	198	16	0	0	0	2	0	1

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	214	0	0	115
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.1	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.2	-	-	2.2
Pot Cap-1 Maneuver	1368	-	-	1487
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1368	-	-	1487
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

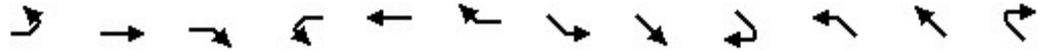
Approach	SE	NW	NE	SW
HCM Control Delay, s	0.1	0	0	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	-	1487	-	-	1368	-	688
HCM Lane V/C Ratio	-	-	0.001	-	-	0.001	-	0.005
HCM Control Delay (s)	0	0	7.4	0	-	7.6	0	10.3
HCM Lane LOS	A	A	A	A	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	0

Capacity Analysis Summary Sheets
Year 2030 No-Build Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

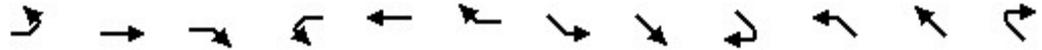
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	33	435	257	115	504	239	244	740	18	203	611	82
Future Volume (vph)	33	435	257	115	504	239	244	740	18	203	611	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%				0%
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.944			0.952			0.997				0.982
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3321	0	1719	3369	0	1736	3525	0	1752	3442	0
Flt Permitted	0.274			0.240			0.193			0.179		
Satd. Flow (perm)	521	3321	0	434	3369	0	353	3525	0	330	3442	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35				35
Link Distance (ft)		933			319			463				1681
Travel Time (s)		18.2			6.2			9.0				32.7
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	2%	5%	2%	2%	4%	2%	6%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	706	0	117	758	0	249	773	0	207	707	0
Turn Type	pm+pt	NA										
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	52.0		13.0	52.0		24.7	40.3		24.7	40.3	
Total Split (%)	10.0%	40.0%		10.0%	40.0%		19.0%	31.0%		19.0%	31.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	56.7	47.4		61.4	53.2		58.6	39.3		55.7	37.8	
Actuated g/C Ratio	0.44	0.36		0.47	0.41		0.45	0.30		0.43	0.29	

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

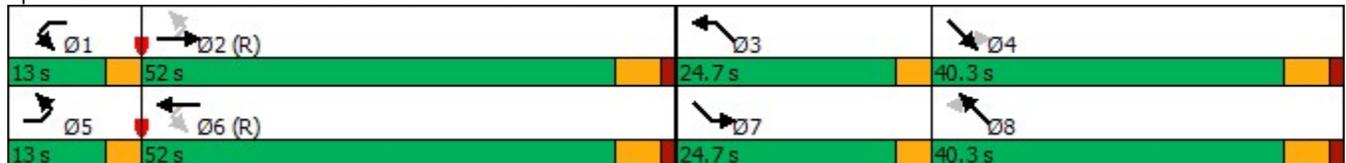


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.12	0.58		0.40	0.55		0.74	0.73		0.67	0.71	
Control Delay	19.7	36.3		23.7	32.4		42.1	58.4		32.3	46.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.7	36.3		23.7	32.4		42.1	58.4		32.3	46.1	
LOS	B	D		C	C		D	E		C	D	
Approach Delay		35.5			31.2			54.4			43.0	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	15	255		55	269		209	363		102	277	
Queue Length 95th (ft)	34	321		93	342		m279	m415		157	366	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	332	1227		298	1379		388	1064		383	1000	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.10	0.58		0.39	0.55		0.64	0.73		0.54	0.71	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 33.8 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 41.8 Intersection LOS: D
 Intersection Capacity Utilization 76.3% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	293	618	66	189	813	78	85	764	338	88	698	145
Future Volume (vph)	293	618	66	189	813	78	85	764	338	88	698	145
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3519	1615	1736	3619	1568	1770	3689	1599	1805	3689	1553
Flt Permitted	0.950			0.950			0.196			0.153		
Satd. Flow (perm)	3467	3519	1615	1736	3619	1568	365	3689	1599	291	3689	1553
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	8%	0%	4%	5%	3%	2%	3%	1%	0%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	631	67	193	830	80	87	780	345	90	712	148
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	27.3	58.5	58.5	18.2	49.4	49.4	13.0	40.3	27.3	13.0	40.3	18.2
Total Split (%)	21.0%	45.0%	45.0%	14.0%	38.0%	38.0%	10.0%	31.0%	21.0%	10.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	None	C-Min	None						
Act Effct Green (s)	16.8	50.0	50.0	13.7	47.0	47.0	48.7	37.6	60.4	48.7	37.6	57.3
Actuated g/C Ratio	0.13	0.38	0.38	0.11	0.36	0.36	0.37	0.29	0.46	0.37	0.29	0.44

Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

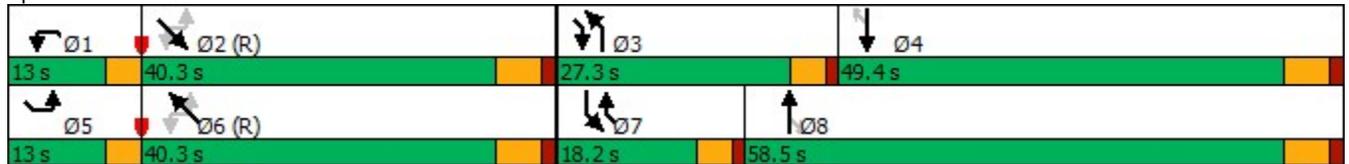
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Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.67	0.47	0.11	1.05	0.64	0.14	0.38	0.73	0.46	0.43	0.67	0.22
Control Delay	61.1	30.9	25.1	137.3	37.1	28.8	30.7	47.5	26.7	29.3	28.4	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	30.9	25.1	137.3	37.1	28.8	30.7	47.5	26.7	29.3	28.4	15.6
LOS	E	C	C	F	D	C	C	D	C	C	C	B
Approach Delay		39.5			54.1			40.3			26.5	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	125	201	35	~178	292	44	47	324	205	28	140	40
Queue Length 95th (ft)	167	254	67	#334	385	85	85	401	274	m63	195	m59
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	608	1421	652	183	1315	570	241	1065	816	221	1066	685
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.10	1.05	0.63	0.14	0.36	0.73	0.42	0.41	0.67	0.22

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 6.5 (5%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 40.6 Intersection LOS: D
 Intersection Capacity Utilization 71.7% ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
3: Theodore Street & Knapp Street

11/08/2024

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	62	699	745	109	68	113
Future Vol, veh/h	62	699	745	109	68	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	4	3	2	1	1
Mvmt Flow	66	744	793	116	72	120

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	909	0	-	0	1355 455
Stage 1	-	-	-	-	851 -
Stage 2	-	-	-	-	504 -
Critical Hdwy	4.1	-	-	-	6.82 6.92
Critical Hdwy Stg 1	-	-	-	-	5.82 -
Critical Hdwy Stg 2	-	-	-	-	5.82 -
Follow-up Hdwy	2.2	-	-	-	3.51 3.31
Pot Cap-1 Maneuver	757	-	-	-	142 555
Stage 1	-	-	-	-	381 -
Stage 2	-	-	-	-	575 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	757	-	-	-	121 555
Mov Cap-2 Maneuver	-	-	-	-	238 -
Stage 1	-	-	-	-	324 -
Stage 2	-	-	-	-	575 -

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	24.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	757	-	-	-	370
HCM Lane V/C Ratio	0.087	-	-	-	0.52
HCM Control Delay (s)	10.2	0.6	-	-	24.8
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	2.9

Intersection												
Int Delay, s/veh	0											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↖↗			↔			↔	
Traffic Vol, veh/h	0	1002	0	0	883	0	0	0	0	0	0	0
Future Vol, veh/h	0	1002	0	0	883	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	1077	0	0	949	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	949	0	0	1077	0	0	1552	2026	539	1488	2026	475
Stage 1	-	-	-	-	-	-	1077	1077	-	949	949	-
Stage 2	-	-	-	-	-	-	475	949	-	539	1077	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	732	-	-	655	-	-	79	58	492	88	58	541
Stage 1	-	-	-	-	-	-	237	298	-	284	342	-
Stage 2	-	-	-	-	-	-	545	342	-	499	298	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	732	-	-	655	-	-	79	58	492	88	58	541
Mov Cap-2 Maneuver	-	-	-	-	-	-	79	58	-	88	58	-
Stage 1	-	-	-	-	-	-	237	298	-	284	342	-
Stage 2	-	-	-	-	-	-	545	342	-	499	298	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	0			0			0			0		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	655	-	-	732	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	0
HCM Lane LOS	A	A	-	-	A	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-

Intersection												
Int Delay, s/veh	0.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	2	182	0	0	170	18	0	0	0	25	0	7
Future Vol, veh/h	2	182	0	0	170	18	0	0	0	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	2	196	0	0	183	19	0	0	0	27	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	202	0	0	196	0	0	397	402	196	393	393	193
Stage 1	-	-	-	-	-	-	200	200	-	193	193	-
Stage 2	-	-	-	-	-	-	197	202	-	200	200	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1382	-	-	1389	-	-	567	540	850	570	546	854
Stage 1	-	-	-	-	-	-	806	739	-	813	745	-
Stage 2	-	-	-	-	-	-	809	738	-	806	739	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1382	-	-	1389	-	-	561	539	850	569	545	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	561	539	-	569	545	-
Stage 1	-	-	-	-	-	-	804	738	-	811	745	-
Stage 2	-	-	-	-	-	-	802	738	-	804	738	-

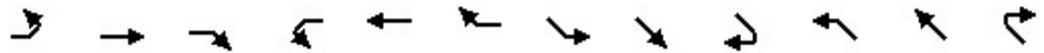
Approach	SE	NW	NE	SW
HCM Control Delay, s	0.1	0	0	11.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1	
Capacity (veh/h)	-	-	1389	-	-	1382	-	-	614
HCM Lane V/C Ratio	-	-	-	-	-	0.002	-	-	0.056
HCM Control Delay (s)	0	0	0	-	-	7.6	0	-	11.2
HCM Lane LOS	A	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.2

Capacity Analysis Summary Sheets
Year 2030 No-Build Saturday Midday Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

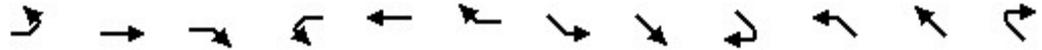
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	18	426	236	122	459	264	214	587	41	95	569	170
Future Volume (vph)	18	426	236	122	459	264	214	587	41	95	569	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.947			0.945			0.990			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3363	0	1787	3353	0	1787	3476	0	1787	3437	0
Flt Permitted	0.297			0.243			0.165			0.337		
Satd. Flow (perm)	564	3363	0	457	3353	0	310	3476	0	634	3437	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	1%	1%	3%	1%	3%	0%	1%	1%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	682	0	126	745	0	221	647	0	98	762	0
Turn Type	pm+pt	NA										
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	45.6		13.2	45.6		21.6	48.0		13.2	39.6	
Total Split (%)	11.0%	38.0%		11.0%	38.0%		18.0%	40.0%		11.0%	33.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	50.0	41.3		56.0	49.6		56.7	42.1		47.1	36.0	
Actuated g/C Ratio	0.42	0.34		0.47	0.41		0.47	0.35		0.39	0.30	

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

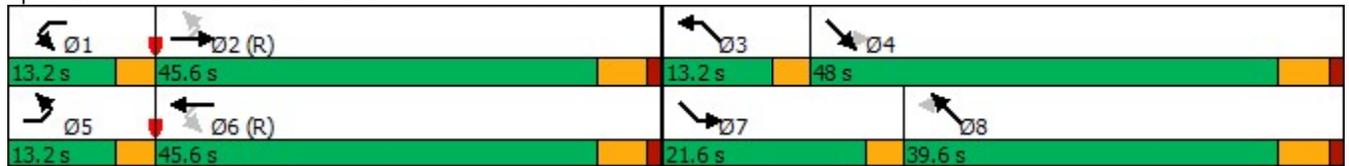


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.06	0.59		0.40	0.54		0.68	0.53		0.30	0.74	
Control Delay	18.4	35.4		22.6	29.5		18.1	22.0		20.3	43.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.4	35.4		22.6	29.5		18.1	22.0		20.3	43.2	
LOS	B	D		C	C		B	C		C	D	
Approach Delay		34.9			28.5			21.0			40.6	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	8	232		55	214		101	214		41	275	
Queue Length 95th (ft)	22	297		94	320		m131	286		73	363	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	351	1156		320	1387		368	1229		348	1030	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.59		0.39	0.54		0.60	0.53		0.28	0.74	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 7.2 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 31.0 Intersection LOS: C
 Intersection Capacity Utilization 75.8% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	395	582	95	144	638	84	91	630	336	99	613	151
Future Volume (vph)	395	582	95	144	638	84	91	630	336	99	613	151
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3762	1599	1787	3654	1599	1787	3725	1615	1805	3762	1583
Flt Permitted	0.950			0.950			0.262			0.249		
Satd. Flow (perm)	3467	3762	1599	1787	3654	1599	493	3725	1615	473	3762	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	4%	1%	1%	2%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	407	600	98	148	658	87	94	649	346	102	632	156
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	24.0	52.8	52.8	16.8	45.6	45.6	13.2	37.2	24.0	13.2	37.2	16.8
Total Split (%)	20.0%	44.0%	44.0%	14.0%	38.0%	38.0%	11.0%	31.0%	20.0%	11.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	None	C-Min	None						
Act Effct Green (s)	18.0	43.5	43.5	12.0	37.4	37.4	46.9	35.8	59.8	47.2	35.9	53.9
Actuated g/C Ratio	0.15	0.36	0.36	0.10	0.31	0.31	0.39	0.30	0.50	0.39	0.30	0.45

Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

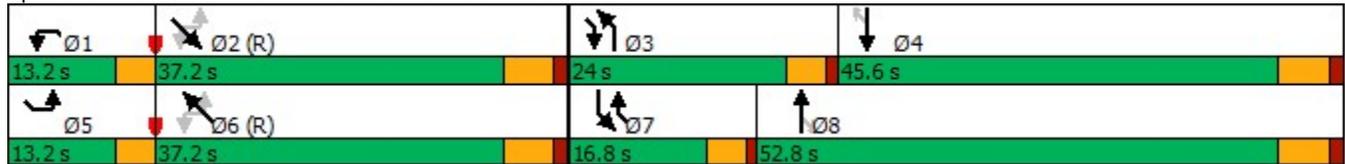
11/08/2024

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.78	0.44	0.17	0.83	0.58	0.17	0.33	0.58	0.43	0.36	0.56	0.22
Control Delay	60.1	29.7	25.7	87.6	36.6	30.2	26.2	39.7	22.2	18.2	30.7	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	29.7	25.7	87.6	36.6	30.2	26.2	39.7	22.2	18.2	30.7	14.8
LOS	E	C	C	F	D	C	C	D	C	B	C	B
Approach Delay		40.5			44.5			33.0			26.5	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	156	175	49	114	218	48	46	237	175	27	232	86
Queue Length 95th (ft)	211	225	88	#226	278	88	84	304	258	m49	331	m117
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	563	1467	623	183	1205	527	301	1110	824	297	1125	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.41	0.16	0.81	0.55	0.17	0.31	0.58	0.42	0.34	0.56	0.22

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 7.2 (6%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 36.2 Intersection LOS: D
 Intersection Capacity Utilization 67.1% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
 3: Theodore Street & Knapp Street

11/08/2024

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	45	765	732	95	100	113
Future Vol, veh/h	45	765	732	95	100	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	47	797	763	99	104	118

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	862	0	-	0	1306 431
Stage 1	-	-	-	-	813 -
Stage 2	-	-	-	-	493 -
Critical Hdwy	4.1	-	-	-	6.8 6.92
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.31
Pot Cap-1 Maneuver	789	-	-	-	154 575
Stage 1	-	-	-	-	402 -
Stage 2	-	-	-	-	585 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	789	-	-	-	138 575
Mov Cap-2 Maneuver	-	-	-	-	261 -
Stage 1	-	-	-	-	359 -
Stage 2	-	-	-	-	585 -

Approach	EB	WB	SB
HCM Control Delay, s	1	0	28.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	789	-	-	-	367
HCM Lane V/C Ratio	0.059	-	-	-	0.605
HCM Control Delay (s)	9.9	0.5	-	-	28.7
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	3.8

Intersection												
Int Delay, s/veh	0											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗			↖↗			↔			↔	
Traffic Vol, veh/h	0	842	0	0	851	0	0	0	0	0	0	0
Future Vol, veh/h	0	842	0	0	851	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	905	0	0	915	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	915	0	0	905	0	0	1363	1820	453	1368	1820	458
Stage 1	-	-	-	-	-	-	905	905	-	915	915	-
Stage 2	-	-	-	-	-	-	458	915	-	453	905	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	754	-	-	760	-	-	109	78	559	108	78	555
Stage 1	-	-	-	-	-	-	302	358	-	298	354	-
Stage 2	-	-	-	-	-	-	557	354	-	561	358	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	754	-	-	760	-	-	109	78	559	108	78	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	78	-	108	78	-
Stage 1	-	-	-	-	-	-	302	358	-	298	354	-
Stage 2	-	-	-	-	-	-	557	354	-	561	358	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	0			0			0			0		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	760	-	-	754	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	0
HCM Lane LOS	A	A	-	-	A	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-

Intersection												
Int Delay, s/veh	0.3											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	1	222	0	0	158	16	0	0	0	9	0	2
Future Vol, veh/h	1	222	0	0	158	16	0	0	0	9	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	252	0	0	180	18	0	0	0	10	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	252	0	0	444	452	252	443	443	189
Stage 1	-	-	-	-	-	-	254	254	-	189	189	-
Stage 2	-	-	-	-	-	-	190	198	-	254	254	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1387	-	-	1325	-	-	528	506	792	528	512	858
Stage 1	-	-	-	-	-	-	755	701	-	817	748	-
Stage 2	-	-	-	-	-	-	816	741	-	755	701	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1387	-	-	1325	-	-	526	505	792	527	511	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	526	505	-	527	511	-
Stage 1	-	-	-	-	-	-	754	700	-	816	748	-
Stage 2	-	-	-	-	-	-	814	741	-	754	700	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	11.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	-	1325	-	-	1387	-	-
HCM Lane V/C Ratio	-	-	-	-	-	0.001	-	-
HCM Control Delay (s)	0	0	0	-	-	7.6	0	-
HCM Lane LOS	A	A	A	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-

Capacity Analysis Summary Sheets
Year 2030 Total Projected Weekday Morning Peak Hour

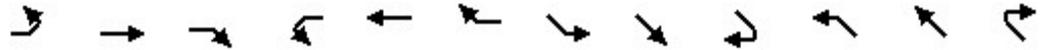
Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

02/28/2025

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Traffic Volume (vph)	32	194	174	66	346	200	108	673	38	119	479	82	
Future Volume (vph)	32	194	174	66	346	200	108	673	38	119	479	82	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)		0%			0%			0%				0%	
Storage Length (ft)	180		0	125		0	310		0	270		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	115			115			220			150			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	
Ped Bike Factor		0.929			0.945			0.992			0.978		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1805	3254	0	1671	3312	0	1736	3482	0	1752	3442	0	
Flt Permitted	0.358			0.441			0.303			0.199			
Satd. Flow (perm)	680	3254	0	776	3312	0	554	3482	0	367	3442	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		35			35			35			35		
Link Distance (ft)		933			319			234			1681		
Travel Time (s)		18.2			6.2			4.6			32.7		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	4%	2%	8%	3%	3%	4%	3%	0%	3%	3%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Shared Lane Traffic (%)													
Lane Group Flow (vph)	35	404	0	73	600	0	119	782	0	131	616	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA		
Protected Phases	5	2		1	6		7	4		3	8		
Permitted Phases	2			6			4			8			
Detector Phase	5	2		1	6		7	4		3	8		
Switch Phase													
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0		
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0		
Total Split (s)	13.2	42.9		13.2	42.7		13.2	40.7		13.2	40.7		
Total Split (%)	12.0%	39.0%		12.0%	38.8%		12.0%	37.0%		12.0%	37.0%		
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5		
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0		
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		
Recall Mode	None	C-Min		None	C-Min		None	None		None	None		
Act Effct Green (s)	47.7	39.6		50.6	42.8		47.6	36.2		48.0	36.4		
Actuated g/C Ratio	0.43	0.36		0.46	0.39		0.43	0.33		0.44	0.33		

Lanes, Volumes, Timings
 1: Plainfield Road & Theodore Street

02/28/2025

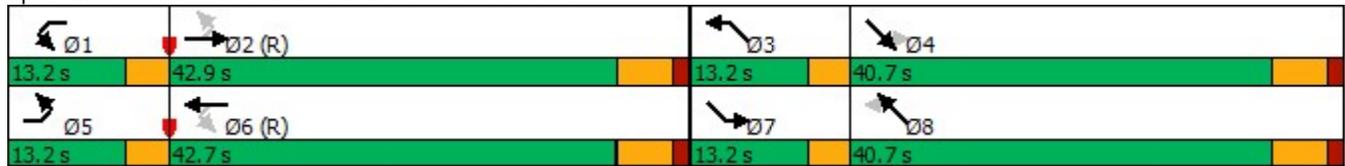


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.10	0.35		0.17	0.47		0.36	0.68		0.48	0.54	
Control Delay	16.6	27.8		17.4	27.6		10.3	24.6		23.2	32.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.6	27.8		17.4	27.6		10.3	24.6		23.2	32.3	
LOS	B	C		B	C		B	C		C	C	
Approach Delay		26.9			26.5			22.7			30.7	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	13	112		28	174		13	261		51	186	
Queue Length 95th (ft)	31	156		54	231		m22	m319		91	249	
Internal Link Dist (ft)		853			239			154			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	407	1193		439	1287		348	1150		285	1142	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.09	0.34		0.17	0.47		0.34	0.68		0.46	0.54	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 11 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 26.5
 Intersection LOS: C
 Intersection Capacity Utilization 62.4%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

02/28/2025

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 	 			 			 			 	
Traffic Volume (vph)	201	561	84	130	536	28	58	640	213	73	474	185
Future Volume (vph)	201	561	84	130	536	28	58	640	213	73	474	185
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3519	1599	1736	3585	1455	1656	3689	1568	1805	3689	1599
Flt Permitted	0.950			0.950			0.367			0.239		
Satd. Flow (perm)	3400	3519	1599	1736	3585	1455	640	3689	1568	454	3689	1599
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1023	
Travel Time (s)		16.6			16.4			13.8			19.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	1%	4%	6%	11%	9%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	623	93	144	596	31	64	711	237	81	527	206
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	14.3	46.2	46.2	14.3	46.2	46.2	13.2	36.3	14.3	13.2	36.3	14.3
Total Split (%)	13.0%	42.0%	42.0%	13.0%	42.0%	42.0%	12.0%	33.0%	13.0%	12.0%	33.0%	13.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	9.7	36.5	36.5	10.2	37.1	37.1	46.2	36.9	52.6	46.7	37.2	53.5
Actuated g/C Ratio	0.09	0.33	0.33	0.09	0.34	0.34	0.42	0.34	0.48	0.42	0.34	0.49

Lanes, Volumes, Timings
 2: Larkin Avenue & Plainfield Road

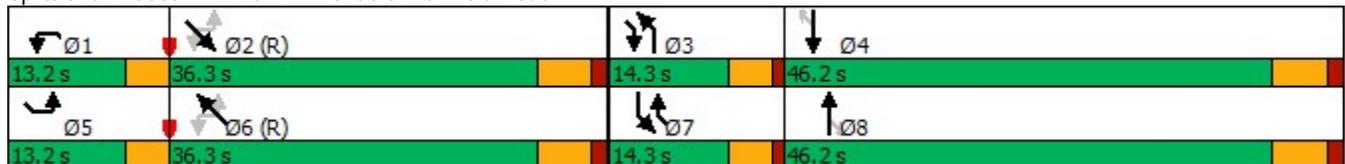
02/28/2025

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.75	0.53	0.18	0.89	0.49	0.06	0.19	0.57	0.32	0.28	0.42	0.27
Control Delay	65.0	31.1	25.6	98.2	30.1	23.5	20.5	34.2	21.2	17.5	28.8	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	31.1	25.6	98.2	30.1	23.5	20.5	34.2	21.2	17.5	28.8	17.4
LOS	E	C	C	F	C	C	C	C	C	B	C	B
Approach Delay		38.6			42.6			30.3			24.8	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	80	176	44	103	166	14	27	233	110	34	181	105
Queue Length 95th (ft)	#134	230	82	#226	218	35	55	304	177	61	244	172
Internal Link Dist (ft)		773			760			728			943	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	302	1286	584	161	1310	531	364	1238	751	315	1248	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.48	0.16	0.89	0.45	0.06	0.18	0.57	0.32	0.26	0.42	0.27

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 16.5 (15%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 33.9 Intersection LOS: C
 Intersection Capacity Utilization 59.9% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
 3: Theodore Street & Knapp Street

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↔	↔↔		↔↔	
Traffic Vol, veh/h	67	317	520	186	62	92
Future Vol, veh/h	67	317	520	186	62	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	5	4	5	2	0
Mvmt Flow	71	334	547	196	65	97

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	743	0	-	0	954 372
Stage 1	-	-	-	-	645 -
Stage 2	-	-	-	-	309 -
Critical Hdwy	4.1	-	-	-	6.84 6.9
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.2	-	-	-	3.52 3.3
Pot Cap-1 Maneuver	873	-	-	-	257 631
Stage 1	-	-	-	-	484 -
Stage 2	-	-	-	-	718 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	873	-	-	-	231 631
Mov Cap-2 Maneuver	-	-	-	-	343 -
Stage 1	-	-	-	-	436 -
Stage 2	-	-	-	-	718 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.9	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	873	-	-	-	472
HCM Lane V/C Ratio	0.081	-	-	-	0.343
HCM Ctrl Dly (s/v)	9.5	0.3	-	-	16.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q (veh)	0.3	-	-	-	1.5

HCM 6th TWSC

4: Access Drive/East Access Drive & Plainfield Road

Intersection												
Int Delay, s/veh	0.6											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↓			↑↑	↑		↑↓				↑
Traffic Vol, veh/h	0	819	1	0	636	75	0	0	0	0	0	78
Future Vol, veh/h	0	819	1	0	636	75	0	0	0	0	0	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	115	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	0	900	1	0	699	82	0	0	0	0	0	86

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	901	0	0	1251	1600	451	-	-	350
Stage 1	-	-	-	-	-	-	901	901	-	-	-	-
Stage 2	-	-	-	-	-	-	350	699	-	-	-	-
Critical Hdwy	-	-	-	4.1	-	-	7.5	6.5	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	763	-	0	131	107	561	0	0	652
Stage 1	0	-	-	-	-	0	303	360	-	0	0	-
Stage 2	0	-	-	-	-	0	645	445	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	763	-	-	114	107	561	-	-	652
Mov Cap-2 Maneuver	-	-	-	-	-	-	114	107	-	-	-	-
Stage 1	-	-	-	-	-	-	303	360	-	-	-	-
Stage 2	-	-	-	-	-	-	560	445	-	-	-	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0	0	0	11.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SERSWLn1
Capacity (veh/h)	-	763	-	-	652
HCM Lane V/C Ratio	-	-	-	-	0.131
HCM Ctrl Dly (s/v)	0	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q (veh)	-	0	-	-	0.5

HCM 6th TWSC

7: Site Access/Willow Circle Drive & Knapp Street

Intersection												
Int Delay, s/veh	3.4											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	1	94	20	79	159	14	28	0	60	2	0	1
Future Vol, veh/h	1	94	20	79	159	14	28	0	60	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	3	7	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	108	23	91	183	16	32	0	69	2	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	199	0	0	131	0	0	496	503	120	529	506	191
Stage 1	-	-	-	-	-	-	122	122	-	373	373	-
Stage 2	-	-	-	-	-	-	374	381	-	156	133	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1385	-	-	1467	-	-	487	474	937	463	472	856
Stage 1	-	-	-	-	-	-	887	799	-	652	622	-
Stage 2	-	-	-	-	-	-	651	617	-	851	790	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1385	-	-	1467	-	-	460	440	937	406	438	856
Mov Cap-2 Maneuver	-	-	-	-	-	-	460	440	-	406	438	-
Stage 1	-	-	-	-	-	-	886	798	-	651	578	-
Stage 2	-	-	-	-	-	-	605	574	-	788	789	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0.1	2.4	10.5	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	460	937	1467	-	-	1385	-	492
HCM Lane V/C Ratio	0.07	0.074	0.062	-	-	0.001	-	0.007
HCM Ctrl Dly (s/v)	13.4	9.1	7.6	0	-	7.6	0	12.4
HCM Lane LOS	B	A	A	A	-	A	A	B
HCM 95th %tile Q (veh)	0.2	0.2	0.2	-	-	0	-	0

HCM 6th TWSC
 8: Plainfield Road & West Site Access Drive

Intersection						
Int Delay, s/veh	4.8					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	76	726	680	34	94	23
Future Vol, veh/h	76	726	680	34	94	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	4	5	0	0	0
Mvmt Flow	80	764	716	36	99	24

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	752	0	-	0	1258 358
Stage 1	-	-	-	-	716 -
Stage 2	-	-	-	-	542 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	867	-	-	-	166 644
Stage 1	-	-	-	-	450 -
Stage 2	-	-	-	-	553 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	867	-	-	-	151 644
Mov Cap-2 Maneuver	-	-	-	-	151 -
Stage 1	-	-	-	-	409 -
Stage 2	-	-	-	-	553 -

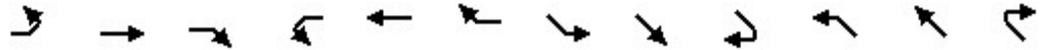
Approach	SE	NW	SW
HCM Ctrl Dly, s/v	0.9	0	61.3
HCM LOS			F

Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	867	- 178
HCM Lane V/C Ratio	-	-	0.092	- 0.692
HCM Ctrl Dly (s/v)	-	-	9.6	- 61.3
HCM Lane LOS	-	-	A	- F
HCM 95th %tile Q (veh)	-	-	0.3	- 4.2

Capacity Analysis Summary Sheets
Year 2030 Total Projected Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

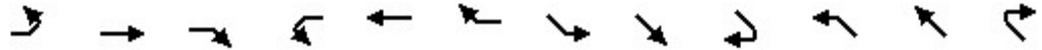
02/28/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	52	436	257	108	511	237	252	766	32	201	637	78
Future Volume (vph)	52	436	257	108	511	237	252	766	32	201	637	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.944			0.952			0.994			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3321	0	1719	3369	0	1736	3512	0	1752	3449	0
Flt Permitted	0.251			0.244			0.174			0.155		
Satd. Flow (perm)	477	3321	0	442	3369	0	318	3512	0	286	3449	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			234			1681	
Travel Time (s)		18.2			6.2			4.6			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	2%	5%	2%	2%	4%	2%	6%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	707	0	110	763	0	257	815	0	205	730	0
Turn Type	pm+pt	NA										
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	52.0		13.0	52.0		24.7	40.3		24.7	40.3	
Total Split (%)	10.0%	40.0%		10.0%	40.0%		19.0%	31.0%		19.0%	31.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	57.4	47.4		60.5	50.6		59.1	39.2		55.4	37.4	
Actuated g/C Ratio	0.44	0.36		0.47	0.39		0.45	0.30		0.43	0.29	

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

02/28/2025

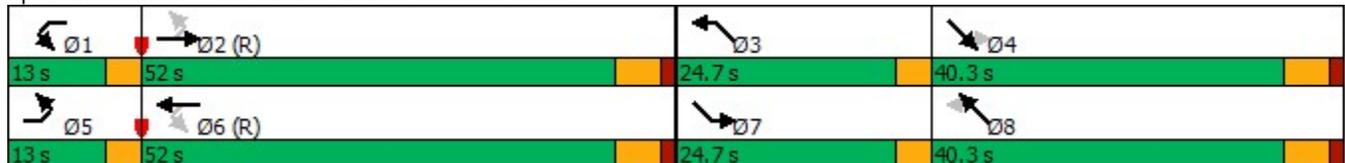


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.18	0.58		0.38	0.58		0.77	0.77		0.69	0.74	
Control Delay	20.3	36.1		23.1	34.6		43.4	58.6		35.2	47.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.3	36.1		23.1	34.6		43.4	58.6		35.2	47.6	
LOS	C	D		C	C		D	E		D	D	
Approach Delay		35.0			33.2			55.0			44.9	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	24	256		51	274		210	380		101	290	
Queue Length 95th (ft)	48	322		88	351		m274	m433		166	380	
Internal Link Dist (ft)		853			239			154			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	314	1213		299	1310		377	1058		369	991	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.17	0.58		0.37	0.58		0.68	0.77		0.56	0.74	

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 33.8 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 43.0 Intersection LOS: D
 Intersection Capacity Utilization 77.0% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

02/28/2025

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	 	 			 			 			 	
Traffic Volume (vph)	293	618	66	199	813	78	85	789	338	88	723	154
Future Volume (vph)	293	618	66	199	813	78	85	789	338	88	723	154
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3519	1615	1736	3619	1568	1770	3689	1599	1805	3689	1553
Flt Permitted	0.950			0.950			0.180			0.139		
Satd. Flow (perm)	3467	3519	1615	1736	3619	1568	335	3689	1599	264	3689	1553
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1023	
Travel Time (s)		16.6			16.4			13.8			19.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	8%	0%	4%	5%	3%	2%	3%	1%	0%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	631	67	203	830	80	87	805	345	90	738	157
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	27.3	58.5	58.5	18.2	49.4	49.4	13.0	40.3	27.3	13.0	40.3	18.2
Total Split (%)	21.0%	45.0%	45.0%	14.0%	38.0%	38.0%	10.0%	31.0%	21.0%	10.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	16.8	50.1	50.1	13.7	47.0	47.0	48.7	37.6	60.4	48.7	37.6	57.3
Actuated g/C Ratio	0.13	0.39	0.39	0.11	0.36	0.36	0.37	0.29	0.46	0.37	0.29	0.44

Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

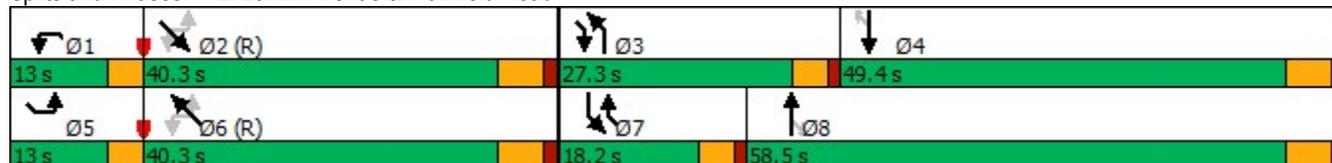
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Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.67	0.47	0.11	1.12	0.64	0.14	0.39	0.76	0.46	0.45	0.69	0.23
Control Delay	61.1	30.9	25.1	153.1	37.1	28.8	31.2	48.4	26.7	31.9	32.0	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	30.9	25.1	153.1	37.1	28.8	31.2	48.4	26.7	31.9	32.0	16.4
LOS	E	C	C	F	D	C	C	D	C	C	C	B
Approach Delay		39.5			57.7			41.1			29.5	
Approach LOS		D			E			D			C	
Queue Length 50th (ft)	125	201	35	~195	292	44	47	337	205	31	166	46
Queue Length 95th (ft)	167	254	67	#353	385	85	85	417	274	m67	254	m66
Internal Link Dist (ft)		773			760			728			943	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	608	1421	652	182	1315	570	232	1065	816	213	1066	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.10	1.12	0.63	0.14	0.38	0.76	0.42	0.42	0.69	0.23

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 6.5 (5%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 42.4 Intersection LOS: D
 Intersection Capacity Utilization 72.4% ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
 3: Theodore Street & Knapp Street

Intersection						
Int Delay, s/veh	4.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	74	692	718	151	89	138
Future Vol, veh/h	74	692	718	151	89	138
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	4	3	2	1	1
Mvmt Flow	79	736	764	161	95	147

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	925	0	-	0	1371 463
Stage 1	-	-	-	-	845 -
Stage 2	-	-	-	-	526 -
Critical Hdwy	4.1	-	-	-	6.82 6.92
Critical Hdwy Stg 1	-	-	-	-	5.82 -
Critical Hdwy Stg 2	-	-	-	-	5.82 -
Follow-up Hdwy	2.2	-	-	-	3.51 3.31
Pot Cap-1 Maneuver	747	-	-	-	138 548
Stage 1	-	-	-	-	384 -
Stage 2	-	-	-	-	560 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	747	-	-	-	113 548
Mov Cap-2 Maneuver	-	-	-	-	230 -
Stage 1	-	-	-	-	315 -
Stage 2	-	-	-	-	560 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.7	0	34.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	747	-	-	-	355
HCM Lane V/C Ratio	0.105	-	-	-	0.68
HCM Ctrl Dly (s/v)	10.4	0.8	-	-	34.2
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q (veh)	0.4	-	-	-	4.8

HCM 6th TWSC

4: Access Drive/East Access Drive & Plainfield Road

Intersection												
Int Delay, s/veh	0.4											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↓			↑↑	↑		↑↓				↑
Traffic Vol, veh/h	0	1050	0	0	858	68	0	0	0	0	0	66
Future Vol, veh/h	0	1050	0	0	858	68	0	0	0	0	0	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	115	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	1129	0	0	923	73	0	0	0	0	0	71

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	1129	0	0	1591	2052	565	-	-	462
Stage 1	-	-	-	-	-	-	1129	1129	-	-	-	-
Stage 2	-	-	-	-	-	-	462	923	-	-	-	-
Critical Hdwy	-	-	-	4.1	-	-	7.5	6.5	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	626	-	0	73	56	473	0	0	552
Stage 1	0	-	-	-	-	0	221	281	-	0	0	-
Stage 2	0	-	-	-	-	0	554	351	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	626	-	-	64	56	473	-	-	552
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	56	-	-	-	-
Stage 1	-	-	-	-	-	-	221	281	-	-	-	-
Stage 2	-	-	-	-	-	-	483	351	-	-	-	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0	0	0	12.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SERSWLn1
Capacity (veh/h)	-	626	-	-	552
HCM Lane V/C Ratio	-	-	-	-	0.129
HCM Ctrl Dly (s/v)	0	0	-	-	12.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q (veh)	-	0	-	-	0.4

HCM 6th TWSC

7: Site Access/Willow Circle Drive & Knapp Street

Intersection												
Int Delay, s/veh	3.1											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	2	173	19	61	163	18	16	0	55	25	0	7
Future Vol, veh/h	2	173	19	61	163	18	16	0	55	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	2	186	20	66	175	19	17	0	59	27	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	194	0	0	206	0	0	521	526	196	547	527	185
Stage 1	-	-	-	-	-	-	200	200	-	317	317	-
Stage 2	-	-	-	-	-	-	321	326	-	230	210	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1391	-	-	1377	-	-	469	460	850	451	459	862
Stage 1	-	-	-	-	-	-	806	739	-	698	658	-
Stage 2	-	-	-	-	-	-	695	652	-	777	732	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1391	-	-	1377	-	-	445	434	850	402	433	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	445	434	-	402	433	-
Stage 1	-	-	-	-	-	-	804	738	-	697	622	-
Stage 2	-	-	-	-	-	-	652	617	-	721	731	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0.1	2	10.5	13.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	445	850	1377	-	-	1391	-	455
HCM Lane V/C Ratio	0.039	0.07	0.048	-	-	0.002	-	0.076
HCM Ctrl Dly (s/v)	13.4	9.6	7.7	0	-	7.6	0	13.6
HCM Lane LOS	B	A	A	A	-	A	A	B
HCM 95th %tile Q (veh)	0.1	0.2	0.2	-	-	0	-	0.2

HCM 6th TWSC
 8: Plainfield Road & West Site Access Drive

Intersection						
Int Delay, s/veh	6					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	61	976	899	25	74	18
Future Vol, veh/h	61	976	899	25	74	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	2	3	0	0	0
Mvmt Flow	64	1027	946	26	78	19

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	972	0	-	0	1588 473
Stage 1	-	-	-	-	946 -
Stage 2	-	-	-	-	642 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	717	-	-	-	101 543
Stage 1	-	-	-	-	343 -
Stage 2	-	-	-	-	492 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	717	-	-	-	92 543
Mov Cap-2 Maneuver	-	-	-	-	92 -
Stage 1	-	-	-	-	312 -
Stage 2	-	-	-	-	492 -

Approach	SE	NW	SW
HCM Ctrl Dly, s/v	0.6	0	127.8
HCM LOS			F

Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	717	- 110
HCM Lane V/C Ratio	-	-	0.09	- 0.88
HCM Ctrl Dly (s/v)	-	-	10.5	- 127.8
HCM Lane LOS	-	-	B	- F
HCM 95th %tile Q (veh)	-	-	0.3	- 5.3

Capacity Analysis Summary Sheets
Year 2030 Total Projected Saturday Midday Peak Hour

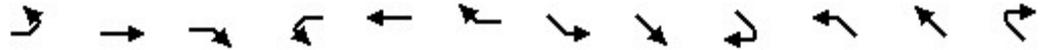
Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

02/28/2025

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR	
Lane Configurations													
Traffic Volume (vph)	40	427	236	115	461	266	227	614	60	94	600	163	
Future Volume (vph)	40	427	236	115	461	266	227	614	60	94	600	163	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)		0%			0%			0%			0%		
Storage Length (ft)	180		0	125		0	310		0	270		0	
Storage Lanes	1		0	1		0	1		0	1		0	
Taper Length (ft)	115			115			220			150			
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	
Ped Bike Factor		0.947			0.945			0.987			0.968		
Flt Protected	0.950			0.950			0.950			0.950			
Satd. Flow (prot)	1805	3363	0	1787	3353	0	1787	3468	0	1787	3445	0	
Flt Permitted	0.258			0.242			0.151			0.309			
Satd. Flow (perm)	490	3363	0	455	3353	0	284	3468	0	581	3445	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		35			35			35			35		
Link Distance (ft)		933			319			234			1681		
Travel Time (s)		18.2			6.2			4.6			32.7		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	2%	1%	1%	1%	3%	1%	3%	0%	1%	1%	3%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Shared Lane Traffic (%)													
Lane Group Flow (vph)	41	683	0	119	749	0	234	695	0	97	787	0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA		
Protected Phases	5	2		1	6		7	4		3	8		
Permitted Phases	2			6			4			8			
Detector Phase	5	2		1	6		7	4		3	8		
Switch Phase													
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0		
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0		
Total Split (s)	13.2	45.6		13.2	45.6		21.6	48.0		13.2	39.6		
Total Split (%)	11.0%	38.0%		11.0%	38.0%		18.0%	40.0%		11.0%	33.0%		
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5		
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5		
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0		
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		
Recall Mode	None	C-Min		None	C-Min		None	None		None	None		
Act Effct Green (s)	50.5	41.0		54.8	44.7		57.1	42.5		47.0	35.9		
Actuated g/C Ratio	0.42	0.34		0.46	0.37		0.48	0.35		0.39	0.30		

Lanes, Volumes, Timings
 1: Plainfield Road & Theodore Street

02/28/2025

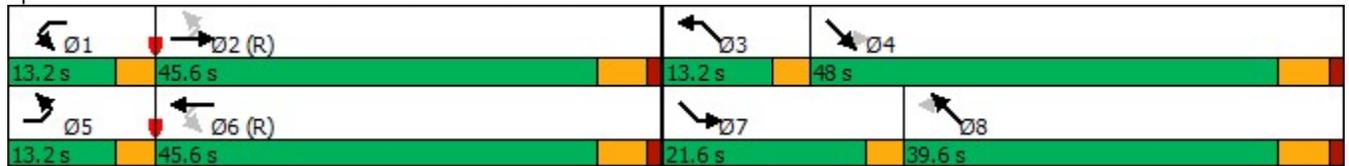


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.14	0.59		0.39	0.60		0.72	0.57		0.31	0.76	
Control Delay	19.3	35.6		22.5	33.8		20.1	20.6		20.6	44.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.3	35.6		22.5	33.8		20.1	20.6		20.6	44.3	
LOS	B	D		C	C		C	C		C	D	
Approach Delay		34.7			32.3			20.4			41.7	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	17	233		52	252		58	230		40	287	
Queue Length 95th (ft)	38	297		89	327		m100	m282		72	377	
Internal Link Dist (ft)		853			239			154			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	323	1148		316	1249		361	1228		330	1031	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.13	0.59		0.38	0.60		0.65	0.57		0.29	0.76	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 7.2 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 32.0 Intersection LOS: C
 Intersection Capacity Utilization 76.8% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

02/28/2025

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	395	582	95	155	638	84	91	658	336	99	639	161
Future Volume (vph)	395	582	95	155	638	84	91	658	336	99	639	161
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3762	1599	1787	3654	1599	1787	3725	1615	1805	3762	1583
Flt Permitted	0.950			0.950			0.245			0.230		
Satd. Flow (perm)	3467	3762	1599	1787	3654	1599	461	3725	1615	437	3762	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1023	
Travel Time (s)		16.6			16.4			13.8			19.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	4%	1%	1%	2%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	407	600	98	160	658	87	94	678	346	102	659	166
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	24.0	52.8	52.8	16.8	45.6	45.6	13.2	37.2	24.0	13.2	37.2	16.8
Total Split (%)	20.0%	44.0%	44.0%	14.0%	38.0%	38.0%	11.0%	31.0%	20.0%	11.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Min	None	None	C-Min	None						
Act Effct Green (s)	18.0	43.2	43.2	12.2	37.4	37.4	46.9	35.8	59.8	47.2	35.9	54.1
Actuated g/C Ratio	0.15	0.36	0.36	0.10	0.31	0.31	0.39	0.30	0.50	0.39	0.30	0.45

Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

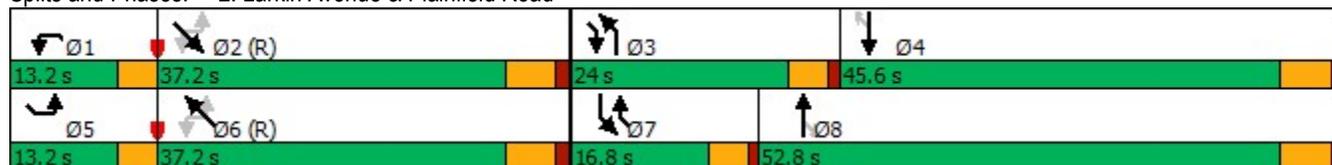
02/28/2025

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.78	0.44	0.17	0.88	0.58	0.17	0.34	0.61	0.43	0.38	0.59	0.23
Control Delay	60.1	29.8	25.7	94.7	36.6	30.2	26.5	40.3	22.2	21.9	34.6	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	29.8	25.7	94.7	36.6	30.2	26.5	40.3	22.2	21.9	34.6	16.0
LOS	E	C	C	F	D	C	C	D	C	C	C	B
Approach Delay		40.6			46.3			33.5			29.9	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	156	175	49	124	218	48	46	251	175	38	275	94
Queue Length 95th (ft)	211	225	88	#251	278	88	84	319	258	m50	337	m123
Internal Link Dist (ft)		773			760			728			943	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	563	1467	623	183	1205	527	291	1110	824	285	1125	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.41	0.16	0.87	0.55	0.17	0.32	0.61	0.42	0.36	0.59	0.23

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 7.2 (6%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 37.5 Intersection LOS: D
 Intersection Capacity Utilization 67.9% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
 3: Theodore Street & Knapp Street

Intersection						
Int Delay, s/veh	5.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	58	759	709	134	121	133
Future Vol, veh/h	58	759	709	134	121	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	60	791	739	140	126	139

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	879	0	-	0	1325 440
Stage 1	-	-	-	-	809 -
Stage 2	-	-	-	-	516 -
Critical Hdwy	4.1	-	-	-	6.8 6.92
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.31
Pot Cap-1 Maneuver	777	-	-	-	150 568
Stage 1	-	-	-	-	403 -
Stage 2	-	-	-	-	570 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	777	-	-	-	129 568
Mov Cap-2 Maneuver	-	-	-	-	251 -
Stage 1	-	-	-	-	347 -
Stage 2	-	-	-	-	570 -

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.3	0	39.6
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	777	-	-	-	355
HCM Lane V/C Ratio	0.078	-	-	-	0.745
HCM Ctrl Dly (s/v)	10	0.6	-	-	39.6
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q (veh)	0.3	-	-	-	5.8

HCM 6th TWSC

4: Access Drive/East Access Drive & Plainfield Road

Intersection												
Int Delay, s/veh	0.4											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑		↑↑				↑
Traffic Vol, veh/h	0	901	0	0	842	64	0	0	0	0	0	61
Future Vol, veh/h	0	901	0	0	842	64	0	0	0	0	0	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	115	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	969	0	0	905	69	0	0	0	0	0	66

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	969	0	0	1422	1874	485	-	-	453
Stage 1	-	-	-	-	-	-	969	969	-	-	-	-
Stage 2	-	-	-	-	-	-	453	905	-	-	-	-
Critical Hdwy	-	-	-	4.1	-	-	7.5	6.5	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	719	-	0	98	73	533	0	0	559
Stage 1	0	-	-	-	-	0	276	334	-	0	0	-
Stage 2	0	-	-	-	-	0	561	358	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	719	-	-	87	73	533	-	-	559
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	73	-	-	-	-
Stage 1	-	-	-	-	-	-	276	334	-	-	-	-
Stage 2	-	-	-	-	-	-	495	358	-	-	-	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0	0	0	12.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SERSWLn1
Capacity (veh/h)	-	719	-	-	559
HCM Lane V/C Ratio	-	-	-	-	0.117
HCM Ctrl Dly (s/v)	0	0	-	-	12.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q (veh)	-	0	-	-	0.4

HCM 6th TWSC

7: Site Access/Willow Circle Drive & Knapp Street

Intersection												
Int Delay, s/veh	2.6											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	1	211	22	60	150	16	18	0	52	9	0	2
Future Vol, veh/h	1	211	22	60	150	16	18	0	52	9	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	240	25	68	170	18	20	0	59	10	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	188	0	0	265	0	0	571	579	253	599	582	179
Stage 1	-	-	-	-	-	-	255	255	-	315	315	-
Stage 2	-	-	-	-	-	-	316	324	-	284	267	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1398	-	-	1311	-	-	435	429	791	416	427	869
Stage 1	-	-	-	-	-	-	754	700	-	700	659	-
Stage 2	-	-	-	-	-	-	699	653	-	727	692	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1398	-	-	1311	-	-	414	404	791	368	402	869
Mov Cap-2 Maneuver	-	-	-	-	-	-	414	404	-	368	402	-
Stage 1	-	-	-	-	-	-	753	699	-	699	621	-
Stage 2	-	-	-	-	-	-	657	615	-	672	691	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0	2.1	11	14
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	414	791	1311	-	-	1398	-	411
HCM Lane V/C Ratio	0.049	0.075	0.052	-	-	0.001	-	0.03
HCM Ctrl Dly (s/v)	14.1	9.9	7.9	0	-	7.6	0	14
HCM Lane LOS	B	A	A	A	-	A	A	B
HCM 95th %tile Q (veh)	0.2	0.2	0.2	-	-	0	-	0.1

HCM 6th TWSC
 8: Plainfield Road & West Site Access Drive

Intersection						
Int Delay, s/veh	6.2					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations	↘	↑↑	↑↑	↗	↘	
Traffic Vol, veh/h	62	819	859	44	82	28
Future Vol, veh/h	62	819	859	44	82	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	2	3	0	0	0
Mvmt Flow	65	862	904	46	86	29

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	950	0	-	0	1465 452
Stage 1	-	-	-	-	904 -
Stage 2	-	-	-	-	561 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	731	-	-	-	121 560
Stage 1	-	-	-	-	360 -
Stage 2	-	-	-	-	540 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	731	-	-	-	110 560
Mov Cap-2 Maneuver	-	-	-	-	110 -
Stage 1	-	-	-	-	328 -
Stage 2	-	-	-	-	540 -

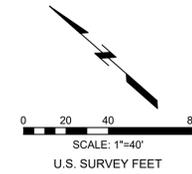
Approach	SE	NW	SW
HCM Ctrl Dly, s/v	0.7	0	100.5
HCM LOS			F

Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	731	- 138
HCM Lane V/C Ratio	-	-	0.089	- 0.839
HCM Ctrl Dly (s/v)	-	-	10.4	- 100.5
HCM Lane LOS	-	-	B	- F
HCM 95th %tile Q (veh)	-	-	0.3	- 5.3

FINAL PLAT

QUIKTRIP NO. 4452 SUBDIVISION

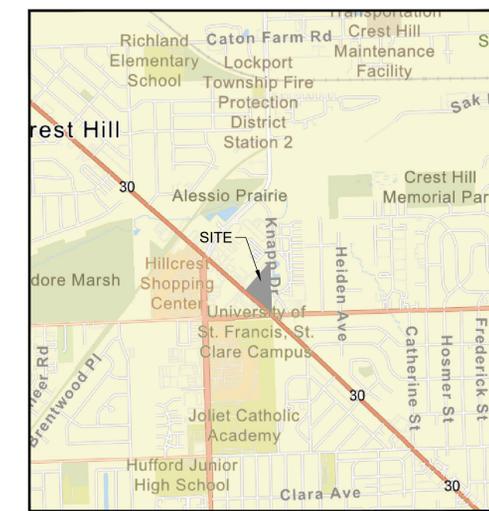
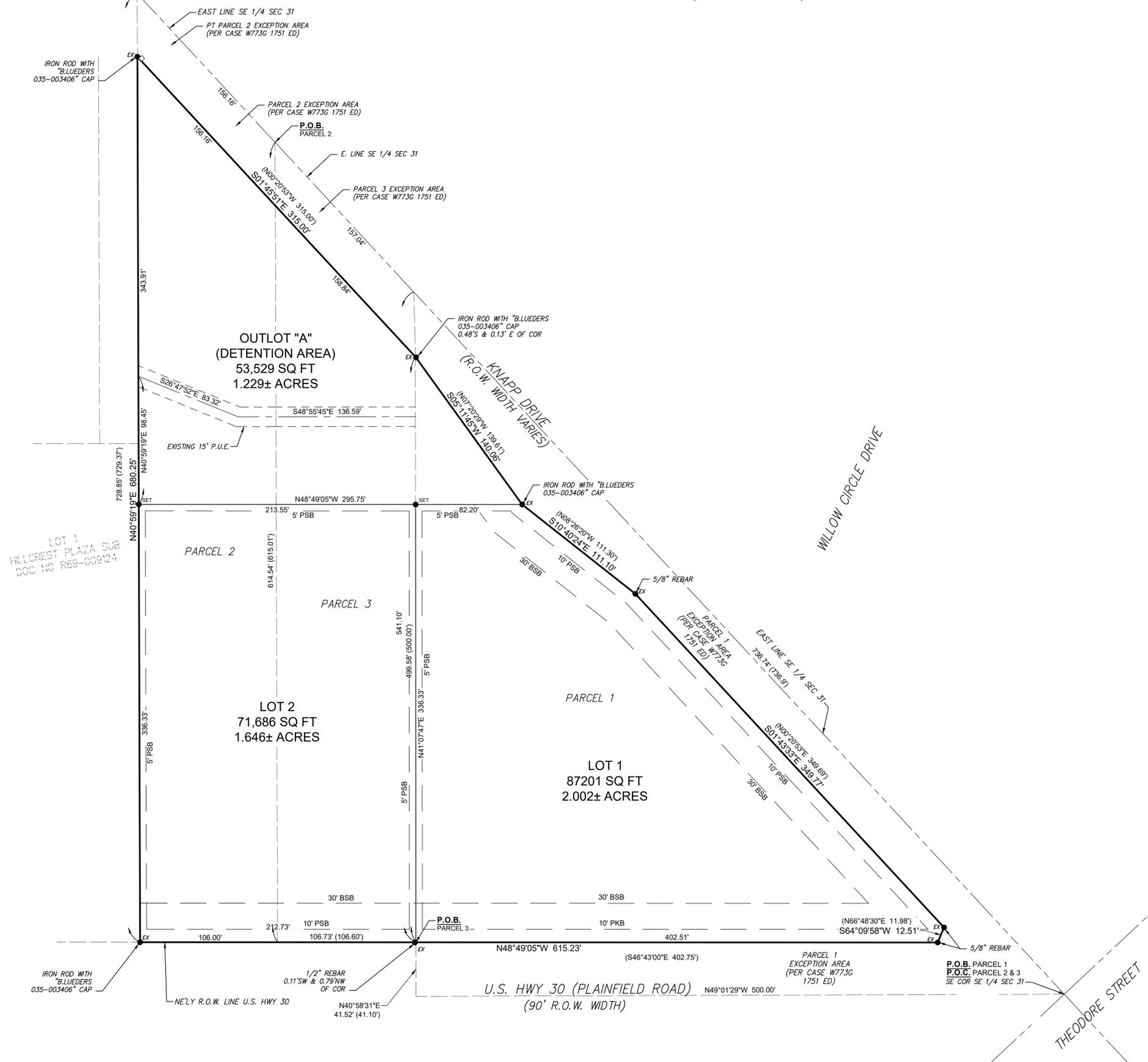
PART OF THE SE 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE 3RD PRINCIPAL MERIDIAN
CITY OF CREST HILL, WILL COUNTY, ILLINOIS



BASIS OF BEARINGS IS ILLINOIS STATE PLANE COORDINATE SYSTEM,
EAST ZONE, NAD 83, 2011 ADJUSTMENT (GEOID18 CONUS)

LEGEND

- SET ● SET 5/8" REBAR WITH PLASTIC CAP STAMPED "FARNSWORTH GROUP"
- EX ● EXISTING IRON ROD FOUND
- PSB ● PUBLIC UTILITY SETBACK
- BSB ● BUILDING SETBACK



Location Map
Not to Scale



Farnsworth GROUP

2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:

PROJECT:

DATE: 12/19/2024

DESIGNED: KJS

DRAWN: PDM

REVIEWED: ###

FIELD BOOK NO.: BMI 3410 63

SHEET TITLE:

FINAL PLAT

DRAFT

SHEET NUMBER:

1
OF 3

PROJECT NO.: 0241200.00

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FINAL PLAT

QUIKTRIP NO. 4452 SUBDIVISION

PART OF THE SE 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE 3RD PRINCIPAL MERIDIAN
CITY OF CREST HILL, WILL COUNTY, ILLINOIS

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

THE UNDERSIGNED, _____, AS TITLEHOLDER TO THE PROPERTY AS DESCRIBED HEREON, IN THE CITY OF CREST HILL, ILLINOIS, DOES HEREBY CERTIFY THAT AS SUCH TITLEHOLDER IT HAS CAUSED SAID PROPERTY TO BE SURVEYED AND SUBDIVIDED AS SHOWN HEREON.

ALSO, THIS IS TO CERTIFY THAT THE PROPERTY DESCRIBED HEREIN, TO THE BEST OF THE TITLEHOLDER'S KNOWLEDGE AND BELIEF, LIES WITHIN THE BOUNDARIES OF:

RICHLAND SCHOOL DISTRICT 88A
LOCKPORT TOWNSHIP HIGH SCHOOL DISTRICT 202
JOLIET JUNIOR COLLEGE COMMUNITY COLLEGE DISTRICT 525

DATED THIS _____ DAY OF _____, 2026.

BY: _____

ATTEST: _____

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID DO I, HEREBY CERTIFY THAT

_____, OF _____, ILLINOIS PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS MAYOR AND CITY CLERK RESPECTIVELY, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED AND DELIVERED THE SAID INSTRUMENT AS THEIR OWN FREE AND VOLUNTARY ACT AND AS THE FREE AND VOLUNTARY ACT OF SAID CITY, FOR THE USES AND PURPOSES THEREIN SET FORTH; AND THAT THE SAID CITY CLERK DID ALSO THEN AND THERE ACKNOWLEDGE THAT THEY, AS CUSTODIAN OF THE CORPORATE SEAL OF SAID CITY, DID AFFIX SAID SEAL OF SAID CITY TO THE SAID INSTRUMENT AS THEIR OWN FREE AND VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT OF SAID CITY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____, 2026.

NOTARY PUBLIC

EASEMENT PROVISIONS

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATIONS SERVICE IS HEREBY RESERVED FOR AND GRANTED TO:

COMMONWEALTH EDISON COMPANY, A. T. & T., APPLICABLE CABLE TELEVISION COMPANY, GRANTEES

THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, JOINTLY AND SEVERALLY, TO INSTALL, OPERATE, MAINTAIN AND REMOVE, FROM TIME TO TIME, FACILITIES USED IN CONNECTION WITH OVERHEAD AND UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY AND SOUNDS AND SIGNALS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DOTTED LINES ON THE PLAT AND MARKED "EASEMENT", THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", AND THE PROPERTY DESIGNATED ON THE PLAT AS A "COMMON AREA OR AREAS", AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN THE DOTTED LINES MARKED "EASEMENT" WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THE MEANING SET FORTH FOR SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2(E), AS AMENDED FROM TIME TO TIME.

THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PLANNED DEVELOPMENT, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY OTHER TERMS SUCH AS, "OUTLOTS", "COMMON ELEMENTS", "OPEN SPACE", "OPEN AREA", "COMMON GROUND", "PARKING AND COMMON AREA". THE TERMS "COMMON AREA OR AREAS" AND "COMMON ELEMENTS" INCLUDES REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, BUT EXCLUDES REAL PROPERTY PHYSICALLY OCCUPIED BY A BUILDING, SERVICE BUSINESS DISTRICT OR STRUCTURES SUCH AS A POOL OR RETENTION POND, OR MECHANICAL EQUIPMENT. RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF GRANTOR/LOT OWNER, UPON WRITTEN REQUEST.

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO NORTHERN ILLINOIS GAS COMPANY, ITS SUCCESSORS AND ASSIGNS ("NI-GAS") TO INSTALL, OPERATE, MAINTAIN, REPAIR AND REMOVE, FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN ON THIS PLAT MARKED "EASEMENT", COMMON AREA OR AREAS", AND STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, AND THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS" TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, AND TO SERVE OTHER PROPERTY, ADJACENT OR OTHERWISE, AND THE RIGHT TO REMOVE OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO, TREES, BUSHES, ROOTS AND FENCES, AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AN THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER NI-GAS FACILITIES OR IN, UPON OR OVER THE PROPERTY IDENTIFIED ON THIS PLAT FOR UTILITY PURPOSES WITHOUT THE PRIOR WRITTEN CONSENT OF NI-GAS. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE TERM "COMMON ELEMENTS" SHALL HAVE THAT MEANING SET FORTH FOR SUCH TERM IN SECTION 605/2(E) OF THE "CONDOMINIUM PROPERTY ACT" (ILLINOIS COMPILED STATUTES, CH. 765, SEC. 605/2(E)), AS AMENDED FROM TIME TO TIME. THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, INCLUDING REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PROPERTY, EVEN THOUGH SUCH AREAS MAY BE DESIGNATED ON THIS PLAT BY OTHER TERMS.

DETENTION EASEMENTS PROVISIONS

ALL EASEMENTS INDICATED AS DETENTION EASEMENTS ARE RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL AND ITS SUCCESSORS AND ASSIGNS ON A NON-EXCLUSIVE BASIS NO BUILDINGS SHALL BE PLACED ON SAID EASEMENT BUT THE SAME MAY BE USED FOR OTHER PURPOSES THAT DO NOT ADVERSELY AFFECT THE STORAGE/FREE FLOW OR STORMWATER THE OWNER OF DETENTION EASEMENT IN THIS SUBDIVISION AND ANY SUBSEQUENT PURCHASER (FUTURE OWNER) SHALL BE RESPONSIBLE FOR MAINTAINING SUCH STORMWATER MANAGEMENT FACILITY AND SHALL NOT DESTROY OR MODIFY GRADES OR SLOPES WITHOUT FIRST HAVING RECEIVED WRITTEN APPROVAL FROM THE CITY OF CREST HILL.

IN THE EVENT THE OWNER OF DETENTION EASEMENT IN THIS SUBDIVISION OR ANY SUBSEQUENT PURCHASER (FUTURE OWNER) FAILS TO MAINTAIN ANY SUCH EASEMENT/STORMWATER MANAGEMENT FACILITY, THE CITY OF CREST HILL, ILLINOIS SHALL UPON THIRTY (30) DAYS WRITTEN NOTICE TO THE OWNER OUTLINING THE NATURE AND DEFECT OF THE OWNERS DEFAULT AND THAT THE OWNER SHALL NOT HAVE CURED SAID DEFAULT SHALL RESERVE THE RIGHT TO PERFORM OR HAVE PERFORMED ON ITS BEHALF, ANY MAINTENANCE WORK UPON THE DETENTION EASEMENT REASONABLY NECESSARY TO INSURE ADEQUATE STORM WATER STORAGE FREE FLOW OF WATER, EROSION CONTROL AND TURF MAINTENANCE TO ELIMINATE STAGNANT WATER WITHIN THE DETENTION AREA AND PROVIDED FUTURE THAT IN THE EVENT THAT THE CITY OF CREST HILL ELECTS TO PERFORM OR CAUSES TO PERFORM ANY SUCH WORK IT SHALL PROVIDE THE OWNERS WITH PROPER INSURANCE CERTIFICATES OF ALL SUBCONTRACTORS WORKING ON THE EASEMENT PREMISES CO-INSURING THE OWNER FOR THE WORK TO BE PERFORMED.

IN THE EVENT THE CITY OF CREST HILL, ILLINOIS SHALL BE REQUIRED TO PERFORM OR HAVE PERFORMED ON ITS BEHALF ANY MAINTENANCE WORK TO OR UPON ANY SUCH FACILITY OR EASEMENT AREA THE COST TOGETHER WITH AN ADDITIONAL SUM OF TEN (10) PERCENT OF SAID COST SHALL BE ASSESSED TO THE OWNER OF DETENTION EASEMENTS IN THIS SUBDIVISION, ITS SUCCESSORS AND ASSIGNS AND SHALL CONSTITUTE ALIEN AGAINST THE PROPERTY WHICH MAY BE ENFORCED BY ANY ACTION BROUGHT BY OR ON BEHALF OF THE CITY OF CREST HILL.

PUBLIC UTILITY AND DRAINAGE EASEMENT PROVISIONS

ALL EASEMENTS INDICATED AS PUBLIC UTILITY AND/OR DRAINAGE AND UTILITY EASEMENTS ON THIS PLAT ARE RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL AND ALSO AS A NON-EXCLUSIVE EASEMENT TO THOSE PUBLIC UTILITY COMPANIES OPERATING UNDER FRANCHISE FROM THE CITY OF CREST HILL, INCLUDING, BUT NOT LIMITED TO, AT&T/SCIAMERITECH COMPANY, NICOR GAS COMPANY, COMMONWEALTH EDISON COMPANY AND THEIR SUCCESSORS AND ASSIGNS (COLLECTIVELY GRANTEE) FOR THE PERPETUAL RIGHT, PRIVILEGE AND AUTHORITY TO CONSTRUCT, RECONSTRUCT, REPAIR, INSPECT, MAINTAIN AND OPERATE "THE PUBLIC UTILITY TOGETHER WITH ANY AND ALL NECESSARY MANHOLES, CATCH BASINS, CONNECTIONS, APPLIANCES AND OTHER STRUCTURES AND APPURTENANCES AS MAY BE DEEMED NECESSARY BY SAID CITY OF CREST HILL, UPON, ALONG, UNDER AND THROUGH SAID INDICATED EASEMENT, TOGETHER WITH RIGHT OF ACCESS ACROSS THE PROPERTY FOR NECESSARY MEN AND EQUIPMENT TO DO ANY OF THE ABOVE WORK. THE RIGHT IS ALSO GRANTED TO CUT DOWN, TRIM OR REMOVE ANY TREES, SHRUBS OR OTHER PLANTS ON THE EASEMENT THAT INTERFERE WITH THE OPERATION OF THE PUBLIC UTILITY. THE GRANTEE OR GRANTEES PERFORMING OR CAUSING TO BE PERFORMED ANY OF SAID WORK SHALL BE RESPONSIBLE AT ITS OR THEIR EXPENSE, TO BACKFILL ALL AREAS WITH APPROVED MATERIALS BUT SHALL NOT BE LIABLE TO RESTORE ANY PAVEMENT, CURB AND GUTTER, SIDEWALKS OR LANDSCAPING DISTURBED DURING MAINTENANCE, THE GRANTOR SHALL BE RESPONSIBLE FOR THE FULL AND COMPLETE RESTORATION OF THE EASEMENT PREMISES. NO PERMANENT BUILDINGS SHALL BE PLACED ON SAID EASEMENT, BUT SAME MAY BE USED FOR ASPHALT AND IMPROVEMENTS NORMALLY FOUND IN A PARKING LOT SUCH AS LIGHT FIXTURES AND SIGNS, GARDENS, SHRUBS, LANDSCAPING AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES OR RIGHTS, ELEVATIONS OR GRADES SHALL NOT BE CHANGED WITHIN THE EASEMENT PREMISES WITHOUT THE WRITTEN APPROVAL OF THE CITY OF CREST HILL.

MUNICIPAL UTILITY AND DRAINAGE EASEMENTS (M.U.E.)

A PERPETUAL NON-EXCLUSIVE EASEMENT APPURTENANT IS HEREBY RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, OVER, UPON, ACROSS, THROUGH AND UNDER THOSE PORTIONS OF THE PROPERTY DESIGNATED AS MUNICIPAL UTILITY AND/OR DRAINAGE EASEMENT (M.U.E.) ON THIS PLAT FOR THE PURPOSE OF INSTALLING, LAYING, CONSTRUCTING, OPERATING, MAINTAINING, REPAIRING, RENEWING AND REPLACING WATER MAINS, SANITARY SEWER LINES, FORCE MAIN LINES, STORM SEWER LINES, IRRIGATION LINES, PIPES, STREET LIGHTS, DITCHES, SWALES AND APPURTENANCES, POLES, WIRES, CABLES, CONDUIT, MANHOLES, PEDESTALS AND OTHER FACILITIES USED IN CONNECTION WITH UNDERGROUND TRANSMISSION AND DISTRIBUTION OF MUNICIPAL UTILITY SERVICES AND DRAINAGE OF STORMWATER, TOGETHER WITH ALL APPURTENANT STRUCTURES, INCLUDING, BUT NOT LIMITED TO, WET WELLS, LIFT STATIONS, FIRE HYDRANTS, VALVE VAULTS, STREET LIGHTING EQUIPMENT AND ANY AND ALL OTHER FIXTURES AND EQUIPMENT REQUIRED FOR THE PURPOSE OF SERVICE THE PROPERTY WITH WATER SERVICE, SANITARY SEWER SERVICE, STORM WATER MANAGEMENT, IRRIGATIONS, STREET LIGHTING AND OTHER MUNICIPAL SERVICES, ALL INSTALLATION OF MUNICIPAL UTILITIES SHALL BE UNDERGROUND OR ON THE SURFACE BUT NOT OVERHEAD.

NO OBSTRUCTIONS SHALL BE PLACED IN THE M.U.E. AREAS, BUT THE M.U.E. AREAS MAY BE USED FOR FENCES, GARDENS, SHRUBS, LANDSCAPING AND SUCH OTHER PURPOSES THAT DO NOT, AND WILL NOT IN THE FUTURE, INTERFERE UNREASONABLY WITH THE EASEMENT RIGHTS HEREIN GRANTED.

BLANKET UTILITY AND DRAINAGE EASEMENT PROVISIONS

A BLANKET EASEMENT FOR UTILITIES AND DRAINAGE IS HEREBY RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL, ILLINOIS, AND TO THOSE PUBLIC UTILITY COMPANIES OPERATING UNDER FRANCHISE FROM THE CITY OF CREST HILL, ILLINOIS, INCLUDING, BUT NOT LIMITED TO COMMONWEALTH EDISON COMPANY, A. T. & T., APPLICABLE CABLE TELEVISION COMPANIES, NORTHERN ILLINOIS GAS COMPANY AND THEIR SUCCESSORS AND ASSIGNS, OVER LOTS 1 AND 2 AS SHOWN HEREON, FOR THE PERPETUAL RIGHT, PRIVILEGE, AND AUTHORITY TO CONSTRUCT, RECONSTRUCT, REPAIR, INSPECT, MAINTAIN, AND OPERATE VARIOUS UTILITY TRANSMISSION AND DISTRIBUTION SYSTEMS AND INCLUDING WATERMANS AND SERVICES, STORM WATER DETENTION, STORM AND/OR SANITARY SEWER MAINS AND SERVICES, STREET LIGHTS AND WIRING TOGETHER WITH ANY AND ALL NECESSARY MANHOLES, CATCH BASINS, CONNECTIONS, APPLIANCES, AND OTHER STRUCTURES AND APPURTENANCES AS MAY BE DEEMED NECESSARY BY SAID CITY, OVER, UPON ALONG, UNDER, AND THROUGH SAID INDICATED BLANKET EASEMENT, TOGETHER WITH RIGHT OF ACCESS ACROSS THE PROPERTY FOR NECESSARY MEN AND EQUIPMENT TO DO ANY OF THE ABOVE WORK. THE RIGHT IS ALSO GRANTED TO CUT DOWN, TRIM, OR REMOVE ANY TREES, SHRUBS, OR OTHER PLANTS ON THE BLANKET EASEMENT THAT INTERFERE WITH THE SAME OPERATION OF THE SEWERS OR OTHER UTILITIES. NO PERMANENT STRUCTURES SHALL BE PLACED ON SAID BLANKET EASEMENT, BUT SAME MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING, AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES OR RIGHTS. WHERE THE EASEMENT IS USED FOR BOTH SEWER AND OTHER UTILITIES, THE OTHER UTILITY INSTALLATION SHALL BE SUBJECT TO THE ORDINANCES OF THE CITY OF CREST HILL.

STORM SEWER, DRAINAGE, AND STORMWATER MANAGEMENT EASEMENT PROVISIONS

A PERPETUAL, NON-EXCLUSIVE EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL, ILLINOIS, WITHIN THE AREAS SHOWN ON THE HEREON PLAT BY DASHED LINES AND MARKED "STORM SEWER EASEMENT HEREBY GRANTED" AND/OR "DRAINAGE & STORMWATER MANAGEMENT EASEMENT HEREBY GRANTED" OR OTHER SIMILAR DESCRIPTION TO INSTALL, CONSTRUCT, RENEW, OPERATE, MAINTAIN, RELOCATE, AND EXTEND STORM SEWERS AND OTHER APPURTENANCES AND EQUIPMENT REQUIRED FOR THE PURPOSE OF SERVING THE SUBJECT PROPERTY, SUBDIVISION AND ADJACENT PROPERTY, SUBJECT TO ALL COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS OF RECORD, INCLUDING, WITHOUT LIMITATION, THAT CERTAIN PIPELINE EASEMENT DESCRIBED BY DOCUMENTS 775308 AND 775310 AND DEPICTED BY DOCUMENTS 795125 AND R1966-016525 (COLLECTIVELY, "PIPELINE EASEMENT"), GRANTEE HEREBY AGREES TO INSTALL, CONSTRUCT, RENEW, OPERATE, MAINTAIN, RELOCATE, EXTEND AND OTHERWISE COMPLETE ALL WORK TO THE STORM SEWER AND ALL APPURTENANCES AND EQUIPMENT RELATED THERETO IN SUCH A MANNER THAT COMPLIES WITH ALL TERMS, CONDITIONS AND RESTRICTIONS SET FORTH IN THE PIPELINE EASEMENT AND GRANTEE FURTHER AGREES NOT TO INTERFERE WITH THE RIGHTS GRANTED UNDER THE PIPELINE EASEMENT. GRANTEE HEREBY AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS GRANTOR, ITS SUCCESSORS AND/OR ASSIGNS, FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, LIABILITIES, COSTS AND EXPENSES (INCLUDING, COURT COSTS AND ATTORNEYS' FEES) ARISING OUT OF OR OTHERWISE RELATING TO THE INSTALLATION, CONSTRUCTION, RENEWAL, OPERATION, MAINTENANCE, RELOCATION, AND EXTENSION OF THE STORM SEWER AND ALL APPURTENANCES AND EQUIPMENT RELATED THERETO, EXCEPT TO THE EXTENT SUCH CLAIMS ARISE AS A RESULT OF GRANTOR'S NEGLIGENCE. THE RIGHT IS GRANTED TO CUT, TRIM, OR REMOVE TREES, BUSHES, AND FENCES AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON SAID PROPERTY FOR ALL SUCH PURPOSES STATED HEREIN, NO PERMANENT BUILDINGS SHALL BE PLACED ON SAID EASEMENTS; HOWEVER, THE SAME MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING, PARKING IMPROVEMENTS, DRIVEWAYS, WALKWAYS, AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES OR THE RIGHTS HEREIN GRANTED.

STATE OF ILLINOIS)
)SS
COUNTY OF PEORIA)

WE, FARNSWORTH GROUP, INC., ILLINOIS PROFESSIONAL DESIGN FIRM NUMBER 184-001856, DO HEREBY CERTIFY THAT A LAND SURVEY HAS BEEN MADE UNDER OUR DIRECTION OF THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1:

THAT PART OF THE SOUTHEAST QUARTER OF SECTION 31, IN TOWNSHIP 36 NORTH, AND IN RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS, AS HEREINAFTER DESCRIBED: BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 31; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE THAT IS A RIGHT ANGLE TO THE AFORESAID CENTER LINE OF SAID RIGHT OF WAY OF SAID HIGHWAY, 541.1 FEET; TO THE EAST LINE OF SAID SECTION 31; THENCE SOUTH ALONG THE EAST LINE OF SAID SECTION 31, 736.9 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30 (PLAINFIELD ROAD) AND WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NO. 0138, CONDEMNED IN CASE NO. W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 2:

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST DESCRIBED LINE 541.10 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 157.04 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 156.16 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 729.37 FEET TO THE NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 106.00 FEET; THENCE NORTHEASTERLY 615.01 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, IN TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST DESCRIBED LINE 41.10 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON THE NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30; THENCE CONTINUE NORTHEASTERLY ALONG THE PROLONGATION OF THE LAST DESCRIBED LINE 500.00 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4 157.04 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 615.01 FEET TO THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 106.60 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W773G 1751 ED, IN WILL COUNTY, ILLINOIS.

WE HAVE SURVEYED SAID PROPERTY INTO TWO LOTS AND ONE OUTLOT OF WHICH ARE REPRESENTED ON THE PLAT HEREON DRAWN. DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF AND ANGULAR BEARINGS ARE SHOWN IN DEGREES, MINUTES, AND SECONDS.

WE FURTHER STATE THAT SAID PROPERTY FALLS WITHIN THE CORPORATE LIMITS OF THE CITY OF CREST HILL, WILL COUNTY, ILLINOIS AND THAT BASED ON EXAMINATION OF THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 17089C0070H, WITH AN EFFECTIVE DATE OF AUGUST 03, 2009, NO PART OF SAID PROPERTY IS SITUATED WITHIN A FLOOD HAZARD AREA.

WE HEREBY DESIGNATE _____ TO SUBMIT THIS PLAT, IN THE ORIGINAL VERSION AS DATED AND SIGNED BELOW FOR RECORDING ON OUR BEHALF.

ALL EXTERIOR AND INTERIOR CORNERS HAVE BEEN SET PER 765 ILCS 205/1.

DATED AT PEORIA, ILLINOIS, THIS _____ DAY OF _____, 2026.

FARNSWORTH GROUP, INC.
100 WALNUT STREET SUITE 200
PEORIA, IL 61602

BY: _____
KENNETH J SILVERTHORN
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3413
ksilverthorn@f-w.com www.f-w.com
PHONE: 309-689-9888



DATE: _____
EXP. DATE: 11-30-2026
DESIGN FIRM REGISTRATION NO. 184-001856

DRAFT



Farnsworth
GROUP

2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:

PROJECT:

DATE: 12/19/2024

DESIGNED: KJS

DRAWN: PDM

REVIEWED: #####

FIELD BOOK NO.: BMI 3410 63

SHEET TITLE:

FINAL PLAT

DRAFT

SHEET NUMBER:

2

OF 3

PROJECT NO.: 0241200.00

FINAL PLAT

QUIKTRIP NO. 4452 SUBDIVISION

PART OF THE SE 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE 3RD PRINCIPAL MERIDIAN
CITY OF CREST HILL, WILL COUNTY, ILLINOIS

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

_____ DOES HEREBY STATE THAT TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF OR THAT IF SUCH SURFACE WATER DRAINAGE WILL CHANGE, ADEQUATE PROVISION HAS BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LAND OWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED AT _____, THIS ____ DAY OF _____, 2026.

ENGINEER

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I FIND NO DELINQUENT OR UNPAID CURRENT TAXES OR SPECIAL ASSESSMENTS AGAINST ANY OF THE REAL ESTATE INCLUDED IN THIS PLAT OF SUBDIVISION.

DATED THIS ____ DAY OF _____, 2026.

WILL COUNTY CLERK

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

I, _____, DIRECTOR OF THE TAX MAPPING AND PLATTING OFFICE DO HEREBY CERTIFY THAT I HAVE CHECKED THE PROPERTY DESCRIPTION ON THIS PLAT AGAINST AVAILABLE COUNTY RECORDS AND FIND SAID DESCRIPTION TO BE TRUE AND CORRECT, THE PROPERTY HEREIN DESCRIBED IS LOCATED ON MAP PAGE # 07-06B-W AND IDENTIFIED AS PERMANENT REAL ESTATE TAX INDEX NUMBERS (P.I.N.) 11-04-31-405-006-0000, 11-04-31-405-051-0000, AND 11-04-31-405-050-0000.

DATED THIS ____ DAY OF _____, 2026.

DIRECTOR

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

THIS INSTRUMENT NO. _____ WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF WILL COUNTY, ILLINOIS, ON THE ____ DAY OF _____, 2026, AT _____ O'CLOCK __M.

WILL COUNTY RECORDER

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

APPROVED BY THE CITY OF CREST HILL PLANNING COMMISSION AT A MEETING HELD ON THE ____ DAY OF _____, 2026.

CHAIRPERSON

SECRETARY

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

APPROVED BY THE CITY COUNCIL OF THE CITY OF CREST HILL AT A MEETING HELD ON DAY OF __ DAY OF _____, 2026.

MAYOR

CITY CLERK

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT OF §2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL, BE REQUIRED BY THE DEPARTMENT.

DATED: _____

REGION _____ ENGINEER _____, P.E.



Farnsworth
GROUP

2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com

www.f-w.com

Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:

PROJECT:

DATE: 12/19/2024
DESIGNED: KJS
DRAWN: PDM
REVIEWED: ####
FIELD BOOK NO.: BMI 3410 63

SHEET TITLE:

FINAL PLAT

DRAFT

SHEET NUMBER:

3
OF 3

PROJECT NO.: 0241200.00

**PRELIMINARY
STORMWATER
DRAINAGE
REPORT**

for

QuikTrip Store #4452

***1610 Plainfield Road
Crest Hill, Will County, Illinois 60403***

***Prepared For:
QuikTrip Corporation
5725 Foxridge Drive
Mission, Kansas 66202***

***Prepared By:
Midwest Design Group
P.O. Box 860015
Shawnee, Kansas 66286-0015
913.248.9385***

ENGINEER'S CERTIFICATION
Stormwater Drainage Report
QuikTrip Store #4452

1610 Plainfield Road
Crest Hill, Will County, Illinois 60403

I Hereby Certify that this Engineering Document was prepared by me, or under my direct supervision, and that I am a duly Registered Professional Engineer under the laws of the State of Illinois.



Jonathon Smith, P.E.
Project Manager
IL Registration No. 062-073894

January 9, 2026

Date



Seal

REPORT PURPOSE

This stormwater drainage report has been prepared to detail the stormwater drainage design for the QuikTrip Store #4452 facility to be located at the north corner of the intersection of Plainfield Road and Theodore Street in Crest Hill, Will County, Illinois. This study will confirm that the proposed development will comply with the design parameters set forth by the Crest Hill Stormwater Drainage and Detention Ordinance.

PROJECT SUMMARY

QuikTrip Corporation is proposing to build a new convenience store with fuel offerings in the north corner of the intersection of Plainfield Road and Theodore Street. The development will include a convenience store, auto fuel canopy, parking stalls, and associated sidewalk and curb and gutter. The store will be oriented to face Plainfield Road (southwest) with an auto fuel canopy southwest of the store. The new QuikTrip facility will be constructed on a parcel of land located in the Southeast ¼ of Section 31, Township 36 North, Range 10 East of the Third Principal Meridian in Crest Hill, Will County, Illinois. The land will be split into Lot 1 (87,201 sf), Lot 2 (71,685 sf), and Tract A (53,529 sf). The new QuikTrip project will be constructed on Lot 1 and a detention facility will be constructed on Tract A that will serve both Lots 1 and 2. The entire property will contain 212,415 s.f. (4.876 acres). The Overall Site Plan (C010) and Site Plan (C100) have been included in the Appendix of this report for reference.

WATERSHED

This property lies within the Des Plaines River Watershed. The detention facility will outlet north using the existing control structure's outlet pipe, which outlets to a ditch along Knapp Drive which drains to an outlet point under Larkin Avenue to the Rock Run located along the west side of Larkin Avenue. Ultimately, runoff drains to the Des Plaines River. Refer to FEMA and USGS map in the Appendix.

FLOODPLAIN CERTIFICATE

According to the National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) Panel No. 17197C0161G, effective February 15, 2019, as published by the Federal Emergency Management Agency, the subject property lies mostly within Flood Zone "X", areas determined to be "outside the 0.2% annual chance floodplain". It appears a minimal portion of the south corner of the property is within Zone AE, but no grading or improvements are proposed in this area.



Map taken from FIRM Panel Number 17197C0161G, dated February 15, 2019.

SITE SOIL CHARACTERISTICS

This property contains the following soil classifications:

- 149A – Brenton Silt Loam, 0-2% slopes, HSG B/D
- 223C2 – Varna Silt Loam, 4-6% slopes, HSG C
- 223D2 – Varna Silt Loam, 6-12% slopes, HSG C
- 329A – Will silty clay loam, 0-2% slopes, HSG B/D

The USDA/NRCS soil survey can be found in the Appendix.



Map taken from USDA/NRCS Soil Survey

WETLANDS

Per the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) map, there are no wetlands present within the property. Refer to the Appendix for the NWI map.

METHODOLOGY

The proposed drainage characteristics of the site were evaluated and analyzed based on the Crest Hill Stormwater Drainage and Detention Ordinance criteria. Hydrologic calculations were performed and detention requirements were determined using the Autodesk Hydraflow Hydrographs program (SCS Method). Runoff curve numbers of 80 for proposed pervious areas and 98 for impervious areas were used. Illinois State Water Survey (ISWS) Bulletin 75 rainfall data was used with Huff 3rd Quartile distribution for a 24-hour storm event.

EXISTING DEVELOPMENT

The existing property is currently partially developed with a commercial development (Crest Hill Public Works) within Lot 1 and part of Tract A. Lot 2 was previously rough graded and storm sewer was installed for a pad site but was never fully developed. Tract A was also previously partially developed as a pad site and an existing detention facility was constructed. It appears Lot 2 and Tract A drain to the existing detention facility but it does not appear that the Crest Hill Public Works building development drains to the existing detention facility. The property is bordered on the east by Knapp Drive, on the northwest by an adjacent commercial property, on the southwest by Plainfield Road, and on the south by Theodore Street.

In the existing conditions, the site generally drains from southwest to northeast either into the detention facility or into Knapp Drive. It appears the southern corner of the site drains directly into Rock Run. The rest of the site drains either directly into Knapp Drive, which appears to have drainage swales adjacent to the property, or through the detention facility which then outlets north and it is assumed it ultimately drains to Rock Run.

The existing site contains approximately 75,122 sf of impervious areas (35.4%), 1,746 sf of gravel area (0.8%), and 135,547 sf of pervious areas (63.8%). A pre-development runoff coefficient and Curve Number was calculated for all drainage areas using the NRCS Soils Report and TR-55 runoff coefficient tables. The pre-development composite runoff coefficient and Curve Number (CN) is 0.52 and 86.5, accordingly. The associated calculations are included in the Appendix. Refer to the Pre-Developed Drainage Map in the Appendix (**Pending final report**).

PROPOSED DEVELOPMENT

The proposed development will be graded to generally maintain existing drainage patterns. Stormwater runoff from the QuikTrip development will be captured and conveyed in private storm sewers to the detention facility within Tract A. The private storm sewer has been designed to convey the 100-year design storm. The proposed detention facility will have a control structure to reduce peak runoff from the proposed improvements. The proposed control structure will utilize the existing outlet pipe from the existing control structure.

For this preliminary report, simplified drainage areas were used for analysis purposes. Drainage area “Detained” is the estimated area that will be detained in full build out condition (when Lots 1 and 2 are fully developed). A Curve Number (CN) value of 95 was assumed based on the TR-55 Manual, using a cover type of Urban Districts, Commercial and Businesses and Hydrologic Soil Group (HSG) D. It is preliminarily estimated that 12% of the total site area will not be

captured and will be uncontrolled runoff (Drainage area “Uncontrolled”). A CN Value of 85 was assumed for the uncontrolled area.

It is estimated the full build out condition will contain 172,665 sf of impervious areas (81.3%) and 39,750 sf of pervious areas (18.7%). This is an increase of 95,797 square feet in impervious area from existing conditions. A post-development runoff coefficient and Curve Number was calculated for all drainage areas using the NRCS Soils Report and TR.-55 runoff coefficient tables. The post-development composite runoff coefficient and Curve Number (CN) is 0.79 and 94.6, accordingly. The proposed storm sewer system, detention facilities, and associated calculations are included in the Appendix. Refer to the Post-Developed Drainage Map in the Appendix (**Pending final report**).

DETENTION REQUIREMENTS

Per the Crest Hill Stormwater Drainage and Detention Ordinance, *“The peak discharge from events less than or equal to the two-year event shall not be greater than 0.04 cfs per acre of property drained. The peak 100-year discharge shall not be greater than 0.15 cfs per acres of property drained.”*

The total property drained is 4.876 acres, which results in allowable release rates for the 2-year and 100-year storm events of 0.195 cfs and 0.731 cfs, accordingly. Peak discharges from the facility will be controlled through a control structure with an internal weir wall and multi-stage orifices. Additional detention information and design calculations can be found in the Appendix.

DOWNSTREAM DRAINAGE IMPACTS

The proposed stormwater detention facilities will control peak runoff so that there will be no adverse impacts to downstream drainage facilities.

STORMWATER TREATMENT

QuikTrip will install SNOUT water quality units upstream of the detention facility and in the detention outlet structure. Bio-skirts will be added to the SNOUT units for oil absorption. Information on these water quality units can be found in the Appendix.

FLOOD STUDY

The QuikTrip Store No. 4452 improvements will be within Zone “X” on the property, as shown in the Floodplain Certificate section. This development is not expected to incur damages as a result of flooding.

U.S. ARMY CORPS OF ENGINEERS REQUIREMENTS

The QuikTrip Store No. 4452 project will not disturb jurisdictional waters or wetlands of the U.S.

CONCLUSION

The QuikTrip Store No. 4452 development will comply with the design parameters set forth by the Crest Hill Stormwater Drainage and Detention Ordinance. The existing detention pond provides approximately 75,213 cubic-feet of detention volume (at elevation 603.00). The existing detention pond will be removed and replaced with a new detention facility that will provide 153,030 cubic-feet of volume (at elevation 603.00). The required detention volume, based on the CN assumptions described in the *Proposed Development* section, will be approximately 106,476 cubic-feet and will be provided at pond elevation 601.72. A stormwater detention facility has been designed to control the peak stormwater runoff from Lots 1 and 2 and Tract A (see table below for release rate summary). A private stormwater drainage system will convey runoff to the stormwater detention facility. Best Management Practices will be implemented to help improve water quality. No adverse effects are expected on adjacent properties or downstream drainage systems after the proposed improvements are completed.

Allowable Release Rates vs Post-Developed Release Rates Summary

Storm Event	Allowable Release Rate (cfs)	Post-Developed Peak Release Rate (cfs)
2-year	0.195	0.179
100-year	0.731	0.686

QuikTrip Store #4452

***1610 Plainfield Road
Crest Hill, Will County, Illinois 60403***

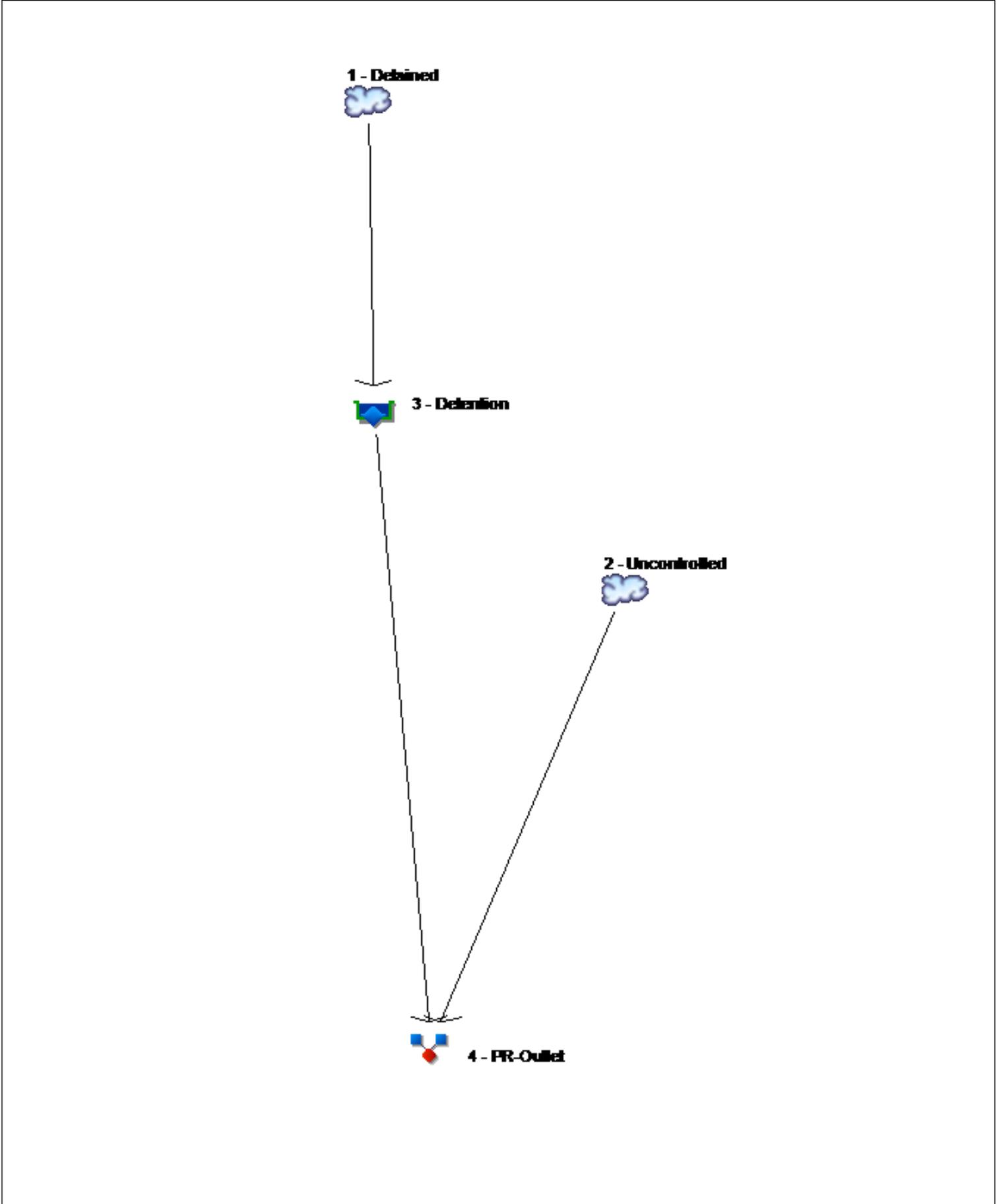
APPENDIX

QuikTrip Store #4452

AutoDesk Hydraflow Hydrographs Results

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023



Hydraflow Rainfall Report

Precip. file name: \\DESKTOP-HIMC8GB\Documents\IL Northeast Precip (Bulletin 75-HUFF) Depths.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	0.00	0.00	3.30	0.00	5.77	5.83	0.00
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	4.33	0.00
Huff-1st	0.00	0.00	0.00	2.75	0.00	5.38	6.50	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	3.34	0.00	0.00	5.15	0.00	0.00	8.57
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	2.80	0.00	5.25	6.00	0.00

Pond Report

Pond No. 3 - Detention

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 596.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	596.00	00	0	0
1.00	597.00	10,000	3,333	3,333
2.00	598.00	15,000	12,415	15,748
3.00	599.00	20,000	17,438	33,186
4.00	600.00	25,000	22,451	55,637
5.00	601.00	30,000	27,459	83,097
6.00	602.00	35,000	32,465	115,561
7.00	603.00	40,000	37,468	153,030

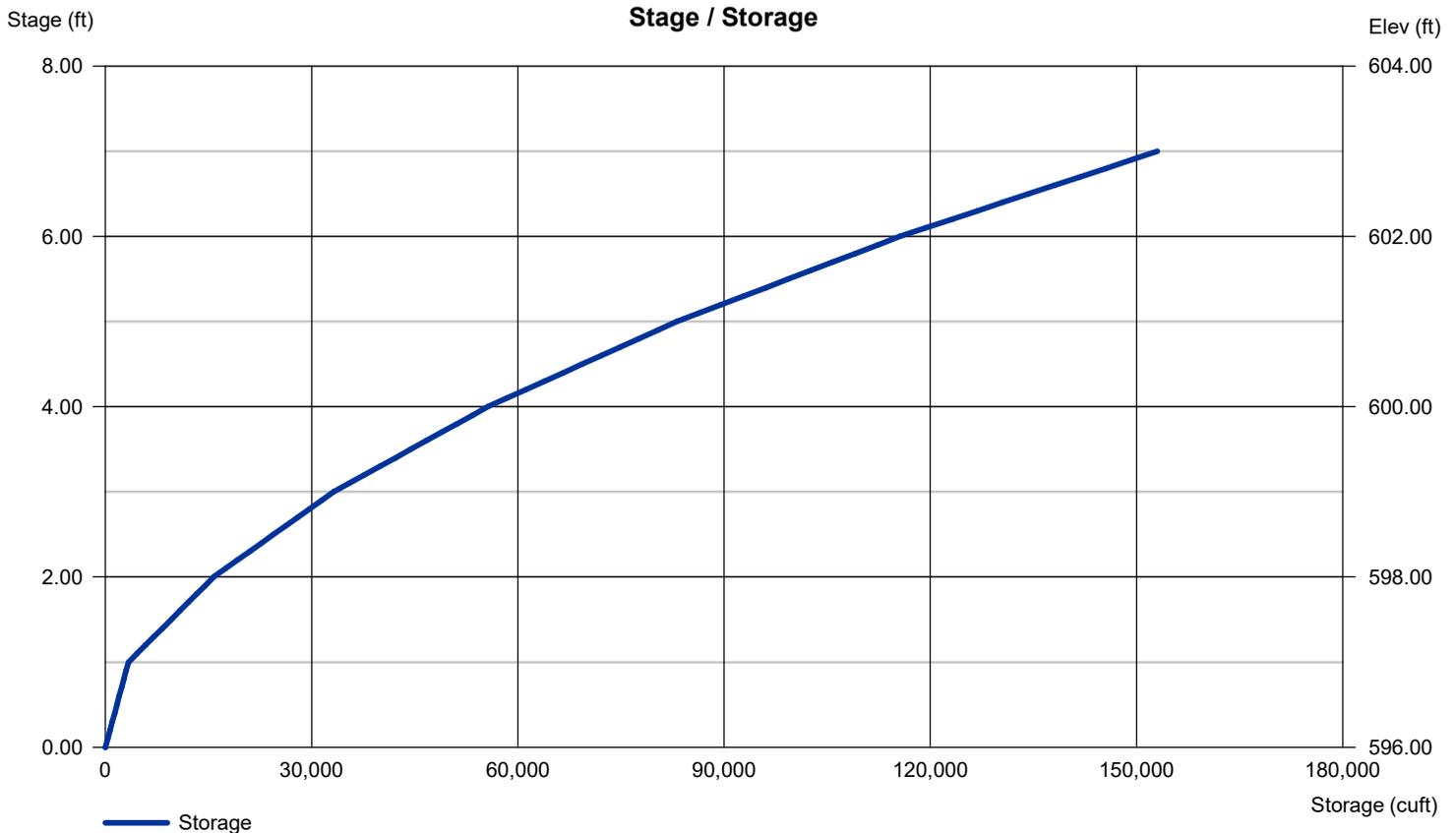
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.75	2.25	0.00	0.00
Span (in)	= 0.75	2.25	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 596.00	599.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Pond Report

Pond No. 3 - Detention

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 596.00 ft

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Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
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4.00	600.00	25,000	22,451	55,637
5.00	601.00	30,000	27,459	83,097
6.00	602.00	35,000	32,465	115,561
7.00	603.00	40,000	37,468	153,030

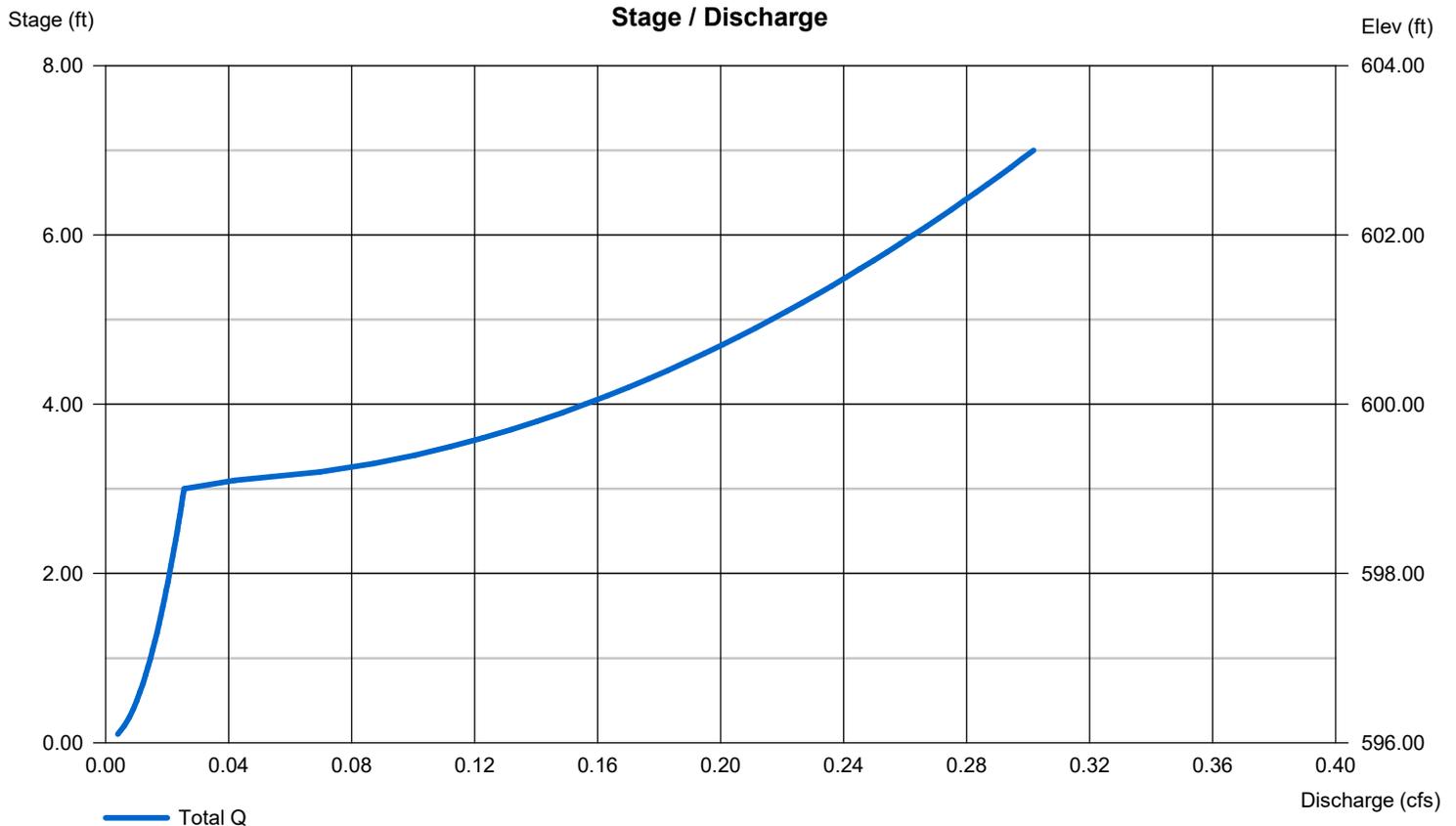
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.75	2.25	0.00	0.00
Span (in)	= 0.75	2.25	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 596.00	599.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



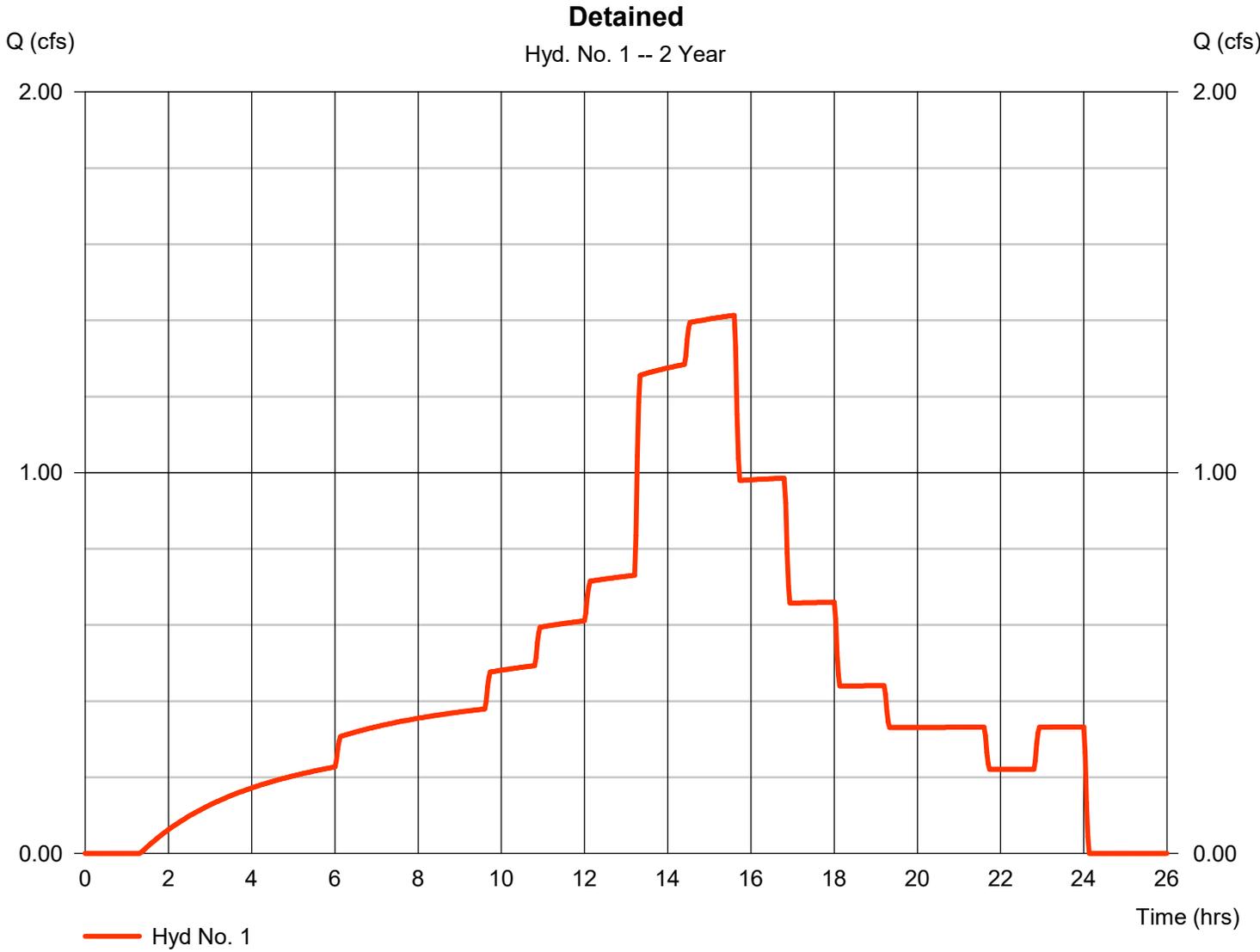
Hydrograph Report

Hyd. No. 1

Detained

Hydrograph type	= SCS Runoff	Peak discharge	= 1.413 cfs
Storm frequency	= 2 yrs	Time to peak	= 15.60 hrs
Time interval	= 2 min	Hyd. volume	= 40,626 cuft
Drainage area	= 4.291 ac	Curve number	= 95*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.34 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.550 x 98) + (0.560 x 80)] / 4.291



Hydrograph Report

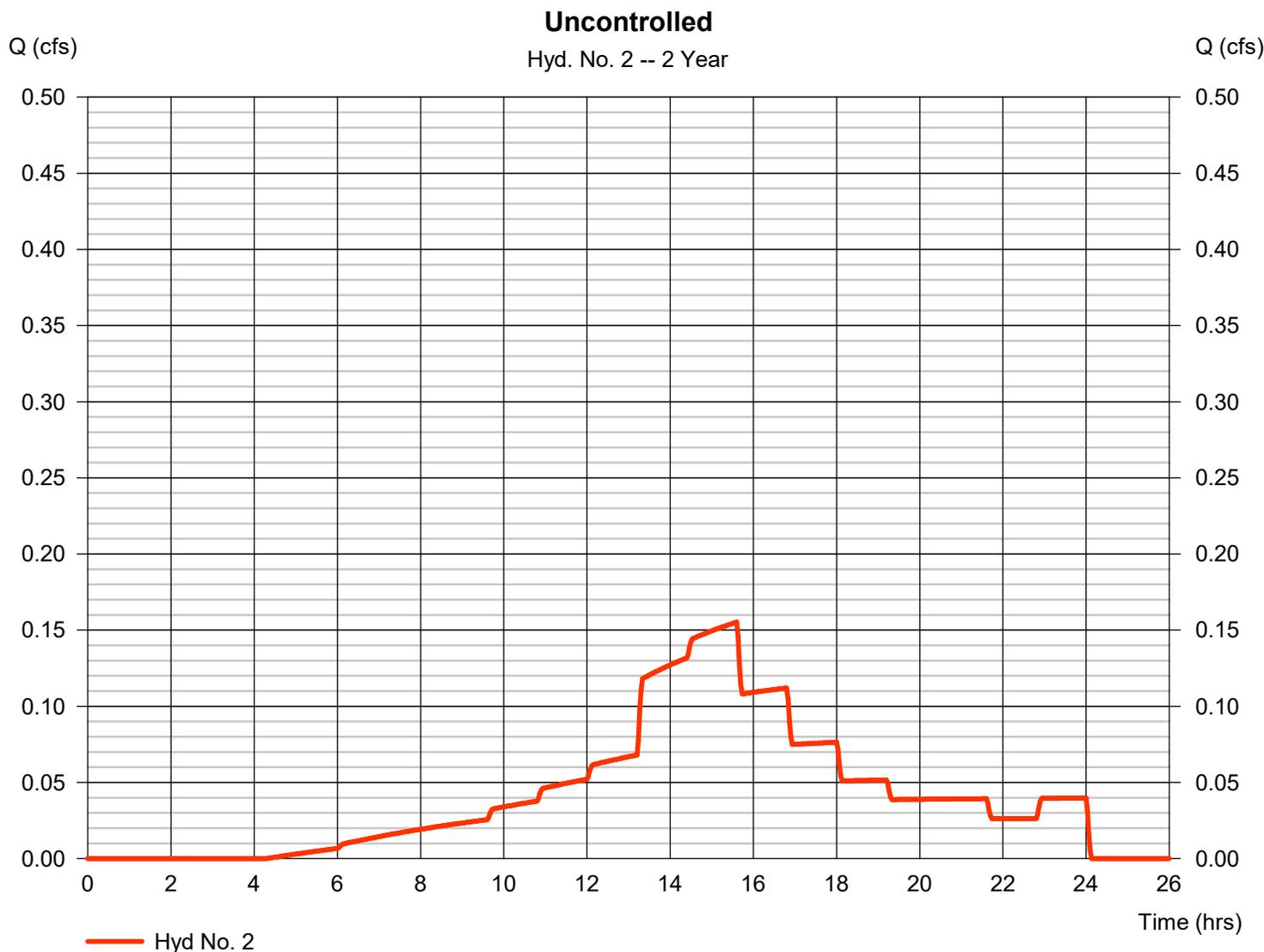
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Wednesday, 02 / 26 / 2025

Hyd. No. 2

Uncontrolled

Hydrograph type	= SCS Runoff	Peak discharge	= 0.155 cfs
Storm frequency	= 2 yrs	Time to peak	= 15.60 hrs
Time interval	= 2 min	Hyd. volume	= 3,738 cuft
Drainage area	= 0.585 ac	Curve number	= 85
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.34 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

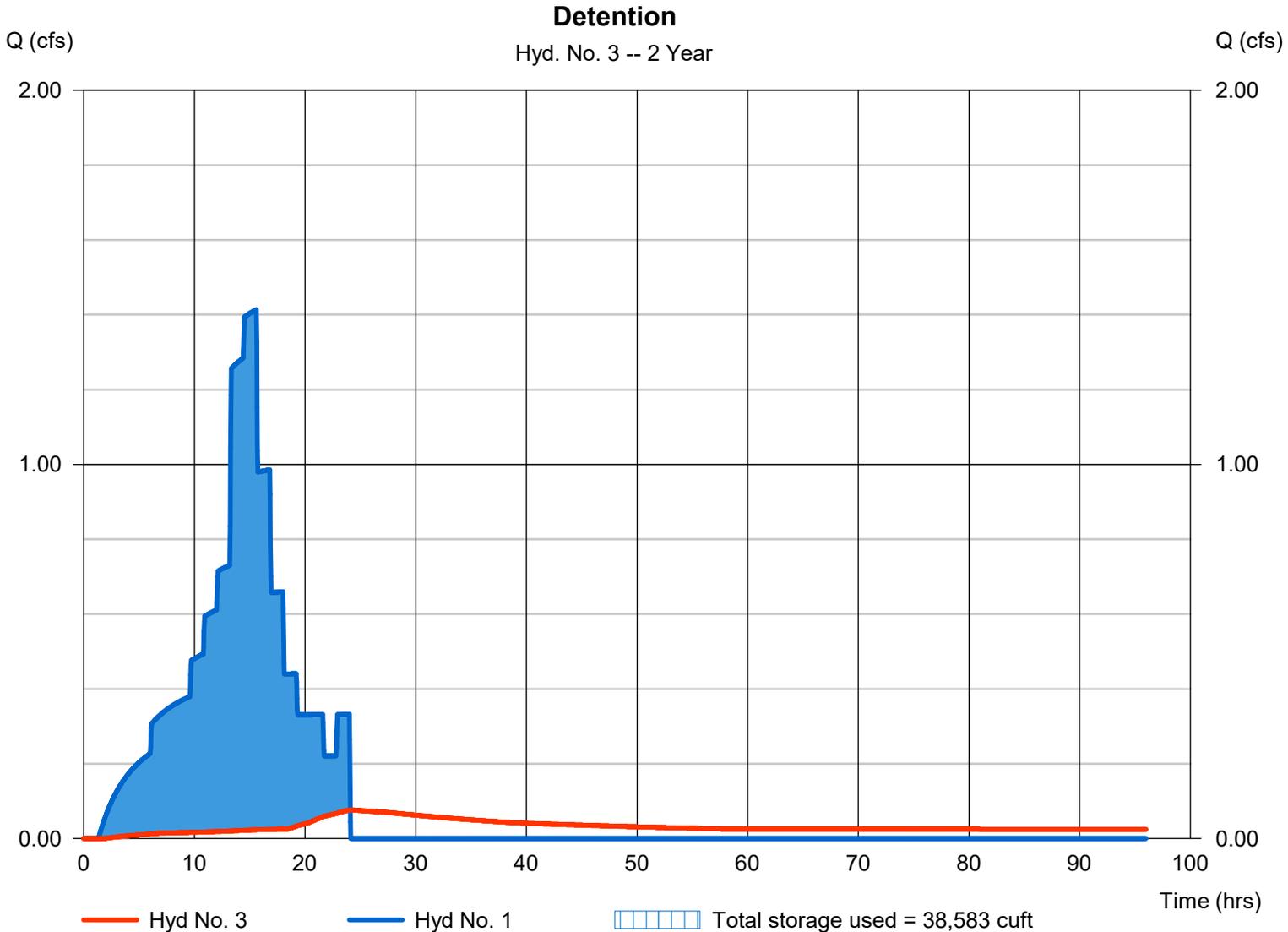
Wednesday, 02 / 26 / 2025

Hyd. No. 3

Detention

Hydrograph type	= Reservoir	Peak discharge	= 0.077 cfs
Storm frequency	= 2 yrs	Time to peak	= 24.10 hrs
Time interval	= 2 min	Hyd. volume	= 10,878 cuft
Inflow hyd. No.	= 1 - Detained	Max. Elevation	= 599.24 ft
Reservoir name	= Detention	Max. Storage	= 38,583 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

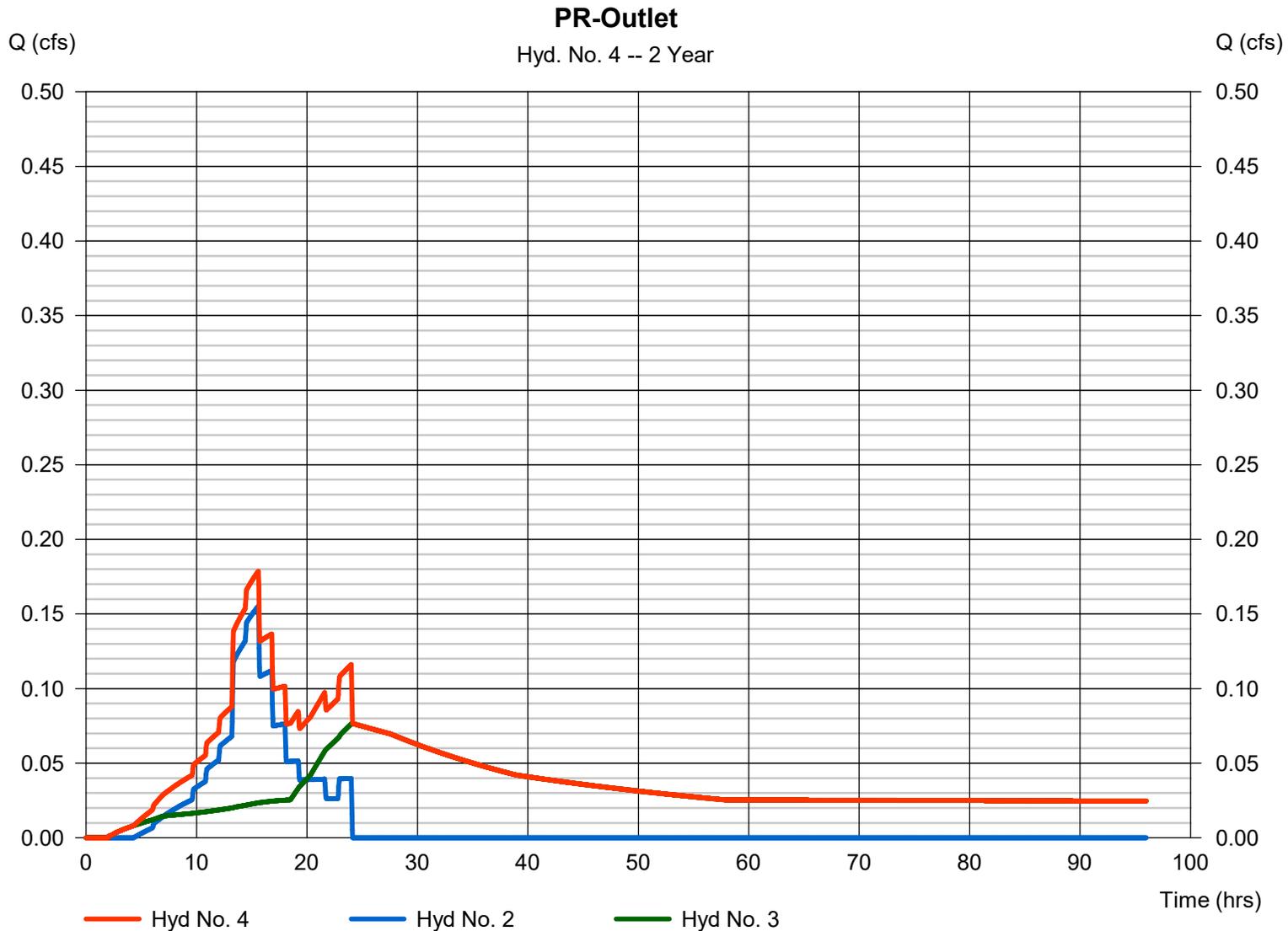
Wednesday, 02 / 26 / 2025

Hyd. No. 4

PR-Outlet

Hydrograph type = Combine
Storm frequency = 2 yrs
Time interval = 2 min
Inflow hyds. = 2, 3

Peak discharge = 0.179 cfs
Time to peak = 15.60 hrs
Hyd. volume = 14,617 cuft
Contrib. drain. area = 0.585 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

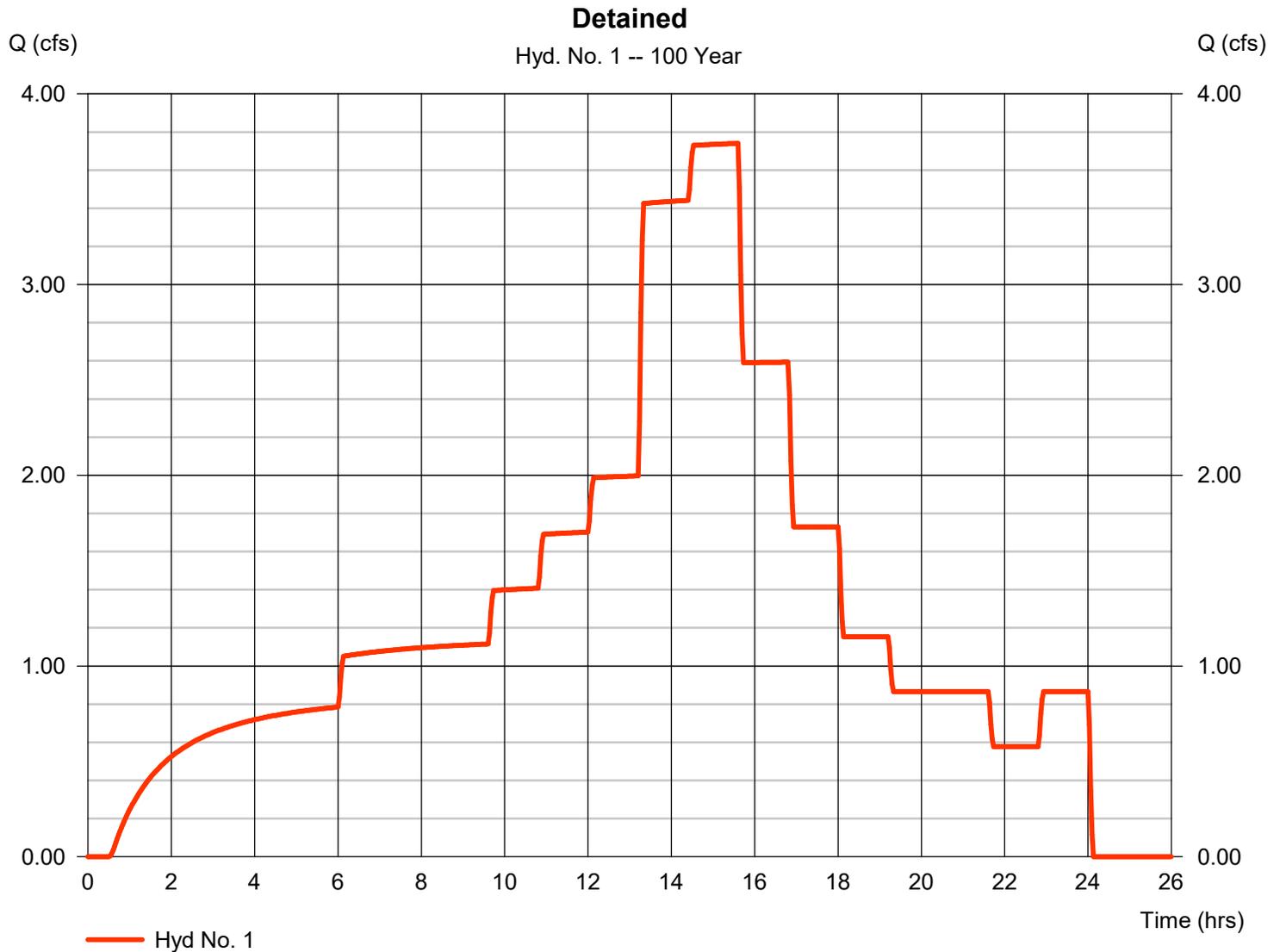
Wednesday, 02 / 26 / 2025

Hyd. No. 1

Detained

Hydrograph type	= SCS Runoff	Peak discharge	= 3.740 cfs
Storm frequency	= 100 yrs	Time to peak	= 15.60 hrs
Time interval	= 2 min	Hyd. volume	= 116,373 cuft
Drainage area	= 4.291 ac	Curve number	= 95*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 8.57 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.550 x 98) + (0.560 x 80)] / 4.291

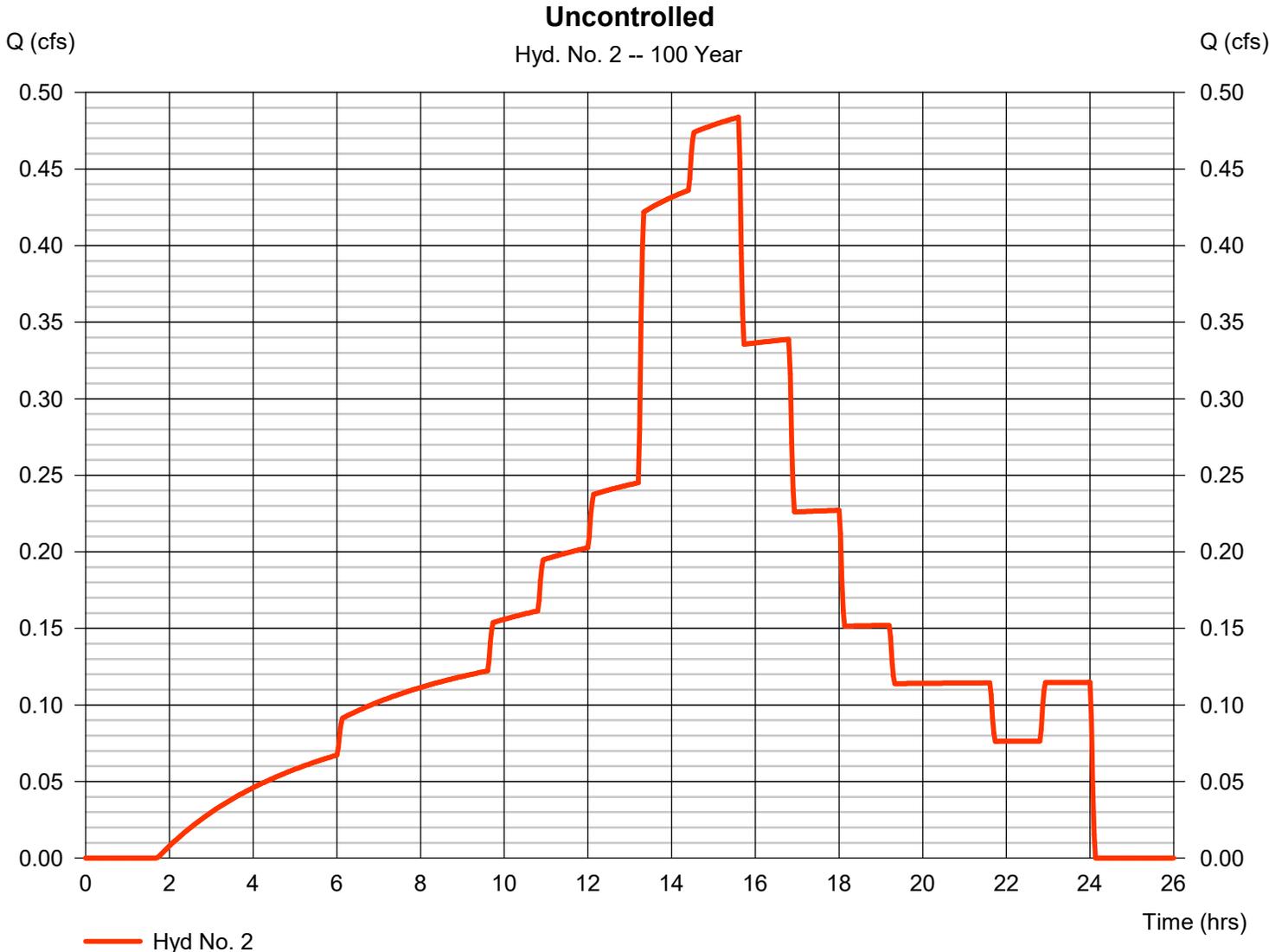


Hydrograph Report

Hyd. No. 2

Uncontrolled

Hydrograph type	= SCS Runoff	Peak discharge	= 0.484 cfs
Storm frequency	= 100 yrs	Time to peak	= 15.60 hrs
Time interval	= 2 min	Hyd. volume	= 13,467 cuft
Drainage area	= 0.585 ac	Curve number	= 85
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 8.57 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

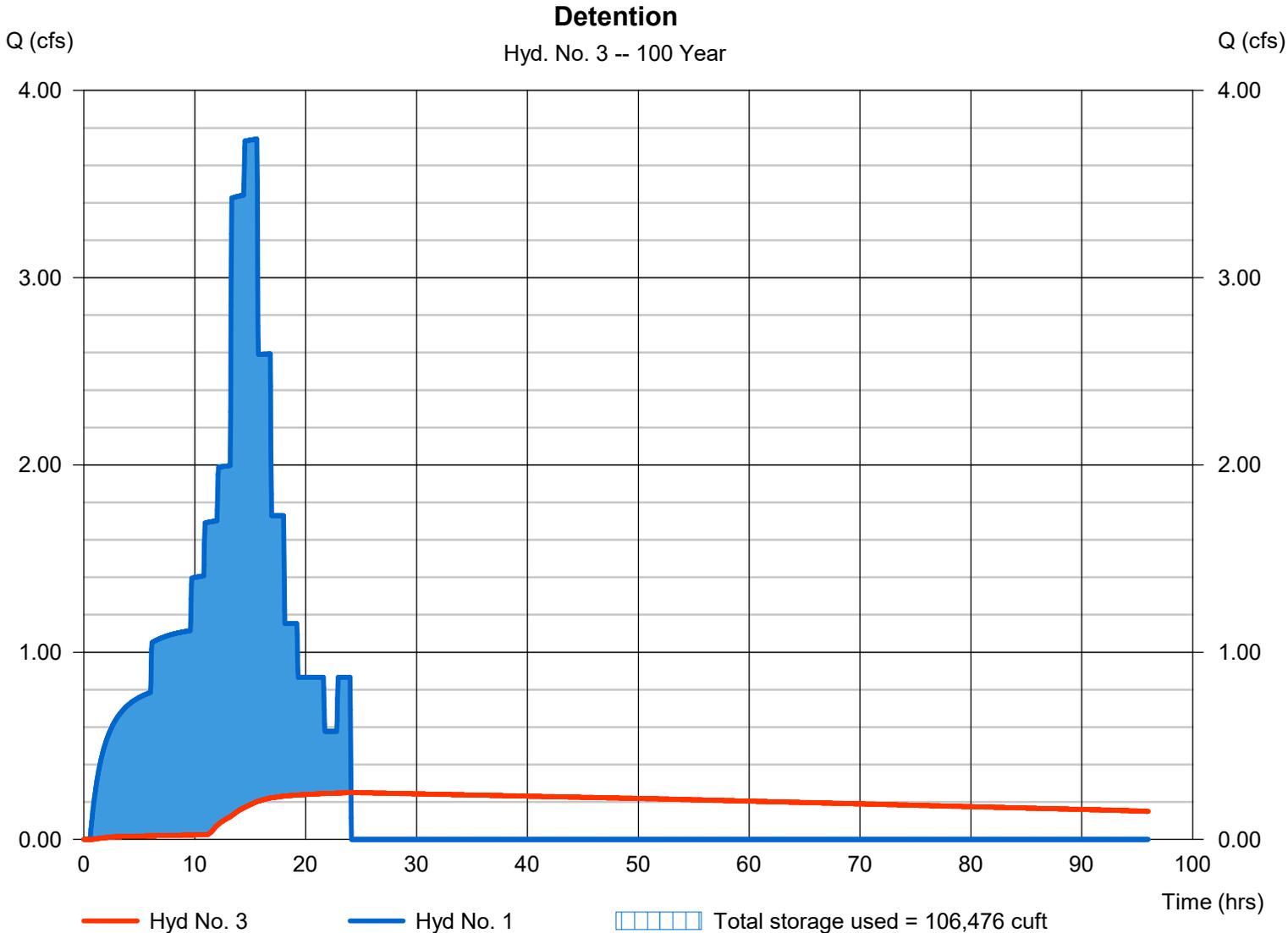
Wednesday, 02 / 26 / 2025

Hyd. No. 3

Detention

Hydrograph type	= Reservoir	Peak discharge	= 0.251 cfs
Storm frequency	= 100 yrs	Time to peak	= 24.07 hrs
Time interval	= 2 min	Hyd. volume	= 62,483 cuft
Inflow hyd. No.	= 1 - Detained	Max. Elevation	= 601.72 ft
Reservoir name	= Detention	Max. Storage	= 106,476 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

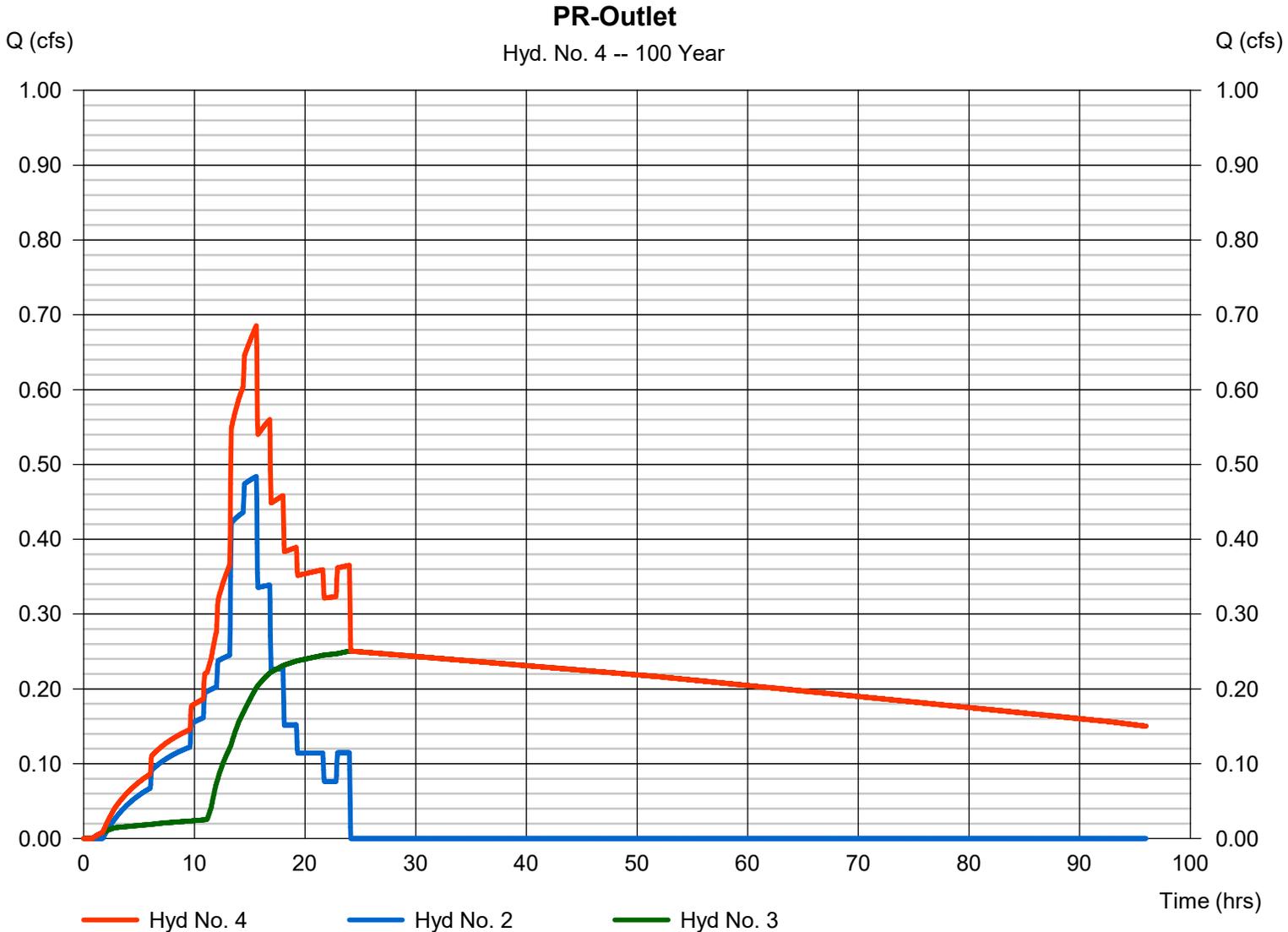
Wednesday, 02 / 26 / 2025

Hyd. No. 4

PR-Outlet

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 2, 3

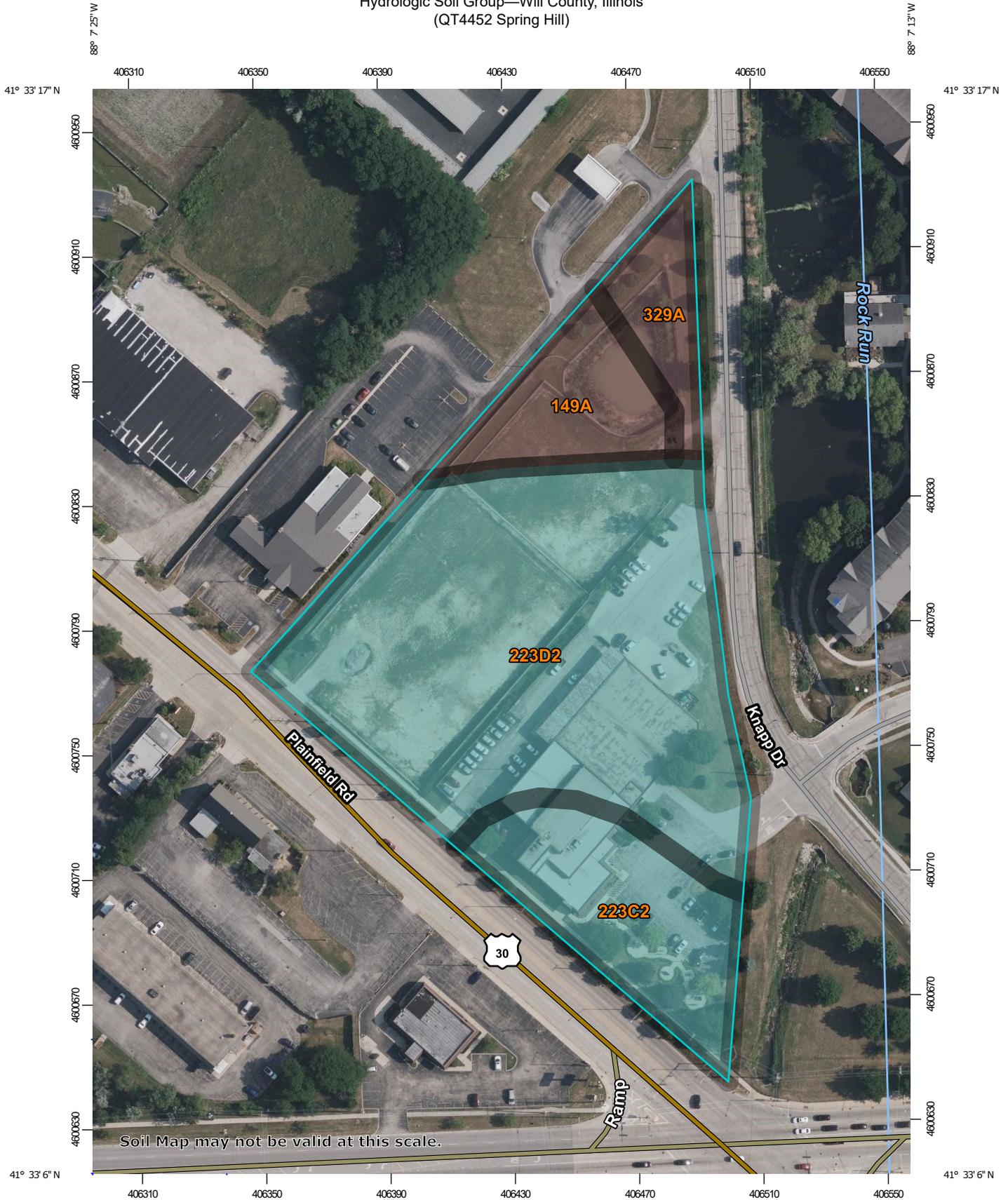
Peak discharge = 0.686 cfs
Time to peak = 15.60 hrs
Hyd. volume = 75,950 cuft
Contrib. drain. area = 0.585 ac



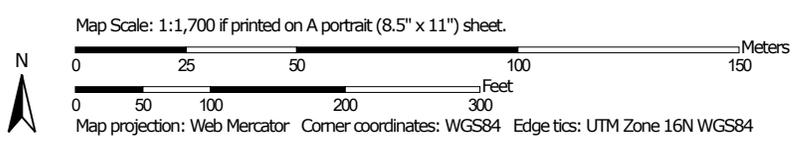
QuikTrip Store #4452

- **NRCS Soils Report**
- **NWI Wetland Map**
- **USGS Maps**
- **FEMA Maps**

Hydrologic Soil Group—Will County, Illinois
(QT4452 Spring Hill)



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Will County, Illinois
 Survey Area Data: Version 19, Aug 21, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 7, 2020—Oct 13, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
149A	Brenton silt loam, 0 to 2 percent slopes	B/D	0.6	10.9%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	C	1.0	18.1%
223D2	Varna silt loam, 6 to 12 percent slopes, eroded	C	3.6	64.2%
329A	Will silty clay loam, 0 to 2 percent slopes	B/D	0.4	6.8%
Totals for Area of Interest			5.6	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

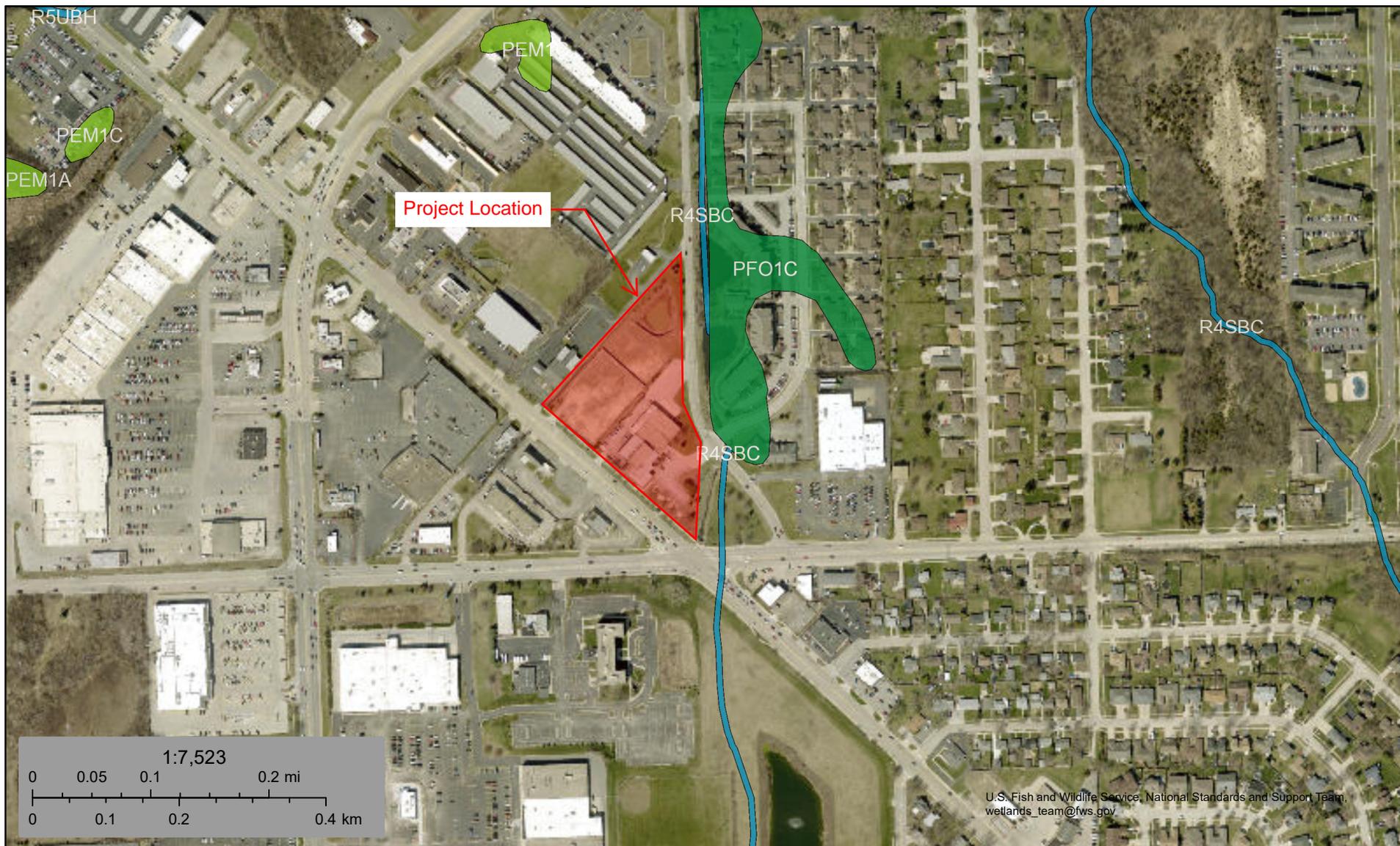
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



February 25, 2025

Wetlands

- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1 000-meter grid Universal Transverse Mercator, Zone 16T
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.
Imagery: August 2019 August 2019 August 2019
Roads: U.S. Census Bureau 2017
Names: U.S. Census Bureau 2017
Hydrography: National Hydrography Dataset, 2002 2002
Contours: National Elevation Dataset, 2014
Boundaries: Multiple sources; see metadata file 2021 2022
Public Land Survey System: BLM 2020
Wetlands: FWS National Wetlands Inventory Not Available

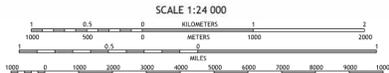
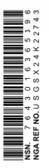
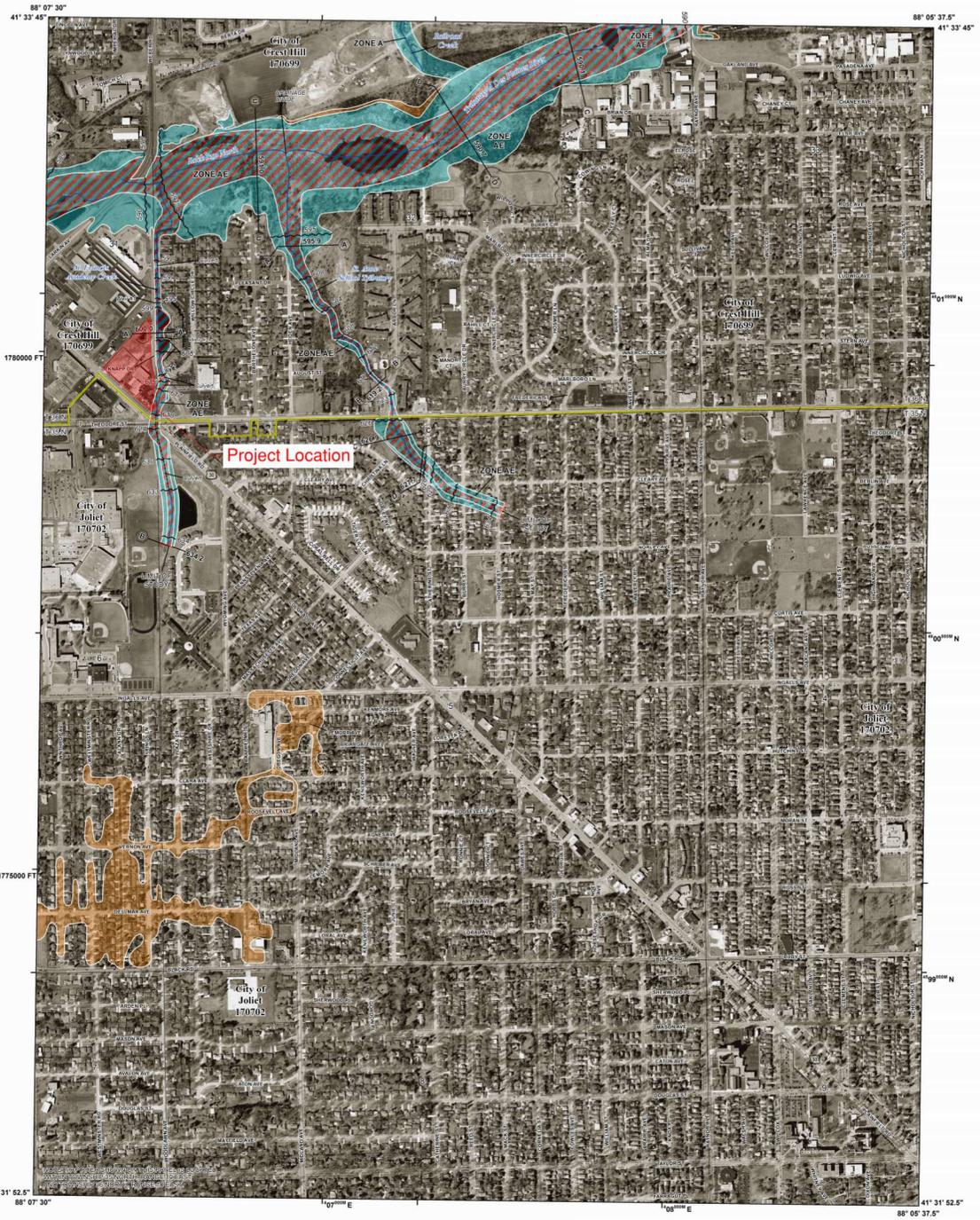


Table with 8 columns and 2 rows listing adjacent quadrangles: 1 Normanton, 2 Romeoville, 3 Sag Bridge, 4 Plainfield, 5 Rockton, 6 Channahon, 7 Elwood, 8 Manhattan.





FLOOD HAZARD INFORMATION

- SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)
- SPECIAL FLOOD HAZARD AREAS**
 - Without Base Flood Elevation (BFE) Zone A, V, A99
 - With BFE or Depth Zone AE, AO, AH, VE, AR
 - Regulatory Floodway
 - OTHER AREAS OF FLOOD HAZARD**
 - 0.2% Annual Chance Flood Hazard. Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile. Zone X
 - Future Conditions 1% Annual Chance Flood Hazard Zone X
 - Area with Reduced Flood Risk due to Levee See Notes Zone X
 - Area with Flood Risk due to Levee Zone D
 - Area of Minimal Flood Hazard Zone X
 - Area of Undetermined Flood Hazard Zone D
 - OTHER AREAS**
 - Channel, Culvert, or Storm Sewer Dam, Jetty, or Weir
 - Levee, Dike or Floodwall
 - GENERAL STRUCTURES**
 - 718.7
 - 717.6
 - Coastal Transect
 - Coastal Transect Baseline
 - Profile Baseline
 - Hydrographic Feature
 - Base Flood Elevation Line (BFE)
 - Limit of Study
 - OTHER FEATURES**
 - Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with the FIRM including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information Exchange at 1-877-FEMA-MAP (1-877-368-2627) or visit the FEMA Flood Map Service Center website at firms.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of the map. Many of these products can be ordered or obtained directly from the website.

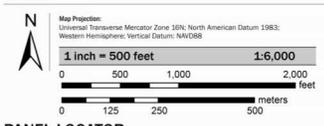
For community and countywide map dates refer to the Flood Insurance Study report for the jurisdiction. To determine if flood insurance is available in a community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6920.

Communities ordering hard or soft-copy FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

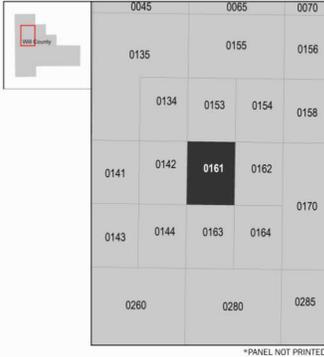
Base map information shown on the FIRM was provided in digital format by Will County, Illinois. This information was derived from digital orthorectified aerial photography at a spatial resolution of 4 inches where available and 8 inches otherwise, from aerial photography dated 2013.

ILLINOIS
 Illinois State Water Survey
 PEAKS RESEARCH INSTITUTE

SCALE



PANEL LOCATOR



**NATIONAL FLOOD INSURANCE PROGRAM
 FLOOD INSURANCE RATE MAP**

WILL COUNTY, ILLINOIS
 and Incorporated Areas

PANEL 161 of 585

FEMA
 National Flood Insurance Program

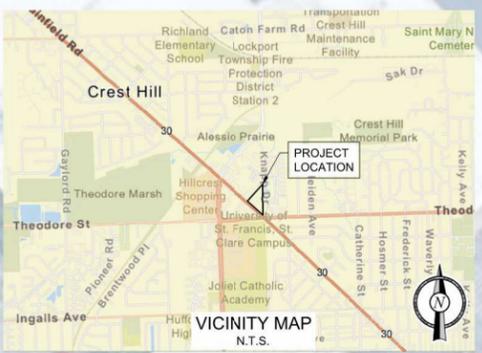
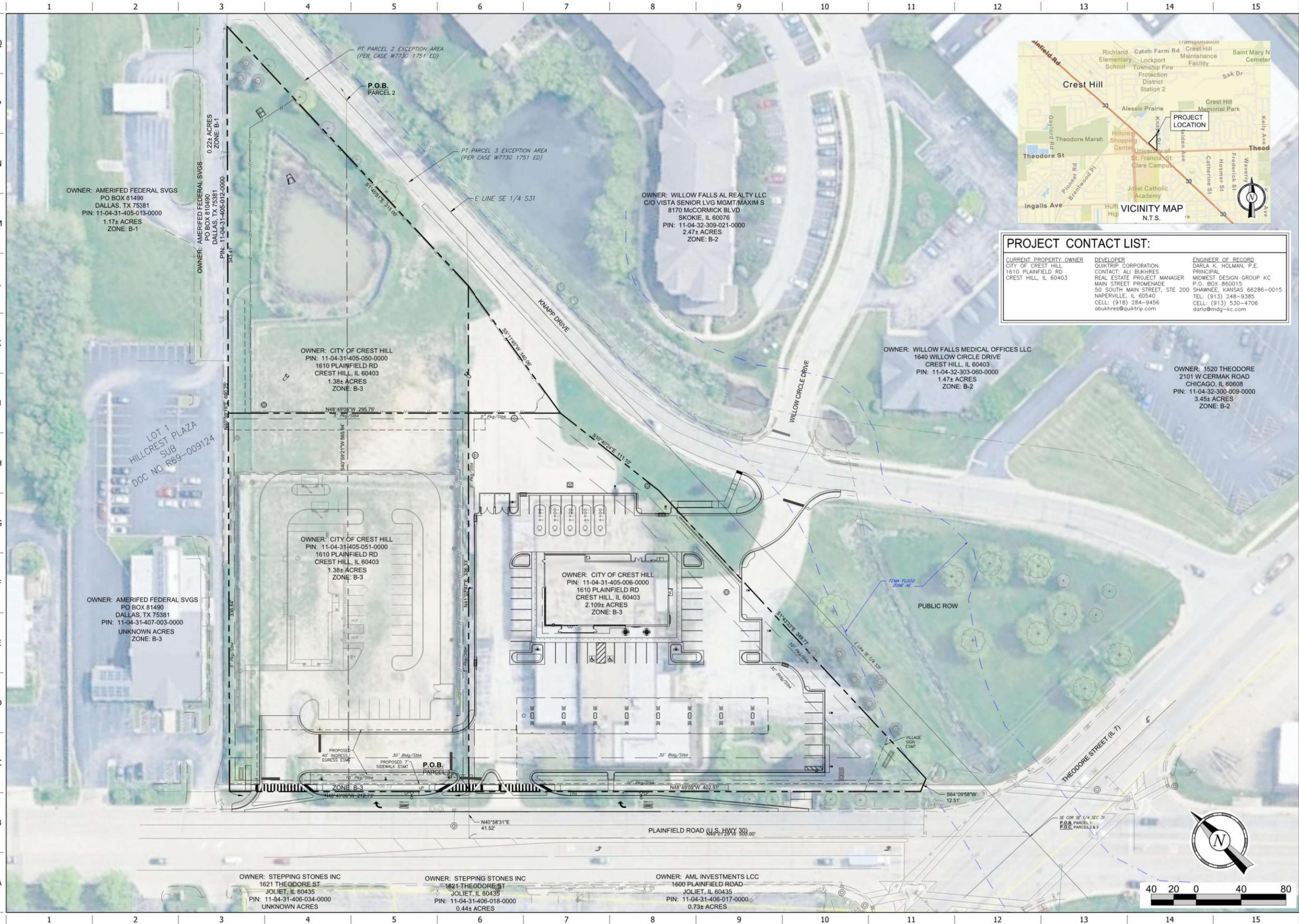
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 NUMBER: 170699
 PANEL: 0161
 SUFFIX: G

VERSION NUMBER: 2.3.3.3
 MAP NUMBER: 17197C0161G
 MAP REVISED: FEBRUARY 15, 2019

QuikTrip Store #4452

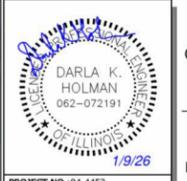
Plan Sheets

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PROJECT CONTACT LIST:

CURRENT PROPERTY OWNER	DEVELOPER	ENGINEER OF RECORD
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PROJECT NO: 84-452

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REVIEWED BY: CJC

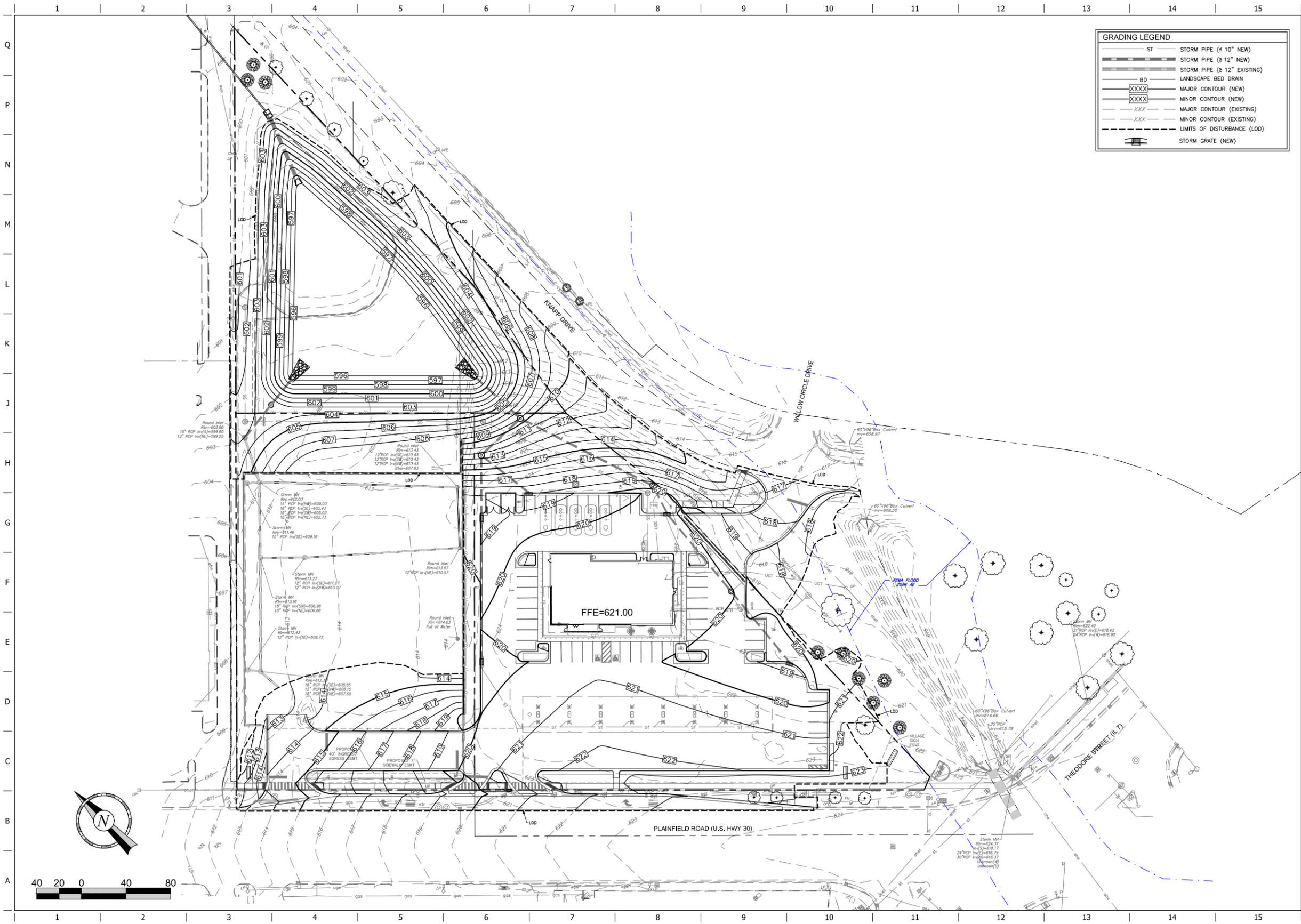
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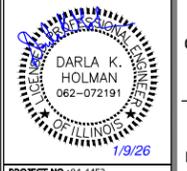
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OVERALL DEVELOPMENT PLAN

SHEET NUMBER:
C010

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GRADING LEGEND	
ST	STORM PIPE (≤ 10" NEW)
ST	STORM PIPE (≥ 12" NEW)
ST	STORM PIPE (≥ 12" EXISTING)
BD	LANDSCAPE BED DRAIN
XXXX	MAJOR CONTOUR (NEW)
XXXX	MINOR CONTOUR (NEW)
----	MAJOR CONTOUR (EXISTING)
----	MINOR CONTOUR (EXISTING)
---	LIMITS OF DISTURBANCE (LOD)
SG	STORM GRATE (NEW)



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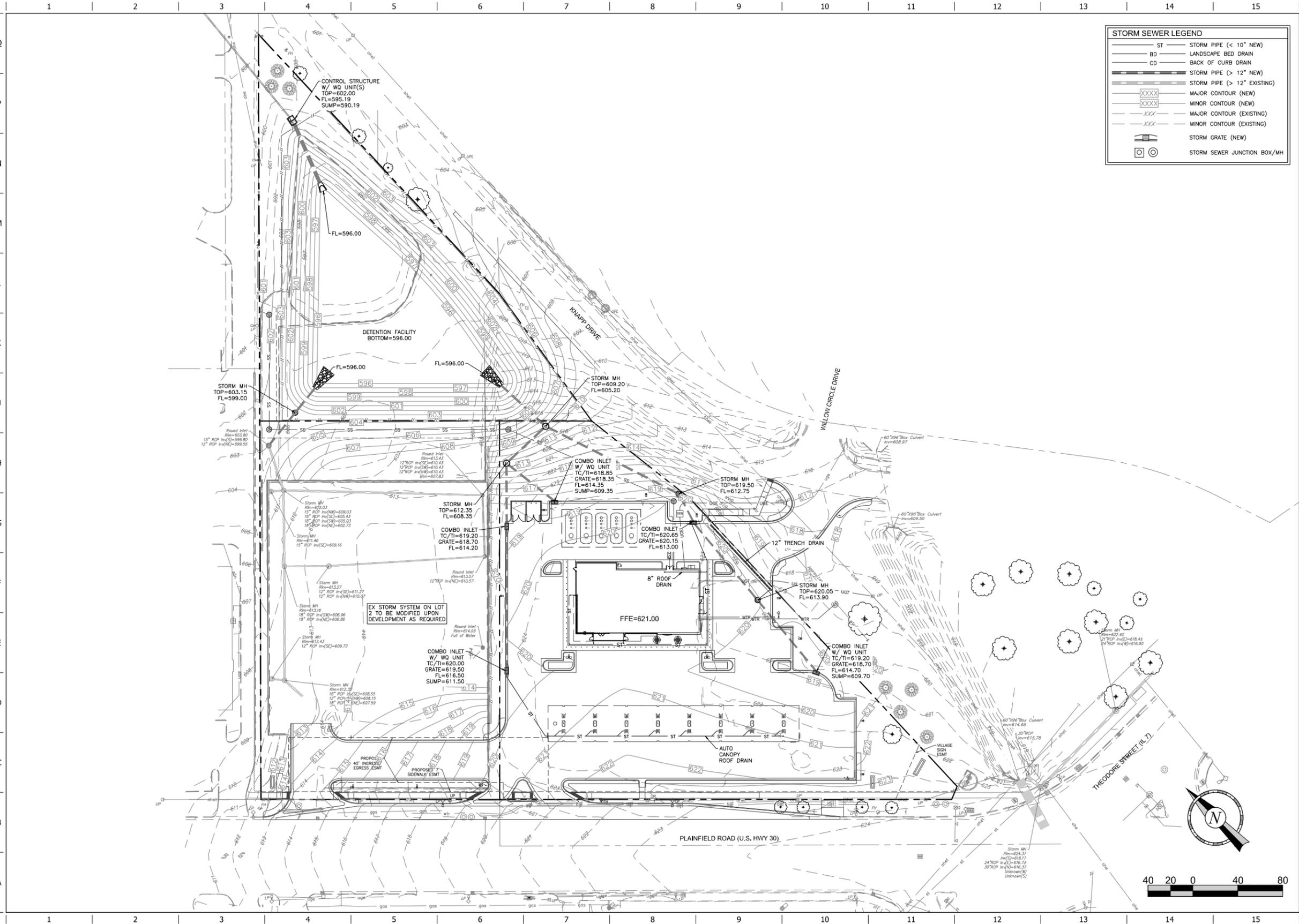
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SHEET TITLE:
OVERALL GRADING PLAN

SHEET NUMBER:
C110

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STORM SEWER LEGEND

- ST - STORM PIPE (< 10" NEW)
- BD - LANDSCAPE BED DRAIN
- CD - BACK OF CURB DRAIN
- STORM PIPE (> 12" NEW)
- STORM PIPE (> 12" EXISTING)
- XXXX - MAJOR CONTOUR (NEW)
- XXXX - MINOR CONTOUR (NEW)
- XXX - MAJOR CONTOUR (EXISTING)
- XXX - MINOR CONTOUR (EXISTING)
- Storm Grate (NEW)
- Storm Sewer Junction Box/MH

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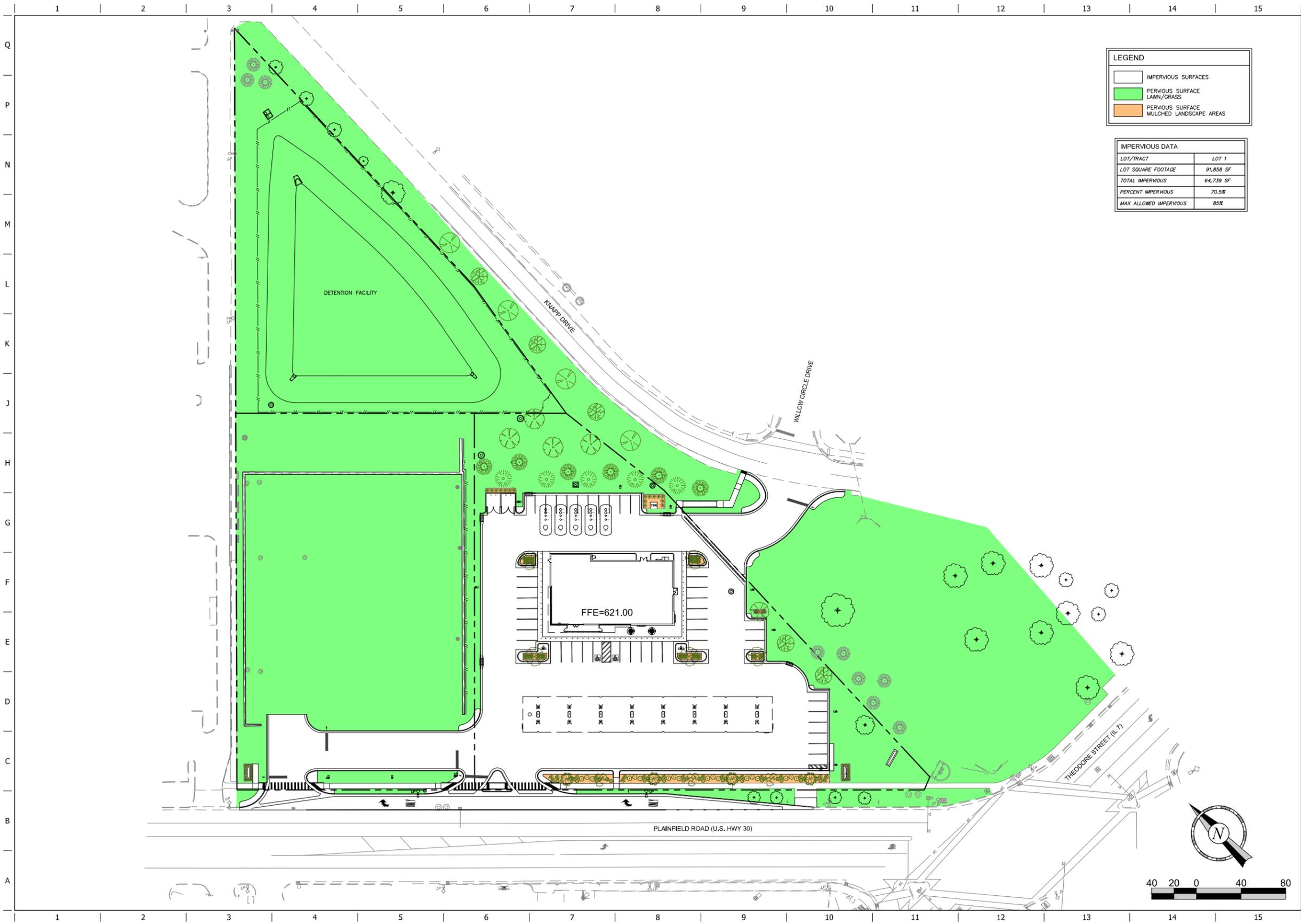
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STORM SEWER PLAN

SHEET NUMBER:
C120

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LEGEND

- IMPERVIOUS SURFACES
- PERVIOUS SURFACE LAWN/GRASS
- PERVIOUS SURFACE MULCHED LANDSCAPE AREAS

IMPERVIOUS DATA

LOT/TRACT	LOT 1
LOT SQUARE FOOTAGE	91,858 SF
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

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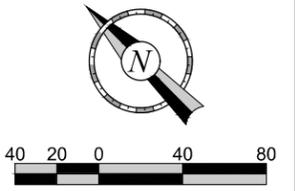
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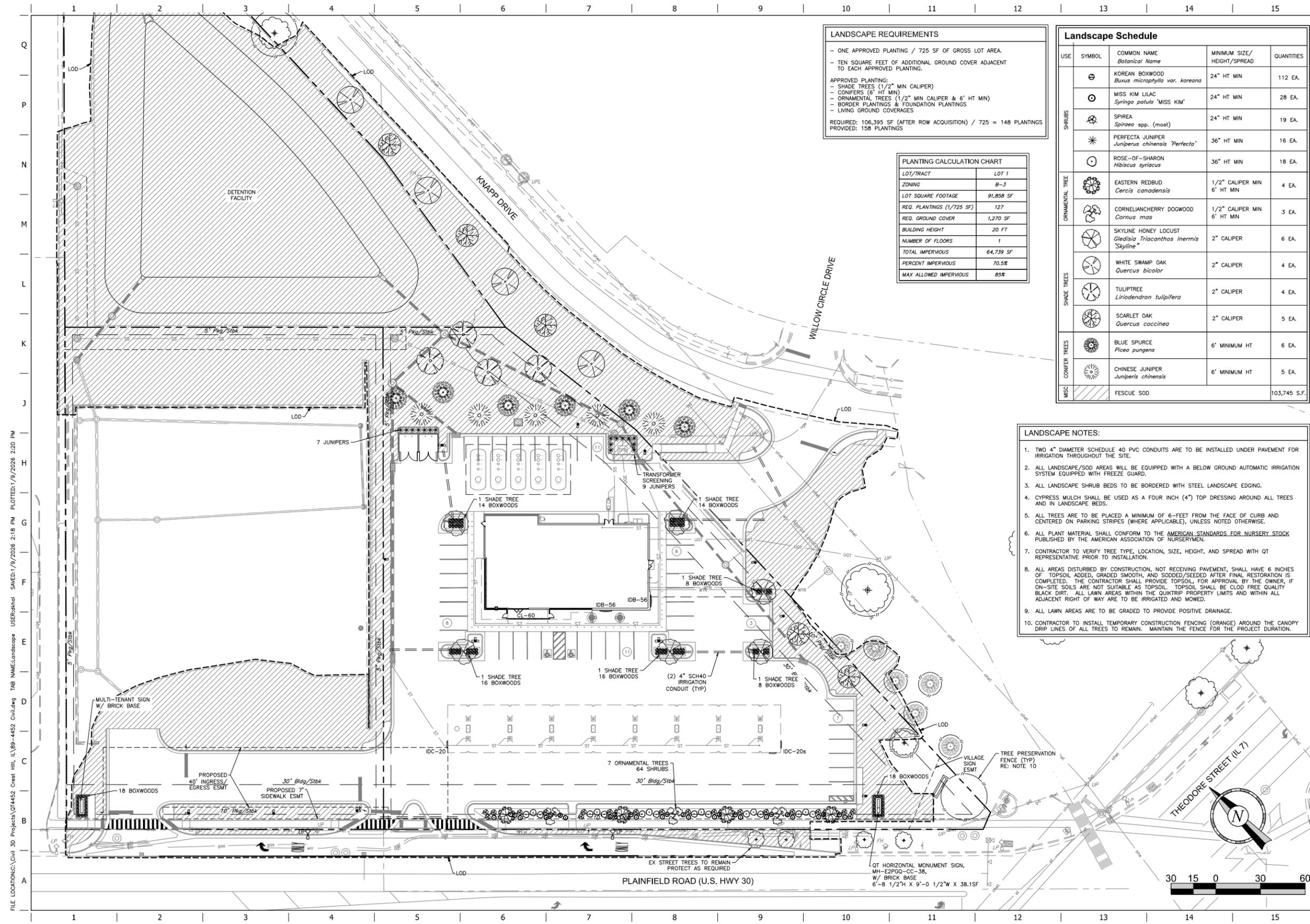
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SHEET TITLE:
 OVERALL LANDSCAPE
 IMPERVIOUS SURFACE PLAN

SHEET NUMBER:
L100





LANDSCAPE REQUIREMENTS

- ONE APPROVED PLANTING / 725 SF OF GROSS LOT AREA.
- TEN SQUARE FEET OF ADDITIONAL GROUND COVER ADJACENT TO EACH APPROVED PLANTING.

APPROVED PLANTING:

- SHADE TREES (1/2" MIN CALIPER)
- CONIFERS (6' HT MIN)
- ORNAMENTAL TREES (1/2" MIN CALIPER & 6' HT MIN)
- BORDER PLANTINGS & FOUNDATION PLANTINGS
- LIVING GROUND COVERAGES

REQUIRED: 106,395 SF (AFTER ROW ACQUISITION) / 725 = 148 PLANTINGS
 PROVIDED: 158 PLANTINGS

PLANTING CALCULATION CHART

LOT/TRACT	LOT 1
ZONING	B-3
LOT SQUARE FOOTAGE	91,858 SF
REQ. PLANTINGS (1/725 SF)	127
REQ. GROUND COVER	1,270 SF
BUILDING HEIGHT	20 FT
NUMBER OF FLOORS	1
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

Landscape Schedule

USE	SYMBOL	COMMON NAME <i>Botanical Name</i>	MINIMUM SIZE/ HEIGHT/SPREAD	QUANTITIES
SHRUBS	⊗	KOREAN BOXWOOD <i>Buxus microphylla var. koreana</i>	24" HT MIN	112 EA.
	⊙	MISS KIM LILAC <i>Syringa patula 'MISS KIM'</i>	24" HT MIN	28 EA.
	⊛	SPIREA <i>Spiraea spp. (most)</i>	24" HT MIN	19 EA.
ORNAMENTAL TREE	⊗	PERFECTA JUNIPER <i>Juniperus chinensis 'Perfecta'</i>	36" HT MIN	16 EA.
	⊙	ROSE-OF-SHARON <i>Hibiscus syriacus</i>	36" HT MIN	18 EA.
	⊛	EASTERN REDBUD <i>Cercis canadensis</i>	1/2" CALIPER MIN 6" HT MIN	4 EA.
SHADE TREES	⊗	CORNELIANCHERRY DOGWOOD <i>Cornus mas</i>	1/2" CALIPER MIN 6" HT MIN	3 EA.
	⊙	SKYLINE HONEY LOCUST <i>Gleditsia triacanthos Inermis 'Skyline'</i>	2" CALIPER	6 EA.
	⊛	WHITE SWAMP OAK <i>Quercus bicolor</i>	2" CALIPER	4 EA.
CONIFER TREES	⊗	TULIPTREE <i>Liriodendron tulipifera</i>	2" CALIPER	4 EA.
	⊙	SCARLET OAK <i>Quercus coccinea</i>	2" CALIPER	5 EA.
MISC	⊗	BLUE SPURGE <i>Picea pungens</i>	6' MINIMUM HT	6 EA.
	⊙	CHINESE JUNIPER <i>Juniperus chinensis</i>	6' MINIMUM HT	5 EA.
		FESCUE SOD		103,745 S.F.

- LANDSCAPE NOTES:**
- TWO 4" DIAMETER SCHEDULE 40 PVC CONDUITS ARE TO BE INSTALLED UNDER PAVEMENT FOR IRRIGATION THROUGHOUT THE SITE.
 - ALL LANDSCAPE/SOD AREAS WILL BE EQUIPPED WITH A BELOW GROUND AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH FREEZE GUARD.
 - ALL LANDSCAPE SHRUB BEDS TO BE BORDERED WITH STEEL LANDSCAPE EDGING.
 - CYPRESS MULCH SHALL BE USED AS A FOUR INCH (4") TOP DRESSING AROUND ALL TREES AND IN LANDSCAPE BEDS.
 - ALL TREES ARE TO BE PLACED A MINIMUM OF 6- FEET FROM THE FACE OF CURB AND CENTERED ON PARKING STRIPES (WHERE APPLICABLE), UNLESS NOTED OTHERWISE.
 - ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
 - CONTRACTOR TO VERIFY TREE TYPE, LOCATION, SIZE, HEIGHT, AND SPREAD WITH QT REPRESENTATIVE PRIOR TO INSTALLATION.
 - ALL AREAS DISTURBED BY CONSTRUCTION, NOT RECEIVING PAVEMENT, SHALL HAVE 6 INCHES OF TOPSOIL ADDED, GRADED SMOOTH, AND SODDED/SEEDED AFTER FINAL RESTORATION IS COMPLETED. THE CONTRACTOR SHALL PROVIDE TOPSOIL FOR APPROVAL BY THE OWNER, IF ON-SITE SOILS ARE NOT SUITABLE AS TOPSOIL. TOPSOIL SHALL BE CLOD FREE QUALITY BLACK DIRT. ALL LAWN AREAS WITHIN THE QUIKTRIP PROPERTY LIMITS AND WITHIN ALL ADJACENT RIGHT OF WAY ARE TO BE IRRIGATED AND MOWED.
 - ALL LAWN AREAS ARE TO BE GRADED TO PROVIDE POSITIVE DRAINAGE.
 - CONTRACTOR TO INSTALL TEMPORARY CONSTRUCTION FENCING (ORANGE) AROUND THE CANOPY DRIP LINES OF ALL TREES TO REMAIN. MAINTAIN THE FENCE FOR THE PROJECT DURATION.

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 062-072191
 1/9/26

PROJECT NO: 04-452

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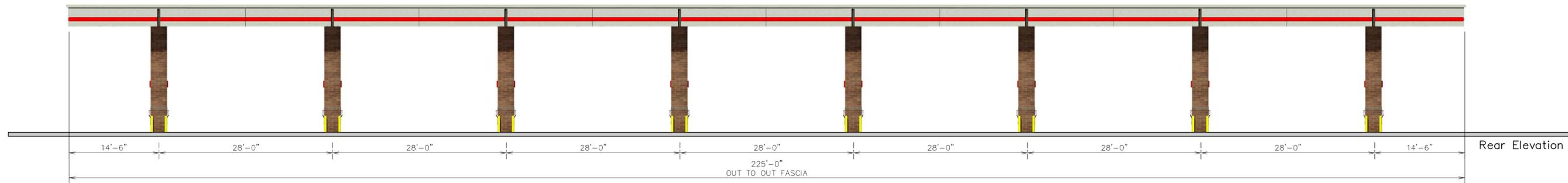
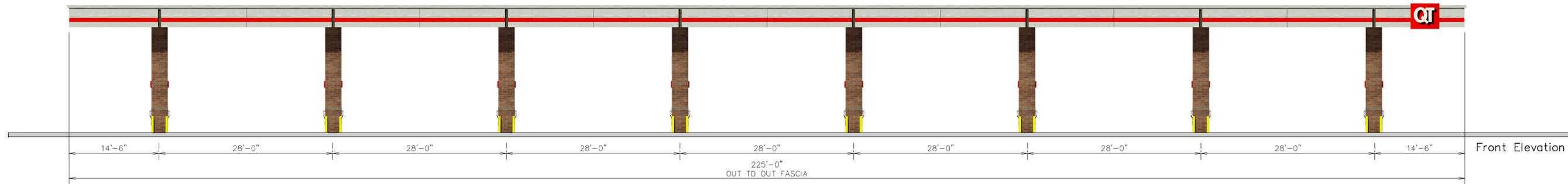
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SHEET TITLE:
 LANDSCAPE PLAN

SHEET NUMBER:
L101

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18'-6" Min. / 25'-6" Max.
 AFF Top of Canopy

15'-0" Min. Store Side Canopies / 20'-0" Max.
 17'-0" Min. Store Front Canopies / 22'-0" Max.
 AFF Bottom of Canopy



QuikTrip.

4705 South 129th East Ave.
 Tulsa, OK 74134-7008
 P.O. Box 3475
 Tulsa, OK 74101-3475
 (918) 615-7700

Store # 4452 G4 Vertical 8 Gas Canopy

Address: 1610 Plainfield Rd

City, State: Crest Hill, IL

Serial # 84-4452-G4-GV08 Scale: 1/8" = 1'-0" Issue Date: 12.22.25

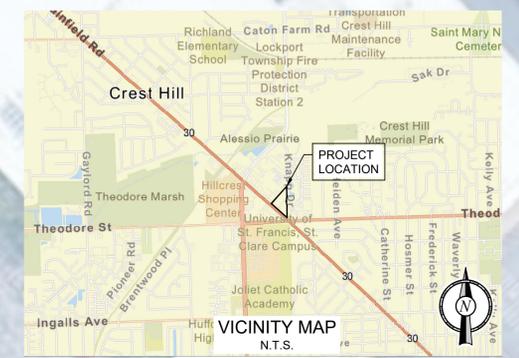
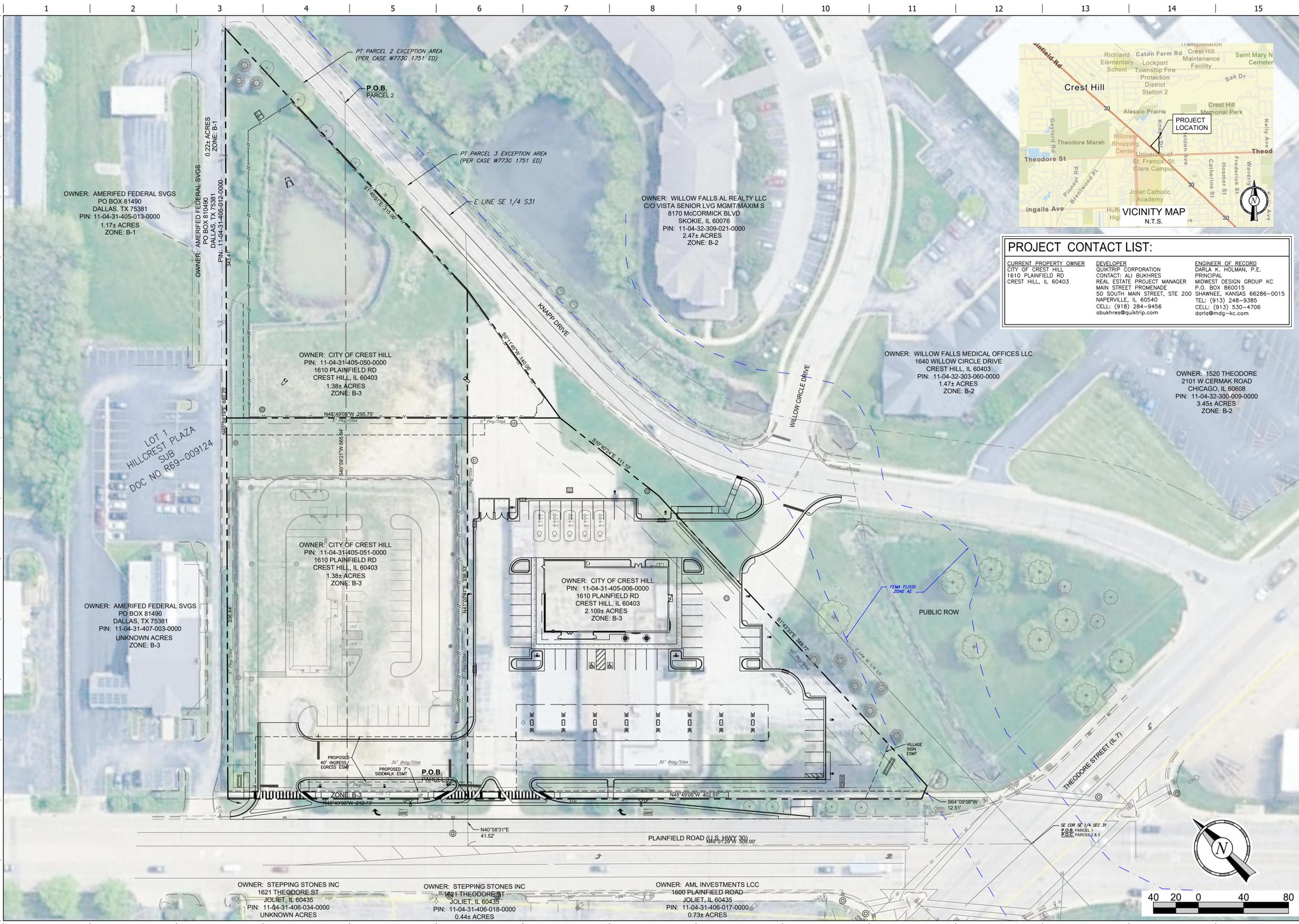
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①	FINISH	MANUFACTURER	SPECIFICATION
1	BRUSHED ALUMINUM	REYNOLDBOND	CANOPY
2	RED POLYCARBONATE	ALLEN INDUSTRIES	ILLUMINATED BAND
3	BROOKSTONE	INTERSTATE BRICK	ATLAS STRUCTURAL BRICK
4	IPCC-20	ALLEN INDUSTRIES	ILLUMINATED SIGNAGE

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PROJECT CONTACT LIST:

CURRENT PROPERTY OWNER CITY OF CREST HILL 1610 PLAINFIELD RD CREST HILL, IL 60403	DEVELOPER QUIKTRIP CORPORATION CONTACT: ALI BUKHRES REAL ESTATE PROJECT MANAGER MAIN STREET PROMENADE 50 SOUTH MAIN STREET, STE 200 NAPERVILLE, IL 60540 CELL: (918) 284-9456 abukhres@quiktrip.com	ENGINEER OF RECORD DARLA K. HOLMAN, P.E. PRINCIPAL MIDWEST DESIGN GROUP KC P.O. BOX 860015 SHAWNEE, KANSAS 66286-0015 TEL: (913) 248-9385 CELL: (913) 530-4706 darla@mdg-kc.com
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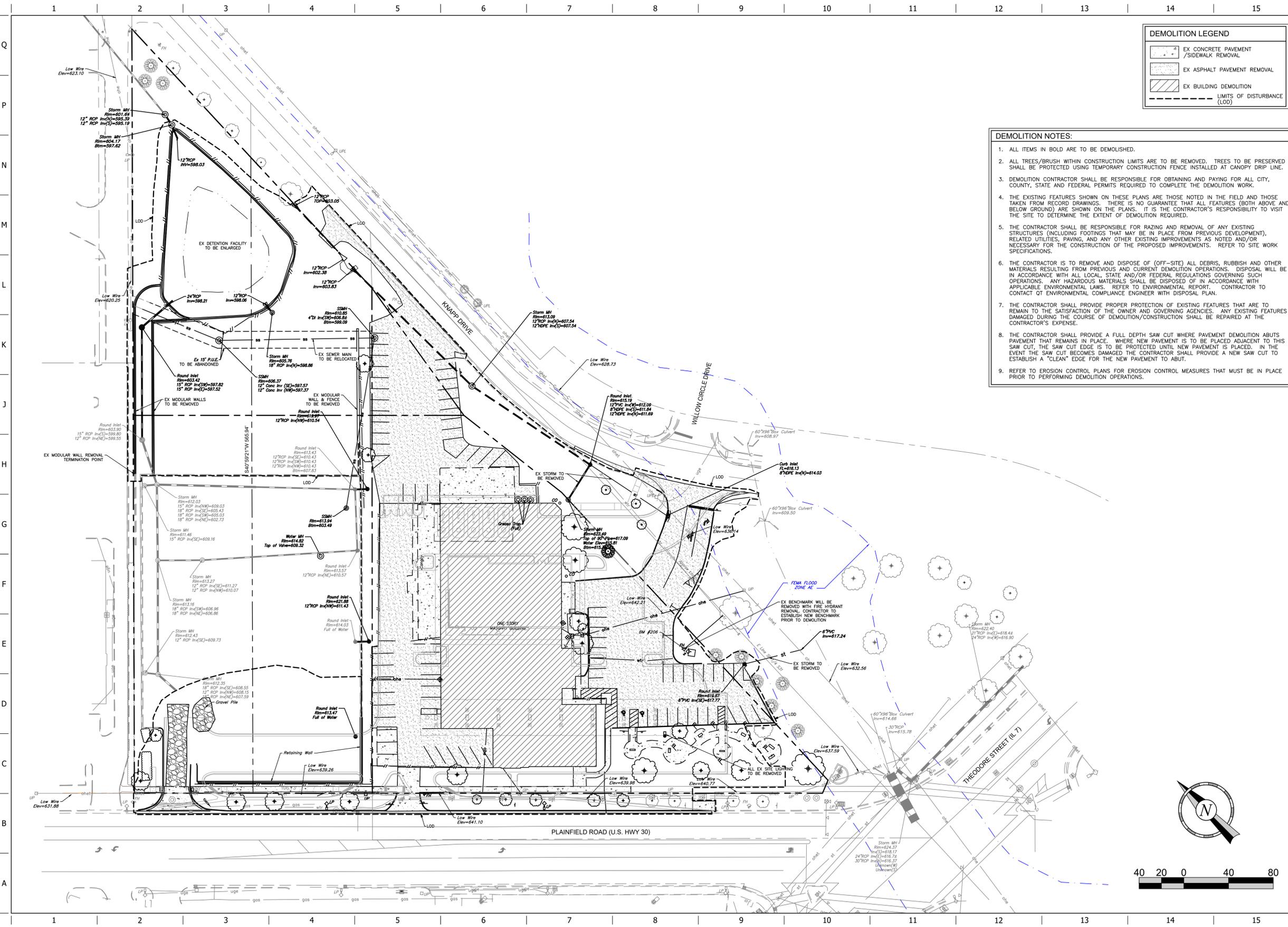
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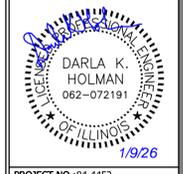
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OVERALL DEVELOPMENT PLAN

SHEET NUMBER:
C010



DEMOLITION LEGEND	
	EX CONCRETE PAVEMENT /SIDEWALK REMOVAL
	EX ASPHALT PAVEMENT REMOVAL
	EX BUILDING DEMOLITION
	LIMITS OF DISTURBANCE (LOD)

- DEMOLITION NOTES:**
- ALL ITEMS IN BOLD ARE TO BE DEMOLISHED.
 - ALL TREES/BRUSH WITHIN CONSTRUCTION LIMITS ARE TO BE REMOVED. TREES TO BE PRESERVED SHALL BE PROTECTED USING TEMPORARY CONSTRUCTION FENCE INSTALLED AT CANOPY DRIP LINE.
 - DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL CITY, COUNTY, STATE AND FEDERAL PERMITS REQUIRED TO COMPLETE THE DEMOLITION WORK.
 - THE EXISTING FEATURES SHOWN ON THESE PLANS ARE THOSE NOTED IN THE FIELD AND THOSE TAKEN FROM RECORD DRAWINGS. THERE IS NO GUARANTEE THAT ALL FEATURES (BOTH ABOVE AND BELOW GROUND) ARE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO DETERMINE THE EXTENT OF DEMOLITION REQUIRED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR RAZING AND REMOVAL OF ANY EXISTING STRUCTURES (INCLUDING FOOTINGS THAT MAY BE IN PLACE FROM PREVIOUS DEVELOPMENT), RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED AND/OR NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. REFER TO SITE WORK SPECIFICATIONS.
 - THE CONTRACTOR IS TO REMOVE AND DISPOSE OF (OFF-SITE) ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS. ANY HAZARDOUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL LAWS. REFER TO ENVIRONMENTAL REPORT. CONTRACTOR TO CONTACT QT ENVIRONMENTAL COMPLIANCE ENGINEER WITH DISPOSAL PLAN.
 - THE CONTRACTOR SHALL PROVIDE PROPER PROTECTION OF EXISTING FEATURES THAT ARE TO REMAIN TO THE SATISFACTION OF THE OWNER AND GOVERNING AGENCIES. ANY EXISTING FEATURES DAMAGED DURING THE COURSE OF DEMOLITION/CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL PROVIDE A FULL DEPTH SAW CUT WHERE PAVEMENT DEMOLITION ABUTS PAVEMENT THAT REMAINS IN PLACE. WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO THIS SAW CUT, THE SAW CUT EDGE IS TO BE PROTECTED UNTIL NEW PAVEMENT IS PLACED. IN THE EVENT THE SAW CUT BECOMES DAMAGED THE CONTRACTOR SHALL PROVIDE A NEW SAW CUT TO ESTABLISH A "CLEAN" EDGE FOR THE NEW PAVEMENT TO ABUT.
 - REFER TO EROSION CONTROL PLANS FOR EROSION CONTROL MEASURES THAT MUST BE IN PLACE PRIOR TO PERFORMING DEMOLITION OPERATIONS.



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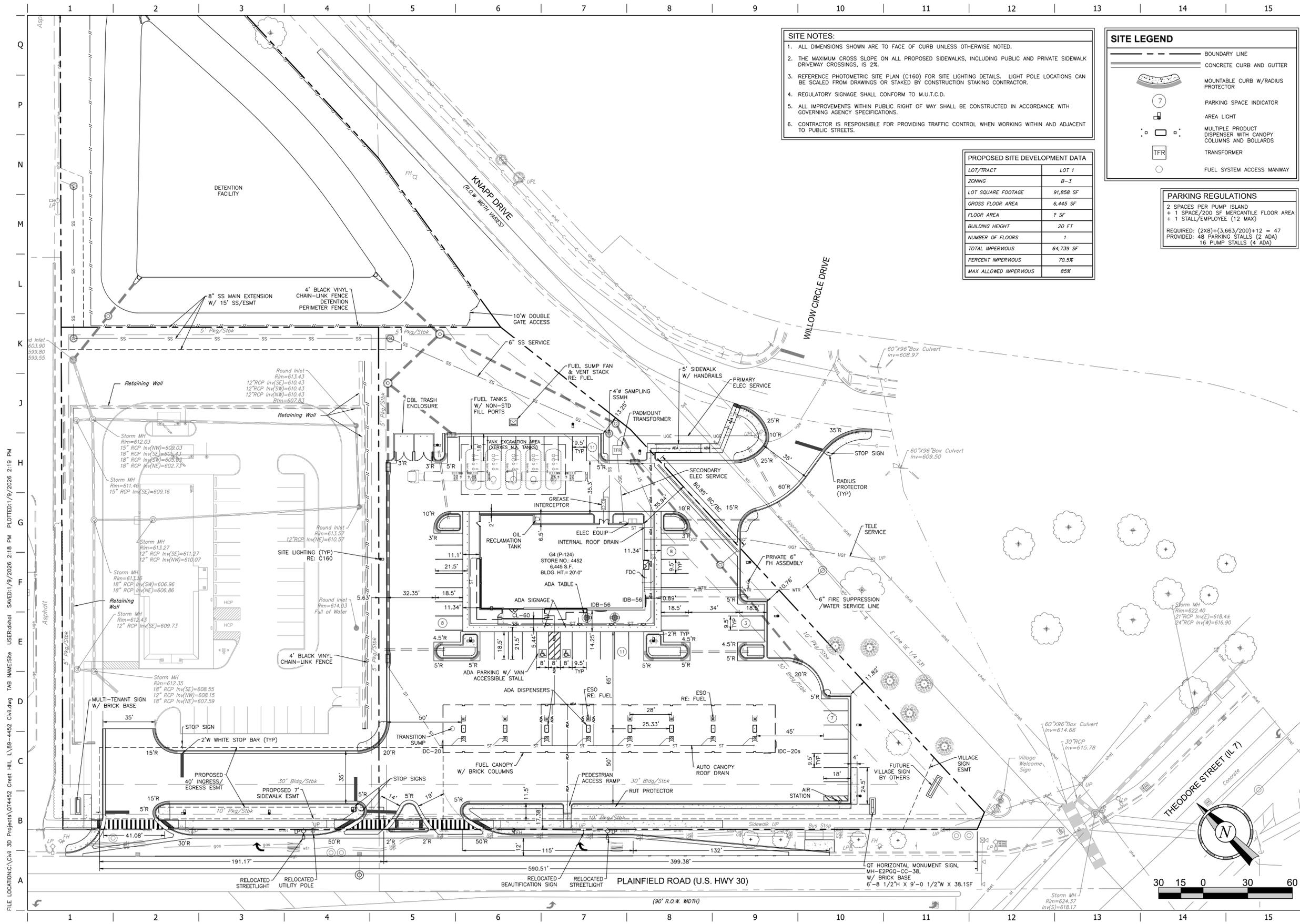
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DEMOLITION PLAN

SHEET NUMBER:
C030

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- SITE NOTES:**
1. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 2. THE MAXIMUM CROSS SLOPE ON ALL PROPOSED SIDEWALKS, INCLUDING PUBLIC AND PRIVATE SIDEWALK DRIVEWAY CROSSINGS, IS 2%.
 3. REFERENCE PHOTOMETRIC SITE PLAN (C160) FOR SITE LIGHTING DETAILS. LIGHT POLE LOCATIONS CAN BE SCALED FROM DRAWINGS OR STAKED BY CONSTRUCTION STAKING CONTRACTOR.
 4. REGULATORY SIGNAGE SHALL CONFORM TO M.U.T.C.D.
 5. ALL IMPROVEMENTS WITHIN PUBLIC RIGHT OF WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING AGENCY SPECIFICATIONS.
 6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL WHEN WORKING WITHIN AND ADJACENT TO PUBLIC STREETS.

SITE LEGEND

- BOUNDARY LINE
- CONCRETE CURB AND GUTTER
- MOUNTABLE CURB W/ RADIUS PROTECTOR
- PARKING SPACE INDICATOR
- AREA LIGHT
- MULTIPLE PRODUCT DISPENSER WITH CANOPY COLUMNS AND BOLLARDS
- TFR TRANSFORMER
- FUEL SYSTEM ACCESS MANWAY

PROPOSED SITE DEVELOPMENT DATA

LOT/TRACT	LOT 1
ZONING	B-3
LOT SQUARE FOOTAGE	91,858 SF
GROSS FLOOR AREA	6,445 SF
FLOOR AREA	? SF
BUILDING HEIGHT	20 FT
NUMBER OF FLOORS	1
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

PARKING REGULATIONS

2 SPACES PER PUMP ISLAND
 + 1 SPACE/200 SF MERCANTILE FLOOR AREA
 + 1 STALL/EMPLOYEE (12 MAX)

REQUIRED: (2x8)+(3,663/200)+12 = 47
 PROVIDED: 49 PARKING STALLS (2 ADA)
 16 PUMP STALLS (4 ADA)

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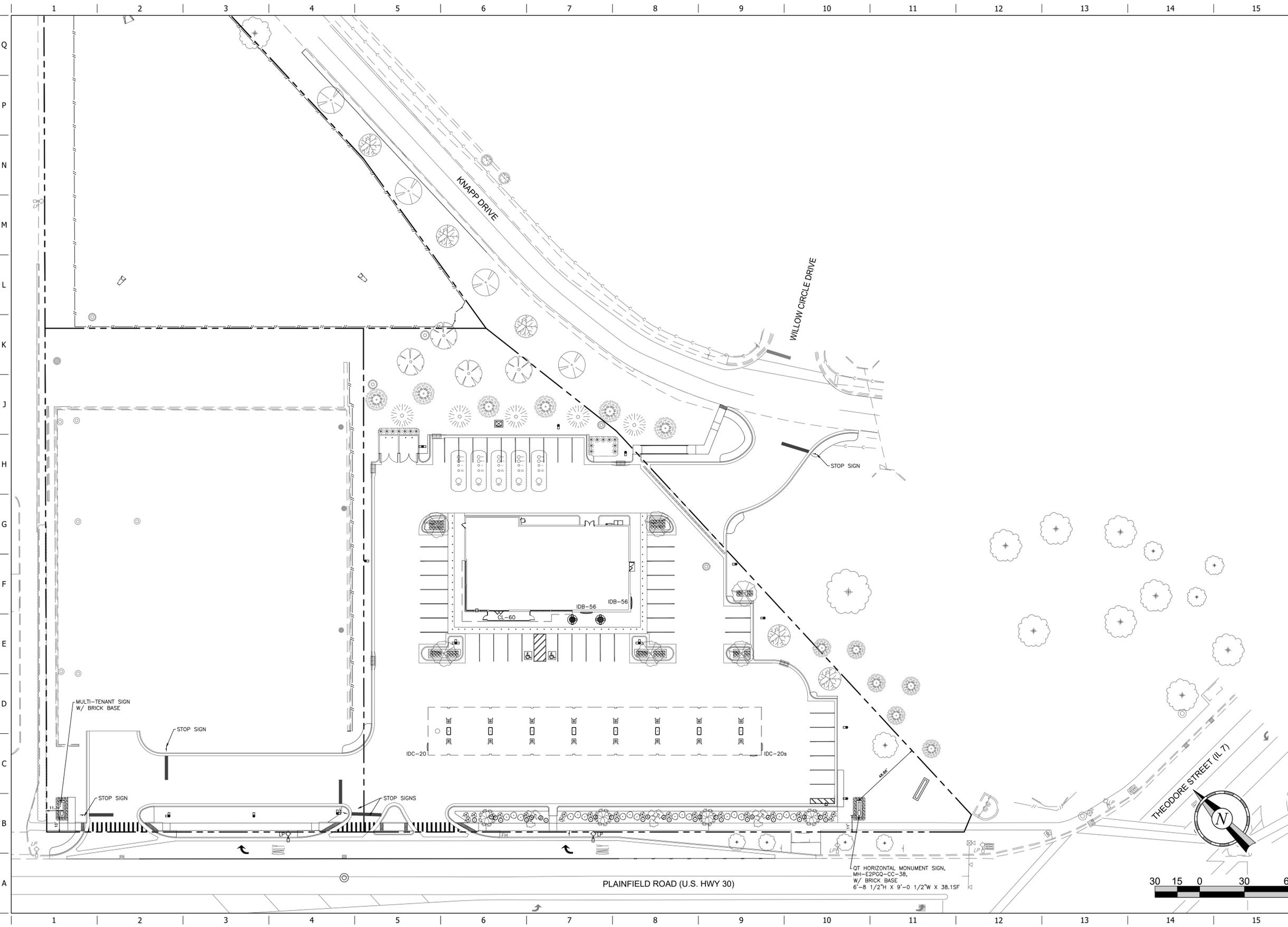
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 SITE PLAN

SHEET NUMBER:
 C101

ORIGINAL ISSUE DATE: 01/09/2026

FILE LOCATION: C:\Civil 3D Projects\C1014452 Crest Hill, IL B9-4452 Civil.dwg USER: dkh DATE: 1/9/2026 2:18 PM PLOTTED: 1/9/2026 2:19 PM

FILE LOCATION: C:\Civil_3D\Projects\C1014452\Crest Hill_IL_B9-4452\Civil.dwg TAB NAME: Signage USER: dmbd SAVED: 1/9/2026 2:18 PM PLOTTED: 1/9/2026 2:19 PM



DARLA K. HOLMAN
 062-072191
 1/9/26

MDG
 Midwest Design Group
 Kansas City
 PO Box 860015
 Shawnee, KS 66286-0015
 P 913.248.9385

QuikTrip No. 4452
 1610 PLAINFIELD ROAD
 CREST HILL, WILL COUNTY, ILLINOIS 60403

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PROTOTYPE: P-122
DIVISION: 84
VERSION: 001
DESIGNED BY: DKH
DRAWN BY: CSH
REVIEWED BY: CJC

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

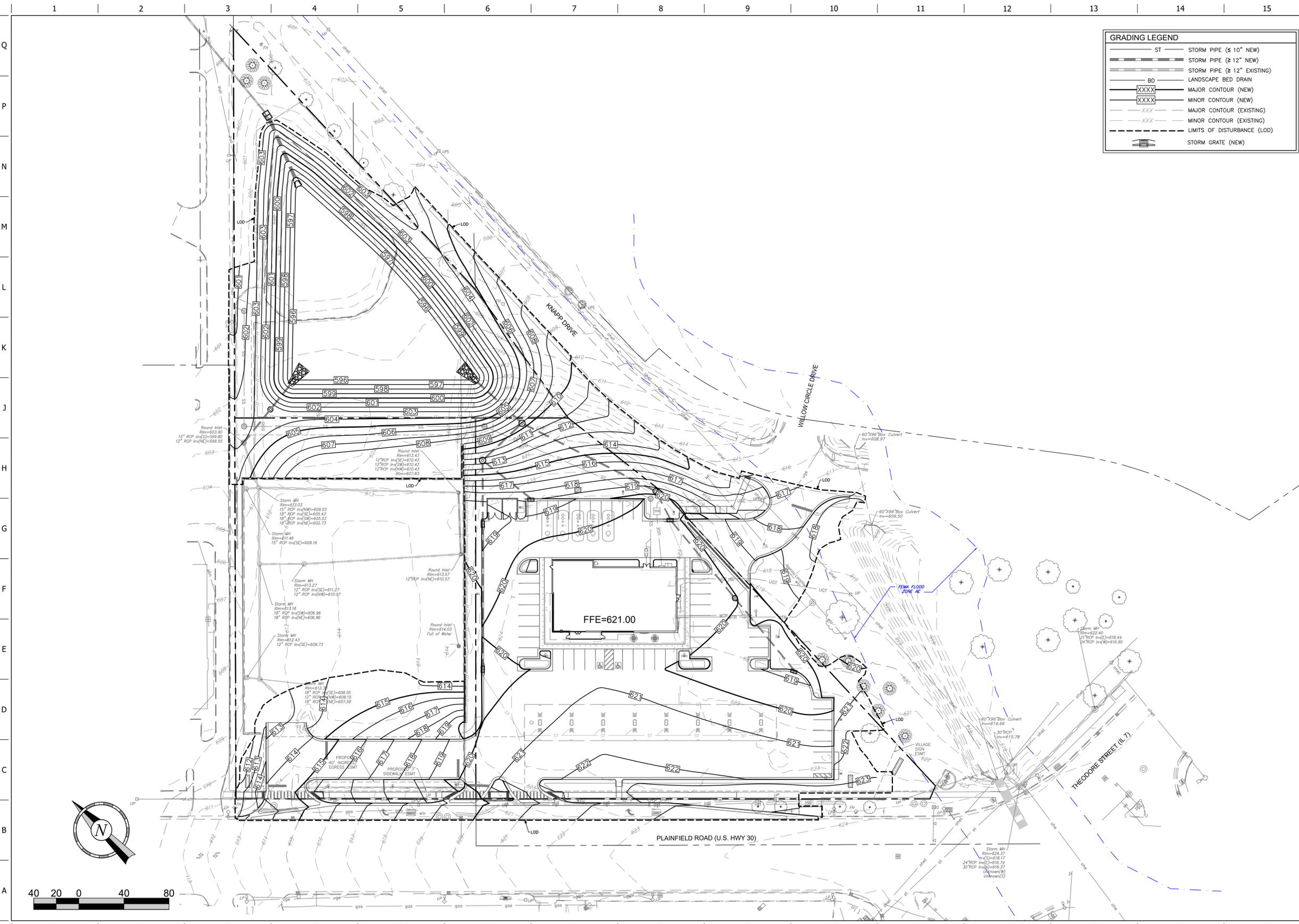
SHEET TITLE:
SIGNAGE PLAN

SHEET NUMBER:
C102

QT HORIZONTAL MONUMENT SIGN,
 MH-E2PGQ-CC-38,
 W/ BRICK BASE
 6'-8 1/2" H X 9'-0 1/2" W X 38.1 SF



FILE LOCATION: C:\Civil 3D Projects\014452 Crest Hill, IL\B9-4452 Civil\Lang TAB NAME: Overall Grading USER: dkhahk SAVED: 1/9/2026 2:18 PM PLOTTED: 1/9/2026 2:19 PM



GRADING LEGEND	
ST	STORM PIPE (≤ 10" NEW)
ST	STORM PIPE (≥ 12" NEW)
ST	STORM PIPE (≥ 12" EXISTING)
BD	LANDSCAPE BED DRAIN
XXXX	MAJOR CONTOUR (NEW)
XXXX	MINOR CONTOUR (NEW)
XXX	MAJOR CONTOUR (EXISTING)
XXX	MINOR CONTOUR (EXISTING)
---	LIMITS OF DISTURBANCE (LOD)
[Symbol]	STORM GRATE (NEW)



PROJECT NO.: 84-4452

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PROTOTYPE: P-122
DIVISION: 84
VERSION: 001
DESIGNED BY: DKH
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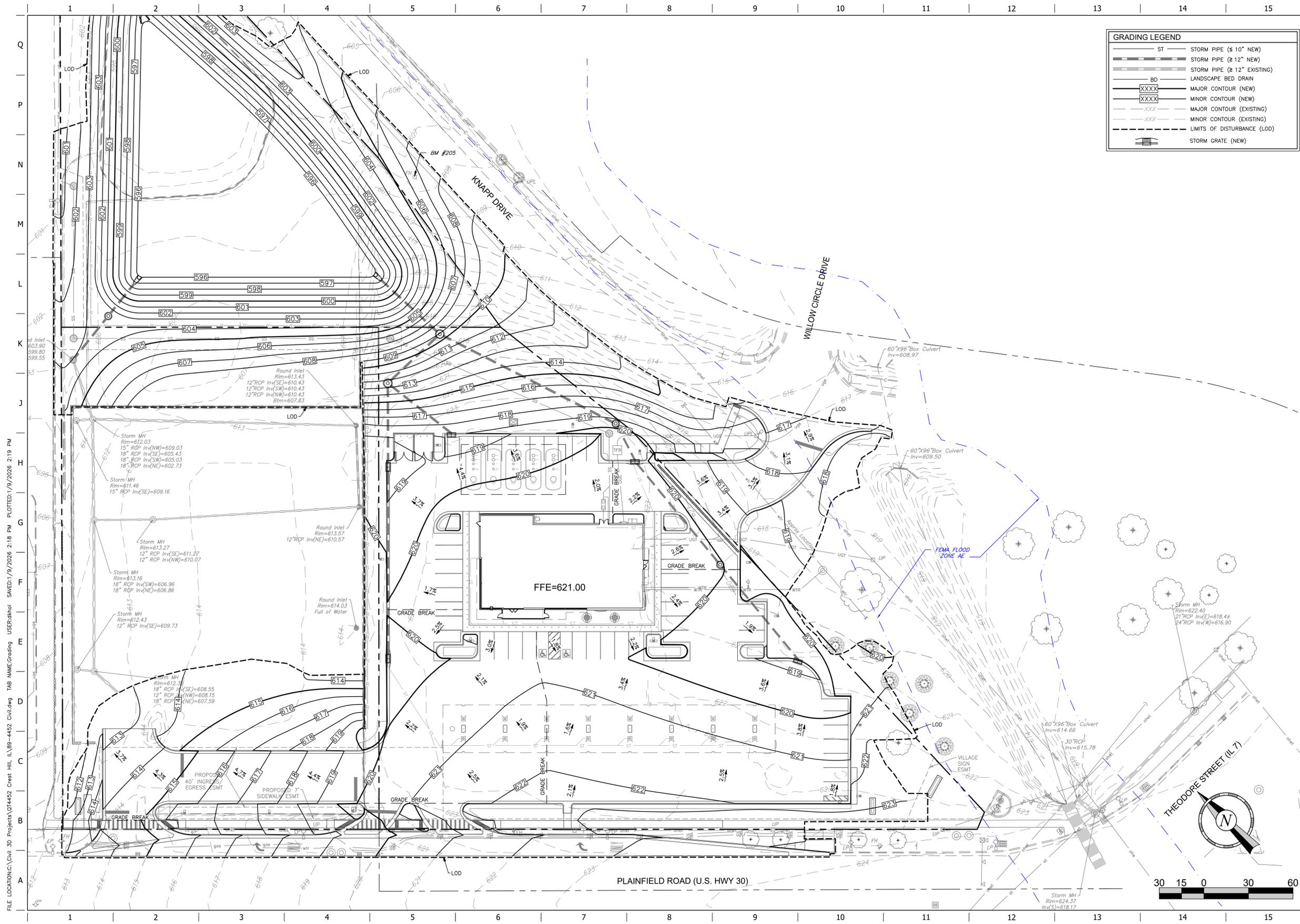
REV	DATE	DESCRIPTION

SHEET TITLE:
OVERALL GRADING PLAN

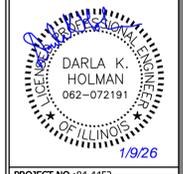
SHEET NUMBER:
C110

ORIGINAL ISSUE DATE: 01/09/2026





GRADING LEGEND	
ST	STORM PIPE (≤ 10" NEW)
ST	STORM PIPE (≥ 12" NEW)
ST	STORM PIPE (≥ 12" EXISTING)
BD	LANDSCAPE BED DRAIN
XXXX	MAJOR CONTOUR (NEW)
XXXX	MINOR CONTOUR (NEW)
---	MAJOR CONTOUR (EXISTING)
---	MINOR CONTOUR (EXISTING)
- - - -	LIMITS OF DISTURBANCE (LOD)
SG	STORM GRATE (NEW)



PROJECT NO.: 84-4452

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CREST HILL, WILL COUNTY, ILLINOIS 60403



PROTOTYPE: P-122
DIVISION: 84
VERSION: 001
DESIGNED BY: DKH
DRAWN BY: CSH
REVIEWED BY: CIC

REV	DATE	DESCRIPTION

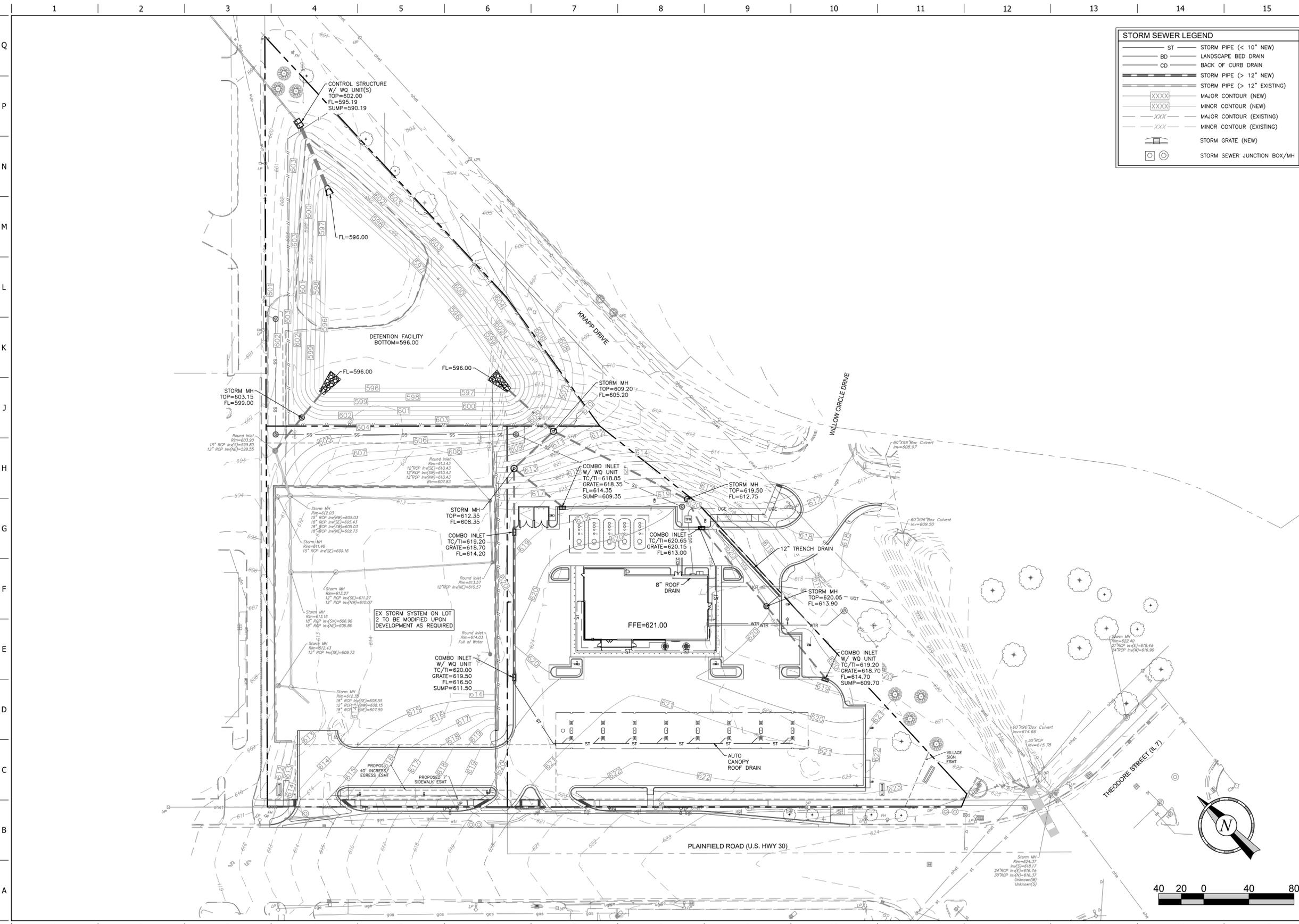
ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C111

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FILE LOCATION: C:\Civil 3D Projects\014452 Crest Hill, IL\B9-4452 Civil\DWG TAB NAME: Storm USER: dkhall SAVED: 1/9/2026 2:18 PM PLOTTED: 1/9/2026 2:20 PM



STORM SEWER LEGEND	
ST	STORM PIPE (< 10" NEW)
BD	LANDSCAPE BED DRAIN
CD	BACK OF CURB DRAIN
---	STORM PIPE (> 12" NEW)
---	STORM PIPE (> 12" EXISTING)
XXXX	MAJOR CONTOUR (NEW)
XXXX	MINOR CONTOUR (NEW)
XXX	MAJOR CONTOUR (EXISTING)
XXX	MINOR CONTOUR (EXISTING)
[Symbol]	STORM GRATE (NEW)
[Symbol]	STORM SEWER JUNCTION BOX/MH

DARLA K. HOLMAN
 062-072191
 1/9/26

PROJECT NO.: 84-4452

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Kansas City

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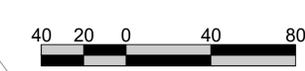
QT
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PROTOTYPE: P-122 DIVISION: 84 VERSION: 001 DESIGNED BY: DKH DRAWN BY: CSH REVIEWED BY: CJC

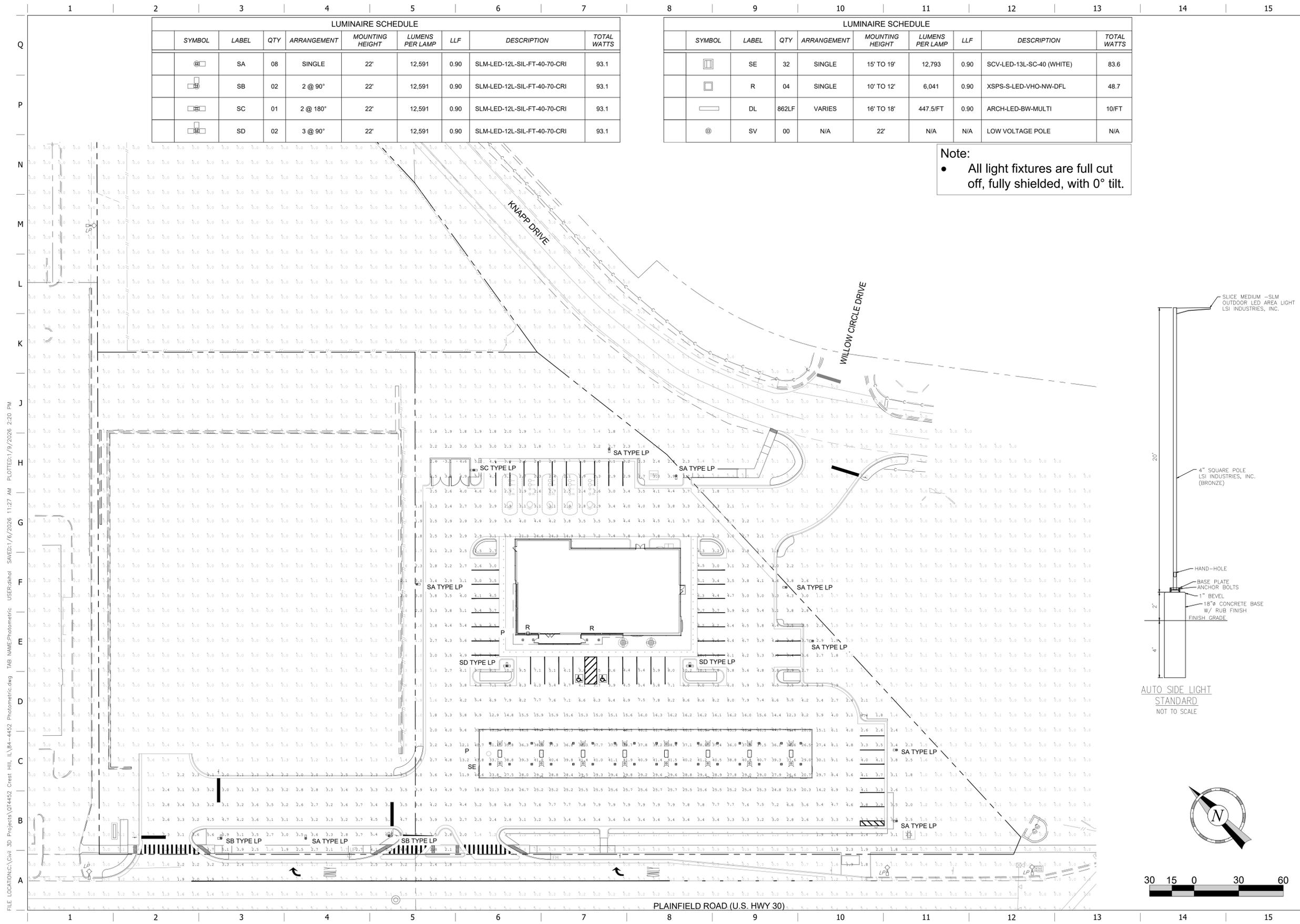
REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
STORM SEWER PLAN

SHEET NUMBER:
C120





LUMINAIRE SCHEDULE								
SYMBOL	LABEL	QTY	ARRANGEMENT	MOUNTING HEIGHT	LUMENS PER LAMP	LLF	DESCRIPTION	TOTAL WATTS
	SA	08	SINGLE	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1
	SB	02	2 @ 90°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1
	SC	01	2 @ 180°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1
	SD	02	3 @ 90°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1

LUMINAIRE SCHEDULE								
SYMBOL	LABEL	QTY	ARRANGEMENT	MOUNTING HEIGHT	LUMENS PER LAMP	LLF	DESCRIPTION	TOTAL WATTS
	SE	32	SINGLE	15' TO 19'	12,793	0.90	SCV-LED-13L-SC-40 (WHITE)	83.6
	R	04	SINGLE	10' TO 12'	6,041	0.90	XSPS-S-LED-VHO-NW-DFL	48.7
	DL	862LF	VARIES	16' TO 18'	447.5/FT	0.90	ARCH-LED-BW-MULTI	10/FT
	SV	00	N/A	22'	N/A	N/A	LOW VOLTAGE POLE	N/A

Note:
 • All light fixtures are full cut off, fully shielded, with 0° tilt.

FILE LOCATION: Civil_3D Projects\Q14452_Crest Hill_IL\84-4452_Photometric.dwg TAB NAME: Photometric USE: cadtool SW: 01/19/2026 11:27 AM PLOT: 01/19/2026 2:20 PM

PROJECT NO.: 84-4452

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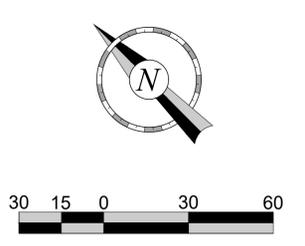
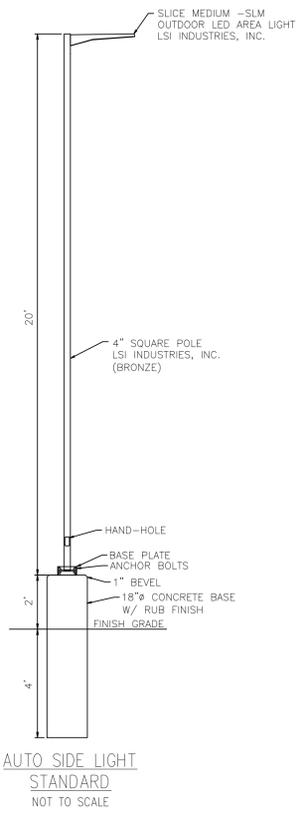
PROTOTYPE: P-122
 DIVISION: 84
 VERSION: 001
 DESIGNED BY: DKH
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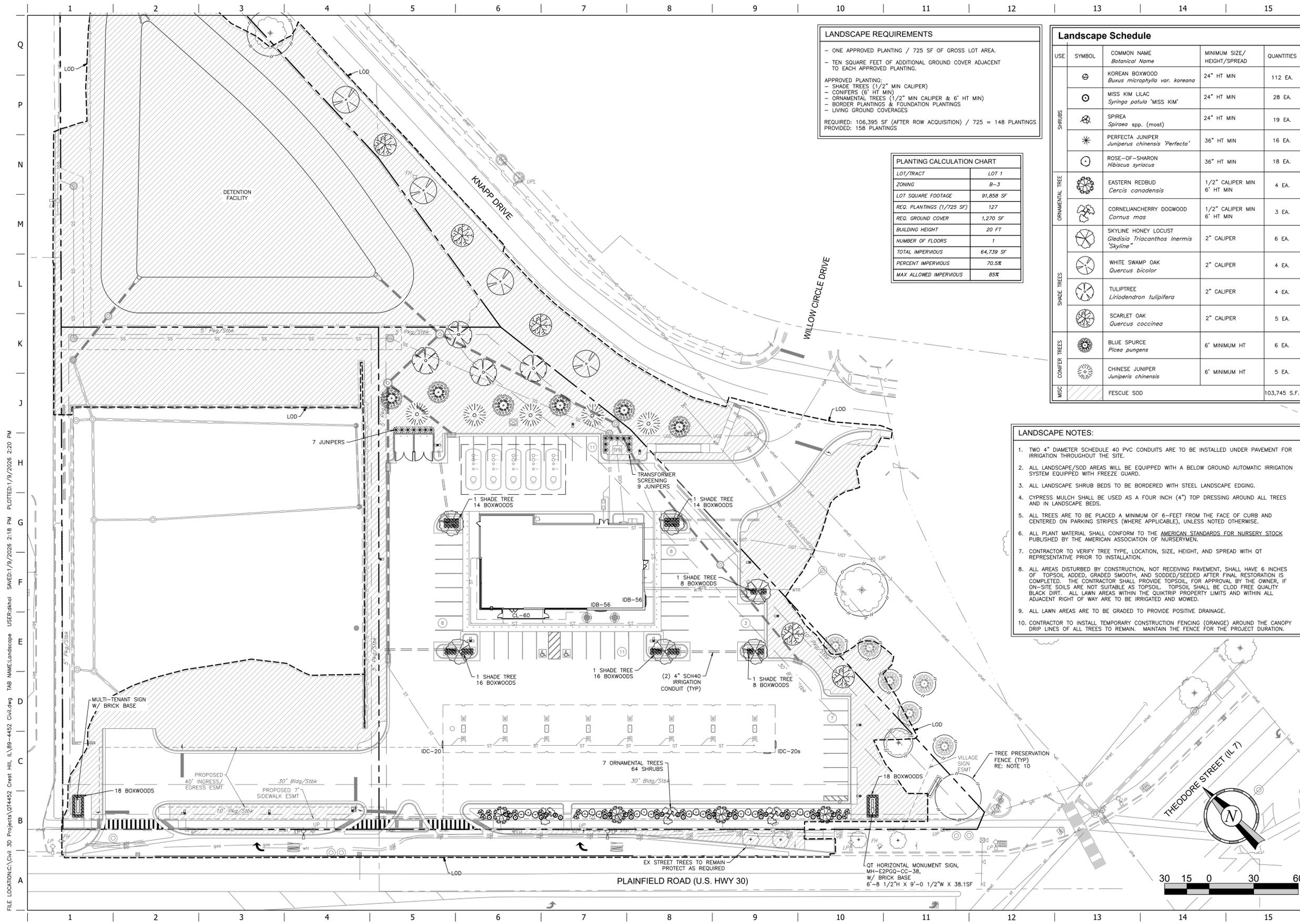
REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
 PHOTOMETRIC SITE PLAN

SHEET NUMBER:
C160





LANDSCAPE REQUIREMENTS

- ONE APPROVED PLANTING / 725 SF OF GROSS LOT AREA.
- TEN SQUARE FEET OF ADDITIONAL GROUND COVER ADJACENT TO EACH APPROVED PLANTING.

APPROVED PLANTING:

- SHADE TREES (1/2" MIN CALIPER)
- CONIFERS (6' HT MIN)
- ORNAMENTAL TREES (1/2" MIN CALIPER & 6' HT MIN)
- BORDER PLANTINGS & FOUNDATION PLANTINGS
- LIVING GROUND COVERAGES

REQUIRED: 106,395 SF (AFTER ROW ACQUISITION) / 725 = 148 PLANTINGS
PROVIDED: 158 PLANTINGS

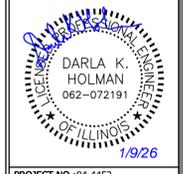
PLANTING CALCULATION CHART

LOT/TRACT	LOT 1
ZONING	B-3
LOT SQUARE FOOTAGE	91,858 SF
REQ. PLANTINGS (1/725 SF)	127
REQ. GROUND COVER	1,270 SF
BUILDING HEIGHT	20 FT
NUMBER OF FLOORS	1
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

Landscape Schedule

USE	SYMBOL	COMMON NAME <i>Botanical Name</i>	MINIMUM SIZE/ HEIGHT/SPREAD	QUANTITIES
SHRUBS	⊙	KOREAN BOXWOOD <i>Buxus microphylla var. koreana</i>	24" HT MIN	112 EA.
	○	MISS KIM LILAC <i>Syringa patula 'MISS KIM'</i>	24" HT MIN	28 EA.
	⊗	SPIREA <i>Spiraea spp. (most)</i>	24" HT MIN	19 EA.
	✱	PERFECTA JUNIPER <i>Juniperus chinensis 'perfecta'</i>	36" HT MIN	16 EA.
ORNAMENTAL TREE	⊙	ROSE-OF-SHARON <i>Hibiscus syriacus</i>	36" HT MIN	18 EA.
	⊗	EASTERN REDBUD <i>Cercis canadensis</i>	1/2" CALIPER MIN 6' HT MIN	4 EA.
	⊗	CORNELIANCHERRY DOGWOOD <i>Cornus mas</i>	1/2" CALIPER MIN 6' HT MIN	3 EA.
SHADE TREES	⊗	SKYLINE HONEY LOCUST <i>Gledisia triacanthos 'Inermis Skyline'</i>	2" CALIPER	6 EA.
	⊗	WHITE SWAMP OAK <i>Quercus bicolor</i>	2" CALIPER	4 EA.
	⊗	TULIPTREE <i>Liriodendron tulipifera</i>	2" CALIPER	4 EA.
	⊗	SCARLET OAK <i>Quercus coccinea</i>	2" CALIPER	5 EA.
CONIFER TREES	⊗	BLUE SPURCE <i>Picea pungens</i>	6' MINIMUM HT	6 EA.
	⊗	CHINESE JUNIPER <i>Juniperus chinensis</i>	6' MINIMUM HT	5 EA.
MISC		FESCUE SOD		103,745 S.F.

- LANDSCAPE NOTES:**
- TWO 4" DIAMETER SCHEDULE 40 PVC CONDUITS ARE TO BE INSTALLED UNDER PAVEMENT FOR IRRIGATION THROUGHOUT THE SITE.
 - ALL LANDSCAPE/SOD AREAS WILL BE EQUIPPED WITH A BELOW GROUND AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH FREEZE GUARD.
 - ALL LANDSCAPE SHRUB BEDS TO BE BORDERED WITH STEEL LANDSCAPE EDGING.
 - CYPRESS MULCH SHALL BE USED AS A FOUR INCH (4") TOP DRESSING AROUND ALL TREES AND IN LANDSCAPE BEDS.
 - ALL TREES ARE TO BE PLACED A MINIMUM OF 6'-FEET FROM THE FACE OF CURB AND CENTERED ON PARKING STRIPES (WHERE APPLICABLE), UNLESS NOTED OTHERWISE.
 - ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
 - CONTRACTOR TO VERIFY TREE TYPE, LOCATION, SIZE, HEIGHT, AND SPREAD WITH QT REPRESENTATIVE PRIOR TO INSTALLATION.
 - ALL AREAS DISTURBED BY CONSTRUCTION, NOT RECEIVING PAVEMENT, SHALL HAVE 6 INCHES OF TOPSOIL ADDED, GRADED SMOOTH, AND SODDED/SEEDED AFTER FINAL RESTORATION IS COMPLETED. THE CONTRACTOR SHALL PROVIDE TOPSOIL, FOR APPROVAL BY THE OWNER, IF ON-SITE SOILS ARE NOT SUITABLE AS TOPSOIL. TOPSOIL SHALL BE CLOD FREE QUALITY BLACK DIRT. ALL LAWN AREAS WITHIN THE QUIKTRIP PROPERTY LIMITS AND WITHIN ALL ADJACENT RIGHT OF WAY ARE TO BE IRRIGATED AND MOWED.
 - ALL LAWN AREAS ARE TO BE GRADED TO PROVIDE POSITIVE DRAINAGE.
 - CONTRACTOR TO INSTALL TEMPORARY CONSTRUCTION FENCING (ORANGE) AROUND THE CANOPY DRIP LINES OF ALL TREES TO REMAIN. MAINTAIN THE FENCE FOR THE PROJECT DURATION.



QuikTrip No. 4452
1610 PLAINFIELD ROAD
CREST HILL, WILL COUNTY, ILLINOIS 60403



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DIVISION: 84
VERSION: 001
DESIGNED BY: DKH
DRAWN BY: CSH
REVIEWED BY: CJC

REV	DATE	DESCRIPTION

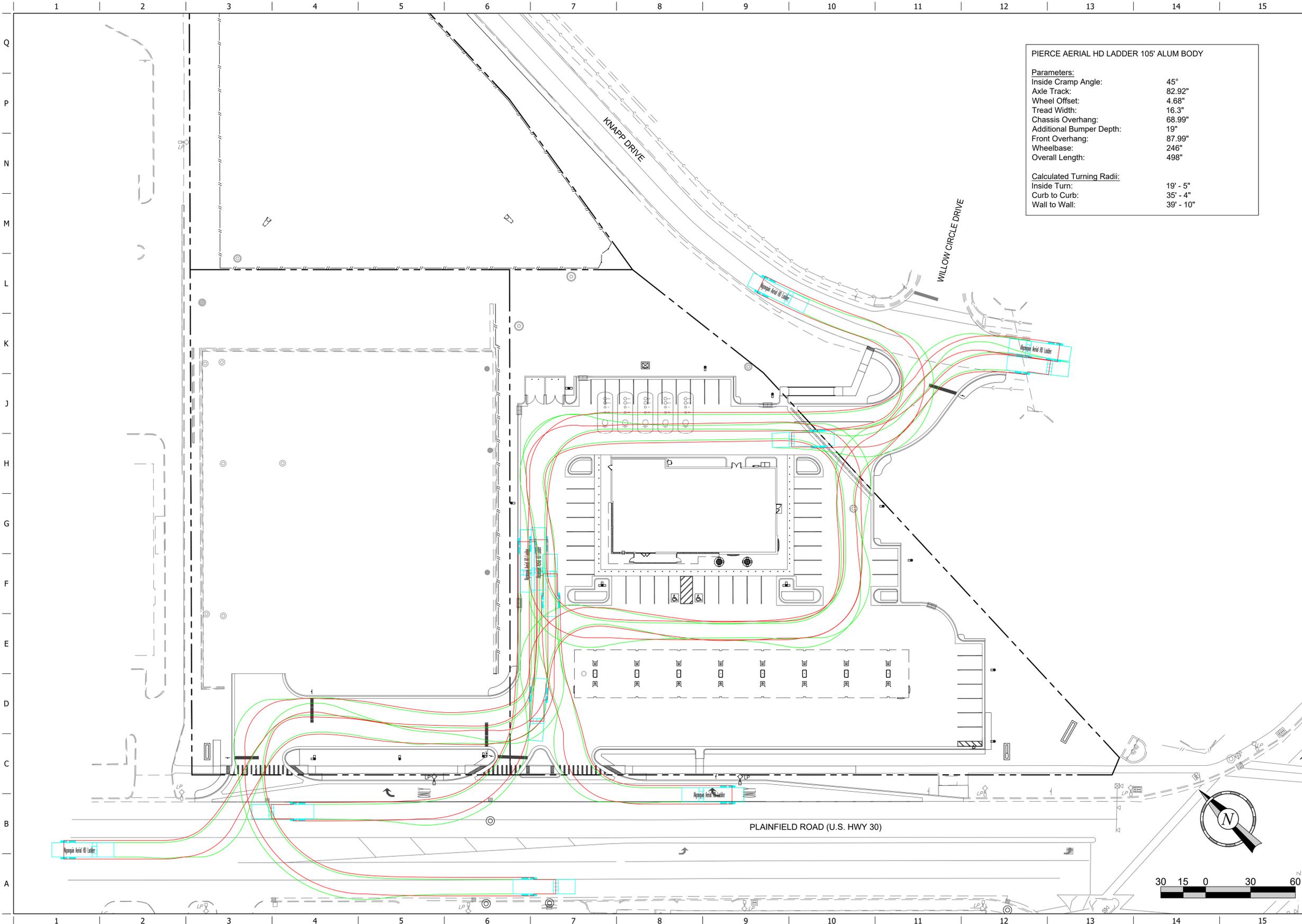
ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L101

FILE LOCATION: C:\Civil 3D Projects\Q14452 Crest Hill, IL\B9-4452 Civil\dwg TAB NAME: Landscape USE: E:\cd\l\19/2026 2:20 PM PLOTTED: 1/9/2026 2:20 PM

FILE LOCATION: C:\3D Projects\014452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME: Vehicle Tracking Fire USER: akhol SAVED: 2/4/2026 3:12 PM PLOTTED: 2/4/2026 3:17 PM



PIERCE AERIAL HD LADDER 105' ALUM BODY

Parameters:	
Inside Cramp Angle:	45°
Axle Track:	82.92"
Wheel Offset:	4.68"
Tread Width:	16.3"
Chassis Overhang:	68.99"
Additional Bumper Depth:	19"
Front Overhang:	87.99"
Wheelbase:	246"
Overall Length:	498"
Calculated Turning Radii:	
Inside Turn:	19' - 5"
Curb to Curb:	35' - 4"
Wall to Wall:	39' - 10"


DARLA K. HOLMAN
 062-072191
 LICENSED PROFESSIONAL ENGINEER
 STATE OF ILLINOIS

PROJECT NO.: 84-4452

Midwest Design Group
 Kansas City
 PO Box 860015
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DIVISION:	84
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DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/16/2026

SHEET TITLE:
 VEHICLE TRACKING
 (AERIAL HD LADDER TRUCK)

SHEET NUMBER:
EXHIBIT

IDB-56
56 SF Building ID Sign

- Flat Bowed Face Panel and 1 1/4" Wide Face Retainers
- 56 Square Feet Sign Area



Item #QT-IDB-56

Project Information

Client: **QuikTrip**
 Location: **Various**

File: **QT Gen4_IDB-56_102**

Sales: **House** Design: **CT** Project Manager: **James Gentry**

Date / Description

01/20/25	Issue Date
01/21/25	Internal correction
03/05/25	Dimensioned J-box
3	
4	
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Notes

Client Review Status

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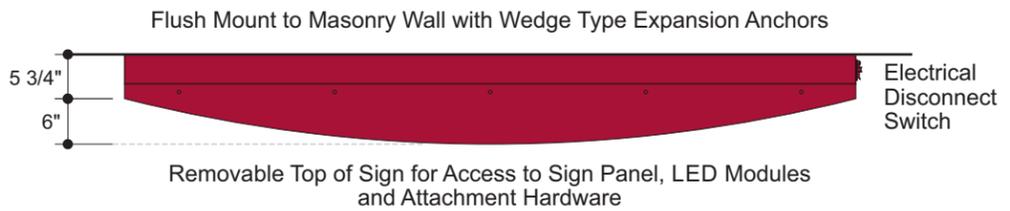
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Name _____

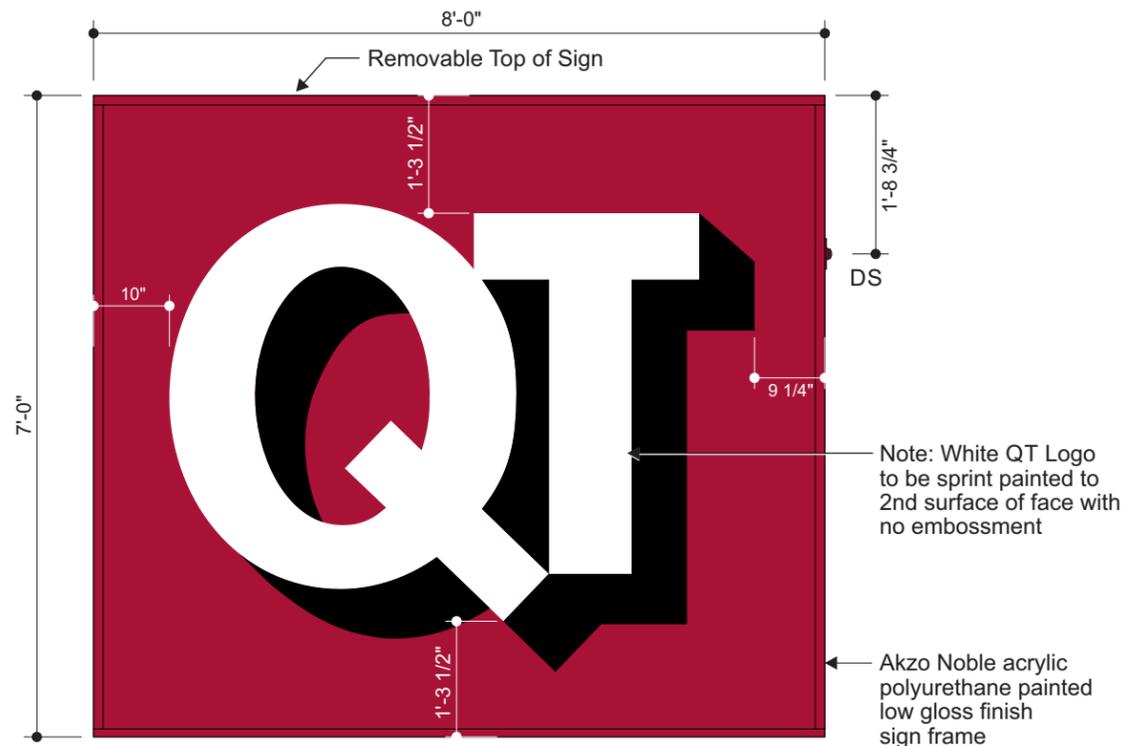
Title _____ Date _____

Declaration

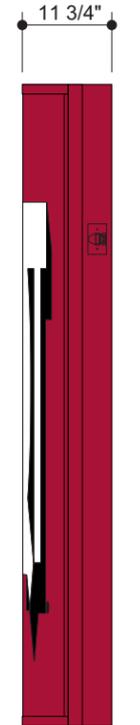
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Top View



Front View
 Scale: 1/2" = 1'-0"



Side View

APPROVED

PSA 3/6/25

Color Specifications

- All Paint Finishes to be Akzo Nobel
- Opaque Silver
 - Translucent White
 - Black - Low Gloss
 - Matte White (Interior of Sign)
 - Match 3M Cardinal Red #3630-53

- Regarding Fabrication Fit & Finish of All QT Signs:
- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
 - Any visible fasteners are to be countersunk and have painted heads.
 - Face retainers must fit flush and have even, minimal seams.
 - Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

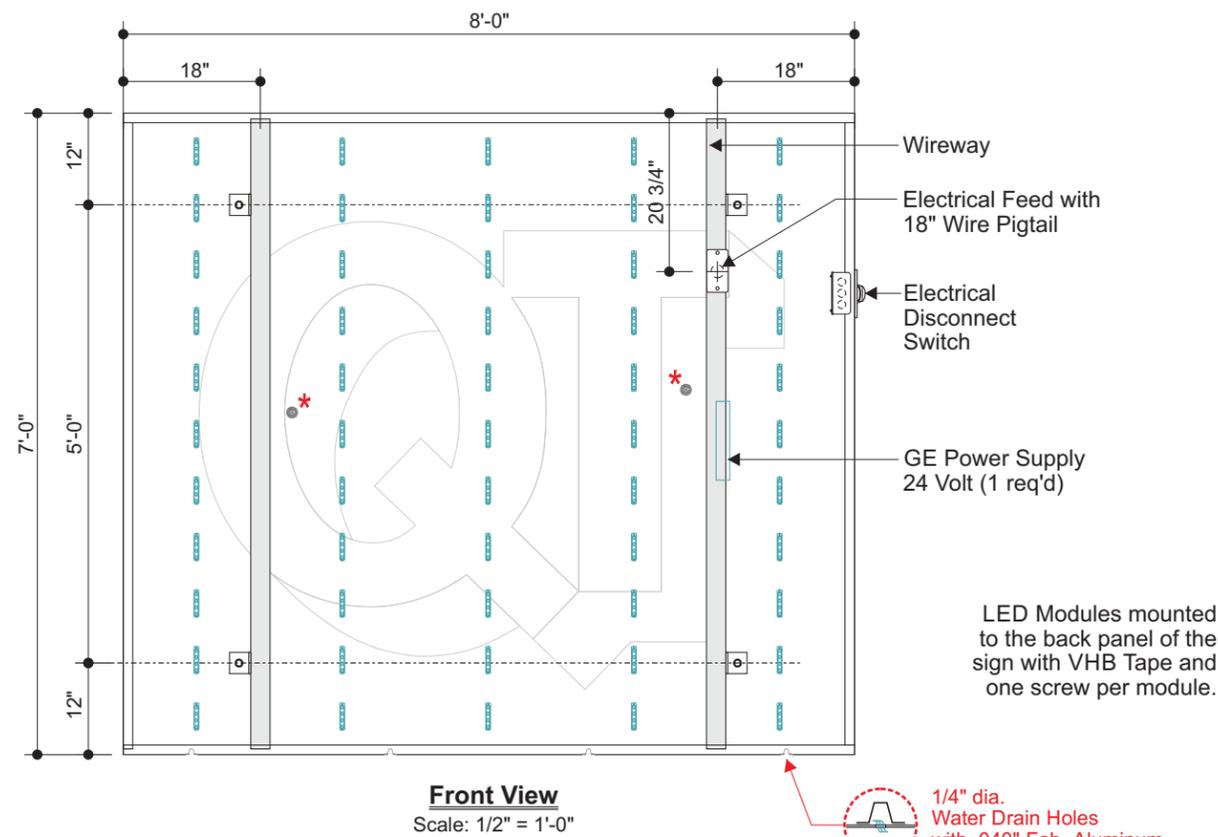
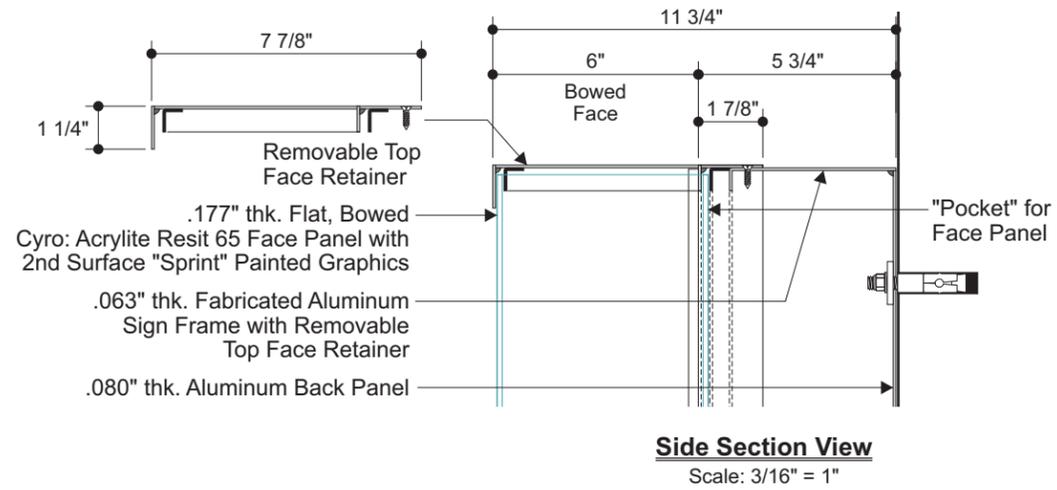
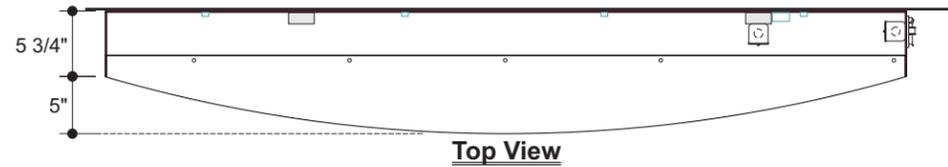
Allen Industries
 FILE NUMBER: E212503
 LISTED MET E212503
 Electric Sign Complies with UL48
 THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.
 GROUNDED ELECTRICAL CONNECTIONS

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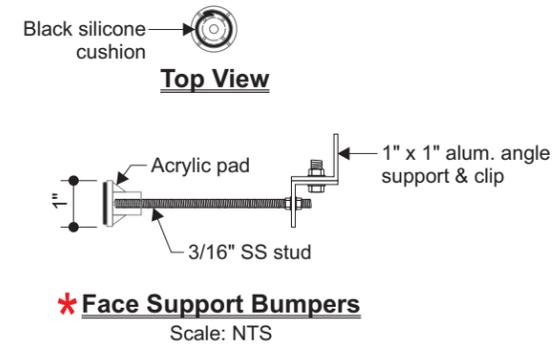
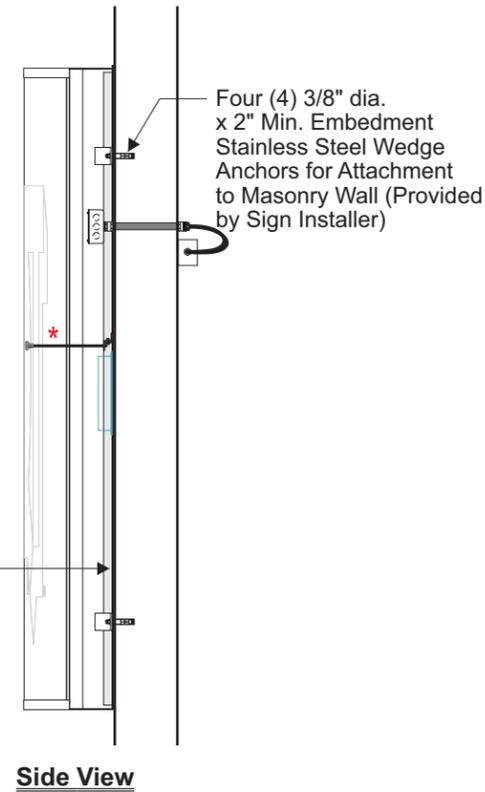
Construction Details

LED Specification

- E** 55 ea. GEPMH2471-W1X
 1 ea. GEPS24-100U-GLX
 Total Electrical Amp Load = 1.1 Amps
 One (1) 120 Volt - 20 Amp
 Circuit Breaker Required for Sign



1/4" dia. Water Drain Holes with .040" Fab. Aluminum Light Baffle



Acrylic face bumpers to be installed in the Black drop shadow area of the QT Logo.

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.



Item #QT-IDB-56

Project Information

Client: QuikTrip
 Location: Various

File: QT Gen4_IDB-56_102

Sales: House Design: CT Project Manager: James Gentry

Date / Description

Date	Description
01/20/25	Issue Date
01/21/25	Internal correction
03/05/25	Dimensioned J-box
3	
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Notes

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Approved Approved as Noted Revise & Resubmit

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Title: _____ Date: _____

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IDC-20 20 SF Building ID Sign

- Flat Bowed Face Panel and 3/4" Wide Face Retainers
- 19.42 Square Feet Sign Area



Item #QT-IDC-20

Project Information

Client
QuikTrip

Location
Various

File
QT-IDC-20_100

Sales House	Design CT	Project Manager James Gentry
-----------------------	---------------------	--

Date / Description

Date	Description	Initial
04/08/20	Issue Date	
1		
2		
3		
4		
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6		
7		
8		
9		

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Name _____

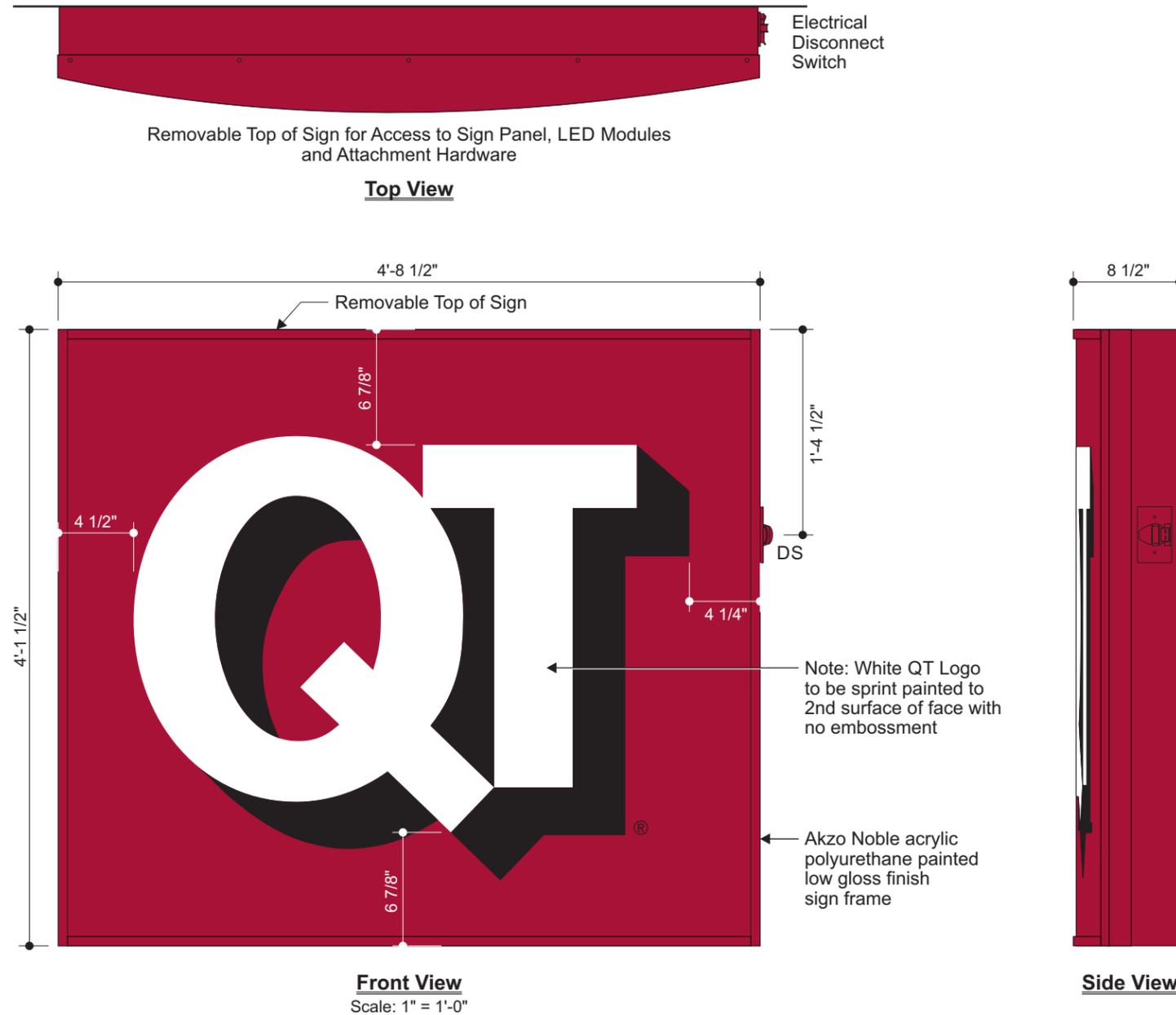
Title _____ Date _____

Declaration

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Color Specifications

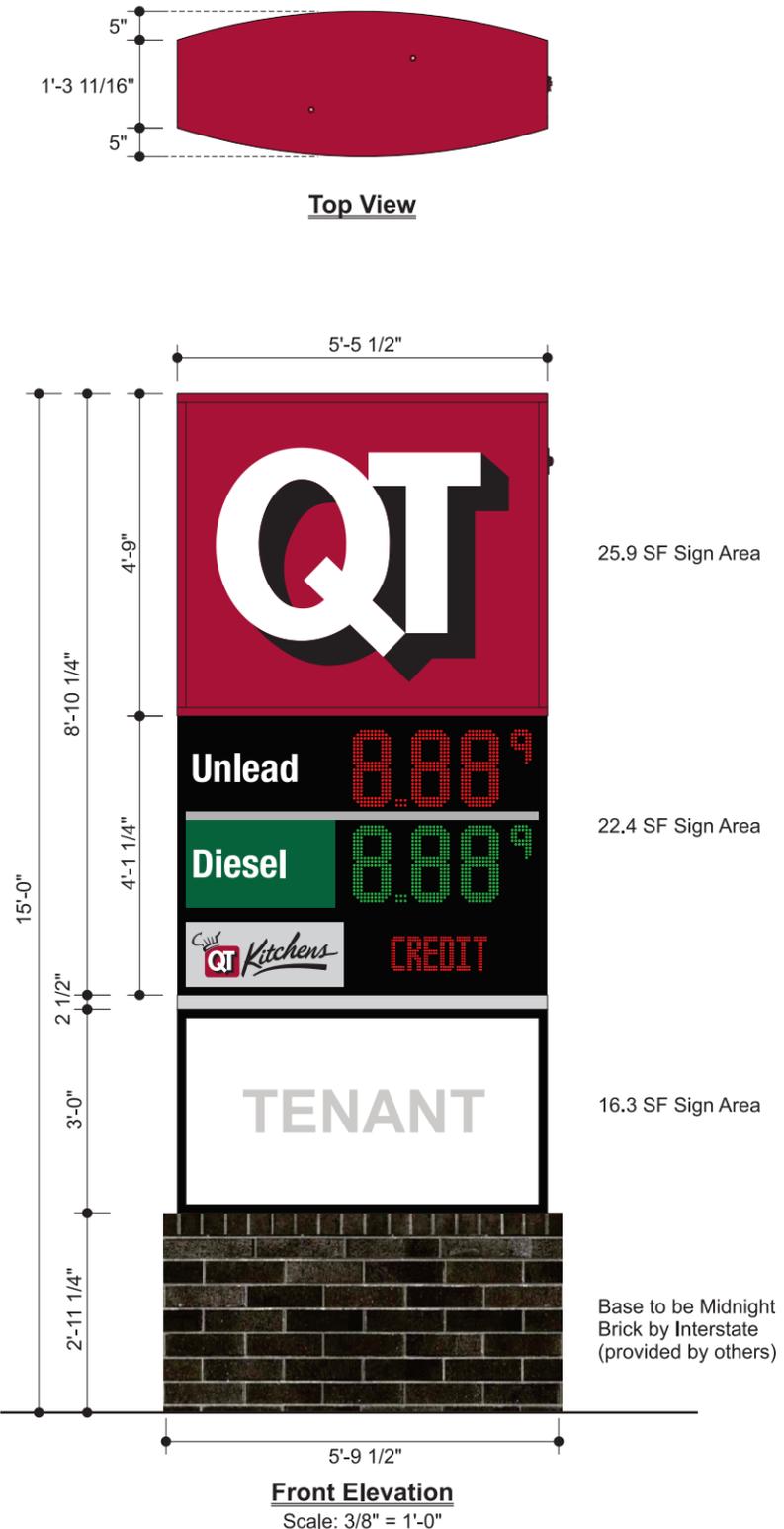
All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3632-53
- Match PMS 349C

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries FILE NUMBER: E212503	Listed Electric Sign Complies with UL48 CSA C22.2 No. 207 A11 017510 E212503	
THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.		



MV-E2PQ-CC-65-BB 12'-0" Vertical Monument Sign

- Two (2) Product LED Gas Price Sign with Cash & Credit
- 64.6 Square Feet Sign Area
- Midnight Brick by Interstate base provided by others

Notes:
 1.) Engineering provided by QT.
 2.) Steel supports provided by sign installer.

Color Specifications

All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3630-53
- Match PMS 349C

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Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client: QuikTrip
 Location: Store 4452

File: QT-MV-E2PQ-CC-65-BB_4452_100

Sales: House Design: CT Project Manager: James Gentry

Date / Description

Date	Issue Date
01/08/26	
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Notes

Client Review Status

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Title: _____ Date: _____

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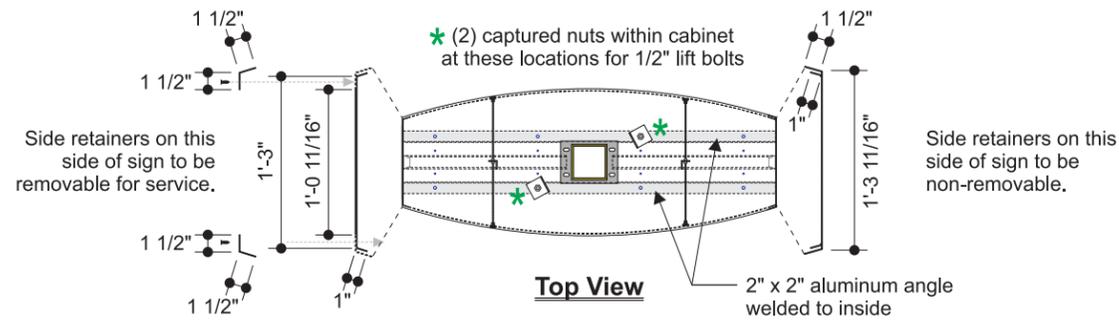
FILE NUMBER: E212503

Electric Sign Complies with
UL48
E212503 CSA C22.2 No.207

GROUNDING AND BONDING OF THE SIGN.

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Construction Details

- Installation by others
- Steel should be primed and painted white for max. reflectivity
- Engineering, steel size requirements and footing specifications are obtained by QT



Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client: QuikTrip
 Location: Store 4452

File: QT-MV-E2PQ-CC-65-BB_4452_100

Sales: House Design: CT Project Manager: James Gentry

Date / Description

Date	Description
01/08/26	Issue Date
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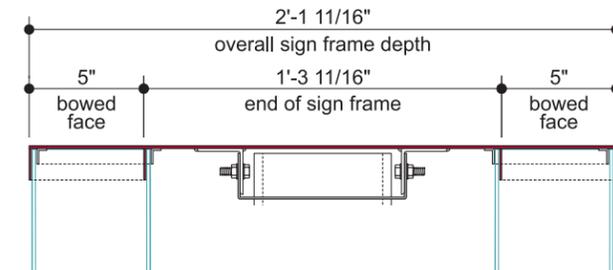
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Title: _____ Date: _____

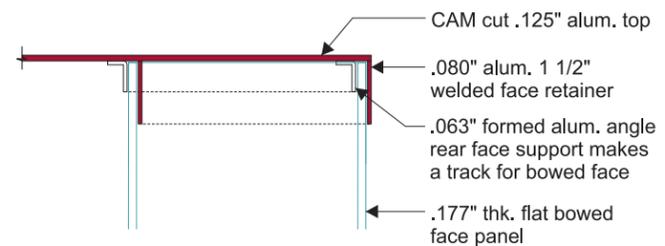
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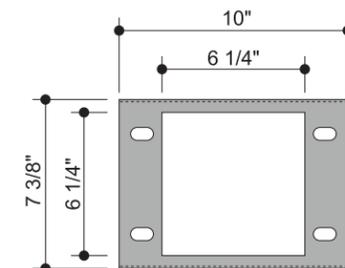
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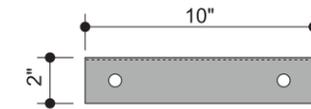
Sign Frame Detail
 Scale: 1/8" = 1"



Side View Detail
 Scale: 1/4" = 1"



Top View

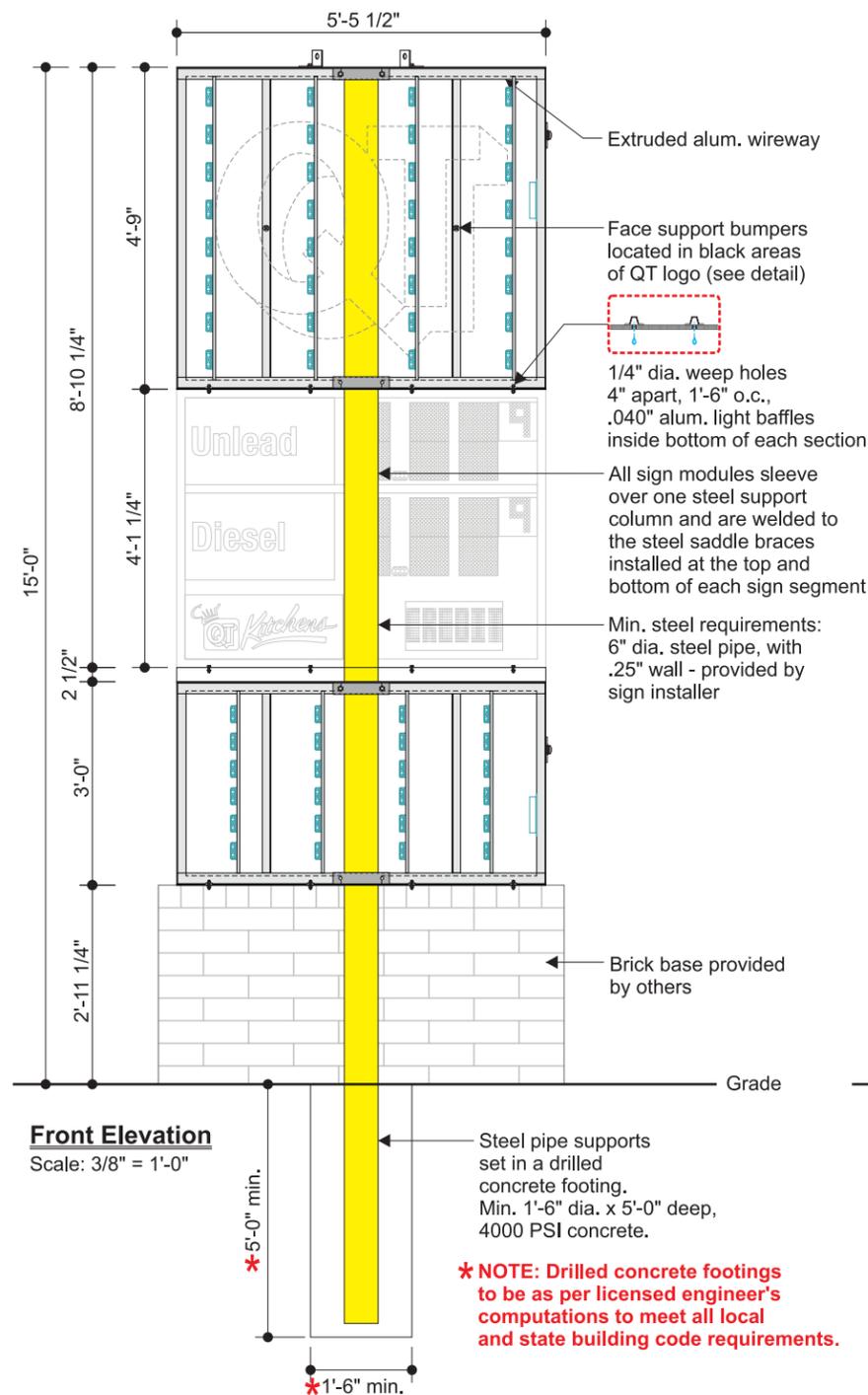


Steel Saddle Detail
 Scale: 1/8" = 1"

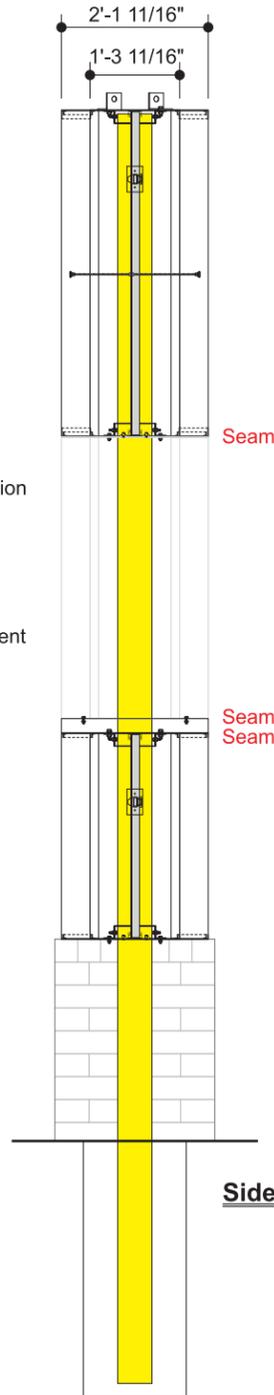
Side View

YELLOW INDICATES THE STEEL SUPPORT PROVIDED BY SIGN INSTALLER

Allen Industries FILE NUMBER: E212503
 MET E212503
 Electric Sign Complies with UL48 CSA C22.2 No.207
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 GROUNDED ELECTRICAL CONNECTIONS

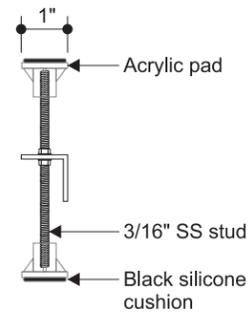


Front Elevation
 Scale: 3/8" = 1'-0"



Side Elevation

Top View



Face Support Bumpers
 Scale: NTS

1" dia. perforated acrylic pad with applied black silicone adhesive cushion and 3/16" dia. SS stud, attached to vertical rails

QT Logo Cabinet



Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

Date	Description
01/08/26	Issue Date
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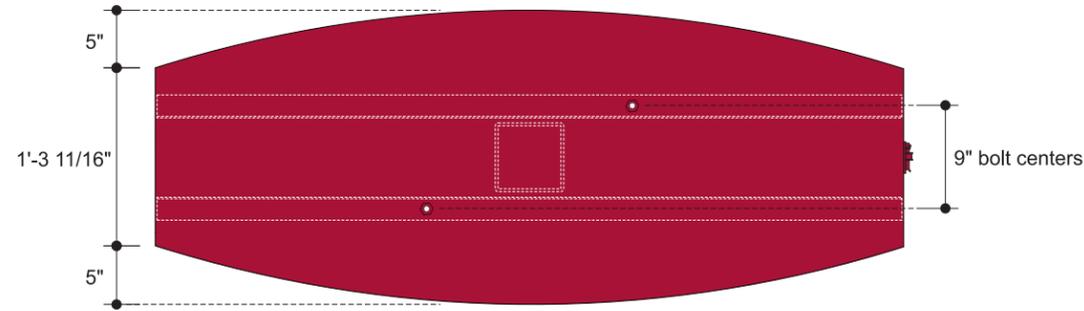
Title _____ Date _____

Declaration

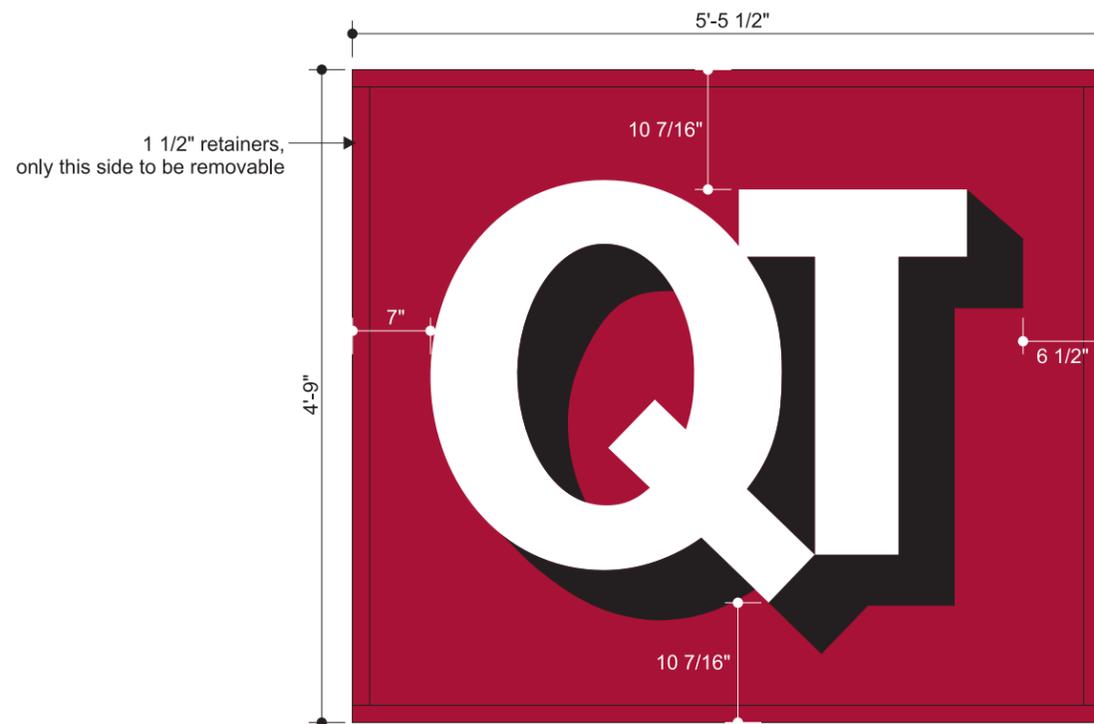
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Top View



Front View - QT Cabinet

Scale: 3/4" = 1'-0"



Side View

All Sign Modules constructed with removable alum. face retainers and clear acrylic, .177" thickness, face panels with 2nd surface painted background colors and graphics.

Note: No Embossment

Translucent Graphics Red Background Color to Paint Match 3M Cardinal Red #3630-53
Translucent Vinyl

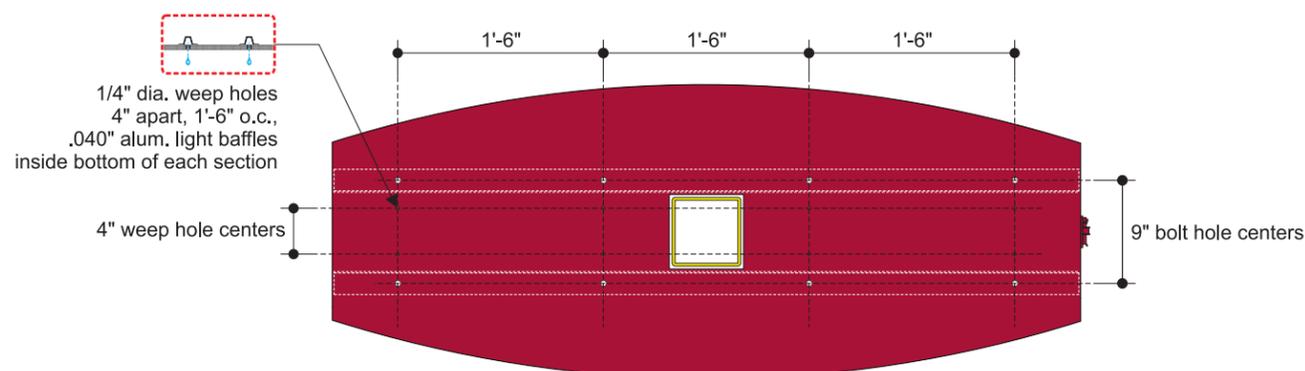
Color Specifications

All Paint Finishes to be Akzo Nobel

- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3630-53

Regarding Fabrication Fit & Finish of All QT Signs:

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Bottom View

Allen Industries FILE NUMBER: E212503	Listed Electric Sign Complies with UL48 E212503 CSA C22.2 No.207	GROUNDING CONNECTIONS
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illumination Details



Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client: QuikTrip
 Location: Store 4452

File: QT-MV-E2PQ-CC-65-BB_4452_100

Sales House: Design CT Project Manager James Gentry

Date / Description

Date	Description
01/08/26	Issue Date
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Notes

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Title _____ Date _____

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Material Breakdown		
Snap DS 71K (24V)	Modules	24V P/S
COLUMN 1	8	P/S 1
COLUMN 2	8	
COLUMN 3	8	
COLUMN 4	8	

Sign Type	illumination	Primary Circuit (120 VAC)	SKU	Description	Name	Quantity	
DOUBLE SIDED CABINET	FACE LIT	1.1 Amps	93128533	GEDS71-3	Snap DS 71K (24V)	32 Modules 23 Ft	
Can Depth 32"	LED Distance From Face N/A	Power Supply Location SELF-CONTAINED	Sign Area				
Special Instructions		Total Module Watts					
ESTIMATE FOR BOTH SIDES OF SIGN		82.88 Watts		GEPS24-100U-GLX2	100W - 24V (GLX2)	1 Ea	
SNAP DS TO BE INSTALLED @ 6.3" OC (HO - 1.9 modules/ft)		Total System Watts					
Notes		99.20 Watts		GEDSRL08-3	Rails (8')	4 Ea	
QT-HR8-ELP-ME3P_103, QT-HR8-ELP-ME4P_104		Energy Usage		GEDSSE-3 / GEDSFE-3	Socket / Frame Endcap	8 Ea	
		1.91 Watts/Sq Ft		GEDSIC-3	Interconnector	0 Ea	
		Total Lumens					
		12800.00 Lumens		191600041 or 192160004	Wire Connector		
		9409		18 AWG Supply Wire			40 Ft
		191600041		Wire End Cap			20 Ea

TECHNICAL SUPPORT:
888-694-3533
EMAIL: tetradrawings@gecurrent.com

Drawn By: GG
 Checked By: MK
 Date: 9/5/22

Job Name: Quik Trip
 Customer Name:

Drwg #: 096021 - 02

Rev -
 PAGE 1 of 1

FILE NUMBER: E212503

Electric Sign Complies with UL48 CSA C22.2 No.207

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1-800-967-2553

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<p>316 S. 6th Street St. Joseph, MO 64501 800.821.9013</p>	Client	Install Location	Sales	Date: Aug 1, 2022	Job #:
	QuikTrip Corporation		Scottie Burnham 816-387-4202 scottie@sunshine.us.com	Revisions:	Date:
	Client Approval:	Date:			

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client: QuikTrip
Location: Store 4452

File: QT-MV-E2PQ-CC-65-BB_4452_100

Sales: House Design: CT Project Manager: James Gentry

Date / Description

Date	Description
01/08/26	Issue Date

Notes

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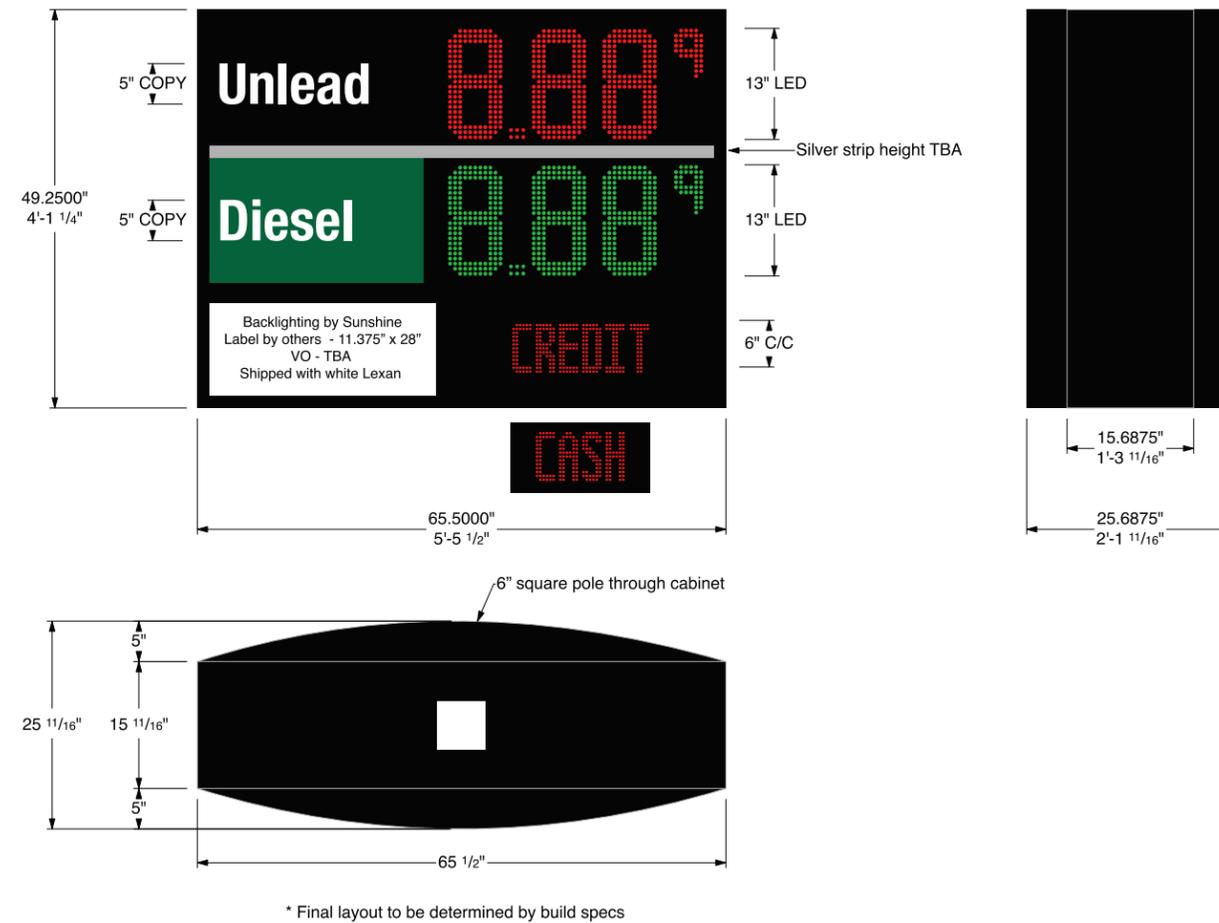
Approved
 Approved as Noted
 Revise & Resubmit

Name: _____

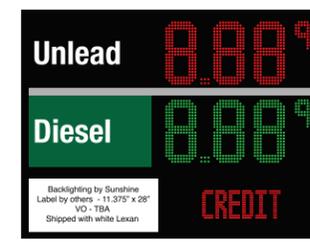
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* Same layout both sides



Cabinet Specs	Label Specs	Other
Digit Size & Style: 13" LED	LED Backlit Label Panel -	* Label and cabinet colors for representation only
Digit Color: Red/Green	Label Font: Helvetica Bold Cond	* 22.4 sq ft
Overall Cabinet Size: 49.25" h x 65.5" w x 25.6875" d	Label Panel Color: 3M 3632-22 Black	* 4.15 total AC amps including both sides
Cabinet Color: Black	Label Type Color: White	* Cabinet(s) will have lifting/install eyebolt(s)
Single or Double Face: Double		* Electrical to be knocked out and ran at installer's preference
Build type: New cabinet		

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FILE NUMBER: E212503

 LISTED
 UL File Number: E340294
 CCN: UXYT

 LISTED
 CONFORMS TO
 UL STD 48
 UL STD 1433
 102482
 CERTIFIED TO
 CAN/CSA STD C22.2 NO. 207
 Electric Sign Complies with UL48

 GROUNDING AND BONDING OF THE SIGN.

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Tenant Cabinet



Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip
Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

Date	Description
01/08/26	Issue Date

Notes

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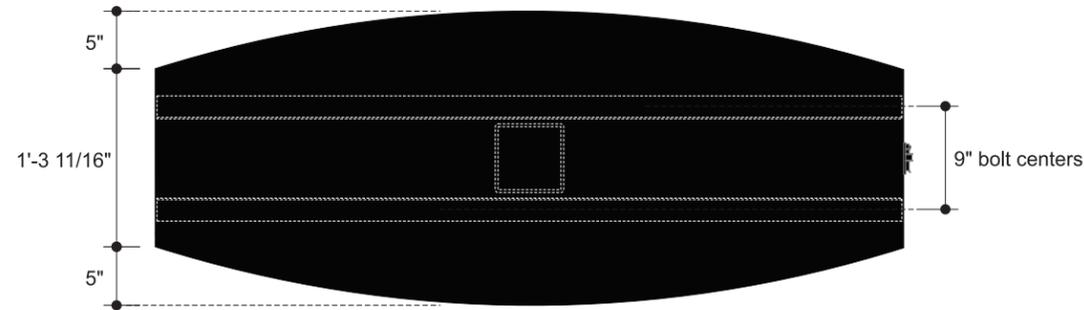
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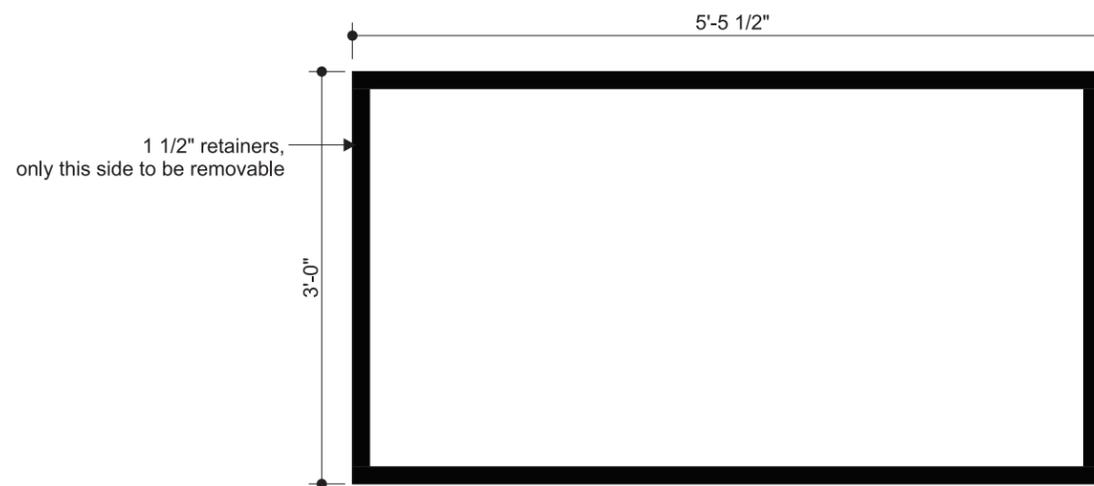
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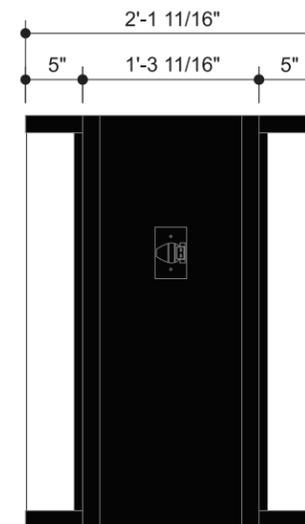


Top View



Front View - Tenant Cabinet

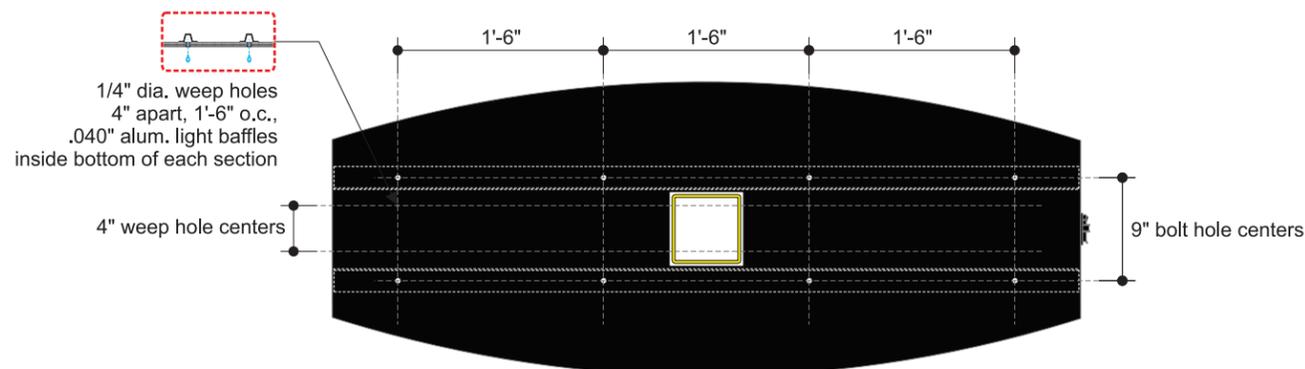
Scale: 3/4" = 1'-0"



Side View

All Sign Modules constructed with removable alum. face retainers and clear acrylic, .177" thickness, face panels with 2nd surface painted background colors and graphics.

Note: No Embossment



Bottom View

Color Specifications

All Paint Finishes to be Akzo Nobel

- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)

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Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip
Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales Design Project Manager
House CT James Gentry

Date / Description

Date	Description
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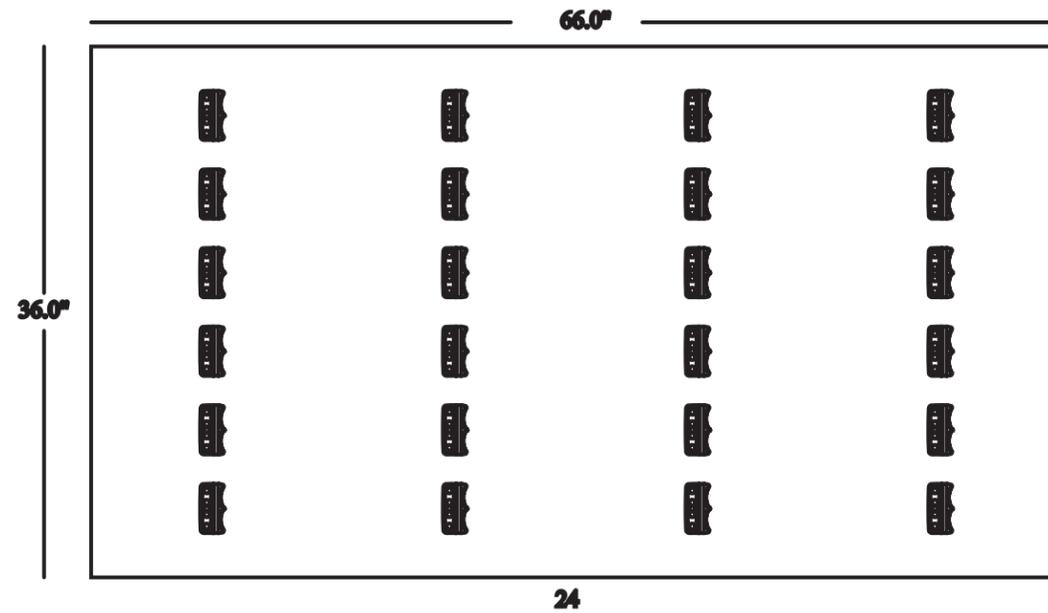
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Tech Support
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Current®



Illumination	Depth	Power Supplies	Qty	Module Name	CCT	Qty	Ordering Length
Face Lit	18.00 in	GEPS24-100U-TT	1 ea	GEDS71-3	7100K	24 ea	17.15 feet
Height	Width	Total Circuit Amps (120 VAC)	Max Load Per PS	Total Module Watts			
36.00 in	66.00 in	1.10	33	62.16 watts			
Date	Job ID						
January 08, 2026							

THE GRAPHICS ABOVE ARE FOR REFERENCE ONLY and should not be used for commercial quotation or bid without validation. The material estimates for Tetra® LED Systems are based upon our engineering standards and information provided pertaining to font, letter height, can depth, face material, and any special instructions provided by the customer. Missing information will cause delays in delivery of estimates as well as affect product selection, quantities, application, and illumination. LED MODULE PLACEMENT AND QUANTITY IS AN APPROXIMATION ONLY. The sign manufacturer must verify module placement and quantity to ensure even illumination. Final material quantities for estimation purposes and construction are the responsibility of the sign OEM. All signs should be tested as complete units (including correct Tetra® power supply) before installation for acceptable color, illumination, intensity, & functionality. For detailed information refer to the applicable Tetra® product found under Signage; <https://www.led.com/applications/led-signage-lighting>

MH-E2PGQ-CC-38-BB Horizontal Monument Sign

- Two (2) Product LED Gas Price Sign
- 38.1 Square Feet Sign Area
- Brick base by others

Notes:
 1.) Engineering provided by QT.
 2.) Steel supports provided by sign installer.



Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip
 Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales **House** Design **CT** Project Manager **James Gentry**

Date / Description

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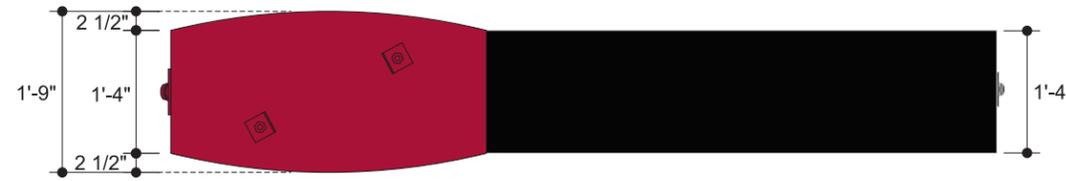
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Title _____ Date _____

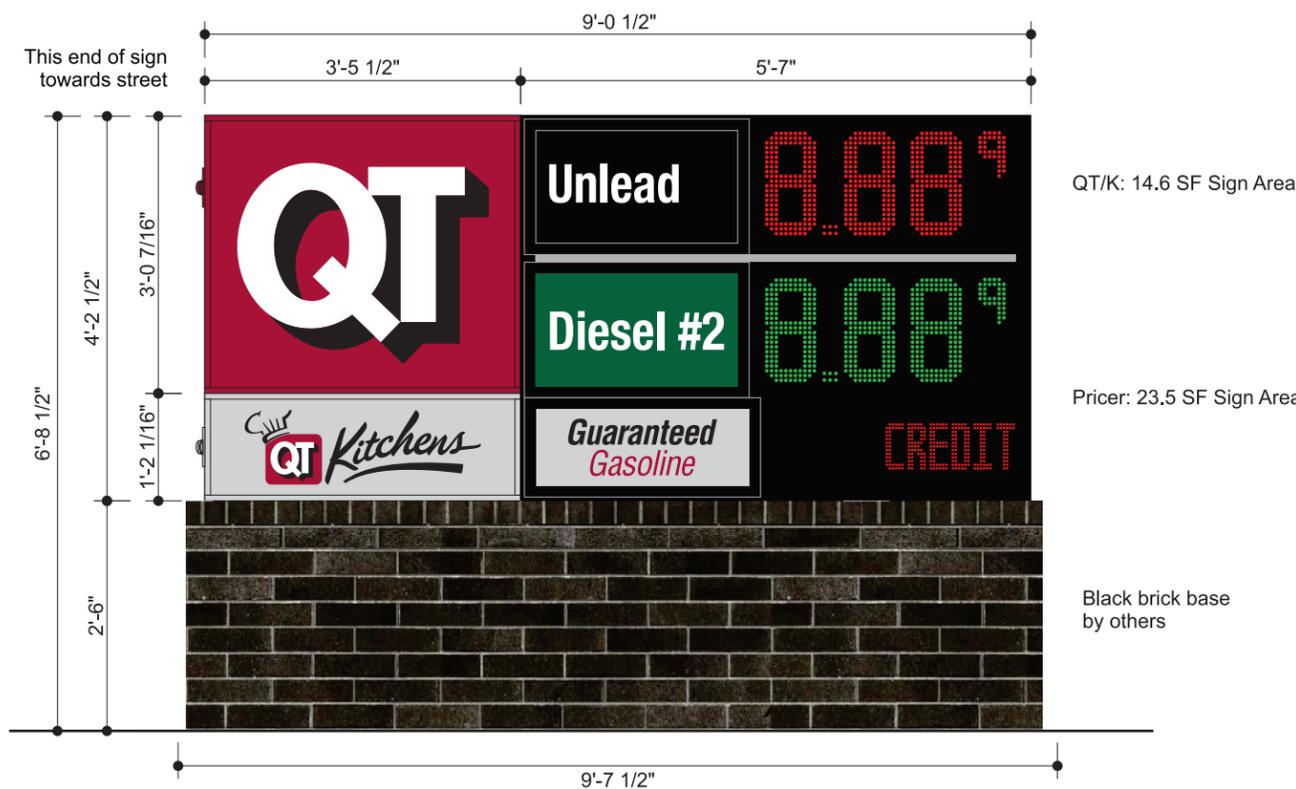
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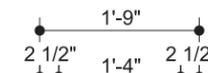


Top View

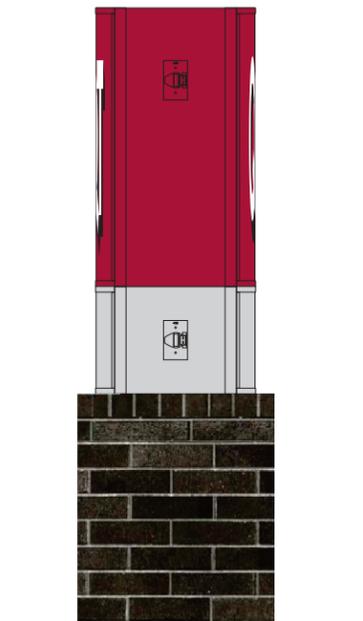


Front Elevation

Scale: 1/2" = 1'-0"



Side Elevation



Side Elevation

Color Specifications

- All Paint Finishes to be Akzo Nobel
- Opaque Silver
 - Translucent White
 - Black - Low Gloss
 - Matte White (Interior of Sign)
 - Match 3M Cardinal Red #3632-53
 - Match PMS 349C

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries MET Electric Sign Complies with UL48 E212503 CSA C22.2 No.207

THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

GROUNDING ELECTRICAL CONNECTIONS

Construction Details

- Installation by others
- Steel should be primed and painted white for max. reflectivity
- Engineering, steel size requirements and footing specifications are obtained by QT



Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales
House

Design
CT

Project Manager
James Gentry

Date / Description

Date	Description
01/08/26	Issue Date
1	
2	
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Notes

Client Review Status

Allen Industries, Inc. requires that an Approved drawing be obtained from the client prior to any production release or production release revision.

Approved Approved as Noted Revise & Resubmit

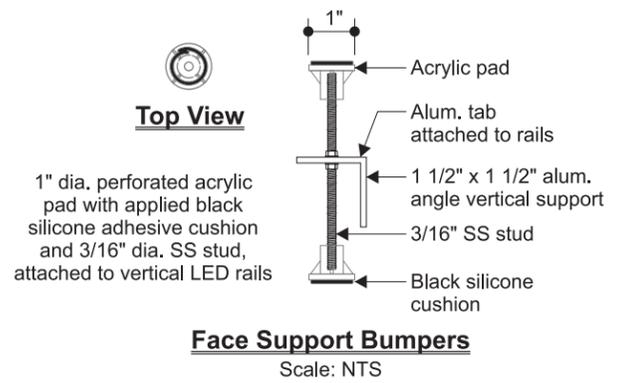
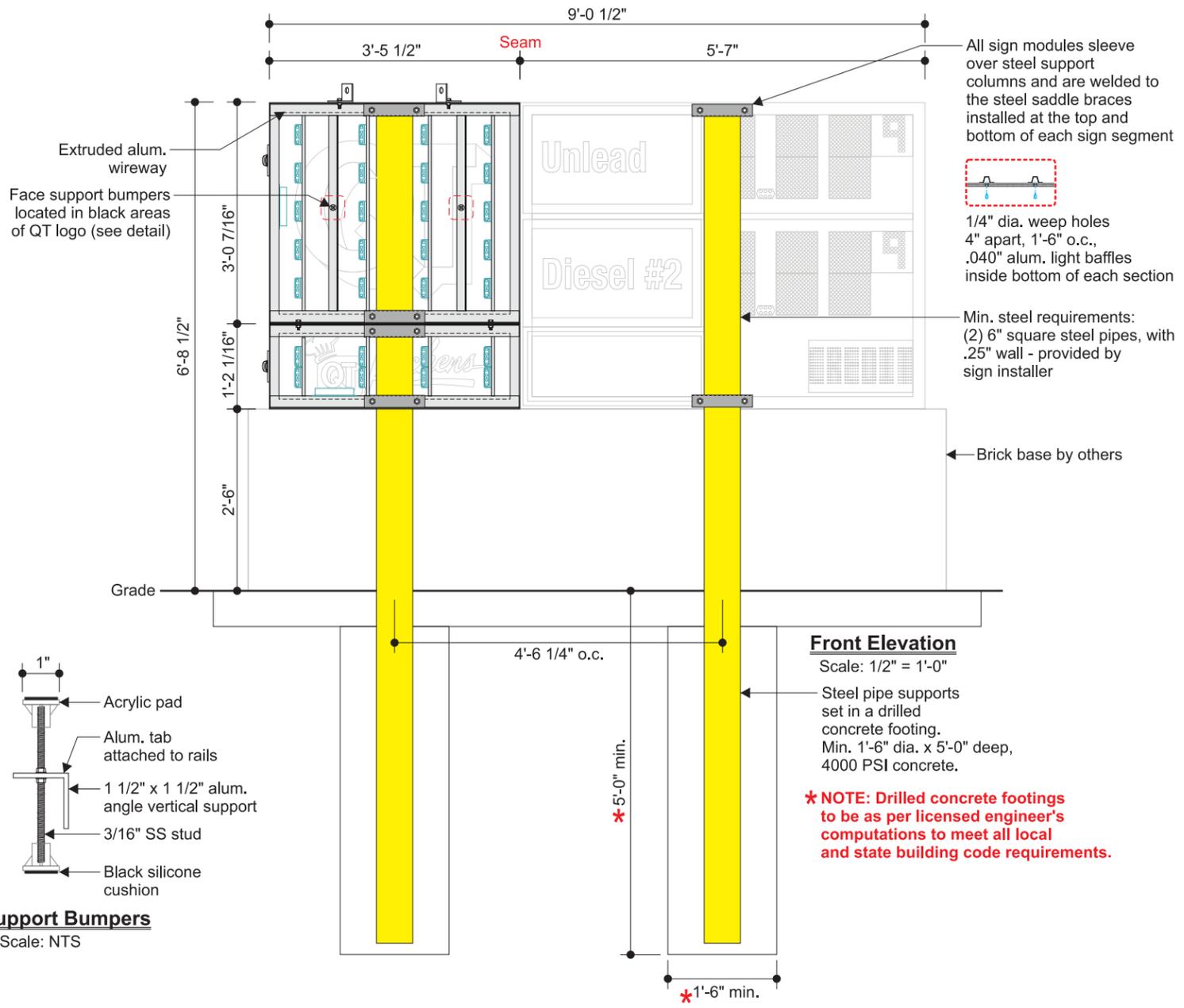
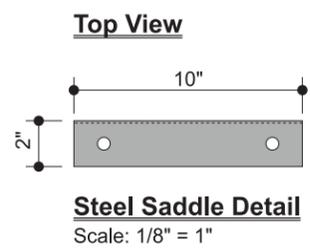
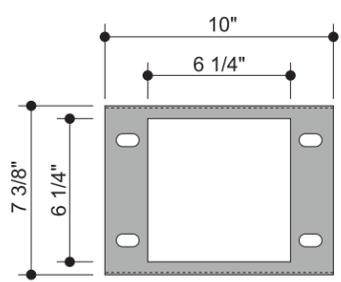
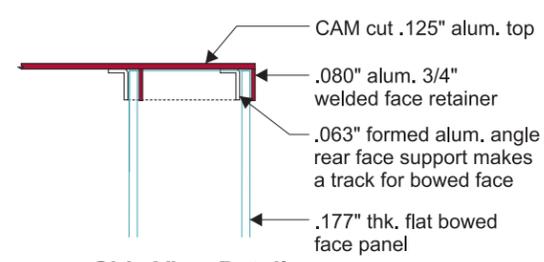
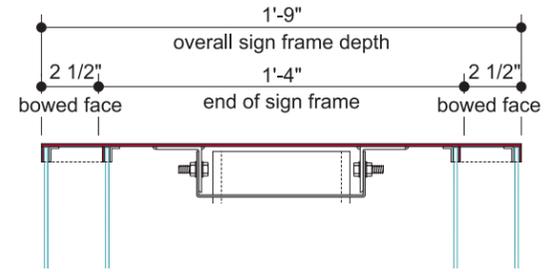
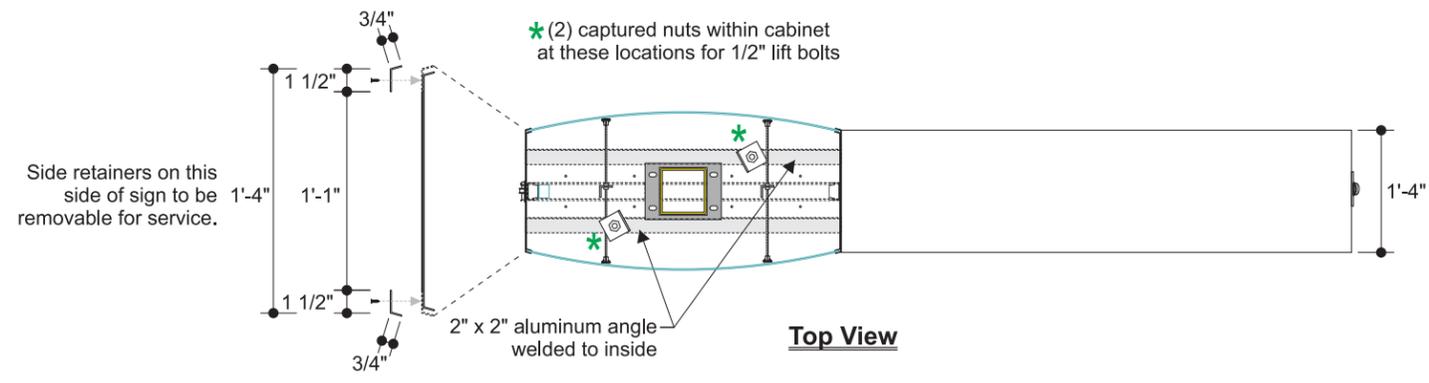
Name _____

Title _____ Date _____

Declaration

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YELLOW INDICATES THE STEEL SUPPORT PROVIDED BY SIGN INSTALLER

Allen Industries FILE NUMBER: E212503

Listed Electric Sign Complies with UL48 CSA C22.2 No.207 E212503

THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

GROUNDING ELECTRICAL CONNECTIONS

Illumination Details



Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client: QuikTrip
 Location: Store 4452

File: QT-MH-E2PGQ-CC-38-BB_4452_100

Sales House: Design CT Project Manager James Gentry

Date / Description

01/08/26	Issue Date
1	
2	
3	
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Notes

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Title _____ Date _____

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Material Breakdown		
Snap DS 71K (24V)	Modules	24V P/S
QUIK TRIP	20	
QT	8	P/S 1-2

Power Supply Type	5 YEAR WARRANTY POWER SUPPLY	5 YEAR WARRANTY POWER SUPPLY	10 YEAR WARRANTY POWER SUPPLY
DIMMABLE POWER SUPPLY GEPS24D-100U-NA	5 YEAR WARRANTY POWER SUPPLY Sku# 93137579 - GEPS24-100U-GLX2	5 YEAR WARRANTY POWER SUPPLY Sku# 95054945 - GEPS24LT-100U-NA	10 YEAR WARRANTY POWER SUPPLY Sku# 93137578 - GEPS24-100U-TT

Sign Type	Illumination	Primary Circuit (120 VAC)	SKU	Description	Name	Quantity
DOUBLE SIDED CABINET	FACE LIT	2.2 Amps	93128533	GEDS71-3	Snap DS 71K (24V)	28 Modules
Can Depth	LED Distance From Face	Power Supply Location	Sign Area			
21"	N/A	SELF-CONTAINED	41.40 Sq Ft			
Special Instructions		Total Module Watts				
SNAP DS TO BE INSTALLED @ 8" OC (Standard - 1.5 modules/ft)		93.24 Watts		SEE OPTIONS ABOVE	100W - 24V DRIVER	100W - 24V DRIVER
ESTIMATE FOR BOTH SIDES OF SIGN						2 Ea
Notes				GEDSRL08-3	Rails (8')	
				GEDSSE-3 / GEDSFE-3	Socket / Frame Endcap	
				GEDSIC-3	Interconnector	
		Total Lumens				
		14400.00 Lumens		191600041	Wire Connector	
		347.83 Lumens/Sq Ft		9409	18 AWG Supply Wire	

TECHNICAL SUPPORT:
888-694-3533
EMAIL: tetradrawings@gecurrent.com

Drawn By: CMK
 Checked By: CMK
 Date: 12/12/24

Job Name: QUIK TRIP
 Customer Name:

Drwg #: 106563 - 02
 Rev -

QT Kitchens Cabinet



Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip
Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales **House** Design **CT** Project Manager **James Gentry**

Date / Description

Date	Description
01/08/26	Issue Date
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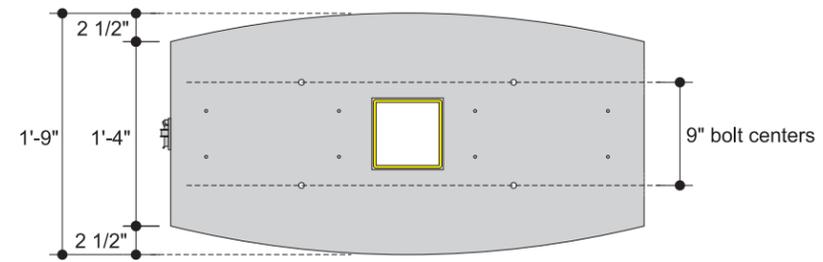
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Name _____

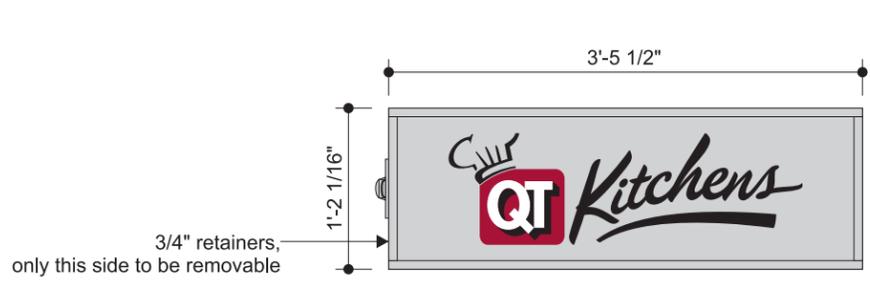
Title _____ Date _____

Declaration

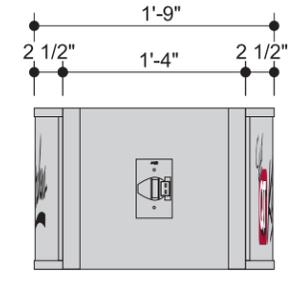
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Top View



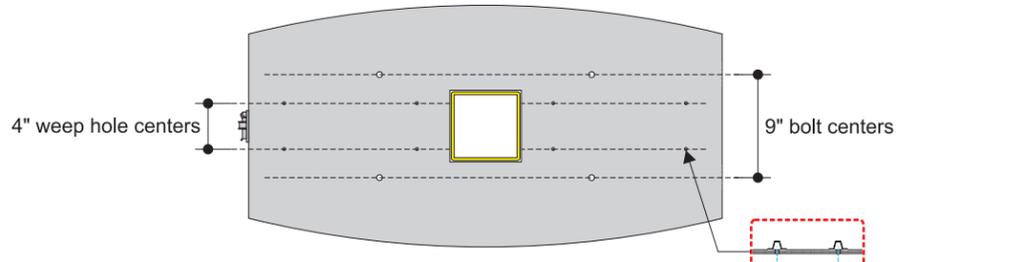
Front View - QT Kitchens Cabinet
Scale: 3/4" = 1'-0"



Side View

All Sign Modules constructed with removable alum. face retainers and clear acrylic, .177" thickness, face panels with 2nd surface painted background colors and graphics.

Note: No Embossment



Bottom View

Color Specifications

- All Paint Finishes to be Akzo Nobel
- Opaque Silver
- Translucent White
- 3M Day/Night Vinyl #3635-0171
- Matte White (Interior of Sign)
- 3M Cardinal Red #3630-53 Translucent Vinyl

- Regarding Fabrication Fit & Finish of All QT Signs:
- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
 - Any visible fasteners are to be countersunk and have painted heads.
 - Face retainers must fit flush and have even, minimal seams.
 - Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries
FILE NUMBER: E212503

Listed MET E212503
Electric Sign Complies with UL48

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GROUNDING ELECTRICAL CONNECTIONS

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Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip
Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales House Design CT Project Manager **James Gentry**

Date / Description

Date	Description
01/08/26	Issue Date

Notes

-

Client Review Status

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Approved
 Approved as Noted
 Revise & Resubmit

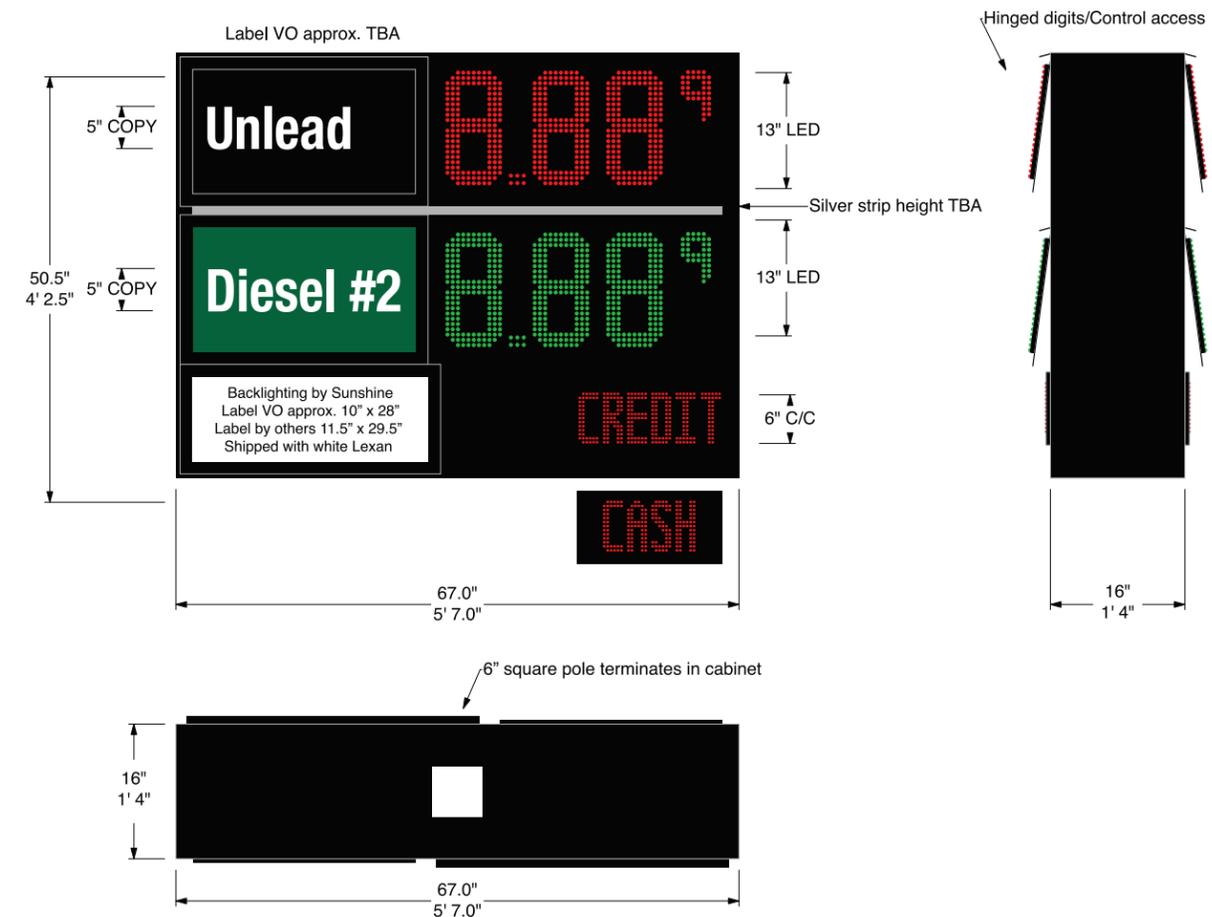
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Title _____ Date _____

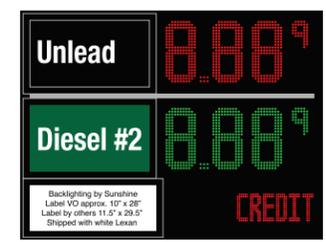
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 316 S. 6th Street St. Joseph, MO 64501 800. 821. 9013	Client	Install Location	Sales	Date: Aug 19, 2022	Job #:
	QuikTrip Corporation	TBA	Scottie Burnham 816-387-4202 scottie@sunshine.us.com	Revisions:	Date:
	Client Approval:	Date:			

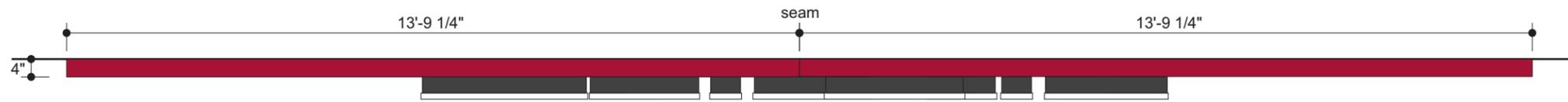


* Same layout both sides

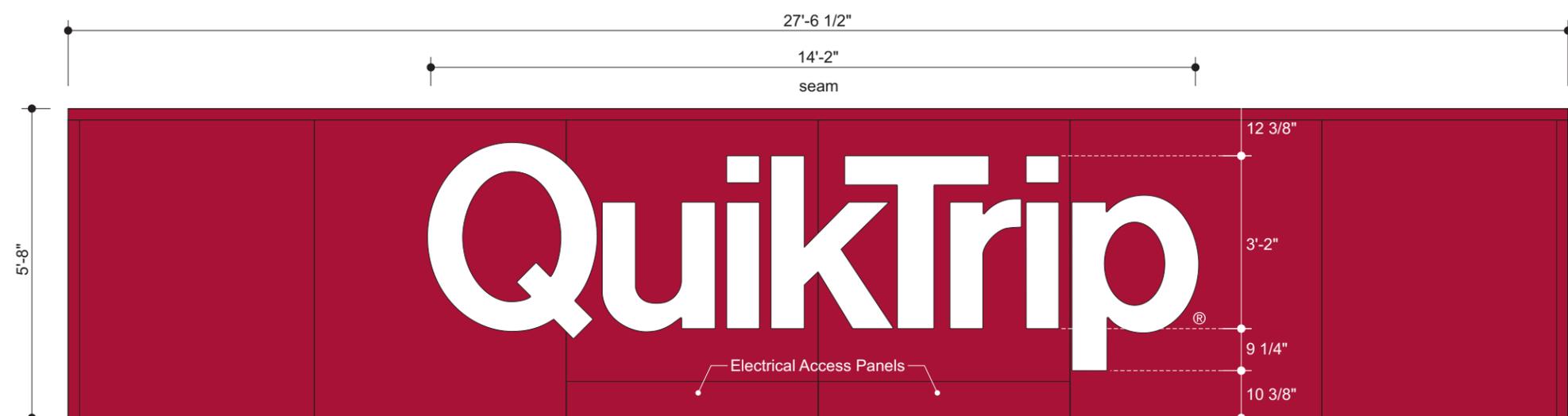


Cabinet Specs	Label Specs	Other
Digit Size & Style: 13" LED Digit Color: Red/Green Overall Cabinet Size: 4'2.5" h x 5'7" w x 16" d Cabinet Color: Black Single or Double Face: Double Build type: New cabinet	LED Backlit Label Panel - Label Font: Helvetica Bold Cond Label Panel Color: 3M 3632-22 Black / 3M 3632-26 Green Label Type Color: White	* Label and cabinet colors for representation only * 23.5 sq ft * 4.15 total AC amps including both sides * Cabinet(s) will have lifting/install eyebolt(s) * Electrical to be knocked out and ran at installer's preference

This original drawing is provided as part of a planned project and is not to be exhibited, copied or reproduced without the written permission of Sunshine Electronic Display Corporation or its authorized agent. All installation details are suggested only. All signs must be installed in accordance with NATIONAL, STATE, ELECTRICAL AND BUILDING CODES. Sunshine Electronic Display Corporation has no responsibility for wind loads, installations or electrical circuits. These are the sole responsibility of the Buyer/user.
 * Actual LED size and configuration may vary



Top View
Scale: 3/8" = 1'-0"



Front Elevation
Scale: 3/8"=1'-0"

General Specifications

- Backer Panel:** custom fabricated aluminum tube frame with .080" thk. aluminum faces
- Letter Faces:** .177" translucent White Evonik Cyro SG-7328 formed face
- Letter Returns:** 5" deep, .063" welded aluminum
- Illumination:** White LEDs as required by manufacturer with remote power supplies
- Wall Type:** TBD
- Install:** Flush to wall as per detail
- Quantity:** TBD

Regarding Fabrication Fit & Finish of All QT Signs:

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- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Paint Specifications

- Akzo Noble to match 3M Cardinal Red #3630-53
- Akzo Nobel to match SW 7069 Iron Ore

All paint finishes to be Satin unless otherwise specified

APPROVED

PSA
3/27/25

Allen Industries FILE NUMBER: E212503 **Electric Sign Complies with UL48** THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

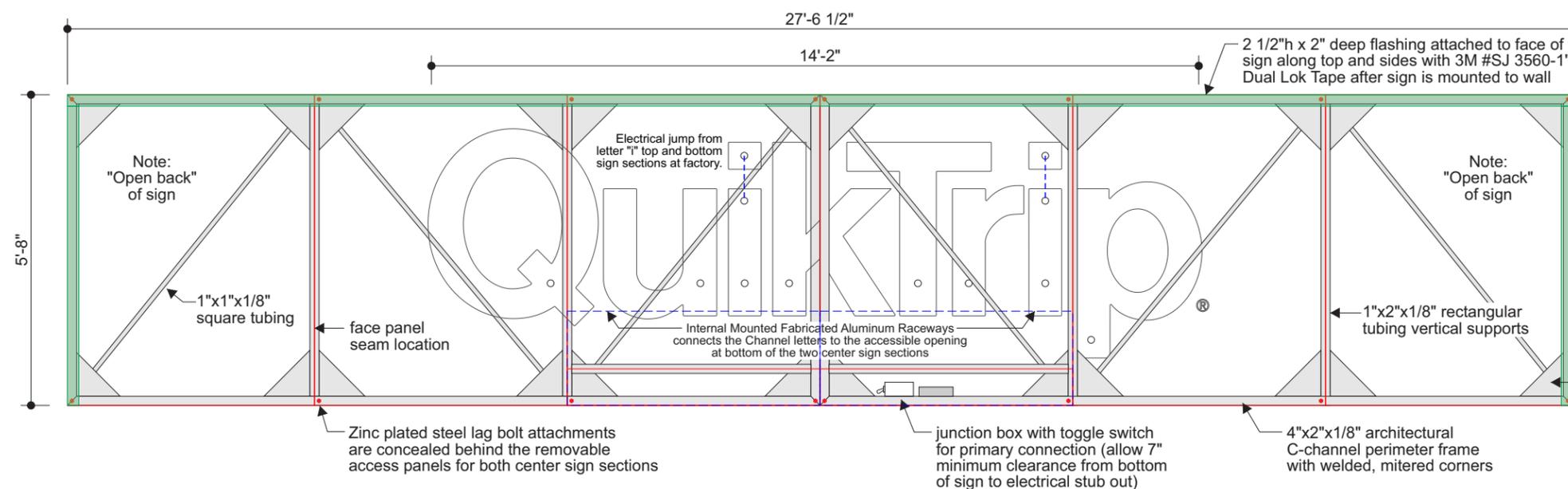
Client: QuikTrip	Date: 01/17/25	Estimate #: E21326	Job #: -	Page #: 1 of 4
Address: Various	File Name: QT Gen4 - CL60_101	Sales: House	Design: CT	PM: JG

#	Date	Description	Initial
1	03/09/25	Revised size per customer	CT
2	03/19/25	Revised size & electrical notes per customer	CT
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-

Client Review Status	
Allen Industries, Inc. requires that an approved drawing be obtained from the client prior to any production release or production release revision.	
Client Signature:	Approval Date:



Top View
Scale: 3/8" = 1'-0"



Internal fabricated aluminum raceways contain the remote located GE power supplies allowing service access through the removable service doors located at the bottom center sign sections to maintain UL approved construction.

Front View
Scale: 3/8" = 1'-0"

- Recessed zinc plated steel lag bolt attachment to wall with .063" x 2-1/2" high aluminum flashing to conceal wall attachment. Flashing painted QT red and provided in three sections.
- Note: The side flashing is 1 section (per side) of 6'-4" long x 2 1/2" wide (on face) x 2" deep (on returns) x .063" thk. aluminum. Flashing to conceal the recessed lag bolt attachment to the wall. Flashing attached with 3M Dual Lok Tape #SJ3560-1". Trim to fit in field.
- aluminum plate gussets to reinforce welded sign frame sections

Regarding Fabrication Fit & Finish of All QT Signs:

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Paint Specifications

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- Akzo Nobel to match SW 7069 Iron Ore

All paint finishes to be Satin unless otherwise specified

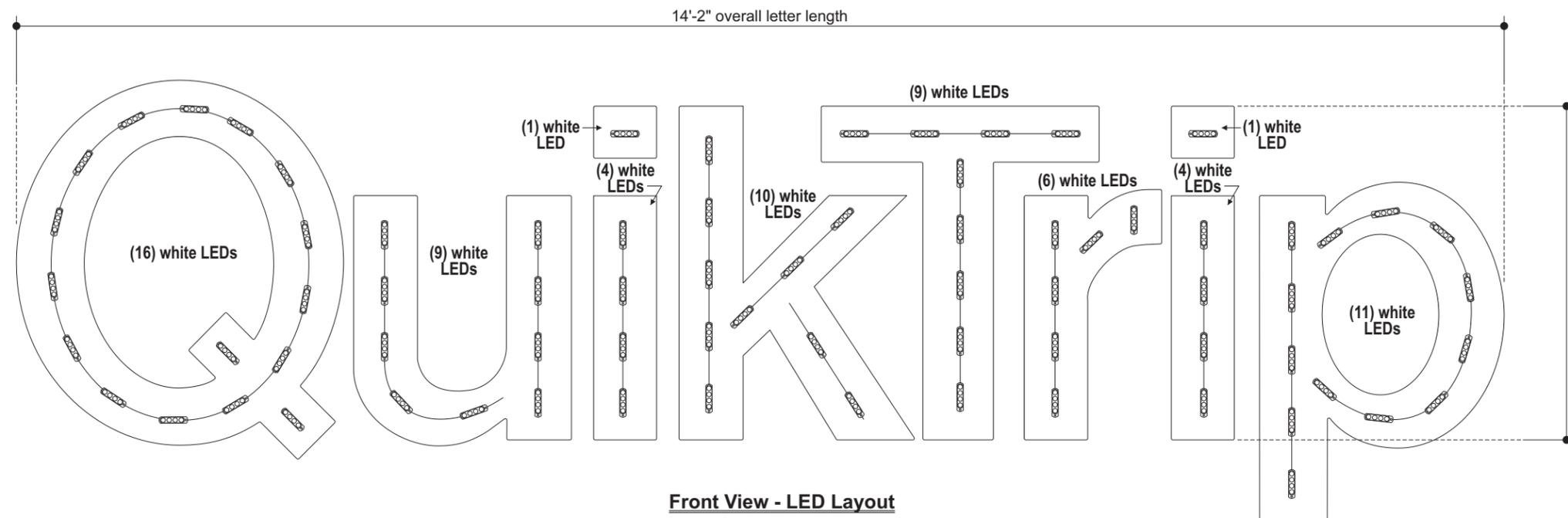


Electric Sign Complies with UL48

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3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-



LED Specification

- E** 71 ea. GEMX2471-W1 7100K White
4 LEDs per Module, Spaced 8" OC
- 1 ea. GEPS24-100U-GLX (pulls 130 modules)
- Total Electrical Amp Load = 1.1 Amps
- One (1) 120 Volt - 20 Amp
Circuit Breaker Required for Sign

Regarding Fabrication Fit & Finish of All QT Signs:

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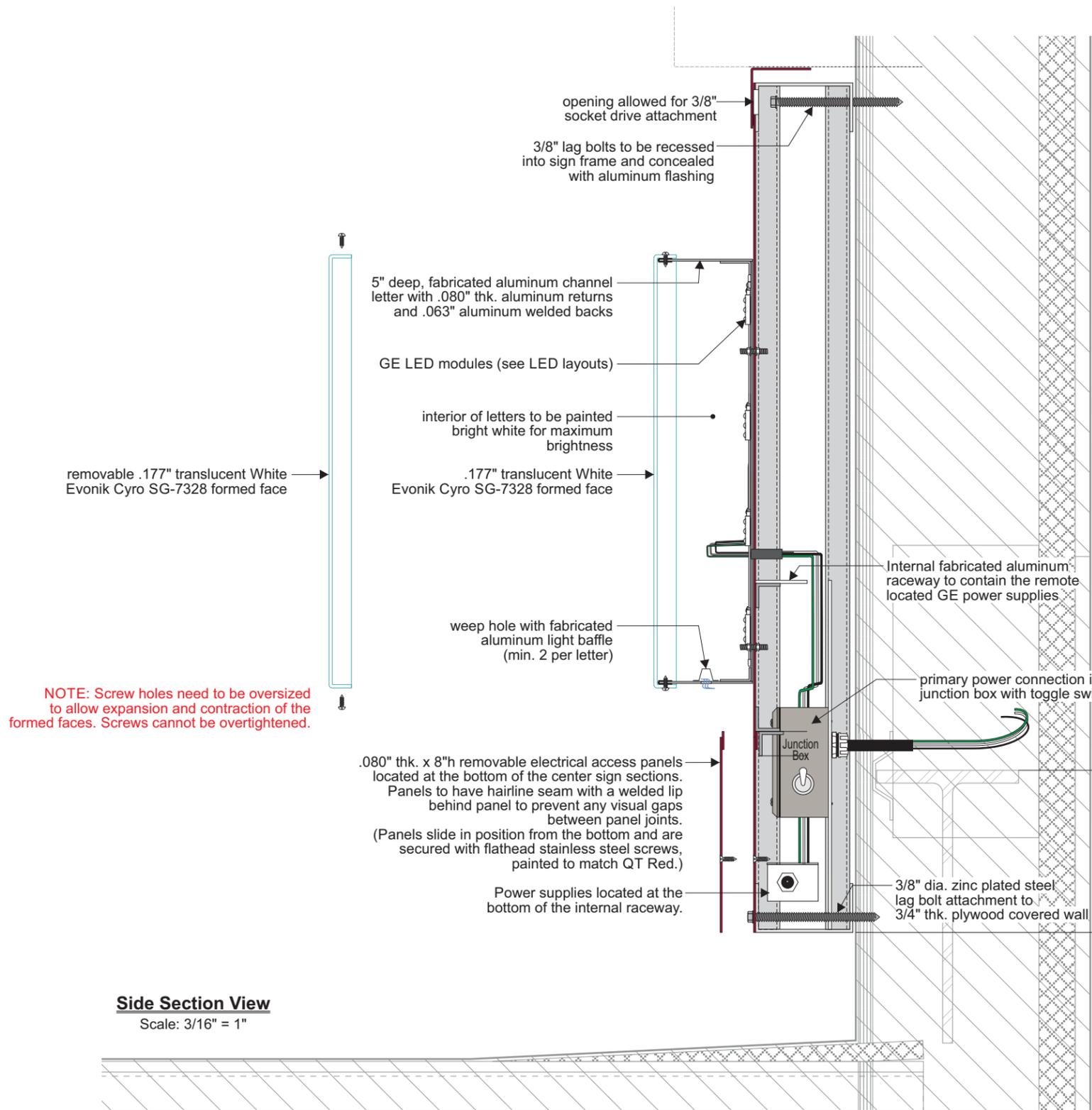
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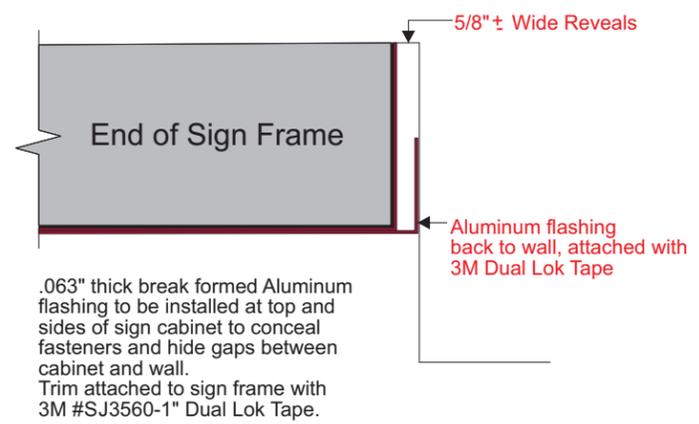
Electric Sign
Complies with
UL48

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Side Section View
Scale: 3/16" = 1"



Top View - Top Trim Detail
Scale: 1/4" = 1"

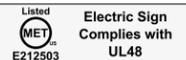
NOTE: Screw holes need to be oversized to allow expansion and contraction of the formed faces. Screws cannot be overtightened.

- Regarding Fabrication Fit & Finish of All QT Signs:**
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- Akzo Nobel to match SW 7069 Iron Ore

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3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-

*QuikTrip Store 4452
Lighting Cut Sheets
Site Lights*

Catalog # :

Project :

Prepared By :

Date :



Slice Medium - SLM Outdoor LED Area Light

The Slice's sleek design makes it perfectly-suited for Commercial & Industrial applications, while its cost-effective die-cast aluminum housing makes its acquisition cost very competitive. The Slice offers high performance silicone optics, die cast aluminum housing, 42,000+ lumens and is available with integral Airlink Synapse controls.

Features & Specifications

Optical System

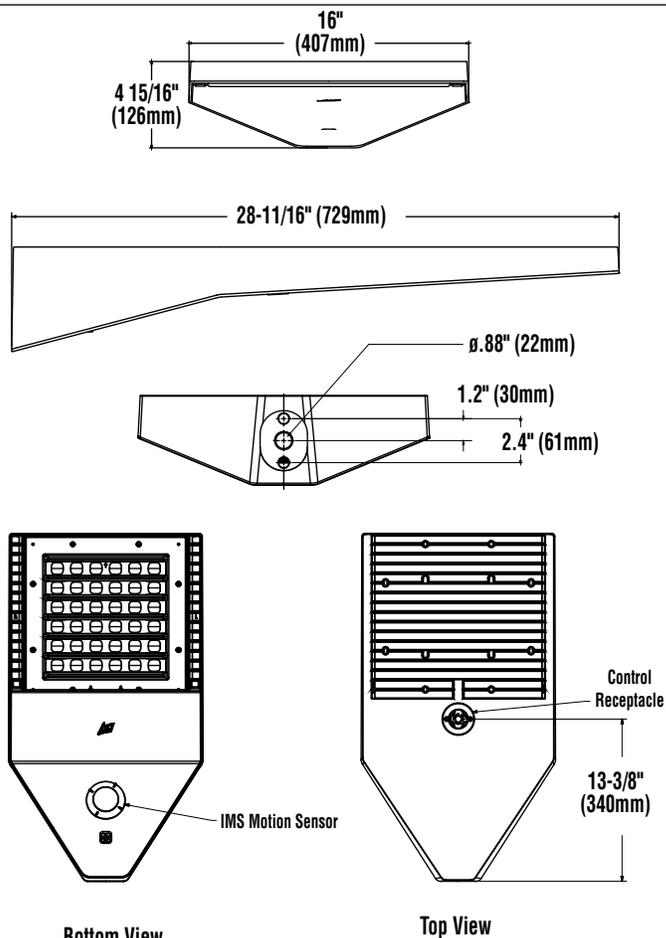
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT and FTA.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, 3000K, and 2700K color temperatures per ANSI C78.377. Optional 5700K CCT available in 90CRI only.
- Minimum CRI of 70. Optional 80 and 90 CRI available, consult factory for lead time.
- Integral Louver (IL) option available for improved back-light control without sacrificing street side performance. See page 5 for more details.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 3)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L lumen package rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Terminal block provided accepts up to 10ga wire.
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.



Product Dimensions





Slice Medium - SLM Outdoor LED Area Light

Features & Specifications (Cont.)

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square poles.
- Luminaire is proudly manufactured in the U.S. of U.S. and imported parts.
- IP66 rated luminaire protects integral components from harsh environments.
- 3G rated for ANSI C136.31 high vibration applications
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 30 lbs in carton.

Controls

Wireless Controls System

To make this fixture AirLink ready, simply order one of the following options:

- The integrated [Wireless Lighting Controller](#): ALSC or ALSCH (see ordering guide) as the controls option, or
- Integrated Wireless Controller option (above) with integrated motion sensor: ALSCS (ordering guide for mounting heights) or
- The 7-Pin Photoelectric Control Receptacle: CR7P as the controls option; and either the [5-Pin](#) or [7-Pin Twist Lock Controller](#): ALSC UNV TL5 or ALSC UNV TL7 as an accessory

To see how the components of AirLink system work together, reference the diagram in the controls section of this specsheet. For more information on our AirLink products, visit our website: www.lsi-airlink.com/airlink-synapse/

Stand-Alone Controls

- The integral passive infrared motion sensor (IMS) activates switching of luminaire light levels (see the controls section for more details).
- The 7-pin ANSI C136.41-2013 photocontrol receptacle option (CR7P) is available for twist lock photocontrols or wireless control modules.
- The Button Type Photocells (PCI) are capable of switching luminaires ON/OFF in response to the amount of available daylight.

Installation

- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment for installing/servicing.
- Included terminal block provides quick and easy on-site wiring.
- Utilizes LSI's traditional 3" drill pattern for easy fastening of LSI products. (See drawing on page 1)

Warranty

- LSI LED Fixtures carry a 5-year warranty.

Listings

- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- American Recovery and Reinvestment Act Funding Compliant.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable For wet Locations.
- IP66 rated Luminaire. IP66 rated optical chamber.
- 3G rated for ANSI C136.31 high vibration applications

Performance

ELECTRICAL DATA (AMPS)*							
Lumens	Watts	120V	208V	240V	277V	347V	480V
9L	68.2	0.6A	0.3A	0.3A	0.2A	0.2A	0.1A
12L	93.1	0.8A	0.4A	0.4A	0.3A	0.3A	0.2A
18L	148.5	1.2A	0.7A	0.6A	0.5A	0.4A	0.3A
24L	188.8	1.6A	0.9A	0.8A	0.7A	0.5A	0.4A
30L	248.6	2.1A	1.2A	1.0A	0.9A	0.7A	0.5A
36L	317.8	2.6A	1.5A	1.3A	1.1A	0.9A	0.7A
42L	393.4	3.3A	1.9A	1.6A	1.4A	1.1A	0.8A

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%

ELECTRICAL DATA - PHOSPHOR CONVERTED AMBER (AMPS)*							
Lumens	Watts	120V	208V	240V	277V	347V	480V
9L	74.3	0.6A	0.4A	0.3A	0.3A	0.2A	0.2A
12L	102.9	0.9A	0.5A	0.4A	0.4A	0.3A	0.2A

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%

RECOMMENDED LUMEN MAINTENANCE ¹ (24-42L)					
Ambient	Initial ²	25 hr ²	50 hr ²	75 hr ³	100 hr ³
0-40 C	100%	100%	97%	94%	92%

RECOMMENDED LUMEN MAINTENANCE ¹ (9-18L)					
Ambient	Initial ²	25 hr ²	50 hr ²	75 hr ³	100 hr ³
0-50 C	100%	96%	91%	87%	83%

- 1- Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.
- 2- In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
- 3- In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing

DELIVERED LUMENS*					
Lumen Package	Distribution	Phosphor Converted Amber			Wattage
		Delivered Lumens	Efficacy	BUG Rating	
9L	2	5958	80	B2-U0-G1	74
	2 IL	3735	50	B0-U0-G1	
	3	6196	83	B1-U0-G1	
	3 IL	4205	56	B0-U0-G1	
	5W	5528	74	B3-U0-G1	
	FT	5922	79	B1-U0-G2	
	FT IL	3712	50	B0-U0-G1	
	FTA	5997	80	B2-U0-G2	
12L	FTA IL	4254	57	B0-U0-G1	103
	2	7559	73	B2-U0-G2	
	2 IL	4738	46	B0-U0-G1	
	3	7860	76	B2-U0-G2	
	3 IL	5335	52	B0-U0-G1	
	5W	7013	68	B3-U0-G2	
	FT	7513	73	B2-U0-G2	
	FT IL	4709	46	B0-U0-G2	
	FTA	7608	74	B2-U0-G2	
	FTA IL	5397	52	B0-U0-G1	

*LED Chips are frequently updated therefore values are nominal

LUMINAIRE EPA CHART - SLM									
Tilt Degree		0°	30°	45°	Tilt Degree		0°	30°	45°
Single	Single	0.5	2.1	2.6	T90°	T90°	1.2	2.9	3.6
D180°	D180°	1.1	2.1	2.6	TN120°	TN120°	1.3	4.4	5.4
D90°	D90°	0.9	2.5	3.1	O90°	O90°	1.2	2.9	3.6

Specifications and dimensions subject to change without notice.



Slice Medium - SLM Outdoor LED Area Light

DELIVERED LUMENS*															Wattage
Lumen Package	Distribution	CRI	2700K CCT			3000K CCT			4000K CCT			5000K CCT			
			Delivered Lumens	Efficacy	BUG Rating										
9L	2	70	8349	122	B2-U0-G2	8576	125	B2-U0-G2	9396	137	B2-U0-G2	9784	143	B2-U0-G2	69
	2 IL	70	5185	76	B0-U0-G1	5326	78	B0-U0-G1	5835	85	B0-U0-G1	6076	89	B0-U0-G1	
	3	70	8571	125	B1-U0-G2	8804	129	B1-U0-G2	9646	141	B2-U0-G2	10044	147	B2-U0-G2	
	3 IL	70	6283	92	B0-U0-G2	6454	94	B0-U0-G2	7071	103	B0-U0-G2	7363	107	B0-U0-G2	
	5W	70	8158	119	B3-U0-G2	8380	122	B3-U0-G2	9181	134	B3-U0-G2	9560	140	B4-U0-G2	
	FT	70	8337	122	B2-U0-G2	8563	125	B2-U0-G2	9382	137	B2-U0-G2	9769	143	B2-U0-G2	
	FT IL	70	5393	79	B0-U0-G2	5540	81	B0-U0-G2	6069	89	B0-U0-G2	6320	92	B0-U0-G2	
	FTA	70	8459	123	B2-U0-G2	8689	127	B2-U0-G2	9520	139	B2-U0-G2	9913	145	B2-U0-G2	
FTA IL	70	6200	91	B1-U0-G1	6369	93	B1-U0-G1	6978	102	B1-U0-G1	7266	106	B1-U0-G1		
12L	2	70	11157	119	B2-U0-G2	11461	122	B2-U0-G2	12556	134	B3-U0-G2	13075	139	B3-U0-G2	94
	2 IL	70	6929	74	B1-U0-G1	7117	76	B1-U0-G2	7798	83	B1-U0-G2	8119	86	B1-U0-G2	
	3	70	11454	122	B2-U0-G2	11766	125	B2-U0-G2	12890	137	B2-U0-G2	13423	143	B2-U0-G2	
	3 IL	70	8396	89	B0-U0-G2	8625	92	B0-U0-G2	9449	101	B0-U0-G2	9839	105	B0-U0-G2	
	5W	70	10902	116	B4-U0-G2	11199	119	B4-U0-G2	12269	131	B4-U0-G2	12775	136	B4-U0-G2	
	FT	70	11141	119	B2-U0-G2	11444	122	B2-U0-G2	12538	133	B2-U0-G3	13055	139	B2-U0-G3	
	FT IL	70	7207	77	B0-U0-G2	7403	79	B0-U0-G2	8110	86	B0-U0-G2	8445	90	B0-U0-G2	
	FTA	70	11304	120	B2-U0-G2	11612	124	B2-U0-G2	12722	135	B2-U0-G2	13247	141	B2-U0-G2	
FTA IL	70	8286	88	B1-U0-G1	8511	91	B1-U0-G1	9325	99	B1-U0-G1	9710	103	B1-U0-G1		
18L	2	70	16714	112	B3-U0-G3	17168	115	B3-U0-G3	18809	126	B3-U0-G3	19586	131	B3-U0-G3	150
	2 IL	70	10379	69	B1-U0-G2	10662	71	B1-U0-G2	11681	78	B1-U0-G2	12163	81	B1-U0-G2	
	3	70	17158	115	B2-U0-G3	17625	118	B2-U0-G3	19310	129	B3-U0-G3	20107	134	B3-U0-G3	
	3 IL	70	12578	84	B1-U0-G3	12920	86	B1-U0-G3	14155	95	B1-U0-G3	14739	99	B1-U0-G3	
	5W	70	16331	109	B4-U0-G2	16776	112	B4-U0-G2	18379	123	B4-U0-G2	19138	128	B5-U0-G3	
	FT	70	16689	112	B3-U0-G3	17143	115	B3-U0-G3	18781	126	B3-U0-G4	19557	131	B3-U0-G4	
	FT IL	70	10795	72	B1-U0-G2	11089	74	B1-U0-G2	12149	81	B1-U0-G3	12651	85	B1-U0-G3	
	FTA	70	16934	113	B3-U0-G3	17395	116	B3-U0-G3	19058	127	B3-U0-G3	19844	133	B3-U0-G3	
FTA IL	70	12412	83	B1-U0-G1	12750	85	B1-U0-G2	13969	93	B1-U0-G2	14546	97	B1-U0-G2		
24L	2	70	20880	112	B3-U0-G3	22701	121	B4-U0-G3	24276	130	B4-U0-G3	24784	133	B4-U0-G3	187
	2 IL	70	13100	70	B1-U0-G2	14243	76	B1-U0-G2	15231	81	B1-U0-G2	15550	83	B1-U0-G2	
	3	70	21739	116	B3-U0-G3	23636	126	B3-U0-G4	25275	135	B3-U0-G4	25804	138	B3-U0-G4	
	3 IL	70	15828	85	B1-U0-G3	17209	92	B1-U0-G3	18403	98	B1-U0-G4	18788	100	B1-U0-G4	
	5W	70	20632	110	B5-U0-G3	22432	120	B5-U0-G3	23988	128	B5-U0-G3	24490	131	B5-U0-G3	
	FT	70	21611	116	B3-U0-G4	23496	126	B3-U0-G4	25126	134	B3-U0-G4	25652	137	B3-U0-G4	
	FT IL	70	13692	73	B1-U0-G3	14886	80	B1-U0-G3	15919	85	B1-U0-G3	16252	87	B1-U0-G3	
	FTA	70	21496	115	B3-U0-G3	23371	125	B3-U0-G3	24992	134	B3-U0-G3	25515	136	B3-U0-G3	
FTA IL	70	15226	81	B1-U0-G2	16555	89	B1-U0-G2	17703	95	B2-U0-G2	18073	97	B2-U0-G2		
30L	2	70	26581	108	B4-U0-G3	28900	117	B4-U0-G3	30905	125	B4-U0-G3	31551	128	B4-U0-G3	247
	2 IL	70	16677	68	B1-U0-G2	18132	73	B1-U0-G2	19390	79	B1-U0-G2	19796	80	B1-U0-G2	
	3	70	27675	112	B3-U0-G4	30089	122	B3-U0-G4	32176	130	B3-U0-G4	32850	133	B3-U0-G4	
	3 IL	70	20150	82	B1-U0-G4	21908	89	B1-U0-G4	23428	95	B1-U0-G4	23918	97	B1-U0-G4	
	5W	70	26266	106	B5-U0-G3	28557	116	B5-U0-G3	30538	124	B5-U0-G4	31177	126	B5-U0-G4	
	FT	70	27512	111	B3-U0-G4	29912	121	B3-U0-G4	31987	130	B3-U0-G4	32656	132	B3-U0-G5	
	FT IL	70	17430	71	B1-U0-G3	18951	77	B1-U0-G4	20266	82	B1-U0-G4	20690	84	B1-U0-G4	
	FTA	70	27365	111	B3-U0-G3	29752	120	B4-U0-G3	31816	129	B4-U0-G3	32482	132	B4-U0-G3	
FTA IL	70	19384	78	B2-U0-G2	21075	85	B2-U0-G2	22537	91	B2-U0-G2	23008	93	B2-U0-G2		
36L	2	70	32214	102	B4-U0-G3	35025	111	B4-U0-G3	37454	118	B4-U0-G3	38238	121	B4-U0-G4	317
	2 IL	70	20212	64	B1-U0-G2	21975	69	B1-U0-G3	23499	74	B2-U0-G3	23991	76	B2-U0-G3	
	3	70	33540	106	B3-U0-G4	36466	115	B3-U0-G5	38996	123	B3-U0-G5	39812	126	B3-U0-G5	
	3 IL	70	24421	77	B1-U0-G4	26551	84	B1-U0-G4	28393	90	B1-U0-G4	28987	92	B1-U0-G5	
	5W	70	31832	101	B5-U0-G4	34609	109	B5-U0-G4	37010	117	B5-U0-G4	37785	119	B5-U0-G4	
	FT	70	33342	105	B3-U0-G5	36251	114	B3-U0-G5	38766	122	B4-U0-G5	39577	125	B4-U0-G5	
	FT IL	70	21125	67	B1-U0-G4	22968	73	B1-U0-G4	24561	78	B1-U0-G4	25075	79	B1-U0-G4	
	FTA	70	33164	105	B4-U0-G3	36058	114	B4-U0-G4	38559	122	B4-U0-G4	39366	124	B4-U0-G3	
FTA IL	70	23492	74	B2-U0-G2	25541	81	B2-U0-G2	27313	86	B2-U0-G2	27885	88	B2-U0-G2		
42L	2	70	36785	94	B4-U0-G3	39994	103	B5-U0-G4	42768	110	B5-U0-G4	43663	112	B5-U0-G4	390
	2 IL	70	23079	59	B1-U0-G3	25093	64	B2-U0-G3	26833	69	B2-U0-G3	27395	70	B2-U0-G3	
	3	70	38299	98	B3-U0-G5	41640	107	B4-U0-G5	44528	114	B4-U0-G5	45460	117	B4-U0-G5	
	3 IL	70	27886	72	B1-U0-G4	30319	78	B1-U0-G5	32422	83	B1-U0-G5	33100	85	B1-U0-G5	
	5W	70	36349	93	B5-U0-G4	39520	101	B5-U0-G4	42261	108	B5-U0-G4	43145	111	B5-U0-G4	
	FT	70	38073	98	B4-U0-G5	41395	106	B4-U0-G5	44266	114	B4-U0-G5	45192	116	B4-U0-G5	
	FT IL	70	24122	62	B1-U0-G4	26226	67	B1-U0-G4	28045	72	B1-U0-G4	28632	73	B1-U0-G4	
	FTA	70	37870	97	B4-U0-G4	41174	106	B4-U0-G4	44030	113	B4-U0-G4	44951	115	B4-U0-G4	
FTA IL	70	26825	69	B2-U0-G2	29165	75	B2-U0-G2	31188	80	B2-U0-G2	31841	82	B2-U0-G2		

*LED Chips are frequently updated therefore values are nominal

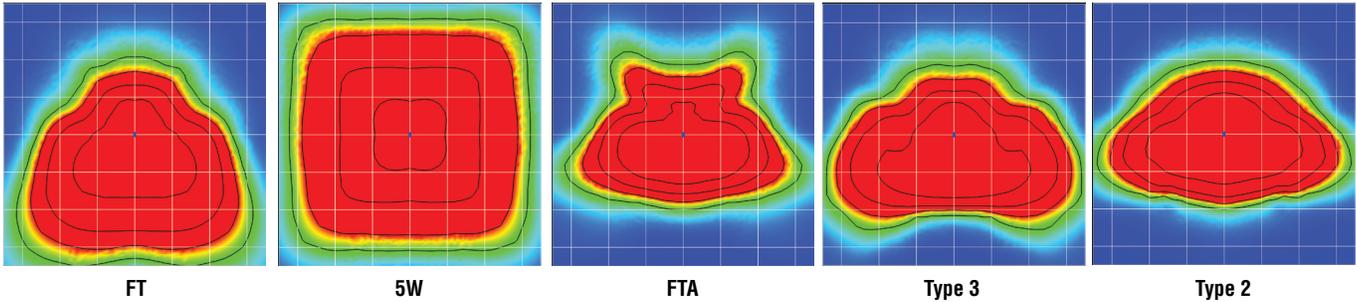
Specifications and dimensions subject to change without notice.



Slice Medium - SLM Outdoor LED Area Light

Performance (Cont.)

All published luminaire photometric testing performed to IESNA LM-79 standards. ISO footcandle plots below demonstrate the Slice (SLM) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.



Ordering Guide

TYPICAL ORDER EXAMPLE: **SLM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Luminaire Prefix	Light Source	Lumen Package*	Light Output	Distribution	Orientation ¹	Voltage	Driver
SLM Slice Medium	LED	9L - 9,000 lms 12L - 12,000 lms 18L - 18,000 lms 24L - 24,000 lms 30L - 30,000 lms 36L - 36,000 lms 42L - 42,000 lms *Consult factory for programmable wattages and lumen packages	SIL - Silicone	2 - Type 2 3 - Type 3 5W - Type 5 Wide FT - Forward Throw FTA - Forward Throw Automotive	(blank) - standard L - Optics rotated left 90 R - Optics rotated right 90	UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)	DIM - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Controls (Choose One)	Finish	Options
57 - 5,700 CCT ^{2,12} 50 - 5,000 CCT 40 - 4,000 CCT 30 - 3,000 CCT ² 27 - 2,700 CCT ² AMB - Phosphor Converted Amber ^{2,3}	70CRI - 70 CRI 80CRI - 80 CRI ² 90CRI - 80 CRI ^{2,12}	(Blank) - None Wireless Controls System ALSC - AirLink Synapse Control System ⁴ ALSCH - AirLink Synapse Control System Host / Satellite ^{4,5} ALSCS01 - AirLink Synapse Control System with 8-12' Motion Sensor ⁴ ALSCHS01 - AirLink Synapse Control System Host / Satellite with 8-12' Motion Sensor ^{4,5} ALSCS02 - AirLink Synapse Control System with 12-20' Motion Sensor ⁴ ALSCHS02 - AirLink Synapse Control System Host / Satellite with 12-20' Motion Sensor ^{4,5} ALSCS04 - AirLink Synapse Control System with 20-40' Motion Sensor ⁴ ALSCHS04 - AirLink Synapse Control System Host / Satellite with 20-40' Motion Sensor ^{4,5} Stand-Alone Controls EXT - 0-10v Dimming (from external signal) IMSOM1 - Integral Motion Sensor 8-12' 120-277V ^{4,6} IMSOM2 - Integral Motion Sensor 12-20' 120-277V ^{4,6} IMSOM4 - Integral Motion Sensor 20-40' 120-277V ^{4,6} IMSOM1HV - Integral Motion Sensor 8-12' 347-480V ^{6,10} IMSOM2HV - Integral Motion Sensor 12-20' 347-480V ^{6,10} IMSOM4HV - Integral Motion Sensor 20-40' 347-480V ^{6,10} CR7P - 7 Pin Control Receptacle ANSI C136.41 ⁷ Button Type Photocells PCI120 - 120V PCI208-277 - 208-277V PCI347 - 347V	BRZ - Bronze BLK - Black GPT - Graphite MSV - Metallic Silver WHT - White PLP - Platinum Plus SVG - Satin Verde Green	(Blank) - None IL - Integral Louver HSS ¹



Slice Medium - SLM Outdoor LED Area Light

Accessory Ordering Information⁸

Description	Order Number	Description	Order Number
PC120 Photocell for use with CR7P option (120V) ⁹	122514	DFK208, 240 Double Fusing (208V, 240V)	DFK240
PC208-277 Photocell for use with CR7P option (208V, 240V, 277V) ⁹	122515	DFK480 Double Fusing (480V)	DFK480
PC347 Photocell for use with CR7P option (347V) ⁹	122516	DFK347 Double Fusing (347V)	DFK347
PC480 Photocell for use with CR7P option (480V) ⁹	1225180	X5RPP - Round Pole Adapter for 5" Poles ¹¹	379968CLR
ALSC UNV TL5 - Airlink 5Pin Twist Lock Controller ^{4,9}	661409	IL - Integral Louver HSS	684812
ALSC UNV TL7 - Airlink 7Pin Twist Lock Controller ^{4,9}	661410	Universal Mounting Bracket (UMB) ¹¹	684616CLR
PMOS24 - 24V Pole-Mount Occupancy Sensor (ALSC/H Compatible) ^{10,11}	663284CLR	Adjustable Slip Fitter (ASF) ¹¹	688138CLR
IMS/PC Remote Configurator Tool	584929	Pole Quick Mount Bracket - Square Pole ¹¹	687073CLR
X3RPP - Round Pole Adapter for 3" Round Tapered Poles ¹¹	408273CLR	Pole Quick Mount Bracket - 4-5" Round Pole ¹¹	689903CLR
X4RPP - Round Pole Adapter for 4" Poles ¹¹	379967CLR	15° Tilt Pole Quick Mount Bracket - Square Pole ¹¹	688003CLR
FK120 Single Fusing (120V)	FK120	15° Tilt Pole Quick Mount Bracket - 4-5" Round Pole ¹¹	689905CLR
FK277 Single Fusing (277V)	FK277	BKS XBO WM * CLR Wall Mount Bracket ¹¹	382132CLR

FOOTNOTES:

- 1 - Not available on "Type V" distribution.
- 2 - Consult Factory for availability.
- 3 - Only available in 9L and 12L Lumen Packages
- 4 - Not available in HV.
- 5 - Consult Factory for Site Layout
- 6 - IMS is field adjustable, via a hand held Remote Configurator Tool, which must be ordered separately. See Accessory Ordering Information.

- 7 - Control device must be ordered separately. 7 pin standard. See Accessory Ordering Information.
- 8 - Accessories are shipped separately and field installed.
- 9 - Factory installed CR7P option required. See Options.
- 10 - Only available with ALSC* Controls
- 11 - "CLR" denotes finish. See Finish options.
- 12 - Only available in 5700K 90CRI for lumen packages 24L-42L.

Accessories/Options

Integral Louver (IL)

Accessory Integral Louver available for improved back-light control without sacrificing street side performance. LSI's Integral Louver (IL) option delivers backlight control that significantly reduces light spill behind the pole for applications with pole locations close to adjacent properties. The integrated louvers' design maximizes forward-reflected light while - reducing glare, maintaining the optical distribution selected, and most importantly, eliminating light trespass. The Integral louver rotates with the optical distribution.

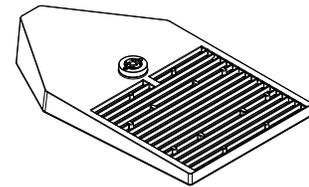
Luminaire Shown with Integral Louver (IL)



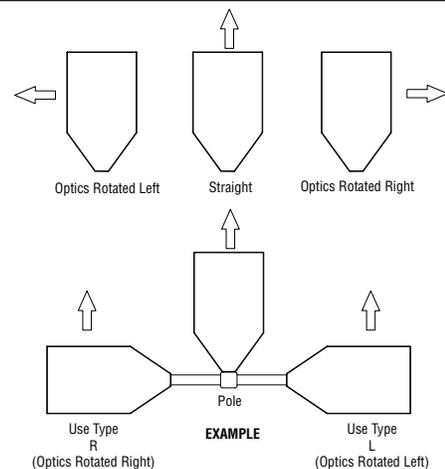
7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).

Fixture Shown with CR7P



Optics Rotation





Slice Medium - SLM Outdoor LED Area Light

Stand-alone Controls: Occupancy Sensor (IMS)

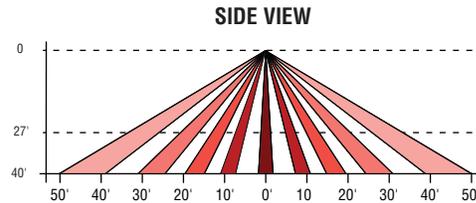
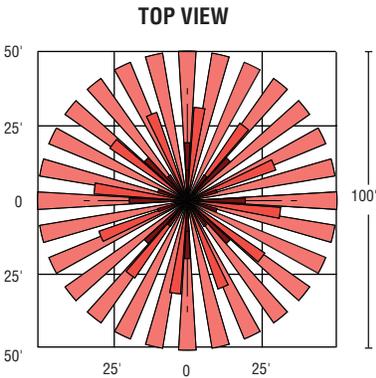
The integral passive infrared motion sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Lowlight level (10% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. See coverage diagram for detection cone.

The Remote Configurator Tool allows for easy and safe programming of each luminaire from ground level. See the [Remote Configurator User Guide](#) for programming instructions.

When ordering the Stand-alone Occupancy Sensor on the fixture, you must include IMS (see ordering guide for mounting height options) as the controls option in the fixture nomenclature.

To order as a motion sensor with the AirLink Wireless Control System, see ordering guide under "Wireless Controls System" and select the ALSCS controls option with the desired mounting height.

IMS Coverage Diagrams



Remote Configurator Tool



Luminaire Shown with IMS





Slice Medium - SLM Outdoor LED Area Light



AirLink™
enabled by Synapse®

The AirLink enabled by Synapse Wireless Lighting Control System is the perfect solution for commercial, industrial and municipal applications, such as: auto dealerships, parking lots, garages, shopping complexes and warehouses.

AirLink utilizes robust wireless communication via 2.4 GHz Self-Healing Mesh Network which not only increases reliability and accuracy of system, but also eliminates single point of failure.

The flexibility of the system make it perfect for new construction and retrofit projects. The user-friendly AirLink web application is accessible through any device with an internet connection and allows for complete customization of the system's features.

Some capabilities of the system include: occupancy/vacancy sensing, daylight harvesting, scheduling, high-end trim, dimming, zone control, BMS integration and energy monitoring.

The AirLink System

Wireless controls & sensors



Wireless & Override Switches



Occupancy/Vacancy & Daylight Sensors



AirLink-integrated Fixtures



AirLink-compatible Fixtures



Circuit & Zone Controllers

Centralized control & integration



Site Manager Controller

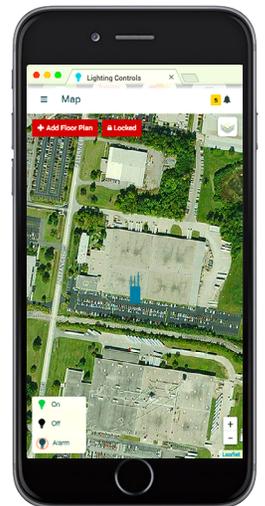


Gateway Module



WiFi, Cellular or Ethernet Connection

Simple-to-use software



AirLink Site Manger: Lighting control web app

Contact LSI Controls



Sales
controls.sales@lsi-industries.com



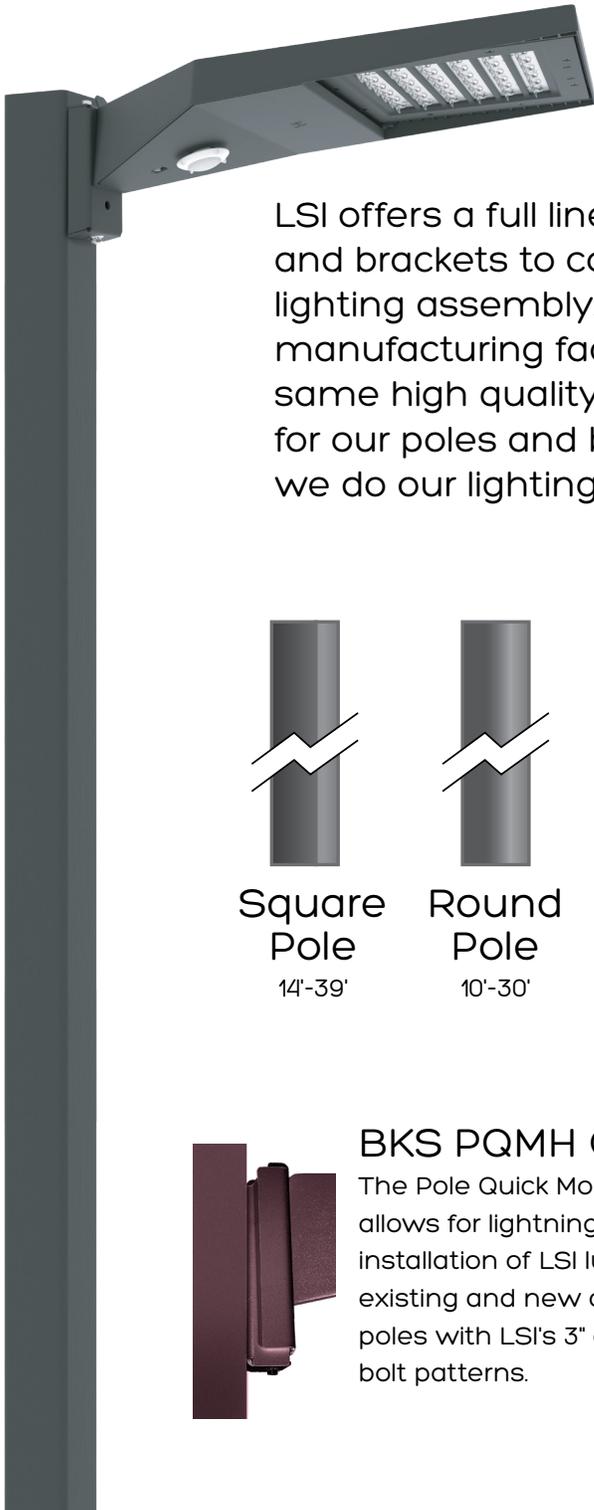
Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)



More information
For more information on AirLink, visit our website at www.lsi-airlink.com



poles & Brackets



LSI offers a full line of poles and brackets to complete your lighting assembly. Our USA manufacturing facility has the same high quality standards for our poles and brackets as we do our lighting fixtures.



BKA UMB CLR

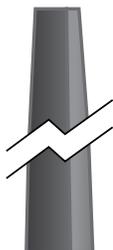
The 3G rated Universal Mounting Bracket (UMB) allows for seamless integration of LSI Luminaires onto existing or new construction poles. The UMB bracket was designed specifically for square or round (tapered/straight) poles with (2) mounting hole spaces between 3.5"-5".



Square Pole
14'-39'



Round Pole
10'-30'



Tapered Pole
20'-39'



BKA ASF CLR

The adjustable Slip Fitter is a 3G rated rugged die cast aluminum adapter to mount LSI luminaires onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon. The Adjustable Slip Fitter can be rotated 180° allowing for tilting LSI luminaires up to 45° and 90° when using a vertical tenon.



BKS PQMH CLR

The Pole Quick Mount Bracket allows for lightning fast installation of LSI luminaires onto existing and new construction poles with LSI's 3" or 5" standard bolt patterns.



BKS PQM15 CLR

The Pole Quick Mount Bracket allows for preset 15° up tilt of LSI luminaires for greater throw of light and increased vertical illumination as well as fast installation onto poles with LSI's 3" or 5" bolt pattern.

*QuikTrip Store 4452
Lighting Cut Sheets
Fuel Canopy Lights*



Scottsdale Vertex™ (SCV)

Petroleum Canopy Light



OVERVIEW

Lumen Package (lm)	9,000 - 23,000
Wattage Range (W)	67 - 188
Efficacy Range (LPW)	109 - 154
Weight lbs (kg)	18.5 (8.4)

QUICK LINKS

[Ordering Guide](#)
[Performance](#)
[Photometrics](#)
[Dimensions](#)

FEATURES & SPECIFICATIONS

Construction

- Rugged low-profile die-cast aluminum housing, optical unit, and driver cover.
- Below canopy access to optical chamber and driver housing for serviceability.
- IP66 rated luminaire protects integral components from dust and water.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.
- Four fasteners secure the door frame to housing. Door frame also provides quick and easy access to the electrical compartment for servicing.
- Shipping weight: 18.5 lbs in carton.

Optical System

- Symmetrical distribution utilizes a clear tempered flat glass lens to uniformly illuminate the area under the gas canopy.
- Combination Forward Throw distribution uses clear tempered flat glass and optical grade PMMA acrylic lens to create an industry leading unique distribution pattern to illuminate the area under the gas canopy and the area between the gas canopy and convenience store eliminating the need for extra floodlights.
- Available in 5000K, 4000K and 3000K color temperatures.
- Minimum CRI of 80.

Electrical

- High-performance factory programmable driver; features include over-voltage, undervoltage, short circuit and over temperature protection.
- Integral 6kV surge protection that meets IEEE C62.41.2 and ANSI C82.77-5 Location Category C Low standards.

- Additional field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2).
- Total harmonic distortion: <20%.
- Operating temperature: -40°C to +50°C (-40°F to +122°F) when mounted to Steel/ Aluminum surfaces for 10L, 13L, & 15L Lumen Packages, +45°C for 20L Lumen Package, and +35°C for 23L Lumen Package. If mounted to a non-metallic surface, reduce ambient by 5°C.
- Power factor: >0.90.
- High-efficacy LEDs are mounted to (4) circuit boards to maximize heat dissipation.
- Driver components are fully encased in potting material for moisture resistance. Driver complies with FCC standards.

Hazardous Location

- Designed for lighter than air fuel applications. Product is suitable for Class 1 Division 2 with all lumen packages and distributions only when properly installed per LSI installation instructions. Models with optional controls are not approved for Class 1, Division 2 applications.
 - Gas Groups A, B, C, and D - Group A: Acetylene / Group B: Hydrogen / Group C: Propane and Ethylene / Group D: Benzene, Butane, Methane & Propane.

Installation (Standard)

- Installs in a 12" or 16" deck pan.
- Four fasteners are provided for use in single deck steel canopies. Other suitable fasteners may be required and provided by others.
- Unit is designed to quickly retrofit into existing Scottsdale (4") hole.
- Aluminum locking collar and gasket are included and required for complete seal and support of canopy deck.
- Retrofit panels are available for existing Encores, Richmond, 2x2 Universal, and more.
- Direct mount to surface or recessed J box with hardware bracket kit ordered separately as an accessory.

Installation (REDiMount)

- Patent pending 3 piece quick mounting system; components include collar, capsule and connector.
- Designed to reduce canopy penetrations and increase installation efficiency.
- Installs in 12" or 16" deck pan.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to <https://www.lsicorp.com/resources/terms-conditions-warranty/> for more information.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- State of California Title 24 Compliant with IMSBT option.
- DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- IDA compliant with 3000K or lower color temperature.

ORDERING GUIDE

[Back to Quick Links](#)

TYPICAL ORDER EXAMPLE: SCV LED 13L SC UNV DIM 50 WHT IMSBT2 REDI									
Prefix	Light Source	Lumen Package	Distribution	Voltage	Driver	Color Temperature	Finish	Options	Mounting
SCV - Petroleum Canopy Luminaire	LED	10L - 10,000 Lumens 13L - 13,000 Lumens 15L - 15,000 Lumens 20L - 20,000 Lumens 23L - 23,000 Lumens Custom Lumen Packages ¹	SC - Standard Symmetric	UNV - Universal Voltage (120-277VAC) HV - 347-480V ²	DIM - 0-10V Dimming ³	30 - 3000K 40 - 4000K 50 - 5000K	WHT - White BLK - Black BRZ - Bronze	Blank - None ALBCS1 - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height) ALBCS2 - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' mounting height) IMSBT1L - Integral Bluetooth™ Motion and Photocell Sensor (8 - 24' mounting height) ⁴ IMSBT2L - Integral Bluetooth™ Motion and Photocell Sensor (25 - 40' mounting height) ⁴ HL - Hazardous Location Class 1 Div 2 ⁵	Blank - None REDI - REDiMount integrated junction box system ⁶
	23L - 23,000 Lumens	SCFT - Combination Standard Symmetric and Forward Throw ¹							



Need more information?
[Click here for our glossary.](#)

Have additional questions?
 Call us at (800) 436-7800



ACCESSORY ORDERING INFORMATION

Part Number	Description
673425R2	Retrofit Panel Kit - EC / ECTA / SCF to SCV, for 16" Deck Panel with larger openings ⁷
676011R2	Retrofit Panel Kit - EC / ECTA / SCF to SCV, for 12" Deck Panel ⁸
673426R2	Retrofit Panel Kit - RECU Richmond to SCV
673427R2	Retrofit Panel Kit - UNV Universal 2x2 to SCV
357282	Retrofit 2x2 Cover Panel Blank (no holes)
354702	Retrofit RIC Cover Panel Blank (no holes)
557193WHT	26" X 26" Beauty Plate Kit (with 4" Center hole)
564160WHT	26" X 32" Beauty Plate Kit (with 4" Center hole)

Part Number	Description
687461	Junction Box
1320540	Kit - Hole Plugs and Sealant (enough for 25 retrofits)
678291R2WHT	Rectangular Top Plate Kit (includes top plate and sealant)
673433R2	Surface Mount Box
687462R2	Retrofit Kit - CRU/CRUS to SCV
744333	Retrofit Kit for SCM/SCV to upgrade SC/SCF/EC/ECTA White
752172R2	Bracket SCM/SCV Direct Mount with Hardware

¹ Custom lumen and wattage packages available consult factory. Values are within industry standard tolerances but not DLC listed.

² HV not available with REDiMount.

³ 0-10 low voltage wired dimming not available with REDiMount.

⁴ IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.

⁵ HL not compatible with AirLink, IMSBT, 3000K, or REDiMount.

⁶ Light fixture engine ships with REDiMount attached.

⁷ Ideal for 9" to 12" openings.

⁸ Ideal for 9" openings.



Scottsdale Vertex™ (SCV) Petroleum Canopy Light

Type: _____

 Have questions? Call us at (800) 436-7800

PERFORMANCE

[Back to Quick Links](#)

Delivered Lumens*										
Lumen Package	3000K CCT			4000K CCT			5000K CCT			Wattage
	Delivered Lumens	Efficiency	BUG Ratings	Delivered Lumens	Efficiency	BUG Ratings	Delivered Lumens	Efficiency	BUG Ratings	
10L	9,652	144	B3-U0-G1	9,928	148	B3-U0-G1	10,317	154	B3-U0-G1	67
13L	12,567	140	B3-U0-G1	12,927	144	B3-U0-G1	13,443	149	B3-U0-G1	90
15L	13,999	137	B3-U0-G1	14,399	141	B3-U0-G1	14,963	147	B3-U0-G1	102
20L	18,755	141	B4-U0-G1	19,598	147	B4-U0-G1	20,234	152	B4-U0-G1	133
23L	21,783	141	B4-U0-G2	22,406	145	B4-U0-G2	23,284	150	B4-U0-G2	155
23L (SCFT)	20,886	111	B3-U0-G3	23,187	123	B4-U0-G3	23,101	123	B3-U0-G3	188

*LEDs are frequently updated therefore values are nominal.

Recommended Lumen Maintenance - SCV 15L SC ¹					
Ambient Temperature °C	Lumen Multiplier				
	Initial ²	25k hr ²	50k hr ²	75k hr ²	100k hr ²
25	102%	97%	92%	88%	84%
30	102%	97%	92%	88%	84%
35	102%	97%	92%	88%	84%
40	102%	97%	92%	88%	84%
45	101%	95%	91%	86%	81%
50	101%	95%	90%	85%	80%

Electrical Data - Current draw in AMPS*							
Lumen Package	Wattage	120V	208V	240V	277V	347V	480V
10L	67	0.56	0.32	0.28	0.24	0.19	0.14
13L	90	0.75	0.43	0.37	0.32	0.26	0.19
15L	102	0.85	0.49	0.42	0.37	0.29	0.21
20L	133	1.1	0.64	0.55	0.48	0.38	0.28
23L (SC)	155	1.29	0.75	0.65	0.56	0.45	0.32
23L (SCFT)	188	1.57	0.9	0.78	0.68	0.54	0.39

*Electrical data at 25°C (77°F). Actual wattage may differ by +/-10%.

Recommended Lumen Maintenance - SCV 23 SCFT ¹					
Ambient Temperature °C	Lumen Multiplier				
	Initial ²	25k hr ²	50k hr ²	75k hr ²	100k hr ²
25	105%	88%	73%	61%	51%
30	105%	80%	61%	47%	36%
35	105%	70%	47%	32%	21%

Recommended Lumen Maintenance - SCV 23 SC ¹					
Ambient temperature °C	Lumen Multiplier				
	Initial ²	25k hr ²	50k hr ²	75k hr ²	100k hr ²
25	102%	97%	92%	88%	84%
30	102%	97%	92%	88%	84%
35	102%	97%	92%	88%	84%
40	101%	96%	91%	86%	82%

1 Lumen maintenance values at 25 °C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.

2 In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

3 In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

Scottsdale Vertex™ (SCV) Petroleum Canopy Light

Type : _____

 Have questions? Call us at (800) 436-7800

PHOTOMETRICS

[Back to Quick Links](#)

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

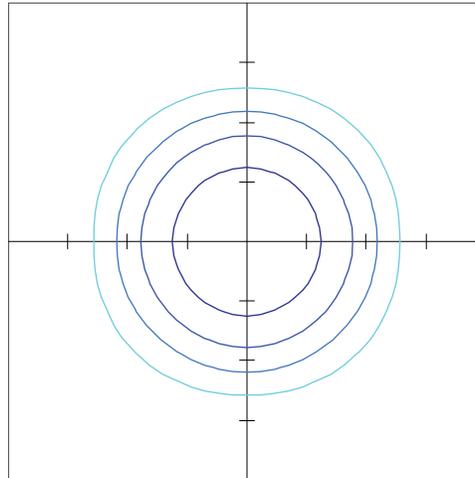
See the individual product page on <https://www.lsicorp.com/> for detailed photometric data.

SCV-LED-15L-SC-50

Luminaire Data	
Wide Distribution	
Description	5000 Kelvin, 80 CRI
Delivered Lumens	15,410
Watts	103
Efficacy	150
IES Type	Type VS - Very Short
BUG Rating	B3-U0-G1

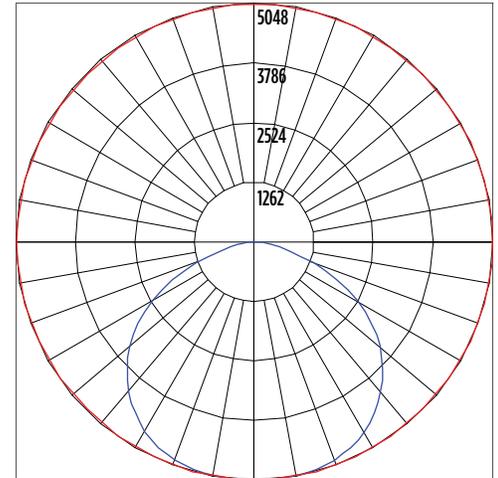
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
Low (0-30°)	4,101.6	26.6%
Medium (30-60°)	8,386.4	54.4%
High (60-80°)	2,748.8	17.8%
Very High (80-90°)	173.4	1.1%
Uplight (90-180°)	0	0.0%
Total Flux	15,410.2	100%

ISO Footcandle



15' Mounting Height / 15' Grid Spacing
 5 FC 2 FC 1 FC 0.5 FC

Polar Curve



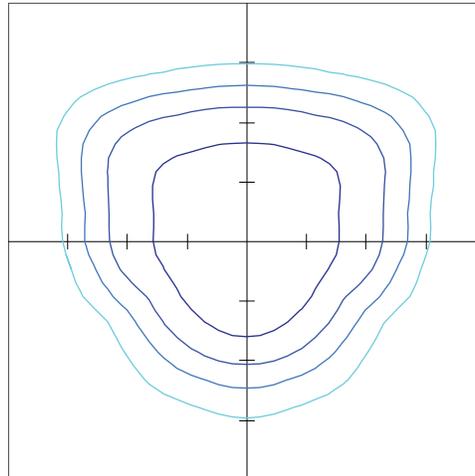
Vertical Plane Horizontal Cone

SCV-LED-23L-SCFT-50

Luminaire Data	
Wide Distribution	
Description	5000 Kelvin, 80 CRI
Delivered Lumens	24,361
Watts	191.5
Efficacy	127
IES Type	Type IV - Short
BUG Rating	B3-U0-G3

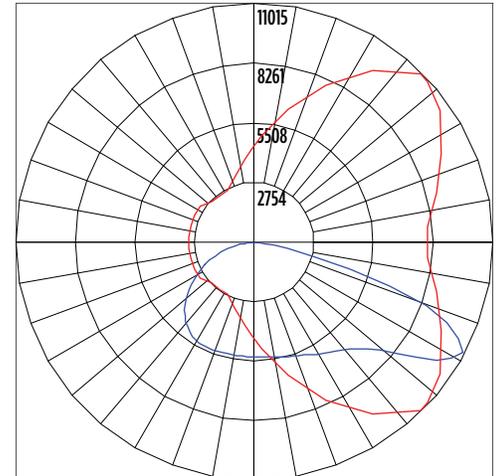
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
Low (0-30°)	4,368.4	17.9%
Medium (30-60°)	12,592.5	51.7%
High (60-80°)	6,960.6	28.6%
Very High (80-90°)	439.5	1.8%
Uplight (90-180°)	0	0.0%
Total Flux	24,361.0	100%

ISO Footcandle



15' Mounting Height / 15' Grid Spacing
 5 FC 2 FC 1 FC 0.5 FC

Polar Curve



Vertical Plane Horizontal Cone

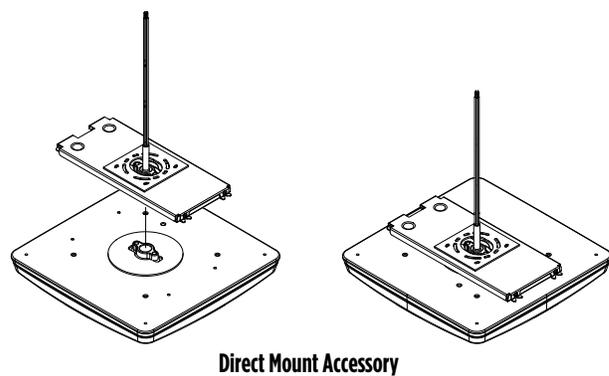
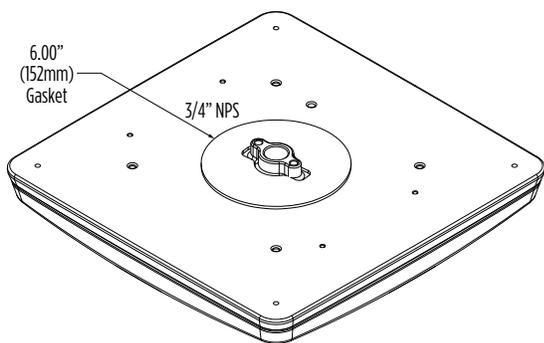
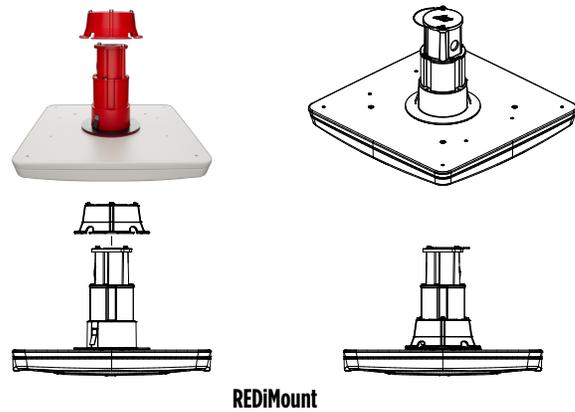
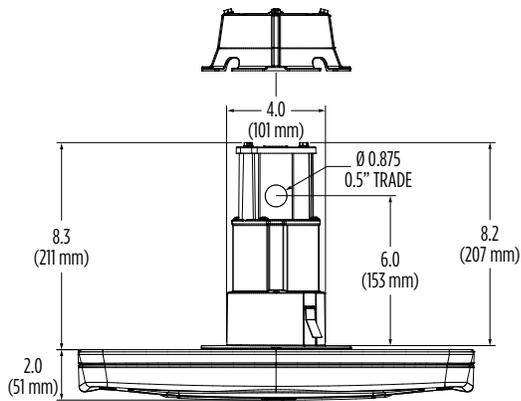
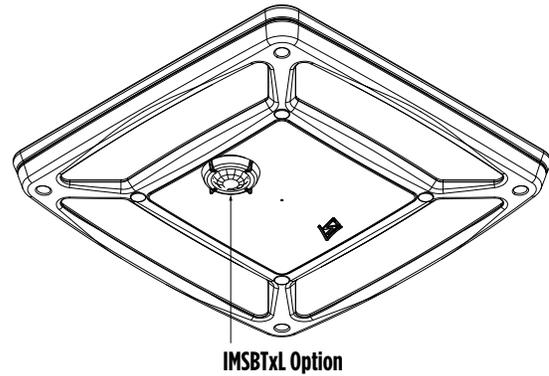
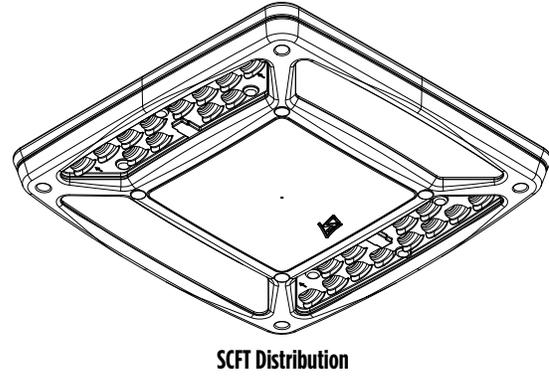
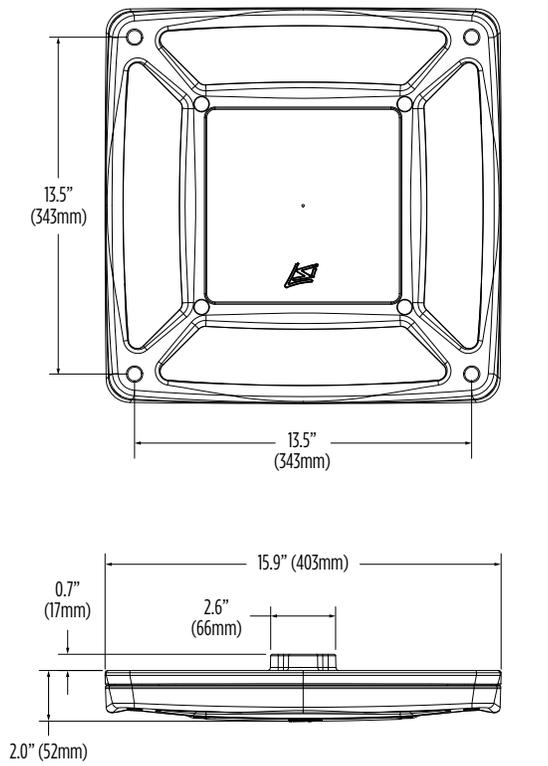
Scottsdale Vertex™ (SCV) Petroleum Canopy Light

Type: _____

 Have questions? Call us at (800) 436-7800

PRODUCT DIMENSIONS

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CONTROLS

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Integral Bluetooth™ Motion and Photocell Sensor (IMSBT1L, IMSBT2L)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is rated for cold and wet locations (-30° C to 70° C). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

[Click here to learn more details about IMSBTxL](#)

AirLink Blue (ALBC, ALBCS1, ALBCS2)

Wireless Bluetooth Mesh Lighting Control System that provides energy savings, code compliance and enhanced safety/security. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into luminaires.

[Click here to learn more details about AirLink Blue](#)

RETROFIT KITS

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LSI Industries offers a full line of Retrofit Kits for existing Encore, Richmond, 2x2 Universal and many more older canopy luminaires.

[Click here to learn more details on all our Retrofit Kits](#)

*QuikTrip Store 4452
Lighting Cut Sheets
Building Canopy Lights*



Catalog #: _____ Project: _____

Prepared By: _____ Date: _____ Type: _____

XSPS

LED Soffit Light



OVERVIEW	
Lumen Package	4000 - 8000
Wattage Range	43 -59
Efficacy Range (LPW)	96 -104
Weight lbs (kg)	7.6 (3.5)

QUICK LINKS

[Ordering Guide](#)
[Performance](#)
[Photometrics](#)
[Dimensions](#)

FEATURES & SPECIFICATIONS

Construction

- Housing is die-formed aluminum with diffuse acrylic lens providing a water-resistant seal. Enclosure contains factory prewired driver and optical unit containing LEDs.
- Recess mount into an enclosed soffit with screws through the mounting frame. 8" clearance required for ease of installation.
- Finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard color is gloss white.
- Shipping weight: 7.6 lbs in carton.
- Suitable for wet locations.

Optical System

- Symmetric distribution with excellent uniformity and a BUG rating of B2-UO-G1. Diffuse lens is standard to minimizing visibility of LEDs.
- Select high-brightness LEDs.
- Available in 5000K, 4000K and 3000K
- Color temperatures per ANSI C78.377.
- Minimum CRI of 80.

Electrical

- High-performance factory programmable driver features over-voltage, under voltage, short-circuit and over temperature protection with integral surge protection that meets IEEE C62.41.2 and ANSI C82.77. -5 Location Category C Low standards.
- 0-10 volt dimming (10% - 100%) standard.
- 120-347VAC 50/60Hz
- Thermal protector standard on 5000-8000 lumen versions.
- L80 Calculated Life: >100k Hours (See Lumen Maintenance chart)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to 40°C (-40°F to 104°F) for HO and VHO. -40°C to 45°C (-40°F to 113°F) for SS. -40°C to 35°C (-40°F to 95°F) for SHO .
- Power factor: >0.90
- Input power stays constant over life.
- High-efficacy LEDs with integrated circuit board mount to the housing to maximize heat dissipation and promote long life.
- Driver components are fully encased in potting material for moisture resistance. Driver complies with FCC standards.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to <https://www.lsicorp.com/resources/terms-conditions-warranty/> for more information.

Listings

- Listed to UL 1598 and UL 8750
- Suitable For Damp Locations
- Meets Buy American Act requirements.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- IDA compliant with 3000K or lower color temperature.





XSPS LED Soffit Light

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ORDERING GUIDE

TYPICAL ORDER EXAMPLE: **XSPS S LED SS CW 120 GWT DFL**

Prefix	Distribution	Light Source	Drive Current	Color Temperature	Input Voltage	Finish	Lens	Options
XSPS - LED Soffit	S - Symmetric	LED	SS - 4,000 Lumens HO - 5,000 Lumens VHO - 6,000 Lumens SHO - 8,000 Lumens	CW - 5000K 80 CRI NW - 4000K 80 CRI WW - 3000K 80 CRI	120 - 120V 208 - 208V 240 - 240V 277 - 277V 347 - 347V	GWT - Gloss White	DFL - Diffused Acrylic Lens	CMT - Channel Bar Mounting Kit BB - Emergency Battery Pack ¹

1 - Emergency Battery Pack only available on the SS - 4000 lumen version (120, 208, 240 & 277V versions).

PERFORMANCE

DELIVERED LUMENS													
Lumen Package	Distribution	Lens Type	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
				Delivered Lumens	Efficacy	Bug Rating	Delivered Lumens	Efficacy	Bug Rating	Delivered Lumens	Efficacy	Bug Rating	
SS	S	DFL	80	3816	123	B2-U0-G1	4022	129	B2-U0-G1	3966	128	B2-U0-G1	31
HO	S	DFL	80	4756	120	B2-U0-G1	5011	127	B2-U0-G1	4941	125	B2-U0-G1	40
VHO	S	DFL	80	5733	118	B2-U0-G1	6041	124	B2-U0-G1	5957	122	B2-U0-G1	49
SHO	S	DFL	80	7559	113	B3-U0-G1	7965	119	B3-U0-G1	7853	118	B3-U0-G1	67

LEDs are frequently updated therefore values are nominal.

Electrical Data (Amps)*						
Lumen Package	Wattage	120V	208V	240V	277V	347V
SS	31	0.26	0.15	0.13	0.11	0.09
HO	40	0.33	0.19	0.16	0.14	0.11
VHO	49	0.41	0.23	0.2	0.18	0.14
SHO	67	0.56	0.32	0.28	0.24	0.19

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

RECOMMENDED LUMEN MAINTENANCE					
Ambient Temp C	Initial ¹	25K hrs. ¹	50K hrs. ¹	75K hrs. ²	100K hrs. ²
25 C	100%	95%	91%	86%	82%

1 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.

2 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.





XSPS LED Soffit Light

PHOTOMETRICS

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Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

For complete specifications and IES files, see website.

XSPS S LED HO NW DFL

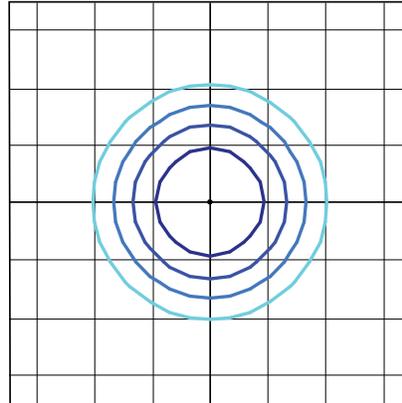
Luminaire Data

Type S Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	5,011
Watts	39.5
Efficacy	127
IES Type	Type VS - Very Short
BUG Rating	B2-U0-G1

Zonal Lumen Summary

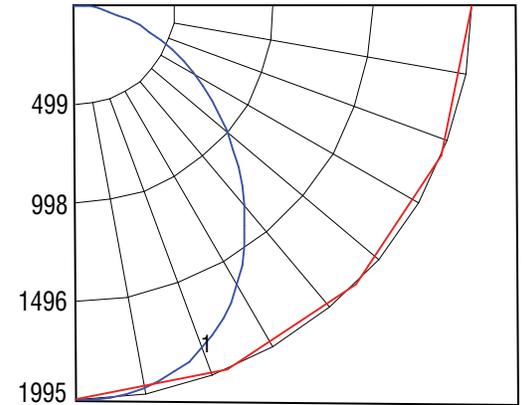
Zone	Lumens	%Luminaire
Low (0-30°)	1536	31%
Medium (30-60°)	2565	51%
High (60-80°)	826	16%
Very High (80-90°)	84	2%
Uplight (90-180°)	0	0%
Total Flux	5011	100%

ISO FOOTCANDLE PLOT



10' Mounting Height/10' Grid Spacing
 ■ 5 FC ■ 2 FC ■ 1 FC ■ 0.5 FC

POLAR CURVE

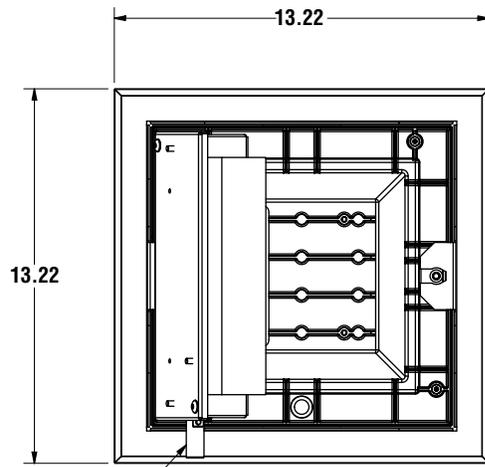




XSPS LED Soffit Light

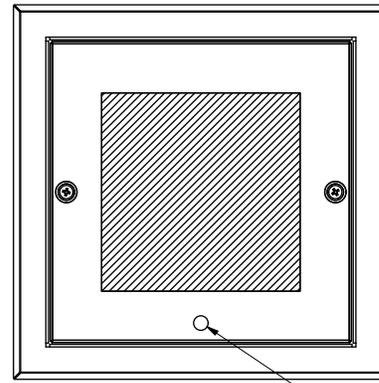
PRODUCT DIMENSIONS

[Back to Quick Links](#)



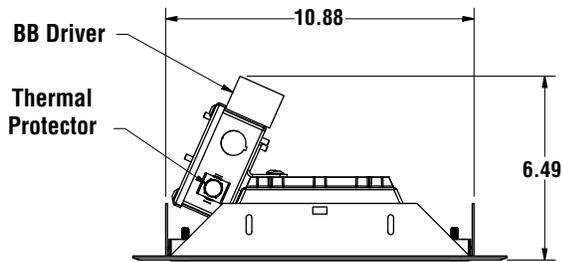
Thermal Protector

TOP VIEW



BOTTOM VIEW

BB Test Button



BB Driver

Thermal Protector

SIDE VIEW

Note:

1. 8" of clearance is required in the soffit for luminaire installation.
2. Emergency Battery pack (BB) only available on 4000 lumen version. Thermal protector only required on 5000, 6000 & 8000 lumen versions. 11" square hole required to install XSPS.



*QuikTrip Store 4452
Lighting Cut Sheets
Building Wall Sconce*



Catalog #: _____ Project: _____

Prepared By: _____ Date: _____ Type: _____

Mirada Medium Wall Sconce (XWM)

Outdoor Wall Sconce

**IK08**

OVERVIEW	
Lumen Range	3,000 - 21,000
Wattage Range	23 - 175
Efficacy Range (LPW)	125 - 158
Weight lbs(kg)	30 (13.6)

QUICK LINKS

[Ordering Guide](#)[Performance](#)[Photometrics](#)[Dimensions](#)

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Hinged die-cast aluminum wiring access door located underneath.
- Galvanized-steel universal wall mount bracket comes standard with hinging mechanism to easily access the junction box wire connections without removing the luminaire.
- Optional pole-mounting bracket (XPMa) permits mounting to standard poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 30 lbs in carton.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP65 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in Types 2, 3, and Forward Throw (FT) distributions.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.

Electrical

- High-performance programmable driver features over-voltage, under-voltage, short-

circuit and over temperature protection. Custom lumen and wattage packages available.

- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours
- Total harmonic distortion: <20%
- 3L to 12L operating temperature: -40°C to +50°C (-40°F to +122°F)
- 15L operating temperature: -40°C to +45°C (-40°F to +113°F).
- 18L operating temperature: -40°C to +40°C (-40°F to +104°F).
- 21L operating temperature: -40°C to +35°C (-40°F to +95°F).
- Power factor: >.90
- Input power stays constant over life.
- Optional 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed via hinged door.
- Optional integral emergency battery pack provides 90-minutes of constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. The fixture delivers 1500 lumens during emergency mode.

Controls

- Integral passive infrared Bluetooth™ motion and photocell sensor options. Fixtures operate independently and can be commissioned via an iOS or Android configuration app. Updates and modifications to the control strategy are

easily implemented via an intuitive app.

- LSI's AirLink™ Blue lighting control system is a simple feature rich wireless Bluetooth mesh network. The integrated fixture sensor module provides wireless control of grouped fixtures based on motion sensors, daylight or a fully customizable schedule.

Installation

- Universal wall mounting plate easily mounts directly to 4" octagonal or square junction box.
- 2 fasteners secure the hinged door underneath the housing and provide quick & easy access to the electrical compartment for installing/servicing.
- Optional terminal block accepts up to 12 ga wire.

Warranty

- LSI LED Fixtures carry a 5-year warranty.
- 1 Year warranty on Battery Back-up option.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K or lower color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations.
- IP65 rated luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications when pole mounted (using optional XPMa bracket) or wall mounted.
- IK08 rated luminaire per IEC 66262 mechanical impact code
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.



Mirada Wall Sconce (XWM)

ORDERING GUIDE

[Back to Quick Links](#)TYPICAL ORDER EXAMPLE: **XWM 2 LED 03L 30 UE BRZ ALSC**

Family	Distribution	LED Technology	Lumen Package	Color Temperature	Voltage
XWM - Mirada Medium Wall Sconce	2 - Type 2 3 - Type 3 FT - Type 4 Forward Throw	LED	3L - 3,000 lms 4L - 4,000 lms 6L - 6,000 lms 8L - 8,000 lms 12L - 12,000 lms 15L - 15,000 lms 18L - 18,000 lms 21L - 21,000 lms Custom Lumen Packages ⁶	30 - 3000K 40 - 4000K 50 - 5000K AMB - Phosphor Converted Amber ¹	UE - Universal Voltage (120-277V) HV - High Voltage (347-480V)

Finish	Controls (Choose One)	Options
BLK - Black BRZ - Dark Bronze GMG - Gun Metal Gray GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus SVG - Satin Verde Green WHT - White	Wireless Controls ALSC - AirLink Synapse Control System ALSCS01 - AirLink Synapse Control System with 8-12' Motion Sensor ALSCS02 - AirLink Synapse Control System with 12-20' Motion Sensor ALBSC1 - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height) ALBSC2 - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' mounting height) Standalone Controls DIM - 0-10v Dimming Leads extended to housing exterior IMSBT1 - Integral Bluetooth™ Motion and Photocell Sensor max 8-24' mounting height ⁴ IMSBT2 - Integral Bluetooth Motion and Photocell Sensor max 25-40' mounting height ⁴ Button Type Photocells PC120 - 120V PC1208-277 - 208 -277V PC347 - 347V	BB - Battery Back-up (0°C) ² CWBB - Cold Weather Battery Backup (-20°C) ² XPMA - Pole Mounting Bracket SPI - 10kV Surge Protection TB - Terminal Block

ACCESSORY ORDERING INFORMATION⁷

Description	Order Number	Description	Order Number
XWM Surface Wiring Box	356915CLR	FK347 - Single Fusing	FK347 ⁵
10' Linear Bird Spike Kit (2' Recommended per Luminaire)	751632	DFK - Double Fusing	DFK208 ⁵
FK120 - Single Fusing	FK120 ⁵	DFK - Double Fusing (240V)	DFK240 ⁵
FK277 - Single Fusing	FK277 ⁵	DFK - Double Fusing (480V)	DFK480 ⁵

- Only available in 6L Lumen Package. Consult factory for lead time and availability.
- Not available in HV.
- Consult Factory for Site Layout.
- IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.
- Fusing must be located in a hand hole for pole or in the junction box.
- Custom lumen and wattage packages available consult factory. Values are within industry standard tolerances but not DLC listed.
- Accessories are shipped separately and field installed.



Mirada Wall Sconce (XWM)

PERFORMANCE

[Back to Quick Links](#)

DELIVERED LUMENS*												
Lumen Package	Distribution	CRI	3000K			4000K			5000K			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
03L	2	70	3178	138	B1-U0-G1	3368	146	B1-U0-G1	3313	143	B1-U0-G1	23
	3	70	3224	140	B1-U0-G1	3416	148	B1-U0-G1	3361	145	B1-U0-G1	
	FT	70	3160	137	B1-U0-G1	3349	145	B1-U0-G1	3294	143	B1-U0-G1	
04L	2	70	4230	139	B1-U0-G1	4483	147	B1-U0-G1	4410	145	B1-U0-G1	30
	3	70	4291	141	B1-U0-G1	4547	150	B1-U0-G1	4473	147	B1-U0-G1	
	FT	70	4206	138	B1-U0-G1	4458	147	B1-U0-G1	4385	144	B1-U0-G1	
06L	2	70	6326	134	B2-U0-G1	6704	142	B2-U0-G2	6595	140	B2-U0-G2	47
	3	70	6417	136	B1-U0-G2	6800	144	B1-U0-G2	6689	142	B1-U0-G2	
	FT	70	6290	134	B2-U0-G2	6666	142	B2-U0-G2	6557	139	B2-U0-G2	
08L	2	70	8166	128	B2-U0-G2	8654	135	B2-U0-G2	8513	133	B2-U0-G2	64
	3	70	8283	129	B2-U0-G2	8778	137	B2-U0-G2	8635	134	B2-U0-G2	
	FT	70	8120	126	B2-U0-G2	8605	134	B2-U0-G2	8465	132	B2-U0-G2	
12L	2	70	11902	146	B3-U0-G2	12358	151	B3-U0-G2	12927	158	B3-U0-G2	82
	3	70	11834	145	B2-U0-G2	12287	150	B2-U0-G2	12853	157	B2-U0-G2	
	FT	70	11737	143	B2-U0-G2	12186	149	B2-U0-G2	12747	156	B2-U0-G2	
15L	2	70	14662	140	B3-U0-G3	15223	145	B3-U0-G3	15924	152	B3-U0-G3	105
	3	70	14603	139	B2-U0-G2	15162	145	B2-U0-G3	15860	151	B2-U0-G3	
	FT	70	14502	139	B2-U0-G3	15057	144	B2-U0-G3	15750	150	B2-U0-G3	
18L	2	70	17403	134	B3-U0-G3	18069	139	B3-U0-G3	18901	145	B3-U0-G3	130
	3	70	17438	134	B3-U0-G3	18106	139	B3-U0-G3	18940	146	B3-U0-G3	
	FT	70	17259	133	B3-U0-G3	17920	138	B3-U0-G3	18745	144	B3-U0-G3	
21L	2	70	20380	127	B3-U0-G3	21160	132	B3-U0-G3	22134	138	B4-U0-G3	161
	3	70	20375	125	B3-U0-G3	21155	131	B3-U0-G3	22129	131	B3-U0-G3	
	FT	70	20215	126	B3-U0-G3	20989	130	B3-U0-G3	21955	136	B3-U0-G3	

*LEDs are frequently updated therefore values are nominal.

ELECTRICAL DATA*							
Lumen Package	120V	208V	240V	277V	347V	480V	
03L	0.19	0.11	0.10	0.08	0.07	0.05	
04L	0.25	0.15	0.13	0.11	0.09	0.06	
06L	0.39	0.23	0.20	0.17	0.14	0.10	
08L	0.54	0.31	0.27	0.23	0.19	0.13	
12L	0.68	0.39	0.34	0.30	0.24	0.17	
15L	0.87	0.50	0.44	0.38	0.30	0.22	
18L	1.08	0.63	0.54	0.47	0.37	0.27	
21L	1.34	0.77	0.67	0.58	0.46	0.34	

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

DELIVERED LUMENS*					
Lumen Package	Distribution	Amber			Wattage
		Delivered Lumens	Efficacy	BUG Rating	
6L	2	3325	76	B1-U0-G1	43.5
	3	3385	78	B1-U0-G1	
	FT	3343	77	B1-U0-G1	

RECOMMENDED LUMEN MAINTENANCE (3L-8L) ¹					
Ambient Temperature C	Initial ²	25K hrs. ²	50K hrs. ³	75K hrs. ³	100K hrs. ³
0 C - 50 C	100%	98%	95%	93%	90%

RECOMMENDED LUMEN MAINTENANCE (12L-21L) ¹					
Ambient Temperature C	Initial ²	25K hrs. ²	50K hrs. ³	75K hrs. ³	100K hrs. ³
0 - 35 C	99%	97%	95%	93%	91%

1 - Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.

3 - Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing times the IESNA LM-80-08 total test duration for the device under testing



Mirada Wall Sconce (XWM)

[Back to Quick Links](#)

PHOTOMETRICS

All published luminaire photometric testing performed to IESNA LM-79 standards. ISO footcandle plots below demonstrate the Mirada Wall Sconce (XWM) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.

XWM-2-LED-6L-40

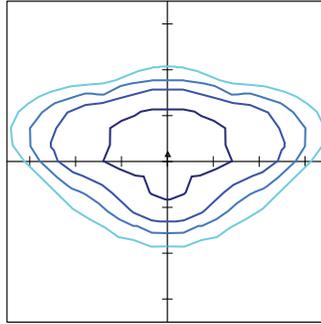
LUMINAIRE DATA

Type 2 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,025
Watts	44.7
Efficacy	135
IES Type	Type III - Medium
BUG Rating	B2-U0-G2

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	807.1	13.4%
Medium (30-60)°	3301.0	54.8%
High (60-80)°	1847.4	30.7%
Very High (80-90)°	69.2	1.1%
Uplight (90-180)°	0.0	0.0%
Total Flux	6024.7	100%

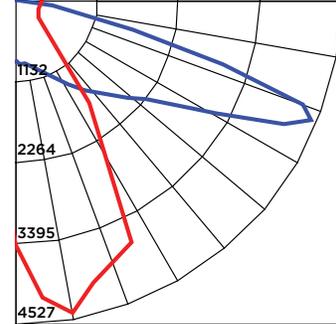
ISO FOOTCANDLE PLOT



15' Mounting Height / 10' Grid Spacing



POLAR CURVE



XWM-3-LED-6L-40

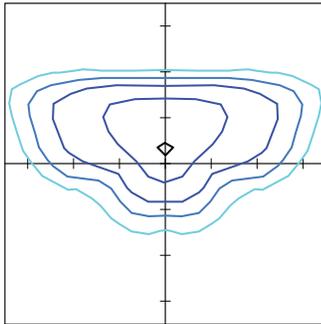
LUMINAIRE DATA

Type 3 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,133
Watts	44.7
Efficacy	137
IES Type	Type III - Medium
BUG Rating	B1-U0-G2

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	567.4	9.3%
Medium (30-60)°	3106.3	50.6%
High (60-80)°	2368.8	38.6%
Very High (80-90)°	90.7	1.5%
Uplight (90-180)°	0.0	0.0%
Total Flux	6133.2	100%

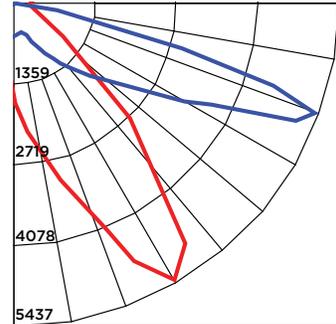
ISO FOOTCANDLE PLOT



10' Mounting Height / 10' Grid Spacing



POLAR CURVE



XWM-FT-LED-6L-40

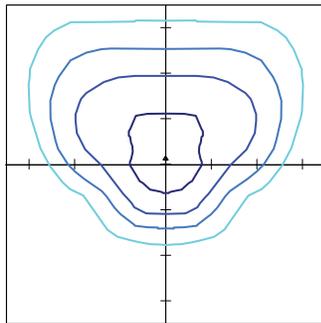
LUMINAIRE DATA

Type FT Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,058
Watts	44.7
Efficacy	136
IES Type	Type IV - Short
BUG Rating	B1-U0-G2

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	779.0	12.9%
Medium (30-60)°	2584.4	42.7%
High (60-80)°	2523.2	41.7%
Very High (80-90)°	170.8	2.8%
Uplight (90-180)°	0.0	0.0%
Total Flux	6057.4	100.0%

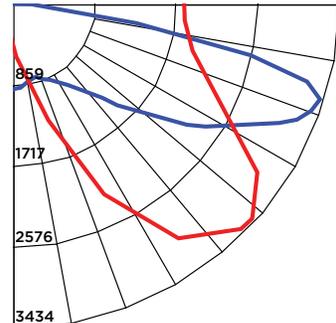
ISO FOOTCANDLE PLOT



10' Mounting Height / 10' Grid Spacing



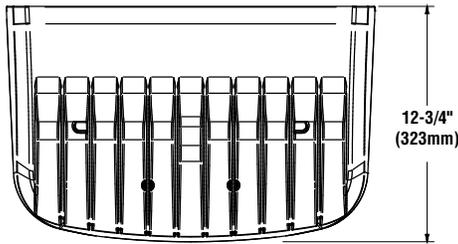
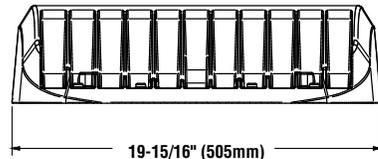
POLAR CURVE



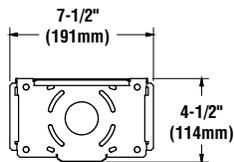


Mirada Wall Sconce (XWM)

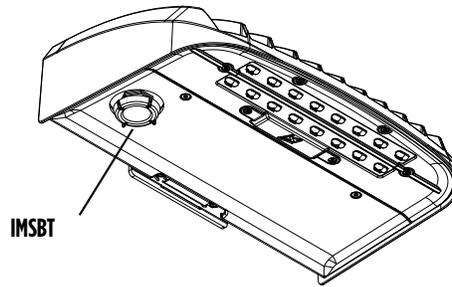
PRODUCT DIMENSIONS

[Back to Quick Links](#)12-3/4"
(323mm)

19-15/16" (505mm)

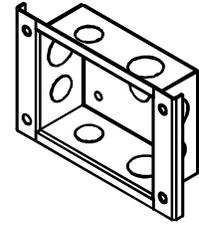
7-1/2"
(191mm)4-1/2"
(114mm)5-5/16"
(134mm)

Luminaire Shown with IMSBT



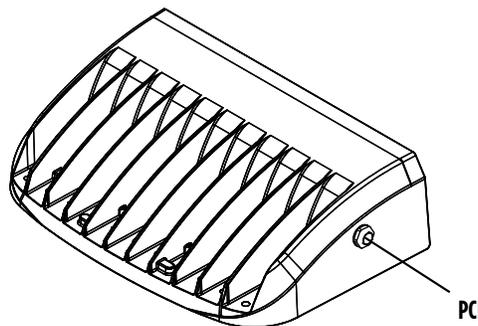
IMSBT

Surface Wiring Box



Wet location rated surface wiring box features 1/2" and 3/4" knockouts for surface conduit

Luminaire Shown with PCI



PCI

CONTROLS

AirLink Wireless Lighting Controller

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect a sensor into the outdoor AirLink wireless lighting system. The wireless integrated controller is compatible with this fixture.

[Click here to learn more about AirLink.](#)

Integral Bluetooth™ Motion and Photocell Sensor (IMSBT)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is rated for cold and wet locations (-30° C to 70° C). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

[Click here to learn more about IMSBT.](#)

AirLink Blue

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

[Click here to learn more about AirLink Blue.](#)

*QuikTrip Store 4452
Lighting Cut Sheets
Light Poles*



Steel Poles

Square Straight



IN THE USA



QUICK LINKS

[Ordering Guide](#)[Configurations](#)[Dimensions](#)[EPA](#)

FEATURES & SPECIFICATIONS

Pole Shaft

- Straight poles are 4", 5", or 6" square.
- Pole shaft is electro-welded ASTM-A500 Grade C steel tubing with a minimum yield strength of 50,000 psi.
- On Tenon Mount steel poles, tenon is 2-3/8" O.D. high-strength pipe. Tenon is 4-3/4" in length.

Hand-Hole

- Standard hand-hole location is 12" above pole base.
- Poles 22' and above have a 3" x 6" reinforced hand-hole. Shorter poles have a 2" x 4" non-reinforced hand-hole.

Base

- Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 36,000 psi.
- Two-piece square base cover is optional.

Anchor Bolts

- Poles are furnished with anchor bolts featuring zinc-plated double nuts and washers. Galvanized anchor bolts are optional.
- Anchor Bolts conform to ASTM F 1554-07a Grade 55 with a minimum yield strength of 55,000 PSI.

Ground Lug

- Ground lug is standard.

Duplex Receptacle

- Weatherproof duplex receptacle is optional.

Ground Fault Circuit Interrupter

- Self-testing Ground fault circuit interrupter is optional.

Finishes

- Every pole is provided with the DuraGrip Protection System and a 5-year limited warranty:
- When the top-of-the line DuraGrip Plus Protection System is selected, in addition to the DuraGrip Protection System, a non-porous, automotive-grade corrosion coating is applied to the lower portion of the pole interior sealing and further protecting it from corrosion. This option extends the limited warranty to 7 years.

Determining The Luminaire/Pole Combination For Your Application:

- Select luminaire from luminaire ordering information.
- Select bracket configuration if required
- Determine EPA value from luminaire/bracket EPA chart

- Select Pole Height

- Select MPH to match wind speed in the application area (See windspeed maps).
- Confirm pole EPA equal to or exceeding value of luminaire/bracket EPA
- Consult factory for special wind load requirements and banner brackets.

Pole Vibration Damper

- A pole vibration damper is recommended in open terrain areas of the country where low steady state winds are common.
- Non-tapered poles and lightly loaded poles are more susceptible to destructive vibration if a damper is not installed.

Listings

- UL Listed
- BAA/TAA Compliant



Steel Poles Square Straight

Type : _____

 **Have questions?** Call us at (800) 436-7800

ORDERING GUIDE

[Back to Quick Links](#)

TYPICAL ORDER EXAMPLE: 4SQ B3 S11G 24 S PLP DGP						
Pole Series	Mounting Method	Material	Height ²	Mounting Configuration	Pole Finish	Options
4SQ - 4" x 4" Square Straight Pole (New Build)	Bolt-On Mount ¹ - See pole selection guide for patterns and fixture matches	S11G - 11 Ga. Steel (4SQ/4SQU and 5SQ/5SQU Only)	8'	S - Single/Parallel	BRZ - Bronze	GA - Galvanized Anchor Bolts
5SQ - 5" x 5" Square Straight Pole (New Build)			10'			
6SQ - 6" x 6" Square Straight Pole (New Build)	B5 - 5" Traditional Drilling Pattern	S07G - 07 Ga. Steel	12'	D180 - Double	BLK - Black	SF - Single Flood ³
4SQU - 4" x 4" Square Straight Pole (Retrofit)			13'			
5SQU - 5" x 5" Square Straight Pole (Retrofit)	B3 - 3" Reduced Drilling Pattern	S07G - 07 Ga. Steel	14'	D90 - Double	PLP - Platinum Plus	DF - Double Flood ³
6SQU - 6" x 6" Square Straight Pole (Retrofit)			15'			
	B2 - 2" Reduced Drilling Pattern	S07G - 07 Ga. Steel	16'	DN90 - Double	WHT - White	DGP - DuraGrip [®] Plus
			17'			
	T - Tenon Mount - See pole selection guide for tenon and fixture/bracket matches	S07G - 07 Ga. Steel	17'6"	T90 - Triple	SVG - Satin Verde Green	LAB - Less Anchor Bolts
			18'			
			20'			
			22'			
			22'6"			
			23'			
			24'			
			25'			
			26'			
			27'			
	I - No Mounting Holes ⁴	S07G - 07 Ga. Steel	28'	TN120 - Triple	GPT - Graphite	CRXX - Conduit Raceway ⁴
			30'			
			32'			
			35'			
			39'			
				Q90 - Quad	MSV - Metallic Silver	
				QN90 - Quad		
				N - Tenon Mount (Standard Tenon size is 2-3/8" O.D.) ⁸	BZA - Alternate Bronze	
				(Blank) - Use with I for Mounting Method		



Need more information?
[Click here for our glossary.](#)

Have additional questions?
Call us at (800) 436-7800



ACCESSORY ORDERING INFORMATION

Part Number	Description
122559CLR	4BC - 4" Square Base Cover
122561CLR	5BC - 5" Square Base Cover
122563CLR	6BC - 6" Square Base Cover
132488CLR	5BC - 5' Square Universal Base Cover
131252CLR	6BC - 6' Square Universal Base Cover
122566CLR	ER2 - Weatherproof Duplex Receptacle
122567CLR	GFI - Ground Fault Circuit Interrupter
132336	MH5 - mounting Hole Plugs for use with 5" traditional drill pattern (3 set of 3 plugs)
681126	MH3 - mounting Hole Plugs for use with 3" reduced drill pattern (3 set of 3 plugs)
725841	MH2 - Mounting Hole Plugs for use with 2" reduced drill pattern (3 sets of 3 plugs)
172539	Vibration Damper - 4" Square Pole (bolt-on mount only)
172538	Vibration Damper - 5" Square Pole (bolt-on mount only)
178361	Vibration Damper - 6" Square Pole (bolt-on mount only)

ANCHOR BOLT KIT ORDERING INFORMATION

Part Number	Description
AB KIT 122584	4SQ S11G/S07G Anchor Bolts (Steel Plated)
AB KIT 122609	4SQ S11G/S07G Anchor Bolts (Galvanized)
AB KIT 1225850	5SQ S11G Anchor Bolts (Steel Plated)
AB KIT 122610	5SQ S11G Anchor Bolts (Galvanized)
AB KIT 122586	5SQ S07G Anchor Bolts (Steel Plated)
AB KIT 122611	5SQ S07G Anchor Bolts (Galvanized)
AB KIT 122612	6SQ S07G Anchor Bolts (Galvanized)

1 - See Area Light Brackets - 3" Reduced Drill Pattern and Area Light Brackets - 5" Traditional Drill Pattern Spec Sheets.

2 - Pole heights will have +/- 1/2" tolerance.

3 - See Flood Lighting Brackets section for choice of FBO brackets.

4 - CR selection must indicate required height and side of pole mounting location. Mounting template required at time of order.

Steel Poles Square Straight

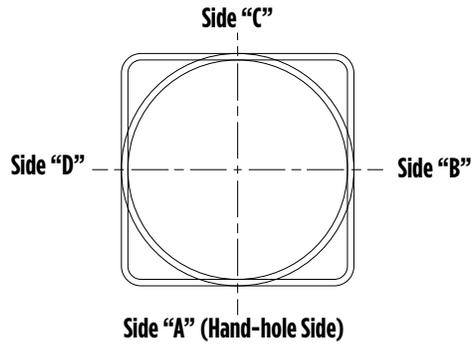
Type : _____

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DRILLING LOCATIONS

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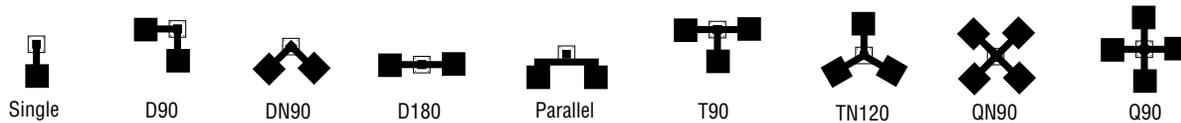
Sides	A	B	C	D
Hand-hole	X			
Single	X			
D180		X		X
D90	X			X
DN90 ¹				
T90	X	X		X
TN120 ²				
Q90	X	X	X	X
QN90 ³				
Single FBO	X			
Double FBO		X		X



- 1 - Two locations will be 45° to the left and right of Side A.
- 2 - Other two locations will be 120° to the left and right of Side A.
- 3 - Two locations will be 45° to the left and right of Side A and two locations will be 135° to the left and right of Side A.

Consult factory for custom variations. Standard SF and DF pole preparations are located 3/4 of the height of the pole from the base, except on 20' poles. Maximum height for SF and DF pole preparations on 20' poles is 13' from the base.

FIXTURE CONFIGURATIONS



Steel Poles Square Straight

Type : _____

 Have questions? Call us at (800) 436-7800

BOLT CIRCLE

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STANDARD BASEPLATE

4" (102mm) square
10-1/8" (257mm) sq.



11" (279mm) Dia. Bolt Circle

5" (127mm) square
10-1/8" (257mm) sq.



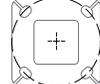
11" (279mm) Dia. Bolt Circle

5" (127mm) square
10-1/8" (257mm) sq.



11" (279mm) Dia. Bolt Circle

6" (152mm) square
12" (305mm) sq.



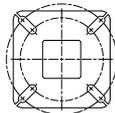
12" (305mm) Dia. Bolt Circle

Bolt Circle Designator	B	C	D	J
Bolt Circle	8"-11" Slotted (203mm-279mm)	9"-11" Slotted (229mm-279mm)	9"-11" Slotted (229mm-279mm)	12" Slotted (305mm)
Anchor Bolt Size	3/4" x 24" (19mm x 609mm)	3/4" x 24" (19mm x 609mm)	1" x 30" (25mm x 762mm)	1" x 30" (25mm x 762mm)
Anchor Bolt Projection	3-1/4" (83mm)	3-1/4" (83mm)	4" (102mm)	4" (102mm)
Base Plate Opening for Wireway Entry	3-5/8" (92mm)	4-3/4" (121mm)	4-5/8" (117mm)	5-5/8" (143mm)
Base Plate Dimensions	10-1/8" sq. x 3/4" thk. (257mm x 19mm)	10-1/8" sq. x 3/4" thk. (257mm x 19mm)	10-1/8" sq. x 1" thk. (257mm x 25mm)	12" sq. x 1-1/8" thk. (305mm x 29mm)
Pole Gauge	11	11	7	7

Note: Base plate illustrations may change without notice. Do not use for setting anchor bolts. Consult factory for the appropriate anchor bolt template.

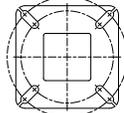
UNIVERSAL BASEPLATE

4" (102mm) square
10.5" (267mm) sq.



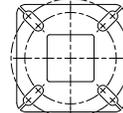
4SQ

5" (127mm) square
11.125" (283mm) sq.



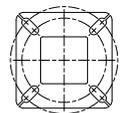
5SQ

5" (127mm) square
11.75" (298mm) sq.



5SQ

6" (152mm) square
12-1/2" (318mm) sq.



14" (356mm) Dia. Bolt Circle

Bolt Circle Designator	E	F	G	H
Bolt Circle	9"-12" Slotted	10"-13" Slotted	10"-13" Slotted	11"-14" Slotted (279mm-356mm)
Anchor Bolt Size	3/4" x 24" (19mm x 609 mm)	3/4" x 24" (19mm x 609 mm)	1" x 30" (25mm x 762mm)	1" x 30" (25mm x 762mm)
Anchor Bolt Projection	3-1/4" (83 mm)	3-1/4" (83 mm)	4" (102 mm)	4" (102mm)
Base Plate Opening for Wireway Entry	3-5/8" (92mm)	4-3/4" (121mm)	5-1/8" (130 mm)	5-5/8" (143mm)
Base Plate Dimensions	10-1/2" sq. x 3/4" thk. (267 mm x 19 mm)	11-1/8" sq. x 3/4" thk. (283 mm x 19 mm)	11-3/4" sq. x 1" thk. (298 mm x 25 mm)	12 1/2" sq. x 1 1/8" thk. (318mm x 29mm)
Pole Gauge	11	11	7	7

Note: Base plate illustrations may change without notice. Do not use for setting anchor bolts. Consult factory for the appropriate anchor bolt template.

1- Full Galvanized option is 1" x 30" straight headed anchor bolt. Contact factory for questions

Steel Poles Square Straight

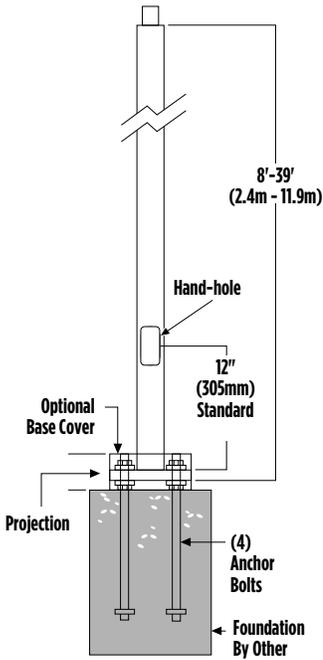
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PRODUCT DIMENSIONS

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SQT -
N= 2-3/8" (60mm) O.D. x 4-3/4" (121mm) Tenon



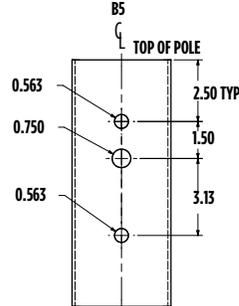
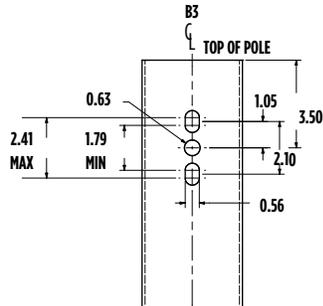
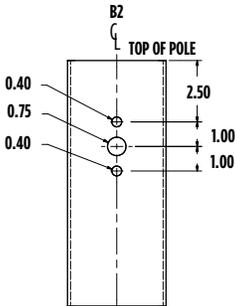
SF -
Single Flood
Pole Preparation



SHIPPING WEIGHTS

4" (102mm) sq. 11 Ga. is approximately	7.50 lbs./ft.
4" (102mm) sq. 07 Ga. is approximately	10.00 lbs./ft.
5" (127mm) sq. 11 Ga. is approximately	9.00 lbs./ft.
5" (127mm) sq. 07 Ga. is approximately	12.50 lbs./ft.
6" (152mm) sq. 07 Ga. is approximately	15.40 lbs./ft.
Anchor Bolts (3/4" x 24") (19mm x 609mm)	15 lbs. (7kg)/set
Anchor Bolts (1" x 30") (25mm x 762mm)	30 lbs. (14kg)/set

Bolt-On Mount 2-Bolt Pattern



Steel Poles Square Straight

Type : _____

 Have questions? Call us at (800) 436-7800

WIND SPEED

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EPA Information

All LSI Industries' poles are guaranteed to meet the EPA requirements listed. LSI Industries is not responsible if a pole order has a lower EPA rating than the indicated wind-loading zone where the pole will be located.

CAUTION: This guarantee does not apply if the pole/bracket/fixture combination is used to support any other items such as flags, pennants, or signs, which would add stress to the pole. LSI Industries cannot accept responsibility for harm or damage caused in these situations.

NOTE: Pole calculations include a 1.3 gust factor over steady wind velocity. Example: poles designed to withstand 80 MPH steady wind will withstand gusts to 104 MPH. EPAs are for locations 100 miles away from hurricane ocean lines. Consult LSI for other areas. Note: Hurricane ocean lines are the Atlantic and Gulf of Mexico coastal areas. For applications in Florida or Canada, consult factory.

POLE ¹	Mtg. Height Length (ft)	Wall Thick (ga)	BOLT CIRCLE			EPA								
			Designator	Dia. (in)	Anchor bolt Dia {in}	110 MPH	115 MPH	120 MPH	130 MPH	140 MPH	150 MPH	160 MPH	170 MPH	180 MPH
4" x 11-ga x 12'	12	11	B	8" - 11"	0.75	13.9	12.5	11.3	9.2	7.6	6.3	5.2	4.3	3.6
4" x 11-ga x 14'	14	11	B	8" - 11"	0.75	10.7	9.5	8.5	6.8	5.4	4.4	3.5	2.7	2.1
4" x 11-ga x 16'	16	11	B	8" - 11"	0.75	8.2	7.2	6.4	4.9	3.8	2.9	2.1	1.5	1.0
4" x 11-ga x 18'	18	11	B	8" - 11"	0.75	6.3	5.4	4.7	3.4	2.4	1.6	1.0	0.4	n/a
4" x 11-ga x 20'	20	11	B	8" - 11"	0.75	4.6	3.9	3.2	2.1	1.2	0.6	n/a	n/a	n/a
4" x 11-ga x 22'	22	11	B	8" - 11"	0.75	7.6	6.6	5.7	4.2	3.0	2.0	1.2	0.5	n/a
4" x 11-ga x 24'	24	11	B	8" - 11"	0.75	6.0	5.1	4.3	2.9	1.8	0.9	n/a	n/a	n/a
4" x 11-ga x 26'	26	11	B	8" - 11"	0.75	4.6	3.7	3.0	1.7	0.7	n/a	n/a	n/a	n/a
4" x 7-ga x 14'	14	7	B	8" - 11"	0.75	18.3	16.4	14.9	12.2	10.2	8.5	7.1	5.9	5.0
4" x 7-ga x 16'	16	7	B	8" - 11"	0.75	14.7	13.2	11.8	9.6	7.8	6.3	5.2	4.2	3.4
4" x 7-ga x 18'	18	7	B	8" - 11"	0.75	11.9	10.5	9.3	7.4	5.9	4.6	3.6	2.8	2.1
4" x 7-ga x 20'	20	7	B	8" - 11"	0.75	9.6	8.4	7.4	5.7	4.3	3.2	2.3	1.6	0.9
4" x 7-ga x 22'	22	7	B	8" - 11"	0.75	7.7	6.6	5.7	4.2	3.0	2.0	1.2	0.5	n/a
4" x 7-ga x 24'	24	7	B	8" - 11"	0.75	6.0	5.1	4.3	2.9	1.8	0.9	n/a	n/a	n/a
4" x 7-ga x 26'	26	7	B	8" - 11"	0.75	4.6	3.7	3.0	1.7	0.7	n/a	n/a	n/a	n/a
4" x 7-ga x 28' ²	28	7	B	8" - 11"	0.75	3.3	2.5	1.8	0.7	n/a	n/a	n/a	n/a	n/a
4" x 7-ga x 30' ²	30	7	B	8" - 11"	0.75	2.2	1.4	0.8	n/a	n/a	n/a	n/a	n/a	n/a
5" x 11-ga x 14'	14	11	C	9" - 11"	0.75	17.4	15.7	14.1	11.5	9.3	7.7	6.3	5.2	4.2
5" x 11-ga x 16'	16	11	C	9" - 11"	0.75	13.8	12.3	10.9	8.7	6.9	5.5	4.3	3.3	2.5
5" x 11-ga x 18'	18	11	C	9" - 11"	0.75	10.8	9.6	8.4	6.5	4.9	3.7	2.6	1.8	1.1
5" x 11-ga x 20'	20	11	C	9" - 11"	0.75	8.5	7.3	6.3	4.6	3.2	2.1	1.2	0.5	n/a
5" x 11-ga x 22'	22	11	C	9" - 11"	0.75	10.9	9.5	8.3	6.2	4.5	3.2	2.1	1.2	0.5
5" x 11-ga x 24'	24	11	C	9" - 11"	0.75	8.8	7.5	6.4	4.5	3.0	1.8	0.8	n/a	n/a
5" x 11-ga x 26'	26	11	C	9" - 11"	0.75	6.8	5.7	4.6	3.0	1.6	0.6	n/a	n/a	n/a
5" x 11-ga x 28'	28	11	C	9" - 11"	0.75	5.2	4.1	3.2	1.6	0.4	n/a	n/a	n/a	n/a
5" x 11-ga x 30'	30	11	C	9" - 11"	0.75	3.6	2.7	1.8	0.4	n/a	n/a	n/a	n/a	n/a
5" x 7-ga x 20'	20	7	D	9" - 11"	1.00	21.6	19.3	17.3	14.0	11.3	9.2	7.4	6.0	4.8
5" x 7-ga x 22'	22	7	D	9" - 11"	1.00	20.7	18.6	16.6	13.3	10.7	8.5	6.8	5.4	4.2
5" x 7-ga x 24'	24	7	D	9" - 11"	1.00	17.7	15.6	13.8	10.8	8.5	6.6	5.0	3.7	2.6
5" x 7-ga x 26'	26	7	D	9" - 11"	1.00	14.9	13.1	11.4	8.8	6.6	4.9	3.5	2.3	1.3
5" x 7-ga x 28'	28	7	D	9" - 11"	1.00	12.5	10.9	9.4	6.9	4.9	3.4	2.1	1.0	n/a
5" x 7-ga x 30'	30	7	D	9" - 11"	1.00	10.3	8.9	7.5	5.2	3.4	2.0	0.8	n/a	n/a
5" x 7-ga x 35'	35	7	D	9" - 11"	1.00	6.0	4.8	3.6	1.8	n/a	n/a	n/a	n/a	n/a
6" x 7-ga x 24'	24	7	J	12"	1.00	18.6	16.4	14.3	11.2	8.6	6.5	4.8	3.4	2.2
6" x 7-ga x 26'	26	7	J	12"	1.00	15.6	13.4	11.7	8.8	6.5	4.6	3.0	1.8	0.7
6" x 7-ga x 28'	28	7	J	12"	1.00	12.9	10.9	9.3	6.7	4.6	2.8	1.5	n/a	n/a
6" x 7-ga x 30'	30	7	J	12"	1.00	10.4	8.8	7.3	4.8	2.9	1.3	n/a	n/a	n/a
6" x 7-ga x 32'	32	7	J	12"	1.00	8.3	6.8	5.5	3.1	1.3	n/a	n/a	n/a	n/a
6" x 7-ga x 34'	34	7	J	12"	1.00	6.5	5.0	3.7	1.6	n/a	n/a	n/a	n/a	n/a
6" x 7-ga x 35'	35	7	J	12"	1.00	5.5	4.2	2.9	0.9	n/a	n/a	n/a	n/a	n/a
6" x 7-ga x 39'	39	7	J	12"	1.00	2.3	1.0	n/a						

Steel Poles Square Straight

Type : _____

 Have questions? Call us at (800) 436-7800

WIND SPEED

POLE ¹	Mtg. Height Length (ft)	Wall Thick (ga)	BOLT CIRCLE			EPA								
			Designator	Dia. (in)	Anchor Bolt Dia (in)	110 MPH	115 MPH	120 MPH	130 MPH	140 MPH	150 MPH	160 MPH	170 MPH	180 MPH
5" x 11-ga x 14'	14	11	F	11"	0.75	17.6	15.8	14.2	11.5	9.4	7.7	6.3	5.2	4.3
5" x 11-ga x 14'	14	11	F	13"	0.75	17.6	15.8	14.2	11.5	9.4	7.7	6.3	5.2	4.3
5" x 11-ga x 16'	16	11	F	11"	0.75	13.9	12.2	11.0	8.8	7.0	5.5	4.3	3.4	2.5
5" x 11-ga x 16'	16	11	F	13"	0.75	13.9	12.2	11.0	8.8	7.0	5.5	4.3	3.4	2.5
5" x 11-ga x 18'	18	11	F	11"	0.75	11.0	9.6	8.4	6.5	5.0	3.7	2.7	1.8	1.1
5" x 11-ga x 18'	18	11	F	13"	0.75	11.0	9.6	8.4	6.5	5.0	3.7	2.7	1.8	1.1
5" x 11-ga x 20'	20	11	F	11"	0.75	8.6	7.4	6.4	4.6	3.3	2.2	1.3	0.5	-
5" x 11-ga x 20'	20	11	F	13"	0.75	8.6	7.4	6.4	4.6	3.3	2.2	1.3	0.5	-
5" x 11-ga x 22'	22	11	F	11"	0.75	12.7	11.1	9.6	7.4	5.6	4.1	3.0	2.0	1.1
5" x 11-ga x 22'	22	11	F	12"	0.75	10.3	8.9	7.7	5.7	4.1	2.8	1.8	0.9	-
5" x 11-ga x 22'	22	11	F	13"	0.75	8.6	7.4	6.4	4.6	3.1	2.0	1.1	-	-
5" x 11-ga x 24'	24	11	F	11"	0.75	10.2	8.9	7.6	5.6	4.0	2.6	1.6	0.7	-
5" x 11-ga x 24'	24	11	F	12"	0.75	8.0	6.9	5.8	4.0	2.6	1.5	0.5	-	-
5" x 11-ga x 24'	24	11	F	13"	0.75	6.7	5.5	4.6	3.0	1.7	0.7	-	-	-
5" x 11-ga x 26'	26	11	F	11"	0.75	8.1	6.9	5.8	4.0	2.5	1.3	-	-	-
5" x 11-ga x 26'	26	11	F	12"	0.75	6.2	5.1	4.1	2.6	1.3	-	-	-	-
5" x 11-ga x 26'	26	11	F	13"	0.75	5.0	4.0	3.1	1.6	0.5	-	-	-	-
5" x 11-ga x 28'	28	11	F	11"	0.75	6.3	5.2	4.3	2.5	1.1	-	-	-	-
5" x 11-ga x 28'	28	11	F	12"	0.75	4.6	3.6	2.7	1.2	-	-	-	-	-
5" x 11-ga x 28'	28	11	F	13"	0.75	3.4	2.5	1.7	-	-	-	-	-	-
5" x 11-ga x 30'	30	11	F	11"	0.75	4.7	3.7	2.8	1.2	-	-	-	-	-
5" x 11-ga x 30'	30	11	F	12"	0.75	3.1	2.2	1.4	-	-	-	-	-	-
5" x 11-ga x 30'	30	11	F	13"	0.75	2.0	1.2	0.5	-	-	-	-	-	-
5" x 7-ga x 20'	20	7	G	11"	0.75	19.0	17.0	15.0	12.2	9.7	7.8	6.2	5.0	3.8
5" x 7-ga x 20'	20	7	G	12"	0.75	21.4	19.1	17.1	13.8	11.2	9.1	7.3	5.9	4.7
5" x 7-ga x 20'	20	7	G	13"	0.75	21.4	19.2	17.2	13.9	11.3	9.2	7.4	6.0	4.8
5" x 7-ga x 20'	20	7	G	11"	1	21.7	19.4	17.4	14.0	11.4	9.3	7.5	6.0	4.8
5" x 7-ga x 20'	20	7	G	13"	1	21.7	19.4	17.4	14.0	11.4	9.3	7.5	6.0	4.8
5" x 7-ga x 22'	22	7	G	11"	0.75	16.0	14.1	12.5	9.8	7.6	5.9	4.4	3.3	2.3
5" x 7-ga x 22'	22	7	G	12"	0.75	17.7	15.9	14.2	11.2	8.7	7.0	5.4	4.1	3.0
5" x 7-ga x 22'	22	7	G	13"	0.75	19.9	17.3	15.6	12.6	10.0	8.0	6.3	5.0	3.8
5" x 7-ga x 22'	22	7	G	11"	1	21.0	18.7	16.7	13.4	10.6	8.5	6.8	5.4	4.2
5" x 7-ga x 22'	22	7	G	12"	1	23.4	20.6	18.4	15.0	12.2	9.9	8.0	6.4	5.1
5" x 7-ga x 22'	22	7	G	13"	1	21.3	18.8	17.0	13.7	11.0	8.8	7.0	5.6	4.3
5" x 7-ga x 24'	24	7	G	11"	0.75	13.3	11.6	10.0	7.7	5.7	4.2	2.9	1.9	1.0
5" x 7-ga x 24'	24	7	G	12"	0.75	15.0	13.0	11.6	8.9	6.8	5.1	3.8	2.6	1.7
5" x 7-ga x 24'	24	7	G	13"	0.75	16.6	14.6	12.9	10.2	8.0	6.1	4.6	3.3	2.3
5" x 7-ga x 24'	24	7	G	11"	1	17.5	15.7	13.9	10.9	8.6	6.7	5.0	3.7	2.7
5" x 7-ga x 24'	24	7	G	12"	1	20.0	17.4	15.4	12.3	9.9	7.8	6.0	4.7	3.5
5" x 7-ga x 24'	24	7	G	13"	1	18.1	16.0	14.2	11.0	8.7	6.7	5.3	3.9	2.8
5" x 7-ga x 26'	26	7	G	11"	0.75	10.9	9.3	8.0	5.9	4.1	2.7	1.6	0.6	-
5" x 7-ga x 26'	26	7	G	12"	0.75	12.4	10.9	9.5	7.0	5.1	3.6	2.3	1.3	-
5" x 7-ga x 26'	26	7	G	13"	0.75	14.0	12.3	10.7	8.1	6.0	4.4	3.1	2.0	1.0
5" x 7-ga x 26'	26	7	G	11"	1	15.0	13.2	11.5	8.8	6.7	4.9	3.5	2.3	1.3

Steel Poles Square Straight

Type: _____

 Have questions? Call us at (800) 436-7800

WIND SPEED

POLE ¹	Mtg. Height Length (ft)	Wall Thick (ga)	BOLT CIRCLE			EPA								
			Designator	Dia. (in)	Anchor Bolt Dia (in)	110 MPH	115 MPH	120 MPH	130 MPH	140 MPH	150 MPH	160 MPH	170 MPH	180 MPH
5" x 7-ga x 26'	26	7	G	12"	1	17.0	14.8	13.0	10.2	7.9	6.0	4.4	3.1	2.1
5" x 7-ga x 26'	26	7	G	13"	1	15.3	13.5	11.8	9.0	6.8	5.0	3.6	2.5	1.4
5" x 7-ga x 28'	28	7	G	11"	0.75	8.9	7.4	6.3	4.3	2.7	1.4	-	-	-
5" x 7-ga x 28'	28	7	G	12"	0.75	10.2	8.8	7.5	5.3	3.5	2.1	1.0	-	-
5" x 7-ga x 28'	28	7	G	13"	0.75	11.8	10.2	8.8	6.4	4.5	3.0	1.7	0.7	-
5" x 7-ga x 28'	28	7	G	11"	1	12.5	10.9	9.5	7.0	5.0	3.3	2.1	1.0	-
5" x 7-ga x 28'	28	7	G	12"	1	14.2	12.4	11.0	8.2	6.0	4.3	3.0	1.7	0.8
5" x 7-ga x 28'	28	7	G	13"	1	12.9	11.0	9.7	7.2	5.2	3.6	2.2	1.1	-
5" x 7-ga x 30'	30	7	G	11"	0.75	7.0	5.8	4.7	2.8	1.3	-	-	-	-
5" x 7-ga x 30'	30	7	G	12"	0.75	8.4	7.0	5.8	3.8	2.2	0.9	-	-	-
5" x 7-ga x 30'	30	7	G	13"	0.75	9.7	8.2	7.0	4.8	3.0	1.6	0.5	-	-
5" x 7-ga x 30'	30	7	G	11"	1	10.4	8.8	7.6	5.3	3.4	2.0	0.8	-	-
5" x 7-ga x 30'	30	7	G	12"	1	12.0	10.3	9.0	6.4	4.4	2.9	1.6	0.5	-
5" x 7-ga x 30'	30	7	G	13"	1	10.6	9.1	7.7	5.5	3.6	2.1	1.0	-	-
5" x 7-ga x 35'	35	7	G	11"	0.75	3.2	2.2	1.2	-	-	-	-	-	-
5" x 7-ga x 35'	35	7	G	12"	0.75	4.4	3.2	2.2	0.5	-	-	-	-	-
5" x 7-ga x 35'	35	7	G	13"	0.75	5.5	4.2	3.1	1.3	-	-	-	-	-
5" x 7-ga x 35'	35	7	G	11"	1	6.0	4.8	3.6	1.8	-	-	-	-	-
5" x 7-ga x 35'	35	7	G	12"	1	7.3	6.0	4.8	2.7	1.1	-	-	-	-
5" x 7-ga x 35'	35	7	G	13"	1	6.3	5.0	3.8	1.9	-	-	-	-	-
6" x 7-ga x 24'	24	7	H	11"	1	16.5	14.4	12.6	9.6	7.2	5.3	3.8	2.5	1.4
6" x 7-ga x 24'	24	7	H	12-1/2"	1	19.8	17.5	15.4	12.0	9.2	7.0	5.3	3.8	2.7
6" x 7-ga x 24'	24	7	H	14"	1	23.0	20.5	18.0	14.3	11.2	8.9	6.9	5.3	3.8
6" x 7-ga x 26'	26	7	H	11"	1	13.7	11.8	10.2	7.5	5.3	3.6	2.1	1.0	-
6" x 7-ga x 26'	26	7	H	12-1/2"	1	16.5	14.6	12.6	9.6	7.0	5.2	3.6	2.2	1.1
6" x 7-ga x 26'	26	7	H	14"	1	19.6	17.3	15.2	11.7	8.9	6.7	5.0	3.5	2.2
6" x 7-ga x 28'	28	7	H	11"	1	11.0	9.3	7.8	5.5	3.5	1.9	0.6	-	-
6" x 7-ga x 28'	28	7	H	12-1/2"	1	13.8	12.0	10.2	7.5	5.2	3.4	1.9	0.7	-
6" x 7-ga x 28'	28	7	H	14"	1	16.4	14.5	12.5	9.4	6.9	4.7	3.2	1.8	0.7
6" x 7-ga x 30'	30	7	H	11"	1	9.0	7.3	6.0	3.6	1.9	0.5	-	-	-
6" x 7-ga x 30'	30	7	H	12-1/2"	1	11.4	9.6	8.0	5.5	3.4	1.7	-	-	-
6" x 7-ga x 30'	30	7	H	14"	1	14.0	12.0	10.0	7.2	5.0	3.2	1.6	-	-
6" x 7-ga x 32'	32	7	H	11"	1	7.0	5.5	4.2	2.0	-	-	-	-	-
6" x 7-ga x 32'	32	7	H	12-1/2"	1	9.2	7.6	6.0	3.8	1.8	-	-	-	-
6" x 7-ga x 32'	32	7	H	14"	1	11.4	9.7	8.0	5.4	3.2	1.6	-	-	-
6" x 7-ga x 34'	34	7	H	11"	1	5.1	3.7	2.5	0.6	-	-	-	-	-
6" x 7-ga x 34'	34	7	H	12-1/2"	1	7.2	5.6	4.4	2.2	-	-	-	-	-
6" x 7-ga x 34'	34	7	H	14"	1	9.3	7.6	6.2	3.6	1.7	-	-	-	-
6" x 7-ga x 35'	35	7	H	11"	1	4.2	3.0	1.8	-	-	-	-	-	-
6" x 7-ga x 35'	35	7	H	12-1/2"	1	6.2	4.8	3.6	1.4	-	-	-	-	-
6" x 7-ga x 35'	35	7	H	14"	1	8.2	6.6	5.2	2.9	1.0	-	-	-	-
6" x 7-ga x 39'	39	7	H	11"	1	1.0	-	-	-	-	-	-	-	-
6" x 7-ga x 39'	39	7	H	12-1/2"	1	3.0	1.6	0.5	-	-	-	-	-	-
6" x 7-ga x 39'	39	7	H	14"	1	4.6	3.3	2.0	-	-	-	-	-	-