

Plan Commission Meeting – April 15, 2015
Agenda Item 3

Amberley Woods Commercial Development
Evaluation of Revised Site Plan Based on Previously Recommended Conditions of Approval

Staff Report and Recommendation
Technical Memorandum - Drainage
Vicinity Map
Air Photo
Enlarged Air Photo

Materials Submitted by the Petitioner

Application - Updated
Statement of Intent - Updated
Revised Site Plan
Site Plan with Cul-de-Sac Option
Staking Diagram
Conceptual Landscape Plan
Route 60 Tree Canopy and View Corridor Plan
Monument Sign Area Designation

Traffic Study – Summary and Recommendations

Correspondence

Materials shown in italics are provided in the Plan Commission packets only.
A complete packet is available for review in the Community Development Department and on the City's website, www.cityoflakeforest.com



**EVALUATION OF REVISED SITE PLAN
Amberley Woods Commercial Development**

TO:	Chairman Ley and Members of the Plan Commission
DATE:	April 15, 2015
FROM:	Catherine Czerniak, Director of Community Development
SUBJECT:	Evaluation of Revised Site Plan Based on Previously Established Conditions of Approval

Property Owner

Saunders – Townline LLC
440 W. Randolph, Suite 500
Chicago, Illinois 60606
Michael Supera Family Limited
Partnership, 50%, Bernard
Leviton, 50%

Property Location

Southeast corner of Route 60 and
Saunders Road

Zoning

TD – Transitional
District

Contract Purchaser/Developer

Pine Tree Commercial Realty

Representatives: Peter Borzak, Manager
Lee Pearson, EVP Design & Construction
Mike Bleck, Bleck Engineering
Robert O'Donnell, Legal Counsel

Review of Past Actions on this Petition

After consideration of this petition over the course of four meetings, on June 11, 2014, the Plan Commission forwarded a recommendation to the City Council in support of the **Amberley Woods Commercial Development** subject to conditions of approval. As a review, a commercial development is proposed on the 8.5 acre portion of the Amberley Woods property that was formerly approved for office development.

On July 7, 2014, the City Council considered and accepted the Plan Commission's recommendation in support of the commercial development. The Council indicated strong support of the project as long as the plan was modified to address the conditions as recommended by the Commission. In general, the condition required that the site be developed less intensely to provide greater setbacks and a development more in keeping with the overall character of the Route 60 Corridor.

Since the Council meeting in July, the ownership of the property has remained the same. An active petition for the project remains on file with the City. In March of this year, the City received an amended application which identified a new developer for the project, Pine Tree Commercial Realty, LLC. Pine Tree representatives met with City staff and indicated its intention to present a revised plan, in conformance with the previously approved conditions. A revised site plan is included in the Commission's packet.

Plan Commission's Role

As noted above, the City Council has already accepted the Plan Commission's recommendation in support of the Amberley Woods Commercial Development and endorsed the conditions as previously recommended by the Commission. Given that, **the Plan Commission's role at this time is limited to evaluating the revised plan based on the conditions of approval already accepted by the City Council.** The Council recognized that the evaluation of the revised site plan based on the conditions of approval is a land use matter and further, the City Council determined that Plan Commission's evaluation of the revised plan, at a public meeting, will provide the opportunity to inform the public about the revised plan and hear any comments on how the conditions are, or are not, met.

An evaluation of the revised plan based on the previously approved conditions is provided below.

Evaluation of Revised Plan Based on Approved Conditions

As noted above, based on the Plan Commission's recommendation, the City Council endorsed the following conditions of approval on July 7, 2014. In summary, the revised site plan submitted by Pine Tree Commercial Realty, LLC satisfies the applicable conditions as detailed below. It should be noted that some of the conditions are most appropriately addressed in the final documents that will be presented to the City Council as part of the approval process; the amended plat of subdivision, the amended Special Use Permit/Final Development Plan Ordinance and the amended Annexation Agreement; or as part of the implementation of the plan and operation of the site.

A few wording changes to the conditions, based on the revised plan and discussions with the new developer are recommended. The suggested wording changes are highlighted.

USE

1. Approve a retail development on the southeast corner of Route 60 and Saunders Road. Require that a Whole Foods grocery store be a tenant at the initial opening of the center. Designate the center for primarily retail and restaurant uses. Authorize the following special uses in the center: one ~~bank with a drive thru~~ for a and one coffee shop or similar restaurant. ~~with a drive thru for a total of two drive thru facilities on the site.~~

Evaluation: This condition is satisfied. Whole Foods is proposed as the tenant of the large anchor space and the approvals will require that Whole Foods be a tenant at the time of the initial opening of the commercial center. Various restaurant, retail and service tenants will occupy the two outbuildings.

2. Require the approximately 45,8720 square foot anchor store to remain as a single tenant space occupied by Whole Foods, or another grocery store offering products and services of a similar quality. Change of the space to a multi-tenant space or occupancy by other than Whole Foods or similar grocery tenant may be permitted only by amendment to the Special Use Permit. Ancillary uses located within and as part of the larger grocery store space, such as, but not limited to, a branch bank, pharmacy, coffee or food or beverage vendor, shall be permitted provided that they are accessible from within the Whole Foods store. ~~not fully enclosed and do not have separate entrances along the exterior of the anchor building.~~

Evaluation: This condition is satisfied. Based on the revised site plans submitted, the square footage of the grocery store space has changed by 1 square foot. The language of the condition has been modified to recognize that as the final construction drawings are prepared, the square footage may change slightly.

As required by this condition, a significant change in use for the anchor space would require review and approval by the City through a process to amend the Special Use Permit.

Some further flexibility is provided for uses that may be incorporated into the Whole Foods store to offer food, beverages, related retail products or limited services.

3. Limit non-sales tax producing businesses, including a the bank, if one is proposed, to a maximum of 10% of the total square footage in the development.

Evaluation: This condition is satisfied and will be documented in the final approval documents.

4. Specify that the approval of the retail center does not imply support for future expansion of commercial uses or parking lots into the adjacent residential portions of the Amberley Woods development to the east or to the south.

Evaluation: This condition is satisfied and will be documented in the final approval documents.

TRAFFIC AND ROADS

5. Allow a right in/right out access from the development on to Route 60 with an acceleration lane on Route 60 from the new access to the east, connecting with the existing eastbound right turn lane on Route 60 as it approaches Conway Farms Drive. Require extension of the existing left turn lane on westbound Route 60 to accommodate additional vehicles turning left on to Saunders Road without blocking through lanes. The cost of the improvements shall be borne by the developer. (A portion of the median in Route 60 will need to be removed.)

Evaluation: This condition is satisfied.

6. Require a payment of \$50,000 to support intersection design studies that will need to be undertaken by the City after completion of this development, as a starting point for discussions about longer term improvements that may be necessary at the Route 60/Saunders Road/Field Drive intersection or on Saunders Road. If a decision is made to proceed with improvement of the intersection, obligate the owner of the Amberley Woods retail development to pay a proportionate share of the cost of the improvements based on the percent of traffic contributed by the development, as determined by a traffic study.

Evaluation: This condition will be documented in the final approval documents.

7. Require that provisions be made and adequate land be reserved to allow Amberley Court to be terminated in a cul-de-sac *after* buildout of the Amberley Woods development is completed. Require that engineering plans for the development include a cul-de-sac designed in accordance with City standards and with a minimum perimeter landscape buffer of 15 feet. The construction of the cul-de-sac should be deferred to allow construction traffic for all

components of the Amberley Woods development to access the site from Saunders Road. Obligate the developer to construct the cul-de-sac or, if after buildout the City Council waives the requirement for a cul-de-sac, to install a gate with an adequate turn around area, at a time directed by the City. The City shall release the developer from the obligation to construct a cul-de-sac if construction has not been directed by the City within 1 year after initial construction of all residential dwellings is completed in Amberley Woods and the permits closed. Require The City may require a bond or Letter of Credit in an amount determined to be appropriate by the City based on the estimated cost of construction of the cul-de-sac ~~to be posted with the City prior to, but not earlier than, the issuance of a Certificate of Occupancy for the commercial development.~~

During the time construction in Amberley Woods is continuing, require the west end of Amberley Court to be gated to prevent cut through traffic from the time the first business in the retail center opens, until the cul-de-sac is constructed. Provide a turnaround of sufficient size on the south side of the gate to accommodate vehicles, including trucks that travel to the end of Amberley Court. The operation, maintenance and emergency calls pertaining to the gate shall be the responsibility of the developer.

Evaluation: This condition is satisfied. Preliminary engineering plans for a future cul-de-sac were provided to the City and the plan is included in the Commission's packet. The final approvals will document that if determined to be necessary by the City, after construction is completed in the overall Amberley Woods development, construction of the cul-de-sac, in a form and of a size acceptable to the City Engineer, may be required by the City and the cost will be borne by the developer of the commercial development.

DRAINAGE/STORMWATER MANAGEMENT

8. Approve amendments to the plat of subdivision including the removal of drainage easements along the north and south property lines.

Evaluation: This condition is satisfied. The final plat will reflect appropriate easements or vacation of easements. The revised plan reflects the addition of two ponds and a bioswale within the setback along Route 60. The previous plan did not provide for any water retention or treatment areas on the site.

9. Require documentation demonstrating, to the satisfaction of the City Attorney that the necessary easements and rights exist to allow discharge of stormwater at the proposed locations, into existing ponds and in the volumes proposed.

Evaluation: This condition will be satisfied as part of the final approval process.

As a follow up to the previous discussions of this project, the City, at its own expense, directed the City's consulting engineer to conduct a review of the stormwater drainage facilities in this area. A technical memorandum was prepared by the City Engineer, summarizing the findings and is included in the Commission's packet as background information.

10. Require a demonstration that all applicable water quality standards are met for water discharged from the site.

Evaluation: This condition will be satisfied as part of the final approval process.

SETBACKS

11. Approve amendments to the plat of subdivision related to the setbacks as detailed below:

- a. Approve a reduction in the setback from the north property line, along Route 60, from the present setback of 150' to 100' feet for buildings and 75' for the parking lot.

Evaluation: This condition is satisfied and the original setbacks from the north property line approved for the Amberley Woods overall development are met. The two buildings closest to Route 60 have been eliminated from the plan. Three buildings, rather than five, are now proposed. The building closest to Route 60 is setback 150' from the property line. The parking lot is setback 100' from the north property line, exceeding the 75' requirement established in this condition.

- b. Approve a reduction in the setback from the south property line from the present setback of 50' to 47' for buildings and 22' for the service drive.

Evaluation: This condition is satisfied and the original setbacks from the south property line approved for the Amberley Woods overall development are met. The main mass of the building is setback more than 65' from the south property line. A small portion of the building, the area where trucks will unload, is set back 50' from the south property line. At the closest point, the service drive is located just under 14' from the south property line for a short distance. The service drive then curves away from the property line to a maximum setback distance of approximately 60'.

- c. Approve a reduction in the setback from the west property line from the present setback of 50' to 5' for buildings and 19' for parking.

Evaluation: This condition is generally satisfied. Building Pad 2 is setback 10' from the west property line near Saunders Road. A small parking area, located to the south of Building Pad 2 is located 10' from the west property line. In discussions of the previous plan, encroachment into the setback along Saunders Road was not a significant concern. Staff encouraged the petitioner to increase the setback on the east side of the development, adjacent to the Amberley Woods Condominium development, at the expense of moving closer to the west property line. The current plan does not propose any encroachment of buildings or parking areas into the parkway along Saunders Road.

- d. Retain the 50' setback for buildings from the east property line. Approve the location of a service driveway as shown on the plan ranging from ~~16.37.3²~~ to ~~25.2'10²~~ from the east property line, ~~subject to the developer submitting documentation that an easement or some other mechanism is in place establishing a 20' landscape buffer on the neighboring property, east of the property line. Require the developer to include the landscape buffer area on the final landscape plan and to plant and maintain the landscape buffer for a 5-year period to assure the establishment of plantings. No~~

~~amended plat may be recorded (or any building permits issued) until this is fully resolved.~~

Evaluation: This condition is satisfied. There is only one building on the revised plan that extends toward the east side of the property. The bank building previously proposed for the northeast corner of the property has been eliminated from the plan. The grocery store building is located 89' away from the east property line, significantly exceeding the 50' setback requirement.

The service drive, which enters the site from Route 60, is located 37' from the property line on the northern portion of the site, closest to the existing condominium building, and gets as close as 25' to the east property line on the south half of the site.

The shift of the service drive away from the east property line will minimize impacts on the trees on the neighboring property to the east, the condominium parcel. The revised site plan eliminates the need for a landscape easement on the neighboring property and the language of the condition above has been modified to recognize that change. A landscape buffer will be maintained just east of the service drive, on the commercial parcel itself.

In addition, the parking lot was reconfigured to minimize activity on the service road. A landscape buffer, approximately 10' wide, is located between the parking lot and the service road. Parking stalls are not located along the service road so cars will not back out into the road instead, the service road will only be used for entering and exiting the site.

PARKING LOT AND INTERNAL CIRCULATION

~~12. Approve a reduction in the parking requirement for up to 6,000 square feet of restaurant space, from 10 spaces per 1,000 square feet as required by the Code, to 5 spaces per 1,000 square feet as reflected in the proposed development plan. Any additional restaurant square footage would require approval of further exception to the established parking requirements. In addition, approve an exception to the parking requirements for a coffee shop with a drive-thru based on the assumption that the drive-thru will negate the need for the number of parking spaces required by the Code.~~

Evaluation: This condition is no longer applicable. A parking ratio of 5-1/2 spaces per 1,000 square feet of building area is provided in the revised plan. The Code requirements for parking for both retail and restaurant uses are met and no variance is required.

13. Provide plans illustrating, to the satisfaction of the City Engineer, that there is adequate space for turning movements, maneuvering into and out of parking spaces, deliveries and trash pickup throughout the parking lot. ~~Consider a diagonal parking space layout to facilitate circulation.~~

Evaluation: This condition is satisfied. The reduction in building square footage has allowed the parking lot to be downsized and modified to improve functionality. Final engineering plans will be reviewed and will be subject to approval by the City Engineer. The trash area for Building Pad 2 is incorporated inside the building.

14. ~~Detail the base of the pervious pavers, particularly in the areas near the trash and recycling enclosures, and demonstrate, to the satisfaction of the City Engineer, that the surface will withstand daily vehicle traffic including garbage trucks as part of the final engineering plans.~~

Evaluation: This condition is no longer applicable. The parking lot, including the areas near the trash and recycling enclosures, will be asphalt rather than pervious pavers for durability. Due to the reduction in the building square footage and parking area and the addition of ponds and a bioswale, the pervious pavers in the parking lot are no longer necessary to meet the stormwater requirements.

15. Submit a final bicycle/pedestrian path plan as part of the final engineering plans detailing the connections to the residential development to the east and south, to Saunders Road, and along the east side of Saunders Road to the southeast corner of the Route 60 and Saunders intersection. In lieu of a path along Route 60 along the frontage of the development, payment shall be made to the City in the amount of the cost of the path to support a path on the north side of Route 60 which is planned as part of a regional project and will facilitate bicycle and pedestrian access to the new development.

Evaluation: This condition will be addressed in the final engineering plans and incorporated into the final approval documents.

ONGOING OPERATIONS

Evaluation: All of the ongoing operations conditions (conditions 16 – 19) will be incorporated into the final approval documents.

16. Limit deliveries to between the hours of 7 a.m. and 7 p.m., Monday through Saturday and between 8 a.m. and 4 p.m. on Sundays.
17. Prohibit outdoor staging or storage of materials except within fully enclosed and screened trash/recycling areas as reflected on the approved site plan.
18. Require that as tenants change, at the time of application for a Certificate of Zoning Compliance, the owner demonstrate that adequate on-site parking is available to meet the needs of the proposed and existing tenants at that point in time. Prohibit employee or customer parking on public or private streets. If off-site parking for employees or customers is proposed in the future, City approval is required to verify zoning compliance.
19. Require that snow be removed from the site rather than stored on the site to maintain adequate parking spaces on site and keep circulation lanes open.

DESIGN REVIEW

20. Direct that architectural plans for all buildings, ~~and~~ plans for ~~signage~~, landscape and lighting and plans for signage including a monument sign to be located in the “Monument Sign Area” on Route 60 identified on the plans, be reviewed by the Building Review Board and a recommendation forwarded to the City Council. Final approval by the City Council will be required for these exterior elements. (The monument sign shall conform to the requirements for monument signs in the OR and OR-2 Districts which also border the Route 60 Corridor.)

LANDSCAPING

Evaluation: The landscaping conditions are satisfied or will be satisfied as final plans are developed and as the plantings occur, are inspected over time and replaced consistent with standard City practices to assure that plantings are ultimately established consistent with the intent of the approved final landscape plan.

21. Require that the final landscape and tree replacement plans be drawn on the approved grading and drainage plan to verify that no conflicts exist between drainage and plantings. The landscaping along Route 60 shall provide for view corridors into the retail development with a focus on the visibility of the buildings, rather than on the parking lot.
22. Allow the developer, through an appropriate agreement with the City, if determined to be appropriate, to locate landscaping in the City's Saunders Road right-of-way along the west side of the development given the location of the building 510' from the property line and lack of space on the site for landscaping in this area. Acknowledge that if widening of Saunders Road is deemed necessary in the future, some or all of the landscaping in this area may need to be removed.
23. Require inch for inch replacement or payment in lieu of planting on site for tree removal that exceeds previous approvals. The tree replacement plan should locate replacement trees in designated "canopy replacement" areas on the site including: the two tree canopy areas along Route 60, the tree canopy areas located along the east and south property lines and the three tree canopy areas located along Saunders Road, all as identified on the plans included in the packet dated April 9, 2015. ~~on adjacent parcels to create a landscape buffer between the development and existing and future residential development, and in the tree preservation to the south of the development to replace die back that will occur in that area.~~ Prior to preparation of the final tree removal plan, the petitioner's representative shall consult with the City's Certified Arborist to identify existing trees that may be feasible and worthy of preserving based on the revised site plan. For replacement tree inches that cannot be accommodated on site or on adjacent properties using good forestry practices, payment in lieu of plantings shall be made and used to support, enhance or extend the Route 60 median.
24. Require that plantings consistent with the approved landscape plan be maintained on the site on an ongoing basis including the replacement of vegetation that is dead or failing to thrive and replacement of plantings damaged by vehicles, pedestrians, shopping carts or snow removal.

FINANCIAL GUARANTEES

25. Obtain financial guarantees, consistent with standard City procedures, to assure completion of the development, repair to any public infrastructure damaged during construction and to assure establishment of the required plantings.

Evaluation: This condition will be satisfied as part of the final approval process.

Public Notice

Public notice of this meeting was provided in accordance with Code requirements and standard practices. Public notice was published in a newspaper of local circulation. Mailed notice was sent to surrounding property owners and to those who have previously indicated interest in these proceedings. The agenda for this meeting was posted at five public locations.

Written correspondence received since the last Plan Commission meeting is included in this packet.

Recommendation to City Council

Recommend to the City Council that the revised site plan be accepted based on the findings that the revised plan satisfies the applicable conditions of approval as detailed above.

AND

Recommend to the City Council that the conditions of approval be modified in response to the revised site plan as detailed above.

TECHNICAL MEMORANDUM

To: Robert Ells, Engineering Supervisor
Cathy Czerniak, Community Development Director
City of Lake Forest

From: Dan Strahan, P.E., CFM
Gewalt Hamilton Associates

Date: April 8, 2015

Re: Amberley Woods Subdivision Review
Stonebridge at Conway Farms Subdivision Review

The City of Lake Forest (City) requested that Gewalt Hamilton Associates (GHA) review the available stormwater management documentation for Amberley Woods Subdivision and Stonebridge at Conway Farms Subdivisions. This memo summarizes our assessment of the available documentation in relation to standard engineering practice and the requirements of the Lake County Watershed Development Ordinance (WDO). Our analysis is based primarily on the following documents:

- Final Engineering Report for Amberley Woods Subdivision, prepared by Bleck Engineering Company, Inc., dated February 5, 2003.
- Site Engineering Plan sheets 6-8 for Amberley Woods Subdivision, prepared by Bleck Engineering Company, Inc., dated July 3, 2003.
- Signed Watershed Development Report for Amberley Woods Subdivision, received by the City on October 14, 2005 and signed by the owner on January 9, 2006.
- Detention Area Design Calculations for Stonebridge at Conway Farms, dated October 2, 2002.
- Site Engineering Plan sheets 4 and 17 for Stonebridge at Conway Farms, dated September 20, 2002.

It is understood that much of the record information for these subdivision files is not available, which is why only selected plan sheets were provided for each subdivision. Our review is based on the records provided to us by the City.

Amberley Woods Subdivision (Amberley Woods) and Stonebridge at Conway Farms Subdivision (Stonebridge) are adjacent developments which were originally designed separately though more or less concurrently in 2002-2003. The Stonebridge development was approved and constructed shortly thereafter, and was substantially built out by 2006. The Amberley Woods development was put on hold until it received final approval in 2006. It is noted that some differences exist between the final approved development and the engineering plans available (e.g. two condominium buildings were approved while three had been shown in the 2003 plans). To date one of the condominium buildings has been built and two of the proposed twenty four single family homes have been constructed within Amberley Woods Subdivision.

Amberley Woods Subdivision

The Amberley Woods Subdivision is approximately 39 acres in total area with additional off-site tributary area from the south. Prior to development of the subdivision, these on and off-site areas were directly tributary to the small pond located at the southwest corner of Conway Farms Drive and Illinois Route 60.

The stormwater management system for the subdivision was analyzed in a report prepared by Bleck Engineering Company, last revised February 5, 2003. The design utilized onstream detention calculations to account for the offsite flow. This involves a calculation of the required storage volume and restrictor size based on the onsite flow characteristics, calculation of a "detention volume safety factor" which provides additional volume based on the offsite flow, and adjustment of the restrictor size based on the offsite tributary area. As a result the size of the offsite tributary area has a significant impact on the discharge characteristics of a pond designed utilizing onstream detention.

The Bleck stormwater report includes an exhibit indicating an offsite tributary area of 66.48 acres based on a USGS quadrangle map. The report indicates this area was adjusted to 58.24 acres based on City of Lake Forest 1-foot topography and a site inspection; this revised area was utilized in their stormwater model. Upon review of current Lake County 1' topographic contours, it appears that both of these calculated offsite areas would include a large portion of the residential neighborhoods to the south which drain into a large pond south of Broadland Lane, which discharges to the east into Conway Farms Golf Course and is not tributary to Amberley Woods. Based on our review of the contours, the actual offsite tributary area appears to be approximately 8.7 acres. It should be noted that the Lake County 1' topography currently available is significantly more detailed and accurate than what would have been available at the time of the original development.

The Bleck report indicates that the stormwater management system reduces the 100 year critical duration peak discharge to the downstream pond from 64 cubic feet per second (cfs) for the existing (pre-construction) condition to 34 cfs in the proposed (post construction) condition. Note that the peak inflow to the site from offsite areas for the proposed condition critical duration storm is 31 cfs versus the 34 cfs peak outflow from the detention pond. With the exception of the calculated offsite tributary area, the stormwater management report and associated drawings appear to be in substantial conformance with standard engineering practice and the requirements of the WDO. However, the larger tributary area calculation resulted in design and construction of a larger restrictor size. We would recommend that this restrictor size be decreased based on the actual offsite area tributary to Amberley Woods Subdivision.

Stonebridge at Conway Farms

The Stonebridge Subdivision is approximately 31 acres in total area. Based on historical topography, it appears that the site did not have any off-site tributary area other than the aforementioned discharge into the northwest pond. Prior to development of the subdivision, the site was tributary to an open area immediately to the east; only a portion of the site immediately adjacent to Conway Farms Road drained into the existing pond. The stormwater management system for the subdivision was analyzed in a report by Henderson and Bodwell dated October 2, 2002. The majority of the site was designed to be tributary to a series of three connected detention basins on the west side of the site that includes the downstream pond to which the Amberley Woods Subdivision ponds discharge.

While the majority of the design calculations for the stormwater management system appear to be in substantial conformance with the requirements of the WDO, it appears that the calculations failed to account for the offsite area (Amberley Woods discharge) tributary to the northwest pond. The Henderson and Bodwell report calculated the required storage volume and allowable release based only on the onsite tributary area. As noted above, the Lake County WDO outlines a process to accommodate offsite flows in detention calculations. While a detention volume safety factor was added to the volume of the ponds, the restrictor was not adjusted to account for the discharge from Amberley Woods. An independent model was developed by GHA to determine the effect of neglecting the offsite area. The model showed that the actual high water level was approximately one foot higher than the design high water level when the offsite area was considered (this model also included the reduced offsite area calculated as noted above in the summary for Amberley Woods).

Conclusion & Recommendation

Based on review of available information as well as the development of an independent stormwater model, GHA has determined that the stormwater calculations for Amberley Woods Subdivision were overestimated the offsite tributary area to the development. As a result the restrictor size was larger than what would be permitted based on the actual offsite tributary area.

While the Stonebridge Subdivision calculations were largely in conformance with the requirements of the WDO, the calculations did not account for the effects of additional flow from the Amberley Subdivision stormwater management system. Therefore GHA estimates that actual high water levels for the Stonebridge Subdivision ponds are approximately one foot higher than designed. We would recommend that consideration be given to increasing the restrictor size in the Stonebridge pond to account for this additional flow.



Area of Request

Area of Request





Amendment to Previous Application

**APPLICATION FOR SUBDIVISION OF PROPERTY – TENTATIVE PLAT
SPECIAL USE PERMIT**

LOCATION OF PROPERTY SEC of Townline & Saunders Rd. **ZONING DISTRICT** TD

ACREAGE OF PROPERTY 8.49

VACANT **DEVELOPED** X **IF DEVELOPED # OF STRUCTURES** 2

OF BUILDABLE LOTS PROPOSED 1

OF OUT LOTS PROPOSED 0

APPLICANT

Name Pine Tree Commercial Realty, LLC

Address 40 Skokie Blvd. Suite 610
Northbrook, IL. 60062

Phone 847-574-33

E-mail lpearson@pinetreecommercial.com

Relationship to Property Contract Purchaser
(Owner/Attorney/Representative/Contract Purchaser)

PROPERTY OWNER (if different from applicant)

Name Saunders-Town Line, LLC

Address 440 W. Randolph, Suite 500
Chicago, IL. 60606

Phone 312-651-2400

E-mail -

BENEFICIAL INTERESTS

Corporation (see exhibit A)
Partnership X (see exhibit B)
Trust, land or other (see exhibit C)

I have read the complete application packet and understand the Subdivision process and criteria.
I understand that this matter will be scheduled for a public hearing when a determination has been made
that this application packet is complete and accurate.

SIGNATURES

Owner _____ **Date** _____

Owner _____ **Date** _____

Applicant As Agent _____ **Date** 3/23/15

EXHIBIT "B"

PARTNERSHIP OWNERSHIP

Please list all partners, general and/or limited, with an individual or beneficial interest of 5% or greater.

NAME Michael Supera Family
ADDRESS Limited Partnership
2001 N. Halsted
Chicago, IL 60614
OWNERSHIP PERCENTAGE 50% %

NAME Bernard Leviton
ADDRESS 1834 N. Lincoln Ave
Chicago, IL 60614
OWNERSHIP PERCENTAGE 50% %

NAME _____
ADDRESS _____
OWNERSHIP PERCENTAGE _____ %

APPLICANT'S REPRESENTATIVES

ENGINEER Michael Bleck
FIRM Bleck Engineering Co.
ADDRESS 1375 N. Western Ave
Lake Forest, IL. 60045
PHONE 847-295-5200

WETLAND CONSULTANT NA
FIRM _____
ADDRESS _____
PHONE _____

LAND PLANNER NA
FIRM _____
ADDRESS _____
PHONE _____

TRAFFIC CONSULTANT Tim Sjogren
FIRM Kimley Horn
ADDRESS 1001 Warrenville Rd. Suite 350
Lisle, IL. 60532
PHONE 331-481-7332

ATTORNEY _____
FIRM _____
ADDRESS _____
PHONE _____

LANDSCAPE ARCH. David McCallum
FIRM David R. McCallum Assoc.
ADDRESS 350 N. Milwaukee Ave
Libertyville, IL. 60048
PHONE 847-362-0209

ARBORIST _____
FIRM _____
ADDRESS _____
PHONE _____

PRESERVATION CONSULTANT _____
FIRM _____
ADDRESS _____
PHONE _____

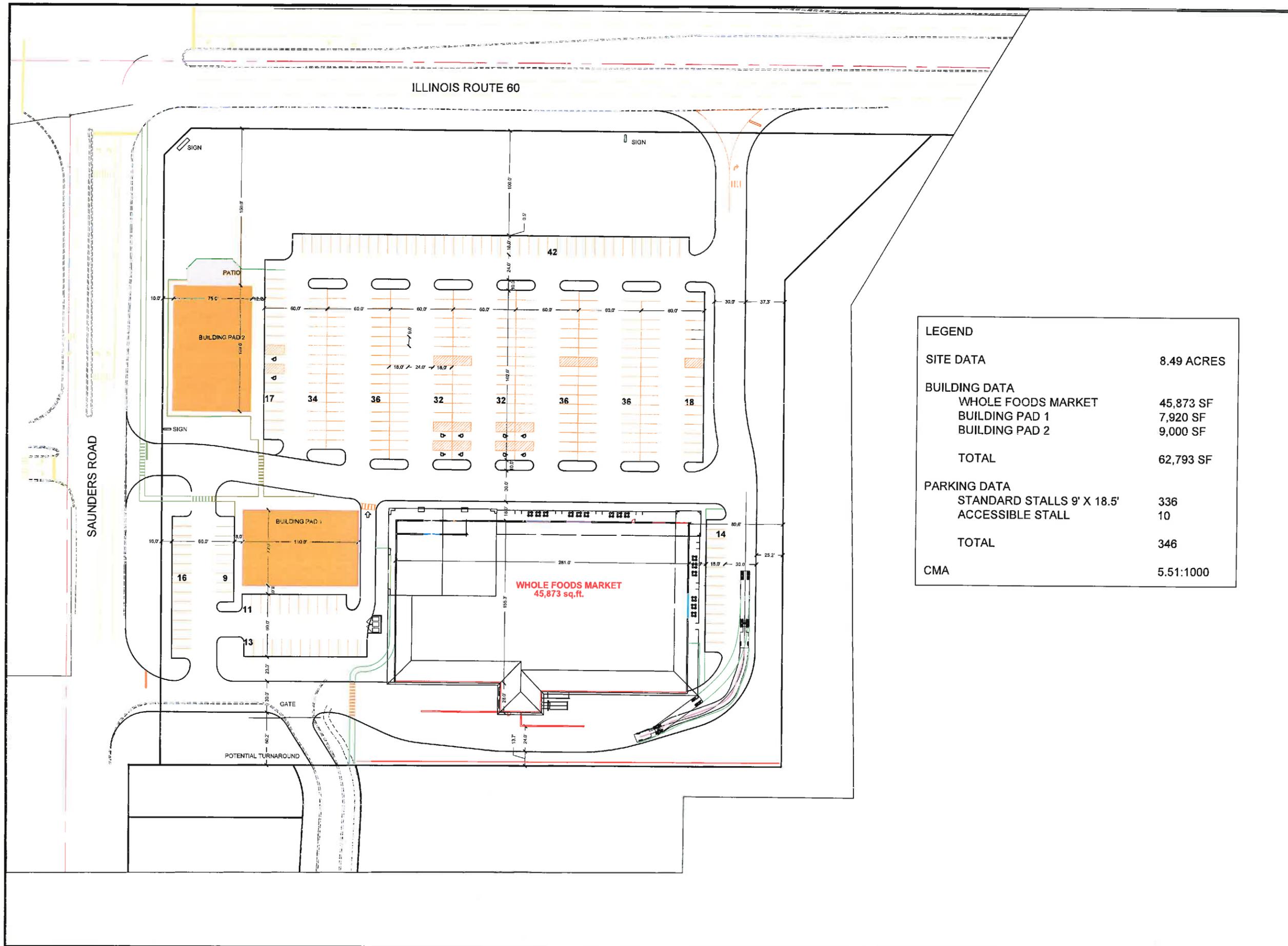
STATEMENT OF INTENT

Applicant Pine Tree Commercial Realty, LLC returns to the Plan Commission on remand from the City Council for consideration of changes to the site plan and conditions of approval previously given. The changes to the site plan are reflected thereon and are identified as follows:

1. There are three (3) total buildings now in lieu of five (5)
2. The bank outlot building with drive thru facilities has been eliminated
3. Total building area has been reduced by 6,697 square feet to 62,793 square feet
4. Parking has been reduced from 348 to 346 parking stalls with a parking ratio of 5.51
5. Building and pavement setbacks from the property lines have, for the most part increased substantially, as follows;
 - a. North building from 60' to 150'
 - b. North pavement from 42' to 100'
 - c. South building from 46' to 50'
 - d. South pavement from 22' to 13'
 - e. West building from 5' to 10'
 - f. West pavement from 19' to 10'
 - g. East building from 86' to 89'
 - h. East pavement from 10-16' to 25-37'
6. Provisions have been made in the new design to accommodate a future cul-de-sac condition at the west end of Amberley Court if deemed necessary
7. Provisions have been made to provide some of the storm water detention on the property and filtration through bio-swales

In addition to the changes to the site plan identified above, applicant seeks revisions to certain conditions of approval, stated as follows:

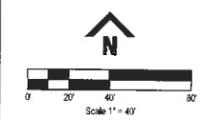
That upon complete build out, a gate be installed with a turnaround area, as reflected on the revised site plan on Amberley Court. The applicant shall install and operate the gate at the applicant's sole expense, and gate access shall be provided as deemed necessary by the applicant in coordination with Amberley Woods Master Association, Owners of the Courtyard Homes and the Condominiums. The gate shall remain in operation for a minimum of one year following completion of the Courtyard Homes, after which the City may, in the exercise of its discretion and if otherwise legal, require that a *cul-de-sac* be installed in lieu of a gate with a turnaround area. Request that the requirement for a Bond or Letter of Credit be deferred until such time that the City determines the need for a cul-de-sac.



LEGEND	
SITE DATA	8.49 ACRES
BUILDING DATA	
WHOLE FOODS MARKET	45,873 SF
BUILDING PAD 1	7,920 SF
BUILDING PAD 2	9,000 SF
TOTAL	62,793 SF
PARKING DATA	
STANDARD STALLS 9' X 18.5'	336
ACCESSIBLE STALL	10
TOTAL	346
CMA	5.51:1000

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Lake Forest, Illinois 60045
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Lake Forest, IL



ISSUED DATE	ISSUED FOR
03.02.2015	INTERNAL REVIEW

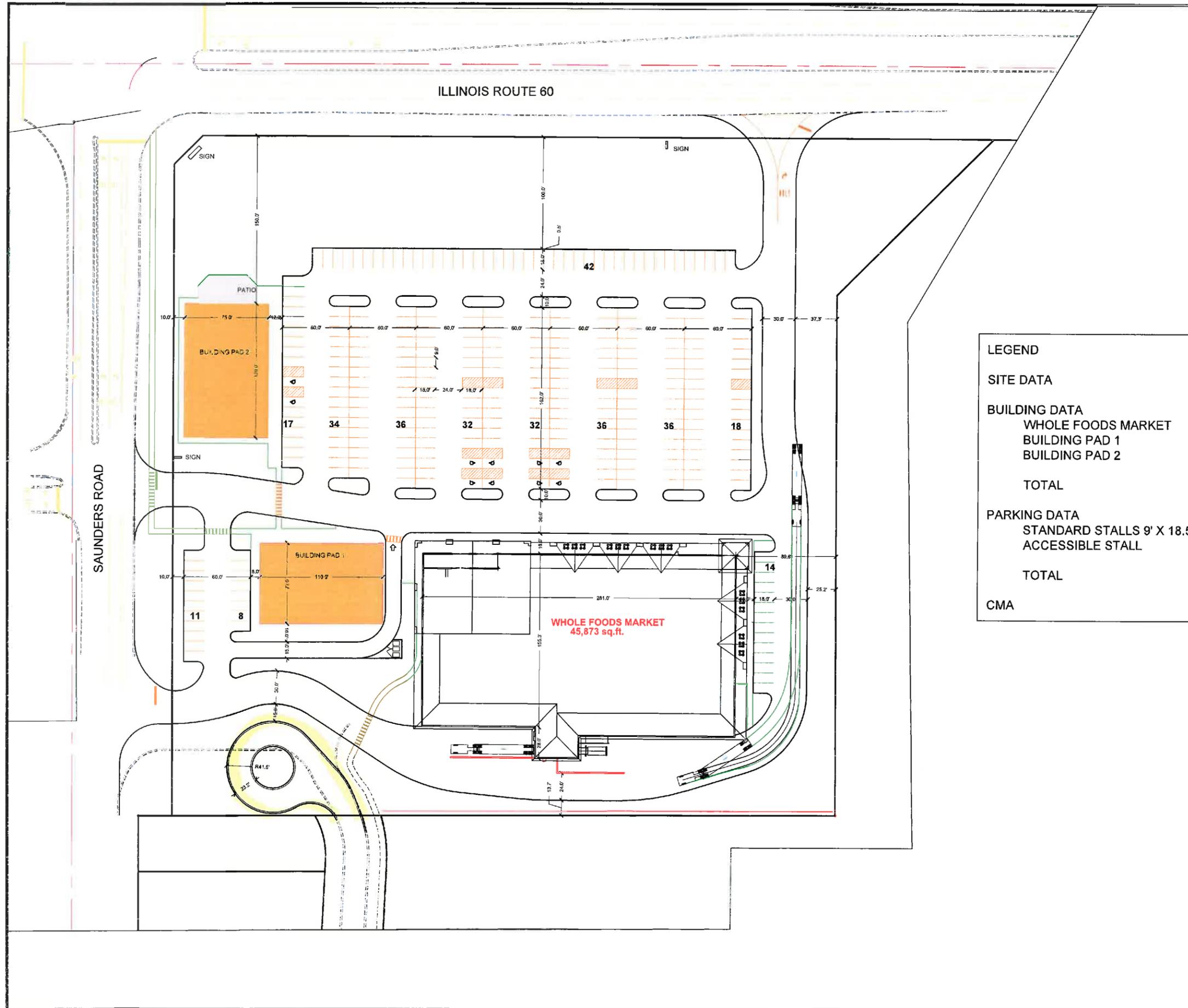
Michael G. Bleck, PE Date
License No. 022.000003 Expires 11/2015

PINETREE COMMERCIAL REALTY, INC.

70-842	Project No.
MGB	Drawn By
MGB	Checked By

Drawing No. **1**

Drawing Name
SITE PLAN

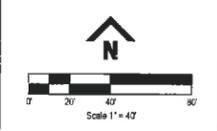


LEGEND	
SITE DATA	8.49 ACRES
BUILDING DATA	
WHOLE FOODS MARKET	45,873 SF
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BUILDING PAD 2	9,000 SF
TOTAL	62,793 SF
PARKING DATA	
STANDARD STALLS 9' X 18.5'	306
ACCESSIBLE STALL	10
TOTAL	316
CMA	5.03:1000

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ISSUED DATE	ISSUED FOR
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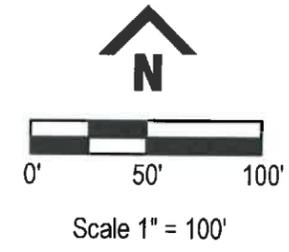
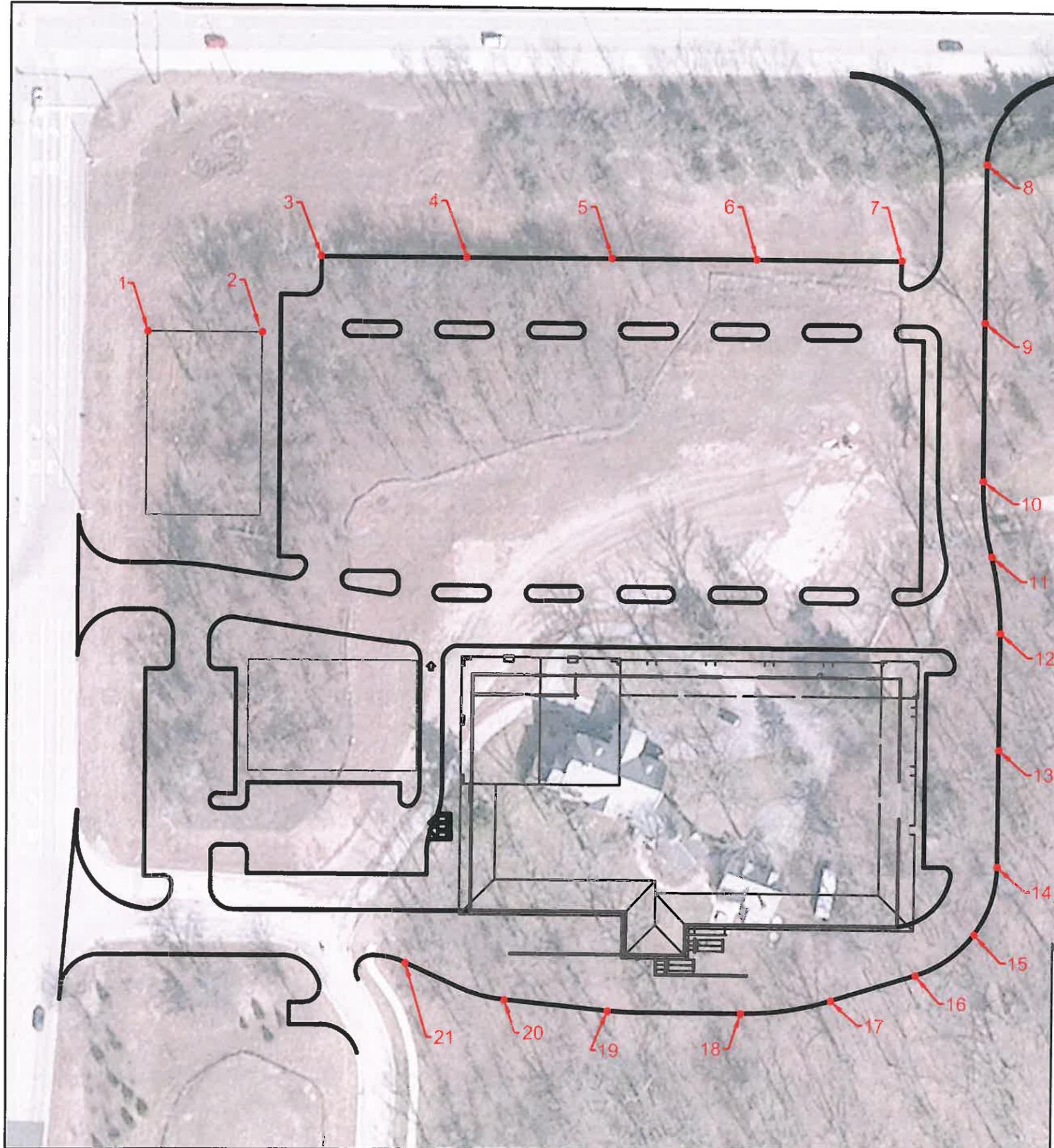
Michael G. Bleck, PE Date
Licensed Professional Engineer No. 1102106

PINETREE COMMERCIAL REALTY, INC.

70-842	Project No.
MGB	Drawn By
MGB	Checked By

Drawing No. **1**

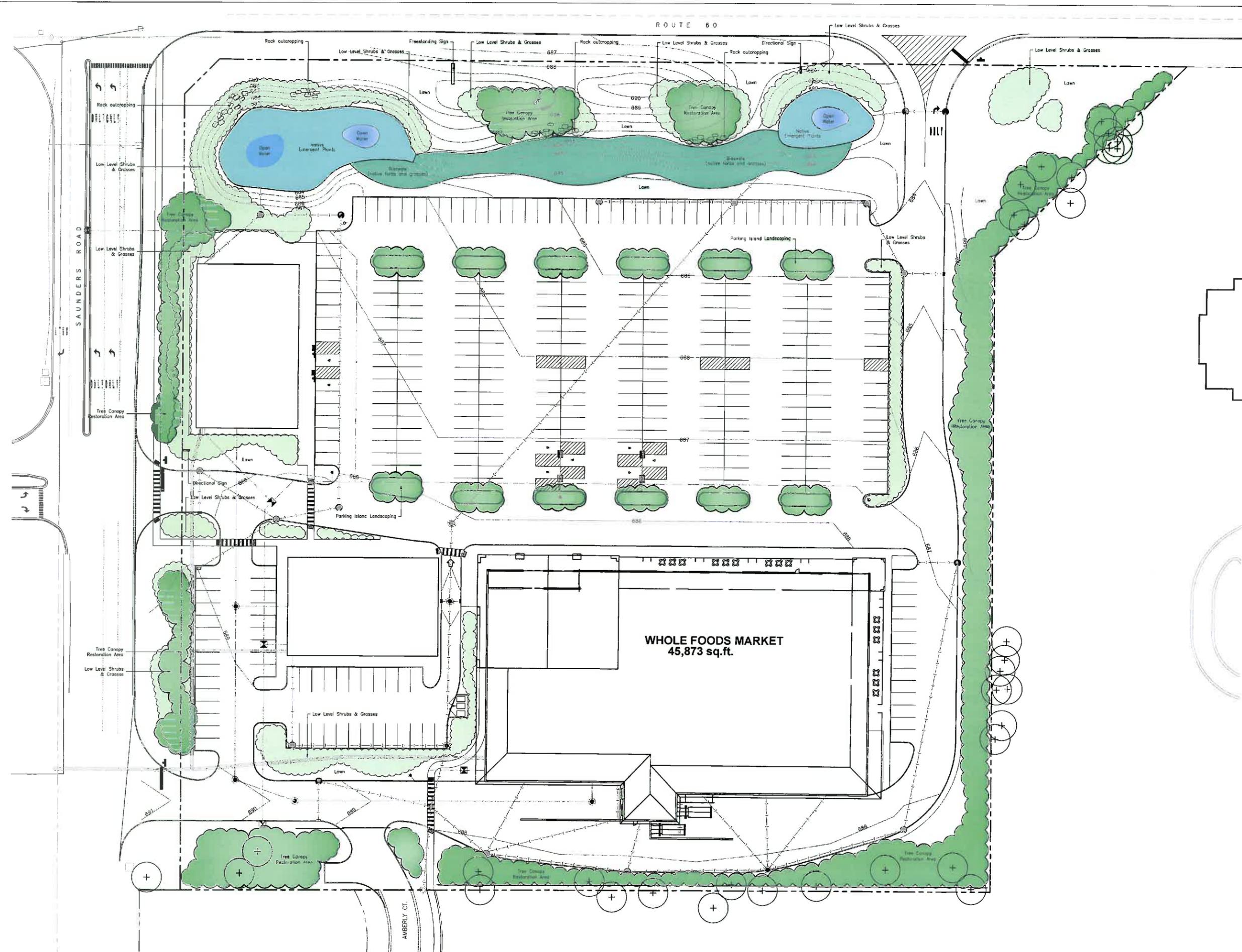
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SITE PLAN



Job No. 70-842 Whole Foods

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ROUTE 60



WHOLE FOODS

Route 60 and Saunders Road
Lake Forest

DAVID R. McCALLUM ASSOCIATES, INC.
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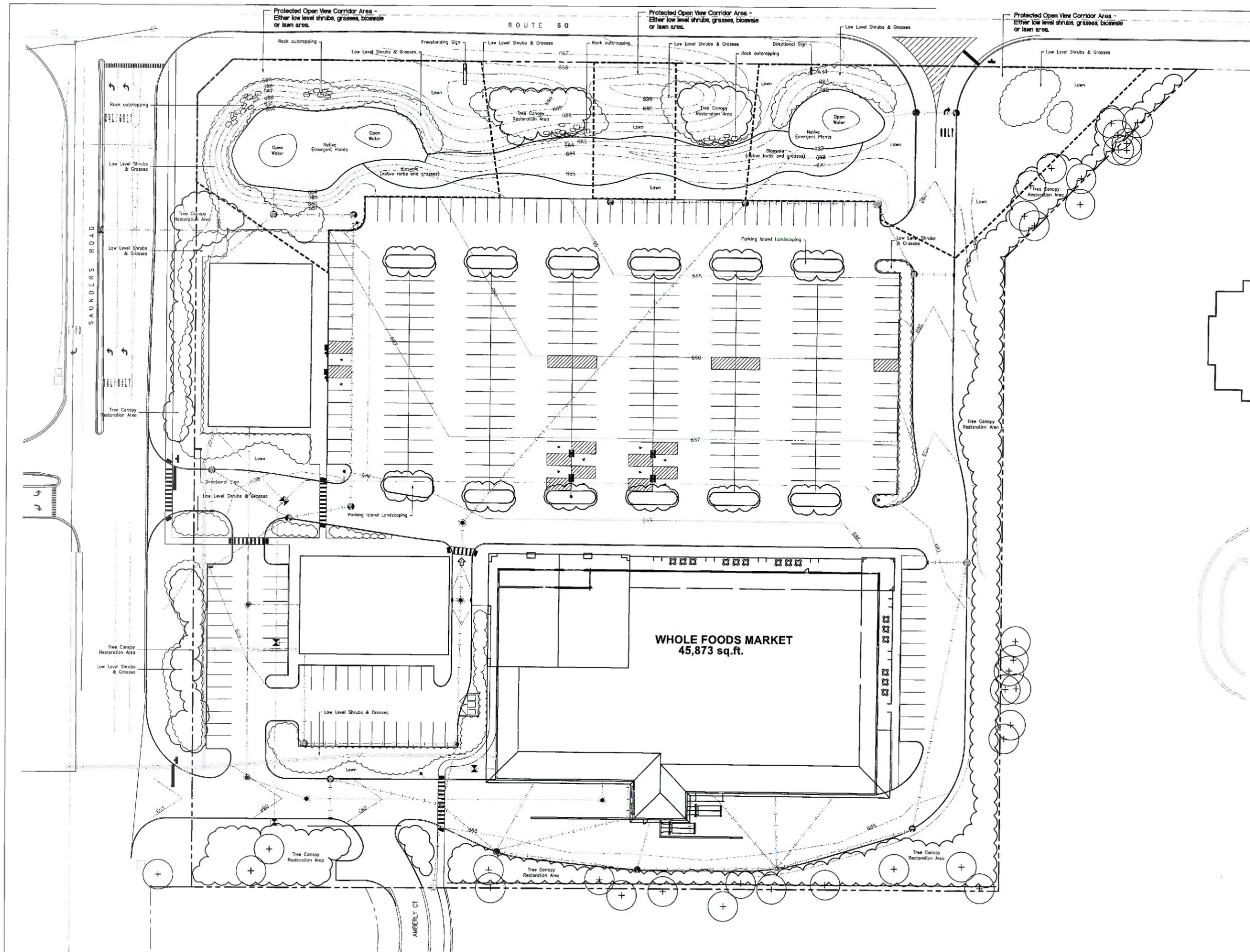
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3	For Review	04/01/15
2	For Review	03/26/15
1	For Review	03/20/15
	Issuance	

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Scale
1" = 30'

File
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Open View
Corridor Areas

Mark	Description	Date
5	For Review	04.09.15
4	For Review	04.08.15
3	For Review	04.01.15
2	For Review	03.26.15
1	For Review	03.20.15
Mark Description Date		
Issuance		

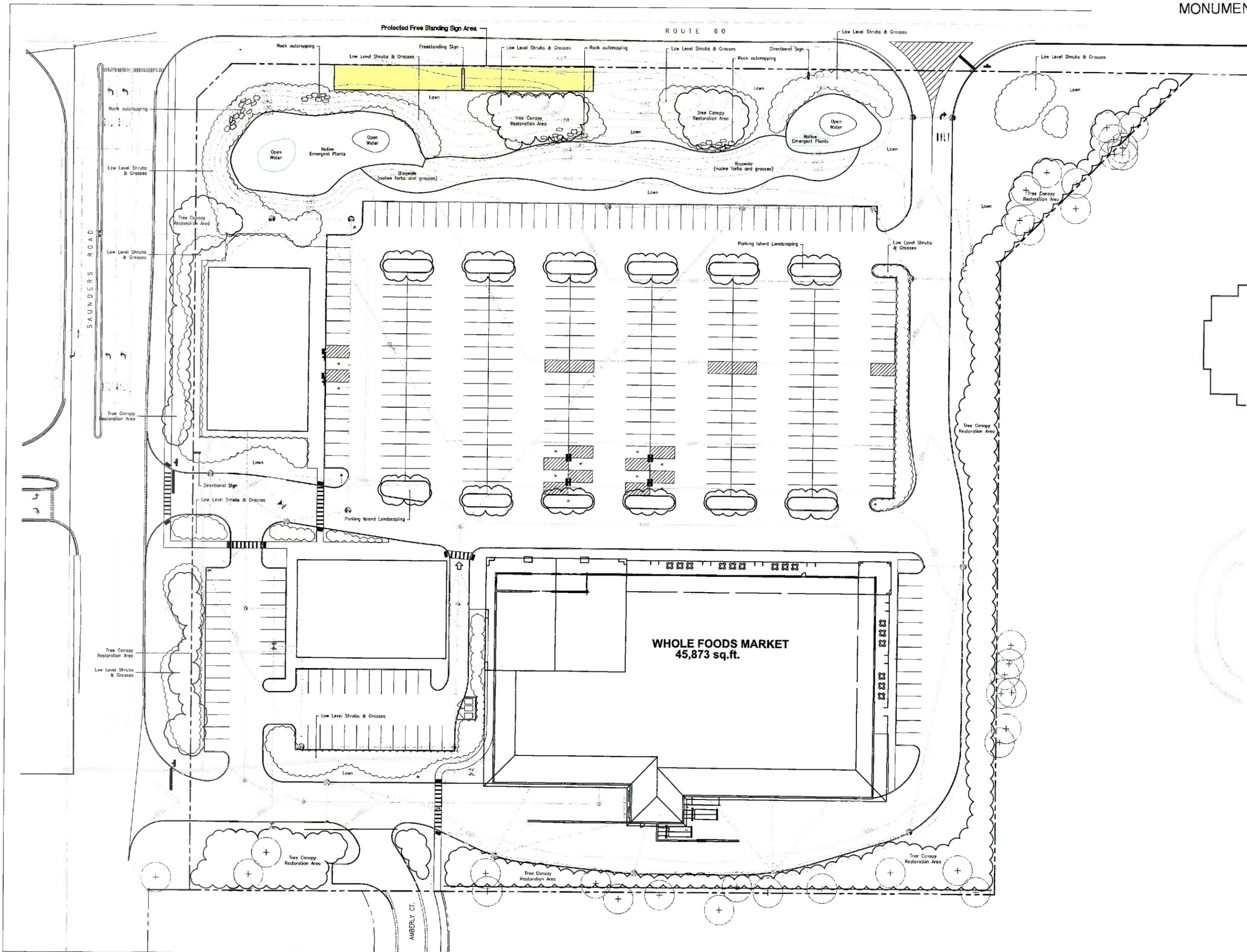
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49 Oakley Boulevard | Naperville, Illinois 60563

Protected Freestanding Sign Area

Mark	Description	Date
4	For Review	04/08/16
3	For Review	04/01/16
2	For Review	03/26/16
1	For Review	03/20/16

issuance

Number
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Scale
1" = 30'

File
43915

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PINE TREE RETAIL DEVELOPMENT

Traffic Impact Study

Lake Forest, Illinois

March 2015

Prepared for:

PTCR Acquisitions, LLC

Kimley»»Horn

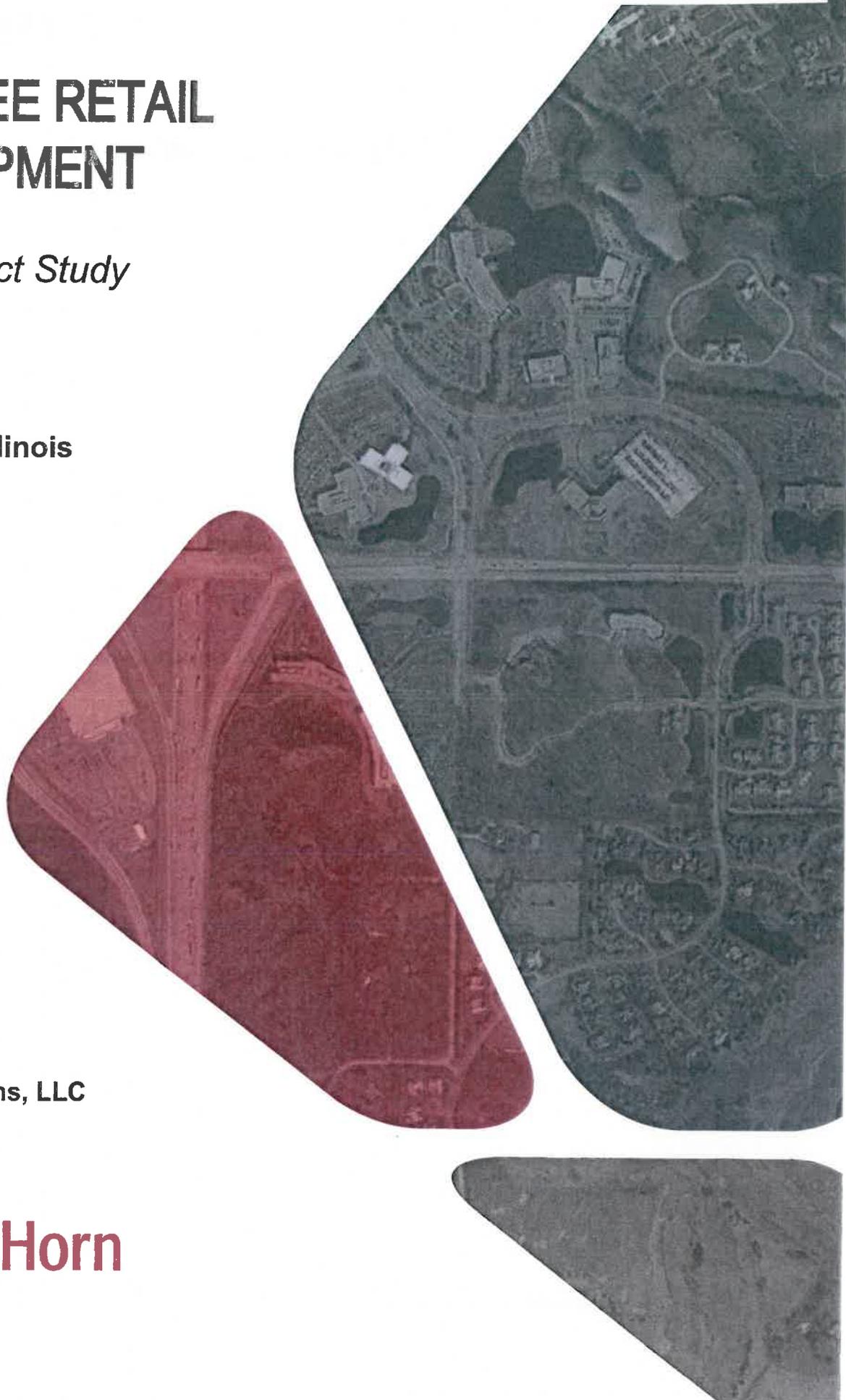


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EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained by PTCR Acquisitions, LLC, to perform an update to the previously submitted traffic impact study for the proposed commercial development on the southeast corner of Illinois Route 60 (IL 60) and Saunders Road in Lake Forest, Illinois. The current plan consists of a 45,873 square-foot supermarket and two retail outlots. Since the current plan replaces the two outlots previously proposed for the north side of the site with a berm, it has a lower density of commercial uses than the previous development plan. The site would be served by a full access driveway on Saunders Road, one right-in/right-out (RIRO) access along IL 60, and a full access on the south side of the site. A loading dock and emergency access roadway would also be provided along the southern perimeter of the site. The Saunders Road access would serve as the main entrance to the site and would align opposite an existing driveway to the adjacent office development. Along the southern site boundary, the western portion of an existing private roadway would become internal to the development, and provide access to the southern side of the site. Based on direction from jurisdictional agencies, the eastbound IL 60 lane drop that occurs east of Saunders Road would be removed as part of the proposed project. As such, the third through lane will be extended across the site frontage to the right-turn lane at the IL 60/Conway Farms Drive intersection. As a result, a shared through/right-turn lane would be provided at the RIRO Access, which is proposed to be located along the east property line to maximize spacing to the signal at IL 60/Saunders Road. In addition, the existing westbound left-turn lane on IL 60 at Saunders Road would be extended as a part of this project to better accommodate anticipated future queues.

Overall, the project operates reasonably well within the constraints of the adjacent roadway infrastructure. The intersection of IL 60/Saunders Road is one of the most heavily traveled in Lake Forest and the significant concentration of office and business development on the north side of IL 60 places atypical demands on the corridor and the Saunders Road intersection in particular.

With the exception of the evening peak hour, which is already failing due to the volume of commuters exiting the Tollway and the adjacent office parks, the site should have minimal impacts on the surrounding roadway network. Based upon the trip generation characteristics of the previously approved development plan, the proposed development could generate 67 percent fewer trips during the morning peak hour and provide an 11 percent reduction during the critical evening peak hour. In addition, the proposed site would add a RIRO Access on IL 60, which would further reduce the amount of site traffic utilizing the IL 60/Saunders Road intersection. The RIRO site access driveways should be designed with at least 50 feet of internal storage to accommodate the 95th percentile queues for exiting traffic. At Saunders Road/North Site Access, the outer northbound travel lane should be restriped to provide a shared through/right-turn lane, and the southbound through lane should be restriped to provide a shared left-turn/through lane. In addition, the eastbound right-turn lane should be restriped to provide a shared through/right-turn lane. To encourage vehicles to keep the intersection open for office and development traffic, crosshatch pavement striping and “Do Not Block Intersection” (R10-7) signage is recommended at Saunders Road/North Site Access in order to mitigate potential queue spillback from northbound left turns at the IL 60/Saunders Road intersection.

The impacts on the operations at the IL 60/Saunders Road and IL 60/Conway Farms Drive intersections are primarily the result of existing geometric constraints and increases in background

traffic through the study area. With the access configuration currently planned, the traffic should be accommodated adequately at the site driveways with implementation of the proposed improvements. Additional details related to the recommendations identified above are provided in the *Recommendations & Conclusion* section of this report.

1. INTRODUCTION

A traffic impact study was performed for the proposed commercial development on the southeast corner of IL 60 and Saunders Road in Lake Forest, Illinois. The current plan includes a 45,873 square-foot supermarket with two retail outlots. An existing residence is located in the southeast corner of the site and would be demolished prior to construction. Access to the site would be provided via one driveway along Saunders Road and one RIRO driveway along IL 60. Additionally, a full access would be provided off of the private roadway located along the southern boundary of the site. Approximately 200 feet of the existing private roadway would become part of the site and provide internal connections prior to curving to the south and continuing to the east. An aerial view of the study location and the surrounding roadway network is presented in **Exhibit 1.1**.

As a part of this study, the existing (2013) network was analyzed to establish current operational characteristics at the study intersections. Site trip generation characteristics were developed for the new facility and the adjacent outlots. Future traffic conditions were then evaluated for Existing + Site and Future (Year 2019) scenarios in order to determine the impact of the development on the area roadway network.

This report presents and documents data collection, summarizes the evaluation of traffic conditions on the surrounding roadways, identifies recommendations to mitigate operational issues, and details the potential impact of development traffic on the adjacent roadway network.



2. EXISTING CONDITIONS

Field observations were conducted to collect relevant information pertaining to the site, existing land uses in the surrounding area, the adjacent roadway network, current traffic volumes and operational conditions, lane configurations and traffic controls, and other key roadway characteristics. A detailed account of this information and findings are as follows.

2.1. Existing Land Uses

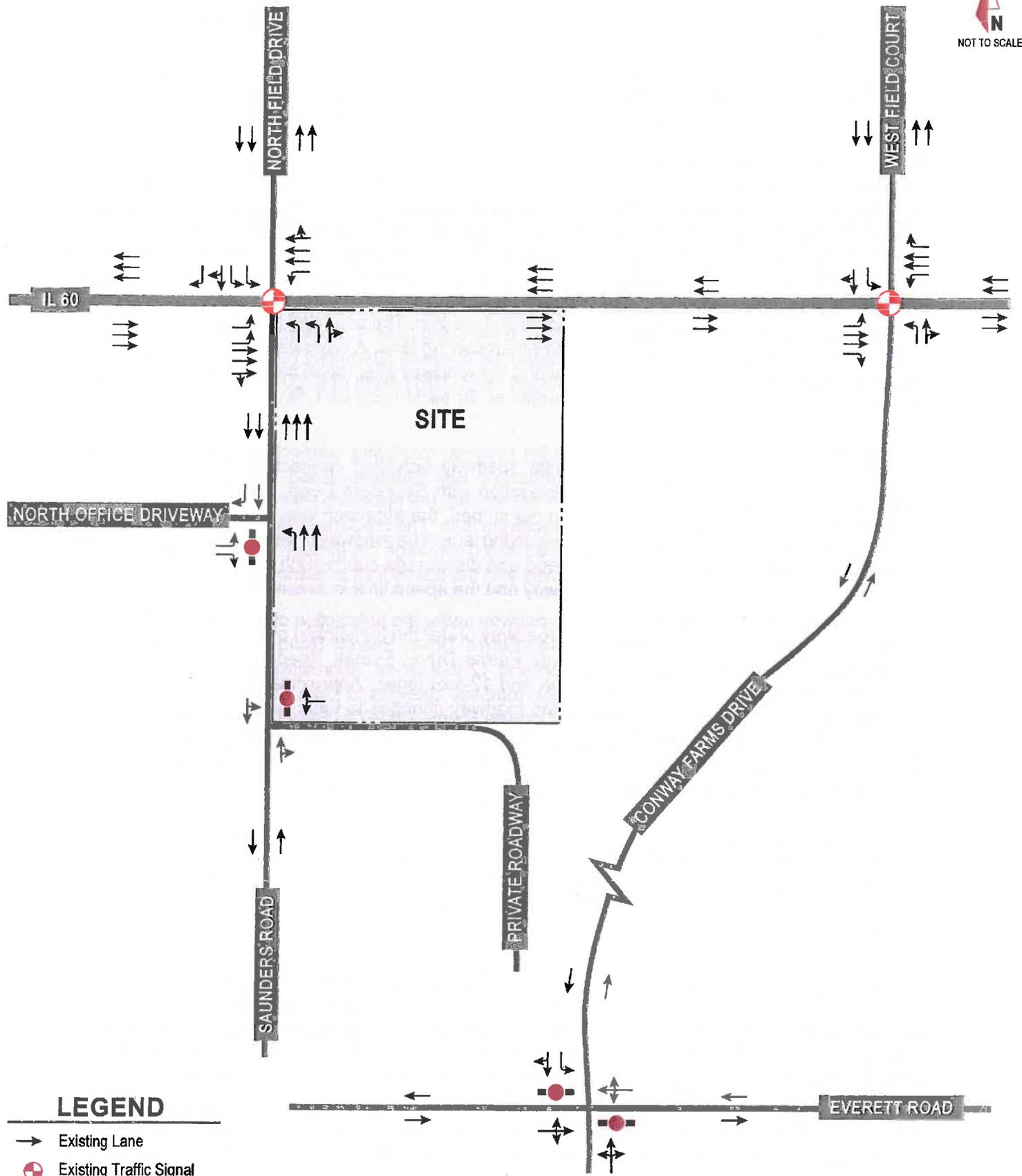
The subject site is located in the southeast quadrant of the IL 60/Saunders Road intersection and currently contains a former residence that would be demolished. With office parks located north and west of the development, the site is primarily surrounded by commercial uses; however, an existing and planned condominium development is located to the east, and future single-family homes would be located to the south. Offices for Solo Cup, Abbott, and Hoogwegt U.S., Inc., are located in the buildings west of the site, and the headquarters for Brunswick, Pactiv, Hospira, Trustmark Companies, and Tenneco are located in the Conway Park office development, north of IL 60. The Conway Farms neighborhood and golf course are located to the southeast along Conway Farms Drive. A retail area exists along IL 21 approximately 2.5 miles west of the site, and Interstate 94 (I-94), which lies just west of Saunders Road, provides regional connectivity to the surrounding area.

2.2. Existing Roadway Characteristics

The study area roadways serving the proposed site include IL 60 and local roadways under the jurisdiction of the City of Lake Forest: Saunders Road, Conway Farms Drive, Private Roadway, and Everett Road. Descriptions of each roadway are summarized below and are illustrated in **Exhibit 2.1**.

Illinois Route 60 (IL 60) is an east-west arterial roadway under the jurisdiction of the IDOT and has been designated by the Department as a Strategic Regional Arterial (SRA). At its signalized intersection with Saunders Road, the east leg of IL 60 provides two through lanes, a shared through/right-turn lane, an exclusive left-turn lane, and an 18-foot raised median with three receiving lanes. The west leg provides two through lanes, a shared through/right-turn lane, dual left-turn lanes, and a 6-foot raised median with three receiving lanes. Approximately 500 feet east of Saunders Road, the IL 60 cross-section narrows to two lanes in each direction with a thirty-foot raised median. At its signalized intersection with Conway Farms Drive, IL 60 provides two travel lanes in each direction with exclusive left- and right-turn lanes and an 18-foot median. A pedestrian crossing is provided for the east leg of the intersection, and the speed limit is posted as 45 MPH within the vicinity of the site.

Saunders Road is a north-south local roadway maintained by the City of Lake Forest. North of IL 60, the roadway is referred to as North Field Drive. At its signalized intersection with IL 60, North Field Drive provides dual left-turn lanes, a shared through/right-turn lane, and an exclusive right-turn lane with two receiving lanes. The south leg provides dual left-turn lanes, a shared through/right-turn lane and two receiving lanes. At its intersection with the North Office Driveway, the north leg of Saunders Road provides one through lane and an exclusive right-turn lane with three receiving lanes for the downstream intersection. The south leg provides an exclusive left-turn lane that is also utilized by vehicles queuing to turn left at intersection with IL 60, two through lanes, and a single receiving lane. At its intersection with Private Roadway, the north leg of Saunders Road provides a shared



LEGEND

- Existing Lane
- ⊕ Existing Traffic Signal
- Existing Stop Sign

through/left-turn lane with a single receiving lane and the south leg provides a shared through/left-turn lane with a single receiving lane. A 25 MPH speed limit is posted within the site vicinity.

Conway Farms Drive is a north-south minor collector roadway maintained by the City of Lake Forest. North of IL 60, the name of the roadway changes to West Field Court. South of Everett Road, the name of the roadway changes to Old Barn Lane. At its signalized intersection with IL 60, an exclusive left-turn lane with a shared through right-turn lane with two receiving lanes is provided for both the north and south leg. At its minor-leg stop-controlled intersection with Everett Road, the north leg of Conway Farms Drive is not striped and operates as an exclusive left-turn lane, a shared through/right-turn lane, and one receiving lane with a 6-foot raised median. The south leg (Old Barn Lane) provides a shared left-turn/through/right-turn lane with one receiving lane. A crosswalk is provided across the north leg and a 5-foot sidewalk is provided along the roadway alternating between the east and west sides. The speed limit on the roadway is posted as 30 MPH north of IL 60 and 25 MPH south of IL 60.

Private Roadway is an east-west residential roadway providing connectivity between Saunders Road and Conway Farms Drive. At its intersection with Saunders Road, no signage is provided; however, stop-control is assumed. Although not striped, the approach was observed operating as a shared left-turn/right-turn lane with a single receiving lane. The roadway is very narrow and curvilinear in nature, presumably to reduce vehicle speed and discourage cut-through traffic. A 5-foot sidewalk is provided along the north side of the roadway and the speed limit is assumed to be 5 mph.

Everett Road is an east-west local arterial roadway under the jurisdiction of the City of Lake Forest. At its unsignalized intersection with Conway Farms Drive, Everett Road provides a shared left-turn/through/right-turn lane in each direction and 12-foot lanes. Approximately one-tenth of a mile west of the intersection, the jurisdiction of the roadway changes to Lake County. The Everett Road bike path, which is 10 feet wide, begins at Conway Farms Drive/Old Barn Lane and continues west along the north side of the roadway. Additionally, a five-foot sidewalk is provided along the south side of the roadway beginning at Conway Farms Drive/Old Barn Lane and continuing to the east. The speed limit is posted as 35 MPH within the site vicinity.

North Office Drive meets Saunders Road at a minor-leg stop-controlled intersection and serves the adjacent office development. The driveway is striped as exclusive left- and right-turn lanes with two receiving lanes and has an 11-foot raised median.

2.3. Traffic Count Data

Manual traffic counts were performed at each of the study intersections in April and May of 2013 during the weekday peak periods (7:00-9:00 AM and 4:00-6:00 PM) and during the Saturday midday peak period (11:00 AM – 1:00 PM). The resulting traffic data indicates that the heaviest traveled hours occur on weekdays from 7:15-8:15 AM and 4:30-5:30 PM and on Saturday from 11:45-12:45 PM. The existing traffic volumes suggest that the Conway Park development, located north of IL 60 between Saunders Road and Conway Farms Drive, is a popular origin/destination for commuters traveling along the IL 60 corridor. This heavy movement to/from the west is most likely a result of the regional connections provided by the interchange with I-94, which is located approximately two-tenths of a mile

west of the IL60/Saunders Road intersection. Additionally, the volumes at the intersection of Saunders Road/Private Roadway suggest that utilizing Saunders Road for travel to/from IL 60 during the peak period is not a popular route for the residents located in the neighborhoods to the southeast, including Conway Farms. The existing traffic data is presented in **Exhibit 2.2**.

2.4. Existing Levels of Service

Traffic volume data was analyzed with Synchro capacity software in order to determine the quality of operation in the existing network. Operation is characterized according to the amount of control delay at each approach and quantified into a level of service (LOS). The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize a driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. LOS D is typically the minimum acceptable LOS accepted by agencies in Northeastern Illinois (including IDOT). A detailed description of each LOS rating can be found in **Table 2.1**.

Table 2.1. Level of Service Grading Descriptions¹

Level of Service	Description
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

1 - Highway Capacity Manual 2010

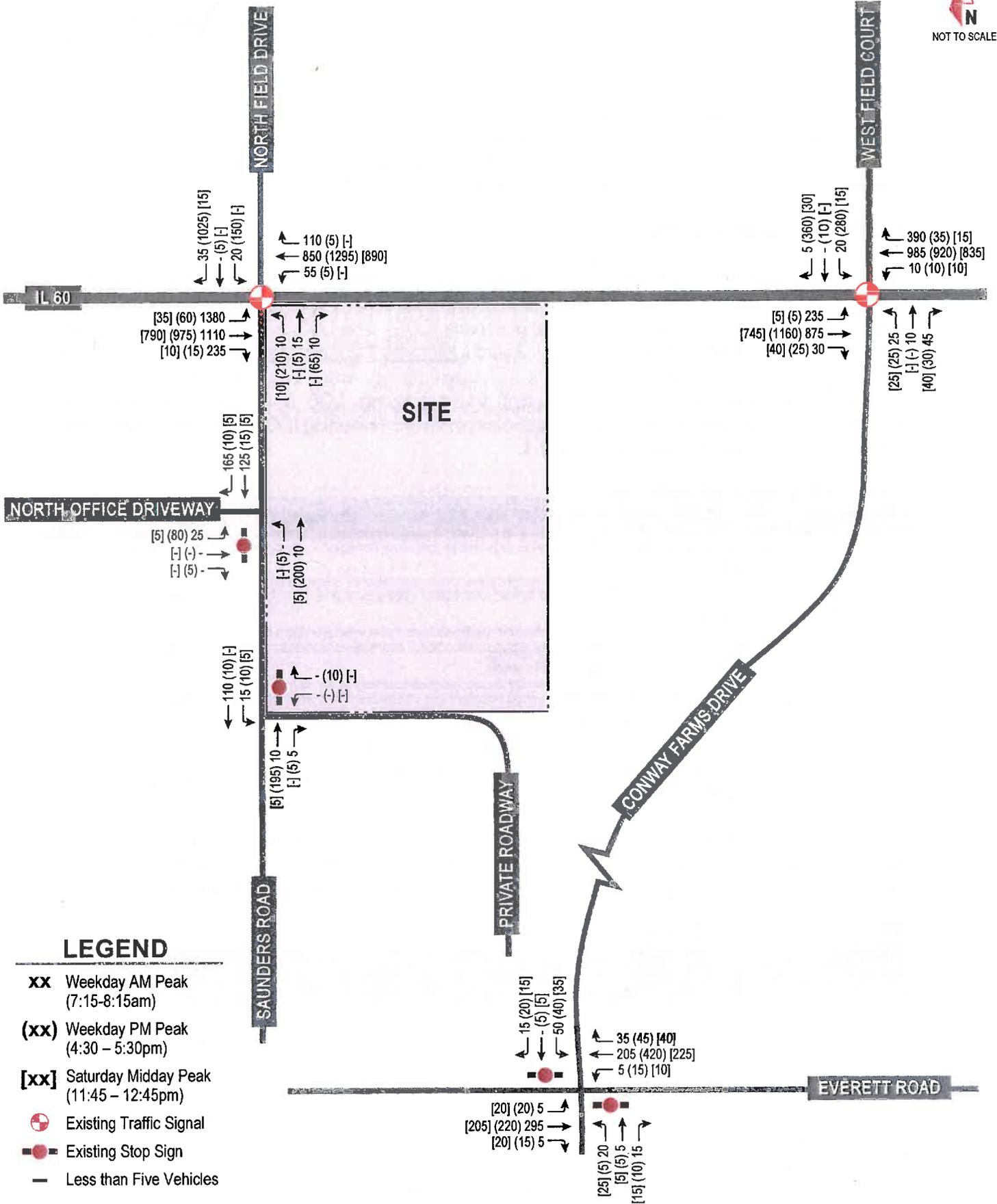
Table 2.2 presents the range of control delay for each LOS rating as detailed in the HCM. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, note that higher delays are tolerated for the corresponding LOS ratings.

Table 2.2. Level of Service Grading Criteria¹

Level of Service	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F ²	> 50	> 80

1 - Highway Capacity Manual 2010

2 - All movements with a Volume to Capacity (v/C) ratio greater than 1 receive a rating of LOS F.



LEGEND

- xx** Weekday AM Peak (7:15-8:15am)
- (xx)** Weekday PM Peak (4:30 - 5:30pm)
- [xx]** Saturday Midday Peak (11:45 - 12:45pm)
- Existing Traffic Signal
- Existing Stop Sign
- Less than Five Vehicles

Based on the HCM standards, each approach LOS was determined for the identified weekday morning and evening peak hours. Delay for uncontrolled approaches with a dedicated left-turn lane is based on results for the opposed left-turning movement only. Based upon discussions with IDOT staff, right turn on red (RTOR) movements were permitted in the analysis for the exclusive southbound right-turn only lane at the IL 60/Saunders Road intersection. Based upon staff direction, the RTOR saturated flow rate was included as one-half of the Synchro-calculated rate. It should be noted that since the input value is a saturation flow rate and not the number of right turns occurring on red, this value may be higher than the existing right-turn volume.

Due to the shared lane approach geometry at the IL 60/Saunders Road intersection, as well as permitted RTOR from the outer right-turn lane, the intersection could not be analyzed using traditional HCM 2010 methodologies. Therefore, per direction from IDOT, Synchro methodologies were used to analyze the intersection. LOS data for the study intersections is reported in **Table 2.3**.

Table 2.3. Existing (Year 2013) Levels of Service

Intersection/Movement	Weekday AM Peak		Weekday PM Peak		Saturday Midday Peak	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
<i>IL 60/Saunders Road (Signalized)¹</i>						
Eastbound	22	C	15	B	5	A
Westbound	13	B	12	B	5	A
Northbound	73	E	53	D	54	D
Southbound	63	E	>120	F	54	D
<i>Intersection</i>	<i>20-</i>	<i>B</i>	<i>51</i>	<i>D</i>	<i>9</i>	<i>A</i>
<i>Saunders Road/North Office Driveway¹</i>						
Eastbound (Left)	10-	A	10-	A	9	A
Eastbound (Right)	9	A	8	A	8	A
Northbound (Left)	8	A	7	A	7	A
<i>Saunders Road/Private Roadway¹</i>						
Westbound	9	A	9	A	9	A
Southbound	1	A	4	A	6	A
<i>IL 60/Conway Farms Drive (Signalized)</i>						
Eastbound	23	C	16	B	6	A
Westbound	13	B	12	B	5	A
Northbound	73	E	53	D	54	D
Southbound	63	E	>120	F	54	D
<i>Intersection</i>	<i>20-</i>	<i>B</i>	<i>51</i>	<i>D</i>	<i>9</i>	<i>A</i>
<i>Everett Road/Conway Farms Drive</i>						
Eastbound (Left)	8	A	8	A	8	A
Westbound (Left)	8	A	8	A	8	A
Northbound	13	B	14	B	13	B
Southbound (Left)	15+	C	20	C	15-	B
Southbound (Through/Right)	10-	A	13	B	11	B

¹ - HCM 2010 Methodology does not support shared lane approaches; therefore, Synchro methodology was used to analyze the intersections along Saunders Road.

With the exception of the two locations on IL 60, the majority of the study intersections operate at an acceptable LOS for existing conditions. The travel patterns that occur at the IL 60/Saunders Road intersection (heavy eastbound to northbound traffic in the morning and heavy southbound to westbound traffic in the evening) have a significant impact on the overall operations of the intersection, and several of the movements operate at LOS E or F. During the morning peak hour, the high volume of eastbound left-turns combined with the low volume of northbound vehicles results in minimum green time for the northbound approach, causing it to operate at LOS E. To facilitate eastbound traffic on IL 60, especially left turns, reduced green time is provided for the westbound movements, resulting in LOS F operations for the westbound left turn. During the evening peak hour, the southbound approach operates at LOS F due to the high volume of left- and right-turning vehicles. Additionally, for the northbound approach, the high volume of left turns combined with the available green time causes the left-turn movement to

operate at LOS F and the approach to operate at LOS E. These failing movements contribute to the overall LOS F for the intersection.

At IL 60/Conway Farms Drive, the overall intersection operations are LOS B for the morning peak hour and LOS D during the evening peak hour, even though several of the movements operate at LOS E or F. During the morning peak hour, the eastbound and westbound left turns operate at LOS F and E, respectively, and the northbound and southbound right-turns operate at LOS E. For the evening peak hour, the eastbound and westbound left turns operate at LOS E. However, due to the high volume of southbound right turns, the shared through/right-turn lane operates at LOS F causing the southbound approach to operate at LOS F.

The remaining study intersections operate at an acceptable level of service during existing conditions.

3. FUTURE CONDITIONS

This section of the report outlines the proposed development plan, summarizes site-specific traffic characteristics, and develops future traffic projections for analysis.

3.1. Development Characteristics & Site Access

The proposed site is planned to include a mix of commercial retail and restaurant uses with one anchor tenant and two outlot buildings. The anchor tenant would likely be a regional grocer, while the outlots could consist of a variety of ancillary retail uses. Based upon discussions with DOT and City staff, the proposed development would include extending the outside through lane on IL 60 across the site frontage to connect to the right-turn lane at the IL 60/Conway Farms Drive intersection, removing the existing eastbound lane drop.

Access to the site would be provided via driveways along Saunders Road and IL 60 as well as through a connection with a private roadway. A loading dock and emergency access roadway would be provided along the southern perimeter. The North Site Access would align opposite an existing office driveway on Saunders Road and would serve as the primary entrance to the development. The RIRO Access would be located on the northeast side of the site and would connect to IL 60. As part of the development, approximately 200 feet of the existing private roadway would become internal to the proposed development. This portion of the roadway would provide internal connections to the site prior to curving to the south and continuing east. The connection to Saunders Road is referred to as the Private Road/South Site Access.

3.2. Trip Generation

In order to calculate site-generated traffic projections for the proposed development, data was referenced from the Institute of Transportation Engineers (ITE) manual Trip Generation, Ninth Edition. The trip generation equation for each ITE Land Use Code (LUC) corresponding to a proposed use is shown in **Table 3.1**. Copies of the ITE data are provided in the appendix.

Table 3.1. ITE Trip Generation Data by Land Use

ITE Land Use	Unit	Weekday			Saturday Midday
		Daily	AM Peak Hour	PM Peak Hour	Peak Hour
Shopping Center (LUC 820)	Per 1,000 sq. ft.	$\ln(T) = 0.65\ln(X) + 5.83$ 50% in/50% out	$\ln(T) = 0.61\ln(X) + 2.24$ 62% in/38% out	$\ln(T) = 0.67\ln(X) + 3.31$ 48% in/52% out	$\ln(T) = 0.65\ln(X) + 3.78$ 52% in/48% out

- T - Site-generated trips
- X - 1,000 square feet gross floor area

Based on the data shown above, site-generated traffic projections were calculated for the proposed land uses and are summarized in **Table 3.2**.

Table 3.2. Site-Generated Traffic Projections

Land Use	Unit	Daily	Weekday				Saturday Midday	
			AM Peak Hour		PM Peak Hour		Peak Hour	
			In	Out	In	Out	In	Out
<i>UNADJUSTED TRIPS</i>								
Supermarket (LUC 850)	62,793 sq. ft.	5,020	75	45	210	230	335	310
<i>PASS-BY</i>								
<i>Total Pass-by Trips</i>	34%	-1,710	-20	-20	-75	-75	-110	-110
Total New Trips		3,310	55	25	135	155	225	200

Due to the nature of the surrounding land uses, the most recent version of the ITE publication Trip Generation Handbook, 2nd Edition, was referenced in order to obtain the percent pass-by for the site. As such, pass-by traffic was assumed to be 34 percent of site traffic. Pass-by traffic reflects the travel patterns of users who visit the site on route to another destination. For example, someone accessing the site along their route to work in the morning, on their way home in the evening, or to eat lunch at a restaurant while running other errands would represent pass-by trips. While these are new vehicles movements entering or exiting a driveway, they do not add new traffic to the streets and adjacent intersections since they are already driving by the site to their primary destination. Since internal capture is already accounted for in LUC 820, it was not applied; therefore, primary trips make up the remaining 66 percent of the development traffic, which are expected to travel directly from their origin to the site and back.

3.3. Directional Distribution

After establishing the anticipated site traffic volumes, a projected trip distribution was derived from existing traffic patterns in the study area and the nature of the surround land uses. Due to the existing congestion along IL 60, and with the considerable amount of office space located in the developments to the immediate north and west of the site, it is likely that a significant portion of visitors to the site during the morning and evening peak hours would be comprised of linked trips. A linked trip is where vehicles would continue on their journey to/from work after stopping at the proposed development. Additionally, based upon the site's proximity to I-94, it is likely that a portion of Lake Forest residents utilizing the interstate to travel home from work would exit at IL 60 to access the site, prior to continuing east to their homes (a diverted link trip). As such, different trip distributions were established for the morning and evening peak hours, to account for the varying travel patterns to/from the site.

Since the office developments north and west of the site are not generally open on Saturdays, it is likely that for the majority of trips are traveling to the proposed development as their primary destination. As such, vehicles would enter from and exit to the same direction (i.e. a trip entering from the east would exit and travel to the east). Therefore, traffic was distributed to/from the site based upon the existing travel patterns for the Saturday midday peak hour. Traffic generated by these new uses was assigned to the adjacent roadway network and the proposed site access system according to this distribution. The estimated trip distribution is summarized in **Table 3.3**.

Table 3.3. Estimated Trip Distribution

Traveling to/from:	Portion of Site Traffic					
	AM Peak		PM Peak		Saturday Midday Peak	
	To	From	To	From	To	From
West via IL 60	30%	50%	45%	40%	50%	50%
East via IL 60	25%	45%	45%	15%	45%	45%
North via Saunders Road	40%	0%	5%	40%	0%	0%
Conway Farms and Neighborhoods to the Southeast	5%	5%	5%	5%	5%	5%
Total	100%	100%	100%	100%	100%	100%

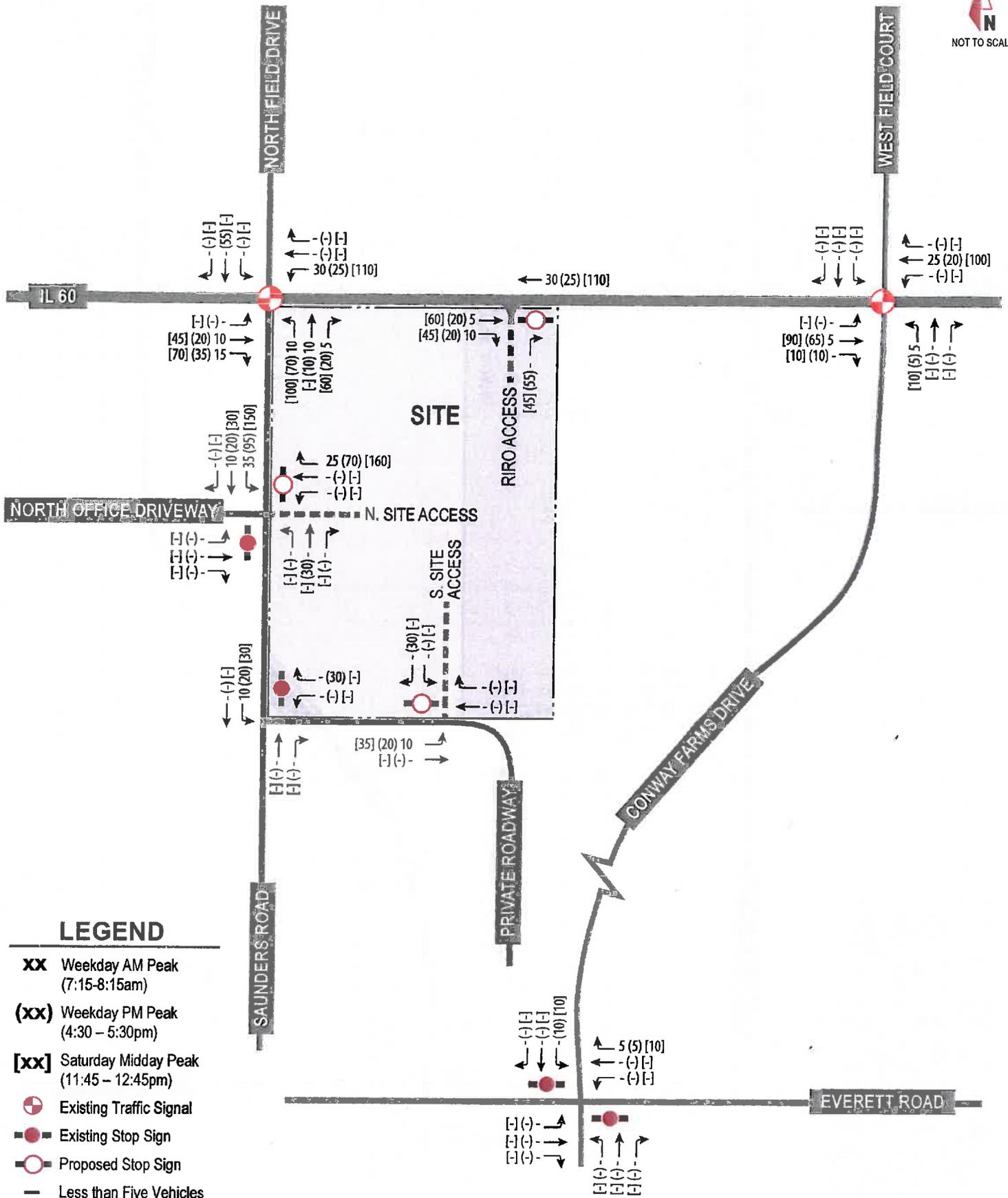
3.4. Trip Assignment

The site traffic assignment, representing traffic volumes associated with the proposed development at the study area intersections, is a function of the estimated trip generation (**Table 3.2**) in conjunction with the directional distribution (**Table 3.3**). It should be noted that all traffic traveling from Conway Farms and the neighborhoods to the southeast were assumed to utilize IL 60. A traffic control device would be installed along Private Roadway to limit access to/from the east on the roadway to the residents of Amberley Court. Since, these volumes are expected to be minimal, these trips were not included as part of the trip assignment in order to analyze the greatest impact to IL 60.

Primary trips were assigned to the study intersections in accordance with the trip distribution above (**Exhibit 3.1**), while pass-by trips were assigned based on the assumed percent of traffic traveling to the site from the adjoining roadways (**Exhibit 3.2**). **Exhibit 3.3** illustrates the total site traffic assignment for the proposed retail development. Because pass-by volumes are already accounted for in local traffic, a negative number is sometimes shown in the trip assignment figure to reflect the redistribution of traffic on adjacent streets.

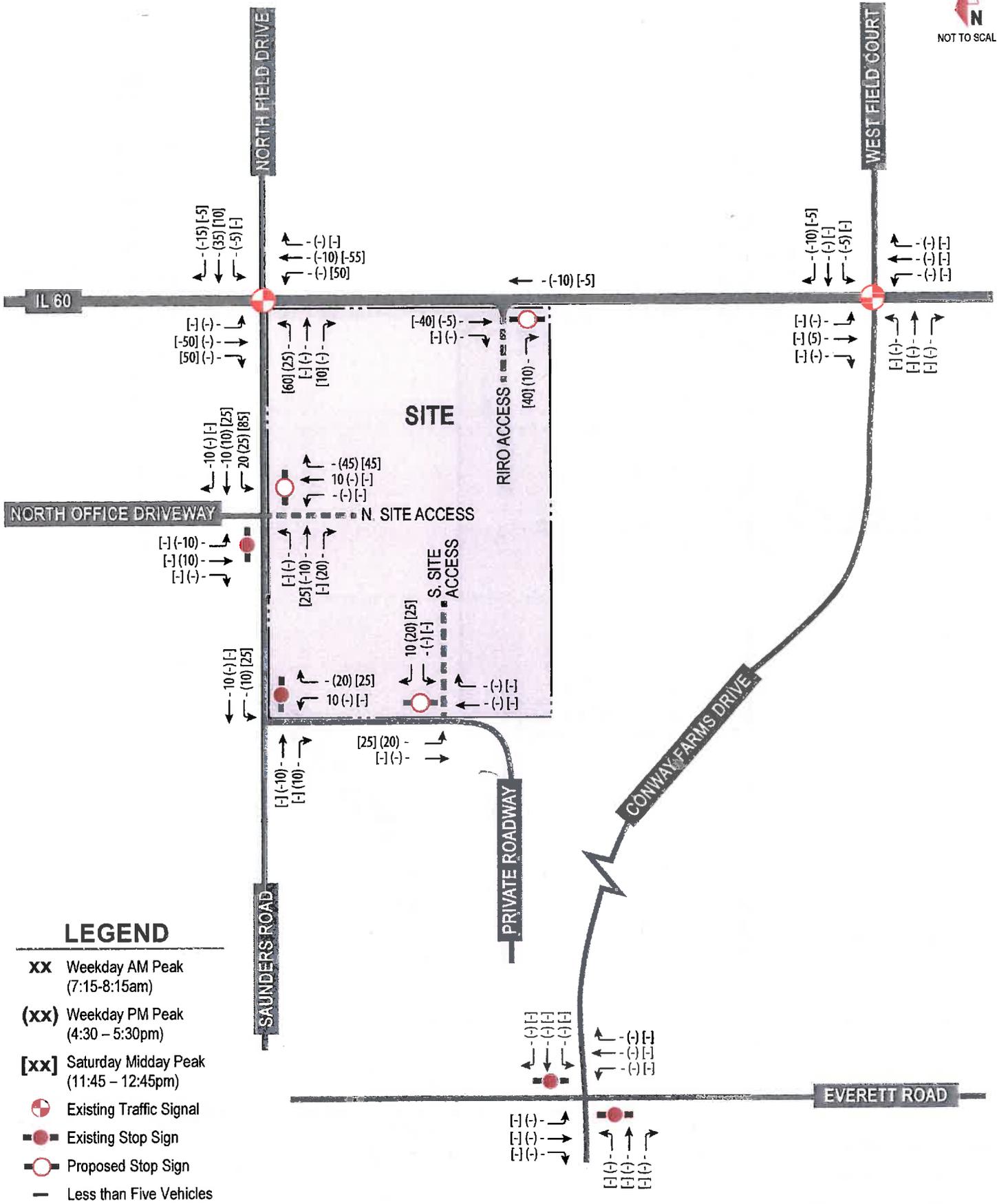
3.5. Trip Generation Comparison

The total new trips generated as part of the proposed development were then compared to the total new trips that could be generated assuming the property was developed under the previously approved development plan. It was assumed at that time that the site would be developed as two office buildings, totaling 85,252 square feet, and an 11,500 square-foot Drive-in Bank. The resulting total new trips for the previously approved development were calculated and compared to those projected for the currently proposed development. This comparison is shown in **Table 3.4**.



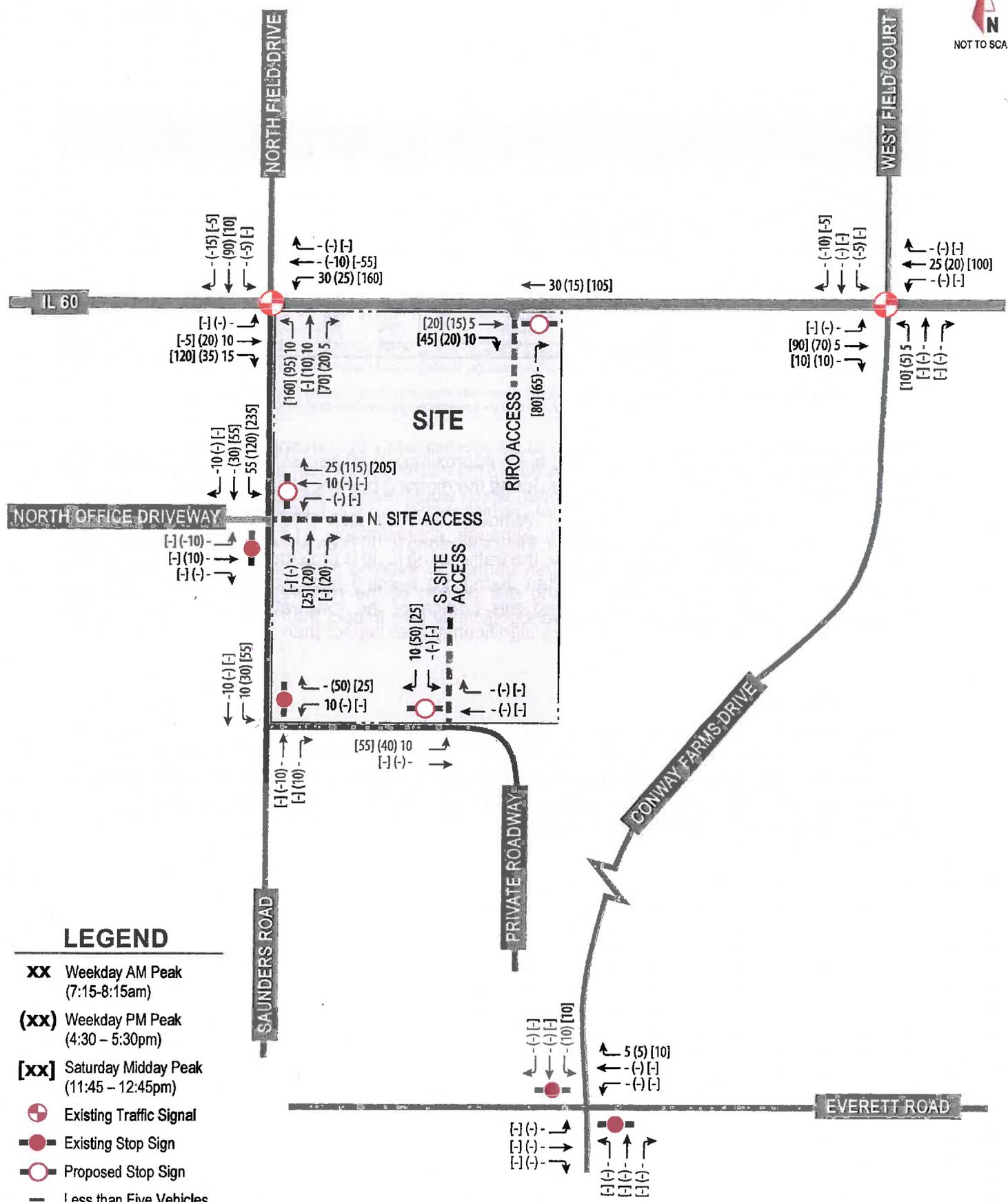
LEGEND

- xx** Weekday AM Peak (7:15-8:15am)
- (xx)** Weekday PM Peak (4:30 - 5:30pm)
- [xx]** Saturday Midday Peak (11:45 - 12:45pm)
- Existing Traffic Signal
- Existing Stop Sign
- Proposed Stop Sign
- Less than Five Vehicles



LEGEND

- XX** Weekday AM Peak (7:15-8:15am)
- (XX)** Weekday PM Peak (4:30 – 5:30pm)
- [xx]** Saturday Midday Peak (11:45 – 12:45pm)
- Existing Traffic Signal
- Existing Stop Sign
- Proposed Stop Sign
- Less than Five Vehicles



LEGEND

- XX** Weekday AM Peak (7:15-8:15am)
- (xx)** Weekday PM Peak (4:30 - 5:30pm)
- [xx]** Saturday Middy Peak (11:45 - 12:45pm)
- Existing Traffic Signal
- Existing Stop Sign
- Proposed Stop Sign
- Less than Five Vehicles

Table 3.4. Trip Generation Comparison

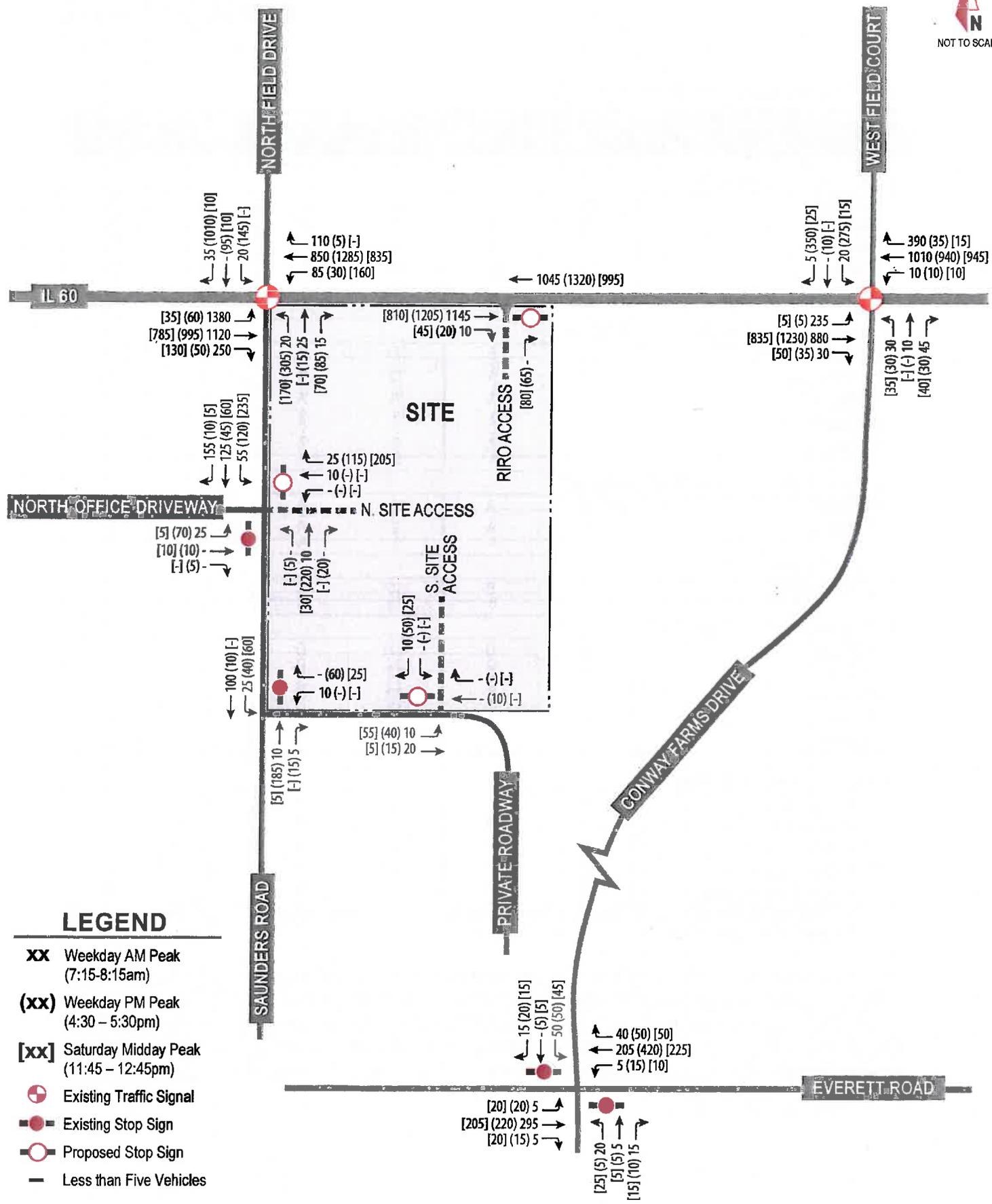
Development Plan	Daily	AM Peak			PM Peak			Saturday Midday Peak		
		In	Out	Total	In	Out	Total	In	Out	Total
TOTAL NEW TRIPS										
Approved Plan (2006) ¹	2,060	195	45	240	105	220	325	105	95	200
Proposed Plan ²	3,310	55	25	80	135	155	290	225	200	425
COMPARISON										
<i>Change in Total Trips</i>	<i>1,250</i>	<i>-140</i>	<i>-20</i>	<i>-160</i>	<i>30</i>	<i>-65</i>	<i>-35</i>	<i>120</i>	<i>105</i>	<i>225</i>
<i>Percent Change in Total Trips</i>	<i>61%</i>	<i>-72%</i>	<i>-44%</i>	<i>-67%</i>	<i>29%</i>	<i>-30%</i>	<i>-11%</i>	<i>114%</i>	<i>111%</i>	<i>113%</i>

- 1 - Assuming that the site would be developed as two office buildings, totaling 85,252 square feet, and an 11,500 square-foot Drive-in Bank with 47% pass-by assigned to the bank.
- 2 - Assuming that the site would be developed as a 62,793 square foot shopping center including 34% pass-by.

While the weekday daily trips are projected to be approximately 60 percent higher for the proposed plan, it could generate 67 percent fewer trips during the morning peak hour and provide an 11 percent reduction in trips during the evening peak hour, which would result in less impact to the surrounding roadway network during peak congestion. Although approximately 113 percent more trips are projected for the Saturday midday peak hour, the traffic along IL 60 is projected to be about 70 percent lower during the Saturday midday peak than during the evening peak hour, primarily due to the concentration of office developments along this portion of the roadway. Overall, the currently proposed development is projected to have significantly less impact than the previously approved plan.

3.6. Existing + Site

To understand the operations of the study intersections without the influence of background growth, an analysis was conducted for the Existing + Site Scenario that includes existing volumes plus the projected site traffic. The projections for the Existing + Site Scenario are illustrated in **Exhibit 3.4** and capacity analysis results are shown in **Table 3.5**. Existing IDOT-provided timings and cycle lengths were utilized for the signalized study intersections.



LEGEND

- XX** Weekday AM Peak (7:15-8:15am)
- (XX)** Weekday PM Peak (4:30 - 5:30pm)
- [XX]** Saturday Midday Peak (11:45 - 12:45pm)
- Existing Traffic Signal
- Existing Stop Sign
- Proposed Stop Sign
- Less than Five Vehicles

Table 3.5. Existing (Year 2013) + Site Levels of Service

Intersection/Movement	Weekday AM Peak		Weekday PM Peak		Saturday Midday Peak	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
<i>IL 60/Saunders Road (Signalized)¹</i>						
Eastbound	29	C	24	C	16	B
Westbound	32	C	35-	C	16	B
Northbound	69	E	>120	F	52	D
Southbound	45	D	>120	F	27	C
<i>Intersection</i>	<i>30</i>	<i>C</i>	<i>115</i>	<i>F</i>	<i>20-</i>	<i>B</i>
<i>Saunders Road/North Office Driveway/North Site Access¹</i>						
Eastbound (Left)	11	B	15+	C	18	C
Eastbound (Right)	10-	A	13	B	12	B
Westbound	9	A	10-	A	9	A
Northbound (Left)	8	A	7	A	7	A
Southbound	1	A	6	A	6	A
<i>Saunders Road/Private Roadway/South Site Access¹</i>						
Westbound	9	A	10-	A	9	A
Southbound	2	A	6	A	7	A
<i>IL 60/RIRO Access</i>						
Northbound (Right)	15-	B	18	C	14	B
<i>IL 60/Conway Farms Drive (Signalized)</i>						
Eastbound	37	D	37	D	1	A
Westbound	13	B	13	B	6	A
Northbound	72	E	52	D	52	D
Southbound	63	E	>120	F	53	D
<i>Intersection</i>	<i>26</i>	<i>C</i>	<i>56</i>	<i>E</i>	<i>6</i>	<i>A</i>
<i>Everett Road/Conway Farms Drive</i>						
Eastbound (Left)	8	A	8	A	8	A
Westbound (Left)	8	A	8	A	8	A
Northbound	13	B	14	A	13	B
Southbound (Left)	15+	C	20+	C	15+	C
Southbound (Through/Right)	10-	A	13	B	11	B

¹ – HCM 2010 Methodology does not support shared lane approaches; therefore, Synchro methodology was used utilized to analyze the intersections along Saunders Road.

The intersection of IL 60/Saunders fails under existing conditions and would be exacerbated by any additional traffic. As such, ways to mitigate this impact at the intersection were explored. However, the corridor was reconstructed recently by the DOT and options for geometric improvements are limited. The addition of a right-in/right-out access on IL 60 and a development with lower traffic generation than the previously approved plan help to offset some of the impacts that could have been experienced at this location.

As shown in the preceding table, the addition of site traffic is not projected to have a significant effect on operations for the majority of the study intersections. Since the IL 60/Saunders Road intersection operates over capacity during existing conditions, delays are projected to increase at the intersection when site traffic is added. As the majority of the green time is dedicated to the predominate movements on the west and north legs, the addition of site traffic to other movements results in increased delays. Based upon simulation results, the longest 95th percentile queue for the westbound left-turn lane is projected to extend approximately 200 feet during the Saturday midday peak hour with an average queue of approximately 120 feet. As such, the extension of the westbound left-turn lane storage should be designed with 200 feet of storage and the IDOT Bureau of Design and Environment (BDE)-recommended 220-foot taper. In order to mitigate any potential impacts that may be experienced by the northbound left-turn queues occasionally extending beyond the development's northern access, it is recommended that crosshatch striping and "Do Not Block Intersection" be provided at this intersection. The crosshatching could be similar to the type provided for a fire station, and "Do Not Block Intersection" sign should be as shown in the Manual on Uniform Traffic Control Devices (R10-7).

With the addition of an east leg at the Saunders Road/North Office Driveway intersection, a slight increase in delay is expected for the west leg; however, the approach is still projected to operate at an acceptable level of service. The increase in delay is primarily due to the addition of westbound right-turn, northbound through traffic, and southbound left-turn traffic, which decreases the available gaps for the eastbound left-turn. Due to this delay during the evening peak hour, half of the exiting left turns were assumed to redistribute to office driveways south of the South Site Access/Private Roadway. In order to match the existing North Office Driveway geometry, and based upon the anticipated volume of westbound right-turns, the North Site Access should be designed with a shared left-turn/through lane and an exclusive right-turn lane with one receiving lane. At the North Site Access, the striping for the outer northbound through lane should be modified to provide a shared through/right-turn lane. The southbound through lane should be restriped to provide a shared left-turn/through lane. Additionally, the striping for the eastbound right-turn lane should be modified to provide a shared through/right-turn lane. The site driveways should be designed with at least 50 feet of internal storage to account for the anticipated 95th percentile queues.

As part of the proposed development, the western portion of the Private Drive would become internal to the site, prior to the roadway curving to the south, and would provide access to the south side of the site. With the addition of site traffic, the Saunders Road/Private Driveway intersection is anticipated to continue operating at LOS A for all peak hours.

As discussed previously, the eastbound IL 60 lane drop (which occurs east of Saunders Road) would be removed as part of the proposed development, and the third through lane would be extended across the site frontage to the eastbound right-turn lane at the IL 60/Conway Farms Drive intersection. As such, a shared through/right-turn lane would be provided on IL 60 at the RIRO Access. The RIRO Access should be located as far east as possible within the property in order to provide the maximum distance between the access point and the signalized intersections to the east and west.

Based on expected improvements in progression, the delay for the eastbound approach of the IL 60/Conway Farms Drive intersection is anticipated to decrease during the Saturday midday peak hour

with the addition of site traffic. Additionally, the south leg of the intersection is expected to continue to operate at LOS F during the evening peak hour.

The existing operation at the Everett Road/Conway Farms Drive intersection is generally anticipated to be maintained with the addition of site traffic.

3.7. Future (Year 2019) Analysis

A growth rate was applied to existing traffic volumes to estimate background traffic in design year 2019. Per projections provided by the Chicago Metropolitan Agency for Planning (CMAP), which show traffic on the IL 60 corridor nearly doubling by 2040, a 2.4 percent annual growth rate was applied to existing traffic volumes to account for potential growth of background traffic in the area. This is roughly equivalent to fifteen percent (15%) growth over six years. Therefore, for the future scenario, site-generated trips were added to the 2019 background traffic to yield total volumes at the study intersections. The 2019 future scenario volumes are illustrated in **Exhibit 3.5** and the capacity analysis results for the scenario are shown in **Table 3.6**. Existing IDOT-provided timings and cycle lengths were utilized for the signalized study intersections.

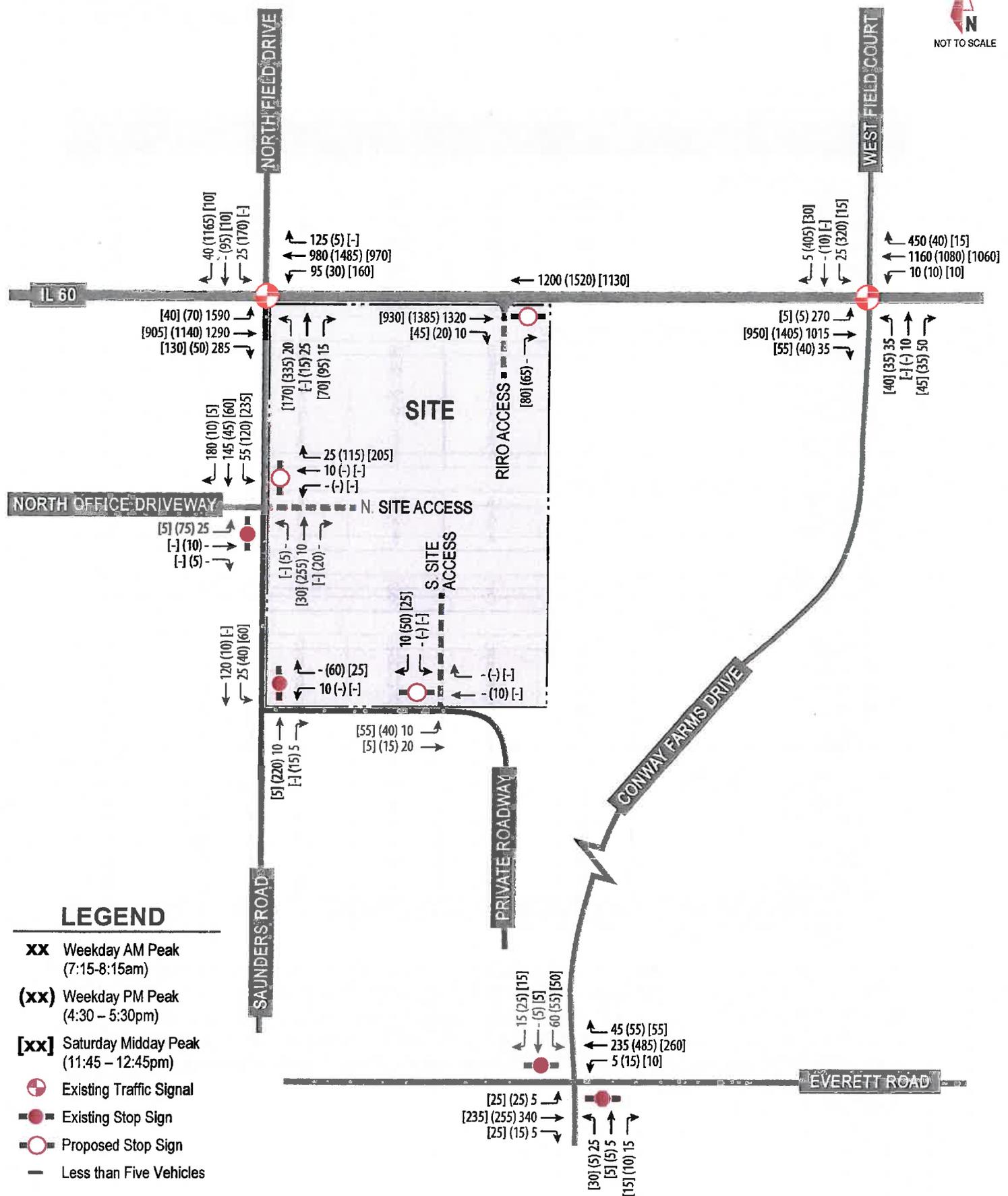


Table 3.6. Future (Year 2019) Levels of Service

Intersection/Movement	Weekday AM Peak		Weekday PM Peak		Saturday Midday Peak	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
<i>IL 60/Saunders Road (Signalized)¹</i>						
Eastbound	44	D	25	C	16	B
Westbound	31	C	39	D	15	B
Northbound	69	E	>120	F	52	D
Southbound	47	D	>120	F	27	C
<i>Intersection</i>	<i>41</i>	<i>D</i>	<i>>120</i>	<i>F</i>	<i>19</i>	<i>B</i>
<i>Saunders Road/North Office Driveway/North Site Access¹</i>						
Eastbound (Left)	12	B	16	C	18	C
Eastbound (Right)	10+	B	13	B	12	B
Westbound	9	A	10-	A	9	A
Northbound (Left)	8	A	7	A	7	A
Southbound	1	A	6	A	6	A
<i>Saunders Road/Private Roadway/South Site Access¹</i>						
Westbound	10-	A	10-	A	9	A
Southbound	1	A	6	A	7	A
<i>IL 60/RIRO Access</i>						
Northbound (Right)	16	C	20	C	15+	C
<i>IL 60/Conway Farms Drive (Signalized)</i>						
Eastbound	42	D	40	D	1	A
Westbound	16	B	13	B	6	A
Northbound	72	E	52	D	52	D
Southbound	63	E	>120	F	54	D
<i>Intersection</i>	<i>29</i>	<i>C</i>	<i>72</i>	<i>E</i>	<i>6</i>	<i>A</i>
<i>Everett Road/Conway Farms Drive</i>						
Eastbound (Left)	8	A	9	A	8	A
Westbound (Left)	8	A	8	A	8	A
Northbound	15-	B	16	C	15+	C
Southbound (Left)	17	C	25+	D	17	C
Southbound (Through/Right)	10+	B	14	B	12	B

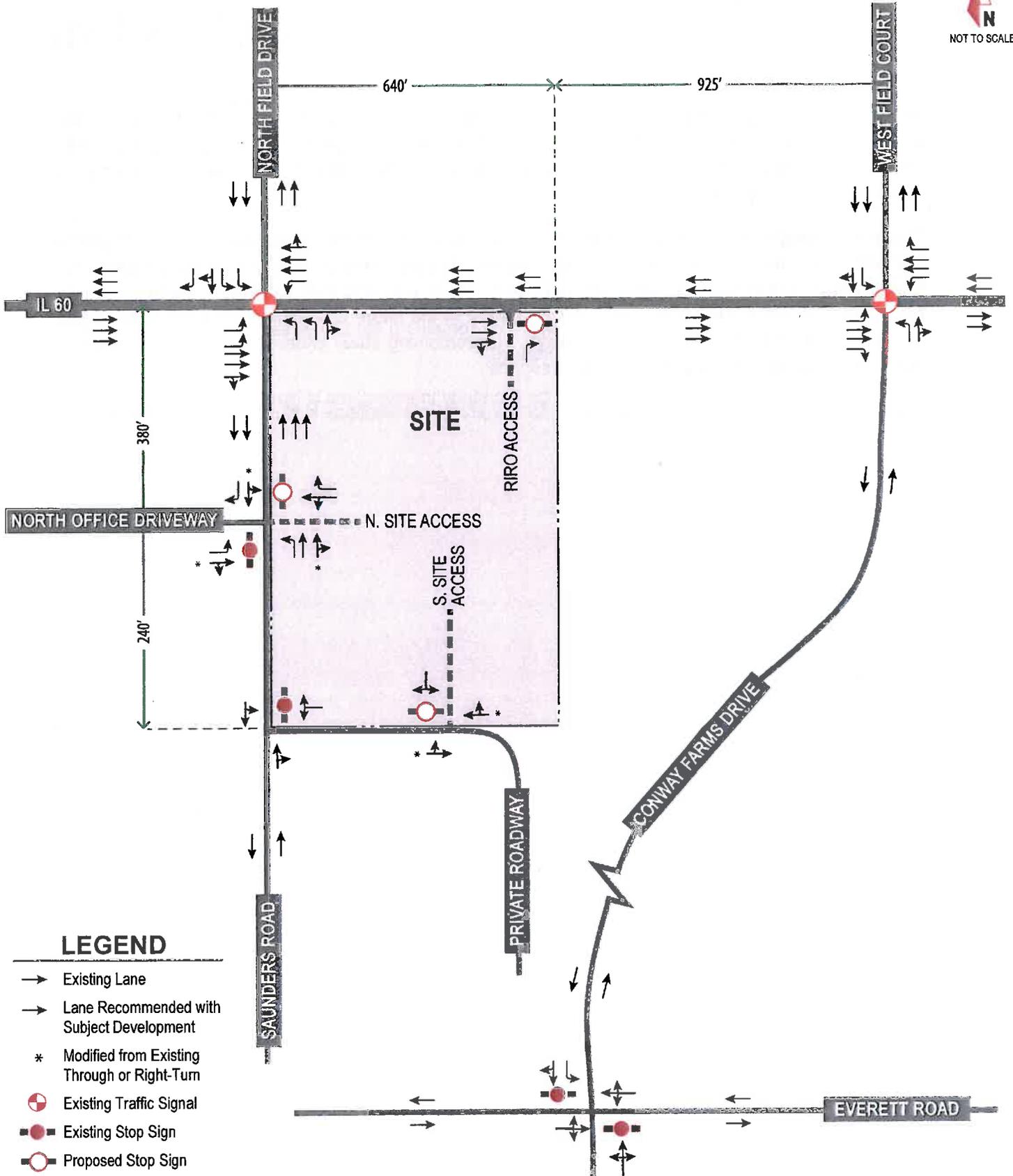
¹ – HCM 2010 Methodology does not support shared lane approaches; therefore, Synchro methodology was used utilized to analyze the intersections along Saunders Road.

With the addition of background traffic at the study intersection, existing capacity constraints at the IL 60/Saunders Road and IL 60/Conway Farms Drive intersections are further exasperated. At the Saunders Road intersection, evening peak hour delays are projected to increase by roughly 25 percent beyond what is associated with the addition of site traffic. Further growth in critical movements to/from the north and west places further strain on the intersection’s capacity and results in worsening delays across all movements.

At the IL 60/Conway Farms Drive intersection, the southbound approach would continue to operate at LOS F during the evening peak hour. The delays at this approach are expected to increase with the addition of background traffic and contribute to the overall level of service at the intersection decreasing to LOS E for the evening peak hour.

Previously noted concerns regarding the impact of the IL 60/Saunders Road congestion on adjacent intersections remain. Left-turn queues on the south approach are expected to increase as additional green time is used to serve heavy movements on the north and west legs. Compliance with previously recommended intersection restrictions will be critical in the future operations of the Saunders Road corridor and adjacent development roadways. The remaining study intersections are anticipated to continue to operate at acceptable levels of service.

A summary of the proposed lane geometry for the study intersections is illustrated in **Exhibit 3.6**.



LEGEND

- Existing Lane
- Lane Recommended with Subject Development
- * Modified from Existing Through or Right-Turn
- ⊕ Existing Traffic Signal
- Existing Stop Sign
- Proposed Stop Sign

4. RECOMMENDATIONS & CONCLUSIONS

Based upon discussions with the jurisdictional agencies, the following improvements along IL 60 will be included as part of the proposed development:

- The existing lane drop that occurs east of the IL 60/Saunders Road intersection will be removed by extending the third through lane across the site frontage to meet the right-turn lane at the IL 60/Conway Farms Drive intersection.
- The existing storage for the westbound left-turn lane IL 60/Saunders Road intersection will be extended to provide 200 feet of storage and the BDE-recommended 220-foot taper.
- A RIRO-only access will be constructed on the east side of the site, maximizing spacing to the signal at IL 60 and Saunders Road.

In addition, the following recommendations have been identified to help mitigate the impacts of the proposed development at the site access locations:

- Provide at least 50 feet of storage for the northbound right-turn lane at the RIRO only access.
- Saunders Road/North Site Access
 - Provide crosshatch pavement striping and "Do Not Block Intersection" signage on Saunders Road.
 - Provide a westbound right-turn lane with at least 50 feet of internal storage.
 - Provide a westbound shared left-turn/through lane in order to align with the North Office Driveway.
 - Restripe the outer northbound through lane to provide a shared through/right-turn lane.
 - Restripe the southbound through lane to provide a shared left-turn/through lane.
 - Restripe the eastbound right-turn lane to provide a shared through/right-turn lane.

Although the capacity results show that the North Site Access will operate with minimal delay, it should be noted that the effects of the poor operations at the IL 60/Saunders Road intersection may not be fully depicted in the capacity results. Based upon the trip generation characteristics of the proposed development, it is likely that the proposed plan would have significantly less impact on the surrounding roadway network than other potential land use scenarios developed utilizing the previously approved plan.

Regardless of the final configuration of the intersection geometrics, several additional items should be taken into consideration when preparing roadway improvement plans for the existing access points. Vertical sight distance does not appear to be an issue at any of the proposed access points; however, care should be taken with landscaping, signage, and monumentation at the proposed access locations to ensure that adequate horizontal sight distance is provided from the new stop bars. Intersection geometrics for site access driveways should also be engineered to allow for heavier vehicle movements (presumably a WB-55 design vehicle) to be accommodated without encroachment on adjacent travel lanes.

If alterations to the site plan or land uses should occur, changes to the analysis within this traffic impact study may be necessary.