AGENDA

PLANNING AND ZONING COMMISSION MEETING

November 14, 2024 | 6:30 PM
Council Chambers
City Hall | 665 Country Club Road, Lucas, Texas

Notice is hereby given that a meeting of the Lucas Planning and Zoning Commission will be held on Thursday, November 14, 2024, beginning at 6:30 pm at Lucas City Hall, 665 Country Club Road, Lucas, Texas 75002-7651, at which time the following agenda will be discussed. As authorized by Section 551.071 of the Texas Government Code, the Commission may convene into closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney on any item on the agenda at any time during the meeting. Pursuant to Texas Government Code 551.127, one or more members of the governing body may appear via videoconference call. The presiding officer and a quorum of the Commission will be physically present at this meeting.

If you would like to watch the meeting live, you may go to the City's live streaming link at https://www.lucastexas.us/departments/public-meetings/.

How to Provide Input at a Meeting:

Speak In Person: Request to Speak forms will be available at the meeting. Please fill out the form and give to the Executive Administrative Assistant prior to the start of the meeting. This form will also allow a place for comments.

Submit Written Comments: If you are unable to attend a meeting and would like to submit written comments regarding a specific agenda item, email Executive Administrative Assistant, Morgan Kowaleski at mkowaleski@lucastexas.us by no later than 3:30 pm the day of the meeting. The email must contain the person's name, address, phone number, and the agenda item(s) for which comments will be made. Any requests received after 3:30 pm will not be included at the meeting.

Call to Order

- Determination of Quorum
- Reminder to turn off or silence cell phones
- Pledge of Allegiance

Consent Agenda

All items listed under the consent agenda are considered routine and are recommended to the Planning and Zoning Commission for a single vote approval. If discussion is desired, an item may be removed from the consent agenda for a separate vote.

1. Consent Agenda:

    A. Approval of the minutes of the October 10, 2024 Planning and Zoning Commission meeting.

Regular Agenda

2. Consider the appointment of a Vice-Chairperson for the Capital Improvements Advisory Committee. **(Capital Improvements Advisory Board)**

3. Consider amendments to the City of Lucas Code of Ordinances, Chapter 14 titled

"Zoning", 14.03.472 titles "Building Regulations", (i) Impervious coverage and Article 14.04 titled "Supplementary Regulations", Division 8 titled "Accessory Buildings, Structures and Uses". **(Development Services Director Joe Hilbourn)**

4. Consider approval of a request by Colton Smith with Spiars Engineering and Surveying and Brock Babb with Centurion American CTMGT Lucas 238 LLC, on behalf of property owners Steve Lenart with CTMGT Lucas 238, LLC and Mehrdad Moayedi for approval of a final plat for Enchanted Creek Estates Phase 2B, for the property located in the James Anderson Survey, Abstract No. 17 and John McKinney Survey, Abstract No. 596, being 104.595 acres. **(Development Services Director Joe Hilbourn)**

5. Consider amendments to an existing SUP at Lucas Christian academy to amend the school's master plan at 505 West Lucas Road Lot 1, Block A of Lucas Christian Church Addition being all of a 16 acre tract of land, is asking to incorporate an adjacent tract ABS A0538 JAS LOVELADY SURVEY, TRACT 21, 22.679 ACRES, and a new master plan. **(Development Services Director Joe Hilbourn)**

Executive Session

As authorized by Section 551.071 of the Texas Government Code, the Planning and Zoning Commission may convene into closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney regarding any item on the agenda at any time during the meeting. This meeting is closed to the public as provided in the Texas Government Code.

6. An Executive Session is not scheduled for this meeting.

Adjournment

7. Adjournment.

Certification

I do hereby certify that the above notice was posted in accordance with the Texas Open Meetings Act on the bulletin board at Lucas City Hall, 665 Country Club Road, Lucas, TX 75002 and on the City's website at www.lucastexas.us on or before 5:00 p.m. on November 8, 2024.

Morgan Kowaleski, Executive Administrative Assistant

In compliance with the American with Disabilities Act, the City of Lucas will provide for reasonable accommodations for persons attending public meetings at City Hall. Requests for accommodations or interpretive services should be directed to City Secretary Toshia Kimball at 972.912.1211 or by email at tkimball@lucastexas.us at least 48 hours prior to the meeting.

Item No. 01

City of Lucas
Planning and Zoning Agenda Request
November 14, 2024

Requester: Planning and Zoning Commission

Agenda Item Request

Consent Agenda:

A. Approval of the minutes of the October 10, 2024 Planning and Zoning Commission meeting.

Background Information

NA

Attachments/Supporting Documentation

1. October 10, 2024 Planning and Zoning Commission Meeting minutes

Budget/Financial Impact

NA

Recommendation

Staff recommends approval of the Consent Agenda as presented.

Motion

I make a motion to approve the Consent Agenda as presented.

MINUTES
PLANNING AND ZONING COMMISSION MEETING

October 10, 2024 | 6:30 PM
Council Chambers
City Hall | 665 Country Club Road, Lucas, Texas

Commissioners Present:
Chairman Tommy Tolson
Vice-Chairman Joe Williams
Commissioner Frank Hise
Commissioner Sean Alwardt
Commissioner James Foster
Alternate Commissioner Brian Dale

Commissioners Absent:
Alternate Commissioner John Awezec

Staff Present:
City Secretary Toshia Kimball
City Attorney Courtney Morris
Development Services Director Joe Hilbourn

Staff Absent:
City Manager John Whitsell

City Council Liaison Absent:
Mayor Dusty Kuykendall

Call to Order

The meeting was called to order at 6:30 pm and the Pledge of Allegiance was recited.

Consent Agenda

1. **Consent Agenda:**

   A. **Approval of the minutes of the September 12, 2024 Planning and Zoning Commission meeting.**

MOTION: A motion was made by Commissioner Alwardt, seconded by Commissioner Foster to approve the consent agenda with corrections. The motion passed unanimously by a 5 to 0 vote.

Regular Agenda

2. **Discuss accessory building regulations in the City of Lucas.**

Development Services Director, Joe Hilbourn presented on this item.

Chairman Tolson informed attendees that he plans to consult with Development Services and then gather input individually from each commissioner, as well as any citizens present who wish to share their perspectives on this item, specific to Chapter 14.

Kenneth Cranfill, 2 Hickory Hill, Lucas Texas, 75002, requested that awnings not be included in the calculation of the total square footage for accessory buildings.

Janean McLaughlin, 3 Skyview Drive, Lucas Texas, 75002, expressed support for excluding awnings from the total square footage of accessory buildings. She also recommended that the City impose a size limit of 1,200 square feet for accessory buildings and restrict their use to prevent any accessory structure from serving as a second residence, due to potential stress on the City's infrastructure.

Patrick Coleman, 5 Edgefield Lane, Lucas Texas, 75002, sought clarification on whether he could construct an addition on his two-acre property if the new structure would be located in front of his existing home.

Recommended Changes to Chapter 14:

- Highlighted text denotes new additions.
- ~~Strikethrough~~ text denotes deletions.
- Red text denotes grammatical adjustments.

Industrial zoning district change:

§ 14.03.472 Building regulations.

(a) All drive-through, drive-in and drive-up businesses shall require a specific use permit.

(b) All mechanical equipment shall be screened from public view either by landscaping materials or materials that blend with the building.

(c) Refuse collection areas shall be screened from public view.

(d) Parking and drives to be weather-impervious surface. Parking and fire lanes shall be a minimum of three thousand five hundred pounds per square inch (3,500 psi) concrete of six inches (6") thick with six inches (6") of flex base material compacted to ninety-five percent (95%).

(e) Outside storage as allowed by specific use permit.

(f) Loading docks to be at rear or side of building and shall be screened from public view or residential zoning districts.

(g) A specific use permit shall be required when the total square footage of the principal building and/or any accessory buildings exceeds fifty thousand square feet (50,000 sq. ft.).

(h) Replacement of buffering/screening/fencing: all existing buffering, screening, and fencing that is replaced is required to be replaced with materials required by code for new construction. If there is no material listed for the application then the replacement will match existing material for buffering, screening, or fencing, of the item being replaced

(i) Impervious coverage. The maximum impervious coverage shall not exceed sixty-five percent (65%) of the total lot area.

Accessory Building definition change:

Accessory buildings and structures.

Buildings or structures located on the same lot as a dwelling or other principal building, the use of which is subordinate in area, volume, and extent as well as incidental in use to the use of the dwelling or other principal building. An accessory building or use is:

(1) Subordinate to and serves a principal building or principal use;

(2) Subordinate in area, extent, or purpose to the principal building or principal use served.

(3) Contributes to the comfort, convenience, and necessity of occupants of the principal building or principal use served; and

(4) Located on the same building lot as the principal use served.

(5) "Accessory" when used in the text shall have the same meaning as accessory use.

§ 14.04.301 Purpose.

The purpose and intent of the accessory building, accessory structures and accessory use regulations is to:

(1) Maintain neighborhood and community integrity and preserve the existing character of neighborhoods by encouraging compatible land uses.

(2) Provide the residents of the city the opportunity to use their property to enhance the quality of life and/or fulfill personal objectives as long as the use of the property is compatible with the land uses or character of the neighborhood.

(3) Assure that public and private services such as streets, water, stormwater drainage, and electrical systems are not burdened by accessory uses to the extent that the accessory usage exceeds that which is normally associated with the principal use of the property.

§ 14.04.302 Accessory buildings, structures, and uses permitted.

(a) Accessory buildings and structures may be erected, maintained, and used for purposes which are clearly subordinate to the principal building, structure, or use permitted on the premises.

(b) Accessory buildings, structures, and uses shall be so constructed, maintained, and utilized so that the use of the building, structure or equipment located therein does not produce excessive noise, vibration, concussion, dust, dirt, smoke, odors, noxious gases, heat, traffic, glare from artificial illumination or from reflection of light that may be offensive to persons of ordinary sensibilities that occupy surrounding properties.

(c) The total square footage of the principal building or structure and any accessory buildings or structures shall not exceed the lesser of fifty thousand (50,000) square feet or thirty percent (30%) of the lot square footage without a specific use permit. Additionally, the total square footage of an accessory dwelling unit (ADU) shall not exceed six hundred (600) square feet without a specific use permit. A specific use permit for an ~~accessory dwelling unit~~ (ADU) in excess of six hundred (600) square feet may be ~~P~~permitted by the city council when such property owner can show the following:

(1) Does not contain or support a use inconsistent with the zoning district regulation applicable to the property;

(2) Use of structure does not cause traffic congestion;

(3) Does not support use by any person other than owner or occupant of the principal building, structure, or dwelling; and

(4) That size and mass of the structure is consistent with the surrounding uses.

(d) Except as provided herein, no trailers, containers, commercial boxes or other similar prefabricated containers shall be used as accessory buildings or structures. Exceptions to this subsection (d) are as follows:

(1) Agriculture uses with five (5) acres or more may utilize trailers, containers, or commercial boxes for permanent storage located behind the principal building or structure and completely obscured from public view; or

(2) In industrial and commercial zoned districts, trailers, containers, or commercial boxes for temporary storage facilities may be used for a period not to exceed ninety (90) days total in any one calendar year. Such industrial or commercial temporary storage facilities shall be located behind the principal building or structure and completely obscured from public view. The director of development services may extend the allowable time in thirty (30) day increments up to a maximum of one hundred and eighty (180) days, provided the property owner provides just cause for the extension.

(e) Except in the agricultural use district (AO), accessory buildings shall be built after the principal building or structure is substantially complete. Accessory buildings used for agricultural purposes that may be built before the principal building or structure in AO districts:

(1) Include, but are not limited to: pole barns, livestock barns, riding arenas, implement storage facilities, and loafing sheds.

(2) Shall not contain area(s) designed or intended to be used for human habitation for living, sleeping, cooking and/or eating.

(f) Game/party room, art studio, or pool house may be a standalone structure, attached but not interconnected to the principal building, structure, or dwelling. All areas associated with, or providing support to a Game/party room, art studio, or pool house shall be used in calculating the square footage of the Game/party room, art studio, or pool house. These areas include but are not limited to habitable spaces, closets, halls, corridors, bathrooms, porches, patios, storage rooms, covered vehicle storage areas, utility rooms, ad similar spaces. Game/party room, art studio, or pool house shall comply with the following:

(~~1~~1) In R-2, R-1.5, R-1, ED, and AO zoning districts, a maximum of six hundred (600) square feet. An additional nine hundred (900) square feet may be permitted with a specific use permit. Total area of ADU shall not exceed one thousand and five hundred (1,500) square feet.

§ 14.04.303 Exemptions.

The following accessory structures are exempt from this division:

(1) Retaining walls;

(2) Air-conditioning mechanical equipment;

(3) Uncovered flatwork (such as, but not limited to, patios, sidewalks, concrete pool decking and driveways);

(4) Playhouses less than one hundred and twenty-five (125) square feet without running water or electricity, playground equipment, tree forts, and similar structures located behind the front of the principal building or structure; and

(5) Temporary (less than seven (7) days) membrane structures (such as, but not limited to, tents and bounce houses).

§ 14.04.304 General accessory buildings and structures regulations.

In all residential zoning districts, accessory buildings and structures shall comply with the following standards except as may be otherwise specifically provided for in this code:

(1) Types of accessory buildings and structures.

(A) Attached accessory buildings and structures. Accessory buildings and structures that are physically attached to a principal building ~~or structure or located less than ten feet (10') from the principal building or structure~~ shall be considered attached accessory buildings or structures.

(B) Detached accessory buildings and structures. Accessory buildings and structures which are physically ~~located ten feet (10') or more~~ detached from a principal building ~~or structure~~ and a minimum of ten feet (10') behind the ~~required front setback line~~ ~~main structure~~ principal building shall be considered detached accessory buildings.

(2) Design.

(A) Attached accessory buildings and structures shall be designed to be architecturally compatible with the principal building, structure or dwelling and constructed of similar materials as the principal building.

(B) Detached accessory buildings shall be constructed of materials designed for construction and have a minimum life expectancy of at least twenty (20) years.

(C) Accessory buildings shall not have spaces for cooking, ~~eating~~, or sleeping areas except as provided in 14.04.304 (4)

(3) Setbacks.

(A) Accessory buildings:

(i) Front yard setback: Attached accessory buildings or structures shall meet the required setback of the principal building or structure. Detached accessory buildings or structures shall be set back a minimum of ten feet (10') behind the rear build line of the principal building, structure or dwelling. A

specific use permit may be ~~P~~permitted to allow a detached accessory building or structure to be located in front of the principal building, structure or dwelling in AO and R-2 (Residential 2-acre) zoned districts and shall require a minimum three-hundred foot (300') front yard setback.

(ii) Rear yard setback: Accessory building and structures shall have a minimum setback of twenty feet (20').

(iii) Side yard setbacks: Accessory building and structures shall be twenty feet (20') unless the side yard is adjacent to a street. Side yards adjacent to a street shall meet the required side yard setbacks as the principal building or structure.

(iv) Where a build line is established on a plat, which is not consistent with this article, the build line that is the greater distance from the front property line shall be observed.

(v) No required parking shall be allowed within the required front yard setback.

(B) In-ground swimming pools, sports courts, tennis courts and similar uses shall maintain a minimum rear yard setback of ~~twenty-five feet (25')~~ fifty feet (50'), a minimum side yard setback of ~~twenty feet (20')~~ twenty-five feet (25'). ~~and if the~~ An in-ground pool ~~is~~ located in front of the principal building ~~it~~ shall maintain a minimum front yard setback of ~~a minimum of~~ three hundred feet (300'). In-ground swimming pool setbacks shall be measured from the inside wall of said pool.

(C) The inside wall of an above-ground swimming pool and any elevated decking associated with an above-ground swimming pool shall be located behind the principal building and shall maintain a minimum rear yard setback of fifty feet (50') and a minimum side yard setback of twenty-five feet (25').

(4) Accessory dwelling units (ADUs). ADUs may only be used and/or occupied by the owner/occupant of the principal building, structure, or dwelling unit, their family, invited guests and/or domestic staff. An ~~ADU may be a standalone structure, attached but not~~ ADU is considered part of the principal building provided it is interconnected to or attached by a breezeway a minimum of twenty feet (20') wide and not greater than twenty-four feet (24') long. ~~the principal building, structure, or dwelling, or be a part of a permitted accessory building.~~ ADU's may be standalone structures, attached but not interconnected to the principal building, structure, or dwelling, or be part of a permitted accessory building. All areas associated with, or providing support to an ADU shall be used in calculating the square footage of the ADU. These areas include but are not limited to habitable spaces, closets, halls, corridors, bathrooms, porches, patios, storage rooms, ~~and~~ covered vehicle storage areas, toilet rooms, utility spaces, and similar areas. The calculation of area associated with an ADU is not intended to include areas of accessory buildings that are isolated and/or delineated for other uses, including but not limited to areas used as a barn, workshop, game/party room, art studio, or pool house. ADUs shall comply with the following:

(A) General regulations for ADUs:

(i) Only one (1) ~~accessory dwelling unit~~ ADU may be constructed or maintained on a lot.

(ii) ADUs shall meet the requirements for safety and occupancy of the International Residential Code as adopted by the city from time-to-time.

(iii) ADUs may not be rented, bartered, leased, or exchanged separate and apart from the principal building or structure.

(iv) ~~Detached~~ ADUs that are standalone structures shall be limited to a maximum height of twenty-five feet (25') measured to the peak of the roof of the structure.

(v) ADU's shall have a minimum rear yard setback of fifty feet (50'), a side yard setback of twenty-five feet (25'), and a minimum of ten feet behind the ~~main structure~~ principal building.

(B) Specific regulations for ADU square footage based on zoning district:

(i) In R-2, R-1.5, R-1, and AO zoning districts, a maximum of six hundred (600) square feet. An additional nine hundred (900) square feet may be permitted with a specific use permit. Total area of ADU shall not exceed one thousand and five hundred (1,500) square feet.

~~(ii) In R-1.5 zoning districts, a maximum of six hundred (600) square feet. An additional six hundred (600) square feet may be permitted with a specific use permit. Total area of ADU shall not exceed one thousand and two hundred (1,200) square feet.~~

~~(iii) In R-1 and AO zoning districts, a maximum of six hundred (600) square feet. An additional four hundred (400) square feet may be permitted with a specific use permit. Total area of ADU shall not exceed one thousand (1,000) square feet.~~

MOTION: There was no motion on this item. Chairman Tolson requested a review of the revisions made to Chapter 14 by each Commissioner before presenting to City Council.

3. **Executive Session: There was not an executive session scheduled for this meeting.**

4. **Adjournment.**

Chairman Tolson adjourned the meeting at 7:50 pm.

Tommy Tolson, Chairman

Toshia Kimball, City Secretary

City of Lucas
Planning & Zoning Agenda Request
November 14, 2024

Requester: Capital Improvements Advisory Committee

Agenda Item

Consider the appointment of a Vice-Chairperson for the Capital Improvements Advisory Committee.

Background Information

Per the City's Code of Ordinances under Article 10.02.003 Advisory Committee, the Capital Improvements Advisory Committee shall consist of the Planning and Zoning Commission. The Capital Improvements Advisory Committee shall appoint a Chairperson and Vice-Chairperson. The Capital Improvements Advisory Committee serves in an advisory capacity and is established to:

(1) Advise and assist in the adoption of land use assumptions;
(2) Review the capital improvements plan and file written comments;
(3) Monitor and evaluate implementation of the capital improvements plan;
(4) File semiannual reports with respect to the progress of the capital improvements plan and report to the City Council any perceived inequities in implementing the plan or imposing the impact fee; and
(5) Advise the City Staff and Council of the need to update or revise the land use assumptions, capital improvements plan and impact fee.

Staff has provided an attachment of Article 10.02.003 Advisory Committee in the Code of Ordinances which includes information regarding the commission's creation, composition, powers, duties, procedures, notice of proceedings, conduct of hearings, and appeals.

Attachments/Supporting Documentation

1. Article 10.02.003 Advisory Committee from City of Lucas Code of Ordinances.

Budget/Financial Impact

NA

City of Lucas
Planning & Zoning Agenda Request
November 14, 2024

Recommendation

Staff recommends appointing a Vice-Chairperson for the Capital Improvements Advisory Committee.

Motion

I make a motion to appoint _____ as Vice Chairman of the Capital Improvements Advisory Board.

10.02.003 **Advisory committee.**

(a) The capital improvements advisory committee (advisory committee) shall consist of the planning and zoning commission. If the advisory committee does not include at least one representative of the real estate, development or building industry who is not an employee or official of a political subdivision or governmental entity, the city council shall appoint at least one such representative as an ad hoc voting member of the advisory committee. If any impact fee is to be applied in the extraterritorial jurisdiction of the city, a representative from the area shall be appointed by the city council.

(b) The advisory committee serves in an advisory capacity and is established to:

(1) Advise and assist in the adoption of land use assumptions;
(2) Review the capital improvements plan and file written comments;
(3) Monitor and evaluate implementation of the capital improvements plan;
(4) File semiannual reports with respect to the progress of the capital improvements plan and report to the city council any perceived inequities in implementing the plan or imposing the impact fee; and
(5) Advise the city staff and council of the need to update or revise the land use assumptions, capital improvements plan and impact fee.

(c) All professional reports concerning the development and implementation of the capital improvements plan shall be made available to the advisory committee.

(d) The advisory committee shall elect a chairperson to preside at its meetings and a vice-chairperson to serve in his absence. All meetings of the advisory committee shall be open to the public and posted at least 72 hours in advance. A majority of the membership of the advisory committee shall constitute a quorum.

City of Lucas
Planning and Zoning Agenda Request
November 14, 2024

Requester: Development Services Director Joe Hilbourn

Agenda Item

Consider amendments to the City of Lucas Code of Ordinances, Chapter 14 titled "Zoning", 14.03.472 titles "Building Regulations", (i) Impervious coverage and Article 14.04 titled "Supplementary Regulations", Division 8 titled "Accessory Buildings, Structures and Uses".

Background Information

On December 7, 2023, the City Council agreed to form a Council Subcommittee consisting of Mayor Jim Olk, Councilmember Dusty Kuykendall, and Councilmember Tim Johnson to further review Chapter 14 and make additional proposed changes. On January 18, 2024, the Council Subcommittee met with Development Services Director Joe Hilbourn and Assistant City Manager Kent Souriyasak to discuss new edits and agreed to move forward with final recommended changes to Chapter 14 excluding accessory buildings which will be reviewed separately.

Prior to Mayor Olk's departure the subcommittee for accessory buildings met and had some discussions regarding ADU's. On October 10th staff brought forward an attempt to replicate what we had discussed. I also tried to address the pool house/art studio concern.

Staff received a request from a citizen to take a fresh look at chapter 14 Supplementary regulations division 7 lighting.

Proposed amendments discussed at the October 10th Planning and Zoning Commission meeting are attached as a supporting document.

Attachments/Supporting Documentation

1. Public Notice
2. Proposed Amendments to Chapter 14

Budget/Financial Impact

NA

Recommendation

City of Lucas
Planning and Zoning Agenda Request
November 14, 2024

Motion

I make a motion to approve/deny amendments to the City of Lucas Code of Ordinances, Chapter 14 titled “Zoning”, 14.03.472 titles “Building Regulations”, (i) Impervious coverage and Article 14.04 titled “Supplementary Regulations”, Division 8 titled “Accessory Buildings, Structures and Uses”.

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN, that the Planning & Zoning Commission of the City of Lucas, Texas will conduct a public hearing on November 14, 2024, at 6:30 p.m., and City Council will conduct a second public hearing on Thursday, December 5, 2024, at 6:30 p.m. at Lucas City Hall, 665 Country Club Road, Lucas, Texas to consider amendments to the City of Lucas Code of Ordinances, Chapter 14 titled "Zoning", 14.03.472 titles "Building Regulations", (i) Impervious coverage and Article 14.04 titled "Supplementary Regulations", Division 8 titled "Accessory Buildings, Structures and Uses".

Those wishing to speak FOR or AGAINST the above item are invited to attend. If you are unable to attend and have comments you may send them to City of Lucas, Attention: City Secretary, Toshia Kimball, 665 Country Club Road, Lucas, Texas 75002, email tkimball@lucastexas.us and it will be presented at the hearing. If you have any questions about the above hearing, you may contact Development Services Director Joe Hilbourn at jhilbourn@lucastexas.us.

Industrial zoning district change:

§ 14.03.472 **Building regulations.**

(a) All drive-through, drive-in and drive-up businesses shall require a specific use permit.

(b) All mechanical equipment shall be screened from public view either by landscaping materials or materials that blend with the building.

(c) Refuse collection areas shall be screened from public view.

(d) Parking and drives to be weather-impervious surface. Parking and fire lanes shall be a minimum of three thousand five hundred pounds per square inch (3,500 psi) concrete of six inches (6") thick with six inches (6") of flex base material compacted to ninety-five percent (95%).

(e) Outside storage as allowed by specific use permit.

(f) Loading docks to be at rear or side of building and shall be screened from public view or residential zoning districts.

(g) A specific use permit shall be required when the total square footage of the principal building and/or any accessory buildings exceeds fifty thousand square feet (50,000 sq. ft.).

(h) Replacement of buffering/screening/fencing: all existing buffering, screening, and fencing that is replaced is required to be replaced with materials required by code for new construction. If there is no material listed for the application then the replacement will match existing material for buffering, screening, or fencing, of the item being replaced

(i) Impervious coverage. The maximum impervious coverage shall not exceed sixty-five percent (65%) of the total lot area.

Accessory Building definition change:

Accessory buildings and structures.

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(1) Subordinate to and serves a principal building or principal use;

(2) Subordinate in area, extent, or purpose to the principal building or principal use served.

(3) Contributes to the comfort, convenience, and necessity of occupants of the principal building or principal use served; and

(4) Located on the same building lot as the principal use served.

(5) "Accessory" when used in the text shall have the same meaning as accessory use.

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(1) Does not contain or support a use inconsistent with the zoning district regulation applicable to the property;

(2) Use of structure does not cause traffic congestion;

(3) Does not support use by any person other than owner or occupant of the principal building, structure, or dwelling; and

(4) That size and mass of the structure is consistent with the surrounding uses.

(d) Except as provided herein, no trailers, containers, commercial boxes or other similar prefabricated containers shall be used as accessory buildings or structures. Exceptions to this subsection (d) are as follows:

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(1) Include, but are not limited to: pole barns, livestock barns, riding arenas, implement storage facilities, and loafing sheds.

(2) Shall not contain area(s) designed or intended to be used for human habitation for living, sleeping, cooking and/or eating.

(f) Game/party room, art studio, or pool house may be a standalone structure, or attached but not interconnected to the principal building, structure, or dwelling. All areas associated with, or providing support to a Game/party room, art studio, or pool house shall be used in calculating the square footage of the Game/party room, art studio, or pool house. These areas include but are not limited to habitable spaces, closets, halls, corridors, bathrooms, porches, patios, storage rooms, covered vehicle storage areas, utility rooms, and similar spaces. Game/party room, art studio, or pool house shall comply with the following:

(~~i~~1) In R-2, R-1.5, R-1, ED, and AO zoning districts, a maximum of six hundred (600) square feet. An additional nine hundred (900) square feet may be permitted with a specific use permit. Total area of ADU shall not exceed one thousand and five hundred (1,500) square feet.

Commented [JH1]: Added or

Commented [JH2]: Changed added an N should be and

§ 14.04.303 Exemptions.

The following accessory structures are exempt from this division:

(1) Retaining walls;

(2) Air-conditioning mechanical equipment;

(3) Uncovered flatwork (such as, but not limited to, patios, sidewalks, concrete pool decking and driveways);

(4) Playhouses less than one hundred and twenty-five (125) square feet without running water or electricity, playground equipment, tree forts, and similar structures located behind the front of the principal building or structure; and

(5) Temporary (less than seven (7) days) membrane structures (such as, but not limited to, tents and bounce houses).

§ 14.04.304 General accessory buildings and structures regulations.

In all residential zoning districts, accessory buildings and structures shall comply with the following standards except as may be otherwise specifically provided for in this code:

(1) Types of accessory buildings and structures.

(A) Attached accessory buildings and structures. Accessory buildings and structures that are physically attached to a principal building ~~or structure or located less than ten feet (10') from the principal building or structure~~ shall be considered attached accessory buildings or structures.

(B) Detached accessory buildings and structures. Accessory buildings and structures which are physically ~~located ten feet (10') or more~~ detached from a principal building ~~or structure~~ and a minimum of ten feet (10') behind the ~~required front setback line~~ ~~main structure~~ principal building shall be considered detached accessory buildings.

(2) Design.

(A) Attached accessory buildings and structures shall be designed to be architecturally compatible with the principal building, structure or dwelling and constructed of similar materials as the principal building.

(B) Detached accessory buildings shall be constructed of materials designed for construction and have a minimum life expectancy of at least twenty (20) years.

(C) Accessory buildings shall not have spaces for cooking, ~~eating~~; or sleeping areas except as provided in 14.04.304 (4)

(3) Setbacks.

(A) Accessory buildings:

(i) Front yard setback: Attached accessory buildings or structures shall meet the required setback of the principal building or structure. Detached accessory buildings or structures shall be set back a minimum of ten feet (10') behind the rear build line of the principal building, structure or dwelling. A specific use permit may be ~~P~~permitted to allow a detached accessory building or structure to be located in front of the principal building, structure or dwelling in AO and R-2 (Residential 2-acre) zoned districts and shall require a minimum three-hundred foot (300') front yard setback.

(ii) Rear yard setback: Accessory building and structures shall have a minimum setback of twenty feet (20').

(iii) Side yard setbacks: Accessory building and structures shall be twenty feet (20') unless the side yard is adjacent to a street. Side yards adjacent to a street shall meet the required side yard setbacks as the principal building or structure.

(iv) Where a build line is established on a plat, which is not consistent with this article, the build line that is the greater distance from the front property line shall be observed.

(v) No required parking shall be allowed within the required front yard setback.

(B) In-ground swimming pools, sports courts, tennis courts and similar uses shall maintain a minimum rear yard setback of ~~twenty-five feet (25')~~ fifty feet (50'), a minimum side yard setback of ~~twenty feet (20')~~ twenty-five feet (25'). ~~and if the~~ An in-ground pool ~~is~~ located in front of the principal building ~~it~~ shall maintain a minimum front yard setback of ~~a minimum of~~ three hundred feet (300'). In-ground swimming pool setbacks shall be measured from the inside wall of said pool.

(C) The inside wall of an above-ground swimming pool and any elevated decking associated with an above-ground swimming pool shall be located behind the principal building and shall maintain a minimum rear yard setback of fifty feet (50') and a minimum side yard setback of twenty-five feet (25').

(4) Accessory dwelling units (ADUs). ADUs may only be used and/or occupied by the owner/occupant of the principal building, structure, or dwelling unit, their family, invited guests and/or domestic staff. An ~~ADU may be a standalone structure, attached but not~~ ADU is considered part of the principal building provided it is interconnected to or attached by a breezeway a minimum of twenty feet (20') wide and not greater than twenty-four feet (24') long. ~~the principal building, structure, or dwelling, or be a part of a permitted accessory building.~~ ADU's may be standalone structures, attached but not interconnected to the principal building, structure, or dwelling, or be part of a permitted accessory building. All areas associated with, or providing support to an ADU shall be used in calculating the square footage of the ADU. These areas include but are not limited to habitable spaces, closets, halls, corridors, bathrooms, porches, patios, storage rooms, ~~and~~ covered vehicle storage areas, toilet rooms, utility spaces, and similar areas. The calculation of area associated with an ADU is not intended to include areas of accessory buildings that are isolated and/or delineated for other uses, including but not limited to areas used as a barn, workshop, game/party room, art studio, or pool house. ADUs shall comply with the following:

(A) General regulations for ADUs:

(i) Only one (1) ~~accessory dwelling unit~~ ADU may be constructed or maintained on a lot.

(ii) ADUs shall meet the requirements for safety and occupancy of the International Residential Code as adopted by the city from time-to-time.

(iii) ADUs may not be rented, bartered, leased, or exchanged separate and apart from the principal building or structure.

(iv) ~~Detached~~ ADUs that are standalone structures shall be limited to a maximum height of twenty-five feet (25') measured to the peak of the roof of the structure.

(v) ADU's shall have a minimum rear yard setback of fifty feet (50'), a side yard setback of twenty-five feet (25'), and a minimum of ten feet (10') behind the ~~main structure~~ principal building.

Commented [JH3]: Added 10 in parenthesis

(B) Specific regulations for ADU square footage based on zoning district:

(i) In R-2, R-1.5, R-1, and AO zoning districts, a maximum of six hundred (600) square feet. An additional nine hundred (900) square feet may be permitted with a specific use permit. Total area of ADU shall not exceed one thousand and five hundred (1,500) square feet.

~~(ii) In R-1.5 zoning districts, a maximum of six hundred (600) square feet. An additional six hundred (600) square feet may be permitted with a specific use permit. Total area of ADU shall not exceed one thousand and two hundred (1,200) square feet.~~

~~(iii) In R-1 and AO zoning districts, a maximum of six hundred (600) square feet. An additional four hundred (400) square feet may be permitted with a specific use permit. Total area of ADU shall not exceed one thousand (1,000) square feet.~~

City of Lucas
Planning & Zoning Agenda Request
November 14, 2024

Requester: Development Services Director Joe Hilbourn

Agenda Item Request

Consider approval of a request by Colton Smith with Spiars Engineering and Surveying and Brock Babb with Centurion American CTMGT Lucas 238 LLC, on behalf of property owners Steve Lenart with CTMGT Lucas 238, LLC and Mehrdad Moayedi for approval of a final plat for Enchanted Creek Estates Phase 2B, for the property located in the James Anderson Survey, Abstract No. 17 and John McKinney Survey, Abstract No. 596, being 104.595 acres.

Background Information

This property is currently zoned R-1 (Residential 1-acre) This plat proposes 51 lots on 104.595 acres, with an average lot size of 2.05 acres. The smallest lot is greater in size than the required one acre. There are no dead-end water lines proposed with this development, all water lines are looped.

The Preliminary Plat was originally approved on December 1, 2016 and would have expired on December 1, 2021. The approval of a preliminary plat expires five years after the date of City Council approval unless a final plat is submitted and approved by the Planning and Zoning Commission for the property within such period the preliminary plat was extended on October 14, 2021.

There is an approved preliminary plat that is current, an approved development agreement, and concept plan. The proposed final plat is in conformance with both the approved preliminary plat, and the approved development agreement with concept plan. There are outstanding items from the site walk see below.

Attachments/Supporting Documentation

1. Location Map
2. Final Plat
3. Site plan
4. Application
5. Checklist

Budget/Financial Impact

City of Lucas
Planning & Zoning Agenda Request
November 14, 2024

NA

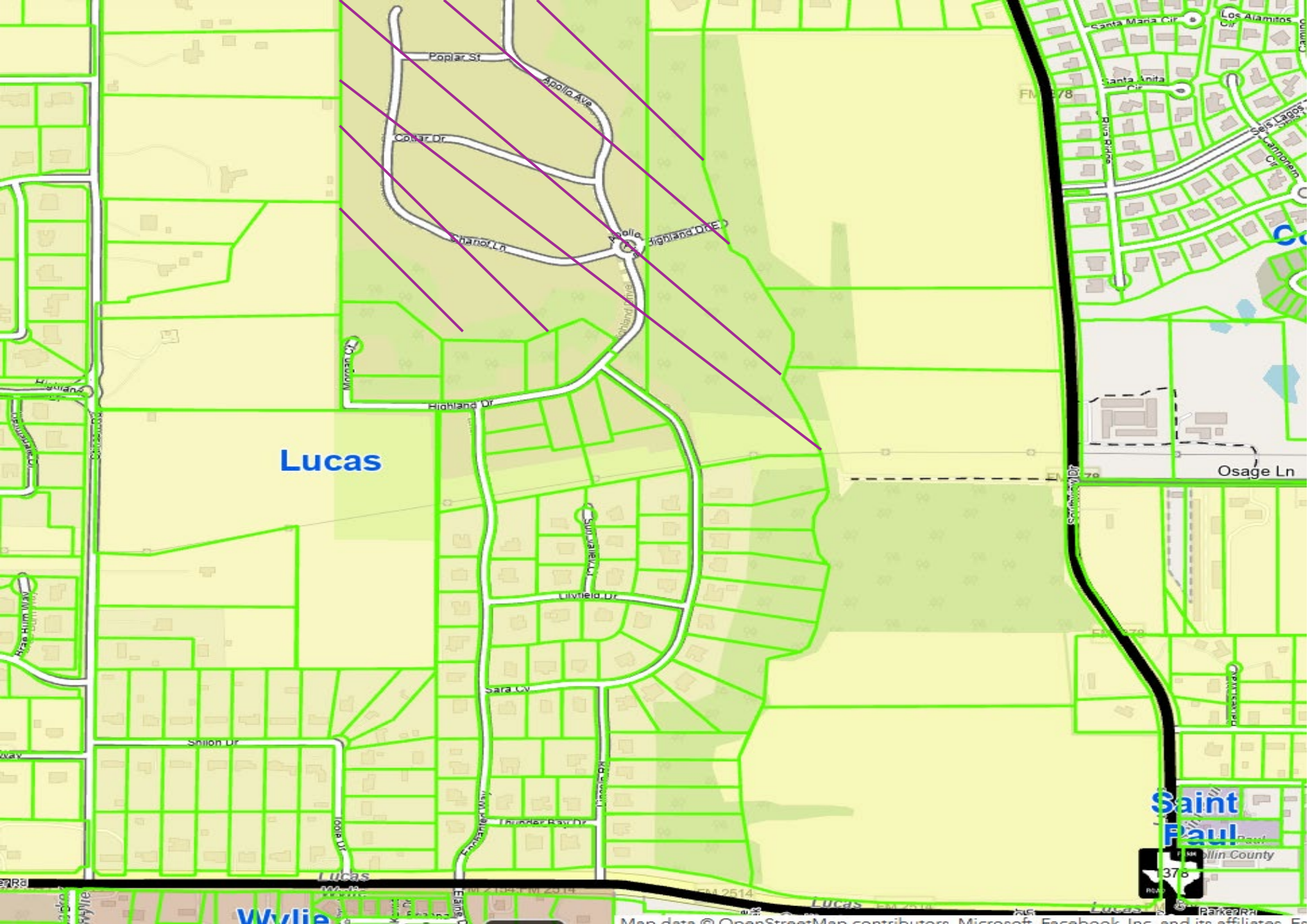
Recommendation

Public improvements, and a LOMR are considered part of the Final Plat, there are outstanding items that must be addressed prior to the planning and zoning commission meeting, or the Final Plat should be removed from the agenda or denied by the planning and zoning commission:

1. Submittal of a letter of map revision (LOMR) must be submitted and reviewed prior to the meeting.
2. Completion of public improvements, initial walk has been completed, outstanding items must be corrected prior to the meeting.

Motion

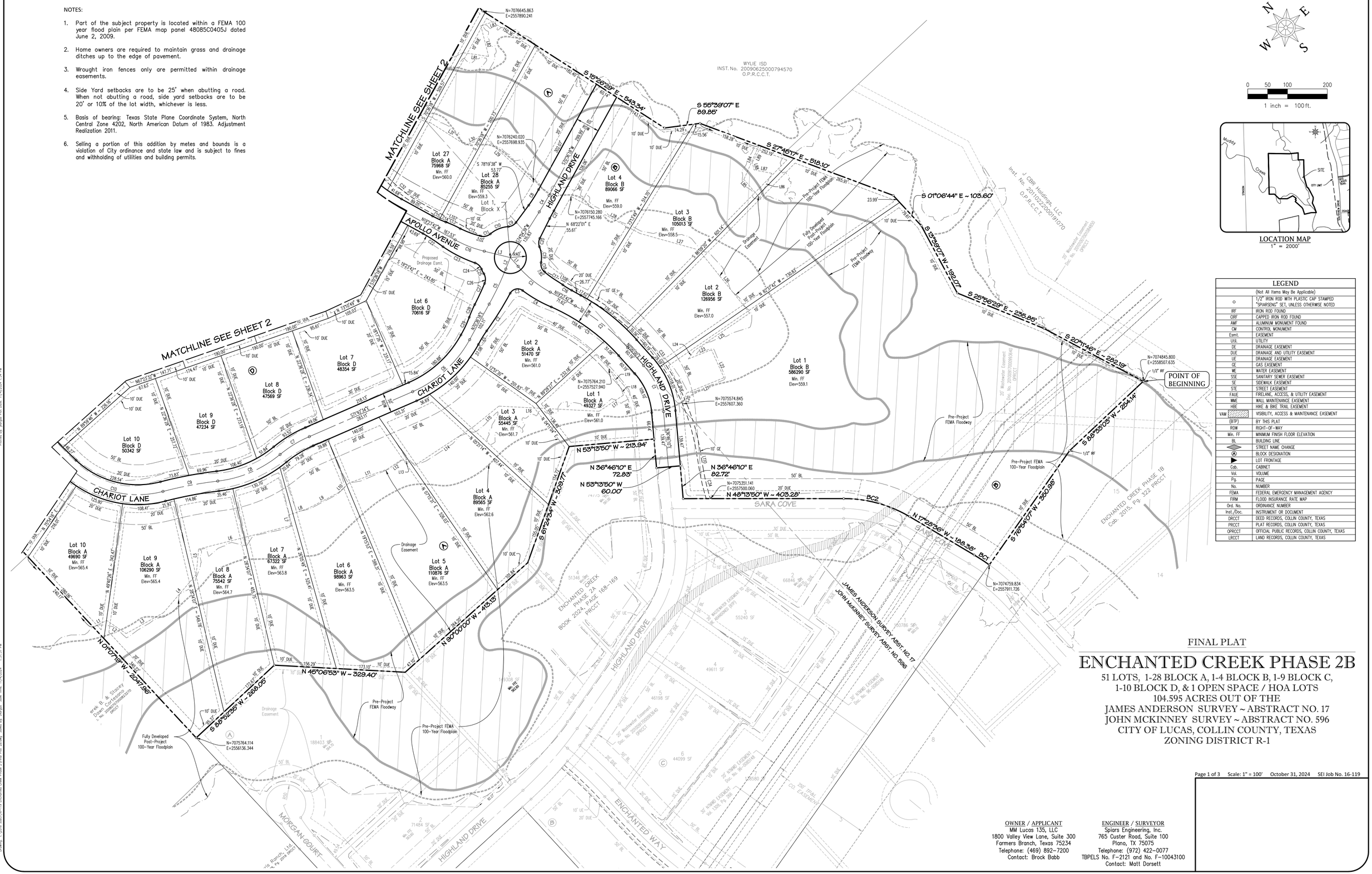
I make a motion to approve/deny the request by Colton Smith with Spiars Engineering and Surveying and Brock Babb with Centurion American CTMGT Lucas 238 LLC, on behalf of property owners Steve Lenart with CTMGT Lucas 238, LLC and Mehrdad Moayedi for approval of a final plat for Enchanted Creek Estates Phase 2A, for the property located in the James Anderson Survey, Abstract No. 17 and John McKinney Survey, Abstract No. 596, being 31.149 acres, 700 feet north of the intersection of Enchanted Way and Lillyfield Drive.



Location Map
Enchanted Creek
Phase 2B

NOTES:

1. Part of the subject property is located within a FEMA 100 year flood plain per FEMA map panel 48085C0405J dated June 2, 2009.
2. Home owners are required to maintain grass and drainage ditches up to the edge of pavement.
3. Wrought iron fences only are permitted within drainage easements.
4. Side Yard setbacks are to be 25' when abutting a road. When not abutting a road, side yard setbacks are to be 20' or 10% of the lot width, whichever is less.
5. Basis of bearing: Texas State Plane Coordinate System, North Central Zone 4202, North American Datum of 1983. Adjustment Realization 2011.
6. Selling a portion of this addition by metes and bounds is a violation of City ordinance and state law and is subject to fines and withholding of utilities and building permits.



0 50 100 200

1 inch = 100 ft.

LOCATION MAP
1" = 2000'

LEGEND

	(Not All Items May Be Applicable)
○	1/2" IRON ROD WITH PLASTIC CAP STAMPED "SPIARSENG" SET, UNLESS OTHERWISE NOTED
IRF	IRON ROD FOUND
CRF	CAPPED IRON ROD FOUND
AMF	ALUMINUM MONUMENT FOUND
CM	CONTROL MONUMENT
Esmt.	EASEMENT
Util.	UTILITY
DE	DRAINAGE EASEMENT
DUE	DRAINAGE AND UTILITY EASEMENT
UE	DRAINAGE EASEMENT
GE	GAS EASEMENT
WE	WATER EASEMENT
SSE	SANITARY SEWER EASEMENT
SE	SIDEWALK EASEMENT
STE	STREET EASEMENT
FAUE	FIRELANE, ACCESS, & UTILITY EASEMENT
WME	WALL MAINTENANCE EASEMENT
HBE	HIKE & BIKE TRAIL EASEMENT
VAM	VISIBILITY, ACCESS & MAINTENANCE EASEMENT
(BTP)	BY THIS PLAT
ROW	RIGHT-OF-WAY
Min. FF	MINIMUM FINISH FLOOR ELEVATION
BL	BUILDING LINE
◇	STREET NAME CHANGE
Ⓐ	BLOCK DESIGNATION
▶	LOT FRONTAGE
Cab.	CABINET
Vol.	VOLUME
Pg.	PAGE
No.	NUMBER
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
FIRM	FLOOD INSURANCE RATE MAP
Ord. No.	ORDINANCE NUMBER
Inst./Doc.	INSTRUMENT OR DOCUMENT
DRCCT	DEED RECORDS, COLLIN COUNTY, TEXAS
PRCCT	PLAT RECORDS, COLLIN COUNTY, TEXAS
OPRCCT	OFFICIAL PUBLIC RECORDS, COLLIN COUNTY, TEXAS
LRCCT	LAND RECORDS, COLLIN COUNTY, TEXAS

FINAL PLAT

ENCHANTED CREEK PHASE 2B

51 LOTS, 1-28 BLOCK A, 1-4 BLOCK B, 1-9 BLOCK C,
1-10 BLOCK D, & 1 OPEN SPACE / HOA LOTS
104.595 ACRES OUT OF THE
JAMES ANDERSON SURVEY ~ ABSTRACT NO. 17
JOHN MCKINNEY SURVEY ~ ABSTRACT NO. 596
CITY OF LUCAS, COLLIN COUNTY, TEXAS
ZONING DISTRICT R-1

 Scale: 1" = 100' October 31, 2024 SEI Job No. 16-119

OWNER / APPLICANT
MM Lucas 135, LLC
1800 Valley View Lane, Suite 300
Farmers Branch, Texas 75234
Telephone: (469) 892-7200
Contact: Brock Babb

ENGINEER / SURVEYOR
Spiars Engineering, Inc.
765 Custer Road, Suite 100
Plano, TX 75075
Telephone: (972) 422-0077
TBPELS No. F-2121 and No. F-10043100
Contact: Matt Dorsett

NOTES:

1. Part of the subject property is located within a FEMA 100 year flood plain per FEMA map panel 48085C0405J dated June 2, 2009.
2. Home owners are required to maintain grass and drainage ditches up to the edge of pavement.
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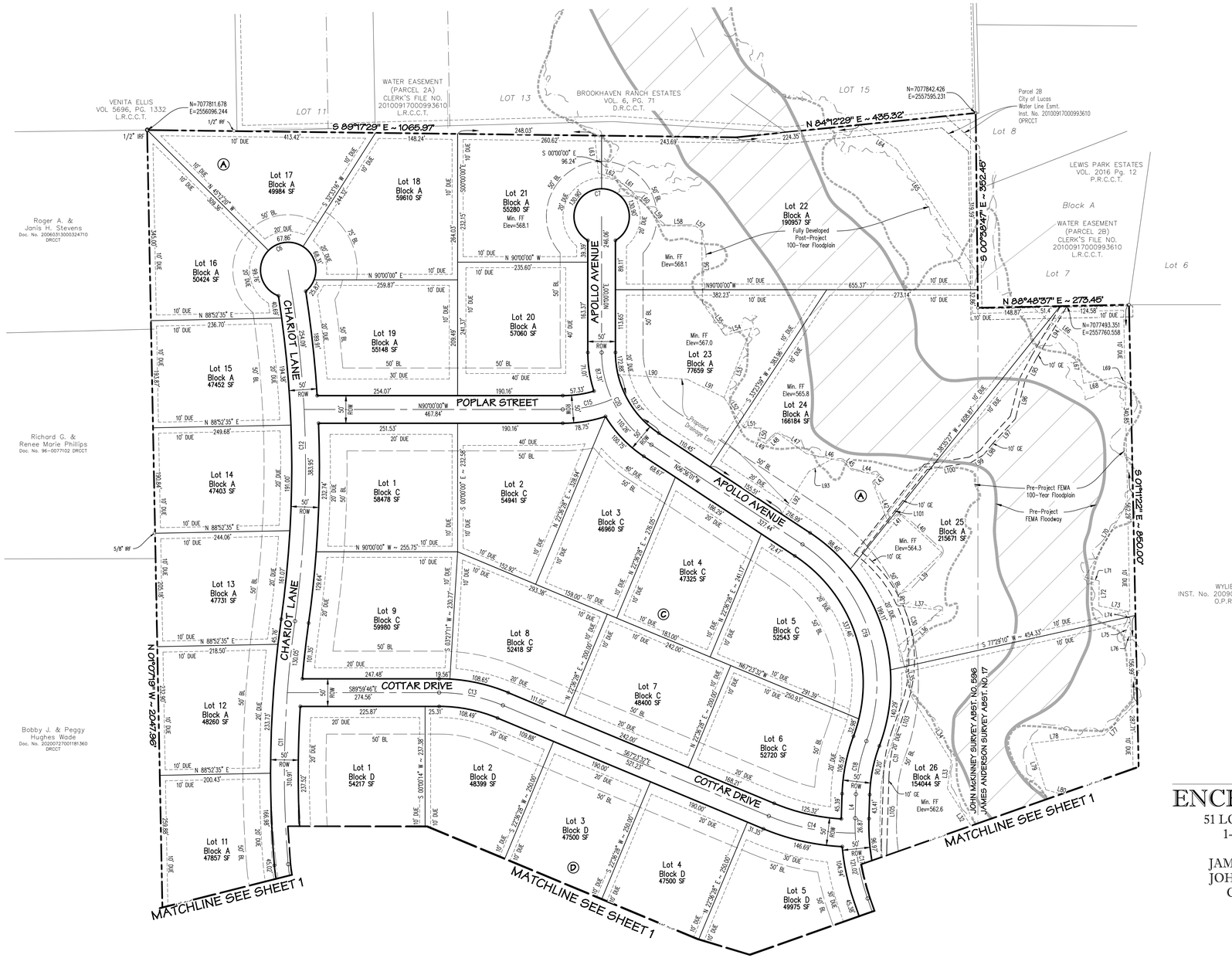
5. Basis of bearing: Texas State Plane Coordinate System, North Central Zone 4202, North American Datum of 1983. Adjustment Realization 2011.
6. Selling a portion of this addition by metes and bounds is a violation of City ordinance and state law and is subject to fines and withholding of utilities and building permits.



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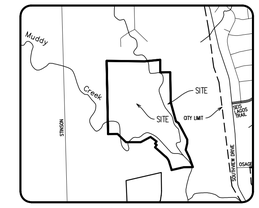
1 inch = 100 ft.



LOCATION MAP
1" = 2000'

LEGEND	
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CIRF	CAPPED IRON ROD FOUND
AMF	ALUMINUM MONUMENT FOUND
CM	CONTROL MONUMENT
Esmt.	EASEMENT
Util.	UTILITY
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GE	GAS EASEMENT
WE	WATER EASEMENT
SSE	SANITARY SEWER EASEMENT
SE	SIDEWALK EASEMENT
STE	STREET EASEMENT
FAUE	FIRELANE, ACCESS, & UTILITY EASEMENT
WME	WALL MAINTENANCE EASEMENT
HBE	HIKE & BIKE TRAIL EASEMENT
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(BTP)	BY THIS PLAT
ROW	RIGHT-OF-WAY
Min. FF	MINIMUM FINISH FLOOR ELEVATION
BL	BUILDING LINE
	STREET NAME CHANGE
Ⓐ	BLOCK DESIGNATION
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Cab.	CABINET
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PRCCT	PLAT RECORDS, COLLIN COUNTY, TEXAS
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LRCCT	LAND RECORDS, COLLIN COUNTY, TEXAS

FINAL PLAT

ENCHANTED CREEK PHASE 2B

51 LOTS, 1-28 BLOCK A, 1-4 BLOCK B, 1-9 BLOCK C,
1-10 BLOCK D, & 1 OPEN SPACE / HOA LOTS
104.595 ACRES OUT OF THE
JAMES ANDERSON SURVEY ~ ABSTRACT NO. 17
JOHN MCKINNEY SURVEY ~ ABSTRACT NO. 596
CITY OF LUCAS, COLLIN COUNTY, TEXAS
ZONING DISTRICT R-1

Submittal Log	Date
1st Submittal	10/09/23

OWNER / APPLICANT
MM Lucas 135, LLC
1800 Valley View Lane, Suite 300
Farmers Branch, Texas 75234
Telephone: (469) 892-7200
Contact: Brock Babb

ENGINEER / SURVEYOR
Spiars Engineering, Inc.
765 Custer Road, Suite 100
Plano, TX 75075
Telephone: (972) 422-0077
TBPELS No. F-2121 and No. F-10043100
Contact: Matt Dorsett

STATE OF TEXAS §
COUNTY OF COLON §

OWNER'S CERTIFICATE

LEGAL DESCRIPTION

BEING part of a tract of land, situated in the James Anderson Survey, Abstract No. 17, and the John McKinney Survey, Abstract No. 596, City of Lucas, Collin County, Texas, conveyed to MM Lucas 135 according to the deed recorded in Document No. 20220000918 31 of the Deed Records of Collin County, Texas (D.R.C.C.T.), the subject tract being more particularly described as follows:

BEGINNING at a 1/2" iron rod stamped "SPIARSENG" found for corner at the northeast corner of Lot 15, Block C, Enchanted Creek Phase 1B, an addition to the City of Lucas, Collin County, Texas, according to the plat thereof recorded in Cabinet 2015, Pg 322, of the Plat Records, Collin County, Texas (PRCCT);

THENCE with the north line of said Lot 1, the following two (2) courses and distances:

1. S 88°33'03" W, a distance of 254.14 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
2. S 76°54'07" W, a distance of 350.98 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set, for the northwest corner of said Lot 1 and the southeast corner of Enchanted Creek Phase 2A, an addition to the City of Lucas, Collin County, Texas, according to the plat thereof recorded in Book 2024, Page 168–169, of the PRCCT;

THENCE with Enchanted Creek Phase 2A, the following twelve (12) courses and distances:

1. Around a non–tangent curve to the left having a central angle of 04°56'52", a radius of 525.00 feet, a chord of N 15°00'10" W – 45.32 feet, an arc length of 45.34 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
2. N 17°28'36" W, a distance of188.38 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
3. Around a tangent curve to the left having a central angle of 30°43'35", a radius of 325.00 feet, a chord of N 32°52'03" W – 172.21 feet, an arc length of 174.29 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
4. N 48°13'50" W, a distance of 403.28 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
5. N 36°46'10" E, a distance of 82.72 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
6. N 53°13'50" W, a distance of 60.00 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
7. N 36°46'10" E, a distance of 72.83 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
8. N 53°13'50" W, a distance of 213.94 feet,
9. S 61°24'34" W, a distance of 309.77 feet,
10. N 90°00'00" W, a distance of 413.13 feet,
11. N 45°06'53" W, a distance of 329.40 feet, to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
12. S 88°52'35" W, a distance of 268.05 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set, in the west line of said MM Lucas 135 tract, for the northwest corner of Enchanted Creek Phase 2A;

THENCE N 01°07'19" W, with the west line of said MM Lucas 135 tract, a distance of 2047.96 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set, for the northwest corner of said MM Lucas 135 tract;

THENCE with the north line of said MM Lucas tract the following two (2) courses and distances:

1. S 89°17'29" E, a distance of 1065.97 feet,
2. N 84°12'29" E, a distance of 435.32 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set, in the west line of Lewis Park Estates, an addition to the City of Lucas, Collin County, Texas, according to the plat thereof recorded in Volume 2016, Page 12, of the PRCCT, for the most northerly northeast corner of said MM Lucas 135 tract;

THENCE with the west and south line of said Lewis Park Estates, the following two (2) courses and distances:

1. S 00°38'47" E, a distance of 352.45 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
2. N 88°48'37" E, a distance of 273.45 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set, for the northeast corner of said MM Lucas 135 tracr;

THENCE with the east line of said MM Lucas tract the following eight (8) courses and distances:

1. S 01°11'22" E, a distance of 850.00 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
2. S 15°26'29" E, a distance of 543.34 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
3. S 55°39'07" E, a distance of 89.85 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
4. S 27°45'17" E, a distance of 518.10 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
5. S 01°06'44" E, a distance of 103.60 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
6. S 13°39'07" W, a distance of 192.07 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
7. S 25°56'29" E, a distance of 235.85 feet to a 1/2" iron rod with a plastic cap stamped "SPIARSENG" set,
8. S 20°11'46" E, a distance of 282.19 feet to the POINT OF BEGINNING with the subject tract containing 4,556,139.01 square feet or 104.595 acres of land.

DEDICATION

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That We, **MM LUCAS 135, LLC**, do hereby adopt this plat designating the hereinabove described property as **Enchanted Creek Phase 2B,** Lots 1–28 Block A, Lots 1–4 Block B, Lots 1–9 Block C, Lots 1–10 Block D and Lot 1, Block X, an addition to the City of Lucas, Texas and do hereby dedicate to the public use forever the streets and alleys shown thereon and do hereby reserve the easement strips shown on this plat for the mutual use and accommodation of garbage collection agencies and all public utilities desiring to use or using same. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other improvements or growths which in any way endanger or interfere with the construction, maintenance or efficiency of its respective systems on any of these easement strips and any public utility shall at all times have the right of ingress and egress to and from and upon the said easement strip for the purpose of constructing, reconstructing, inspecting, and patrolling, without the necessity at any time of procuring the permission of anyone. This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Lucas, Texas.

This plat approved subject to all platting ordinances, rules, regulations, and resolutions of the City of Lucas, Texas.

Executed this _____ day of _____ , 2024.

MM Lucas 135, LLC

By: _____

Name: _____

STATE OF TEXAS §
COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and for said County and State, on this day personally appeared Mehrdad Moayedi, known to me to be the person(s) whose names are subscribed to the foregoing instrument and acknowledged to me that they each executed the same for the purpose and considerations therein expressed.

Given under my hand and seal of office, this _____ day of _____, 2024.

_____
Notary Public in and for
the State of Texas

SURVEYOR'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

That I, Scott F. Ammons, of Spiars Engineering, Inc., do hereby certify, that I prepared this plat from an actual on the ground survey of the land as described and that the corner monuments shown thereon were properly placed under my personal supervision in accordance with the Platting Rules and Regulations of the City of Lucas Planning and Zoning Commission.

_____
SCOTT F. AMMONS, R.P.L.S. NO. 6550
scott.ammons@spiarsengneering.com

STATE OF TEXAS §
COUNTY OF COLLIN §

Before me, the undersigned, a Notary Public in and for said County and State, on this day personally appeared Scott F. Ammons, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the _____ day of _____, 2024.

_____
Notary Public in and for
the State of Texas

CITY APPROVAL CERTIFICATE

This plat is hereby approved by the Planning and Zoning Commission of the City of Lucas, Texas

_____
Tommy Tolson, Planning and Zoning Commission Chairman Date

ATTEST:

_____
Signature Date

_____
Name and Title Date

The Director of Public Works of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge of belief, this subdivision plat conforms to all the requirements of the Code of Ordinances and with engineering construction standards and processes adopted by the City of Lucas, Texas as to which his/her approval is required

_____
Jeremy Bogle, Director of Public Works Date

The Development Services Director of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances, or as may have been amended or modified, as allowed, by the Planning and Zoning Commission as to which his/her approval is required

_____
Joseph Hilbourn, Development Services Director Date

HEALTH DEPARTMENT CERTIFICATION

I, as a representative of Collin County Development Services, do hereby certify that the on–site sewage facilities described on this plat conform to the applicable OSSF laws of the State of Texas, that site evaluations have been submitted representing the site conditions in the area in which on–site sewage facilities are planned to be used.

_____ _____
Designated Representative Collin County Development Services Date

OSSF NOTES:

1. All lots must utilize alternative type On–Site Sewage Facilities.
2. All lots must maintain state–mandated setbacks of all On–Site Sewage Facility components from any/all easements and drainage areas, water distribution lines, sharp breaks and/or creeks/rivers/ponds, etc. (Per State regulations). No variances will be granted for setbacks or for OSSF reduction.
   - Standard easements for each lot consist of 20'–40' drainage utility easements along roadways and 10'–20' drainage/utility easements along the non–roadway lot lines to which OSSF setbacks will apply.
   - There is ½ of a 250' power easement, two (2) 30' water easements and a 20' water easement (~185' total) across lot 1B to which OSSF setback will apply. None of these easements can be crossed so all structures and OSSF components must be on the same side of the easement block. Due to constraints on these lots, placement, size or OSSF type may be limited. Careful pre–planning will be required.
   - There is a 10' utility easement on lots 1B, 2B, 3B, 4B, 24A, 25A (bisecting), 26A, 27A and 28A to which OSSF setbacks will apply and cannot be crossed when bisecting. Due to constraints on these lots, placement, size or OSSF type may be limited. Careful pre–planning will be required.
   - There is a detention easement on lot 23A, 24A and 6D to which OSSF setbacks will apply. Due to constraints on these lots, placement, size or OSSF type may be limited. Careful pre–planning will be required.
   - There is a large drainage easement/flood plain/creek area on lot 1A, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 22A, 23A, 24A, 25A, 26A, 27A, 28A, 1B, 2B, 3B and 4B to which OSSF setbacks will apply. Due to constraints on these lots, placement, size or OSSF type may be limited. Careful pre–planning will be required. Additionally, any OSSF system/components within the flood plain or within a drainage easement are subject to additional requirements and special planning materials. A pre–planning meeting with RS/PE and Development Services is recommended for any of these lots.
   - Lot 1X is an open space lot and not approved for any OSSF.
3. There are no easements other than those noted above.
4. A portion of lots 1A, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 22A, 23A, 24A, 25A, 26A, 27A, 28A, 1B, 2B, 3B and 4B is located within the 100–year flood plain:
   - Any OSSF that is located within the 100–year floodplain may be subject to special planning requirements or may be restricted from being within the flood plain.
   - A pre–planning meeting with RS/PE and Development Services is recommended prior to any development planning.
5. There were no permitted/approved existing structures with associated OSSF(s) on lot at the time of approval. Any existing structures or OSSFs on lots must be reviewed and permitted by Collin County Development Services prior to any use.
6. Tree removal and/or grading for OSSF will likely be required on individual lots.
7. There are no water wells noted in this subdivision and no water wells are allowed without prior approval from Collin County Development Services.
8. Each lot is limited to a maximum of 5,000 gallons of treated/disposed sewage each day.
9. Individual site evaluations and OSSF design plans (meeting all State and County requirements) must be submitted to and approved by Collin County for each lot prior to construction of any OSSF system.

Lot Area Table

Lot #	Block #	Square Feet	Acreage
1	A	49,327	1.132
2	A	51,470	1.182
3	A	55,445	1.273
4	A	89,565	2.056
5	A	110,876	2.545
6	A	98,963	2.272
7	A	67,322	1.546
8	A	75,542	1.734
9	A	106,290	2.440
10	A	49,690	1.141
11	A	47,857	1.099
12	A	48,260	1.108
13	A	47,731	1.096
14	A	47,403	1.088

Lot Area Table

Lot #	Block #	Square Feet	Acreage
1	B	586,290	13.459
2	B	126,956	2.914

Lot Area Table

Lot #	Block #	Square Feet	Acreage
1	C	58,478	1.342
2	C	54,941	1.261
3	C	46,960	1.078
4	C	47,325	1.086
5	C	52,543	1.206

Lot Area Table

Lot #	Block #	Square Feet	Acreage
1	D	54,217	1.245
2	D	48,399	1.111
3	D	47,500	1.090
4	D	47,500	1.090
5	D	49,975	1.147

Lot Area Table

Lot #	Block #	Square Feet	Acreage
15	A	47,452	1.089
16	A	50,424	1.158
17	A	49,984	1.147
18	A	59,610	1.368
19	A	55,148	1.266
20	A	57,060	1.310
21	A	55,280	1.269
22	A	190,957	4.384
23	A	77,659	1.783
24	A	166,184	3.815
25	A	215,671	4.951
26	A	154,044	3.536
27	A	75,968	1.744
28	A	85,255	1.957

Lot Area Table

Lot #	Block #	Square Feet	Acreage
3	B	105,013	2.411
4	B	89,066	2.045

Lot Area Table

Lot #	Block #	Square Feet	Acreage
6	C	52,720	1.210
7	C	48,400	1.111
8	C	52,418	1.203
9	C	59,980	1.377

Lot Area Table

Lot #	Block #	Square Feet	Acreage
6	D	70,616	1.621
7	D	48,354	1.110
8	D	47,569	1.092
9	D	47,234	1.084
10	D	50,342	1.156

Lot Curve Table

Curve #	Length	Radius	Delta	Chord Bearing	Chord Distance
C1	40.18'	269.25'	8°33'02"	N73°08'51"E	40.14'
C2	111.62'	835.44'	7°39'18"	N73°48'21"E	111.54'
C3	36.22'	21.00'	98°49'52"	S60°36'21"E	31.90'
C4	83.32'	334.34'	14°16'46"	S18°19'49"E	83.11'
C5	159.46'	501.64'	18°12'47"	S15°20'48"E	158.79'
C6	261.80'	50.00'	299°59'46"	N80°28'36"E	50.00'
C7	261.80'	50.00'	300°00'00"	N90°00'00"E	50.00'
C8	46.70'	346.43'	7°43'22"	S73°52'35"W	46.66'
C9	22.57'	26.00'	49°43'38"	N76°48'33"W	21.86'
C10	49.71'	78.00'	36°30'58"	N70°12'13"W	48.87'
C11	25.79'	27.00'	54°44'14"	N61°05'35"W	24.82'
C12	60.57'	267.42'	12°58'37"	N27°17'16"W	60.44'
C13	34.01'	263.00'	7°24'36"	N24°33'22"W	33.99'
C14	17.29'	237.00'	4°10'49"	N26°10'16"W	17.29'
C15	19.38'	237.00'	4°41'09"	N21°44'17"W	19.38'
C16	26.08'	236.00'	6°19'53"	N16°13'46"W	26.07'
C17	39.23'	267.91'	8°23'20"	N12°29'00"W	39.19'
C18	26.84'	26.00'	59°08'26"	N21°16'54"E	25.66'
C19	40.62'	73.91'	31°29'09"	N35°57'16"E	40.11'
C20	21.47'	26.00'	47°18'43"	N44°42'47"E	20.86'
C21	22.21'	304.20'	4°10'56"	N70°19'54"E	22.20'
C22	60.40'	435.77'	7°56'27"	S14°46'01"E	60.35'
C23	90.52'	332.69'	15°35'24"	S21°25'22"E	90.24'
C24	23.20'	27.00'	49°14'31"	S04°35'48"E	22.50'
C25	12.95'	78.00'	9°30'48"	S15°16'03"W	12.94'
C26	25.52'	27.00'	54°09'17"	S37°35'18"W	24.58'
C27	58.17'	770.56'	4°19'30"	S66°49'41"W	58.15'
C28	34.93'	263.00'	7°36'36"	S65°11'08"W	34.91'
C29	49.27'	258.46'	10°55'17"	S67°01'58"W	49.19'

Centerline Curve Table

Curve #	Length	Radius	Delta	Chord Bearing	Chord Distance
C1	128.35'	200.00'	36°46'10"	N18°23'05"E	126.16'
C2	169.25'	500.00'	19°23'42"	N09°41'51"W	168.45'
C3	104.06'	300.00'	19°52'26"	N09°27'30"W	103.54'
C4	48.49'	800.00'	3°28'21"	S72°20'28"W	48.48'
C5	97.47'	800.00'	6°58'52"	N67°06'52"E	97.41'
C6	197.32'	300.00'	37°41'09"	N89°26'52"E	193.78'
C7	86.40'	300.00'	16°30'03"	S79°35'37"E	86.10'
C8	172.62'	300.00'	32°58'07"	S71°21'35"E	170.25'
C9	140.29'	1000.00'	8°02'16"	S58°53'40"E	140.17'
C10	253.94'	250.00'	58°11'52"	S33°48'52"E	243.16'
C11	440.96'	2000.00'	12°37'57"	S01°36'02"W	440.07'
C12	638.04'	2025.00'	18°03'10"	S01°06'35"E	635.41'
C13	118.35'	300.00'	22°36'14"	S78°41'39"E	117.59'
C14	160.32'	400.00'	22°57'49"	S78°52'27"E	159.24'
C15	91.71'	225.00'	23°21'14"	S78°19'23"W	91.08'
C16	78.80'	300.00'	15°02'58"	N26°55'12"W	78.57'
C17	147.89'	400.00'	21°11'03"	N08°48'11"W	147.05'
C18	98.39'	300.00'	18°47'31"	N11°11'06"E	97.95'
C19	404.12'	300.00'	77°10'53"	N18°00'35"W	374.25'
C20	197.57'	200.00'	56°36'01"	N28°18'01"W	189.64'

Boundary Curve Table

Curve #	Length	Radius	Delta	Chord Bearing	Chord Distance
BC1	45.34'	525.00'	4°56'52"	N15°00'10"W	45.32'
BC2	174.29'	325.00'	30°43'35"	N32°52'03"W	172.21'

Gas Easement Curve Table

Curve #	Length	Radius	Delta	Chord Bearing	Chord Distance
C30	309.49'	248.00'	71°30'05"	S16°07'30"E	289.79'
C31	78.45'	252.00'	17°50'12"	S10°42'27"W	78.13'
C32	130.15'	352.00'	21°11'03"	S08°48'11"E	129.41'
C33	494.26'	548.00'	51°40'38"	S06°26'36"W	477.68'
C34	75.86'	552.00'	7°52'27"	S28°20'42"W	75.80'

Drainage Easement Line Table

Line #	Bearing	Distance
L1	S74°00'23"E	37.88'
L2	S14°02'41"E	58.79'
L3	S77°23'15"E	107.71'
L4	N82°20'13"E	126.50'
L5	N47°04'08"E	64.01'
L6	S62°29'33"E	239.19'
L7	N29°42'02"E	26.95'
L8	S67°02'36"E	51.22'
L9	S75°30'54"E	85.35'
L10	N89°20'56"E	36.84'
L11	S68°05'30"E	103.37'
L12	S82°02'39"E	40.92'
L13	S33°27'39"E	40.75'
L14	S81°36'52"E	171.08'
L15	S87°12'59"E	81.72'
L16	S45°17'01"E	252.34'
L17	S81°41'40"E	73.02'
L18	N22°19'10"E	17.95'
L19	N10°37'05"E	58.18'
L20	N60°32'26"E	28.39'
L21	S70°31'36"E	101.98'
L22	N17°39'31"E	76.97'
L23	N70°00'00"W	62.56'
L24	N76°32'31"E	24.81'
L25	S82°18'20"E	168.99'
L26	N02°56'47"E	204.06'
L27	N32°36'24"W	153.25'
L28	N19°58'27"W	196.52'
L29	N05°56'10"W	165.41'
L30	N68°33'47"W	51.57'
L31	N15°51'02"W	104.47'

Drainage Easement Line Table

Line #	Bearing	Distance
L32	N32°24'08"W	114.41'
L33	N07°46'27"E	50.34'
L34	N31°39'32"W	133.76'
L35	N14°08'32"W	98.15'
L36	N50°00'55"E	99.80'
L37	N85°00'27"W	79.26'
L38	N01°10'07"E	19.89'
L39	N46°07'04"E	110.82'
L40	N47°34'28"W	104.08'
L41	S48°40'04"W	27.03'
L42	N20°50'26"W	81.07'
L43	N43°50'52"E	16.67'
L44	N78°52'37"W	50.48'
L45	N43°51'48"W	21.38'
L46	N78°24'02"W	68.11'
L47	N54°18'50"W	64.27'
L48	S47°28'59"W	28.57'
L49	N64°22'16"W	16.07'
L50	N14°55'39"E	22.05'
L51	N89°22'32"W	30.96'
L52	N33°12'39"W	65.43'
L53	N21°26'35"E	134.97'
L54	S74°26'10"W	48.96'
L55	N35°10'23"W	72.23'
L56	N00°26'10"W	130.04'
L57	N51°46'56"W	13.87'
L58	N89°04'17"W	61.10'
L59	N38°56'59"W	38.41'
L60	N42°45'32"W	43.04'
L61	N50°12'55"W	32.21'
L62	N70°51'32"W	39.09'

Drainage Easement Line Table

Line #	Bearing	Distance
L63	N05°39'35"W	68.33'
L64	S56°55'55"E	80.44'
L65	S32°54'38"E	268.27'
L66	N50°55'28"W	105.51'
L67	S09°20'20"E	72.97'
L68	N79°57'45"E	61.04'
L69	S64°10'32"E	27.82'
L70	S29°34'55"W	175.47'
L71	S76°11'57"E	26.27'
L72	S00°31'19"W	45.47'
L73	S79°30'27"E	52.78'
L74	S16°55'29"E	17.21'
L75	S22°14'02"W	33.01'
L76	N85°13'00"E	22.56'
L77	S45°27'04"W	84.81'
L78	S83°34'53"W	132.03'
L79	S17°17'47"E	88.10'
L80	S74°09'51"E	63.78'
L81	S39°53'00"E	65.19'
L82	N27°35'27"E	79.57'
L83	N65°30'34"W	43.91'
L84	S65°44'29"W	93.69'
L85	S00°50'24"W	61.07'
L86	N68°00'25"E	68.64'
L87	N37°27'49"W	45.40'
L88	N28°11'00"E	19.45'
L89	N70°57'23"E	46.53'
L90	S85°51'37"E	125.85'
L91	S63°40'05"E	74.25'
L92	S32°31'41"W	91.73'
L93	N61°52'33"E	47.70'

Gas Easement Line Table

Line #	Bearing	Distance
L94	S30°15'14"W	111.45'
L95	S27°57'43"W	41.45'
L96	S14°09'40"W	73.59'
L97	S42°35'21"W	61.27'
L98	S38°46'39"W	25.72'
L99	S58°43'32"W	26.37'
L100	S80°52'29"W	80.38'
L101	S38°06'48"W	190.98'
L103	S19°37'33"W	51.23'
L105	S01°47'21"W	128.97'
L107	S19°23'42"E	171.76'
L108	S19°23'42"E	136.88'
L110	S32°16'55"W	46.41'

Centerline Line Table

Line #	Bearing	Distance
L1	N00°28'43"E	29.32'
L2	N63°37'26"E	30.98'
L3	N34°26'41"W	67.57'
L4	N01°47'21"E	43.41'

FINAL PLAT

ENCHANTED CREEK PHASE 2B

51 LOTS, 1-28 BLOCK A, 1-4 BLOCK B, 1-9 BLOCK C,
1-10 BLOCK D, & 1 OPEN SPACE / HOA LOTS
104.595 ACRES OUT OF THE
JAMES ANDERSON SURVEY ~ ABSTRACT NO. 17
JOHN MCKINNEY SURVEY ~ ABSTRACT NO. 596
CITY OF LUCAS, COLLIN COUNTY, TEXAS
ZONING DISTRICT R-1

 Scale: 1" = 100' October 31, 2024 SEI Job No. 16-119

OWNER / APPLICANT
MM Lucas 135, LLC
1800 Valley View Lane, Suite 300
Farmers Branch, Texas 75234
Telephone: (469) 892–7200
Contact: Brock Babb

ENGINEER / SURVEYOR
Spiars Engineering, Inc.
765 Custer Road, Suite 100
Plano, TX 75075
Telephone: (972) 422–0077
TBPELS No. F–2121 and No. F–10043100
Contact: Matt Dorsett

Planning & Zoning
Application Fee Breakdown

Development Name: Enchanted Creek Phase 2B

Development Address: Parker Road

G/L	TRAN		
4361	361.1	Initial Zoning	$ _____
4361	361.2	Rezoning	$ _____
4362	362	Specific Use Permit	$ _____
4363	363	Waiver/Variance Request	$ _____
4390.1	390.1	Site Plan	$ _____
4390.2	390.2	Tree Survey/Conservation Plan	$ _____
4390.3	390.3	Architectural Plan	$ _____
4390.4	390.4	Landscape Plan	$ _____
4424	424.1	Preliminary Plat	$ _____
4424	424.2	Final Plat	$ 1475.00
4424	424.3	Replat	$ _____
4424	424.4	Vacation of Plat	$ _____
4424	424.5	Optional Land Study	$ _____
4424	424.6	Filing Fees	$ _____
4427	427	Public Improvements/3% Construction	$ 76,500.00
4980	980	Park ProRata/Dedication Fee	$ 51,000.00

Total Amount Due $ _____

Official Use Only:

Received by: DRB Date: 10/24/2024

Processed by: _____ Date: _____

Received Monies from: _____ Check # 200036 - 76,500 Cash ____ CC ____

200035 - 1475.

200034 - 51,000

MM Lucas 135, LLC 04023 City of Lucas Date: 10/17/2024 Check #200034

Invoice Date	Invoice Number	Job	Description	Net Amount
Oct 15, 2024	101524A	032002	City Park Fees	51,000.00
			Check 200034 Total	51,000.00

TO VERIFY AUTHENTICITY, SEE REVERSE SIDE FOR DESCRIPTION OF THE 11 SECURITY FEATURES

MM Lucas 135, LLC
1800 Valley View Lane, Ste 300
Farmers Branch, TX 75234

International Bank of Commerce

200034

DATE	AMOUNT
10/17/2024	**$51,000.00**

Void After 90 Days

Fifty One Thousand Dollars and Zero cents ********

PAY TO THE ORDER OF

City of Lucas
665 Country Club Road.
Lucas, TX 75002-7651.

⑈200034⑈ ⑆113000861⑆ 1114220787⑈

MM Lucas 135, LLC [illegible] Date: 10/17/2024 Check #200035

Invoice Date	Invoice Number	Job	Description	Net Amount
Oct 15, 2024	101524B	032002	Final Plat Fee	1,475.00
			Check 200035 Total	1,475.00

TO VERIFY AUTHENTICITY, SEE REVERSE SIDE FOR DESCRIPTION OF THE 11 SECURITY FEATURES

MM Lucas 135, LLC
1800 Valley View Lane, Ste 300
Farmers Branch, TX 75234

International Bank of Commerce

200035

DATE	AMOUNT
10/17/2024	**$1,475.00**

Void After 90 Days

One Thousand, Four Hundred Seventy Five Dollars and Zero cents ********

PAY TO THE ORDER OF
City of Lucas
665 Country Club Road.
Lucas, TX 75002-7651.

Laura Wayland

⑈200035⑈ ⑆113000861⑆ 1114220787⑈

MM Lucas 135, LLC 04173 City of Lucas Date: 10/22/2024 Check #200036

Invoice Date	Invoice Number	Job	Description	Net Amount
Oct 15, 2024	1Q1524- Rev 1	032002	City Inspection Fees	76,500.00
			Check 200036 Total	76,500.00

TO VERIFY AUTHENTICITY, SEE REVERSE SIDE FOR DESCRIPTION OF THE 11 SECURITY FEATURES

MM Lucas 135, LLC
1800 Valley View Lane, Ste 300
Farmers Branch, TX 75234

International Bank of Commerce

200036

DATE	AMOUNT
10/22/2024	**$76,500.00**

Void After 90 Days

Seventy Six Thousand, Five Hundred Dollars and Zero cents ********

PAY TO THE ORDER OF
City of Lucas
665 Country Club Road.
Lucas, TX 75002-7651

Laura Wayland

⑈200036⑈ ⑆113000861⑆ 1114220787⑈

N

W E

S

0 100 200 400

1 inch = 200 ft.

LEGEND

Proposed Drainage Area Boundaries

Offsite Drainage Area Boundaries

Drainage Easement Line Table

Line #	Bearing	Distance
L1	S74°00'23"E	37.88'
L2	S14°02'41"E	58.79'
L3	S77°23'15"E	107.71'
L4	N82°20'13"E	126.50'
L5	N47°04'08"E	64.01'
L6	S62°29'33"E	239.19'
L7	N29°42'02"E	26.95'
L8	S67°02'36"E	51.22'
L9	S75°30'54"E	85.35'
L10	N89°20'56"E	36.84'
L11	S68°05'30"E	103.37'
L12	S82°02'39"E	40.92'
L13	S33°27'39"E	40.75'
L14	S81°36'52"E	171.08'
L15	S87°12'59"E	81.72'
L16	S45°17'01"E	252.34'

Drainage Easement Line Table

Line #	Bearing	Distance
L17	S81°41'40"E	73.02'
L18	N22°19'10"E	17.95'
L19	N10°37'05"E	58.18'
L20	N60°32'26"E	28.39'
L21	S70°31'36"E	101.98'
L22	N17°39'31"E	76.97'
L23	N70°00'00"W	62.56'
L24	N76°32'31"E	24.81'
L25	S82°18'20"E	168.99'
L26	N02°56'47"E	204.06'
L27	N32°36'24"W	153.25'
L28	N19°58'27"W	196.52'
L29	N05°56'10"W	165.41'
L30	N68°33'47"W	51.57'
L31	N15°51'02"W	104.47'
L32	N32°24'08"W	114.41'

Drainage Easement Line Table

Line #	Bearing	Distance
L33	N07°46'27"E	50.34'
L34	N31°39'32"W	133.76'
L35	N14°08'32"W	98.13'
L36	N50°00'55"E	99.80'
L37	N85°00'27"W	79.26'
L38	N01°10'07"E	19.89'
L39	N46°07'04"E	110.82'
L40	N47°34'28"W	104.08'
L41	S48°40'04"W	27.03'
L42	N20°50'26"W	81.07'
L43	N43°50'52"E	16.67'
L44	N78°52'37"W	50.48'
L45	N43°51'48"W	21.38'
L46	N78°24'02"W	68.11'
L47	N54°18'50"W	64.27'
L48	S47°28'59"W	28.57'

Drainage Easement Line Table

Line #	Bearing	Distance
L49	N64°22'16"W	16.07'
L50	N14°55'39"E	22.05'
L51	N89°22'32"W	30.96'
L52	N33°12'39"W	65.43'
L53	N21°26'35"E	134.97'
L54	S74°26'10"W	48.96'
L55	N35°10'23"W	72.23'
L56	N00°26'10"W	130.04'
L57	N51°46'56"W	13.87'
L58	N89°04'17"W	61.10'
L59	N38°56'59"W	38.41'
L60	N42°45'32"W	43.04'
L61	N50°12'55"W	32.21'
L62	N70°51'32"W	39.09'
L63	N05°39'35"W	68.33'
L64	S56°55'55"E	80.44'

Drainage Easement Line Table

Line #	Bearing	Distance
L65	S32°54'38"E	268.27'
L66	N50°55'28"W	105.51'
L67	S09°20'20"E	72.97'
L68	N79°57'45"E	61.04'
L69	S64°10'32"E	27.82'
L70	S29°34'55"W	175.47'
L71	S76°11'57"E	26.27'
L72	S00°31'19"W	45.47'
L73	S79°30'27"E	52.78'
L74	S16°55'29"E	17.21'
L75	S22°14'02"W	33.01'
L76	N85°13'00"E	22.56'
L77	S45°27'04"W	84.81'
L78	S83°34'53"W	132.03'
L79	S17°17'47"E	88.10'
L80	S74°09'51"E	63.78'

Drainage Easement Line Table

Line #	Bearing	Distance
L81	S39°53'00"E	65.19'
L82	N27°35'27"E	79.57'
L83	S65°30'34"E	43.91'
L84	S65°44'29"W	93.69'
L85	S00°50'24"W	61.07'
L86	N68°00'25"E	68.64'
L87	N37°27'49"W	45.40'
L88	N28°11'00"E	19.45'
L89	N70°57'23"E	46.53'
L90	S85°51'37"E	125.85'
L91	S63°40'05"E	74.25'
L92	S32°31'41"W	91.73'
L93	N61°52'33"E	47.70'

SITE PLAN

ENCHANTED CREEK PHASE 2B

51 LOTS, 1-28 BLOCK A, 1-4 BLOCK B, 1-9 BLOCK C,
1-10 BLOCK D, & 1 OPEN SPACE / HOA LOTS
104.595 ACRES OUT OF THE
JAMES ANDERSON SURVEY ~ ABSTRACT NO. 17
JOHN MCKINNEY SURVEY ~ ABSTRACT NO. 596
CITY OF LUCAS, COLLIN COUNTY, TEXAS
ZONING DISTRICT R-1

Scale: 1" = 200' October 2023 SEI Job No. 16-119

PLATTING APPLICATION

Name of Subdivision and/or Project: Enchanted Creek Phase 2B

Items Submitted	Filing Fee
☐ **Preliminary Plat**	
▪ Single Family Residential Subdivision Development	_____
o $750 + $5 per acre with 20 acres or less (i.e. $850 for 20 acres) excluding minor plats of five (5) acres or less.	
o $750 + $5 per acre with 21 - 30 acres (i.e. $900 for 30 acres)	
o $800 + $5 acre with 31 - 45 acres (i.e. $1,025 for 45 acres)	
o $900 + $5 per acre with 46+ acres (i.e. $1,130 for 46 acres)	
▪ Estate Residential Subdivision Development	_____
o $1,000 + $7 per acre for all size parcels (i.e. $1,140 for 20 acres)	
▪ Minor Plats	_____
o $500 + $5 per acre with 5 acres or less (i.e. $525 for 5 acres)	
▪ Non-residential District Plats	_____
o $800 + $10 per acre with 30 acres or less	
o $850 + $10 per acre with 31 – 45 acres	
o $950 + $10 per acre with 46+ acres	
☒ **Final Plat**	
▪ Single Family Residential Subdivision Development	_____
o $800 + $5 per acre with 30 acres or less	
o $850 + $5 per acre with 31 -- 45 acres	
o $950 + $5 per acre with 46+ acres	
Any additional development fees will be charged at final plat rates.	
▪ Estate residential Subdivision Development	$1475
o $950 + $7 per lot for all size parcels	
▪ Minor Plat	_____
o $350 + $5 per acre with 5 acres or less	
▪ Non-residential District Plats	_____
o $850 + $10 per acre for up to 30 acres	
o $900 + $10 per acre with 31 – 45 acres	
o $1,000 + $10 per acre with 46+ acres	
▪ Replat	_____
o Minor Plat (5 acres or less) $450 + $5 per acre ($475 for 5 acres)	
o All others - $600 + $10 per acre	
▪ Amended Plat	_____
o Minor Plats (5 acres or less) - $300 + $7 per acre (i.e. $300 for an amended plat for 5 acres)	
o All others - $500 + $10 per acre (i.e. $700 for an amended plat for 20 acres)	_____
☐ **Storm Water Run-Off Permit**	
o Developments 0 – 3 acres $75	
o Developments 4 – 10 acres $150	
o Developments 10+ acres $500	_____
☐ **Vacation of Plat**	
o $500 + $10 per acre	_____
☐ **Concept Plan (Optional Land Study)**	
o $150 per session with Planning & Zoning and/or City Council	_____
☐ **Tree Survey/Conservation Plan**	No Fee
☐ **Tree Removal & Site Clearing Permit**	_____
o $ 250	
☐ **Park Site Dedication**	_____
o $ 1,000 per lot or land dedication	
TOTAL	$1475

PRELIMINARY AND FINAL PLAT
Application Guidelines

LOCATION AND CONTACTS

Physical Location of Property: Parker & Southview Drive Lucas, TX 75002 Approx. 1840 feet to Southview Drive and Osage Lane Intersection
(Address and general location – approximate distance to nearest existing street intersection)

Legal Description of Property: James Anderson Survey Abstract No. 17; John McKinney Survey Abstract No. 596 Enchanted Creek Phase 2B; Lots 1-28 Block A, Lot 1-4 Block B, Lots 1-7 Block C, Lots 1-10 Block D, Lot 1 Block X
(Survey/ Abstract Number and Tracts/Platted Subdivision Name with Lots/Block – Must attach metes and bounds description)

Comprehensive Zoning Designation(s): R-1

Existing Zoning Designation(s): R-1

Description of Project Use: Residential

Acreage: 104.595 Acres | Existing # of Lots/Tracts: 2

OWNERS NAME: MM Lucas 135, LLC | Contact Number: 469-576-1505

Applicant/Contact Person Kyle Mueller | Title: Development Manager

Company Name Lenart Development Company, LLC

Street Address 520 Central Parkway E. #104, Plano, TX 75074

Mailing Address 520 Central Parkway E. #104, Plano, TX 75074

Phone: 469-576-1505 | Fax: | Email: k_mueller@lenartdevelopment.com

OWNERS NAME: | Contact Number:

Applicant/Contact Person | Title:

Company Name

Street Address

Mailing Address

Phone: | Fax: | Email:

ENGINEER REPRESENTATIVE: Spiars Engineering | Contact Number: 469-766-1778

Applicant/Contact Person Colton Smith | Title: Project Manager

Company Name Spiars Engineering

Street Address 765 Custer Road, Suite 100 Plano, TX 75075

Mailing Address 765 Custer Road, Suite 100 Plano, TX 75075

Phone: 469-766-1778 | Fax: | Email: colton.smith@spiarsengineering.com

Read before signing below: If there is more than one property owner complete a separate sheet with the same wording as below. The City requires all original signatures. If applicant is other than the property owner a "Power of Attorney" with original, notarized signatures are required. (notaries are available)

PRELIMINARY AND FINAL PLAT
Application Guidelines

ITEMS REQUIRED PRIOR TO FINAL PLAT APPROVAL:

ALL APPLICATIONS MUST BE COMPLETE, ACCOMPANIED BY THE APPLICABLE CHECKLIST AND TAX CERTIFICATE SHOWING TAXES PAID BEFORE BEING SCHEDULED ON THE P&Z AGENDA. It is the applicant's responsibility to be familiar with, and to comply with, all City submittal requirements (in the Zoning & Subdivision Ordinances, and any separate submittal policies, requirements and/or checklists that may be required from City staff), including the number of plans to be submitted, application fees, etc. Please contact City staff in advance for submittal requirements. Drawings will not be returned to applicant.

ALL PARCELS/PROPERTIES MUST MATCH IN ACREAGE ALL OTHER DOCUMENTS SUBMITTED WITH NO AMBIGUITY.

SUBMISSIONS: **Failure to submit all materials to the City with this application will result in delays scheduling the agenda date.**

NOTICE OF PUBLIC RECORDS: **The submission of plans/drawings with this application makes such items public record, and the applicant understands that these items may be viewed by the public unless they are copyrighted.**

PRELIMINARY AND FINAL PLAT
Application Guidelines

- Applicant agrees to pay any and all required fees due to the City including but not limited to Plat application fee, Park dedications fee, Tree Removal Permit fee, $1500 per lot public improvement inspection fee and including but not limited to other fees that may be required prior to final plat approval.
- Maintenance Bond for City Improvements, 2 year – 10% Bond to be verified by submitting contract.
- Construction as-built record drawings (mylar)
- Engineering construction test reports.
- Walk-through with Public Works personnel completed with satisfactory outcome.
- HOA (covenants, conditions & restrictions) documentation approved by City Attorney before submittal to Planning & Zoning.

By signing this application, I hereby grant the Development Services Director and City staff access to my property to perform work related to this Preliminary and Final Plat Application.

STATE OF TEXAS }

COUNTY OF COLLIN }

BEFORE ME, a Notary Public, on this day personally appeared Mehrdad Moayedi the undersigned applicant, who, under oath, stated the following: "I hereby certify that I am the owner, or duly authorized agent of the owner, **(proof must be attached, e.g. "Power of Attorney)** for the purposes of this application; that all information submitted herein is true and correct. I understand that submitting this application does not constitute approval, and incomplete applications will result in delays and possible denial."

[Notary seal] JOANNA LYNN RIVERA
Notary ID #133681005
My Commission Expires
March 31, 2026

Owner / Agent (*circle one*)

SUBSCRIBED AND SWORN TO before me, this the 31st day of October 2024.

Notary Public in and for the State of Texas: Joanna Rivera

Official Use Only:

Planning & Zoning: _____ Date: _____

City Council: _____ Date: _____

Applicant Withdrew: Yes or No Date: _____

Applicant Made a Written Withdrawal: Yes or No Date: _____

FINAL PLAT
Minimum Requirements Checklist

Project Name Enchanted Creek Phase 2B **Preparer** Spiars Engineering

This checklist is provided to assist you in addressing the minimum requirements for final plat submission. An application is incomplete unless all applicable information noted below is submitted to the Development Services Department. Confirm that all information is included on the submitted plans by checking the box next to the required information. **Checking the box certifies to the City that you have completely and accurately addressed the issue**.

This completed form must be returned at the time of application submittal. If an exception or modification to the regulations is requested, the reason and/or request for each shall be provided on a separate sheet on letterhead with sufficient details as to allow a determination by the appropriate approving body. Additional information may be required. Reference the specific requirement. All exception/modification requests must also be specifically listed on the plans.

Plans are expected to be submitted complete in all detail as included by the checklist. Should plans be determined to be incomplete, they may either be returned to the applicant without further review or marked up with needed changes. **If a preliminary plat was not required, a Tree Survey/Preservation Plan is required as part of the submittal requirements with and at the time of submittal of the final plat. Refer to the Development Plan Application for the needed application and checklist.**

Items to be Included:

☒ **Preliminary Plat.** All information required for a Preliminary Plat.

☐ **Drawings and Plans.** Record drawings, construction plans including one set of mylars and a digital copy in PDF, and DWG format, and two sets of blacklines, where applicable. Record drawings cannot be produced at this time.

☐ **Improvement Agreement.** The improvement agreement and security if required, in a form satisfactory to the City Attorney and in an amount established by the City Council upon recommendation of the City Engineer and shall include a provision that the owner shall comply with all the terms of the Final Plat Approval as determined by the commission. No improvement agreement proposed with this phase

☒ **Dedication Documentation.** Formal irrevocable offers of dedication to the public of all streets, alleys, utilities, easements and parks in a form approved by the City Attorney.

☒ **Phases.** An owner may, at the discretion of the commission, obtain approval of a phase of a subdivision for which a preliminary plat was approved provided such phase meets all the requirements of this article in the same manner as is required for a complete subdivision.

☒ **HOA Agreement.** If applicable, copy of agreements, covenants and restrictions establishing and creating the homeowners' association approved by the commission based on recommendation of the City Attorney.

- ☒ Homeowner Association Covenants, Conditions, and Restrictions (CCR's) are submitted for review and include statements for perpetual maintenance and provisions for maintenance by City of Lucas should the homeowner's association (HOA) dissolve.

☒ **I have made the decision NOT to waive the statutory time limits (30 days) in accordance with section 212 of the Texas Local Government Code. I understand and acknowledge that the City may DENY my Plat Application if not complete as determined by staff within the 30-day time period.**

☒ **Map.** Location map clearly showing the location of the proposed Final Plat with cross streets is included. Indicate scale or not to scale (NTS) and provide north arrow.

☒ **Legend and Scale.** Written and bar graph scale and north arrow are indicated. North shall be oriented to the top or left side of the sheet.

☒ **Boundary Lines.** Abstract lines, survey lines, corporate boundaries are shown and clearly labeled.

☒ **Title Block.** A title block is provided in the lower right corner that includes large, boldly printed:

(SUBDIVISION NAME)
FINAL PLAT (or REPLAT, AMENDING PLAT, MINOR PLAT as applicable)
LOT(S) _____, BLOCK(S) _____
(survey, abstract and tract number)
If a replat, include:
REPLAT OF LOT(S) _____, BLOCK(S) _____

FINAL PLAT
Minimum Requirements Checklist

- ☒ **Contact, Acres, and Filing Information.** The owner and surveyor's name, address and phone number, gross and net areas as applicable, submission date, and a log of submittal/revision dates since submitted to the city.
- ☒ **Property Information.** Location of property lines, owner or subdivision name(s) and recording information of abutting properties is shown.
- ☒ **Abutting Property Information.** Abutting properties are indicated by a light solid line.
- ☒ **Existing ROW Information.** Existing boundary of street rights-of-way adjacent to the property and boundaries of right-of-way dedication are indicated by a medium weight solid line, intermittent with two dashed lines, and widths are dimensioned.
- ☒ **Proposed Street and ROW Information:**
  - ☒ Existing and proposed internal alleys and streets ROW are indicated by a medium weight solid line, intermittent with two dashed lines.
  - ☒ Streets are named and ROW dimensioned.
  - ☒ Streets and alleys ROW within 200 feet of the subject property boundary are accurately located, dimensioned, and named/labeled.
  - ☒ Residential minor streets shall be designed and platted so that no street segment shall have a straight line for more than 1,000 feet before altering its course by at least 20 degrees.
- ☒ **Lot Lines:**
  - ☒ The length and bearing of all straight lines, radii, arc lengths, tangent length and central angles of all curves are indicated along the lines of each lot. The curve data pertaining to block or lot boundary may be placed in a curve table at the base of the plat and prepared in a tabular form with the following information:
    - Curve number
    - Delta
    - Radius
    - Tangent length
    - Tangent offset
    - Arc length
    - Chord
  - ☒ Internal lot lines are clearly indicated and shown to scale.
- ☒ **Survey Markers and Monuments:**
  - ☒ The description and location of all survey monuments placed in the subdivision or immediately adjacent to it are shown.
  - ☒ In all subdivisions, corners are established at the corner of each block in the subdivision consisting of an iron rod or pipe not less than three-quarter inches (3/4") in diameter and twenty-four inches (24") deep, flush with the top of the sidewalk or other paving, surface, etc. All lot corners shall be installed prior to the final inspection of the subdivision.
  - ☒ Lot corner monuments are placed at all lot corners except corners which are also block corners, consisting of iron rods or pipes of a diameter of not less than one-half inch (1/2") and eighteen inches (18") deep set flush with the top of the sidewalk. All lot corners shall be installed prior to the final inspection of the subdivision.
  - ☒ Curve point markers are established using the same specifications as lot corners. All lot corners shall be installed prior to the final inspection of the subdivision.
- ☒ **Lots:**
  - ☒ Each lot is dimensioned with bearings and distances, as applicable, and the square footage of each lot is indicated.
  - ☒ Each lot is numbered, and block groups are assigned a letter.

- ☒ **Flood Plain:**
  - ☒ The location of flood plain boundaries and state or federally protected areas, such as wetlands, are indicated.
  - ☒ A note is included that states whether or not the property is in the 100-year flood plain, with the F.I.R.M. Community Panel reference number and map date indicated.

FINAL PLAT
Minimum Requirements Checklist

☒ **Easements:**
- ☒ Existing easements are indicated by a light, dashed line and labeled indicating dimension, purpose, and County recording information.
- ☒ Proposed easements are indicated by a medium weight, dashed line and labeled indicating dimension and purpose.

☒ **Ingress/Egress.** Required cross access or ingress/egress easements are shown, dimensioned, labeled, and properly tied down.

☒ **Zoning.** Existing zoning of the subject property is indicated.

☒ **Parks and Open Space.** Location and area of parks, drainage ways, and open space is indicated. Open space/Homeowner's Association (HOA) areas are to be labeled with tract number/s.

☒ **Legal Description.** A legal description/metes and bounds description is included.

☒ **Utility/Governmental Notes.** Include any notes required by the various affected agencies/utilities.

☒ **Reservations/Dedications.** Sites to be reserved or dedicated for parks, playgrounds and/or other private or public use are indicated.

☒ **Notes.** Applicable notes have been added to the plat. Any change from the wording shown herein shall be approved by the City of Lucas.

☐ **Improvement Agreement.** The Improvement Agreement and security, if required, in a form satisfactory to the City Attorney and in an amount established by the City Council upon recommendation of the City Engineer and should include a provision that the owner will comply with all the terms of the final plat approval as determined by the Commission.No improvement agreement proposed with this phase

☒ **Phases.** At the discretion of the Commission, obtain approval of a phase of a subdivision for which a Preliminary Plat was approved provided such phase meets all the requirements of the subdivision ordinance.

☒ **Replat/Amending Plat.** The purpose of a Replat or Amending Plat is specifically noted on the face of the drawing. N/A

☒ **Certificates.** The following certificates shall be placed on the final plat in a manner that will allow them to be clearly visible on the final plat.

APPROVED BY THE PLANNING AND ZONING COMMISSION OF THE CITY OF LUCAS, TEXAS, ON THE _____ DAY OF_____, _____.

ATTEST:

_____
Tommy Tolson, Chair
Planning and Zoning Commission

_____
City Secretary

"APPROVED FOR PREPARATION OF FINAL PLAT"

_____ _____
Tommy Tolson, Chair Date
Planning and Zoning Commission

_____ _____
Joseph Hilbourn, Development Services Director Date

_____ _____
Scott Holden, Public Works Director/City Engineer Date

Item No. 05

City of Lucas
Planning and Zoning Agenda Request
November 14, 2024

Requester: Development Services Director Joe Hilbourn

Agenda Item

Consider amendments to an existing SUP at Lucas Christian academy to amend the school's master plan at 505 West Lucas Road Lot 1, Block A of Lucas Christian Church Addition being all of a 16 acre tract of land, is asking to incorporate an adjacent tract ABS A0538 JAS LOVELADY SURVEY, TRACT 21, 22.679 ACRES, and a new master plan.

Background Information

Lucas Christian academy is an existing private school located on West Lucas Road. This will be the 4th amendment to the master plan. The first SUP was submitted in 2004, the plan was amended in 2009, 2011, and again when the school was built in 2014. Lucas has been a good addition to the community. Kimley Horn is making application on behalf of Lucas Christian Academy.

Kimley-Horn respectfully submits this written letter of intent for a formal review of the submitted SUP amendment. The subject property has an existing Specific Use Permit (SUP) overlay with a base zoning of R2 Single Family. The applicant is proposing to amend the existing SUP for Lot 1, Block A and create a new conceptual masterplan for the property that incorporates the adjacent 22.61-acre parcel owned by James and Lee Irwin Family Limited Partnership. The subject property is an existing educational facility and is surrounded by vacant land to the west, residential to the south, a church within the SUP and a residential use to the east. The proposed development and revised masterplan include the expansion of educational and athletic facilities, as well as the extension of Stinson Road through the property, per the City master thoroughfare plan amendment currently in progress. This expansion to the existing Lucas Christian Academy campus will provide important and complimentary services to the nearby residents, students, and visitors, as well as provide additional academic classrooms and support facilities. The proposed Stinson Road extension will run north-south between FM1378 and existing Stinson Road to the south of the parcel. A signalized intersection is proposed at the intersection of the future Stinson Road extension and FM 1378. The two additional access drives to the property will remain in their existing locations. The project proposes additional access off the proposed Stinson Road extension.

Attachments/Supporting Documentation

Item No. 05

City of Lucas
Planning and Zoning Agenda Request
November 14, 2024

1. LCA Conceptual Master Plan
2. Notice of Public Hearing
3. Meets and bounds proposed addition
4. Legal Description existing facilities
5. Tree Inventory spread sheet
6. Written statement of intent
7. Zoning app signed by Owner
8. Zoning app signed by LCA
9. Tree inventory map
10. Application check list
11. 2004 SUP
12. 2009 SUP
13. 2011 SUP
14. Traffic Impact Analysis

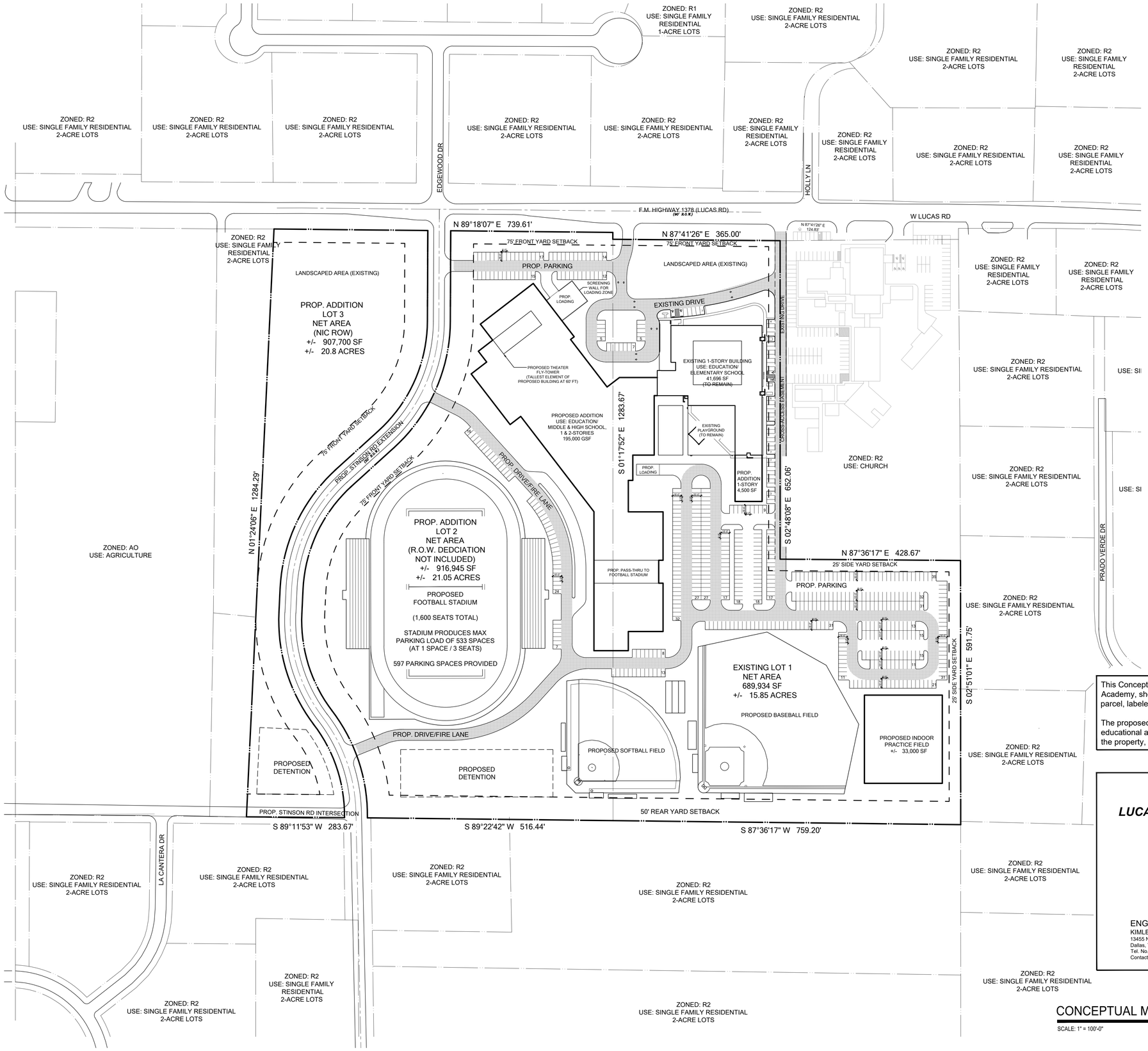
Budget/Financial Impact

NA

Recommendation

Motion

I make a motion to approve/deny amendments to an existing SUP at Lucas Christian academy to amend the school's master plan at 505 West Lucas Road Lot 1, Block A of Lucas Christian Church Addition being all of a 16 acre tract of land, is asking to incorporate an adjacent tract ABS A0538 JAS LOVELADY SURVEY, TRACT 21, 22.679 ACRES, and a new master plan.



The development of this site will be in accordance with City of Lucas Development Standards

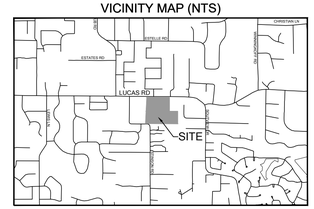
This Concept Plan is for illustrative purposes only and subject to change. This Concept Plan, along with development requests), are intended to describe the intent of the Planned Development.

Significant deviations from this Concept Plan, as determined by the Development Services Director, will require an amendment to the Concept Plan and, as necessary, the development regulations.

LEGEND & NOTES

FIRE LANES, ACCESS, AND UTILITY EASEMENT

VICINITY MAP (NTS)



This Conceptual Master Plan seeks to amend the existing SUP for Lucas Christian Academy, shown here as Lot 1, Block A, with the addition of the adjacent 22.61-acre parcel, labeled as Lot 2 on this plan. The base zoning is R2 Single Family.

The proposed development and revised masterplan include the expansion of educational and athletic facilities, as well as the extension of Stinson Road through the property, per the City's master thoroughfare plan amendment.

SUP#

CONCEPT PLAN

LUCAS CHRISTIAN ACADEMY MASTER PLAN

+/- 36.9 ACRES

LEGAL DESCRIPTION SEE SUPPORTING DOCUMENTS

DATE: OCTOBER 25, 2024

ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
13455 Noel Road, Suite 700
Dallas, Texas 75240
Tel. No. 972-770-1300
Contact: Jeffrey Dolian

APPLICANT:
LUCAS CHRISTIAN ACADEMY
505 W. Lucas Road
Lucas, Texas 75002
Tel. No. 972-429-4362
Contact: Joseph Walker

CONCEPTUAL MASTER PLAN

SCALE: 1" = 100'-0"

0 25 50 100 Feet

TRUE NORTH

PLAN NORTH

GFFdesign

LCA CONCEPTUAL MP
LOTS 1 & 2
LUCAS, TEXAS

CONCEPT PLAN SUBMISSION

No. Date Revision

GCN
Drawn

GCN
Approved

CONCEPT PLAN

Project No. 24073.00
Date 10/25/2024

AS–001

NOTICE OF PUBLIC HEARING

Notice is hereby given, that the Planning & Zoning Commission of the City of Lucas, Texas will hold a public hearing on Thursday, November 14, 2024 at 6:30 p.m. and City Council will conduct a second public hearing on Thursday, December 5, 2024 at 6:30 p.m. at Lucas City Hall, 665 Country Club, Lucas, Texas to consider amending an existing SUP to amend the school's master plan more particularly described as follows:

Gavin Newman, representing Lucas Christian Academy is requesting an amendment to an existing SUP for Lucas Christian Academy located at ABS A0538 JAS LOVELADY SURVEY, TRACT 22 being 15.8750 acres of land to amend the school's master plan on a parcel of land to include an additional 22.679 acres of land (ABS A0538 JAS LOVELADY SURVEY, TRACT 21) adjacent to the existing facilities for a total of 44.779 +/- acres of land.
Otherwise known as 415 W Lucas Road (6.23 acres), 505 West Lucas Road (15.87 acres) and Tract 21 (22.679 acres) of A0538 JAS LOVELADY SURVEY, Lucas, Texas, 75002.

Those wishing to speak FOR or AGAINST the above item are invited to attend. If you are unable to attend and have comments you may send them to City of Lucas, Attention: City Secretary, Toshia Kimball, 665 Country Club Road, Lucas, Texas 75002, email tkimball@lucastexas.us and it will be presented at the hearing. If you have any questions about the above hearing, you may contact Development Services Director Joe Hilbourn at jhilbourn@lucastexas.us.

EXHIBIT "A"
ZONING DESCRIPTION
JAMES AND LEE IRWIN FAMILY LIMITED PARTNERSHIP
REFERENCE THE GENERAL WARRANTY DEED
INSTRUMENT NO. 20210301000398820, O.P R.C.C.T.

Being a tract of land, situated in the James Lovelady Survey, Abstract No. 538, in the City of Lucas, Collin County, Texas, and being all of that called 22.661 acre tract of land, described by deed to Gus Gibson, Jr. and Walter G. Bedell, as recorded in Volume 1889, Page 283, of the Deed Records, Collin County, Texas (D.R.C.C.T.), said tract being more particularly described, as follows:

BEGINNING at a 1/2" iron rod with a yellow plastic cap stamped "RPLS 5686" found for the northwesterly corner of said 22.661 acre tract, same being the northeasterly corner of a tract of land, described by deed to Chris Koerner and Jessica Koerner, as recorded under Document No. 20160725000950450, of the Official Public Records, Collin County, Texas (O.P.R.C.C.T.), same being in the southerly monumented line of W. Lucas Road (FM. 1378);

THENCE South 89°43'16" East, along said southerly monumented line of W. Lucas, Road, a distance of 739.61' to a 5/8" iron rod found for the northeasterly corner of said 22.661 acre tract, same being the northwesterly corner of a right-of-way dedication, dedicated by plat recorded in Vol. 2009, Pg. 224, O.P.R.C.C.T. (LUCAS CHURCH ADDITION);

THENCE South 00°19'15" East, along the common line between said 22.661 acre tract and said LUCAS CHURCH ADDITION, passing a 1/2" iron rod found for the northwesterly corner of Lot 1, Block A, of said LUCAS CHURCH ADDITION, at a distance of 15.00', and continuing in all, a total distance of 1283.67' to a point for corner, being the southeasterly corner of said 22.661 acre tract, same being in the northerly line of Lot 3, of HI FLYIN' ACRES, an addition to the City of Parker, as recorded in Volume J, Page 929, of the Map Records, Collin County, Texas (M.R.C.C.T.), from which a 5/8" iron rod found bears, South 00°34'04" East, a distance of 3.60';

THENCE North 89°38'41" West, along the southerly line of said 22.661 acre tract, same being along the northerly line of said Lot 3, passing a 1/2" iron rod found, at a distance of 212.71', for the northwesterly corner of said Lot 3, same being the northeasterly corner of Lot 2, of said HI FLYIN' ACRES, and continuing along the northerly line of said Lot 2, a total distance of 516.44' to a 1/2" iron rod with a yellow plastic cap stamped "RPLS 5686" set for the northwesterly corner of said Lot 2;

THENCE North 89°49'30" West, along the southerly line of said 22.661 acre tract, a distance of 283.67' to a 1" iron rod found for the southwesterly corner of said 22.661 acre tract, same being on the southerly side of Stinson Road, said corner also being the southeasterly corner of a tract of land, described by deed to Adagio Investments, Inc., as recorded under Document No. 20180111000049020, O.P.R.C.C.T.;

THENCE North 02°22'44" East, along the westerly line of said 22.661 acre, same being the easterly line of said Adagio Investments, LLC tract, passing a 1/2" iron rod found, at a distance of 44.70' and continuing a distance of 390.43' (total easterly line of said Adagio tract: 435.13') a 1/2" iron rod found for the northeasterly corner of said Adagio Investments, LLC tract, same being the southeasterly corner of the aforementioned Koerner tract, and continuing, in all, a total distance of 1284.29 to the POINT OF BEGINNING and containing 987,894 square feet or 22.679 acres of land, more or less.

Note:

This document was prepared under 22 TAC §138.95, does not reflect the results of an on the ground survey, and is not to be used to convey or establish interests in real property except those rights and interests implied or established by the creation or reconfiguration of the boundary of the political subdivision for which it was prepared.

EXHIBIT “A”
ZONING DESCRIPTION
LUCAS CHRISTIAN CHURCH ADDITION

Lot 1, Block A of **Lucas Christian Church Addition**, an addition to the City of Lucas according to the amending plat thereof recorded in Volume 2009, Page 224 and in Instrument No. 20090609010001430 of the Official Public Records of Collin County, Texas.

Note:

This document was prepared under 22 TAC §138.95, does not reflect the results of an on the ground survey, and is not to be used to convey or establish interests in real property except those rights and interests implied or established by the creation or reconfiguration of the boundary of the political subdivision for which it was prepared.

LCA Master Tree - Tree Inventory
Lucas, Collin County, Texas

TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2001	10.0	hackberry	*Celtis laevigata*	Healthy	Forked
2002	4.7	hackberry	*Celtis laevigata*	Healthy	Single
2003	11.8	hackberry	*Celtis laevigata*	Healthy	Multi
2004	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2005	6.7	hackberry	*Celtis laevigata*	Healthy	Single
2006	6.3	hackberry	*Celtis laevigata*	Healthy	Single
2007	16.9	hackberry	*Celtis laevigata*	Healthy	Forked
2008	11.3	hackberry	*Celtis laevigata*	Healthy	Forked
2009	8.5	hackberry	*Celtis laevigata*	Healthy	Single
2010	5.5	hackberry	*Celtis laevigata*	Healthy	Single
2011	16.6	hackberry	*Celtis laevigata*	Healthy	Multi
2012	13.7	hackberry	*Celtis laevigata*	Healthy	Forked
2013	7.1	hackberry	*Celtis laevigata*	Healthy	Single
2014	10.6	hackberry	*Celtis laevigata*	Healthy	Forked
2015	6.2	hackberry	*Celtis laevigata*	Healthy	Single
2016	15.1	hackberry	*Celtis laevigata*	Healthy	Multi
2017	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2018	11.1	hackberry	*Celtis laevigata*	Healthy	Multi
2019	10.4	hackberry	*Celtis laevigata*	Healthy	Forked
2020	15.9	hackberry	*Celtis laevigata*	Declining	Forked
2021	10.6	hackberry	*Celtis laevigata*	Healthy	Forked
2022	11.2	hackberry	*Celtis laevigata*	Healthy	Single
2023	7.5	hackberry	*Celtis laevigata*	Healthy	Single
2024	6.4	hackberry	*Celtis laevigata*	Healthy	Single
2025	13.9	hackberry	*Celtis laevigata*	Healthy	Multi
2026	7.2	hackberry	*Celtis laevigata*	Healthy	Single
2027	8.1	hackberry	*Celtis laevigata*	Healthy	Single
2028	16.8	American Elm	*Ulmus americana*	Healthy	Forked
2029	10.8	hackberry	*Celtis laevigata*	Healthy	Single
2030	10.4	hackberry	*Celtis laevigata*	Healthy	Forked
2031	14.3	hackberry	*Celtis laevigata*	Healthy	Forked
2032	15.7	hackberry	*Celtis laevigata*	Healthy	Multi
2033	6.3	hackberry	*Celtis laevigata*	Healthy	Multi
2034	10.5	hackberry	*Celtis laevigata*	Healthy	Single
2035	10.6	hackberry	*Celtis laevigata*	Healthy	Single
2036	7.9	hackberry	*Celtis laevigata*	Healthy	Single
2037	9.9	eastern redcedar	*Juniperus virginiana*	Healthy	Multi
2038	10.8	hackberry	*Celtis laevigata*	Healthy	Single
2039	7.2	hackberry	*Celtis laevigata*	Healthy	Forked
2040	7.0	hackberry	*Celtis laevigata*	Healthy	Single
2041	9.7	hackberry	*Celtis laevigata*	Healthy	Single
2042	6.2	hackberry	*Celtis laevigata*	Healthy	Single
2043	5.3	hackberry	*Celtis laevigata*	Healthy	Forked
2044	9.2	hackberry	*Celtis laevigata*	Healthy	Multi
2045	6.1	hackberry	*Celtis laevigata*	Healthy	Single
2046	4.9	hackberry	*Celtis laevigata*	Healthy	Multi
2047	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2048	11.6	hackberry	*Celtis laevigata*	Healthy	Multi
2049	5.7	hackberry	*Celtis laevigata*	Healthy	Single
2050	5.5	hackberry	*Celtis laevigata*	Healthy	Single
2051	6.1	hackberry	*Celtis laevigata*	Healthy	Multi
2052	8.6	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2053	7.1	hackberry	*Celtis laevigata*	Healthy	Multi

LCA Master Tree - Tree Inventory
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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2054	4.5	hackberry	*Celtis laevigata*	Healthy	Single
2055	8.2	hackberry	*Celtis laevigata*	Healthy	Multi
2056	4.8	hackberry	*Celtis laevigata*	Healthy	Single
2057	8.8	hackberry	*Celtis laevigata*	Healthy	Multi
2058	7.7	hackberry	*Celtis laevigata*	Healthy	Single
2059	4.9	hackberry	*Celtis laevigata*	Healthy	Single
2060	4.5	hackberry	*Celtis laevigata*	Healthy	Forked
2061	6.8	hackberry	*Celtis laevigata*	Healthy	Single
2062	8.7	hackberry	*Celtis laevigata*	Healthy	Forked
2063	8.8	hackberry	*Celtis laevigata*	Healthy	Multi
2064	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2065	14.2	hackberry	*Celtis laevigata*	Healthy	Multi
2066	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2067	11.6	hackberry	*Celtis laevigata*	Healthy	Multi
2068	5.6	hackberry	*Celtis laevigata*	Healthy	Forked
2069	5.7	hackberry	*Celtis laevigata*	Healthy	Single
2070	16.0	hackberry	*Celtis laevigata*	Healthy	Multi
2071	5.6	hackberry	*Celtis laevigata*	Healthy	Forked
2072	5.5	hackberry	*Celtis laevigata*	Healthy	Forked
2073	9.0	hackberry	*Celtis laevigata*	Healthy	Multi
2074	5.6	chittamwood	*Sideroxylon lanuginosum*	Healthy	Single
2075	10.0	hackberry	*Celtis laevigata*	Healthy	Forked
2076	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2077	5.1	hackberry	*Celtis laevigata*	Healthy	Single
2078	9.5	hackberry	*Celtis laevigata*	Healthy	Multi
2079	4.9	hackberry	*Celtis laevigata*	Healthy	Single
2080	6.4	Hercules-club	*Zanthoxylum clava-herculis*	Healthy	Single
2081	9.5	hackberry	*Celtis laevigata*	Healthy	Multi
2082	6.2	hackberry	*Celtis laevigata*	Healthy	Single
2083	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2084	8.0	hackberry	*Celtis laevigata*	Healthy	Multi
2085	9.3	hackberry	*Celtis laevigata*	Healthy	Forked
2086	9.1	hackberry	*Celtis laevigata*	Healthy	Forked
2087	7.9	chittamwood	*Sideroxylon lanuginosum*	Healthy	Multi
2088	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2089	9.0	hackberry	*Celtis laevigata*	Healthy	Forked
2090	12.0	Chinese elm	*Ulmus parvifolia*	Healthy	Forked
2091	5.2	hackberry	*Celtis laevigata*	Healthy	Single
2092	7.4	hackberry	*Celtis laevigata*	Healthy	Multi
2093	18.6	slippery elm	*Ulmus rubra*	Healthy	Forked
2094	5.2	slippery elm	*Ulmus rubra*	Healthy	Single
2095	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2096	9.0	hackberry	*Celtis laevigata*	Healthy	Forked
2097	8.5	hackberry	*Celtis laevigata*	Healthy	Forked
2098	7.8	hackberry	*Celtis laevigata*	Healthy	Forked
2099	4.5	hackberry	*Celtis laevigata*	Healthy	Single
2100	9.7	hackberry	*Celtis laevigata*	Healthy	Multi
2101	5.9	hackberry	*Celtis laevigata*	Healthy	Multi
2102	8.2	hackberry	*Celtis laevigata*	Healthy	Multi
2103	12.6	hackberry	*Celtis laevigata*	Healthy	Forked
2104	10.2	hackberry	*Celtis laevigata*	Healthy	Single
2105	4.5	hackberry	*Celtis laevigata*	Healthy	Single
2106	8.0	hackberry	*Celtis laevigata*	Healthy	Forked

LCA Master Tree - Tree Inventory
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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2107	8.1	hackberry	*Celtis laevigata*	Healthy	Single
2108	7.5	hackberry	*Celtis laevigata*	Healthy	Single
2109	14.1	hackberry	*Celtis laevigata*	Healthy	Multi
2110	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2111	11.1	hackberry	*Celtis laevigata*	Healthy	Multi
2112	5.7	hackberry	*Celtis laevigata*	Healthy	Multi
2113	12.0	hackberry	*Celtis laevigata*	Healthy	Single
2114	20.6	hackberry	*Celtis laevigata*	Healthy	Multi
2115	8.3	hackberry	*Celtis laevigata*	Healthy	Single
2116	15.7	hackberry	*Celtis laevigata*	Healthy	Multi
2117	8.5	hackberry	*Celtis laevigata*	Healthy	Single
2118	6.0	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2119	10.3	hackberry	*Celtis laevigata*	Healthy	Forked
2120	12.7	hackberry	*Celtis laevigata*	Healthy	Single
2121	18.3	hackberry	*Celtis laevigata*	Healthy	Single
2122	26.9	hackberry	*Celtis laevigata*	Healthy	Multi
2123	6.7	Hercules-club	*Zanthoxylum clava-herculis*	Healthy	Single
2124	6.5	hackberry	*Celtis laevigata*	Healthy	Single
2125	13.8	hackberry	*Celtis laevigata*	Healthy	Single
2126	7.0	hackberry	*Celtis laevigata*	Declining	Single
2127	8.0	hackberry	*Celtis laevigata*	Healthy	Single
2128	23.4	Osage-orange	*Maclura pomifera*	Healthy	Multi
2129	9.9	hackberry	*Celtis laevigata*	Healthy	Multi
2130	14.9	hackberry	*Celtis laevigata*	Healthy	Single
2131	8.0	hackberry	*Celtis laevigata*	Healthy	Single
2132	6.5	hackberry	*Celtis laevigata*	Healthy	Single
2133	10.8	hackberry	*Celtis laevigata*	Healthy	Single
2134	6.1	hackberry	*Celtis laevigata*	Healthy	Single
2135	29.5	hackberry	*Celtis laevigata*	Healthy	Forked
2136	10.1	Osage-orange	*Maclura pomifera*	Healthy	Single
2137	9.7	hackberry	*Celtis laevigata*	Healthy	Multi
2138	11.0	Osage-orange	*Maclura pomifera*	Healthy	Forked
2139	7.4	Osage-orange	*Maclura pomifera*	Declining	Single
2140	8.8	hackberry	*Celtis laevigata*	Healthy	Single
2141	10.6	hackberry	*Celtis laevigata*	Healthy	Single
2142	26.8	slippery elm	*Ulmus rubra*	Healthy	Multi
2143	8.4	slippery elm	*Ulmus rubra*	Healthy	Single
2144	24.4	Osage-orange	*Maclura pomifera*	Declining	Multi
2145	15.7	slippery elm	*Ulmus rubra*	Healthy	Multi
2146	17.9	hackberry	*Celtis laevigata*	Declining	Single
2147	29.3	American Elm	*Ulmus americana*	Declining	Multi
2148	9.0	hackberry	*Celtis laevigata*	Declining	Single
2149	15.2	hackberry	*Celtis laevigata*	Declining	Single
2150	11.6	Osage-orange	*Maclura pomifera*	Healthy	Forked
2151	10.8	American Elm	*Ulmus americana*	Declining	Single
2152	8.0	American Elm	*Ulmus americana*	Healthy	Single
2153	19.0	hackberry	*Celtis laevigata*	Healthy	Single
2154	13.0	hackberry	*Celtis laevigata*	Healthy	Single
2155	13.1	hackberry	*Celtis laevigata*	Healthy	Multi
2156	7.0	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2157	19.0	hackberry	*Celtis laevigata*	Healthy	Single
2158	7.6	hackberry	*Celtis laevigata*	Healthy	Single
2159	20.4	hackberry	*Celtis laevigata*	Healthy	Multi

LCA Master Tree - Tree Inventory
Lucas, Collin County, Texas

TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2160	10.0	hackberry	*Celtis laevigata*	Healthy	Single
2161	5.9	hackberry	*Celtis laevigata*	Declining	Single
2162	11.7	black willow	*Salix nigra*	Declining	Single
2163	6.4	Osage-orange	*Maclura pomifera*	Healthy	Single
2164	11.3	black willow	*Salix nigra*	Healthy	Single
2165	8.0	black willow	*Salix nigra*	Declining	Single
2166	32.1	hackberry	*Celtis laevigata*	Healthy	Forked
2167	22.4	black willow	*Salix nigra*	Healthy	Multi
2168	7.8	hackberry	*Celtis laevigata*	Healthy	Single
2169	7.1	hackberry	*Celtis laevigata*	Healthy	Single
2170	11.2	hackberry	*Celtis laevigata*	Healthy	Single
2171	15.0	hackberry	*Celtis laevigata*	Healthy	Multi
2172	10.4	hackberry	*Celtis laevigata*	Healthy	Single
2173	8.9	hackberry	*Celtis laevigata*	Healthy	Single
2174	6.7	hackberry	*Celtis laevigata*	Healthy	Single
2175	7.9	hackberry	*Celtis laevigata*	Healthy	Single
2176	6.8	American Elm	*Ulmus americana*	Healthy	Single
2177	21.3	hackberry	*Celtis laevigata*	Healthy	Single
2178	20.8	hackberry	*Celtis laevigata*	Declining	Multi
2179	5.8	hackberry	*Celtis laevigata*	Healthy	Single
2180	20.8	hackberry	*Celtis laevigata*	Healthy	Multi
2181	8.2	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2182	10.4	hackberry	*Celtis laevigata*	Healthy	Single
2183	14.4	hackberry	*Celtis laevigata*	Healthy	Forked
2184	36.2	hackberry	*Celtis laevigata*	Healthy	Multi
2185	14.3	Osage-orange	*Maclura pomifera*	Healthy	Single
2186	13.7	hackberry	*Celtis laevigata*	Hazard	Single
2187	6.0	hackberry	*Celtis laevigata*	Declining	Single
2188	7.2	hackberry	*Celtis laevigata*	Declining	Single
2189	32.8	hackberry	*Celtis laevigata*	Healthy	Multi
2190	9.5	hackberry	*Celtis laevigata*	Declining	Single
2191	13.6	hackberry	*Celtis laevigata*	Healthy	Single
2192	13.4	hackberry	*Celtis laevigata*	Healthy	Single
2193	15.0	hackberry	*Celtis laevigata*	Healthy	Single
2194	8.5	hackberry	*Celtis laevigata*	Healthy	Single
2195	8.6	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2196	13.8	chittamwood	*Sideroxylon lanuginosum*	Healthy	Forked
2197	20.4	hackberry	*Celtis laevigata*	Healthy	Multi
2198	6.1	hackberry	*Celtis laevigata*	Healthy	Single
2199	31.8	hackberry	*Celtis laevigata*	Healthy	Multi
2200	17.4	hackberry	*Celtis laevigata*	Healthy	Forked
2201	6.1	bald cypress	*Taxodium distichum*	Healthy	Single
2202	5.2	bald cypress	*Taxodium distichum*	Healthy	Single
2203	6.4	bald cypress	*Taxodium distichum*	Healthy	Single
2204	8.2	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2205	6.1	bald cypress	*Taxodium distichum*	Healthy	Single
2206	7.6	bald cypress	*Taxodium distichum*	Healthy	Single
2207	8.0	bald cypress	*Taxodium distichum*	Healthy	Single
2208	4.9	bald cypress	*Taxodium distichum*	Healthy	Single
2209	6.3	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2210	8.5	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2211	9.3	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2212	5.9	Chinese pistache	*Pistacia chinensis*	Healthy	Single

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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2213	9.3	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2214	7.0	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2215	9.0	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2216	7.1	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2217	6.5	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2218	9.6	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2219	5.7	bur oak	*Quercus macrocarpa*	Healthy	Single
2220	15.0	hackberry	*Celtis laevigata*	Healthy	Single
2221	12.1	hackberry	*Celtis laevigata*	Healthy	Single
2222	13.5	hackberry	*Celtis laevigata*	Healthy	Single
2223	8.2	hackberry	*Celtis laevigata*	Healthy	Single
2224	11.2	pecan	*Carya illinoinensis*	Healthy	Single
2225	10.9	hackberry	*Celtis laevigata*	Healthy	Single
2226	10.0	hackberry	*Celtis laevigata*	Healthy	Single
2227	7.9	hackberry	*Celtis laevigata*	Healthy	Single
2228	25.8	hackberry	*Celtis laevigata*	Healthy	Multi
2229	8.1	hackberry	*Celtis laevigata*	Healthy	Single
2230	10.2	hackberry	*Celtis laevigata*	Healthy	Single
2231	11.5	hackberry	*Celtis laevigata*	Healthy	Multi
2232	4.5	hackberry	*Celtis laevigata*	Healthy	Single
2233	10.7	hackberry	*Celtis laevigata*	Healthy	Single
2234	15.2	hackberry	*Celtis laevigata*	Healthy	Multi
2235	24.9	pecan	*Carya illinoinensis*	Declining	Single
2236	15.4	hackberry	*Celtis laevigata*	Healthy	Forked
2237	14.2	hackberry	*Celtis laevigata*	Healthy	Single
2238	12.0	hackberry	*Celtis laevigata*	Healthy	Single
2239	6.5	pecan	*Carya illinoinensis*	Healthy	Single
2240	5.4	hackberry	*Celtis laevigata*	Healthy	Single
2241	7.6	hackberry	*Celtis laevigata*	Healthy	Single
2242	8.0	hackberry	*Celtis laevigata*	Healthy	Single
2243	7.3	hackberry	*Celtis laevigata*	Healthy	Single
2244	31.2	hackberry	*Celtis laevigata*	Healthy	Single
2245	20.4	American Elm	*Ulmus americana*	Healthy	Forked
2246	5.9	hackberry	*Celtis laevigata*	Healthy	Single
2247	11.9	hackberry	*Celtis laevigata*	Healthy	Forked
2248	7.6	hackberry	*Celtis laevigata*	Healthy	Single
2249	9.9	hackberry	*Celtis laevigata*	Healthy	Single
2250	6.0	hackberry	*Celtis laevigata*	Healthy	Single
2251	7.2	hackberry	*Celtis laevigata*	Healthy	Single
2252	9.2	hackberry	*Celtis laevigata*	Healthy	Single
2253	13.1	hackberry	*Celtis laevigata*	Healthy	Single
2254	10.1	hackberry	*Celtis laevigata*	Healthy	Single
2255	9.3	hackberry	*Celtis laevigata*	Healthy	Single
2256	10.4	hackberry	*Celtis laevigata*	Healthy	Single
2257	7.2	hackberry	*Celtis laevigata*	Healthy	Single
2258	10.4	hackberry	*Celtis laevigata*	Healthy	Single
2259	8.7	hackberry	*Celtis laevigata*	Healthy	Single
2260	6.3	hackberry	*Celtis laevigata*	Healthy	Single
2261	8.2	hackberry	*Celtis laevigata*	Healthy	Single
2262	16.0	hackberry	*Celtis laevigata*	Healthy	Multi
2263	8.9	hackberry	*Celtis laevigata*	Healthy	Single
2264	30.2	hackberry	*Celtis laevigata*	Healthy	Multi
2265	19.6	hackberry	*Celtis laevigata*	Healthy	Single

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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2266	25.8	hackberry	*Celtis laevigata*	Healthy	Single
2267	23.5	hackberry	*Celtis laevigata*	Declining	Single
2268	10.8	hackberry	*Celtis laevigata*	Healthy	Single
2269	10.0	hackberry	*Celtis laevigata*	Healthy	Single
2270	8.3	hackberry	*Celtis laevigata*	Healthy	Single
2271	9.6	hackberry	*Celtis laevigata*	Healthy	Single
2272	8.0	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2273	8.8	Chinese pistache	*Pistacia chinensis*	Healthy	Single
2274	7.4	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2275	6.2	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2276	5.7	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2277	5.6	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2278	10.1	Chinese elm	*Ulmus parvifolia*	Healthy	Forked
2279	5.9	bur oak	*Quercus macrocarpa*	Healthy	Single
2280	5.2	bur oak	*Quercus macrocarpa*	Healthy	Single
2281	5.0	bur oak	*Quercus macrocarpa*	Healthy	Single
2282	5.8	bur oak	*Quercus macrocarpa*	Healthy	Single
2283	5.1	bur oak	*Quercus macrocarpa*	Healthy	Single
2284	23.2	black willow	*Salix nigra*	Healthy	Multi
2285	18.5	black willow	*Salix nigra*	Healthy	Multi
2286	5.2	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2287	10.9	hackberry	*Celtis laevigata*	Healthy	Multi
2288	7.1	hackberry	*Celtis laevigata*	Healthy	Multi
2289	10.0	hackberry	*Celtis laevigata*	Healthy	Multi
2290	9.4	hackberry	*Celtis laevigata*	Healthy	Single
2291	9.7	hackberry	*Celtis laevigata*	Healthy	Single
2292	6.7	hackberry	*Celtis laevigata*	Declining	Single
2293	9.0	hackberry	*Celtis laevigata*	Healthy	Single
2294	7.1	hackberry	*Celtis laevigata*	Healthy	Single
2295	11.7	hackberry	*Celtis laevigata*	Healthy	Single
2296	9.0	hackberry	*Celtis laevigata*	Healthy	Single
2297	9.1	hackberry	*Celtis laevigata*	Healthy	Single
2298	8.3	hackberry	*Celtis laevigata*	Healthy	Single
2299	6.7	hackberry	*Celtis laevigata*	Healthy	Single
2300	4.6	slippery elm	*Ulmus rubra*	Healthy	Single
2301	7.3	hackberry	*Celtis laevigata*	Healthy	Single
2302	10.0	hackberry	*Celtis laevigata*	Healthy	Forked
2303	7.2	hackberry	*Celtis laevigata*	Healthy	Single
2304	12.0	hackberry	*Celtis laevigata*	Healthy	Single
2305	7.7	hackberry	*Celtis laevigata*	Healthy	Single
2306	6.2	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2307	7.1	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2308	6.7	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2309	7.2	eastern redcedar	*Juniperus virginiana*	Healthy	Forked
2310	6.3	hackberry	*Celtis laevigata*	Healthy	Single
2311	9.0	hackberry	*Celtis laevigata*	Healthy	Single
2312	5.7	hackberry	*Celtis laevigata*	Healthy	Single
2313	5.1	eastern redcedar	*Juniperus virginiana*	Healthy	Forked
2314	6.3	hackberry	*Celtis laevigata*	Healthy	Single
2315	5.8	hackberry	*Celtis laevigata*	Healthy	Single
2316	6.9	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2317	6.5	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2318	5.9	hackberry	*Celtis laevigata*	Healthy	Single

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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2319	5.8	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2320	9.0	hackberry	*Celtis laevigata*	Healthy	Single
2321	5.5	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2322	5.0	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2323	8.0	hackberry	*Celtis laevigata*	Healthy	Single
2324	5.1	eastern redcedar	*Juniperus virginiana*	Healthy	Forked
2325	7.0	hackberry	*Celtis laevigata*	Healthy	Single
2326	5.9	eastern redcedar	*Juniperus virginiana*	Healthy	Multi
2327	7.9	hackberry	*Celtis laevigata*	Healthy	Single
2328	5.3	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2329	5.0	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2330	5.3	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2331	5.4	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2332	8.8	eastern redcedar	*Juniperus virginiana*	Healthy	Multi
2333	5.9	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2334	4.8	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2335	5.1	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2336	4.5	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2337	10.2	hackberry	*Celtis laevigata*	Healthy	Single
2338	5.1	Hercules-club	*Zanthoxylum clava-herculis*	Healthy	Single
2339	8.3	Hercules-club	*Zanthoxylum clava-herculis*	Healthy	Forked
2340	5.9	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2341	7.6	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2342	11.5	hackberry	*Celtis laevigata*	Healthy	Single
2343	4.9	hackberry	*Celtis laevigata*	Healthy	Single
2344	5.0	Hercules-club	*Zanthoxylum clava-herculis*	Healthy	Single
2345	25.2	hackberry	*Celtis laevigata*	Healthy	Multi
2346	23.8	hackberry	*Celtis laevigata*	Healthy	Multi
2347	7.3	hackberry	*Celtis laevigata*	Healthy	Single
2348	6.3	Hercules-club	*Zanthoxylum clava-herculis*	Healthy	Single
2349	17.2	hackberry	*Celtis laevigata*	Healthy	Multi
2350	13.5	hackberry	*Celtis laevigata*	Healthy	Multi
2351	14.0	hackberry	*Celtis laevigata*	Healthy	Forked
2352	16.2	hackberry	*Celtis laevigata*	Healthy	Multi
2353	4.8	hackberry	*Celtis laevigata*	Healthy	Multi
2354	7.7	hackberry	*Celtis laevigata*	Healthy	Multi
2355	5.0	hackberry	*Celtis laevigata*	Healthy	Forked
2356	8.4	hackberry	*Celtis laevigata*	Healthy	Multi
2357	12.2	hackberry	*Celtis laevigata*	Healthy	Multi
2358	9.2	hackberry	*Celtis laevigata*	Healthy	Multi
2359	16.4	hackberry	*Celtis laevigata*	Healthy	Multi
2360	5.5	live oak	*Quercus virginiana*	Healthy	Forked
2361	7.6	live oak	*Quercus virginiana*	Healthy	Single
2362	10.0	live oak	*Quercus virginiana*	Healthy	Forked
2363	10.9	live oak	*Quercus virginiana*	Healthy	Multi
2364	7.2	Chinese pistache	*Pistacia chinensis*	Healthy	Forked
2365	24.9	hackberry	*Celtis laevigata*	Healthy	Forked
2366	18.4	hackberry	*Celtis laevigata*	Healthy	Single
2367	17.4	hackberry	*Celtis laevigata*	Healthy	Forked
2368	33.9	hackberry	*Celtis laevigata*	Healthy	Multi
2369	6.2	hackberry	*Celtis laevigata*	Healthy	Multi
2370	22.3	hackberry	*Celtis laevigata*	Declining	Single
2371	5.1	Osage-orange	*Maclura pomifera*	Healthy	Single

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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2372	4.6	hackberry	*Celtis laevigata*	Healthy	Multi
2373	5.1	hackberry	*Celtis laevigata*	Healthy	Multi
2374	7.7	hackberry	*Celtis laevigata*	Healthy	Multi
2375	9.2	hackberry	*Celtis laevigata*	Healthy	Multi
2376	6.9	hackberry	*Celtis laevigata*	Healthy	Multi
2377	5.6	hackberry	*Celtis laevigata*	Healthy	Multi
2378	4.8	hackberry	*Celtis laevigata*	Healthy	Multi
2379	5.5	hackberry	*Celtis laevigata*	Healthy	Multi
2380	6.8	hackberry	*Celtis laevigata*	Healthy	Multi
2381	8.0	hackberry	*Celtis laevigata*	Healthy	Multi
2382	6.5	hackberry	*Celtis laevigata*	Healthy	Multi
2383	5.9	hackberry	*Celtis laevigata*	Healthy	Multi
2384	7.2	hackberry	*Celtis laevigata*	Healthy	Multi
2385	8.1	Osage-orange	*Maclura pomifera*	Healthy	Multi
2386	5.1	hackberry	*Celtis laevigata*	Healthy	Multi
2387	5.6	hackberry	*Celtis laevigata*	Healthy	Multi
2388	7.2	hackberry	*Celtis laevigata*	Healthy	Multi
2389	6.6	hackberry	*Celtis laevigata*	Healthy	Multi
2390	4.9	hackberry	*Celtis laevigata*	Healthy	Multi
2391	7.1	hackberry	*Celtis laevigata*	Healthy	Multi
2392	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2393	6.9	hackberry	*Celtis laevigata*	Healthy	Multi
2394	7.9	Osage-orange	*Maclura pomifera*	Healthy	Single
2395	11.6	American Elm	*Ulmus americana*	Healthy	Single
2396	17.3	American Elm	*Ulmus americana*	Healthy	Single
2397	23.4	Osage-orange	*Maclura pomifera*	Healthy	Multi
2398	17.5	hackberry	*Celtis laevigata*	Healthy	Single
2399	15.1	hackberry	*Celtis laevigata*	Healthy	Single
2400	10.0	American Elm	*Ulmus americana*	Healthy	Single
2401	13.0	American Elm	*Ulmus americana*	Healthy	Single
2402	17.8	hackberry	*Celtis laevigata*	Healthy	Single
2403	15.8	hackberry	*Celtis laevigata*	Healthy	Multi
2404	12.0	hackberry	*Celtis laevigata*	Healthy	Multi
2405	7.7	Osage-orange	*Maclura pomifera*	Declining	Single
2406	7.0	hackberry	*Celtis laevigata*	Healthy	Single
2407	13.5	hackberry	*Celtis laevigata*	Healthy	Single
2408	13.1	hackberry	*Celtis laevigata*	Healthy	Single
2409	9.7	hackberry	*Celtis laevigata*	Healthy	Single
2410	10.7	hackberry	*Celtis laevigata*	Healthy	Multi
2411	10.2	American Elm	*Ulmus americana*	Healthy	Single
2412	26.5	hackberry	*Celtis laevigata*	Declining	Multi
2413	7.2	hackberry	*Celtis laevigata*	Declining	Single
2414	21.6	hackberry	*Celtis laevigata*	Healthy	Multi
2415	12.6	hackberry	*Celtis laevigata*	Healthy	Single
2416	16.0	hackberry	*Celtis laevigata*	Healthy	Multi
2417	13.4	hackberry	*Celtis laevigata*	Healthy	Single
2418	13.8	hackberry	*Celtis laevigata*	Healthy	Single
2419	8.0	hackberry	*Celtis laevigata*	Healthy	Single
2420	24.2	hackberry	*Celtis laevigata*	Healthy	Multi
2421	30.8	hackberry	*Celtis laevigata*	Healthy	Multi
2422	6.5	Osage-orange	*Maclura pomifera*	Healthy	Multi
2423	23.2	hackberry	*Celtis laevigata*	Healthy	Multi
2424	13.0	hackberry	*Celtis laevigata*	Healthy	Single

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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2425	11.3	hackberry	*Celtis laevigata*	Healthy	Single
2426	5.3	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2427	20.8	Osage-orange	*Maclura pomifera*	Healthy	Multi
2428	15.6	Osage-orange	*Maclura pomifera*	Healthy	Multi
2429	14.8	hackberry	*Celtis laevigata*	Healthy	Single
2430	11.9	hackberry	*Celtis laevigata*	Healthy	Multi
2431	6.9	hackberry	*Celtis laevigata*	Healthy	Multi
2432	28.8	hackberry	*Celtis laevigata*	Healthy	Multi
2433	18.7	hackberry	*Celtis laevigata*	Healthy	Single
2434	14.8	hackberry	*Celtis laevigata*	Healthy	Single
2435	9.4	hackberry	*Celtis laevigata*	Healthy	Single
2436	6.3	hackberry	*Celtis laevigata*	Healthy	Single
2437	12.8	Osage-orange	*Maclura pomifera*	Healthy	Multi
2438	8.3	hackberry	*Celtis laevigata*	Healthy	Single
2439	6.2	hackberry	*Celtis laevigata*	Healthy	Single
2440	13.3	hackberry	*Celtis laevigata*	Healthy	Single
2441	12.0	hackberry	*Celtis laevigata*	Healthy	Single
2442	19.0	hackberry	*Celtis laevigata*	Healthy	Single
2443	12.7	hackberry	*Celtis laevigata*	Healthy	Single
2444	18.6	Osage-orange	*Maclura pomifera*	Declining	Multi
2445	6.5	hackberry	*Celtis laevigata*	Healthy	Single
2446	4.9	hackberry	*Celtis laevigata*	Healthy	Single
2447	30.3	hackberry	*Celtis laevigata*	Healthy	Multi
2448	10.6	hackberry	*Celtis laevigata*	Healthy	Single
2449	6.0	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2450	33.8	hackberry	*Celtis laevigata*	Healthy	Multi
2451	8.7	Osage-orange	*Maclura pomifera*	Healthy	Single
2452	29.2	hackberry	*Celtis laevigata*	Declining	Multi
2453	7.2	Osage-orange	*Maclura pomifera*	Declining	Single
2454	12.1	hackberry	*Celtis laevigata*	Healthy	Single
2455	12.0	hackberry	*Celtis laevigata*	Healthy	Single
2456	15.3	hackberry	*Celtis laevigata*	Healthy	Single
2457	13.8	Osage-orange	*Maclura pomifera*	Healthy	Single
2458	15.5	Osage-orange	*Maclura pomifera*	Declining	Multi
2459	8.4	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2460	8.3	hackberry	*Celtis laevigata*	Healthy	Single
2461	10.3	hackberry	*Celtis laevigata*	Healthy	Single
2462	13.3	hackberry	*Celtis laevigata*	Healthy	Single
2463	24.6	hackberry	*Celtis laevigata*	Healthy	Multi
2464	7.2	American Elm	*Ulmus americana*	Healthy	Single
2465	8.2	hackberry	*Celtis laevigata*	Healthy	Single
2466	14.0	hackberry	*Celtis laevigata*	Healthy	Single
2467	8.4	hackberry	*Celtis laevigata*	Declining	Single
2468	5.8	Osage-orange	*Maclura pomifera*	Declining	Single
2469	6.6	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2470	20.5	hackberry	*Celtis laevigata*	Healthy	Multi
2471	12.6	hackberry	*Celtis laevigata*	Healthy	Single
2472	7.9	hackberry	*Celtis laevigata*	Healthy	Single
2473	14.0	hackberry	*Celtis laevigata*	Healthy	Single
2474	9.9	Osage-orange	*Maclura pomifera*	Declining	Forked
2475	10.3	Osage-orange	*Maclura pomifera*	Declining	Single
2476	6.3	hackberry	*Celtis laevigata*	Healthy	Single
2477	10.2	Osage-orange	*Maclura pomifera*	Healthy	Multi

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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2478	10.7	hackberry	*Celtis laevigata*	Healthy	Single
2479	4.8	hackberry	*Celtis laevigata*	Healthy	Single
2480	18.1	hackberry	*Celtis laevigata*	Healthy	Multi
2481	8.3	hackberry	*Celtis laevigata*	Healthy	Single
2482	27.8	hackberry	*Celtis laevigata*	Declining	Multi
2483	13.9	hackberry	*Celtis laevigata*	Healthy	Single
2484	10.2	Osage-orange	*Maclura pomifera*	Healthy	Single
2485	7.8	Osage-orange	*Maclura pomifera*	Declining	Single
2486	25.2	hackberry	*Celtis laevigata*	Declining	Multi
2487	10.3	hackberry	*Celtis laevigata*	Healthy	Single
2488	19.5	Osage-orange	*Maclura pomifera*	Healthy	Multi
2489	9.7	hackberry	*Celtis laevigata*	Healthy	Single
2490	19.4	hackberry	*Celtis laevigata*	Healthy	Multi
2491	14.0	hackberry	*Celtis laevigata*	Healthy	Single
2492	8.9	American Elm	*Ulmus americana*	Healthy	Single
2493	4.5	Eve's necklace	*Sophora affinis*	Healthy	Single
2494	23.3	hackberry	*Celtis laevigata*	Healthy	Multi
2495	10.4	hackberry	*Celtis laevigata*	Healthy	Single
2496	5.3	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2497	17.3	hackberry	*Celtis laevigata*	Healthy	Single
2498	28.3	hackberry	*Celtis laevigata*	Declining	Single
2499	13.7	hackberry	*Celtis laevigata*	Declining	Single
2500	6.3	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2501	9.6	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2502	6.7	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2503	5.0	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2504	15.9	hackberry	*Celtis laevigata*	Healthy	Single
2505	7.2	hackberry	*Celtis laevigata*	Healthy	Single
2506	8.7	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2507	17.2	hackberry	*Celtis laevigata*	Healthy	Multi
2508	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2509	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2510	12.0	hackberry	*Celtis laevigata*	Healthy	Single
2511	6.8	hackberry	*Celtis laevigata*	Healthy	Single
2512	9.9	hackberry	*Celtis laevigata*	Healthy	Single
2513	16.0	hackberry	*Celtis laevigata*	Healthy	Single
2514	5.8	hackberry	*Celtis laevigata*	Healthy	Single
2515	6.9	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2516	12.1	Osage-orange	*Maclura pomifera*	Healthy	Single
2517	14.8	chittamwood	*Sideroxylon lanuginosum*	Healthy	Single
2518	9.4	chittamwood	*Sideroxylon lanuginosum*	Healthy	Single
2519	4.7	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2520	5.5	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2521	9.3	hackberry	*Celtis laevigata*	Healthy	Single
2522	16.0	hackberry	*Celtis laevigata*	Healthy	Single
2523	12.7	hackberry	*Celtis laevigata*	Healthy	Single
2524	6.6	hackberry	*Celtis laevigata*	Healthy	Single
2525	16.2	hackberry	*Celtis laevigata*	Healthy	Single
2526	7.2	hackberry	*Celtis laevigata*	Healthy	Single
2527	11.1	hackberry	*Celtis laevigata*	Healthy	Single
2528	6.4	hackberry	*Celtis laevigata*	Healthy	Single
2529	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2530	7.1	hackberry	*Celtis laevigata*	Healthy	Multi

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TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2531	8.7	hackberry	*Celtis laevigata*	Healthy	Multi
2532	9.8	hackberry	*Celtis laevigata*	Healthy	Forked
2533	4.8	hackberry	*Celtis laevigata*	Healthy	Single
2534	9.3	hackberry	*Celtis laevigata*	Healthy	Multi
2535	12.6	hackberry	*Celtis laevigata*	Healthy	Forked
2536	11.1	hackberry	*Celtis laevigata*	Healthy	Multi
2537	8.4	hackberry	*Celtis laevigata*	Healthy	Single
2538	8.9	hackberry	*Celtis laevigata*	Healthy	Forked
2539	6.6	hackberry	*Celtis laevigata*	Healthy	Single
2540	16.5	hackberry	*Celtis laevigata*	Healthy	Multi
2541	6.1	hackberry	*Celtis laevigata*	Healthy	Single
2542	16.2	black willow	*Salix nigra*	Declining	Single
2543	5.4	black willow	*Salix nigra*	Healthy	Single
2544	11.3	black willow	*Salix nigra*	Healthy	Multi
2545	7.3	hackberry	*Celtis laevigata*	Healthy	Single
2546	11.4	hackberry	*Celtis laevigata*	Healthy	Single
2547	6.2	hackberry	*Celtis laevigata*	Healthy	Single
2548	14.0	hackberry	*Celtis laevigata*	Declining	Single
2549	8.8	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2550	5.7	Hercules-club	*Zanthoxylum clava-herculis*	Healthy	Single
2551	19.4	hackberry	*Celtis laevigata*	Healthy	Single
2552	24.6	Chinese elm	*Ulmus parvifolia*	Healthy	Multi
2553	17.3	hackberry	*Celtis laevigata*	Healthy	Single
2554	6.0	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2555	20.0	American Elm	*Ulmus americana*	Healthy	Single
2556	7.5	hackberry	*Celtis laevigata*	Declining	Single
2557	14.2	hackberry	*Celtis laevigata*	Healthy	Multi
2558	23.6	hackberry	*Celtis laevigata*	Healthy	Multi
2559	7.6	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2560	28.3	hackberry	*Celtis laevigata*	Healthy	Multi
2561	7.5	eastern redcedar	*Juniperus virginiana*	Healthy	Forked
2562	10.5	hackberry	*Celtis laevigata*	Healthy	Single
2563	6.2	hackberry	*Celtis laevigata*	Healthy	Single
2564	12.5	hackberry	*Celtis laevigata*	Healthy	Single
2565	28.9	hackberry	*Celtis laevigata*	Healthy	Multi
2566	10.4	hackberry	*Celtis laevigata*	Healthy	Single
2567	12.3	hackberry	*Celtis laevigata*	Healthy	Single
2568	19.6	hackberry	*Celtis laevigata*	Healthy	Multi
2569	21.2	hackberry	*Celtis laevigata*	Healthy	Multi
2570	30.8	hackberry	*Celtis laevigata*	Healthy	Multi
2571	14.0	hackberry	*Celtis laevigata*	Healthy	Single
2572	7.2	hackberry	*Celtis laevigata*	Declining	Single
2573	14.4	hackberry	*Celtis laevigata*	Healthy	Single
2574	6.4	hackberry	*Celtis laevigata*	Healthy	Single
2575	25.7	hackberry	*Celtis laevigata*	Healthy	Multi
2576	17.0	hackberry	*Celtis laevigata*	Healthy	Single
2577	12.5	hackberry	*Celtis laevigata*	Declining	Multi
2578	9.0	hackberry	*Celtis laevigata*	Healthy	Single
2579	9.8	hackberry	*Celtis laevigata*	Healthy	Single
2580	10.0	hackberry	*Celtis laevigata*	Healthy	Single
2581	14.9	eastern redcedar	*Juniperus virginiana*	Healthy	Multi
2582	20.3	hackberry	*Celtis laevigata*	Healthy	Single
2583	4.5	Chinese elm	*Ulmus parvifolia*	Healthy	Single

LCA Master Tree - Tree Inventory
Lucas, Collin County, Texas

TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2584	8.2	hackberry	*Celtis laevigata*	Healthy	Single
2585	8.0	hackberry	*Celtis laevigata*	Healthy	Single
2586	5.2	hackberry	*Celtis laevigata*	Healthy	Single
2587	9.7	hackberry	*Celtis laevigata*	Healthy	Multi
2588	15.8	hackberry	*Celtis laevigata*	Healthy	Single
2589	7.6	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2590	39.3	Chinese elm	*Ulmus parvifolia*	Healthy	Multi
2591	12.0	hackberry	*Celtis laevigata*	Healthy	Single
2592	41.3	Chinese elm	*Ulmus parvifolia*	Healthy	Multi
2593	16.0	hackberry	*Celtis laevigata*	Healthy	Single
2594	25.0	hackberry	*Celtis laevigata*	Healthy	Multi
2595	29.6	Chinese elm	*Ulmus parvifolia*	Healthy	Multi
2596	18.6	hackberry	*Celtis laevigata*	Healthy	Forked
2597	9.8	Chinese elm	*Ulmus parvifolia*	Healthy	Multi
2598	12.7	hackberry	*Celtis laevigata*	Healthy	Forked
2599	12.0	hackberry	*Celtis laevigata*	Healthy	Single
2600	5.1	Chinese elm	*Ulmus parvifolia*	Healthy	Multi
2601	15.2	hackberry	*Celtis laevigata*	Healthy	Single
2602	9.4	hackberry	*Celtis laevigata*	Healthy	Single
2603	24.8	Osage-orange	*Maclura pomifera*	Healthy	Multi
2604	38.4	American Elm	*Ulmus americana*	Healthy	Multi
2605	26.9	American Elm	*Ulmus americana*	Declining	Multi
2606	19.9	American Elm	*Ulmus americana*	Hazard	Forked
2607	33.4	Osage-orange	*Maclura pomifera*	Healthy	Multi
2608	21.4	hackberry	*Celtis laevigata*	Declining	Single
2609	19.3	hackberry	*Celtis laevigata*	Healthy	Single
2610	17.8	hackberry	*Celtis laevigata*	Healthy	Single
2611	9.2	hackberry	*Celtis laevigata*	Healthy	Single
2612	8.5	hackberry	*Celtis laevigata*	Healthy	Single
2613	15.9	hackberry	*Celtis laevigata*	Healthy	Single
2614	21.7	hackberry	*Celtis laevigata*	Healthy	Single
2615	18.3	American Elm	*Ulmus americana*	Declining	Single
2616	11.4	red mulberry	*Morus rubra*	Declining	Single
2617	14.4	hackberry	*Celtis laevigata*	Healthy	Single
2618	16.4	hackberry	*Celtis laevigata*	Healthy	Single
2619	11.3	hackberry	*Celtis laevigata*	Healthy	Single
2620	17.8	American Elm	*Ulmus americana*	Declining	Single
2621	12.8	American Elm	*Ulmus americana*	Declining	Single
2622	14.0	American Elm	*Ulmus americana*	Hazard	Forked
2623	12.2	American Elm	*Ulmus americana*	Healthy	Single
2624	5.4	hackberry	*Celtis laevigata*	Healthy	Multi
2625	21.0	American Elm	*Ulmus americana*	Healthy	Forked
2626	15.4	American Elm	*Ulmus americana*	Healthy	Multi
2627	19.3	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2628	33.9	American Elm	*Ulmus americana*	Healthy	Multi
2629	13.0	American Elm	*Ulmus americana*	Healthy	Single
2630	11.2	American Elm	*Ulmus americana*	Declining	Single
2631	32.4	American Elm	*Ulmus americana*	Healthy	Multi
2632	23.3	American Elm	*Ulmus americana*	Healthy	Single
2633	17.4	Chinese elm	*Ulmus parvifolia*	Healthy	Single
2634	20.4	winged elm	*Ulmus alata*	Healthy	Single
2635	22.0	American Elm	*Ulmus americana*	Declining	Single
2636	23.6	Chinese elm	*Ulmus parvifolia*	Declining	Forked

LCA Master Tree - Tree Inventory
Lucas, Collin County, Texas

TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2637	11.3	hackberry	*Celtis laevigata*	Healthy	Single
2638	10.5	hackberry	*Celtis laevigata*	Healthy	Single
2639	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2640	13.6	hackberry	*Celtis laevigata*	Healthy	Single
2641	12.4	hackberry	*Celtis laevigata*	Healthy	Single
2642	10.7	hackberry	*Celtis laevigata*	Healthy	Single
2643	10.8	black willow	*Salix nigra*	Declining	Single
2644	12.8	black willow	*Salix nigra*	Declining	Single
2645	8.5	hackberry	*Celtis laevigata*	Healthy	Single
2646	8.9	hackberry	*Celtis laevigata*	Healthy	Single
2647	17.4	black willow	*Salix nigra*	Declining	Single
2648	7.0	hackberry	*Celtis laevigata*	Healthy	Single
2649	26.0	Osage-orange	*Maclura pomifera*	Declining	Forked
2650	14.6	hackberry	*Celtis laevigata*	Healthy	Single
2651	13.7	hackberry	*Celtis laevigata*	Healthy	Single
2652	18.2	hackberry	*Celtis laevigata*	Declining	Single
2653	15.1	hackberry	*Celtis laevigata*	Healthy	Single
2654	17.5	American Elm	*Ulmus americana*	Healthy	Single
2655	20.8	black willow	*Salix nigra*	Healthy	Single
2656	9.7	American Elm	*Ulmus americana*	Healthy	Multi
2657	14.3	American Elm	*Ulmus americana*	Declining	Single
2658	8.3	American Elm	*Ulmus americana*	Healthy	Single
2659	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2660	9.2	hackberry	*Celtis laevigata*	Healthy	Single
2661	8.5	hackberry	*Celtis laevigata*	Healthy	Multi
2662	4.7	American Elm	*Ulmus americana*	Healthy	Multi
2663	5.8	hackberry	*Celtis laevigata*	Healthy	Single
2664	5.0	hackberry	*Celtis laevigata*	Healthy	Single
2665	5.6	hackberry	*Celtis laevigata*	Healthy	Forked
2666	6.9	hackberry	*Celtis laevigata*	Healthy	Multi
2667	12.8	hackberry	*Celtis laevigata*	Healthy	Multi
2668	10.6	hackberry	*Celtis laevigata*	Healthy	Forked
2669	7.3	hackberry	*Celtis laevigata*	Healthy	Multi
2670	18.8	hackberry	*Celtis laevigata*	Declining	Single
2671	9.2	American Elm	*Ulmus americana*	Healthy	Single
2672	20.3	hackberry	*Celtis laevigata*	Healthy	Single
2673	4.7	hackberry	*Celtis laevigata*	Healthy	Single
2674	11.7	hackberry	*Celtis laevigata*	Healthy	Single
2675	4.6	hackberry	*Celtis laevigata*	Healthy	Single
2676	13.7	Osage-orange	*Maclura pomifera*	Healthy	Single
2677	9.1	American Elm	*Ulmus americana*	Declining	Single
2678	8.0	hackberry	*Celtis laevigata*	Healthy	Forked
2679	5.4	hackberry	*Celtis laevigata*	Healthy	Single
2680	9.2	hackberry	*Celtis laevigata*	Healthy	Multi
2681	4.5	hackberry	*Celtis laevigata*	Healthy	Single
2682	9.7	American Elm	*Ulmus americana*	Healthy	Single
2683	16.0	black willow	*Salix nigra*	Healthy	Single
2684	11.9	black willow	*Salix nigra*	Declining	Single
2685	12.6	black willow	*Salix nigra*	Healthy	Single
2686	14.0	black willow	*Salix nigra*	Healthy	Single
2687	11.2	black willow	*Salix nigra*	Healthy	Single
2688	10.7	black willow	*Salix nigra*	Healthy	Single
2689	14.1	black willow	*Salix nigra*	Healthy	Single

LCA Master Tree - Tree Inventory
Lucas, Collin County, Texas

TAG#	DBH	COMMON NAME	*SCIENTIFIC NAME*	CONDITION	MULTIPLE-STEMMED
2690	15.3	black willow	*Salix nigra*	Healthy	Single
2691	12.8	black willow	*Salix nigra*	Healthy	Single
2692	17.0	black willow	*Salix nigra*	Healthy	Single
2693	5.6	American Elm	*Ulmus americana*	Healthy	Single
2694	15.7	black willow	*Salix nigra*	Healthy	Single
2695	20.2	black willow	*Salix nigra*	Healthy	Multi
2696	22.3	black willow	*Salix nigra*	Healthy	Multi
2697	12.3	black willow	*Salix nigra*	Healthy	Single
2698	15.6	black willow	*Salix nigra*	Healthy	Single
2699	10.5	hackberry	*Celtis laevigata*	Healthy	Single
2700	13.5	hackberry	*Celtis laevigata*	Healthy	Single
2701	16.7	hackberry	*Celtis laevigata*	Healthy	Multi
2702	9.4	hackberry	*Celtis laevigata*	Healthy	Single
2703	8.7	hackberry	*Celtis laevigata*	Healthy	Multi
2704	8.6	Osage-orange	*Maclura pomifera*	Healthy	Multi
2705	7.4	eastern redcedar	*Juniperus virginiana*	Healthy	Single
2706	16.0	hackberry	*Celtis laevigata*	Healthy	Single
2707	19.6	hackberry	*Celtis laevigata*	Healthy	Single

Kimley-Horn red tag series: 2001-2707. Trees measuring 4.5-inches and larger DBH were tagged in accordance with the City of Lucas Ordinance.

October 25, 2024

Mr. Joe Hilbourn
City of Lucas, TX
Planning & Zoning Commission
665 Country Club Road
Lucas, Texas 75002

RE: ***Lot 1, Block A of Lucas Christian Church Addition***
SUP Amendment
Statement of Intent

Dear Mr. Hilbourn:

Kimley-Horn respectfully submits this written letter of intent for a formal review of the submitted SUP amendment. The subject property has an existing Specific Use Permit (SUP) overlay with a base zoning of R2 Single Family. The applicant is proposing to amend the existing SUP for Lot 1, Block A and create a new conceptual masterplan for the property that incorporates the adjacent 22.61-acre parcel owned by James and Lee Irwin Family Limited Partnership. The subject property is an existing educational facility and is surrounded by vacant land to the west, residential to the south, a church within the SUP and a residential use to the east. The proposed development and revised masterplan include the expansion of educational and athletic facilities, as well as the extension of Stinson Road through the property, per the City master thoroughfare plan amendment currently in progress. This expansion to the existing Lucas Christian Academy campus will provide important and complimentary services to the nearby residents, students, and visitors, as well as provide additional academic classrooms and support facilities.

The proposed Stinson Road extension will run north-south between FM1378 and existing Stinson Road to the south of the parcel. A signalized intersection is proposed at the intersection of the future Stinson Road extension and FM 1378. The two additional access drives to the property will remain in their existing locations. The project proposes additional access off the proposed Stinson Road extension.

Please do not hesitate to contact to contact me via email (Jeffrey.Dolian@kimley-horn.com) if you have any questions during the review process.

Regards,

Jeffrey Dolian

KIMLEY-HORN AND ASSOCIATES, INC.

ZONING APPLICATION
City of Lucas, Texas

Name of Project: LUCAS CHRISTIAN ACADEMY SUP

	Application Fee
____ Initial Zoning (newly annexed or agricultural property) per classification	$450.00
____ Rezoning (property currently zoned) per classification	$450.00
_X_ Specific Use Permit (SUP) - see Zoning Ordinance for special requirements and procedures	$450.00

Physical Location of Property: TRACT IMMEDIATELY WEST OF 505 W LUCAS ROAD, LUCAS, TX 75002

[Address and General Location – approximate distance to nearest existing street corner]

Brief Legal Description of Property (must also attach accurate metes and bounds description):
ABS A0538 JAS LOVELADY SURVEY, TRACT 21, 22.679 ACRES

[Survey/Abstract No. and Tracts; or platted Subdivision Name with Lots/Block]

Collin County Appraisal District Short Account Number: 2665871

Acreage: 22.7 **Existing Zoning:** R2 **Requested Zoning:** R2 w/ SUP

[Attach a detailed description of requested zoning]

OWNER(S) NAME: JAMES AND LEE IRWIN FAMILY LIMITED PARTNERSHIP **Phone Number:** 903-517-9452

Applicant / Contact Person: ANDREA BEDELL **Title:** REALTOR

Company Name: JAMES AND LEE IRWIN FAMILY LIMITED PARTNERSHIP

Mailing Address: 5617 COUNTY RD 115 **City:** ~~LUCAS~~ WHITESBORO **State:** TX **ZIP:** 76273

Phone: (817) 247-1778 **Fax:** (___) NA **Email Address:** BEDELLPROPERTIES@GMAIL.COM

ENGINEER(S) / REPRESENTATIVE(S) NAME: KIMLEY-HORN AND ASSOCIATES, INC.

Contact Person: JEFFREY DOLIAN **Title:** PROJECT MANAGER

Company Name: KIMLEY-HORN AND ASSOCIATES, INC.

Mailing Address: 13455 NOEL RD, STE. 700 **City:** DALLAS **State:** TX **ZIP:** 75240

Phone: (___) 972-770-1300 **Fax:** (___) _____ **Email Address:** JEFFREY.DOLIAN@KIMLEY-HORN.COM

ZONING APPLICATION (continued)

Name of Project: LUCAS CHRISTIAN ACADEMY SUP

****READ BEFORE SIGNING BELOW:** If there should be more than one property owner, complete a separate sheet with the same wording as below. The City requires all original signatures. If applicant is other than the property owner a "Power of Attorney" with original, notarized signatures is required. (Notaries are available upon submittal.)

SUBMITTAL DEADLINE: 30 DAYS PRIOR TO P&Z PUBLIC HEARING DATE. All zoning applications must be advertised in the newspaper, and notices must be mailed to all property owners within 500 feet of the subject property. Please contact City staff in advance for submittal deadlines.

ALL APPLICATIONS MUST BE COMPLETE, ACCOMPANIED BY THE APPLICABLE CHECKLIST AND TAX CERTIFICATE SHOWING TAXES PAID, BEFORE THEY WILL BE SCHEDULED FOR P&Z AGENDA. It is the applicant's responsibility to be familiar with, and to comply with, all City submittal requirements (in the Zoning & Subdivision Ordinances, and any separate submittal policies, requirements and/or checklists that may be required from City staff), including the number of plans to be submitted, application fees, etc. Please contact City staff in advance for submittal requirements. [Drawings will not be returned to applicant.]

SUBMISSIONS. Failure to submit all materials to the City with this application will result in delays scheduling the agenda date.

NOTICE OF PUBLIC RECORDS. The submission of plans/drawings/etc. with this application makes such items public record, and the applicant understands that these items may be viewed by the general public. Unless the applicant expressly states otherwise in writing, submission of this application (with associated plans/drawings/etc.) will be considered consent by the applicant that the general public may view and/or reproduce (i.e., copy) such documents.

ALL PARCELS/PROPERTIES MUST MATCH IN ACREAGE ALL OTHER DOCUMENTS SUBMITTED, WITH NO AMBIGUITY.

STATE OF TEXAS }
COUNTY OF COLLIN }

Andea Bedell

BEFORE ME, a Notary Public, on this day personally appeared _____ the undersigned who, under oath, stated the following: "I hereby certify that I am the owner, or duly authorized agent of the owner, (proof attached) for the purposes of this application; that all information submitted herein is true and correct. I understand that submitting this application does not constitute approval, and incomplete applications will result in delays and possible denial."

Andrea Bedell
Owner / Agent *(circle one)*

SUBSCRIBED AND SWORN TO before me, this the 4th day of October 2024.

NOMAN A GILL
Notary ID #133917788
My Commission Expires
August 19, 2026

Notary Public in and for the State of Texas: _____

Official Use Only **Action Taken**

Planning & Zoning: _____ **Date:** _____

City Council: _____ **Date:** _____

Applicant Made a Written Withdrawal: Yes or No **Date:** _____

ZONING APPLICATION
City of Lucas, Texas

Name of Project: LUCAS CHRISTIAN ACADEMY SUP

		Application Fee
____	Initial Zoning (newly annexed or agricultural property) per classification	$450.00
____	Rezoning (property currently zoned) per classification	$450.00
_X_	Specific Use Permit (SUP) - see Zoning Ordinance for special requirements and procedures	$450.00

Physical Location of Property: 505 W LUCAS ROAD, LUCAS, TX 75002

[Address and General Location – approximate distance to nearest existing street corner]

Brief Legal Description of Property (must also attach accurate metes and bounds description):
LUCAS CHRISTIAN CHURCH ADDITION, BLOCK A, LOT 1

[Survey/Abstract No. and Tracts; or platted Subdivision Name with Lots/Block]

Collin County Appraisal District Short Account Number: 2656636

Acreage: 16.0 **Existing Zoning:** R2 w/ SUP **Requested Zoning:** R2 w/ SUP

[Attach a detailed description of requested zoning]

OWNER(S) NAME: LUCAS CHRISTIAN ACADEMY INC **Phone Number:** 972-429-4362

Applicant / Contact Person: JOSEPH WALKER **Title:** HEAD OF SCHOOL

Company Name: LUCAS CHRISTIAN ACADEMY

Mailing Address: 505 W. LUCAS ROAD **City:** LUCAS **State:** TX **ZIP:** 75002

Phone: (___) 972-429-4362 **Fax:** (___) _____ **Email Address:** JWALKER@LUCASCHRISTIANACADEMY.COM

ENGINEER(S) / REPRESENTATIVE(S) NAME: KIMLEY-HORN AND ASSOCIATES, INC.

Contact Person: JEFFREY DOLIAN **Title:** PROJECT MANAGER

Company Name: KIMLEY-HORN AND ASSOCIATES, INC.

Mailing Address: 13455 NOEL RD, STE 700 **City:** DALLAS **State:** TX **ZIP:** 75240

Phone: (___) 972-770-1300 **Fax:** (___) _____ **Email Address:** JEFFREY.DOLIAN@KIMLEY-HORN.COM

ZONING APPLICATION (continued)

Name of Project: LUCAS CHRISTIAN ACADEMY SUP

****READ BEFORE SIGNING BELOW:** If there should be more than one property owner, complete a separate sheet with the same wording as below. The City requires all original signatures. If applicant is other than the property owner a "Power of Attorney" with original, notarized signatures is required. (Notaries are available upon submittal.)

SUBMITTAL DEADLINE: 30 DAYS PRIOR TO P&Z PUBLIC HEARING DATE. All zoning applications must be advertised in the newspaper, and notices must be mailed to all property owners within 500 feet of the subject property. Please contact City staff in advance for submittal deadlines.

ALL APPLICATIONS MUST BE COMPLETE, ACCOMPANIED BY THE APPLICABLE CHECKLIST AND TAX CERTIFICATE SHOWING TAXES PAID, BEFORE THEY WILL BE SCHEDULED FOR P&Z AGENDA. It is the applicant's responsibility to be familiar with, and to comply with, all City submittal requirements (in the Zoning & Subdivision Ordinances, and any separate submittal policies, requirements and/or checklists that may be required from City staff), including the number of plans to be submitted, application fees, etc. Please contact City staff in advance for submittal requirements. [Drawings will not be returned to applicant.]

SUBMISSIONS. Failure to submit all materials to the City with this application will result in delays scheduling the agenda date.

NOTICE OF PUBLIC RECORDS. The submission of plans/drawings/etc. with this application makes such items public record, and the applicant understands that these items may be viewed by the general public. Unless the applicant expressly states otherwise in writing, submission of this application (with associated plans/drawings/etc.) will be considered consent by the applicant that the general public may view and/or reproduce (i.e., copy) such documents.

ALL PARCELS/PROPERTIES MUST MATCH IN ACREAGE ALL OTHER DOCUMENTS SUBMITTED, WITH NO AMBIGUITY.

STATE OF TEXAS }
COUNTY OF COLLIN }

BEFORE ME, a Notary Public, on this day personally appeared Joseph Walker the undersigned who, under oath, stated the following: "I hereby certify that I am the owner, or duly authorized agent of the owner, (proof attached) for the purposes of this application; that all information submitted herein is true and correct. I understand that submitting this application does not constitute approval, and incomplete applications will result in delays and possible denial."

Owner / Agent *(circle one)*

SUBSCRIBED AND SWORN TO before me, this the 23rd day of 2024

LEAH M THOMPSON
Notary Public, State of Texas
Comm. Expires 11-03-2024
Notary ID 132763302

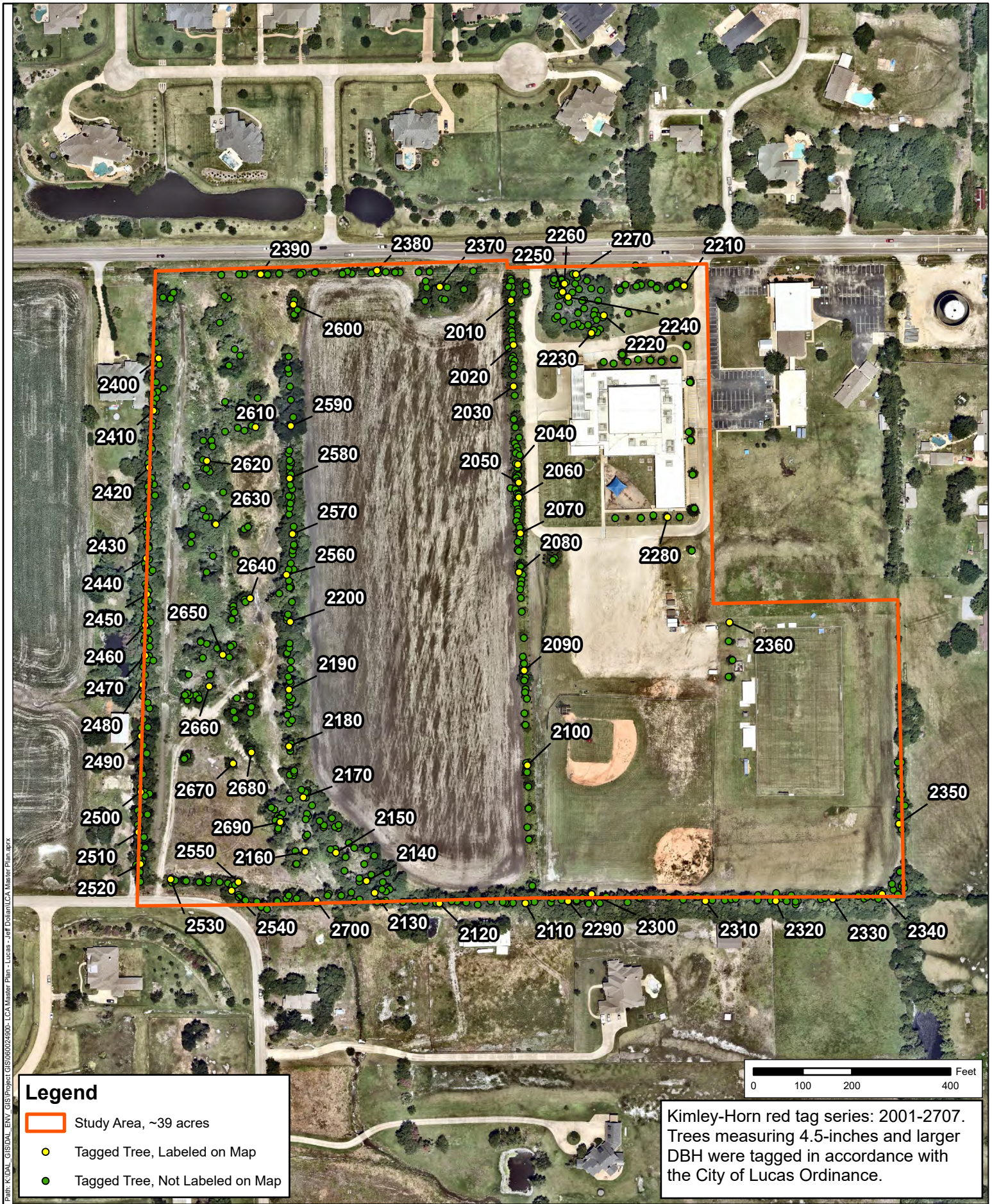
Notary Public in and for the State of Texas:

Official Use Only **Action Taken**

Planning & Zoning: _____ **Date:** _____

City Council: _____ **Date:** _____

Applicant Made a Written Withdrawal: Yes or No **Date:** _____



Path: K:\DAL_GIS\DAL_ENV_GIS\Project GIS\060024900- LCA Master Plan - Lucas - Jeff Dolan\LCA Master Plan.aprx

FIGURE			
1	DATE: 10/17/2024	Tree Inventory Map	LCA Master Plan
	DRAWN: QDW	Source: Nearmap June 2024	Lucas, Collin County, Texas
	CHECKED: AMB		
	KHA NO.: 060024900		

Kimley»Horn

CITY OF LUCAS

Zoning Guidelines and Application

665 Country Club Road
Lucas, Texas 75002

Office 972-912-1206
www.lucastexas.us

ZONING SUBMISSION REQUIREMENTS

The City is concerned about the time, expense and efforts you and City staff have or will put into your project. The checklists herein are provided to expedite the project review process, and to provide a clear understanding of what will be required, what will be expected, and what will be evaluated. City staff is bound by City Ordinance and State law regarding publishing of notices, mail-outs, etc. that will have an effect upon when your project will be heard by the approval body, which can only occur when the Zoning Application and plans are complete in all detail as determined by City staff.

Please read each checklist carefully. They are to be complete for all projects prior to acknowledgement by the City that the respective plan is accepted to proceed for approval. Instructions for completion are included with each checklist. Development regulations may be reviewed on the City's web site www.lucastexas.us.

It is recognized that there most often will be changes needed from what is initially submitted to the City for review. City staff conscientiously examines each item on a checklist to see if the item was sufficiently addressed according to City requirements. Where deficiencies are found, the plans will be marked and returned to the applicant named on the application to be addressed prior to further review or acceptance.

ZONING SUBMISSION REQUIREMENTS

1st or initial submittal

- 2 (two) - 24" x 36" folded to approximately 8" x 12" copies of each plan
- An electronic copy of required plat and/or exhibits in pdf format.
- 6 (six) - 11" x 17" hardcopy reductions
- Completed checklist
- Completed application
- A letter requesting any variance or exception, or why an issue was not addressed
- An 8 ½" x 11" hardcopy reduction of the Plat
- A fee as required

2nd and 3rd submittals to address requirements

- Highlight questions asked by Design Review Committee (DRC) committee in bold.
  - Provide response/correction directly below DRC question.
- 2 (two) - 24"x 36" folded (approximately 8" x 12") copies with required corrections
- An electronic copy of the corrected plat and/or exhibits in pdf format.
- 6 (six) - 11" x 17" hard copy reductions with required corrections

4th and subsequent submittal(s)

- 2 (two) - 24" x 36" folded (approximately 8" x 12") copies with required corrections.
- A fee equal to the original submission fee

When staff has determined the application is complete and accepted for final approval

- 30 (thirty) - 24" x 36" folded copies of Zoning Concept Plan and any/all other required Plan Exhibits
- 4 (four) - 11" x 17" Z folded copies.
- An electronic copy (8 1/2 x 11 size) in pdf format.
- Labels of an appropriate size for mailing, with current property owner(s) name and address, of any property located within 500' of all property lines.
- A copy of the affected parcels on a CollinCad generated map.
- Any changes made after Planning & Zoning review and before City Council review will require:
  - 15 (fifteen) - 24" x 36" copies of each Plan, folded to approximately 8" x 12"
  - 4 (four) - 11" x 17" or "12 x 18" reductions of each plan tri- or Z-folded.
  - An electronic copy of all plans in pdf format

Zoning Exhibit Checklist
Minimum Requirements

Project Name: Lucas Christian Academy

Preparer: Kimley Horn (Jeff Dolian)

This checklist is provided to assist you in addressing the minimum requirements for a zoning or rezoning submission. An application is incomplete unless all applicable information noted below is submitted to the Development Services Department. Indicate that all information is included on the submitted plans by initialing the box next to the required information. Initialing each item certifies to the City that you have completely and accurately addressed the issue. Return this form at the time of application submittal.

A zoning/rezoning request and associated plans are expected to be submitted complete and accurate in all detail as shown by the checklist. Should plans be determined to be incomplete, they may either be returned to the applicant without further review or marked up with needed changes, depending on the amount/magnitude of changes or corrections needed.

For Zoning or Rezoning to a Straight Zoning District N/A

____ Location/vicinity map showing the location of the proposed zoning with cross streets is included. Indicate scale or not to scale (NTS) and provide north arrow.
____ Abstract lines, survey lines, county lines, corporate boundaries are correctly shown and clearly labeled.
____ Statement of purpose and intent of the zoning or rezoning that includes:

- Land Use(s) proposed
- Existing and proposed zoning
- Impact of uses(s) on the transportation system. NOTE: The City will determine if a Traffic Impact Analysis (TIA) is required.
- Impact of the use(s) on water and wastewater utilities (e.g. provide statement as to general availability).
- Impact on land use(s) adjacent to the rezoning request.
- Conformance to the Comprehensive Plan.
- Other information as required by City staff, Planning & Zoning Commission, and/or City Council
- If a residential use, the density of the proposal and density of adjacent residential use(s).

____ Adjacent zoning and existing land use(s) within 500 feet is indicated.
____ Adjacent driveways, streets, roads and other thoroughfares within 500 feet of the property are shown and labeled.
____ A note stating that development of the site will be in accordance with City of Lucas development standards.
____ Provide an electronic file (pdf) of Legal Description/Metes & Bounds Description with labeling at top of document.
____ Mailing labels of an appropriate size for mailing, with current property owner(s) name and address, of any property located within 500 feet of all property lines of subject property.

Zoning Exhibit Checklist
Minimum Requirements (continued)

*****Note: See GFF Master Plan**

For Special Use Permit (SUP) Requests, Conditional Use Permit (CUP) Requests and Planned Development / Zoning District Requests or Amendments

__x__ Zoning boundary is indicated by a heavy solid line, intermittent with 2 dash lines; dimensioned with bearing(s) and distance(s).

__-__ A title block in the lower right corner that includes large, boldly printed "ZONING CONCEPT PLAN - EXHIBIT B", owner and engineer(s), architect(s), and/or surveyor(s) names, addresses and phone numbers, project name, total acreage, survey name and abstract number (Addition Name & Lot and Block info if platted property), Collin County, submission date, and a log of submittal/revision dates since submitted to the City. A note shall be affixed to the Zoning Concept Plan as follows:

"This Concept Plan is for illustrative purposes only and subject to change. This Concept Plan, along with development regulations (for Planned Development requests), are intended to describe the intent of the Planned Development. Significant deviations from this Concept Plan, as determined by the Development Services Director, will require an amendment to the Concept Plan and, as necessary, the development regulations."

____- Location/vicinity map showing the location of the proposed zoning request/change with cross streets is included.

_x___ Indicate scale or not to scale (NTS) and provide north arrow.

_x___ Written and bar graph scale, and north arrow are indicated. North shall be oriented to the top or left side of the sheet.

__-__ Abstract lines, survey lines, corporate boundaries are correctly shown and clearly labeled.

_x___ Statement of purpose and intent of the rezoning that includes:

- Land use(s) proposed
- Existing and proposed zoning and land use
- Impact of uses(s) on the transportation system.
  NOTE: The City will determine if a Traffic Impact Analysis (TIA) is required.
- Impact of the use(s) on water and wastewater utilities (e.g. provide statement as to general availability).
- Impact on land use(s) adjacent to the rezoning request.
- Conformance to the Comprehensive Plan.
- Other information as required by City staff, Planning & Zoning Commission, and/or City Council

_x___ Adjacent zoning and existing land use(s) within 500 feet is indicated.

_x___ Adjacent driveways, streets, roads and other thoroughfares within 500 feet of the project are shown.

_x___ Concept Plan that includes the following:

- Land use(s) proposed (building footprint(s) are to be graphically shown).
- Thoroughfares as depicted on the Master Thoroughfare Plan (MTP) within and adjacent to the site are accurately located, named and dimensioned. Existing is to be shown as a light, solid line; proposed shown as a medium weight solid line.
- Medians, left-turn lanes, median openings, curb cuts, acceleration/deceleration lanes within 200 feet of the property are accurately located, labeled, and dimensioned. Existing is to be shown as a light, solid line; proposed shown as a medium weight solid line.
- If a structure is proposed, or proposed to remain, a minimum and maximum square footage (if no definitive/specific user(s) are identified at this time) is indicated for the structure(s).
- If a structure is proposed, or proposed to remain, the use, approximate location, and square footage of each building is provided.
- If a residential use, the density of the proposal and density of adjacent residential use(s).
- Project phasing lines.
- Other pertinent data as may be required by City staff, Planning and Zoning Commission, and/or City Council.
- Location of present, future or proposed public dedication of parks, open space, etc.

_x___ Mailing labels of an appropriate size for mailing, with current property owner(s) name and address, of any property located within 500 feet of all property lines of subject property.

Zoning Exhibit Checklist
Minimum Requirements (continued)

Special Use Permit (SUP) and **Conditional Use Permit (CUP)** requests shall also include the following items in table format on the Zoning Concept Plan (Exhibit "B") and those specified in items 1 thru 10 above as applicable:

_x___ Existing/proposed Lot Number(s)
_x___ Lot area specified in square feet and acreage
_x___ Building square footage (Indication of Minimum and Maximum suggested if no definitive/specific user(s) identified at this time)
_x___ Proposed use for each proposed building by category of use (e.g. retail, medical office, restaurant with or without drive-thru, convenience store, bank with drive-thru, church, etc.)
__x__ Parking count required and specified per use(s) with required ratio indicated

Planned Development (PD) Zoning District requests shall also include Development Regulations (labeled/titled Exhibit "C") with the following: **N/A**

____ Hard copy (8 ½" X 11") and pdf file on disk is provided.
____ List of proposed land uses
____ Proposed use(s) for each building (non-residential and mixed-use development) by category of use (e.g. retail, professional office, medical office, church, restaurant, bank with drive through, etc.)
____ Maximum square footage of each building (non-residential uses)
____ Minimum lot area (residential uses)
____ Minimum lot width (residential uses)
____ Minimum lot depth (residential uses)
____ Heights and stories
____ Maximum lot coverage percentage
____ Maximum lot count (residential uses)
____ Minimum house size square footage excluding garages and breezeways
____ Fencing requirements indicated
____ Garage type(s) indicated (e.g. front entry, rear entry alley served, "J"-hook, etc.)
____ Accessory Building regulations
____ Subdivision Ordinance waiver/modification requests are specifically listed.
____ Parking count required specified per use(s) with required ratio indicated
____ Parking count provided
____ Statement is provided indicating that all current development requirements of the City as amended shall be met unless approved otherwise within these Planned Development Zoning District Development Regulations.
____ Hard copy (8 ½" X 11") and electronic file (pdf) of Legal Description/Metes & Bounds Description with labeling at top of document indicating Exhibit "A" is provided.
____ Mailing labels of an appropriate size for mailing, with current property owner(s) name and address, of any property located within 500 feet of all property lines.

NOTE: DEVIATIONS FROM CURRENT DEVELOPMENT STANDARDS/REGULATIONS NOT SPECIFICALLY ADDRESSED/LISTED FOR APPROVAL AS PART OF PLANNED DEVELOPMENT REGULATIONS MAY REQUIRE A HEARING/APPROVAL BY THE BOARD OF ADJUSTMENT (BOA).

New Ordinance #
2004-10-00510

ORDINANCE NO. 2004-10-411

AN ORDINANCE OF THE CITY OF LUCAS, TEXAS, AMENDING THE COMPREHENSIVE ZONING ORDINANCE AND MAP OF THE CITY OF LUCAS TO GRANT A CHANGE IN ZONING TO GRANT A SPECIFIC USE PERMIT FOR THE OPERATION OF A CHURCH AND SCHOOL FACILITY FOR THE PROPERTY DESCRIBED IN EXHIBIT "A" ATTACHED HERETO, A TRACT OF LAND IN THE CITY OF LUCAS, TEXAS LOCATED AT 415 W. LUCAS ROAD; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND ($2,000.00) DOLLARS FOR EACH OFFENSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Planning and Zoning Commission of the City of Lucas and the governing body of the City of Lucas, in compliance with state laws with reference to amending the Comprehensive Zoning Ordinance and Map, have given the requisite notice by publication and otherwise, and after holding due hearings and affording a full and fair hearing to all property owners generally, the governing body of the City of Lucas is of the opinion that said zoning ordinance should be amended as provided herein; Now, Therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS:

SECTION 1. That the Comprehensive Zoning Ordinance and Map of the City of Lucas, Texas, as heretofore amended be and the same are hereby amended to grant a change in zoning to grant a Special Use Permit to allow the use, construction, expansion, renovation, and operation of a church and place of religious worship and ancillary, related uses including a private school for property located at 415 W. Lucas Road and being more particularly described in Exhibit "A" attached hereto and made part hereof for all purposes.

SECTION 2. That the above-described property shall be used only in the manner and for the purposes provided for by the Comprehensive Zoning Ordinance of the City of Lucas as heretofore amended, and the regulations imposed within the R2 Single Family District, subject to the following conditions:

1. The Property may be used as a church and for religious worship and ancillary related uses and purposes, including but not limited to a private school operated by the Lucas Christian Academy;

2. The development of the property shall be in accordance with the site plan, a copy of which is attached hereto as Exhibit "B" and is, by this reference, incorporated herein and made a part of this ordinance;

3. There shall be no additional structures, temporary or permanent, situated, located, constructed or erected on the Property other than those that currently exist as of the effective date of this ordinance and those that are depicted on the site plan attached hereto as Exhibit "B";

4. The applicant/owner of the Property shall conduct and perform a traffic study in conjunction with the Texas Department of Transportation which shall indicate traffic flows and patterns on streets that service and access the Property; and

5. This Specific Use Permit shall be for a period of five (5) years of and from the effective date hereof, after which time it shall automatically terminate. Upon termination, no use or structure shall be grandfathered or considered or deemed to be a lawful nonconforming use or structure. The applicant/owner may, at any time prior to expiration of this Specific Use Permit, apply for a new Specific Use Permit and/or an extension hereof, in conjunction with the submission of a permanent master site plan.

SECTION 3. That if any section, sentence, clause, or phrase of this ordinance is for any reason held to be unconstitutional or otherwise invalid or unenforceable by a court of competent jurisdiction, such decision shall not affect the validity of the remaining sections, sentences, clauses, or phrases of this ordinance, the Comprehensive Zoning Ordinance, or the Code of Ordinances as an entirety, it being the legislative intent that the provisions of this ordinance are severable and that the ordinance shall continue in effect notwithstanding the invalidity of such section, sentence, clause, or phrase.

SECTION 4. Any person, firm or corporation violating any of the provisions of this ordinance or the Comprehensive Zoning Ordinance of the City of Lucas, Texas, as amended hereby, shall be deemed guilty of a misdemeanor and, upon conviction, shall be subject to a fine not to exceed the sum of Two Thousand ($2,000.00) Dollars for each offense, and each and every day any such violation shall continue shall be deemed to constitute a separate offense.

SECTION 5. This Ordinance shall take effect immediately from and after its passage and the publication of the caption as the law in such cases provide.

DULY ADOPTED AND APPROVED by the City Council of the City of Lucas, Texas, on *this the 4th day of October, 2004.*

APPROVED:

Mayor

ATTEST:

City Secretary

APPROVED AS TO FORM:

City Attorney (68192)

ORDINANCE NO. 2004-10-411

AN ORDINANCE OF THE CITY OF LUCAS, TEXAS, AMENDING THE COMPREHENSIVE ZONING ORDINANCE AND MAP OF THE CITY OF LUCAS TO GRANT A CHANGE IN ZONING TO GRANT A SPECIFIC USE PERMIT FOR THE PROPERTY DESCRIBED IN EXHIBIT "A" ATTACHED HERETO, A TRACT OF LAND IN THE CITY OF LUCAS, TEXAS LOCATED AT 415 W. LUCAS ROAD; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND ($2,000.00) DOLLARS FOR EACH OFFENSE; AND PROVIDING AN EFFECTIVE DATE.

DULY ADOPTED AND APPROVED by the City Council of the City of Lucas, Texas, on *this the 4th day of October, 2004.*

APPROVED:

Mayor

ATTEST:

City Secretary

EXHIBIT A
ORDINANCE 2004-10-411

LEGAL DESCRIPTION
Lucas Christian Church and Lucas Christian Academy
415 W. Lucas Road

A0538 LOVELADY, JAS, TRACT 16, ACRES 2.3340,
A0538 LOVELADY, JAS, TRACT 15, ACRES 2.8000,
A0538 LOVELADY, JAS, TRACT 69, ACRES 17.232

Filename: Lucas Zoning Ordinance SUP Lucas Christian Academy2
Directory: C:\Documents and Settings\esmith\Local Settings\Temporary Internet Files\OLK27A
Template: C:\Documents and Settings\esmith\Application Data\Microsoft\Templates\Normal.dot
Title: ORDINANCE NO
Subject:
Author: dberman
Keywords:
Comments:
Creation Date: 10/5/2004 1:06 PM
Change Number: 2
Last Saved On: 10/5/2004 1:06 PM
Last Saved By: dberman
Total Editing Time: 5 Minutes
Last Printed On: 10/29/2004 2:41 PM
As of Last Complete Printing
Number of Pages: 4
Number of Words: 857 (approx.)
Number of Characters: 4,890 (approx.)

☐ Annexation
☐ Disannexation
☒ Code of Ordinances
☐ Other

ORDINANCE # 2009-06-00648
[Lucas Christian Church SUP]

AN ORDINANCE OF THE CITY OF LUCAS, TEXAS AMENDING THE COMPREHENSIVE ZONING ORDINANCE AND MAP OF THE CITY OF LUCAS, TEXAS, TO GRANT A SPECIFIC USE PERMIT FOR THE OPERATION OF A CHURCH AND SCHOOL FACILITY FOR THE PROPERTY DESCRIBED IN EXHIBIT "A" ATTACHED HERETO, A TRACT OF LAND IN THE CITY OF LUCAS, TEXAS LOCATED AT 415 WEST LUCAS ROAD; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS ($2,000.00) FOR EACH OFFENSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Planning and Zoning Commission of the City of Lucas, Texas, and the governing body of the City of Lucas, in compliance with state laws with reference to amending the Comprehensive Zoning Ordinance and Map, have given the requisite notice by publication and otherwise, and after holding due hearings and affording a full and fair hearing to all property owners generally, the governing body of the City of Lucas is of the opinion that said zoning ordinance should be amended as provided herein;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS:

SECTION 1. That the Comprehensive Zoning Ordinance and Map of the City of Lucas, Texas, as heretofore amended, be and the same are hereby amended, to grant a change in zoning to grant a Special Use Permit to allow the use, construction, expansion, renovation, and operation of a church and place of worship and ancillary located at 415 West Lucas Road and being more particularly described in Exhibit "A" attached hereto and made a part hereof for all purposes.

SECTION 2. That the above-described property shall be used only in the manner and for the purposes provided for by the Comprehensive Zoning Ordinance of the City of Lucas as heretofore amended, and the regulations imposed within the R2 Single Family District, subject to he following conditions:

1. The Property may be used as a church and for religious worship and ancillary related uses and purposes, including but not limited to a private school operated by the Lucas Christian Church d/b/a Faith Fellowship;

2. The development of the property shall be in accordance with the site plan, a copy of which is attached hereto as Exhibit "B" and made a part hereof for all purposes;

3. There shall be no additional structures, temporary or permanent, situated, located, constructed or erected on the Property, other than those that currently exist as of the effective date of this Ordinance and those that are depicted on the site plan attached as Exhibit "B"; and

5. This Specific Use Permit is granted to the Lucas Christian Church d/b/a Faith Fellowship and shall be for a period of five (5) years or and from the effective date hereof, after which time it shall automatically terminate. Upon termination, no use or structure shall be grandfathered or considered or deemed to be a lawful nonconforming use or structure. The applicant/owner may, at any time prior to expiration of this Specific Use Permit, apply for a new Specific Use Permit and/or an extension hereof, in conjunction with the submission of a permanent master site plan.

SECTION 3. That should any section, sentence, clause, or phrase of this ordinance is for any reason held to be unconstitutional or otherwise invalid or unenforceable by a court of competent jurisdiction, such decision shall not affect the validity of the remaining sections, sentences, clauses, or phrases of this ordinance, the Comprehensive Zoning Ordinance, or the Code of Ordinances as an entirety, it being the legislative intent that the provisions of this ordinance are severable and that the ordinance shall continue in effect notwithstanding the invalidity of such section, sentence, clause, or phrase.

SECTION 4. That any person, firm or corporation violating any of the provisions or terms of this Ordinance shall be subject to the same penalty as provided for in the Code of Ordinances, as amended, and upon conviction in the municipal court shall be punished by a fine not to exceed the sum of Two Thousand Dollars ($2,000.00) for each offense, and each and every day such violation shall continue shall be deemed to constitute a separate offense.

SECTION 5. That this Ordinance shall take effect immediately from and after its passage and the publication of the caption, as the law and charter in such cases provide.

DULY ADOPTED AND APPROVED by the City Council of the City of Lucas, Texas, this the 4th day of June, 2009.

APPROVED:

CITY OF LUCAS, TEXAS
SEAL

Bill Carmickle, Mayor

ATTEST:

Kathy Wingo, TRMC, City Secretary

APPROVED AS TO FORM:

Joe Gorfida, Jr., City Attorney
(JJG/cgo/03-31-09/35976))

EXHIBIT "A"

LEGAL DESCRIPTION

Lucas Christian Church and Lucas Christian Academy
415 W. Lucas Road

A0538 LOVELADY, JAS, TRACT 16, ACRES 2.3340,
A0538 LOVELADY, JAS, TRACT 15, ACRES 2.8000,
A0538 LOVELADY, JAS, TRACT 69, ACRES 17.232

EXHIBIT "B"

Lucas Christian Church

Site Plan 2009

☐ Annexation
☐ Disannexation
☐ Code of Ordinances
☒ Other

ORDINANCE # 2011-04-00679
[Specific Use Permit for 505 West Lucas Road]

AN ORDINANCE OF THE CITY OF LUCAS, TEXAS, AMENDING THE COMPREHENSIVE ZONING ORDINANCE AND MAP OF THE CITY OF LUCAS, TEXAS, AS HERETOFORE AMENDED, BY GRANTING A SPECIFIC USE PERMIT WITH SPECIAL CONDITIONS FOR THE OPERATION OF A PRIVATE SCHOOL FACILITY KNOWN AS LUCAS CHRISTIAN ACADEMY FOR THE PROPERTY DESCRIBED IN EXHIBIT "A" AND DEPICTED IN EXHIBIT "B" ATTACHED HERETO, A TRACT OF LAND IN THE CITY OF LUCAS, TEXAS, LOCATED AT 505 WEST LUCAS ROAD; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALING CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS ($2,000.00) FOR EACH OFFENSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Planning and Zoning Commission of the City of Lucas, Texas, and the governing body of the City of Lucas, in compliance with state laws with reference to amending the Comprehensive Zoning Ordinance and Map, have given the requisite notice by publication and otherwise, and after holding due hearings and affording a full and fair hearing to all property owners generally, the governing body of the City of Lucas is of the opinion that said zoning ordinance should be amended as provided herein;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS:

SECTION 1. That the Comprehensive Zoning Ordinance and Map of the City of Lucas, Texas, as heretofore amended, be and the same are hereby amended, to grant a change in zoning to grant a Special Use Permit to allow the operation of a private school facility (Grade K-12) known as "Lucas Christian Academy" located at 505 West Lucas Road and being more particularly described in Exhibit "A" attached hereto and made a part hereof for all purposes.

SECTION 2. That the above-described property shall be used only in the manner and for the purposes provided for by the Comprehensive Zoning Ordinance of the City of Lucas as heretofore amended, and the regulations imposed within the R2 Single Family District, subject to the following conditions:

1. The Property may be used for a private school grades K-12 d/b/a as Lucas Christian Academy;

2. The development of the property shall be in accordance with the site plan, a copy of which is attached hereto as Exhibit "B" and made a part hereof for all purposes;

3. There shall be no additional structures, temporary or permanent, situated, located, constructed or erected on the Property, other than those that are depicted on the site plan attached as Exhibit "B";

4. The hours of operation for the campus shall be Monday through Saturday from 7:30 a.m. – 10 p.m.

5. Exterior field lighting shall be restricted to Tuesdays and Thursdays until 9 p.m.; Fridays and Saturdays until 10 p.m. Field lighting is not permitted at any other time.

6. A right turn lane and/or left turn lane shall be constructed on West Lucas Rd. if it is determined through a traffic study completed by the City that one or both are necessary.

7. An earthen berm with a minimum height of 5 feet or live evergreen landscape screening to a minimum of 5 feet shall be constructed on the rear parking lot prior to the completion of the parking lot.

SECTION 3. That should any section, sentence, clause, or phrase of this ordinance is for any reason held to be unconstitutional or otherwise invalid or unenforceable by a court of competent jurisdiction, such decision shall not affect the validity of the remaining sections, sentences, clauses, or phrases of this ordinance, the Comprehensive Zoning Ordinance, or the Code of Ordinances as an entirety, it being the legislative intent that the provisions of this ordinance are severable and that the ordinance shall continue in effect notwithstanding the invalidity of such section, sentence, clause, or phrase.

SECTION 4. That all provisions of the ordinances of the City of Lucas in conflict with the provisions of this ordinance be, and the same are hereby, repealed, and all other provisions of the ordinances of the City of Lucas not in conflict with the provisions of this ordinance shall remain in full force and effect.

SECTION 5. That any person, firm or corporation violating any of the provisions or terms of this Ordinance shall be subject to the same penalty as provided for in the Code of Ordinances, as amended, and upon conviction in the municipal court shall be punished by a fine not to exceed the sum of Two Thousand Dollars ($2,000.00) for each offense, and each and every day such violation shall continue shall be deemed to constitute a separate offense.

SECTION 6. That this Ordinance shall take effect immediately from and after its passage and the publication of the caption, as the law and charter in such cases provide.

DULY PASSED AND APPROVED BY THE CITY COUNSEL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, ON THIS 21st DAY OF APRIL, 2011.

CITY OF LUCAS, TEXAS
SEAL

APPROVED:

Rebecca Mark, Mayor

APPROVED AS TO FORM:

Joe Gorfida, Jr., City Attorney
(JJG/04-20-11/49040)

ATTEST:

Kathy Wingo, TRMC, CMC, City Secretary

EXHIBIT "A"

LEGAL DESCRIPTION

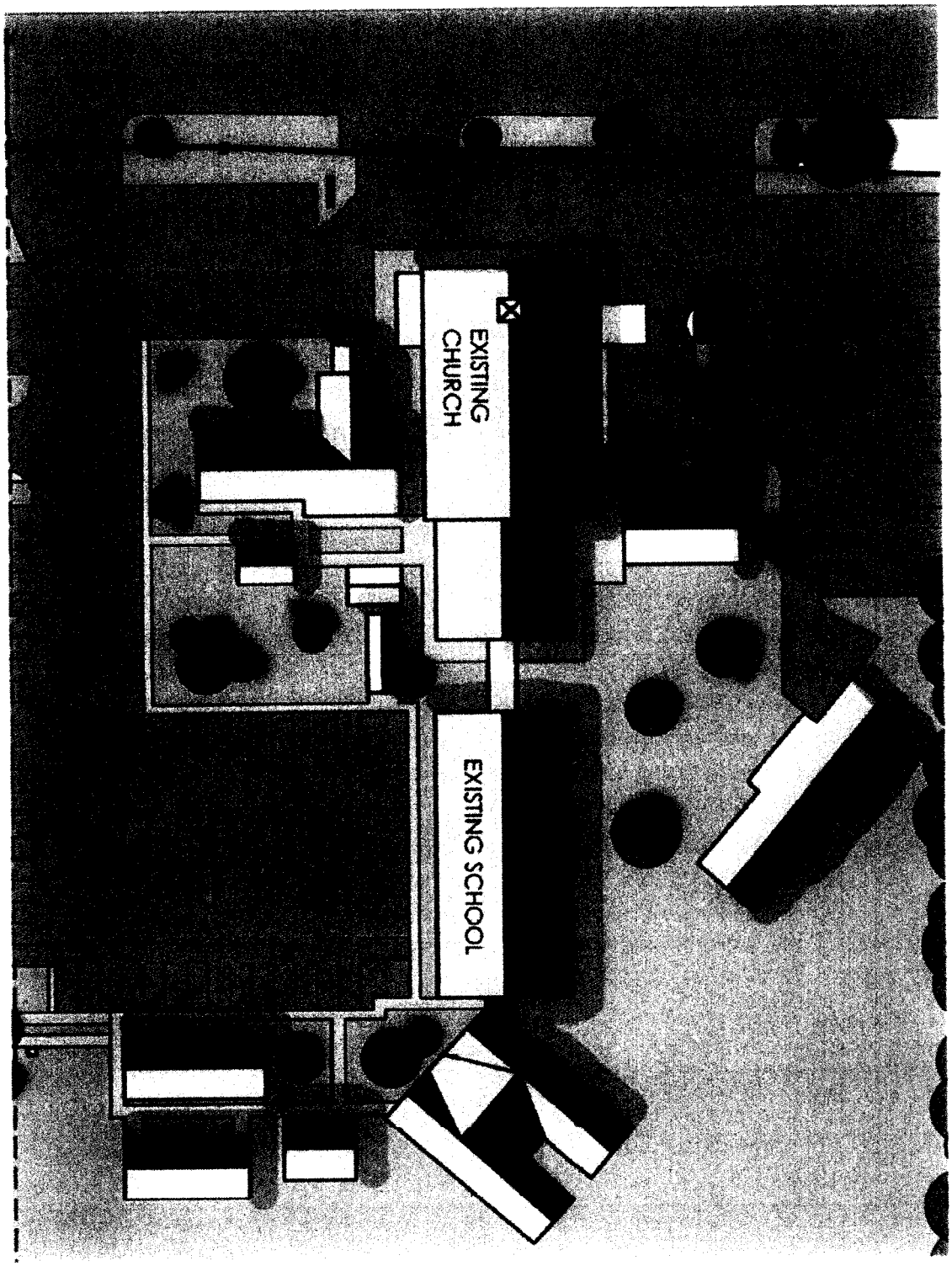
Lucas Christian Church and Lucas Christian Academy
415 W. Lucas Road

A0538 LOVELADY, JAS, TRACT 16, ACRES 2.3340,
A0538 LOVELADY, JAS, TRACT 15, ACRES 2.8000,
A0538 LOVELADY, JAS, TRACT 69, ACRES 17.232

EXHIBIT "B"

Lucas Christian Church

Site Plan 2009



TRAFFIC IMPACT ANALYSIS

LUCAS CHRISTIAN ACADEMY
WILLOW SPRINGS MIDDLE SCHOOL

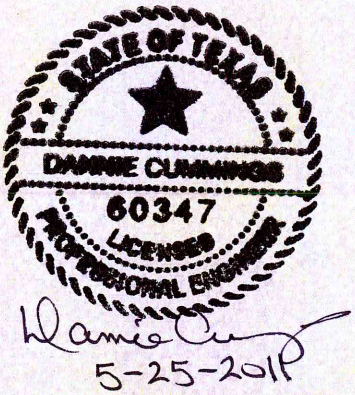
Prepared for

City of Lucas

May 25, 2011

By

C&P Engineering, Ltd.
Dannie Cummings, P.E.



C&P Engineering, Ltd.
1801 Gateway Blvd. • Suite 101 • Richardson, Texas 75080
(972) 644-2800 • Texas Registration No. F-3185

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The purpose of conducting this TIA was to determine the impact of the vehicular traffic projected to be generated by two new school sites on the adjacent roadway system - specifically on Lucas (F.M. 1378) Road. The two school sites are the Willow Springs Middle School (WSMS) and the Lucas Christian Academy (LCA).

The intersections included in this study for analysis and evaluation included the following six (6) locations: the LCA's two driveway intersections with Lucas Road; the WSMS's two driveway intersections with Lucas Road; Country Club Road and Lucas Road; and Southview Drive and Lucas Road.

A brief description of the traffic controls measures that are recommended in this report have been listed below. A more detailed description is included in the "Recommendations" section beginning on page 43 of this report.

WILLOW SPRINGS MIDDLE SCHOOL - Provide westbound left-turn lanes on Lucas at both school driveways; provide an eastbound right-turn lane on Lucas at the east school driveway; and implement a reduced speed limit school zone on Lucas adjacent to the school site.

LUCAS CHRISTIAN ACADEMY - Provide a westbound left-turn lane on Lucas at the west school driveway; provide an eastbound right-turn lane on Lucas at the west school driveway; implement a reduced speed limit school zone on Lucas adjacent to the school site; and consider the use of off-duty police officers to control exiting traffic at the east school driveway.

COUNTRY CLUB ROAD AND LUCAS ROAD - We recommend that the City submit this report to TxDOT as supporting documentation for the construction of an eastbound left-turn lane at this intersection.

SOUTHVIEW DRIVE AND LUCAS ROAD - We recommend that the City submit this report to TxDOT as supporting documentation for the construction of a southbound left-turn lane and westbound and northbound right-turn lanes at this intersection.

TRAFFIC IMPACT ANALYSIS
LUCAS CHRISTIAN ACADEMY
WILLOW SPRINGS MIDDLE SCHOOL
CITY OF LUCAS

INTRODUCTION

C&P Engineering has conducted a traffic impact analysis and prepared this report in response to the City's request to study the traffic impact of two school sites on traffic operations along Lucas Road. The two school sites addressed in this study are the Lucas Christian Academy (LCA) and the Willow Springs Middle School (WSMS).

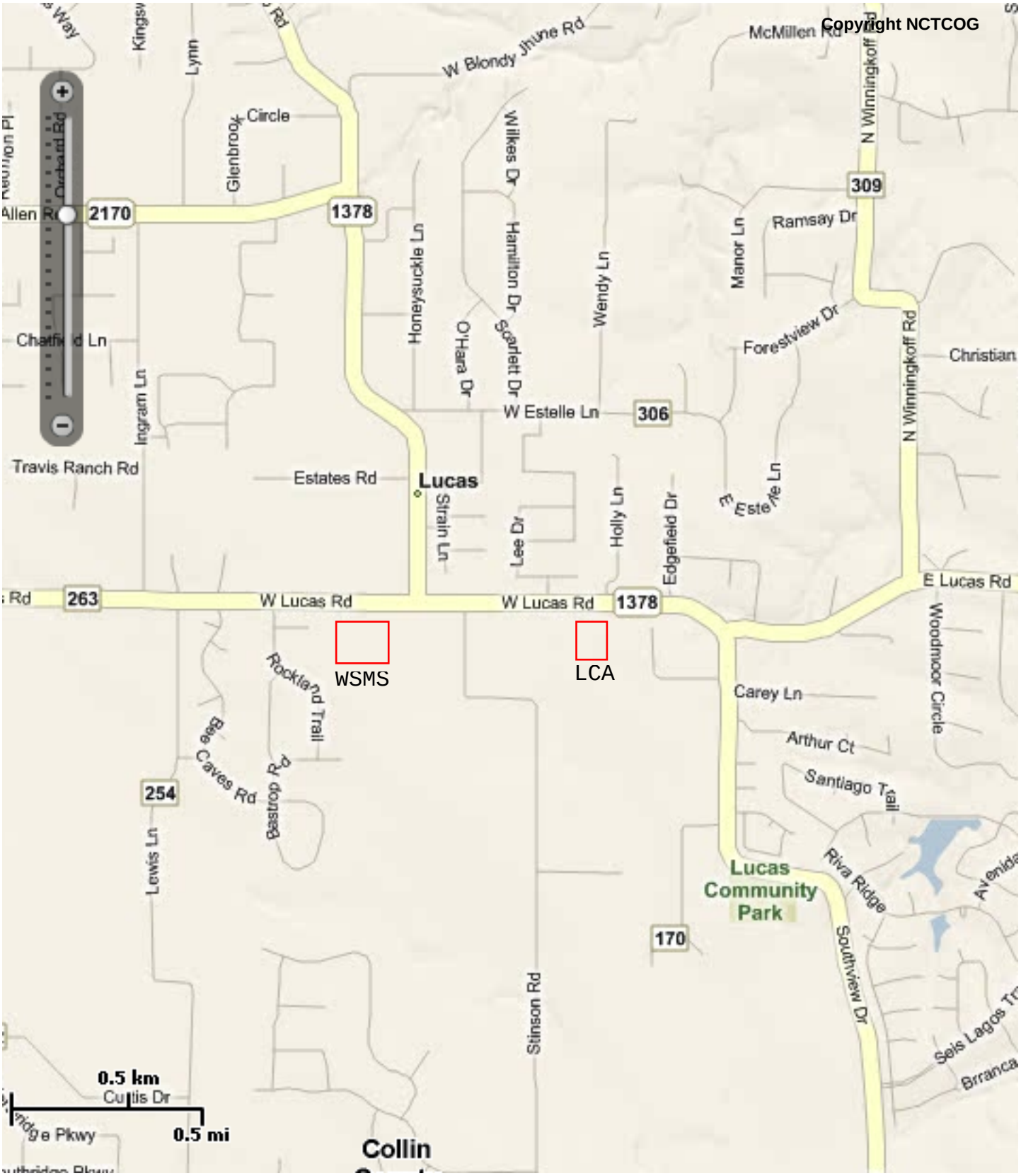
The LCA is an existing private school located at 415 West Lucas Road. A new and larger facility is currently planned to be located immediately west of its present location and will be open for classes in the fall of 2012 with a projected maximum student enrollment occurring by 2014.

In addition to classrooms, the new LCA site will be include a gymnasium, a theater, a dining hall, a family gathering site, and athletic fields.

The WSMS is a new facility to be constructed by the Lovejoy ISD on the south side of Lucas Road just west of Country Club Road. It too is scheduled to be open for classes in the fall of 2012, but with a projected maximum student enrollment occurring by 2020 .

In addition to classrooms, the WSMS site will include tennis courts, an athletic field, and a football field with bleachers and a running track.

A location map has been included as Figure 1 on the next page of this report and aerial photographs of each site have been included in the Appendix.



North Central Texas Council of Governments

LOCATION MAP

DFWMaps.com

http://www.dfwmaps.com/#

DISCLAIMER
This data has been compiled for NCTCOG. Various official and unofficial sources were used to gather this information. Every effort was made to ensure the accuracy of this data, however, no guarantee is given or implied as to the accuracy of said data.

N

FIGURE 1

PURPOSE AND SCOPE OF STUDY

The purpose of conducting this TIA was to determine the impact of the vehicular traffic projected to be generated by these two schools on the adjacent roadway system - specifically on Lucas (F.M. 1378) Road. The intersections included in this study for analysis and evaluation included the following six (6) locations: the LCA's two driveway intersections with Lucas Road; the WSMS's two driveway intersections with Lucas Road; Country Club Road and Lucas Road; and Southview Drive and Lucas Road.

Our analyses and evaluations conducted for this study addressed the following issues:

Traffic operations at all six (6) of the study intersections;
The need for right-turn deceleration / storage lanes;
The need for left-turn deceleration / storage lanes; and
The need for reduced speed limit school zones.

This TIA will address the traffic impact at the six (6) study intersections under four scenarios: existing 2011 conditions; opening year of both school sites (projected for 2012); full build out of the LCA school site (projected for 2014); and full build out of the WSMS site (projected for 2020).

LUCAS CHRISTIAN ACADEMY (LCA)

C&P collected and obtained the LCA data contained in this section of the report through conversations with Julie Montgomery, Interim Dean of Academics, and through a review of a TIA report prepared by Tom Walton and dated April 2009.

PROPOSED SITE LAYOUT

An exhibit depicting the proposed LCA site has been included in the Appendix to this report. The site will be served by two driveways on Lucas Road. During the morning and afternoon peak hours the west driveway will operate as an entrance only drive and the east driveway as an exit only drive. This will apply only to the school traffic.

The east driveway will function as a common access driveway with the Faith Fellowship Church. Vehicles traveling to and from the church site will be able to enter and exit through the east driveway at all times.

Our trip distributions and traffic assignments assume the above described driveway operations.

EDUCATION MODEL

The education model being used at the LCA facility is quite different from most public or private schools. The following excerpts from their website help describe their unique approach to education.

> *Lucas Christian Academy is a Certified University-Model School (UMS). This is a proven educational model that integrates the parents (mentoring their students) in partnership with highly qualified professional instructors to gain better academic and spiritual development of the student. It integrates the home and school in the common goal of producing godly men and women who will become difference makers in the Kingdom of God.*
>
> *The UMS takes the best aspects of public, private, and home schools and molds them into one model. UMS uses a university-style schedule adapted to elementary, junior, and senior high levels. Professional teachers conduct central classroom instruction. Students attend classes on Mondays, Wednesdays, and Fridays and/or Tuesdays and Thursdays. Students spend alternate days at home where parents continue their instruction or monitor their student's progress. Teachers provide parents with detailed instructions for days spent at home in the satellite classroom (1 to 1.5 hours of study per course).*

STUDENT ENROLLMENT

The LCA site has a current enrollment of 273 students and a projected build out enrollment of 464 students. Table 1 has been prepared to summarize the student enrollment breakdown between grade levels. The opening year student enrollment numbers were obtained by interpolation between the 2011 and the 2014 enrollment numbers.

TABLE 1
LCA Student Enrollment

STUDENT GRADE LEVEL	CURRENT 2011	OPENING 2012	BUILD OUT 2014
Elementary School	98 students	140 students	232 students
Junior High School	55 students	60 students	72 students
High School	120 students	130 students	160 students
TOTAL	273 students	330 students	464 students

STUDENT BREAKDOWN BY CLASS SCHEDULE

Table 2 has been developed to summarize the current breakdown of LCA students by their choice of a Monday-Wednesday-Friday schedule or a Tuesday-Thursday schedule.

TABLE 2
LCA Student Class Schedule Breakdown

STUDENT GRADE LEVEL	MONDAY-WEDNESDAY-FRIDAY SCHEDULE	TUESDAY-THURSDAY SCHEDULE
Elementary School	98 students	0 students
Junior High School	55 students	23 students
High School	120 students	82 students
TOTAL	273 students	105 students

As can be seen in Table 2 the LCA will experience its highest traffic volumes during the Monday-Wednesday-Friday schedule of classes.

CLASS TIMES

Classes begin at 8:00 a.m. and end at 3:30 p.m. for students attending the Monday-Wednesday-Friday class schedule. For students attending the Tuesday-Thursday schedule, classes begin at 8:30 a.m. and end at 4:00 p.m.

WILLOW SPRINGS MIDDLE SCHOOL (WSMS)

C&P collected and obtained the WSMS data contained in this section of the report through a review of the Lovejoy ISD web site and through a review of a TIA report prepared by Halff Associates, Inc. and dated November 2010.

PROPOSED SITE LAYOUT

An exhibit depicting the proposed WSMS site has been included in the Appendix to this report. This site will also be served by two driveways on Lucas Road. The Halff Associates report identified the east driveway as the planned primary entrance for parents dropping off and picking up students.

The current paving plan prepared by PBK includes an eastbound right-turn deceleration/storage lane at that east driveway.

Our trip distributions and traffic assignments assume the above described driveway operations.

STUDENT ENROLLMENT

The WSMS site has a projected opening year enrollment of 430 students and a projected build out enrollment of 850 students. Table 3 has been prepared to summarize this student enrollment information.

TABLE 3
WSMS Student Enrollment

GRADE LEVEL	OPENING 2012	BUILD OUT 2020
Middle School	430 students	850 students

CLASS TIMES

Class times for the middle school will be somewhat similar to those of the LCA. Classes will typically begin at 7:30 - 8:00 a.m. each morning and will typically end between 3:00 - 4:00 p.m. each afternoon.

STUDY AREA TRAFFIC CONDITIONS

Lucas Road fronts both school sites and is the primary roadway directly serving both schools. It is a two-lane undivided asphalt road with 6-foot shoulders west of Country Club Road and minimal shoulders east of Country Club Road. The speed limit along this section of the Lucas Road is posted at 50 mph.

24-hour bi-directional machine count were taken at five (5) locations in the study area on Tuesday May 10, 2011. Those locations and a summary of the count data collected at each location are summarized in the following paragraphs.

Lucas Road west of Country Club Road . . . This count indicated an average daily two-way traffic volume of 8,743 vehicles per day (4,181 eastbound and 4,562 westbound).

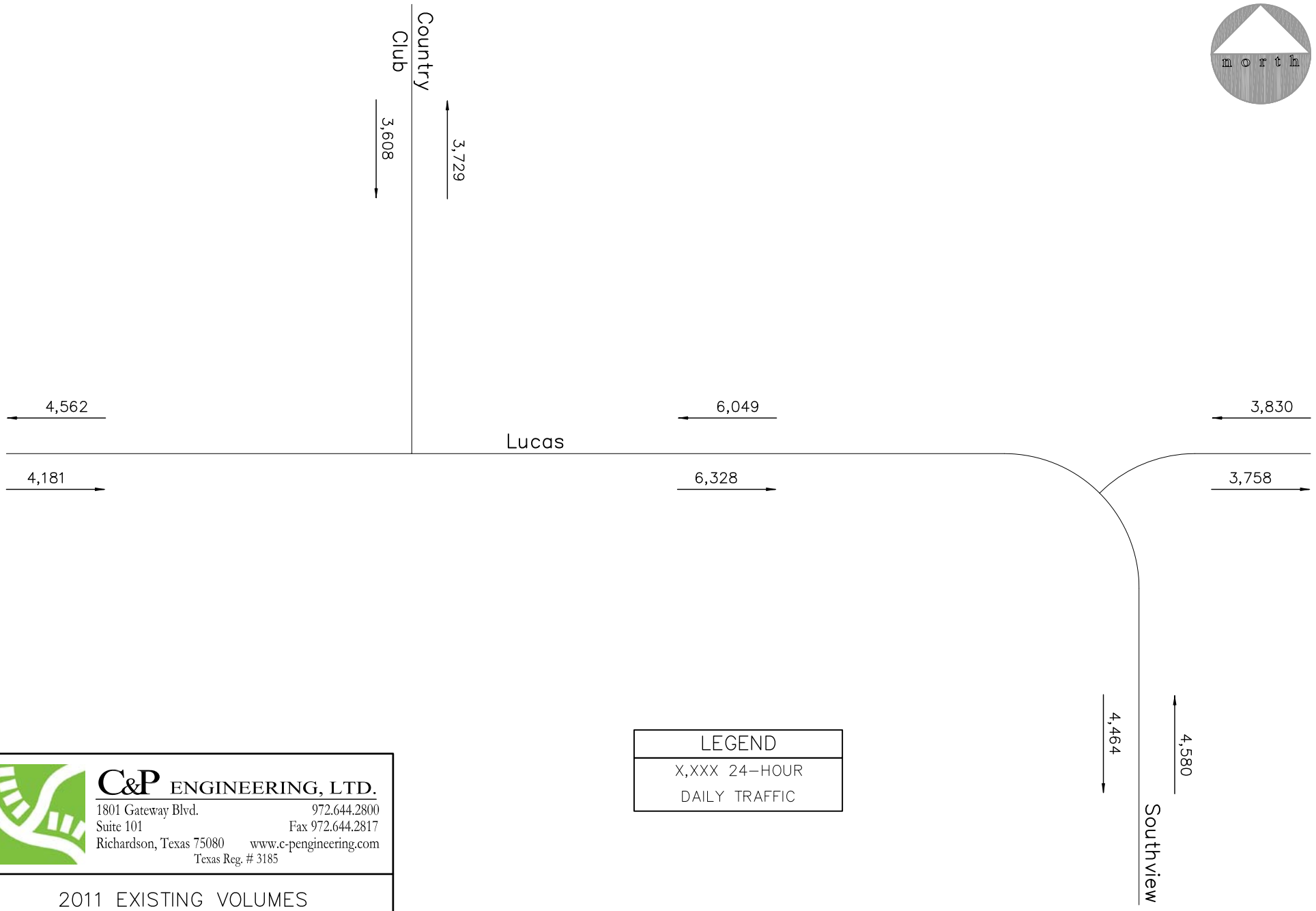
Lucas Road adjacent to the LCA site . . . This count indicated an average daily two-way traffic volume of 12,377 vehicles per day (6,328 eastbound and 6,049 westbound).

Lucas Road east of Southview Drive . . . This count indicated an average daily two-way traffic volume of 7,588 vehicles per day (3,758 eastbound and 3,830 westbound).

Country Club Road north of Lucas Road . . . This count indicated an average daily two-way traffic volume of 7,737 vehicles per day (3,729 northbound and 3,608 southbound).

Southview Drive south of Lucas Road . . . This count indicated an average daily two-way traffic volume of 9,044 vehicles per day (4,580 northbound and 4,464 southbound).

Figure 2 has been prepared to depict the existing 24-hour daily traffic volumes along Lucas Road, Country Club Road, and Southview Drive. Computer printouts of the traffic count data collection have been included in the Appendix.



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2011 EXISTING VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 2

Manual turning movement counts were collected at two existing signalized intersections on Lucas Road on Tuesday May 10, 2011. Counts were collected during the 7:00 - 9:00 a.m. and 2:00 - 5:00 p.m. periods in order to quantify the amount of street traffic occurring during the school peak hour traffic periods.

Those locations and a summary of the count data collected at each location are summarized in the following paragraphs.

LUCAS ROAD AND COUNTRY CLUB ROAD

A.M. School Peak Hour . . . The count indicated a morning school peak hour (7:15 - 8:15) volume of 1,410 total entering vehicles.

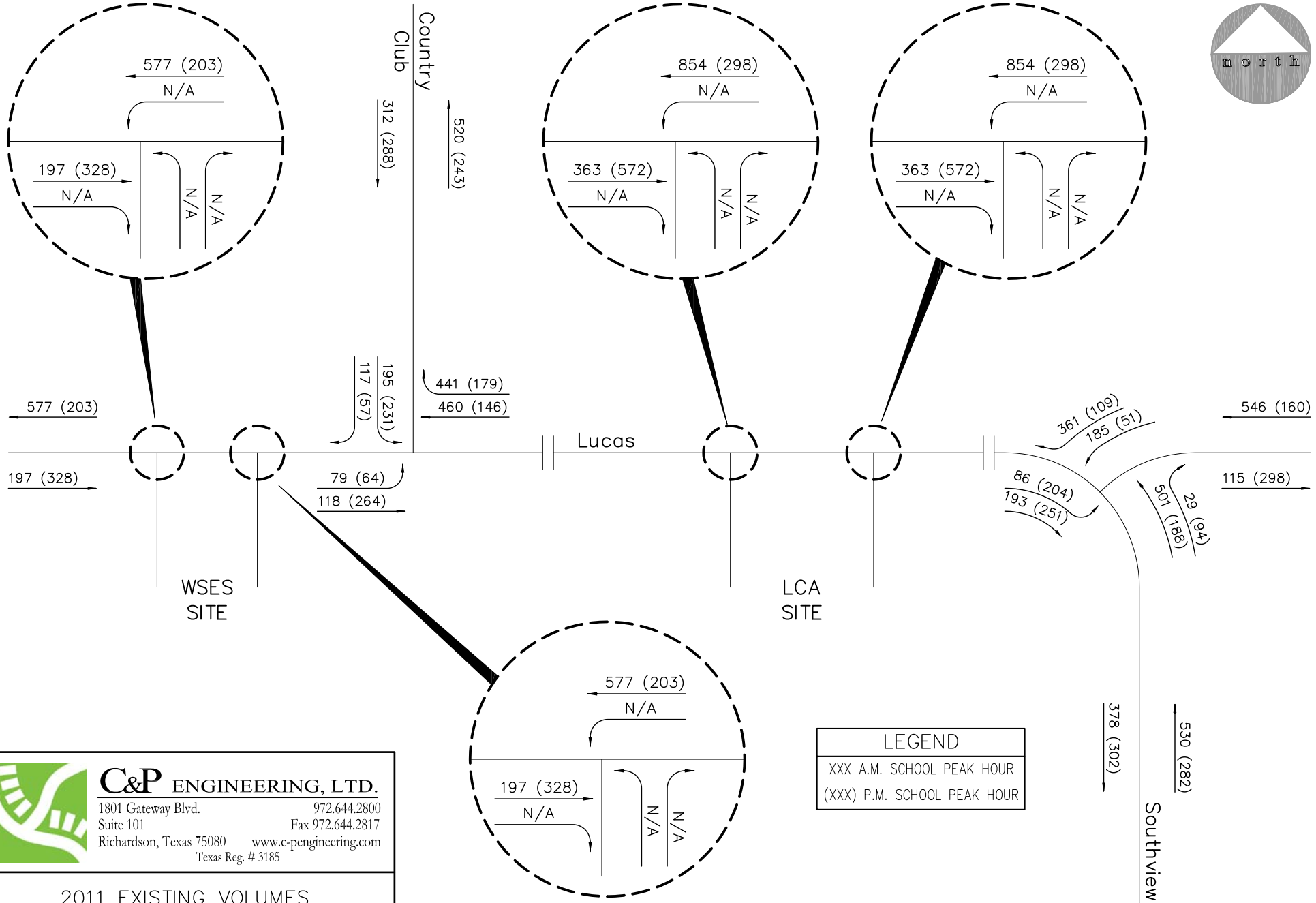
P.M. School Peak Hour . . . The count indicated an afternoon school peak hour (3:00 - 4:00) volume of 954 total entering vehicles.

LUCAS ROAD AND SOUTHVIEW DRIVE

A.M. School Peak Hour . . . The count indicated a morning school peak hour (7:15 - 8:15) volume of 1,357 total entering vehicles.

P.M. School Peak Hour . . . The count indicated an afternoon school peak hour (3:00 - 4:00) volume of 898 total entering vehicles.

Figure 3 has been prepared to depict the existing a.m. and p.m. school peak hour traffic volumes along Lucas Road through its intersections with Country Club Road and Southview Drive. Computer printouts of the traffic count data collection have been included in the Appendix.



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2011 EXISTING VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 3

TRIP GENERATION CHARACTERISTICS

Estimated vehicle trip ends to and from the two school sites were determined using different methodologies.

WILLOW SPRINGS MIDDLE SCHOOL

For the WSMS vehicle trip ends to and from the study area were calculated utilizing trip generation rates and characteristics collected and compiled by the Institute of Transportation Engineers (ITE) in the eighth edition of their *Trip Generation Handbook*. Tables 4 and 5 have been prepared to summarize the associated trip generation data and the calculated trips that are anticipated to be generated by the institutional land use associated with the WSMS site. Copies of the ITE data sheets used to develop these tables have been attached to this report.

TABLE 4
WSMS Trip Generation Data

LAND USE AND YEAR	ITE CODE	UNITS	QUANTITY
Middle School:			
Opening Year - 2012	522	Students	430
Build Out Year - 2020	522	Students	850

The trips indicated in Table 5 are the total unadjusted traffic volumes for the proposed WSMS study site.

TABLE 5
WSMS Calculated Trip Ends

YEAR	ADT (vpd)	A.M. PEAK HOUR		P.M. PEAK HOUR	
		IN (vph)	OUT (vph)	IN (vph)	OUT (vph)
Opening - 2012	697	128	104	60	73
Build Out - 2020	1,377	252	207	119	145

(ADT = average daily trips; vpd = vehicles per day; vph = vehicles per hour; in = vehicles entering the site; and out = vehicles exiting the site)

LUCAS CHRISTIAN ACADEMY

The standard study approach that would have been used to determine the number of vehicular trips that the LCA site would generate in its opening and build out years would normally be to use trip rates for private schools as provided by ITE's *Trip Generation Handbook*.

Data for public or private schools using the UMS instruction model is not currently available in the ITE data. As a result, we collected current inbound and outbound vehicular trip data at the two existing school driveways to determine the projected opening year and build out year trip information. The data collected has been summarized in Table 6.

TABLE 6
LCA Driveway Traffic Volume Data

CLASS SCHEDULE	INBOUND VOLUME (VPH)	OUTBOUND VOLUMES (VPH)	NUMBER OF STUDENTS
Mon-Wed-Fri			
Morning Peak	117	69	273
Afternoon Peak	65	124	273
Tue-Thur			
Morning Peak	37	8	105
Afternoon Peak	29	23	105

These inbound and outbound school peak hour volumes when divided by the student enrollment numbers yield the trip generation data that we used in determining the vehicular traffic volumes associated with the opening and build out years of the LCA. Table 7 has been prepared to summarize the trip generation rates calculated for use in this study.

TABLE 7
LCA Trip Generation Rates

CLASS SCHEDULE	A.M. PEAK HOUR		P.M. PEAK HOUR	
	IN	OUT	IN	OUT
Mon-Wed-Fri	0.429	0.252	0.238	0.454
Tue-Thur	0.352	0.076	0.276	0.219

The trips indicated in Table 8 are the total unadjusted traffic volumes for the proposed LCA study site. These volumes are based on the trip rates associated with the Monday-Wednesday-Friday class schedule since this schedule has the larger number of students and the higher trip rates.

TABLE 8
LCA Calculated Trip Ends

YEAR	ADT (vpd)	A.M. PEAK HOUR		P.M. PEAK HOUR	
		IN (vph)	OUT (vph)	IN (vph)	OUT (vph)
Opening - 2012	735	142	83	79	150
Build Out - 2014	1,035	199	117	110	211

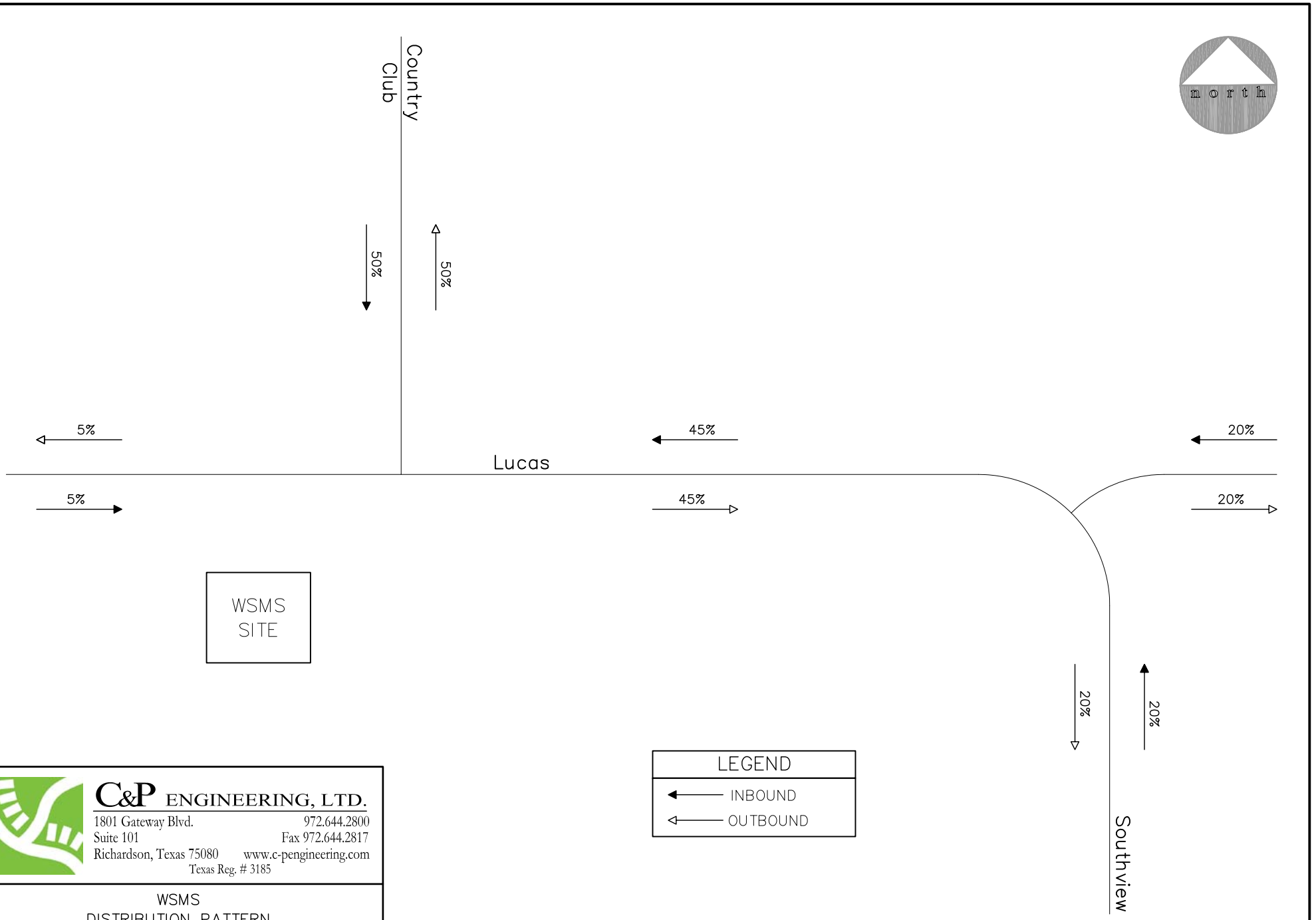
(ADT = average daily trips; vpd = vehicles per day; vph = vehicles per hour; in = vehicles entering the site; and out = vehicles exiting the site)

DISTRIBUTION OF VEHICULAR TRIPS

The trip ends summarized in the previous Tables 4 and 7 for the WSMS site and the LCA site respectively, were distributed to and from the study area based on the following distribution keys:

the schools' locations with respect to adjacent and nearby major roadways;
existing traffic patterns as evidenced by the collected traffic counts;
the Lovejoy ISD boundary; and
the patterns used in the previous traffic studies conducted for both schools.

Figures 4 and 5 have been prepared to depict the distribution patterns developed for this study: Figure 4 displays the distribution pattern for the WSMS site; and Figure 5 the LCA site.



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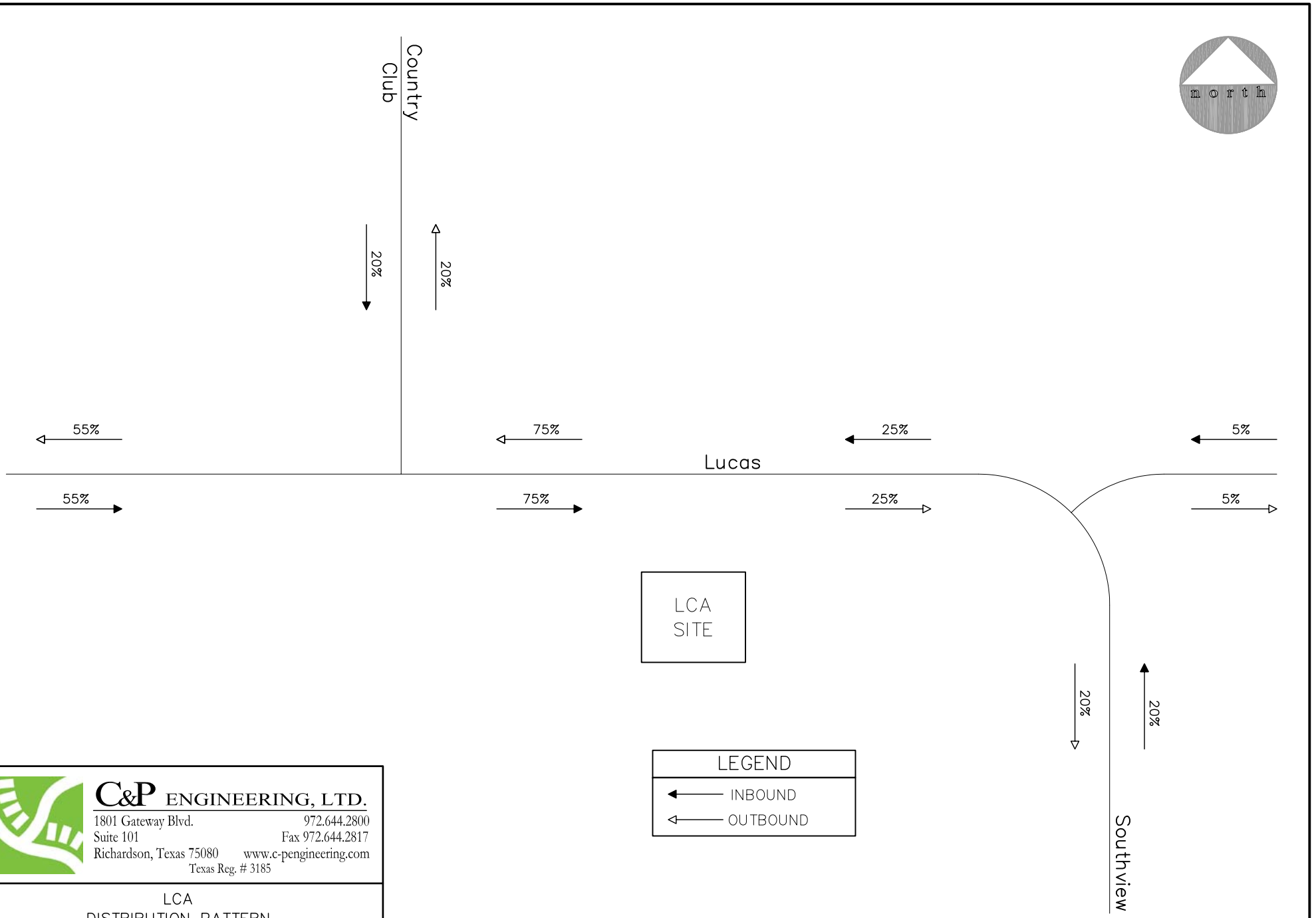
WSMS
DISTRIBUTION PATTERN

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 4



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LCA
DISTRIBUTION PATTERN

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 5

PROJECTED TRAFFIC VOLUMES

SCHOOL SITE TRAFFIC VOLUMES

Figures 6, 7, and 8 have been prepared to depict the "site volumes" anticipated to be distributed to and from the two schools during the morning and afternoon school peak hour periods.

Figure 6 depicts the traffic volumes anticipated to be generated by both schools in 2012 - the opening year projected for both school sites.

Figure 7 depicts the traffic volumes anticipated to be generated by both school sites in 2014 - the build out year projected for the LCA site.

Figure 8 depicts the traffic volumes anticipated to be generated by both school sites in 2020 - the build out year projected for the WSMS site.

BACKGROUND TRAFFIC VOLUMES

For this study "background volumes" represents the traffic expected to occur along Lucas Road, Country Club Road, and Southview Drive as a result of the increase in traffic volumes due to normal traffic growth in the area and due to trip generators other than the WSMS and LCA sites.

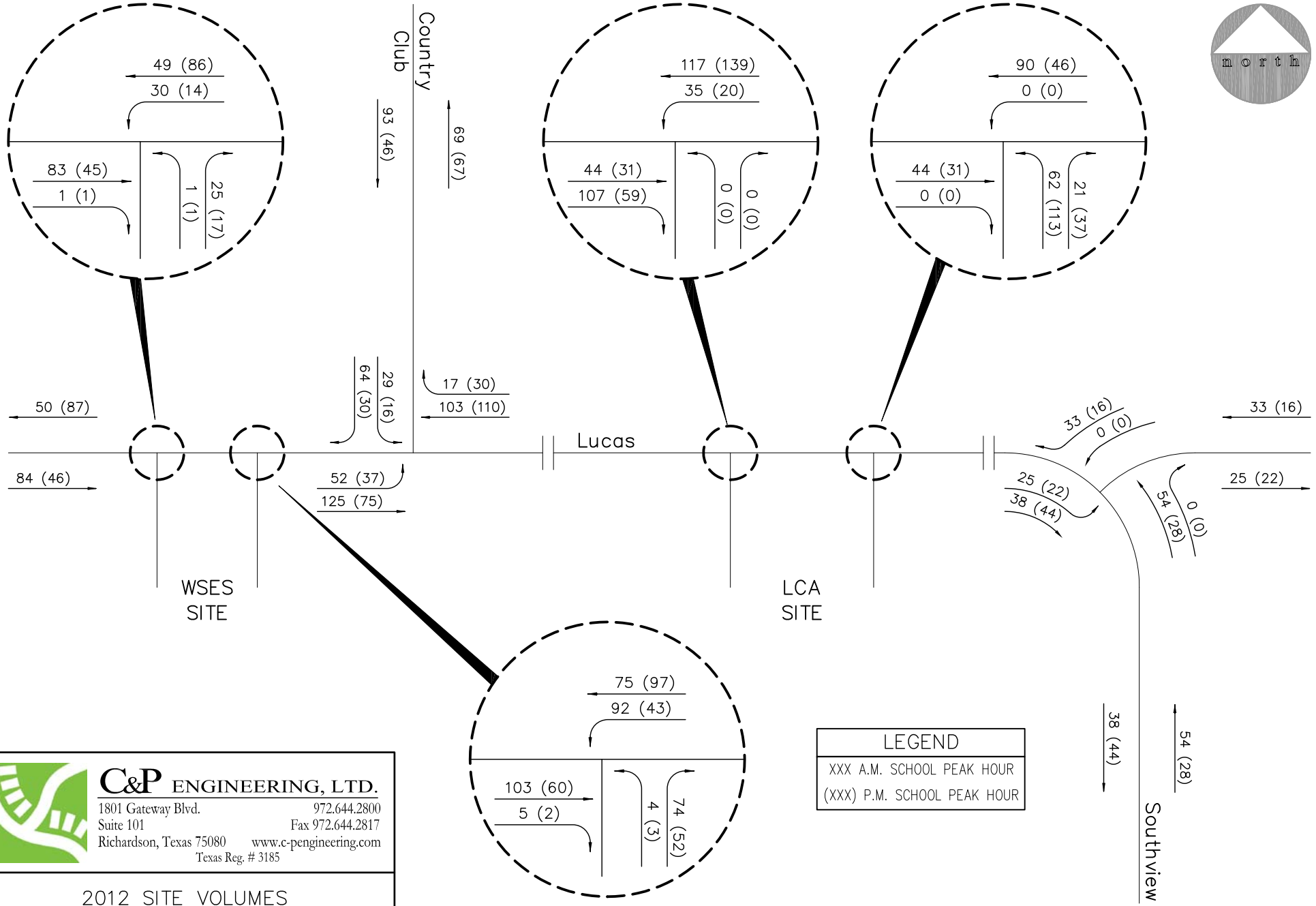
Figures A1, A2, and A3 have been prepared to depict the background volumes that are anticipated to occur during the morning and afternoon school peak hour periods.

Figure A1 depicts the background traffic volumes anticipated to occur in 2012 - the opening year projected for both school sites.

Figure A2 depicts the background traffic volumes anticipated to occur in 2014 - the build out year projected for the LCA site.

Figure A3 depicts the background traffic volumes anticipated to occur in 2020 - the build out year projected for the WSMS site.

The volumes in Figures A1, A2, and A3 reflect the current year 2011 volumes extrapolated to the respective year (2012, 2014, and 2020) by applying a two (2) percent annual growth rate. This is the same rate used by Halff Associates in their TIA for the WSMS site. These three figures have been included in the Appendix.



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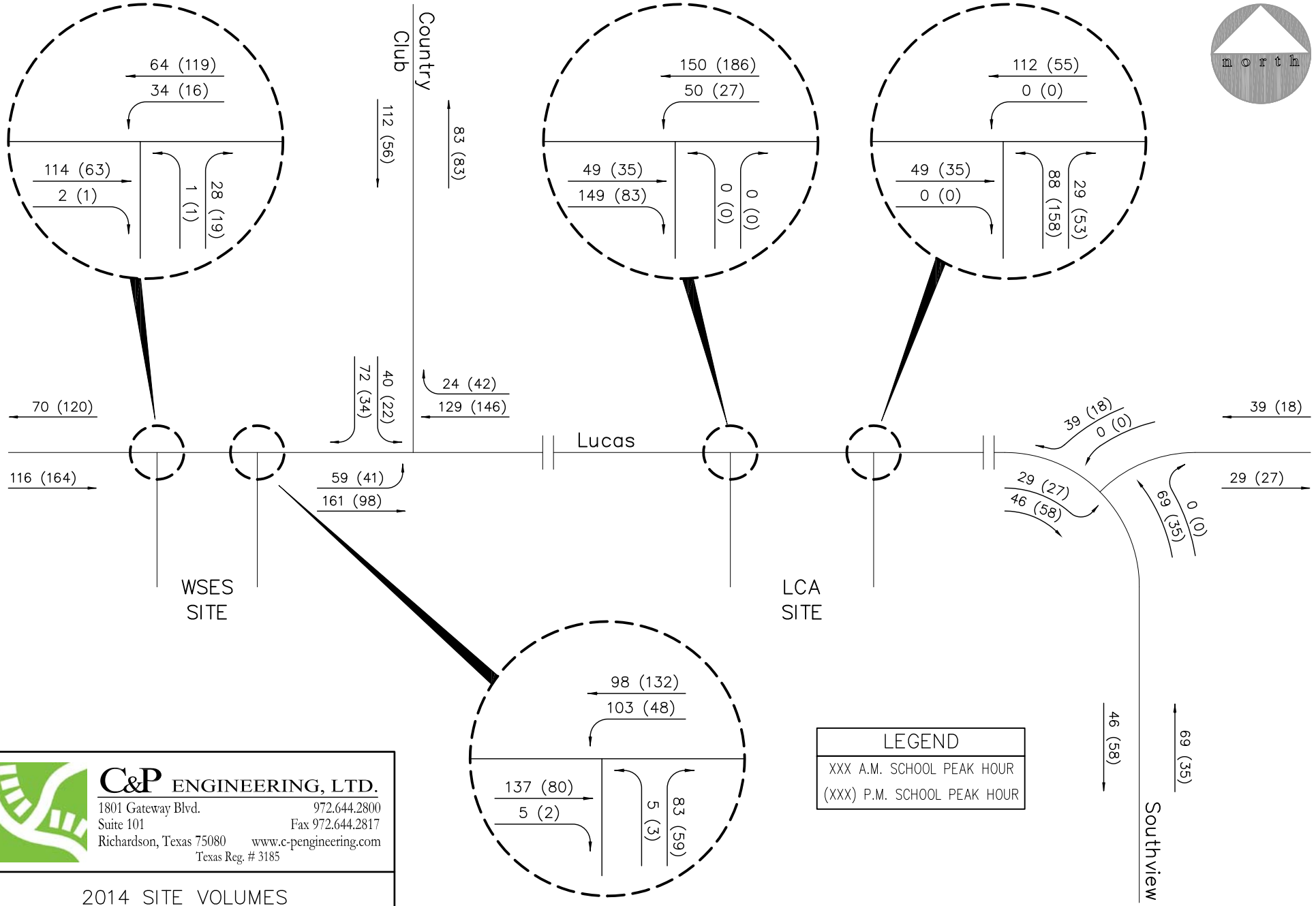
2012 SITE VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 6



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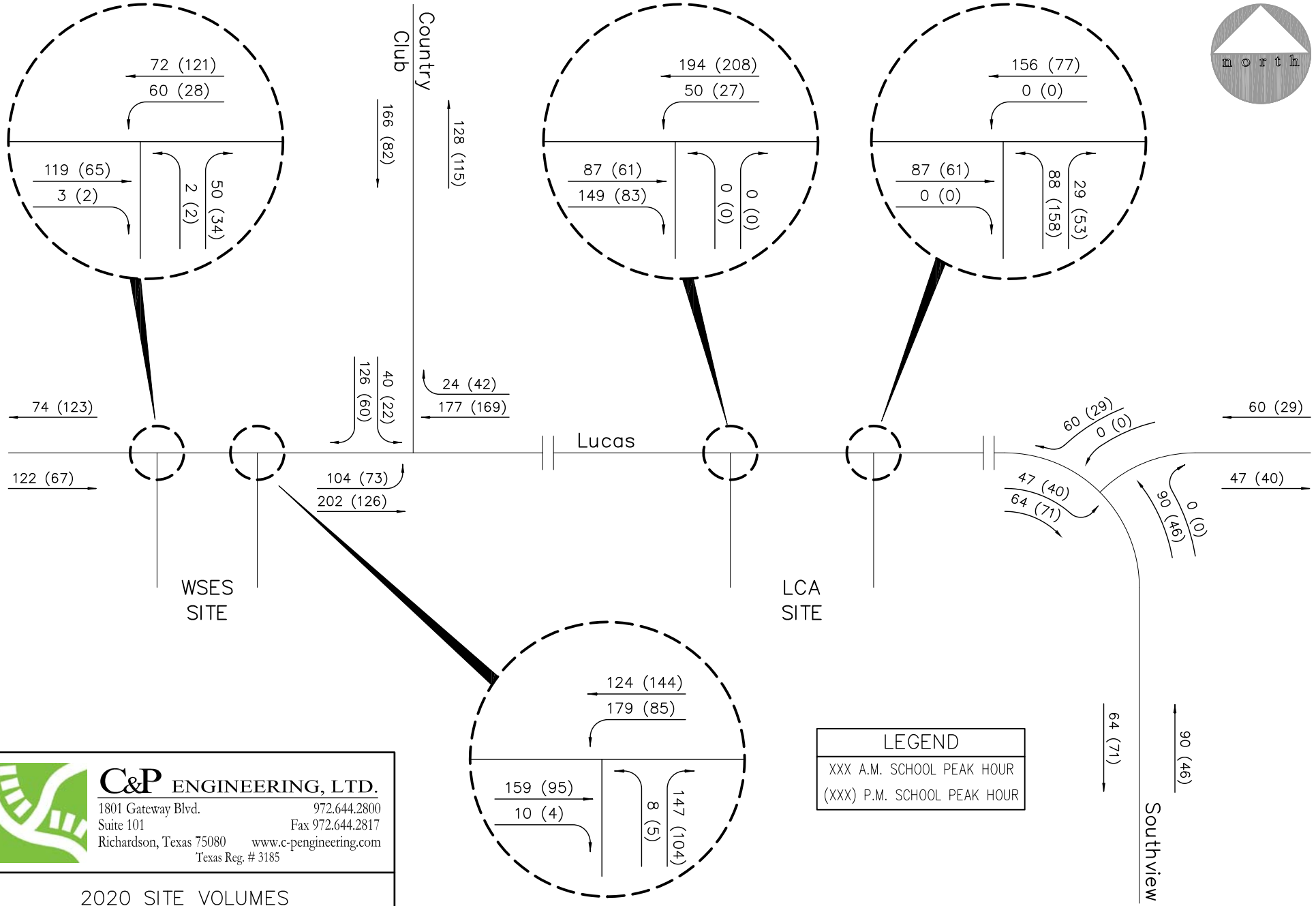
2014 SITE VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 7



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2020 SITE VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 8

TOTAL TRAFFIC VOLUMES

Figures 9, 10, and 11 have been prepared to depict the “total volumes” anticipated to occur at the six study intersections and along Lucas Road, Country Club Road, and Southview Drive during the morning and afternoon school peak hour periods.

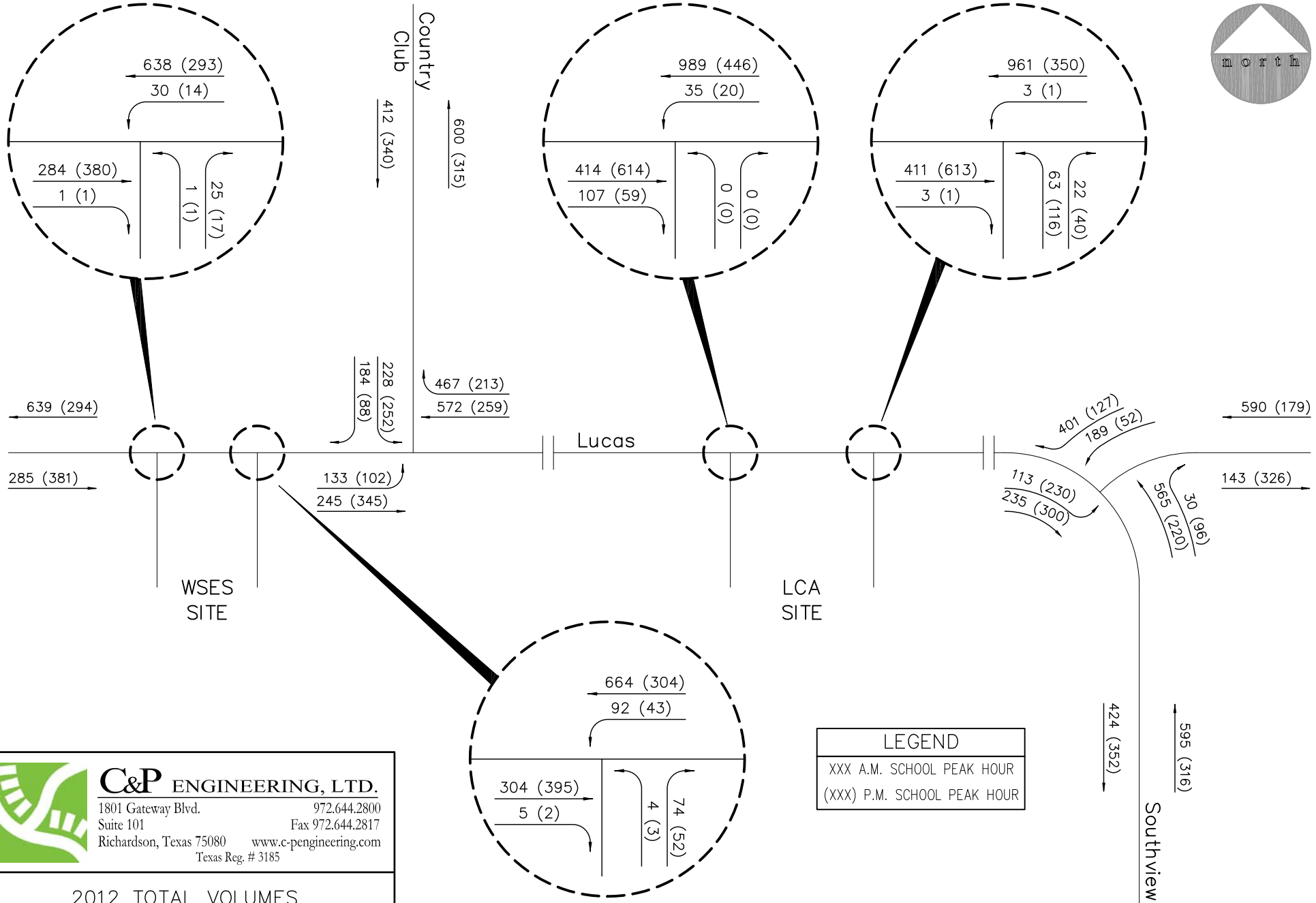
Figure 9 depicts the total traffic volumes anticipated to occur in 2012 - the opening year projected for both school sites.

Figure 10 depicts the total traffic volumes anticipated to occur in 2014 - the build out year projected for the LCA site.

Figure 11 depicts the total traffic volumes anticipated to occur in 2020 - the build out year projected for the WSMS site.

The total volumes depicted in Figures 9, 10, and 11 include two components:

the school site traffic summarized in Figures 6, 7, and 8; and
the background traffic summarized in Figures A1, A2, and A3.



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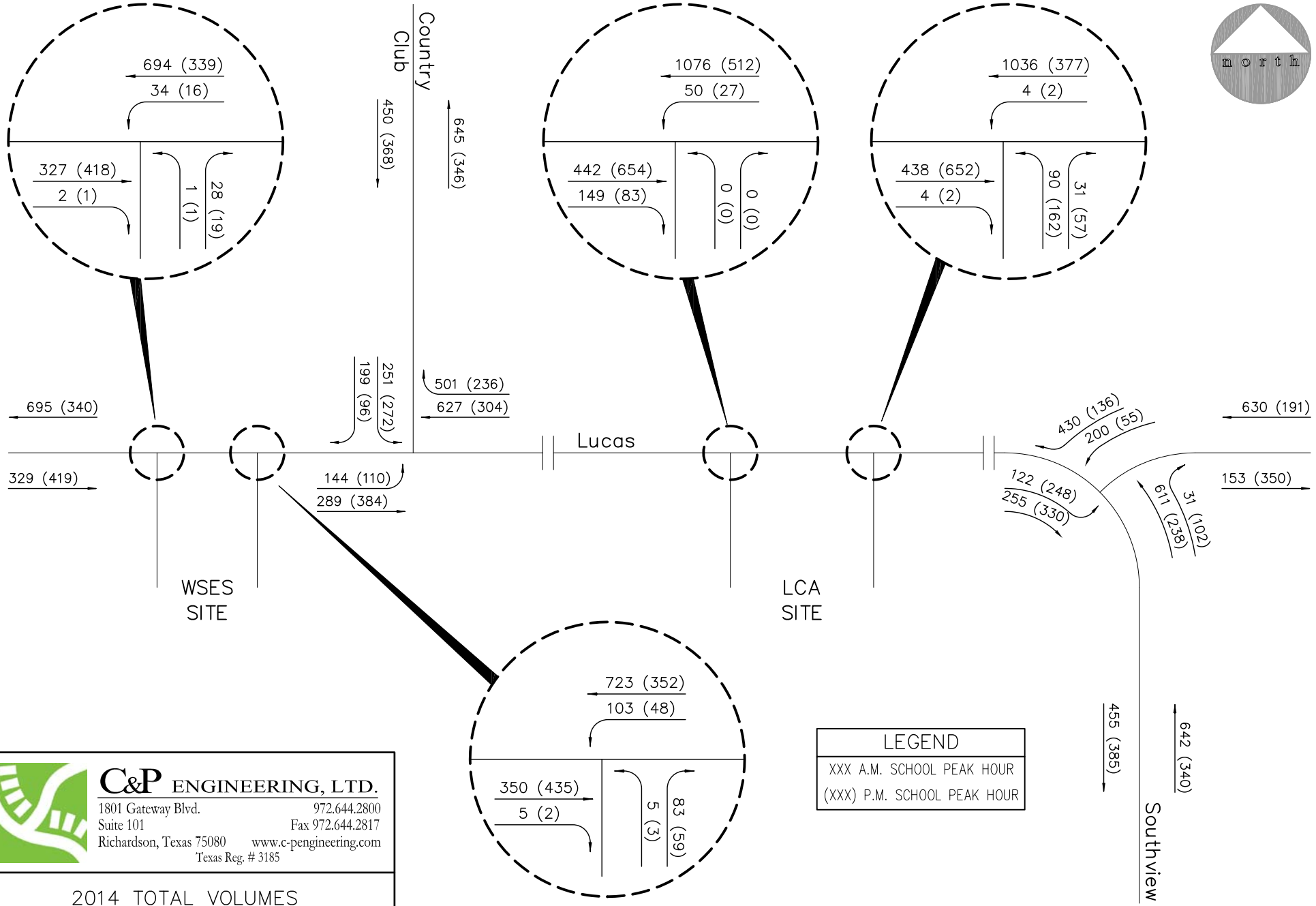
2012 TOTAL VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 9



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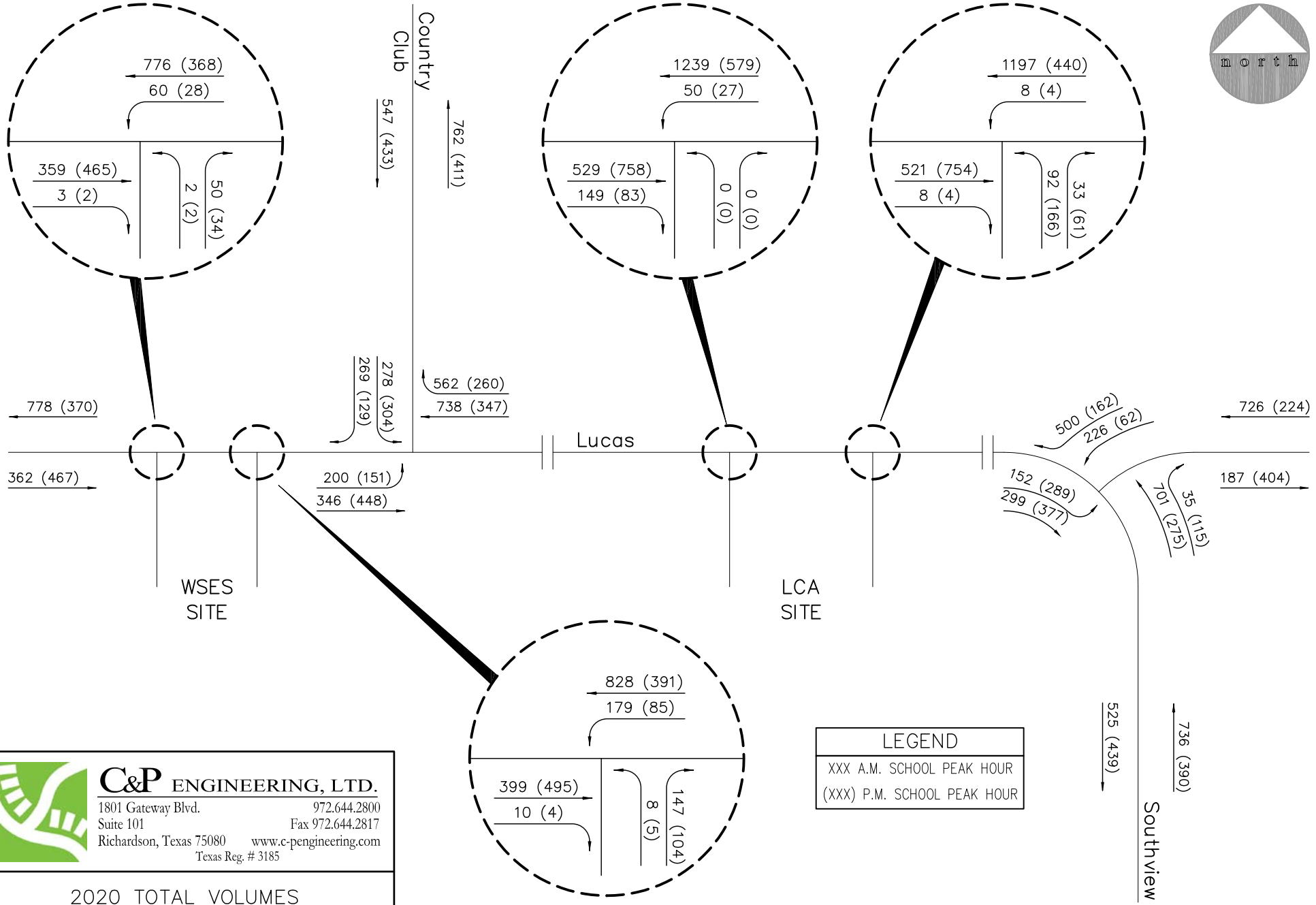
2014 TOTAL VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 10



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2020 TOTAL VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE 11

INTERSECTION CAPACITY ANALYSIS

The Consultant performed analyses of the traffic operations at the six study intersections under four scenarios: existing 2011 conditions; opening year of both school sites (projected for 2012); full build out of the LCA school site (projected for 2014); and full build out of the WSMS site (projected for 2020).

Analysis of the stop sign controlled school driveways was conducted utilizing the current edition of the Highway Capacity Manual (HCM2000) and its associated software. HCM2000 was developed by the Transportation Research Board while the software was developed by the Transportation Research Center at the University of Florida.

Analysis of the two signalized city roadway intersections was conducted utilizing Synchro. This software was developed by the Trafficware Corporation.

The results of the capacity analysis for the six study intersections with the resulting delay and levels of service values are summarized in the following paragraphs of this section of the report.

Copies of the HCM and Synchro computer printouts have been included in the Appendix. Typically the desirable levels of service are "A" through "D" with "E" and "F" being undesirable. A general description of the various levels of service has also been included in the Appendix.

WILLOW SPRINGS MIDDLE SCHOOL DRIVEWAY INTERSECTIONS

Tables 9 and 10 have been prepared to summarize the results of the capacity analysis conducted for the two driveways serving the proposed WSMS site.

TABLE 9
WSMS WEST SCHOOL DRIVEWAY

PEAK PERIOD AND MOVEMENT	DELAY (sec.) / LEVEL OF SERVICE			
	EXISTING 2011	OPENING 2012	2014	BUILD OUT 2020
A.M. Peak:				
WB Left	N/A	8.0 / A	8.1 / A	8.3 / A
NB Left	N/A	20.6 / C	23.5 / C	29.8 / D
NB Right	N/A	10.2 / B	10.5 / C	11.0 / B
NB Total	N/A	10.5 / B	10.9 / B	11.7 / B
P.M. Peak:				
WB Left	N/A	8.3 / A	8.4 / A	8.6 / A
NB Left	N/A	15.4 / C	17.0 / C	19.3 / C
NB Right	N/A	11.0 / B	11.4 / B	12.1 / B
NB Total	N/A	11.2 / B	11.6 / B	12.5 / A

The results in Table 9 indicate that very acceptable traffic operations can be expected to occur during all three of the study year conditions - 2012, 2014, and 2020.

TABLE 10
WSMS EAST SCHOOL DRIVEWAY

PEAK PERIOD AND MOVEMENT	DELAY (sec.) / LEVEL OF SERVICE			
	EXISTING 2011	OPENING 2012	2014	BUILD OUT 2020
A.M. Peak:				
WB Left	N/A	8.2 / A	8.4 / A	9.0 / A
NB Left	N/A	27.0 / D	32.7 / D	57.9 / F
NB Right	N/A	10.8 / B	11.4 / B	13.0 / B
NB Total	N/A	11.6 / B	12.5 / B	15.1 / C
P.M. Peak:				
WB Left	N/A	8.4 / A	8.6 / A	9.0 / A
NB Left	N/A	17.4 / C	19.6 / C	25.3 / D
NB Right	N/A	11.6 / B	12.1 / B	13.9 / B
NB Total	N/A	11.9 / B	12.5 / B	14.4 / B

The results in Table 10 indicate that very acceptable traffic operations can be expected to occur during the 2012 and 2014 study year conditions. By build out of the WSMS site in 2020 the left-turning traffic exiting the east driveway during the morning peak period is projected to be experiencing poor traffic operations at an undesirable “F” service level.

We should point out that the “F” service level is applicable to a minimal number of vehicles. Only eight (8) vehicles are projected to turn left from this driveway at build out in 2020.

LUCAS CHRISTIAN ACADEMY DRIVEWAY INTERSECTIONS

Tables 11 and 12 have been prepared to summarize the results of the capacity analysis conducted for the two driveways serving the proposed LCA site.

TABLE 11
LCA WEST SCHOOL DRIVEWAY

PEAK PERIOD AND MOVEMENT	DELAY (sec.) / LEVEL OF SERVICE			
	EXISTING 2011	OPENING 2012	BUILD OUT 2014	2020
A.M. Peak:				
WB Left	N/A	8.8 / A	9.1 / A	9.5 / A
NB Left	N/A	N/A	N/A	N/A
NB Right	N/A	N/A	N/A	N/A
P.M. Peak:				
WB Left	N/A	9.4 / A	9.7 / A	10.3 / B
NB Left	N/A	N/A	N/A	N/A
NB Right	N/A	N/A	N/A	N/A

Because the west driveway is proposed to be operated as an entrance only drive during school drop off and pick up periods, the results in Table 11 indicate that very acceptable traffic operations can be expected to occur during the 2012, 2014, and 2020 study year conditions.

TABLE 12
LCA EAST SCHOOL DRIVEWAY

PEAK PERIOD AND MOVEMENT	DELAY (sec.) / LEVEL OF SERVICE			
	EXISTING 2011	OPENING 2012	BUILD OUT 2014	2020
A.M. Peak:				
WB Left	N/A	8.3 / A	8.4 / A	8.7 / A
NB Left	N/A	61.9 / F	137.7 / F	350.4 / F
NB Right	N/A	11.2 / B	11.6 / B	12.5 / B
NB Total	N/A	49.0 / E	105.7 / F	262.3 / F
P.M. Peak:				
WB Left	N/A	9.0 / A	9.2 / A	9.7 / A
NB Left	N/A	39.5 / E	85.3 / F	193.4 / F
NB Right	N/A	14.2 / B	15.4 / C	17.7 / C
NB Total	N/A	33.1 / D	67.2 / F	146.1 / F

The results in Table 12 indicate that poor traffic operations and undesirable service levels can be expected to occur beginning in the opening year of the LCA site in 2012. These poor traffic operational conditions will continue to worsen through build out of the site in 2014 and continuing on into 2020.

The most impacted movement will be the northbound left-turning traffic exiting from the east driveway onto Lucas Road which will operate at an “F” service level.

COUNTRY CLUB ROAD AND LUCAS ROAD

Table 13 has been prepared to summarize the results of the capacity analysis conducted for the signalized intersection of Country Club Road and Lucas Road.

TABLE 13
COUNTRY CLUB ROAD AND LUCAS ROAD

PEAK PERIOD AND APPROACH	DELAY (sec.) / LEVEL OF SERVICE			
	EXISTING 2011	2012	2014	2020
A.M. Peak:				
EB Total	7.0 / A	12.0 / B	13.7 / B	72.1 / E
WB Through	8.2 / A	9.1 / A	8.6 / A	9.1 / A
WB Right	2.2 / A	2.0 / A	1.8 / A	1.7 / A
SB Left	12.9 / A	25.1 / C	36.9 / D	64.8 / E
SB Right	3.9 / A	5.6 / A	6.7 / A	8.0 / A
Overall	6.4 / A	9.6 / A	11.4 / B	28.1 / C
P.M. Peak:				
EB Total	10.1 / B	10.9 / B	13.5 / B	16.0 / B
WB Through	7.2 / A	7.1 / A	7.8 / A	7.0 / A
WB Right	2.4 / A	1.9 / A	1.8 / A	1.5 / A
SB Left	11.4 / B	15.5 / B	21.8 / C	34.3 / C
SB Right	3.8 / A	4.3 / A	5.1 / A	5.5 / A
Overall	8.1 / A	9.1 / A	11.3 / B	14.4 / B

The results in Table 13 indicate that very acceptable traffic operations and service levels are currently occurring at this intersection during the morning and afternoon school peak hours. Acceptable operations and service levels can be expected to continue through the 2012 and 2014 study year conditions. However, our projections indicate that by 2020 two traffic movements will be experiencing poor traffic operations and undesirable service levels during the morning school peak hour: the eastbound traffic on Lucas and the southbound left-turn traffic on Country Club.

SOUTHVIEW DRIVE AND LUCAS ROAD

Table 14 has been prepared to summarize the results of the capacity analysis conducted for the signalized intersection of Country Club Road and Lucas Road.

TABLE 14
SOUTHVIEW DRIVE AND LUCAS ROAD

PEAK PERIOD AND APPROACH	DELAY (sec.) / LEVEL OF SERVICE			
	EXISTING 2011	2012	2014	2020
A.M. Peak:				
WB Total	21.2 / C	40.1 / D	65.8 / E	153.0 / F
NB Through	14.4 / B	14.6 / B	15.2 / B	15.6 / B
NB Right	5.7 / A	6.1 / A	6.3 / A	5.8 / A
SB Total	13.9 / B	19.4 / B	24.7 / C	86.3 / F
Overall	16.8 / B	25.4 / C	36.5 / D	84.2 / F
P.M. Peak:				
WB Total	8.3 / A	9.5 / A	11.4 / B	15.2 / B
NB Through	4.3 / A	4.0 / A	3.7 / A	3.9 / A
NB Right	1.4 / A	1.2 / A	1.3 / A	1.5 / A
SB Total	7.9 / A	8.1 / A	8.4 / A	13.2 / B
Overall	6.6 / A	6.8 / A	7.3 / A	10.5 / B

The results in Table 14 indicate that very acceptable traffic operations and service levels are currently occurring at this intersection during the morning and afternoon school peak hours. Acceptable operations and service levels can be expected to continue through the opening year for both schools in 2012. However, our projections indicate that by 2014 the morning school peak period will begin to experience poor traffic operations and undesirable service levels. By 2020 the westbound traffic on Lucas and the southbound traffic on Lucas will be experiencing very poor traffic operations with an “F” service level.

RIGHT-TURN LANE ANALYSIS

Table 2-3 in the *Access Management Manual (AMM)* details the TxDOT approach for analyzing the need for right-turn only lanes. That publication indicates a threshold value of 50 right-turning vehicles per hour when the posted speed limit exceeds 45 mph and 60 right-turning vehicles when the posted speed limit is 45 mph or less. The results of our right-turn lane analysis for the six study intersections are summarized in the following paragraphs of this section of the report.

WILLOW SPRINGS MIDDLE SCHOOL

Tables 15 and 16 have been prepared to summarize the results of the right-turn lane analysis conducted for the two driveways serving the proposed WSMS site.

TABLE 15
Right-Turn Lane Analysis Results
West School Driveway

PEAK PERIOD BY YEAR	PROJECTED RIGHT TURNS (VPH)	REQUIRED TURNS BY TXDOT (VPH)	TURN LANE WARRANTED?
A.M. Peak Hour			
2012	1	50	NO
2014	2	50	NO
2020	3	50	NO
P.M. Peak Hour			
2012	1	50	NO
2014	1	50	NO
2020	2	50	NO

Based on the conditions set forth in the *AMM*, the inbound right-turning traffic projected to be generated by the WSMS site will not warrant consideration of a right-turn deceleration lane at the west school driveway.

TABLE 16
Right-Turn Lane Analysis Results
East School Driveway

PEAK PERIOD	PROJECTED RIGHT TURNS (VPH)	REQUIRED TURNS BY TXDOT (VPH)	TURN LANE WARRANTED?
A.M. Peak Hour			
2012	5	50	NO
2014	5	50	NO
2020	10	50	NO
P.M. Peak Hour			
2012	2	50	NO
2014	2	50	NO
2020	4	50	NO

Based on the conditions set forth in the *AMM*, the inbound right-turning traffic projected to be generated by the WSMS site will not warrant consideration of a right-turn deceleration lane at the east school driveway.

LUCAS CHRISTIAN ACADEMY

Tables 17 and 18 have been prepared to summarize the results of the right-turn lane analysis conducted for the two driveways serving the proposed LCA site.

TABLE 17
Right-Turn Lane Analysis Results
West School Driveway

PEAK PERIOD	PROJECTED RIGHT TURNS (VPH)	REQUIRED TURNS BY TXDOT (VPH)	TURN LANE WARRANTED?
A.M. Peak Hour			
2012	107	50	YES
2014	149	50	YES
2020	149	50	YES
P.M. Peak Hour			
2012	59	50	YES
2014	83	50	YES
2020	83	50	YES

Based on the conditions set forth in the *AMM*, the inbound right-turning traffic projected to be generated by the LCA site will warrant consideration of a right-turn deceleration lane at the west school driveway.

TABLE 18
Right-Turn Lane Analysis Results
East School Driveway

PEAK PERIOD	PROJECTED RIGHT TURNS (VPH)	REQUIRED TURNS BY TXDOT (VPH)	TURN LANE WARRANTED?
A.M. Peak Hour			
2012	3	50	NO
2014	4	50	NO
2020	8	50	NO
P.M. Peak Hour			
2012	1	50	NO
2014	2	50	NO
2020	4	50	NO

Based on the conditions set forth in the *AMM*, the inbound right-turning traffic projected to be generated by both the LCA site and the church site will not warrant consideration of a right-turn deceleration lane at the east school driveway.

COUNTRY CLUB ROAD AND LUCAS ROAD

No right-turn lane analysis is required for this intersection, since right-turn only lanes are currently in place on the east and north approaches to this intersection.

SOUTHVIEW DRIVE AND LUCAS ROAD

A review of the existing 2011 traffic volumes (see Figure 3) reveals that TxDOT warranting criteria for right-turn only lanes is currently satisfied for both the northbound right-turn movement on Southview and the westbound right-turn movement on Lucas.

LEFT-TURN LANE ANALYSIS

Table 3-11 in the TxDOT *Design Manual* details the TxDOT approach for analyzing the need for left-turn only lanes on two-lane highways. The results of our left-turn lane analysis for the six study intersections are summarized in the following paragraphs of this section of the report.

WILLOW SPRINGS MIDDLE SCHOOL

Tables 19 and 20 have been prepared to summarize the results of the left-turn lane analysis conducted for the two driveways serving the proposed WSMS site.

TABLE 19
WSMS - West School Driveway
Left-Turn Lane Analysis
2012 Opening Year

ANALYSIS CONDITION	A.M. PEAK PERIOD	P.M. PEAK PERIOD
Opposing Volume	285 vph	381 vph
Design Speed	50 mph	50 mph
Left-Turns	30 vph - 4.5 %	14 vph - 4.4 %
Advancing Volume	668 vph	321 vph
Table 3-11 Advancing Volume	525 vph	475 vph
Left-Turn Lane To Be Considered?	Yes - 668 $\geq$ 525	No - 475 $\geq$ 321

Analysis of the projected 2012 opening year traffic volumes during the morning and afternoon school peak hour periods indicate that consideration of a westbound left-turn lane on Lucas Road at the west WSMS driveway is warranted.

TABLE 20
WSMS - East School Driveway
Left-Turn Lane Analysis
2012 Opening Year

ANALYSIS CONDITION	A.M. PEAK PERIOD	P.M. PEAK PERIOD
Opposing Volume	309 vph	397 vph
Design Speed	50 mph	50 mph
Left-Turns	92 vph - 12.2 %	43 vph - 12.4 %
Advancing Volume	756 vph	347 vph
Table 3-11 Advancing Volume	350 vph	310 vph
Left-Turn Lane To Be Considered?	Yes - 756 ≥ 350	Yes - 347 ≥ 310

Analysis of the projected 2012 opening year traffic volumes during the morning and afternoon school peak hour periods indicate that consideration of a westbound left-turn lane on Lucas Road at the east WSMS driveway is warranted.

LUCAS CHRISTIAN ACADEMY

Tables 21 and 22 have been prepared to summarize the results of the left-turn lane analysis conducted for the two driveways serving the proposed LCA site.

TABLE 21
LCA - West School Driveway
Left-Turn Lane Analysis
2012 Opening Year

ANALYSIS CONDITION	A.M. PEAK PERIOD	P.M. PEAK PERIOD
Opposing Volume	521 vph	663 vph
Design Speed	50 mph	50 mph
Left-Turns	35 vph - 3.4 %	20 vph - 4.3 %
Advancing Volume	1,024 vph	466 vph
Table 3-11 Advancing Volume	450 vph	400 vph
Left-Turn Lane To Be Considered?	Yes - 1,024 $\geq$ 450	Yes - 466 $\geq$ 400

Analysis of the projected 2012 opening year traffic volumes during the morning and afternoon school peak hour periods indicate that consideration of a westbound left-turn lane on Lucas Road at the west LCA driveway is warranted.

A detailed left-turn lane analysis was not conducted for the east LCA driveway. The circulation plan for the LCA site proposes that the east driveway operate as an exit only drive during the morning and afternoon school peak hours. As a result, the only inbound traffic at the east driveway will be a minimal number of vehicles associated with the Faith Fellowship Church.

COUNTRY CLUB ROAD AND LUCAS ROAD

A left-turn lane analysis was conducted for the eastbound left-turn on Lucas Road at Country Club Road. The existing traffic volumes easily satisfied the TxDOT warranting criteria for a left-turn only lane at that location.

SOUTHVIEW DRIVE AND LUCAS ROAD

A left-turn lane analysis was conducted for the southbound left-turn on Lucas Road at Southview Drive. The existing traffic volumes easily satisfied the TxDOT warranting criteria for a left-turn only lane at that location.

TxDOT warranting criteria in Table 3-11 of the *Design Manual* is not applicable to the stem of "tee" intersections - such as the east leg of this intersection.

REDUCED SPEED LIMIT SCHOOL ZONES

The 50 mph speed limit and the high traffic volumes on Lucas Road create a school area environment that should be improved through the installation of reduced speed limit school zones for each school site. Zones similar to the 35 mph zone on Country Club Road for Hart Elementary School should be considered.

KEY FINDINGS

This section of the report has been prepared to summarize the key findings that resulted from the analyses and evaluations conducted to this point of the study.

TRAFFIC VOLUMES

The heaviest traffic volumes are shown to occur on Lucas Road between Country Club Road and Southview Drive. This will significantly influence the traffic operations at the LCA site.

PEAK HOUR OPERATIONS

The school peak hours were found to occur during the 7:15 - 8:15 a.m. and 3:00 - 4:00 p.m. time periods. The morning school peak is the more critical because it coincides with the morning street peak hour.

TRIP GENERATION

During the morning school peak hour, the WSMS site will ultimately generate 459 trips (252 inbound and 207 outbound).

During the morning school peak hour, the LCA site will ultimately generate 316 trips (199 inbound and 117 outbound).

LOCATIONS OF UNDESIRABLE SERVICE LEVELS

WSMS Driveways . . . The east school driveway is projected to experience poor traffic operations and undesirable service levels beginning in approximately 2015. However, the undesirable service level is applicable to a minimal number of vehicles - possibly six (6) by 2015 and only eight (8) by 2020.

LCA Driveways . . . The east school driveway is projected to experience poor traffic operations and undesirable service levels beginning in the 2012 opening year.

Country Club and Lucas . . . Poor traffic operations and undesirable service levels are projected to occur at this intersection during the morning school peak hour in approximately 2018.

Southview and Lucas . . . Poor traffic operations and undesirable service levels are projected to occur at this intersection during the morning school peak hour in approximately 2014.

TXDOT RIGHT-TURN LANE WARRANTING CRITERIA

The projected right-turning traffic volumes at the following locations have satisfied the TxDOT criteria necessary to warrant consideration of a right-turn deceleration lane.

The eastbound right-turn on Lucas at the LCA west driveway will satisfy the TxDOT criteria in 2012.

The northbound right-turn on Southview at Lucas currently satisfies the TxDOT criteria. A very short right-turn lane currently exists at this location, but it primarily consists of the driveway apron serving the convenience store at this location.

The westbound right-turn on Lucas at Southview currently satisfies the TxDOT criteria.

TXDOT LEFT-TURN LANE WARRANTING CRITERIA

The projected left-turning traffic volumes at the following locations have satisfied the TxDOT criteria necessary to warrant consideration of a left-turn lane.

The westbound left-turns on Lucas at both WSMS driveways will satisfy the TxDOT criteria in 2012.

The westbound left-turn on Lucas at the west LCA driveway will satisfy the TxDOT criteria in 2012.

The eastbound left-turn on Lucas at Country Club currently satisfies the TxDOT criteria.

The southbound left-turn on Lucas at Southview currently satisfies the TxDOT criteria.

REDUCED SPEED LIMIT SCHOOL ZONES

It is our engineering judgement that the 50 mph speed limit and the high traffic volumes on Lucas Road create a school area environment that should be improved through the installation of reduced speed limit school zones for each school site.

RECOMMENDATIONS

This section of the report has been prepared to present the traffic related recommendations resulting from the analyses and evaluations conducted in this study.

WILLOW SPRINGS MIDDLE SCHOOL

Our study supports and we concur with the Halff TIA report that westbound left-turn lanes should be provided on Lucas Road to serve both WSMS driveways. With both driveways available for inbound and outbound school traffic volumes the need for a left-turn lane at each driveway is justified.

We would point out that our capacity analyses revealed that left-turning vehicles would be able to turn easily into the driveways and suffer very little delay. The service level for the left-turn movements was at very acceptable levels. However, we believe that the opportunity to reduce or eliminate potential road user accidents at this school site is sufficient to justify the need for the left-turn lanes.

The current Lovejoy ISD boundary is such that very few students are expected to arrive from or depart to the west. As a result, our traffic projections resulted in a maximum peak hour right-turn volume of only 10 vehicles. That was our projection for the build out year 2020 conditions during the morning peak hour at the east driveway.

While our study did not find a right-turn lane to be warranted at either WSMS driveway, we concur with the Halff TIA finding that a right-turn lane at the east driveway would provide a sheltered area in which vehicles could decelerate from the high speed approach and then more easily execute the right-turning maneuver.

The 50 mph speed limit and the high traffic volumes on Lucas Road create a school area environment that should be improved through the installation of reduced speed limit school zone for the WSMS site. A request for a speed zone similar to the 35 mph zone on Country Club Road for Hart Elementary School should be submitted to TxDOT.

LUCAS CHRISTIAN ACADEMY

Our study supports and we recommend that a westbound left-turn lane be provided on Lucas Road to serve the west LCA driveway. With the west driveway operating as an entrance only drive and the east driveway as an exit only drive during the morning and afternoon school periods the need for a left-turn lane at the west driveway is justified.

We would point out that our capacity analyses revealed that left-turning vehicles would be able to turn easily into this driveway and suffer very little delay. The service level for this left-turn movements was at a very acceptable levels. However, we believe that the opportunity to reduce or eliminate potential road user accidents at this school site is sufficient to justify the need for the left-turn lane.

Our study supports and we recommend that an eastbound right-turn lane be provided on Lucas Road to serve the west LCA driveway.

Because of the heavy traffic projected for Lucas Road the left-turn traffic from the east LCA driveway is projected to operate at a very undesirable service level at the opening of the new school site in 2012. The LCA board may want to consider the hiring of off-duty police officers to work the this driveway during school peak hours - especially for the Monday - Wednesday - Friday class schedule. They would have the authority to stop traffic on Lucas Road and allow the queue from the driveway to quickly dissipate - all in a safe and controlled manner.

The 50 mph speed limit and the high traffic volumes on Lucas Road create a school area environment that should be improved through the installation of reduced speed limit school zone for the WSMS site. A request for a speed zone similar to the 35 mph zone on Country Club Road for Hart Elementary School should be submitted to TxDOT.

COUNTRY CLUB ROAD AND LUCAS ROAD

We recommend that the City submit this report to TxDOT as supporting documentation for the construction of an eastbound left-turn lane at this intersection.

SOUTHVIEW DRIVE AND LUCAS ROAD

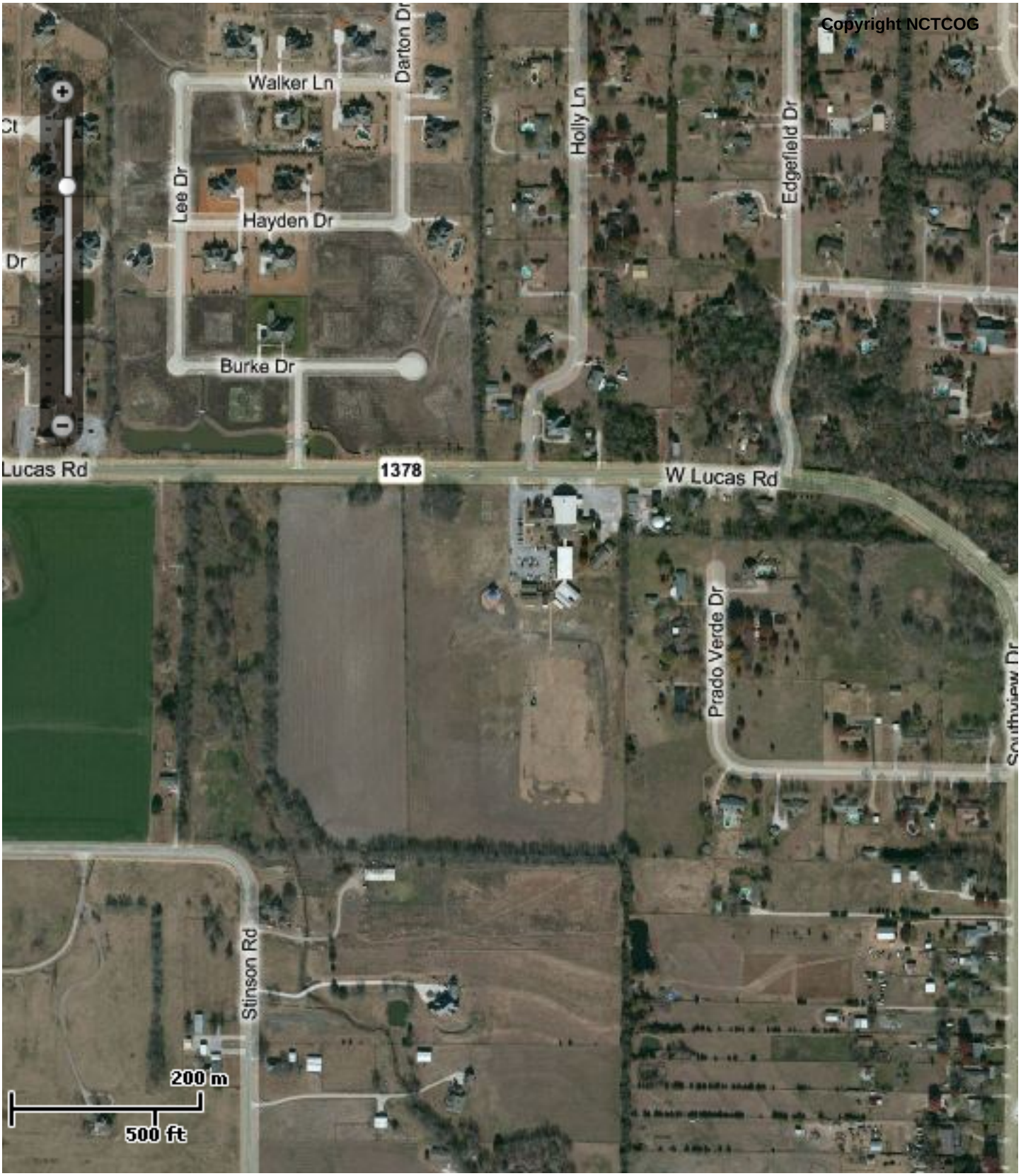
We also recommend that the City submit this report to TxDOT as supporting documentation for the construction of a southbound left-turn lane and westbound and northbound right-turn lanes at this intersection.

CLOSING

We have appreciated the opportunity to assist the City of Lucas in the evaluation and analysis of the traffic impacts of the Willow Springs Middle School and the Lucas Christian Academy on the City's street and highway system. Please do not hesitate to contact our office should you have any questions or comments concerning this report.

APPENDIX

AERIAL PHOTOGRAPHS



North Central Texas Council of Governments

AERIAL - LCA SITE

DFWMaps.com

http://www.dfwmaps.com/#

DISCLAIMER
This data has been compiled for NCTCOG. Various official and unofficial sources were used to gather this information. Every effort was made to ensure the accuracy of this data, however, no guarantee is given or implied as to the accuracy of said data.

N

North Central Texas Council of Governments

AERIAL - WSMS SITE

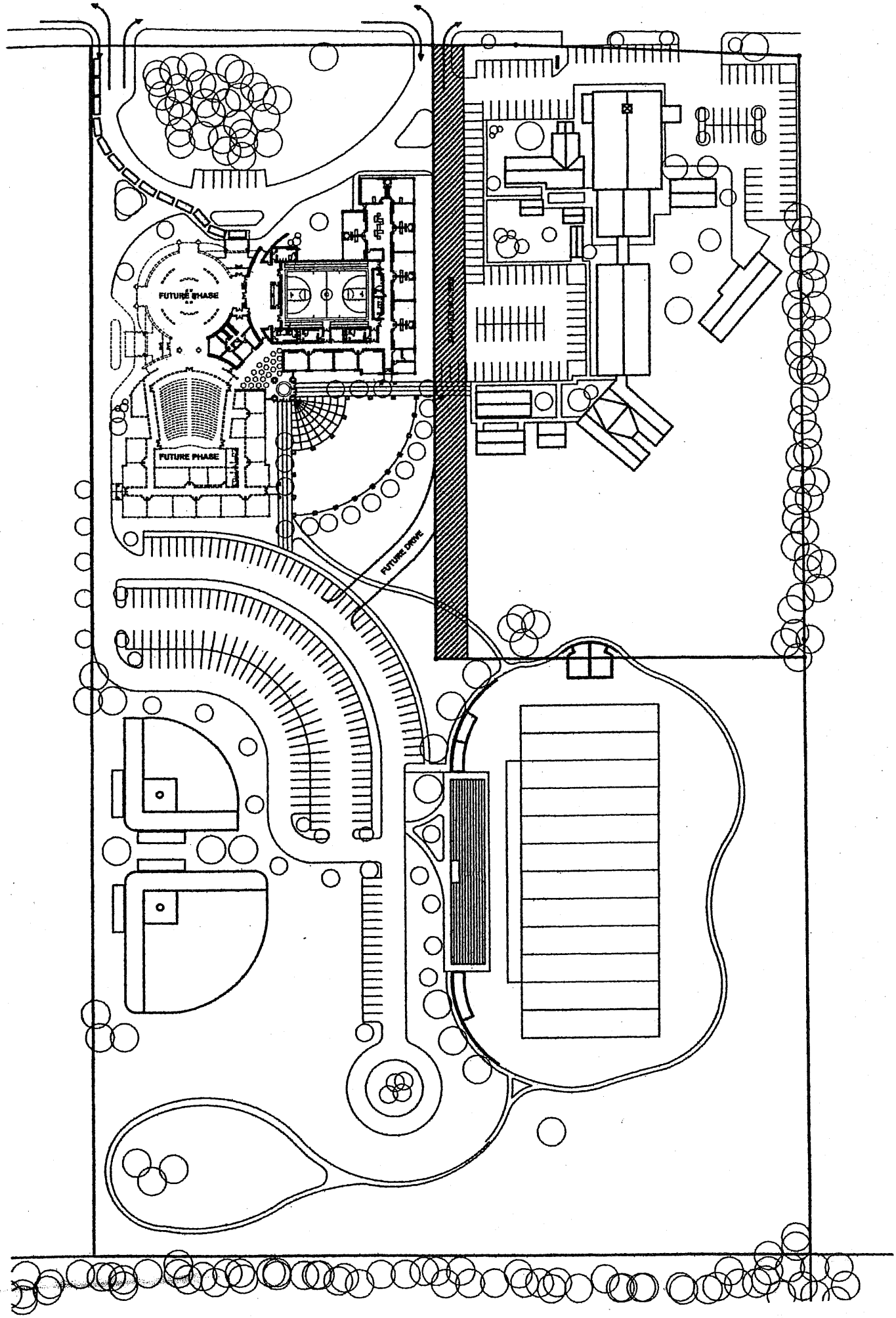
DFWMaps.com

http://www.dfwmaps.com/#

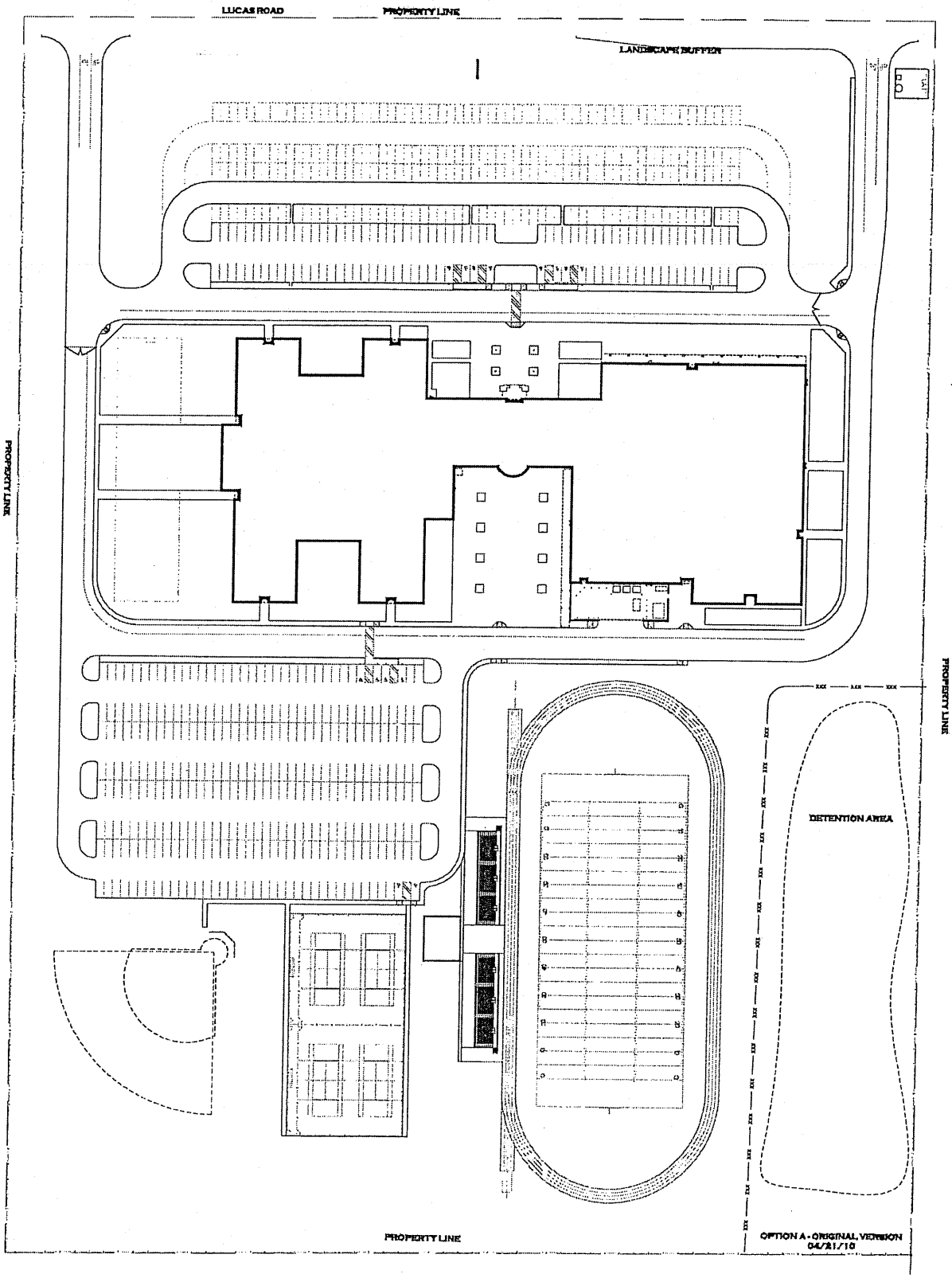
DISCLAIMER
This data has been compiled for NCTCOG. Various official and unofficial sources were used to gather this information. Every effort was made to ensure the accuracy of this data, however, no guarantee is given or implied as to the accuracy of said data.

N

SITE EXHIBITS


FUTURE PHASE
FUTURE PHASE
FUTURE DRIVE

6 COMPOSITE SITE PLAN



NEW
WILLOW SPRINGS
MIDDLE SCHOOL
Lovejoy Independent School District

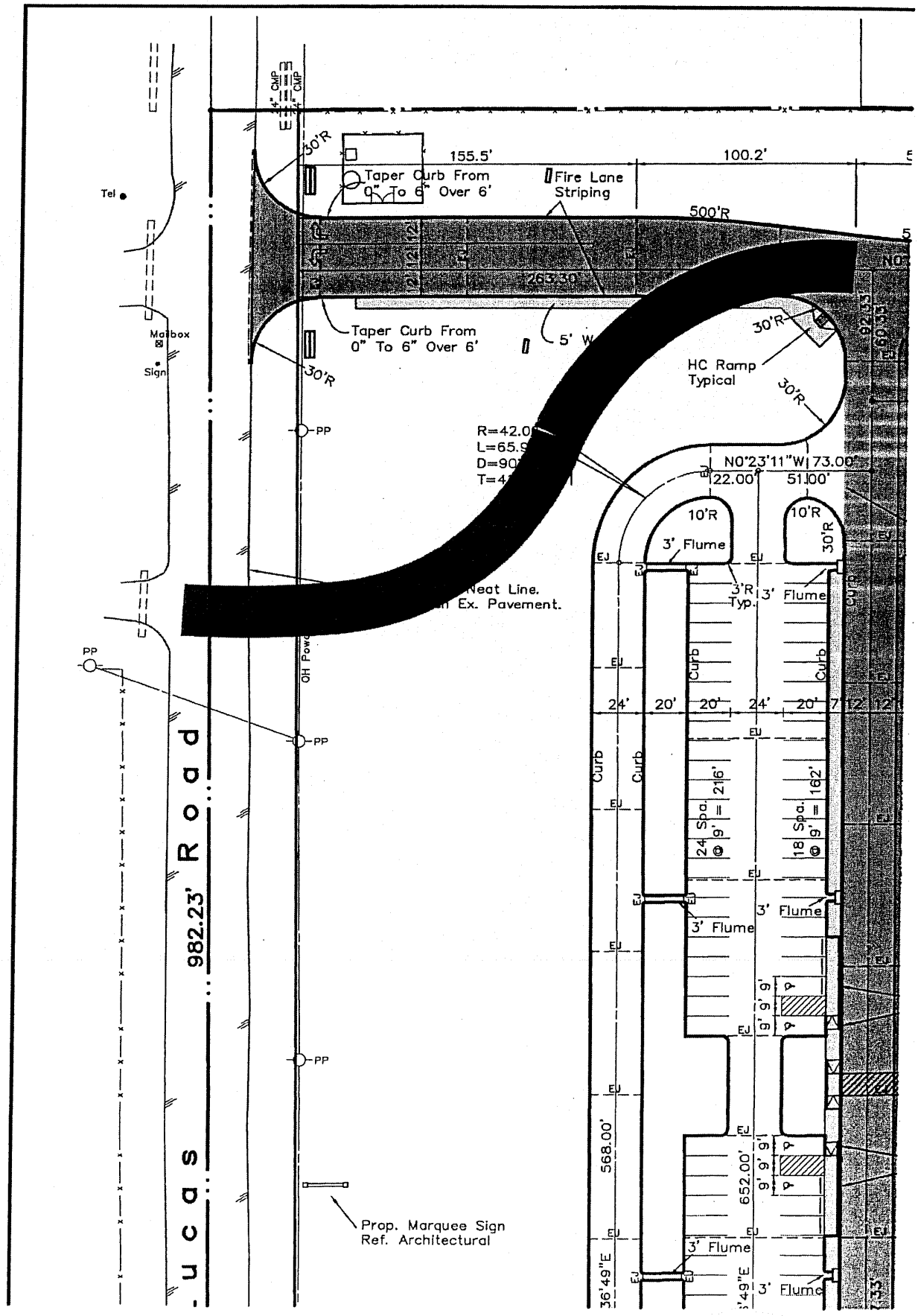
PBK
Architecture
Engineering
Planning
Facility Consulting

A1.01
COMPOSITE SITE PLAN

PROJECT NO. 0942
DATE 09/04/10
DRAWN
CHECKED
REVISIONS

100% REVIEW SET

CONSULTANTS


N
Tel
Mailbox
Sign
30'R
155.5'
100.2'
Taper Curb From
0" To 6" Over 6'
Fire Lane
Striping
500'R
263.30'
Taper Curb From
0" To 6" Over 6'
5' W
30'R
HC Ramp
Typical
30'R
R=42.0
L=65.9
D=90
T=4
PP
N0°23'11"W 73.00'
22.00'
51.00'
10'R
10'R
30'R
3' Flume
3'R
Typ.
3' Flume
Neat Line.
Ex. Pavement.
OH Powe
Curb
Curb
Curb
Curb
24'
20'
20'
24'
20'
7'
12'
12'
24 Spa.
@ 9' = 216'
18 Spa.
@ 9' = 162'
3' Flume
3' Flume
3' Flume
3' Flume
9' 9' 9'
9' 9' 9'
568.00'
652.00'
36'49"E
36'49"E
Lucas 982.23' Road
Prop. Marquee Sign
Ref. Architectural

TRAFFIC COUNT SUMMARY SHEETS

01 - COUNTRY CLUB RD NORTH OF LUCAS RD

Start Date: 5/10/2011
Start Time: 12:00:00 AM

Date	Time	NB	SB	TOTAL
5/10/2011	12:00 AM	2	8	10
5/10/2011	12:15 AM	3	5	8
5/10/2011	12:30 AM	0	7	7
5/10/2011	12:45 AM	1	4	5
5/10/2011	01:00 AM	3	2	5
5/10/2011	01:15 AM	2	2	4
5/10/2011	01:30 AM	1	3	4
5/10/2011	01:45 AM	0	0	0
5/10/2011	02:00 AM	2	2	4
5/10/2011	02:15 AM	3	2	5
5/10/2011	02:30 AM	2	3	5
5/10/2011	02:45 AM	2	0	2
5/10/2011	03:00 AM	1	1	2
5/10/2011	03:15 AM	2	0	2
5/10/2011	03:30 AM	1	0	1
5/10/2011	03:45 AM	1	1	2
5/10/2011	04:00 AM	1	2	3
5/10/2011	04:15 AM	3	2	5
5/10/2011	04:30 AM	5	1	6
5/10/2011	04:45 AM	7	2	9
5/10/2011	05:00 AM	9	5	14
5/10/2011	05:15 AM	13	9	22
5/10/2011	05:30 AM	18	3	21
5/10/2011	05:45 AM	13	21	34
5/10/2011	06:00 AM	24	10	34
5/10/2011	06:15 AM	43	30	73
5/10/2011	06:30 AM	59	31	90
5/10/2011	06:45 AM	89	33	122
5/10/2011	07:00 AM	80	40	120
5/10/2011	07:15 AM	108	52	160
5/10/2011	07:30 AM	150	71	221
5/10/2011	07:45 AM	188	118	306
5/10/2011	08:00 AM	118	90	208
5/10/2011	08:15 AM	96	49	145
5/10/2011	08:30 AM	85	67	152
5/10/2011	08:45 AM	109	76	185
5/10/2011	09:00 AM	84	55	139
5/10/2011	09:15 AM	48	49	97
5/10/2011	09:30 AM	61	50	111
5/10/2011	09:45 AM	61	37	98
5/10/2011	10:00 AM	51	41	92
5/10/2011	10:15 AM	50	38	88
5/10/2011	10:30 AM	48	28	76
5/10/2011	10:45 AM	52	46	98
5/10/2011	11:00 AM	49	37	86
5/10/2011	11:15 AM	46	44	90
5/10/2011	11:30 AM	36	46	82
5/10/2011	11:45 AM	49	44	93

5/10/2011	12:00 PM	42	53	95
5/10/2011	12:15 PM	57	42	99
5/10/2011	12:30 PM	49	54	103
5/10/2011	12:45 PM	46	39	85
5/10/2011	01:00 PM	40	43	83
5/10/2011	01:15 PM	46	53	99
5/10/2011	01:30 PM	48	70	118
5/10/2011	01:45 PM	62	42	104
5/10/2011	02:00 PM	42	73	115
5/10/2011	02:15 PM	50	57	107
5/10/2011	02:30 PM	52	68	120
5/10/2011	02:45 PM	71	52	123
5/10/2011	03:00 PM	65	89	154
5/10/2011	03:15 PM	65	103	168
5/10/2011	03:30 PM	60	76	136
5/10/2011	03:45 PM	65	61	126
5/10/2011	04:00 PM	51	83	134
5/10/2011	04:15 PM	56	100	156
5/10/2011	04:30 PM	43	78	121
5/10/2011	04:45 PM	78	69	147
5/10/2011	05:00 PM	61	77	138
5/10/2011	05:15 PM	56	100	156
5/10/2011	05:30 PM	63	103	166
5/10/2011	05:45 PM	52	75	127
5/10/2011	06:00 PM	50	68	118
5/10/2011	06:15 PM	52	45	97
5/10/2011	06:30 PM	51	56	107
5/10/2011	06:45 PM	58	40	98
5/10/2011	07:00 PM	30	45	75
5/10/2011	07:15 PM	36	41	77
5/10/2011	07:30 PM	31	32	63
5/10/2011	07:45 PM	22	31	53
5/10/2011	08:00 PM	17	26	43
5/10/2011	08:15 PM	26	40	66
5/10/2011	08:30 PM	11	43	54
5/10/2011	08:45 PM	23	29	52
5/10/2011	09:00 PM	23	27	50
5/10/2011	09:15 PM	19	29	48
5/10/2011	09:30 PM	13	26	39
5/10/2011	09:45 PM	16	19	35
5/10/2011	10:00 PM	9	13	22
5/10/2011	10:15 PM	15	21	36
5/10/2011	10:30 PM	6	14	20
5/10/2011	10:45 PM	9	3	12
5/10/2011	11:00 PM	6	9	15
5/10/2011	11:15 PM	2	13	15
5/10/2011	11:30 PM	2	2	4
5/10/2011	11:45 PM	3	9	12
		3729	3608	7337

02 - LUCAS RD WEST OF COUNTRY CLUB RD

Start Date: 5/10/2011
Start Time: 12:00:00 AM

Date	Time	EB	WB	TOTAL
5/10/2011	12:00 AM	13	4	17
5/10/2011	12:15 AM	10	2	12
5/10/2011	12:30 AM	2	2	4
5/10/2011	12:45 AM	3	0	3
5/10/2011	01:00 AM	3	0	3
5/10/2011	01:15 AM	3	2	5
5/10/2011	01:30 AM	2	4	6
5/10/2011	01:45 AM	5	8	13
5/10/2011	02:00 AM	3	2	5
5/10/2011	02:15 AM	2	2	4
5/10/2011	02:30 AM	2	2	4
5/10/2011	02:45 AM	2	2	4
5/10/2011	03:00 AM	0	4	4
5/10/2011	03:15 AM	2	6	8
5/10/2011	03:30 AM	1	2	3
5/10/2011	03:45 AM	2	2	4
5/10/2011	04:00 AM	0	2	2
5/10/2011	04:15 AM	0	6	6
5/10/2011	04:30 AM	2	10	12
5/10/2011	04:45 AM	4	10	14
5/10/2011	05:00 AM	5	24	29
5/10/2011	05:15 AM	4	26	30
5/10/2011	05:30 AM	8	28	36
5/10/2011	05:45 AM	18	54	72
5/10/2011	06:00 AM	12	42	54
5/10/2011	06:15 AM	18	60	78
5/10/2011	06:30 AM	22	96	118
5/10/2011	06:45 AM	33	106	139
5/10/2011	07:00 AM	37	124	161
5/10/2011	07:15 AM	33	126	159
5/10/2011	07:30 AM	63	124	187
5/10/2011	07:45 AM	107	184	291
5/10/2011	08:00 AM	66	166	232
5/10/2011	08:15 AM	43	116	159
5/10/2011	08:30 AM	50	102	152
5/10/2011	08:45 AM	67	96	163
5/10/2011	09:00 AM	42	96	138
5/10/2011	09:15 AM	27	78	105
5/10/2011	09:30 AM	50	84	134
5/10/2011	09:45 AM	42	70	112
5/10/2011	10:00 AM	35	62	97
5/10/2011	10:15 AM	43	40	83
5/10/2011	10:30 AM	35	40	75
5/10/2011	10:45 AM	46	48	94
5/10/2011	11:00 AM	53	52	105
5/10/2011	11:15 AM	57	58	115
5/10/2011	11:30 AM	38	68	106
5/10/2011	11:45 AM	57	64	121

5/10/2011	12:00 PM	44	60	104
5/10/2011	12:15 PM	57	52	109
5/10/2011	12:30 PM	56	62	118
5/10/2011	12:45 PM	58	50	108
5/10/2011	01:00 PM	50	44	94
5/10/2011	01:15 PM	65	30	95
5/10/2011	01:30 PM	54	50	104
5/10/2011	01:45 PM	58	56	114
5/10/2011	02:00 PM	67	56	123
5/10/2011	02:15 PM	80	50	130
5/10/2011	02:30 PM	72	66	138
5/10/2011	02:45 PM	81	50	131
5/10/2011	03:00 PM	78	84	162
5/10/2011	03:15 PM	86	96	182
5/10/2011	03:30 PM	120	90	210
5/10/2011	03:45 PM	79	72	151
5/10/2011	04:00 PM	71	76	147
5/10/2011	04:15 PM	86	62	148
5/10/2011	04:30 PM	92	60	152
5/10/2011	04:45 PM	94	80	174
5/10/2011	05:00 PM	97	82	179
5/10/2011	05:15 PM	120	64	184
5/10/2011	05:30 PM	105	104	209
5/10/2011	05:45 PM	104	92	196
5/10/2011	06:00 PM	106	68	174
5/10/2011	06:15 PM	106	62	168
5/10/2011	06:30 PM	72	78	150
5/10/2011	06:45 PM	100	72	172
5/10/2011	07:00 PM	85	56	141
5/10/2011	07:15 PM	68	52	120
5/10/2011	07:30 PM	65	34	99
5/10/2011	07:45 PM	63	32	95
5/10/2011	08:00 PM	42	28	70
5/10/2011	08:15 PM	51	26	77
5/10/2011	08:30 PM	50	20	70
5/10/2011	08:45 PM	38	16	54
5/10/2011	09:00 PM	42	16	58
5/10/2011	09:15 PM	45	20	65
5/10/2011	09:30 PM	31	12	43
5/10/2011	09:45 PM	32	10	42
5/10/2011	10:00 PM	20	14	34
5/10/2011	10:15 PM	29	8	37
5/10/2011	10:30 PM	22	10	32
5/10/2011	10:45 PM	13	6	19
5/10/2011	11:00 PM	16	6	22
5/10/2011	11:15 PM	17	4	21
5/10/2011	11:30 PM	12	8	20
5/10/2011	11:45 PM	10	10	20
		4181	4562	8743

03 - LUCAS RD MIDWAY BETWEEN COUNTRY CLUB RD & SOUTHVIEW DR

Start Date: 5/10/2011
Start Time: 12:00:00 AM

Date	Time	EB	WB	TOTAL
5/10/2011	12:00 AM	18	4	22
5/10/2011	12:15 AM	16	5	21
5/10/2011	12:30 AM	6	3	9
5/10/2011	12:45 AM	7	4	11
5/10/2011	01:00 AM	7	4	11
5/10/2011	01:15 AM	3	7	10
5/10/2011	01:30 AM	5	2	7
5/10/2011	01:45 AM	5	5	10
5/10/2011	02:00 AM	3	3	6
5/10/2011	02:15 AM	5	0	5
5/10/2011	02:30 AM	2	4	6
5/10/2011	02:45 AM	1	3	4
5/10/2011	03:00 AM	2	2	4
5/10/2011	03:15 AM	1	6	7
5/10/2011	03:30 AM	2	4	6
5/10/2011	03:45 AM	1	6	7
5/10/2011	04:00 AM	3	3	6
5/10/2011	04:15 AM	0	12	12
5/10/2011	04:30 AM	4	19	23
5/10/2011	04:45 AM	6	25	31
5/10/2011	05:00 AM	3	28	31
5/10/2011	05:15 AM	8	34	42
5/10/2011	05:30 AM	14	50	64
5/10/2011	05:45 AM	25	80	105
5/10/2011	06:00 AM	20	74	94
5/10/2011	06:15 AM	41	111	152
5/10/2011	06:30 AM	43	149	192
5/10/2011	06:45 AM	50	199	249
5/10/2011	07:00 AM	61	197	258
5/10/2011	07:15 AM	50	220	270
5/10/2011	07:30 AM	82	226	308
5/10/2011	07:45 AM	130	231	361
5/10/2011	08:00 AM	101	178	279
5/10/2011	08:15 AM	59	161	220
5/10/2011	08:30 AM	77	149	226
5/10/2011	08:45 AM	72	158	230
5/10/2011	09:00 AM	65	138	203
5/10/2011	09:15 AM	50	96	146
5/10/2011	09:30 AM	51	107	158
5/10/2011	09:45 AM	49	111	160
5/10/2011	10:00 AM	59	90	149
5/10/2011	10:15 AM	56	76	132
5/10/2011	10:30 AM	43	77	120
5/10/2011	10:45 AM	65	80	145
5/10/2011	11:00 AM	66	61	127
5/10/2011	11:15 AM	71	70	141
5/10/2011	11:30 AM	56	77	133
5/10/2011	11:45 AM	78	79	157

5/10/2011	12:00 PM	65	65	130
5/10/2011	12:15 PM	55	86	141
5/10/2011	12:30 PM	73	75	148
5/10/2011	12:45 PM	70	76	146
5/10/2011	01:00 PM	69	60	129
5/10/2011	01:15 PM	79	71	150
5/10/2011	01:30 PM	95	75	170
5/10/2011	01:45 PM	81	84	165
5/10/2011	02:00 PM	100	70	170
5/10/2011	02:15 PM	108	67	175
5/10/2011	02:30 PM	121	69	190
5/10/2011	02:45 PM	114	67	181
5/10/2011	03:00 PM	110	88	198
5/10/2011	03:15 PM	144	83	227
5/10/2011	03:30 PM	180	59	239
5/10/2011	03:45 PM	138	68	206
5/10/2011	04:00 PM	133	76	209
5/10/2011	04:15 PM	171	77	248
5/10/2011	04:30 PM	144	68	212
5/10/2011	04:45 PM	142	92	234
5/10/2011	05:00 PM	159	83	242
5/10/2011	05:15 PM	183	82	265
5/10/2011	05:30 PM	185	91	276
5/10/2011	05:45 PM	162	78	240
5/10/2011	06:00 PM	165	73	238
5/10/2011	06:15 PM	153	79	232
5/10/2011	06:30 PM	151	67	218
5/10/2011	06:45 PM	118	78	196
5/10/2011	07:00 PM	117	55	172
5/10/2011	07:15 PM	106	54	160
5/10/2011	07:30 PM	98	53	151
5/10/2011	07:45 PM	84	34	118
5/10/2011	08:00 PM	70	35	105
5/10/2011	08:15 PM	106	32	138
5/10/2011	08:30 PM	95	17	112
5/10/2011	08:45 PM	75	33	108
5/10/2011	09:00 PM	73	32	105
5/10/2011	09:15 PM	58	35	93
5/10/2011	09:30 PM	63	17	80
5/10/2011	09:45 PM	63	24	87
5/10/2011	10:00 PM	46	15	61
5/10/2011	10:15 PM	42	13	55
5/10/2011	10:30 PM	32	15	47
5/10/2011	10:45 PM	30	11	41
5/10/2011	11:00 PM	14	17	31
5/10/2011	11:15 PM	19	6	25
5/10/2011	11:30 PM	14	8	22
5/10/2011	11:45 PM	13	8	21
		6328	6049	12377

04 - SOUTHVIEW DR SOUTH OF LUCAS RD

Start Date: 5/10/2011
Start Time: 12:00:00 AM

Date	Time	NB	SB	TOTAL
5/10/2011	12:00 AM	2	10	12
5/10/2011	12:15 AM	5	4	9
5/10/2011	12:30 AM	3	4	7
5/10/2011	12:45 AM	1	5	6
5/10/2011	01:00 AM	2	3	5
5/10/2011	01:15 AM	6	2	8
5/10/2011	01:30 AM	1	1	2
5/10/2011	01:45 AM	1	0	1
5/10/2011	02:00 AM	1	2	3
5/10/2011	02:15 AM	0	2	2
5/10/2011	02:30 AM	4	5	9
5/10/2011	02:45 AM	1	0	1
5/10/2011	03:00 AM	2	2	4
5/10/2011	03:15 AM	3	0	3
5/10/2011	03:30 AM	1	1	2
5/10/2011	03:45 AM	4	1	5
5/10/2011	04:00 AM	1	5	6
5/10/2011	04:15 AM	6	3	9
5/10/2011	04:30 AM	5	7	12
5/10/2011	04:45 AM	13	7	20
5/10/2011	05:00 AM	12	9	21
5/10/2011	05:15 AM	5	16	21
5/10/2011	05:30 AM	23	20	43
5/10/2011	05:45 AM	30	39	69
5/10/2011	06:00 AM	29	49	78
5/10/2011	06:15 AM	49	67	116
5/10/2011	06:30 AM	85	79	164
5/10/2011	06:45 AM	107	76	183
5/10/2011	07:00 AM	98	90	188
5/10/2011	07:15 AM	127	95	222
5/10/2011	07:30 AM	149	99	248
5/10/2011	07:45 AM	158	100	258
5/10/2011	08:00 AM	115	104	219
5/10/2011	08:15 AM	109	65	174
5/10/2011	08:30 AM	103	69	172
5/10/2011	08:45 AM	98	72	170
5/10/2011	09:00 AM	95	57	152
5/10/2011	09:15 AM	61	51	112
5/10/2011	09:30 AM	70	46	116
5/10/2011	09:45 AM	76	50	126
5/10/2011	10:00 AM	74	45	119
5/10/2011	10:15 AM	68	53	121
5/10/2011	10:30 AM	48	37	85
5/10/2011	10:45 AM	50	61	111
5/10/2011	11:00 AM	53	64	117
5/10/2011	11:15 AM	54	53	107
5/10/2011	11:30 AM	40	46	86
5/10/2011	11:45 AM	59	64	123

5/10/2011	12:00 PM	46	56	102
5/10/2011	12:15 PM	69	44	113
5/10/2011	12:30 PM	49	58	107
5/10/2011	12:45 PM	48	46	94
5/10/2011	01:00 PM	50	55	105
5/10/2011	01:15 PM	61	65	126
5/10/2011	01:30 PM	52	69	121
5/10/2011	01:45 PM	65	51	116
5/10/2011	02:00 PM	66	85	151
5/10/2011	02:15 PM	52	83	135
5/10/2011	02:30 PM	51	64	115
5/10/2011	02:45 PM	74	71	145
5/10/2011	03:00 PM	79	89	168
5/10/2011	03:15 PM	94	96	190
5/10/2011	03:30 PM	61	94	155
5/10/2011	03:45 PM	71	79	150
5/10/2011	04:00 PM	85	81	166
5/10/2011	04:15 PM	76	102	178
5/10/2011	04:30 PM	61	82	143
5/10/2011	04:45 PM	115	72	187
5/10/2011	05:00 PM	88	90	178
5/10/2011	05:15 PM	100	105	205
5/10/2011	05:30 PM	95	109	204
5/10/2011	05:45 PM	87	99	186
5/10/2011	06:00 PM	90	83	173
5/10/2011	06:15 PM	83	59	142
5/10/2011	06:30 PM	72	60	132
5/10/2011	06:45 PM	67	56	123
5/10/2011	07:00 PM	59	57	116
5/10/2011	07:15 PM	39	52	91
5/10/2011	07:30 PM	44	51	95
5/10/2011	07:45 PM	24	39	63
5/10/2011	08:00 PM	29	39	68
5/10/2011	08:15 PM	30	51	81
5/10/2011	08:30 PM	15	50	65
5/10/2011	08:45 PM	32	38	70
5/10/2011	09:00 PM	34	37	71
5/10/2011	09:15 PM	27	33	60
5/10/2011	09:30 PM	20	28	48
5/10/2011	09:45 PM	28	23	51
5/10/2011	10:00 PM	16	24	40
5/10/2011	10:15 PM	15	24	39
5/10/2011	10:30 PM	12	19	31
5/10/2011	10:45 PM	11	12	23
5/10/2011	11:00 PM	16	17	33
5/10/2011	11:15 PM	6	15	21
5/10/2011	11:30 PM	5	6	11
5/10/2011	11:45 PM	4	6	10
		4580	4464	9044

05 - LUCAS RD EAST OF SOUTHVIEW DR

Start Date: 5/10/2011
Start Time: 12:00:00 AM

Date	Time	EB	WB	TOTAL
5/10/2011	12:00 AM	13	3	16
5/10/2011	12:15 AM	10	0	10
5/10/2011	12:30 AM	1	3	4
5/10/2011	12:45 AM	4	2	6
5/10/2011	01:00 AM	5	1	6
5/10/2011	01:15 AM	3	3	6
5/10/2011	01:30 AM	1	2	3
5/10/2011	01:45 AM	5	3	8
5/10/2011	02:00 AM	1	3	4
5/10/2011	02:15 AM	5	3	8
5/10/2011	02:30 AM	2	4	6
5/10/2011	02:45 AM	2	1	3
5/10/2011	03:00 AM	0	1	1
5/10/2011	03:15 AM	2	2	4
5/10/2011	03:30 AM	2	3	5
5/10/2011	03:45 AM	3	4	7
5/10/2011	04:00 AM	0	8	8
5/10/2011	04:15 AM	1	12	13
5/10/2011	04:30 AM	1	17	18
5/10/2011	04:45 AM	6	18	24
5/10/2011	05:00 AM	1	25	26
5/10/2011	05:15 AM	3	40	43
5/10/2011	05:30 AM	12	54	66
5/10/2011	05:45 AM	15	67	82
5/10/2011	06:00 AM	11	76	87
5/10/2011	06:15 AM	24	119	143
5/10/2011	06:30 AM	25	123	148
5/10/2011	06:45 AM	32	122	154
5/10/2011	07:00 AM	31	152	183
5/10/2011	07:15 AM	28	166	194
5/10/2011	07:30 AM	24	140	164
5/10/2011	07:45 AM	37	135	172
5/10/2011	08:00 AM	54	99	153
5/10/2011	08:15 AM	28	86	114
5/10/2011	08:30 AM	49	80	129
5/10/2011	08:45 AM	26	69	95
5/10/2011	09:00 AM	35	77	112
5/10/2011	09:15 AM	26	58	84
5/10/2011	09:30 AM	23	47	70
5/10/2011	09:45 AM	22	49	71
5/10/2011	10:00 AM	33	39	72
5/10/2011	10:15 AM	26	34	60
5/10/2011	10:30 AM	28	44	72
5/10/2011	10:45 AM	29	44	73
5/10/2011	11:00 AM	23	31	54
5/10/2011	11:15 AM	36	33	69
5/10/2011	11:30 AM	32	41	73
5/10/2011	11:45 AM	33	43	76

5/10/2011	12:00 PM	40	43	83
5/10/2011	12:15 PM	45	32	77
5/10/2011	12:30 PM	37	37	74
5/10/2011	12:45 PM	47	39	86
5/10/2011	01:00 PM	44	56	100
5/10/2011	01:15 PM	38	39	77
5/10/2011	01:30 PM	47	46	93
5/10/2011	01:45 PM	37	36	73
5/10/2011	02:00 PM	45	32	77
5/10/2011	02:15 PM	47	34	81
5/10/2011	02:30 PM	48	60	108
5/10/2011	02:45 PM	42	39	81
5/10/2011	03:00 PM	52	40	92
5/10/2011	03:15 PM	69	30	99
5/10/2011	03:30 PM	75	38	113
5/10/2011	03:45 PM	95	44	139
5/10/2011	04:00 PM	111	47	158
5/10/2011	04:15 PM	110	46	156
5/10/2011	04:30 PM	102	49	151
5/10/2011	04:45 PM	115	53	168
5/10/2011	05:00 PM	108	56	164
5/10/2011	05:15 PM	157	41	198
5/10/2011	05:30 PM	143	57	200
5/10/2011	05:45 PM	133	40	173
5/10/2011	06:00 PM	108	49	157
5/10/2011	06:15 PM	116	53	169
5/10/2011	06:30 PM	100	36	136
5/10/2011	06:45 PM	76	40	116
5/10/2011	07:00 PM	88	36	124
5/10/2011	07:15 PM	65	31	96
5/10/2011	07:30 PM	53	39	92
5/10/2011	07:45 PM	63	23	86
5/10/2011	08:00 PM	54	22	76
5/10/2011	08:15 PM	58	46	104
5/10/2011	08:30 PM	54	33	87
5/10/2011	08:45 PM	34	20	54
5/10/2011	09:00 PM	40	22	62
5/10/2011	09:15 PM	43	33	76
5/10/2011	09:30 PM	37	27	64
5/10/2011	09:45 PM	51	14	65
5/10/2011	10:00 PM	23	17	40
5/10/2011	10:15 PM	22	15	37
5/10/2011	10:30 PM	15	9	24
5/10/2011	10:45 PM	23	6	29
5/10/2011	11:00 PM	6	13	19
5/10/2011	11:15 PM	12	8	20
5/10/2011	11:30 PM	9	10	19
5/10/2011	11:45 PM	8	8	16
		3758	3830	7588

METROCOUNT

9128 Couples Dr.-Plano TX-75025
Phone/Fax (972) 359-7882
NealHopeHig@aol.com

Lucas
Country Club Rd. & Lucas Rd.
5-10-111

File Name : C&P5101
Site Code : 00005101
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	Country Club Southbound				Lucas Westbound				Private Drive Northbound				Lucas Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	26	0	33	59	75	110	0	185	0	0	0	0	0	25	4	29	273
07:15 AM	18	0	38	56	97	144	1	242	0	0	0	0	4	24	10	38	336
07:30 AM	25	0	50	75	132	118	0	250	0	0	0	0	0	28	19	47	372
07:45 AM	45	0	58	103	124	97	0	221	0	0	0	0	0	28	40	68	392
Total	114	0	179	293	428	469	1	898	0	0	0	0	4	105	73	182	1373
08:00 AM	29	0	49	78	88	101	0	189	0	0	0	0	0	38	10	48	315
08:15 AM	13	1	42	56	79	99	0	178	0	0	0	0	1	44	11	56	290
08:30 AM	17	0	40	57	72	81	1	154	2	0	0	2	0	40	13	53	266
08:45 AM	22	0	32	54	75	64	0	139	0	0	2	2	1	26	9	36	231
Total	81	1	163	245	314	345	1	660	2	0	2	4	2	148	43	193	1102
*** BREAK ***																	
02:00 PM	11	0	52	63	33	28	0	61	0	0	0	0	1	50	14	65	189
02:15 PM	11	0	38	49	29	35	0	64	0	0	1	1	0	46	16	62	176
02:30 PM	13	0	35	48	38	51	1	90	0	0	0	0	0	51	17	68	206
02:45 PM	9	0	33	42	30	41	0	71	1	0	0	1	0	49	15	64	178
Total	44	0	158	202	130	155	1	286	1	0	1	2	1	196	62	259	749
03:00 PM	18	0	49	67	46	40	1	87	1	0	1	2	0	66	18	84	240
03:15 PM	12	0	46	58	43	37	0	80	0	0	0	0	1	52	16	69	207
03:30 PM	12	0	57	69	36	36	1	73	0	0	1	1	0	71	18	89	232
03:45 PM	15	1	79	95	54	33	0	87	1	0	2	3	3	75	12	90	275
Total	57	1	231	289	179	146	2	327	2	0	4	6	4	264	64	332	954
04:00 PM	21	0	68	89	36	45	1	82	0	0	5	5	2	99	13	114	290
04:15 PM	16	0	84	100	46	60	0	106	1	0	2	3	1	84	10	95	304
04:30 PM	14	0	63	77	60	58	0	118	0	0	1	1	1	85	16	102	298
04:45 PM	13	0	85	98	61	35	0	96	0	0	0	0	1	88	12	101	295
Total	64	0	300	364	203	198	1	402	1	0	8	9	5	356	51	412	1187
Grand Total	360	2	1031	1393	1254	1313	6	2573	6	0	15	21	16	1069	293	1378	5365
Apprch %	25.8	0.1	74		48.7	51	0.2		28.6	0	71.4		1.2	77.6	21.3		
Total %	6.7	0	19.2	26	23.4	24.5	0.1	48	0.1	0	0.3	0.4	0.3	19.9	5.5	25.7	

	Country Club Southbound				Lucas Westbound				Private Drive Northbound				Lucas Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	18	0	38	56	**97**	**144**	**1**	242	0	0	0	0	**4**	24	10	38	336
07:30 AM	25	0	50	75	**132**	118	0	**250**	0	0	0	0	0	28	19	47	372
07:45 AM	**45**	0	**58**	**103**	124	97	0	221	0	0	0	0	0	28	**40**	**68**	**392**
08:00 AM	29	0	49	78	88	101	0	189	0	0	0	0	0	**38**	10	48	315
Total Volume	117	0	195	312	441	460	1	902	0	0	0	0	4	118	79	201	1415
% App. Total	37.5	0	62.5		48.9	51	0.1		0	0	0		2	58.7	39.3		
PHF	.650	.000	.841	.757	.835	.799	.250	.902	.000	.000	.000	.000	.250	.776	.494	.739	.902

METROCOUNT

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Lucas
Country Club Rd. & Lucas Rd.
5-10-111

File Name : C&P5101
Site Code : 00005101
Start Date : 5/10/2011
Page No : 2

	Country Club Southbound				Lucas Westbound				Private Drive Northbound				Lucas Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				08:00 AM				07:45 AM				
+0 mins.	18	0	38	56	97	144	1	242	0	0	0	0	0	28	40	68	
+15 mins.	25	0	50	75	132	118	0	250	0	0	0	0	0	38	10	48	
+30 mins.	46	0	58	103	124	97	0	221	2	0	0	2	1	44	11	56	
+45 mins.	29	0	49	78	68	101	0	169	0	0	2	2	0	40	13	53	
Total Volume	117	0	195	312	441	460	1	902	2	0	2	4	1	150	74	225	
% App. Total	37.5	0	62.5		48.9	51	0.1		50	0	50		0.4	66.7	32.9		
PHF	.650	.000	.841	.757	.835	.799	.250	.902	.250	.000	.250	.500	.250	.852	.463	.827	
Peak Hour Analysis From 12:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	21	0	68	89	36	45	1	82	0	0	5	5	2	99	13	114	290
04:15 PM	16	0	84	100	46	60	0	106	1	0	2	3	1	84	10	95	304
04:30 PM	14	0	63	77	60	58	0	118	0	0	1	1	1	85	16	102	298
04:45 PM	13	0	85	98	61	35	0	96	0	0	0	0	1	88	12	101	295
Total Volume	64	0	300	364	203	198	1	402	1	0	8	9	5	356	51	412	1187
% App. Total	17.6	0	82.4		50.5	49.3	0.2		11.1	0	88.9		1.2	86.4	12.4		
PHF	.762	.000	.882	.910	.832	.825	.250	.852	.250	.000	.400	.450	.625	.899	.797	.904	.976

Peak Hour Analysis From 12:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				03:30 PM				04:00 PM				
+0 mins.	21	0	68	89	36	45	1	82	0	0	1	1	2	99	13	114	
+15 mins.	16	0	84	100	46	60	0	106	1	0	2	3	1	84	10	95	
+30 mins.	14	0	63	77	60	58	0	118	0	0	5	5	1	85	16	102	
+45 mins.	13	0	85	98	61	35	0	96	1	0	2	3	1	88	12	101	
Total Volume	64	0	300	364	203	198	1	402	2	0	10	12	5	356	51	412	
% App. Total	17.6	0	82.4		50.5	49.3	0.2		16.7	0	83.3		1.2	86.4	12.4		
PHF	.762	.000	.882	.910	.832	.825	.250	.852	.500	.000	.500	.600	.625	.899	.797	.904	

METROCOUNT

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Lucas
Lucas Rd. & Southview Dr.
5-10-11

File Name : C&P5103
Site Code : 00005103
Start Date : 5/10/2011
Page No : 1

Groups Printed- Unshifted

	Lucas Southbound				Lucas Westbound				Southview Northbound				NA Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	32	21	53	90	0	53	143	12	93	0	105	0	0	0	0	301
07:15 AM	0	44	19	63	106	0	58	164	7	133	0	140	0	0	0	0	367
07:30 AM	0	46	11	57	95	0	56	151	9	142	0	151	0	0	0	0	359
07:45 AM	0	57	27	84	77	0	39	116	5	127	0	132	0	0	0	0	332
Total	0	179	78	257	368	0	206	574	33	495	0	528	0	0	0	0	1359
08:00 AM	0	48	29	77	83	0	32	115	8	99	0	107	0	0	0	0	299
08:15 AM	0	40	23	63	66	0	24	90	13	98	0	111	0	0	0	0	264
08:30 AM	0	42	33	75	57	0	19	76	14	85	0	99	0	0	0	0	250
08:45 AM	0	36	20	56	49	0	22	71	14	84	0	98	0	0	0	0	225
Total	0	166	105	271	255	0	97	352	49	366	0	415	0	0	0	0	1038
*** BREAK ***																	
02:00 PM	0	59	30	89	18	0	14	32	9	31	0	40	0	0	0	0	161
02:15 PM	0	45	35	80	23	0	12	35	15	31	0	46	0	0	0	0	161
02:30 PM	0	48	34	82	39	0	16	55	13	40	0	53	0	0	0	0	190
02:45 PM	0	42	29	71	27	0	11	38	14	44	0	58	0	0	0	0	167
Total	0	194	128	322	107	0	53	160	51	146	0	197	0	0	0	0	679
03:00 PM	0	54	34	88	28	0	13	41	19	39	0	58	0	0	0	0	187
03:15 PM	0	69	54	123	28	0	8	36	23	49	0	72	0	0	0	0	231
03:30 PM	0	64	56	120	25	0	12	37	20	43	0	63	0	0	0	0	220
03:45 PM	0	64	60	124	28	0	19	47	32	57	0	89	0	0	0	0	260
Total	0	251	204	455	109	0	52	161	94	188	0	282	0	0	0	0	898
04:00 PM	0	85	73	158	33	0	15	48	36	42	0	78	0	0	0	0	284
04:15 PM	0	81	66	147	38	0	12	50	45	55	0	100	0	0	0	0	297
04:30 PM	0	70	68	138	33	0	14	47	38	68	0	106	0	0	0	0	291
04:45 PM	0	84	78	162	32	0	20	52	38	60	0	98	0	0	0	0	312
Total	0	320	285	605	136	0	61	197	157	225	0	382	0	0	0	0	1184
Grand Total	0	1110	800	1910	975	0	469	1444	384	1420	0	1804	0	0	0	0	5158
Apprch %	0	58.1	41.9		67.5	0	32.5		21.3	78.7	0		0	0	0		
Total %	0	21.5	15.5	37	18.9	0	9.1	28	7.4	27.5	0	35	0	0	0	0	

	Lucas Southbound				Lucas Westbound				Southview Northbound				NA Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	32	21	53	90	0	53	143	12	93	0	105	0	0	0	0	301
07:15 AM	0	44	19	63	**106**	0	**58**	**164**	7	133	0	140	0	0	0	0	**367**
07:30 AM	0	46	11	57	95	0	56	151	9	**142**	0	**151**	0	0	0	0	359
07:45 AM	0	**57**	**27**	**84**	77	0	39	116	5	127	0	132	0	0	0	0	332
Total Volume	0	179	78	257	368	0	206	574	33	495	0	528	0	0	0	0	1359
% App. Total	0	69.6	30.4		64.1	0	35.9		6.2	93.8	0		0	0	0		
PHF	.000	.785	.722	.765	.868	.000	.888	.875	.688	.871	.000	.874	.000	.000	.000	.000	.926

METROCOUNT

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Lucas
Lucas Rd. & Southview Dr.
5-10-11

File Name : C&P5103
Site Code : 00005103
Start Date : 5/10/2011
Page No : 2

	Lucas Southbound				Lucas Westbound				Southview Northbound				NA Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:00 AM				07:15 AM				07:00 AM				
+0 mins.	0	**57**	27	**84**	90	0	53	143	7	133	0	**140**	0	0	0	0	
+15 mins.	0	48	29	77	**106**	0	**58**	**164**	**9**	**142**	0	**151**	0	0	0	0	
+30 mins.	0	40	23	63	95	0	56	151	5	127	0	132	0	0	0	0	
+45 mins.	0	42	**33**	75	77	0	39	116	8	99	0	107	0	0	0	0	
Total Volume	0	187	112	299	368	0	206	574	29	501	0	530	0	0	0	0	
% App. Total	0	62.5	37.5		64.1	0	35.9		5.5	94.5	0		0	0	0		
PHF	.000	.820	.848	.890	.868	.000	.868	.875	.806	.882	.000	.877	.000	.000	.000	.000	
Peak Hour Analysis From 12:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**86**	73	158	33	0	15	48	36	42	0	78	0	0	0	0	284
04:15 PM	0	81	66	147	**38**	0	12	50	**45**	55	0	100	0	0	0	0	297
04:30 PM	0	70	68	138	33	0	14	47	38	**68**	0	**106**	0	0	0	0	291
04:45 PM	0	84	**78**	**162**	32	0	**20**	**52**	38	60	0	98	0	0	0	0	**312**
Total Volume	0	320	285	605	136	0	61	197	157	225	0	382	0	0	0	0	1184
% App. Total	0	52.9	47.1		69	0	31		41.1	58.9	0		0	0	0		
PHF	.000	.941	.913	.934	.895	.000	.763	.947	.872	.827	.000	.901	.000	.000	.000	.000	.949
Peak Hour Analysis From 12:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				12:00 PM				
+0 mins.	0	**86**	73	158	33	0	15	48	36	42	0	78	0	0	0	0	
+15 mins.	0	81	66	147	**38**	0	12	50	**45**	55	0	100	0	0	0	0	
+30 mins.	0	70	68	138	33	0	14	47	38	**68**	0	**106**	0	0	0	0	
+45 mins.	0	84	**78**	**162**	32	0	**20**	**52**	38	60	0	98	0	0	0	0	
Total Volume	0	320	285	605	136	0	61	197	157	225	0	382	0	0	0	0	
% App. Total	0	52.9	47.1		69	0	31		41.1	58.9	0		0	0	0		
PHF	.000	.941	.913	.934	.895	.000	.763	.947	.872	.827	.000	.901	.000	.000	.000	.000	

ITE TRIP GENERATION SHEETS

Middle School/Junior High School
(522)

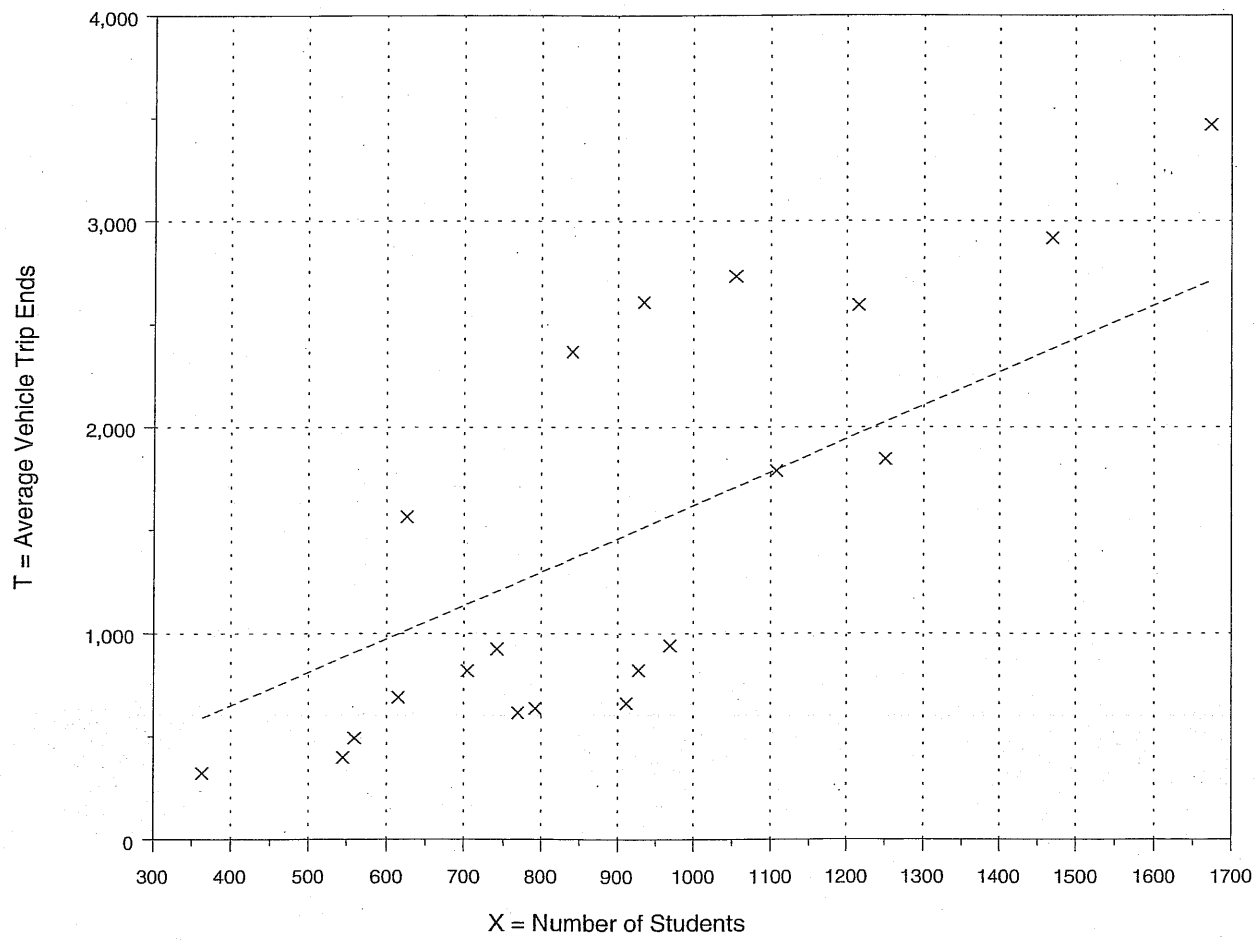
Average Vehicle Trip Ends vs: Students
On a: Weekday

Number of Studies: 20
Average Number of Students: 904
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
1.62	0.72 - 2.81	1.45

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

Middle School/Junior High School
(522)

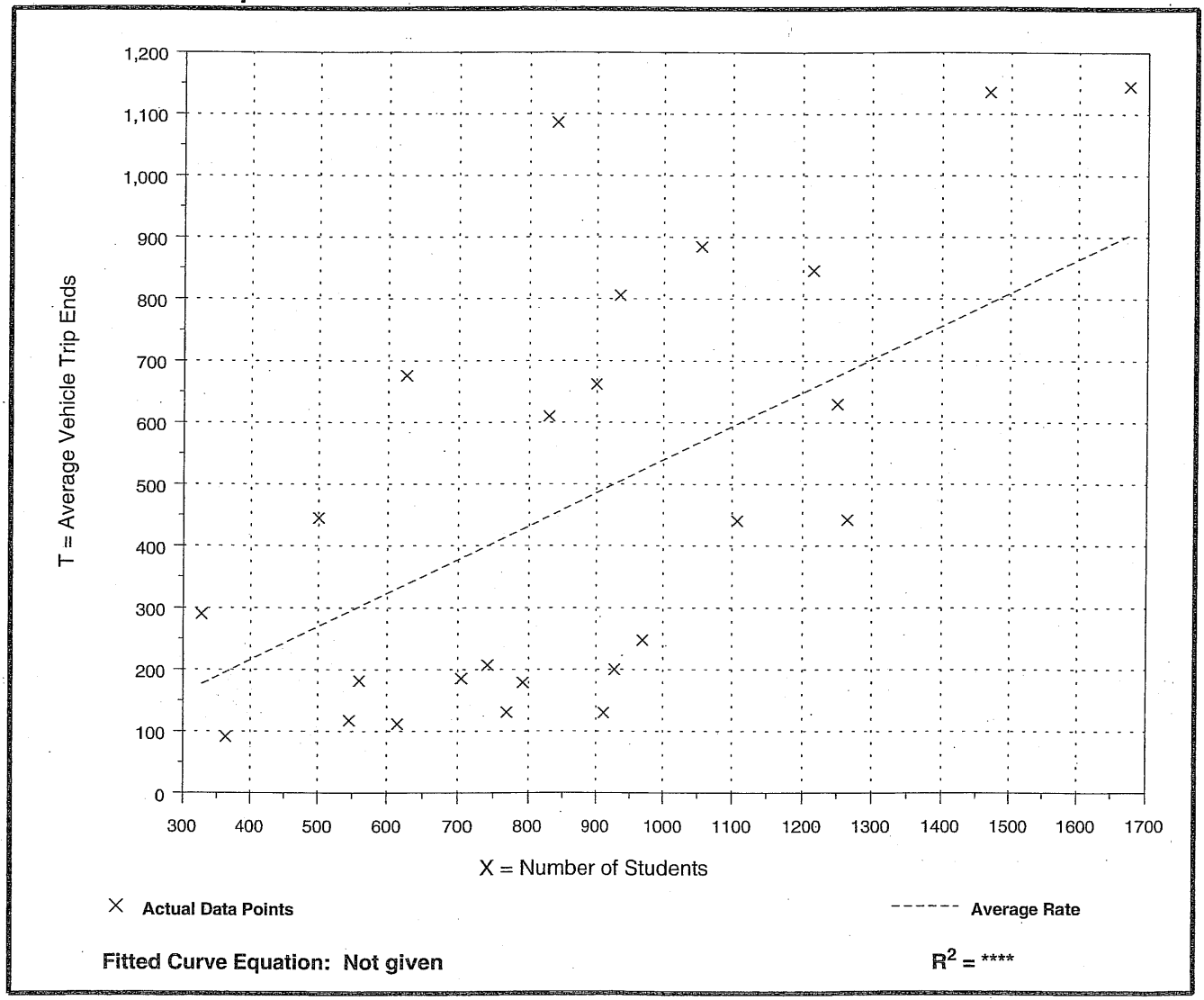
Average Vehicle Trip Ends vs: Students
On a: Weekday,
A.M. Peak Hour

Number of Studies: 25
Average Number of Students: 876
Directional Distribution: 55% entering, 45% exiting

Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.54	0.14 - 1.29	0.80

Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

Middle School/Junior High School
(522)

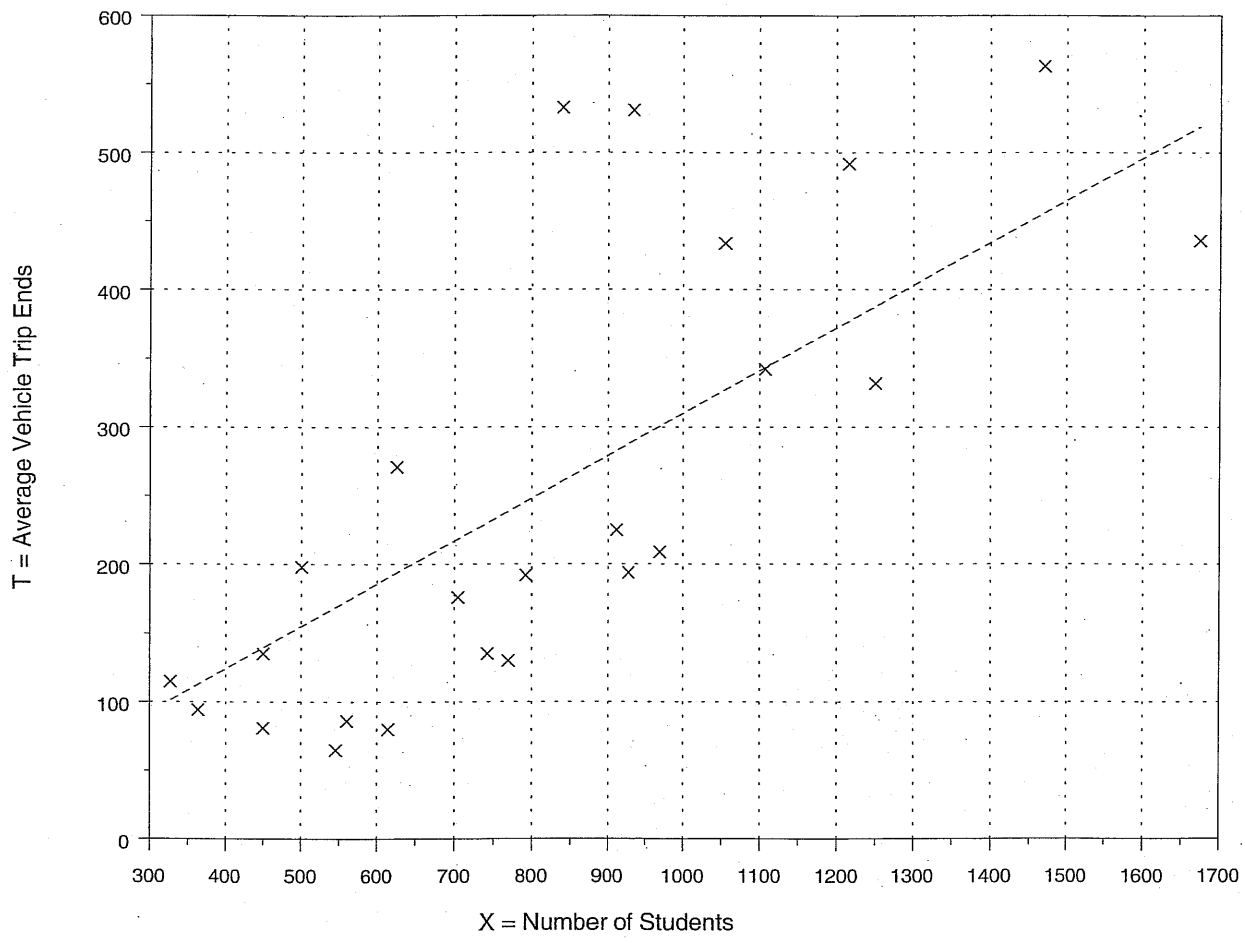
Average Vehicle Trip Ends vs: Students
On a: Weekday,
P.M. Peak Hour of Generator

Number of Studies: 24
Average Number of Students: 825
Directional Distribution: 45% entering, 55% exiting

Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.31	0.12 - 0.63	0.57

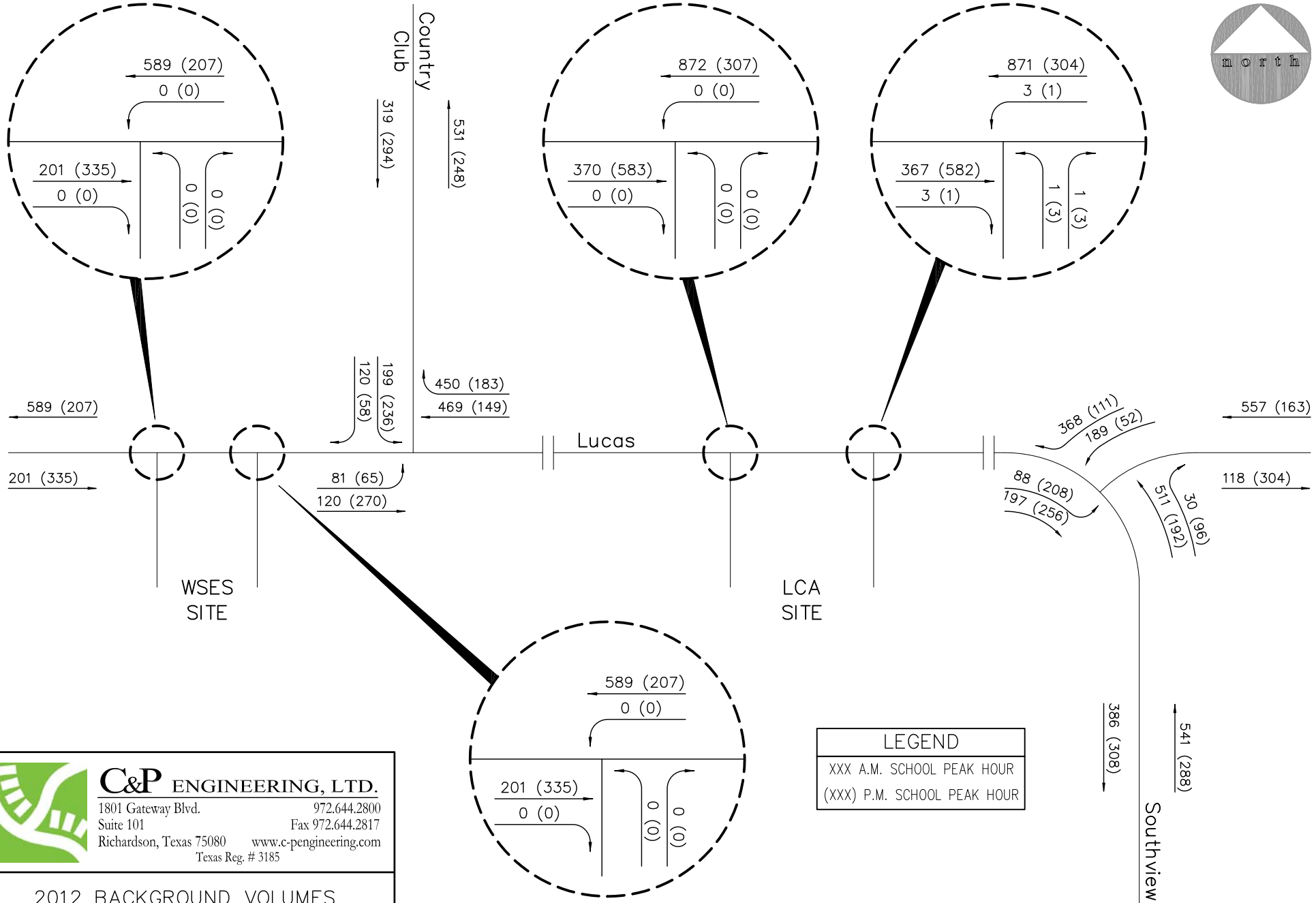
Data Plot and Equation



Fitted Curve Equation: Not given

R^2 = ****

BACKGROUND TRAFFIC VOLUMES



C&P ENGINEERING, LTD.
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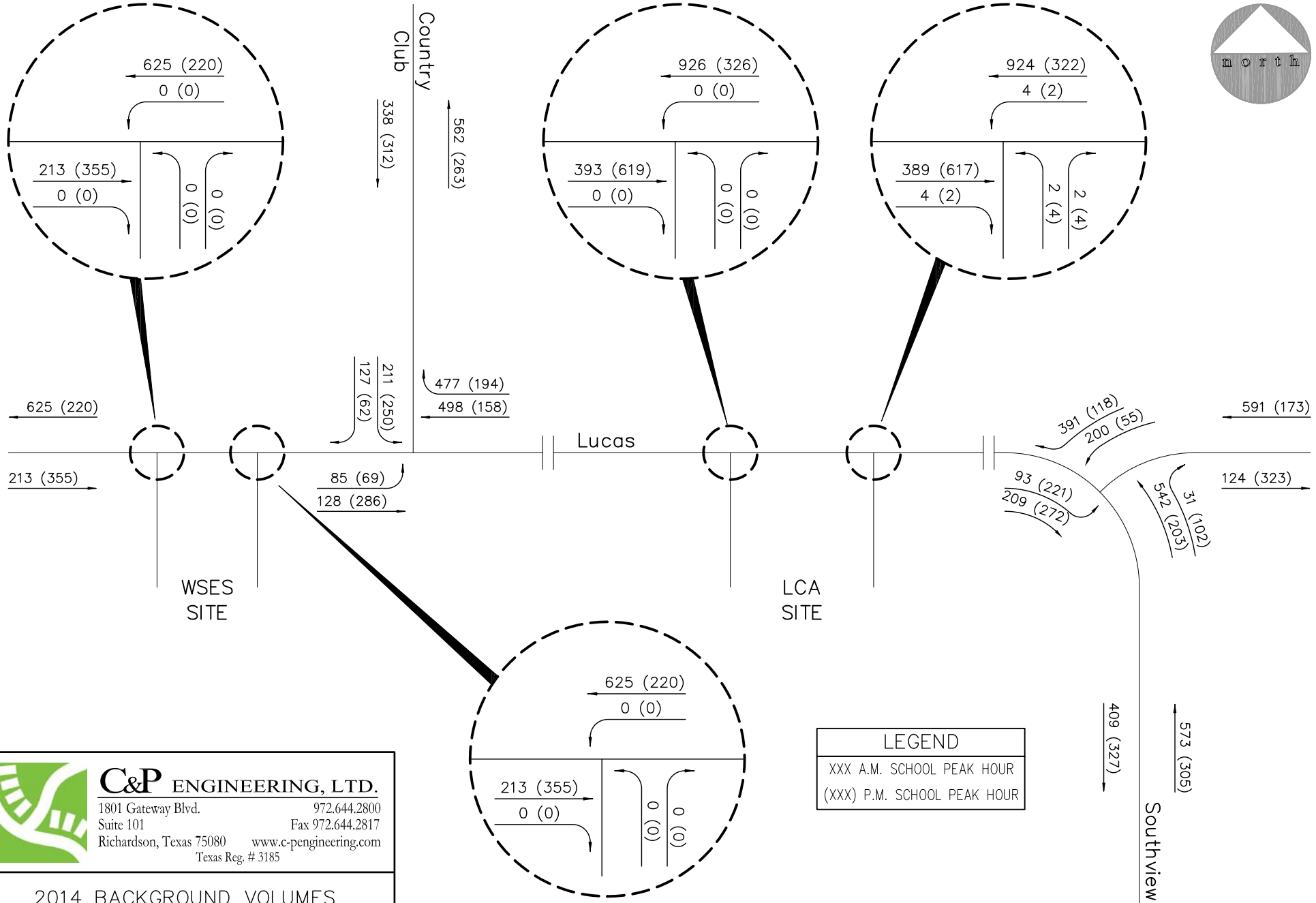
Richardson, Texas 75080 www.c-pengineering.com
Texas Reg. # 3185

2012 BACKGROUND VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE A1



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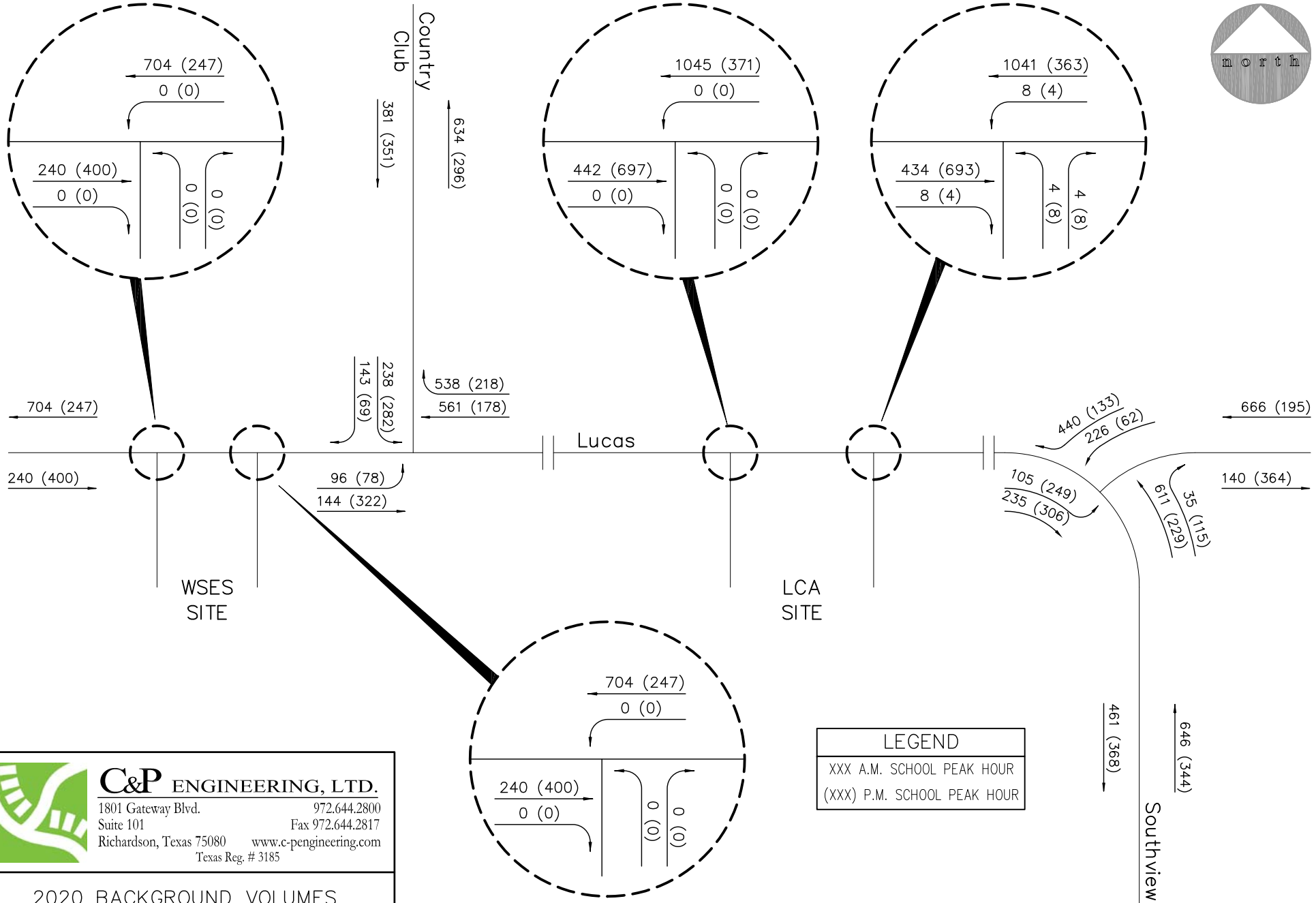
Richardson, Texas 75080 www.c-pengineering.com
Texas Reg. # 3185

2014 BACKGROUND VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE A2



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Richardson, Texas 75080 www.c-pengineering.com
Texas Reg. # 3185

2020 BACKGROUND VOLUMES

Scale: N/A	Date: MAY 2011
Job No.: 11020	Dwg. File: FIGURE A3

LEVEL OF SERVICE DESCRIPTION

LEVEL OF SERVICE DESCRIPTIONS

LOS	DESCRIPTION
A and B	No delays at intersections with smooth progression of traffic. Uncongested operations; all vehicles clear in a single signal cycle.
C	Moderate delays at intersections with satisfactory to good progression of traffic. Light congestion; occasional back-ups on critical approaches.
D	40 percent probability of delays of one cycle or more at every intersection. No progression of traffic along the roadway with 90 percent probability of being stopped at every intersection experiencing "D" condition. Significant congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long standing lines formed.
E	Heavy traffic flow condition. Delays of two or more cycles probable. No progression. 100 percent probability of stopping at intersection. Limit of stable flow. Blockage of intersection may occur if traffic signal does not provide for protected turning movements.
F	Unstable traffic flow. Heavy congestion. Traffic moves in forced flow condition. Three of more cycles to pass through intersection. Total breakdown with stop-and-go operation.

HCM SHEETS

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DRC*	Intersection	*#4*
Agency/Co.	*C&P ENGINEERING*	Jurisdiction	*LUCAS*
Date Performed	*5/23/2011*	Analysis Year	*2012*
Analysis Time Period	*A.M. SCHOOL PEAK*		

Project Description *2012 TOTAL VOLUMES*

East/West Street: *LUCAS*	North/South Street: *WSMS EAST DRIVE*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*304*	*5*	*92*	*664*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*337*	*5*	*102*	*737*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*4*		*74*			
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*4*	*0*	*82*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*102*	*4*		*82*			
C (m) (veh/h)		*1217*	*168*		*702*			
v/c		*0.08*	*0.02*		*0.12*			
95% queue length		*0.27*	*0.07*		*0.39*			
Control Delay (s/veh)		*8.2*	*27.0*		*10.8*			
LOS		*A*	*D*		*B*			
Approach Delay (s/veh)	--	--	*11.6*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#3*
Jurisdiction	*LUCAS*
Analysis Year	*2012*

Project Description *2012 TOTAL VOLUMES*

East/West Street: *LUCAS* | North/South Street: *WSMS WEST DRIVE*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*380*	*1*	*14*	*293*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*436*	*1*	*16*	*336*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*		*17*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*19*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*16*	*1*		*19*			
C (m) (veh/h)		*1123*	*347*		*620*			
v/c		*0.01*	*0.00*		*0.03*			
95% queue length		*0.04*	*0.01*		*0.09*			
Control Delay (s/veh)		*8.3*	*15.4*		*11.0*			
LOS		*A*	*C*		*B*			
Approach Delay (s/veh)	--	--	*11.2*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DRC*	Intersection	*#3*
Agency/Co.	*C&P ENGINEERING*	Jurisdiction	*LUCAS*
Date Performed	*5/23/2011*	Analysis Year	*2014*
Analysis Time Period	*A.M. SCHOOL PEAK*		

Project Description *2014 TOTAL VOLUMES*

East/West Street: *LUCAS*	North/South Street: *WSMS WEST DRIVE*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*327*	*2*	*34*	*694*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*363*	*2*	*37*	*771*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*		*28*			
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*31*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*37*	*1*		*31*			
C (m) (veh/h)		*1194*	*196*		*681*			
v/c		*0.03*	*0.01*		*0.05*			
95% queue length		*0.10*	*0.02*		*0.14*			
Control Delay (s/veh)		*8.1*	*23.5*		*10.5*			
LOS		*A*	*C*		*B*			
Approach Delay (s/veh)	--	--	*10.9*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#3*
Jurisdiction	*LUCAS*
Analysis Year	*2014*

Project Description *2014 TOTAL VOLUMES*

East/West Street: *LUCAS* | North/South Street: *WSMS WEST DRIVE*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*418*	*1*	*16*	*339*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*480*	*1*	*18*	*389*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*		*19*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*18*	*1*		*21*			
C (m) (veh/h)		*1082*	*302*		*586*			
v/c		*0.02*	*0.00*		*0.04*			
95% queue length		*0.05*	*0.01*		*0.11*			
Control Delay (s/veh)		*8.4*	*17.0*		*11.4*			
LOS		*A*	*C*		*B*			
Approach Delay (s/veh)	--	--	*11.6*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DRC*	Intersection	*#3*
Agency/Co.	*C&P ENGINEERING*	Jurisdiction	*LUCAS*
Date Performed	*5/23/2011*	Analysis Year	*20204*
Analysis Time Period	*A.M. SCHOOL PEAK*		

Project Description *2020 TOTAL VOLUMES*

East/West Street: *LUCAS*	North/South Street: *WSMS WEST DRIVE*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*359*	*3*	*60*	*776*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*398*	*3*	*66*	*862*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*2*		*50*			
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*2*	*0*	*55*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*66*	*2*		*55*			
C (m) (veh/h)		*1158*	*147*		*650*			
v/c		*0.06*	*0.01*		*0.08*			
95% queue length		*0.18*	*0.04*		*0.28*			
Control Delay (s/veh)		*8.3*	*29.8*		*11.0*			
LOS		*A*	*D*		*B*			
Approach Delay (s/veh)	--	--	*11.7*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#3*
Jurisdiction	*LUCAS*
Analysis Year	*2020*

Project Description *2020 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *WSMS WEST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*465*	*2*	*28*	*368*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*534*	*2*	*32*	*422*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*2*		*34*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*2*	*0*	*39*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*32*	*2*		*39*			
C (m) (veh/h)		*1032*	*254*		*545*			
v/c		*0.03*	*0.01*		*0.07*			
95% queue length		*0.10*	*0.02*		*0.23*			
Control Delay (s/veh)		*8.6*	*19.3*		*12.1*			
LOS		*A*	*C*		*B*			
Approach Delay (s/veh)	--	--	*12.5*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*A.M. SCHOOL PEAK*

Site Information

Intersection	*#4*
Jurisdiction	*LUCAS*
Analysis Year	*2012*

Project Description *2012 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *WSMS EAST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*304*	*5*	*92*	*664*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*349*	*5*	*105*	*763*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*4*		*74*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*4*	*0*	*85*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*105*	*4*		*85*			
C (m) (veh/h)		*1205*	*157*		*692*			
v/c		*0.09*	*0.03*		*0.12*			
95% queue length		*0.29*	*0.08*		*0.42*			
Control Delay (s/veh)		*8.3*	*28.5*		*10.9*			
LOS		*A*	*D*		*B*			
Approach Delay (s/veh)	--	--	*11.7*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DRC*	Intersection	*#4*
Agency/Co.	*C&P ENGINEERING*	Jurisdiction	*LUCAS*
Date Performed	*5/23/2011*	Analysis Year	*2012*
Analysis Time Period	*P.M. SCHOOL PEAK*		

Project Description *2012 TOTAL VOLUMES*

East/West Street: *LUCAS*	North/South Street: *WSMS EAST DRIVE*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*395*	*2*	*43*	*304*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*454*	*2*	*49*	*349*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*3*		*52*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*3*	*0*	*59*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*49*	*3*		*59*			
C (m) (veh/h)		*1105*	*294*		*605*			
v/c		*0.04*	*0.01*		*0.10*			
95% queue length		*0.14*	*0.03*		*0.32*			
Control Delay (s/veh)		*8.4*	*17.4*		*11.6*			
LOS		*A*	*C*		*B*			
Approach Delay (s/veh)	--	--	*11.9*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DRC*	Intersection	*#4*
Agency/Co.	*C&P ENGINEERING*	Jurisdiction	*LUCAS*
Date Performed	*5/23/2011*	Analysis Year	*2014*
Analysis Time Period	*A.M. SCHOOL PEAK*		

Project Description *2014 TOTAL VOLUMES*

East/West Street: *LUCAS*	North/South Street: *WSMS EAST DRIVE*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*350*	*5*	*103*	*723*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*388*	*5*	*114*	*803*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*5*		*83*			
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*5*	*0*	*92*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*114*	*5*		*92*			
C (m) (veh/h)		*1166*	*135*		*658*			
v/c		*0.10*	*0.04*		*0.14*			
95% queue length		*0.32*	*0.11*		*0.48*			
Control Delay (s/veh)		*8.4*	*32.7*		*11.4*			
LOS		*A*	*D*		*B*			
Approach Delay (s/veh)	--	--	*12.5*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#4*
Jurisdiction	*LUCAS*
Analysis Year	*2014*

Project Description *2014 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *WSMS EAST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*435*	*2*	*48*	*352*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*499*	*2*	*55*	*404*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*3*		*59*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*3*	*0*	*67*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*55*	*3*		*67*			
C (m) (veh/h)		*1063*	*250*		*571*			
v/c		*0.05*	*0.01*		*0.12*			
95% queue length		*0.16*	*0.04*		*0.40*			
Control Delay (s/veh)		*8.6*	*19.6*		*12.1*			
LOS		*A*	*C*		*B*			
Approach Delay (s/veh)	--	--	*12.5*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DRC*	Intersection	*#4*
Agency/Co.	*C&P ENGINEERING*	Jurisdiction	*LUCAS*
Date Performed	*5/23/2011*	Analysis Year	*2020*
Analysis Time Period	*A.M. SCHOOL PEAK*		

Project Description *2020 TOTAL VOLUMES*

East/West Street: *LUCAS*	North/South Street: *WSMS EAST DRIVE*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*399*	*10*	*179*	*828*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*443*	*11*	*198*	*920*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*8*		*147*			
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*8*	*0*	*163*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*198*	*8*		*163*			
C (m) (veh/h)		*1107*	*76*		*611*			
v/c		*0.18*	*0.11*		*0.27*			
95% queue length		*0.65*	*0.34*		*1.07*			
Control Delay (s/veh)		*9.0*	*57.9*		*13.0*			
LOS		*A*	*F*		*B*			
Approach Delay (s/veh)	--	--	*15.1*					
Approach LOS	--	--	*C*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#4*
Jurisdiction	*LUCAS*
Analysis Year	*2020*

Project Description *2020 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *WSMS EAST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*495*	*4*	*85*	*391*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*568*	*4*	*97*	*449*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*5*		*104*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*5*	*0*	*119*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*97*	*5*		*119*			
C (m) (veh/h)		*1001*	*182*		*521*			
v/c		*0.10*	*0.03*		*0.23*			
95% queue length		*0.32*	*0.08*		*0.87*			
Control Delay (s/veh)		*9.0*	*25.3*		*13.9*			
LOS		*A*	*D*		*B*			
Approach Delay (s/veh)	--	--	*14.4*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DRC*	Intersection	*#5*
Agency/Co.	*C&P ENGINEERING*	Jurisdiction	*LUCAS*
Date Performed	*5/23/2011*	Analysis Year	*2012*
Analysis Time Period	*A.M. SCHOOL PEAK*		

Project Description *2012 TOTAL VOLUMES*

East/West Street: *LUCAS*	North/South Street: *LCA WEST DRIVE*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*414*	*107*	*35*	*989*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*460*	*118*	*38*	*1098*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*						
v (veh/h)		*38*						
C (m) (veh/h)		*996*						
v/c		*0.04*						
95% queue length		*0.12*						
Control Delay (s/veh)		*8.8*						
LOS		*A*						
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#5*
Jurisdiction	*LUCAS*
Analysis Year	*2012*

Project Description *2012 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA WEST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*614*	*59*	*20*	*446*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*705*	*67*	*22*	*512*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*						
v (veh/h)		*22*						
C (m) (veh/h)		*843*						
v/c		*0.03*						
95% queue length		*0.08*						
Control Delay (s/veh)		*9.4*						
LOS		*A*						
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*A.M. SCHOOL PEAK*

Site Information

Intersection	*#5*
Jurisdiction	*LUCAS*
Analysis Year	*2014*

Project Description *2014 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA WEST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*442*	*149*	*50*	*1076*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*491*	*165*	*55*	*1195*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*						
v (veh/h)		*55*						
C (m) (veh/h)		*931*						
v/c		*0.06*						
95% queue length		*0.19*						
Control Delay (s/veh)		*9.1*						
LOS		*A*						
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#5*
Jurisdiction	*LUCAS*
Analysis Year	*2014*

Project Description *2014 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA WEST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*654*	*83*	*27*	*512*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*751*	*95*	*31*	*588*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*						
v (veh/h)		*31*						
C (m) (veh/h)		*791*						
v/c		*0.04*						
95% queue length		*0.12*						
Control Delay (s/veh)		*9.7*						
LOS		*A*						
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*A.M. SCHOOL PEAK*

Site Information

Intersection	*#5*
Jurisdiction	*LUCAS*
Analysis Year	*2020*

Project Description *2020 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA WEST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*529*	*149*	*50*	*1239*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*587*	*165*	*55*	*1376*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*						
v (veh/h)		*55*						
C (m) (veh/h)		*858*						
v/c		*0.06*						
95% queue length		*0.21*						
Control Delay (s/veh)		*9.5*						
LOS		*A*						
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#5*
Jurisdiction	*LUCAS*
Analysis Year	*2020*

Project Description *2020 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA WEST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*758*	*83*	*27*	*579*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*871*	*95*	*31*	*665*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*						
v (veh/h)		*31*						
C (m) (veh/h)		*713*						
v/c		*0.04*						
95% queue length		*0.14*						
Control Delay (s/veh)		*10.3*						
LOS		*B*						
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*A.M. SCHOOL PEAK*

Site Information

Intersection	*#6*
Jurisdiction	*LUCAS*
Analysis Year	*2012*

Project Description *2012 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA EAST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*411*	*3*	*3*	*961*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*456*	*3*	*3*	*1067*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*63*		*22*			
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*70*	*0*	*24*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*3*	*70*		*24*			
C (m) (veh/h)		*1102*	*129*		*603*			
v/c		*0.00*	*0.54*		*0.04*			
95% queue length		*0.01*	*2.63*		*0.12*			
Control Delay (s/veh)		*8.3*	*61.9*		*11.2*			
LOS		*A*	*F*		*B*			
Approach Delay (s/veh)	--	--	*49.0*					
Approach LOS	--	--	*E*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#6*
Jurisdiction	*LUCAS*
Analysis Year	*2012*

Project Description *2012 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA EAST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*613*	*1*	*1*	*350*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*704*	*1*	*1*	*402*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*116*		*40*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*133*	*0*	*45*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*1*	*133*		*45*			
C (m) (veh/h)		*893*	*232*		*437*			
v/c		*0.00*	*0.57*		*0.10*			
95% queue length		*0.00*	*3.20*		*0.34*			
Control Delay (s/veh)		*9.0*	*39.5*		*14.2*			
LOS		*A*	*E*		*B*			
Approach Delay (s/veh)	--	--	*33.1*					
Approach LOS	--	--	*D*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*A.M. SCHOOL PEAK*

Site Information

Intersection	*#6*
Jurisdiction	*LUCAS*
Analysis Year	*2014*

Project Description *2014 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA EAST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*438*	*4*	*4*	*1036*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*486*	*4*	*4*	*1151*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*90*		*31*			
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*100*	*0*	*34*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*4*	*100*		*34*			
C (m) (veh/h)		*1073*	*109*		*580*			
v/c		*0.00*	*0.92*		*0.06*			
95% queue length		*0.01*	*5.59*		*0.19*			
Control Delay (s/veh)		*8.4*	*137.7*		*11.6*			
LOS		*A*	*F*		*B*			
Approach Delay (s/veh)	--	--	*105.7*					
Approach LOS	--	--	*F*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*P.M. SCHOOL PEAK*

Site Information

Intersection	*#6*
Jurisdiction	*LUCAS*
Analysis Year	*2014*

Project Description *2014 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA EAST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*652*	*2*	*2*	*377*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*749*	*2*	*2*	*433*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*162*		*57*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*186*	*0*	*65*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*2*	*186*		*65*			
C (m) (veh/h)		*858*	*208*		*411*			
v/c		*0.00*	*0.89*		*0.16*			
95% queue length		*0.01*	*7.09*		*0.56*			
Control Delay (s/veh)		*9.2*	*85.3*		*15.4*			
LOS		*A*	*F*		*C*			
Approach Delay (s/veh)	--	--	*67.2*					
Approach LOS	--	--	*F*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*DRC*
Agency/Co.	*C&P ENGINEERING*
Date Performed	*5/23/2011*
Analysis Time Period	*A.M. SCHOOL PEAK*

Site Information

Intersection	*#6*
Jurisdiction	*LUCAS*
Analysis Year	*2020*

Project Description *2020 TOTAL VOLUMES*

East/West Street: *LUCAS*

North/South Street: *LCA EAST DRIVE*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*521*	*8*	*8*	*1197*	
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*578*	*8*	*8*	*1330*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*92*		*33*			
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*102*	*0*	*36*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*8*	*102*		*36*			
C (m) (veh/h)		*989*	*72*		*513*			
v/c		*0.01*	*1.42*		*0.07*			
95% queue length		*0.02*	*8.34*		*0.23*			
Control Delay (s/veh)		*8.7*	*350.4*		*12.5*			
LOS		*A*	*F*		*B*			
Approach Delay (s/veh)	--	--	*262.3*					
Approach LOS	--	--	*F*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*DRC*	Intersection	*#6*
Agency/Co.	*C&P ENGINEERING*	Jurisdiction	*LUCAS*
Date Performed	*5/23/2011*	Analysis Year	*2020*
Analysis Time Period	*P.M. SCHOOL PEAK*		

Project Description *2020 TOTAL VOLUMES*

East/West Street: *LUCAS*	North/South Street: *LCA EAST DRIVE*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

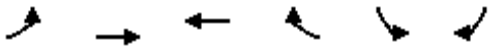
Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*754*	*4*	*4*	*440*	
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*0*	*866*	*4*	*4*	*505*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*166*		*61*			
Peak-Hour Factor, PHF	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*	*0.87*
Hourly Flow Rate, HFR (veh/h)	*190*	*0*	*70*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

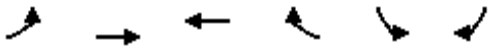
Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*	*L*		*R*			
v (veh/h)		*4*	*190*		*70*			
C (m) (veh/h)		*775*	*158*		*352*			
v/c		*0.01*	*1.20*		*0.20*			
95% queue length		*0.02*	*10.67*		*0.73*			
Control Delay (s/veh)		*9.7*	*193.4*		*17.7*			
LOS		*A*	*F*		*C*			
Approach Delay (s/veh)	--	--	*146.1*					
Approach LOS	--	--	*F*					

SYNCHRO SHEETS



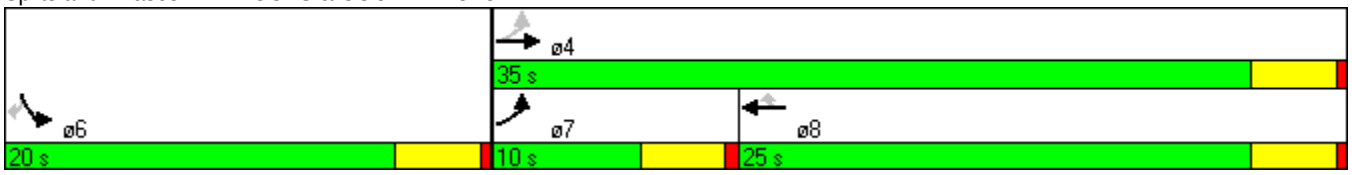
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	79	118	460	441	195	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			300	1000	350
Storage Lanes	0			1	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.980			0.950	
Satd. Flow (prot)	0	1825	1863	1583	1770	1583
Flt Permitted		0.736			0.950	
Satd. Flow (perm)	0	1371	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				490		130
Link Speed (mph)		50	50		50	
Link Distance (ft)		925	900		702	
Travel Time (s)		12.6	12.3		9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	88	131	511	490	217	130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	219	511	490	217	130
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	10.0	35.0	25.0	25.0	20.0	20.0
Total Split (%)	18.2%	63.6%	45.5%	45.5%	36.4%	36.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)		19.0	19.0	19.0	10.6	10.6
Actuated g/C Ratio		0.59	0.59	0.59	0.33	0.33
v/c Ratio		0.27	0.46	0.43	0.37	0.21
Control Delay		7.0	8.2	2.2	12.9	3.9
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		7.0	8.2	2.2	12.9	3.9
LOS		A	A	A	B	A
Approach Delay		7.0	5.2		9.6	
Approach LOS		A	A		A	
Stops (vph)		103	269	41	142	23
Fuel Used(gal)		3	8	3	4	1
CO Emissions (g/hr)		211	526	234	249	68

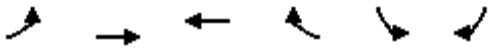


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
NOx Emissions (g/hr)		41	102	45	48	13
VOC Emissions (g/hr)		49	122	54	58	16
Dilemma Vehicles (#)		21	51	0	0	0
Queue Length 50th (ft)		22	58	0	33	0
Queue Length 95th (ft)		62	143	33	81	25
Internal Link Dist (ft)		845	820		622	
Turn Bay Length (ft)				300	1000	350
Base Capacity (vph)		1201	1237	1216	980	934
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.18	0.41	0.40	0.22	0.14

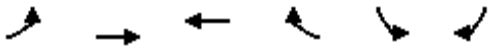
Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 32.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 6.4		Intersection LOS: A	
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: LUCAS & COUNTRY CLUB





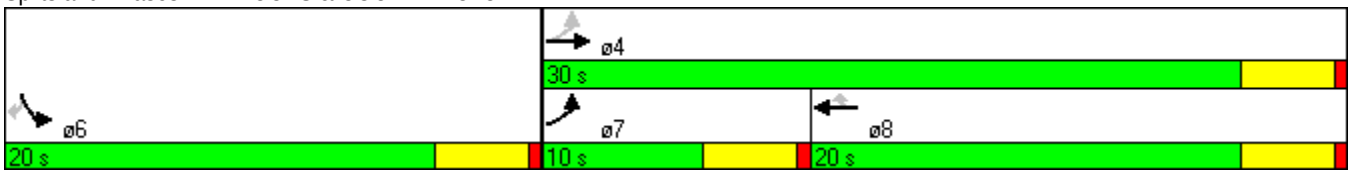
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	64	264	146	179	231	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			300	1000	350
Storage Lanes	0			1	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.990			0.950	
Satd. Flow (prot)	0	1844	1863	1583	1770	1583
Flt Permitted		0.913			0.950	
Satd. Flow (perm)	0	1701	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				206		66
Link Speed (mph)		50	50		50	
Link Distance (ft)		925	900		702	
Travel Time (s)		12.6	12.3		9.6	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	74	303	168	206	266	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	377	168	206	266	66
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	10.0	30.0	20.0	20.0	20.0	20.0
Total Split (%)	20.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)		12.7	12.7	12.7	10.5	10.5
Actuated g/C Ratio		0.43	0.43	0.43	0.35	0.35
v/c Ratio		0.52	0.21	0.26	0.43	0.11
Control Delay		10.1	7.2	2.4	11.4	3.8
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		10.1	7.2	2.4	11.4	3.8
LOS		B	A	A	B	A
Approach Delay		10.1	4.5		9.9	
Approach LOS		B	A		A	
Stops (vph)		204	78	23	156	15
Fuel Used(gal)		6	2	1	4	1
CO Emissions (g/hr)		401	157	102	277	37

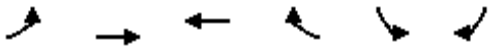


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
NOx Emissions (g/hr)		78	31	20	54	7
VOC Emissions (g/hr)		93	36	24	64	9
Dilemma Vehicles (#)		44	18	0	0	0
Queue Length 50th (ft)		39	15	0	30	0
Queue Length 95th (ft)		108	47	22	91	16
Internal Link Dist (ft)		845	820		622	
Turn Bay Length (ft)				300	1000	350
Base Capacity (vph)		1444	1155	1060	1063	977
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.26	0.15	0.19	0.25	0.07

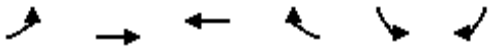
Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 29.6			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 8.1		Intersection LOS: A	
Intersection Capacity Utilization 47.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: LUCAS & COUNTRY CLUB





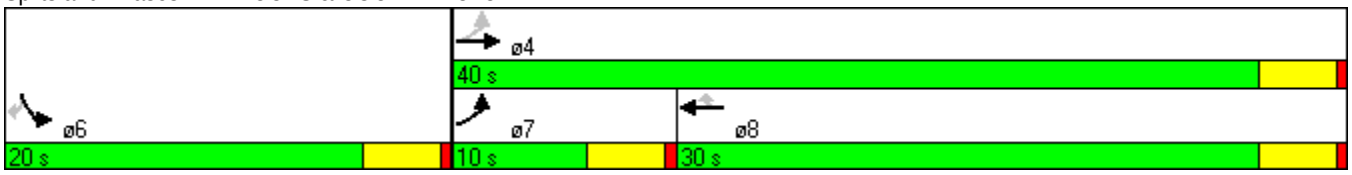
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	133	245	572	467	228	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			300	1000	350
Storage Lanes	0			1	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.983			0.950	
Satd. Flow (prot)	0	1831	1863	1583	1770	1583
Flt Permitted		0.610			0.950	
Satd. Flow (perm)	0	1136	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				519		204
Link Speed (mph)		50	50		50	
Link Distance (ft)		925	900		702	
Travel Time (s)		12.6	12.3		9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	148	272	636	519	253	204
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	420	636	519	253	204
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	10.0	40.0	30.0	30.0	20.0	20.0
Total Split (%)	16.7%	66.7%	50.0%	50.0%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)		30.6	30.6	30.6	12.4	12.4
Actuated g/C Ratio		0.59	0.59	0.59	0.24	0.24
v/c Ratio		0.62	0.57	0.45	0.59	0.38
Control Delay		12.0	9.1	2.0	25.1	5.6
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		12.0	9.1	2.0	25.1	5.6
LOS		B	A	A	C	A
Approach Delay		12.0	5.9		16.4	
Approach LOS		B	A		B	
Stops (vph)		225	310	28	186	29
Fuel Used(gal)		7	9	3	5	1
CO Emissions (g/hr)		461	635	230	352	103

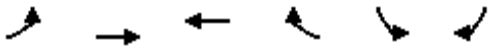


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
NOx Emissions (g/hr)		90	124	45	69	20
VOC Emissions (g/hr)		107	147	53	82	24
Dilemma Vehicles (#)		33	45	0	0	0
Queue Length 50th (ft)		70	102	0	78	0
Queue Length 95th (ft)		167	201	30	141	42
Internal Link Dist (ft)		845	820		622	
Turn Bay Length (ft)				300	1000	350
Base Capacity (vph)		812	1214	1213	582	658
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.52	0.52	0.43	0.43	0.31

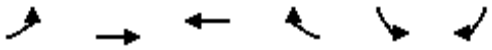
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 51.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 73.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: LUCAS & COUNTRY CLUB





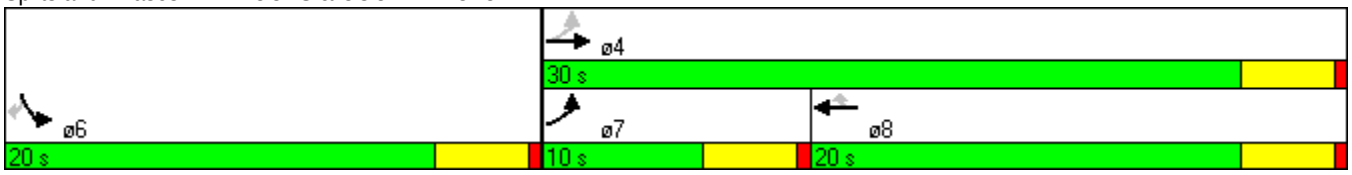
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	102	345	259	213	252	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			300	1000	350
Storage Lanes	0			1	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.989			0.950	
Satd. Flow (prot)	0	1842	1863	1583	1770	1583
Flt Permitted		0.863			0.950	
Satd. Flow (perm)	0	1608	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				245		101
Link Speed (mph)		50	50		50	
Link Distance (ft)		925	900		702	
Travel Time (s)		12.6	12.3		9.6	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	117	397	298	245	290	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	514	298	245	290	101
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	10.0	30.0	20.0	20.0	20.0	20.0
Total Split (%)	20.0%	60.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)		19.7	19.7	19.7	12.5	12.5
Actuated g/C Ratio		0.54	0.54	0.54	0.34	0.34
v/c Ratio		0.59	0.30	0.25	0.48	0.17
Control Delay		10.9	7.1	1.9	15.5	4.3
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		10.9	7.1	1.9	15.5	4.3
LOS		B	A	A	B	A
Approach Delay		10.9	4.8		12.6	
Approach LOS		B	A		B	
Stops (vph)		281	129	20	186	18
Fuel Used(gal)		8	4	2	5	1
CO Emissions (g/hr)		554	268	112	333	52

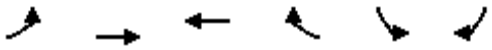


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
NOx Emissions (g/hr)		108	52	22	65	10
VOC Emissions (g/hr)		129	62	26	77	12
Dilemma Vehicles (#)		56	28	0	0	0
Queue Length 50th (ft)		72	34	0	50	0
Queue Length 95th (ft)		164	78	22	121	23
Internal Link Dist (ft)		845	820		622	
Turn Bay Length (ft)				300	1000	350
Base Capacity (vph)		1146	1137	1062	912	865
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.45	0.26	0.23	0.32	0.12

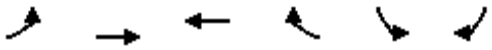
Intersection Summary			
Area Type:	Other		
Cycle Length: 50			
Actuated Cycle Length: 36.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: LUCAS & COUNTRY CLUB





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	144	289	627	501	251	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			300	1000	350
Storage Lanes	0			1	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.984			0.950	
Satd. Flow (prot)	0	1833	1863	1583	1770	1583
Flt Permitted		0.574			0.950	
Satd. Flow (perm)	0	1069	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				557		221
Link Speed (mph)		50	50		50	
Link Distance (ft)		925	900		702	
Travel Time (s)		12.6	12.3		9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	160	321	697	557	279	221
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	481	697	557	279	221
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	12.0	50.0	38.0	38.0	20.0	20.0
Total Split (%)	17.1%	71.4%	54.3%	54.3%	28.6%	28.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)		42.0	42.0	42.0	14.0	14.0
Actuated g/C Ratio		0.65	0.65	0.65	0.22	0.22
v/c Ratio		0.69	0.57	0.45	0.72	0.43
Control Delay		13.7	8.6	1.8	36.9	6.7
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		13.7	8.6	1.8	36.9	6.7
LOS		B	A	A	D	A
Approach Delay		13.7	5.6		23.6	
Approach LOS		B	A		C	
Stops (vph)		265	310	22	215	30
Fuel Used(gal)		8	9	3	6	2
CO Emissions (g/hr)		547	660	236	441	113

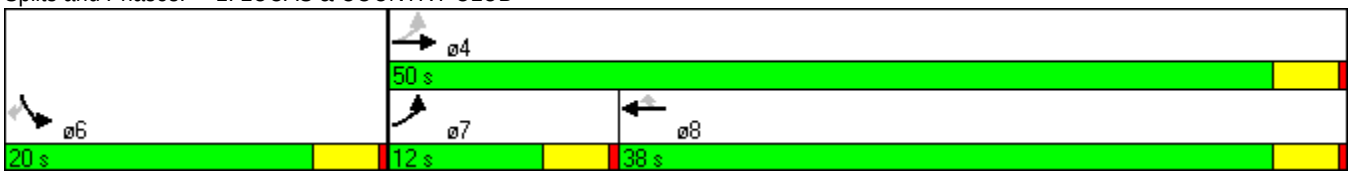


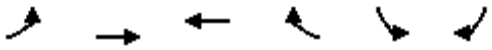
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
NOx Emissions (g/hr)		106	128	46	86	22
VOC Emissions (g/hr)		127	153	55	102	26
Dilemma Vehicles (#)		32	39	0	0	0
Queue Length 50th (ft)		109	140	0	111	0
Queue Length 95th (ft)		221	221	28	#207	49
Internal Link Dist (ft)		845	820		622	
Turn Bay Length (ft)				300	1000	350
Base Capacity (vph)		780	1275	1259	455	571
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.62	0.55	0.44	0.61	0.39

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 64.3			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: LUCAS & COUNTRY CLUB



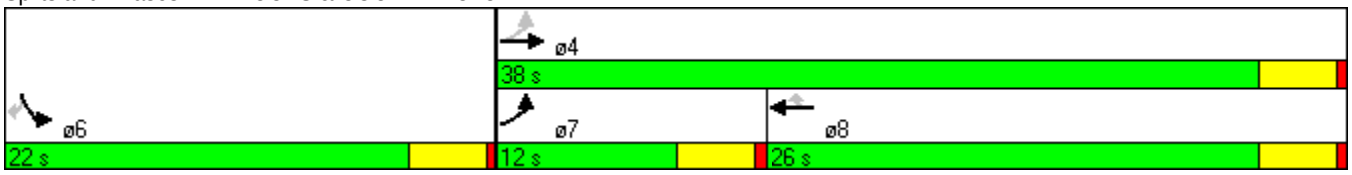


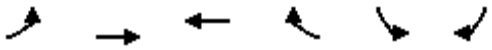
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	110	384	304	236	272	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			300	1000	350
Storage Lanes	0			1	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.989			0.950	
Satd. Flow (prot)	0	1842	1863	1583	1770	1583
Flt Permitted		0.848			0.950	
Satd. Flow (perm)	0	1580	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				271		110
Link Speed (mph)		50	50		50	
Link Distance (ft)		925	900		702	
Travel Time (s)		12.6	12.3		9.6	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	126	441	349	271	313	110
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	567	349	271	313	110
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	12.0	38.0	26.0	26.0	22.0	22.0
Total Split (%)	20.0%	63.3%	43.3%	43.3%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)		24.1	24.1	24.1	13.4	13.4
Actuated g/C Ratio		0.52	0.52	0.52	0.29	0.29
v/c Ratio		0.69	0.36	0.28	0.61	0.20
Control Delay		13.5	7.8	1.8	21.8	5.1
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		13.5	7.8	1.8	21.8	5.1
LOS		B	A	A	C	A
Approach Delay		13.5	5.2		17.5	
Approach LOS		B	A		B	
Stops (vph)		320	148	17	216	18
Fuel Used(gal)		9	4	2	6	1
CO Emissions (g/hr)		640	314	119	401	56

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
NOx Emissions (g/hr)		125	61	23	78	11
VOC Emissions (g/hr)		148	73	27	93	13
Dilemma Vehicles (#)		47	26	0	0	0
Queue Length 50th (ft)		97	47	0	73	0
Queue Length 95th (ft)		203	98	23	159	27
Internal Link Dist (ft)		845	820		622	
Turn Bay Length (ft)				300	1000	350
Base Capacity (vph)		1197	1146	1078	753	737
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.47	0.30	0.25	0.42	0.15

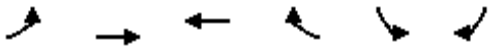
Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 67.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: LUCAS & COUNTRY CLUB





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	200	346	738	562	278	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			300	1000	350
Storage Lanes	0			1	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.982			0.950	
Satd. Flow (prot)	0	1829	1863	1583	1770	1583
Flt Permitted		0.428			0.950	
Satd. Flow (perm)	0	797	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				624		299
Link Speed (mph)		50	50		50	
Link Distance (ft)		925	900		702	
Travel Time (s)		12.6	12.3		9.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	222	384	820	624	309	299
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	606	820	624	309	299
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	15.0	68.0	53.0	53.0	22.0	22.0
Total Split (%)	16.7%	75.6%	58.9%	58.9%	24.4%	24.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)		64.0	64.0	64.0	17.4	17.4
Actuated g/C Ratio		0.72	0.72	0.72	0.19	0.19
v/c Ratio		1.06	0.62	0.48	0.90	0.54
Control Delay		72.1	9.1	1.7	64.8	8.0
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		72.1	9.1	1.7	64.8	8.0
LOS		E	A	A	E	A
Approach Delay		72.1	5.9		36.9	
Approach LOS		E	A		D	
Stops (vph)		393	354	19	244	34
Fuel Used(gal)		17	11	4	9	2
CO Emissions (g/hr)		1205	769	258	605	151



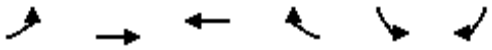
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
NOx Emissions (g/hr)		234	150	50	118	29
VOC Emissions (g/hr)		279	178	60	140	35
Dilemma Vehicles (#)		27	34	0	0	0
Queue Length 50th (ft)		~386	204	0	172	0
Queue Length 95th (ft)		#589	304	27	#318	66
Internal Link Dist (ft)		845	820		622	
Turn Bay Length (ft)				300	1000	350
Base Capacity (vph)		571	1333	1310	356	558
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		1.06	0.62	0.48	0.87	0.54

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.4			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 28.1		Intersection LOS: C	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			

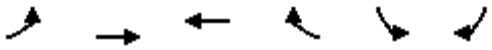
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: LUCAS & COUNTRY CLUB



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	151	448	347	260	304	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			300	1000	350
Storage Lanes	0			1	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected		0.988			0.950	
Satd. Flow (prot)	0	1840	1863	1583	1770	1583
Flt Permitted		0.803			0.950	
Satd. Flow (perm)	0	1496	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				299		148
Link Speed (mph)		50	50		50	
Link Distance (ft)		925	900		702	
Travel Time (s)		12.6	12.3		9.6	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	174	515	399	299	349	148
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	689	399	299	349	148
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	15.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	15.0	40.0	25.0	25.0	20.0	20.0
Total Split (%)	25.0%	66.7%	41.7%	41.7%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)		34.6	34.6	34.6	14.5	14.5
Actuated g/C Ratio		0.60	0.60	0.60	0.25	0.25
v/c Ratio		0.76	0.35	0.28	0.78	0.29
Control Delay		16.0	7.0	1.5	34.3	5.5
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		16.0	7.0	1.5	34.3	5.5
LOS		B	A	A	C	A
Approach Delay		16.0	4.7		25.7	
Approach LOS		B	A		C	
Stops (vph)		408	158	17	257	23
Fuel Used(gal)		12	5	2	7	1
CO Emissions (g/hr)		820	343	128	519	75

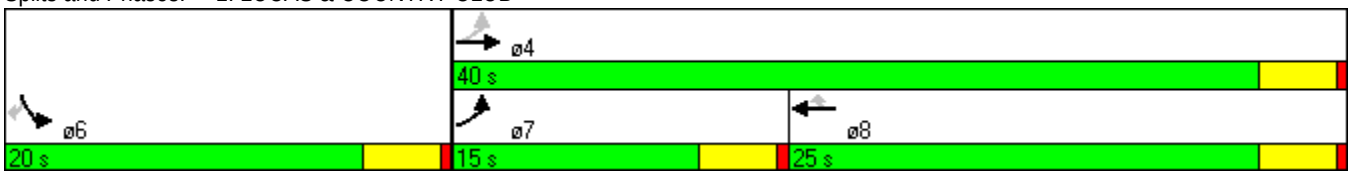


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
NOx Emissions (g/hr)		160	67	25	101	15
VOC Emissions (g/hr)		190	79	30	120	17
Dilemma Vehicles (#)		50	24	0	0	0
Queue Length 50th (ft)		160	64	0	115	0
Queue Length 95th (ft)		275	103	21	#214	33
Internal Link Dist (ft)		845	820		622	
Turn Bay Length (ft)				300	1000	350
Base Capacity (vph)		950	1127	1076	500	553
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.73	0.35	0.28	0.70	0.27

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 57.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 77.0%		ICU Level of Service D	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: LUCAS & COUNTRY CLUB



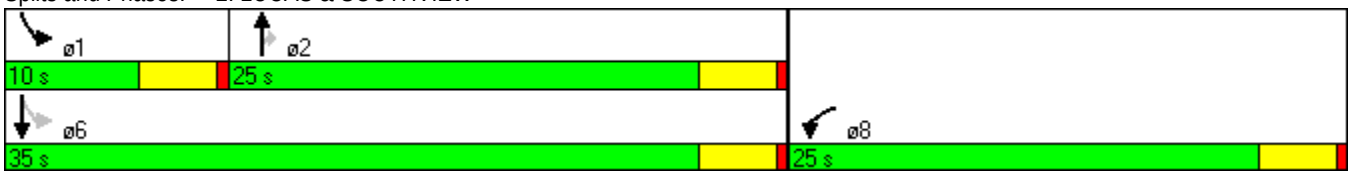
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	185	361	501	29	86	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		40	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.911			0.850		
Flt Protected	0.983					0.985
Satd. Flow (prot)	1668	0	1863	1583	0	1835
Flt Permitted	0.983					0.666
Satd. Flow (perm)	1668	0	1863	1583	0	1241
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	180			14		
Link Speed (mph)	50		50			50
Link Distance (ft)	808		600			538
Travel Time (s)	11.0		8.2			7.3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	199	388	539	31	92	208
Shared Lane Traffic (%)						
Lane Group Flow (vph)	587	0	539	31	0	300
Turn Type				Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	10.0	20.0
Total Split (s)	25.0	0.0	25.0	25.0	10.0	35.0
Total Split (%)	41.7%	0.0%	41.7%	41.7%	16.7%	58.3%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	None
Act Effct Green (s)	17.4		21.0	21.0		21.0
Actuated g/C Ratio	0.37		0.45	0.45		0.45
v/c Ratio	0.80		0.65	0.04		0.54
Control Delay	21.2		14.4	5.7		13.9
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	21.2		14.4	5.7		13.9
LOS	C		B	A		B
Approach Delay	21.2		13.9			13.9
Approach LOS	C		B			B
Stops (vph)	303		342	12		179
Fuel Used(gal)	10		9	0		4
CO Emissions (g/hr)	685		603	23		314

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
NOx Emissions (g/hr)	133		117	4		61
VOC Emissions (g/hr)	159		140	5		73
Dilemma Vehicles (#)	0		43	0		24
Queue Length 50th (ft)	91		114	3		59
Queue Length 95th (ft)	#309		202	13		121
Internal Link Dist (ft)	728		520			458
Turn Bay Length (ft)				40		
Base Capacity (vph)	892		1003	859		864
Starvation Cap Reductn	0		0	0		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	0.66		0.54	0.04		0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 47			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 16.8		Intersection LOS: B	
Intersection Capacity Utilization 83.7%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: LUCAS & SOUTHVIEW



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	51	109	188	94	204	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		40	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.908			0.850		
Flt Protected	0.984					0.978
Satd. Flow (prot)	1664	0	1863	1583	0	1822
Flt Permitted	0.984					0.768
Satd. Flow (perm)	1664	0	1863	1583	0	1431
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	117			101		
Link Speed (mph)	50		50			50
Link Distance (ft)	808		600			538
Travel Time (s)	11.0		8.2			7.3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	55	117	202	101	219	270
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	0	202	101	0	489
Turn Type				Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	15.0	20.0
Total Split (s)	20.0	0.0	20.0	20.0	15.0	35.0
Total Split (%)	36.4%	0.0%	36.4%	36.4%	27.3%	63.6%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	None
Act Effct Green (s)	9.1		18.7	18.7		20.2
Actuated g/C Ratio	0.28		0.57	0.57		0.62
v/c Ratio	0.32		0.19	0.11		0.55
Control Delay	8.3		4.3	1.4		7.9
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	8.3		4.3	1.4		7.9
LOS	A		A	A		A
Approach Delay	8.3		3.4			7.9
Approach LOS	A		A			A
Stops (vph)	56		70	10		237
Fuel Used(gal)	2		2	1		6
CO Emissions (g/hr)	136		137	38		414

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
NOx Emissions (g/hr)	27		27	7		81
VOC Emissions (g/hr)	32		32	9		96
Dilemma Vehicles (#)	0		21	0		64
Queue Length 50th (ft)	8		14	0		45
Queue Length 95th (ft)	53		41	12		133
Internal Link Dist (ft)	728		520			458
Turn Bay Length (ft)				40		
Base Capacity (vph)	972		1253	1098		1225
Starvation Cap Reductn	0		0	0		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	0.18		0.16	0.09		0.40

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 32.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 6.6		Intersection LOS: A	
Intersection Capacity Utilization 53.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: LUCAS & SOUTHVIEW

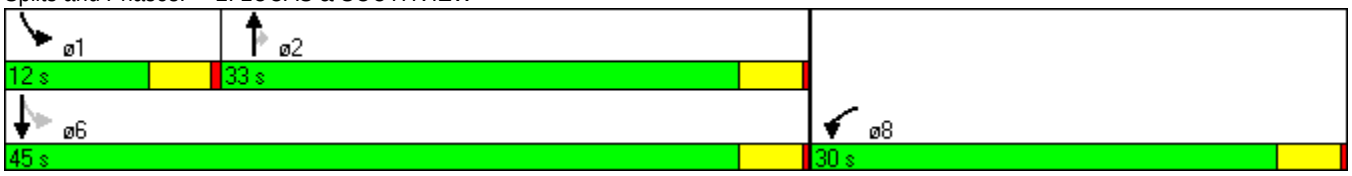
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	189	401	565	30	113	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		40	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.908			0.850		
Flt Protected	0.984					0.984
Satd. Flow (prot)	1664	0	1863	1583	0	1833
Flt Permitted	0.984					0.561
Satd. Flow (perm)	1664	0	1863	1583	0	1045
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	156			11		
Link Speed (mph)	50		50			50
Link Distance (ft)	808		600			538
Travel Time (s)	11.0		8.2			7.3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	203	431	608	32	122	253
Shared Lane Traffic (%)						
Lane Group Flow (vph)	634	0	608	32	0	375
Turn Type				Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	12.0	20.0
Total Split (s)	30.0	0.0	33.0	33.0	12.0	45.0
Total Split (%)	40.0%	0.0%	44.0%	44.0%	16.0%	60.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	None
Act Effct Green (s)	24.5		37.4	37.4		37.4
Actuated g/C Ratio	0.35		0.53	0.53		0.53
v/c Ratio	0.93		0.61	0.04		0.67
Control Delay	40.1		14.6	6.1		19.4
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	40.1		14.6	6.1		19.4
LOS	D		B	A		B
Approach Delay	40.1		14.2			19.4
Approach LOS	D		B			B
Stops (vph)	384		361	11		245
Fuel Used(gal)	14		9	0		6
CO Emissions (g/hr)	960		655	22		443

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
NOx Emissions (g/hr)	187		128	4		86
VOC Emissions (g/hr)	223		152	5		103
Dilemma Vehicles (#)	0		32	0		24
Queue Length 50th (ft)	220		175	4		114
Queue Length 95th (ft)	#434		273	15		214
Internal Link Dist (ft)	728		520			458
Turn Bay Length (ft)				40		
Base Capacity (vph)	729		1028	878		626
Starvation Cap Reductn	0		0	0		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	0.87		0.59	0.04		0.60

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 70.1			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 93.5%		ICU Level of Service F	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: LUCAS & SOUTHVIEW



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	52	127	220	96	230	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		40	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904			0.850		
Flt Protected	0.986					0.979
Satd. Flow (prot)	1660	0	1863	1583	0	1824
Flt Permitted	0.986					0.759
Satd. Flow (perm)	1660	0	1863	1583	0	1414
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	137			103		
Link Speed (mph)	50		50			50
Link Distance (ft)	808		600			538
Travel Time (s)	11.0		8.2			7.3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	56	137	237	103	247	323
Shared Lane Traffic (%)						
Lane Group Flow (vph)	193	0	237	103	0	570
Turn Type				Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	15.0	20.0
Total Split (s)	20.0	0.0	25.0	25.0	15.0	40.0
Total Split (%)	33.3%	0.0%	41.7%	41.7%	25.0%	66.7%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	None
Act Effct Green (s)	9.9		23.7	23.7		26.2
Actuated g/C Ratio	0.26		0.62	0.62		0.68
v/c Ratio	0.36		0.21	0.10		0.59
Control Delay	9.5		4.0	1.2		8.1
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	9.5		4.0	1.2		8.1
LOS	A		A	A		A
Approach Delay	9.5		3.2			8.1
Approach LOS	A		A			A
Stops (vph)	59		73	8		271
Fuel Used(gal)	2		2	1		7
CO Emissions (g/hr)	152		149	36		478

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
NOx Emissions (g/hr)	30		29	7		93
VOC Emissions (g/hr)	35		35	8		111
Dilemma Vehicles (#)	0		22	0		70
Queue Length 50th (ft)	11		17	0		61
Queue Length 95th (ft)	60		50	12		181
Internal Link Dist (ft)	728		520			458
Turn Bay Length (ft)				40		
Base Capacity (vph)	895		1348	1174		1187
Starvation Cap Reductn	0		0	0		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	0.22		0.18	0.09		0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 38.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 6.8		Intersection LOS: A	
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: LUCAS & SOUTHVIEW

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	200	430	611	31	122	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		40	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.908			0.850		
Flt Protected	0.984					0.984
Satd. Flow (prot)	1664	0	1863	1583	0	1833
Flt Permitted	0.984					0.512
Satd. Flow (perm)	1664	0	1863	1583	0	954
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	146			10		
Link Speed (mph)	50		50			50
Link Distance (ft)	808		600			538
Travel Time (s)	11.0		8.2			7.3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	215	462	657	33	131	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	677	0	657	33	0	405
Turn Type				Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	12.0	20.0
Total Split (s)	31.0	0.0	37.0	37.0	12.0	49.0
Total Split (%)	38.8%	0.0%	46.3%	46.3%	15.0%	61.3%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	None
Act Effct Green (s)	27.0		45.0	45.0		45.0
Actuated g/C Ratio	0.34		0.56	0.56		0.56
v/c Ratio	1.03		0.63	0.04		0.75
Control Delay	65.8		15.2	6.3		24.7
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	65.8		15.2	6.3		24.7
LOS	E		B	A		C
Approach Delay	65.8		14.8			24.7
Approach LOS	E		B			C
Stops (vph)	432		396	11		278
Fuel Used(gal)	18		10	0		7
CO Emissions (g/hr)	1279		720	23		521

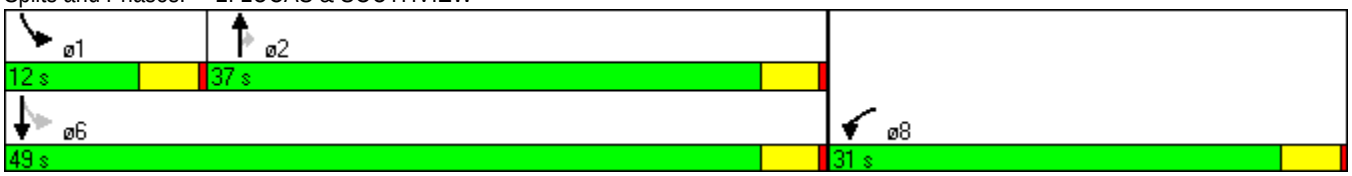
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
NOx Emissions (g/hr)	249		140	4		101
VOC Emissions (g/hr)	297		167	5		121
Dilemma Vehicles (#)	0		31	0		23
Queue Length 50th (ft)	~314		205	5		142
Queue Length 95th (ft)	#521		313	16		#312
Internal Link Dist (ft)	728		520			458
Turn Bay Length (ft)				40		
Base Capacity (vph)	658		1048	895		537
Starvation Cap Reductn	0		0	0		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	1.03		0.63	0.04		0.75

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 36.5		Intersection LOS: D	
Intersection Capacity Utilization 99.9%		ICU Level of Service F	
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.

Splits and Phases: 2: LUCAS & SOUTHVIEW



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	55	136	238	102	248	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		40	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904			0.850		
Flt Protected	0.986					0.979
Satd. Flow (prot)	1660	0	1863	1583	0	1824
Flt Permitted	0.986					0.752
Satd. Flow (perm)	1660	0	1863	1583	0	1401
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	146			103		
Link Speed (mph)	50		50			50
Link Distance (ft)	808		600			538
Travel Time (s)	11.0		8.2			7.3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	59	146	256	110	267	355
Shared Lane Traffic (%)						
Lane Group Flow (vph)	205	0	256	110	0	622
Turn Type				Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	15.0	20.0
Total Split (s)	20.0	0.0	25.0	25.0	15.0	40.0
Total Split (%)	33.3%	0.0%	41.7%	41.7%	25.0%	66.7%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	None
Act Effct Green (s)	8.3		32.4	32.4		32.4
Actuated g/C Ratio	0.19		0.73	0.73		0.73
v/c Ratio	0.48		0.19	0.09		0.61
Control Delay	11.4		3.7	1.3		8.4
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	11.4		3.7	1.3		8.4
LOS	B		A	A		A
Approach Delay	11.4		3.0			8.4
Approach LOS	B		A			A
Stops (vph)	63		74	10		304
Fuel Used(gal)	2		2	1		8
CO Emissions (g/hr)	167		155	40		533

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
NOx Emissions (g/hr)	32		30	8		104
VOC Emissions (g/hr)	39		36	9		124
Dilemma Vehicles (#)	0		18	0		49
Queue Length 50th (ft)	16		19	1		73
Queue Length 95th (ft)	63		55	13		222
Internal Link Dist (ft)	728		520			458
Turn Bay Length (ft)				40		
Base Capacity (vph)	772		1363	1186		1106
Starvation Cap Reductn	0		0	0		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	0.27		0.19	0.09		0.56

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 44.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: LUCAS & SOUTHVIEW

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	226	500	701	35	152	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		40	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.907			0.850		
Flt Protected	0.985					0.983
Satd. Flow (prot)	1664	0	1863	1583	0	1831
Flt Permitted	0.985					0.410
Satd. Flow (perm)	1664	0	1863	1583	0	764
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	145			10		
Link Speed (mph)	50		50			50
Link Distance (ft)	808		600			538
Travel Time (s)	11.0		8.2			7.3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	243	538	754	38	163	322
Shared Lane Traffic (%)						
Lane Group Flow (vph)	781	0	754	38	0	485
Turn Type				Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	12.0	20.0
Total Split (s)	29.0	0.0	38.0	38.0	13.0	51.0
Total Split (%)	36.3%	0.0%	47.5%	47.5%	16.3%	63.8%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	None
Act Effct Green (s)	25.0		47.0	47.0		47.0
Actuated g/C Ratio	0.31		0.59	0.59		0.59
v/c Ratio	1.26		0.69	0.04		1.08
Control Delay	153.0		15.6	5.8		86.3
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	153.0		15.6	5.8		86.3
LOS	F		B	A		F
Approach Delay	153.0		15.1			86.3
Approach LOS	F		B			F
Stops (vph)	485		469	11		340
Fuel Used(gal)	34		12	0		15
CO Emissions (g/hr)	2361		845	24		1026

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
NOx Emissions (g/hr)	459		164	5		200
VOC Emissions (g/hr)	547		196	6		238
Dilemma Vehicles (#)	0		36	0		24
Queue Length 50th (ft)	~447		238	5		~275
Queue Length 95th (ft)	#662		365	17		#455
Internal Link Dist (ft)	728		520			458
Turn Bay Length (ft)				40		
Base Capacity (vph)	620		1095	934		449
Starvation Cap Reductn	0		0	0		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	1.26		0.69	0.04		1.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.26			
Intersection Signal Delay: 84.2		Intersection LOS: F	
Intersection Capacity Utilization 114.3%		ICU Level of Service H	
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.

Splits and Phases: 2: LUCAS & SOUTHVIEW

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	62	162	275	115	289	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		40	0	
Storage Lanes	1	0		1	0	
Taper Length (ft)	25	25		25	25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.903			0.850		
Flt Protected	0.986					0.979
Satd. Flow (prot)	1659	0	1863	1583	0	1824
Flt Permitted	0.986					0.725
Satd. Flow (perm)	1659	0	1863	1583	0	1350
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	173			101		
Link Speed (mph)	50		50			50
Link Distance (ft)	808		600			538
Travel Time (s)	11.0		8.2			7.3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	67	174	296	124	311	405
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	0	296	124	0	716
Turn Type				Perm	pm+pt	
Protected Phases	8		2		1	6
Permitted Phases				2	6	
Detector Phase	8		2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	15.0	20.0
Total Split (s)	20.0	0.0	35.0	35.0	15.0	50.0
Total Split (%)	28.6%	0.0%	50.0%	50.0%	21.4%	71.4%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	0.5		0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		None	None	None	None
Act Effct Green (s)	8.8		39.7	39.7		39.7
Actuated g/C Ratio	0.15		0.70	0.70		0.70
v/c Ratio	0.60		0.23	0.11		0.76
Control Delay	15.2		3.9	1.5		13.2
Queue Delay	0.0		0.0	0.0		0.0
Total Delay	15.2		3.9	1.5		13.2
LOS	B		A	A		B
Approach Delay	15.2		3.2			13.2
Approach LOS	B		A			B
Stops (vph)	70		82	11		377
Fuel Used(gal)	3		3	1		10
CO Emissions (g/hr)	204		176	45		689

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
NOx Emissions (g/hr)	40		34	9		134
VOC Emissions (g/hr)	47		41	10		160
Dilemma Vehicles (#)	0		19	0		53
Queue Length 50th (ft)	24		25	2		108
Queue Length 95th (ft)	82		69	17		#432
Internal Link Dist (ft)	728		520			458
Turn Bay Length (ft)				40		
Base Capacity (vph)	610		1367	1188		1085
Starvation Cap Reductn	0		0	0		0
Spillback Cap Reductn	0		0	0		0
Storage Cap Reductn	0		0	0		0
Reduced v/c Ratio	0.40		0.22	0.10		0.66

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 56.9			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 10.5		Intersection LOS: B	
Intersection Capacity Utilization 73.7%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: LUCAS & SOUTHVIEW