

# PLAN COMMISSION STAFF REPORT

To:

Members of the Plan Commission

From:

Tom Vander Woude, Planning Director

**Meeting Date:** 

July 14, 2020

Agenda Item:

PC Docket No. 20-003

Application:

**ZONING AMENDMENT - Planned Unit Development** 

Hearing:

**PUBLIC HEARING** 

**Summary:** 

Maple Leaf Crossing LLC requesting approval of the Maple Leaf Crossing Planned

**Unit Development** 

Applicant:

Maple Leaf Crossing LLC represented by Jay Lieser and David Beach

**Property Address:** 

9450 Calumet Avenue

**Current Zoning:** 

CD-4.A General Urban A Character District

Adjacent Zoning:

North: SD-M

South: SD-M/PUD East: CD-4.A

West: SD-M

**Action Requested:** 

Favorable recommendation to the Town Council to approve the Maple

**Leaf Crossing Planned Unit Development** 

**Additional Actions Required:** 

Findings of Fact

**Staff Recommendation:** 

Favorable recommendation with conditions

Attachments:

Maple Leaf Crossing Town Council Ordinance

Exhibit A: Development Plan (engineering plans prepared by Torrenga

Engineering dated 06.26.2020

Exhibit B: Development Requirements (DEVELOPMENTAL STANDARDS FOR THE MAPLE LEAF CROSSING DEVELOPMENT AT THE MUNSTER

**BUSINESS COMPLEX PLANNED UNIT DEVELOPMENT** 

Exhibit C: Landscape Plan prepared by Planned Environment Associates, dated 06.29.2020

Maple Leaf Crossing Partial Site Plan prepared by Borderline Design LLC dated 03/09/2020

Technical Memorandum Maple Leaf Crossing Traffic and Parking Study prepared by Ciorba Group dated June 2020

# REQUESTED ACTION

# The following action is being requested:

# Recommendation to approve the Maple Leaf Crossing PUD

### The PUD includes:

- 1. A new set of development standards containing a list of all permitted and prohibited uses, any additional use restrictions (such as hours of operation), and all design standards, e.g. architecture, building materials, landscaping, etc.
- 2. Phasing plan
- 3. Site engineering

Note that the Developmental Standards document attached to this memo incorporates the engineering, phasing, and landscaping plans by reference.

The recommendation of the Plan Commission will be forwarded to the Town Council. The Town Council may approve the recommendation, modify the recommendation, or deny the recommendation. An approval is final. A denial or modification to the recommendation is returned to the Plan Commission for consideration whether to accept or reject the denial or modifications. If accepted, the amendment is approved. If rejected, the Town Council must vote a second time to confirm its original action.

### **BACKGROUND**

Maple Leaf Crossing LLC has entered into a development agreement with the Town of Munster to redevelop the Munster Business Complex Planned Unit Development. The proposed development is named Maple Leaf Crossing and will contain a mixture of retail, office, and hotel space. A section of the development will include buildings constructed of metal shipping containers. The proposed development is subject to both the development agreement and the Planned Unit Development standards.

The development agreement specifically states that the project must include:

- (a) approximately 80,000 to 100,000 square feet of professional office and retail space, including some container architecture which (i) shall include a minimum of 10 containers providing functional retail spaces to be restricted by the Developer for rent to owner-operated businesses (the "Restricted Retail Spaces"), (ii) Restricted Retail Spaces shall be offered for rent by the Developer to businesses which shall comply with restrictions described in Section 1.10(A)(3) hereof, shall not consist of any franchise already operating within a fifteen (15) mile radius of the Project Site, and shall have no more than ten (10) full-time employees, and (iii) Restricted Retail Spaces shall be offered for rent by such businesses at the reduced rate of \$15 per square foot gross rent...
- (b) approximately 10,000 to 15,000 square feet of restaurant space; and
- (c) approximately 24,000 square feet of warehouse space.

# PLAN COMMISSION PROJECT HISTORY

# October 2019

Maple Leaf Crossing LLC presented preliminary concepts to the Plan Commission including representative images.

# February 2020

The Plan Commission held preliminary hearings for PC 20-002 Preliminary Plat and PC 20-003 PUD Amendment.

### March 2020

The Plan Commission held public hearings for PC 20-002 Preliminary Plat and PC 20-003 PUD Amendment. The Plan Commission voted to endorse a conceptual site plan.

# April 2020

Maple Leaf Crossing LLC requested and received continuances for PC 20-002 Preliminary Plat and PC 20-003 PUD Amendment to allow more time to prepare plans.

### May 2020

The Plan Commission approved PC 20-002 granting preliminary plat approval contingent upon staff review and approval of the engineering plans. PC 20-003 was tabled to allow more time for the applicant to provide a complete set of materials.

### June 2020

Revised engineering and landscaping plans along with a traffic and parking study were submitted to the Plan Commission. PC 20-003 was tabled to allow the Plan Commission and staff time to review the submitted materials.

# **ANALYSIS**

# Site Plan

Staff has reviewed the development standards document and the plans attached here and finds that they are generally in conformity with the attached conceptual plan approved by the Plan Commission in March 2020 (Maple Leaf Crossing Partial Site Plan prepared by Borderline Design LLC dated 03/09/2020). They have also been revised substantially in keeping with previous staff comments.

A phasing plan has been provided which shows the north half of the development, the proposed hotel and four story office building along with the required parking, to be the first phase and the remaining south half to be the second phase. The PUD ordinance and development standards do not commit to specific timing of the phases, but the Munster zoning code requires that a PUD be completed within 5 years of the establishment of the district.

# **Parking**

A traffic and parking study has been provided by the applicants, which confirms that the number of parking spaces in the development are sufficient. 350 spaces are required, and 358 parking spaces are provided. The overall parking calculation is based on a shared parking factor of 1.7 which allows a certain number of spaces to count towards multiple uses, on the assumption that the uses have different peak times. The proposed phasing of the development provides sufficient parking spaces for each phase.

### **Traffic**

The completion of the Maple Leaf Crossing development assumes the installation of a traffic signal at the intersection of Calumet Avenue and Maple Leaf Boulevard. The applicant has not provided any details regarding the design of the intersection or timing of the signal but has represented that a detailed traffic study will be completed after the completion of the 45<sup>th</sup> Street underpass project. Staff notes that the proposed Maple Leaf Boulevard right-of-way is wide enough to only accommodate three traffic lanes, which will constrain any future intersection.

Staff recommends that the Plan Commission require a commitment from the developer that Maple Leaf Crossing LLC will design and construct this intersection and traffic signal according to the Town's standards prior to the construction of any buildings within the Maple Leaf Crossing PUD.

# Pedestrian and Bicycle Infrastructure

Adequate sidewalks are included throughout the development with multiple pedestrian connections to Calumet. A 10' bike path is proposed along the south side of Maple Leaf Boulevard. At the June 2020 public hearing for this project, one remonstrant expressed concern that the location of the path will pose

a danger to westbound cyclists, who will not be seen by drivers exiting onto Maple Leaf Boulevard. The plans have not been revised to account for this.

### **Architectural Standards**

The proposed development standards include building material standards from the former Munster Business Complex PUD and incorporate the architectural standards of the CD-4.A district by reference.

# Landscaping

The landscaping plan for the development is incorporated into the development standards document by reference. There are no additional standards being proposed. Staff has identified the following revisions required by the Munster Zoning ordinance.

- Parking lot buffer trees must be planted along Calumet Avenue spaced at intervals equal to their mature canopy, e.g. every 15-20 feet.
- 2. Shade trees must be planted in sidewalks spaced at 30-foot intervals. Ornamental trees may be substituted if spaced at intervals equal to their mature canopy.
  - a. Tree grates can be used to ensure a minimum 5-foot ADA compliant path of travel.
  - b. Specifications must be provided for the tree pits and any tree grates.
- 3. Locations and specifications for bike racks and ornamental fencing must be provided.
- 4. Planting specifications are required.
- 5. 3.0'-3.5' ornamental fencing or a masonry wall is required between the parking lot and Calumet Avenue.
- 6. The landscape ordinance review references the previous zoning ordinance and should be removed or replaced with the Town's current standards.
- 7. In the event that construction of Maple Leaf Boulevard requires the removal of the existing chain link and barbed wire fence, it may be replaced with an ornamental, wrought iron-style security fence, the detail for which must be submitted. Chain link fencing is permitted at rear and sides of lots only. Barbed wire is not permitted.

# Lighting

The lighting plan for the development is incorporated into the development standards document by reference, with some additional standards being proposed. Staff has identified the following revisions required by the Munster Zoning ordinance

- 1. The maximum permitted height of fixtures is 20 feet, except for streetlights.
- 2. The maximum permitted color temperature of fixtures is 3000K.
- 3. All fixtures are required to be fully cut off or fully shielded.
- 4. Provide specification sheets for all light fixtures, light poles, and light pole bases.
- 5. Confirm that all light fixtures are directed down and not tilted.

6. Light E-5 appears to be located within the 10' bike path and must be relocated.

Staff also recommends that a commercial-style pole and fixture be substituted for the proposed streetlight style poles and fixtures along the east and south sides of the property, though this is not specifically required by the Munster zoning ordinance.

# **Engineering**

The engineering plans for the development are incorporated into the development standards document by reference. The Town Engineer has reviewed the stormwater report and finds the proposed stormwater plans to be acceptable. Staff has identified the following revisions required by the Munster Zoning ordinance

- 1. The 60-degree angled parking area along the southern edge of the development does not meet minimum standards and must be adjusted:
  - a. Stall depth measured from the curb is to be a minimum of 20'
  - b. Drive aisle is to be a minimum of 16' wide
- 2. Eliminate "new chain link fence" along north side of Maple Leaf Boulevard. Chain link fencing is permitted at rear and sides of lots only

Staff also recommends the following, which are not specifically required by the Munster zoning ordinance:

- 1. Identify a proposed location for the utility pole relocated from the Maple Leaf Boulevard right-of-way or bury the utility lines rather than installing a new pole.
- 2. Speed limit signs should be posted along the north curb of Maple Leaf Boulevard.

# **Other Standards**

In any area where the ordinance or reference plans are silent, the development standards for zoning district CD-4.A and other generally applicable sections of the zoning ordinance will control.

# **Development Plan Approval**

As noted above, this approval is a first step and allows the developer to install public infrastructure. Before any buildings can be constructed, the developer must complete or provide a bond for all required public infrastructure and receive final plat approval. In addition, no building may be constructed without receiving the approval of the Plan Commission in keeping with Section 26-6.804.G of the Munster zoning ordinance. At that time, the Plan Commission will review detailed architectural and site plans for conformity with the approved PUD documents.

# **MOTION**

The Plan Commission may wish to consider the following motion:

Motion to forward a favorable recommendation to the Munster Town Council to approve PC Docket No. 20-002 adopting the Maple Leaf Crossing Planned Unit Development, upon the conditions that the plans be revised in accordance with the Plan Commission staff report dated July 14, 2020 and including a commitment from the developer that Maple Leaf Crossing LLC will commission a traffic study for and design and construct the Calumet Avenue/Maple Leaf Boulevard intersection and traffic signal according to the Town's standards prior to the construction of any buildings within the Maple Leaf Crossing PUD.

# ORDINANCE NO.

# AN ORDINANCE OF THE TOWN OF MUNSTER TOWN COUNCIL REZONING CERTAIN PROPERTY AS THE MAPLE LEAF CROSSING PUD AND ADOPTING DEVELOPMENTAL STANDARDS FOR THE MUNSTER BUSINESS COMPLEX PLANNED UNIT DEVELOPMENT

WHEREAS, the Munster Redevelopment Commission previously applied for rezoning of the Munster Business Complex, which was adopted as Ordinance 1701 on October 17, 2016. WHEREAS, the Town of Munster adopted Zoning Ordinance No. 1788 on December 23, 2019, which substantially revised the previous zoning code and maps for the Town of Munster.

WHEREAS, the Munster Town Council, Munster Plan Commission and Munster Redevelopment Commission have all engaged in significant discussion and planning with Maple Leaf Crossing, LLC, since Ordinance 1701 was passed in October, 2016.

WHEREAS, the Munster Plan Commission has held multiple public meetings, and approved the preliminary plat on May 12, 2020 for the development to be known as Maple Leaf Crossing on the Munster Business Complex site.

WHEREAS, the Munster Town Council desires to amend the Munster Business Complex Planned Unit Development, rename it to the Maple Leaf Crossing Planned Unit Development, and rezone and adopt development standards for Maple Leaf Crossing Planned Unit Development as set forth herein and in certain Development Standards approved concurrently herewith.

# NOW, THEREFORE, BE IT ORDAINED by the Town Council as follows:

- 1. The Munster Business Complex Planned Unit Development shall be rezoned pursuant to the Approved Development Plan and Development Standards approved by the Town of Munster Plan Commission and Munster Town Council.
- 2. The Munster Business Complex Planned Unit Development shall now be known as the Maple Leaf Crossing Planned Unit Development.
- 3. The Maple Leaf Crossing PUD shall be developed according to the Approved Development Plan approved by the Munster Plan Commission on July 14, 2020, as amended, a true and correct copy of which is attached hereto as Exhibit A and incorporated herein.
- 4. The Development Standards for the Maple Leaf Crossing Planned Unit Development attached as Exhibit B are hereby adopted and ordained.

	ORDAINED and Al	DOPTED by the Town Council of the Town of Munster, Indiana on
the	Day of	, 2020 by a vote of in favor and
oppose		
• •		
		TOWN COUNCIL OF THE TOWN OF
		MUNSTER, LAKE COUNTY, INDIANA

# MAPLE LEAF CROSSING

# A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE COUNTY, INDIANA

	INDEX
PAGE	DESCRIPTION
COVER	TITLE PAGE
C-1.0	EXISTING TOPOGRAPHY & UTILITIES
C-1.1	DEMOLITION PLAN
C-2.0	SITE PLAN
C-2.1	SIGNAGE PLAN
C-3.0	SANITARY SEWERS & WATERMAIN PLAN
C-4.0	STORM SEWERS & GRADING PLAN
C-5.0 TO C-5.3	DETAILS & SPECIFICATIONS
C-6.0	STORM WATER POLLUTION PREVENTION PLAN
C-7.0 TO C-7.1	STORM WATER POLLUTION PREVENTION PLAN DETAILS & SPECIFICATIONS
1 OF 1	FINAL PLAT

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VICINITY MAP



NOTES: 1. TOTAL SITE AREA =  $7.049\pm$  (ACRES)  $307.066\pm$  (S.F)

- THIS PROPERTY IS LOCATED IN FLOOD ZONE "X". AMEAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN AS TAKEN FROM THE FLOOD INSURANCE RATE MAP (FRM) FOR MUNISTER, LAKE COUNTY, INDIANA, MAP NUMBER 18099C0117E, EFFECTIVE OATE JANUARY 18, 2012.
- BENCHMARK(S):
  TBU #II FIRE HYDRAWI LOCATED ALONG THE WEST SIDE OF CALUMET AVENUE, 85 65
  FEET SOUTH OF THE NORTHWEST COMNER OF LOT 1 IN MUNISTER BUSINESS COMPLEX,
  SOUTH SOUTHEAST BOLT ELEVATION 618 87.

TBM #2 - MAG, MAIL SET LOCATED ALONG THE EAST SIDE OF CALUMET AVENUE AT CONCRETE SIDEWALK, 120 FEET SOUTH OF THE NORTH LINE OF LOT 1 IN MUNISTER BUSINESS COMPLEX, ELEVATION 616,73.

- 5 EXISTING TOPOGRAPHY AND UTILITIES DATA ARE PROVIDED AND TAKEN FROM TORRENGA SURVEYING, LLC, JOB NO: 2019-0676 DATED 03-25-2020
- A ALL VERTICAL DATUM IS BASED ON NAVDBO
- 7 HYDROLOGIC UNIT CODES: 07120003030030- HART DITCH (PLUM CREEK)-DYER DITCH
- 9. CURRENT ZONING: CD-4A WITH NO GROUND FLOOR RESIDENTIAL USES PERMIT

Know what's below. Call before you dig.

"IT'S THE LAW" 811 or 1-800-382-5544

CALL TOLL FREE
PER INDIAMS STATE LAW ICB-1-25.
IT IS AGAINST THE LAW ICB I-25.
IT IS AGAINST THE LAW ICB I-25.
WITHOUT MODERNIC THE UNDERGROUND
LOCATION SERVICE THO (2) WORKING
DAYS BUT DIST. COMMINIOR WORK.

MUNSTER

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DATE AND REVISIONS:

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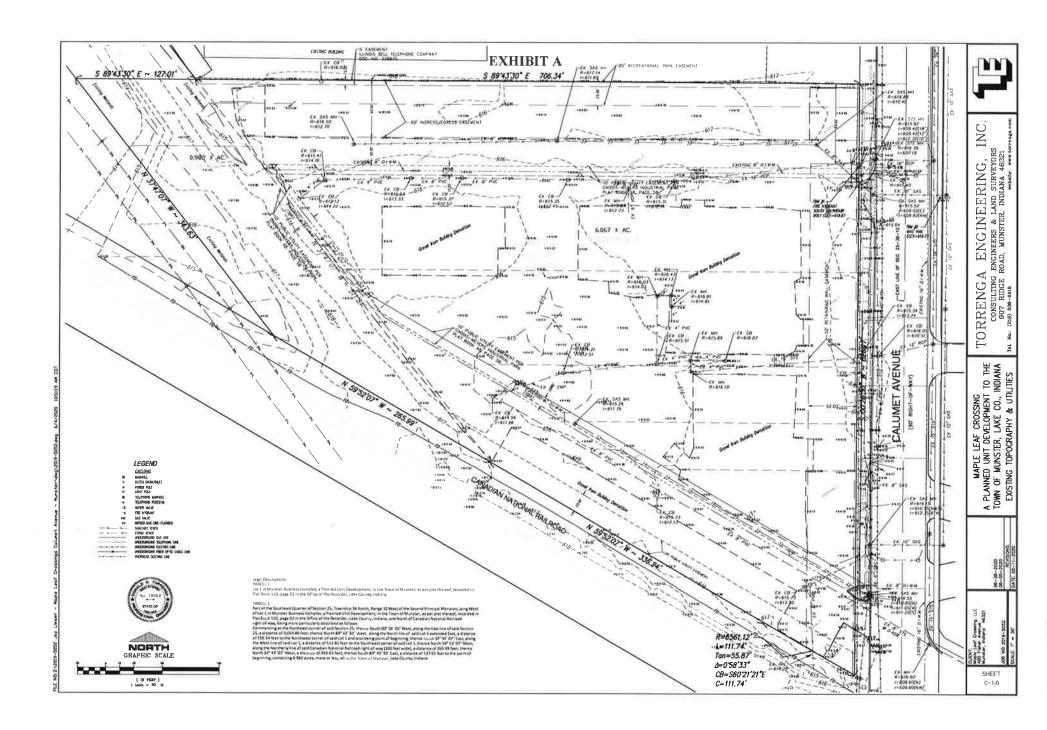
CLIENT/OWNER: Maple Leaf Crossing, LLC 400 Fisher Avenue Munster, IN 46321

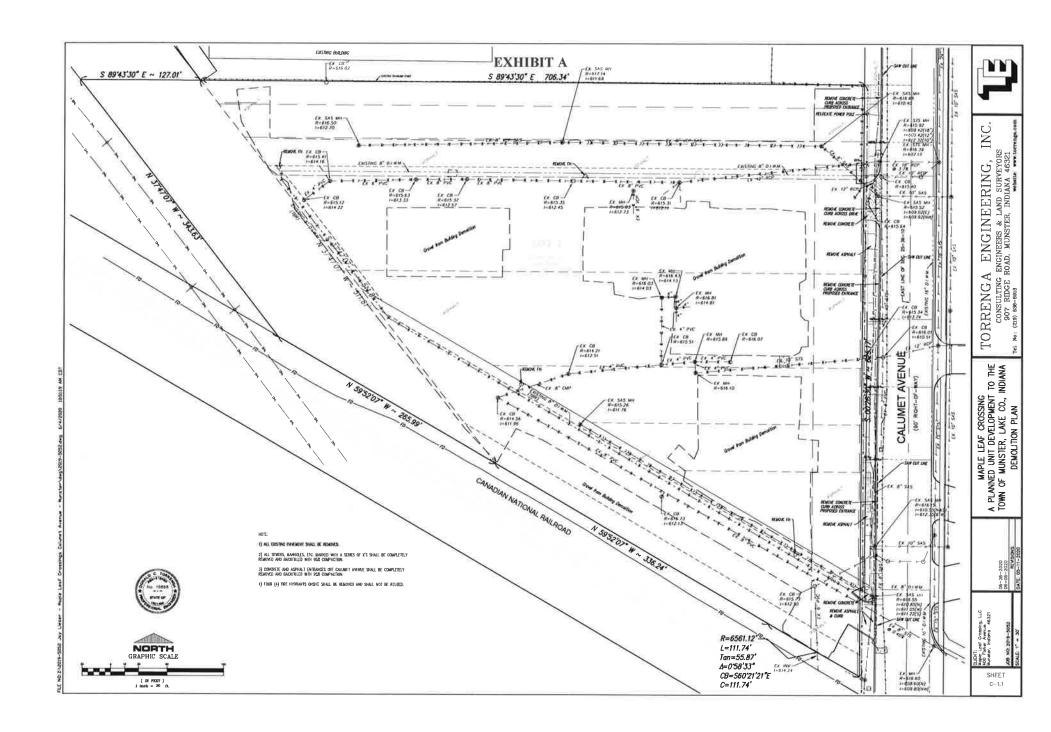
PREPARED BY: Torrenga Engineering, Inc. 907 Ridge Road Munster, Indiana 46321 (219)836 - 8918

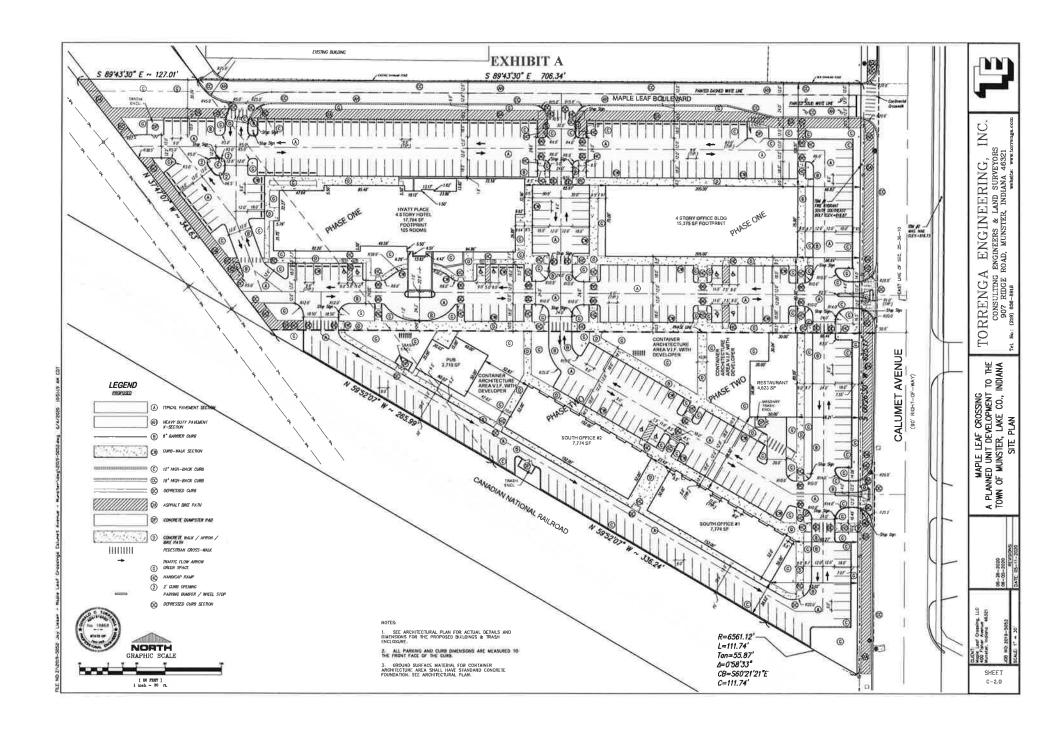
CERTIFIED BY: DONALD C. TORRENGA P.E. # 19868

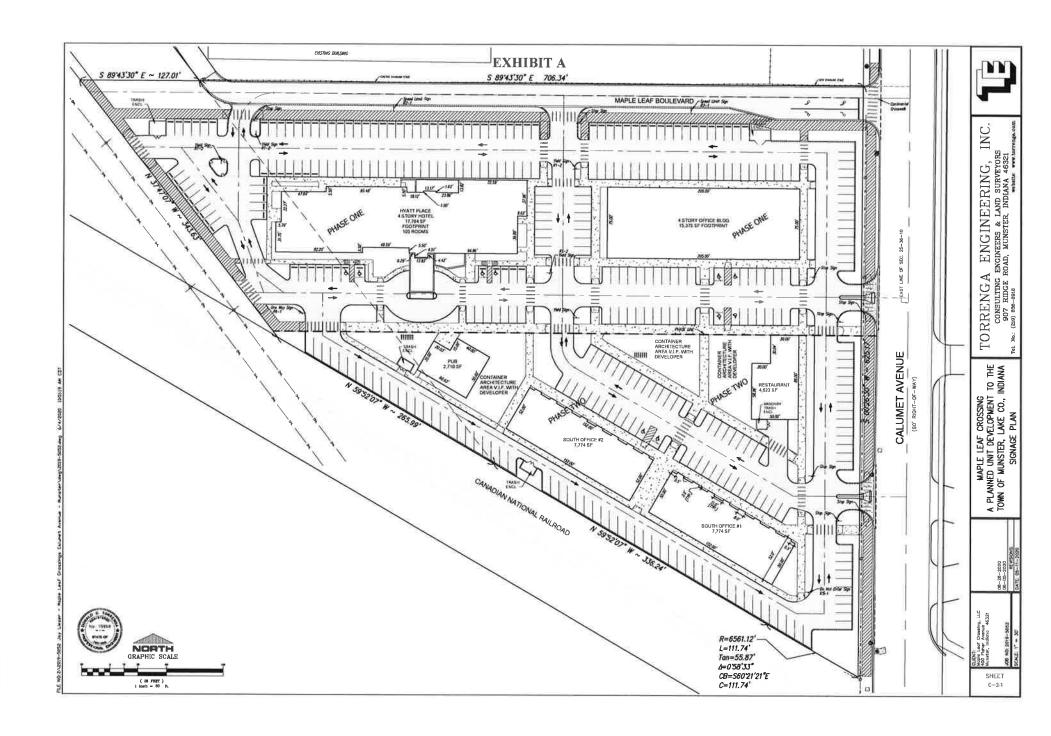


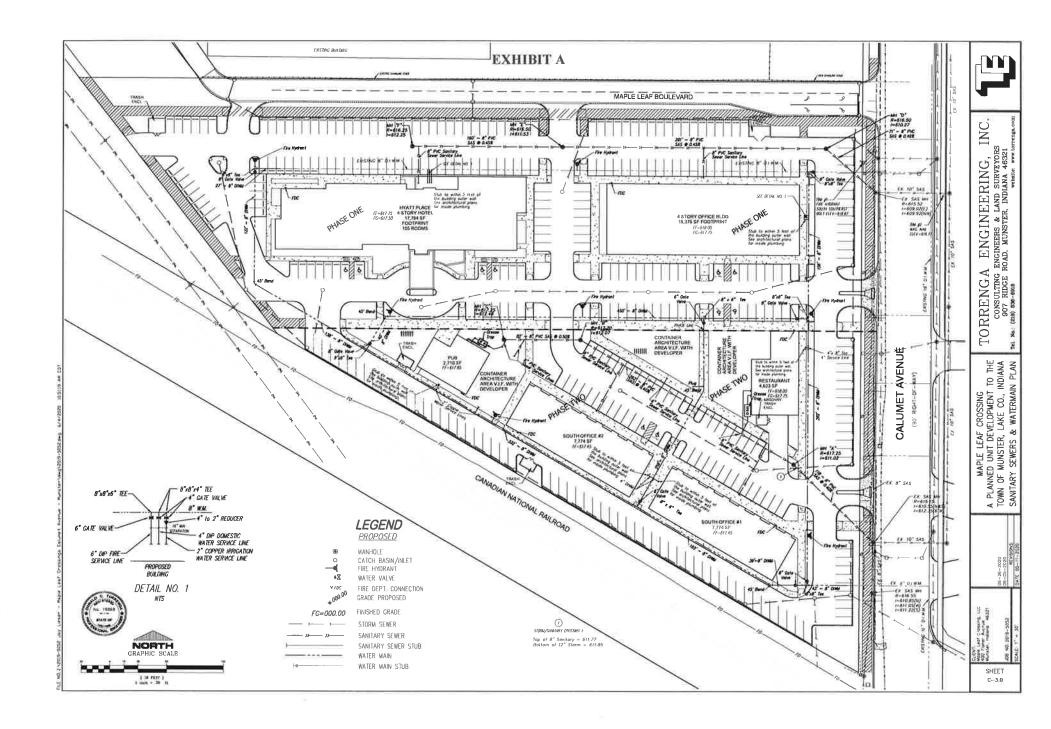


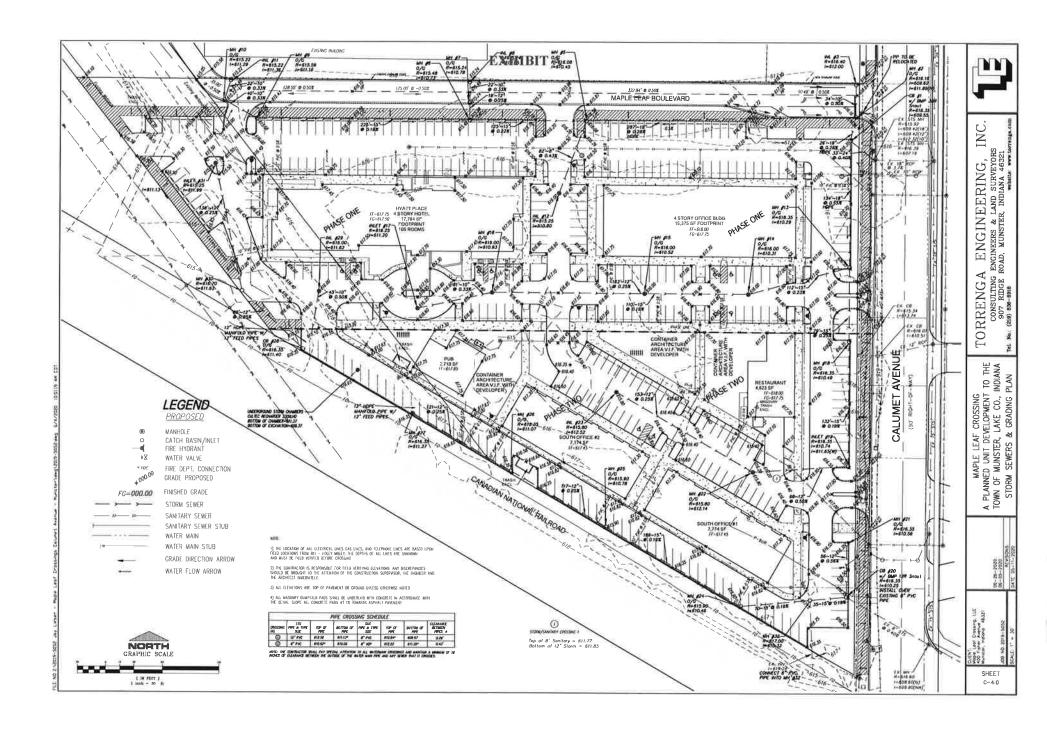


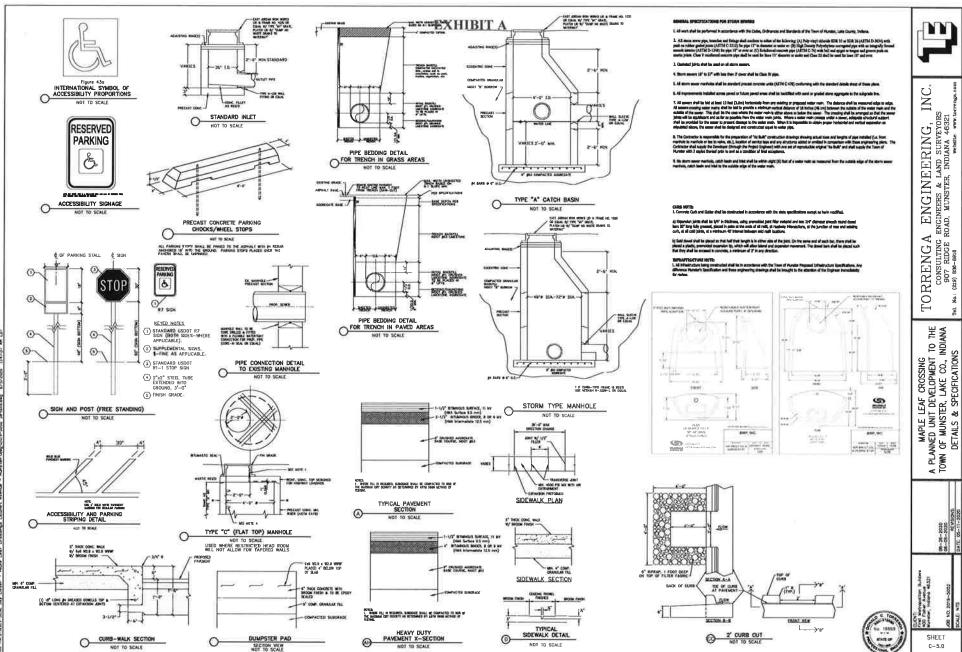












2, All sanhary sewer pipe, branches and fittings shall conform to one of the following: (a) Estra strength vitrified clay pipe (ASTM C-700) with pinch on robber gaskel, pints (ASTM C-425), (b) Poly-vinyl chloride (PVC), SOR 26 (ASTM C-0212). So inch service pipes shall be in accordance with the infrastructure improvement codes of the Town of Houster.

J. All sanitary sewer manholes shall be standard 48" diameter precess concrete units (ASTM C+478) conforming with the Standard Detail sheet of these plans.

4. The sanitary manhole base shall be precast with a minimum of 2 fool section, though, etc...

5. Sanitary manholes shall be provided with a watertight gasketed cover

6. All improvements installed across paved or future paved areas shall be backfilled with sand or graded slone aggregate to the subgrade

7.4 The competed sanitary sever system shall be air tested for infantion and shall have a maximum infiltration of 100 CPD/inct/diamnate/mile of sever pipe. The completed sanitary sever system shall be air gressure tested for infiltration/celfution with 41 hs. of pressure lord minutes. The testing shall conform to the procedure described in ASTM C-828-96 for clay pipe, ASTM C-924 for concreta pipe, ASTM F-1417 for poly-vinyl chloride pipe, and for other materials test procedures approved by the regulatory agency. The Contractor shall be responsible for supplying all testing materials and appurtenances. The Town of Munster shall be notified when the system (or portion thereof) is ready for testing.

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9. Care should be taken in partney areas to assure compaction acceptable his the future catalogy of diversity and octovellos. While special lackfill material is not required, a shall be the responsibly of the Conductor to purchast aparter statement future wellowers the hardfall creater the conductor aparter statement future wellowers the hardfall creater the conductor hald provide sport of lackfill material across divisionly and sidowalks in the event that a reserv or main is installed undermostic.

11. All sewers shall be faid at least 10 feet (3.0m) horizontally from any existing or removed water main The distance shall be measured edge to edge. All sewers crossing water mains shall be labt to provide a minimum vertical distance of 18 inches (45 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main Joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. When it is impossible to obtain proper hostontal and vertical separation as stiguisted above, the sewer shall be designed and constructed equal to water pipe.

12. The Contractor is responsible for the preparation of "As Bulls" construction drawings showing actual sizes and lengths of pipe installed (i.e. from numbels to manked or the lo valve, etc.), location of service in loss and any instructives added or mettles in comparison with time engineering plans. The Considerts and supply the Developer (through the Project Engineery with one set of expressions). The Considerts and was added as supply the Considerts and that Supply the Considerts and that Supply the Consideration of the final state of the consideration of the con

13.4 or passure test shall be performed in all completed Saultony Naholes in necordance with SCHPC 134449. Saulton Heal Pelleded for Concrete Sown Healthcale by Inguister All Primarum (Vaccum) Tact. He lests shall be conducted piper in bestill fin demonstrate the interriged with the contraction of the bestill fin demonstrate the interriged with the contraction of the cont responsible for supplying all testing materials and appurtenances. The Town of Munster shall be notified when the manholes (or portion thereof) are ready for testing.

14. No sanitary sewer manhole shall be within eight (8) feet of a water main as measured from the outside

1. All work shall be performed in accordance with the Gades, Ordinances and Standards of the form of High State of Indians.

2. All water main pipe shall be polywrapped Ductile Iron Pipe (AWWA C151 C-52) with bell and spigot push-on rubber pasket Johns (AWWA CII). All water main pipe shall be installed with a minimum cover of the property of

3. All improvements installed across paved or future paved areas shall be backfilled with sand or graded stone aggregate to the subgrade

4. All water valves 12" or larger shall be placed in vaults,

5. On 12' water main bends, restrained joints shall be used, megalog or equal. Al 90° bends, the water main shall be additionally restrained at 1 joint in each direction,

6. All fire hydrants shall be manufactured by Mueller Company, Super Centurion 250 model with 51%" valve openings with a 5" Storz pumper connection and shall be backfilled with 3/4" stone for drainage purposes.

2, All water mains shall be last at least 10 feet (3.0m) hortontably from any existing or proposed severs, The distance shall be measured from outside of pips to outside of pips. All evenes crossing water mains shall be been severed from outside of pips to outside of pips. All evenes crossing water mains shall be all the control of the evenes. This shall be the case when the vener man is either that of the shall main shall be all the control of the evenes. This shall be the case when the vener man is either that of the shall main shall be all the shall be arranged to that the sever pint will be unustated and as far as possible from the water man pickle, where water main consess under a sever, adequate structure largest fastle by provided for the sever to prevent denuge to the water main. When it is impossible to obtain proper in the control of the control and vertice of the outside control of the control of

B. Care should be taken in partway areas to assure compaction acceptable for the future stability of driveways and stiewalks. While special backfill material is not required, it shall be the responsibility of the Contractor to protect against substantial future setllement of backfilled areas. The Contractor shall provide spread backfill material across driveways and sidewalks in the eyent that a water main is intelled

9. The Bulfalo Boxes shall be arch pattern box style and shall be located one foot behind sidewalks, if possible. No Bulfalo Boxes shall be located in concrete areas, and they shall have AWAWA approved shut offs and corporation valves.

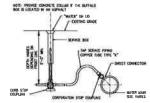
10, All water main pipe shall be disinfected by the use of iguid chlorine. The Contractor shall notify the town of Munster when the water main system (or portion thereof) is ready for testing.

11. The Contractor is responsible for water quality tests done by a State Certified Laboratory. The Town of Minister Water Department stall shall be notified and be present white tests are being performed. The approved water system shall be furned on by the Water Department Stall, only alter the water quality reports have been approved.

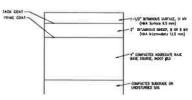
12. The newly installed water main (ar portions thereof) shall be subjected to a pression and linkage text, saving beforeking texting. Their greases shall not be less than 1.5 time in the earliest persons or according to the step pression. Pression shall not help by primer than a 5.5 filter another and a 5-hour statement or according during the text and any damaged or defeative pairs printed shall be replaced, and the text shall be repeated. The allowed between the order of the printed shall be replaced, and the text shall be repeated. The advantage that not creded 13.55 poblimite of boundaries of the statement of the shall be replaced to the statement of the shall be replaced to the statement of the shall be replaced to the statement of the shall be respectable for experience of the statement of the shall be replaced to the statement of the shall be replaced to the shall be repla

L3. The contractor is responsible for the preparation of "As BUB" construction drawings showing actual sizes and lengths of pipe installed (i.e., from manifole to manifole or lete to varbe, etc.), location of service tapes and entractive and or midded in companion with those employing plans. The Contractes thall supply the Develope (through the Project Engineer) with one set of reproducible displays 1-k-built" Plans and shall supply the Town of Munder with 2 copies thereof gener to and as a condition of the final acceptance.

14. No water main shall be within eight (6) feel of a sanitary sewer manhole, a storm sewer manhole, or a drielange grate support structure as measured from the outside edge of the water main to the outside edge of the sandary sever manhole, som sewer manhole, or drainage grate support structure.

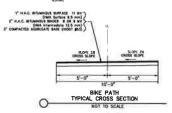


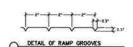
TYPICAL WATER TAP SERVICE PIPING NOT TO SCALE

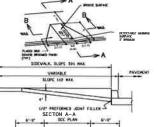


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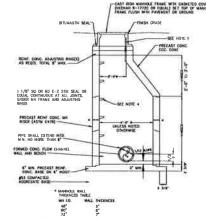
2. MARKE FILL IS REDURED, SUBGRADE SHALL BE COMPACTED TO BEE THE MADDAUM ORY DENSITY AS DETERMINED BY ASTM DIGHT METHOD OF







SECTION B-B HANDICAP RAMP TYPE A NOT TO SCALE



HOTES:
II. USE CANUSA HRAP ON ALL MANHOLES

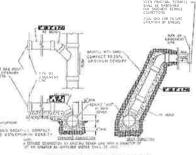
2 MERE SEPTH FROM THE OF CASTING TO INVEST IS LESS THAN 5'-0", USE FLAT TOP MANIFOLE TYPE "C" IN LIEU OF ECCUNTRIC CONE

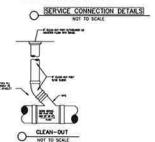
J WATERTIGHT SEAL IS REQ'D BETWEEN PRECAST RISER AND SEWER PIPE, TYPE A-LOK OR EQUAL.

4 COPPLYMENTATELL MH STEPS AS MANUFACTURED BY M.A. HOLSTELL NC., OF YOUR. AT 16" O.C.

\*\* FOR PIPE SIZES RANGING FROM 8" TO 30" IN DIAMETER.

TYPE "A" MANHOLE NOT TO SCALE





C-5.1

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ENGIN ROAD,

No.

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TO THE INDIANA

MAPLE LEAF CROSSING A PLANNED UNIT DEVELOPMENT TO TOWN OF MUNSTER, LAKE CO., INDI, DETAILS & SPECIFICATIONS

S

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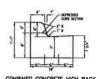
TRIANGULAR PATTERN SQUARE PATTERN TLAN OF TONE STAMP PATTERN IN SURFACE

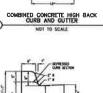
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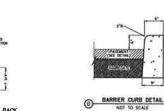
YELLOW COLOR ONLY DETECTABLE WARNING SURFACE







COMBINED CONCRETE HIGH BACK





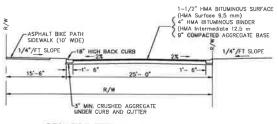
INC. A ENGINEERING, IN G ENGINEERS & LAND SURVEYORS S ROAD, WUNSTER, INDIANA 46321 TORRENGA CONSULTING EN 907 RIDGE RO,

MAPIE LEAF CROSSING A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE CO., INDIANA DETAILS & SPECIFICATIONS

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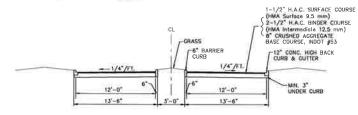
NT: Metropolitan Bulider Faher Avenue Fater, indiana 46321

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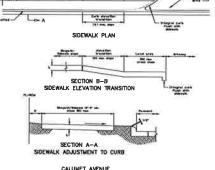
# O TYPICAL PUBLIC STREET CROSS SECTION

6'-1 ld fever Constitución Joseta



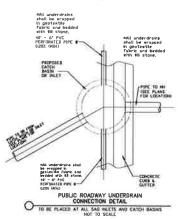
### CALUMET AVENUE RIGHT-IN/RIGHT-OUT ENTRANCE X-SECTION NO SCALE

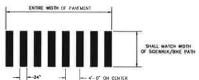




BIKEPATH/SIDEWALK DETAILS NO SCALE

# **EXHIBIT A**



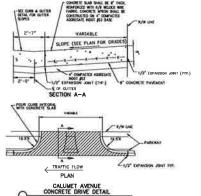


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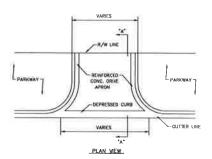
1. ALL REGULATOARY SIGNS SHALL BE HIGH INTERSITY AND IN ACCORDANCE WITH THE INDIANA MANUAL. ON UNIFORM TRAFFIC CONTROL DEVICES, MOST RECENT EDITION.

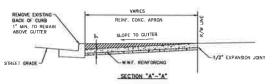
2. ALL PARKENTI MARKINGS SHALL BE WITE THERMOPLASTIC AND SPAN ACROSS APPROACH LAWES.





NO SCALE

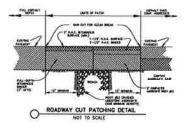


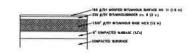


### TYPICAL STREET CROSS SECTION NOT TO SCALE

All concrete work for the drive aprons shall be in accordance with the codes and ordinances of the Town of Munster.

All drivaway oprems extending beyond the aldewalk and into the street (parkway) shall consist of reinforced connects at local seven inches in thickness and placed as shown on these plans and/or site plan accompanying the permit application.





NOTES.

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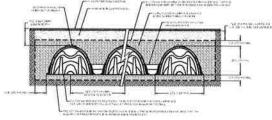


99.56 cu. feet



Breakdown of Storage Provided by Recharges 1.16X1102 Memorales Syste	
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under Dane	3,919.16 on last
Tukat Sturage Provided:	J.FAJ.E. on few
Tanal Storage Personal	PELL DO no Person

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Total Number of Chambers Required Septimistry Ann. Chambers Santan Chambers Unannesissa Chambers End Chambers End Chambers	18 4 64 4	Places eces eces eces	Basedon External Part Maretald
CATTC No. 410 Non-Woven Geotexnile CATTC No. 4800 Waven Geotexnile	960 128	sq yards	





INC. TORRENGA ENGINEERING, J
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIA 46821
At No. (2019) 804-8119

MAPLE LEAF CROSSING A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE CO., INDIANA DETAILS & SPECIFICATIONS

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OVERHEAD ELECTRIC LINE



Ž A ENGINEERING, IN G ENGINEERS & LAND SURVEYORS E ROAD, MUNSTER, INDIANA 46321

> PLAN INDIANA POLLUTION PREVENTION

Tel

P.U.D. STORM ⋖

Average MC 14.00

> SHEET C-6.0

TORRENGA RIDGE R

CROSSING N MUNTER, LEAF CF MAPLE L TO THE WATER

"GRIVEL"

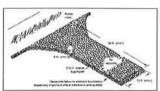
Wields 12 feet magazings or hill width of entrang-

Tright 50 feel monorous

Material 2-5 unit wantes wested stone (INDOP CA No. 2) with Georgeale
Falsa, Cathelines

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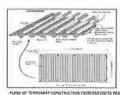
    \*\*Toyology No flushing of reducing of the street
    Report only to bus mode permitted unmediately



Plans of a temporary providi construction onbarrier out

with 12 feet minimum or full with of entrance Longth. No fast durations Motional Charlestoppe mate. AGES Must Mat or approximation

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### DESCRIPTION AND RESIDENCE

Site and enabled preparation. Graded, and limit and fertilizes applied.

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- Note: A refull sead loss as recently soled by the soft of Toll for a fix obtains and loss as soled, without performance and loss rate of 2-1<sup>nd</sup> days yorks after an agent and soled tribings. Any yorks after an agent and soled tribings. Any obtained and agent agent agent agent and agent agent
- harpest peroducity after planting to see that vegetains, stands one edicately established, te-reed if tones may.

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Seed species*	Manufacts	Pleating depth	Opinion deler
White or res	100 Ba.	Abrillain.	9/65 or 65/36
Speing right	TOTAL .	Lie	3/410.4/43
Assad regran	Willia.	3./1 in	3/1 to 5/1
			A/1 to 9/1
Grenne milke	Willia.	I to Z in	3/1 to 5/1
Suffrigues	35 Re.	A to Zin.	1/1 to 2/20

PERMANENT REFERENCE

Requirements Site and modical proparation. Graded, and four with temples applied

### Perform and draw to entitle the me this form as 10-10-11 and on a spendor. Mulcla 15 2 length or stow. Strawmart to dry, unchoosed and her of malaritable mode

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- instrume ().
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Note:

A remark of the day approach that a school is to large 1 and August 10 or large 10

Seeding Recommendations
This table provides several seeding options. Additional seed spaces and majures are available commercedly. When selecting a misture, consider side conditions, suctiving soil proporties to git soil pit and disentage, stope supers and the tolerance oil each spaces to shade and dirought inside. Auto per pire Occupant se host

		L'accompany.	Annual de limite	
747	WAND DISTURBED AREAS (REWAY	PRINCIPLE AND	Function :	
1	Perponial repriata	35 to 50 br	\$0 to 75 lbs	551070
	- white or lading cloves*	1 to 2 lbs	1 % to 3 lbs	
2	Kentucky bluegrass	10 lbs	30 Kn	5 5 to 7 5
	- smooth bromestrass	10 lbs	15 lbs	
	- Swelchuress	3 (b)s	5 lbs	
	- Lympthy	4 lbs	6 lbs	
	- perennial megrata	10 lbs.	15 lbs	
	- while or lading clover*	I to 2 lbs	1 % to 3 lbs	
1	Perennial ryegrass	15 to 30 lbs	22 to 45 lbs	5 5 to 7 0
	- tall lescunes	15 to 30 lbs	22 to 45 lbs	
4	Tall fescue**	15 to 50 lbs	50 to 75 lbs	S S to 7 5
	- ladino or white clover*	1 to 2 ibs	1 M to 3 lbs	
.766	P BANKS AND CUTS, LOW MAIN	TENANCE ABOAT	(NOT HOUSE)	
L	Smooth bromegrass	25 to 35 lbs	15 to 50 lbs	55 to 2.5
	- red clover*	10 to 20 hs	15 to 30 lbs	22/01/3
2	Tall Inscon**	35 to 50 lbs	50 to 75 lbs.	5 5 to 7.5
	+ white or lading clover*	1 to 2 by	1 X to 3 lbs	33(073
1	Tall feacue**	35 to 50 lbs	50 to 75 lbs	551075
-	- red clove."	10 to 20 lbs	15 to 10 lbs	331073
	(Recommended north of US 4)		1710 20101	
1	Orcharderass	" To 30 lbs	30 to 45 fbs	56 to 7 D
	+ red ckyer*	10 to 20 lbs	35 to 30 lbs	
	- Jadino clover*	1 to 2 lbs	1 % to 1 lbs	
s	Crowcomish*	10 to 12 lbs	15 to 18 lbs	5 6 to 7 0
	- lait lescue**	20 to 10 lbs	10 to 45 lbs	
	(Recommended south of US 4)	0)		
	NA AND HID AVENUE AND AND A			
3	Bluearass	105 to 140 to	1901# #10:No	334-72
2	Perennial ryegrass (turl type)		70 to 90 lbs	35470
	- blues/ass	70 to 90 fbs	105 to 135 bs	394818
4	Tail feacue (turf type)**	130 to 170 lbs	195 to 250 lbs	351673
	- bluegrais	20 to 30 lbs	10 to 45 lbs	340033
CHA 1	Perennal contrast of Concent	20 to 150 lbs	150 to 225 lbs	\$5 to 5 Tr
		20 to 2 lbs	350 to 225 lbs	9.8 m. r m.
2	white or lading closer*     Kentucky bluegrass.	1 to 2 lbs	1 % to 3 tos	City Ph
4	- smooth bromeriass	10 lbs	30 lbs	12011
	~ Emooth promegrass	3 lbs	15 lbs	
	- Limpley	3 lbs	5 lbs 6 lbs	
	+ perennal megrass	10 lòs	15 lbs	
	- while or lading clover"	1 to 2 lbs	1 % to 5 ths	
	Fall lescue"*	100 to 250 lbs	1 % 10 3 lbs 150 to 225 lbs	651473
,	- lading of white cloves"	1 lp 7 lbs	1 % to 3 ibs	**************************************
4	Tall leacue**	100 to 150 lbs	150 to 3 to 5	\$344ZT
•	- Perennul ryegrass	1510 10101	12 to 30 (b)	2.575.7.1
	- Kentucky bluegrass	15 to 20 lbs	22 to 30 ths	
	- sermony unicares	( A 10 EU 101	121030405	

\* For best staukti (pl. legume seed should be modulated. (b) seeding minutes containing legumes should perfortably be some vessels, without perfortably be some vessels, with plant only be full seeded and the legume seeds, seeding legumes seed the seeds on a routy light. The containing legumes seeds seed on the legumes seed to see the legumes seed to see the legumes seed on the legume

# EXHIBIT A

Requirements

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Remarks of the state of without the commission of the state of

Seed species*	Rate per acre
Wheat or rye	150 Ma
Mongage	#50 ma
Annual ryegram	85 bx

"Percental species may be used as temporary cover, especially if the area to be seeded will remain idle for more than a year STOREMENT

Regulatements |
Marchal Straw hay brood fibri of cicultron and table for Misk's Materials it also
and comments

nutria;
Coverage 25% of the nod explace
Anchoring, Required to prevent dirights wind by wind or write; see table for Mulch.
Am having Methods

- Protection

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  2. Spring models and the recommendation

  2. Spring models may be plant by factor models between, who between their street of their street and the recommendation of their spring models between their street and t

Material	Ente	Comtorell
Straw or hay	1953 toes/sore	Sheald be dry, unchapped, free of undesirable seeds.  Speed by hasd or machine.  Must be crimped or anchored (see Exhibit 1.15-D).
Wood fiber or cellulms	J ton /nure	Apply with a hydromoleher and ttu- with incloing agent
Long Fiber wood (exclusor)	1/23/4	Ancher in arras subject to wood

Anchoring method	How to apply		
Mulch anchoring tool <u>OH</u> Farm disk (dall, scerated, and set straight)	Crimp or punch the stans or hay into the stall 2.4 in. Operate tracklinery on the contour of the slope		
Cleating with dozer tracks	Operate doter up and down slope, not across, or ela- the tracks will form rills		
Wood hydromolek fileza	Apply 1-2 tons/nero using a hydromulcher at a rate of 750 lbs /acre with a tacking agent (or necording to contractor sperifications). Do not use in areas of concentrated flow.		
Aughalt emobius	Emulaified asphalt abouted conform to the acquire- rocuts of ASTM Spor. #977. Apply with untable- component at a rate of QDS gal /vg yd. Do not use by areas of power titrated flow.		
Spart bioder or wal stabilizer	Apply according to manufacturers reconnectation		
Undergradult, a	Approved to the second of the		

omboring program that includes the following most be implemented at all permitted

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NT: Metropolitan Builders Fisher Avenue ater, Indiana 46321 Ĭ8 SHEET C-7.0

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RREI CONSU 907 F (228) 836-

MAPLE LEAF CROSSING A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE CO., INDIANA SWPPP DETAILS & SPECIFICATIONS

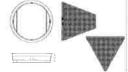
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TYPICAL INLET/CATCH BASIN PROTECTION INSERT DETAIL



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Be traceful not to sweep up any tadinous substance or any object that may be polyptically

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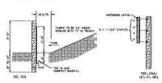
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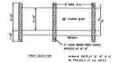
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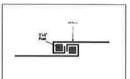
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TOPSOIL SALVAGE & UTILIZATION

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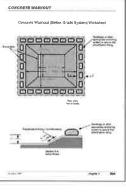
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CONCRETE WASHOUT Concrete Washout (Above Grade System) Worksheet Terrenant. 884 Chaples 7



TORRENGA CONSULTING EN Z. MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
SWPPP DETAILS & SPECIFICATIONS

INC.

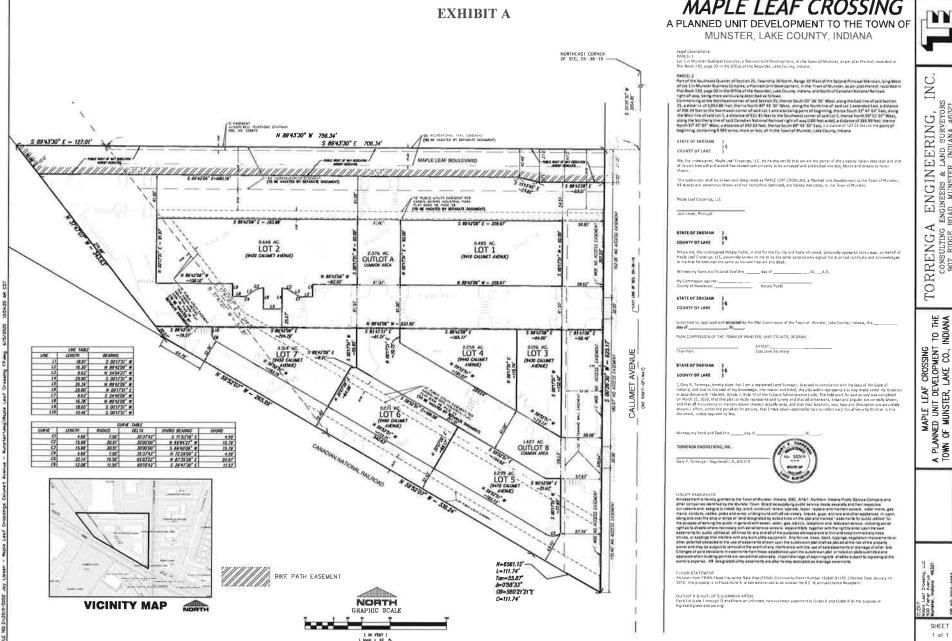
ENGINEERING, II ngineers & land surveyors dad, munster, indiana, 46321

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No

Metropolitan Builders Fatter Avenue

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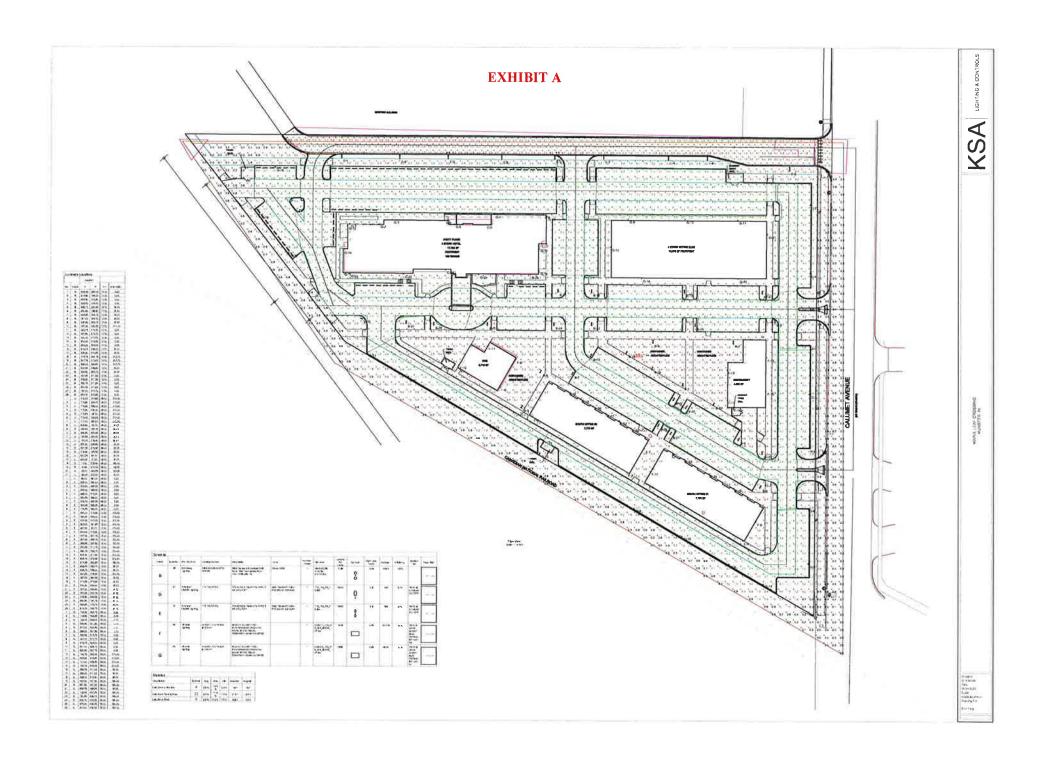
# MAPLE LEAF CROSSING

A ENGINEERING, ING ENGINEERS & LAND SURVEYORS
E ROAD, MUNSTER, INDIANA 46521

TORRENGA CONSULTING ED 907 RIDGE RO Je

MAPLE LEAF CROSSING A PLANNED UNIT DEVELOPMENT TO TOWN OF MUNSTER, LAKE CO., INI FINAL PLAT

SHEET 1 of 1



# DEVELOPMENTAL STANDARDS FOR THE

# MAPLE LEAF CROSSING DEVELOPMENT AT THE

# MUNSTER BUSINESS COMPLEX

# PLANNED UNIT DEVELOPMENT

This document sets forth the developmental standards for the Planned Unit Development known as Maple Leaf Crossing, with street addresses 9352-9482 Calumet Avenue.

# I. Planned Unit Development

Maple Leaf Crossing is hereby designated as a Planned Unit Development Special District ("SD-PUD") under Ordinance No. 1788.

# A. Permitted uses shall include:

- 1. Hotel
- 2. Professional Office
- 3. Medical or Dental Office or Clinic
- 4. Alcoholic Beverage Retail Sales
- 5. Alcoholic Beverage- Serving Establishment
- 6. Bar or Tavern
- 7. Brewpub
- 8. Craftsman Establishment
- 9. Dry Cleaning without drive-through
- 10. Entertainment Facility
- 11. Financial Services without Drive-through
- 12. Hair, skin, nail care or day spa
- 13. Open air market, including container shops
- 14. Open Front or Open Lot Retail, including container shops
- 15. Pharmacy
- 16. Restaurant, and Restaurant with outdoor dining
- 17. Tailor or Seamstress Shop
- 18. Tasting Room
- 19. Theater or Performing Arts Venue
- 20. Ticket Office
- 21. Veterinary Office Clinic or Hospital

- 22. Warehouse/ retail
- 23. Civic space
- 24. Brewery
- 25. Distillery
- 26. Microbrewery/MicroDistillery/ Microwinery/ Nanobrewery
- 27. Winery
- 28. Food/ Refreshment Stand
- 29. Garden
- 30. Gift Shop
- 31. Massage Services by Indiana licensed masseuse, accessory to Spa or Salon
- 32. Parking Area
- 33. Patio
- 34. Such other uses as approved by the Plan Commission or Town Council
- B. Temporary buildings for construction purposes for a period not to exceed the duration of the construction.

# 2. Use Conditions and Restrictions

A. Hours. Maple Leaf Crossing hours of operation shall be seven days per week as allowed for any like businesses in Commercial Districts in the Town of Munster.

# 3. Yards

Yards, roadways, walkways, parking and greenspace shall be as set forth in the Approved Development Plan attached hereto as Exhibit A and incorporated herein.

# 4. Height Regulations

No building shall exceed four stories in height and a maximum of 60 feet.

# 5. Screening of Mechanicals

All mechanical equipment will be screened as to not be visible by those at street level on all sides of the building.

# 6. Off-Street Parking Facilities

Off-street parking shall include approximately 358 parking spaces as set forth in the Approved Development Plan.

# 7. Lot Coverage

Green space shall exceed 7.5% of the total area as set forth in the Approved Development Plan.

# 8. Pedestrian and Bicycle Access

Sidewalks and bicycle paths shall be located within and upon Maple Leaf Crossing as set forth in the Approved Development Plan.

# II. Formula Business Regulations

Any Formula Business that desires to located within the Planned Unit Development must obtain a Special Use permit from the Board of Zoning Appeals. A "Formula Business" is defined as a restaurant or retail establishment which is required by contractual or other arrangements to operate with standardized menus, ingredients, architecture, décor, uniforms, appearance or signage.

The following findings, at a minimum, must be made prior to the issuance of a Special Use Permit for a Formula Business:

- The Formula Business will be compatible with existing surrounding uses, and has been designed and will be operative in a non-obtrusive manner to preserve the community's distinctive character and ambiance;
- 2. The Formula Business will not result in an over-concentration of formula establishments in its immediate vicinity or the Town as a whole;
- 3. The Formula Business will promote diversity and variety to assure a balanced mix of commercial use available to serve both resident and visitor populations;
- 4. The Formula Business will contribute to an appropriate balance of local, regional or national-based businesses in the community;
- 5. The Formula Business will be mutually beneficial to and will enhance the economic health of surrounding uses in the district; and,
- 6. The Formula Business will contribute to an appropriate balance of small, medium and large-sized businesses in the community.

# III. Building and Material Requirements

# 1. Building Design

All building designs and lot plans shall be submitted to the Plan Commission for building site plan approval in accordance with Section 26-6.804.G of the Town's Code of Ordinances. The overall image should be well coordinated, fully integrating components such as entries, displays and signage. Buildings shall comply with the

Approved Development Plan and the Development Standards for the Maple Leaf Crossing Planned Unit Development.

### 2. Materials and Details

Building materials shall consist primarily of glass, steel, brick, stone, and shipping containers for accents and small businesses as contemplated by the Development Agreement. Proposed materials and colors shall be submitted on a color material sample as a component of building site plan approval application in accordance with Section 26-6.804.G of the Town's Code of Ordinances..

# 3. Permitted Materials

The following is a list of permitted materials, subject to Town approval during the review process:

- a. Painted aluminum or steel;
- b. Stainless steel:
- c. Solid brass, bronze, copper or pewter;
- d. Enamel coated steel;
- e. Textured or brushed stainless steel;
- f. Galvanized, sandblasted or etched metals;
- g. Natural stone;
- h. Full size brick;
- i. Painted or stained wood in limited amounts
- j. Porcelain, ceramic or glass

# 4. Metals

High quality is expected for all metal applications. Metal such as shop-painted aluminum and steel, stainless steel, solid brass, bronze, copper, pewter, or enamel coated steel may be used for hardware, trim and panels when well designed and detailed.

- a. Lap joints and seams must be even and straight and concealed when possible. Outside corners are to be mitered or continuous break shaped.
- b. Fabrication must be either heavy gauge material or thinner gauge material shop laminated to solid backing. In no case are oil canning (resulting from light reflection from an uneven or buckled surface), scratches, warps, dents, occlusions, visible seams or other imperfections allowed.
- c. Sealants on natural metals are required to prevent tarnishing.

- d. Textured or brushed stainless steel, galvanized, sandblasted and etched metals are encouraged in creative applications. Unique treatments such as patina, rusted, etched and imprinted metals will be considered for special design objectives.
- e. Polished metals should be solid, not plated and limited to accent trim.

# 5. Natural Stone

- a. Granite, marble, limestone, slate and other natural stone materials may be used in building applications. Stone may be polished, unpolished, sandblasted, flamed, honed, split face or caved. Careful, craftsman-like attention to detail is required at all connections and transitions to other materials.
- b. Edge details must prevent visible unfinished edges. Exposed edges must be quirk mitered, chamfered or polished to match adjacent surface finish.
- c. The transition between stone and adjoining materials must be defined by use of metal reveals.
- d. Stone use as a paving material must be flush when meeting other flooring materials.
- e. Natural stone must be protected against staining and discoloration by means of sealers appropriate to the material.

### 6. Wood

- a. Painted or stained wood may be used in many design applications, such as window frames, decorative trim or molding, and for solid areas, such as decorative bulkheads. In some cases, it may be used for larger architectural elements, such as columns and entablatures. Wood paneling and plank construction are not acceptable unless presented in a highly imaginative concept and approved by the Town.
  - 1. Wood used in the construction of the building must be kiln dried, mill quality, or marine grade hardwood and must meet local frame spread requirements.
  - 2. Painted wood must have a shop quality enamel finish.
  - 3. Wood without a paint finish must receive a clear, preservative sealant.
  - 4. Extensive use of natural wood finishes is discouraged.

# 7. Tile

- a. Tile may be used in diverse applications. Its use is encouraged to introduce light, decorative texture or graphic quality to a storefront.
  - Porcelain ceramic or glass tiles in glazed or natural finishes may be used as accents and in limited field applications. Patterns used over large areas are expected t have a sophisticated, well executed design concept.

- 2. Small and intricate mosaic tile patterns may be utilized for detail and accent only.
- 3. All tiles must be carefully detailed at outside corners with bull nose edges or special corner trims. Lapped or butt joints are not permitted.

# 8. Glazing

- a. The creative use of glazing and other building front design elements is encouraged and must be carefully detailed.
  - 1. Large panes
  - 2. All glass
  - 3. Stained, leaded
  - 4. Glass block
  - 5. In frameless assemblies,
  - 6. Aluminum, metal or wood building
  - 7. All aluminum framing
  - 8. Tinted glass is permitted, however, reflective glass (including mirroring) is not permitted.

# 9. Lighting

- a. Lighting fixtures shall be high quality commercial grade. The fixtures shall be constructed and installed to be glare free and shall comply with all applicable code requirements.
- b. Recessed or appropriately styled surface mounted halogen incandescent, ceramic metal halide, or solid state (LED) sources are permitted. 2077 to 3000 k is the required color temperature range of these sources, with a minimum Color Rendering Index (CRI) of 80.
- c. Fluorescent fixtures are not permitted.
- d. The lighting plan shall be of the design and layout set forth in the Approved Development Plan.
- e. A detailed lighting plan for each building and lot shall be submitted for Plan Commission approval as a component of a site plan approval application in accordance with the procedure of Section 26-6.804.G of the Town's Code of Ordinances and the standards of the Development Plan and Development Standards.

# 10. Prohibited Materials

1. The following is a list of prohibited materials. In rare instances, special consideration may be given for the use of a prohibited material if its application is highly original, creative and essential to the theme

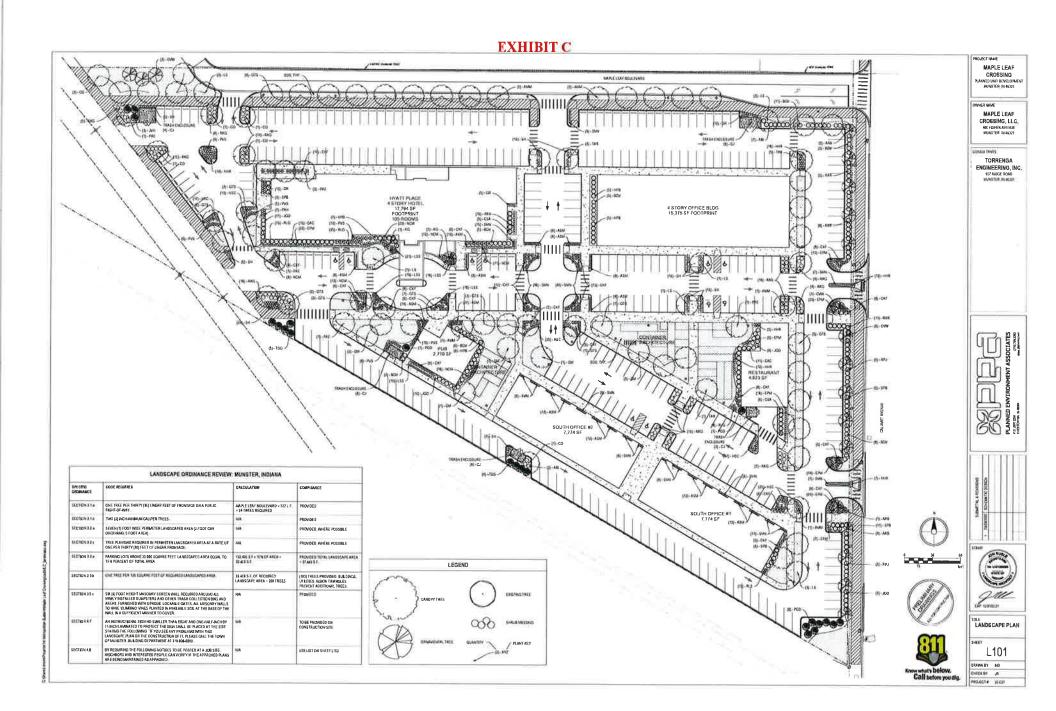
or design concept of the building front. Exceptions may be granted by the Plan Commission solely at its discretion as a component of a building site plan approval application in accordance with Section 26-6.804.G of the Town's Code of Ordinances.: Plastic laminates, except for high pressure laminates such as Prodema and Trespa or similar.

- 2. Glossy, or large expanses of acrylic or Plexiglass
- 3. Pegboard
- 4. Mirror
- 5. Mirrored glass (but not tinted glass)
- 6. Vinyl, fabric or paper
- 7. Plywood or particle board
- 8. Sheet or modular vinyl
- 9. Luminous ceiling, including "egg crate"
- 10. Shingles, shakes, rustic siding
- 11. Drywall
- 12. Stucco, exterior insulation finishing system (EIFS) or similar products

# IV. Signage Design Criteria

Signage shall be compliant with §26-6.701 unless a variance is obtained from the Board of Zoning Appeals.

- V. Landscape Design Criteria
  - Landscaping for Maple Leaf Crossing shall generally be in accordance with the Landscaping Plan attached hereto as Exhibit C and incorporated herein. Other Developmental Standards
- VI. Other Development Standards
  - The Approved Development Plan and Development Standards shall govern the development of Maple Leaf Crossing PUD. The development standards for zoning district CD-4.A set forth in Zoning Ordinance 1788, Table 26-6.405.A-6 shall apply to matters not addressed in the Approved Development Plan and Development Standards.
- VII. All construction on the building sites on lots 1 through 7 of the Approved Development Plan are subject to approval by the Munster Plan Commission in accordance with the procedure set forth in Section 26-6.804.G of the Town's Code of Ordinances according to the terms and standards of the Approved Development Plan and Development Standards for Maple Leaf Crossing PUD or section VI above, if applicable.



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ROJECT NAME MAPLE LEAF

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CONSULTANTS

CROSSING

PLANNED UNIT DEVELOPME

MUNSTER IN 46321

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CROSSING, LLC.

**40C FISHER AVENU** MUNSTER IN 45321

TORRENGA ENGINEERING INC.

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## TRAFFIC AND PARKING STUDY MAPLE LEAF CROSSING MUNSTER, INDIANA

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#### Introduction

A new development called Maple Leaf Crossing is being proposed in the Town of Munster, Indiana. It will be located on the west side of Calumet Avenue just north of 45<sup>th</sup> Street. This will be a multi-use development and is intended to receive increased access from pedestrian and bicycle traffic. The goal of the study is to determine parking and traffic demand created by the development. This multi-use site includes a hotel, three office buildings, a restaurant, a pub, and local shops. A new road is proposed along the north end of the site which will have two entrances to the site, a bike path, and a traffic signal at the Calumet Avenue intersection. One exit-only access drive will be provided for the Pepsi-Cola Bottlers Company to the north. Two driveways will be provided on the east end of the site which will provide right-in/right-out access to Calumet Avenue. See Appendix A-1 for the Site Location Map and the Proposed Site Plan. The study summarizes observations and provides analysis on the traffic and parking demand generated by the site. The study will include:

- Trip generation and distribution projections using the ITE Trip Generation Manual 10th Edition.
- Parking Demand using the ITE Parking Generation Manual 5th Edition.

### **Background Information**

Calumet Avenue is classified as a principal arterial route and is under the jurisdiction of the Town of Munster, Indiana. The land use around the site is a mix of commercial, residential and recreational properties. There is a hospital located about half a mile north of the site and multiple clinics located along Calumet Avenue. The annual average daily traffic (AADT) for Calumet Ave is 31,490 (2019) according to the INDOT website. An at-grade railroad crossing is located on Calumet Avenue just south of the site.

There is sidewalk along the east side of Calumet Avenue as well as an existing multi-use path along the west side of Calumet Avenue. An extension of the Pennsy Greenway, a 15-mile trail that will connect to the Burnham Greenway/Grand Illinois trail system when complete, is proposed just north and west of the site. An east-west multi-use path is proposed along the center and north end of the site which will connect into the proposed Pennsy Parkway at the west end and the existing path at the east end of the site. These connections will make the site accessible to bicycle and pedestrian traffic.

Amtrak in Dyer Indiana provides service to a train station located two miles southwest of the project site. The train route connects Chicago to multiple locations in Indiana. The Gary Public Transportation Corp (GPTC) provides bus service to the region with the nearest route (Route R4) along Calumet Avenue extending to Ridge Road which is 1.2 miles north of the site.

0

32

17

20

9

12 32

123

26

205

### **Trip Generation**

925

932

(Pub) Drinking Place

High-Turnover (Sit-Down) Restaurant

Total

The ITE Trip Generation Manual 10th Edition was used to develop trip ends and distribution for the proposed site. The Trip Generation Manual serves as the most widely accepted reference guide for establishing vehicle trip generations by land use. Graphs and equations are provided for each land use to calculate trip ends for general urban/suburban locations. The results of the trip generations are shown in the table on the next page.

AM Peak Hour PM Peak Hour ITE LUC Land Use Size Unit In Out | Total In Out Total 310 Hotel 105 Rooms 28 19 47 27 26 53 710 Office Building (4 Story) 61.5 1,000 SF GFA 69 11 80 11 57 68 710 Office Building (S. Office 1) 1,000 SF GFA 8 9 8 10 1 2 710 Office Building (S. Office 2) 1,000 SF GFA 8 9 2 8 10 876 Apparel Store 2.0 1,000 SF GFA 2 0 3 3 6

Table 1. Trip Generations by Land Use and Peak Hours

Note: The "Apparel Store" land use from the ITE Manual was used to analyze the container park retail

2.71

1,000 SF GFA

1,000 SF GFA

18

133

14

46 179

Weekend traffic was not analyzed in this study as it is anticipated that the office buildings will not be open during the weekend which reduces the parking demand conflict with the restaurant, pub, and local shops. Like three other hotels in the area, the proposed hotel is considered a business hotel and is not anticipated to be busy during the weekend.

The trip generations in Table 1 have a percent reduction incorporated to better represent the demand in a mixed-use site such as Maple Leaf Crossing. Applying the formulas from the *ITE Trip Generation Manual* without consideration of the site use can lead to an overestimation of the demand. Reductions were made by referencing ITE guidelines for internal trip reductions within a mixed-use development. Based on this analysis, the following reductions in Table 2 were used.

Land Use Percentage Trip Reduction

Hotel 0%

Office Building 5%

Apparel Store 15%

Pub (Drinking Place) 15%

Restaurant 15%

Table 2. Percent Reduction by Land Use

Note: The "Apparel Store" land use from the ITE Manual was used to analyze the container park retail

#### Directional Distribution

The directional distribution of how traffic will approach and depart the site was estimated based on accessibility and location of nearby transit facilities and highways. With I-80/I-94 located two miles north of the project site, it is estimated that 60% of site traffic will be from the north and 40% will be from the south along Calumet Avenue.

Due to substandard traffic volumes at the time of this study, traffic counts were not performed along Calumet Avenue. The peak hour traffic was estimated as 10% of the AADT. The site traffic distribution and peak hour traffic projections are indicated in Appendix A-2 and A-3.

### **Projected Site Traffic Volumes**

The projected site traffic volumes indicated in Appendix A-3 are based on trip generation and directional distribution estimates for the site. A percentage of site traffic was estimated for each driveway during the morning and evening peak traffic hours for Calumet Avenue and is indicated in Appendix A-2. This information was also used to determine the turning volumes on the proposed road and Calumet Avenue which is indicated in Table 3.

Table 3. Projected Turning Traffic Volumes at Intersection of Calumet Avenue and Proposed Road

Street	Direction	Turn	Traffic	
			AM	PM
Calumet Ave	NB	Left	53	33
Calumet Ave	SB	Right	13	8
Proposed Road	EB	Left	27	74
Proposed Road	EB	Right	5	13

Note: The "Apparel Store" land use from the ITE Manual was used to analyze the container park retail

Based on the projected turning volumes shown in Table 3 for the proposed road, it seems that one lane of traffic in the eastbound and westbound direction could accommodate the projected traffic. An eastbound right-turn lane may not be needed. This will need to be verified once traffic counts can be obtained along Calumet Avenue to perform a traffic signal warrant and capacity analysis for the intersection.

Peak hour traffic volumes on the proposed road did not account for the proposed exit-only access drive from the Pepsi-Cola Bottlers Company. Information provided by others indicates that the main traffic from the Pepsi access will be 30 to 40 vehicles between 5:00 and 6:00 AM which is before the peak hour of traffic for the Maple Leaf Crossing site.

## **Parking**

Parking analysis was performed for the site using the ITE Parking Generation Manual. ITE Parking demand was not available for this report for the Apparel Store, Pub or Restaurant. Therefore, parking requirements indicated in the Proposed Site Plan were used for these land uses. Table 4 shows the projected parking required for the site to be 387 spaces. This incorporates the trip reductions for a mixed-use development indicated in Table 2.

Table 4. Parking Spaces Required through ITE Trip Generation Manual (Trip Reductions Included)

ITE LUC	Land Use	Size	Unit	Required Parking
310	Hotel	105	Rooms	86
710	Office Building (4 Story)	61.5	1,000 SF GFA	159
710	Office Building (S. Office 1)	7.77	1,000 SF GFA	19
710	Office Building (S. Office 2)	7.77	1,000 SF GFA	19
876	Apparel Store	2.0	1,000 SF GFA	8
925	Pub (Drinking Place)	2.71	1,000 SF GFA	40
932	High-Turnover (Sit-Down) Restaurant	3.85	1,000 SF GFA	56
			Total	387

Note: The "Apparel Store" land use from the ITE Manual was used to analyze the container park retail

The Proposed Site Plan in Appendix A-1 indicates that 358 parking spaces are provided and 509 parking spaces are required for the development. The parking demand, as calculated above using the ITE parking data with trip reductions included, indicates that only 387 parking spaces would be required for the site. While the parking spaces provided does not match the peak parking rates for all the land uses combined, the peak parking demand for the separate land uses occur at different times. The two biggest generators on the site are the hotel and office building. The ITE Parking Generation Manual indicates the following peak parking demand times:

Hotel 8:00 PM to 1:00 PM - 80% of Peak or More
 Office 9:00 AM to 5:00 PM - 80% of Peak or More

Both overlap between 9:00 AM and 1:00 PM only; however, the pub will likely have minimal parking demand at this time. The unused parking spaces for the pub would then be available during this timeframe to accommodate the parking needs.

Furthermore, the Town of Munster Character Based Code (Article 26 Zoning Code) allows the application of a Shared Parking Factor for two different land uses. Per Table 26-6.405.0-2 of the Code, the applicable Shared Parking Factor is 1.7 for hotels and offices. Table 5 reflects the application of the factor for the hotel and office, which yields 350 parking spaces required and the proposed site plan provides 358.

Table 5. Parking Spaces Adjustment per Town of Munster Character Based Code

Land Use	Required Parking	Shared Parking Factor	Parking Adjustment
NORTH OFFICE BUILDING	203	1.7	120
SOUTH OFFICE BUILDING #1	27	1.7	16
SOUTH OFFICE BUILDING #2	27	1.7	16
RESTAURANT	65	1	65
PUB	46	1	46
HOTEL	132	1.7	78
CONTAINER PARK (RETAIL)	9	1	9
Total	509		350

Note: The Required Parking is from Proposed Site Plan in Appendix A-1

Due to this parking variance between the separate land uses, parking requirements are satisfied.

#### Conclusion

Based on the projected traffic volumes on the proposed road along the north side of the Maple Leaf Crossing Development, it may be possible to eliminate the eastbound right turn lane and have one lane service both left and right turn movements. This should be confirmed in a future intersection capacity analysis using actual traffic counts along Calumet Avenue. Up to six additional parking spaces could be provided on the site if the right turn lane were eliminated.

Based on the findings of the study, the parking spaces provided in the Maple Leaf Crossing Proposed Site Plan satisfy parking demand when accounting for the variable peak parking demand and internal trip reductions associated with this mixed-use development.

## Maple Leaf Crossing Traffic and Parking Study

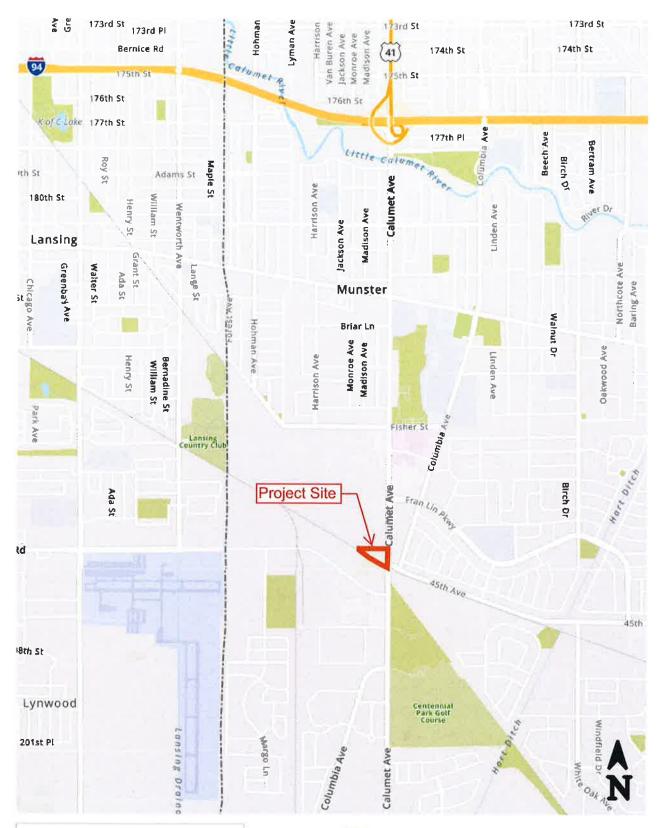
## **Appendix**

Appendix 1 - Location Map and Proposed Site Plan

Appendix 2 - Site Peak Hour Distribution

Appendix 3 - Site Peak Hour Traffic

## APPENDIX A-1 LOCATION MAP AND PROPOSED SITE PLAN



## **Project Location**

Maple Leaf Crossing Calumet Ave and 45th St Munster, IN

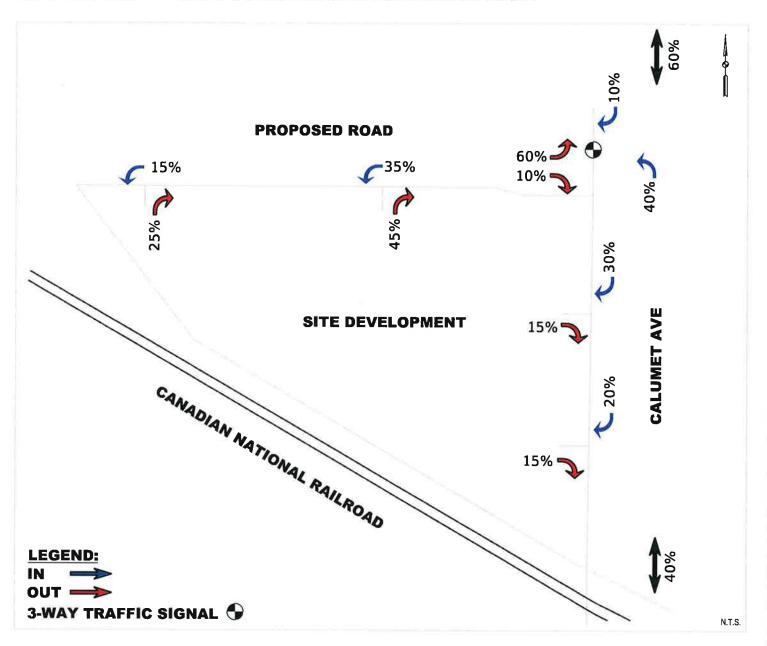


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# APPENDIX A-2 SITE PEAK HOUR DISTRIBUTION

## **APPENDIX 2 - SITE PEAK HOUR DISTRIBUTION**

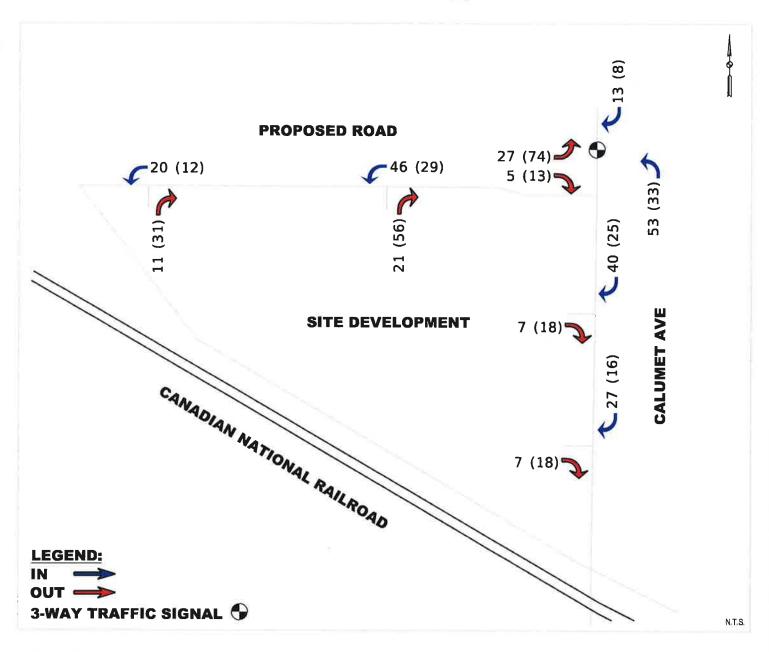


#### Assumptions:

- The traffic distributions assume 60% of site traffic will be from the north and 40% will be from the south.
- Exiting traffic onto the Proposed Road from the Pepsi-Cola Bottlers Company occurs prior to the AM Peak Hour.

## APPENDIX A-3 SITE PEAK HOUR TRAFFIC

## **APPENDIX 3 - SITE PEAK HOUR TRAFFIC**



#### Assumptions:

- The traffic distributions assume 60% of site traffic will be from the north and 40% will be from the south.
- Exiting traffic onto the Proposed Road from the Pepsi-Cola Bottlers Company occurs prior to the AM Peak Hour.