PLAN COMMISSION STAFF REPORT

To:	Members of the Plan Commission
From:	Rachel Christenson, AICP, On-call Planner for the Town of Munster
Meeting Date:	August 8th, 2023
Agenda Item:	PC Docket No. 23-019
Application:	**Development Plan Review**
Hearing:	**PUBLIC HEARING**
Summary:	Maple Leaf Crossing LLC requesting approval of a Development Plan for a retail building at Maple Leaf Crossing Lot 6, located at 9460 Calumet Avenue

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Applicant:	Maple Leaf Crossing, LLC
Property Address:	9460 Calumet Avenue
Current Zoning:	Planned Unit Development
Adjacent Zoning:	North: SD-M South: SD M/PUD East: CD-4.A West: SD-M
Action Requested:	Development Plan Review Approval
Additional Actions Requested:	Findings of Fact
Staff Recommendation:	Approve with Conditions

Attachments:

1. Development Plan Review Application
2. Building Rendering
3. Maple Leaf Out-Building Lot 6 Architectural Drawings prepared by Michael E. Stanula dated 07.18.23
4. Maple Leaf Crossing PUD Drawings, including Site Plan, Details & Specs., and SWPPP for Lot 6 prepared by Torrenga dated 06.29.2023

BACKGROUND

Figure 1: Maple Leaf Crossing PUD outlined in red.

Maple Leaf Crossing, LLC has applied for a Development Plan approval for a retail building at Maple Leaf Crossing Lot 6, located at 9460 Calumet Avenue.

This Lot is part of the Maple Leaf Crossing Planned Unit Development that is governed by Ordinance 1803. The ordinance was adopted in July 2020 by the Munster Town Council, on the recommendation of the Plan Commission. The approved PUD includes Developmental Standards and a Site Plan.

An ordinance amending the Maple Leaf Crossing Planned Unit Development (Ordinance 1878) was adopted amendment to this PUD was adopted by the Munster Town Council in December of 2022, on recommendation of the Plan Commission. This amendment provided for the development of Lot 7 as a cigar bar and restaurant.

An additional amendment to the PUD Ordinance was made in July of 2023 that add parking spaces and modified Lots 2-7 and Outlots A and B. Subsequently, a resubdivision of the Maple Leaf Crossing site was also pursued. A Final Plat has been filed and will be heard at the August 8th, 2023, Plan Commission meeting.

DESCRIPTION OF PROJECT

The submitted plans call for the development of Lot 6 at the Maple Leaf Planned Unit Development, including a 7227 square foot retail structure with five units. Additional site elements include sidewalks, landscaping, and lighting. The proposed structure will have a mixture of brick, stone, and aluminum siding. The façade of the structure includes steel canopies. The average square footage of each unit in the structure is approximately 1300 square feet per unit.

ANALYSIS

REVIEW OF DEVELOPMENTAL STANDARDS & SITE PLAN

Staff reviewed the submitted plans in comparison to the approved Maple Leaf PUD Developmental Standards and approved Site Plan. The proposed development plan appears to in compliance with the PUD Ordinance, with the exception of a couple of minor issues listed below:

Code/Ordinance	Section	Standard	Issue
Ord. 1803	I.B.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.	The electrical equipment to the rear (southeast) of the structure is not screened.
	III.9.	**Lighting** 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	A lighting plan has been submitted for both the site and the structure, however, specifications for the light fixtures themselves have not been submitted.

STAFF RECOMMENDATION

Staff recommends that this petition be approved as presented with conditions. First, plans to screen the mechanical equipment proposed for the rear of the structure (southeast side) shall be submitted to staff to ensure it meets the intent of the Maple Leaf PUD Developmental Standards. Secondly, specifications for the light fixtures for the structure and the site shall be submitted to staff to ensure they are meeting the intent of the Maple Leaf PUD Developmental Standards.

MOTION

The Plan Commission may wish to consider the following motion:

Motion to recommend approval of PC Docket No. 23-019, a Development Plan for a retail building at Maple Leaf Crossing Lot 6, located at 9460 Calumet Avenue, with the following conditions:

1. *The petitioner will submit a plan satisfactory to staff that shows how the mechanical equipment at the rear of the structure (southwest elevation) will be screened from public view.*
2. *The petitioner will submit high quality commercial grade light fixture specifications for the structure and the site that are satisfactory to staff.*

Petition PC _____-_____
Date: _____
Application Fee: $ ∅
Sign Fee: $_____

Town of Munster *Plan Commission Petition Application*

OWNER INFORMATION:

MAPLE LEAF CROSSING, LLC
Name of Owner

Phone Number

400 FISHER ST., ~~#####~~ SUITE J
Street address, City, ST, ZIP Code

219-746-0753
Email address

MUNSTER, IN 46321

JACKCLIESER@ADL.COM

APPLICANT OR PETITIONER INFORMATION (if different than above):

Name of Applicant/Petitioner

Phone Number

Street address, City, ST, ZIP Code

Email address

PROPERTY INFORMATION:

Business or Development Name (if applicable)
MAPLE LEAF CROSSING LOT 6

Address of Property or Legal Description
9460 CALUMET AVE

Current Zoning PUD

APPLICATION INFORMATION:

Please select what this Application is for:

☐ **Subdivision** If yes, select one of the following: ☐ **Preliminary Plat** ☐ **Final Plat**

☒ **Development Plan Review**

☐ **Rezoning (including Planned Unit Development) – Proposed Zoning District**

Brief Description of Project:

7227 SQFT. RETAIL BUILDING
5 UNITS AVAILABLE
AVG SQFT. IS ~~AT~~ 1300 SQ FT PER UNIT

MICHAEL E. STANULA, ARCHITECT
Name of Registered Engineer, Architect or Land Surveyor

708-5673362
Phone Number

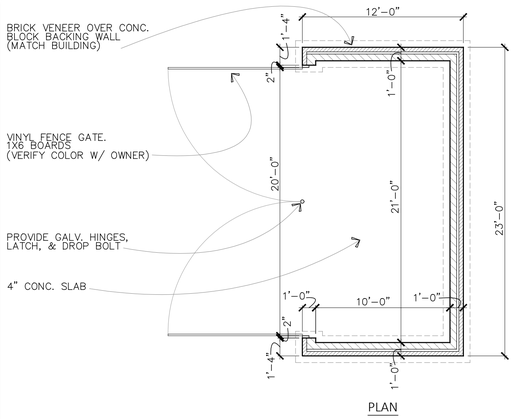
31800 S. STATE LINE RD, BEECHER, IL
Street address, City, ST, ZIP Code

STANULA.ARCH@GMAIL.COM
Email address

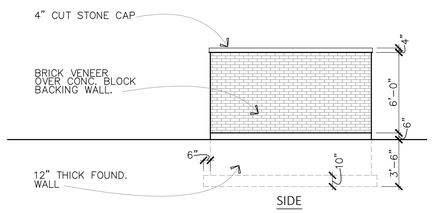
REC
JUL 18 2023
MUNSTER BUILDING DEPARTMENT

MAPLE LEAF
OUT-BUILDING LOT 6

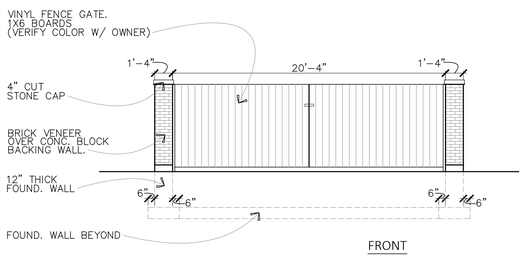
9460 CALUMET AVE.
MUNSTER, IN 46321



PLAN

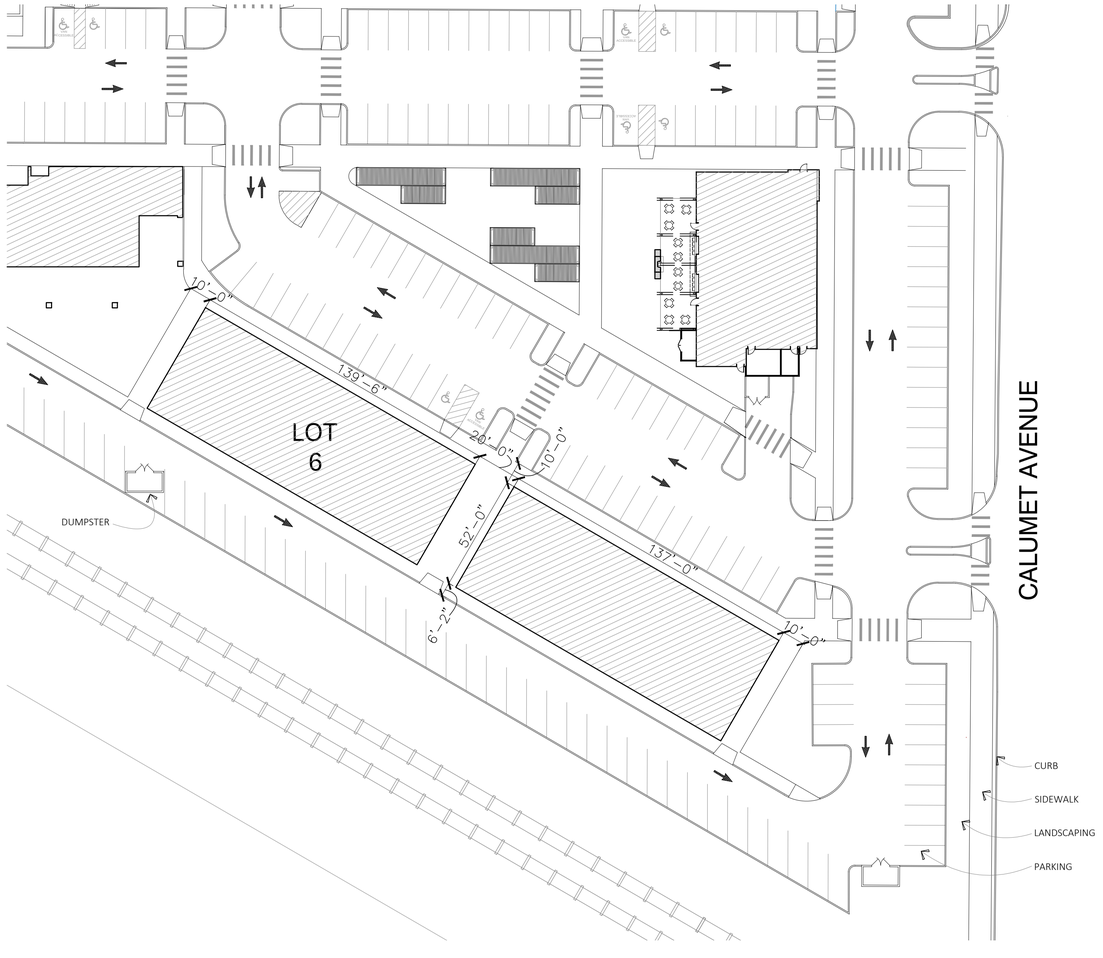


SIDE



FRONT

DUMPSTER ENCLOSURE
SCALE: 3/16"=1'-0"



SITE PLAN
SCALE: 1/32"=1'-0"

FOR ADDITIONAL SITE INFORMATION & DETAILS, REFER TO PLANS DEVELOPED BY *TORRENGA ENGINEERING*

INDEX OF DRAWINGS

BUILDING CODES

2012 International Building Code w/ 2014 Indiana Amendments
2012 International Mechanical Code w/ 2014 Amendments
2012 International Fuel Gas Code w/ 2014 Amendments
2012 International Fire Code w/ 2014 Amendments
2006 Indiana Plumbing Code w/ 2012 Amendments
2008 National Electric Code w/ 2009 Amendments
2007 ANSI/ASHRAE 90.1
2010 ADA Accessibilty Guidelines w/ 2009 ANSI 117.1

LICENSED ARCHITECTS CERTIFICATION

PLANS AND SPECIFICATIONS FOR NEW CONSTRUCTION.

I HEREBY CERTIFY THAT THESE PLANS & SPECIFICATIONS, DATED 6/10/23, FOR CONSTRUCTION OF MAPLE LEAF CROSSING COMMERCIAL OUT-BUILDING LOCATED AT 9460 CALUMET AVE, MUNSTER, INDIANA WERE PREPARED UNDER MY SUPERVISION.

ARCHITECTS NAME: MICHAEL E. STANULA
LICENSE NUMBER: AR-19600117
LICENSE EXPIRES: 12-31-23
SIGNATURE:
DATE: 6-10-23

07-18-23

STATE OF INDIANA · MICHAEL E. STANULA · 10100 · REGISTERED · LICENSED ARCHITECT

12-31-23

SCOPE DOCUMENT

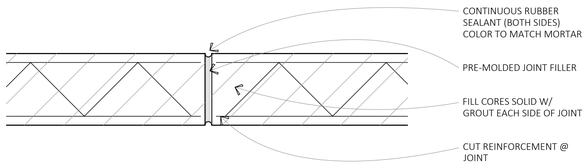
THESE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF ARCHITECTURAL DESIGN CONCEPT, THE DIMENSIONS OF THE BUILDING, THE MAJOR ARCHITECTURAL ELEMENTS, AND THE TYPE OF STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS. AS SCOPE DOCUMENTS THESE DRAWINGS AND SPECIFICATIONS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE CONTRACT DOCUMENTS. ON THE BASIS OF THE GENERAL SCOPE INDICATED OR DESCRIBED THE CONTRACTORS SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. DECISIONS OF THE ARCHITECT AS TO THE ITEMS OF WORK INCLUDED WITHIN THE SCOPE OF THIS DOCUMENT SHALL BE FINAL.

A.D.A. COMPLIANCE STATEMENT
To the best of my knowledge these drawings are in compliance with the Environmental Barriers Act & Indiana Accessibility Code.

REVISIONS	DATE

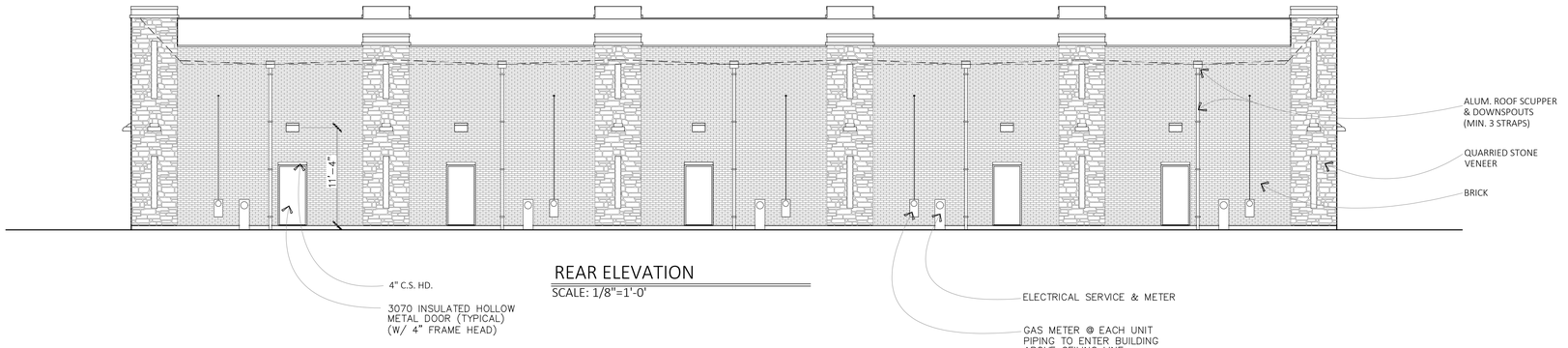
MICHAEL E. STANULA
architect
31800 S. State Line Rd.
Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET

DRAWN: N.G.
PROJECT: MAPLE LEAF OUT-BUILDING LOT 6
DATE: 07/18/23
SCALE: AS NOTED
JOB NO.: C2-23
SHEET: COVER
OF 10 SHEETS



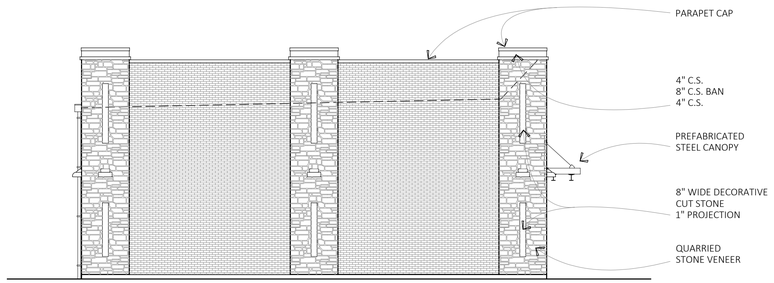
TYPICAL MASONRY CONTROL JOINT

SCALE: 1-½"=1'-0'



REAR ELEVATION

SCALE: 1/8"=1'-0'

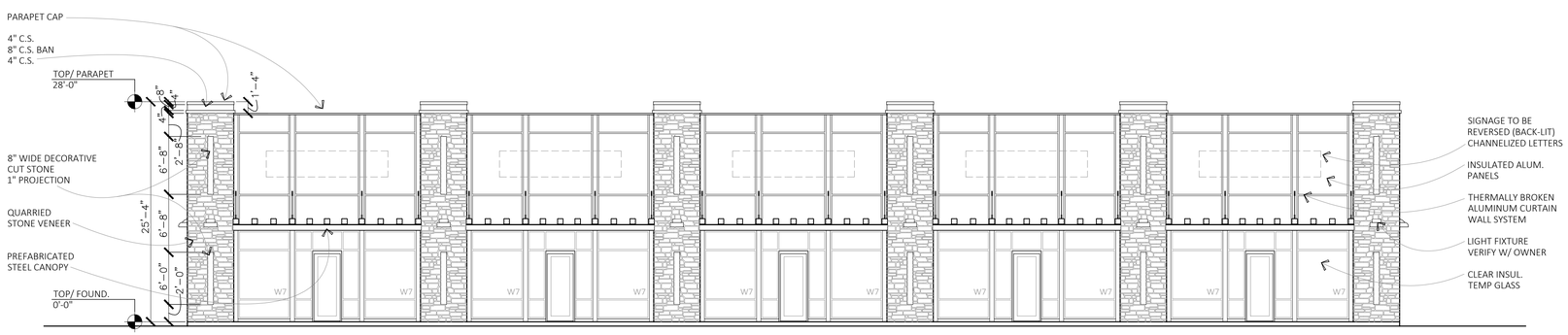


LEFT ELEVATION

SCALE: 1/8"=1'-0'

RIGHT ELEVATION

SCALE: 1/8"=1'-0'



FRONT ELEVATION

SCALE: 1/8"=1'-0'

REVISIONS	DATE

MICHAEL E. STANULA
architect
31800 S. State Line Rd.
Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET

DRAWN	N.G.
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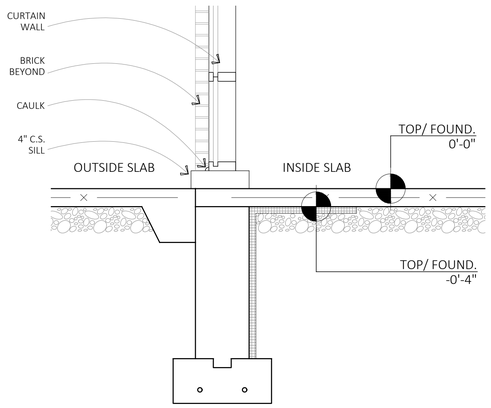
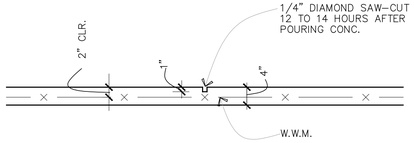
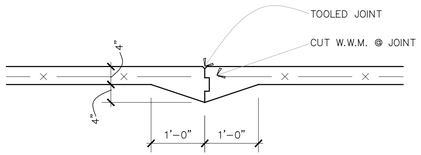
DATE	07/18/23
SCALE	AS NOTED
JOB NO.	C2-23
SHEET	A-1
	OF 10 SHEETS



3 / A-2 WINDOW/ FOUND. DETAIL
SCALE: 3/4"=1'-0'



TYPICAL CONTROL JOINT
SCALE: 3/4" = 1'-0"



TYPICAL CONSTRUCTION JOINT
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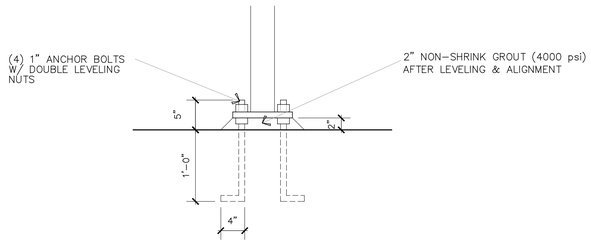
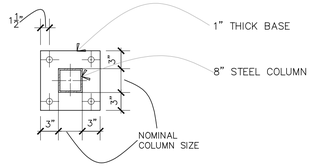


COLUMN BASE DETAIL
SCALE: 1" = 1'-0"



COLUMN BASE DETAIL
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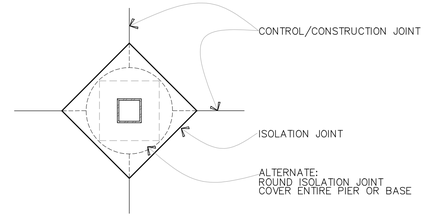
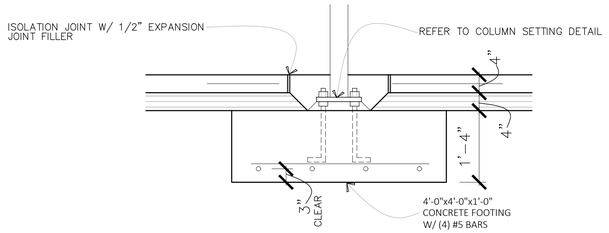
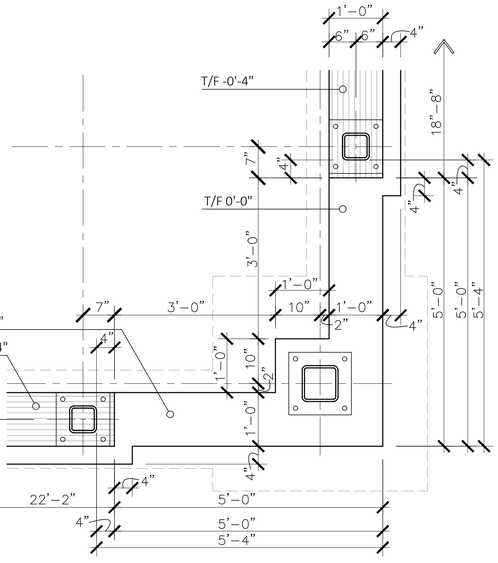


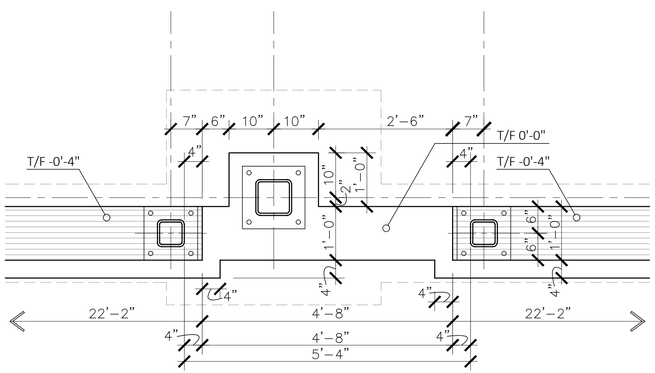
TYP. COLUMN ISOLATION JOINT DETAIL
SCALE: N.T.S.



INTERIOR COLUMN FOOTING
SCALE: N.T.S.



1 / A-2 FOUNDATION DETAIL
SCALE: 3/4"=1'-0'



2 / A-2 FOUNDATION DETAIL
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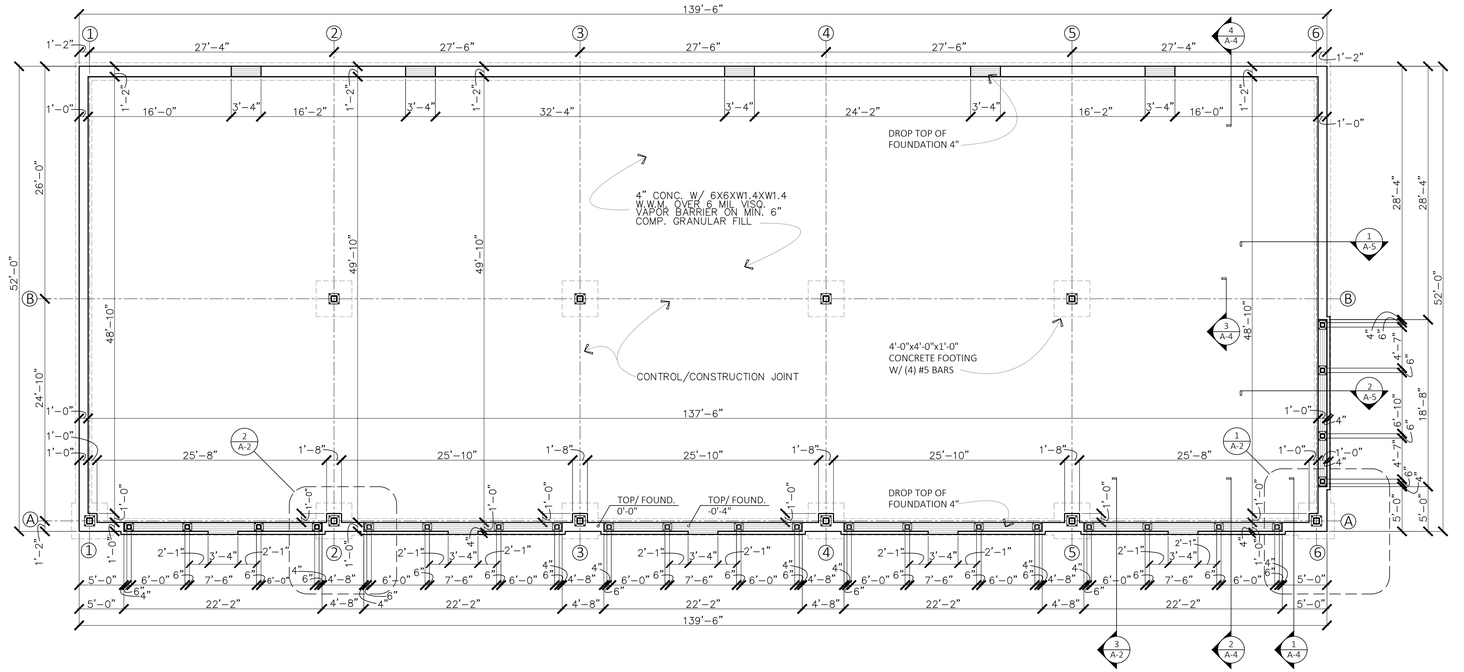

FOUNDATION PLAN
SCALE: 1/8"=1'-0'

REVISIONS	DATE

MICHAEL E. STANULA
architect
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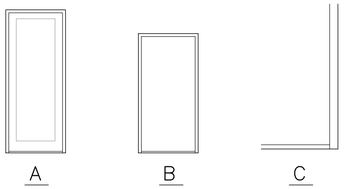
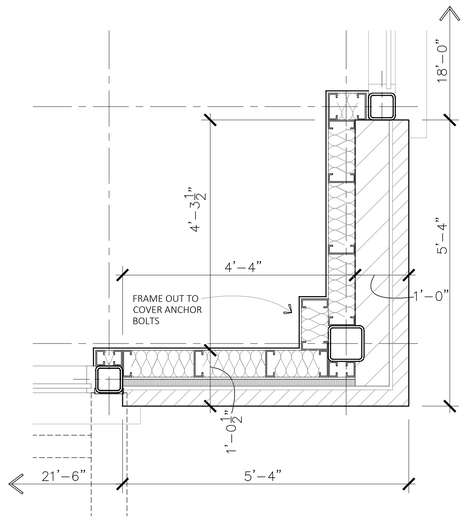
DRAWN	N.G.
PROJECT	MAPLE LEAF OUT-BUILDING LOT 6
DATE	07/18/23
SCALE	AS NOTED
JOB NO.	C2-23
SHEET	A-2
	OF 10 SHEETS

DOOR SCHEDULE					
DOOR	ELEV.	SIZE	MAT'L.	CLOSER	REMARKS
1	A	3'-0" X 8'-0"	A.S.F.	Y	
2	B	3'-0" X 6'-8"	S.C.WOOD	Y	PRE-HUNG
3	C	3'-0" X 7'-0"	H.M.	N	INSUL. DOOR & FRAME, PEEP HOLE 4" FRAME HEAD

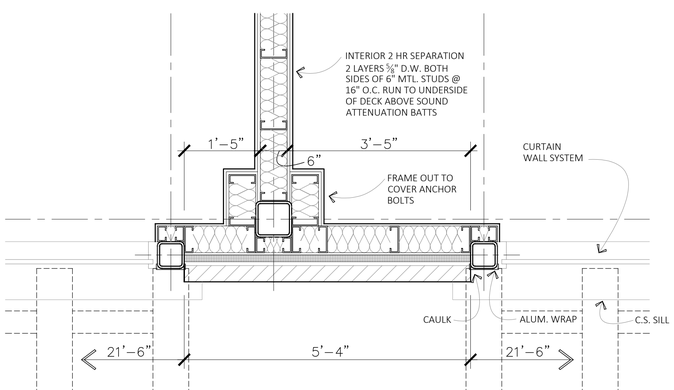
A.S.F. – ALUMINUM STOREFRONT DOOR
H.M. – HOLLOW METAL – FOAM FILLED, INSULATED
S.C. WOOD – SOLID CORE WOOD



DOOR ELEVATION
SCALE: 1/4" = 1'-0"



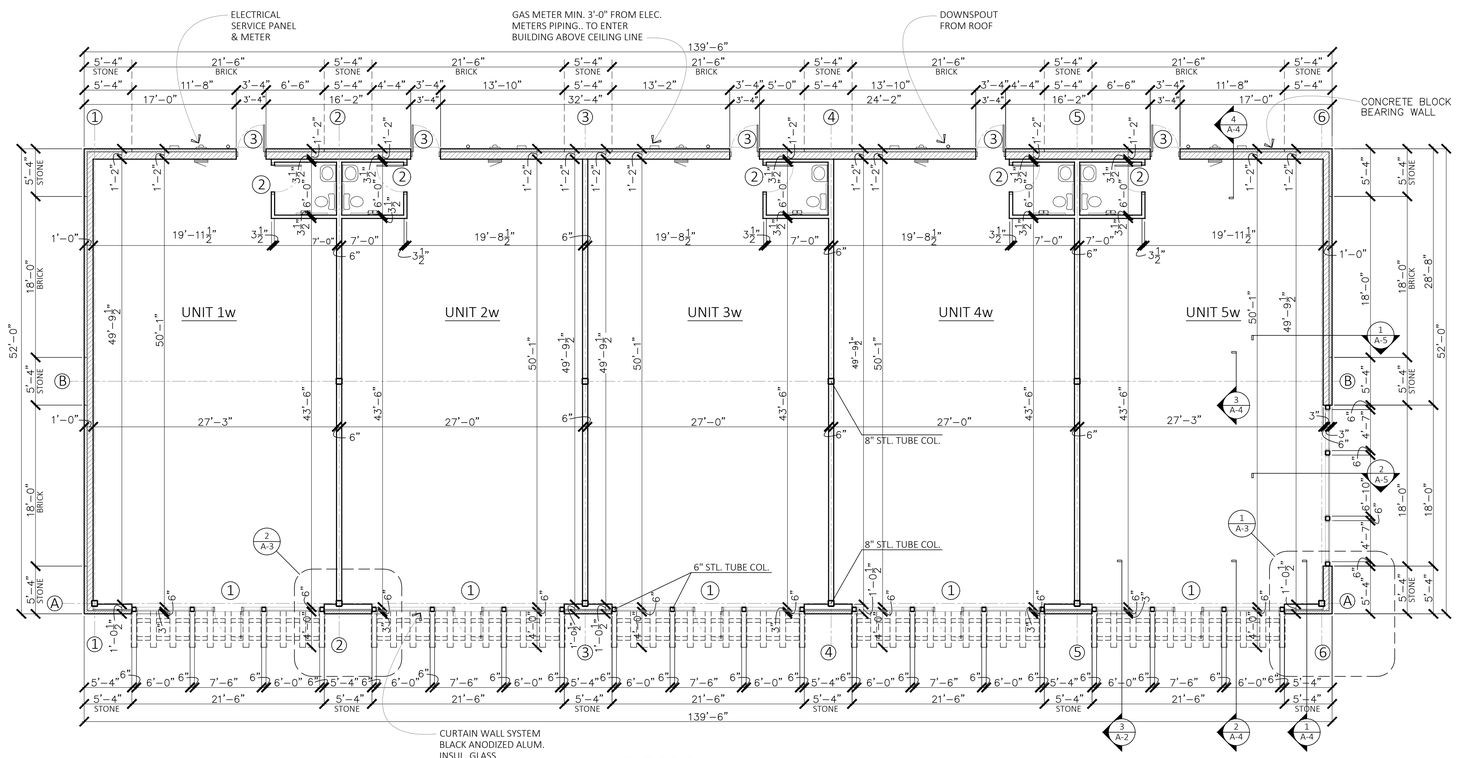
1 A-3 FLOOR PLAN DETAIL
SCALE: 3/4"=1'-0'



2 A-3 FLOOR PLAN DETAIL
SCALE: 3/4"=1'-0'

GENERAL REQUIREMENTS

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES AND ALL AUTHORITIES HAVING JURISDICTION.
2. ALL PARTITON DIMENSIONS ON PLAN SHEETS ARE TO FACE OF STUDS INTERIOR AND FACE OF SHEATHING EXTERIOR. NON-BEARING PARTITIONS ARE TO BE LAID OUT SO THAT STOCK COMPONENTS WILL FIT EXACTLY WITHIN INDICATED DIMENSIONS. FINISHED DIMENSIONS AT CRITICAL AREAS SUCH AS KITCHENS, CLOSETS, BATHTUBS, ETC. MUST BE HELD.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS (DO NOT SCALE DRAWINGS, FIGURED DIMENSIONS SHALL TAKE PRECEDENCE) AND CONDITIONS BEFORE PROCEEDING WITH THE WORK AND NOTIFY SUPERINTENDANT AT ONCE OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
4. PLUMBING SCHEMATIC DRAWINGS, HVAC DRAWINGS, SEWER MAINS, ELECTRICAL OUTLETS, SWITCHES, LIGHT LOCATIONS FOR ROUTING ALL PLUMBING, MECHANICAL AND ELECTRICAL WORK IS TO BE COORDINATED BETWEEN THE TRADES AFFECTED BY THE WORK AS PART OF THEIR INSTALLATION LAYOUT. NO PLUMBING, MECHANICAL, OR ELECTRICAL INFORMATION IS TO BE SCALED FROM THE DRAWING.
5. ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR.
6. SPOT SURVEY MUST BE SUBMITTED TO TOWN FOR REVIEW AND APPROVAL PRIOR TO FRAMING WALLS.
7. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAM IN CONNECTION WITH THIS WORK.
8. CONTRACTOR SHALL PAY FOR ALL PERMITS AND FEES RELATED TO THEIR WORK.
9. GENERAL CONTRACTOR SHALL PRESENT THE OWNER WITH AN "AS-BUILT" DRAWING INDICATING LOCATIONS OF ALL UNDERGROUND UTILITIES ON SITE (ELECTRIC, GAS, WATER, SEWER, TELEPHONE, ECT.). BY THE FIREPLACE MANUFACTURER SHALL BE PLACED AT
10. RECOMMENDATION... PROVIDE "KNOX BOX" NEAR THE FRONT ENTRANCE AS DICTATED BY THE LOCAL FIRE DEPARTMENT.
11. PROVIDE FIRE EXTINGUISHERS IN ACCORDANCE WITH NFPA 10 AND LOCATED AS DIRECTED BY THE LOCAL FIRE DEPARTMENT.
12. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER PER INDUSTRY HIGH QUALITY STANDARDS AND THE SPECIFICATIONS CONTAINED IN THE BID DOCUMENTS.
13. EACH CONTRACTOR SHALL INCLUDE LABOR, MATERIALS, TOOLS, EQUIPMENT, ECT., FOR THE COMPLETE CONSTRUCTION OF WORK INDICATED AND SPECIFIED BY THE DRAWINGS AND SPECIFICATIONS.
14. EACH CONTRACTOR SHALL ESTABLISH A SYSTEM OF TESTING AND INSPECTING THEIR WORK IN THE ROUGH AND FINISHED STATE, TO INSURE QUALITY AND PERFORMANCE OF THE FINAL WORK PRODUCT.
15. MATERIALS AS SPECIFIED ON THE DRAWING SHALL BE USED. SUBSTITUTIONS OF THE MATERIALS WILL NOT BE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE OWNER.
16. EACH SUBCONTRACTOR SHALL AMEND AND MAKE GOOD, AT HIS OWN COST, ANY DEFECTS OR OTHER DEFECTS IN HIS WORKMANSHIP AND/OR MATERIAL, OR DAMAGE HE MAY CAUSE TO ANOTHER'S WORK.
17. EACH CONTRACTOR IS TO CLEAN UP DEBRIS INSIDE AND OUTSIDE THE BUILDING WHICH IS CAUSED BY HIS WORK.
18. THE CONTRACTOR SHALL SUBMIT TO THE OWNER FOR APPROVAL A LIST OF MATERIALS, FIXTURES, AND EQUIPMENT, INCLUDING TYPE AND QUALITY TO BE USED.
19. ANY DETAILS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL NOT BE EXECUTED WITHOUT OWNERS APPROVAL.
20. ALL WORK MUST MEET OWNERS APPROVAL BEFORE FINAL PAYMENT IS MADE.
21. ALL WORK SHALL BE GUARANTEED FOR NOT LESS THAN ONE YEAR.
22. ALL MATERIAL TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS. THESE RECOMMENDATIONS SHALL TAKE PRECEDENCE OVER CONFLICTING DETAILS FOUND HEREIN.
23. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUAL CLEAN-UP OF SITE AT THE TIME OF MOVE IN. A FINAL CLEAN-UP WILL BE GIVEN TO PREMISES INCLUDING, BUT NOT LIMITED TO: FLOORS, WALLS, WINDOWS, CABINETS, ETC.
24. ALL EXTERIOR STEEL SHALL BE PRIMED AND PAINTED.
25. ALL FIRESTOPPING AS PER STATE AND LOCAL CODES.
26. ALL WINDOWS, DOORS, AND TRIM SHALL BE AS VERIFIED BY OWNER.
27. THERMAL AND SOUND INSULATING MATERIALS IN EXPOSED OR CONCEALED INSTALLATIONS SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 450 OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM-384.
28. THERMAL EAVE BAFFLES BY INSULATION CONTRACTOR.
29. ATTIC SPACES SHALL BE VENTILATED WITH A MINIMUM NET OPENING OF 1/300 OF THE AREA OF THE SPACE TO BE VENTILATED WITH AT LEAST 50% OF THE REQUIRED VENTILATING AREA PROVIDED BY RIDGE VENTS.
30. CONTRACTOR TO PROVIDE MANUFACURER'S INSTALLATION GUIDE & CUT-SHEETS FOR ALL APPLIANCES, ELECTRICAL HARDWARE & DEVICES, PLUMBING MATERIALS, & THE EQUIPMENT FOR HEATING, COOLING & VENTILATING.
31. ALL FOAM PLASTIC CORES OF MANUFACTURED ASSEMBLES SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 75 AND SHALL HAVE A SMOKE DEVELOPED RATING OF NOT MORE THAN 450 WHEN TESTED IN THE MAXIMUM THICKNESS INTENDED FOR USE IN ACCORDANCE WITH ASTM-E83.
32. ALL CONTRACTORS TO BE REGISTERED, LICENSED, INSURED, & BONDED.



FLOOR PLAN
SCALE: ⅛"=1'-0' 7227 SQ. FT.

REVISIONS	DATE

MICHAEL E. STANULA architect
31800 S. State Line Rd.
Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET

DRAWN: N.G.
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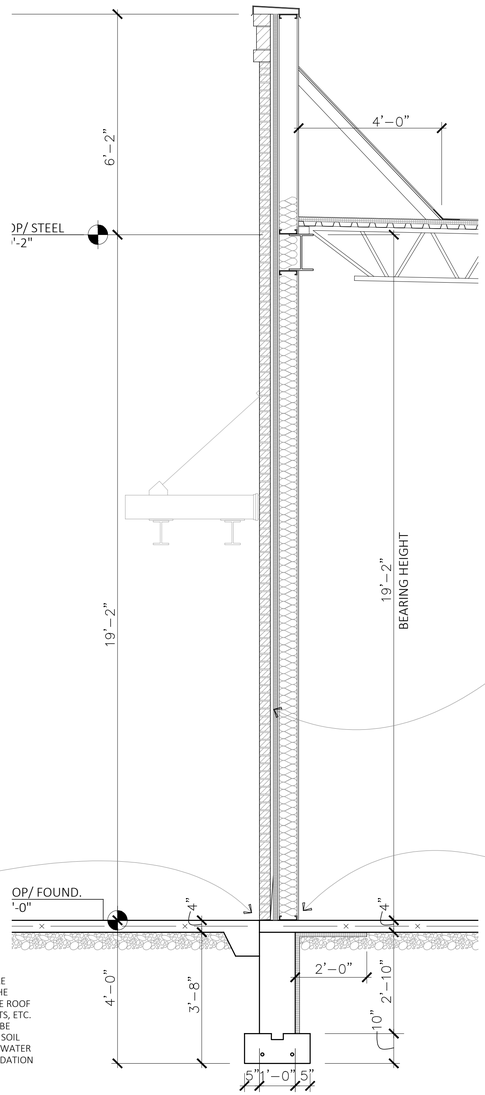
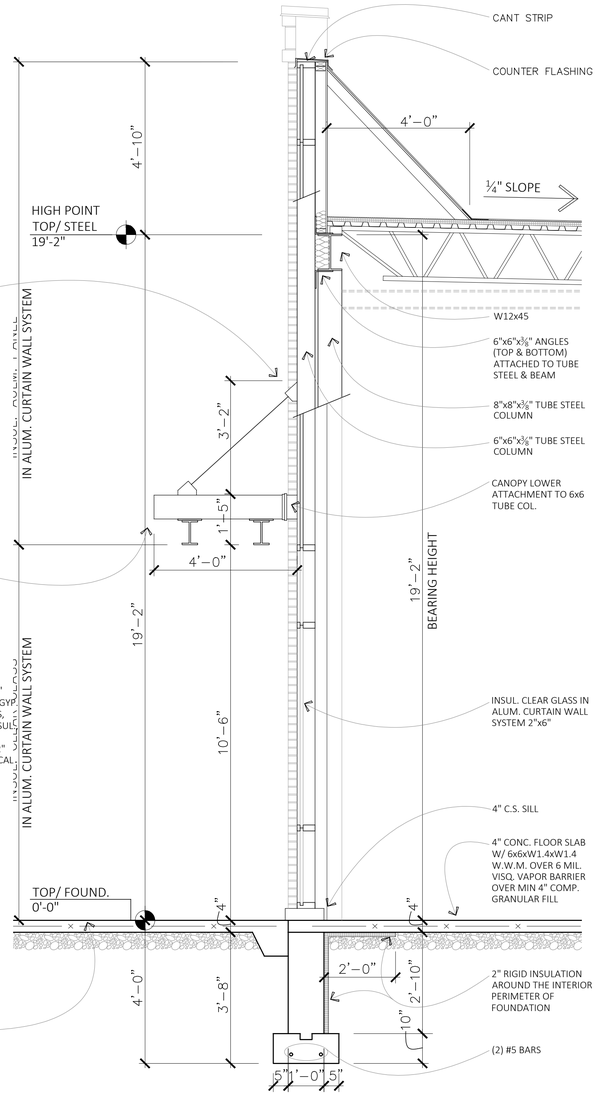
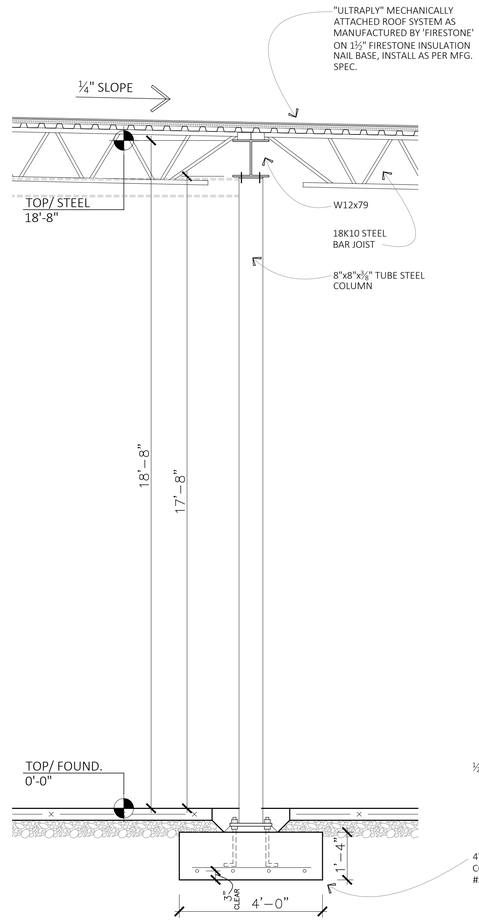
JOB NO.: C2-23
SHEET: A-3
OF 10 SHEETS



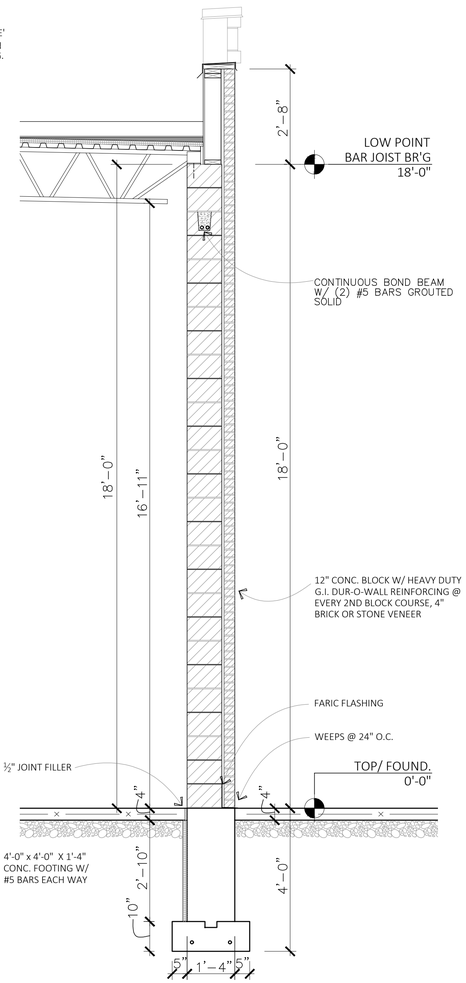
1 A-4 WALL SECTION
SCALE: 1/2"=1'-0'



2 A-4 WALL SECTION
SCALE: 1/2"=1'-0'



3 A-4 WALL SECTION
SCALE: 1/2"=1'-0'

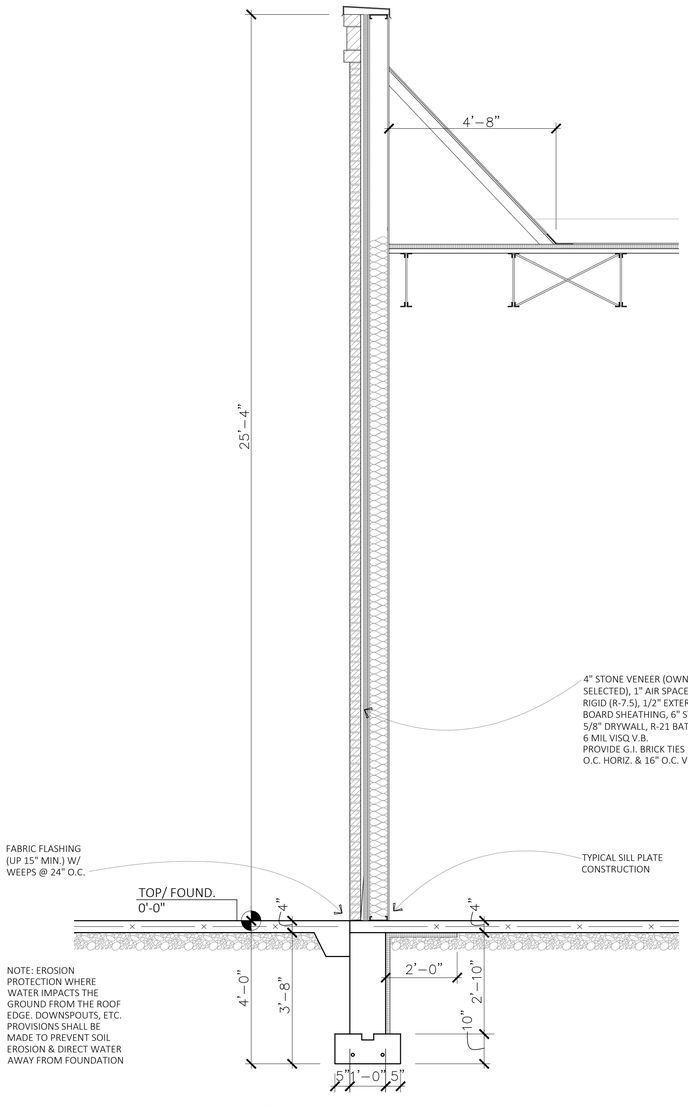


4 A-4 WALL SECTION
SCALE: 1/2"=1'-0'

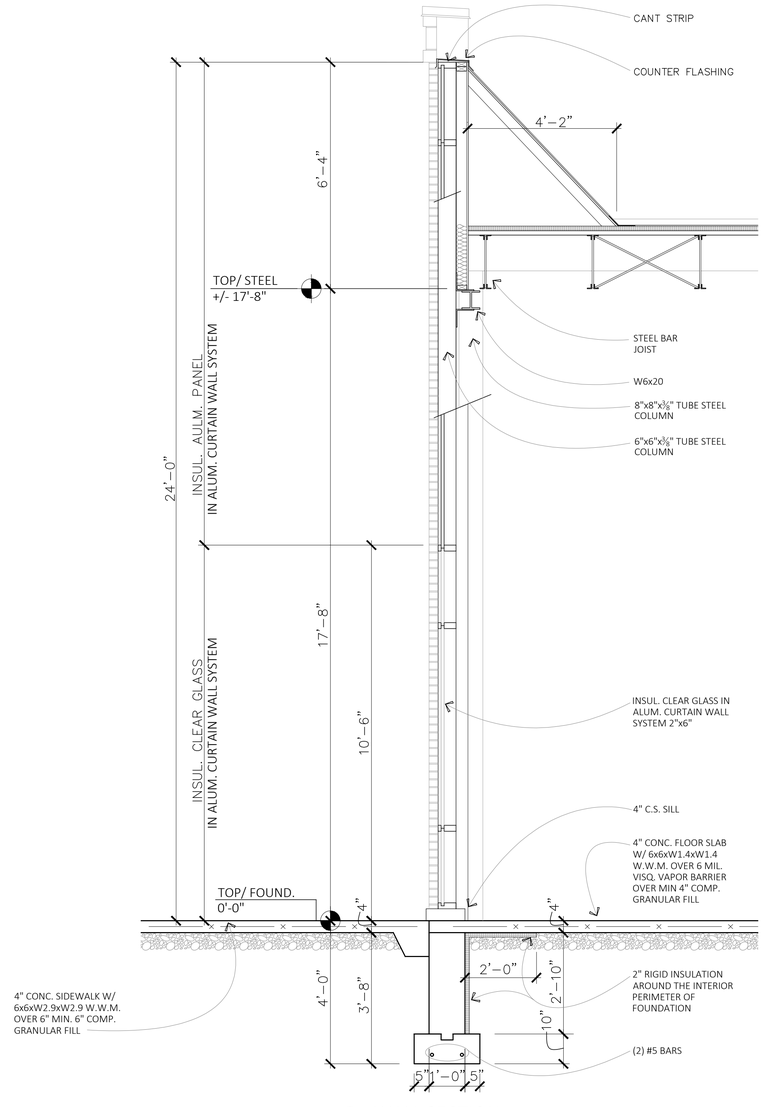
REVISIONS	DATE

MICHAEL E. STANULA
architect
31800 S. State Line Rd.
Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET

DRAWN	N.G.
PROJECT MAPLE LEAF OUT-BUILDING	LOT 6
DATE	07/18/23
SCALE	AS NOTED
JOB NO.	C2-23
SHEET	A-4
OF	10 SHEETS



1 A-5 WALL SECTION
SCALE: 1/2"=1'-0'



2 A-5 WALL SECTION
SCALE: 1/2"=1'-0'

REVISIONS	DATE

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architect
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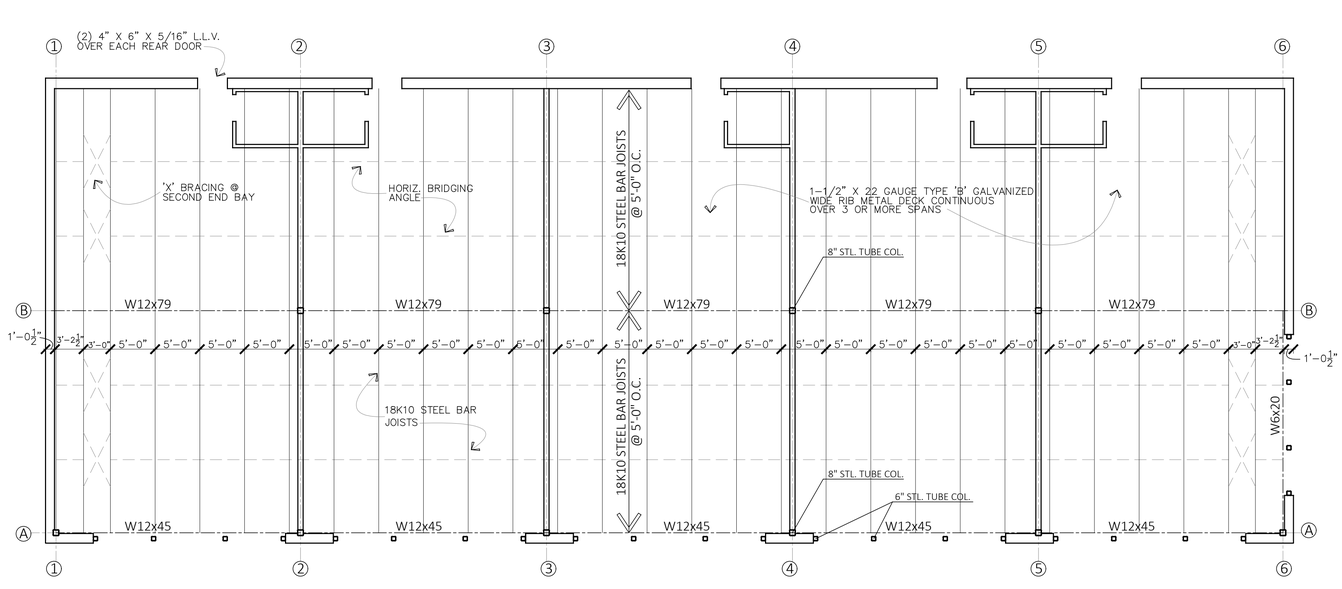
Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET

DRAWN	N.G.
PROJECT	MAPLE LEAF OUT-BUILDING LOT 6
DATE	07/18/23
SCALE	AS NOTED
JOB NO.	C2-23
SHEET	A-5
	OF 10 SHEETS



STRUCTURAL FLOOR PLAN

SCALE: ⅛"=1'-0'

REVISIONS	DATE

MICHAEL E. STANULA
architect
31800 S. State Line Rd.
Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET

DRAWN	N.G.
PROJECT	MAPLE LEAF OUT-BUILDING LOT 6
DATE	07/18/23
SCALE	AS NOTED
JOB NO.	C2-23
SHEET	S-1
	OF 10 SHEETS

EXHAUST FAN SCHEDULE

TAG	MFR. ✳	CFM	E.S.P.	RPM	WATTS	ELECTRICAL						REMARKS
						VOLT	PH	Hz	FLA	MCA	MOCP	
RTU-1	BROAN	75	0.3"	1,280	40	120	1	60	.9	2	10	1, 2 WALL CAP & DAMPER

1. DISCONNECT SWITCH & BACKDRAFT DAMPER
2. RAIN CAP

✳ OR EQUAL

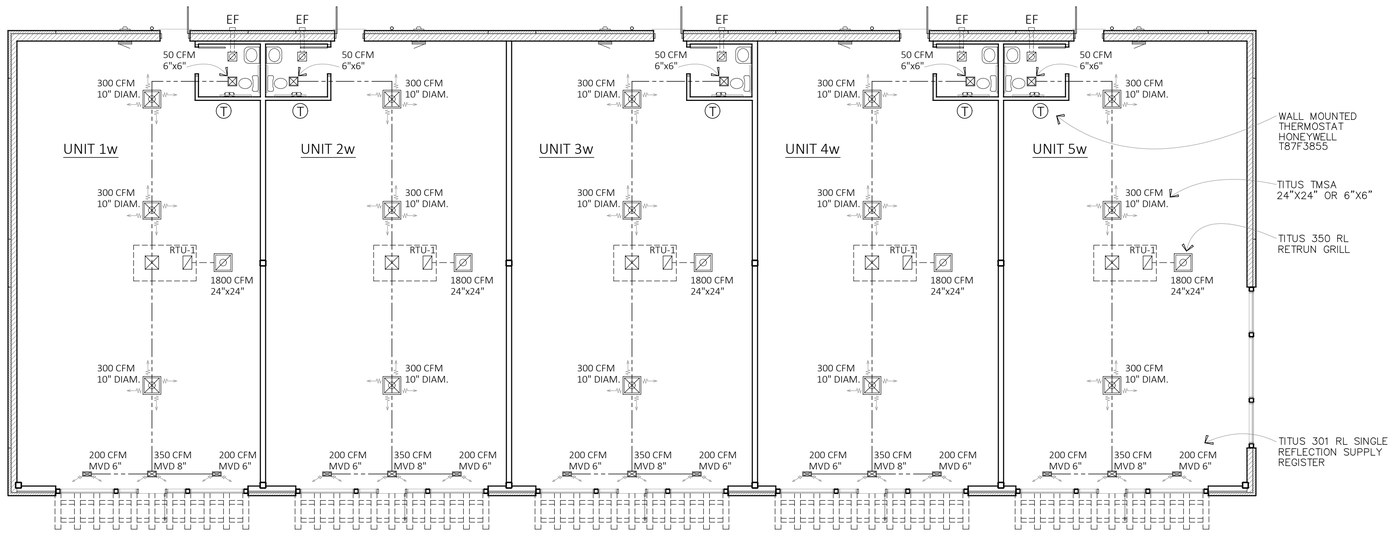
NOTE. EXHAUSTS FOR TOILET ROOMS SHALL CONNECT TO THE EXTERIOR OF THE BUILDING AT A POINT WHERE IT WILL NOT CAUSE A NUISSANCE AND AT LEAST 3-FEET FROM ANY OPENING INTO THE BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES.

FURNACE/AIR HANDLER SCHEDULE

TAG	MFR. ✳	SA CFM (HEAT)	SA CFM (COOL)	HEATING			VOLT	HP	Ph	FLA	Hz	AFUE%	MCA	HEAT ESP	COOL ESP	F.A.I.① CFM	REMARKS
				TYPE	INPUT (BTU/HR)	OUTPUT (BTU/HR)											
RTU-1	LG	1600	--		--	--	208/230	1	1	7.6	60	92	10	--	.4	0	HIGH EFFICIENCY. HORIZ. FLOW

✳ OR EQUAL

1. INTAKE TO HAVE AUTOMATIC DAMPER LINKED TO SYSTEM. DAMPER TO BE CLOSED WHEN FURNACE NOT IN USE.



SUPPLY DUCT

RETURN DUCT

MECHANICAL PLAN

SCALE: 1/8"=1'-0'

MECHANICAL LAYOUT PLANS ARE GUIDELINES ONLY. HVAC CONTRACTOR TO VERIFY EQUIPMENT SIZE & LOCATIONS IN FIELD.

REVISIONS	DATE

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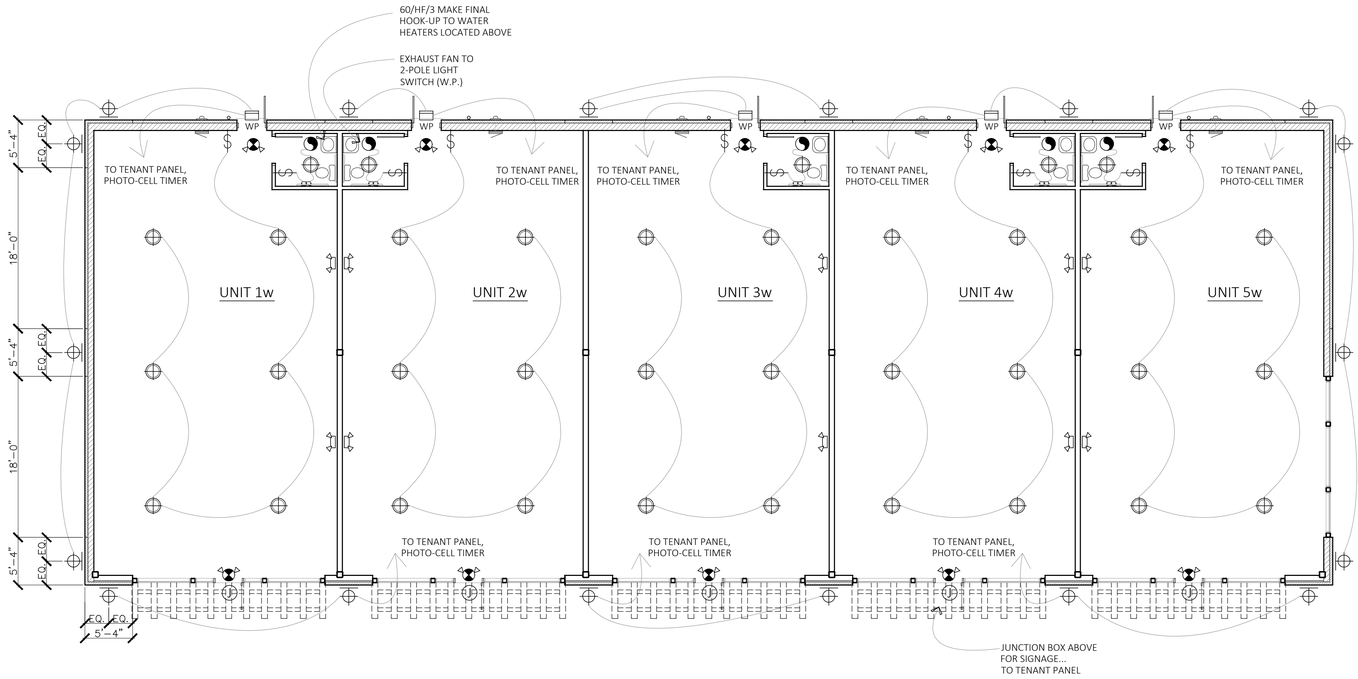
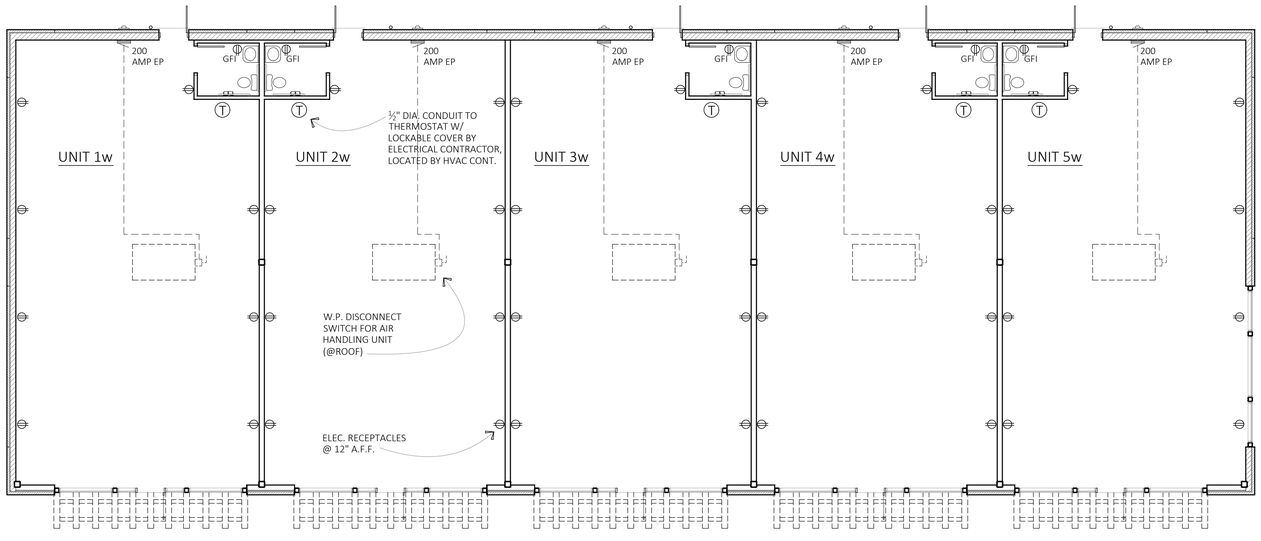
SHEET: M-1
OF 10 SHEETS



LIGHTING PLAN

SCALE: ⅛"=1'-0'



POWER PLAN

SCALE: ⅛"=1'-0'

ADDITIONAL ELECTRICAL NOTES

1. EXIT AND EMERGENCY LIGHTS SHALL BE LOCAL CODE APPROVED PRIOR TO PURCHASE AND INSTALLATION.
2. ALL EXIT LAMPS SHALL BE ENERGY SAVING TYPE AND HAVE TEST SWITCH.
3. MEANS OF EGRESS LIGHTING MINIMUM INTENSITY OF 1-FOOT CANDLE.
4. SET-UP MEETING IN FIELD WITH OWNER BEFORE STARTING WIRING WORKS. REVIEW ALL SWITCH, OUTLET, AND FIXTURE LOCATIONS. MARK EXACT LOCATIONS. DO NOT INSTALL BY SCALING LOCATIONS OFF OF THE PLANS. THE OWNER MAY MAKE REASONABLE ADJUSTMENTS IN LOCATION BEFORE START OF WIRING FROM THAT SHOWN ON THE PLANS WITHOUT ADDITIONAL EXPENSE.
5. VERIFY WITH OWNER ALL COMPUTER REQUIREMENTS I.E. DEDICATED CIRCUITS, ADDITIONAL TELEPHONE LINES, CONDUIT RUNS, ETC. (IF ANY). PROVIDE WIRE MANAGEMENT GROMMETS AT LOCATIONS IN COUNTER TOPS AS DIRECTED BY OWNER/INTERIOR DESIGNER.
6. EMERGENCY LIGHTING AND EXIT SIGNAGE SHALL RECEIVE THEIR PRIMARY POWER FROM GENERAL LIGHTING BRANCH CIRCUITS.
7. EXACT LOCATION OF PANEL BOARDS SHALL BE AS DIRECTED BY OWNER

EMERGENCY LIGHT AND EXIT LIGHT REQUIREMENTS (ORD. 1023.1-4)

PROVIDE DUAL VOLTAGE EXIT SIGNS WITH AN ALTERNATIVE POWER SOURCE. FACE LETTERING SHALL BE RED. VERIFICATION FOR PROPER COVERAGE WILL TAKE PLACE ON SITE.

PROVIDE EMERGENCY LIGHT COVERAGE AT EACH EXIT, AND IN STAIRWELLS. VERIFICATION FOR POPER COVERAGE WILL TAKE PLACE ON SITE.

BREAKER LOCKS ARE REQUIRED ON EXIT, EMERGENCY LIGHTS, FIRE ALARM, AND FIRE ALARM BELL CIRCUITS.

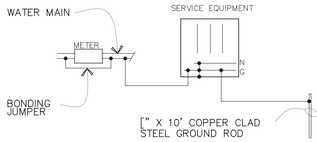
NOTES:
- AREAS TO ACHIEVE 50% LIGHT REDUCTION THROUGH DUAL SWITCHES UNLESS THE AREA HAS AN OCCUPANCY SENSOR, HAS ONLY ONE LIGHT SWITCH OR IS A CORRIDOR, TOILET ROOM, OR STORAGE ROOM.
- FLUORESCENT FIXTURES SHALL HAVE ALTERNATE BALLASTS CONNECTED FOR TWO-LEVEL LIGHTING WHERE TWO SWITCHES ARE INDICATED.
- MOUNTING HT. OF LIGHT FIXTURES TO BE 10'-0" A.F.F. VERIFY.

ELECTRICAL SYMBOLS LIST

- DUPLEX RECEPTACLE OUTLET
- GFI — GROUND FAULT INTERRUPT OUTLET
- TOGGLE SWITCH
- CEILING MOUNTED DECORATIVE FIXTURE
- WALL MOUNTED FIXTURE
- EXHAUST FAN
- S — SMOKE DETECTOR- DUAL VOLT IN SERIES
- J — JUNCTION BOX
- WP — LITHONIA #TWS LED P1 50K 120 PE BZ WALL PACK LED LIGHT. 25W. LED LAMP. 1476 LUMENS. 5000K 120V. MTD. @ 9'-0" ABOVE GRADE
- LITHONIA #ECC G M6 LED GREEN EXIT SIGN W/ DUAL EMERGENCY HEADS. 120-277V. UNIVERSAL 90 MIN. BATTERY BACK-UP. SURFACE MOUNTED 1" ABOVE DOOR 1.1W
- LITHONIA #EU2L M12 DUAL HEAD EMERGENCY LIGHT UNIT. LED HEADS. 120-277V. UNIVERSAL 90 MIN. BATTERY BACK-UP. SURFACE MOUNTED .3W

GENERAL NOTES

1. ALL METERED SERVICE ENTRANCES, BOTH UNDERGROUND AND OVERHEAD, MUST BE IN RIGID METAL CONDUIT OR INTERMEDIATE METALLIC CONDUIT.
2. FLEXIBLE METAL CONDUIT SHALL NOT BE PERMITTED IN EXPOSED LOCATIONS, IN LENGTHS OVER 3 FEET, OR IN LOCATIONS PROHIBITED BY 'NEC ARTICLE 348.12'
3. ALUMINUM CONDUCTOR MATERIAL IS PROHIBITED.
4. NON-METALLIC CONDUIT IS PERMITTED ONLY IN THE FOLLOWING LOCATIONS:
   - A. IN LOCATIONS SUBJECT TO SEVERE CORROSIVE INFLUENCES AS COVERED BY 'NEC ARTICLE 300.6'
   - B. IN WET LOCATIONS WHERE WALLS ARE WASHED FREQUENTLY.
   - C. IN DRY AND DAMP LOCATIONS NOT PROHIBITED BY 'NEC ARTICLE 352.12'.
   - D. UNDERGROUND INSTALLATIONS (HORIZONTAL ONLY)
5. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL NOT BE PERMITTED FOR DIRECT BURIAL IN ADDITION TO USES NOT PERMITTED IN 'NEC ARTICLE 350.12.'



GROUNDING DIAGRAM

1. ALL GROUNDING AND BONDING MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE, NEC ARTICLE 250 AND/OR LOCAL ORDINANCES.
2. REFER TO NEC TABLE 250-66 AND ARTICLE 250-66 (a) TO SIZE BONDING CONDUCTORS/JUMPERS. BONDING JUMPERS MUST BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 250-64.
3. BOND GROUND ROD, WATER MAIN (THERMAL WELD CONNECTION MUST BE MADE WITHIN (5) FEET OF POINT OF ENTRANCE OF PIPE AND AHEAD OF WATER METER FITTINGS

REVISIONS	DATE

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architect
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Beecher, IL 60401
MES.ARCH@SBCGLOBAL.NET

DRAWN: N.G.
PROJECT: MAPLE LEAF OUT-BUILDING LOT 6
DATE: 07/18/23
SCALE: AS NOTED
JOB NO.: C2-23
SHEET: E-1
OF 10 SHEETS

TOILET ACCESSORY SCHEDULE

ITEM No.	DESCRIPTION
1	SOAP DISPENSER SURFACE MOUNTED
2	PAPER TOWEL DISPENSER SURFACE MOUNTED
3	1–1/2" DIA. STAINLESS STEEL GRAB BAR 36" LONG
4	1–1/2" DIA. STAINLESS STEEL GRAB BAR 42" LONG
5	WALL MIRROR W/ STAINLESS STEEL FRAME 24"X36"
6	TOILET TISSUE PAPER HOLDER, SURFACE MOUNTED
7	1–1/2" DIA. STAINLESS STEEL GRAB BAR 18" LONG

– ALL LAVATORY & HAND SINK FAUCETS SHALL BE PROVIDED WITH AN AUTOMATIC SAFETY WATER–MIXING DEVICE. THE DEVICE SHALL BE EITHER A THERMOSTATIC PRESSURE BALANCE OR COMBINATION CONTROLS WHICH SHALL BE ADJUSTED TO A MAXIMUM SETTING OF 100 DEGREES AT THE TIME OF INSTALLATION.

TOILETS MAY BE WALL–HUNG OR PEDESTAL STYLE. THE HEIGHT MUST BE BETWEEN 17" & 19" MEASURED FROM THE FLOOR TO THE TOP OF THE TOILET SEAT.

NOTES:
– 1/2" WATER RESISTANT D.W. @ TOILET WALLS

– PROVIDE 3/4" PLYWOOD BEHIND ALL GRAB BARS & TOILET ACCESSORIES

PLUMBING FIXTURE SCHEDULE
OR EQUAL

LAV – LAVATORY ADA
AMERICAN STANDARD SINK "LUCERNE" HDCP. HDCP. HT. *31–34", HERITAGE INS. TAIL PIPE W/ SENSOR OPERATED AUTOMATIC FAUCET ELECTRONICS PACKAGE BY MOEN OR EQUAL

WC – WATER CLOSET ADA
WATER CLOSET, AMERICAN STANDARD HDCP. W/ ELONGATED WHITE SEAT, OPEN FRONT SENSOR OPERATED AUTOMATIC FLUSH.

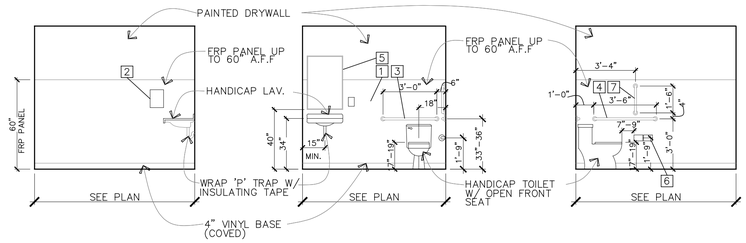
LT – 24" LAUNDRY TUB
SEE EQUIPMENT SPECS FROM OWNER

W.H. – WATER HEATER
6 GAL. ELECTRICAL WATER HEATER

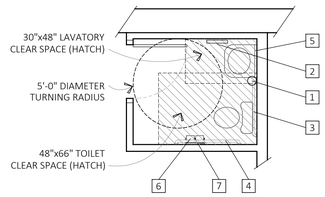
FD – FLOOR DRAIN
ZURN 4" W/ BRASS STRAINER ADJUSTABLE STRAINER

WCO – WALL CLEAN OUT
CHROME COVER WALL MOUNT

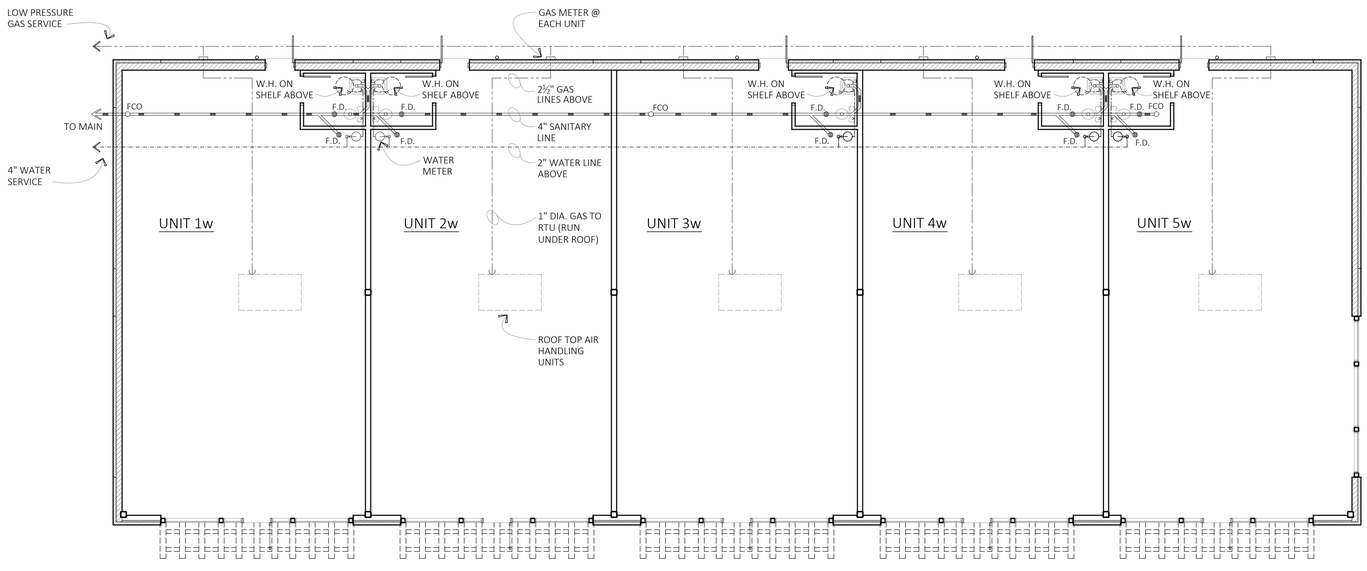
FCO – FLOOR CLEAN OUT
ZURN BRONZE ROUND FRAME & FLUSH COVER.



TOILET ROOM ELEVATIONS
SCALE: 1/4"=1'-0'



PARTIAL FLOOR PLAN: RESTROOM
SCALE: 1/4"=1'-0'



SANITARY LINE
COLD WATER LINE
HOT WATER LINE

PLUMBING PLAN
SCALE: ⅛"=1'-0'

REVISIONS	DATE

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OF 10 SHEETS

MAPLE LEAF CROSSING

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

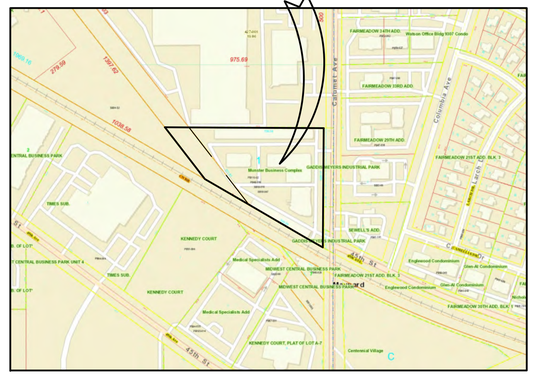
INDEX	
PAGE	DESCRIPTION
COVER	TITLE PAGE
C–1.0	EXISTING TOPOGRAPHY & UTILITIES
C–1.1	DEMOLITION PLAN
C–2.0	SITE PLAN
C–2.1	SIGNAGE PLAN
C–3.0	SANITARY SEWERS & WATERMAIN PLAN
C–4.0	STORM SEWERS & GRADING PLAN
C–5.0 TO C–5.3	DETAILS & SPECIFICATIONS
C–6.0	STORM WATER POLLUTION PREVENTION PLAN
C–7.0 TO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

Legal Descriptions:
PARCEL 1
Lot 1 in Munster Business Complex, a Planned Unit Development, in the Town of Munster, as per plat thereof, recorded in Plat Book 110, page 02 in the Office of the Recorder, Lake County, Indiana.

PARCEL 2
Part of the Southeast Quarter of Section 25, Township 36 North, Range 10 West of the Second Principal Meridian, lying West of Lot 1 in Munster Business Complex, a Planned Unit Development, in the Town of Munster, as per plat thereof, recorded in Plat Book 110, page 02 in the Office of the Recorder, Lake County, Indiana, and North of Canadian National Railroad right-of-way, being more particularly described as follows: Commencing at the Northeast corner of said Section 25; thence South 00° 26' 30" West, along the East line of said Section 25, a distance of 3,054.86 feet; thence North 89° 43' 30" West, along the North line of said Lot 1 extended East, a distance of 756.34 feet to the Northwest corner of said Lot 1 and also being point of beginning; thence South 37° 47' 07" East, along the West line of said Lot 1, a distance of 511.81 feet to the Southwest corner of said Lot 1; thence North 59° 52' 07" West, along the Northerly line of said Canadian National Railroad right-of-way (100 feet wide), a distance of 265.99 feet; thence North 37° 47' 07" West, a distance of 343.63 feet; thence South 89° 43' 30" East, a distance of 127.01 feet to the point of beginning, containing 0.982 acres, more or less, all in the Town of Munster, Lake County, Indiana.

Legal Description:
Being a resubdivision of Lot 1 in Munster Business Complex, a Planned Unit Development, to the Town of Munster, as per Plat thereof, recorded in Plat Book 110, page 2, in the Office of the Recorder of Lake County, Indiana, and part of the Southeast Quarter of Section 25, Township 36 North, Range 10 West of the Second Principal Meridian, lying North of Canadian National Railroad right-of-way (100 feet wide) and West of Calumet Avenue (90 feet wide); being more particularly described as follows:
Commencing at the Northeast corner of said Section 25; thence South 00° 26' 30" West, along the East line of said Section 25, a distance of 3,054.86 feet; thence North 89° 43' 30" West, along the North line of said Lot 1 extended East, a distance of 50.00 feet to the Northeast corner of said Lot 1 and also being point of beginning; thence South 00°26' 30" West, along the East line of said Lot 1 and also being the West right-of-way line of Calumet Avenue, a distance of 625.17 feet to a point on a curve, said point also being the North line of the Canadian National Railroad right-of-way; thence Northwesterly along a curve concave to the Northeast, along the Northerly line of said Canadian National Railroad right-of-way and having a radius of 6,561.12 feet (the chord of which bears North 60° 21'21" West, a chord distance of 111.74 feet), an arc distance of 111.74 feet; thence North 59° 52' 07" West, along the Northerly line of said Canadian National Railroad right-of-way, a distance of 602.23 feet; thence North 37° 47' 07" West, a distance of 343.63 feet; thence South 89° 43' 30" East, a distance of 833.34 feet to the point of beginning, containing 7.049 acres, more or less, all in the Town of Munster, Lake County, Indiana.

SUBJECT AREA



VICINITY MAP
NOT TO SCALE

NORTH

NOTES:
1. TOTAL SITE AREA = 7.049± (ACRES) 307,066± (S.F)
2. THIS PROPERTY IS LOCATED IN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN AS TAKEN FROM THE FLOOD INSURANCE RATE MAP (FIRM) FOR MUNSTER, LAKE COUNTY, INDIANA, MAP NUMBER 18089C0117E, EFFECTIVE DATE JANUARY 18, 2012.
3. BENCHMARK(S):
   TBM #1 – FIRE HYDRANT LOCATED ALONG THE WEST SIDE OF CALUMET AVENUE, 85.65 FEET SOUTH OF THE NORTHWEST CORNER OF LOT 1 IN MUNSTER BUSINESS COMPLEX, SOUTH SOUTHEAST BOLT ELEVATION 618.87.

   TBM #2 – MAG. NAIL SET LOCATED ALONG THE EAST SIDE OF CALUMET AVENUE AT CONCRETE SIDEWALK, 120 FEET SOUTH OF THE NORTH LINE OF LOT 1 IN MUNSTER BUSINESS COMPLEX, ELEVATION 616.73.
4. DEVELOPER:
   First Metropolitan Builders
   400 Fisher Avenue
   Munster, IN 46321
5. EXISTING TOPOGRAPHY AND UTILITIES DATA ARE PROVIDED AND TAKEN FROM TORRENGA SURVEYING, LLC, JOB NO.: 2019–0676 DATED 03–25–2020
6. ALL VERTICAL DATUM IS BASED ON NAVD88.
7. HYDROLOGIC UNIT CODES: 07120003030030– HART DITCH (PLUM CREEK)–DYER DITCH
8. LOCATION:
   LATITUDE – 41°32'35" N
   LONGITUDE – 87°30'36" W
9. CURRENT ZONING: CD–4A WITH NO GROUND FLOOR RESIDENTIAL USES PERMIT

Know what's **below.** **Call** before you dig.

"IT'S THE LAW"
CALL 2 WORKING DAYS BEFORE YOU DIG
811 or 1-800-382-5544
CALL TOLL FREE
PER INDIANA STATE LAW IC8–1–26.
IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

County: Lake

SE **Qtr., Sec.** 25 , **T.** 36 **N, R.** 10 **W.**

Township: MUNSTER

DATE AND REVISIONS:

NO.	DATE	DESCRIPTION	BY
8	06-29-2023	SITE PLAN REVISION	DT/EM
7	06-17-2021	HOTEL CANOPY REVISIONS	DT/EM
6	12-14-2020	METES AND BOUNDS LEGAL DESCRIPTION	DT/EM
5	11-30-2020	STORM SEWERS REVISIONS	DT/EM
4	11-17-2020	SWPPP REVISIONS	DT/RT
3	06-26-2020	RE-SUBMITTAL TO MUNSTER	DT/RT
2	06-05-2020	RE-SUBMITTAL TO MUNSTER	DT/EM/MH
1	05-11-2020	PRIMARY SUBMITTAL	DT/EM/MH

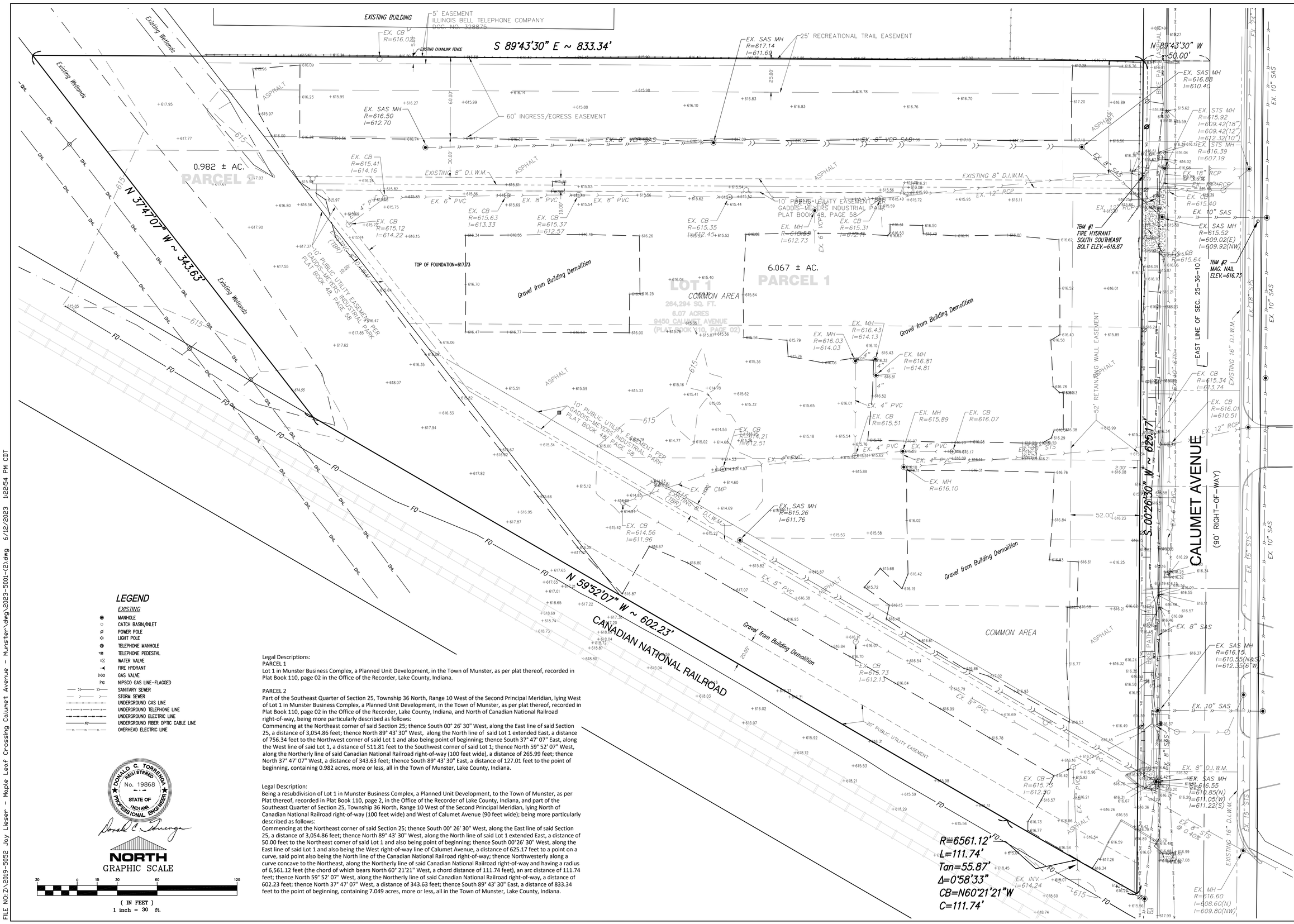
CLIENT/OWNER:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, IN 46321

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

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

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

Donald C. Torrenga



LEGEND

EXISTING

◉	MANHOLE
○	CATCH BASIN/INLET
Ø	POWER POLE
☼	LIGHT POLE
Ⓣ	TELEPHONE MANHOLE
T⊠	TELEPHONE PEDESTAL
W⧖	WATER VALVE
⊸	FIRE HYDRANT
⋈G	GAS VALVE
⚐G	NIPSCO GAS LINE-FLAGGED
——))——	SANITARY SEWER
—— >——	STORM SEWER
— GAS —	UNDERGROUND GAS LINE
— T —	UNDERGROUND TELEPHONE LINE
— ELEC —	UNDERGROUND ELECTRIC LINE
—— FO ——	UNDERGROUND FIBER OPTIC CABLE LINE
— OHL —	OVERHEAD ELECTRIC LINE

DONALD C. TORRENGA
REGISTERED
No. 19868
STATE OF INDIANA
PROFESSIONAL ENGINEER

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PARCEL 2
Part of the Southeast Quarter of Section 25, Township 36 North, Range 10 West of the Second Principal Meridian, lying West of Lot 1 in Munster Business Complex, a Planned Unit Development, in the Town of Munster, as per plat thereof, recorded in Plat Book 110, page 02 in the Office of the Recorder, Lake County, Indiana, and North of Canadian National Railroad right-of-way, being more particularly described as follows:
Commencing at the Northeast corner of said Section 25; thence South 00° 26' 30" West, along the East line of said Section 25, a distance of 3,054.86 feet; thence North 89° 43' 30" West, along the North line of said Lot 1 extended East, a distance of 756.34 feet to the Northwest corner of said Lot 1 and also being point of beginning; thence South 37° 47' 07" East, along the West line of said Lot 1, a distance of 511.81 feet to the Southwest corner of said Lot 1; thence North 59° 52' 07" West, along the Northerly line of said Canadian National Railroad right-of-way (100 feet wide), a distance of 265.99 feet; thence North 37° 47' 07" West, a distance of 343.63 feet; thence South 89° 43' 30" East, a distance of 127.01 feet to the point of beginning, containing 0.982 acres, more or less, all in the Town of Munster, Lake County, Indiana.

Legal Description:
Being a resubdivision of Lot 1 in Munster Business Complex, a Planned Unit Development, to the Town of Munster, as per Plat thereof, recorded in Plat Book 110, page 2, in the Office of the Recorder of Lake County, Indiana, and part of the Southeast Quarter of Section 25, Township 36 North, Range 10 West of the Second Principal Meridian, lying North of Canadian National Railroad right-of-way (100 feet wide) and West of Calumet Avenue (90 feet wide); being more particularly described as follows:
Commencing at the Northeast corner of said Section 25; thence South 00° 26' 30" West, along the East line of said Section 25, a distance of 3,054.86 feet; thence North 89° 43' 30" West, along the North line of said Lot 1 extended East, a distance of 50.00 feet to the Northeast corner of said Lot 1 and also being point of beginning; thence South 00°26' 30" West, along the East line of said Lot 1 and also being the West right-of-way line of Calumet Avenue, a distance of 625.17 feet to a point on a curve, said point also being the North line of the Canadian National Railroad right-of-way; thence Northwesterly along a curve concave to the Northeast, along the Northerly line of said Canadian National Railroad right-of-way and having a radius of 6,561.12 feet (the chord of which bears North 60° 21'21" West, a chord distance of 111.74 feet), an arc distance of 111.74 feet; thence North 59° 52' 07" West, along the Northerly line of said Canadian National Railroad right-of-way, a distance of 602.23 feet; thence North 37° 47' 07" West, a distance of 343.63 feet; thence South 89° 43' 30" East, a distance of 833.34 feet to the point of beginning, containing 7.049 acres, more or less, all in the Town of Munster, Lake County, Indiana.

FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossing Calumet Avenue - Munster\dwg\2023-5001-(2).dwg 6/12/2023 1:22:54 PM CDT

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com

MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE CO., INDIANA
EXISTING TOPOGRAPHY & UTILITIES

REVISIONS:
12-14-2020
06-26-2020
06-05-2020

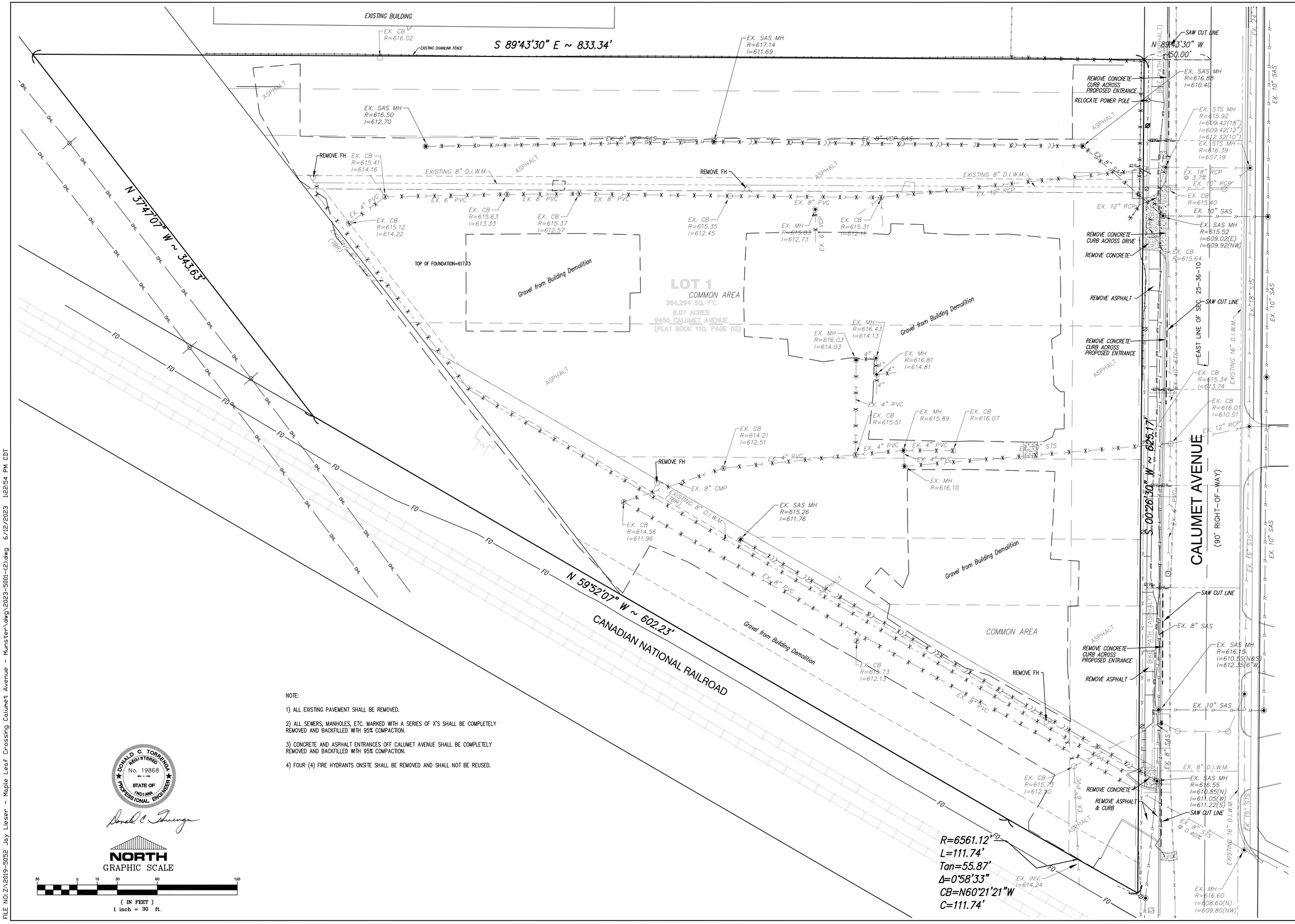
DATE: 05-11-2020

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052

SCALE: 1" = 30'

SHEET
C-1.0



NOTE:

1) ALL EXISTING PAVEMENT SHALL BE REMOVED.

2) ALL SEWERS, MANHOLES, ETC. MARKED WITH A SERIES OF X'S SHALL BE COMPLETELY REMOVED AND BACKFILLED WITH 95% COMPACTION.

3) CONCRETE AND ASPHALT ENTRANCES OFF CALUMET AVENUE SHALL BE COMPLETELY REMOVED AND BACKFILLED WITH 95% COMPACTION.

4) FOUR (4) FIRE HYDRANTS ONSITE SHALL BE REMOVED AND SHALL NOT BE REUSED.

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

NORTH

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenga.com

MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE CO., INDIANA
DEMOLITION PLAN

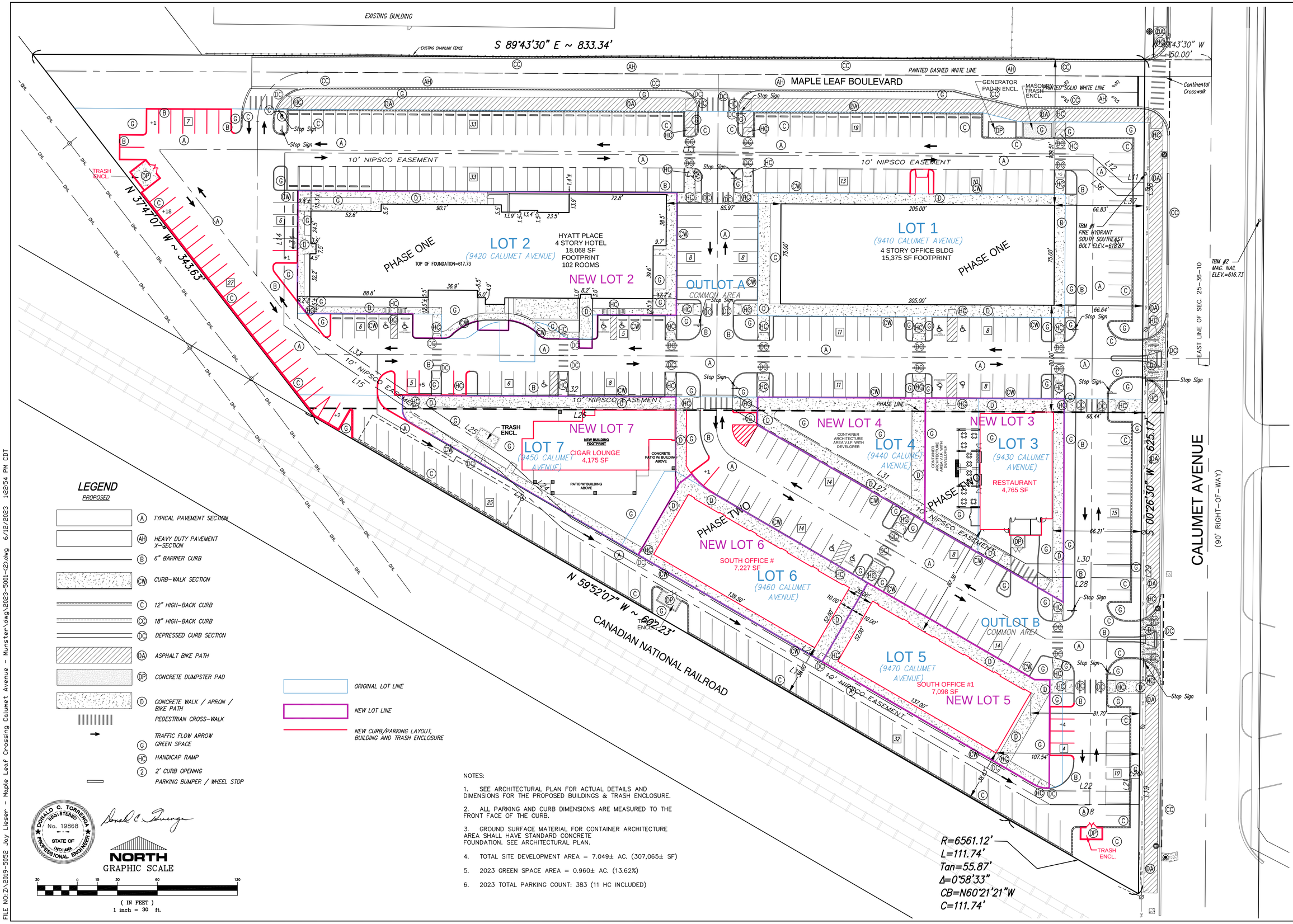
06-26-2020
06-05-2020
REVISIONS:
DATE: 05-11-2020

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052
SCALE: 1" = 30'

SHEET
C-1.1

FILE NO:Z:\2019-5052 Jay Lieser - Maple Leaf Crossing Calumet Avenue - Munster\dwg\2023-5001-C2).dwg 6/12/2023 12:54 PM CDT



LEGEND

PROPOSED

- (A) TYPICAL PAVEMENT SECTION
- (AH) HEAVY DUTY PAVEMENT X-SECTION
- (B) 6" BARRIER CURB
- (CW) CURB-WALK SECTION
- (C) 12" HIGH-BACK CURB
- (CC) 18" HIGH-BACK CURB
- (DC) DEPRESSED CURB SECTION
- (DA) ASPHALT BIKE PATH
- (DP) CONCRETE DUMPSTER PAD
- (D) CONCRETE WALK / APRON / BIKE PATH
- PEDESTRIAN CROSS-WALK
- TRAFFIC FLOW ARROW
- (G) GREEN SPACE
- (HC) HANDICAP RAMP
- (2) 2' CURB OPENING
- PARKING BUMPER / WHEEL STOP

- ORIGINAL LOT LINE
- NEW LOT LINE
- NEW CURB/PARKING LAYOUT, BUILDING AND TRASH ENCLOSURE

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

NORTH

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

NOTES:

1. SEE ARCHITECTURAL PLAN FOR ACTUAL DETAILS AND DIMENSIONS FOR THE PROPOSED BUILDINGS & TRASH ENCLOSURE.
2. ALL PARKING AND CURB DIMENSIONS ARE MEASURED TO THE FRONT FACE OF THE CURB.
3. GROUND SURFACE MATERIAL FOR CONTAINER ARCHITECTURE AREA SHALL HAVE STANDARD CONCRETE FOUNDATION. SEE ARCHITECTURAL PLAN.
4. TOTAL SITE DEVELOPMENT AREA = 7.049± AC. (307,065± SF)
5. 2023 GREEN SPACE AREA = 0.960± AC. (13.62%)
6. 2023 TOTAL PARKING COUNT: 383 (11 HC INCLUDED)

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenga.com

MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE CO., INDIANA
SITE PLAN

REVISIONS:	DATE: 05-11-2020
05-04-2023	
04-20-2023	
03-30-2023	
03-01-2022	
06-29-2023	
05-28-2021	
05-19-2023	
06-26-2020	
05-15-2023	
06-05-2020	

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052

SCALE: 1" = 30'

SHEET
C-2.0

FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossing Calumet Avenue - Munster\dwg\2023-5001-(2).dwg 6/12/2023 12:54 PM CDT

EXISTING BUILDING

EXISTING CHAINLINK FENCE

S 89°43'30" E ~ 833.34'

N 89°43'30" W 650.00'

MAPLE LEAF BOULEVARD

Speed Limit Sign R2-1

Stop Sign

Yield Sign R1-2

GENERATOR PAD IN ENCL.

MASONRY TRASH ENCL.

Continental Crosswalk

10' NIPSCO EASEMENT

TRASH ENCL.

N 37°47'07" W ~ 343.63'

PHASE ONE

LOT 2
(9420 CALUMET AVENUE)
HYATT PLACE
4 STORY HOTEL
18,068 SF FOOTPRINT
102 ROOMS
TOP OF FOUNDATION=617.73

NEW LOT 2

OUTLOT A
COMMON AREA

LOT 1
(9410 CALUMET AVENUE)
4 STORY OFFICE BLDG
15,375 SF FOOTPRINT

PHASE ONE

One Way Sign R6-1

PHASE LINE

NEW LOT 7

NEW BUILDING FOOTPRINT

LOT 7
(9450 CALUMET AVENUE)
CIGAR LOUNGE
4,175 SF

CONCRETE PATIO W/ BUILDING ABOVE

PATIO W/ BUILDING ABOVE

NEW LOT 4

CONTAINER ARCHITECTURE AREA V.I.F. WITH DEVELOPER

LOT 4
(9440 CALUMET AVENUE)

NEW LOT 3

LOT 3
(9430 CALUMET AVENUE)
RESTAURANT
4,765 SF

PHASE TWO

NEW LOT 6

SOUTH OFFICE #
7,227 SF

LOT 6
(9460 CALUMET AVENUE)

OUTLOT B
COMMON AREA

LOT 5
(9470 CALUMET AVENUE)
SOUTH OFFICE #1
7,098 SF

NEW LOT 5

Do Not Enter Sign R5-1

N 59°52'07" W ~ 802.23'

CANADIAN NATIONAL RAILROAD

R=6561.12'
L=111.74'
Tan=55.87'
Δ=0°58'33"
CB=N60°21'21"W
C=111.74'

S 00°26'30" W ~ 625.17'

EAST LINE OF SEC. 25-36-10

CALUMET AVENUE
(90' RIGHT-OF-WAY)

Donald C. Torrenga
DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

NORTH
GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

FILE NO:Z:\2019-5052 Jay Lieser - Maple Leaf Crossing Calumet Avenue - Munster\dwg\2023-5001-(2).dwg 6/12/2023 1:22:54 PM CDT

TORRENGA ENGINEERING, INC.
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907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenga.com

MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
SIGNAGE PLAN

07-08-2020
06-26-2020
06-05-2020
REVISIONS:
DATE: 05-11-2020

CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052
SCALE: 1" = 30'

SHEET
C-2.1

EXISTING BUILDING

EXISTING CHAINLINK FENCE

MAPLE LEAF BOULEVARD

N 89°43'30" W 150.00'

GENERATOR PAD IN ENCL.

MASONRY TRASH ENCL.

MH "F" R=616.25 I=612.25

MH "E" R=616.50 I=611.53

MH "D" R=616.50 I=610.27

160' ~ 8" PVC SAS @ 0.45%

281' ~ 8" PVC SAS @ 0.45%

71' ~ 8" PVC SAS @ 0.49%

EX. 10" SAS

EX. SAS MH R=615.52 I=609.02(E) I=609.92(NW)

TBM #2 MAG. NAIL ELEV.=616.73

TBM #1 FIRE HYDRANT SOUTH SOUTHEAST BOLT ELEV.=618.87

10' NIPSCO EASEMENT

8" PVC Sanitary Sewer Service Line

SEE DETAIL NO. 1

EXISTING 8" D.I.W.M.

Fire Hydrant

8"x8" Tee
8" Gate Valve
27' ~ 8" DIWM

8" Gate Valve
8"x8" Tee

FDC

TRASH ENCL.

122' ~ 8" DIWM

PHASE ONE

LOT 2

FF=617.75
FG=617.50
TOP OF FOUNDATION=617.73

HYATT PLACE
4 STORY HOTEL
18,068 SF FOOTPRINT
102 ROOMS

NEW LOT 2

Stub to within 5 feet of the building outer wall. See architectural plans for inside plumbing.

OUTLOT A
COMMON AREA

LOT 1

4 STORY OFFICE BLDG
15,375 SF FOOTPRINT
FF=618.00
FG=617.75

PHASE ONE

156' ~ 8" DIWM

45° Bend

L33

10' NIPSCO EASEMENT

L15

Fire Hydrant

MH "C" R=617.25 I=612.29

+5

45° Bend

L32

10' NIPSCO EASEMENT

L26

Fire Hydrant

MH "B" R=617.20 I=612.07

450' ~ 8" DIWM

6" Gate Valve

6" x 6" Tee

8"x8" Tee
8" Gate Valve

Fire Hydrant

PHASE LINE

NEW LOT 4

LOT 4

NEW LOT 3

LOT 3

Stub to within 5 feet of the building outer wall. See architectural plans for inside plumbing.

RESTAURANT
4,765 SF
FF=618.00
FG=617.75

FDC

4" x 8" Tee
4" Service Line

CONTAINER ARCHITECTURE MEA V.I.F. WITH DEVELOPER

1.39' ~ 8" DIWM

8" Gate Valve
8"x8" Tee

TRASH ENCL.

NEW LOT 7

LOT 7

NEW BUILDING FOOTPRINT

CIGAR LOUNGE
4,175 SF
FF=617.75

CONCRETE PATIO W/ BUILDING ABOVE

Stub to within 5 feet of the building outer wall. See architectural plans for inside plumbing.

FDC

PATIO W/ BUILDING ABOVE

Grease Trap

Water Copper Service Lines

44' ~ 8" PVC SAS @ 0.50%

6" PVC Sanitary Sewer Service Lines

+1

282' ~ 8" PVC SAS @ 0.40%

L31

L27

Plug

45° Bend

6" PVC Sanitary Sewer Service Line

10' NIPSCO EASEMENT

PHASE TWO

Fire Hydrant

NEW LOT 6

SOUTH OFFICE #
7,227 SF
FF=617.45

LOT 6

Stub to within 5 feet of the building outer wall. See architectural plans for inside plumbing

4" DIWM

332' ~ 8" DIWM

TRASH ENCL.

CANADIAN NATIONAL RAILROAD

L23

L22

10' NIPSCO EASEMENT

185' ~ 8" DIWM

219' ~ 8" DIWM

6" Gate Valve
8" x 6" Tee

Stub to within 5 feet of the building outer wall. See architectural plans for inside plumbing

NEW LOT 5

LOT 5

SOUTH OFFICE #1
7,098 SF
FF=617.45

FDC

Fire Hydrant

39'~8" DIWM

8" Gate Valve

43' ~ 8" DIWM

45° Bend

8"x8" Tee

L20

L18

TRASH ENCL.

OUTLOT B
COMMON AREA

L30

MH "A" R=617.25 I=611.02

118' ~ 8" PVC SAS @ 0.40%

EX. 8" SAS

EX. SAS MH R=616.15 I=610.55(N&S) I=612.35(6"W)

EX. 10" SAS

EX. 8" SAS

EX. 8" D.I.W.M.

EX. SAS MH R=616.55 I=610.85(N) I=611.05(W) I=611.22(S)

EXISTING 16" D.I.W.M.

EX. 10" SAS

CALUMET AVENUE
(90' RIGHT-OF-WAY)

EX. 10" SAS

EX. 10" SAS

EXISTING 16" D.I.W.M.

8"x8"x6" TEE
8"x8"x4" TEE
4" GATE VALVE
8" W.M.
4" to 2" REDUCER
6" GATE VALVE
16" MIN. SEPARATION
4" DIP DOMESTIC WATER SERVICE LINE
2" COPPER IRRIGATION WATER SERVICE LINE
6" DIP FIRE SERVICE LINE

PROPOSED BUILDING

DETAIL NO. 1

NTS

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

Donald C. Torrenga

NORTH

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LEGEND

PROPOSED

- MANHOLE
- CATCH BASIN/INLET
- FIRE HYDRANT
- WATER VALVE
- FDC — FIRE DEPT. CONNECTION
- 000.00 — GRADE PROPOSED
- FG=000.00 — FINISHED GRADE
- STORM SEWER
- SANITARY SEWER
- SANITARY SEWER STUB
- WATER MAIN
- WATER MAIN STUB

1 STORM/SANITARY CROSSING 1

Top of 8" Sanitary = 611.77
Bottom of 12" Storm = 611.85

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenga.com

MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE CO., INDIANA
SANITARY SEWERS & WATERMAIN PLAN

REVISIONS:	DATE: 05-11-2020
05-19-2023	
06-26-2020	
06-05-2020	

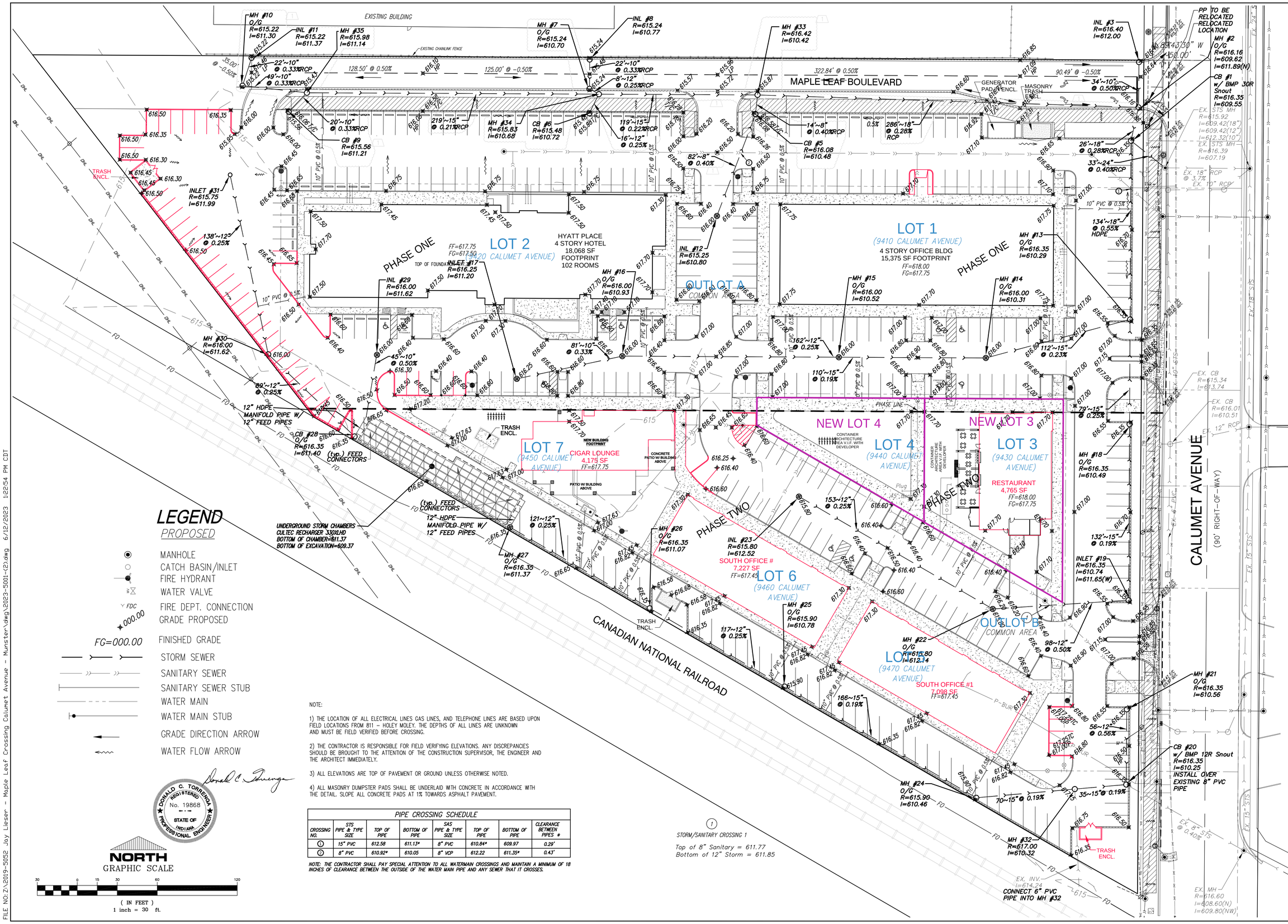
CLIENT:
Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052

SCALE: 1" = 30'

SHEET
C-3.0

FILE NO:Z:\2019-5052 Joy Lieser - Maple Leaf Crossing Calumet Avenue - Munster\dwg\2023-5001(2).dwg 6/12/2023 12:54 PM CDT



LEGEND

PROPOSED

- MANHOLE
- CATCH BASIN/INLET
- FIRE HYDRANT
- WATER VALVE
- FDC — FIRE DEPT. CONNECTION
- 000.00 — GRADE PROPOSED
- FG=000.00 — FINISHED GRADE
- STORM SEWER
- SANITARY SEWER
- SANITARY SEWER STUB
- WATER MAIN
- WATER MAIN STUB
- GRADE DIRECTION ARROW
- WATER FLOW ARROW

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

NORTH

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

NOTE:

1) THE LOCATION OF ALL ELECTRICAL LINES GAS LINES, AND TELEPHONE LINES ARE BASED UPON FIELD LOCATIONS FROM 811 – HOLEY MOLEY. THE DEPTHS OF ALL LINES ARE UNKNOWN AND MUST BE FIELD VERIFIED BEFORE CROSSING.

2) THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ELEVATIONS. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION SUPERVISOR, THE ENGINEER AND THE ARCHITECT IMMEDIATELY.

3) ALL ELEVATIONS ARE TOP OF PAVEMENT OR GROUND UNLESS OTHERWISE NOTED.

4) ALL MASONRY DUMPSTER PADS SHALL BE UNDERLAID WITH CONCRETE IN ACCORDANCE WITH THE DETAIL. SLOPE ALL CONCRETE PADS AT 1% TOWARDS ASPHALT PAVEMENT.

PIPE CROSSING SCHEDULE

CROSSING NO.	STS PIPE & TYPE SIZE	TOP OF PIPE	BOTTOM OF PIPE	SAS PIPE & TYPE SIZE	TOP OF PIPE	BOTTOM OF PIPE	CLEARANCE BETWEEN PIPES *
1	15" PVC	612.58	611.13*	8" PVC	610.84*	609.97	0.29'
2	8" PVC	610.92*	610.05	8" VCP	612.22	611.35*	0.43'

NOTE: THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO ALL WATERMAIN CROSSINGS AND MAINTAIN A MINIMUM OF 18 INCHES OF CLEARANCE BETWEEN THE OUTSIDE OF THE WATER MAIN PIPE AND ANY SEWER THAT IT CROSSES.

1 STORM/SANITARY CROSSING 1

Top of 8" Sanitary = 611.77
Bottom of 12" Storm = 611.85

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenga.com

MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE TOWN OF MUNSTER, LAKE CO., INDIANA
STORM SEWERS & GRADING PLAN

REVISIONS:
05-19-2023
05-04-2023
03-01-2022
06-17-2021
11-30-2020
06-26-2020
06-05-2020
DATE: 05-11-2020

CLIENT: Maple Leaf Crossing, LLC
400 Fisher Avenue
Munster, Indiana 46321

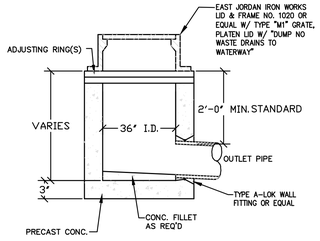
JOB NO: 2019-5052

SCALE: 1" = 30'

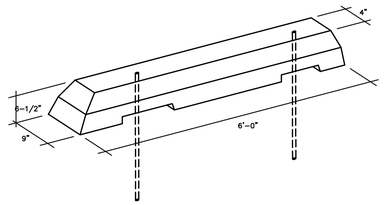
SHEET
C-4.0

Figure 43a
INTERNATIONAL SYMBOL OF ACCESSIBILITY PROPORTIONS
NOT TO SCALE

ACCESSIBILITY SIGNAGE
NOT TO SCALE

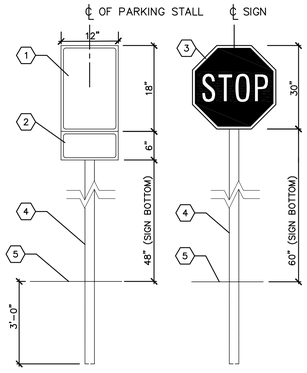


STANDARD INLET
NOT TO SCALE



PRECAST CONCRETE PARKING CHOCKS/WHEEL STOPS
NOT TO SCALE

ALL PARKING STOPS SHALL BE PINNED TO THE ASPHALT WITH #4 REBAR ANCHORED 18" INTO THE GROUND. PARKING STOPS PLACED OVER THE PAVERS SHALL BE UNPINNED.

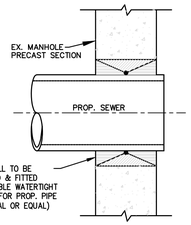


SIGN AND POST (FREE STANDING)
NOT TO SCALE

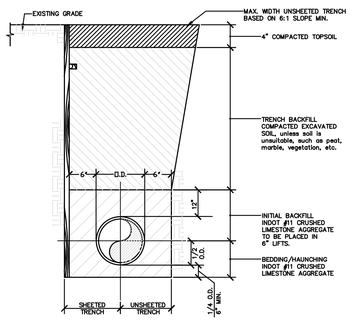
R7 SIGN

KEYED NOTES

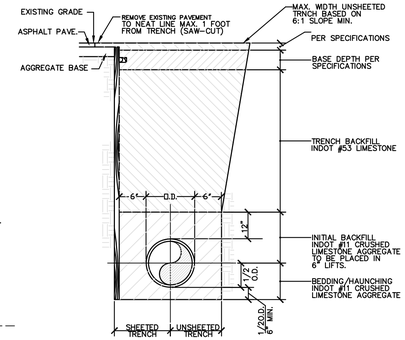
1. STANDARD USDOT R7 SIGN (BOTH SIDES–WHERE APPLICABLE).
2. SUPPLEMENTAL SIGNS, $–FINE AS APPLICABLE.
3. STANDARD USDOT R1–1 STOP SIGN
4. 2"x2" STEEL TUBE EXTENDED INTO GROUND, 3'–0"
5. FINISH GRADE.



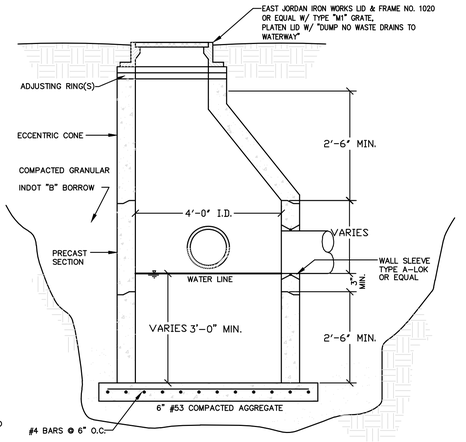
PIPE CONNECTION DETAIL TO EXISTING MANHOLE
NOT TO SCALE



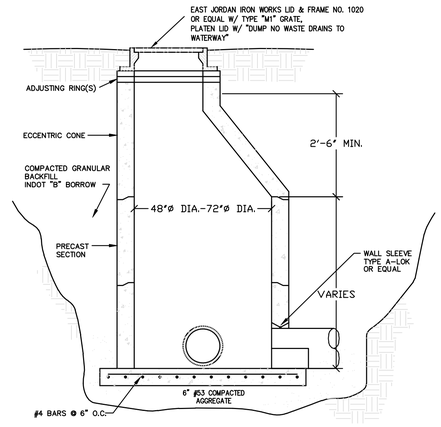
PIPE BEDDING DETAIL FOR TRENCH IN GRASS AREAS
NOT TO SCALE



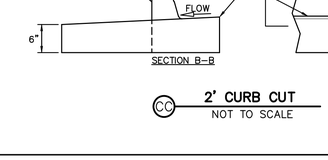
PIPE BEDDING DETAIL FOR TRENCH IN PAVED AREAS
NOT TO SCALE



TYPE "A" CATCH BASIN
NOT TO SCALE

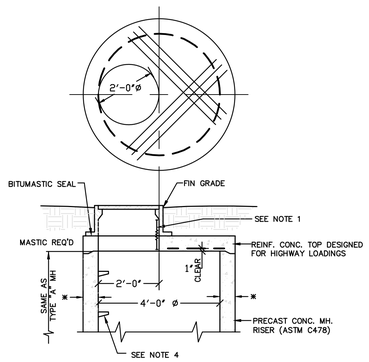


* IF CURB-TYPE FRAME IS REQ'D USE NEENAH R-3229-L OR EQUAL

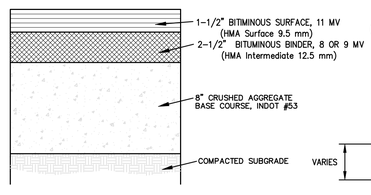


NOTE:
USE 4" SOLID WHITE PAVEMENT MARKING FOR REGULAR PARKING

ACCESSIBILITY AND PARKING STRIPING DETAIL
NOT TO SCALE

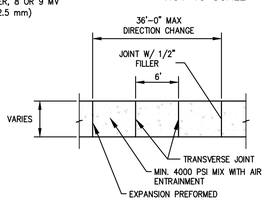


TYPE "C" (FLAT TOP) MANHOLE
NOT TO SCALE
USED WHERE RESTRICTED HEAD ROOM WILL NOT ALLOW FOR TAPERED WALLS

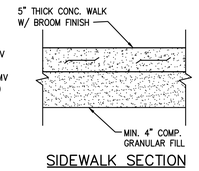


NOTES:
1. WHERE FILL IS REQUIRED, SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD OF TESTING.

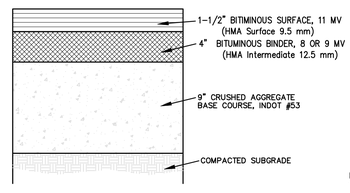
TYPICAL PAVEMENT SECTION
NOT TO SCALE



SIDEWALK PLAN

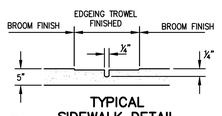


SIDEWALK SECTION

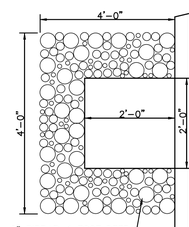


NOTES:
1. WHERE FILL IS REQUIRED, SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD OF TESTING.

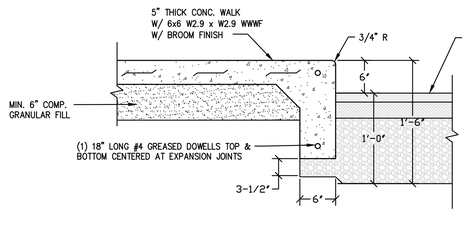
HEAVY DUTY PAVEMENT X-SECTION
NOT TO SCALE



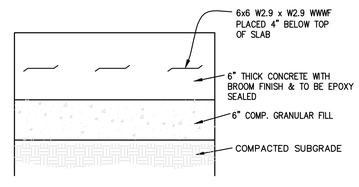
TYPICAL SIDEWALK DETAIL
NOT TO SCALE



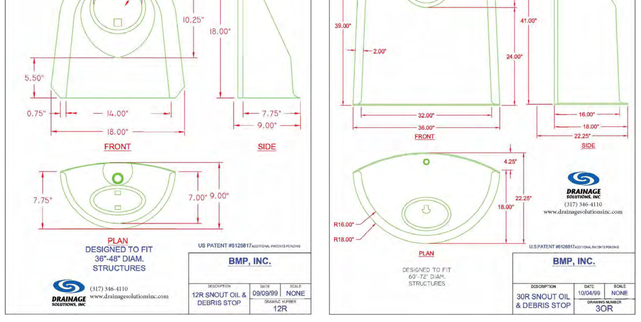
2' CURB CUT
NOT TO SCALE



CURB-WALK SECTION
NOT TO SCALE



DUMPSTER PAD
SECTION VIEW
NOT TO SCALE



GENERAL SPECIFICATIONS FOR STORM SEWERS

1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, Lake County, Indiana.

2. All storm sewer pipe, branches and fittings shall conform to either of the following: (A) Poly-vinyl chloride SDR 35 or SDR 26 (ASTM D-3034) with push on rubber gasket joints (ASTM C-3212) for pipe 15" in diameter or under or: (B) High Density Polyethylene corrugated pipe with an integrally formed smooth interior (ASTM D-1248) for pipe 18" or over or: (C) Reinforced concrete pipe (ASTM C-76) with bell and spigot or tongue and groove push-on mastic joints. Class V reinforced concrete pipe shall be used for lines 15" diameter or under and Class III shall be used for lines 18" and over.

3. Gasketed joints shall be used on all storm sewers.

4. Storm sewers 18" to 27" with less than 3' cover shall be Class IV pipe.

5. All storm sewer manholes shall be standard precast concrete units (ASTM C-478) conforming with the standard details sheet of these plans.

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

7. All sewers shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 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 horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.

8. The Contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of final acceptance.

9. No storm sewer manhole, catch basin and inlet shall be within eight (8) feet of a water main as measured from the outside edge of the storm sewer manhole, catch basin and inlet to the outside edge of the water main.

CURB NOTE:
1. Concrete Curb and Gutter shall be constructed in accordance with the state specifications except as herin modified.

a) Expansion joints shall be 3/4" in thickness, using premolded joint filler material and two 3/4" diameter smooth round dowel bars 30" long fully greased, placed in pairs at the ends of all radii, at roadway intersections, at the junction of new and existing curb, at all cold joints, at a minimum 40' interval between said radii locations.

b) Said dowel shall be placed so that half their length is in either side of the joint. On the same end of each bar, there shall be placed a plastic, premolded expansion tip, which will allow lateral and expansion movement. The dowel bars shall be placed such that they shall be encased in concrete, a minimum of 3" in any direction.

INFRASTRUCTURE NOTE:
1. All infrastructure being constructed shall be in accordance with the Town of Munster Proposed Infrastructure Specifications. Any difference Munster's Specification and these engineering drawings shall be brought to the attention of the Engineer immediately for review.

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenga.com

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

06-26-2020
06-05-2020
REVISIONS:
DATE: 05-11-2020

CLIENT:
First Metropolitan Builders
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052
SCALE: NTS

SHEET
C-5.0

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossings Calumet Avenue - Munster\dwg\2019-5052 Details.dwg 6/5/2020 11:47:37 AM CDT

GENERAL SPECIFICATIONS FOR SANITARY SEWER

1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, Lake County, and the State of Indiana.

2. All sanitary sewer pipe, branches and fittings shall conform to one of the following: (a) Extra strength vitrified clay pipe (ASTM C-700) with push on rubber gasket joints (ASTM C-425). (b) Poly-vinyl chloride (PVC), SDR 26 (ASTM D-3034), with push-on rubber gasket joints (ASTM C-3212). Six inch service pipes shall be in accordance with the infrastructure improvement codes of the Town of Munster.

3. All sanitary sewer manholes shall be standard 48" diameter precast 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 foot section, trough, 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 stone aggregate to the subgrade.

7. The competed sanitary sewer system shall be air tested for infiltration and shall have a maximum infiltration of 100 GPD/inch/diameter/mile of sewer pipe. The completed sanitary sewer system shall be air pressure tested for infiltration/exfiltration with 4 lbs. of pressure for 4 minutes. The testing shall conform to the procedure described in ASTM C-838-86 for clay pipe, ASTM C 924 for concrete 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.

8. Deflection tests shall be performed on all flexible pipe materials placed. The contractor shall be responsible for supplying testing materials and appurtenances. The tests shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5 %. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95 % of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices. The Town of Munster shall be notified when the system (or portion thereof) is ready for testing.

9. Care should be taken in parkway areas to assure compaction acceptable for the future stability of driveways and sidewalks. While special backfill material is not required, it shall be the responsibility of the Contractor to protect against substantial future settlement of backfilled areas. The Contractor shall provide special backfill material across driveways and sidewalks in the event that a sewer or main is installed underneath.

11. All sewers shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed water main. The distance shall be measured edge to edge. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 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 horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.

12. The Contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" Plans and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of the final acceptance.

13. Air pressure test shall be performed on all completed Sanitary Manholes in accordance with ASTM C 1244-93, Standard Test Method for Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test. The tests shall be conducted prior to backfill to demonstrate the integrity of the installed materials. The manhole shall pass if the test time meets or exceeds the required minimum test times as specified in ASTM C 1244-93 for the vacuum reading to drop from 10 inches of mercury to 9 inches of mercury. If the manhole fails the initial test, necessary repairs shall be made, and the test shall be repeated. The contractor shall be 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 edge of the sanitary sewer manhole to the outside edge of the water main.

GENERAL SPECIFICATIONS FOR WATER MAINS

1. All work shall be performed in accordance with the Codes, Ordinances and Standards of the Town of Munster, and the State of Indiana.

2. All water main pipe shall be polywrapped Ductile Iron Pipe (AWWA C151 C-52) with bell and spigot push-on rubber gasket joints (AWWA CIII). All water main pipe shall be installed with a minimum cover of 5.0 feet from top of curb to top of pipe. All fire hydrants, tees, bends and fittings shall be suitably harnessed or thrust blocked with concrete.

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, megalug or equal. At 90º bends, the water main shall be additionaly restrained at 1 joint in each direction.

6. All fire hydrants shall be manufactured by Mueller Company, Super Centurion 250 model with 5¼" valve openings with a 5" Storz pumper connection and shall be backfilled with 3/4" stone for drainage purposes.

7. All water mains shall be laid at least 10 feet (3.0m) horizontally from any existing or proposed sewer. The distance shall be measured from outside of pipe to outside of pipe. All sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches (46 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 horizontal and vertical separation as stipulated above, the sewer shall be designed and constructed equal to water pipe.

8. Care should be taken in parkway areas to assure compaction acceptable for the future stability of driveways and sidewalks. While special backfill material is not required, it shall be the responsibility of the Contractor to protect against substantial future settlement of backfilled areas. The Contractor shall provide special backfill material across driveways and sidewalks in the event that a water main is installed underneath.

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

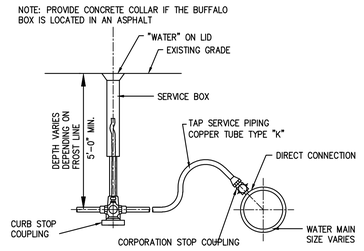
10. All water main pipe shall be disinfected by the use of liquid chlorine. The Contractor shall notify the town of Munster when the water main system (or portion thereof) is ready for testing.

11. The Contractor is responsible for water quality tests done by a State Certified Laboratory. The Town of Munster Water Department staff shall be notified and be present while tests are being performed. The approved water system shall be turned on by the Water Department Staff, only after the water quality reports have been approved.

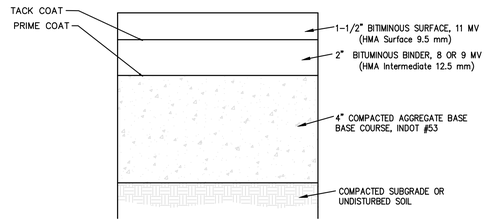
12. The newly installed water main (or portions thereof) shall be subjected to a pressure and leakage test, using hydrostatic testing. Test pressure shall not be less than 1.5 times the working pressure or exceed pipe design pressure. Pressure shall not vary by more than ± 5 PSI for a minimum of a 2 hour duration test. The exposed pipe and joints shall be examined carefully during the test and any damaged or defective pipe or joints shall be replaced, and the test shall be repeated. The allowable leakage shall not exceed 11.65 gpd/mi/in of nominal pipe diameter at a pressure of 150 PSI.
All visible leaks are to be repaired regardless of the amount of leakage. The contractor shall be responsible for supplying all testing materials and appurtenances. The Town of Munster shall be notified when the water main (or portion thereof) is ready for testing.

13. The contractor is responsible for the preparation of "As Built" construction drawings showing actual sizes and lengths of pipe installed (i.e. from manhole to manhole or tee to valve, etc.), location of service taps and any structures added or omitted in comparison with these engineering plans. The Contractor shall supply the Developer (through the Project Engineer) with one set of reproducible original "As-Built" Plans and shall supply the Town of Munster with 2 copies thereof prior to and as a condition of the final acceptance.

14. No water main shall be within eight (8) feet of a sanitary sewer manhole, a storm sewer manhole, or a drainage grate support structure as measured from the outside edge of the water main to the outside edge of the sanitary sewer manhole, storm sewer manhole, or drainage grate support structure.

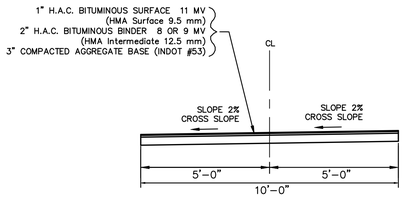


TYPICAL WATER TAP SERVICE PIPING
NOT TO SCALE

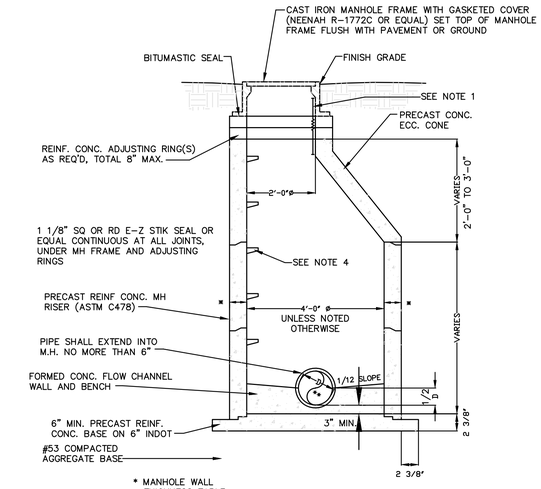


NOTES:
1. PAVEMENT & AGGREGATE THICKNESS MAY VARY DEPENDING ON CBR SOIL TESTING RESULTS.

2. WHERE FILL IS REQUIRED, SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD OF TESTING.



BIKE PATH
TYPICAL CROSS SECTION
NOT TO SCALE

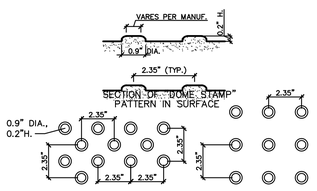


* MANHOLE WALL THICKNESS TABLE

MH I.D.	WALL THICKNESS
48"	5"
60"	6"
72"	7"

NOTES:
1. USE CANUSA WRAP ON ALL MANHOLES.
2. WHERE DEPTH FROM TOP OF CASTING TO INVERT IS LESS THAN 5'-0", USE FLAT TOP MANHOLE TYPE "C" IN LIEU OF ECCENTRIC CONE
3. WATERTIGHT SEAL IS REQ'D BETWEEN PRECAST RISER AND SEWER PIPE, TYPE A-LOK OR EQUAL.
4. COPOLYMER/STEEL MH STEPS AS MANUFACTURED BY M.A. INDUSTRIES, INC., OR EQUAL, AT 16" O.C.
** FOR PIPE SIZES RANGING FROM 8" TO 30" IN DIAMETER.

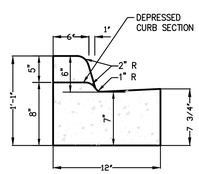
SANITARY
TYPE "A" MANHOLE
NOT TO SCALE



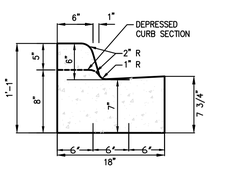
PLAN OF "DOME STAMP" PATTERN IN SURFACE

CURB RAMPS MUST HAVE A DETECTABLE WARNING FEATURE EXTENDING THE FULL WIDTH AND DEPTH OF THE RAMP (MID-WALK "IN-LINE" RAMPS ONLY NEED DETECTABLE WARNINGS AT WALK/PARKING TRANSITION). THE DETECTABLE SURFACE MUST CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER-TO CENTER SPACING OF NOMINAL 2.35 INCHES. THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST WITH THE SURROUNDING SURFACES (EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT). SEE ABOVE.
ACCEPTABLE PAVER MANUFACTURERS:
-HANOVER ARCHITECTURAL PRODUCTS, DETECTABLE WARNING PAVERS,
www.hanoverpavers.com/html/detectable.html
-TekWay™ - DETECTABLE WARNING SYSTEM
www.stronggo.com/ourproducts.html
-NuWay, CAST IN TACT, DETECTABLE WARNING PAVERS
www.nuwayinc.com/CAST_IN_TACT_1.pdf

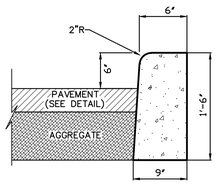
YELLOW COLOR ONLY
DETECTABLE WARNING SURFACE
NOT TO SCALE



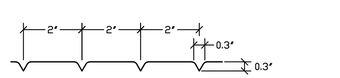
COMBINED CONCRETE HIGH BACK CURB AND GUTTER
NOT TO SCALE



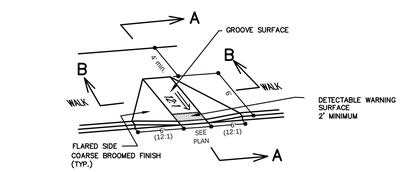
COMBINED CONCRETE HIGH BACK CURB AND GUTTER
NOT TO SCALE



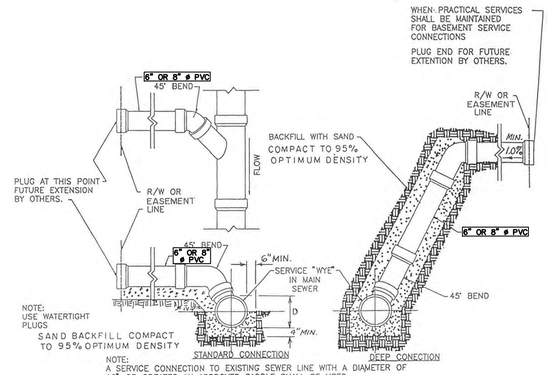
BARRIER CURB DETAIL
NOT TO SCALE



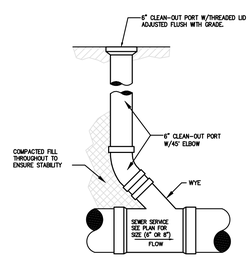
DETAIL OF RAMP GROOVES
NOT TO SCALE



HANDICAP RAMP TYPE A
NOT TO SCALE



SERVICE CONNECTION DETAILS
NOT TO SCALE



CLEAN-OUT
NOT TO SCALE

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

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

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REVISIONS:
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SHEET
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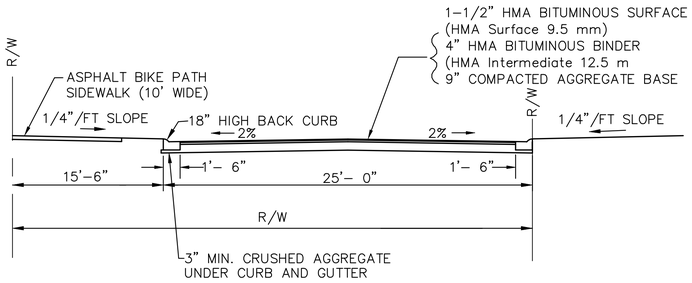
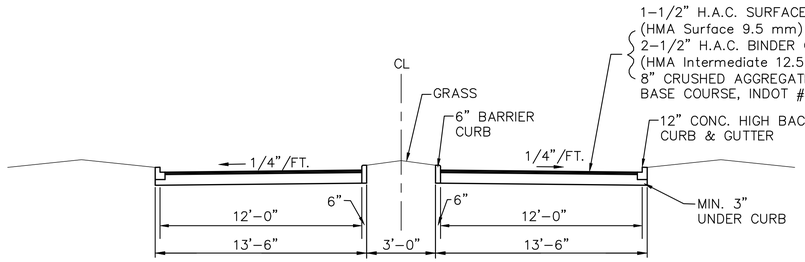
FILE NO:Z:\2019-5052 Jay Lieser - Maple Leaf Crossings Calumet Avenue - Munster\dwg\2019-5052 Details.dwg 6/5/2020 11:47:37 AM CDT



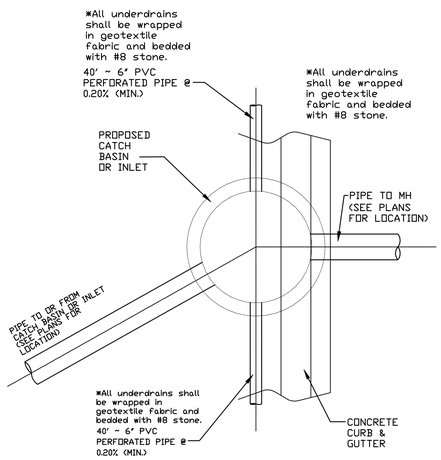
TYPICAL PUBLIC STREET CROSS SECTION

NO SCALE



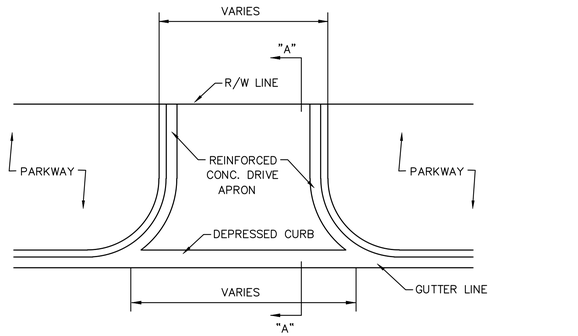
CALUMET AVENUE
RIGHT-IN/RIGHT-OUT
ENTRANCE X-SECTION

NO SCALE

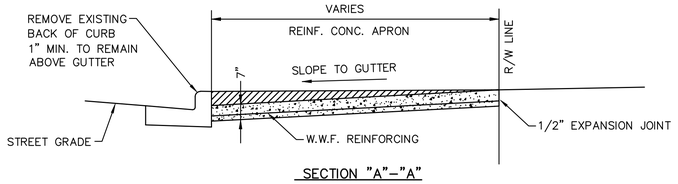


PUBLIC ROADWAY UNDERDRAIN
CONNECTION DETAIL

TO BE PLACED AT ALL SAG INLETS AND CATCH BASINS
NOT TO SCALE



PLAN VIEW



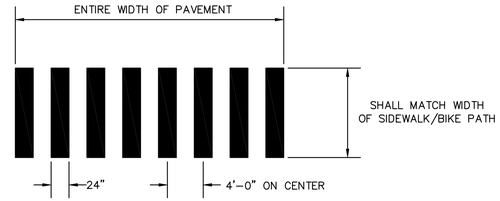
SECTION "A"-"A"

TYPICAL STREET CROSS SECTION

NOT TO SCALE

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

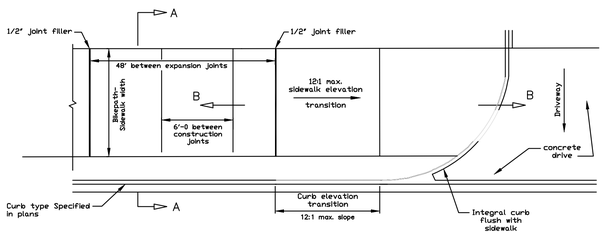
All driveway aprons extending beyond the sidewalk and into the street (parkway) shall consist of reinforced conrete at least seven inches in thickness and placed as shown on these plans and/or site plan accompanying the permit application.



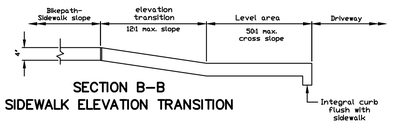
NOTE:
1. ALL REGULATOARY SIGNS SHALL BE HIGH INTENSITY AND IN ACCORDANCE WITH THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MOST RECENT EDITION.
2. ALL PAVEMENT MARKINGS SHALL BE WHITE THERMOPLASTIC AND SPAN ACROSS APPROACH LANES.

CONTINENTAL
CROSSWALK DETAIL

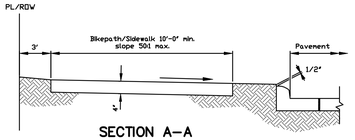
NO SCALE



SIDEWALK PLAN



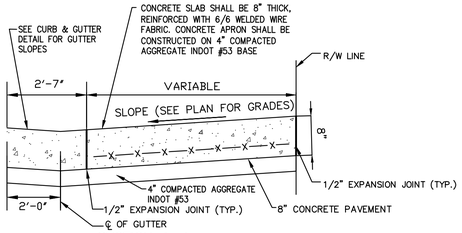
SECTION B-B
SIDEWALK ELEVATION TRANSITION



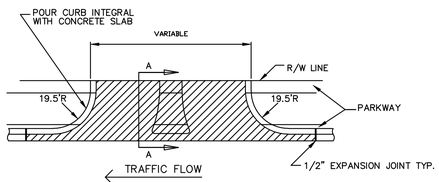
SECTION A-A
SIDEWALK ADJUSTMENT TO CURB

CALUMET AVENUE
BIKEPATH/SIDEWALK DETAILS

NO SCALE



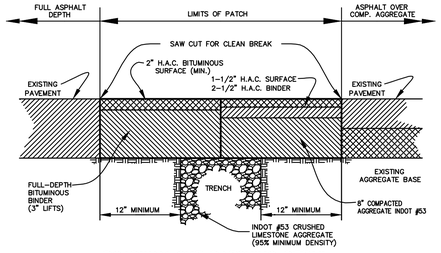
SECTION A-A



PLAN

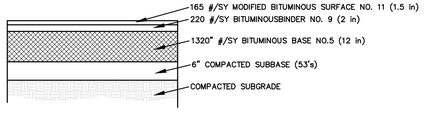
CALUMET AVENUE
CONCRETE DRIVE DETAIL

NO SCALE



ROADWAY CUT PATCHING DETAIL

NOT TO SCALE



NOTES:
1. PAVEMENT & AGGREGATE THICKNESS ARE TAKEN FROM THE TYPICAL CROSS SECTION DETAIL ON THE ORIGINAL PLANS FOR CALUMET AVENUE STAE HIGHWAY MAM-M-PROJECT NO. 152 (2), DATED 12/23/86

2. WHERE FILL IS REQUIRED, SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 METHOD OF TESTING.

TYPICAL PAVEMENT SECTION
CALUMET AVENUE

NOT TO SCALE

Donald C. Torrenga

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

TORRENGA ENGINEERING, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918
website: www.torrenga.com

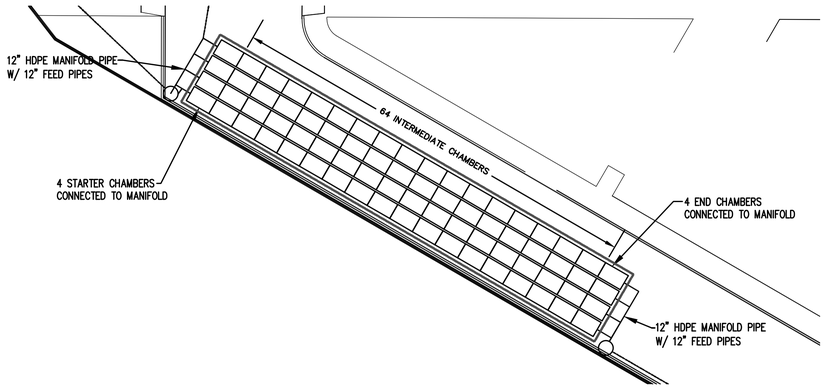
MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
DETAILS & SPECIFICATIONS

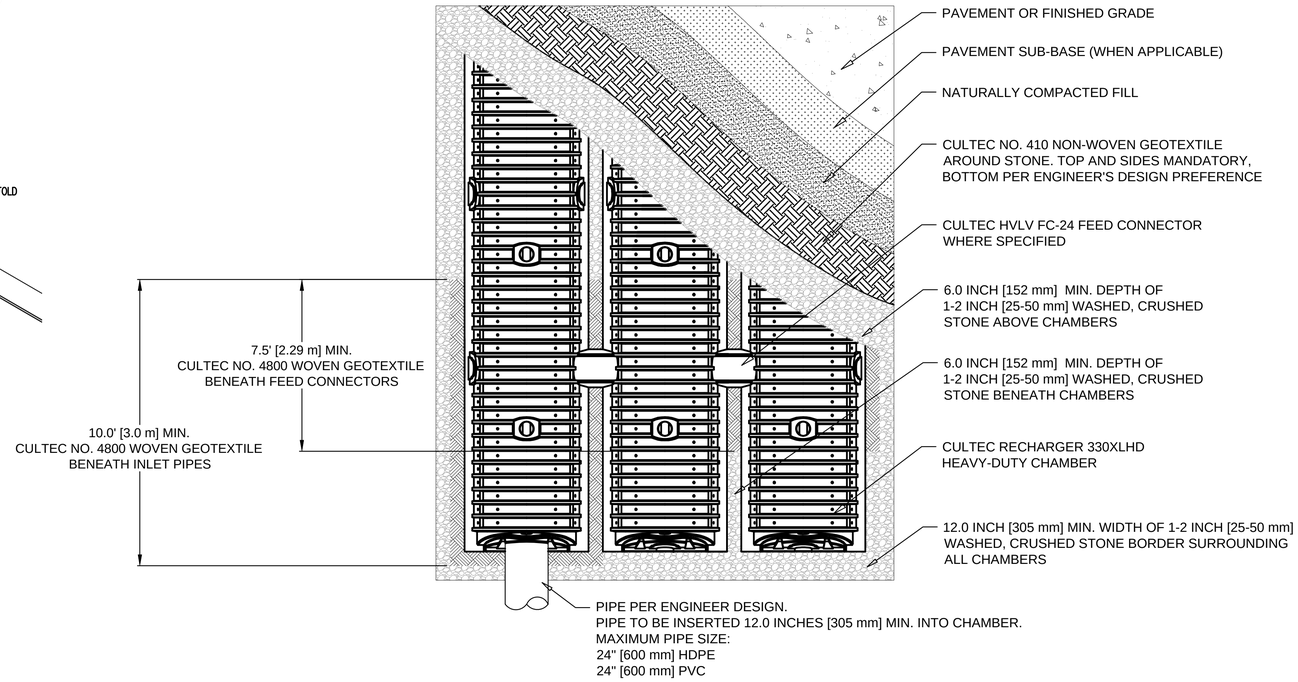
06-26-2020
06-05-2020
REVISIONS:
DATE: 05-11-2020

CLIENT:
First Metropolitan Builders
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052
SCALE: NTS

SHEET
C-5.2





CULTEC

CULTEC Stormwater Design Calculator

Date:	June 15, 2020

Project Information:

Maple Leaf Crossings
9450 Calumet Avenue
Munster
Indiana
United States

INPUT INFO

RECHARGER 330XLHD

Project Number:	2019-5052

Calculations Performed By:

Ryan Torrenga
Torrenga Engineering
907 Ridge Road
Munster Indiana
46321
United States
(219) 836-8918
Ryan.Torrenga@Torrenga.com

Recharger 330XLHD Chamber Specifications

Height	30.5	inches
Width	52.0	inches
Length	8.50	feet
Installed Length	7.00	feet
Bare Chamber Volume	52.21	cu. feet
Installed Chamber Volume	99.56	cu. feet

Breakdown of Storage Provided by Recharger 330XLHD Stormwater System

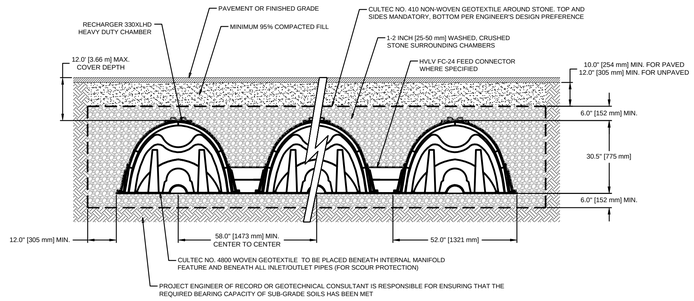
Within Chambers	3,804.09	cu. feet
Within Feed Connectors	-	cu. feet
Within Stone	3,919.16	cu. feet
Total Storage Provided	**7,723.3**	**cu. feet**
Total Storage Required	7622.00	cu. feet

Materials List

Recharger 330XLHD		
Total Number of Chambers Required	**72**	**pieces**
Separator Row Chambers	18	pieces
Starter Chambers	4	pieces
Intermediate Chambers	64	pieces
End Chambers	4	pieces
HVLV FC-24 Feed Connectors	0	pieces
CULTEC No. 410 Non-Woven Geotextile	960	sq. yards
CULTEC No. 4800 Woven Geotextile	128	feet
Stone	363	cu. yards

Separator Flow Qty. Included in Total

Based on External Pipe Manifold



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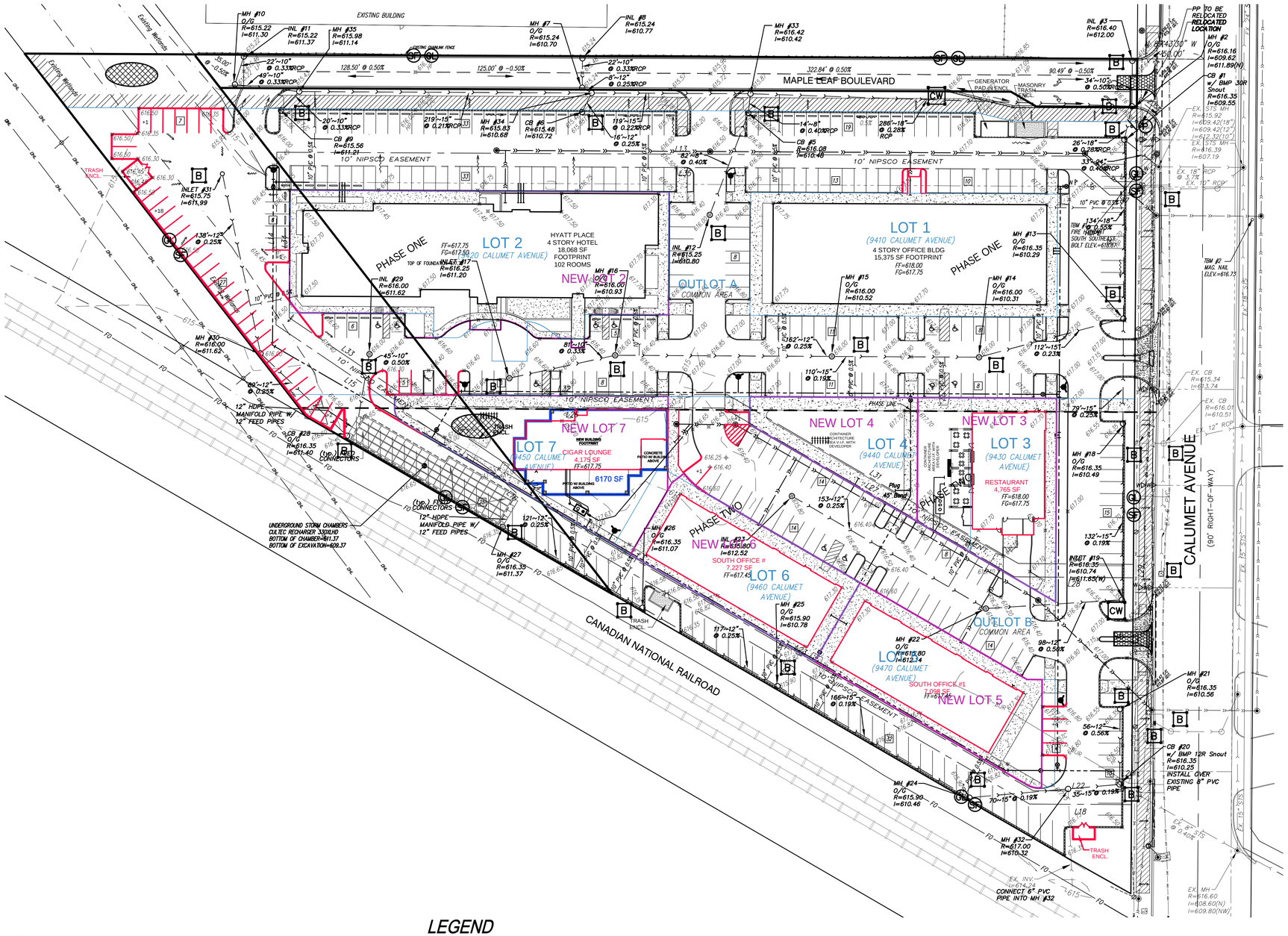
SHEET
C-5.3

FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossings Calunet Avenue - Munster\dwg\2019-5052 Details.dwg 6/5/2020 11:47:37 AM CDT


MAPLE LEAF BOULEVARD
CALUMET AVENUE
(90' RIGHT-OF-WAY)
CANADIAN NATIONAL RAILROAD
Existing Wetlands
10' NIPSCO EASEMENT
PHASE ONE
PHASE TWO
LOT 1
(9410 CALUMET AVENUE)
4 STORY OFFICE BLDG
15,375 SF FOOTPRINT
FF=618.00
FG=617.75
LOT 2
(9420 CALUMET AVENUE)
HYATT PLACE
4 STORY HOTEL
18,068 SF
FOOTPRINT
102 ROOMS
LOT 3
(9430 CALUMET AVENUE)
RESTAURANT
4,765 SF
FF=618.00
FG=617.75
LOT 4
(9440 CALUMET AVENUE)
LOT 5
(9470 CALUMET AVENUE)
SOUTH OFFICE #1
7,098 SF
FF=617.45
LOT 6
(9460 CALUMET AVENUE)
LOT 7
(9450 CALUMET AVENUE)
CIGAR LOUNGE
4,175 SF
FF=617.75
6170 SF
OUTLOT A
COMMON AREA
OUTLOT B
COMMON AREA
NEW LOT 1
NEW LOT 2
NEW LOT 3
NEW LOT 4
NEW LOT 5
NEW LOT 6
NEW LOT 7
NEW BUILDING FOOTPRINT
CONCRETE PATIO BELOW BUILDING ABOVE
PATIO BELOW BUILDING ABOVE
CONTAINER ARCHITECTURE AREA N.I.P. WITH DEVELOPER
TRASH ENCL.
CW
SF
GL
B
CB #1 w/ BMP 30R Snout R=616.35 I=609.55
CB #2 R=616.08 I=610.48
CB #3 R=615.92 I=609.42(18") I=609.42(12") I=612.32(10")
CB #5 R=616.39 I=607.19
CB #8 R=615.48 I=610.72
CB #9 R=615.56 I=611.21
CB #20 w/ BMP 12R Snout R=616.35 I=610.25 INSTALL OVER EXISTING 8" PVC PIPE
CB #28 O/G PI=616.35 I=611.40
INLET #3 R=616.40 I=612.00
INLET #17 R=616.25 I=611.20
INLET #19 R=616.35 I=610.74 I=611.65(W)
INLET #29 R=616.00 I=611.62
INLET #31 R=615.75 I=611.99
MH #2 O/G R=616.16 I=611.89(N)
MH #10 O/G R=615.22 I=611.30
MH #11 R=615.22 I=611.37
MH #12 R=615.25 I=610.80
MH #13 O/G R=616.35 I=610.29
MH #14 O/G R=616.00 I=610.31
MH #15 O/G R=616.00 I=610.52
MH #16 R=616.00 I=610.93
MH #18 O/G R=616.35 I=610.49
MH #21 O/G R=616.35 I=610.56
MH #22 O/G R=615.80 I=612.14
MH #23 R=615.80 I=612.52
MH #24 O/G R=615.90 I=610.46
MH #25 O/G R=615.90 I=610.78
MH #26 O/G R=616.35 I=611.07
MH #27 O/G R=616.35 I=611.37
MH #30 R=616.00 I=611.62
MH #32 R=617.00 I=610.32
MH #33 R=616.42 I=610.42
MH #34 R=615.83 I=610.68
MH #35 R=615.98 I=611.14
MH #7 O/G R=615.24 I=610.70
INL #8 R=615.24 I=610.77
PP TO BE RELOCATED RELOCATED LOCATION
TBM #1 FIRE HYDRANT SOUTH SOUTHEAST BOLT ELEV=616.71
TBM #2 MAG. NAIL ELEV=616.73
EX. CB R=615.34 I=613.74
EX. CB R=616.01 I=610.51
EX. MH R=616.60 I=608.60(N) I=609.80(NW)
EX. 12" RCP
EX. 15" RCP
EX. 10" RCP
EX. 8" S.D.R. @ 0.40%
EX. INV. CONNECT 6" PVC PIPE INTO MH #32
10" PVC @ 0.25%
12" HDPE MANIFOLD PIPE W/ 12" FEED PIPES
UNDERGROUND STORM CHAMBERS CULTEC RECHARGER 330XLHD BOTTOM OF CHAMBER=611.37 BOTTOM OF EXCAVATION=609.37
TRASH ENCL.
EXISTING BUILDING
EXISTING CHAINLINK FENCE
EXISTING WOOD FENCE
EXISTING WETLANDS
PHASE LINE
38'-00" @ -0.50%
128.50' @ 0.50%
125.00' @ -0.50%
322.84' @ 0.50%
90.49' @ -0.50%
S43°53'50" W 450.00'
GENERATOR PAD IN ENCL.
MASONRY TRASH ENCL.
22'-10" @ 0.33%RCP
49'-10" @ 0.33%RCP
20'-10" @ 0.33%RCP
219'-15" @ 0.21%RCP
119'-15" @ 0.22%RCP
16'-12" @ 0.25%
14'-8" @ 0.40%RCP
28'-18" @ 0.28% RCP
26'-18" @ 0.28%RCP
33'-24" @ 0.40%RCP
82'-8" @ 0.40%
134'-18" @ 0.50%
138'-12" @ 0.25%
45'-10" @ 0.50%
99'-12" @ 0.83%
81'-10" @ 0.33%
162'-12" @ 0.25%
112'-15" @ 0.23%
110'-15" @ 0.19%
121'-12" @ 0.25%
117'-12" @ 0.25%
153'-12" @ 0.25%
79'-15" @ 0.25%
132'-15" @ 0.19%
98'-12" @ 0.50%
59'-12" @ 0.56%
166'-15" @ 0.19%
70'-15" @ 0.19%
35'-15" @ 0.19%
L27 45° Bend
L28
L18
L19
L33
L15
L37
L3
L4
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L6
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L11
L12
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L76
L77

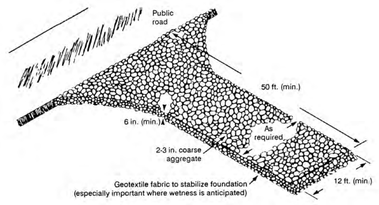
TEMPORARY CONSTRUCTION ENTRANCE/EXIT

Purpose: To provide a stable entrance/exit condition from the construction site, and to keep mud and sediment off public roads.

"GRAVEL"
Requirements:
Width: 12 feet minimum or full width of entrance
Length: 50 feet minimum
Material: 2-3 inch diameter washed stone (INDOT CA No. 2), with Geotextile Fabric Underliner.
Thickness: 6 inch minimum

Installation:
1. Remove all vegetation and other objectionable material from the foundation area.
2. Install pipe under the stone if needed to provide proper public road drainage.
3. Install Geotextile fabric on the graded foundation area prior to stone placement.
4. Divert all surface runoff and drainage from the stone to sediment trap.

Maintenance:
1. Inspect entrance pad for sediment deposits weekly and after storm events or heavy use.
2. Reshape pad as needed for drainage and runoff control.
3. Topdress with clean stone as needed.
4. Remove mud and sediment tracked or washed onto public road by brushing or sweeping. No flushing of sediment off the street
5. Repair any broken road pavement immediately.

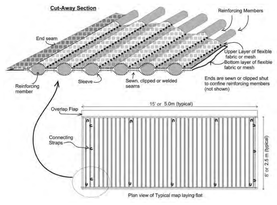


Plans of a temporary gravel construction entrance/exit pad.

"MAT"
Requirements:
Width: 12 feet minimum or full width of entrance
Length: 50 feet minimum
Material: Geotextile-Type mats, **AGES Mud Mat** or approved equal

Installation:
1. Install pipe under mat if needed to provide proper site drainage.
2. Install Geotextile-Type mat on the graded foundation area.
3. Divert all surface runoff and drainage from the mat to sediment trap.

Maintenance:
1. Inspect entrance mat for sediment deposits weekly and after storm of a minimum of 1/2 inch rainfall events or heavy use.
2. Reshape pad as needed for drainage and runoff control.
3. Repair or replace mats as needed.
4. Remove mud and sediment tracked or washed onto public road by brushing or sweeping. No flushing of sediment off the street.



PLANS OF TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD

TEMPORARY SEEDING

Purpose: To stabilize disturbed areas especially along both sides of the streets and courts after final grading work is completed and where additional work is not scheduled.

Requirements:
Site and seedbed preparation: Graded, and lime and fertilizer applied

Seed Selected:
Selected on the basis of quick germination, growth, and time of year, see Table for temporary seeding recommendations.

Fertilize: According to soil test or use 600 lbs/acre 12-12-12 analysis or equivalent.

Mulch: 1.5 - 2 tons/acre straw. Straw must be dry, unchopped and free of undesirable seeds.

Application:
1. Fertilize and lime as recommended by the soil test.
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2-4" deep with a disk or rake operated across the slope.
3. Apply seed uniformly with a drill or cultipacker-seeder, or by broadcasting, and cover to a depth as shown on Table for temporary seeding recommendations.
4. If drilling or broadcasting, firm the seedbed with a roller or cultipacker.
5. Mulch all seeded areas. (Note: If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.)

Maintenance:
1. Inspect periodically after planting to see that vegetative stands are adequately established; re-seed if necessary.
2. Check for erosion damage after storm events and repair; re-seed and mulch if necessary.

Notes:
1. Vegetative Filter Strip: permanent or temporary, shall be done on all disturbed areas along both sides of the streets and courts to reduce erosion where additional work is not scheduled.
2. Permanent Seeding: or sodding shall be done at the time of final landscaping.

Exhibit 3.11–B. Temporary Seeding Recommendations.

Seed species*	Rate/acre	Planting depth	Optimum dates**
Wheat or rye	150 lbs.	1 to 1½ in.	9/15 to 10/30
Spring oats	100 lbs.	1 in.	3/1 to 4/15
Annual ryegrass	40 lbs.	1/4 in.	3/1 to 5/1 8/1 to 9/1
German millet	40 lbs.	1 to 2 in.	5/1 to 6/1
Sudangrass	35 lbs.	1 to 2 in.	5/1 to 7/30

* Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than a year (See PERMANENT SEEDING)
** Seeding done outside the optimum dates increases the chances of seeding failure.

PERMANENT SEEDING

Purpose: To stabilize disturbed areas especially along both sided of the streets and courts after final grading work is completed and where additional work is not scheduled.

Requirements:
Site and seedbed preparation: Graded, and lime and fertilizer applied.

Seed Selected:
Selected on the basis of Site Conditions, Soil PH, intended land use, and expected level of maintenance see Table for permanent seeding recommendations.

Fertilize: According to soil test or use 600 lbs/acre 12-12-12 analysis or equivalent.

Mulch: 1.5 - 2 tons/acre straw. Straw must be dry, unchopped and free of undesirable seeds.

Application:
1. Fertilize and line as recommended by soil test.
2. Till the soil to obtain a uniform seedbed, working the fertilizer and lime into the soil 2-4" deep with a disk or rake operated across the slope.
3. Apply seed uniformly with a drill or cultipacker-seeder, or broadcasting, and cover to a depth of ¼ to ½ inch.
4. If drilling or broadcasting, firm the seedbed with a roller or cultipacker.
5. Mulch all seeded areas. (Note: If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.)

Maintenance:
1. Inspect periodically, especially after storm events, until the stand is successfully established. (Characteristics of a successful stand include: vigorous dark green or bluish-green seedling; uniform density with nurse plants, legumes, and grasses well intermixed; green leaves; and the perennials remaining green throughout the summer, at least at the plant base.)
2. Plan to add fertilizer the following seasons according to soil test recommendations.
3. Repair damaged, bare or sparse areas by filling any gullies, refertilizing, over- or re-seeding, and mulching.
4. If plant cover is sparse or patchy, review the plant materials chosen, soil fertility, moisture condition, and mulching; then repair the affected area either by over-seeding or by re-seeding, and mulching.
5. If vegetation fails to grow, consider soil testing to determine acidity or nutrient deficiency problems. (Contact your SWCD or Cooperative Extension office for assistance.)
6. If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.

Notes:
1. Permanent seeding optimum dates are March 1 to May 10 and August 10 to September 30, seeding done between May 10 to August 10 may require irrigation. Temporary seeding may be used as an alternative until preferred date for Permanent Seeding.
2. Retention/Detention area walls and base will be seeded as soon as possible using permanent seeding when possible, mulch or erosion control blankets are to be used on seeded areas to protect the soil from wind and water impact. Install silt fences around Retention/Detention area until seed is established.

Seeding Recommendations.
This table provides several seeding options. Additional seed species and mixtures are available commercially. When selecting a mixture, consider site conditions, including soil properties (e.g., soil pH and drainage), slope aspect and the tolerance of each species to shade and droughtiness.

Seed species and mixtures	Rate per acre: Permanent	Rate per acre: Dormont or frost	Optimum soil pH
OPEN AND DISTURBED AREAS (REMAINING IDLE MORE THAN 1 YR.)			
1. Perennial ryegrass	35 to 50 lbs.	50 to 75 lbs.	5.6 to 7.0
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
2. Kentucky bluegrass	20 lbs.	30 lbs.	5.5 to 7.5
+ smooth bromegrass	10 lbs.	15 lbs.	
+ switchgrass	3 lbs.	5 lbs.	
+ timothy	4 lbs.	6 lbs.	
+ perennial ryegrass	10 lbs.	15 lbs.	
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
3. Perennial ryegrass	15 to 30 lbs.	22 to 45 lbs.	5.6 to 7.0
+ tall fescue**	15 to 30 lbs.	22 to 45 lbs.	
4. Tall fescue**	35 to 50 lbs.	50 to 75 lbs.	5.5 to 7.5
+ ladino or white clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
STEEP BANKS AND CUTS, LOW MAINTENANCE AREAS (NOT MOWED)			
1. Smooth bromegrass	25 to 35 lbs.	35 to 50 lbs.	5.5 to 7.5
+ red clover*	10 to 20 lbs.	15 to 30 lbs.	
2. Tall fescue**	35 to 50 lbs.	50 to 75 lbs.	5.5 to 7.5
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
3. Tall fescue**	35 to 50 lbs.	50 to 75 lbs.	5.5 to 7.5
+ red clover*	10 to 20 lbs.	15 to 30 lbs.	
(Recommended north of US 40)			
4. Orchardgrass	^^ to 30 lbs.	30 to 45 lbs.	5.6 to 7.0
+ red clover*	10 to 20 lbs.	15 to 30 lbs.	
+ ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
5. Crownvetch*	10 to 12 lbs.	15 to 18 lbs.	5.6 to 7.0
+ tall fescue**	20 to 30 lbs.	30 to 45 lbs.	
(Recommended south of US 40)			
LAWNS AND HIGH MAINTENANCE AREAS			
1. Bluegrass	105 to 140 lbs.	160 to 210 lbs.	5.5 to 7.0
2. Perennial ryegrass (turf-type)	45 to 60 lbs.	70 to 90 lbs.	5.6 to 7.0
+ bluegrass	70 to 90 lbs.	105 to 135 lbs.	
3. Tall fescue (turf-type)**	130 to 170 lbs.	195 to 250 lbs.	5.6 to 7.5
+ bluegrass	20 to 30 lbs.	30 to 45 lbs.	
CHANNELS AND AREAS OF CONCENTRATED FLOW			
1. Perennial ryegrass	00 to 150 lbs.	150 to 225 lbs.	5.6 to 7.0
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
2. Kentucky bluegrass	20 lbs.	30 lbs.	5.5 to 7.5
+ smooth bromegrass	10 lbs.	15 lbs.	
+ switchgrass	3 lbs.	5 lbs.	
+ timothy	4 lbs.	6 lbs.	
+ perennial ryegrass	10 lbs.	15 lbs.	
+ white or ladino clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
3. Tall fescue**	100 to 150 lbs.	150 to 225 lbs.	5.5 to 7.5
+ ladino or white clover*	1 to 2 lbs.	1 ½ to 3 lbs.	
4. Tall fescue**	100 to 150 lbs.	150 to 225 lbs.	5.5 to 7.5
+ Perennial ryegrass	15 to 20 lbs.	22 to 30 lbs.	
+ Kentucky bluegrass	15 to 20 lbs.	22 to 30 lbs.	

* For best results: (a) legume seed should be inoculated; (b) seeding mixtures containing legumes should preferably be spring-seeded, although the grass may be fall-seeded and the legume frost-seeded; and (c) if legumes are fall-seeded, do so in early fall.
** Tall fescue provides little cover for, and may be toxic to, some species of wildlife. The IDNR recognizes the need for additional research on alternatives to tall fescue, such as buffalograss, orchardgrass, smooth bromegrass, and switch-grass. This research, in conjunction with demonstration areas, should focus on erosion control characteristics, wildlife toxicity, turf durability, and drought resistance.

DORMANT AND FROST SEEDING

Purpose:
1. To provide early germination and soil stabilization in the spring.
2. To reduce sediment runoff to downstream areas.
3. To repair previous seedings.

Requirements:
Site and seedbed preparation: Graded, lime and fertilizer applied.

Seed Selected:
Selected on the basis of Site Conditions, Soil PH, intended land use, and expected level of maintenance. See Table for dormant or frost seeding recommendations.

Fertilize: According to soil test or use 400-600 lbs/acre 12-12-12 analysis or equivalent.

Application:
Dormant seeding is a temporary or permanent seeding application at a time when soil temperatures are too low for germination to occur (less than 50 °F) Frost seeding is a temporary or permanent seeding application in early spring when soils are in the freeze-thaw stage.

For Dormant Seeding: (Seeding dates: Dec. 1-Feb. 28)
1. Site preparation and mulching can be done months ahead of actual seeding, apply mulch upon completion of grading (Practice 3.15)
2. Broadcast fertilizer as recommended by soil test.
3. Broadcast seeding on top of the mulch and/or into existing ground cover at the rate shown on table. (if site preparation occurs within the recommended dates, fertilize and lime, seed, and mulch at the time.)

For Frost Seeding: (Seeding dates: Feb. 28 - Mar. 28)
1. Broadcast fertilizer as recommended by a soil test.
2. Select an appropriate seed species or mixture from table for temporary seeding or table for permanent seeding, and broadcast on to the seedbed or into the existing ground cover at the rate shown. (Do not work the seed into the soil.)

Maintenance:
1. Apply 200-300 lbs./acre of 12-12-12 or equivalent fertilizer between Apr. 15 and May 10 or during periods of vigorous growth.
2. Re-seed and mulch any areas that have inadequate cover by mid- to late April. For best results, re-seed within the recommended dates shown for temporary seeding or for permanent seeding.

Temporary Dormant or Frost Seeding Recommendations.

Seed species*	Rate per acre
Wheat or rye	150 lbs.
Spring oats	150 lbs.
Annual ryegrass	60 lbs.

*Perennial species may be used as temporary cover, especially if the area to be seeded will remain idle for more than a year.

MULCHING

Purpose: To promote seed germination and seedling growth, a temporary surface stabilization, and protecting the soil from wind and water impact.

Requirements:
Material: Straw, hay, wood fiber or excelsior, see table for Mulch Materials, Rates, and comments.
Comments:
Coverage: 75% of the soil surface
Anchoring: Required to prevent displacement by wind or water, see table for Mulch Anchoring Methods.

Application:
1. Apply mulch at the recommended rate.
2. Spread uniformly by hand, hay fork, mulch blower, or hydromulcher with no more than 25% of the surface visible.
3. Anchor immediately if using straw or hay, using one of the folliwing methods:
- Crimp with mulch anchoring tool.
- Hydromulch with short cellulose fibers.
- Apply liquid tackifier.
- Cover with netting secured with metal staples..

Maintenance:
1. Inspect after storm events to check for movement of mulch or for erosion.
2. If washout, breakage, or erosion is present, repair the surface, then re-seed, re-mulch.
3. Continue inspections until vegetation is firmly established.

Exhibit 3.15–B. Mulch Materials, Rates, and Comments.

Material	Rate	Comments
Straw or hay	1½-2 tons/acre	Should be dry, unchopped, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see *Exhibit 3.15-D*).
Wood fiber or cellulose	1 ton /acre	Apply with a hydromulcher and use with tacking agent.
Long fiber wood (excelsior)	1/2-3/4 ton/acre	Anchor in areas subject to wind.

Exhibit 3.15–D. Mulch Anchoring Methods.

Anchoring method	How to apply
Mulch anchoring tool OR Farm disk (dull, serrated, and set straight)	Crimp or punch the straw or hay into the soil 2-4 in. Operate machinery on the contour of the slope.
Cleating with dozer tracks	Operate dozer up and down slope, not across, or else the tracks will form rills.
Wood hydromulch fibers	Apply 1-2 tons/acre using a hydromulcher at a rate of 750 lbs./acre with a tacking agent (or according to contractor specifications). Do not use in areas of concentrated flow.
Asphalt emulsion	Emulsified asphalt should conform to the requirements of ASTM Spec. #977. Apply with suitable equipment at a rate of 0.05 gal./sq. yd. Do not use in areas of concentrated flow.
Synthetic tackifier, binder or soil stabilizer	Apply according to manufacturer's recommendation.
Biodegradable netting (polypropylene or similar material)*	Apply over mulch and staple with 6-8 in. wire staples. Follow manufacturer's recommendations for installation. Best suited to slope application.

* Install the netting immediately after applying the mulch. In areas of concentrated water flow, lay it parallel to the direction of flow; on other slopes, lay it either parallel or perpendicular to direction of flow. Edges of adjacent netting strips should overlap 4-6 in., with the strip on the upgrade side of any lateral water flow on top. Installation details are site specific, so follow manufacturer's directions.

SELF-MONITORING PROGRAM

A self-monitoring program that includes the following must be implemented at all permitted project sites:

1. A trained individual shall perform a written evaluation of the project site a minimum of one (1) time per week and by the end of the next business day following each measurable storm event.
2. The evaluation must address the maintenance of existing storm water quality measures to ensure they are functioning properly and identify additional measures necessary to remain in compliance with all applicable statutes and rules.
3. Written evaluation reports must include:
   a. the name of individual performing the evaluation;
   b. the date of evaluation;
   c. problems identified at the project site; and
   d. details of corrective actions recommended and completed.
4. All evaluation reports for the project site must be made available to the MS4 Operator or other designated entity within forty-eight (48) hours of a request.
5. Evaluation reports must be maintained for a period of two (2) years from date of NOT.
6. All evaluation reports will be submitted to the Town of Munster when requested.

Date: _____
Project: _____
Inspected by: _____
Type of Inspection: Scheduled Weekly Rain Event

CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG
(To be Completed by Property Owner or Agent)

All stormwater pollution prevention BMPs shall be inspected and maintained as needed to ensure continued performance of their intended function during construction and shall continue until the entire site has been stabilized and a Notice of Termination has been issued. An inspection of the project site must be completed by the end of the next business day following each measurable storm event. If there are no measurable storm events within a given week, the site should be monitored at least once in that week. Maintenance and repair shall be conducted in accordance with the accepted site plans. This log shall be kept as a permanent record and must be made available to **the, Town of Munster Town** Engineer, in an organized fashion, within forty-eight (48) hours upon request.

Yes	No	N/A	
			1. Are all sediment control barriers, inlet protection and silt fences in place and functioning properly?
			2. Are all erodible slopes protected from erosion through the implementation of acceptable soil stabilization practices?
			3. Are all dewatering structures functioning properly?
			4. Are all discharge points free of any noticeable pollutant discharges?
			5. Are all discharge points free of any noticeable erosion or sediment transport?
			6. Are designated equipment washout areas properly sited, clearly marked, and being utilized?
			7. Are construction staging and parking areas restricted to areas designated as such on the plans?
			8. Are temporary soil stockpiles in approved areas and properly protected?
			9. Are construction entrances properly installed and being used and maintained?
			10. Are "Do Not Disturb" areas designated on plan sheets clearly marked on-site and avoided?
			11. Are public roads at intersections with site access roads being kept clear of sediment, mud, and dust?
			12. Is spill response equipment on-site, logically located, and easily accessed in an emergency?
			13. Are emergency response procedures and contact information clearly posted?
			14. Is solid waste properly contained?
			15. Is a stable access provided to the solid waste storage and pick-up area?
			16. Are hazardous materials, waste or otherwise, being properly handled and stored?
			17. Have previously recommended corrective actions been implemented?

If you answered "no" to any of the above questions, describe any corrective action which must be taken to remedy the problem and when the corrective actions are to be completed.

REPORT SAMPLE

SPILL PREVENTION AND RESPONSE

Purpose: Procedures and practices to prevent and control spills in a manner that minimizes or eliminates the discharge of spilled material to the drainage system or watercourses.

Hazardous Waste Products:
- Petroleum Products,
- Asphalt Products,
- Concrete Curing Compounds,
- Pesticides,
- Acids,
- Paints,
- Stains,
- Solvents,
- Wood Preservatives,
- Roofing Tar, or

Other Waste Products:
- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals
- Fuels
- Lubricants
- Other petroleum distillates

Any materials deemed a hazardous waste in 40 CFR Parts 110, 117, 261, or 302

Spill Prevention Practices:
The following are management practices used for reduction of spills and other accidental exposure of materials and substances to storm water runoff:
a. The contractors and subcontractors shall refer to the Material Safety Data Sheet (MSDS) for information on the proper storage, use, and clean-up methods for all materials anticipated being on the project site.
b. All required materials for spill clean up and disposal of all onsite materials shall be kept on site in a project trailer with easy access for all users of associated materials.
c. All disposals of spilled materials shall be done in accordance with Federal, State and Local waste disposal regulations. All contractors and subcontractors shall be responsible for any and all spills associated with their work.
d. Prompt cleanup of any spills that may occur of liquid or dry materials.
e. Cleanup of sediments that have been tracked by vehicles or have been transported by wind or storm water about the site or onto nearby roadways.

Response Practices:
In the event that a large spill occurs (that which requires extensive cleanup actions, refer to MSD sheets for information), the following procedures shall be followed to minimize exposure of the material.

a. Immediate action shall be taken to control and contain the spill to prevent it from entering any nearby storm sewer structures or open waters.
b. Notify the Town of Munster Fire Department at 911 for all combustible and flammable materials.
c. Notify the Federal Emergency Spill Hotline at 1-800-424-8802 within 2 hours for spills above the reported allowable quantity, or if the material enters any nearby storm sewer structures or open waters.
d. Notify the Indiana Emergency Response Hotline at 1-888-233-7745.
e. The spill area shall be isolated from all surrounding areas with absorbent pads, booms, and pillows designed for the use of spill containment and absorption.
f. The spill kits that are required to be on site shall be utilized.
g. Emergency Response teams shall be contacted for extensive spills above and beyond the containment by available methods.

Waste Disposal Management Practices:
All solid waste associated with the construction and development of this project shall be removed and disposed of properly with in all applicable state and federal laws associated with the waste generated. Developer and/or contractor are to provide on-site dumpsters, rented from a licensed solid waste management company, to ensure waste is collected and disposed of properly. All trash and construction debris from the site will be deposited in a dumpster. No construction waste will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal.

a. Select a designated waste collection area onsite.
b. Provide an adequate number of containers with lids or covers throughout the site, and frequent pickups
c. Provide immediate cleanup of any container spills.
d. Make sure that construction waste is collected, removed, and disposed of only at authorized areas.

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907 RIDGE ROAD, MUNSTER, INDIANA 46321
Tel. No.: (219) 836-8918 website: www.torrenga.com

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

06-26-2020
06-05-2020
REVISIONS:
DATE: 05-11-2020

CLIENT:
First Metropolitan Builders
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052
SCALE: NTS

SHEET
C-7.0

BASKET INLET / CATCH BASIN PROTECTION

Purpose: To prevent excessive sediment from entering storm sewers at inlet/catch basin, allowing full use of the storm drain system during the construction period.

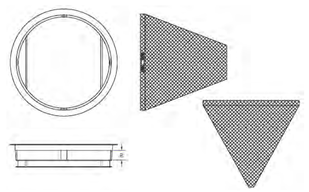
Requirements: Steel Frame with top width-length dimensions such that the basket fits into the inlet and/or catch basin (circular and/or rectangular), and a replaceable Geotextile fabric bag attached with a steel band locking cap that is suspended from the frame, **Catch -all Inlet Protector Hancor Flo-Gard bt Nyloplast** or approved equal.

Installation:

1. Install protection to existing and newly installed inlet/catch basin in a new development before land disturbing activities begin in a stabilized area.
2. Remove the grate, and place the basket assembly under the grate on the lip of the structure frame.
3. Replace the inlet/catch basin grate.

Maintenance:

1. Inspect weekly during construction and after each storm event of a minimum of 1/2 inch rainfall, and remove built-up sediment.
2. Replace bag every six (6) months.
3. Replace the Geotextile fabric bag if there is a hole and/or won't pass water.
4. Replace the Geotextile fabric bag after any oil, gasoline or solvent spill.



GENERAL NOTES:
FRAME: Top flange fabricated from 1½"x1½"x⅛" angle. Base rim fabricated from 1½"x½"x⅛" channel. Handles and suspension brackets fabricated from 1¼"x⅛" flat stock. All steel conforming to ASTM-A36.
SEDIMENT BAG: Bag fabricated from 4 oz./sq/yd non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel band and lock.

TYPICAL INLET/CATCH BASIN PROTECTION
INSERT DETAIL

STREET AND PARKING LOT SWEEPING

Purpose: To reduce the amount of pollutants that get washed into the storm drain and ultimately transported and deposited in waterbodies.

Application:

1. Sweeping at points of egress where sediment is tracked from project site onto public or private streets and roads.

Limitations:

1. Sweeping may be ineffective if soil is wet or heavy accumulation of mud.
2. May require repeat cleanings.

Maintenance:

1. Inspect potential sediment tracking ingress and egress points locations daily, and after rain events.
2. Visible sediment observed outside the construction limits shall be swept and removed daily.
3. Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
4. If not mixed with debris or trash, consider incorporating the removed sediment back into the project.
5. Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
6. Adjust brooms frequently; maximize efficiency of sweeping operations.
7. After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

SILT FENCE

Purpose: To retain sediment from small sloping disturbed areas by reducing the velocity of sheet flow.

Requirements:

Trench: 6" minimum depth, flat bottom , filled with compacted soil to bury lower portion of fence fabric.

Support : 2" x 2" hardwood stakes set at least 8-inches to 12-inches deep.

Spacing of Support: 6-foot maximum on center.

Fence height: A 2-ft. minimum or high enough so depth of impounded water does not exceed one-half the height of the fence at any point along the line.

Attachement: Hardwood laths secured to stakes with five (5) 1-1/2 inch staples.

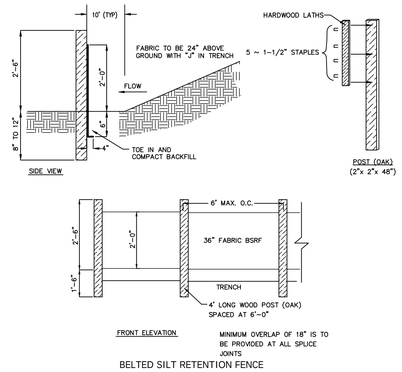
Fence Fabric: Spunbound polyester material with a fiberglass scrim or net sandwiched in between the layers, **SS-700 SiltSaver** or approved equal.

Installation:

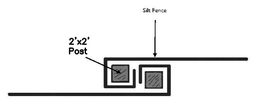
1. Along the entire intended fence line, maintain contour as much as possible, dig a 6" deep flat bottom trench.
2. On the downslope side of the trench, drive the post 8" to 12" into the ground.
3. Run a continuous length of fence fabric along upslope side of posts.
4. Fasten fence fabric to the upslope side of the stakes, extending it into the trench, and securing it with hardwood laths secured with five (5) 1-1/2 staples. The bottom 12" of the fence fabric shall be left unsecured to allow for entrenchment.
5. If a joint is necessary, staple the overlap to the nearest post with a wood lath.
6. Place the bottom 1' of fabric in the 6" deep trench, extending the remaining 4" of fabric toward the upslope side.
7. Backfill the trench with compacted earth.

Maintenance:

1. Inspect silt fence once every seven calendar days and 24 hours after each storm event of minimum of 1/2 inch rainfall.
2. If fence fabric tears, starts to decompose, or becomes ineffective, replace the affected portion, as outlined by the manufacturer.
3. Remove deposited sediment when it reaches one-half the height of the fence at its lowest point or is causing the fabric to bulge.
4. Take care to avoid undermining the fence during clean out.
5. After watershed has been stabilized, remove fence and sediment deposits, bring the disturbed area to grade and stabilize.



BELTED SILT RETENTION FENCE



Silt Fence Wrap Joint Detail

TOPSOIL SALVAGE & UTILIZATION

Purpose: To provide a method of preserving topsoil for use in establishing vegetation to achieve final site stabilization.

Specifications:
Material
Typically the darker, friable, loamy surface layer of soil found immediately below vegetation.

Storage Area

1. Free of stumps, rock, and construction debris.
2. Stockpile covered with vegetation or a tarp.
3. Surrounded by a sediment barrier or sediment filter.
4. Stockpile outside rooting zone of trees to be protected.

Application:
Salvaging and Stockpiling Topsoil

1. Determine depth and suitability of topsoil at site.
2. Prior to stripping topsoil, install any site-specific down slope measures needed to control storm water runoff and sedimentation.
3. Remove soil material no deeper than the "surface soil".
4. Stockpile the material in accessible locations that will not interfere with other construction activities or block drainage.
5. Stockpiled soil should be temporarily seeded and surrounded by a sediment control measure.

Spreading Topsoil

1. Prior to applying topsoil, grade the subsoil and roughen the top three to four inches by disking.
2. Apply topsoil evenly to a depth of a minimum of four inches, then compact slightly to improve contact with the subsoil.
3. Do not apply topsoil when the site is wet, muddy, or frozen.
4. After spreading the topsoil, grade and stabilize the site.

Maintenance:

1. Inspect daily.
2. Check for damage to perimeter barrier; repair immediately.
3. Check for erosion or damage to newly spread topsoil; repair immediately and revegetate.

CONCRETE WASHOUT

Purpose: To reduce the discharge of pollutants associated with concrete waste through consolidation of solids and retention of liquids.

Requirements:

1.) Locate concrete washout systems at least 50 feet from any creeks, wetlands, ditches, karst features, or storm drains/manmade conveyance systems.
2.) Locate concrete washout systems in relatively flat areas with established vegetative cover and do not receive runoff from adjacent land areas.
3.) Locate in areas that provide easy access for concrete trucks and other construction equipment.
4.) Locate away from other construction traffic to reduce the potential for damage to the system.
5.) Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining.
6.) Signage.
7.) Orange safety fencing or equivalent.
8.) Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile fabric), soil material, or other appropriate materials that can be used to construct a containment system (above grade systems).

Installation:

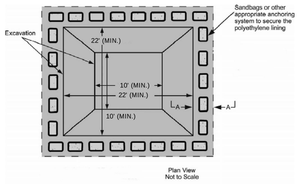
1.) Dependent upon the type of system, either excavate the pit or install the containment system.
2.) A base shall be constructed and prepared that is free of rocks and other debris that may cause tears or punctures in the polyethylene lining.
3.) Install the polyethylene lining. For excavated systems, the lining should extend over the entire excavation. The lining for bermed systems should be installed over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, staples, or other fasteners.
4.) Place flags, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.
5.) Place a non-collapsing, non-water holding cover over the washout facility prior to a predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).
6.) Install signage that identifies concrete washout areas.
7.) Post signs directing contractors and suppliers to designated locations.

Maintenance:

1.) Inspect daily and after each storm event.
2.) Inspect the integrity of the overall structure including, where applicable, the containment system.
3.) Inspect the system for leaks, spills, and tracking of soil by equipment.
4.) Inspect the polyethylene lining for failure, including tears and punctures.
5.) Once concrete wastes harden, remove and dispose of the material.
6.) Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.
7.) Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
8.) Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.
9.) The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.
10.) The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.
11.) Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further dewatering.
12.) Prefabricated units are often pumped and the company supplying the unit provides this service.
13.) Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate action.
14.) When concrete washout systems are no longer required, the concrete washout systems shall be closed. Dispose of all hardened concrete and other materials used to construct the system.
15.) Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.

CONCRETE WASHOUT

Concrete Washout (Below Grade System) Worksheet



Plan View
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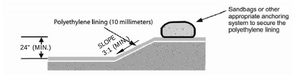

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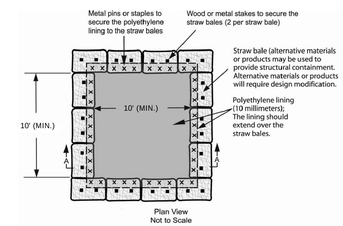
CONCRETE WASHOUT

Concrete Washout (Above Grade System) Worksheet



Plan View
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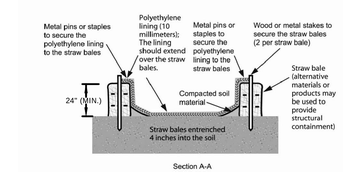

Section A-A
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MAPLE LEAF CROSSING
A PLANNED UNIT DEVELOPMENT TO THE
TOWN OF MUNSTER, LAKE CO., INDIANA
SWPPP DETAILS & SPECIFICATIONS

06-26-2020
06-05-2020
REVISIONS:
DATE: 05-11-2020

CLIENT:
First Metropolitan Builders
400 Fisher Avenue
Munster, Indiana 46321

JOB NO: 2019-5052
SCALE: NTS

SHEET
C-7.1

DONALD C. TORRENGA REGISTERED No. 19868 STATE OF INDIANA PROFESSIONAL ENGINEER

FILE NO: Z:\2019-5052 Jay Lieser - Maple Leaf Crossings Calumet Avenue - Munster\dwg\2019-5052 SWPPP Details.dwg 6/4/2020 11:07:10 AM CDT