STATEMENT OF PRACTICAL DIFFICULTY

In order for a variance to be granted, a practical difficulty, as determined by the Board, must be present. On a separate sheet, please clearly identify and explain the practical difficulty justifying the variance request. The practical difficulty must be clearly related to as many of the 5 standards below as possible:

a) Exceptional characteristics of property for which the variance is sought make compliance with dimensional requirements substantially more difficult than would be the case for the great majority of properties in the same zoning district. Characteristics of property which shall be considered include exceptional narrowness, shallowness, smallness, irregular shape, topography, vegetation and other similar characteristics.

b) The characteristics which make compliance with dimensional requirements difficult must be related to the premises for which the variance is sought, not some other location.

c) The characteristics which make compliance with the dimensional requirements shall not be of a personal nature.

d) The characteristics which make compliance with dimensional requirements difficult must not have been created by the current or a previous owner.

e) The proposed variance will not be harmful or alter the essential character of the area in which the property is located, will not impair an adequate supply of light and air to adjacent property, or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, or unreasonably diminish or impair established property value within the surrounding area, or in any other respect impair the public health, safety, comfort, morals or welfare of the inhabitants of the City.

ZONING BOARD OF APPEALS – OPENING STATEMENT

Zoning Board of Appeals is a group of seven of your neighbors appointed by City Council to decide on requests for variances and other matters that are brought before them. A variance is a relaxation of the literal provisions of the Zoning Ordinance. Petitioners must indicate a hardship or practical difficulty with the land that would warrant the granting of the variance.

PROCEDURE

The Board will hear the items in the order that they appear on the agenda. When an item is called, the Chairman will verify that the petitioner is present. Then the City Administration will summarize the facts of the case. The petitioner will then be given an opportunity to address the Board to explain the justification for the action requested.

After the petitioner makes their presentation, and answers any questions that the Board may have, the Chairman will open the Public Hearing. Administration will present public comments to the Board.

At the conclusion of public comments, the Chairman will close the Public Hearing. Once the Public Hearing is closed, no other public comment will be taken unless in response to a specific question by a member of the Board. The Board will then make a motion to approve, deny, or postpone the request. In order for the request to pass a minimum of four votes are needed. If the request is not granted, the applicant has the right to appeal the Board’s decision to Oakland County Circuit Court.

500 West Big Beaver
Troy, MI 48084
troymi.gov

248.524.3364
planning@troymi.gov

ZONING BOARD OF APPEALS
MEETING AGENDA

Glenn Clark, Chairman, Michael Bossenbroek, Vice Chairman
Thomas Desmond, David Eisenbacher, Aaron Green Jim McCauley,
Sadek Rahman, Orestis Kaltsounis Alternate, Mahendra Kenkre Alternate

---

January 19, 2021 **7:30 P.M.** **Remote Meeting**

Public Comment may be communicated to the Zoning Board of Appeals via telephone voice mail by calling 248.524.3580 or by sending an email to ZBAPublicComments@troymi.gov. All comments will be provided to the Zoning Board of Appeals. Public comments must be received by 3 pm the day of the remote meeting. The meeting can be viewed at: https://troymi.gov/community/government/citycouncil/council_meeting_webcast.php .

1. ROLL CALL

2. PROCEDURE

3. APPROVAL OF MINUTES – December 15, 2020

4. APPROVAL OF AGENDA

5. HEARING OF CASES

   A. VARIANCE REQUEST, 4928 PARK MANOR, NEETU SHARMA & AMBUJ MATHUR: A variance to allow a partially covered deck 10 feet from the rear property line where the development approval requires the deck to be no less than 25 feet from the rear property line.

      ZONING ORDINANCE SECTIONS: 10.04 E, 2, b, ii (covered portion), 7.08 B (uncovered portion)

   B. VARIANCE REQUEST, 4095-4115 CROOKS AND PROPERTY ADJACENT, SAFET "SAM" STAFA : Tollbrook North, LLC ("Developer") appeals the November 10, 2020 decision of the City of Troy's Planning Commission ("PC") to deny the Preliminary Site Plan ("PSP") for its Crooks Road Townhomes project to the City's Zoning Board of Appeals ("ZBA"). The Developer requests that the ZBA reverse the PC's decision and grant PSP approval.

      ZONING ORDINANCE SECTIONS: 5.06, 8.06, 15.04 C

NOTICE: *People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at clerk@troymi.gov or by calling (248) 524-3317 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.*

6. COMMUNICATIONS – None

7. MISCELLANEOUS BUSINESS

8. PUBLIC COMMENT

9. ADJOURNMENT

NOTICE: *People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at clerk@troymi.gov or by calling (248) 524-3317 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.*

RESOLUTION TEMPLATE

Moved by:
Seconded by:

That the variance request for *[applicant name, address or location]*, for *[request]*

Be granted for the following reasons:

The applicant has demonstrated that:

a) Exceptional characteristics of property for which the variance is sought make compliance with dimensional requirements substantially more difficult than would be the case for the great majority of properties in the same zoning district. Characteristics of property which shall be considered include exceptional narrowness, shallowness, smallness, irregular shape, topography, vegetation and other similar characteristics.

b) The characteristics which make compliance with dimensional requirements difficult must be related to the premises for which the variance is sought, not some other location.

c) The characteristics which make compliance with the dimensional requirements shall not be of a personal nature.

d) The characteristics which make compliance with dimensional requirements difficult must not have been created by the current or a previous owner.

e) The proposed variance will not be harmful or alter the essential character of the area in which the property is located, will not impair an adequate supply of light and air to adjacent property, or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, or unreasonably diminish or impair established property value within the surrounding area, or in any other respect impair the public health, safety, comfort, morals or welfare of the inhabitants of the City

Yeas:
Nays:

MOTION CARRIED / FAILED

Moved by:
Seconded by:

That the variance request for *[applicant name, address or location]*, for *[request]*

Be denied for the following reason(s):

The applicant has not demonstrated that:

f) Exceptional characteristics of property for which the variance is sought make compliance with dimensional requirements substantially more difficult than would be the case for the great majority of properties in the same zoning district. Characteristics of property which shall be considered include exceptional narrowness, shallowness, smallness, irregular shape, topography, vegetation and other similar characteristics.

g) The characteristics which make compliance with dimensional requirements difficult must be related to the premises for which the variance is sought, not some other location.

h) The characteristics which make compliance with the dimensional requirements shall not be of a personal nature.

i) The characteristics which make compliance with dimensional requirements difficult must not have been created by the current or a previous owner.

j) The proposed variance will not be harmful or alter the essential character of the area in which the property is located, will not impair an adequate supply of light and air to adjacent property, or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, or unreasonably diminish or impair established property value within the surrounding area, or in any other respect impair the public health, safety, comfort, morals or welfare of the inhabitants of the City

Yeas:
Nays:

MOTION CARRIED / FAILED

Moved by:
Seconded by:

RESOLVED, that the variance request for *[applicant name, address or location]*, for *[request]*

Be postponed for the following reason(s):

Yeas:
Nays:

MOTION CARRIED / FAILED

On December 15 2020 at 7:30pm via a remote meeting, Chairman Clark called the Zoning Board of Appeals meeting to order.

1. ROLL CALL

Present:
Michael Bossenbroek
Glenn Clark
Thomas Desmond
David Eisenbacher
Aaron Green
James McCauley
Sadek Rahman

Also Present:
Paul Evans, Zoning and Compliance Specialist
Allan Motzny, Assistant City Attorney
Jackie Ferencz, Planning Administrative Assistant

2. PROCEDURE

3. APPROVAL OF MINUTES – November 17, 2020

Moved by Eisenbacher
Seconded by McCauley

RESOLVED, to approve the November 17, 2020 meeting minutes.

Yes: All

MOTION PASSED

4. APPROVAL OF AGENDA – No changes

5. HEARING OF CASES:

A. VARIANCE REQUEST, OLLIE APAHIDEAN, VACANT-BLACK OAK PARCEL (88-20-11-226-004): A variance to split a property into 3 properties, variance to allow two of the properties to have a lot width and frontage of 30 feet, and the third to have zero lot width and frontage. The Zoning Ordinance requires each property to have 85 foot lot width and frontage.

Motion to move item to 5C on agenda to allow applicant to provide the Board additional requested information.

Moved by Green
Second by Eisenbacher

Motion to amend and to move item 5A to item 5F, and allow a 15 minute recess after 5E to allow review of requested documents submitted for 5A.

Moved by McCauley
Second by Green

RESOLVED, to amend the motion.

Yes: All

MOTION PASSED

Vote on the first motion:

Yes: All

MOTION PASSED

B. VARIANCE REQUEST, 224 WEBB, JOSEPH MANIACI FOR MONDRIAN PROPERTIES LLC: A variance to split a parcel of land into two parcels. One parcel is proposed to be 13,844 square feet. The other proposed parcel is proposed to be 13,571 square feet and have 98.03 feet frontage and width. The Zoning Ordinance requires each proposed parcel to be 15,000 square feet and have 100 feet frontage and width

MOVED by McCauley
SECOND by Desmond

RESOLVED, to grant the request.

Yes: All

MOTION PASSED

C. VARIANCE REQUEST, 4857 RIVERS EDGE, JOE NOVITSKY FOR JSN ARCHITECTURE: A variance request to allow a home addition to be set back 39 feet 3 inches from the rear property line. The Zoning Ordinance requires the addition to be set back 45 feet from the rear property line.

MOVED BY Green
SECOND BY Desmond

RESOLVED, to grant the request.

YES: All

MOTION PASSED

D. VARIANCE REQUEST, 1041 PADDOCK, THOMAS LEININGER FOR ADVANCED BUILDERS: A variance request to allow a home addition to be set back 39.79 feet from the rear property line. The Zoning Ordinance requires the addition to be set back 45 feet from the rear property line.

MOVED by Eisenbacher
SECOND by Green

RESOLVED, to grant the request.

YES: All

MOTION PASSED

E. VARIANCE REQUEST, 2975 THALES, THOMAS LEININGER FOR ADVANCED BUILDERS: A variance request to allow a home addition to be set back 36.5 feet from the rear property line. The Zoning Ordinance requires the addition to be set back 50 feet from the rear property line.

MOVED by Eisenbacher
SECOND by Green

RESOLVED, to grant the request.

YES: All

MOTION PASSED

F. VARIANCE REQUEST, OLLIE APAHIDEAN, VACANT-BLACK OAK PARCEL (88-20-11-226-004): A variance to split a property into 3 properties, variance to allow two of the properties to have a lot width and frontage of 30 feet, and the third to have zero lot width and frontage. The Zoning Ordinance requires each property to have 85 foot lot width and frontage.

MOVED by Eisenbacher
SECOND by Desmond

RESOLVED, to grant the request.

YES: Desmond, Eisenbacher, Bossenbroek, Rahman
NO: McCauley, Clark, Green

MOTION PASSED

6. COMMUNICATIONS – None.

7. MISCELLANEOUS BUSINESS – Board received 2021 ZBA meeting dates.

8. PUBLIC COMMENT – Miscellaneous Board member comments.

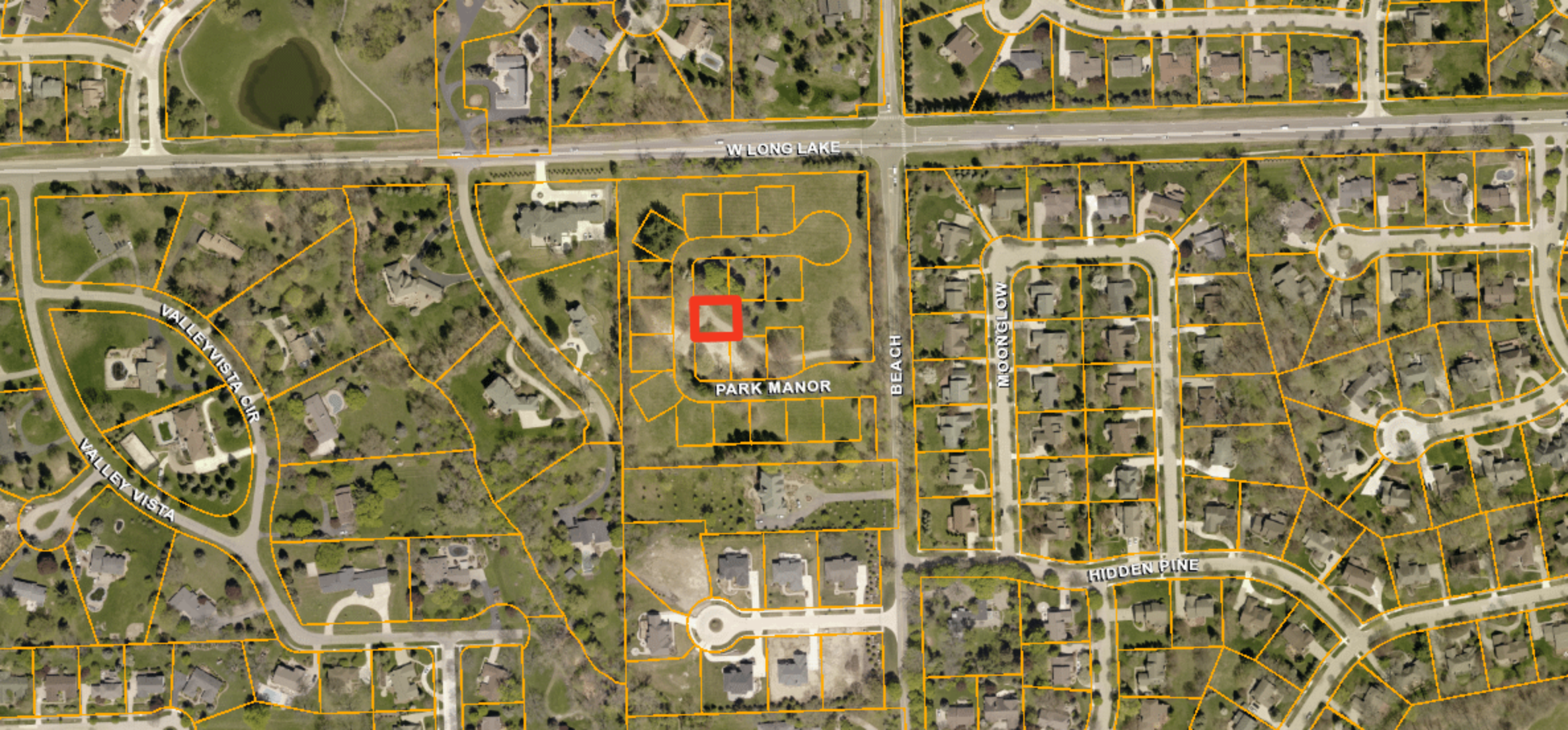
9. ADJOURNMENT – The Zoning Board of Appeals meeting ADJOURNED at 11:04pm.

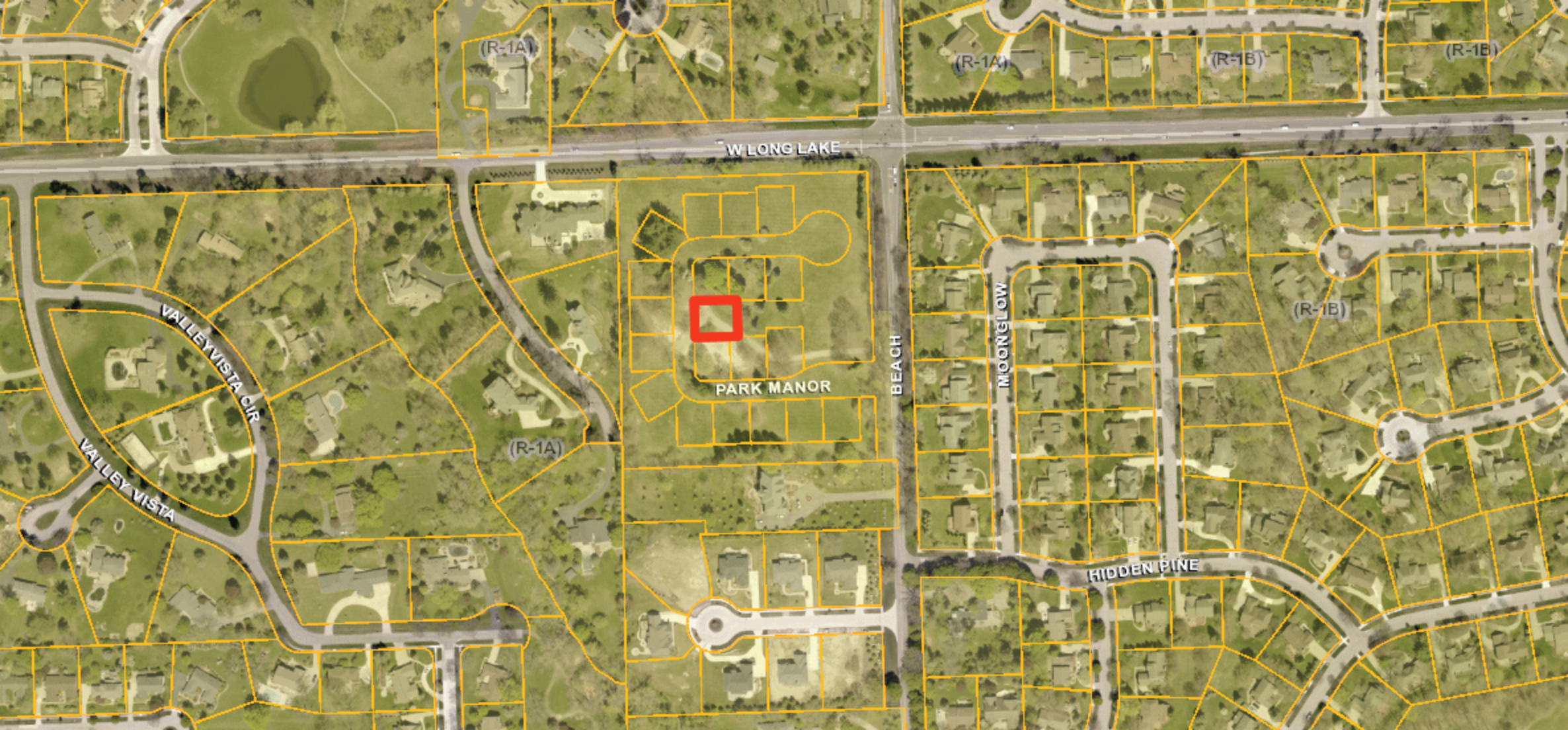
Respectfully submitted,

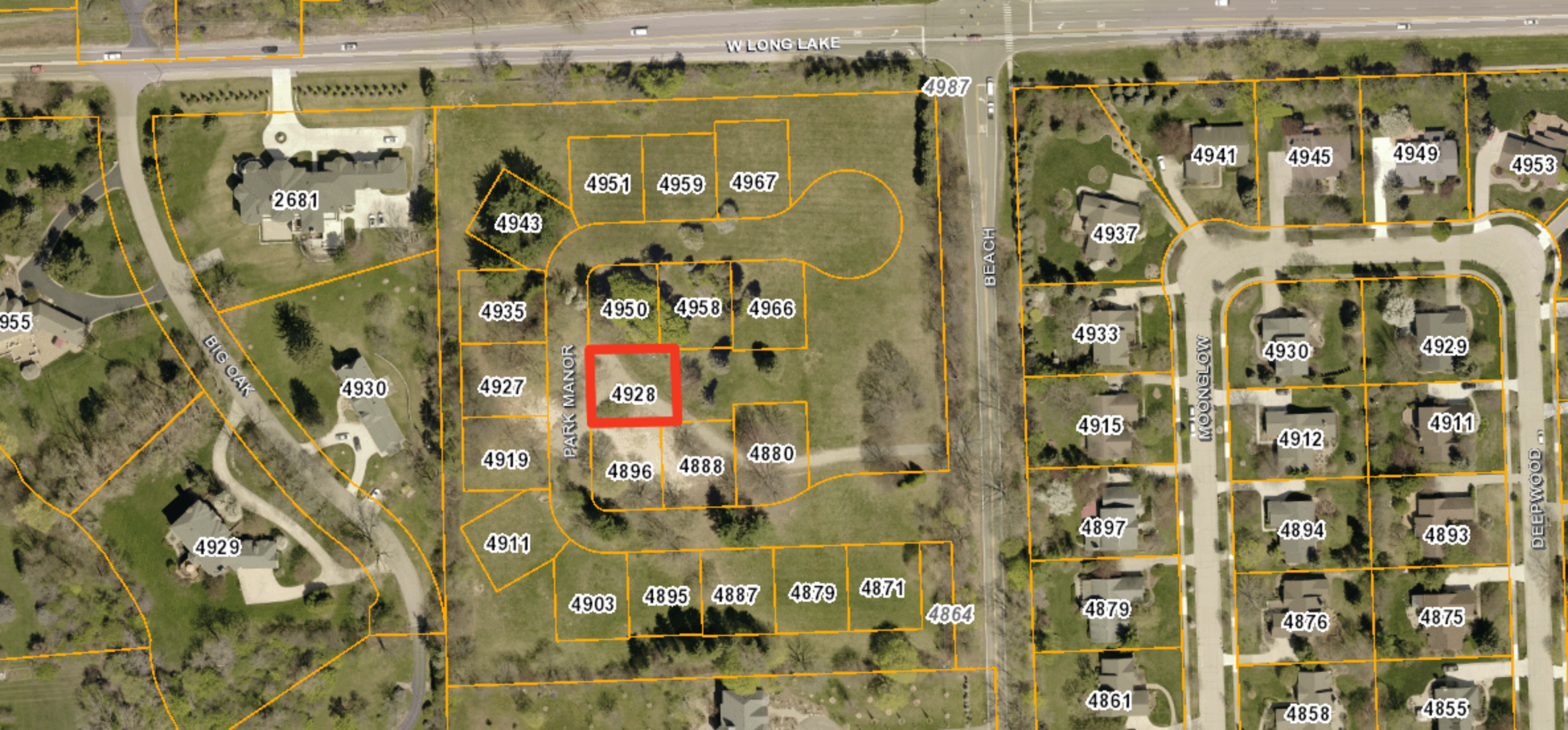
_____
Glenn Clark, Chairman

_____
Paul Evans, Zoning and Compliance Specialist

A. VARIANCE REQUEST, 4928 PARK MANOR, NEETU SHARMA & AMBUJ MATHUR: A variance to allow a partially covered deck 10 feet from the rear property line where the development approval requires the deck to be no less than 25 feet from the rear property line


W LONG LAKE
PARK MANOR
BEACH
MOONGLOW
HIDDEN PINE
VALLEY VISTA CIR
VALLEY VISTA


W LONG LAKE
(R-1A)
(R-1A)
(R-1B)
(R-1B)
VALLEY VISTA CIR
VALLEY VISTA
(R-1A)
PARK MANOR
BEACH
MOONGLOW
(R-1B)
HIDDEN PINE


W LONG LAKE
BIG OAK
PARK MANOR
BEACH
MOONGLOW
DEEPWOOD
2681
4930
4929
4987
4951
4959
4967
4943
4935
4950
4958
4966
4927
4928
4919
4896
4888
4880
4911
4903
4895
4887
4879
4871
4864
4941
4945
4949
4953
4937
4933
4930
4929
4915
4912
4911
4897
4894
4893
4879
4876
4875
4861
4858
4855


4935
4950
4958
4966
4927
4928
4919
4896
4888
4880

CITY OF TROY PLANNING DEPARTMENT
BUILDING CODE BOARD OF APPEALS APPLICATION

CITY OF TROY PLANNING DEPARTMENT
500 W. BIG BEAVER ROAD
TROY, MICHIGAN 48084
PHONE: 248-524-3364
E-MAIL: planning@troymi.gov

FEE $50

NOTICE TO THE APPLICANT

REGULAR MEETINGS OF THE BUILDING CODE BOARD OF APPEALS ARE HELD ON THE FIRST **WEDNESDAY OF EACH MONTH AT 3:00 P.M.** AT CITY HALL.

PLEASE FILE A COMPLETE APPLICATION, TOGETHER WITH THE APPROPRIATE FEE, **NOT LESS THAN TWENTY-SEVEN (27) DAYS** BEFORE THE MEETING DATE.

COMPLETE APPLICATIONS ARE PLACED ON THE NEXT AVAILABLE AGENDA OF THE BUILDING CODE BOARD OF APPEALS.

1. ADDRESS OF THE SUBJECT PROPERTY: 4928 Park Manor Dr, Troy, MI 48098

   ACREAGE PROPERTY: *Attach legal description if this an acreage parcel*

2. PROPERTY TAX IDENTIFICATION NUMBER(S): 88-20-18-131-017

3. CODE NAME (e.g. "BUILDING CODE", "SIGN CODE", "FENCE CODE") AND SECTION(S) RELATED TO THE APPEAL:
   Building Code

4. REASONS FOR APPEAL/VARIANCE: *On a separate sheet, please describe the reasons justifying the requested action. See Submittal Checklist.*

5. HAVE THERE BEEN ANY PREVIOUS APPEALS INVOLVING THIS PROPERTY? YES ☐ NO ■

6. APPLICANT INFORMATION:

NAME Nikola Gojcaj / Toma Djurasevic

COMPANY NU-CENTURY Painting

ADDRESS 8917 Glenmoor Circle

CITY Washington STATE MI ZIP 48094

TELEPHONE 5867641232

E-MAIL neetudoc80@gmail.com

7. APPLICANT'S AFFILIATION TO THE PROPERTY OWNER: Contractor

8. OWNER OF SUBJECT PROPERTY:

NAME Neetu Sharma / Ambuj Mathur

COMPANY

ADDRESS 4928 Park Manor Dr

CITY Troy STATE MI ZIP 48098

TELEPHONE 313-204-9292

E-MAIL neetudoc80@gmail.com

The undersigned hereby declare(s) under penalty of perjury that the contents of this application are true to the best of my (our) knowledge, information and belief.

The applicant accepts all responsibility for all of the measurements and dimensions contained within this application, attachments and/or plans, and the applicant releases the City of Troy and its employees, officers, and consultants from any responsibility or liability with respect thereto.

I, Neetu Sharma (PROPERTY OWNER), HEREBY DEPOSE AND SAY THAT ALL THE ABOVE STATEMENTS AND STATEMENTS CONTAINED IN THE INFORMATION SUBMITTED ARE TRUE AND CORRECT AND GIVE PERMISSION FOR THE BOARD MEMBERS AND CITY STAFF TO CONDUCT A SITE VISIT TO ASCERTAIN PRESENT CONDITIONS.

SIGNATURE OF APPLICANT N Gojcaj DATE 8/13/2020

PRINT NAME: Nikola Gojcaj / Toma Djurasevic

SIGNATURE OF PROPERTY OWNER Neetu Sharma DATE 8/13/2020

PRINT NAME: Neetu Sharma

Failure of the applicant or his/her authorized representative to appear before the Board, as scheduled, shall be justifiable cause for denial or dismissal of the case with no refund of appeal fee(s). If the person appearing before the Board is not the applicant or property owner, signed permission must be presented to the Board.

The applicant will be notified of the time and date of the hearing by electronic mail.

Neetu Sharma, Ambuj Mathur
4928 Park Manor Dr
Troy, MI 48098
8/12/2020

City of Troy Planning Department
Building Code Board of Appeals
500 W Big Beaver Road
Troy, MI 48084

Ref: Request for variance to build a Deck

Dear City of Troy Planning Department:

Our permit request for building a deck to our new home was recently denied as our deck encroached the 25' setback from the rear property line per City of Troy zoning ordinance

The rear property line is exactly 25' away from the home itself. The house has a very high elevation with daylight windows which puts our kitchen door about 7 feet off the ground (see attached Pics)

Building a deck is the only option we have for a safe exit out of the kitchen. Currently the door is blocked off by a thin wooden fence. We have young children under the age of 8 as well as our old parents living with us.

The back of the house faces an open common area and there will be no hindrance or obstruction of any kind to any other property around us if we build the deck. Please find attached no-objection letters from our next-door neighbor as well as the Home Owners Association

We appreciate your timely response to our request

Sincerely,

Neetu Sharma Ambuj Mathur

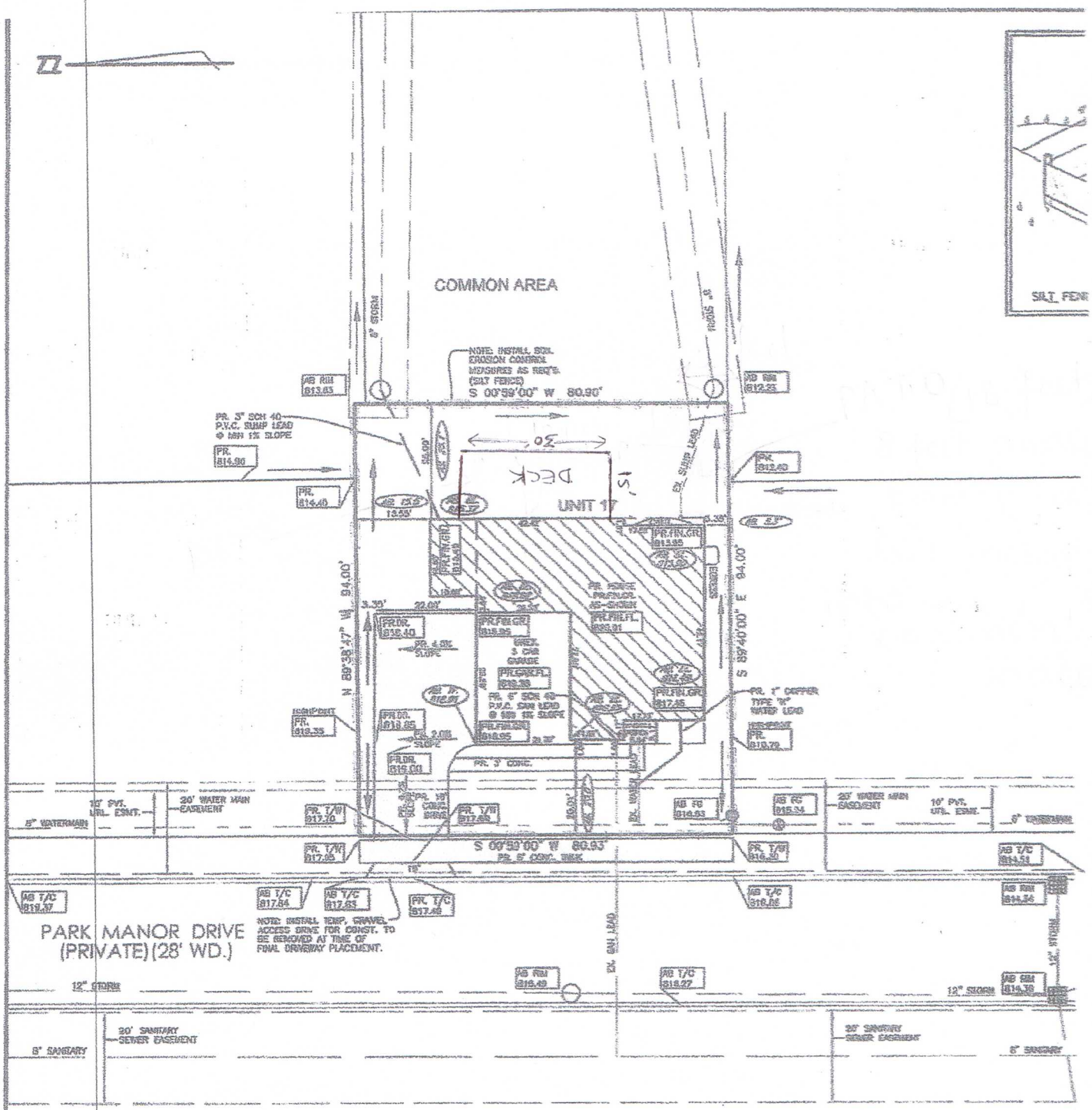
(Home owners of 4928 Park Manor Dr)


7'


COMMON
AREA



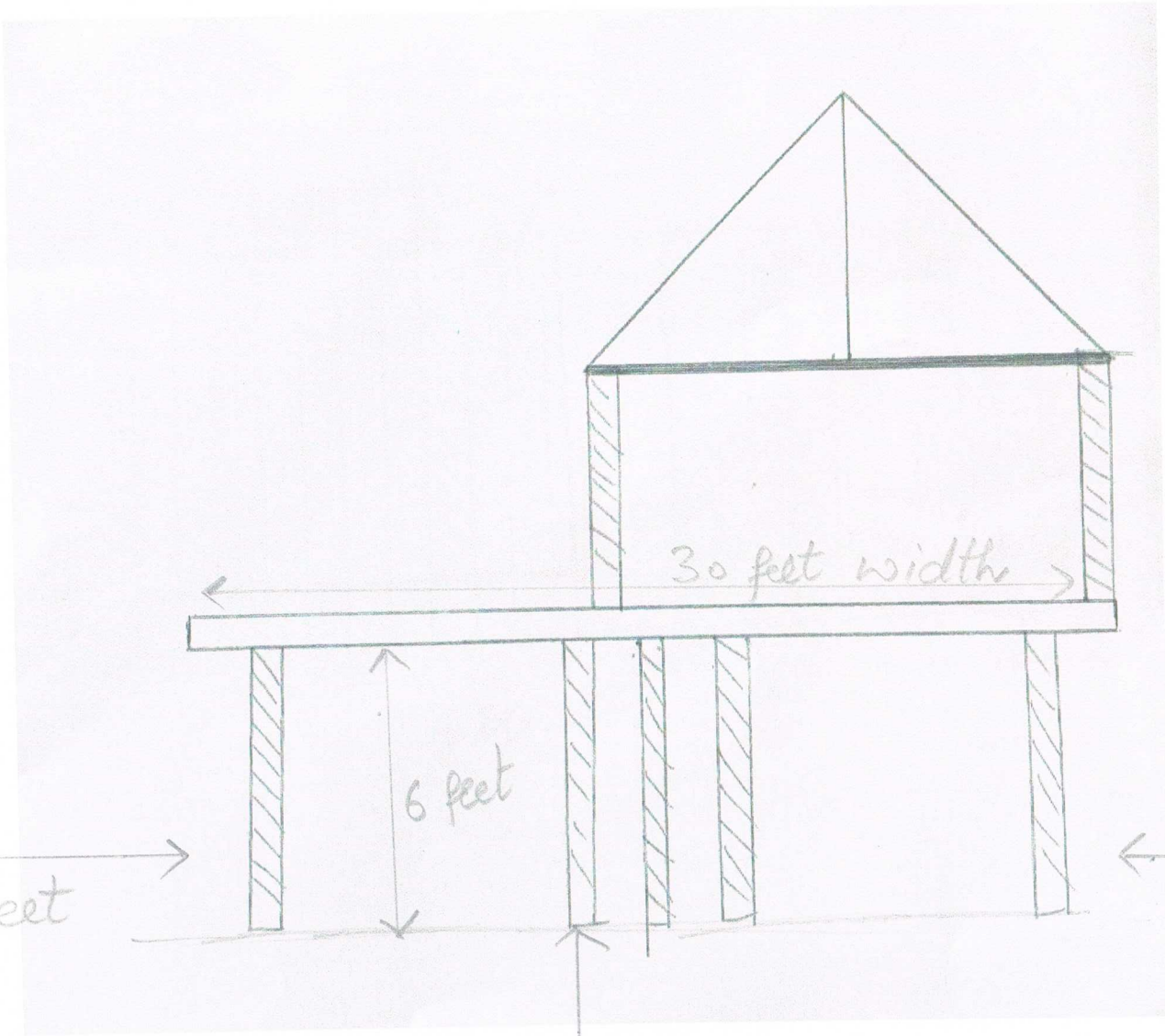
KITCHEN DOOR FROM INSIDE SHOWING COMMON AREA IN THE BACK! NO HINDERANCE TO ANYONE !!

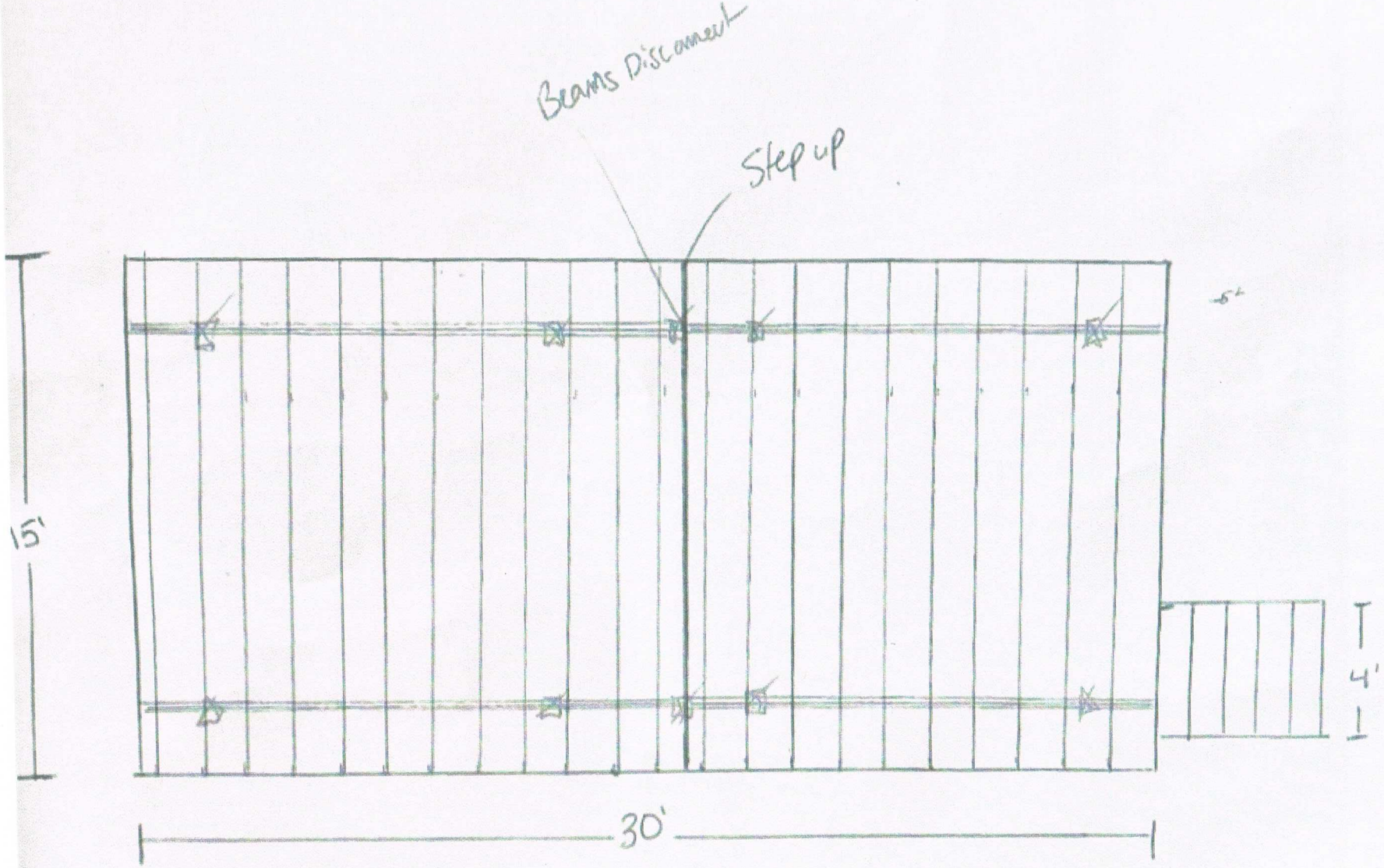


✻NOTE: IF THIS DRAWING IS NOT STAMPED & APPROVED BY THE MUNICIPALITY, THEN IT IS NOT TO BE USED FOR CONSTRUCTION.✻

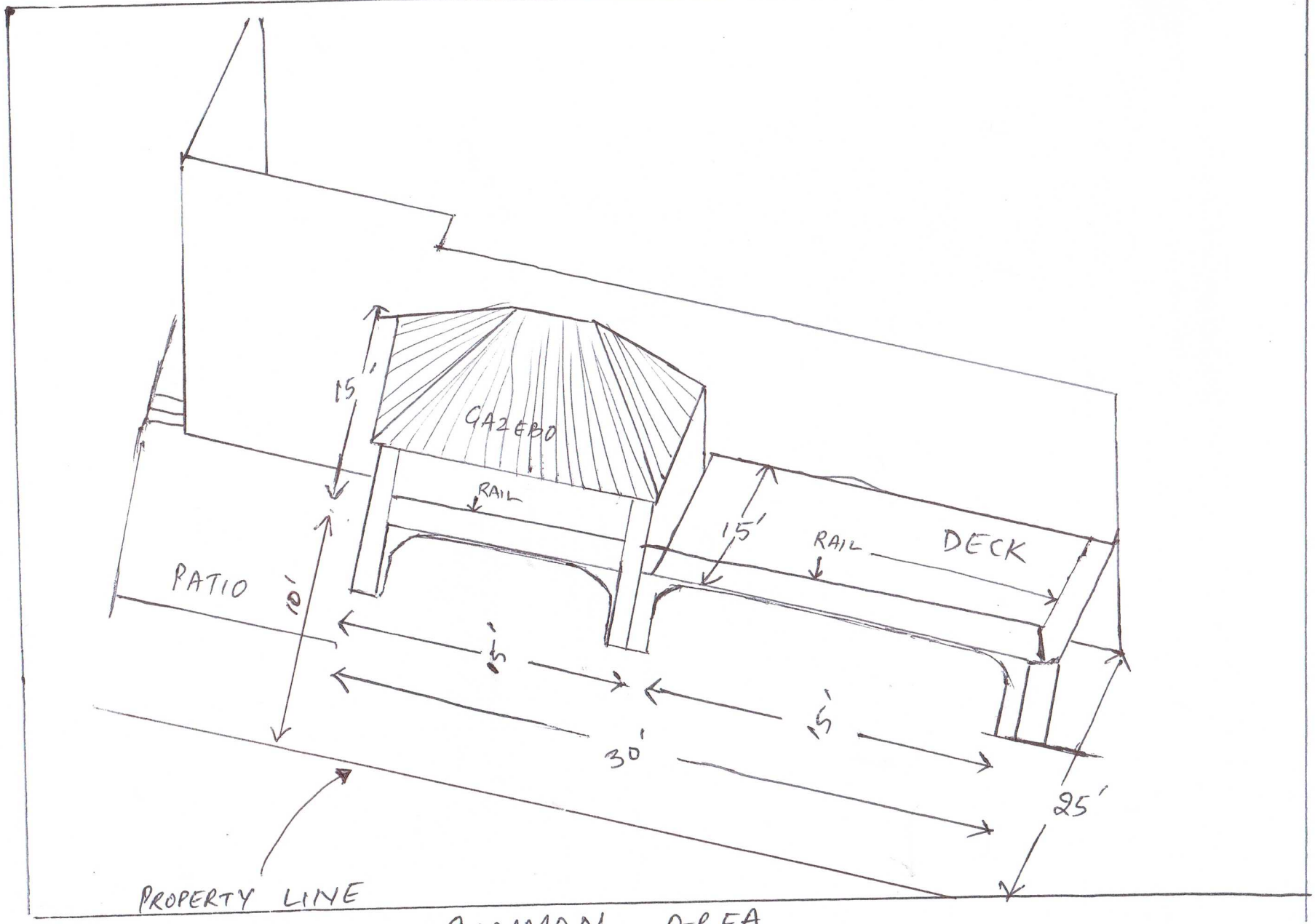
	CONSTRUCTION SEQUENCE	OPERATION TAKE SEQUENCE - SEQUENCE
A	SOIL EROSION CONTROL MEASURE	
B	HOUSE CONSTRUCTION	
C	DRIVEWAY & SIDEWALK CONSTRUCTION	
D	FINAL GRADING	
E	PERMANENT SOIL EROSION	

NOTE: THIS TIMING AND SEQUENCE CHART IS TO BE FILLED IN BY THE CLIENT PRIOR TO SUBMITTAL TO THE CITY/TOWNSHIP.

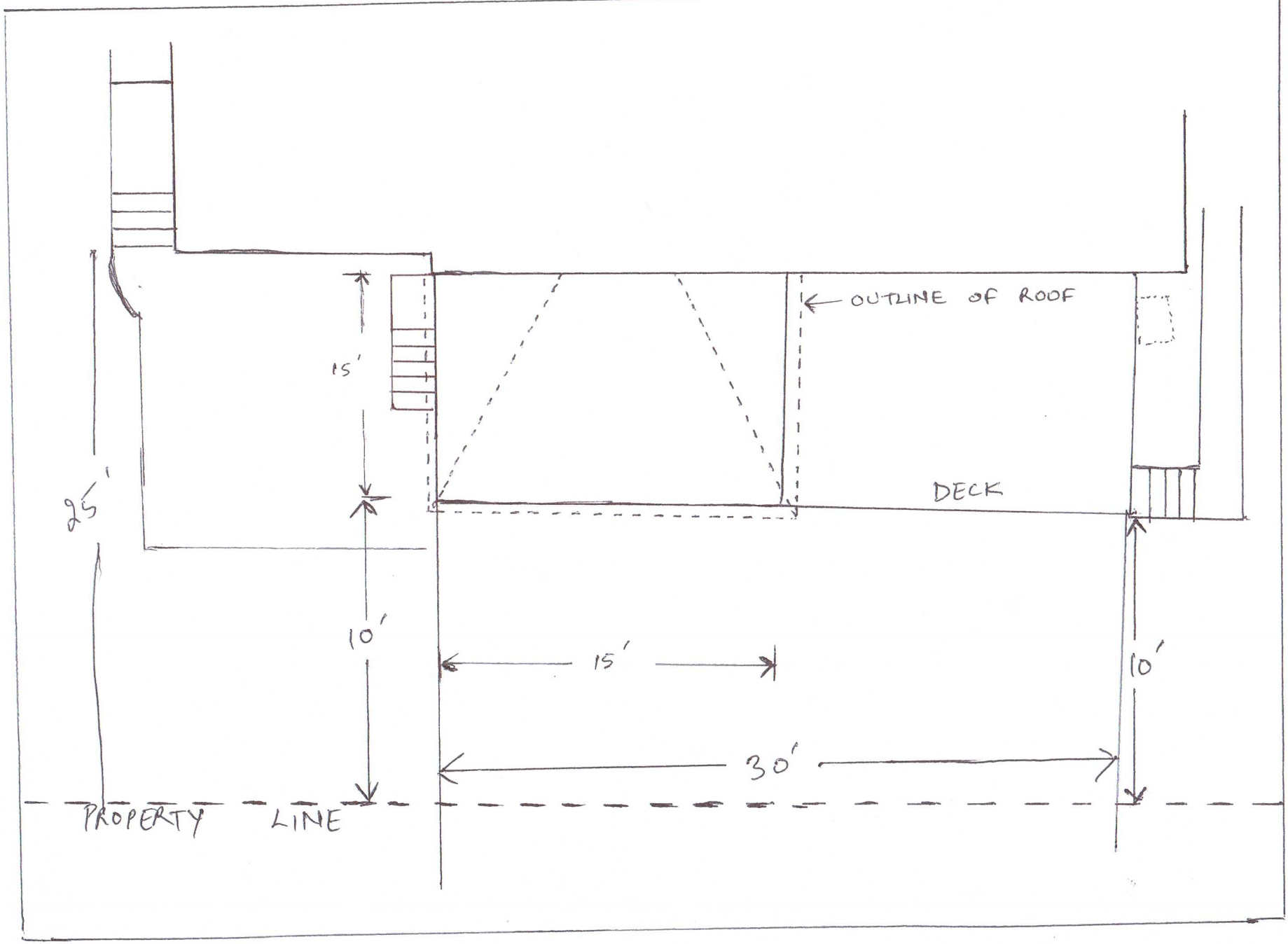

30 feet width
6 feet
23 feet
20 feet
10 feet
Property line
Property line
COMMON AREA


Beams Disconnect
Step up
15'
4'
30'

4928 PARK MANOR DR.



4928 PARK MANOR DR.



PARKVIEW
ON BEACH

May 26th, 2020

To Zoning Board of Appeals,

RE: Deck/Patio Variance

The Parkview on Beach Association is in support of a rear lot line variance to construct a deck or raised patio.

Please let us know if you have any additional questions.

Sincerely,

Parkview on Beach Association
586.726.7340

Lucienne Zenieh & Elias Zeine
4958 Park Manor Dr
Troy, MI 48098
8/13/2020

City of Troy Planning Department
500 W Big Beaver Road
Troy, MI 48084

We are next door neighbors of 4928 Park Manor Dr, owned by Neetu Sharma and Ambuj Mathur. We are in support of them building a deck and for their request of the rear lot line variance to construct a deck in their backyard

Respectfully,

Lucienne Zenieh



Assessing Report

Assessing Report for 88-20-18-131-017

Parcel Number	88-20-18-131-017
Property Address	4928 PARK MANOR
Property Address Apt	

Property Address	48098
Owner Name 1	SHARMA TRUST, NEETU & MATHUR, AMBUJ
Owner Name 2	
State Equalized Value (SEV)	468410
Taxable Value	468410
Summary Land Value	177200
Depth of Parcel	94
Frontage	80.92
Acreage	0.17000000
Last Sale Amount	927260
Last Sale Date	07/23/2019
Legal Description	T2N,R11E, SEC 18 OAKALND COUNTY CONDOMINIUM PLAN NO 2224 PARKVIEW ON BEACH UNIT 17 L51676 P704 4-9-18 FR 008 & 009
Neighborhood Code	18B
Num Res Buildings	1
Num CI Buildings	0
Owner City	TROY
Owner State	MI
Owner Street Address	4928 PARK MANOR
Owner Zip Code	48098
Principal Residence Exemption	100

Principal Residence Exemption Date	07/23/2019
Property Class	401
School District	TROY SCHOOL DISTRICT
Summary CI Floor Area	0
Summary CI Stories	0
Summary CI Year Built	0
Summary Res Basement Area	1888
Summary Res Floor Area	3776
Summary Res Num Full Bath	3
Summary Res Garage Area	586
Summary Res Num Half Bath	1
Summary Res Num Bed	4
Summary Res Style Alph	COLONIAL
Summary Res Year Built	2018
Taxpayer Street Addr	
Zoning	R-1A

E-Notification

BSAOnline

Parcel

500 W. Big Beaver Rd
Troy, Michigan 48084

Ph: 248.524.3300
Hours: 8am-4:30pm

Subscribe to Troy Today Digital Edition

Subscribe now

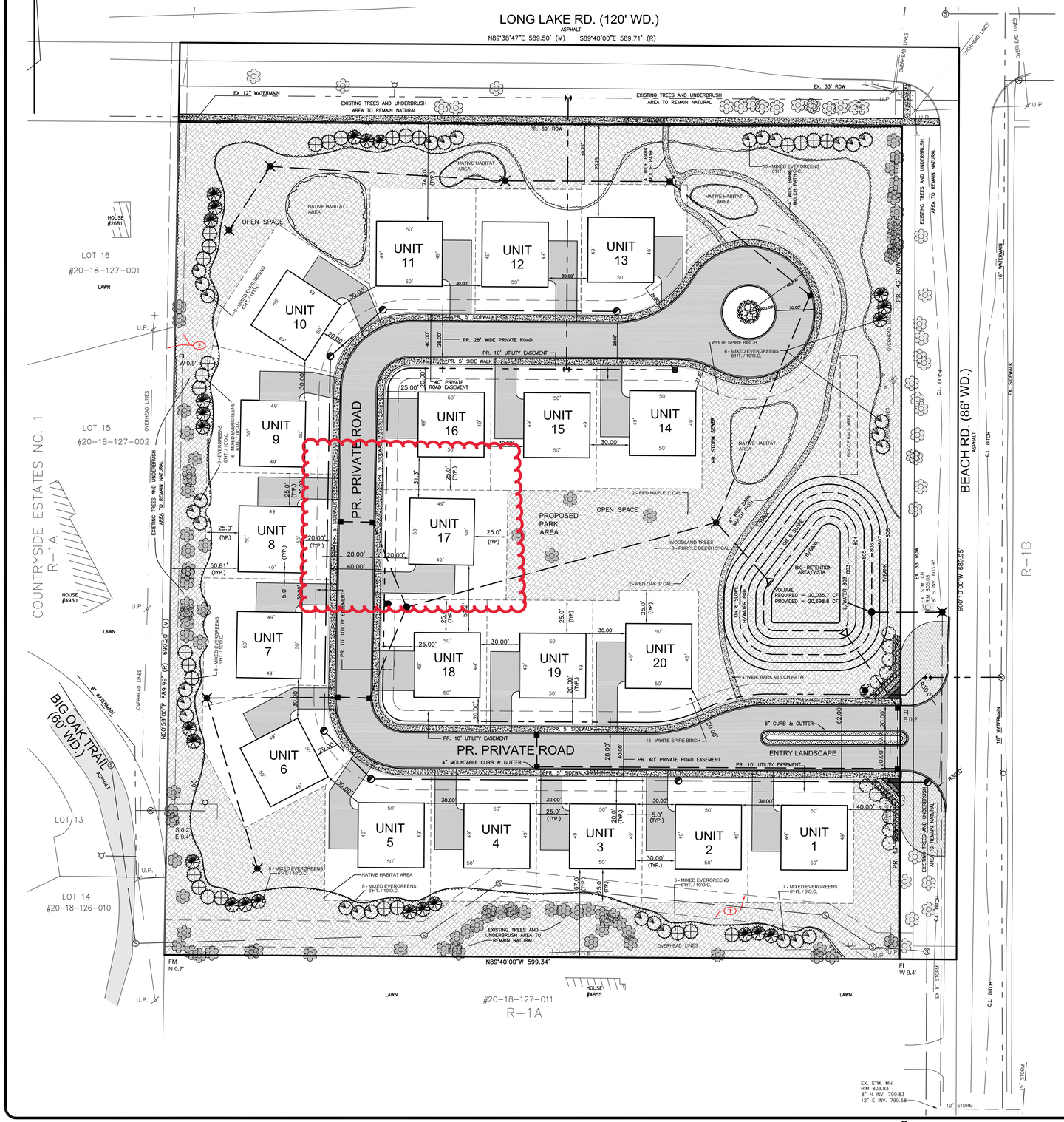
Your email will be safe with us

Copyright © 2017 City of Troy

Powered By Revize Login

PRELIMINARY SITE PLAN
PARKVIEW ON BEACH

PART OF THE NW 1/4 OF SECTION 18, T2N, R11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN



SITE BENCHMARKS: (NAVD88)

1) NAIL IN THE WEST FACE OF THE UTILITY POLE 300' ± SOUTH OF THE N.E. PROPERTY CORNER, ELEVATION = 811.51

2) TOP OF HYDRANT ON THE EAST SIDE OF BEACH RD., 125' ± NORTH OF THE S.E. PROPERTY CORNER, ELEVATION = 806.69

3) TOP OF HYDRANT ON THE SOUTH SIDE OF LONG LAKE RD, ALONG THE NORTH PROPERTY LINE, ELEVATION = 827.10

4) TOP OF HYDRANT 150' ± NORTH OF THE S.W. PROPERTY CORNER, ELEVATION = 814.28

PARCEL DESCRIPTION PER TAX RECORDS

PID: 20-18-127-008

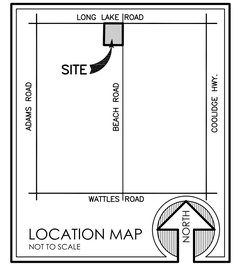
Part of the Northwest 1/4 of Section 18, T.2N., R.11E., City of Troy, Oakland County, Michigan. Beginning at the North 1/4 corner of Section 18:
Thence S 00°10'00" W 367.04 feet;
thence N 89°40'00" W 181.50 feet;
thence S 00°10'00" W 60.00 feet;
thence N 89°40'00" W 107.22 feet;
thence 14.68 feet along a non-tangent curve to the left, radius 220.00 feet, central angle of 03°49'28", chord bearing N 02°04'44" E, 14.68 feet;
thence N 00°10'00" E 107.53 feet;
thence 67.23 feet along a non-tangent curve to the left, radius 380.00 feet, central angle of 10°08'10", chord bearing S 62°27'44" W, 67.14 feet;
thence 129.54 feet along a curve to the right, radius 60.00 feet, central angle of 123°42'18", chord bearing N 60°45'12" W, 105.81 feet;
thence N 69°51'06" W, 162.41 feet;
thence N 00°59'00" E 230,22 feet (230,01 feet Recorded)
thence N89°38'47"E 589,50' (S89°40'00"E 589,71 feet Recorded) to the Point of Beginning, Containing 4.62 Acres, more or less.

PID: 20-18-127-009

Part of the Northwest 1/4 of Section 18, T.2N., R.11E., City of Troy, Oakland County, Michigan. Commencing at the North 1/4 corner of Section 18:
thence S 00°10'00" W, 367.04 feet to the Point of Beginning;
thence continuing S 00°10'00" W, 120.00 feet;
thence N 89°40'00" W 301.28 feet;
thence 50.86 feet along a non-tangent curve to the right, radius 220.00 feet, central angle of 13°14'47", chord bearing S 26°37'18" W 50.75 feet;
thence S 33°14'41" W, 6.28 feet;
thence 30.77 feet along a curve to the left, radius of 280.00 feet, central angle of 06°17'50", chord bearing S 30°05'46" W, 30.76 feet;
thence 51.74 feet along a non-tangent curve to the left, radius of 60.00 feet, central angle of 49°24'30" chord bearing S 72°24'32" W, 50.15 feet;
thence N 89°40'00" W, 207.34 feet;
thence N 00°59'00" E 349.97 feet;
thence S 89°51'06", 162.41 feet;
thence 129.54 feet along a non-tangent curve to left, radius 60.00 feet, central angle of 123°42'18", chord bearing S 60°45'12" E, 105.81 feet;
thence 67.23 feet along a curve to the right, radius 380.00 feet, central angle of 10°08'10", chord bearing N 62°27'44" E, 67,14 feet;
thence S 00°10'00" W 107.53 feet;
thence 14.68 feet along a curve to the right, radius 220.00 feet, central angle of 03°49'28", chord bearing S 02°04'44" W ,14.68 feet;
thence S 89°40'00" E. 107.22 feet;
thence N 00°10'00" E, 60,00 feet;
thence S 89°40'00" E, 181.50 feet to the Point of Beginning. Containing 2.58 Acres, more or less.

PID: 20-18-127-010

Part of the Northwest 1/4 of Section 18, T.2N., R.11E., City of Troy, Oakland County, Michigan, Commencing at the North 1/4 corner of Section 18:
thence S 00°10'00" W, 487.04 feet to the Point of Beginning;
thence continuing S 00°10'00" W, 202.91 feet;
thence N 89°40'00" W, 599.34 feet;
thence N 00°59'00" E, 110,01 feet;
thence S 89°40'00" E, 207,34 feet;
thence 51.74 feet along a non-tangent curve to the right, radius 60.00 feet, central angle of 49°24'30", chord bearing N 72°24'32" E, 50.15 feet;
thence 30.77 feet along o non-tangent curve to the right, radius 280.00 feet, central angle of 06°17'50", chord bearing N 30°05'46" E, 30.76 feet;
thence N 33°14'41" E, 6.28 feet;
thence 50.86 feet along a curve to the left, radius 220.00 feet, central on le of 13°14'47" chord bearing N 26°37'18" E, 50.75 feet;
thence S 89°40'00" E, 301.28 feet to the Point of Beginning, Containing 2.22 Acres, more or less.



LEGEND

- SECTION CORNER
- FOUND IRON, MON., NAIL
- SET IRON
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING

- O.H.W. — ELEC., PHONE, CABLE TV O.H., POLE & GUY WIRE
- CATV — UNDERGROUND CABLE TV
- MMT — UC — TELEPHONE U.G. CABLE, SPLICING BOX & MANHOLE
- ELEC — UC — ELECTRIC U.G. CABLE & MANHOLE
- GAS — GAS MAIN & VALVE
- W — WATERMAIN, HYD.,TAPPING SLEEVE, GATE VALVE
- S — SANITARY SEWER, CLEANOUT & MANHOLE
- SD — STORM DRAIN & MANHOLE
- C — COMBINED SEWER & MANHOLE
- CATCH BASIN, INLET
- YARD BASIN
- STORM DRAIN & END SECTION
- POST INDICATOR VALVE
- WATER SERVICE SHUTOFF, HYDRANT VALVE BOX
- MAILBOX
- 123.45 — POINT ELEVATION (AT X OR END OF LEADER)
- 670 — CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- TREE

INDEX:

1. PRELIMINARY SITE PLAN
2. TOPOGRAPHIC & REMOVAL PLAN
3. PRELIMINARY GRADING PLAN

SITE DATA

LIMITED COMMON ELEMENT:
- MINIMUM UNIT SETBACKS
- UNIT DRIVEWAYS
- UNIT WALKS
- UNIT DECKS

GENERAL COMMON ELEMENT:
- PRIVATE ROAD RIGHT-OF-WAYS
- SIDEWALKS
- OPEN SPACE

OPEN SPACE: OPEN SPACE

- WALKING PATHS (PERVIOUS)
- PASSIVE RECREATION
- TREE PRESERVATION
- EXTENSIVE LANDSCAPING
- TRANSITIONAL AREA FOR NEIGHBORS
- BIO-RETENTION AREA/VISTA

AREA NOT INCLUDED IN OPEN SPACE:
- PRIVATE AND PUBLIC ROAD RIGHT-OF-WAYS
- LIMITED COMMON ELEMENTS

PID: 20-18-127-008
PID: 20-18-127-009
PID: 20-18-127-010

CURRENT ZONINING.....R-1A
PROPOSED ZONED.....R-1A, CLUSTER OPTION
PROPOSED USE: DETACHED SINGLE FAMILY CONDOMINIUM

TOTAL GROSS SITE ACREAGE.....9.42
NET SITE ACREAGE (EX. R.O.W.).....8.47
NET SITE ACREAGE (PR. R.O.W.).....7.98

REQUIRED SETBACKS
FRONT.....20' (INTERIOR ROAD)
50' (LONG LAKE ROAD)
40' (ON BEACH)
SIDE.....7.5' MIN.
REAR.....25'

TOTAL UNITS PER PARALLEL PLAN.....15 UNITS
DENSITY BONUS, 20%.....18 UNITS
OPEN SPACE BONUS, 21%.....21 UNITS
PROPOSED UNITS.....20 UNITS

MIN. OPEN SPACE (GROSS).....20% 1.88 AC
PROPOSED OPEN SPACE.....41% 3.29 AC



DETAIL

TYPICAL UNIT LINES CONFIGURATION VARIES SEE PLAN VIEW

NOTE:

1. APPLICANT TO APPLY FOR SIDEWALK WAIVER.
2. FRANCHISE UTILITIES WERE NOT LOCATED AT THIS TIME.
3. UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF FACILITIES ONLY, AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S RECORDS. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY.
4. THIS PROPERTY IS NOT IN A FLOOD ZONE. THE NEAREST FLOOD ZONE IS APPROXIMATELY 2000 FEET AWAY.
5. WETLAND EVALUATION / ASSESSMENT DOCUMENTATION WILL BE PROVIDED BY OWNER
6. THIS DRAWING IS MERELY A PRELIMINARY CONCEPT TO DETERMINE THE FEASIBILITY OF DEVELOPMENT AND IS NOT TO BE USED AS A CONSTRUCTION DRAWING.

CALL MISS DIG

811 — 3 WORKING DAYS (EXCLUDING SAT, SUN, AND HOLIDAYS)
BEFORE YOU DIG CALL MISS DIG
1-800-482-7171 (TOLL FREE)

Fenn & Associates, Inc.
Land Surveying and Civil Engineering
14933 Commercial Drive, Shelby Township, MI 48315
Phone: 586-254-9577 Fax: 586-254-9020
www.fennsurveying.com

PRELIMINARY SITE PLAN
PARKVIEW ON BEACH
PART OF THE NW 1/4 OF SECTION 18, T2N, R11E
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DISTRIBUTION	
●	PRELIMINARY
●	APPROVAL
○	CONSTRUCTION
○	AS-BUILT

REVISIONS	
DATE	REMARKS
11/04/15	PER CLIENT
11/12/15	PER CLIENT
01/20/16	PER CLIENT
04/18/16	PER CLIENT
06/15/16	PER CLIENT
08/12/16	PER CLIENT
10/12/16	PER CLIENT
10/20/16	PER CLIENT

SEAL

CLIENT
MONDRIAN PROPERTIES
50215 SCHOENHERR
SHELBY TWP., MI 48315

PHONE: 586-726-7340

PROJECT NAME
PARKVIEW ON BEACH

PROJECT NUMBER
C15-003.12X

SHEET NAME
PRELIMINARY SITE PLAN

DRAWING SCALE:	1"=40'
DATE:	01/26/16
PROJECT MANAGER:	J.S.R., P.E.
DESIGNED BY:	J.J.S., PE/ MS
DRAWN BY:	J.J.S., P.E./ MS/ IB
FIELD BY:	BH/RR
CHECKED BY:	TWD/JSR.PE

SHEET NUMBER
1 OF 3

500 West Big Beaver
Troy, MI 48084
troymi.gov

Date: November 11, 2020
To: Paul Evans, ZBA Liaison
From: R. Brent Savidant, Community Development Director
Subject: One-Family Cluster Option

The following is an overview of the One-Family Cluster Option to the Zoning Board of Appeals.

One-Family Cluster Option provisions are in Section 10.04 of the Zoning Ordinance. The provisions were adopted by City Council in 2016. Simply described, a cluster development involves grouping homes within a development so that the remaining land on the site can be preserved as open space. A minimum of 20% of the subject site is require to be dedicated open space, remaining as open space in perpetuity through some type of an instrument such as an open space easement. In return for preserving open space, the developer receives a corresponding density bonus. Advantages of the One-Family Cluster Option include preservation of natural features, creative design and reduction of infrastructure.

The tradeoff for residents having smaller individual yards is access to common open space.

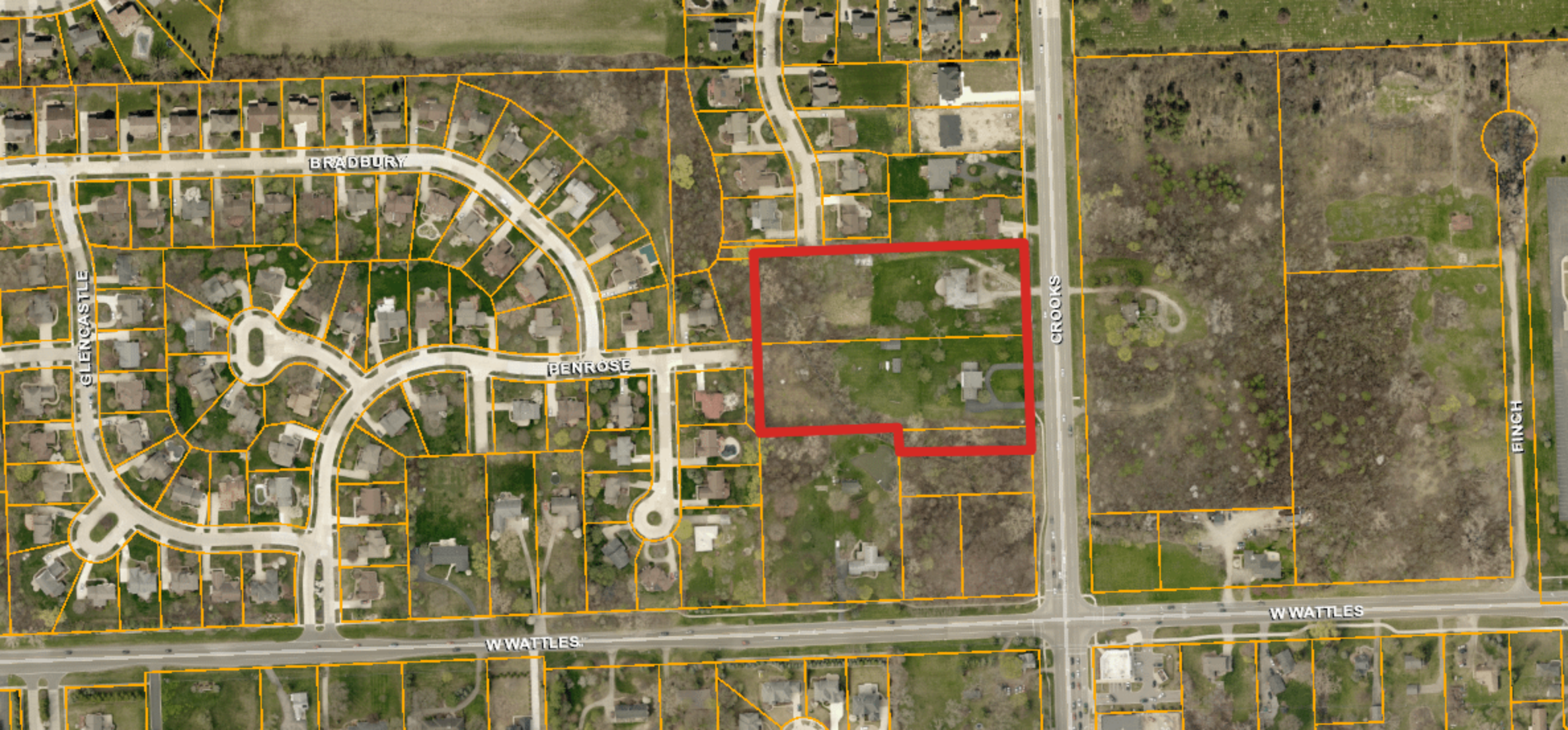
The One-Family Cluster is an option available to developers. The approval process for this option requires a recommendation from the Planning Commission (following a public hearing) and approval by City Council (following a public hearing). A traditional single family detached site condominium development is permitted by right in One Family Residential zoning districts (R-1A through R-1E). The Planning Commission has approval authority at a public meeting; it does not require a public hearing.

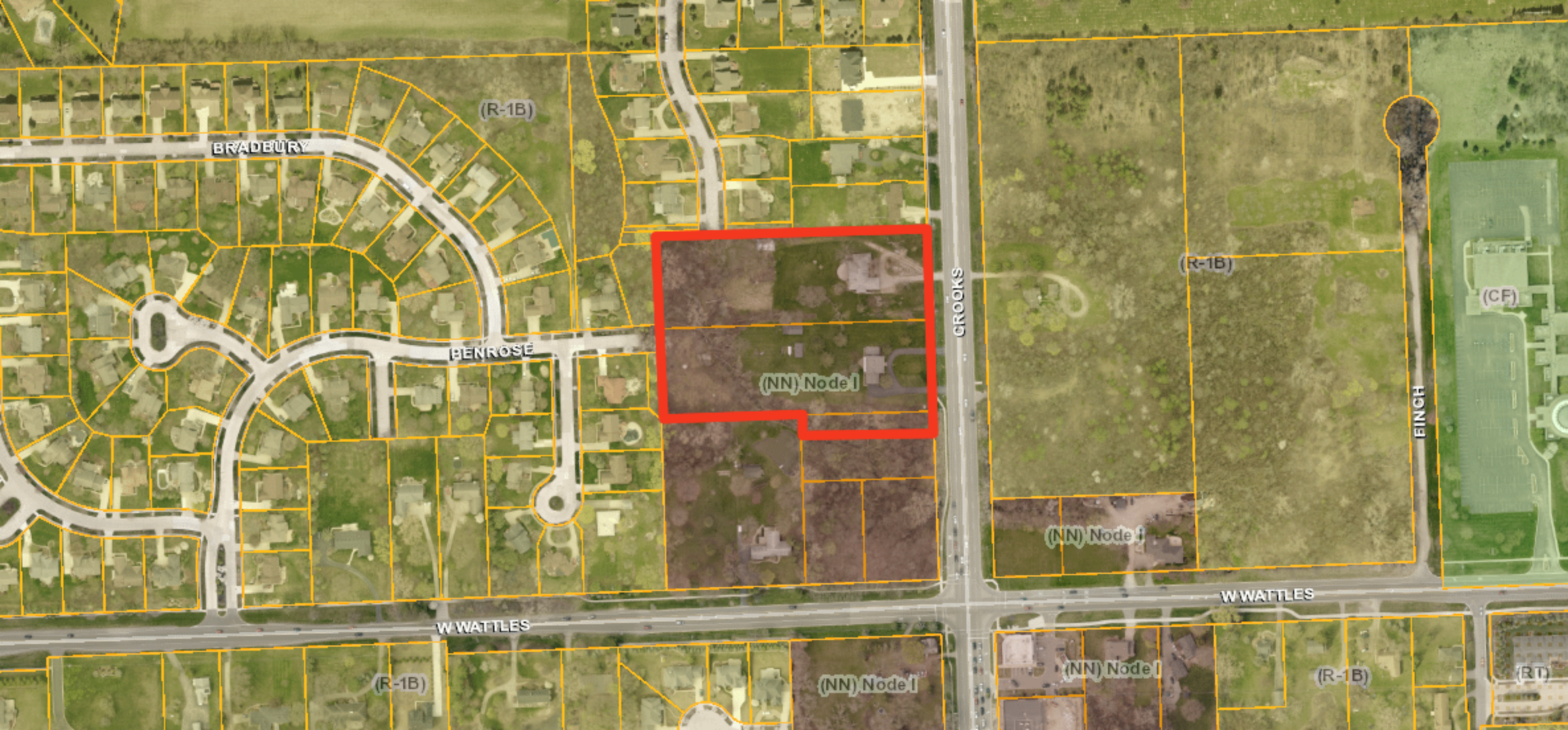
Below is a summary of the One-Family Cluster developments that have been approved since 2016:

500 West Big Beaver
Troy, MI 48084
troymi.gov

NAME	LOCATION	PARCEL SIZE	#UNITS	% OPEN SPACE PRESERVED
Parkview on Beach	SW corner off Long Lake & Beach	9.42 acres	20	38%
Raintree Village on the Park	North Lake Drive (west of John R)	18.11 acres	59	32%
Davis Cluster Development	285 E. Long Lake Drive (East of Livernois)	5 acres	13	37%
Whispering Park	North of Long Lake Road, between John R Road & Rochester Road	18 acres	50	31%
West Troy Meadows	North of Wattles, west of Livernois	19.43 acres	42	41%
Ashton Parc	Square Lake and Willow Grove	8.69 acres	29	30%
Chadbury Place	South side of Long Lake, east of John R	5.22 acres	16	24%
Preserves of Troy	North side of Square Lake, west of Dequindre	81.1	23	87%
TOTAL			252	

B. VARIANCE REQUEST, 4095-4115 CROOKS AND PROPERTY ADJACENT, SAFET "SAM" STAFA : Tollbrook North, LLC ("Developer") appeals the November 10, 2020 decision of the City of Troy's Planning Commission ("PC") to deny the Preliminary Site Plan ("PSP") for its Crooks Road Townhomes project to the City's Zoning Board of Appeals ("ZBA"). The Developer requests that the ZBA reverse the PC's decision and grant PSP approval


BRADBURY
GLENCASTLE
BENROSE
CROOKS
FINCH
W WATTLES
W WATTLES


(R-1B)
BRADBURY
BENROSE
(NN) Node I
CROOKS
(R-1B)
(CF)
FINCH
(NN) Node I
W WATTLES
W WATTLES
(R-1B)
(NN) Node I
(NN) Node I
(R-1B)
(RT)


4179
4180
4165
1204
1190
4115
4114
1176
4187
PENROSE
4095
CROOKS
4088
4087
4074
4073
PARKSTONE
4060
4059
4046
4045

CITY OF TROY | PLANNING DEPT. | 500 WEST BIG BEAVER | TROY, MI 48084 | 248-524-3364

Zoning Board of Appeals Application

planning@troymi.gov | Fee $150.00

THE ZONING BOARD OF APPEALS MEETS THE **THIRD TUESDAY OF EACH MONTH AT 7:30 P.M. AT CITY HALL**. PLEASE FILE A COMPLETE DIGITAL APPLICATION AND FEE AT LEAST **29 DAYS BEFORE** THE MEETING DATE. PRE APPLICATION MEETING WITH PLANNING DEPARTMENT REQUIED BEFORE FILING APPLICATION.

1. ADDRESS OF THE SUBJECT PROPERTY: 4115 Crooks Road, 4095 Crooks Road, and a sliver of land, plus or minus 10,000 square feet contiguous thereto

2. PROPERTY TAX IDENTIFICATION NUMBER(S): 2017476013, 2017476014, 2017476055

3. ZONING ORDINANCE SECTIONS RELATED TO THE REQUEST: Sections 5.06 and 8.06

4. HAVE THERE BEEN ANY PREVIOUS APPEALS INVOLVING THIS PROPERTY? If yes, provide date(s) and particulars: n/a

5. APPLICANT:

   NAME Safet "Sam" Stafa

   COMPANY Tollbrook North LLC

   ADDRESS 550 Stephenson Hwy Suite 440

   CITY Troy STATE MI ZIP 48083

   PHONE 248-906-5400

   E-MAIL arbanstafa@gmail.com

   AFFILIATION TO THE PROPERTY OWNER: Purchase Agreement

CITY OF TROY | PLANNING DEPT. | 500 WEST BIG BEAVER | TROY, MI 48084 | 248-524-3364

Zoning Board of Appeals Application

6. PROPERTY OWNER:

NAME Kamal Shouhayib

COMPANY Choice Development

ADDRESS 2265 Livernois Suite 500

CITY Troy STATE MI ZIP 48083

TELEPHONE 248-362-4150

E-MAIL oshouhayib@choiceproperties.com

The undersigned hereby declares under penalty of perjury that the contents of this application are true to the best of my (our) knowledge, information and belief.

The applicant accepts all responsibility for all of the measurements and dimensions contained within this application, attachments and/or plans, and the applicant releases the City of Troy and its employees, officers, and consultants from any responsibility or liability with respect thereto.

I, Tollbrook North LLC (APPLICANT) HEREBY DEPOSE AND SAY THAT ALL THE ABOVE STATEMENTS CONTAINED IN THE INFORMATION SUBMITTED ARE TRUE AND CORRECT AND GIVE PERMISSION FOR THE BOARD MEMBERS AND CITY STAFF TO ENTER THE PROPERTY TO ASCERTAIN PRESENT CONDITIONS.

APPLICANT SIGNATURE _____ **DATE** 12/10/2020

PRINT NAME: Safet "Sam" Stafa, Tollbrook North LLC (Its Member)

PROPERTY OWNER SIGNATURE _____ **DATE** 12-11-2020

PRINT NAME: Choice Development - Kamal Shouhayib

Failure of the applicant or their authorized representative to appear before the Board as scheduled shall be cause for denial or dismissal of the case with no refund of fees. The applicant will be notified of the time and date of the hearing by mail. If the person appearing before the Board is not the applicant or property owner, signed permission must be presented to the Board.

Approved variances are good for a one year period.

CITY OF TROY | PLANNING DEPT. | 500 WEST BIG BEAVER | TROY, MI 48084 | 248-524-3364

Zoning Board of Appeals Application

STATEMENT OF PRACTICAL DIFFICULTY

In order for a variance to be granted, a practical difficulty, as determined by the Board, must be present. On a separate sheet, please clearly identify and explain the practical difficulty justifying the variance request. The practical difficulty must be clearly related to as many of the 5 standards below as possible:

a) Exceptional characteristics of property for which the variance is sought make compliance with dimensional requirements substantially more difficult than would be the case for the great majority of properties in the same zoning district. Characteristics of property which shall be considered include exceptional narrowness, shallowness, smallness, irregular shape, topography, vegetation and other similar characteristics.

b) The characteristics which make compliance with dimensional requirements difficult must be related to the premises for which the variance is sought, not some other location.

c) The characteristics which make compliance with the dimensional requirements shall not be of a personal nature.

d) The characteristics which make compliance with dimensional requirements difficult must not have been created by the current or a previous owner.

e) The proposed variance will not be harmful or alter the essential character of the area in which the property is located, will not impair an adequate supply of light and air to adjacent property, or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, or unreasonably diminish or impair established property value within the surrounding area, or in any other respect impair the public health, safety, comfort, morals or welfare of the inhabitants of the City.

CITY OF TROY | PLANNING DEPT. | 500 WEST BIG BEAVER | TROY, MI 48084 | 248-524-3364

Zoning Board of Appeals Application

ZONING BOARD OF APPEALS
APPLICATION CHECKLIST

Please provide the following in digital format. You may e-mail them to planning@troymi.gov or submit them on media such as a CD or jump drive:

- ✓ Completed application
- ✓ Statement of practical difficulty see page 3
- ✓ Plot plan or survey showing property lines, existing and proposed buildings, their dimensions and locations (height, length, width, as applicable)
- ✓ Setbacks from property lines
- ✓ Elevation drawings
- ✓ Photos as necessary to accurately describe the request, including existing and proposed property conditions
- ✓ Any other information that explains the request
- ✓ Incomplete applications cannot be accepted

STATEMENT OF APPEAL

I. INTRODUCTION

Tollbrook North, LLC ("**Developer**") appeals the November 10, 2020 decision of the City of Troy's Planning Commission ("**PC**") to deny the Preliminary Site Plan ("**PSP**") for its Crooks Road Townhomes project to the City's Zoning Board of Appeals ("**ZBA**"). The Developer requests that the ZBA reverse the PC's decision and grant PSP approval.

The Developer's Project (as described below) is a permitted use of the Property under Zoning Ordinance, does not require any variances, exceptions or waivers from the Zoning Ordinance, and otherwise meets all the criteria for PSP approval. Under the Michigan Zoning Enabling Act, a site plan shall be approved if it contains the information required by the zoning ordinance and is incompliance with the conditions imposed under the zoning ordinance. MCL125.3501(5).

The PC's decision to deny the PSP was arbitrary and capricious, based on no findings of material facts, constituted an abuse of discretion by the PC, and based on erroneous interpretation of the Zoning Ordinance.

II. AUTHORITY AND STANDARD OF REVEIW

Section 15.04.C of the City's Zoning Ordinance authorizes the ZBA to hear and decide this appeal:

> C. Appeals of Administrative Decisions. The Zoning Board of Appeals shall hear and decide appeals where it is alleged there is error of law in any order, requirement, decision or determination made by an administrative official or body in the enforcement of this Ordinance.

The ZBA's standard of review for appeal is set forth in Section 15.04.C.4 of the Zoning Ordinance:

> 4. An administrative decision may be reversed, in whole or in part, or may be modified. To that end, the Zoning Board of Appeals shall have all the powers of the Zoning Administrator from whom the appeal is taken. In reaching its decision, the Zoning Board of Appeals shall only modify or reverse an administrative decision being appealed if one (1) or more of the following requirements are met:
>
> a. The administrative decision was arbitrary or capricious.
> b. The administrative decision was based on an erroneous finding of material fact.
> c. The administrative decision constituted an abuse of discretion; or
> d. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

III. BACKGROUND

A. The Property

The subject property is a 5.72-acre parcel of land on the west side of Crooks Road just north of Wattles Road (the "**Property**"). The Property is zoned Neighborhood Nodes (NN) District ("**NND**") - I. The adjacent zoning and uses surround the Property (See the Preliminary Site Plan Review prepared by Carlisle Wortman Associates, Inc. ("CWA") dated November 6, 2020; the "**Review**", attached as **Exhibit A**):

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Vacant/Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

B. The Project

The Project consists of 74 townhomes contained in 13 buildings. The Project requires no variances, waivers or exceptions from the Zoning Ordinance. See PSP attached as **Exhibit B** and Letter from PEA Inc. dated March 14, 2020 attached as **Exhibit C**.

The Project is a permitted use under the Zoning Ordinance. This fact is s acknowledged by the City's Planner, CWA, and the City's attorney. CWA wrote: "Overall, we find the proposed use to be appropriate for the site." (See Page 10 of the Review). The City Attorney during the January 14, 2020 Planning Commission stated: "the proposed development is permitted by right on the subject property." (See January 14, 2020 PC Meeting Minutes attached as **Exhibit D**).

Not only is the Project permitted, the Project is modest in size and scope as it provides setbacks and open space far greater than required by the Zoning Ordinance and building size (both by stories and height) and lot coverage far less than required by the Zoning Ordinance. The Project complies with all dimensional standards of the Zoning Ordinance (See Page 5 and 6 of the Review):

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies.
Side (north)	N/A, building may be placed up to property line	40-feet	Complies.
Side (south)	N/A, building may be placed up to property line	80 feet	Complies.
Rear (west)	30-foot minimum setback	139 feet	Complies.
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 37.5 feet to peak of roof	Complies.

Lot Coverage (Building)	30%	19.3%	Complies.
Minimum Open Space	15%	55%	Complies.
Parking Location	Cannot be located in front yard	Within garages	Complies.

The Zoning Ordinance in the definition of Building Height states that the building height for a gable and gambrel roofs is measure to the mid-point of the roof. The buildings have gable and gambrel styled roofs. Further, buildings B, C and D of the Project (the most northern buildings; the "**Transitional Buildings**") have a peak height of 36' and a mid-point height of 27'9". The other ten buildings have a peak height of 37'4" and mid-point height of 33"1". For reference, a single-family home in an R1-B District is permitted 30' to mid-point.

C. Chronology

Date	Activity
September 24, 2019	PC hears PSP for first iteration of the Project, which was 60 townhomes in 8 buildings on 2.73 acres. The buildings were 40' tall to the peak. While this first iteration was compliant with Zoning Ordinance, the PC postponed approval of the PSP so that the Developer could address items in the CWA Review dated September 17, 2019 (See **Exhibit E**) and raised by the PC and audience members.
January 14, 2020	PC hears PSP for 2nd iteration of the Project, which was for 74 units over 5.73 acres. There were significant changes from the 1st iteration, including, but not limited to: reduction in density from 22 units per acre to 12.9 units per acre; increase in guest parking; all resident parking changed to 2 car side by side garage; reduction in building heights by 3'; removal of the emergency vehicle access to the stub road for the adjacent neighborhood to the north; increase of all setbacks; reduction in lot coverage; and increase in open space. Despite all the improvements, the PC postponed the PSP to give the Developer time to digest comments made by the residents, PC and staff and to address site plan items identified in CWA Review dated January 7, 2020 attached as **Exhibit F**.
November 10, 2020	PC denies the PSP for 3rd iteration of the Project because of a lack of compatibility and inadequate transition. While this last iteration of the Project was generally same as the same as the prior iteration, there were several changes as itemized on the Review and the PEA Letter that included the creation of the Transitional Buildings, installation of an aluminum fence along north boundary line in lieu of vinyl fence,

	commitment to brick and cement board siding and no vinyl siding and increased landscape buffer plantings.[1]
December 8, 2020	PC approves its November 10, 2020 Meeting Minutes thereby memorializing its denial of the PSP.

IV. PC DETERMINATION

On November 10, 2020, the PC denied the PSP for the Project "for the following reasons lack of compatibility and inadequate transition." (the "**PC Determination**"; See November 10, 2020 PC Meeting Minutes for November 10, 2020 (attached as **Exhibit G**) and video recording of November 10, 2020 PC meeting on YouTube at 4:41:30).

The reasons provided for denial are without reference to a specific section in the Zoning Ordinance and are not supported by any findings of fact. This reasoning is broad and subjective, leaving the Developer with no certainty as to what would be, from the PC's perspective, an approved use for the Property under the Zoning Ordinance.

Moreover, the Zoning Ordinance, with regard to compatibility and transition standards, is vague as: (a) it lacks the standards needed to govern the PC's discretion; (b) is so indefinite that it permits unstructured and unlimited discretion to be exercised by the PC or determine whether the law has been violated; (c) fails to give the Developer reasonable notice of the prohibited conduct, is vague, overbroad, lacking definite standards; and (d) is incapable of being rationally administered.

The PC Determination was arbitrary and capricious, was based on erroneous findings of fact, constituted an abuse of discretion and was an erroneous interpretation of the Zoning Ordinance.

V. COMPATIBILITY IS NOT REQUIRED AND, EVEN IF IT WERE, THE PROJECT IS COMPATIBLE TO ADJACENT PROPERTIES.

The PC Determination did not provide any findings of fact to support the allegation that the Project lacked compatibility with adjacent zoning or uses. Moreover, the PC's Determination is flawed because it applied a compatibility standard where there is no basis to do so and it failed to consider facts that support compatibility.

A. Compatibility is Not Requited in the Neighborhood Nodes District

Nowhere in the 15 pages of text of the NND in the Zoning Ordinance (Section 5.06) is the word "compatible" or "compatibility" present. The obvious reason is that the NND is form-based zoning, such that the ultimate use of and building forms permitted on a property in the that district

[1] After the January 14, 2020 PC meeting, the Developer scheduled a meeting and met with residents who resided in the neighborhood to the north of the Project, including board members of the homeowner's association. As a result of that meeting, the Developer agreed to not use vinyl siding on the buildings and agreed to use only high-quality materials of brick and cement board siding.

are based upon the size of the site and street type. There is no need to require a use in a NND to be compatible with adjacent properties because the City made that determination when it adopted the NND.

B. **Compatibility in the Site Plan Review Guidelines is misapplied, and even so, the Project satisfies its Requirements**.

Section 8.06.A of the Zoning Ordinance contains the following with regard to compatibility (emphasis added):

> **SECTION 8.06 SITE PLAN REVIEW DESIGN STANDARDS**
> These design standards are intended to enhance the overall character of Troy by building upon patterns of development that create or enhance sense of place and have well-defined and vibrant design context.
>
> The following general standards and any standards established for a specific use shall be applied when considering a site plan application:
>
> A. Development shall ensure compatibility to existing commercial districts and provide a transition between land uses through application of the following requirements:

This design standard is inapplicable to the Project. As written, "compatibility" is limited to existing commercial districts. There being no existing commercial districts adjacent or near the Property, this design standard is inapplicable. To apply this design standard and its requirements is a misapplication and misinterpretation of the Zoning Ordinance.

C. **The Application of a Compatibility Standard to the Project is Arbitrary, Capricious and Unequal**.

On April 28, 2020, the PC approved a PSP for a very similar project in a NND on the south side of East Square Lake Road and west of Dequindre Road (the "**SLC Project**"; see PC Minutes for April 28, 2020 Meeting attached as **Exhibit H**). The SLC Project totaled 62 units in 13 townhome styled buildings with a building height of 34'10" (to the mid-line for a hip roof). See Site Plan attached as **Exhibit I**. This project abuts a single-family neighborhood with single-family zoning and commercial use in an NND. See CWA Review dated for SLC Project dated April 28, 2020 attached as **Exhibit J**.

As compared to the Project, the SLC Project: is 23% more dense with density at 16 units per acre; has buildings that are taller; has smaller setbacks; less open space; and more lot coverage. In every objective way, the SLC Project is more developed and intense than the Project; however, the PC never raised or considered the issue of "compatibility" in approving the SLC Project, even though it abuts single family residential. The PC's denial of the PSP for the Project is arbitrary, capricious and unequal because the PC applied a standard of compatibility to the Project that it did not apply to a similarly situated Project, especially considering that the Project is less intense than the SLC Project.

Lastly, this inconsistent application of standards violates the intent of the site plan review to provide a consistent and uniform method of review. See Zoning Ordinance Section 8.01.

D. The City Has Already Established that the Project is Compatible

The City went through exhaustive statutory procedures to adopt the Master Plan and Zoning Ordinance with regards to the NND zoning. Through the legislative process, the City determined, with input by the residents, its staff and consultants, the appropriate uses and building forms the City desired on properties to be zoned NND. In order for a Zoning Ordinance to be adopted, it must ensure compatibility with adjacent uses of land. *See Zoning Ordinance Section 16.03.C.5*. The Michigan Municipal Planning Act (MCL 125.3807(2)(a) &(b)) states that the Master Plan be is to be coordinated, adjusted, harmonious, efficient, and economical and to consider the character of the planning jurisdiction and its suitability for particular uses, judged in terms of such factors as trends in land and population development. The Michigan Zoning Enabling Act (MCL 125.3203(1)) requires that the Zoning Ordinance be based upon a plan to ensure that uses of land shall be situated in appropriate locations and relationships. The City did not do this exercise in a vacuum. The City, adopting the Master Plan, and implementing that plan by adoption of the Zoning Ordinance for the Property, established that Developer's proposed and permitted use under the Project is suitable and appropriate for the location. The City established what uses can be developed on the Property and the Developer is merely operating within the strictures established by the City.

E. The Project as a Residential Use is Compatible with Adjacent Residential Uses and the Neighborhood Node zoning to the South.

The Property is adjacent to a vacant parcel zoned NND to the south. The Project seeks to use the Property pursuant to the NND zoning, so it is compatible with that Zoning and future use under that NND zoning.

The Project is also compatible with the adjacent properties to the north and west that are zoned R1-B and are currently used for single family housing. First, the Project is residential, contained in townhome styled buildings resembling houses. Moreover, the buildings are set back 138' and 40' from the west and north Property lines, respectively. Simply, given the distance and type of use, there is no conflict in compatibility with the property to the west and north of the Property.

Not only is the Project for a residential use, the buildings in the Project will have an upgraded façade compared to the adjacent single- family homes. The Developer committed to using brick and cement board siding (aka Hardie Board) for the facades. One PC Member stated that he drove the adjacent neighborhood and noted vinyl siding on some of the homes and therefore considered this Project to be an upgrade. (See Video recording of November 10, 2020 PC meeting on YouTube at 4:00:19).

F. The PC's Improper Application of a "Compatibility" Standard Requires the ZBA to Reverse the PC's Determination and Approve the PSP.

As stated above, the ZBA can reverse an administrative decision being appealed if **ANY** one (1) or more of the following requirements are met:

a. The administrative decision was arbitrary or capricious.
b. The administrative decision was based on an erroneous finding of material fact.
c. The administrative decision constituted an abuse of discretion; or
d. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

In this case, reversal by the ZBA is fully supported based on each and all of the requirements.

1. The decision of the PC to deny the PSP was arbitrary and capricious.

The PC applied the standard of compatibility to the Project, when no such standard is applicable to this Project. Further, it applied the compatibility standard to the Project, even though it did not apply such a standard in approving the similarly situated SLC Project that is more intense than the Project. By these actions, singularly and collectively, the PC Determination was arbitrary and capricious.

2. The decision of the PC to deny the PSP was based on an erroneous finding of material fact.

First, there was no finding of any facts by the PC. The approval motion merely stated a "lack of compatibility" without any findings of fact to support that conclusion. To the contrary, the PC ignored numerous facts to support the Project being compatible to its adjacent properties, including the fact that the City through its Master Plan and Zoning Ordinance already determined the use proposed by the Project to be compatible and the fact that the Project sought to use the Property for a residential use, similar to adjacent properties to the north and west. Therefore, the PC Determination was based on an erroneous finding of material fact.

3. The Decision of the PC to Deny the PSP constituted an abuse of discretion.

As stated above, the PC applied a compatibility standard to the Project that is not found in the NND and is inapplicable to the Project under the Site Plan Ordinance. Even so, by applying a subjective standard, not itemizing facts to support the alleged incompatibility and ignoring facts supporting compatibility, the PC abused its discretion.

4. The Decision of the PC to Deny the PSP was based on erroneous interpretation of the Zoning Ordinance.

As stated above, the NND does not contain any compatibility standard and the design guideline contained in Section 8.06 of the Zoning Ordinance does not apply to the Project. The PC, by applying a compatibility standard, interpreted the Zoning Ordinance in error, for if the PC had correctly interpreted the Zoning Ordinance denial could not be based upon lack of

compatibility. The PC's application of a compatibility standard upon the Project is an erroneous interpretation of the Zoning Ordinance.

VI. THE PROJECT PROVIDES ADEQUATE TRANSITION

Without identifying how the Project lacked "transition" or articulating what would be an adequate transition for the Property, the PC ignored all the Design Features (as listed below) being provided for by the Developer that make the Project an appropriate transition between existing and future adjacent uses. The concept of transition in NND for this Property identified as an NN:B site is provided for in Section 5.06.E.3 of the Zoning Ordinance:

> While not always present between NN:A sites and residential neighborhoods, when possible or preferable based on the parcel arrangement and existing circumstances, the NN:B category allows the Node to develop in a tiered manner, with more intense developments and uses permitted within the core of the Node, and less intense projects providing a buffer for the residential area.

This Project does exactly what the NND Ordinance requests: a moderate density multi-family project of townhomes of modest heights, with significant setbacks and built with high quality materials that provide a transitional buffer to the residential area to the north from the future more intense uses that will be developed to the south of the Project in adjacent NND parcels. The future development to the south could be 4 story medical office buildings or commercial uses in one or more developments down to Wattles Road. See also the letter from Community Image Builders dated March 16, 2020 attached as **Exhibit K**.

The NND Ordinance provides a design standard for "transitional features" in Section 5.06.E.3 of the Zoning Ordinance. However, the Determination states "lack of transition" not lack of "transitional features". The PC ignored the NND Ordinance about transitional features[2] and ostensibly relied upon language from Section 8.06.A of the Site Plan Ordinance where it states with regard to transition (emphasis supplied):

---

[2] The NND Ordinance provides a design standard for "transitional features" in Section 5.06.E.3:

E. Design Standards. In addition to standards set forth in this Ordinance, all proposed development shall comply with the standards set forth herein.

***

3. Transitional Features.

a. Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.

b. Intensity. A continuum of use intensity, where moderate intensity uses are sited between high-intensity uses and low-intensity uses, shall be developed for multi-building developments. An example would be an office use between commercial and residential uses.

c. Height and Mass. Building height and mass in the form of building step-backs, recess lines or other techniques shall be graduated so that structures with higher intensity uses are comparable in scale with adjacent structures of lower intensity uses.

d. Orientation. Primary building facades shall be placed away from the residential use.

SECTION 8.06 SITE PLAN REVIEW DESIGN STANDARDS

These design standards are intended to enhance the overall character of Troy by building upon patterns of development that create or enhance sense of place and have well-defined and vibrant design context.

The following general standards and any standards established for a specific use shall be applied when considering a site plan application:

A. Development shall ensure compatibility to existing commercial districts and provide a transition between land uses through application of the following requirements:

1. Building design shall enhance the character of the surrounding area in relation to building and parking placement, landscape and streetscape features, and architectural design.
2. Street fronts shall provide a variety of architectural expression that is appropriate in its context and prevents monotony.
3. Building design shall achieve a compatible transition between areas with different height, massing, scale, and architectural style.

A. **The Building Design of The Project Does Enhance the Character of The Surrounding Area**.

The Project's building design incorporates several features to enhance the character of the surround area ("**Design Features**"):

a. Building facades are to constructed with high quality materials of brick and cement board siding;
b. Building heights of 27'9" and 33'1" are comparable to existing single family uses and zoning heights of 30'; especially considering that the Property has a lower elevation than the properties to the north;
c. All resident parking for the Project is enclosed within garages, such that the only hardscape is for the drives and guest parking;
d. The Project does not require any tree mitigation as tree preservation and replacement exceed City Ordinances.
e. There is a 138' setback to the west and a 40' setback to the Woodlands of Troy Subdivision;
f. The 13 Buildings are residential townhomes with gabled roofs with 2 different sizes spread out in a campus-like setting;
g. The Project provides for 55% Open Space, which is more three times the minimum amount of 15% required by the Zoning Ordinance; and

---

e. Architectural Features. Similarly sized and patterned architectural features such as windows, doors, arcades, pilasters, cornices, wall offsets, building materials, and other building articulations included on the lower-intensity use shall be incorporated in the transitional features.

h. Lot Coverage (Building) is less than 20%, a third less than the 30% maximum required by the Zoning Ordinance.

These Design Features are undisputed. The PC made no findings of fact to the contrary.

B. **The Street Front of The Project Is Appropriate for The Use and Is Not Monotonous**.

Along Crooks road, the Project provides for three 5-unit buildings, split by the access boulevard. This design is appropriate for the use and is not monotonous.

C. **Building Design for The Project Provides A Compatible Transition Between Areas with Different Height, Massing, Scale, And Architectural Style**.

The Project, through its residential use and Design Features, provides an appropriate transition both within the NND and between the NND and the adjacent single family uses. The NND contemplates that uses of land will intensify moving toward the core the of NND and will lessen moving away from the NND core. The Property represents the farthest parcel of this particular Neighborhood Node; therefore, it has to accommodate a use that will be more intense to the south. Similarly, it must and dos provide a buffer to the existing single family uses to the north.

A moderate multi-family townhouse development spread out over 13 buildings with comparable heights to single family homes, landscaped buffers, increased setbacks and open space represents the most optimal transition that could be envisioned for the Property.

D. **The PC's Improper Denial of the PSP Based on "Inadequate Transition" Must Be Reversed.**

As stated above, the ZBA can reverse an administrative decision being appealed if **ANY** one (1) or more of the following requirements are met:

e. The administrative decision was arbitrary or capricious.
f. The administrative decision was based on an erroneous finding of material fact.
g. The administrative decision constituted an abuse of discretion; or
h. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

In this case, reversal by the ZBA is fully supported.

1. The decision of the PC to deny the PSP was arbitrary and capricious.

The PC applied the transition standard to the Project, but did not apply such a standard in approving the similarly situated SLC Project that is more intense than the Project. By this action the PC Determination was arbitrary, capricious and unequal.

2. The decision of the PC to deny the PSP was based on an erroneous finding of material fact.

First, there was no finding of **any** facts by the PC. The approval motion merely stated there was "inadequate transition" without any findings of fact to support that conclusion. To the contrary, the PC ignored all the Design Feature which support the Project being an appropriate transition between its adjacent properties. Therefore, the PC Determination was based on an erroneous finding of material fact.

3. The decision of the PC to deny the PSP constituted an abuse of discretion.

By applying a subjective standard, not itemizing facts to support the alleged incompatibility and ignoring facts supporting an adequate transition, the PC abused its discretion.

VII. SUMMARY

There are four requirements by which the ZBA is empowered to reverse an administrative decision. Even though the Developer satisfies all four of these requirements, the Zoning Ordinance provides that only the satisfaction of **one** is needed for the ZBA to reverse the PC Determination.

The PC wrongfully denied Developer's PSP for the Project without even making any findings of fact while at the same time wholly disregarding the Design Features. The PC applied a standard to the Project that is not within the City's Zoning Ordinance and applied standards to the Project, that it did not apply to a similarly situated project that was by every metric more intense than the Project.

To state the Project lacks compatibility and has inadequate transition is a hollow conclusion. The Project is compatible and provides adequate transition, but the PC without any valid justifications applied vague standards. For the reasons stated above, this decision of the PC was arbitrary and capricious, based on an erroneous finding of material fact, constituted an abuse of discretion and was based on erroneous interpretation of the Zoning Ordinance. Therefore, Developer respectfully requests that the ZBA reverse the decision of the PC to deny the PSP for the Project and approve the PSP for the Project.

Index of Exhibits to Statement of Appeal

A	Carlisle Wortman Associates, Inc. Review dated November 6, 2020
B	Crooks Road Townhomes Site Plan – Resubmittal to City dated March 12, 2020
C	PEA Letter dated March 14, 2020
D	Troy Planning Commission Minutes dated January 14, 2020
E	Carlisle Wortman Associates, Inc. Review dated September 17, 2020
F	Carlisle Wortman Associates, Inc. Review dated January 7, 2020
G	Troy Planning Commission Minutes November 10, 2020
H	Troy Planning Commission Minutes dated April 28, 2020
I	Square Lake Townhomes – SPA to City dated February 5, 2020
J	Carlisle Wortman Associates, Inc. Review for SLC Project dated April 28, 2020
K	Community Image Builders Letter dated March 16, 2020

Carlisle | Wortman
ASSOCIATES, INC.
117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: September 17, 2019
January 7, 2020
November 6, 2020

Preliminary Site Plan Review
For
City of Troy, Michigan

Applicant: Tollbrook North LLC

Project Name: Crooks Road Townhomes

Plan Date: March 12, 2020

Location: Between Wattles Road and Long Lake Road, on the East side of Crooks Road

Zoning: Neighborhood Node (NN) – I

Action Requested: Preliminary Site Plan Approval

SITE DESCRIPTION

The subject site is located on the east side of Crooks Road, between Wattles Road and Long Lake Road. The approximate 5.73-acre site is improved with two single-family homes. The two houses will be removed if the proposed development is approved.

The applicant proposes to develop the site as a 74-unit townhome project, grouped into a total of thirteen (13) buildings. Access to the site is via Crooks Road.

Buildings A, H, and R front on Crooks Road, and all other buildings front on interior drives. The number of units in each building vary from 5 to 6. All units are three (3) stories in height and accompanied by a 2-car tandem garage.

A list of full changes is included on Page 4 of this report. All housing development will be on the east side of the drain, and the site's detention pond will be on the west side of the drain.



Size of Subject Property:
The parcel is 5.72 net acres

Proposed Uses of Subject Parcel:
Seventy-four (74) townhome units

Current Use of Subject Property:
The subject property is currently improved with a single-family home

Current Zoning:
The property is currently zoned NN, Neighborhood Node District

Surrounding Property Details:

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Vacant/Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

NATURAL FEATURES

Topography: A topographic survey has been provided on sheet C-1.0 and shows that the site has a slightly higher elevation in the northwest portion of the property. Elevations decrease heading toward its south and southwest boundaries. Grading will occur on the west side of the drain to accommodate the stormwater facility.

Wetlands: The applicant completed a wetland delineation on December 12, 2019. The applicant has confirmed that an EGLE regulated wetland does exist on the site. The applicant is proposing grading and tree planting within wetland. Any impact upon wetland requires a permit from EGLE. Wetland mitigation details are not provided. Final wetland permit is required with final engineering review; however, applicant should confirm wetland mitigation plan.

Floodplain: The Lane Drain, and associated floodplain is located at the southwest corner of the site. The preliminary plans show that no development and grading within the floodplain. However, the applicant will be required to confirm the floodplain and obtain any necessary permits for floodplain impact as part of the final engineering review.

Woodlands: A tree inventory has been provided on sheet T-1.1. The applicant has identified a total of 69 woodland trees and 6 landmark trees on site. Of the 69 woodland trees, the applicant is removing 49 and preserving 20. Of the 6 landmark trees, the applicant is removing 5 and preserving 1.

Replacement Details		
Protected Tree	**Inches Removed**	**Replacement Required**
Landmark	108 inches	108 inches
Woodland	447 inches	224 inches
Preservation/Mitigation	**Inches Preserved**	**Credit**
Landmark	13 inches	26 inches

Woodland	225 inches	450 inches
Protected Replacement Required	332 Inches	
Preservation Credit	426 Inches	
Total	**+ 94-inch credit**	
Total Tree Mitigation	Zero. The number of inches preserved and credited exceed the mitigation required.	

The noted tree removal is the same as in previous plans where access to the stormwater facility was unclear. The applicant should confirm tree removal as a result of access to the stormwater pond.

Items to be addressed: *1). Provide wetland mitigation plan; and 2). Confirm tree removal as a result of access to stormwater plan.*

PREVIOUS PLANNING COMMISSION REVIEW

The application was last considered in January 2020. Action on the site plan was postponed. Staff and Planning Commission discussion included:

- *Compatibility and transition*
- *Neighborhood node districts as relates to Master Plan*
- *Access to stormwater facility*
- *Tree removal and loss of screening due to installation of installation of stormwater facility.*
- *Access and EVA to Crooks Road.*
- *Pedestrian connections*
- *Increased screening*
- *Architecture and materials*

There were a number of residents who spoke in opposition to the project. These comments include:

- Grading difference at relates to drainage and engineering design process.
- Stormwater management
- Wetlands and floodplain, as relates to EGLE and engineering design process
- Compatibility and transition to residential, as relates to landscape buffer, building height, line of vision, building materials
- Line of vision scale and elevations
- Neighborhood node districts as relates to Master Plan
- Traffic impact study
- Density
- Engagement with neighbors
- Intent of Master Plan
- Joint meeting with City County to discuss intent of Neighborhood Node

SITE PLAN CHANGES

Based on the discussion from the Planning Commission, staff, and the public, the applicant has made changes their site plan. There were no major changes to the plan since the last Planning Commission review; however, changes include:

- Added Emergency Vehicle Access point on Crooks as requested by Fire Department
- Internally connected units via sidewalks.
- Provided access to the stormwater detention facility via Penrose Boulevard. This access is only for stormwater facility and does not connect to the rest of the site.
- Provided pedestrian path and picnic tables around stormwater facility via Penrose Boulevard.
- Indicated tree removal and loss of existing screening on western property line as result of installation of stormwater facility and access via Penrose Boulevard.
- Applicant confirmed presence of state regulated wetland. Revised plan shows grading within wetland.
- Added additional landscape screening along western property line.
- Added community pavilion.
- Replaced vinyl fence with aluminum fence along northern property line.

SITE ACCESS AND CIRCULATION

Vehicular access to the site is via Crooks Road. The applicant has removed the Emergency Vehicle Access (EVA) connection at Carson Drive, and added an EVA on Crooks. The applicant has connected all units via an internal pedestrian sidewalk network.

The Fire and Engineering Department confirms that access and circulation is sufficient.

Items to be addressed: *None*

AREA, WIDTH, HEIGHT, SETBACKS

Table 5.03.B.3, Building Form C of Section 5.03, Standards Applicable to All Districts of the Zoning Ordinance establishes the dimensional requirements for the NN, Neighborhood Node District. The requirements and proposed dimensions are shown in the following table.

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies. Planning Commission can grant up to a 30-foot building placement.
Side (north)	N/A, building may be placed up to property line	40-feet	Complies

Side (south)	N/A, building may be placed up to property line	80 feet	Complies
Rear (west)	30-foot minimum setback	139 feet	Complies
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 37.5 feet to peak of roof (as indicated on building elevations)	Complies
Lot Coverage (Building)	30%	19.3%	Complies
Minimum Open Space	15%	55.0%	Complies
Parking Location	Cannot be located in front yard	Within garages	Complies

Items to be addressed: *None*

TRAFFIC

The city's traffic engineering consultant OHM has been asked to review the plan from a traffic impact standpoint. At the time of writing this memo, the review has not been finalized.

Items to be Addressed: *Comply with traffic findings as necessary.*

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Residential: 2 spaces per unit	74 Units = 148 spaces	148 garage spaces + 34 guest spaces = 182 spaces
Barrier Free	0	0
Bicycle Parking	0	Located within garages
Loading	0	0
Total	**148 spaces**	**148 spaces within garages and 34 guest spaces**

As noted by the City Engineer, ADA guest parking should be provided.

Items to be Addressed: *Provide ADA guest parking.*

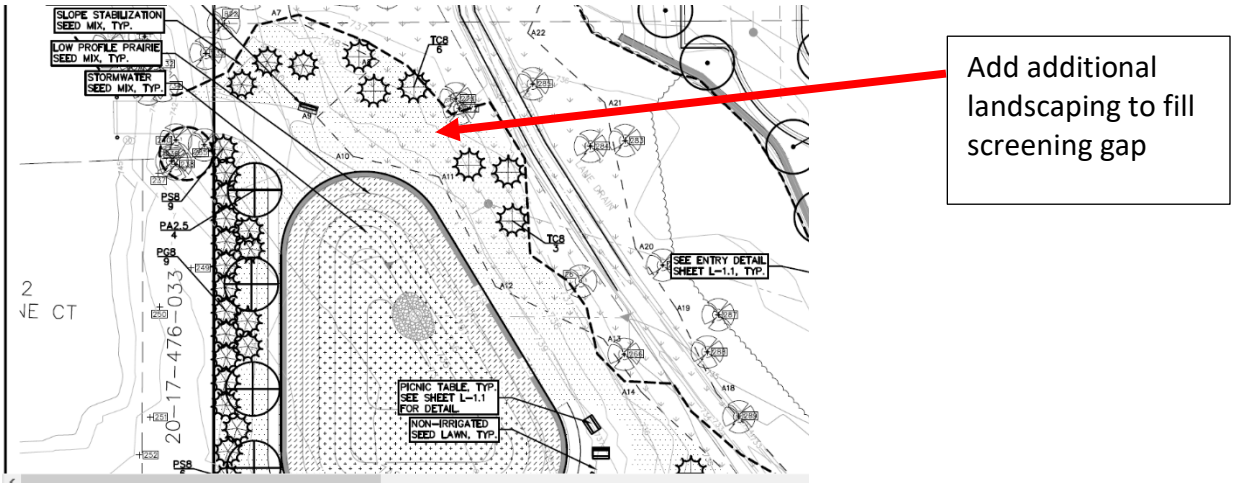
LANDSCAPING

A landscaping plan has been provided on sheet L-1.0 and are supplemented by tree protection and planting details on sheet L-1.1. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	Provided:	Compliance:
North Property Line:			
Landscape buffering: Required buffering between two differentiating land uses. Alternative 1 or 2.	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. = 590 feet / 10 = 59 large evergreen Or Alternative screening method may be considered by the Planning Commission.	59 large evergreen + 6-foot tall vinyl privacy fence	Planning Commission to consider the use of a aluminum fence in addition to required screening.
West Property Line:			
Landscape buffering:	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. = 400 feet / 10 = 40 large evergreen	44 large evergreen	Complies
East Property Line:			
(Crooks Road) Street Trees: The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.	400 feet = 14 trees	21 trees	Complies
Overall:			
Site landscaping: A minimum of fifteen percent (15%) of the site area shall be comprised of landscape material. Up to twenty-five	15%	55%	Complies

percent (25%) of the required landscape area may be brink, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.			

There will be significant tree removal and loss of existing screening on western property line as result of installation of stormwater facility and access via Penrose Boulevard. The applicant proposes instillation of landscape screening along western property line. However, there is a gap in screening where the access road turns south. The applicant should add additional landscaping to fill in this gap.



Transformer / Trash Enclosure:

The applicant has not indicated a central trash enclosure. It is assumed that each unit will have trash bins in the garage to be rolled out for trash pickup.

***Items to be Addressed**: 1). Planning Commission to consider the use of an aluminum fence in addition to required screening; and 2). Add additional landscaping to fill in gap; and 3). Confirm trash pickup.*

STORMWATER

The proposed stormwater facility is located on the west side of the drain. As noted, instillation of facility will require tree loss and existing screening along western property line. Applicant proposes to install a dense evergreen screen to replace screening that is lost. The public works department notes that the City will not be responsible for detention pond maintenance or underground storm system.

Items to be Addressed: *None*

PHOTOMETRICS

A photometric plan has been provided on sheet SL-1.0, and additional details are provided on sheet SL-1.1. A total of 140 building light fixtures are proposed of two (2) varying types. Wall light fixtures placed at each unit's entrance and rear are described as having a height of six (6) feet. A note indicates that all area light fixtures are to be directed away from neighboring properties and roadways. Controlling light source is particularly important along northern and western property line.

Items to be Addressed: *None*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided on sheets A-1 through A-7. The elevations provided show architectural details, variations in material and pattern (brick, siding, asphalt shingles and wood trim wrapped with aluminum), as well as general color scheme. The applicant provided an electronic material board.

Items to be Addressed: *None*

DESIGN STANDARDS and SITE PLAN REVIEW STANDARDS

The Neighborhood Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

<u>Section 5.06.E. outlines Design Standards:</u>

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.06.E for standard details

<u>Section 8.06 outlines Site Plan Review Design Standards.</u>

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
2. *Development shall incorporate the recognized best architectural building design practices.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*

Please see Section 8.06 for standard details

CWA Response: *Make site plan changes as noted, of particular importance is impact upon adjacent properties including proper screening/landscaping, stormwater detention access, confirmation of tree removal/screening, and and lighting.*

SUMMARY

A key tenet of the Master Plan and enforced in the zoning regulations of the form-base district is the protection of existing neighborhoods and providing the appropriate transition from higher intensity uses to lower or moderate-density residential areas. Section 5.06.E.3 of the Zoning Ordinance sets forth transitional features that shall be considered in the review of any development in the form-based district:

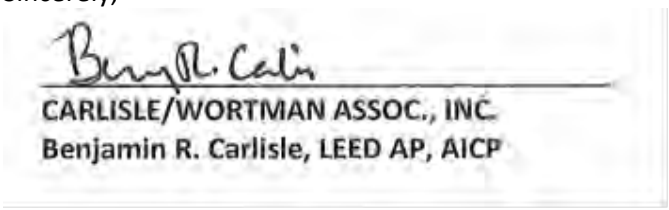
3. Transitional Features.

a. *Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.*
b. *Intensity. A continuum of use intensity, where moderate intensity uses are sited between high-intensity uses and low-intensity uses, shall be developed for multi-building developments. An example would be an office use between commercial and residential uses.*
c. *Height and Mass. Building height and mass in the form of building step-backs, recess lines or other techniques shall be graduated so that structures with higher intensity uses are comparable in scale with adjacent structures of lower intensity uses.*
d. *Orientation. Primary building facades shall be placed away from the residential use.*
e. *Architectural Features. Similarly sized and patterned architectural features such as windows, doors, arcades, pilasters, cornices, wall offsets, building materials, and other building articulations included on the lower-intensity use shall be incorporated in the transitional features.*

In combination, these transitional features assist in mitigating potential conflicts between uses.

Overall, we find the proposed use to be appropriate for the site. However, there are some site planning elements that should be considered by the Planning Commission. Though multiple-family residential is a permitted use, multiple-family residential can include a wide range of housing types, products, and scale. When considering the type of multiple-family proposed and number of units, the Planning Commission should consider if the applicant has provided the appropriate transition.

Sincerely,



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

PRELIMINARY SITE PLANS FOR

CROOKS ROAD TOWNHOMES

PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,

CITY OF TROY, OAKLAND COUNTY, MICHIGAN

OWNER:

TOLLBROOK NORTH LLC
1612 MUER DR.
TORY, MI, 48084
CONTACT: SAM STAFA
PHONE: (248) 890-8621
EMAIL: SSTAFA3@GMAIL.COM

ARCHITECT:

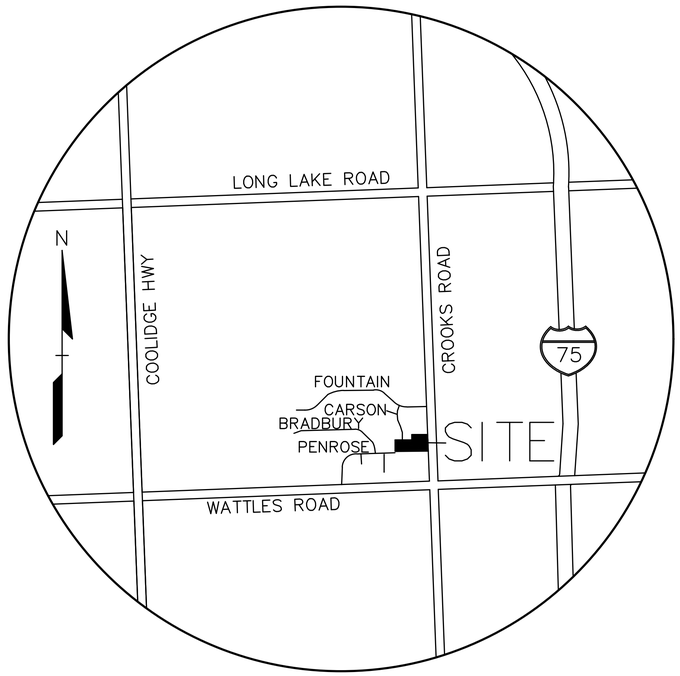
BRIAN NEEPER ARCHITECTURE P.C.
630 N. OLD WOODWARD SUITE 203
BIRMINGHAM, MI 48009
CONTACT: BRIAN NEEPER
PHONE: (248) 259-1784

CIVIL ENGINEER:

PEA, INC.
2430 ROCHESTER CT, SUITE 100
TROY, MI 48083
CONTACT: GREGORY BONO, P.E.
PHONE: (248) 689-9090 EXT. 1148
FAX: (248) 689-1044
EMAIL: GBONO@PEAINC.COM

LANDSCAPE ARCHITECT:

PEA, INC.
7927 NEMCO WAY, SUITE 115
BRIGHTON, MI 48116
CONTACT: LYNN WHIPPLE, PLA
PHONE: (517) 546-8583 EXT. 1203
FAX: (517) 546-8973
EMAIL: LWHIPPLE@PEAINC.COM



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS:

C-0.0	COVER SHEET
C-1.0	TOPOGRAPHIC SURVEY
C-2.0	PRELIMINARY SITE PLAN
C-3.0	PRELIMINARY GRADING PLAN
C-4.0	PRELIMINARY UTILITY SHEET
C-5.0	NOTES AND DETAILS
L-1.0	PRELIMINARY LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
T-1.0	TREE PRESERVATION PLAN
T-1.1	TREE PRESERVATION LIST
SL-1.0	PHOTOMETRIC PLAN
SL-1.1	PHOTOMETRIC DETAILS

ARCHITECTURAL SHEETS:

A-1	UNIT PLANS - BUILDINGS A & E-N
A-2	UNIT PLANS - BUILDINGS B, C & D
A-3	UNIT ELEVATIONS - FRONTS AND SIDE BUILDINGS A & E-N
A-4	UNIT REAR ELEVATIONS - BUILDINGS A & E-N
A-5	UNIT ELEVATIONS - FRONTS AND SIDE BUILDINGS B, C & D
A-6	UNIT REAR ELEVATIONS - BUILDINGS B, C & D
A-7	5 UNIT BUILDING PLANS - BUILDINGS A & E-N
A-8	5 UNIT BUILDING ELEVATIONS - BUILDINGS A & E-N
A-9	6 UNIT BUILDING PLANS - BUILDINGS A & E-N
A-10	6 UNIT BUILDING ELEVATIONS - BUILDINGS A & E-N
A-11	5 UNIT BUILDING PLANS - BUILDINGS B, C & D
A-12	5 UNIT BUILDING ELEVATIONS - BUILDINGS B, C & D
A-13	6 UNIT BUILDING PLANS - BUILDINGS B, C & D
A-14	6 UNIT BUILDING ELEVATIONS - BUILDINGS B, C & D
A-15	PAVILION PLANS AND ELEVATION

NOT FOR CONSTRUCTION

XREF: S:PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	KRD	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	11/13/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 44435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE required TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR SHALL AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.net

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

COVER SHEET
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - GMB\DWG\SITE PLAN\[C-0.0] COVER - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: N.T.S.

DRAWING NUMBER:
C-0.0

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

N

LOCATION MAP – NOT TO SCALE
LONG LAKE ROAD
COOLIDGE HWY
CROOKS ROAD
FOUNTAIN
CARSON
BRADBURY
PENROSE
SITE
WATTLES ROAD
75

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED PER CITY PLANNING REVIEW	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

REVISIONS

LEGEND

IRON FOUND	BRASS PLUG SET	SEC. CORNER FOUND	
IRON SET	MONUMENT FOUND	R RECORDED	
NAIL FOUND	MONUMENT SET	M MEASURED	
NAIL & CAP SET		C CALCULATED	

EXISTING

- ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UNDERGROUND CABLE TV, CATV PEDESTAL
- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONC. CONCRETE
- ASPH. ASPHALT

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

LEGAL DESCRIPTION
(Per PEA, Inc.)

OVERALL PARCEL
Land in the City of Troy, Oakland County, Michigan, described as follows:

All of Lot 3 and the north 40 feet of Lot 4, except for the East 27 feet taken for Crooks Road, "Supervisor's Plat of Troy Farmsites" as recorded in Liber 56 of Plats, Page 59, Oakland County Records, and being more particularly described as:

Commencing at the East 1/4 corner of Section 17, Town 2 North, Range 11 East; thence along the east line of said section 17, S00°01'30"E, 1620.52 feet to the extension of the north line of said Lot 3; thence along said extension, S89°42'00"W, 60.00 feet to the west line of Crooks Road (120 feet wide) and the POINT OF BEGINNING;
thence along said west line, S00°01'30"E, 439.30 feet;
thence S89°42'00"W, 291.08 feet to the west line of said Lot 4;
thence along said west line, N00°01'28"E, 40.00 feet to the south line of said Lot 3;
thence along said south line, S89°42'00"W, 304.20 feet to the west line of said Lot 3, said line also being the east line of "Woodlands of Troy No. 3", as recorded in Liber 207, Page 1, Oakland County Records;
thence along said east line, N00°01'28"E, 399.30 feet to the north line of said Lot 3, said line also being the south line of "Woodlands of Troy No. 4", as recorded in Liber 220, Page 7, Oakland Count Records;
thence along said north line, N89°42'00"E, 594.91 feet to the aforementioned west line of Crooks Road and the Point of Beginning.
Containing 5.72 acres of land, more or less.

FLOODPLAIN:
(Per Flood Insurance Rate Map Number 26125C–0533F. Revised Date September 29, 2009)

BY GRAPHICAL PLOTTING, THE SITE LIES WITHIN:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water–surface elevation of the 1% annual chance flood.

ZONE A – No Base Flood Elevations determined.

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
BENCHTIE IN NORTH SIDE OF POWERPOLE, ±290' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 739.19

BM #301
BENCHTIE IN WEST SIDE OF POWERPOLE, ±133' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 745.59

BM #302
BENCHTIE ON WEST SIDE OF POWERPOLE, ±62' EAST OF HOUSE #4165.
ELEV. – 746.60

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

TOPOGRAPHIC SURVEY
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	GMB	DN.	GMB	SUR.	KTR	P.M.	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY – DWG\DWG\SITE PLAN\C-1.0 TOPO – 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
C-1.0

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–BASE–18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–TBLK–18238A.DWG

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
BENCHTIE IN NORTH SIDE OF POWERPOLE, ±290' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 739.19

BM #301
BENCHTIE IN WEST SIDE OF POWERPOLE, ±133' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 745.59

BM #302
BENCHTIE ON WEST SIDE OF POWERPOLE, ±62' EAST OF HOUSE #4165.
ELEV. – 746.60

FLOODPLAIN:
(Per Flood Insurance Rate Map Number 26125C–0533F. Revised Date September 29, 2009)

BY GRAPHICAL PLOTTING, THE SITE LIES WITHIN:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water–surface elevation of the 1% annual chance flood.

ZONE A – No Base Flood Elevations determined.

LEGAL DESCRIPTION
(Per Warranty Deed, as recorded in Liber 48572, Page 470, Oakland County Records)

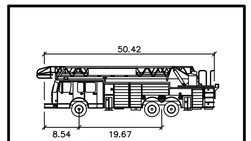
PARCEL NO 20–17–476–013 (#4115 Crooks Road)
Land in the City of Troy, Oakland County, Michigan, described as follows:

The North 1/2 of Lot 3 except the East 27 feet taken for Crooks Road, Supervisor's Plat of Troy Farmsites, according to the plat thereof as recorded in Liber 56 of Plats, Page 59, Oakland County Records.

LEGAL DESCRIPTION
(Per Warranty Deed, as recorded in Liber 48572, Page 470, Oakland County Records)

PARCEL NO 20–17–476–014 (#4095 Crooks Road)
Land in the City of Troy, Oakland County, Michigan, described as follows:

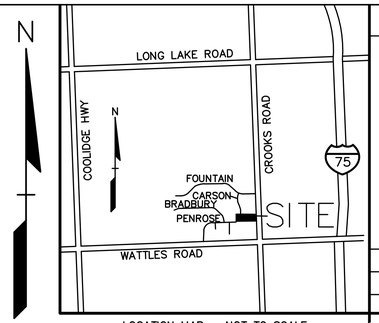
The South 1/2 of Lot 3 except the East 27 feet taken for Crooks Road, Supervisor's Plat of Troy Farmsites, according to the plat thereof as recorded in Liber 56 of Plats, Page 59, Oakland County Records.



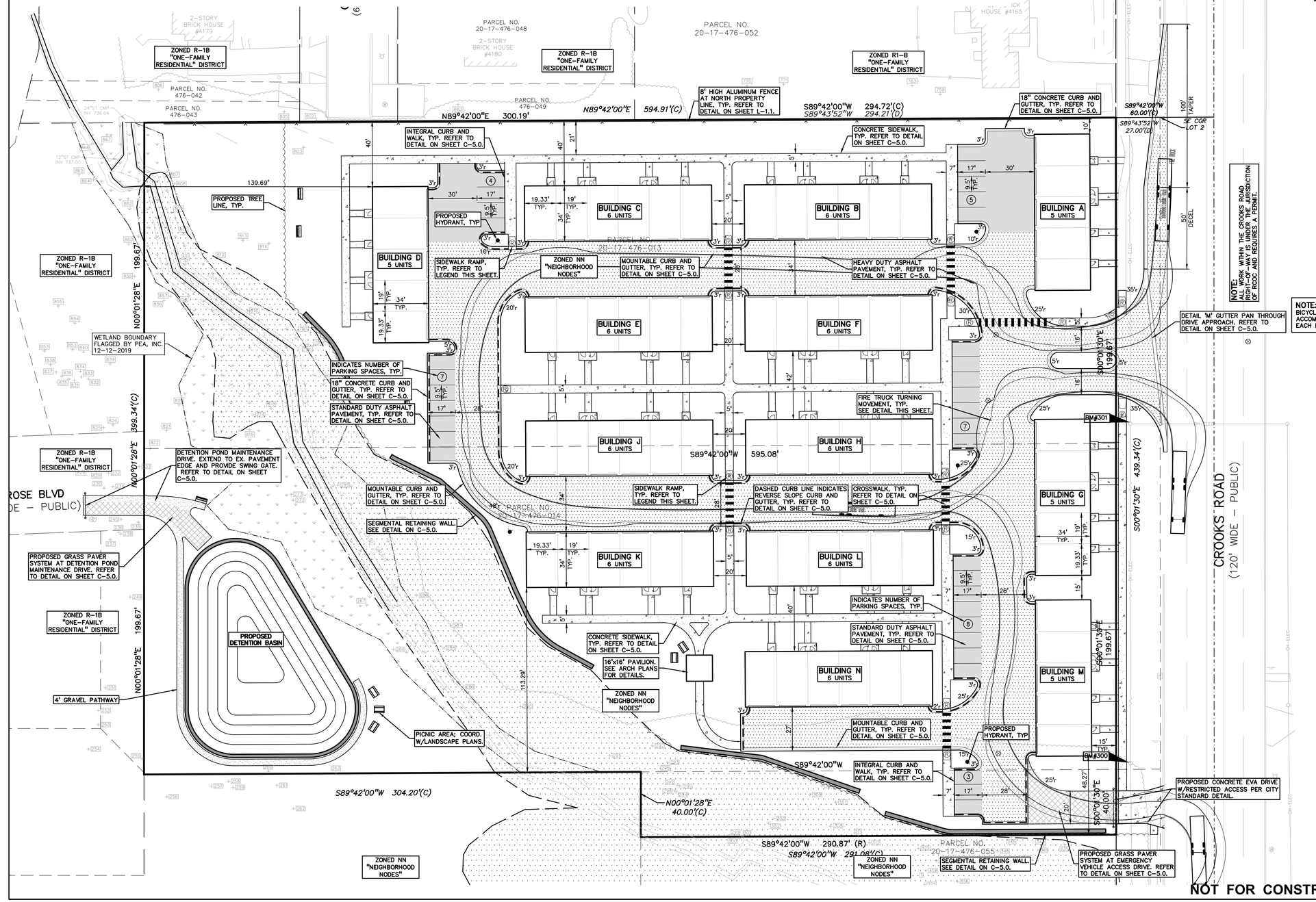
FIRE TRUCK

	feet
Width	: 8.33
Track	: 7.61
Lock to Lock Time	: 5.0
Steering Angle	: 40.0

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



LOCATION MAP – NOT TO SCALE



LEGEND

IRON FOUND	BRASS PLUG SET
IRON SET	MONUMENT FOUND
NAIL FOUND	MONUMENT SET
NAIL & CAP SET	SEC. CORNER FOUND
	R RECORDED
	M MEASURED
	C CALCULATED

EXISTING	PROPOSED
ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE	
UNDERGROUND CABLE TV, CATV PEDESTAL	
TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE	
ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE	
GAS MAIN, VALVE & GAS LINE MARKER	
WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE	
SANITARY SEWER, CLEANOUT & MANHOLE	
STORM SEWER, CLEANOUT & MANHOLE	
COMBINED SEWER & MANHOLE	
SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN	
POST INDICATOR VALVE	
WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	
MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	
UNIDENTIFIED STRUCTURE	
SPOT ELEVATION	
CONTOUR LINE	
FENCE	
GUARD RAIL	
STREET LIGHT	
SIGN	
CONCRETE	
ASPHALT	

SIDEWALK RAMP LEGEND:
SIDEWALK RAMP 'TYPE R' ®
REFER TO LATEST M.D.O.T. R–28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

SITE DATA TABLE:

SITE AREA: 5.72 ACRES (249,257 SF) (LESS THE 60' 1/2 R.O.W.)

ZONING: NN NODE I, BUILDING FORM C

EXISTING USE: SINGLE–FAMILY RESIDENTIAL
PROPOSED USE: MULTI–FAMILY RESIDENTIAL

BUILDING INFORMATION:
PROPOSED UNITS = 74 UNITS

BUILDING FOOTPRINT AREA:
5–UNIT = 3,253 SF
6–UNIT = 3,899 SF

BUILDING LOT COVERAGE = 4(3,253) + 9(3,899)
= 48,103 / 249,257 = 19.3%

OPEN SPACE = 130,774 / 237,614 = 55.0%

SETBACK REQUIREMENTS:	REQUIRED:	PROPOSED:
FRONT (EAST):	10'	15.00'
SIDE (NORTH):	0'	10.00'
SIDE (SOUTH):	0'	48.27'
REAR (WEST):	30'	139.69'

PARKING CALCULATIONS:
MULTI–FAMILY RESIDENTIAL = 2 SPACES PER UNIT
TOTAL PARKING REQUIRED = 2 * 74 UNITS = 148 SPACES
TOTAL PARKING PROVIDED = 148 GARAGE SPACES + 34 GUEST SPACES
= 182 SPACES

GENERAL NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
2. REFER TO SHEET C–5.0 FOR ON–SITE PAVING DETAILS.
3. REFER TO SHEET C–5.0 FOR ON–SITE SIDEWALK RAMP DETAILS.
4. 'NO PARKING–FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF TROY CURRENT STANDARDS AND REGULATIONS.
6. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
7. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS–OF–WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND /OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–BASE–18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–TBLK–18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
2	KRD	GMB	RESUBMITTAL TO CITY	7/26/19
1	KRD	GMB	REVISED SITE PLAN APPROVAL	

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING ALL UTILITIES AND THEIR LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON–LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1–800–482–7171 (TOLL FREE) www.missdig.net

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083–1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PRELIMINARY SITE PLAN
CROOKS RD. MULTI–FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	GMB	DN.	GMB	SUR.	KTR	P.M.	GMB

S:\PROJECTS\2018\2018–238A CROOKS RD MULTI–FAMILY – OAK\DWG\SITE PLANS\C–2.0 SITE – 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018–238A

SCALE: 1" = 30'

DRAWING NUMBER:
C–2.0

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
BENCHTIE IN NORTH SIDE OF POWERPOLE, ±290' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 739.19

BM #301
BENCHTIE IN WEST SIDE OF POWERPOLE, ±133' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 745.59

BM #302
BENCHTIE ON WEST SIDE OF POWERPOLE, ±62' EAST OF HOUSE #4165.
ELEV. – 746.60

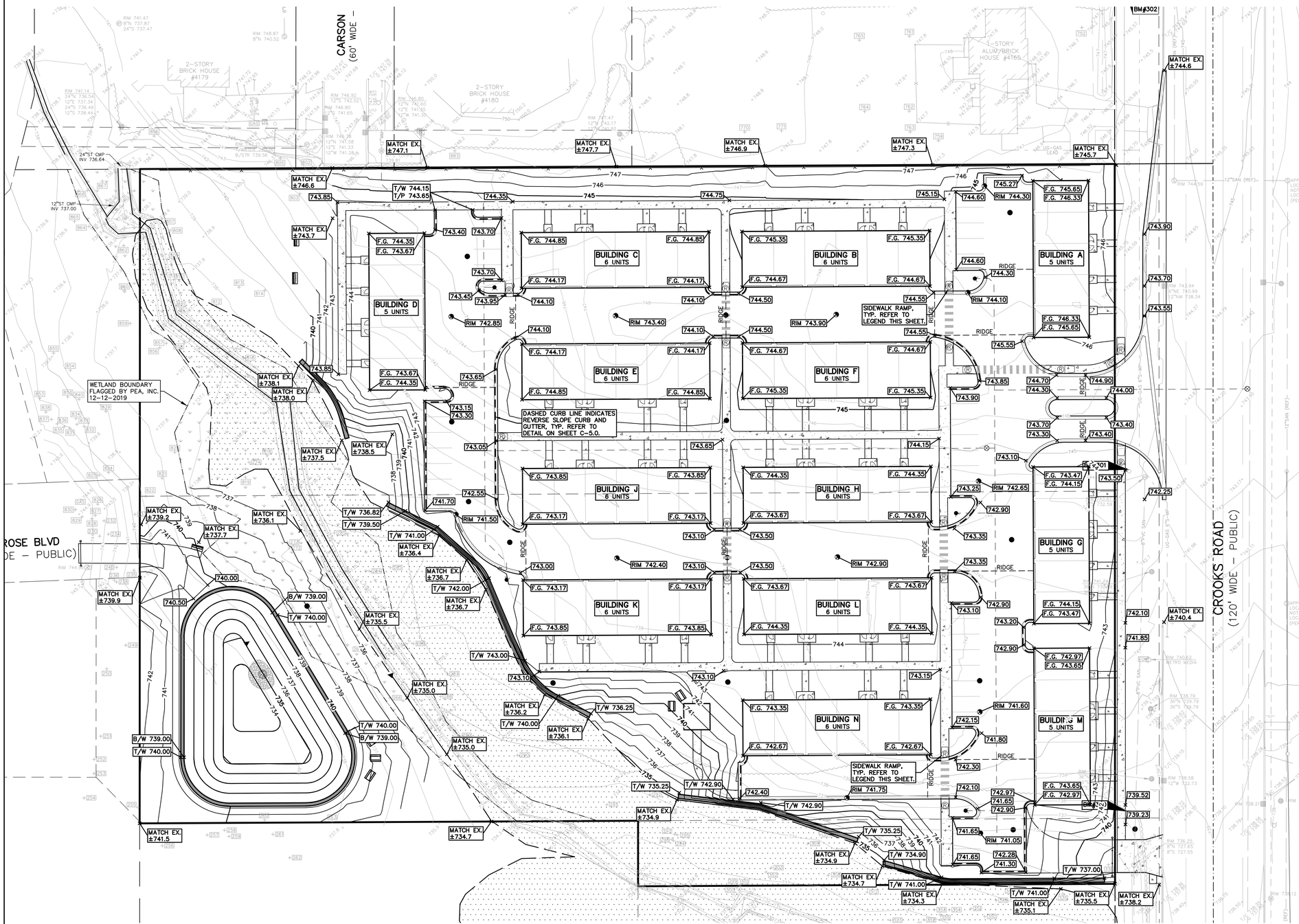
FLOODPLAIN:
(Per Flood Insurance Rate Map Number 26125C–0533F. Revised Date September 29, 2009)

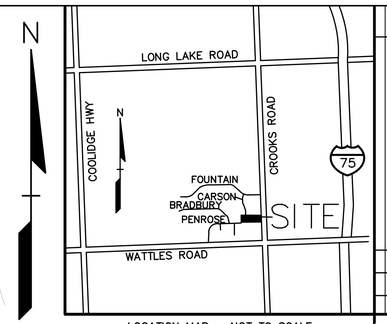
BY GRAPHICAL PLOTTING, THE SITE LIES WITHIN:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water–surface elevation of the 1% annual chance flood.

ZONE A – No Base Flood Elevations determined.

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





LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING		PROPOSED
–OH–ELEC–W–	ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE	
–UG–CATV–	UNDERGROUND CABLE TV, CATV PEDESTAL	
–UG–PHONE–	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE	
–UG–ELEC–	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE	
	GAS MAIN, VALVE & GAS LINE MARKER	
	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE	
	SANITARY SEWER, CLEANOUT & MANHOLE	
	STORM SEWER, CLEANOUT & MANHOLE	
	COMBINED SEWER & MANHOLE	
Y.D.	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN	Y.D.
	POST INDICATOR VALVE	
	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	
	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	
	UNIDENTIFIED STRUCTURE	
816.06	SPOT ELEVATION	871.21
670	CONTOUR LINE	671
	FENCE	
	GUARD RAIL	
	STREET LIGHT	
	SIGN	
CONC.	CONCRETE	STD DUTY / HEAVY DUTY / R.O.W. ONLY.
ASPH.	ASPHALT	STD DUTY / HEAVY DUTY / DEEP STRENGTH

SIDEWALK RAMP LEGEND:

SIDEWALK RAMP 'TYPE R' (R)

REFER TO LATEST M.D.O.T. R–28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. 794.50

PROPOSED CONTOUR LINE 795

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

REVISIONS

No.	BY	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

STATE OF MICHIGAN – GREGORY BONO – ENGINEER – No. 54435 – LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING ALL UTILITIES AND THEIR LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.net

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PRELIMINARY GRADING PLAN
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - DWG\DWG\SITE PLAN\C-3.0 GRADE - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
C-3.0

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
BENCHTIE IN NORTH SIDE OF POWERPOLE, ±290' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 739.19

BM #301
BENCHTIE IN WEST SIDE OF POWERPOLE, ±133' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 745.59

BM #302
BENCHTIE ON WEST SIDE OF POWERPOLE, ±62' EAST OF HOUSE #4165.
ELEV. – 746.60

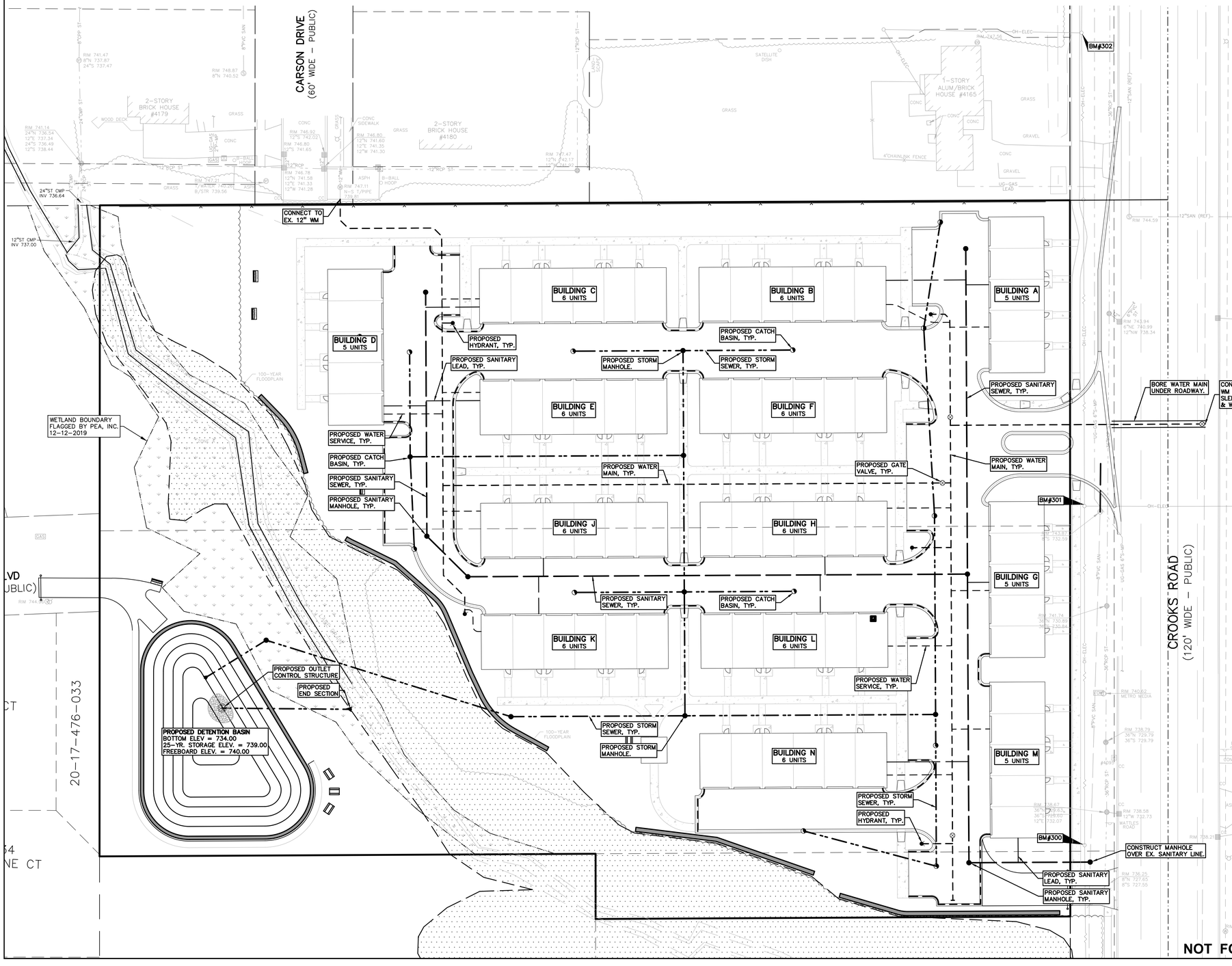
FLOODPLAIN:
(Per Flood Insurance Rate Map Number 26125C–0533F. Revised Date September 29, 2009)

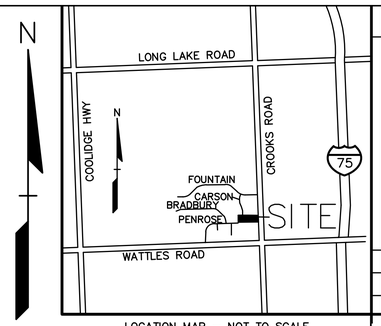
BY GRAPHICAL PLOTTING, THE SITE LIES WITHIN:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water–surface elevation of the 1% annual chance flood.

ZONE A – No Base Flood Elevations determined.

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





LOCATION MAP – NOT TO SCALE

LEGEND

● IRON FOUND	⊗ BRASS PLUG SET
⊠ IRON SET	◉ MONUMENT FOUND
◪ NAIL FOUND	⊛ MONUMENT SET
⊘ NAIL & CAP SET	✪ SEC. CORNER FOUND
	R RECORDED
	M MEASURED
	C CALCULATED

EXISTING	PROPOSED	
–OH–ELEC–		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
–UG–CATV–		UNDERGROUND CABLE TV, CATV PEDESTAL
–UG–PHONE–		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
–UG–ELEC–		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
–GAS–		GAS MAIN, VALVE & GAS LINE MARKER
–W–		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
–S–		SANITARY SEWER, CLEANOUT & MANHOLE
–ST–		STORM SEWER, CLEANOUT & MANHOLE
		COMBINED SEWER & MANHOLE
Y.D.	Y.D.	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
		UNIDENTIFIED STRUCTURE
816.06 ×		SPOT ELEVATION
670		CONTOUR LINE
–x–x–x–		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT

PROPOSED	
	SPOT ELEVATION
671	CONTOUR LINE
–x–x–x–	FENCE
	GUARD RAIL
	STREET LIGHT
	SIGN
	CONCRETE
	ASPHALT

STD DUTY | HEAVY DUTY | R.O.W. ONLY.
STD DUTY | HEAVY DUTY | DEEP STRENGTH

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D–1557).

25 YEAR STORM DETENTION DESIGN
(PER OAKLAND COUNTY DESIGN METHOD)

Site Drainage Data		
Contributing Area (A):	3.63	acre
Allowable Discharge (Qa)	0.73	cfs (0.2*acreage)
Coefficient of Runoff (Cr):	0.720	
25-yr Design Storm Calculations		
Qo = ((Qa)/(A)(Cr):	0.28	cfs/acre impervious
T = -25 + ((8062.5/Qo))^0.5:	144.69	minutes
Vs = (12900(T)/(T+25)) - 40Qo(T):	9,379	cf/acre impervious
Vt = (Vs)(A)(Cr):	**24,513**	**cf**

POND VOLUME CALCULATION (FRUSTUM CONE METHOD)

CONTOUR	AREA	VOLUME	CUMULATIVE VOLUME
734	795	-	-
735	2,625	1,622	1,622
736	4,170	3,368	4,989
737	5,908	5,014	10,003
738	7,872	6,867	16,870
739	10,063	8,945	25,815

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICE, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1–800–482–7171 www.missdig.net
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083–1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PRELIMINARY UTILITY SHEET
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

S:\PROJECTS\2018\2018–238A CROOKS RD MULTI–FAMILY – DWB\DWG\SITE PLAN\(C–4.0) UTIL – 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

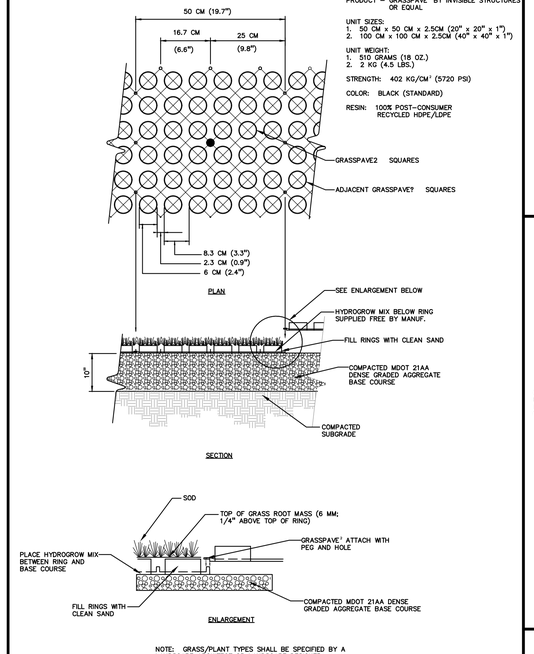
PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
C-4.0

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–BASE–18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–TBLK–18238A.DWG



PRODUCT – GRASSPAVE² BY INVISIBLE STRUCTURES OR EQUAL

UNIT SIZES:
1. 50 CM x 50 CM x 2.5CM (20" x 20" x 1")
2. 100 CM x 100 CM x 2.5CM (40" x 40" x 1")

UNIT WEIGHT:
1. 510 GRAMS (18 OZ.)
2. 2 KG (4.5 LBS.)

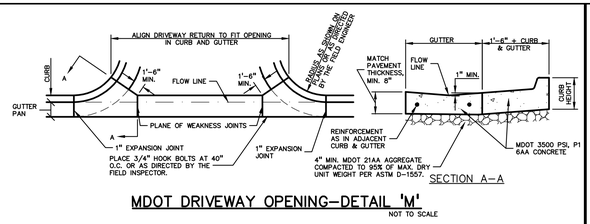
STRENGTH: 402 KG/CM² (5720 PSI)

COLOR: BLACK (STANDARD)

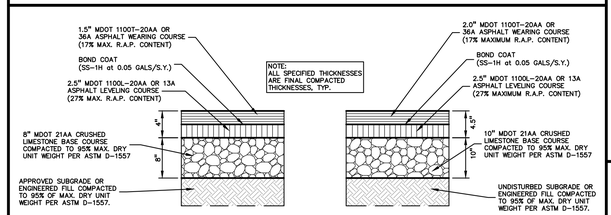
RESIN: 100% POST-CONSUMER RECYCLED HDPE/LDPE

NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER

GRASS PAVERS



MDOT DRIVEWAY OPENING–DETAIL 'M'
NOT TO SCALE



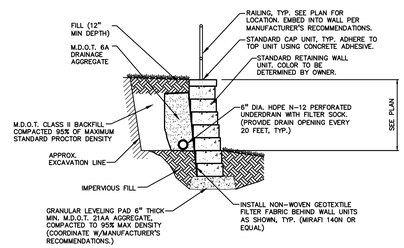
STANDARD DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY)
NOT TO SCALE

HEAVY DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY)
NOT TO SCALE

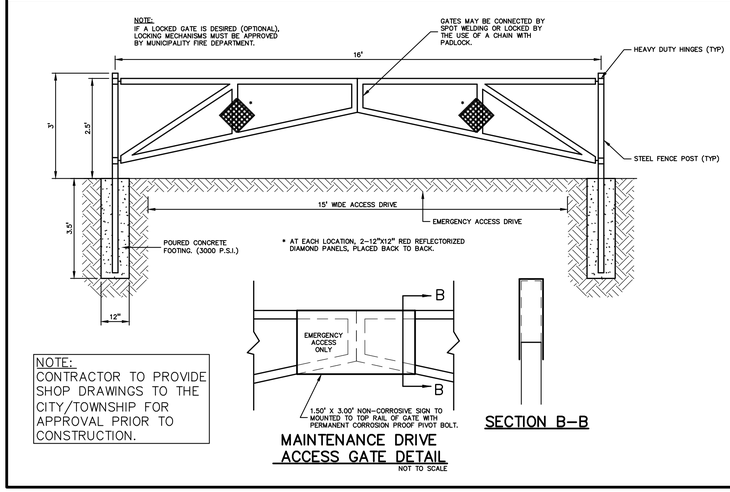
AGGREGATE BASE NOTE:
THIS PAVEMENT SECTION DESIGN ASSUMES THE USE OF MDOT 21AA CRUSHED LIMESTONE BASE MATERIAL THAT MEETS THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION SECTION 902 FOR AGGREGATES. IF CRUSHED CONCRETE AGGREGATE BASE IS PROPOSED IN LIEU OF THE SPECIFIED CRUSHED LIMESTONE MATERIAL, PEA INC. WILL REQUIRE A MINIMUM 25% INCREASE IN BASE THICKNESS. HOWEVER, IF TESTING DOCUMENTATION IS PROVIDED TO PEA, INC. THAT SHOWS THAT THE CRUSHED CONCRETE MATERIAL MEETS ALL REQUIREMENTS OF MDOT SPECIFICATION SECTION 902, THEN THE 25% INCREASE IN THICKNESS MAY BE REEVALUATED.

ASPHALT MATERIAL NOTES:
HOT-MIX ASPHALT MIXTURES UTILIZING RECYCLED ASPHALT PAVEMENT (RAP) MUST MEET MDOT SPECIAL PROVISION 12SP501(C). THE BINDER GRADE FOR THIS WORK IS PG58-22. IF ASPHALT MIXES CONTAINING RAP ARE TO BE SUPPLIED FOR THIS PROJECT, THE ASPHALT BINDER MUST BE REVISED PER MDOT TIER 1 OR TIER 2 REQUIREMENTS (RAP CONTENT UP TO 27% MAXIMUM). TIER 3 MIXES ARE NOT ACCEPTABLE ON THIS PROJECT. AN ASPHALT MIX DESIGN FOR ALL SPECIFIED MIXES SHOULD BE FORWARDED TO PEA INC. FOR REVIEW PRIOR TO CONSTRUCTION

NOTE:
RETAINING WALL DESIGN CALCULATIONS AND SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.



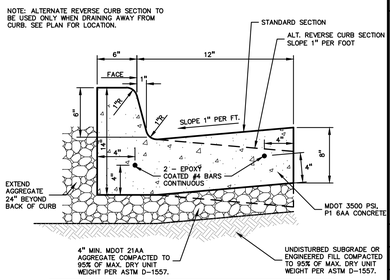
SECTION THROUGH RETAINING WALL
NOT TO SCALE



MAINTENANCE DRIVE ACCESS GATE DETAIL
NOT TO SCALE

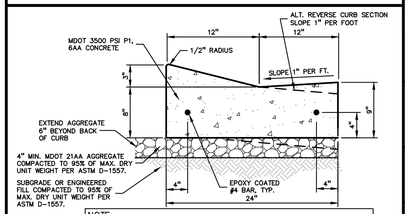
SECTION B–B

NOTE: ALTERNATE REVERSE CURB SECTION TO BE USED ONLY WHEN DRAINING AWAY FROM CURB. SEE PLAN FOR LOCATION.



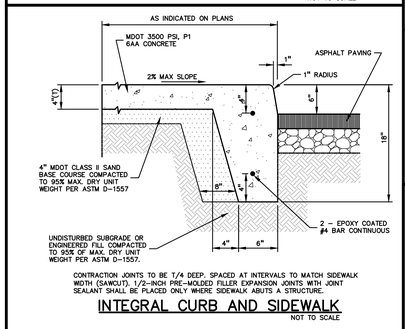
NOTE:
PROVIDE CONTROL JOINTS IN CURB AT 10' O.C. AND AT ALL RADIUS RETURNS. PROVIDE EXPANSION JOINTS AND JOINT SEALANT WHERE CURBS ABUT STRUCTURES.

18" STANDARD CONCRETE CURB AND GUTTER
NOT TO SCALE



NOTE:
PROVIDE CONTROL JOINTS IN CURB AT 10' O.C. AND AT ALL RADIUS RETURNS. PROVIDE EXPANSION JOINTS AND JOINT SEALANT WHERE CURBS ABUT STRUCTURES.

RCOC STANDARD MOUNTABLE CURB AND GUTTER DETAIL
NOT TO SCALE

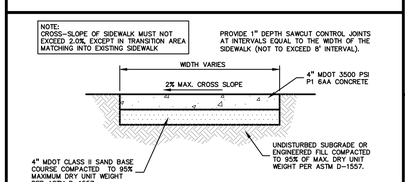


CONTRACTION JOINTS TO BE T/4 DEEP, SPACED AT INTERVALS TO MATCH SIDEWALK WIDTH (SAWCUT). 1/2–INCH PRE–MOLDED FILLER EXPANSION JOINTS WITH JOINT SEALANT SHALL BE PLACED ONLY WHERE SIDEWALK ABUTS A STRUCTURE.

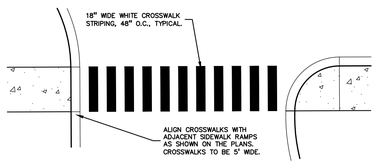
INTEGRAL CURB AND SIDEWALK
NOT TO SCALE

NOTE:
CROSS–SLOPE OF SIDEWALK MUST NOT EXCEED 2.0%, EXCEPT IN TRANSITION AREA MATCHING INTO EXISTING SIDEWALK

PROVIDE 1" DEPTH SAWCUT CONTROL JOINTS AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK (NOT TO EXCEED 5' INTERVAL).



CONCRETE SIDEWALK
NOT TO SCALE



STRIPED CROSSWALK DETAIL
NOT TO SCALE

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	KRD	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED PER CITY PLANNING REVIEW	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING ALL UTILITIES AND VERIFYING LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

NOTES AND DETAILS
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - DWB\DWG\SITE PLAN\C-5.0_DETAILS - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: N.T.S.

DRAWING NUMBER:
C-5.0

DECIDUOUS TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
11	AF2.5	Armstrong Maple	*Acer x freemanii 'Armstrong'*	2.5" Cal.	B&B
16	CB2.5	Columnar European Hornbeam	*Carpinus betulus 'Fastigiata'*	2.5" Cal.	B&B
8	CC2.5	American Hornbeam	*Carpinus caroliniana*	2.5" Cal.	B&B
10	GT2.5	Skyline Honeylocust	*Gleditsia triacanthos 'Skyline'*	2.5" Cal.	B&B
4	PA2.5	Encore London Planetree	*Platanus x acerifolia 'Encore'*	2.5" Cal.	B&B
11	SR2.5	Japanese Tree Lilac	*Syringa reticulata*	2.5" Cal.	B&B
12	TA2.5	Boulevard Linden	*Tilia americana 'Boulevard'*	2.5" Cal.	B&B
72	TOTAL DECIDUOUS				

EVERGREEN TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
20	AC8	Concolor Fir	*Abies concolor*	8' Ht.	B&B
26	PG8	Black Hills Spruce	*Picea glauca 'Densata'*	8' Ht.	B&B
22	PM8	Douglas Fir	*Pseudotsuga menziesii*	8' Ht.	B&B
16	PO8	Serbian Spruce	*Picea omorika*	8' Ht.	B&B
18	PS8	Eastern White pine	*Pinus strobus*	8' Ht.	B&B
17	TC8	Canadian Hemlock	*Tsuga canadensis*	8' Ht.	B&B
119	TOTAL EVERGREEN				

LANDSCAPE CALCULATIONS:
PER CITY OF TROY ZONING ORDINANCE; R1-B, NN: I NODE, BUILDING FORM C:

GREENBELT
REQUIRED: 1 TREE / 30 LF OF FRONTAGE

CROOKS ROAD: 400 LF FRONTAGE/ 30 = 13 TREES

PROVIDED: 13 TREES

INTERNAL PUBLIC OR PRIVATE ROAD STREET TREES:
REQUIRED: 1 TREE / 50 LF (BOTH SIDES RD.)
2,750 LF / 50 LF = 55 TREES

PROVIDED: 55 DECIDUOUS TREES

RESIDENTIAL BUFFER
NORTH PROPERTY LINE
REQUIRED: 1 EVERGREEN / 10 FT OR 1 NARROW EVERGREEN/3 FT OR SOLID OPAQUE FENCE
594 LF / 10 = 59 EVERGREEN TREES

PROVIDED: SOLID OPAQUE FENCE AND 59 EVERGREEN TREES ALONG NORTH SIDE OF PROPERTY

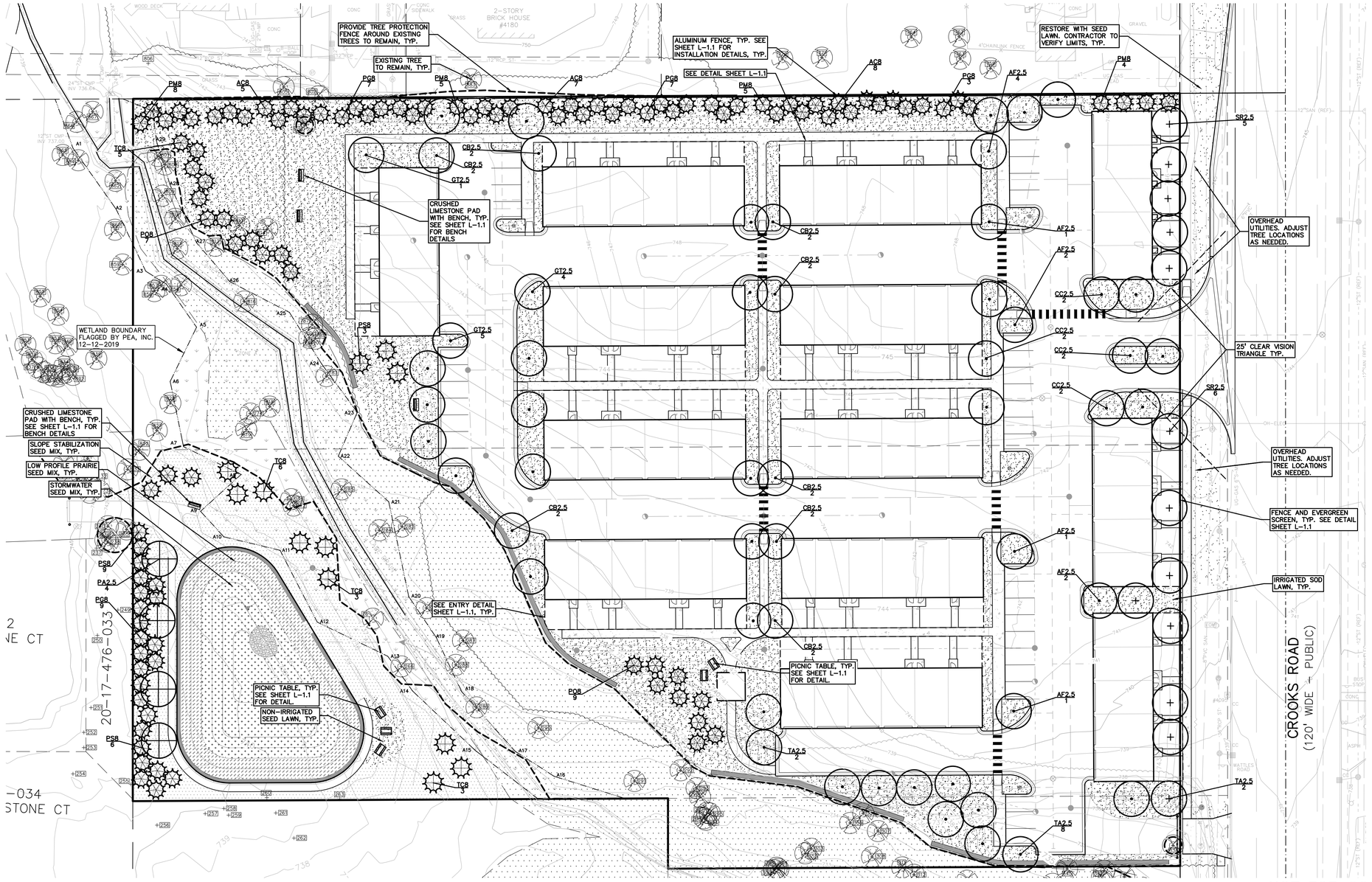
WEST PROPERTY LINE
REQUIRED: 399 LF / 10 FT = 40 TREES

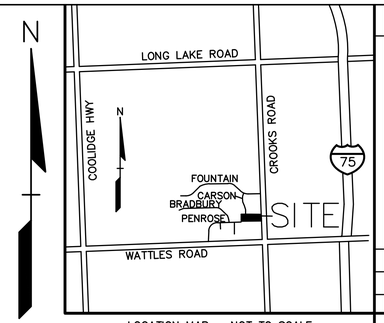
PROVIDED: 40 EVERGREEN TREES + 15 ADDITIONAL TREES NOT REQUIRED BY ORDINANCE

WOODLAND TREES				
WOODLAND TREES REMOVED:	**45**	(REPLACE AT 50% OF REMOVED DBH)		
447" DBH x 0.5 =		**224"** REPLACEMENT		
WOODLAND TREES SAVED:	24	(CREDIT OF 2X DBH)		
225 DBH x 2 =		**450"** CREDIT		
223.5 -	450	=	-226.5	
0 " DBH REQUIRED FOR WOODLAND REPLACEMENT				

LANDMARK TREES				
LANDMARK TREES REMOVED:	**5**	(REPLACE AT 100% OF REMOVED DBH)		
108" DBH x 1 =		**108"** REPLACEMENT		
LANDMARK TREES SAVED:	1	(CREDIT OF 2X DBH)		
13" DBH x 2 =		**26"** CREDIT		
108 -	26	=	82	
0 " TOTAL DBH REQUIRED FOR REPLACEMENT				

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





LOCATION MAP - NOT TO SCALE

KEY:

- = GREENBELT TREES
- = INTERNAL PUBLIC ROAD STREET TREES
- = RESIDENTIAL BUFFER TREES
- = TREES NOT REQUIRED BY ORDINANCE
- = RESTORED SEED LAWN
- = IRRIGATED SOD LAWN
- = STORM WATER SEED MIX WITH STAKED EROSION MAT. BY: CARDNO NATIVE PLANT NURSERY PHONE: 574 . 586 . 2412
- = LOW PROFILE PRAIRIE MIX WITH STAKED EROSION MAT BY: CARDNO NATIVE PLANT NURSERY PHONE: 574 . 586 . 2412
- = SLOPE STABILIZATION MIX WITH STAKED EROSION MAT BY: CARDNO NATIVE PLANT NURSERY PHONE: 574 . 586 . 2412
- = EXISTING TREES TO REMAIN WITH TREE PROTECTION FENCE (800)

*NOTE: TREES SHALL BE PLACED AT A MINIMUM OF 5' AWAY FROM UTILITY LEADS.

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH, WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	11/13/20
4	KRD	GMB	REVISED PER CITY PLANNING REVIEW	12/4/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20

REVISIONS

LYNN A. WHIPPLE LANDSCAPE ARCHITECT No. 1301 — STATE OF MICHIGAN — REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PRELIMINARY LANDSCAPE PLAN
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	LW.	SUR.	KTR	P.M.	GMB

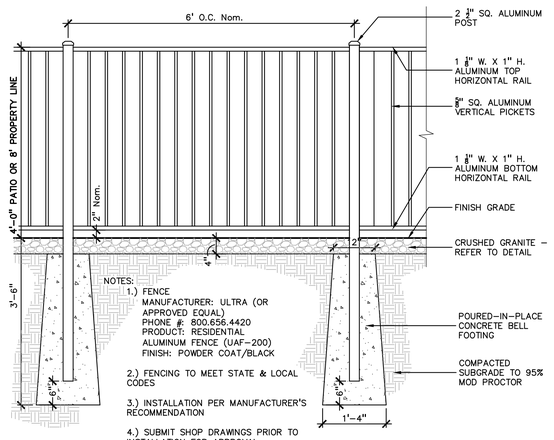
S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - DWB\DWG\LANDSCAPE\SITE PLANS\L-1.0 LANDSCAPE PLAN 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

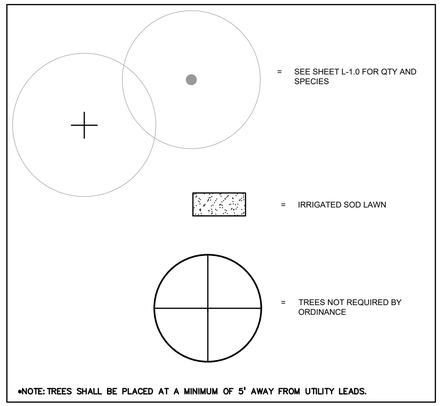
DRAWING NUMBER:
L-1.0

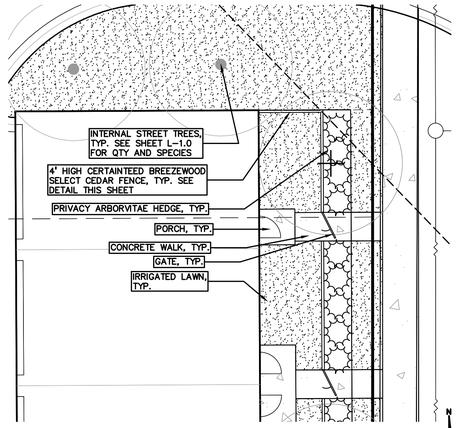


8 ALUMINUM FENCING DETAIL

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

KEY:





6 TYPICAL CROOKS ROAD PATIO DETAIL

SCALE: 1" = 10'-0"

TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN; INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

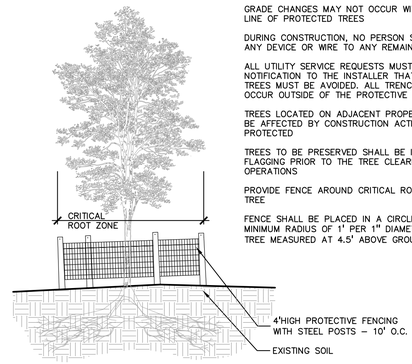
ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

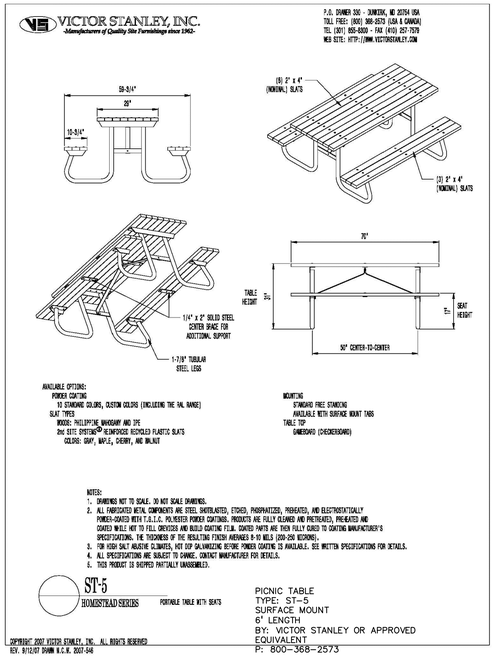
PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND



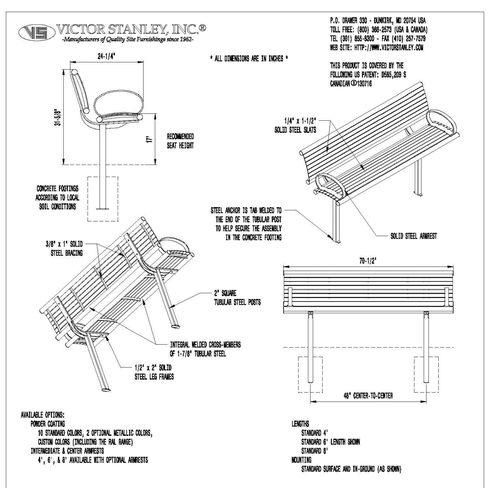
3 TREE PROTECTION DETAIL

SCALE: 1" = 3'-0"



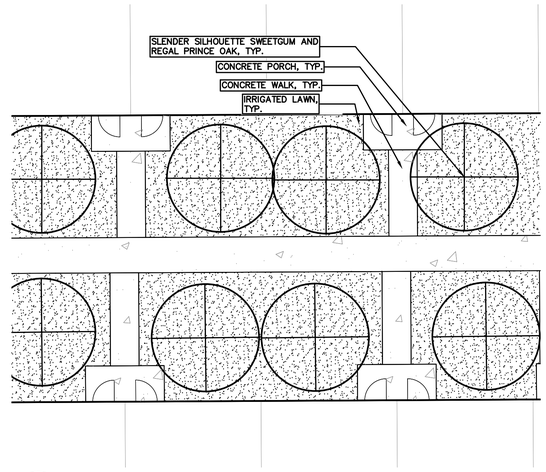
10 PICNIC TABLE

NOT TO SCALE



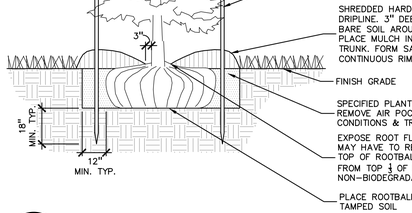
9 BENCH

NOT TO SCALE



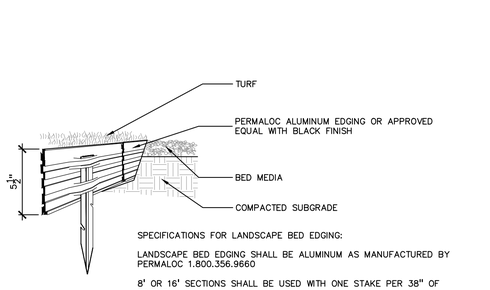
5 TYPICAL PATIO DETAIL

SCALE: 1" = 10'-0"



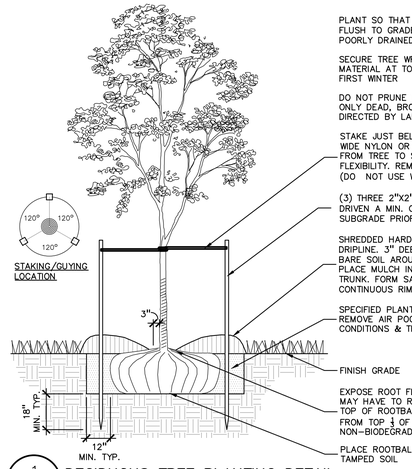
2 EVERGREEN TREE PLANTING DETAIL

SCALE: 1" = 3'-0"



4 ALUMINUM EDGE DETAIL

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



1 DECIDUOUS TREE PLANTING DETAIL

SCALE: 1" = 3'-0"

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\SURBASE-TOPOGRAPHIC.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\GRXTS\PLNTSCHDL-REVISED.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\GRXTS\PLNTSCHDL-REVISED.DWG

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	CAB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED PER CITY PLANNING REVIEW	10/4/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

LYNN A. WHIPPLE LANDSCAPE ARCHITECT No. 47901 REGISTERED LANDSCAPE ARCHITECT STATE OF MICHIGAN

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

LANDSCAPE DETAILS
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	LAW	SUR.	KTR	P.M.	GMB

\\pealan1\pea\PROJECTS\2018\2018-238A - CROOKS RD MULTI-FAMILY - DMD\DWG\LANDSCAPE\SITE PLANS\L-1.1 LANDSCAPE DETAILS-18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: N/A

DRAWING NUMBER:
L-1.1

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

LOT 85 | LOT 86 | LOT 87 | LOT 88

"WOODLANDS OF TROY NO. 4" (L.220, P.7-9)

CARSON DRIVE (60' WIDE – PUBLIC)

2-STORY BRICK HOUSE #4179

2-STORY BRICK HOUSE #4180

1-STORY ALUM./BRICK HOUSE #4166

EXISTING TREE TO REMAIN TYP.

EXISTING TREE TO BE REMOVED TYP.

PROVIDE TREE PROTECTION FENCE AROUND EXISTING TREES TO REMAIN, TYP.

PART OF LOT 2

PART OF LOT 3

NORTH 1/2 LOT 3

"SUPERVISOR'S PLAT OF TROY FARMSITES" (L.56, P.59)

OUTLOT B | OUTLOT C | OUTLOT D | OUTLOT A

WETLAND BOUNDARY FLAGGED BY PEA, INC. 12-12-2019

100-YEAR FLOODPLAIN

N89°42'00"E 300.19'
N89°42'00"E 594.91'(C)
S89°42'00"W 294.72'(C)
S89°43'52"W 294.21'(D)
S89°42'00"W 60.00'(C)
S89°43'52"W 27.00'(D)
SE COR LOT 2
N00°01'28"E 199.67'
N00°01'28"E 399.34'(C)
S00°01'30"E 199.67'
S00°01'30"E 439.34'(C)
S89°42'00"W 595.08'
S89°42'00"W 622.07'
S89°42'00"W 304.20'(C)
N00°01'28"E 40.00'(C)
S00°01'30"E 40.00'(C)
S89°42'00"W 290.87' (R)
S89°42'00"W 291.08'(C)

E BLVD – PUBLIC)

LOT 79 | LOT 80 | LOT 81

LONG LAKE ROAD
COOLIDGE HWY
CROOKS ROAD
FOUNTAIN
CARSON
BRADBURY
PENROSE
SITE
WATTLES ROAD
75
N

LOCATION MAP – NOT TO SCALE

KEY:

= EXISTING TREE TO BE REMOVED

= EXISTING TREE TO REMAIN

= TREE PROTECTION FENCING

SEE SHEET T-1.1 FOR EXISTING TREE LIST AND REPLACEMENT CALCULATIONS

TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN; INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

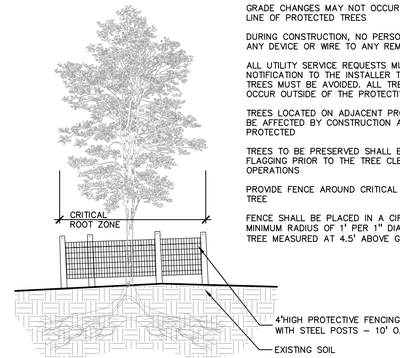
ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND



1 TREE PROTECTION DETAIL
SCALE: 1" = 3'-0"

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/20
3	KRD	GMB	REVISED PER PEA REVIEW	11/10/20
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 1301
REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR LISTED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
TOLL FREE

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

TREE PRESERVATION PLAN
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	JE	SUR.	KTR	P.M.	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - OMB\DWG\LANDSCAPE\SITE PLANS\T-1.0 TREE PRESERVATION PLAN - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

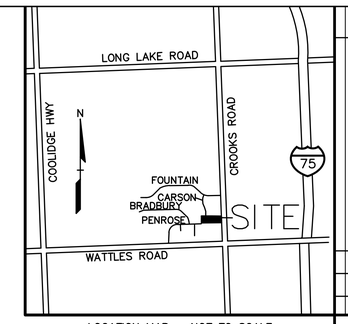
PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
T-1.0

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT	CLASS	SAVE / REMOVE	ON-SITE	REPLACE
230	WW	8	Weeping Willow	Salix babylonica	Very Poor		INVASIVE	-	N	-
231	CT	23	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
232	CT	13	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
233	BW	8	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
234	WW	8	Weeping Willow	Salix babylonica	Fair		INVASIVE	-	N	-
235	CT	10	Cottonwood	Populus deltoides	Fair	x1	INVASIVE	-	N	-
236	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
237	EE	8	Siberian Elm	Ulmus pumila	Fair		INVASIVE	-	N	-
238	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
239	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
240	CT	9	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
241	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
242	CT	6	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
243	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
244	CT	17	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
245	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
246	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
247	BW	12	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
248	EE	7	Siberian Elm	Ulmus pumila	Poor		INVASIVE	R	Y	-
249	BW	8	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
250	WW	14	Weeping Willow	Salix babylonica	Good		INVASIVE	-	N	-
251	WW	14	Weeping Willow	Salix babylonica	Good		INVASIVE	-	N	-
252	BW	10	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
253	E	8	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
254	MW	15	White Mulberry	Morus alba	Fair		INVASIVE	-	N	-
255	AP	6	Domestic Apple	Malus sylvestris	Poor		WOODLAND	S	Y	-
256	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
257	BW	13	Black Walnut	Juglans nigra	Good		WOODLAND	-	N	-
258	WS	8	White Spruce	Picea glauca	Very Poor		WOODLAND	-	N	-
259	WS	11	White Spruce	Picea glauca	Poor		WOODLAND	-	N	-
260	E	9	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
261	WS	13	White Spruce	Picea glauca	Fair		WOODLAND	-	N	-
262	CT	20	Cottonwood	Populus deltoides	Fair	x1	INVASIVE	-	N	-
263	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	S	Y	-
264	TH	8	Thornapple/Hawthorne	Crataegus spp.	Poor	x1	WOODLAND	R	Y	-
265	E	6	American Elm	Ulmus americana	Poor		INVASIVE	R	Y	-
266	BW	13	Black Walnut	Juglans nigra	Fair		WOODLAND	S	Y	-
267	BW	10	Black Walnut	Juglans nigra	Fair		WOODLAND	S	Y	-
268	BW	8	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
269	BW	11	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
270	CH	11	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
271	BW	8	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
272	E	12	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
273	E	10	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
274	CT	30	Cottonwood	Populus deltoides	Fair		INVASIVE	S	Y	-
275	NS	13	Norway Spruce	Picea Abies	Good		WOODLAND	R	Y	REPLACE
276	NS	16	Norway Spruce	Picea Abies	Fair		WOODLAND	R	Y	REPLACE
277	SC	16	Scotch Pine	Pinus sylvestris	Fair		WOODLAND	R	Y	REPLACE
278	SC	16	Scotch Pine	Pinus sylvestris	Fair	x1	WOODLAND	R	Y	REPLACE
279	SC	16	Scotch Pine	Pinus sylvestris	Fair		WOODLAND	R	Y	REPLACE
280	TH	8	Thornapple/Hawthorne	Crataegus spp.	Poor		WOODLAND	R	Y	-
281	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
282	WP	14	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	Y	REPLACE
283	E	24	American Elm	Ulmus americana	Fair		INVASIVE	S	Y	-
284	TH	7	Thornapple/Hawthorne	Crataegus spp.	Poor	x2	WOODLAND	S	Y	-
285	BW	20	Black Walnut	Juglans nigra	Very Poor		LANDMARK	S	Y	-
286	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	S	Y	-
287	CH	7	Domestic Cherry	Prunus avium	Poor	x1	WOODLAND	S	Y	-
288	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	S	Y	-
289	GA	13	Green Ash	Fraxinus pennsylvanica	Very Poor		INVASIVE	S	Y	-
290	E	15	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
291	E	12	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
292	BW	12	Black Walnut	Juglans nigra	Fair		WOODLAND	S	Y	-
293	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	S	Y	-
294	CT	23	Cottonwood	Populus deltoides	Fair		INVASIVE	S	Y	-
295	BWW	25	Black Willow	Salix nigra	Poor		INVASIVE	S	Y	-
296	CT	18	Cottonwood	Populus deltoides	Fair		INVASIVE	S	Y	-
297	BX	7	Box elder	Acer negundo	Poor		INVASIVE	S	Y	-
298	E	10	American Elm	Ulmus americana	Poor	no tag	INVASIVE	S	Y	-
299	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	S	Y	-
300	BX	6	Box elder	Acer negundo	Poor		INVASIVE	-	N	-
301	BX	6	Box elder	Acer negundo	Poor		INVASIVE	-	N	-
302	BX	6	Box elder	Acer negundo	Poor		INVASIVE	S	Y	-
303	BX	6	Box elder	Acer negundo	Poor		INVASIVE	S	Y	-
304	E	9	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
305	BW	6	Black Walnut	Juglans nigra	Fair		WOODLAND	S	Y	-
306	E	19	American Elm	Ulmus americana	Fair		INVASIVE	R	Y	-
307	E	9	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
308	SM	16	Silver Maple	Acer saccharinum	Fair	move 5 feet south / no tag	INVASIVE	S	Y	-
309	BX	10	Box elder	Acer negundo	Very Poor		INVASIVE	R	Y	-
310	CH	16	Domestic Cherry	Prunus avium	Poor		LANDMARK	R	Y	-
311	E	8	American Elm	Ulmus americana	Fair	move south 7 ft /no tag	INVASIVE	S	Y	-
312	CH	12	Domestic Cherry	Prunus avium	Poor	move south 8 ft/ no tag	LANDMARK	-	N	-
313	CH	8	Domestic Cherry	Prunus avium	Poor		WOODLAND	R	Y	-
314	CT	25	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
315	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
316	BX	8	Box elder	Acer negundo	Poor		INVASIVE	R	Y	-
317	CH	7	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
318	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
319	CH	7	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
320	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
321	BX	8	Box elder	Acer negundo	Fair		INVASIVE	R	Y	-
322	MW	7	White Mulberry	Morus alba	Fair		INVASIVE	-	N	-
323	BX	6	Box elder	Acer negundo	Poor		INVASIVE	-	N	-
324	E	7	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
325	E	8	American Elm	Ulmus americana	Poor		INVASIVE	-	N	-
326	BW	10	Black Walnut	Juglans nigra	Poor		WOODLAND	-	N	-
327	E	13	American Elm	Ulmus americana	Poor		INVASIVE	-	N	-
328	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
329	E	10	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
330	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
331	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
332	BW	6	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
333	BW	10	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
334	BW	7	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
335	E	9	American Elm	Ulmus americana	Poor	x3	INVASIVE	-	N	-
336	BW	7	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
337	BW	9	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
338	BW	7	Black Walnut	Juglans nigra	Poor		WOODLAND	S	Y	-
339	MW	7	White Mulberry	Morus alba	Fair		INVASIVE	R	Y	-
340	CH	7	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
341	GA	6	Green Ash	Fraxinus pennsylvanica	Very Poor		INVASIVE	-	N	-
342	E	6	American Elm	Ulmus americana	Very Poor		INVASIVE	-	N	-
343	E	7	American Elm	Ulmus americana	Fair	x3	INVASIVE	R	Y	-
344	E	7	American Elm	Ulmus americana	Fair	x1	INVASIVE	-	N	-
345	E	6	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
346	GA	8	Green Ash	Fraxinus pennsylvanica	Fair		INVASIVE	R	Y	-
347	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
348	E	6	American Elm	Ulmus americana	Fair		INVASIVE	R	Y	-
349	E	9	American Elm	Ulmus americana	Fair	x1	INVASIVE	-	N	-
350	E	6	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
351	E	7	American Elm	Ulmus americana	Fair	x5	INVASIVE	-	N	-
352	E	8	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
353	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
354	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
355	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
356	E	10	American Elm	Ulmus americana	Poor		INVASIVE	-	N	-
357	BX	7	Box elder	Acer negundo	Fair		INVASIVE	R	Y	-
358	CH	8	Domestic Cherry	Prunus avium	Poor		WOODLAND	R	Y	-
359	CH	11	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
360	CH	8	Domestic Cherry	Prunus avium	Fair	x1	WOODLAND	R	Y	REPLACE
361	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
362	SC	14	Scotch Pine	Pinus sylvestris	Fair		WOODLAND	R	Y	REPLACE
363	CH	10	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
364	BS	19	Blue Spruce	Picea pungens	Fair		LANDMARK	R	Y	REPLACE
744	NS	19	Norway Spruce	Picea Abies	POOR		LANDMARK	R	Y	-
745	NS	24	Norway Spruce	Picea Abies	FAIR		LANDMARK	R	Y	REPLACE
746	BS	8	Blue Spruce	Picea pungens	FAIR		WOODLAND	-	N	-
747	NS	8	Norway Spruce	Picea Abies	GOOD		WOODLAND	-	N	-
748	NS	8	Norway Spruce	Picea Abies	GOOD		WOODLAND	-	N	-
749	NS	6	Norway Spruce	Picea Abies	GOOD		WOODLAND	-	N	-
750	BS	6	Blue Spruce	Picea pungens	GOOD	X2	WOODLAND	-	N	-

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT	CLASS	SAVE / REMOVE	ON-SITE	REPLACE
751	WP	7	(Eastern) White Pine	Pinus strobus	FAIR		WOODLAND	-	N	-
752	NM	17	Norway Maple	Acer platanoides	GOOD	X2	INVASIVE	-	N	-
753	PR	11	Pear	Pyrus communis	POOR		WOODLAND	R	Y	-
754	MR	24	Red Mulberry	Morus rubra	POOR		INVASIVE	R	Y	-
755	MR	7	Red Mulberry	Morus rubra	GOOD		INVASIVE	R	Y	-
756	B	7	Basswood	Tilia americana	GOOD		WOODLAND	R	Y	REPLACE
757	B	6	Basswood	Tilia americana	GOOD	X4	WOODLAND	R	Y	REPLACE
758	BS	15	Blue Spruce	Picea pungens	POOR		WOODLAND	R	Y	-
759	RC	12	Red Cedar	Juniperus virginiana	POOR	X3	INVASIVE	-	N	-
760	SM	13	Silver Maple	Acer saccharinum	GOOD	X5	INVASIVE	-	N	-
761	GA	11	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	-	N	-
762	SM	29	Silver Maple	Acer saccharinum	POOR		INVASIVE	-	N	-
763	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	-	N	-
764	SM	27	Silver Maple	Acer saccharinum	POOR		INVASIVE	-	N	-
765	SM	18	Silver Maple	Acer saccharinum	GOOD	X2	INVASIVE	-	N	-
766	WP	8	(Eastern) White Pine	Pinus strobus	GOOD		WOODLAND	-	N	-
767	BP	10	Bradford Pear	Pyrus calleryanna	GOOD		WOODLAND	-	N	-
768	WP	8	(Eastern) White Pine	Pinus strobus	GOOD		WOODLAND	-	N	-
769	WP	8	(Eastern) White Pine	Pinus strobus	GOOD		WOODLAND	-	N	-
770	E	16	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
771	CT	20	Cottonwood	Populus deltoides	GOOD		INVASIVE	-	N	-
772	BW	25	Black Walnut	Juglans nigra	POOR	X2	LANDMARK	R	Y	-
773	SG	15	Sweetgum	Liquidambar styraciflua	GOOD		LANDMARK	R	Y	REPLACE
774	MG	29	Magnolia	Magnolia grandiflora	GOOD		LANDMARK	R	Y	REPLACE
775	RM	10	Red Maple	Acer rubrum	GOOD		WOODLAND	S	Y	-
776	RM	10	Red Maple	Acer rubrum	GOOD	X2	WOODLAND	S	Y	-
777	BW	19	Black Walnut	Juglans nigra	POOR	X2	LANDMARK	S	Y	-
778	BW	8	Black Walnut	Juglans nigra	POOR		WOODLAND	S	Y	-
779	BW	10	Black Walnut	Juglans nigra	POOR		WOODLAND	S	Y	-
780	CA	8	Crab Apple	Malus caronaria	POOR		WOODLAND	S	Y	-
781	CH	12	Domestic Cherry	Prunus avium	POOR		LANDMARK	S	Y	-
782	CH	13	Domestic Cherry	Prunus avium	FAIR		LANDMARK	S	Y	-
783	BW	11	Black Walnut	Juglans nigra	FAIR		WOODLAND	S	Y	-
784	BW	8	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
785	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
786	BW	8	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
787	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
788	BW	12	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
789	BX	11	Box elder	Acer negundo	FAIR	X2	INVASIVE	S	Y	-
790	E	12	American Elm	Ulmus americana	FAIR		INVASIVE	R	Y	-
791	E	13	American Elm	Ulmus americana	GOOD		INVASIVE	R	Y	-
792	TH	9	Thornapple/Hawthorne	Cragagegus spp.	POOR		WOODLAND	R	Y	-
793	E	11	American Elm	Ulmus americana	POOR		INVASIVE	R	Y	-
794	BW	21	Black Walnut	Juglans nigra	FAIR		LANDMARK	R	Y	REPLACE
795	BW	8	Black Walnut	Juglans nigra	POOR		WOODLAND	R	Y	-
796	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
797	E	9	American Elm	Ulmus americana	FAIR		INVASIVE	R	Y	-
798	E	10	American Elm	Ulmus americana	POOR		INVASIVE	R	Y	-
799	E	10	American Elm	Ulmus americana	POOR		INVASIVE	R	Y	-
800	WW	13	Weeping Willow	Salix babylonica	GOOD		INVASIVE	R	Y	-
801	CH	10	Domestic Cherry	Prunus avium	GOOD		WOODLAND	R	Y	REPLACE
802	CH	9	Domestic Cherry	Prunus avium	GOOD	X3	WOODLAND	-	N	-
803	E	10	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
804	CH	10	Domestic Cherry	Prunus avium	POOR	X2	WOODLAND	R	Y	-
805	GA	7	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	-	N	-
806	WW	31	Weeping Willow	Salix babylonica	GOOD		INVASIVE	-	N	-
807	E	13	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
808	E	7	American Elm	Ulmus americana	GOOD		INVASIVE	S	Y	-
809	CT	22	Cottonwood	Populus deltoides	POOR	X2	INVASIVE	S	Y	-
810	CT	7	Cottonwood	Populus deltoides	GOOD	X2	INVASIVE	S	Y	-
811	CT	32	Cottonwood	Populus deltoides	GOOD		INVASIVE	S	Y	-
812	E	10	American Elm	Ulmus americana	FAIR		INVASIVE	S	Y	-
813	BC	14	Wild Black Cherry	Prunus serotina	POOR		WOODLAND	S	Y	-
814	E	7	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
815	CH	12	Domestic Cherry	Prunus avium	POOR	X2	LANDMARK	S	Y	-
816	E	9	American Elm	Ulmus americana	FAIR	X2	INVASIVE	S	Y	-
817	BW	7	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
818	CT	28	Cottonwood	Populus deltoides	GOOD		INVASIVE	S	Y	-
819	E	10	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
820	BW	9	Black Walnut	Juglans nigra	FAIR		WOODLAND	S	Y	-
821	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
822	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
823	BW	8	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
824	CT	7	Cottonwood	Populus deltoides	FAIR		INVASIVE	-	N	-
825	CT	7	Cottonwood	Populus deltoides	FAIR		INVASIVE	-	N	-
826	WW	14	Weeping Willow	Salix babylonica	POOR		INVASIVE	-	N	-
827	WW	7	Weeping Willow	Salix babylonica	FAIR		INVASIVE	-	N	-
828	WW	14	Weeping Willow	Salix babylonica	FAIR		INVASIVE	-	N	-
829	B	7	Basswood	Tilia americana	GOOD		WOODLAND	-	N	-
830	E	7	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
831	CH	10	Domestic Cherry	Prunus avium	GOOD		WOODLAND	-	N	-
832	CH	10	Domestic Cherry	Prunus avium	FAIR		WOODLAND	-	N	-
833	CH	6	Domestic Cherry	Prunus avium	GOOD	X2	WOODLAND	-	N	-
834	CH	9	Domestic Cherry	Prunus avium	POOR		WOODLAND	-	N	-
835	CH	10	Domestic Cherry	Prunus avium	GOOD		WOODLAND	-	N	-
836	CH	12	Domestic Cherry	Prunus avium	GOOD		LANDMARK	-	N	-
837	CH	10	Domestic Cherry	Prunus avium	GOOD		WOODLAND	-	N	-
838	E	24	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
839	NM	12	Norway Maple	Acer platanoides	GOOD		INVASIVE	-	N	-
840	CH	8	Domestic Cherry	Prunus avium	POOR		WOODLAND	-	N	-
853	CH	12	Domestic Cherry	Prunus avium	GOOD	X2	LANDMARK	-	N	-
854	E	8	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
855	CH	8	Domestic Cherry	Prunus avium	POOR	X2	WOODLAND	-	N	-
856	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
857	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
858	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
859	E	10	American Elm	Ulmus americana	POOR		INVASIVE	-	N	-
860	BW	13	Black Walnut	Juglans nigra	FAIR		WOODLAND	-	N	-
861	TH	10	Thornapple/Hawthorne	Cragagegus spp.	FAIR	X2	WOODLAND	S	Y	-
862	E	13	American Elm	Ulmus americana	FAIR		INVASIVE	-	N	-
863	E	8	American Elm	Ulmus americana	GOOD		INVASIVE	S	Y	-
864	GA	14	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	-	N	-
865	E	7	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
866	WW	15	Weeping Willow	Salix babylonica	GOOD		INVASIVE	-	N	-
867	WW	18	Weeping Willow	Salix babylonica	FAIR	X2	INVASIVE	-	N	-
868	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
869	BW	7	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
870	BW	14	Black Walnut	Juglans nigra	FAIR		WOODLAND	R	Y	REPLACE
871	HK	7	Hackberry	Celtis occidentalis	GOOD		WOODLAND	S	Y	-
872	WO	7	White Oak	Quercus alba	GOOD		WOODLAND	R	Y	REPLACE
873	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
874	BW	6	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
875	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
876	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
877	BW	10	Black Walnut	Juglans nigra	FAIR		WOODLAND	R	Y	REPLACE
878	E	10	American Elm	Ulmus americana	POOR		INVASIVE	R	Y	-
879	CH	7	Domestic Cherry	Prunus avium	POOR		WOODLAND	R	Y	-
880	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
881	BW	11	Black Walnut	Juglans nigra	POOR		WOODLAND	R	Y	-
882	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
883	E	3	American Elm	Ulmus americana	FAIR		INVASIVE	-	N	-
884	BW	9	Black Walnut	Juglans nigra	FAIR		WOODLAND	S	Y	-
885	E	8	American Elm	Ulmus americana	FAIR		INVASIVE	R	Y	-
886	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
887	PN	7	Pin Cherry	Prunus pennsylvanica	POOR		WOODLAND	R	Y	-
888	GA	9	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	S	Y	-
889	E	10	American Elm	Ulmus americana	GOOD		INVASIVE	S	Y	-
890	MR	10	Red Mulberry	Morus rubra	POOR		INVASIVE	R	Y	-
891	GA	7	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	R	Y	-
892	GA	8	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	S	Y	-
893	E	9	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
894	BW	10	Black Walnut	Juglans nigra	FAIR		WOODLAND	R	Y	REPLACE
895	MR	8	Red Mulberry	Morus rubra	POOR		INVASIVE	R	Y	-
896	BW	11	Black Walnut	Juglans nigra	POOR		WOODLAND	R	Y	-



LOCATION MAP – NOT TO SCALE

WOODLAND TREES		
WOODLAND TREES REMOVED:	**45**	(REPLACE AT 50% OF REMOVED DBH)
447" DBH x 0.5 =	**224"**	REPLACEMENT
WOODLAND TREES SAVED:	24	(CREDIT OF 2X DBH)
225 DBH x 2 =	**450"**	CREDIT
223.5 - 450	=	-226.5
0 " DBH REQUIRED FOR WOODLAND REPLACEMENT		
LANDMARK TREES		
LANDMARK TREES REMOVED:	**5**	(REPLACE AT 100% OF REMOVED DBH)
108" DBH x 1 =	**108"**	REPLACEMENT
LANDMARK TREES SAVED:	1	(CREDIT OF 2X DBH)
13" DBH x 2 =	**26"**	CREDIT
108 - 26	=	82
0 " TOTAL DBH REQUIRED FOR REPLACEMENT		

KEY: NIC FOR REPLACEMENT = DEAD, DAMAGED, DISEASED, INVASIVE SPECIES

STRIKETHROUGH = TREES TO REMOVE **R**

TYP. TEXT = TREES TO SAVE **S**

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/20
3	KRD	GMB	REVISED PER PEA COMMENTS	8/26/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

LYNN A. WHIPPLE LANDSCAPE ARCHITECT No. 1301 REGISTERED LANDSCAPE ARCHITECT STATE OF MICHIGAN

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY AND NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

TREE PRESERVATION LIST
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
JE	JE	KTR	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY – DWG\DWG\LANDSCAPE\SITE PLANS\[T-1.0] TREE PRESERVATION PLAN – 18238A.dwg

ORI

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Schedule											
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
○	P1* (6' HEIGHT)	145	Lithonia Lighting	DSXW1 LED 10C 1000 AMBPC T4M MVOLT HS	DSXW1 LED WITH (1) 10 LED LIGHT ENGINES, TYPE T4M OPTIC, AMBER PC, @ 1000mA WITH HOUSE-SIDE SHIELDS.	LED	1	DSXW1_LED_10C_1000_AMBPC_T4M_MVOLT_HS.ies	1651	0.95	73.2
▭	P3* (6' HEIGHT)	15	Lithonia Lighting	DSXW1 LED 10C 350 AMBPC T2S MVOLT HS	DSXW1 LED WITH (1) 10 LED LIGHT ENGINES, TYPE T2S OPTIC, AMBPC, @ 350mA WITH HOUSE-SIDE SHIELDS.	LED	1	DSXW1_LED_10C_350_AMBPC_T2S_MVOLT_HS.ies	788	0.95	13.3

★BECAUSE AN IES FILE IS NOT AVAILABLE FOR THE FIXTURE TO BE INSTALLED, THE IES FILE FROM A COMPARABLE FIXTURE WAS USED.

ZONED R-1B "ONE-FAMILY RESIDENTIAL" DISTRICT

ZONED R1-B "ONE-FAMILY RESIDENTIAL" DISTRICT

ZONED NN "NEIGHBORHOOD NODES"

BUILDING A 5 UNITS
BUILDING B 6 UNITS
BUILDING C 6 UNITS
BUILDING D 5 UNITS
BUILDING E 6 UNITS
BUILDING F 6 UNITS
BUILDING G 5 UNITS
BUILDING H 6 UNITS
BUILDING J 6 UNITS
BUILDING K 6 UNITS
BUILDING L 6 UNITS
BUILDING M 5 UNITS
BUILDING N 6 UNITS

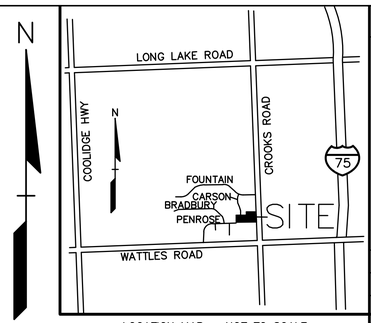
WETLAND BOUNDARY FLAGGED BY PEA, INC. 12-12-2019

BM #300

BM #301

ROSE BLVD (PUBLIC)

CROOKS ROAD (120' WIDE – PUBLIC)



LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
-OH-ELEC-		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
-UG-CATV-		UNDERGROUND CABLE TV, CATV PEDESTAL
-UG-PHONE-		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
-UG-ELEC-		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
GAS		GAS MAIN, VALVE & GAS LINE MARKER
W		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
S		SANITARY SEWER, CLEANOUT & MANHOLE
ST		STORM SEWER, CLEANOUT & MANHOLE
C		COMBINED SEWER & MANHOLE
Y.D.		SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
W		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
M T E		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
?		UNIDENTIFIED STRUCTURE
816.06 ×	871.21 ×	SPOT ELEVATION
670	671	CONTOUR LINE
		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT

C.O.
Y.D.

STD DUTY | HEAVY DUTY | R.O.W. ONLY

STD DUTY | HEAVY DUTY | DEEP STRENGTH

GENERAL SITE LIGHTING NOTES:

1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
2. ALL AREA LIGHT FIXTURES ARE TO BE DIRECTED AWAY FROM NEIGHBORING PROPERTIES AND ROADWAYS.
3. CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT ALL MATERIALS AND EQUIPMENT FOR THIS WORK UNLESS OTHERWISE NOTED.
4. COORDINATE LIGHT FIXTURE PLACEMENT AND INSTALLATION WITH ARCHITECT.

SITE PHOTOMETRIC DATA:

	ALLOWED	PROPOSED
1. SITE FOOTCANDLE MAX	10 FC	8.8 FC
2. SITE FOOTCANDLE AT PROPERTY (MAX)		
RESIDENTIAL	0.1 FC	0.1 FC (MAX)
NON-RESIDENTIAL	1.0 FC	0.2* FC (MAX)
3. FIXTURE HEIGHT (SITE):	25 FT. (MAX)	6 FT.

*AT ROW

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/20
3	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY AND SOLELY RESPONSIBLE FOR LOCATING ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.net

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PHOTOMETRIC PLAN
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	GMB	SUR.	KTR	P.M.	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - DWG\DWG\SITE PLAN\(24-1.0) PHOTO - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
SL-1.0

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

LUMEN P1 & P3

Cylinder 3000K LED 7" Wall Light Textured Black

11250BKT30 (Textured Black)

Project Name: _____
Location: _____
Type: _____
Qty: _____
Comments: _____



Certifications/Qualifications

Class 2	Yes
Dark Sky Compliant	Yes
Location Rating	Wet
Title 24 Compliant	Yes
	www.kichler.com/warranty

Dimensions

Base Backplate	5.00 X 5.00
Extension	6.50"
Weight	2.60 LBS
Height from center of Wall opening (Spec Sheet)	3.25"
Height	7.00"
Width	5.00"

Electrical

Input Voltage	Dual (120/140)V

Mounting/Installation

Interior/Exterior	Exterior
Mounting Style	Wall Mount

Photometrics

Color Rendering Index	90
Color Temperature Range	3000
Delivered Efficacy (Lumens/Watt)	33
Delivered Lumens	350
Kelvin Temperature	3000K

Primary Lamping

Expected Life Span	40000
Lamp Included	Integrated
Light Source	LED
Max or Nominal Watt	11W
# of Bulbs/LED Modules	1

Product/Ordering Information

SKU	11250BKT30
Finish	Black
Style	Contemporary
UPC	783927453066

Specifications

Material	ALUMINUM

Additional Finishes

Textured Architectural Bronze

Textured Black

Kichler
7711 East Pleasant Valley Road Cleveland, Ohio 44131-8010
Toll free: 866.558.5706 or kichler.com

Notes:
1) Information provided is subject to change without notice. All values are design or typical values when measured under laboratory conditions.
2) Incandescent Equivalent: The incandescent equivalent as presented is an approximate number and is for reference only.

KICHLER.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	9/9/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATIONS, DEPTHS, ELEVATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's **below** **Call** before you dig
MISS DIG System, Inc.
1-800-482-7171 (toll free) www.missdig.net

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PHOTOMETRIC DETAILS
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - CAD\DWG\SITE PLAN\(24x36) PHOTO - 18238A.dwg

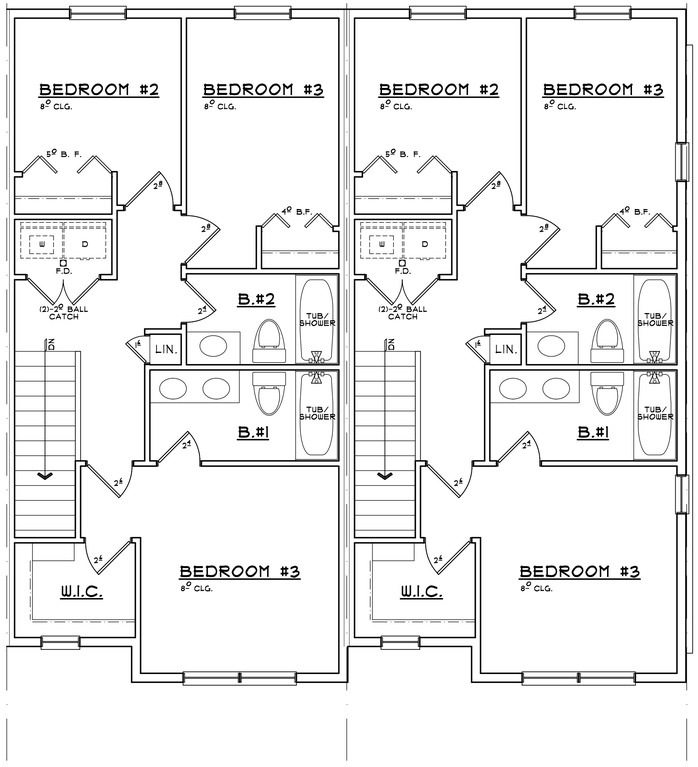
ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: NTS

DRAWING NUMBER:
SL-1.1

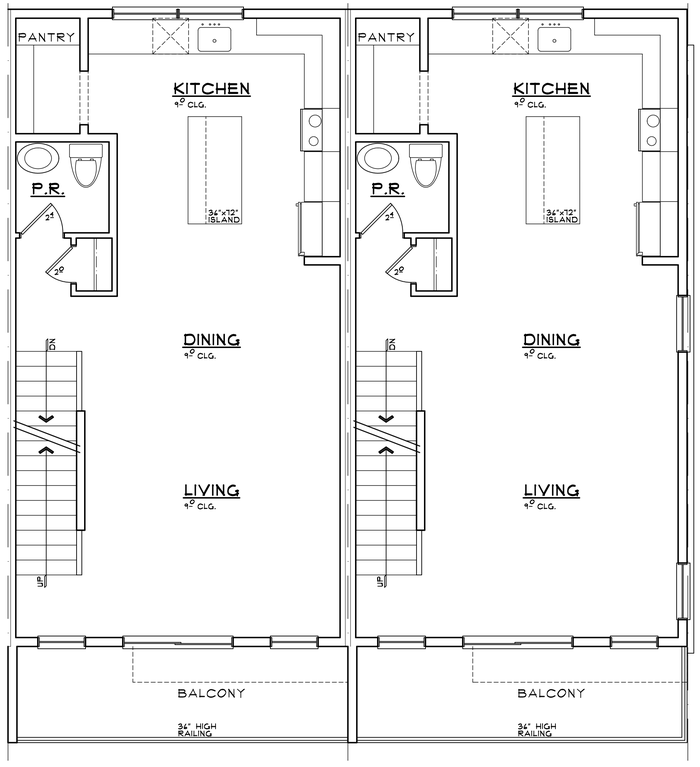
SQUARE FOOTAGE	
LOWER LEVEL	184 SQ FT
1ST FLOOR	677 SQ FT
2ND FLOOR	701 SQ FT
TOTAL	1,564 SQ FT



'B' / 'C' END UNIT 'A'

SECOND FLOOR PLAN

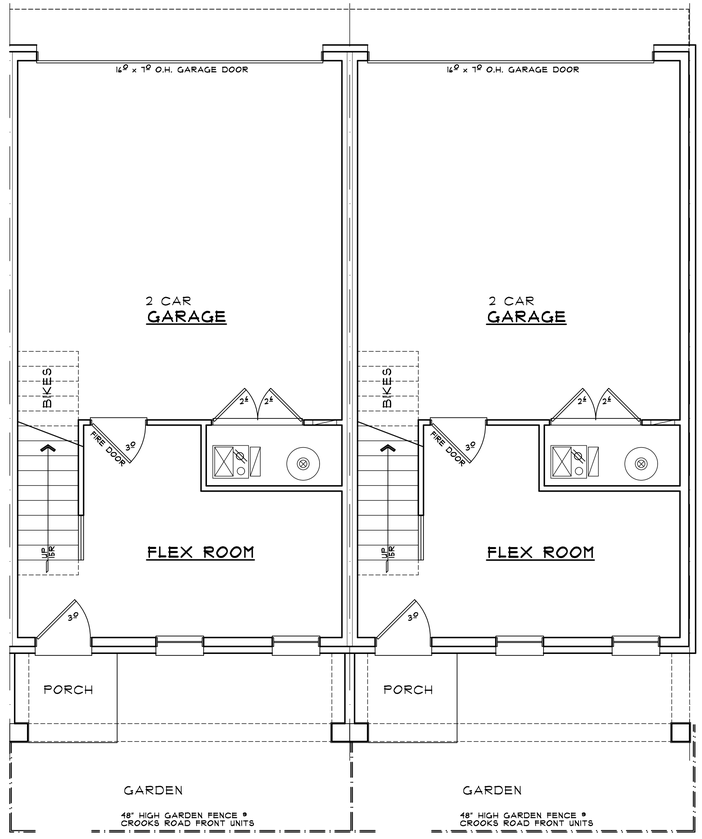
BUILDINGS A & E-N SCALE: 1/4" = 1'-0"



'B' / 'C' END UNIT 'A'

FIRST FLOOR PLAN

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"



'B' / 'C' END UNIT 'A'

LOWER LEVEL PLAN

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT PLANS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

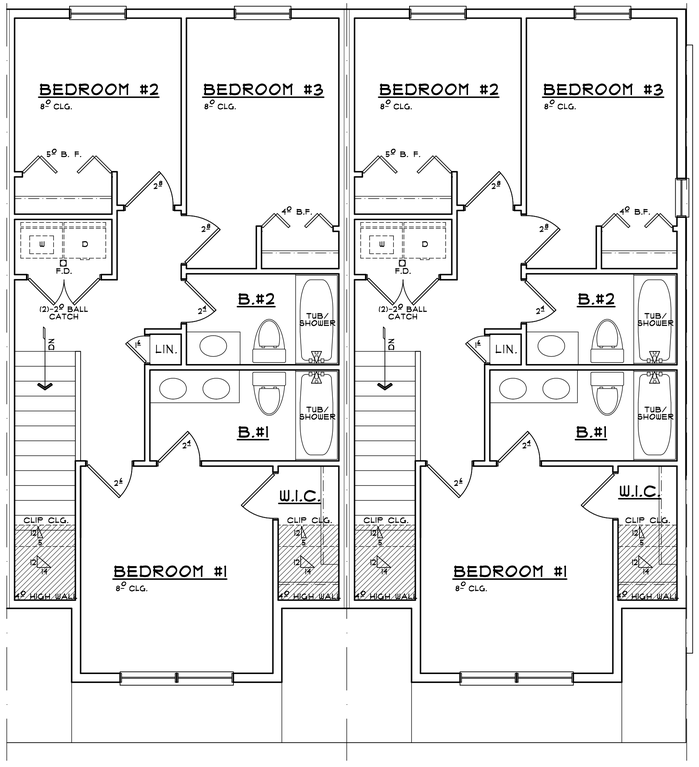
PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	

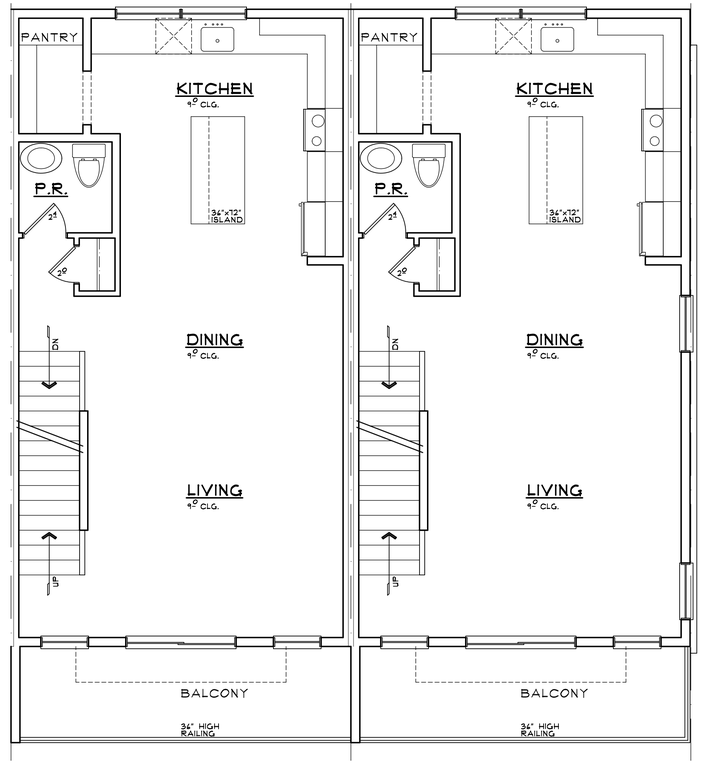
SHEET NUMBER
A-1

SQUARE FOOTAGE	
LOWER LEVEL	184 SQ FT
1ST FLOOR	677 SQ FT
2ND FLOOR	630 SQ FT
TOTAL	1,493 SQ FT



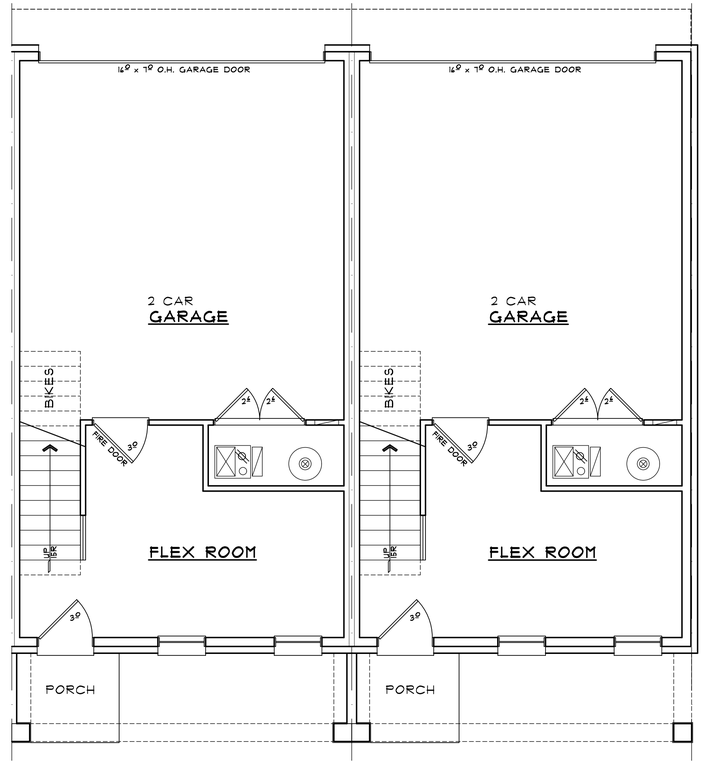
'B' / 'C' END UNIT 'A'
SECOND FLOOR PLAN

BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"



'B' / 'C' END UNIT 'A'
FIRST FLOOR PLAN

BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"



'B' / 'C' END UNIT 'A'
LOWER LEVEL PLAN

BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

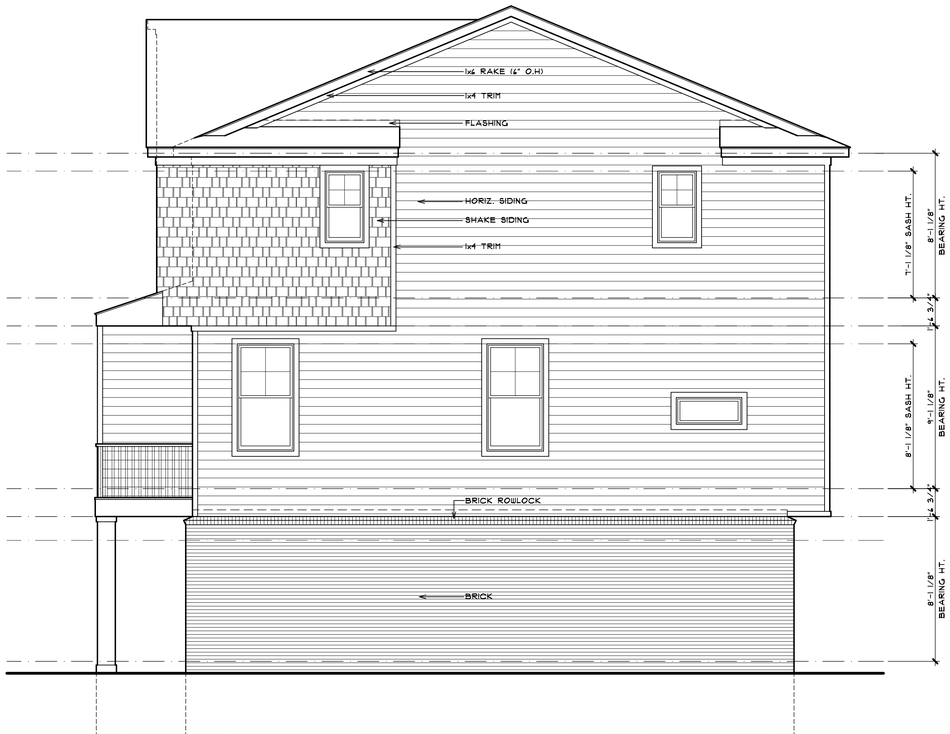
SHEET TITLE
UNIT PLANS
BUILDINGS B, C & D
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-2



RIGHT SIDE ELEVATION

LEFT SIDE ELEVATION - OPPOSITE - SIMILAR BUILDINGS A & E-N SCALE: 1/4" = 1'-0"



ELEVATION 'A'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

ELEVATION 'B'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

ELEVATION 'C'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

ARCHITECTURE

SHEET TITLE
UNIT ELEVATIONS
FRONTS AND SIDE
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-3

STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301000283
REGISTERED ARCHITECT



REAR ELEVATION 'C'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

REAR ELEVATION 'B'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

REAR ELEVATION 'A'

END UNIT BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT REAR ELEVATIONS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

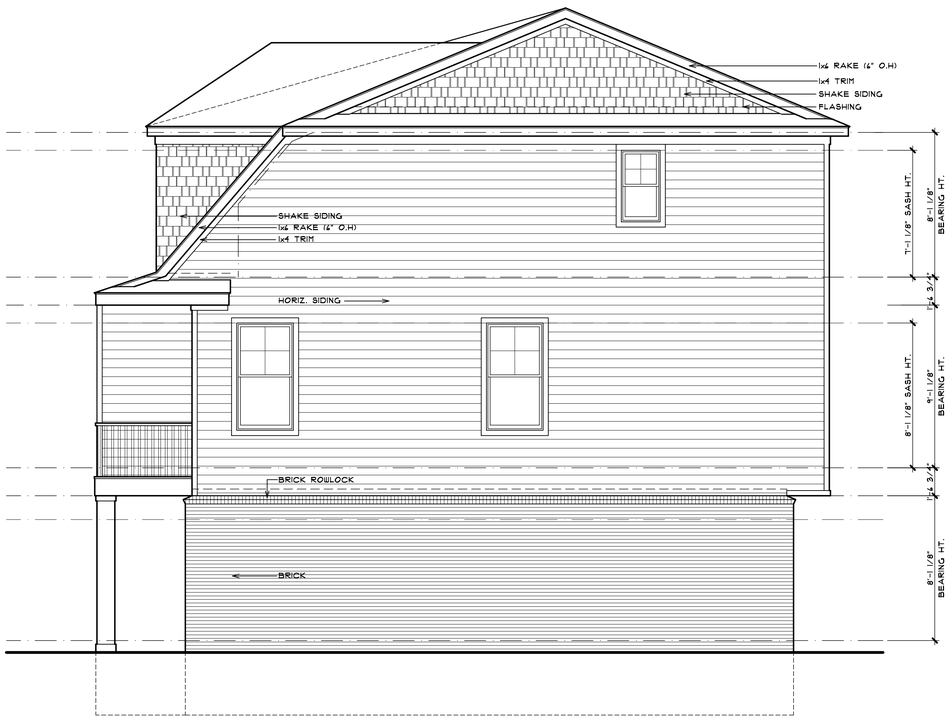
PRELIMINARY 11-13-19
BIDS
PERMITS
FINAL
REVISIONS

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER 19028
DRAWN BY BN / JF
CHECKED BY

SHEET NUMBER
A-4

STATE OF MICHIGAN
BRIAN J. NEEPER
ARCHITECT
No. 1301035050
REGISTERED



RIGHT SIDE ELEVATION

LEFT SIDE ELEVATION - OPPOSITE - SIMILAR BUILDINGS B, C & D SCALE: 1/4" = 1'-0"



ELEVATION 'A'

BUILDINGS B, C & D SCALE: 1/4" = 1'-0"

ELEVATION 'B'

BUILDINGS B, C & D SCALE: 1/4" = 1'-0"

ELEVATION 'C'

BUILDINGS B, C & D SCALE: 1/4" = 1'-0"

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT ELEVATIONS
FRONTS AND SIDE
BUILDINGS B, C & D
S.F.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-5





REAR ELEVATION 'B'

BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"

REAR ELEVATION 'A'

END UNIT BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT REAR ELEVATIONS
BUILDINGS B, C & D
S.P.A.

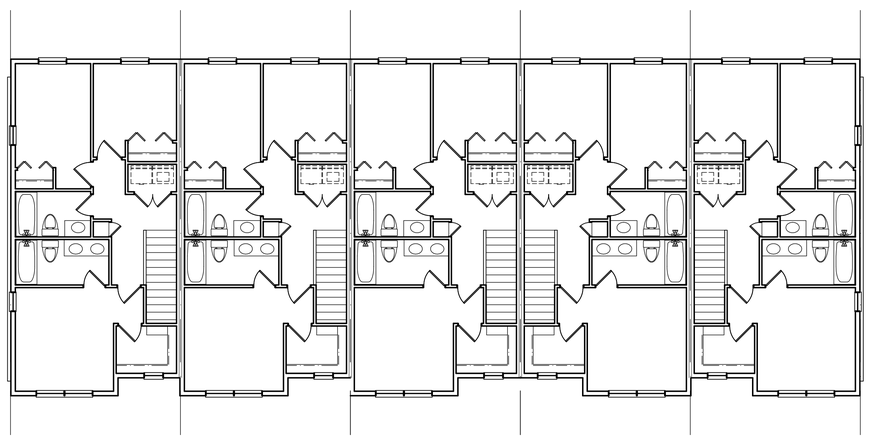
CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-6

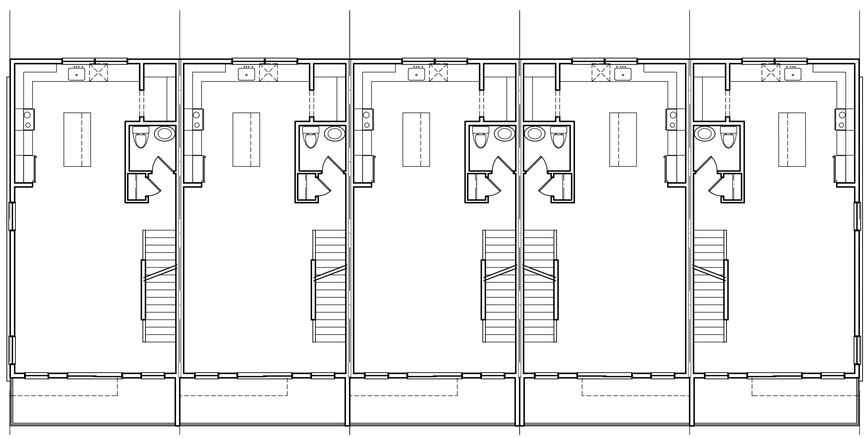
STATE OF MICHIGAN — BRIAN NEEPER — ARCHITECT — No. 1301060283 — REGISTERED ARCHITECT



** COORDINATE SECOND FLOOR UNIT LAYOUT OPTIONS WITH DEVELOPER

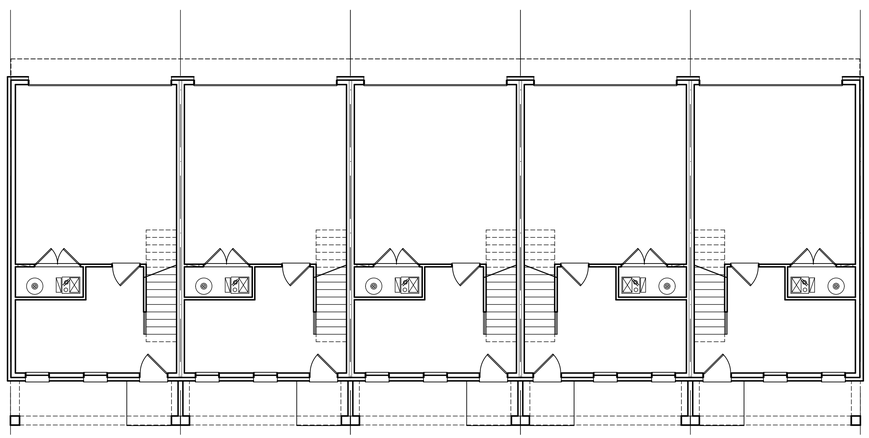
SECOND FLOOR PLAN
5 UNIT BUILDING

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



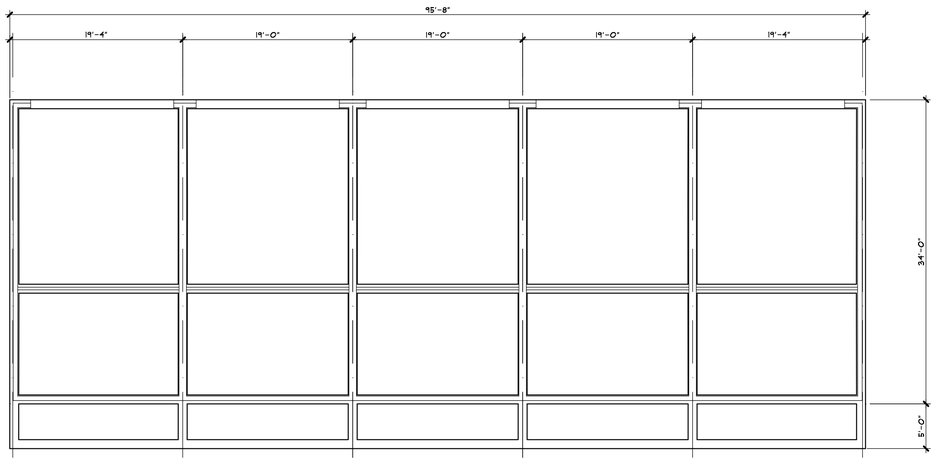
FIRST FLOOR PLAN
5 UNIT BUILDING

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



LOWER LEVEL PLAN
5 UNIT BUILDING

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



FOUNDATION PLAN
5 UNIT BUILDING

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
5 UNIT BUILDING PLANS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-7



REAR ELEVATION
5 UNIT BUILDING

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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



FRONT ELEVATION
5 UNIT BUILDING

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

ARCHITECTURE
BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

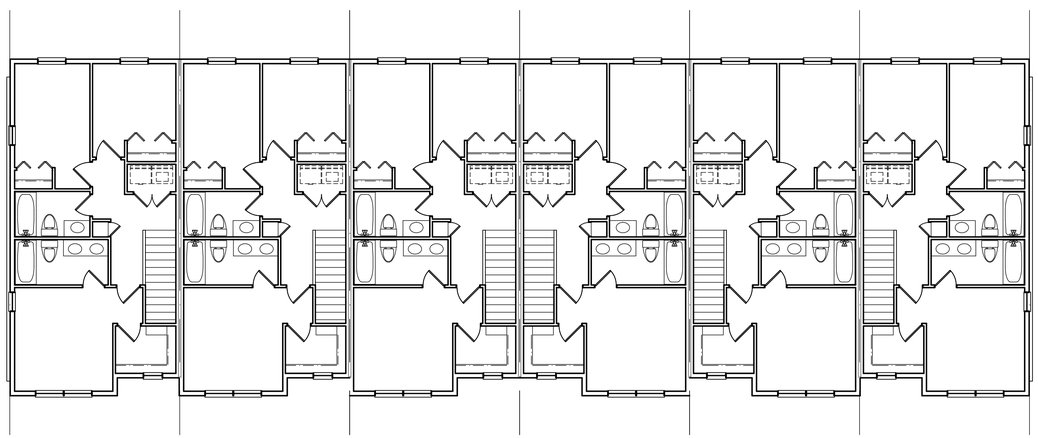
SHEET TITLE
5 UNIT BUILDING ELEVATIONS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

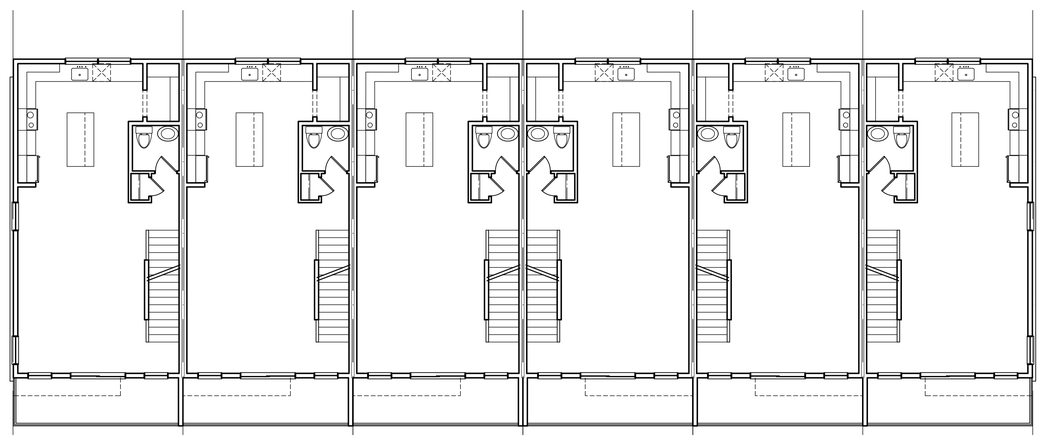
COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-8



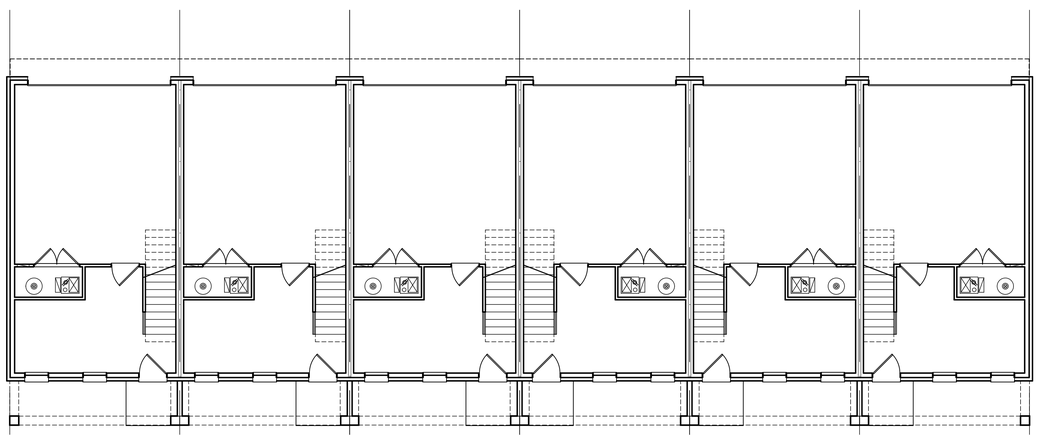
SECOND FLOOR PLAN
6 UNIT BUILDING

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



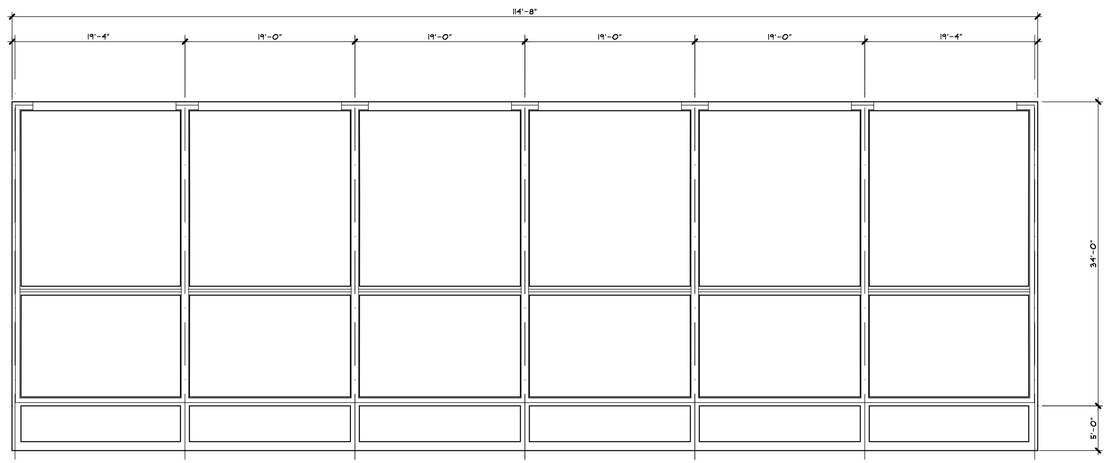
FIRST FLOOR PLAN
6 UNIT BUILDING

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



LOWER LEVEL PLAN
6 UNIT BUILDING

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



FOUNDATION PLAN
6 UNIT BUILDING

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

ARCHITECTURE

SHEET TITLE
6 UNIT BUILDING PLANS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-9



REAR ELEVATION
6 UNIT BUILDING

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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



FRONT ELEVATION
6 UNIT BUILDING

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

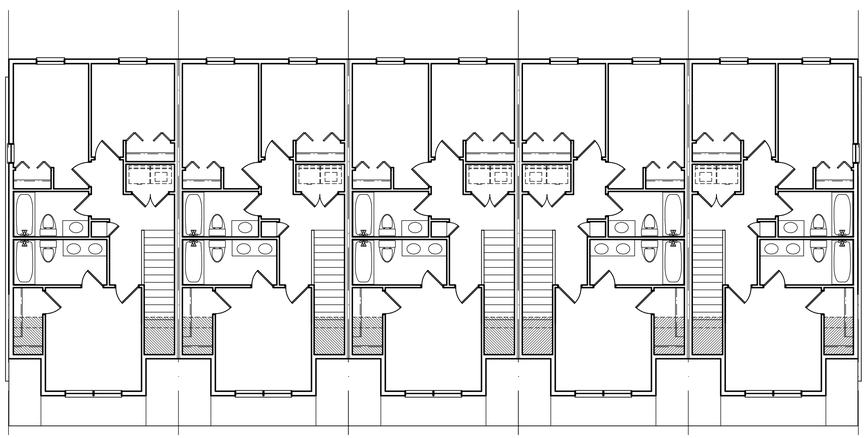
SHEET TITLE
6 UNIT BUILDING ELEVATIONS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

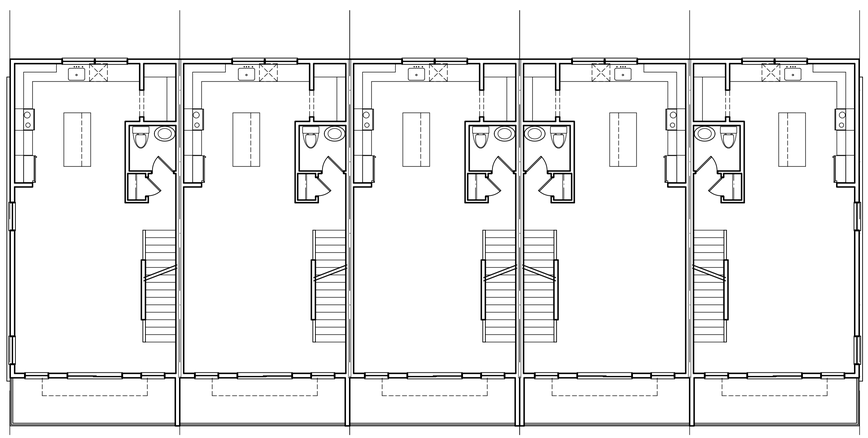
JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-10



** COORDINATE SECOND FLOOR UNIT LAYOUT OPTIONS WITH DEVELOPER

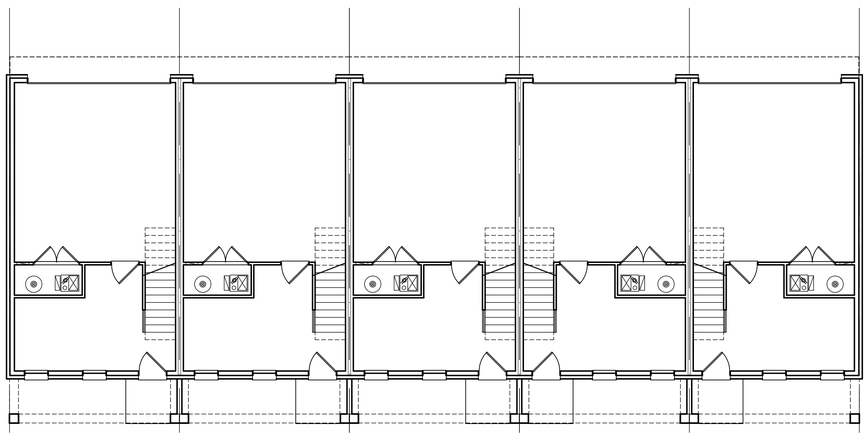
SECOND FLOOR PLAN
5 UNIT BUILDING

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



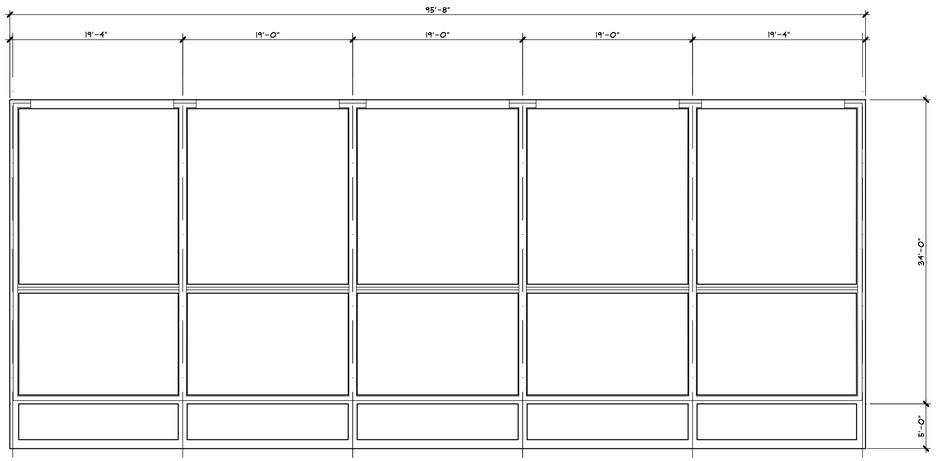
FIRST FLOOR PLAN
5 UNIT BUILDING

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



LOWER LEVEL PLAN
5 UNIT BUILDING

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



FOUNDATION PLAN
5 UNIT BUILDING

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

ARCHITECTURE

SHEET TITLE
5 UNIT BUILDING PLANS
BUILDINGS B, C & D
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-11



REAR ELEVATION
5 UNIT BUILDING

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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



FRONT ELEVATION
5 UNIT BUILDING

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

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
5 UNIT BUILDING ELEVATIONS
BUILDINGS B, C & D
S.P.A.

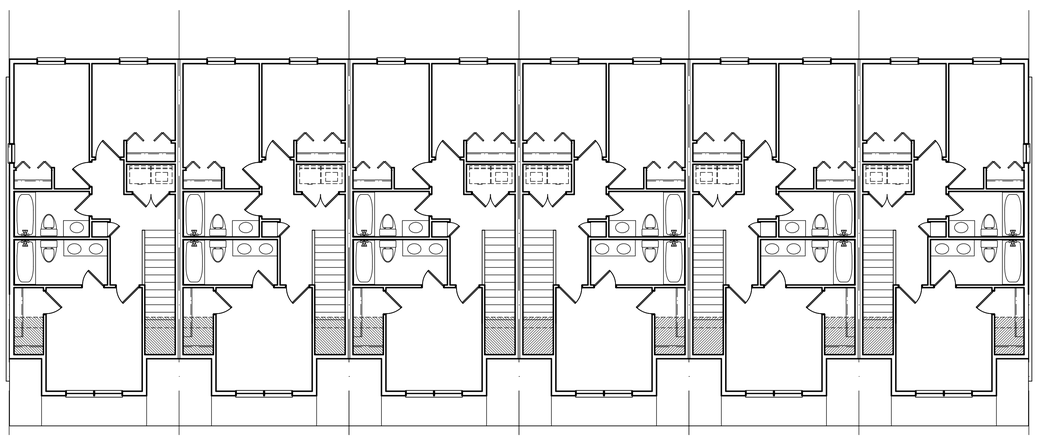
CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

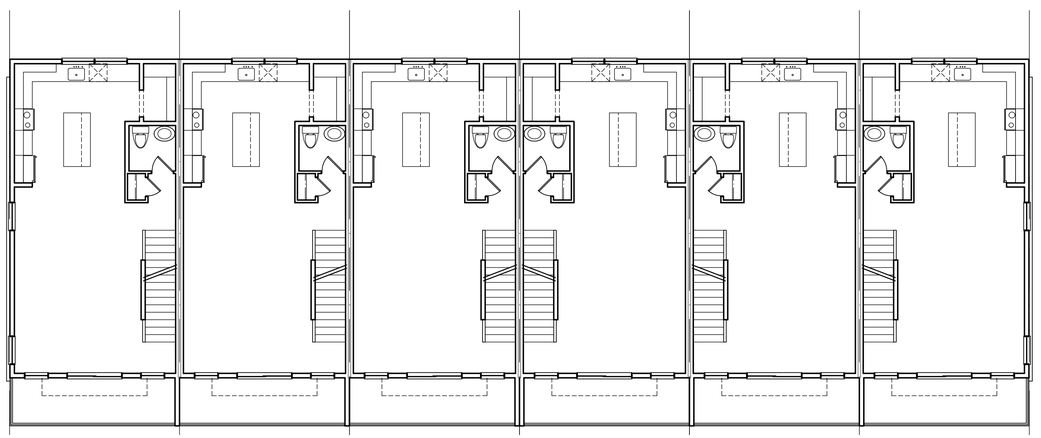
JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-12





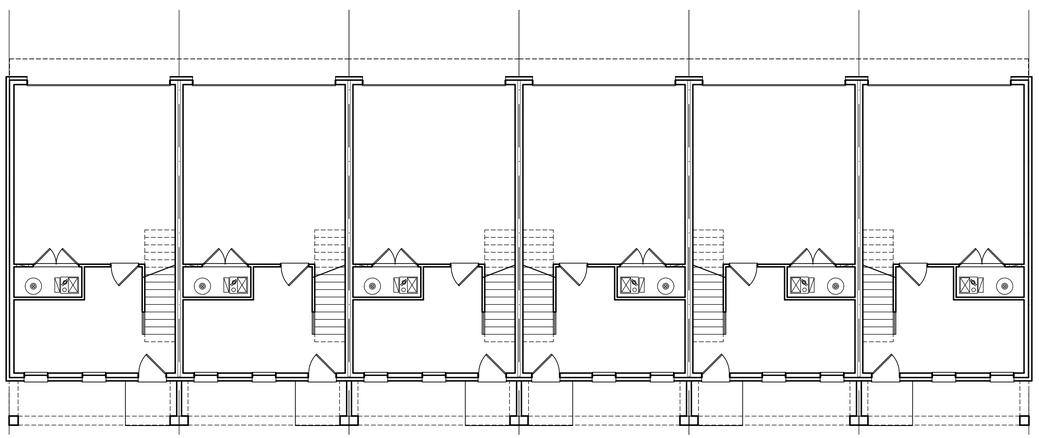
SECOND FLOOR PLAN
6 UNIT BUILDING

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



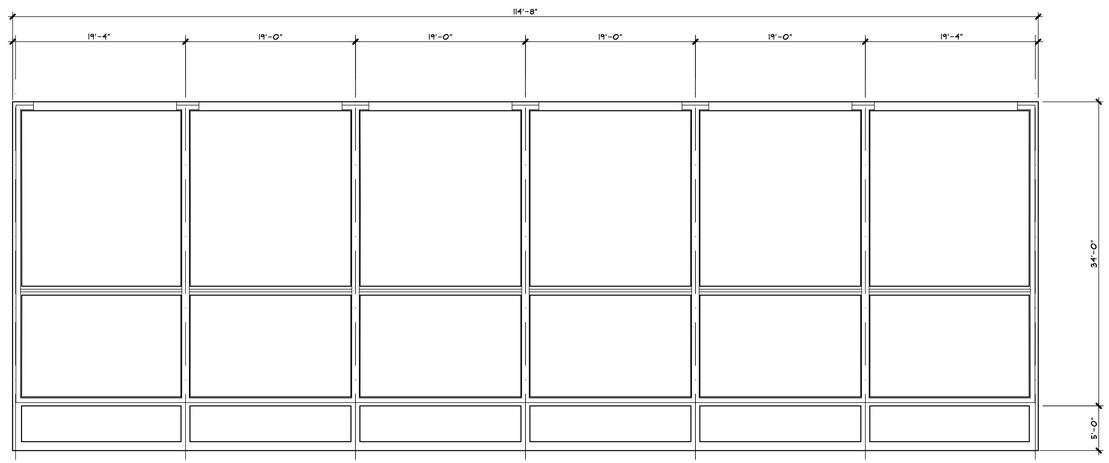
FIRST FLOOR PLAN
6 UNIT BUILDING

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



LOWER LEVEL PLAN
6 UNIT BUILDING

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



FOUNDATION PLAN
6 UNIT BUILDING

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

ARCHITECTURE

SHEET TITLE
6 UNIT BUILDING PLANS
BUILDINGS B, C & D
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-13



REAR ELEVATION
6 UNIT BUILDING

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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



ELEV. 'A' ELEV. 'B' ELEV. 'C' ELEV. 'C' ELEV. 'B' ELEV. 'A'

FRONT ELEVATION
6 UNIT BUILDING

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

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
6 UNIT BUILDING ELEVATIONS
BUILDINGS B, C & D

S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

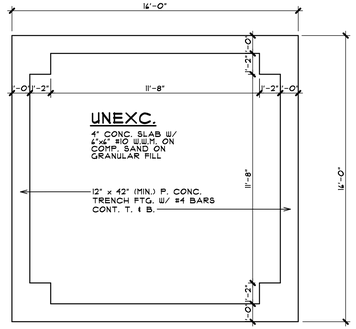
PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	

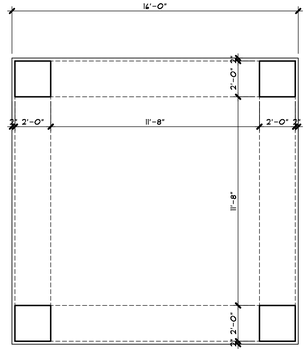
SHEET NUMBER
A-14

STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301035551
REGISTERED ARCHITECT



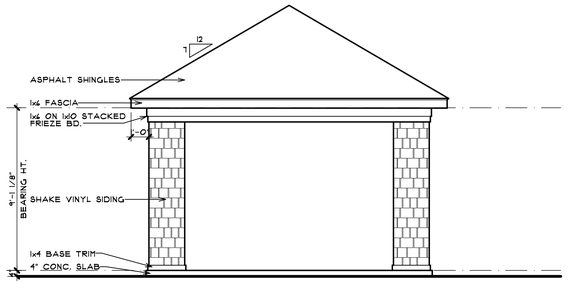
PAVILION FOUNDATION

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



PAVILION PLAN

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



PAVILION ELEVATION

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

ARCHITECTURE
BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
PAVILION
PLANS AND ELEVATION
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-15



Civil Engineers | Land Surveyors | Landscape Architects
experienced. responsive. passion for quality.
Corporate Office: 2430 Rochester Court • Suite 100 • Troy, MI 48083
t: 248.689.9090 • f: 248.689.1044 • www.peainc.com

March 16, 2020

Brent Savidant
City of Troy
Planning Department
500 W. Big Beaver
Troy, MI 48084

RE: Crooks Road Townhomes
Preliminary Site Plan Submittal – Architectural Design Statements (Revised)

Dear Mr. Savidant:

The following are revised responses to the requested statements in item #6 on the site plan application:

A. Description of context of site and how project responds to character of the area:

The site is located at the Northern most edge of Neighborhood Node I on Crooks near Wattles. According to the zoning ordinance the Neighborhood Nodes should draw people and should be visually distinguished from the surrounding area because of their greater intensity, density and design. The intent for this site is to build a 74-unit townhouse condominium project that will begin to increase pedestrian activity in this node within a distinctive architecturally designed community. We have added various amenities to the site including a pavilion, foot trail along with benches and picnic tables.

B. Description of the project's design concept:

The Design concept of the community is a townhome with full balconies facing the green spaces, thoughtful sidewalk placement for safe pedestrian and cycle activity as well as conservation and protection of the existing natural existing features the site. We aim to provide our future residents all the benefits of living in the area while maintenance free social lifestyle.

C. Description of how the project achieves the design concept:

We are proposing modern open interior floor plans, each home to have a traditional 2-car side by side garage. We are also, protecting many of the on-site natural features and many existing trees as well as, proposing the addition of a combination many of new deciduous trees within the community and evergreen trees along the northern and western property lines. The exterior architecture focuses on breaking down the 3-story building mass through delineating the individual homes. The Townhome fronts maximize the connection to outdoor space with the Townhome fronting on landscaped green spaces and landscaped court yards. All homes will have large second floor balcony and ground level porches which flow into a professionally landscaped tree lined green spaces and courtyards. The site design connects these unit front garden spaces through interconnected walks creating a social walkable neighborhood that seeks to be connected to the future developments of the node.

D. Description of the development program (intended uses, known or possible tenants, etc.):

Our Proposed Condominium Development will have a target market that will include:

- Young adults moving out of their parents' house and living on their own
- Younger adults recently married or in a co-habitant relationship
- Younger adults starting families and/or with younger children
- Empty nesters looking to downsize, eliminate maintenance responsibilities, and live close to nice restaurant and shopping destinations.

E. Description of how the building materials enhance the design concept:

The building materials have been chosen based on their qualities of durability, sustainability, longevity, traditional appearances and low maintenance. The bases of the buildings are grounded by the use of a dark earth tone brick as a foundation material. The building fronts rise into 3 distinctive gabled elevations clad in shake, horizontal and vertical fiber cement siding which allude to patterns of existing nearby residential facades. The use of traditional materials in a modern expression of traditional pure forms will create a transitional yet timeless architectural feel. The generous amounts of windows allow for a strong connection to the outside and a modern expression on the façade.

F. If the project is in a form-based district, provide a description of how the project meets the transparency requirements:

The units that front Crooks Road will be provided with a private garden space partially enclosed by a 48" tall garden fence screen and landscape hedge green screening as a buffer to the street front, this would account for 42% of the first floor fronting the right of way. The first-floor building façade includes an additional 28% glazing transparency.

G. Note any other important elements, features or design concepts not covered above that will help the planning commission understand how the project fosters excellence in design of the built environment:

Our revised plans have greatly taken into consideration the past comments from Planning Commission Board Members and adjacent Neighbors. We have worked on concerns that were expressed at the September 24th, 2019 and January 14th, 2020 Planning Commission Meeting. Important design elements and features are as follows:

- We have completely reoriented the design of the townhomes with the revised layout.
- We have doubled the land area for the development by acquiring a property to the south of the original proposed project, which has allowed us to accommodate the following:
  - Re-orient the townhomes and revise the overall layout of the development
  - Reduce the unit density, in terms of building lot coverage, from 32% to 19.3%.
  - Increase the overall green space, in terms of open space area, from 43.2% (~51,000 sf on 2.73 acres) to 55.0% (~131,000 sf on 5.72 acres) and very minimal disturbance of existing natural features on the property. (Storm system/Detention pond construction only)
  - Increase on-site guest parking to 34 spaces.
  - Increase the setback along northern property line (adjacent single-family) to 40 feet.
  - Provide 20 feet of green belt area as well as the required 1 large evergreen per 10 feet.
- We are proposing an 8-foot decorative black aluminum fence along the northern property line.

- To create a transition adjacent to the single-family residential subdivision, we reduced the ordinance-measured height for Buildings “B”, “C”, and “D” to 27’-8 11/16” tall and 2 ½ stories, which is actually lower than permitted height of single family residential R1A- R1E at 30 ft.
- To address neighbor concerns about the location of the Emergency Vehicle Access (EVA), we have eliminated the connection to Carson Drive, which will therefore keep Carson Drive as a quiet dead-end street. The EVA has been relocated to the southern portion of the site, connecting to Crooks Rd. south of Building
- There was concern from the residents on Carson Dr. about the possibility of future residents/guests from our proposed community parking on Carson Drive and accessing their units. We have addressed these concerns by providing items mentioned previously (additional guest parking, 8-foot fence, landscape buffer/green belt area, and elimination of EVA at Carson Dr.)

If you should have any questions or require any additional information, please feel free to contact this office.

Sincerely,

PEA, Inc.

Gregory Bono, P.E.
Project Coordinator

July 20, 2020

Brent Savidant City of Troy Planning Department 500 W. Big Beaver Troy, MI 48084

RE: Crooks Road Townhomes Preliminary Site Plan Submittal – Architectural Design Statements

Dear Mr. Savidant:

The following are responses to the requested statements in item #6 on the site plan application:

A. Description of context of site and how project responds to character of the area:

The site is located at the Northern most edge of Neighborhood Node I on Crooks near Wattles. According to the zoning ordinance the Neighborhood Nodes should draw people and should be visually distinguished from the surrounding area because of their greater intensity, density and design. The intent for this site is to build a 74-unit townhouse project that will begin to increase pedestrian activity in this node within a distinctive architecturally designed community.

We have added various amenities to the site including a pavilion, foot trail along with benches and picnic tables.

B. Description of the project's design concept:

The Design concept of the community is a townhome with full balconies facing the green spaces, thoughtful sidewalk placement for safe pedestrian and cycle activity as well as conservation and protection of the existing natural existing features the site. We aim to provide our future residents all the benefits of living in the area while maintenance free social lifestyle.

C. Description of how the project achieves the design concept:

We are proposing modern open interior floor plans, each home to have a traditional 2-car side by side garage. We are also, protecting many of the on-site natural features and many existing trees as well as, proposing the addition of a combination many of new deciduous trees within the community and evergreen trees along the northern and western property lines. The exterior architecture focuses on breaking down the 3-story building mass through delineating the individual homes. The Townhome fronts maximize the connection to outdoor space with the Townhome fronting on landscaped green spaces and landscaped court yards. All homes will have large second floor balcony and ground level porches which flow into a professionally landscaped tree lined green spaces and courtyards. The site

design connects these unit front garden spaces through interconnected walks creating a social walkable neighborhood that seeks to be connected to the future developments of the node.

D. Description of the development program (intended uses, known or possible tenants, etc.):

Our Proposed Development will have a target market that will include:

• Young adults moving out of their parents' house and living on their own

• Younger adults recently married or in a co-habitant relationship

• Younger adults starting families and/or with younger children

• Empty nesters looking to downsize, eliminate maintenance responsibilities, and live close to nice restaurant and shopping destinations.

E. Description of how the building materials enhance the design concept:

The building materials have been chosen based on their qualities of durability, sustainability, longevity, traditional appearances and low maintenance. The bases of the buildings are grounded by the use of a dark earth tone brick as a foundation material. The building fronts rise into 3 distinctive gabled elevations clad in shake, horizontal and vertical fiber cement siding which allude to patterns of existing nearby residential facades. The use of traditional materials in a modern expression of traditional pure forms will create a transitional yet timeless architectural feel. The generous amounts of windows allow for a strong connection to the outside and a modern expression on the façade.

F. If the project is in a form-based district, provide a description of how the project meets the transparency requirements:

The units that front Crooks Road will be provided with a private garden space partially enclosed by a 48" tall garden fence screen and landscape hedge green screening as a buffer to the street front, this would account for 42% of the first floor fronting the right of way. The first-floor building façade includes an additional 28% glazing transparency.

G. Note any other important elements, features or design concepts not covered above that will help the planning commission understand how the project fosters excellence in design of the built environment:

Our revised plans have greatly taken into consideration the past comments from Planning Commission Board Members and adjacent Neighbors. We have worked on concerns that were expressed at the September 24th, 2019 and January 14th, 2020 Planning Commission Meeting.

We have completely reoriented the design of the townhomes, layout and have doubled the land by acquiring a property to the south of the original proposed project, decreased density, increased green space and protection of existing natural features on the property and greatly increased on site guest parking. Regarding the northern property line and adjacent single family to the north, we have increased the setback to 40 feet, provided 20 feet of a green belt as well as the required 1 large evergreen per 10 feet. In addition to this, we are also proposing a 6-foot decorative black aluminum fence along the entire northern property line. To create transition we dropped the height in Building "B", "C", "D" which are adjacent to single family residential to 27'-8 11/16" tall and 2 ½ stories which is actually lower than permitted height of single family residential R1A- R1E at 30 ft.

Our updates were done to address neighbor concerns which were centered around visual impact and the removal of the initially proposed "EVA" Emergency Vehicular access to maintaining Carson Drive as a quiet dead-end street. There was also concern from the residents on Carson about the possibility of future residents on our proposed community parking on Carson Drive and then walking over to our proposed community. In response to this, we have addressed these concerns by providing ample guest parking, proposing placement of a 6ft. privacy fence along the entirety of the northern property as well as, landscape buffer and green belt. In addition to that, in our most updated plans we remove our previously proposed "EVA" Emergency Vehicular Access. This will ensure that Carson Drive remains a permanent quiet dead end and prohibit any parking and walking over on Carson Drive from the potential future residents on our proposed Project as well as, provides a nice green belt, tree screening, privacy fence and large setbacks.

GRAPHIC SCALE

-30 0 15 30 60 120

(in feet)
1 inch = 30 ft.

N

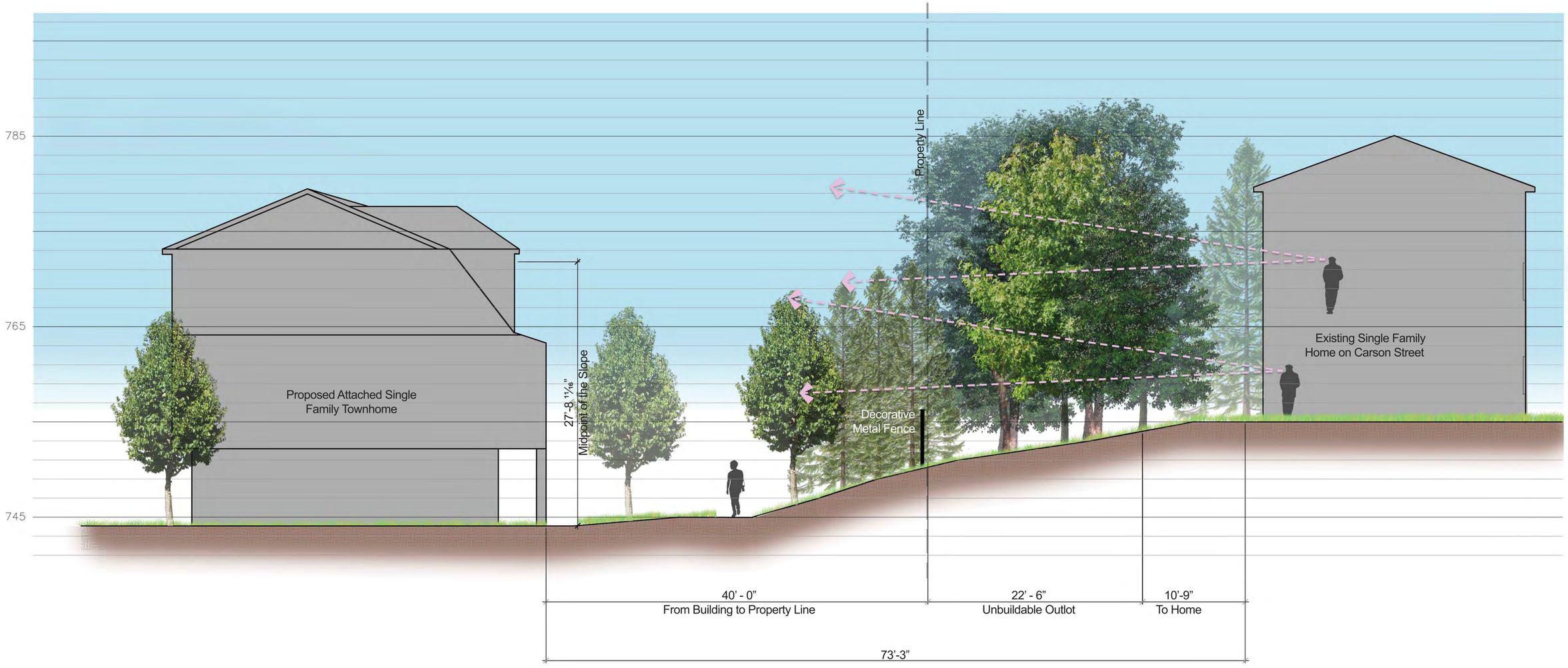


Crooks Rd Townhomes

Troy, Michigan

March, 2020

PEA, Inc.
7927 Nemco Way, Ste 115
Brighton, MI 48116
t: 517.546-8583
f: 517.546.8973
www.peainc.com



GRAPHIC SCALE

-5 0 5 10 20

(in feet)
1 inch = 5 ft.

Crooks Rd Townhomes

Troy, Michigan

March, 2020

PEA, Inc.
7927 Nemco Way, Ste 115
Brighton, MI 48116
t: 517.546-8583
f: 517.546.8973
www.peainc.com







Chair Faison called the Regular meeting of the Troy City Planning Commission to order at 7:01 p.m. on January 14, 2020 in the Council Chamber of the Troy City Hall.

1. ROLL CALL

Present:
Ollie Apahidean
Karen Crusse
Carlton M. Faison
Michael W. Hutson
Tom Krent
David Lambert
Marianna Perakis
Sadek Rahman
John J. Tagle

Also Present:
R. Brent Savidant, Community Development Director
Ben Carlisle, Carlisle Wortman Associates
Julie Quinlan Dufrane, Assistant City Attorney
Jackie Ferencz, Planning Department Administrative Assistant
Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

Resolution # PC-2020-01-001
Moved by: Lambert
Support by: Rahman

RESOLVED, To approve the Agenda as prepared.

Yes: All present (9)

MOTION CARRIED

3. APPROVAL OF MINUTES

Mr. Krent asked the minutes to reflect a correction in the time of adjournment.

Resolution # PC-2020-01-002
Moved by: Krent
Support by: Tagle

RESOLVED, To approve the minutes of the December 10, 2019 Regular meeting as revised.

Yes: All present (9)

MOTION CARRIED

4. PUBLIC COMMENT – Items not on the Agenda

There was no one present who wished to speak.

PUBLIC HEARING

5. PUBLIC HEARING – REZONING REQUEST (File Number Z 2019-0039) – Proposed Addison Heights Subdivision Rezoning, East of Livernois, South side of Arthur (88-20-27-307-033), Section 27, From P (Vehicular Parking) District to R-1E (One Family Residential) District

Mr. Savidant explained what a rezoning request is and its approval process. He provided a history of the zoning of the property. Mr. Savidant addressed the request as relates to the Rezoning Standards and Master Plan. Mr. Savidant said the applicant wants to construct a residential home on the site. It was recommended that the Planning Commission recommends to the City Council to grant approval of the rezoning request.

The applicant Ross Martin was present.

PUBLIC HEARING OPENED

There was no one present who wished to speak.

PUBLIC HEARING CLOSED

There was discussion on:
- Ownership of adjacent parcels.
- Potential development in the future along Livernois and the right of way.

Resolution # PC-2020-01-003
Moved by: Hutson
Support by: Tagle

RESOLVED, That the Planning Commission hereby recommends to the City Council that the P (Vehicular Parking) District to R-1E (One Family Residential) District rezoning request, as per Section 16.03 of the City of Troy Zoning Ordinance, located on the south side of Arthur, East of Livernois, within Section 27, being approximately 0.24 acres in size, be **GRANTED** for the following reasons:

1. The proposed rezoning is consistent with the Master Plan.
2. The proposed rezoning does not appear to cause or increase any nonconformity.
3. If rezoned the property will be capable of accommodating service and facility loads caused by use of the development.
4. The rezoning does not appear to impact public health, safety, or welfare.
5. The rezoning will ensure compatibility with adjacent uses of land.

Yes: All present (9)

MOTION CARRIED

PRELIMINARY SITE PLAN APPROVALS

6. PRELIMINARY SITE PLAN REVIEW (File Number SP2019-0022) – Proposed Crooks Road Townhomes, West side of Crooks, North of Wattles, Section 17, Currently Zoned NN (Neighborhood Node "I") District

Ms. Perakis disclosed she formerly lived in the Woodlands subdivision from 2008 to 2014 and her home on Parkstone backed up to the subject property. She also disclosed that the applicant is a current neighbor of hers and she was in opposition to the applicant's proposed apartment project that was formerly considered by the City. Ms. Perakis said there is no conflict of interest and that she can be objective in her consideration of the application.

Mr. Carlisle outlined the revisions the applicant proposes to the application based on discussion from the Planning Commission, staff and the public when considered at the September 24, 2019 meeting. He noted the site plan revisions are identified on page 5 of his report dated January 7, 2020. Mr. Carlisle reported there are significant outstanding site plan items on the revised site plan, as relates to screening/landscaping along adjacent residential property lines, tree removal loss due to the stormwater facility and lighting impact to adjacent property.

Mr. Carlisle recommended to postpone the application to allow the applicant to address site plan items.

Present were Carmine Avantini, AICP, of Community Image Builders, Arvin Stafa, Brandon Bronikowski, James Butler and Greg Bono, both of Professional Engineering Associates (PEA).

Mr. Avantini presented a PowerPoint presentation and addressed the additional acreage, decrease in density, increase in guest parking, traditional two-car garages, increased setback, screening and buffer to residential, building height, line of sight visual, grade difference, location of EVA, parking and pedestrian traffic. Mr. Avantini indicated several site plan issues identified by the Planning Consultant have been addressed. He asked for a favorable vote conditioned on the remaining issues that could be administratively addressed through engineering and final site plan processes.

Mr. Stafa addressed building height, grading, outlots and public engagement. Mr. Bronikowski addressed building materials and circulated building material samples. Mr. Bono addressed stormwater management. Mr. Butler said concerns relating to floodplain and wetlands would be addressed through the engineering process.

Chair Faison opened the floor for public comment.

The following spoke in opposition, voicing concerns with grade difference, drainage, flooding, compatibility, property values, application process, no public engagement, traffic impact and safety.

- James Chang, 4397 Bender
- Latish Adnani, 4219 Crooks
- Tom Reiss, 1400 Bradbury
- Jerry Rauch, 4187 Penrose
- Doug and Linda Gerard, 4197 Carson
- Mike and Laura Lipinski, 4233 Carson
- Thomas Mikulski, 4408 Cahill
- Daphne (Ntiri) and Jean-Claude Quenum, 4198 Carson
- JinMing Xu, 4179 Carson
- Bob Laudicina, 1286 Fountain
- Paul Balas, 4087 Parkstone
- Nadwa Gowda, 4412 Lehigh *(illegible)*
- Trevor Babi, 4537 Cahill
- Jeff Silagy, Whisper Way
- Raghav Kashi, 4420 Cahill

David Donnellon, architect and municipal planner; represented the seller of the property. He stated the development is permitted by right in the Neighborhood Node zoning district and addressed the balance between the Neighborhood Node and Single Family Residential zoning districts.

Chair Faison closed the floor for public comment.

There was discussion on:
- Grading difference, as relates to drainage and engineering design process.
- Stormwater management.
- Outlots; ownership, potential to build, property lines.
- Wetland and floodplain, as relates to MDEQ and engineering design process.
- Compatibility and transition to residential, as relates to landscape buffer, building height, line of vision, building materials.
- Line of vision scale and calculations.
- Neighborhood Node districts as relates to Master Plan, philosophy.
- Traffic impact; study.
- “Real” density.
- Engagement with neighbors; strongly encouraged.
- Intent of Master Plan.
- Joint meeting with City Council to discuss Neighborhood Node zoning districts.

Ms. Dufrane interjected the discussion to state the proposed development is permitted by right on the subject property.

Mr. Avantini asked the Board's consideration to postpone the item to allow an opportunity to respond to and investigate comments made this evening and to possibly gain insight from the joint meeting.

Resolution # PC-2020-01-004
Moved by: Krent
Support by: Lambert

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Crooks Road Townhomes, located on the west side of Crooks, North of Wattles, Section 17, within the NN (Neighborhood Node "I") District, be postponed, for the following reasons:

1. Allow the applicant time to digest comments made by residents, Planning Commission and staff and to address the site plan items identified in the Planning Consultant report and staff review.

Yes: Apahidean, Crusse, Lambert, Faison, Krent, Rahman, Tagle
No: Hutson, Perakis

MOTION CARRIED

Chair Faison called for a recess at 9:33 p.m. The meeting reconvened at 9:50 p.m.

7. PRELIMARY SITE PLAN REVIEW (File Number SP JPLN2019-0040) – Proposed Square Lake Court Townhomes, South side of Square Lake Road, West of Dequindre, Section 12, (88-20-12-200-025), Currently Zoned NN (Neighborhood Node "N") District

Mr. Carlisle reviewed the Preliminary Site Plan application for Square Lake Court Townhomes. He addressed the need for a dedicated guest parking area, a cross-access easement along the southern property line, additional trees along the west property line, shielding light fixtures and architectural detail on elevations.

Mr. Carlisle recommended to postpone the Preliminary Site Plan application to allow the applicant to address the guest parking, architectural detailing and other site plan concerns identified in his report dated January 7, 2020.

Present were Renis Nushaj, Erion Nikolla of Eureka Building Company and James Butler of Professional Engineering Associates (PEA).

Mr. Butler addressed the outstanding site plan issues relating to the photometric plan, landscaping and guest parking. He said the additional trees would be added and the light fixture shielded. Mr. Butler indicated 10 to 12 parallel spaces could be dedicated for guest parking along the southern property line.

Mr. Nikolla addressed design and architectural features of the elevations, building materials and colors. Building material samples were circulated.

Mr. Nushaj addressed the City's requirement for a cross-access easement. Mr. Nushaj believes a cross-access easement agreement should be a private contract among involved parties, not a requirement of the City, and views the City's requirement as an encumbrance on private property.

There was discussion on:
- Guest parking; accommodation and layout.
- Ownership of property to south.
- Cross-access easement and EVA requirements.
- Traffic circulation; no comments from Engineering review.
- Recent revisions to site plan.

Ms. Dufrane referenced Zoning Ordinance sections that relate to the requirement of a cross-access easement and exceptions to that requirement; i.e., if it is demonstrated that there are either physical limitations or functional circumstances that prevent such access from being installed.

Mr. Carlisle said the EVA is noted on the site plan; the cross-access easement is not noted on the site plan.

Mr. Savidant stated that both the Fire Department and Engineering Department recommend a cross-access easement, but it is the authority of the Planning Commission to place a cross-access easement on a property.

Resolution # PC-2020-01-005
Moved by: Krent
Seconded by: Crusse

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Square Lake Court Townhomes, 14 units, located on the South side of Square Lake, West of Dequindre (PIN 88-20-12-200-025), Section 12, Zoned NN (Neighborhood Node "N"), be granted, subject to the following:

1. Add dedicated guest parking.
2. Provide cross-access easement along southern property line.
3. Add additional trees along west property line.
4. Replace light fixture with shielded one.
5. Identify all materials.
6. Add additional architectural details to the side elevations.

Yes: Crusse, Lambert, Faison, Krent, Rahman, Tagle
No: Apahidean, Hutson, Perakis

MOTION CARRIED

OTHER BUSINESS

8. PLANNING COMMISSION 2020 MEETING SCHEDULE – REVISION

Mr. Savidant asked for the Board's consideration to revise the 2020 Planning Commission meeting calendar by removing the March 10, 2020. He explained an election is being held that day and there could be a conflict in reserving a meeting room.

Resolution # PC-2020-01-006
Moved by: Lambert
Seconded by: Rahman

RESOLVED, To revise the 2020 Planning Commission Schedule and remove the March 10, 2020 date.

Yes: All present (9)

MOTION CARRIED

9. ELECTION OF OFFICERS

Chair Faison opened the floor for nominations of Chair. Ms. Crusse nominated Mr. Faison. Mr. Hutson nominated Mr. Krent. There were no further nominations placed on the floor.

Mr. Faison said he would be happy to serve another year or happy to step down to allow the opportunity to another member.

Mr. Krent accepted the nomination.

Roll call vote on the nomination of Mr. Faison for Chair

Yes: Crusse, Lambert, Faison, Rahman
No: Apahidean, Hutson, Krent, Perakis, Tagle

MOTION FAILED

Roll call vote on the nomination of Mr. Krent for Chair

Yes: Apahidean, Lambert, Faison, Hutson, Krent, Perakis, Rahman, Tagle
No: Crusse

MOTION CARRIED

Mr. Krent is the newly elected Chair.

Chair Faison opened the floor for nominations of Vice Chair. Mr. Tagle nominated Mr. Lambert. There were no further nominations placed on the floor.

Mr. Lambert accepted the nomination and is the newly elected Vice Chair.

There was discussion on the role, structure and formation of the Planning Commission representative to the Zoning Board of Appeals; consideration might be given to making revisions.

Chair Faison opened the floor for nominations of Zoning Board of Appeals (ZBA) Representative. Mr. Apahidean nominated Mr. Rahman. There were no further nominations placed on the floor.

Mr. Rahman accepted the nomination and is the newly elected ZBA Representative.

---

10. PUBLIC COMMENT

There was no one present who wished to speak.

11. PLANNING COMMISSION COMMENT

There were general Planning Commission comments, some relating to:

- Compatibility, transition of Neighborhood Nodes to single family residential.
- Opening the floor for public comment following a Public Hearing.
- 2020 Michigan Regional Future City Competition at Novi Showplace on January 28.

Chair Faison was acknowledged and thanked for a good job as Chair!

A warm welcome was extended to Ms. Perakis.

The Regular meeting of the Planning Commission adjourned at 11:19 p.m.

Respectfully submitted,

Shaw L/Saut FOR CARLTON FAISON
Carlton Faison, Chair

Jackie Ferency FOR Kathy Czarnecki
Kathy L. Czarnecki, Recording Secretary

Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: September 17, 2019

Preliminary Site Plan Review
For
City of Troy, Michigan

Applicant: Tollbrook North LLC

Project Name: Crooks Road Townhomes

Plan Date: August 30, 2019

Location: Between Wattles Road and Long Lake Road, on the East side of Crooks Road

Zoning: Neighborhood Node (NN) – Node "I"

Action Requested: Preliminary Site Plan Approval

SITE DESCRIPTION

The subject site is located on the east side of Crooks Road, between Wattles Road and Long Lake Road. The approximate 2.73-acre site is improved with a single-family home. The house will be removed if the proposed development is approved.

The applicant proposes to develop the site as a 60-unit townhome project, grouped into a total of eight (8) buildings. Access to the site is via Crooks Road. The applicant proposes an Emergency Vehicle Access (EVA) connection at the site's northwest boundary at Carson Drive.

Buildings A and B front Crooks Road, Buildings C-G front the interior drive, and Building H is located at the rear of the site. The number of units in each building vary from 4 in Building A to 12 in building H. All units are three (3) stories, accompanied by a 2-car tandem garage.

The property is zoned Neighborhood Node (Node "I") and multiple family residential is a permitted use. While we support the use of multiple family residential as it is permitted by zoning, we met with the applicant on August 13, 2019 to discuss the proposed site plan and

outline opportunities to improve the proposed layout. These opportunities focused on both reducing impacts upon adjacent properties and providing a better and safer layout for future residents. Many of the opportunities discussed at the August 13, 2019 meeting have not been addressed by the applicant. See Building Arrangement section for more details.



Size of Subject Property:
The parcel is 2.73 net acres

Proposed Uses of Subject Parcel:
Sixty (60) townhome units

Current Use of Subject Property:
The subject property is currently improved with a single-family home

Current Zoning:
The property is currently zoned NN, Neighborhood Node District (Node "I")

Surrounding Property Details:

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

NATURAL FEATURES

Topography: A topographic survey has been provided on sheet C-1.0 and shows that the site has a slightly higher elevation in the northwest portion of the property. Elevations decrease heading toward its south and southwest boundaries.

Wetlands: There are no wetlands on site.

Floodplain: An existing floodplain is located at the southwest corner of the site and is not intended to be developed. A segmental retaining wall has been proposed to protect this feature.

Woodlands: A tree inventory has been provided on sheet T-1.1. The tree inventory and calculations include the single-family parcel to the north. The tree inventory and calculations must be corrected to only include the parcel that is proposed for development.

Items to be addressed: *Update tree inventory and calculations to only include the parcel that is proposed for development.*

BUILDING ARRANGEMENT

While we support the use of multiple family residential as it is permitted by zoning, we met with the applicant on August 13, 2019 to discuss the proposed site plan and outline opportunities to improve the proposed layout. These opportunities focused on both reducing impacts upon adjacent properties and providing a better and safer layout for future residents. Many of the opportunities discussed at the August 13, 2019 meeting have not been addressed by the applicant.

These opportunities include:

- Stormwater location: The applicant is proposing underground detention along the southern property line. The applicant should consider relocating the underground detention to the northern property line. By doing so, the applicant is able to provide additional buffer to the adjacent single-family residential. It's worth noting that the parcel to the south is also zoned Neighborhood Node and will be developed for a more

intense use than single-family residential. The need for a large buffer along the southern property line is not necessary.

- Shift buildings to the south: By relocating underground detention along the northern property line, the applicant can shift the buildings to the south to provide more buffer along the northern property line.
- Replace vinyl fence along northern property line: The applicant proposes a vinyl fence along the northern property line rather than providing the required landscape screening. There is no proposed landscaping along the northern property line. Using a fence rather than a landscape screening requires approval from the Planning Commission. Relocating the underground detention along the northern property line should allow for the opportunity to provide the required landscape buffer with or without additional fence screening.
- Provide a slight jog in the internal drive to reduce "canyon" effect and reduce internal speeding: Lining the 400-foot long straight internal drive are thirty-eight 40-foot tall townhomes. The overall length of the road, coupled with the height of the building, may create a "canyon" effect from Crooks, without any visual breaking up of the massing. Furthermore, the length of the road, and the "straightness" encourages increased vehicle speeds. Providing a slight jog in the internal drive accomplishes two goals: 1). Providing visual relief and breakup in massing of buildings from Crooks; and 2). Discouraging internal speeding.
- Provide additional guest parking spaces: The applicant is proposing two tandem garage spaces for each unit. While the number of spaces meets the required parking, understanding human nature, many residents may not want their car "blocked" in the garage by another car. That being the case, many of the guest spaces will be used by residents.
- Consideration of changes to the elevations along the northern property lines to reduce impact of second and third story elevations, including windows, facing adjacent residential properties.
- Break up 12-unit Building H: The 168-foot length of Building H creates a significant visual mass, especially for residents on Carson Drive, as it is the primary view into the development from Carson Drive.
- Pedestrian Connection: Carson Drive has sidewalks. Extend sidewalk internal sidewalks to connect to existing Carson Drive sidewalks.
- Engineering Review:
    - Reconfigure the rear part of the site to eliminate the two triangular-shaped areas created by the skewed orientation of Building K. It would be preferable to reorient Building K.
    - The guest parking located along the reverse curve near the entrance should be on a straight taper so that the parking stalls are parallel to each other.
    - It is unclear how trash collection will be handled. Site is configured such that a garbage truck may have difficulty circulating some portions of the site.

- The design of the garages is not true "pull-through" as there is only access through one door. This will require additional maneuvering to fit 2 cars and could lead to vehicles parking or standing in drive aisles, blocking access to adjacent units.
- Show sight triangles. The second north-south drive aisle between the building units is located in the horizontal curve of the main drive access. It appears that the sight parking exiting this aisle may be impaired by the northernmost building unit or cars in the guest parking lot.
- Accessible parking spaces should be dispersed throughout the site.

Items to be addressed: *Address layout issues noted within this report*

AREA, WIDTH, HEIGHT, SETBACKS

Table 5.03.B.3, Building Form C of Section 5.03, Standards Applicable to All Districts of the Zoning Ordinance establishes the dimensional requirements for the NN, Neighborhood Node District. The requirements and proposed dimensions are shown in the following table.

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies. Planning Commission can grant up to a 30-foot building placement.
Side (north)	N/A, building may be placed up to property line	Buildings C, E, G: 23.46 feet Building H: 15-feet	Complies
Side (south)	N/A, building may be placed up to property line	46.2 feet	Complies
Rear (west)	30-foot minimum setback	56.68 feet	Complies
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 40 feet (as indicated on building elevations)	Complies
Lot Coverage (Building)	30%	32%	Complies
Minimum Open Space	15%	43.2%	Complies
Parking Location	Cannot be located in front yard	Within garages	Complies

Items to be addressed: *Address Site Plan issues noted within this report*

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Residential: 2 spaces per unit	60 Units = 112 spaces	120 garage spaces + 9 guest spaces = 129 spaces
Barrier Free	0	0
Bicycle Parking	0	Located within garages
Loading	0	0
Total	**112 spaces**	**112 spaces within garages and 17 guest spaces**

Items to be Addressed: *Address Site Plan issues noted within this report*

SITE ACCESS AND CIRCULATION

Vehicular access to the site is via Crooks Road. The applicant proposes an Emergency Vehicle Access (EVA) connection at the site's northwest boundary at Carson Drive. A truck t-turn around is provided adjacent the the EVA.

The applicant is proposing a concrete, internal pedestrian sidewalk network.

Items to be addressed: *None*

LANDSCAPING

A landscaping plan has been provided on sheet L-1.0 and are supplemented by tree protection and planting details on sheet L-1.1. The applicant should verify that the plant list provided on sheet L-1.0 corresponds to drawings provided. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	Provided:	Compliance:
North Property Line:			
Landscape buffering: Required buffering between two differentiating land uses. Alternative 1 or 2.	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. Alternative screening method may be considered by the Planning Commission.	6-foot tall vinyl privacy fence	Planning Commission review is required in order to determine whether screening is sufficient.

East Property Line:			
(Crooks Road) Street Trees: The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.	200 feet = 7 trees	7 trees	Complies
West Property Line:			
Landscape buffering:	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet.	20 preserved trees, floodplain area, and segmental retaining wall	Complies
Overall:			
Site landscaping: A minimum of twenty percent (20%) of the site area shall be comprised of landscape material. Up to twenty-five percent (25%) of the required landscape area may be brink, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.	15%	43.2%	Complies
Mitigation:	The tree inventory and calculations include the single-family parcel to the north. The tree inventory and calculations must be corrected to only include the parcel that is proposed for development.		

Transformer / Trash Enclosure:

The applicant has not indicated a central trash enclosure. It is assumed that each unit will have trash bins in the garage to be rolled out for trash pickup. However, as note above, Engineering has questioned the ability to service the site with a trash truck.

***Items to be Addressed**: 1). Planning Commission to consider the use of a vinyl fence in place of required screening; 2). Confirm ability for truck to maneuver site; and 3). Correct tree inventory and calculations.*

PHOTOMETRICS

A photometric plan has been provided on sheet SL-1.0, and additional details are provided on sheet SL-1.1. A total of 123 building light fixtures are proposed of three (3) varying types. Wall

light fixtures placed at each unit's entrance and rear are described as having a height of six (6) feet. A note indicates that all area light fixtures are to be directed away from neighboring properties and roadways.

The fixture submitted is not compliant with ordinance requirements as the light source is not fully shielded.

Items to be Addressed: *Replace fixture*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided on sheets A-1 through A-13. The elevations provided show architectural details, variations in material and pattern (brick, siding, asphalt shingles and wood trim wrapped with aluminum), as well as general color scheme. The applicant should clarify the siding material and bring a material sample to the meeting.

Items to be Addressed: *Clarify siding material*

DESIGN STANDARDS and SITE PLAN REVIEW STANDARDS

The Neighborhood Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

Section 5.06.E. outlines Design Standards:

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.06.E for standard details

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
2. *Development shall incorporate the recognized best architectural building design practices.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*

Please see Section 8.06 for standard details

CWA Response: Based upon our site plan comments noted herein, we find that the standards set forth in the Neighborhood Node Design Standards and Site Plan Review Standards have not

been met. We find that the standards of compatibility and transitions may be able to be met with the site plan changes noted herein this report.

RECOMMENDATION

Overall, we find the proposed use to be appropriate for the site, however, we find that the applicant has not meet the Neighborhood Node Design Standards set forth in Section 5.06.E and Site Plan Review Standards set forth in Section 8.06.

We recommend that the Planning Commission postpone action to allow the applicant to address site plan items noted in our report. Specifically the items noted in our report should be addressed to meet the Site Plan Review Standards and Neighborhood Node Design Standards of compatibility and transitions.

Sincerely,

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: September 17, 2019
January 7, 2020

Preliminary Site Plan Review
For
City of Troy, Michigan

Applicant: Tollbrook North LLC

Project Name: Crooks Road Townhomes

Plan Date: November 13, 2019

Location: Between Wattles Road and Long Lake Road, on the West side of Crooks Road

Zoning: Neighborhood Node (NN) – I

Action Requested: Preliminary Site Plan Approval

SITE DESCRIPTION

The subject site is located on the east side of Crooks Road, between Wattles Road and Long Lake Road. The approximate 5.73-acre site is improved with two single-family homes. The two houses will be removed if the proposed development is approved.

The applicant has made significant modifications since the previous application, including purchasing the 3.0-acre parcel to the south and removing the Emergency Vehicle Access to Carson Drive. A list of full changes is included on Page 4 of this report. All housing development will be on the east side of the drain, and the site's detention pond will be on the west side of the drain.

The applicant proposes to develop the site as a 74-unit townhome project, grouped into a total of thirteen (13) buildings. Access to the site is via Crooks Road.

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*

Buildings A, H, and R front on Crooks Road, and all other buildings front on interior drives. The number of units in each building vary from 5 to 6. All units are three (3) stories in height and accompanied by a 2-car tandem garage.



Size of Subject Property:
The parcel is 5.72 net acres

Proposed Uses of Subject Parcel:
Seventy-four (74) townhome units

Current Use of Subject Property:
The subject property is currently improved with a single-family home

Current Zoning:
The property is currently zoned NN, Neighborhood Node District

Surrounding Property Details:

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Vacant/Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

NATURAL FEATURES

Topography: A topographic survey has been provided on sheet C-1.0 and shows that the site has a slightly higher elevation in the northwest portion of the property. Elevations decrease heading toward its south and southwest boundaries. Grading will occur on the west side of the drain to accommodate the stormwater facility.

Wetlands: The applicant has noted no wetlands on site. The applicant will be required to confirm that there are no wetlands onsite and if so, obtain any necessary permits for floodplain impact as part of the final engineering review.

Floodplain: The Lane Drain, and associated floodplain is located at the southwest corner of the site. No development in intended with in the floodplain, however, the proposed stormwater facility is located on the west side of the drain, which may be in floodplain.

The applicant will be required to confirm the floodplain and obtain any necessary permits for floodplain impact as part of the final engineering review.

Woodlands: A tree inventory has been provided on sheet T-1.1. The applicant has identified a total of 69 woodland trees and 6 landmark trees on site. Of the 69 woodland trees, the applicant is removing 49 and preserving 20. Of the 6 landmark trees, the applicant is removing 5 and preserving 1.

Replacement Details		
Protected Tree	**Inches Removed**	**Replacement Required**
Landmark	108 inches	108 inches
Woodland	489 inches	245 inches
Preservation/Mitigation	**Inches Preserved**	**Credit**
Landmark	13 inches	26 inches
Woodland	183 inches	366 inches

Protected Replacement Required	353 Inches
Preservation Credit	392 Inches
Total	**+ 39-inch credit**
Total Tree Mitigation	Zero. The number of inches preserved and credited exceed the mitigation required.

The tree removal and mitigation may need to be updated based on proposed means of access to the stormwater detention facility. See stormwater section below.

Items to be addressed: *Update tree removal and mitigation based upon impact as a result of access to stormwater facility.*

PREVIOUS PLANNING COMMISSION REVIEW

The application was last considered in September 2019. Action on the site plan was postponed. Staff and Planning Commission discussion included:

- Elevations, building material, height, and setbacks
- Density
- Guest parking, number of spaces, off-street parking
- Internal road, traffic calming devices
- Transition to adjacent residential, required landscaping, proposed fence
- Compatibility with neighborhood residential
- Parcels for sale to the north and south of subject property
- Meeting and/or discussion with neighbors
- Rendering, accurate representation visually in relation to site plan
- Trash collection
- Discretion for Planning Commission with regards to site plan improvements
- Neighborhood node zoning district as it relates to compatibility and transition to neighborhood

There were a number of residents who spoke in opposition to the project. These comments include:

- Density
- Transition
- Compatibility
- Traffic impacts
- Parking
- Safety of children
- Over-development
- Impact on existing utilities
- Emergency access
- School capacity
- Impact on environment

- Emergency access
- Home values
- Snow removal

SITE PLAN CHANGES

Based on the discussion from the Planning Commission, staff, and the public, the applicant has amended their site plan. Changes include:

- Purchased 3.0 acres to the south
- Increased number of units but decreased overall density:
  - Original density: 21.9 units per acre (60 / 2.73 = 21.9)
  - Revised density: 12.9 units per acre (74 / 5.73 = 12.9)
- Relocated stormwater detention to the west side of the drain
- Increased unit size square footage
- Removed proposed emergency access to Carson Drive
- Increased setback along northern property line from 24 to 40-feet
- Reduced lot coverage from 32% to 19.3%
- Increased open space from 43.2% to 55.0%
- Increased guest parking spaces from 17 to 31

SITE ACCESS AND CIRCULATION

Vehicular access to the site is via Crooks Road. The applicant has removed the Emergency Vehicle Access (EVA) connection at Carson Drive. The Fire Department has reviewed access and circulation and supports the layout provided that the applicant adds an EVA at the extreme south end (direct connection to Crooks Road). The EVA would eliminate six (6) "guest" parking spaces.

When the property to the south is developed, the EVA could come out, parking could go back in (if needed) and cross access between the sites established.

The applicant is proposing a concrete, internal pedestrian sidewalk network. However, there are no direct connections from the front door/steps of each unit to the internal sidewalks. The applicant should clarify if there are direct sidewalk connections to the front door/step.

Items to be addressed: *1). Provide EVA with direct connection to Crooks Road; and 2). Show direct sidewalk connection from each front door/step to the internal sidewalk network.*

AREA, WIDTH, HEIGHT, SETBACKS

Table 5.03.B.3, Building Form C of Section 5.03, Standards Applicable to All Districts of the Zoning Ordinance establishes the dimensional requirements for the NN, Neighborhood Node District. The requirements and proposed dimensions are shown in the following table.

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies. Planning Commission can grant up to a 30-foot building placement.
Side (north)	N/A, building may be placed up to property line	40-feet	Complies
Side (south)	N/A, building may be placed up to property line	80 feet	Complies
Rear (west)	30-foot minimum setback	139 feet	Complies
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 37.5 feet to peak of roof (as indicated on building elevations)	Complies
Lot Coverage (Building)	30%	19.3%	Complies
Minimum Open Space	15%	55.0%	Complies
Parking Location	Cannot be located in front yard	Within garages	Complies

Items to be addressed: *None*

TRAFFIC

The city's traffic engineering consultant OHM has been asked to review the plan from a traffic impact standpoint. At the time of writing this memo, the review has not been finalized. The traffic review will either be delivered to the Planning Commission and the applicant at the meeting or emailed out prior to the meeting.

Items to be Addressed: *Comply with traffic findings as necessary.*

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Residential: 2 spaces per unit	74 Units = 148 spaces	148 garage spaces + 31 guest spaces = 179 spaces
Barrier Free	0	0
Bicycle Parking	0	Located within garages
Loading	0	0
Total	**148 spaces**	**148 spaces within garages and 31 guest spaces**

Items to be Addressed: *None*

LANDSCAPING

A landscaping plan has been provided on sheet L-1.0 and are supplemented by tree protection and planting details on sheet L-1.1. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	Provided:	Compliance:
North Property Line:			
Landscape buffering: Required buffering between two differentiating land uses. Alternative 1 or 2.	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. = 590 feet / 10 = 59 narrow evergreen Or Alternative screening method may be considered by the Planning Commission.	59 narrow evergreen + 6-foot tall vinyl privacy fence	Planning Commission to consider the use of a vinyl fence in addition to required screening. Alternative material to vinyl should be considered.
West Property Line:			
Landscape buffering:	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet.	5 trees	Does not comply
East Property Line:			
(Crooks Road) Street Trees:	200 feet = 7 trees	7 trees	Complies

The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.			
Overall:			
Site landscaping: A minimum of fifteen percent (15%) of the site area shall be comprised of landscape material. Up to twenty-five percent (25%) of the required landscape area may be brink, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.	15%	55%	Complies

The applicant has provided a colored site plan that indicates that the significant screening along the western propriety line will remain. However, with grading due to the stormwater facility it appears that much the existing trees in the area outline in red in the graphic below will be removed. The applicant should confirm removal of existing trees and indicate screening as a result of the installation of the stormwater facility.



Transformer / Trash Enclosure:

The applicant has not indicated a central trash enclosure. It is assumed that each unit will have trash bins in the garage to be rolled out for trash pickup.

***Items to be Addressed**: 1). Planning Commission to consider the use of a vinyl fence in addition to required screening; 2). Add additional screening along western property line; and 3). Conform removal of existing tree cover and screening as a result of installation of stormwater facility.*

STORMWATER

The proposed stormwater facility is located on the west side of the drain, which may be in the floodplain. Furthermore, it is not clear how the stormwater facility will be accessed. The applicant should clarify how access will be provided to the stormwater facility. If accessed from Penrose, significant additional tree removal will be required. The applicant will need to update tree removal and mitigation based upon impact as a result of access to stormwater facility.

***Items to be Addressed:** Confirm access to the stormwater facility.*

PHOTOMETRICS

A photometric plan has been provided on sheet SL-1.0, and additional details are provided on sheet SL-1.1. A total of 140 building light fixtures are proposed of two (2) varying types. Wall light fixtures placed at each unit's entrance and rear are described as having a height of six (6) feet. A note indicates that all area light fixtures are to be directed away from neighboring properties and roadways.

Notes on the plan indicate the use of poles, however no pole lights are proposed. The applicant shall verify.

The fixture submitted is not compliant with ordinance requirements as the light source is not fully shielded. Visible light source is particularly important along northern and western property line.

***Items to be Addressed:** 1). Verify use of pole lighting; and 2). Replace fixture*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided on sheets A-1 through A-7. The elevations provided show architectural details, variations in material and pattern (brick, siding, asphalt shingles and wood trim wrapped with aluminum), as well as general color scheme. The applicant should clarify the siding material and bring a material sample to the meeting.

The applicant should provide a 3-D model of the site in context of the surrounding area.

Items to be Addressed: *1). Clarify siding material; 2). Provide material board; and 3). Provide 3-D model of site in context to surrounding area.*

DESIGN STANDARDS and SITE PLAN REVIEW STANDARDS

The Neighborhood Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

Section 5.06.E. outlines Design Standards:

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.06.E for standard details

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
2. *Development shall incorporate the recognized best architectural building design practices.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*

Please see Section 8.06 for standard details

CWA Response: *Make site plan changes as noted, of particular importance is impact upon adjacent properties including proper screening/landscaping, stormwater detention access, confirmation of tree removal/screening, and and lighting.*

RECOMMENDATION

The applicant has made significant modifications since the previous application, including purchasing the 3.0-acre parcel to the south and removing the Emergency Vehicle Access to Carson Drive. Overall, we find the proposed use to be appropriate for the site. However, we find that there are some significant outstanding site plan items to be addressed. Of particular importance is proper screening/landscaping along adjacent residential property lines, tree removal loss due to stormwater facility, and lighting impact to adjacent properties. We recommend that the Planning Commission postpone action to allow the applicant to address site plan items noted in our report:

1. *Confirm access to the stormwater facility.*
2. *Conform removal of existing tree cover and screening as a result of installation of stormwater facility.*
3. *Update tree removal and mitigation based upon impact as a result of access to stormwater facility.*
4. *Provide EVA with direct connection to Crooks Road.*
5. *Show direct sidewalk connection from each front door/step to the internal sidewalk network.*
6. *Comply with traffic findings as necessary.*
7. *Planning Commission to consider the use of a vinyl fence in addition to required screening. Alternative material to vinyl should be considered.*
8. *Add additional screening along western property line.*
9. *Verify use of pole lighting.*
10. *Replace proposed fixture.*
11. *Clarify siding material.*
12. *Provide material board.*
13. *Provide 3-D model of site in context to surrounding area.*

Sincerely,

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

Chair Krent called the virtual Regular meeting of the Troy City Planning Commission to order at 7:03 p.m. on November 10, 2020. Chair Krent introduced the procedure to be followed for a remote meeting.

1. ROLL CALL

Present:
Ollie Apahidean
Karen Crusse
Carlton M. Faison
Michael W. Hutson
Tom Krent
David Lambert
Marianna Perakis
Sadek Rahman
John J. Tagle (audibly only)

Also Present:
R. Brent Savidant, Community Development Director
Ben Carlisle, Carlisle Wortman Associates
Julie Quinlan Dufrane, Assistant City Attorney
Jackie Ferencz, Planning Department Administrative Assistant
Kathy L. Czarnecki, Recording Secretary

2. SUSPENSION OF PLANNING COMMISSION BYLAWS

Resolution # PC-2020-11-027
Moved by: Rahman
Support by: Perakis

WHEREAS, the Michigan Department of Health and Human Services (MDHHS) Director Robert Gordon issued an Order on October 5, 2020 under MCL 333.2253 restricting indoor gathering sizes to protect public health and safety, and

WHEREAS Public Act 228 of 2020 permits public meetings to be held by electronic means where an in-person meeting could detrimentally increase exposure of board members and the general public to COVID-19,

THEREFORE BE IT RESOLVED, That as allowed by Planning Commission Rules of Procedure Article IV, Section 6, the Troy Planning Commission hereby **TEMPORARILY SUSPENDS** the requirement of holding a meeting at the Troy City Hall and **ALLOWS** all Troy Planning Commission Members to electronically participate in any Planning Commission meeting through December 31, 2020.

Members participating electronically will be considered present and in attendance at the meeting and may participate in the meeting as if physically present. However, members must avoid using email, texting, instant messaging, and other such electronic forms of communication to make a decision or deliberate toward a decision.

RESOLVED, As allowed by Planning Commission By-laws and Rules of Procedure Article X, the Troy Planning Commission hereby **TEMPORARILY SUSPENDS AND MODIFIES** the By-laws and Rules of Procedure concerning the Order of the Agenda, as set forth in Article V, Section 3, to consolidate the Public Comment sections of the meeting for any meeting held through December 31, 2020.

RESOLVED, As allowed by Planning Commission By-laws and Rules of Procedure Article X, the Troy Planning Commission hereby **TEMPORARILY SUSPENDS AND ALLOWS** two methods of receiving Public Comment for virtual meetings. Public comments can be submitted for the Planning Commission meeting by sending an email to: planning@troymi.gov. Emails received prior to 4:00 pm on the day of the Planning Commission meeting, will be read at the meeting and made part of the public record. Public comments can also be submitted by calling the following phone number and leaving a voicemail message: (248) 524-1305. Recorded voicemail messages received prior to 4:00 pm on the day of the Planning Commission meeting will be played at the meeting. For emails and recorded messages received after the deadline, reasonable efforts will be made to read emails and play recorded messages received during the meeting. Email and voicemail public comments will be limited to three minutes each.

Yes: All present (9)

MOTION CARRIED

3. APPROVAL OF AGENDA

Resolution # PC-2020-11-028
Moved by: Perakis
Support by: Apahidean

RESOLVED, To approve the Agenda as prepared.

Yes: All present (9)

MOTION CARRIED

4. APPROVAL OF MINUTES

Mr. Lambert asked that the draft minutes reflect that Resolution # PC-2020-10-026 was moved by him and not Mr. Tagle.

Resolution # PC-2020-11-029
Moved by: Lambert
Support by: Rahman

RESOLVED, To approve the minutes of the October 27, 2020 Regular meeting as revised.

Yes: All present (9)

MOTION CARRIED

5. PUBLIC COMMENT – For Items Submitted via Email or Telephone Message

Email messages received after the online posting of the agenda, in response to Agenda item #6.

- Carl Koenig, 4393 Cahill; oppose
- Jan Walsh, 4318 Bender Court; oppose
- Omar Shouhayib, 2265 Livernois, Choice Development; in support
- Laura Lipinski, 4233 Carson; oppose
- Ken McCabe, no address; oppose
- Thomas and Patricia Reiss, 1400 Bradbury; oppose
- Charlotte MacPherson, no address; oppose
- Senthil Kumar, 4073 Parkstone; oppose
- Lisa Paglino, 1061 Redding; oppose
- Neal and Paulette Shaw, 3861 Jennings; oppose
- Linda Baatz, no address; oppose
- Anirudh Sure, no address; oppose
- Daryl and Denise Jamison, no address; oppose
- Yumin and Zhang Ying Sheng, 4678 Tifton; oppose
- Tom Shaw, 4040 Glencastle; oppose
- John and Shelly Shallcross, 1059 Fountain; oppose
- Vivian Zoma, no address; oppose
- Sathya Dev, no address; oppose
- Maureen Cash, 4278 Lehigh; oppose
- Bonnie Jeffrey, no address; oppose
- Maureen Pickard, no address; oppose
- Celine T (concerned citizen), no address; oppose
- Faina Temkin, no address; oppose
- Larry and Jennifer Patton, 1417 Fountain; oppose
- Srinivasan Ravindran, no address; oppose
- Medha Tripathi, no address; oppose
- Angela He, 1347 Fountain; oppose
- Natarajan Athreya, 4089 Glencastle; oppose
- No name (Boots2344), 1310 Fountain; oppose
- Jonathan Maksabo, no address; oppose
- Ralph Schick, 4117 Penrose; oppose
- Amy Hirina, 4234 Carson; oppose
- Shalin Shah, no address; oppose
- No name, no address; oppose
- Harshini Chandrasekaran, no address; oppose
- Varun Aravapally, no address; oppose
- Ayesha Khan, no address; oppose
- Aryamaan Gaddam, no address; oppose
- Andrea Noble, Treasurer Woodlands of Troy HOA; oppose
- Rose Marie Ialapi, no address; oppose

- Matt Parowski, 240 W. Wattles; oppose
- Sanjay Shah and Bela Shah, no address; oppose
- June Yount, no address; oppose
- Aashit Shah, 4088 Parkstone; oppose
- Aashka Shah, no address; oppose
- Abbassieh Sobh, no address; oppose
- Amy Leigh Talarico, no address; oppose
- Arushi Mahajan, no address; oppose
- L. Xiaob (Bob), no address; oppose
- Brian Bartkowiak, 4278 Lehigh; oppose
- Brian Conolly; no address; oppose
- Carl Koenig, 4393 Cahill; oppose
- Carmen Franco, no address; oppose
- Carol Kohut, no address; oppose
- Cynthia Desmon, no address; oppose
- Cindy Sweeney, 4037 Glencastle; oppose
- Dan Raubinger, no address; President Woodlands of Troy HOA; oppose
- Daphne Ntiri, 4198 Carson; oppose
- Daryl Dickhudt, 4143 Glencastle; oppose
- David and Claudette Rusing, 1425 Bradbury; oppose
- Deanna Vetrone, no address; oppose
- Debbie A. Knauss, 3897 Meadowbrook; oppose
- Devinder Singh, 2452 Claymont; oppose
- Edmund Jaskulka, 4291 Lehigh; oppose
- Geeta Desai, 1844 Rolling Woods; oppose
- Geomy George, 4025 Glencastle; oppose
- James and Sharon Murray, 1267 Bradbury; oppose
- Jayashree Rao, 4415 Wintergreen; oppose
- Jenn-Tser and Jin-Feng Pan, 4059 Parkstone; oppose
- Jenny Chang, no address; oppose
- Jinming Xu, 4179 Carson; oppose
- John Bridge, 4089 Penrose; oppose
- Gerald and Judith Holmberg, no address; oppose
- Thomas and Karen Shaw, 4040 Glencastle; oppose
- Katherine Mikulski, 4408 Cahill; oppose
- Kosta and Carol Hardaloupas, no address; oppose
- Kristen Rondeau, 5090 Longview; oppose
- Les and Liz Kobylak, 1938 Canary; oppose
- Lisa Paglino, no address; oppose
- Lopa Rana, no address; oppose
- Mark and Diane Paul, 3844 Root; oppose
- Mary Kay Michaels, 4535 Hycliffe; oppose
- Mary Kennedy, no address; oppose
- Masood Siddiqui, no address; oppose

- Mike Lipinski, 4233 Carson; oppose
- Praveen Gomer, 1062 Whisper Way; oppose
- Pat Baker, no address; oppose
- Paul Pabian, no address; oppose
- Priti Gupta, no address; oppose
- Ringo Zhang, no address; oppose
- Robert Laudicina, 1286 Fountain; oppose
- Robert Marku, no address; oppose
- Scott and Claudia Leman, 1075 Fountain; oppose
- Sujith Nair, 1337 Bradbury; oppose
- Susan Turpin, 4216 Carson; oppose
- Xiao Min Chen, 975 Emerson; oppose
- Jerry Rauch, 4187 Penrose; oppose
- Xiaoqing Yu, 1260 Bradbury; oppose
- Yi Guo and Zhe Xu, 1192 Provincial; oppose
- Yongpeng Zhang, no address; oppose
- Zachary Reed, 1395 Fountain; oppose
- Kevin Zhou, no address; oppose
- Shelley Stenger, no address; oppose
- Aditi Mahajan, no address; oppose
- Atika Singh, no address; oppose
- Dorothy Shetler, 4558 Rivers Edge; oppose
- Fred Tarazi, 4388 Cahill; oppose
- Jayne and Rick Smith, no address; oppose
- Jean-Claude Quenum, 4198 Carson; oppose
- Jigna Shah, 4088 Parkstone; oppose
- Kelly Coval, no address; oppose
- Kristi Roncelli, no address; oppose
- Mary Branch, no address; oppose
- Michael and Peggy O'Shaughnessey, no address; oppose
- Mike Temkin, no address; oppose
- Patricia Orlowski, 1381 Bradbury; oppose
- Paul Balas, 4087 Parkstone; oppose
- Ravi, no address; oppose
- Renee Weiss, no address; oppose
- Rhea Sautter, no address; oppose
- Rose Wright and James Laherty, 1269 Autumn; oppose
- Lisa Paglino, 1061 Redding; oppose
- Sumit Mathur, 4426 Hycliffe; oppose
- Ashish and Swati Mody, 4752 Rivers Edge; oppose

Chair Krent called a recess at 9:32 p.m. The meeting reconvened at 9:38 p.m.

Voicemail messages received in response to Agenda item #6.

- Aashit Shah, 4088 Parkstone; oppose
- Thomas Mikulski, 4408 Cahill; oppose
- Edmund Jaskulka, 4291 Lehigh; oppose
- Praveen Gomer, 1062 Whisper Way; oppose
- David Rusing, 1425 Bradbury; oppose
- Indiscernible name; oppose
- Joyce Barnett, 3448 Tothill; oppose
- Deepak Parekh, 2956 Devonwood; oppose
- Indiscernible name; oppose
- Robert Marku, 3394 Kilmer; oppose
- Tim Dryzga, 4642 Bentley; oppose
- Jigna Shah, 4088 Parkstone; oppose
- Gloria Vanevery, 2140 Charnwood; oppose
- Resident, Woodlands of Troy; oppose
- Victor Nowak, 1132 Fountain, oppose
- Michael Walsh, 4318 Bender Court; oppose
- Heena Shah, 1701 Caliper; oppose
- Deborah Louzecky, 6327 Donaldson; oppose
- Carol Quigley, 2489 Tall Oaks; oppose
- (first name indiscernible) Raghavulu, 4020 Penrose; oppose
- Henry Bzdziuch, 2337 Valleyview; oppose

PRELIMINARY SITE PLAN APPROVAL

6. PRELIMINARY SITE PLAN REVIEW (File Number SP JPLN2019-0022) – Proposed Crooks Road Townhomes, West side of Crooks Road, North of Wattles Road, Section 17, Currently Zoned NN (Neighborhood Node "I") District

Mr. Savidant gave a history of the Preliminary Site Plan application from its initial submission on June 28, 2019. He indicated a public hearing is not required for the application but at two previous Planning Commission meetings, the Chair opened the floor for public comment. At the September 24, 2019 meeting, 30 people spoke and 82 email messages were received. At the January 14, 2020 meeting, 18 people spoke and 59 email messages were received.

Mr. Savidant indicated the applicant has brought back the application with minor modifications after meeting with representatives of the abutting neighborhood. He said the administration notified the Woodlands Homeowners Association with a link to the agenda packet posted online this past Friday afternoon, which generated the public comment presented this evening. Mr. Savidant said the applicant has a right to due process by law to be heard by the Planning Commission.

Mr. Carlisle gave a review of the Preliminary Site Plan application identifying the recent modifications to the plan since last reviewed by the Planning Commission and as identified in his report dated November 6, 2020. He shared the renderings provided by the applicant.

Mr. Carlisle reported the proposed use is appropriate for the site and multiple family residential is a permitted use in the neighborhood node. He asked the Planning Commission to take into consideration the type of multiple family residential proposed, the number of units proposed, and transitional features as set forth in Section 5.06.E.3 of the Zoning Ordinance.

Discussion among members and administration:

- Building height permitted in Neighborhood Node districts.
- Pedestrian path and picnic area.
  - Amenity for development or adjacent Penrose residents; question for applicant.
  - Access; no physical vehicular or pedestrian connection.
- Community Image Builders communication; some valid points, some points not related specifically to Troy.
- Stormwater management; review during final site plan process by City Engineering Department, as well State permits required.
- No applications on file for proposed development on remaining corners of Wattles and Crooks.

Present were Attorney Greg Obloy of Carson Fischer, Carmine Avantini of Community Image Builders, James Butler and Gregory Bono of Professional Engineering Associates and the applicant Arban Stafa of Tollbrook North LLC.

Mr. Obloy said the applicant met with representatives of the abutting residential neighborhood after the Planning Commission meeting in January and resubmitted the plan in March with revisions to address transition and Planning Consultant review comments. Mr. Obloy clarified the picnic area is intended as an amenity for the neighborhood to the west. Mr. Obloy said the application complies with all requirements of the Zoning Ordinance and respectfully requested action this evening to approve the Preliminary Site Plan.

Mr. Avantini gave a PowerPoint presentation. He addressed a reduction in building height, elevation difference between uses, amenities and building material. Mr. Avantini said building material is brick and cement fiber board, no vinyl. He noted trash collection would be internally for individual townhomes with no dumpsters on site. Mr. Avantini's presentation showed various renderings and a three-dimensional view of the development in context to neighboring homes.

There was discussion on:

- Neighborhood meeting on January 23, 2020 at City Hall Library; applicant indicated no compromise reached.
- Pedestrian path and picnic area.
- Elevation and grading differences; approximate 5-foot difference, accuracy of information provided by applicant.
- Transitional features and compatibility with surrounding neighbors.
  - Interpretation(s) of design standards subjective.
- Application as relates to Zoning Ordinance requirements and Master Plan.
- Traffic study dated January 14, 2020; same data and conclusion for revised application.
- Department reviews of application; no outstanding issues cited.
- Recent legal matter received in City Attorney office.

Resolution # PC-2020-11-
Moved by: Lambert
Support by:

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Crooks Road Townhomes, located on the west side of Crooks, North of Wattles, Section 17, within the NN (Neighborhood Node "I") District, be DENIED, for the following reason(s):

1. That the applicant has not provided the appropriate transition.
2. That it does not meet the design standards, does not enhance the character, environment and safety of pedestrian and motorists through the requirements of the Zoning Ordinance.

Reason #2 offered by Ms. Perakis prior to support on the motion.

Ms. Perakis shared concerns about the safety of children in the context of lack of sidewalks and internal traffic circulation with respect to pedestrians and vehicles.

Ms. Dufrane encouraged further discussion if Ms. Perakis believes there is a safety issue.

Chair Krent stated there appears to be plenty of sidewalks; the open issue is whether the application meets transition and compatibility standards.

Mr. Savidant responded to the concerns expressed by Ms. Perakis about safety. He said the application was submitted to appropriate City departments for review. Mr. Savidant said the traffic professionals and the Fire Department cited no safety concerns with the development. Mr. Savidant said there is nothing dangerous about the project and that the Planning Department does not forward applications to the Planning Commission to act upon if there are any safety concerns.

Chair Krent called the remotely-conducted Regular meeting of the Troy City Planning Commission to order at 7:00 p.m. on April 28, 2020. Chair Krent introduced the procedure to be followed for a remote meeting.

1. ROLL CALL

Present:
Ollie Apahidean
Karen Crusse
Carlton M. Faison
Michael W. Hutson
Tom Krent
David Lambert
Marianna Perakis
Sadek Rahman
John J. Tagle

Also Present:
R. Brent Savidant, Community Development Director
Ben Carlisle, Carlisle Wortman Associates
Julie Quinlan Dufrane, Assistant City Attorney
Jackie Ferencz, Planning Department Administrative Assistant
Kathy L. Czarnecki, Recording Secretary

2. SUSPENSION OF PLANNING COMMISSION BYLAWS

Resolution # PC-2020-04-016
Moved by: Krent
Support by: Lambert

WHEREAS, On March 16, 2020, the Troy City Council declared an emergency under Troy's City Charter and State Law, specifically the Emergency Management Act, MCL 30.401, (Resolution 2020-03-048) which allowed for, among other matters, the cancellation of meetings when necessary, and,

WHEREAS, On April 13, 2020, the Troy City Council extended its declared emergency under Troy's City Charter and State Law, specifically the Emergency Management Act, MCL 30.401, (Resolution 2020-04-055) which allowed for, among other matters, moving forward remotely and virtually with necessary meetings such as Planning Commission meetings, and,

WHEREAS, Governor Gretchen Whitmer issued Executive Order 2020-48 (EO 2020-48) on April 14, 2020 which temporarily suspends strict compliance with physical-place and physical-presence requirements of the Open Meetings Act in order to allow electronic meetings.

THEREFORE, BE IT RESOLVED, That as allowed by Planning Commission Rules of Procedure Article IV, Section 6, the Troy Planning Commission hereby **ALLOWS** all Troy Planning Commission Members to electronically participate in any Planning Commission meeting during the pendency of the declared State of Emergency. However, consistent with State of Michigan Executive Directive 2020-02 and Executive Order 2020-48, Planning Commission Members shall not use email, texting, instant messaging, or any other internet communication during the meeting.

RESOLVED, As allowed by Planning Commission By-laws and Rules of Procedure Article X, the Troy Planning Commission hereby **AMENDS** the By-laws and Rules of Procedure for the duration of the declared state of emergency to modify the Order of the Agenda, as set forth in Article V, Section 3, to consolidate the Public Comment sections of the meeting.

RESOLVED, As allowed by Planning Commission By-laws and Rules of Procedure Article X, the Troy Planning Commission hereby **AMENDS** the By-laws and Planning Commission Rules of Procedure for the duration of the declared emergency to provide for two methods of receiving Public Comment for virtual meetings. During this time, public comments can be submitted for the Planning Commission meeting by sending an email to: planning@troymi.gov. Emails received prior to 4:00 pm on the day of the Planning Commission meeting, will be read at the meeting and made part of the public record. Public comments can also be submitted by calling the following phone number and leaving a voicemail message: (248) 524-1305. Recorded voicemail messages received prior to 4:00 pm on the day of the Planning Commission meeting will be played at the meeting, in compliance with the Rules of Procedure. For emails and recorded messages received after the deadline, reasonable efforts will be made to read emails and play recorded messages during the meeting.

Yes: All present (9)

MOTION CARRIED

3. APPROVAL OF AGENDA

Resolution # PC-2020-04-017
Moved by: Tagle
Support by: Perakis

RESOLVED, To approve the Agenda as prepared.

Yes: All present (9)

MOTION CARRIED

4. APPROVAL OF MINUTES

Resolution # PC-2020-04-018
Moved by: Perakis
Support by: Lambert

RESOLVED, To approve the minutes of the February 25, 2020 Regular meeting as submitted.

Yes: Apahidean, Crusse, Hutson, Krent, Lambert, Perakis, Rahman, Tagle
Abstain: Faison

MOTION CARRIED

5. PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA – For Items Submitted via Email or Telephone Message

Ms. Ferencz reported no email or telephone messages were received.

PRELIMINARY SITE PLAN APPROVALS

6. PRELIMINARY SITE PLAN REVIEW (File Number SP JPLN2019-0038) – Proposed Timbercrest Drive Extension, South of East Wattles, West of Dequindre (88-20-24-201-015), Zoned R-1C (One Family Residential) District

Mr. Carlisle reviewed the Preliminary Site Plan application for Timbercrest Drive Extension. He said the proposed request is permitted by right. Mr. Carlisle addressed the site layout, access of existing single family home and proposed two new homes, landscaping, floor plans and elevations. Mr. Carlisle said the application meets all requirements of the Zoning Ordinance and recommended the Planning Commission grant Preliminary Site Plan approval.

Carol Thurber of Nowak & Fraus Engineers was present to represent the property owner Bismack Designs.

There was discussion on:
- Existing house; to remain as-is.
- Potential future extension of Timbercrest; no plans to extend, property to the south not under petitioner ownership.
- Stormwater management; studies conducted, capacity to tie-in to existing detention basin.
- Elevations; typical representation of homes built by petitioner, review by Building Department.

Ms. Ferencz reported there were no comments on the application received by email or voicemail.

Resolution # PC-2020-04-019
Moved by: Faison
Support by: Rahman

RESOLVED, That Preliminary Site Condominium Approval, pursuant to Article 8 and Section 10.02 of the Zoning Ordinance, as requested for Timbercrest Drive Extension, 3 units/lots, South of East Wattles, West of Dequindre, Section 24, Currently Zoned R-1C (One Family Residential) District, be granted.

Yes: All present (9)

MOTION CARRIED

At 7:21 p.m., Chair Krent was remotely unconnected, at which time the meeting paused. Chair Krent remotely connected to the meeting at 7:24 p.m. Also at this time, it appeared Mr. Hutson was remotely connected audibly (intermittently) but not visibly.

7. PRELIMINARY SITE PLAN REVIEW (File Number SP JPLN2020-0004) – Proposed Square Lake Court Phase II, South of Square Lake, West of Dequindre (88-20-12-200-027), Zoned NN (Neighborhood Node "N") District

Mr. Carlisle reviewed the Preliminary Site Plan application for Square Lake Court Phase II, noting that Phase I was considered and granted approval by the Planning Commission on January 14, 2020. He said the petitioner acquired the parcel to the south and is proposing 48 units. Mr. Carlisle said approval of Phase I was subject to a cross access easement to the south parcel. He noted the petitioner might combine both phases into one project which would terminate the need for a cross access easement and two homeowner associations.

Mr. Carlisle addressed site access one of which is shared with a retail site on Dequindre, rear-accessed garages, cluster of buildings, building height, floor plans and elevations. He identified site plan concerns relating to removal of two guest parking spaces, landscaping to break up long rows of guest parking and sidewalk connections.

Mr. Carlisle recommended that the Planning Commission grant Preliminary Site Plan approval with the conditions as identified in his report dated April 6, 2020.

Present were property owner Erion Nikolla and James Butler of Professional Engineering Associates (PEA).

Mr. Nikolla said if Phase 2 is granted approval, his intent is to merge both phases of the project dependent on construction target dates.

There was discussion on:

- Combining Phase 1 and Phase 2 as one project.
- Guest parking; number of spaces, landscaping to break up rows.
- Cross access easement; recorded agreement with retail for Phase 1. If phases are combined to one project, cross access easement is mute and no longer a Phase 1 requirement.

Ms. Ferencz reported there were no comments on the application received by email or voicemail.

Resolution # PC-2020-04-020
Moved by: Lambert
Support by: Faison

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Square Lake Court Townhomes, 48 units, located South of Square Lake, West of Dequindre (PIN 88-20-12-200-025), Section 12, Zoned NN (Neighborhood Node "N"), be granted, subject to the following:

1. Remove the two (2) spaces that are termination of the access drive off Dequindre.
2. Provide necessary easement to Dequindre.
3. Increase all sidewalks to five (5) feet in width.
4. Provide continuous sidewalk around the perimeter of the site (connect the walk between Buildings H and J, Buildings K and L, and add a walk along easterly edge of site.
5. Add direction connection between Buildings J and K, G and F, D and E, and A and B to Square Lake.
6. Break up the two (2) long rows of parking with landscape peninsula and tree.

Yes: Apahidean, Crusse, Faison, Hutson, Krent, Lambert, Perakis, Rahman, Tagle

Note: Mr. Hutson remotely connected audibly but not visibly.

MOTION CARRIED

OTHER ITEMS

8. PLANNING COMMISSION COMMENT

There were general Planning Commission comments. An all around thanks was given to the Information Technology and Cable departments for their technical assistance to conduct the remote meeting.

The remotely-conducted Regular meeting of the Planning Commission adjourned at 7:43 p.m.

Respectfully submitted,

Tom Krent, Chair

Kathy L. Czarnecki, Recording Secretary

PRELIMINARY SITE PLANS FOR

SQUARE LAKE COURT TOWNHOUSES

SOUTHWEST CORNER OF DEQUINDRE ROAD & SQUARE LAKE ROAD

CITY OF TROY, OAKLAND COUNTY, MICHIGAN

OWNER:

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MI 48315
CONTACT: ERION NIKOLLA

ARCHITECT:

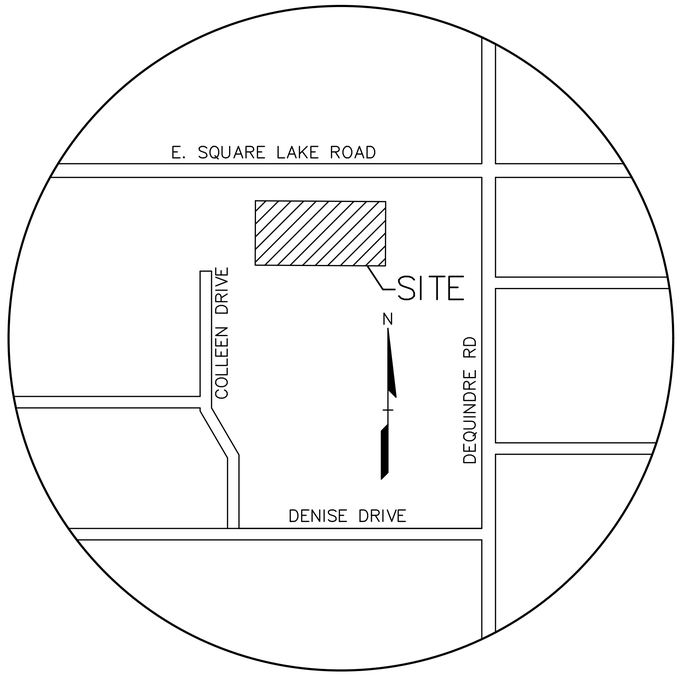
ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE
COMMERCE TOWNSHIP, MI 48382
CONTACT:
PHONE: (248) 802-8409

CIVIL ENGINEER:

PEA, INC.
2430 ROCHESTER CT, SUITE 100
TROY, MI 48083
CONTACT: GREGORY BONO, P.E.
PHONE: (248) 689-9090 EXT. 1148
FAX: (248) 689-1044
EMAIL: GBONO@PEAINC.COM

LANDSCAPE ARCHITECT:

PEA, INC.
7927 NEMCO WAY, SUITE 115
BRIGHTON, MI 48116
CONTACT: LYNN WHIPPLE, PLA
PHONE: (517) 546-8583 EXT. 1203
FAX: (517) 546-8973
EMAIL: LWHIPPLE@PEAINC.COM



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS:

C-0.0	COVER SHEET
C-1.0	TOPOGRAPHIC SURVEY
C-2.0	PRELIMINARY SITE PLAN
C-3.0	PRELIMINARY GRADING PLAN
C-4.0	PRELIMINARY UTILITY SHEET
C-5.0	NOTES AND DETAILS
L-1.0	PRELIMINARY LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
T-1.0	TREE PRESERVATION PLAN
T-1.1	TREE PRESERVATION LIST
SL-1.1	PRELIMINARY PHOTOMETRIC PLAN

ARCHITECTURAL SHEETS:

A-1	UNIT FLOOR PLANS
A-2	UNIT FLOOR PLANS
A-3.1	DETAIL EXTERIOR ELEVATIONS
A-3.2	DETAIL REAR ELEVATIONS/RIGHT SIDE ELEVATION
A-3.3	DETAIL FRONT ELEVATIONS/LEFT SIDE ELEVATIONS
A-4	4 UNIT BUILDING PLANS
A-5	4 UNIT BUILDING ELEVATIONS
A-6	6 UNIT BUILDING PLANS
A-7	6 UNIT BUILDING ELEVATIONS

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
JAMES P. BUTLER
ENGINEER
No. 39905
REGISTERED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR SHALL FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T. 2N, R. 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
JPB	KRD	TJS	JPB

COVER SHEET

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: N.T.S.

DRAWING NUMBER:
C-0.0

LEGAL DESCRIPTION:
(Per PEA)

A parcel of land situated in the Northeast 1/4 of Section 12, Township 2 North, Range 11 East, City of Troy, Oakland County, Michigan described as being part of Lots 5, 6 and 7 of "Supervisor's Plat of Wilbrett Acres" as recorded in Liber 13, Page 54, Oakland County Records, more particularly described as follows:

Commencing at the Northeast corner of said Section 12, thence along the East line of said Section 12, S00°00'04"W, 360.27 feet; thence N88°07'00W, 60.03 feet to the West line of Dequindre Road (120 foot wide); thence along said West line S00°00'04"W, 133.55 feet; thence N88°07'55"W, 204.33 feet to the **POINT OF BEGINNING;**

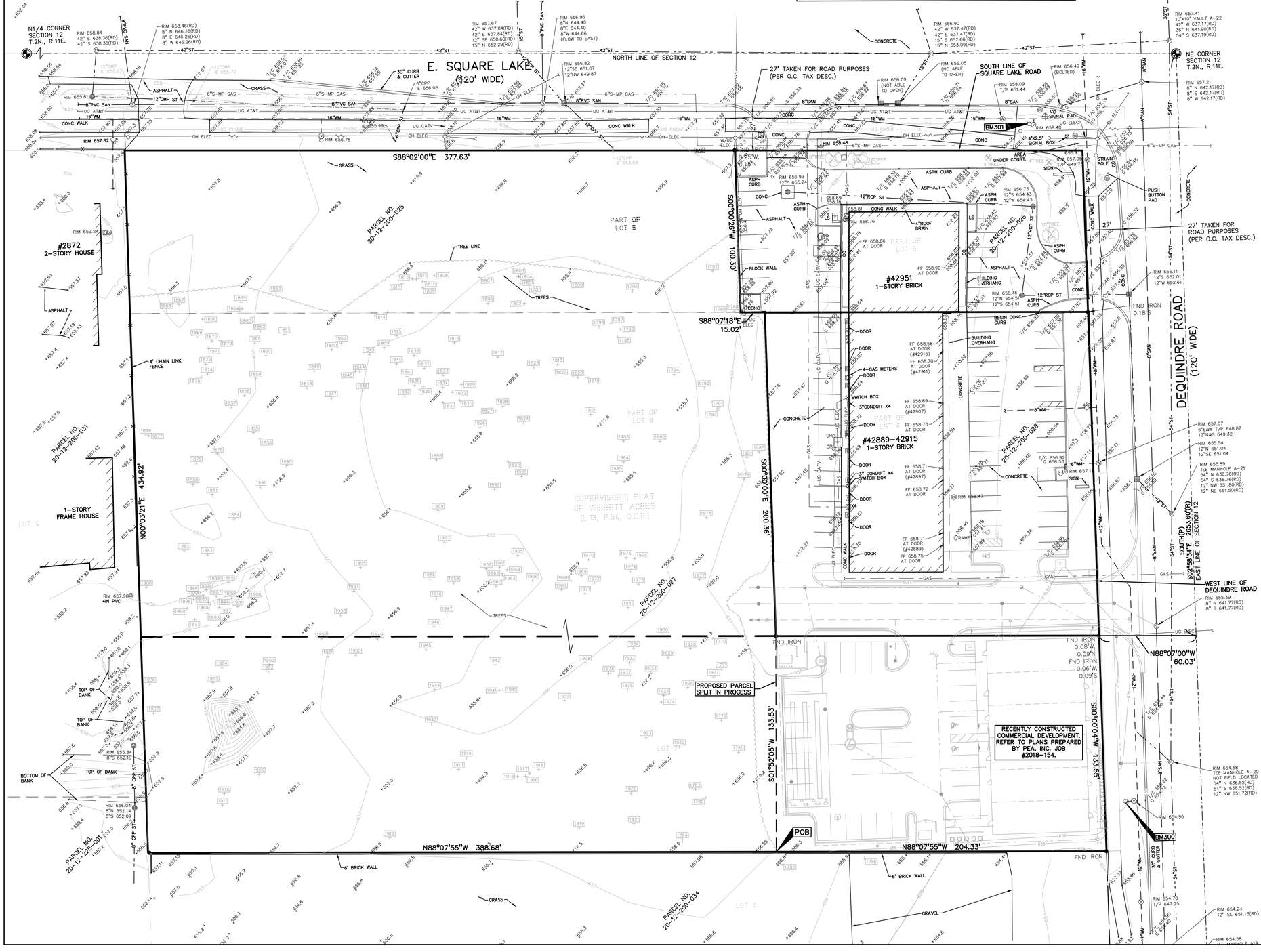
thence continuing N88°07'55"W, 388.68 feet; thence N00°03'21"E, 434.92 feet to the South line of E Square Lake Road (120 foot wide); thence along said South line, S88°02'00"E, 377.63 feet; thence S00°00'26"W, 100.30 feet; thence S88°07'18"E, 15.02 feet; thence S00°00'00"E, 200.36 feet; thence S01°52'05"W, 133.53 feet to the **POINT OF BEGINNING.**

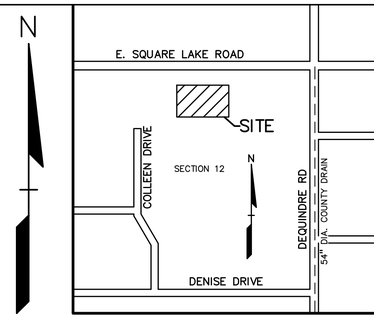
Containing ±3.876 acres of land.

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'





LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING

- ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UNDERGROUND CABLE TV, CATV PEDESTAL
- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- 816.06 SPOT ELEVATION
- 670 CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONC. CONCRETE
- ASPH. ASPHALT

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05-16-18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07-27-18
GAS	CONSUMERS ENERGY MAP #22-61-12-1, DATED 10-02-17
CATV	COMCAST SERVICE MAP, RECEIVED 08-30-18
OTHER	RODC ROAD PLANS #3431, SHEETS 113-115, DATED 06-21-17

FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0552F, DATED SEPTEMBER 29, 2006.

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN · JAMES PATRICK BUTLER · No. 47905 · PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR CONFIRMING THE LOCATIONS, DESCRIPTIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

TOPOGRAPHIC SURVEY
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	JPB	DN.	KRD	SUR.	TJS	P.M.	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
C-1.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

GENERAL NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
2. REFER TO SHEET C-5.0 FOR ON-SITE PAVING DETAILS.
3. REFER TO SHEET C-5.0 FOR ON-SITE SIDEWALK RAMP DETAILS.
4. 'NO PARKING-FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF TROY CURRENT STANDARDS AND REGULATIONS.
6. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
7. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND /OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

DESCRIPTION:

(A)

of land situated in the Northeast 1/4 of Section 12, Township 2 North, Range City of Troy, Oakland County, Michigan described as being part of Lots 5, 6 and pervisor's Plat of Wilbrett Acres" as recorded in Liber 13, Page 54, Oakland ecords, more particularly described as follows:

ing at the Northeast corner of said Section 12, thence along the East line of tion 12, S00°00'04"W, 360.27 feet; thence N88°07'00W, 60.03 feet to the West equindre Road (120 foot wide); thence along said West line S00°00'04"W, 133.55 nce N88°07'55"W, 204.33 feet to the **POINT OF BEGINNING;**

ontinuing N88°07'55"W, 388.68 feet; thence N00°03'21"E, 434.92 feet to the of E Square Lake Road (120 foot wide); thence along said South line, 0"E, 377.63 feet; thence S00°00'26"W, 100.30 feet; thence S88°07'18"E, 15.02 nce S00°00'00"E, 200.36 feet; thence S01°52'05"W, 133.53 feet to the **POINT NING.**

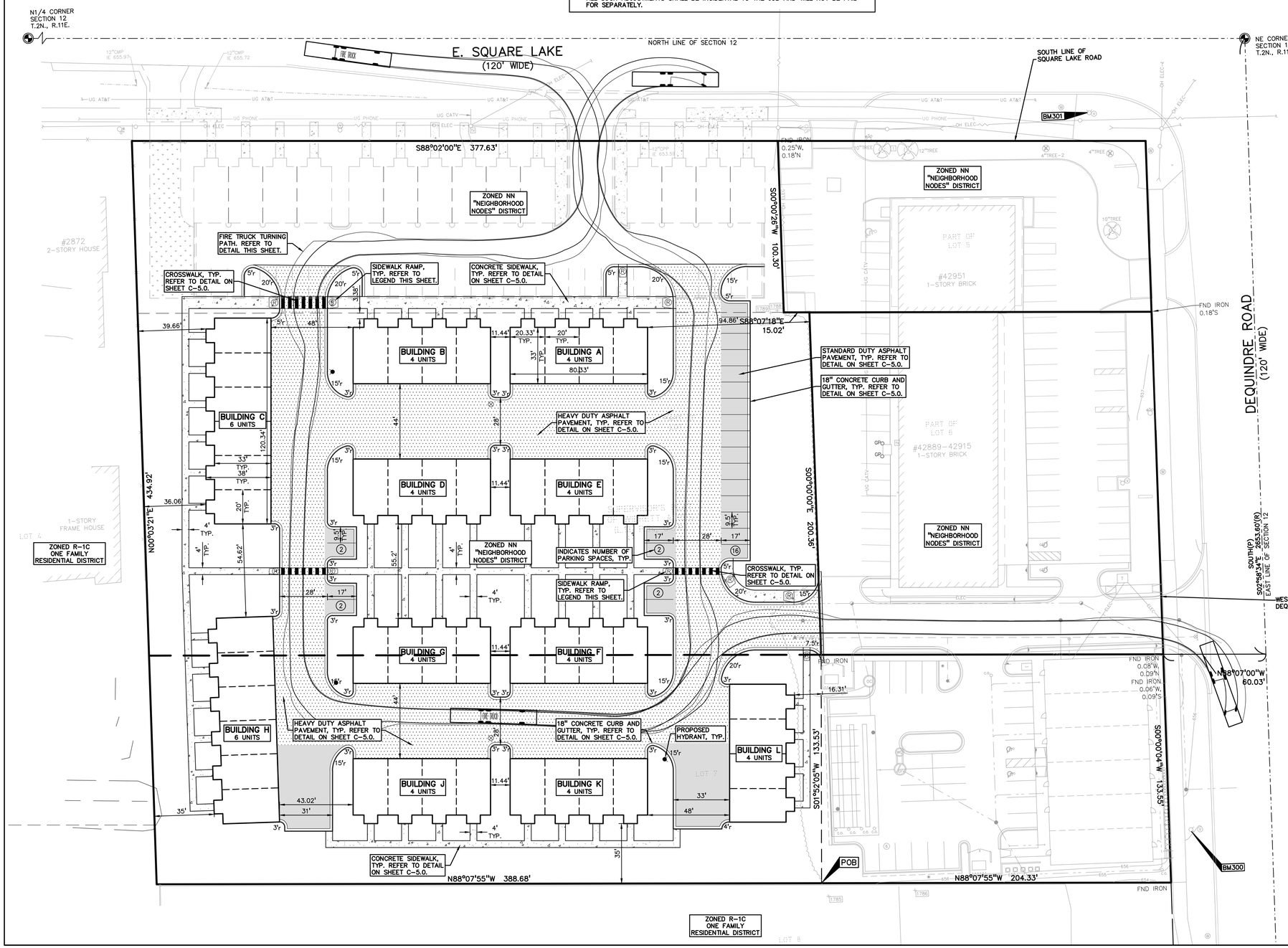
g ±3.876 acres of land.

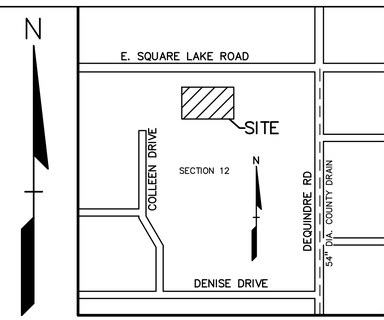
BENCHMARKS

(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'





LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
OH-ELEC-M-		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
UG-CATV		UNDERGROUND CABLE TV, CATV PEDESTAL
UG-PHONE-T-		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
UG-ELEC-E-E-E-		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
GAS	GAS	GAS MAIN, VALVE & GAS LINE MARKER
W	W	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
S	S	SANITARY SEWER, CLEANOUT & MANHOLE
S	S	STORM SEWER, CLEANOUT & MANHOLE
C	C	COMBINED SEWER & MANHOLE
		SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
		UNIDENTIFIED STRUCTURE
816.06	871.21	SPOT ELEVATION
670	671	CONTOUR LINE
X X		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT

STD DUTY, HEAVY DUTY, R.O.W. ONLY; STD DUTY, HEAVY DUTY, DEEP STRENGTH

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05-16-18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07-27-18
GAS	CONSUMERS ENERGY MAP #22-61-12-1, DATED 10-02-17
CATV	COMCAST SERVICE MAP, RECEIVED 08-30-18
OTHER	RODC ROAD PLANS #53431, SHEETS 113-115, DATED 06-21-17

FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0552F, DATED SEPTEMBER 29, 2006.

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SITE DATA TABLE:

SITE AREA: 3.01 ACRES (131,154 SF)

ZONING: NEIGHBORHOOD NODE (NN) NODE N

EXISTING USE: VACANT LAND
PROPOSED USE: MULTI-FAMILY RESIDENTIAL

BUILDING INFORMATION:
MINIMUM ALLOWABLE BUILDING HEIGHT = 1 STORY (14 FT)
MAXIMUM ALLOWABLE BUILDING HEIGHT = 3 STORIES (35 FT)
PROPOSED BUILDING HEIGHT = 3 STORIES

PROPOSED UNITS = 48 UNITS

BUILDING FOOTPRINT AREA:
4-UNIT = 2,811 SF
6-UNIT = 4,211 SF

BUILDING LOT COVERAGE = 9(2,811) + 2(4,211) = 33,721 SF
= 21.4%

SETBACK REQUIREMENTS:	REQUIRED:	PROPOSED:
FRONT (NORTH):	10'	3.38'
SIDE (EAST):	0'	16.31'
SIDE (WEST):	0'	35.00'
REAR (SOUTH):	30'	35.00'

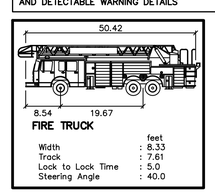
PARKING CALCULATIONS:
REQUIRED = 2 SPACES PER UNIT
= 2 * 48 UNITS = 96 SPACES
PROVIDED = 96 GARAGE SPACES + 24 GUEST SPACES
= 120 SPACES

OPEN SPACE:
REQUIRED = 20%
PROVIDED = 49,549 / 131,154 = 37.8%

SIDEWALK RAMP LEGEND:

SIDEWALK RAMP 'TYPE R' ®

REFER TO LATEST M.D.O.T. R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS



FIRE TRUCK

	feet
Width	: 8.33
Track	: 7.61
Lock to Lock Time	: 5.0
Steering Angle	: 40.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

STATE OF MICHIGAN — JAMES JOSEPH BUTLER — No. 39805 — PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING AND PROTECTING UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY SITE PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	JPB	DN.	KRD	SUR.	T.J.S	P.M.	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
C-2.0

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'

N1/4 CORNER SECTION 12 T.2N., R.11E.

E. SQUARE LAKE (120' WIDE)

NORTH LINE OF SECTION 12

27' TAKEN FOR ROAD PURPOSES (PER O.C. TAX DESC.)

SOUTH LINE OF SQUARE LAKE ROAD

NE CORNER SECTION 12 T.2N., R.11E.

BM301

FND IRON 0.25'W, 0.18'N

#2872 2-STORY HOUSE

#42951 1-STORY BRICK

#42889-42915 1-STORY BRICK

1-STORY FRAME HOUSE

PART OF LOT 5

PART OF LOT 6

PARCEL NO. 20-12-200-026

PARCEL NO. 20-12-200-028

PARCEL NO. 20-12-200-027

PARCEL NO. 20-12-200-031

PARCEL NO. 20-12-226-001

PARCEL NO. 20-12-200-034

DEQUINDRE ROAD (120' WIDE)

EAST LINE OF SECTION 12

WEST LINE OF DEQUINDRE ROAD

BUILDING A 4 UNITS
BUILDING B 4 UNITS
BUILDING C 6 UNITS
BUILDING D 4 UNITS
BUILDING E 4 UNITS
BUILDING F 4 UNITS
BUILDING G 4 UNITS
BUILDING H 6 UNITS
BUILDING J 4 UNITS
BUILDING K 4 UNITS
BUILDING L 4 UNITS

SIDEWALK RAMP, TYP. REFER TO LEGEND THIS SHEET.

POB

FND IRON

BM300

N

E. SQUARE LAKE ROAD

SITE

SECTION 12

COLLEEN DRIVE

DEQUINDRE RD

54" DIA. COUNTY DRAIN

DENISE DRIVE

LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
OH–ELEC–W		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
UG–CATV		UNDERGROUND CABLE TV, CATV PEDESTAL
UG–PHONE–T		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
UG–ELEC–E		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
GAS		GAS MAIN, VALVE & GAS LINE MARKER
W		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
S		SANITARY SEWER, CLEANOUT & MANHOLE
S		STORM SEWER, CLEANOUT & MANHOLE
S		COMBINED SEWER & MANHOLE
C.B.	C.B.	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
V		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
M T		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
?		UNIDENTIFIED STRUCTURE
×816.06	×871.21	SPOT ELEVATION
670	671	CONTOUR LINE
		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
		STD DUTY / HEAVY DUTY / R.O.W. ONLY
ASPH.		ASPHALT
		STD DUTY / HEAVY DUTY / DEEP STRENGTH

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05–16–18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05–16–18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05–16–18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07–27–18
GAS	CONSUMERS ENERGY MAP #22–61–12–1, DATED 10–02–17
CATV	COMCAST SERVICE MAP, RECEIVED 08–30–18
OTHER	RODC ROAD PLANS #53431, SHEETS 113–115, DATED 06–21–17

FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0552F, DATED SEPTEMBER 29, 2006.

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SIDEWALK RAMP LEGEND:

SIDEWALK RAMP 'TYPE R' ®

REFER TO LATEST M.D.O.T. R–28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. 794.50

PROPOSED CONTOUR LINE —795—

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN · JAMES ALLEN PEA · No. 49805 · PROFESSIONAL ENGINEER · LICENSED

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY GRADING PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	KRD	SUR.	T.J.S	P.M.	J.P.B
J.P.B						

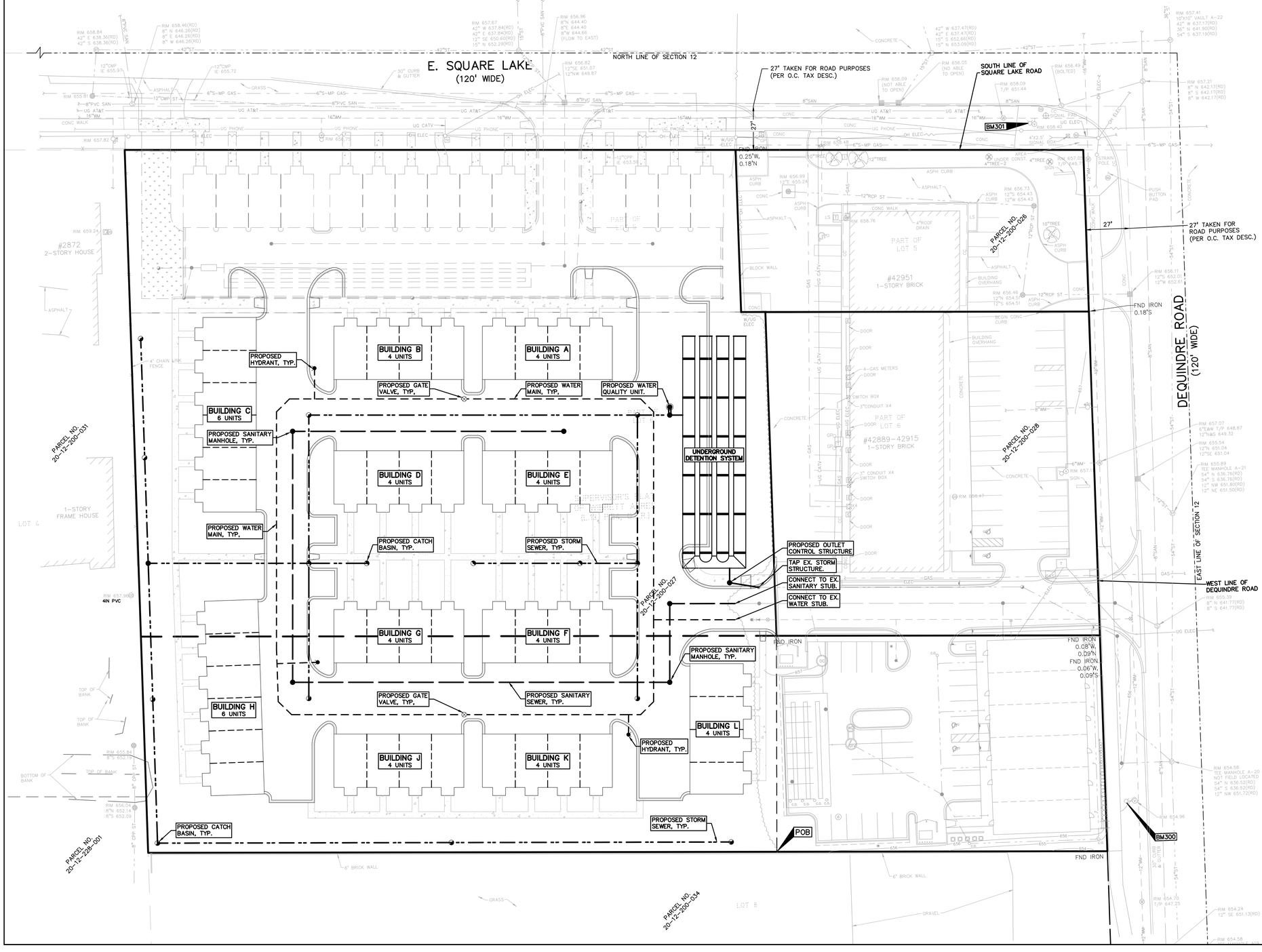
ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
C-3.0

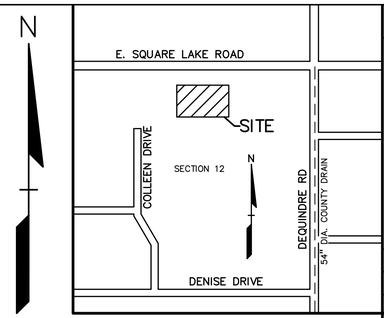
XREF: S:\PROJECTS\2018\2018154C\DWG\18154C–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE–18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK–18154C.DWG



BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'



LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
—OH—ELEC—V—		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
—UG—CATV—		UNDERGROUND CABLE TV, CATV PEDESTAL
—UG—PHONE—T—		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
—UG—ELEC—		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
—GAS—		GAS MAIN, VALVE & GAS LINE MARKER
—W—		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
—S—		SANITARY SEWER, CLEANOUT & MANHOLE
—ST—		STORM SEWER, CLEANOUT & MANHOLE
—C—		COMBINED SEWER & MANHOLE
		SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
		UNIDENTIFIED STRUCTURE
816.06	871.21	SPOT ELEVATION
670	671	CONTOUR LINE
—X—X—		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT

STD DUTY, HEAVY DUTY, R.O.W. ONLY
STD DUTY, HEAVY DUTY, DEEP STRENGTH

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05-16-18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07-27-18
GAS	CONSUMERS ENERGY MAP #02-61-12-1, DATED 10-02-17
CATV	COMCAST SERVICE MAP, RECEIVED 08-30-18
OTHER	RODC ROAD PLANS #53431, SHEETS 113-115, DATED 06-21-17

FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0552F, DATED SEPTEMBER 29, 2006.

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D–1557).

Project:	Square Lake Court Townhomes	
Location:	Troy	
Project No:	2018-154C	
100 YEAR STORM DETENTION DESIGN		
(PER OAKLAND COUNTY DESIGN METHOD)		
Site Drainage Data		
Contributing Area (A):		3.01 acre
Allowable Discharge (Qa)		0.60 cfs (0.2*acreage)
Coefficient of Runoff (Cr):		0.69
100-yr Design Storm Calculations		
Qo = ((Qa)/(A)(Cr):		0.29 cfs/acre impervious
T = -25 + ((10312.5/Qo))^0.5:		163.57 minutes
Vs = (16500(T)/(T+25)) - 40Qo(T):		12.415 cf/acre impervious
Vt = (Vs)(A)(Cr):		**25,626 cf**

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
JAMES J. BUTCHER
ENGINEER
No. 49805
PROFESSIONAL ENGINEER
LICENSED

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING ALL UTILITIES AND VERIFYING LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY UTILITY PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
JPB	KRD	TJS	JPB

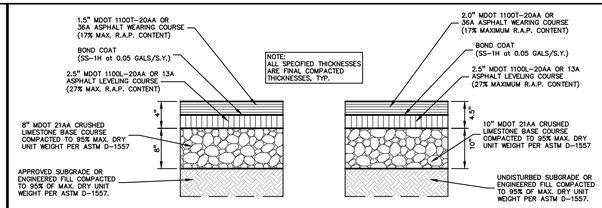
ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
C-4.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

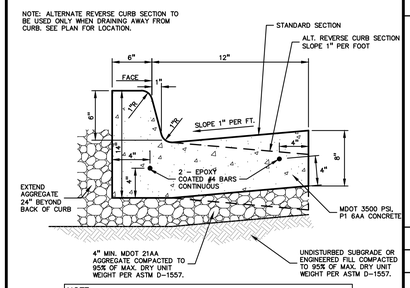


STANDARD DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY) NOT TO SCALE

HEAVY DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY) NOT TO SCALE

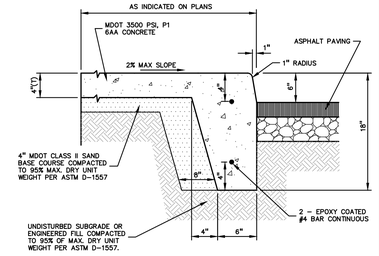
AGGREGATE BASE NOTE:
THIS PAVEMENT SECTION DESIGN ASSUMES THE USE OF MDOT 21AA CRUSHED LIMESTONE BASE MATERIAL THAT MEETS THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION SECTION 902 FOR AGGREGATES. IF CRUSHED CONCRETE AGGREGATE BASE IS PROPOSED IN LIEU OF THE SPECIFIED CRUSHED LIMESTONE MATERIAL, PEA INC. WILL REQUIRE A MINIMUM 25% INCREASE IN BASE THICKNESS. HOWEVER, IF TESTING DOCUMENTATION IS PROVIDED TO PEA, INC. THAT SHOWS THAT THE CRUSHED CONCRETE MATERIAL MEETS ALL REQUIREMENTS OF MDOT SPECIFICATION SECTION 902, THEN THE 25% INCREASE IN THICKNESS MAY BE REEVALUATED.

ASPHALT MATERIAL NOTES:
HOT-MIX ASPHALT MIXTURES UTILIZING RECYCLED ASPHALT PAVEMENT (RAP) MUST MEET MDOT SPECIAL PROVISION 12SP501(E). THE BINDER GRADE FOR THIS WORK IS PG58-22. IF ASPHALT MIXES CONTAINING RAP ARE TO BE SUPPLIED FOR THIS PROJECT, THE ASPHALT BINDER MUST BE REVISED PER MDOT 'TIER 1' OR 'TIER 2' REQUIREMENTS (RAP CONTENT UP TO 27% MAXIMUM). TIER 3 MIXES ARE NOT ACCEPTABLE ON THIS PROJECT. AN ASPHALT MIX DESIGN FOR ALL SPECIFIED MIXES SHOULD BE FORWARDED TO PEA INC. FOR REVIEW PRIOR TO CONSTRUCTION



NOTE:
PROVIDE CONTROL JOINTS IN CURB AT 10' O.C. AND AT ALL RADIUS RETURNS. PROVIDE EXPANSION JOINTS AND JOINT SEALANT WHERE CURBS ABUT STRUCTURES.

18" STANDARD CONCRETE CURB AND GUTTER
NOT TO SCALE

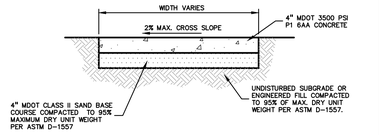


CONTRACTION JOINTS TO BE T/4 DEEP, SPACED AT INTERVALS TO MATCH SIDEWALK WIDTH (SAWCUT). 1/2-INCH PRE-MOLDED FILLER EXPANSION JOINTS WITH JOINT SEALANT SHALL BE PLACED ONLY WHERE SIDEWALK ABUTS A STRUCTURE.

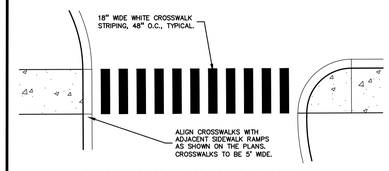
INTEGRAL CURB AND SIDEWALK
NOT TO SCALE

NOTE:
CROSS-SLOPE OF SIDEWALK MUST NOT EXCEED 2.0%, EXCEPT IN TRANSITION AREA MATCHING INTO EXISTING SIDEWALK

PROVIDE 1" DEPTH SAWCUT CONTROL JOINTS AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK (NOT TO EXCEED 8' INTERVAL).



CONCRETE SIDEWALK
NOT TO SCALE



STRIPED CROSSWALK DETAIL
NOT TO SCALE

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
JAMES PETER BUTLER
ENGINEER
No. 39805
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING ALL UTILITIES AND VERIFYING LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

NOTES AND DETAILS
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

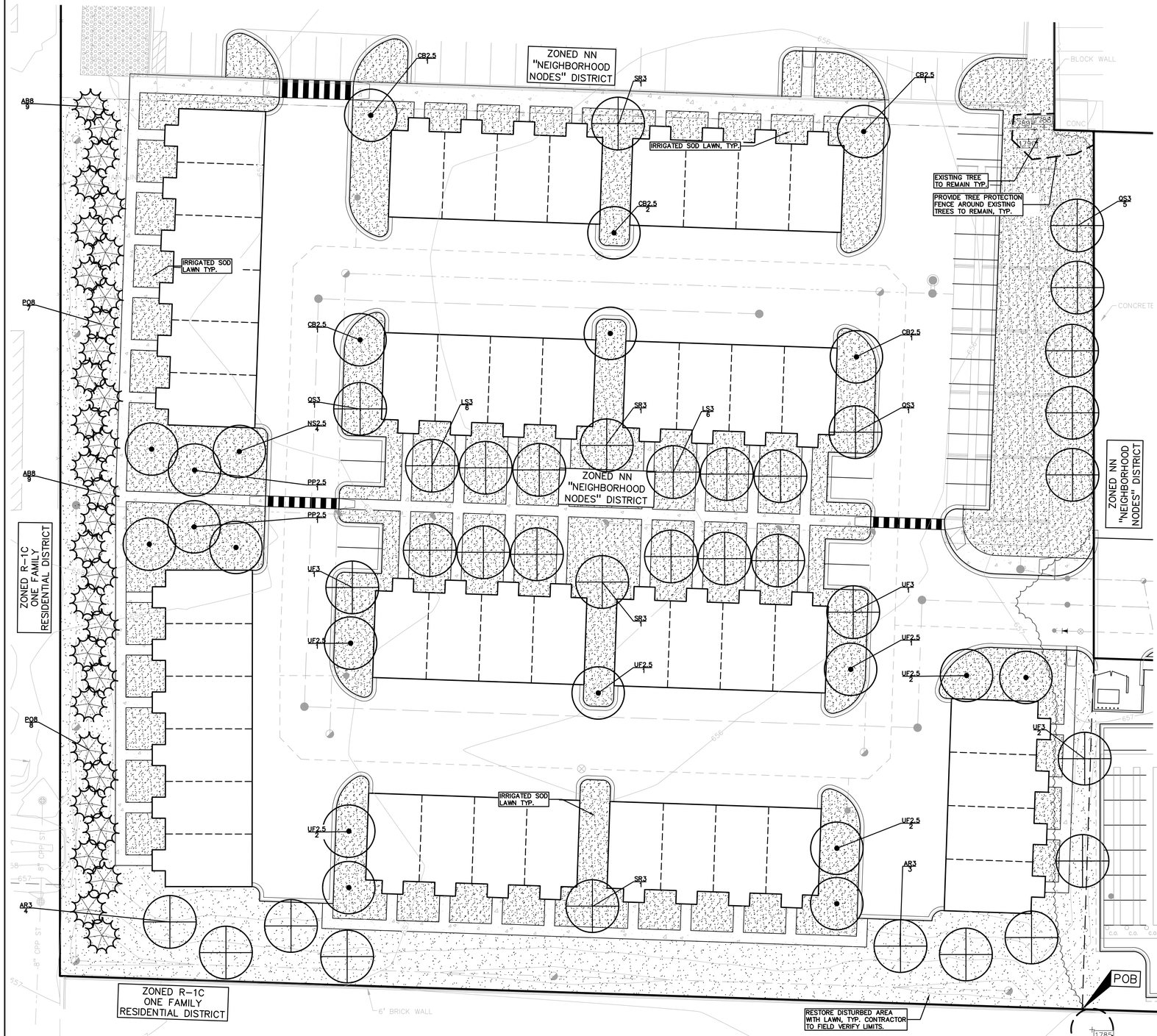
DES.	DN.	KRD	SUR.	P.M.
JPB			TJS	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: N.T.S.

DRAWING NUMBER:
C-5.0



KEY:

- = SCREENING TREES AND SHRUBS
- = INTERIOR ROADWAY TREES
- = REPLACEMENT TREES
- = IRRIGATED SOD LAWN
- = LAWN RESTORATION (CONTRACTOR SHALL REPLACE DISTURBED AREAS WITH LAWN. REPLACE IRRIGATION AS NEEDED.
- 1786 = EXISTING TREE TO REMAIN WITH TREE PROTECTION FENCE

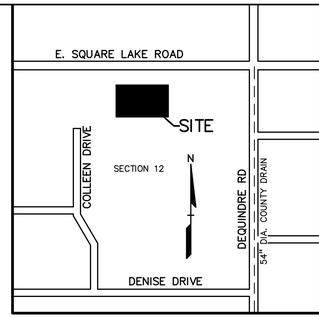
NOTE:
TREES TO BE PLANTED A MIN. OF 5' AWAY FROM UTILITIES

N

GRAPHIC SCALE

−20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



LOCATION MAP – NOT TO SCALE

LANDSCAPE CALCULATIONS:

PER CITY OF TROY ZONING ORDINANCE FORM BASE DISTRICT NN, NEIGHBORHOOD NODE, NODE N, SITE TYPE B, BLDG. TYPE A, STREET TYPE A

5.03 C-1a. = GENERAL SITE LANDSCAPE
REQUIRED: 20% OF SITE AREA SHALL BE LANDSCAPE MATERIAL
131,154 SQ.FT. SF • 20 % = 26,231 SF LANDSCAPE AREA REQUIRED
PROVIDED: 49,549 SF LANDSCAPED AREA (37.8%)

13.02 B. = SCREENING BETWEEN USES:
REQUIRED: WEST PROPERTY ABUTS R-1C USE
REQUIRES SCREEN ALT. 2 OR 3 OR A SOLID WALL OR FENCE MIN. 6' HT.
(1 LARGE EVERGREEN TREE/10' OR 1 NARROW EVG/3')

334' (WEST)/10 = 33 LG. EVG. OR 334'/ 3 = 112 NARROW EVG. REQ'D.

PROVIDED: 33 LARGE EVERGREEN TREES ON WEST SIDE OF SITE

13.02 B. = SCREENING BETWEEN USES:
REQUIRED: SOUTH PROPERTY ABUTS R-1C USE
REQUIRES SCREEN ALT. 2 OR 3 OR A SOLID WALL OR FENCE MIN. 6' HT.
(1 LARGE EVERGREEN TREE/10' OR 1 NARROW EVG/3')

389' (SOUTH)/10 = 39 LG. EVG. OR 389'/ 3 = 130 NARROW EVG. REQ'D.

PROVIDED: EXISTING 6' HT. SOLID WALL

13.02 F. SUBDIVISION AND SITE CONDOMINIUM STANDARDS
REQUIRED: 13.02 F.= 1 TREE PER 50 LF OF INTERNAL ROADS
1,069.4 LF / 50 = 21.3 = 21 TREES REQUIRED

PROVIDED: 21 INTERIOR ROADWAY TREES

TREE REPLACEMENT
REQUIRED: REPLACE 101.5" DBH WITH 3" CAL. TREES = 34 TREES
SEE TREE PRESERVATION PLAN, T-1.0, FOR TREE REMOVALS.

PROVIDED: 34 REPLACEMENT TREES

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH, WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

DECIDUOUS TREE LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
7	AR3	Redpointe Maple	*Acer rubrum 'Redpointe'*	3" Cal.	B&B
6	CB2.5	Columnar Hornbeam	*Carpinus betulus 'Fastigiata'*	2.5" Cal.	B&B
12	LS3	American Sweetgum 'Slender Silhouette'	*Liquidambar styraciflua 'Slender Silhouette'*	3" Cal.	B&B
4	NS2.5	Black Gum	*Nyssa sylvatica*	2.5" Cal.	B&B
2	PP2.5	Persian Ironwood	*Parrotia persica*	2.5" Cal.	B&B
7	QS3	Red Oak 'Skinny Genes'	*Quercus robur x alba 'JFS-KW2QX'*	3" Cal.	B&B
4	SR3	Japanese Tree Lilac	Syringa reticulata 'Ivory Silk'	3" Cal.	B&B
9	UF2.5	Frontier Elm	*Ulmus 'Frontier'*	2.5" Cal.	B&B
4	UF3	Frontier Elm	*Ulmus 'Frontier'*	3" Cal.	B&B
55	TOTAL DEC.				

EVERGREEN TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	
18	AB8	Balsam Fir	*Abies balsamea*	8' Ht.	B&B
15	PO8	Serbian Spruce	*Picea omorika*	8' Ht.	B&B
33	TOTAL EVG.				

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

REVISIONS

No.	BY	CHK	DESCRIPTION	DATE

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THEIR COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED IN WHOLE OR PART, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2019 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIM LANDSCAPE PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	CLR	DN.	CLR	SUR.	TJS	P.M.	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1"=20'

DRAWING NUMBER:
L-1.0

TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN; INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

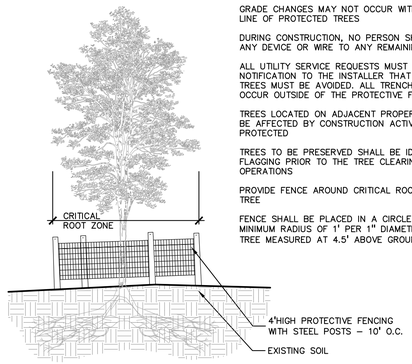
ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

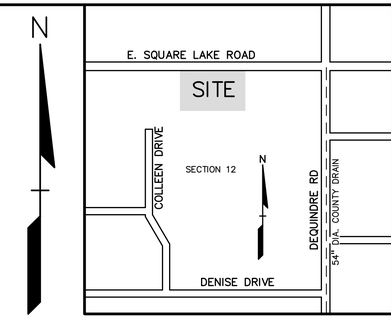
PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND

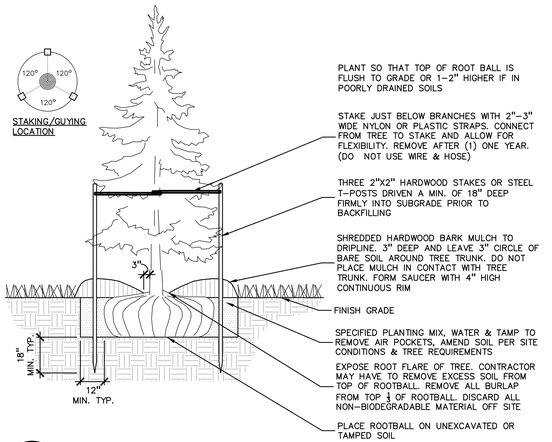


3 TREE PROTECTION DETAIL

SCALE: 1" = 3'-0"

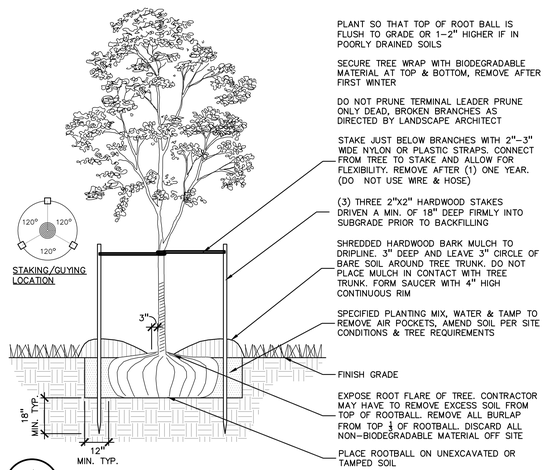


LOCATION MAP – NOT TO SCALE



2 EVERGREEN TREE PLANTING DETAIL

SCALE: 1" = 3'-0"



1 DECIDUOUS TREE PLANTING DETAIL

SCALE: 1" = 3'-0"

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\GRASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 1795
REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS CONSTRUCTION DRAWING ARE ONLY AS GOOD AS THE GUARANTEE IS EITHER EXPRESSED OR INCLUDED IS, TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

SQUARE LAKE COURT TOWNHOUSES
LANDSCAPE DETAILS
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD

DES.	DN.	CHK	SUR.	P.M.
CLR	CLR	CLR	TJS	JPB

ORIGINAL ISSUE DATE:
JANUARY 23, 2020

PEA JOB NO. 2018-154C

SCALE: VARIES

DRAWING NUMBER:
L-1.1

REPLACEMENT TREE SUMMARY:

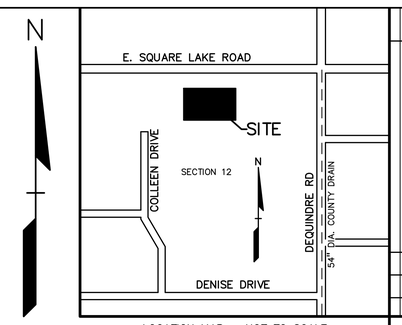
NOT INCLUDED FOR REPLACEMENT ARE DEAD, DAMAGED, DISEASED, INVASIVE SPECIES AND OFF SITE TREES.

SEE SHEET T-1.1 FOR TREE LIST AND CALCULATIONS.

KEY:

2782 = EXISTING TREE/ WOODED AREA TO REMAIN WITH TREE PROTECTION FENCE

2782 = EXISTING TREE/ WOODED AREA TO BE REMOVED

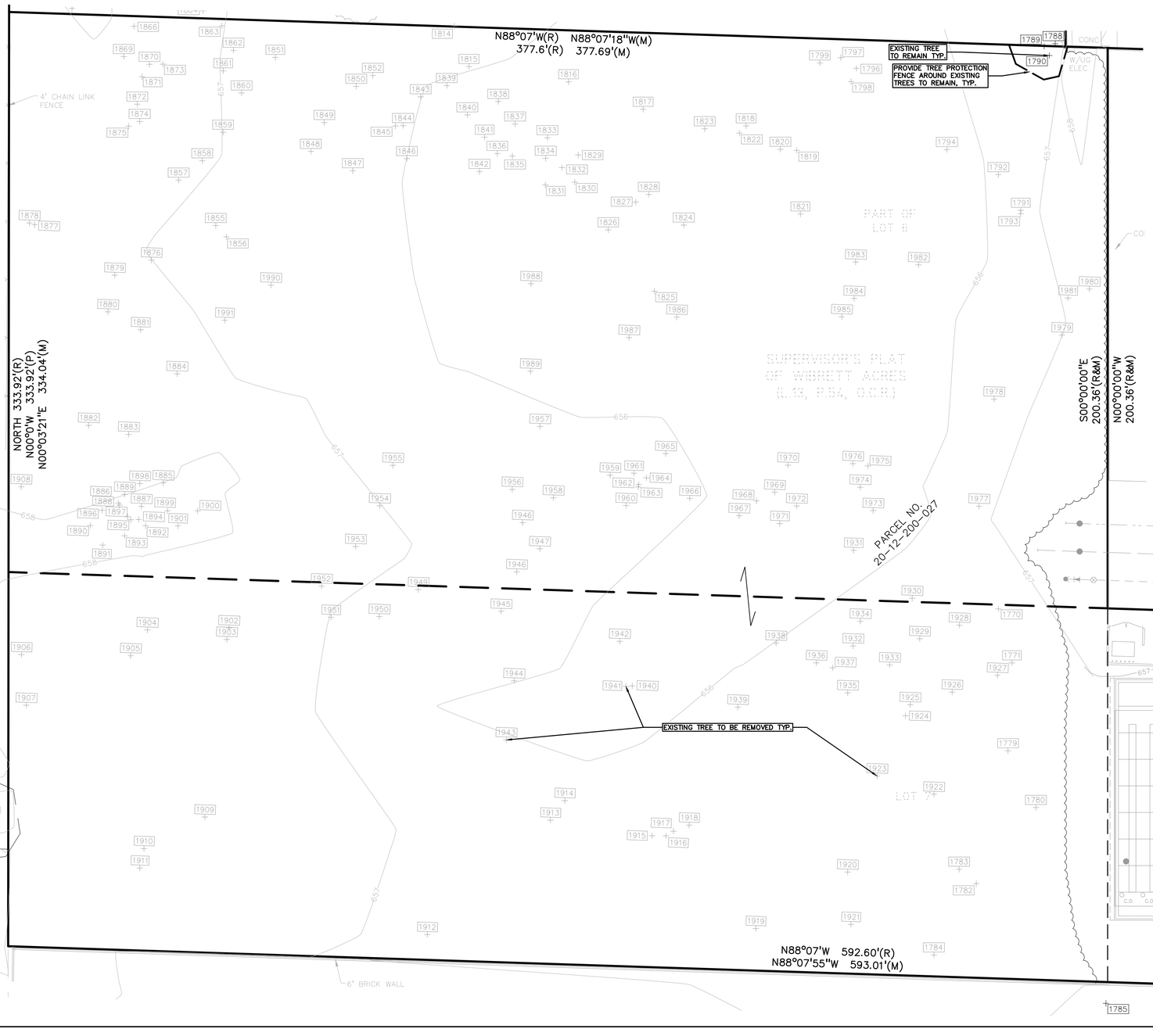


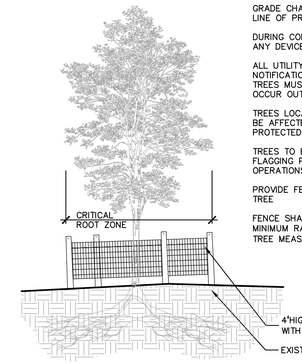
LOCATION MAP – NOT TO SCALE

GRAPHIC SCALE

−20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.





1 TREE PROTECTION DETAIL
SCALE: 1" = 3'-0"

TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN; INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 1301001116
REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATIONS, DEPTHS, CONDITIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR SHALL FURTHER AGREE TO INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53970 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

TREE PRESERVATION PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T.2N, R.11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	CLR	DN.	CLR	SUR.	T.JS	P.M.	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

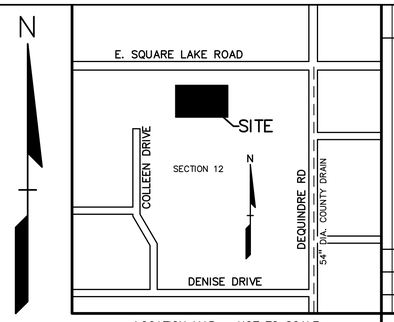
SCALE: 1" = 20'

DRAWING NUMBER:
T-1.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

TAG	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTE	CLASS	SAVE / REMOVE	REPLACE
1770	RM	8	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
1771	RM	10	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
1779	SM	10	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1780	SC	9	Scotch Pine	Pinus sylvestris	Good		WOODLAND	R	REPLACE
1782	BX	6	Box elder	Acer negundo	Good		INVASIVE	R	-
1783	RM	9	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
1784	BX	8	Box elder	Acer negundo	Fair		INVASIVE	R	-
1789	CT	43	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1790	CT	27	Cottonwood	Populus deltoides	Good		INVASIVE	S	-
1791	E	9	American Elm	Ulmus americana	Good		INVASIVE	R	-
1792	B	8	Basswood	Tilia americana	Good	X4	WOODLAND	R	REPLACE
1793	B	14	Basswood	Tilia americana	Good		WOODLAND	R	REPLACE
1794	RM	7	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
1796	E	13	American Elm	Ulmus americana	Good		INVASIVE	R	-
1797	CT	25	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1798	RM	12	Red Maple	Acer rubrum	Good	X3	WOODLAND	R	REPLACE
1799	WO	11	White Oak	Quercus alba	Good		WOODLAND	R	REPLACE
1814	SH	14	Shagbark Hickory	Carya ovata	Fair		WOODLAND	R	REPLACE
1815	SM	10	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1816	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1817	GA	7	Green Ash	Fraxinus pennsylvanica	Very Poor		INVASIVE	R	-
1818	CT	9	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1819	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1820	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1821	SM	11	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1822	SM	9	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1823	SM	8	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1824	CT	22	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1825	CT	21	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1826	SM	13	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1827	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1828	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1829	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1830	SM	11	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1831	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1832	CT	9	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1833	CT	14	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1834	CT	9	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1835	CT	9	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1836	CT	11	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1837	SM	10	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1838	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1839	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1840	CT	9	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1841	CT	13	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1842	CT	15	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1843	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1844	CT	11	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1845	CT	14	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1846	E	8	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1847	E	12	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1848	E	12	American Elm	Ulmus americana	Very Poor		INVASIVE	R	-
1849	SM	17	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1850	SM	8	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1851	BX	9	Box elder	Acer negundo	Poor		INVASIVE	R	-
1852	SM	6	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1855	SM	18	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1856	BX	7	Box elder	Acer negundo	Poor	X3	INVASIVE	R	-
1857	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R	-
1858	BX	11	Box elder	Acer negundo	Poor		INVASIVE	R	-
1859	BW	9	Black Walnut	Juglans nigra	Fair		WOODLAND	R	REPLACE
1860	CT	12	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1861	BX	11	Box elder	Acer negundo	Poor	X2	INVASIVE	R	-
1862	MR	7	Red Mulberry	Morus rubra	Fair		INVASIVE	R	-
1863	BX	9	Box elder	Acer negundo	Poor		INVASIVE	R	-
1866	EE	13	Siberian Elm	Ulmus pumila	Poor		INVASIVE	R	-
1869	BW	7	Black Walnut	Juglans nigra	Poor		WOODLAND	R	-
1870	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R	-
1871	BX	7	Box elder	Acer negundo	Fair		INVASIVE	R	-
1872	BX	7	Box elder	Acer negundo	Fair		INVASIVE	R	-
1873	BX	8	Box elder	Acer negundo	Fair		INVASIVE	R	-
1874	CT	12	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1875	BX	6	Box elder	Acer negundo	Fair		INVASIVE	R	-
1876	E	9	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1877	CT	18	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1878	CT	28	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1879	CT	16	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1880	BW	15	Black Walnut	Juglans nigra	Fair		WOODLAND	R	REPLACE
1881	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R	-
1882	BW	13	Black Walnut	Juglans nigra	Fair		WOODLAND	R	REPLACE
1883	BW	10	Black Walnut	Juglans nigra	Poor		WOODLAND	R	-
1884	BX	15	Box elder	Acer negundo	Poor		INVASIVE	R	-
1885	CT	19	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1887	E	6	American Elm	Ulmus americana	Very Poor		INVASIVE	R	-
1888	CT	10	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1889	BX	9	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
1886	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1890	CT	10	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1891	CT	6	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1892	CT	12	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1893	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1894	CT	15	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1895	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1896	CT	7	Cottonwood	Populus deltoides	Very Poor		INVASIVE	R	-

TAG	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTE	CLASS	SAVE / REMOVE	REPLACE
1897	CT	8	Cottonwood	Populus deltoides	Very Poor		INVASIVE	R	-
1898	CT	12	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1899	CT	12	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1900	BW	10	Black Walnut	Juglans nigra	Good		WOODLAND	R	REPLACE
1901	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
1902	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1903	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1904	CT	14	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1905	BX	8	Box elder	Acer negundo	Poor		INVASIVE	R	-
1906	CT	16	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1907	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1908	E	7	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1909	CT	30	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1910	CT	18	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1911	CT	9	Cottonwood	Populus deltoides	Very Poor		INVASIVE	R	-
1912	SM	8	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1913	SM	10	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1914	GA	6	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1915	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1916	CT	13	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1917	SM	8	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1918	CT	6	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1919	BC	8	Wild Black Cherry	Prunus serotina	Fair	X1	WOODLAND	R	REPLACE
1921	E	6	American Elm	Ulmus americana	Fair		INVASIVE	R	-
1920	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1922	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1923	BP	8	Bradford Pear	Pyrus calleryanna	Good		WOODLAND	R	REPLACE
1924	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1925	SC	9	Scotch Pine	Pinus sylvestris	Poor		WOODLAND	R	-
1926	SM	6	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1927	SM	10	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1928	SM	6	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1929	SM	9	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1930	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1931	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1932	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1933	CT	8	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1934	SM	6	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1935	SM	6	Silver Maple	Acer saccharinum	Fair	X1	INVASIVE	R	-
1936	GA	6	Green Ash	Fraxinus pennsylvanica	Fair		INVASIVE	R	-
1937	SM	8	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1938	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1939	GA	7	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1940	SM	13	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1941	SM	9	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1942	SM	15	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1943	SM	13	Silver Maple	Acer saccharinum	Good	X1	INVASIVE	R	-
1944	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1946	BX	6	Box elder	Acer negundo	Poor		INVASIVE	R	-
1947	RE	8	Rock Elm	Ulmus thomasii	Good		INVASIVE	R	-
1945	GA	7	Green Ash	Fraxinus pennsylvanica	Good		INVASIVE	R	-
1946	BX	8	Box elder	Acer negundo	Poor		INVASIVE	R	-
1949	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1950	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1951	SM	6	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1952	SM	10	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1953	GA	12	Green Ash	Fraxinus pennsylvanica	Fair		INVASIVE	R	-
1954	GA	6	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1955	GA	6	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1956	BX	6	Box elder	Acer negundo	Poor		INVASIVE	R	-
1957	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1958	BX	7	Box elder	Acer negundo	Fair		INVASIVE	R	-
1959	CT	14	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1960	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R	-
1961	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1962	CT	8	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1963	CT	6	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1964	CT	9	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1965	SWO	10	Swamp White Oak	Quercus bicolor	Fair		WOODLAND	R	REPLACE
1966	CT	14	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1967	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1968	CT	7	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1969	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1970	CT	10	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1971	SM	8	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1972	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1973	SM	9	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1974	CT	14	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1975	CT	12	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1976	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1977	GA	6	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1978	BX	13	Box elder	Acer negundo	Poor		INVASIVE	R	-
1979	BW	9	Black Walnut	Juglans nigra	Good		WOODLAND	R	REPLACE
1980	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
1981	BX	9	Box elder	Acer negundo	Poor		INVASIVE	R	-
1982	GA	7	Green Ash	Fraxinus pennsylvanica	Fair	ng pea pod op	INVASIVE	R	-
1983	SM	12	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1984	CT	20	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1985	E	11	American Elm	Ulmus americana	Very Poor		INVASIVE	R	-
1986	CT	20	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1987	BX	6	Box elder	Acer negundo	Poor		INVASIVE	R	-
1988	SM	9	Silver Maple	Acer saccharinum	Fair	move 15 ft north	INVASIVE	R	-
1989	BX	10	Box elder	Acer negundo	Fair		INVASIVE	R	-
1990	BX	18	Box elder	Acer negundo	Poor		INVASIVE	R	-
1991	BW	13	Black Walnut	Juglans nigra	Fair		WOODLAND	R	REPLACE



LOCATION MAP – NOT TO SCALE

REPLACEMENT TREE SUMMARY:

NOT INCLUDED FOR REPLACEMENT ARE DEAD, DAMAGED, DISEASED, INVASIVE SPECIES AND OFF SITE TREES.

SEE SHEET T-1.0 FOR TREE PRESERVATION PLAN.

TREE INVENTORY/PRESERVATION CALCULATIONS

WOODLAND TREES			
WOODLAND TREES REMOVED:	**20**	(REPLACE AT 50% OF REMOVED DBH)	
203" DBH x 0.5 =	**102"**	REPLACEMENT	
WOODLAND TREES SAVED:	0	(CREDIT OF 2X DBH)	
" DBH x 2 =	"	CREDIT	
101.5 -	0	=	101.5
101.5 " DBH REQUIRED FOR WOODLAND REPLACEMENT			
LANDMARK TREES			
LANDMARK TREES REMOVED:	0	(REPLACE AT 100% OF REMOVED DBH)	
" DBH x 1 =	"	REPLACEMENT	
LANDMARK TREES SAVED:	0	(CREDIT OF 2X DBH)	
" DBH x 2 =	"	CREDIT	
0 -	0	=	0
101.5 " TOTAL DBH REQUIRED FOR REPLACEMENT			
EXEMPT TREES			
(NO REPLACEMENT REQUIRED FOR EXEMPT TREES)			
SAVED EXEMPT TREES:	2	**Trees**	
EXEMPT TREES ON SITE:	111	**Trees**	

LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
REGISTERED LANDSCAPE ARCHITECT
STATE OF MICHIGAN

CAUTION!!

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATIONS, DEPTHS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR SHALL FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

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

MISS DIG System, Inc.

1-800-482-7171 www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

EUREKA BUILDING COMPANY
SOUTH DESIGN
SHELBY TOWNSHIP, MICHIGAN 48315

TREE PRESERVATION LIST
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T. 2N, R.11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	CR	DN.	CR	SUR.	T.J.S	P.M.	J.P.B

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: N.T.S.

DRAWING NUMBER:
T-1.1

XREF: S:\PROJECTS\2018\2018154C\DWG\181540-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-181540.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-181540.DWG

SITE PHOTOMETRIC DATA:

	ALLOWED	PROPOSED
1. LIGHTING LEVELS:		
1.1. MAX ON SITE	20 F.c.	4.7 F.c.
1.2. AT RESIDENTIAL BOUNDARY:	0.2 F.c.	0.0 F.c.
1.3. AT NON-RESIDENTIAL BOUNDARY:	1.0 F.c.	0.0
2. FIXTURE HEIGHT (MAX)	25 FT.	10 FT.

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
○	P1 (10' HEIGHT)	59	KICHLER	258377-2 MOD#:11250/CP133 536	LED WALL CYLINDER	LED	1	11250 258377-2Q.IES	374	0.95	11.2
△	P2 (6' HEIGHT)	48	KICHLER	258377-2 MOD#:11250/CP133 536	LED WALL CYLINDER	LED	1	11250 258377-2Q.IES	374	0.95	11.2

GENERAL SITE LIGHTING NOTES:

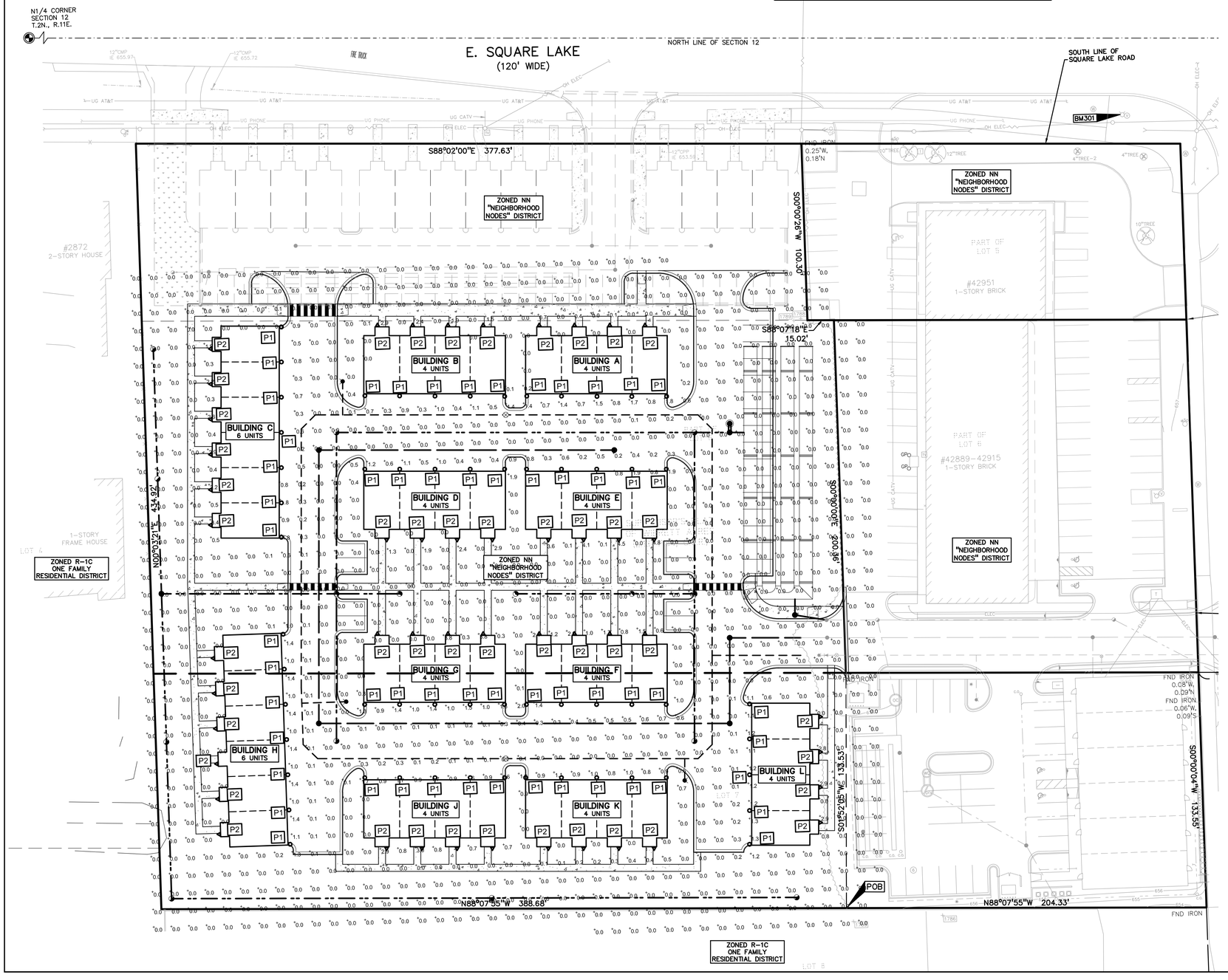
1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
2. ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2 FEET ABOVE GRADE AS SHOWN IN DETAIL.
3. ALL POLES LOCATED OUTSIDE OF THE PARKING LOT AREA SHALL BE LOCATED 3 FEET FROM BACK OF CURB OR EDGE OF SIDEWALKS AND 5 FEET FROM UNDERGROUND UTILITIES.
4. SHOP DRAWINGS FOR THE ELECTRICAL WIRING OF THE FIXTURES NEED TO BE SUPPLIED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR COORDINATION OF UNDERGROUND CONDUIT AND APPROVAL OF LAYOUT.
5. ALL AREA LIGHT FIXTURES ARE TO BE DIRECTED AWAY FROM NEIGHBORING PROPERTIES AND ROADWAYS.
6. CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT ALL MATERIALS AND EQUIPMENT FOR THIS WORK UNLESS OTHERWISE NOTED.
7. COORDINATE LIGHT FIXTURE PLACEMENT AND INSTALLATION WITH LANDSCAPE.
8. ALL CONDUCTORS SHALL BE IN CONDUIT.

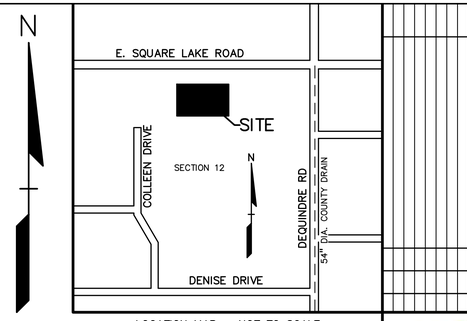
BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'

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





LOCATION MAP – NOT TO SCALE

LEGEND

IRON FOUND, IRON SET, NAIL FOUND, NAIL & CAP SET, BRASS PLUG SET, MONUMENT FOUND, MONUMENT SET, SEC. CORNER FOUND
R RECORDED, M MEASURED, C CALCULATED

EXISTING	PROPOSED
OH-ELEC-M	ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE	
UG-CATV	UNDERGROUND CABLE TV, CATV PEDESTAL	
UG-PHONE	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE	
UG-ELEC	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE	
GAS	GAS MAIN, VALVE & GAS LINE MARKER	
	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE	
	SANITARY SEWER, CLEANOUT & MANHOLE	
	STORM SEWER, CLEANOUT & MANHOLE	
	COMBINED SEWER & MANHOLE	
	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN	
	POST INDICATOR VALVE	
	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	
	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	
	UNIDENTIFIED STRUCTURE	
816.06	SPOT ELEVATION	671.21
670	CONTOUR LINE	671
	FENCE	
	GUARD RAIL	
	STREET LIGHT	
	SIGN	
CONC.	CONCRETE	STD DUTY, HEAVY DUTY, R.O.W. ONLY
ASPH.	ASPHALT	STD DUTY, HEAVY DUTY, DEEP STRENGTH

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05-16-18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07-27-18
GAS	CONSUMERS ENERGY MAP #22-61-12-1, DATED 10-02-17
CATV	COMCAST SERVICE MAP, RECEIVED 08-30-18
OTHER	RODC ROAD PLANS #53431, SHEETS 113-115, DATED 06-21-17

LUMEN P1 & P2

KICHLER
Style to live by



1 Light Outdoor Wall Cylinder in BA
9234BA (Brushed Aluminum)

Product Description:
This one light, Wall Cylinder features our Brushed Aluminum finish and uses a BR-30 bulb that produces 65-watts (max.) of pure light. It measures 7" high, is U.L. listed for wet location, and is a Dark Skies compliant fixture.

Available Finishes
Architectural Bronze
Brushed Aluminum
White

ADD TO PROJECT

Technical Information

Weight:	0.95 LBS
Safety Rated:	Wet
HCWO:	3.50"
Base Backplate:	5.00"
Width:	4.75"
Height:	7.00"
Lamp Included:	Not Included
Extension:	7.00"
Voltage:	120V
CFL Bulb Type:	HYBRID (13-15W)
Light Source:	Incandescent
Socket Base:	Medium
Number of Bulbs:	1
Lamp Type:	A19
Max Watt:	65W
Finish:	Brushed Aluminum

Project	
Type	
Ordering #	
Comments	

REVISIONS

No.	BY	CHK	DESCRIPTION	DATE

STATE OF MICHIGAN – JAMES PETER ANDERSON – No. 49805 – PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY PHOTOMETRIC PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	KRD	SUR.	T.J.S	P.M.	JPB
JPB						

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
SL-1.1

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

NOTE

SECTION R702.4.2 & R702.4.3:
WATER-RESISTANT GYPSUM BACKER BOARD SHALL NOT BE USED OVER A VAPOR RETARDER IN A SHOWER OR BATHTUB COMPARTMENT, WHERE THERE WILL BE DIRECT EXPOSURE TO WATER, OR IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY

NOTE

SECTION E3802.11:
ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.

NOTE:

1. ALL FIRST FLOOR CEILING HEIGHTS TO BE 9'-0" HIGH UNLESS NOTED OTHERWISE.
2. ALL FIRST FLOOR SASH HEIGHTS TO BE 7'-8" UNLESS NOTED OTHERWISE.

NOTE: ⊙SD/CM

ALL SMOKE DETECTORS / CARBON MONOXIDE ALRMARS SHALL BE INTERCONNECTED W/ BATTERY BACK-UP PER CODE.

NOTE:

BATHROOM EXHAUST FANS ARE TO VENT DIRECTLY TO THE OUTSIDE OF STRUCTURE.

NOTE:

FRAME GARAGE WALLS EXCEEDING 10'-0" IN HEIGHT WITH 2x6 STUDS.

NOTE:

LANDINGS AT DOORS (R311.4.3)
THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF EACH EXTERIOR DOOR , WHERE A STAIRWAY OF 2 OR FEWER RISERS IS LOCATED ON THE EXTERIOR SIDE OF A DOOR, OTHER THAN THE REQUIRED EXIT DOOR, A LANDING IS NOT REQUIRED FOR THE EXTERIOR SIDE.

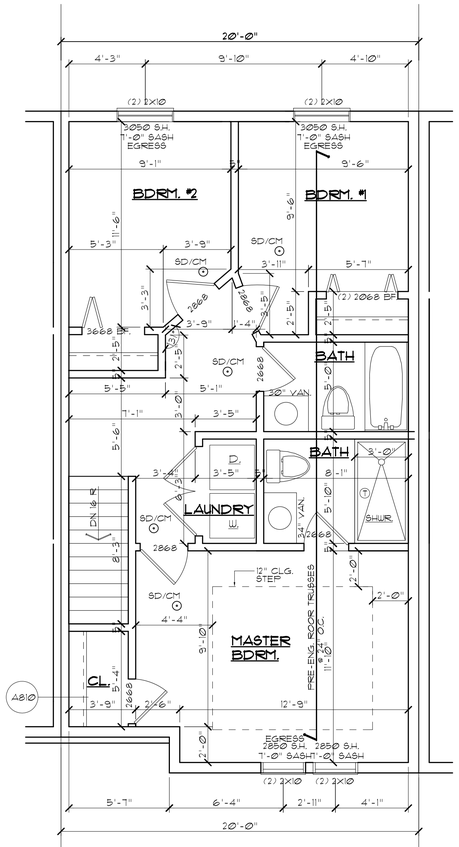
A LANDING AT AN EXTERIOR DOOR SHALL NOT BE MORE THAN 7 3/4" BELOW THE TOP OF THE THRESHOLD. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SRVED. EVERY LANDING SHALL HAVE A MIN. DIMENSION OF 36" MEASURED IN THE DIRECTION OF TRAVEL.

FIRE SEPARATION NOTE FOR LIVING SPACE ABOVE GARAGE

FIRE SEPARATION (R309)
GARAGE SPACE BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8-INCH TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT. ALL OTHER GARAGE SPACE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE. DROP CLG. UNDER FLR. ABV. (ENCLOSE MECHANICAL AND STRUCTURAL ELEMENTS) VERIFY W/ BLDR.

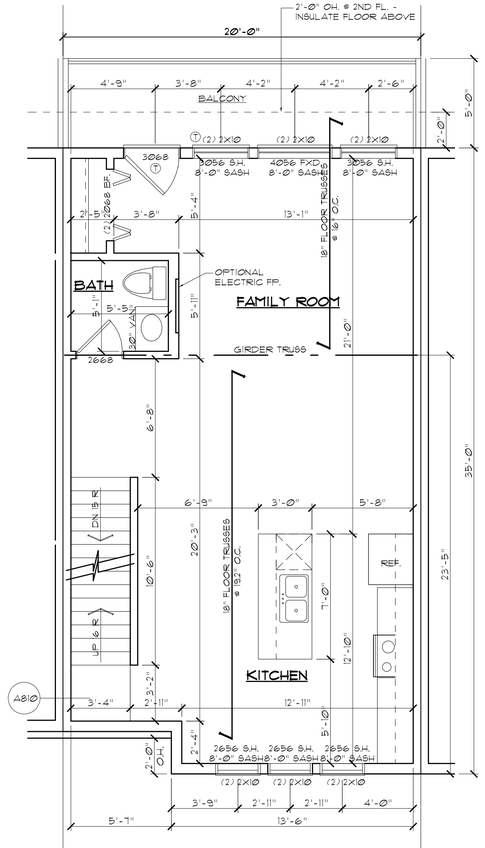
NOTE:

STAIRWAY ILLUMINATION (R303.6)
ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING OF THE STAIRWAY. FOR INTERIOR STAIRS THE ARTIFICIAL LIGHT SOURCES SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS NOT LESS THAN 1 FOOT-CANDLES MEASURED AT THE CENTER OF TREADS AND LANDINGS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS PROVIDING ACCESS TO A BASEMENT FROM THE OUTSIDE GRADE LEVEL SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF THE STAIRWAY. THE LIGHTING AND SWITCHING OF THE STAIRWELL WILL BE INSPECTED AN ELECTRICAL INSPECTOR.



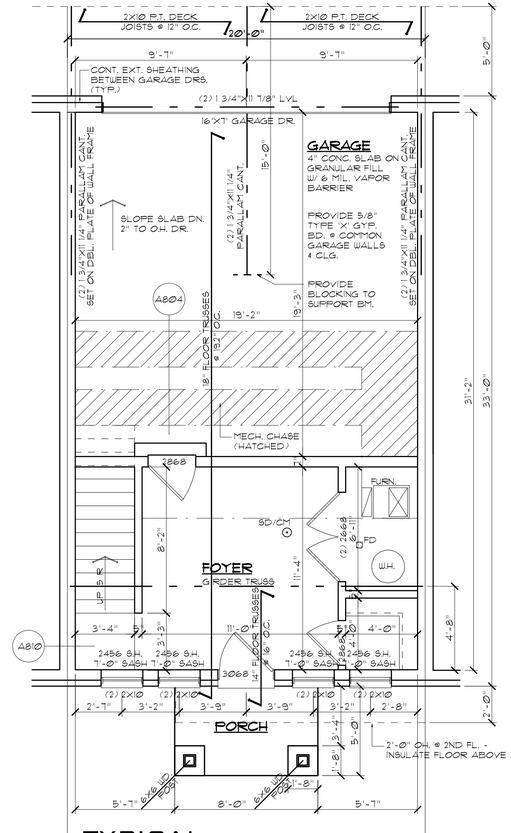
TYPICAL
SECOND FLOOR PLAN-727 SF

SCALE: 1/4" = 1'-0" 3-BEDROOMS



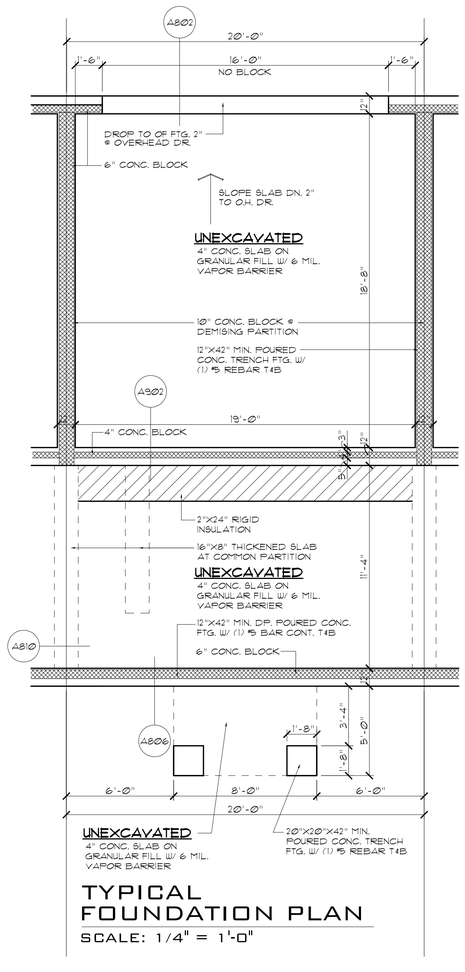
TYPICAL
FIRST FLOOR PLAN-685 SF

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



TYPICAL
LOWER LEVEL PLAN-249 SF

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



TYPICAL
FOUNDATION PLAN

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

COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER CAN AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
UNIT FLOOR PLANS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
PREVIEW 9-11-19
8-8-19

DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-1

CONDO DEVELOP.

NOTE

SECTION R702.4.2 & R702.4.3:
WATER-RESISTANT GYPSUM BACKER BOARD SHALL NOT BE USED OVER A VAPOR RETARDER IN A SHOWER OR BATHTUB COMPARTMENT, WHERE THERE WILL BE DIRECT EXPOSURE TO WATER, OR IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY

NOTE

SECTION E3802.11:
ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.

NOTE:

1. ALL FIRST FLOOR CEILING HEIGHTS TO BE 9'-0" HIGH UNLESS NOTED OTHERWISE.
2. ALL FIRST FLOOR SASH HEIGHTS TO BE 7'-8" UNLESS NOTED OTHERWISE.

NOTE: ⊙SD/CM

ALL SMOKE DETECTORS / CARBON MONOXIDE ALRMARS SHALL BE INTERCONNECTED W/ BATTERY BACK-UP PER CODE.

NOTE:

FRAME GARAGE WALLS EXCEEDING 10'-0" IN HEIGHT WITH 2x6 STUDS.

NOTE:

LANDINGS AT DOORS (R311.4.3)
THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF EACH EXTERIOR DOOR . WHERE A STAIRWAY OF 2 OR FEWER RISERS IS LOCATED ON THE EXTERIOR SIDE OF A DOOR, OTHER THAN THE REQUIRED EXIT DOOR, A LANDING IS NOT REQUIRED FOR THE EXTERIOR SIDE.

A LANDING AT AN EXTERIOR DOOR SHALL NOT BE MORE THAN 7 3/4" BELOW THE TOP OF THE THRESHOLD. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SRVED. EVERY LANDING SHALL HAVE A MIN. DIMENSION OF 36" MEASURED IN THE DIRECTION OF TRAVEL.

NOTE:

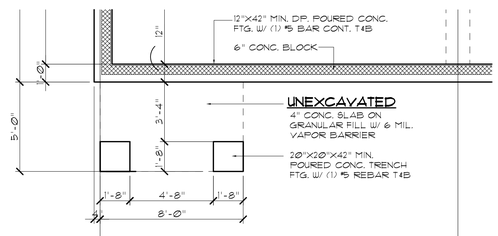
BATHROOM EXHAUST FANS ARE TO VENT DIRECTLY TO THE OUTSIDE OF STRUCTURE

FIRE SEPARATION NOTE FOR LIVING SPACE ABOVE GARAGE

FIRE SEPARATION (R309)
GARAGE SPACE BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8-INCH TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT. ALL OTHER GARAGE SPACE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE. DROP CLG. UNDER FLR. ABV. (ENCLOSE MECHANICAL AND STRUCTURAL ELEMENTS) VERIFY W/ BLDR.

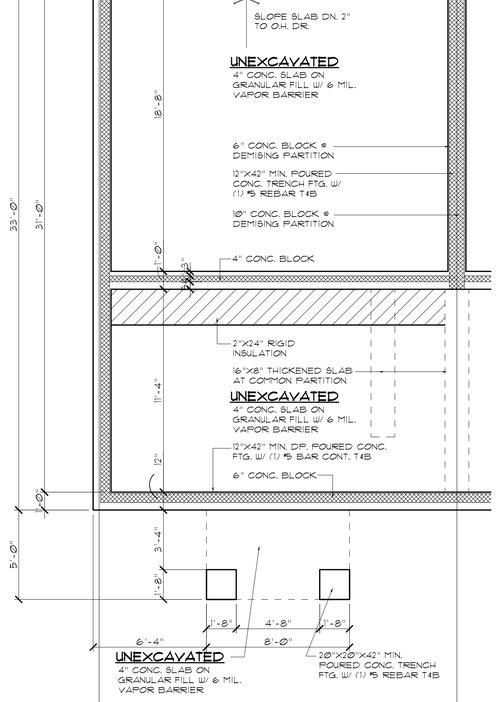
NOTE:

STAIRWAY ILLUMINATION (R303.6)
ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING OF THE STAIRWAY. FOR INTERIOR STAIRS THE ARTIFICIAL LIGHT SOURCES SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS NOT LESS THAN 1 FOOT-CANDLES MEASURED AT THE CENTER OF TREADS AND LANDINGS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS PROVIDING ACCESS TO A BASEMENT FROM THE OUTSIDE GRADE LEVEL SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF THE STAIRWAY. THE LIGHTING AND SWITCHING OF THE STAIRWELL WILL BE INSPECTED AN ELECTRICAL INSPECTOR.



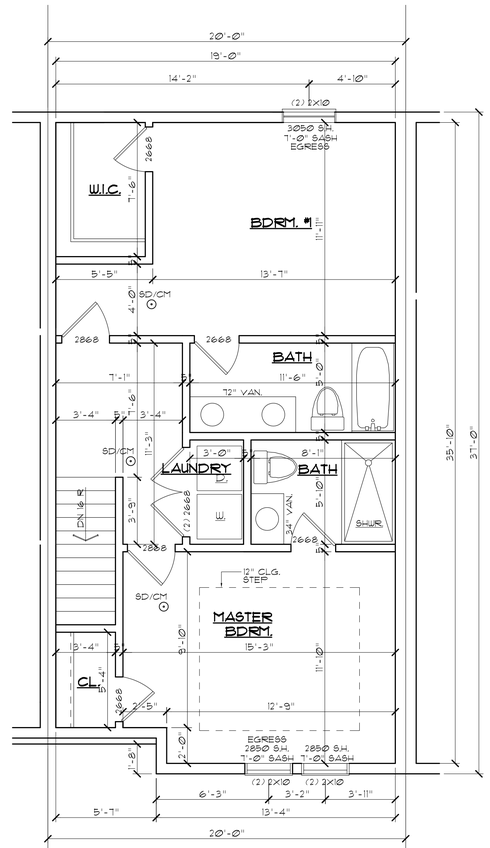
@ PORCH OPTIONAL END UNIT FOUNDATION PLAN

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



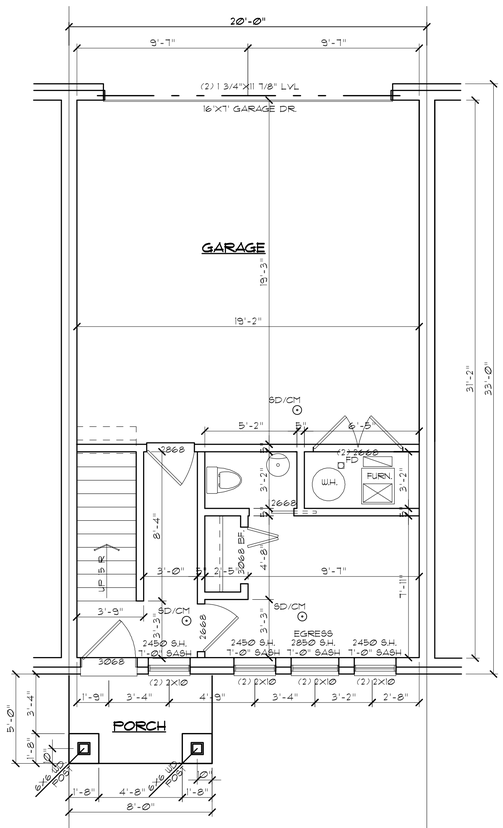
TYPICAL END UNIT FOUNDATION PLAN

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



TYPICAL SECOND FLOOR PLAN-712 SF

SCALE: 1/4" = 1'-0" 2-BEDROOMS



OPTIONAL LOWER LEVEL PLAN-249 SF

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

COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER CAN AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
UNIT FLOOR PLANS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:

DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-2

CONDO DEVELOP.



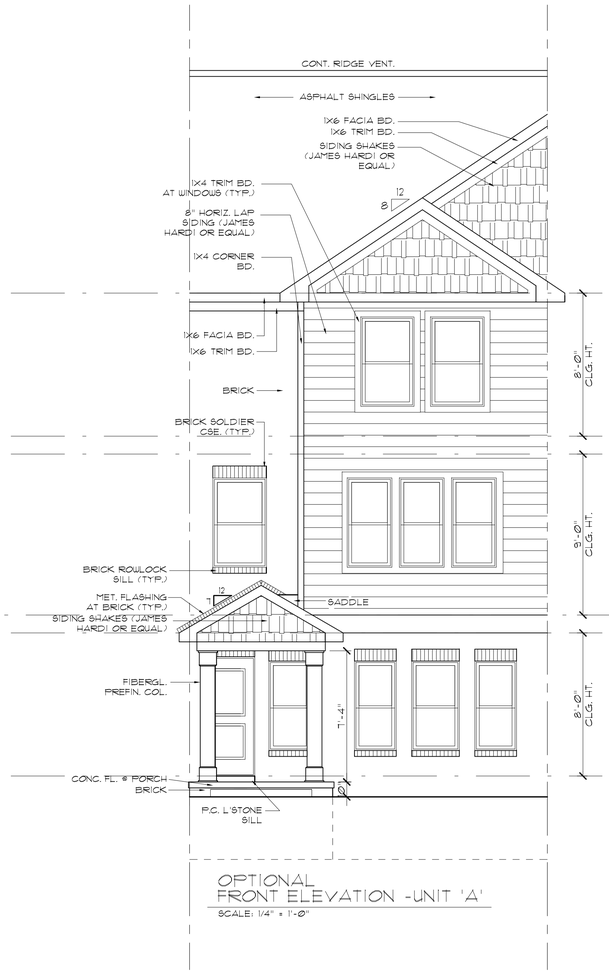
END UNIT
OPTIONAL LOWER LEVEL
FRONT ELEVATION -UNIT 'A'

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



OPTIONAL LOWER LEVEL
FRONT ELEVATION -UNIT 'A'

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



OPTIONAL
FRONT ELEVATION -UNIT 'A'

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

COPYRIGHT © 2019
THE DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED WITHOUT PUBLICATION WITHOUT THE WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
DETAIL EXTERIOR ELEVATIONS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:

REVIEW
09-12-19
10-21-19
11-04-19
11-08-19
12-13-19
BID

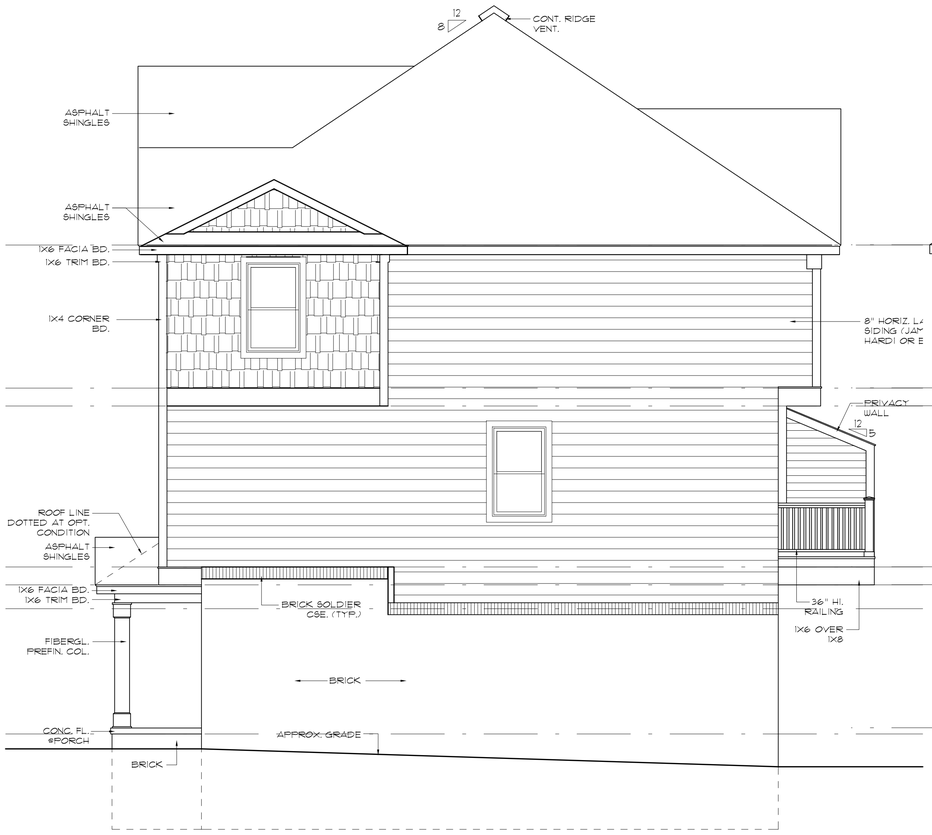
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS – USE FIGURED DIMENSIONS ONLY

JOB NO.
2019–20

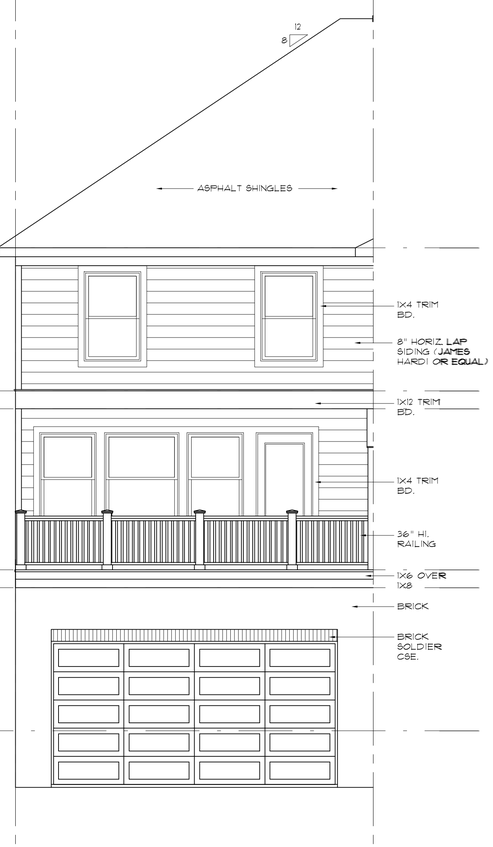
SHEET
A–3.1

CONDO DEVELOP.



RIGHT SIDE ELEVATION -UNIT 'A'

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



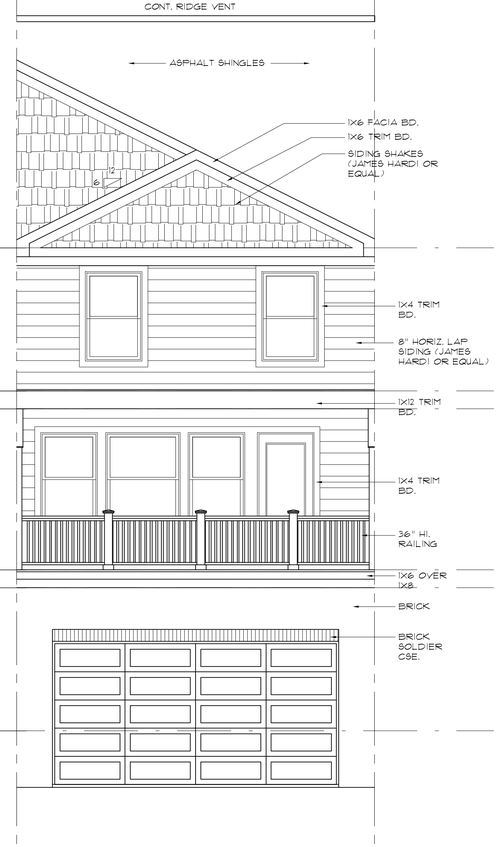
REAR ELEVATION -UNIT 'A'

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



REAR ELEVATION -UNIT 'A'

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



REAR ELEVATION -UNIT 'A'

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

COPYRIGHT © 2019
THE DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED WITHOUT THE EXPRESS WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
DETAIL REAR ELEVATIONS
RIGHT SIDE ELEVATION

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
REVIEW
00-00-00
00-00-00
00-00-00
00-00-00
00-00-00
00-00-00

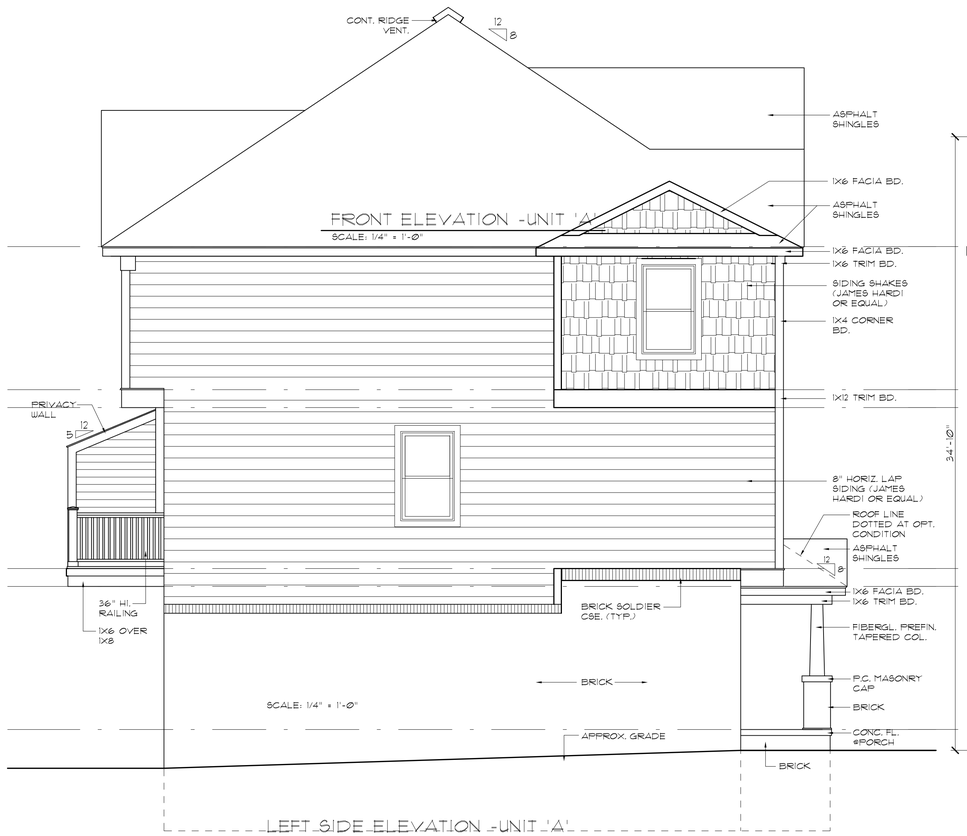
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

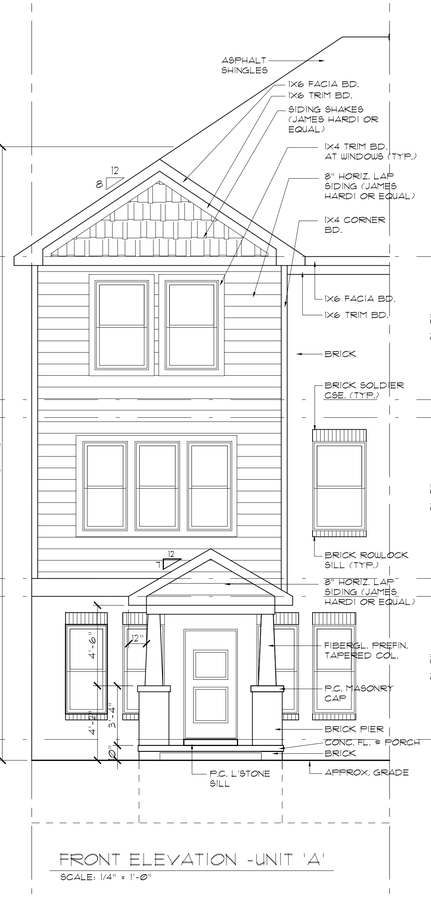
JOB NO.
2019-20

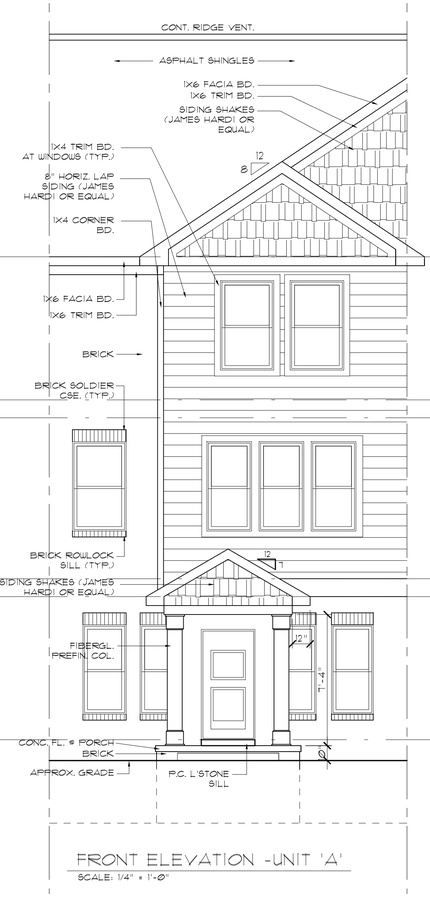
SHEET
A-3.2

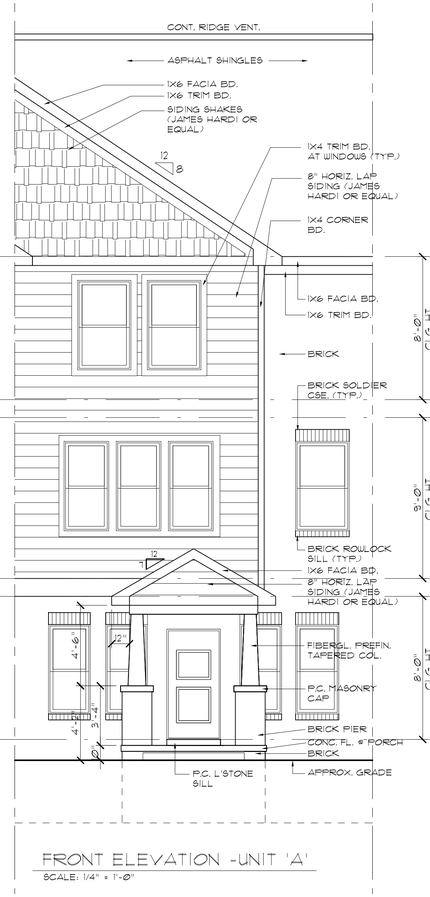
CONDO DEVELOP.



LEFT ELEVATION - 4 UNIT BLDG.
2,300 SF SCALE: 1/4" = 1'-0"







COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER THEREIN IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
DETAIL FRONT ELEVATIONS
LEFT SIDE ELEVATIONS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
05-10-19

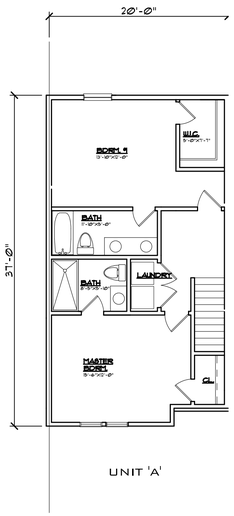
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

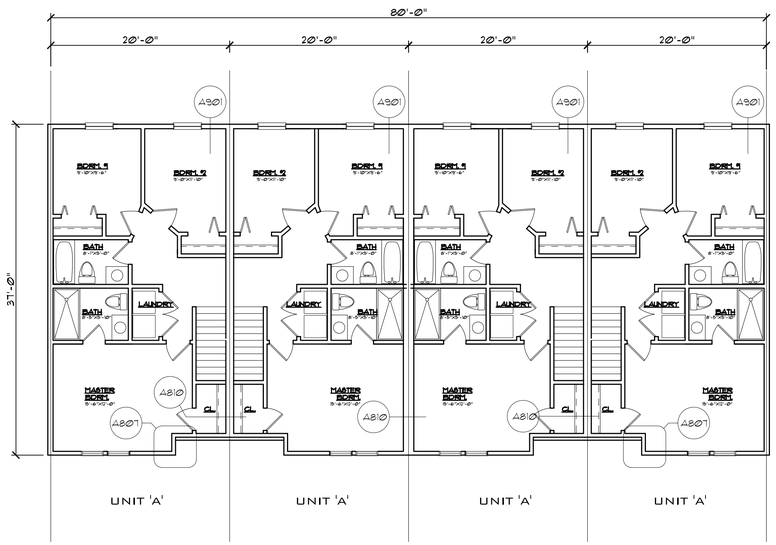
JOB NO.
2019-20

SHEET
A-3

CONDO DEVELOP.

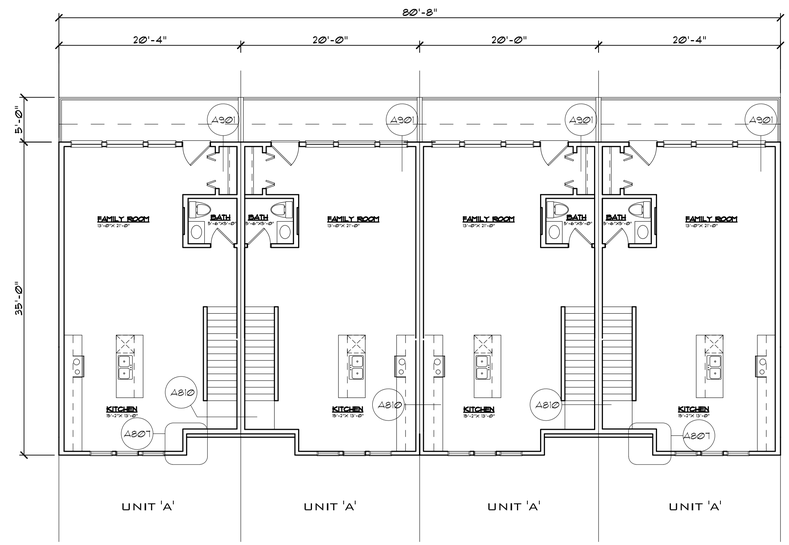


2 BEDROOM OPTION
UPPER LEVEL PLAN
712 SF



4-UNIT BUILDING
UPPER FLOOR PLAN
712 SF

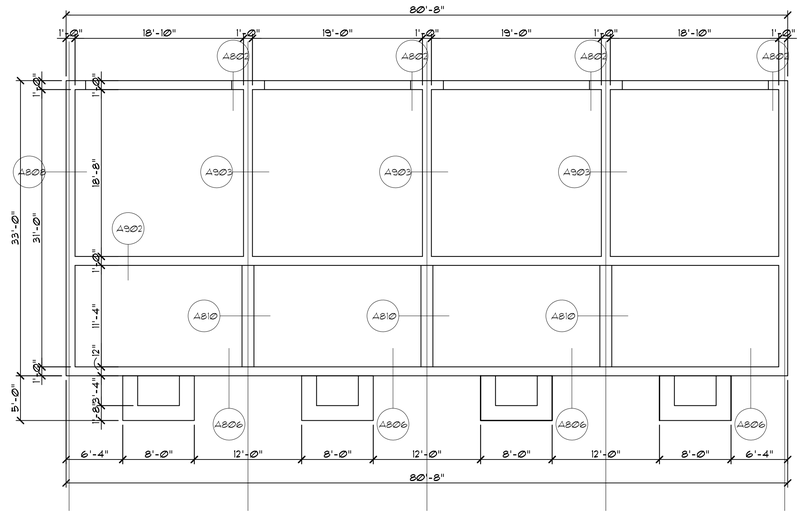
SCALE: 1/4" = 1'-0"



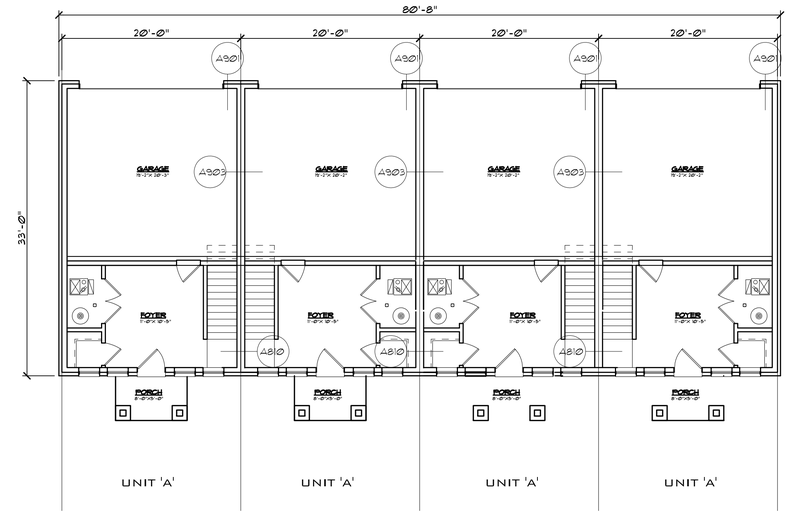
4-UNIT BUILDING
First FLOOR PLAN
685 SF

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

'A' UNIT AREAS - 4 UNIT BUILDING	
LOWER LEVEL	249 SF
FIRST FLOOR	685 SF
SECOND FLOOR	712 SF
TOTAL	1,646 SF



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



4-UNIT BUILDING
Lower LEVEL PLAN
229 SF

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

COPYRIGHT © 2019
THE DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
4 UNIT BUILDING PLANS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
PREVIEW 08-27-19
10-21-19
11-04-19
11-08-19
01-16-20

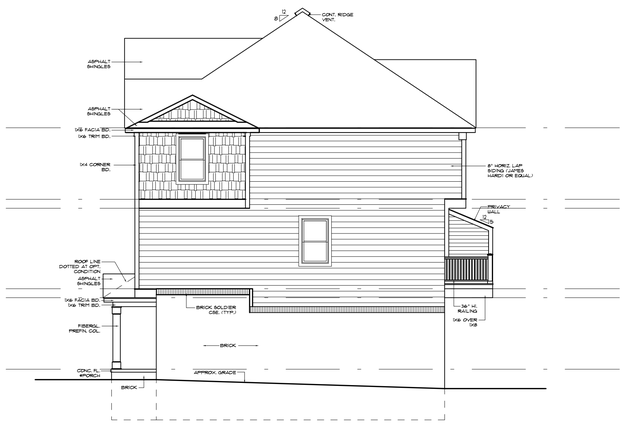
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-4

CONDO DEVELOP.

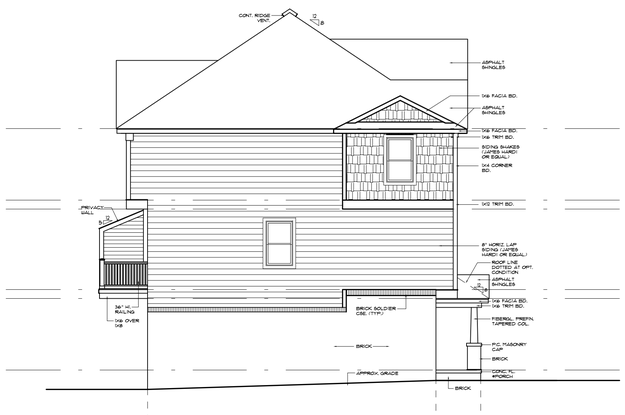


LEFT ELEVATION - 4 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"

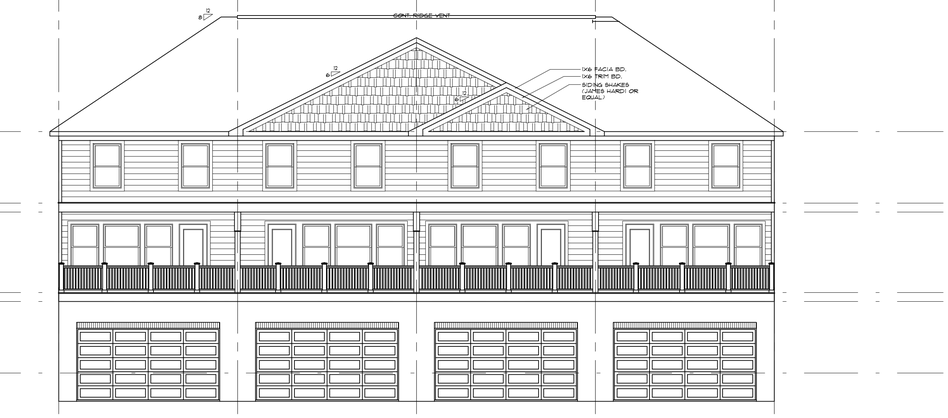


FRONT ELEVATION - 4 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"

FACADE FENESTRATION: 57.5%
368 SF / 640 SF



LEFT ELEVATION - 4 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"



REAR ELEVATION - 4 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"

COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER CONTAINED IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
4 UNIT BUILDING ELEVATIONS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:

REVIEW
09-27-19
10-01-19
11-04-19
11-25-19
01-15-20

DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

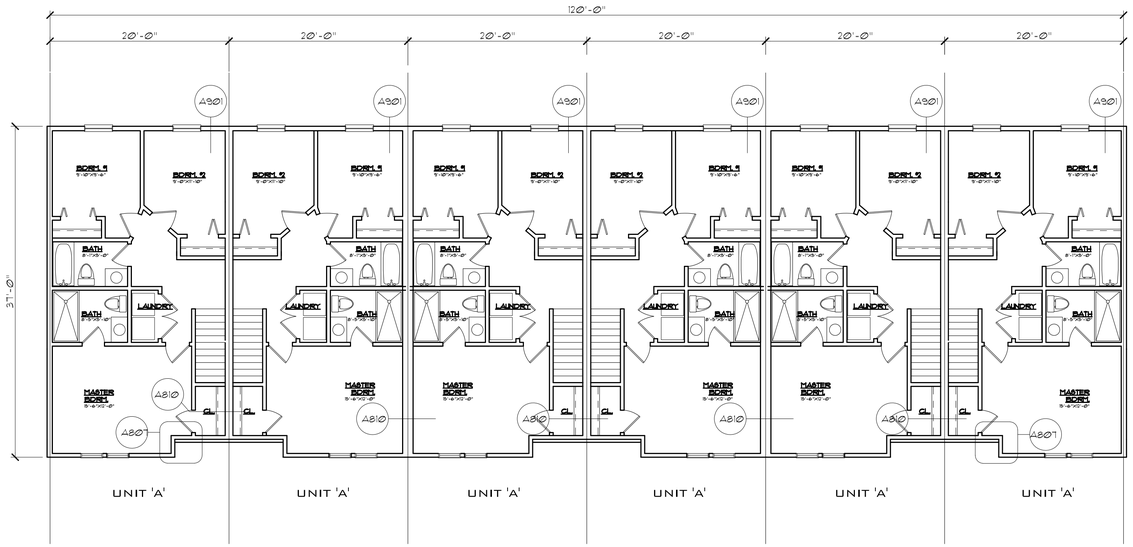
DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

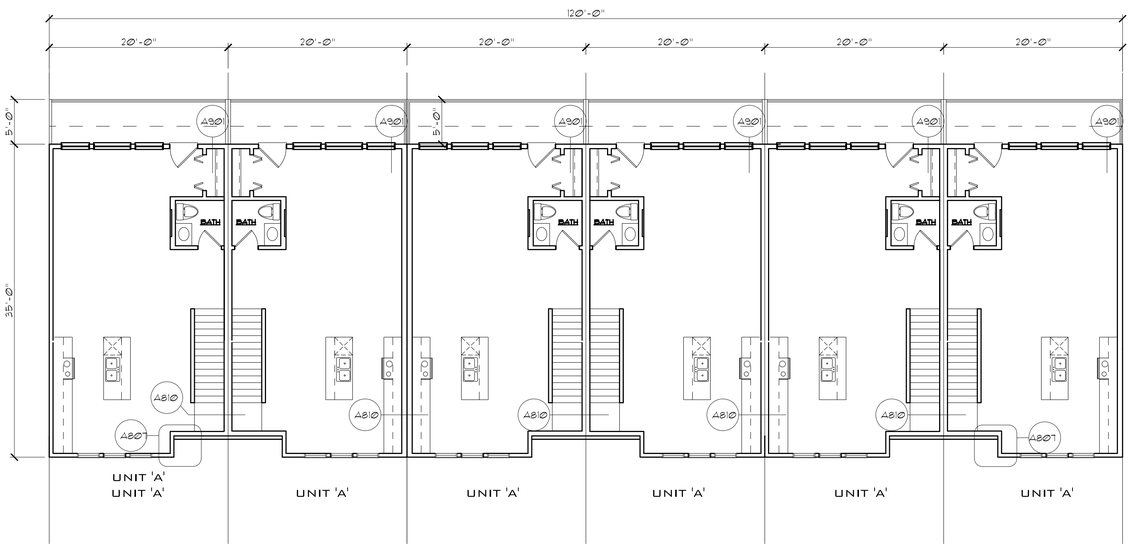
SHEET
A-5

CONDO DEVELOP.

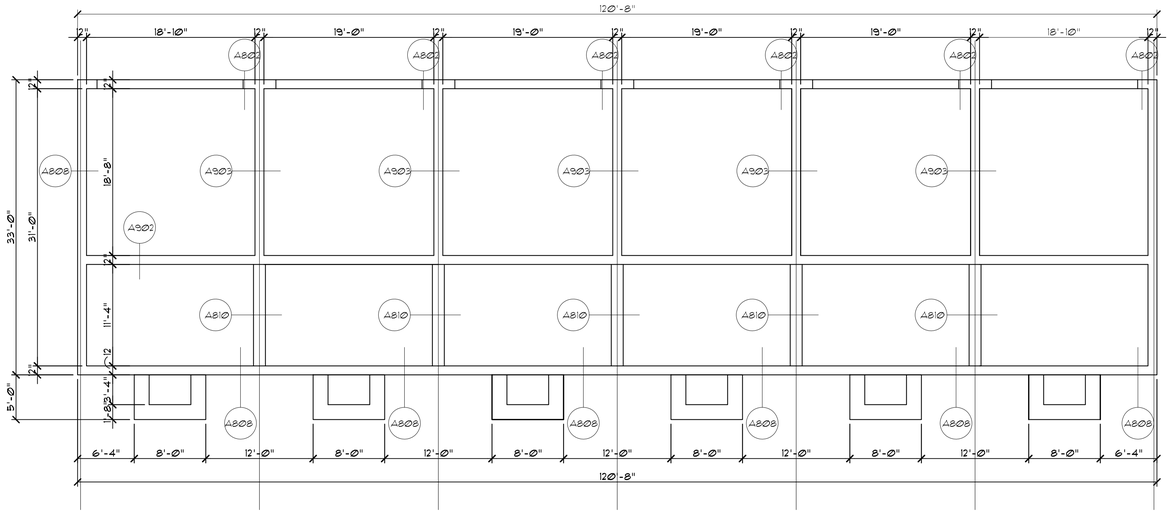
'A' UNIT AREAS - 6 UNIT BUILDING	
LOWER LEVEL	249 SF
FIRST FLOOR	685 SF
SECOND FLOOR	712 SF
TOTAL	1,646 SF



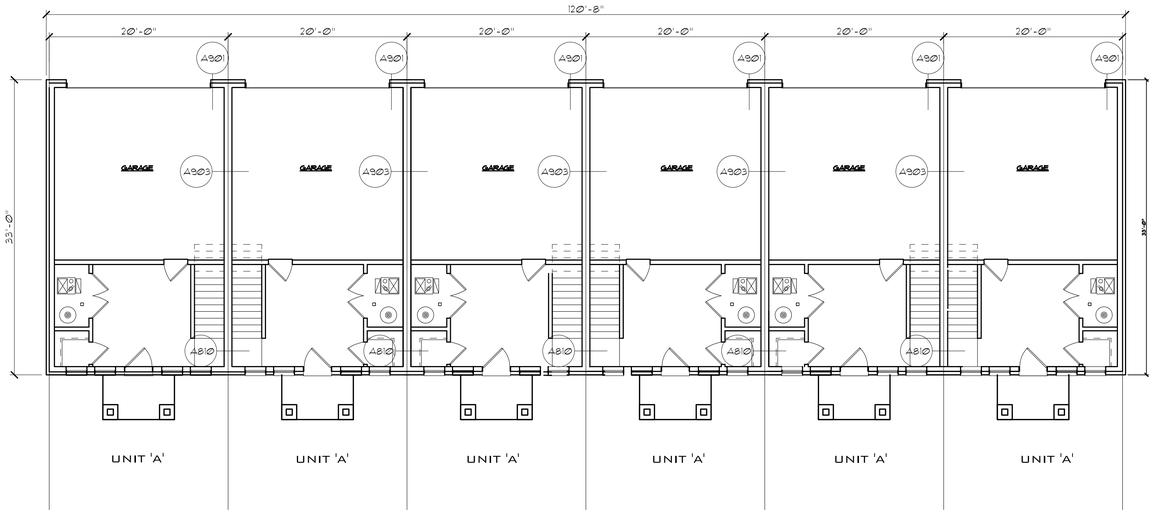
6-UNIT BUILDING
UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"
712 SF



6-UNIT BUILDING
First FLOOR PLAN
SCALE: 1/4" = 1'-0"
685 SF



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



6-UNIT BUILDING
Lower LEVEL PLAN
SCALE: 1/4" = 1'-0"
229 SF

COPYRIGHT © 2019
THE DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED WITHOUT THE EXPRESS WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
6 UNIT BUILDING PLANS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
REVIEW
CO-17-19
11-21-19
01-13-20
02-03-20

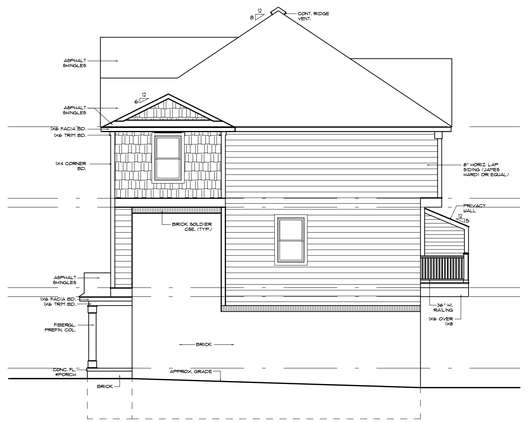
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-6

CONDO DEVELOP.

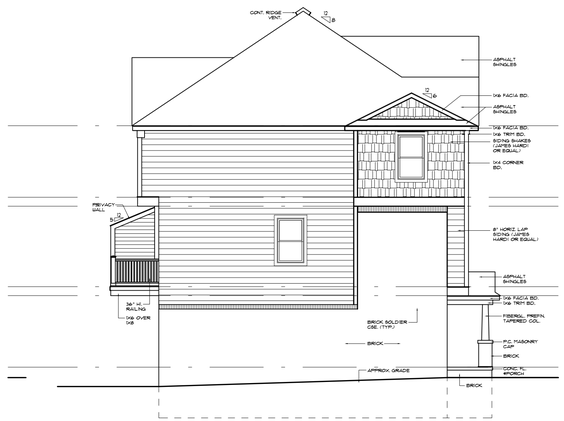


RIGHT ELEVATION - 6 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"

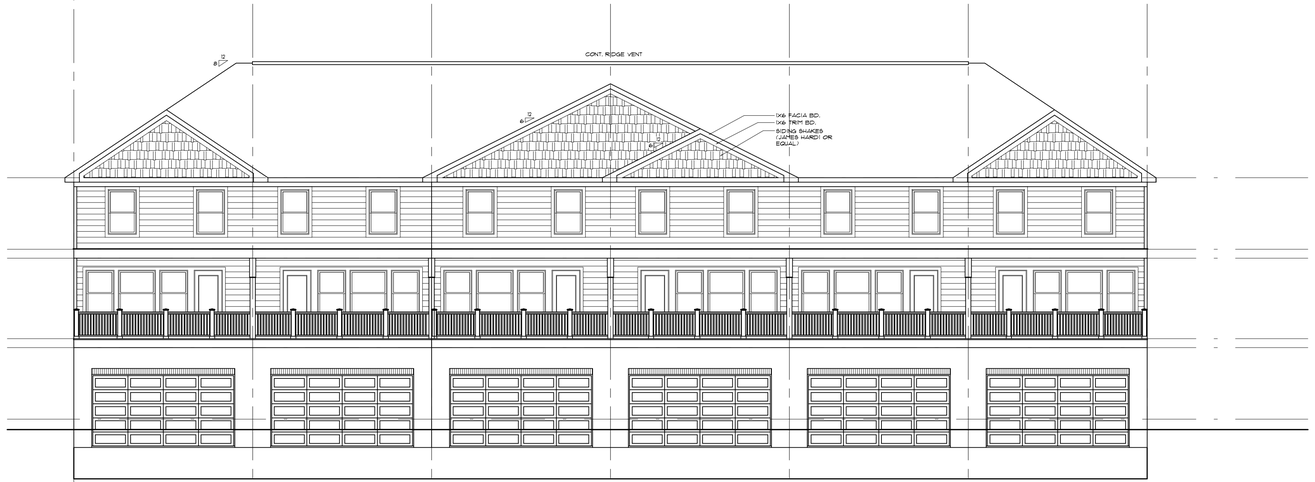


6-UNIT BUILDING
REAR ELEVATION
SCALE: 1/4" = 1'-0"

FACADE FENESTRATION: 57.5%
552 SF / 960 SF



LEFT ELEVATION - 6 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"



6-UNIT BUILDING
REAR ELEVATION
SCALE: 1/4" = 1'-0"

COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER CONTAINED IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
6-UNIT BUILDING ELEVATIONS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:

REVIEW
09-27-19
10-21-19
11-25-19
12-23-19
01-16-20

DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-7

CONDO DEVELOP.

Index of Exhibits to Statement of Appeal

A	Carlisle Wortman Associates, Inc. Review dated November 6, 2020
B	Crooks Road Townhomes Site Plan – Resubmittal to City dated March 12, 2020
C	PEA Letter dated March 14, 2020
D	Troy Planning Commission Minutes dated January 14, 2020
E	Carlisle Wortman Associates, Inc. Review dated September 17, 2020
F	Carlisle Wortman Associates, Inc. Review dated January 7, 2020
G	Troy Planning Commission Minutes November 10, 2020
H	Troy Planning Commission Minutes dated April 28, 2020
I	Square Lake Townhomes – SPA to City dated February 5, 2020
J	Carlisle Wortman Associates, Inc. Review for SLC Project dated April 28, 2020
K	Community Image Builders Letter dated March 16, 2020

Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: April 6, 2020

Preliminary Site Plan Review
For
City of Troy, Michigan

Applicant:	Eureka Builders
Project Name:	Square Lake Court
Plan Date:	February 6, 2020
Location:	South side of E. Square Lake, west of Dequindre
Zoning:	NN, Neighborhood Node
Action Requested:	Preliminary Site Plan Approval

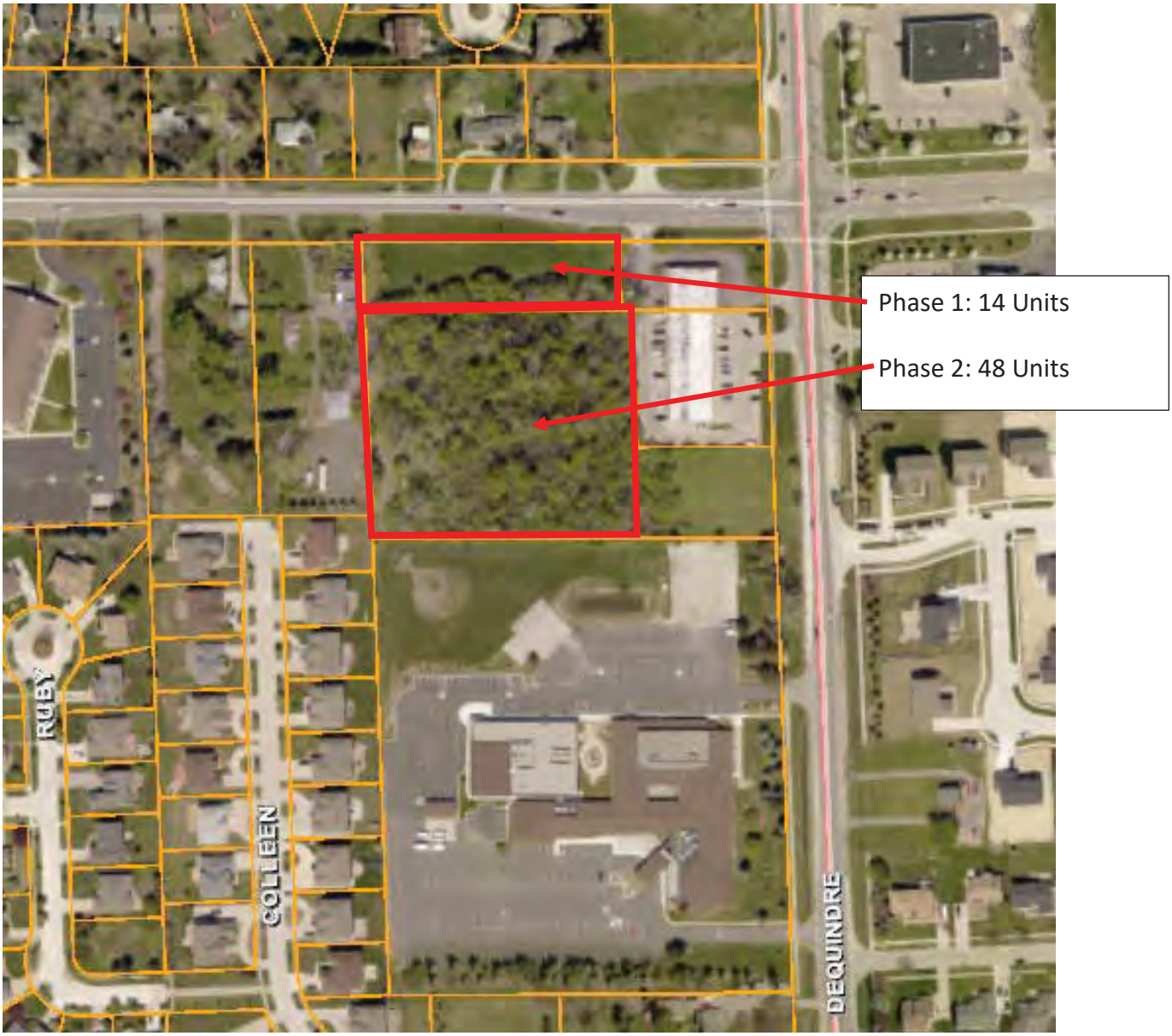
SITE DESCRIPTION

The subject site is located on the south side of E. Square Lake, west of Dequindre. The 3.0-acre site is Phase 2 of the recently approved Square Lake Court development. Phase 1 was approved on January 14 and included 14 units on 0.87 acres. The Planning Commission approval for Phase 1 included cross-access and guest parking. Phase 2 is immediately south of Phase 1 and incorporates those conditions of Phase 2.

Phase 2 includes a total of 48 units in 4 and 6-unit buildings, with the same architecture as approved as part of Phase 1. If approved, it is assumed that Phase 1 and Phase 2 will be combined into one project. Combining into one project will eliminate the need for cross-access easements and two separate homeowners' associations. Applicant should confirm if Phase 1 and Phase 2 will be combined into one project.

The property is zoned NN, Neighborhood Node residential and the proposed site condominium use is permitted by-right. The site will be accessed by one point on E. Square Lake, through Phase 1, and one point on Dequnidre, through the existing shopping center. All forty-eight (48) units are served with parking in rear-accessed garages.

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*



Size of Subject Property:
The parcel is 3.0 acres

Proposed Uses of Subject Parcel:
Forty-eight (48) attached townhomes

Current Use of Subject Property:
The subject property is currently unimproved and vacant.

Current Zoning:
The property is currently zoned NN, Neighborhood Node District

Surrounding Property Details:

Direction	Zoning	Use
North	NN, Neighborhood	Vacant
South	R1-C, Single-Family	Church
East	NN, Neighborhood Node	Neighborhood Commercial
West	R1-C, Single Family	Single Family Residential

NATURAL FEATURES

Topography: A topographic survey has been provided on sheet C-1.0 and shows that the site has a generally flat landscape.

Wetlands: There are no wetlands on site.

Floodplain: There are no floodplains onsite.

Woodlands: The applicant has identified a total of 20 woodland trees on the site, all of which will be removed.

Replacement Details		
Protected Tree	**Inches Removed**	**Replacement Required**
Landmark	0 inches	0 inches
Woodland	203 inches	102 inches
Preservation/Mitigation	**Inches Preserved**	**Credit**
Landmark	0 inches	0 inches
Woodland	0 inches	0 inches
Protected Replacement Required	102 Inches	
Preservation Credit	0 Inches	
Total	**102 inches**	
Total Tree Mitigation	102 inches = Forty-one 2.5 inch trees or thirty-four 3 inch trees.	

Items to be addressed: *None.*

BUILDING ARRANGEMENT

The site configuration consists of forty-eight (48) townhomes in eleven (11) building clusters. Building clusters include four (4) and six (6) units. All townhomes are served with garages. We find the proposed configuration suitable for the type and size of the development proposed.

Items to be addressed: *None.*

AREA, WIDTH, HEIGHT, SETBACKS

Table 5.03.B.3, Building Form C of Section 5.03, Standards Applicable to All Districts of the Zoning Ordinance establishes the dimensional requirements for the NN, Neighborhood Node District. The requirements and proposed dimensions are shown in the following table.

	Required	Provided	Compliance
Side (east)	N/A, building may be placed up to property line	16 feet	Complies
Rear (west)	30-foot minimum setback	35 feet	Complies
Rear (south)	30-foot minimum setback	35 feet	Complies
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 34'-10"	Complies
Lot Coverage (Building)	30%	21%	Complies
Minimum Open Space	20%	37%	Complies
Parking Location	Cannot be located in front yard	Within garages	Complies

Items to be addressed: *None.*

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Residential: 2 spaces per unit	48 Units = 96 spaces	96 garage spaces + 24 guest spaces = 120 spaces
Barrier Free	0	0
Bicycle Parking	0	0
Loading	0	0
Total	**96 spaces**	**96 spaces within garages and 24 guest spaces**

For Phase 2 the applicant is providing 2-car garages for a total of 96. In addition, the applicant is providing 24 guest spaces. Traffic Engineering has requested the applicant remove the two (2) spaces that are termination of the access drive off Dequindre. It is not desirable to have vehicles maneuvering into/out of parking spaces in this area.

For Phase 1 and Phase 2 there are a total of 38 guest spaces for the combined 54 units of Phase 1 and 2. Even with the loss of two (2) spaces, guest parking is sufficient.

Items to be Addressed: *Remove the two (2) spaces that are termination of the access drive off Dequindre.*

SITE ACCESS AND CIRCULATION

The site will be served with two access points. Point 1 is via a vehicular connection to Phase 1, which has a direct connection to E. Square Lake Road. A secondary point of access is through the existing stripmall on Dequindre. A cross-access easement will be required for access to Dequindre.

The fire department has reviewed the application and finds access and circulation sufficient. However, improved internal pedestrian circulation should be provided:

1. Sidewalks should be five (5) feet in width;
2. Provide continuous sidewalk around the perimeter of the site (connect the walk between Buildings H and J, Buildings K and L, and add a walk along easterly edge of site; and
3. Add direction connection between Buildings J and K, G and F, D, and E, and A and B to Square Lake.

Items to be addressed: *1). Provide necessary easement to Dequindre. 2. Sidewalks should be five (5) feet in width; 3). Provide continuous sidewalk around the perimeter of the site (connect the walk between Buildings H and J, Buildings K and L, and add a walk along easterly edge of site; and 4). Add direction connection between Buildings J and K, G and F, D, and E, and A and B to Square Lake.*

LANDSCAPING

A landscaping plan has been provided on sheet L-1.0 and are supplemented by tree protection and planting details on sheet L-1.1. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	**Provided:**	**Compliance:**
Landscape buffering (east property line)	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. 330 / 10= 33 trees	33 evergreen screening trees	Complies
Landscape buffering (south property line)	Not Applicable	Existing Wall	Complies
Landscape buffering (west property line)	Not Applicable	Deciduous Trees	Complies
Parking Lot Trees	1 per 8 spaces = 38 spaces / 8 = 5 trees	5 trees but located on perimeter of parking spaces	Complies with Planning Commission approval.
Site landscaping: A minimum of twenty percent (20%) of the site area shall be comprised of landscape material. Up to twenty-five percent (25%) of the required	20%	30%	Complies

landscape area may be brink, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.			
Mitigation:	Applicant is providing the required 34 replacement trees on site.		

Though the applicant complies with the number of parking lot trees, there are two (2) long rows with parking, one on Phase 1 and the other as part of Phase 2, that should be broken up with landscape peninsula and tree.

Transformer / Trash Enclosure:
The applicant has not indicated a central trash enclosure. It is assumed that each unit will have trash bins in the garage to be rolled out for trash pickup.

***Items to be Addressed**: Break up the two (2) long rows of parking with landscape peninsula and tree.*

PHOTOMETRICS

A photometric plan has been provided. All photometrics and fixture meet ordinance requirements.

***Items to be Addressed:** None.*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided. The primary material for the elevations are hardi board siding and a brick material.

The applicant has provided a bird eye view but they should provide additional 3D models to review the site in context. In addition, the applicant should bring a material samples to the meeting.

***Items to be Addressed:** 1). Provide additional 3D models to review the site in context; and 2). Bring physical material samples to the meeting.*

DESIGN STANDARDS and SITE PLAN REVIEW STANDARDS

The Neighborhood Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

Section 5.06.E. outlines Design Standards:

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.06.E for standard details.

We find that the design standards have been met. The applicant is providing a hardi board and brick product with architectural details on all elevations.

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
2. *Development shall incorporate the recognized best architectural building design practices.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*

Please see Section 8.06 for standard details

The applicant is providing a medium density multiple family residential project. As far as site layout, access, and circulation the site plan meets the site plan review standards.

RECOMMENDATION

Applicant should confirm if Phase 1 and Phase 2 will be combined into one project, and provide additional 3D models to review the site in context; and bring physical material samples to the meeting.

We recommend that the Planning Commission grant preliminary site plan approval with the following conditions:

1. *Remove the two (2) spaces that are termination of the access drive off Dequindre.*
2. *Provide necessary easement to Dequindre.*
3. *Increase all sidewalks to five (5) feet in width.*
4. *Provide continuous sidewalk around the perimeter of the site (connect the walk between Buildings H and J, Buildings K and L, and add a walk along easterly edge of site.*
5. *Add direction connection between Buildings J and K, G and F, D, and E, and A and B to Square Lake.*
6. *Break up the two (2) long rows of parking with landscape peninsula and tree.*
7. *Make any additional architecture changes based on Planning Commission input.*

Sincerely,

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

Ā
Ā



Ā

Ā Ā
Ā

March 16, 2020

Planning Commission
City of Troy
500 W. Big Beaver Rd
Troy, Michigan 48084

Attention: Mr. Brent Savidant, AICP, Community Development Director

Subject: **Crooks Road Townhomes Site Plan Review** (SP 2019-0022): Response to Comments at January 14, 2020 PC Meeting

Dear Planning Commissioners:

I have been asked by representatives of Tollbook Homes to respond to specific comments made at the 1/14/20 Planning Commission meeting by residents of the Woodlands of Troy residents concerning the above project. To begin attached housing is a permitted use in the *NN, Neighborhood Node District, 5.06, C-2, Building Forms Permitted*, and is being evaluated by the standards in the Zoning Ordinance *only*, not the Master Plan. The Master Plan provides direction for the creation of zoning ordinance requirements but only comes into play when a rezoning is being requested. That is not the case here since the subject property is already zoned for the use and only site plan approval is being requested. The site plan request is only reviewed under the standards in the zoning ordinance, per the Michigan Zoning Enabling Act of 2008, and must be approved if those requirements are met.

Transitional Use

The Woodlands of Troy Homeowners Association submitted a letter dated January 2, 2020 objecting to the site plan. Page 2 of that letter refers to the "Neighborhood Nodes Building Form C Standards providing for a minimum of 2 stories and a maximum of 4 stories." It then uses the Missing Middle graphic from the City of Troy Master Plan as a way of defining appropriate transitional residential forms in that District. It states that "The above visual representation from the Master Plan shows one family residential similar to ours next to Attached Single Family Residential, followed in intensity with Bungalow Courts with Townhouses next, adjacent to a higher intensive use of Fourplexes." While creative, there is no relationship between the allowed minimum 2 story and maximum 4 story building height in the Zoning Ordinance and the Master Plan.

Moreover, that diagram comes from the web site for the organization called "Missing Middle Housing," whose goal is to encourage the integration of the wide range of housing types shown into neighborhoods that have historically only allowed large-lot, single-family houses. They also encourage allowing uses like townhouses *by right* next to large lot, single-family neighborhoods because existing residents tend to object for numerous unfounded reasons, including a decline in property values. As the zoning instructor for the Michigan Economic Development Corporation's

17195 Silver Parkway, #309
Fenton, MI 48430

Phone: 810-734-0000
Email: sprague@cibplanning.com

Redevelopment Ready Communities Program (RRC), I teach communities about the need for "Middle Housing" throughout the State. This same diagram is included in the presentation on behalf of MEDC and I discuss the bias that residents in large-lot, single-family neighborhoods across the State have against housing that is different than theirs. The diagram in the Troy Master Plan was never intended to be used as a way of supporting a transition in housing types, since that would work against the very principle the Missing Middle Housing group is promoting.

The HOA letter also combines and misuses the concepts of "transitional uses" and "density" or intensity. *Sections 5.06 (E)(3)(a&b), Transitional Features*, of the ordinance discuss transitional uses and intensity as follows:

a. *Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.*
b. *Intensity. A continuum of use intensity, where moderate intensity uses are sited between high-intensity uses and low-intensity uses, shall be developed for multi-building developments. An example would be an office use between commercial and residential uses.*

These are the ordinance requirements being met by the subject development through extensive setbacks, buffering, limitation of building height and the closing of a road extension and sidewalk connections, that under good planning practice should connect. The development also includes attached single-family townhouses next to single-family residential houses, which is an appropriate continuum of use intensity, per the description above. The argument that there should be a reduction in density and type of units due to their interpretation of the language in the Master Plan is absurd and shows a poor understanding of the relationship between the Master Plan and Zoning Ordinance.

Townhouses as a Transitional Use

There is a discussion in the HOA about the public health, safety and welfare, which is why we have local ordinances to protect the community. The proposed development will not connect to the abutting neighborhood and for the most part will only be partly visible to the closest houses. Nor will a single-family attached development with 6 units per acre have less impact on the neighborhood than the proposed development with 13 units per acre, in compliance with ordinance requirements. The term "density" is often misused by residents against projects, often stating that it is too high without understanding why density requirements are even used in ordinances. Density regulations are in place to prevent unnecessary negative "impacts" on surrounding properties and infrastructure; not as a transitional use requirement. For example, a multiple-family development might allow up to 20 units per acre, since that is a density that the infrastructure and services can handle. In this case, traffic will not be going through the Woodlands neighborhood nor will the townhouse homeowners be able to use their sidewalk system. There will be virtually no relationship between the two developments, including impacts. Finally, there are no studies showing that the development of single-family residential townhouses next to single-family residential subdivisions have a negative impact on the value of existing homes. In essence, this project will have no impact on the Woodlands neighborhood whatsoever.

NN, Neighborhood Nodes Requirements

One of the last comments in the Woodlands HOA letter is that the focus of the Neighborhood Nodes District should not be "high intensity" residential (their label, not that of the zoning ordinance). They refer to the parts of the ordinance and then interject Master Plan statements to weave a story indicating that maybe a mixed-use development is required and that townhouse development is not allowed. The ordinance actually states:

*"NN:B sites may contain a variety of uses, **including residential at grade, in a higher-density arrangement**, but may also include small scale retail and service or office uses. A strong focus on transitional landscaping and a suitable connection to the neighboring residential areas is of critical concern for the NN:B sites, as they will often serve as the primary zone through which residents in a social neighborhood, as identified in the Master Plan, engage the Node, which serves as the core of the economic neighborhood."*

Residential townhouses, like the ones proposed, are clearly permitted in the NN, Neighborhood Nodes District (see table below) and there is no requirement that it be part of a mixed-use development, although it is allowed. If a mixed-use development were proposed, the street and sidewalk connections to the Woodlands subdivision would be required, since the goal is to integrate such a development with the neighborhood. In all likelihood a mixed-use project with a road connection at this location would bring a new set of objections from the Woodlands HOA.

Table 5.06.C-2
Building Forms Permitted

Building Forms	Site Type NN:A		Site Type NN:B	
	Street Type NN:A Arterials	Street Type NN:B Local and Connectors	Street Type NN:A Arterials	Street Type NN:B Local and Connectors
A: Small, single-purpose, out buildings	P	P	P	P
B: Small, multi-tenant commercial with mixed use	P	P	P	P
C: Attached residential or live/work	S	S	P	P
D: Multi-story mixed use, medium density	P	P	S	S
E: Large format commercial	P	S	NP	NP
F: Large format mixed-use	P	S	NP	NP

P - Permitted Building Form
S - Special Approval Building Form
NP - Prohibited Building Form

Conclusion

Unfortunately, residents in existing detached single-family developments across the state and country come out against housing that is different than theirs. Yet not everyone wants the same type of housing they do and look for alternate options, which are in short supply due to the opposition mentioned above. Statistics show that the "Middle Housing" is in great demand and will continue to be so in the foreseeable future. There will likely be a glut of detached single-family housing in about

20 years and the communities that balance existing neighborhoods with middle housing types will probably fare better.

In this particular case a rezoning is not being requested. Ordinance requirements are in place and being met through site design and changes to the plan. Once those standards are met the site plan must be approved, per State law, regardless of the objections of neighboring residents. The zoning ordinance does not require that the residents of the Woodlands neighborhood be consulted nor that their objections play a role in obtaining approval. With all due respect, the Master Plan has no impact on whether the ordinance requirements are being met and should not play a role in your decision-making.

Thank you for your consideration and If you have any further questions, please contact us at 810-734-0000.

Sincerely,

CIB Planning



Carmine P. Avantini, AICP
President

STATEMENT OF APPEAL

I. INTRODUCTION

Tollbrook North, LLC ("**Developer**") appeals the November 10, 2020 decision of the City of Troy's Planning Commission ("**PC**") to deny the Preliminary Site Plan ("**PSP**") for its Crooks Road Townhomes project to the City's Zoning Board of Appeals ("**ZBA**"). The Developer requests that the ZBA reverse the PC's decision and grant PSP approval.

The Developer's Project (as described below) is a permitted use of the Property under Zoning Ordinance, does not require any variances, exceptions or waivers from the Zoning Ordinance, and otherwise meets all the criteria for PSP approval. Under the Michigan Zoning Enabling Act, a site plan shall be approved if it contains the information required by the zoning ordinance and is incompliance with the conditions imposed under the zoning ordinance. MCL125.3501(5).

The PC's decision to deny the PSP was arbitrary and capricious, based on no findings of material facts, constituted an abuse of discretion by the PC, and based on erroneous interpretation of the Zoning Ordinance.

II. AUTHORITY AND STANDARD OF REVEIW

Section 15.04.C of the City's Zoning Ordinance authorizes the ZBA to hear and decide this appeal:

> C. Appeals of Administrative Decisions. The Zoning Board of Appeals shall hear and decide appeals where it is alleged there is error of law in any order, requirement, decision or determination made by an administrative official or body in the enforcement of this Ordinance.

The ZBA's standard of review for appeal is set forth in Section 15.04.C.4 of the Zoning Ordinance:

> 4. An administrative decision may be reversed, in whole or in part, or may be modified. To that end, the Zoning Board of Appeals shall have all the powers of the Zoning Administrator from whom the appeal is taken. In reaching its decision, the Zoning Board of Appeals shall only modify or reverse an administrative decision being appealed if one (1) or more of the following requirements are met:
>
> a. The administrative decision was arbitrary or capricious.
> b. The administrative decision was based on an erroneous finding of material fact.
> c. The administrative decision constituted an abuse of discretion; or
> d. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

III. BACKGROUND

A. The Property

The subject property is a 5.72-acre parcel of land on the west side of Crooks Road just north of Wattles Road (the "**Property**"). The Property is zoned Neighborhood Nodes (NN) District ("**NND**") - I. The adjacent zoning and uses surround the Property (See the Preliminary Site Plan Review prepared by Carlisle Wortman Associates, Inc. ("CWA") dated November 6, 2020; the "**Review**", attached as **Exhibit A**):

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Vacant/Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

B. The Project

The Project consists of 74 townhomes contained in 13 buildings. The Project requires no variances, waivers or exceptions from the Zoning Ordinance. See PSP attached as **Exhibit B** and Letter from PEA Inc. dated March 14, 2020 attached as **Exhibit C**.

The Project is a permitted use under the Zoning Ordinance. This fact is s acknowledged by the City's Planner, CWA, and the City's attorney. CWA wrote: "Overall, we find the proposed use to be appropriate for the site." (See Page 10 of the Review). The City Attorney during the January 14, 2020 Planning Commission stated: "the proposed development is permitted by right on the subject property." (See January 14, 2020 PC Meeting Minutes attached as **Exhibit D**).

Not only is the Project permitted, the Project is modest in size and scope as it provides setbacks and open space far greater than required by the Zoning Ordinance and building size (both by stories and height) and lot coverage far less than required by the Zoning Ordinance. The Project complies with all dimensional standards of the Zoning Ordinance (See Page 5 and 6 of the Review):

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies.
Side (north)	N/A, building may be placed up to property line	40-feet	Complies.
Side (south)	N/A, building may be placed up to property line	80 feet	Complies.
Rear (west)	30-foot minimum setback	139 feet	Complies.
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 37.5 feet to peak of roof	Complies.

Lot Coverage (Building)	30%	19.3%	Complies.
Minimum Open Space	15%	55%	Complies.
Parking Location	Cannot be located in front yard	Within garages	Complies.

The Zoning Ordinance in the definition of Building Height states that the building height for a gable and gambrel roofs is measure to the mid-point of the roof. The buildings have gable and gambrel styled roofs. Further, buildings B, C and D of the Project (the most northern buildings; the "**Transitional Buildings**") have a peak height of 36' and a mid-point height of 27'9". The other ten buildings have a peak height of 37'4" and mid-point height of 33"1". For reference, a single-family home in an R1-B District is permitted 30' to mid-point.

C. Chronology

Date	Activity
September 24, 2019	PC hears PSP for first iteration of the Project, which was 60 townhomes in 8 buildings on 2.73 acres. The buildings were 40' tall to the peak. While this first iteration was compliant with Zoning Ordinance, the PC postponed approval of the PSP so that the Developer could address items in the CWA Review dated September 17, 2019 (See **Exhibit E**) and raised by the PC and audience members.
January 14, 2020	PC hears PSP for 2nd iteration of the Project, which was for 74 units over 5.73 acres. There were significant changes from the 1st iteration, including, but not limited to: reduction in density from 22 units per acre to 12.9 units per acre; increase in guest parking; all resident parking changed to 2 car side by side garage; reduction in building heights by 3'; removal of the emergency vehicle access to the stub road for the adjacent neighborhood to the north; increase of all setbacks; reduction in lot coverage; and increase in open space. Despite all the improvements, the PC postponed the PSP to give the Developer time to digest comments made by the residents, PC and staff and to address site plan items identified in CWA Review dated January 7, 2020 attached as **Exhibit F**.
November 10, 2020	PC denies the PSP for 3rd iteration of the Project because of a lack of compatibility and inadequate transition. While this last iteration of the Project was generally same as the same as the prior iteration, there were several changes as itemized on the Review and the PEA Letter that included the creation of the Transitional Buildings, installation of an aluminum fence along north boundary line in lieu of vinyl fence,

	commitment to brick and cement board siding and no vinyl siding and increased landscape buffer plantings.[1]
December 8, 2020	PC approves its November 10, 2020 Meeting Minutes thereby memorializing its denial of the PSP.

IV. PC DETERMINATION

On November 10, 2020, the PC denied the PSP for the Project "for the following reasons lack of compatibility and inadequate transition." (the "**PC Determination**"; See November 10, 2020 PC Meeting Minutes for November 10, 2020 (attached as **Exhibit G**) and video recording of November 10, 2020 PC meeting on YouTube at 4:41:30).

The reasons provided for denial are without reference to a specific section in the Zoning Ordinance and are not supported by any findings of fact. This reasoning is broad and subjective, leaving the Developer with no certainty as to what would be, from the PC's perspective, an approved use for the Property under the Zoning Ordinance.

Moreover, the Zoning Ordinance, with regard to compatibility and transition standards, is vague as: (a) it lacks the standards needed to govern the PC's discretion; (b) is so indefinite that it permits unstructured and unlimited discretion to be exercised by the PC or determine whether the law has been violated; (c) fails to give the Developer reasonable notice of the prohibited conduct, is vague, overbroad, lacking definite standards; and (d) is incapable of being rationally administered.

The PC Determination was arbitrary and capricious, was based on erroneous findings of fact, constituted an abuse of discretion and was an erroneous interpretation of the Zoning Ordinance.

V. COMPATIBILITY IS NOT REQUIRED AND, EVEN IF IT WERE, THE PROJECT IS COMPATIBLE TO ADJACENT PROPERTIES.

The PC Determination did not provide any findings of fact to support the allegation that the Project lacked compatibility with adjacent zoning or uses. Moreover, the PC's Determination is flawed because it applied a compatibility standard where there is no basis to do so and it failed to consider facts that support compatibility.

A. Compatibility is Not Requited in the Neighborhood Nodes District

Nowhere in the 15 pages of text of the NND in the Zoning Ordinance (Section 5.06) is the word "compatible" or "compatibility" present. The obvious reason is that the NND is form-based zoning, such that the ultimate use of and building forms permitted on a property in the that district

[1] After the January 14, 2020 PC meeting, the Developer scheduled a meeting and met with residents who resided in the neighborhood to the north of the Project, including board members of the homeowner's association. As a result of that meeting, the Developer agreed to not use vinyl siding on the buildings and agreed to use only high-quality materials of brick and cement board siding.

are based upon the size of the site and street type. There is no need to require a use in a NND to be compatible with adjacent properties because the City made that determination when it adopted the NND.

B. **Compatibility in the Site Plan Review Guidelines is misapplied, and even so, the Project satisfies its Requirements**.

Section 8.06.A of the Zoning Ordinance contains the following with regard to compatibility (emphasis added):

> **SECTION 8.06 SITE PLAN REVIEW DESIGN STANDARDS**
> These design standards are intended to enhance the overall character of Troy by building upon patterns of development that create or enhance sense of place and have well-defined and vibrant design context.
>
> The following general standards and any standards established for a specific use shall be applied when considering a site plan application:
>
> A. Development shall ensure compatibility to existing commercial districts and provide a transition between land uses through application of the following requirements:

This design standard is inapplicable to the Project. As written, "compatibility" is limited to existing commercial districts. There being no existing commercial districts adjacent or near the Property, this design standard is inapplicable. To apply this design standard and its requirements is a misapplication and misinterpretation of the Zoning Ordinance.

C. **The Application of a Compatibility Standard to the Project is Arbitrary, Capricious and Unequal**.

On April 28, 2020, the PC approved a PSP for a very similar project in a NND on the south side of East Square Lake Road and west of Dequindre Road (the "**SLC Project**"; see PC Minutes for April 28, 2020 Meeting attached as **Exhibit H**). The SLC Project totaled 62 units in 13 townhome styled buildings with a building height of 34'10" (to the mid-line for a hip roof). See Site Plan attached as **Exhibit I**. This project abuts a single-family neighborhood with single-family zoning and commercial use in an NND. See CWA Review dated for SLC Project dated April 28, 2020 attached as **Exhibit J**.

As compared to the Project, the SLC Project: is 23% more dense with density at 16 units per acre; has buildings that are taller; has smaller setbacks; less open space; and more lot coverage. In every objective way, the SLC Project is more developed and intense than the Project; however, the PC never raised or considered the issue of "compatibility" in approving the SLC Project, even though it abuts single family residential. The PC's denial of the PSP for the Project is arbitrary, capricious and unequal because the PC applied a standard of compatibility to the Project that it did not apply to a similarly situated Project, especially considering that the Project is less intense than the SLC Project.

Lastly, this inconsistent application of standards violates the intent of the site plan review to provide a consistent and uniform method of review. See Zoning Ordinance Section 8.01.

D. The City Has Already Established that the Project is Compatible

The City went through exhaustive statutory procedures to adopt the Master Plan and Zoning Ordinance with regards to the NND zoning. Through the legislative process, the City determined, with input by the residents, its staff and consultants, the appropriate uses and building forms the City desired on properties to be zoned NND. In order for a Zoning Ordinance to be adopted, it must ensure compatibility with adjacent uses of land. *See Zoning Ordinance Section 16.03.C.5*. The Michigan Municipal Planning Act (MCL 125.3807(2)(a) &(b)) states that the Master Plan be is to be coordinated, adjusted, harmonious, efficient, and economical and to consider the character of the planning jurisdiction and its suitability for particular uses, judged in terms of such factors as trends in land and population development. The Michigan Zoning Enabling Act (MCL 125.3203(1)) requires that the Zoning Ordinance be based upon a plan to ensure that uses of land shall be situated in appropriate locations and relationships. The City did not do this exercise in a vacuum. The City, adopting the Master Plan, and implementing that plan by adoption of the Zoning Ordinance for the Property, established that Developer's proposed and permitted use under the Project is suitable and appropriate for the location. The City established what uses can be developed on the Property and the Developer is merely operating within the strictures established by the City.

E. The Project as a Residential Use is Compatible with Adjacent Residential Uses and the Neighborhood Node zoning to the South.

The Property is adjacent to a vacant parcel zoned NND to the south. The Project seeks to use the Property pursuant to the NND zoning, so it is compatible with that Zoning and future use under that NND zoning.

The Project is also compatible with the adjacent properties to the north and west that are zoned R1-B and are currently used for single family housing. First, the Project is residential, contained in townhome styled buildings resembling houses. Moreover, the buildings are set back 138' and 40' from the west and north Property lines, respectively. Simply, given the distance and type of use, there is no conflict in compatibility with the property to the west and north of the Property.

Not only is the Project for a residential use, the buildings in the Project will have an upgraded façade compared to the adjacent single- family homes. The Developer committed to using brick and cement board siding (aka Hardie Board) for the facades. One PC Member stated that he drove the adjacent neighborhood and noted vinyl siding on some of the homes and therefore considered this Project to be an upgrade. (See Video recording of November 10, 2020 PC meeting on YouTube at 4:00:19).

F. The PC's Improper Application of a "Compatibility" Standard Requires the ZBA to Reverse the PC's Determination and Approve the PSP.

As stated above, the ZBA can reverse an administrative decision being appealed if **ANY** one (1) or more of the following requirements are met:

a. The administrative decision was arbitrary or capricious.
b. The administrative decision was based on an erroneous finding of material fact.
c. The administrative decision constituted an abuse of discretion; or
d. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

In this case, reversal by the ZBA is fully supported based on each and all of the requirements.

1. The decision of the PC to deny the PSP was arbitrary and capricious.

The PC applied the standard of compatibility to the Project, when no such standard is applicable to this Project. Further, it applied the compatibility standard to the Project, even though it did not apply such a standard in approving the similarly situated SLC Project that is more intense than the Project. By these actions, singularly and collectively, the PC Determination was arbitrary and capricious.

2. The decision of the PC to deny the PSP was based on an erroneous finding of material fact.

First, there was no finding of any facts by the PC. The approval motion merely stated a "lack of compatibility" without any findings of fact to support that conclusion. To the contrary, the PC ignored numerous facts to support the Project being compatible to its adjacent properties, including the fact that the City through its Master Plan and Zoning Ordinance already determined the use proposed by the Project to be compatible and the fact that the Project sought to use the Property for a residential use, similar to adjacent properties to the north and west. Therefore, the PC Determination was based on an erroneous finding of material fact.

3. The Decision of the PC to Deny the PSP constituted an abuse of discretion.

As stated above, the PC applied a compatibility standard to the Project that is not found in the NND and is inapplicable to the Project under the Site Plan Ordinance. Even so, by applying a subjective standard, not itemizing facts to support the alleged incompatibility and ignoring facts supporting compatibility, the PC abused its discretion.

4. The Decision of the PC to Deny the PSP was based on erroneous interpretation of the Zoning Ordinance.

As stated above, the NND does not contain any compatibility standard and the design guideline contained in Section 8.06 of the Zoning Ordinance does not apply to the Project. The PC, by applying a compatibility standard, interpreted the Zoning Ordinance in error, for if the PC had correctly interpreted the Zoning Ordinance denial could not be based upon lack of

compatibility. The PC's application of a compatibility standard upon the Project is an erroneous interpretation of the Zoning Ordinance.

VI. THE PROJECT PROVIDES ADEQUATE TRANSITION

Without identifying how the Project lacked "transition" or articulating what would be an adequate transition for the Property, the PC ignored all the Design Features (as listed below) being provided for by the Developer that make the Project an appropriate transition between existing and future adjacent uses. The concept of transition in NND for this Property identified as an NN:B site is provided for in Section 5.06.E.3 of the Zoning Ordinance:

> While not always present between NN:A sites and residential neighborhoods, when possible or preferable based on the parcel arrangement and existing circumstances, the NN:B category allows the Node to develop in a tiered manner, with more intense developments and uses permitted within the core of the Node, and less intense projects providing a buffer for the residential area.

This Project does exactly what the NND Ordinance requests: a moderate density multi-family project of townhomes of modest heights, with significant setbacks and built with high quality materials that provide a transitional buffer to the residential area to the north from the future more intense uses that will be developed to the south of the Project in adjacent NND parcels. The future development to the south could be 4 story medical office buildings or commercial uses in one or more developments down to Wattles Road. See also the letter from Community Image Builders dated March 16, 2020 attached as **Exhibit K**.

The NND Ordinance provides a design standard for "transitional features" in Section 5.06.E.3 of the Zoning Ordinance. However, the Determination states "lack of transition" not lack of "transitional features". The PC ignored the NND Ordinance about transitional features[2] and ostensibly relied upon language from Section 8.06.A of the Site Plan Ordinance where it states with regard to transition (emphasis supplied):

---

[2] The NND Ordinance provides a design standard for "transitional features" in Section 5.06.E.3:

E. Design Standards. In addition to standards set forth in this Ordinance, all proposed development shall comply with the standards set forth herein.

***

3. Transitional Features.

a. Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.

b. Intensity. A continuum of use intensity, where moderate intensity uses are sited between high-intensity uses and low-intensity uses, shall be developed for multi-building developments. An example would be an office use between commercial and residential uses.

c. Height and Mass. Building height and mass in the form of building step-backs, recess lines or other techniques shall be graduated so that structures with higher intensity uses are comparable in scale with adjacent structures of lower intensity uses.

d. Orientation. Primary building facades shall be placed away from the residential use.

SECTION 8.06 SITE PLAN REVIEW DESIGN STANDARDS

These design standards are intended to enhance the overall character of Troy by building upon patterns of development that create or enhance sense of place and have well-defined and vibrant design context.

The following general standards and any standards established for a specific use shall be applied when considering a site plan application:

A. Development shall ensure compatibility to existing commercial districts and provide a transition between land uses through application of the following requirements:

1. Building design shall enhance the character of the surrounding area in relation to building and parking placement, landscape and streetscape features, and architectural design.
2. Street fronts shall provide a variety of architectural expression that is appropriate in its context and prevents monotony.
3. Building design shall achieve a compatible transition between areas with different height, massing, scale, and architectural style.

A. **The Building Design of The Project Does Enhance the Character of The Surrounding Area**.

The Project's building design incorporates several features to enhance the character of the surround area ("**Design Features**"):

a. Building facades are to constructed with high quality materials of brick and cement board siding;
b. Building heights of 27'9" and 33'1" are comparable to existing single family uses and zoning heights of 30'; especially considering that the Property has a lower elevation than the properties to the north;
c. All resident parking for the Project is enclosed within garages, such that the only hardscape is for the drives and guest parking;
d. The Project does not require any tree mitigation as tree preservation and replacement exceed City Ordinances.
e. There is a 138' setback to the west and a 40' setback to the Woodlands of Troy Subdivision;
f. The 13 Buildings are residential townhomes with gabled roofs with 2 different sizes spread out in a campus-like setting;
g. The Project provides for 55% Open Space, which is more three times the minimum amount of 15% required by the Zoning Ordinance; and

---

e. Architectural Features. Similarly sized and patterned architectural features such as windows, doors, arcades, pilasters, cornices, wall offsets, building materials, and other building articulations included on the lower-intensity use shall be incorporated in the transitional features.

h. Lot Coverage (Building) is less than 20%, a third less than the 30% maximum required by the Zoning Ordinance.

These Design Features are undisputed. The PC made no findings of fact to the contrary.

B. **The Street Front of The Project Is Appropriate for The Use and Is Not Monotonous**.

Along Crooks road, the Project provides for three 5-unit buildings, split by the access boulevard. This design is appropriate for the use and is not monotonous.

C. **Building Design for The Project Provides A Compatible Transition Between Areas with Different Height, Massing, Scale, And Architectural Style**.

The Project, through its residential use and Design Features, provides an appropriate transition both within the NND and between the NND and the adjacent single family uses. The NND contemplates that uses of land will intensify moving toward the core the of NND and will lessen moving away from the NND core. The Property represents the farthest parcel of this particular Neighborhood Node; therefore, it has to accommodate a use that will be more intense to the south. Similarly, it must and dos provide a buffer to the existing single family uses to the north.

A moderate multi-family townhouse development spread out over 13 buildings with comparable heights to single family homes, landscaped buffers, increased setbacks and open space represents the most optimal transition that could be envisioned for the Property.

D. **The PC's Improper Denial of the PSP Based on "Inadequate Transition" Must Be Reversed.**

As stated above, the ZBA can reverse an administrative decision being appealed if **ANY** one (1) or more of the following requirements are met:

e. The administrative decision was arbitrary or capricious.
f. The administrative decision was based on an erroneous finding of material fact.
g. The administrative decision constituted an abuse of discretion; or
h. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

In this case, reversal by the ZBA is fully supported.

1. The decision of the PC to deny the PSP was arbitrary and capricious.

The PC applied the transition standard to the Project, but did not apply such a standard in approving the similarly situated SLC Project that is more intense than the Project. By this action the PC Determination was arbitrary, capricious and unequal.

2. The decision of the PC to deny the PSP was based on an erroneous finding of material fact.

First, there was no finding of **any** facts by the PC. The approval motion merely stated there was "inadequate transition" without any findings of fact to support that conclusion. To the contrary, the PC ignored all the Design Feature which support the Project being an appropriate transition between its adjacent properties. Therefore, the PC Determination was based on an erroneous finding of material fact.

3. The decision of the PC to deny the PSP constituted an abuse of discretion.

By applying a subjective standard, not itemizing facts to support the alleged incompatibility and ignoring facts supporting an adequate transition, the PC abused its discretion.

VII. SUMMARY

There are four requirements by which the ZBA is empowered to reverse an administrative decision. Even though the Developer satisfies all four of these requirements, the Zoning Ordinance provides that only the satisfaction of **one** is needed for the ZBA to reverse the PC Determination.

The PC wrongfully denied Developer's PSP for the Project without even making any findings of fact while at the same time wholly disregarding the Design Features. The PC applied a standard to the Project that is not within the City's Zoning Ordinance and applied standards to the Project, that it did not apply to a similarly situated project that was by every metric more intense than the Project.

To state the Project lacks compatibility and has inadequate transition is a hollow conclusion. The Project is compatible and provides adequate transition, but the PC without any valid justifications applied vague standards. For the reasons stated above, this decision of the PC was arbitrary and capricious, based on an erroneous finding of material fact, constituted an abuse of discretion and was based on erroneous interpretation of the Zoning Ordinance. Therefore, Developer respectfully requests that the ZBA reverse the decision of the PC to deny the PSP for the Project and approve the PSP for the Project.

Carlisle | Wortman
ASSOCIATES, INC.
117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: September 17, 2019
January 7, 2020
November 6, 2020

Preliminary Site Plan Review
For
City of Troy, Michigan

Applicant: Tollbrook North LLC

Project Name: Crooks Road Townhomes

Plan Date: March 12, 2020

Location: Between Wattles Road and Long Lake Road, on the East side of Crooks Road

Zoning: Neighborhood Node (NN) – I

Action Requested: Preliminary Site Plan Approval

SITE DESCRIPTION

The subject site is located on the east side of Crooks Road, between Wattles Road and Long Lake Road. The approximate 5.73-acre site is improved with two single-family homes. The two houses will be removed if the proposed development is approved.

The applicant proposes to develop the site as a 74-unit townhome project, grouped into a total of thirteen (13) buildings. Access to the site is via Crooks Road.

Buildings A, H, and R front on Crooks Road, and all other buildings front on interior drives. The number of units in each building vary from 5 to 6. All units are three (3) stories in height and accompanied by a 2-car tandem garage.

A list of full changes is included on Page 4 of this report. All housing development will be on the east side of the drain, and the site's detention pond will be on the west side of the drain.

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*



Size of Subject Property:
The parcel is 5.72 net acres

Proposed Uses of Subject Parcel:
Seventy-four (74) townhome units

Current Use of Subject Property:
The subject property is currently improved with a single-family home

Current Zoning:
The property is currently zoned NN, Neighborhood Node District

Surrounding Property Details:

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Vacant/Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

NATURAL FEATURES

Topography: A topographic survey has been provided on sheet C-1.0 and shows that the site has a slightly higher elevation in the northwest portion of the property. Elevations decrease heading toward its south and southwest boundaries. Grading will occur on the west side of the drain to accommodate the stormwater facility.

Wetlands: The applicant completed a wetland delineation on December 12, 2019. The applicant has confirmed that an EGLE regulated wetland does exist on the site. The applicant is proposing grading and tree planting within wetland. Any impact upon wetland requires a permit from EGLE. Wetland mitigation details are not provided. Final wetland permit is required with final engineering review; however, applicant should confirm wetland mitigation plan.

Floodplain: The Lane Drain, and associated floodplain is located at the southwest corner of the site. The preliminary plans show that no development and grading within the floodplain. However, the applicant will be required to confirm the floodplain and obtain any necessary permits for floodplain impact as part of the final engineering review.

Woodlands: A tree inventory has been provided on sheet T-1.1. The applicant has identified a total of 69 woodland trees and 6 landmark trees on site. Of the 69 woodland trees, the applicant is removing 49 and preserving 20. Of the 6 landmark trees, the applicant is removing 5 and preserving 1.

Replacement Details		
Protected Tree	**Inches Removed**	**Replacement Required**
Landmark	108 inches	108 inches
Woodland	447 inches	224 inches
Preservation/Mitigation	**Inches Preserved**	**Credit**
Landmark	13 inches	26 inches

Woodland	225 inches	450 inches
Protected Replacement Required	332 Inches	
Preservation Credit	426 Inches	
Total	**+ 94-inch credit**	
Total Tree Mitigation	Zero. The number of inches preserved and credited exceed the mitigation required.	

The noted tree removal is the same as in previous plans where access to the stormwater facility was unclear. The applicant should confirm tree removal as a result of access to the stormwater pond.

Items to be addressed: *1). Provide wetland mitigation plan; and 2). Confirm tree removal as a result of access to stormwater plan.*

PREVIOUS PLANNING COMMISSION REVIEW

The application was last considered in January 2020. Action on the site plan was postponed. Staff and Planning Commission discussion included:

- *Compatibility and transition*
- *Neighborhood node districts as relates to Master Plan*
- *Access to stormwater facility*
- *Tree removal and loss of screening due to installation of installation of stormwater facility.*
- *Access and EVA to Crooks Road.*
- *Pedestrian connections*
- *Increased screening*
- *Architecture and materials*

There were a number of residents who spoke in opposition to the project. These comments include:

- Grading difference at relates to drainage and engineering design process.
- Stormwater management
- Wetlands and floodplain, as relates to EGLE and engineering design process
- Compatibility and transition to residential, as relates to landscape buffer, building height, line of vision, building materials
- Line of vision scale and elevations
- Neighborhood node districts as relates to Master Plan
- Traffic impact study
- Density
- Engagement with neighbors
- Intent of Master Plan
- Joint meeting with City County to discuss intent of Neighborhood Node

SITE PLAN CHANGES

Based on the discussion from the Planning Commission, staff, and the public, the applicant has made changes their site plan. There were no major changes to the plan since the last Planning Commission review; however, changes include:

- Added Emergency Vehicle Access point on Crooks as requested by Fire Department
- Internally connected units via sidewalks.
- Provided access to the stormwater detention facility via Penrose Boulevard. This access is only for stormwater facility and does not connect to the rest of the site.
- Provided pedestrian path and picnic tables around stormwater facility via Penrose Boulevard.
- Indicated tree removal and loss of existing screening on western property line as result of installation of stormwater facility and access via Penrose Boulevard.
- Applicant confirmed presence of state regulated wetland. Revised plan shows grading within wetland.
- Added additional landscape screening along western property line.
- Added community pavilion.
- Replaced vinyl fence with aluminum fence along northern property line.

SITE ACCESS AND CIRCULATION

Vehicular access to the site is via Crooks Road. The applicant has removed the Emergency Vehicle Access (EVA) connection at Carson Drive, and added an EVA on Crooks. The applicant has connected all units via an internal pedestrian sidewalk network.

The Fire and Engineering Department confirms that access and circulation is sufficient.

Items to be addressed: *None*

AREA, WIDTH, HEIGHT, SETBACKS

Table 5.03.B.3, Building Form C of Section 5.03, Standards Applicable to All Districts of the Zoning Ordinance establishes the dimensional requirements for the NN, Neighborhood Node District. The requirements and proposed dimensions are shown in the following table.

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies. Planning Commission can grant up to a 30-foot building placement.
Side (north)	N/A, building may be placed up to property line	40-feet	Complies

Side (south)	N/A, building may be placed up to property line	80 feet	Complies
Rear (west)	30-foot minimum setback	139 feet	Complies
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 37.5 feet to peak of roof (as indicated on building elevations)	Complies
Lot Coverage (Building)	30%	19.3%	Complies
Minimum Open Space	15%	55.0%	Complies
Parking Location	Cannot be located in front yard	Within garages	Complies

Items to be addressed: *None*

TRAFFIC

The city's traffic engineering consultant OHM has been asked to review the plan from a traffic impact standpoint. At the time of writing this memo, the review has not been finalized.

Items to be Addressed: *Comply with traffic findings as necessary.*

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Residential: 2 spaces per unit	74 Units = 148 spaces	148 garage spaces + 34 guest spaces = 182 spaces
Barrier Free	0	0
Bicycle Parking	0	Located within garages
Loading	0	0
Total	**148 spaces**	**148 spaces within garages and 34 guest spaces**

As noted by the City Engineer, ADA guest parking should be provided.

Items to be Addressed: *Provide ADA guest parking.*

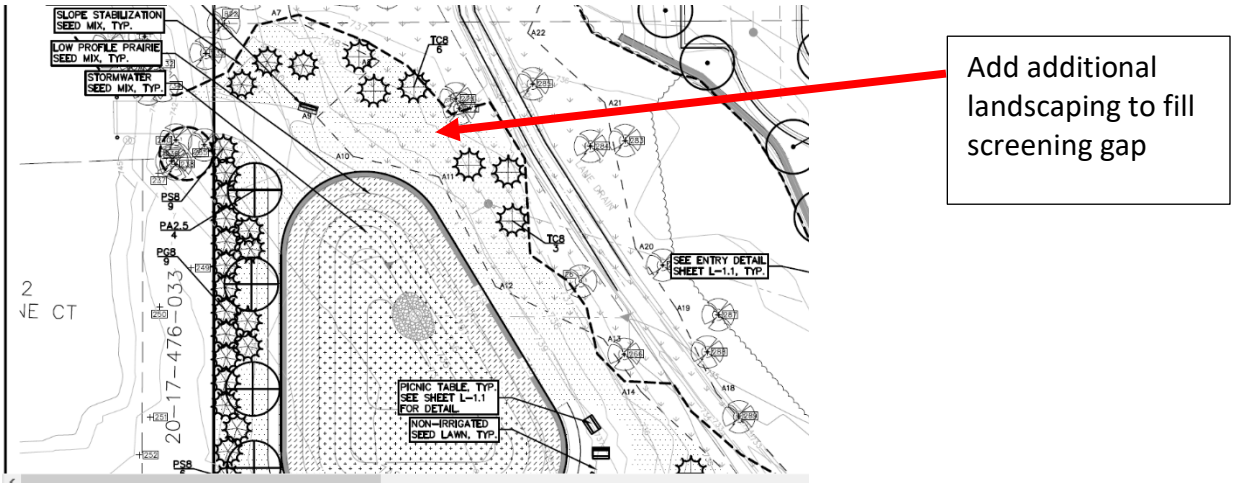
LANDSCAPING

A landscaping plan has been provided on sheet L-1.0 and are supplemented by tree protection and planting details on sheet L-1.1. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	Provided:	Compliance:
North Property Line:			
Landscape buffering: Required buffering between two differentiating land uses. Alternative 1 or 2.	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. = 590 feet / 10 = 59 large evergreen Or Alternative screening method may be considered by the Planning Commission.	59 large evergreen + 6-foot tall vinyl privacy fence	Planning Commission to consider the use of a aluminum fence in addition to required screening.
West Property Line:			
Landscape buffering:	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. = 400 feet / 10 = 40 large evergreen	44 large evergreen	Complies
East Property Line:			
(Crooks Road) Street Trees: The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.	400 feet = 14 trees	21 trees	Complies
Overall:			
Site landscaping: A minimum of fifteen percent (15%) of the site area shall be comprised of landscape material. Up to twenty-five	15%	55%	Complies

percent (25%) of the required landscape area may be brink, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.			

There will be significant tree removal and loss of existing screening on western property line as result of installation of stormwater facility and access via Penrose Boulevard. The applicant proposes instillation of landscape screening along western property line. However, there is a gap in screening where the access road turns south. The applicant should add additional landscaping to fill in this gap.



Transformer / Trash Enclosure:

The applicant has not indicated a central trash enclosure. It is assumed that each unit will have trash bins in the garage to be rolled out for trash pickup.

***Items to be Addressed**: 1). Planning Commission to consider the use of an aluminum fence in addition to required screening; and 2). Add additional landscaping to fill in gap; and 3). Confirm trash pickup.*

STORMWATER

The proposed stormwater facility is located on the west side of the drain. As noted, instillation of facility will require tree loss and existing screening along western property line. Applicant proposes to install a dense evergreen screen to replace screening that is lost. The public works department notes that the City will not be responsible for detention pond maintenance or underground storm system.

Items to be Addressed: *None*

PHOTOMETRICS

A photometric plan has been provided on sheet SL-1.0, and additional details are provided on sheet SL-1.1. A total of 140 building light fixtures are proposed of two (2) varying types. Wall light fixtures placed at each unit's entrance and rear are described as having a height of six (6) feet. A note indicates that all area light fixtures are to be directed away from neighboring properties and roadways. Controlling light source is particularly important along northern and western property line.

Items to be Addressed: *None*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided on sheets A-1 through A-7. The elevations provided show architectural details, variations in material and pattern (brick, siding, asphalt shingles and wood trim wrapped with aluminum), as well as general color scheme. The applicant provided an electronic material board.

Items to be Addressed: *None*

DESIGN STANDARDS and SITE PLAN REVIEW STANDARDS

The Neighborhood Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

<u>Section 5.06.E. outlines Design Standards:</u>

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.06.E for standard details

<u>Section 8.06 outlines Site Plan Review Design Standards.</u>

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
2. *Development shall incorporate the recognized best architectural building design practices.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*

Please see Section 8.06 for standard details

CWA Response: *Make site plan changes as noted, of particular importance is impact upon adjacent properties including proper screening/landscaping, stormwater detention access, confirmation of tree removal/screening, and and lighting.*

SUMMARY

A key tenet of the Master Plan and enforced in the zoning regulations of the form-base district is the protection of existing neighborhoods and providing the appropriate transition from higher intensity uses to lower or moderate-density residential areas. Section 5.06.E.3 of the Zoning Ordinance sets forth transitional features that shall be considered in the review of any development in the form-based district:

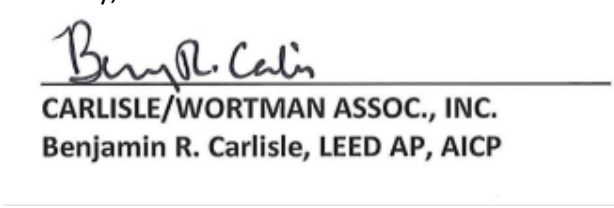
3. Transitional Features.

a. *Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.*
b. *Intensity. A continuum of use intensity, where moderate intensity uses are sited between high-intensity uses and low-intensity uses, shall be developed for multi-building developments. An example would be an office use between commercial and residential uses.*
c. *Height and Mass. Building height and mass in the form of building step-backs, recess lines or other techniques shall be graduated so that structures with higher intensity uses are comparable in scale with adjacent structures of lower intensity uses.*
d. *Orientation. Primary building facades shall be placed away from the residential use.*
e. *Architectural Features. Similarly sized and patterned architectural features such as windows, doors, arcades, pilasters, cornices, wall offsets, building materials, and other building articulations included on the lower-intensity use shall be incorporated in the transitional features.*

In combination, these transitional features assist in mitigating potential conflicts between uses.

Overall, we find the proposed use to be appropriate for the site. However, there are some site planning elements that should be considered by the Planning Commission. Though multiple-family residential is a permitted use, multiple-family residential can include a wide range of housing types, products, and scale. When considering the type of multiple-family proposed and number of units, the Planning Commission should consider if the applicant has provided the appropriate transition.

Sincerely,



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

PRELIMINARY SITE PLANS FOR

CROOKS ROAD TOWNHOMES

PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,

CITY OF TROY, OAKLAND COUNTY, MICHIGAN

OWNER:

TOLLBROOK NORTH LLC
1612 MUER DR.
TORY, MI, 48084
CONTACT: SAM STAFA
PHONE: (248) 890-8621
EMAIL: SSTAFA3@GMAIL.COM

ARCHITECT:

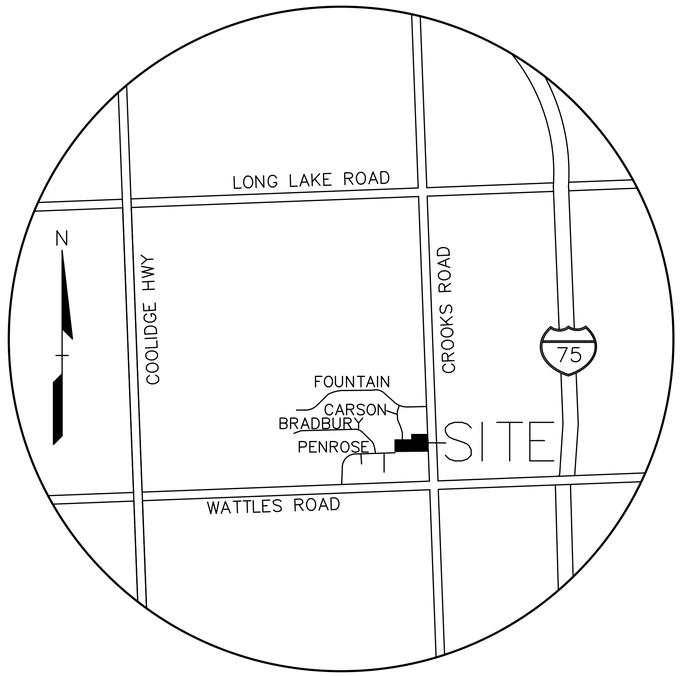
BRIAN NEEPER ARCHITECTURE P.C.
630 N. OLD WOODWARD SUITE 203
BIRMINGHAM, MI 48009
CONTACT: BRIAN NEEPER
PHONE: (248) 259-1784

CIVIL ENGINEER:

PEA, INC.
2430 ROCHESTER CT, SUITE 100
TROY, MI 48083
CONTACT: GREGORY BONO, P.E.
PHONE: (248) 689-9090 EXT. 1148
FAX: (248) 689-1044
EMAIL: GBONO@PEAINC.COM

LANDSCAPE ARCHITECT:

PEA, INC.
7927 NEMCO WAY, SUITE 115
BRIGHTON, MI 48116
CONTACT: LYNN WHIPPLE, PLA
PHONE: (517) 546-8583 EXT. 1203
FAX: (517) 546-8973
EMAIL: LWHIPPLE@PEAINC.COM



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS:

C-0.0	COVER SHEET
C-1.0	TOPOGRAPHIC SURVEY
C-2.0	PRELIMINARY SITE PLAN
C-3.0	PRELIMINARY GRADING PLAN
C-4.0	PRELIMINARY UTILITY SHEET
C-5.0	NOTES AND DETAILS
L-1.0	PRELIMINARY LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
T-1.0	TREE PRESERVATION PLAN
T-1.1	TREE PRESERVATION LIST
SL-1.0	PHOTOMETRIC PLAN
SL-1.1	PHOTOMETRIC DETAILS

ARCHITECTURAL SHEETS:

A-1	UNIT PLANS - BUILDINGS A & E-N
A-2	UNIT PLANS - BUILDINGS B, C & D
A-3	UNIT ELEVATIONS - FRONTS AND SIDE BUILDINGS A & E-N
A-4	UNIT REAR ELEVATIONS - BUILDINGS A & E-N
A-5	UNIT ELEVATIONS - FRONTS AND SIDE BUILDINGS B, C & D
A-6	UNIT REAR ELEVATIONS - BUILDINGS B, C & D
A-7	5 UNIT BUILDING PLANS - BUILDINGS A & E-N
A-8	5 UNIT BUILDING ELEVATIONS - BUILDINGS A & E-N
A-9	6 UNIT BUILDING PLANS - BUILDINGS A & E-N
A-10	6 UNIT BUILDING ELEVATIONS - BUILDINGS A & E-N
A-11	5 UNIT BUILDING PLANS - BUILDINGS B, C & D
A-12	5 UNIT BUILDING ELEVATIONS - BUILDINGS B, C & D
A-13	6 UNIT BUILDING PLANS - BUILDINGS B, C & D
A-14	6 UNIT BUILDING ELEVATIONS - BUILDINGS B, C & D
A-15	PAVILION PLANS AND ELEVATION

NOT FOR CONSTRUCTION

XREF: S:PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	KRD	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	11/13/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 44435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE required TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR SHALL AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.net

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

COVER SHEET
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - GMB\DWG\SITE PLAN\[C-0.0] COVER - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: N.T.S.

DRAWING NUMBER:
C-0.0

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

N

LOCATION MAP – NOT TO SCALE
LONG LAKE ROAD
COOLIDGE HWY
CROOKS ROAD
FOUNTAIN
CARSON
BRADBURY
PENROSE
SITE
WATTLES ROAD
75

REVISIONS

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED PER CITY PLANNING REVIEW	9/26/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

LEGEND

●	IRON FOUND	⊗	BRASS PLUG SET
⊠	IRON SET	◉	MONUMENT FOUND
◪	NAIL FOUND	⊛	MONUMENT SET
⌀	NAIL & CAP SET	⊕	SEC. CORNER FOUND
		R	RECORDED
		M	MEASURED
		C	CALCULATED

EXISTING

OH–ELEC–W–O	ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
UG–CATV	UNDERGROUND CABLE TV, CATV PEDESTAL
UG–PHONE	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
UG–ELEC	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
	GAS MAIN, VALVE & GAS LINE MARKER
	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
	SANITARY SEWER, CLEANOUT & MANHOLE
	STORM SEWER, CLEANOUT & MANHOLE
	COMBINED SEWER & MANHOLE
	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
	POST INDICATOR VALVE
	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
M T E	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
	UNIDENTIFIED STRUCTURE
816.06 ×	SPOT ELEVATION
670	CONTOUR LINE
	FENCE
	GUARD RAIL
	STREET LIGHT
	SIGN
CONC.	CONCRETE
ASPH.	ASPHALT

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATIONS AND PROTECTION OF ALL UTILITY INSTALLATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(OHIO, ONLY)

LEGAL DESCRIPTION
(Per PEA, Inc.)

OVERALL PARCEL
Land in the City of Troy, Oakland County, Michigan, described as follows:

All of Lot 3 and the north 40 feet of Lot 4, except for the East 27 feet taken for Crooks Road, "Supervisor's Plat of Troy Farmsites" as recorded in Liber 56 of Plats, Page 59, Oakland County Records, and being more particularly described as:

Commencing at the East 1/4 corner of Section 17, Town 2 North, Range 11 East; thence along the east line of said section 17, S00°01'30"E, 1620.52 feet to the extension of the north line of said Lot 3; thence along said extension, S89°42'00"W, 60.00 feet to the west line of Crooks Road (120 feet wide) and the POINT OF BEGINNING;
thence along said west line, S00°01'30"E, 439.30 feet;
thence S89°42'00"W, 291.08 feet to the west line of said Lot 4;
thence along said west line, N00°01'28"E, 40.00 feet to the south line of said Lot 3;
thence along said south line, S89°42'00"W, 304.20 feet to the west line of said Lot 3, said line also being the east line of "Woodlands of Troy No. 3", as recorded in Liber 207, Page 1, Oakland County Records;
thence along said east line, N00°01'28"E, 399.30 feet to the north line of said Lot 3, said line also being the south line of "Woodlands of Troy No. 4", as recorded in Liber 220, Page 7, Oakland Count Records;
thence along said north line, N89°42'00"E, 594.91 feet to the aforementioned west line of Crooks Road and the Point of Beginning.
Containing 5.72 acres of land, more or less.

FLOODPLAIN:
(Per Flood Insurance Rate Map Number 26125C–0533F. Revised Date September 29, 2009)

BY GRAPHICAL PLOTTING, THE SITE LIES WITHIN:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water–surface elevation of the 1% annual chance flood.

ZONE A – No Base Flood Elevations determined.

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
BENCHTIE IN NORTH SIDE OF POWERPOLE, ±290' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 739.19

BM #301
BENCHTIE IN WEST SIDE OF POWERPOLE, ±133' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 745.59

BM #302
BENCHTIE ON WEST SIDE OF POWERPOLE, ±62' EAST OF HOUSE #4165.
ELEV. – 746.60

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

TOPOGRAPHIC SURVEY
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	GMB	DN.	GMB	SUR.	KTR	P.M.	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY – DWG\DWG\SITE PLAN\C-1.0 TOPO – 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
C-1.0

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–BASE–18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–TBLK–18238A.DWG

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
BENCHTIE IN NORTH SIDE OF POWERPOLE, ±290' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 739.19

BM #301
BENCHTIE IN WEST SIDE OF POWERPOLE, ±133' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 745.59

BM #302
BENCHTIE ON WEST SIDE OF POWERPOLE, ±62' EAST OF HOUSE #4165.
ELEV. – 746.60

FLOODPLAIN:
(Per Flood Insurance Rate Map Number 26125C–0533F. Revised Date September 29, 2009)

BY GRAPHICAL PLOTTING, THE SITE LIES WITHIN:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water–surface elevation of the 1% annual chance flood.

ZONE A – No Base Flood Elevations determined.

LEGAL DESCRIPTION
(Per Warranty Deed, as recorded in Liber 48572, Page 470, Oakland County Records)

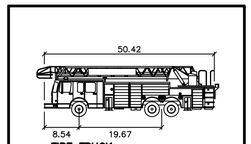
PARCEL NO 20–17–476–013 (#4115 Crooks Road)
Land in the City of Troy, Oakland County, Michigan, described as follows:

The North 1/2 of Lot 3 except the East 27 feet taken for Crooks Road, Supervisor's Plat of Troy Farmsites, according to the plat thereof as recorded in Liber 56 of Plats, Page 59, Oakland County Records.

LEGAL DESCRIPTION
(Per Warranty Deed, as recorded in Liber 48572, Page 470, Oakland County Records)

PARCEL NO 20–17–476–014 (#4095 Crooks Road)
Land in the City of Troy, Oakland County, Michigan, described as follows:

The South 1/2 of Lot 3 except the East 27 feet taken for Crooks Road, Supervisor's Plat of Troy Farmsites, according to the plat thereof as recorded in Liber 56 of Plats, Page 59, Oakland County Records.

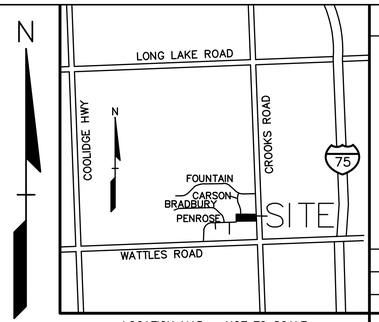


FIRE TRUCK

	feet
Width	: 8.33
Track	: 7.61
Lock to Lock Time	: 5.0
Steering Angle	: 40.0

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

N



LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING / PROPOSED

- ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UNDERGROUND CABLE TV, CATV PEDESTAL
- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONCRETE
- ASPHALT

STD DUTY / HEAVY DUTY / R.O.W. ONLY.
STD DUTY / HEAVY DUTY / DEEP STRENGTH

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED PER CITY PLANNING REVIEW	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING ALL UTILITIES AND THEIR LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON–LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1–800–482–7171 (TOLL FREE) www.missdig.net

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083–1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PRELIMINARY SITE PLAN
CROOKS RD. MULTI–FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	GMB	DN.	GMB	MULTI–FAMILY	SUR.	KTR	P.M.	GMB

S:\PROJECTS\2018\2018–238A CROOKS RD MULTI–FAMILY – OAK\DWG\SITE PLAN\C–2.0 SITE – 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018–238A

SCALE: 1" = 30'

DRAWING NUMBER:
C–2.0

SITE DATA TABLE:

SITE AREA: 5.72 ACRES (249,257 SF) (LESS THE 60' 1/2 R.O.W.)

ZONING: NN NODE I, BUILDING FORM C

EXISTING USE: SINGLE–FAMILY RESIDENTIAL
PROPOSED USE: MULTI–FAMILY RESIDENTIAL

BUILDING INFORMATION:
PROPOSED UNITS = 74 UNITS

BUILDING FOOTPRINT AREA:
5–UNIT = 3,253 SF
6–UNIT = 3,899 SF

BUILDING LOT COVERAGE = 4(3,253) + 9(3,899)
= 48,103 / 249,257 = 19.3%

OPEN SPACE = 130,774 / 237,614 = 55.0%

SETBACK REQUIREMENTS:	REQUIRED:	PROPOSED:
FRONT (EAST):	10'	15.00'
SIDE (NORTH):	0'	10.00'
SIDE (SOUTH):	0'	48.27'
REAR (WEST):	30'	139.69'

PARKING CALCULATIONS:
MULTI–FAMILY RESIDENTIAL = 2 SPACES PER UNIT
TOTAL PARKING REQUIRED = 2 * 74 UNITS = 148 SPACES
TOTAL PARKING PROVIDED = 148 GARAGE SPACES + 34 GUEST SPACES
= 182 SPACES

GENERAL NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
2. REFER TO SHEET C–5.0 FOR ON–SITE PAVING DETAILS.
3. REFER TO SHEET C–5.0 FOR ON–SITE SIDEWALK RAMP DETAILS.
4. 'NO PARKING–FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF TROY CURRENT STANDARDS AND REGULATIONS.
6. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
7. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS–OF–WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND /OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

SIDEWALK RAMP LEGEND:
SIDEWALK RAMP 'TYPE R' ®
REFER TO LATEST M.D.O.T. R–28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

NOTE:
BICYCLE PARKING WILL BE ACCOMMODATED WITHIN EACH INDIVIDUAL UNIT.

NOTE:
ALL WORK WITHIN THE CROOKS ROAD RIGHT–OF–WAY IS SUBJECT TO REVIEW OF ROC AND REQUIRES A PERMIT.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–BASE–18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–TBLK–18238A.DWG

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
BENCHTIE IN NORTH SIDE OF POWERPOLE, ±290' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 739.19

BM #301
BENCHTIE IN WEST SIDE OF POWERPOLE, ±133' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 745.59

BM #302
BENCHTIE ON WEST SIDE OF POWERPOLE, ±62' EAST OF HOUSE #4165.
ELEV. – 746.60

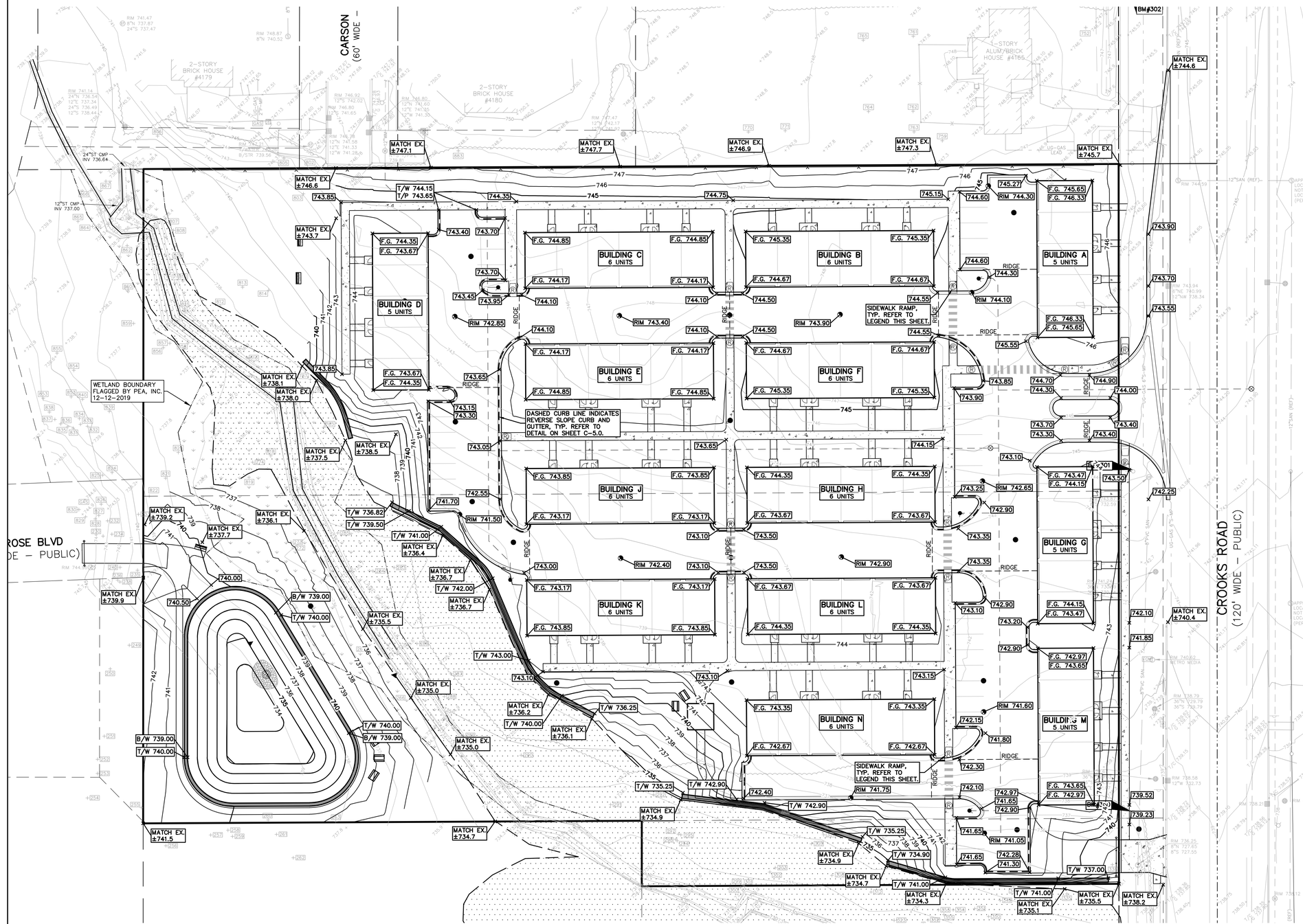
FLOODPLAIN:
(Per Flood Insurance Rate Map Number 26125C–0533F. Revised Date September 29, 2009)

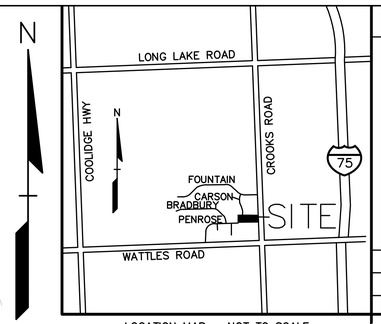
BY GRAPHICAL PLOTTING, THE SITE LIES WITHIN:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water–surface elevation of the 1% annual chance flood.

ZONE A – No Base Flood Elevations determined.

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





LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING		PROPOSED
–OH–ELEC–	ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE	
–UG–CATV–	UNDERGROUND CABLE TV, CATV PEDESTAL	
–UG–PHONE–	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE	
–UG–ELEC–	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE	
	GAS MAIN, VALVE & GAS LINE MARKER	
	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE	
	SANITARY SEWER, CLEANOUT & MANHOLE	
	STORM SEWER, CLEANOUT & MANHOLE	
	COMBINED SEWER & MANHOLE	
Y.D.	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN	Y.D.
	POST INDICATOR VALVE	
	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	
	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	
	UNIDENTIFIED STRUCTURE	
816.06	SPOT ELEVATION	871.21
670	CONTOUR LINE	671
	FENCE	
	GUARD RAIL	
	STREET LIGHT	
	SIGN	
CONC.	CONCRETE	STD DUTY / HEAVY DUTY / R.O.W. ONLY.
ASPH.	ASPHALT	STD DUTY / HEAVY DUTY / DEEP STRENGTH

SIDEWALK RAMP LEGEND:

SIDEWALK RAMP 'TYPE R' ®

REFER TO LATEST M.D.O.T. R–28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. 794.50

PROPOSED CONTOUR LINE 795

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–BASE–18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–TBLK–18238A.DWG

No.	BY	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING ALL UTILITIES AND OTHER OBSTRUCTIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON–LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.net

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083–1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PRELIMINARY GRADING PLAN
CROOKS RD. MULTI–FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

S:\PROJECTS\2018\2018–238A CROOKS RD MULTI–FAMILY – CMD\DWG\SITE PLAN\(C–3.0) GRADE – 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
C-3.0

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
BENCHTIE IN NORTH SIDE OF POWERPOLE, ±290' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 739.19

BM #301
BENCHTIE IN WEST SIDE OF POWERPOLE, ±133' SOUTHEAST FROM SOUTHEAST HOUSE CORNER #4115.
ELEV. – 745.59

BM #302
BENCHTIE ON WEST SIDE OF POWERPOLE, ±62' EAST OF HOUSE #4165.
ELEV. – 746.60

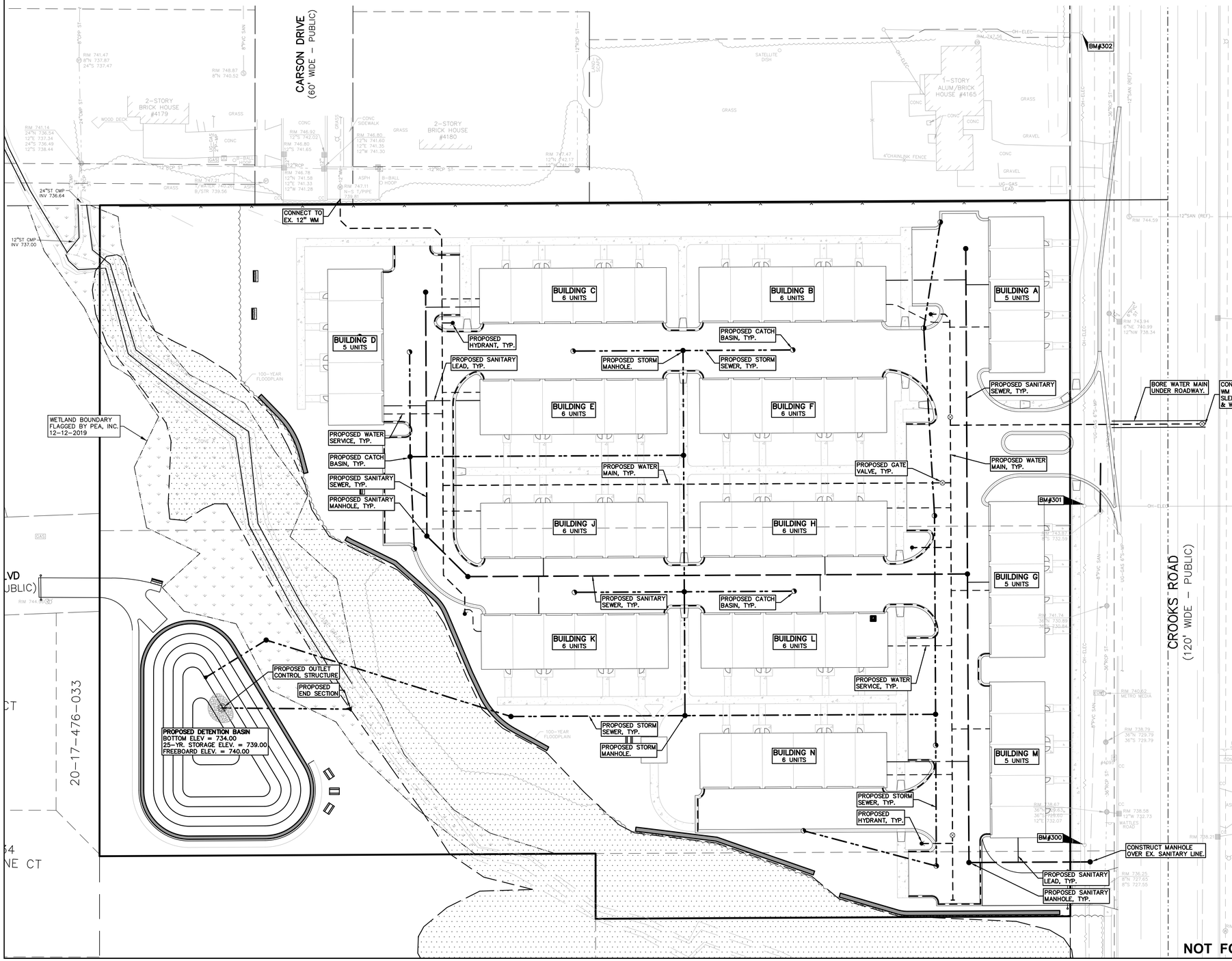
FLOODPLAIN:
(Per Flood Insurance Rate Map Number 26125C–0533F. Revised Date September 29, 2009)

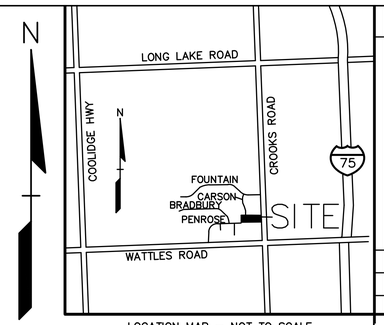
BY GRAPHICAL PLOTTING, THE SITE LIES WITHIN:

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100 year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water–surface elevation of the 1% annual chance flood.

ZONE A – No Base Flood Elevations determined.

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





LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
OH–ELEC–W–O		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
UG–CATV–TV–O		UNDERGROUND CABLE TV, CATV PEDESTAL
UG–PHONE–T–O		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
UG–ELEC–E–O		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
GAS	GAS	GAS MAIN, VALVE & GAS LINE MARKER
W	W	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
S	S	SANITARY SEWER, CLEANOUT & MANHOLE
ST	ST	STORM SEWER, CLEANOUT & MANHOLE
		COMBINED SEWER & MANHOLE
Y.D.	Y.D.	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
M T	M T	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
		UNIDENTIFIED STRUCTURE
816.06		SPOT ELEVATION
670		CONTOUR LINE
		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT

		871.21
		671
		STD DUTY / HEAVY DUTY / R.O.W. ONLY.
		STD DUTY / HEAVY DUTY / DEEP STRENGTH

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D–1557).

25 YEAR STORM DETENTION DESIGN
(PER OAKLAND COUNTY DESIGN METHOD)

Site Drainage Data		
Contributing Area (A):	3.63	acre
Allowable Discharge (Qa)	0.73	cfs (0.2*acreage)
Coefficient of Runoff (Cr):	0.720	
25-yr Design Storm Calculations		
Qo = ((Qa)/(A)(Cr):	0.28	cfs/acre impervious
T = -25 + ((8062.5/Qo))^0.5:	144.69	minutes
Vs = (12900(T)/(T+25)) - 40Qo(T):	9,379	cf/acre impervious
Vt = (Vs)(A)(Cr):	**24,513**	**cf**

POND VOLUME CALCULATION (FRUSTUM CONE METHOD)

CONTOUR	AREA	VOLUME	CUMULATIVE VOLUME
734	795	-	-
		1,622	1,622
735	2,625		
		3,368	4,989
736	4,170		
		5,014	10,003
737	5,908		
		6,867	16,870
738	7,872		
		8,945	25,815
739	10,063		

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–BASE–18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X–TBLK–18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PRELIMINARY UTILITY SHEET
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

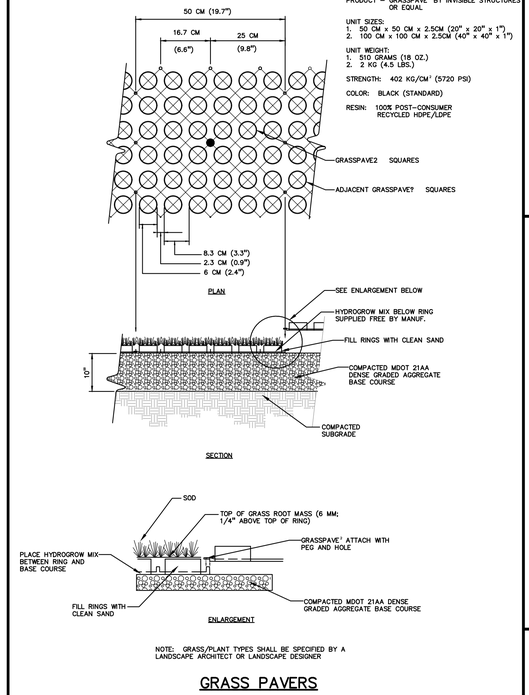
S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - DWB\DWG\SITE PLAN\(C-4.0) UTIL - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
C-4.0



PRODUCT – GRASSPAVE² BY INVISIBLE STRUCTURES OR EQUAL

UNIT SIZES:
1. 50 CM x 50 CM x 2.5CM (20" x 20" x 1")
2. 100 CM x 100 CM x 2.5CM (40" x 40" x 1")

UNIT WEIGHT:
1. 510 GRAMS (18 OZ.)
2. 2 KG (4.5 LBS.)

STRENGTH: 402 KG/CM² (5720 PSI)

COLOR: BLACK (STANDARD)

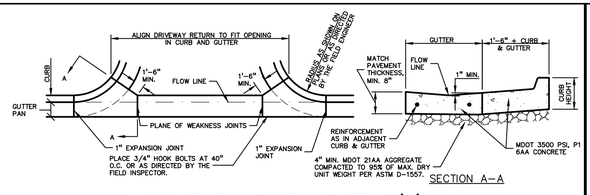
RESIN: 100% POST-CONSUMER RECYCLED HDPE/LDPE

GRASSPAVE2 SQUARES

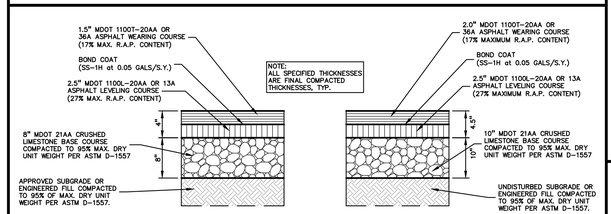
ADJACENT GRASSPAVE2 SQUARES

NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER

GRASS PAVERS



MDOT DRIVEWAY OPENING–DETAIL 'M'
NOT TO SCALE



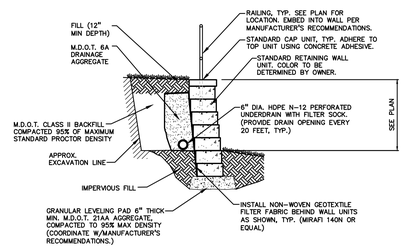
STANDARD DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY)
NOT TO SCALE

HEAVY DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY)
NOT TO SCALE

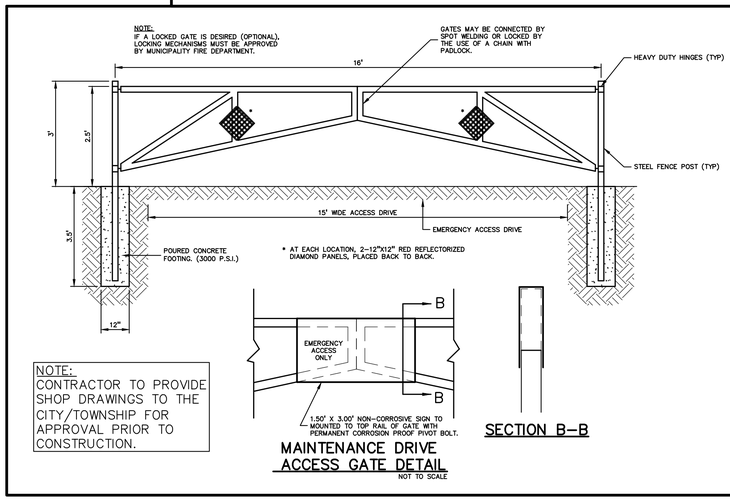
AGGREGATE BASE NOTE:
THIS PAVEMENT SECTION DESIGN ASSUMES THE USE OF MDOT 21AA CRUSHED LIMESTONE BASE MATERIAL THAT MEETS THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION SECTION 902 FOR AGGREGATES. IF CRUSHED CONCRETE AGGREGATE BASE IS PROPOSED IN LIEU OF THE SPECIFIED CRUSHED LIMESTONE MATERIAL, PEA INC. WILL REQUIRE A MINIMUM 25% INCREASE IN BASE THICKNESS. HOWEVER, IF TESTING DOCUMENTATION IS PROVIDED TO PEA, INC. THAT SHOWS THAT THE CRUSHED CONCRETE MATERIAL MEETS ALL REQUIREMENTS OF MDOT SPECIFICATION SECTION 902, THEN THE 25% INCREASE IN THICKNESS MAY BE REEVALUATED.

ASPHALT MATERIAL NOTES:
HOT-MIX ASPHALT MIXTURES UTILIZING RECYCLED ASPHALT PAVEMENT (RAP) MUST MEET MDOT SPECIAL PROVISION 12SP501(C). THE BINDER GRADE FOR THIS WORK IS PG58–22. IF ASPHALT MIXES CONTAINING RAP ARE TO BE SUPPLIED FOR THIS PROJECT, THE ASPHALT BINDER MUST BE REVISED PER MDOT TIER 1 OR TIER 2 REQUIREMENTS (RAP CONTENT UP TO 27% MAXIMUM). TIER 3 MIXES ARE NOT ACCEPTABLE ON THIS PROJECT. AN ASPHALT MIX DESIGN FOR ALL SPECIFIED MIXES SHOULD BE FORWARDED TO PEA INC. FOR REVIEW PRIOR TO CONSTRUCTION

NOTE:
RETAINING WALL DESIGN CALCULATIONS AND SHOP DRAWINGS TO BE PROVIDED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.



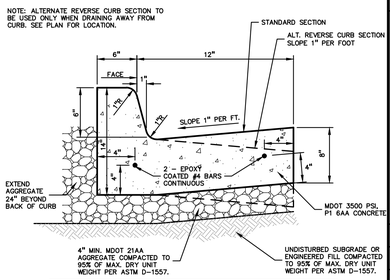
SECTION THROUGH RETAINING WALL
NOT TO SCALE



MAINTENANCE DRIVE ACCESS GATE DETAIL
NOT TO SCALE

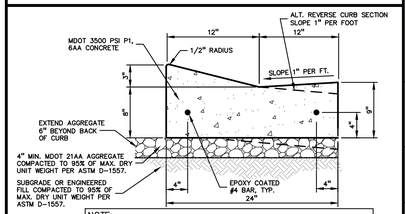
SECTION B–B

NOTE: ALTERNATE REVERSE CURB SECTION TO BE USED ONLY WHEN DRAINING AWAY FROM CURB. SEE PLAN FOR LOCATION.



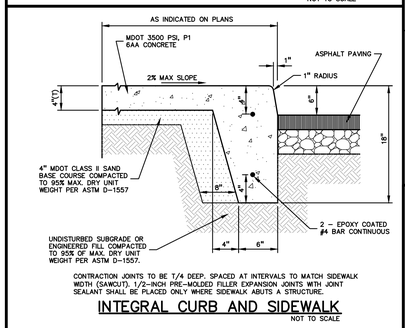
NOTE:
PROVIDE CONTROL JOINTS IN CURB AT 10' O.C. AND AT ALL RADIUS RETURNS. PROVIDE EXPANSION JOINTS AND JOINT SEALANT WHERE CURBS ABUT STRUCTURES.

18" STANDARD CONCRETE CURB AND GUTTER
NOT TO SCALE



NOTE:
PROVIDE CONTROL JOINTS IN CURB AT 10' O.C. AND AT ALL RADIUS RETURNS. PROVIDE EXPANSION JOINTS AND JOINT SEALANT WHERE CURBS ABUT STRUCTURES.

RCOC STANDARD MOUNTABLE CURB AND GUTTER DETAIL
NOT TO SCALE

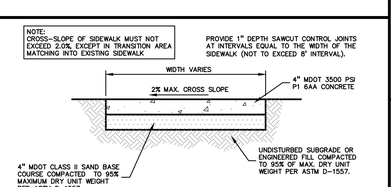


CONTRACTION JOINTS TO BE T/4 DEEP, SPACED AT INTERVALS TO MATCH SIDEWALK WIDTH (SAWCUT). 1/2–INCH PRE–MOLDED FILLER EXPANSION JOINTS WITH JOINT SEALANT SHALL BE PLACED ONLY WHERE SIDEWALK ABUTS A STRUCTURE.

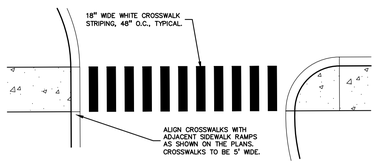
INTEGRAL CURB AND SIDEWALK
NOT TO SCALE

NOTE:
CROSS–SLOPE OF SIDEWALK MUST NOT EXCEED 2.0%, EXCEPT IN TRANSITION AREA MATCHING INTO EXISTING SIDEWALK

PROVIDE 1" DEPTH SAWCUT CONTROL JOINTS AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK (NOT TO EXCEED 5' INTERVAL).



CONCRETE SIDEWALK
NOT TO SCALE



STRIPED CROSSWALK DETAIL
NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED PER CITY PLANNING REVIEW	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES, STRUCTURES AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

NOTES AND DETAILS
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	GMB	SUR.	KTR	P.M.	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - DWB\DWG\SITE PLAN\C-5.0_DETAILS - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: N.T.S.

DRAWING NUMBER:
C-5.0

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

DECIDUOUS TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
11	AF2.5	Armstrong Maple	*Acer x freemanii 'Armstrong'*	2.5" Cal.	B&B
16	CB2.5	Columnar European Hornbeam	*Carpinus betulus 'Fastigiata'*	2.5" Cal.	B&B
8	CC2.5	American Hornbeam	*Carpinus caroliniana*	2.5" Cal.	B&B
10	GT2.5	Skyline Honeylocust	*Gleditsia triacanthos 'Skyline'*	2.5" Cal.	B&B
4	PA2.5	Encore London Planetree	*Platanus x acerifolia 'Encore'*	2.5" Cal.	B&B
11	SR2.5	Japanese Tree Lilac	*Syringa reticulata*	2.5" Cal.	B&B
12	TA2.5	Boulevard Linden	*Tilia americana 'Boulevard'*	2.5" Cal.	B&B
72	TOTAL DECIDUOUS				

EVERGREEN TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
20	AC8	Concolor Fir	*Abies concolor*	8' Ht.	B&B
26	PG8	Black Hills Spruce	*Picea glauca 'Densata'*	8' Ht.	B&B
22	PM8	Douglas Fir	*Pseudotsuga menziesii*	8' Ht.	B&B
16	PO8	Serbian Spruce	*Picea omorika*	8' Ht.	B&B
18	PS8	Eastern White pine	*Pinus strobus*	8' Ht.	B&B
17	TC8	Canadian Hemlock	*Tsuga canadensis*	8' Ht.	B&B
119	TOTAL EVERGREEN				

LANDSCAPE CALCULATIONS:
PER CITY OF TROY ZONING ORDINANCE; R1-B, NN: I NODE, BUILDING FORM C:

GREENBELT
REQUIRED: 1 TREE / 30 LF OF FRONTAGE

CROOKS ROAD: 400 LF FRONTAGE/ 30 = 13 TREES

PROVIDED: 13 TREES

INTERNAL PUBLIC OR PRIVATE ROAD STREET TREES:
REQUIRED: 1 TREE / 50 LF (BOTH SIDES RD.)
2,750 LF / 50 LF = 55 TREES

PROVIDED: 55 DECIDUOUS TREES

RESIDENTIAL BUFFER
NORTH PROPERTY LINE
REQUIRED: 1 EVERGREEN / 10 FT OR 1 NARROW EVERGREEN/3 FT OR SOLID OPAQUE FENCE
594 LF / 10 = 59 EVERGREEN TREES

PROVIDED: SOLID OPAQUE FENCE AND 59 EVERGREEN TREES ALONG NORTH SIDE OF PROPERTY

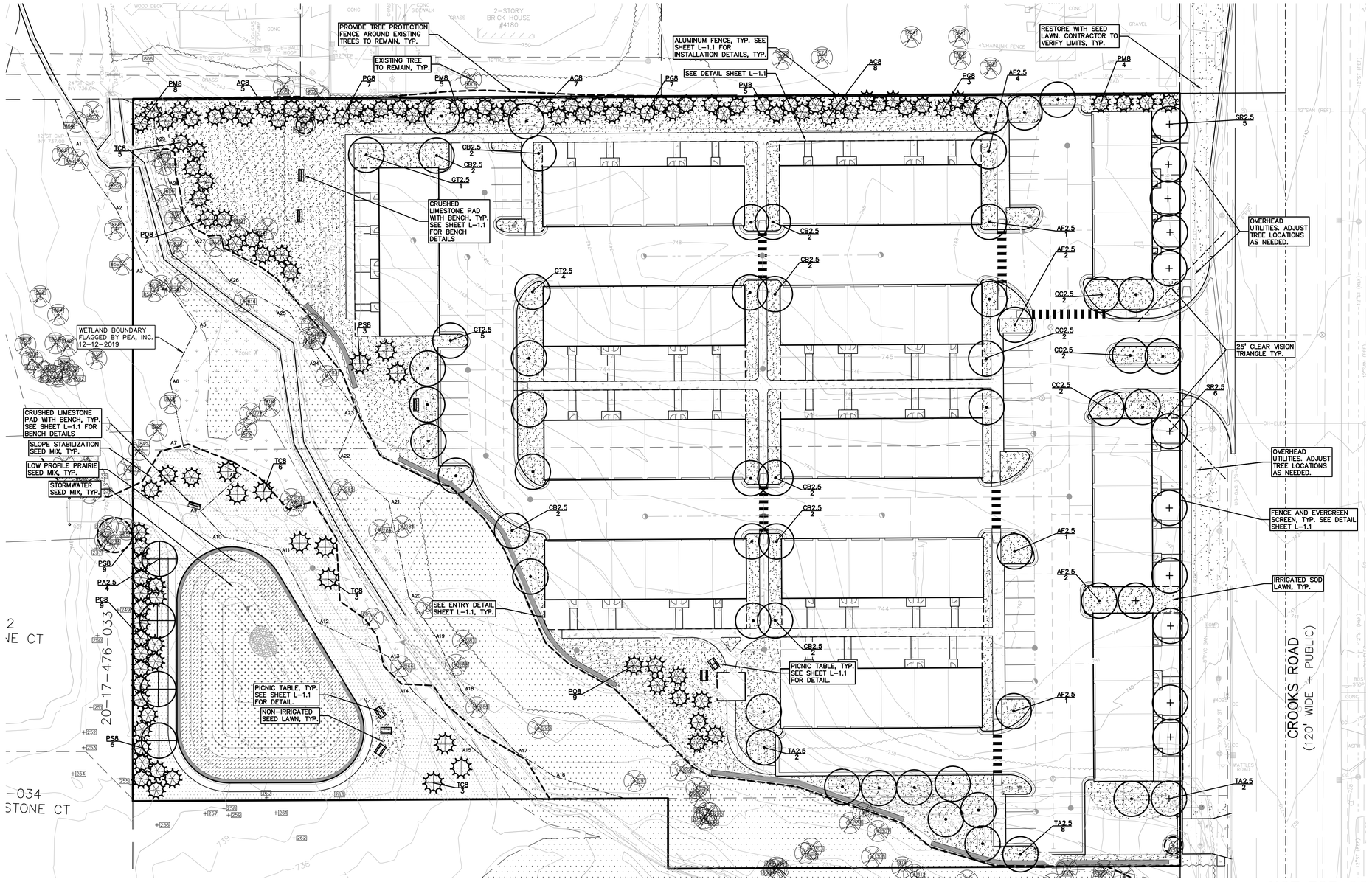
WEST PROPERTY LINE
REQUIRED: 399 LF / 10 FT = 40 TREES

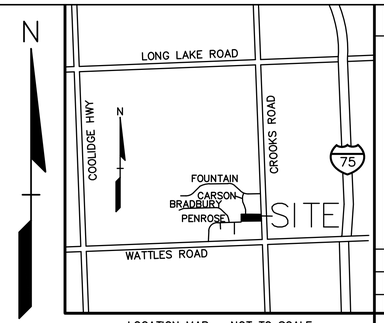
PROVIDED: 40 EVERGREEN TREES + 15 ADDITIONAL TREES NOT REQUIRED BY ORDINANCE

WOODLAND TREES				
WOODLAND TREES REMOVED:	**45**	(REPLACE AT 50% OF REMOVED DBH)		
447" DBH x 0.5 =		**224"** REPLACEMENT		
WOODLAND TREES SAVED:	24	(CREDIT OF 2X DBH)		
225 DBH x 2 =		**450"** CREDIT		
223.5 -	450	=	-226.5	
0 " DBH REQUIRED FOR WOODLAND REPLACEMENT				

LANDMARK TREES				
LANDMARK TREES REMOVED:	**5**	(REPLACE AT 100% OF REMOVED DBH)		
108" DBH x 1 =		**108"** REPLACEMENT		
LANDMARK TREES SAVED:	1	(CREDIT OF 2X DBH)		
13" DBH x 2 =		**26"** CREDIT		
108 -	26	=	82	
0 " TOTAL DBH REQUIRED FOR REPLACEMENT				

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





LOCATION MAP – NOT TO SCALE

KEY:

- = GREENBELT TREES
- = INTERNAL PUBLIC ROAD STREET TREES
- = RESIDENTIAL BUFFER TREES
- = TREES NOT REQUIRED BY ORDINANCE
- = RESTORED SEED LAWN
- = IRRIGATED SOD LAWN
- = STORM WATER SEED MIX WITH STAKED EROSION MAT. BY: CARDINO NATIVE PLANT NURSERY PHONE: 574 . 586 . 2412
- = LOW PROFILE PRAIRIE MIX WITH STAKED EROSION MAT BY: CARDINO NATIVE PLANT NURSERY PHONE: 574 . 586 . 2412
- = SLOPE STABILIZATION MIX WITH STAKED EROSION MAT BY: CARDINO NATIVE PLANT NURSERY PHONE: 574 . 586 . 2412
- = EXISTING TREES TO REMAIN WITH TREE PROTECTION FENCE

*NOTE: TREES SHALL BE PLACED AT A MINIMUM OF 5' AWAY FROM UTILITY LEADS.

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH, WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
3	KRD	GMB	REVISED PER CITY PLANNING REVIEW	11/13/20
4	KRD	GMB	REVISED SITE PLAN APPROVAL	12/4/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20

REVISIONS

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 1301
REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PRELIMINARY LANDSCAPE PLAN
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	LW.	SUR.	KTR	P.M.	GMB

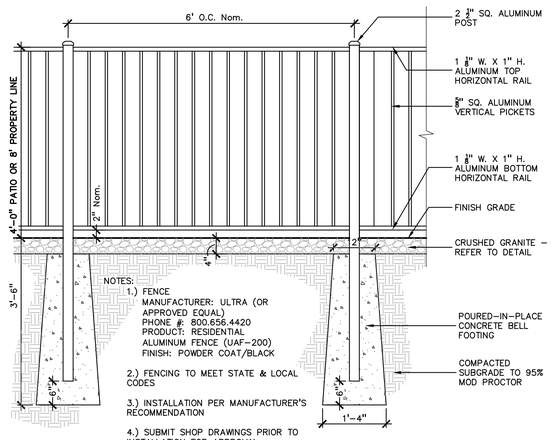
S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - DWB\DWG\LANDSCAPE\SITE PLANS\L-1.0 LANDSCAPE PLAN 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

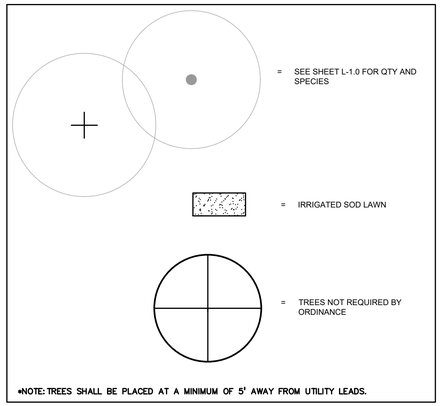
DRAWING NUMBER:
L-1.0

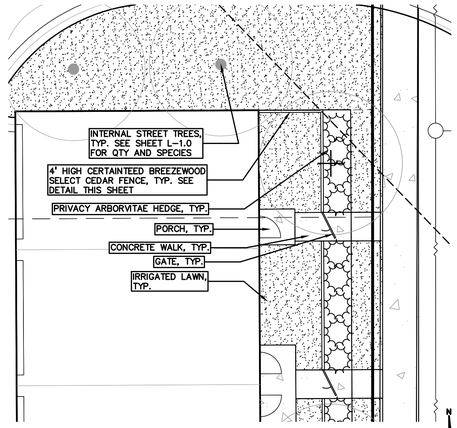


8 ALUMINUM FENCING DETAIL

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

KEY:





6 TYPICAL CROOKS ROAD PATIO DETAIL

SCALE: 1" = 10'-0"

TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN; INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

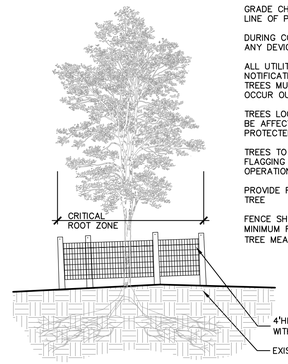
ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

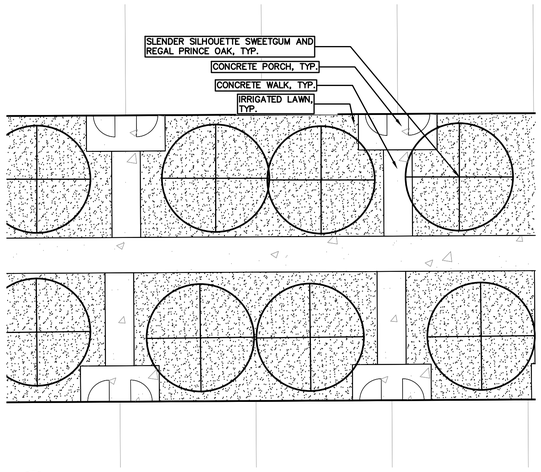
PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND



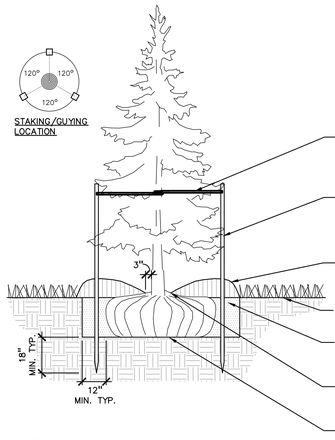
3 TREE PROTECTION DETAIL

SCALE: 1" = 3'-0"



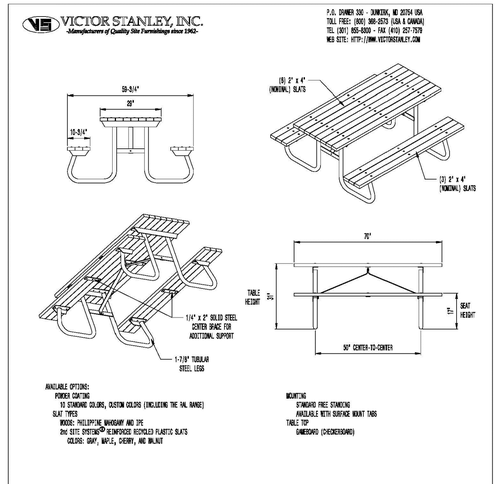
5 TYPICAL PATIO DETAIL

SCALE: 1" = 10'-0"



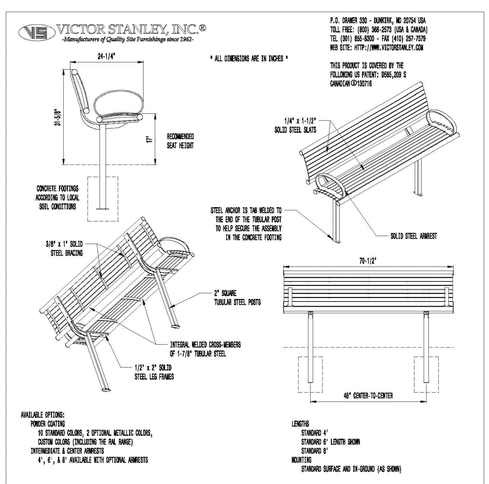
2 EVERGREEN TREE PLANTING DETAIL

SCALE: 1" = 3'-0"



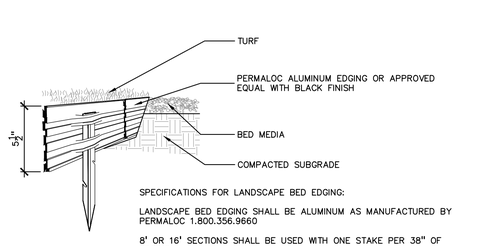
10 PICNIC TABLE

NOT TO SCALE



9 BENCH

NOT TO SCALE



SPECIFICATIONS FOR LANDSCAPE BED EDGING:

LANDSCAPE BED EDGING SHALL BE ALUMINUM AS MANUFACTURED BY PERMALOC 1.800.356.9660

8' OR 16' SECTIONS SHALL BE USED WITH ONE STAKE PER 38" OF EDGING

EDGING SHALL BE 3/16" THICK X 4" DEPTH WHEN ADJ. TO MULCH AND 3/16" THICK X 5 1/2" DEPTH WHEN ADJ. TO ROCK, FINISH: BLACK DURAFLEX MEETING AAMA 2603

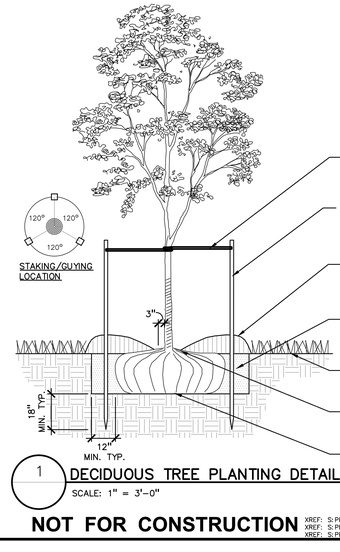
STAKE SHALL SECURELY ENGAGE EDGING AND SHALL BE ENTIRELY BELOW TOP SURFACE OF EDGING

EDGING SHALL HAVE A MINIMUM OF 2" OF INTERLOCKING OVERLAP BETWEEN SECTIONS

INSTALL AS PER MANUFACTURER'S SPECIFICATIONS WITH TOP OF EDGING 1/2"-3/4" ABOVE COMPACTED FINISH GRADE. FINISH GRADE TO BE COMPACTED ON BOTH SIDES OF EDGING TO MAINTAIN STABILITY

4 ALUMINUM EDGE DETAIL

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



1 DECIDUOUS TREE PLANTING DETAIL

SCALE: 1" = 3'-0"

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\SRZ68-TOPOGRAPHY.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\GRXT\PLNTSCHD.XLS
XREF: S:\PROJECTS\2018\2018238A\DWG\GRXT\PLNTSCHD.XLS

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	CAB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED PER CITY PLANNING REVIEW	10/4/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 47901
REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
(TOLL FREE)

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

LANDSCAPE DETAILS
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	LAW	SUR.	KTR	P.M.	GMB
JLE						

\\pealnc1\pea1\PROJECTS\2018\2018-238A - CROOKS RD MULTI-FAMILY - DWG\DWG\LANDSCAPE\SITE PLANS\L-1.1 LANDSCAPE DETAILS-18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: N/A

DRAWING NUMBER:
L-1.1

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

LOT 85 | LOT 86 | LOT 87 | LOT 88

"WOODLANDS OF TROY NO. 4" (L.220, P.7-9)

CARSON DRIVE (60' WIDE – PUBLIC)

2-STORY BRICK HOUSE #4179

2-STORY BRICK HOUSE #4180

1-STORY ALUM./BRICK HOUSE #4166

EXISTING TREE TO REMAIN TYP.

EXISTING TREE TO BE REMOVED TYP.

PROVIDE TREE PROTECTION FENCE AROUND EXISTING TREES TO REMAIN, TYP.

PART OF LOT 2

PART OF LOT 3

OUTLOT A | OUTLOT B | OUTLOT C | OUTLOT D

"SUPERVISOR'S PLAT OF TROY FARMSITES" (L.56, P.59)

NORTH 1/2 LOT 3

WETLAND BOUNDARY FLAGGED BY PEA, INC. 12-12-2019

100-YEAR FLOODPLAIN

N89°42'00"E 300.19'
N89°42'00"E 594.91'(C)
S89°42'00"W 294.72'(C)
S89°43'52"W 294.21'(D)
S89°42'00"W 60.00'(C)
S89°43'52"W 27.00'(D)
SE COR LOT 2

N00°01'28"E 199.67'
N00°01'28"E 399.34'(C)
S00°01'30"E 199.67'
S00°01'30"E 439.34'(C)

S89°42'00"W 595.08'
S89°42'00"W 304.20'(C)
S89°42'00"W 622.07'
N00°01'28"E 40.00'(C)
S89°42'00"W 290.87' (R)
S89°42'00"W 291.08'(C)
S00°01'30"E 40.00'(C)

LOT 81 | LOT 80 | LOT 79

E BLVD – PUBLIC)

LONG LAKE ROAD
COOLIDGE HWY
CROOKS ROAD
FOUNTAIN
CARSON
BRADBURY
PENROSE
SITE
WATTLES ROAD
75
N

LOCATION MAP – NOT TO SCALE

KEY:

- [T586] = EXISTING TREE TO BE REMOVED
- [T586] = EXISTING TREE TO REMAIN
- = TREE PROTECTION FENCING

SEE SHEET T-1.1 FOR EXISTING TREE LIST AND REPLACEMENT CALCULATIONS

TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN; INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

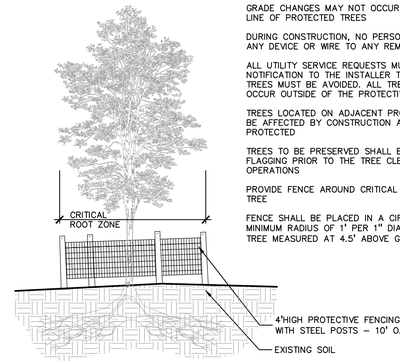
ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND



1 TREE PROTECTION DETAIL
SCALE: 1" = 3'-0"

No.	BY	CHK	DESCRIPTION	DATE
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/20
3	GMB	GMB	REVISED PER FINAL SITE PLAN APPROVAL	11/15/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

LYNN A. WHIPPLE LANDSCAPE ARCHITECT No. 1301 REGISTERED LANDSCAPE ARCHITECT STATE OF MICHIGAN

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY AND NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR LISTED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.net
TOLL FREE

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY – GMB\DWG\LANDCAPE\SITE PLANS\(1-10) TREE PRESERVATION PLAN – 18238A.dwg

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

TREE PRESERVATION PLAN
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R.11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	JE	SUR.	KTR	P.M.	GMB

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

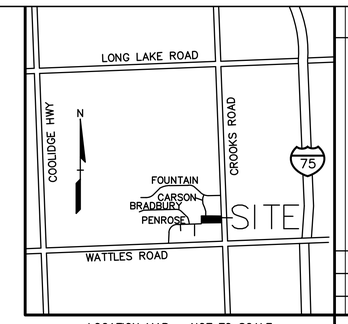
DRAWING NUMBER:
T-1.0

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT	CLASS	SAVE / REMOVE	ON-SITE	REPLACE
230	WW	8	Weeping Willow	Salix babylonica	Very Poor		INVASIVE	-	N	-
231	CT	23	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
232	CT	13	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
233	BW	8	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
234	WW	8	Weeping Willow	Salix babylonica	Fair		INVASIVE	-	N	-
235	CT	10	Cottonwood	Populus deltoides	Fair	x1	INVASIVE	-	N	-
236	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
237	EE	8	Siberian Elm	Ulmus pumila	Fair		INVASIVE	-	N	-
238	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
239	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
240	CT	9	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
241	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
242	CT	6	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
243	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
244	CT	17	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
245	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
246	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
247	BW	12	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
248	EE	7	Siberian Elm	Ulmus pumila	Poor		INVASIVE	R	Y	-
249	BW	8	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
250	WW	14	Weeping Willow	Salix babylonica	Good		INVASIVE	-	N	-
251	WW	14	Weeping Willow	Salix babylonica	Good		INVASIVE	-	N	-
252	BW	10	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
253	E	8	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
254	MW	15	White Mulberry	Morus alba	Fair		INVASIVE	-	N	-
255	AP	6	Domestic Apple	Malus sylvestris	Poor		WOODLAND	S	Y	-
256	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	-	N	-
257	BW	13	Black Walnut	Juglans nigra	Good		WOODLAND	-	N	-
258	WS	8	White Spruce	Picea glauca	Very Poor		WOODLAND	-	N	-
259	WS	11	White Spruce	Picea glauca	Poor		WOODLAND	-	N	-
260	E	9	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
261	WS	13	White Spruce	Picea glauca	Fair		WOODLAND	-	N	-
262	CT	20	Cottonwood	Populus deltoides	Fair	x1	INVASIVE	-	N	-
263	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	S	Y	-
264	TH	8	Thornapple/Hawthorne	Crataegus spp.	Poor	x1	WOODLAND	R	Y	-
265	E	6	American Elm	Ulmus americana	Poor		INVASIVE	R	Y	-
266	BW	13	Black Walnut	Juglans nigra	Fair		WOODLAND	S	Y	-
267	BW	10	Black Walnut	Juglans nigra	Fair		WOODLAND	S	Y	-
268	BW	8	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
269	BW	11	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
270	CH	11	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
271	BW	8	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
272	E	12	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
273	E	10	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
274	CT	30	Cottonwood	Populus deltoides	Fair		INVASIVE	S	Y	-
275	NS	13	Norway Spruce	Picea Abies	Good		WOODLAND	R	Y	REPLACE
276	NS	16	Norway Spruce	Picea Abies	Fair		WOODLAND	R	Y	REPLACE
277	SC	16	Scotch Pine	Pinus sylvestris	Fair		WOODLAND	R	Y	REPLACE
278	SC	16	Scotch Pine	Pinus sylvestris	Fair	x1	WOODLAND	R	Y	REPLACE
279	SC	16	Scotch Pine	Pinus sylvestris	Fair		WOODLAND	R	Y	REPLACE
280	TH	8	Thornapple/Hawthorne	Crataegus spp.	Poor		WOODLAND	R	Y	-
281	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
282	WP	14	(Eastern) White Pine	Pinus strobus	Good		WOODLAND	R	Y	REPLACE
283	E	24	American Elm	Ulmus americana	Fair		INVASIVE	S	Y	-
284	TH	7	Thornapple/Hawthorne	Crataegus spp.	Poor	x2	WOODLAND	S	Y	-
285	BW	20	Black Walnut	Juglans nigra	Very Poor		LANDMARK	S	Y	-
286	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	S	Y	-
287	CH	7	Domestic Cherry	Prunus avium	Poor	x1	WOODLAND	S	Y	-
288	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	S	Y	-
289	GA	13	Green Ash	Fraxinus pennsylvanica	Very Poor		INVASIVE	S	Y	-
290	E	15	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
291	E	12	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
292	BW	12	Black Walnut	Juglans nigra	Fair		WOODLAND	S	Y	-
293	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	S	Y	-
294	CT	23	Cottonwood	Populus deltoides	Fair		INVASIVE	S	Y	-
295	BWW	25	Black Willow	Salix nigra	Poor		INVASIVE	S	Y	-
296	CT	18	Cottonwood	Populus deltoides	Fair		INVASIVE	S	Y	-
297	BX	7	Box elder	Acer negundo	Poor		INVASIVE	S	Y	-
298	E	10	American Elm	Ulmus americana	Poor	no tag	INVASIVE	S	Y	-
299	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	S	Y	-
300	BX	6	Box elder	Acer negundo	Poor		INVASIVE	-	N	-
301	BX	6	Box elder	Acer negundo	Poor		INVASIVE	-	N	-
302	BX	6	Box elder	Acer negundo	Poor		INVASIVE	S	Y	-
303	BX	6	Box elder	Acer negundo	Poor		INVASIVE	S	Y	-
304	E	9	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
305	BW	6	Black Walnut	Juglans nigra	Fair		WOODLAND	S	Y	-
306	E	19	American Elm	Ulmus americana	Fair		INVASIVE	R	Y	-
307	E	9	American Elm	Ulmus americana	Poor		INVASIVE	S	Y	-
308	SM	16	Silver Maple	Acer saccharinum	Fair	move 5 feet south / no tag	INVASIVE	S	Y	-
309	BX	10	Box elder	Acer negundo	Very Poor		INVASIVE	R	Y	-
310	CH	16	Domestic Cherry	Prunus avium	Poor		LANDMARK	R	Y	-
311	E	8	American Elm	Ulmus americana	Fair	move south 7 ft /no tag	INVASIVE	S	Y	-
312	CH	12	Domestic Cherry	Prunus avium	Poor	move south 8 ft/ no tag	LANDMARK	-	N	-
313	CH	8	Domestic Cherry	Prunus avium	Poor		WOODLAND	R	Y	-
314	CT	25	Cottonwood	Populus deltoides	Fair		INVASIVE	R	Y	-
315	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
316	BX	8	Box elder	Acer negundo	Poor		INVASIVE	R	Y	-
317	CH	7	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
318	CH	8	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
319	CH	7	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
320	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
321	BX	8	Box elder	Acer negundo	Fair		INVASIVE	R	Y	-
322	MW	7	White Mulberry	Morus alba	Fair		INVASIVE	-	N	-
323	BX	6	Box elder	Acer negundo	Poor		INVASIVE	-	N	-
324	E	7	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
325	E	8	American Elm	Ulmus americana	Poor		INVASIVE	-	N	-
326	BW	10	Black Walnut	Juglans nigra	Poor		WOODLAND	-	N	-
327	E	13	American Elm	Ulmus americana	Poor		INVASIVE	-	N	-
328	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
329	E	10	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
330	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
331	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
332	BW	6	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
333	BW	10	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
334	BW	7	Black Walnut	Juglans nigra	Fair		WOODLAND	-	N	-
335	E	9	American Elm	Ulmus americana	Poor	x3	INVASIVE	-	N	-
336	BW	7	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
337	BW	9	Black Walnut	Juglans nigra	Fair		WOODLAND	R	Y	REPLACE
338	BW	7	Black Walnut	Juglans nigra	Poor		WOODLAND	S	Y	-
339	MW	7	White Mulberry	Morus alba	Fair		INVASIVE	R	Y	-
340	CH	7	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
341	GA	6	Green Ash	Fraxinus pennsylvanica	Very Poor		INVASIVE	-	N	-
342	E	6	American Elm	Ulmus americana	Very Poor		INVASIVE	-	N	-
343	E	7	American Elm	Ulmus americana	Fair	x3	INVASIVE	R	Y	-
344	E	7	American Elm	Ulmus americana	Fair	x1	INVASIVE	-	N	-
345	E	6	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
346	GA	8	Green Ash	Fraxinus pennsylvanica	Fair		INVASIVE	R	Y	-
347	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
348	E	6	American Elm	Ulmus americana	Fair		INVASIVE	R	Y	-
349	E	9	American Elm	Ulmus americana	Fair	x1	INVASIVE	-	N	-
350	E	6	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
351	E	7	American Elm	Ulmus americana	Fair	x5	INVASIVE	-	N	-
352	E	8	American Elm	Ulmus americana	Fair		INVASIVE	-	N	-
353	CH	9	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
354	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
355	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	-	N	-
356	E	10	American Elm	Ulmus americana	Poor		INVASIVE	-	N	-
357	BX	7	Box elder	Acer negundo	Fair		INVASIVE	R	Y	-
358	CH	8	Domestic Cherry	Prunus avium	Poor		WOODLAND	R	Y	-
359	CH	11	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
360	CH	8	Domestic Cherry	Prunus avium	Fair	x1	WOODLAND	R	Y	REPLACE
361	CH	6	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
362	SC	14	Scotch Pine	Pinus sylvestris	Fair		WOODLAND	R	Y	REPLACE
363	CH	10	Domestic Cherry	Prunus avium	Fair		WOODLAND	R	Y	REPLACE
364	BS	19	Blue Spruce	Picea pungens	Fair		LANDMARK	R	Y	REPLACE
744	NS	19	Norway Spruce	Picea Abies	POOR		LANDMARK	R	Y	-
745	NS	24	Norway Spruce	Picea Abies	FAIR		LANDMARK	R	Y	REPLACE
746	BS	8	Blue Spruce	Picea pungens	FAIR		WOODLAND	-	N	-
747	NS	8	Norway Spruce	Picea Abies	GOOD		WOODLAND	-	N	-
748	NS	8	Norway Spruce	Picea Abies	GOOD		WOODLAND	-	N	-
749	NS	6	Norway Spruce	Picea Abies	GOOD		WOODLAND	-	N	-
750	BS	6	Blue Spruce	Picea pungens	GOOD	X2	WOODLAND	-	N	-

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT	CLASS	SAVE / REMOVE	ON-SITE	REPLACE
751	WP	7	(Eastern) White Pine	Pinus strobus	FAIR		WOODLAND	-	N	-
752	NM	17	Norway Maple	Acer platanoides	GOOD	X2	INVASIVE	-	N	-
753	PR	11	Pear	Pyrus communis	POOR		WOODLAND	R	Y	-
754	MR	24	Red Mulberry	Morus rubra	POOR		INVASIVE	R	Y	-
755	MR	7	Red Mulberry	Morus rubra	GOOD		INVASIVE	R	Y	-
756	B	7	Basswood	Tilia americana	GOOD		WOODLAND	R	Y	REPLACE
757	B	6	Basswood	Tilia americana	GOOD	X4	WOODLAND	R	Y	REPLACE
758	BS	15	Blue Spruce	Picea pungens	POOR		WOODLAND	R	Y	-
759	RC	12	Red Cedar	Juniperus virginiana	POOR	X3	INVASIVE	-	N	-
760	SM	13	Silver Maple	Acer saccharinum	GOOD	X5	INVASIVE	-	N	-
761	GA	11	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	-	N	-
762	SM	29	Silver Maple	Acer saccharinum	POOR		INVASIVE	-	N	-
763	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	-	N	-
764	SM	27	Silver Maple	Acer saccharinum	POOR		INVASIVE	-	N	-
765	SM	18	Silver Maple	Acer saccharinum	GOOD	X2	INVASIVE	-	N	-
766	WP	8	(Eastern) White Pine	Pinus strobus	GOOD		WOODLAND	-	N	-
767	BP	10	Bradford Pear	Pyrus calleryanna	GOOD		WOODLAND	-	N	-
768	WP	8	(Eastern) White Pine	Pinus strobus	GOOD		WOODLAND	-	N	-
769	WP	8	(Eastern) White Pine	Pinus strobus	GOOD		WOODLAND	-	N	-
770	E	16	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
771	CT	20	Cottonwood	Populus deltoides	GOOD		INVASIVE	-	N	-
772	BW	25	Black Walnut	Juglans nigra	POOR	X2	LANDMARK	R	Y	-
773	SG	15	Sweetgum	Liquidambar styraciflua	GOOD		LANDMARK	R	Y	REPLACE
774	MG	29	Magnolia	Magnolia grandiflora	GOOD		LANDMARK	R	Y	REPLACE
775	RM	10	Red Maple	Acer rubrum	GOOD		WOODLAND	S	Y	-
776	RM	10	Red Maple	Acer rubrum	GOOD	X2	WOODLAND	S	Y	-
777	BW	19	Black Walnut	Juglans nigra	POOR	X2	LANDMARK	S	Y	-
778	BW	8	Black Walnut	Juglans nigra	POOR		WOODLAND	S	Y	-
779	BW	10	Black Walnut	Juglans nigra	POOR		WOODLAND	S	Y	-
780	CA	8	Crab Apple	Malus caronaria	POOR		WOODLAND	S	Y	-
781	CH	12	Domestic Cherry	Prunus avium	POOR		LANDMARK	S	Y	-
782	CH	13	Domestic Cherry	Prunus avium	FAIR		LANDMARK	S	Y	-
783	BW	11	Black Walnut	Juglans nigra	FAIR		WOODLAND	S	Y	-
784	BW	8	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
785	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
786	BW	8	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
787	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
788	BW	12	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
789	BX	11	Box elder	Acer negundo	FAIR	X2	INVASIVE	S	Y	-
790	E	12	American Elm	Ulmus americana	FAIR		INVASIVE	R	Y	-
791	E	13	American Elm	Ulmus americana	GOOD		INVASIVE	R	Y	-
792	TH	9	Thornapple/Hawthorne	Cragagegus spp.	POOR		WOODLAND	R	Y	-
793	E	11	American Elm	Ulmus americana	POOR		INVASIVE	R	Y	-
794	BW	21	Black Walnut	Juglans nigra	FAIR		LANDMARK	R	Y	REPLACE
795	BW	8	Black Walnut	Juglans nigra	POOR		WOODLAND	R	Y	-
796	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
797	E	9	American Elm	Ulmus americana	FAIR		INVASIVE	R	Y	-
798	E	10	American Elm	Ulmus americana	POOR		INVASIVE	R	Y	-
799	E	10	American Elm	Ulmus americana	POOR		INVASIVE	R	Y	-
800	WW	13	Weeping Willow	Salix babylonica	GOOD		INVASIVE	R	Y	-
801	CH	10	Domestic Cherry	Prunus avium	GOOD		WOODLAND	R	Y	REPLACE
802	CH	9	Domestic Cherry	Prunus avium	GOOD	X3	WOODLAND	-	N	-
803	E	10	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
804	CH	10	Domestic Cherry	Prunus avium	POOR	X2	WOODLAND	R	Y	-
805	GA	7	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	-	N	-
806	WW	31	Weeping Willow	Salix babylonica	GOOD		INVASIVE	-	N	-
807	E	13	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
808	E	7	American Elm	Ulmus americana	GOOD		INVASIVE	S	Y	-
809	CT	22	Cottonwood	Populus deltoides	POOR	X2	INVASIVE	S	Y	-
810	CT	7	Cottonwood	Populus deltoides	GOOD	X2	INVASIVE	S	Y	-
811	CT	32	Cottonwood	Populus deltoides	GOOD		INVASIVE	S	Y	-
812	E	10	American Elm	Ulmus americana	FAIR		INVASIVE	S	Y	-
813	BC	14	Wild Black Cherry	Prunus serotina	POOR		WOODLAND	S	Y	-
814	E	7	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
815	CH	12	Domestic Cherry	Prunus avium	POOR	X2	LANDMARK	S	Y	-
816	E	9	American Elm	Ulmus americana	FAIR	X2	INVASIVE	S	Y	-
817	BW	7	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
818	CT	28	Cottonwood	Populus deltoides	GOOD		INVASIVE	S	Y	-
819	E	10	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
820	BW	9	Black Walnut	Juglans nigra	FAIR		WOODLAND	S	Y	-
821	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
822	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
823	BW	8	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
824	CT	7	Cottonwood	Populus deltoides	FAIR		INVASIVE	-	N	-
825	CT	7	Cottonwood	Populus deltoides	FAIR		INVASIVE	-	N	-
826	WW	14	Weeping Willow	Salix babylonica	POOR		INVASIVE	-	N	-
827	WW	7	Weeping Willow	Salix babylonica	FAIR		INVASIVE	-	N	-
828	WW	14	Weeping Willow	Salix babylonica	FAIR		INVASIVE	-	N	-
829	B	7	Basswood	Tilia americana	GOOD		WOODLAND	-	N	-
830	E	7	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
831	CH	10	Domestic Cherry	Prunus avium	GOOD		WOODLAND	-	N	-
832	CH	10	Domestic Cherry	Prunus avium	FAIR		WOODLAND	-	N	-
833	CH	6	Domestic Cherry	Prunus avium	GOOD	X2	WOODLAND	-	N	-
834	CH	9	Domestic Cherry	Prunus avium	POOR		WOODLAND	-	N	-
835	CH	10	Domestic Cherry	Prunus avium	GOOD		WOODLAND	-	N	-
836	CH	12	Domestic Cherry	Prunus avium	GOOD		LANDMARK	-	N	-
837	CH	10	Domestic Cherry	Prunus avium	GOOD		WOODLAND	-	N	-
838	E	24	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
839	NM	12	Norway Maple	Acer platanoides	GOOD		INVASIVE	-	N	-
840	CH	8	Domestic Cherry	Prunus avium	POOR		WOODLAND	-	N	-
853	CH	12	Domestic Cherry	Prunus avium	GOOD	X2	LANDMARK	-	N	-
854	E	8	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
855	CH	8	Domestic Cherry	Prunus avium	POOR	X2	WOODLAND	-	N	-
856	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
857	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
858	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	S	Y	-
859	E	10	American Elm	Ulmus americana	POOR		INVASIVE	-	N	-
860	BW	13	Black Walnut	Juglans nigra	FAIR		WOODLAND	-	N	-
861	TH	10	Thornapple/Hawthorne	Cragagegus spp.	FAIR	X2	WOODLAND	S	Y	-
862	E	13	American Elm	Ulmus americana	FAIR		INVASIVE	-	N	-
863	E	8	American Elm	Ulmus americana	GOOD		INVASIVE	S	Y	-
864	GA	14	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	-	N	-
865	E	7	American Elm	Ulmus americana	GOOD		INVASIVE	-	N	-
866	WW	15	Weeping Willow	Salix babylonica	GOOD		INVASIVE	-	N	-
867	WW	18	Weeping Willow	Salix babylonica	FAIR	X2	INVASIVE	-	N	-
868	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
869	BW	7	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
870	BW	14	Black Walnut	Juglans nigra	FAIR		WOODLAND	R	Y	REPLACE
871	HK	7	Hackberry	Celtis occidentalis	GOOD		WOODLAND	S	Y	-
872	WO	7	White Oak	Quercus alba	GOOD		WOODLAND	R	Y	REPLACE
873	BW	13	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
874	BW	6	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
875	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
876	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
877	BW	10	Black Walnut	Juglans nigra	FAIR		WOODLAND	R	Y	REPLACE
878	E	10	American Elm	Ulmus americana	POOR		INVASIVE	R	Y	-
879	CH	7	Domestic Cherry	Prunus avium	POOR		WOODLAND	R	Y	-
880	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
881	BW	11	Black Walnut	Juglans nigra	POOR		WOODLAND	R	Y	-
882	BW	9	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
883	E	3	American Elm	Ulmus americana	FAIR		INVASIVE	-	N	-
884	BW	9	Black Walnut	Juglans nigra	FAIR		WOODLAND	S	Y	-
885	E	8	American Elm	Ulmus americana	FAIR		INVASIVE	R	Y	-
886	BW	10	Black Walnut	Juglans nigra	GOOD		WOODLAND	R	Y	REPLACE
887	PN	7	Pin Cherry	Prunus pennsylvanica	POOR		WOODLAND	R	Y	-
888	GA	9	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	S	Y	-
889	E	10	American Elm	Ulmus americana	GOOD		INVASIVE	S	Y	-
890	MR	10	Red Mulberry	Morus rubra	POOR		INVASIVE	R	Y	-
891	GA	7	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	R	Y	-
892	GA	8	Green Ash	Fraxinus pennsylvanica	POOR		INVASIVE	S	Y	-
893	E	9	American Elm	Ulmus americana	POOR		INVASIVE	S	Y	-
894	BW	10	Black Walnut	Juglans nigra	FAIR		WOODLAND	R	Y	REPLACE
895	MR	8	Red Mulberry	Morus rubra	POOR		INVASIVE	R	Y	-
896	BW	11	Black Walnut	Juglans nigra	POOR		WOODLAND	R	Y	-



LOCATION MAP – NOT TO SCALE

WOODLAND TREES		
WOODLAND TREES REMOVED:	**45**	(REPLACE AT 50% OF REMOVED DBH)
447" DBH x 0.5 =	**224"**	REPLACEMENT
WOODLAND TREES SAVED:	24	(CREDIT OF 2X DBH)
225 DBH x 2 =	**450"**	CREDIT
223.5 - 450	=	-226.5
0 " DBH REQUIRED FOR WOODLAND REPLACEMENT		
LANDMARK TREES		
LANDMARK TREES REMOVED:	**5**	(REPLACE AT 100% OF REMOVED DBH)
108" DBH x 1 =	**108"**	REPLACEMENT
LANDMARK TREES SAVED:	1	(CREDIT OF 2X DBH)
13" DBH x 2 =	**26"**	CREDIT
108 - 26	=	82
0 " TOTAL DBH REQUIRED FOR REPLACEMENT		

KEY: NIC FOR REPLACEMENT = DEAD, DAMAGED, DISEASED, INVASIVE SPECIES

STRIKETHROUGH = TREES TO REMOVE **R**

TYP. TEXT = TREES TO SAVE **S**

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/20
3	KRD	GMB	REVISED PER PEA REVIEW	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	7/26/19
1	KRD	GMB	RESUBMITTAL TO CITY	

REVISIONS

LYNN A. WHIPPLE LANDSCAPE ARCHITECT No. 001012 REGISTERED LANDSCAPE ARCHITECT STATE OF MICHIGAN

CAUTION!!

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below Call before you dig

MISS DIG System, Inc.

1-800-482-7171 www.missdig.net

(OHIO, ONLY)

PEA

PEA, Inc.

2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

TREE PRESERVATION LIST
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
JE	JE	KTR	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY – DWG\DWG\LANDSCAPE\SITE PLANS\[T-1.0] TREE PRESERVATION PLAN – 18238A.dwg

ORIGINA

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

Schedule											
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
○	P1* (6' HEIGHT)	145	Lithonia Lighting	DSXW1 LED 10C 1000 AMBPC T4M MVOLT HS	DSXW1 LED WITH (1) 10 LED LIGHT ENGINES, TYPE T4M OPTIC, AMBER PC, @ 1000mA WITH HOUSE-SIDE SHIELDS.	LED	1	DSXW1_LED_10C_1000_AMBPC_T4M_MVOLT_HS.ies	1651	0.95	73.2
▭	P3* (6' HEIGHT)	15	Lithonia Lighting	DSXW1 LED 10C 350 AMBPC T2S MVOLT HS	DSXW1 LED WITH (1) 10 LED LIGHT ENGINES, TYPE T2S OPTIC, AMBPC, @ 350mA WITH HOUSE-SIDE SHIELDS.	LED	1	DSXW1_LED_10C_350_AMBPC_T2S_MVOLT_HS.ies	788	0.95	13.3

★BECAUSE AN IES FILE IS NOT AVAILABLE FOR THE FIXTURE TO BE INSTALLED, THE IES FILE FROM A COMPARABLE FIXTURE WAS USED.

ZONED R-1B "ONE-FAMILY RESIDENTIAL" DISTRICT

ZONED R1-B "ONE-FAMILY RESIDENTIAL" DISTRICT

ZONED NN "NEIGHBORHOOD NODES"

BUILDING A 5 UNITS
BUILDING B 6 UNITS
BUILDING C 6 UNITS
BUILDING D 5 UNITS
BUILDING E 6 UNITS
BUILDING F 6 UNITS
BUILDING G 5 UNITS
BUILDING H 6 UNITS
BUILDING J 6 UNITS
BUILDING K 6 UNITS
BUILDING L 6 UNITS
BUILDING M 5 UNITS
BUILDING N 6 UNITS

WETLAND BOUNDARY FLAGGED BY PEA, INC. 12-12-2019

BM #300
BM #301

CROOKS ROAD (120' WIDE – PUBLIC)

ROSE BLVD (PUBLIC)

GENERAL SITE LIGHTING NOTES:

1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
2. ALL AREA LIGHT FIXTURES ARE TO BE DIRECTED AWAY FROM NEIGHBORING PROPERTIES AND ROADWAYS.
3. CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT ALL MATERIALS AND EQUIPMENT FOR THIS WORK UNLESS OTHERWISE NOTED.
4. COORDINATE LIGHT FIXTURE PLACEMENT AND INSTALLATION WITH ARCHITECT.

SITE PHOTOMETRIC DATA:

		ALLOWED	PROPOSED
1.	SITE FOOTCANDLE MAX	10 FC	8.8 FC
2.	SITE FOOTCANDLE AT PROPERTY (MAX)		
	RESIDENTIAL	0.1 FC	0.1 FC (MAX)
	NON-RESIDENTIAL	1.0 FC	0.2* FC (MAX)
3.	FIXTURE HEIGHT (SITE):	25 FT. (MAX)	6 FT.

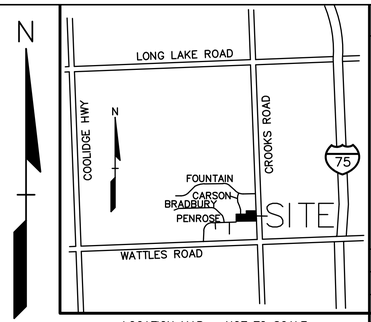
*AT ROW

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

N

LOCATION MAP – NOT TO SCALE



LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING / PROPOSED

- ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UNDERGROUND CABLE TV, CATV PEDESTAL
- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONCRETE
- ASPHALT

STD DUTY / HEAVY DUTY / R.O.W. ONLY.
STD DUTY / HEAVY DUTY / DEEP STRENGTH

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

GREGORY BONO ENGINEER No. 54435 LICENSED PROFESSIONAL ENGINEER
STATE OF MICHIGAN

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY AND SOLELY RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.net

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PHOTOMETRIC PLAN
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	GMB	SUR.	KTR	P.M.	GMB

S:\PROJECTS\2018\2018-238A CROOKS RD MULTI-FAMILY - DWG\DWG\SITE PLAN\12k-1.0 PHOTO - 18238A.dwg

ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: 1" = 30'

DRAWING NUMBER:
SL-1.0

LUMEN P1 & P3

Cylinder 3000K LED 7" Wall Light Textured Black

11250BKT30 (Textured Black)

Project Name: _____
Location: _____
Type: _____
Qty: _____
Comments: _____



Certifications/Qualifications

Class 2	Yes
Dark Sky Compliant	Yes
Location Rating	Wet
Title 24 Compliant	Yes
	www.kichler.com/warranty

Dimensions

Base Backplate	5.00 X 5.00
Extension	6.50"
Weight	2.60 LBS
Height from center of Wall opening (Spec Sheet)	3.25"
Height	7.00"
Width	5.00"

Electrical

Input Voltage	Dual (120/140)V

Mounting/Installation

Interior/Exterior	Exterior
Mounting Style	Wall Mount

Photometrics

Color Rendering Index	90
Color Temperature Range	3000
Delivered Efficacy (Lumens/Watt)	33
Delivered Lumens	350
Kelvin Temperature	3000K

Primary Lamping

Expected Life Span	40000
Lamp Included	Integrated
Light Source	LED
Max or Nominal Watt	11W
# of Bulbs/LED Modules	1

Product/Ordering Information

SKU	11250BKT30
Finish	Black
Style	Contemporary
UPC	783927453066

Specifications

Material	ALUMINUM

Additional Finishes

Textured Architectural Bronze

Textured Black

Kichler
7711 East Pleasant Valley Road Cleveland, Ohio 44131-8010
Toll free: 866.558.5706 or kichler.com

Notes:
1) Information provided is subject to change without notice. All values are design or typical values when measured under laboratory conditions.
2) Incandescent Equivalent: The incandescent equivalent as presented is an approximate number and is for reference only.

KICHLER.

NOT FOR CONSTRUCTION

XREF: S:\PROJECTS\2018\2018238A\DWG\18238-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-BASE-18238A.DWG
XREF: S:\PROJECTS\2018\2018238A\DWG\SITE PLANS\X-TBLK-18238A.DWG

No.	BY	CHK	DESCRIPTION	DATE
6	KRD	GMB	REVISED SITE PLAN APPROVAL	3/12/20
5	KRD	GMB	REVISED PER CITY PLANNING REVIEW	1/24/20
4	GMB	GMB	REVISED PER CITY PLANNING REVIEW	11/13/19
3	KRD	GMB	REVISED SITE PLAN APPROVAL	9/9/19
2	KRD	GMB	REVISED SITE PLAN APPROVAL	8/29/19
1	KRD	GMB	RESUBMITTAL TO CITY	7/26/19

REVISIONS

STATE OF MICHIGAN
GREGORY BONO
ENGINEER
No. 54435
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.net

PEA

PEA, Inc.
2430 Rochester Ct, Ste 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

TOLLBROOK NORTH LLC
1612 MUER DR.
TROY, MI 48084

PHOTOMETRIC DETAILS
CROOKS RD. MULTI-FAMILY
PART OF THE SE 1/4 OF SECTION 17, T. 2N., R. 11E., CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
GMB	GMB	KTR	GMB

S:\PROJECTS\2018\2018-238A DRIVING RD MULTI-FAMILY - CAD\DWG\SITE PLAN\(24.+10) PHOTO - 18238A.dwg

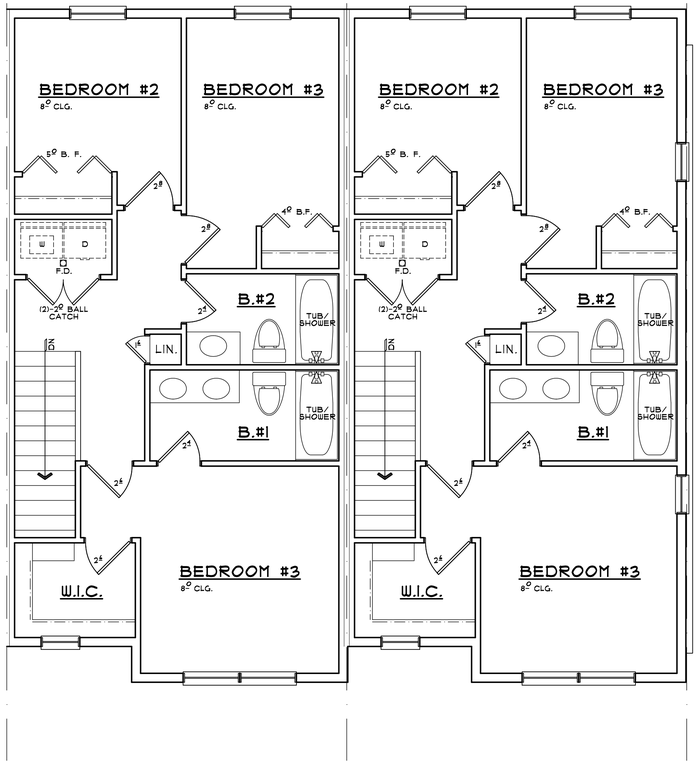
ORIGINAL ISSUE DATE:
JUNE 20, 2019

PEA JOB NO. 2018-238A

SCALE: NTS

DRAWING NUMBER:
SL-1.1

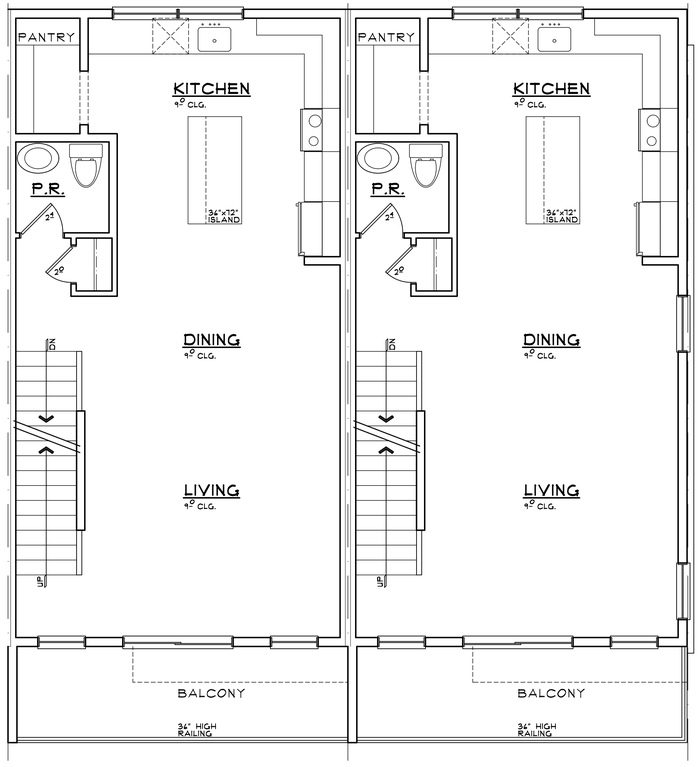
SQUARE FOOTAGE	
LOWER LEVEL	184 SQ FT
1ST FLOOR	677 SQ FT
2ND FLOOR	701 SQ FT
TOTAL	1,564 SQ FT



'B' / 'C' END UNIT 'A'

SECOND FLOOR PLAN

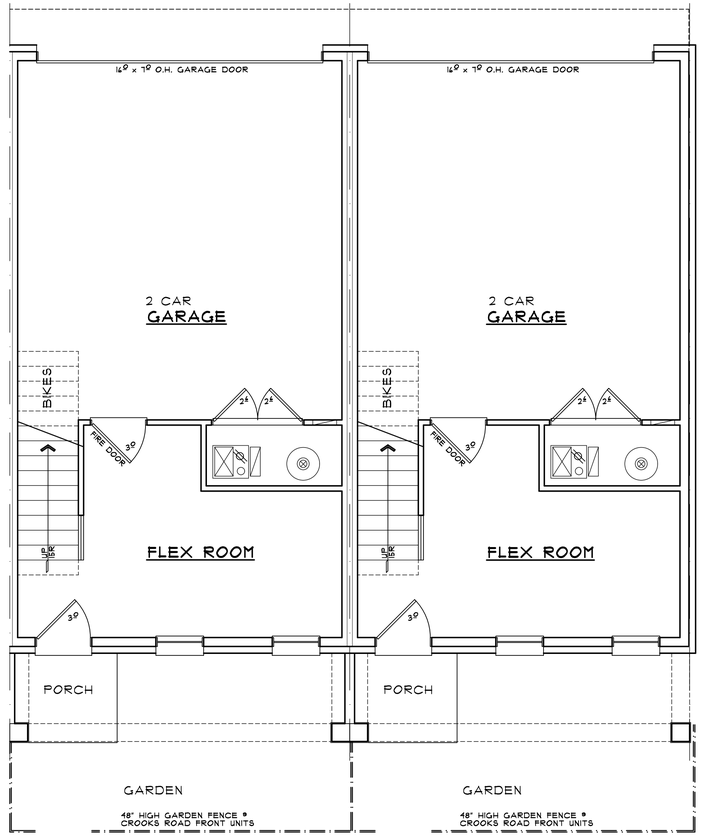
BUILDINGS A & E-N SCALE: 1/4" = 1'-0"



'B' / 'C' END UNIT 'A'

FIRST FLOOR PLAN

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"



'B' / 'C' END UNIT 'A'

LOWER LEVEL PLAN

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT PLANS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

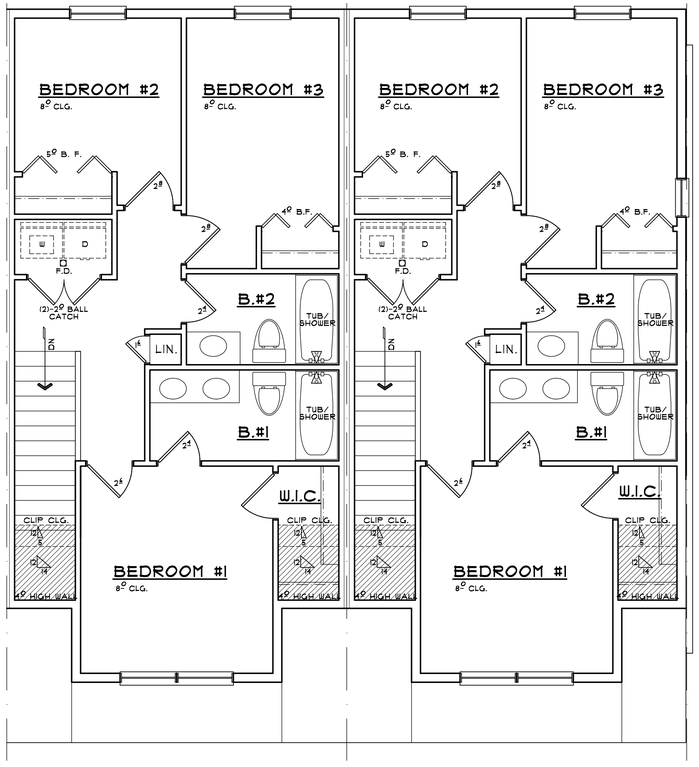
COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	

SHEET NUMBER
A-1

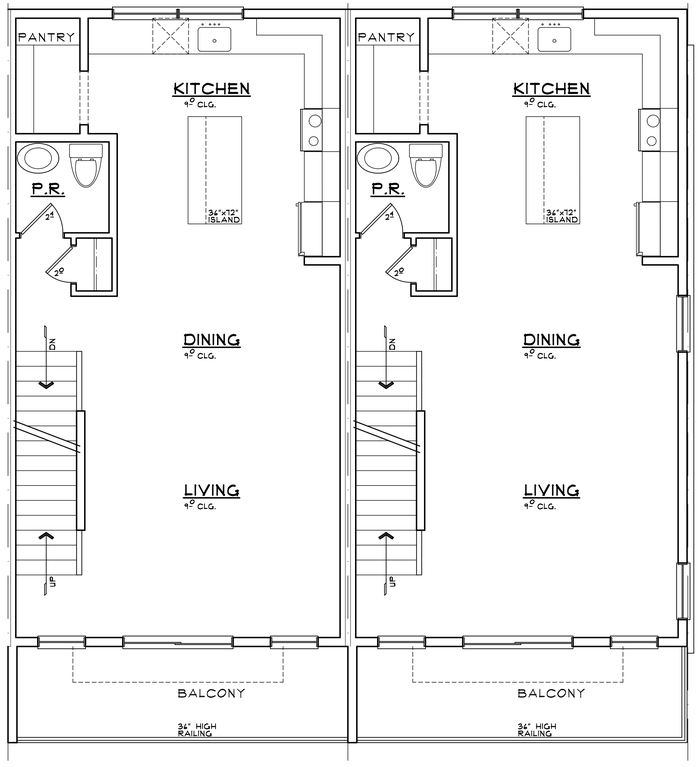
STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301035283
REGISTERED ARCHITECT

SQUARE FOOTAGE	
LOWER LEVEL	184 SQ FT
1ST FLOOR	677 SQ FT
2ND FLOOR	630 SQ FT
TOTAL	1,493 SQ FT



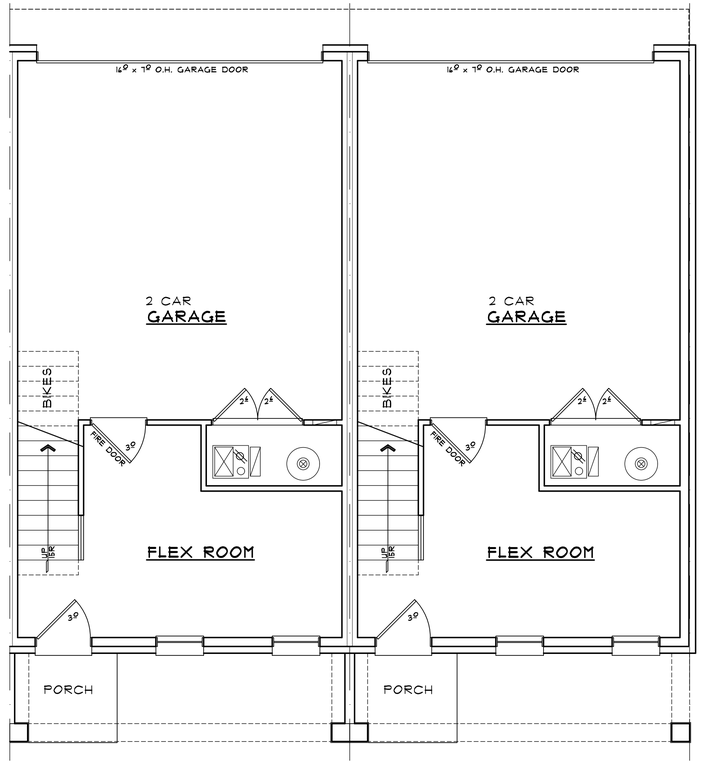
'B' / 'C' END UNIT 'A'
SECOND FLOOR PLAN

BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"



'B' / 'C' END UNIT 'A'
FIRST FLOOR PLAN

BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"



'B' / 'C' END UNIT 'A'
LOWER LEVEL PLAN

BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT PLANS
BUILDINGS B, C & D
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

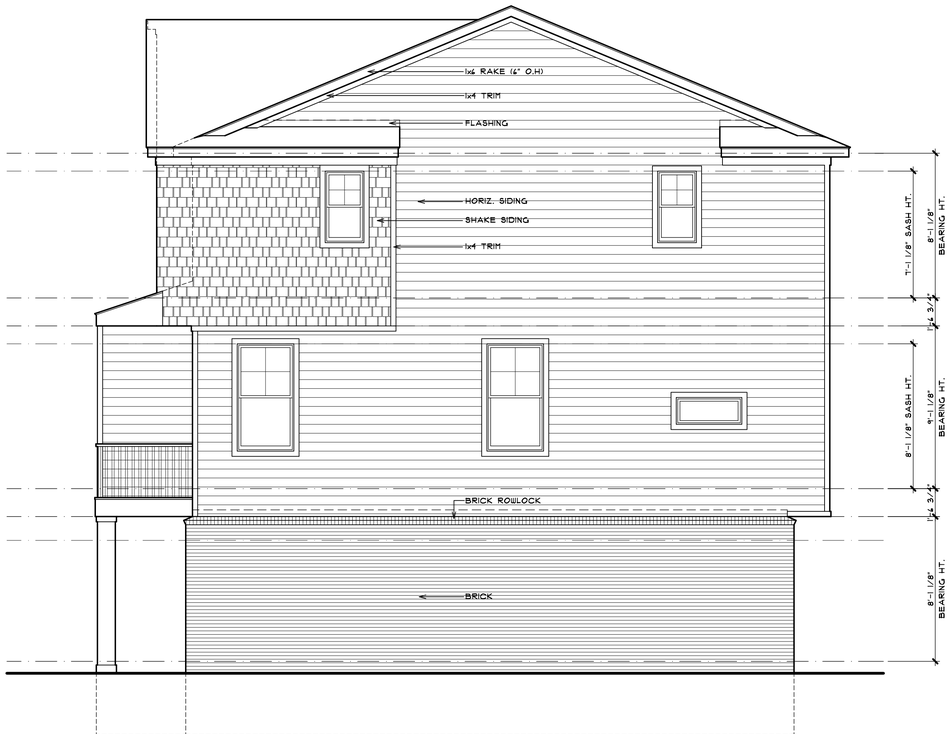
PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	

SHEET NUMBER
A-2

STATE OF MICHIGAN — BRIAN NEEPER — ARCHITECT — No. 1301035283 — REGISTERED ARCHITECT



RIGHT SIDE ELEVATION

LEFT SIDE ELEVATION - OPPOSITE - SIMILAR BUILDINGS A & E-N SCALE: 1/4" = 1'-0"



ELEVATION 'A'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

ELEVATION 'B'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

ELEVATION 'C'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT ELEVATIONS
FRONTS AND SIDE
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-3

STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301033353
REGISTERED ARCHITECT



REAR ELEVATION 'C'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

REAR ELEVATION 'B'

BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

REAR ELEVATION 'A'

END UNIT BUILDINGS A & E-N SCALE: 1/4" = 1'-0"

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE

UNIT REAR ELEVATIONS
BUILDINGS A & E-N

S.P.A.

CLIENT / PROJECT

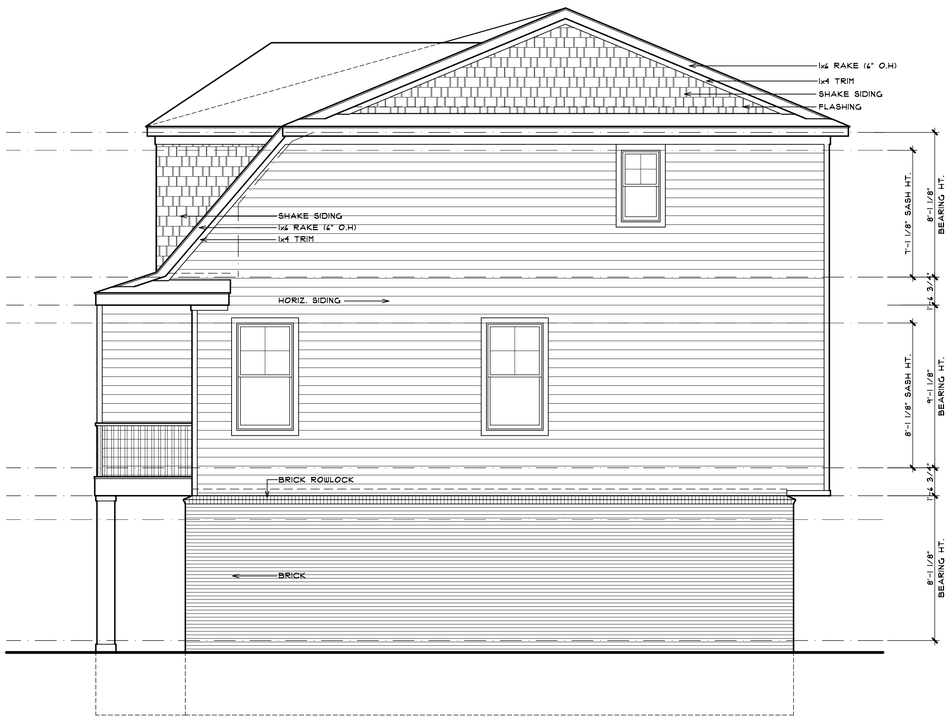
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-4

STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301035253
REGISTERED ARCHITECT



RIGHT SIDE ELEVATION

LEFT SIDE ELEVATION - OPPOSITE - SIMILAR BUILDINGS B, C & D SCALE: 1/4" = 1'-0"



ELEVATION 'A'

BUILDINGS B, C & D SCALE: 1/4" = 1'-0"

ELEVATION 'B'

BUILDINGS B, C & D SCALE: 1/4" = 1'-0"

ELEVATION 'C'

BUILDINGS B, C & D SCALE: 1/4" = 1'-0"

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT ELEVATIONS
FRONTS AND SIDE
BUILDINGS B, C & D
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-5

STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301033283
REGISTERED ARCHITECT



REAR ELEVATION 'B'

BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"

REAR ELEVATION 'A'

END UNIT BUILDINGS B, C & D — SCALE: 1/4" = 1'-0"

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
UNIT REAR ELEVATIONS
BUILDINGS B, C & D
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

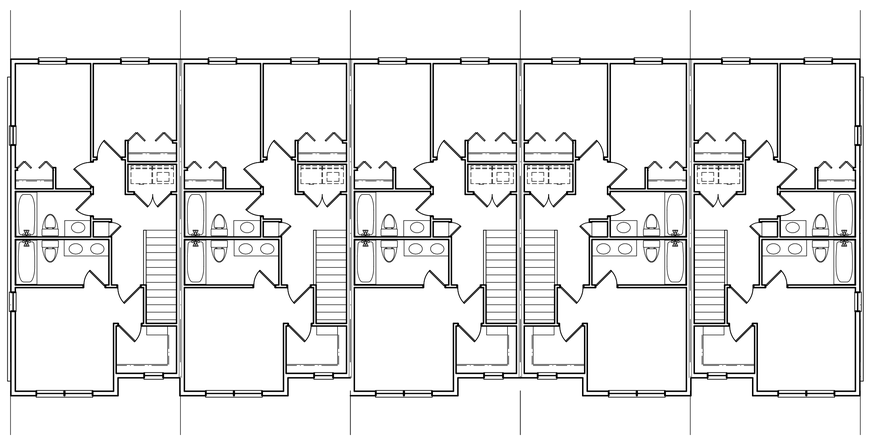
PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	

SHEET NUMBER
A-6

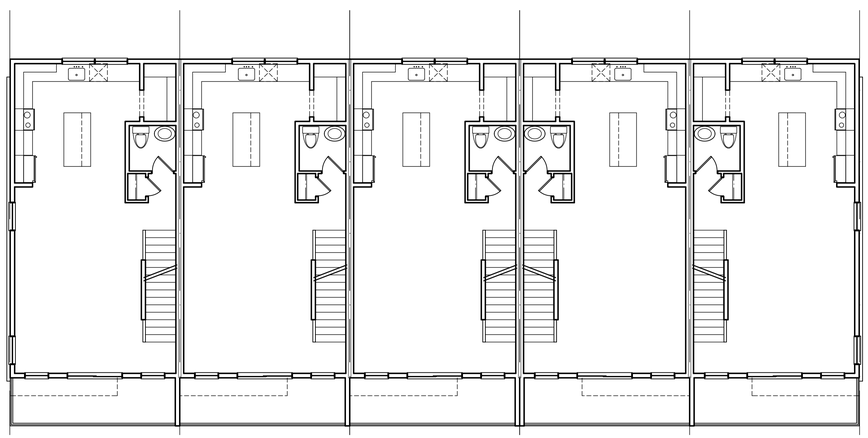
STATE OF MICHIGAN — BRIAN NEEPER — ARCHITECT — No. 1301033283 — REGISTERED ARCHITECT



** COORDINATE SECOND FLOOR UNIT LAYOUT OPTIONS WITH DEVELOPER

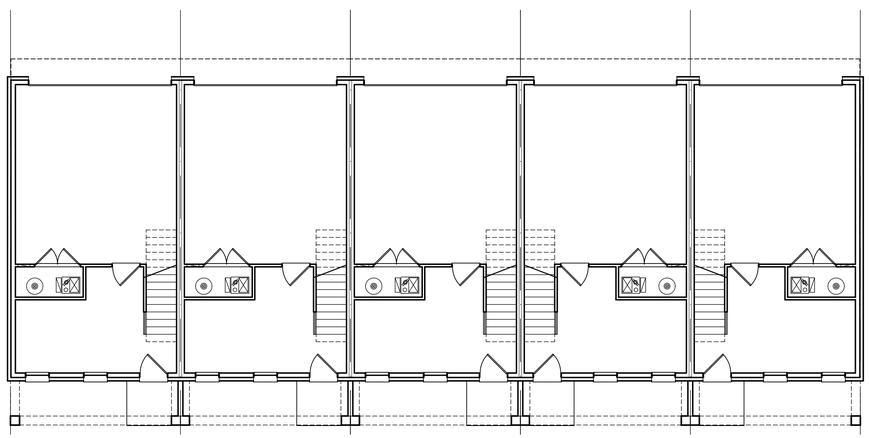
SECOND FLOOR PLAN
5 UNIT BUILDING

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



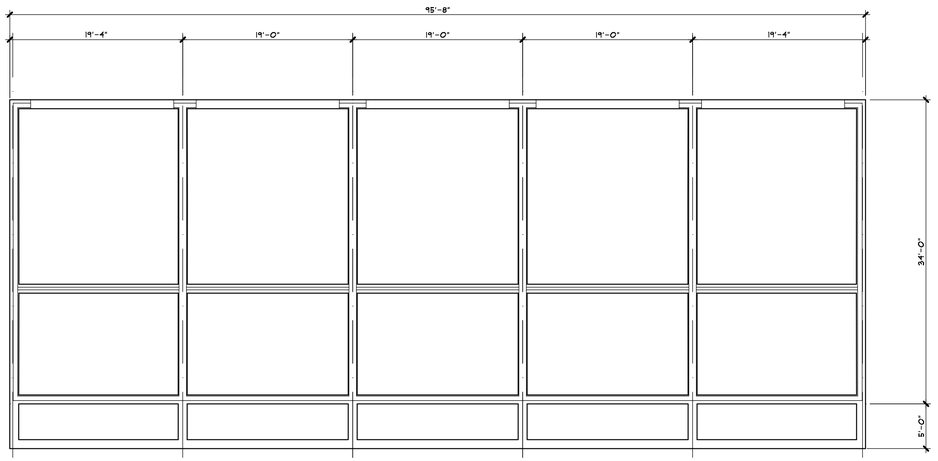
FIRST FLOOR PLAN
5 UNIT BUILDING

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



LOWER LEVEL PLAN
5 UNIT BUILDING

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



FOUNDATION PLAN
5 UNIT BUILDING

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

ARCHITECTURE

SHEET TITLE
5 UNIT BUILDING PLANS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-7



REAR ELEVATION
5 UNIT BUILDING

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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



FRONT ELEVATION
5 UNIT BUILDING

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

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
5 UNIT BUILDING ELEVATIONS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

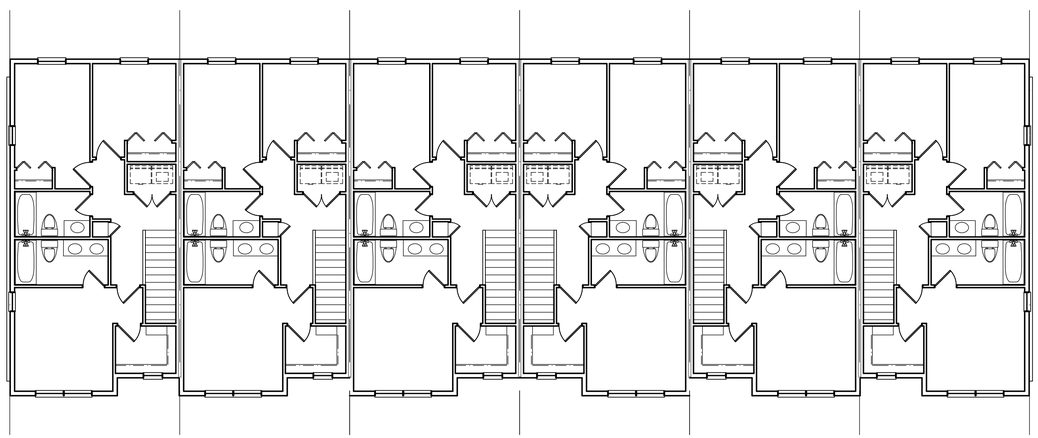
PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	

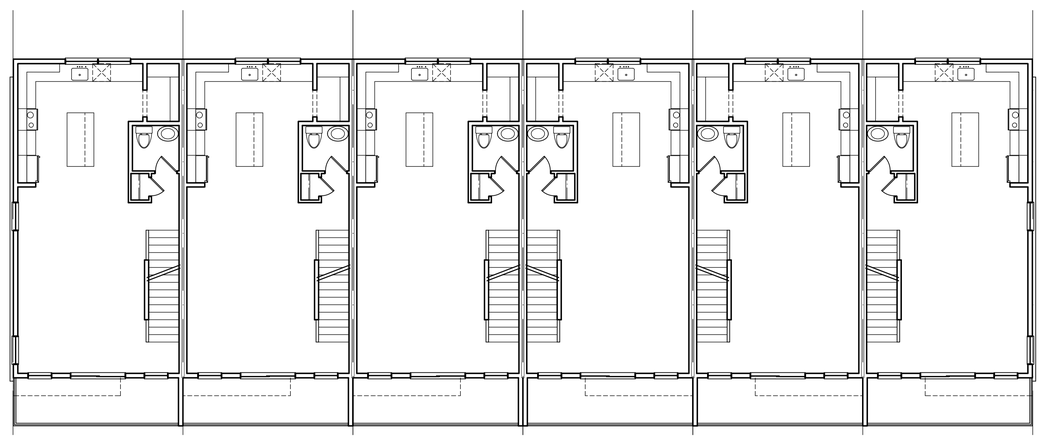
SHEET NUMBER
A-8

STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301030353
LICENSED ARCHITECT



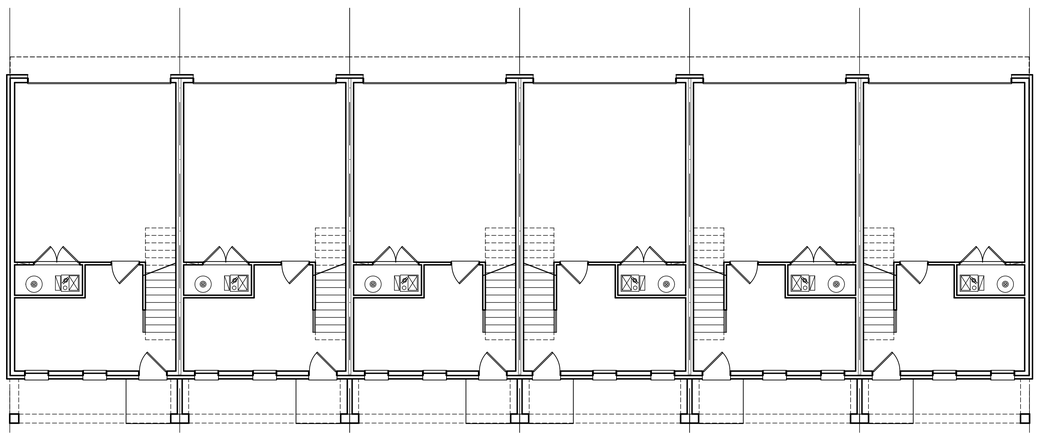
SECOND FLOOR PLAN
6 UNIT BUILDING

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



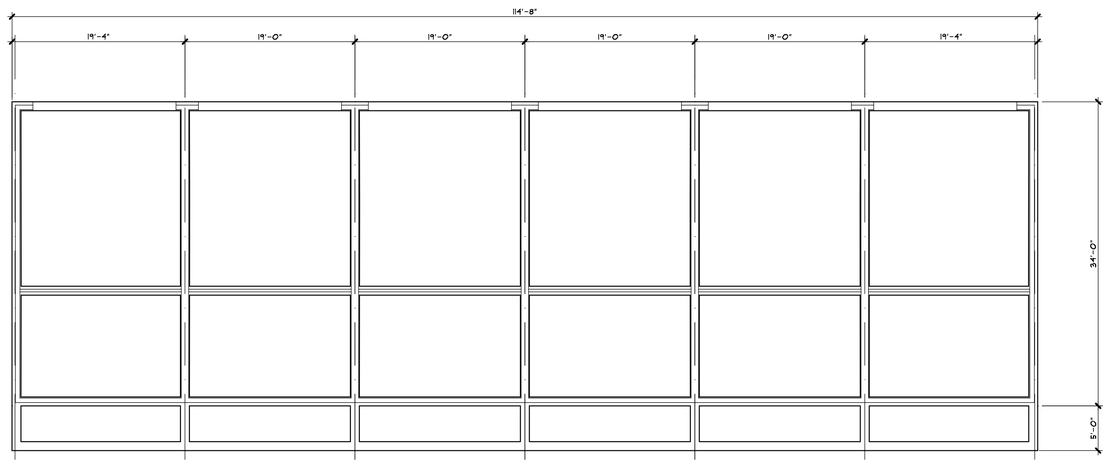
FIRST FLOOR PLAN
6 UNIT BUILDING

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



LOWER LEVEL PLAN
6 UNIT BUILDING

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



FOUNDATION PLAN
6 UNIT BUILDING

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

ARCHITECTURE

SHEET TITLE
6 UNIT BUILDING PLANS
BUILDINGS A & E-N
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-9



REAR ELEVATION
6 UNIT BUILDING

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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



FRONT ELEVATION
6 UNIT BUILDING

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

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
6 UNIT BUILDING ELEVATIONS
BUILDINGS A & E-N
S.P.A.

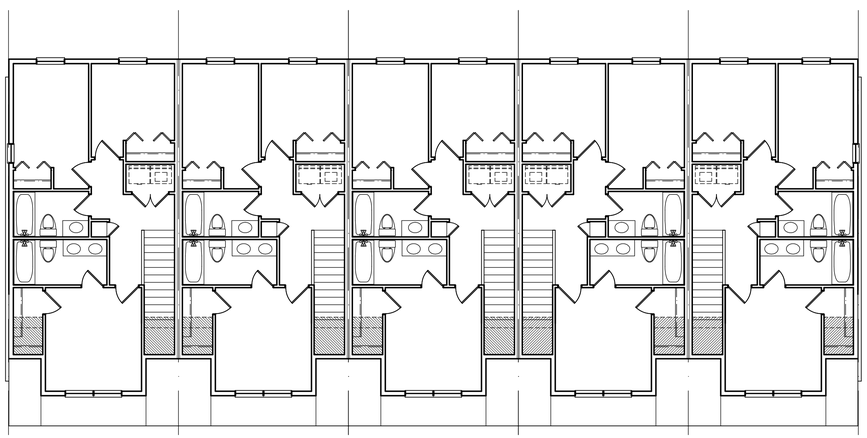
CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-10

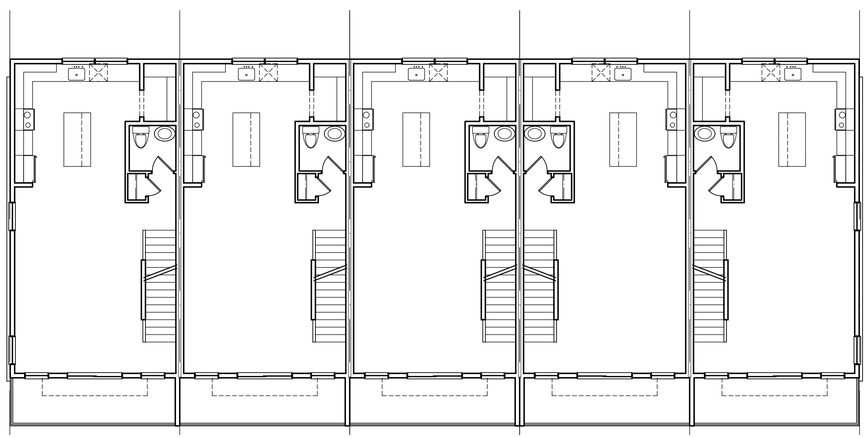
STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301035953
REGISTERED ARCHITECT



** COORDINATE SECOND FLOOR UNIT LAYOUT OPTIONS WITH DEVELOPER

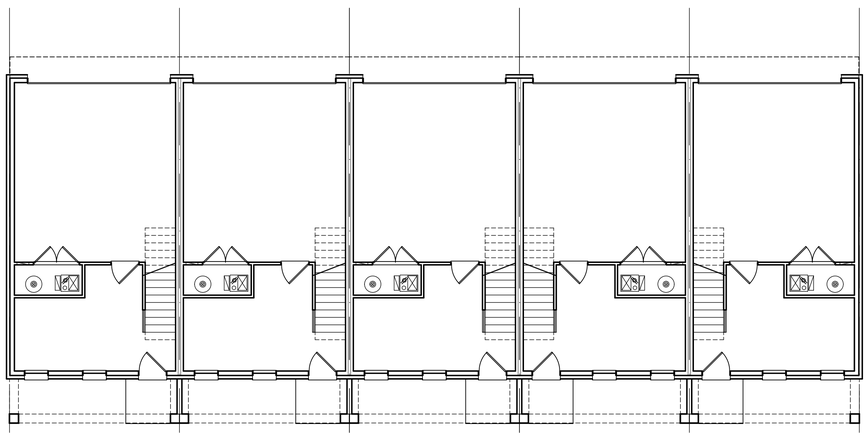
SECOND FLOOR PLAN
5 UNIT BUILDING

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



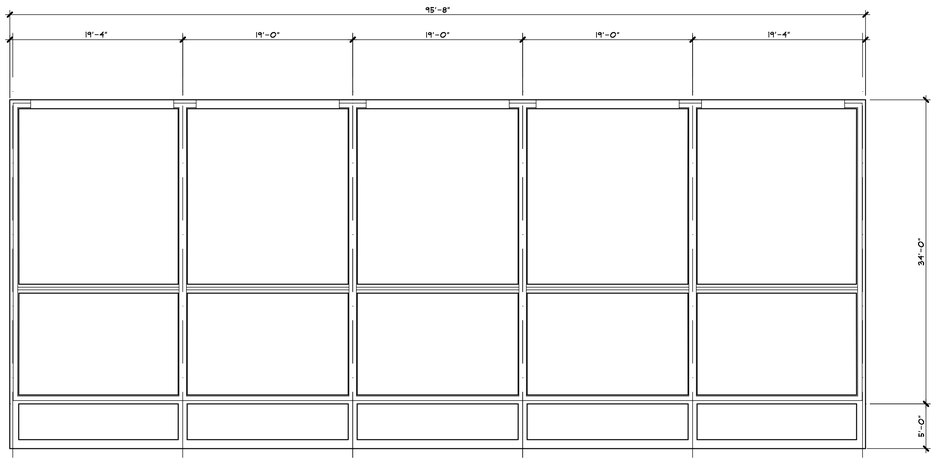
FIRST FLOOR PLAN
5 UNIT BUILDING

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



LOWER LEVEL PLAN
5 UNIT BUILDING

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



FOUNDATION PLAN
5 UNIT BUILDING

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

ARCHITECTURE
BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
5 UNIT BUILDING PLANS
BUILDINGS B, C & D
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-11



REAR ELEVATION
5 UNIT BUILDING

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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



FRONT ELEVATION
5 UNIT BUILDING

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

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
5 UNIT BUILDING ELEVATIONS
BUILDINGS B, C & D

S.P.A.

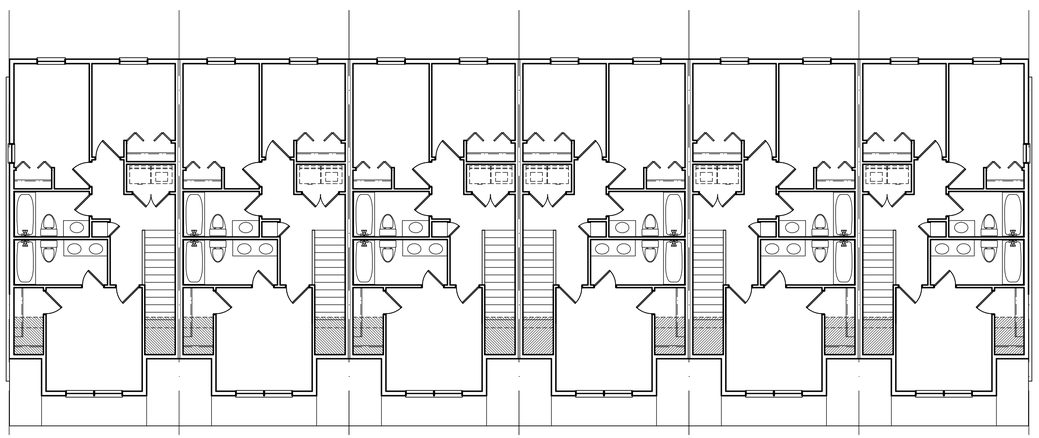
CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

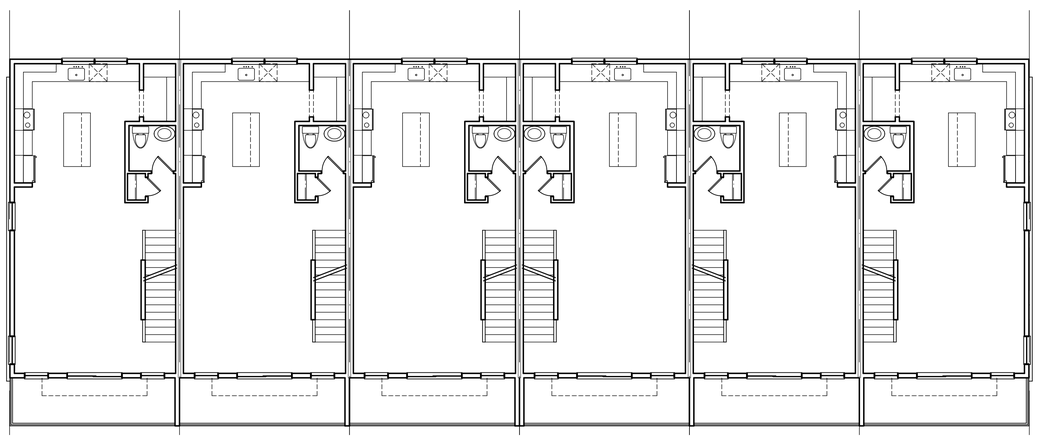
JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-12





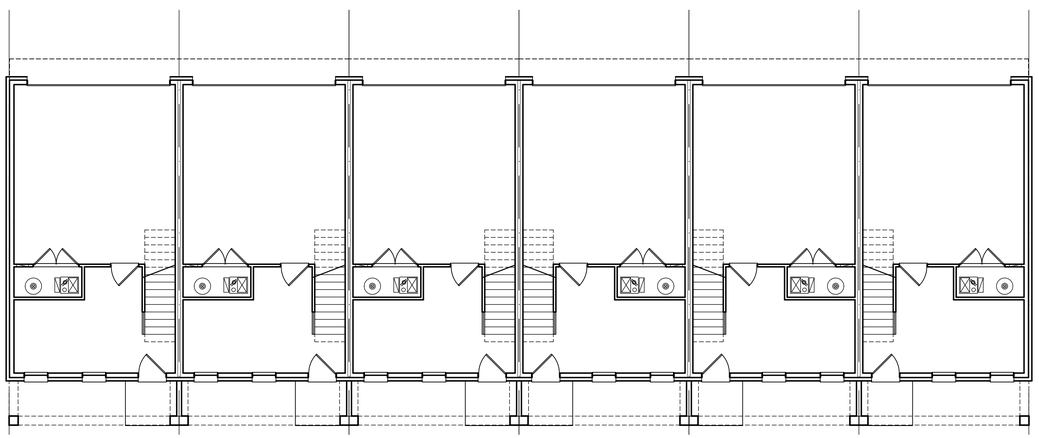
SECOND FLOOR PLAN
6 UNIT BUILDING

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



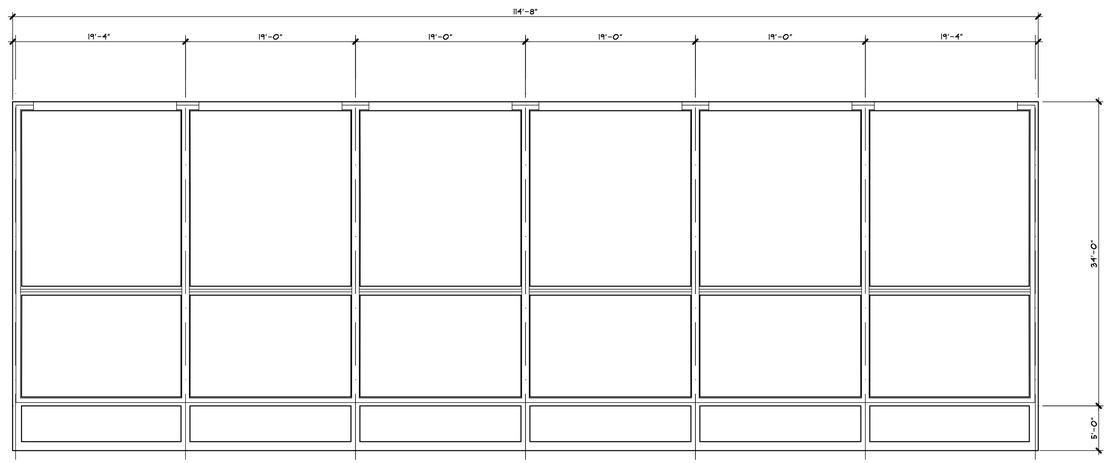
FIRST FLOOR PLAN
6 UNIT BUILDING

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



LOWER LEVEL PLAN
6 UNIT BUILDING

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



FOUNDATION PLAN
6 UNIT BUILDING

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

ARCHITECTURE

SHEET TITLE
6 UNIT BUILDING PLANS
BUILDINGS B, C & D
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-13



REAR ELEVATION
6 UNIT BUILDING

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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



FRONT ELEVATION
6 UNIT BUILDING

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

ARCHITECTURE

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
6 UNIT BUILDING ELEVATIONS
BUILDINGS B, C & D

S.P.A.

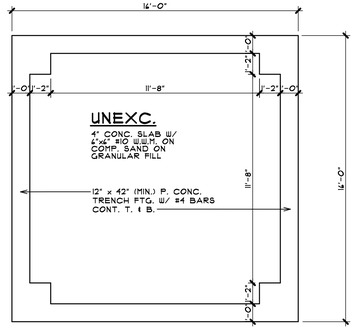
CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

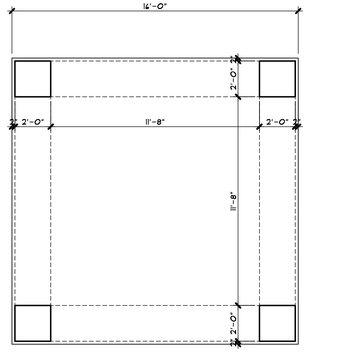
JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-14

STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301035083
REGISTERED ARCHITECT



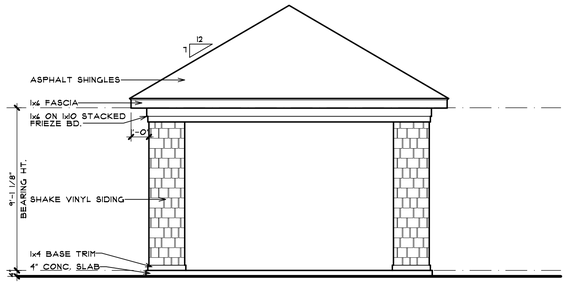
PAVILION FOUNDATION

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



PAVILION PLAN

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



PAVILION ELEVATION

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

BRIAN NEEPER ARCHITECTURE P.C.
DESIGN - PLANNING - INTERIORS
630 North Old Woodward, Suite 203
BIRMINGHAM, MICHIGAN
BRIANNEEPER.COM
248. 259. 1784

SHEET TITLE
PAVILION
PLANS AND ELEVATION
S.P.A.

CLIENT / PROJECT
TOLLBROOK NORTH LLC
CROOKS ROAD TOWNHOMES
TROY, MICHIGAN

PRELIMINARY	11-13-19
BIDS	
PERMITS	
FINAL	
REVISIONS	

COPYRIGHT 2019
BRIAN NEEPER
ARCHITECTURE P.C.

JOB NUMBER	19028
DRAWN BY	BN / JF
CHECKED BY	
SHEET NUMBER	A-15

STATE OF MICHIGAN
BRIAN NEEPER
ARCHITECT
No. 1301033283
REGISTERED ARCHITECT

Civil Engineers | Land Surveyors | Landscape Architects
experienced. responsive. passion for quality.
Corporate Office: 2430 Rochester Court • Suite 100 • Troy, MI 48083
t: 248.689.9090 • f: 248.689.1044 • www.peainc.com

March 16, 2020

Brent Savidant
City of Troy
Planning Department
500 W. Big Beaver
Troy, MI 48084

RE: Crooks Road Townhomes
Preliminary Site Plan Submittal – Architectural Design Statements (Revised)

Dear Mr. Savidant:

The following are revised responses to the requested statements in item #6 on the site plan application:

A. Description of context of site and how project responds to character of the area:

The site is located at the Northern most edge of Neighborhood Node I on Crooks near Wattles. According to the zoning ordinance the Neighborhood Nodes should draw people and should be visually distinguished from the surrounding area because of their greater intensity, density and design. The intent for this site is to build a 74-unit townhouse condominium project that will begin to increase pedestrian activity in this node within a distinctive architecturally designed community. We have added various amenities to the site including a pavilion, foot trail along with benches and picnic tables.

B. Description of the project's design concept:

The Design concept of the community is a townhome with full balconies facing the green spaces, thoughtful sidewalk placement for safe pedestrian and cycle activity as well as conservation and protection of the existing natural existing features the site. We aim to provide our future residents all the benefits of living in the area while maintenance free social lifestyle.

C. Description of how the project achieves the design concept:

We are proposing modern open interior floor plans, each home to have a traditional 2-car side by side garage. We are also, protecting many of the on-site natural features and many existing trees as well as, proposing the addition of a combination many of new deciduous trees within the community and evergreen trees along the northern and western property lines. The exterior architecture focuses on breaking down the 3-story building mass through delineating the individual homes. The Townhome fronts maximize the connection to outdoor space with the Townhome fronting on landscaped green spaces and landscaped court yards. All homes will have large second floor balcony and ground level porches which flow into a professionally landscaped tree lined green spaces and courtyards. The site design connects these unit front garden spaces through interconnected walks creating a social walkable neighborhood that seeks to be connected to the future developments of the node.

D. Description of the development program (intended uses, known or possible tenants, etc.):

Our Proposed Condominium Development will have a target market that will include:

- Young adults moving out of their parents' house and living on their own
- Younger adults recently married or in a co-habitant relationship
- Younger adults starting families and/or with younger children
- Empty nesters looking to downsize, eliminate maintenance responsibilities, and live close to nice restaurant and shopping destinations.

E. Description of how the building materials enhance the design concept:

The building materials have been chosen based on their qualities of durability, sustainability, longevity, traditional appearances and low maintenance. The bases of the buildings are grounded by the use of a dark earth tone brick as a foundation material. The building fronts rise into 3 distinctive gabled elevations clad in shake, horizontal and vertical fiber cement siding which allude to patterns of existing nearby residential facades. The use of traditional materials in a modern expression of traditional pure forms will create a transitional yet timeless architectural feel. The generous amounts of windows allow for a strong connection to the outside and a modern expression on the façade.

F. If the project is in a form-based district, provide a description of how the project meets the transparency requirements:

The units that front Crooks Road will be provided with a private garden space partially enclosed by a 48" tall garden fence screen and landscape hedge green screening as a buffer to the street front, this would account for 42% of the first floor fronting the right of way. The first-floor building façade includes an additional 28% glazing transparency.

G. Note any other important elements, features or design concepts not covered above that will help the planning commission understand how the project fosters excellence in design of the built environment:

Our revised plans have greatly taken into consideration the past comments from Planning Commission Board Members and adjacent Neighbors. We have worked on concerns that were expressed at the September 24th, 2019 and January 14th, 2020 Planning Commission Meeting. Important design elements and features are as follows:

- We have completely reoriented the design of the townhomes with the revised layout.
- We have doubled the land area for the development by acquiring a property to the south of the original proposed project, which has allowed us to accommodate the following:
  - Re-orient the townhomes and revise the overall layout of the development
  - Reduce the unit density, in terms of building lot coverage, from 32% to 19.3%.
  - Increase the overall green space, in terms of open space area, from 43.2% (~51,000 sf on 2.73 acres) to 55.0% (~131,000 sf on 5.72 acres) and very minimal disturbance of existing natural features on the property. (Storm system/Detention pond construction only)
  - Increase on-site guest parking to 34 spaces.
  - Increase the setback along northern property line (adjacent single-family) to 40 feet.
  - Provide 20 feet of green belt area as well as the required 1 large evergreen per 10 feet.
- We are proposing an 8-foot decorative black aluminum fence along the northern property line.

- To create a transition adjacent to the single-family residential subdivision, we reduced the ordinance-measured height for Buildings “B”, “C”, and “D” to 27’-8 11/16” tall and 2 ½ stories, which is actually lower than permitted height of single family residential R1A- R1E at 30 ft.
- To address neighbor concerns about the location of the Emergency Vehicle Access (EVA), we have eliminated the connection to Carson Drive, which will therefore keep Carson Drive as a quiet dead-end street. The EVA has been relocated to the southern portion of the site, connecting to Crooks Rd. south of Building
- There was concern from the residents on Carson Dr. about the possibility of future residents/guests from our proposed community parking on Carson Drive and accessing their units. We have addressed these concerns by providing items mentioned previously (additional guest parking, 8-foot fence, landscape buffer/green belt area, and elimination of EVA at Carson Dr.)

If you should have any questions or require any additional information, please feel free to contact this office.

Sincerely,

PEA, Inc.

Gregory Bono, P.E.
Project Coordinator

July 20, 2020

Brent Savidant City of Troy Planning Department 500 W. Big Beaver Troy, MI 48084

RE: Crooks Road Townhomes Preliminary Site Plan Submittal – Architectural Design Statements

Dear Mr. Savidant:

The following are responses to the requested statements in item #6 on the site plan application:

A. Description of context of site and how project responds to character of the area:

The site is located at the Northern most edge of Neighborhood Node I on Crooks near Wattles. According to the zoning ordinance the Neighborhood Nodes should draw people and should be visually distinguished from the surrounding area because of their greater intensity, density and design. The intent for this site is to build a 74-unit townhouse project that will begin to increase pedestrian activity in this node within a distinctive architecturally designed community.

We have added various amenities to the site including a pavilion, foot trail along with benches and picnic tables.

B. Description of the project's design concept:

The Design concept of the community is a townhome with full balconies facing the green spaces, thoughtful sidewalk placement for safe pedestrian and cycle activity as well as conservation and protection of the existing natural existing features the site. We aim to provide our future residents all the benefits of living in the area while maintenance free social lifestyle.

C. Description of how the project achieves the design concept:

We are proposing modern open interior floor plans, each home to have a traditional 2-car side by side garage. We are also, protecting many of the on-site natural features and many existing trees as well as, proposing the addition of a combination many of new deciduous trees within the community and evergreen trees along the northern and western property lines. The exterior architecture focuses on breaking down the 3-story building mass through delineating the individual homes. The Townhome fronts maximize the connection to outdoor space with the Townhome fronting on landscaped green spaces and landscaped court yards. All homes will have large second floor balcony and ground level porches which flow into a professionally landscaped tree lined green spaces and courtyards. The site

design connects these unit front garden spaces through interconnected walks creating a social walkable neighborhood that seeks to be connected to the future developments of the node.

D. Description of the development program (intended uses, known or possible tenants, etc.):

Our Proposed Development will have a target market that will include:

• Young adults moving out of their parents' house and living on their own

• Younger adults recently married or in a co-habitant relationship

• Younger adults starting families and/or with younger children

• Empty nesters looking to downsize, eliminate maintenance responsibilities, and live close to nice restaurant and shopping destinations.

E. Description of how the building materials enhance the design concept:

The building materials have been chosen based on their qualities of durability, sustainability, longevity, traditional appearances and low maintenance. The bases of the buildings are grounded by the use of a dark earth tone brick as a foundation material. The building fronts rise into 3 distinctive gabled elevations clad in shake, horizontal and vertical fiber cement siding which allude to patterns of existing nearby residential facades. The use of traditional materials in a modern expression of traditional pure forms will create a transitional yet timeless architectural feel. The generous amounts of windows allow for a strong connection to the outside and a modern expression on the façade.

F. If the project is in a form-based district, provide a description of how the project meets the transparency requirements:

The units that front Crooks Road will be provided with a private garden space partially enclosed by a 48" tall garden fence screen and landscape hedge green screening as a buffer to the street front, this would account for 42% of the first floor fronting the right of way. The first-floor building façade includes an additional 28% glazing transparency.

G. Note any other important elements, features or design concepts not covered above that will help the planning commission understand how the project fosters excellence in design of the built environment:

Our revised plans have greatly taken into consideration the past comments from Planning Commission Board Members and adjacent Neighbors. We have worked on concerns that were expressed at the September 24th, 2019 and January 14th, 2020 Planning Commission Meeting.

We have completely reoriented the design of the townhomes, layout and have doubled the land by acquiring a property to the south of the original proposed project, decreased density, increased green space and protection of existing natural features on the property and greatly increased on site guest parking. Regarding the northern property line and adjacent single family to the north, we have increased the setback to 40 feet, provided 20 feet of a green belt as well as the required 1 large evergreen per 10 feet. In addition to this, we are also proposing a 6-foot decorative black aluminum fence along the entire northern property line. To create transition we dropped the height in Building "B", "C", "D" which are adjacent to single family residential to 27'-8 11/16" tall and 2 ½ stories which is actually lower than permitted height of single family residential R1A- R1E at 30 ft.

Our updates were done to address neighbor concerns which were centered around visual impact and the removal of the initially proposed "EVA" Emergency Vehicular access to maintaining Carson Drive as a quiet dead-end street. There was also concern from the residents on Carson about the possibility of future residents on our proposed community parking on Carson Drive and then walking over to our proposed community. In response to this, we have addressed these concerns by providing ample guest parking, proposing placement of a 6ft. privacy fence along the entirety of the northern property as well as, landscape buffer and green belt. In addition to that, in our most updated plans we remove our previously proposed "EVA" Emergency Vehicular Access. This will ensure that Carson Drive remains a permanent quiet dead end and prohibit any parking and walking over on Carson Drive from the potential future residents on our proposed Project as well as, provides a nice green belt, tree screening, privacy fence and large setbacks.

GRAPHIC SCALE

-30 0 15 30 60 120

(in feet)
1 inch = 30 ft.

N

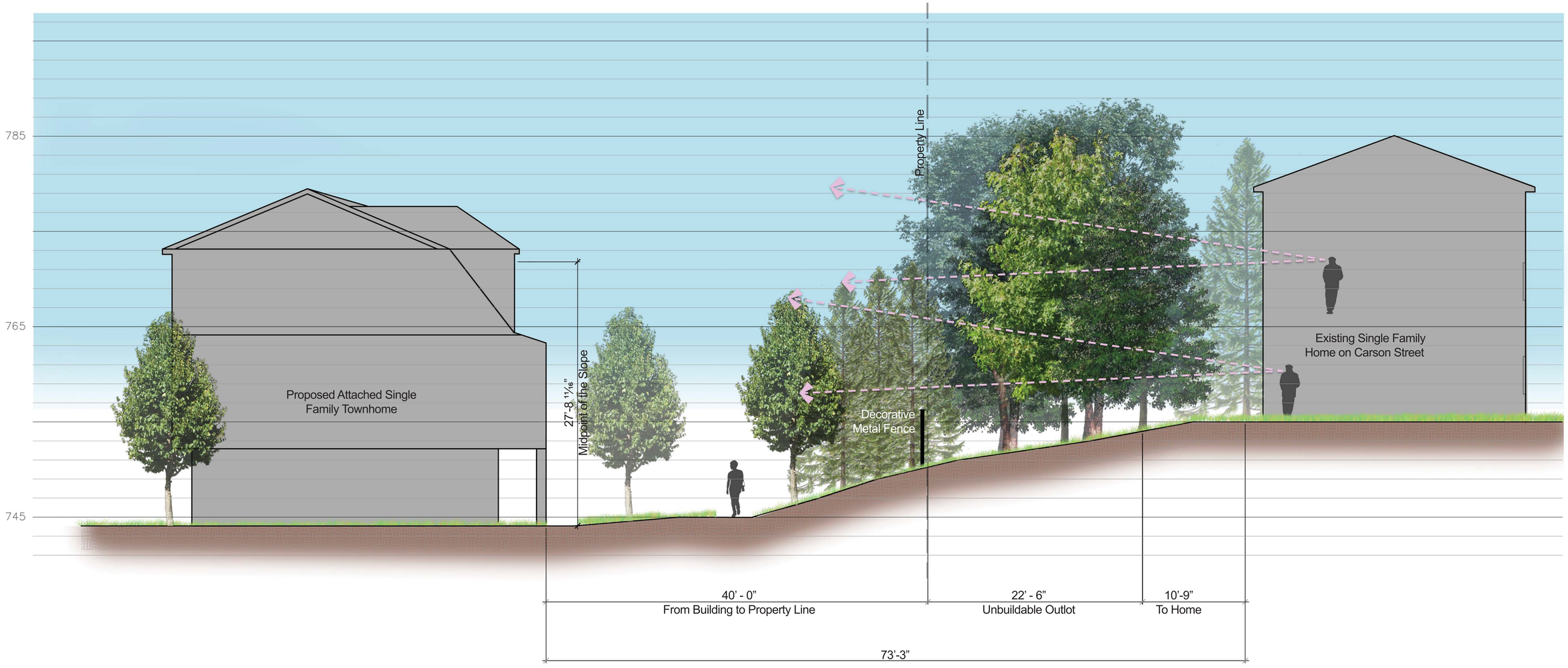


Crooks Rd Townhomes

Troy, Michigan

March, 2020

PEA, Inc.
7927 Nemco Way, Ste 115
Brighton, MI 48116
t: 517.546.8583
f: 517.546.8973
www.peainc.com



GRAPHIC SCALE

-5 0 5 10 20

(in feet)
1 inch = 5 ft.

Crooks Rd Townhomes

Troy, Michigan

March, 2020

PEA, Inc.
7927 Nemco Way, Ste 115
Brighton, MI 48116
t: 517.546-8583
f: 517.546.8973
www.peainc.com







Chair Faison called the Regular meeting of the Troy City Planning Commission to order at 7:01 p.m. on January 14, 2020 in the Council Chamber of the Troy City Hall.

1. ROLL CALL

Present:
Ollie Apahidean
Karen Crusse
Carlton M. Faison
Michael W. Hutson
Tom Krent
David Lambert
Marianna Perakis
Sadek Rahman
John J. Tagle

Also Present:
R. Brent Savidant, Community Development Director
Ben Carlisle, Carlisle Wortman Associates
Julie Quinlan Dufrane, Assistant City Attorney
Jackie Ferencz, Planning Department Administrative Assistant
Kathy L. Czarnecki, Recording Secretary

2. APPROVAL OF AGENDA

Resolution # PC-2020-01-001
Moved by: Lambert
Support by: Rahman

RESOLVED, To approve the Agenda as prepared.

Yes: All present (9)

MOTION CARRIED

3. APPROVAL OF MINUTES

Mr. Krent asked the minutes to reflect a correction in the time of adjournment.

Resolution # PC-2020-01-002
Moved by: Krent
Support by: Tagle

RESOLVED, To approve the minutes of the December 10, 2019 Regular meeting as revised.

Yes: All present (9)

MOTION CARRIED

4. PUBLIC COMMENT – Items not on the Agenda

There was no one present who wished to speak.

PUBLIC HEARING

5. PUBLIC HEARING – REZONING REQUEST (File Number Z 2019-0039) – Proposed Addison Heights Subdivision Rezoning, East of Livernois, South side of Arthur (88-20-27-307-033), Section 27, From P (Vehicular Parking) District to R-1E (One Family Residential) District

Mr. Savidant explained what a rezoning request is and its approval process. He provided a history of the zoning of the property. Mr. Savidant addressed the request as relates to the Rezoning Standards and Master Plan. Mr. Savidant said the applicant wants to construct a residential home on the site. It was recommended that the Planning Commission recommends to the City Council to grant approval of the rezoning request.

The applicant Ross Martin was present.

PUBLIC HEARING OPENED

There was no one present who wished to speak.

PUBLIC HEARING CLOSED

There was discussion on:
- Ownership of adjacent parcels.
- Potential development in the future along Livernois and the right of way.

Resolution # PC-2020-01-003
Moved by: Hutson
Support by: Tagle

RESOLVED, That the Planning Commission hereby recommends to the City Council that the P (Vehicular Parking) District to R-1E (One Family Residential) District rezoning request, as per Section 16.03 of the City of Troy Zoning Ordinance, located on the south side of Arthur, East of Livernois, within Section 27, being approximately 0.24 acres in size, be **GRANTED** for the following reasons:

1. The proposed rezoning is consistent with the Master Plan.
2. The proposed rezoning does not appear to cause or increase any nonconformity.
3. If rezoned the property will be capable of accommodating service and facility loads caused by use of the development.
4. The rezoning does not appear to impact public health, safety, or welfare.
5. The rezoning will ensure compatibility with adjacent uses of land.

Yes: All present (9)

MOTION CARRIED

PRELIMINARY SITE PLAN APPROVALS

6. PRELIMINARY SITE PLAN REVIEW (File Number SP2019-0022) – Proposed Crooks Road Townhomes, West side of Crooks, North of Wattles, Section 17, Currently Zoned NN (Neighborhood Node "I") District

Ms. Perakis disclosed she formerly lived in the Woodlands subdivision from 2008 to 2014 and her home on Parkstone backed up to the subject property. She also disclosed that the applicant is a current neighbor of hers and she was in opposition to the applicant's proposed apartment project that was formerly considered by the City. Ms. Perakis said there is no conflict of interest and that she can be objective in her consideration of the application.

Mr. Carlisle outlined the revisions the applicant proposes to the application based on discussion from the Planning Commission, staff and the public when considered at the September 24, 2019 meeting. He noted the site plan revisions are identified on page 5 of his report dated January 7, 2020. Mr. Carlisle reported there are significant outstanding site plan items on the revised site plan, as relates to screening/landscaping along adjacent residential property lines, tree removal loss due to the stormwater facility and lighting impact to adjacent property.

Mr. Carlisle recommended to postpone the application to allow the applicant to address site plan items.

Present were Carmine Avantini, AICP, of Community Image Builders, Arvin Stafa, Brandon Bronikowski, James Butler and Greg Bono, both of Professional Engineering Associates (PEA).

Mr. Avantini presented a PowerPoint presentation and addressed the additional acreage, decrease in density, increase in guest parking, traditional two-car garages, increased setback, screening and buffer to residential, building height, line of sight visual, grade difference, location of EVA, parking and pedestrian traffic. Mr. Avantini indicated several site plan issues identified by the Planning Consultant have been addressed. He asked for a favorable vote conditioned on the remaining issues that could be administratively addressed through engineering and final site plan processes.

Mr. Stafa addressed building height, grading, outlots and public engagement. Mr. Bronikowski addressed building materials and circulated building material samples. Mr. Bono addressed stormwater management. Mr. Butler said concerns relating to floodplain and wetlands would be addressed through the engineering process.

Chair Faison opened the floor for public comment.

The following spoke in opposition, voicing concerns with grade difference, drainage, flooding, compatibility, property values, application process, no public engagement, traffic impact and safety.

- James Chang, 4397 Bender
- Latish Adnani, 4219 Crooks
- Tom Reiss, 1400 Bradbury
- Jerry Rauch, 4187 Penrose
- Doug and Linda Gerard, 4197 Carson
- Mike and Laura Lipinski, 4233 Carson
- Thomas Mikulski, 4408 Cahill
- Daphne (Ntiri) and Jean-Claude Quenum, 4198 Carson
- JinMing Xu, 4179 Carson
- Bob Laudicina, 1286 Fountain
- Paul Balas, 4087 Parkstone
- Nadwa Gowda, 4412 Lehigh *(illegible)*
- Trevor Babi, 4537 Cahill
- Jeff Silagy, Whisper Way
- Raghav Kashi, 4420 Cahill

David Donnellon, architect and municipal planner; represented the seller of the property. He stated the development is permitted by right in the Neighborhood Node zoning district and addressed the balance between the Neighborhood Node and Single Family Residential zoning districts.

Chair Faison closed the floor for public comment.

There was discussion on:

- Grading difference, as relates to drainage and engineering design process.
- Stormwater management.
- Outlots; ownership, potential to build, property lines.
- Wetland and floodplain, as relates to MDEQ and engineering design process.
- Compatibility and transition to residential, as relates to landscape buffer, building height, line of vision, building materials.
- Line of vision scale and calculations.
- Neighborhood Node districts as relates to Master Plan, philosophy.
- Traffic impact; study.
- “Real” density.
- Engagement with neighbors; strongly encouraged.
- Intent of Master Plan.
- Joint meeting with City Council to discuss Neighborhood Node zoning districts.

Ms. Dufrane interjected the discussion to state the proposed development is permitted by right on the subject property.

Mr. Avantini asked the Board's consideration to postpone the item to allow an opportunity to respond to and investigate comments made this evening and to possibly gain insight from the joint meeting.

Resolution # PC-2020-01-004
Moved by: Krent
Support by: Lambert

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Crooks Road Townhomes, located on the west side of Crooks, North of Wattles, Section 17, within the NN (Neighborhood Node "I") District, be postponed, for the following reasons:

1. Allow the applicant time to digest comments made by residents, Planning Commission and staff and to address the site plan items identified in the Planning Consultant report and staff review.

Yes: Apahidean, Crusse, Lambert, Faison, Krent, Rahman, Tagle
No: Hutson, Perakis

MOTION CARRIED

Chair Faison called for a recess at 9:33 p.m. The meeting reconvened at 9:50 p.m.

7. PRELIMARY SITE PLAN REVIEW (File Number SP JPLN2019-0040) – Proposed Square Lake Court Townhomes, South side of Square Lake Road, West of Dequindre, Section 12, (88-20-12-200-025), Currently Zoned NN (Neighborhood Node "N") District

Mr. Carlisle reviewed the Preliminary Site Plan application for Square Lake Court Townhomes. He addressed the need for a dedicated guest parking area, a cross-access easement along the southern property line, additional trees along the west property line, shielding light fixtures and architectural detail on elevations.

Mr. Carlisle recommended to postpone the Preliminary Site Plan application to allow the applicant to address the guest parking, architectural detailing and other site plan concerns identified in his report dated January 7, 2020.

Present were Renis Nushaj, Erion Nikolla of Eureka Building Company and James Butler of Professional Engineering Associates (PEA).

Mr. Butler addressed the outstanding site plan issues relating to the photometric plan, landscaping and guest parking. He said the additional trees would be added and the light fixture shielded. Mr. Butler indicated 10 to 12 parallel spaces could be dedicated for guest parking along the southern property line.

Mr. Nikolla addressed design and architectural features of the elevations, building materials and colors. Building material samples were circulated.

Mr. Nushaj addressed the City's requirement for a cross-access easement. Mr. Nushaj believes a cross-access easement agreement should be a private contract among involved parties, not a requirement of the City, and views the City's requirement as an encumbrance on private property.

There was discussion on:
- Guest parking; accommodation and layout.
- Ownership of property to south.
- Cross-access easement and EVA requirements.
- Traffic circulation; no comments from Engineering review.
- Recent revisions to site plan.

Ms. Dufrane referenced Zoning Ordinance sections that relate to the requirement of a cross-access easement and exceptions to that requirement; i.e., if it is demonstrated that there are either physical limitations or functional circumstances that prevent such access from being installed.

Mr. Carlisle said the EVA is noted on the site plan; the cross-access easement is not noted on the site plan.

Mr. Savidant stated that both the Fire Department and Engineering Department recommend a cross-access easement, but it is the authority of the Planning Commission to place a cross-access easement on a property.

Resolution # PC-2020-01-005
Moved by: Krent
Seconded by: Crusse

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Square Lake Court Townhomes, 14 units, located on the South side of Square Lake, West of Dequindre (PIN 88-20-12-200-025), Section 12, Zoned NN (Neighborhood Node "N"), be granted, subject to the following:

1. Add dedicated guest parking.
2. Provide cross-access easement along southern property line.
3. Add additional trees along west property line.
4. Replace light fixture with shielded one.
5. Identify all materials.
6. Add additional architectural details to the side elevations.

Yes: Crusse, Lambert, Faison, Krent, Rahman, Tagle
No: Apahidean, Hutson, Perakis

MOTION CARRIED

OTHER BUSINESS

8. PLANNING COMMISSION 2020 MEETING SCHEDULE – REVISION

Mr. Savidant asked for the Board's consideration to revise the 2020 Planning Commission meeting calendar by removing the March 10, 2020. He explained an election is being held that day and there could be a conflict in reserving a meeting room.

Resolution # PC-2020-01-006
Moved by: Lambert
Seconded by: Rahman

RESOLVED, To revise the 2020 Planning Commission Schedule and remove the March 10, 2020 date.

Yes: All present (9)

MOTION CARRIED

9. ELECTION OF OFFICERS

Chair Faison opened the floor for nominations of Chair. Ms. Crusse nominated Mr. Faison. Mr. Hutson nominated Mr. Krent. There were no further nominations placed on the floor.

Mr. Faison said he would be happy to serve another year or happy to step down to allow the opportunity to another member.

Mr. Krent accepted the nomination.

Roll call vote on the nomination of Mr. Faison for Chair

Yes: Crusse, Lambert, Faison, Rahman
No: Apahidean, Hutson, Krent, Perakis, Tagle

MOTION FAILED

Roll call vote on the nomination of Mr. Krent for Chair

Yes: Apahidean, Lambert, Faison, Hutson, Krent, Perakis, Rahman, Tagle
No: Crusse

MOTION CARRIED

Mr. Krent is the newly elected Chair.

Chair Faison opened the floor for nominations of Vice Chair. Mr. Tagle nominated Mr. Lambert. There were no further nominations placed on the floor.

Mr. Lambert accepted the nomination and is the newly elected Vice Chair.

There was discussion on the role, structure and formation of the Planning Commission representative to the Zoning Board of Appeals; consideration might be given to making revisions.

Chair Faison opened the floor for nominations of Zoning Board of Appeals (ZBA) Representative. Mr. Apahidean nominated Mr. Rahman. There were no further nominations placed on the floor.

Mr. Rahman accepted the nomination and is the newly elected ZBA Representative.

---

10. PUBLIC COMMENT

There was no one present who wished to speak.

11. PLANNING COMMISSION COMMENT

There were general Planning Commission comments, some relating to:

- Compatibility, transition of Neighborhood Nodes to single family residential.
- Opening the floor for public comment following a Public Hearing.
- 2020 Michigan Regional Future City Competition at Novi Showplace on January 28.

Chair Faison was acknowledged and thanked for a good job as Chair!

A warm welcome was extended to Ms. Perakis.

The Regular meeting of the Planning Commission adjourned at 11:19 p.m.

Respectfully submitted,

FOR CARLTON FAISON

Carlton Faison, Chair

Jackie Ferency FOR Kathy Czarnecki

Kathy L. Czarnecki, Recording Secretary

Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: September 17, 2019

Preliminary Site Plan Review
For
City of Troy, Michigan

Applicant: Tollbrook North LLC

Project Name: Crooks Road Townhomes

Plan Date: August 30, 2019

Location: Between Wattles Road and Long Lake Road, on the East side of Crooks Road

Zoning: Neighborhood Node (NN) – Node "I"

Action Requested: Preliminary Site Plan Approval

SITE DESCRIPTION

The subject site is located on the east side of Crooks Road, between Wattles Road and Long Lake Road. The approximate 2.73-acre site is improved with a single-family home. The house will be removed if the proposed development is approved.

The applicant proposes to develop the site as a 60-unit townhome project, grouped into a total of eight (8) buildings. Access to the site is via Crooks Road. The applicant proposes an Emergency Vehicle Access (EVA) connection at the site's northwest boundary at Carson Drive.

Buildings A and B front Crooks Road, Buildings C-G front the interior drive, and Building H is located at the rear of the site. The number of units in each building vary from 4 in Building A to 12 in building H. All units are three (3) stories, accompanied by a 2-car tandem garage.

The property is zoned Neighborhood Node (Node "I") and multiple family residential is a permitted use. While we support the use of multiple family residential as it is permitted by zoning, we met with the applicant on August 13, 2019 to discuss the proposed site plan and

outline opportunities to improve the proposed layout. These opportunities focused on both reducing impacts upon adjacent properties and providing a better and safer layout for future residents. Many of the opportunities discussed at the August 13, 2019 meeting have not been addressed by the applicant. See Building Arrangement section for more details.



Size of Subject Property:
The parcel is 2.73 net acres

Proposed Uses of Subject Parcel:
Sixty (60) townhome units

Current Use of Subject Property:
The subject property is currently improved with a single-family home

Current Zoning:
The property is currently zoned NN, Neighborhood Node District (Node "I")

Surrounding Property Details:

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

NATURAL FEATURES

Topography: A topographic survey has been provided on sheet C-1.0 and shows that the site has a slightly higher elevation in the northwest portion of the property. Elevations decrease heading toward its south and southwest boundaries.

Wetlands: There are no wetlands on site.

Floodplain: An existing floodplain is located at the southwest corner of the site and is not intended to be developed. A segmental retaining wall has been proposed to protect this feature.

Woodlands: A tree inventory has been provided on sheet T-1.1. The tree inventory and calculations include the single-family parcel to the north. The tree inventory and calculations must be corrected to only include the parcel that is proposed for development.

Items to be addressed: *Update tree inventory and calculations to only include the parcel that is proposed for development.*

BUILDING ARRANGEMENT

While we support the use of multiple family residential as it is permitted by zoning, we met with the applicant on August 13, 2019 to discuss the proposed site plan and outline opportunities to improve the proposed layout. These opportunities focused on both reducing impacts upon adjacent properties and providing a better and safer layout for future residents. Many of the opportunities discussed at the August 13, 2019 meeting have not been addressed by the applicant.

These opportunities include:

- Stormwater location: The applicant is proposing underground detention along the southern property line. The applicant should consider relocating the underground detention to the northern property line. By doing so, the applicant is able to provide additional buffer to the adjacent single-family residential. It's worth noting that the parcel to the south is also zoned Neighborhood Node and will be developed for a more

intense use than single-family residential. The need for a large buffer along the southern property line is not necessary.

- Shift buildings to the south: By relocating underground detention along the northern property line, the applicant can shift the buildings to the south to provide more buffer along the northern property line.
- Replace vinyl fence along northern property line: The applicant proposes a vinyl fence along the northern property line rather than providing the required landscape screening. There is no proposed landscaping along the northern property line. Using a fence rather than a landscape screening requires approval from the Planning Commission. Relocating the underground detention along the northern property line should allow for the opportunity to provide the required landscape buffer with or without additional fence screening.
- Provide a slight jog in the internal drive to reduce "canyon" effect and reduce internal speeding: Lining the 400-foot long straight internal drive are thirty-eight 40-foot tall townhomes. The overall length of the road, coupled with the height of the building, may create a "canyon" effect from Crooks, without any visual breaking up of the massing. Furthermore, the length of the road, and the "straightness" encourages increased vehicle speeds. Providing a slight jog in the internal drive accomplishes two goals: 1). Providing visual relief and breakup in massing of buildings from Crooks; and 2). Discouraging internal speeding.
- Provide additional guest parking spaces: The applicant is proposing two tandem garage spaces for each unit. While the number of spaces meets the required parking, understanding human nature, many residents may not want their car "blocked" in the garage by another car. That being the case, many of the guest spaces will be used by residents.
- Consideration of changes to the elevations along the northern property lines to reduce impact of second and third story elevations, including windows, facing adjacent residential properties.
- Break up 12-unit Building H: The 168-foot length of Building H creates a significant visual mass, especially for residents on Carson Drive, as it is the primary view into the development from Carson Drive.
- Pedestrian Connection: Carson Drive has sidewalks. Extend sidewalk internal sidewalks to connect to existing Carson Drive sidewalks.
- Engineering Review:
    - Reconfigure the rear part of the site to eliminate the two triangular-shaped areas created by the skewed orientation of Building K. It would be preferable to reorient Building K.
    - The guest parking located along the reverse curve near the entrance should be on a straight taper so that the parking stalls are parallel to each other.
    - It is unclear how trash collection will be handled. Site is configured such that a garbage truck may have difficulty circulating some portions of the site.

- The design of the garages is not true "pull-through" as there is only access through one door. This will require additional maneuvering to fit 2 cars and could lead to vehicles parking or standing in drive aisles, blocking access to adjacent units.
- Show sight triangles. The second north-south drive aisle between the building units is located in the horizontal curve of the main drive access. It appears that the sight parking exiting this aisle may be impaired by the northernmost building unit or cars in the guest parking lot.
- Accessible parking spaces should be dispersed throughout the site.

Items to be addressed: *Address layout issues noted within this report*

AREA, WIDTH, HEIGHT, SETBACKS

Table 5.03.B.3, Building Form C of Section 5.03, Standards Applicable to All Districts of the Zoning Ordinance establishes the dimensional requirements for the NN, Neighborhood Node District. The requirements and proposed dimensions are shown in the following table.

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies. Planning Commission can grant up to a 30-foot building placement.
Side (north)	N/A, building may be placed up to property line	Buildings C, E, G: 23.46 feet Building H: 15-feet	Complies
Side (south)	N/A, building may be placed up to property line	46.2 feet	Complies
Rear (west)	30-foot minimum setback	56.68 feet	Complies
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 40 feet (as indicated on building elevations)	Complies
Lot Coverage (Building)	30%	32%	Complies
Minimum Open Space	15%	43.2%	Complies
Parking Location	Cannot be located in front yard	Within garages	Complies

Items to be addressed: *Address Site Plan issues noted within this report*

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Residential: 2 spaces per unit	60 Units = 112 spaces	120 garage spaces + 9 guest spaces = 129 spaces
Barrier Free	0	0
Bicycle Parking	0	Located within garages
Loading	0	0
Total	**112 spaces**	**112 spaces within garages and 17 guest spaces**

Items to be Addressed: *Address Site Plan issues noted within this report*

SITE ACCESS AND CIRCULATION

Vehicular access to the site is via Crooks Road. The applicant proposes an Emergency Vehicle Access (EVA) connection at the site's northwest boundary at Carson Drive. A truck t-turn around is provided adjacent the the EVA.

The applicant is proposing a concrete, internal pedestrian sidewalk network.

Items to be addressed: *None*

LANDSCAPING

A landscaping plan has been provided on sheet L-1.0 and are supplemented by tree protection and planting details on sheet L-1.1. The applicant should verify that the plant list provided on sheet L-1.0 corresponds to drawings provided. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	Provided:	Compliance:
North Property Line:			
Landscape buffering: Required buffering between two differentiating land uses. Alternative 1 or 2.	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. Alternative screening method may be considered by the Planning Commission.	6-foot tall vinyl privacy fence	Planning Commission review is required in order to determine whether screening is sufficient.

East Property Line:			
(Crooks Road) Street Trees: The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.	200 feet = 7 trees	7 trees	Complies
West Property Line:			
Landscape buffering:	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet.	20 preserved trees, floodplain area, and segmental retaining wall	Complies
Overall:			
Site landscaping: A minimum of twenty percent (20%) of the site area shall be comprised of landscape material. Up to twenty-five percent (25%) of the required landscape area may be brink, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.	15%	43.2%	Complies
Mitigation:	The tree inventory and calculations include the single-family parcel to the north. The tree inventory and calculations must be corrected to only include the parcel that is proposed for development.		

Transformer / Trash Enclosure:

The applicant has not indicated a central trash enclosure. It is assumed that each unit will have trash bins in the garage to be rolled out for trash pickup. However, as note above, Engineering has questioned the ability to service the site with a trash truck.

***Items to be Addressed**: 1). Planning Commission to consider the use of a vinyl fence in place of required screening; 2). Confirm ability for truck to maneuver site; and 3). Correct tree inventory and calculations.*

PHOTOMETRICS

A photometric plan has been provided on sheet SL-1.0, and additional details are provided on sheet SL-1.1. A total of 123 building light fixtures are proposed of three (3) varying types. Wall

light fixtures placed at each unit's entrance and rear are described as having a height of six (6) feet. A note indicates that all area light fixtures are to be directed away from neighboring properties and roadways.

The fixture submitted is not compliant with ordinance requirements as the light source is not fully shielded.

Items to be Addressed: *Replace fixture*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided on sheets A-1 through A-13. The elevations provided show architectural details, variations in material and pattern (brick, siding, asphalt shingles and wood trim wrapped with aluminum), as well as general color scheme. The applicant should clarify the siding material and bring a material sample to the meeting.

Items to be Addressed: *Clarify siding material*

DESIGN STANDARDS and SITE PLAN REVIEW STANDARDS

The Neighborhood Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

Section 5.06.E. outlines Design Standards:

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.06.E for standard details

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
2. *Development shall incorporate the recognized best architectural building design practices.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*

Please see Section 8.06 for standard details

CWA Response: Based upon our site plan comments noted herein, we find that the standards set forth in the Neighborhood Node Design Standards and Site Plan Review Standards have not

been met. We find that the standards of compatibility and transitions may be able to be met with the site plan changes noted herein this report.

RECOMMENDATION

Overall, we find the proposed use to be appropriate for the site, however, we find that the applicant has not meet the Neighborhood Node Design Standards set forth in Section 5.06.E and Site Plan Review Standards set forth in Section 8.06.

We recommend that the Planning Commission postpone action to allow the applicant to address site plan items noted in our report. Specifically the items noted in our report should be addressed to meet the Site Plan Review Standards and Neighborhood Node Design Standards of compatibility and transitions.

Sincerely,

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: September 17, 2019
January 7, 2020

Preliminary Site Plan Review
For
City of Troy, Michigan

Applicant: Tollbrook North LLC

Project Name: Crooks Road Townhomes

Plan Date: November 13, 2019

Location: Between Wattles Road and Long Lake Road, on the West side of Crooks Road

Zoning: Neighborhood Node (NN) – I

Action Requested: Preliminary Site Plan Approval

SITE DESCRIPTION

The subject site is located on the east side of Crooks Road, between Wattles Road and Long Lake Road. The approximate 5.73-acre site is improved with two single-family homes. The two houses will be removed if the proposed development is approved.

The applicant has made significant modifications since the previous application, including purchasing the 3.0-acre parcel to the south and removing the Emergency Vehicle Access to Carson Drive. A list of full changes is included on Page 4 of this report. All housing development will be on the east side of the drain, and the site's detention pond will be on the west side of the drain.

The applicant proposes to develop the site as a 74-unit townhome project, grouped into a total of thirteen (13) buildings. Access to the site is via Crooks Road.

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*

Buildings A, H, and R front on Crooks Road, and all other buildings front on interior drives. The number of units in each building vary from 5 to 6. All units are three (3) stories in height and accompanied by a 2-car tandem garage.



Size of Subject Property:
The parcel is 5.72 net acres

Proposed Uses of Subject Parcel:
Seventy-four (74) townhome units

Current Use of Subject Property:
The subject property is currently improved with a single-family home

Current Zoning:
The property is currently zoned NN, Neighborhood Node District

Surrounding Property Details:

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Vacant/Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

NATURAL FEATURES

Topography: A topographic survey has been provided on sheet C-1.0 and shows that the site has a slightly higher elevation in the northwest portion of the property. Elevations decrease heading toward its south and southwest boundaries. Grading will occur on the west side of the drain to accommodate the stormwater facility.

Wetlands: The applicant has noted no wetlands on site. The applicant will be required to confirm that there are no wetlands onsite and if so, obtain any necessary permits for floodplain impact as part of the final engineering review.

Floodplain: The Lane Drain, and associated floodplain is located at the southwest corner of the site. No development in intended with in the floodplain, however, the proposed stormwater facility is located on the west side of the drain, which may be in floodplain.

The applicant will be required to confirm the floodplain and obtain any necessary permits for floodplain impact as part of the final engineering review.

Woodlands: A tree inventory has been provided on sheet T-1.1. The applicant has identified a total of 69 woodland trees and 6 landmark trees on site. Of the 69 woodland trees, the applicant is removing 49 and preserving 20. Of the 6 landmark trees, the applicant is removing 5 and preserving 1.

Replacement Details		
Protected Tree	**Inches Removed**	**Replacement Required**
Landmark	108 inches	108 inches
Woodland	489 inches	245 inches
Preservation/Mitigation	**Inches Preserved**	**Credit**
Landmark	13 inches	26 inches
Woodland	183 inches	366 inches

Protected Replacement Required	353 Inches
Preservation Credit	392 Inches
Total	**+ 39-inch credit**
Total Tree Mitigation	Zero. The number of inches preserved and credited exceed the mitigation required.

The tree removal and mitigation may need to be updated based on proposed means of access to the stormwater detention facility. See stormwater section below.

Items to be addressed: *Update tree removal and mitigation based upon impact as a result of access to stormwater facility.*

PREVIOUS PLANNING COMMISSION REVIEW

The application was last considered in September 2019. Action on the site plan was postponed. Staff and Planning Commission discussion included:

- Elevations, building material, height, and setbacks
- Density
- Guest parking, number of spaces, off-street parking
- Internal road, traffic calming devices
- Transition to adjacent residential, required landscaping, proposed fence
- Compatibility with neighborhood residential
- Parcels for sale to the north and south of subject property
- Meeting and/or discussion with neighbors
- Rendering, accurate representation visually in relation to site plan
- Trash collection
- Discretion for Planning Commission with regards to site plan improvements
- Neighborhood node zoning district as it relates to compatibility and transition to neighborhood

There were a number of residents who spoke in opposition to the project. These comments include:

- Density
- Transition
- Compatibility
- Traffic impacts
- Parking
- Safety of children
- Over-development
- Impact on existing utilities
- Emergency access
- School capacity
- Impact on environment

- Emergency access
- Home values
- Snow removal

SITE PLAN CHANGES

Based on the discussion from the Planning Commission, staff, and the public, the applicant has amended their site plan. Changes include:

- Purchased 3.0 acres to the south
- Increased number of units but decreased overall density:
  - Original density: 21.9 units per acre (60 / 2.73 = 21.9)
  - Revised density: 12.9 units per acre (74 / 5.73 = 12.9)
- Relocated stormwater detention to the west side of the drain
- Increased unit size square footage
- Removed proposed emergency access to Carson Drive
- Increased setback along northern property line from 24 to 40-feet
- Reduced lot coverage from 32% to 19.3%
- Increased open space from 43.2% to 55.0%
- Increased guest parking spaces from 17 to 31

SITE ACCESS AND CIRCULATION

Vehicular access to the site is via Crooks Road. The applicant has removed the Emergency Vehicle Access (EVA) connection at Carson Drive. The Fire Department has reviewed access and circulation and supports the layout provided that the applicant adds an EVA at the extreme south end (direct connection to Crooks Road). The EVA would eliminate six (6) "guest" parking spaces.

When the property to the south is developed, the EVA could come out, parking could go back in (if needed) and cross access between the sites established.

The applicant is proposing a concrete, internal pedestrian sidewalk network. However, there are no direct connections from the front door/steps of each unit to the internal sidewalks. The applicant should clarify if there are direct sidewalk connections to the front door/step.

Items to be addressed: *1). Provide EVA with direct connection to Crooks Road; and 2). Show direct sidewalk connection from each front door/step to the internal sidewalk network.*

AREA, WIDTH, HEIGHT, SETBACKS

Table 5.03.B.3, Building Form C of Section 5.03, Standards Applicable to All Districts of the Zoning Ordinance establishes the dimensional requirements for the NN, Neighborhood Node District. The requirements and proposed dimensions are shown in the following table.

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies. Planning Commission can grant up to a 30-foot building placement.
Side (north)	N/A, building may be placed up to property line	40-feet	Complies
Side (south)	N/A, building may be placed up to property line	80 feet	Complies
Rear (west)	30-foot minimum setback	139 feet	Complies
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 37.5 feet to peak of roof (as indicated on building elevations)	Complies
Lot Coverage (Building)	30%	19.3%	Complies
Minimum Open Space	15%	55.0%	Complies
Parking Location	Cannot be located in front yard	Within garages	Complies

Items to be addressed: *None*

TRAFFIC

The city's traffic engineering consultant OHM has been asked to review the plan from a traffic impact standpoint. At the time of writing this memo, the review has not been finalized. The traffic review will either be delivered to the Planning Commission and the applicant at the meeting or emailed out prior to the meeting.

Items to be Addressed: *Comply with traffic findings as necessary.*

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Residential: 2 spaces per unit	74 Units = 148 spaces	148 garage spaces + 31 guest spaces = 179 spaces
Barrier Free	0	0
Bicycle Parking	0	Located within garages
Loading	0	0
Total	**148 spaces**	**148 spaces within garages and 31 guest spaces**

Items to be Addressed: *None*

LANDSCAPING

A landscaping plan has been provided on sheet L-1.0 and are supplemented by tree protection and planting details on sheet L-1.1. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	Provided:	Compliance:
North Property Line:			
Landscape buffering: Required buffering between two differentiating land uses. Alternative 1 or 2.	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. = 590 feet / 10 = 59 narrow evergreen Or Alternative screening method may be considered by the Planning Commission.	59 narrow evergreen + 6-foot tall vinyl privacy fence	Planning Commission to consider the use of a vinyl fence in addition to required screening. Alternative material to vinyl should be considered.
West Property Line:			
Landscape buffering:	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet.	5 trees	Does not comply
East Property Line:			
(Crooks Road) Street Trees:	200 feet = 7 trees	7 trees	Complies

The Ordinance requires that the greenbelt shall be landscaped with a minimum of one (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.			
Overall:			
<u>Site landscaping:</u> A minimum of fifteen percent (15%) of the site area shall be comprised of landscape material. Up to twenty-five percent (25%) of the required landscape area may be brink, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.	15%	55%	Complies

The applicant has provided a colored site plan that indicates that the significant screening along the western propriety line will remain. However, with grading due to the stormwater facility it appears that much the existing trees in the area outline in red in the graphic below will be removed. The applicant should confirm removal of existing trees and indicate screening as a result of the installation of the stormwater facility.



Transformer / Trash Enclosure:

The applicant has not indicated a central trash enclosure. It is assumed that each unit will have trash bins in the garage to be rolled out for trash pickup.

***Items to be Addressed**: 1). Planning Commission to consider the use of a vinyl fence in addition to required screening; 2). Add additional screening along western property line; and 3). Conform removal of existing tree cover and screening as a result of installation of stormwater facility.*

STORMWATER

The proposed stormwater facility is located on the west side of the drain, which may be in the floodplain. Furthermore, it is not clear how the stormwater facility will be accessed. The applicant should clarify how access will be provided to the stormwater facility. If accessed from Penrose, significant additional tree removal will be required. The applicant will need to update tree removal and mitigation based upon impact as a result of access to stormwater facility.

***Items to be Addressed:** Confirm access to the stormwater facility.*

PHOTOMETRICS

A photometric plan has been provided on sheet SL-1.0, and additional details are provided on sheet SL-1.1. A total of 140 building light fixtures are proposed of two (2) varying types. Wall light fixtures placed at each unit's entrance and rear are described as having a height of six (6) feet. A note indicates that all area light fixtures are to be directed away from neighboring properties and roadways.

Notes on the plan indicate the use of poles, however no pole lights are proposed. The applicant shall verify.

The fixture submitted is not compliant with ordinance requirements as the light source is not fully shielded. Visible light source is particularly important along northern and western property line.

***Items to be Addressed:** 1). Verify use of pole lighting; and 2). Replace fixture*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided on sheets A-1 through A-7. The elevations provided show architectural details, variations in material and pattern (brick, siding, asphalt shingles and wood trim wrapped with aluminum), as well as general color scheme. The applicant should clarify the siding material and bring a material sample to the meeting.

The applicant should provide a 3-D model of the site in context of the surrounding area.

Items to be Addressed: *1). Clarify siding material; 2). Provide material board; and 3). Provide 3-D model of site in context to surrounding area.*

DESIGN STANDARDS and SITE PLAN REVIEW STANDARDS

The Neighborhood Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

Section 5.06.E. outlines Design Standards:

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.06.E for standard details

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
2. *Development shall incorporate the recognized best architectural building design practices.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*

Please see Section 8.06 for standard details

CWA Response: *Make site plan changes as noted, of particular importance is impact upon adjacent properties including proper screening/landscaping, stormwater detention access, confirmation of tree removal/screening, and and lighting.*

RECOMMENDATION

The applicant has made significant modifications since the previous application, including purchasing the 3.0-acre parcel to the south and removing the Emergency Vehicle Access to Carson Drive. Overall, we find the proposed use to be appropriate for the site. However, we find that there are some significant outstanding site plan items to be addressed. Of particular importance is proper screening/landscaping along adjacent residential property lines, tree removal loss due to stormwater facility, and lighting impact to adjacent properties. We recommend that the Planning Commission postpone action to allow the applicant to address site plan items noted in our report:

1. *Confirm access to the stormwater facility.*
2. *Conform removal of existing tree cover and screening as a result of installation of stormwater facility.*
3. *Update tree removal and mitigation based upon impact as a result of access to stormwater facility.*
4. *Provide EVA with direct connection to Crooks Road.*
5. *Show direct sidewalk connection from each front door/step to the internal sidewalk network.*
6. *Comply with traffic findings as necessary.*
7. *Planning Commission to consider the use of a vinyl fence in addition to required screening. Alternative material to vinyl should be considered.*
8. *Add additional screening along western property line.*
9. *Verify use of pole lighting.*
10. *Replace proposed fixture.*
11. *Clarify siding material.*
12. *Provide material board.*
13. *Provide 3-D model of site in context to surrounding area.*

Sincerely,

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

Chair Krent called the virtual Regular meeting of the Troy City Planning Commission to order at 7:03 p.m. on November 10, 2020. Chair Krent introduced the procedure to be followed for a remote meeting.

1. ROLL CALL

Present:
Ollie Apahidean
Karen Crusse
Carlton M. Faison
Michael W. Hutson
Tom Krent
David Lambert
Marianna Perakis
Sadek Rahman
John J. Tagle (audibly only)

Also Present:
R. Brent Savidant, Community Development Director
Ben Carlisle, Carlisle Wortman Associates
Julie Quinlan Dufrane, Assistant City Attorney
Jackie Ferencz, Planning Department Administrative Assistant
Kathy L. Czarnecki, Recording Secretary

2. SUSPENSION OF PLANNING COMMISSION BYLAWS

Resolution # PC-2020-11-027
Moved by: Rahman
Support by: Perakis

WHEREAS, the Michigan Department of Health and Human Services (MDHHS) Director Robert Gordon issued an Order on October 5, 2020 under MCL 333.2253 restricting indoor gathering sizes to protect public health and safety, and

WHEREAS Public Act 228 of 2020 permits public meetings to be held by electronic means where an in-person meeting could detrimentally increase exposure of board members and the general public to COVID-19,

THEREFORE BE IT RESOLVED, That as allowed by Planning Commission Rules of Procedure Article IV, Section 6, the Troy Planning Commission hereby **TEMPORARILY SUSPENDS** the requirement of holding a meeting at the Troy City Hall and **ALLOWS** all Troy Planning Commission Members to electronically participate in any Planning Commission meeting through December 31, 2020.

Members participating electronically will be considered present and in attendance at the meeting and may participate in the meeting as if physically present. However, members must avoid using email, texting, instant messaging, and other such electronic forms of communication to make a decision or deliberate toward a decision.

RESOLVED, As allowed by Planning Commission By-laws and Rules of Procedure Article X, the Troy Planning Commission hereby **TEMPORARILY SUSPENDS AND MODIFIES** the By-laws and Rules of Procedure concerning the Order of the Agenda, as set forth in Article V, Section 3, to consolidate the Public Comment sections of the meeting for any meeting held through December 31, 2020.

RESOLVED, As allowed by Planning Commission By-laws and Rules of Procedure Article X, the Troy Planning Commission hereby **TEMPORARILY SUSPENDS AND ALLOWS** two methods of receiving Public Comment for virtual meetings. Public comments can be submitted for the Planning Commission meeting by sending an email to: planning@troymi.gov. Emails received prior to 4:00 pm on the day of the Planning Commission meeting, will be read at the meeting and made part of the public record. Public comments can also be submitted by calling the following phone number and leaving a voicemail message: (248) 524-1305. Recorded voicemail messages received prior to 4:00 pm on the day of the Planning Commission meeting will be played at the meeting. For emails and recorded messages received after the deadline, reasonable efforts will be made to read emails and play recorded messages received during the meeting. Email and voicemail public comments will be limited to three minutes each.

Yes: All present (9)

MOTION CARRIED

3. APPROVAL OF AGENDA

Resolution # PC-2020-11-028
Moved by: Perakis
Support by: Apahidean

RESOLVED, To approve the Agenda as prepared.

Yes: All present (9)

MOTION CARRIED

4. APPROVAL OF MINUTES

Mr. Lambert asked that the draft minutes reflect that Resolution # PC-2020-10-026 was moved by him and not Mr. Tagle.

Resolution # PC-2020-11-029
Moved by: Lambert
Support by: Rahman

RESOLVED, To approve the minutes of the October 27, 2020 Regular meeting as revised.

Yes: All present (9)

MOTION CARRIED

5. PUBLIC COMMENT – For Items Submitted via Email or Telephone Message

Email messages received after the online posting of the agenda, in response to Agenda item #6.

- Carl Koenig, 4393 Cahill; oppose
- Jan Walsh, 4318 Bender Court; oppose
- Omar Shouhayib, 2265 Livernois, Choice Development; in support
- Laura Lipinski, 4233 Carson; oppose
- Ken McCabe, no address; oppose
- Thomas and Patricia Reiss, 1400 Bradbury; oppose
- Charlotte MacPherson, no address; oppose
- Senthil Kumar, 4073 Parkstone; oppose
- Lisa Paglino, 1061 Redding; oppose
- Neal and Paulette Shaw, 3861 Jennings; oppose
- Linda Baatz, no address; oppose
- Anirudh Sure, no address; oppose
- Daryl and Denise Jamison, no address; oppose
- Yumin and Zhang Ying Sheng, 4678 Tifton; oppose
- Tom Shaw, 4040 Glencastle; oppose
- John and Shelly Shallcross, 1059 Fountain; oppose
- Vivian Zoma, no address; oppose
- Sathya Dev, no address; oppose
- Maureen Cash, 4278 Lehigh; oppose
- Bonnie Jeffrey, no address; oppose
- Maureen Pickard, no address; oppose
- Celine T (concerned citizen), no address; oppose
- Faina Temkin, no address; oppose
- Larry and Jennifer Patton, 1417 Fountain; oppose
- Srinivasan Ravindran, no address; oppose
- Medha Tripathi, no address; oppose
- Angela He, 1347 Fountain; oppose
- Natarajan Athreya, 4089 Glencastle; oppose
- No name (Boots2344), 1310 Fountain; oppose
- Jonathan Maksabo, no address; oppose
- Ralph Schick, 4117 Penrose; oppose
- Amy Hirina, 4234 Carson; oppose
- Shalin Shah, no address; oppose
- No name, no address; oppose
- Harshini Chandrasekaran, no address; oppose
- Varun Aravapally, no address; oppose
- Ayesha Khan, no address; oppose
- Aryamaan Gaddam, no address; oppose
- Andrea Noble, Treasurer Woodlands of Troy HOA; oppose
- Rose Marie Ialapi, no address; oppose

- Matt Parowski, 240 W. Wattles; oppose
- Sanjay Shah and Bela Shah, no address; oppose
- June Yount, no address; oppose
- Aashit Shah, 4088 Parkstone; oppose
- Aashka Shah, no address; oppose
- Abbassieh Sobh, no address; oppose
- Amy Leigh Talarico, no address; oppose
- Arushi Mahajan, no address; oppose
- L. Xiaob (Bob), no address; oppose
- Brian Bartkowiak, 4278 Lehigh; oppose
- Brian Conolly; no address; oppose
- Carl Koenig, 4393 Cahill; oppose
- Carmen Franco, no address; oppose
- Carol Kohut, no address; oppose
- Cynthia Desmon, no address; oppose
- Cindy Sweeney, 4037 Glencastle; oppose
- Dan Raubinger, no address; President Woodlands of Troy HOA; oppose
- Daphne Ntiri, 4198 Carson; oppose
- Daryl Dickhudt, 4143 Glencastle; oppose
- David and Claudette Rusing, 1425 Bradbury; oppose
- Deanna Vetrone, no address; oppose
- Debbie A. Knauss, 3897 Meadowbrook; oppose
- Devinder Singh, 2452 Claymont; oppose
- Edmund Jaskulka, 4291 Lehigh; oppose
- Geeta Desai, 1844 Rolling Woods; oppose
- Geomy George, 4025 Glencastle; oppose
- James and Sharon Murray, 1267 Bradbury; oppose
- Jayashree Rao, 4415 Wintergreen; oppose
- Jenn-Tser and Jin-Feng Pan, 4059 Parkstone; oppose
- Jenny Chang, no address; oppose
- Jinming Xu, 4179 Carson; oppose
- John Bridge, 4089 Penrose; oppose
- Gerald and Judith Holmberg, no address; oppose
- Thomas and Karen Shaw, 4040 Glencastle; oppose
- Katherine Mikulski, 4408 Cahill; oppose
- Kosta and Carol Hardaloupas, no address; oppose
- Kristen Rondeau, 5090 Longview; oppose
- Les and Liz Kobylak, 1938 Canary; oppose
- Lisa Paglino, no address; oppose
- Lopa Rana, no address; oppose
- Mark and Diane Paul, 3844 Root; oppose
- Mary Kay Michaels, 4535 Hycliffe; oppose
- Mary Kennedy, no address; oppose
- Masood Siddiqui, no address; oppose

- Mike Lipinski, 4233 Carson; oppose
- Praveen Gomer, 1062 Whisper Way; oppose
- Pat Baker, no address; oppose
- Paul Pabian, no address; oppose
- Priti Gupta, no address; oppose
- Ringo Zhang, no address; oppose
- Robert Laudicina, 1286 Fountain; oppose
- Robert Marku, no address; oppose
- Scott and Claudia Leman, 1075 Fountain; oppose
- Sujith Nair, 1337 Bradbury; oppose
- Susan Turpin, 4216 Carson; oppose
- Xiao Min Chen, 975 Emerson; oppose
- Jerry Rauch, 4187 Penrose; oppose
- Xiaoqing Yu, 1260 Bradbury; oppose
- Yi Guo and Zhe Xu, 1192 Provincial; oppose
- Yongpeng Zhang, no address; oppose
- Zachary Reed, 1395 Fountain; oppose
- Kevin Zhou, no address; oppose
- Shelley Stenger, no address; oppose
- Aditi Mahajan, no address; oppose
- Atika Singh, no address; oppose
- Dorothy Shetler, 4558 Rivers Edge; oppose
- Fred Tarazi, 4388 Cahill; oppose
- Jayne and Rick Smith, no address; oppose
- Jean-Claude Quenum, 4198 Carson; oppose
- Jigna Shah, 4088 Parkstone; oppose
- Kelly Coval, no address; oppose
- Kristi Roncelli, no address; oppose
- Mary Branch, no address; oppose
- Michael and Peggy O'Shaughnessey, no address; oppose
- Mike Temkin, no address; oppose
- Patricia Orlowski, 1381 Bradbury; oppose
- Paul Balas, 4087 Parkstone; oppose
- Ravi, no address; oppose
- Renee Weiss, no address; oppose
- Rhea Sautter, no address; oppose
- Rose Wright and James Laherty, 1269 Autumn; oppose
- Lisa Paglino, 1061 Redding; oppose
- Sumit Mathur, 4426 Hycliffe; oppose
- Ashish and Swati Mody, 4752 Rivers Edge; oppose

Chair Krent called a recess at 9:32 p.m. The meeting reconvened at 9:38 p.m.

Voicemail messages received in response to Agenda item #6.

- Aashit Shah, 4088 Parkstone; oppose
- Thomas Mikulski, 4408 Cahill; oppose
- Edmund Jaskulka, 4291 Lehigh; oppose
- Praveen Gomer, 1062 Whisper Way; oppose
- David Rusing, 1425 Bradbury; oppose
- Indiscernible name; oppose
- Joyce Barnett, 3448 Tothill; oppose
- Deepak Parekh, 2956 Devonwood; oppose
- Indiscernible name; oppose
- Robert Marku, 3394 Kilmer; oppose
- Tim Dryzga, 4642 Bentley; oppose
- Jigna Shah, 4088 Parkstone; oppose
- Gloria Vanevery, 2140 Charnwood; oppose
- Resident, Woodlands of Troy; oppose
- Victor Nowak, 1132 Fountain, oppose
- Michael Walsh, 4318 Bender Court; oppose
- Heena Shah, 1701 Caliper; oppose
- Deborah Louzecky, 6327 Donaldson; oppose
- Carol Quigley, 2489 Tall Oaks; oppose
- (first name indiscernible) Raghavulu, 4020 Penrose; oppose
- Henry Bzdziuch, 2337 Valleyview; oppose

PRELIMINARY SITE PLAN APPROVAL

6. PRELIMINARY SITE PLAN REVIEW (File Number SP JPLN2019-0022) – Proposed Crooks Road Townhomes, West side of Crooks Road, North of Wattles Road, Section 17, Currently Zoned NN (Neighborhood Node "I") District

Mr. Savidant gave a history of the Preliminary Site Plan application from its initial submission on June 28, 2019. He indicated a public hearing is not required for the application but at two previous Planning Commission meetings, the Chair opened the floor for public comment. At the September 24, 2019 meeting, 30 people spoke and 82 email messages were received. At the January 14, 2020 meeting, 18 people spoke and 59 email messages were received.

Mr. Savidant indicated the applicant has brought back the application with minor modifications after meeting with representatives of the abutting neighborhood. He said the administration notified the Woodlands Homeowners Association with a link to the agenda packet posted online this past Friday afternoon, which generated the public comment presented this evening. Mr. Savidant said the applicant has a right to due process by law to be heard by the Planning Commission.

Mr. Carlisle gave a review of the Preliminary Site Plan application identifying the recent modifications to the plan since last reviewed by the Planning Commission and as identified in his report dated November 6, 2020. He shared the renderings provided by the applicant.

Mr. Carlisle reported the proposed use is appropriate for the site and multiple family residential is a permitted use in the neighborhood node. He asked the Planning Commission to take into consideration the type of multiple family residential proposed, the number of units proposed, and transitional features as set forth in Section 5.06.E.3 of the Zoning Ordinance.

Discussion among members and administration:

- Building height permitted in Neighborhood Node districts.
- Pedestrian path and picnic area.
  - Amenity for development or adjacent Penrose residents; question for applicant.
  - Access; no physical vehicular or pedestrian connection.
- Community Image Builders communication; some valid points, some points not related specifically to Troy.
- Stormwater management; review during final site plan process by City Engineering Department, as well State permits required.
- No applications on file for proposed development on remaining corners of Wattles and Crooks.

Present were Attorney Greg Obloy of Carson Fischer, Carmine Avantini of Community Image Builders, James Butler and Gregory Bono of Professional Engineering Associates and the applicant Arban Stafa of Tollbrook North LLC.

Mr. Obloy said the applicant met with representatives of the abutting residential neighborhood after the Planning Commission meeting in January and resubmitted the plan in March with revisions to address transition and Planning Consultant review comments. Mr. Obloy clarified the picnic area is intended as an amenity for the neighborhood to the west. Mr. Obloy said the application complies with all requirements of the Zoning Ordinance and respectfully requested action this evening to approve the Preliminary Site Plan.

Mr. Avantini gave a PowerPoint presentation. He addressed a reduction in building height, elevation difference between uses, amenities and building material. Mr. Avantini said building material is brick and cement fiber board, no vinyl. He noted trash collection would be internally for individual townhomes with no dumpsters on site. Mr. Avantini's presentation showed various renderings and a three-dimensional view of the development in context to neighboring homes.

There was discussion on:

- Neighborhood meeting on January 23, 2020 at City Hall Library; applicant indicated no compromise reached.
- Pedestrian path and picnic area.
- Elevation and grading differences; approximate 5-foot difference, accuracy of information provided by applicant.
- Transitional features and compatibility with surrounding neighbors.
  - Interpretation(s) of design standards subjective.
- Application as relates to Zoning Ordinance requirements and Master Plan.
- Traffic study dated January 14, 2020; same data and conclusion for revised application.
- Department reviews of application; no outstanding issues cited.
- Recent legal matter received in City Attorney office.

Resolution # PC-2020-11-___
Moved by: Lambert
Support by:

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Crooks Road Townhomes, located on the west side of Crooks, North of Wattles, Section 17, within the NN (Neighborhood Node "I") District, be DENIED, for the following reason(s):

1. That the applicant has not provided the appropriate transition.
2. That it does not meet the design standards, does not enhance the character, environment and safety of pedestrian and motorists through the requirements of the Zoning Ordinance.

Reason #2 offered by Ms. Perakis prior to support on the motion.

Ms. Perakis shared concerns about the safety of children in the context of lack of sidewalks and internal traffic circulation with respect to pedestrians and vehicles.

Ms. Dufrane encouraged further discussion if Ms. Perakis believes there is a safety issue.

Chair Krent stated there appears to be plenty of sidewalks; the open issue is whether the application meets transition and compatibility standards.

Mr. Savidant responded to the concerns expressed by Ms. Perakis about safety. He said the application was submitted to appropriate City departments for review. Mr. Savidant said the traffic professionals and the Fire Department cited no safety concerns with the development. Mr. Savidant said there is nothing dangerous about the project and that the Planning Department does not forward applications to the Planning Commission to act upon if there are any safety concerns.

Chair Krent called the remotely-conducted Regular meeting of the Troy City Planning Commission to order at 7:00 p.m. on April 28, 2020. Chair Krent introduced the procedure to be followed for a remote meeting.

1. ROLL CALL

Present:
Ollie Apahidean
Karen Crusse
Carlton M. Faison
Michael W. Hutson
Tom Krent
David Lambert
Marianna Perakis
Sadek Rahman
John J. Tagle

Also Present:
R. Brent Savidant, Community Development Director
Ben Carlisle, Carlisle Wortman Associates
Julie Quinlan Dufrane, Assistant City Attorney
Jackie Ferencz, Planning Department Administrative Assistant
Kathy L. Czarnecki, Recording Secretary

2. SUSPENSION OF PLANNING COMMISSION BYLAWS

Resolution # PC-2020-04-016
Moved by: Krent
Support by: Lambert

WHEREAS, On March 16, 2020, the Troy City Council declared an emergency under Troy's City Charter and State Law, specifically the Emergency Management Act, MCL 30.401, (Resolution 2020-03-048) which allowed for, among other matters, the cancellation of meetings when necessary, and,

WHEREAS, On April 13, 2020, the Troy City Council extended its declared emergency under Troy's City Charter and State Law, specifically the Emergency Management Act, MCL 30.401, (Resolution 2020-04-055) which allowed for, among other matters, moving forward remotely and virtually with necessary meetings such as Planning Commission meetings, and,

WHEREAS, Governor Gretchen Whitmer issued Executive Order 2020-48 (EO 2020-48) on April 14, 2020 which temporarily suspends strict compliance with physical-place and physical-presence requirements of the Open Meetings Act in order to allow electronic meetings.

THEREFORE, BE IT RESOLVED, That as allowed by Planning Commission Rules of Procedure Article IV, Section 6, the Troy Planning Commission hereby **ALLOWS** all Troy Planning Commission Members to electronically participate in any Planning Commission meeting during the pendency of the declared State of Emergency. However, consistent with State of Michigan Executive Directive 2020-02 and Executive Order 2020-48, Planning Commission Members shall not use email, texting, instant messaging, or any other internet communication during the meeting.

RESOLVED, As allowed by Planning Commission By-laws and Rules of Procedure Article X, the Troy Planning Commission hereby **AMENDS** the By-laws and Rules of Procedure for the duration of the declared state of emergency to modify the Order of the Agenda, as set forth in Article V, Section 3, to consolidate the Public Comment sections of the meeting.

RESOLVED, As allowed by Planning Commission By-laws and Rules of Procedure Article X, the Troy Planning Commission hereby **AMENDS** the By-laws and Planning Commission Rules of Procedure for the duration of the declared emergency to provide for two methods of receiving Public Comment for virtual meetings. During this time, public comments can be submitted for the Planning Commission meeting by sending an email to: planning@troymi.gov. Emails received prior to 4:00 pm on the day of the Planning Commission meeting, will be read at the meeting and made part of the public record. Public comments can also be submitted by calling the following phone number and leaving a voicemail message: (248) 524-1305. Recorded voicemail messages received prior to 4:00 pm on the day of the Planning Commission meeting will be played at the meeting, in compliance with the Rules of Procedure. For emails and recorded messages received after the deadline, reasonable efforts will be made to read emails and play recorded messages during the meeting.

Yes: All present (9)

MOTION CARRIED

3. APPROVAL OF AGENDA

Resolution # PC-2020-04-017
Moved by: Tagle
Support by: Perakis

RESOLVED, To approve the Agenda as prepared.

Yes: All present (9)

MOTION CARRIED

4. APPROVAL OF MINUTES

Resolution # PC-2020-04-018
Moved by: Perakis
Support by: Lambert

RESOLVED, To approve the minutes of the February 25, 2020 Regular meeting as submitted.

Yes: Apahidean, Crusse, Hutson, Krent, Lambert, Perakis, Rahman, Tagle
Abstain: Faison

MOTION CARRIED

5. PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA – For Items Submitted via Email or Telephone Message

Ms. Ferencz reported no email or telephone messages were received.

PRELIMINARY SITE PLAN APPROVALS

6. PRELIMINARY SITE PLAN REVIEW (File Number SP JPLN2019-0038) – Proposed Timbercrest Drive Extension, South of East Wattles, West of Dequindre (88-20-24-201-015), Zoned R-1C (One Family Residential) District

Mr. Carlisle reviewed the Preliminary Site Plan application for Timbercrest Drive Extension. He said the proposed request is permitted by right. Mr. Carlisle addressed the site layout, access of existing single family home and proposed two new homes, landscaping, floor plans and elevations. Mr. Carlisle said the application meets all requirements of the Zoning Ordinance and recommended the Planning Commission grant Preliminary Site Plan approval.

Carol Thurber of Nowak & Fraus Engineers was present to represent the property owner Bismack Designs.

There was discussion on:
- Existing house; to remain as-is.
- Potential future extension of Timbercrest; no plans to extend, property to the south not under petitioner ownership.
- Stormwater management; studies conducted, capacity to tie-in to existing detention basin.
- Elevations; typical representation of homes built by petitioner, review by Building Department.

Ms. Ferencz reported there were no comments on the application received by email or voicemail.

Resolution # PC-2020-04-019
Moved by: Faison
Support by: Rahman

RESOLVED, That Preliminary Site Condominium Approval, pursuant to Article 8 and Section 10.02 of the Zoning Ordinance, as requested for Timbercrest Drive Extension, 3 units/lots, South of East Wattles, West of Dequindre, Section 24, Currently Zoned R-1C (One Family Residential) District, be granted.

Yes: All present (9)

MOTION CARRIED

At 7:21 p.m., Chair Krent was remotely unconnected, at which time the meeting paused. Chair Krent remotely connected to the meeting at 7:24 p.m. Also at this time, it appeared Mr. Hutson was remotely connected audibly (intermittently) but not visibly.

7. PRELIMINARY SITE PLAN REVIEW (File Number SP JPLN2020-0004) – Proposed Square Lake Court Phase II, South of Square Lake, West of Dequindre (88-20-12-200-027), Zoned NN (Neighborhood Node "N") District

Mr. Carlisle reviewed the Preliminary Site Plan application for Square Lake Court Phase II, noting that Phase I was considered and granted approval by the Planning Commission on January 14, 2020. He said the petitioner acquired the parcel to the south and is proposing 48 units. Mr. Carlisle said approval of Phase I was subject to a cross access easement to the south parcel. He noted the petitioner might combine both phases into one project which would terminate the need for a cross access easement and two homeowner associations.

Mr. Carlisle addressed site access one of which is shared with a retail site on Dequindre, rear-accessed garages, cluster of buildings, building height, floor plans and elevations. He identified site plan concerns relating to removal of two guest parking spaces, landscaping to break up long rows of guest parking and sidewalk connections.

Mr. Carlisle recommended that the Planning Commission grant Preliminary Site Plan approval with the conditions as identified in his report dated April 6, 2020.

Present were property owner Erion Nikolla and James Butler of Professional Engineering Associates (PEA).

Mr. Nikolla said if Phase 2 is granted approval, his intent is to merge both phases of the project dependent on construction target dates.

There was discussion on:

- Combining Phase 1 and Phase 2 as one project.
- Guest parking; number of spaces, landscaping to break up rows.
- Cross access easement; recorded agreement with retail for Phase 1. If phases are combined to one project, cross access easement is mute and no longer a Phase 1 requirement.

Ms. Ferencz reported there were no comments on the application received by email or voicemail.

Resolution # PC-2020-04-020
Moved by: Lambert
Support by: Faison

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Square Lake Court Townhomes, 48 units, located South of Square Lake, West of Dequindre (PIN 88-20-12-200-025), Section 12, Zoned NN (Neighborhood Node "N"), be granted, subject to the following:

1. Remove the two (2) spaces that are termination of the access drive off Dequindre.
2. Provide necessary easement to Dequindre.
3. Increase all sidewalks to five (5) feet in width.
4. Provide continuous sidewalk around the perimeter of the site (connect the walk between Buildings H and J, Buildings K and L, and add a walk along easterly edge of site.
5. Add direction connection between Buildings J and K, G and F, D and E, and A and B to Square Lake.
6. Break up the two (2) long rows of parking with landscape peninsula and tree.

Yes: Apahidean, Crusse, Faison, Hutson, Krent, Lambert, Perakis, Rahman, Tagle

Note: Mr. Hutson remotely connected audibly but not visibly.

MOTION CARRIED

OTHER ITEMS

8. PLANNING COMMISSION COMMENT

There were general Planning Commission comments. An all around thanks was given to the Information Technology and Cable departments for their technical assistance to conduct the remote meeting.

The remotely-conducted Regular meeting of the Planning Commission adjourned at 7:43 p.m.

Respectfully submitted,

Tom Krent, Chair

Kathy L. Czarnecki, Recording Secretary

PRELIMINARY SITE PLANS FOR

SQUARE LAKE COURT TOWNHOUSES

SOUTHWEST CORNER OF DEQUINDRE ROAD & SQUARE LAKE ROAD

CITY OF TROY, OAKLAND COUNTY, MICHIGAN

OWNER:

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MI 48315
CONTACT: ERION NIKOLLA

ARCHITECT:

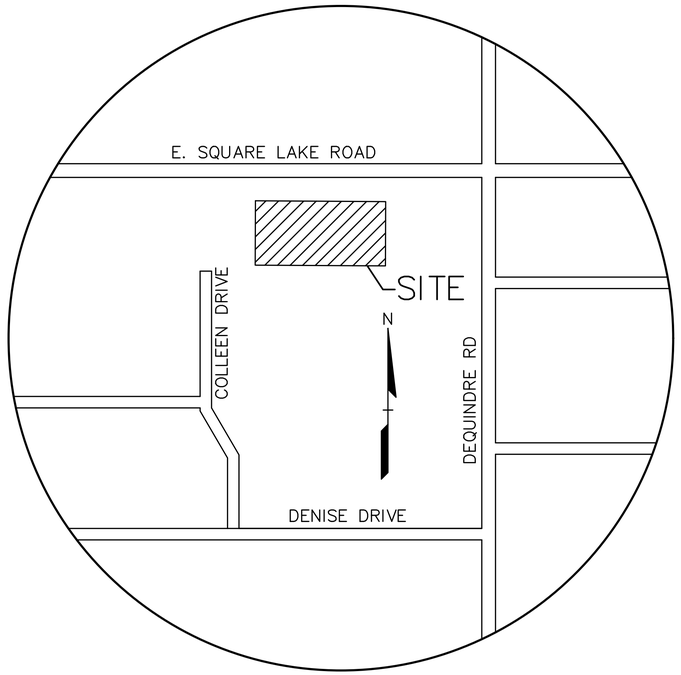
ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE
COMMERCE TOWNSHIP, MI 48382
CONTACT:
PHONE: (248) 802-8409

CIVIL ENGINEER:

PEA, INC.
2430 ROCHESTER CT, SUITE 100
TROY, MI 48083
CONTACT: GREGORY BONO, P.E.
PHONE: (248) 689-9090 EXT. 1148
FAX: (248) 689-1044
EMAIL: GBONO@PEAINC.COM

LANDSCAPE ARCHITECT:

PEA, INC.
7927 NEMCO WAY, SUITE 115
BRIGHTON, MI 48116
CONTACT: LYNN WHIPPLE, PLA
PHONE: (517) 546-8583 EXT. 1203
FAX: (517) 546-8973
EMAIL: LWHIPPLE@PEAINC.COM



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS:

C-0.0	COVER SHEET
C-1.0	TOPOGRAPHIC SURVEY
C-2.0	PRELIMINARY SITE PLAN
C-3.0	PRELIMINARY GRADING PLAN
C-4.0	PRELIMINARY UTILITY SHEET
C-5.0	NOTES AND DETAILS
L-1.0	PRELIMINARY LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
T-1.0	TREE PRESERVATION PLAN
T-1.1	TREE PRESERVATION LIST
SL-1.1	PRELIMINARY PHOTOMETRIC PLAN

ARCHITECTURAL SHEETS:

A-1	UNIT FLOOR PLANS
A-2	UNIT FLOOR PLANS
A-3.1	DETAIL EXTERIOR ELEVATIONS
A-3.2	DETAIL REAR ELEVATIONS/RIGHT SIDE ELEVATION
A-3.3	DETAIL FRONT ELEVATIONS/LEFT SIDE ELEVATIONS
A-4	4 UNIT BUILDING PLANS
A-5	4 UNIT BUILDING ELEVATIONS
A-6	6 UNIT BUILDING PLANS
A-7	6 UNIT BUILDING ELEVATIONS

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
JAMES P. BUTLER
ENGINEER
No. 39505
LICENSED PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTOR (NOT CONSULTANT) WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTOR SHALL FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

COVER SHEET
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T. 2N, R. 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	SUR.	P.M.
JPB	KRD	TJS	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: N.T.S.

DRAWING NUMBER:
C-0.0

LEGAL DESCRIPTION:
(Per PEA)

A parcel of land situated in the Northeast 1/4 of Section 12, Township 2 North, Range 11 East, City of Troy, Oakland County, Michigan described as being part of Lots 5, 6 and 7 of "Supervisor's Plat of Wilbrett Acres" as recorded in Liber 13, Page 54, Oakland County Records, more particularly described as follows:

Commencing at the Northeast corner of said Section 12, thence along the East line of said Section 12, S00°00'04"W, 360.27 feet; thence N88°07'00W, 60.03 feet to the West line of Dequindre Road (120 foot wide); thence along said West line S00°00'04"W, 133.55 feet; thence N88°07'55"W, 204.33 feet to the **POINT OF BEGINNING;**

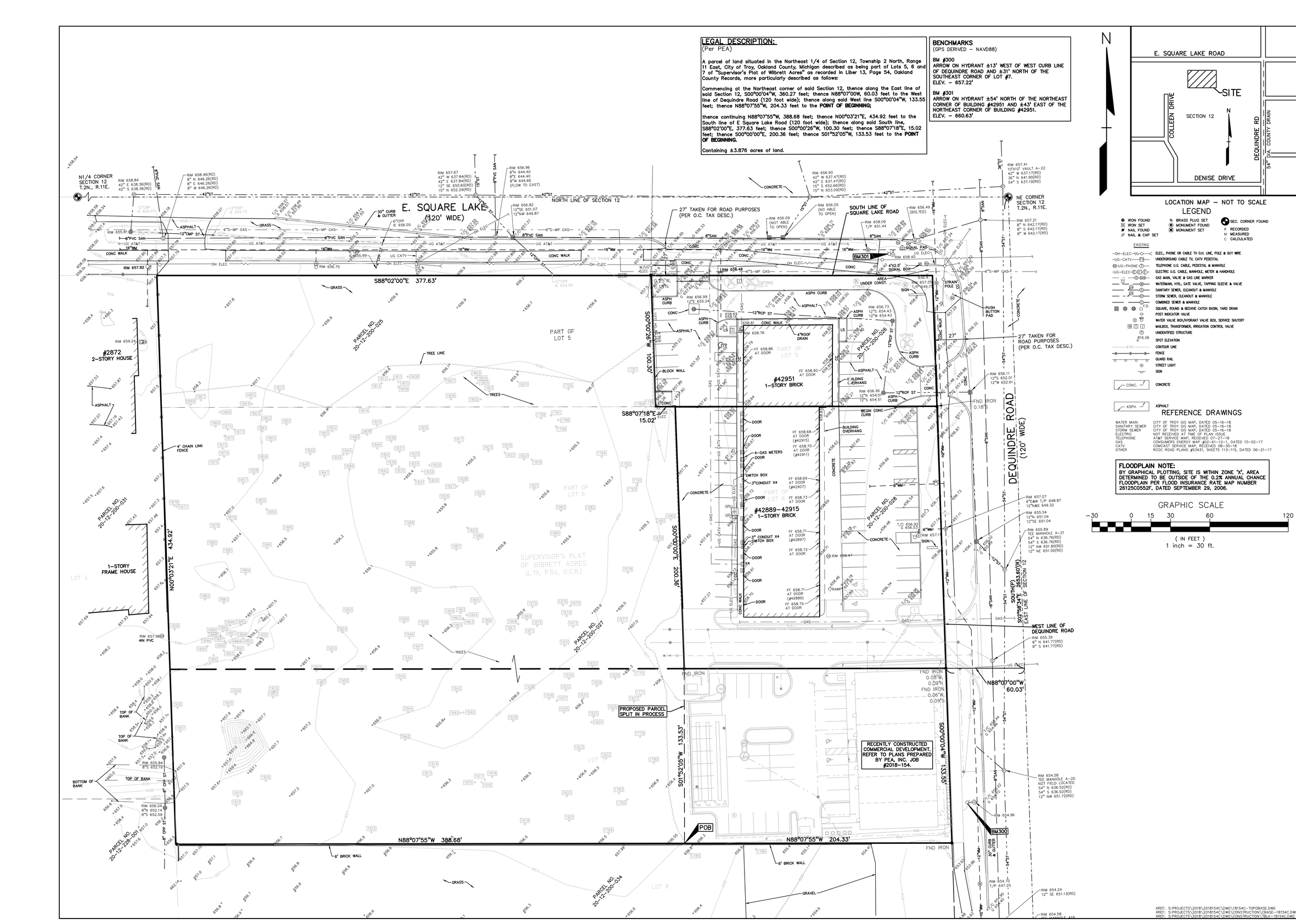
thence continuing N88°07'55"W, 388.68 feet; thence N00°03'21"E, 434.92 feet to the South line of E Square Lake Road (120 foot wide); thence along said South line, S88°02'00"E, 377.63 feet; thence S00°00'26"W, 100.30 feet; thence S88°07'18"E, 15.02 feet; thence S00°00'00"E, 200.36 feet; thence S01°52'05"W, 133.53 feet to the **POINT OF BEGINNING.**

Containing ±3.876 acres of land.

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'


N1/4 CORNER SECTION 12 T.2N., R.11E.
RIM 658.84
42" E 638.36(RD)
42" S 638.36(RD)
RIM 658.46(RD)
8" N 646.26(RD)
8" E 646.26(RD)
8" W 646.26(RD)
E. SQUARE LAKE ROAD (120' WIDE)
NORTH LINE OF SECTION 12
S88°02'00"E 377.63'
RIM 657.82
RIM 655.81
RIM 656.75
RIM 657.67
42" W 637.84(RD)
42" E 637.84(RD)
12" SE 650.60(RD)
15" N 652.29(RD)
RIM 656.96
8"N 644.40
8"E 644.40
8"W 644.66
(FLOW TO EAST)
RIM 656.82
12"SE 651.07
12"NW 649.87
27' TAKEN FOR ROAD PURPOSES (PER O.C. TAX DESC.)
RIM 656.09
(NOT ABLE TO OPEN)
RIM 656.05
(NO ABLE TO OPEN)
SOUTH LINE OF SQUARE LAKE ROAD
RIM 658.09
T/P 651.44
RIM 656.49
(BOLTED)
NE CORNER SECTION 12 T.2N., R.11E.
RIM 657.41
10'X10' VAULT A-22
42" W 637.17(RD)
36" N 641.90(RD)
54" S 637.19(RD)
RIM 657.21
8" N 642.17(RD)
8" S 642.17(RD)
8" W 642.17(RD)
BM301
RIM 658.40
RIM 658.48
RIM 656.99
12"E 655.24
RIM 656.73
12"S 654.43
12"W 654.43
RIM 656.46
12"S 654.51
12"E 654.51
RIM 656.11
12"S 652.01
12"W 652.61
RIM 657.03
T/C 649.73
RIM 657.07
6"E&W T/P 648.87
12"NAS 649.32
RIM 655.54
12"N 651.04
12"SE 651.04
RIM 655.89
TEE MANHOLE A-21
54" N 636.76(RD)
54" S 636.76(RD)
12" NW 651.80(RD)
12" NE 651.50(RD)
RIM 654.58
TEE MANHOLE A-20
NOT FIELD LOCATED
54" N 636.52(RD)
54" S 636.52(RD)
12" NW 651.72(RD)
RIM 654.96
BM300
RIM 654.70
T/P 647.25
RIM 654.24
12" SE 651.13(RD)
RIM 654.58
TEE MANHOLE A19
DEQUINDRE ROAD (120' WIDE)
SOUTH(P) 2653.60'(R)
S02°58'34"E
EAST LINE OF SECTION 12
WEST LINE OF DEQUINDRE ROAD
RIM 655.39
8" N 641.77(RD)
8" S 641.77(RD)
N88°07'00"W 60.03'
S00°00'04"W 133.55'
FND IRON 0.18'S
FND IRON 0.08'W, 0.09'N
FND IRON 0.06'W, 0.09'S
FND IRON
PROPOSED PARCEL SPLIT IN PROCESS
RECENTLY CONSTRUCTED COMMERCIAL DEVELOPMENT. REFER TO PLANS PREPARED BY PEA, INC. JOB #2018-154.
POB
S01°52'05"W 133.53'
S00°00'26"W 100.30'
S88°07'18"E 15.02'
N00°03'21"E 434.92'
3,000,000-005
200.36
#2872
2-STORY HOUSE
1-STORY FRAME HOUSE
#42951
1-STORY BRICK
#42889-42915
1-STORY BRICK
PARCEL NO. 20-12-200-025
PARCEL NO. 20-12-200-026
PARCEL NO. 20-12-200-028
PARCEL NO. 20-12-200-027
PARCEL NO. 20-12-200-031
PARCEL NO. 20-12-226-001
PARCEL NO. 20-12-200-034
PART OF LOT 5
PART OF LOT 6
PART OF LOT 8
LOT 4
LOT 8
SUPERVISOR'S PLAT OF WILBRETT ACRES (L13, P54, OCR)
27' TAKEN FOR ROAD PURPOSES (PER O.C. TAX DESC.)
4' CHAIN LINK FENCE
6' BRICK WALL
BLOCK WALL
TREE LINE
TREES
GRASS
GRAVEL
ASPHALT
CONC WALK
CONCRETE
ASPH CURB
BUILDING OVERHANG
BEGIN CONC CURB
30" CURB & GUTTER
4"ROOF DRAIN
4-GAS METERS
SWITCH BOX
3"CONDUIT X4
3" CONDUIT X4 SWITCH BOX
DOOR
FF 658.68 AT DOOR (#42915)
FF 658.70 AT DOOR (#42911)
FF 658.69 AT DOOR (#42907)
FF 658.73 AT DOOR
FF 658.71 AT DOOR (#42897)
FF 658.72 AT DOOR
FF 658.71 AT DOOR (#42889)
FF 658.75 AT DOOR
FF 658.90 AT DOOR
FF 658.76 AT DOOR
TOP OF BANK
BOTTOM OF BANK
RIM 655.84
8"S 652.19
RIM 656.04
8"N 652.14
8"S 652.09
RIM 657.96
4IN PVC
4"CPP
IE 656.05
12"CMP
IE 655.71
IE 655.72
IE 655.99
IE 653.59
IE 655.97
IE 656.00
IE 656.01
IE 656.02
IE 656.03
IE 656.04
IE 656.06
IE 656.07
IE 656.08
IE 656.09
IE 656.10
IE 656.11
IE 656.12
IE 656.13
IE 656.14
IE 656.15
IE 656.16
IE 656.17
IE 656.18
IE 656.19
IE 656.20
IE 656.21
IE 656.22
IE 656.23
IE 656.24
IE 656.25
IE

GENERAL NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
2. REFER TO SHEET C-5.0 FOR ON-SITE PAVING DETAILS.
3. REFER TO SHEET C-5.0 FOR ON-SITE SIDEWALK RAMP DETAILS.
4. 'NO PARKING-FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF TROY CURRENT STANDARDS AND REGULATIONS.
6. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
7. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND /OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

DESCRIPTION:

(A)

of land situated in the Northeast 1/4 of Section 12, Township 2 North, Range City of Troy, Oakland County, Michigan described as being part of Lots 5, 6 and pervisor's Plat of Wilbrett Acres" as recorded in Liber 13, Page 54, Oakland ecords, more particularly described as follows:

ing at the Northeast corner of said Section 12, thence along the East line of tion 12, S00°00'04"W, 360.27 feet; thence N88°07'00W, 60.03 feet to the West equindre Road (120 foot wide); thence along said West line S00°00'04"W, 133.55 nce N88°07'55"W, 204.33 feet to the **POINT OF BEGINNING;**

ontinuing N88°07'55"W, 388.68 feet; thence N00°03'21"E, 434.92 feet to the of E Square Lake Road (120 foot wide); thence along said South line, 0"E, 377.63 feet; thence S00°00'26"W, 100.30 feet; thence S88°07'18"E, 15.02 nce S00°00'00"E, 200.36 feet; thence S01°52'05"W, 133.53 feet to the **POINT NING.**

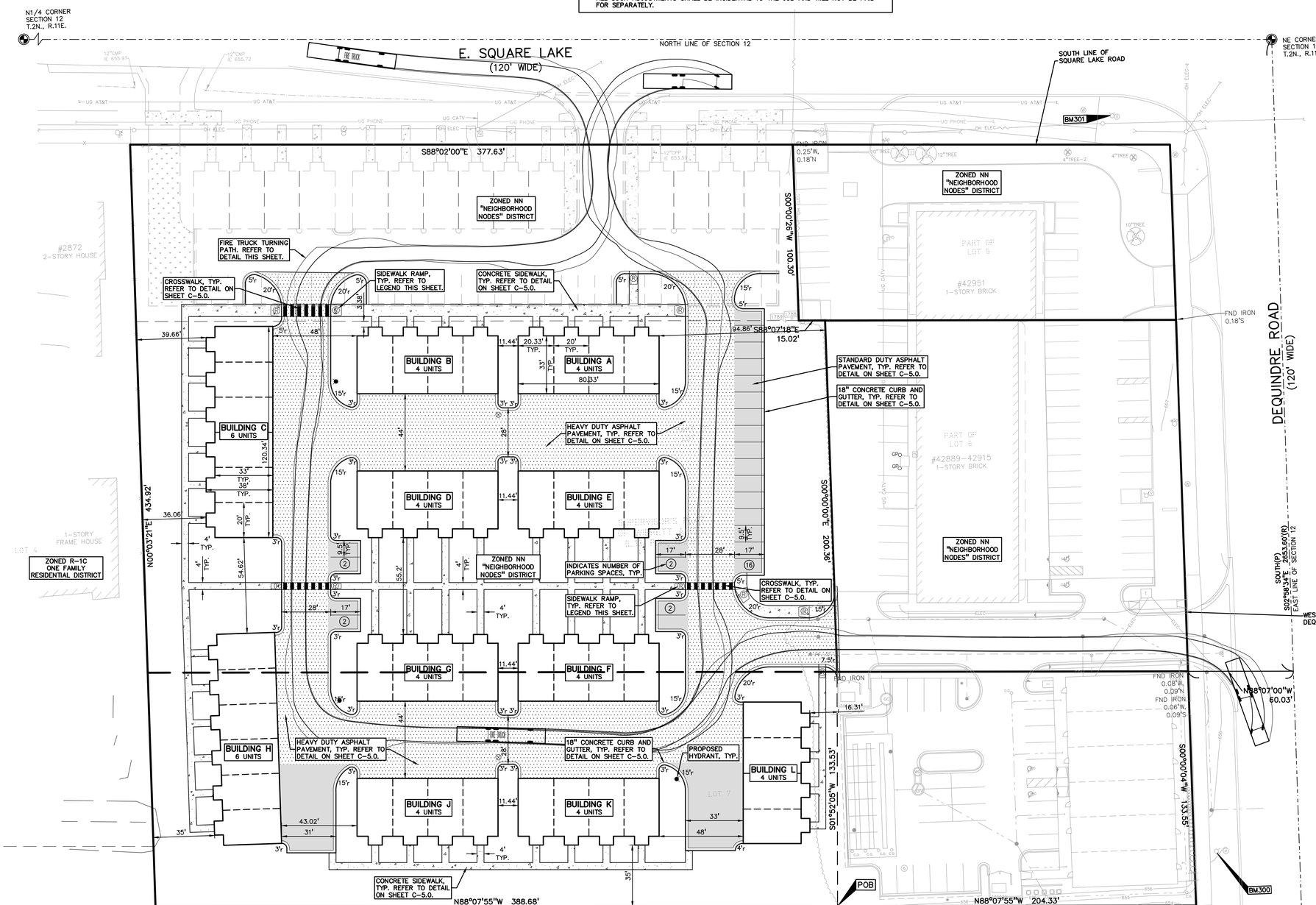
g ±3.876 acres of land.

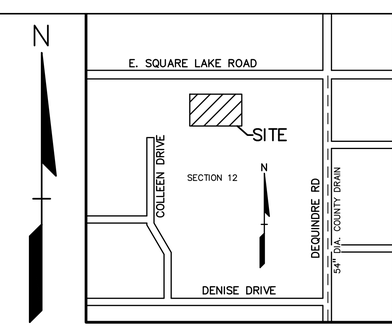
BENCHMARKS

(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'





LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
OH-ELEC-M		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
UG-CATV		UNDERGROUND CABLE TV, CATV PEDESTAL
UG-PHONE-T		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
UG-ELEC-E		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
GAS		GAS MAIN, VALVE & GAS LINE MARKER
W	W	WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
S	S	SANITARY SEWER, CLEANOUT & MANHOLE
ST	ST	STORM SEWER, CLEANOUT & MANHOLE
C	C	COMBINED SEWER & MANHOLE
		SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
		UNIDENTIFIED STRUCTURE
816.06	871.21	SPOT ELEVATION
670	671	CONTOUR LINE
X X		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT

STD DUTY, HEAVY DUTY, R.O.W. ONLY; STD DUTY, HEAVY DUTY, DEEP STRENGTH

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05-16-18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07-27-18
GAS	CONSUMERS ENERGY MAP #22-61-12-1, DATED 10-02-17
CATV	COMCAST SERVICE MAP, RECEIVED 08-30-18
OTHER	RODC ROAD PLANS #53431, SHEETS 113-115, DATED 06-21-17

FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0552F, DATED SEPTEMBER 29, 2006.

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SITE DATA TABLE:

SITE AREA: 3.01 ACRES (131,154 SF)

ZONING: NEIGHBORHOOD NODE (NN) NODE N

EXISTING USE: VACANT LAND
PROPOSED USE: MULTI-FAMILY RESIDENTIAL

BUILDING INFORMATION:
MINIMUM ALLOWABLE BUILDING HEIGHT = 1 STORY (14 FT)
MAXIMUM ALLOWABLE BUILDING HEIGHT = 3 STORIES (35 FT)
PROPOSED BUILDING HEIGHT = 3 STORIES

PROPOSED UNITS = 48 UNITS

BUILDING FOOTPRINT AREA:
4-UNIT = 2,811 SF
6-UNIT = 4,211 SF

BUILDING LOT COVERAGE = 9(2,811) + 2(4,211) = 33,721 SF
= 21.4%

SETBACK REQUIREMENTS:	REQUIRED:	PROPOSED:
FRONT (NORTH):	10'	3.38'
SIDE (EAST):	0'	16.31'
SIDE (WEST):	0'	35.00'
REAR (SOUTH):	30'	35.00'

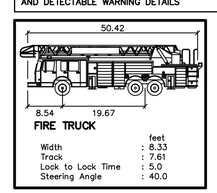
PARKING CALCULATIONS:
REQUIRED = 2 SPACES PER UNIT
= 2 * 48 UNITS = 96 SPACES
PROVIDED = 96 GARAGE SPACES + 24 GUEST SPACES
= 120 SPACES

OPEN SPACE:
REQUIRED = 20%
PROVIDED = 49,549 / 131,154 = 37.8%

SIDEWALK RAMP LEGEND:

SIDEWALK RAMP 'TYPE R' ®

REFER TO LATEST M.D.O.T. R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS



FIRE TRUCK

	feet
Width	: 8.33
Track	: 7.61
Lock to Lock Time	: 5.0
Steering Angle	: 40.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

STATE OF MICHIGAN — JAMES JEFFREY PETTER — LICENSED — No. 39805 — PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING AND PROTECTING UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY SITE PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	KRD	SUR.	T.J.S	P.M.	JPB
JPB						

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
C-2.0

BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'

N1/4 CORNER SECTION 12 T.2N., R.11E.

E. SQUARE LAKE (120' WIDE)

NORTH LINE OF SECTION 12

27' TAKEN FOR ROAD PURPOSES (PER O.C. TAX DESC.)

SOUTH LINE OF SQUARE LAKE ROAD

NE CORNER SECTION 12 T.2N., R.11E.

BM301

FND IRON 0.25'W, 0.18'N

27' TAKEN FOR ROAD PURPOSES (PER O.C. TAX DESC.)

#2872 2-STORY HOUSE

#42951 1-STORY BRICK

PARCEL NO. 20-12-200-026

FND IRON 0.18'S

DEQUINDRE ROAD (120' WIDE)

EAST LINE OF SECTION 12

WEST LINE OF DEQUINDRE ROAD

#42889-42915 1-STORY BRICK

1-STORY FRAME HOUSE

PARCEL NO. 20-12-200-031

PARCEL NO. 20-12-200-028

PARCEL NO. 20-12-200-027

PARCEL NO. 20-12-226-001

PARCEL NO. 20-12-200-034

FND IRON 0.08'W, 0.09'N
FND IRON 0.06'W, 0.09'S

FND IRON

POB

BM300

BUILDING A 4 UNITS
BUILDING B 4 UNITS
BUILDING C 6 UNITS
BUILDING D 4 UNITS
BUILDING E 4 UNITS
BUILDING F 4 UNITS
BUILDING G 4 UNITS
BUILDING H 6 UNITS
BUILDING J 4 UNITS
BUILDING K 4 UNITS
BUILDING L 4 UNITS

MATCH EX. ±658.1
MATCH EX. ±657.8
MATCH EX. ±657.5
MATCH EX. ±657.8
MATCH EX. ±658.3
MATCH EX. ±657.7
MATCH EX. ±657.7

SIDEWALK RAMP, TYP. REFER TO LEGEND THIS SHEET.

F.G. 659.50
F.G. 658.80
F.G. 658.80
RIDGE

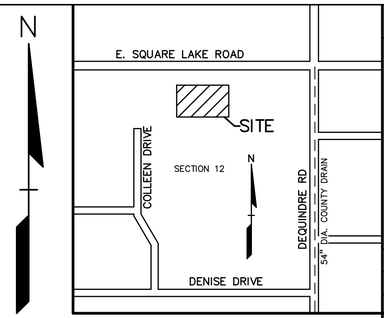
RIM 656.50
RIM 657.00
RIM 657.30
RIM 657.80
RIM 658.05
RIM 658.50
RIM 657.43
RIM 655.55
RIM 656.50
RIM 655.50

658.35
658.70
658.45
658.15
658.40
658.25
658.65
658.20
658.60
658.75
658.10

4IN PVC

LOT 4
LOT 5
LOT 7
LOT 8

LOCATION MAP – NOT TO SCALE



LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
—OH—ELEC—W—		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
—UG—CATV—		UNDERGROUND CABLE TV, CATV PEDESTAL
—UG—PHONE—T—		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
—UG—ELEC—E—		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
—GAS—		GAS MAIN, VALVE & GAS LINE MARKER
—W—		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
—S—		SANITARY SEWER, CLEANOUT & MANHOLE
—S—		STORM SEWER, CLEANOUT & MANHOLE
—S—		COMBINED SEWER & MANHOLE
	C.O.	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
V		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
M T I		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
?		UNIDENTIFIED STRUCTURE
×816.06	×671.21	SPOT ELEVATION
670	671	CONTOUR LINE
—X—X—		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
ASPH.		ASPHALT

	STD DUTY	HEAVY DUTY	R.O.W. ONLY	STD DUTY	HEAVY DUTY	DEEP STRENGTH

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05-16-18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07-27-18
GAS	CONSUMERS ENERGY MAP #22-61-12-1, DATED 10-02-17
CATV	COMCAST SERVICE MAP, RECEIVED 08-30-18
OTHER	RCOC ROAD PLANS #53431, SHEETS 113-115, DATED 06-21-17

FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0552F, DATED SEPTEMBER 29, 2006.

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SIDEWALK RAMP LEGEND:

SIDEWALK RAMP 'TYPE R' ®

REFER TO LATEST M.D.O.T. R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. 794.50

PROPOSED CONTOUR LINE —795—

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

STATE OF MICHIGAN JAMES ALTHER ENGINEER No. 49805 PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY GRADING PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	KRD	SUR.	TJS	P.M.	JPB
JPB						

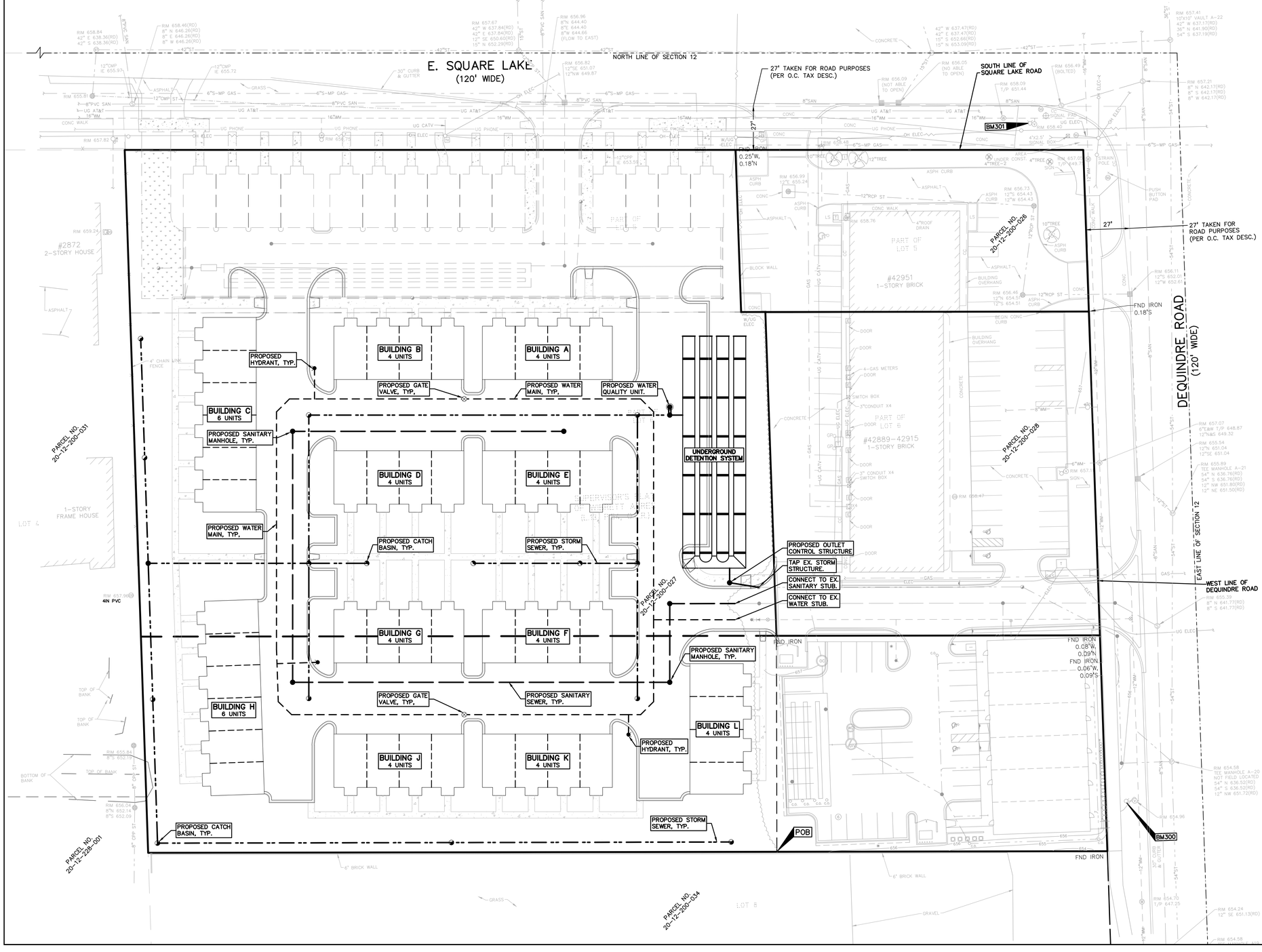
ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
C-3.0

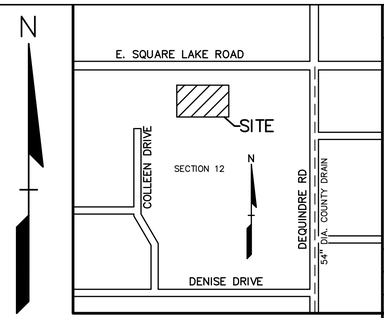
XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG



BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'



LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING / PROPOSED

- OH–ELEC– / OH–ELEC–: ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UG–CATV– / UG–CATV–: UNDERGROUND CABLE TV, CATV PEDESTAL
- UG–PHONE– / UG–PHONE–: TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG–ELEC– / UG–ELEC–: ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM SEWER, CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- 816.06 / 671.21: SPOT ELEVATION
- 670 / 671: CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONC.: CONCRETE
- ASPH.: ASPHALT

STD DUTY / HEAVY DUTY / R.O.W. ONLY
STD DUTY / HEAVY DUTY / DEEP STRENGTH

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05-16-18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05-16-18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07-27-18
GAS	CONSUMERS ENERGY MAP #02-61-12-1, DATED 10-02-17
CATV	COMCAST SERVICE MAP, RECEIVED 08-30-18
OTHER	RODC ROAD PLANS #53431, SHEETS 113-115, DATED 06-21-17

FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26125C0552F, DATED SEPTEMBER 29, 2006.

GRAPHIC SCALE

−30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D–1557).

Project:	Square Lake Court Townhomes		
Location:	Troy		
Project No:	2018-154C		
100 YEAR STORM DETENTION DESIGN (PER OAKLAND COUNTY DESIGN METHOD)			
Site Drainage Data			
Contributing Area (A):		3.01	acre
Allowable Discharge (Qa)		0.60	cfs (0.2*acreage)
Coefficient of Runoff (Cr):		0.69	
100-yr Storm Design Calculations			
Qo = ((Qa)/(A)(Cr):		0.29	cfs/acre impervious
T = -25 + ((10312.5/Qo))^0.5:		163.57	minutes
Vs = (16500(T)/(T+25)) - 40Qo(T):		12.415	cf/acre impervious
Vt = (Vs)(A)(Cr):		**25,626**	**cf**

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
JAMES PATRICK BUTLER
ENGINEER
No. 49805
PROFESSIONAL ENGINEER
LICENSED

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR CONTACTING UTILITIES FOR EXACT LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY UTILITY PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	CHK	SUR.	TJS	P.M.
JPB		KRD			JPB

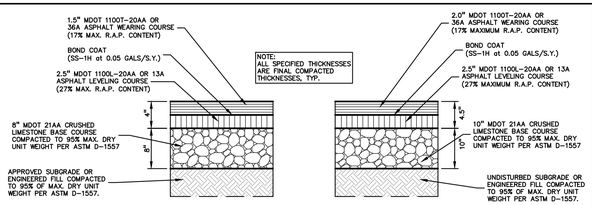
ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
C-4.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

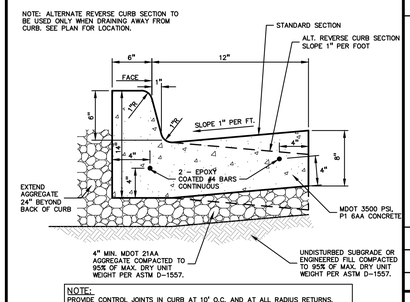


STANDARD DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY) NOT TO SCALE

HEAVY DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY) NOT TO SCALE

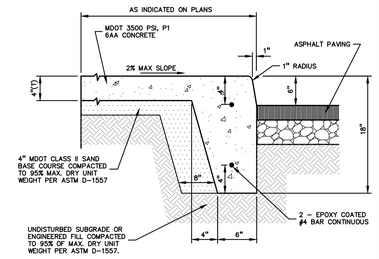
AGGREGATE BASE NOTE:
THIS PAVEMENT SECTION DESIGN ASSUMES THE USE OF MDOT 21AA CRUSHED LIMESTONE BASE MATERIAL THAT MEETS THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION SECTION 902 FOR AGGREGATES. IF CRUSHED CONCRETE AGGREGATE BASE IS PROPOSED IN LIEU OF THE SPECIFIED CRUSHED LIMESTONE MATERIAL, PEA INC. WILL REQUIRE A MINIMUM 25% INCREASE IN BASE THICKNESS. HOWEVER, IF TESTING DOCUMENTATION IS PROVIDED TO PEA, INC. THAT SHOWS THAT THE CRUSHED CONCRETE MATERIAL MEETS ALL REQUIREMENTS OF MDOT SPECIFICATION SECTION 902, THEN THE 25% INCREASE IN THICKNESS MAY BE REEVALUATED.

ASPHALT MATERIAL NOTES:
HOT-MIX ASPHALT MIXTURES UTILIZING RECYCLED ASPHALT PAVEMENT (RAP) MUST MEET MDOT SPECIAL PROVISION 12SP501(E). THE BINDER GRADE FOR THIS WORK IS PG58-22. IF ASPHALT MIXES CONTAINING RAP ARE TO BE SUPPLIED FOR THIS PROJECT, THE ASPHALT BINDER MUST BE REVISED PER MDOT 'TIER 1' OR 'TIER 2' REQUIREMENTS (RAP CONTENT UP TO 27% MAXIMUM). TIER 3 MIXES ARE NOT ACCEPTABLE ON THIS PROJECT. AN ASPHALT MIX DESIGN FOR ALL SPECIFIED MIXES SHOULD BE FORWARDED TO PEA INC. FOR REVIEW PRIOR TO CONSTRUCTION



NOTE:
PROVIDE CONTROL JOINTS IN CURB AT 10' O.C. AND AT ALL RADIUS RETURNS. PROVIDE EXPANSION JOINTS AND JOINT SEALANT WHERE CURBS ABUT STRUCTURES.

18" STANDARD CONCRETE CURB AND GUTTER
NOT TO SCALE

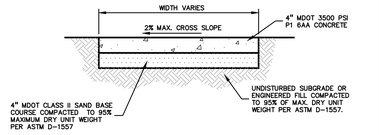


CONTRACTION JOINTS TO BE T/4 DEEP, SPACED AT INTERVALS TO MATCH SIDEWALK WIDTH (SAWCUT). 1/2-INCH PRE-MOLDED FILLER EXPANSION JOINTS WITH JOINT SEALANT SHALL BE PLACED ONLY WHERE SIDEWALK ABUTS A STRUCTURE.

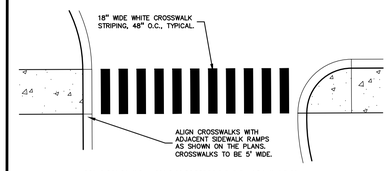
INTEGRAL CURB AND SIDEWALK
NOT TO SCALE

NOTE:
CROSS-SLOPE OF SIDEWALK MUST NOT EXCEED 2.0%, EXCEPT IN TRANSITION AREA MATCHING INTO EXISTING SIDEWALK

PROVIDE 1" DEPTH SAWCUT CONTROL JOINTS AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK (NOT TO EXCEED 8' INTERVAL).



CONCRETE SIDEWALK
NOT TO SCALE



STRIPED CROSSWALK DETAIL
NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
JAMES P. BUTCHER
ENGINEER
No. 47905
PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR LOCATING ALL UTILITIES AND VERIFYING LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
Know what's below
Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

NOTES AND DETAILS
SQUARE LAKE COURT TOWNHOUSES
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.		SUR.	P.M.
JPB		KRD	TJS	JPB

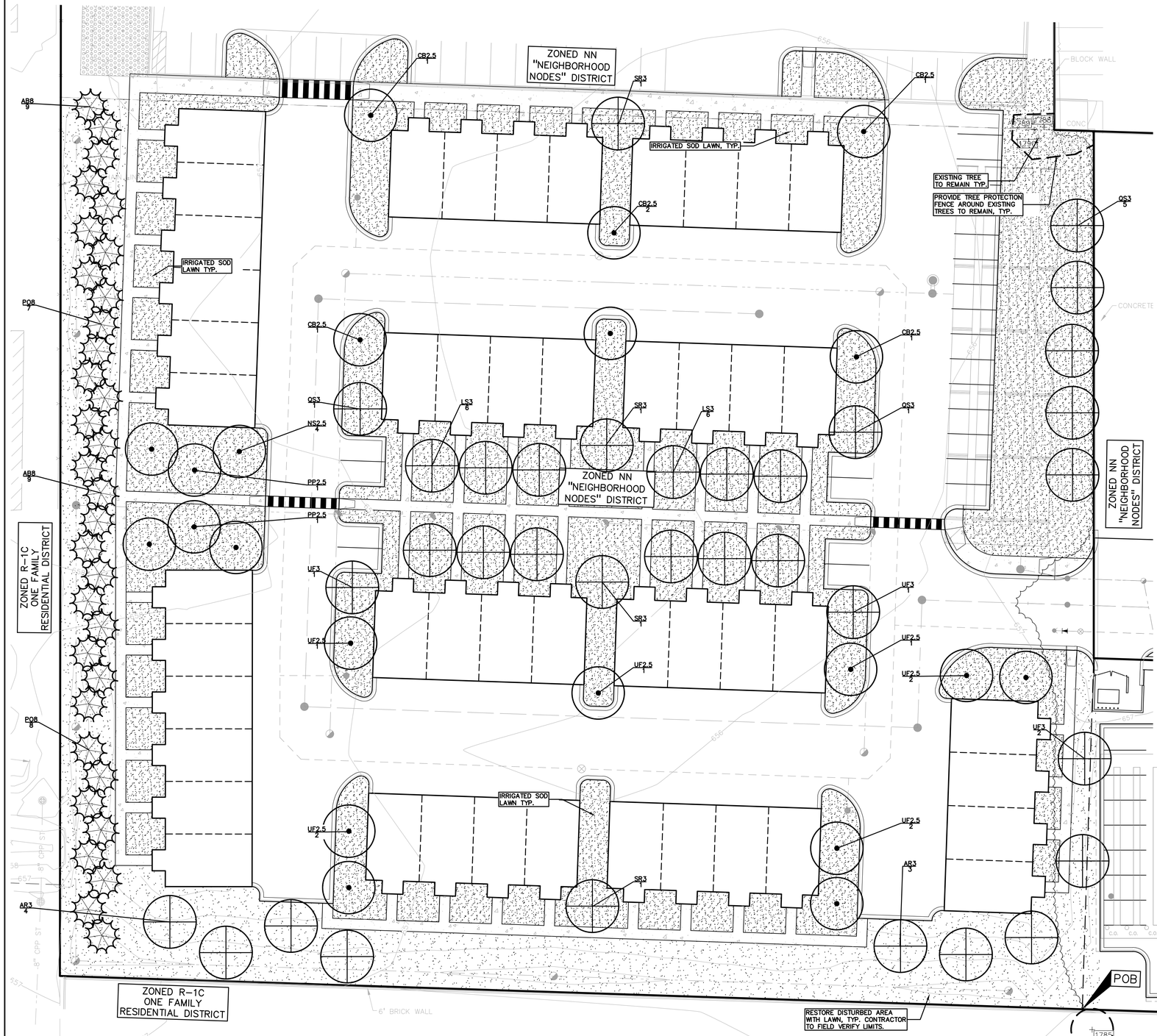
ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: N.T.S.

DRAWING NUMBER:
C-5.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG



KEY:

= SCREENING TREES AND SHRUBS

= INTERIOR ROADWAY TREES

= REPLACEMENT TREES

= IRRIGATED SOD LAWN

= LAWN RESTORATION (CONTRACTOR SHALL REPLACE DISTURBED AREAS WITH LAWN. REPLACE IRRIGATION AS NEEDED.

1786 = EXISTING TREE TO REMAIN WITH TREE PROTECTION FENCE

NOTE:
TREES TO BE PLANTED A MIN. OF 5' AWAY FROM UTILITIES

N

GRAPHIC SCALE

−20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LANDSCAPE CALCULATIONS:

PER CITY OF TROY ZONING ORDINANCE FORM BASE DISTRICT NN, NEIGHBORHOOD NODE, NODE N, SITE TYPE B, BLDG. TYPE A, STREET TYPE A

5.03 C-1a. = GENERAL SITE LANDSCAPE
REQUIRED: 20% OF SITE AREA SHALL BE LANDSCAPE MATERIAL
131,154 SQ.FT. SF • 20 % = 26,231 SF LANDSCAPE AREA REQUIRED
PROVIDED: 49,549 SF LANDSCAPED AREA (37.8%)

13.02 B. = SCREENING BETWEEN USES:
REQUIRED: WEST PROPERTY ABUTS R-1C USE
REQUIRES SCREEN ALT. 2 OR 3 OR A SOLID WALL OR FENCE MIN. 6' HT.
(1 LARGE EVERGREEN TREE/10' OR 1 NARROW EVG/3')

334' (WEST)/10 = 33 LG. EVG. OR 334'/ 3 = 112 NARROW EVG. REQ'D.

PROVIDED: 33 LARGE EVERGREEN TREES ON WEST SIDE OF SITE

13.02 B. = SCREENING BETWEEN USES:
REQUIRED: SOUTH PROPERTY ABUTS R-1C USE
REQUIRES SCREEN ALT. 2 OR 3 OR A SOLID WALL OR FENCE MIN. 6' HT.
(1 LARGE EVERGREEN TREE/10' OR 1 NARROW EVG/3')

389' (SOUTH)/10 = 39 LG. EVG. OR 389'/ 3 = 130 NARROW EVG. REQ'D.

PROVIDED: EXISTING 6' HT. SOLID WALL

13.02 F. SUBDIVISION AND SITE CONDOMINIUM STANDARDS
REQUIRED: 13.02 F.= 1 TREE PER 50 LF OF INTERNAL ROADS
1,069.4 LF / 50 = 21.3 = 21 TREES REQUIRED

PROVIDED: 21 INTERIOR ROADWAY TREES

TREE REPLACEMENT
REQUIRED: REPLACE 101.5" DBH WITH 3" CAL. TREES = 34 TREES
SEE TREE PRESERVATION PLAN, T-1.0, FOR TREE REMOVALS.

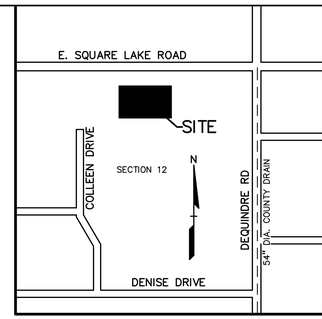
PROVIDED: 34 REPLACEMENT TREES

DECIDUOUS TREE LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
7	AR3	Redpointe Maple	*Acer rubrum 'Redpointe'*	3" Cal.	B&B
6	CB2.5	Columnar Hornbeam	*Carpinus betulus 'Fastigiata'*	2.5" Cal.	B&B
12	LS3	American Sweetgum 'Slender Silhouette'	*Liquidambar styraciflua 'Slender Silhouette'*	3" Cal.	B&B
4	NS2.5	Black Gum	*Nyssa sylvatica*	2.5" Cal.	B&B
2	PP2.5	Persian Ironwood	*Parrotia persica*	2.5" Cal.	B&B
7	QS3	Red Oak 'Skinny Genes'	*Quercus robur x alba 'JFS-KW2QX'*	3" Cal.	B&B
4	SR3	Japanese Tree Lilac	Syringa reticulata 'Ivory Silk'	3" Cal.	B&B
9	UF2.5	Frontier Elm	*Ulmus 'Frontier'*	2.5" Cal.	B&B
4	UF3	Frontier Elm	*Ulmus 'Frontier'*	3" Cal.	B&B
55	TOTAL DEC.				

EVERGREEN TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	
18	AB8	Balsam Fir	*Abies balsamea*	8' Ht.	B&B
15	PO8	Serbian Spruce	*Picea omorika*	8' Ht.	B&B
33	TOTAL EVG.				



LOCATION MAP – NOT TO SCALE

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH, WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.

No.	BY	CHK	DESCRIPTION	DATE

REVISIONS

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THEIR COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED IN WHOLE OR PART, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2019 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org
(TOLL FREE)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIM LANDSCAPE PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	CLR	DN.	CLR	SUR.	TJS	P.M.	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1"=20'

DRAWING NUMBER:
L-1.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN; INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

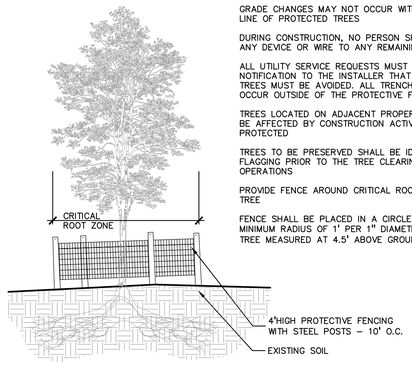
ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

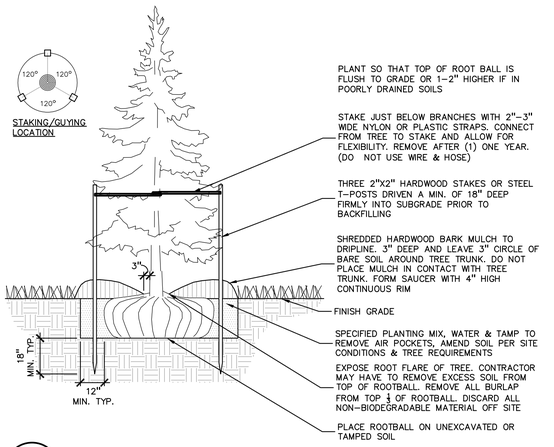
PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND



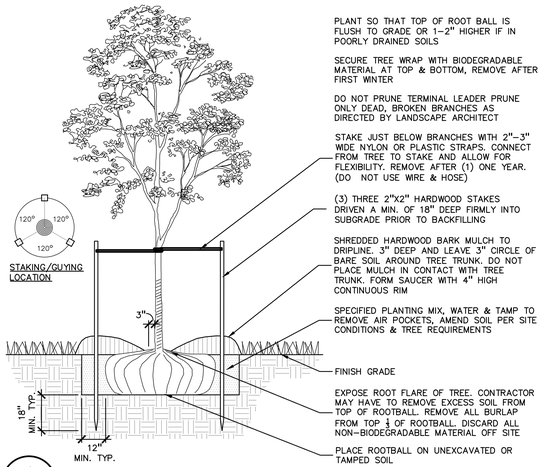
3 TREE PROTECTION DETAIL

SCALE: 1" = 3'-0"



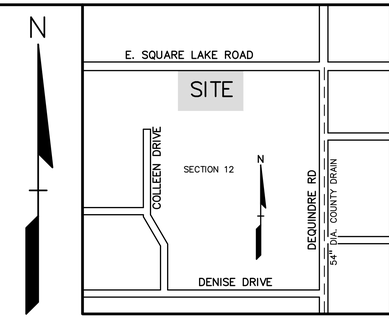
2 EVERGREEN TREE PLANTING DETAIL

SCALE: 1" = 3'-0"



1 DECIDUOUS TREE PLANTING DETAIL

SCALE: 1" = 3'-0"



LOCATION MAP – NOT TO SCALE

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 1301
REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY AND NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below Call before you dig

MISS DIG System, Inc.

1-800-482-7171 www.missdig.org

(OHIO, INDY)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

LANDSCAPE DETAILS
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	CHK	SUR.	P.M.
CLR	CLR	CLR	TJS	JPB

ORIGINAL ISSUE DATE:
JANUARY 23, 2020

PEA JOB NO. 2018-154C

SCALE: VARIES

DRAWING NUMBER:
L-1.1

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\GBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

REPLACEMENT TREE SUMMARY:

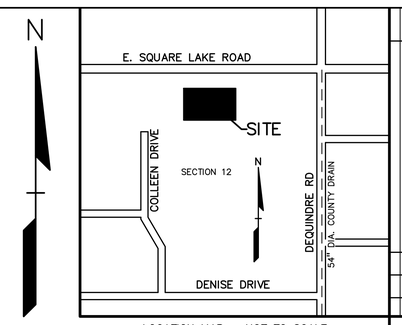
NOT INCLUDED FOR REPLACEMENT ARE DEAD, DAMAGED, DISEASED, INVASIVE SPECIES AND OFF SITE TREES.

SEE SHEET T-1.1 FOR TREE LIST AND CALCULATIONS.

KEY:

2782 = EXISTING TREE/ WOODED AREA TO REMAIN WITH TREE PROTECTION FENCE

2782 = EXISTING TREE/ WOODED AREA TO BE REMOVED

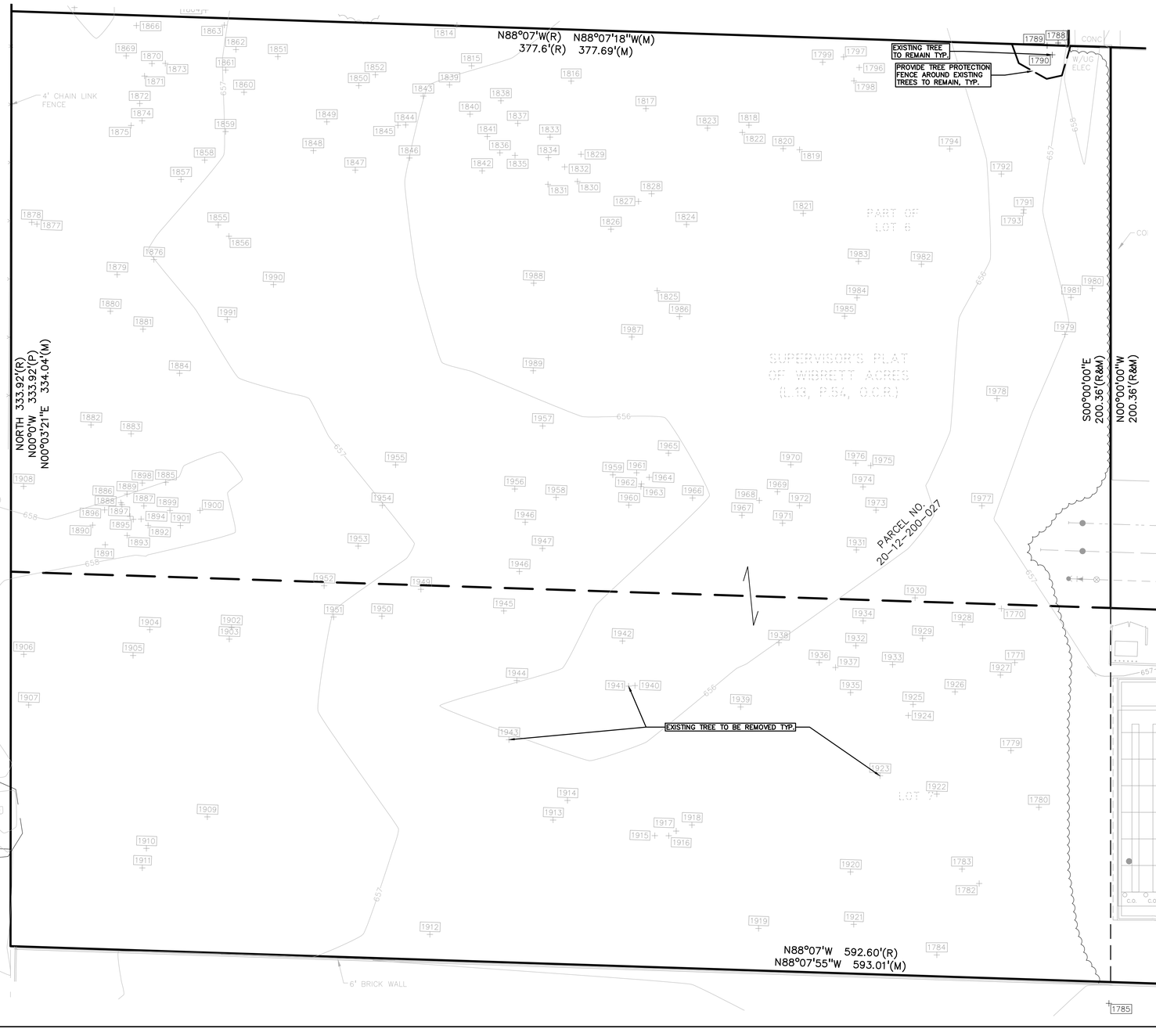


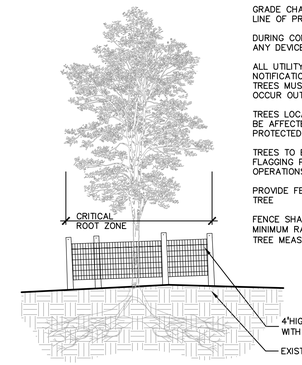
LOCATION MAP – NOT TO SCALE

GRAPHIC SCALE

−20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.





1 TREE PROTECTION DETAIL
SCALE: 1" = 3'−0"

TREE PROTECTION WILL BE ERECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE

NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN; INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT OR SOIL DEPOSITS WITHIN DRIP LINES

GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES

DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE

ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING

TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED

TREES TO BE PRESERVED SHALL BE IDENTIFIED WITH FLAGGING PRIOR TO THE TREE CLEARING OPERATIONS

PROVIDE FENCE AROUND CRITICAL ROOT ZONE OF TREE

FENCE SHALL BE PLACED IN A CIRCLE WITH A MINIMUM RADIUS OF 1' PER 1" DIAMETER OF THE TREE MEASURED AT 4.5' ABOVE GROUND

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 1301
REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATIONS AND ELEVATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR SHALL FURTHER INDEMNIFY AND HOLD OWNER AND ENGINEER, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org
(TOLL FREE!)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53970 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

TREE PRESERVATION PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T.2N, R.11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	CLR	DN.	CLR	SUR.	T.JS	P.M.	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

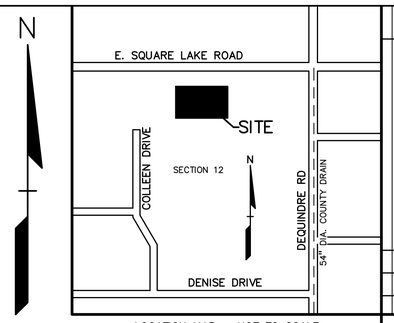
SCALE: 1" = 20'

DRAWING NUMBER:
T-1.0

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

TAG	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTE	CLASS	SAVE / REMOVE	REPLACE
1770	RM	8	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
1771	RM	10	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
1779	SM	10	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1780	SC	9	Scotch Pine	Pinus sylvestris	Good		WOODLAND	R	REPLACE
1782	BX	6	Box elder	Acer negundo	Good		INVASIVE	R	-
1783	RM	9	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
1784	BX	8	Box elder	Acer negundo	Fair		INVASIVE	R	-
1789	CT	43	Cottonwood	Populus deltoides	Fair		INVASIVE	S	-
1790	CT	27	Cottonwood	Populus deltoides	Good		INVASIVE	S	-
1791	E	9	American Elm	Ulmus americana	Good		INVASIVE	R	-
1792	B	8	Basswood	Tilia americana	Good	X4	WOODLAND	R	REPLACE
1793	B	14	Basswood	Tilia americana	Good		WOODLAND	R	REPLACE
1794	RM	7	Red Maple	Acer rubrum	Good		WOODLAND	R	REPLACE
1796	E	13	American Elm	Ulmus americana	Good		INVASIVE	R	-
1797	CT	25	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1798	RM	12	Red Maple	Acer rubrum	Good	X3	WOODLAND	R	REPLACE
1799	WO	11	White Oak	Quercus alba	Good		WOODLAND	R	REPLACE
1814	SH	14	Shagbark Hickory	Carya ovata	Fair		WOODLAND	R	REPLACE
1815	SM	10	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1816	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1817	GA	7	Green Ash	Fraxinus pennsylvanica	Very Poor		INVASIVE	R	-
1818	CT	9	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1819	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1820	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1821	SM	11	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1822	SM	9	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1823	SM	8	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1824	CT	22	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1825	CT	21	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1826	SM	13	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1827	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1828	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1829	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1830	SM	11	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1831	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1832	CT	9	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1833	CT	14	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1834	CT	9	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1835	CT	9	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1836	CT	11	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1837	SM	10	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1838	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1839	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1840	CT	9	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1841	CT	13	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1842	CT	15	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1843	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1844	CT	11	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1845	CT	14	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1846	E	8	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1847	E	12	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1848	E	12	American Elm	Ulmus americana	Very Poor		INVASIVE	R	-
1849	SM	17	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1850	SM	8	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1851	BX	9	Box elder	Acer negundo	Poor		INVASIVE	R	-
1852	SM	6	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1855	SM	18	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1856	BX	7	Box elder	Acer negundo	Poor	X3	INVASIVE	R	-
1857	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R	-
1858	BX	11	Box elder	Acer negundo	Poor		INVASIVE	R	-
1859	BW	9	Black Walnut	Juglans nigra	Fair		WOODLAND	R	REPLACE
1860	CT	12	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1861	BX	11	Box elder	Acer negundo	Poor	X2	INVASIVE	R	-
1862	MR	7	Red Mulberry	Morus rubra	Fair		INVASIVE	R	-
1863	BX	9	Box elder	Acer negundo	Poor		INVASIVE	R	-
1866	EE	13	Siberian Elm	Ulmus pumila	Poor		INVASIVE	R	-
1869	BW	7	Black Walnut	Juglans nigra	Poor		WOODLAND	R	-
1870	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R	-
1871	BX	7	Box elder	Acer negundo	Fair		INVASIVE	R	-
1872	BX	7	Box elder	Acer negundo	Fair		INVASIVE	R	-
1873	BX	8	Box elder	Acer negundo	Fair		INVASIVE	R	-
1874	CT	12	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1875	BX	6	Box elder	Acer negundo	Fair		INVASIVE	R	-
1876	E	9	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1877	CT	18	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1878	CT	28	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1879	CT	16	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1880	BW	15	Black Walnut	Juglans nigra	Fair		WOODLAND	R	REPLACE
1881	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R	-
1882	BW	13	Black Walnut	Juglans nigra	Fair		WOODLAND	R	REPLACE
1883	BW	10	Black Walnut	Juglans nigra	Poor		WOODLAND	R	-
1884	BX	15	Box elder	Acer negundo	Poor		INVASIVE	R	-
1885	CT	19	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1887	E	6	American Elm	Ulmus americana	Very Poor		INVASIVE	R	-
1888	CT	10	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1889	BX	9	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
1886	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1890	CT	10	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1891	CT	6	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1892	CT	12	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1893	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1894	CT	15	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1895	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1896	CT	7	Cottonwood	Populus deltoides	Very Poor		INVASIVE	R	-

TAG	CODE	DBH	COMMON NAME	LATIN NAME	COND	NOTE	CLASS	SAVE / REMOVE	REPLACE
1897	CT	8	Cottonwood	Populus deltoides	Very Poor		INVASIVE	R	-
1898	CT	12	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1899	CT	12	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1900	BW	10	Black Walnut	Juglans nigra	Good		WOODLAND	R	REPLACE
1901	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
1902	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1903	CT	7	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1904	CT	14	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1905	BX	8	Box elder	Acer negundo	Poor		INVASIVE	R	-
1906	CT	16	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1907	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1908	E	7	American Elm	Ulmus americana	Poor		INVASIVE	R	-
1909	CT	30	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1910	CT	18	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1911	CT	9	Cottonwood	Populus deltoides	Very Poor		INVASIVE	R	-
1912	SM	8	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1913	SM	10	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1914	GA	6	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1915	CT	15	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1916	CT	13	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1917	SM	8	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1918	CT	6	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1919	BC	8	Wild Black Cherry	Prunus serotina	Fair	X1	WOODLAND	R	REPLACE
1921	E	6	American Elm	Ulmus americana	Fair		INVASIVE	R	-
1920	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1922	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1923	BP	8	Bradford Pear	Pyrus calleryanna	Good		WOODLAND	R	REPLACE
1924	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1928	SC	9	Scotch Pine	Pinus sylvestris	Poor		WOODLAND	R	-
1926	SM	6	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1927	SM	10	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1928	SM	6	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1929	SM	9	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1930	SM	8	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1931	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1932	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1933	CT	8	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1934	SM	6	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1935	SM	6	Silver Maple	Acer saccharinum	Fair	X1	INVASIVE	R	-
1936	GA	6	Green Ash	Fraxinus pennsylvanica	Fair		INVASIVE	R	-
1937	SM	8	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1938	SM	9	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1939	GA	7	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1940	SM	13	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1941	SM	9	Silver Maple	Acer saccharinum	Poor		INVASIVE	R	-
1942	SM	15	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1943	SM	13	Silver Maple	Acer saccharinum	Good	X1	INVASIVE	R	-
1944	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1946	BX	6	Box elder	Acer negundo	Poor		INVASIVE	R	-
1947	RE	8	Rock Elm	Ulmus thomasii	Good		INVASIVE	R	-
1945	GA	7	Green Ash	Fraxinus pennsylvanica	Good		INVASIVE	R	-
1946	BX	8	Box elder	Acer negundo	Poor		INVASIVE	R	-
1949	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1950	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1951	SM	6	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1952	SM	10	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1953	GA	12	Green Ash	Fraxinus pennsylvanica	Fair		INVASIVE	R	-
1954	GA	6	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1955	GA	6	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1956	BX	6	Box elder	Acer negundo	Poor		INVASIVE	R	-
1957	BC	6	Wild Black Cherry	Prunus serotina	Fair		WOODLAND	R	REPLACE
1958	BX	7	Box elder	Acer negundo	Fair		INVASIVE	R	-
1959	CT	14	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1960	BX	7	Box elder	Acer negundo	Poor		INVASIVE	R	-
1961	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1962	CT	8	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1963	CT	6	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1964	CT	9	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1965	SWO	10	Swamp White Oak	Quercus bicolor	Fair		WOODLAND	R	REPLACE
1966	CT	14	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1967	SM	12	Silver Maple	Acer saccharinum	Good		INVASIVE	R	-
1968	CT	7	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1969	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1970	CT	10	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1971	SM	8	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1972	CT	8	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1973	SM	9	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1974	CT	14	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1975	CT	12	Cottonwood	Populus deltoides	Poor		INVASIVE	R	-
1976	CT	12	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1977	GA	6	Green Ash	Fraxinus pennsylvanica	Poor		INVASIVE	R	-
1978	BX	13	Box elder	Acer negundo	Poor		INVASIVE	R	-
1979	BW	9	Black Walnut	Juglans nigra	Good		WOODLAND	R	REPLACE
1980	BX	7	Box elder	Acer negundo	Very Poor		INVASIVE	R	-
1981	BX	9	Box elder	Acer negundo	Poor		INVASIVE	R	-
1982	GA	7	Green Ash	Fraxinus pennsylvanica	Fair	ing pea pod op	INVASIVE	R	-
1983	SM	12	Silver Maple	Acer saccharinum	Fair		INVASIVE	R	-
1984	CT	20	Cottonwood	Populus deltoides	Good		INVASIVE	R	-
1985	E	11	American Elm	Ulmus americana	Very Poor		INVASIVE	R	-
1986	CT	20	Cottonwood	Populus deltoides	Fair		INVASIVE	R	-
1987	BX	6	Box elder	Acer negundo	Poor		INVASIVE	R	-
1988	SM	9	Silver Maple	Acer saccharinum	Fair	move 15 ft north	INVASIVE	R	-
1989	BX	10	Box elder	Acer negundo	Fair		INVASIVE	R	-
1990	BX	18	Box elder	Acer negundo	Poor		INVASIVE	R	-
1991	BW	13	Black Walnut	Juglans nigra	Fair		WOODLAND	R	REPLACE



LOCATION MAP – NOT TO SCALE

REPLACEMENT TREE SUMMARY:

NOT INCLUDED FOR REPLACEMENT ARE DEAD, DAMAGED, DISEASED, INVASIVE SPECIES AND OFF SITE TREES.

SEE SHEET T-1.0 FOR TREE PRESERVATION PLAN.

TREE INVENTORY/PRESERVATION CALCULATIONS

WOODLAND TREES			
WOODLAND TREES REMOVED:	**20**	(REPLACE AT 50% OF REMOVED DBH)	
203" DBH x 0.5 =	**102"**	REPLACEMENT	
WOODLAND TREES SAVED:	0	(CREDIT OF 2X DBH)	
" DBH x 2 =	**"**	CREDIT	
101.5 -	0	=	101.5
101.5 " DBH REQUIRED FOR WOODLAND REPLACEMENT			
LANDMARK TREES			
LANDMARK TREES REMOVED:	0	(REPLACE AT 100% OF REMOVED DBH)	
" DBH x 1 =	**"**	REPLACEMENT	
LANDMARK TREES SAVED:	0	(CREDIT OF 2X DBH)	
" DBH x 2 =	**"**	CREDIT	
0 -	0	=	0
101.5 " TOTAL DBH REQUIRED FOR REPLACEMENT			
EXEMPT TREES			
(NO REPLACEMENT REQUIRED FOR EXEMPT TREES)			
SAVED EXEMPT TREES:	2	**Trees**	
EXEMPT TREES ON SITE:	111	**Trees**	

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
REGISTERED LANDSCAPE ARCHITECT

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR VERIFYING THE LOCATIONS, DEPTHS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR SHALL FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 www.missdig.org
(NON-MEMB)

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53975 TENNO
SHELBY TOWNSHIP, MICHIGAN 48315

TREE PRESERVATION LIST
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T.2N, R.11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	CR	DN.	CR	SUR.	TJS	P.M.	JPB

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: N.T.S.

DRAWING NUMBER:
T-1.1

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C-TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE-18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK-18154C.DWG

SITE PHOTOMETRIC DATA:

	ALLOWED	PROPOSED
1. LIGHTING LEVELS:		
1.1. MAX ON SITE	20 F.c.	4.7 F.c.
1.2. AT RESIDENTIAL BOUNDARY:	0.2 F.c.	0.0 F.c.
1.3. AT NON-RESIDENTIAL BOUNDARY:	1.0 F.c.	0.0
2. FIXTURE HEIGHT (MAX)	25 FT.	10 FT.

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
○	P1 (10' HEIGHT)	59	KICHLER	258377-2 MOD#:11250/CP133 536	LED WALL CYLINDER	LED	1	11250 258377-2Q.IES	374	0.95	11.2
△	P2 (6' HEIGHT)	48	KICHLER	258377-2 MOD#:11250/CP133 536	LED WALL CYLINDER	LED	1	11250 258377-2Q.IES	374	0.95	11.2

GENERAL SITE LIGHTING NOTES:

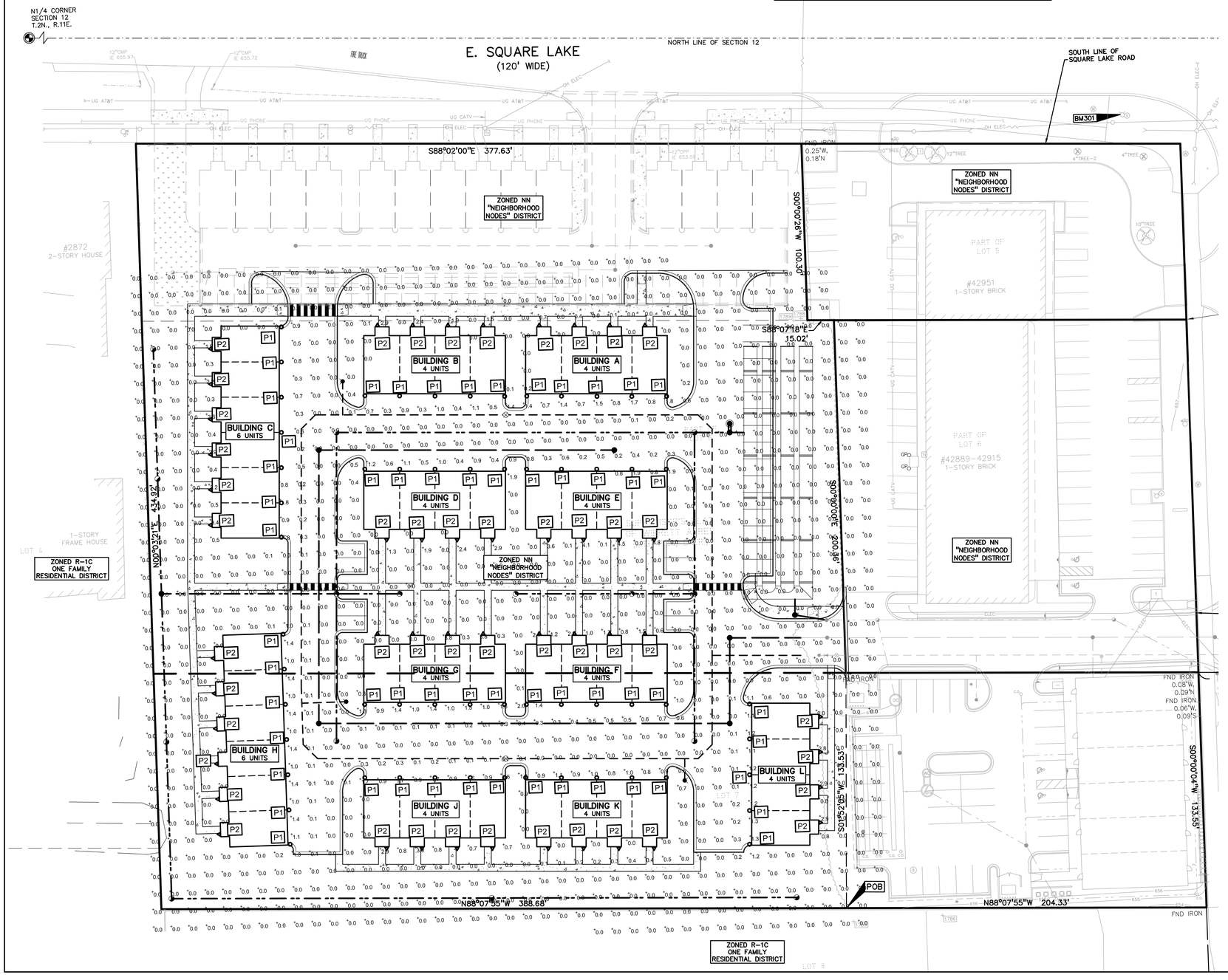
1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
2. ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2 FEET ABOVE GRADE AS SHOWN IN DETAIL.
3. ALL POLES LOCATED OUTSIDE OF THE PARKING LOT AREA SHALL BE LOCATED 3 FEET FROM BACK OF CURB OR EDGE OF SIDEWALKS AND 5 FEET FROM UNDERGROUND UTILITIES.
4. SHOP DRAWINGS FOR THE ELECTRICAL WIRING OF THE FIXTURES NEED TO BE SUPPLIED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR COORDINATION OF UNDERGROUND CONDUIT AND APPROVAL OF LAYOUT.
5. ALL AREA LIGHT FIXTURES ARE TO BE DIRECTED AWAY FROM NEIGHBORING PROPERTIES AND ROADWAYS.
6. CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT ALL MATERIALS AND EQUIPMENT FOR THIS WORK UNLESS OTHERWISE NOTED.
7. COORDINATE LIGHT FIXTURE PLACEMENT AND INSTALLATION WITH LANDSCAPE.
8. ALL CONDUCTORS SHALL BE IN CONDUIT.

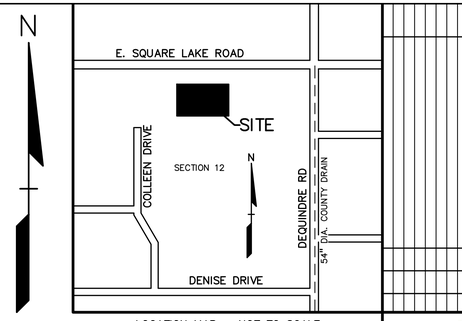
BENCHMARKS
(GPS DERIVED – NAVD88)

BM #300
ARROW ON HYDRANT ±13' WEST OF WEST CURB LINE OF DEQUINDRE ROAD AND ±31' NORTH OF THE SOUTHEAST CORNER OF LOT #7.
ELEV. – 657.22'

BM #301
ARROW ON HYDRANT ±54' NORTH OF THE NORTHEAST CORNER OF BUILDING #42951 AND ±43' EAST OF THE NORTHEAST CORNER OF BUILDING #42951.
ELEV. – 660.63'

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





LOCATION MAP – NOT TO SCALE

LEGEND

- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET
- SEC. CORNER FOUND
- R RECORDED
- M MEASURED
- C CALCULATED

EXISTING	PROPOSED	
–OH–ELEC–W–		ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
–UG–CATV–		UNDERGROUND CABLE TV, CATV PEDESTAL
–UG–PHONE–		TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
–UG–ELEC–		ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
		GAS MAIN, VALVE & GAS LINE MARKER
		WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
		SANITARY SEWER, CLEANOUT & MANHOLE
		STORM SEWER, CLEANOUT & MANHOLE
		COMBINED SEWER & MANHOLE
		SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		POST INDICATOR VALVE
		WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
		MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
		UNIDENTIFIED STRUCTURE
816.06	871.21	SPOT ELEVATION
670	671	CONTOUR LINE
		FENCE
		GUARD RAIL
		STREET LIGHT
		SIGN
CONC.		CONCRETE
	STD DUTY / HEAVY DUTY / R.O.W. ONLY	
ASPH.		ASPHALT
	STD DUTY / HEAVY DUTY / DEEP STRENGTH	

REFERENCE DRAWINGS

WATER MAIN	CITY OF TROY GIS MAP, DATED 05–16–18
SANITARY SEWER	CITY OF TROY GIS MAP, DATED 05–16–18
STORM SEWER	CITY OF TROY GIS MAP, DATED 05–16–18
ELECTRIC	NOT RECEIVED AT TIME OF PLAN ISSUE
TELEPHONE	AT&T SERVICE MAP, RECEIVED 07–27–18
GAS	CONSUMERS ENERGY MAP #22–61–12–1, DATED 10–02–17
CATV	COMCAST SERVICE MAP, RECEIVED 08–30–18
OTHER	ROOC ROAD PLANS #53431, SHEETS 113–115, DATED 06–21–17

LUMEN P1 & P2

KICHLER
Style to live by



1 Light Outdoor Wall Cylinder in BA
9234BA (Brushed Aluminum)

Product Description:
This one light, Wall Cylinder features our Brushed Aluminum finish and uses a BR-30 bulb that produces 65-watts (max.) of pure light. It measures 7" high, is U.L. listed for wet location, and is a Dark Skies compliant fixture.

Available Finishes
Architectural Bronze
Brushed Aluminum
White

ADD TO PROJECT

Technical Information

Weight:	0.95 LBS
Safety Rated:	Wet
HCWO:	3.50"
Base Backplate:	5.00"
Width:	4.75"
Height:	7.00"
Lamp Included:	Not Included
Extension:	7.00"
Voltage:	120V
CFL Bulb Type:	HYBRID (13-15W)
Light Source:	Incandescent
Socket Base:	Medium
Number of Bulbs:	1
Lamp Type:	A19
Max Watt:	65W
Finish:	Brushed Aluminum

Project	
Type	
Ordering #	
Comments	

XREF: S:\PROJECTS\2018\2018154C\DWG\18154C–TOPOBASE.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\CBASE–18154C.DWG
XREF: S:\PROJECTS\2018\2018154C\DWG\CONSTRUCTION\TBLK–18154C.DWG

No.	BY	CHK	DESCRIPTION	DATE
			REVISIONS	

STATE OF MICHIGAN
JAMES PETER BUTCHER
ENGINEER
No. 49805
PROFESSIONAL ENGINEER

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON-LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2017 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811
Know what's below Call before you dig
MISS DIG System, Inc.
1-800-482-7171 (TOLL FREE) www.missdig.org

PEA

PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48083-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

EUREKA BUILDING COMPANY
53976 DESANO
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY PHOTOMETRIC PLAN
SQUARE LAKE COURT TOWNHOUSES
SQUARE LAKE ROAD, WEST OF DEQUINDRE ROAD
PART OF SEC. 12, T 2N, R 11E, CITY OF TROY, OAKLAND COUNTY, MICHIGAN

DES.	DN.	CHK	SUR.	T.J.S	P.M.	JPB
JPB		KRD				

ORIGINAL ISSUE DATE:
FEBRUARY 3, 2020

PEA JOB NO. 2018-154C

SCALE: 1" = 30'

DRAWING NUMBER:
SL-1.1

NOTE

SECTION R702.4.2 & R702.4.3:
WATER-RESISTANT GYPSUM BACKER BOARD SHALL NOT BE USED OVER A VAPOR RETARDER IN A SHOWER OR BATHTUB COMPARTMENT, WHERE THERE WILL BE DIRECT EXPOSURE TO WATER, OR IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY

NOTE

SECTION E3802.11:
ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.

NOTE:

1. ALL FIRST FLOOR CEILING HEIGHTS TO BE 9'-0" HIGH UNLESS NOTED OTHERWISE.
2. ALL FIRST FLOOR SASH HEIGHTS TO BE 7'-8" UNLESS NOTED OTHERWISE.

NOTE: ⊙SD/CM

ALL SMOKE DETECTORS / CARBON MONOXIDE ALRMARS SHALL BE INTERCONNECTED W/ BATTERY BACK-UP PER CODE.

NOTE:

BATHROOM EXHAUST FANS ARE TO VENT DIRECTLY TO THE OUTSIDE OF STRUCTURE.

NOTE:

FRAME GARAGE WALLS EXCEEDING 10'-0" IN HEIGHT WITH 2x6 STUDS.

NOTE:

LANDINGS AT DOORS (R311.4.3)
THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF EACH EXTERIOR DOOR , WHERE A STAIRWAY OF 2 OR FEWER RISERS IS LOCATED ON THE EXTERIOR SIDE OF A DOOR, OTHER THAN THE REQUIRED EXIT DOOR, A LANDING IS NOT REQUIRED FOR THE EXTERIOR SIDE.

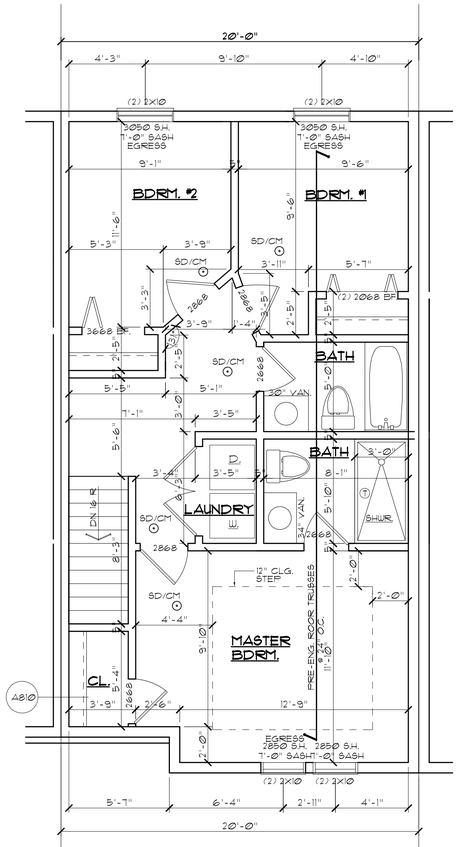
A LANDING AT AN EXTERIOR DOOR SHALL NOT BE MORE THAN 7 3/4" BELOW THE TOP OF THE THRESHOLD. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SRVED. EVERY LANDING SHALL HAVE A MIN. DIMENSION OF 36" MEASURED IN THE DIRECTION OF TRAVEL.

FIRE SEPARATION NOTE FOR LIVING SPACE ABOVE GARAGE

FIRE SEPARATION (R309)
GARAGE SPACE BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8-INCH TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT. ALL OTHER GARAGE SPACE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE. DROP CLG. UNDER FLR. ABV. (ENCLOSE MECHANICAL AND STRUCTURAL ELEMENTS) VERIFY W/ BLDR.

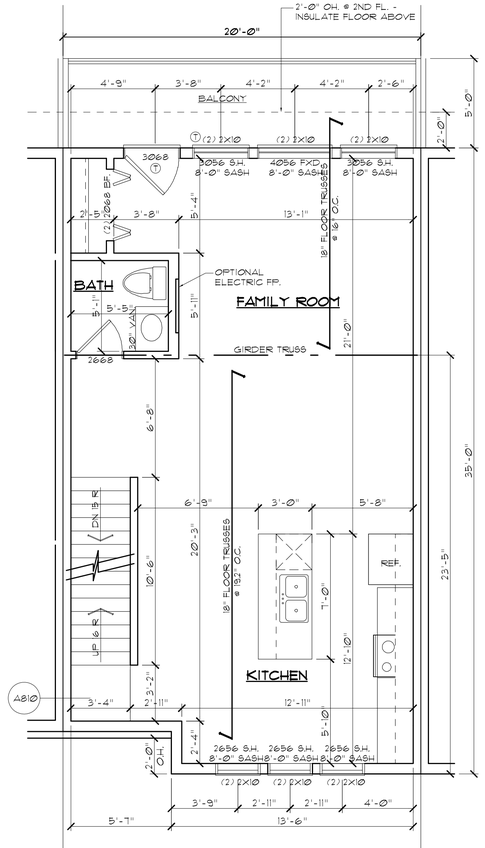
NOTE:

STAIRWAY ILLUMINATION (R303.6)
ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING OF THE STAIRWAY. FOR INTERIOR STAIRS THE ARTIFICIAL LIGHT SOURCES SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS NOT LESS THAN 1 FOOT-CANDLES MEASURED AT THE CENTER OF TREADS AND LANDINGS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS PROVIDING ACCESS TO A BASEMENT FROM THE OUTSIDE GRADE LEVEL SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF THE STAIRWAY. THE LIGHTING AND SWITCHING OF THE STAIRWELL WILL BE INSPECTED AN ELECTRICAL INSPECTOR.



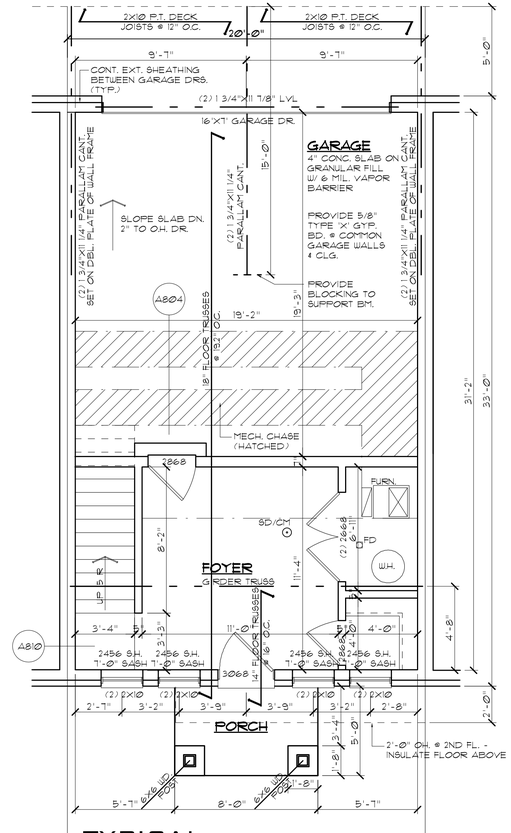
TYPICAL SECOND FLOOR PLAN-727 SF

SCALE: 1/4" = 1'-0" 3-BEDROOMS



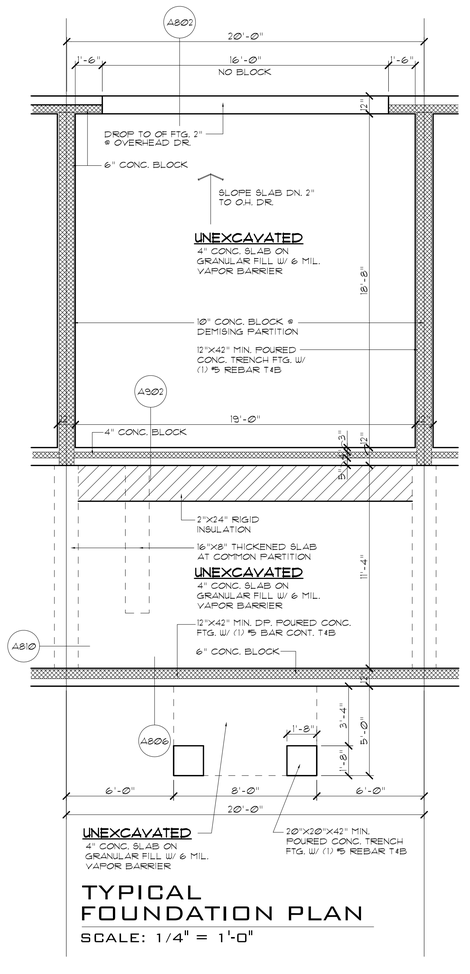
TYPICAL FIRST FLOOR PLAN-685 SF

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



TYPICAL LOWER LEVEL PLAN-249 SF

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



TYPICAL FOUNDATION PLAN

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

COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS NOT TO BE USED OR REPRODUCED WITHOUT THE WRITTEN CONSENT OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
UNIT FLOOR PLANS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
REVIEW
1ST SUBM.
2ND SUBM.
3RD SUBM.

DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-1

CONDO DEVELOP.

NOTE

SECTION R702.4.2 & R702.4.3:
WATER-RESISTANT GYPSUM BACKER BOARD SHALL NOT BE USED OVER A VAPOR RETARDER IN A SHOWER OR BATHTUB COMPARTMENT, WHERE THERE WILL BE DIRECT EXPOSURE TO WATER, OR IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY

NOTE

SECTION E3802.11:
ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT.

NOTE:

1. ALL FIRST FLOOR CEILING HEIGHTS TO BE 9'-0" HIGH UNLESS NOTED OTHERWISE.
2. ALL FIRST FLOOR SASH HEIGHTS TO BE 7'-8" UNLESS NOTED OTHERWISE.

NOTE: ⊙SD/CM

ALL SMOKE DETECTORS / CARBON MONOXIDE ALRMARS SHALL BE INTERCONNECTED W/ BATTERY BACK-UP PER CODE.

NOTE:

FRAME GARAGE WALLS EXCEEDING 10'-0" IN HEIGHT WITH 2x6 STUDS.

NOTE:

LANDINGS AT DOORS (R311.4.3)
THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF EACH EXTERIOR DOOR . WHERE A STAIRWAY OF 2 OR FEWER RISERS IS LOCATED ON THE EXTERIOR SIDE OF A DOOR, OTHER THAN THE REQUIRED EXIT DOOR, A LANDING IS NOT REQUIRED FOR THE EXTERIOR SIDE.

A LANDING AT AN EXTERIOR DOOR SHALL NOT BE MORE THAN 7 3/4" BELOW THE TOP OF THE THRESHOLD. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SRVED. EVERY LANDING SHALL HAVE A MIN. DIMENSION OF 36" MEASURED IN THE DIRECTION OF TRAVEL.

NOTE:

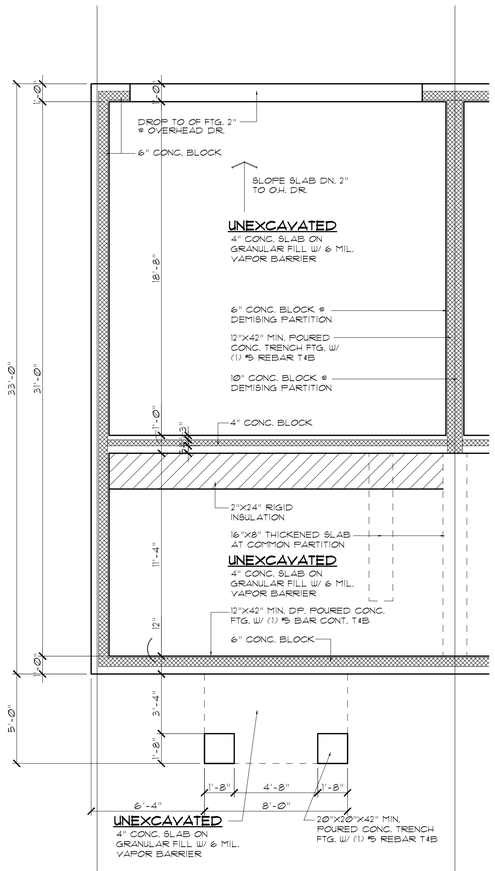
BATHROOM EXHAUST FANS ARE TO VENT DIRECTLY TO THE OUTSIDE OF STRUCTURE

FIRE SEPARATION NOTE FOR LIVING SPACE ABOVE GARAGE

FIRE SEPARATION (R309)
GARAGE SPACE BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8-INCH TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT. ALL OTHER GARAGE SPACE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE. DROP CLG. UNDER FLR. ABV. (ENCLOSE MECHANICAL AND STRUCTURAL ELEMENTS) VERIFY W/ BLDR.

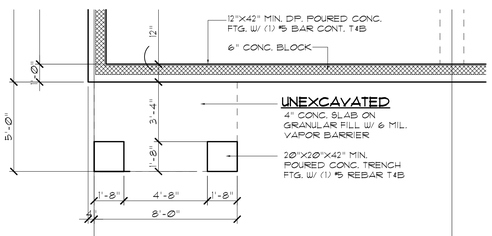
NOTE:

STAIRWAY ILLUMINATION (R303.6)
ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING OF THE STAIRWAY. FOR INTERIOR STAIRS THE ARTIFICIAL LIGHT SOURCES SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS NOT LESS THAN 1 FOOT-CANDLES MEASURED AT THE CENTER OF TREADS AND LANDINGS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS PROVIDING ACCESS TO A BASEMENT FROM THE OUTSIDE GRADE LEVEL SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF THE STAIRWAY. THE LIGHTING AND SWITCHING OF THE STAIRWELL WILL BE INSPECTED AN ELECTRICAL INSPECTOR.



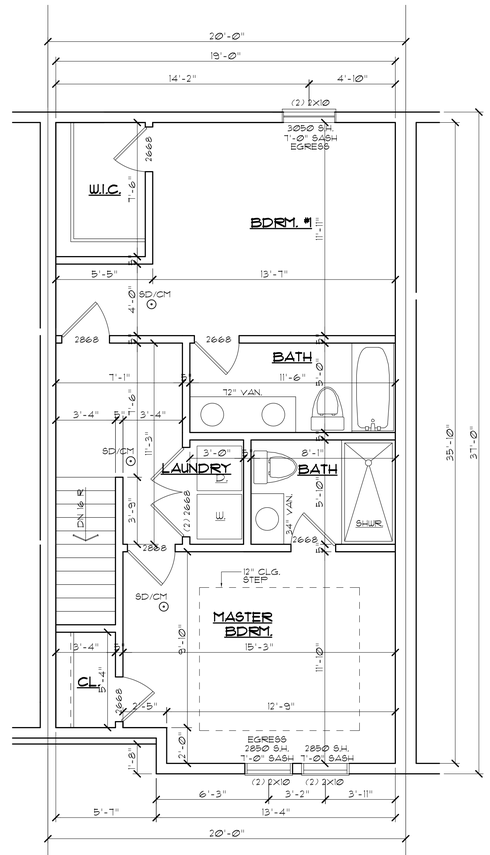
TYPICAL END UNIT FOUNDATION PLAN

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



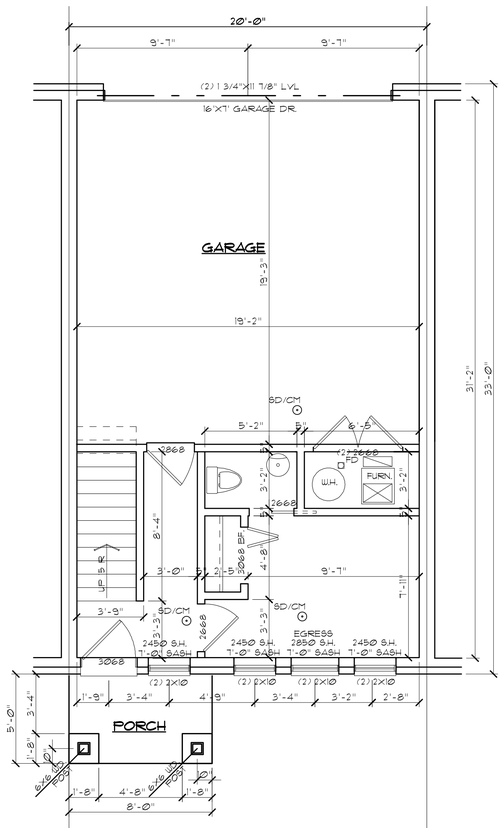
@ PORCH OPTIONAL END UNIT FOUNDATION PLAN

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



TYPICAL SECOND FLOOR PLAN-712 SF

SCALE: 1/4" = 1'-0" 2-BEDROOMS



OPTIONAL LOWER LEVEL PLAN-249 SF

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

COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER CAN AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
UNIT FLOOR PLANS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:

DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-2

CONDO DEVELOP.



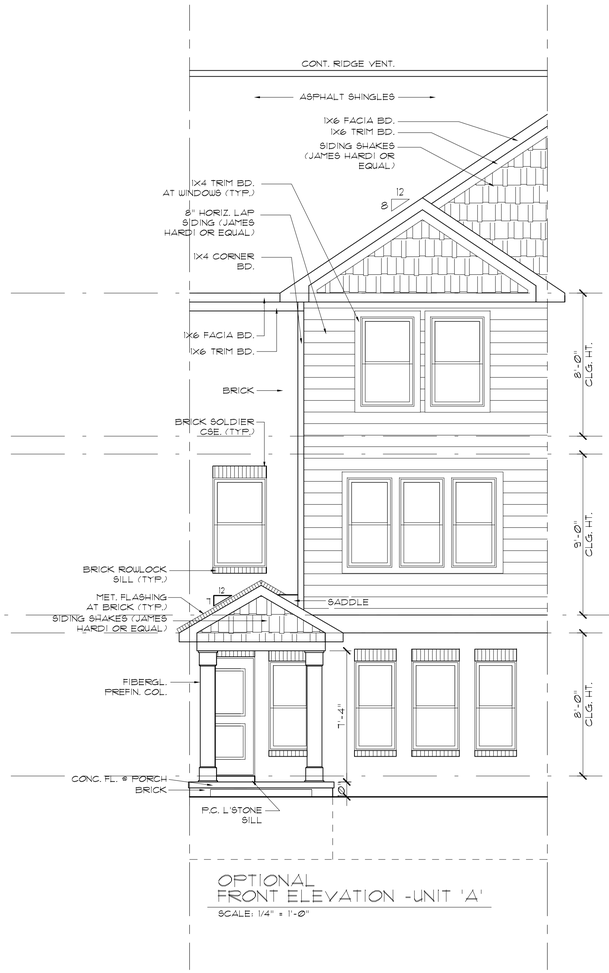
END UNIT
OPTIONAL LOWER LEVEL
FRONT ELEVATION -UNIT 'A'

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



OPTIONAL LOWER LEVEL
FRONT ELEVATION -UNIT 'A'

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



OPTIONAL
FRONT ELEVATION -UNIT 'A'

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

COPYRIGHT © 2019
THE DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED WITHOUT PUBLICATION WITHOUT THE WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
DETAIL EXTERIOR ELEVATIONS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:

REVIEW
09-09-19
10-21-19
11-04-19
11-08-19
11-18-19
BID

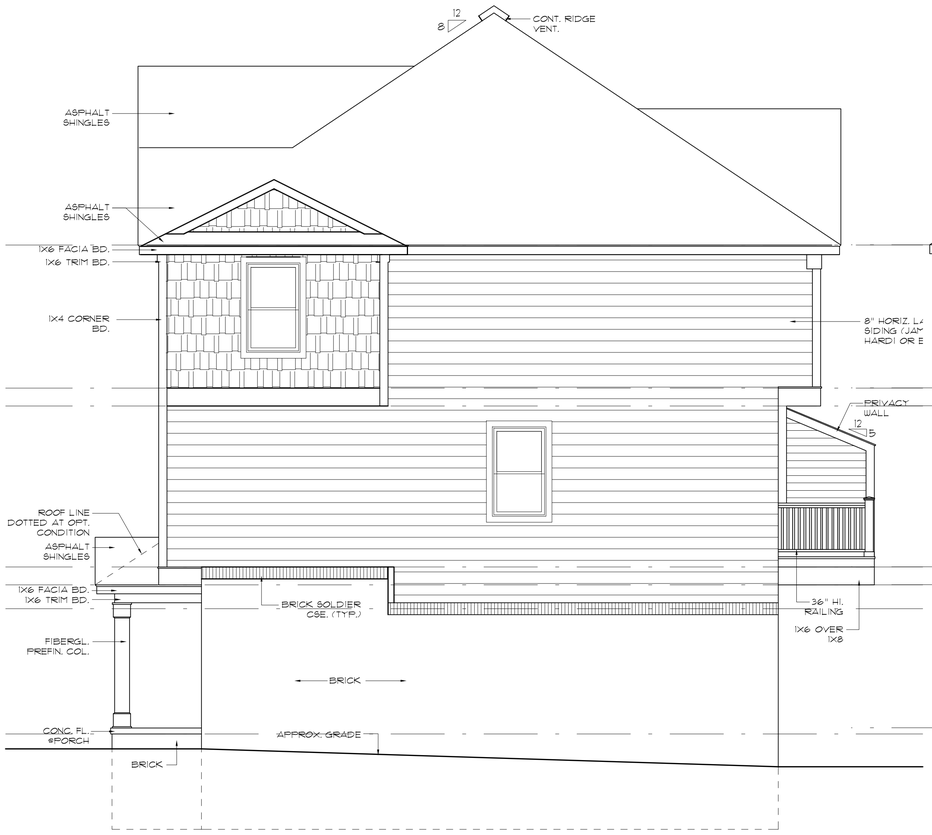
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS – USE FIGURED DIMENSIONS ONLY

JOB NO.
2019–20

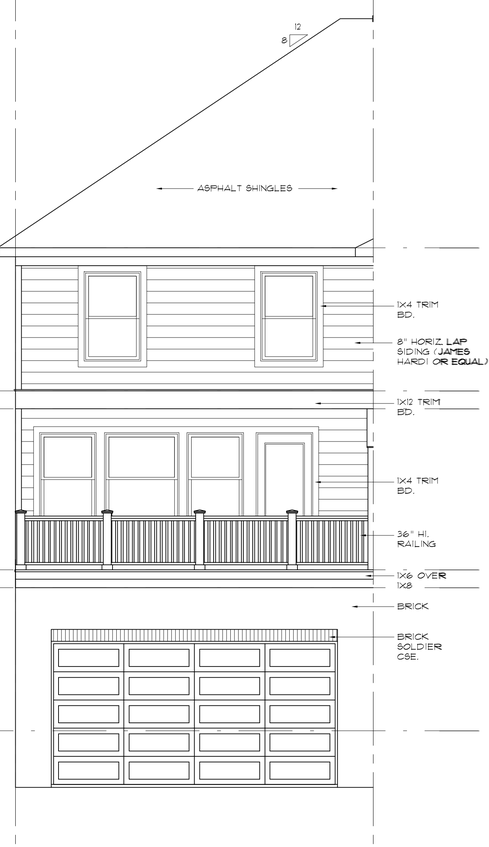
SHEET
A–3.1

CONDO DEVELOP.



RIGHT SIDE ELEVATION -UNIT 'A'

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



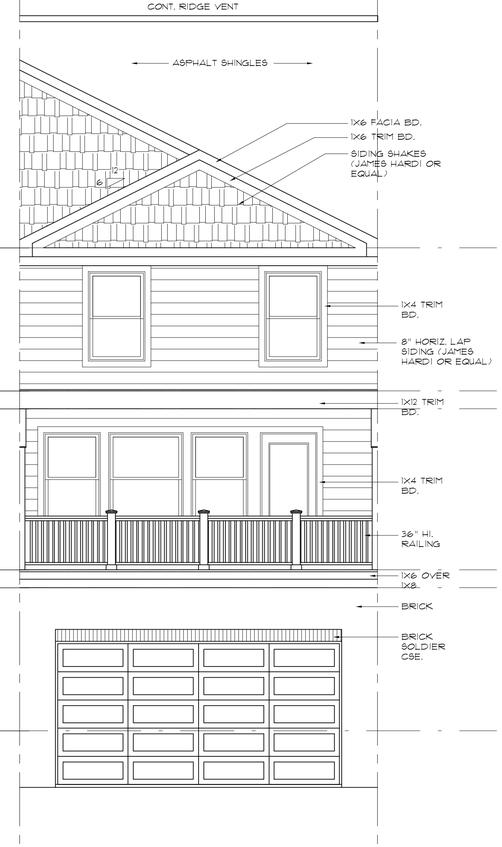
REAR ELEVATION -UNIT 'A'

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



REAR ELEVATION -UNIT 'A'

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



REAR ELEVATION -UNIT 'A'

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

COPYRIGHT © 2019
THE DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED WITHOUT THE EXPRESS WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
DETAIL REAR ELEVATIONS
RIGHT SIDE ELEVATION

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
REVIEW
00-17-19
12-21-19
11-02-20
11-06-20
01-15-20
00-00-00

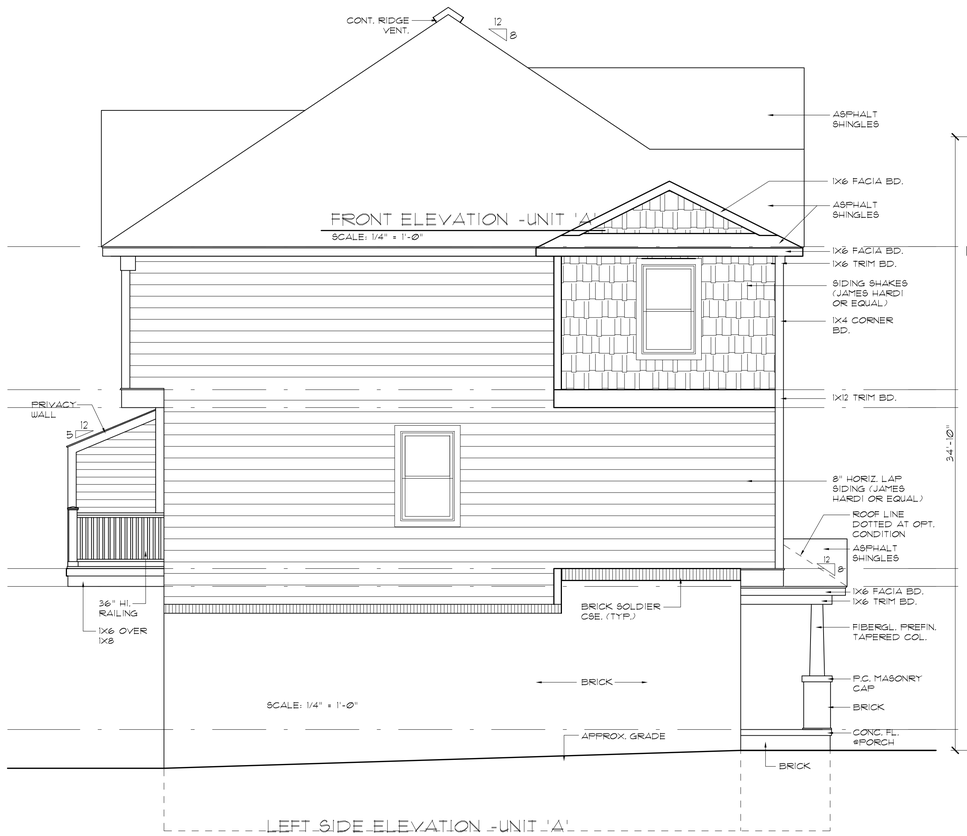
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

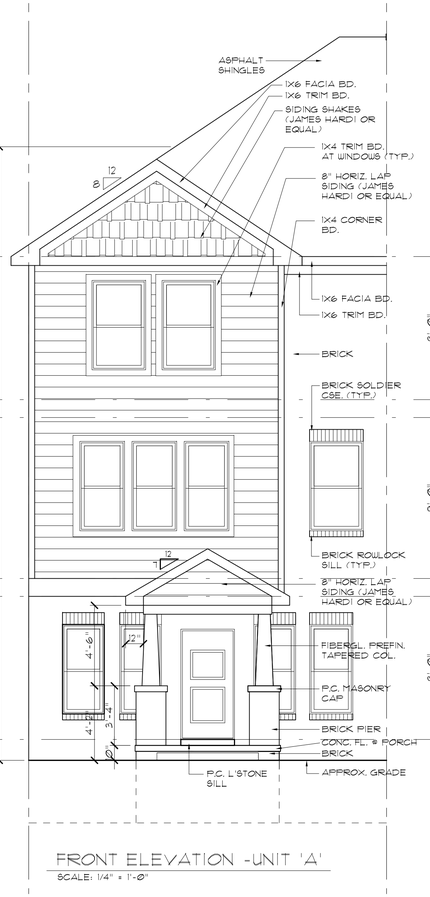
SHEET
A-3.2

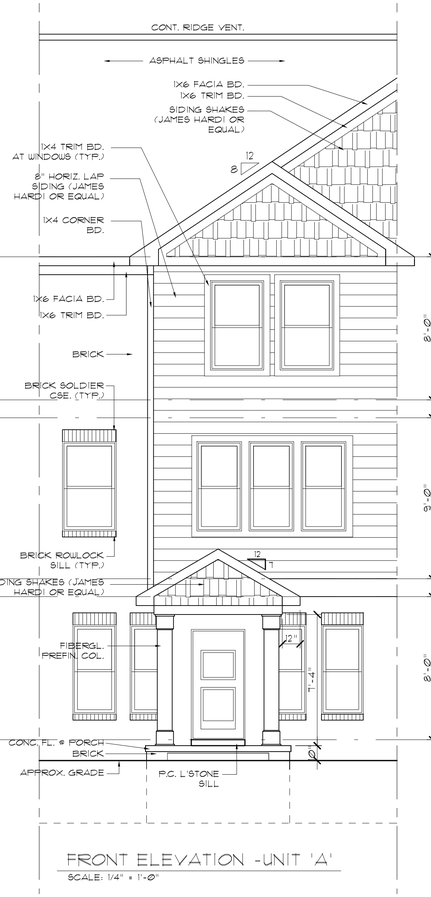
CONDO DEVELOP.

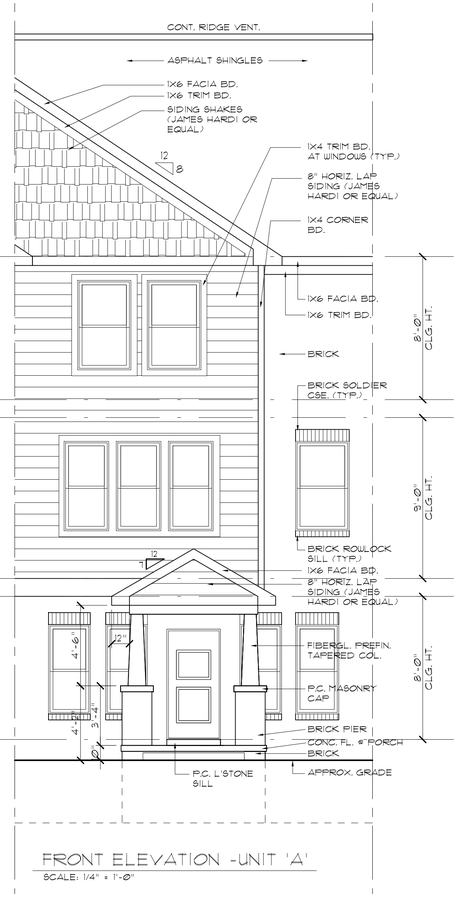


LEFT ELEVATION - 4 UNIT BLDG.

2,300 SF SCALE: 1/4" = 1'-0"







COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER THEREIN IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
DETAIL FRONT ELEVATIONS
LEFT SIDE ELEVATIONS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
08-07-19

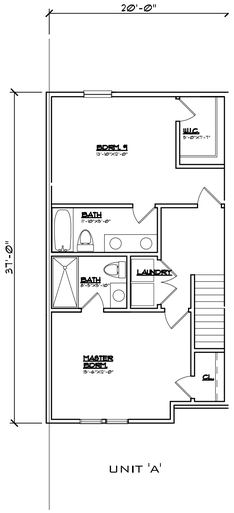
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

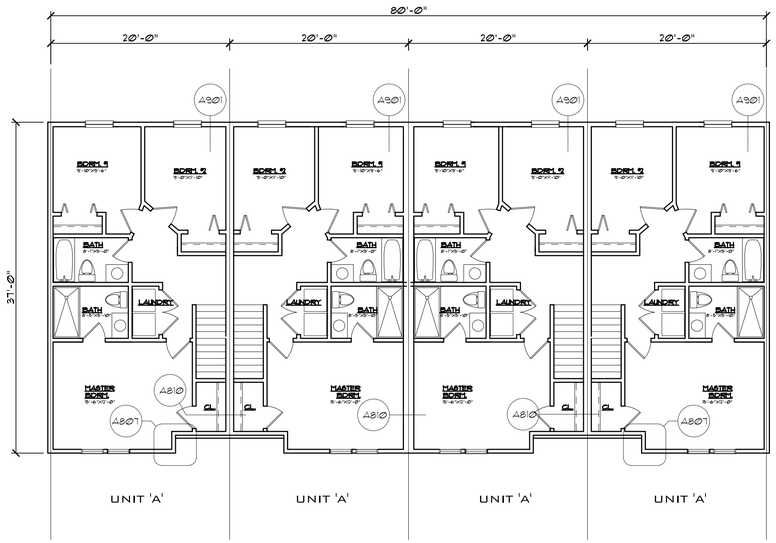
JOB NO.
2019-20

SHEET
A-3

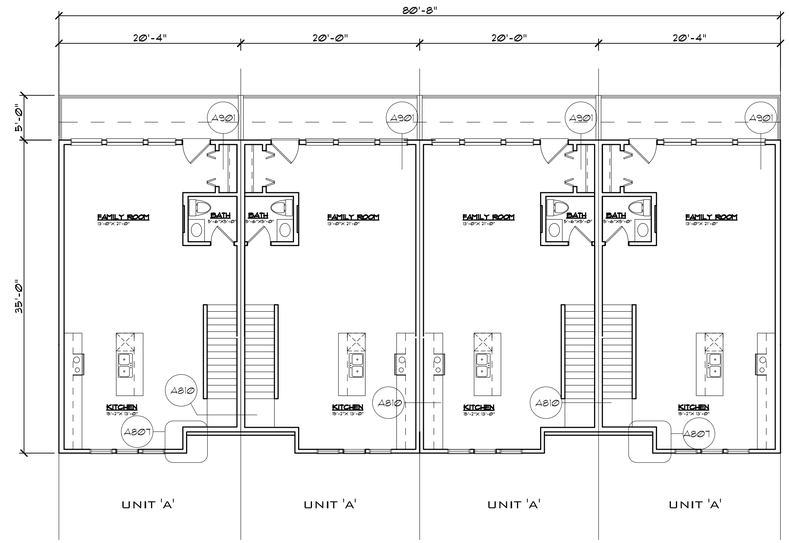
CONDO DEVELOP.



2 BEDROOM OPTION
UPPER LEVEL PLAN
712 SF

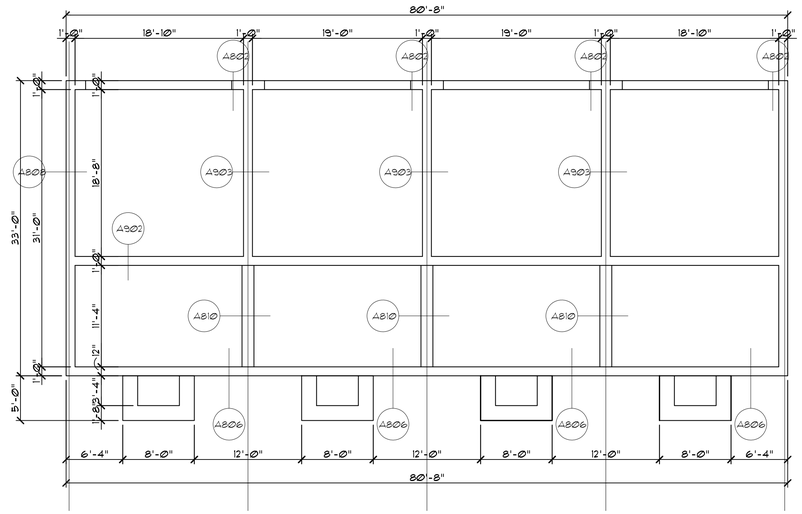


4-UNIT BUILDING
UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"
712 SF

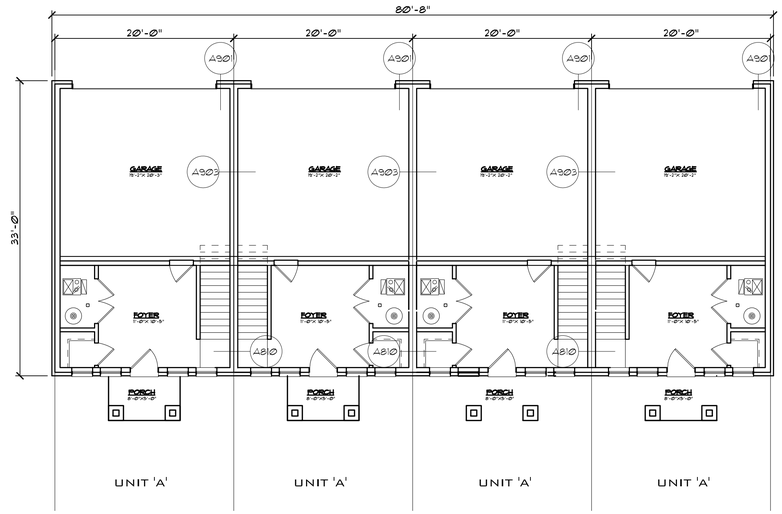


4-UNIT BUILDING
First FLOOR PLAN
SCALE: 1/4" = 1'-0"
685 SF

'A' UNIT AREAS - 4 UNIT BUILDING	
LOWER LEVEL	249 SF
FIRST FLOOR	685 SF
SECOND FLOOR	712 SF
TOTAL	1,646 SF



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



4-UNIT BUILDING
Lower LEVEL PLAN
SCALE: 1/4" = 1'-0"
229 SF

COPYRIGHT © 2019
THE DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED IN ANY FORM WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
4 UNIT BUILDING PLANS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
PREVIEW 08-27-19
10-21-19
11-04-19
11-08-19
01-16-20

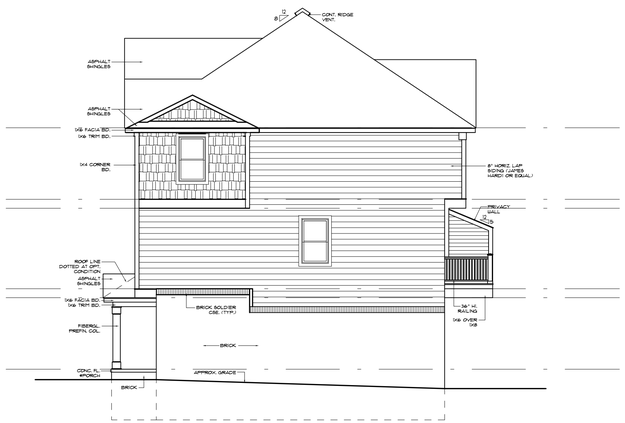
DRAWN AK
CHECKED AK
APPROVED AK
BIDS
CONSTR

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-4

CONDO DEVELOP.

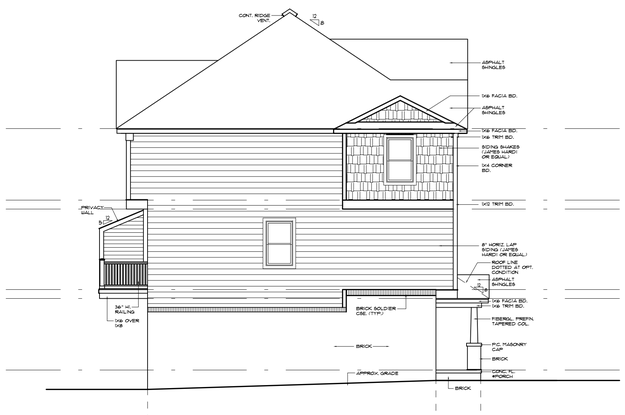


LEFT ELEVATION - 4 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"

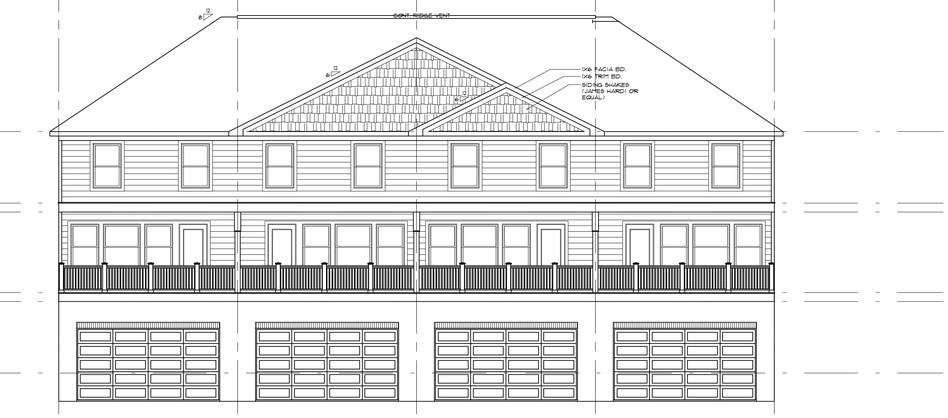


FRONT ELEVATION - 4 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"

FACADE FENESTRATION: 57.5%
368 SF / 640 SF



LEFT ELEVATION - 4 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"



REAR ELEVATION - 4 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"

COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER CONTAINED IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
UNIT BUILDING ELEVATIONS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

4

ISSUED:

REVIEW
09-27-19
10-21-19
11-04-19
11-25-19
01-15-20

DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

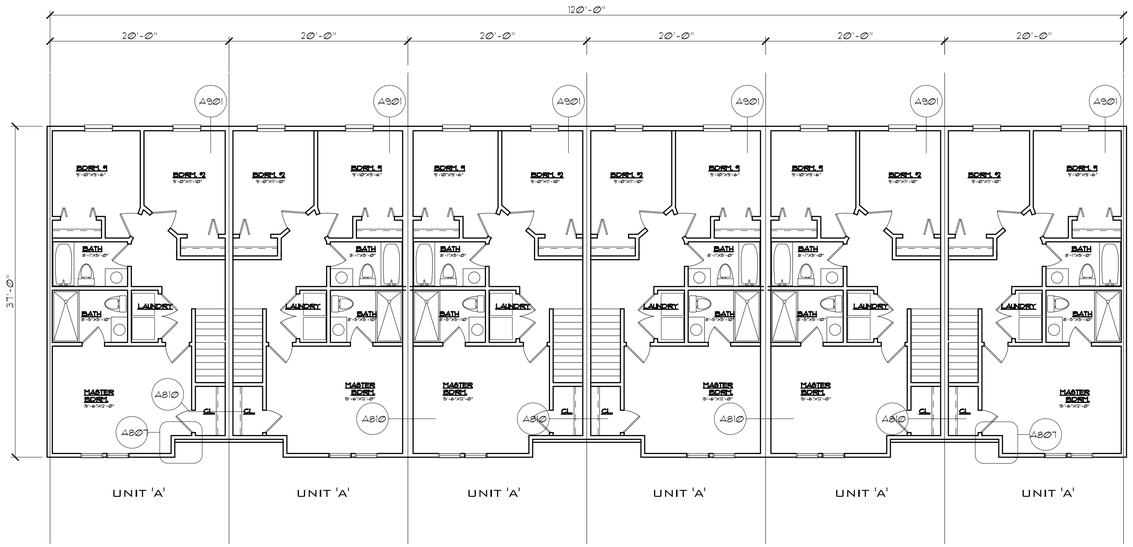
DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

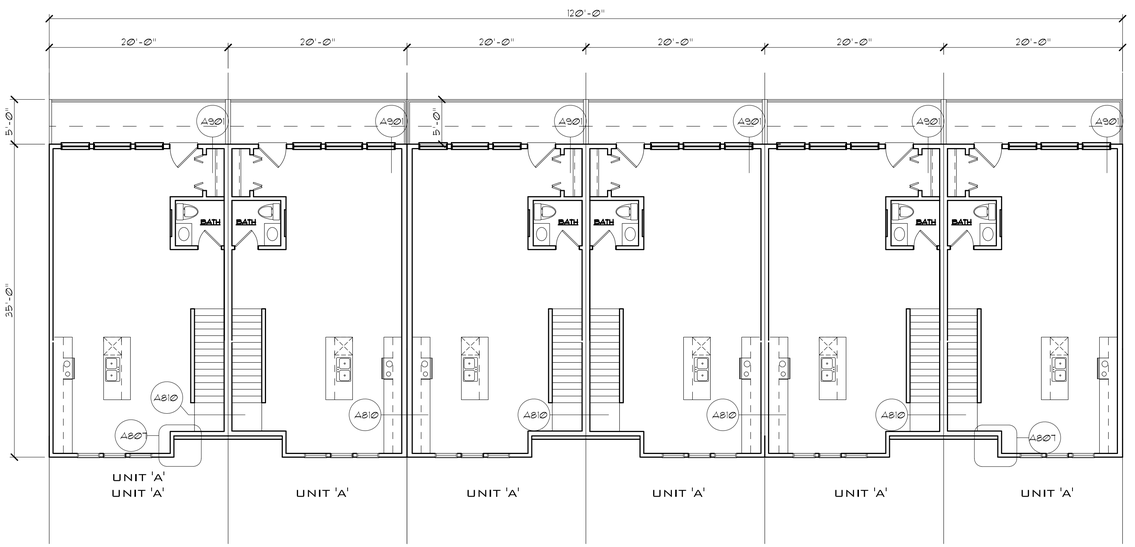
SHEET
A-5

CONDO DEVELOP.

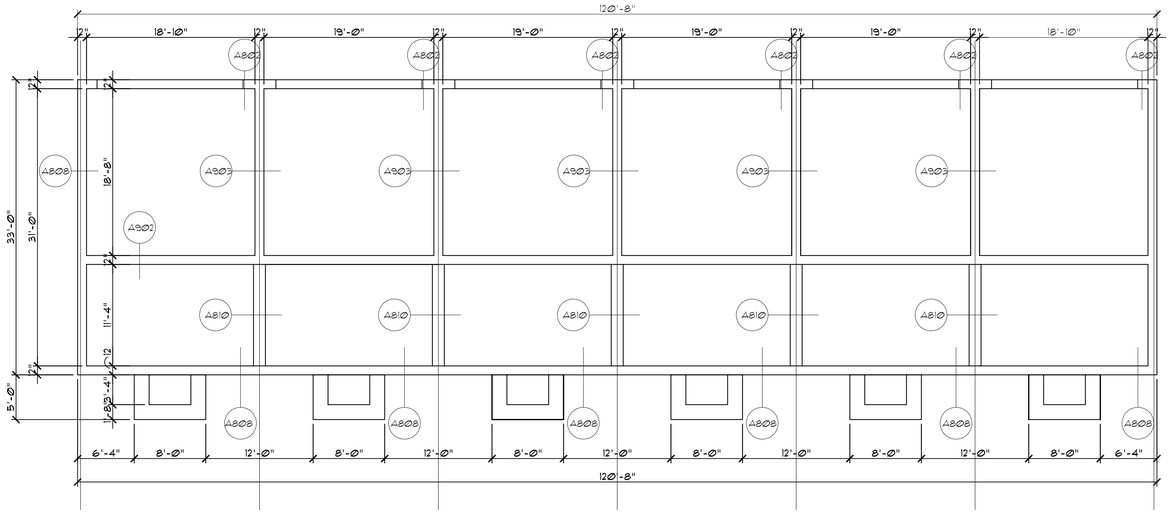
'A' UNIT AREAS - 6 UNIT BUILDING	
LOWER LEVEL	249 SF
FIRST FLOOR	685 SF
SECOND FLOOR	712 SF
TOTAL	1,646 SF



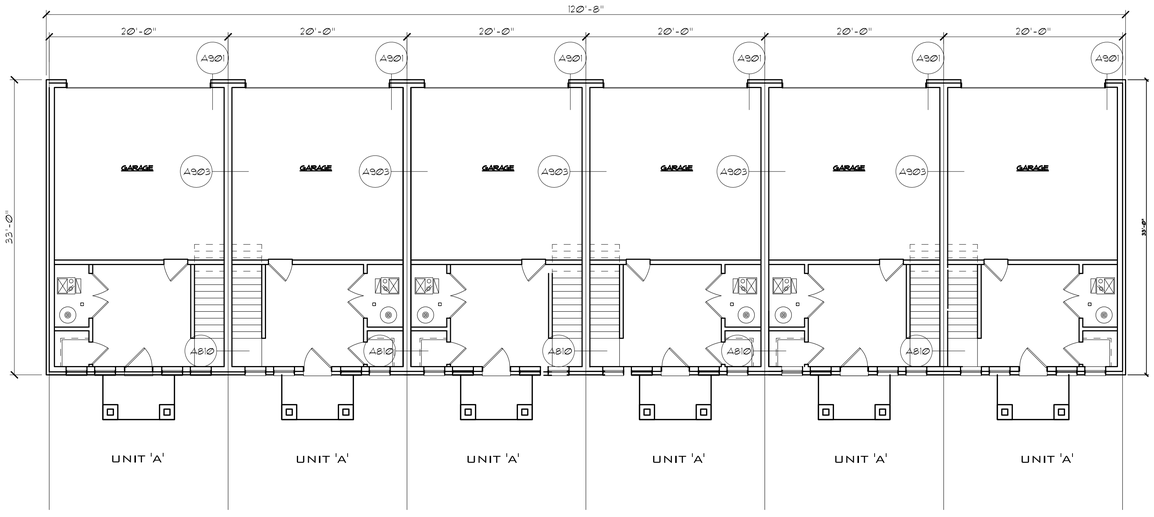
6-UNIT BUILDING
UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"
712 SF



6-UNIT BUILDING
First FLOOR PLAN
SCALE: 1/4" = 1'-0"
685 SF



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



6-UNIT BUILDING
Lower LEVEL PLAN
SCALE: 1/4" = 1'-0"
229 SF

COPYRIGHT © 2019
THE DOCUMENT AND SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED WITHOUT PERMISSION OF THE WRITTEN PERMISSION OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
6 UNIT BUILDING PLANS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:
REVIEW
CO-17-19
11-12-19
12-12-19
01-13-20
02-03-20

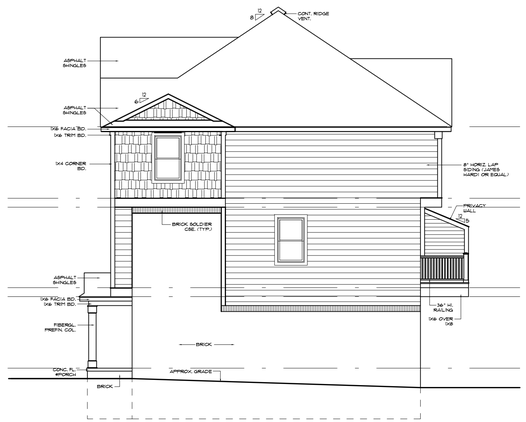
DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-6

CONDO DEVELOP.

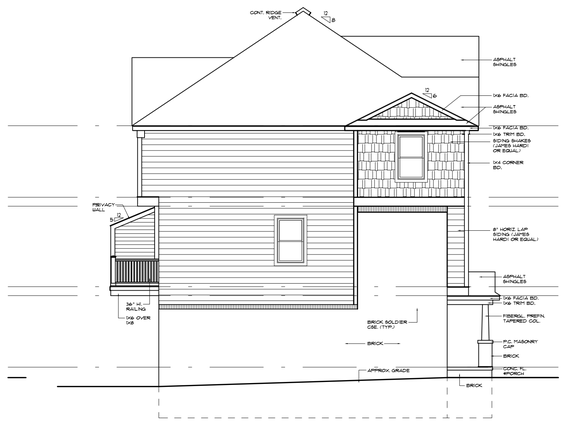


RIGHT ELEVATION - 6 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"

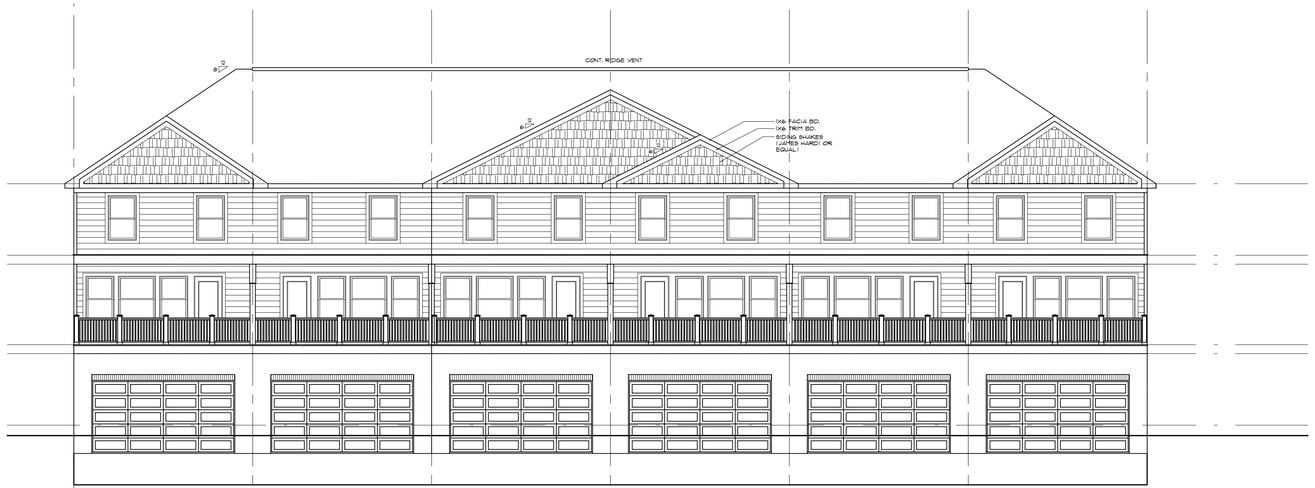


6-UNIT BUILDING
REAR ELEVATION
SCALE: 1/4" = 1'-0"

FACADE FENESTRATION: 57.5%
552 SF / 960 SF



LEFT ELEVATION - 6 UNIT BLDG.
2,300 SF
SCALE: 1/4" = 1'-0"



6-UNIT BUILDING
REAR ELEVATION
SCALE: 1/4" = 1'-0"

COPYRIGHT © 2019
THIS DOCUMENT AND SUBJECT MATTER CONTAINED IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF ARKO DESIGN ASSOCIATES

PROJECT
SQUARE LAKE COURT TOWNHOUSES
XXXX SQUARE LAKE RD.
TROY, MI

SUBJECT
6-UNIT BUILDING ELEVATIONS

ARKO DESIGN ASSOCIATES
2298 YASMIN DRIVE, COMMERCE TOWNSHIP, MI 48382
PH. (248) 802-8409

ISSUED:

REVIEW
09-27-19
10-21-19
11-22-19
12-04-19
01-15-20

DRAWN	AK
CHECKED	AK
APPROVED	AK
BIDS	
CONSTR	

DO NOT SCALE PRINTS - USE FIGURED DIMENSIONS ONLY

JOB NO.
2019-20

SHEET
A-7

CONDO DEVELOP.

Index of Exhibits to Statement of Appeal

A	Carlisle Wortman Associates, Inc. Review dated November 6, 2020
B	Crooks Road Townhomes Site Plan – Resubmittal to City dated March 12, 2020
C	PEA Letter dated March 14, 2020
D	Troy Planning Commission Minutes dated January 14, 2020
E	Carlisle Wortman Associates, Inc. Review dated September 17, 2020
F	Carlisle Wortman Associates, Inc. Review dated January 7, 2020
G	Troy Planning Commission Minutes November 10, 2020
H	Troy Planning Commission Minutes dated April 28, 2020
I	Square Lake Townhomes – SPA to City dated February 5, 2020
J	Carlisle Wortman Associates, Inc. Review for SLC Project dated April 28, 2020
K	Community Image Builders Letter dated March 16, 2020

Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: April 6, 2020

Preliminary Site Plan Review
For
City of Troy, Michigan

Applicant:	Eureka Builders
Project Name:	Square Lake Court
Plan Date:	February 6, 2020
Location:	South side of E. Square Lake, west of Dequindre
Zoning:	NN, Neighborhood Node
Action Requested:	Preliminary Site Plan Approval

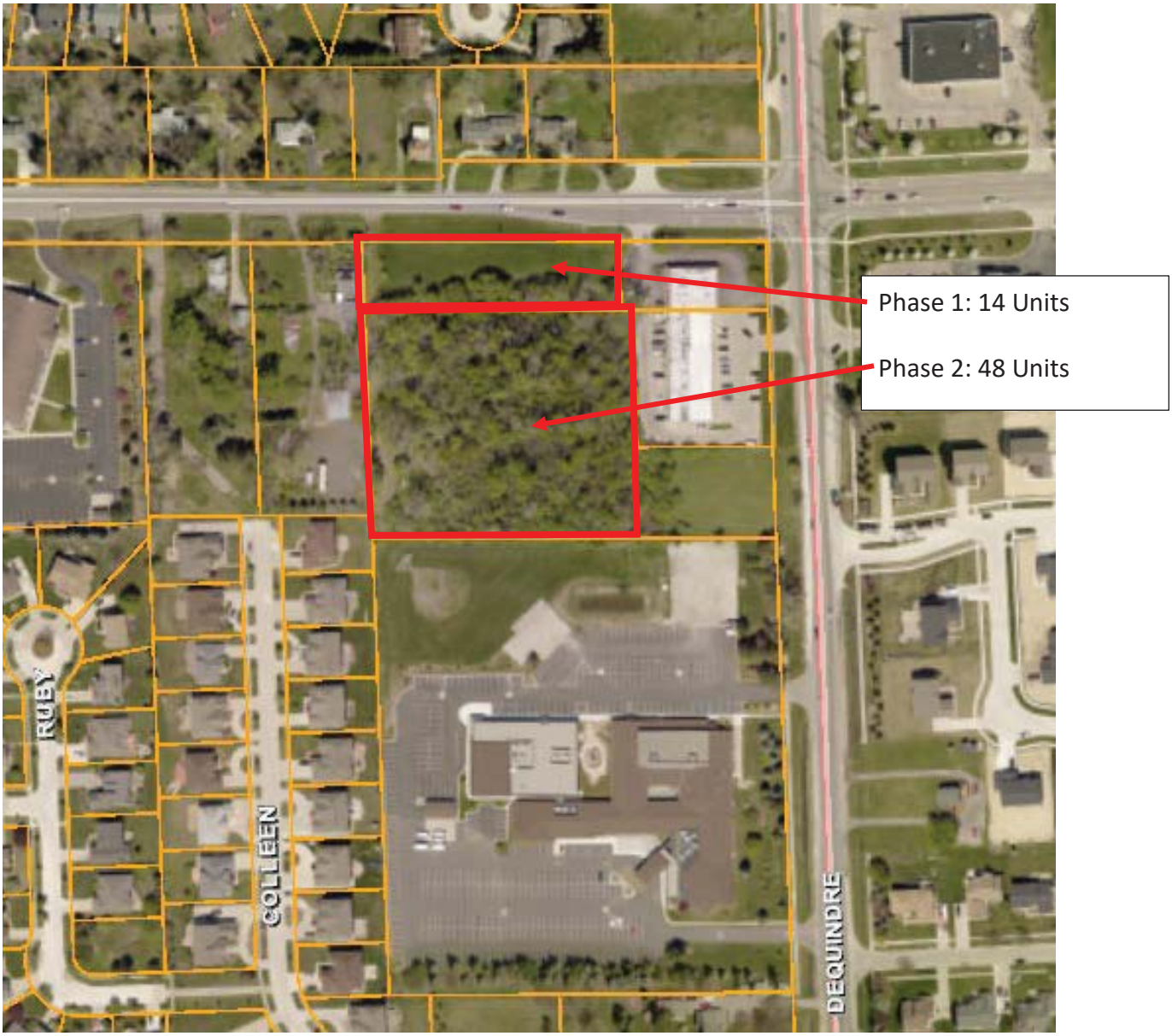
SITE DESCRIPTION

The subject site is located on the south side of E. Square Lake, west of Dequindre. The 3.0-acre site is Phase 2 of the recently approved Square Lake Court development. Phase 1 was approved on January 14 and included 14 units on 0.87 acres. The Planning Commission approval for Phase 1 included cross-access and guest parking. Phase 2 is immediately south of Phase 1 and incorporates those conditions of Phase 2.

Phase 2 includes a total of 48 units in 4 and 6-unit buildings, with the same architecture as approved as part of Phase 1. If approved, it is assumed that Phase 1 and Phase 2 will be combined into one project. Combining into one project will eliminate the need for cross-access easements and two separate homeowners' associations. Applicant should confirm if Phase 1 and Phase 2 will be combined into one project.

The property is zoned NN, Neighborhood Node residential and the proposed site condominium use is permitted by-right. The site will be accessed by one point on E. Square Lake, through Phase 1, and one point on Dequnidre, through the existing shopping center. All forty-eight (48) units are served with parking in rear-accessed garages.

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Principal*
David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* R. Donald Wortman, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*



Size of Subject Property:
The parcel is 3.0 acres

Proposed Uses of Subject Parcel:
Forty-eight (48) attached townhomes

Current Use of Subject Property:
The subject property is currently unimproved and vacant.

Current Zoning:
The property is currently zoned NN, Neighborhood Node District

Surrounding Property Details:

Direction	Zoning	Use
North	NN, Neighborhood	Vacant
South	R1-C, Single-Family	Church
East	NN, Neighborhood Node	Neighborhood Commercial
West	R1-C, Single Family	Single Family Residential

NATURAL FEATURES

Topography: A topographic survey has been provided on sheet C-1.0 and shows that the site has a generally flat landscape.

Wetlands: There are no wetlands on site.

Floodplain: There are no floodplains onsite.

Woodlands: The applicant has identified a total of 20 woodland trees on the site, all of which will be removed.

Replacement Details		
Protected Tree	**Inches Removed**	**Replacement Required**
Landmark	0 inches	0 inches
Woodland	203 inches	102 inches
Preservation/Mitigation	**Inches Preserved**	**Credit**
Landmark	0 inches	0 inches
Woodland	0 inches	0 inches
Protected Replacement Required	102 Inches	
Preservation Credit	0 Inches	
Total	**102 inches**	
Total Tree Mitigation	102 inches = Forty-one 2.5 inch trees or thirty-four 3 inch trees.	

Items to be addressed: *None.*

BUILDING ARRANGEMENT

The site configuration consists of forty-eight (48) townhomes in eleven (11) building clusters. Building clusters include four (4) and six (6) units. All townhomes are served with garages. We find the proposed configuration suitable for the type and size of the development proposed.

Items to be addressed: *None.*

AREA, WIDTH, HEIGHT, SETBACKS

Table 5.03.B.3, Building Form C of Section 5.03, Standards Applicable to All Districts of the Zoning Ordinance establishes the dimensional requirements for the NN, Neighborhood Node District. The requirements and proposed dimensions are shown in the following table.

	Required	Provided	Compliance
Side (east)	N/A, building may be placed up to property line	16 feet	Complies
Rear (west)	30-foot minimum setback	35 feet	Complies
Rear (south)	30-foot minimum setback	35 feet	Complies
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 34'-10"	Complies
Lot Coverage (Building)	30%	21%	Complies
Minimum Open Space	20%	37%	Complies
Parking Location	Cannot be located in front yard	Within garages	Complies

Items to be addressed: *None.*

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided
Residential: 2 spaces per unit	48 Units = 96 spaces	96 garage spaces + 24 guest spaces = 120 spaces
Barrier Free	0	0
Bicycle Parking	0	0
Loading	0	0
Total	**96 spaces**	**96 spaces within garages and 24 guest spaces**

For Phase 2 the applicant is providing 2-car garages for a total of 96. In addition, the applicant is providing 24 guest spaces. Traffic Engineering has requested the applicant remove the two (2) spaces that are termination of the access drive off Dequindre. It is not desirable to have vehicles maneuvering into/out of parking spaces in this area.

For Phase 1 and Phase 2 there are a total of 38 guest spaces for the combined 54 units of Phase 1 and 2. Even with the loss of two (2) spaces, guest parking is sufficient.

Items to be Addressed: *Remove the two (2) spaces that are termination of the access drive off Dequindre.*

SITE ACCESS AND CIRCULATION

The site will be served with two access points. Point 1 is via a vehicular connection to Phase 1, which has a direct connection to E. Square Lake Road. A secondary point of access is through the existing stripmall on Dequindre. A cross-access easement will be required for access to Dequindre.

The fire department has reviewed the application and finds access and circulation sufficient. However, improved internal pedestrian circulation should be provided:

1. Sidewalks should be five (5) feet in width;
2. Provide continuous sidewalk around the perimeter of the site (connect the walk between Buildings H and J, Buildings K and L, and add a walk along easterly edge of site; and
3. Add direction connection between Buildings J and K, G and F, D, and E, and A and B to Square Lake.

Items to be addressed: *1). Provide necessary easement to Dequindre. 2. Sidewalks should be five (5) feet in width; 3). Provide continuous sidewalk around the perimeter of the site (connect the walk between Buildings H and J, Buildings K and L, and add a walk along easterly edge of site; and 4). Add direction connection between Buildings J and K, G and F, D, and E, and A and B to Square Lake.*

LANDSCAPING

A landscaping plan has been provided on sheet L-1.0 and are supplemented by tree protection and planting details on sheet L-1.1. The following table discusses the development's compliance with the landscape requirements set forth in Section 13.02.

	Required:	**Provided:**	**Compliance:**
Landscape buffering (east property line)	1 large evergreen every 10 feet or 1 narrow evergreen every 3 feet. 330 / 10= 33 trees	33 evergreen screening trees	Complies
Landscape buffering (south property line)	Not Applicable	Existing Wall	Complies
Landscape buffering (west property line)	Not Applicable	Deciduous Trees	Complies
Parking Lot Trees	1 per 8 spaces = 38 spaces / 8 = 5 trees	5 trees but located on perimeter of parking spaces	Complies with Planning Commission approval.
Site landscaping: A minimum of twenty percent (20%) of the site area shall be comprised of landscape material. Up to twenty-five percent (25%) of the required	20%	30%	Complies

landscape area may be brink, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.			
Mitigation:	Applicant is providing the required 34 replacement trees on site.		

Though the applicant complies with the number of parking lot trees, there are two (2) long rows with parking, one on Phase 1 and the other as part of Phase 2, that should be broken up with landscape peninsula and tree.

Transformer / Trash Enclosure:
The applicant has not indicated a central trash enclosure. It is assumed that each unit will have trash bins in the garage to be rolled out for trash pickup.

***Items to be Addressed**: Break up the two (2) long rows of parking with landscape peninsula and tree.*

PHOTOMETRICS

A photometric plan has been provided. All photometrics and fixture meet ordinance requirements.

***Items to be Addressed:** None.*

FLOOR PLAN AND ELEVATIONS

Floor plans and elevations have been provided. The primary material for the elevations are hardi board siding and a brick material.

The applicant has provided a bird eye view but they should provide additional 3D models to review the site in context. In addition, the applicant should bring a material samples to the meeting.

***Items to be Addressed:** 1). Provide additional 3D models to review the site in context; and 2). Bring physical material samples to the meeting.*

DESIGN STANDARDS and SITE PLAN REVIEW STANDARDS

The Neighborhood Node design standards as well as Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

Section 5.06.E. outlines Design Standards:

1. *Building Orientation and Entrance*
2. *Ground Story Activation*
3. *Transitional Features*
4. *Site Access, Parking, and Loading*

Please see Section 5.06.E for standard details.

We find that the design standards have been met. The applicant is providing a hardi board and brick product with architectural details on all elevations.

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
2. *Development shall incorporate the recognized best architectural building design practices.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*

Please see Section 8.06 for standard details

The applicant is providing a medium density multiple family residential project. As far as site layout, access, and circulation the site plan meets the site plan review standards.

RECOMMENDATION

Applicant should confirm if Phase 1 and Phase 2 will be combined into one project, and provide additional 3D models to review the site in context; and bring physical material samples to the meeting.

We recommend that the Planning Commission grant preliminary site plan approval with the following conditions:

1. *Remove the two (2) spaces that are termination of the access drive off Dequindre.*
2. *Provide necessary easement to Dequindre.*
3. *Increase all sidewalks to five (5) feet in width.*
4. *Provide continuous sidewalk around the perimeter of the site (connect the walk between Buildings H and J, Buildings K and L, and add a walk along easterly edge of site.*
5. *Add direction connection between Buildings J and K, G and F, D, and E, and A and B to Square Lake.*
6. *Break up the two (2) long rows of parking with landscape peninsula and tree.*
7. *Make any additional architecture changes based on Planning Commission input.*

Sincerely,

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, LEED AP, AICP

March 16, 2020

Planning Commission
City of Troy
500 W. Big Beaver Rd
Troy, Michigan 48084

Attention: Mr. Brent Savidant, AICP, Community Development Director

Subject: **Crooks Road Townhomes Site Plan Review** (SP 2019-0022): Response to Comments at January 14, 2020 PC Meeting

Dear Planning Commissioners:

I have been asked by representatives of Tollbook Homes to respond to specific comments made at the 1/14/20 Planning Commission meeting by residents of the Woodlands of Troy residents concerning the above project. To begin attached housing is a permitted use in the *NN, Neighborhood Node District, 5.06, C-2, Building Forms Permitted*, and is being evaluated by the standards in the Zoning Ordinance *only*, not the Master Plan. The Master Plan provides direction for the creation of zoning ordinance requirements but only comes into play when a rezoning is being requested. That is not the case here since the subject property is already zoned for the use and only site plan approval is being requested. The site plan request is only reviewed under the standards in the zoning ordinance, per the Michigan Zoning Enabling Act of 2008, and must be approved if those requirements are met.

Transitional Use

The Woodlands of Troy Homeowners Association submitted a letter dated January 2, 2020 objecting to the site plan. Page 2 of that letter refers to the "Neighborhood Nodes Building Form C Standards providing for a minimum of 2 stories and a maximum of 4 stories." It then uses the Missing Middle graphic from the City of Troy Master Plan as a way of defining appropriate transitional residential forms in that District. It states that "The above visual representation from the Master Plan shows one family residential similar to ours next to Attached Single Family Residential, followed in intensity with Bungalow Courts with Townhouses next, adjacent to a higher intensive use of Fourplexes." While creative, there is no relationship between the allowed minimum 2 story and maximum 4 story building height in the Zoning Ordinance and the Master Plan.

Moreover, that diagram comes from the web site for the organization called "Missing Middle Housing," whose goal is to encourage the integration of the wide range of housing types shown into neighborhoods that have historically only allowed large-lot, single-family houses. They also encourage allowing uses like townhouses *by right* next to large lot, single-family neighborhoods because existing residents tend to object for numerous unfounded reasons, including a decline in property values. As the zoning instructor for the Michigan Economic Development Corporation's

17195 Silver Parkway, #309
Fenton, MI 48430

Phone: 810-734-0000
Email: sprague@cibplanning.com

Redevelopment Ready Communities Program (RRC), I teach communities about the need for "Middle Housing" throughout the State. This same diagram is included in the presentation on behalf of MEDC and I discuss the bias that residents in large-lot, single-family neighborhoods across the State have against housing that is different than theirs. The diagram in the Troy Master Plan was never intended to be used as a way of supporting a transition in housing types, since that would work against the very principle the Missing Middle Housing group is promoting.

The HOA letter also combines and misuses the concepts of "transitional uses" and "density" or intensity. *Sections 5.06 (E)(3)(a&b), Transitional Features*, of the ordinance discuss transitional uses and intensity as follows:

a. *Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.*
b. *Intensity. A continuum of use intensity, where moderate intensity uses are sited between high-intensity uses and low-intensity uses, shall be developed for multi-building developments. An example would be an office use between commercial and residential uses.*

These are the ordinance requirements being met by the subject development through extensive setbacks, buffering, limitation of building height and the closing of a road extension and sidewalk connections, that under good planning practice should connect. The development also includes attached single-family townhouses next to single-family residential houses, which is an appropriate continuum of use intensity, per the description above. The argument that there should be a reduction in density and type of units due to their interpretation of the language in the Master Plan is absurd and shows a poor understanding of the relationship between the Master Plan and Zoning Ordinance.

Townhouses as a Transitional Use

There is a discussion in the HOA about the public health, safety and welfare, which is why we have local ordinances to protect the community. The proposed development will not connect to the abutting neighborhood and for the most part will only be partly visible to the closest houses. Nor will a single-family attached development with 6 units per acre have less impact on the neighborhood than the proposed development with 13 units per acre, in compliance with ordinance requirements. The term "density" is often misused by residents against projects, often stating that it is too high without understanding why density requirements are even used in ordinances. Density regulations are in place to prevent unnecessary negative "impacts" on surrounding properties and infrastructure; not as a transitional use requirement. For example, a multiple-family development might allow up to 20 units per acre, since that is a density that the infrastructure and services can handle. In this case, traffic will not be going through the Woodlands neighborhood nor will the townhouse homeowners be able to use their sidewalk system. There will be virtually no relationship between the two developments, including impacts. Finally, there are no studies showing that the development of single-family residential townhouses next to single-family residential subdivisions have a negative impact on the value of existing homes. In essence, this project will have no impact on the Woodlands neighborhood whatsoever.

NN, Neighborhood Nodes Requirements

One of the last comments in the Woodlands HOA letter is that the focus of the Neighborhood Nodes District should not be "high intensity" residential (their label, not that of the zoning ordinance). They refer to the parts of the ordinance and then interject Master Plan statements to weave a story indicating that maybe a mixed-use development is required and that townhouse development is not allowed. The ordinance actually states:

"NN:B sites may contain a variety of uses, ***including residential at grade, in a higher-density arrangement****, but may also include small scale retail and service or office uses. A strong focus on transitional landscaping and a suitable connection to the neighboring residential areas is of critical concern for the NN:B sites, as they will often serve as the primary zone through which residents in a social neighborhood, as identified in the Master Plan, engage the Node, which serves as the core of the economic neighborhood."*

Residential townhouses, like the ones proposed, are clearly permitted in the NN, Neighborhood Nodes District (see table below) and there is no requirement that it be part of a mixed-use development, although it is allowed. If a mixed-use development were proposed, the street and sidewalk connections to the Woodlands subdivision would be required, since the goal is to integrate such a development with the neighborhood. In all likelihood a mixed-use project with a road connection at this location would bring a new set of objections from the Woodlands HOA.

Table 5.06.C-2
Building Forms Permitted

Building Forms	Site Type NN:A		Site Type NN:B	
	Street Type NN:A Arterials	Street Type NN:B Local and Connectors	Street Type NN:A Arterials	Street Type NN:B Local and Connectors
A: Small, single-purpose, out buildings	P	P	P	P
B: Small, multi-tenant commercial with mixed use	P	P	P	P
C: Attached residential or live/work	S	S	P	P
D: Multi-story mixed use, medium density	P	P	S	S
E: Large format commercial	P	S	NP	NP
F: Large format mixed-use	P	S	NP	NP

P - Permitted Building Form
S - Special Approval Building Form
NP - Prohibited Building Form

Conclusion

Unfortunately, residents in existing detached single-family developments across the state and country come out against housing that is different than theirs. Yet not everyone wants the same type of housing they do and look for alternate options, which are in short supply due to the opposition mentioned above. Statistics show that the "Middle Housing" is in great demand and will continue to be so in the foreseeable future. There will likely be a glut of detached single-family housing in about

20 years and the communities that balance existing neighborhoods with middle housing types will probably fare better.

In this particular case a rezoning is not being requested. Ordinance requirements are in place and being met through site design and changes to the plan. Once those standards are met the site plan must be approved, per State law, regardless of the objections of neighboring residents. The zoning ordinance does not require that the residents of the Woodlands neighborhood be consulted nor that their objections play a role in obtaining approval. With all due respect, the Master Plan has no impact on whether the ordinance requirements are being met and should not play a role in your decision-making.

Thank you for your consideration and If you have any further questions, please contact us at 810-734-0000.

Sincerely,

CIB Planning



Carmine P. Avantini, AICP
President

STATEMENT OF APPEAL

I. INTRODUCTION

Tollbrook North, LLC ("**Developer**") appeals the November 10, 2020 decision of the City of Troy's Planning Commission ("**PC**") to deny the Preliminary Site Plan ("**PSP**") for its Crooks Road Townhomes project to the City's Zoning Board of Appeals ("**ZBA**"). The Developer requests that the ZBA reverse the PC's decision and grant PSP approval.

The Developer's Project (as described below) is a permitted use of the Property under Zoning Ordinance, does not require any variances, exceptions or waivers from the Zoning Ordinance, and otherwise meets all the criteria for PSP approval. Under the Michigan Zoning Enabling Act, a site plan shall be approved if it contains the information required by the zoning ordinance and is incompliance with the conditions imposed under the zoning ordinance. MCL125.3501(5).

The PC's decision to deny the PSP was arbitrary and capricious, based on no findings of material facts, constituted an abuse of discretion by the PC, and based on erroneous interpretation of the Zoning Ordinance.

II. AUTHORITY AND STANDARD OF REVEIW

Section 15.04.C of the City's Zoning Ordinance authorizes the ZBA to hear and decide this appeal:

> C. Appeals of Administrative Decisions. The Zoning Board of Appeals shall hear and decide appeals where it is alleged there is error of law in any order, requirement, decision or determination made by an administrative official or body in the enforcement of this Ordinance.

The ZBA's standard of review for appeal is set forth in Section 15.04.C.4 of the Zoning Ordinance:

> 4. An administrative decision may be reversed, in whole or in part, or may be modified. To that end, the Zoning Board of Appeals shall have all the powers of the Zoning Administrator from whom the appeal is taken. In reaching its decision, the Zoning Board of Appeals shall only modify or reverse an administrative decision being appealed if one (1) or more of the following requirements are met:
>
> a. The administrative decision was arbitrary or capricious.
> b. The administrative decision was based on an erroneous finding of material fact.
> c. The administrative decision constituted an abuse of discretion; or
> d. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

III. BACKGROUND

A. The Property

The subject property is a 5.72-acre parcel of land on the west side of Crooks Road just north of Wattles Road (the "**Property**"). The Property is zoned Neighborhood Nodes (NN) District ("**NND**") - I. The adjacent zoning and uses surround the Property (See the Preliminary Site Plan Review prepared by Carlisle Wortman Associates, Inc. ("CWA") dated November 6, 2020; the "**Review**", attached as **Exhibit A**):

Direction	Zoning	Use
North	R1-B, Single Family	Single Family Residential
South	NN, Neighborhood Node	Vacant/Single Family Residential
East	R1-B, Single Family	Single Family Residential
West	R1-B, Single Family	Single Family Residential

B. The Project

The Project consists of 74 townhomes contained in 13 buildings. The Project requires no variances, waivers or exceptions from the Zoning Ordinance. See PSP attached as **Exhibit B** and Letter from PEA Inc. dated March 14, 2020 attached as **Exhibit C**.

The Project is a permitted use under the Zoning Ordinance. This fact is s acknowledged by the City's Planner, CWA, and the City's attorney. CWA wrote: "Overall, we find the proposed use to be appropriate for the site." (See Page 10 of the Review). The City Attorney during the January 14, 2020 Planning Commission stated: "the proposed development is permitted by right on the subject property." (See January 14, 2020 PC Meeting Minutes attached as **Exhibit D**).

Not only is the Project permitted, the Project is modest in size and scope as it provides setbacks and open space far greater than required by the Zoning Ordinance and building size (both by stories and height) and lot coverage far less than required by the Zoning Ordinance. The Project complies with all dimensional standards of the Zoning Ordinance (See Page 5 and 6 of the Review):

	Required	Provided	Compliance
Front (east property line)	10-foot build-to-line	15 feet	Complies.
Side (north)	N/A, building may be placed up to property line	40-feet	Complies.
Side (south)	N/A, building may be placed up to property line	80 feet	Complies.
Rear (west)	30-foot minimum setback	139 feet	Complies.
Building Height	Maximum 4 stories, 55 feet, Minimum 2 stories	3 stories, 37.5 feet to peak of roof	Complies.

Lot Coverage (Building)	30%	19.3%	Complies.
Minimum Open Space	15%	55%	Complies.
Parking Location	Cannot be located in front yard	Within garages	Complies.

The Zoning Ordinance in the definition of Building Height states that the building height for a gable and gambrel roofs is measure to the mid-point of the roof. The buildings have gable and gambrel styled roofs. Further, buildings B, C and D of the Project (the most northern buildings; the "**Transitional Buildings**") have a peak height of 36' and a mid-point height of 27'9". The other ten buildings have a peak height of 37'4" and mid-point height of 33"1". For reference, a single-family home in an R1-B District is permitted 30' to mid-point.

C. Chronology

Date	Activity
September 24, 2019	PC hears PSP for first iteration of the Project, which was 60 townhomes in 8 buildings on 2.73 acres. The buildings were 40' tall to the peak. While this first iteration was compliant with Zoning Ordinance, the PC postponed approval of the PSP so that the Developer could address items in the CWA Review dated September 17, 2019 (See **Exhibit E**) and raised by the PC and audience members.
January 14, 2020	PC hears PSP for 2nd iteration of the Project, which was for 74 units over 5.73 acres. There were significant changes from the 1st iteration, including, but not limited to: reduction in density from 22 units per acre to 12.9 units per acre; increase in guest parking; all resident parking changed to 2 car side by side garage; reduction in building heights by 3'; removal of the emergency vehicle access to the stub road for the adjacent neighborhood to the north; increase of all setbacks; reduction in lot coverage; and increase in open space. Despite all the improvements, the PC postponed the PSP to give the Developer time to digest comments made by the residents, PC and staff and to address site plan items identified in CWA Review dated January 7, 2020 attached as **Exhibit F**.
November 10, 2020	PC denies the PSP for 3rd iteration of the Project because of a lack of compatibility and inadequate transition. While this last iteration of the Project was generally same as the same as the prior iteration, there were several changes as itemized on the Review and the PEA Letter that included the creation of the Transitional Buildings, installation of an aluminum fence along north boundary line in lieu of vinyl fence,

	commitment to brick and cement board siding and no vinyl siding and increased landscape buffer plantings.[1]
December 8, 2020	PC approves its November 10, 2020 Meeting Minutes thereby memorializing its denial of the PSP.

IV. PC DETERMINATION

On November 10, 2020, the PC denied the PSP for the Project "for the following reasons lack of compatibility and inadequate transition." (the "**PC Determination**"; See November 10, 2020 PC Meeting Minutes for November 10, 2020 (attached as **Exhibit G**) and video recording of November 10, 2020 PC meeting on YouTube at 4:41:30).

The reasons provided for denial are without reference to a specific section in the Zoning Ordinance and are not supported by any findings of fact. This reasoning is broad and subjective, leaving the Developer with no certainty as to what would be, from the PC's perspective, an approved use for the Property under the Zoning Ordinance.

Moreover, the Zoning Ordinance, with regard to compatibility and transition standards, is vague as: (a) it lacks the standards needed to govern the PC's discretion; (b) is so indefinite that it permits unstructured and unlimited discretion to be exercised by the PC or determine whether the law has been violated; (c) fails to give the Developer reasonable notice of the prohibited conduct, is vague, overbroad, lacking definite standards; and (d) is incapable of being rationally administered.

The PC Determination was arbitrary and capricious, was based on erroneous findings of fact, constituted an abuse of discretion and was an erroneous interpretation of the Zoning Ordinance.

V. COMPATIBILITY IS NOT REQUIRED AND, EVEN IF IT WERE, THE PROJECT IS COMPATIBLE TO ADJACENT PROPERTIES.

The PC Determination did not provide any findings of fact to support the allegation that the Project lacked compatibility with adjacent zoning or uses. Moreover, the PC's Determination is flawed because it applied a compatibility standard where there is no basis to do so and it failed to consider facts that support compatibility.

A. Compatibility is Not Requited in the Neighborhood Nodes District

Nowhere in the 15 pages of text of the NND in the Zoning Ordinance (Section 5.06) is the word "compatible" or "compatibility" present. The obvious reason is that the NND is form-based zoning, such that the ultimate use of and building forms permitted on a property in the that district

[1] After the January 14, 2020 PC meeting, the Developer scheduled a meeting and met with residents who resided in the neighborhood to the north of the Project, including board members of the homeowner's association. As a result of that meeting, the Developer agreed to not use vinyl siding on the buildings and agreed to use only high-quality materials of brick and cement board siding.

are based upon the size of the site and street type. There is no need to require a use in a NND to be compatible with adjacent properties because the City made that determination when it adopted the NND.

B. **Compatibility in the Site Plan Review Guidelines is misapplied, and even so, the Project satisfies its Requirements**.

Section 8.06.A of the Zoning Ordinance contains the following with regard to compatibility (emphasis added):

> **SECTION 8.06 SITE PLAN REVIEW DESIGN STANDARDS**
> These design standards are intended to enhance the overall character of Troy by building upon patterns of development that create or enhance sense of place and have well-defined and vibrant design context.
>
> The following general standards and any standards established for a specific use shall be applied when considering a site plan application:
>
> A. Development shall ensure compatibility to existing commercial districts and provide a transition between land uses through application of the following requirements:

This design standard is inapplicable to the Project. As written, "compatibility" is limited to existing commercial districts. There being no existing commercial districts adjacent or near the Property, this design standard is inapplicable. To apply this design standard and its requirements is a misapplication and misinterpretation of the Zoning Ordinance.

C. **The Application of a Compatibility Standard to the Project is Arbitrary, Capricious and Unequal**.

On April 28, 2020, the PC approved a PSP for a very similar project in a NND on the south side of East Square Lake Road and west of Dequindre Road (the "**SLC Project**"; see PC Minutes for April 28, 2020 Meeting attached as **Exhibit H**). The SLC Project totaled 62 units in 13 townhome styled buildings with a building height of 34'10" (to the mid-line for a hip roof). See Site Plan attached as **Exhibit I**. This project abuts a single-family neighborhood with single-family zoning and commercial use in an NND. See CWA Review dated for SLC Project dated April 28, 2020 attached as **Exhibit J**.

As compared to the Project, the SLC Project: is 23% more dense with density at 16 units per acre; has buildings that are taller; has smaller setbacks; less open space; and more lot coverage. In every objective way, the SLC Project is more developed and intense than the Project; however, the PC never raised or considered the issue of "compatibility" in approving the SLC Project, even though it abuts single family residential. The PC's denial of the PSP for the Project is arbitrary, capricious and unequal because the PC applied a standard of compatibility to the Project that it did not apply to a similarly situated Project, especially considering that the Project is less intense than the SLC Project.

Lastly, this inconsistent application of standards violates the intent of the site plan review to provide a consistent and uniform method of review. See Zoning Ordinance Section 8.01.

D. The City Has Already Established that the Project is Compatible

The City went through exhaustive statutory procedures to adopt the Master Plan and Zoning Ordinance with regards to the NND zoning. Through the legislative process, the City determined, with input by the residents, its staff and consultants, the appropriate uses and building forms the City desired on properties to be zoned NND. In order for a Zoning Ordinance to be adopted, it must ensure compatibility with adjacent uses of land. *See Zoning Ordinance Section 16.03.C.5*. The Michigan Municipal Planning Act (MCL 125.3807(2)(a) &(b)) states that the Master Plan be is to be coordinated, adjusted, harmonious, efficient, and economical and to consider the character of the planning jurisdiction and its suitability for particular uses, judged in terms of such factors as trends in land and population development. The Michigan Zoning Enabling Act (MCL 125.3203(1)) requires that the Zoning Ordinance be based upon a plan to ensure that uses of land shall be situated in appropriate locations and relationships. The City did not do this exercise in a vacuum. The City, adopting the Master Plan, and implementing that plan by adoption of the Zoning Ordinance for the Property, established that Developer's proposed and permitted use under the Project is suitable and appropriate for the location. The City established what uses can be developed on the Property and the Developer is merely operating within the strictures established by the City.

E. The Project as a Residential Use is Compatible with Adjacent Residential Uses and the Neighborhood Node zoning to the South.

The Property is adjacent to a vacant parcel zoned NND to the south. The Project seeks to use the Property pursuant to the NND zoning, so it is compatible with that Zoning and future use under that NND zoning.

The Project is also compatible with the adjacent properties to the north and west that are zoned R1-B and are currently used for single family housing. First, the Project is residential, contained in townhome styled buildings resembling houses. Moreover, the buildings are set back 138' and 40' from the west and north Property lines, respectively. Simply, given the distance and type of use, there is no conflict in compatibility with the property to the west and north of the Property.

Not only is the Project for a residential use, the buildings in the Project will have an upgraded façade compared to the adjacent single- family homes. The Developer committed to using brick and cement board siding (aka Hardie Board) for the facades. One PC Member stated that he drove the adjacent neighborhood and noted vinyl siding on some of the homes and therefore considered this Project to be an upgrade. (See Video recording of November 10, 2020 PC meeting on YouTube at 4:00:19).

F. The PC's Improper Application of a "Compatibility" Standard Requires the ZBA to Reverse the PC's Determination and Approve the PSP.

As stated above, the ZBA can reverse an administrative decision being appealed if **ANY** one (1) or more of the following requirements are met:

a. The administrative decision was arbitrary or capricious.
b. The administrative decision was based on an erroneous finding of material fact.
c. The administrative decision constituted an abuse of discretion; or
d. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

In this case, reversal by the ZBA is fully supported based on each and all of the requirements.

1. The decision of the PC to deny the PSP was arbitrary and capricious.

The PC applied the standard of compatibility to the Project, when no such standard is applicable to this Project. Further, it applied the compatibility standard to the Project, even though it did not apply such a standard in approving the similarly situated SLC Project that is more intense than the Project. By these actions, singularly and collectively, the PC Determination was arbitrary and capricious.

2. The decision of the PC to deny the PSP was based on an erroneous finding of material fact.

First, there was no finding of any facts by the PC. The approval motion merely stated a "lack of compatibility" without any findings of fact to support that conclusion. To the contrary, the PC ignored numerous facts to support the Project being compatible to its adjacent properties, including the fact that the City through its Master Plan and Zoning Ordinance already determined the use proposed by the Project to be compatible and the fact that the Project sought to use the Property for a residential use, similar to adjacent properties to the north and west. Therefore, the PC Determination was based on an erroneous finding of material fact.

3. The Decision of the PC to Deny the PSP constituted an abuse of discretion.

As stated above, the PC applied a compatibility standard to the Project that is not found in the NND and is inapplicable to the Project under the Site Plan Ordinance. Even so, by applying a subjective standard, not itemizing facts to support the alleged incompatibility and ignoring facts supporting compatibility, the PC abused its discretion.

4. The Decision of the PC to Deny the PSP was based on erroneous interpretation of the Zoning Ordinance.

As stated above, the NND does not contain any compatibility standard and the design guideline contained in Section 8.06 of the Zoning Ordinance does not apply to the Project. The PC, by applying a compatibility standard, interpreted the Zoning Ordinance in error, for if the PC had correctly interpreted the Zoning Ordinance denial could not be based upon lack of

compatibility. The PC's application of a compatibility standard upon the Project is an erroneous interpretation of the Zoning Ordinance.

VI. THE PROJECT PROVIDES ADEQUATE TRANSITION

Without identifying how the Project lacked "transition" or articulating what would be an adequate transition for the Property, the PC ignored all the Design Features (as listed below) being provided for by the Developer that make the Project an appropriate transition between existing and future adjacent uses. The concept of transition in NND for this Property identified as an NN:B site is provided for in Section 5.06.E.3 of the Zoning Ordinance:

> While not always present between NN:A sites and residential neighborhoods, when possible or preferable based on the parcel arrangement and existing circumstances, the NN:B category allows the Node to develop in a tiered manner, with more intense developments and uses permitted within the core of the Node, and less intense projects providing a buffer for the residential area.

This Project does exactly what the NND Ordinance requests: a moderate density multi-family project of townhomes of modest heights, with significant setbacks and built with high quality materials that provide a transitional buffer to the residential area to the north from the future more intense uses that will be developed to the south of the Project in adjacent NND parcels. The future development to the south could be 4 story medical office buildings or commercial uses in one or more developments down to Wattles Road. See also the letter from Community Image Builders dated March 16, 2020 attached as **Exhibit K**.

The NND Ordinance provides a design standard for "transitional features" in Section 5.06.E.3 of the Zoning Ordinance. However, the Determination states "lack of transition" not lack of "transitional features". The PC ignored the NND Ordinance about transitional features[2] and ostensibly relied upon language from Section 8.06.A of the Site Plan Ordinance where it states with regard to transition (emphasis supplied):

---

[2] The NND Ordinance provides a design standard for "transitional features" in Section 5.06.E.3:

E. Design Standards. In addition to standards set forth in this Ordinance, all proposed development shall comply with the standards set forth herein.

***

3. Transitional Features.

a. Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.

b. Intensity. A continuum of use intensity, where moderate intensity uses are sited between high-intensity uses and low-intensity uses, shall be developed for multi-building developments. An example would be an office use between commercial and residential uses.

c. Height and Mass. Building height and mass in the form of building step-backs, recess lines or other techniques shall be graduated so that structures with higher intensity uses are comparable in scale with adjacent structures of lower intensity uses.

d. Orientation. Primary building facades shall be placed away from the residential use.

SECTION 8.06 SITE PLAN REVIEW DESIGN STANDARDS

These design standards are intended to enhance the overall character of Troy by building upon patterns of development that create or enhance sense of place and have well-defined and vibrant design context.

The following general standards and any standards established for a specific use shall be applied when considering a site plan application:

A. Development shall ensure compatibility to existing commercial districts and provide a transition between land uses through application of the following requirements:

1. Building design shall enhance the character of the surrounding area in relation to building and parking placement, landscape and streetscape features, and architectural design.
2. Street fronts shall provide a variety of architectural expression that is appropriate in its context and prevents monotony.
3. Building design shall achieve a compatible transition between areas with different height, massing, scale, and architectural style.

A. **The Building Design of The Project Does Enhance the Character of The Surrounding Area**.

The Project's building design incorporates several features to enhance the character of the surround area ("**Design Features**"):

a. Building facades are to constructed with high quality materials of brick and cement board siding;
b. Building heights of 27'9" and 33'1" are comparable to existing single family uses and zoning heights of 30'; especially considering that the Property has a lower elevation than the properties to the north;
c. All resident parking for the Project is enclosed within garages, such that the only hardscape is for the drives and guest parking;
d. The Project does not require any tree mitigation as tree preservation and replacement exceed City Ordinances.
e. There is a 138' setback to the west and a 40' setback to the Woodlands of Troy Subdivision;
f. The 13 Buildings are residential townhomes with gabled roofs with 2 different sizes spread out in a campus-like setting;
g. The Project provides for 55% Open Space, which is more three times the minimum amount of 15% required by the Zoning Ordinance; and

---

e. Architectural Features. Similarly sized and patterned architectural features such as windows, doors, arcades, pilasters, cornices, wall offsets, building materials, and other building articulations included on the lower-intensity use shall be incorporated in the transitional features.

h. Lot Coverage (Building) is less than 20%, a third less than the 30% maximum required by the Zoning Ordinance.

These Design Features are undisputed. The PC made no findings of fact to the contrary.

B. **The Street Front of The Project Is Appropriate for The Use and Is Not Monotonous**.

Along Crooks road, the Project provides for three 5-unit buildings, split by the access boulevard. This design is appropriate for the use and is not monotonous.

C. **Building Design for The Project Provides A Compatible Transition Between Areas with Different Height, Massing, Scale, And Architectural Style**.

The Project, through its residential use and Design Features, provides an appropriate transition both within the NND and between the NND and the adjacent single family uses. The NND contemplates that uses of land will intensify moving toward the core the of NND and will lessen moving away from the NND core. The Property represents the farthest parcel of this particular Neighborhood Node; therefore, it has to accommodate a use that will be more intense to the south. Similarly, it must and dos provide a buffer to the existing single family uses to the north.

A moderate multi-family townhouse development spread out over 13 buildings with comparable heights to single family homes, landscaped buffers, increased setbacks and open space represents the most optimal transition that could be envisioned for the Property.

D. **The PC's Improper Denial of the PSP Based on "Inadequate Transition" Must Be Reversed.**

As stated above, the ZBA can reverse an administrative decision being appealed if **ANY** one (1) or more of the following requirements are met:

e. The administrative decision was arbitrary or capricious.
f. The administrative decision was based on an erroneous finding of material fact.
g. The administrative decision constituted an abuse of discretion; or
h. The administrative decision was based on erroneous interpretation of the Zoning Ordinance or zoning law.

In this case, reversal by the ZBA is fully supported.

1. The decision of the PC to deny the PSP was arbitrary and capricious.

The PC applied the transition standard to the Project, but did not apply such a standard in approving the similarly situated SLC Project that is more intense than the Project. By this action the PC Determination was arbitrary, capricious and unequal.

2. The decision of the PC to deny the PSP was based on an erroneous finding of material fact.

First, there was no finding of **any** facts by the PC. The approval motion merely stated there was "inadequate transition" without any findings of fact to support that conclusion. To the contrary, the PC ignored all the Design Feature which support the Project being an appropriate transition between its adjacent properties. Therefore, the PC Determination was based on an erroneous finding of material fact.

3. The decision of the PC to deny the PSP constituted an abuse of discretion.

By applying a subjective standard, not itemizing facts to support the alleged incompatibility and ignoring facts supporting an adequate transition, the PC abused its discretion.

VII. SUMMARY

There are four requirements by which the ZBA is empowered to reverse an administrative decision. Even though the Developer satisfies all four of these requirements, the Zoning Ordinance provides that only the satisfaction of **one** is needed for the ZBA to reverse the PC Determination.

The PC wrongfully denied Developer's PSP for the Project without even making any findings of fact while at the same time wholly disregarding the Design Features. The PC applied a standard to the Project that is not within the City's Zoning Ordinance and applied standards to the Project, that it did not apply to a similarly situated project that was by every metric more intense than the Project.

To state the Project lacks compatibility and has inadequate transition is a hollow conclusion. The Project is compatible and provides adequate transition, but the PC without any valid justifications applied vague standards. For the reasons stated above, this decision of the PC was arbitrary and capricious, based on an erroneous finding of material fact, constituted an abuse of discretion and was based on erroneous interpretation of the Zoning Ordinance. Therefore, Developer respectfully requests that the ZBA reverse the decision of the PC to deny the PSP for the Project and approve the PSP for the Project.

CITY OF TROY | PLANNING DEPT. | 500 WEST BIG BEAVER | TROY, MI 48084 | 248-524-3364

Zoning Board of Appeals Application

planning@troymi.gov | Fee $150.00

THE ZONING BOARD OF APPEALS MEETS THE **THIRD TUESDAY OF EACH MONTH AT 7:30 P.M. AT CITY HALL**. PLEASE FILE A COMPLETE DIGITAL APPLICATION AND FEE AT LEAST **29 DAYS BEFORE** THE MEETING DATE. PRE APPLICATION MEETING WITH PLANNING DEPARTMENT REQUIED BEFORE FILING APPLICATION.

1. ADDRESS OF THE SUBJECT PROPERTY: 4115 Crooks Road, 4095 Crooks Road, and a sliver of land, plus or minus 10,000 square feet contiguous thereto

2. PROPERTY TAX IDENTIFICATION NUMBER(S): 2017476013, 2017476014, 2017476055

3. ZONING ORDINANCE SECTIONS RELATED TO THE REQUEST: Sections 5.06 and 8.06

4. HAVE THERE BEEN ANY PREVIOUS APPEALS INVOLVING THIS PROPERTY? If yes, provide date(s) and particulars: n/a

5. APPLICANT:

   NAME Safet "Sam" Stafa

   COMPANY Tollbrook North LLC

   ADDRESS 550 Stephenson Hwy Suite 440

   CITY Troy STATE MI ZIP 48083

   PHONE 248-906-5400

   E-MAIL arbanstafa@gmail.com

   AFFILIATION TO THE PROPERTY OWNER: Purchase Agreement

CITY OF TROY | PLANNING DEPT. | 500 WEST BIG BEAVER | TROY, MI 48084 | 248-524-3364

Zoning Board of Appeals Application

6. PROPERTY OWNER:

NAME Kamal Shouhayib

COMPANY Choice Development

ADDRESS 2265 Livernois Suite 500

CITY Troy STATE MI ZIP 48083

TELEPHONE 248-362-4150

E-MAIL oshouhayib@choiceproperties.com

The undersigned hereby declares under penalty of perjury that the contents of this application are true to the best of my (our) knowledge, information and belief.

The applicant accepts all responsibility for all of the measurements and dimensions contained within this application, attachments and/or plans, and the applicant releases the City of Troy and its employees, officers, and consultants from any responsibility or liability with respect thereto.

I, Tollbrook North LLC (APPLICANT) HEREBY DEPOSE AND SAY THAT ALL THE ABOVE STATEMENTS CONTAINED IN THE INFORMATION SUBMITTED ARE TRUE AND CORRECT AND GIVE PERMISSION FOR THE BOARD MEMBERS AND CITY STAFF TO ENTER THE PROPERTY TO ASCERTAIN PRESENT CONDITIONS.

APPLICANT SIGNATURE _____ **DATE** 12/10/2020

PRINT NAME: Safet "Sam" Stafa, Tollbrook North LLC (Its Member)

PROPERTY OWNER SIGNATURE _____ **DATE** 12-11-2020

PRINT NAME: Choice Development - Kamal Shouhayib

Failure of the applicant or their authorized representative to appear before the Board as scheduled shall be cause for denial or dismissal of the case with no refund of fees. The applicant will be notified of the time and date of the hearing by mail. If the person appearing before the Board is not the applicant or property owner, signed permission must be presented to the Board.

Approved variances are good for a one year period.

CITY OF TROY | PLANNING DEPT. | 500 WEST BIG BEAVER | TROY, MI 48084 | 248-524-3364

Zoning Board of Appeals Application

STATEMENT OF PRACTICAL DIFFICULTY

In order for a variance to be granted, a practical difficulty, as determined by the Board, must be present. On a separate sheet, please clearly identify and explain the practical difficulty justifying the variance request. The practical difficulty must be clearly related to as many of the 5 standards below as possible:

a) Exceptional characteristics of property for which the variance is sought make compliance with dimensional requirements substantially more difficult than would be the case for the great majority of properties in the same zoning district. Characteristics of property which shall be considered include exceptional narrowness, shallowness, smallness, irregular shape, topography, vegetation and other similar characteristics.

b) The characteristics which make compliance with dimensional requirements difficult must be related to the premises for which the variance is sought, not some other location.

c) The characteristics which make compliance with the dimensional requirements shall not be of a personal nature.

d) The characteristics which make compliance with dimensional requirements difficult must not have been created by the current or a previous owner.

e) The proposed variance will not be harmful or alter the essential character of the area in which the property is located, will not impair an adequate supply of light and air to adjacent property, or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, or unreasonably diminish or impair established property value within the surrounding area, or in any other respect impair the public health, safety, comfort, morals or welfare of the inhabitants of the City.

CITY OF TROY | PLANNING DEPT. | 500 WEST BIG BEAVER | TROY, MI 48084 | 248-524-3364

Zoning Board of Appeals Application

ZONING BOARD OF APPEALS APPLICATION CHECKLIST

Please provide the following in digital format. You may e-mail them to planning@troymi.gov or submit them on media such as a CD or jump drive:

- ✓ Completed application
- ✓ Statement of practical difficulty see page 3
- ✓ Plot plan or survey showing property lines, existing and proposed buildings, their dimensions and locations (height, length, width, as applicable)
- ✓ Setbacks from property lines
- ✓ Elevation drawings
- ✓ Photos as necessary to accurately describe the request, including existing and proposed property conditions
- ✓ Any other information that explains the request
- ✓ Incomplete applications cannot be accepted