

The renderings depicted on sheets A9.0 - A9.9 are representations of the final building design. These images do not perfectly represent the final product, but they are meant to convey materiality, massing, and position relating to the site plan submission.



# North Maple Road Apartments

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Project # 210302  
 PUD Zoning Etrakit # Z22-002  
 Site Plan Etrakit # SP22-004

NOT FOR CONSTRUCTION

Revisions

Date	By	For
01.27.2022	A2	City of Ann Arbor
04.15.2022	A2	City of Ann Arbor
07.07.2022	A2	City of Ann Arbor
08.10.2022	A2	City of Ann Arbor

Owner / Applicant  
 A2 North Maple Properties, LLC  
 Jeff Wilkerson  
 2370 E. Stadium Blvd. #305  
 Ann Arbor, MI 48104

Site Design  
 A2 Collaborative, LLC  
 1510 Eisenhower Place  
 Ann Arbor, MI 48108

Project North



Scale: Architecture Renderings

# A9.0



Signage for the building (this is a placeholder sign and name, and it may not be the final text on the sign).

Composite wood exterior facade.

EIFS/Stucco exterior facade (dark blue/grey).

Fixed composite wood and aluminum louver panels.

Operable windows.

Brick facade.

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Scale: \_\_\_\_\_  
 Architecture Renderings

# A9.1

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Scale: \_\_\_\_\_  
 Architecture Renderings

# A9.2

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Project North



Scale: Architecture Renderings

# A9.3

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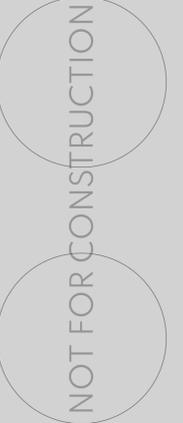
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Project North



Scale: \_\_\_\_\_  
 Architecture Renderings

# A9.4

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Ann Arbor, MI 48108

Project North



Scale:   
Architecture Renderings

# A9.5

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Project North



Scale: Architecture Renderings

# A9.6

The renderings provided on sheets A9.7 through A9.10 are artistic representations of the final building design. These images are not intended to represent the final construction and are meant to provide a general impression of massing and scale. All details are subject to change and are not to be relied upon for the site plan submission.



# North Maple Road Apartments

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Scale: Architecture Renderings

# A9.7



# North Maple Road Apartments

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Project North



Scale: 0' 30' 60'

Aerial Natural Features Overlay

# AS3.0



# North Maple Road Apartments

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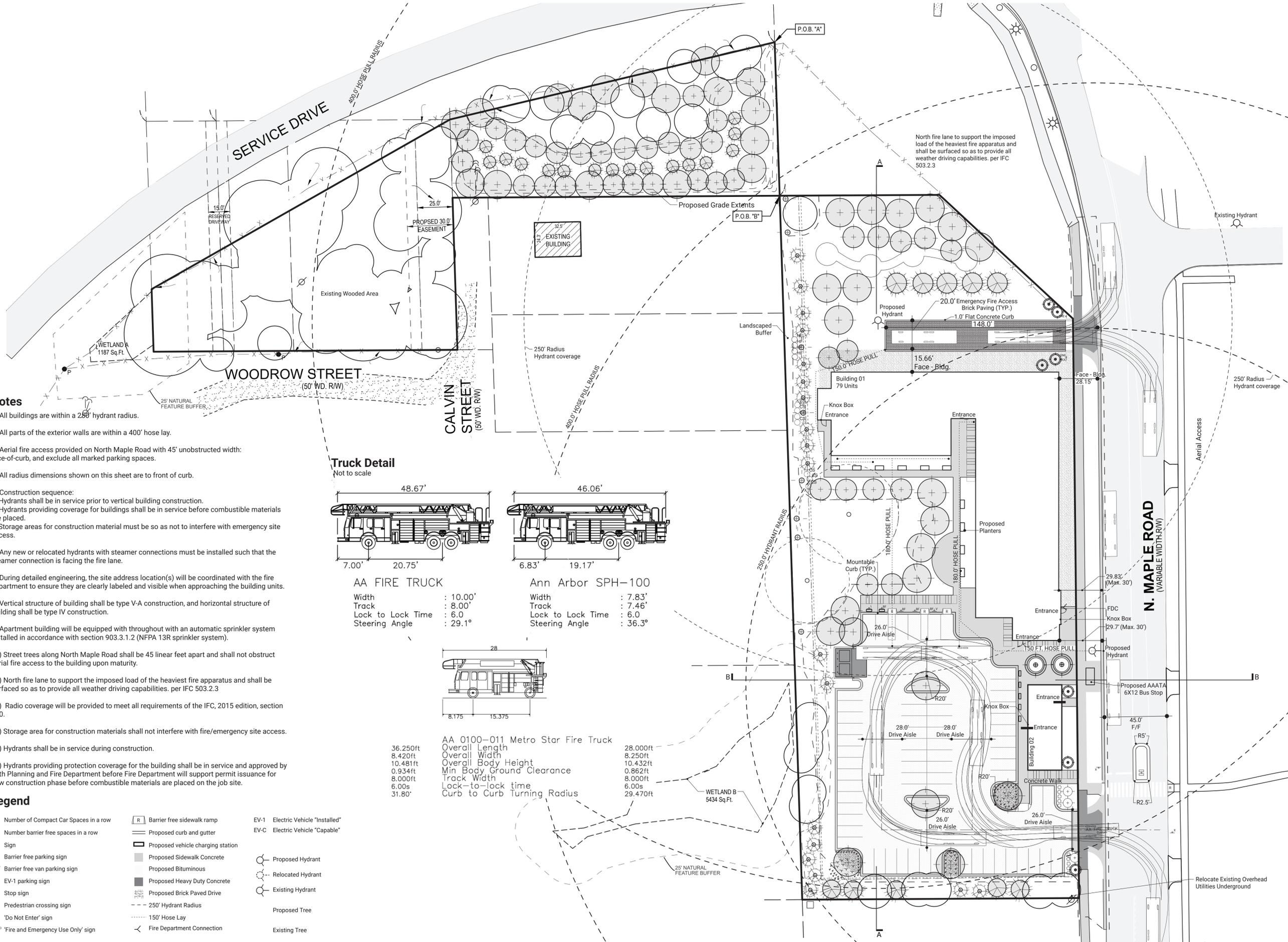
Project North



Scale: 0' 30' 60'

Fire Protection Plan

# AS4.0

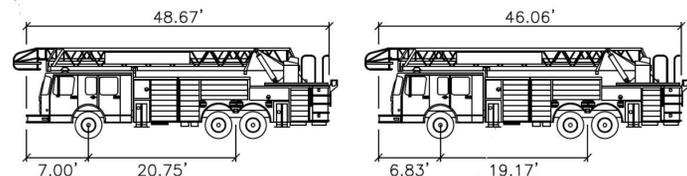


### Notes

- 1) All buildings are within a 250' hydrant radius.
- 2) All parts of the exterior walls are within a 400' hose lay.
- 3) Aerial fire access provided on North Maple Road with 45' unobstructed width: face-of-curb, and exclude all marked parking spaces.
- 4) All radius dimensions shown on this sheet are to front of curb.
- 5) Construction sequence:  
 a. Hydrants shall be in service prior to vertical building construction.  
 b. Hydrants providing coverage for buildings shall be in service before combustible materials are placed.  
 c. Storage areas for construction material must be so as not to interfere with emergency site access.
- 6) Any new or relocated hydrants with steamer connections must be installed such that the steamer connection is facing the fire lane.
- 7) During detailed engineering, the site address location(s) will be coordinated with the fire department to ensure they are clearly labeled and visible when approaching the building units.
- 8) Vertical structure of building shall be type V-A construction, and horizontal structure of building shall be type IV construction.
- 9) Apartment building will be equipped with throughout with an automatic sprinkler system installed in accordance with section 903.3.1.2 (NFPA 13R sprinkler system).
- 10) Street trees along North Maple Road shall be 45 linear feet apart and shall not obstruct aerial fire access to the building upon maturity.
- 11) North fire lane to support the imposed load of the heaviest fire apparatus and shall be surfaced so as to provide all weather driving capabilities. per IFC 503.2.3
- 12) Radio coverage will be provided to meet all requirements of the IFC, 2015 edition, section 510.
- 13) Storage area for construction materials shall not interfere with fire/emergency site access.
- 14) Hydrants shall be in service during construction.
- 15) Hydrants providing protection coverage for the building shall be in service and approved by both Planning and Fire Department before Fire Department will support permit issuance for new construction phase before combustible materials are placed on the job site.

### Truck Detail

Not to scale

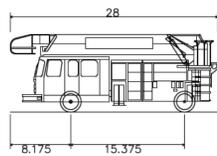


#### AA FIRE TRUCK

Width : 10.00'  
 Track : 8.00'  
 Lock to Lock Time : 6.0  
 Steering Angle : 29.1°

#### Ann Arbor SPH-100

Width : 7.83'  
 Track : 7.46'  
 Lock to Lock Time : 6.0  
 Steering Angle : 36.3°



#### AA 0100-011 Metro Star Fire Truck

Overall Length : 36.250ft  
 Overall Width : 8.420ft  
 Overall Body Height : 10.481ft  
 Min Body Ground Clearance : 0.934ft  
 Track Width : 8.000ft  
 Lock-to-lock time : 6.00s  
 Curb to Curb Turning Radius : 31.80'

28.000ft  
 8.250ft  
 10.432ft  
 0.862ft  
 8.000ft  
 6.00s  
 29.470ft

### Legend

- |   |   |                                   |
|---|---|-----------------------------------|
| ⑩ Number of Compact Car Spaces in a row   | [R] Barrier free sidewalk ramp          | EV-1 Electric Vehicle "Installed" |
| ④ Number barrier free spaces in a row     | [---] Proposed curb and gutter          | EV-C Electric Vehicle "Capable"   |
| [S] Sign                                  | [---] Proposed vehicle charging station | [H] Proposed Hydrant              |
| [P] Barrier free parking sign             | [---] Proposed Sidewalk Concrete        | [H] Relocated Hydrant             |
| [PV] Barrier free van parking sign        | [---] Proposed Bituminous               | [H] Existing Hydrant              |
| [EV-1] EV-1 parking sign                  | [---] Proposed Heavy Duty Concrete      | [T] Proposed Tree                 |
| [ST] Stop sign                            | [---] Proposed Brick Paved Drive        | [T] Existing Tree                 |
| [PC] Pedestrian crossing sign             | [---] 250' Hydrant Radius               |                                   |
| [DNE] "Do Not Enter" sign                 | [---] 150' Hose Lay                     |                                   |
| [FEUO] "Fire and Emergency Use Only" sign | [---] Fire Department Connection        |                                   |



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Project North



Scale: 0' 15' 30'

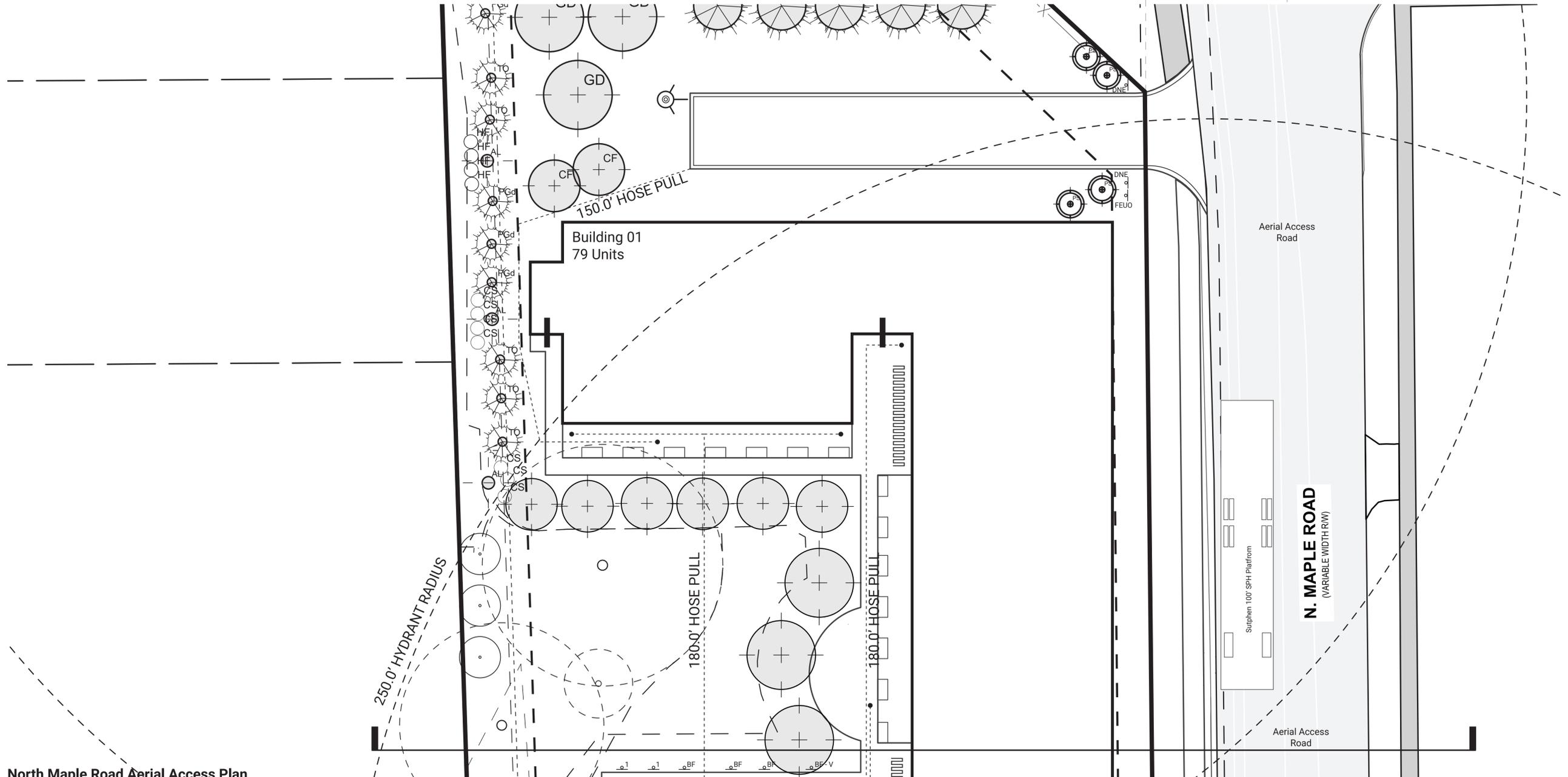
Aerial Access Ladder Sections

# AS4.1

A2 Collaborative 2022



### North Maple Road Aerial Access Section



### North Maple Road Aerial Access Plan

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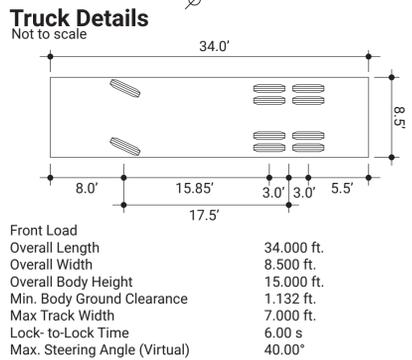
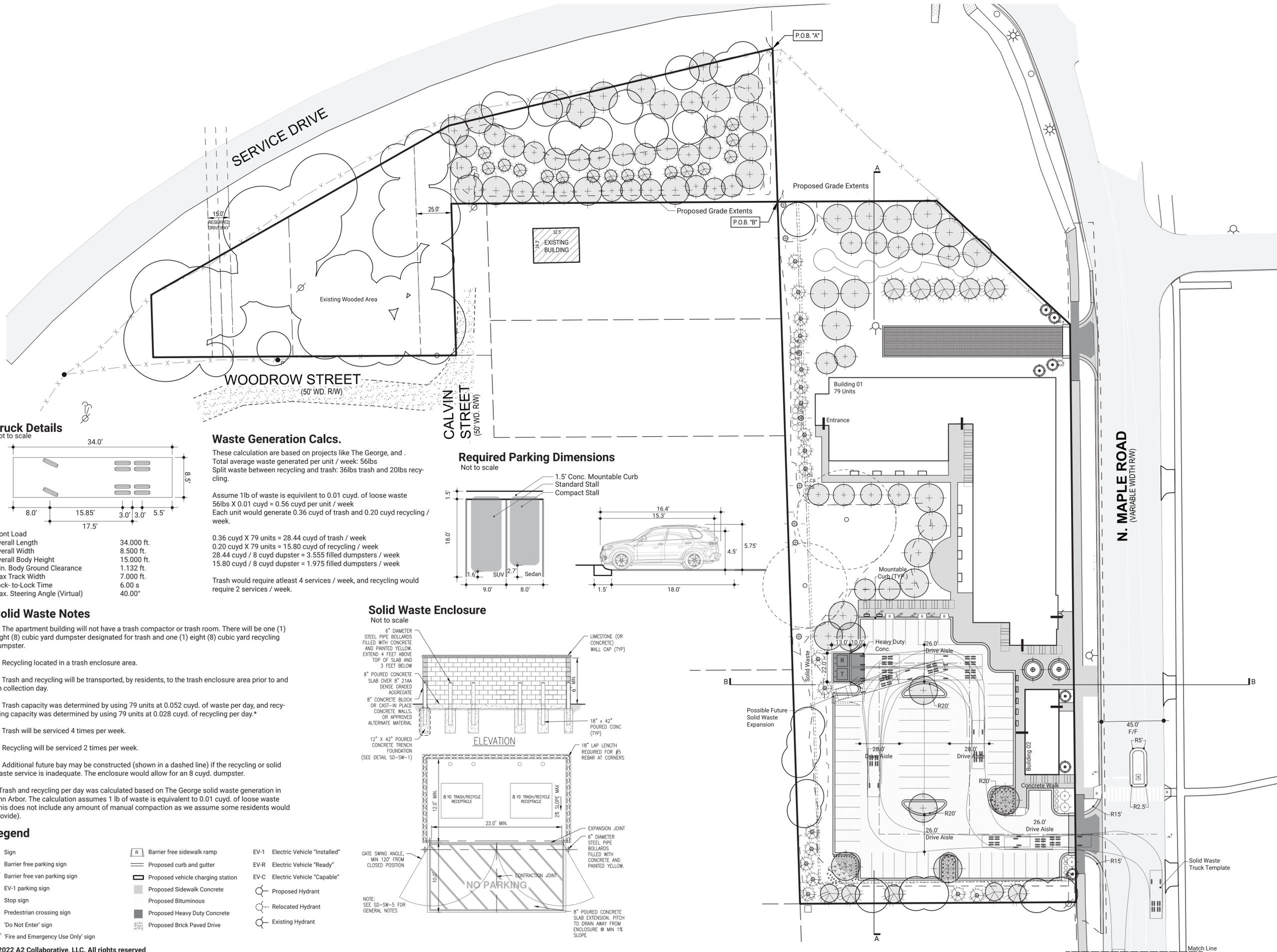
Project North



Scale: 0' 30' 60'

Solid Waste Plan

# AS5.0



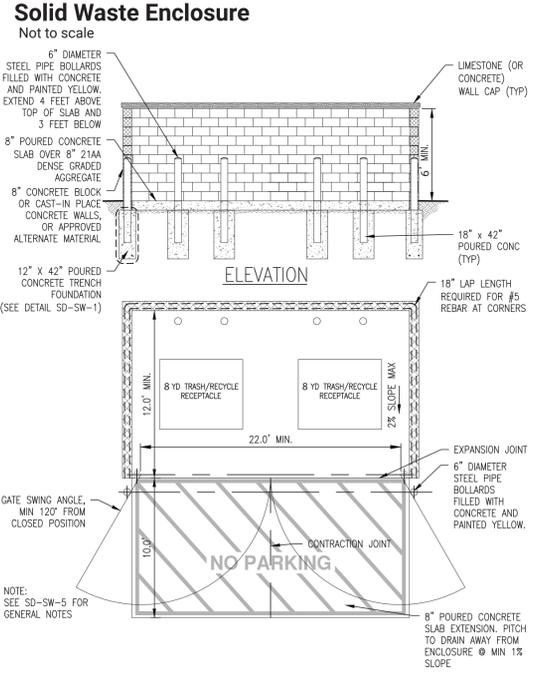
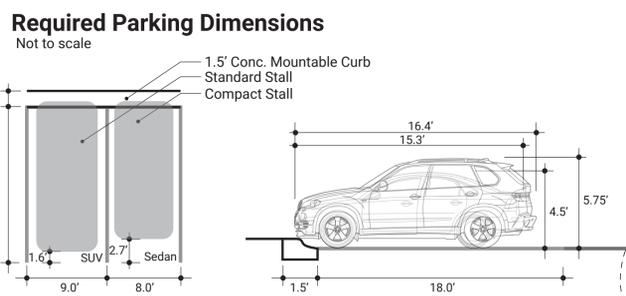
### Waste Generation Calcs.

These calculations are based on projects like The George, and Total average waste generated per unit / week: 56lbs  
 Split waste between recycling and trash: 36lbs trash and 20lbs recycling.

Assume 1lb of waste is equivalent to 0.01 cu yd. of loose waste  
 56lbs X 0.01 cu yd = 0.56 cu yd per unit / week  
 Each unit would generate 0.36 cu yd of trash and 0.20 cu yd recycling / week.

0.36 cu yd X 79 units = 28.44 cu yd of trash / week  
 0.20 cu yd X 79 units = 15.80 cu yd of recycling / week  
 28.44 cu yd / 8 cu yd dumpster = 3.555 filled dumpsters / week  
 15.80 cu yd / 8 cu yd dumpster = 1.975 filled dumpsters / week

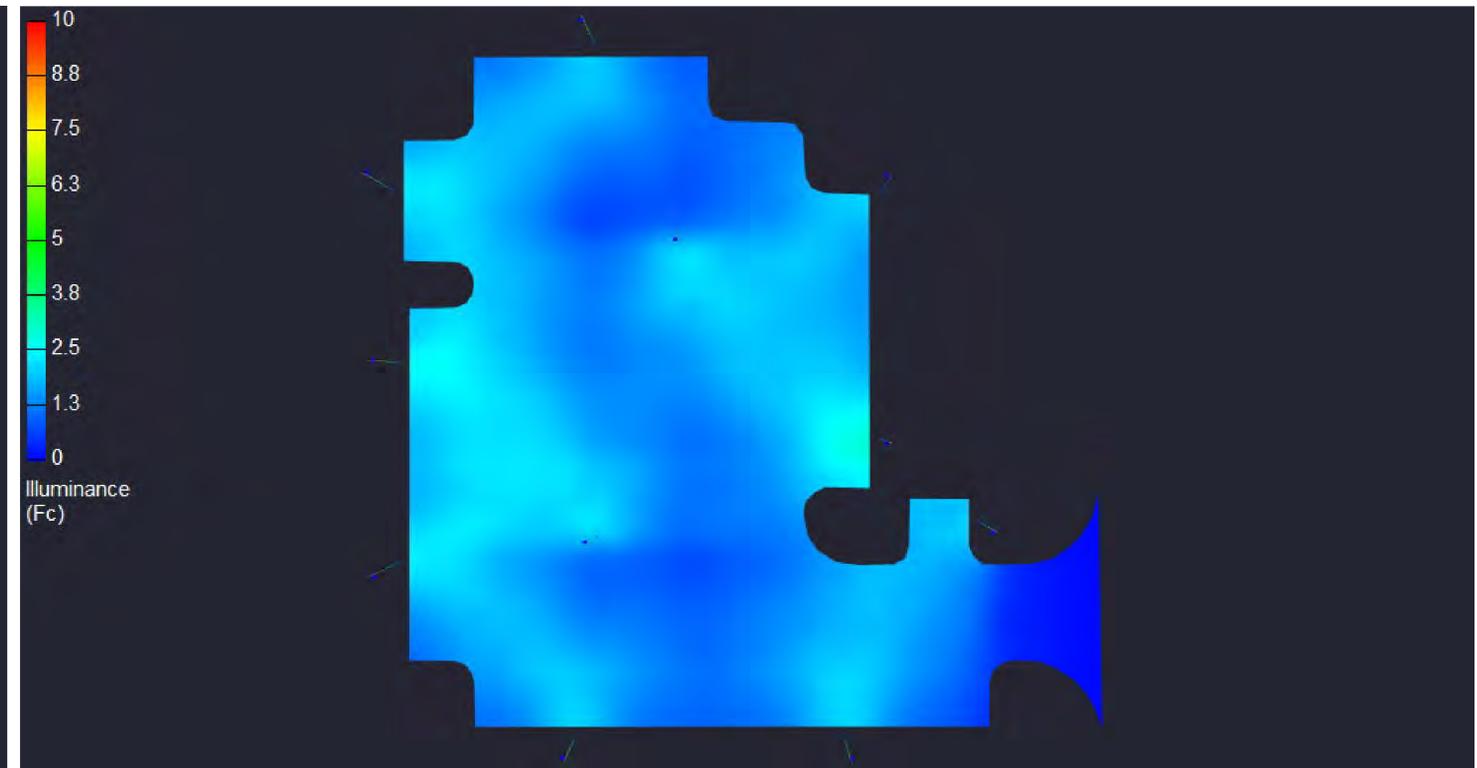
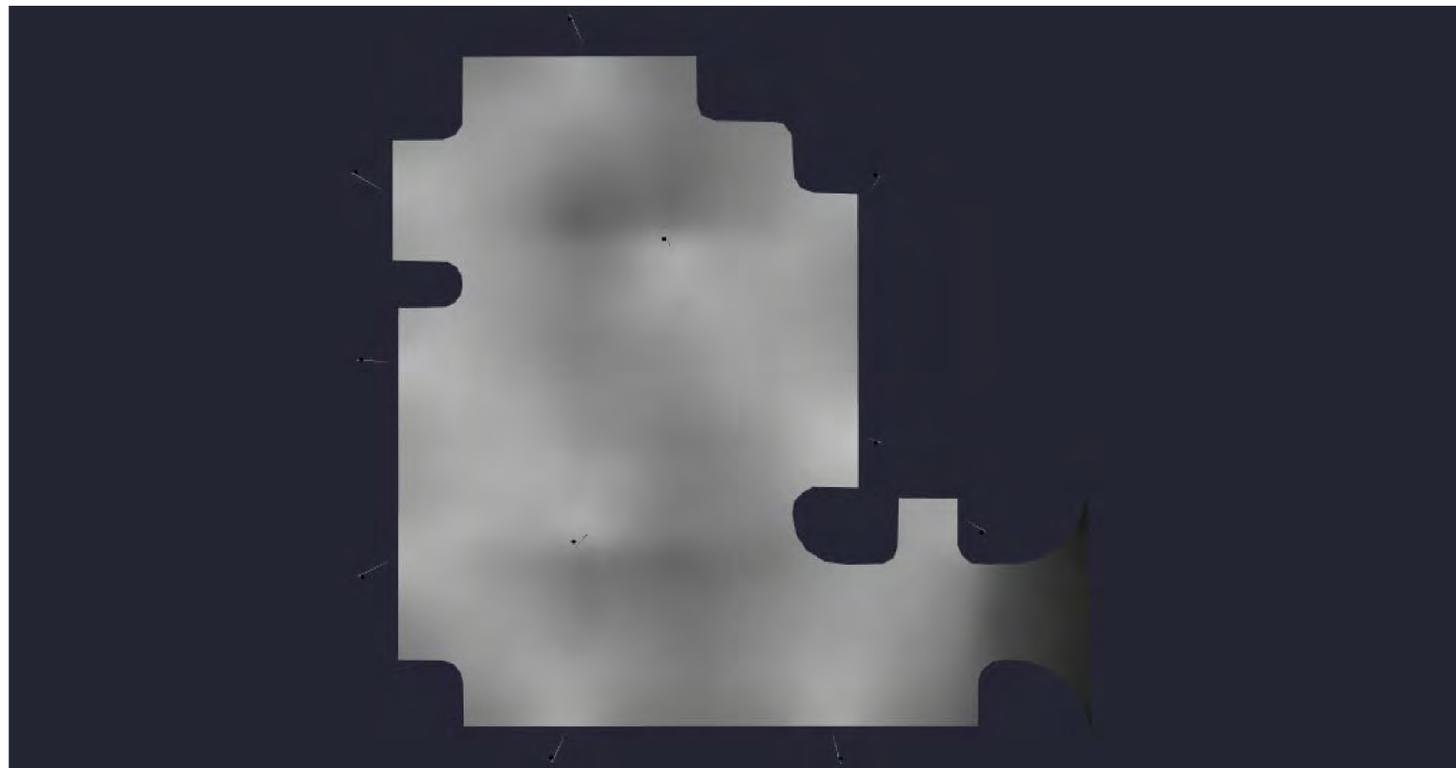
Trash would require at least 4 services / week, and recycling would require 2 services / week.



- ### Solid Waste Notes
- The apartment building will not have a trash compactor or trash room. There will be one (1) eight (8) cubic yard dumpster designated for trash and one (1) eight (8) cubic yard recycling dumpster.
  - Recycling located in a trash enclosure area.
  - Trash and recycling will be transported, by residents, to the trash enclosure area prior to and on collection day.
  - Trash capacity was determined by using 79 units at 0.052 cu yd. of waste per day, and recycling capacity was determined by using 79 units at 0.028 cu yd. of recycling per day.\*
  - Trash will be serviced 4 times per week.
  - Recycling will be serviced 2 times per week.
  - Additional future bay may be constructed (shown in a dashed line) if the recycling or solid waste service is inadequate. The enclosure would allow for an 8 cu yd. dumpster.
- \* Trash and recycling per day was calculated based on The George solid waste generation in Ann Arbor. The calculation assumes 1 lb of waste is equivalent to 0.01 cu yd. of loose waste (this does not include any amount of manual compaction as we assume some residents would provide).

- ### Legend
- |                                  |                                   |                                   |
|----------------------------------|-----------------------------------|-----------------------------------|
| Sign                             | Barrier free sidewalk ramp        | EV-1 Electric Vehicle "Installed" |
| Barrier free parking sign        | Proposed curb and gutter          | EV-R Electric Vehicle "Ready"     |
| Barrier free van parking sign    | Proposed vehicle charging station | EV-C Electric Vehicle "Capable"   |
| EV-1 parking sign                | Proposed Sidewalk Concrete        | Proposed Hydrant                  |
| Stop sign                        | Proposed Bituminous               | Relocated Hydrant                 |
| Pedestrian crossing sign         | Proposed Heavy Duty Concrete      | Existing Hydrant                  |
| "Do Not Enter" sign              | Proposed Brick Paved Drive        |                                   |
| Fire and Emergency Use Only sign |                                   |                                   |





ISOMETRIC VIEWS: CONTRAST & PSEUDO COLOR

GENERAL NOTE  
 1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.  
 2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0", FOOD SERVICE AREA AT: 2' - 6". TREES SHOWN AT BOTTOM OF LEAVES  
 3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

- THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS.  
 THIS LIGHTING LAYOUT 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. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

- THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY.  
 THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.  
 - UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.  
 - FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.  
 - THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.  
 - MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

MAPLE ROAD APARTMENTS PHOTOMETRIC PLAN  
 PREPARED FOR: A2 NORTH PROPERTIES LLC  
 GASSER BUSH ASSOCIATES  
 WWW.GASSERBUSH.COM

DESIGNER: JC3  
 DATE: 4.12.2022  
 REV. DATE: TBD  
 SCALE: NOT TO SCALE  
 DRAWING NO: #22-71159 V2

AS6.1



Schedule							
Symbol	Qty	Manufacturer	Catalog Number	Light Loss Factor	Lumens Per Lamp	Watts	Label
	11	LITHONIA D SX1 1	DSX1 LED P1 30K T4M MVOLT HS	0.900	4910	54	P1



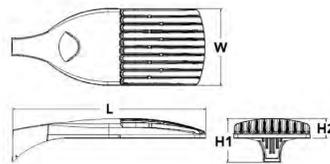
## D-Series Size 1 LED Area Luminaire



Catalog Number \_\_\_\_\_  
 Notes \_\_\_\_\_  
 Type \_\_\_\_\_

### Specifications

**EPA:** 1.01 ft<sup>2</sup>  
(0.09m<sup>2</sup>)  
**Length:** 33"  
(84.8cm)  
**Width:** 13"  
(33.0cm)  
**Height H1:** 7-1/2"  
(19.0cm)  
**Height H2:** 3-1/2"  
**Weight (max):** 27 lbs  
(12.2kg)



### Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

### Ordering Information

**EXAMPLE:** DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED		Color Temperature		Distribution		Voltage	Mounting
Series	LEDs	30K	3000K	T1S	Type I short (Automotive)	TSVS	Type V very short <sup>1</sup>
DSX1 LED	Forward optics	40K	4000K	T2S	Type II short	TSS	Type V short <sup>1</sup>
	P1 P4 P7 <sup>1</sup>	50K	5000K	T2M	Type II medium	TSM	Type V medium <sup>1</sup>
	P2 P5 P8			T3S	Type III short	TSW	Type V wide <sup>1</sup>
	P3 P6 P9 <sup>1</sup>			T3M	Type III medium	BLC	Backlight control <sup>4</sup>
	Rotated optics			T4M	Type IV medium	LCCO	Left corner cutoff <sup>4</sup>
	P10 <sup>1</sup> P12 <sup>1</sup>			TFM	Forward throw medium	RCCO	Right corner cutoff <sup>4</sup>
	P11 <sup>1</sup> P13 <sup>1</sup>						
						MVOLT <sup>1</sup>	
						XVOLT	
						(277V-480V) <sup>1,2,3</sup>	
						120 <sup>1</sup>	
						208 <sup>1</sup>	
						240 <sup>1</sup>	
						277 <sup>1</sup>	
						347 <sup>1</sup>	
						480 <sup>1</sup>	
							<b>Shipped included</b>
							SPA Square pole mounting
							RPA Round pole mounting <sup>5</sup>
							WBA Wall bracket <sup>1</sup>
							SPIMBA Square pole universal mounting adaptor <sup>1</sup>
							RPIMBA Round pole universal mounting adaptor <sup>1</sup>
							<b>Shipped separately</b>
							KMAR DDBXD U Most arm mounting bracket adaptor (Specify finish) <sup>6</sup>

### Control options:

**Shipped installed**  
**NLTAIR2** 4-Light AIR operation 2 enabled<sup>11</sup>  
**PIRHN** Network, high/low motion/ambient sensor<sup>14</sup>  
**PER** NEMA twist-lock receptacle only (controls ordered separately)<sup>12</sup>  
**PER5** Five-pin receptacle only (controls ordered separately)<sup>12,14</sup>  
**PER7** Seven-pin receptacle only (controls ordered separately)<sup>12,14</sup>  
**DMG** 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)<sup>12</sup>  
**DS** Dial switching<sup>14,16,18</sup>

**PIR** High/low motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5%<sup>20,21</sup>  
**PIRH** High/low motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5%<sup>20,21</sup>  
**PIRHFCV** High/low motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1%<sup>20,21</sup>  
**PIRHFCV** 0-4-level motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1%<sup>20,21</sup>  
**FAO** Field adjustable output<sup>20,21</sup>

### Other options:

**Shipped installed**  
**HS** House-side shroud<sup>22</sup>  
**SE** Single fuse (130, 277, 347V)<sup>1</sup>  
**DF** Double fuse (208, 240, 480V)<sup>1</sup>  
**LOO** Left rotated optics<sup>2</sup>  
**ROO** Right rotated optics<sup>2</sup>  
**HA** 50°C ambient operations<sup>1</sup>  
**BAA** Buy American (A) Act Compliant  
**Shipped separately**  
**BS** Bird spikes<sup>24</sup>  
**EGS** External glare shield

### Finish:

**DDBXD** Dark bronze  
**DBLXD** Black  
**DNAXD** Natural aluminum  
**DWHXD** White  
**DOBXD** Textured dark bronze  
**DBLXD** Textured black  
**DNATXD** Textured natural aluminum  
**DWHGXD** Textured white



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DSX1-LED  
 Rev: 07/19/21  
 Page 1 of 6

### SPECIFICATION SHEETS

**GENERAL NOTE**  
 1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.  
 2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0", FOOD SERVICE AREA AT: 2' - 6", TREES SHOWN AT BOTTOM OF LEAVES  
 3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

- THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS.  
 - UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT [ASG@GASSERBUSH.COM](mailto:ASG@GASSERBUSH.COM) OR 734-266-6705.  
 - FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT [QUOTES@GASSERBUSH.COM](mailto:QUOTES@GASSERBUSH.COM) OR 734-266-6705.

- THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY.  
 - THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.  
 - THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.  
 - MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

MAPLE ROAD APARTMENTS PHOTOMETRIC PLAN

PREPARED FOR: A2 NORTH PROPERTIES LLC  
 GASSER BUSH ASSOCIATES

[WWW.GASSERBUSH.COM](http://WWW.GASSERBUSH.COM)

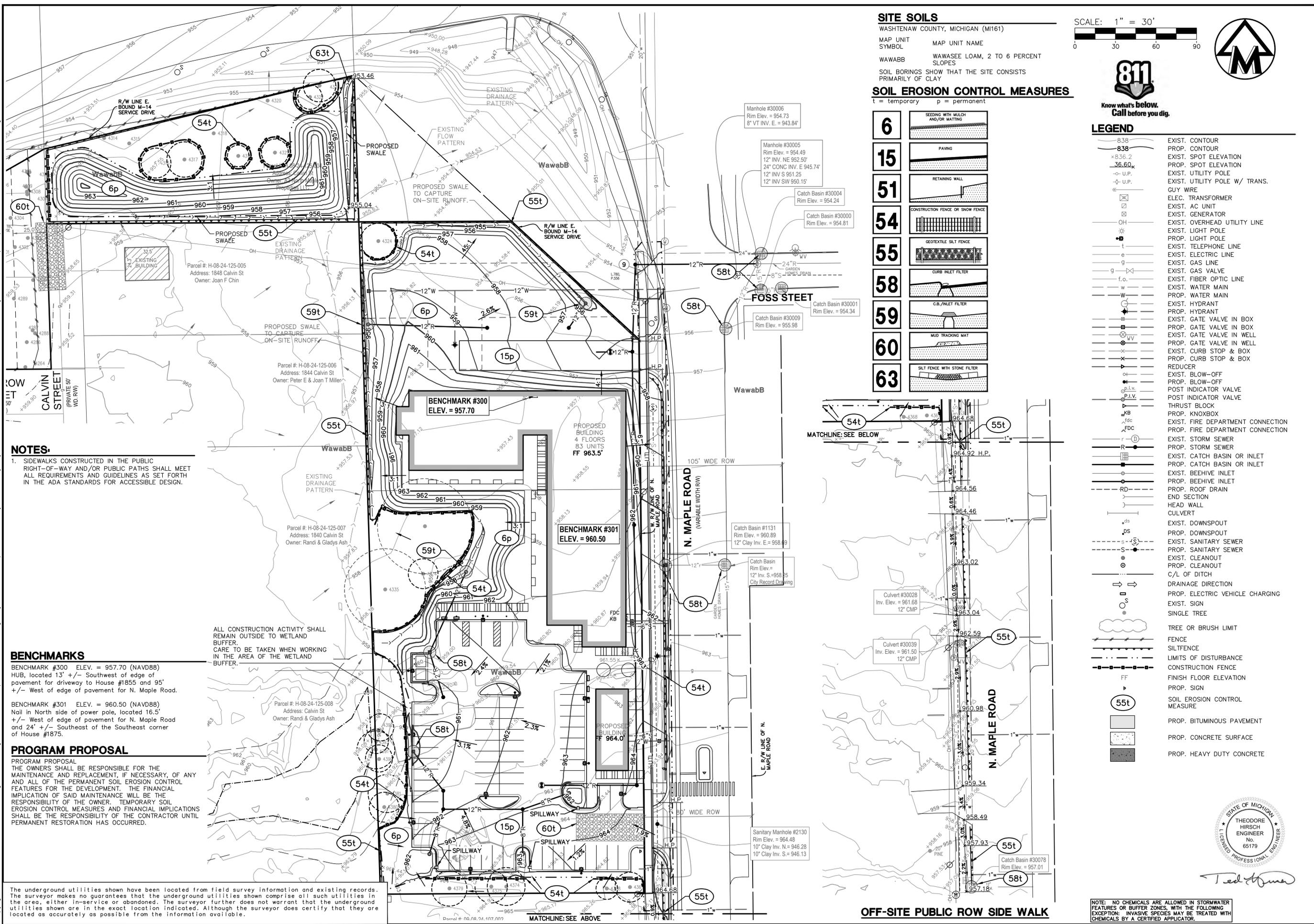
DESIGNER: JC3  
 DATE: 4.12.2022  
 REV. DATE: TBD  
 SCALE: NOT TO SCALE

AS6.2



DRAWING NO: #22-71159 V2

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**NOTES:**

- SIDEWALKS CONSTRUCTED IN THE PUBLIC RIGHT-OF-WAY AND/OR PUBLIC PATHS SHALL MEET ALL REQUIREMENTS AND GUIDELINES AS SET FORTH IN THE ADA STANDARDS FOR ACCESSIBLE DESIGN.

**BENCHMARKS**

BENCHMARK #300 ELEV. = 957.70 (NAVD88)  
 HUB, located 13' +/- Southwest of edge of pavement for driveway to House #1855 and 95' +/- West of edge of pavement for N. Maple Road.

BENCHMARK #301 ELEV. = 960.50 (NAVD88)  
 Nail in North side of power pole, located 16.5' +/- West of edge of pavement for N. Maple Road and 24' +/- Southeast of the Southeast corner of House #1875.

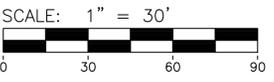
**PROGRAM PROPOSAL**

PROGRAM PROPOSAL  
 THE OWNERS SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPLACEMENT, IF NECESSARY, OF ANY AND ALL OF THE PERMANENT SOIL EROSION CONTROL FEATURES FOR THE DEVELOPMENT. THE FINANCIAL IMPLICATION OF SAID MAINTENANCE WILL BE THE RESPONSIBILITY OF THE OWNER. TEMPORARY SOIL EROSION CONTROL MEASURES AND FINANCIAL IMPLICATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL PERMANENT RESTORATION HAS OCCURRED.

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

**SITE SOILS**  
 WASHTENAW COUNTY, MICHIGAN (M1161)  
 MAP UNIT SYMBOL MAP UNIT NAME  
 WAWABB WAWASEE LOAM, 2 TO 6 PERCENT SLOPES  
 SOIL BORINGS SHOW THAT THE SITE CONSISTS PRIMARILY OF CLAY

**SOIL EROSION CONTROL MEASURES**  
 t = temporary p = permanent



6	SEEDING WITH MULCH AND/OR MATTING
15	PAVING
51	RETAINING WALL
54	CONSTRUCTION FENCE OR SNOW FENCE
55	GEOTEXTILE SILT FENCE
58	CURB INLET FILTER
59	C.B./INLET FILTER
60	MUD TRACKING MAT
63	SILT FENCE WITH STONE FILTER

**LEGEND**

838	EXIST. CONTOUR
838	PROP. CONTOUR
836.2	EXIST. SPOT ELEVATION
36.60x	PROP. SPOT ELEVATION
U.P.	EXIST. UTILITY POLE
U.P.	EXIST. UTILITY POLE W/ TRANS.
GW	GUY WIRE
TR	ELEC. TRANSFORMER
AC	EXIST. AC UNIT
GEN	EXIST. GENERATOR
OH	EXIST. OVERHEAD UTILITY LINE
L.P.	EXIST. LIGHT POLE
t	PROP. LIGHT POLE
e	EXIST. TELEPHONE LINE
g	EXIST. ELECTRIC LINE
g	EXIST. GAS LINE
g	EXIST. GAS VALVE
f.o.	EXIST. FIBER OPTIC LINE
w	EXIST. WATER MAIN
w	PROP. WATER MAIN
W	EXIST. HYDRANT
W	PROP. HYDRANT
g	EXIST. GATE VALVE IN BOX
g	PROP. GATE VALVE IN BOX
g	EXIST. GATE VALVE IN WELL
g	PROP. GATE VALVE IN WELL
g	EXIST. CURB STOP & BOX
g	PROP. CURB STOP & BOX
RED	REDUCER
BO	EXIST. BLOW-OFF
BO	PROP. BLOW-OFF
P.I.V.	POST INDICATOR VALVE
P.I.V.	POST INDICATOR VALVE
T.B.	THRUST BLOCK
KB	PROP. KNOXBOX
FDC	EXIST. FIRE DEPARTMENT CONNECTION
FDC	PROP. FIRE DEPARTMENT CONNECTION
R	EXIST. STORM SEWER
R	PROP. STORM SEWER
C.B.	EXIST. CATCH BASIN OR INLET
C.B.	PROP. CATCH BASIN OR INLET
B.I.	EXIST. BEEHIVE INLET
B.I.	PROP. BEEHIVE INLET
R.D.	PROP. ROOF DRAIN
ES	END SECTION
HW	HEAD WALL
C	CULVERT
ds	EXIST. DOWNSPOUT
ds	PROP. DOWNSPOUT
S.S.	EXIST. SANITARY SEWER
S.S.	PROP. SANITARY SEWER
C	EXIST. CLEANOUT
C	PROP. CLEANOUT
C/L	C/L OF DITCH
D	DRAINAGE DIRECTION
E.V.C.	PROP. ELECTRIC VEHICLE CHARGING
S	EXIST. SIGN
S	PROP. SIGN
T	SINGLE TREE
TL	TREE OR BRUSH LIMIT
F	FENCE
S.F.	SILT FENCE
L.D.	LIMITS OF DISTURBANCE
C.F.	CONSTRUCTION FENCE
F.F.	FINISH FLOOR ELEVATION
S	PROP. SIGN
S.E.C.	SOIL EROSION CONTROL MEASURE
B.P.	PROP. BITUMINOUS PAVEMENT
C.S.	PROP. CONCRETE SURFACE
H.D.C.	PROP. HEAVY DUTY CONCRETE

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 2370 E. STADIUM BLVD. # 305  
 ANN ARBOR, MI 48104  
 JEFF WILKERSON  
 (989) 529-5858

**NORTH MAPLE APARTMENTS**  
 GRADING AND SECC PLAN

**C1.0**

JOB No.	21147
DATE:	2/1/22
REV. DATE	4/20/22
REV. DATE	5/25/22
REV. DATE	7/15/22
REV. DATE	7/22/22
REV. DATE	7/21/23
REV. DATE	7/21/23

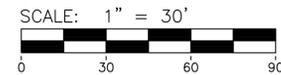
THEODORE HIRSCH  
 ENGINEER  
 No. 68179  
 LICENSED PROFESSIONAL ENGINEER

**OFF-SITE PUBLIC ROW SIDE WALK**

NOTE: NO CHEMICALS ARE ALLOWED IN STORMWATER FEATURES OR BUFFER ZONES, WITH THE FOLLOWING EXCEPTION: INVASIVE SPECIES MAY BE TREATED WITH CHEMICALS BY A CERTIFIED APPLICATOR.



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**LEGEND**

	838	EXIST. CONTOUR
	836.2	PROP. CONTOUR
	36.60	EXIST. SPOT ELEVATION
	U.P.	PROP. SPOT ELEVATION
	U.P.	EXIST. UTILITY POLE W/ TRANS.
	GUY WIRE	EXIST. UTILITY POLE W/ TRANS.
	ELEC. TRANSFORMER	GUY WIRE
	EXIST. AC UNIT	ELEC. TRANSFORMER
	EXIST. GENERATOR	EXIST. AC UNIT
	EXIST. OVERHEAD UTILITY LINE	EXIST. GENERATOR
	EXIST. LIGHT POLE	EXIST. OVERHEAD UTILITY LINE
	EXIST. TELEPHONE LINE	EXIST. LIGHT POLE
	EXIST. ELECTRIC LINE	EXIST. TELEPHONE LINE
	EXIST. GAS LINE	EXIST. ELECTRIC LINE
	EXIST. GAS VALVE	EXIST. GAS LINE
	EXIST. FIBER OPTIC LINE	EXIST. GAS VALVE
	EXIST. WATER MAIN	EXIST. FIBER OPTIC LINE
	PROP. WATER MAIN	EXIST. WATER MAIN
	EXIST. HYDRANT	PROP. WATER MAIN
	PROP. HYDRANT	EXIST. HYDRANT
	EXIST. GATE VALVE IN BOX	PROP. HYDRANT
	PROP. GATE VALVE IN BOX	EXIST. GATE VALVE IN BOX
	EXIST. GATE VALVE IN WELL	PROP. GATE VALVE IN BOX
	PROP. GATE VALVE IN WELL	EXIST. GATE VALVE IN WELL
	EXIST. CURB STOP & BOX	PROP. GATE VALVE IN WELL
	PROP. CURB STOP & BOX	EXIST. CURB STOP & BOX
	REDUCER	PROP. CURB STOP & BOX
	EXIST. BLOW-OFF	REDUCER
	PROP. BLOW-OFF	EXIST. BLOW-OFF
	POST INDICATOR VALVE	PROP. BLOW-OFF
	PROP. POST INDICATOR VALVE	POST INDICATOR VALVE
	THRUST BLOCK	PROP. POST INDICATOR VALVE
	PROP. THRUST BLOCK	THRUST BLOCK
	PROP. KNOXBOX	PROP. THRUST BLOCK
	EXIST. FIRE DEPARTMENT CONNECTION	PROP. KNOXBOX
	PROP. FIRE DEPARTMENT CONNECTION	EXIST. FIRE DEPARTMENT CONNECTION
	EXIST. STORM SEWER	PROP. FIRE DEPARTMENT CONNECTION
	PROP. STORM SEWER	EXIST. STORM SEWER
	EXIST. CATCH BASIN OR INLET	PROP. STORM SEWER
	PROP. CATCH BASIN OR INLET	EXIST. CATCH BASIN OR INLET
	EXIST. BEEHIVE INLET	PROP. CATCH BASIN OR INLET
	PROP. BEEHIVE INLET	EXIST. BEEHIVE INLET
	PROP. ROOF DRAIN END SECTION	PROP. BEEHIVE INLET
	HEAD WALL	PROP. ROOF DRAIN END SECTION
	CULVERT	HEAD WALL
	EXIST. DOWNSPOUT	CULVERT
	PROP. DOWNSPOUT	EXIST. DOWNSPOUT
	EXIST. SANITARY SEWER	PROP. DOWNSPOUT
	PROP. SANITARY SEWER	EXIST. SANITARY SEWER
	EXIST. CLEANOUT	PROP. SANITARY SEWER
	PROP. CLEANOUT	EXIST. CLEANOUT
	C/L OF DITCH	PROP. CLEANOUT
	DRAINAGE DIRECTION	C/L OF DITCH
	PROP. ELECTRIC VEHICLE CHARGING	DRAINAGE DIRECTION
	EXIST. SIGN	PROP. ELECTRIC VEHICLE CHARGING
	PROP. SIGN	EXIST. SIGN
	TREE OR BRUSH LIMIT	PROP. SIGN
	FENCE	TREE OR BRUSH LIMIT
	SILT FENCE	FENCE
	LIMITS OF DISTURBANCE	SILT FENCE
	CONSTRUCTION FENCE	LIMITS OF DISTURBANCE
	FINISH FLOOR ELEVATION	CONSTRUCTION FENCE
	PROP. SIGN	FINISH FLOOR ELEVATION
	SOIL EROSION CONTROL MEASURE	PROP. SIGN
	PROP. BITUMINOUS PAVEMENT	SOIL EROSION CONTROL MEASURE
	PROP. CONCRETE SURFACE	PROP. BITUMINOUS PAVEMENT
	PROP. HEAVY DUTY CONCRETE	PROP. CONCRETE SURFACE

**NOTES**

- FOR FIRE DEPT. TO SUPPORT BUILDING PERMITS FOR INDIVIDUAL BUILDINGS: SUPPORTING HYDRANT SHALL BE IN PLACE & OPERATING AND ACCESS ROAD ACCEPTABLE TO THE FIRE MARSHAL SHALL BE IN PLACE PRIOR TO PERMIT ISSUANCE. SUPPORTING HYDRANTS SHALL BE IN SERVICE DURING CONSTRUCTION.
- ALL PRE-EXISTING UTILITY LEADS SLATED FOR REMOVAL WILL BE ABANDONED/REMOVED IN ACCORDANCE WITH CITY STANDARDS (CUT/CAPPED AT MAIN).
- THERE ARE NO FIREWALLS IN THE PROPOSED BUILDINGS.
- BOOSTER PUMPS WILL BE PROVIDED FOR DOMESTIC WATER SERVICES IF NEEDED.
- IF BOOSTER PUMPS ARE REQUIRED, THE BOOSTER PUMP DETAILS WILL BE REVIEWED ALONG WITH BACKFLOW PREVENTION AND METERING ARRANGEMENTS DURING THE CONSTRUCTION PLAN REVIEW OF THE PROJECT.
- ANY NEW OR RELOCATED HYDRANTS WITH STEAMER CONNECTIONS MUST BE INSTALLED SUCH THAT THE STEAMER CONNECTION IS FACING THE FIRE LANE.
- THE PROPOSED DEVELOPMENT WILL COMPLY WITH THE CITY'S DEVELOPER OFFSET-MITIGATION PROGRAM.
- USE OF LINE STOPS IS REQUIRED WHERE EXISTING WATER MAINS CANNOT BE SUFFICIENTLY ISOLATED TO COMPLETE THE WORK. THE COST OF ANY LINE STOP INSTALLATION IS THE RESPONSIBILITY OF THE DEVELOPER AND/OR CONTRACTOR.
- TAPS TO EXISTING STORM STRUCTURES ARE ALLOWED IF THE STRUCTURE IS AT LEAST THREE-FOOT IN DIAMETER AND IN GOOD CONDITION AS DETERMINED BY THE CITY. REPLACEMENT OF THE STRUCTURE MAY BE REQUIRED TO MAKE A CONNECTION. THIS DETERMINATION WILL BE MADE AT THE CONSTRUCTION PHASE.
- ALL ROOF DRAINS AND SUMP DRAINAGE SHALL TIE DIRECTLY TO NEAREST CATCH BASIN CONNECTED TO ON-SITE STORM WATER MANAGEMENT SYSTEM.
- THE PROPOSED STORM OUTLET RUNNING SOUTH ALONG NORTH MAPLE SHALL BE CONSTRUCTED WITH TRENCH BOX TO MINIMIZE ROW IMPACTS. THIS WORK WILL REQUIRE RIGHT-OF-WAY PERMIT.

**SANITARY SEWER FLOW MITIGATION CALCULATIONS**

**Design Flow**  
Based on the City of Ann Arbor's sanitary sewer flow evaluation Table 'A', the design dry weather flow rate will be:

67 units - Apartments 0-600 sf gross floor area	175.00	gpd/unit	11,725	gpd
16 units - Apartments 601-1,200 sf gross floor area	250.00	gpd/unit	4,000	gpd
1,043 sf. ft. - Non-Medical Office space	0.06	gpd/sq ft.	63	gpd
671 sf. ft. - Gym	0.06	gpd/sq ft.	40	gpd
<b>Total</b>			<b>15,828</b>	<b>gpd</b>

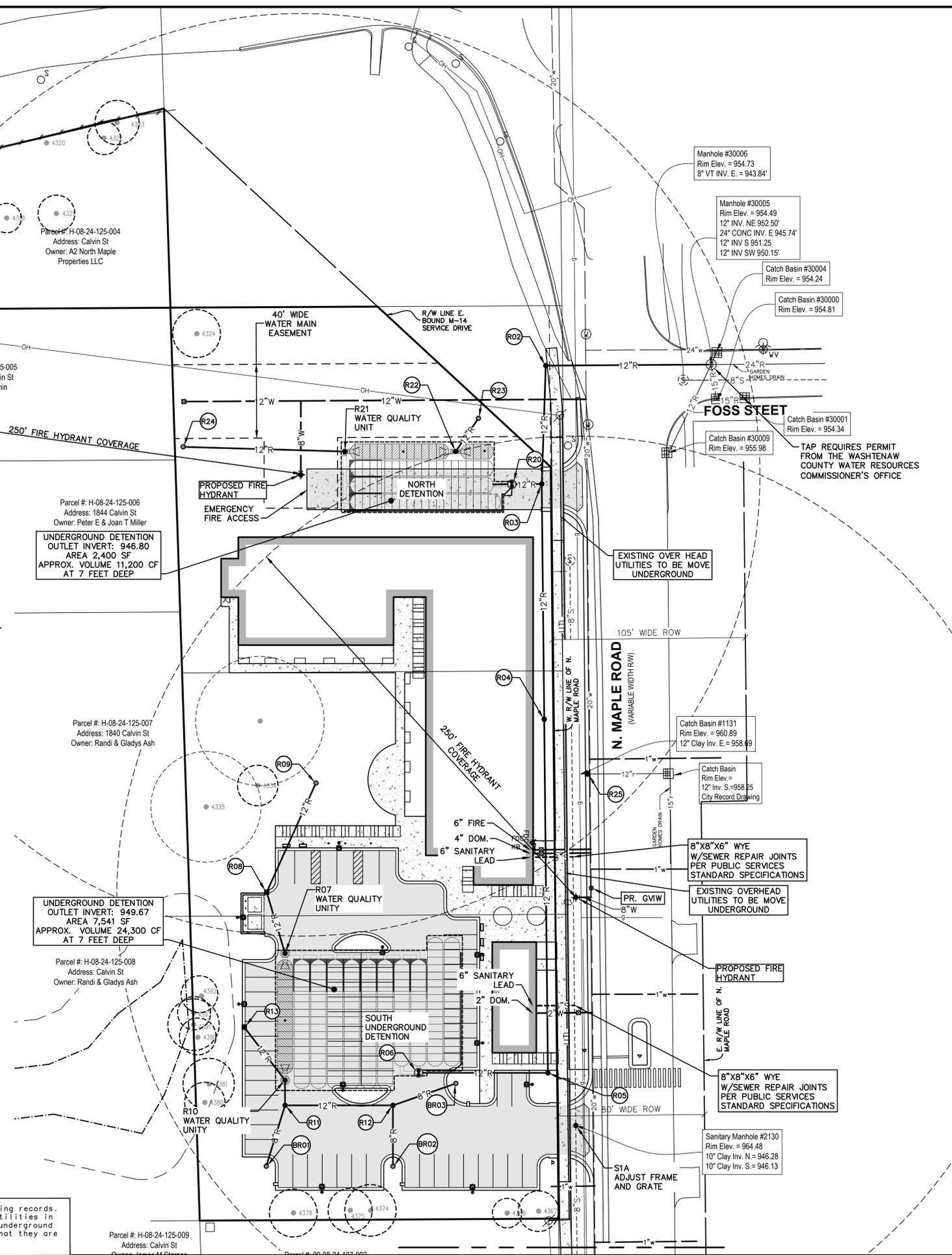
**Existing Flow**  
Based on the City of Ann Arbor's sanitary sewer flow evaluation Table 'A', the existing design dry weather flow rate

3 Single Family Residence	300.00	gpd/unit	900	gpd
			0	gpd
<b>Total</b>			<b>900</b>	<b>gpd</b>

**Mitigation Flow**  
Mitigation Flow = (Proposed Flow - Existing Flow) \* 4(peaking factor) \* 1.1(recovery)  
Mitigation Peak Flow = 14928 gpd x 4(peaking factor) x 1.1(recovery) = **65,682.6 gpd**  
**46.0 gpm**

If footing drains for the existing building are connected to the sanitary sewer system, disconnection will be required in accordance with current city specifications. Footing drains removed from an existing building will offset required mitigation. Footing drain connections to the sanitary sewer must be verified by Engineering in order to receive credit.

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.



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A2 NORTH MAPLE PROPERTIES LLC  
2370 E. STADIUM BLVD. # 305  
ANN ARBOR, MI 48104  
JEFF WILKERSON  
(989) 529-5858

**NORTH MAPLE APARTMENTS**  
UTILITY PLAN

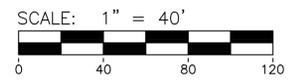
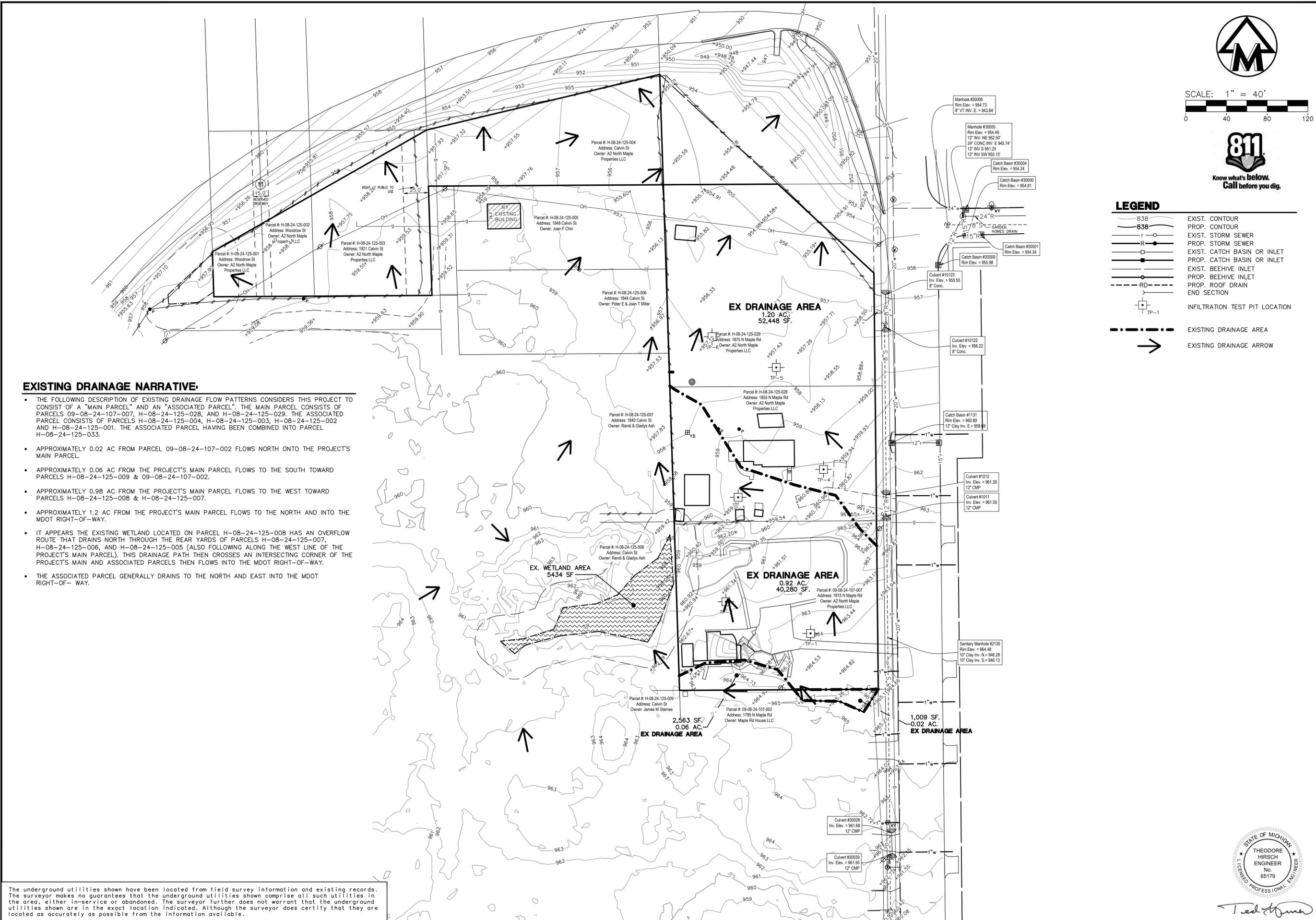
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JOB No.	21147
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REV. DATE	7/15/22
REV. DATE	7/22/22

THEODORE HIRSCH  
ENGINEER  
No. 65179  
LICENSED PROFESSIONAL ENGINEER  
STATE OF MICHIGAN

Ted Hirsch

M:\CIVIL\3D\_Plan\121147D02.dwg, 7/22/2022 3:35 PM, Ted P. Hirsch, C3.0 EXISTING STORMWATER DRAINAGE, MCLLC PDF.plt  
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**LEGEND**

	EXIST. CONTOUR
	PROP. CONTOUR
	EXIST. STORM SEWER
	PROP. STORM SEWER
	EXIST. CATCH BASIN OR INLET
	PROP. CATCH BASIN OR INLET
	EXIST. BEEHIVE INLET
	PROP. BEEHIVE INLET
	PROP. ROOF DRAIN END SECTION
	INFILTRATION TEST PIT LOCATION
	EXISTING DRAINAGE AREA
	EXISTING DRAINAGE ARROW

**EXISTING DRAINAGE NARRATIVE:**

- THE FOLLOWING DESCRIPTION OF EXISTING DRAINAGE FLOW PATTERNS CONSIDERS THIS PROJECT TO CONSIST OF A "MAIN PARCEL" AND AN "ASSOCIATED PARCEL". THE MAIN PARCEL CONSISTS OF PARCELS 09-08-24-107-007, H-08-24-125-028, AND H-08-24-125-029. THE ASSOCIATED PARCEL CONSISTS OF PARCELS H-08-24-125-004, H-08-24-125-003, H-08-24-125-002 AND H-08-24-125-001. THE ASSOCIATED PARCEL HAVING BEEN COMBINED INTO PARCEL H-08-24-125-033.
- APPROXIMATELY 0.02 AC FROM PARCEL 09-08-24-107-002 FLOWS NORTH ONTO THE PROJECT'S MAIN PARCEL.
- APPROXIMATELY 0.06 AC FROM THE PROJECT'S MAIN PARCEL FLOWS TO THE SOUTH TOWARD PARCELS H-08-24-125-009 & 09-08-24-107-002.
- APPROXIMATELY 0.98 AC FROM THE PROJECT'S MAIN PARCEL FLOWS TO THE WEST TOWARD PARCELS H-08-24-125-008 & H-08-24-125-007.
- APPROXIMATELY 1.2 AC FROM THE PROJECT'S MAIN PARCEL FLOWS TO THE NORTH AND INTO THE MDOT RIGHT-OF-WAY.
- IT APPEARS THE EXISTING WETLAND LOCATED ON PARCEL H-08-24-125-008 HAS AN OVERFLOW ROUTE THAT DRAINS NORTH THROUGH THE REAR YARDS OF PARCELS H-08-24-125-007, H-08-24-125-006, AND H-08-24-125-005 (ALSO FOLLOWING ALONG THE WEST LINE OF THE PROJECT'S MAIN PARCEL). THIS DRAINAGE PATH THEN CROSSES AN INTERSECTING CORNER OF THE PROJECT'S MAIN AND ASSOCIATED PARCELS THEN FLOWS INTO THE MDOT RIGHT-OF-WAY.
- THE ASSOCIATED PARCEL GENERALLY DRAINS TO THE NORTH AND EAST INTO THE MDOT RIGHT-OF-WAY.

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

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ANN ARBOR, MI 48104  
JEFF WILKERSON  
(989) 529-5858

**NORTH MAPLE APARTMENTS**  
EXISTING STORMWATER DRAINAGE

**C3.0**

DATE: 2/1/22	REV. DATE: 4/20/22	REV. DATE: 5/25/22	REV. DATE: 7/15/22	REV. DATE: 7/22/22
SHEET OF	CADD	ENG. TYP	PM. TJC	TECH. TJC
				7/21/2022



*Ted Hirsch*

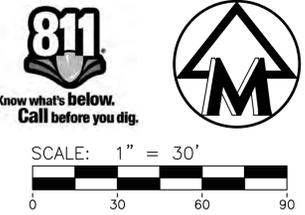
**JOB No. 21147**







M:\CIVIL\2022\21147\Site Plan\21147L1.0.dwg, 7/22/2022 3:36 PM, Ted P. Hirsch, L1.0 LANDSCAPE PLAN, MCLLC PDF, ps3  
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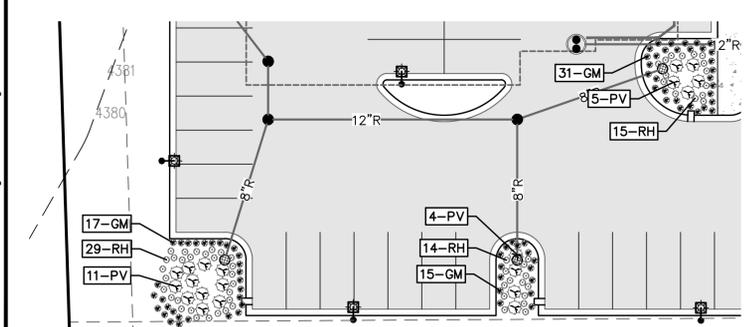
### LANDSCAPE LEGEND

	-V	PROPOSED CANOPY TREE (INTERIOR VUA)
	-R	PROPOSED CANOPY TREE (RIGHT-OF-WAY SCREEN)
	-R	PROPOSED EVERGREEN SHRUBS (RIGHT-OF-WAY SCREEN)
	-C	PROPOSED CANOPY TREE (CONFLICTING LAND USE BUFFER)
	-C	PROPOSED EVERGREEN TREE (CONFLICTING LAND USE BUFFER)
	-C	PROPOSED DECIDUOUS SHRUBS
	-M	PROPOSED CANOPY TREE (MITIGATION)
	-M	PROPOSED EVERGREEN TREE (MITIGATION)
	-S	PROPOSED CANOPY TREE (STREET TREE)
	###	EXISTING TREE TO REMAIN
	[Pattern]	VEHICLE USE AREA - NON-BIORETENTION
	[Pattern]	VEHICLE USE AREA - BIORETENTION
	.....	VEHICULAR USE AREA LIMITS
	.....	GRADING LIMITS

### PLANT SCHEDULE

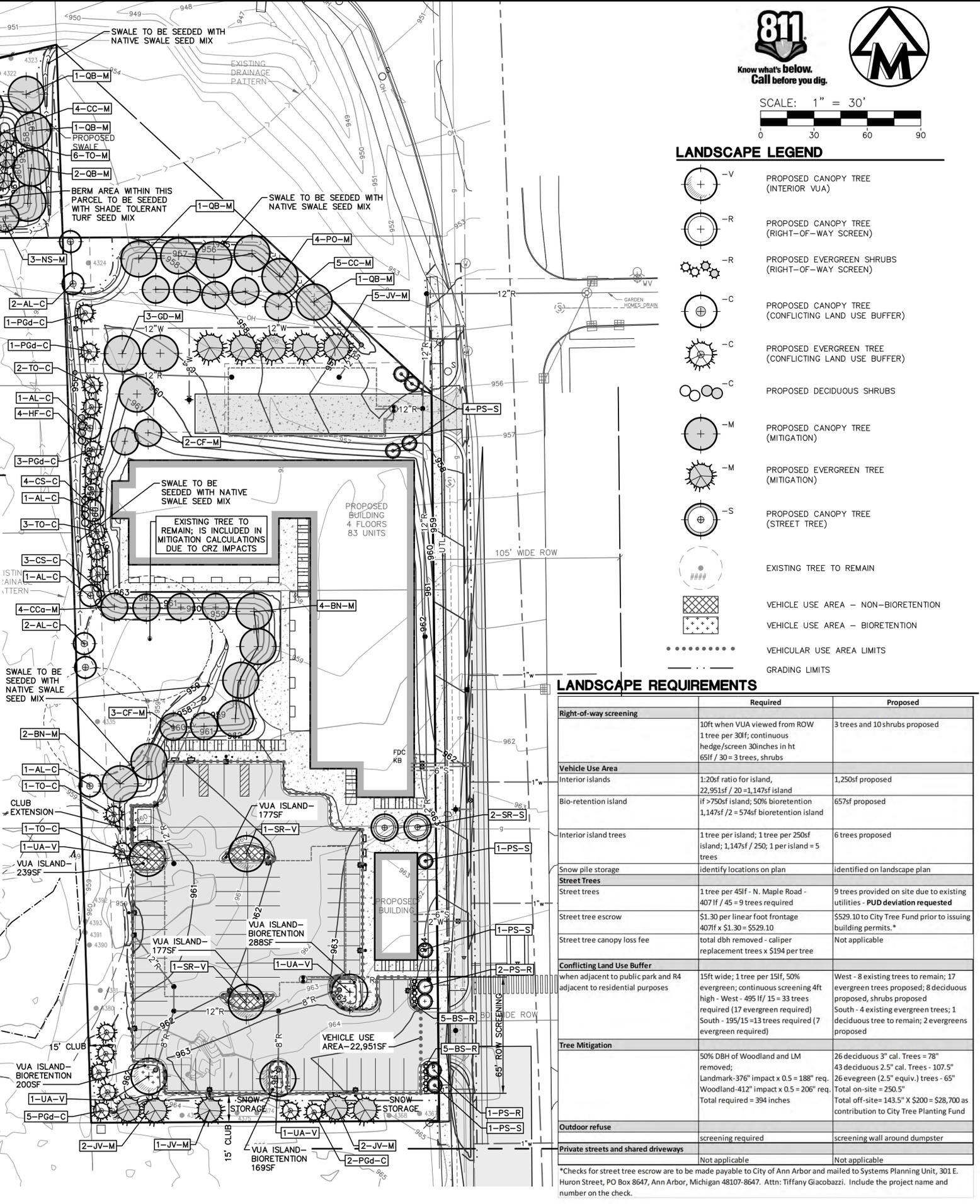
Total	Street Tree (-S)	VUA (-V)	ROW Screen (-R)	CLUB (-C)	Mitigation (-M)	Site	Code	Scientific Name	Common Name	Root	Size	Spacing	Notes
<b>2-2.5" Deciduous Trees</b>													
6					6		BN	<i>Betula nigra</i>	River Birch	B&B	2.5" cal.	20' o.c.	single stem/tree form
15					15		CC	<i>Cornus caroliniana</i>	American Hornbeam	B&B	2.5" cal.	15' o.c.	
4					4		CF	<i>Cornus florida</i>	Flowering Dogwood	B&B	2.5" cal.	15' o.c.	single stem/tree form
10				1	9		NS	<i>Nyssa sylvatica</i>	Black Gum	B&B	2.5" cal.	20' o.c.	
9					9		CCa	<i>Cercis canadensis</i>	Eastern Redbud	B&B	2.5" cal.	15' o.c.	
8				8			AL	<i>Amelanchier laevis</i>	Allegheny Serviceberry	B&B	2" cal.	12' o.c.	single stem/tree form
10	7		3				PS	<i>Prunus serrulata 'Amanogawa'</i>	Amanogawa Japanese Flowering Cherry	B&B	2" cal.	10' o.c.	
4	2	2					SR	<i>Syringa reticulata 'Ivory Silk'</i>	Japanese Tree Lilac	B&B	2" cal.	20' o.c.	
4		4					UA	<i>Ulmus americana 'Frontier'</i>	Frontier Elm	B&B	2" cal.	20' o.c.	
70	9	6	3	9	43	0	Total						
<b>3" Deciduous Trees</b>													
10					10		GD	<i>Gymnocladia dioica</i>	Kentucky Coffee Tree	B&B	3" Cal.	As shown	Male
8					8		PO	<i>Platanus occidentalis</i>	Sycamore	B&B	3" cal.	20' o.c.	
8					8		QB	<i>Quercus bicolor</i>	Swamp White Oak	B&B	3" cal.	25' o.c.	
26	0	0	0	0	26	0	Total						
<b>Evergreen Trees</b>													
10					10		JV	<i>Juniperus virginiana</i>	Eastern Red Cedar	B&B	7' ht	10' o.c.	Full
23				7	16		TO	<i>Thuja occidentalis</i>	American Arborvitae	B&B	7' ht	12' o.c.	
12				12			PGd	<i>Picea glauca 'densata'</i>	Black Hills Spruce	B&B	7' ht	10' o.c.	Full
45	0	0	0	19	26	0	Total						
<b>Shrubs</b>													
10			10				BS	<i>Buxus sinica var. insularis 'Winter Gem'</i>	Winter Gem Boxwood	Cont.	24-30" ht	3' o.c.	
7				7			CS	<i>Cornus stolonifera 'Farrow'</i>	Arctic Fire Red Twig Dogwood	#5 Cont.	24-30" ht	4' o.c.	
4				4			HF	<i>Hypericum frondosum 'Sunburst'</i>	Sunburst St. Johns Wort	#5 Cont.	18-24" ht.	4' o.c.	
21	0	0	10	11	0	0	Total						
<b>Bio-retention island plantings</b>													
75						75	GM	<i>Geranium maculatum</i>	Wild Geranium	Cont.	Plug min.	18" o.c.	along perimeter of island
20						20	PV	<i>Panicum virgatum 'Shenandoah'</i>	Shenandoah Switchgrass	Cont.	#1 Cont.	36" o.c.	center of island around tree
58						58	RH	<i>Rudbeckia hirta 'Goldstrum'</i>	Goldstrum Black-eyed Susan	Cont.	#1 Cont.	18" o.c.	between other two species
153	0	0	0	0	0	153	Total						

Note: All plant species deviations from the approved site plan must be approved by the City of Ann Arbor in writing prior to installation.  
 ALL TREES WITHIN SIGHT DISTANCE TRIANGLES SHALL HAVE ALL BRANCHES TRIMMED TO PROVIDE A CLEAR VISION FOR A VERTICAL HEIGHT OF EIGHT FEET ABOVE THE ROADWAY SURFACE.



**BIO-RETENTION PLANTING DETAIL**  
 SCALE: 1" = 20 FEET

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.



### LANDSCAPE REQUIREMENTS

	Required	Proposed
<b>Right-of-way screening</b>	10ft when VUA viewed from ROW 1 tree per 30ft; continuous hedge/screen 30inches in ht 65ft / 30 = 3 trees, shrubs	3 trees and 10 shrubs proposed
<b>Vehicle Use Area</b>		
Interior islands	1:20sf ratio for island, 22,951sf / 20 = 1,147sf island	1,250sf proposed
Bio-retention island	if >750sf island; 50% bioretention 1,147sf / 2 = 574sf bioretention island	657sf proposed
Interior island trees	1 tree per island; 1 tree per 250sf island; 1,147sf / 250; 1 per island = 5 trees	6 trees proposed
<b>Snow pile storage</b>	identify locations on plan	identified on landscape plan
<b>Street Trees</b>		
Street trees	1 tree per 45f - N. Maple Road - 407 lf / 45 = 9 trees required	9 trees provided on site due to existing utilities - <b>PUD deviation requested</b>
Street tree escrow	\$1.30 per linear foot frontage 407ft x \$1.30 = \$529.10	\$529.10 to City Tree Fund prior to issuing building permits.*
Street tree canopy loss fee	total dbh removed - caliper replacement trees x \$194 per tree	Not applicable
<b>Conflicting Land Use Buffer</b>	when adjacent to public park and R4 adjacent to residential purposes	15ft wide; 1 tree per 15ft, 50% evergreen; continuous screening 4ft high - West - 495 lf / 15 = 33 trees required (17 evergreen required) South - 195/15 = 13 trees required (7 evergreen required)
<b>Tree Mitigation</b>	50% DBH of Woodland and LM removed; Landmark-376" impact x 0.5 = 188" req. Woodland-412" impact x 0.5 = 206" req. Total required = 394 inches	26 deciduous 3" cal. Trees = 78" 43 deciduous 2.5" cal. Trees = 107.5" 26 evergreen (2.5" equiv.) trees = 65" Total on-site = 250.5" Total off-site = 143.5" X \$200 = \$28,700 as contribution to City Tree Planting Fund
<b>Outdoor refuse</b>	screening required	screening wall around dumpster
<b>Private streets and shared driveways</b>	Not applicable	Not applicable

\*Checks for street tree escrow are to be made payable to City of Ann Arbor and mailed to Systems Planning Unit, 301 E. Huron Street, PO Box 8647, Ann Arbor, Michigan 48107-8647. Attn: Tiffany Giacobazzi. Include the project name and number on the check.

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NORTH MAPLE APARTMENTS

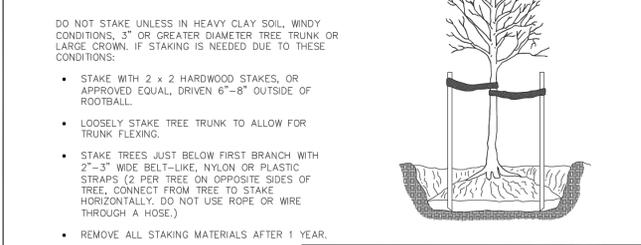
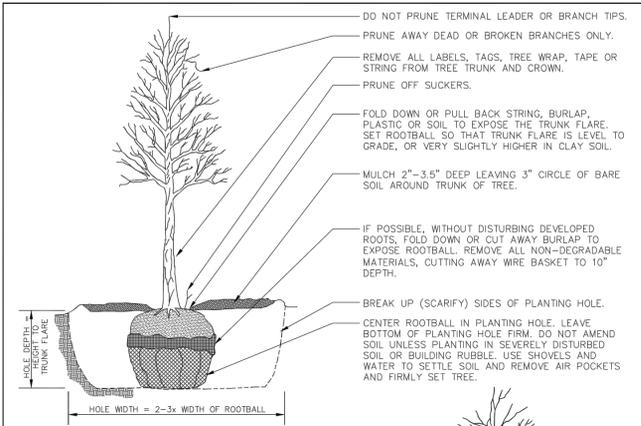
LANDSCAPE PLAN

L1.0

JOB No. 21147

REV.	DATE	BY	DESCRIPTION
1	4/20/22	RAMLI	CADD: RAMLI
2	5/17/22	ENG. THP	ENG. REVIEW
3	5/25/22	PM. TIC	PM. REVIEW
4	7/15/22	TECH. TRP	TECH. REVIEW
5	7/22/22	21147L1P1	PER WATER RESOURCES REVIEW

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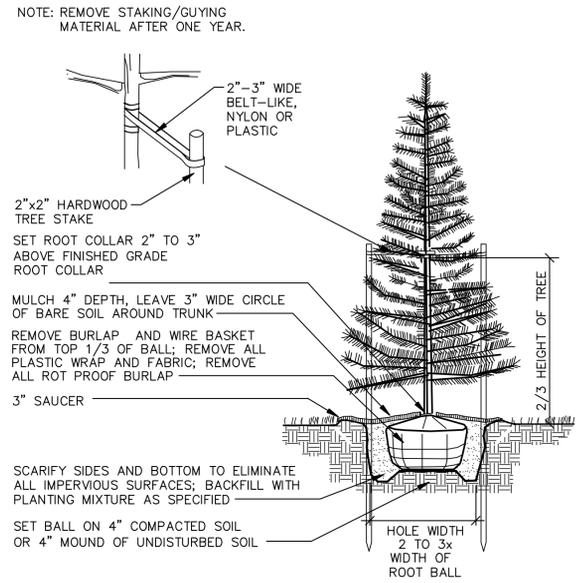
REV. NO.	DATE	DR.	BY	CH.	BY	DATE

**PUBLIC SERVICES DEPARTMENT  
CITY OF ANN ARBOR**

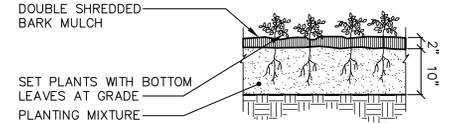
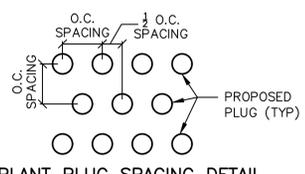
**TREE PLANTING DETAIL**

DR. BY	ARG	CH. BY	CSS	DRAWING NO.
SCALE	NONE	DATE	7-23-10	SD-L-3

INCH SHEET NO.      OF     

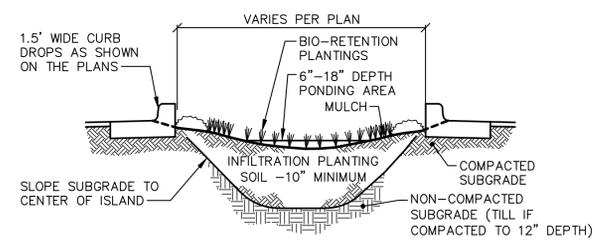


**EVERGREEN TREE PLANTING DETAIL**  
NOT TO SCALE

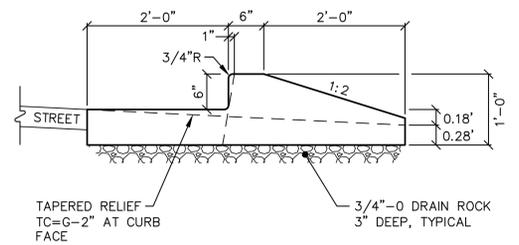
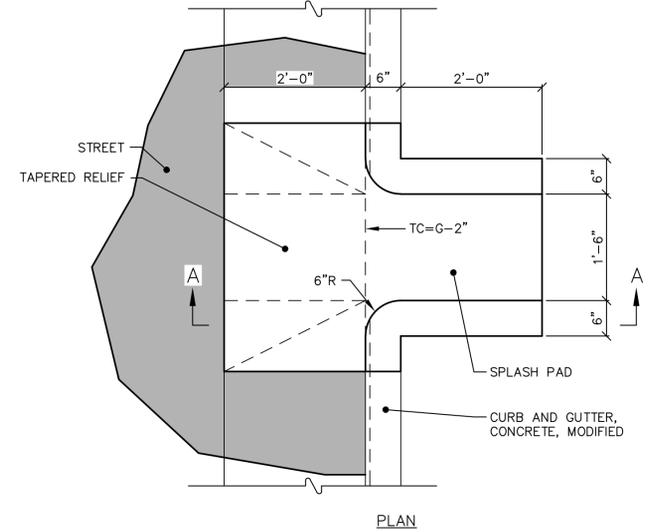


- HERBACEOUS PLANTS SHOULD BE PEAT POT GROWN. PLANT PLUG WITH PEAT POT INTACT.
- HERBICIDES SHALL NOT BE USED WITHIN THE BIO-RETENTION AREA TO REMOVE EXISTING WEED GROWTH.
- FERTILIZERS SHALL NOT BE USED WITHIN THE BIO-RETENTION AREA.
- PLANTING SHALL TAKE PLACE IMMEDIATELY AFTER PREPARATION.
- INFILTRATION PLANTING SOIL SHALL HAVE A SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE PER THE USDA TEXTURAL TRIANGLE. THE SOIL MIXTURE SHOULD HAVE PH BETWEEN 5.5 AND 6.6. THE SOIL MIXTURE SHALL HAVE MAXIMUM CLAY CONTENT OF 10% AND 20% ORGANIC MATTER. INFILTRATION PLANTING SOIL SHALL MEET INFILTRATION RATE OF 0.5 IN/HR. RECOMMENDED: PRE-SOAK PRIOR TO VEGETATION PLANTING TO AID IN SETTLEMENT.

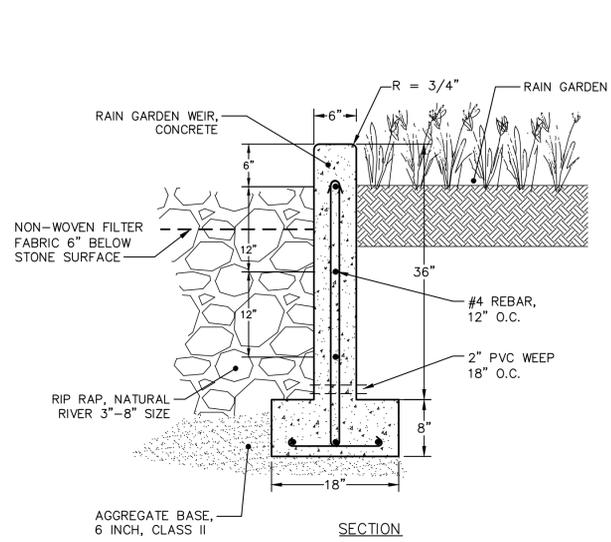
**BIO-RETENTION ISLAND PLANTING DETAIL**  
NOT TO SCALE



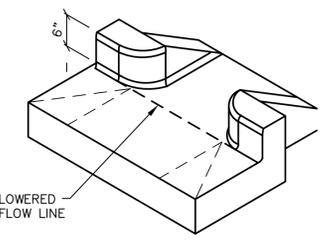
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SCALE: NTS



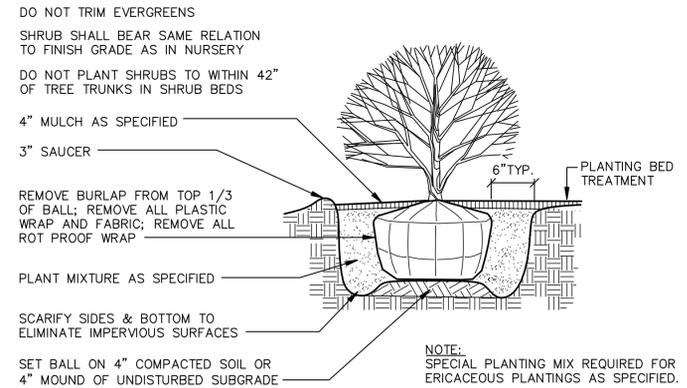
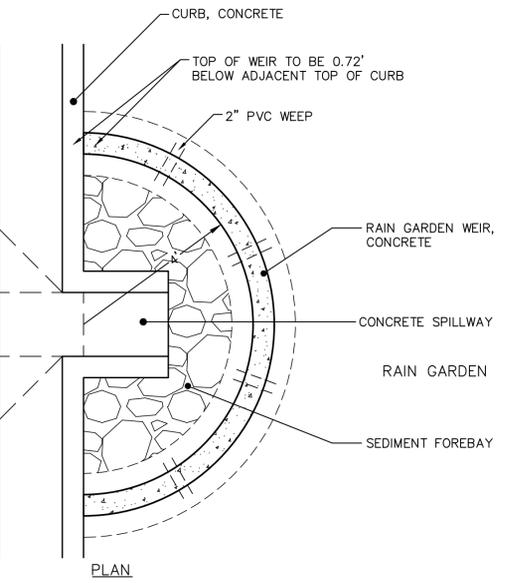
**SPILLWAY, CONCRETE DETAIL**  
NOT TO SCALE



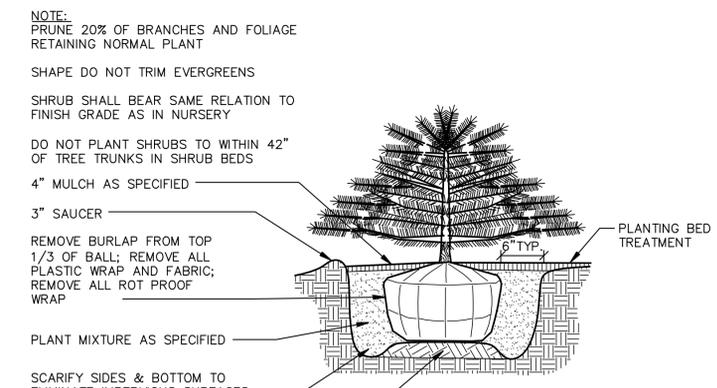
**SPILLWAY WEIR DETAIL**  
NO SCALE



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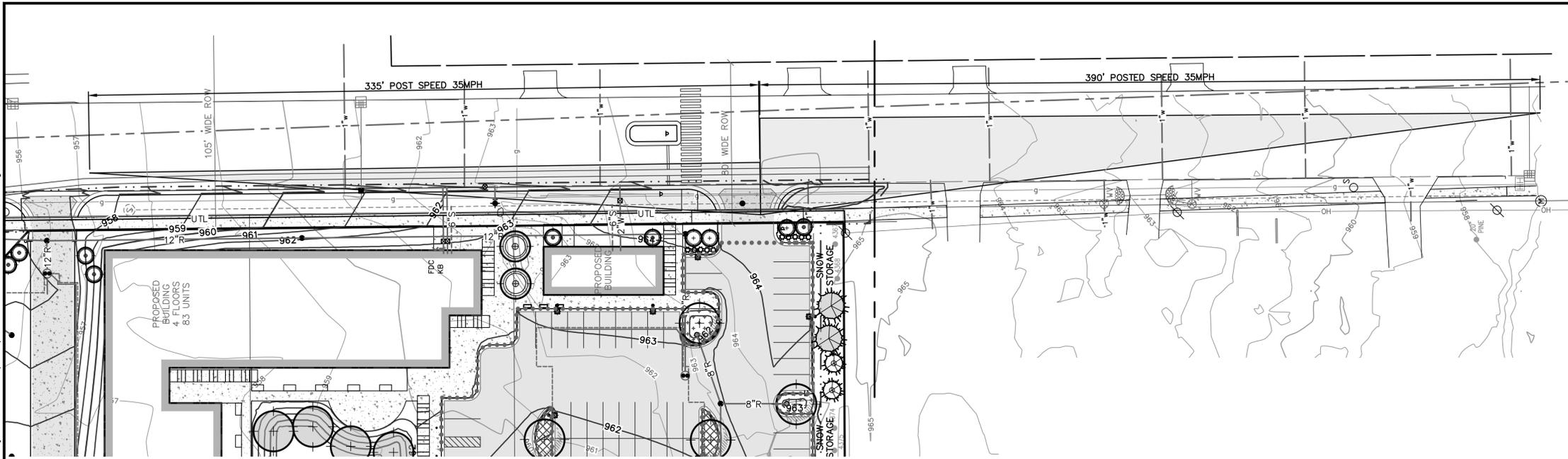
**SHRUB PLANTING DETAIL**  
NOT TO SCALE



**EVERGREEN SHRUB PLANTING DETAIL**  
NOT TO SCALE

JOB No.	21147
DATE:	2/1/22
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4/20/22	4/20/22
5/25/22	5/25/22
7/15/22	7/15/22
7/22/22	7/22/22

M:\CIVIL\3D\_Proj\1214\Site Plan\1214L1.2.dwg, 7/22/2022 3:37 PM, Ted P. Hirsch, L1.2 LANDSCAPE DETAILS AND SIGHT DISTANCE, MCLC PDF.pc3  
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**SWALE SEED MIX**

SOURCE: CARDNO NATIVE PLANT NURSERY

Botanical Name	Common Name	PIS (Sq. Ft.)
<b>Perennial Grasses/Sedges</b>		
<i>Andropogon gerardii</i>	Big Bluestem	4.00
<i>Carex crinita</i>	Ornamental Owl Sedge	1.00
<i>Carex lurida</i>	Bottlebrush Sedge	3.00
<i>Carex spp.</i>	Prairie Sedge Species	8.00
<i>Carex vulpina</i>	Brown Fox Sedge	3.00
<i>Elymus canadensis</i>	Canada Wild Rye	16.00
<i>Elymus virginicus</i>	Virginia Wild Rye	18.00
<i>Juncus canadensis</i>	Canada Rush	1.00
<i>Panicum virgatum</i>	Switch Grass	3.00
<i>Scirpus atrovirens</i>	Dark Green Rush	2.00
<i>Scirpus cyperinus</i>	Wood Grass	0.50
<i>Spartina pectinata</i>	Prairie Cord Grass	3.00
	<b>Total</b>	<b>50.00</b>
<b>Temporary Grasses</b>		
<i>Avena sativa</i>	Common oat	512.00
	<b>Total</b>	<b>512.00</b>
<b>Forbs</b>		
<i>Alisma subrotundum</i>	Common Water Plantain	1.00
<i>Asclepias incarnata</i>	Swamp Milkweed	2.00
<i>Carex ripens</i>	Tall Carex	1.00
<i>Euthamia graminifolia</i>	Common Grass Leaved Goldenrod	0.50
<i>Epipactis maculata</i>	Spotted Jewel Plant	1.00
<i>Horsetail</i>	Horsetail	4.00
<i>Lythrum spicata</i>	Marsh Blazing Star	1.00
<i>Lycopus americanus</i>	Common Water Horehound	0.50
<i>Mentha virginiana</i>	Wild Mint	3.00
<i>Pentstemon sedoides</i>	Blotch Stonewort	1.00
<i>Phlox pilularis</i>	Common Mountain Mint	0.50
<i>Rudbeckia hirta</i>	Brown-Eyed Susan	1.00
<i>Sida spicata</i>	Wild Sida	1.00
<i>Siphium terrestris</i>	Prairie Dock	1.00
<i>Symphoricarpos angustifolius</i>	New England Aster	0.50
<i>Verbena hastata</i>	Blue Veranda	1.50
<i>Zizia aurea</i>	Golden Alexander	2.00
	<b>Total</b>	<b>14.00</b>

**LANDSCAPE NOTES**

- For any plant quantity discrepancies between the plan view and the plant schedules, the plant schedule shall take precedence.
  - Plant materials shall be selected and installed in accordance with standards established by City of Ann Arbor.
  - All diseased, damaged or dead material shown on the site plan as proposed plantings shall be replaced by the end of the following growing season.
  - Restore disturbed areas with a minimum of four (4) inches of topsoil and then seed/ fertilize/mulch.
  - All disturbed areas not to be seeded with seed mixes identified on the Landscape Plan shall be lawn areas. Fertilizer for the initial installation of lawns shall provide not less than one (1) pound of actual nitrogen per 1,000 sq ft of lawn area and shall contain not less than two percent (2%) potassium and four percent (4%) phosphoric acid.  
Lawn (turfgrass) seed mix shall consist of:  
15% Rugby Kentucky Bluegrass  
10% Park Kentucky Bluegrass  
40% Ruby Creeping Red Fescue  
15% Pennine Perennial Ryegrass  
20% Scaldis Hard Fescue
  - Seed shall be applied at a rate of five pounds (5 lbs) per 1000 sq ft. Mulch within 24 hours with two (2) tons of straw per acre, or 71 bales of excelsior mulch per acre. Anchor straw mulch with spray coating of adhesive material applied at the rate of 150 gals. / acre.
  - After the first growing season, only fertilizers that contain NO phosphorus shall be used on the site.
  - Areas identified on the Landscape Plan with seed mixes shall be seeded with specified seed mixes from Cardno Native Plant Nursery, or equivalent as approved by landscape architect. Temporary cover crop shall be included with all seed mixes. Seeding rates and installation techniques shall be confirmed with supplier.
  - All seeded areas with slopes less than 1:3 (one vertical foot for every 3 horizontal feet) shall be mulched with straw mulch at the rate of two (2) bales per 1,000 square feet. All seeded areas with slopes greater than 1:3 shall be seeded and biodegradable erosion control blanket North American Green SC150, or equivalent, shall be applied with biodegradable stakes.
  - Deciduous plants shall be planted between March 1 and May 15 and from October 1 until the prepared soil becomes frozen. Evergreen plants shall be planted between March 1 and June 1 and from August 15 to September 15.
  - Native seeding areas shall be seeded after May 1, (when soil is free of frost and in workable condition), but before June 15 or after October 1, but before November 30 (or prior to ground freezing) or as approved by Landscape Architect or guaranteed by the supplier. If seeding is performed outside planting window, contractor shall perform regularly scheduled watering for installed seed and as needed based on weather conditions to ensure germination and establishment of seed.
  - All planting beds are to receive four (4) inches of shredded hardwood bark mulch.
  - All trees to be located a minimum of 10 feet from public utilities.
  - All single trunk, deciduous trees shall have a straight and a symmetrical crown with a central leader. One sided trees or those with thin or open crowns shall not be accepted.
  - All evergreen trees shall be branched fully to the ground, symmetrical in shape and have not been sheared in the last three (3) growing seasons.
  - All compacted subgrade soils in proposed landscape bed areas shall be tilled to a minimum 12-inch depth prior to placement of topsoil, geotextile fabric, or other planting media as specified.
  - Proposed trees will be planted a minimum of 15 feet apart.
  - Planting Soil: Existing, in-place or stockpiled topsoil. Supplement with imported topsoil as needed. Verify suitability of existing surface soil to produce viable planting soil. Remove stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth. Mix surface soil with the following soil amendments to produce planting soil:
    - Ratio of Loose Compost to Topsoil by Volume: 1:4.
    - Weight of Lime per 1000 Sq. Ft.: Amend with lime only on recommendation of soil test to adjust soil pH.
    - Weight of Sulfur or Aluminum Sulfate per 1,000 Sq. Ft.: Amend with sulfur or aluminum sulfate only on recommendation of soil test to adjust soil pH.
    - Volume of Sand: Amend with sand only on recommendation of Landscape Architect to adjust soil texture.
    - Weight of Slow-Release Fertilizer per 1,000 Sq. Ft.: Amend with fertilizer only on recommendation of soil test to adjust soil fertility.
  - Native seeding installation shall be performed by a qualified contractor with documented experience of successful established native seeding. Seed shall be installed per manufacturer's specification via hand broadcast.
  - At the time of plant and seed delivery for the infiltration basins, including native seed and live plantings, a Washtenaw County Water Resource Commissioner landscape reviewer must be present. Contact Cate Wytchak at [wytchak@washtenaw.org](mailto:wytchak@washtenaw.org) or 734-222-6813 to coordinate.
  - Snow cannot be pushed onto interior islands unless they are designated on the plan for snow storage. Bio-retention islands can be used for snow storage.
  - Snow storage areas is located in the courtyard area as shown on the landscape plan.
  - No chemicals are allowed in stormwater features or buffer zones with the following exception: invasive species may be treated with chemicals by a certified applicator.
- Maintenance:
- Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.
  - Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
  - Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.
  - Contractor shall warranty all plant material and trees to remain alive and be in healthy, vigorous and like new condition for the specified period from installation to Substantial Completion. The entire Landscaping Project, including but not limited to: plants (perennials), trees, shrubs, mulches, shrubs, etc are to be under Warranty for One Year after Substantial Completion date of the Project. At the end of the specified One Year Warranty period the Owner's Representative will inspect plant material for compliance. Contractor shall replace, in accordance with the drawings and specifications, all plants, trees, shrubs, etc or as determined by the Owner's Representative, are in an unhealthy or unsightly condition. Warranty shall not include damage or loss of plants, trees, and shrubs caused by fires, floods, freezing rains, lightning storms, or winds over 75 miles per hour, acts of vandalism or negligence on the part of the owner, or any other incident beyond landscape contractor's control.
  - Long-term maintenance of the bio-retention islands shall be performed by the Owner. Maintenance shall include seasonal trimming and removal of dead foliage, removal of weeds, and removal or mulching of leaves and stems. Spot treatment/removal of invasive weeds may be necessary if localized areas become dominated by invasive weeds. Bio-retention islands shall be inspected by owner following any storm event exceeding 1". Trash and debris shall be removed as needed. Shredded hardwood mulch must be re-spread when erosion is evident and be replenished annually. Once every 2 to 3 years, the entire bio-retention/rain garden area may require mulch replacement.
  - Turf installations shall meet the following criteria as determined by Owner:
    - Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
    - Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.
    - Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

**MIDWESTERN CONSULTING**  
3815 Plaza Drive Ann Arbor, Michigan 48108  
734.995.0200 • www.midwesternconsulting.com  
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CLIENT  
A2 NORTH MAPLE PROPERTIES LLC  
2370 E. STADIUM BLVD. # 305  
ANN ARBOR, MI 48104  
JEFF WILKERSON  
(989) 529-5858

**NORTH MAPLE APARTMENTS**  
LANDSCAPE DETAILS AND SIGHT DISTANCE

DATE: 2/1/22  
SHEET OF  
REV. DATE  
4/20/22  
REV. DATE  
6/25/22  
REV. DATE  
7/15/22  
REV. DATE  
7/22/22

JOB No. **21147**

REVISIONS:  
PER MUNICIPAL REVIEW  
PER MUNICIPAL REVIEW  
PER MUNICIPAL REVIEW  
PER WATER RESOURCES REVIEW

ADD: RM/LL  
ENG: TPJ  
PM: TJC  
TECH: TRW  
7/21/22