The Columbia

2476 Columbia Rd. Berkley, MI 48072

Owner

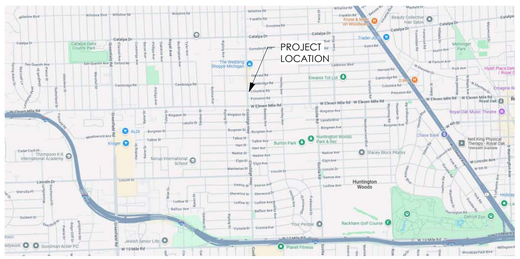
WJ Ventures, LLC
2060 Coolidge Hwy.
Berkley, MI 48072
P.248.246.7878

Architect

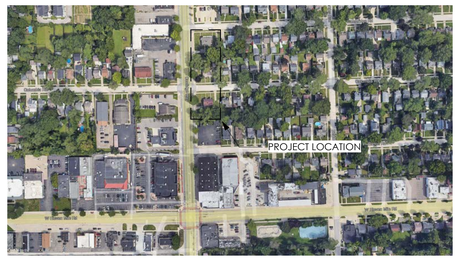
Krieger | Klatt Architects Inc.
400 E. Lincoln Ave.
Royal Oak, MI 48067
P.248.414.9270.
F.248.414.9275

Civil Engineer

Giffels Webster
1025 E. Maple, Suite 100
Birmingham, MI 48009
P.248.852.3100



North
Location Map
NTS



North
Aerial Map
NTS

Civil Sheet Index

Sheet No.	Title	Revised PUD 02.14.2025
C-200	Topographic & Boundary Survey	•
C-210	Schedule of Structures	•
C-300	Demolition Plan	•
C-600	Grading and Paving Plan	•
C-700	Utility Plan	•
C-720	Utility Calculations	•
LS-100	Landscape Plan	•

Architectural Sheet Index

Sheet No	Title	Revised PUD 02.14.2025
G.001	Cover Sheet	•
G.002	Aerial Renderings	•
G.003	Perspective Renderings	•
A.100	First Floor Plan	•
A.101	Typical Floor Plan (Second - Third)	•
A.102	Fourth Floor Plan	•
A.103	Roof Plan	•
A.200	Elevations	•
A.201	Rendered Elevations	•
A.202	Carport Elevations	•
A.400	Building Sections	•

KRIEGER KLATT
ARCHITECTS
400 E. Lincoln Ave. | Royal Oak, MI 48067
P: 248.414.9270 **F:** 248.414.9275
www.kriegerklatt.com

PRELIMINARY NOT FOR CONSTRUCTION

Client:

WJ Ventures, LLC
2060 Coolidge Hwy.
Berkley, MI
48072

Project:

The Columbia
2476 Columbia Rd.
Berkley, MI 48072

Issued	Description	By
02.13.2025	Revised PUD	

Seal:

Note:

Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

North Arrow:

Sheet Title:

Cover Sheet

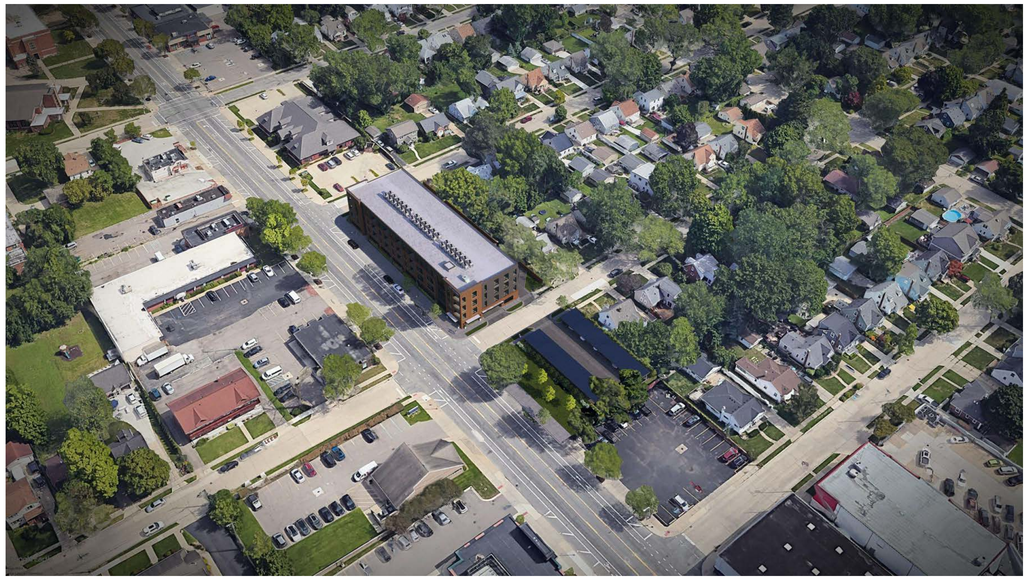
Project Number:

Project Number

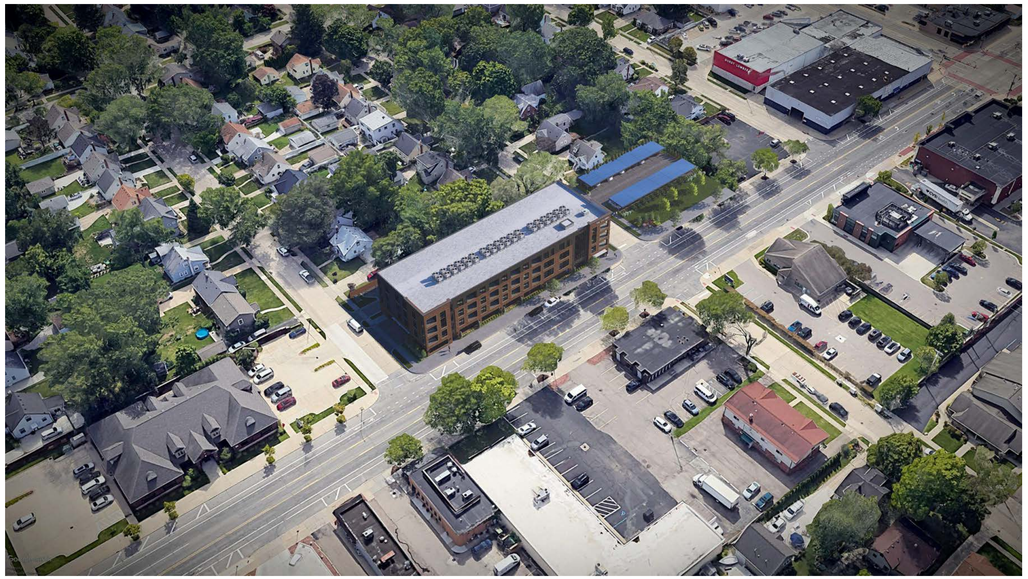
Scale:

Sheet Number:

G.001

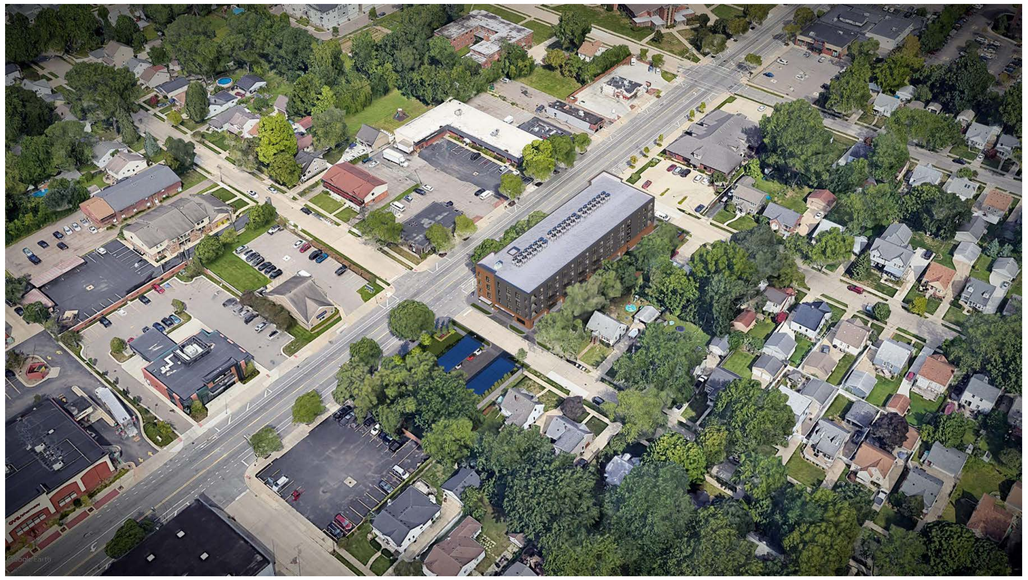


Aerial Rendering looking Northeast



Aerial Rendering looking Southeast

Aerial Rendering looking Southwest



Aerial Rendering looking Northwest

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Project:

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Berkley, MI 48072

PRELIMINARY NOT FOR CONSTRUCTION

Issued	Description	By
02.13.2025	Revised PUD	

Seal:

Note:

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North Arrow:

Sheet Title:

Aerial Renderings

Project Number:

Project Number

Scale:

Sheet Number:

G.002

Perspective Rendering at Northwest Corner

Perspective Rendering along Coolidge Hwy.

Perspective Rendering at Pocket Park

Perspective Rendering at Southwest Corner

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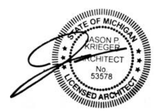


Note:
Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

North Arrow:

Sheet Title:
Perspective Renderings

Project Number:
Project Number

Scale:

Sheet Number:
G.003

LEGEND – EXISTING

- SECTION LINE
- E/ PAVEMENT
- CURB
- E/ GRAVEL
- CL ROAD
- E/ WALK
- RAILROAD
- E/ BRICK
- MISC. LINE
- FENCE
- GUARD RAIL
- WALL
- BLDG. LINE
- OVERHEAD WIRES
- RAILING
- OVERHANG LINE
- T/ BANK
- B/ BANK
- CL DITCH/STREAM
- SHRUB LINE
- TREE LINE
- WATER EDGE
- WETLAND LINE
- STORM LINE
- SAN. LINE
- WATER LINE
- GAS LINE
- UG ELEC. LINE
- UG TELE. LINE
- UG CABLE TV LINE
- PAINT STRIPE
- COMBINED SEWER
- PLD LINE
- STEAM LINE
- ELECTRIC OVERHEAD
- TELEPHONE OVERHEAD
- SAN. MH
- SAN. CLEAN OUT
- SAN. RISER
- SAN. PUMP STATION
- COMB. MH
- GATE VALVE
- HYDRANT
- WATER VALVE
- WATER METER
- POST INDICATOR VALVE
- WELL HEAD
- FDC CONNECTION
- IRRIGATION CONTROL BOX
- STORM MH
- CATCH BASIN
- BEEHIVE CB
- CULVERT E.S.
- ROOF/DOWN SPOUT
- OVERFLOW/OUTLET STRUCTURE
- STORM CLEAN OUT
- ROUND CB
- LIGHT POLE
- UTILITY POLE
- ELEC. TRANS.
- AIR CONDITIONER
- ELEC. MH
- ELEC. METER
- ELEC. RISER
- TRAFFIC CONTROL BOX
- STEAM MH
- PUBLIC LIGHTING MH
- GAS METER
- GAS RISER
- GAS VALVE
- GAS MH
- TELE. RISER
- TELE. MH
- TELE. CROSS BOX
- CABLE RISER
- PAY PHONE
- MANHOLE
- SIGN
- PROT. POST/GUARD POST
- GUY
- DECIDUOUS TREE
- CONIFEROUS TREE
- DEAD TREE
- UTILITY FLAG
- BLDG. CORNER (FIELD LOCATED)
- HANDICAP PARKING
- WETLAND FLAG
- BUSH/SHRUB
- PARKING METER
- RESIDENTIAL MAILBOX
- U.S. MAILBOX
- 000.00+000.0 EXISTING ELEVATION
- SOIL BORING
- MONITORING WELL
- LAWN IRRIG. HEAD
- CENTERLINE R.R. TRACK
- MISC. TOPO. FEATURE
- SURVEY CONTROL POINT
- FOUND IRON
- FOUND NAIL
- F. CUT CROSS
- SECTION COR.
- FENCE POST
- BENCHMARK
- FOUND PIPE
- FOUND MON.
- ASPH. ASPHALT
- CONC. CONCRETE
- A.C. AIR CONDITIONER
- G.P. GUARD POST
- C.L.F. CHAIN–LINK FENCE
- D.L. DOOR LEDGE
- F.F. FINISHED FLOOR
- O.H. OVERHANG
- F.I. FOUND IRON
- S.I. SET IRON
- F.I.P. FOUND IRON PIPE
- (M) MEASURED
- (R) RECORD
- F.M. FOUND MONUMENT
- S.N. SET NAIL
- CMP CORREGATED METAL PIPE
- RCP REINFORCED CONCRETE PIPE
- G.L. GROUND LIGHT
- L.S. LANDSCAPING
- ENCROACHMENT

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. 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 HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

(R) = UTILITY SHOWN FROM RECORDS OR PLANS, & FIELD LOCATED WHERE POSSIBLE.

PRIOR TO THE PLANNED BUILDING IMPROVEMENTS, AND/ OR CONSTRUCTION, THE RESPECTIVE UTILITY COMPANIES MUST BE NOTIFIED TO STAKE THE PRECISE LOCATION OF THEIR UTILITIES.

BENCH MARK DATA

(NAVD88) DATUM

WHICH DATUM? NOT LISTED ON BENCH LOOP

BENCH MARK 1

ARROW ON HYDRANT (1996), LOCATED ON THE WEST SIDE OF COOLIDGE HIGHWAY, +/– 3.5 FEET OFF OF THE BACK OF CURB, AND +/– 36 FEET SOUTH OF COLUMBIA ROAD.

ELEVATION=672.66'

(SHOWN GRAPHICALLY)

BENCH MARK 2

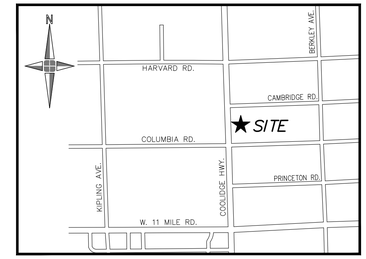
SE BOLT IN A LIGHT POLE BASE, LOCATED ON THE WEST SIDE OF COOLIDGE HIGHWAY, +/– 3 FEET OFF OF THE BACK OF CURB, AND +/– 150 FEET NORTH OF COLUMBIA ROAD.

ELEVATION=671.64'

(SHOWN GRAPHICALLY)

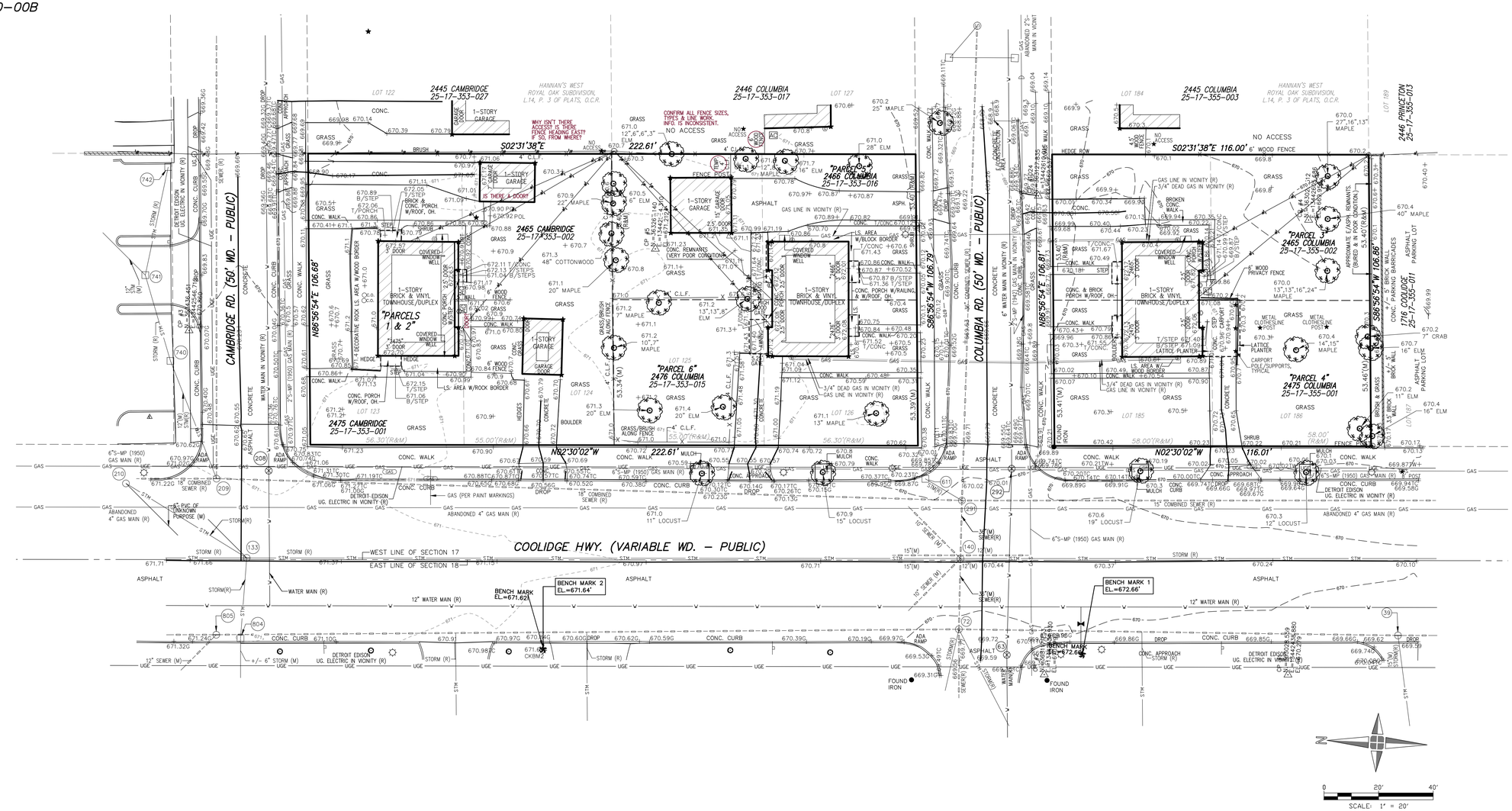
NOTES:

- SURVEY IN ACCORDANCE WITH TITLE COMMITMENT NO. 21223250–LP, ISSUED BY BELL TITLE AGENCY, DATED AUGUST 17, 2021
- TELEPHONE, CABLE TV, STEAM, AND PUBLIC LIGHTING UTILITY MAPS WERE NOT AVAILABLE AT TIME OF SURVEY.
- THE FOLLOWING WERE UTILIZED FOR THE REPRESENTATION OF CONDUIT, IN THIS DRAWING:
  - CONSUMERS ENERGY RECORD DRAWINGS.
    GAS LEAD LOCATION SHOULD BE CONSIDERED AS APPROXIMATE. CONTACT MISS DIG TO LOCATE ALL CONDUIT, PRIOR TO CONSTRUCTION.
  - THE CITY OF BERKLEY WATER, SEWER, AND STORM RECORD DRAWING.
    DUE TO THE SCHEMATIC NATURE OF THIS RECORD, PRECISE LOCATION OF CONDUIT CANNOT BE DETERMINED. CONDUIT LOCATION, IN THIS DRAWING, SHOULD BE CONSIDERED AS APPROXIMATE. CONTACT MISS DIG TO LOCATE ALL CONDUIT, PRIOR TO ANY CONSTRUCTION.
  - OLDER DETROIT EDISON RECORD DRAWINGS.
    AS THESE RECORD DRAWINGS ARE NOT CURRENT, CONDUIT MAY EXIST, ALTHOUGH NOT DEPICTED. IN ADDITION, DUE TO THE SCHEMATIC NATURE OF THESE RECORDS, PRECISE LOCATION CANNOT BE DETERMINED. CONDUIT LOCATION SHOULD BE CONSIDERED AS APPROXIMATE, WHERE NOT FIELD LOCATED. CONTACT MISS DIG TO LOCATE ALL CONDUIT, PRIOR TO ANY CONSTRUCTION.
  - OLDER LEVEL 3/CENTURY LINK DRAWNG.
    CONDUIT IS SHOWN, IN THIS RECORD, AS BEING OUTSIDE OF THE SCOPE OF THIS DRAWING. HOWEVER, AS THIS RECORD DRAWING IS NOT CURRENT, CONDUIT MAY EXIST, ALTHOUGH NOT DEPICTED. CONTACT MISS DIG TO LOCATE ALL CONDUIT, PRIOR TO ANY CONSTRUCTION.
- MEASURED BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH (2113), NAD83.
- SEE SHEET 2 FOR STRUCTURE LIST.



LOCATION MAP
(NOT TO SCALE)

MISS DIG DESIGN TICKET NUMBER: B012982740–00B



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Surveyors
Planners
Landscape Architects

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p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

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Manager:	JKA
Designer:	JKA
Quality Control:	AW
Section:	25
	T-03-N R-10-E

Professional Seal:

STATE OF MICHIGAN
JOSEPH KENNETH ANDERSON
ENGINEER
No. 6201055882
LICENSED PROFESSIONAL ENGINEER

811
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08.29.2023	Submit #3 PUD to City
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03.20.2024	Revised PUD
04.26.2024	Revised PUD
06.04.2024	Rev. per PC Conditions for Approval
02.14.2025	Revised Plans for PUD Amendment

Developed For:

WJ VENTURES, LLC

2060 COOLIDGE HWY
BERKLEY, MI 48072

248-246-7878

TOPOGRAPHIC & BOUNDARY SURVEY

THE COLUMBIA

CITY OF BERKLEY
OAKLAND COUNTY
MICHIGAN

Date:	07.21.2023
Scale:	1" = 20'
Sheet:	C-200
Project:	20388.00

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SCHEDULE OF STRUCTURES

STRUCTURE	TYPE	SIZE OF PIPE	RIM	DROP	INVERT	DIRECTION	COMMENTS
39	STORM MANHOLE	CL. 15" CHANNEL	669.49	-12.23	657.26	NORTH & SOUTH. FLOWS NORTH.	
		15"	669.49	-7.14	662.35	WEST	
63	GATE VALVE	T/VALVE	669.60	-3.48	666.12		
72	COMBINED MANHOLE	18"	669.89	-13.50	656.39	NORTH	
		CL. 36" CHANNEL	669.89	-14.10	655.79	EAST & WEST. FLOWS EAST.	
		18"	669.89	-13.52	656.37	SOUTH	
133	STORM MANHOLE	CL. 15" CHANNEL	671.51	-6.20	665.31	NORTH & SOUTH. FLOWS SOUTH.	
		10"	671.51	-5.05	666.46	NORTHEAST	
			671.51	-4.90	666.61	WEST	
140	SANITARY MANHOLE	10"	670.46	-5.00	665.46	NORTHWEST	
		15"	670.46	-6.80	663.66	NORTH	
			670.46	-12.55	657.91	NORTH	
		10"	670.46	-5.30	665.16	NORTHEAST	
		CL. 36" CHANNEL	670.46	-14.90	655.56	EAST & WEST. FLOWS EAST.	
		12"	670.46	-6.60	663.86	SOUTH	
			670.46	-12.20	658.26	SOUTH	
208	GATE VALVE	T/VALVE	670.84	-4.05	666.79		
209	STORM MANHOLE	18"	671.01	-12.85	658.16	NORTH	
		12"	671.01	-9.60	661.41	EAST-NORTHEAST	
			671.01	-12.25	658.76	EAST	
		18"	671.01	-13.00	658.01	SOUTH. FLOWS SOUTH.	
210	UNKNOWN MANHOLE	6" PVC	671.03	-3.77	667.26	SOUTHWEST	INVERT PLUS OR MINUS. HEAVILY, OFFSET. NO OTHER PIPES VISIBLE. FULL OF WATER.
291	SANITARY MANHOLE	18"	670.10	-13.85	656.25	NORTH	
		12" PVC	670.10	-3.85	666.25	NORTHEAST	
		CL. 36" CHANNEL	670.10	-14.80	655.30	EAST & WEST	
		18"	670.10	-13.40	656.70	SOUTH	
292	GATE VALVE	T/WATER	669.74	-1.10	668.64		
		T/VALVE	669.74	-3.98	665.76		INVERT PLUS OR MINUS. UNABLE TO DEFINITELY DETERMINE T/VALVE.
611	CATCH BASIN	12"	669.84	-3.32	666.52	SOUTHWEST	NO OTHER PIPES VISIBLE. FULL OF WATER.
740	CATCH BASIN	12"	670.33	-8.00	662.33	EAST-NORTHEAST	NO OTHER PIPES VISIBLE
741	CATCH BASIN	12"	670.31	-6.67	663.64	NORTHEAST	NO OTHER PIPES VISIBLE
		10"	670.31	-6.27	664.04	EAST	NO OTHER PIPES VISIBLE
		12"	670.31	-7.87	662.44	WEST-SOUTHWEST	NO OTHER PIPES VISIBLE
742	CATCH BASIN	10"	669.37	-3.78	665.59	WEST	24" DIAMETER STRUCTURE
804	CATCH BASIN	10"	670.97	-3.90	667.07	EAST. FLOWS EAST.	
		+/- 6"	670.97	-3.02	667.95	WEST	
805	STORM MANHOLE	12"	671.14	-12.30	658.84	NORTHWEST	
		18" CHANNEL	671.14	-13.18	657.96	NORTH & SOUTH. FLOWS SOUTH.	

PROPERTY DESCRIPTION

(PER TITLE COMMITMENT NO. 21223250-LP, ISSUED BY BELL TITLE AGENCY, DATED AUGUST 17, 2021)

LAND IN THE CITY OF BERKLEY, COUNTY OF OAKLAND, MICHIGAN TO WIT:

PARCELS 1 AND 2:

LOTS 123 AND 124, EXCEPT THAT PORTION NOW INCLUDED IN COOLIDGE HIGHWAY, HANNAN'S WEST ROYAL OAK SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 14 OF PLATS, PAGE 3, OAKLAND COUNTY RECORDS.
(TAX ID.: 25-17-353-001 - 2475 CAMBRIDGE)
(TAX ID.: 25-17-353-002 - 2465 CAMBRIDGE)

PARCEL 3:

EAST 53.4 FEET OF LOTS 185 AND 186, HANNAN'S WEST ROYAL OAK SUBDIVISION, AS RECORDED IN LIBER 14, PAGE 3 OF PLATS, OAKLAND COUNTY RECORDS
(TAX ID.: 25-17-355-002 - 2465 COLUMBIA)

PARCEL 4:

LOTS 185 AND 186, EXCEPT EAST 53.40 FEET OF EACH, ALSO EXCEPT WEST 10.19 FEET OF LOT 185 AND WEST 10.17 FEET OF LOT 186, HANNAN'S WEST ROYAL OAK SUBDIVISION, AS RECORDED IN LIBER 14, PAGE 3 OF PLATS, OAKLAND COUNTY RECORDS.
(TAX ID.: 25-17-355-001 - 2475 COLUMBIA)

PARCEL 5:

EAST 53.4 FEET OF LOTS 125 AND 126, HANNAN'S WEST ROYAL OAK SUBDIVISION, AS RECORDED IN LIBER 14, PAGE 3 OF PLATS, OAKLAND COUNTY RECORDS.
(TAX ID.: 25-17-353-016 - 2466 COLUMBIA)

PARCEL 6:

LOTS 125 AND 126, EXCEPT THE EAST 53.40 FEET OF EACH, ALSO EXCEPT WEST 10.25 FEET OF LOT 125, ALSO EXCEPT WEST 10.23 FEET OF LOT 126, HANNAN'S WEST ROYAL OAK SUBDIVISION, AS RECORDED IN LIBER 14, PAGE 3 OF PLATS, OAKLAND COUNTY RECORDS.
(TAX ID.: 25-17-353-015 - 2476 COLUMBIA)

SCHEDULE B - II. EXCEPTIONS

(PER TITLE COMMITMENT NO. 21223250-LP, ISSUED BY BELL TITLE AGENCY, DATED AUGUST 17, 2021)

NO SCHEDULE B - II. EXCEPTIONS, LISTED.

NOT FOR CONSTRUCTION

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248-246-7878

SCHEDULE OF STRUCTURES

THE COLUMBIA

CITY OF BERKLEY
OAKLAND COUNTY
MICHIGAN

Date:	07.21.2023
Scale:	N/A
Sheet:	C-210
Project:	20388.00

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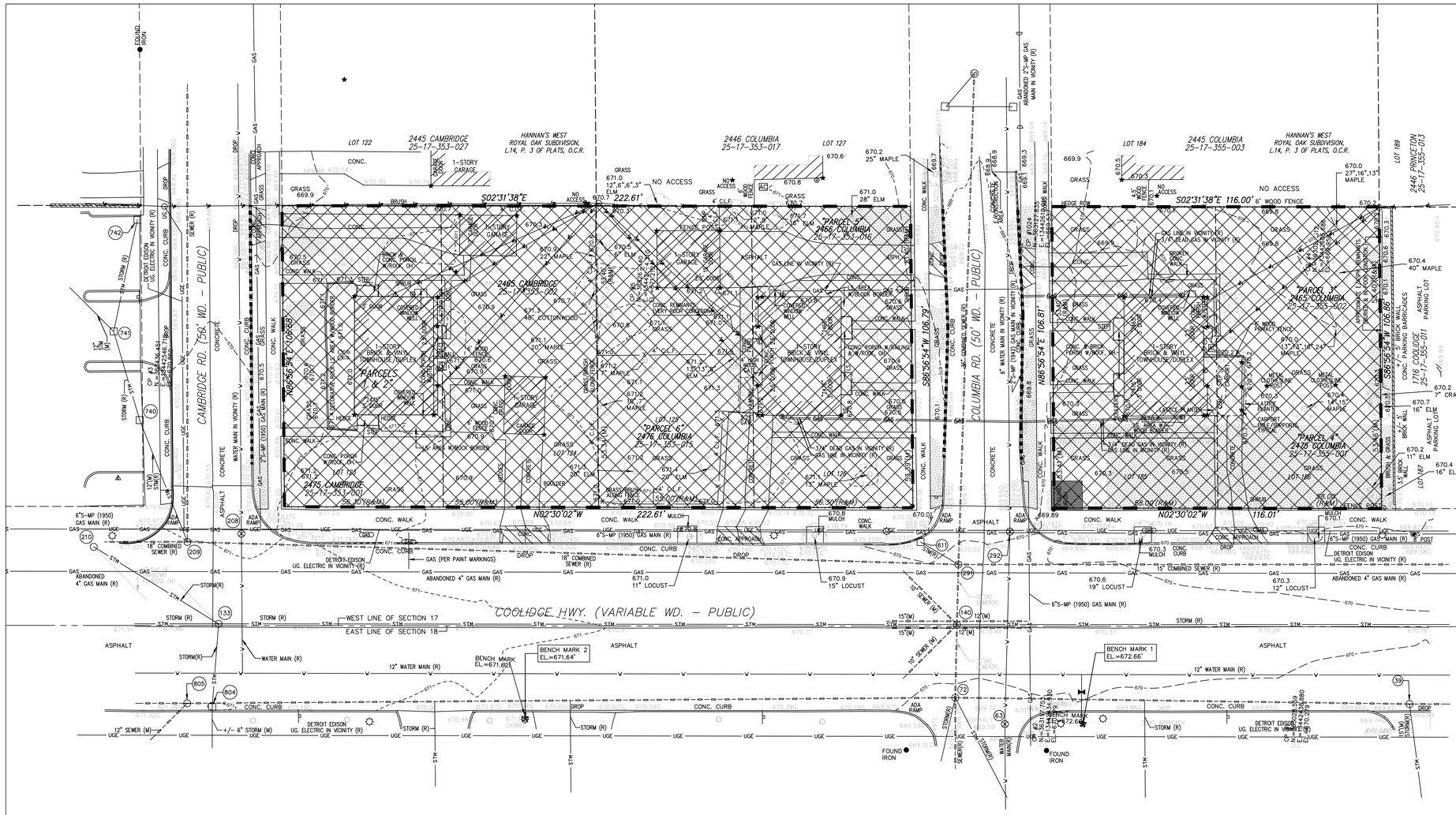
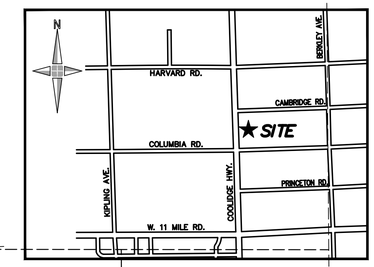
H:\20\2030\20388.00 Berkley Lofts\Design\CAD\Site Plan 01.24.2025\C-200 Topo-Boundary-SP-REV.dwg





LOCATION MAP
(NOT TO SCALE)

SCALE: 1" = 20'

DEMOLITION NOTES:

- CONTRACTOR TO REMOVE ALL ITEMS WITHIN THE DEMOLITION AREAS.
- TREES TO BE CUT, REMOVED FROM SITE AND STUMPS REMOVED, NOT GROUND IN PLACE.
- BUILDINGS TO BE COMPLETELY REMOVED INCLUDING ALL FOUNDATIONS.
- CONTRACTOR TO COORDINATE WITH ALL UTILITY COMPANIES FOR PROPER SHUT OFF, DECOMMISSIONING, BULK–HEADING, ETC.OF ALL PUBLIC AND PRIVATE UTILITIES OR ARRANGE FOR REROUTING OF UTILITIES.
- CONTRACTOR TO WORK WITH CITY DPW FOR SHUTOFF, BULK–HEADING, AND ABANDONING OF ALL PUBLIC UTILITIES AND SERVICE LEADS.
- ALL REMOVED MATERIAL SHALL BE DISPOSED OF OFF SITE AND AT AN APPROVED FACILITY.

- MissDig Design Ticket Number B012982740–00B

DEMOLITION LEGEND:

- REMOVE EXISTING CURB
- DEMOLITION AREA
- REMOVE CONCRETE SURFACE

NOT FOR CONSTRUCTION

[redacted]

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02.14.2025	Revised Plans for PUD Amendment

Developed For:

WJ VENTURES, LLC

2060 COOLIDGE HWY
BERKLEY, MI 48072

248-246-7878

DEMOLITION PLAN

THE COLUMBIA

CITY OF BERKLEY
OAKLAND COUNTY
MICHIGAN

Date:	07.21.2023
Scale:	1" = 20'
Sheet:	C-300
Project:	20388.00

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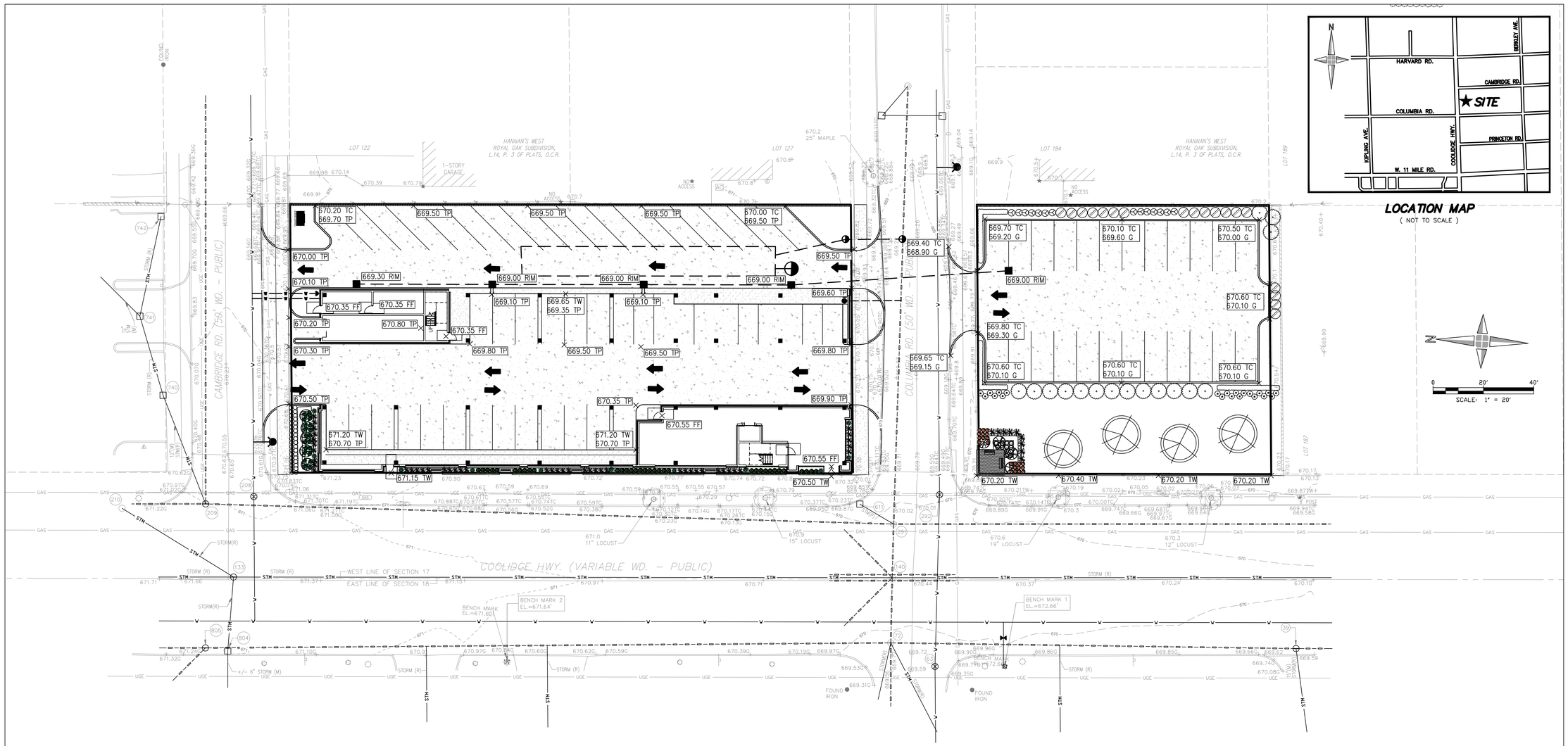

LOCATION MAP
(NOT TO SCALE)

LEGEND

670.00 TP	PR TOP OF PAVEMENT ELEV.
670.00 FG	PR FINISHED GRADE ELEV.
	PR 8" CONCRETE PAVEMENT
	PR 6" CONCRETE PAVEMENT
	PR 4" CONCRETE PAVEMENT

NOT FOR CONSTRUCTION

[redacted]

Engineers
Surveyors
Planners
Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	AW
Manager:	JKA
Designer:	JKA
Quality Control:	AW
Section:	25
	T-03-N R-10-E

Professional Seal:

STATE OF MICHIGAN
JOSEPH KENNETH ANDERSON
ENGINEER
No. 6201055862
LICENSED PROFESSIONAL ENGINEER

811
Know what's **below.**
Call before you dig.

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Developed For:

WJ VENTURES, LLC

2060 COOLIDGE HWY
BERKLEY, MI 48072

248-246-7878

GRADING and PAVING PLAN

THE COLUMBIA

CITY OF BERKLEY
OAKLAND COUNTY
MICHIGAN

Date:	07.21.2023
Scale:	1" = 20'
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Project:	20388.00

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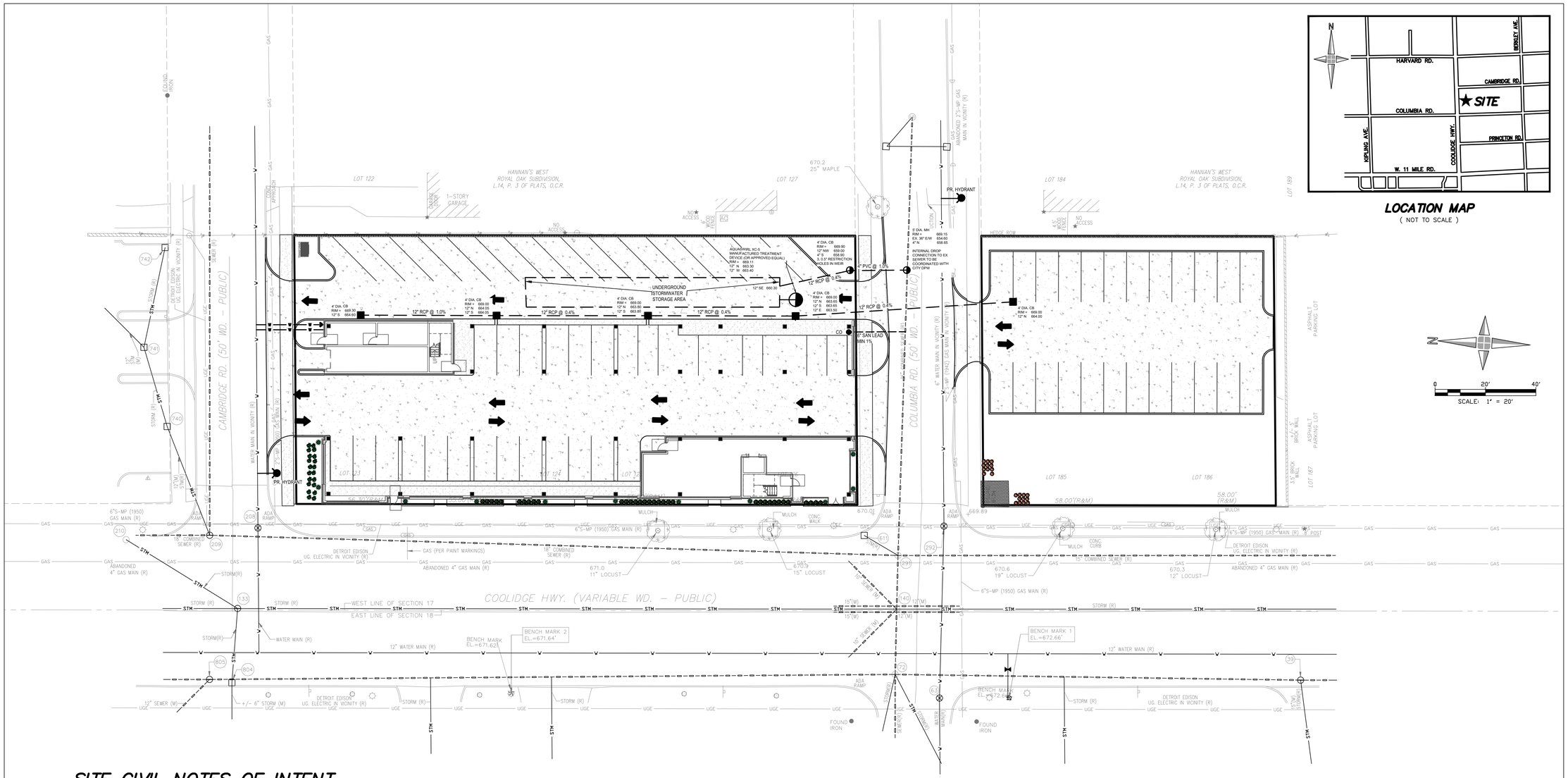

LOCATION MAP
(NOT TO SCALE)

SITE CIVIL NOTES OF INTENT

- GRADING AND SESC: ALL GRADING AND SOIL EROSION & SEDIMENTATION CONTROL MEASURES WILL BE IMPLEMENTED AND STRICTLY ENFORCED THROUGHOUT CONSTRUCTION.
- SANITARY SERVICE: ALL EXISTING SANITARY SERVICES ARE PROPOSED TO BE ABANDONED VIA A SPOT LINER OR ANOTHER DPW APPROVED METHOD, WITHIN 2' OF THE MAIN. NEW SANITARY LEADS WILL BE INSTALLED AND CONNECTED WITH TWISTEE SEWER SADDLE PER DPW.
- WATER SERVICE: THE EXISTING WATER SERVICES WILL BE REMOVED TO THE CITY STOP BOXES OR PER DPW DIRECTION. A NEW DOMESTIC SERVICES WILL BE CONNECTED AND INSTALLED TO THE BUILDINGS. THE BUILDINGS WILL BE FIRE SUPPRESSED AND HAVE SEPARATE FIRE SERVICE LEADS INSTALLED.
- STREETS WILL BE RESTORED THAT ARE ASSOCIATED WITH UTILITY WORK.
- A TRAFFIC CONTROL PLAN WILL BE COORDINATED WITH CITY AND ADDED TO CONSTRUCTION PLANS FOR REVIEW AND APPROVAL.
- APPLICANT WILL COORDINATE / DISCUSS WITH CITY ON ANY ADDITIONAL UTILITY IMPROVEMENTS.
- ADDITIONAL FIRE HYDRANTS ARE PROPOSED TO PROVIDE APPROPRIATE FIRE COVERAGE.
- STORMWATER MANAGEMENT:
  - THE OAKLAND COUNTY WATER RESOURCES COMMISSIONER STORMWATER ENGINEERING DESIGN STANDARDS, UPDATED 11/22/2021, WILL BE FOLLOWED FOR PROPER DESIGN REQUIREMENTS. AND THE DESIGNED STORAGE WILL MEET OCWRC STANDARDS.
  - THIS SITE WILL ALSO UTILIZE A MECHANICAL TREATMENT DEVICE TO CAPTURE FLOATABLES AND FILTER OUT SEDIMENT. THIS UNIT WILL HAVE NJDEP CERTIFICATION.
  - THE PROPOSED OUTLET CONTROL STRUCTURE WILL BE RESTRICTED AND DEWATER WITHIN ALLOWABLE TIMES.

STORMWATER SYSTEM NOTE:

STORMWATER MANAGEMENT SYSTEM WILL BE A PRIVATE SYSTEM UNDER THE MAINTENANCE OF THE PROPERTY OWNER. A MAINTENANCE AGREEMENT BETWEEN OWNER AND CITY OF BERKLEY WILL BE PROVIDED ONCE PLAN IS APPROVED. ALL NECESSARY EXHIBITS WILL BE INCLUDED WITH THE AGREEMENT.

LEGEND

- PR STORM SEWER
- PR STORM CATCH BASIN
- PR OUTLET CONTROL STRUCTURE
- PR MANUFACTURED TREATMENT DEVICE
- EX SANITARY LEAD
- EX WATER SERVICE
- FIRE HYDRANT

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JOSEPH KENNETH ANDERSON
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UTILITY PLAN

THE COLUMBIA

CITY OF BERKLEY
OAKLAND COUNTY
MICHIGAN

Date:	07.21.2023
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Detention Design

Project Name	Berkley Lofts
Project Number	20388.00
Completed By	Joe Anderson
Working Date	02.14.2023
Jurisdiction	Oakland County

Weighted "C" Calculation

	Area (acres)	C	Area x C
Building Roofs	0.28	0.95	0.33
Pavement	0.34	0.95	0.32
Lawn Areas	0.05	0.35	0.02
Total	0.74		0.67
Cw	Area x C	=	0.67 / 0.74 = 0.91
	Area		

Internal Equivalent Volume Quality

The required Channel Protection Volume (VCP) is the post-development site runoff volume from a 1-inch rainfall event. CPVC also promotes groundwater recharge, stabilizes flow rates and baseflow in our natural watercourses, and addresses water quality control criteria (Total Suspended Solids)

C Factor =	0.91		Property Area =	0.74	acres		
Req. Channel Protection Volume V_{CPV} =	4,719	x	A	x	C		
=	4,719	x	0.74	x	0.91		
=	3,176	cubic feet					

External Protection Volume (Extended Detention)

Extended Detention is required for the site's post-development runoff volume from a 1-5inch rainfall event. This **Extended Detention Volume (V_{ED})** shall be dewatered in not less than 48 hours.

C Factor =	0.91		Property Area =	0.74	acres		
Extended Detention Volume V_{ED} =	6,857	x	A	x	C		
=	6,857	x	0.74	x	0.91		
=	4,642	cubic feet					

Time of Concentration

Mechanical Separators: Mechanical separators designed for the required TSS removal at a **peak flow rate (Q_{WQ})** generated by a 1-year peak flow.

Calculate Time of Concentration - Time required for water to travel from the hydraulically most remote point of the drainage sub-area to a design point

Sheet Flow (no more than 300)

		K < 0.40					K > 1.00		Slope of flow path in percent
Intensity of sheet flow, I_{sheet} =	K	x	$i^{0.4}$						
I_{sheet} =	0.48	x	1.00	0.48					
I_{sheet} =	0.48	0.5							
		L =	115	ft	Flow Length				
Travel Time, T_{sheet} =	3.600	x		Time					
T_{sheet} =		115							
T_{sheet} =	3.600	x	0.48						
T_{sheet} =	0.59	hours	=	0.62	minutes				

Pipe Flow

T_{pipe} =	2.00	minutes	(from pipe network calculations, subtract initial Tc (15 or 20 minutes) from ending Tc)						
Time of Concentration T_c =	T_{sheet}	+	$T_{channel}$	+	T_{pipe}	+	15	minutes	Added time for diffusion through pervious (pavers and stone bed)
T_c =	0.62	+	0.00	+	2.00	+	0.00		
Time of Concentration T_c=	2.62	minutes							
Peak Rainfall Intensity I =	35.44	/	(	T_c	)	= 9.17 $I^{0.66}$			
=	35.44	/	(	2.62	)	= 9.17 $I^{0.66}$			
=	**3.86**	**inches / hour**							

C Factor =	0.91	L =	3.95	John	Property Area =	0.74	acres	
Peak Flow Rate Q_{WQ} =	C	x	L	x	A			
=	0.91	x	3.95	x	0.74			
=	**2.66**	**cfs**						

Detention and Flood System

The **allowable 100-year post-development peak flow rate (Q_{100})** shall be approved by the OCWRC office on a case-by-case basis and will be calculated one of two ways. 1. Using the Variable Release Rate (see equations below). 2. County-determined peak flow rate based on a documented County Drain flow capacity or other known downstream. Prior to commencing with site plan design, contact the OCWRC Permitting Department to confirm which of the above methods is more restrictive and will apply to your site.

The variable release rate (offshore) is capped at 1.5 cfs/acre for developments 2 acres or less. For all developments equal to or greater than 100 acres, the variable release rate is 0.15 cfs/acre.

Property Area =	0.74	acres					
	CHECK:	0.74	<	2 acres	?	True	1.5 cfs / acre
	CHECK:	0.74	>=	100 acres	?	False	0.15 cfs / acre
Variable Release Rate Q_{100} =	1.1055	-	0.206	x	ln(	A	)
=	1.1055	-	0.206	x	ln(	0.74	)
=	**1.17**	**cfs / acre**					
Variable Release Rate Q_{100} =	**1.00**	**cfs / acre**					
Property Area =	0.74	acres					
Allowable 100-year Post Development Peak Flow Rate: Q_{100} =	Q_{100}	x	A				
Q_{100} =	1.00	x	0.74				
Q_{100} =	0.74	cfs					
C Factor =	0.91		Property Area =	0.74	acres		
100-year Runoff Volume V_{100} =	18,895	x	C	x	A		
=	18,895	x	0.91	x	0.74		
=	**12,718**	**cubic feet**					
Time of Concentration T_c =	5.82	minutes					
100-year Peak Rainfall Intensity I_{100} =	83.3	/	(	T_c	)	= 9.17 $I^{0.66}$	
=	83.3	/	(	5.82	)	= 9.17 $I^{0.66}$	
=	**9.30**	**inches / hour**					
C Factor =	0.91	I_{100} =	9.30	John	Property Area =	0.74	acres
100-year Peak Inflow Rate Q_{100} =	C	x	I_{100}	x	A		
=	0.91	x	9.30	x	0.74		
=	**6.26**	**cfs**					
Q_{100} =	0.74	cfs	Q_{100b} =	6.26	cfs		
Storage Curve Factor R =	[1.206 -	0.15ln(	Q100P	/	Q100N	)]	
=	[1.206 -	0.15ln(	0.74	/	6.26	)]	
=	**0.83**						
V_{100} =	12,718	cubic feet	R =	0.83	$V_{100\ R}$ =	3,176	cubic feet
							(provided CVPC volume)
Required 100-year Detention Volume V_{100} =	(	V_{100}	x	R	)	-	$V_{100\ R}$
=	(	12,718	x	0.83	)	-	0
=	**6,691**	**cubic feet**					

Storage Volume Provided

						UNDERGROUND DETENTION SYSTEM	
						SEE STORMTRAP DETENTION SYSTEM SCHEMATIC DRAWINGS	
						Total Volume Provided=	10,018 cubic feet
						Total Volume Required=	6,691 cubic feet

Outlet Structure Calculations

100-YR Detention Outlet Calculations

Released over a period of 48 hours.

V_{100} Release time =	48.00	hours					
$Q_{100\ REQ}$ =	V_{100}	÷	6,691	÷	0.0367	cfs	
	Release Time		172,800				
Q_{100} =	$C \times A_0 \times (2 \times 32.2 \times h_{100})^{0.5}$				= 0.62		
h_{100} (ft) =	3.00	ft					
ED Outlet Hole Area, A_0 =	$Q_{100\ REQ}$						
	$0.62(64.4 \times h_{100})^{0.5}$						
A_0 =			0.0367				
=	0.62	x (	64.4	x	3.00	$)^{0.5}$	
A_0 =	**0.00448**						
	Use 1, 1/2" holes at outlet elevation				A_0 =	0.00420	ft²
$Q_{100\ WQ}$ =	$C \times A_0 \times (64.4 \times h_{100})^{0.5}$						
=	0.62	x	0.00420	x (	64.4	x	3.00 $)^{0.5}$
=	**0.038**	**cfs**					
Dewatering Time =	V_{100}	÷	6,691	÷	91.26	hr	
	$Q_{100\ WQ}$		0.038				

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Aqua-Swirl® XCELERATOR System

- Provides customized solutions for project specific requirements.
- Systems designed for specific water quality treatment flow rates.
- Modular sizes from 2.0 - 12 ft diameters with attached offsets to finish grade.
- Online project and system design tool at http://pda.aquashieldinc.com.

Vortex Separation Technology

- Utilizes high velocity hydrodynamic and gravitational forces to settle fine sediment (TSS), trash, and debris.
- Extensive full-scale laboratory testing by independent third parties.
- Strict 3rd party verifications from New Jersey Corporation for Advanced Technology (NJCAT).
- Certified Approval from New Jersey Dept. of Environment (NJDEP).

Bypass Designs

- Systems are designed to treat water quality flow rates and bypass peak storm events.
- Internal and external bypass configurations are available and tailored to site-specific needs.

Pipe Connections

- Systems are designed with custom inlet/outlet diameters at various configuration angles.
- Inlet/outlet stub outs are provided for easy coupling to storm drain lines.
- Easily plumbed to RCP, CMP, PVC, and HDPE piping with dissimilar pipe diameters.

Installation Benefits

- Quick and simple installation, resulting in measurable project cost savings.
- Designed to withstand HS-25 loadings with capabilities of heavier loads available.
- Small footprint design reduces excavations costs.
- Lightweight and durable construction eliminating the need of a crane
- Lifting lugs attached for easy maneuverability on site.

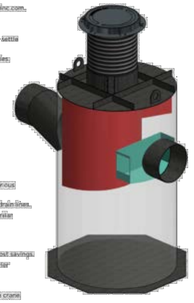
Storage Capacities

- Large storage capacities for sediment, debris and free oil to extend maintenance frequency.
- Calculated sediment capacity for each model with maintenance interval per Appendix B, Part 8 of the NJDEP Laboratory Protocol for HDS MTDs. Contact your representative for more info.

Inspection & Maintenance

- Large storage capacities for sediment, debris and free oil to extend maintenance frequency.
- IBH manuals are available to download at www.aquashieldinc.com.

AQUA-SWIRL® XCELERATOR



AquaShield® WATER TREATMENT SOLUTIONS

www.aquashieldinc.com
2733 Kanasita Dr., Ste 111
Chattanooga, TN 37343
888.344.9044
423.870.8888
423.826.2112 (fax)

Table 1 Aqua-Swirl® XCelerator Models and Associated MTFRs

Model	Manhole Diameter (ft)	NJDEP 50% TSS Maximum Treatment Flow Rate, MTFR (cfs)	50% Maximum Sediment Storage Area Volume (ft^3)
XC-2	2.5	0.57	2.46
XC-3	3.5	1.13	4.81
XC-4	4.5	1.86	7.95
XC-5	5.5	2.78	11.88
XC-6	6.5	3.88	16.59
XC-7	7.5	5.17	22.09
XC-8	8.5	6.64	28.38
XC-9	9.5	8.29	35.44
XC-10	10.5	10.13	43.30
XC-11	11.5	12.15	51.94
XC-12	12.5	14.35	61.36
XC-13	13	15.53	66.37

StormTrap® MODULAR CONCRETE STORMWATER MANAGEMENT

COOLIDGE HWY - DETENTION
BIRMINGHAM , MI

SHEET INDEX

PAGE	DESCRIPTION
1.0	DOUBLETRAP DESIGN CRITERIA
2.0	DOUBLETRAP SYSTEM LAYOUT
3.0	DOUBLETRAP INSTALLATION SPECIFICATIONS
4.0	DOUBLETRAP BACKFILL SPECIFICATIONS
5.0	DOUBLETRAP BASKETS SPECIFICATIONS
6.0	DOUBLETRAP MODULE TYPES

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STORMTRAP CONTACT INFORMATION

STORMTRAP SUPPLIER:	STORMTRAP
CITY, STATE:	CHATTANOOGA, TN
CELL PHONE:	423-826-2112
DESIG EMAIL:	JACLARK@STORMTRAP.COM

GIFFELS WEBSTER
1025 EAST MAPLE TOAD SUITE 100
BIRMINGHAM, MI 48009
248.852.3100

PROJECT INFORMATION: COOLIDGE HWY DETENTION, BIRMINGHAM, MI

CURRENT ISSUE DATE: 4/26/2023

ISSUED FOR: PRELIMINARY

SHEET TITLE: COVER SHEET

SHEET NUMBER: 0.0

STRUCTURAL DESIGN LOADING CRITERIA

(WE LOADING **AASHTO HS-25 HIGHWAY LOADING**

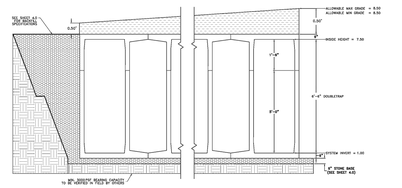
GROUND WATER TABLE BELOW INVERT OF SYSTEM
SOIL BEARING CAPACITY 1500 PSF
SOIL DENSITY 120 PCF
EQUIVALENT FLUID PRESSURE
LATERAL ACTIVE EARTH PRESSURE (ø) 30# / FT.
LATERAL ACTIVE EARTH PRESSURE (ø) 30# / FT.
GEOTEXTILE REQUIRED
LATERAL ALLOWABLE SOIL BEARING PRESSURE (IF WATER TABLE PRESENT)
APPLICABLE CODES-AISC 13ED
ACI 318-11
BACKFILL TYPE-SEE SHEET 4.0 FOR BACKFILL OPTIONS

STORMTRAP SYSTEM INFORMATION

WATER STORAGE PROV: 10,018 FT.³ (SEE TEST UNIT HEADROOM: 6'-4" DOUBLETRAP

SITE SPECIFIC DESIGN CRITERIA

1. STORMTRAP UNITS SHALL INCLUDE ACCESSORIES AS SHOWN ON THESE DRAWINGS APPROVED BY THE INSTALLING CONTRACTOR AND STORMTRAP. ACCESSORIES INCLUDE SOME OF THE FOLLOWING: ACCESS OPENINGS AND INSPECTOR PIPE TYPES, SIDES, INVERT ELEVATIONS AND SIZE OF OPENINGS.
2. COVER RANGE: MIN-0.50' MAX.0.50' CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS.
3. ALL DIMENSIONS AND SOIL CONDITIONS INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE REQUIRED TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO STORMTRAP INSTALLATION.
4. THE STORMTRAP SYSTEM SHALL BE INSTALLED WITH A MINIMUM OF 2' OF WATER TABLE SEPARATION. IF WATER TABLE IS ANTICIPATED TO BE BELOW INVERT OF SYSTEM 2' WATER TABLE SEPARATION MUST BE MAINTAINED.
5. **SYSTEM DESIGN MUST ALLOW FOR INCIDENTAL LEAKAGE AND WILL NOT BE SUBJECT TO LEAKAGE TESTING.**



6'-6" DOUBLETRAP

GIFFELS WEBSTER
1025 EAST MAPLE TOAD SUITE 100
BIRMINGHAM, MI 48009
248.852.3100

PROJECT INFORMATION: COOLIDGE HWY DETENTION, BIRMINGHAM, MI

CURRENT ISSUE DATE: 4/26/2023

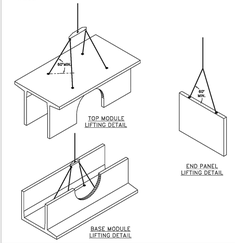
ISSUED FOR: PRELIMINARY

SHEET TITLE: DOUBLETRAP DESIGN CRITERIA

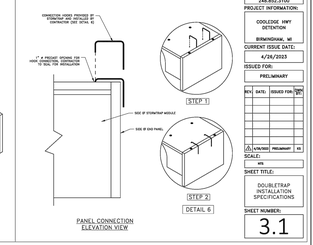
SHEET NUMBER: 1.0

STORMTRAP MODULE LIFTING INSTALLATION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL CIG OVERLOADERS ARE SECURED PROPERLY TO THE LIFTING ANCHORS AND IN VISUAL TENSION WHEN LIFTING THE STORMTRAP MODULE (SEE RECOMMENDATIONS 2 & 3).
2. MINIMUM 7'-0" OVAL/OVALIZE LENGTH TO BE USED TO LIFT STORMTRAP MODULES (SUPPLIED BY CONTRACTOR).
3. CONTRACTOR TO ENSURE MINIMUM LIFTING ANGLE IS NOT FROM THE SURFACE OF STORMTRAP MODULE, SEE DETAIL.
4. IF IN CONTRADICTION AND AGREED THAT AT ALL TIMES DURING INSTALLATION AND MOVING EQUIPMENT IN PLACE OF STORMTRAP MODULES, THE CONTRACTOR'S EQUIPMENT OPERATOR HAS THE FINAL DECISION AND SHALL BE ALL TIMES BE THE JUDGE OF THE SAFETY AND PROPERTY OF ANY SUGGESTION TO HIM FROM THE SELLER, OWNER OR ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE STORMTRAP MODULES CAUSED, OWNERS OR CAUSED OF ACCIDENT, WHICH MAY ARISE FROM THE IMPROPER OR OPERATION OF SAID EQUIPMENT.



END PANEL ERECTION/INSTALLATION NOTES



PANEL CONNECTION ELEVATION VIEW

GIFFELS WEBSTER
1025 EAST MAPLE TOAD SUITE 100
BIRMINGHAM, MI 48009
248.852.3100

PROJECT INFORMATION: COOLIDGE HWY DETENTION, BIRMINGHAM, MI

CURRENT ISSUE DATE: 4/26/2023

ISSUED FOR: PRELIMINARY

SHEET TITLE: DOUBLETRAP INSTALLATION SPECIFICATIONS

SHEET NUMBER: 3.1

ZONE CHART

ZONES	ZONE DESCRIPTION	BEARING
ZONE 1	FOUNDATION AGGREGATE	4" (6") STONE AGGREGATE, SEE SHEET 4.0 FOR DETAILS
ZONE 2	BACKFILL	24" (12") FROM BOTTOM OF MODULE FOR 24" (12") WIDE MODULES, SEE SHEET 4.0 FOR DETAILS
ZONE 3	FINAL COVER OVERFILL	MATERIALS MAY BE DENSED OVERFILL

FILL DEPTH	TRACK WIDTH	MIN. LIFTING HEIGHT	MIN. DENSITY
1.0'	12"	10.5	1,500 LBS
	18"	10.5	1,750 LBS
	24"	10.5	1,950 LBS
	30"	10.5	2,100 LBS
	36"	10.5	2,250 LBS

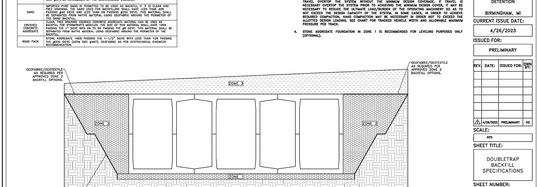
NOTE: TRACK LENGTH MAY BE DENSED 12"-4", ONLY IF TRACKS PER WHEEL.

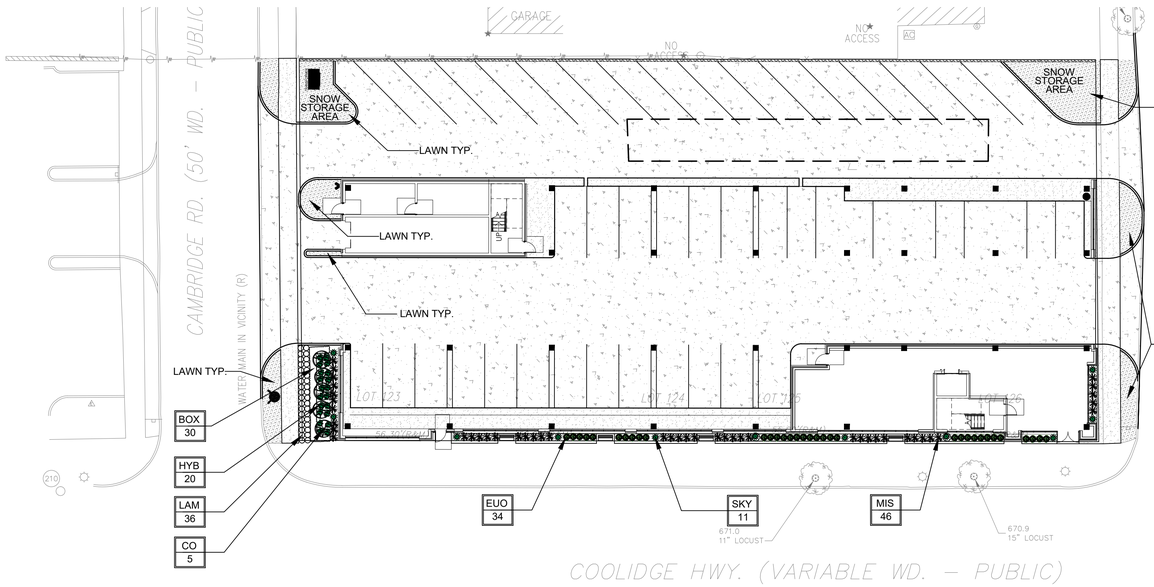
APPROVED ZONE 2 BACKFILL OPTIONS

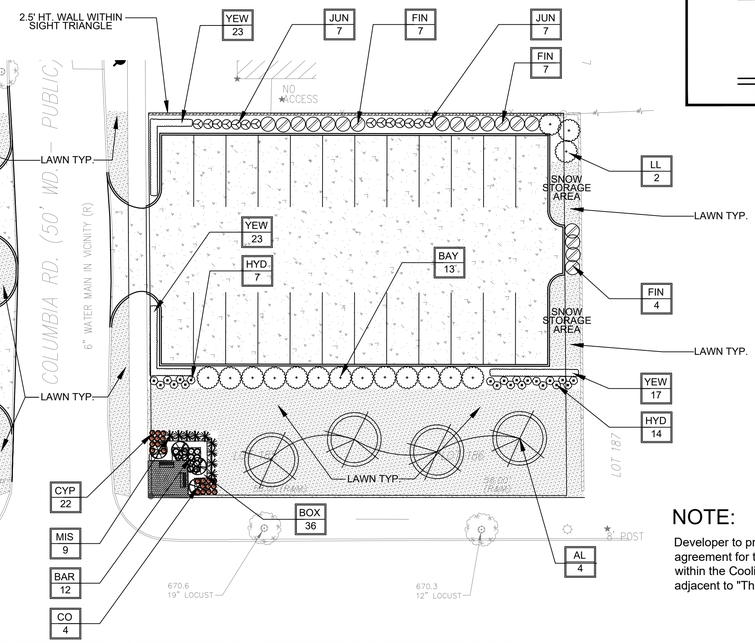
OPTION	BEARING
1	NO STONE AGGREGATE SHALL CONSIST OF CLEAN AND FREE DRAINING AGGLOMERATE MATERIAL WITH NO FINES OR ANY MATERIAL THAT WILL PASS THE 3/8" SIEVE. NOTE: THE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12" IN THICKNESS AND COMPACTED TO ACHIEVE A MINIMUM DENSITY OF 1,500 LBS PER CUBIC FOOT (PCF) AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2	NO STONE AGGREGATE SHALL CONSIST OF CLEAN AND FREE DRAINING AGGLOMERATE MATERIAL WITH NO FINES OR ANY MATERIAL THAT WILL PASS THE 3/8" SIEVE. NOTE: THE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12" IN THICKNESS AND COMPACTED TO ACHIEVE A MINIMUM DENSITY OF 1,750 LBS PER CUBIC FOOT (PCF) AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
CONCRETE SAND	SAND
ROAD BASE	ROAD BASE

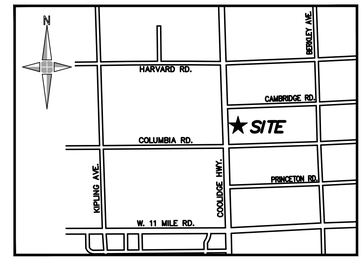
STORMTRAP ZONE INSTALLATION SPECIFICATIONS/PROCEDURES

1. THE FILL PLACED BETWEEN THE STORMTRAP MODULES MUST DEPOSITED ON BOTH SIDES AT THE SAME TIME AND TO APPROXIMATELY THE SAME ELEVATION. AT NO TIME SHALL THE FILL MATERIAL BE PLACED ALONG ONE ENTIRE SIDE OF THE STORMTRAP MODULES. THE CONTRACTOR SHALL OPTIONS BE COMPACTED ADJACENT TO STORMTRAP THAT MAY BE NECESSARY TO ENSURE THAT THE STORMTRAP MODULES MAINTAIN ALIGNMENT AND THAT THE MODULES DO NOT EXCEED THE ALLOWABLE DEFLECTIONS AND ALL DEFECTS WITHIN THE AREA TO BE COMPACTED. THE CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT TO ENSURE THAT THE FILL IS TAMPED AT THE JOINT BETWEEN THE JOINT BETWEEN THE JOINT BETWEEN THE JOINT BETWEEN THE PRECAST MODULES. WHEN THE PRECAST MODULES ARE PRE-CHAMFERED MATERIAL, THE ZONE 2 BACKFILL COMPACTION TOOL MUST BE CAPABLE OF COMPACTING THE FILL MATERIAL IN THE CHAMFER AREA. THE CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT OPERATOR AND SUPERVISOR (PROVIDED BY STORMTRAP) TO ENSURE THAT THE PRECAST MODULES ARE PROPERLY INSTALLED.
2. DURING PLACEMENT OF MATERIAL OVERFILL THE SYSTEM, IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE MAXIMUM DEFLECTION OF THE STORMTRAP MODULES DOES NOT EXCEED THE ALLOWABLE DEFLECTION OF 1" OF THE SIDE WALL OF STORMTRAP MODULE IN PARALLEL WITH THE OVERALL DIMENSIONAL DIRECTION OF THE SYSTEM MODULAR PANELS.
3. THE FILL PLACED BEHIND THE SYSTEM SHALL BE PLACED AT A MINIMUM OF 24" (12"), AS THE SMALL DIMENSION OF MODULES GREATER THAN THE SYSTEM ARE ON CHAMFER. NOTE: THE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12" IN THICKNESS AND COMPACTED TO ACHIEVE A MINIMUM DENSITY OF 1,500 LBS PER CUBIC FOOT (PCF) AS DETERMINED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT TO ENSURE THAT THE FILL MATERIAL DOES NOT EXCEED THE DESIGN CAPACITY OF THE SYSTEM. IN SAME CASES, IN ORDER TO ACHIEVE MINIMUM COVER OVER THE SYSTEM, THE CONTRACTOR MAY BE REQUIRED TO PLACE ADDITIONAL FILLERS BEYOND LONGWALL SIDE CHAMFER TO ACHIEVE MINIMUM COVER REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT TO ENSURE THAT THE FILL MATERIAL DOES NOT EXCEED THE DESIGN CAPACITY OF THE SYSTEM.
4. STONE AGGREGATE FOUNDATION IN ZONE 1 IS RECOMMENDED FOR LEVELING PURPOSES ONLY (OPTIONAL).


GEOFABRIC(TENTATIVE OR REQUIRED) ON APPROVED ZONE 2 BACKFILL OPTIONS
GEOFABRIC(TENTATIVE OR REQUIRED) ON APPROVED ZONE 2 BACKFILL OPTIONS
ZONE 3
ZONE 3
ZONE 3
ZONE 2
ZONE 1
ZONE 1
ZONE 1

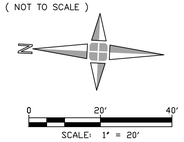






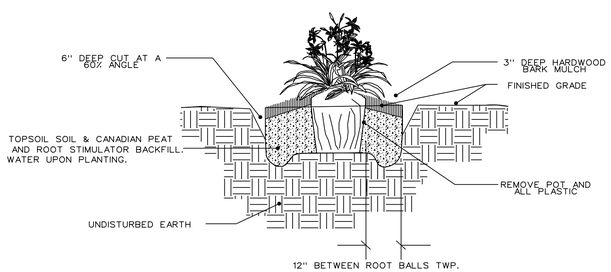
LOCATION MAP

(NOT TO SCALE)



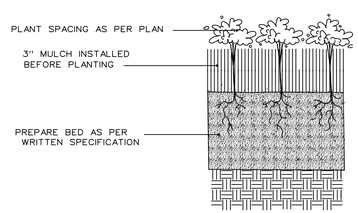
NOTE:

Developer to provide a sum of money as referenced in the PUD agreement for the City of Berkley to plant up to 6 new trees within the Coolidge Hwy ROW. These trees to be placed adjacent to "The Columbia" apartment development.



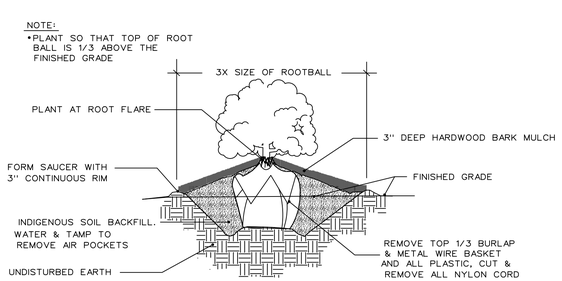
PERENNIAL PLANTING DETAIL

NO SCALE



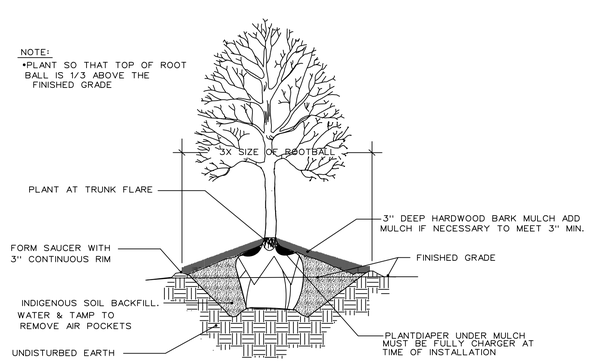
GROUNDCOVER PLANTING DETAIL

NO SCALE



SHRUB PLANTING DETAIL

NO SCALE



TREE PLANTING DETAIL

NO SCALE

PLANT SCHEDULE

SYMBOL	ABBR	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
	CO	9	Quercus robur x crimscmidt	CRIMSON SPIRE OAK	3" cal.	B&B.
	AL	4	Tilia americana	AMERICAN LINDEN	3" cal.	B&B.
	BAY	13	Myrica pensylvanica	NORTHERN BAYBERRY	5 gal.	CONTAINER
	JUN	14	Juniperus chinensis 'blue point'	BLUE POINT JUNIPER	5 gal.	CONTAINER
	SKY	11	Juniperus scopulorum skyrocket	SKYROCKET JUNIPER	3 gal.	CONTAINER
	MIS	55	Miscanthus sinensis 'little kitten'	LITTLE KITTEN MAIDEN GRASS	3 gal.	CONTAINER
	BOX	66	Buxus 'Green Velvet'	GREEN VELVET BOXWOOD	3 gal.	CONTAINER
	FIN	18	Rhamnus frangula 'ron williams'	FINELINE BARBERRY	3 gal.	CONTAINER
	BAR	12	Thuja 'Degroot's Spire'	GOLDEN RUBY BARBERRY	1 gal.	CONTAINER
	YEW	63	Buxus 'Green Velvet'	GREEN VELVET BOXWOOD	5 gal.	CONTAINER
	CYP	22	Chamaecyparis pisifera f. 'mop'	MOPS THREADLEAF CYPRESS	1 GAL	CONTAINER
	HYD	21	Hydrangea paniculata 'smnhph'	LITTLE LIME PUNCH HYDRANGEA	3 gal.	CONTAINER
	HYB	20	Hydrangea quercifolia 'Munchkin'	MUNCHKIN OAKLEAF HYDRANGEA	3 gal.	CONTAINER
	EUO	34	Euonymus fortunei emerald'n gold	EMERALD 'N GOLD EUONYMUS,	1 gal.	CONTAINER
	LAM	36	Lamium maculatum 'orchid frost'	ORCHID FROST LAMIUM	1 gal.	CONTAINER

LAWN SEED MIX:

30% PERENNIAL RYGRASS
20% PARK KENTUCKY BLUEGRASS
45% CREEPING RED FESCUE
5% ANNUAL RYEGRASS
4#/1000 S.F. SEEDING RATE

NOT FOR CONSTRUCTION

Engineers
Surveyors
Planners
Landscape Architects

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Executive:	AW
Manager:	JKA
Designer:	JKA
Quality Control:	AW
Section:	25
	T-03-N R-10-E

Professional Seal:

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

DATE:	ISSUE:
07.21.2023	Submit PUD to City
08.25.2023 08.29.2023	Submit #2 PUD to City Submit #3 PUD to City
10.18.2023	Revised PUD to City
01.12.2024	ROW tree notes on Sht. LS-100
03.20.2024	Revised PUD
04.26.2024	Revised PUD
06.04.2024	Rev. per PC Conditions for Approval
02.14.2025	Revised Plans for PUD Amendment

Developed For:

WJ VENTURES, LLC

2060 COOLIDGE HWY
BERKLEY, MI 48072

248-246-7878

LANDSCAPE PLAN

THE COLUMBIA

CITY OF BERKLEY
OAKLAND COUNTY
MICHIGAN

Date:	07.21.2023
Scale:	1" = 20'
Sheet:	LS-100
Project:	20388.00

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H:\20\20300\20388.00 Berkley Lofts\Design\CAD\Site Plan 01.24.2025\LS-100 LANDSCAPE Berkley Condo SP REV.dwg

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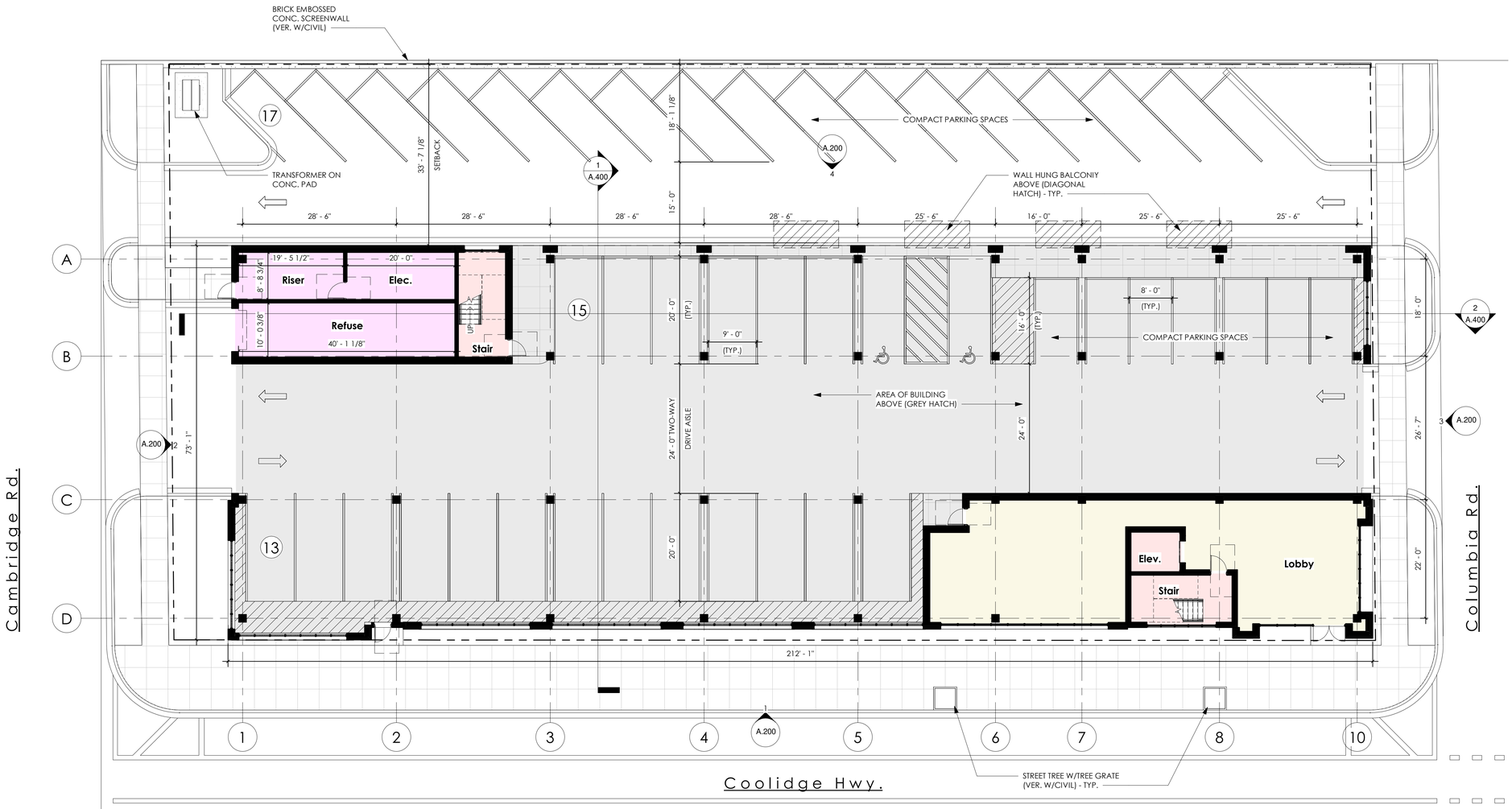
www.kriegerklatt.com

Client:
WJ Ventures, LLC

PRELIMINARY NOT FOR CONSTRUCTION

Project:
The Columbia
2476 Columbia Rd.
Berkley, MI 48072

Issued	Description	By
02.13.2025	Revised PUD	



First Floor Plan
3/32" = 1'-0"

Unit Schedule

Name	Count
02 - Second Floor	
A1 - Studio	4
A2 - Studio	1
B1 - 1 Bedroom	8
B2 - 1 Bedroom	1
B2.1 - 1 Bedroom	1
B3 - 1 Bedroom	1
B3.1 - 1 Bedroom	1
	17
03 - Third Floor	
A1 - Studio	4
A2 - Studio	1
B1 - 1 Bedroom	8
B2 - 1 Bedroom	1
B2.1 - 1 Bedroom	1
B3 - 1 Bedroom	1
B3.1 - 1 Bedroom	1
	17
04 - Fourth Floor	
A1 - Studio	4
A2 - Studio	1
B1 - 1 Bedroom	8
B2 - 1 Bedroom	1
B2.1 - 1 Bedroom	1
B3 - 1 Bedroom	1
B3.1 - 1 Bedroom	1
	17
Total Units	51

Unit Percentage

Occupancy	Count	Unit %
1 Bedroom	36	70.6%
Studio	15	29.4%
Total Units	51	

Unit SF

Name	Area
Unit A1	623 SF
Unit A2	575 SF
Unit B1	739 SF
Unit B2	683 SF
Unit B2.1	683 SF
Unit B3	821 SF
Unit B3.1	701 SF

Gross Area

Area
01 - First Floor
15172 SF
02 - Second Floor
14203 SF
03 - Third Floor
6801 SF
04 - Fourth Floor
6801 SF
42977 SF

Resi. Net Area

Area
02 - Second Floor
11785 SF
03 - Third Floor
4864 SF
04 - Fourth Floor
4864 SF
21513 SF

Parking Schedule

Count
69
69

RATIO: 1.35 SPACES / UNIT

Seal:
STATE OF MICHIGAN
JASON P. KRIEGER
ARCHITECT
No. 53578
LICENSED ARCHITECT

Note:
Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

North Arrow:
North

Sheet Title:
First Floor Plan

Project Number:
Project Number

Scale:
3/32" = 1'-0"

Sheet Number:
A.100

Typical Floor Plan (Second - Third)

3/32" = 1'-0"

Unit Schedule

Name	Count
02 - Second Floor	
A1 - Studio	4
A2 - Studio	1
B1 - 1 Bedroom	8
B2 - 1 Bedroom	1
B2.1 - 1 Bedroom	1
B3 - 1 Bedroom	1
B3.1 - 1 Bedroom	1
	17
03 - Third Floor	
A1 - Studio	4
A2 - Studio	1
B1 - 1 Bedroom	8
B2 - 1 Bedroom	1
B2.1 - 1 Bedroom	1
B3 - 1 Bedroom	1
B3.1 - 1 Bedroom	1
	17
04 - Fourth Floor	
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Gross Area

Area
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15172 SF
02 - Second Floor
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03 - Third Floor
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6801 SF
42977 SF

Resi. Net Area

Area
02 - Second Floor
11785 SF
03 - Third Floor
4864 SF
04 - Fourth Floor
4864 SF
21513 SF

Parking Schedule

Count
69
69

RATIO: 1.35 SPACES / UNIT

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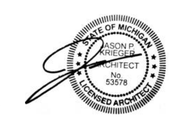

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North Arrow:

Sheet Title:

Typical Floor Plan (Second - Third)

Project Number:

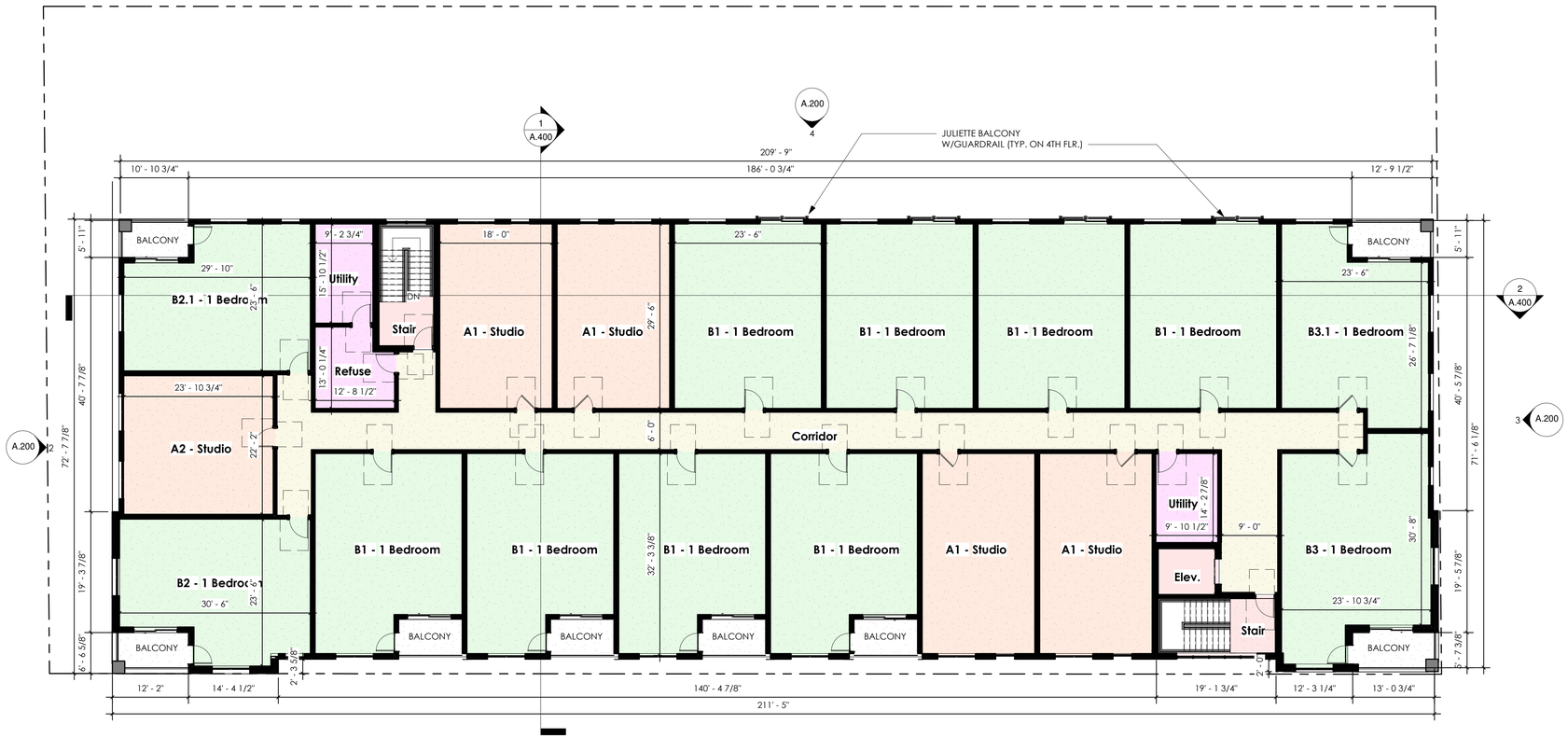
Project Number

Scale:

3/32" = 1'-0"

Sheet Number:

A.101



Fourth Floor Plan

3/32" = 1'-0"

Unit Schedule

Name	Count
02 - Second Floor	
A1 - Studio	4
A2 - Studio	1
B1 - 1 Bedroom	8
B2 - 1 Bedroom	1
B2.1 - 1 Bedroom	1
B3 - 1 Bedroom	1
B3.1 - 1 Bedroom	1
	17
03 - Third Floor	
A1 - Studio	4
A2 - Studio	1
B1 - 1 Bedroom	8
B2 - 1 Bedroom	1
B2.1 - 1 Bedroom	1
B3 - 1 Bedroom	1
B3.1 - 1 Bedroom	1
	17
04 - Fourth Floor	
A1 - Studio	4
A2 - Studio	1
B1 - 1 Bedroom	8
B2 - 1 Bedroom	1
B2.1 - 1 Bedroom	1
B3 - 1 Bedroom	1
B3.1 - 1 Bedroom	1
	17
Total Units	51

Unit Percentage

Occupancy	Count	Unit %
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Unit SF

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Gross Area

Area
01 - First Floor
15172 SF
02 - Second Floor
14203 SF
03 - Third Floor
6801 SF
04 - Fourth Floor
6801 SF
42977 SF

Resi. Net Area

Area
02 - Second Floor
11785 SF
03 - Third Floor
4864 SF
04 - Fourth Floor
4864 SF
21513 SF

Parking Schedule

Count
69
69

RATIO: 1.35 SPACES / UNIT

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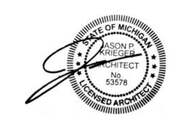

Note:

Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

North Arrow:

Sheet Title:

Fourth Floor Plan

Project Number:

Project Number

Scale:

3/32" = 1'-0"

Sheet Number:

A.102

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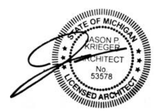

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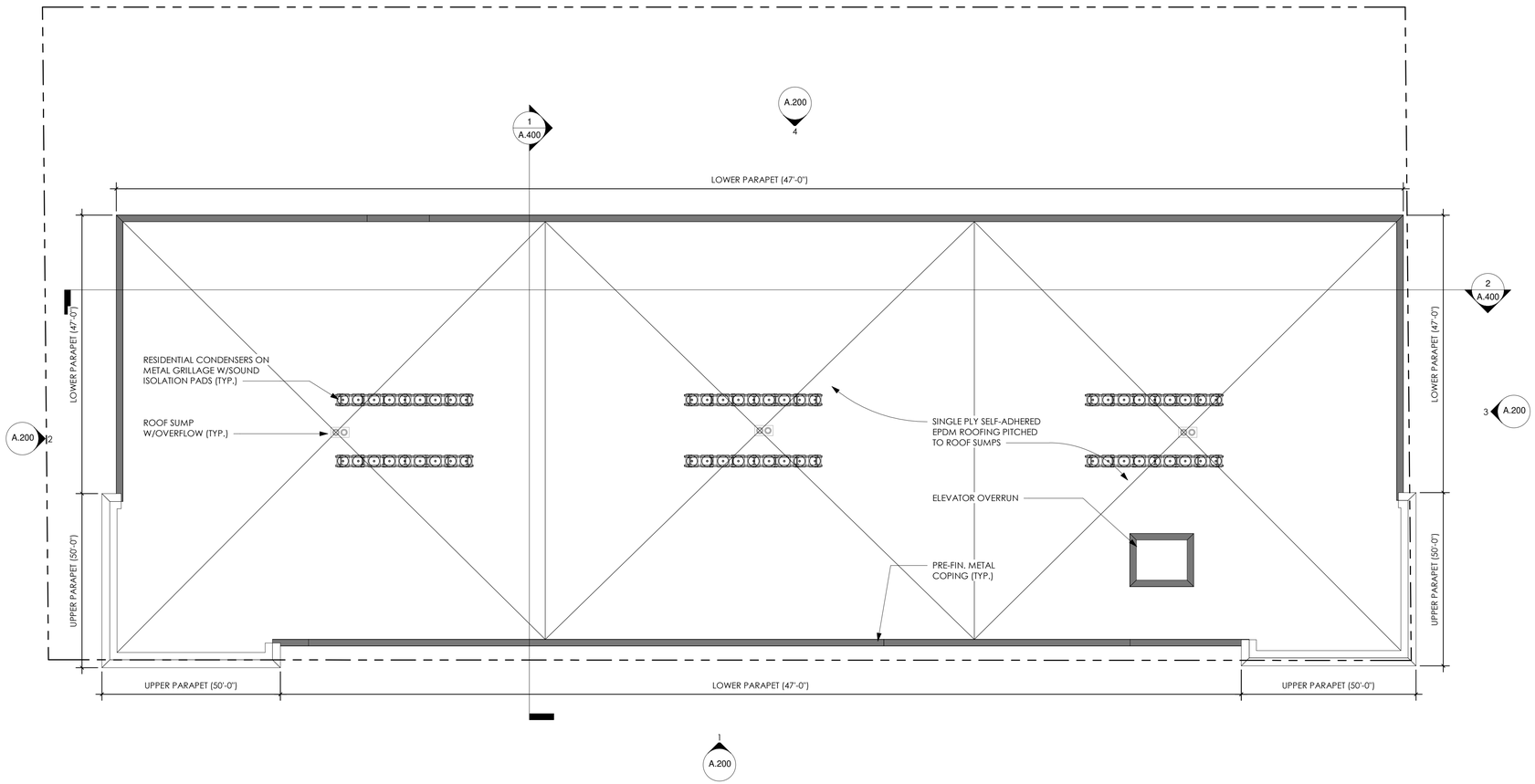
North Arrow:



Roof Plan
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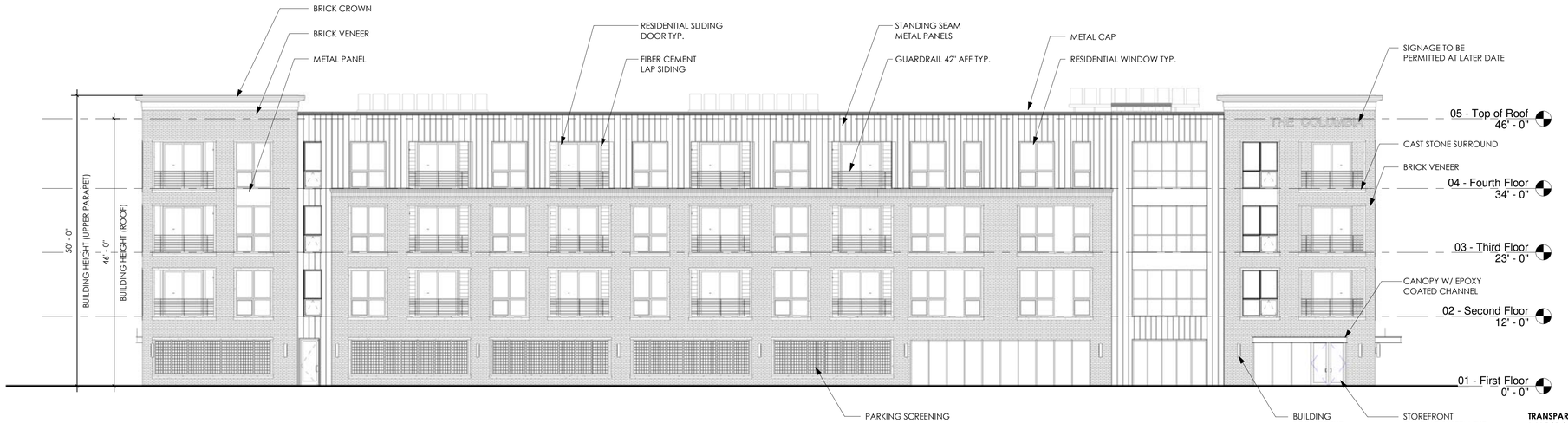
Sheet Title:
Roof Plan

Project Number:
Project Number

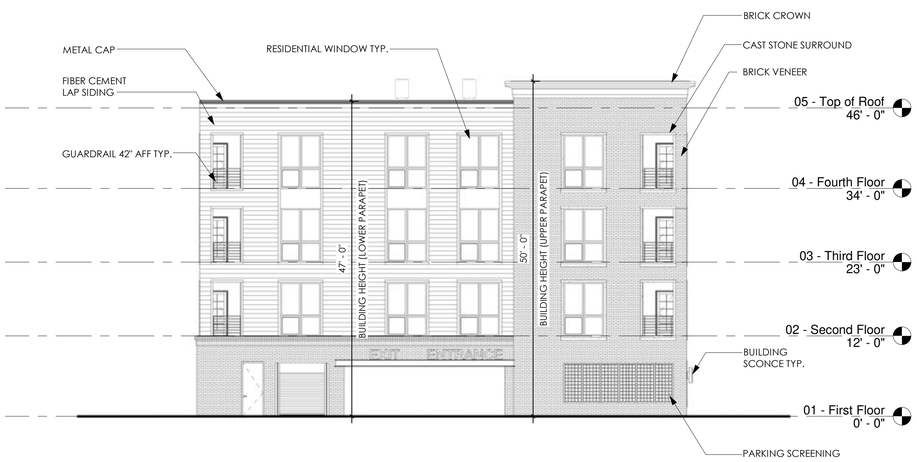
Scale:
3/32" = 1'-0"

Sheet Number:
A.103



TRANSPARENCY CALCULATION:
1,115 SF OPENINGS
2,545 SF TOTAL x100 = **44%**

1 A.100 Front (West) Elevation
3/32" = 1'-0"



2 A.100 Left (North) Elevation
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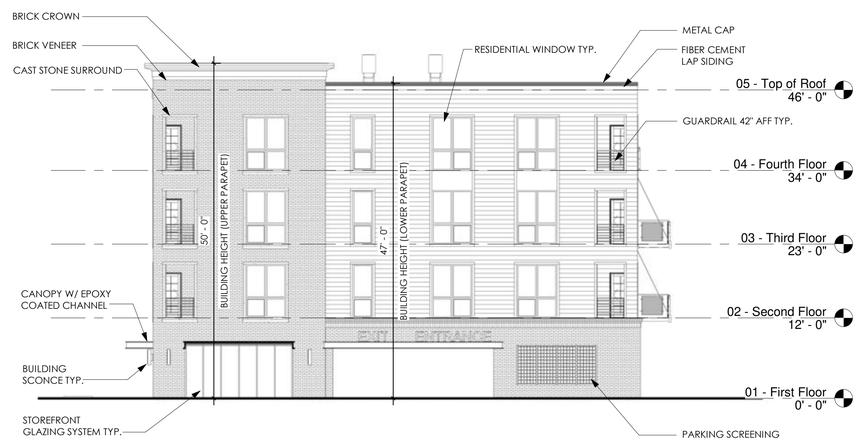

3 A.100 Right (South) Elevation
3/32" = 1'-0"

4 A.100 Rear (East) Elevation
3/32" = 1'-0"

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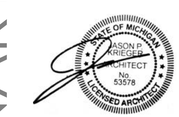

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North Arrow:

Sheet Title:
Elevations

Project Number:
Project Number

Scale:
3/32" = 1'-0"

Sheet Number:
A.200

Front (West) Elevation

Left (North) Elevation

Right (South) Elevation

Rear (East) Elevation

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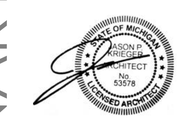
Seal:



Note:
Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

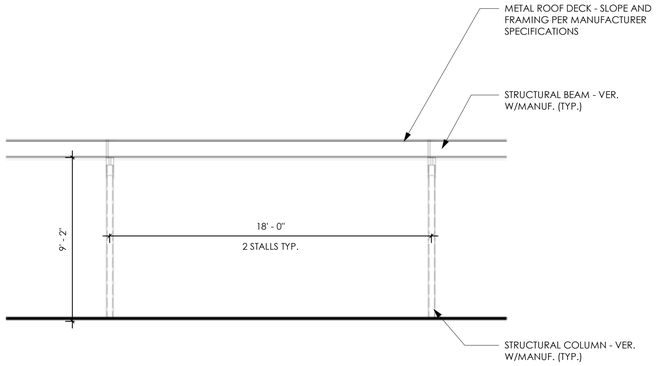
North Arrow:

Sheet Title:
Rendered Elevations

Project Number:
Project Number

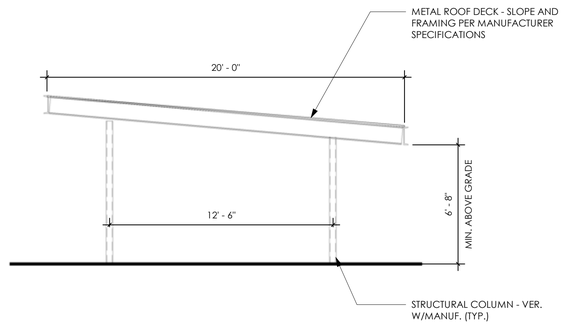
Scale:

Sheet Number:
A.201



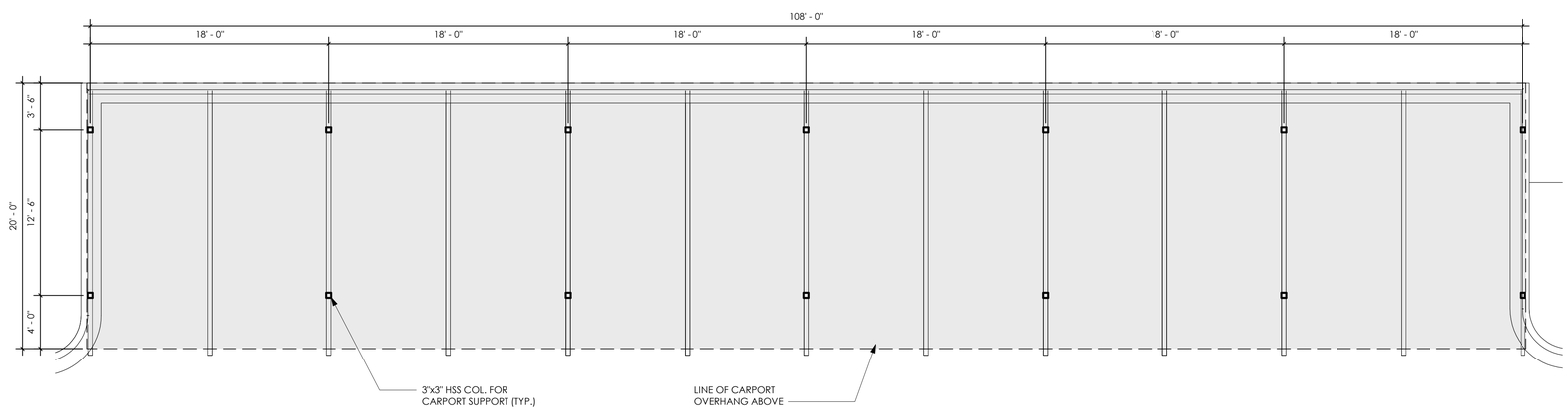
1 Partial Typical Carport Front Elevation

1/4" = 1'-0"



2 Carport Typical Side Elevation

1/4" = 1'-0"



First Floor Plan - Carport

3/16" = 1'-0"

KRIEGER KLATT
ARCHITECTS

400 E. Lincoln Ave. | Royal Oak, MI 48067
P: 248.414.9270 **F:** 248.414.9275
www.kriegerklatt.com

Client:

WJ Ventures, LLC

PRELIMINARY NOT FOR CONSTRUCTION

Project:

The Columbia
2476 Columbia Rd.
Berkley, MI 48072

Issued	Description	By
02.13.2025	Revised PUD	

Seal:

Note:

Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

North Arrow:

Sheet Title:

Carport Elevations

Project Number:

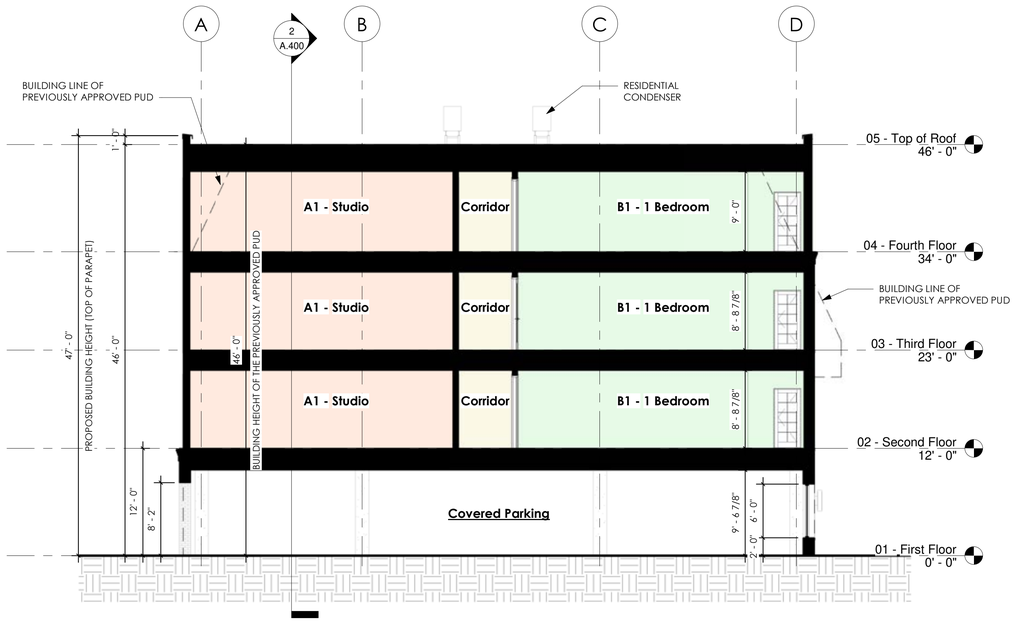
Project Number

Scale:

As indicated

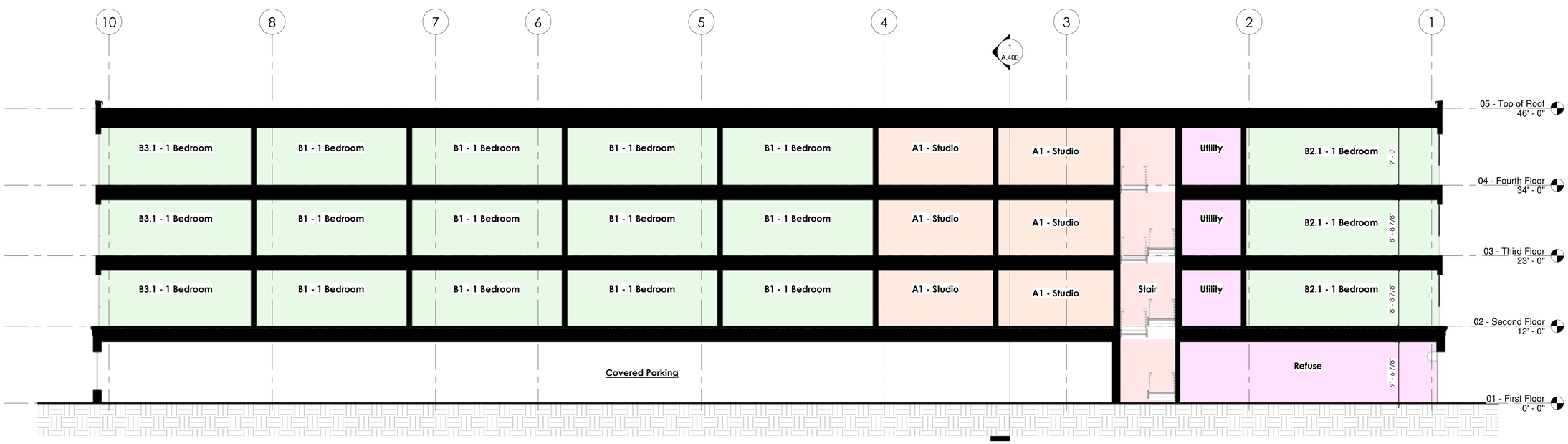
Sheet Number:

A.202



1 A.100 Building Section 1

1/8" = 1'-0"



2 A.100 Building Section 2

1/8" = 1'-0"

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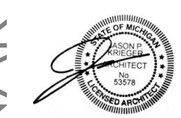

Note:

Do not scale drawings. Use calculated dimensions only. Verify existing conditions in field.

North Arrow:

Sheet Title:

Building Sections

Project Number:

Project Number

Scale:

1/8" = 1'-0"

Sheet Number:

A.400