

COMMERCIAL  
SITE PLANNING  
SITE ENGINEERING  
INDUSTRIAL & MULTI-UNIT  
LAND SURVEYING  
CONSTRUCTION LAYOUT

SURVEYING  
ALTA SURVEYS  
BOUNDARY SURVEYS  
TOPOGRAPHIC SURVEYS  
PARCEL SPLITS

RESIDENTIAL  
SUBDIVISIONS  
SITE CONDOMINIUM  
MULTI-FAMILY  
LOT PLANS  
CONSTRUCTION LAYOUT

**ALPINE**  
ENGINEERING, INC.  
CIVIL ENGINEERS & LAND SURVEYORS

(248) 926-3701 (BUS)  
(248) 926-3765 (FAX)  
WWW.ALPINE-INC.NET

46892 WEST ROAD  
SUITE 109  
NOVI, MICHIGAN 48377



JACK SCHWARCZ  
ALTA/NSPS LAND TITLE SURVEY  
AND DEMOLITION PLAN  
SECTION: 9  
TOWNSHIP: 3 S  
RANGE: 6 E  
PITTSFIELD TOWNSHIP  
WASHTENAW COUNTY  
MICHIGAN

**DEMOLITION NOTES:**

- DEMOLITION PLAN IS FOR GENERAL INFORMATION PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND COORDINATING WITH OWNER TO DETERMINE DETAILED DEMOLITION REQUIREMENTS.
- CONTRACTOR TO COORDINATE WITH FRANCHISE UTILITY COMPANIES AND/OR CITY AND COUNTY DEPARTMENTS FOR REMOVAL AND/OR RELOCATION OF METER BOXES, UTILITY POLES, UNDERGROUND LINES, ABOVE GROUND LINES, ETC., AS NECESSARY.
- REMOVE EXISTING BUILDING WALLS, FLOOR SLABS, AND FOUNDATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER. BACKFILL THE OPENING WITH SUITABLE MATERIAL TO CARRY BUILDING/PARKING LOT LOADS.
- REMOVE OR GROUT IN PLACE, AS DIRECTED BY THE FIELD INSPECTOR, EX. SEWERS AND/OR MAINS TO BE ABANDONED AS NECESSARY.
- CONTACT OWNER FOR ENVIRONMENTAL REPORT FOR ANY ENVIRONMENTAL CONCERNS.
- CONTRACTOR IS RESPONSIBLE FOR DOING AN EARTHWORK CALCULATION FOR CUT AND FILL REQUIREMENTS, AND IS RESPONSIBLE FOR INCLUDING IMPORT AND EXPORT OF MATERIALS IN THEIR BID. ALL EXCESS MATERIAL (INCLUDING TOPSOIL, CLEAN FILL, AND WASTE MATERIAL) SHALL BE REMOVED FROM THE SITE.
- CONTRACTOR TO PROTECT EX. WALKS, POSTS, CONDUITS, PAVEMENT, CURBS, GUTTER, WALLS, BUILDINGS, FENCES, LANDSCAPING, TREES, ETC. TO REMAIN DURING CONSTRUCTION. CONTRACTOR TO COORDINATE REPLACEMENT OF LANDSCAPING, ETC. WITH THE OWNER.
- PRIOR TO THE REMOVAL OR ABANDONMENT OF ANY EX. UNDERGROUND UTILITY OR BUILDING SERVICE LINES CALLED FOR ON THE PLANS OR DISCOVERED DURING EXCAVATION, THE CONTRACTOR MUST DETERMINE IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE. IF THE UTILITY LINE OR BUILDING SERVICE IS IN USE/ACTIVE THE CONTRACTOR MUST TAKE ALL THE NECESSARY STEPS TO GUARANTEE THAT THE UTILITY LINE OR BUILDING SERVICE IS RECONNECTED WITHOUT AN INTERRUPTION IN SERVICE. THE RECONNECTION OF THE UTILITY LINE OR BUILDING SERVICE MUST BE IN ACCORDANCE WITH THE STANDARDS AND THE REQUIREMENTS OF THE APPROPRIATE GOVERNMENTAL AGENCY OR PRIVATE UTILITY COMPANY.
- CONTRACTOR TO COORDINATE WITH THE ADJACENT LAND OWNERS AS REQUIRED.
- FIELD VERIFY EXISTING PAVEMENT AND CURB ELEVATIONS WHERE PROPOSED PAVEMENT AND CURB MEETS EXISTING PAVEMENT AND CURB. PAVING CONTRACTOR SHALL TAKE EXTRA CARE TO ENSURE PAVEMENT SLOPES AWAY FROM BUILDINGS. THE PARKING LOT IS DESIGNED AS PERMEABLE PAVEMENT. CONTRACTOR TO FOLLOW BEST PRACTICES TO ENSURE THE PERMEABLE PAVEMENT FUNCTIONS AS DESIGNED.
- CONTRACTOR TO ESTABLISH NEW BENCHMARKS, IF NECESSARY PRIOR TO DEMOLITION WORK.
- CONTRACTOR TO COORDINATE OBTAINING RIGHT-OF-WAY PERMITS FOR WORK WITHIN THE ROW AS NECESSARY.

**NOTICE:**

CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

**NOTE:**

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

**LEGAL DESCRIPTION:**

COMMENCING AT A POINT IN THE SOUTHWEST 1/4 OF SECTION 9, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, WHICH POINT IS DISTANT NORTH 247.5 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION 9, RUNNING THENCE EAST 528.00 FEET; THENCE NORTH 82.5 FEET; THENCE WEST 528.00 FEET; THENCE SOUTH 82.5 FEET TO THE PLACE OF BEGINNING, EXCEPTING AND RESERVING THE USE OF THE WEST 83.00 FEET AND THE EAST 30.00 FEET THEREOF FOR HIGHWAY AND PUBLIC UTILITY PURPOSES, ALSO KNOWN AS PARCEL 4 OF THE JOHN LAWRENCE FARM.

**EXCEPTIONS:**

- PER ATA NATIONAL TITLE GROUP FILE NO. 81-21788504-SCM, DATED JUNE 22, 2021.
- MORTGAGE EXECUTED BY JAG BRIARWOOD, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY TO INDEPENDENT BANK DATED MAY 17, 2017 AND RECORDED JUNE 20, 2017 IN LIBER 5211, PAGE 444, WASHTENAW COUNTY RECORDS. **AFFECTS, NOTHING TO PLOT**
  - ASSIGNMENT OF LEASES AND RENTS EXECUTED BY JAG BRIARWOOD, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY TO INDEPENDENT BANK DATED MAY 17, 2017 AND RECORDED JUNE 20, 2017 IN LIBER 5211, PAGE 445, WASHTENAW COUNTY RECORDS. **AFFECTS, NOTHING TO PLOT**
  - MORTGAGE EXECUTED BY JAG BRIARWOOD, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY TO INDEPENDENT BANK DATED JUNE 24, 2019 AND RECORDED JULY 2, 2019 IN LIBER 5309, PAGE 758, WASHTENAW COUNTY RECORDS. **AFFECTS, NOTHING TO PLOT**
  - ASSIGNMENT OF LEASES AND RENTS EXECUTED BY JAG BRIARWOOD, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY TO INDEPENDENT BANK DATED JUNE 24, 2019 AND RECORDED JULY 2, 2019 IN LIBER 5309, PAGE 759, WASHTENAW COUNTY RECORDS. **AFFECTS, NOTHING TO PLOT**
  - HIGHWAY EASEMENT RELEASE TO MICHIGAN STATE HIGHWAY DEPARTMENT RECORDED IN LIBER 609, PAGE 489, WASHTENAW COUNTY RECORDS. **DOES NOT AFFECT**
  - RELEASE OF RIGHT OF WAY TO THE BOARD OF COUNTY ROAD COMMISSIONERS RECORDED IN LIBER 1582, PAGE 412, WASHTENAW COUNTY RECORDS. **AS SHOWN HEREON**
  - EASEMENT FOR WATER MAINS AND APPURTENANCES PURPOSES VESTED IN CITY OF ANN ARBOR BY INSTRUMENT RECORDED IN LIBER 5141, PAGE 21, WASHTENAW COUNTY RECORDS. **AS SHOWN HEREON**
  - DTE ELECTRIC COMPANY UNDERGROUND EASEMENT RECORDED IN LIBER 5149, PAGE 551, WASHTENAW COUNTY RECORDS. **AS SHOWN HEREON**

**NOTES:**

- ALL WORK TO CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF CITY, COUNTY, AND STATE.
- CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
- BEARINGS BASED ON MICHIGAN STATE PLANE COORDINATES, NAD83 MICHIGAN SOUTH ZONE.

**LEGEND:**

□	EX. CATCH BASIN	---	EX. WATER MAIN
○	EX. MANHOLE	---	EX. ELECTRIC CABLE
◇	EX. END SECTION	---	EX. COMMUNICATION
⊕	EX. OVERFLOW STRUCTURE	---	EX. GAS LINE
⊖	EX. DOWNSPOUT/ROOF DRAIN	---	EX. OVERHEAD LINE
⊙	EX. CLEANOUT	---	EX. SIGN
⊗	EX. WATER GATE VALVE	⊙	EX. POST/BOLLARD
⊘	EX. HYDRANT	⊙	EX. FLAGPOLE
⊙	EX. WATER VALVE	⊙	EX. SATELLITE DISH
⊙	EX. WATER SHUTOFF	⊙	EX. BOULDER
⊙	EX. FIRE DEPT. CONNECTION	⊙	EX. TREE STUMP
⊙	EX. GAS SHUTOFF	⊙	EX. PARKING METER
⊙	EX. GAS VENT	⊙	EX. UTILITY MARKER
⊙	EX. ELECTRIC/GAS METER	⊙	EX. SOIL BORING
⊙	EX. HANDHOLE	⊙	EX. MAILBOX
⊙	EX. PEDESTAL	⊙	EX. GENERATOR
⊙	EX. TRANSFORMER	⊙	EX. MONITOR WELL
⊙	EX. LIGHTPOLE	⊙	EX. AIR CONDITIONER
⊙	EX. UTILITY POLE	⊙	EX. TRAFFIC SIGNAL
⊙	EX. GUY ANCHOR	⊙	EX. FENCE
⊙	EX. TREE	F.F.	FINISH FLOOR ELEVATION
⊙	EX. TREE TAG & NUMBER	NFV	NOT FIELD VERIFIED
⊙	EX. TREE LINE	---	APPROX. LIMITS OF DEMOLITION, CONTRACTOR TO COORDINATE WITH THE OWNER AND ADJACENT PROPERTY OWNER(S) AS NECESSARY
⊙	EX. SANITARY SEWER		
⊙	EX. STORM SEWER		

**BENCHMARKS:**

- BM#1 - ARROW ON LIGHT POLE ON EAST SIDE OF STATE ST. NORTHERN PROPERTY LINE OF SUBJECT PARCEL.  
ELEVATION - 834.87 NAVD88
- BM#2 - SPIKE IN POWERPOLE ~33 FT. EAST OF EAST PROPERTY OF SUBJECT PARCEL.  
ELEVATION - 829.60 NAVD88
- BM#3 - CHISELED "X" ON NORTH SIDE LIGHT POLE BASE NEAR SOUTHEAST CORNER OF SITE.  
ELEVATION - 832.14 NAVD88
- BM#4 - ARROW ON HYDRANT IN CURB ISLAND JUST EAST OF DRIVE THRU ENTRANCE BETWEEN BUILDINGS.  
ELEVATION - 834.25 NAVD88

**CERTIFICATION:**

TO: JAG BRIARWOOD, L.L.C. & ATA NATIONAL TITLE GROUP, L.L.C.

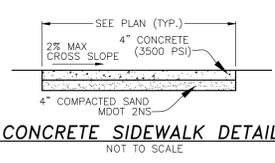
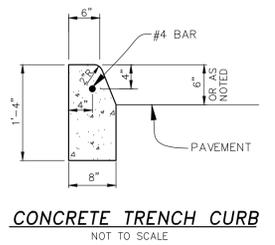
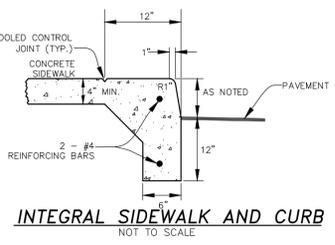
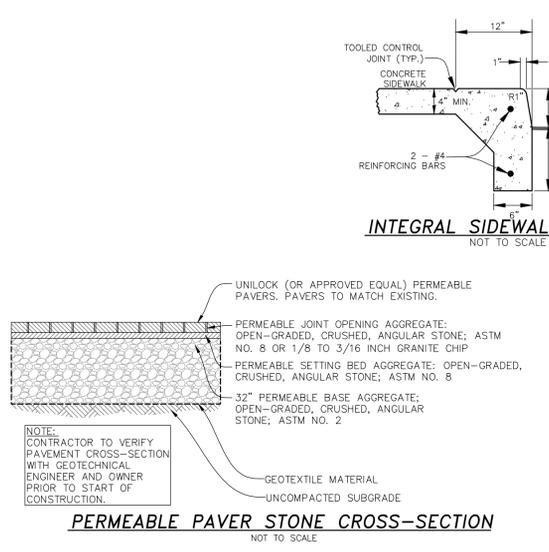
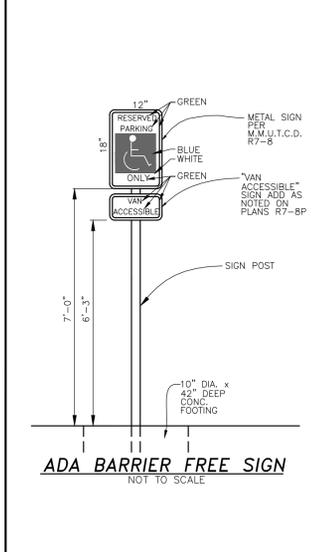
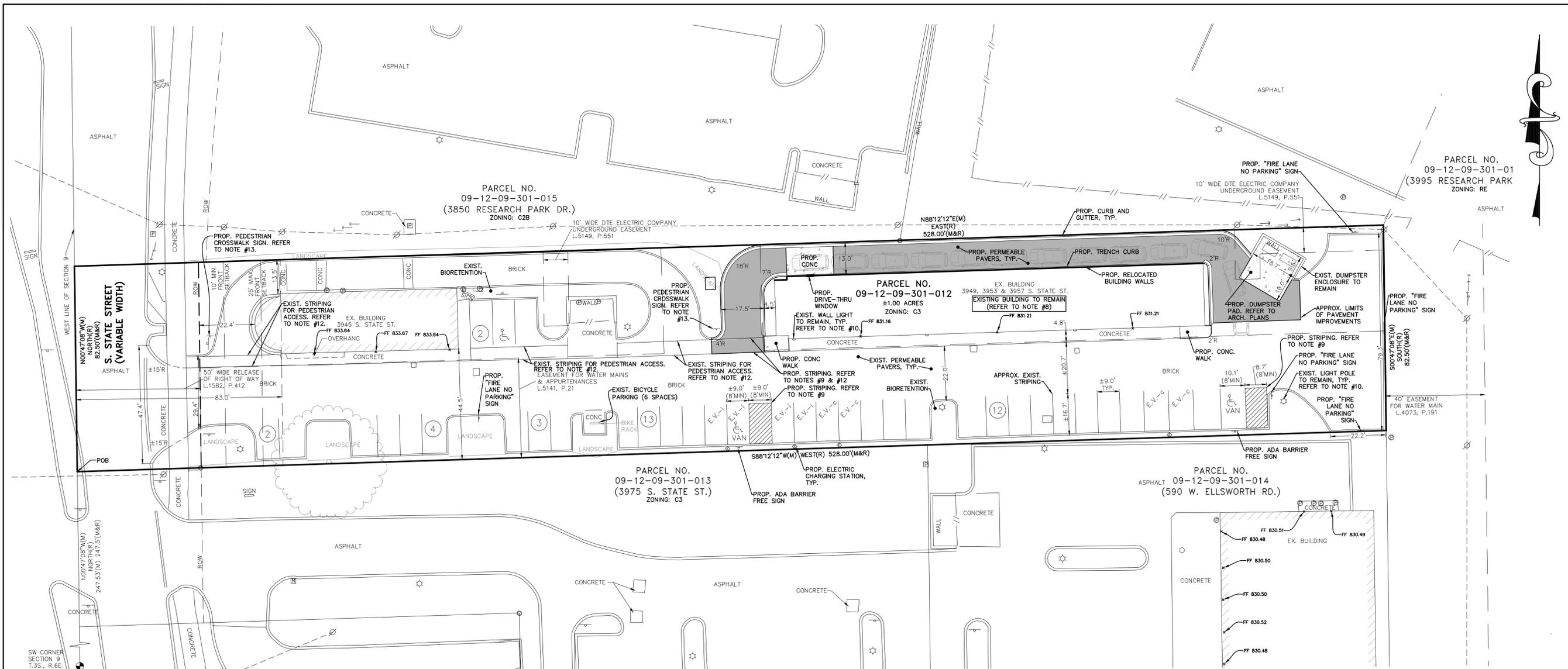
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS. THE FIELD WORK WAS COMPLETED ON 7-22-2021.

*John Heikinen*  
JOHN D. HEIKINEN  
PROFESSIONAL SURVEYOR NO. 4001047952  
EMAIL: JOHN@ALPINE-INC.NET



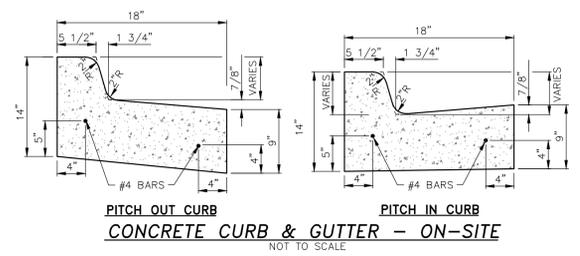
CLIENT:	JACK SCHWARCZ
REVISED:	
DATE:	11-17-2021
DRAWN BY:	TJP
CHECKED BY:	JDH
DATE:	
SCALE:	HOR 1" = 20 FT. VER 1" = 10 FT.
FBK:	384
CHF:	RDF
21-409	

NOT FOR CONSTRUCTION



**PERMEABLE PAVEMENT INSTALLATION AND MAINTENANCE**

- INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.
- PERMEABLE PAVEMENTS REQUIRE REGULAR AND EFFECTIVE MAINTENANCE TO ENSURE PROLONGED FUNCTIONING.
  - ADJACENT AREAS THAT DRAIN TO THE PERMEABLE PAVEMENT AREA SHOULD BE PERMANENTLY STABILIZED AND MAINTAINED TO LIMIT THE SEDIMENT LOAD TO THE SYSTEM.
  - ANY USE OF SALT OR SAND FOR DE-ICING AND TRACTION IN THE WINTER SHOULD BE MINIMIZED.
  - VACUUM SWEEPING SHOULD BE TYPICALLY PERFORMED A MINIMUM OF TWICE A YEAR. ADJUST THE FREQUENCY IF NEEDED.



- NOTES:**
- ALL WORK TO CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF CITY, COUNTY, AND STATE.
  - CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
  - BUILDINGS TO UTILIZE EXISTING LEADS.
  - CONTRACTOR TO PLACE BOLLARDS PER ARCHITECTURAL DRAWINGS, IF ANY PROPOSED. CONTRACTOR TO VERIFY THAT ADA ACCESS IS NOT IMPACTED BY THE BOLLARDS.
  - ALL SIDEWALKS SHALL BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME. PRIOR TO THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALKS IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS.
  - THE MAXIMUM LONGITUDINAL SLOPE ALONG THE ADA ACCESS ROUTE IS 5%. THE MAXIMUM CROSS-SLOPE OF THE ADA ACCESS ROUTE IS 2%.
  - ALL DIMENSIONS FROM BACK OF CURB TO BACK OF CURB UNLESS OTHERWISE NOTED.
  - EXISTING BUILDING TO REMAIN; HOWEVER THE NORTHERN BUILDING WALL TO BE RELOCATED 8' SOUTH TO ACCOMMODATE THE PROPOSED DRIVE-THRU. CONTRACTOR TO VERIFY DIMENSIONS OF ALL IMPROVEMENTS (WALLS, WINDOWS, DRIVE-THRU WINDOWS, DOORS, ETC.) WITH THE ARCHITECTURAL PLANS PRIOR TO START OF CONSTRUCTION.
  - EXISTING STRIPING IS ACCOMPLISHED WITH DIFFERENT COLOR PAWING STONES. CONTRACTOR TO ADJUST BRICKS AND/OR PAINT AS REQUIRED BY THE CITY INSPECTOR. CONTRACTOR TO VERIFY THE ADA PARKING SPACE/ACCESS AISLE MEET ADA DIMENSION REQUIREMENTS.
  - REFER TO THE PHOTOMETRICS PLAN PREPARED BY OTHERS.
  - REMOVAL AND RESTORATION OF THE EXISTING BIORETENTION AREAS, LIGHT POLES, AND PERMEABLE BRICK PAVERS LOCATED WITHIN THE PUBLIC UTILITY EASEMENT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER IN THE EVENT OF UTILITY MAIN MAINTENANCE, REPAIR, AND/OR REPLACEMENT.
  - CONTRACTOR TO APPLY HIGH VISIBILITY TRAFFIC STRIPING PAINT (RUST-OLEUM PROFESSIONAL TRAFFIC STRIPING PAINT (COLOR: TRAFFIC WHITE) OR SIMILAR) ON THE PAVERS CURRENTLY DEMARCATING THE PEDESTRIAN PATH AND THE PROPOSED PEDESTRIAN PATH. CONTRACTOR TO VERIFY THE PEDESTRIAN PATH (EXISTING/PROPOSED) MEETS ADA REQUIREMENTS.
  - CONTRACTOR TO PROVIDE PEDESTRIAN CROSSWALK SIGNS. R1-5b OR APPROVED EQUAL.

**LEGEND:**

	EX. HYDRANT
	EX. PEDESTAL
	EX. TRANSFORMER
	EX. LIGHTPOLE
	EX. UTILITY POLE
	EX. GUY ANCHOR
	EX. OVERHEAD LINE
	EX. SIGN
	EX. POST/BOLLARD
	EX. FLAGPOLE
	EX. MAILBOX
	EX. GENERATOR
	EX. MONITOR WELL
	EX. AIR CONDITIONER
	EX. TRAFFIC SIGNAL
	EX. FENCE
	FINISH FLOOR ELEV.
	PROP. CURB & GUTTER
	PROP. PERMEABLE PAVEMENT
	PROP. CONCRETE
	PROP. ELECTRIC CHARGING STATION
	PROP. PARKING SPACE FOR ELECTRIC VEHICLE
	EV-1 ELECTRIC VEHICLE INSTALLED
	EV-R ELECTRIC VEHICLE READY
	EV-C ELECTRIC VEHICLE CAPABLE

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

**DIMENSIONAL LAYOUT PLAN**

CLIENT: JACK SCHWARCZ

RENOVATION OF 3945 S. STATE STREET  
SECTION: 9 RANGE: 6 E  
ANN ARBOR  
WASHTENAW COUNTY  
MICHIGAN

REVISED
05-16-2023 SUBMITTAL
04-25-2023 SUBMITTAL
02-16-2023 SUBMITTAL
08-17-2022 SUBMITTAL
04-19-2022 SUBMITTAL
03-25-2022 SUBMITTAL
DATE: 11-17-2021
DRAWN BY: SD
CHECKED BY: TG
FBK: 384
CHF: RDF
SCALE: HOR 1"=20 FT. VER 1"=
21-409

NOT FOR CONSTRUCTION







Review	06.02.23

Site Photos

# RENOVATION OF 3945 S. STATE ST.

## 3945, 3949, 3953, AND 3957 S. STATE ST, ANN ARBOR, WASHTENAW COUNTY

### SITE PLANS

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LOCATION MAP  
NOT TO SCALE

**OWNER:**  
JAG BRIARWOOD LLC  
4779 COLLINS AVE  
SUITE 4301  
MIAMI BEACH, FL 33140  
CONTACT: JACK SCHWARCZ

**ARCHITECT:**  
J BRADLEY MOORE &  
ASSOCIATES ARCHITECTS, INC.  
4844 JACKSON RD., SUITE 150  
ANN ARBOR, MI 48103  
PHONE: 734-930-1500  
CONTACT: BRAD MOORE

**APPLICANT:**  
SCL, INC.  
26140 RAINE ST.  
OAK PARK, MI 48237  
CONTACT: JACK SCHWARCZ

**SURVEYOR/ENGINEER:**  
ALPINE ENGINEERING, INC.  
46892 WEST ROAD, SUITE 109  
NOVI, MI 48377  
PHONE: (248) 926-3701  
FAX: (248) 926-3765  
CONTACT: SHILOH DAHLIN

**LANDSCAPE ARCHITECT:**  
ALLEN DESIGN  
557 CARPENTER  
NORTHVILLE, MI 48167  
PHONE: (248) 467-4668  
CONTACT: JIM ALLEN

**PROJECT TYPE:**  
RENOVATION OF AN EXISTING COMMERCIAL BUILDING TO ADD A DRIVE-THRU.

**SITE DATA COMPARISON CHART:**

ITEM	EXISTING	REQUIRED	MAXIMUM	PROPOSED
<b>SITE AREA</b>				
GROSS	±1.00 ACRES			±1.00 ACRES
STATE STREET RIGHT-OF-WAY	±0.09 ACRES	6,000 SF		±0.09 ACRES
NET	±0.91 ACRES (39,428 SF)			±0.91 ACRES (39,428 SF)
<b>ZONING</b>	C3			C3
<b>PROPOSED USE</b>	COMMERCIAL (RESTAURANT/RETAIL)			COMMERCIAL (RESTAURANT/RETAIL) PROPOSED DRIVE-THRU FOR BUILDING #2
<b>TOTAL AREA OF BUILDINGS</b>				
BUILDING #1 FOOTPRINT (3945 S. STATE ST.)	1,900 SF			1,900 SF
BUILDING #2 FOOTPRINT (3949, 3953, & 3957 S. STATE ST.)	5,695 SF			4,311 SF
<b>TOTALS</b>	7,595 SF			6,211 SF
FLOOR AREA RATIO	$= (7,595 / 39,428) \times 100 = 19.3\%$		200%	$= (6,211 / 39,428) \times 100 = 15.8\%$
<b>OPEN SPACE</b>	5,046 SF	NONE		4,660 SF
<b>HEIGHT OF BUILDINGS</b>				
BUILDING #1 HEIGHT (3945 S. STATE ST.)	25 FT - 8 INCHES		55 FT (4 STORIES)	NO CHANGE PROPOSED
BUILDING #2 HEIGHT (3949, 3953, & 3957 S. STATE ST.)	39 FT - 5 1/2 INCHES		55 FT (4 STORIES)	NO CHANGE PROPOSED
<b>SETBACKS</b>				
BUILDING #1 (3945 S. STATE ST.)				
FRONT	22 FT	10 FT	25 FT	NO CHANGE PROPOSED
SIDE	13 FT (NORTH) / 45 FT (SOUTH)	NONE	NONE	NO CHANGE PROPOSED
REAR	374 FT	NONE	NONE	NO CHANGE PROPOSED
BUILDING #2 (3949, 3953, & 3957 S. STATE ST.)				
FRONT	232 FT	10 FT	25 FT	NO CHANGE PROPOSED
SIDE	5 FT (NORTH) / 44 FT (SOUTH)	NONE	NONE	13 FT (NORTH) / NO CHANGE PROPOSED FOR SOUTH SIDE
REAR	73 FT	NONE	NONE	NO CHANGE PROPOSED
<b>PARKING REQUIRED (AUTOMOTIVE)</b>				
RESTAURANT	19 SPACES	1 FOR EACH 100 SF OF FLOOR AREA = 19 SPACES	1 FOR EACH 100 SF OF FLOOR AREA = 19 SPACES	19 SPACES
RETAIL	20 SPACES	1 FOR EACH 310 SF OF FLOOR AREA = 14 SPACES	1 FOR EACH 265 SF OF FLOOR AREA = 16 SPACES	17 SPACES
<b>TOTAL PARKING REQUIRED</b>		32 SPACES	34 SPACES	
<b>TOTAL PARKING PROVIDED</b>	39 SPACES			36 SPACES [INCLUDING 2 ADA AND 8 ELECTRIC VEHICLES (4 EV-INSTALLED AND 4 EV-CAPABLE)]
<b>PARKING REQUIRED (BICYCLE)</b>				
RESTAURANT	3 SPACES	1 FOR EACH 750 SF = 3 SPACES		3 SPACES
RETAIL	1 SPACE	1 FOR EACH 3,000 SF = 1 SPACE		1 SPACE
<b>TOTAL BICYCLE PARKING REQUIRED</b>	4 SPACES			4 SPACES
<b>BICYCLE PARKING PROVIDED</b>	6 SPACES			6 SPACES

**STATEMENT OF INTEREST IN LAND:**  
THE APPLICANT IS THE OWNER OF THE LAND.

**LEGAL DESCRIPTION:**  
COMMENCING AT A POINT IN THE SOUTHWEST 1/4 OF SECTION 9, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, WHICH POINT IS DISTANT NORTH 247.5 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION 9, RUNNING THENCE EAST 528.00 FEET; THENCE NORTH 82.5 FEET; THENCE WEST 528.00 FEET; THENCE SOUTH 82.5 FEET TO THE PLACE OF BEGINNING, EXCEPTING AND RESERVING THE USE OF THE WEST 83.00 FEET AND THE EAST 30.00 FEET THEREOF FOR HIGHWAY AND PUBLIC UTILITY PURPOSES, ALSO KNOWN AS PARCEL 4 OF THE JOHN LAWRENCE FARM.  
TOTAL ACREAGE: ±1.00 ACRES

**REQUIRED STATEMENTS FOR SITE PLAN REVIEW:**

- APPLICATION IDENTIFICATION**
- i- SPECIAL EXCEPTION USE IS REQUIRED FOR THE ADDITION OF THE DRIVE-THRU.
  - ii- IDENTIFICATION OF ASSOCIATED APPLICATIONS:
    - a) REZONING FROM RE TO O (MAY 2003)(ETRAKIT PROJECT #1209361.2)
    - b) REZONING FROM O TO C3 (JUNE 2013)(ETRAKIT PROJECT #213-003)
    - c) SITE PLAN APPROVED (JUNE 2013)(ETRAKIT PROJECT #SP12-027)
    - d) SITE PLAN APPROVED (OCTOBER 2014)(ETRAKIT PROJECT #SP14-045)
    - e) SITE PLAN APPROVED (JUNE 2017)(ETRAKIT PROJECT #SP16-118)
- PROPOSED DEVELOPMENT**
- i- PROPOSED LAND USE: COMMERCIAL
  - ii- PROPOSED IMPROVEMENTS: EXISTING BUILDING IS PROPOSED TO BE RECONSTRUCTED TO ALLOW SPACE FOR A DRIVE-THRU. ADA PARKING WILL BE RELOCATED. PARKING AND SITE ACCESS TO REMAIN.
  - iii- CONSTRUCTION IS PROPOSED IN ONE PHASE.
  - iv- ESTIMATED CONSTRUCTION COSTS: \$69,000 (CIVIL SITE WORK)
- COMMUNITY ANALYSIS**
- i- IMPACT ON SCHOOLS: NO IMPACT ON PUBLIC SCHOOLS IS ANTICIPATED.
  - ii- RELATIONSHIP OF INTENDED USE TO NEIGHBORING USES: SURROUNDING USES ARE OF SIMILAR NATURE.
  - iii- IMPACT OF ADJACENT USES ON PROPOSED DEVELOPMENT: NONE ARE ANTICIPATED.
  - iv- IMPACT OF PROPOSED DEVELOPMENT ON THE AIR AND WATER QUALITY AND ON EXISTING NATURAL FEATURES OF THE SITE AND NEIGHBORING SITES: NONE ARE ANTICIPATED.
  - v- IMPACT OF THE PROPOSED USE ON HISTORIC SITES OR STRUCTURES WHICH ARE LOCATED WITHIN A HISTORIC DISTRICT OR LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES: NONE ARE ANTICIPATED.
  - vi- TRAFFIC STATEMENT: THE NUMBER OF VEHICLE TRIPS PER UNIT PER PEAK HOUR AND SUPPORTING DOCUMENTATION FROM THE ITE MANUAL: REFER TO THE TRAFFIC IMPACT STATEMENT PROVIDED WITH THIS SITE PLAN SUBMITTAL PACKAGE. (RECEIVED MARCH 2022 AND PREPARED BY MIDWESTERN CONSULTING).
  - vii- PUBLIC SIDEWALK MAINTENANCE STATEMENT: THE PUBLIC SIDEWALK IS EXISTING. REFER TO NOTE #5 ON SHEET C-3.
  - viii- ADDITIONAL INFORMATION FOR SITE PLANS: THE SITE IS CURRENTLY DEVELOPED. PAVING CONSISTS OF PERMEABLE PAVERS WITH LANDSCAPED PARKING ISLANDS. NEW CONSTRUCTION WILL INCLUDE PERMEABLE PAVERS. LANDSCAPE ISLANDS TO REMAIN AS INDICATED ON THE LANDSCAPE PLAN.

**SHEET INDEX:**

ALPINE ENGINEERING, INC.	C-1	COVER SHEET
	C-2	ALTA/NPS LAND TITLE SURVEY AND DEMOLITION PLAN
	C-3	DIMENSIONAL LAYOUT PLAN
	C-4	PRELIMINARY ENGINEERING PLAN
	C-5	PRELIMINARY STORM WATER MANAGEMENT PLAN
	C-6A	TRUCK CIRCULATION PLAN - GARBAGE TRUCK
	C-6B	TRUCK CIRCULATION PLAN - FIRE TRUCK
ALLEN DESIGN	L-1	LANDSCAPE PLAN
GASSER BUSH	P-1	PHOTOMETRICS PLAN



**COMMERCIAL**  
 SITE PLANNING  
 SITE ENGINEERING  
 INDUSTRIAL & MULTI-UNIT  
 LAND SURVEYING  
 CONSTRUCTION LAYOUT

**SURVEYING**  
 ALTA SURVEYS  
 BOUNDARY SURVEYS  
 TOPOGRAPHIC SURVEYS  
 PARCEL SPLITS

**RESIDENTIAL**  
 SUBDIVISIONS  
 SITE CONDOMINIUM  
 MULTI-FAMILY  
 LOT PLANS  
 CONSTRUCTION LAYOUT

**ALPINE ENGINEERING, INC.**  
 CIVIL ENGINEERS & LAND SURVEYORS

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 NOVI, MICHIGAN 48377

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CLIENT: JACK SCHWARCZ  
**COVER SHEET**  
 RENOVATION OF 3945 S. STATE STREET  
 TOWNSHIP: 3 S  
 ANN ARBOR  
 WASHTENAW COUNTY  
 MICHIGAN  
 SECTION: 9  
 RANGE: 6 E

REVISED

05-16-2023	SUBMITTAL
04-25-2023	SUBMITTAL
02-16-2023	SUBMITTAL
08-17-2022	SUBMITTAL
05-04-2022	SUBMITTAL
04-19-2022	SUBMITTAL
03-25-2022	SUBMITTAL

DATE: 11-17-2021

DRAWN BY: SD

CHECKED BY: TG

FBK: 384

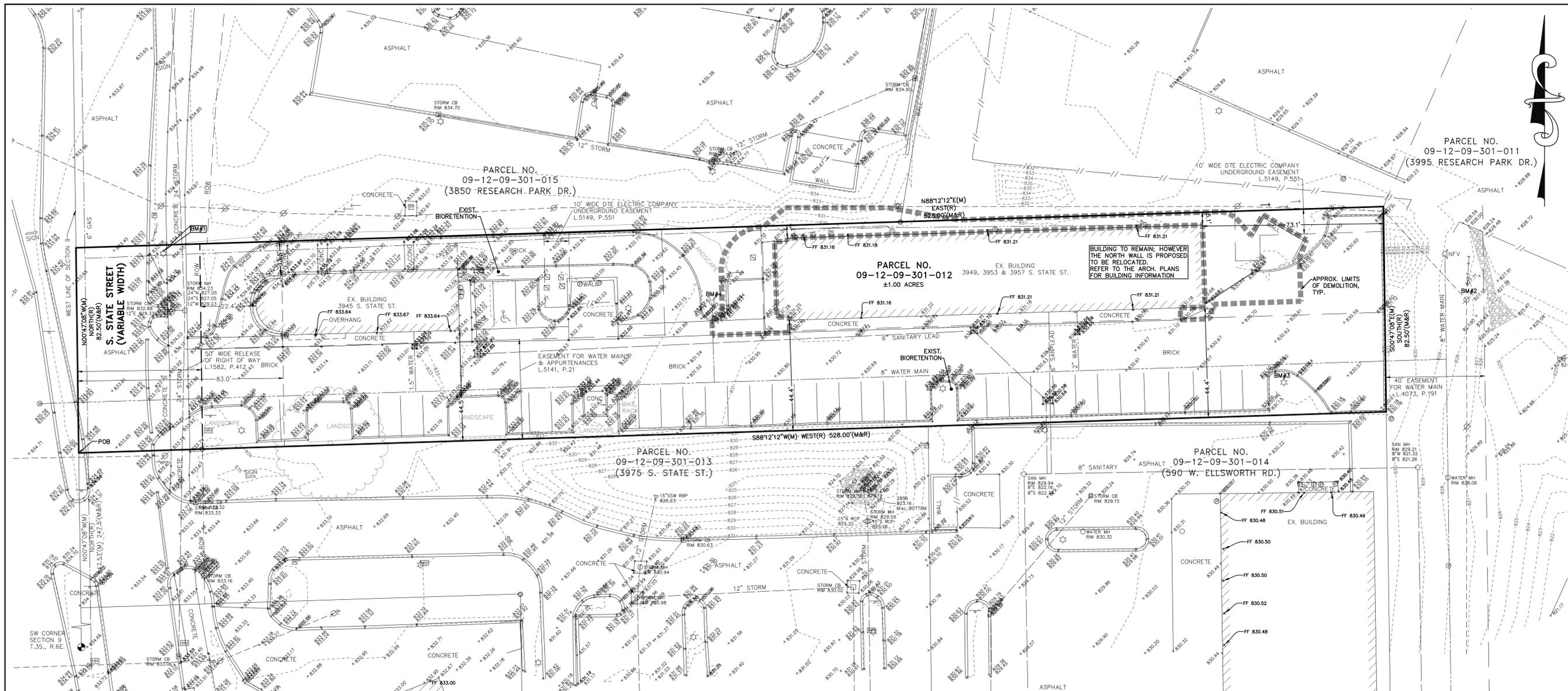
CHF: RDF

SCALE: HOR 1" = 20 FT.  
VER 1" = 10 FT.

**C-1**

21-409

NOT FOR CONSTRUCTION



**DEMOLITION NOTES:**

- DEMOLITION PLAN IS FOR GENERAL INFORMATION PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND COORDINATING WITH OWNER TO DETERMINE DETAILED DEMOLITION REQUIREMENTS.
- CONTRACTOR TO COORDINATE WITH FRANCHISE UTILITY COMPANIES AND/OR CITY AND COUNTY DEPARTMENTS FOR REMOVAL AND/OR RELOCATION OF METER BOXES, UTILITY POLES, UNDERGROUND LINES, ABOVE GROUND LINES, ETC., AS NECESSARY.
- REMOVE EXISTING BUILDING WALLS, FLOOR SLABS, AND FOUNDATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER. BACKFILL THE OPENING WITH SUITABLE MATERIAL TO CARRY BUILDING/PARKING LOT LOADS.
- REMOVE OR GROUT IN PLACE, AS DIRECTED BY THE FIELD INSPECTOR, EX. SEWERS AND/OR MAINS TO BE ABANDONED AS NECESSARY.
- CONTACT OWNER FOR ENVIRONMENTAL REPORT FOR ANY ENVIRONMENTAL CONCERNS.
- CONTRACTOR IS RESPONSIBLE FOR DOING AN EARTHWORK CALCULATION FOR CUT AND FILL REQUIREMENTS, AND IS RESPONSIBLE FOR INCLUDING IMPORT AND EXPORT OF MATERIALS IN THEIR BID. ALL EXCESS MATERIAL (INCLUDING TOPSOIL, CLEAN FILL, AND WASTE MATERIAL) SHALL BE REMOVED FROM THE SITE.
- CONTRACTOR TO PROTECT EX. WALKS, POSTS, CONDUITS, PAVEMENT, CURBS, GUTTER, WALLS, BUILDINGS, FENCES, LANDSCAPING, TREES, ETC. TO REMAIN DURING CONSTRUCTION. CONTRACTOR TO COORDINATE REPLACEMENT OF LANDSCAPING, ETC. WITH THE OWNER.
- PRIOR TO THE REMOVAL OR ABANDONMENT OF ANY EX. UNDERGROUND UTILITY OR BUILDING SERVICE LINES CALLED FOR ON THE PLANS OR DISCOVERED DURING EXCAVATION, THE CONTRACTOR MUST DETERMINE IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE. IF THE UTILITY LINE OR BUILDING SERVICE IS IN USE/ACTIVE THE CONTRACTOR MUST TAKE ALL THE NECESSARY STEPS TO GUARANTEE THAT THE UTILITY LINE OR BUILDING SERVICE IS RECONNECTED WITHOUT AN INTERRUPTION IN SERVICE. THE RECONNECTION OF THE UTILITY LINE OR BUILDING SERVICE MUST BE IN ACCORDANCE WITH THE STANDARDS AND THE REQUIREMENTS OF THE APPROPRIATE GOVERNMENTAL AGENCY OR PRIVATE UTILITY COMPANY.
- CONTRACTOR TO COORDINATE WITH THE ADJACENT LAND OWNERS AS REQUIRED.
- FIELD VERIFY EXISTING PAVEMENT AND CURB ELEVATIONS WHERE PROPOSED PAVEMENT AND CURB MEETS EXISTING PAVEMENT AND CURB. PAVING CONTRACTOR SHALL TAKE EXTRA CARE TO ENSURE PAVEMENT SLOPES AWAY FROM BUILDINGS. THE PARKING LOT IS DESIGNED AS PERMEABLE PAVEMENT. CONTRACTOR TO FOLLOW BEST PRACTICES TO ENSURE THE PERMEABLE PAVEMENT FUNCTIONS AS DESIGNED.
- CONTRACTOR TO ESTABLISH NEW BENCHMARKS, IF NECESSARY PRIOR TO DEMOLITION WORK.
- CONTRACTOR TO COORDINATE OBTAINING RIGHT-OF-WAY PERMITS FOR WORK WITHIN THE ROW AS NECESSARY.

**NOTICE:**

CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

**NOTE:**

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

**LEGAL DESCRIPTION:**

COMMENCING AT A POINT IN THE SOUTHWEST 1/4 OF SECTION 9, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, WHICH POINT IS DISTANT NORTH 247.5 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION 9, RUNNING THENCE EAST 528.00 FEET; THENCE NORTH 82.5 FEET; THENCE WEST 528.00 FEET; THENCE SOUTH 82.5 FEET TO THE PLACE OF BEGINNING, EXCEPTING AND RESERVING THE USE OF THE WEST 83.00 FEET AND THE EAST 30.00 FEET THEREOF FOR HIGHWAY AND PUBLIC UTILITY PURPOSES, ALSO KNOWN AS PARCEL 4 OF THE JOHN LAWRENCE FARM.

**EXCEPTIONS:**

- PER ATA NATIONAL TITLE GROUP FILE NO. 81-21788504-SCM, DATED JUNE 22, 2021.
- MORTGAGE EXECUTED BY JAG BRIARWOOD, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY TO INDEPENDENT BANK DATED MAY 17, 2017 AND RECORDED JUNE 20, 2017 IN LIBER 5211, PAGE 444, WASHTENAW COUNTY RECORDS. **AFFECTS, NOTHING TO PLOT**
  - ASSIGNMENT OF LEASES AND RENTS EXECUTED BY JAG BRIARWOOD, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY TO INDEPENDENT BANK DATED MAY 17, 2017 AND RECORDED JUNE 20, 2017 IN LIBER 5211, PAGE 445, WASHTENAW COUNTY RECORDS. **AFFECTS, NOTHING TO PLOT**
  - MORTGAGE EXECUTED BY JAG BRIARWOOD, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY TO INDEPENDENT BANK DATED JUNE 24, 2019 AND RECORDED JULY 2, 2019 IN LIBER 5309, PAGE 758, WASHTENAW COUNTY RECORDS. **AFFECTS, NOTHING TO PLOT**
  - ASSIGNMENT OF LEASES AND RENTS EXECUTED BY JAG BRIARWOOD, L.L.C., A MICHIGAN LIMITED LIABILITY COMPANY TO INDEPENDENT BANK DATED JUNE 24, 2019 AND RECORDED JULY 2, 2019 IN LIBER 5309, PAGE 759, WASHTENAW COUNTY RECORDS. **AFFECTS, NOTHING TO PLOT**
  - HIGHWAY EASEMENT RELEASE TO MICHIGAN STATE HIGHWAY DEPARTMENT RECORDED IN LIBER 609, PAGE 489, WASHTENAW COUNTY RECORDS. **DOES NOT AFFECT**
  - RELEASE OF RIGHT OF WAY TO THE BOARD OF COUNTY ROAD COMMISSIONERS RECORDED IN LIBER 1582, PAGE 412, WASHTENAW COUNTY RECORDS. **AS SHOWN HEREON**
  - EASEMENT FOR WATER MAINS AND APPURTENANCES PURPOSES VESTED IN CITY OF ANN ARBOR BY INSTRUMENT RECORDED IN LIBER 5141, PAGE 21, WASHTENAW COUNTY RECORDS. **AS SHOWN HEREON**
  - DTE ELECTRIC COMPANY UNDERGROUND EASEMENT RECORDED IN LIBER 5149, PAGE 551, WASHTENAW COUNTY RECORDS. **AS SHOWN HEREON**

**NOTES:**

- ALL WORK TO CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF CITY, COUNTY, AND STATE.
- CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
- BEARINGS BASED ON MICHIGAN STATE PLANE COORDINATES, NAD83 MICHIGAN SOUTH ZONE.

**LEGEND:**

□	EX. CATCH BASIN	---	EX. WATER MAIN
○	EX. MANHOLE	---	EX. ELECTRIC CABLE
◇	EX. END SECTION	---	EX. COMMUNICATION
⊕	EX. OVERFLOW STRUCTURE	---	EX. GAS LINE
⊖	EX. DOWNSPOUT/ROOF DRAIN	---	EX. OVERHEAD LINE
⊙	EX. CLEANOUT	---	EX. SIGN
⊗	EX. WATER GATE VALVE	⊙	EX. POST/BOLLARD
⊘	EX. HYDRANT	⊙	EX. FLAGPOLE
⊙	EX. WATER VALVE	⊙	EX. SATELLITE DISH
⊙	EX. WATER SHUTOFF	⊙	EX. BOULDER
⊙	EX. FIRE DEPT. CONNECTION	⊙	EX. TREE STUMP
⊙	EX. GAS SHUTOFF	⊙	EX. PARKING METER
⊙	EX. GAS VENT	⊙	EX. UTILITY MARKER
⊙	EX. ELECTRIC/GAS METER	⊙	EX. SOIL BORING
⊙	EX. HANDHOLE	⊙	EX. MAILBOX
⊙	EX. PEDESTAL	⊙	EX. GENERATOR
⊙	EX. TRANSFORMER	⊙	EX. MONITOR WELL
⊙	EX. LIGHTPOLE	⊙	EX. AIR CONDITIONER
⊙	EX. UTILITY POLE	⊙	EX. TRAFFIC SIGNAL
⊙	EX. GUY ANCHOR	⊙	EX. FENCE
⊙	EX. TREE	F.F.	FINISH FLOOR ELEVATION
⊙	EX. TREE TAG & NUMBER	NFV	NOT FIELD VERIFIED
⊙	EX. TREE LINE	---	APPROX. LIMITS OF DEMOLITION, CONTRACTOR TO COORDINATE WITH THE OWNER AND ADJACENT PROPERTY OWNER(S) AS NECESSARY
⊙	EX. SANITARY SEWER		
⊙	EX. STORM SEWER		



**BENCHMARKS:**

- BM#1 - ARROW ON LIGHT POLE ON EAST SIDE OF STATE ST. NORTHERN PROPERTY LINE OF SUBJECT PARCEL. ELEVATION - 834.87 NAVD88
- BM#2 - SPIKE IN POWERPOLE ~33 FT. EAST OF EAST PROPERTY OF SUBJECT PARCEL. ELEVATION - 829.60 NAVD88
- BM#3 - CHISELED "X" ON NORTH SIDE LIGHT POLE BASE NEAR SOUTHEAST CORNER OF SITE. ELEVATION - 832.14 NAVD88
- BM#4 - ARROW ON HYDRANT IN CURB ISLAND JUST EAST OF DRIVE THRU ENTRANCE BETWEEN BUILDINGS. ELEVATION - 834.25 NAVD88

**CERTIFICATION:**

TO: JAG BRIARWOOD, L.L.C. & ATA NATIONAL TITLE GROUP, L.L.C.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS. THE FIELD WORK WAS COMPLETED ON 7-22-2021.

JOHN D. HEIKINEN  
PROFESSIONAL SURVEYOR NO. 4001047952  
EMAIL: JOHN@ALPINE-INC.NET

NOT FOR CONSTRUCTION

COMMERCIAL  
ALTA/NSPS  
SITE ENGINEERING  
INDUSTRIAL & MULTI-UNIT  
LAND SURVEYING  
CONSTRUCTION LAYOUT

RESIDENTIAL  
SUBDIVISIONS  
SITE CONDOMINIUM  
MULTI-FAMILY  
LOT PLANS  
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JACK SCHWARZ  
ALTA/NSPS LAND TITLE SURVEY  
AND DEMOLITION PLAN  
SECTION: 9  
TOWNSHIP: 3 S  
RANGE: 6 E  
PITTSFIELD TOWNSHIP  
WASHTENAW COUNTY  
MICHIGAN

CLIENT: JACK SCHWARZ

REVISED

DATE: 11-17-2021

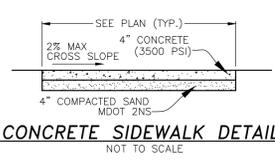
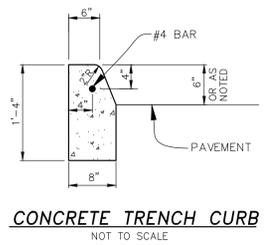
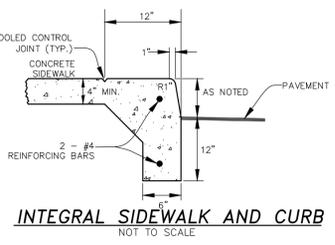
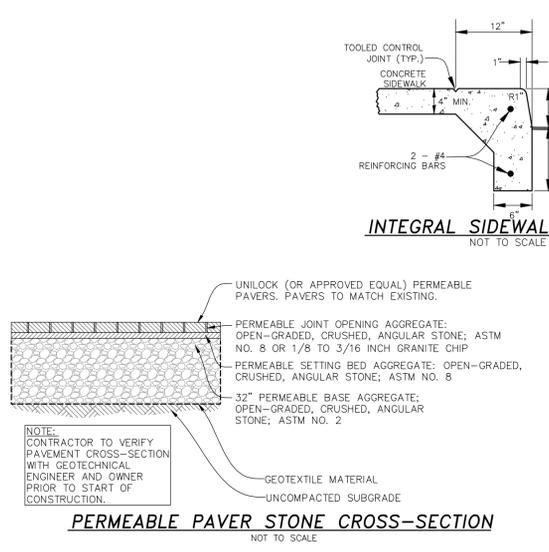
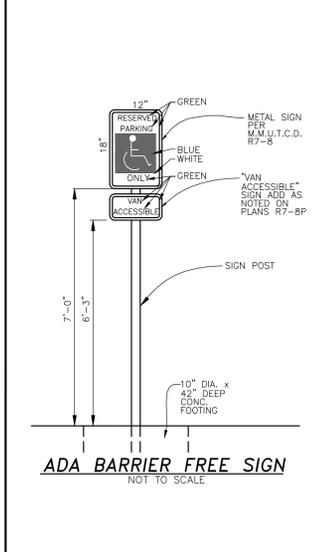
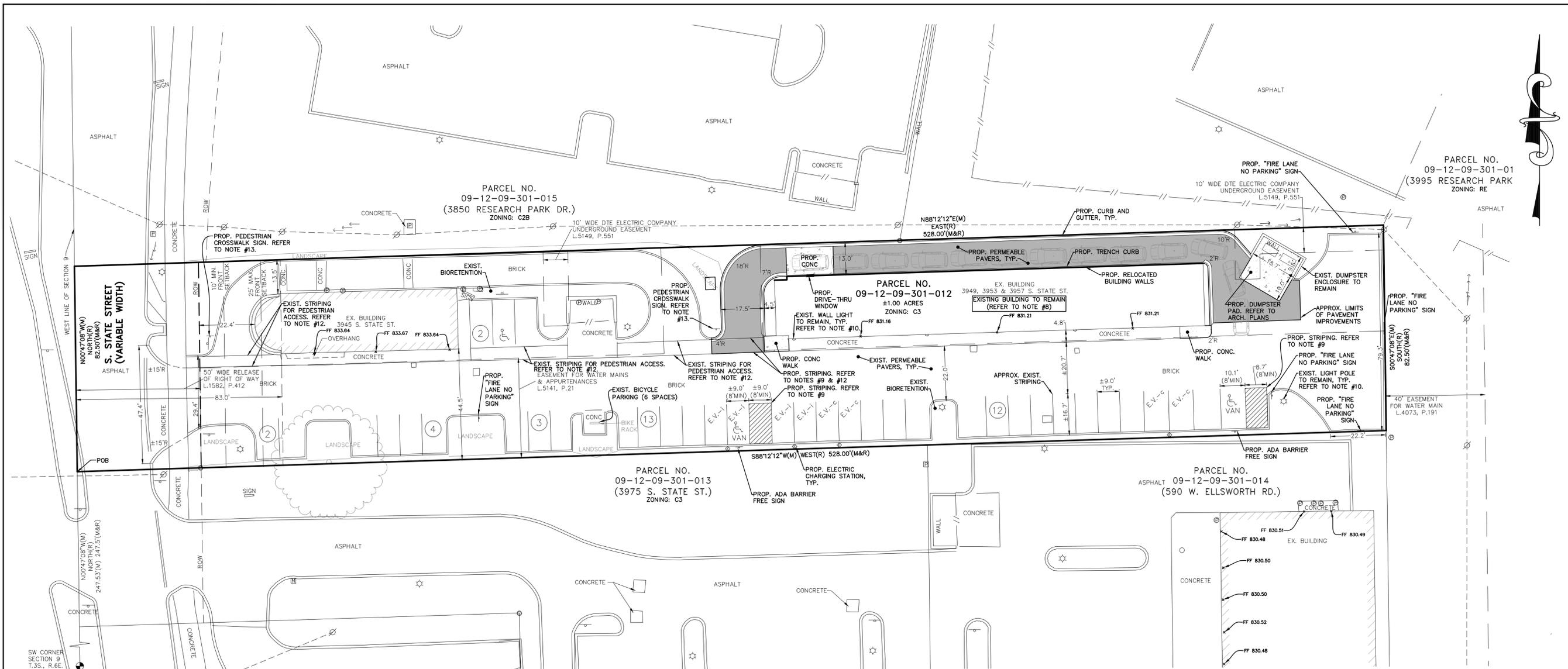
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CHECKED BY: JDH

DATE: \_\_\_\_\_

FBK: 384  
CHF: RDF

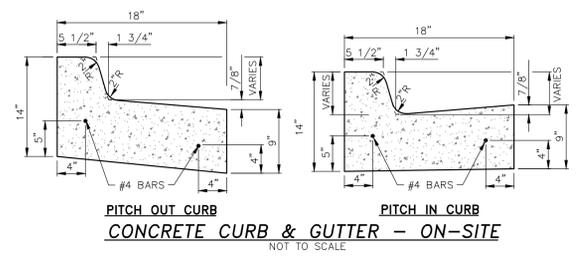
C-2  
SCALE: HOR 1" = 20 FT.  
VER 1" = 10 FT.

21-409



**PERMEABLE PAVEMENT INSTALLATION AND MAINTENANCE**

- INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.
- PERMEABLE PAVEMENTS REQUIRE REGULAR AND EFFECTIVE MAINTENANCE TO ENSURE PROLONGED FUNCTIONING.
  - ADJACENT AREAS THAT DRAIN TO THE PERMEABLE PAVEMENT AREA SHOULD BE PERMANENTLY STABILIZED AND MAINTAINED TO LIMIT THE SEDIMENT LOAD TO THE SYSTEM.
  - ANY USE OF SALT OR SAND FOR DE-ICING AND TRACTION IN THE WINTER SHOULD BE MINIMIZED.
  - VACUUM SWEEPING SHOULD BE TYPICALLY PERFORMED A MINIMUM OF TWICE A YEAR. ADJUST THE FREQUENCY IF NEEDED.



- NOTES:**
- ALL WORK TO CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF CITY, COUNTY, AND STATE.
  - CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
  - BUILDINGS TO UTILIZE EXISTING LEADS.
  - CONTRACTOR TO PLACE BOLLARDS PER ARCHITECTURAL DRAWINGS, IF ANY PROPOSED. CONTRACTOR TO VERIFY THAT ADA ACCESS IS NOT IMPACTED BY THE BOLLARDS.
  - ALL SIDEWALKS SHALL BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME. PRIOR TO THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALKS IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS.
  - THE MAXIMUM LONGITUDINAL SLOPE ALONG THE ADA ACCESS ROUTE IS 5%. THE MAXIMUM CROSS-SLOPE OF THE ADA ACCESS ROUTE IS 2%.
  - ALL DIMENSIONS FROM BACK OF CURB TO BACK OF CURB UNLESS OTHERWISE NOTED.
  - EXISTING BUILDING TO REMAIN; HOWEVER THE NORTHERN BUILDING WALL TO BE RELOCATED 8' SOUTH TO ACCOMMODATE THE PROPOSED DRIVE-THRU. CONTRACTOR TO VERIFY DIMENSIONS OF ALL IMPROVEMENTS (WALLS, WINDOWS, DRIVE-THRU WINDOWS, DOORS, ETC.) WITH THE ARCHITECTURAL PLANS PRIOR TO START OF CONSTRUCTION.
  - EXISTING STRIPING IS ACCOMPLISHED WITH DIFFERENT COLOR PAWING STONES. CONTRACTOR TO ADJUST BRICKS AND/OR PAINT AS REQUIRED BY THE CITY INSPECTOR. CONTRACTOR TO VERIFY THE ADA PARKING SPACE/ACCESS AISLE MEET ADA DIMENSION REQUIREMENTS.
  - REFER TO THE PHOTOMETRICS PLAN PREPARED BY OTHERS.
  - REMOVAL AND RESTORATION OF THE EXISTING BIORETENTION AREAS, LIGHT POLES, AND PERMEABLE BRICK PAVERS LOCATED WITHIN THE PUBLIC UTILITY EASEMENT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER IN THE EVENT OF UTILITY MAIN MAINTENANCE, REPAIR, AND/OR REPLACEMENT.
  - CONTRACTOR TO APPLY HIGH VISIBILITY TRAFFIC STRIPING PAINT (RUST-OLEUM PROFESSIONAL TRAFFIC STRIPING PAINT (COLOR: TRAFFIC WHITE) OR SIMILAR) ON THE PAVERS CURRENTLY DEMARCATING THE PEDESTRIAN PATH AND THE PROPOSED PEDESTRIAN PATH. CONTRACTOR TO VERIFY THE PEDESTRIAN PATH (EXISTING/PROPOSED) MEETS ADA REQUIREMENTS.
  - CONTRACTOR TO PROVIDE PEDESTRIAN CROSSWALK SIGNS. R1-5b OR APPROVED EQUAL.

**LEGEND:**

	EX. HYDRANT
	EX. PEDESTAL
	EX. TRANSFORMER
	EX. LIGHTPOLE
	EX. UTILITY POLE
	EX. GUY ANCHOR
	EX. OVERHEAD LINE
	EX. SIGN
	EX. POST/BOLLARD
	EX. FLAGPOLE
	EX. MAILBOX
	EX. GENERATOR
	EX. MONITOR WELL
	EX. AIR CONDITIONER
	EX. TRAFFIC SIGNAL
	EX. FENCE
	FINISH FLOOR ELEV.
	PROP. CURB & GUTTER
	PROP. PERMEABLE PAVEMENT
	PROP. CONCRETE
	PROP. ELECTRIC CHARGING STATION
	PROP. PARKING SPACE FOR ELECTRIC VEHICLE
	EV-1: ELECTRIC VEHICLE INSTALLED
	EV-R: ELECTRIC VEHICLE READY
	EV-C: ELECTRIC VEHICLE CAPABLE

**NOTICE:**  
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

**NOTE:**  
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.



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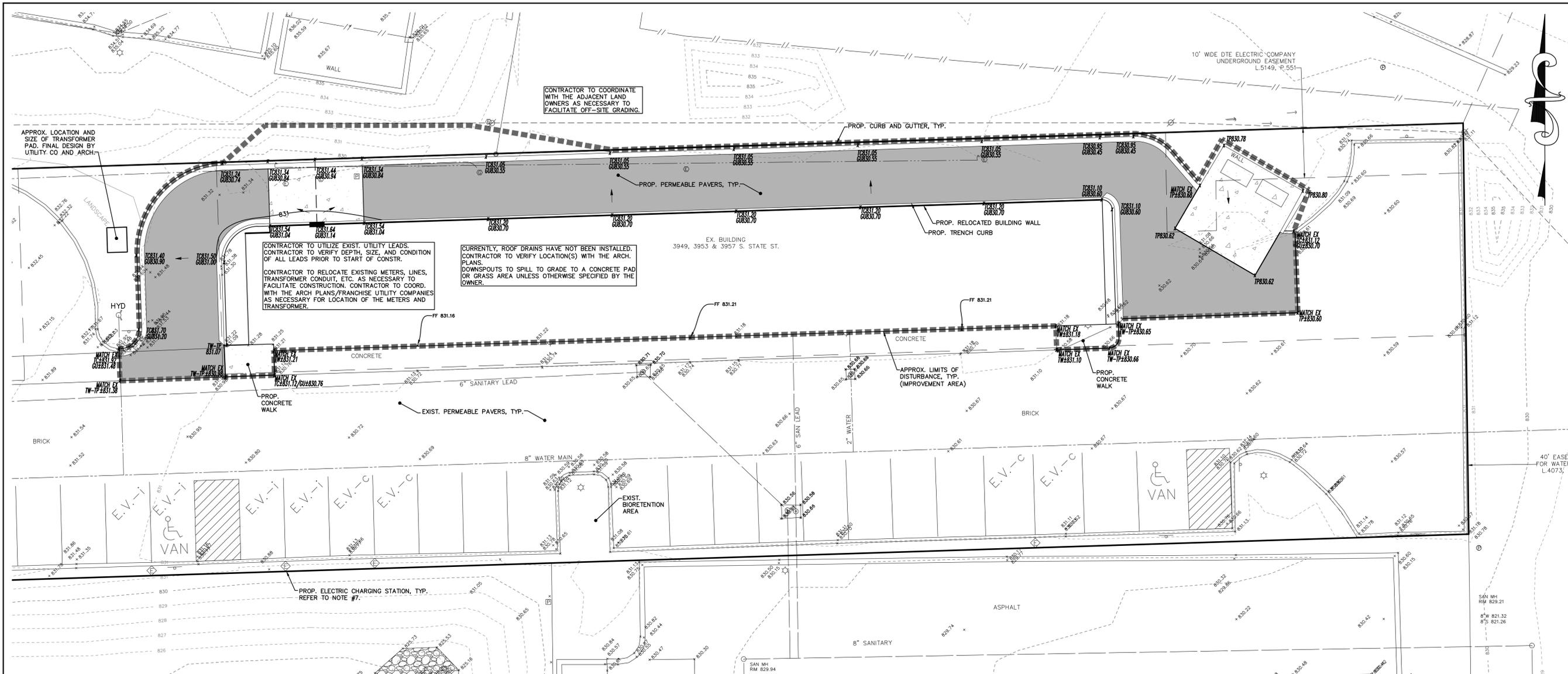
**DIMENSIONAL LAYOUT PLAN**

CLIENT: JACK SCHWARCZ

RENOVATION OF 3945 S. STATE STREET RANGE: 6 E  
SECTION: 9 ANN ARBOR WASHTEENAW COUNTY MICHIGAN

REVISED
05-16-2023 SUBMITTAL
04-25-2023 SUBMITTAL
02-16-2023 SUBMITTAL
08-17-2022 SUBMITTAL
04-19-2022 SUBMITTAL
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DRAWN BY: SD
CHECKED BY: TG
FBK: 384
CHF: RDF
SCALE: HOR 1"=20 FT. VER 1"=
21-409

NOT FOR CONSTRUCTION



- NOTES:**
- ALL WORK TO CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF CITY, COUNTY, AND STATE.
  - CONTRACTOR TO FIELD VERIFY LOCATION, DEPTH, AND SIZE OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
  - CONTRACTOR TO PLACE BOLLARDS PER ARCHITECTURAL DRAWINGS, IF ANY PROPOSED. CONTRACTOR TO VERIFY THAT ADA ACCESS IS NOT IMPACTED BY THE BOLLARDS.
  - PER CHAPTER 49 OF THE CITY CODE, ALL SIDEWALKS SHALL BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME. PRIOR TO THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALKS IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS.
  - THE MAXIMUM LONGITUDINAL SLOPE ALONG THE ADA ACCESS ROUTE IS 5%. THE MAXIMUM CROSS-SLOPE OF THE ADA ACCESS ROUTE IS 2%.
  - NO FIREWALLS EXIST OR ARE PROPOSED.
  - REMOVE AND REPLACE CURB/BRICK PAVERS/ETC AS NECESSARY TO FACILITATE UTILITY CONNECTION TO THE ELECTRIC CHARGING STATION. CROSS-SECTIONS TO MATCH EXISTING.

**LEGEND:**

○	EX. CATCH BASIN	○	EX. FLAGPOLE
○	EX. MANHOLE	○	EX. WATER WELL
○	EX. END SECTION	○	EX. SOIL BORING
○	EX. OVERFLOW STRUCTURE	○	EX. MAILBOX
○	EX. CLEANOUT	○	EX. GENERATOR
○	EX. WATER GATE VALVE	○	EX. MONITOR WELL
○	EX. HYDRANT	○	EX. AIR CONDITIONER
○	EX. WATER VALVE	○	EX. TRAFFIC SIGNAL
○	EX. WATER SHUTOFF	○	EX. FENCE
○	EX. FIRE DEPT. CONN.	○	EX. FINISH FLOOR ELEV.
○	EX. GAS SHUTOFF	○	PROP. TOP OF CURB ELEV.
○	EX. GAS VENT	○	PROP. TOP OF WALK ELEV.
○	EX. ELECTRIC/GAS METER	○	PROP. TOP OF PAVEMENT ELEV.
○	EX. HANDHOLE	○	PROP. SPOT ELEV.
○	EX. PEDESTAL	○	PROP. DRAINAGE ARROW
○	EX. TRANSFORMER	○	PROP. SILT FENCE
○	EX. LIGHTPOLE	○	PROP. PERMEABLE PAVEMENT
○	EX. UTILITY POLE	○	PROP. CONCRETE
○	EX. CUY ANCHOR	○	PROP. ELECTRIC CHARGING STATION
○	EX. SANITARY SEWER	○	PROP. PARKING SPACE FOR ELECTRIC VEHICLE
○	EX. STORM SEWER	○	EV-I/ EV-II/ EV-C
○	EX. WATER MAIN	○	PROP. ELECTRIC VEHICLE INSTALLED
○	EX. ELECTRIC CABLE	○	EV-I/ EV-II/ EV-C
○	EX. COMMUNICATION	○	PROP. ELECTRIC VEHICLE READY
○	EX. GAS LINE	○	EV-C/ ELECTRIC VEHICLE CAPABLE
○	EX. OVERHEAD LINE		
○	EX. SIGN		
○	EX. POST/BOLLARD		

- SOIL EROSION CONTROL NOTES**
- ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY/COUNTY/STATE.
  - ALL TEMPORARY AND PERMANENT (POST CONSTRUCTION) SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE CITY/COUNTY/STATE.
  - THE CONTRACTOR SHALL MAKE DAILY INSPECTIONS TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
  - EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
  - EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
  - PERMANENT SOIL EROSION CONTROL MEASURES FOR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED.
  - ALL MUD/DIRT TRACKED ONTO EXISTING CITY/STATE ROADS FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR/BUILDER.
  - CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED.
  - STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
  - ESTIMATED COST OF THE SOIL EROSION AND SEDIMENTATION CONTROL METHODS IS \$3,000.

- MAINTENANCE REQUIREMENTS**
- INSPECTION & MAINTENANCE OF SOIL EROSION CONTROL MEASURES TO BE CONDUCTED ON A WEEKLY BASIS OR AS INDICATED BELOW, WHICHEVER IS SOONER.
- PERMEABLE PAVEMENT**  
PERMEABLE PAVEMENT SHOULD BE SWEEP WEEKLY AND VACUUMED IMMEDIATELY AFTER THE SITE IS STABILIZED.
- SEEDING, SODDING & MULCHING**  
SEED, SODDED OR MULCHED AREAS SHOULD BE CHECKED FOLLOWING EACH RAIN TO ENSURE THE MATERIAL IS STAYING IN PLACE. ADDITIONAL TACKING MATERIALS OR NETTING MAY NEED TO BE APPLIED TO HOLD THE AFOREMENTIONED MATERIALS IN PLACE. MAINTENANCE PROCEDURES SHOULD ALSO BE FOLLOWED FOR THE BMP'S WHICH WERE IMPLEMENTED TO KEEP ERODED SOIL OR CONCENTRATED RUNOFF AWAY FROM THESE TARGET AREAS.

- SEQUENCE OF CONSTRUCTION**
- INSTALL CATCH BASIN INLET FILTERS ON EXISTING DRAINAGE STRUCTURES. INSTALL SILT FENCE. (SUMMER 2023)
  - DEMOLISH A PORTION OF THE EXISTING BUILDING (REFER TO THE ARCHITECTURAL PLANS)/CURB/PARKING LOT. (SUMMER 2023)
  - COMMENCE LAND BALANCE AND MASS GRADING OPERATIONS. STOCKPILES SHOULD BE LOCATED AWAY FROM EXISTING DRAINAGE FACILITIES INCLUDING THE PERMEABLE PAVEMENT. (SUMMER 2023)
  - INSTALL CURB & GUTTER AND PAVING INCLUDING THE PERMEABLE PAVEMENT SYSTEM. CONTRACTOR TO STABILIZE ANY AREAS DRAINING TO THE PROPOSED PERMEABLE PAVEMENT AREA PRIOR TO THE INSTALLATION OF THE PERMEABLE PAVERS. CONTRACTOR TO REFER TO THE MAINTENANCE REQUIREMENTS ABOVE AND THE DETAIL ON SHEET C-3 FOR ADDITIONAL INFORMATION. CURBING AND PAVERS SHALL BE IN PLACE PRIOR TO ANY VERTICAL CONSTRUCTION (SUMMER 2023)
  - BEGIN BUILDING RENOVATION. (SUMMER 2023)
  - INSTALL LANDSCAPING MATERIALS. SEED & MULCH OR SOD ALL DISTURBED AREAS. (FALL 2023)
  - REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ONCE PERMANENT MEASURES ARE ESTABLISHED. (FALL 2023)

**SANITARY SEWER FLOW MITIGATION CALCULATIONS:**  
CALCULATIONS PREVIOUSLY APPROVED BY THE S111-118 SITE PLAN (SHOWN BELOW) REFER TO THE PLANS PREPARED BY ATELIER ARCHITECTS, LLC AND REVISED PER MIDWESTERN CONSULTING LLC ON 2-14-2017 FOR ADDITIONAL INFORMATION.

**SANITARY SEWER FLOW DATA AND CALCULATIONS:**  
PREVIOUSLY APPROVED

MAIN PIPE 8" PVC SDR 26

RETAIL BUILDING AREA • 5,635 SQFT  
FLOW • 0.00000000 • 342 GPD (TABLE A)  
RESTAURANT • 41 SEATS  
FLOW • 4000 • 800 GPD (TABLE A)  
TOTAL FLOW • 342+800 • 1162 GPD

PEAK FLOW • 1162 GPD x 4 (PEAKING FACTOR) x 11 (SYSTEM RECOVERY FACTOR) • 5113 GPD  
PEAK FLOW • 5113 GPD • 0.00000000 • 3355 GALL/MIN

AVAILABLE CAPACITY OF 8" PIPE @ 0.6% SLOPE • 123 CFS @ PEAK FLOW 0.00000000 CFS OK

FOR PEAK FLOW • 3355 GALL/MIN  
USING 4 GPM/HOUR FOOTING DRAIN FLOW (VALUE BASED ON BMP FLOW MONITORING)  
FOOTING DRAIN TO DISCONNECT • 180/4 • 0.99 • 1 FDC

THE DEVELOPMENT WOULD REQUIRE TO DISCONNECT 1 (ONE) FOOTING DRAIN FROM THE SANITARY SEWER SYSTEM

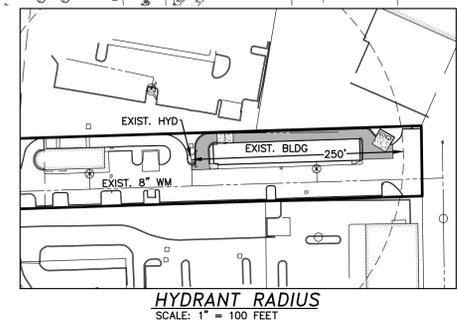
**PROPOSED FLOWS:**

<b>BUILDING #1</b>	Floor Area	1900	sf
<b>3945 S. STATE ST. (JIMMY JOHN'S RESTAURANT)</b>	Est. Number of Seats	41	seats
	Fast Food Restaurants and Coffee Shops	20	gpd/seat*
		= 41 seats x 20 gpd/seat =	820
			gpd
<b>BUILDING #2</b>	Floor Area	1322	sf
<b>3949 S. STATE ST. (ASSUME NON-MEDICAL OFFICE SPACE)</b>	Non-Medical Office Space	0.06	gpd/sf of gross floor area*
		= sf x 0.06 gpd/sf =	79
			gpd
<b>3953 S. STATE ST. (ASSUME NON-MEDICAL OFFICE SPACE)</b>	Floor Area	1383	sf
	Non-Medical Office Space	0.06	gpd/sf of gross floor area*
		= sf x 0.06 gpd/sf =	83
			gpd
<b>3957 S. STATE ST. (ASSUME NON-MEDICAL OFFICE SPACE)</b>	Floor Area	1220	sf
	Non-Medical Office Space	0.06	gpd/sf of gross floor area*
		= sf x 0.06 gpd/sf =	73
			gpd
	Total Proposed Design Flow =	1055	gpd
	Total Proposed Peak Flow =	4642	gpd
	= Total Designed Flow x 4.0 (peaking factor) x 1.1 (system recovery factor)		
	= 1 day/24 hours x 1 hour/60 minutes =	3.2	gpm

**COMPARISON OF PREVIOUSLY APPROVED AND PROPOSED SANITARY SEWER PEAK FLOWS**

Previously Approved:	3.6	gpm
Proposed:	3.2	gpm
	= -0.4	gpm

Reduction in estimated flow due to the proposed reduction in building #2's floor area.  
No mitigation is required as part of this site plan.  
\*Table A from the "Sanitary Flow Offset Mitigation For Development" (Dated February 12, 2019)



**NOTICE:**  
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**NOTE:**  
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**ESTIMATED EXCAVATION/FILL QUANTITIES**  
(SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR DOING AN EARTHWORK CALCULATIONS FOR CUT AND FILL REQUIREMENTS. REFER TO NOTE #6 ON THE ALTA LAND SURVEY AND DEMOLITION PLAN)

EXCAVATION	FILL	NET
±19 CU. YD.	±0 CU. YD.	±19 CU. YD. (CUT)

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PARCEL SPLITS

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LOT PLANS  
CONSTRUCTION LAYOUT

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**PRELIMINARY ENGINEERING PLAN**

JACK SCHWARZ

3945 S. STATE STREET  
ANN ARBOR  
WASHTENAW COUNTY  
MICHIGAN

SECTION: 9

TOWNSHIP: 3 S  
RANGE: 6 E

REVISED

02-16-2023 SUBMITTAL

08-17-2022 SUBMITTAL

04-19-2022 SUBMITTAL

03-25-2022 SUBMITTAL

DATE: 11-17-2021

DRAWN BY: SD

CHECKED BY: TG

FBK: 384

CHF: RDF

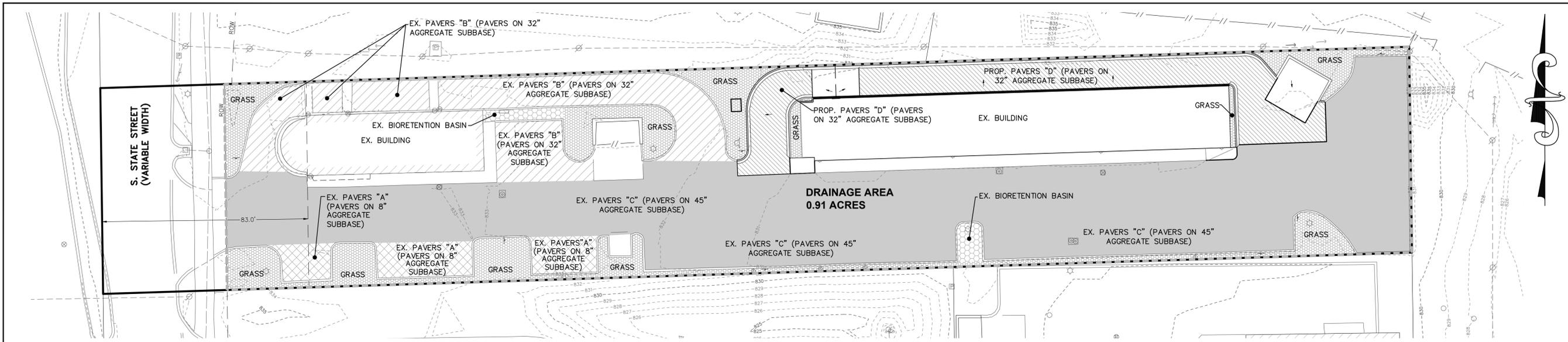
C-4

SCALE: HOR 1"=10 FT.  
VER 1"=10 FT.

21-409



NOT FOR CONSTRUCTION



**STORM WATER MANAGEMENT NARRATIVE**

THE SITE'S STORM WATER MANAGEMENT WAS PREVIOUSLY APPROVED [PLANS PREPARED BY ATELIER ARCHITECT, INC. AND REVISED PER MIDWESTERN CONSULTING LLC ON 2-14-2017]. A PORTION OF THE EXISTING BUILDING IS PROPOSED TO BE REMOVED TO CONSTRUCT THE DRIVE-THRU LANE. THE DRIVE-THRU LANE IS PROPOSED TO BE CONSTRUCTED WITH A PERVIOUS PAVEMENT CROSS-SECTION SIMILAR TO THE EXISTING PARKING LOT.

**DETENTION REQUIREMENTS**

**W1**  
**DETERMINING POST-DEVELOPMENT COVER TYPES, AREAS, CURVE NUMBERS, AND RUNOFF COEFFICIENTS**

Total Site Area: 39.428 ac  
 Total Drainage area of AREA #1: 0.91 ac

Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient (c)	(c)(Area)
blgd/pvmt	n/a	10,249	0.24	0.95	0.22
perm. pvm	group B	24,510	0.56	0.85	0.48
grass	group B	4,669	0.11	0.25	0.03
<b>Total:</b>					<b>0.73</b>
					Total - $\sum C(Area) = 0.73$
					Total - $\sum ac \text{ or } \sum sf = 0.91$
					Weighted C - $\sum C(Area) / \sum ac \text{ or } \sum sf = 0.80$

NRCS Variables (PERVIOUS)	Pervious Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(c)(Area)
	grass	Group B	4,669	0.11	61	6.71
<b>Total:</b>					<b>0.11</b>	
					Total - $\sum C(Area) = 6.71$	
					Total - $\sum ac \text{ or } \sum sf = 0.11$	
					Weighted C - $\sum C(Area) / \sum ac \text{ or } \sum sf = 61$	

NRCS Variables	Impervious Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(c)(Area)
	blgd/pvmt	n/a	10,249	0.24	98	23.52
	perm. pvm	n/a	24,510	0.56	98	54.88
<b>Total:</b>					<b>0.80</b>	
					Total - $\sum C(Area) = 78.40$	
					Total - $\sum ac \text{ or } \sum sf = 0.80$	
					Weighted C - $\sum C(Area) / \sum ac \text{ or } \sum sf = 98$	

**W2**  
**FIRST FLUSH - RATIONAL METHOD**  
 First Flush Runoff Calculations ( $V_{ff}$ )

$V_{ff} = (1.1)^2 (1/12)^2 (43560 \text{ ft}^2 / 1 \text{ ac}) \cdot A \cdot C$

$V_{ff} = 2,629 \text{ cf}$

**W3**  
**STANDARD METHOD RUNOFF VOLUME CALCS - Pre-Development Bankfull Runoff Calculations ( $V_{bf-pre}$ )**

- A. 2 year/24 hour storm event, P P= 2.35 in
- B. The pre-development land cover will be Good Cover Woods or Meadow. Determine the associated soil hydrologic group for the entire site and choose the curve number. CN= 58
- C. S = (1000/CN) - 10 = 7.24
- D. Q = (P - 0.2"S)/2 / (P + 0.8"S) = 0.10
- E. Drainage area excluding "Self-Crediting" BMPs = 39,428 sf
- F.  $V_{bf-pre} = Q(1/12) \cdot \text{Area} = 328 \text{ cf}$

**NOTICE:**  
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**SOIL INFORMATION:**  
 REFER TO THE "REPORT ON SOI INVESTIGATION" PREPARED BY A&M CONSULTANTS AND DATED DECEMBER 5, 2011.

**NOTE:**  
 THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

**NOTE:**  
 INFORMATION REGARDING THE PAVEMENT CROSS-SECTIONS TAKEN FROM THE PREVIOUSLY APPROVED [PLANS PREPARED BY ATELIER ARCHITECT, INC. AND REVISED PER MIDWESTERN CONSULTING LLC ON 2-14-2017].

**W4**  
**STANDARD METHOD RUNOFF VOLUME CALCS - Post-Development Bankfull Runoff Calculations - Pervious ( $V_{bf-pervious-post}$ )**

- A. 2 year/24 hour storm event, P P= 2.35 in
- B. Pervious Cover CN from Worksheet 1 CN= 61
- C. S = (1000/CN) - 10 = 6.39
- D. Q = (P - 0.2"S)/2 / (P + 0.8"S) = 0.15
- E. Pervious Cover Area from Worksheet 1 = 4,669 sf
- F.  $V_{bf-perv-post} = Q(1/12) \cdot \text{Area} = 58 \text{ cf}$

**W5**  
**STANDARD METHOD RUNOFF VOLUME CALCS - Post-Development Bankfull Runoff Calculations - Impervious ( $V_{bf-imp-post}$ )**

- A. 2 year/24 hour storm event, P P= 2.35 in
- B. Impervious Cover CN from Worksheet 1 CN= 98
- C. S = (1000/CN) - 10 = 0.20
- D. Q = (P - 0.2"S)/2 / (P + 0.8"S) = 2.13
- E. Impervious Cover Area from Worksheet 1 = 34,759 sf
- F.  $V_{bf-imp-post} = Q(1/12) \cdot \text{Area} = 6,170 \text{ cf}$

**W6**  
**STANDARD METHOD RUNOFF VOLUME CALCS - Post-Development 100-Year Storm Runoff Calculations - Pervious ( $V_{100-pervious-post}$ )**

- A. 100 year/24 hour storm event, P P= 5.11 in
- B. Pervious Cover CN from Worksheet 1 CN= 61
- C. S = (1000/CN) - 10 = 6.39
- D. Q 100-yr = (P - 0.2"S)/2 / (P + 0.8"S) = 1.44
- E. Pervious Cover Area from Worksheet 1 = 4,669 sf
- F.  $V_{100-perv-post} = Q(1/12) \cdot \text{Area} = 560 \text{ cf}$

**W7**  
**STANDARD METHOD RUNOFF VOLUME CALCS - Post-Development 100-Year Storm Runoff Calculations - Impervious ( $V_{100-imp-post}$ )**

- A. 100 year/24 hour storm event, P P= 5.11 in
- B. Impervious Cover CN from Worksheet 1 CN= 98
- C. S = (1000/CN) - 10 = 0.20
- D. Q 100-yr = (P - 0.2"S)/2 / (P + 0.8"S) = 4.88
- E. Impervious Cover Area from Worksheet 1 = 34,759 sf
- F.  $V_{100-imp-post} = Q(1/12) \cdot \text{Area} = 14,135 \text{ cf}$

**W8**  
**Time of Concentration ( $T_c$ -hrs)**

Assume the time of concentration = 0.16 hours = 10 minutes

**W9**  
**Runoff Summary and On-site Infiltration Requirement**

A. Runoff Summary from Previous Worksheets			
First Flush Volume ( $V_{ff}$ ) =		2,629	cf
Pre-Development Bankfull Runoff Volume ( $V_{bf-pre}$ ) =		328	cf
Pervious Post-Development Bankfull Runoff Volume ( $V_{bf-perv-post}$ ) =		58	cf
Impervious Post-Development Bankfull Runoff Volume ( $V_{bf-imp-post}$ ) =		14,135	cf
Pervious Post-Development 100-year Runoff Volume ( $V_{100-perv-post}$ ) =		560	cf
Impervious Post-Development 100-year Runoff Volume ( $V_{100-imp-post}$ ) =		14,135	cf
<b>Total BF Volume (<math>V_{bf-post}</math>)(cf):</b>		<b>14,193</b>	
<b>Total 100-Year Volume (<math>V_{100-post}</math>)(cf):</b>		<b>14,695</b>	

B. Determine Onsite Infiltration Requirement			
Subtract the Pre-Development Bankfull from the Post-Development Bankfull volume			
Total Post-Development Volume ( $V_{bf-post}$ ) =		14,193	cf
Pre-Development Bankfull Runoff Volume ( $V_{bf-pre}$ ) =		328	cf
Bankfull Volume Difference		13,865	cf
Compare the Bankfull Volume Difference with the First Flush Volume. The greater of the two is the Onsite Infiltration Requirement.			
<b>Onsite Infiltration Requirement (<math>V_{infil}</math>) =</b>		<b>13,865</b>	<b>cf</b>

**W10**  
**Detention / Retention Requirements**

A. Detention			
Peak of the Unit Hydrograph			1072 cfs
$Q_p = 238.6 \cdot T_c^{-0.82}$			
Drainage Area (ac) excluding "Self-Crediting" BMPs		0.91	ac
$Q_{100} = Q_{100-perv} + Q_{100-imp}$		6.32	in
Peak Flow (PF) = $Q_p(\text{cfs}/\text{in} \cdot \text{mi}^2) \cdot Q_{100}(\text{in}) \cdot \text{Area}(\text{ac})$		9.58	cf
		640	
$\Delta = PF(\text{cfs}) - 0.15 \cdot \text{Area}(\text{ac})$		9.45	cf/s
$V_{det} = \Delta(\text{cfs}) \cdot V_{100}(\text{cf})$		14,487	cf
<b>Vdet Required:</b>		<b>14,487</b>	<b>cf</b>

**W11**  
**Determine Applicable BMPs and Associated Volume Credits**

Proposed BMP <sup>a</sup>	Area (ft <sup>2</sup> )	Storage Volume <sup>b</sup> (ft <sup>3</sup> )	Avg. Design Infiltration Rate <sup>c</sup> (in/hr)	Infiltration Volume during Storm <sup>d</sup> (ft <sup>3</sup> )	Total Volume Reduction <sup>e</sup> (ft <sup>3</sup> )
Pervious Pavement with Infiltration Bed	24,510	16,193	0.86	10,588	26,781
Infiltration Basin					
Subsurface Infiltration Bed					
Rain Garden/Bioretention					
Dry Well					
Bioswale					
Vegetated Filter Strip					
Green Roof					

<sup>a</sup> Complete checklist from Chapter VI for each Structural BMP type  
<sup>b</sup> Storage volume as designed in individual BMP write-ups  
<sup>c</sup> REFER TO THE PERVIOUS PAVEMENT CALCULATIONS ON THIS SHEET  
<sup>d</sup> The Geotechnical Investigation Report indicates that the site's soils have an infiltration rate as follows: 0.86 in/hr  
<sup>e</sup> Approximated as the average design infiltration rate over 6 hours multiplied by the BMP area.  
 Infiltration Rate x 6 hours x BMP area X Unit Conversions = Infiltration Volume (ft<sup>3</sup>)  
 REFER TO THE PERVIOUS PAVEMENT CALCULATIONS ON THIS SHEET  
<sup>f</sup> Total Volume Reduction Credit is the sum of the Storage Volume and the Infiltration Volume During Storm

**W12 - NOT USED**  
**W13**  
**Site Summary of Infiltration & Detention**

A. Stormwater Management Summary			
Minimum Onsite Infiltration Requirement ( $V_{infil}$ ) =		13,865	cf
Designed/Provided Infiltration Volume =		10,588	cf
% Minimum Required Infiltration Provided =		76	%
Total Calculated Detention Volume ( $V_{det}$ ) =		14,487	cf
Net Required Detention Volume ( $V_{net}$ ) =		3,899	cf
<b>B. Determine volume increase for sites where the required infiltration volume cannot be achieved</b>			
% Required Infiltration NOT provided =		24	%
Net % Penalty (20% x % Required Infiltration NOT provided) =		4.73	%
<b>TOTAL REQUIRED DETENTION VOLUME, INCLUDING PENALTY</b>		<b>4,093</b>	<b>cf</b>
<b>(100% - Net % Penalty) x Net Required Detention Volume</b>		<b>14,671</b>	<b>cf</b>
<b>TOTAL REQUIRED DETENTION VOLUME, INCLUDING PENALTY AND INFILTRATION</b>		<b>14,671</b>	<b>cf</b>

PERVIOUS PAVERS						
Description	Aggregate Depth (in)	Aggregate Depth (ft)	Area (sq. ft.)	Volume (cu. ft.)	Void Space (%)	Storage Volume (cu. ft.)
Paver Area "A"	8	0.67	1,223	819	20	164
Paver Area "B"	32	2.67	3,536	9,441	20	1,888
Paver Area "C"	45	3.75	16,639	62,396	20	12,479
Paver Area "D"	32	2.67	3,112	8,309	20	1,662
<b>Total Pervious Paver Area (sq. ft.)</b>			<b>24,510</b>			<b>16,193</b>

Infiltration Volume			
* INFILTRATION VOLUME (CF) = INFILTRATION AREA (SF) X INFILTRATION (IN/HR) X INFILTRATION PERIOD (HR) X (1/12)			
INFILTRATION AREA	24,510	SQ. FT.	
INFILTRATION DESIGN RATE	0.0012	FT/MIN*	
	0.0720	FT/HR	
	0.86	IN/HR	
INFILTRATION PERIOD	6	HOURS	
<b>INFILTRATION VOLUME</b>	<b>10,588</b>	<b>CU. FT.</b>	
*INFILTRATION RATE PER THE "REPORT ON SOIL INVESTIGATION" PREPARED BY A&M CONSULTANTS AND DATED DECEMBER 5, 2011.			

COMMERCIAL  
 SITE PLANNING  
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 CONSTRUCTION LAYOUT

RESIDENTIAL  
 SUBDIVISIONS  
 SITE CONDOMINIUM  
 MULTI-FAMILY  
 LOT PLANS  
 CONSTRUCTION LAYOUT

ALPINE ENGINEERING INC.  
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JACK SCHWARCZ  
**PRELIMINARY STORM WATER MANAGEMENT PLAN**  
 RANGE: 6 E  
 TOWNSHIP: 3 S  
 ANN ARBOR  
 WASHINGTON COUNTY  
 MICHIGAN

SECTION: 9  
 3945 S. STATE STREET

CLIENT: JACK SCHWARCZ

REVISED

08-17-2022 SUBMITTAL  
 04-19-2022 SUBMITTAL  
 03-25-2022 SUBMITTAL

DATE: 11-17-2021

DRAWN BY: SD  
 CHECKED BY: TG

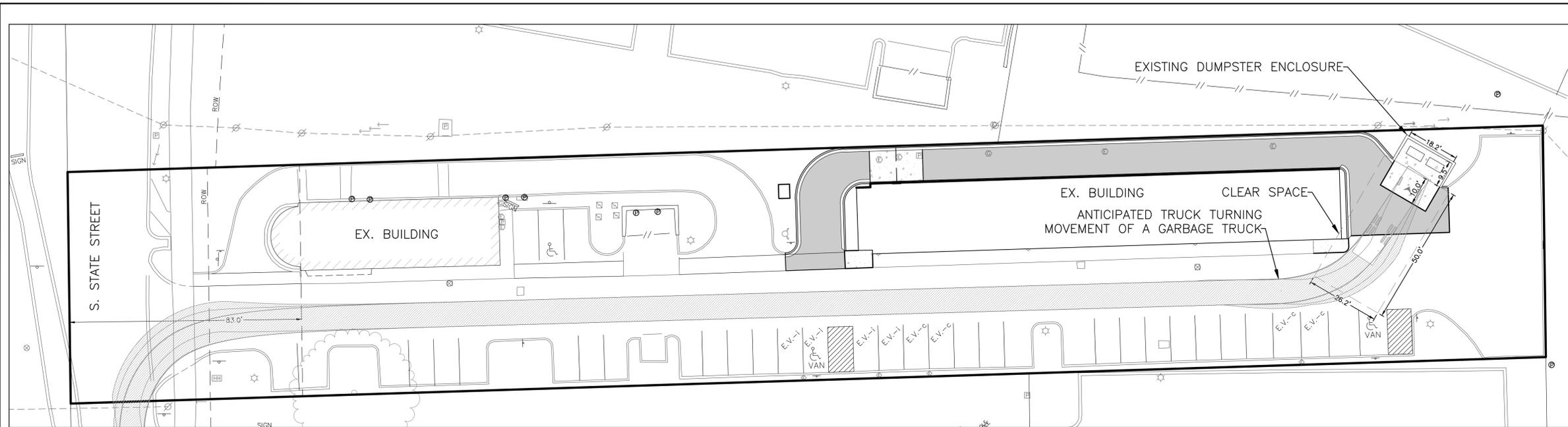
FBK: 384  
 CHF: RDF

SCALE: HOR 1" = 20 FT.  
 VER 1" = 10 FT.

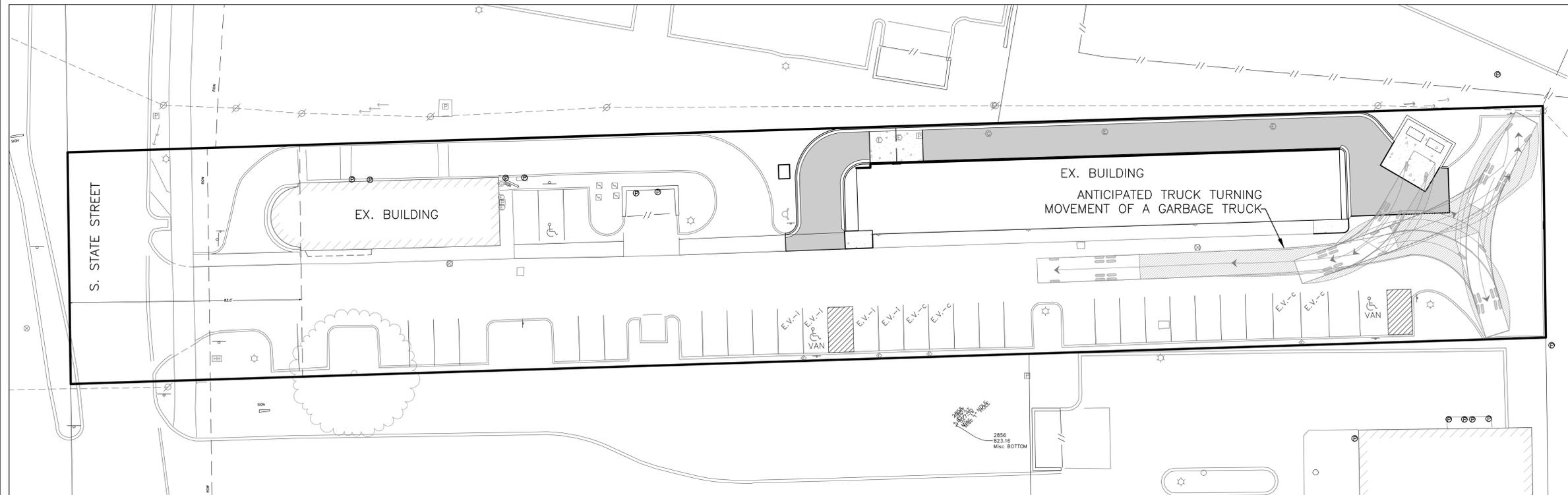
C-5  
 21-409



NOT FOR CONSTRUCTION



**GARBAGE TRUCK CIRCULATION PLAN:**  
1" = 20 FEET



**FIRE TRUCK CIRCULATION PLAN:**  
1" = 20 FEET

**NOTICE:**

CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

**NOTE:**

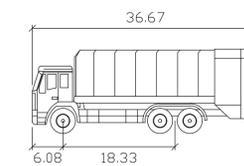
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

**NOTES:**

- PROPOSED CONCRETE WALK SHALL NOT IMPEDE SOLID WASTE ACCESS.
- SOLID WASTE WILL NOT BE SERVICED IF SERVICING ROUTE IS IMPEDED BY DRIVE-THRU TRAFFIC OR OTHER TRAFFIC IMPEDING INGRESS/EGRESS. THE CITY WILL NOT RETURN TO SERVICE SOLID WASTE IF PICKUP IS MISSED DUE TO THE SERVICING ROUTE BEING IMPEDED. SOLID WASTE WILL BE SERVICED AT NEXT SCHEDULED PICKUP, AND ALL SOLID WASTE GENERATED MUST BE HANDLED AND CONTAINED IN ACCORDANCE WITH ALL APPLICABLE CITY SOLID WASTE REGULATIONS AND CODES.
- GATES ON SOLID WASTE ENCLOSURE MUST BE ABLE TO BE SECURED IN BOTH OPEN (120 DEGREE MINIMUM) AND CLOSED POSITIONS. GATES WILL NOT BE CLOSED BY CITY SOLID WASTE DRIVERS AFTER SERVICING.
- GATES SHALL BE DESIGNED AND BUILT AS TO NOT DECREASE THE CLEARANCE OF THE ENCLOSURE ENTRANCE. CLEARANCE WIDTH OF 18.7' SHALL BE MAINTAINED.
- ENCLOSURE SHALL BE CLEARED OF DEBRIS AND VEGETATION, CURB IN FRONT OF DUMPSTER REMOVED, AND A CONCRETE PAD SHALL BE POURED AS SHOWN ON THE "SITE PLAN".

**LEGEND:**

	EX. HYDRANT		EX. TRAFFIC SIGNAL
	EX. PEDESTAL		EX. FENCE
	EX. TRANSFORMER		EX. FINISH FLOOR ELEV
	EX. LIGHTPOLE		PROP. PERMEABLE PAVEMENT
	EX. UTILITY POLE		PROP. CONCRETE
	EX. GUY ANCHOR		PROP. ELECTRIC CHARGING STATION
	EX. OVERHEAD LINE		
	EX. SIGN		
	EX. POST/BOLLARD		
	EX. FLAGPOLE		
	EX. GENERATOR		
	EX. AIR CONDITIONER		



**ANN ARBOR AUTOCAR ACX 6x4**

Width	: 8.75
Track	: 8.75
Lock to Lock Time	: 6.0
Steering Angle	: 32.6
Curb to Curb Turning Radius	: 34.1



**TRUCK CIRCULATION PLAN NOTES:**

1. TRUCK ROUTES SHOWN ON THE TRUCK CIRCULATION PLANS ARE ILLUSTRATIVE ONLY AND DOES NOT TAKE IN ACCOUNT ALL POSSIBLE TRUCK MOVEMENTS.

ADDITIONAL TRUCK MOVEMENTS MAY BE NECESSARY.

**NOT FOR CONSTRUCTION**

**ALPINE ENGINEERING INC.**  
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LAND SURVEYS  
CONSTRUCTION LAYOUT

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CLIENT: JACK SCHWARCZ

**TRUCK CIRCULATION PLAN  
- GARBAGE TRUCK**

SECTION: 9

3945 S. STATE STREET  
ANN ARBOR  
WASHTENAW COUNTY  
MICHIGAN

TOWNSHIP: 3 S  
RANGE: 6 E

REVISED

04-25-2023 SUBMITTAL  
02-16-2023 SUBMITTAL  
01-26-2023 DRAFT FOR CLIENT  
08-17-2022 SUBMITTAL

DATE: 11-17-2021

DRAWN BY: SD

CHECKED BY: TG

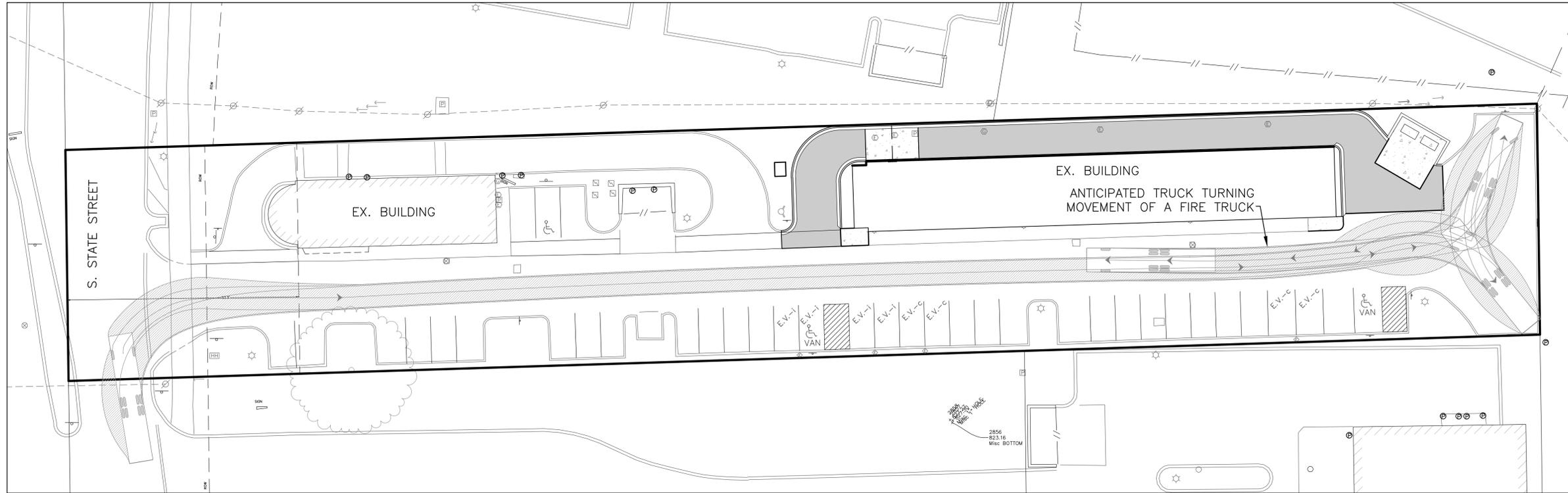
FBK: 384

CHF: RDF

C-6A

SCALE: HOR 1" = 20 FT.  
VER 1" = 40 FT.

21-409



**FIRE TRUCK CIRCULATION PLAN:**  
1" = 20 FEET

**NOTICE:**

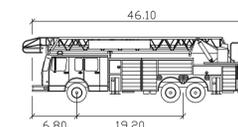
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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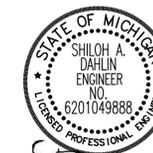
**LEGEND:**

	EX. HYDRANT		EX. TRAFFIC SIGNAL
	EX. PEDESTAL		EX. FENCE
	EX. TRANSFORMER		EXIST. FINISH FLOOR ELEV
	EX. LIGHTPOLE		PROP. PERMEABLE PAVEMENT
	EX. UTILITY POLE		PROP. CONCRETE
	EX. GUY ANCHOR		PROP. ELECTRIC CHARGING STATION
	EX. OVERHEAD LINE		
	EX. SIGN		
	EX. POST/BOLLARD		
	EX. FLAGPOLE		
	EX. GENERATOR		
	EX. AIR CONDITIONER		



ANN ARBOR SPH-100

Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 5.0
Steering Angle	: 36.3



**TRUCK CIRCULATION PLAN NOTES:**

1. TRUCK ROUTES SHOWN ON THE TRUCK CIRCULATION PLANS ARE ILLUSTRATIVE ONLY AND DOES NOT TAKE IN ACCOUNT ALL POSSIBLE TRUCK MOVEMENTS.

ADDITIONAL TRUCK MOVEMENTS MAY BE NECESSARY.

NOT FOR CONSTRUCTION

COMMERCIAL  
SITE PLANNING  
SITE ENGINEERING  
INDUSTRIAL & MULTI-UNIT  
LAND SURVEYING  
CONSTRUCTION LAYOUT

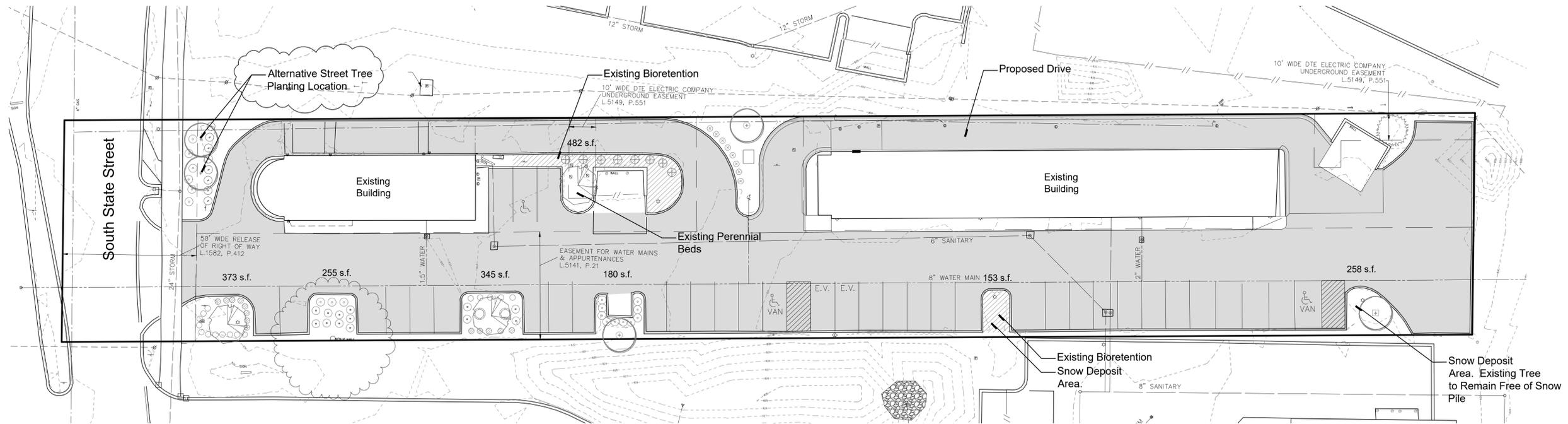
SURVEYING  
ALTA SURVEYS  
BOUNDARY SURVEYS  
TOPOGRAPHIC SURVEYS  
PARCEL SPLITS

RESIDENTIAL  
SUBDIVISIONS  
SITE CONDOMINIUM  
MULTI-FAMILY  
LOT PLANS  
CONSTRUCTION LAYOUT

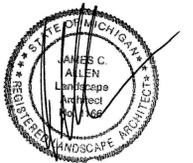


CLIENT: JACK SCHWARCZ  
**TRUCK CIRCULATION PLAN**  
**- FIRE TRUCK**  
SECTION: 9  
3945 S. STATE STREET  
ANN ARBOR  
WASHTENAW COUNTY  
MICHIGAN  
TOWNSHIP: 3 S  
RANGE: 6 E

REVISED	
02-16-2023	SUBMITTAL
08-17-2022	SUBMITTAL
DATE:	11-17-2021
DRAWN BY:	SD
CHECKED BY:	TG
FBK: 384	
CHF: RDF	
SCALE: HOR 1" = 20 FT.	VER 1" = 20 FT.
C-6B	21-409



Seal:



Title:

**Landscape Plan**

Project:

**3945 State Street  
 Ann Arbor, Michigan**

Prepared for:

Alpine Engineering  
 46892 West Road, Suite 109  
 Novi, Michigan 48337

Revision: Issued:

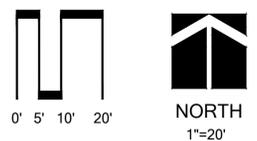
Review	March 25, 2022
Revised	April 19, 2022
Revised	August 18, 2022

Job Number:

22-026

Drawn By: Checked By:

jca jca



Sheet No.

**L-1**

**Existing Shrubs - Ornamentals**

	Ginkgo		Cotoneaster
	Honey Locust		Dwarf Fountain Grass
	Hornbeam		False Cypress
	Maple		Hydrangea
	Spruce		Juniper
			Spirea
			Viburnum
			Yew

**Landscape Summary**

<b>Vehicular Use Area</b>	25,423 s.f.
Use Area	1,271 s.f. (1:20)
Landscape Area Required	1,411 s.f.
Landscape Area Provided	635 s.f. (1,271 x 50%)
Bioretention Required	635 s.f.
Bioretention Provided	5 Trees (1,271 / 250 s.f.)
Trees Required	5 Trees (5 Existing)
Trees Provided	
<b>Street Trees</b>	
Right of Way Length	82 l.f.
Street Trees Required	1.8 Trees (82 / 45)
Street Trees Provided	0 Trees (Trees Cannot be Planted in ROW Due to Utility Conflicts. Alternative Planting Location is Shown Above.)

Note: Existing Plantings Meet Ordinance Requirements. As a Result, no New Plantings Are Proposed.

**Legend**

	Vehicular Use Area
	Bioretention Area as Shown on Originally Approved Plan





**WDGE2 LED Architectural Wall Sconce**

Category Number  
Notes  
Type

**Introduction**  
The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean, rectangular design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance. WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

**WDGE LED Family Overview**

Luminaire	Standard (lm, °FC)	Cold (lm, 20°FC)	Sensor	F1	F2	F3	F4	F5	F6
WDGE2 LED	4W	—	—	1,200	2,300	—	—	—	—
WDGE2 LED	10W	18W	Standalone /d Light	1,200	2,300	3,000	4,500	6,000	—
WDGE2 LED	15W	18W	Standalone /d Light	2,500	4,500	10,000	12,000	—	—
WDGE2 LED	—	—	Standalone /d Light	12,000	16,000	18,000	20,000	22,000	25,000

**Ordering Information** EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT DDBXD

Series	Package	Color Temperature	CR	Distribution	Voltage	Mounting
WDGE2 LED	P1	P30W	27K	2700K	80CRI	VF
	P2	P30W	30K	3000K	90CRI	VF
	P3	P30W	35K	3500K	—	VF
	P4	—	40K	4000K	—	VF
	P5	—	50K	5000K	—	VF

**Options**

Options	Finish
E48W Emergency battery backup, CEC compliant (180 °FC min)	DDBXD Dark bronze
E20W Emergency battery backup, CEC compliant (100 °FC min)	DBXD Black
E20WC Emergency battery backup, CEC compliant (100 °FC min)	NDAXD Natural aluminum
PE* Photocell, Button Type	DWWD White
DS* Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)	DSXD Sandstone
DNG* 0-10V dimming wires pulled outside fixture for use with an external control (external separate)	DBDSD Teardrop dark bronze
ICE Bottom conductor entry for premium back box (PBBW), Total of 4 entry points	DBDSD Teardrop dark bronze
SP10WV 10W surge pack	DNXDD Teardrop natural aluminum
	DSXDD Teardrop sandstone

LITHONIA LIGHTING COMMERCIAL OUTDOOR One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com WDGE2 LED Rev. 01/07/20



**WDGE3 LED Architectural Wall Sconce**

Category Number  
Notes  
Type

**Introduction**  
The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean, rectangular design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance. WDGE3 has been designed to deliver up to 12,000 lumens through a precision refractive lens with wide distribution, perfect for augmenting the lighting from pole mounted luminaires.

**WDGE LED Family Overview**

Luminaire	Standard (lm, °FC)	Cold (lm, 20°FC)	Sensor	F1	F2	F3	F4	F5	F6
WDGE2 LED	4W	—	—	1,200	2,300	—	—	—	—
WDGE2 LED	10W	18W	Standalone /d Light	1,200	2,300	3,000	4,500	6,000	—
WDGE2 LED	15W	18W	Standalone /d Light	2,500	4,500	10,000	12,000	—	—
WDGE2 LED	—	—	Standalone /d Light	12,000	16,000	18,000	20,000	22,000	25,000

**Ordering Information** EXAMPLE: WDGE3 LED P3 40K 70CRI R3 MVOLT DDBXD

Series	Package	Color Temperature	CR	Distribution	Voltage	Mounting
WDGE3 LED	P1	30K	3000K	70CRI	R3	Type 1
	P2	40K	4000K	—	R3	Type 2
	P3	50K	5000K	—	R4	Type 4
	P4	—	—	—	BT	Forward/Throw

**Options**

Options	Finish
E15WV Emergency battery backup, CEC compliant (150 °FC min)	DDXDD Dark bronze
E20WC Emergency battery backup, CEC compliant (100 °FC min)	DBXD Black
E20WC Emergency battery backup, CEC compliant (100 °FC min)	NDAXD Natural aluminum
PE* Photocell, Button Type	DWWD White
DS* Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)	DSXD Sandstone
DNG* 0-10V dimming wires pulled outside fixture for use with an external control (external separate)	DBDSD Teardrop dark bronze
ICE Bottom conductor entry for premium back box (PBBW), Total of 4 entry points	DBDSD Teardrop dark bronze
SP10WV 10W surge pack	DNXDD Teardrop natural aluminum
	DSXDD Teardrop sandstone

**Accessories**

WDGE2 LED E15WV and E20WC: 15W and 20W not available with E15WV and E20WC.  
WDGE2 LED E20WC: 20W not available with E20WC.  
WDGE2 LED E20WC: 20W not available with E20WC.

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**D-Series Size 0 LED Area Luminaire**

Category Number  
Notes  
Type

**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 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

**Specifications**

EPA: 0.95 ft (29.27 cm)  
Length: 26" (66.04 cm)  
Width: 13" (33.02 cm)  
Height: 3" (76.20 mm)  
Weight (max): 16 lbs (7.26 kg)

**Ordering Information** EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAR2 PIRHN DDBXD

Series	LEDs	Color Temperature	Distribution	Voltage	Mounting
DSX0 LED	Forward optics	30K	3000K	T3S	Type 1 (Automotive)
	P1	40K	4000K	T3S	Type 1 (Automotive)
	P2	50K	5000K	T3M	Type 1 (Automotive)
	P3	—	—	T3M	Type 1 (Automotive)

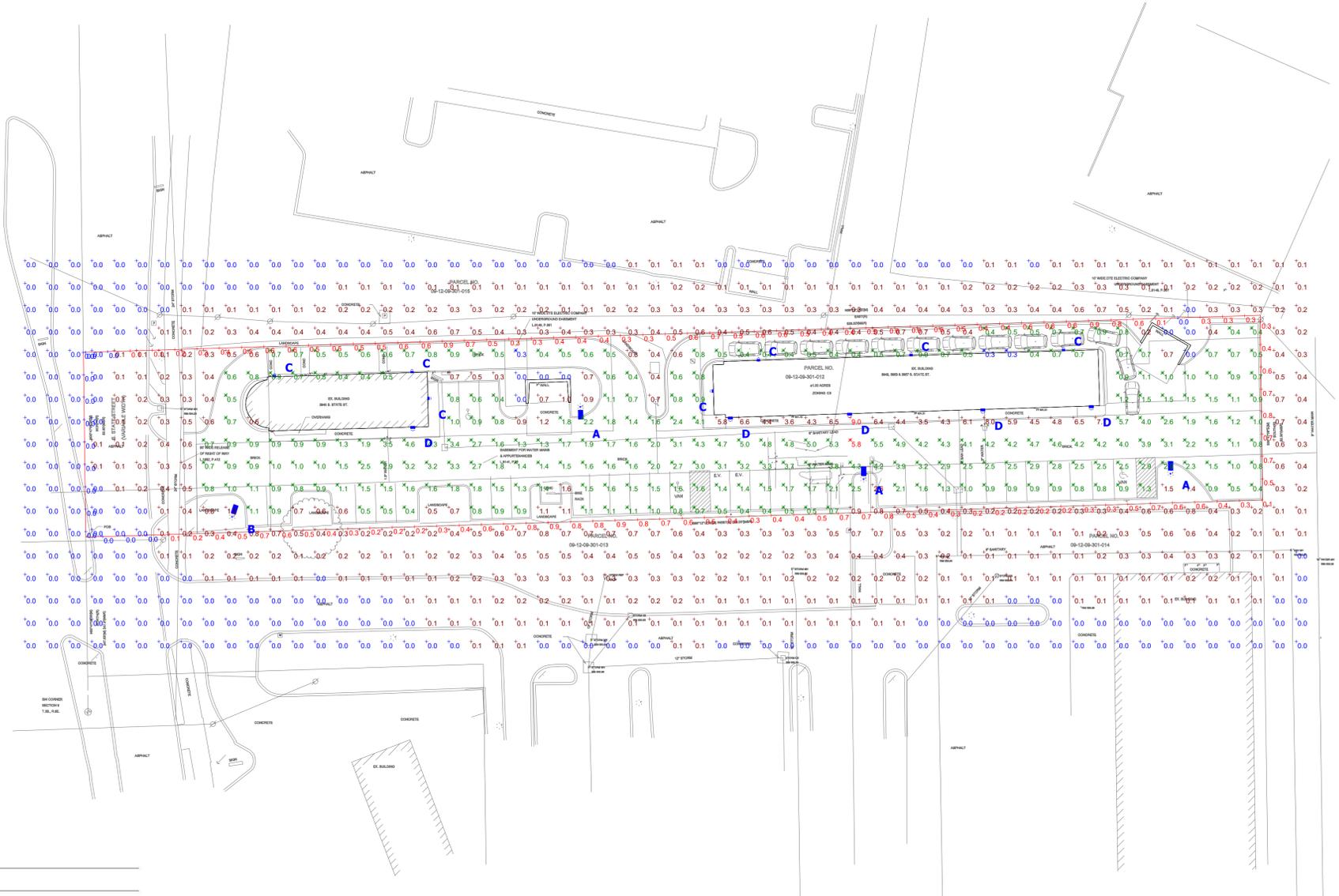
**Options**

Options	Finish
NLTAR2 Network, high flow, medium ambient sensor	DDXDD Dark bronze
PIRHN Network, high flow, medium ambient sensor	DBXD Black
PIRHN Network, high flow, medium ambient sensor	NDAXD Natural aluminum
PIRHN Network, high flow, medium ambient sensor	DWWD White
PIRHN Network, high flow, medium ambient sensor	DSXD Sandstone
PIRHN Network, high flow, medium ambient sensor	DBDSD Teardrop dark bronze
PIRHN Network, high flow, medium ambient sensor	DNXDD Teardrop natural aluminum
PIRHN Network, high flow, medium ambient sensor	DSXDD Teardrop sandstone

**Control options**

Control options	Other options	Finish
Shipped installed	PIR	DDXDD Dark bronze
NLTAR2 Network, high flow, medium ambient sensor	PIRHN	DBXD Black
PIRHN Network, high flow, medium ambient sensor	PIRHN	NDAXD Natural aluminum
PIRHN Network, high flow, medium ambient sensor	PIRHN	DWWD White
PIRHN Network, high flow, medium ambient sensor	PIRHN	DSXD Sandstone
PIRHN Network, high flow, medium ambient sensor	PIRHN	DBDSD Teardrop dark bronze
PIRHN Network, high flow, medium ambient sensor	PIRHN	DNXDD Teardrop natural aluminum
PIRHN Network, high flow, medium ambient sensor	PIRHN	DSXDD Teardrop sandstone

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**Plan View**  
Scale - 1" = 30ft

**Schedule**

Symbol	Label	Quantity	Manufacturer	Description	Lamp	Mounting Height
[Symbol A]	A	3	Lithonia Lighting	DSX0 LED AREA LIGHT 4000K	LED	25'-0"
[Symbol B]	B	1	Lithonia Lighting	DSX0 LED P2 40K T3M MVOLT with houseside shield	LED	25'-0"
[Symbol C]	C	7	Lithonia Lighting	WDGE2 LED WALL MOUNTED LIGHT 4000K	LED	14'-0"
[Symbol D]	D	5	Lithonia Lighting	WDGE3 LED WALL MOUNTED LIGHT 4000K	LED	14'-0"

**Statistics**

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
PROPERTY LINE	+	0.4 fc	0.9 fc	0.0 fc	N/A	N/A	0.4:1
SITE	X	1.6 fc	5.8 fc	0.3 fc	19.3:1	5.3:1	0.3:1

**Alternates Note**  
THE USE OF FIXTURE ALTERNATES MUST BE RESUBMITTED TO THE CITY FOR APPROVAL.

**Mounting Height Note**  
MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

**Ordering Note**  
FOR INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

**Drawing Note**  
THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

**General Note**  
1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.  
2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"

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.