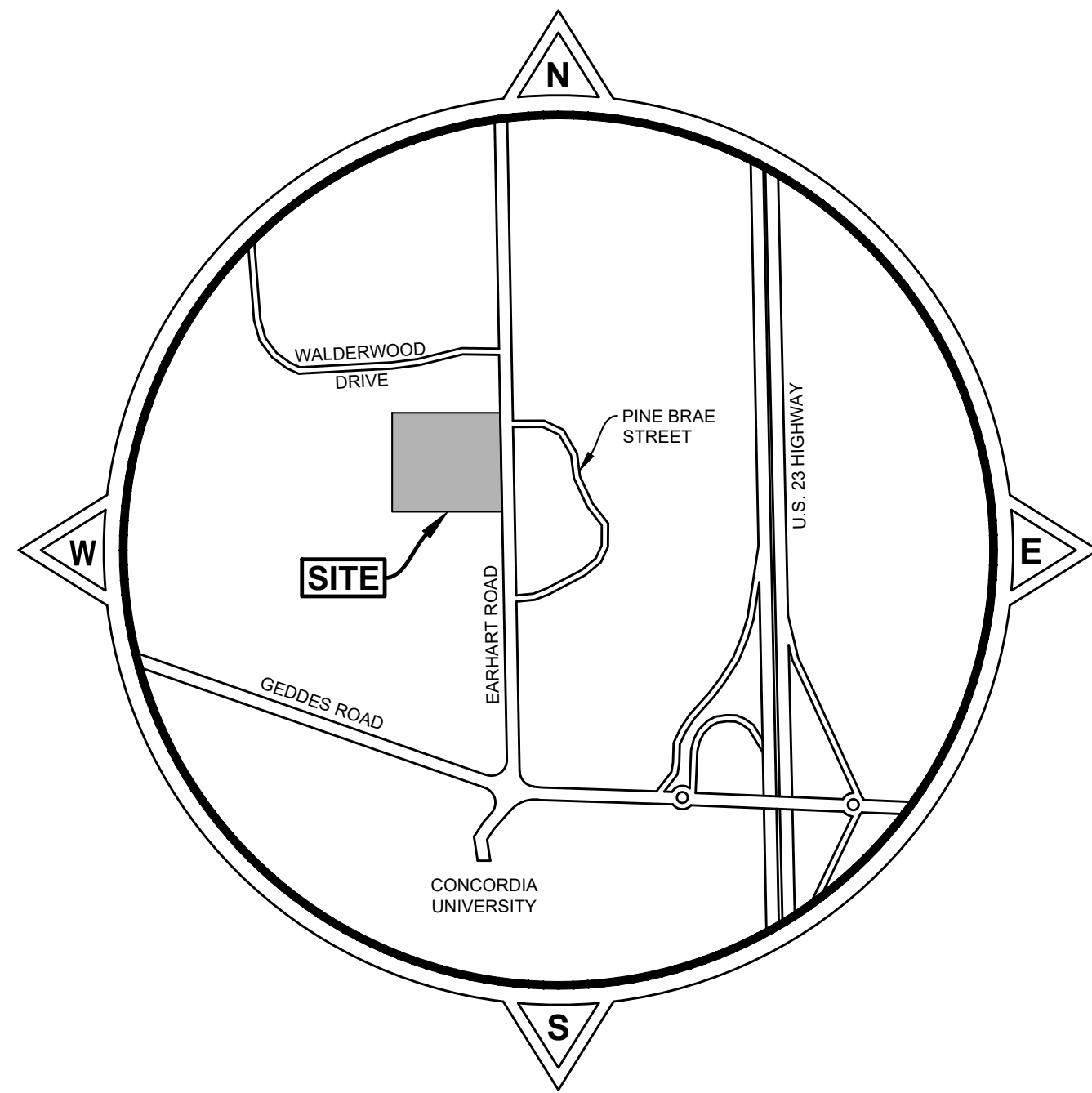


# St. Paul Lutheran School

495 Earhart Road

City of Ann Arbor, Washtenaw County, Michigan  
Site Plan for Planning Commission Approval (Type 2)



## INDEX TO SHEETS

COVER SHEET .....	C1
OVERALL SITE PLAN.....	C2
TOPOGRAPHICAL SURVEY OVERALL .....	C3
TOPOGRAPHICAL SURVEY NORTH .....	C3A
REMOVAL PLAN .....	C4
LAYOUT PLAN .....	C5
EV PARKING PLAN .....	C5A
UTILITY PLAN .....	C6
GRADING AND STORM WATER MANAGEMENT PLANS .....	C7-C8A
BUILDING ADDITION PLAN .....	C9
SOIL EROSION AND SEDIMENTATION CONTROL PLANS .....	C10-C11
SIGNAGE AND PAVEMENT MARKING PLAN .....	C12
PHOTOMETRIC PLAN .....	C13
LANDSCAPE PLAN .....	C14
TREE SURVEY .....	C15
TREE LISTING .....	C16
SOLID WASTE PLAN .....	C17
ALTA SURVEY .....	C18
FLOOR PLAN .....	A101
ELEVATIONS .....	A201

## LEGAL DESCRIPTION

PARCEL NO. 09-09-26-400-007

PART OF THE SOUTHEAST QUARTER OF SECTION 26, TOWN 2 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN BEING DESCRIBED AS:

BEGINNING AT THE EAST QUARTER CORNER OF SECTION 26, TOWN 2 SOUTH, RANGE 6 EAST; THENCE SOUTH 89 DEGREE 09 MINUTES 10 SECONDS WEST 1335.29 FT.; THENCE SOUTH 00 DEGREE 18 MINUTES 26 SECONDS EAST 326.38 FT.; THENCE NORTH 89 DEGREE 09 MINUTES 10 SECONDS EAST 471.96 FT.; THENCE SOUTH 00 DEGREE 08 MINUTES 50 SECONDS EAST 1064.55 FT.; THENCE NORTH 89 DEGREE 09 MINUTES 10 SECONDS EAST 859.32 FT.; THENCE NORTH 00 DEGREE 01 MINUTES 10 SECONDS WEST 1390.98 FT. TO THE POINT OF BEGINNING, CONTAINING 31.03 ACRES MORE OR LESS, BEING SUBJECT TO ROW OVER EASTERLY 33 FEET AND ANY OTHER EASEMENT OR RESTRICTIONS OF RECORD, SPLIT ON 11/03/1999 FROM 09-09-26-400-006.

SUBJECT TO ANY AND ALL EASEMENTS AND RIGHTS OF WAY OF RECORD OR OTHERWISE.

FROM RECORDS ONLY. NO FIELD SURVEY PERFORMED.

## STATEMENTS

INTEREST IN LAND  
THE PETITIONER WILL BE THE OWNER AND DEVELOPER OF THE PROPERTY.

APPLICATIONS  
PETITIONER IS SEEKING PLANNING COMMISSION APPROVAL FOR SITE PLAN (TYPE 2).  
PROPERTY IS SUBJECT TO SEU. NO MODIFICATIONS ARE BEING REQUESTED.  
NO REGULATED WETLANDS ARE PROPOSED TO BE DISTURBED.

DEVELOPMENT PROGRAM  
THE SITE CONSISTS OF AN EXISTING SCHOOL AND PARKING LOT AND THE PROJECT CONSISTS OF A PROPOSED 2,582 SQUARE FOOT BUILDING ADDITION FOR A NEW LIBRARY, REMOVAL OF THE EXISTING PARKING LOT, CONSTRUCTING A RE-CONFIGURED PARKING LOT, AND PROVIDING INCREASED STORM WATER DETENTION FOR THE INCREASED STORM WATER RUNOFF.

THE PROPOSED DEVELOPMENT IS ANTICIPATED TO HAVE A POSITIVE IMPACT ON THE COMMUNITY, PROVIDING A STATE OF THE ART LIBRARY, INCREASED PARKING LOT EFFICIENCY AND MANEUVERABILITY, AND SAFER DROP OFF FOR STUDENTS AND PARENTS.

THE ESTIMATED PROBABLE COST OF THIS PROJECT IS \$4,000,000.

COMMUNITY ANALYSIS  
THE SITE IS USE, NOT RESIDENTIAL, NO IMPACT ON PUBLIC SCHOOLS.  
THE RELATIONSHIP OF THE INTENDED USE TO THE NEIGHBORING USES WILL NOT CHANGE WITH PROPOSED IMPROVEMENTS.  
ADJACENT USES ARE DEVELOPED, NO POTENTIAL IMPACT FROM THEIR DEVELOPMENT.  
PROPOSED IMPROVEMENTS DO NOT AFFECT AIR/WATER QUALITY. NATURAL FEATURES ON SITE ARE BEING IMPACTED DUE TO THE STORM WATER DETENTION REQUIREMENTS, BUT EXISTING DETENTION IS BEING RETROFIT TO MINIMIZE IMPACT TO EXISTING NATURAL FEATURES.  
NO HISTORIC IMPACT APPLICABLE.  
NO ADDITIONAL TRIPS ARE BEING GENERATED FROM THE PROPOSED IMPROVEMENTS.  
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 THE CITY STANDARDS.  
NATURAL FEATURES EXIST ON SITE, INCLUDING LANDMARK TREES, WETLANDS, WOODLANDS. SEE NATURAL FEATURES ASSESSMENT REPORT PREPARED BY ASTI ENVIRONMENTAL, DATED OCTOBER 20, 2023.

## COMPARISON CHART

	EXISTING	REQUIRED/ ALLOWABLE	PROPOSED
ZONING	R1-B	-	R1-B
LOT AREA	29.92 ac	10,000	29.92 ac
LOT WIDTH	1391	70	1391
FLOOR AREA	23,750	58,000	26,368
FLOOR AREA RATIO	1.8%	-	2%
FRONT SETBACK (EAST)	208.5	30	208.5
REAR SETBACK (WEST)	241.3	40	241.3
SIDE SETBACK (NORTH)	77.8	Min 5, Total 14	44.9
SIDE SETBACK (SOUTH)	888.1	Min 5, Total 14	888.1
HEIGHT	15	30	25.5
PARKING SPACES	112	0 Min/Max	171
BICYCLE SPACES	60	70*	70
EV-I SPACES	-	(10%) 18	18
EV-C SPACES	-	(40%) 69	69

\* 5 PER CLASSROOM @ 14 CLASSROOMS = 70 CLASS C  
BICYCLE PARKING SPACES  
NOTE: ALL BICYCLE SPACES, EXISTING AND PROPOSED, ARE TYPE C

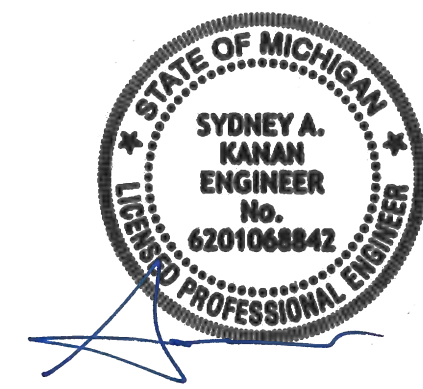
## OWNER/APPLICANT

ST. PAUL LUTHERAN CHURCH  
495 EARHART ROAD  
ANN ARBOR, MICHIGAN 48105  
DENNIS KUHN  
SS\_PAC@YAHOO.COM  
(734) 277-5898

ANDERSON, ECKSTEIN AND WESTRICK, INC.

CIVIL ENGINEERS, LAND SURVEYORS, ARCHITECTS

SHELBY TOWNSHIP, MICHIGAN



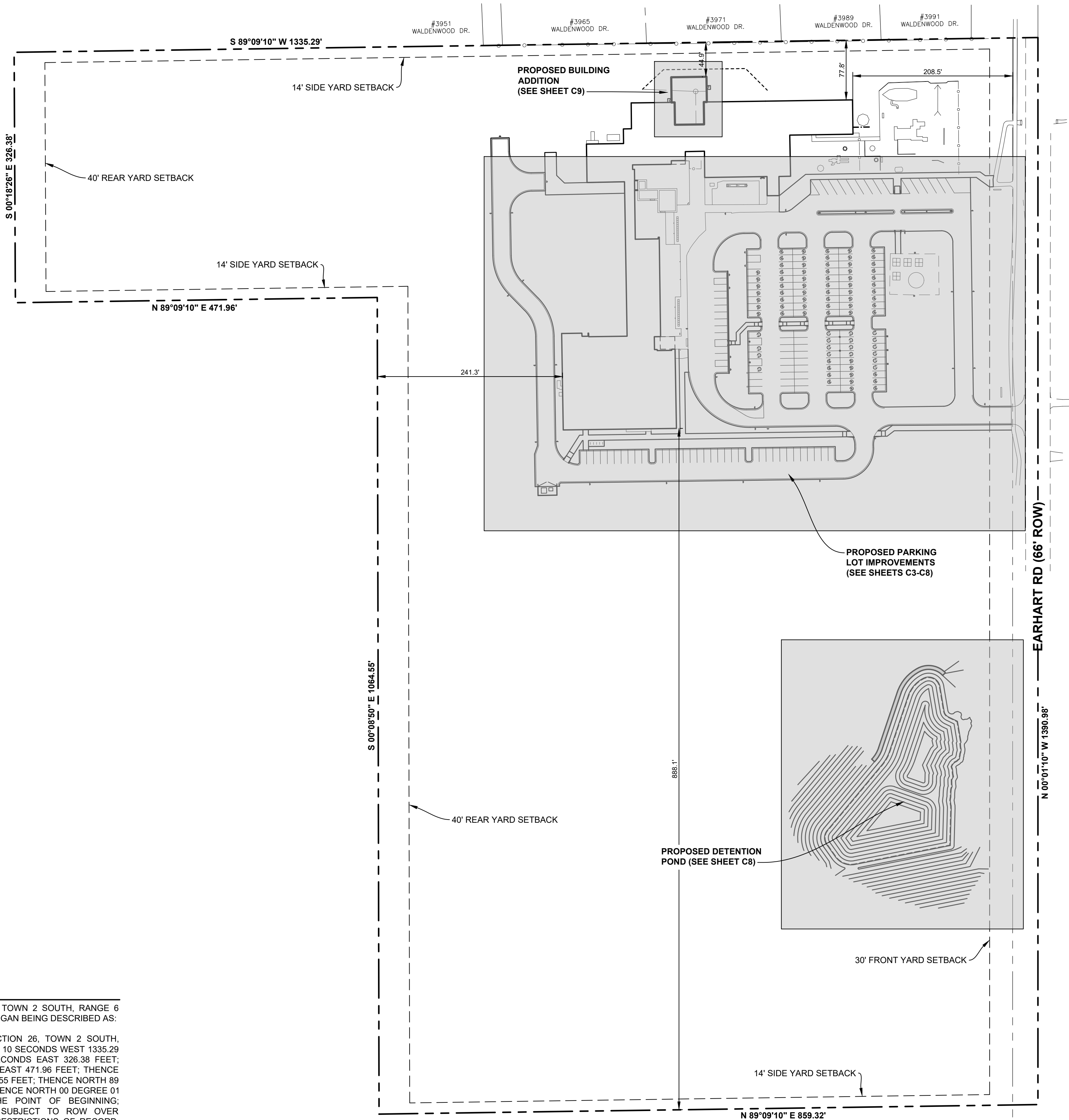
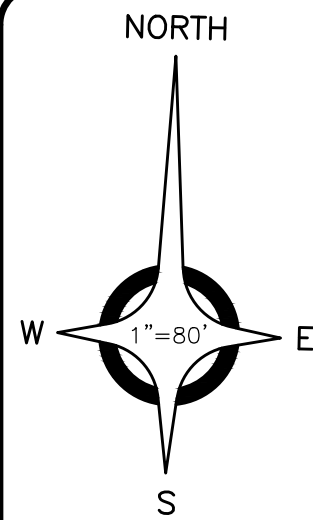
SYDNEY A. KANAN  
MICHIGAN REGISTRATION #6201068842

PLAN DATE: DECEMBER 2025

C1

1688-0001 ST. PAUL LUTHERAN SCHOOL





#### DESCRIPTION

PART OF THE SOUTHEAST QUARTER OF SECTION 26, TOWN 2 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN BEING DESCRIBED AS:

BEGINNING AT THE EAST QUARTER CORNER OF SECTION 26, TOWN 2 SOUTH, RANGE 6 EAST; THENCE SOUTH 89 DEGREE 09 MINUTES 10 SECONDS WEST 1335.29 FEET; THENCE SOUTH 00 DEGREE 18 MINUTES 26 SECONDS EAST 326.38 FEET; THENCE NORTH 89 DEGREE 09 MINUTES 10 SECONDS EAST 471.96 FEET; THENCE SOUTH 00 DEGREE 08 MINUTES 50 SECONDS EAST 1064.55 FEET; THENCE NORTH 89 DEGREE 09 MINUTES 10 SECONDS EAST 859.32 FEET; THENCE NORTH 00 DEGREE 01 MINUTES 10 SECONDS WEST 1390.98 FEET TO THE POINT OF BEGINNING; CONTAINING 31.03 ACRES MORE OR LESS, BEING SUBJECT TO ROW OVER EASTERLY 33 FEET AND ANY OTHER EASEMENT OR RESTRICTIONS OF RECORD. SPLIT ON 11/03/1999 FROM 09-09-26-400-006.

SUBJECT TO ANY AND ALL EASEMENTS AND RIGHTS OF WAY OF RECORD OR OTHERWISE.

FROM RECORDS ONLY. NO FIELD SURVEY PERFORMED.



#### SITE DATA

PARCEL No.: 09-09-26-400-007  
ADDRESS: 495 EARTHART ROAD  
CURRENT ZONING: R1-B SINGLE FAMILY DWELLING CHURCH/SCHOOL  
CURRENT USE: CHURCH/SCHOOL  
GROSS SITE AREA: 31.02 Ac.  
NET AREA (MINUS ROW): 29.92 Ac.  
EXISTING BUILDING: 23,492 S.F.  
PROPOSED ADDITION: 2,582 S.F.

PARKING REQUIRED:  
SPACES PROVIDED: 171  
ADA REQUIRED: 6 (1 VAN)  
ADA PROVIDED: 6 (6 VAN)

EV PARKING REQUIRED:  
SCHOOL, PRIVATE: EV-C = 40%  
EV-I = 10%

SPACES REQUIRED, EV-C: 69  
SPACES REQUIRED, EV-I: 18  
SPACES PROVIDED, EV-C: 69  
SPACES PROVIDED, EV-I: 18

BICYCLE PARKING REQUIRED:  
SCHOOL, PRIVATE: CL C = 100%  
SPACES REQUIRED: 70  
SPACES EXISTING: 60  
SPACES PROPOSED: 10

SITE SETBACK, HEIGHT STANDARDS  
REQUIRED PROVIDED  
FRONT: 40' 208.5'  
BACK: 50' 241.3'  
SIDE: 5' (MIN), 14' (TOTAL) 44.9'  
SIDE: 30' 25.5'

WATER SERVICE  
EXISTING WATER SERVICE WILL BE UTILIZED. NO IMPROVEMENTS TO THE WATER SERVICE ARE PROPOSED. FIRE SUPPRESSION WILL BE ADDED TO THE EXISTING AND PROPOSED BUILDING.

SANITARY SEWER  
EXISTING SANITARY SERVICE WILL BE UTILIZED. NO IMPROVEMENTS TO THE SANITARY SYSTEM ARE PROPOSED. NO ADDITIONAL FLOW IS PROPOSED, THEREFORE, NO SANITARY MITIGATION IS REQUIRED.

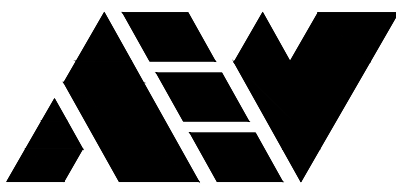
STORM SEWER/SITE DRAINAGE  
SITE DRAINAGE WILL NOT BE ALTERED OR REDIRECTED IN AREAS WHICH ARE NOT PROPOSED TO BE DISTURBED. ALL DISTURBED AREA (AND ANY TRIBUTARY AREA ALREADY DRAINING TO DISTURBED AREAS) WILL BE ROUTED TO THE PROPOSED DETENTION POND, THE EXISTING DETENTION POND, DRAINAGE PATTERN, AND OUTLET, WILL BE UTILIZED TO THE MAXIMUM EXTENT POSSIBLE TO AVOID UNNECESSARY DISTURBANCE TO EXISTING NATURAL FEATURES.

PAVEMENT  
PROPOSED PARKING LOT PAVEMENT WILL BE BITUMINOUS PAVEMENT WITH CONCRETE CURB AND GUTTER, AND CONFORM TO THE CITY OF ANN ARBOR PAVING STANDARDS.

SIDEWALKS  
SIDEWALKS WILL BE PROVIDED FOR INTERIOR SITE MOVEMENT. EXISTING SIDEWALK WILL BE REPLACED AS NEEDED.

RIGHT-OF-WAY IMPROVEMENTS  
NO RIGHT-OF-WAY IMPROVEMENTS ARE PROPOSED.

TRIP GENERATION/TRAFFIC STUDY  
TRIP GENERATION CALCULATIONS FOR SCHOOLS ARE CALCULATED BASED ON NUMBER OF STUDENTS. THE PROPOSED BUILDING ADDITION IS NOT CORRELATED TO AN EXPECTED INCREASE IN STUDENT POPULATION. THEREFORE, NO ADDITIONAL TRIPS ARE BEING GENERATED BY THE PROPOSED IMPROVEMENTS. NO TRAFFIC IMPACT STUDY OR ANALYSIS IS REQUIRED AS THE PROPOSED IMPROVEMENTS DO NOT GENERATE MORE THAN 50 ADDITIONAL TRIPS TO ANY GIVEN PEAK HOUR, AND NO IMPROVEMENTS ARE PROPOSED IN THE EARTHART ROAD ROW.



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025 07-24-2025 07-09-2024 01-05-2024	SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

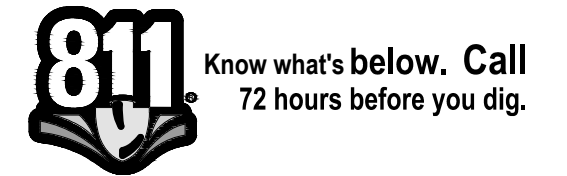
SHEET TITLE:

## OVERALL SITE PLAN

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CBR	CHECKED BY: SAK	DATE: MARCH 2023
SCALE: 1" = 80'		
0 40 80 160		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (ON CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

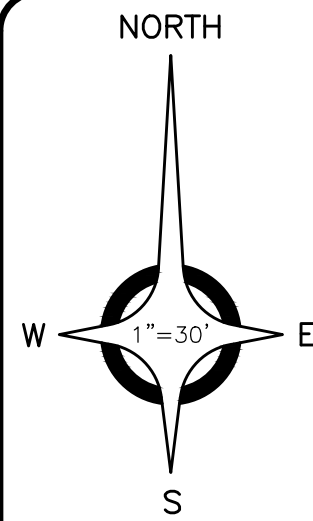
PROJECT NO.

1688-0001

M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
02\_Overall Site Plan-11/26/2025 10:39:10 AM

SHEET NO.

C2



NOTE:  
THIS TOPOGRAPHICAL SURVEY  
WAS PRODUCED USING MICHIGAN  
STATE PLANE COORDINATES.

#### DESCRIPTION

PART OF THE SOUTHEAST QUARTER OF SECTION 26, TOWN 2 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN BEING DESCRIBED AS:

BEGINNING AT THE EAST QUARTER CORNER OF SECTION 26, TOWN 2 SOUTH, RANGE 6 EAST; THENCE SOUTH 89 DEGREE 09 MINUTES 10 SECONDS WEST 1335.29 FEET; THENCE SOUTH 00 DEGREE 18 MINUTES 26 SECONDS EAST 326.38 FEET; THENCE NORTH 89 DEGREE 09 MINUTES 10 SECONDS EAST 471.96 FEET; THENCE SOUTH 00 DEGREE 08 MINUTES 50 SECONDS EAST 1064.55 FEET; THENCE NORTH 89 DEGREE 09 MINUTES 10 SECONDS EAST 859.32 FEET; THENCE NORTH 00 DEGREE 01 MINUTES 10 SECONDS WEST 1390.98 FEET TO THE POINT OF BEGINNING; CONTAINING 31.03 ACRES MORE OR LESS, BEING SUBJECT TO ROW OVER EASTERLY 33 FEET AND ANY OTHER EASEMENT OR RESTRICTIONS OF RECORD. SPLIT ON 11/03/1999 FROM 09-09-26-400-006.

SUBJECT TO ANY AND ALL EASEMENTS AND RIGHTS OF WAY OF RECORD OR OTHERWISE.

FROM RECORDS ONLY. NO FIELD SURVEY PERFORMED.



LOCATION MAP  
NOT TO SCALE

#### BENCH MARKS (NAVD88 DATUM)

BENCH MARK NO.1  
CHIS "X" NORTH RIM SANITARY  
M.H. 75' SOUTHEAST OF  
SOUTHEAST CORNER AT  
#20001.  
ELEVATION: 880.74

BENCH MARK NO.2  
SET RR SPIKE SOUTHWEST  
FACE OF UTILITY POLE  
W/TRANSFORMER 60' NORTH  
OF ENTRANCE TO LOT, 80'  
EAST OF EAST LOT.  
ELEVATION: 881.57

BENCH MARK NO.3  
CHIS "X" BOX ON SOUTHWEST  
T/CONC. LIGHT POLE BASE #60  
SOUTH WEST OF MAIN  
ENTRANCE DOOR TO SCHOOL.  
ELEVATION: 889.06

BENCH MARK NO.4  
SET MAG NAIL SOUTH FACE OF  
UTILITY POLE, #150'  
NORTHWEST OF NORTHWEST  
PT CORNER SCHOOL.  
ELEVATION: 892.03

BENCH MARK NO.5  
SET MAG NAIL SOUTH FACE  
UTILITY POLE, #40' NORTH OF  
NORTH F/SCHOOL, #125', EAST  
OF WEST F/SCHOOL.  
ELEVATION: 888.51

#### LEGEND

- BOUNDARY LINE
- SPOT ELEVATION ("+" INDICATES ELEVATION LOCATION UNLESS OTHERWISE INDICATED)
- SIGN
- FLAG POLE
- BASKETBALL POLE
- FLOOD LIGHT
- GUY ANCHOR
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- GATE VALVE & WELL
- VALVE BOX
- WATER MAIN
- STORM CATCH BASIN (PAVT.)
- STORM CATCH BASIN (FIELD)
- STORM MANHOLE
- STORM SEWER
- OVHD. UTIL.

09-18-2025	SITE PLAN SUBMITTAL
07-24-2025	SITE PLAN SUBMITTAL
07-08-2024	SITE PLAN SUBMITTAL
01-05-2024	BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

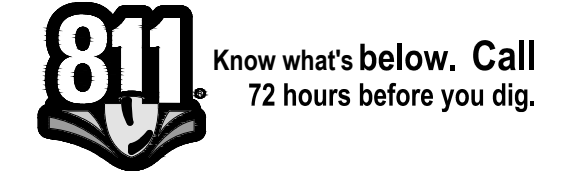
SHEET TITLE:

## TOPOGRAPHICAL SURVEY OVERALL

CLIENT:

ST. PAUL LUTHERAN CHURCH

PRELIMINARY	CONSTRUCTION	RECORD
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DRAWN BY:	CHECKED BY:	DATE:
MJS	SAK	AUGUST 25, 2023
SCALE:		
1" = 30'		
0 15 30 60		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES, (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

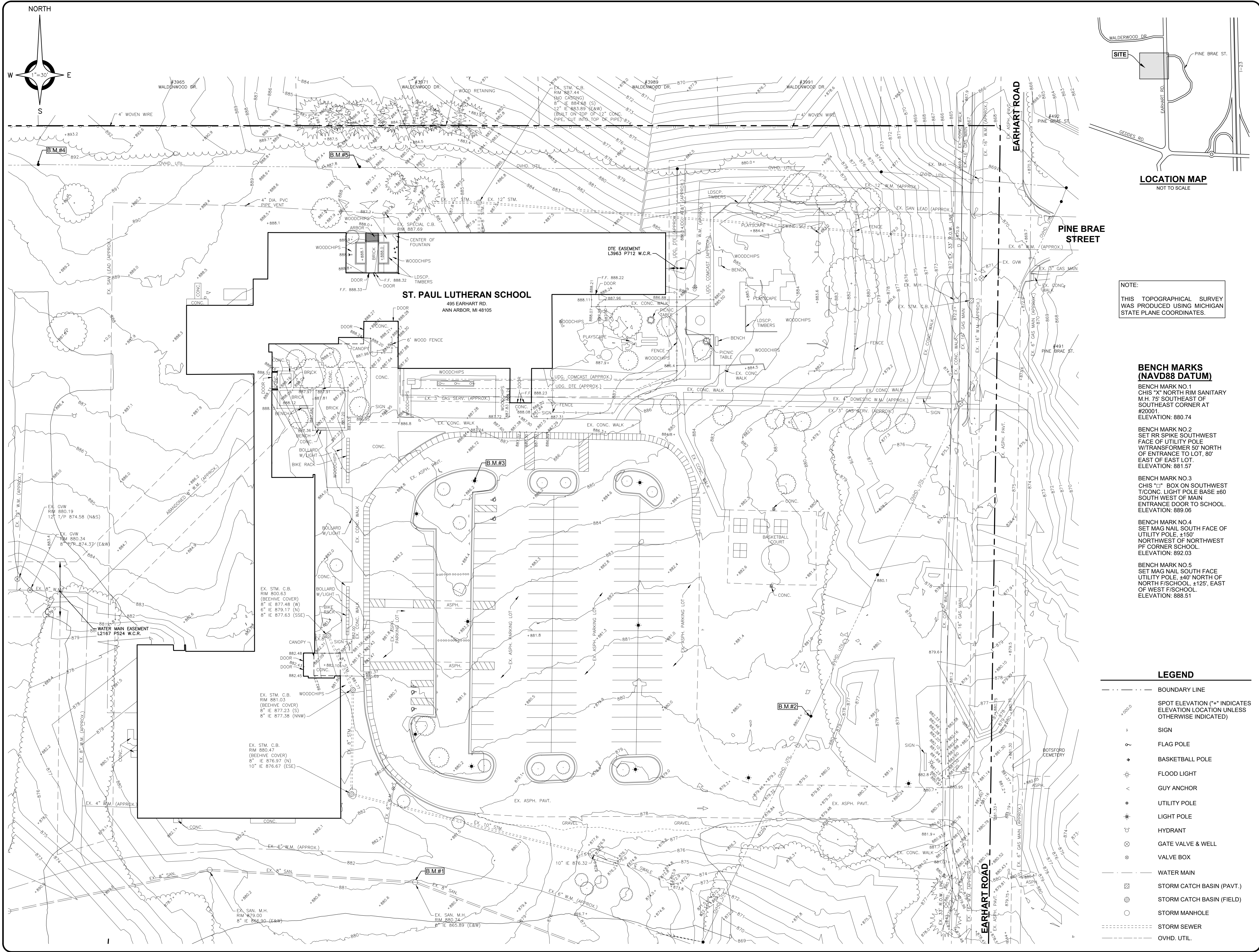
1688-0001

M:\1688\1688-0001\DWG\ICV\1\01\_SITE.PLAN.DWG  
03 Topo-11/26/2025 10:39:14 AM

SHEET NO.

C3





09-18-2025	SITE PLAN SUBMITTAL
07-24-2025	SITE PLAN SUBMITTAL
07-09-2024	SITE PLAN SUBMITTAL
01-05-2024	BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS**

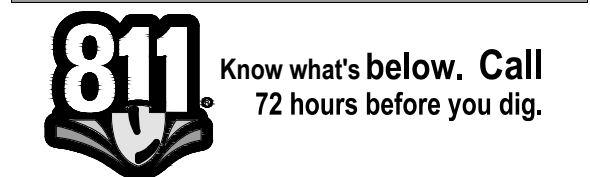
SHEET TITLE:

**TOPOGRAPHICAL SURVEY NORTH**

CLIENT:

**ST. PAUL LUTHERAN CHURCH**

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: AUGUST 25, 2023
SCALE: 1" = 30'		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO. 1688-0001

M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
03A\_Top-11/26/2025 10:39:18 AM

SHEET NO.

**C3A**





CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

[www.aewinc.com](http://www.aewinc.com)

ENGINEERING STRONG COMMUNITIES



BENCH MARK NO.1  
CHIS "X" NORTH RIM SANITARY  
M.H. 75' SOUTHEAST OF  
SOUTHEAST CORNER AT  
#20001.  
ELEVATION: 880.74

BENCH MARK NO.2  
SET RR SPIKE SOUTHWEST  
FACE OF UTILITY POLE  
W/TRANSFORMER 50' NORTH  
OF ENTRANCE TO LOT, 80'  
EAST OF EAST LOT.  
ELEVATION: 881.57

BENCH MARK NO.3  
CHIS "□" BOX ON SOUTHWEST  
T/CONC. LIGHT POLE BASE ±60  
SOUTH WEST OF MAIN  
ENTRANCE DOOR TO SCHOOL.  
ELEVATION: 889.06

BENCH MARK NO.4  
SET MAG NAIL SOUTH FACE OF  
UTILITY POLE, ±150'  
NORTHWEST OF NORTHWEST  
PF CORNER SCHOOL.  
ELEVATION: 892.03

BENCH MARK NO.5  
SET MAG NAIL SOUTH FACE  
UTILITY POLE, ±40' NORTH OF  
NORTH F/SCHOOL, ±125', EAST  
OF WEST F/SCHOOL.  
ELEVATION: 888.51

11-26-2025	SITE PLAN SUBMITTAL
09-18-2025	SITE PLAN SUBMITTAL
07-24-2025	SITE PLAN SUBMITTAL
07-09-2024	SITE PLAN SUBMITTAL
01-05-2024	BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

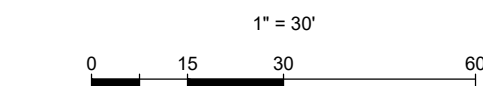
SHEET TITLE

## REMOVAL PLAN

CLIENT

ST. PAUL LUTHERAN CHURCH

<input checked="checked" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY:	CHECKED BY:	DATE:
RO	JA	MARCH 2023
SCALE:		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD DURING THE CONSTRUCTION. THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION, VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO. \_\_\_\_\_

1688-0001

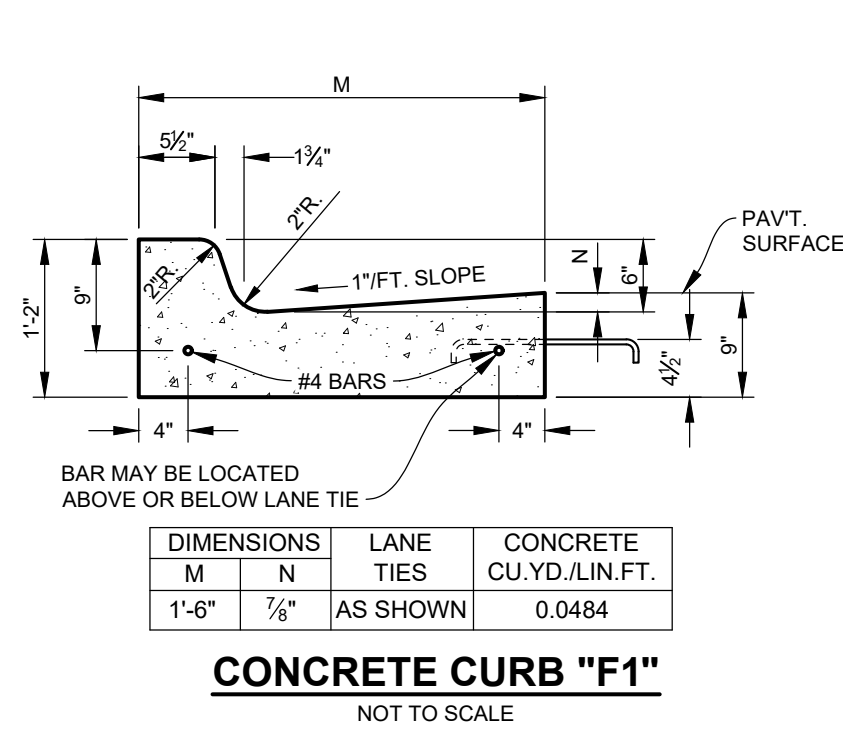
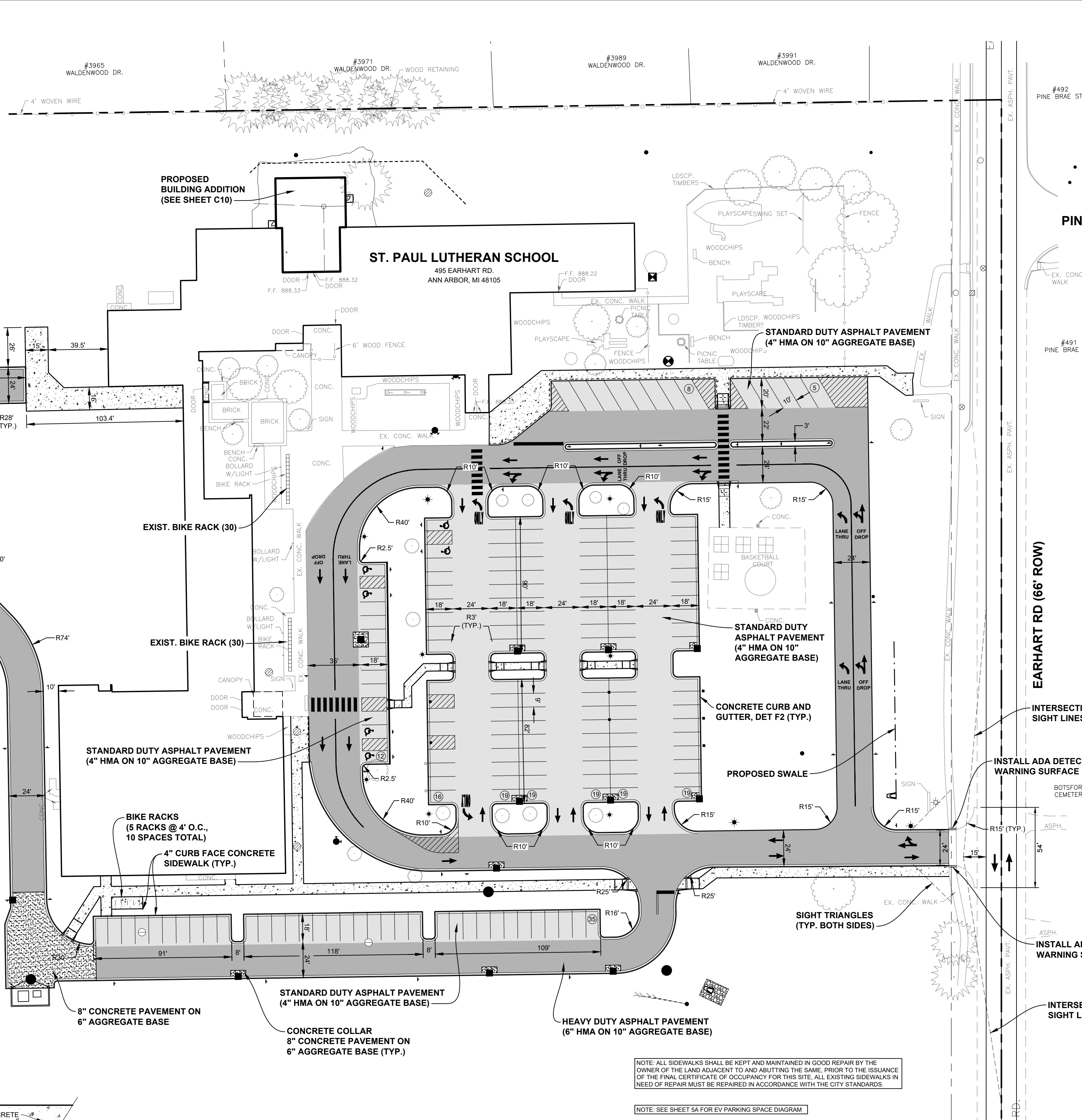
M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
04 Removal-11/26/2025 10:39:20 AM

SHEET NO.

## C4

COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.



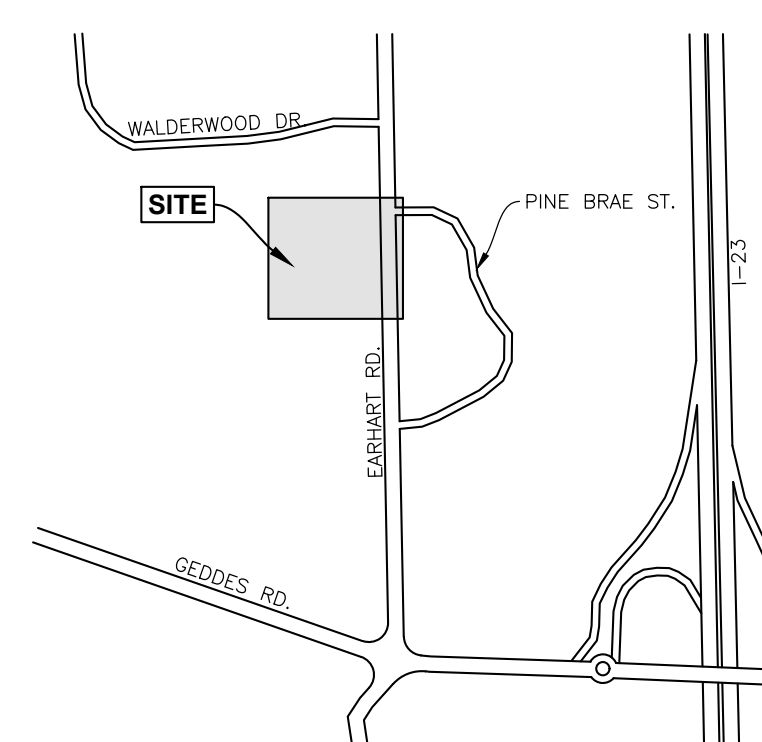
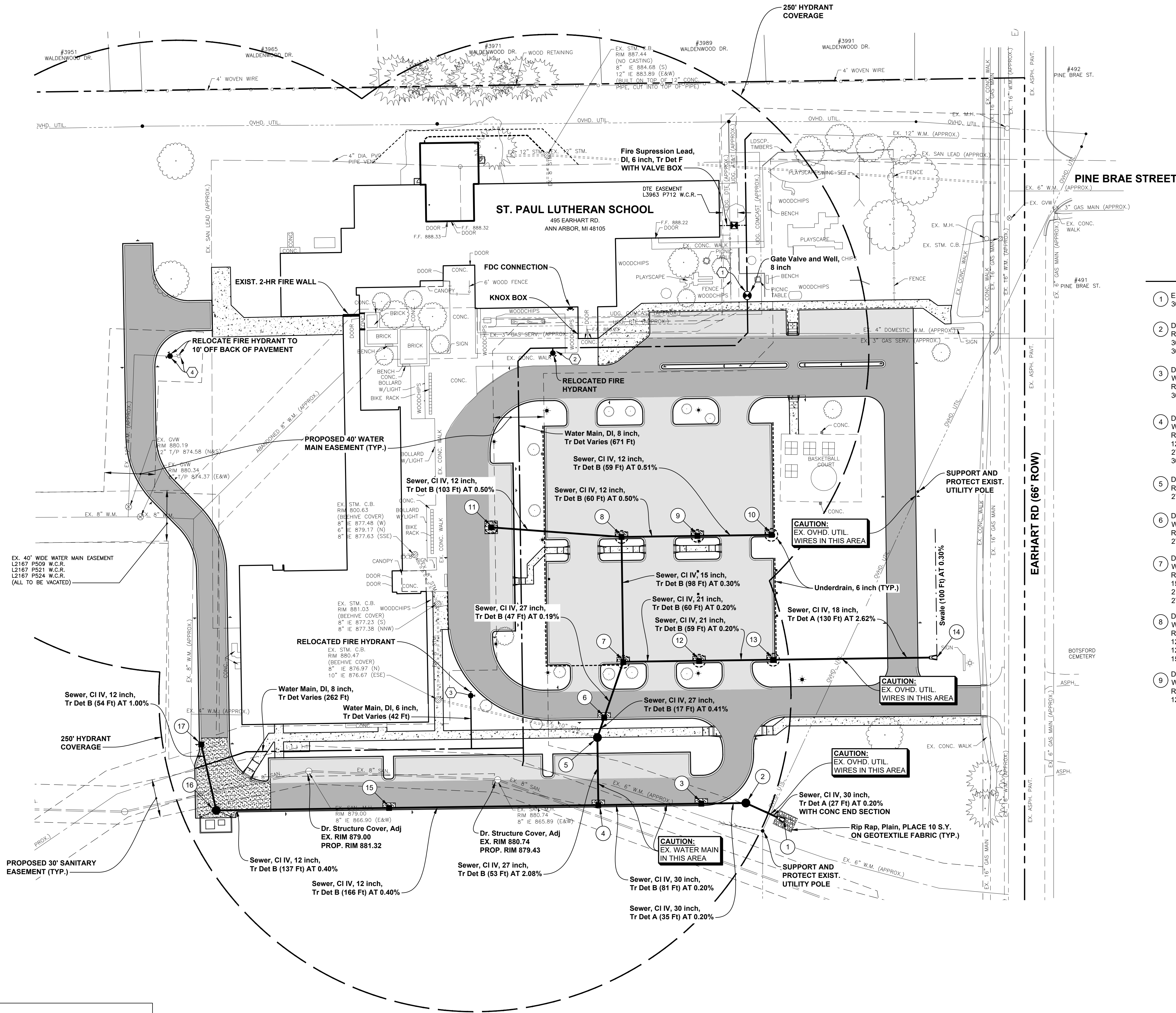
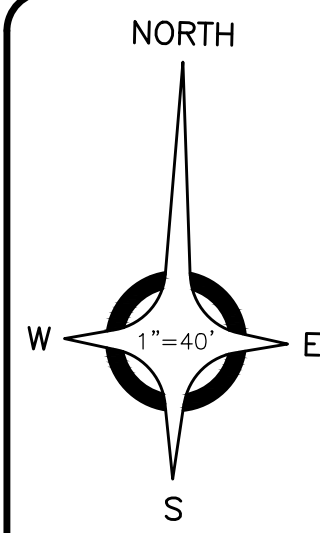


COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.









#### STRUCTURE DATA

- |   |  |
|---|--|
| 1 END SECTION<br>30" IE 870.10 (NW)   | 10 Dr Structure, 48 inch dia<br>RIM 880.80<br>12" IE 876.10 (W)                                      |
| 2 Dr Structure, 60 inch dia<br>RIM 875.00<br>30" IE 870.27 (W)<br>30" IE 870.17 (SE)                                      | 11 Dr Structure, 48 inch dia<br>RIM 882.50<br>12" IE 877.80 (E)                                      |
| 3 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 879.45<br>30" IE 870.34 (E&W)  | 12 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 878.40<br>21" IE 872.48 (E&W)                    |
| 4 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 877.00<br>12" IE 872.83 (W)<br>27" IE 870.70 (N)<br>30" IE 870.50 (E)  | 13 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 879.40<br>18" IE 872.80 (E)<br>21" IE 872.60 (W) |
| 5 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 879.00<br>27" IE 871.80 (S&NE)   | 14 END SECTION<br>18" IE 876.20 (W)  |
| 6 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 879.00<br>27" IE 871.87 (SW&NE)  | 15 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 880.65<br>12" IE 873.49 (W&E)                    |
| 7 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 879.40<br>15" IE 875.00 (N)<br>21" IE 872.36 (E)<br>27" IE 871.96 (SW) | 16 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 880.45<br>12" IE 874.04 (NW&E)                   |
| 8 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 882.20<br>12" IE 877.29 (W)<br>12" IE 875.50 (E)<br>15" IE 875.30 (S)  | 17 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 879.28<br>12" IE 874.58 (SE)                     |
| 9 Dr Structure, 48 inch dia<br>WITH 2' SUMP<br>RIM 881.10<br>12" IE 875.80 (E&W)  |  |

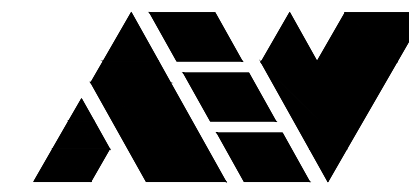
#### LEGEND

- |     |                           |
|-----|---------------------------|
| --- | BOUNDARY LINE             |
| +   | SIGN                      |
| +   | FLAG POLE                 |
| +   | BASKETBALL POLE           |
| +   | FLOOD LIGHT               |
| +   | GUY ANCHOR                |
| +   | UTILITY POLE              |
| +   | LIGHT POLE                |
| +   | HYDRANT                   |
| +   | GATE VALVE & WELL         |
| +   | VALVE BOX                 |
| --- | WATER MAIN                |
| +   | STORM CATCH BASIN (PAVT.) |
| +   | STORM CATCH BASIN (FIELD) |
| +   | STORM MANHOLE             |
| --- | STORM SEWER               |
| --- | OVHD. UTIL.               |

#### SANITARY SEWER MITIGATION CALCULATIONS

FLOW RATE (ELEMENTARY SCHOOL) = 10 GPD/STUDENT  
NET INCREASE IN STUDENTS = 0  
TOTAL INCREASE IN FLOW = 0 \* 10 GPD = 0 GPD

NOTE:  
NO FIRE WALLS ARE PROPOSED. AN EXISTING FIRE WALL IS IN PLACE AS NOTED ON THIS PLAN. ALL SANITARY SEWER LEADS ARE EXISTING AND WILL REMAIN IN USE. NO NEW SANITARY LEADS ARE REQUIRED OR PROPOSED.  
NO BOOSTER PUMPS ARE PROPOSED.  
EXISTING WATER MAIN L2167 P509, L2167 P521, AND L2167 P524 TO BE VACATED AND NEW WATER MAIN EASEMENT SHALL BE GRANTED.



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

11-26-2025 09-18-2025 07-24-2025 07-08-2024 01-05-2024	SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

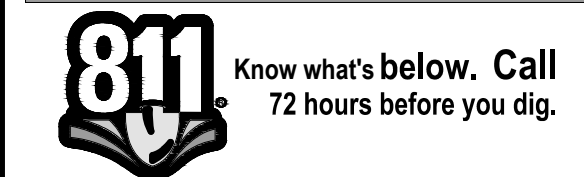
SHEET TITLE:

### UTILITY PLAN

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: AUGUST 25, 2023
SCALE: 1" = 40'		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

1688-0001

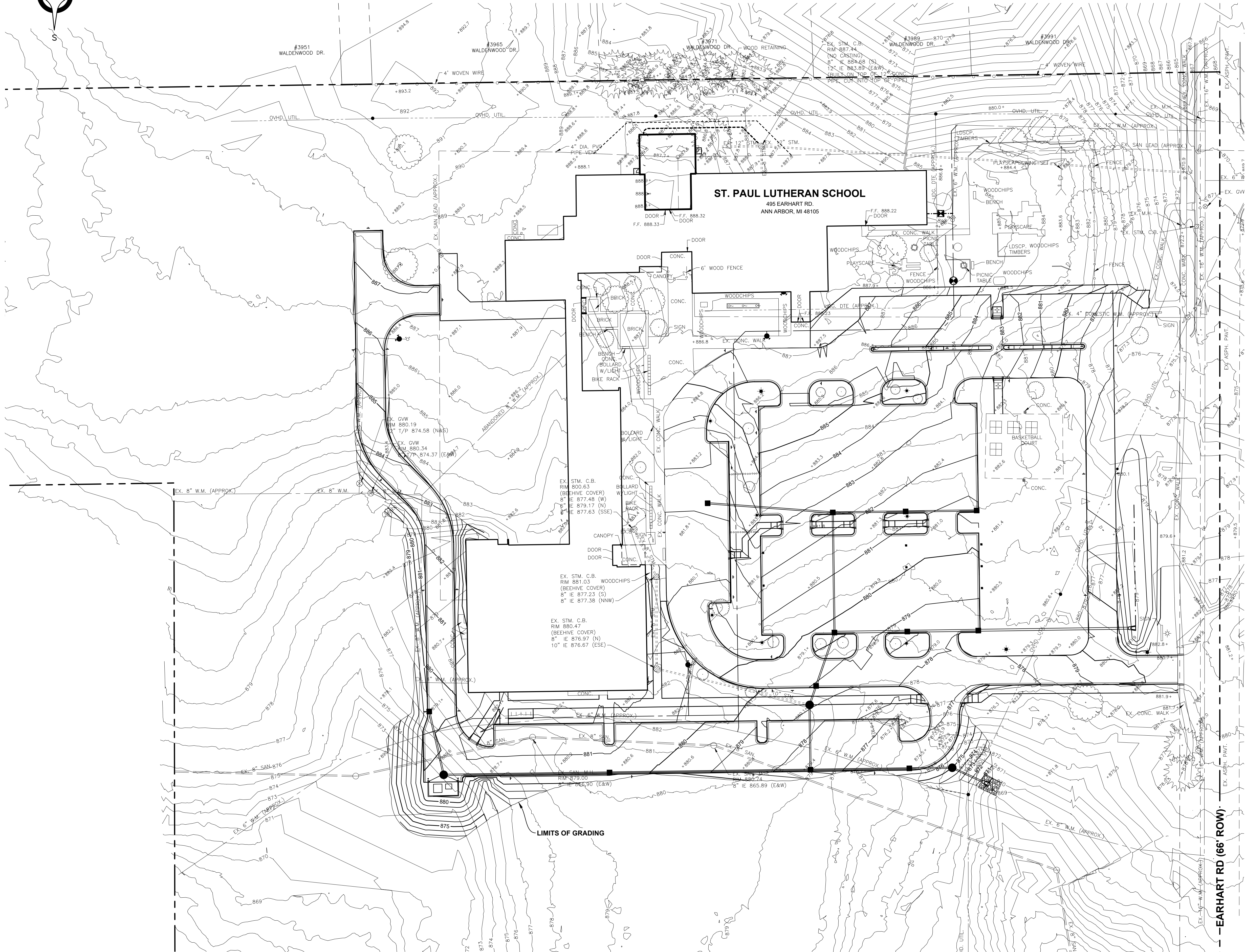
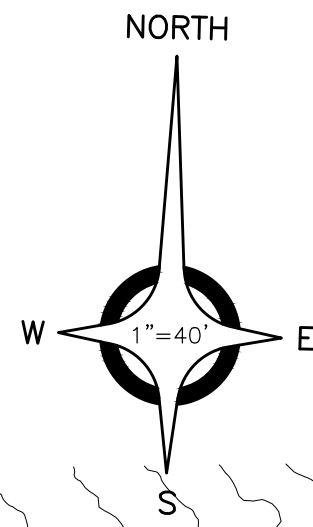
M:\1688\1688-0001\DWG\CIVIL\01\_SITE.PLAN.DWG  
05-11-2025 10:39:30 AM

SHEET NO.

C6

COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.





SEE SHEET C8 FOR CONTINUATION

SEE SHEET C8 FOR CONTINUATION

#### LEGEND

- BOUNDARY LINE
- SPOT ELEVATION ("+" INDICATES ELEVATION LOCATION UNLESS OTHERWISE INDICATED)
- SIGN
- FLAG POLE
- BASKETBALL POLE
- FLOOD LIGHT
- GUY ANCHOR
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- GATE VALVE & WELL
- VALVE BOX
- STORM CATCH BASIN (PAVT.)
- STORM CATCH BASIN (FIELD)
- STORM MANHOLE



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025	SITE PLAN SUBMITTAL
07-24-2025	SITE PLAN SUBMITTAL
07-09-2024	SITE PLAN SUBMITTAL
01-05-2024	BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

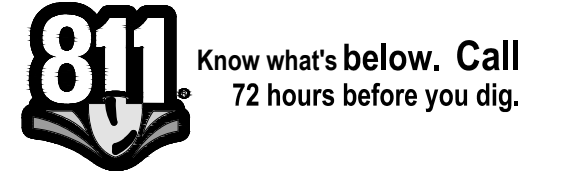
SHEET TITLE:

## GRADING AND STORMWATER MANAGEMENT PLAN

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: AUGUST 25, 2023
SCALE: 0 20 40 80 1" = 40'		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (ON CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

1688-0001

M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG

07\_Grading-11/26/2025 10:39:34 AM

SHEET NO.

C7



## WCWRC STORMWATER CALCULATIONS

Washtenaw County WRC Stormwater Design Standards - St. Paul Lutheran School

### W1-Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients

Total Disturbed Area = 5.85 Ac  
Total Contributing Area = 9.86 Ac  
Area Detained For = 9.86 Ac

Cover Type	Soil Type	Area (ft <sup>2</sup> )	Area (ac)	Runoff Coefficient (C)	(C)*(Area)
Asphalt	B	100,896	2.32	0.95	2.20
Concrete	B	11,631	0.27	0.95	0.25
Roof	B	34,147	0.78	0.95	0.74
Grass	B	282,665	6.49	0.25	1.62
Water	0	0.00	0.00	1	0.00

Total - Σ(C)\*(Area) = 4.82  
Area Total - Σac or Σsf = 9.86  
Weighted C - Σ(C)\*(Area)/Σac or Σsf = 0.48

Pervious Cover Type	Soil Type	Area (ft <sup>2</sup> )	Area (ac)	Curve Number	(CN)*(Area)
Grass	B	282,665	6.49	61	395.83

Total - Σ(CN)\*(Area) = 395.83  
Area Total - Σac or Σsf = 6.49  
Weighted CN - Σ(CN)\*(Area)/Σac or Σsf = 61.00

Impervious Cover Type	Soil Type	Area (ft <sup>2</sup> )	Area (ac)	Curve Number	(CN)*(Area)
Asphalt	B	100,896	2.32	98	236.59
Concrete	B	11,631	0.27	98	26.17
Roof	B	34,147	0.78	98	76.82
Water	0	0.00	0.00	98	0.00

Total - Σ(CN)\*(Area) = 339.58  
Area Total - Σac or Σsf = 3.37  
Weighted CN - Σ(CN)\*(Area)/Σac or Σsf = 98.00

- a. Use this area for the remainder of the runoff calculations  
b. Required for first flush runoff calculations  
c. Required for bankfull and 100-year runoff calculations

### W2-Standard Method Runoff Volume Calculations

First Flush Volume, V<sub>ff</sub>

A = 9.86 Ac  
C = 0.49  
V<sub>ff</sub> = 3638(A/C) = 17,501 ft<sup>3</sup>

### W3-Standard Method Runoff Volume Calculations

Pre-Development Bankfull Runoff Calculations (V<sub>bf,pre</sub>)

2 year/24 hour storm event (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 = 58.00

S = (1000/CN) - 10 = 7.24 in

Q = (P-0.25)<sup>1.49</sup> / (P+0.85) = 0.10 in

E. Total Site Area (sf) excluding "Self-Crediting" BMP's Area = 429,339.00 sf

V<sub>bf,pre</sub> = 0.83(QA) = 3,558 ft<sup>3</sup>

### W4-Standard Method Runoff Volume Calculations

Pervious Cover Post-Development Bankfull Runoff Calculations (V<sub>bf,post</sub>)

2 year/24 hour storm event (P) = 2.35 in

B. Pervious Cover CN From Worksheet 1 CN = 61.00

S = (1000/CN) - 10 = 6.39 in

Q = (P-0.25)<sup>1.49</sup> / (P+0.85) = 0.15 in

E. Pervious Cover Area from Worksheet 1 Area = 282,665 sf

V<sub>bf,post</sub> = 0.83(QA) = 3,607 ft<sup>3</sup>

### W5-Standard Method Runoff Volume Calculations

Impervious Cover Post-Development Bankfull Runoff Calculations (V<sub>bf,post</sub>)

2 year/24 hour storm event (P) = 2.35 in

B. Impervious Cover CN From Worksheet 1 CN = 98.00

S = (1000/CN) - 10 = 0.20 in

Q = (P-0.25)<sup>1.49</sup> / (P+0.85) = 2.12 in

E. Impervious Cover Area from Worksheet 1 Area = 146,674 sf

V<sub>bf,post</sub> = 0.83(QA) = 25,829 ft<sup>3</sup>

### W6-Standard Method Runoff Volume Calculations

Pervious Cover Post-Development 100-Year Storm Runoff Calculations (V<sub>100,post</sub>)

100-Year Storm Event = 5.11 in

B. Pervious Cover CN From Worksheet 1 CN = 61.00

S = (1000/CN) - 10 = 6.39 in

Q = (P-0.25)<sup>1.49</sup> / (P+0.85) = 1.44 in

E. Pervious Cover Area from Worksheet 1 Area = 282,665 sf

V<sub>100,post</sub> = 0.83(QA) = 33,682 ft<sup>3</sup>

### W7-Standard Method Runoff Volume Calculations

Impervious Cover Post-Development 100-Year Storm Runoff Calculations (V<sub>100,post</sub>)

100-Year Storm Event = 5.11 in

B. Impervious Cover CN From Worksheet 1 CN = 98.00

S = (1000/CN) - 10 = 0.20 in

D. Q = (P-0.25)<sup>1.49</sup> / (P+0.85) = 4.87 in

E. Impervious Cover Area from Worksheet 1 Area = 146,674 sf

V<sub>100,post</sub> = 0.83(QA) = 59,324 ft<sup>3</sup>

### W8-Standard Method Runoff Volume Calculations

Total Time of Concentration (T<sub>tc</sub>) = 0.29

### W9-Standard Method Runoff Volume Calculations

Runoff Summary & Onsite Infiltration Requirement

A. Runoff Summary from Previous Worksheets

First Flush Volume (V<sub>ff</sub>) = 17,501 ft<sup>3</sup>

Pre-Development Bankfull Runoff Volume (V<sub>bf,pre</sub>) = 3,558 ft<sup>3</sup>

Pervious Cover Post-Development Bankfull Volume (V<sub>bf,post</sub>) = 3,607 ft<sup>3</sup>

Impervious Cover Post-Development Bankfull Volume (V<sub>bf,post</sub>) = 25,829 ft<sup>3</sup>

Total BF Volume (V<sub>bf,total</sub>) = 29,436 ft<sup>3</sup>

Pervious Cover Post-Development 100-Year Volume (V<sub>100,post</sub>) = 33,682 ft<sup>3</sup>

Impervious Cover Post-Development 100-Year Volume (V<sub>100,post</sub>) = 59,324 ft<sup>3</sup>

Total 100 Year Volume (V<sub>100</sub>) = 93,005 ft<sup>3</sup>

Is Q<sub>bf,pre</sub> less than or equal to Q<sub>bf</sub>? Yes Acceptable

B. Determine Onsite Infiltration Requirement

Total Post Development Bankfull Volume (V<sub>bf,post</sub>) = 29,436 ft<sup>3</sup>

Pre-Development Bankfull Runoff Volume (V<sub>bf,pre</sub>) = 3,558 ft<sup>3</sup>

Bankfull Volume Difference = 25,878 ft<sup>3</sup>

Onsite Infiltration Requirement (V<sub>inf</sub>) = 25,878 ft<sup>3</sup>

### W10-Standard Method Runoff Volume Calculations

Detention/Retention Requirement

Detention A. Q<sub>bf</sub> = 238.67<sup>0.82</sup> = 665.01 cfs/in-mi<sup>2</sup>

B. Total Site Area (ac) Excluding "Self-Crediting" BMP's = 9.86 ac

C. Q<sub>100</sub> = Q<sub>100,pre</sub> + Q<sub>100,post</sub> = 6.31 in

D. Peak Flow (PF) = Q<sub>bf</sub>(Q<sub>100</sub>/A) = 65 cfs

E. Δ = PF - 0.15A = 63 cfs

F. V<sub>det</sub> = ΔV<sub>100</sub> = 90,877 ft<sup>3</sup>

W13 - Summary

Site Summary of Infiltration and Detention

A. Stormwater Management Summary

Minimum Onsite Infiltration Requirement (V<sub>inf</sub>) = 25,878 ft<sup>3</sup>

Designed/Provided Infiltration Volume = 3,255 ft<sup>3</sup>

% Minimum Required Infiltration Provided = 12 %

Total Calculated Detention Volume (V<sub>det</sub>) = 90,877 ft<sup>3</sup>

Net Required Detention Volume = 87,822 ft<sup>3</sup>

B. Detention Volume Increase for Sites where the required infiltration

volume cannot be achieved

% Required Infiltration NOT Provided = 88 %

Net % Penalty = 105.83 %

Total Required Detention Volume, Including Penalty = 92,945 ft<sup>3</sup>

Total Detention Provided = 95,072 ft<sup>3</sup>

Total Required Forebay Volume = 4,647 ft<sup>3</sup>

Total Forebay Volume Provided = 7,573 ft<sup>3</sup>

Total Required Permanent Pool Volume = 43,751 ft<sup>3</sup>

Total Permanent Pool Volume Provided = 0 ft<sup>3</sup>

\* MINIMUM REQUIREMENT FOR INFILTRATION VOLUME AND PERMANENT POOL VOLUME HAVE NOT BEEN MET. A WAIVER OF THESE REQUIREMENTS IS REQUESTED. MEETING THESE REQUIREMENTS WOULD CAUSE ADDITIONAL DISTURBANCES AND LOSS OF EXISTING NATURAL FEATURES, WHICH WOULD OTHERWISE NOT BE NECESSARY. MEETING THESE REQUIREMENTS IS NOT PRUDENT IN PRESERVING NATURAL FEATURES.

## OUTLET CONTROL CALCULATIONS

### Forebay Orifice (Dewatered Between 24 and 48 Hours)

#### Orifice Requirements

Average Flow (Forebay)

Storage Elevation (Forebay)

Outlet Elevation

Head (Forebay)

Average Head (Forebay)

Orifice Area Required

Q<sub>avg</sub> = 0.05 cfs = V<sub>bf</sub>/86400  
Z<sub>sf</sub> = 848.00  
Z<sub>out</sub> = 845.00  
H<sub>sf</sub> = 3.00 ft = (Z<sub>sf</sub>-Z<sub>out</sub>)  
H<sub>avg</sub> = 2.00 ft = (2/3)(Z<sub>sf</sub>-Z<sub>out</sub>)  
A<sub>or</sub> = 0.01 sf = Q<sub>avg</sub>/H / (0.62)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)

#### Orifice Selection

Number of Holes

Required Diameter of Holes

Selected Diameter of Holes

Orifice Area

N = 1  
D<sub>h</sub> = 1.18 in  
D<sub>s</sub> = 1.25 in  
A = 0.01 sf  
@ Elev. 845.00

Actual Release Rate (Forebay)

Actual Release Time (Forebay)

Q<sub>rel</sub> = 0.06 cfs = 0.62(A<sub>or</sub>)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)  
T<sub>rel</sub> = 35.10 hr = (V<sub>bf</sub>)/(Q<sub>rel</sub>)(3600)

### First Flush Orifice (Held for at least 24 Hours)

#### Orifice Requirements

Average Flow (First Flush)

Storage Elevation (First Flush)

Outlet Elevation

Head (First Flush)

Average Head (First Flush)

Orifice Area Required

Q<sub>avg</sub> = 0.20 cfs = V<sub>bf</sub>/86400  
Z<sub>sf</sub> = 847.40  
Z<sub>out</sub> = 843.92  
H<sub>sf</sub> = 3.48 ft = (Z<sub>sf</sub>-Z<sub>out</sub>)  
H<sub>avg</sub> = 2.32 ft = (2/3)(Z<sub>sf</sub>-Z<sub>out</sub>)  
A<sub>or</sub> = 0.03 sf = Q<sub>avg</sub>/H / (0.62)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)

#### Orifice Selection

Number of Holes

Required Diameter of Holes

Selected Diameter of Holes

Orifice Area

N = 1  
D<sub>h</sub> = 2.21 in  
D<sub>s</sub> = 2.00 in  
A = 0.02 sf  
@ Elev. 843.92

Actual Release Rate (First Flush)

Actual Release Time (First Flush)

Q<sub>rel</sub> = 0.17 cfs = 0.62(A<sub>or</sub>)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)  
T<sub>rel</sub> = 29.41 hr = (V<sub>bf</sub>)/(Q<sub>rel</sub>)(3600)

### Bankfull Orifice (Through First Flush Orifice) (Dewatered Between 36 and 48 Hours)

#### Orifice Requirements

Average Flow (Bankfull)

Storage Elevation (Bankfull)

Outlet Elevation

Head (Bankfull)

Average Head (Bankfull)

Orifice Area of First Flush Orifice

Q<sub>avg</sub> = 0.23 cfs = V<sub>bf</sub>/129400  
Z<sub>sf</sub> = 848.47  
Z<sub>out</sub> = 843.92  
H<sub>sf</sub> = 4.55 ft = (Z<sub>sf</sub>-Z<sub>out</sub>)  
H<sub>avg</sub> = 3.03 ft = (2/3)(Z<sub>sf</sub>-Z<sub>out</sub>)  
A<sub>or</sub> = 0.02 sf = Q<sub>avg</sub>/H / (0.62)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)

Actual Release Rate (Bankfull)

Actual Release Time (Bankfull)

Q<sub>rel</sub> = 0.19 cfs = 0.62(A<sub>or</sub>)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)  
T<sub>rel</sub> = 43.30 hr = (V<sub>bf</sub>)/(Q<sub>rel</sub>)(3600)

### 100 Year Flood Control (Dewatered in 72 Hours)

#### Orifice Requirements

Flow Allowable (Site)

Storage Elevation (Flood Control)

Outlet Elevation

Head (Flood Control)

Average Head (Flood Control)

Orifice Area Required

Q<sub>bf</sub> = 1.48 cfs = Q<sub>bf</sub>\*A = 0.15'A  
Z<sub>sf</sub> = 851.99  
Z<sub>out</sub> = 843.92  
H<sub>sf</sub> = 8.07 ft = (Z<sub>sf</sub>-Z<sub>out</sub>)  
H<sub>avg</sub> = 5.38 ft = (2/3)(Z<sub>sf</sub>-Z<sub>out</sub>)  
A<sub>or</sub> = 0.13 sf = Q<sub>bf</sub>/H / (0.62)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)

#### Orifice Selection

Number of Holes

Required Diameter of Holes

Selected Diameter of Holes

Orifice Area

N = 1  
D<sub>h</sub> = 4.85 in  
D<sub>s</sub> = 1.50 in  
A = 0.01 sf  
@ Elev. 848.47

Actual Release Rate (Flood Control through BF Holes)

Head (Flood Control)

Actual Release Rate (Flood Control)

Actual Release Rate (Total Flood Control)

Actual Release Time (Flood Control)

Q<sub>rel</sub> = 0.31 cfs = 0.62(A<sub>or</sub>)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)  
H<sub>sf</sub> = 2.35 ft = (2/3)(Z<sub>sf</sub>-Z<sub>out</sub>)  
Q<sub>rel</sub> = 0.09 cfs = 0.62(A<sub>or</sub>)(2(g)(h<sub>avg</sub>)<sup>0.5</sup>)  
Q<sub>rel</sub> = 0.40 cfs = Q<sub>rel</sub> + Q<sub>rel</sub> = 0.40  
T<sub>rel</sub> = 64.24 hr = (V<sub>bf</sub>)/(Q<sub>rel</sub>)(3600)

Is Q<sub>rel</sub> less than or equal to Q<sub>bf</sub>? Yes Acceptable

## INFILTRATION CALCULATIONS

### First Flush Orifice (Held for at least 24 Hours)

Bed Bottom Area

Observed Infiltration Rate

Design Infiltration Rate Safety Factor

Design Infiltration Rate

Infiltration Rate

A<sub>bf</sub> = 2.289 sf  
Inf<sub>obs</sub> = 0.5 in/hr  
SF = 2  
Inf<sub>des</sub> = 0.25 in/hr  
Q<sub>inf</sub> = 0.01 cfs  
A<sub>bf</sub>Inf<sub>des</sub> / (12\*3600)

First Flush Volume

Allowable Discharge

Storage Elevation

Infiltration Invert

Hydraulic Head

Outflow (through orifice)

Outflow (through infiltration)

First Flush Release Time

V<sub>ff</sub> = 17,501 cf  
Q<sub>bf</sub> = 0.20 cfs  
SE<sub>1</sub> = 847.40 ft  
IE<sub>1</sub> = 845.00 ft  
H<sub>1</sub> = 1.40 ft  
Q<sub>bf</sub> = 0.17 cfs  
Q<sub>inf</sub> = 0.01 cfs  
T<sub>ff</sub> = 27.23 hrs  
V<sub>ff</sub> / ((



Storm Water Maintenance Plan  
ST. PAUL LUTHERAN SCHOOL

1. **Responsibility for Maintenance**
- a. During and following construction, it is the Owners responsibility to perform the maintenance.
- b. Routine maintenance of the storm water facilities must be completed within 90 days of receipt of written notification that action is required, unless other acceptable arrangements are made with the (City of Ann Arbor), (Washtenaw County Water Resources Commissioner) or successors. Emergency maintenance (i.e. when there is endangerment to public health, safety, or welfare) shall be performed immediately upon receipt of written notice. Should the Owner fail to act within these time frames, the (City of Ann Arbor), (Washtenaw County Water Resources Commissioner) or successors may perform the needed maintenance and assess the costs to the Owner.
2. **Source of Financing**
- a. The Owner is required to pay for all maintenance activities on a continuing basis.
3. **Maintenance Tasks and Schedule**
- a. See charts on the next two pages 2 and 3:
- i. The first describes maintenance tasks during construction to be performed by the developer.
- ii. The second describes maintenance tasks post construction to be performed by the Condominium Association.
- b. Immediately following construction, the Owner will have the storm water management system inspected by an engineer to verify grades of the detention and filtration areas and make recommendations for any necessary sediment removal.
4. **Maintenance Plan Budget**
- a. See chart on page 4

Page 1 of 4

MAINTENANCE PLAN BUDGET

ANNUAL INSPECTION FOR SEDIMENT ACCUMULATION	\$ 400.00
REMOVAL OF SEDIMENT ACCUMULATION EVERY 2 YEARS AS NEEDED	\$ 2,400.00
INSPECT FOR FLOATABLES AND DEBRIS ANNUALLY AND AFTER MAJOR STORMS	\$ 400.00
REMOVAL OF FLOATABLES AND DEBRIS ANNUALLY AND AFTER MAJOR STORMS	\$ 900.00
INSPECT SYSTEM FOR EROSION ANNUALLY AND AFTER MAJOR STORMS	\$ 400.00
RE-ESTABLISH PERMANENT VEGETATION ON ERODED SLOPES AS NEEDED	\$ 1,800.00
REPLACEMENT OF STONE	\$ 1,600.00
MOWING 0-2 TIMES PER YEAR	\$ 900.00
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS BUILT PLANS EVERY 2 YEARS	\$ 600.00
MAKE STRUCTURAL ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY INSPECTION AS NEEDED	\$ 1,800.00
HAVE A PROFESSIONAL ENGINEER CARRY OUT EMERGENCY INSPECTIONS UPON IDENTIFICATION OF SEVERE PROBLEMS	\$ 900.00

TOTAL ANNUAL BUDGET \$ 12,100.00

Page 4 of 4

MAINTENANCE TASKS AND SCHEDULE DURING CONSTRUCTION

TASKS	STORM SEWER SYSTEMS	CATCH BASIN SUMPS	CATCH BASIN INLET CASTINGS	CHANNELS AND SWALES	OUTFLOW CONTROL STRUCTURE	RIP-RAP	STORM DETENTION AREAS	EMERGENCY OVERFLOW	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION			X	X			X		WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION			X	X			X		AS NEEDED AND PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS			X	X			X		QUARTERLY
CLEANING OF FLOATABLES AND DEBRIS			X	X			X		QUARTERLY AND AT TURNOVER
INSPECTION FOR EROSION			X	X			X		WEEKLY
GENERAL NPDS INSPECTION FOR PERTINENT SOIL EROSION CONTORL MEASURES									WEEKLY OR AFTER RAINFALL EVENT
RE-ESTABLISH PERMANANT VEGETATION ON ERODED SLOPES			X	X			X		AS NEEDED AND PRIOR TO TURNOVER
REPLACEMENT OF STONE				X					AS NEEDED
MOWING			X				X		0 TO 2 TIMES PER YEAR
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS				X	X		X		ANNUALLY AND AT TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY PRE TURNOVER INSPECTION				X	X		X		AS NEEDED

Page 2 of 4

ENGINEER'S CERTIFICATE OF OUTLET



ENGINEER'S CERTIFICATE OF OUTLET

Date: July 24, 2025

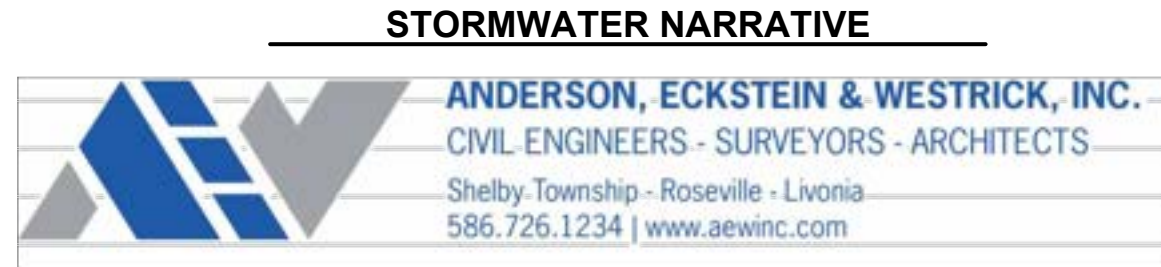
**Development Name:** St. Paul Lutheran School  
City, Village or Township of: Ann Arbor, Section 26  
Washtenaw County, Michigan

I hereby certify that the existing outlet to the Earhart Road ROW is the only reasonably achievable stormwater outlet for the proposed stormwater management system, the detention pond is designed for a 100 year storm event, and the storm water discharge is limited to predevelopment runoff rates.

Signed,

Sydney A. Kanan, PE  
Project Manager

51301 Schoenherr Road, Shelby Township, MI 48315  
Engineering Strong Communities



July 24, 2025

Peter Stephens  
City of Ann Arbor  
301 E. Huron St.  
Ann Arbor, Michigan 48104

**Reference:** Stormwater Narrative  
St. Paul Lutheran School  
AEW Project No. 1688-0001

Dear Mr. Stephens:

St. Paul Lutheran School is an existing development with a detention pond that outlets on grade near the southeast corner of the site, ultimately discharging overland to the Earhart Road ROW. The proposed improvements for the site include removal and reconstruction of the existing parking lot, parking lot addition, ring road construction, stormwater sewer collection system, and detention pond expansion.

The expanded detention pond is sized to accommodate the total area tributary to the pond (9.86 ac), including area by direct runoff, or through the stormwater collection system.

In addition to detention, infiltration testing was conducted in the existing detention pond, and the resulted in an infiltration rate of 0.5 in/hr. The calculations presented on the plans and described herein include release rates for the both infiltration into the soil, and release through the outlet control structure. All calculations were completed in accordance with the Washtenaw County Water Resources Commissioner Rules and Guidelines for Stormwater Management.

The first flush calculations resulted in a required detention of 17,501 cf. It is proposed to restrict this volume using one 2-inch orifice hole, resulting in a release time of 29.20 hours, meeting the standard of releasing this volume over a span of time not less than 24 hours.



St. Paul  
July 24, 2025  
Page 2

51301 Schoenherr Road, Shelby Township, MI 48315  
Engineering Strong Communities

The bankfull calculations resulted in a required detention of 29,436 cf. It is proposed to restrict this volume using the same 2-inch orifice hole, resulting in a release time of 43.11 hours, meeting the standard of releasing this volume at a time between 36 and 48 hours.

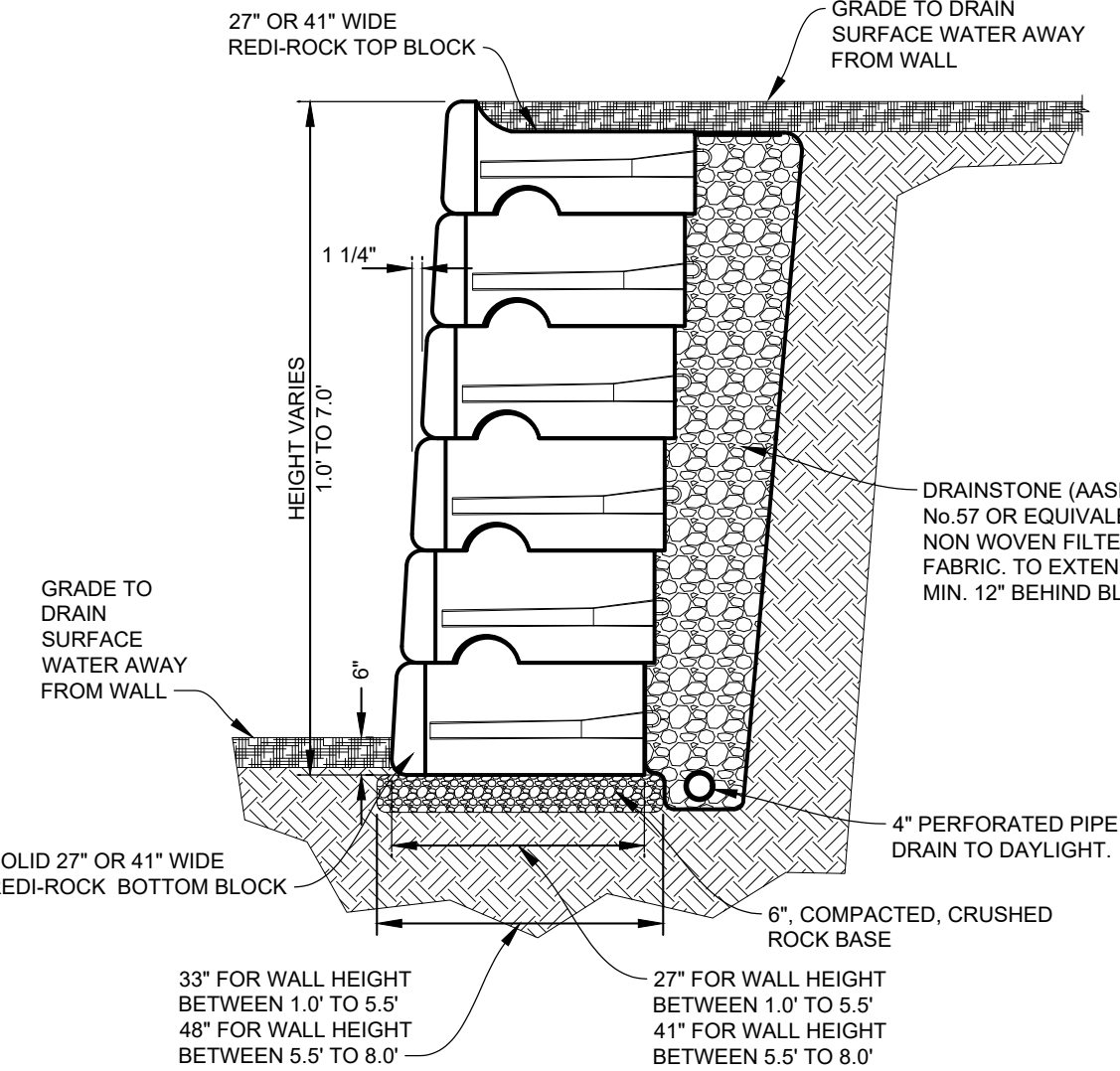
The 100-year calculations resulted in a required detention of 90,809 cf. It is proposed to restrict this volume using the 2-inch orifice hole and three 2.5-inch orifice holes, resulting in a release time of 23.48 hours at a rate of 1.07 cfs, meeting the standard of releasing this volume at a time between not greater than 72 hours and at a rate not greater than 1.48 cfs.

Sincerely,

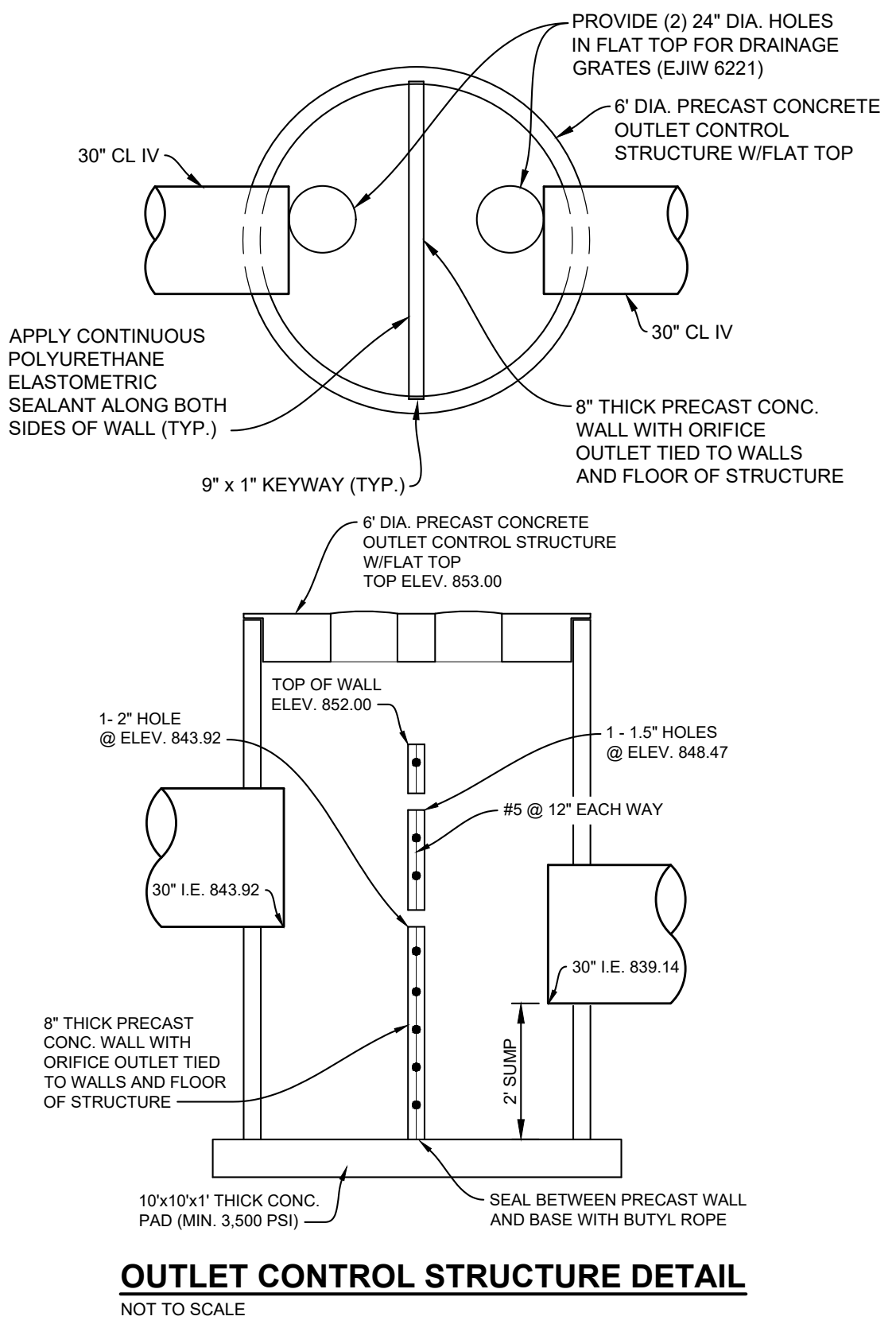
Sydney A. Kanan, PE  
Project Manager

PERMANENT MAINTENANCE TASKS AND SCHEDULE

TASKS	CATCH BASIN INLET CASTINGS	DITCHES AND SWALES	OUTFLOW CONTROL STRUCTURE	RIP-RAP	STORM DETENTION AREAS	WETLANDS	EMERGENCY OVERFLOW	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	X	X			X			ANNUALLY
REMOVAL OF SEDIMENT ACCUMULATION	X	X			X			EVERY 2 YEARS AS NEEDED
INSPECT FOR FLOATABLES AND DEBRIS	X	X	X		X			ANNUALLY
CLEANING OF FLOATABLES AND DEBRIS	X	X	X		X			ANNUALLY
INSPECTION FOR EROSION	X	X			X			ANNUALLY
RE-ESTABLISH PERMANANET VEGETATION ON ERODED SLOPES	X				X			AS NEEDED
REPLACEMENT OF STONE				X				EVERY 3-5 YEARS AS NEEDED
CLEAN STREETS								SEMI-ANNUALLY
MOWING	X				X			0 TO 2 TIMES PER YEAR
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS	X	X	X	X	X	X	X	ANNUALLY AND AT TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION	X	X	X	X	X	X	X	AS NEEDED
KEEP RECORDS OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES AND REPORT TO CONDOMINIUM ASSOCIATION								ANNUALLY
KEEP RECORDS OF ALL COSTS FOR INSPECTIONS, MAINTENANCE AND REPAIRS. REPORT TO CONDOMINIUM ASSOCIATION								ANNUALLY



TYPICAL REDI-ROCK WALL DETAIL  
NOT TO SCALE



OUTLET CONTROL STRUCTURE DETAIL  
NOT TO SCALE



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025 07-24-2025 07-09-2024 01-05-2024	SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

ST. PAUL LUTHERAN  
SCHOOL SITE  
IMPROVEMENTS

SHEET TITLE:

STORMWATER  
MANAGEMENT PLAN  
AND DETAILS

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: AUGUST 25, 2023
SCALE: 1" = 40'		
0 20 40 80		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

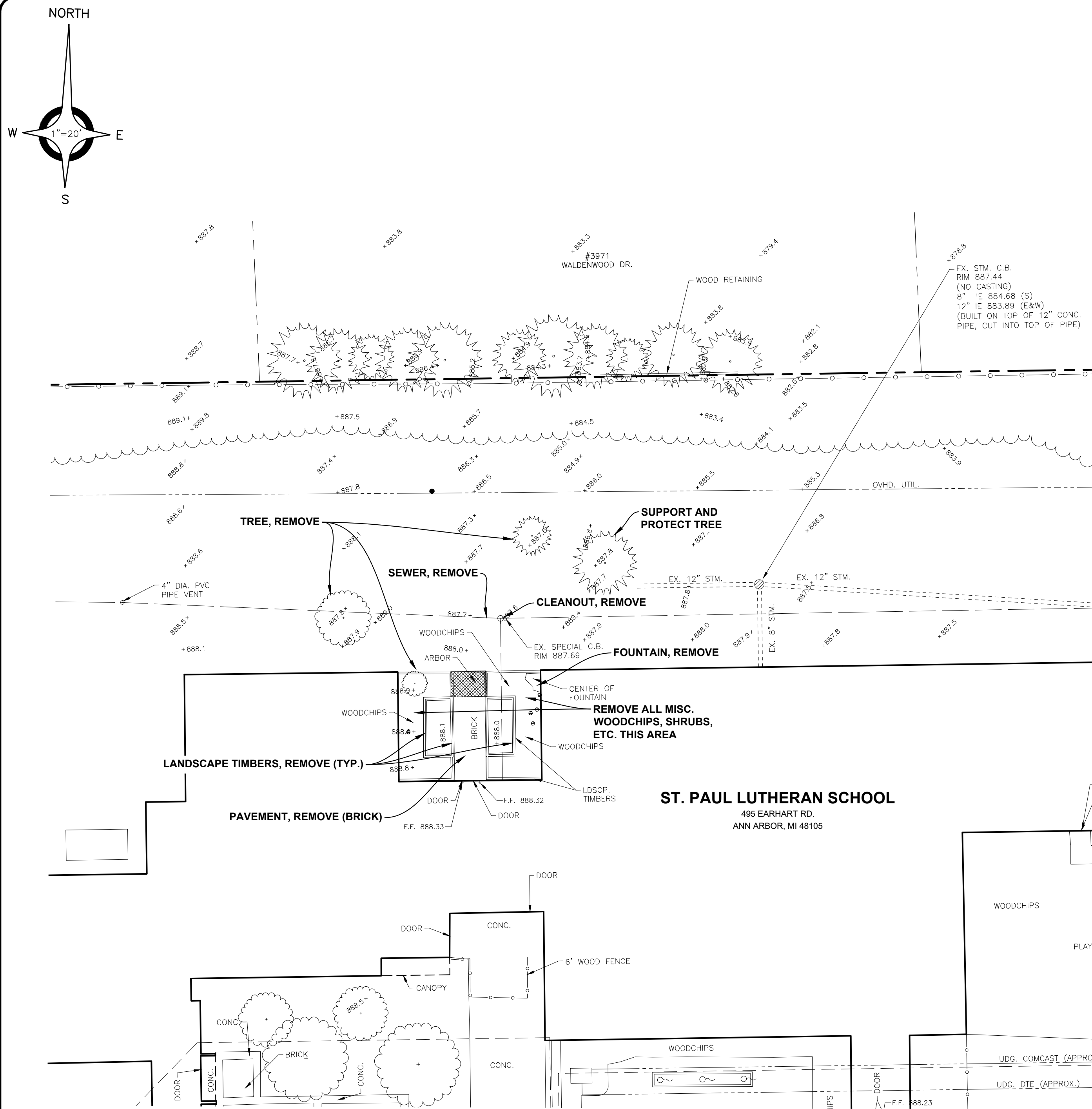
1688-0001

M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
08A\_Stormwater Management--11/26/2025 10:39:45 AM

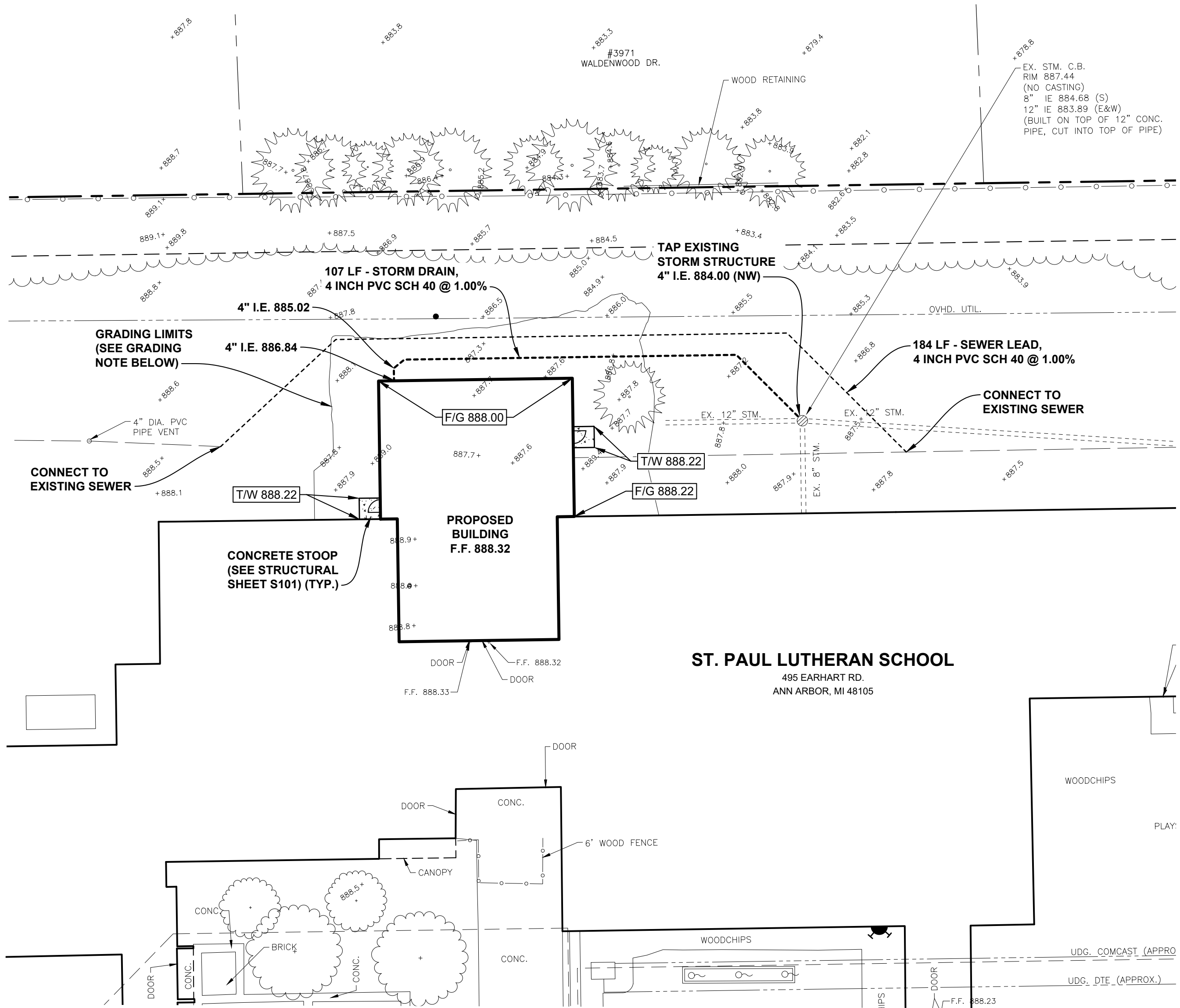
SHEET NO.

C8A



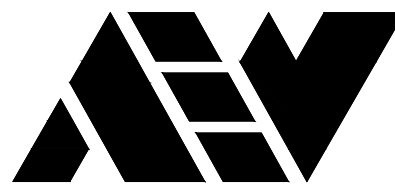


#### REMOVALS



#### CONSTRUCTION

LEGEND	
---	BOUNDARY LINE
+	SPOT ELEVATION ("+" INDICATES ELEVATION LOCATION UNLESS OTHERWISE INDICATED)
+	SIGN
+	FLAG POLE
+	BASKETBALL POLE
+	FLOOD LIGHT
+	GUY ANCHOR
+	UTILITY POLE
+	LIGHT POLE
+	HYDRANT
+	GATE VALVE & WELL
+	VALVE BOX
---	WATER MAIN
+	STORM CATCH BASIN (PAVT.)
+	STORM CATCH BASIN (FIELD)
+	STORM MANHOLE
---	STORM SEWER
---	OVHD. UTIL.
+	PROPOSED SIDEWALK
---	PROPOSED STORM DRAIN



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025 07-24-2025 07-09-2024 01-05-2024	SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

SHEET TITLE:

## BUILDING ADDITION PLAN

CLIENT:

ST. PAUL LUTHERAN CHURCH

PRELIMINARY	CONSTRUCTION	RECORD
DRAWN BY:	CHECKED BY:	DATE:
MJS	SAK	AUGUST 25, 2023
SCALE:		
1" = 20'		
0 10 20 40		



Know what's below. Call  
72 hours before you dig.

UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

1688-0001

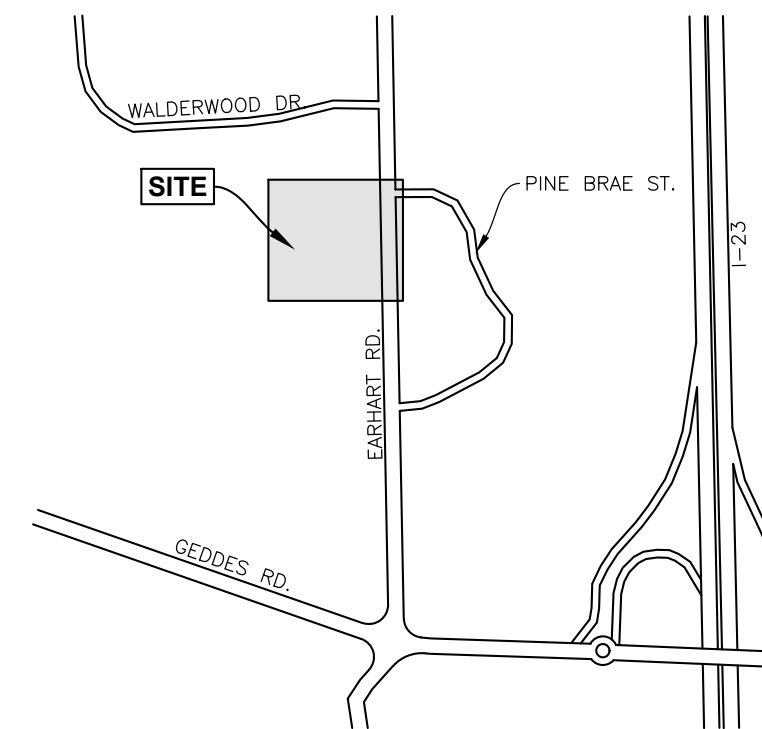
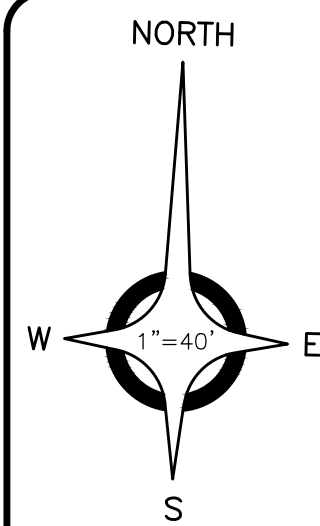
M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
09\_Building-11/26/2025 10:39:51 AM

SHEET NO.

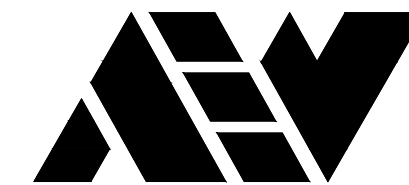
C9

COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.





LOCATION MAP  
NOT TO SCALE



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025	SITE PLAN SUBMITTAL
07-24-2025	SITE PLAN SUBMITTAL
07-08-2024	SITE PLAN SUBMITTAL
01-05-2024	BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

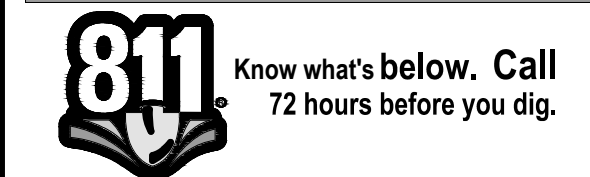
SHEET TITLE:

## SOIL EROSION AND SEDIMENTATION CONTROL PLAN

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: AUGUST 25, 2023
SCALE: 1" = 40'		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

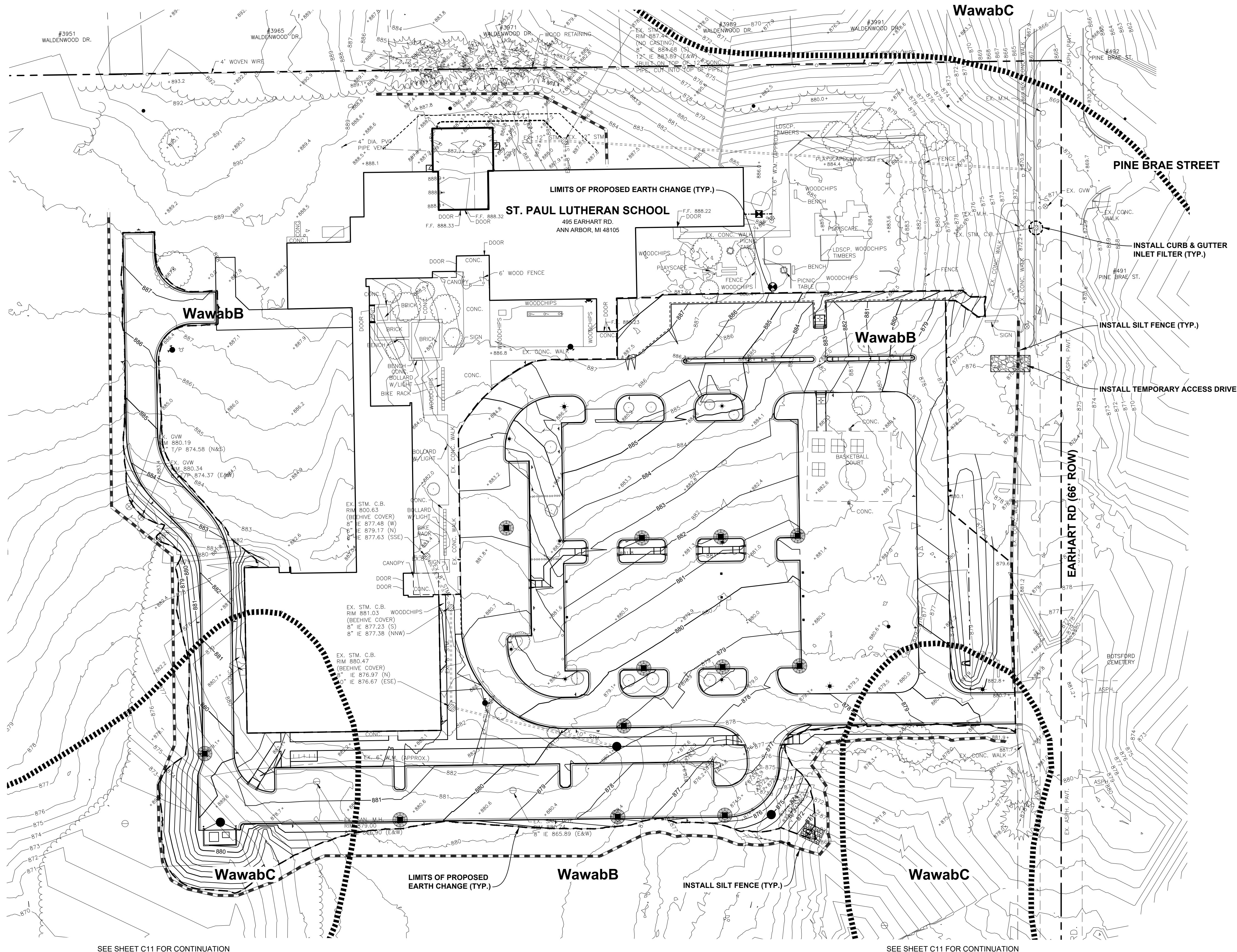
1688-0001

M:\1688\1688-0001\DWG\CIVIL\01\_SITE.PLAN.DWG  
10\_08-2023-11:26:2025 10:39:56 AM

SHEET NO.

C10

COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.



SEE SHEET C11 FOR CONTINUATION

SEE SHEET C11 FOR CONTINUATION

- NOTES:
- THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AS AMENDED. "THE SOIL EROSION AND SEDIMENT CONTROL ACT"
  - NO WETLANDS WITHIN CONSTRUCTION AREA.
  - NEAREST WATERCOURSE:  
HURON RIVER - 2,400± FEET SOUTHWEST OF SITE.
  - SOIL TYPE FOR THE ENTIRE SITE IS:  
WawabB - WAWASEE LOAM, 2 TO 6 PERCENT SLOPES.  
WawabC - WAWASEE LOAM, 6 TO 12 PERCENT SLOPES.
  - IF NECESSARY, SILT FENCE SHALL BE USED AND INSTALLED AS SHOWN IN THE DETAIL ON THIS SHEET.
  - ESTIMATED RESTORATION COST = \$40,512 (27,008 SYD @ \$1.50 / SYD)

### LEGEND

- BOUNDARY LINE
- SPOT ELEVATION ("+" INDICATES ELEVATION LOCATION UNLESS OTHERWISE INDICATED)
- SIGN
- FLAG POLE
- BASKETBALL POLE
- FLOOD LIGHT
- GUY ANCHOR
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- GATE VALVE & WELL
- VALVE BOX
- STORM CATCH BASIN (PAVT.)
- STORM CATCH BASIN (FIELD)
- STORM MANHOLE
- STORM SEWER
- PROPOSED SILT FENCE
- PROPOSED AREA OF EARTH CHANGE
- EXISTING SOIL TYPE
- INLET FILTER





51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

ENGINEERING STRONG COMMUNITIES



---	BOUNDARY LINE
+000.0	SPOT ELEVATION ("+" INDICATES ELEVATION LOCATION UNLESS OTHERWISE INDICATED)
+	SIGN
~	FLAG POLE
◆	BASKETBALL POLE
☀	FLOOD LIGHT
<	GUY ANCHOR
●	UTILITY POLE
★	LIGHT POLE
⌋	HYDRANT
⊗	GATE VALVE & WELL
⊗	VALVE BOX
▣	STORM CATCH BASIN (PAVT.)
⊗	STORM CATCH BASIN (FIELD)
○	STORM MANHOLE
-----	STORM SEWER
▬	PROPOSED SILT FENCE
---	PROPOSED AREA OF EARTH RETENTION
	EXISTING SOIL TYPE
⦿	INLET FILTER

SITE PLAN SUBMITTAL  
SITE PLAN SUBMITTAL  
SITE PLAN SUBMITTAL

DATE	SUBMITTALS/REVISION
------	---------------------

PROJECT NAME

## SHEET TITLE

CLIENT

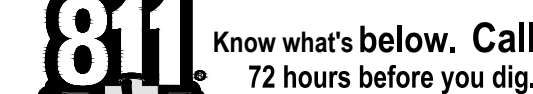
ST. PAUL LUTHERAN CHURCH

☒ PRELIMINARY ☐ CONSTRUCTION ☐ RECORD

DRAWN BY:	CHECKED BY:	DATE:
MJS	SAK	AUGUST 25, 2023

ISS	SAR	AUGUST 29, 2023
SCALE:		

					1° = 40'					
	0		20		40				80	



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION, VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

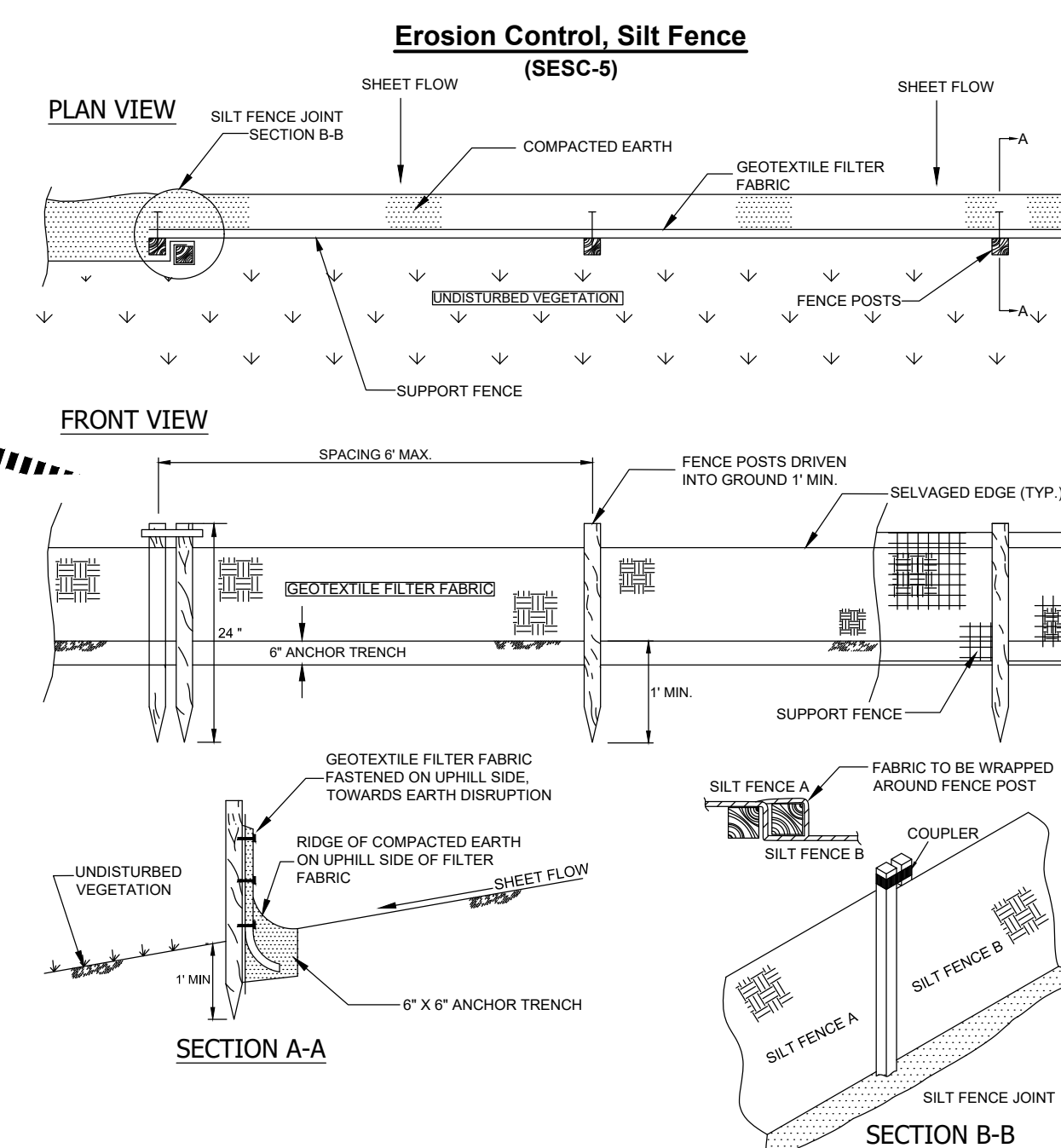
PROJECT NO. \_\_\_\_\_

1688-0001

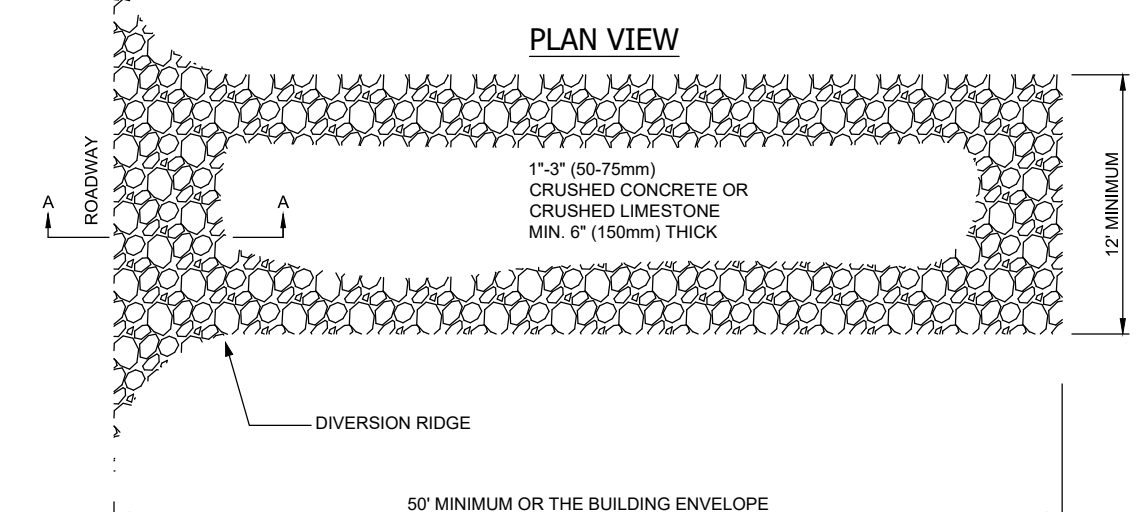
M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
11 SECC-11/26/2025 10:40:01 AM

SHEET NO.

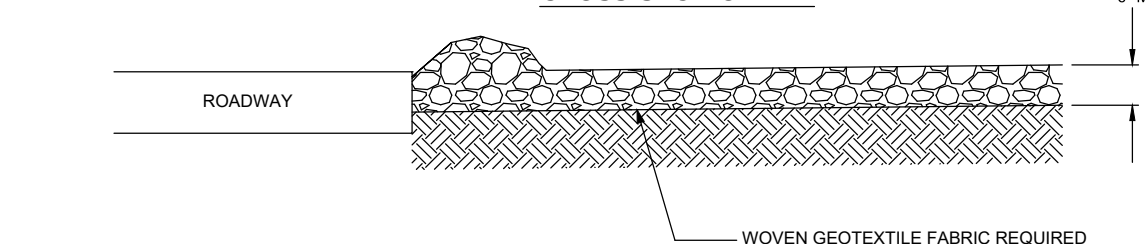
COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.



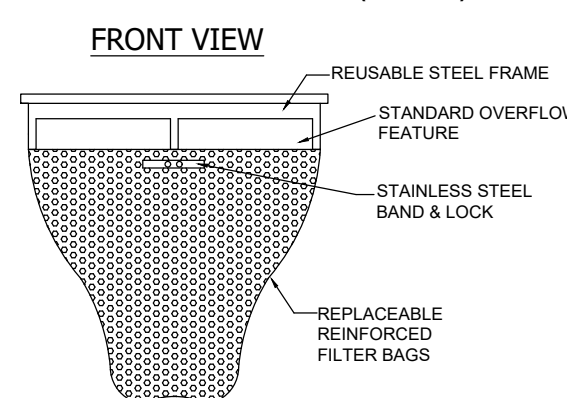
PLAN VIEW



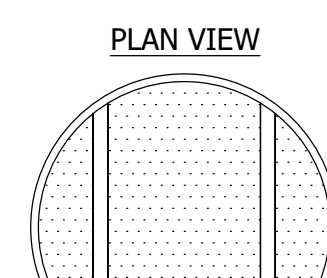
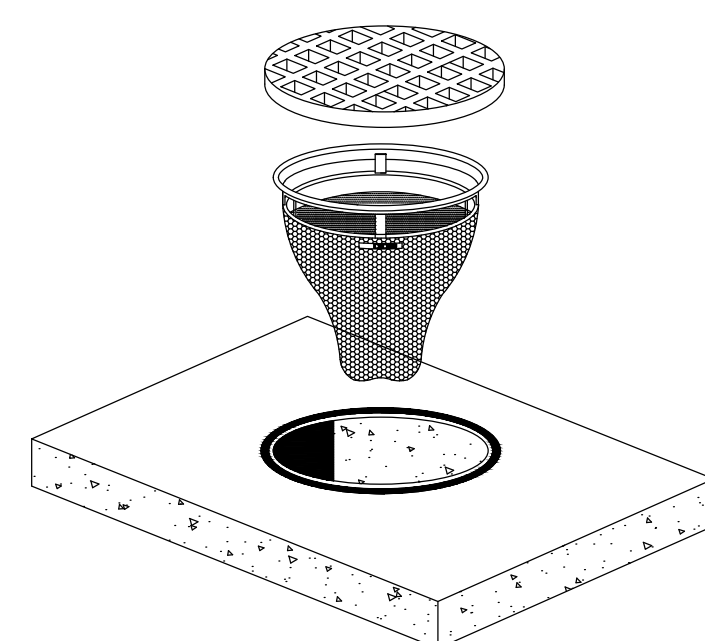
CROSS SECTION A-A



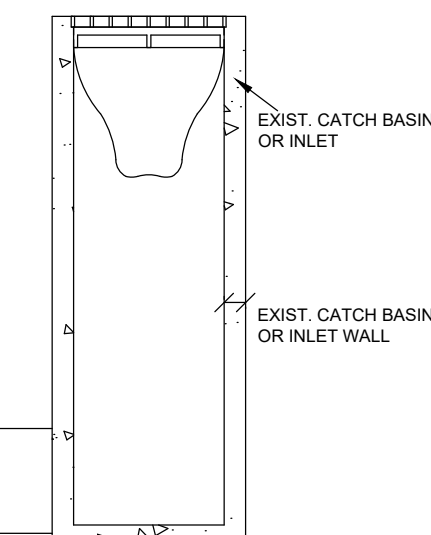
(SESC-2)



## INSTALLATION DETAILS



HANDLES  
FOR EASY



PRELIMINARY SESC SCHEDULE	2026					
	MAR	APR	MAY	JUN	OCT	NOV
Install SESC Measures						
Pavement & Sidewalk Removal						
Construct Underground Utilities						
Construct Detention Pond						
Construct Pavement and Sidewalk						
Construct Building Addition						
Site Restoration						
Remove SESC Measures						





51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025 07-24-2025 07-09-2024 01-05-2024	SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

SHEET TITLE

## SIGNAGE AND PAVEMENT MARKING PLAN

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> RECORD		
DRAWN BY:	CHECKED BY:	DATE:
MJS	SAK	AUGUST 25, 2022

SCALE:

1" = 30'

A horizontal graphic scale bar with alternating black and white segments. It is marked with the numbers 0, 15, 30, and 60, representing feet.



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION, VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

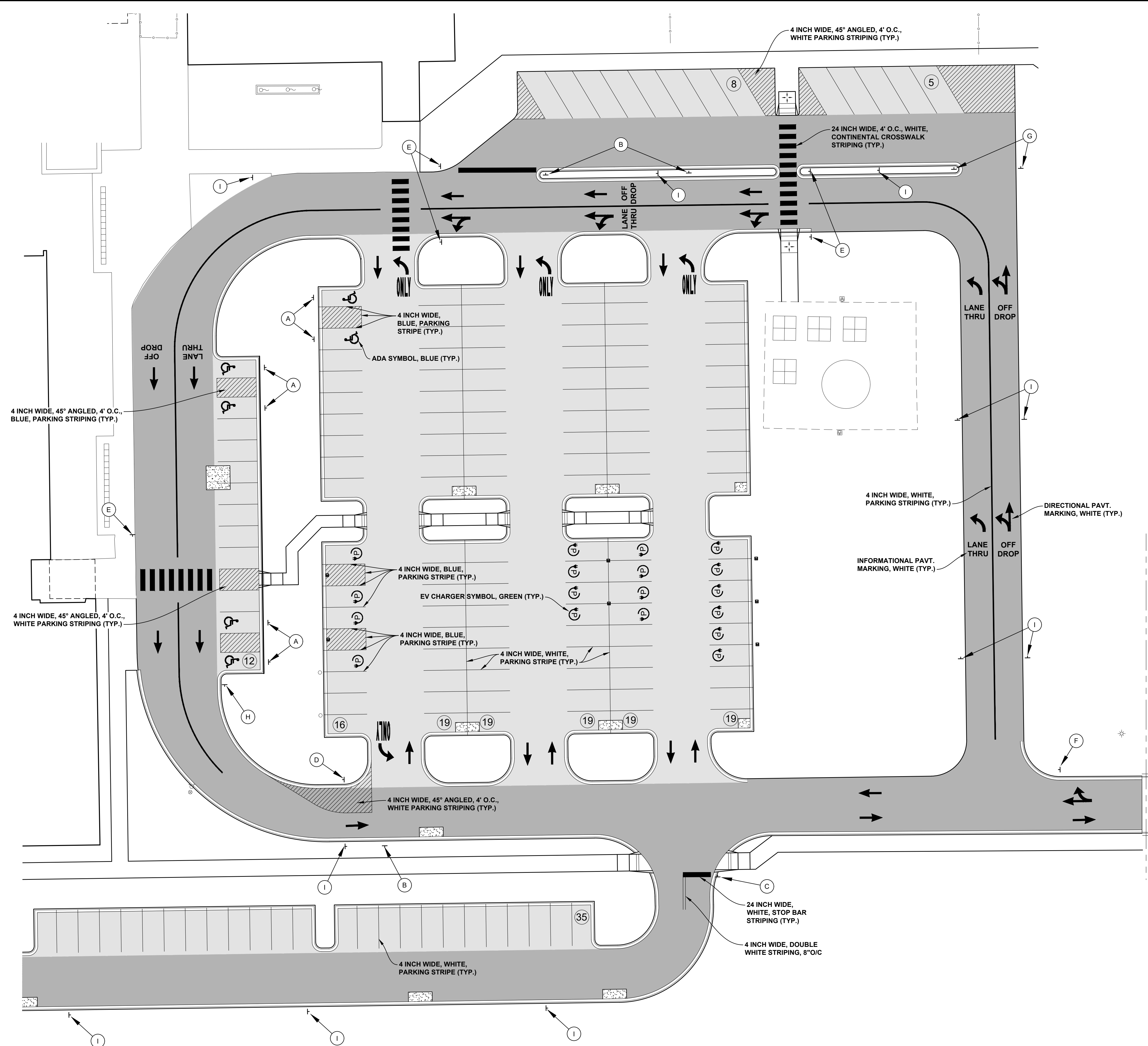
PROJECT NO. 1688-0001

M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
12 Signage--11/26/2025 10:40:04 AM

SHEET NO.

# C12

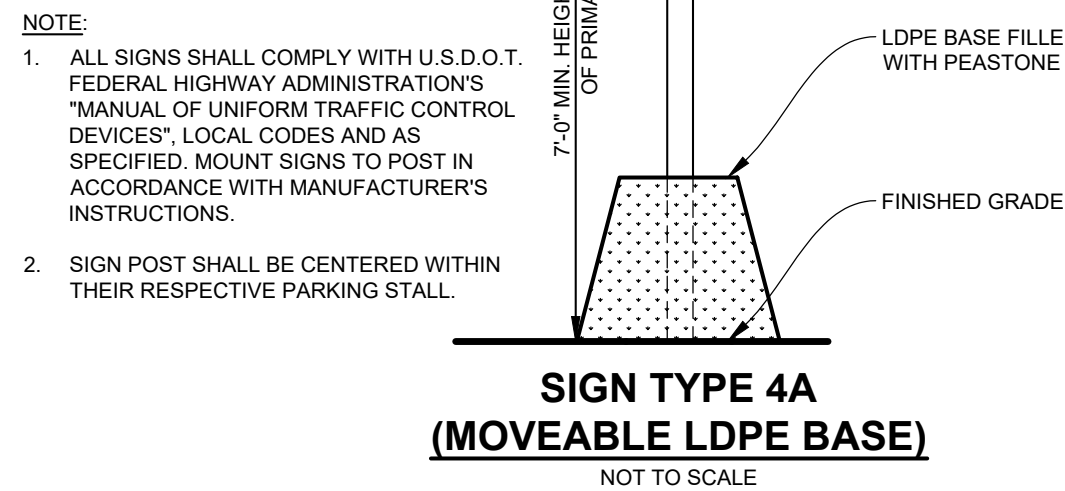
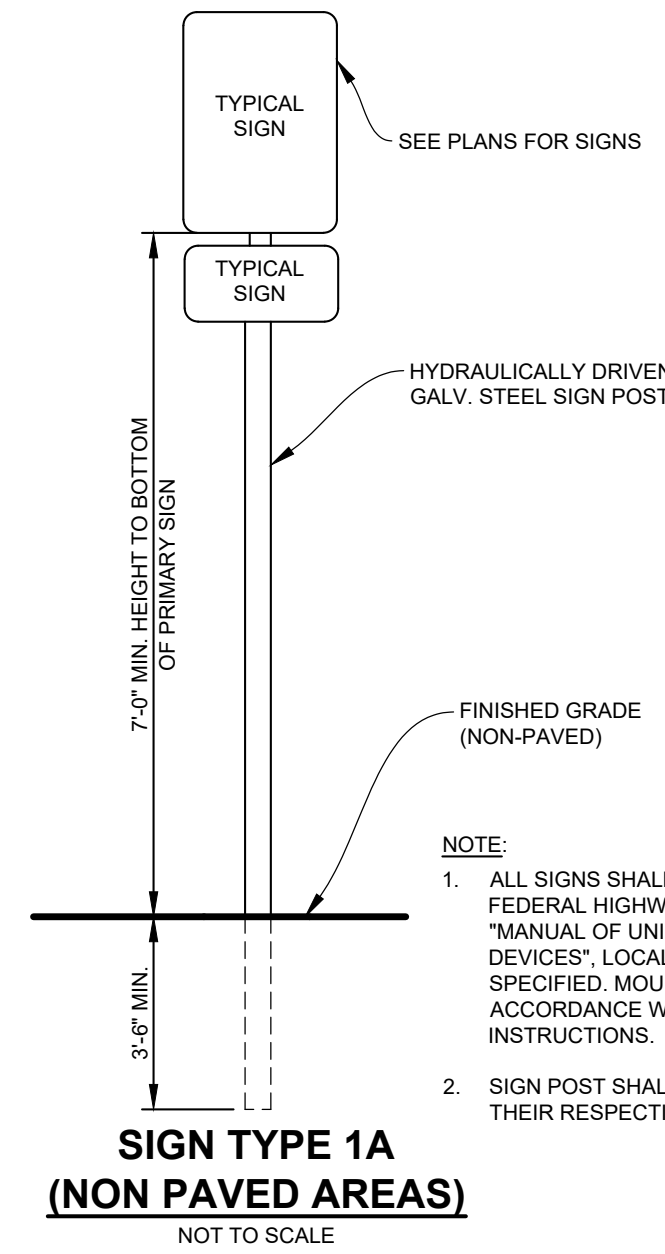
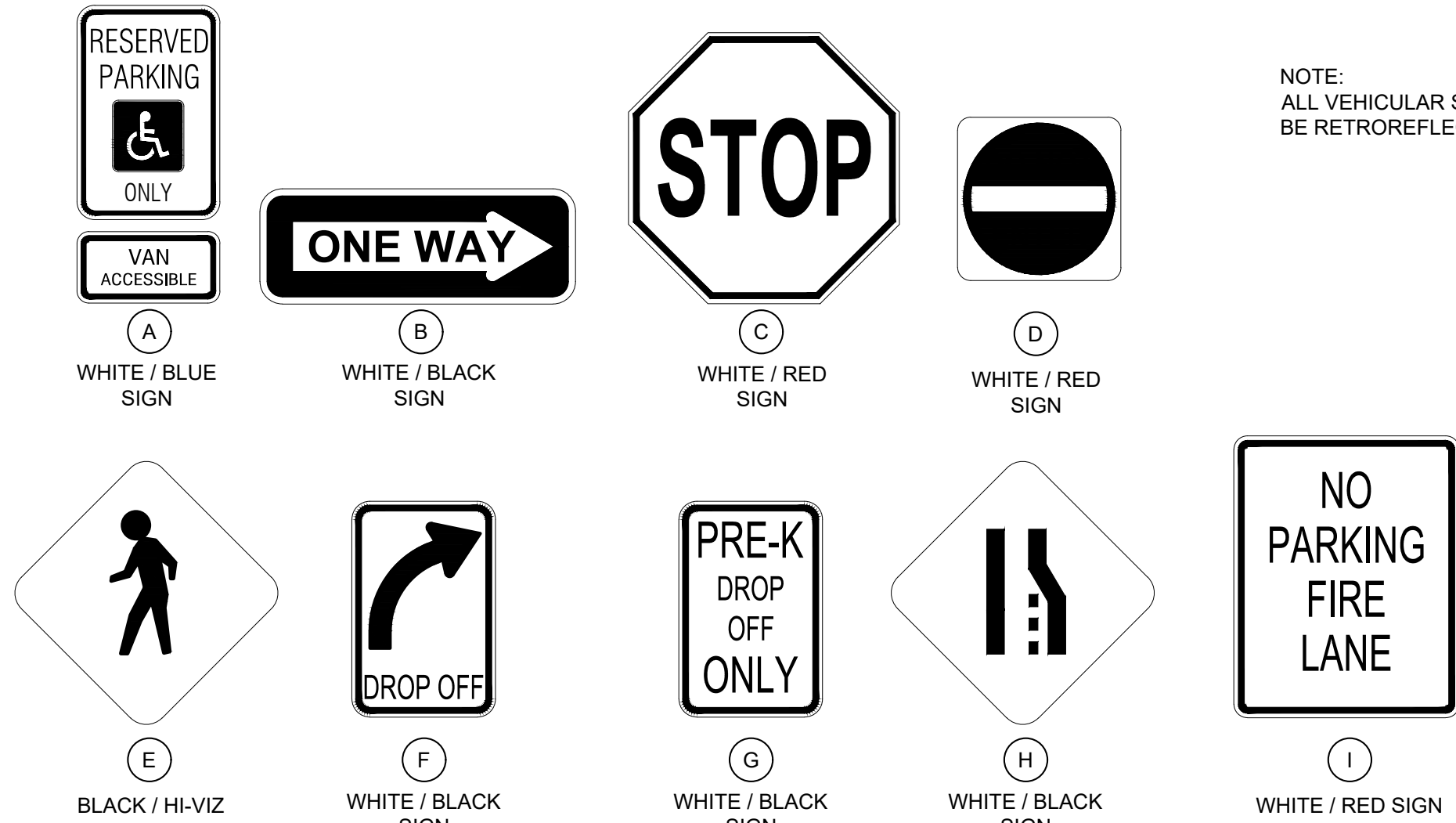
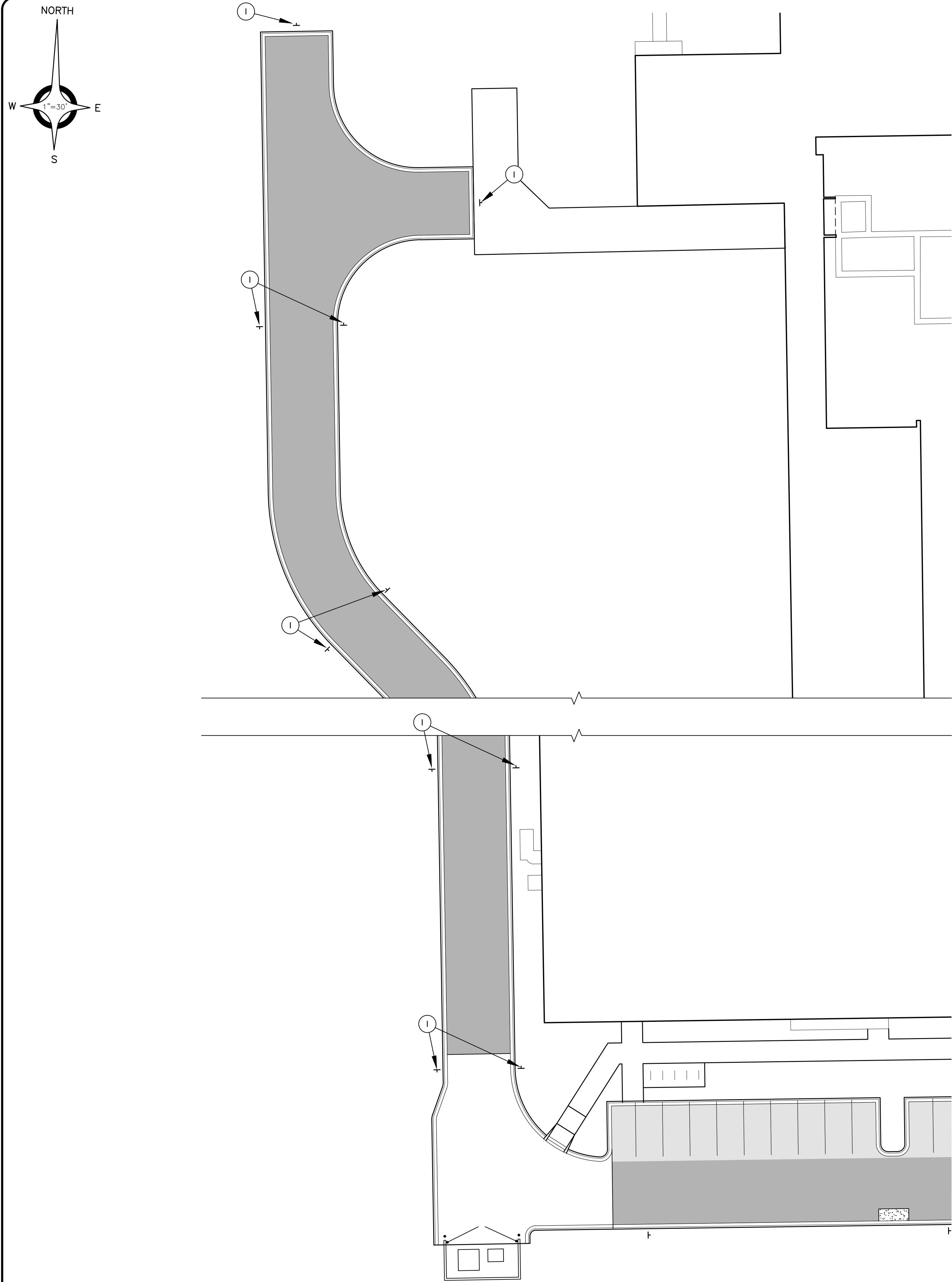
COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.



### SIGN SUMMARY (THIS SHEET)

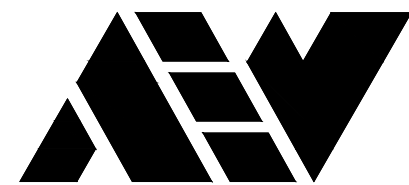
KEY	DESCRIPTION	QUANTITY
(A)	ADA PARKING AND VAN ACCESSIBLE SIGN - TYPE 1A- SINGLE SIDED	6
(B)	ONE WAY SIGN - TYPE 1A- SINGLE SIDED	3
(C)	STOP SIGN - TYPE 1A- SINGLE SIDED	1
(D)	DO NOT ENTER / WRONG WAY SIGN - TYPE 1A- SINGLE SIDED	1
(E)	PEDESTRIAN CROSSING SIGN - TYPE 1A- SINGLE SIDED	3
(E)	PEDESTRIAN CROSSING SIGN - TYPE 4A- SINGLE SIDED	2
(F)	DROP OFF SIGN - TYPE 1A- SINGLE SIDED	1
(G)	PRE-K DROP OFF ONLY SIGN - TYPE 1A- SINGLE SIDED	2
(H)	MERGE RIGHT SIGN - TYPE 1A- SINGLE SIDED	1
(I)	NO PARKING FIRE LANE SIGN - TYPE 1A- SINGLE SIDED	11





#### SIGN SUMMARY (THIS SHEET)

KEY	DESCRIPTION	QUANT.
A	ADA PARKING AND VAN ACCESSIBLE SIGN - TYPE 1A - SINGLE SIDED	0
B	ONE WAY SIGN - TYPE 1A - SINGLE SIDED	0
C	STOP SIGN - TYPE 1A - SINGLE SIDED	0
D	DO NOT ENTER / WRONG WAY SIGN - TYPE 1A - SINGLE SIDED	0
E	PEDESTRIAN CROSSING SIGN - TYPE 4A - SINGLE SIDED	0
E	PEDESTRIAN CROSSING SIGN - TYPE 1A - SINGLE SIDED	0
F	DROP OFF SIGN - TYPE 1A - SINGLE SIDED	0
G	PRE-K DROP OFF ONLY SIGN - TYPE 1A - SINGLE SIDED	0
H	MERGE RIGHT SIGN - TYPE 1A - SINGLE SIDED	0
I	NO PARKING FIRE LANE SIGN - TYPE 1A - SINGLE SIDED	10



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025 07-24-2025 07-08-2024 01-05-2024	SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**ST. PAUL LUTHERAN  
SCHOOL SITE  
IMPROVEMENTS**

SHEET TITLE:

**SIGNAGE AND  
PAVEMENT MARKING  
PLAN**

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: AUGUST 25, 2023
SCALE: 1" = 30' 0 15 30 60		



Know what's below. Call  
72 hours before you dig.

UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (ON CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

1688-0001

M:\1688\1688-0001\DWG\ICIVIL\01\_SITEPLAN.DWG  
12A\_Signage-11/26/2025 10:40:07 AM

SHEET NO.

**C12A**

COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.



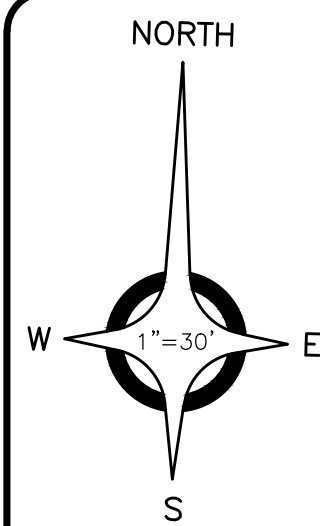


**Plan View**  
Scale - 1" = 40'

PARKING LOT LIGHTING SHALL BE ON AN AUTOMATIC TIME SUCH THAT THE LIGHTING DOES NOT REMAIN ON THROUGHOUT THE NIGHT

**Designer**  
BK  
**Date**  
10/10/2023  
**Scale**  
Not to Scale  
**Drawing No.**  
#23-20991



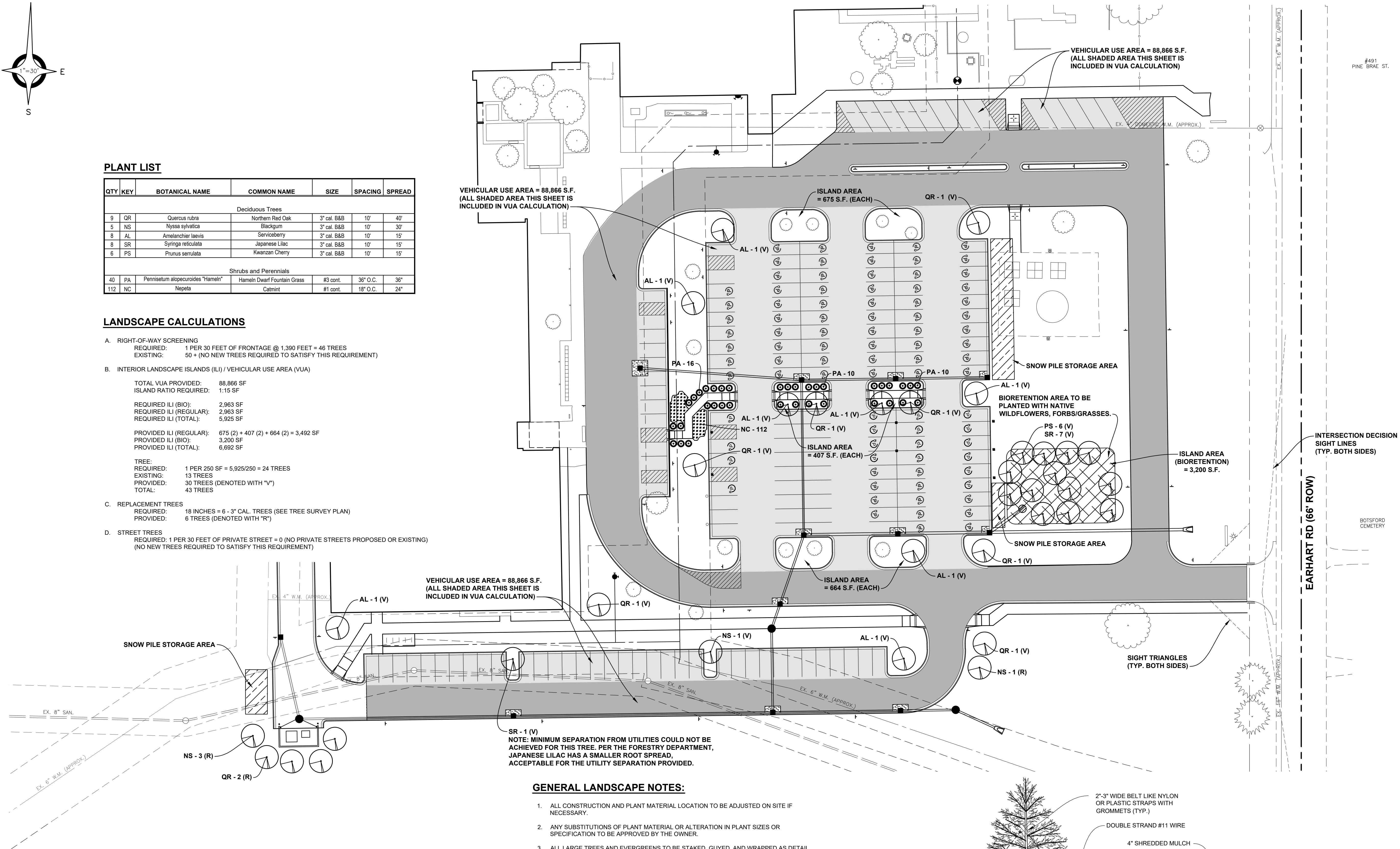


### PLANT LIST

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	SPREAD
Deciduous Trees						
9	QR	Quercus rubra	Northern Red Oak	3" cal. B&B	10'	40'
5	NS	Nyssa sylvatica	Blackgum	3" cal. B&B	10'	30'
8	AL	Amelanchier laevis	Serviceberry	3" cal. B&B	10'	15'
8	SR	Syringa reticulata	Japanese Lilac	3" cal. B&B	10'	15'
6	PS	Prunus serrulata	Kwanzan Cherry	3" cal. B&B	10'	15'
Shrubs and Perennials						
40	PA	Pennisetum alopecuroides "Hameln"	Hameln Dwarf Fountain Grass	#3 cont.	36" O.C.	36"
112	NC	Napeta	Catmint	#1 cont.	18" O.C.	24"

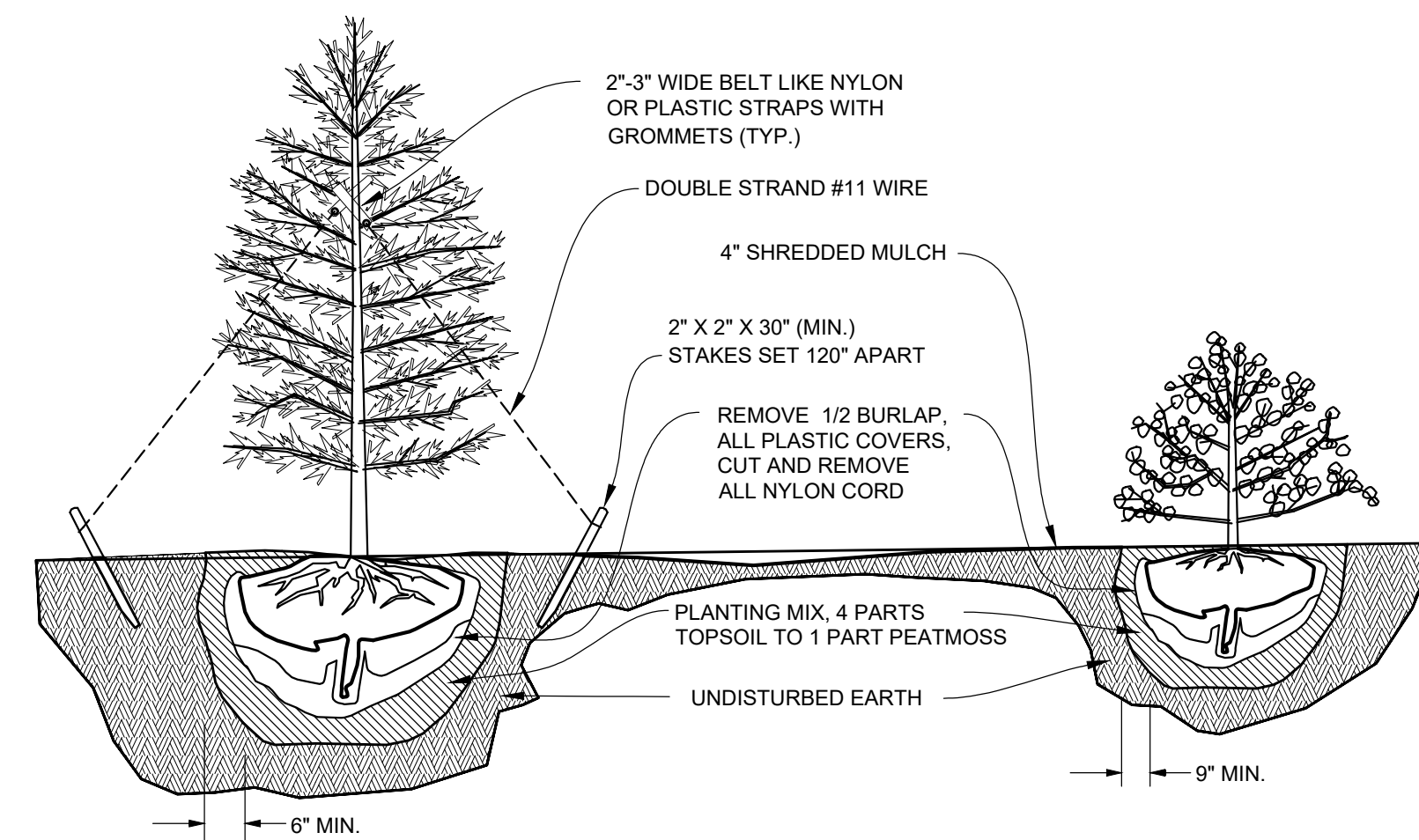
### LANDSCAPE CALCULATIONS

- A. RIGHT-OF-WAY SCREENING  
REQUIRED: 1 PER 30 FEET OF FRONTAGE @ 1,390 FEET = 46 TREES  
EXISTING: 50 + (NO NEW TREES REQUIRED TO SATISFY THIS REQUIREMENT)
- B. INTERIOR LANDSCAPE ISLANDS (ILI) / VEHICULAR USE AREA (VUA)  
TOTAL VUA PROVIDED: 88,866 SF  
ISLAND RATIO REQUIRED: 1:15 SF  
REQUIRED ILI (BIO): 2,963 SF  
REQUIRED ILI (REGULAR): 2,963 SF  
REQUIRED ILI (TOTAL): 5,925 SF  
PROVIDED ILI (REGULAR): 675 (2) + 407 (2) + 664 (2) = 3,492 SF  
PROVIDED ILI (BIO): 3,200 SF  
PROVIDED ILI (TOTAL): 6,692 SF  
TREE:  
REQUIRED: 1 PER 250 SF = 5,925/250 = 24 TREES  
EXISTING: 13 TREES  
PROVIDED: 30 TREES (DENOTED WITH "V")  
TOTAL: 43 TREES
- C. REPLACEMENT TREES  
REQUIRED: 18 INCHES ± 6 - 3" CAL. TREES (SEE TREE SURVEY PLAN)  
PROVIDED: 6 TREES (DENOTED WITH "R")
- D. STREET TREES  
REQUIRED: 1 PER 30 FEET OF PRIVATE STREET = 0 (NO PRIVATE STREETS PROPOSED OR EXISTING)  
(NO NEW TREES REQUIRED TO SATISFY THIS REQUIREMENT)



### GENERAL LANDSCAPE NOTES:

- ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE IF NECESSARY.
- ANY SUBSTITUTIONS OF PLANT MATERIAL OR ALTERATION IN PLANT SIZES OR SPECIFICATION TO BE APPROVED BY THE OWNER.
- ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED, AND WRAPPED AS DETAIL SHOWN ON PLAN.
- PLANT BEDS TO BE MULCHED AND DRESSED WITH 4" OF SHREDDED HARDWOOD MULCH.
- DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.
- REMOVE ALL TWINE, WIRE, AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS.
- LAWN TREES TO BE MULCHED WITH 4" WIDE MINIMUM OF 4" DEEP SHREDDED HARDWOOD MULCH RING OR APPROVED ALTERNATE DESIGN FOR TRUNK PROTECTION.
- INSTALLATION OF PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.
- PLANT MATERIAL, ESPECIALLY EVERGREENS, TO BE PLANTED HIGHER THAN NORMAL WHEN HEAVY SOIL CONDITIONS (CLAY, ETC.) PREVAIL.
- ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.
- NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR EXACT LOCATION AND DETAILS.
- ALL TREE SPECIES DEVIATIONS FROM THE APPROVED SITE PLAN MUST BE APPROVED BY THE CITY OF ANN ARBOR IN WRITING PRIOR TO INSTALLATION.



**TREE PLANTING DETAIL**  
NO SCALE

**SHRUB PLANTING DETAIL**  
NO SCALE



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

12-05-2025 08-16-2025 07-24-2025 07-09-2024 01-05-2024	PER FORESTRY SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

### ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

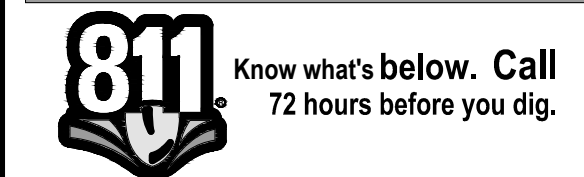
SHEET TITLE:

### LANDSCAPE PLAN

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: AUGUST 25, 2023
SCALE: 1" = 30'		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

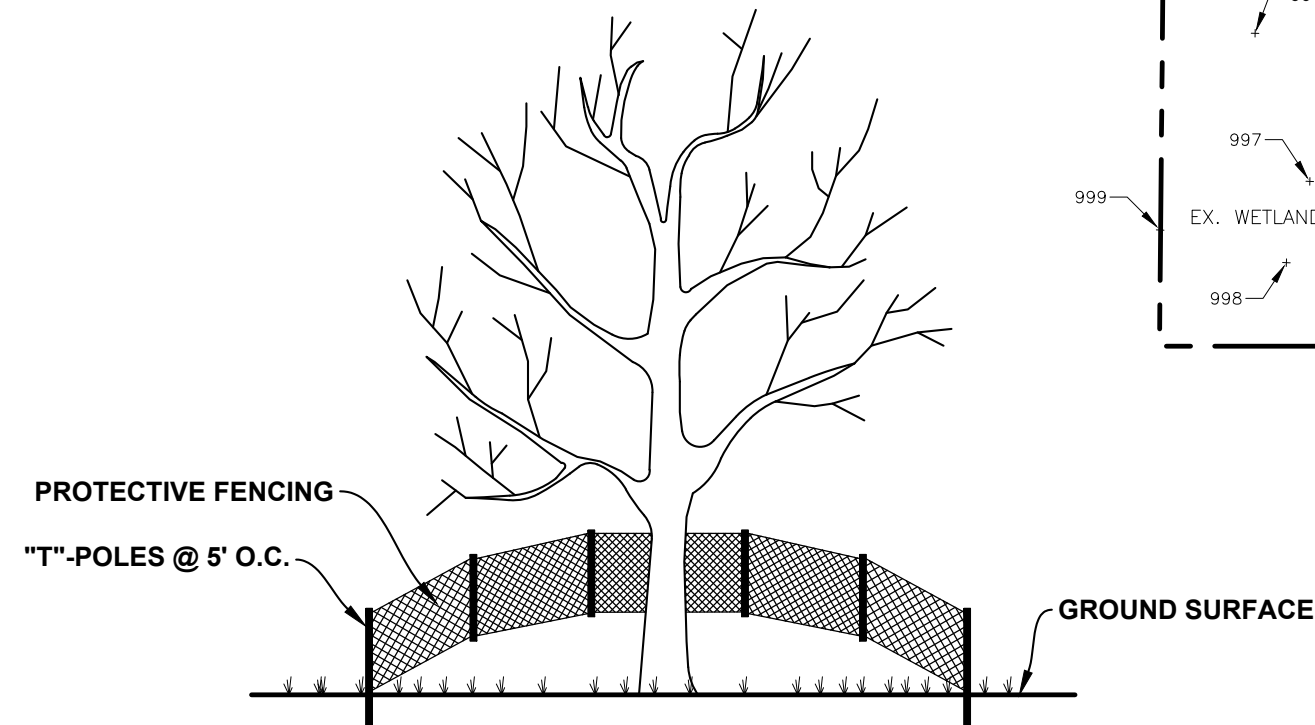
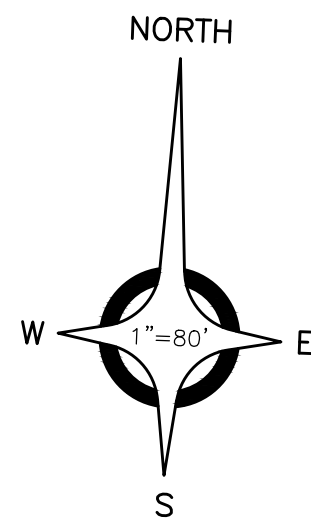
1688-0001

M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
14 Landscape-12/18/2025 5:52:07 PM

SHEET NO.

C14





#### NOTES:

- EITHER PLASTIC OR WOOD ORANGE SNOW FENCING SHALL BE INSTALLED AT OR BEYOND THE DRIPLINE, UNLESS MORE SUBSTANTIAL FENCING IS REQUIRED.
- STAKES SHALL BE METAL "T" POLES SPACED NO FURTHER THAN 5' ON CENTER.
- FENCING SHALL NOT BE INSTALLED CLOSER TO THE TREE THAN THE CRITICAL ROOT ZONE OF THOSE TREES TO BE SAVED. THE CRITICAL ROOT ZONE IS DEFINED AS A CIRCLE WITH 1 FOOT RADIUS FOR EACH 1 INCH D.B.H. FOR THE TREE. SPECIAL CIRCUMSTANCES SHALL BE REVIEWED BY THE CITY.
- FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION. THE CITY SHALL BE NOTIFIED ONCE THE FENCING IS INSTALLED FOR INSPECTION.
- UNDER NO CIRCUMSTANCES SHALL THE PROTECTIVE FENCING BE REMOVED WITHOUT PROPER APPROVAL FROM THE CITY.
- NO PERSON SHALL CONDUCT ANY ACTIVITY WITHIN THE AREAS PROPOSED TO REMAIN. THIS SHALL INCLUDE, BUT NOT LIMITED TO:
  - NO SOLVENTS OR CHEMICALS WITHIN THE PROTECTED AREAS.
  - NO BUILDING MATERIALS OR CONSTRUCTION EQUIPMENT WITHIN THE PROTECTED AREAS.
  - NO GRADE CHANGES, INCLUDING FILL, WITHIN THE PROTECTED AREAS.
  - NO REMOVAL OF VEGETATION FROM THE GROUND UP WITHOUT PERMISSION FROM THE PROPER REVIEWING AUTHORITY, INCLUDING THE WOODLAND REVIEW BOARD.
  - ANY REQUIRED SWALE NEEDS TO BE DIRECTED AROUND THE PROTECTED AREAS. IN INSTANCES WHERE SWALES ARE APPROVED THROUGH A PROTECTED AREA, THE SWALES NEED TO BE HAND DUG. MACHINERY OF ANY KIND IS PROHIBITED.
- REGULATED WETLANDS OR REGULATED TREES ADJACENT TO THE PROPERTY ARE ALSO REQUIRED TO BE PROTECTED WHETHER OR NOT THEY ARE SHOWN ON THE PLAN.
- THE LOCATION OF TREE PROTECTION FENCES WILL BE INSPECTED AND APPROVED IN THE FIELD BY THE CITY PRIOR TO ANY TREE REMOVAL, GRADING OR LAND BALANCING OCCURRING ON THE SITE.
- ANY TREE WITHIN 10 FEET OF A SEWER OR STORMWATER PIPE MUST BE DESIGNATED FOR REMOVAL.

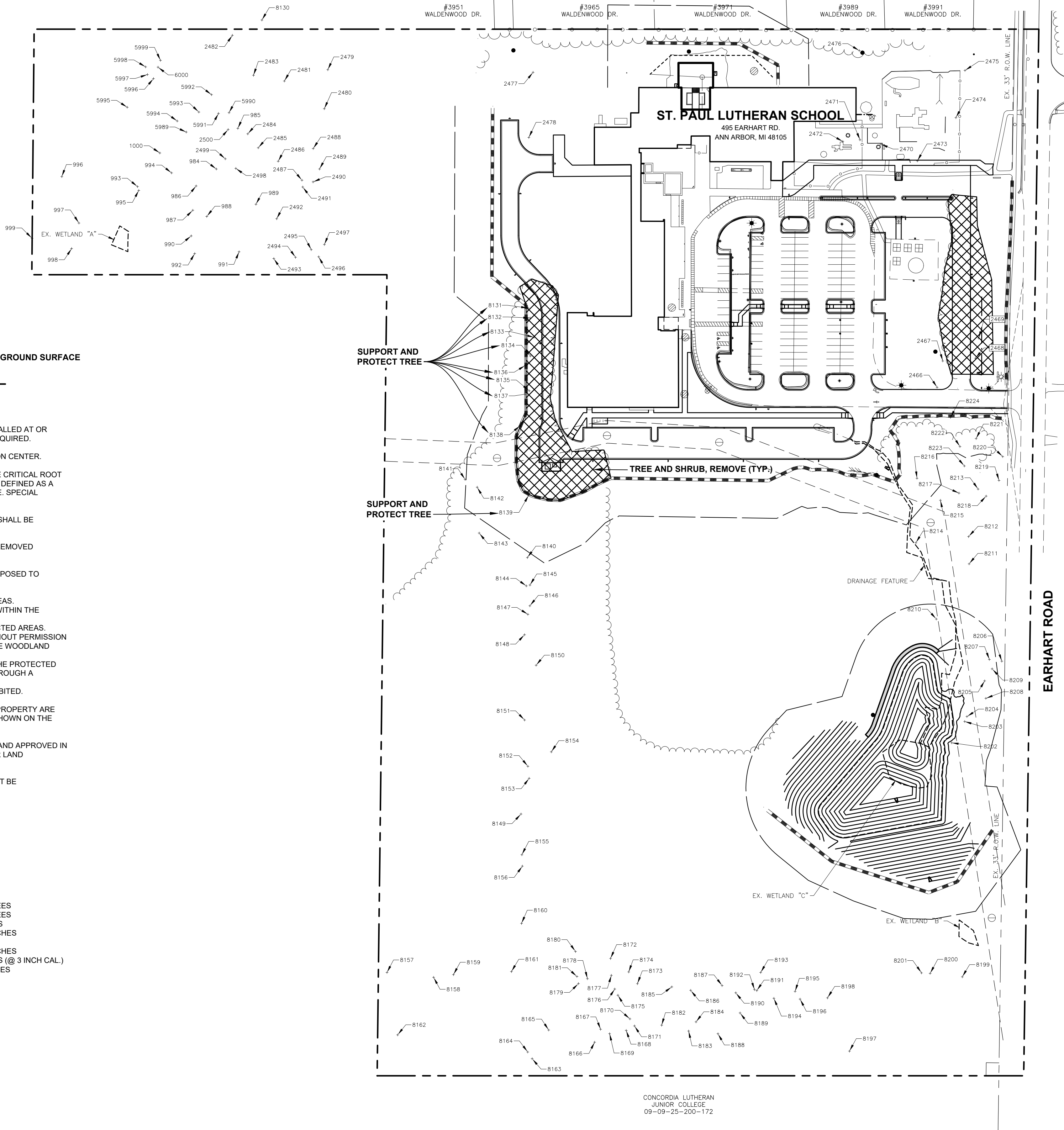
#### TREE PROTECTION DETAIL

NOT TO SCALE

#### TREE SUMMARY

TOTAL NUMBER OF TREES SURVEYED = 229 TREES  
TOTAL NUMBER OF LANDMARK TREES = 159 TREES  
TOTAL NUMBER OF LANDMARK TREES BEING REMOVED = 2 TREES  
TOTAL DBH BEING REMOVED = 32.8 INCHES

REQUIRED REPLACEMENT DBH (50%) = 16.4 INCHES  
REPLACEMENT TREES PROVIDED = 6 TREES (@ 3 INCH CAL.)  
= 18 INCHES



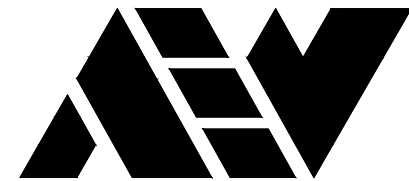
#### LEGEND

- BOUNDARY LINE
- XXXX TREE ID NUMBER
- XXXX TREE ID NUMBER - REMOVE
- 50 FOOT PROJECT OFFSET



PINE BRAE STREET

EARHART ROAD



ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025 07-24-2025 07-08-2024 01-05-2024	SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	

## ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS

SHEET TITLE:

### TREE SURVEY

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: OCTOBER 2023
SCALE: 1" = 80' 0 40 80 160		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

1688-0001

M:\1688\1688-0001\DWG\CIVIL\TREE SURVEY\01\_TREE SURVEY.DWG  
15 Tree Survey-8/18/2025 11:23:58 AM

SHEET NO.

C15

COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.





ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

09-18-2025 07-24-2025 07-09-2024 01-05-2024	SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL SITE PLAN SUBMITTAL BIDS & CITY SUBMITTAL
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

ST. PAUL LUTHERAN  
SCHOOL SITE  
IMPROVEMENTS

SHEET TITLE:

TREE LISTING

CLIENT:

ST. PAUL LUTHERAN CHURCH

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: OCTOBER 2023
SCALE: N.T.S.		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY. AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

1688-0001

M:\1688\1688-0001\00\W00\CIVIL\TREE SURVEY\01\_TREE SURVEY.DWG  
16 Tree Listing - 9/18/2025 11:24:00 AM

SHEET NO.

C16

COPYRIGHT, 2025, ANDERSON, ECKSTEIN AND WESTRICK, INC.

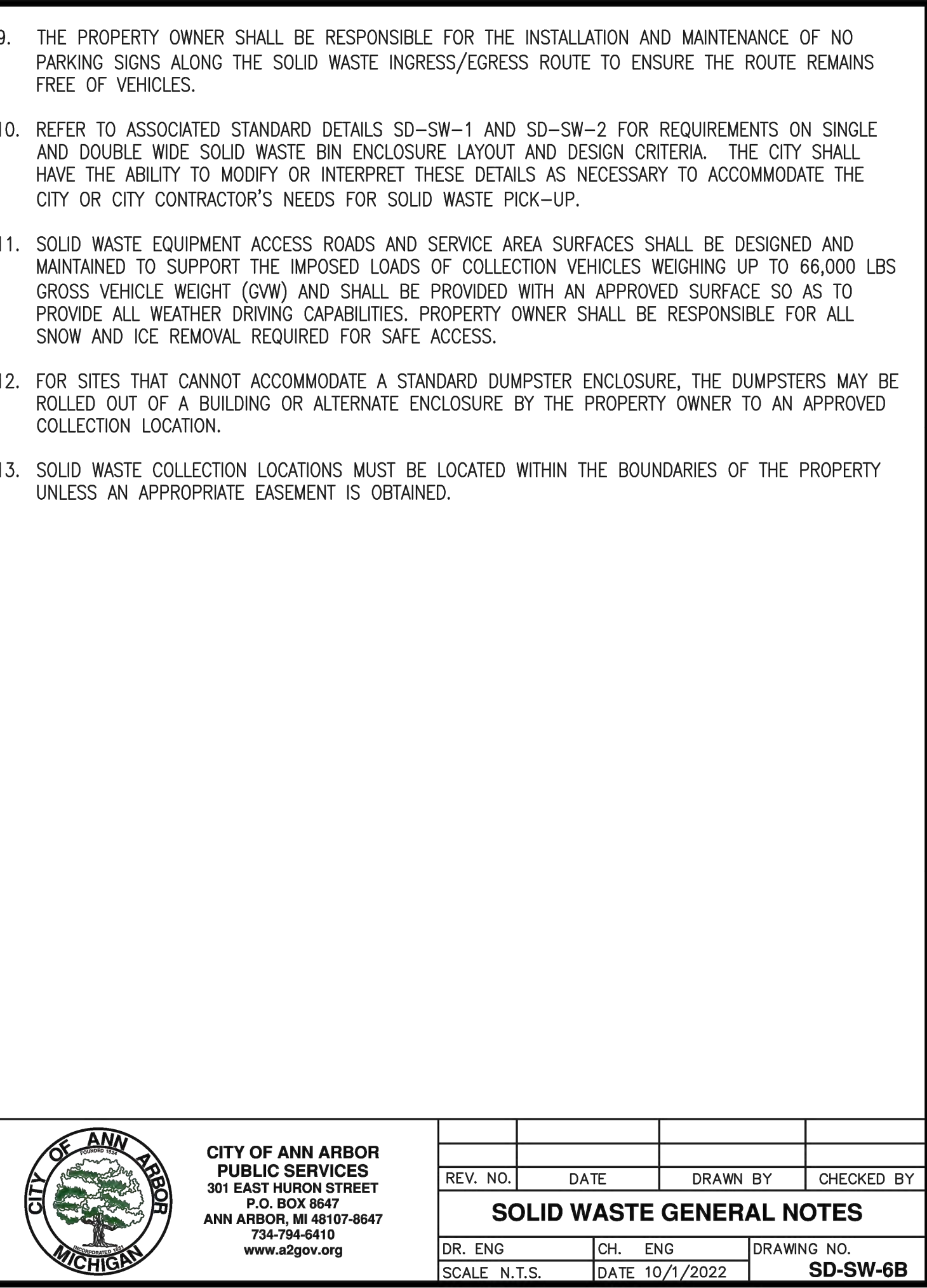
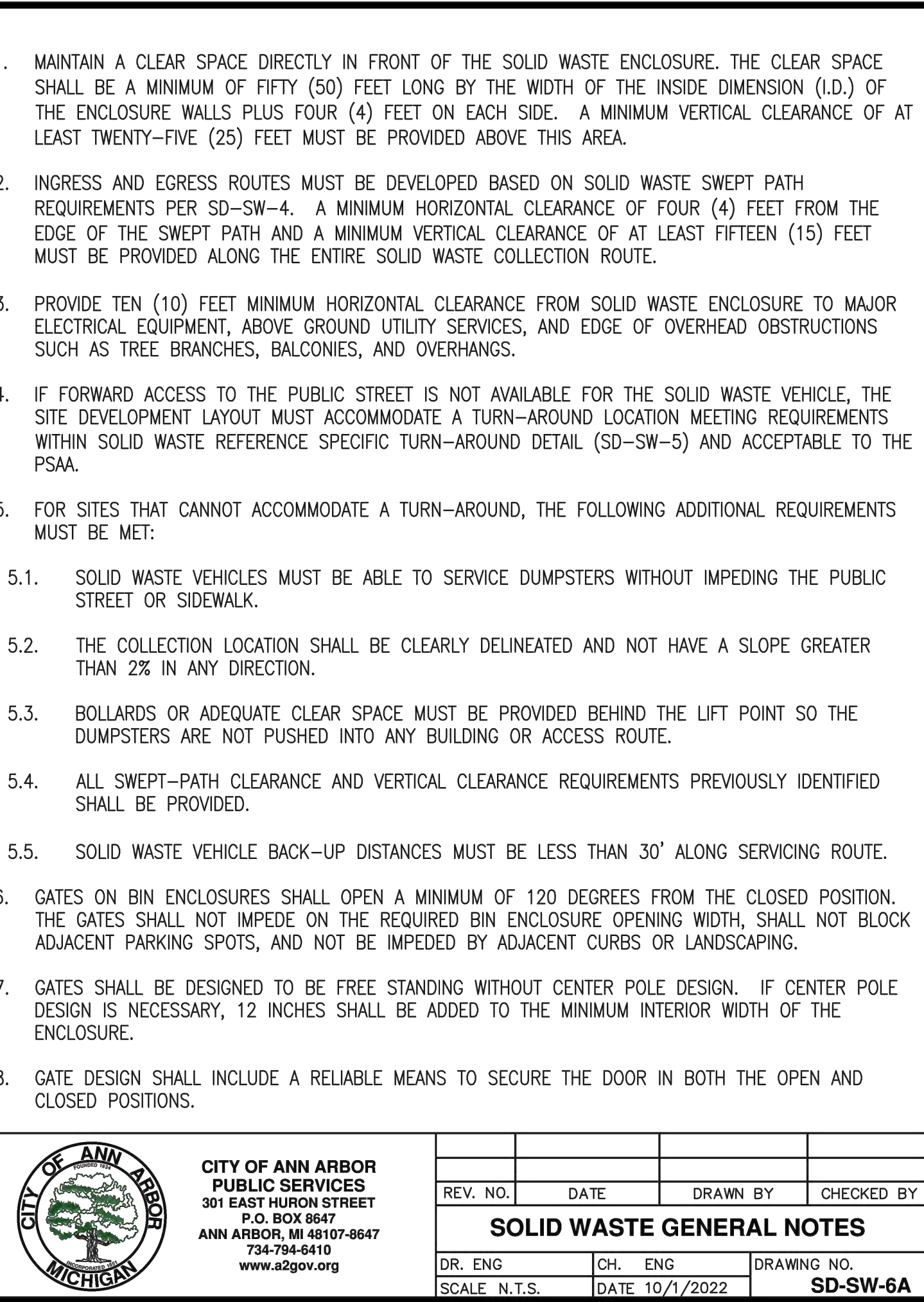
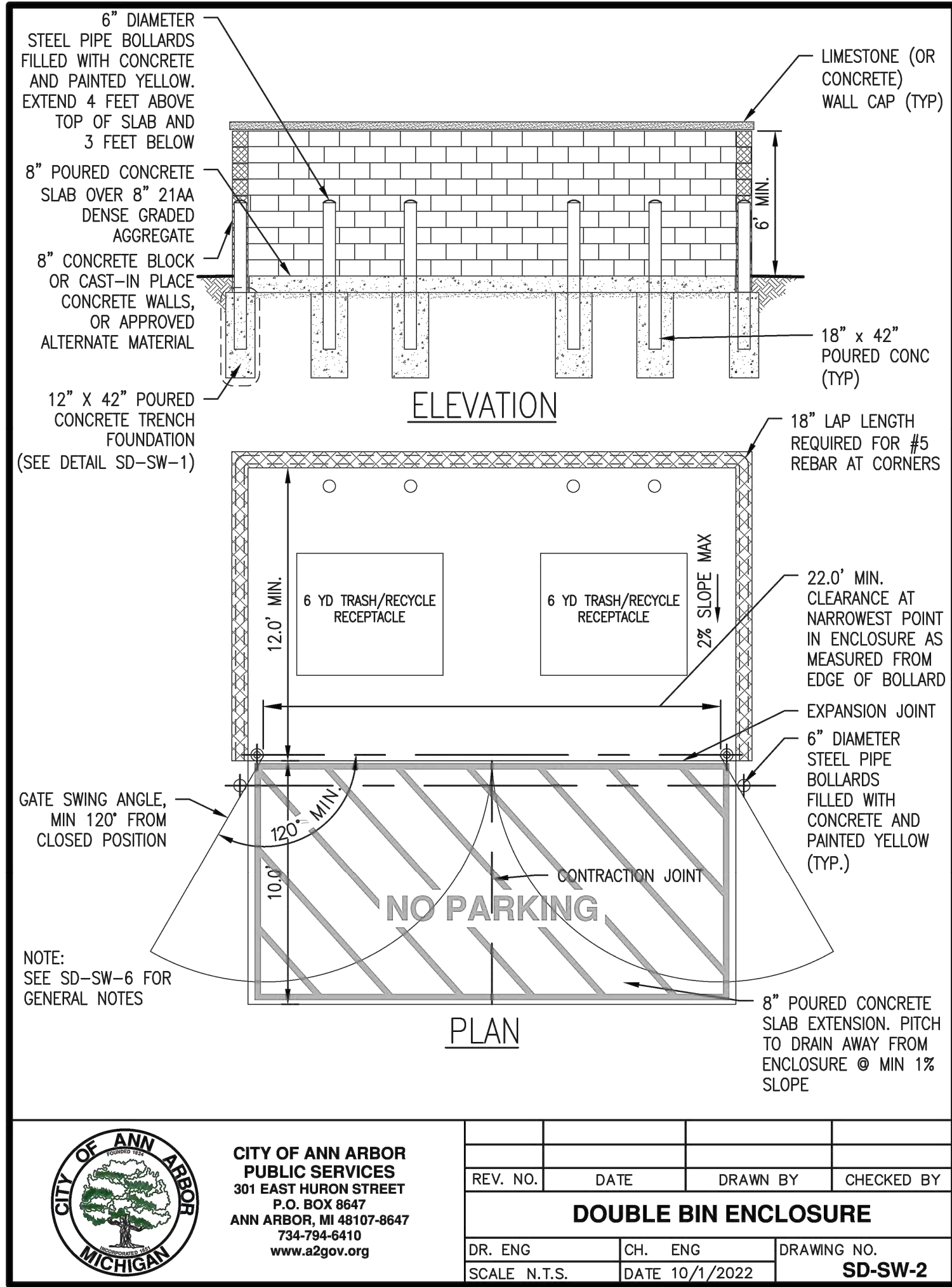
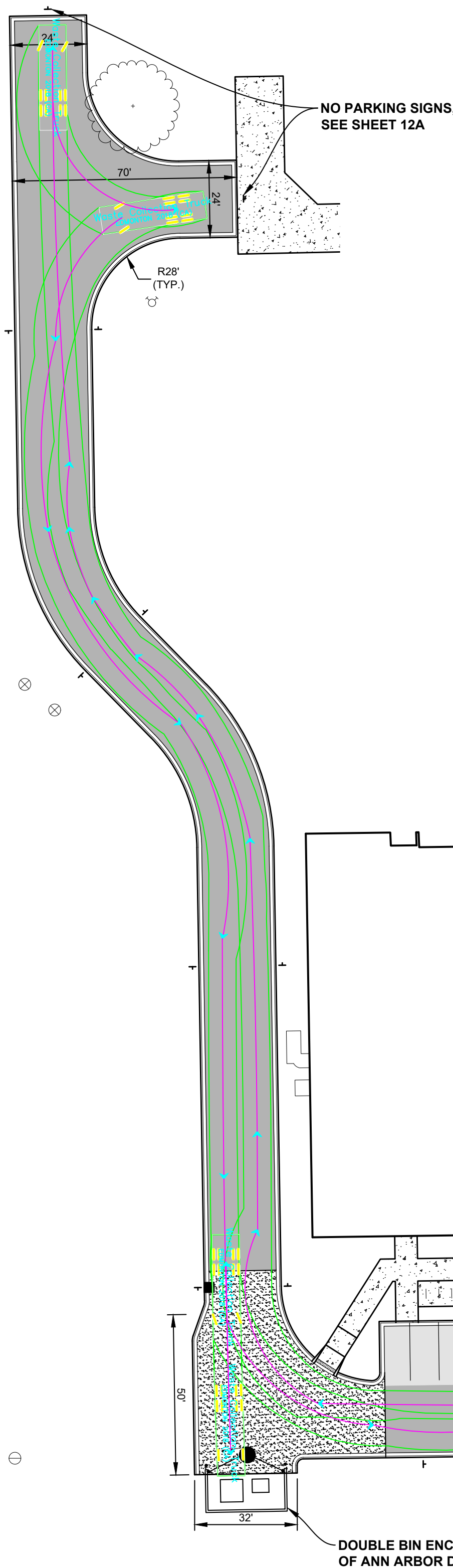
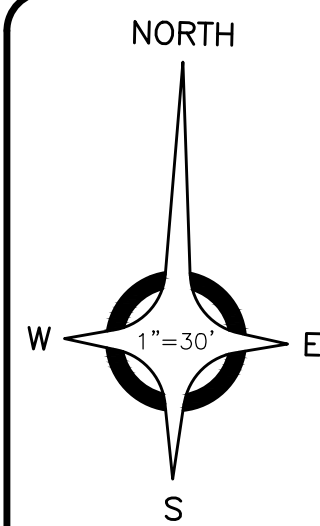
TREE, REMOVE (TYP.)

Tree Tag #	Common Name	Scientific Name	# DBHs	DBH1 (inches)	DBH2 (inches)	DBH3 (inches)	DBH4 (inches)	Condition	Bat Tree	Woodland	Landmark	Assessment	Justification	Inspect	Notes
984	White Pine	Pinus strobus	1	18.1	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	Overgrown with vines. Thin canopy.
985	White Pine	Pinus strobus	1	18.6	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
986	White Pine	Pinus strobus	1	22.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
987	White Pine	Pinus strobus	1	26.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
988	White Pine	Pinus strobus	1	24.2	0.0	0.0	0.0	Fair	No	Yes	L	NULL	NA	NA	
989	Apple	Malus pumila	1	12.1	0.0	0.0	0.0	Fair	No	Yes	L	NULL	NA	NA	
990	White Pine	Pinus strobus	1	21.3	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
991	White Pine	Pinus strobus	1	18.0	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
992	White Pine	Pinus strobus	1	19.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
993	White Pine	Pinus strobus	1	22.0	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
994	Sugar Maple	Acer saccharum	1	16.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	Chlorosis. Chlorosis.
995	White Pine	Pinus strobus	1	21.7	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
996	Black Walnut	Juglans nigra	1	23.0	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
997	Black Walnut	Juglans nigra	1	19.6	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
998	Bur Oak	Quercus macrocarpa	1	17.6	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
999	White Oak	Quercus alba	1	24.5	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
1000	White Pine	Pinus strobus	2	19.5	18.2	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2466	Pin Oak	Quercus palustris	1	23.5	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2467	Pin Oak	Quercus palustris	1	17.5	0.0	0.0	0.0	Fair	No	No	L	NULL	NA	NA	
2468	Sweet Cherry	Prunus avium	1	14.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	Chlorosis. Chlorosis.
2469	Black Walnut	Juglans nigra	1	18.3	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2470	Silver Maple	Acer saccharinum	1	17.6	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2471	Silver Maple	Acer saccharinum	1	36.5	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2472	Copper Beech	Fagus sylvatica	2	19.7	10.6	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2473	Red Pine	Pinus resinosa	1	20.9	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2474	Silver Maple	Acer saccharinum	1	44.1	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2475	Norway Maple	Acer platanoides	1	22.1	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2476	Black Walnut	Juglans nigra	1	21.3	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2477	Shagbark Hickory	Carya ovata	1	25.0	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
2478	Shagbark Hickory	Carya ovata	1	22.5	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	Chlorosis. Chlorosis. Chlorosis. Thin canopy.
2479	White Pine	Pinus strobus	1	20.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2480	White Pine	Pinus strobus	1	20.8	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2481	White Pine	Pinus strobus	1	21.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2482	White Pine	Pinus strobus	1	18.6	0.0	0.0	0.0	Fair	No	Yes	L	NULL	NA	NA	
2483	White Pine	Pinus strobus	1	19.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2484	White Pine	Pinus strobus	1	18.0	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2485	White Pine	Pinus strobus	1	23.8	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2486	White Pine	Pinus strobus	1	18.1	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2487	White Pine	Pinus strobus	1	21.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2488	White Pine	Pinus strobus	1	20.3	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	Overgrown with vines.
2489	White Pine	Pinus strobus	1	22.3	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2490	White Pine	Pinus strobus	1	18.8	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2491	White Pine	Pinus strobus	1	24.8	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2492	Box-elder	Acer negundo	3	16.5	10.5	9.7	0.0	Fair	No	Yes	L	NULL	NA	NA	
2493	White Pine	Pinus strobus	1	23.6	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2494	White Pine	Pinus strobus	1	20.7	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2495	White Pine	Pinus strobus	1	18.4	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2496	White Pine	Pinus strobus	1	20.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2497	White Pine	Pinus strobus	2	16.8	10.2	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2498	White Pine	Pinus strobus	1	20.7	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	Trunk rot. Trunk rot. Excessive Leaning.
2499	White Pine	Pinus strobus	1	18.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
2500	White Pine	Pinus strobus	1	18.6	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5989	White Pine	Pinus strobus	1	18.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5990	White Pine	Pinus strobus	1	18.0	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5991	White Pine	Pinus strobus	1	19.7	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5992	White Pine	Pinus strobus	1	20.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5993	White Pine	Pinus strobus	1	20.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5994	White Pine	Pinus strobus	1	23.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5995	Red Cedar	Juniperus virginiana	1	11.0	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5996	Red Pine	Pinus resinosa	1	9.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	Trunk rot. Trunk rot. Excessive Leaning.
5997	Red Pine	Pinus resinosa	1	20.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5998	White Pine	Pinus strobus	1	19.0	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
5999	White Pine	Pinus strobus	1	21.8	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
6000	Quaking Aspen	Populus tremuloides	1	15.8	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
8130	Bur Oak	Quercus macrocarpa	1	16.2	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
8131	Shagbark Hickory	Carya ovata	1	22.0	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
8132	Shagbark Hickory	Carya ovata	1	25.1	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
8133	Shagbark Hickory	Carya ovata	2	20.0	17.2	0.0	0.0	Good	No	No	L	NULL	NA	NA	
8134	Shagbark Hickory	Carya ovata	1	22.0	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
8135	White Oak	Quercus alba	1	42.7	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	Trunk rot. Trunk rot. Excessive Leaning.
8136	Shagbark Hickory	Carya ovata	1	21.0	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
8137	Shagbark Hickory	Carya ovata	1	16.2	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
8138	Shagbark Hickory	Carya ovata	1	24.0	0.0	0.0	0.0	Good	No	No	L	NULL	NA	NA	
8139	Wild Black Cherry	Prunus serotina	2	23.1	8.7	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
8140	Wild Black Cherry	Prunus serotina	1	26.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	NA	
8141	Wild Black Cherry	Prunus serotina	2	24.2	17.7	0.0	0.0	Fair	No	Yes	L	Structure	Deadwood (DW)	Stem	
8142	Pin Oak	Quercus palustris	1	17.2	0.0	0.0	0.0	Fair	No	Yes	L	Structure	Deadwood (DW)	Stem	
8143	Pin Oak	Quercus palustris	1	22.5	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	Stem	
8144	Wild Black Cherry	Prunus serotina	1	12.2	0.0	0.0	0.0	Fair	No	Yes	L	NULL	NA	Stem	
8145	Wild Black Cherry	Prunus serotina	1	39.0	0.0	0.0	0.0	Good	No	Yes	L	NULL	NA	Stem	

NOTE:

TREE CONDITION HEALTH FORM WILL BE SUBMITTED AFTER TREE REMOVALS ARE APPROVED BY THE CITY OF ANN ARBOR.





09-18-2025	SITE PLAN SUBMITTAL
07-24-2025	SITE PLAN SUBMITTAL
07-09-2024	BIDS & CITY SUBMITTAL
01-05-2024	
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:  
**ST. PAUL LUTHERAN SCHOOL SITE IMPROVEMENTS**

SHEET TITLE:

**SOLID WASTE PLAN**

CLIENT:  
**ST. PAUL LUTHERAN CHURCH**

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: MJS	CHECKED BY: SAK	DATE: JANUARY 06, 2025
SCALE:	1" = 30'	
0	15	30



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

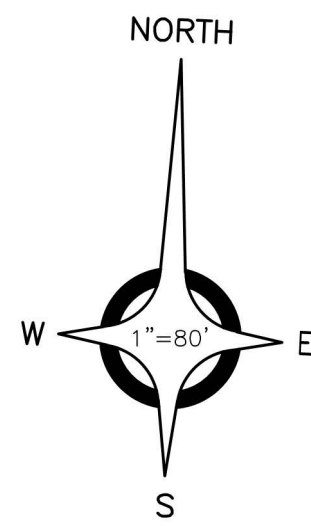
PROJECT NO.  
**1688-0001**

M:\1688\1688-0001\DWG\CIVIL\01\_SITEPLAN.DWG  
17\_Solid Waste-11/26/2025 10:40:14 AM

SHEET NO.

**C17**

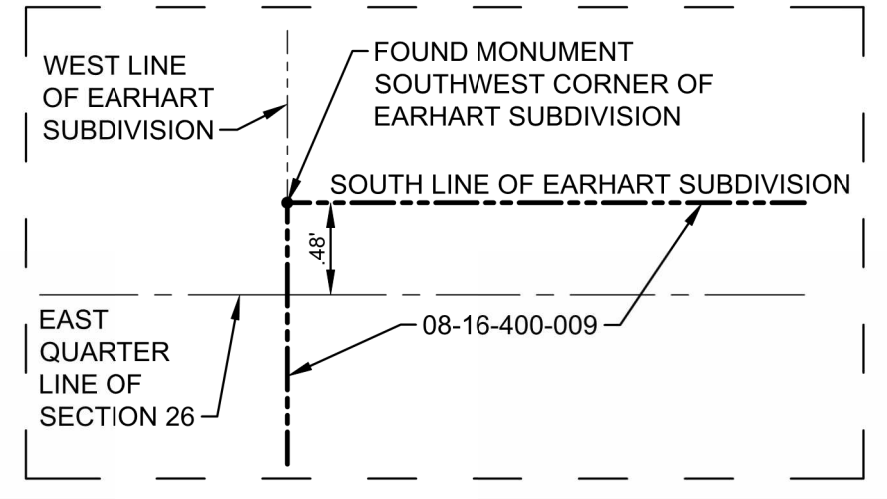




CENTER OF SECTION 26  
TOWN 2 SOUTH, RANGE 6 EAST,  
CITY OF ANN ARBOR,  
WASHTENAW CO., MI  
FOUND CONCRETE MONUMENT

FOUND MONUMENT  
SOUTHWEST CORNER OF  
EARHART SUBDIVISION  
SECTION LINE  
N87° 42' 36"E 2668.852'

SEE DETAIL THIS SHEET



DETAIL

TO: THE CITY OF ANN ARBOR

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, AND INCLUDES ITEMS 2, 3, 4, 5, 8, 11(a) AND 15 OF TABLE A THEREOF.

THE FIELDWORK WAS COMPLETED ON JANUARY 14, 2025.

DATE OF PLAT OR MAP: JULY 7, 2025

SCOTT J. KEHRER, P.S.  
MICHIGAN LICENSE NO. 4001052477



MICHIGAN DISTRICT OF  
THE LUTHERAN CHURCH  
-MISSOURI SYNOD  
3773 GEDDES RD  
ANN ARBOR, MI. 48105

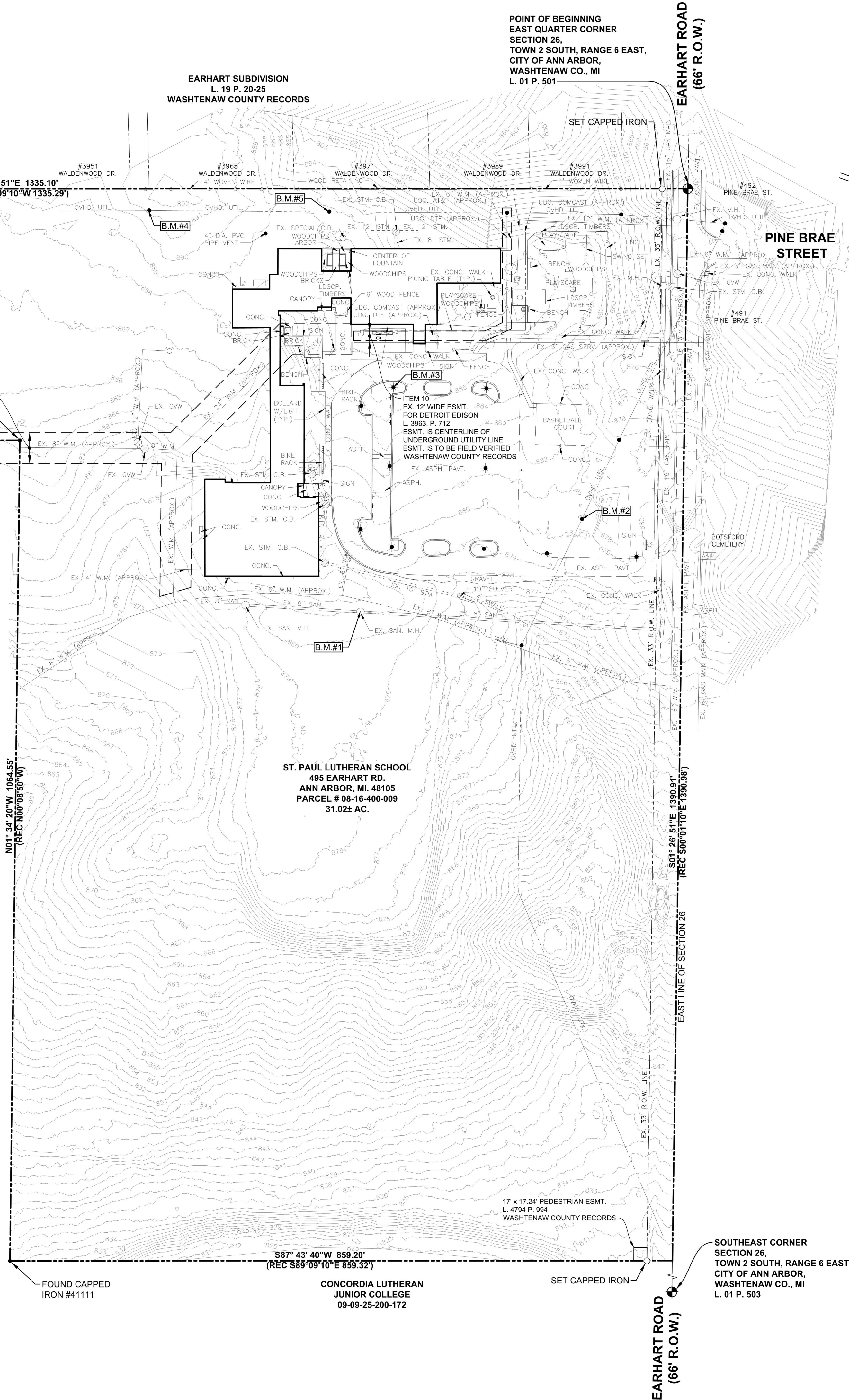
## DESCRIPTION

PART OF THE SOUTHEAST QUARTER OF SECTION 26, TOWN 2 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT THE EAST QUARTER CORNER OF SECTION 26; THENCE ALONG THE EAST LINE OF SECTION 26, SOUTH 01 DEGREES 26 MINUTES 51 SECONDS EAST 1390.91 FEET (RECORDED AS SOUTH 00 DEGREES 01 MINUTES 10 SECONDS EAST 1390.98 FEET); THENCE SOUTH 87 DEGREES 43 MINUTES 40 SECONDS WEST 859.20 FEET (RECORDED AS SOUTH 89 DEGREES 09 MINUTES 10 SECONDS EAST 859.32 FEET); THENCE NORTH 01 DEGREES 34 MINUTES 20 SECONDS WEST (RECORDED AS NORTH 00 DEGREES 08 MINUTES 50 SECONDS WEST) 1064.55 FEET; THENCE SOUTH 87 DEGREES 43 MINUTES 40 SECONDS WEST (RECORDED AS SOUTH 89 DEGREES 09 MINUTES 10 SECONDS WEST) 471.96 FEET; THENCE NORTH 01 DEGREES 43 MINUTES 56 SECONDS WEST (RECORDED AS NORTH 00 DEGREES 18 MINUTES 26 SECONDS WEST) 326.38 FEET TO THE MONUMENT AT THE SOUTHWEST CORNER OF EARHART SUBDIVISION AS RECORDED IN LIBER 19 OF PLATS, PAGES 20 THROUGH 25; THENCE ALONG THE SOUTH LINE OF EARHART SUBDIVISION, NORTH 87 DEGREES 43 MINUTES 51 SECONDS EAST 1335.10 FEET (RECORDED AS NORTH 89 DEGREES 09 MINUTES 10 SECONDS WEST 1335.29 FEET) TO THE POINT OF BEGINNING. CONTAINING 31.02 ACRES, MORE OR LESS.

SUBJECT TO ANY AND ALL EASEMENTS AND RIGHTS OF WAY OF RECORD OR OTHERWISE.

DOCUMENT SCHEDULE					
PER TITLE COMMITMENT # 81-25940237-SSP, DATED JANUARY 9, 2025, BY ATA NATIONAL TITLE GROUP					
ITEM	LIBER	PAGE	GRANTEE/ASSIGNEE/DECLARANT	TYPE	DRAWING STATUS
1	3960	760		WARRANTY DEED	REFERRED TO AS 09-09-26-400-007 (AS-SURVEYED)
2	3906	761		MORTGAGE	NOT PLOTTABLE
	3979	488		MORTGAGE MODIFICATION	NOT PLOTTABLE
3			LEFT BLANK		NOT PLOTTABLE
4			TAXES ARE EXEMPT		NOT PLOTTABLE
5			OUTSTANDING OIL GAS AND MINERAL RIGHTS		NO KNOWN RIGHTS
6			RIGHTS OF THE PUBLIC		PLOTTED AS SHOWN ON DEEDED DESCRIPTION FOR EARHART ROAD
7	2167	509	CITY OF ANN ARBOR	WATERMAIN EASEMENT	PLOTTED, SAME AS 2167-521 & 2167-524
7	2167	521	CITY OF ANN ARBOR	WATERMAIN EASEMENT	PLOTTED, SAME AS 2167-509 & 2167-524
7	2167	524	CITY OF ANN ARBOR	WATERMAIN EASEMENT	PLOTTED, SAME AS 2167-509 & 2167-521
8	3906	760	ST. PAUL'S EVANGELICAL LUTHERAN CHURCH OF ANN	WARRANTY DEED	REFERRED TO AS 09-09-26-400-007 (AS-SURVEYED)
9	3913	591	CITY OF ANN ARBOR	DEVELOPMENT AGREEMENT	NOT PLOTTABLE
10	3963	712	DETROIT EDISON COMPANY	EASEMENT	PLOTTED AS DESCRIBED, NEEDS TO BE FIELD VERIFIED
	4794	994	CITY OF ANN ARBOR	EASEMENT	PLOTTED



NOTES:

ZONE X - AREA DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOOD PLAIN, MAP #26161C0268E APRIL 3, 2012.

CONTOURS ARE NAVD88 GPS DERIVED.

## LEGEND

- BOUNDARY LINE
- SPOT ELEVATION (\*\* INDICATES ELEVATION LOCATION UNLESS OTHERWISE INDICATED)
- SIGN
- FLAG POLE
- BASKETBALL POLE
- FLOOD POLE
- GUY ANCHOR
- POWER POLE
- LIGHT POLE
- HYDRANT
- GATE VALVE & WELL
- VALVE BOX
- WATER MAIN
- STORM CATCH BASIN (PAVT.)
- STORM CATCH BASIN (FIELD)
- STORM MANHOLE
- STORM SEWER
- OVHD. UTIL.



## BENCH MARKS (NAVD88 DATUM)

BENCH MARK NO.1  
CHIS "X" NORTH RIM SANITARY  
M.H. 75' SOUTHEAST OF  
SOUTHEAST CORNER AT  
#20001.  
ELEVATION: 880.74

BENCH MARK NO.2  
SET RR SPIKE SOUTHWEST  
FACE OF UTILITY POLE  
W/TRANSFORMER 50' NORTH  
OF ENTRANCE TO LOT, 80'  
EAST OF EAST LOT.  
ELEVATION: 881.57

BENCH MARK NO.3  
CHIS "D" BOX ON SOUTHWEST  
T/CONC. LIGHT POLE BASE ±60  
SOUTH WEST OF MAIN  
ENTRANCE DOOR TO SCHOOL.  
ELEVATION: 889.06

BENCH MARK NO.4  
SET MAG NAIL SOUTH FACE OF  
UTILITY POLE. ±150'  
NORTHWEST OF NORTHWEST  
PF CORNER SCHOOL.  
ELEVATION: 892.03

BENCH MARK NO.5  
SET MAG NAIL SOUTH FACE  
UTILITY POLE. ±40' NORTH OF  
NORTH F/SCHOOL. ±125', EAST  
OF WEST F/SCHOOL.  
ELEVATION: 888.51

**ANDERSON, ECKSTEIN & WESTRICK, INC.**  
CIVIL ENGINEERS - SURVEYORS - ARCHITECTS

51301 Schoenherr Road  
Shelby Township, MI 48315  
586.726.1234 | aewinc.com

Engineering Strong Communities

DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	
ALTA SURVEY 495 EARHART ROAD	
SHEET TITLE:	
ALTA/NSPS LAND TITLE SURVEY	
CLIENT: ST. PAUL LUTHERAN CHURCH	
PRELIMINARY CONSTRUCTION RECORD	
DRAWN BY: KMD	CHECKED BY: SAK
DATE: FEBRUARY 2025	
SCALE: 1" = 80'	

## ALTA SURVEY 495 EARHART ROAD

SHEET TITLE:

## ALTA/NSPS LAND TITLE SURVEY

CLIENT:  
ST. PAUL LUTHERAN CHURCH

PRELIMINARY	CONSTRUCTION	RECORD
DRAWN BY: KMD	CHECKED BY: SAK	DATE: FEBRUARY 2025
SCALE: 1" = 80'		



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY. AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

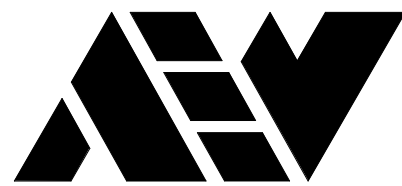
PROJECT NO.  
1688-0001

M:\1688\1688-0001\00\00\CIVIL\ALTA SURVEY\00\_ALTA\_SURVEY.DWG  
18 Alta Survey-7/7/2025 5:30:30 PM

SHEET NO.

C18





ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315  
www.aewinc.com

ENGINEERING STRONG COMMUNITIES



KEY PLAN

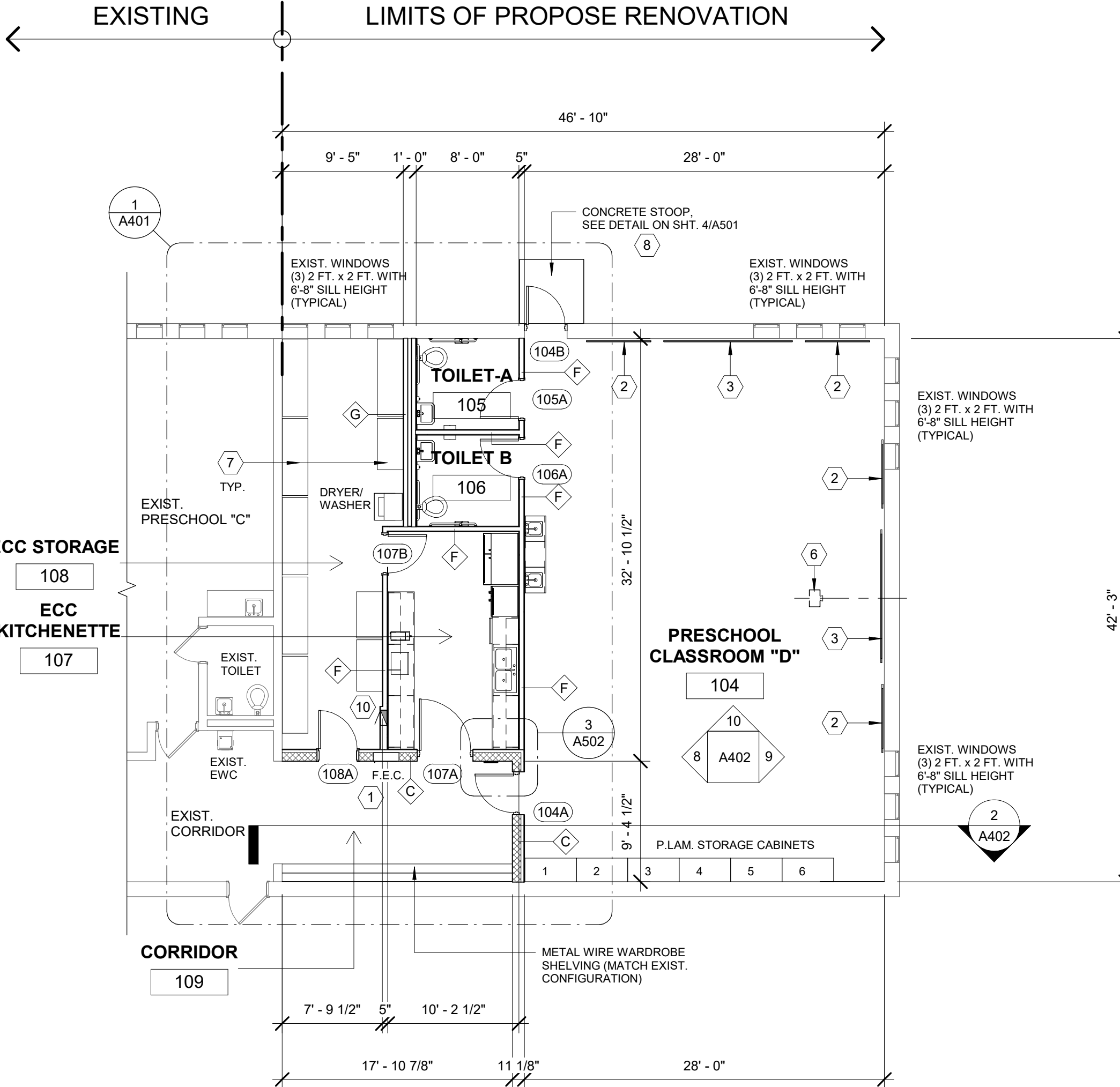
NTS

## PARTITION TYPES :

- A 4" BRICK VENEER OVER AIR GAP OVER 2" RIGID INSULATION, WITH AIR BARRIER ON 8" CMU
- B 8" GROUND FACE CMU (BOTH SIDES)
- B1 8" CMU EXTEND TO STL. JOIST + GYP. BOARD BOTH SIDES W/ 3 5/8" METAL STUD @ 16" O.C. TIGHT TO DECK
- C 8" CMU WITH 2 1/2" METAL STUDS @ 16" O.C. + GYP. BOARD ON ONE SIDE IN STL. JOIST FACE - EXTEND TO STL. JOIST ABOVE (PAINT)
- F 3 5/8" 18 GA. METAL STUDS @ 16" O.C. TIGHT TO DECK AND STRUCTURE ABOVE WITH BATT INSULATION AND 5/8" GWB BOTH SIDES PAINTED.
- G 3 5/8" 18 GA. METAL STUDS @ 16" O.C. TIGHT TO DECK AND STRUCTURE ABOVE WITH BATT INSULATION AND 5/8" GWB ON ONE SIDE (PAINTED)
- H 2 1/2" 18 GA. METAL STUDS @ 16" O.C. TO 4" ABOVE THE CEILING WITH BATT INSULATION AND 5/8" GWB ON ONE SIDE (PAINT)

## FLOOR PLAN KEY NOTES

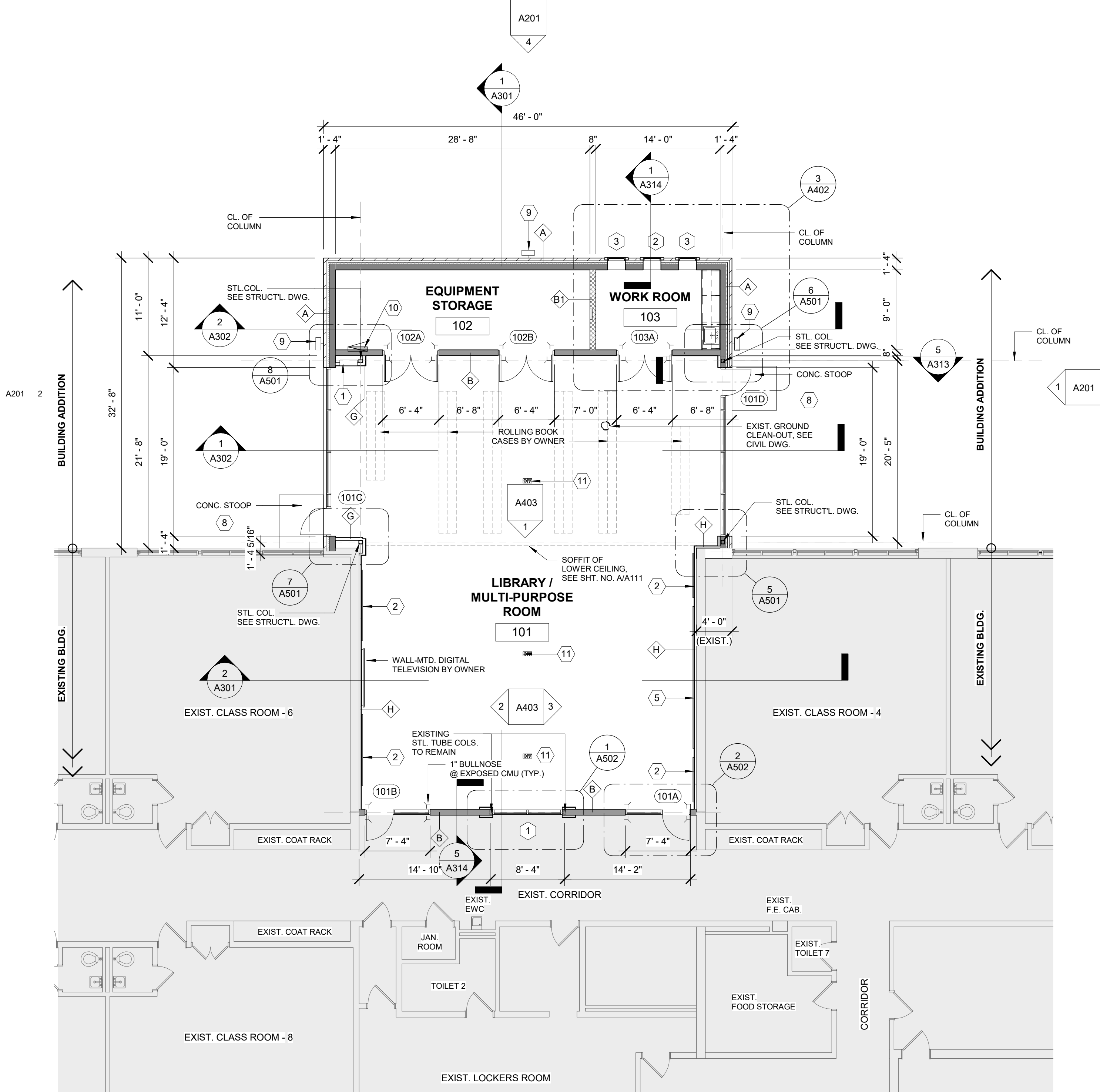
- 1 FIRE EXTINGUISHER AND CABINET, CONTRACTOR PROVIDED, CONTRACTOR INSTALLED
- 2 5 FT. (W) x 4 FT (H) BULLETIN BOARD, OWNER PROVIDED, CONTRACTOR INSTALLED
- 3 10 FT. (W) x 4 FT. (H) DRY MARKER BOARD, OWNER PROVIDED, CONTRACTOR INSTALLED
- 4 8 FT. (W) x 4 FT. (H) DRY MARKER BOARD, OWNER PROVIDED, CONTRACTOR INSTALLED
- 5 16 FT. (W) x 4 FT. (H) DRY MARKER BOARD, OWNER PROVIDED, CONTRACTOR INSTALLED
- 6 PROJECTOR ON SUSPENDED CARRIER, OWNER PROVIDED, OWNER INSTALLED
- 7 METAL WIRE STORAGE SHELVING (7'-0" HIGH), CONTRACTOR PROVIDED, CONTRACTOR INSTALLED
- 8 CONCRETE STOOP, SEE TYPICAL DETAIL ON SHT. 4/A501
- 9 EXTERIOR LED LIGHT, SEE ELECTRICAL DWG.
- 10 ELECTRICAL PANEL BOX, SEE ELECTRICAL DWG.
- 11 ELECTRICAL FLOOR OUTLET & DATA, SEE ELECTRICAL DWG.
- X WINDOW TYPE, SEE WINDOW SCHEDULE; SHEET A601



FLOOR PLAN  
CLASSROOM "D" (PRESCHOOL)

1  
A102

1/8" = 1'-0"



FLOOR PLAN  
LIBRARY / MULTI - PURPOSE ROOM

2  
A102

1/8" = 1'-0"

01-05-2024	BIDS & STATE SUBMITTAL
08-15-2023	OWNER REVIEW
02-28-2023	DESIGN DEVELOPMENT
02-10-2023	OWNER REVIEW
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

ST. PAUL  
LUTHERAN  
SCHOOL ADDITION  
/ RENOVATION

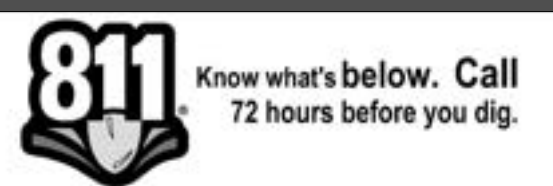
SHEET TITLE:

FLOOR PLANS  
(LIBRARY /  
MULTI-PURPOSE RM  
& PRESCHOOL RM)

CLIENT:

ST. PAUL LUTHERAN SCHOOL

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: AGP	CHECKED BY: JRAMUM	DATE: 12/07/22
SCALE:	AS NOTED	



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY. AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

1688-0001

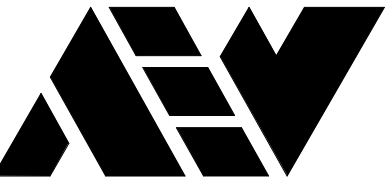
M:\1688\1688-0001\DWG\Arch\DDIST PAUL SCHOOL.AGP.rvt

1/4/2024 11:43:46 AM

SHEET NO.

A102





ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

01-05-2024	BIDS & STATE SUBMITTAL
08-15-2023	OWNER REVIEW
02-28-2023	DESIGN DEVELOPMENT
02-10-2023	OWNER REVIEW
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**ST. PAUL  
LUTHERAN  
SCHOOL ADDITION  
/ RENOVATION**

SHEET TITLE:

**EXTERIOR  
ELEVATIONS**

CLIENT:

**ST. PAUL LUTHERAN SCHOOL**

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: AGP	CHECKED BY: JRAMUM	DATE: 12/10/22
SCALE:	AS NOTED	



UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF EXISTING FACILITIES ONLY, AS DISCLOSED BY RECORDS PROVIDED TO THIS FIRM FROM THE VARIOUS UTILITY COMPANIES. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL COSTS FOR UTILITY LOCATION, VERIFICATION, SUPPORT AND PROTECTION SHALL BE INCLUDED IN THE PROPOSED PAY ITEM CONFLICTING WITH THAT UTILITY).

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO.

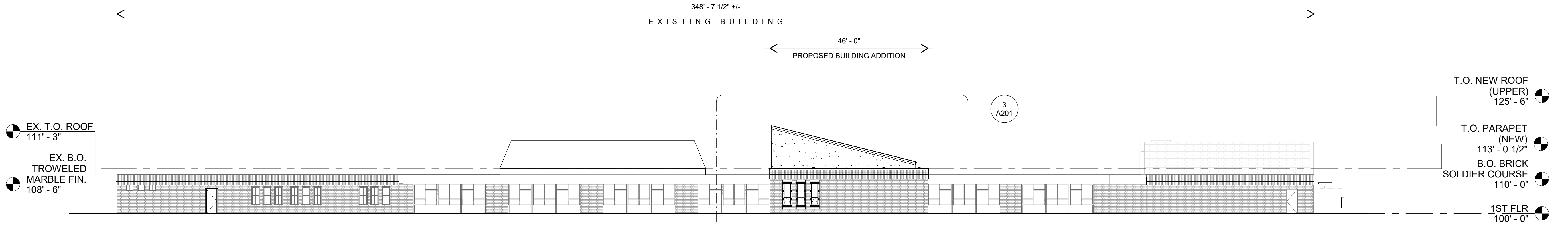
1688-0001

M:\1688\1688-0001\Drawg\Arch\DD\ST PAUL SCHOOL.AGP.rvt  
1/4/2024 12:02:42 PM

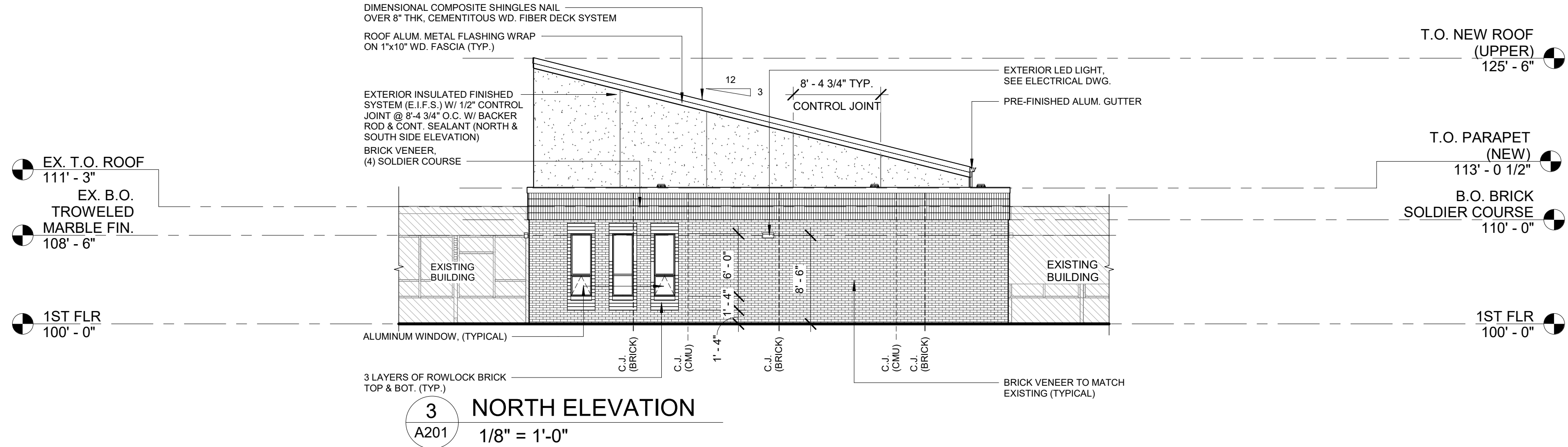
SHEET NO.

**A201**

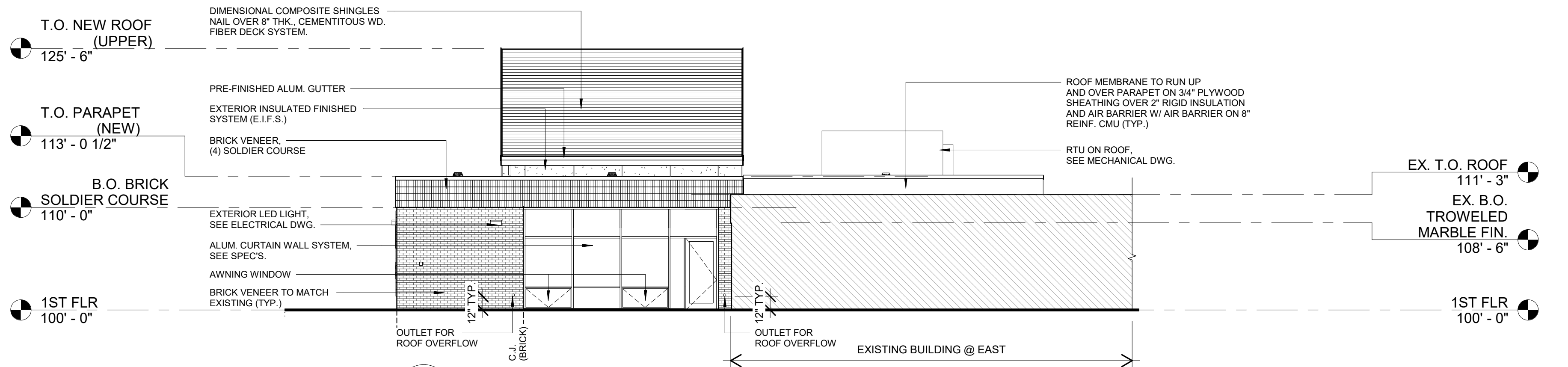
COPYRIGHT, 2022, ANDERSON, ECKSTEIN AND WESTRICK, INC.



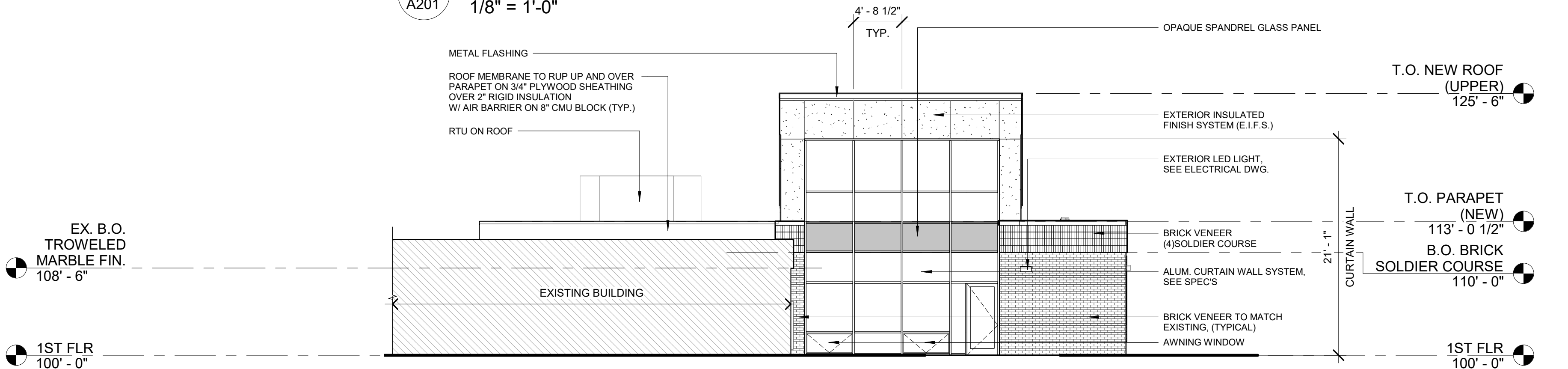
**4 COMPOSITE NORTH ELEVATION**  
1/16" = 1'-0"



**3 NORTH ELEVATION**  
1/8" = 1'-0"



**2 WEST ELEVATION**  
1/8" = 1'-0"



**1 EAST ELEVATION**  
1/8" = 1'-0"