

November 18, 2021

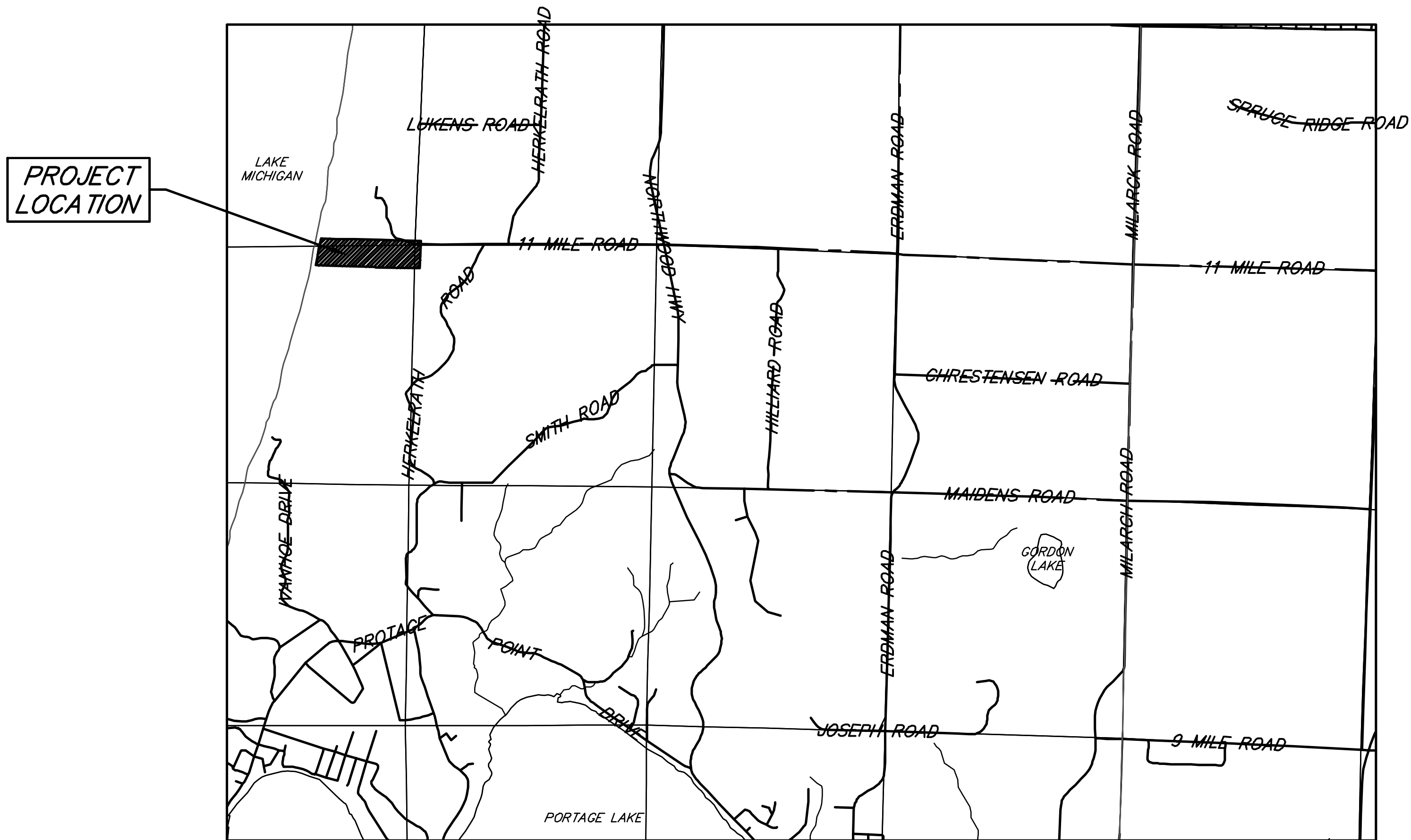
FINAL PROJECT DESCRIPTION:

This Planned Unit Development request entails the construction of five (5) primary structures, all to be designed as single-family dwellings on Parcel ID # 51-11-016-001-00. The parcel is approximately 26-acres total in size. The construction of the five (5) primary structures will be contained in the areas identified within the final Site Plan dated (INSERT DATE AND TITLE FOR FINAL PLANS) as Building Site A, B, C, D, & E. Each Building Site will contain one structure, under 35' in height. Each building site will be provided a well and septic system. The size of the Building Sites is between 25,000 and 37,000 square feet. Contained within the property is an 8.78-acre Conservation Easement that is to remain in perpetuity, and serve as public value to the Township, satisfying the requirements of Article 88 – Planned Unit Development, Section 8804. Basic Restrictions and Modification Procedure: D.4.b.4. This development also contains a private road that is to be maintained by the property owner at sixteen (16) feet wide with a cul-de-sac for emergency vehicle turnaround. The private road is identified within the final Site Plans dated (INSERT DATE AND TITLE FOR FINAL PLANS). Landscaping will be minimal, mowed green belt maintained along the roadway. This unique Planned Unit Development request is designed to be developed and maintained as a private development, completely funded by the property owner, Carol Tamminga.

TAMMINGA PLANNED UNIT DEVELOPMENT

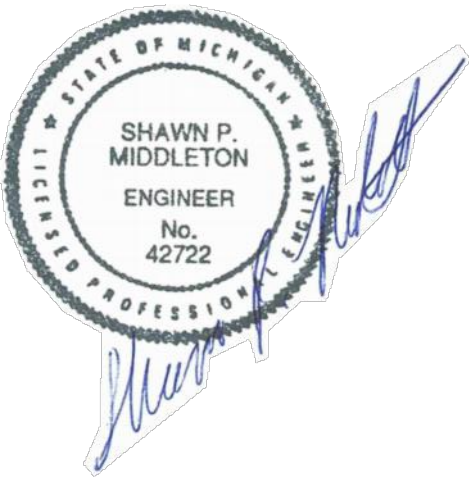


AREA MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

SECTION 16 T.23 N.-R.16 W.,
ONEKAMA TOWNSHIP,
MANISTEE COUNTY, MICHIGAN



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SMB	PLANNING DEPARTMENT REVIEW	11/20/20	
SMB	REVIEW SET	2/12/20	
SMB	REVIEW SET	11/18/19	
BY	MARK	REVISIONS	DATE

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CONSTRUCTION DESIGN, INC
387 RIVER STREET
MANISTEE, MI 49660

TITLE

MANISTEE OFFICE
302 River Street
Manistee, MI 49660
Tel. 231-794-5620
www.SpicerGroup.com

DE. BY: SMB APP. BY: SPH PROJECT NO. 126364SG2018
DR. BY: SMB CH. BY: SPH

STDs. — SHEET 01 OF 14 C
DATE OCTOBER 2021 FILE NO. JD-1611-01 01
SCALE N/A

GENERAL NOTES

NO WORK SHALL BE PERFORMED BEFORE 7:00 AM OR AFTER 7:00 PM MONDAY THROUGH SATURDAY. NO WORK SHALL HAPPEN ON SUNDAYS OR HOLIDAYS. UNLESS AUTHORIZED BY THE OWNER.

CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO START OF CONSTRUCTION, CONSTRUCTION STAKING AND INSPECTION.

CONTRACTOR SHALL MAINTAIN ACCESS FOR MAIL DELIVERY AND GARBAGE PICKUP AT ALL PARCELS. IF THESE SERVICES CANNOT BE PERFORMED CONTRACTOR IS RESPONSIBLE FOR TAKING THE NECESSARY MEASURES TO CARRY THEM OUT.

COORDINATE DRIVE CLOSURES AND MAIL BOX RELOCATION WITH LANDOWNERS A MINIMUM OF ONE DAY IN ADVANCE.

CONTRACTOR TO PROVIDE DUST CONTROL AND SWEEP ROADS DAILY.

ALL EXCAVATED MATERIAL NOT TO BE REUSED OR DISPOSED OF ON SITE SHALL BE REMOVED FROM SITE. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSING MATERIALS ACCORDING TO LOCAL AND STATE REQUIREMENTS.

UNDERGROUND UTILITIES/MISS DIG
FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 OR 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER AS TO WHERE POSSIBLE CONFLICT EXISTS.

ALL CONSTRUCTION UNDER EXISTING UTILITIES, INCLUDING HOUSE SERVICES, SHALL BE COMPLETELY BACKFILLED WITH SAND, IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT.

ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE SUPPORTED, PER THE SPECIFICATIONS OF THE INDIVIDUAL UTILITY COMPANY CLAIMING OWNERSHIP OF THE UTILITY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES
APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODABLE SLOPES AS DIRECTED BY THE ENGINEER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD OR SEED/MULCH OR MULCH BLANKET AS DIRECTED BY THE ENGINEER.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND MAINTAINED UNTIL THE CONTRACT HAS BEEN COMPLETED AND ACCEPTED. MEASURES SHALL ONLY BE PAID FOR ONCE.

ALL CATCHBASINS AND SEDIMENTATION TRAP/BASIN SHALL BE CLEANED OUT UPON COMPLETION OF THE PROJECT.

CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT, PART 91 OF ACT 451 OF 1994.

PROPERTY OWNERS
PROPERTY OWNERS' NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.

ADJUSTING MONUMENT BOXES
ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED, WHETHER SHOWN OR NOT. IT MAY BE NECESSARY TO PLACE OR ADJUST MONUMENT BOXES, AS REQUIRED.

TRAFFIC
THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES. SIGNAGE MUST BE IN ACCORDANCE WITH THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL BE COORDINATED WITH THE ENGINEER AND GOVERNING ROAD AGENCY. PERMITS MAY BE REQUIRED.

PERMITS
PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED BY THE APPROPRIATE AGENCIES.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE AGENCIES.

CONTACTS

CONSTRUCTION DESIGN, INC. DESIGNER/BUILDER
ATT: ED KRASKYMCZ
387 RIVER STREET
MANISTEE, MI 49660
PHONE: (231) 723-9552

SPICER GROUP, INC. ENGINEER
ATT: SHANE BRENNAN
302 RIVER STREET
MANISTEE, MI 49660
PHONE: (231) 794-5620

ABBREVIATIONS

BC = BACK OF CURB
BM = BENCH MARK
C/C = CENTER TO CENTER
CB = CATCH BASIN
CL = CENTERLINE
CJ = CONSTRUCTION JOINT
CMP = CORRUGATED METAL PIPE
CSP = CORRUGATED STEEL PIPE
CONC = CONCRETE
DI = DUCTILE IRON PIPE
EF = EACH FACE
ELEC = ELECTRIC
EL OR ELEV = ELEVATION
EOM = EDGE OF METAL
EOP = EDGE OF PAVEMENT
EQ/SP = EQUALLY SPACED
ESMT = EASEMENT
EW = EACH WAY
EX OR EXIST = EXISTING
FF = FINISH FLOOR
FL = FLOW LINE
FS = FINISH SURFACE
FG = FINISH GROUND
GALV = GALVANIZED
G = GUTTER
HDG = HOT DIP GALVANIZED
HDPE = HIGH DENSITY POLYETHYLENE
HP = HIGH POINT
HMA = HOT MIX ASPHALT
HYD = HYDRANT
INV = INVERT
LP = LOW POINT
OC = ON CENTER
OH = OVERHEAD
MH = MANHOLE
MIN = MINIMUM
MON = MONUMENT
NFL = NOT FIELD LOCATED
NTS = NOT TO SCALE
PROP = PROPOSED
PVC = POLYVINYL CHLORIDE
RCP = REINFORCED CONCRETE PIPE
ROW = RIGHT OF WAY
SAN = SANITARY
SB = SOIL BORING
SS = STAINLESS STEEL
STA = STATION
STM = STORM
SWR = SEWER
T/B = TOP AND BOTTOM
TC = TOP OF CURB
TOB = TOP OF BANK
TOS = TOE OF SLOPE
TELE = TELEPHONE
TRW = TOP OF RETAINING WALL
TW = TOP OF WALK
UNO = UNLESS NOTED OTHERWISE
WM = WATER MAIN
WS = WATER SURFACE ELEVATION

LINE TYPE LEGEND

EXISTING ROAD CENTERLINE
EXISTING WATER MAIN
EXISTING SANITARY SEWER OR FORCEMAIN
EXISTING STORM SEWER
EXISTING TELEPHONE CABLE
EXISTING GAS MAIN
EXISTING ELECTRIC
PROPOSED UTILITY
EXISTING CURB & GUTTER
PROPOSED CURB & GUTTER
FENCE LINE
OVERHEAD UTILITY
RAILROAD TRACKS
STATION LINE
LIMITS OF RIGHT OF WAY
EASEMENT
SILT FENCE
REVERSE PAN CURB & GUTTER
TREE LINE
EXISTING CONTOURS
PROPOSED CONTOURS

SYMBOL LEGEND

EXISTING SYMBOLS

MANHOLE
CATCH BASIN
CURB CATCH BASIN
FIRE HYDRANT
GAS VALVE
WATER VALVE
TELEPHONE PEDESTAL
POWER POLE
TELEPHONE POLE
POWER AND TELEPHONE POLE
LIGHT POLE
GUY ANCHOR AND POLE
MAIL BOX
WATER METER
TELEPHONE MANHOLE
ELECTRIC MANHOLE
MONITORING WELL
HAND HOLE
TRANSFORMER
ELECTRICAL PEDESTAL
BARRIER FREE PARKING

SPRINKLER
RAILROAD SIGNAL
ANTENNA
SATELLITE DISH
AIR CONDITIONING UNIT
SOIL BORING
BENCH MARK
FOUND SURVEY CORNER
SET 1/2" IRON ROD
1/4 SECTION CORNER
BREAK IN LINE
EXISTING SIGN-1 POST
EXISTING SIGN-2 POST
STUMP
WETLANDS
PINE
BUSH
TREE

PROPOSED SYMBOLS

MANHOLE
CATCHBASIN
FIRE HYDRANT
WATER VALVE
BARRIER FREE PARKING
LIGHT POLES
DRAINAGE FLOW
SPOT ELEVATION LABELS
GUTTER
WALK
TOP OF CURB
FINISH SURFACE

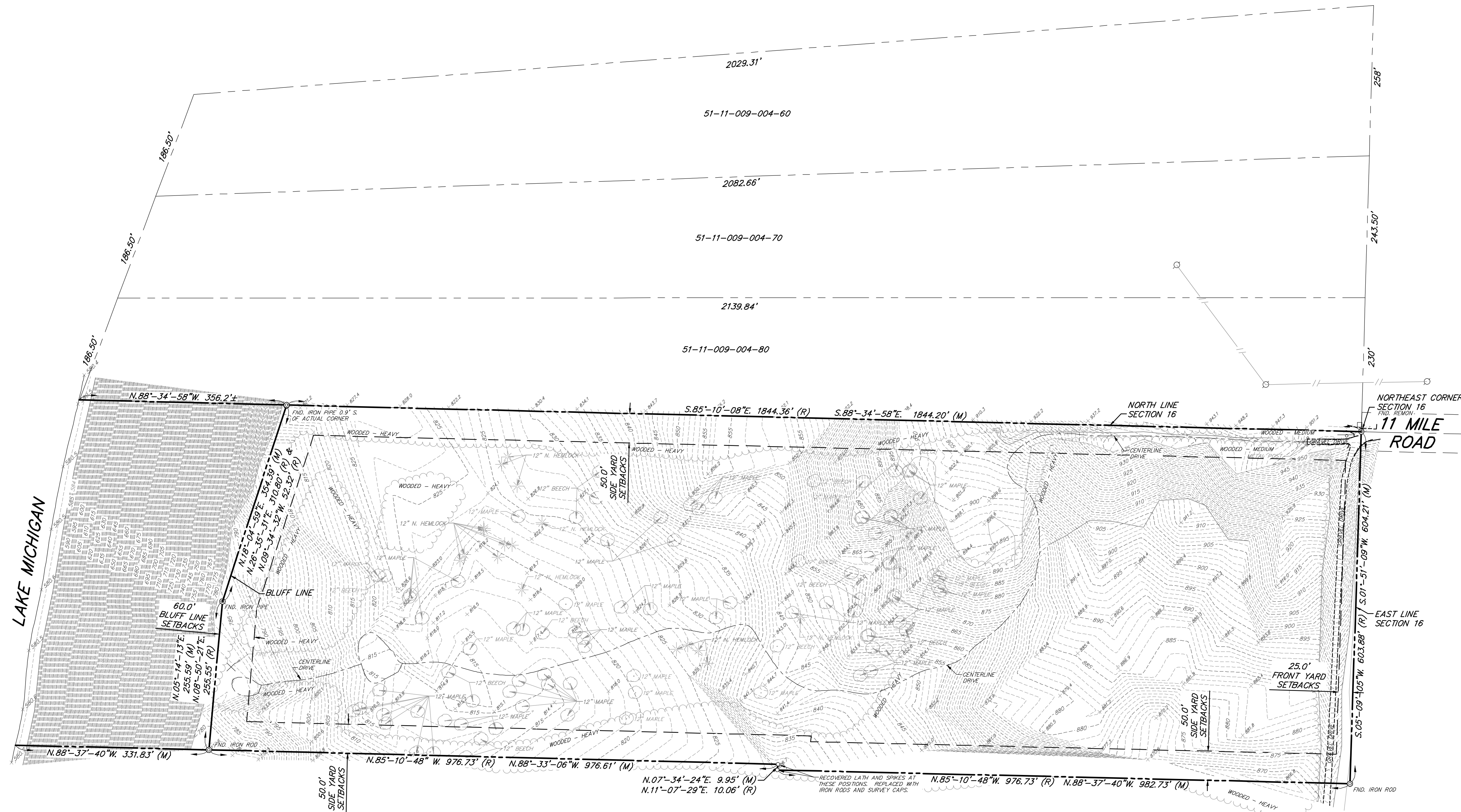
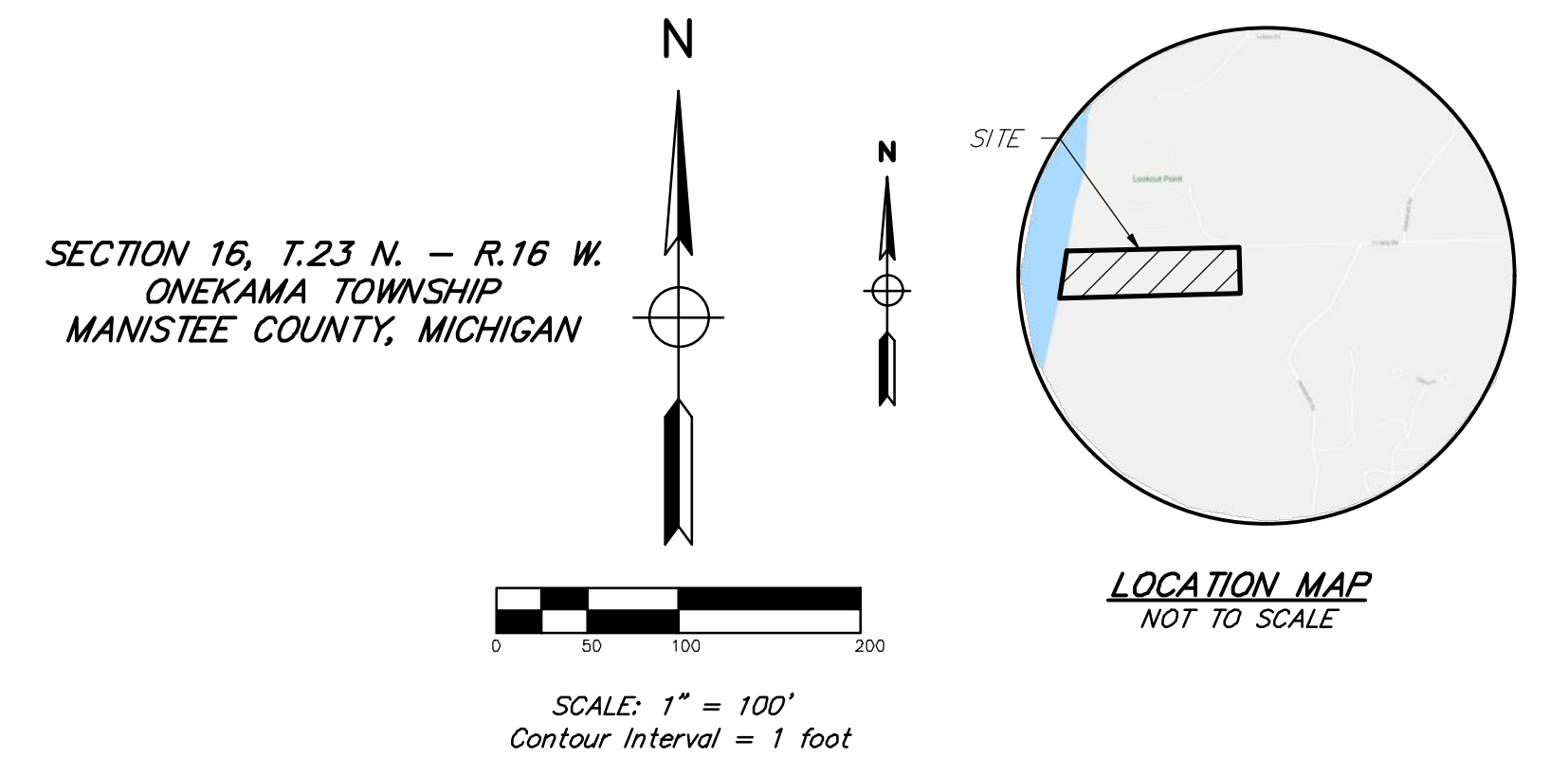
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BY	MARK	REVISIONS
		DATE

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CONSTRUCTION DESIGN, INC
387 RIVER STREET
MANISTEE, MI 49660

NOTES

		MANISTEE OFFICE 302 River Street Manistee, MI 49660 Tel: 231-794-5620 www.SpicerGroup.com	
DE. BY: SMB	APP. BY: SPH	PROJECT NO.	
DR. BY: SMB	CH. BY: SPH	126364SG2018	
STDs. —	SHEET 02 OF 14	C	
DATE OCTOBER 2021	FILE NO.	02	
SCALE NO SCALE	JD-1611-02		



- | <u>LEGEND</u> | |
|---|--------------------------|
|  | MANHOLE |
|  | CATCHBASIN |
|  | CURB CATCHBASIN |
|  | FIRE HYDRANT |
|  | WATER VALVE |
|  | GAS VALVE |
|  | TELEPHONE POLE |
|  | POWER POLE |
|  | POWER AND TELEPHONE POLE |
|  | LIGHT POLE |
|  | MAIL BOX |
|  | SIGN |
|  | SPRINKLER |
|  | RAILROAD SIGNAL |
|  | TRANSFORMER |
|  | BARRIER FREE PARKING |
|  | BITUMINOUS SURFACE |
|  | CONCRETE SURFACE |
|  | CONCRETE CURB |
|  | FENCE LINE |
|  | OVERHEAD POWER LINES |
|  | TREE LINE |
|  | STUMP |
|  | PINE |
|  | BUSH |
|  | TREE |
|  | TELEPHONE PEDESTAL |
|  | FOUND SURVEY CORNER |
|  | SET 1/2" IRON PIPE |
|  | SET WOOD LATH |
|  | SET P.K. NAIL |
|  | GUY ANCHOR AND POLE |
|  | NOT FIELD LOCATED |
|  | CABLE TV PEDESTAL |
|  | ANTENNA |
|  | SATELLITE DISH |
|  | AIR CONDITIONING UNIT |
|  | SOIL BORING |
|  | ELECTRICAL PEDESTAL |
|  | BURIED CABLE LINES |
|  | BURIED ELECTRIC LINES |
|  | GASMAINS |
|  | SANITARY SEWER LINES |
|  | STORM SEWER LINES |
|  | TELEPHONE LINES |
|  | WATERMAINS |

PARCEL DESCRIPTION

PER DEED RECORDED IN DOC. #2017R003272

A parcel of land in part of Government Lot 1 of Section 16, T.23 N.-R.16 W., Onekama Township, Manistee County, Michigan, more exactly described as: Commencing at the Northeast section corner of said section, said Northeast corner also being the Point of Beginning for this description: thence S.05°-09'-05"W., along the East line of said section, 60.38 feet; thence N.85°-10'-48"W., 985.48 feet; thence N.11°-07'-29"E., 10.06 feet; thence N.85°-10'-48"W., 976.73 feet to a point on the bluff above Lake Michigan; thence N.08°-50'-21"E., along said bluff, 255.55 feet; thence N.26°-35'-31"E., along said bluff, 310.80 feet; thence N.09°-34'-32"W., 52.32 feet to a point on the North line of said section; thence S.85°-10'-08"E., along said North line, 1944.36 feet to the point of beginning.

BEARING & ELEVATION BASIS

BEARINGS ARE BASED ON MI STATE PLAIN COORDINATE SYSTEM,
ZONE 2112 AND WERE OBTAINED BY GPS OBSERVATION.

ELEVATIONS ARE NAVD88 AND WERE OBTAINED BY A STATIC GPS SESSION THAT WAS PROCESSED THROUGH OPUS (ONLINE POSITIONING USER SERVICE).

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387 RIVER STREET
MANISTEE, MI 49660

BOUNDARY, TOPOGRAPHIC,
UTILITY SURVEY



ADMINISTRATIVE OFFICE
2 River Street
Spicer, MI 49660
Tel. 231-794-5620
www.SpicerGroup.com

DE. BY: _____		APP. BY: <i>PGB</i>		PROJECT NO. _____	
DR. BY: <i>MLU</i>		CH. BY: <i>PGB</i>		<i>126364SG2018</i>	
STDS. —			SHEET <i>03</i> OF <i>14</i>		C 03
DATE OCTOBER 2021 SCALE 1" = 100'			FILE NO. JD-1611-03		

ZONING

The subject property is zoned "Special and Unique Residential":

BUILDING SETBACKS:

Minimum Lot Depth from Bluff Line	300 ft.
Minimum Lot Frontage at Street/Road	300 ft.
Front Yard Setback	25 ft.
Side Yard Setback	50 ft.
Bluff Line Setback	60 ft.
Rear Yard Setback	25 ft.

For more Zoning Information see Onekama Township Zoning Ordinances.

UTILITY NOTE

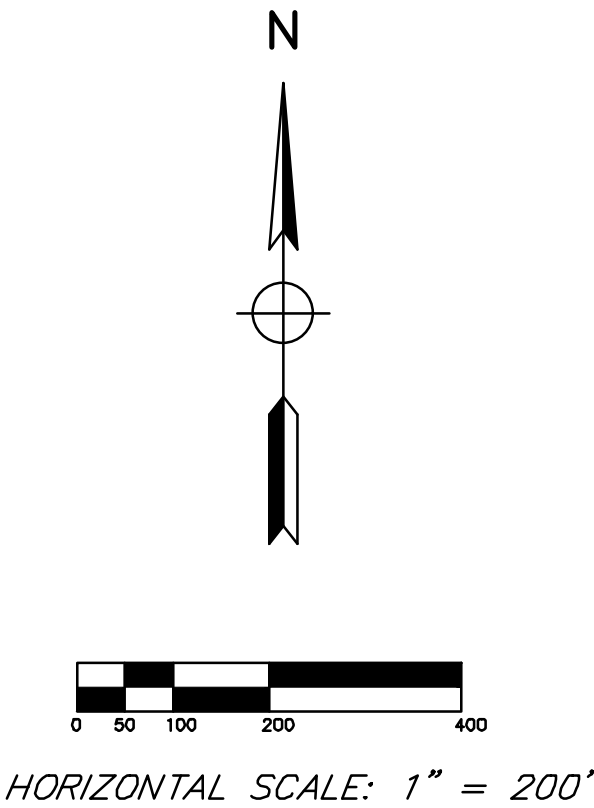
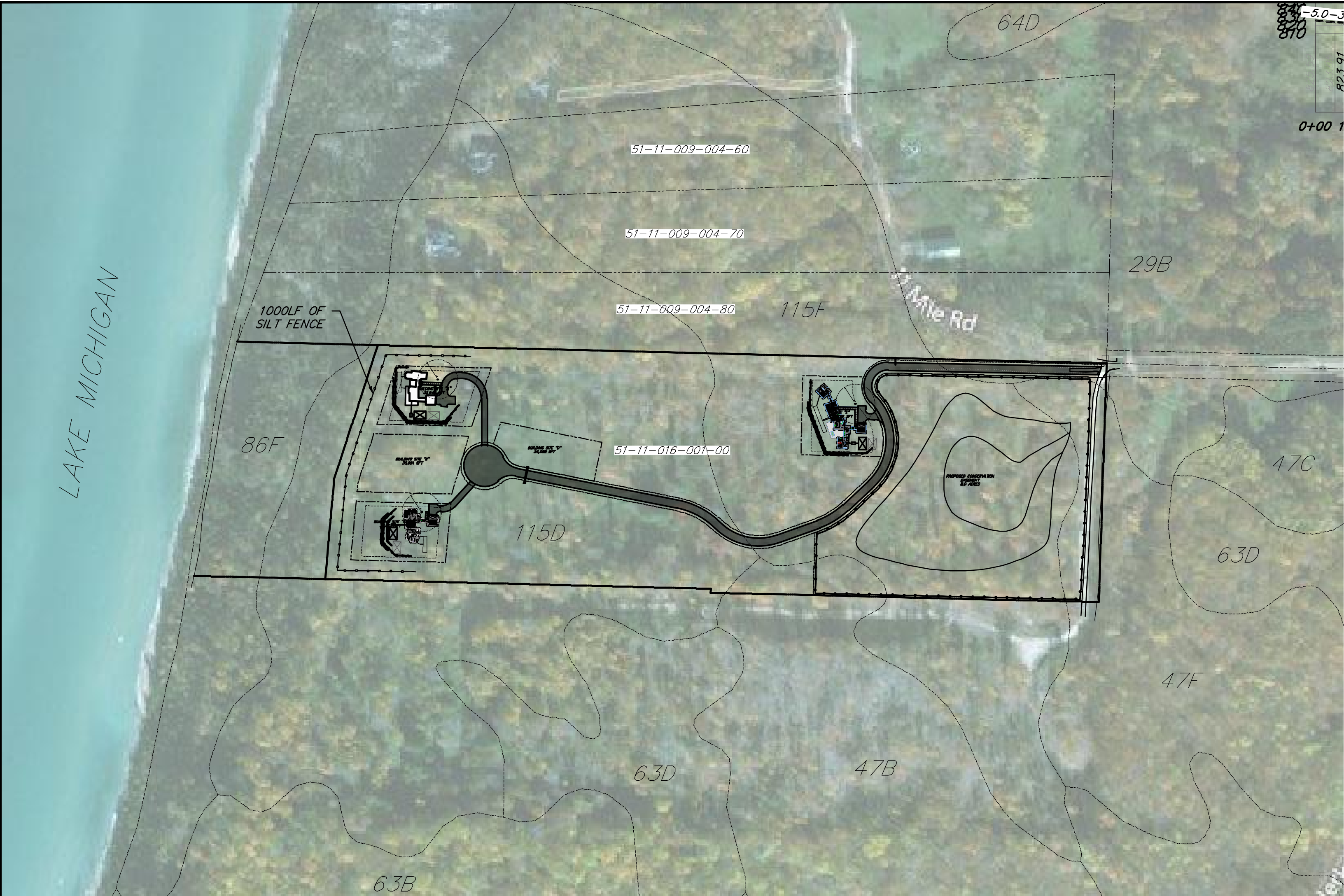
The utility locations as hereon shown are based on field observations and a careful review of municipal and utility company records. However, it is not possible to determine the precise location and depth of underground utilities without excavation. Therefore, we cannot guarantee the completeness of the buried utility information hereon shown. The contractor shall call "MISS DIG" (1-800-482-7171 or 811) within three working days prior to any excavation. The contractor is responsible for verifying these utility locations prior to construction and shall make every effort to protect and/or relocate these utilities. The contractor shall notify the Engineer/Surveyor as soon as possible in the event a discrepancy is found.

MISS DIG FLAGGING NOTE

A Miss Dig survey ticket was submitted when the survey was authorized. To date, flagging for utility locations have not been completed, as requested. Therefore utilities shown on the survey are provided from available records we obtained, and are not located from field surveyed measurements.

Please note Miss Dig requests do not include all potential utility providers or underground services. Prior to any excavation ALWAYS contact Miss Dig at 1-800-482-7171 or 811. www.missdig.net





MAINTENANCE PROGRAM FOR SESC MEASURES

- GENERAL MAINTENANCE**
- TEMPORARY SESC MEASURES SHALL BE INSTALLED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
 - TEMPORARY MEASURES MUST BE MAINTAINED AND IN PLACE UNTIL AREAS ARE PERMANENTLY STABILIZED.
 - PERMANENT MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR UNTIL FINAL COMPLETION
 - DAILY MAINTENANCE IS THE CONTRACTOR'S RESPONSIBILITY.
 - TEMPORARY SESC MEASURES SHALL BE REMOVED AT THE END OF THE PROJECT ONCE PERMANENT MEASURES ARE ESTABLISHED.
 - TEMPORARY MEASURES SHALL BE INSTALLED PRIOR TO OR AT THE TIME OF EARTH DISTURBANCE.
 - CONTRACTOR SHALL PROVIDED DAILY DUST CONTROL ON ALL DISTURBED AREAS, UNTIL TEMPORARY AND PERMANENT STABILIZATION METHODS ARE IN PLACE AND EFFECTIVE.
- SEEDING AND MULCHING**
- SEEDING PRACTICES INCLUDE TOPSOIL (AS DIRECTED BY ENGINEER), SEED, POLYMER SILT STOP, AND MULCH OR MULCH MATTING (AS DIRECTED BY ENGINEER OR WHERE SHOWN ON PLANS).
 - WHERE NECESSARY, APPROPRIATE MULCH MATTING MUST BE APPLIED BASED ON SLOPE AND GROWING CONDITIONS AS APPROVED BY THE PROJECT ENGINEER.
 - ALL SLOPES AND HIGHLY ERODIBLE AREAS WILL BE SEEDED AND MULCHED WHEN CONSTRUCTION ACTIVITY IS NOT TAKING PLACE.
 - SEED AND MULCH IS TO BE INSPECTED FOLLOWING EACH RAIN EVENT TO DETERMINE IF CONCENTRATED FLOWS ARE PRESENT.
 - IN THE EVENT THAT SEED AND MULCH ARE REMOVED BY ERODIBLE RUNOFF, REPAIRS ARE TO BE MADE IMMEDIATELY. COST TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.
 - ALL AREAS DURING CONSTRUCTION WILL BE PERMANENTLY STABILIZED WITHIN 24 HOURS OF FINAL GRADE (GRADE LISTED ON PLAN).

- SILT FENCE**
- SILT FENCE IS TO BE TRENCHED IN NO LESS THAN 6 INCHES BELOW THE GROUND SURFACE.
 - INSPECT SILT FENCE DAILY AND IMMEDIATELY FOLLOWING EACH RAINFALL.
 - REPAIR WHEN SILT FENCE IS SAGGING OR HAS BEEN REMOVED/TORN DOWN.
 - WHEN SILT COLLECTS TO HALF THE HEIGHT OF THE FENCE ALL SILT IS TO BE REMOVED AND FENCE REPAIRED.
 - REMOVE SILT FENCE WHEN PERMANENT SESC MEASURES ARE IN PLACE AND VEGETATION IS ESTABLISHED.

- COMPLIANCE WITH PART 91 OF PA 451**
- RESPOND IMMEDIATELY TO STORMWATER OPERATOR AND/OR SOIL EROSION AND SEDIMENTATION CONTROL INSPECTOR CONCERNS. MAKE CORRECTIVE MEASURES AS REQUIRED IMMEDIATELY AS DETAILED BY THE APPROVED APA MANUAL(S) THAT APPLY.

- STORM INLET PROTECTION**
- INSPECT ROUTINELY AND FOLLOWING A PRECIPITATION EVENT THAT RESULTS IN RUNOFF UNTIL SEDIMENT FILTER IS REMOVED.
 - ROUTINELY REMOVE SEDIMENT ACCUMULATION.
 - REPAIR AND OR REPLACE CONTROL MEASURE AS NEEDED.
 - REMOVE TEMPORARY CONTROL MEASURES AND CLEAN SEDIMENT FROM SUMP AFTER SITE IS STABILIZED.
 - INLET PROTECTION SHALL BE PROVIDED WITH THE CORRESPONDING SILT SACK, DANDY BAG OR EQUAL PRODUCT UNLESS ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER.

MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL KEYING SYSTEM

KEY	SESC MEASURE	SYMBOL	
1	SEEDING		When bare soil is exposed, temporarily or permanently, to erosive forces from wind and or water on flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles.
2	MULCH		On flat areas, mild slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to raindrop impact, and erosive forces from wind or water.
7	RIPRAP		Along drain banks, shorelines, or where concentrated flows occur. Slows velocity, reduces erosion and sediment load.
15	ARMORED SPILLWAY		When concentrated flow must be conveyed down a drain bank or slope or discharge into another drain. Where slope failure or channel scour is observed or is likely to occur, or when runoff must be redirected around work in the drain.
60	STORM DRAIN INLET PROTECTION		When disturbance to a newly constructed catch basin or an inlet that will capture runoff from an earth change activity.
61	SILT FENCE		As a temporary measure used to capture sediment from sheet flow. May also divert small volumes of sheet flow to protected outlets.
66	STABILIZED CONSTRUCTION ACCESS		At locations where construction equipment will enter and exit the roadway and tracking of soil is anticipated.

ROUTINE MAINTENANCE ACTIVITY DETAILS

KEY	BEST MANAGEMENT PRACTICE
80	Debris Removal
81	Sediment Removal

DETAILED DRAWINGS AND SPECIFICATIONS ARE LOCATED IN THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL AUTHORIZED PUBLIC AGENCY PROCEDURES MANUAL

SSURGO SOILS IN PROJECT LOCATION	
MUSYM	COMPOSITION NAME
29B	FOGG-BENZONIA SANDS, 0 TO 6 PERCENT SLOPES
47B	SPINKS-COLOMA SANDS, 0 TO 6 PERCENT SLOPES
47C	SPINKS-COLOMA SANDS, 6 TO 12 PERCENT SLOPES
47F	SPINKS-COLOMA SANDS, 35 TO 70 PERCENT SLOPES
63B	COLOMA SAND, 0 TO 6 PERCENT SLOPES
63D	COLOMA SAND, 12 TO 18 PERCENT SLOPES
64D	BENONA SAND, 12 TO 18 PERCENT SLOPES
86F	DUNE LAND-QUARTZIPSAMMENTS COMPLEX, HILLY TO VERY STEEP
115D	NORDHOUSE SAND, 6 TO 18 PERCENT SLOPES
115F	NORDHOUSE SAND, 18 TO 70 PERCENT SLOPES

Zoning Requirements

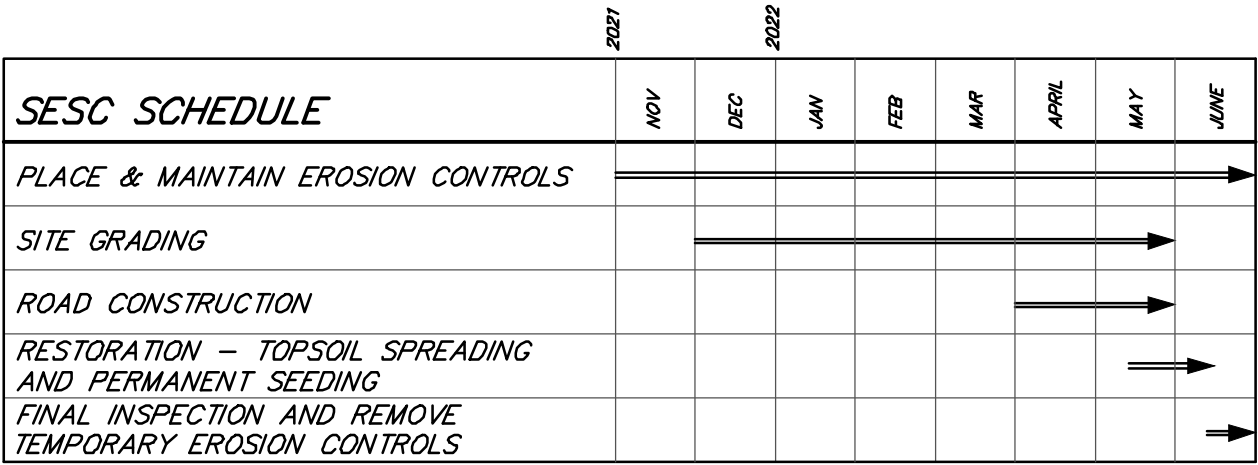
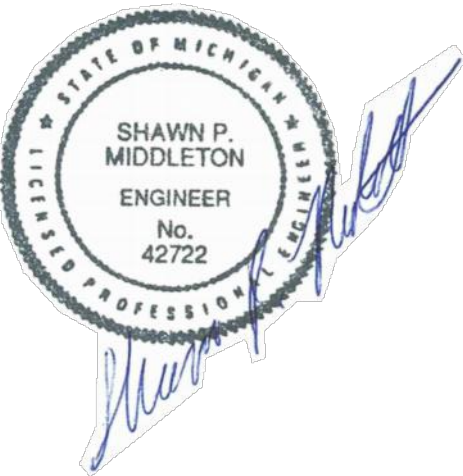
The subject property is zoned "Special and Unique Residential".

Zoning Ordinance Requirement

Minimum Lot Depth for all lots	300 Ft
Minimum Depth of lot from Bluff Line	300 Ft
Minimum Lot Width	300 Ft
Minimum Frontage on Street/Road	300 Ft
Minimum Setback from Road	25 Ft
Minimum Setback from Bluff Line	60 Ft
Minimum Setback for Side Yards	50 Ft
Minimum Setback for Rear Yards	25 Ft
Minimum Floor Area	800 Sft

Planned Unit Development Requirements

	Required	Actual (Acres)
Minimum Gross Site Area	8 Acres	26.3
Minimum Net Land Area	>1/2 of Gross Site Area	23.5
Structure Foundation Area Coverage	<35% of Net Land Area	8.2



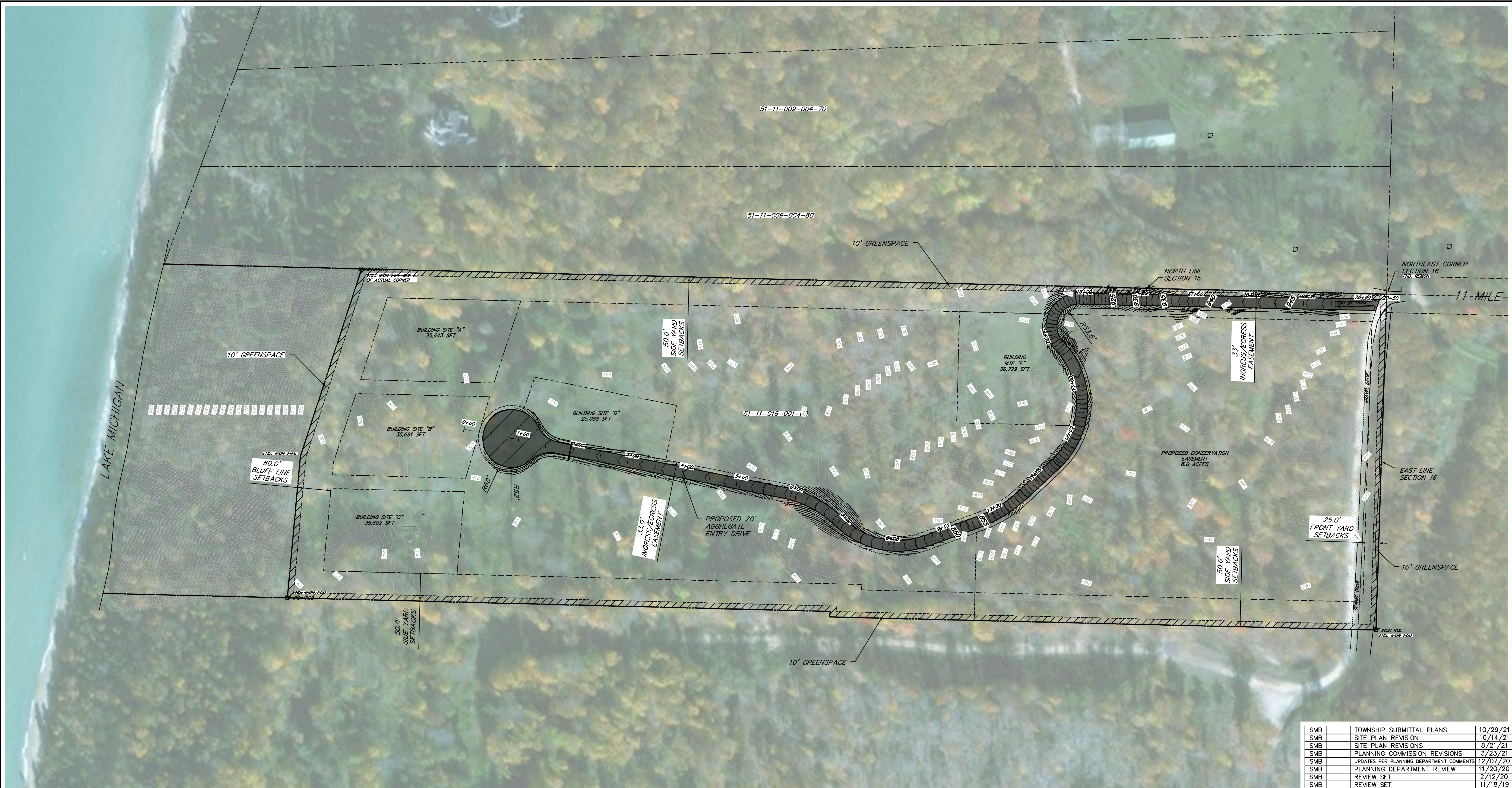
SMB	TOWNSHIP SUBMITTAL PLANS		10/29/21
SMB	SITE PLAN REVISION		10/14/21
SMB	SITE PLAN REVISIONS		8/21/21
SMB	PLANNING COMMISSION REVISIONS		3/23/21
SMB	UPDATES PER PLANNING DEPARTMENT COMMENTS		12/07/20
SMB	PLANNING DEPARTMENT REVIEW		11/20/20
SMB	REVIEW SET		2/12/20
SMB	REVIEW SET		11/18/19
BY	MARK	REVISIONS	DATE

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CONSTRUCTION DESIGN, INC
387 RIVER STREET
MANISTEE, MI 49660

SESC NOTES & DETAILS

		MANISTEE OFFICE 302 River Street Manistee, MI 49660 Tel. 231-794-5620 www.SpicerGroup.com	
DE. BY: <i>SMB</i> DR. BY: <i>SMB</i>		APP. BY: <i>SPM</i> CH. BY: <i>SPM</i>	
		PROJECT NO. 126364SG2018	
STDs. -		SHEET <i>04</i> OF <i>14</i>	
DATE OCTOBER 2021 SCALE AS SHOWN		FILE NO. JD-1611-04	
		C 04	



SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21
SMB	SITE PLAN REVISION	10/14/21
SMB	SITE PLAN REVISIONS	8/21/21
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SMB	REVIEW SET	2/12/20
SMB	REVIEW SET	11/18/19
BY	MARK	REVISIONS
		DATE

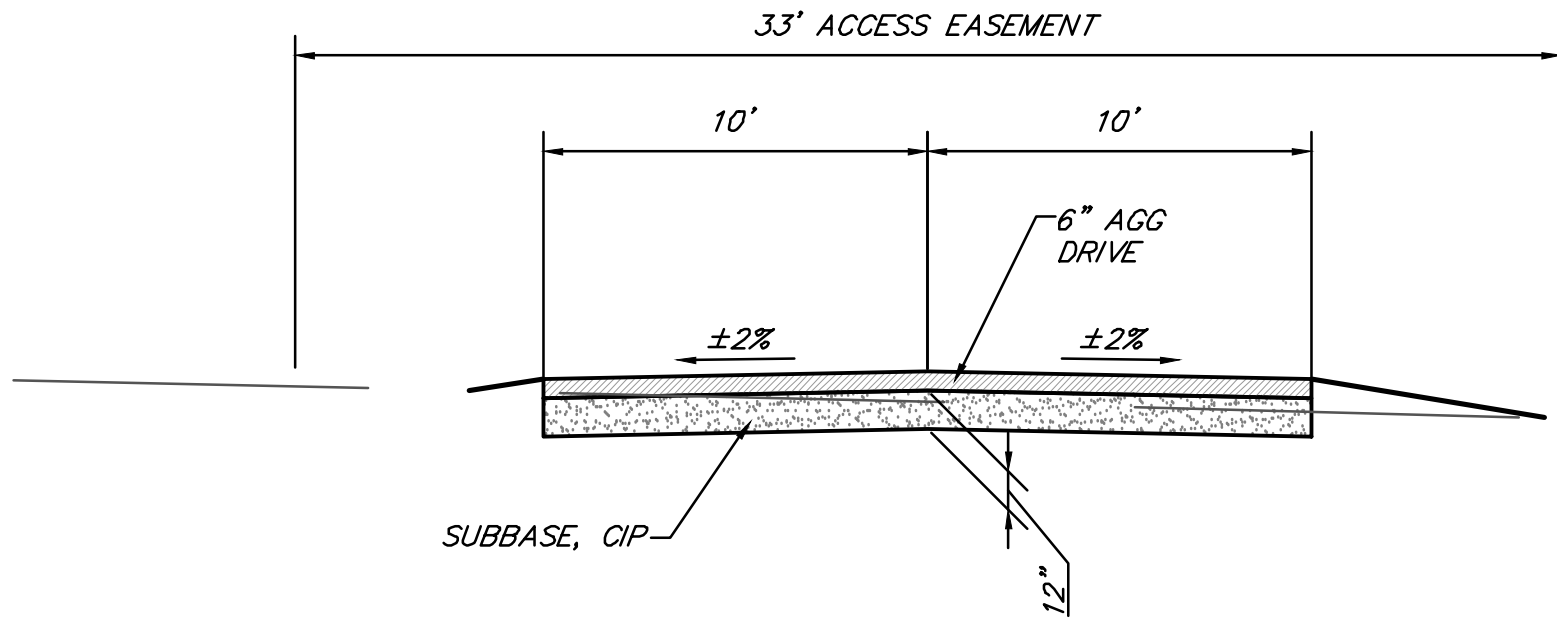
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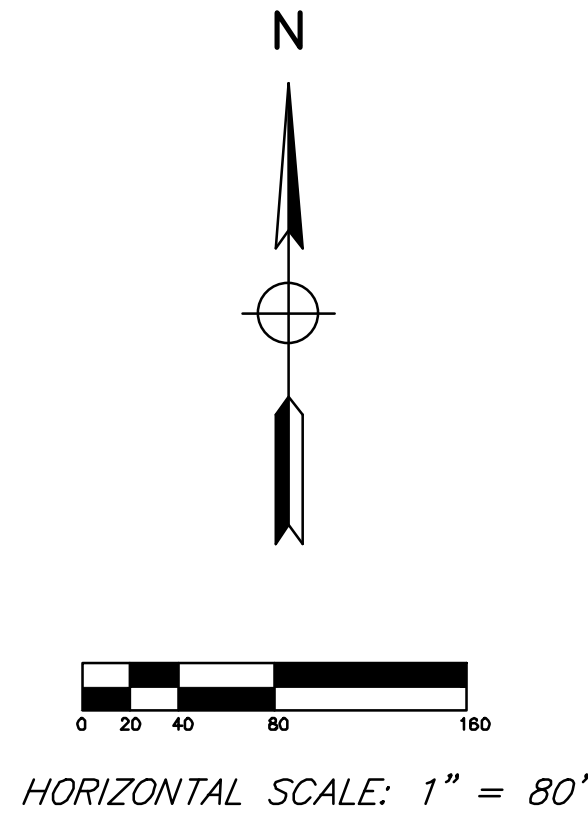
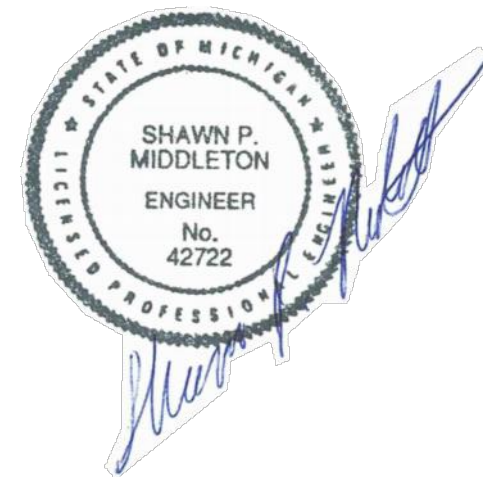
PROPOSED SITE LAYOUT

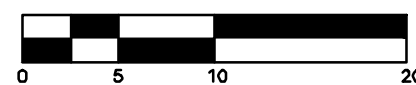
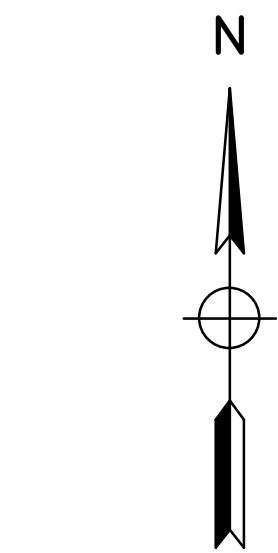
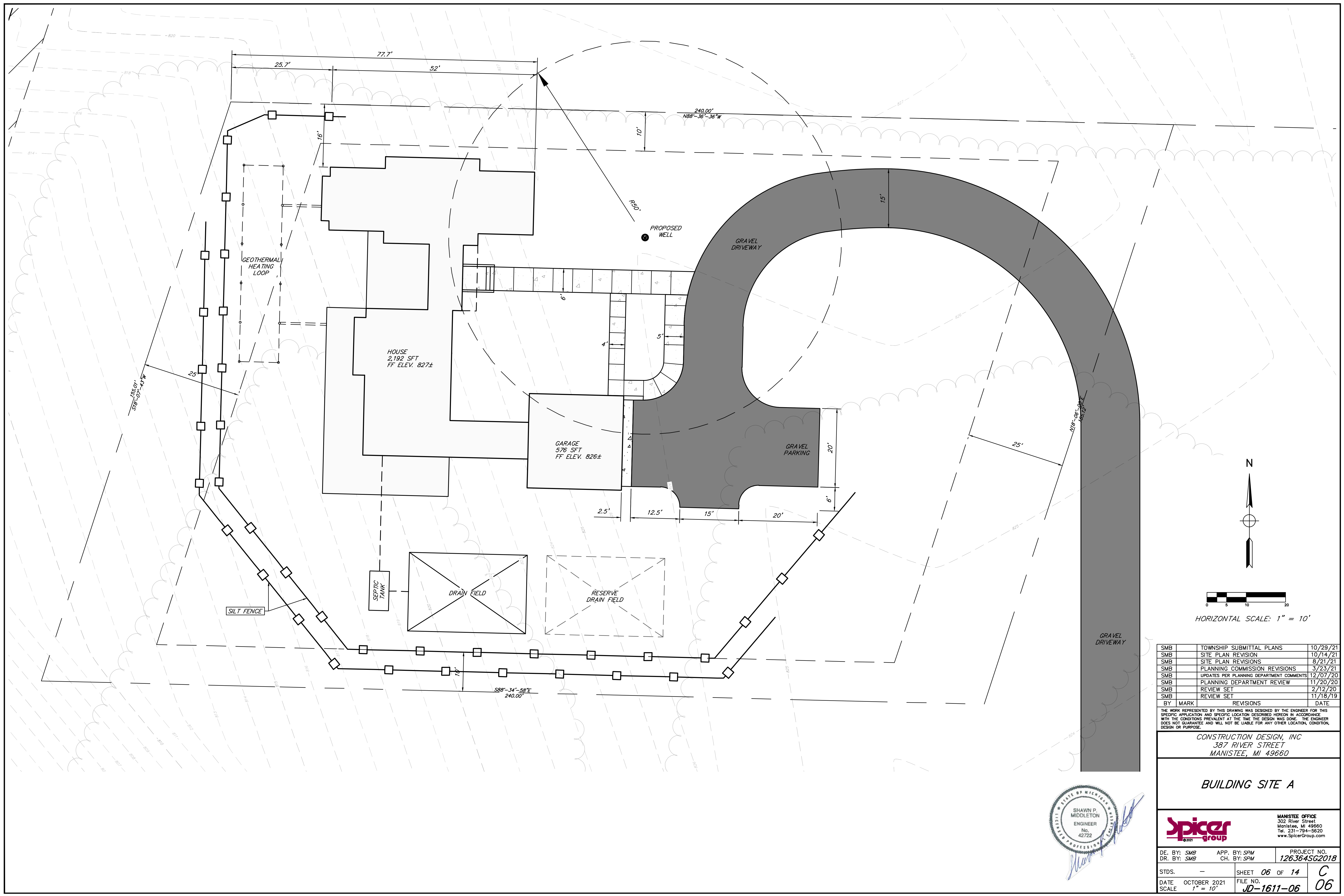
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DE. BY: SMB	APP. BY: SPW	PROJECT NO.
DR. BY: SMB	CH. BY: SPW	126364SG2018
STDs.	SHEET 05 OF 14	C
DATE OCTOBER 2021	FILE NO.	05
SCALE 1" = 80'	JD-1611-05	



PROPOSED TYPICAL SECTION
NOT TO SCALE





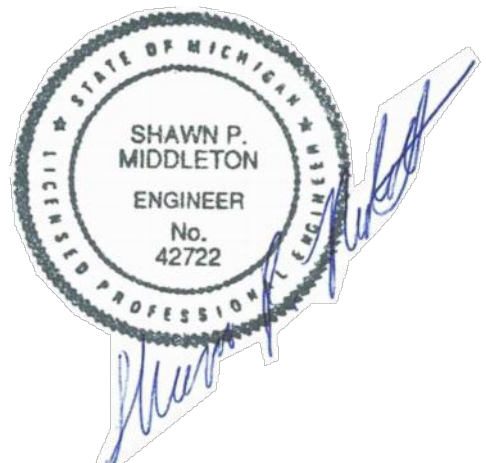
HORIZONTAL SCALE: 1" = 10'

SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21
SMB	SITE PLAN REVISION	10/14/21
SMB	SITE PLAN REVISIONS	8/21/21
SMB	PLANNING COMMISSION REVISIONS	3/23/21
SMB	UPDATES PER PLANNING DEPARTMENT COMMENTS	12/07/20
SMB	PLANNING DEPARTMENT REVIEW	11/20/20
SMB	REVIEW SET	2/12/20
SMB	REVIEW SET	11/18/19
BY	MARK	REVISIONS
		DATE

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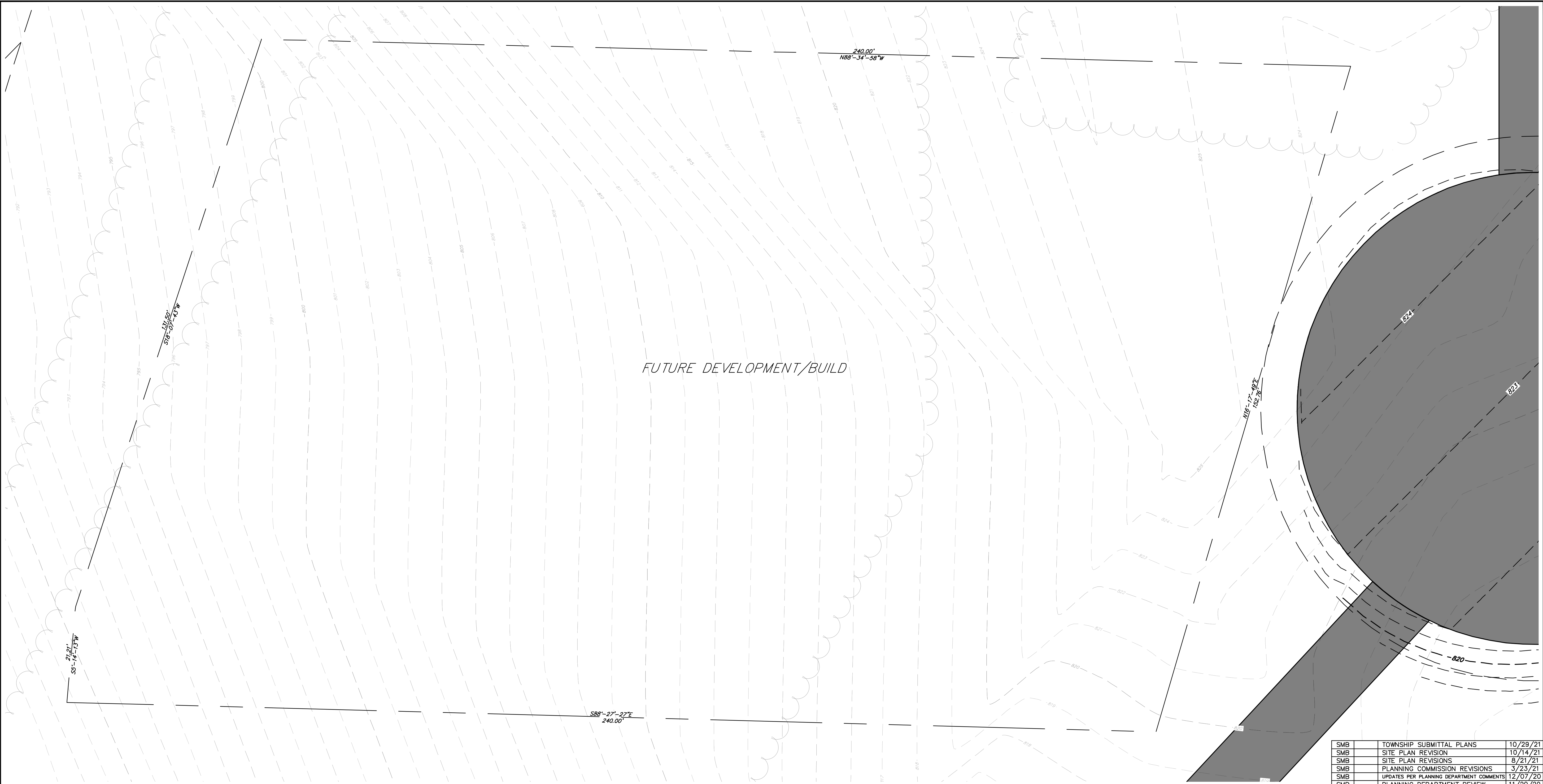
BUILDING SITE A



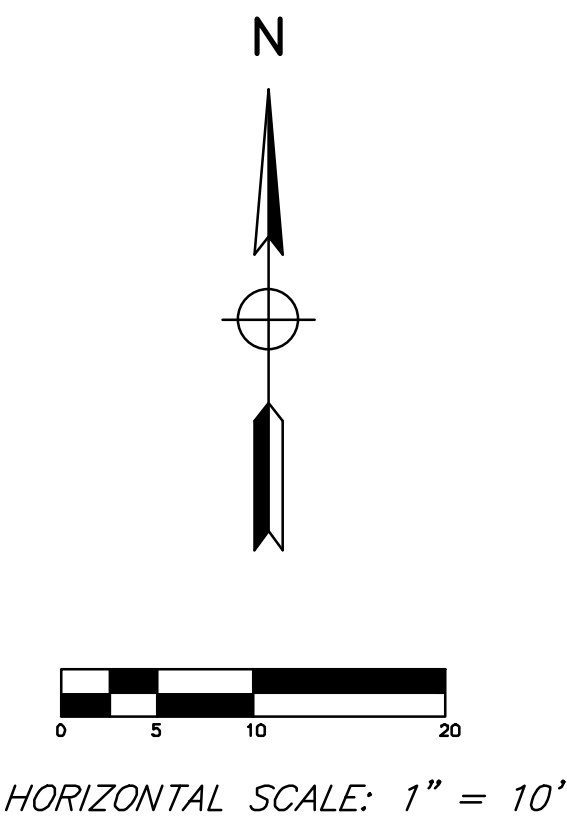
DE. BY: SMB		APP. BY: SPW	PROJECT NO. 126364SG2018
DR. BY: SMB		CH. BY: SPW	
STDS.	—	SHEET 06 OF 14	C 06
DATE	OCTOBER 2021	FILE NO. JD-1611-06	
SCALE	1" = 10'		

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BUILDING SITE "B"
35,691 SFT



SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21
SMB	SITE PLAN REVISION	10/14/21
SMB	SITE PLAN REVISIONS	8/21/21
SMB	PLANNING COMMISSION REVISIONS	3/23/21
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SMB	PLANNING DEPARTMENT REVIEW	11/20/20
SMB	REVIEW SET	2/12/20
SMB	REVIEW SET	11/18/19
BY	MARK	REVISIONS
		DATE

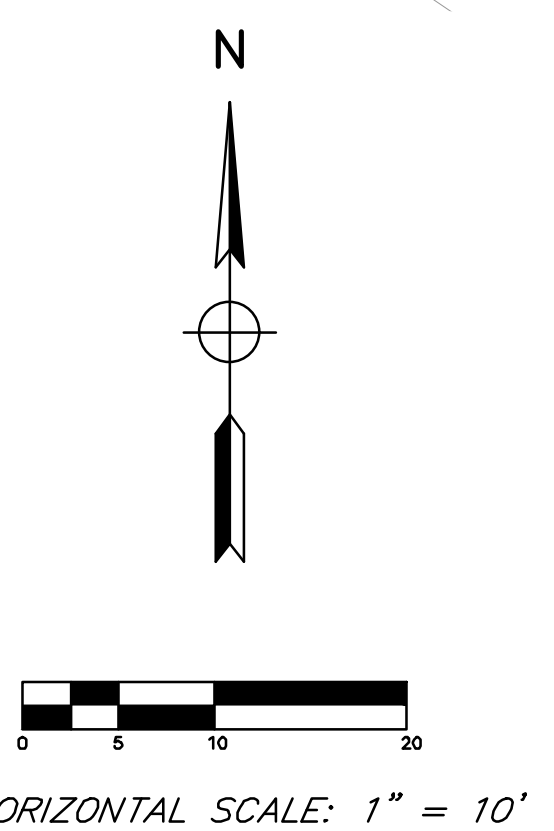
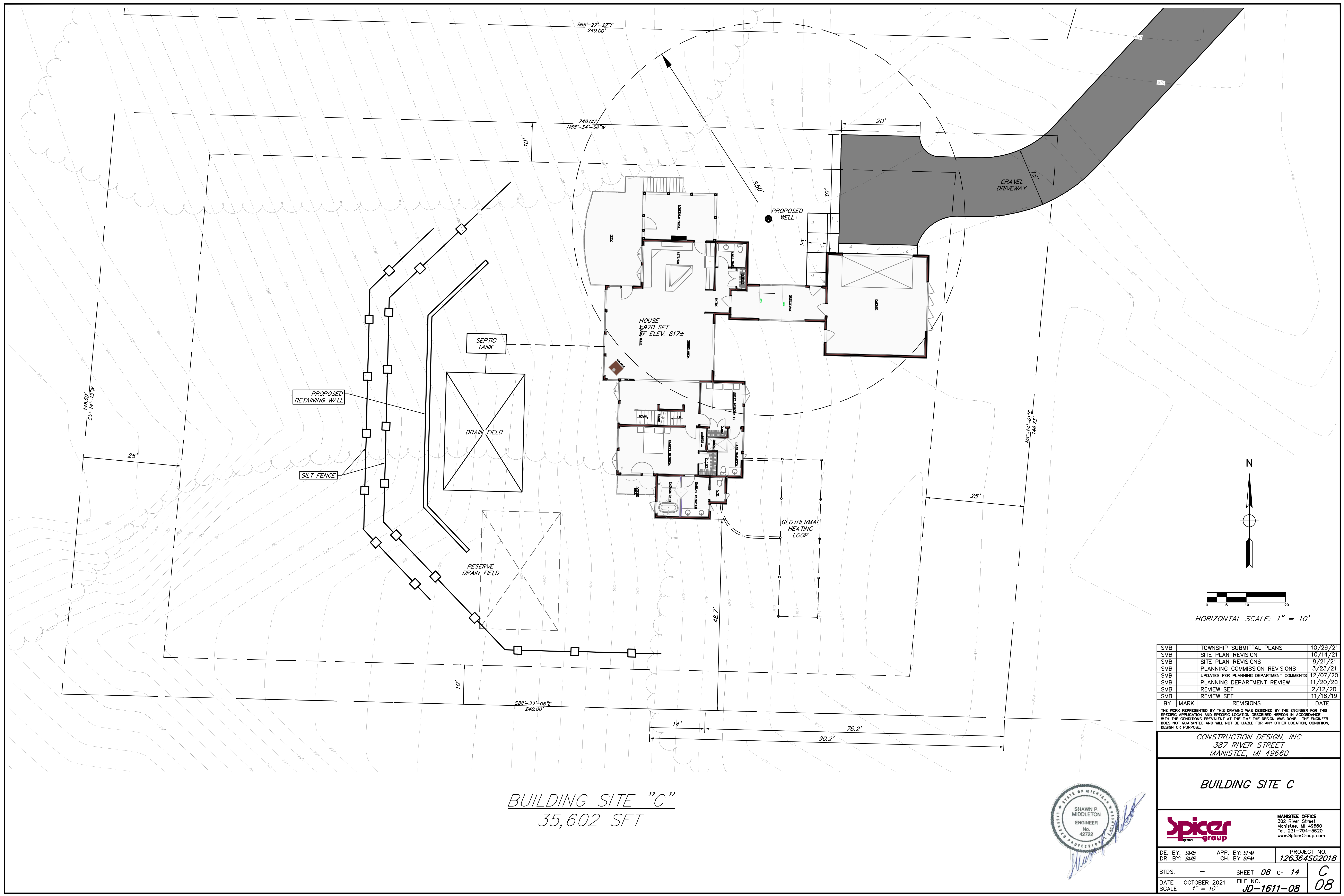
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BUILDING SITE B

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DE. BY: SMB	APP. BY: SPW	PROJECT NO.
DR. BY: SMB	CH. BY: SPW	126364SG2018
STDS.	SHEET 07 OF 14	C
DATE OCTOBER 2021	FILE NO.	07
SCALE 1" = 10'	JD-1611-07	



HORIZONTAL SCALE: 1" = 10'

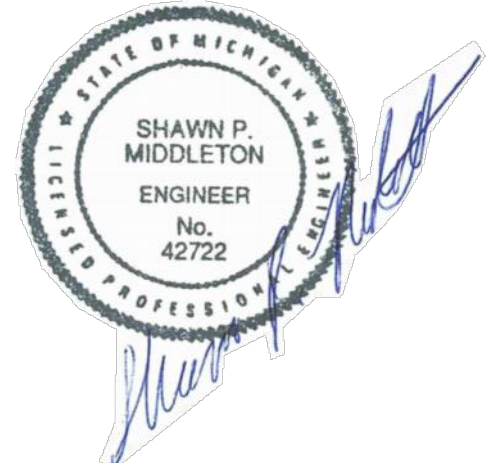
BUILDING SITE "C"
35,602 SFT

SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21
SMB	SITE PLAN REVISION	10/14/21
SMB	SITE PLAN REVISIONS	8/21/21
SMB	PLANNING COMMISSION REVISIONS	3/23/21
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BY	MARK	REVISIONS
		DATE

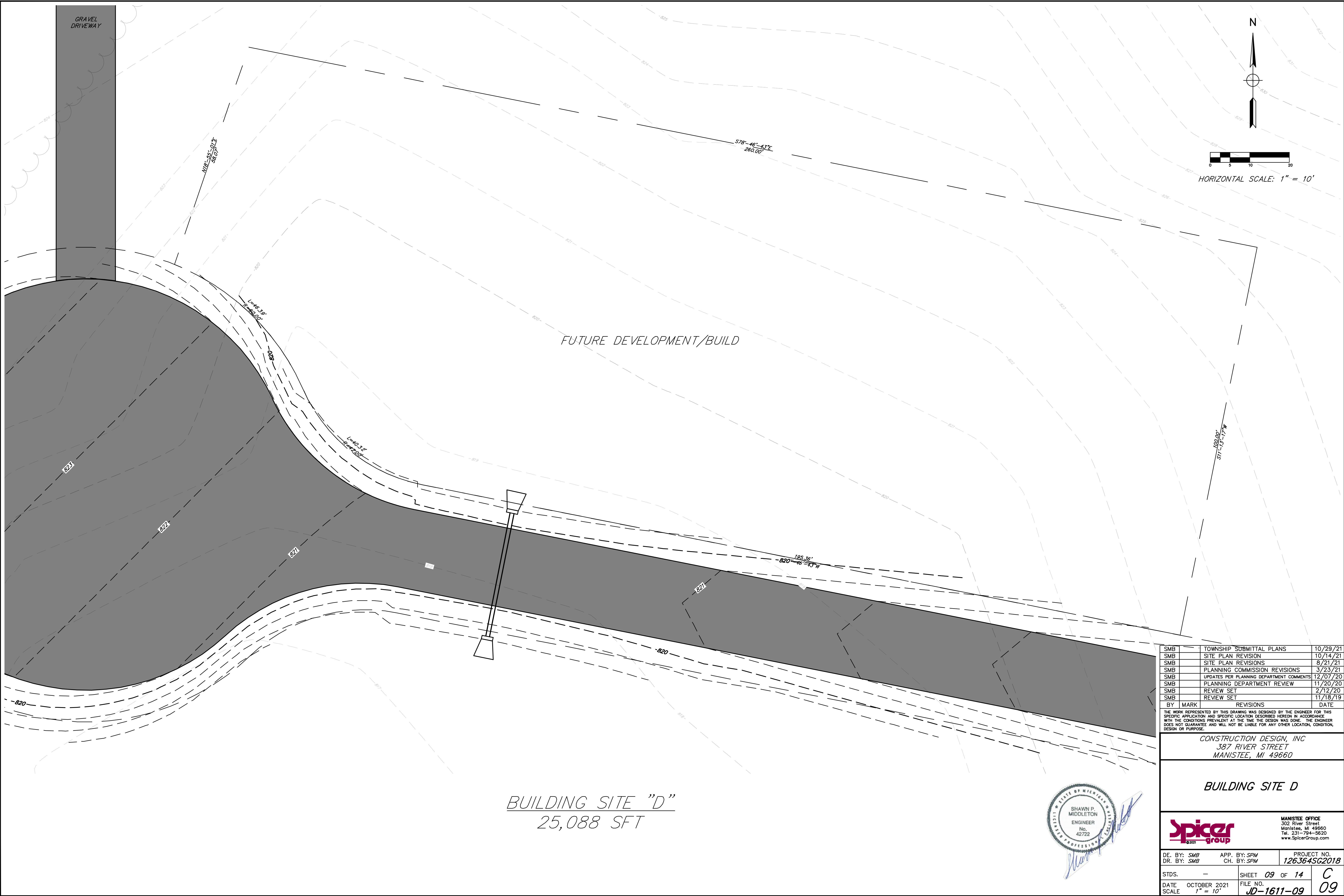
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BUILDING SITE C



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DE. BY: SMB	APP. BY: SPW	PROJECT NO. 126364SG2018	
DR. BY: SMB	CH. BY: SPW		
STDs.	—	SHEET 08 OF 14	C
DATE	OCTOBER 2021	FILE NO.	08
SCALE	1" = 10'	JD-1611-08	



SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21
SMB	SITE PLAN REVISION	10/14/21
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SMB	REVIEW SET	2/12/20
SMB	REVIEW SET	11/18/19
BY	MARK	REVISIONS
		DATE

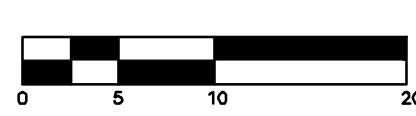
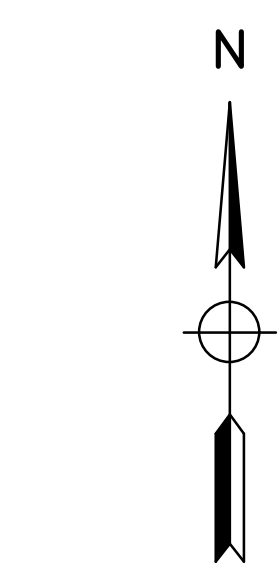
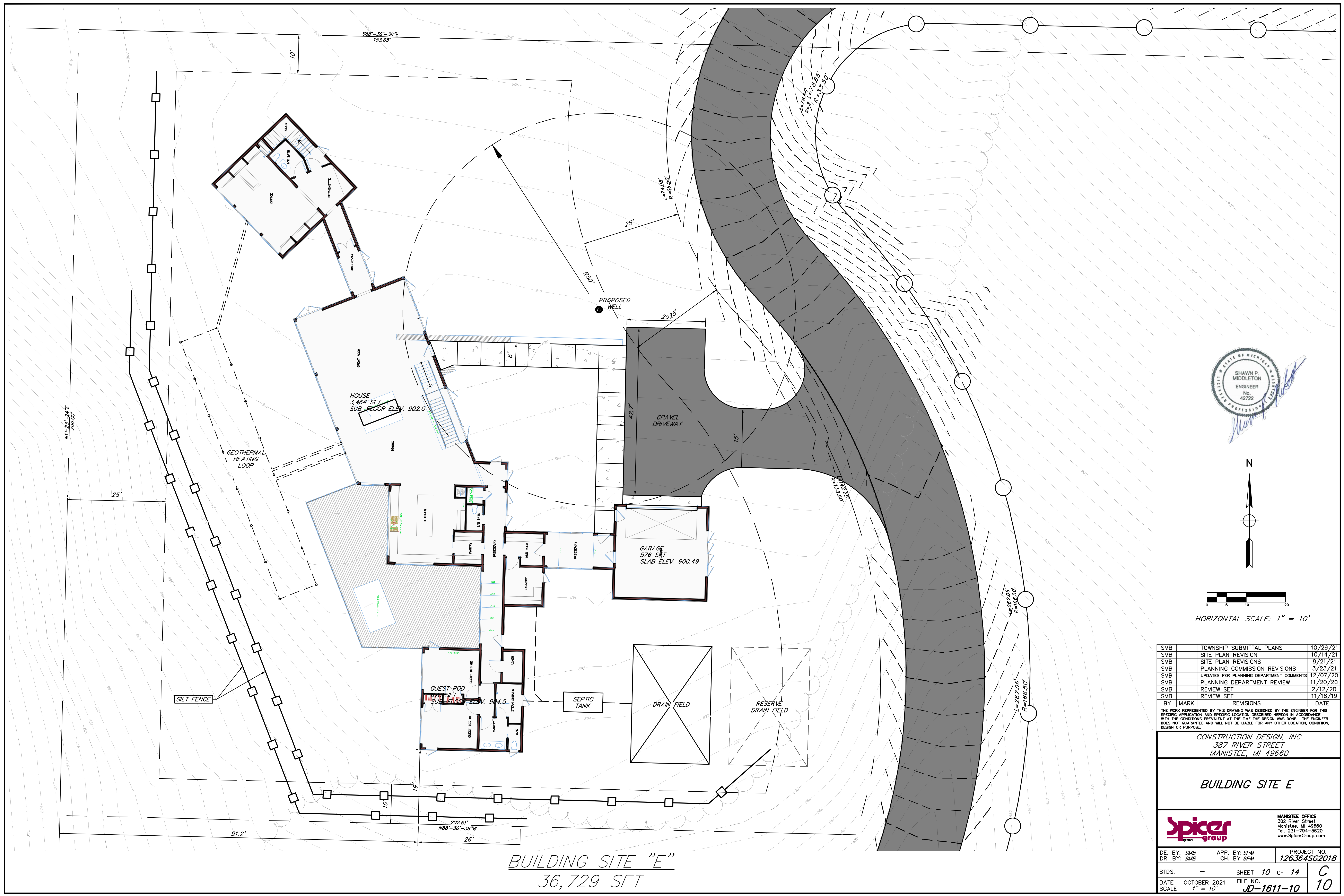
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MANISTEE, MI 49660

BUILDING SITE D

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DE. BY: SMB	APP. BY: SPW	PROJECT NO.
DR. BY: SMB	CH. BY: SPW	126364SG2018
STDS.	SHEET 09 OF 14	C
DATE OCTOBER 2021	FILE NO.	09
SCALE 1" = 10'	JD-1611-09	



HORIZONTAL SCALE: 1" = 10'

SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21
SMB	SITE PLAN REVISION	10/14/21
SMB	SITE PLAN REVISIONS	8/21/21
SMB	PLANNING COMMISSION REVISIONS	3/23/21
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SMB	REVIEW SET	11/18/19
BY	MARK	REVISIONS
		DATE

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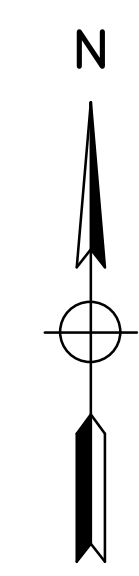
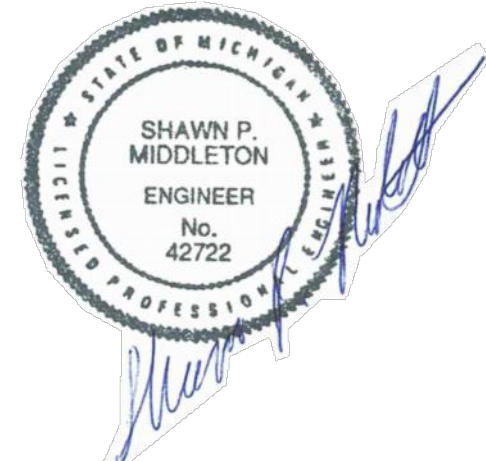
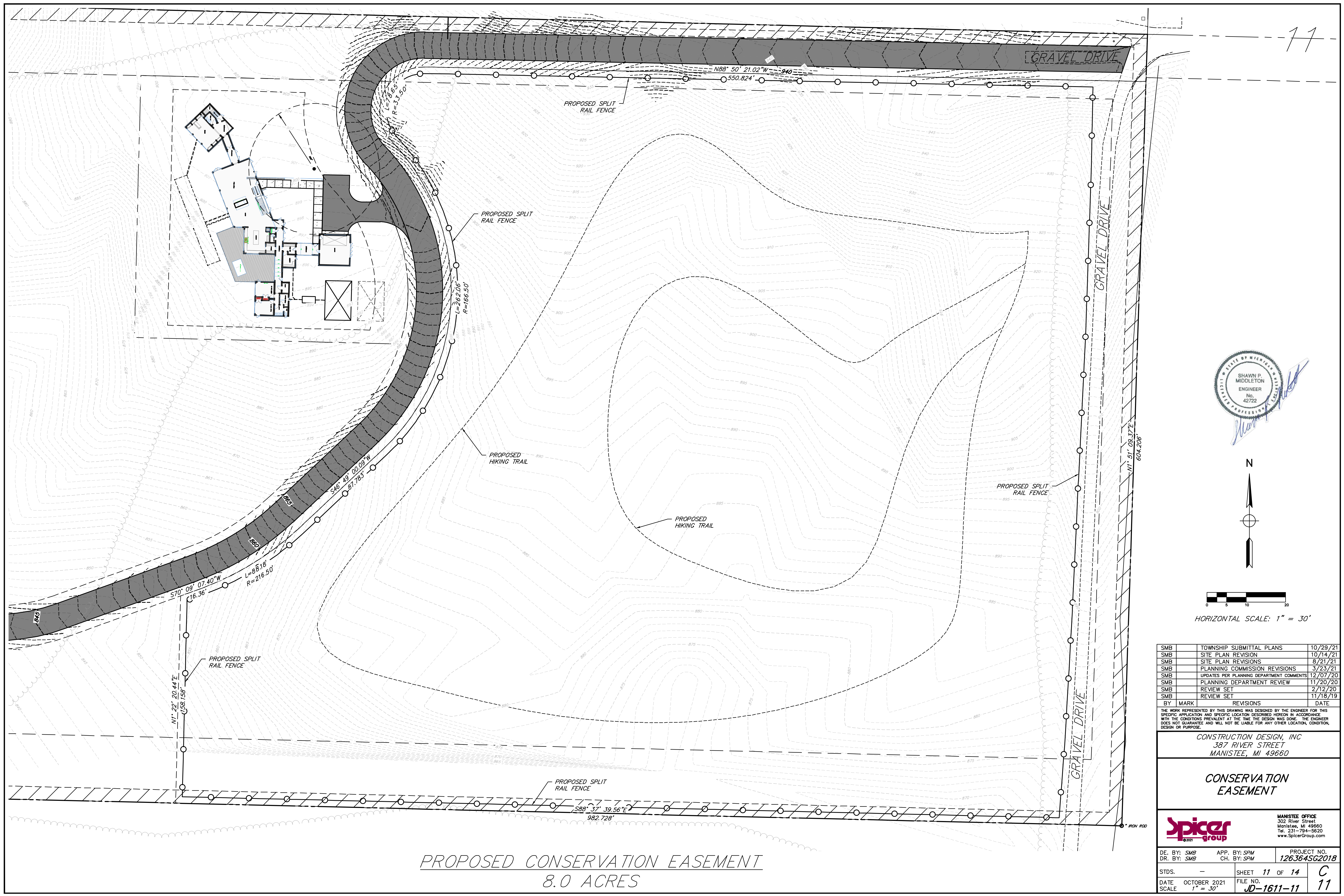
CONSTRUCTION DESIGN, INC
387 RIVER STREET
MANISTEE, MI 49660

BUILDING SITE E

MANISTEE OFFICE
302 River Street
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Tel. 231-794-5620
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DE. BY: SMB	APP. BY: SPW	PROJECT NO.
DR. BY: SMB	CH. BY: SPW	126364SG2018
STDS.	SHEET 10 OF 14	C
DATE OCTOBER 2021	FILE NO.	10
SCALE 1" = 10'	JD-1611-10	

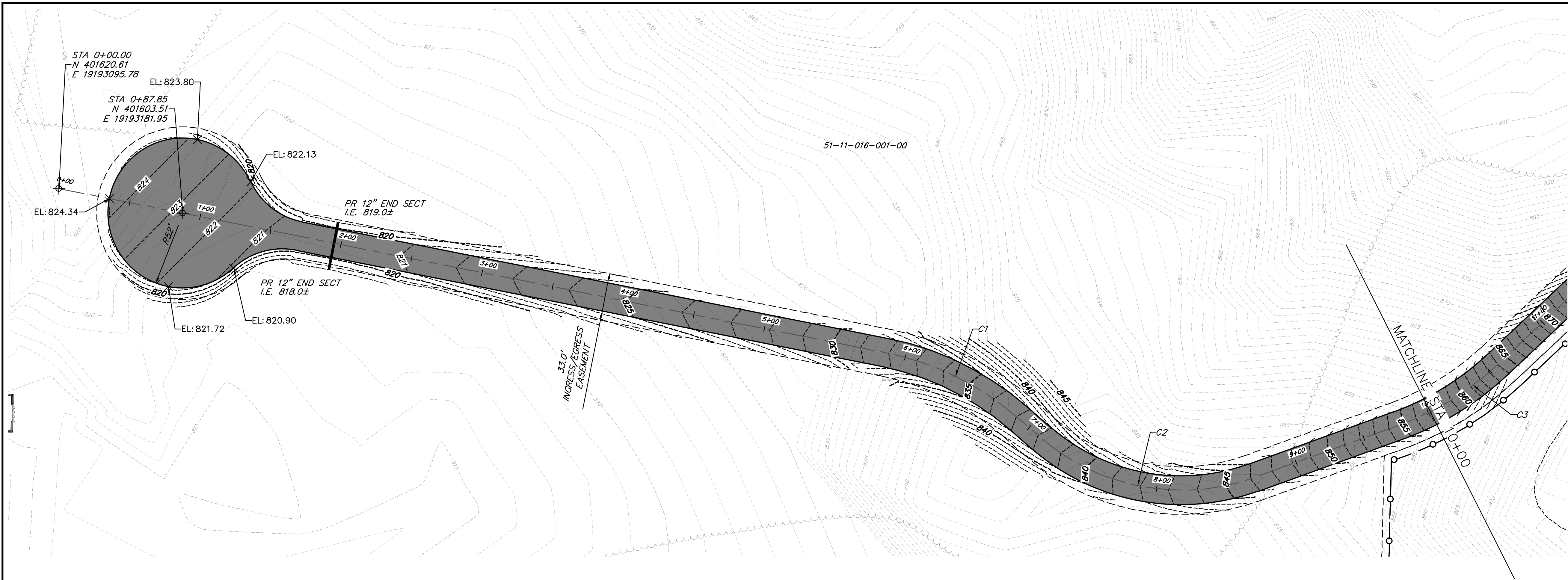
BUILDING SITE "E"
36,729 SFT



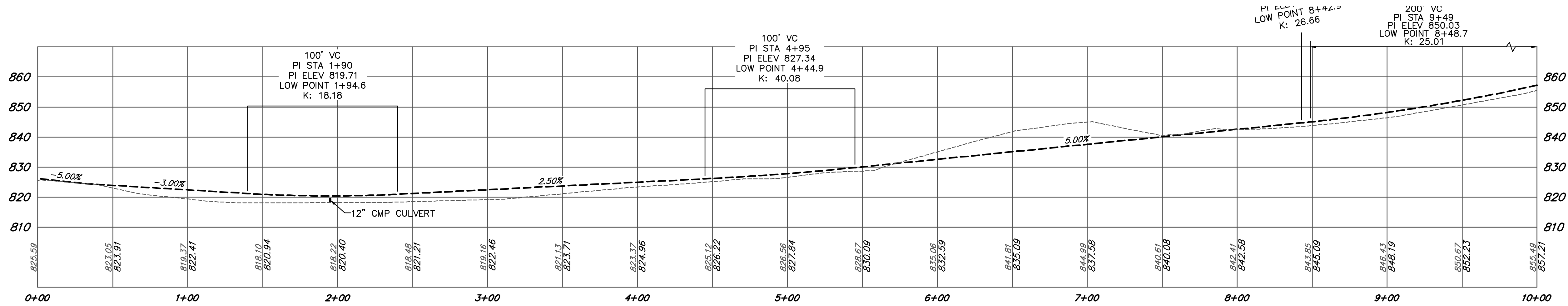
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HORIZONTAL SCALE: 1" = 30'

SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21	
SMB	SITE PLAN REVISION	10/14/21	
SMB	SITE PLAN REVISIONS	8/21/21	
SMB	PLANNING COMMISSION REVISIONS	3/23/21	
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BY	MARK	REVISIONS	DATE
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CONSTRUCTION DESIGN, INC 387 RIVER STREET MANISTEE, MI 49660			
CONSERVATION EASEMENT			
		MANISTEE OFFICE 302 River Street Manistee, MI 49660 Tel. 231-794-5620 www.SpicerGroup.com	
DE. BY: SMB	APP. BY: SPW	PROJECT NO.	
DR. BY: SMB	CH. BY: SPW	126364SG2018	
STDs.	—	SHEET 11 OF 14	C
DATE	OCTOBER 2021	FILE NO.	11
SCALE	1" = 30'	JD-1611-11	

PROPOSED CONSERVATION EASEMENT
8.0 ACRES



CURVE TABLE					
CURVE NO.	RADIUS	LENGTH	CHORD DIRECTION	PC (NORTHING, EASTING)	PT (NORTHING, EASTING)
C1	200.00	104.94	S63° 44' 50.44"E	(401506.6273, 19193670.30)	(401460.74, 19193763.34)
C2	150.00	160.04	S79° 16' 55.22"E	(401448.3363, 19193777.46)	(401419.96, 19193927.36)



SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21
SMB	SITE PLAN REVISION	10/14/21
SMB	SITE PLAN REVISIONS	8/21/21
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		DATE

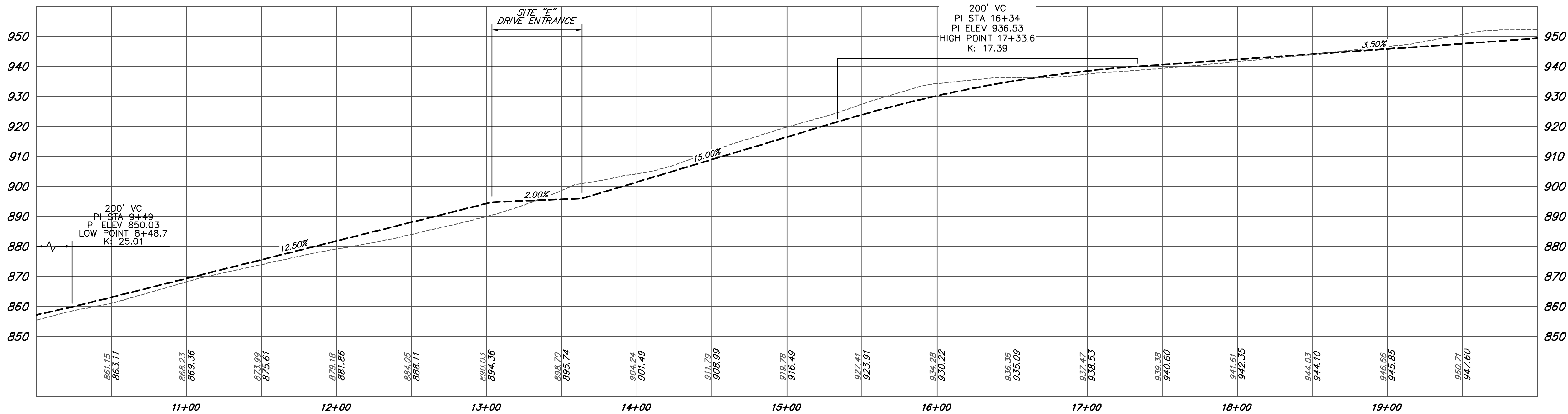
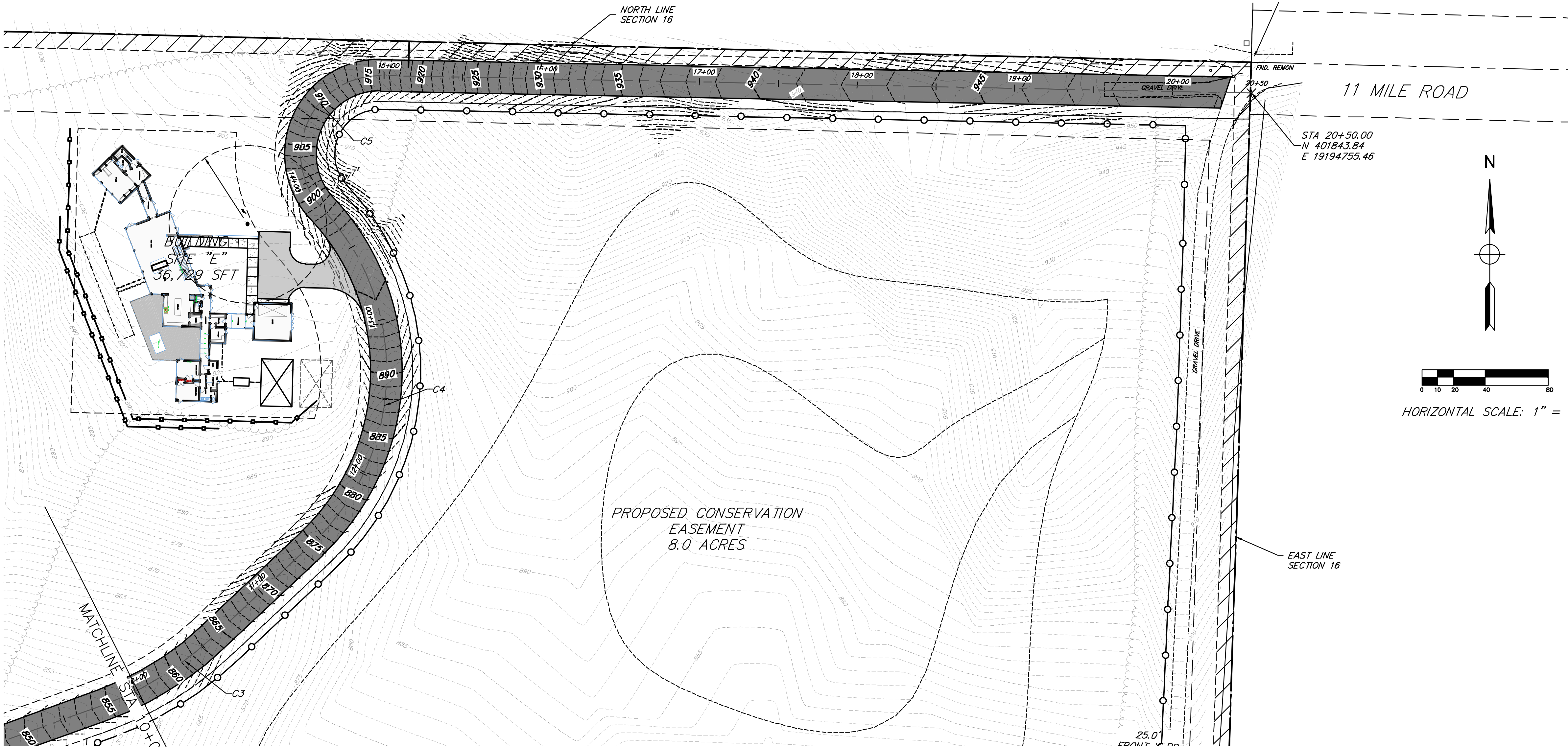
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387 RIVER STREET
MANISTEE, MI 49660

ACCESS ROAD PLAN & PROFILE

		MANISTEE OFFICE 302 River Street Manistee, MI 49660 Tel: 231-794-5620 www.SpicerGroup.com
DE. BY: SMB	APP. BY: SPW	PROJECT NO. 126364SG2018
DR. BY: SMB	CH. BY: SPW	
STDs. —	SHEET 12 OF 14	C 12
DATE OCTOBER 2021	FILE NO. JD-1611-12	
SCALE 1" = 40'		

CURVE TABLE					
CURVE NO.	RADIUS	LENGTH	CHORD DIRECTION	PC (NORTHING, EASTING)	PT (NORTHING, EASTING)
C3	200.00	81.46	N58° 29' 03.74"E	(401455.9676,19194027.10)	(401498.25,19194096.07)
C4	150.00	236.09	N1° 43' 35.83"E	(401558.3263,19194160.07)	(401770.70,19194166.48)
C5	50.00	117.39	N23° 53' 55.28"E	(401770.6951,19194166.48)	(401855.02,19194203.84)



SMB	TOWNSHIP SUBMITTAL PLANS	10/28/21
SMB	SITE PLAN REVISION	10/14/21
SMB	SITE PLAN REVISIONS	8/21/21
SMB	PLANNING COMMISSION REVISIONS	3/23/21
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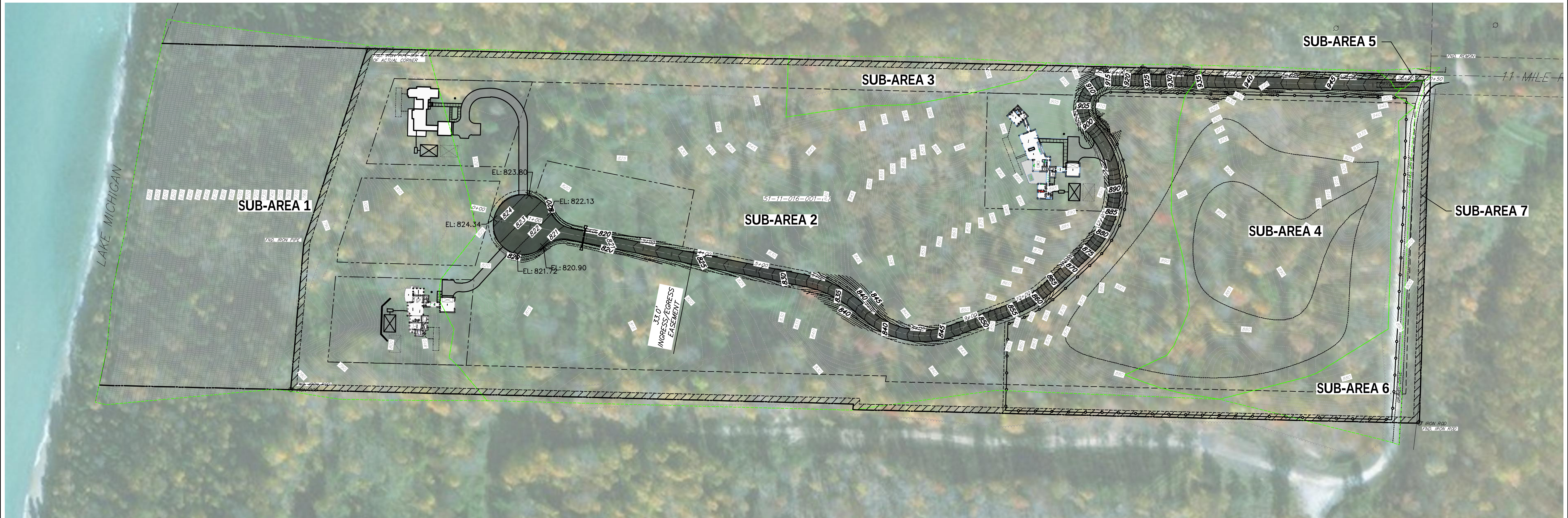
CONSTRUCTION DESIGN, INC
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ACCESS ROAD PLAN & PROFILE

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DE. BY: SMB	APP. BY: SPW	PROJECT NO.
DR. BY: SMB	CH. BY: SPW	126364SG2018

STDs.	—	SHEET 13 OF 14	C
DATE	OCTOBER 2021	FILE NO.	JD-1611-13
SCALE	1" = 40'		13



**NOAA Atlas 14 Point
Precipitation Depth:**

10 Year - 24 Hour Rainfall:	3.47 Inches
25 Year - 24 Hour Rainfall:	4.4 Inches
50 Year - 24 Hour Rainfall:	5.24 Inches
100 Year - 24 Hour Rainfall:	6.19 Inches

EXISTING SITE RUNOFF QUANTITIES

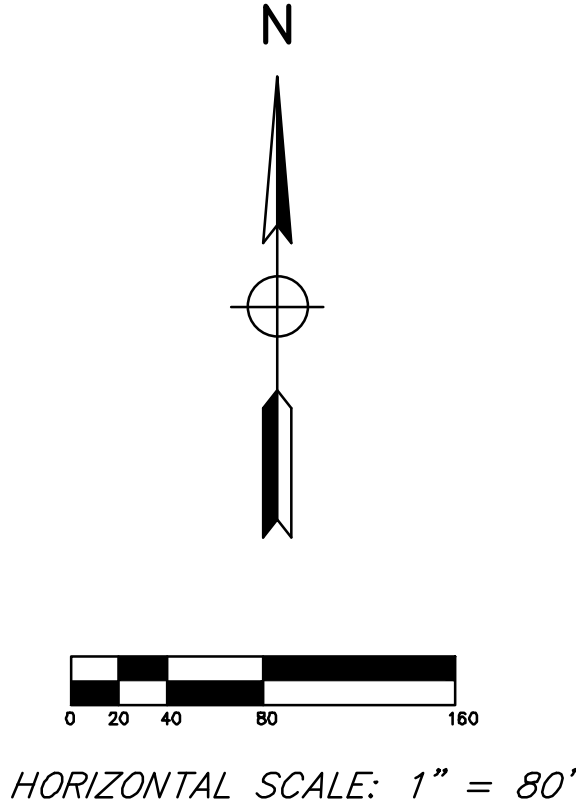
Existing Drainage Areas	PERVIOUS AREA (SFT)	IMPERVIOUS AREA (SFT)	TOTAL AREA (SFT)	WEIGHTED C FACTOR	10 YEAR STORM ACCUM. (CFT)	25 YEAR STORM ACCUM. (CFT)	50 YEAR STORM ACCUM. (CFT)	100 YEAR STORM ACCUM. (CFT)	NOTES
Sub Area 1	354,058	0	354,058	0.2	20476	25964	30921	36527	Drains to Lake Michigan
Sub Area 2	717,143	0	717,143	0.2	41475	52590	62630	73985	Drains to the South offsite
Sub Area 3	31,927	0	31,927	0.2	1846	2341	2788	3294	Drains to the North offsite
Sub Area 4	200,880	0	200,880	0.2	11618	14731	17544	20724	Drains to a low spot on the South side of the Sub-Area
Sub Area 5	2,091	0	2,091	0.2	121	153	183	216	Drains to the North offsite
Sub Area 6	40,238	0	40,238	0.2	2327	2951	3514	4151	Drains to the South offsite
Sub Area 7	16,603	0	16,603	0.2	960	1218	1450	1713	Drains to the East offsite
Totals:	1,362,940	0	1,362,940		78,823	99,949	119,030	140,610	
C Factors:	0.2	0.9							

ASSUMPTIONS FOR PROPOSED CONSTRUCTION

3300 sf	ROOF AREA OF EACH PROPOSED HOUSE WITH A TWO CAR GARAGE SITES "A", "B", "C"
3300 sf	ROOF AREA OF EACH PROPOSED HOUSE WITH A TWO CAR GARAGE SITES "D"
3300 sf	ROOF AREA OF EACH PROPOSED HOUSE WITH A TWO CAR GARAGE SITES "E"
45000 sf	AREA OF PROPOSED AGGREGATE ENTRY DRIVE
3000 sf	APPROX. AREA OF EACH PROPOSED DRIVEWAY

PROPOSED SITE RUNOFF QUANTITIES

PROPOSED DRAINAGE AREAS	PERVIOUS AREA (SFT)	IMPERVIOUS AREA (SFT)	TOTAL AREA (SFT)	WEIGHTED C FACTOR	10 YEAR STORM ACCUM. (CFT)	25 YEAR STORM ACCUM. (CFT)	50 YEAR STORM ACCUM. (CFT)	100 YEAR STORM ACCUM. (CFT)	NOTES
Sub Area 1	347,458	6,600	354,058	0.2	21812	27658	32938	38910	Houses on Building Site "B", "C".
Sub Area 2	653,743	63,400	717,143	0.3	52081	66040	78647	92906	House on Building Site "A", "B", "C", "D", "E", Aggregate Entry Drive, Driveways
Sub Area 3	31,927	0	31,927	0.2	1846	2341	2788	3294	No Change
Sub Area 4	194,380	6,500	200,880	0.2	12557	15923	18963	22401	Aggregate Entry Drive
Sub Area 5	2,091	0	2,091	0.2	121	153	183	216	No Change
Sub Area 6	40,238	0	40,238	0.2	2327	2951	3514	4151	No Change
Sub Area 7	16,603	0	16,603	0.2	960	1218	1450	1713	No Change
Totals:	1,286,440	76,500	1,362,940		91,706	116,284	138,484	163,590	
C Factors:	0.2	0.9 Roof/0.7 Drive							



SMB	TOWNSHIP SUBMITTAL PLANS		10/29/21
SMB	SITE PLAN REVISION		10/14/21
SMB	SITE PLAN REVISIONS		8/21/21
SMB	PLANNING COMMISSION REVISIONS		3/23/21
SMB	UPDATES PER PLANNING DEPARTMENT COMMENTS		12/07/20
SMB	PLANNING DEPARTMENT REVIEW		11/20/20
SMB	REVIEW SET		2/12/20
SMB	REVIEW SET		11/18/19
BY	MARK	REVISIONS	DATE

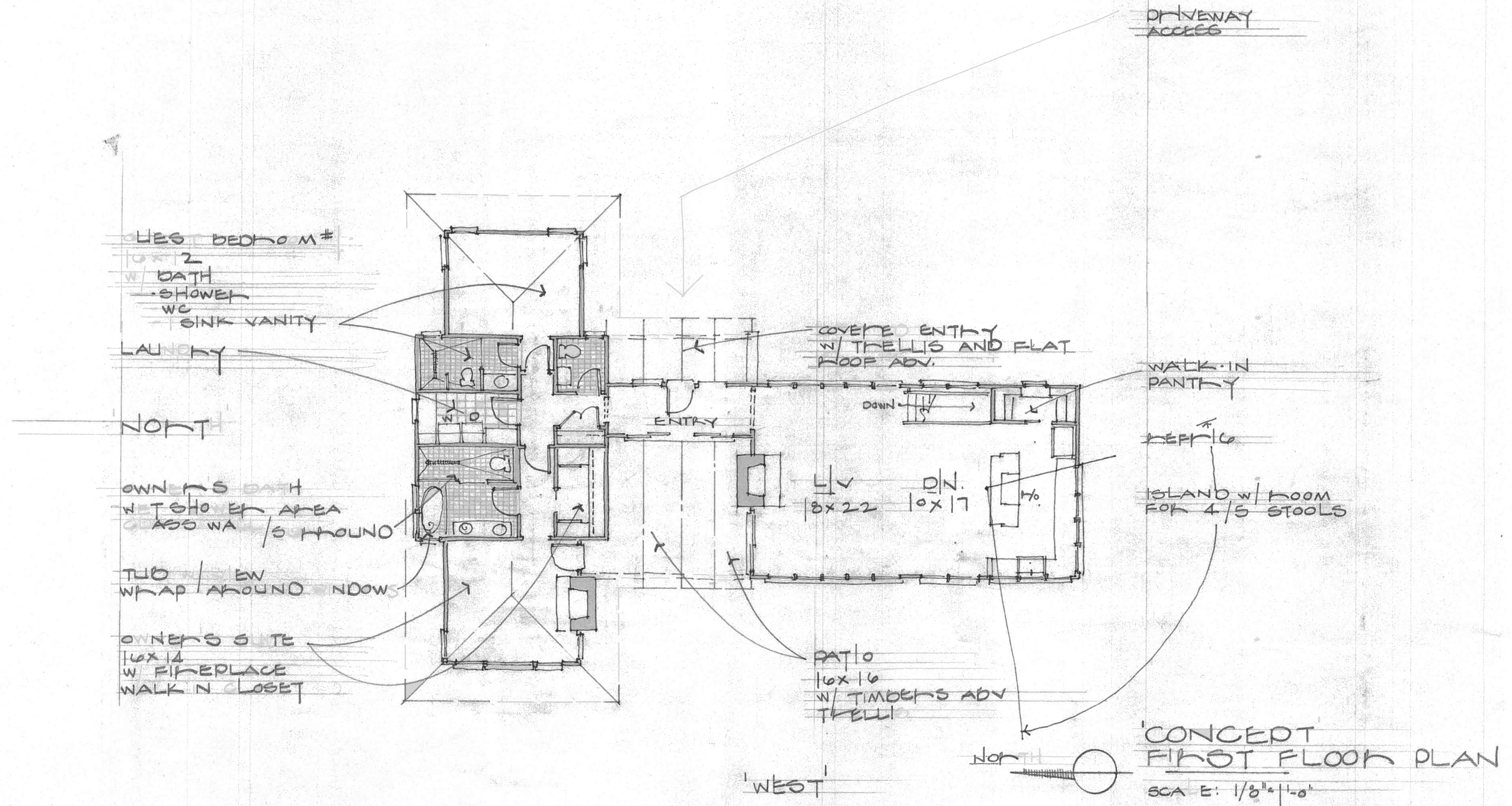
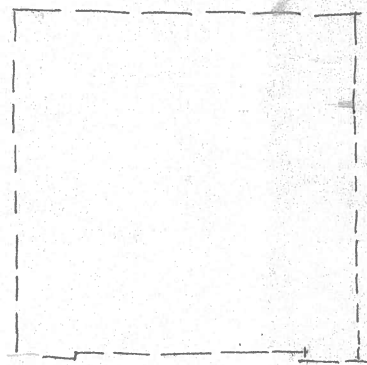
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.

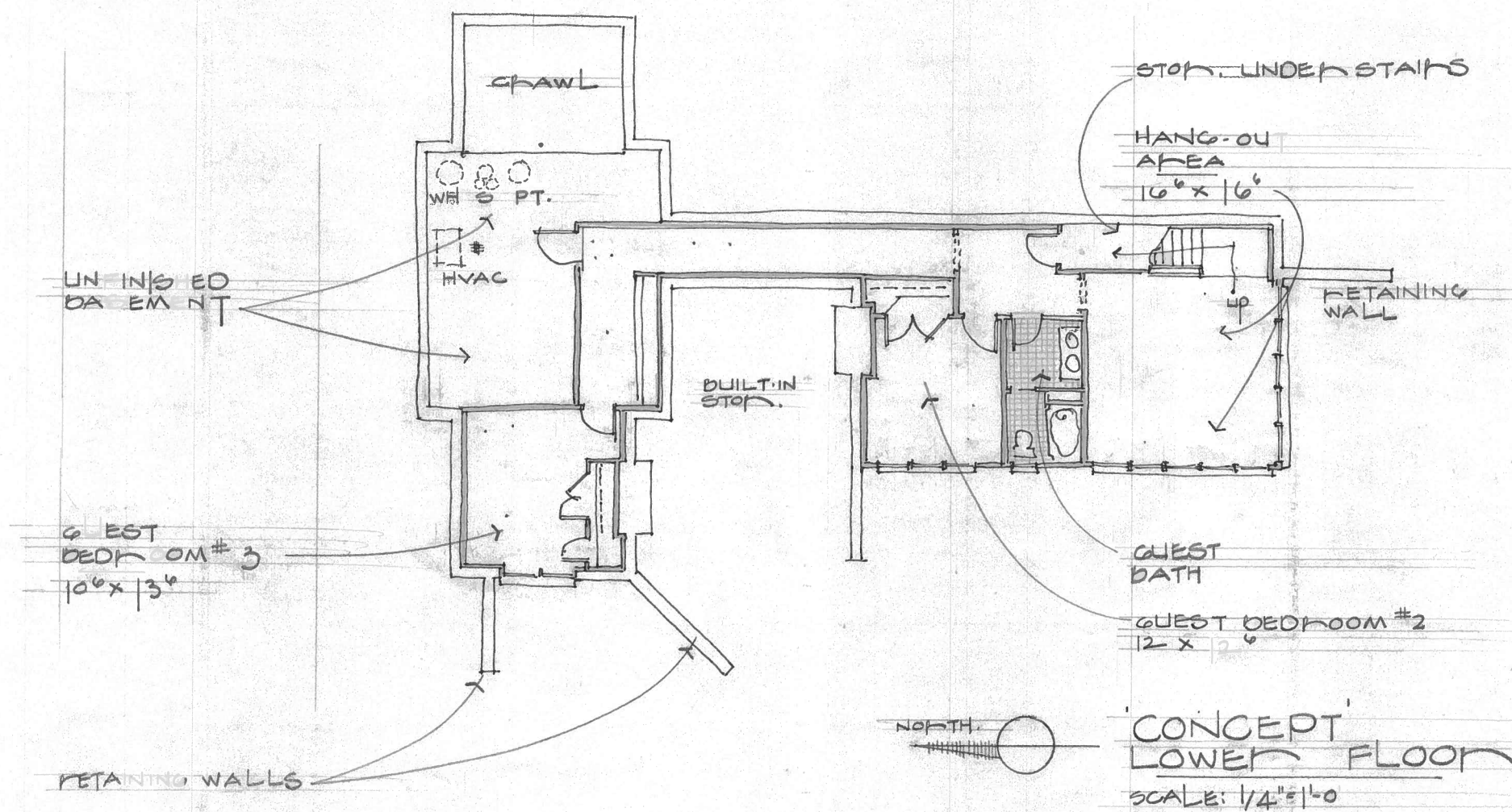
CONSTRUCTION DESIGN, INC
387 RIVER STREET
MANISTEE, MI 49660

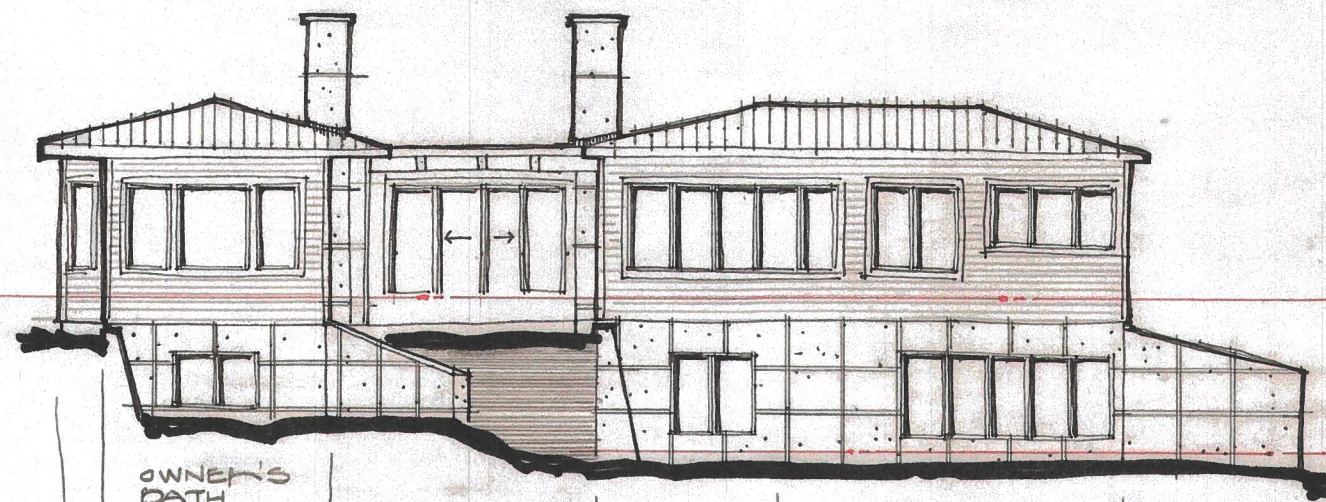
SITE RUNOFF CALCULATIONS

		MANISTEE OFFICE 302 River Street Manistee, MI 49660 Tel: 231-794-5620 www.SpicerGroup.com	
DE. BY: SMB	APP. BY: SPM	PROJECT NO. 126364SG2018	
DR. BY: SMB	CH. BY: SPM		
STDS. —	SHEET 14 OF 14	C	
DATE OCTOBER 2021	FILE NO. JD-1611-14	14	
SCALE 1" = 80'			





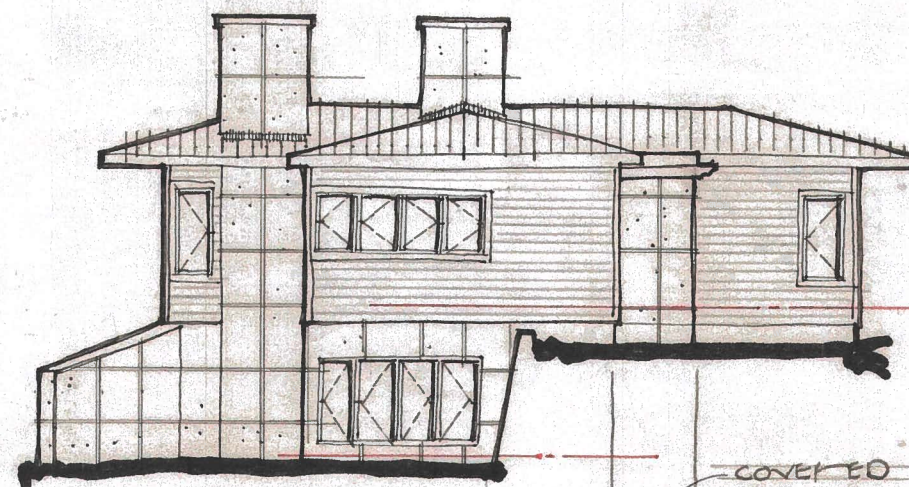




OWNER'S BATH
OWNER'S SUITE
ENTRY + PATIO
GREAT ROOM / DIN. / KITCHEN
GUEST BATH HANG-OUT
BEDRM #3 (LOWER LEVEL)
BEDRM #2 (LOWER LEVEL)

'CONCEPT' WEST ELEVATION

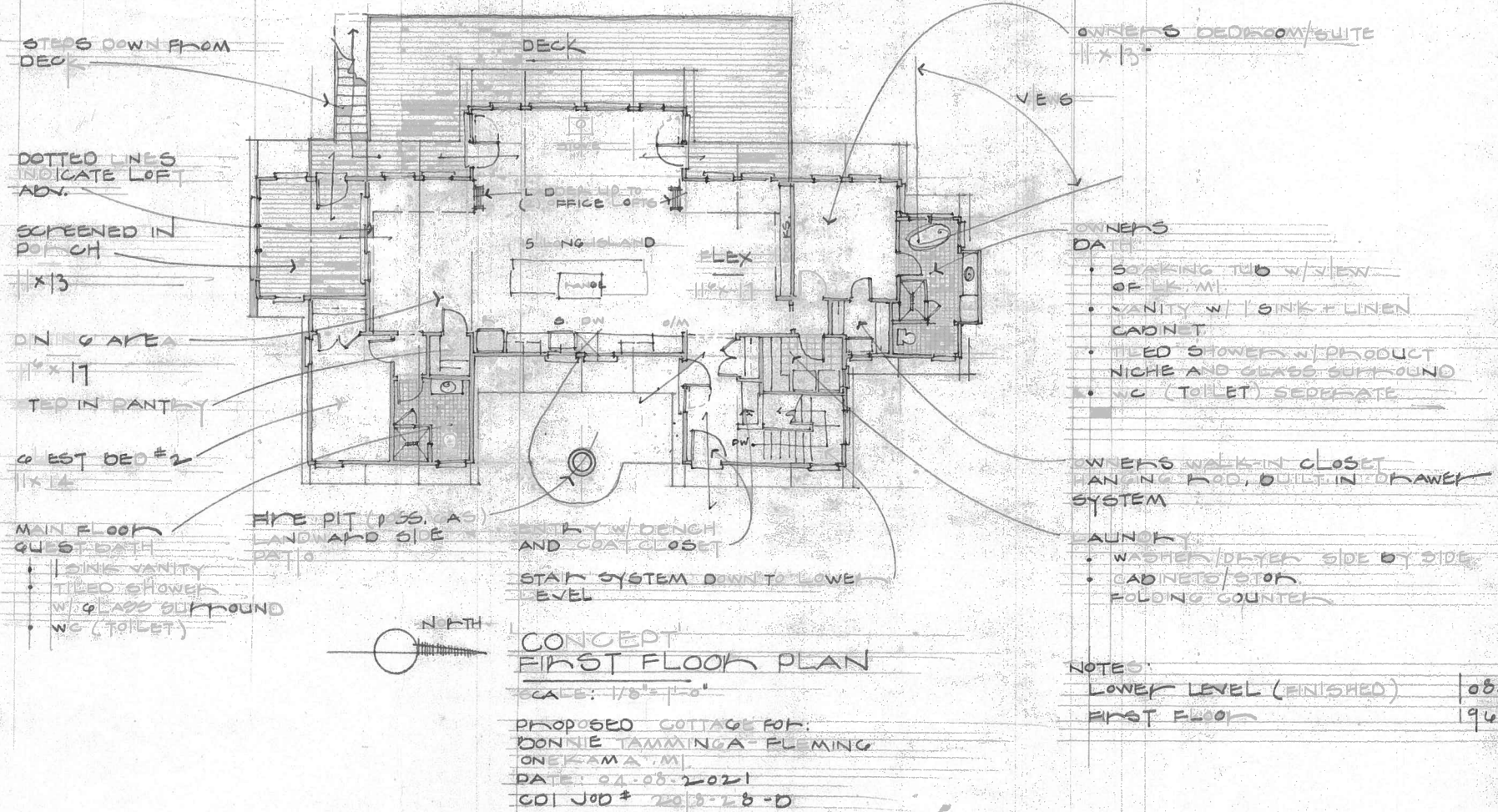
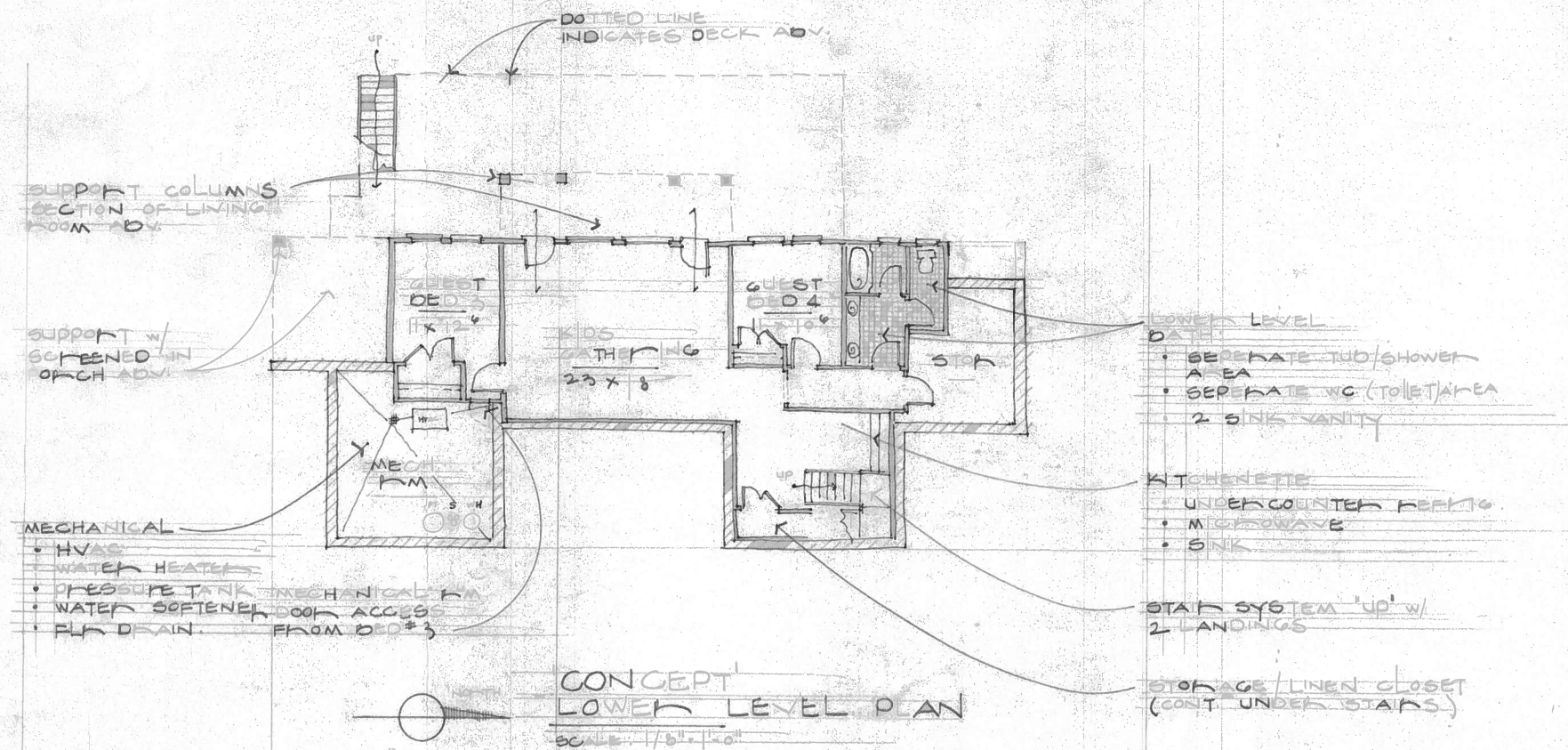
SCALE: 1/8" = 1'-0"



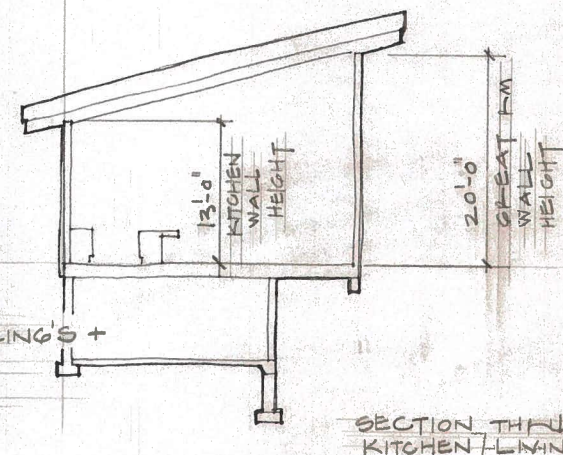
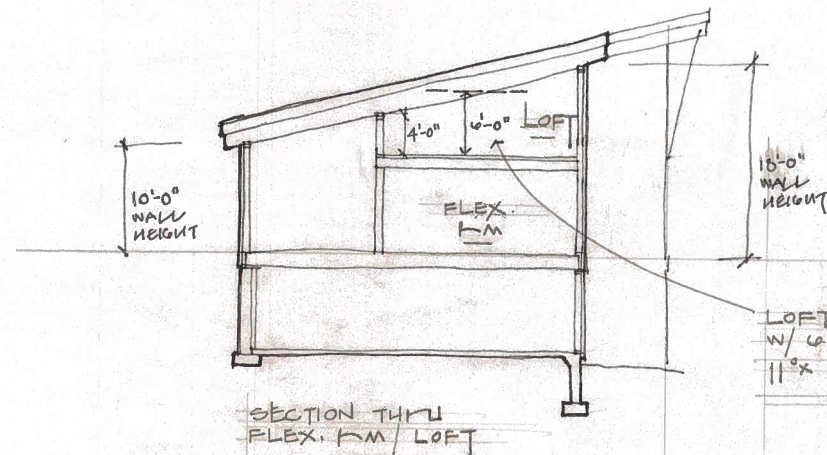
KITCHEN/PANTY
HANG-OUT (LOWER LEVEL)
COVERED ENTRY BEYOND

'CONCEPT' SOUTH ELEVATION

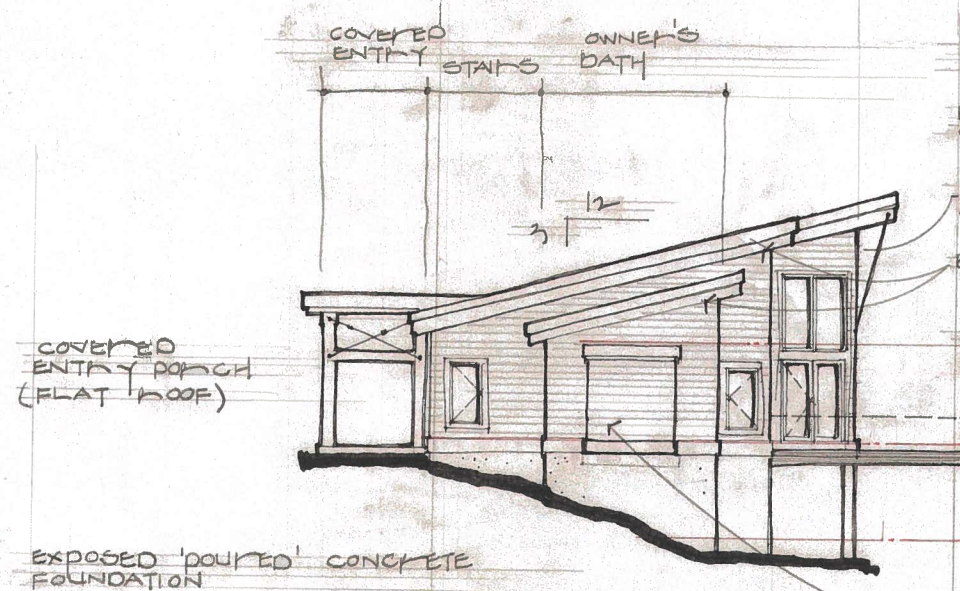
SCALE: 1/8" = 1'-0"



PROPOSED COTTAGE FOR:
DONNIE TAMMINGA- FLEMING
ONEKAMA, M.
DATE: 04-08-2021
CDI JOB # 2003-28-D

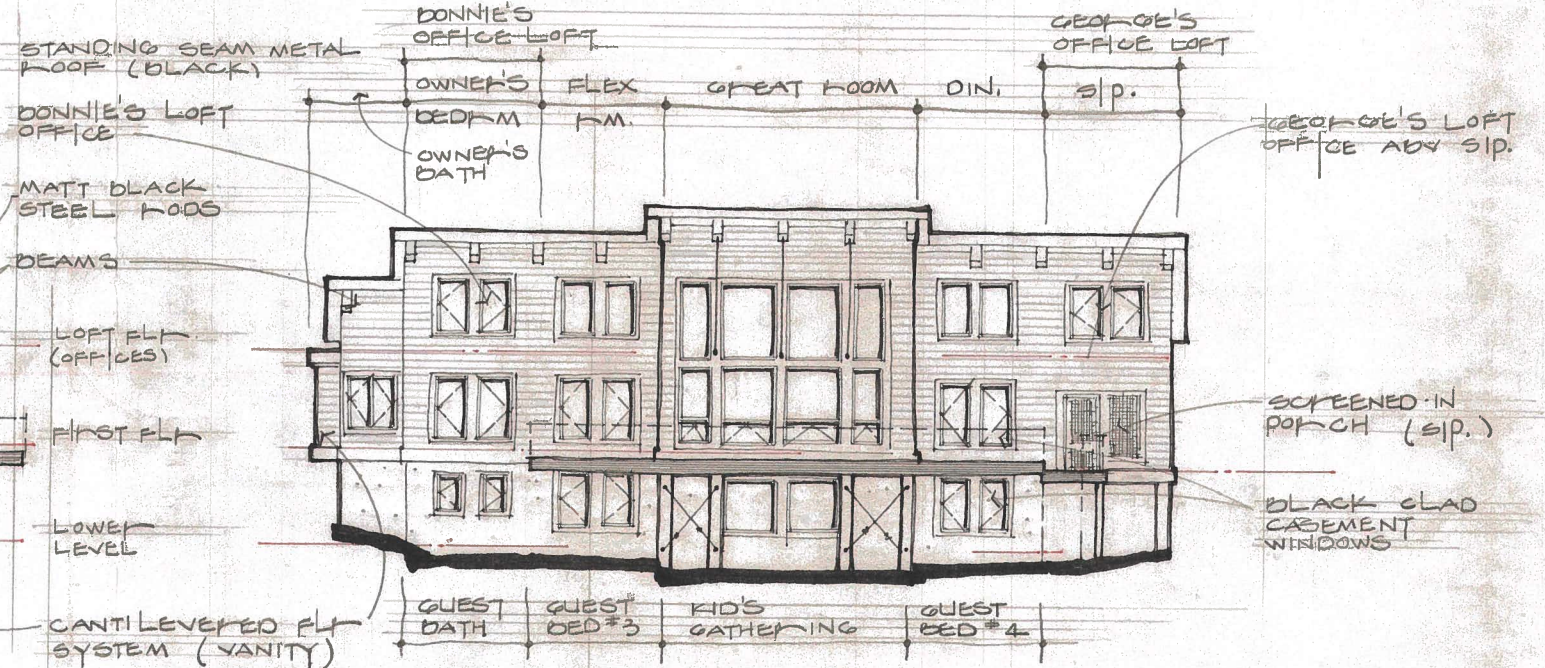


LOFT AREAS
w/ 6'-0" HIGH CEILING'S +
11' x 10' +/-



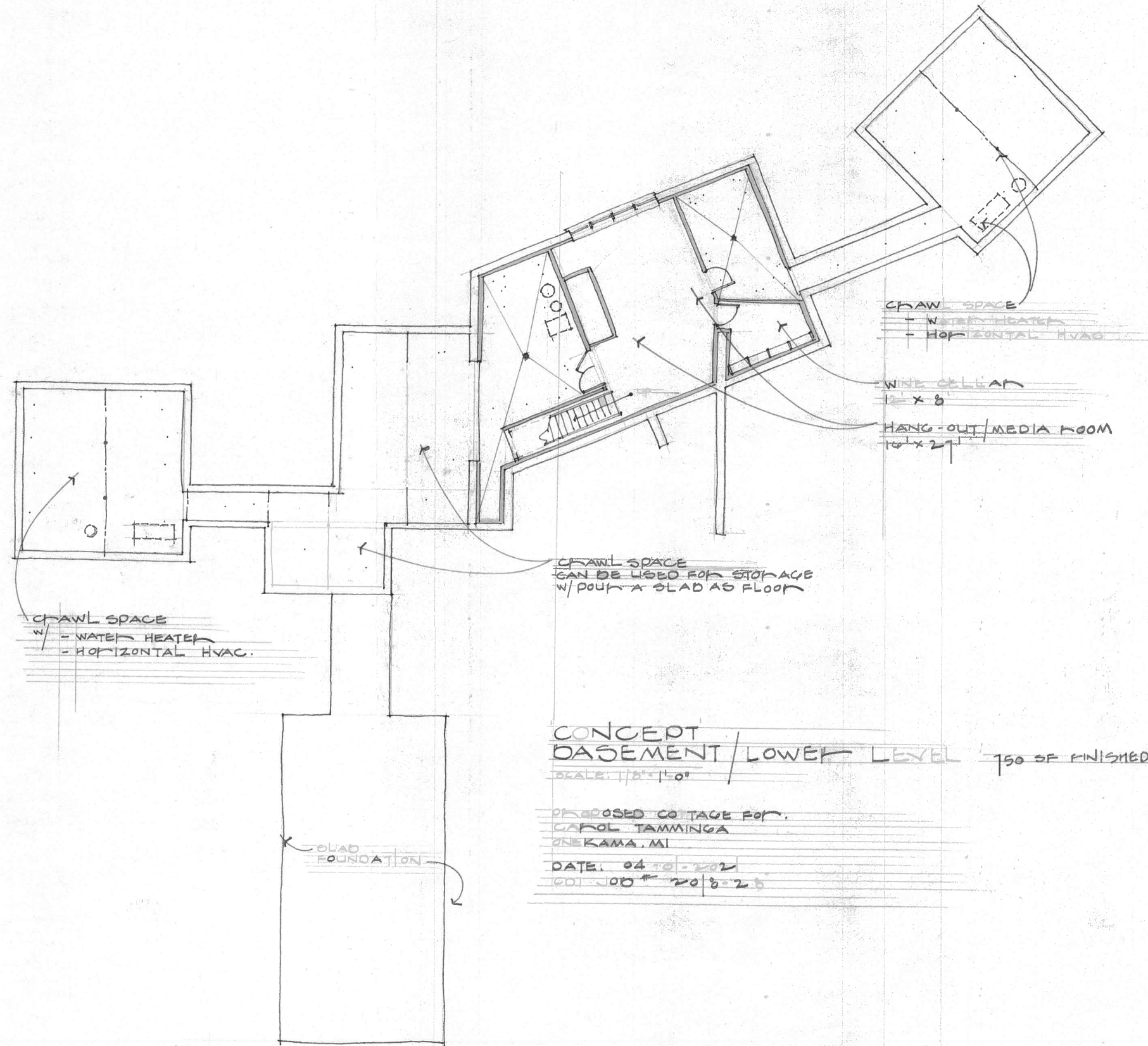
CONCEPT
NORTH ELEVATION

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



CONCEPT
WEST ELEVATION

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



CONCEPT BASEMENT / LOWER LEVEL

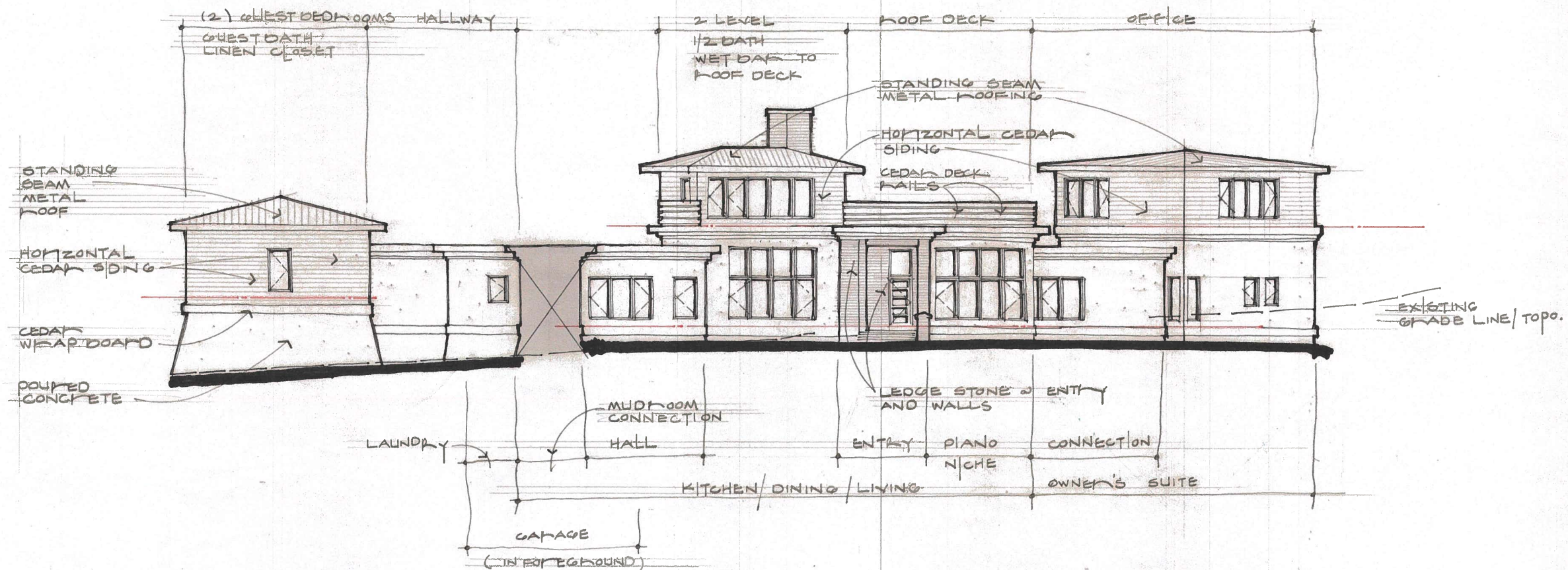
SCALE: 1/8" = 1'-0"

750 SF FINISHED AREA

PROPOSED COTTAGE FOR:
CAROL TAMMINGA
ONEKAMA, MI

DATE: 04-0-2021

CD JOB # 2018-25



CONCEPT EAST ELEVATION

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

PROPOSED COTTAGE FOR:
CAROL TAMMINGA
ONEKAMA, MI.

DATE: APRIL 01, 2021

CD JOB # 2018-28

126364SG2018

Conservation Easement Legal Description:

A parcel of land in the Northeast 1/4 of Section 16, T.23 N.-R.16 W., Onekama Township, Manistee County, Michigan, described as follows: Beginning at a point on the East line of said Section, which is 36.03 feet, S.01°-51'-09"W., of the Northeast Corner of said Section; thence continuing S.01°-51'-09"W., on said East line, 568.18 feet; thence N.88°-37'-40"W., 982.73 feet; thence N.07°-34'-24"E., 9.95 feet; thence N.00°-00'-00"E., 153.47 feet; thence S.48°-42'-58"E., 17.18 feet to a point on a 164.15 feet radius curve to the left; thence Southeasterly on the arc of said curve, 175.14 feet, said arc being subtended by a chord bearing and distance of S.79°-16'-55"E., 166.95 feet; thence, N.70°-09'-07"E., 107.43 feet to a point on a 216.50 feet radius curve to the left; thence Northeasterly on the arc of said curve 88.18 feet, said arc being subtended by a chord bearing and distance of N.58°-29'-04"E., 87.57 feet; thence N.46°-49'-00"E., 87.78 feet to a 166.50 feet radius curve to the left; thence Northeasterly on the arc of said curve 262.06 feet, said arc being subtended by a chord bearing and distance of N.01°-43'-36"E., 235.84 feet to a 33.50 feet radius curve to the right; thence Northeasterly on the arc of said curve 78.65 feet, said arc being subtended by a chord bearing and distance of N.23°-53'-55"E., 61.79 feet; thence S.88°-50'-21"E., 550.82 feet to the point of beginning, containing 8.78 acres of land.

