



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, DETROIT DISTRICT
REGULATORY OFFICE
SAULT STE. MARIE FIELD OFFICE
312 WEST PORTAGE AVENUE
SAULT STE. MARIE, MICHIGAN 49783

January 30, 2020

Engineering & Technical Services
Regulatory Office
File No. LRE-2020-00133-56-C20

Robert Fitzgerald
Antrim County Road Commission
P.O. Box 308
Mancelona, Michigan 49659

Dear Mr. Fitzgerald:

Please refer to your application for a Department of the Army permit to remove the existing structures, construct a seawall and place riprap in Lake Michigan at 8551 to 8597 North Bayshore Drive, near Elk Rapids, Michigan.

We have verified that your proposed work is authorized under Regional Permit No. 1990-2000050, reissued on June 30, 2017, under authority of Section 10 of the 1899 Rivers and Harbors Act and Section 404 of the 1977 Clean Water Act. The regional permit is a blanket permit whereby a class of activities having minimum impacts can receive Department of the Army authorization with a minimal amount of administrative review. The purpose of this letter is to inform you that your proposal has been evaluated, complies with, and is therefore authorized under the regional permit.

You may proceed with the work per the following project description, attached drawings, and attached general and special conditions:

Remove the existing 9 foot by 10 foot deck and 3 foot by 20 foot long stairs at the south end and the 6 foot by 10 ft deck and 2.5 wide by 25 foot long stairs at the north end. Install 250 linear feet of steel-sheet piling, a 6 foot return wall on each side, for a total length of 262 feet, backfill with approximately 200 cubic yards of fill material and place approximately 167 cubic yards of toe stone, on geotextile material, waterward of the steel-sheet piling.

Special Conditions:

1. All material removed will be disposed of in upland location(s) landward of the Ordinary High Water Mark with no placement in, or return to, any waterway or wetland.
2. All fill shall consist of clean, inert materials from an upland source. The fill material must be free from toxic substances, fines, oil and grease, debris, wood, general refuse, plaster, and other pollutants, and shall contain no broken asphalt, oil-based material, or metal.

3. Erosion controls, such as silt fencing, shall be placed to prevent discharge material from entering wetlands or waterways. These must be erected prior to starting work, and their effectiveness must be maintained until all work at the site is completed and the area has been stabilized against erosion.
4. The seawall shall be in place prior to the deposition of any fill material behind the seawall.

Any construction activity other than that shown on the plans may not qualify for the authorization. If you contemplate any changes or additional activities from those depicted on the plans, please submit them to this office for review and authorization prior to any construction. Upon completion of authorized work, fill in and return the enclosed COMPLETION REPORT.

Any construction activity other than that shown on the plans may not qualify for the authorization. If you contemplate any changes or additional activities from those depicted on the plans, please submit them to this office for authorization review prior to any construction. On completion of the work, you must fill in and return the enclosed COMPLETION REPORT.

This verification is invalid until you obtain an appropriate state permit/certification or waiver thereof. You must not initiate activities authorized under the NWP until all required State authorizations have been received. If local approvals are required, we recommend you contact the appropriate local government body directly.

We are obligated to provide recipients of permit verifications with a jurisdictional determination (JD) when requested to do so. The Corps of Engineers has the following options with respect to JDs: (1) Approved Jurisdictional Determinations (AJD), which are considered "official" JDs and can be administratively appealed; (2) Preliminary Jurisdictional Determinations (PJD), which are non-binding JDs and advise an affected party that the Corps of Engineers believes there may be waters of the United States on the property that fall under the Corps' regulatory authority and enables the Corps and a permit applicant or other affected party to resolve certain jurisdiction and permit issues without expending time on making an official determination of the Corps' jurisdiction; and (3) No Jurisdiction Determination (NJD), which is used in situations where issuance of a JD is deemed unnecessary by a permit applicant or other affected party because Corps' jurisdiction is undisputed (e.g., work is in a navigable water of the United States) or not subject to question. The NJD option requires less documentation than a PJD and likewise enables the Corps and a permit applicant or other affected party to resolve jurisdiction and permit issues without expending time on an official determination of the Corps' jurisdiction.

Per the information in your application, we have determined that your project will occur in a navigable water of the United States subject to the Detroit District, U.S. Army Corps of Engineers' regulatory authority under Section 10 of the Rivers and Harbors Act

and Section 404 of the Clean Water Act. Our listing of navigable waters under the Corps' regulatory authority within the Detroit District's geographic area can be found at: <http://www.lre.usace.army.mil/Missions/Regulatory-Program-and-Permits>. As there was no question regarding the Corps' regulatory jurisdiction during our evaluation of the application, we do not intend to include a JD with this permit verification. Our intent to not issue a JD in this instance does not preclude you from requesting a PJD or an AJD at any time. As noted above, an AJD would provide an official determination of jurisdictional waters on a site and can be administratively appealed.

This verification is valid until the RGP or NWP is modified, reissued, or revoked. All existing RGPs are scheduled to be modified, reissued, or revoked prior to June 30, 2022. All existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2022. It is incumbent on you to remain informed of changes to the NWPs and the RGPs. We will issue a public notice when they are modified or reissued. If you commence or are under contract to commence this activity before the date that the relevant Nationwide or Regional Permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP or RGP to complete the activity under the present terms and conditions of this NWP or RGP.

As per 33 CFR 325, Appendix A, representatives from this office are allowed to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this permit.

Should you have any questions, please contact me at the above address, by E-Mail at Sue.P.Bright@usace.army.mil, or by telephone at (906) 635-3462. In all communications, please refer to File Number LRE-2020-00133-56-C20.

We are interested in your thoughts and opinions concerning your experience with the Detroit District, Corps of Engineers Regulatory Program. If you are interested in letting us know how we are doing, you can complete an electronic Customer Service Survey

from our web site at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.
Alternatively, you may contact us and request a paper copy of the survey that you may complete and return to us by mail or fax. Thank you for taking the time to complete the survey. We appreciate your feedback.

Sincerely,

Suzanne P. Bright
Project Manager
Sault Ste. Marie Field Office

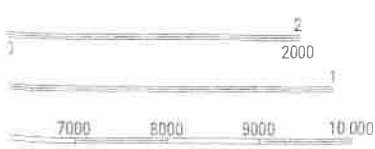
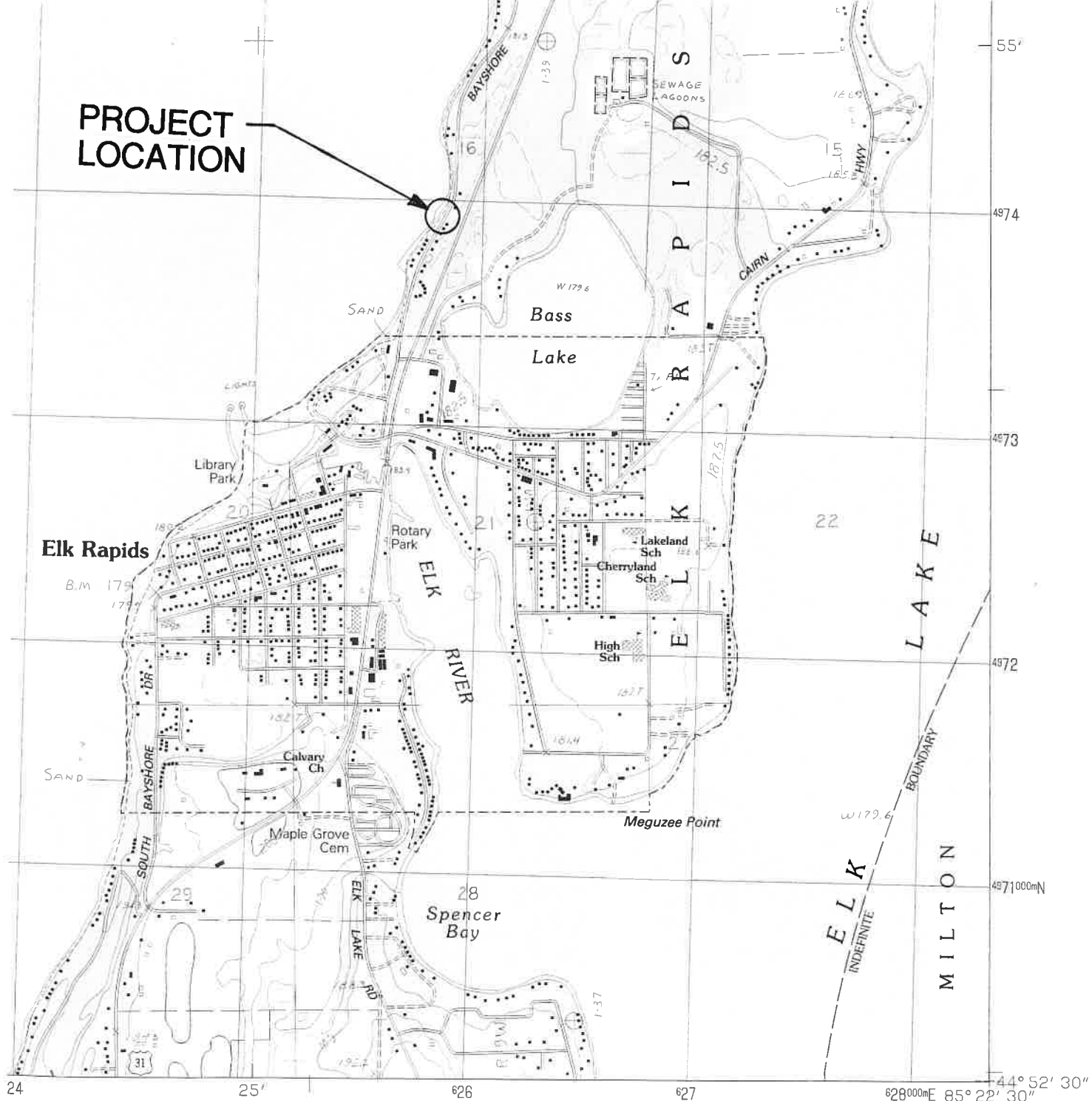
Enclosure

Copy Furnished

EGLE, Cadillac District Office, (05 – N. Bayshore Drive 2, East Arm Grand Traverse
Bay), Golden

NOAA

PROJECT LOCATION



INTERIOR—GEOLOGICAL SURVEY RESTON, VIRGINIA—1984

ROAD LEGEND

- Improved Road
- Unimproved Road
- Trail

- Interstate Route
- U. S. Route
- State Route

**ELK RAPIDS, MICHIGAN
PROVISIONAL EDITION 1983**


1	2	3	1 Omena
			2
			3 Central Lake
4		5	4 Mapleton
			5 Alden
			6 Traverse City SE
6	7	8	7 Williamsburg
			8 Torch River

ADJOINING 7.5 QUADRANGLE NAMES
CONTOURS AND ELEVATIONS
IN METERS

44085-H4-TM-025

STANDARDS
ON, VIRGINIA 22092
VISION
ANSING, MICHIGAN 48909

ANTRIM COUNTY ROAD COMMISSION N BAYSHORE DR SHORELINE IMPROVEMENTS CIVIL SITE PLAN



TRAVERSE CITY, MI PH 231.935.1530
LUDINGTON, MI
www.machinengineering.net

REGISTRATION:
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER LAWS OF THE STATE OF MICHIGAN

PATRICK J. MACHIN
PRINT NAME

SIGNATURE
6201051471 EXP. 10/31/2020
REG. NO. DATE

MACHIN ENGINEERING, INC.
ORIGINAL DOCUMENT(S) ARE STORED AT

REV#	DESCRIPTION	DATE
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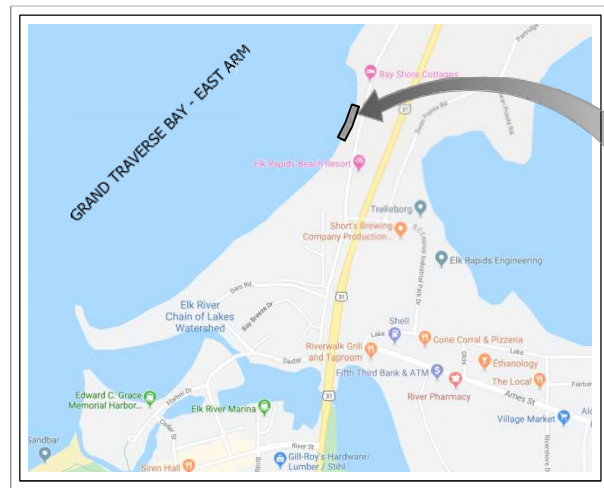
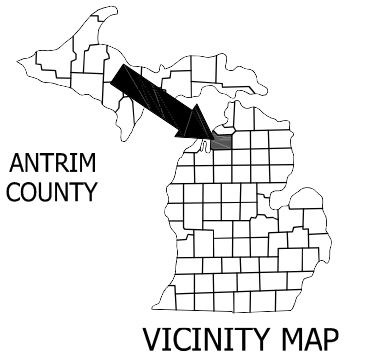
DRAWN BY:	CHECK BY:	APPROVED BY:	CREATED:
KAS	PJM	PJM	12/06/2019

PROJECT TITLE:
N BAYSHORE DR
SHORELINE
IMPROVEMENTS

CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCERLONA, MI 49659

SHEET TITLE:
COVER
SHEET

PROJECT NUMBER 19209
SHEET NUMBER T1



PROJECT LOCATION

CLIENT
ANTRIM COUNTY ROAD COMMISSION
319 E LINCOLN STREET, PO BOX 308,
MANCERLONA, MI 49659

LOCATION MAP
SECTION 16, T29N, R9W, ANTRIM CO, MI
NO SCALE

SHEET INDEX

- T1 COVER SHEET
- R1 NOTES & SPECIFICATIONS
- R2 NOTES & SPECIFICATIONS
- C1 SITE PLAN
- C2 SITE PLAN
- C3 DIAGRAM CUT & FILL
- C4 DESIGN CROSS SECTIONS
- C5 DESIGN CROSS SECTIONS
- C6 DESIGN SHEET PILE PROFILE
- C7 DESIGN SHEET PILE PROFILE
- C8 STRUCTURAL DETAILS



Know what's below.
Call before you dig.
(3 WORKING DAYS)

THE LOCATION OF THE EXISTING UTILITIES, AS SHOWN ON THIS PLAN, ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL LOCATION AND DEPTH OF ALL EXISTING UTILITIES. THE OWNER AND THE SUPERVISOR SHALL NOT BE RESPONSIBLE FOR ANY OMISSION OR VARIATION FROM THE LOCATION SHOWN. THE CONTRACTOR SHALL NOTIFY "MISS DIG" AT 1 (800) 482-7171 OR 811 THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.

C:\USERS\ETHANMILLER\APPDATA\LOCAL\TEMP\ACPIBLSH_622619209_EG_REV1.DWG (12/27/19 7:52 AM) ETHANMILLER

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SPECIFICATIONS:

DIVISION 01—GENERAL NOTES

GENERAL

1. SOIL BORINGS WERE COMPLETED BY OTWELL MAWBY, PC BORINGS 1 AND 2.
2. ANY DISCREPANCIES OR IRREGULARITIES BETWEEN ANY PART OF THE DESIGN DOCUMENTS OR BETWEEN THE DESIGN DOCUMENTS AND APPLICABLE CODES, LAWS OR ORDINANCES, SUCH DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
3. TYPICAL DETAILS AND OTHER SECTIONS / DETAILS APPLY TO CONDITIONS THAT ARE SIMILAR TO THE CONDITIONS DESCRIBED IN THE SECTIONS / DETAILS, EVEN IF THEY ARE NOT SPECIFICALLY REFERENCED ON THE PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS, METHODS, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.
5. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
6. NO CHANGE IN SIZE OF DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
7. DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS. DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH CIVIL DRAWINGS.
8. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ENGINEER OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
9. CONSTRUCTION SHALL COMPLY FULLY WITH THE APPLICABLE PROVISIONS OF OSHA AND THE LOCAL GOVERNING CODES, CURRENT EDITION, AND ALL REQUIREMENTS SPECIFIED IN THE CODES SHALL BE ADHERED TO AS IF THEY WERE CALLED FOR OR SHOWN ON THE DRAWINGS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT REQUIREMENTS SET FORTH ON THE DRAWING MAY BE MODIFIED BECAUSE THEY ARE MORE STRINGENT THAN THE CODE REQUIREMENTS OR BECAUSE THEY ARE NOT SPECIFICALLY REQUIRED BY CODE.
10. WORK CONSTRUCTED PER THESE DRAWINGS SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY RETAINED TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. SPECIAL INSPECTIONS REQUIRED BY THE GOVERNING BUILDING CODE, LOCAL BUILDING DEPARTMENT AND THE CONTRACT DOCUMENTS SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR. PROJECT SITE VISITS BY THE ENGINEER DOES NOT CONSTITUTE OR REPLACE INSPECTION.

DIVISION 32 — EARTHWORK

SITE CLEARING

1. CONTACT MISS DIG AT 8-1-1 A MIN. OF 72 HOURS PRIOR TO COMMENCING WORK.
2. INSTALL TEMPORARY SOIL AND EROSION CONTROL MEASURES. REMOVE UPON COMPLETION OF PROJECT AND ONCE VEGETATION IS ESTABLISHED. MAINTAIN THESE MEASURES IN WORKING ORDER AT ALL TIMES.
3. COMPLY WITH THE INDIVIDUAL REQUIREMENTS ON THE AGENCY PERMITS.

EARTHWORK

1. PROTECT ALL STRUCTURES AND THOSE AREAS DESIGNATED FOR PROTECTION.

EARTHWORK (CONTINUED)

2. CONSTRUCT ALL GRADES TO THAT DESIGNATED ON THE PLANS.
3. ALL STORED MATERIALS SUCH AS FILL MATERIALS, TOPSOIL, AND ANY OTHER TEMP. STOCKPILES SHALL NOT BE STORED ON NEIGHBORING PARCELS NOR THE RIGHT-OF-WAY.
4. MAINTAIN ALL SLOPES TO A MIN OF 2H:1V U.N.O. WHERE SLOPES ARE GREATER THAN 2H:1V.
5. ALL SUBBASE MATERIAL SHALL BE MDOT CLASS II
6. COMPACT ALL BACKFILLS AND FOUNDATIONS SOILS TO A MIN. OF 95% OF MAX. DRY DENSITY.
7. THE CONTRACTOR SHALL PROVIDE TEMPORARY SOIL EROSION CONTROL MEASURES PER P.A. 451 AS AMENDED. THE CONTRACTOR SHALL MEET WITH THE SOIL EROSION CONTROL OFFICER BEFORE STARTING CONSTRUCTION TO REVIEW THE TEMPORARY SOIL EROSION CONTROL MEASURES AND REQUIREMENTS. WITH THE USE OF SILT FENCE AND OTHER TEMPORARY MEASURES THE CONTRACTOR SHALL PROTECT THE ADJACENT AREA FROM ACCELERATED EROSION AND SEDIMENTATION FLOWS RESULTING FROM CONSTRUCTION. THE CONTRACTOR SHALL INSTALL ADDITIONAL TEMPORARY AND PERMANENT SOIL EROSION CONTROL MEASURES, IF DIRECTED BY THE ENGINEER OR SOIL EROSION CONTROL OFFICER, AT NO ADDITIONAL COST TO THE PROJECT.
8. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING GROUND COVER ON AREAS DISTURBED BY CONSTRUCTION AND SHALL REPAIR ALL WASHOUTS AND EROSION DURING THE GUARANTEE PERIOD ON ONE (1) YEAR AFTER GROUND COVER IS ESTABLISHED AT NO ADDITIONAL COST TO THE OWNER.

STEEL SHEET PILE

1. SHEET PILE HAS BEEN DESIGNED IN ACCORDANCE WITH ASD CRITERIA.
2. SHEET PILE WAS DESIGNED USING SHORING SUITE V8 BY CIVILTECH.
3. SHEET PILE, HOT ROLLED; ASTM A572, GRADE 50KSI. SIZE AND SHAPE PER DRAWINGS OR EQUAL.
4. DESIGN SHEET PILE WITH A SURCHARGE LOAD OF 240 PSF LL MINIMUM. CRANE LOADS AND OTHER CONSTRUCTION LOADS SHALL BE MAINTAINED AWAY FROM WALLS TO MINIMIZE SURCHARGE LOADS. EQUIPMENT SURCHARGE WAS NOT CONSIDERED IN THE DESIGN OF THE SHORING SYSTEMS. ACCESS MUST BE MAINTAINED FOR EQUIPMENT IMMEDIATELY BEHIND THE WALL.
5. INSPECT ALL INTERLOCKS OF SHEETS ABOVE GRADE. SHEETS NOT INTERLOCKED SHALL BE REMOVED AND REINSTALLED.
6. ALL WELDING SHALL BE PERFORMED USING THE ELECTRIC ARC METHOD IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE". E70XX ELECTRODES CONFORMING TO AWS A5.1 OR A5.5 SHALL BE USED SHIELDED METAL ARC METHOD Fx7-EXXX FLUX ELECTRODE COMBINATION CONFORMING TO AWS A5.17 FOR SUBMERGED ARC METHOD.
7. MAINTAIN SHEETS PLUMB DURING INSTALLATION.
8. PROVIDE A TEMPORARY FRAME WORK FOR SHEET INSTALLATION.
9. DRIVING HAMMERS SHALL MAINTAIN ALIGNMENT DURING DRIVING OPERATIONS. THE USE OF VIBRATORY HAMMERS SHALL BE DISCONTINUED AND IMPACT HAMMERS EMPLOYED WHEN THE PENETRATION RATE DUE TO VIBRATORY LOADING IS LESS THAN 4-INCHES PER MINUTE.
10. WHEN USING IMPACT HAMMERS A PROTECTIVE CAP SHALL BE EMPLOYED TO PROTECT TOP OF SHEETS.
11. USE CORNER SHEET AT EACH 90° CHANGE IN SHEETING DIRECTION.

STEEL SHEET PILE (CONTINUED)

12. CONTACT ENGINEER IF PILE TIP AND OR CUT-OFF ELEVATIONS VARY FROM THE PLANS.
13. SHEET SPLICES ARE PROHIBITED.

MONITORING

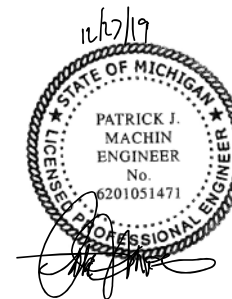
- PRIOR TO DRIVING OPERATIONS:
- A. CONTRACTOR TO PERFORM A VISUAL INSPECTION OF ANY NEIGHBORING STRUCTURES AND NOTE CONDITION PRIOR TO DRIVING SHEET PILE. ADJUSTMENTS SHOULD BE MADE TO THE PROPOSED MONITORING SCHEDULE AS REQUIRED BASED ON THE OUTCOME OF THE INSPECTION.
 - B. CONTRACTOR SHALL PROVIDE DOCUMENTATION AN INSPECTION WAS MADE NOTING THE OUTCOME OF SUCH INSPECTION.


DIVISION 32 — EXTERIOR IMPROVEMENTS

LAWNS AND GRASSES

1. PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED.
2. SEEDING ON NON-MAINTAINED AREAS: CEREAL RYE MIX
3. SEEDING ON MAINTAINED AREAS: KENTUCKY BLUEGRASS
4. FERTILIZER: 240 LBS/ACRE
5. MULCH: STRAW MULCH AT 2 TONS/ACRE OR SPRAY APPLIED TACKIFIER.
6. EXCELSTOR MULCH BLANKETS: NORTH AMERICAN GREEN DS150
7. ROLL AND RAKE TOPSOIL, REMOVE RIDGES, FILL DEPRESSIONS. REMOVE ALL DELETERIOUS DEBRIS, ROCKS GREATER THAN 1 INCH IN DIAMETER, CONSTRUCTION DEBRIS, ET CETERA.
8. PROMPTLY CLEANUP DEBRIS FROM OPERATIONS.

SPECIFICATIONS (CONTINUES ON SHEET R2)





MACHIN ENGINEERING
incorporation

TRAVERSE CITY, MI PH 231.935.1530
LUDINGTON, MI
www.machinengineering.net

REGISTRATION:
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PATRICK J. MACHIN
PRINT NAME

SIGNATURE
6201051471 EXP. 10/31/2020
REG. NO. DATE

MACHIN ENGINEERING, INC.
ORIGINAL DOCUMENT(S) ARE STORED AT

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C	REVIEW - 90% DESIGN	KAS/22319
D	ISSUED FOR CLIENT REVIEW	KAS/22319
0	ISSUED FOR CONSTRUCTION	ENR/22619

DRAWN BY: KAS CHECK BY: PUM APPROVED BY: PUM CREATED: 12/06/2019

PROJECT TITLE:
**N BAYSHORE DR
SHORELINE
IMPROVEMENTS**

CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCELONA, MI 49659

SHEET TITLE:
**NOTES
&
SPECIFICATIONS**

PROJECT NUMBER **19209**

SHEET NUMBER **R1**

SPECIFICATIONS:

DIVISION 35 — STONE REVETMENTS

STONE REVETMENTS

1. ALL STONE SHALL BE DURABLE, HIGHLY RESISTANT TO WEATHERING AND DISINTEGRATION UNDER FREEZING AND THAWING, FREE FROM DETRIMENTAL CRACKS, SEAMS, DEFECTS AND OTHER DEFECTS WHICH TEND TO LEAD TO DETERIORATION FROM NATURAL CAUSES OR CAUSE BREAKAGE IN HANDLING.
2. ALL ARMOR STONE AND UNDERLAYMENT SHALL HAVE ANGULAR FACES THAT ARE FRACTURED, SPLIT OR THE ACTUAL BEDDING PLANE SURFACE. ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTED UNLESS AUTHORIZED BY SPECIAL PROVISIONS.
3. STONE SHALL BE HANDLED, TRANSPORTED AND STORED WITH CARE TO MINIMIZE CRACKING, CHIPPING, SPLITTING AND EXCESSIVE WEAR THAT WOULD OTHERWISE LEAD TO REJECTION AT THE JOB SITE.
4. EACH INDIVIDUAL STONE SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:
 ARMOR STONE:
 LOS ANGELES ABRASION, % OF WEAR: 28% MAXIMUM
 SPECIFIC GRAVITY (DRY): 2.6 MINIMUM
 WATER ABSORPTION: 2% MAX GAIN BY WT
 MEDIAN WEIGHT: 5,000 LBS
 WEIGHT RANGE: 4,000 LBS — 6,000 LBS
 AVG DENSITY: 167 PCF

 SPLASH STONE:
 LOS ANGELES ABRASION, % OF WEAR: 28% MAXIMUM
 SPECIFIC GRAVITY (DRY): 2.6 MINIMUM
 WATER ABSORPTION: 2% MAX GAIN BY WT
 MEDIAN WEIGHT: 500 LBS
 WEIGHT RANGE: 400-600 LBS
 AVG DENSITY: 167 PCF
5. ARMOR STONE SIZES SHALL BE SUCH THAT A MINIMUM OF 90% OF THE INDIVIDUAL STONES WEIGH FROM 4,000 LBS TO 6,000 LBS AND SHALL HAVE A WELL GRADED DISTRIBUTION OF THESE SIZES THROUGH THESE LIMITS. NOT MORE THAN 10% OF THE INDIVIDUAL STONES SHALL WEIGH MORE THAN 6,000 LBS. NO ARMOR STONES SHALL WEIGH LESS THAN 4,000 LBS.
6. STONE SOURCE: SPECIFICATION STONE PRODUCT, ALPENA, MI OR EQUAL.
7. CERTIFICATION
 PRIOR TO INSTALLATION, THE CONTRACTOR SHALL OBTAIN FROM THE QUARRY AND SUBMIT TO THE OWNER A CERTIFICATE INDICATING THE FOLLOWING:
 A. STONE CLASSIFICATION.
 B. STONE WEIGHT PER CUBIC FOOT.
 C. THE STONE FURNISHED WILL MEET THE REQUIREMENTS OF THE SPECIFICATIONS, GRADATION, AND DURABILITY.
8. FILTER FABRIC: 160Z, NON-WOVEN GEOTEXTILE FILTER FABRIC BY CSI GEOTURF OR EQUAL.
9. ARMOR STONE DIMENSTONS SHALL BE SUCH THAT THE LEAST DIMENSION IS NO LESS THAN ONE-THIRD OF ITS GREATEST DIMENSION.
10. ARMOR STONE AND SPLASH STONE SHALL BE STOCKPILED SEPARATELY, AND THEY SHALL NOT BE MIXED. STOCKPILING OF STONES WILL NOT BE PERMITTED WITHIN THE RIGHT-OF-WAY UNLESS PERMITTED BY THE ANTRIM COUNTY ROAD COMMISSION.

STONE REVETMENTS (CONTINUED)

11. CONSTRUCTION TOLERANCES
 THE FINISHED SURFACE AND STONE LAYER THICKNESS SHALL NOT DEVIATE FROM THE LINES AND GRADES SHOWN BY MORE THAN THE TOLERANCES LISTED BELOW. TOLERANCES ARE MEASURED PERPENDICULAR TO THE INDICATED PLANNED GRADE MEASURED FROM THE TOP OF STONE. EXTREME LIMITS OF THE TOLERANCES GIVEN SHALL NOT BE CONTINUOUS IN ANY DIRECTION FOR MORE THAN FIVE TIMES THE NOMINAL STONE DIMENSION. ALL TOLERANCES SHALL BE CONSIDERED AS AVERAGE ACROSS THE MEASURED AREA. PLANNED GRADE TOLERANCES


MATERIAL	APG (INCHES)	BPG (INCHES)
SPLASH STONE	6	6
ARMOR STONE	12	12

APG — ABOVE PLANNED GRADE
 BPG — BELOW PLANNED GRADE

THE INTENTION IS THAT THE WORK SHALL BE BUILT GENERALLY TO THE REQUIRED ELEVATIONS, SLOPE AND GRADE, AND THAT THE OUTER SURFACES SHALL BE EVEN AND PRESENT A NEAT APPEARANCE. PLACED MATERIAL NOT MEETING THESE LIMITS SHALL BE REMOVED OR REWORKED AS DIRECTED BY THE ENGINEER.

12. CHECK SURVEY
 SURVEYS MADE BY THE CONTRACTOR ARE REQUIRED ON EACH MATERIAL PLACED FOR DETERMINING THAT THE MATERIALS ARE ACCEPTABLY PLACED IN THE WORK. MAKE CHECKS AS THE WORK PROGRESSES TO VERIFY LINES, GRADES AND THICKNESSES ESTABLISHED FOR COMPLETED WORK. AT LEAST ONE (1) CHECK SURVEY AS SPECIFIED BELOW SHALL BE MADE FOR EACH TWENTY-FIVE (25) FOOT SECTION AS SHOWN AS PRACTICABLE AFTER COMPLETION. FOLLOWING PLACEMENT OF EACH TYPE OF MATERIAL, THE CROSS SECTION OF EACH STEP OF THE WORK SHALL BE APPROVED BY THE OWNER BEFORE PROCEEDING WITH THE NEXT STEP OF THE WORK. APPROVAL OF CROSS SECTIONS BASED UPON CHECK SURVEYS SHALL NOT CONSTITUTE FINAL ACCEPTANCE OF THE WORK. CROSS SECTIONS SHALL BE TAKEN ON LINES 25 FEET APART, MEASURED ALONG THE STRUCTURE REFERENCE LINE, WITH READINGS AT 5-FOOT INTERVALS AND AT BREAKS ALONG THE LINES. HOWEVER, OTHER CROSS SECTION SPACING AND READING INTERVALS MAY BE USED IF DETERMINED APPROPRIATE BY THE ENGINEER. ADDITIONAL ELEVATIONS AND SOUNDINGS SHALL BE TAKEN AS THE ENGINEER MAY DEEM NECESSARY OR ADVISABLE. THE SURVEYS SHALL BE CONDUCTED IN THE PRESENCE OF AN AUTHORIZED REPRESENTATIVE OF THE OWNER, UNLESS THIS REQUIREMENT IS WAIVED BY THE OWNER.
 A. THE ELEVATION OF STONE ABOVE AND BELOW THE WATER SURFACE SHALL BE DETERMINED BY THE USE OF A LEVELING INSTRUMENT AND A ROD HAVING A BASE 12 INCHES IN DIAMETER. IF APPROVED BY THE ENGINEER OTHER MEANS MAY ALSO BE USED.





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A	REVIEW - 90% DESIGN	KAS120619
B	REVIEW - 60% DESIGN	KAS121119
C	REVIEW - 90% DESIGN	KAS122319
D	ISSUED FOR CLIENT REVIEW	KAS122319
E	ISSUED FOR CONSTRUCTION	ENR122619

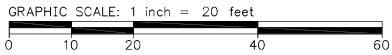
DRAWN BY: KAS CHECK BY: PJM APPROVED BY: PJM CREATED: 12/06/2019

PROJECT TITLE:
**N BAYSHORE DR
 SHORELINE
 IMPROVEMENTS**

CLIENT:
 ANTRIM COUNTY ROAD COM
 319 E LINCOLN ST., PO BOX 308
 MANCERLONA, MI 49659

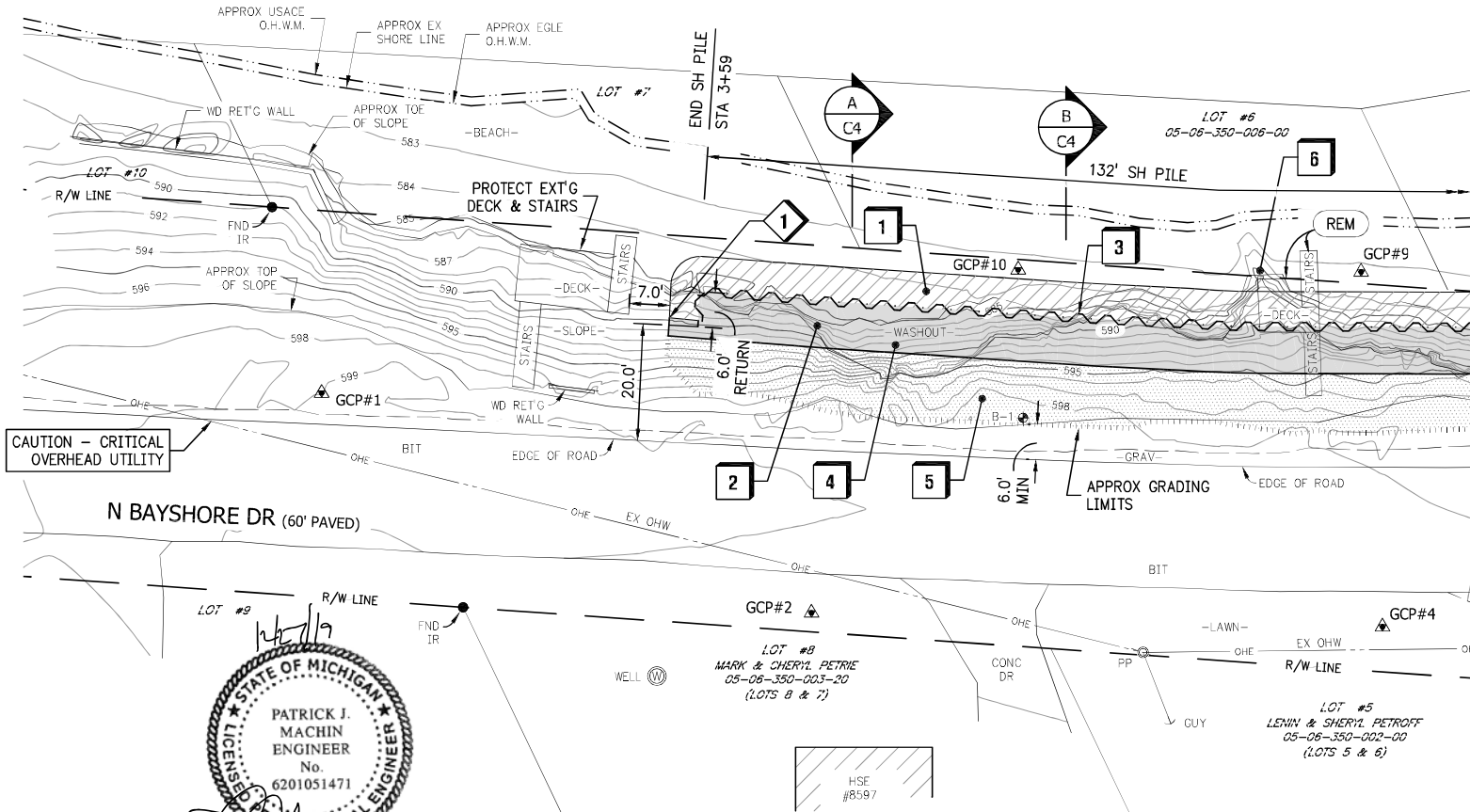
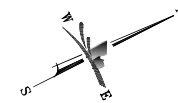
SHEET TITLE:
**NOTES
 &
 SPECIFICATIONS**

PROJECT NUMBER **19209**
 SHEET NUMBER **R2**



WATER SURFACE
EL.=581.68
(11/29/2019)

GRAND TRAVERSE BAY - EAST ARM



MATCH LINE - SEE SHEET C-2

MACHIN ENGINEERING
incorporation

TRAVERSE CITY, MI PH 231.935.1530
LUDINGTON, MI
www.machinengineering.net

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PATRICK J. MACHIN
PRINT NAME

SIGNATURE
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REG. NO. DATE

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D	ISSUED FOR CLIENT REVIEW	KAS/22319
E	ISSUED FOR CONSTRUCTION	ENM/22619

DRAWN BY:	CHECK BY:	APPROVED BY:	CREATED:
KAS	PJM	PJM	12/06/2019

PROJECT TITLE:
**N BAYSHORE DR
SHORELINE
IMPROVEMENTS**

CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCERONA, MI 49659

SHEET TITLE:
**SITE
PLAN**

PROJECT NUMBER **19209**

SHEET NUMBER **C1**

KEY NOTES

- 1** INSTALL ARMOR STONE. SEE DESIGN CROSS SECTION SHEETS
- 2** INSTALL SPLASH STONE. SEE DESIGN CROSS SECTION SHEETS
- 3** INSTALL PROPOSED E288 SHEET PILE WALL W/ ST CAP SEE DETAIL '1/C8'
- 4** FILL WASH OUT AREA WITH LOCAL SAND
- 5** INSTALL SLOPE ARMOR W/ TRM P300 OR EQUAL
- 6** EXCAVATE & REMOVE PENINSULA FEATURE TO MATCH PROP WORK
- 1** TAPER STONE TO TIE IN FLUSH

NOTE:

- TOPOGRAPHIC CONTOURS ARE FOR REFERENCE ONLY AND ARE NOT INTENDED FOR DESIGN AND SHOULD BE USED W/CARE. THEY ARE REPRESENTATIVE OF AN AERIAL IMAGING PERFORMED BY MACHIN ENGINEERING, INC NOVEMBER 25, 2019
- BASIS OF BEARING IS THE SUPERVISOR'S PLAT OF ELK RAPIDS SHORES, OF LOTS 3, 4, 5, 6, 7, 8, 9, 10

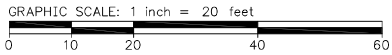
LEGEND

- REM** REMOVE ITEM
- Tree Line
- Wetland
- Gravel
- Ditch Line
- PROP ARMOR STONE
- PROP STONE
- PROP TURF REINF'T MAT
- GRADING LIMITS
- ▲ = HORIZ CONTROL PNT
- ⊕ = SOIL BORING



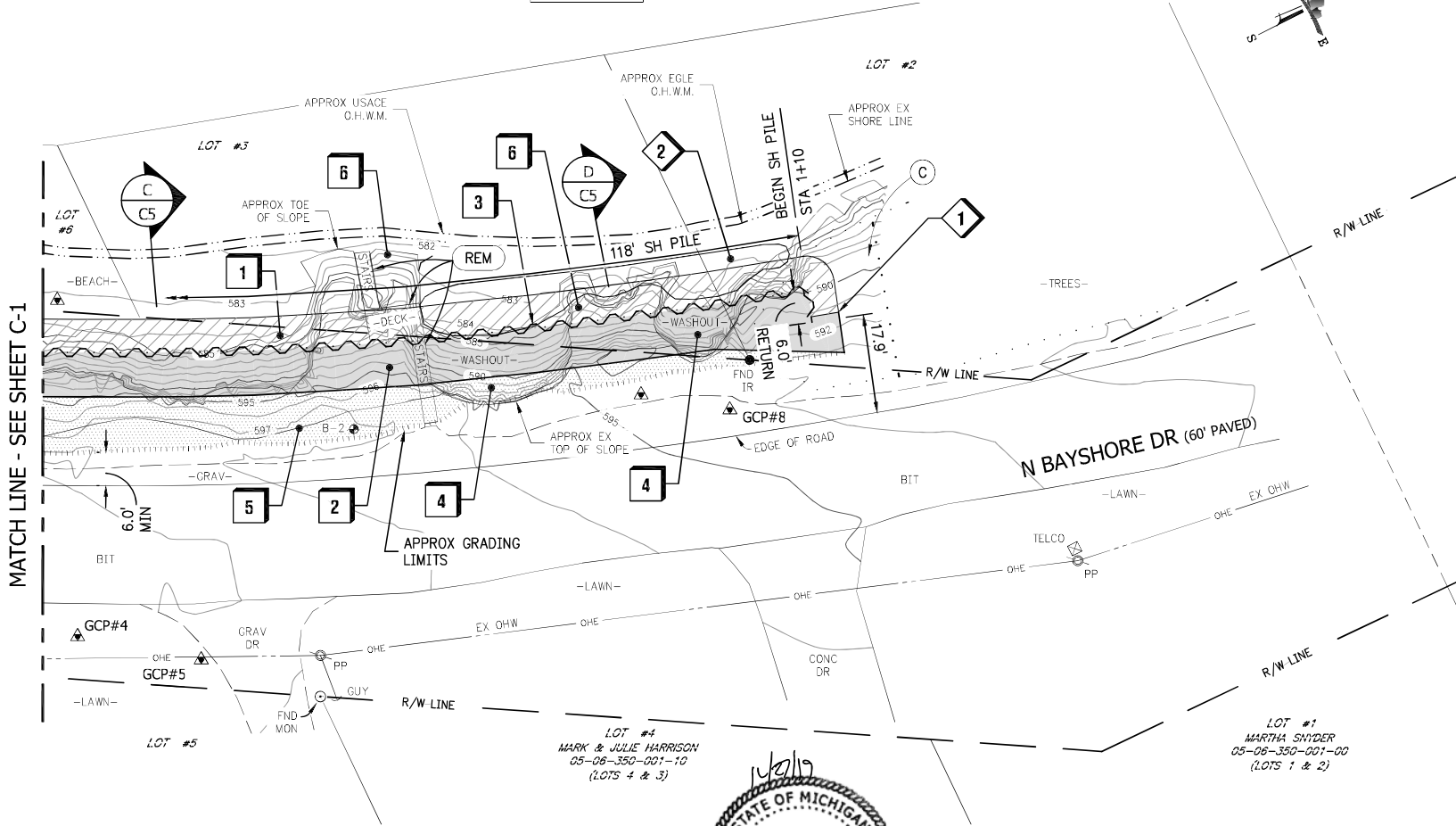
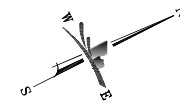
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WATER SURFACE
EL=581.68
(11/29/2019)

GRAND TRAVERSE BAY - EAST ARM



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D	ISSUED FOR CLIENT REVIEW	KAS/22319
0	ISSUED FOR CONSTRUCTION	ENM/22619

DRAWN BY: KAS CHECK BY: PUM APPROVED BY: PUM CREATED: 12/06/2019

PROJECT TITLE:
**N BAYSHORE DR
SHORELINE
IMPROVEMENTS**

CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCERONA, MI 49659

SHEET TITLE:
**SITE
PLAN**

PROJECT NUMBER **19209**

SHEET NUMBER **C2**

KEY NOTES

- 1** INSTALL ARMOR STONE. SEE DESIGN CROSS SECTION SHEETS
- 2** INSTALL SPLASH STONE. SEE DESIGN CROSS SECTION SHEETS
- 3** INSTALL PROPOSED EZ88 SHEET PILE WALL W/ ST CAP SEE DETAIL '1/C8'
- 4** FILL WASH OUT AREA WITH LOCAL SAND
- 5** INSTALL SLOPE ARMOR W/ TRM P300 OR EQUAL
- 6** EXCAVATE & REMOVE PENINSULA FEATURE TO MATCH PROP WORK
- 1** TAPER STONE TO TIE IN FLUSH
- 2** REMOVE & REUSE EXT'G RIP RAP AS ARMOR STONE APPROX 82 TONS IN PLACE



NOTE:
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2. BASIS OF BEARING IS THE SUPERVISOR'S PLAT OF ELK RAPIDS SHORES, OF LOTS 3, 4, 5, 6, 7, 8, 9, 10

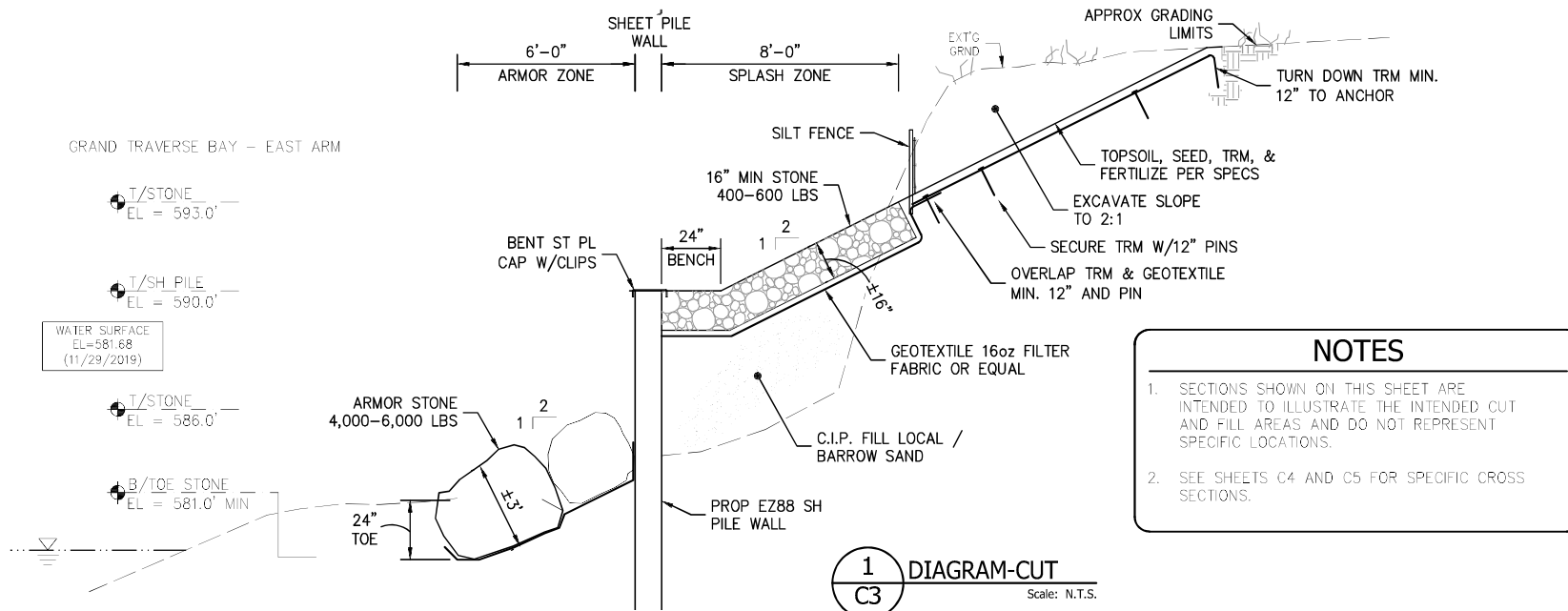
LEGEND

- (C) CLEARING
- REM REMOVE ITEM
- Tree Line
- Wetland
- Gravel
- Ditch Line
- PROP ARMOR STONE
- PROP STONE
- PROP TURF REINF'T MAT
- GRADING LIMITS
- ▲ = HORIZ CONTROL PNT
- ⊗ = SOIL BORING

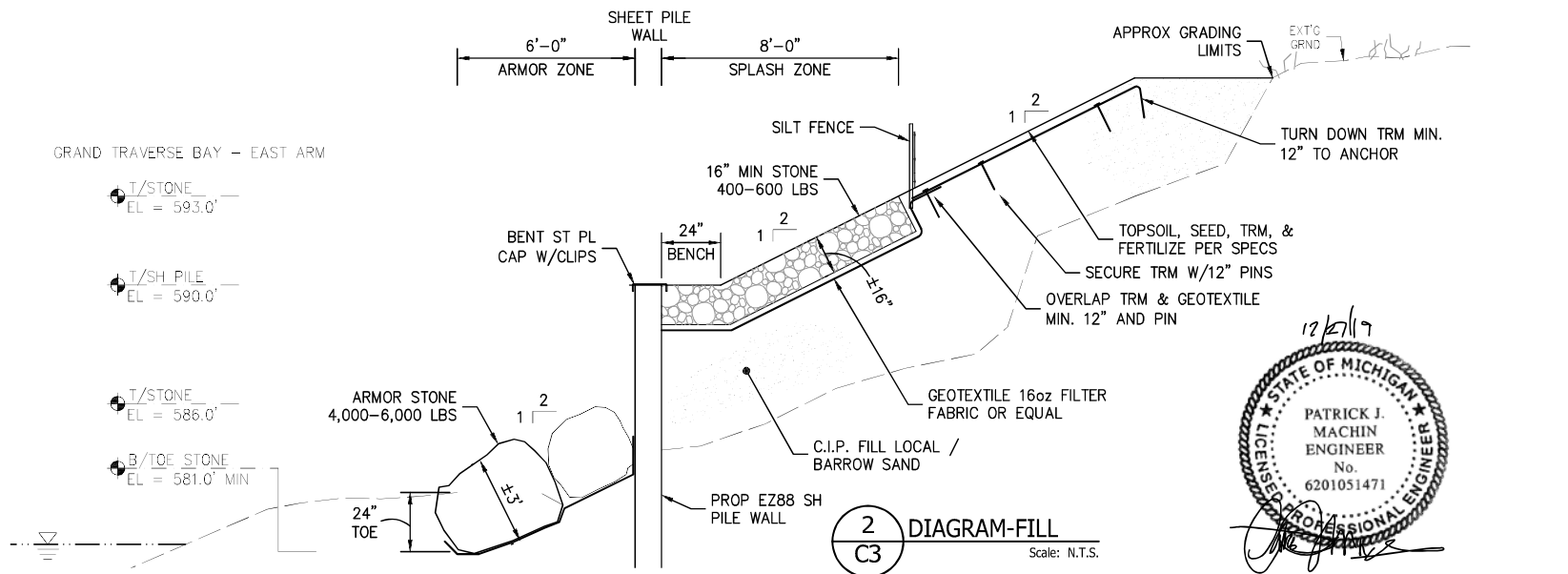
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I:\PROJECTS\2019\19209_ANTRIM_CRC_N_BAYSHORE_FSS\DRAWINGS\19209_EG_REV1.DWG (12/20/19 9:49 AM) MACHINENGINE



1 **DIAGRAM-CUT**
Scale: N.T.S.



2 **DIAGRAM-FILL**
Scale: N.T.S.

NOTES

1. SECTIONS SHOWN ON THIS SHEET ARE INTENDED TO ILLUSTRATE THE INTENDED CUT AND FILL AREAS AND DO NOT REPRESENT SPECIFIC LOCATIONS.
2. SEE SHEETS C4 AND C5 FOR SPECIFIC CROSS SECTIONS.



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PROJECT TITLE:
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IMPROVEMENTS**

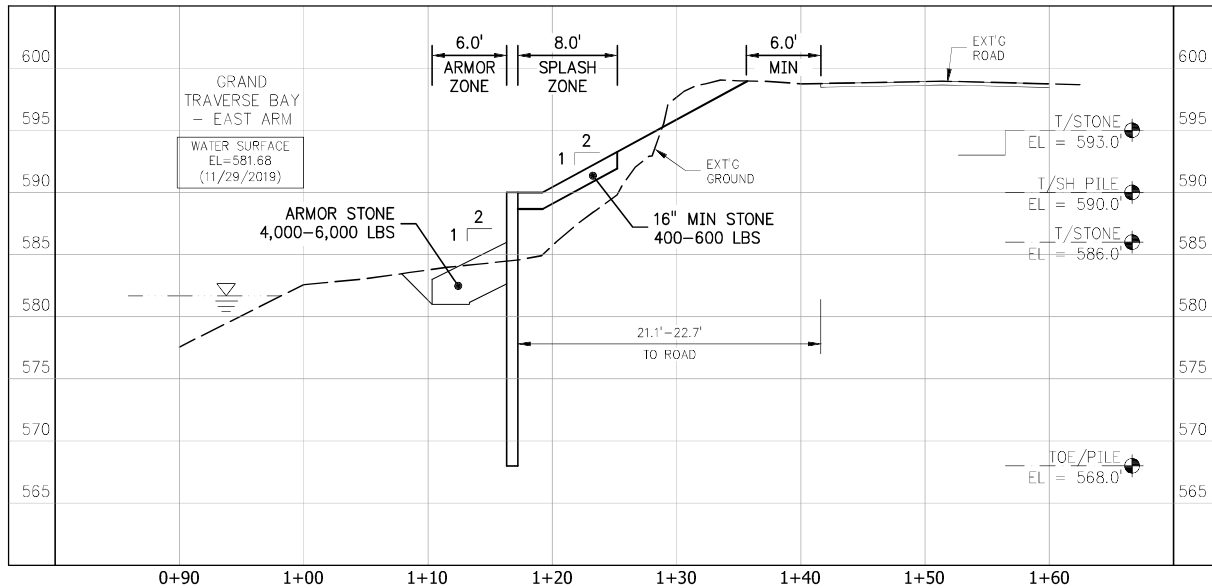
CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCELONA, MI 49659

SHEET TITLE:
**DIAGRAM
CUT
&
FILL**

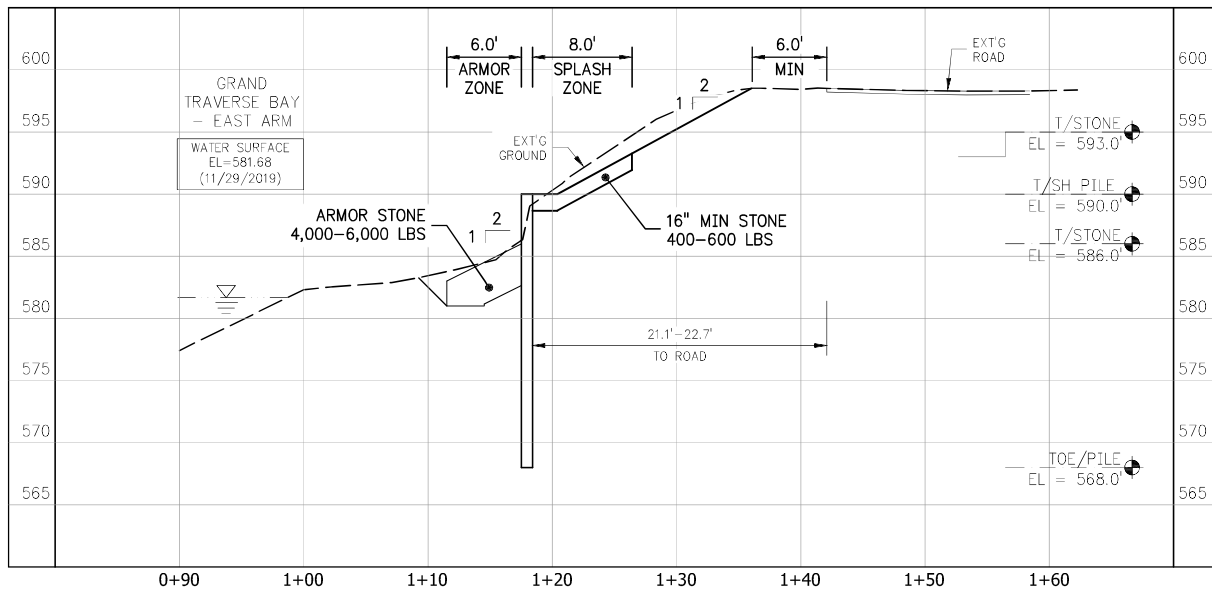
PROJECT NUMBER 19209
SHEET NUMBER C3

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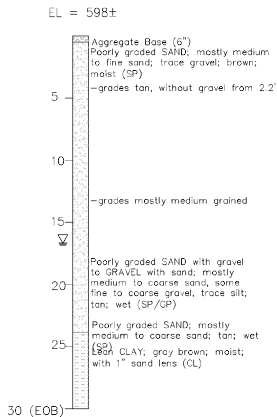
CROSS SECTION A-A (TYP)



CROSS SECTION B-B (TYP)



BORING B-1

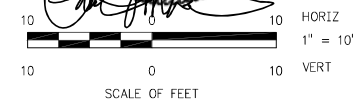


NOTES

- SECTIONS ARE TO SHOWN TO REPRESENT THE GENERAL REQUIREMENTS OF THE PROJECT FOR MAINTAINING ALIGNMENT OF THE SHEETING WITH RESPECT TO CUT AND FILL SECTIONS.
- EXCAVATED SOILS ARE INTENDED FOR USE IN FILL AREAS TO MAINTAIN LINE AND GRADE. IMPORTED FILL MAY BE REQUIRED TO MEET THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

ARMOR STONE TOTAL QTYS:
SECTION A:
68' x 8' = 544 SFT
544 SFT x 3' / 27 CFT / CYD = 60 CYD

SECTION B:
63' x 8' = 504 SFT
504 SFT x 3' / 27 CFT / CYD = 56 CYD



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E	ISSUED FOR CONSTRUCTION	ENM/22619

DRAWN BY: KAS CHECK BY: PUM APPROVED BY: PUM CREATED: 12/06/2019

PROJECT TITLE:
**N BAYSHORE DR
SHORELINE
IMPROVEMENTS**

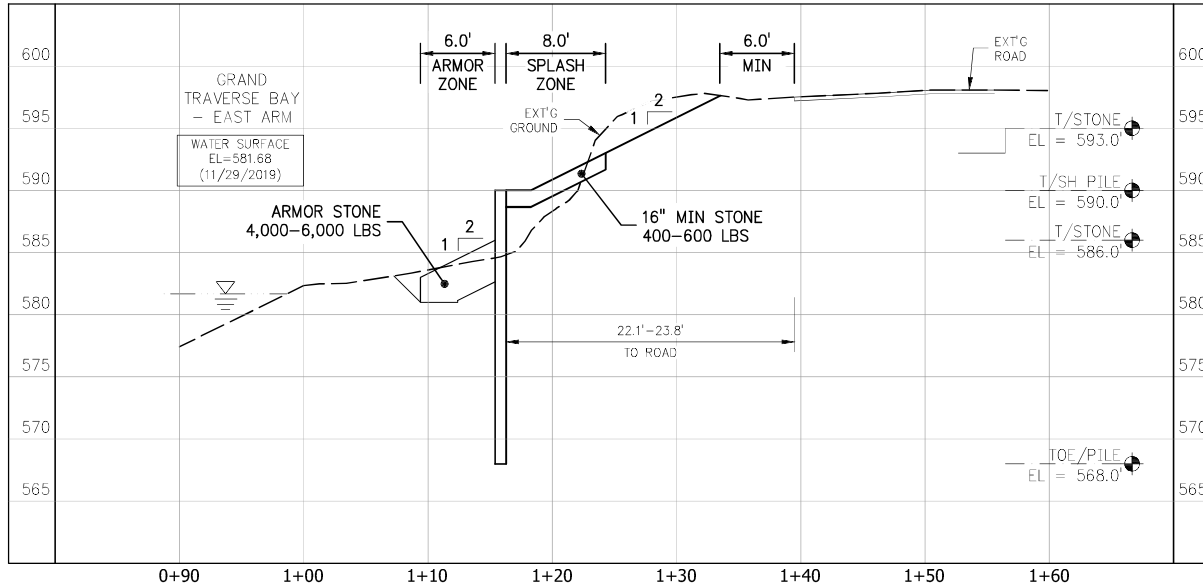
CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCELONA, MI 49659

SHEET TITLE:
**DESIGN
CROSS SECTIONS**

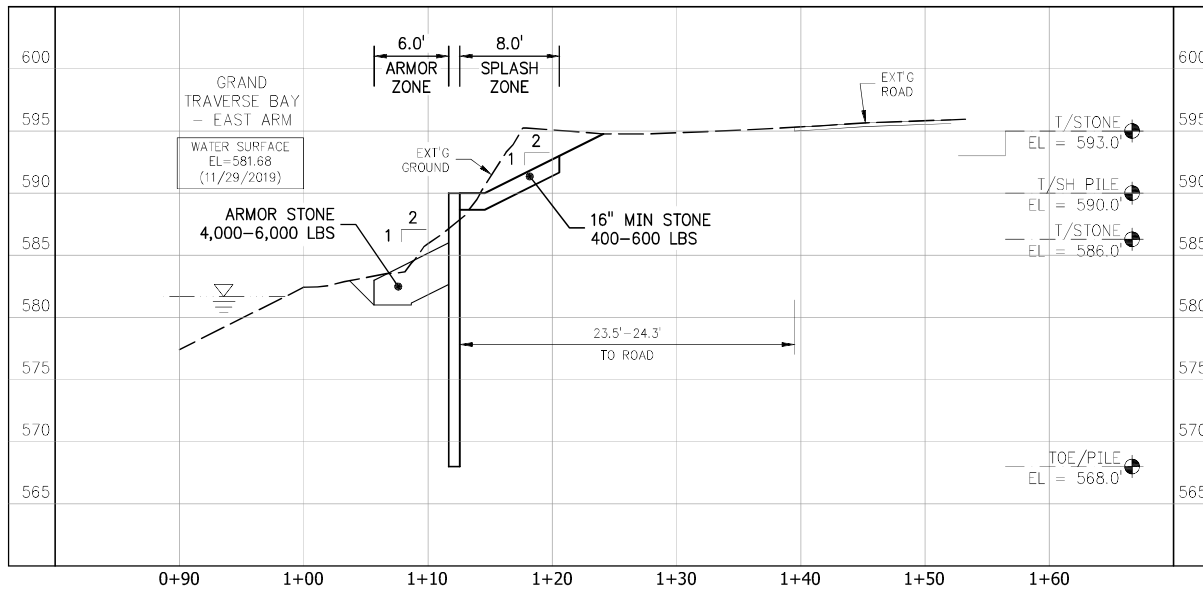
PROJECT NUMBER **19209**
SHEET NUMBER **C4**

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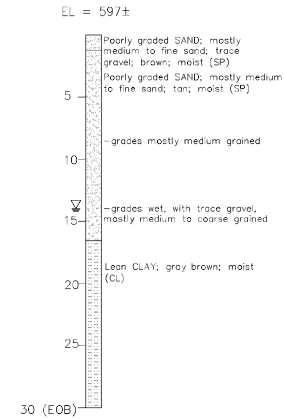
CROSS SECTION C-C (TYP)



CROSS SECTION D-D (TYP)



BORING B-2

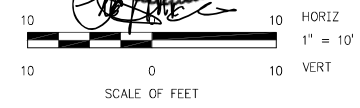



NOTES

- SECTIONS ARE TO SHOWN TO REPRESENT THE GENERAL REQUIREMENTS OF THE PROJECT FOR MAINTAINING ALIGNMENT OF THE SHEETING WITH REPECT TO CUT AND FILL SECTIONS.
- EXCAVATED SOILS ARE INTENDED FOR USE IN FILL AREAS TO MAINTAIN LINE AND GRADE. IMPORTED FILL MAY BE REQUIRED TO MEET THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

ARMOR STONE TOTAL QTY'S:
SECTION C:
63' x 8' = 504 SFT
504 SFT x 3' / 27 CFT / CYD = 56 CYD

SECTION D:
68' x 8' = 544 SFT
544 SFT x 3' / 27 CFT / CYD = 60 CYD





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E	ISSUED FOR CONSTRUCTION	ENM/22619

DRAWN BY: KAS CHECK BY: PJM APPROVED BY: PJM CREATED: 12/06/2019

PROJECT TITLE:
**N BAYSHORE DR
SHORELINE
IMPROVEMENTS**

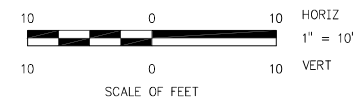
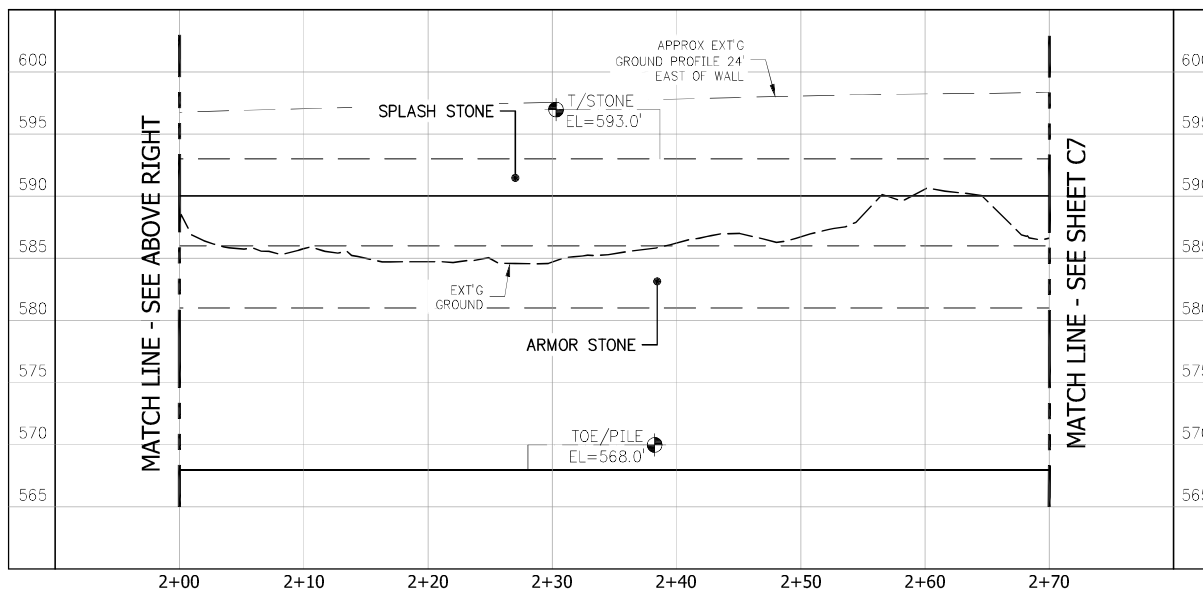
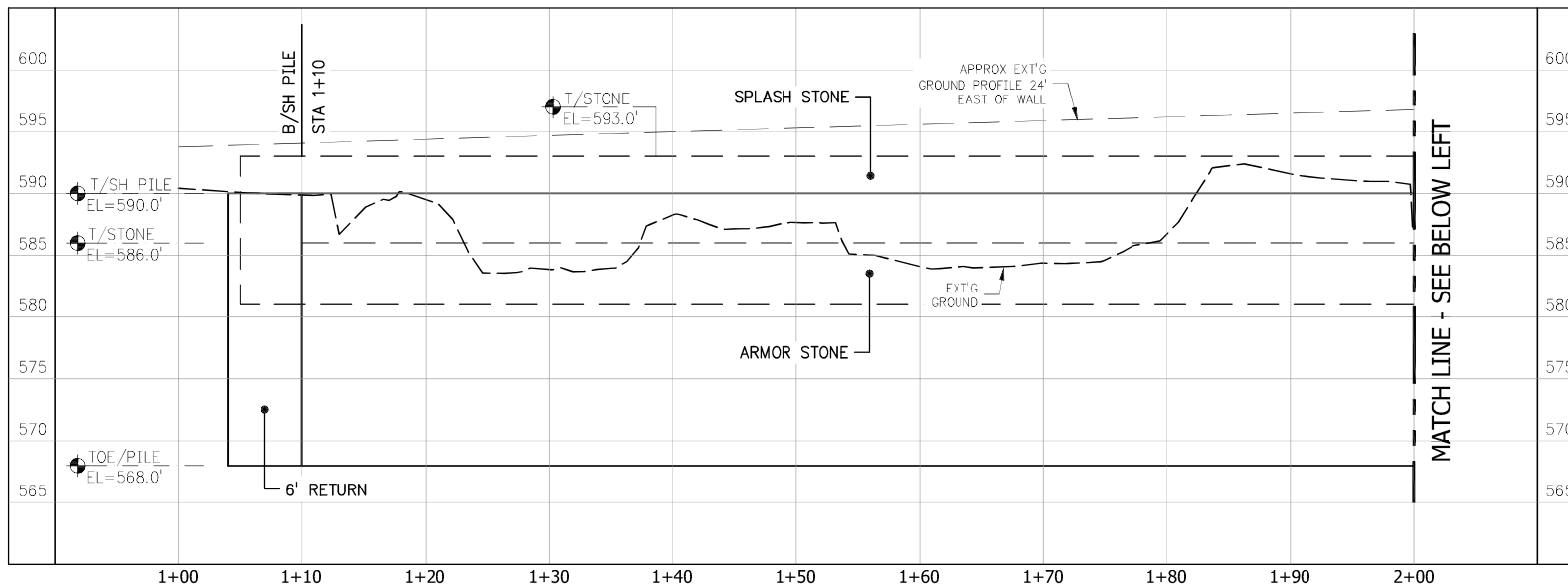
CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCELONA, MI 49659

SHEET TITLE:
**DESIGN
CROSS SECTIONS**

PROJECT NUMBER **19209**
SHEET NUMBER **C5**

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SHEET PILE PROFILE



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C	REVIEW - 90% DESIGN	KAS/22319
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KAS	PJM	PJM	12/06/2019

PROJECT TITLE:
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IMPROVEMENTS

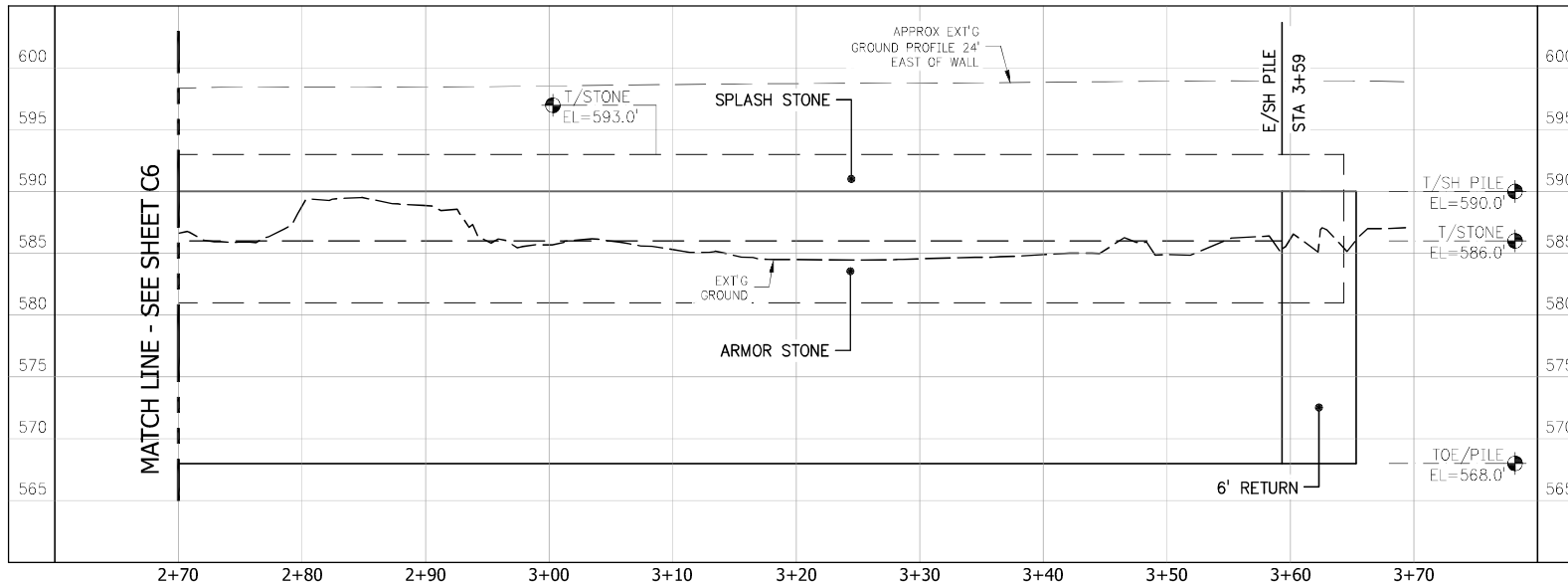
CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCELONA, MI 49659

SHEET TITLE:
DESIGN
SHEET PILE
PROFILE

PROJECT NUMBER 19209
SHEET NUMBER C6

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SHEET PILE PROFILE



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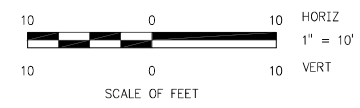
DRAWN BY:	CHECK BY:	APPROVED BY:	CREATED:
KAS	PJM	PJM	12/06/2019

PROJECT TITLE:
**N BAYSHORE DR
SHORELINE
IMPROVEMENTS**

CLIENT:
ANTRIM COUNTY ROAD COM
319 E LINCOLN ST., PO BOX 308
MANCELONA, MI 49659

SHEET TITLE:
**DESIGN
SHEET PILE
PROFILE**

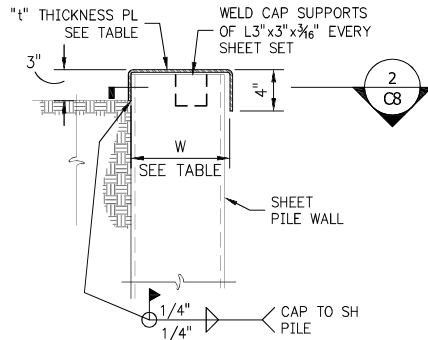
PROJECT NUMBER **19209**
SHEET NUMBER **C7**



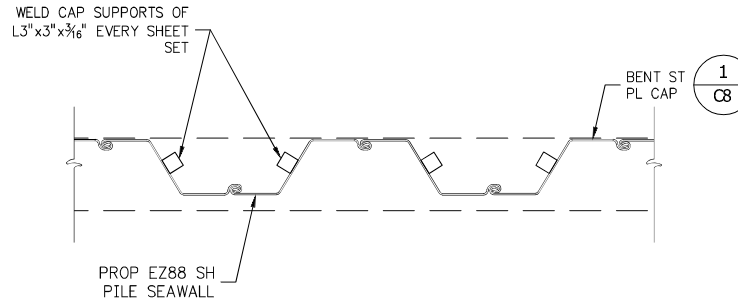
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PILE CAP SCHEDULE

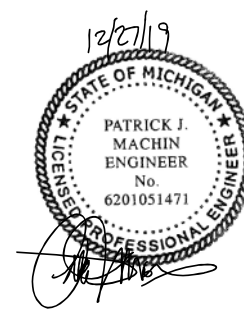
SHEET PILE	"W"	"t"
EZ88	14"	1/4"



1 C8
BENT SHEET PLATE CAP DETAIL
 Scale: 1'=1'-0"



2 C8
SECTION
 Scale: 1'=1'-0"



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DRAWN BY:	CHECK BY:	APPROVED BY:	CREATED:
KAS	PJM	PJM	12/06/2019

PROJECT TITLE:
 N BAYSHORE DR
 SHORELINE
 IMPROVEMENTS

CLIENT:
 ANTRIM COUNTY ROAD COM
 319 E LINCOLN ST., PO BOX 308
 MANCERLONA, MI 49659

SHEET TITLE:
 STRUCTURAL
 DETAILS

PROJECT NUMBER 19209
SHEET NUMBER C8

A. Nationwide Permit General Conditions:

To qualify for NWP authorization, the permittee must comply with the following general conditions, as appropriate. These conditions are selected from those published in the Federal Register that are particularly relevant to the construction and/or operation of this particular authorized activity. The complete text is available at our website <http://www.lre.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx> under "Detroit Regulatory Quick" select "Detroit District General Permit Types" and then choose "Nationwide Permits with Michigan Regional Conditions" OR "Nationwide Permits with Indiana Regional Conditions"; or, you may contact the Detroit District directly for the information. We have done our best to verify that your project complies with the others, where applicable.

1. Navigation. (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre- construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

11. Equipment. Heavy equipment working in wetlands

or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

17. Tribal Rights. No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act

may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/ THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new

owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(Transferee) (Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

B. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

REGIONAL PERMIT GENERAL CONDITIONS

1. You must maintain any structures or work authorized by the Regional Permit in good condition and in conformance with the terms and conditions of the Regional Permit. You are not relieved of this requirement if you abandon any permitted structures/work, although you may make a good faith transfer to a third party. You are required to contact us should you wish to cease to maintain any authorized structures/work or should you desire to abandon it without a good faith transfer. We will most likely instruct you to remove the structures/work from the waterway and provide you with written authorization to conduct the removal work. We may add special conditions to the removal work with respect to equipment and techniques, work sequence, and disposal.

2. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by the Regional Permit, you must immediately stop work in that area and notify this office of what you have found. We will initiate the Federal, Tribal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

3. If a conditioned water quality certification and/or coastal zone management consistency concurrence has been issued for your project, you must comply with the conditions specified in the certification as special conditions to insure compliance with the Regional Permit. For your convenience, a copy of the certification is attached if it contains such conditions.

4. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of the Regional Permit.

5. The permittee understands and agrees that activities affecting structures or works built by the United States require permission from the Corps pursuant to 33 U.S.C. 408 (Section 408). If Section 408 Permission has been issued for your project, you must comply with the conditions specified in the permission document as special conditions to ensure compliance with the Regional Permit. For your convenience, a copy of the Section 408 Permission is attached if it contains such conditions.

6. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal of alteration.

7. If you sell the property associated with this Regional Permit verification, you must obtain the signature of the new owner in the space provided and forward a copy of the Regional Permit to this office to validate the transfer of this authorization.

“When the structures or work authorized by this Regional Permit are still in existence at the time the property is transferred, the terms and conditions of this Regional Permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this Regional Permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

 (Transferee) (Date)

Further Information:

1. Congressional Authorities: You have been so authorized to undertake the activity described above pursuant to:

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Limits of this authorization.

- a. The Regional Permit does not obviate the need to obtain Federal, state, or local authorizations required by law.
- b. The Regional Permit does not grant any property rights or exclusive privileges.
- c. The Regional Permit does not authorize any injury to the property or rights of others.

- d. The Regional Permit does not authorize interference with any existing or proposed Federal project.
 - e. The Regional Permit authorizing the activity expires on June 30, 2022 unless it is reissued without modification or the activity complies with any subsequent modification of the Regional Permit. If the Regional Permit is not reissued for the activity in question, activities which have commenced construction or are under contract to commence in reliance upon the Regional Permit will remain authorized provided the activity is completed by June 30, 2023.
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision and/or our verification that the activity complies with the Regional Permit.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of the Regional Permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

3. Limits of Federal Liability. In issuing the Regional Permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by the Regional Permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modifications, suspension, or revocation of the Regional Permit.

4. Reliance on Applicant's Data: The verification by this office that the project conforms with the Regional Permit was made in reliance of the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this project at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of the Regional Permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

REGIONAL PERMIT COMPLETION REPORT

CELRE-ERC

Chief, Compliance and Enforcement Branch
Regulatory Office
U.S. Army Corps of Engineers
477 Michigan Avenue
Room 603
Detroit, MI 48226-2550

Dear Sir:

You are hereby notified that work verified as qualifying for Nationwide and Regional Permit under File No. LRE-2020-00133-56-C20 to remove the existing structures, construct a seawall and place riprap in Lake Michigan at 8551 to 8597 North Bayshore Drive, near Elk Rapids, Antrim County, Michigan, issued to Antrim County Road Commission was completed in accordance with the permit on:

(Date work completed)

(Permittee's Signature)

IMPORTANT

1. This COMPLETION REPORT MUST BE MAILED to the above addressee within 10 days after completion of work covered by the REGIONAL PERMIT to insure an accurate Government record of data affecting navigation.
2. Where soundings are completed for projects that include dredging, a copy of the soundings should accompany this report. If the soundings are measured from the water surface and have not been corrected to International Great Lakes Datum 1985, the hour and date the soundings were made should be noted on the soundings report.