

**PLAN INDEX**

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# MANISTEE COUNTY ROAD COMMISSION

PLANS OF PROPOSED IMPROVEMENTS TO

## 2ND STREET, 3RD STREET, 4TH STREET, 5TH STREET, 6TH STREET, 9TH STREET, PORTAGE POINT DRIVE, CHERRY, MADISON, LINKE & PREUSS ROADS

### 2025 HMA RESURFACING

ONEKAMA & FILER TOWNSHIPS, MANISTEE COUNTY

PLACING OF TEMPORARY TRAFFIC CONTROL ITEMS SHALL BE DONE IN ACCORDANCE WITH THE 2011 EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS REVISED.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND SUPPLEMENTAL SPECIFICATIONS, AS AMENDED.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH AASHTO'S GUIDELINES FOR GEOMETRIC DESIGN OF LOW-VOLUME ROADS (ADT ≤ 400).

TOTAL PROJECT LENGTH = 1.894 MILES  
 PORTAGE POINT ROADS = 1.111 MILES  
 CHERRY ROAD = 0.229 MILES  
 MADISON ROAD = 0.059 MILES  
 LINKE & PREUSS ROADS = 0.495 MILES

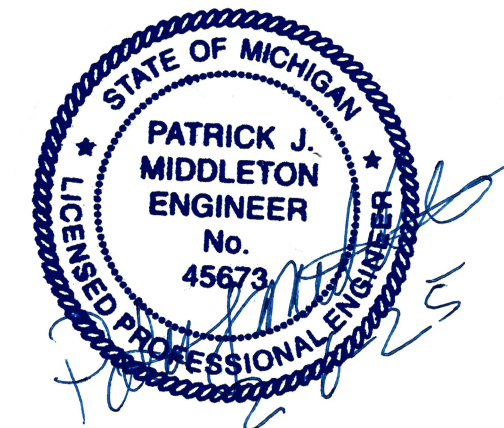
CONTRACT FOR:  
 HMA OVERLAY, GUARDRAIL & AGG SHOULDERS.

MANISTEE COUNTY ROAD COMMISSION APPROVALS

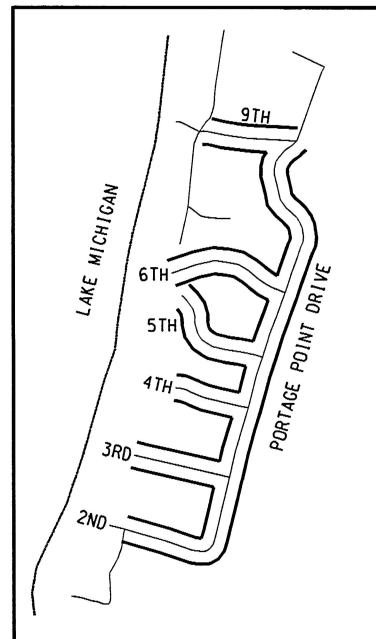
BRAD KLUCZYNSKI, MCRC MANAGER \_\_\_\_\_ DATE \_\_\_\_\_

PREPARED UNDER SUPERVISION OF  
 PATRICK J. MIDDLETON, P.E. 45673  
 REGISTERED PROFESSIONAL ENGINEER REGISTRATION NUMBER

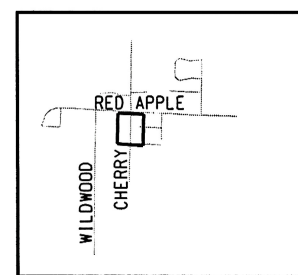
**KPM ENGINEERING**  
 CIVIL ENGINEERING CONSULTANTS



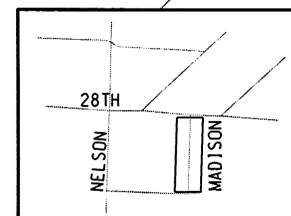
COUNTY KEY



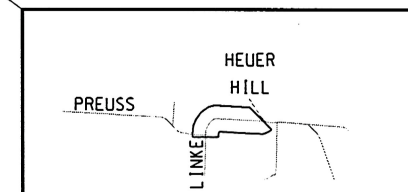
PORTAGE POINT ROADS



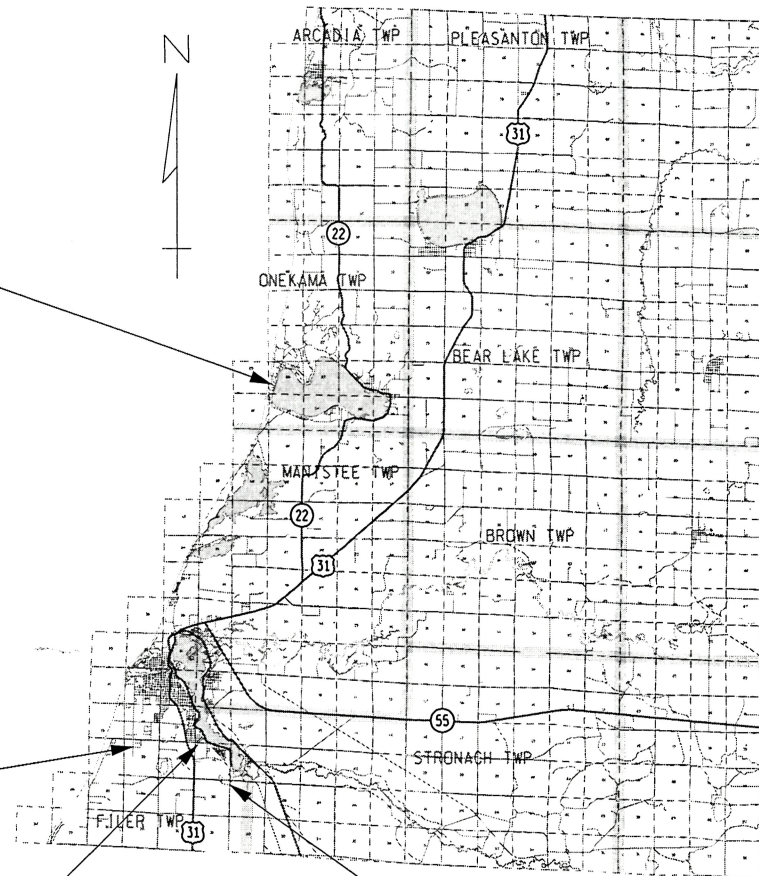
CHERRY ROAD



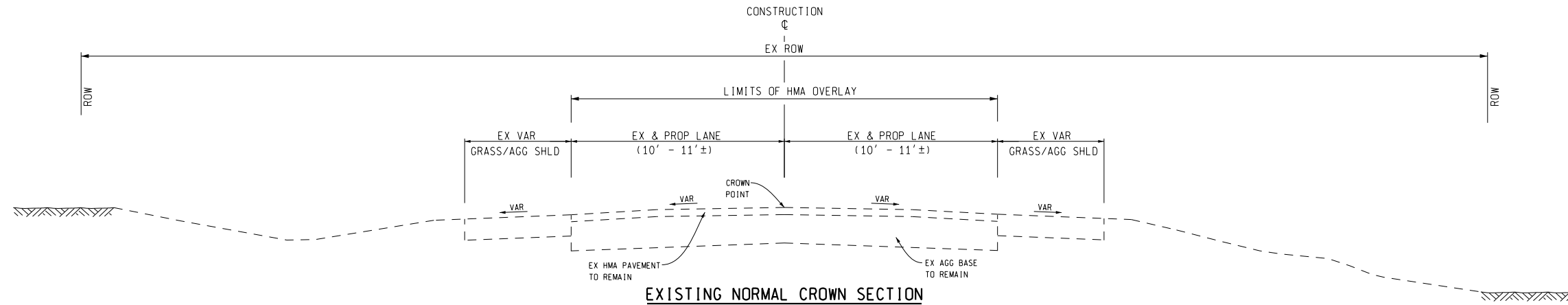
MADISON ROAD



LINKE & PREUSS ROADS

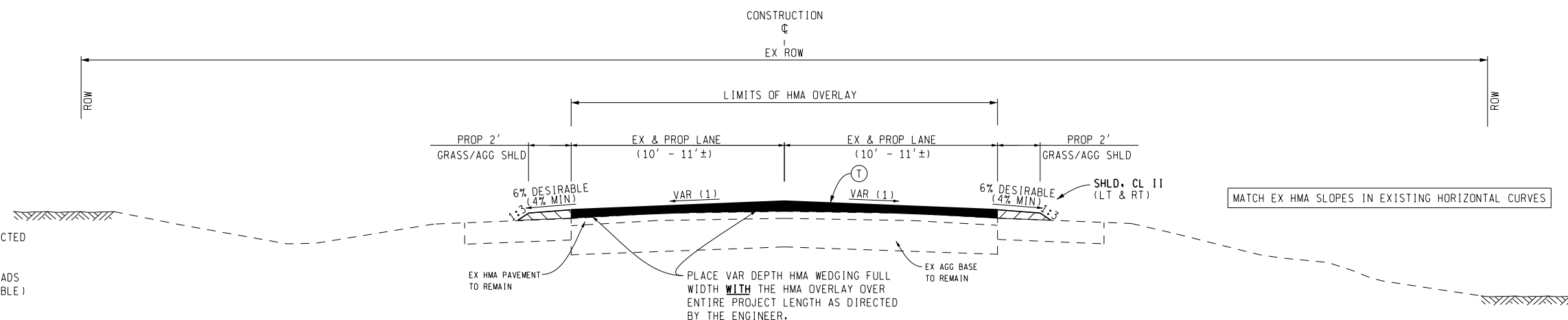


3 WORKING DAYS  
 BEFORE YOU DIG  
 CALL MISS DIG  
 800-482-7171  
 OR 811



**EXISTING NORMAL CROWN SECTION**

- SECTION APPLIES:
- 2ND STREET POB TO POE
  - 3RD STREET POB TO POE
  - 4TH STREET POB TO POE
  - 5TH STREET POB TO POE
  - 6TH STREET POB TO POE
  - 9TH STREET POB TO POE
  - PORTAGE POINT DRIVE POB TO POE
  - CHERRY ROAD POB TO POE
  - LINKE ROAD POB TO POE
  - PREUSS ROAD POB TO POE



**PROPOSED NORMAL CROWN SECTION**

- SECTION APPLIES:
- 2ND STREET POB TO POE
  - 3RD STREET POB TO POE
  - 4TH STREET POB TO POE
  - 5TH STREET POB TO POE
  - 6TH STREET POB TO POE
  - 9TH STREET POB TO POE
  - PORTAGE POINT DRIVE POB TO POE
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  - MADISON ROAD POB TO POE
  - LINKE ROAD POB TO POE
  - PREUSS ROAD POB TO POE

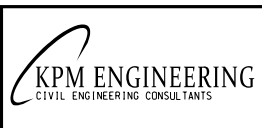
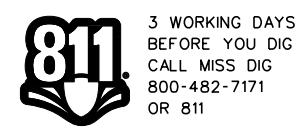
THE MCRC, ENGINEER AND CONTRACTOR SHALL MEET AFTER HMA PAVING WORK TO IDENTIFY LOCATIONS FOR AGG SHLDR AND/OR SLOPE RESTORATION.

- (1) PORTAGE POINT ROADS MATCH EXISTING LANE SLOPES AS DIRECTED BY THE ENGINEER.
- CHERRY, MADISON, LINKE & PREUSS ROADS VARY SLOPE 1.0% TO 3.0% (2% DESIRABLE) AS DIRECTED BY THE ENGINEER.
- (2) THE PROPOSED HMA WEDGING IS ESTIMATED AT:  
 PORTAGE POINT ROADS = 45 #/SYD  
 CHERRY ROAD = 75 #/SYD  
 MADISON ROAD = 110 #/SYD  
 LINKE/PREUSS ROADS 75 #/SYD.  
 THICKNESS OF HMA SHALL VARY TO OBTAIN THE PROPOSED CROSS SLOPE.
- (3) PRIOR TO PLACING THE HMA OVERLAY TOP COURSE SOME INTERMITTENT VARIABLE WIDTH AND DEPTH HMA WEDGING MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.

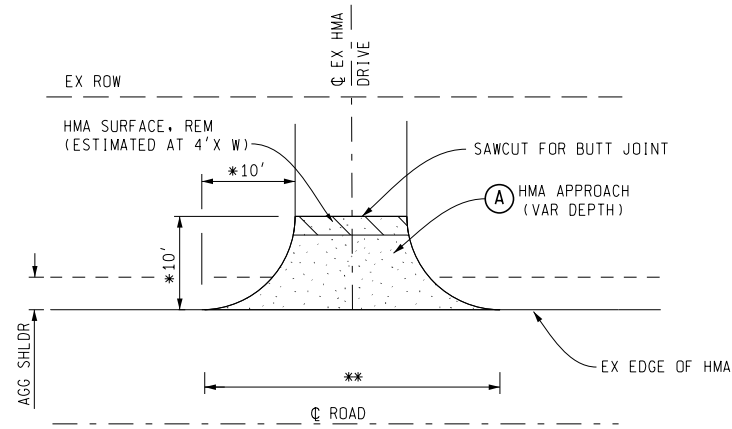
**HMA APPLICATION ESTIMATE**

IDENT NO.	ITEM	RATE PER SYD	PERFORMANCE GRADE	REMARKS
(T)	HMA, 4EL	240# AVG (165# MIN)	PG 58-28	HMA OVERLAY TOP COURSE (2) (INCLUDES WEDGING) AWI = 220
(W)	HMA, 4EL	VARIES	PG 58-28	PROP HMA WEDGING (3)
(A)	HMA APPROACH	220# AVG *	PG 58-28	HMA, 4EL FOR APPROACH ROADS & DRIVES
BOND COAT		0.05-0.15 GAL/SYD FOR INFORMATION ONLY		

\* OR THICKER TO MATCH EX DEPTHS  
 THE TARGET AIR VOID PERCENTAGE SHALL BE 3.5% FOR ALL HMA ON THIS PROJECT.

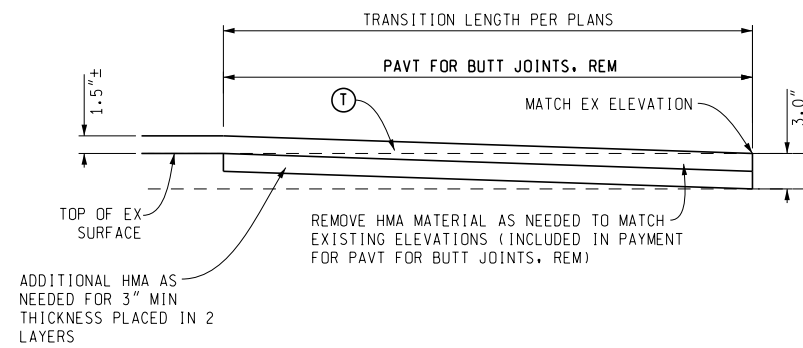


TYPICAL CROSS SECTIONS			
DATE	TOWNSHIP	JOB NO.	SHEET NO.
2/6/2025	ONEKAMA & FILER		2



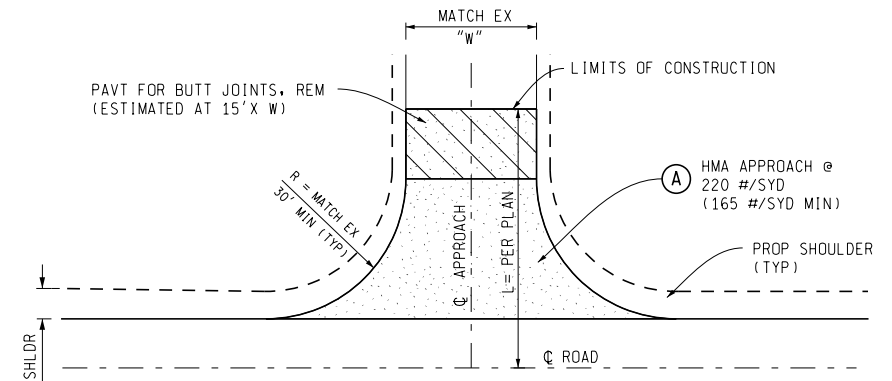
**HMA PAVED DRIVEWAY DETAIL**

\* OR AS DIRECTED BY THE ENGINEER  
 \*\* THE CONTRACTOR SHALL DOCUMENT THE EXISTING START/STOP POINTS OF HMA DRIVE (AT THE EDGE OF PAVT) PRIOR TO REMOVAL OF DRIVE. THE INTENT IS TO MATCH THE EXISTING DRIVE WIDTH.



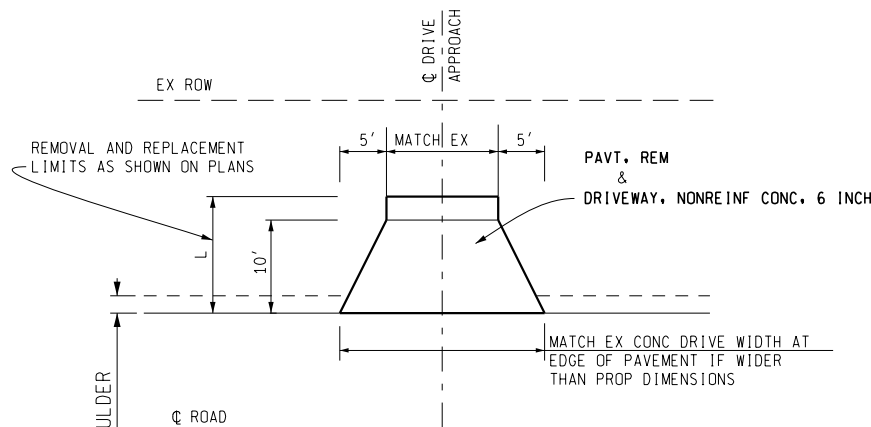
**BUTT JOINT DETAIL**

TO APPLY:  
 WHERE CALLED FOR ON PLANS

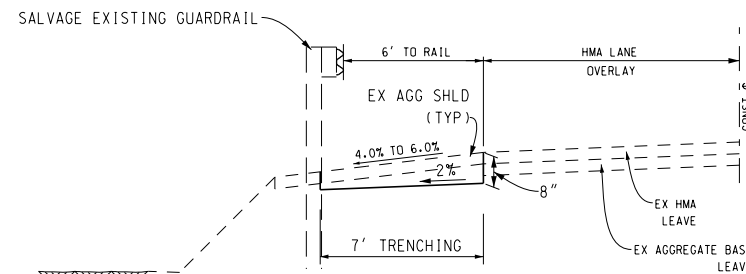


**APPROACH TREATMENT TYPE I (EX HMA)**

TO APPLY:  
 CHERRY ROAD  
 ANTHONY DRIVE (RT)  
 LINKE ROAD  
 PREUSS ROAD (LT)

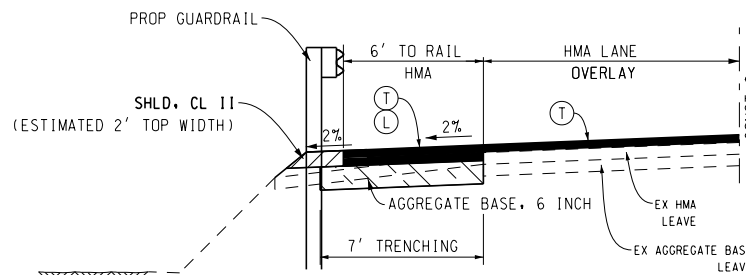


**CONCRETE DRIVEWAY DETAIL**



**EXISTING GUARDRAIL SECTION**

SECTION APPLIES:  
 LINKE-PREUSS ROAD - SEE PLANS



**PROPOSED GUARDRAIL SECTION**

SECTION APPLIES:  
 LINKE-PREUSS ROAD - SEE PLANS

\* OR AS DIRECTED BY THE ENGINEER **UN-PAVED DRIVEWAY DETAIL**

DURING MAINLINE PAVING, PAVE ADDITIONAL 2' WIDTH AT AGG DRIVEWAYS (PAID FOR AS HMA, 4EL)



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DATE		TOWNSHIP		JOB NO.		SHEET NO.	
2/6/2025		ONEKAMA & FILER				3	

**DETAIL SHEET**

**MISCELLANEOUS SYMBOLS**

- ☆ PINE TREE
- ⊗ TREE
- ⊖ STUMP
- ⊕ SWAMP
- ⊗ T.H.# TEST HOLE NO.
- ◁ EXISTING CULVERT END SECTION
- ◄ PROPOSED CULVERT END SECTION
- SECTION CORNER
- ⊙ QUARTER QUARTER CORNER
- ⊘ QUARTER CORNER
- ⊙ HALF QUARTER CORNER
- ⊥ SIGN
- ⊥⊥ SIGN2
- ⊗ RIPRAP
- ⊙ EXISTING PROPERTY CORNER

**UTILITIES SYMBOLS**

- POWER POLE
- GUY POLE
- TELEPHONE POLE
- ⑦ TELEPHONE MANHOLE
- ⊕ TELEPHONE PEDESTAL
- ⊗ GAS LINE MARKER
- ⊗ GAS VALVE
- ⊕ MAIL BOX
- ⊕ DEADMAN FOR GUYWIRE

HAZARDOUS OR FLAMMABLE MATERIAL

CAUTION - CRITICAL UNDERGROUND UTILITY

**TOPO LIFESTYLES**

- ⌋ TREE LINE
- x—x— EXISTING FENCE
- · · · — EXISTING DRAINAGE COURSE EDGE OF WATER
- · · · — PROPOSED DRAINAGE COURSE EDGE OF WATER
- PROP 36" — PROPOSED CULVERT/SEWER
- EX 12" CMP — EXISTING CULVERT/SEWER
- ▨ PAVT FOR BUTT JOINTS, REM
- ▨ PROPOSED HMA APPROACH
- ▨ PROP CL II APPROACH

**UNDERGROUND UTILITY LIFESTYLES**

- ELEC — ELECTRICAL LINE
- 24" GAS — GAS LINE
- 12" OIL — OIL LINE
- TELE — TELEPHONE LINE
- 36" WM — WATER LINE
- CTV — CABLE TV
- FO — FIBER OPTICS

**ABOVE GROUND UTILITY LIFESTYLES**

- ○ — POWER TRANSMISSION LINE

**UTILITIES**

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

**UTILITY NAME                      UTILITY TYPE**

CONSUMERS ENERGY  
300 CHESTNUT STREET  
CADILLAC, MI 49601  
CONTACT: ERIC MARR  
231-779-8451

ELECTRIC

AT&T  
205 E HARRIS STREET  
CADILLAC, MI 49601  
CONTACT: JEFF SHUSTER  
231-779-8451  
231-510-1381 CELL

TELEPHONE

DTE ENERGY/MICH CON  
609 BJORNSON ST  
BIG RAPIDS, MI 49307  
CONTACT: LARRY BOURKE  
(231) 592-3244

GAS

**GENERAL PLAN NOTES**

**UNDERGROUND UTILITIES / MISS DIG**

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 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.

**ALIGNMENTS AND STATIONING**

HORIZONTAL ALIGNMENTS AND STATIONING ARE "BEST FIT" BASED ON HIGH RESOLUTION AERIAL IMAGES.

**AGGREGATE BASE**

AGGREGATE BASE USED ON THIS PROJECT SHALL BE AGGREGATE 22A.

**SAWCUTTING**

SAWCUT AT ALL LIMITS OF CONSTRUCTION INCLUDING DRIVEWAYS. PAYMENT FOR SAWCUTTING REQUIRED THROUGHOUT THE PROJECT SHALL BE INCLUDED IN OTHER ITEMS.

**GUARDRAIL POST HOLES**

POSTS LOCATED NEAR EXISTING UTILITIES SHALL BE HAND DUG. THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT WILL BE INCLUDED IN PAYMENT FOR THE NEW GUARDRAIL.

**GUARDRAIL INSTALLATION**

ALL EXISTING AND PROPOSED GUARDRAIL SHALL BE STAKED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

**MISCELLANEOUS ESTIMATES**

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT AS DIRECTED BY THE ENGINEER. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN SHEETS:

	PORTAGE POINT RDS	CHERRY RD	MADISON RD	LINKE & PREUSS RDS	
Slope Restoration	1955	253	253	100	Syd
Shld. Cl II	279	57	15		Ton
HMA. 4EL	75	25	25	100	Ton
Approach. Cl I		5		5	Ton
Post. Mailbox	5	5		5	EA
Pavt for Butt Joints. Rem	100				Syd

THE FOLLOWING ITEMS OF WORK ARE ESTIMATED FOR THE ENTIRE PROJECT FOR MAINTAINING TRAFFIC WHERE DESIGNATED BY THE ENGINEER.

	PORTAGE POINT RDS	CHERRY RD	MADISON RD	LINKE & PREUSS RDS	
Traffic Control	0.5	0.1	0.1	0.3	LSUM
Temporary Pavement Markings	0.0	0.0	0.0	1.0	LSUM

THE FOLLOWING DRIVEWAY ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT AS DIRECTED BY THE ENGINEER. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN SHEETS:

	PORTAGE POINT RDS	CHERRY RD	MADISON RD	LINKE & PREUSS RDS	
Approach. Cl I	5	5		5	Ton
Approach. Cl II	20	8	2	8	Ton
HMA Surface. Rem	156	18		36	Syd
HMA Approach	52	6		12	Ton
Pavt. Rem	83	64			Syd
Driveway. Nonrein Conc. 6 inch	83	64			Syd

**NOTES APPLYING TO ROAD STANDARD PLANS**

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

- R-29-J DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS
- R-60-J \* GUARDRAIL TYPES A, B, BD, T, TD, MGS-8 & MGS-8D
- R-62-H \* GUARDRAIL APPROACH TERMINAL TYPE 2M
- R-74-D BUMPER & PARKING RAILS AND MISC. WOOD POSTS

**NOTES APPLYING TO TRAFFIC AND SAFETY STANDARD PLANS**

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

- \* WZD-125-E TEMPORARY TRAFFIC CONTROL DEVICES

\* DENOTES SPECIAL DETAIL



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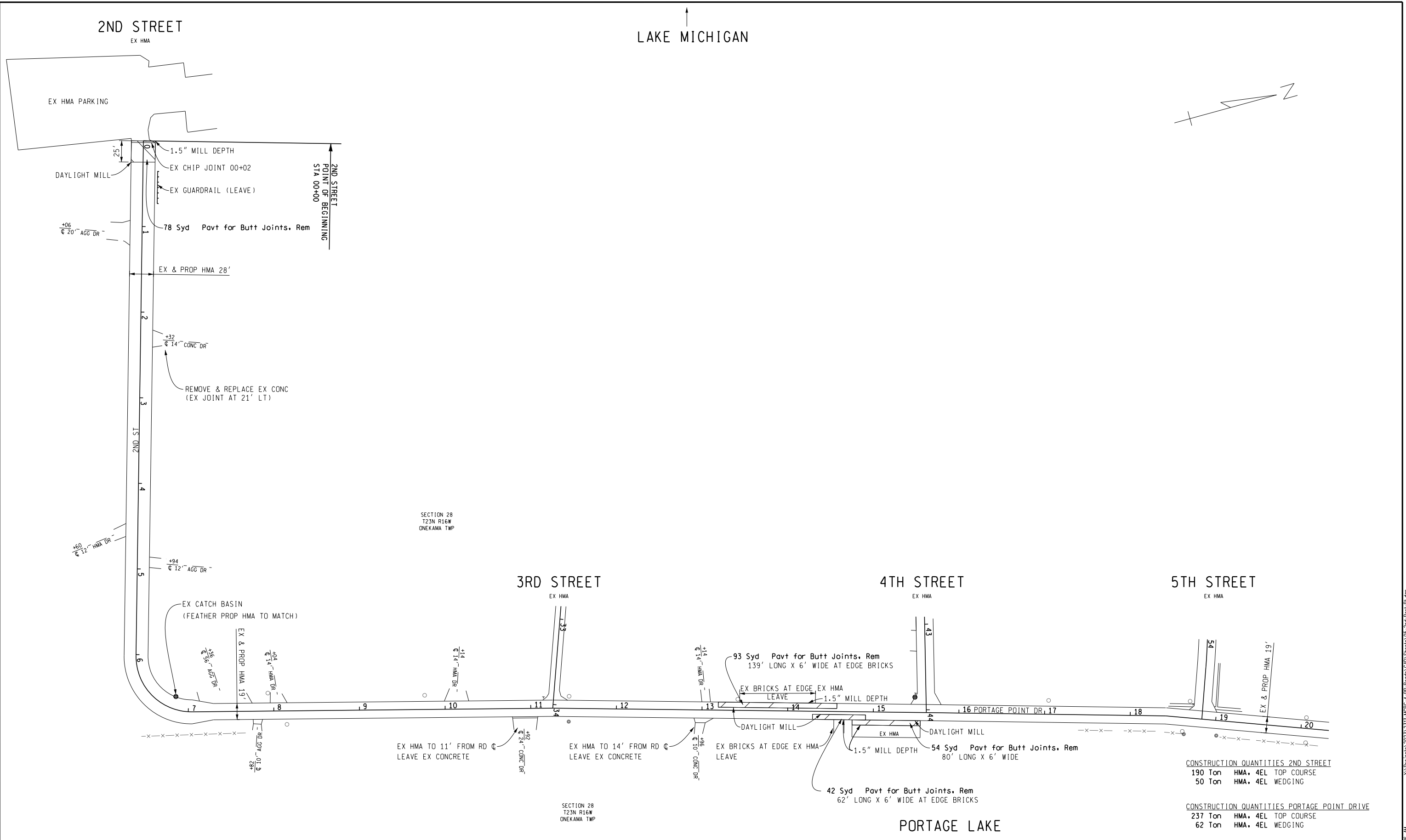
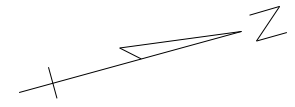


PORTAGE POINT ROADS, CHERRY, LINKE & PREUSS ROADS

DATE	TOWNSHIP	JOB NO.	SHEET NO.
2/6/2025	ONEKAMA & FILER		4

2ND STREET  
EX HMA

LAKE MICHIGAN



SECTION 28  
T23N R16W  
ONEKAMA TWP

SECTION 29  
T23N R16W  
ONEKAMA TWP

CONSTRUCTION QUANTITIES 2ND STREET  
190 Ton HMA, 4EL TOP COURSE  
50 Ton HMA, 4EL WEDGING

CONSTRUCTION QUANTITIES PORTAGE POINT DRIVE  
237 Ton HMA, 4EL TOP COURSE  
62 Ton HMA, 4EL WEDGING



3 WORKING DAYS  
BEFORE YOU DIG  
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OR 811

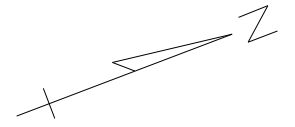
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2ND STREET FROM POB STA 00+00 TO STA 07+05 & PORTAGE POINT DRIVE POB STA 07+05 TO STA 20+00			
DATE	TOWNSHIP	JOB NO.	SHEET NO.
2/6/2025	ONEKAMA		5

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LAKE MICHIGAN



PORTAGE POINT DR  
POINT OF ENDING  
STA 34+10

9TH STREET  
EX HMA

6TH STREET  
EX HMA

SECTION 28  
T23N R16W  
ONEKAMA TWP

SECTION 28  
T23N R16W  
ONEKAMA TWP

PORTAGE LAKE

PORTAGE POINT DRIVE

29 Syd Pavt for Butt Joints. Rem  
43' LONG X 6' WIDE  
DAYLIGHT MILL  
1.5" MILL DEPTH  
EX CHIP JOINT 33+85

CONSTRUCTION QUANTITIES THIS SHEET  
263 Ton HMA, 4EL TOP COURSE  
69 Ton HMA, 4EL WEDGING

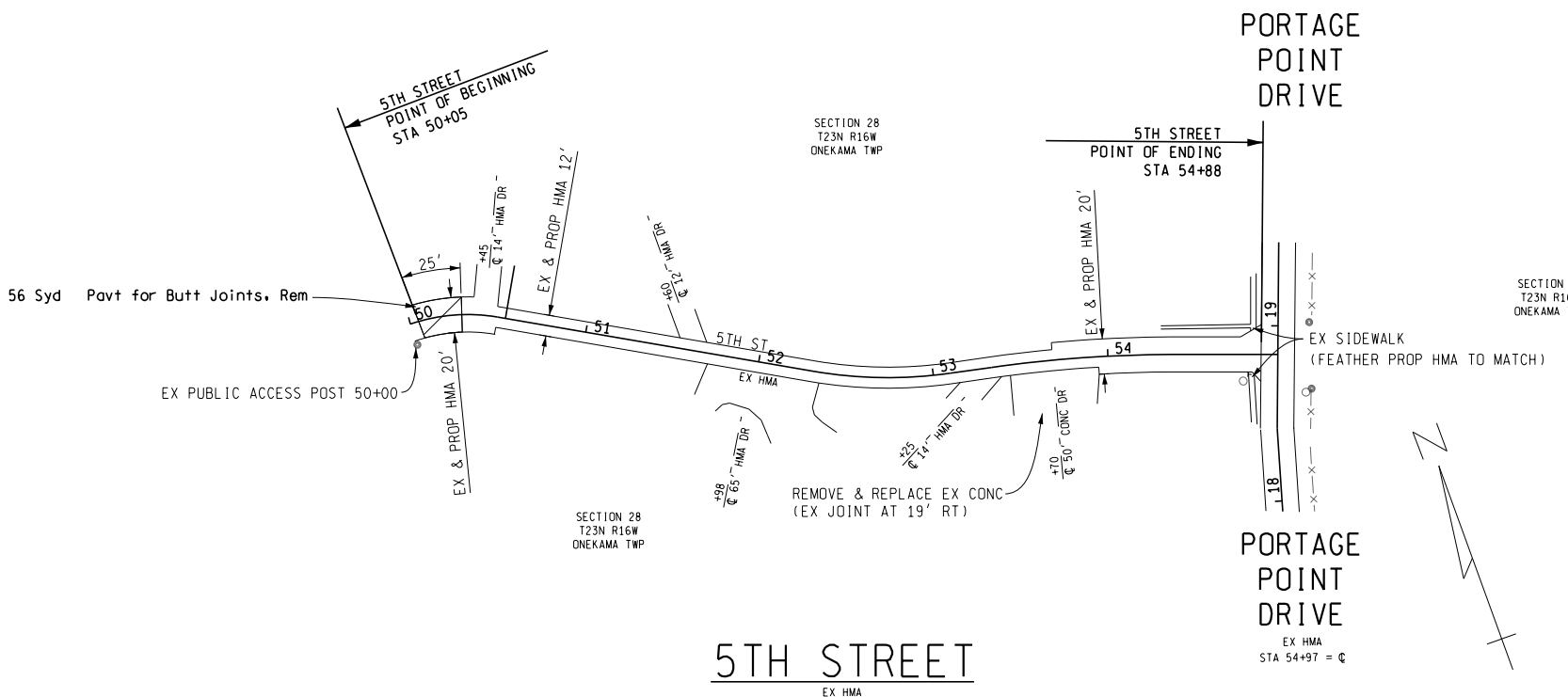
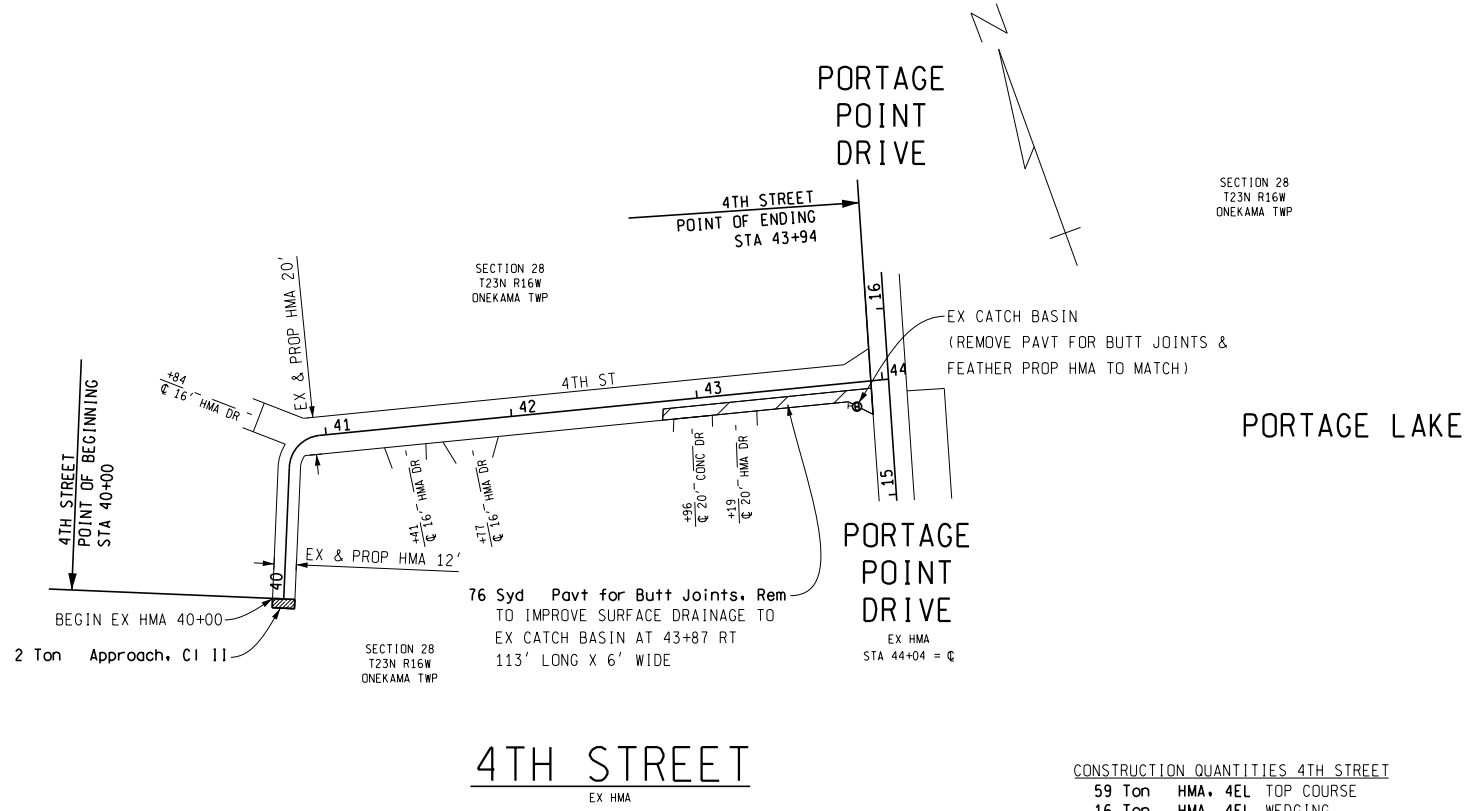
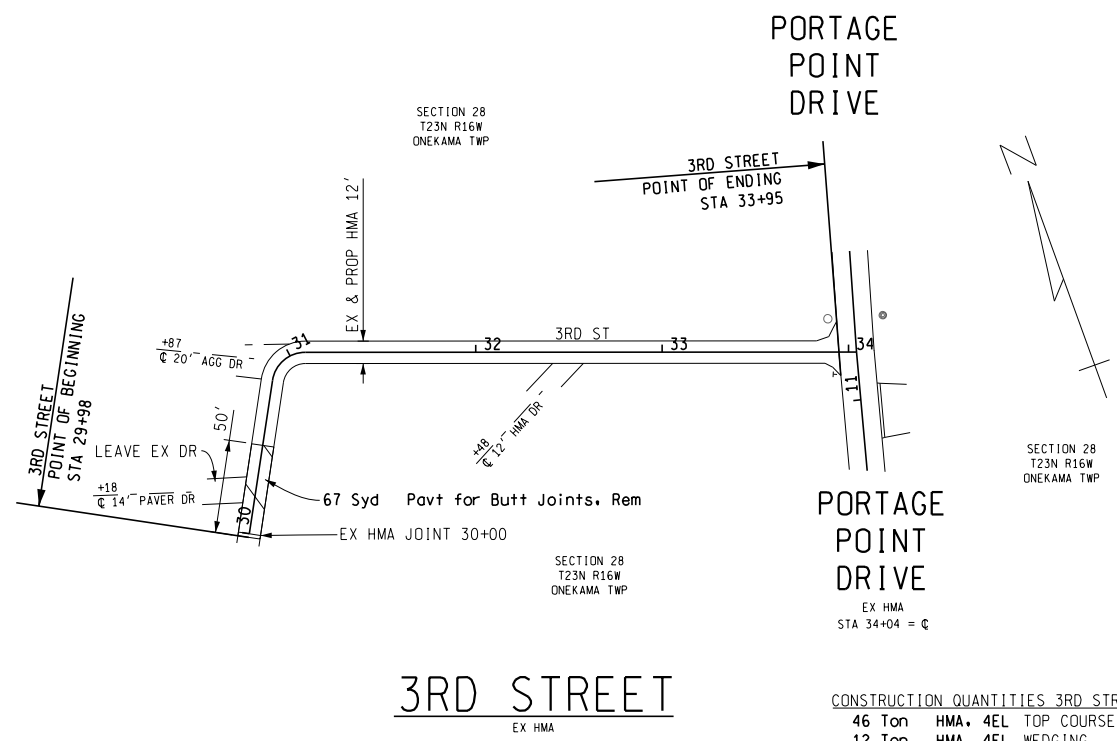
**811**  
3 WORKING DAYS  
BEFORE YOU DIG  
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800-482-7171  
OR 811

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County Road Commission

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PORTAGE POINT DRIVE STA 20+00 TO POE STA 34+10			
DATE	TOWNSHIP	JOB NO.	SHEET NO.
2/6/2025	ONEKAMA		6

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LAKE MICHIGAN

PORTAGE LAKE

**811**  
3 WORKING DAYS  
BEFORE YOU DIG  
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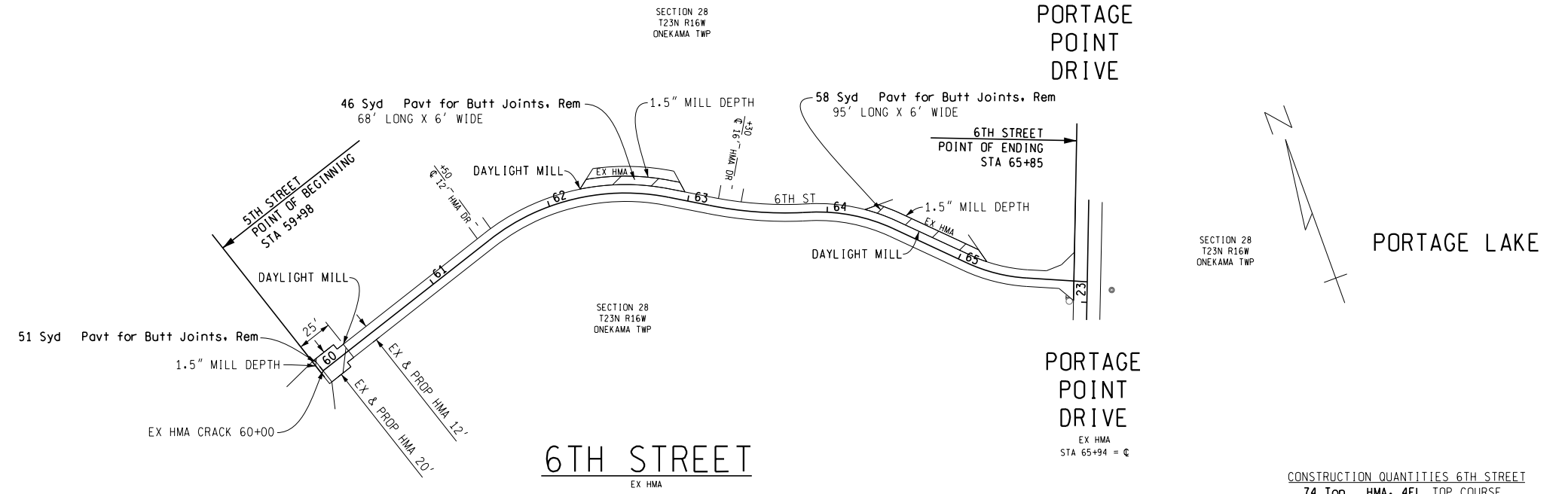
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CIVIL ENGINEERING CONSULTANTS

3RD, 4TH & 5TH STREETS			
DATE	TOWNSHIP	JOB NO.	SHEET NO.
2/6/2025	ONEKAMA		7

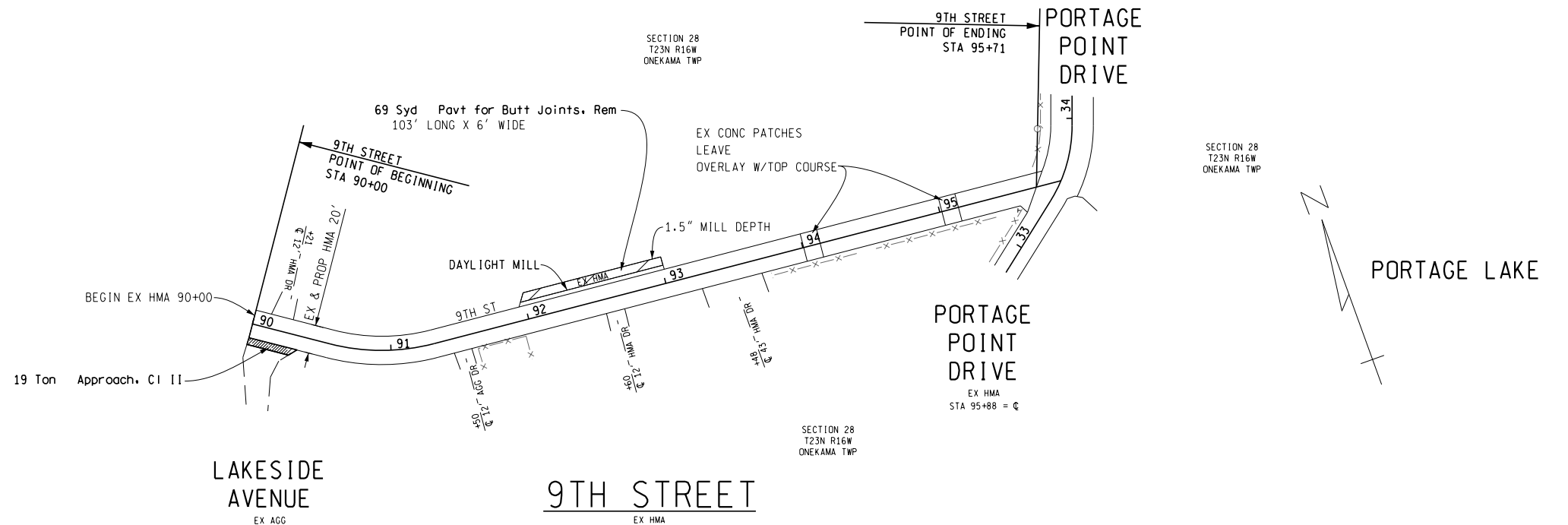
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LAKE MICHIGAN



CONSTRUCTION QUANTITIES 6TH STREET  
 74 Ton HMA, 4EL TOP COURSE  
 20 Ton HMA, 4EL WEDGING

LAKE MICHIGAN



EX HMA ROADWAY CROWN = INVERTED  
 MATCH EX CROWN AS DIRECTED BY THE ENGINEER.

CONSTRUCTION QUANTITIES 9TH STREET  
 110 Ton HMA, 4EL TOP COURSE  
 29 Ton HMA, 4EL WEDGING



3 WORKING DAYS  
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 OR 811

**MANISTEE**  
 County Road Commission



DATE  
 2/6/2025

6TH & 9TH STREETS

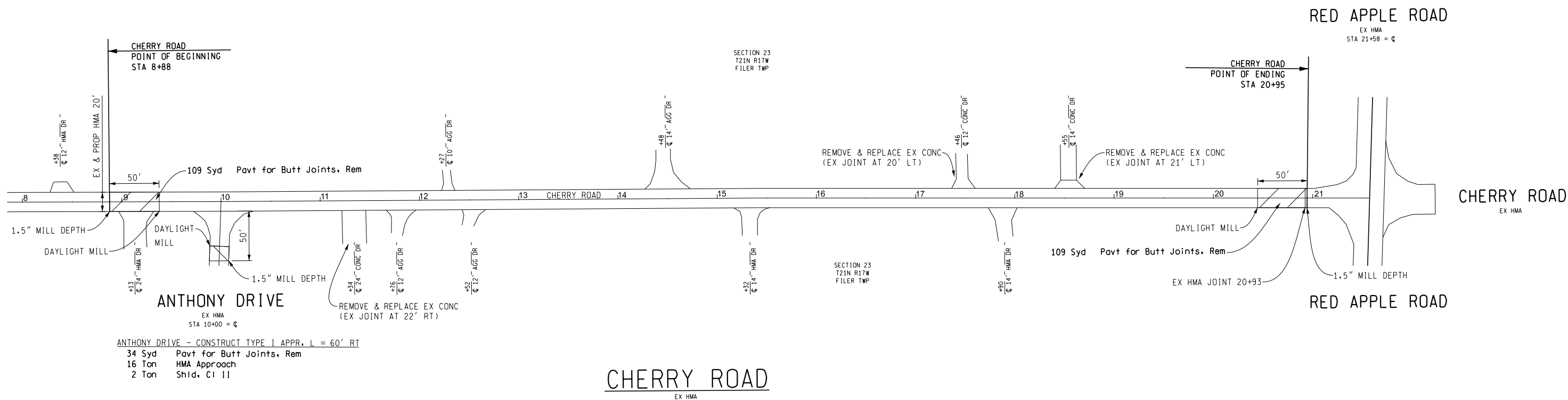
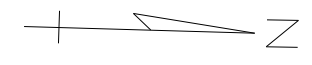
TOWNSHIP  
 ONEKAMA

JOB NO.

SHEET NO.  
 8

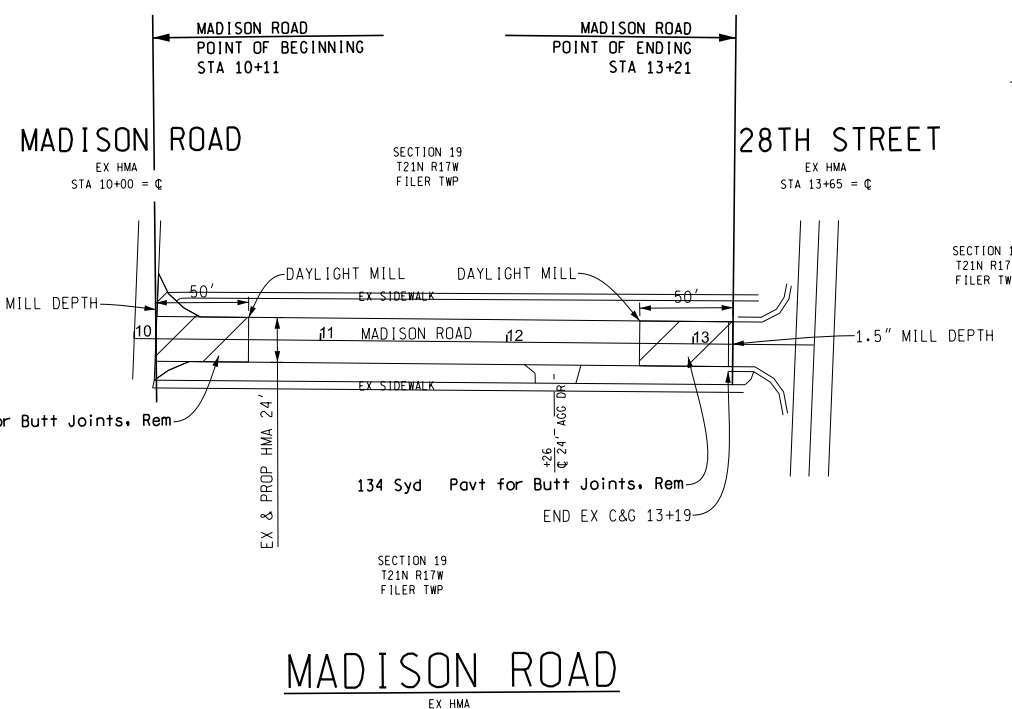
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ANTHONY DRIVE - CONSTRUCT TYPE I APPR. L = 60' RT  
 34 Syd Pavt for Butt Joints, Rem  
 16 Ton HMA Approach  
 2 Ton Shld. CI 11

CONSTRUCTION QUANTITIES CHERRY ROAD  
 233 Ton HMA, 4EL (TOP COURSE)  
 101 Ton HMA, 4EL (WEDGING)



CONSTRUCTION QUANTITIES MADISON ROAD  
 72 Ton HMA, 4EL (TOP COURSE)  
 58 Ton HMA, 4EL (WEDGING)

NOTE: ALIGNMENT INFORMATION HAS BEEN DERIVED FROM AERIAL PHOTOGRAPHY AND IS FOR INFORMATION ONLY.



3 WORKING DAYS BEFORE YOU DIG  
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**MANISTEE**  
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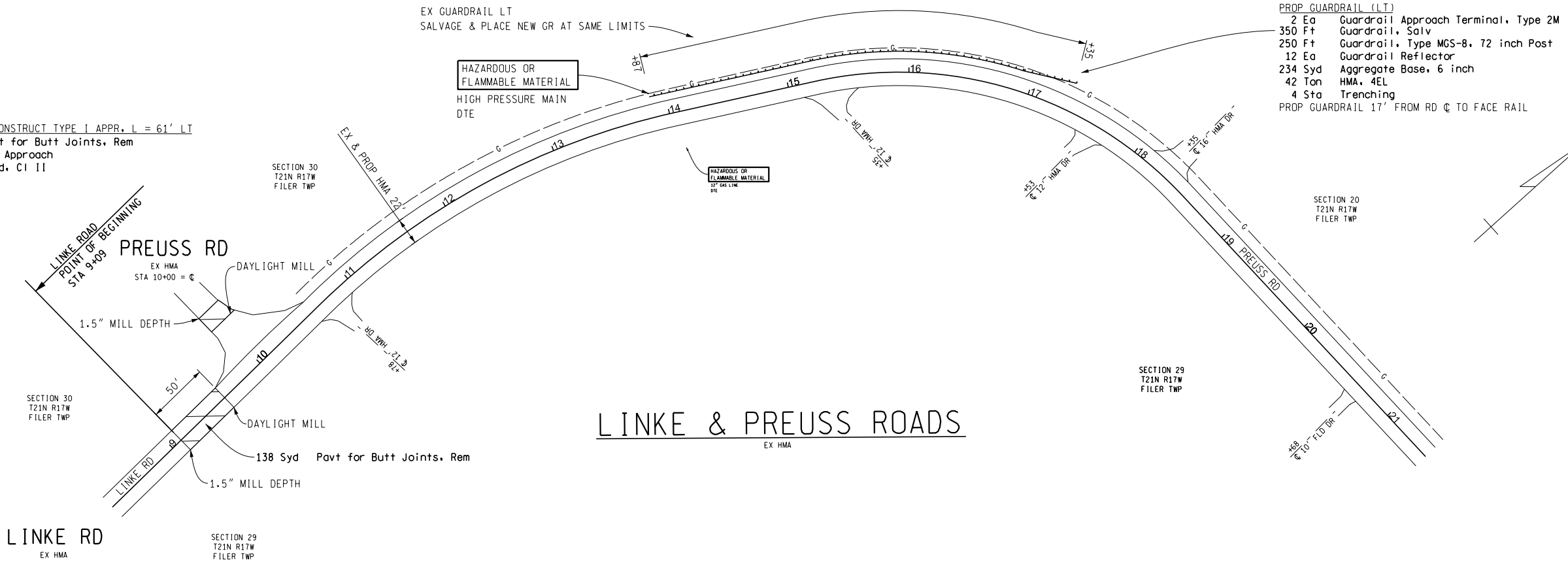
**KPM ENGINEERING**  
 CIVIL ENGINEERING CONSULTANTS

CHERRY ROAD - POB STA 8+88 TO POE STA 20+95 & MADISON ROAD - POB STA 10+11 TO POE STA 13+21			
DATE	TOWNSHIP	JOB NO.	SHEET NO.
2/6/2025	FILER		9

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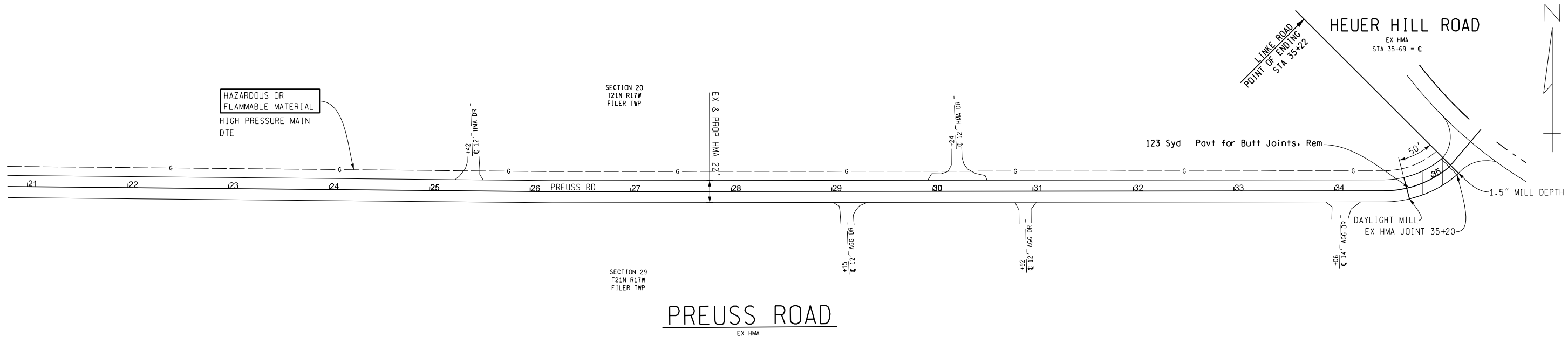
PREUSS ROAD - CONSTRUCT TYPE I APPR. L = 61' LT

40 Syd Pavt for Butt Joints, Rem  
 24 Ton HMA Approach  
 2 Ton Shld, CI II



PROP GUARDRAIL (LT)  
 2 Ea Guardrail Approach Terminal, Type 2M  
 350 Ft Guardrail, Salv  
 250 Ft Guardrail, Type MGS-8, 72 inch Post  
 12 Ea Guardrail Reflector  
 234 Syd Aggregate Base, 6 inch  
 42 Ton HMA, 4EL  
 4 Sta Trenching  
 PROP GUARDRAIL 17' FROM RD C TO FACE RAIL

LINKE & PREUSS ROADS  
 EX HMA



PREUSS ROAD  
 EX HMA

CONSTRUCTION QUANTITIES THIS SHEET  
 504 Ton HMA, 4EL (TOP COURSE)  
 218 Ton HMA, 4EL (WEDGING)  
 246 Ton Shld, CI II



3 WORKING DAYS BEFORE YOU DIG  
 CALL MISS DIG  
 800-482-7171  
 OR 811

**MANISTEE**  
 County Road Commission

**KPM ENGINEERING**  
 CIVIL ENGINEERING CONSULTANTS

LINKE & PREUSS ROADS - POB STA 9+59 TO POE STA 35+22			
DATE	TOWNSHIP	JOB NO.	SHEET NO.
2/6/2025	FILER		10

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