

# City of Grosse Pointe Woods



## Wayne County, Michigan

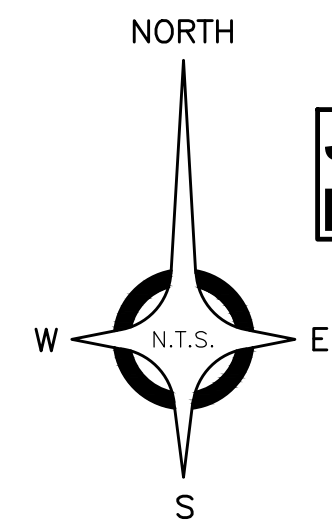
In Cooperation With The Michigan Department Of Transportation And The Federal Highway Administration

Plan And Detail Of Proposed

### Vernier & Mack Intersection Improvements

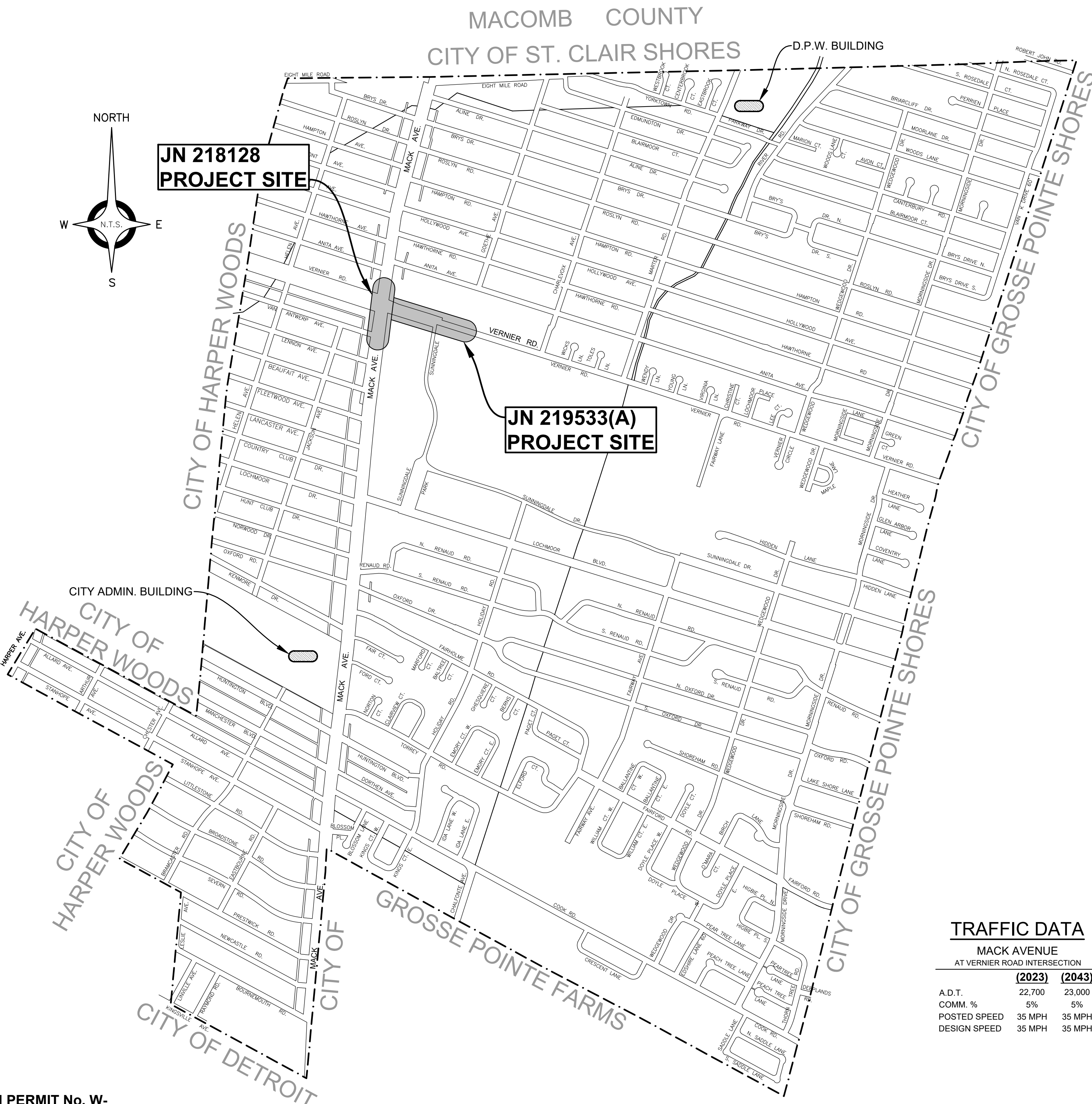
**Control Section** **Job No.**

HSIP / VRU 82000 218128  
SRTS / VRU 82000 219533(A)



**JN 218128  
PROJECT SITE**

**JN 219533(A)  
PROJECT SITE**



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#### DESIGN & CONSTRUCTION STANDARD

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE CITY OF EASTPOINTE STANDARD WATER MAIN SPECIFICATIONS UNLESS MODIFIED BY A SPECIAL PROVISION.

ALL TRAFFIC CONTROL DEVICES SUCH AS LIGHTED ARROW BOARDS, PLASTIC DRUMS, BARRICADES, TEMPORARY SIGNAGE, AND LANE CLOSURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE 2011 MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE SUPPLEMENTARY MAINTAINING TRAFFIC SPECIAL PROVISION.

#### PROJECT DESCRIPTION

INTERSECTION AND SIGNAL MODERNIZATION INCLUDING MAST ARMS ON MACK AVENUE AT VERNIER ROAD, RECONFIGURATION OF AN EXISTING CROSSOVER INCLUDING NEW MAST ARM SIGNALS ON VERNIER ROAD EAST OF MACK AVENUE, A NEW SIGNALIZED INTERSECTION ON VERNIER ROAD AT SUNNINGDALE PARK INCLUDING MAST ARMS, CROSSWALK WITH ADA IMPROVEMENTS, AND WIDENING OF VERNIER ROAD EAST OF SUNNINGDALE IN THE CITY OF GROSSE POINTE WOODS, WAYNE COUNTY. THIS IS A LOCAL AGENCY PROJECT.

#### TRAFFIC DATA

MACK AVENUE  
AT VERNIER ROAD INTERSECTION

	(2023)	(2043)
A.D.T.	22,700	23,000
COMM. %	5%	5%
POSTED SPEED	35 MPH	35 MPH
DESIGN SPEED	35 MPH	35 MPH

#### TRAFFIC DATA

VERNIER ROAD  
SUNNINGDALE PARK TO MACK AVENUE

	(2023)	(2043)
A.D.T.	5,800	6,000
COMM. %	3%	3%
POSTED SPEED	35 MPH	35 MPH
DESIGN SPEED	35 MPH	35 MPH

LOCAL AUTHORITY APPROVAL  
CITY OF GROSSE POINTE WOODS

JIM KOWALSKI, DIRECTOR OF PUBLIC SERVICES

DATE

"I HEREBY CERTIFY THESE PLANS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH ACT 240, PUBLIC ACTS OF 1937 AS AMENDED- STATE OF MICHIGAN."

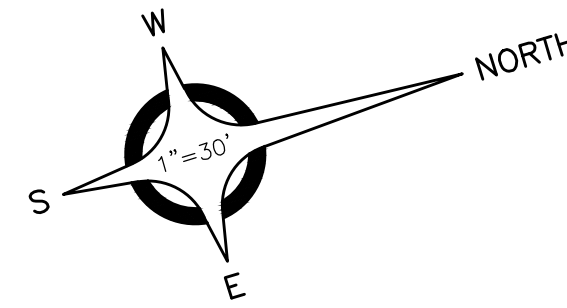
ROSS T. WILBERDING, P.E. No. 6201068836

DATE

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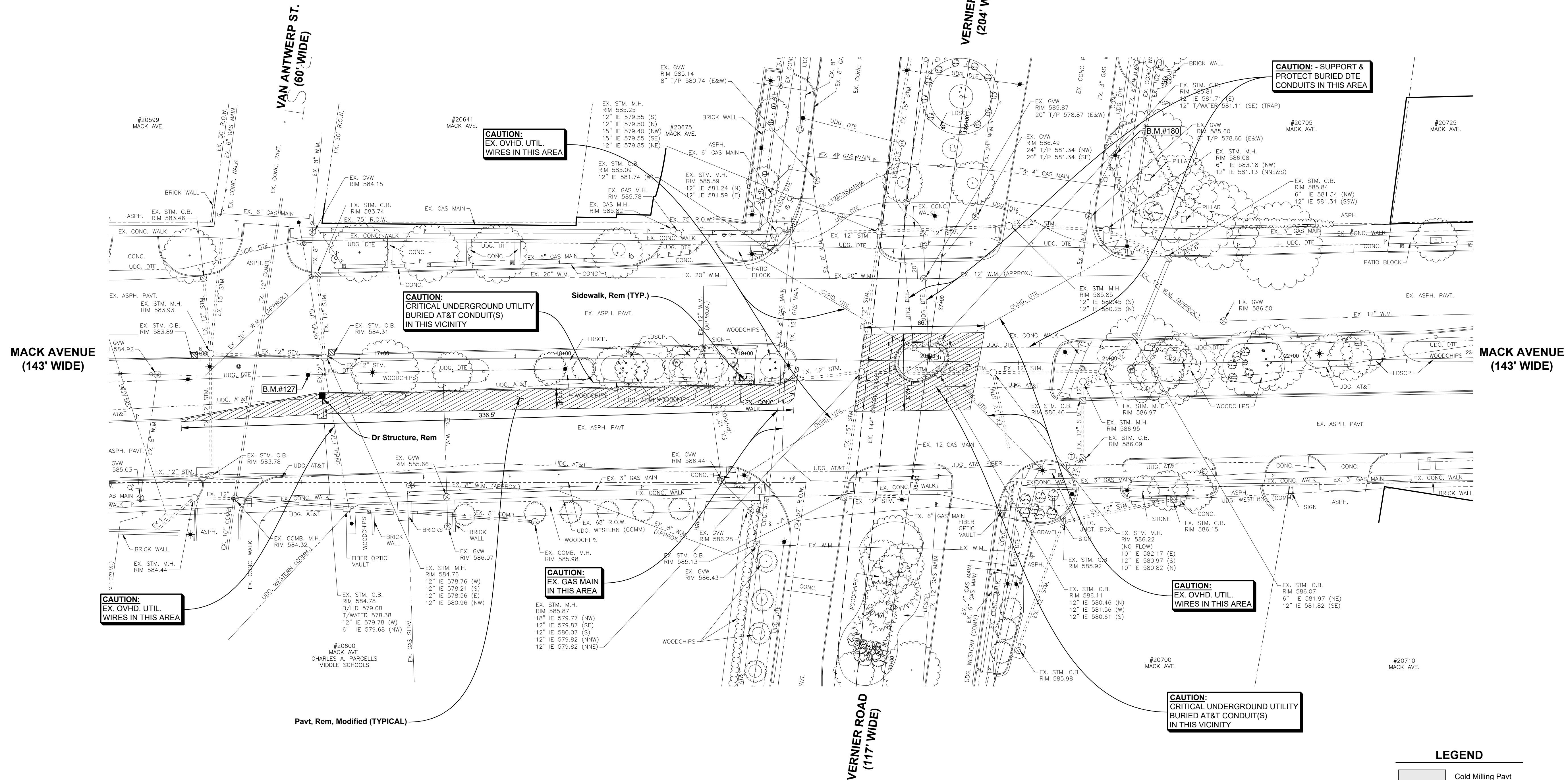
ANDERSON, ECKSTEIN AND WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

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ENGINEERING STRONG COMMUNITIES



MACK AVENUE  
(143' WIDE)

MACK AVENUE  
(143' WIDE)

VERNIER ROAD  
(204' WIDE)

VERNIER ROAD  
(117' WIDE)

VAN ANTWERP ST.  
(60' WIDE)

**LEGEND**

	Cold Milling Pavt
	Pavt, Rem, Modified
	Sidewalk, Rem

**JN 218128 ESTIMATED QUANTITIES (THIS SHEET)**

1. Pavt, Rem, Modified	640	Syd
2. Sidewalk, Rem	8	Syd
3. Dr Structure, Rem	1	Ea

DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	

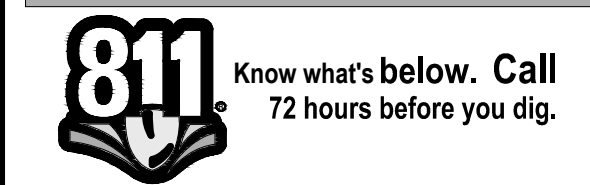
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**REMOVAL PLAN**  
MACK AVENUE  
STA. 15+25 TO STA. 23+00

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: DBK	CHECKED BY: RW	DATE: JUNE 2023
SCALE: 1" = 30'		
0 15 30 60		



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

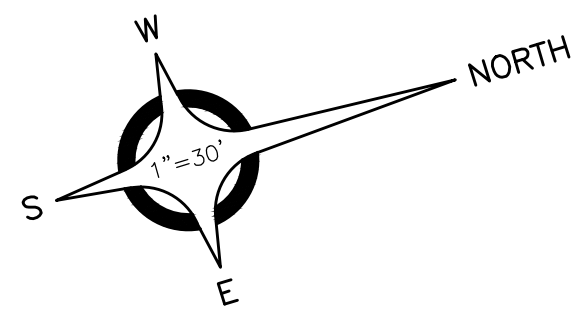
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DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO. 0160-0455

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SHEET NO.



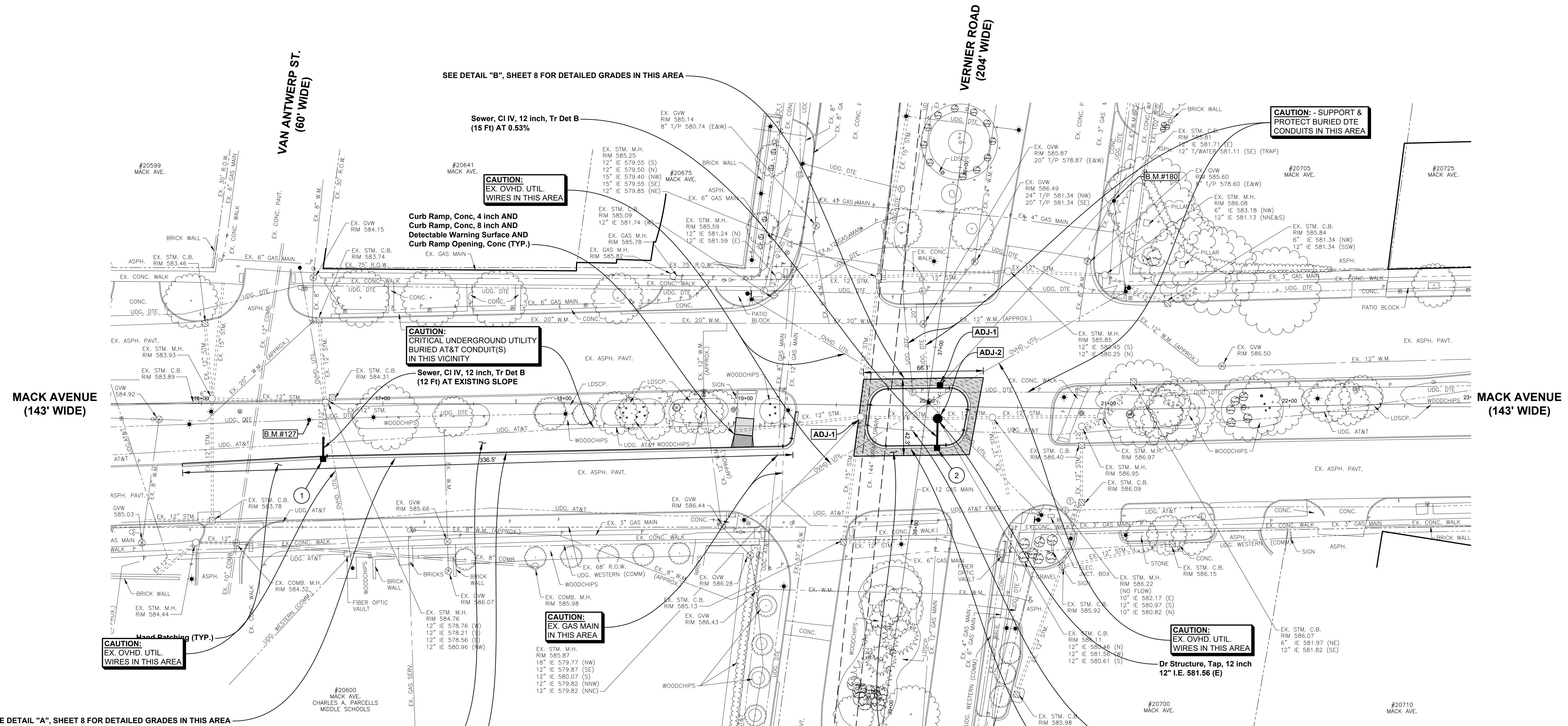
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MACK AVENUE  
(143' WIDE)

MACK AVENUE  
(143' WIDE)

VERNIER ROAD  
(204' WIDE)

VERNIER ROAD  
(117' WIDE)

VAN ANTWERP ST.  
(60' WIDE)

SEE DETAIL "B", SHEET 8 FOR DETAILED GRADES IN THIS AREA

SEE DETAIL "A", SHEET 8 FOR DETAILED GRADES IN THIS AREA

Embankment, CIP AND  
Topsoil, Furn, 3 inch AND  
Hydroseeding (TYPICAL)

Curb and Gutter, Conc, Det F1, Modified

Sewer, CI IV, 12 inch, Tr Det B  
(15 Ft) AT 0.53%

Curb Ramp, Conc, 4 inch AND  
Curb Ramp, Conc, 8 inch AND  
Detectable Warning Surface AND  
Curb Ramp Opening, Conc (TYP.)

CAUTION:  
CRITICAL UNDERGROUND UTILITY  
BURIED AT&T CONDUIT(S)  
IN THIS VICINITY

Sewer, CI IV, 12 inch, Tr Det B  
(12 Ft) AT EXISTING SLOPE

CAUTION:  
EX. GAS MAIN  
IN THIS AREA

CAUTION:  
EX. OVHD. UTIL.  
WIRES IN THIS AREA

CAUTION: - SUPPORT &  
PROTECT BURIED DTE  
CONDUITS IN THIS AREA

CAUTION:  
EX. OVHD. UTIL.  
WIRES IN THIS AREA

Dr Structure, Tap, 12 inch  
12" I.E. 581.56 (E)

CAUTION:  
CRITICAL UNDERGROUND UTILITY  
BURIED AT&T CONDUIT(S)  
IN THIS VICINITY

**JN 218128 ESTIMATED QUANTITIES  
(THIS SHEET)**

1. HMA, 5EMH	20 Ton
2. HMA, 4EMH	20 Ton
3. Conc Base Cse, Nonreinf, 10 inch	105 Syd
4. Aggregate Base, 8 inch	217 Syd
5. Curb and Gutter, Conc, Det F1, Modified	510 Ft
6. Dr Structure, Tap, 12 inch	1 Ea
7. Curb Ramp, Conc, 4 inch	125 Sft
8. Curb Ramp, Conc, 8 inch	80 Sft
9. Curb Ramp Opening, Conc	13 Ft
10. Detectable Warning Surface	10 Ft
11. Dr Structure, Adj, Case 1	2 Ea
12. Dr Structure, Adj, Case 2	1 Ea
13. Dr Structure, 24 inch dia	2 Ea
14. External Structure Wrap, 18 inch	2 Ea
15. Catch Basin Cover, WC DPS	3 Ea
16. Storm Manhole Cover, GPW	2 Ea
17. Embankment, CIP	90 Cyd
18. Sewer, CI IV, 12 inch, Tr Det B	27 Ft
19. Curb Ramp Opening, Conc	10 Ft

**LEGEND**

- HMA, 5EMH (2 inch) ON  
HMA, 4EMH (2 inch)
- HMA, 5EMH (3 inch) ON  
HMA, 4EMH (3 inch) ON  
Conc Base Cse, Nonreinf, 10 inch  
ON Aggregate Base, 8 inch
- Driveway, Nonreinf Conc, 8 inch
- Sidewalk, Conc, 8 inch
- Curb Ramp, Conc, 4 inch
- Curb Ramp, Conc, 8 inch

① Dr Structure, 24 inch dia  
WITH 2' SUMP AND  
External Structure Wrap, 18 inch AND  
Catch Basin Cover, WC DPS  
STA. 16+69.36, 30.76' RT.  
RIM 584.85  
12" IE 578.91 (W)

② Dr Structure, 24 inch dia  
WITH 2' SUMP AND  
External Structure Wrap, 18 inch AND  
Catch Basin Cover, WC DPS  
STA. 20+05.88, 22.85' RT.  
RIM 585.90  
12" IE 581.64 (W)

DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	

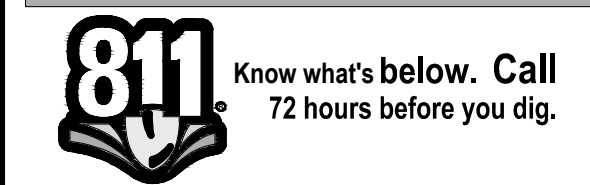
**VERNIER & MACK  
INTERSECTION  
IMPROVEMENTS**

SHEET TITLE:

**CONSTRUCTION  
PLAN  
MACK AVENUE  
STA. 15+25 TO STA. 23+00**

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: DBK	CHECKED BY: RW	DATE: JUNE 2023
SCALE: 1" = 30'		



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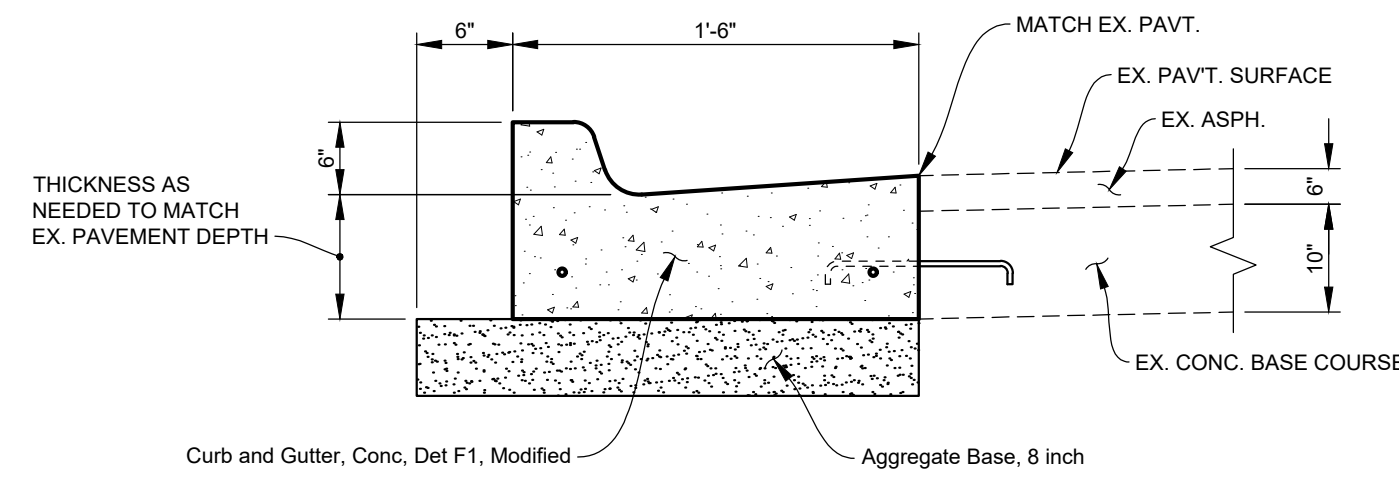
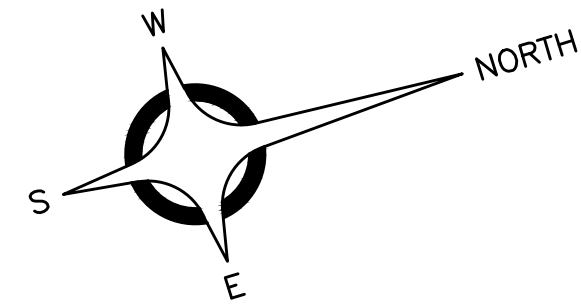
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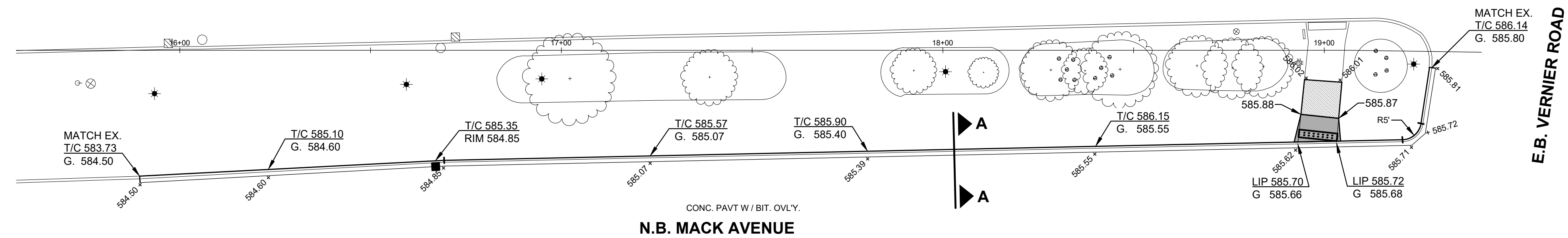




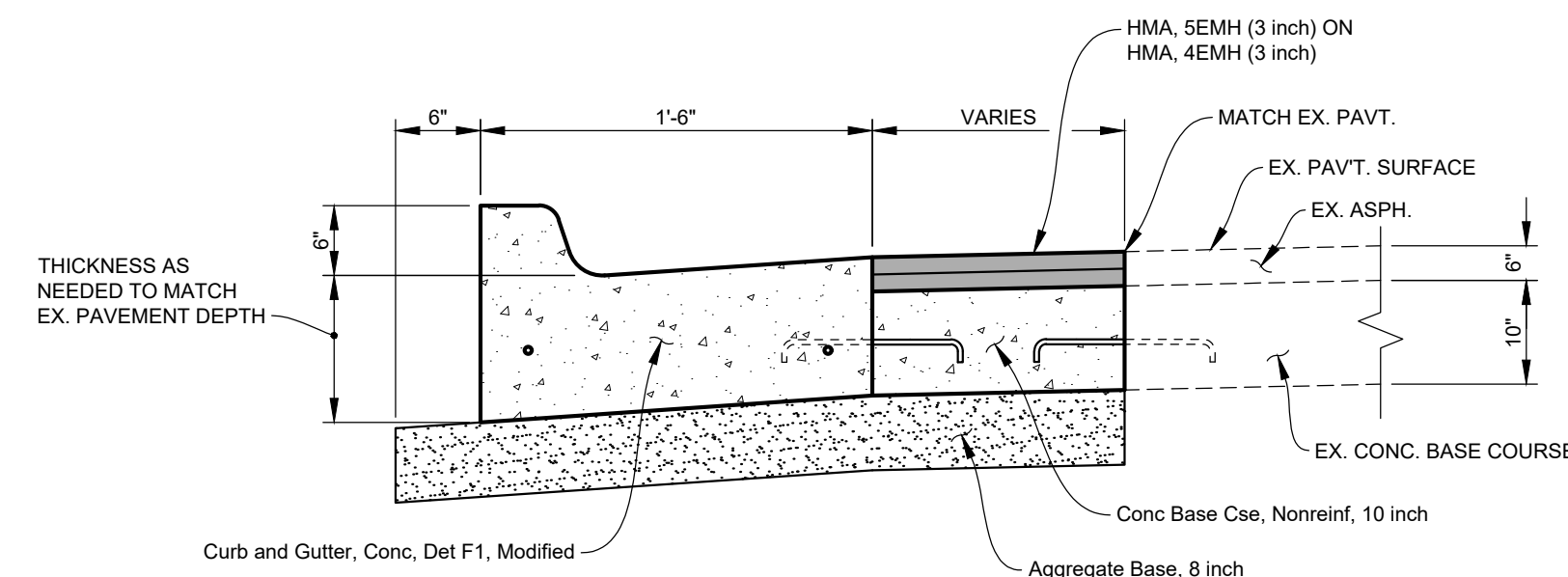


**SECTION "A-A"**  
NOT TO SCALE

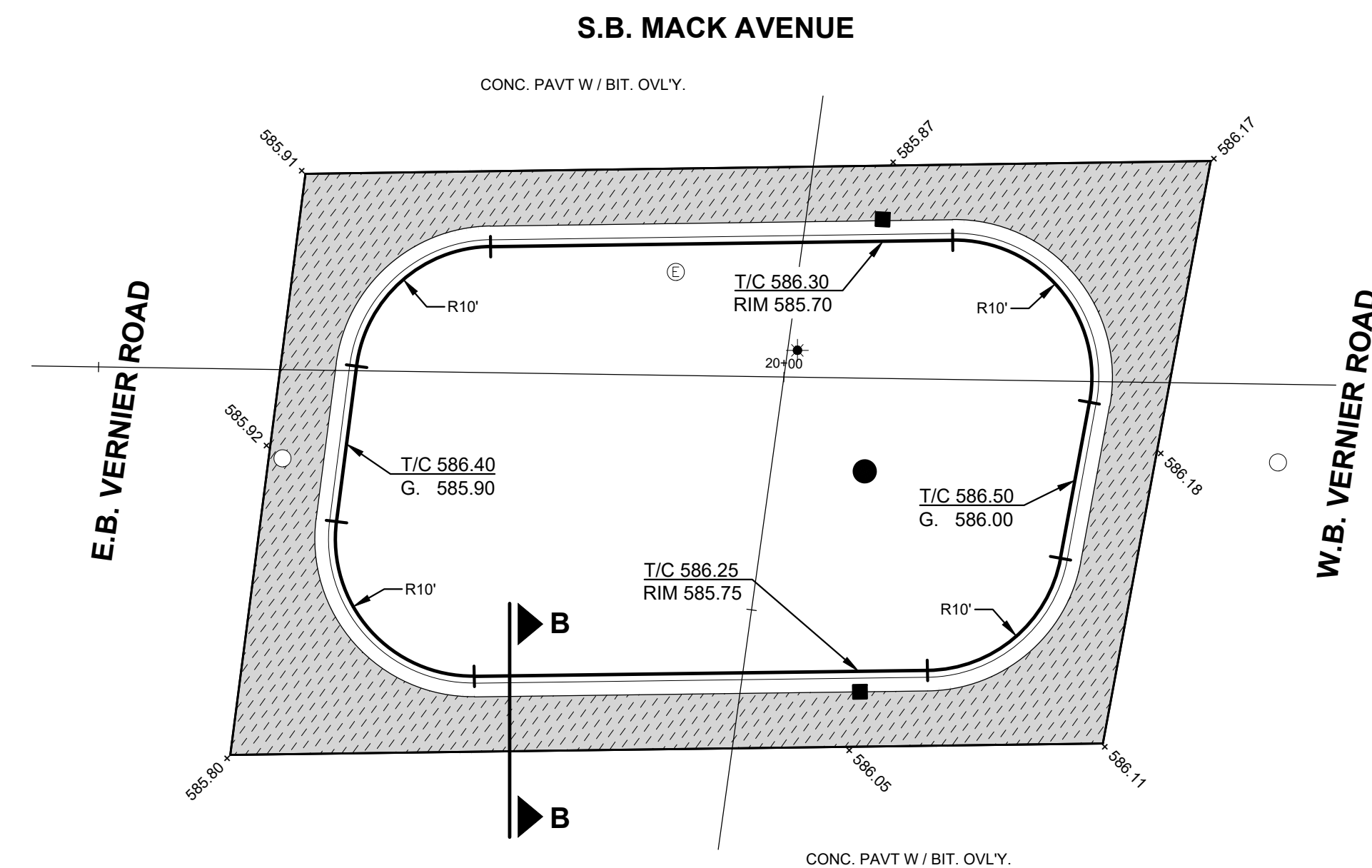
**S.B. MACK AVENUE**



**DETAIL "A"**  
SCALE: 1" = 20'



**SECTION "B-B"**  
NOT TO SCALE



**DETAIL "B"**  
SCALE: 1" = 10'



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DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	
<b>VERNIER &amp; MACK INTERSECTION IMPROVEMENTS</b>	
SHEET TITLE:	
<b>DETAILED GRADES MACK AVENUE</b>	
CLIENT:	
CITY OF GROSSE POINTE WOODS	
<input checked="" type="checkbox"/> PRELIMINARY <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> RECORD	
DRAWN BY:	CHECKED BY:
KJP/DBK	RW
DATE:	
JUNE 2023	
SCALE:	
AS NOTED	

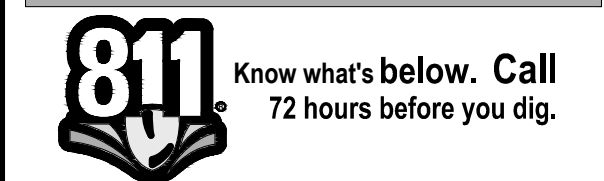
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**DETAILED GRADES MACK AVENUE**

CLIENT:  
CITY OF GROSSE POINTE WOODS

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DRAWN BY:	CHECKED BY:	DATE:
KJP/DBK	RW	JUNE 2023
SCALE:		
AS NOTED		



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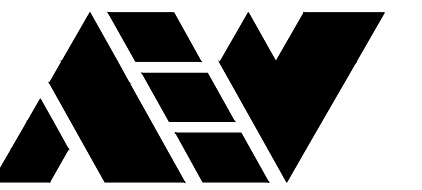
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SHEET NO.

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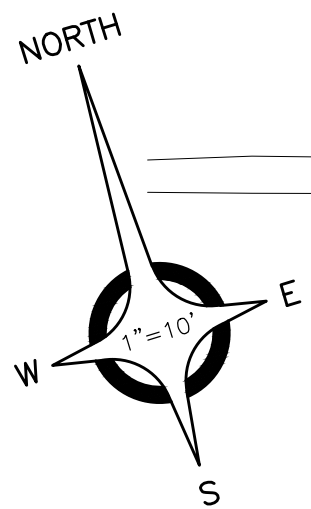
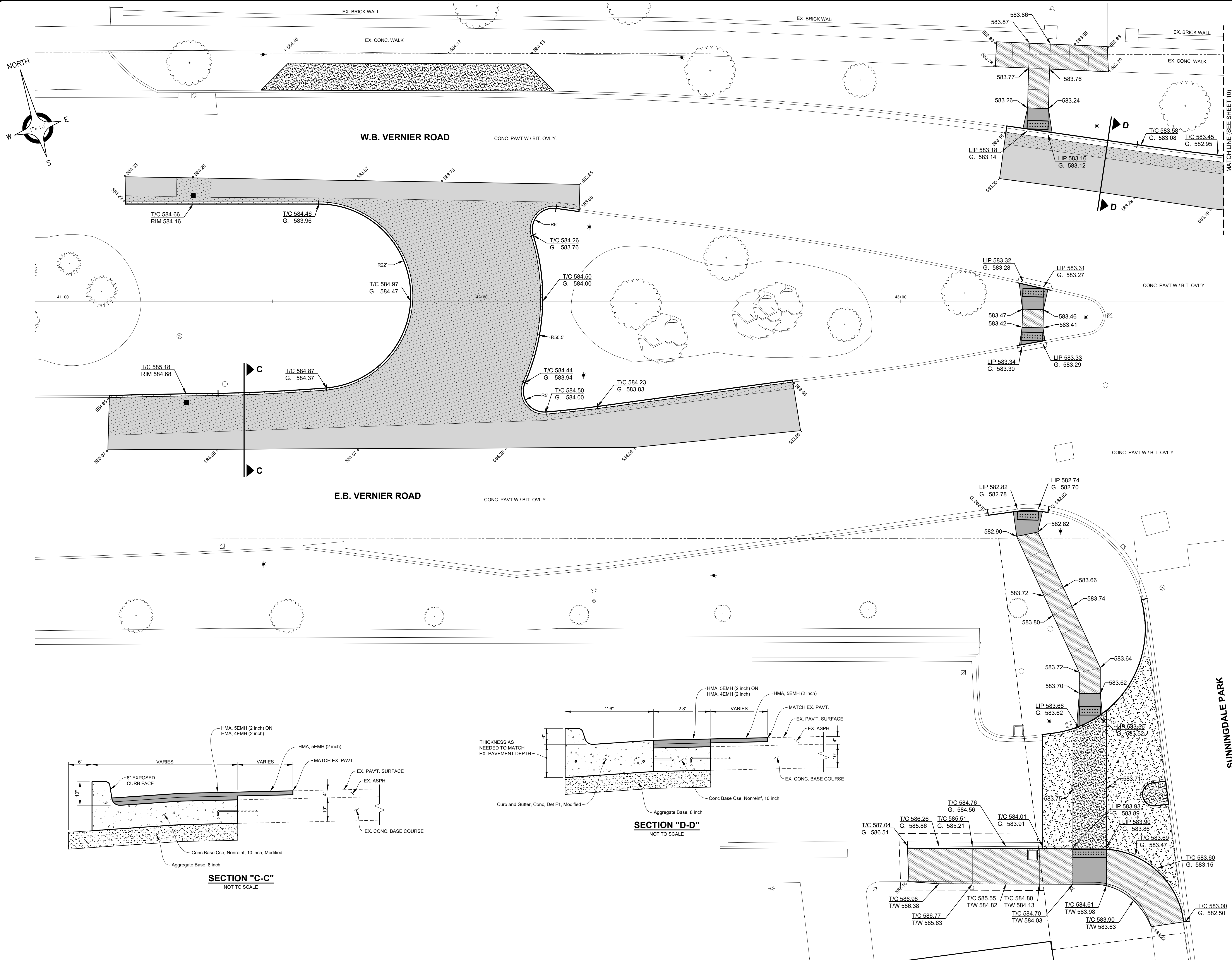
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MATCH LINE (SEE SHEET 10)

DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

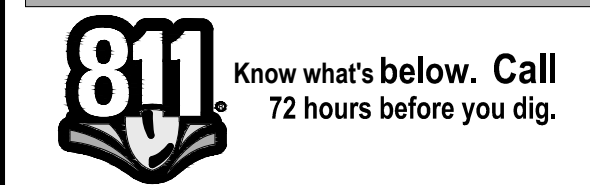
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**DETAILED GRADES  
VERNIER ROAD**

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: KJP/DBK	CHECKED BY: RW	DATE: MAY 2023
SCALE: 1" = 10'		



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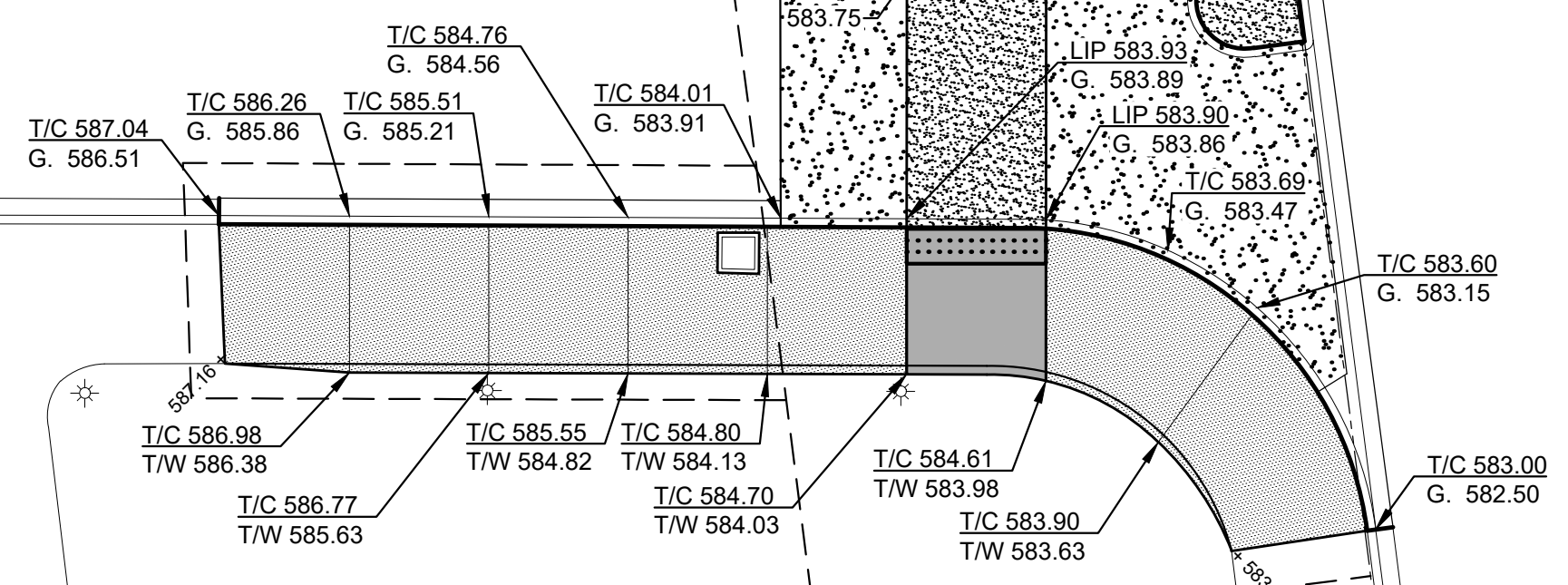
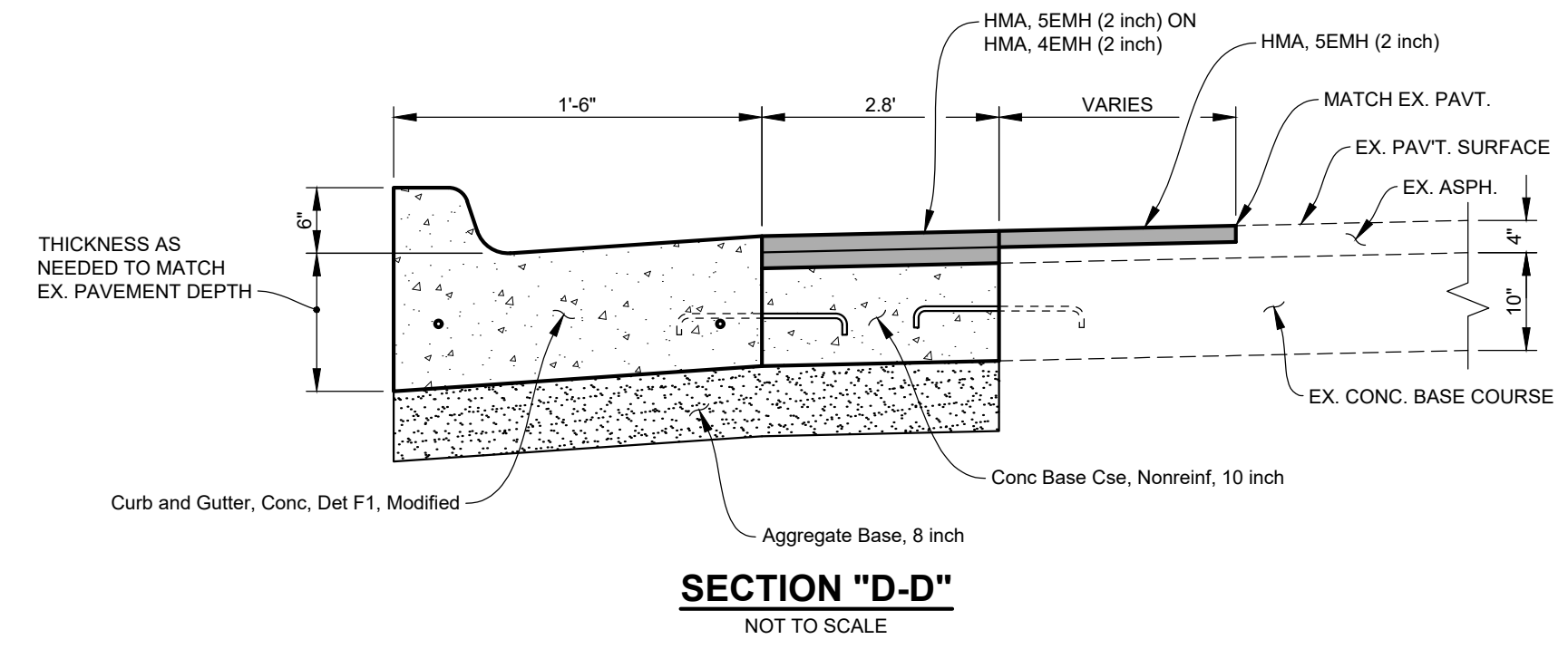
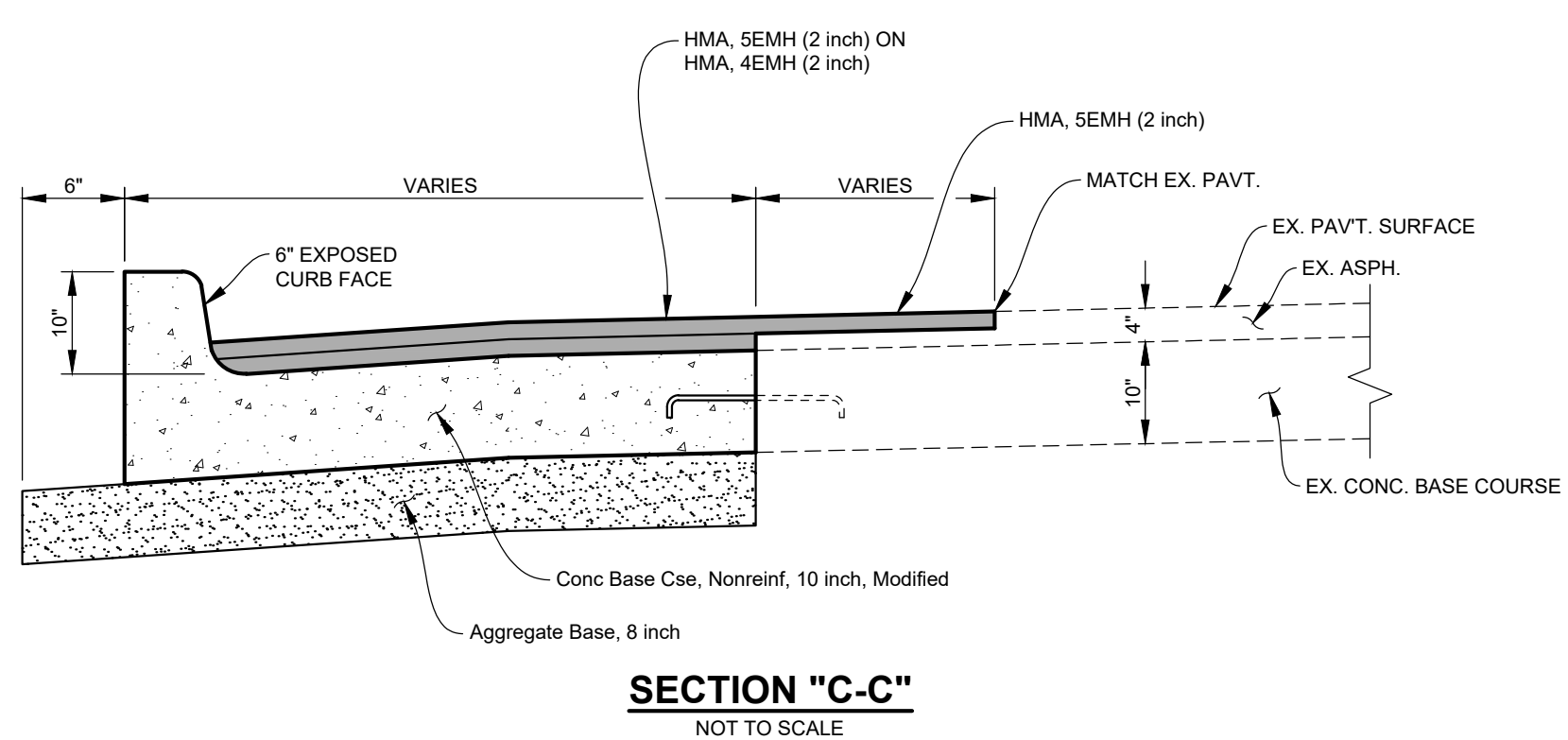
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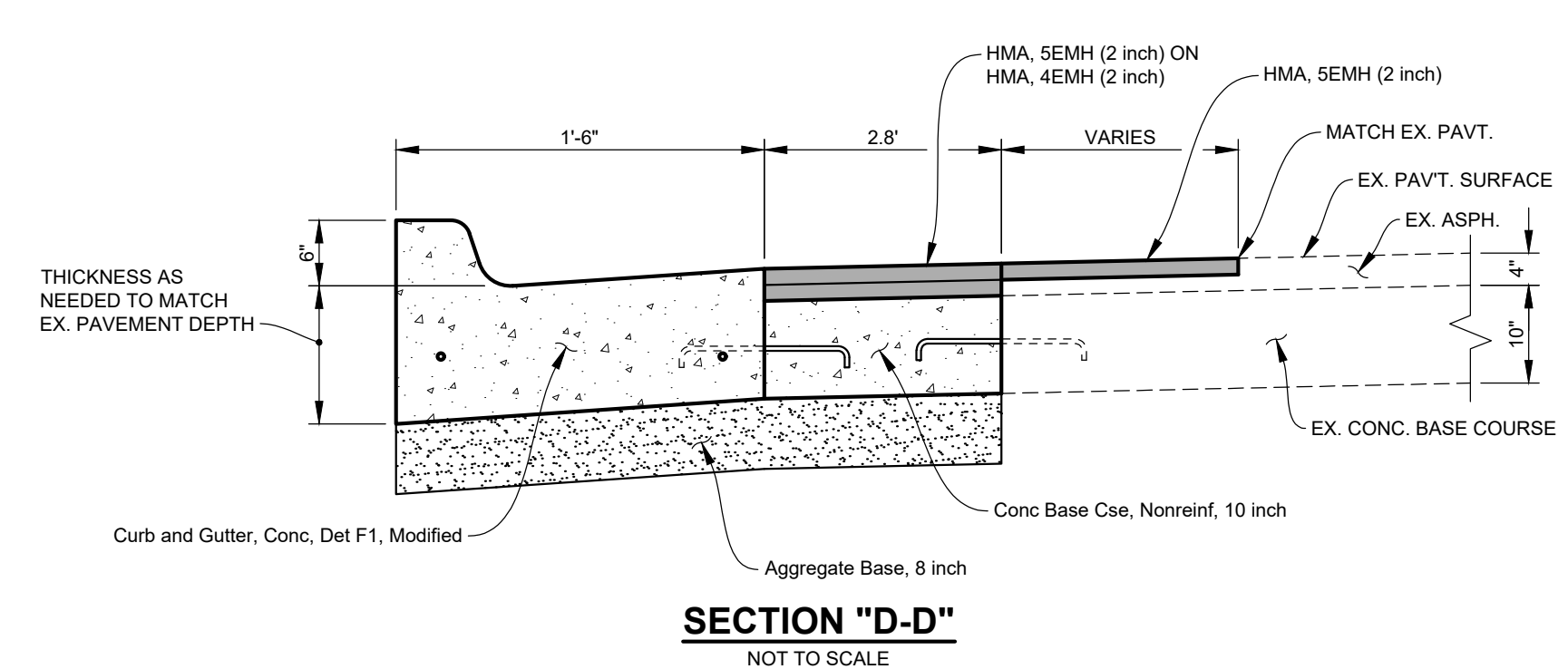
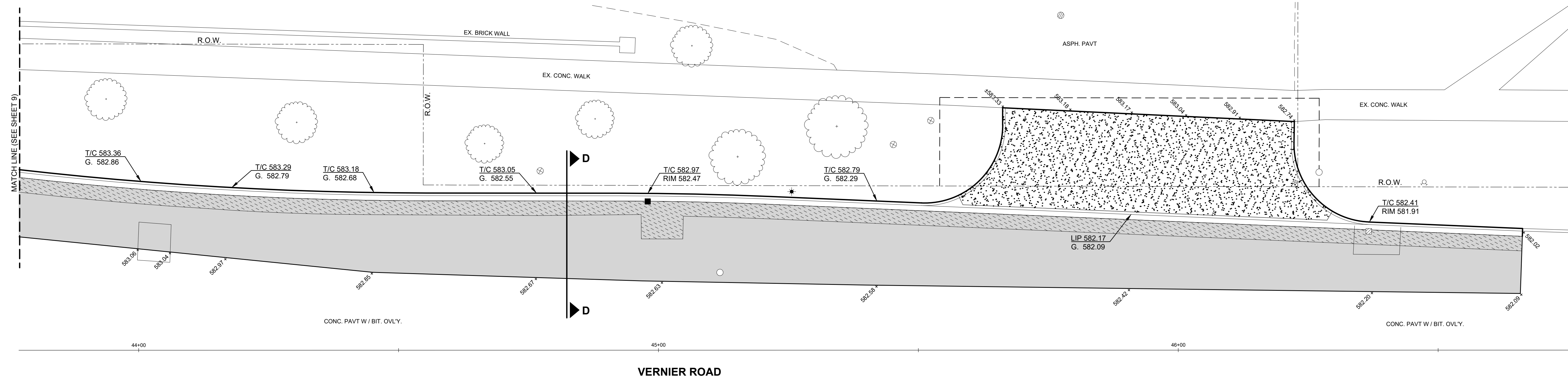
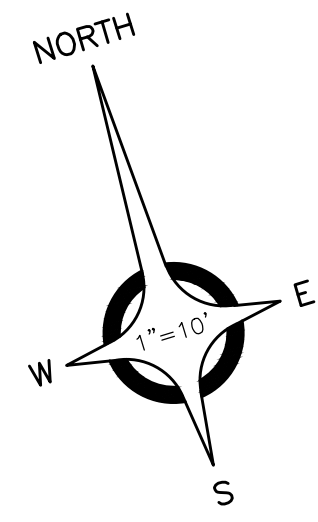
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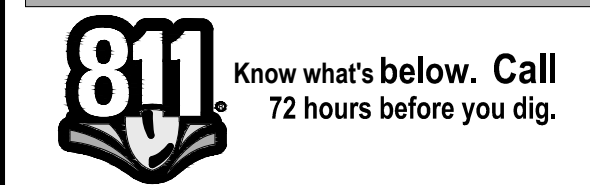
DATE	SUBMITTALS/REVISIONS

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**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:  
**DETAILED GRADES  
VERNIER ROAD**

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: KJP/DBK	CHECKED BY: RW	DATE: MAY 2023
SCALE: 1" = 10'		
0 5 10 20		



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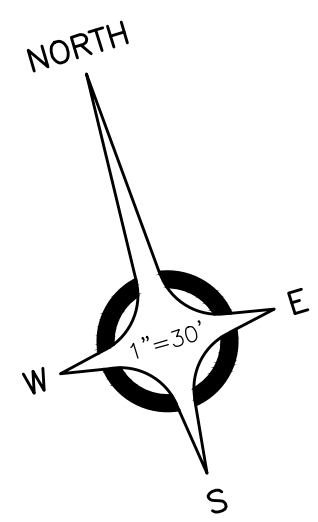
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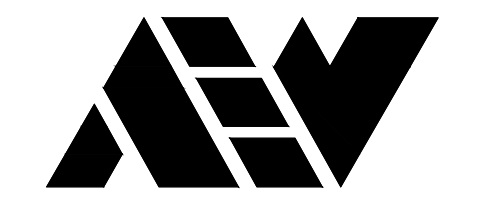
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SHEET NO.



**NO TRUCKS  
AT CROSSOVER**

NOTE:  
MAINTAIN MINIMUM 11' LANES AT ALL TIMES



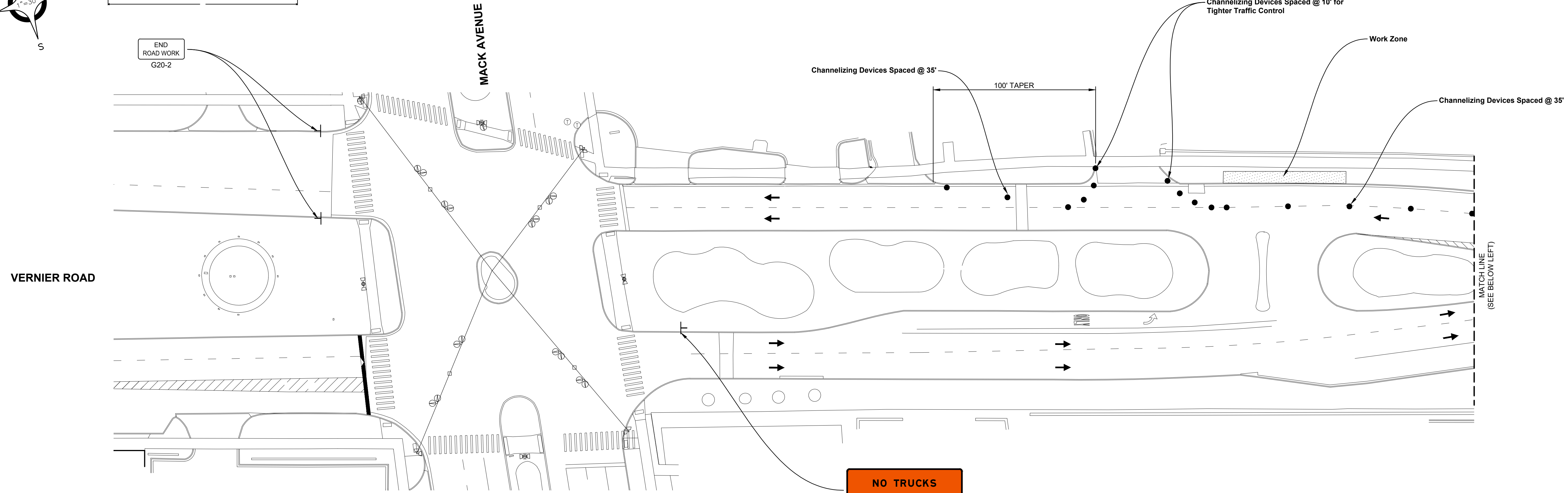
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CIVIL ENGINEERS SURVEYORS ARCHITECTS

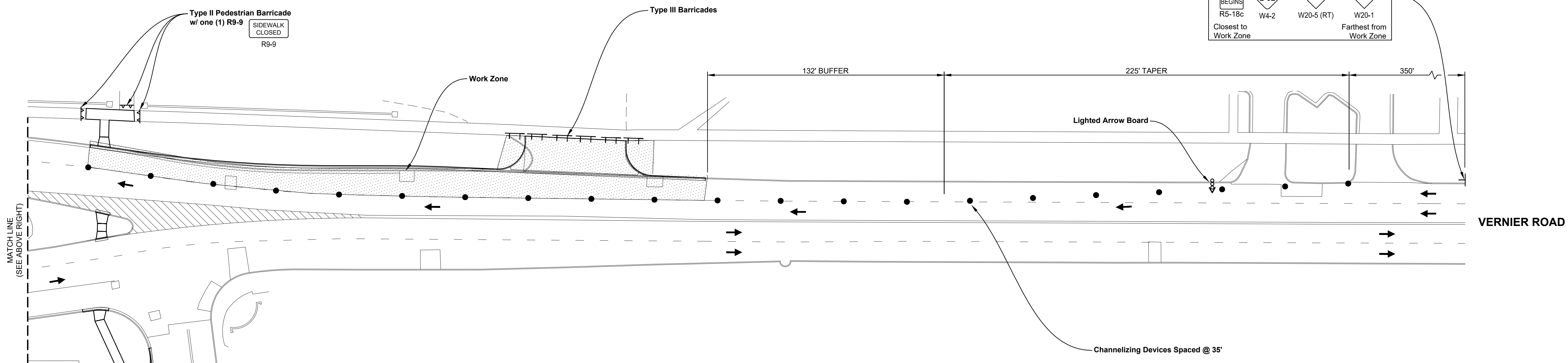
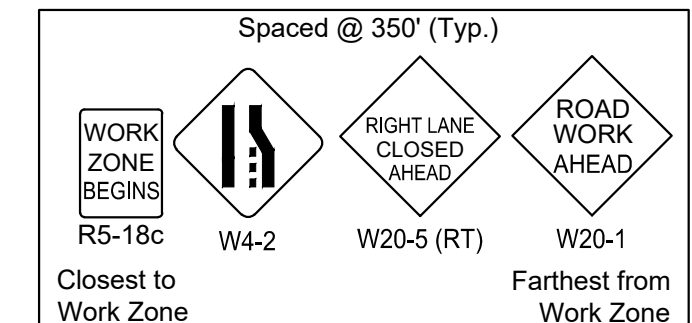
51301 Schoenherr Road Phone 586 726 1234  
Shelby Township Fax 586 726 8780  
Michigan 48315

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ENGINEERING STRONG COMMUNITIES



**NO TRUCKS  
AT CROSSOVER**  
SP-4



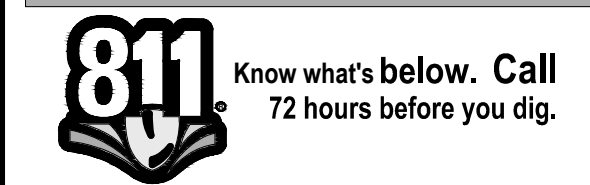
DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	
<b>VERNIER &amp; MACK INTERSECTION IMPROVEMENTS</b>	
SHEET TITLE:	
<b>MAINTENANCE OF TRAFFIC STAGE 1A VERNIER ROAD</b>	
CLIENT:	
CITY OF GROSSE POINTE WOODS	
<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION
<input type="checkbox"/> RECORD	
DRAWN BY: CAD	CHECKED BY: MTL
	DATE: JUNE 2023
SCALE: 1" = 30'	
0 15 30 60	

**VERNIER & MACK  
INTERSECTION  
IMPROVEMENTS**

**MAINTENANCE  
OF TRAFFIC  
STAGE 1A  
VERNIER ROAD**

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: JUNE 2023
SCALE: 1" = 30'		
0 15 30 60		



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

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PROJECT NO. 0160-0455

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SHEET NO.

**11**

COPYRIGHT, 2023, ANDERSON, ECKSTEIN AND WESTRICK, INC.

- LEGEND**
- PLASTIC DRUM
  - 42" CHANNELIZING DEVICE
  - TT TYPE III BARRICADE, LIGHTED
  - TT TYPE III BARRICADE, LIGHTED W/SUPPLEMENTAL SIGNAGE
  - T TEMPORARY SIGN
  - ← TRAFFIC FLOW, THIS STAGE
  - ∇ TEMPORARY PEDESTRIAN TYPE II BARRICADE
  - ↔ LIGHTED ARROW BOARD
  - ▨ WORK ZONE

NOTE:  
MAINTAIN MINIMUM 11' LANES AT ALL TIMES



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CIVIL ENGINEERS SURVEYORS ARCHITECTS

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Shelby Township Fax 586 726 8780  
Michigan 48315

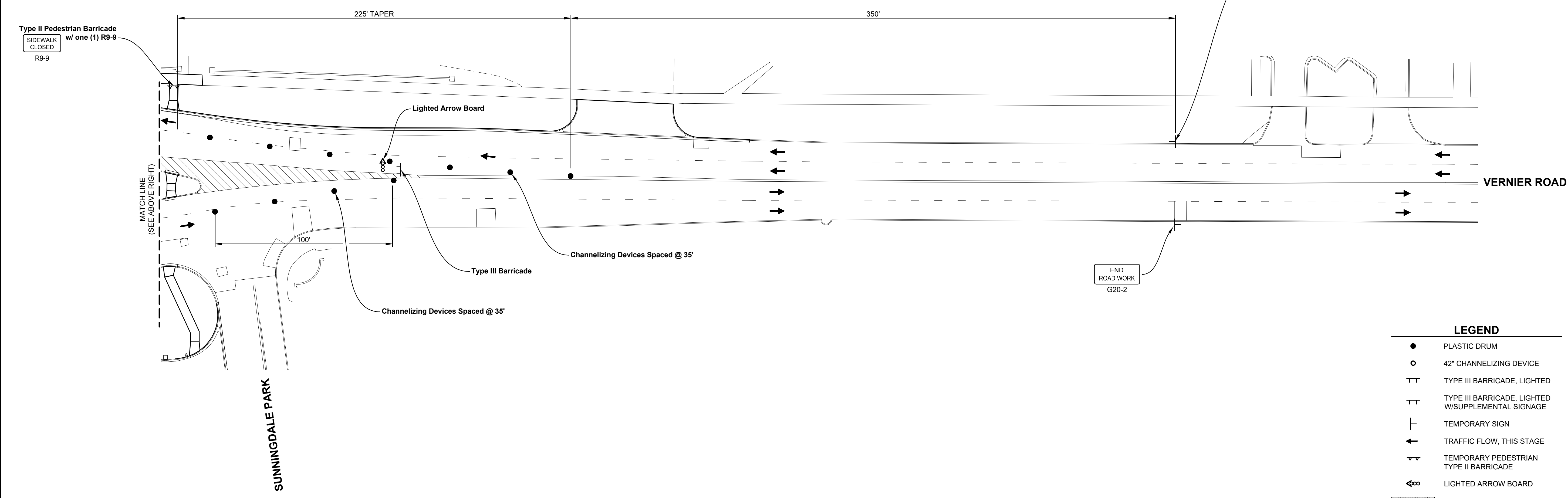
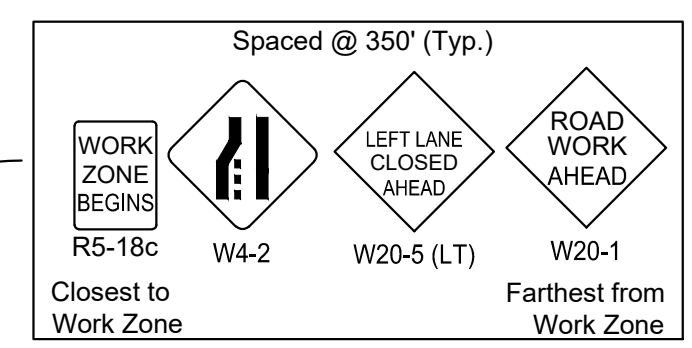
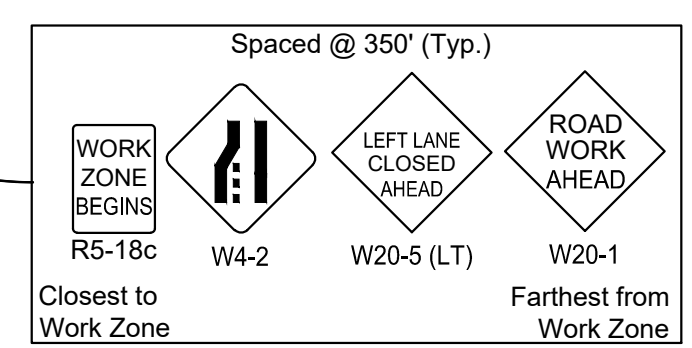
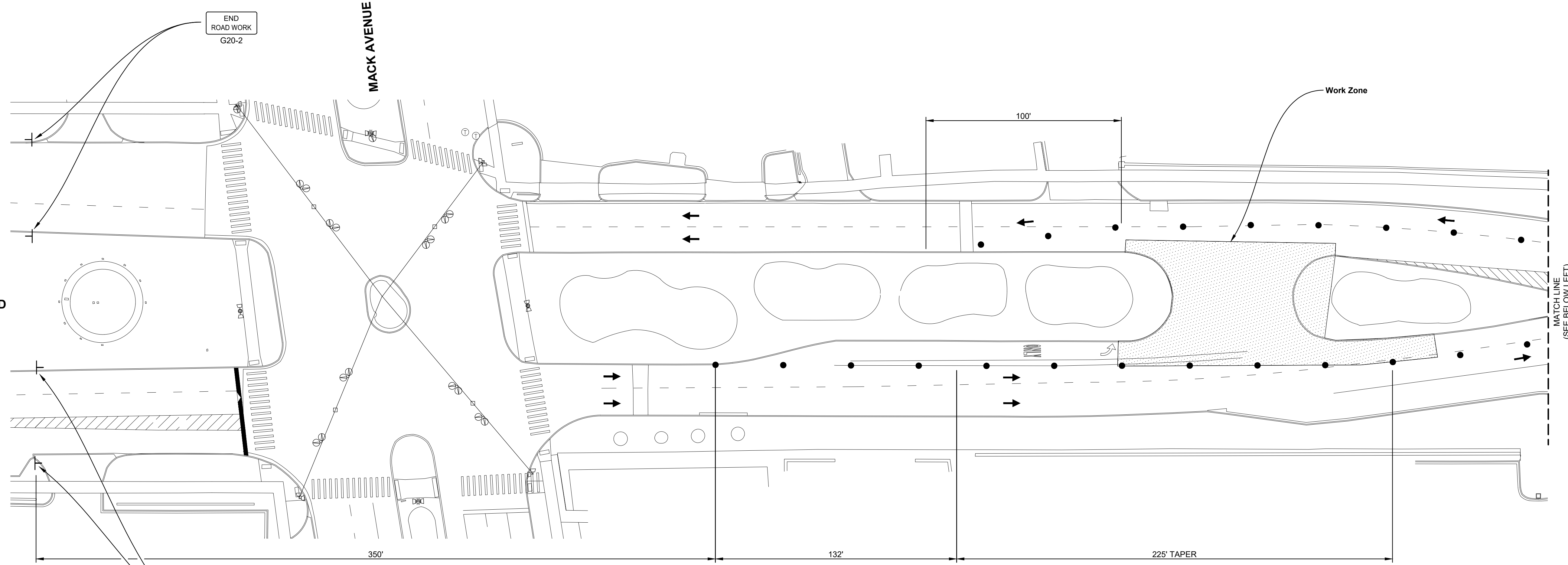
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ENGINEERING STRONG COMMUNITIES



VERNIER ROAD

MACK AVENUE



**LEGEND**

- PLASTIC DRUM
- 42" CHANNELIZING DEVICE
- TT TYPE III BARRICADE, LIGHTED
- TT TYPE III BARRICADE, LIGHTED W/SUPPLEMENTAL SIGNAGE
- T TEMPORARY SIGN
- ← TRAFFIC FLOW, THIS STAGE
- ▽ TEMPORARY PEDESTRIAN TYPE II BARRICADE
- ↔ LIGHTED ARROW BOARD
- ▨ WORK ZONE

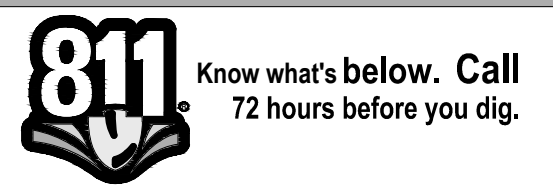
DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

**MAINTENANCE OF TRAFFIC STAGE 1B VERNIER ROAD**

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: JUNE 2023
SCALE: 1" = 30'		
0 15 30 60		



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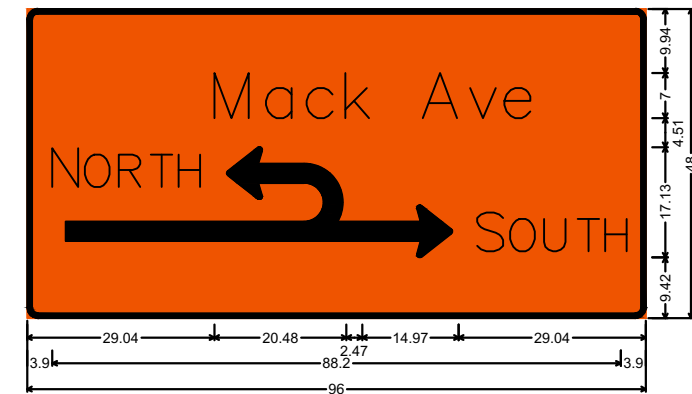
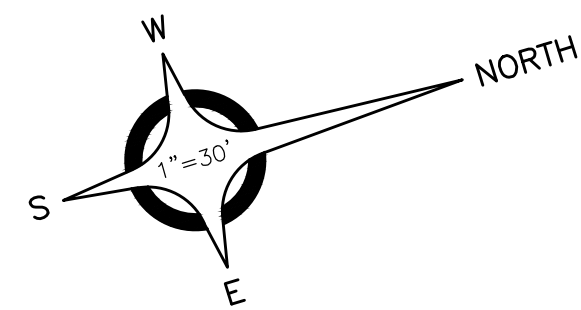
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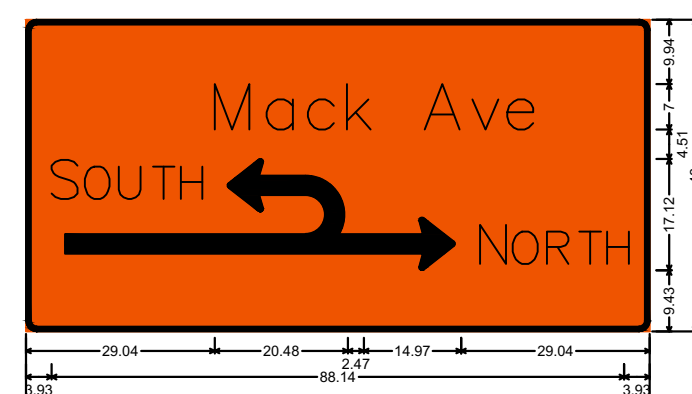
PROJECT NO. 0160-0455

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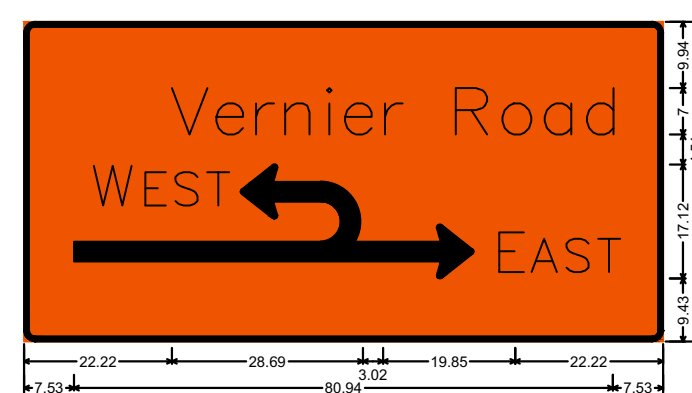
SHEET NO.



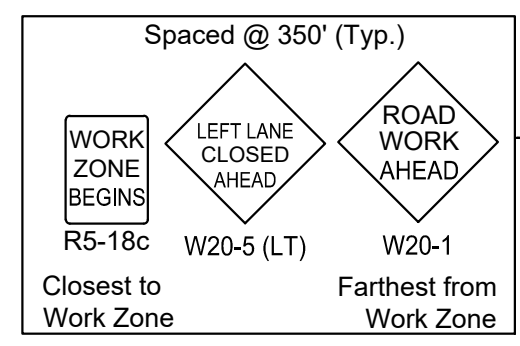
SP-1  
0.75" Border, Black on, Orange;  
"Mack Ave", Clearviewlet-3-W;



SP-2  
0.75" Border, Black on, Orange;  
"Mack Ave", Clearviewlet-3-W;



SP-3  
0.75" Border, Black on, Orange;  
"Vernier Road", Clearviewlet-3-W;



- LEGEND**
- PLASTIC DRUM
  - 42" CHANNELIZING DEVICE
  - TT TYPE III BARRICADE, LIGHTED
  - TT TYPE III BARRICADE, LIGHTED W/SUPPLEMENTAL SIGNAGE
  - T TEMPORARY SIGN
  - ← TRAFFIC FLOW, THIS STAGE
  - ↕ TEMPORARY PEDESTRIAN TYPE II BARRICADE
  - ↔ LIGHTED ARROW BOARD
  - ▨ WORK ZONE

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

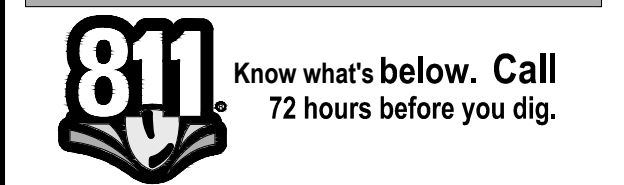
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**MAINTENANCE OF TRAFFIC STAGE 2 MACK AVENUE**

CLIENT: CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: JUNE 2023
SCALE: 1" = 30'		

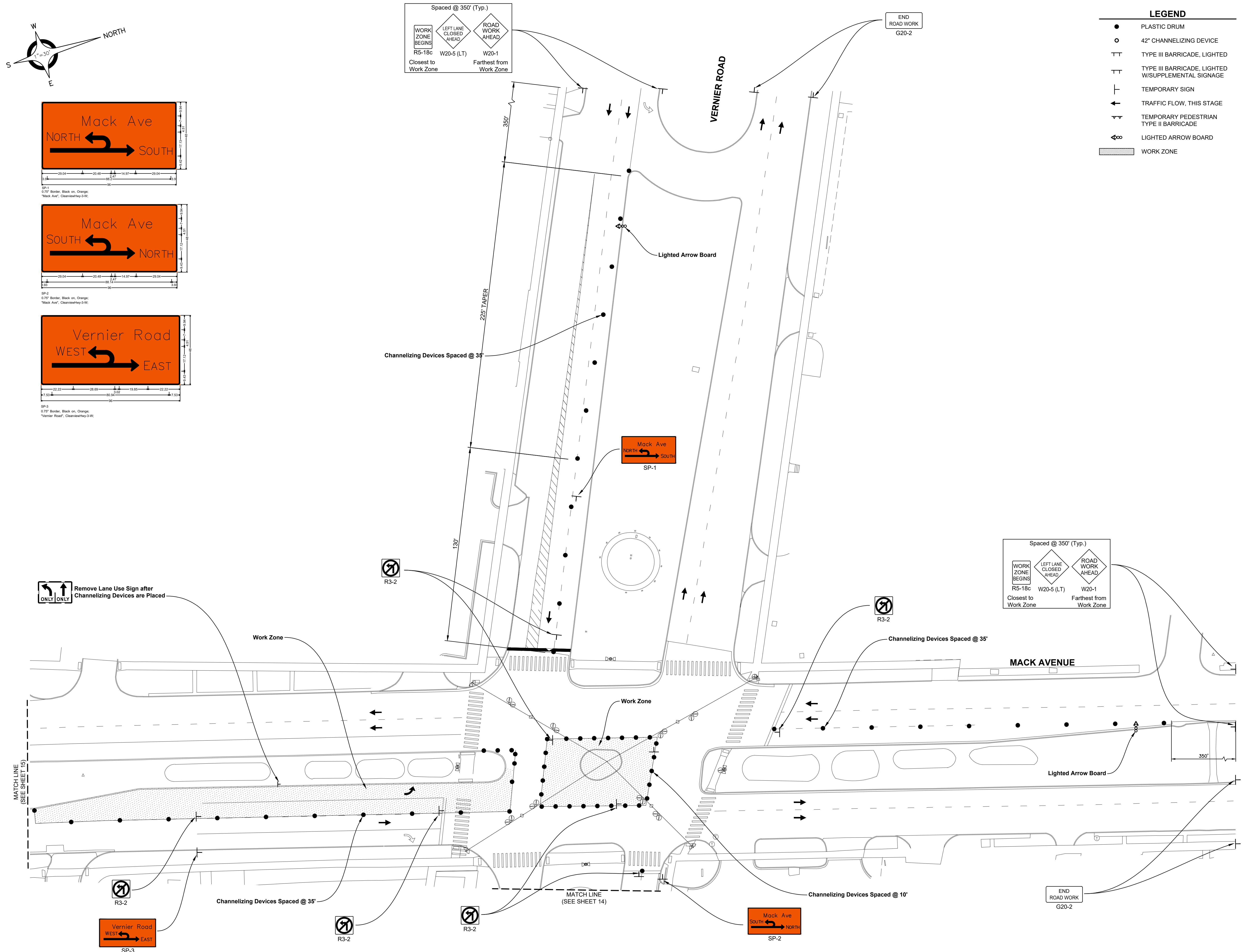


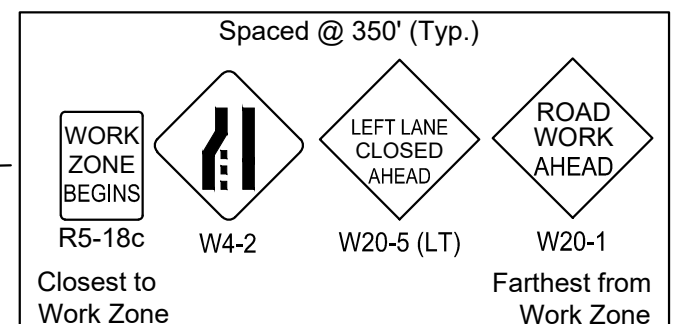
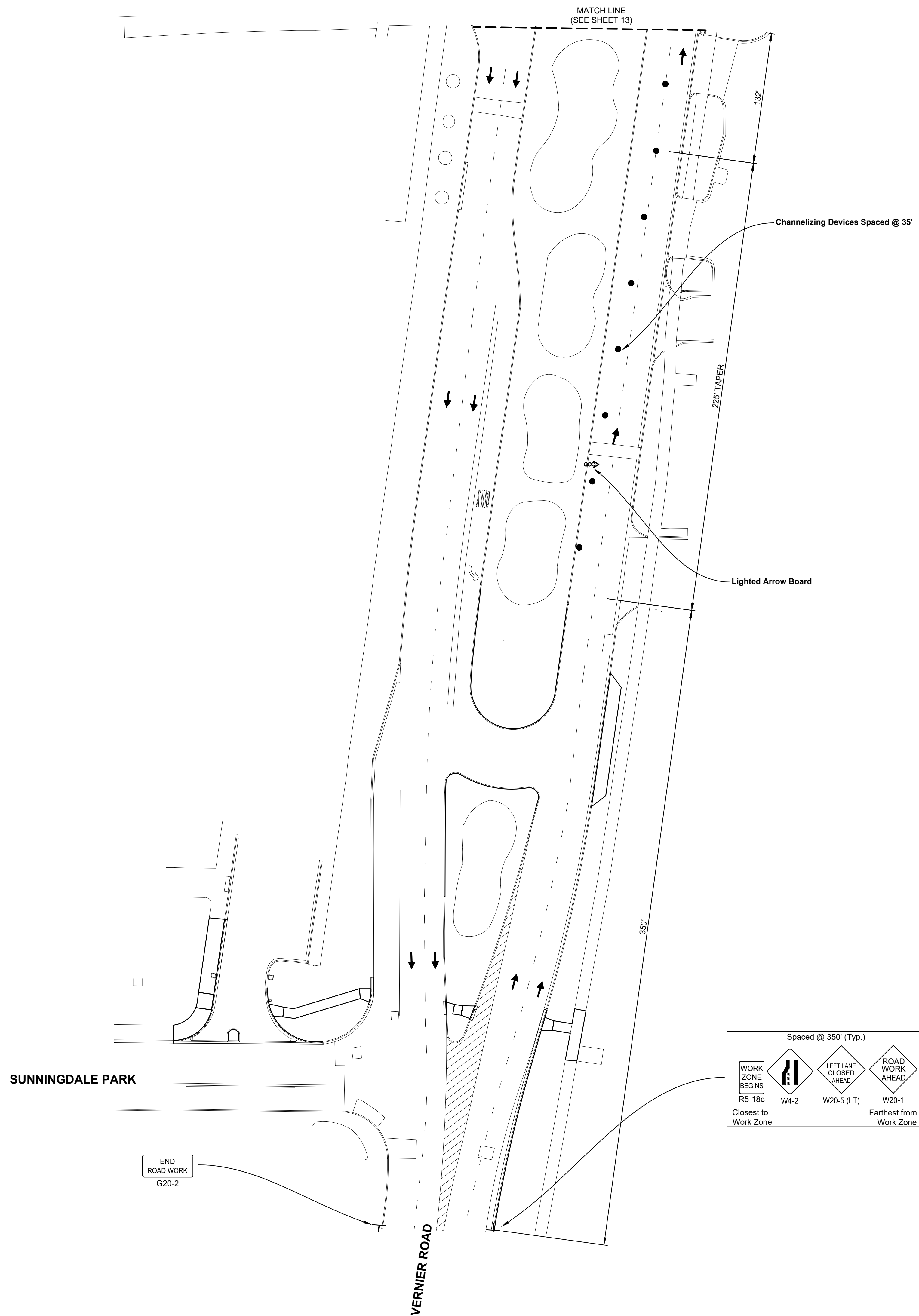
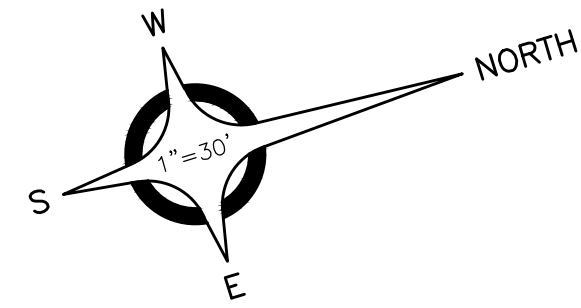
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PROJECT NO. 0160-0455  
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LEGEND	
●	PLASTIC DRUM
○	42" CHANNELIZING DEVICE
TT	TYPE III BARRICADE, LIGHTED
TT	TYPE III BARRICADE, LIGHTED W/SUPPLEMENTAL SIGNAGE
T	TEMPORARY SIGN
←	TRAFFIC FLOW, THIS STAGE
∨∨	TEMPORARY PEDESTRIAN TYPE II BARRICADE
↔	LIGHTED ARROW BOARD
▨	WORK ZONE

DATE	SUBMITTALS/REVISIONS

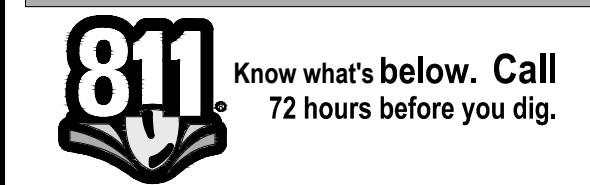
PROJECT NAME:  
**VERNIER & MACK INTERSECTION IMPROVEMENTS**  
 SHEET TITLE:  
**MAINTENANCE OF TRAFFIC STAGE 2 VERNIER ROAD**

CLIENT:  
 CITY OF GROSSE POINTE WOODS

PRELIMINARY	CONSTRUCTION	RECORD
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DRAWN BY:	CHECKED BY:	DATE:
CAD	MTL	JUNE 2023

SCALE:  
 1" = 30'  
 0 15 30 60



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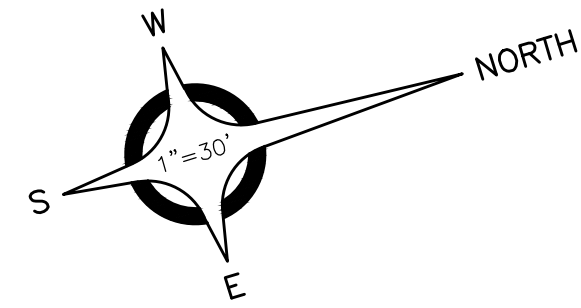
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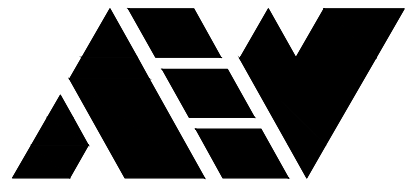
PROJECT NO. 0160-0455

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SHEET NO. 14



LEGEND	
●	PLASTIC DRUM
○	42" CHANNELIZING DEVICE
TT	TYPE III BARRICADE, LIGHTED
TT	TYPE III BARRICADE, LIGHTED W/SUPPLEMENTAL SIGNAGE
T	TEMPORARY SIGN
←	TRAFFIC FLOW, THIS STAGE
▼	TEMPORARY PEDESTRIAN TYPE II BARRICADE
↔	LIGHTED ARROW BOARD
▭	WORK ZONE



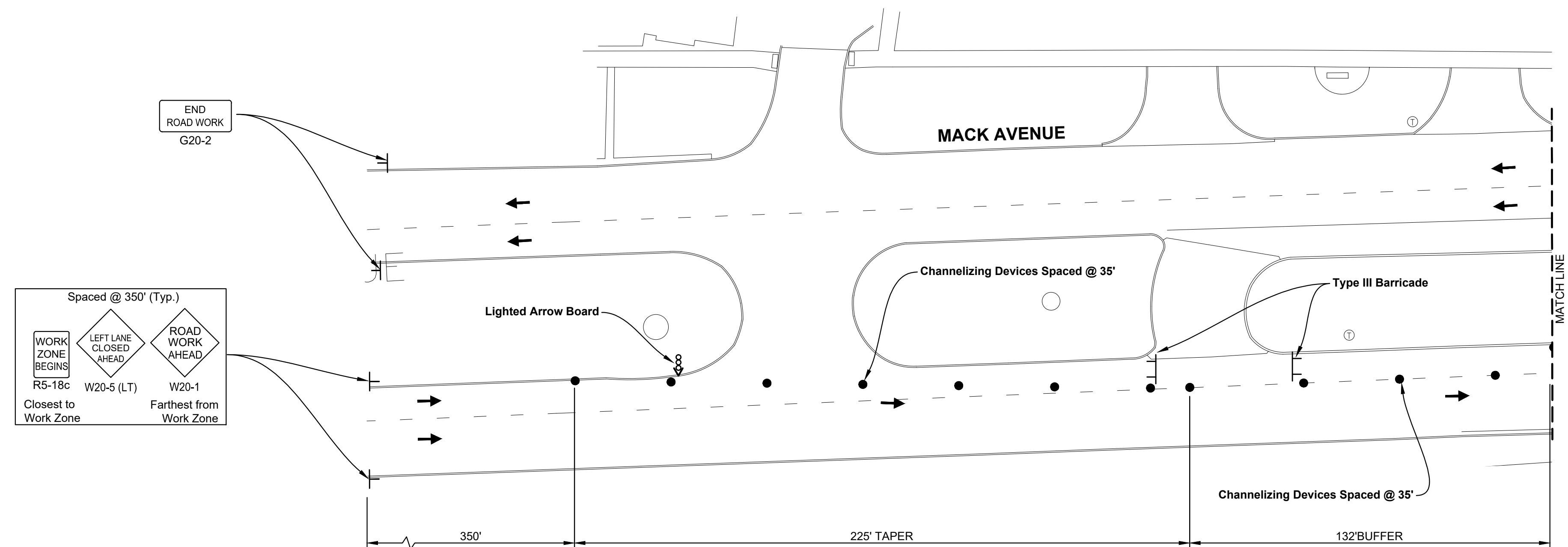
**ANDERSON, ECKSTEIN AND WESTRICK, INC.**

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

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DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

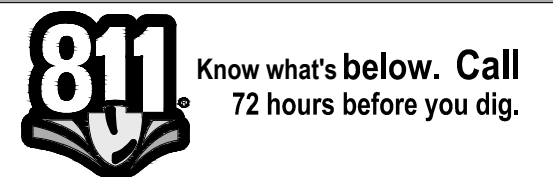
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**MAINTENANCE OF TRAFFIC STAGE 2 MACK AVENUE**

CLIENT: CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: JUNE 2023
SCALE: 1" = 30'		
0 15 30 60		



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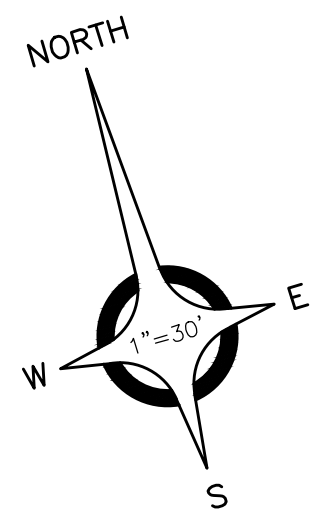
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PROJECT NO. 0160-0455

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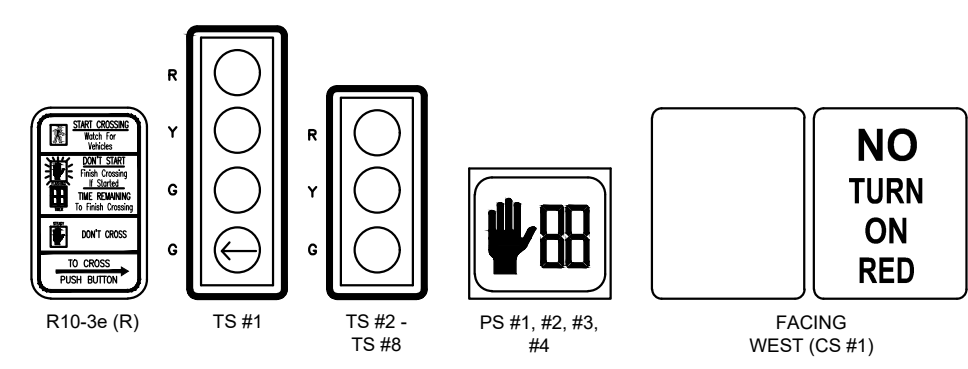
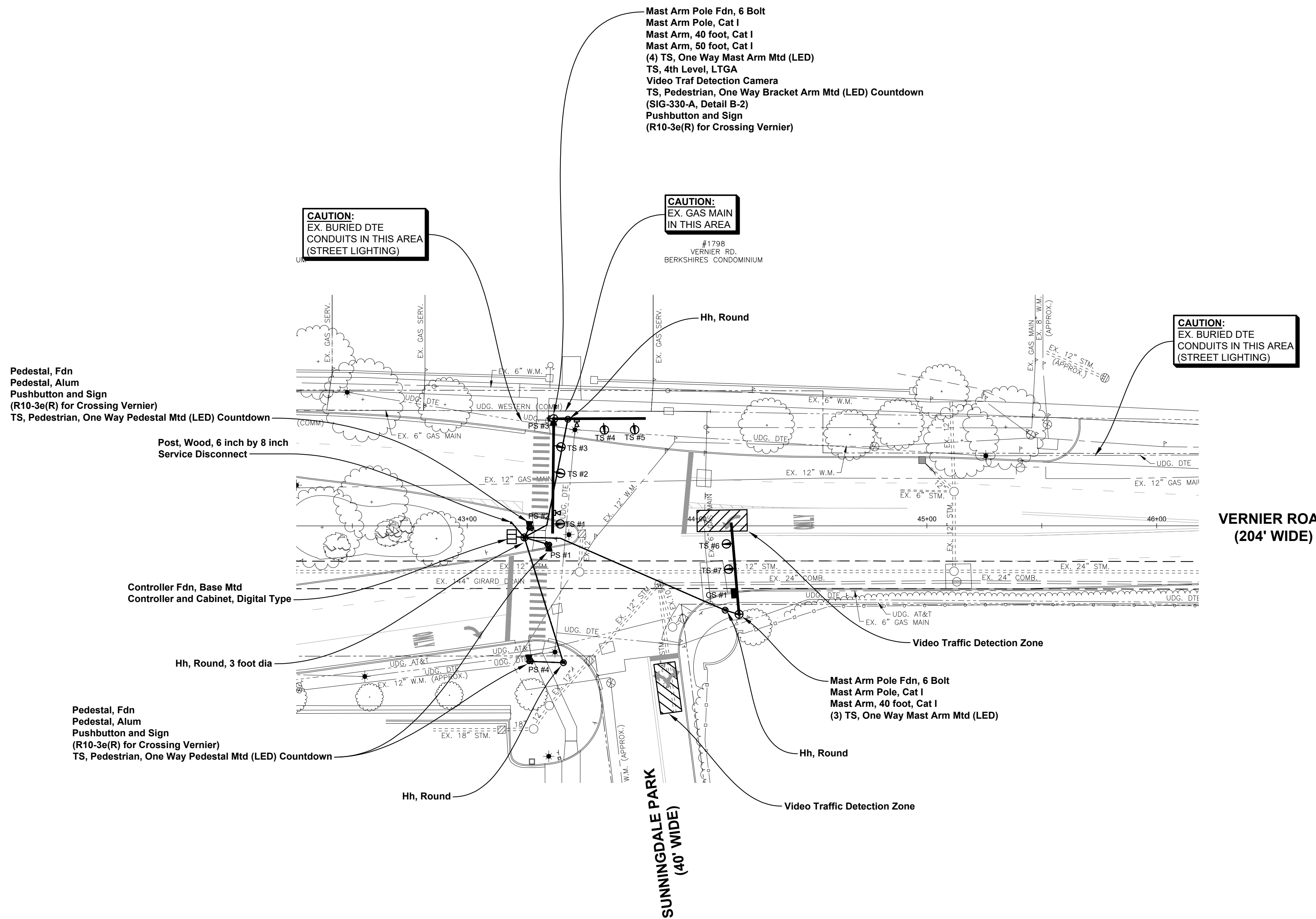
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Shelby Township Michigan 48315 Fax 586 726 8780

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**JN 219533A ESTIMATED QUANTITIES (THIS SHEET)**

1. Hh, Round	3 Ea
2. Hh, Round, 3 foot dia	1 Ea
3. Controller Fdn, Base Mtd	1 Ea
4. Global Positioning System Module	1 Ea
5. Pedestal, Alum	3 Ea
6. Pedestal, Fdn	3 Ea
7. Pushbutton and Sign	4 Ea
8. TS, 4th Level, LTGA	1 Ea
9. TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	3 Ea
10. TS, Pedestrian, One Way Bracket Arm Mtd (LED) Countdown	1 Ea
11. TS, One Way Mast Arm Mtd (LED)	6 Ea
12. Case Sign, Disappearing Legend, 24 inch by 30 inch	1 Ea
13. Video Traf Detection System	1 Ea
14. Video Traf Detection Camera	2 Ea
15. Backplate, TS	7 Ea
16. Mast Arm Pole, Cat I	2 Ea
17. Mast Arm, 40 foot, Cat I	2 Ea
18. Mast Arm, 50 foot, Cat I	1 Ea
19. Mast Arm Pole Fdn, 6 Bolt	30 Ft
20. Controller and Cabinet, Digital Type	1 Ea
21. Post, Wood, 6 inch by 8 inch	10 Ft
22. Service Disconnect	1 Ea
23. Cable, Sec, 600V, 1, 3/C #8	250 Ft

DATE	SUBMITTALS/REVISIONS

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

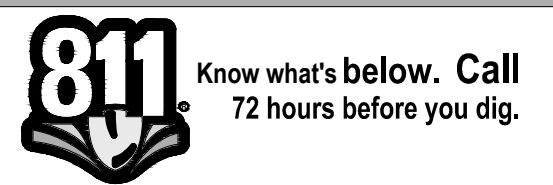
**TRAFFIC SIGNAL CONSTRUCTION PLAN**  
SUNNINGDALE PARK & VERNIER ROAD

CLIENT: CITY OF GROSSE POINTE WOODS

PRELIMINARY	CONSTRUCTION	RECORD
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DRAWN BY:	CHECKED BY:	DATE:
CAD	MTL	MAY 2023

SCALE: 1" = 30'



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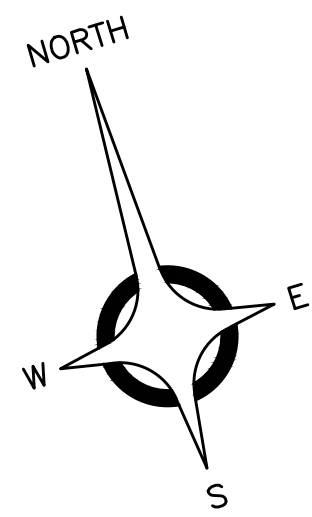
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PROJECT NO. 0160-0455

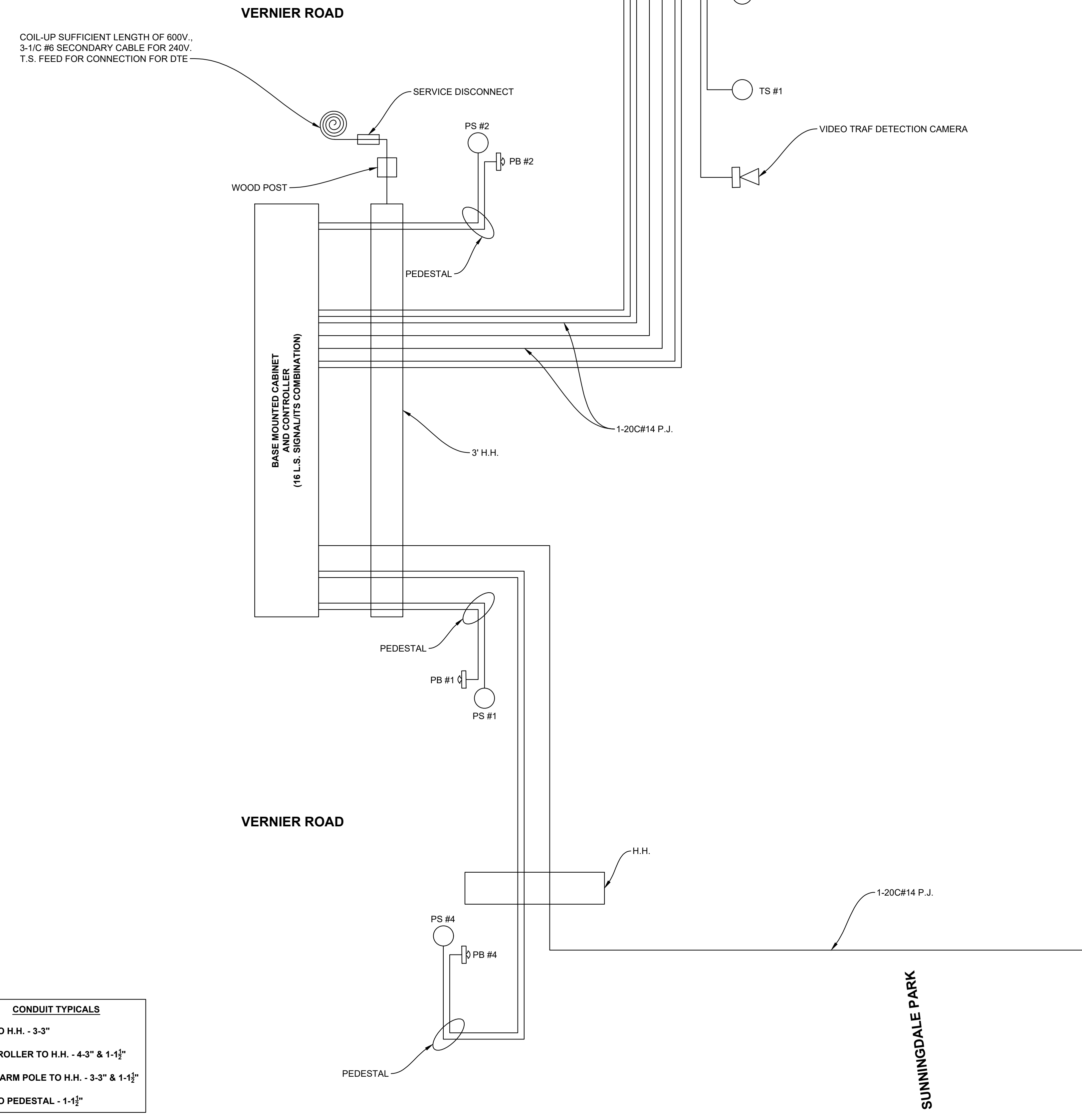
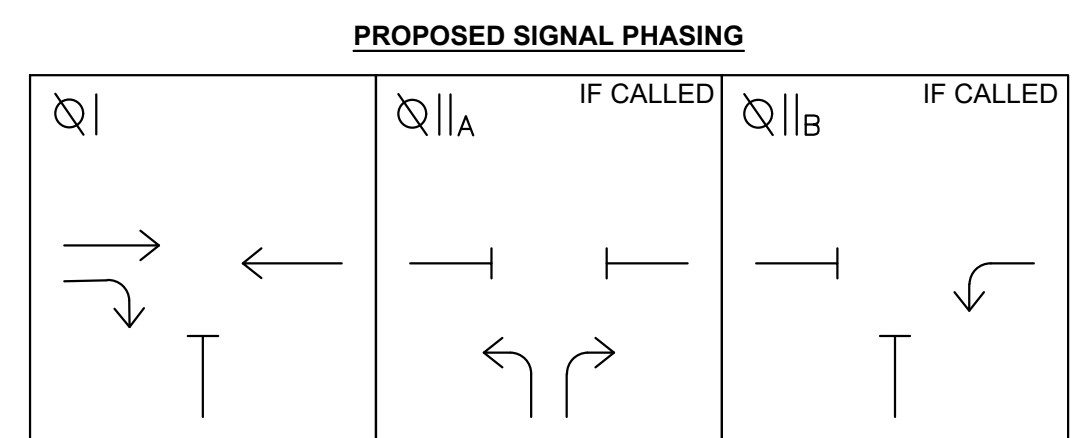
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SHEET NO.





- CABLES TO BE USED  
UNLESS SPECIFIED OTHERWISE**
1. TRAFFIC SIGNAL CABLES ARE 7/C#14P.J.
  2. CASE SIGN CABLES ARE 7/C#14P.J.
  3. PEDESTRIAN SIGNAL CABLES ARE 7/C#14P.J.
  4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED P.J.
  5. GPS MODULE CABLES ARE 600V 1-8/C#28 FOIL SHIELDED
  6. CABLE TO VIDEO CAMERA TO BE COMBINED COAXIAL/POWER CABLE R6 59-3 CONDUCTOR 16 AWG, CAT 6 FTP, OR APPROVED EQUAL



**CONDUIT TYPICALS**

H.H. TO H.H. - 3-3"
CONTROLLER TO H.H. - 4-3" & 1-1 1/2"
MAST ARM POLE TO H.H. - 3-3" & 1-1 1/2"
H.H. TO PEDESTAL - 1-1 1/2"

**JN 219533A ESTIMATED QUANTITIES  
(THIS SHEET)**

1. Conduit, Directional Bore, 3,3 inch	215 Ft
2. Conduit, DB, 1, 1 1/2 inch	35 Ft
3. Conduit, DB, 3, 3 inch	15 Ft
4. Conduit, DB, 4, 3 inch	5 Ft

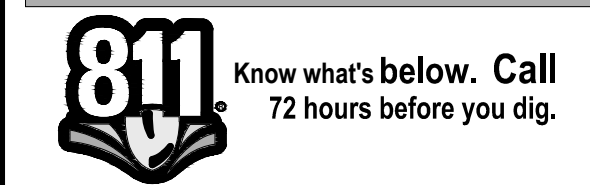
DATE	SUBMITTALS/REVISIONS

**VERNIER & MACK  
INTERSECTION  
IMPROVEMENTS**

SHEET TITLE:  
**WIRING DIAGRAM  
SUNNINGDALE PARK &  
VERNIER ROAD**

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: N.T.S.		



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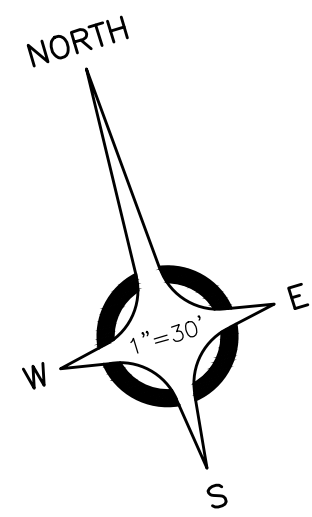
PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF THESE PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND SUPPORT ALL UTILITIES THAT ARE ENCOUNTERED. (ALL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

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PROJECT NO. 0160-0455

WAEV-AC/DATA/ACTIVE/01600160-0455/DWG/CIVIL/00\_TS.DWG  
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SHEET NO.



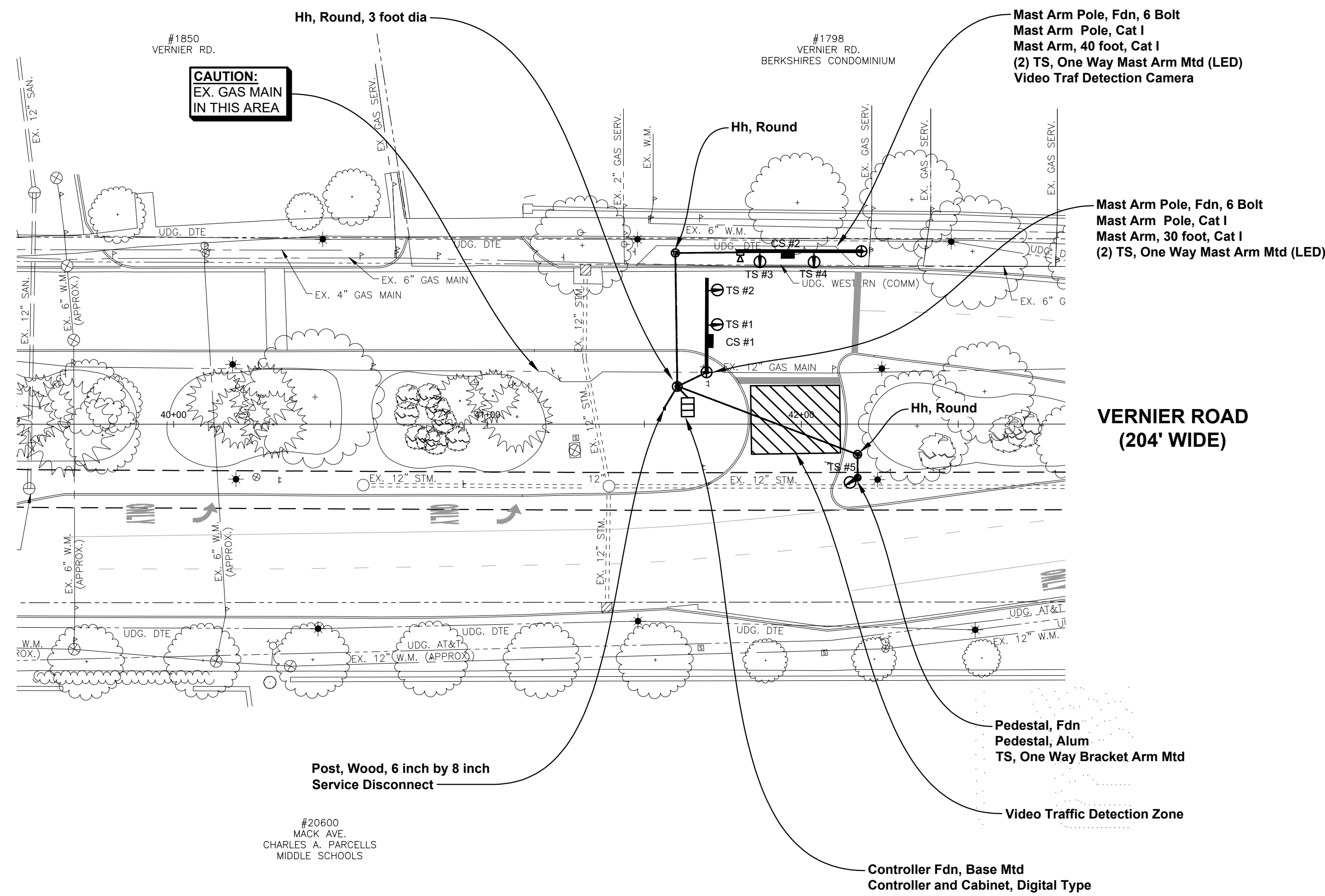
ANDERSON, ECKSTEIN AND WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

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

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ENGINEERING STRONG COMMUNITIES



DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**TRAFFIC SIGNAL CONSTRUCTION PLAN  
CROSSOVER & VERNIER ROAD**

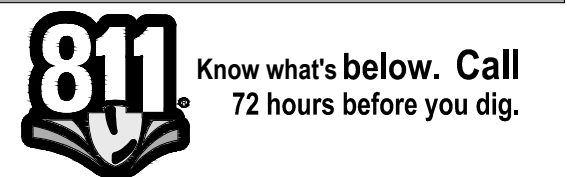
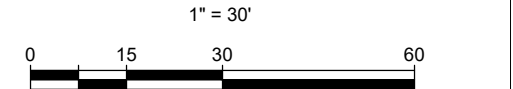
CLIENT:

CITY OF GROSSE POINTE WOODS

PRELIMINARY CONSTRUCTION RECORD

DRAWN BY: CAD CHECKED BY: MTL DATE: MAY 2023

SCALE: 1" = 30'



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PROJECT NO.

0160-0455

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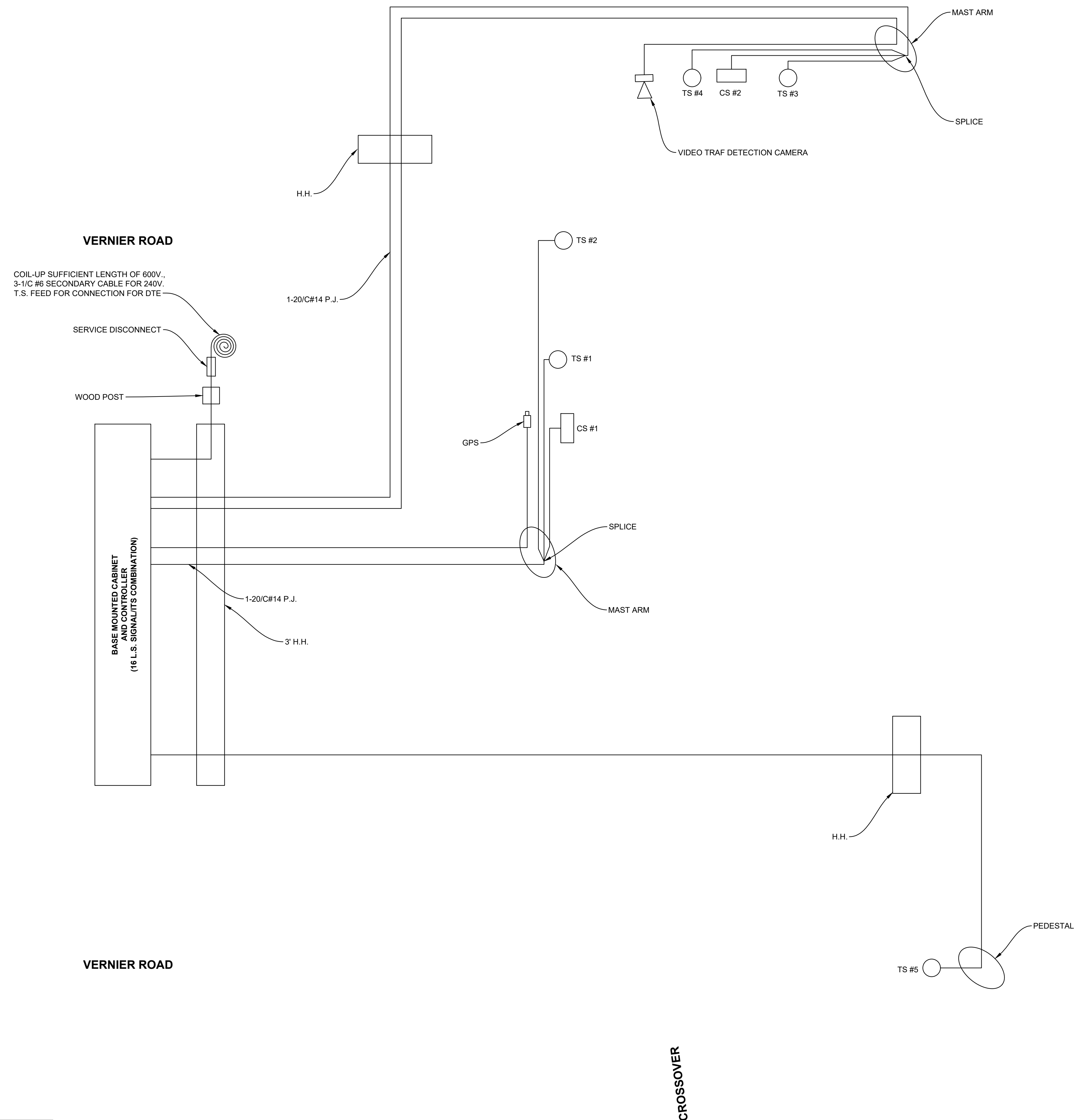
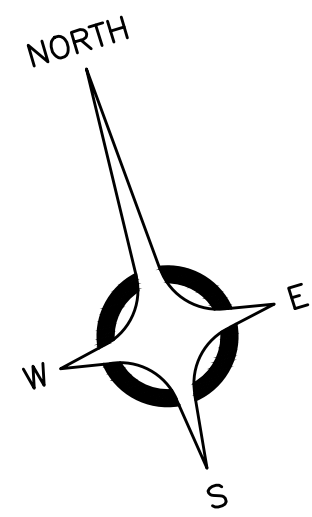
SHEET NO.

18

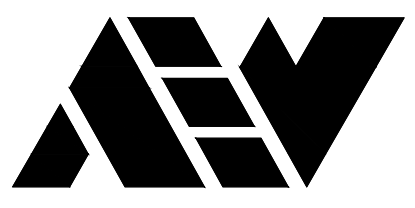
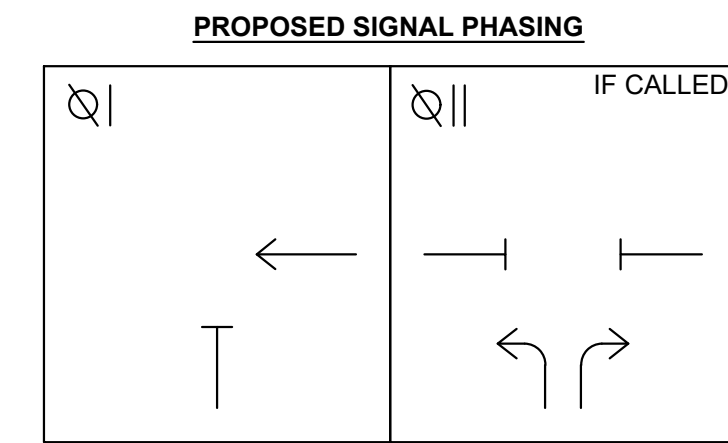
**JN 219533A ESTIMATED QUANTITIES (THIS SHEET)**

1. Hh, Round	2 Ea
2. Hh, Round, 3 foot dia	1 Ea
3. Serv Disconnect	1 Ea
4. Controller Fdn, Base Mtd	1 Ea
5. Global Positioning System Module	1 Ea
6. Pedestal, Alum	1 Ea
7. Pedestal, Fdn	1 Ea
8. TS, One Way Bracket Arm Mtd (LED)	1 Ea
9. TS, One Way Mast Arm Mtd (LED)	4 Ea
10. Case Sign (LED), One Way, 24 inch by 30 inch	2 Ea
11. Video Traf Detection System	1 Ea
12. Video Traf Detection Camera	1 Ea
13. Backplate, TS	5 Ea
14. Mast Arm Pole, Cat I	2 Ea
15. Mast Arm, 30 foot, Cat I	1 Ea
16. Mast Arm, 40 foot, Cat I	1 Ea
17. Mast Arm Pole Fdn, 6 Bolt	30 Ft
18. Controller and Cabinet, Digital Type	1 Ea
19. Post, Wood, 6 inch by 8 inch	10 Ft
20. Cable, Sec, 600V, 1, 3/C #6	250 Ft





- CABLES TO BE USED  
UNLESS SPECIFIED OTHERWISE**
1. TRAFFIC SIGNAL CABLES ARE 7/C#14P.J.
  2. CASE SIGN CABLES ARE 7/C#14P.J.
  3. PEDESTRIAN SIGNAL CABLES ARE 7/C#14P.J.
  4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED P.J.
  5. GPS MODULE CABLES ARE 600V 1-8/C#28 FOIL SHIELDED
  6. CABLE TO VIDEO CAMERA TO BE COMBINED COAXIAL/POWER CABLE R6 59-3 CONDUCTOR 16 AWG, CAT 6 FTP, OR APPROVED EQUAL



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ENGINEERING STRONG COMMUNITIES

DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

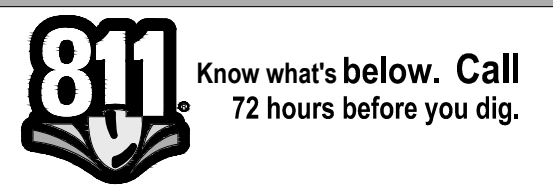
SHEET TITLE:

**WIRING DIAGRAM CROSSOVER & VERNIER ROAD**

CLIENT:

CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: N.T.S.		



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PROJECT NO.

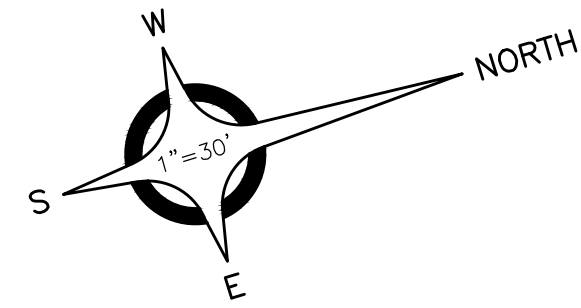
0160-0455

**JN 219533A ESTIMATED QUANTITIES (THIS SHEET)**

1. Conduit, Directional Bore, 3,3 inch	115 Ft
2. Conduit, DB, 1, 1 1/2 inch	75 Ft
3. Conduit, DB, 3, 3 inch	65 Ft
4. Conduit, DB, 4, 3 inch	5 Ft

**CONDUIT TYPICALS**

H.H. TO H.H. - 3-3"
CONTROLLER TO H.H. - 4-3" & 1-1 1/2"
MAST ARM POLE TO H.H. - 3-3" & 1-1 1/2"
H.H. TO PEDESTAL - 1-1 1/2"



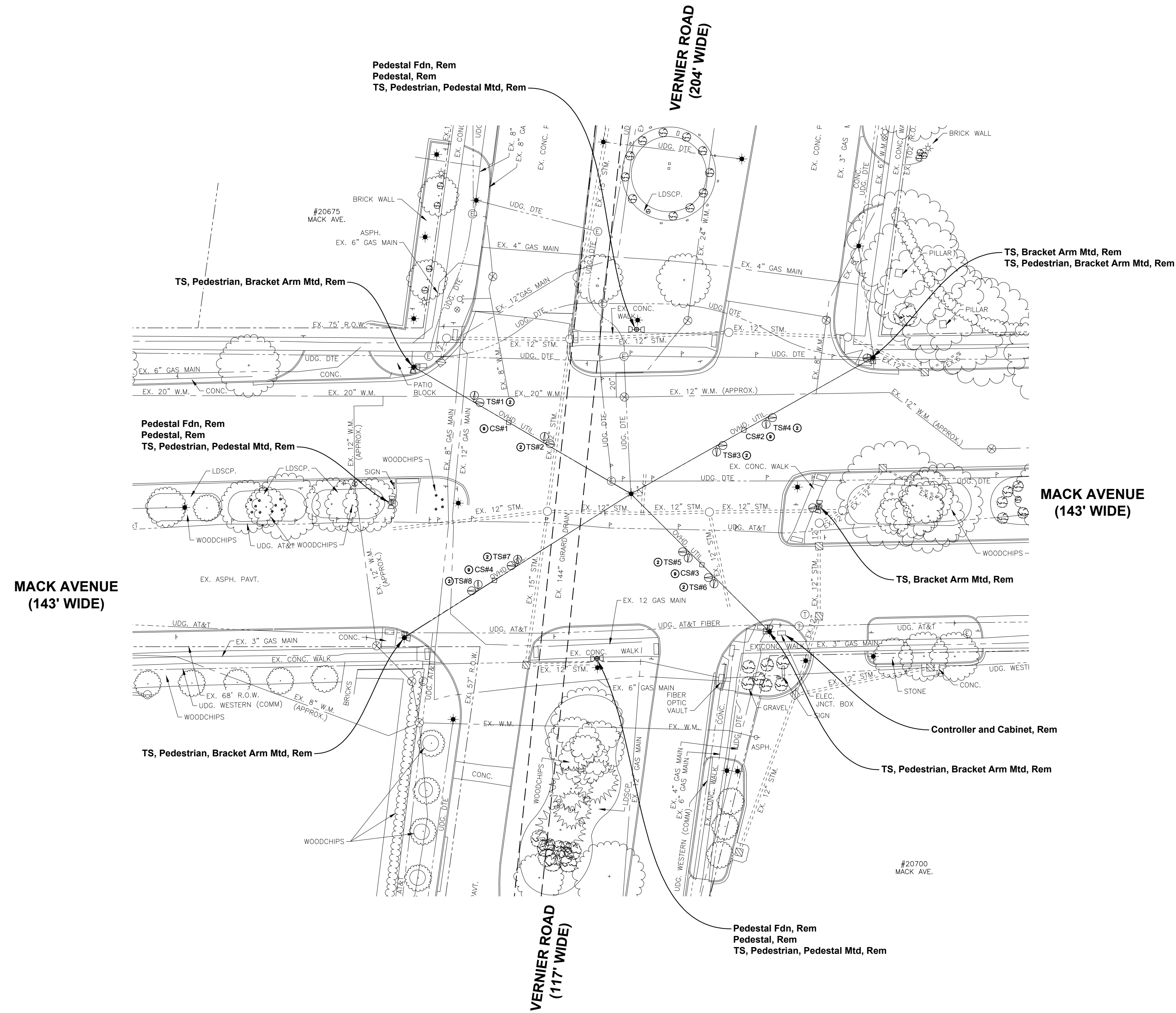
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Shelby Township Michigan 48315 Fax 586 726 8780

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ENGINEERING STRONG COMMUNITIES



DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

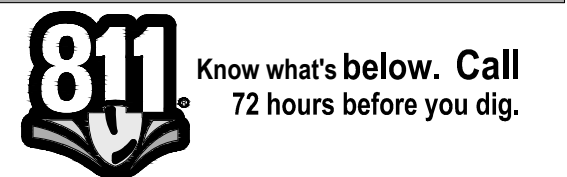
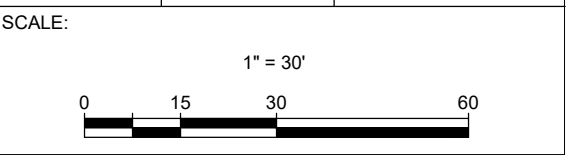
SHEET TITLE:

**TRAFFIC SIGNAL REMOVAL PLAN  
MACK AVENUE &  
VERNIER ROAD**

CLIENT:  
CITY OF GROSSE POINTE WOODS

PRELIMINARY CONSTRUCTION RECORD

DRAWN BY:	CHECKED BY:	DATE:
CAD	MTL	MAY 2023



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PROJECT NO.

0160-0455

M:\10160\0160-0455\DWG\CIVIL\00\_TS.DWG  
20 Rem\_Mack-@182023 3:03:55 PM

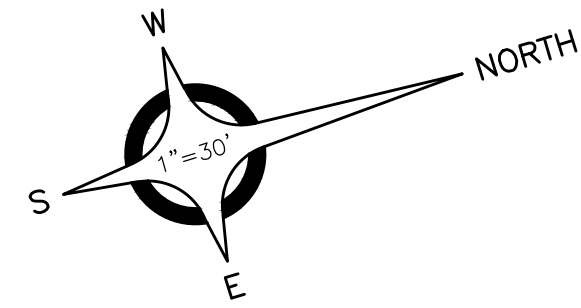
SHEET NO.

20

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**JN 218128 ESTIMATED QUANTITIES  
(THIS SHEET)**

1. Span Wire, Rem	4 Ea
2. TS, Span Wire Mtd, Rem	8 Ea
3. TS, Bracket Arm Mtd, Rem	2 Ea
4. TS, Pedestrian, Pedestal Mtd, Rem	8 Ea
5. TS, Pedestrian, Bracket Arm Mtd, Rem	8 Ea
6. Pedestal Fdn, Rem	4 Ea
7. Pedestal, Rem	4 Ea
8. Junction Box, Rem	4 Ea
9. Case Sign, Rem	4 Ea
10. Controller and Cabinet, Rem	1 Ea



Mast Arm Pole, Fdn  
Mast Arm Pole, Cat I  
Mast Arm, 50 foot, Cat I  
Mast Arm, 40 foot, Cat I  
(5) TS, One Way Mast Arm Mtd (LED)  
(3) Case Sign (LED), One Way, 24 inch by 30 inch  
Street Name Sign, One Way, 8 foot, LED

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(R) for Crossing Vernier)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(R) for Crossing Vernier)  
TS, Pedestrian, Two Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail D-2)

Pushbutton, Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Mack)

Mast Arm Pole Fdn, 6 Bolt  
Mast Arm Pole, Cat I  
(2) Mast Arm, 50 foot, Cat I  
(6) TS, One Way Mast Arm Mtd (LED)  
(3) Case Sign (LED), One Way, 24 inch by 30 inch  
Street Name Sign, One Way, 8 foot, LED  
Video Traf Detection Camera

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Mack)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Mack)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(R) for Crossing Mack)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(R) for Crossing Vernier)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Vernier)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

Mast Arm Pole Fdn, 6 Bolt  
Mast Arm Pole, Cat I  
Mast Arm, 50 foot, Cat I  
(5) TS, One Way Mast Arm Mtd (LED)  
(3) Case Sign (LED), One Way, 24 inch by 30 inch  
Street Name Sign, One Way, 8 foot, LED

Controller Fdn, Base Mtd  
Controller and Cabinet, Digital Type  
Service Disconnect

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Vernier)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

Hh, Round

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Vernier)  
TS, Pedestrian, Two Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail D-2)

Pushbutton, Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(R) for Crossing Mack)

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Mack)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

MACK AVENUE  
(143' WIDE)

Hh, Round

Mast Arm Pole, Fdn  
Mast Arm Pole, Cat I  
Mast Arm, 50 foot, Cat I  
Mast Arm, 40 foot, Cat I  
(4) TS, One Way Mast Arm Mtd (LED)  
(3) Case Sign (LED), One Way, 24 inch by 30 inch  
Street Name Sign, One Way, 8 foot, LED  
Video Traf Detection Camera

Pedestal, Fdn  
Pedestal, Alum  
TS, Pedestrian, Two Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail D-2)

Hh, Round

Pushbutton, Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Mack)

Pushbutton, Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Vernier)

Pedestal, Fdn  
Pedestal, Alum  
Pushbutton and Sign  
(R10-3e(L) for Crossing Vernier)  
TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown  
(SIG-330-A Detail B-2)

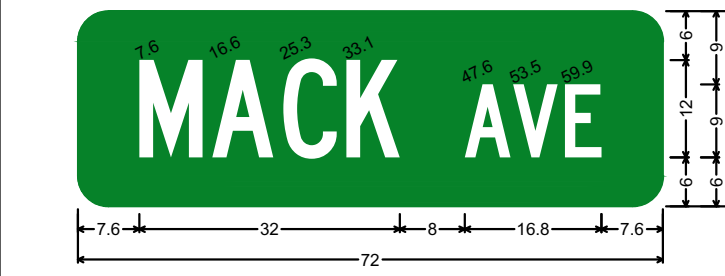
Video Traffic Detection Zone

Hh, Round, 3 foot dia

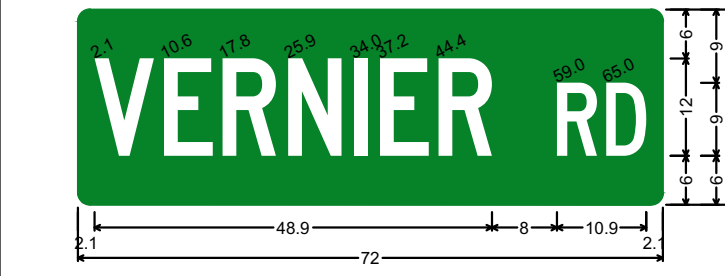
VERNIER ROAD  
(117' WIDE)

VERNIER ROAD  
(204' WIDE)

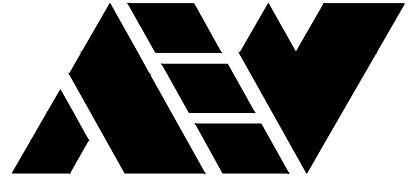
ILLUMINATED STREET NAME SIGN DETAILS



3.8" Radius, No border, Green.  
"MACK" White, C 60% spacing; "AVE" White, C 60% spacing.



1.5" Radius, No border, Green.  
"VERNIER" White, C 60% spacing; "RD" White, C 60% spacing.



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Shelby Township Fax 586 726 8780  
Michigan 48315

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ENGINEERING STRONG COMMUNITIES

DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

VERNIER & MACK INTERSECTION IMPROVEMENTS

SHEET TITLE:

TRAFFIC SIGNAL CONSTRUCTION PLAN  
MACK AVENUE & VERNIER ROAD

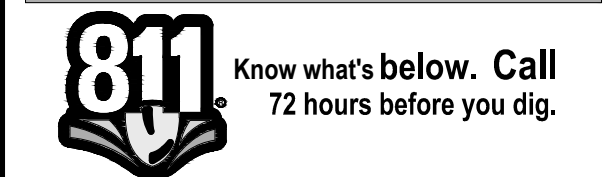
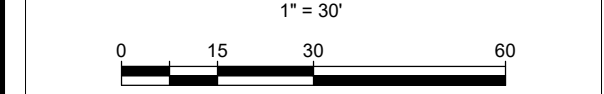
CLIENT:

CITY OF GROSSE POINTE WOODS

PRELIMINARY CONSTRUCTION RECORD

DRAWN BY: MTL CHECKED BY: MTL DATE: MAY 2023

SCALE: 1" = 30'



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PROJECT NO.

0160-0455

WAEW:ACTDATA\ACTVE\1600160-0455\DWG\CIVIL\00\_TS.DWG  
21\_Const\_Mack-11/2/2024 11:06:41 AM

SHEET NO.

21

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NO TURNS

ONE WAY

NO TURN ON RED

R10-3e(L)

R10-3e(R)

TS #1 - TS #20

PS #1 - PS #16

JN 218128 ESTIMATED QUANTITIES (THIS SHEET)

1. Hh, Round	7 Ea
2. Hh, Round, 3 foot dia	1 Ea
3. Serv Disconnect	1 Ea
4. Case Sign (LED), One Way, 24 inch by 30 inch	12 Ea
5. Controller Fdn, Base Mtd	1 Ea
6. Global Positioning System Module	1 Ea
7. Pedestal, Alum	13 Ea
8. Pedestal, Fdn	13 Ea
9. Pushbutton and Sign	17 Ea
10. Pushbutton, Pedestal, Alum	4 Ea
11. TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	10 Ea
12. TS, Pedestrian, Two Way Pedestal Mtd (LED) Countdown	3 Ea
13. TS, One Way Mast Arm Mtd (LED)	20 Ea
14. Video Traf Detection System	1 Ea
15. Video Traf Detection Camera	2 Ea
16. Backplate, TS	20 Ea
17. Mast Arm Pole, Cat I	4 Ea
18. Mast Arm, 40 foot, Cat I	3 Ea
19. Mast Arm, 50 foot, Cat I	5 Ea
20. Mast Arm Pole Fdn, 6 Bolt	760 Ft
21. Controller and Cabinet, Digital Type	1 Ea
22. Wood Pole, Sec, Fit Up	1 Ea
23. Cable, Sec, 600V, 1, 3/C#6	250 Ft



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Michigan 48315

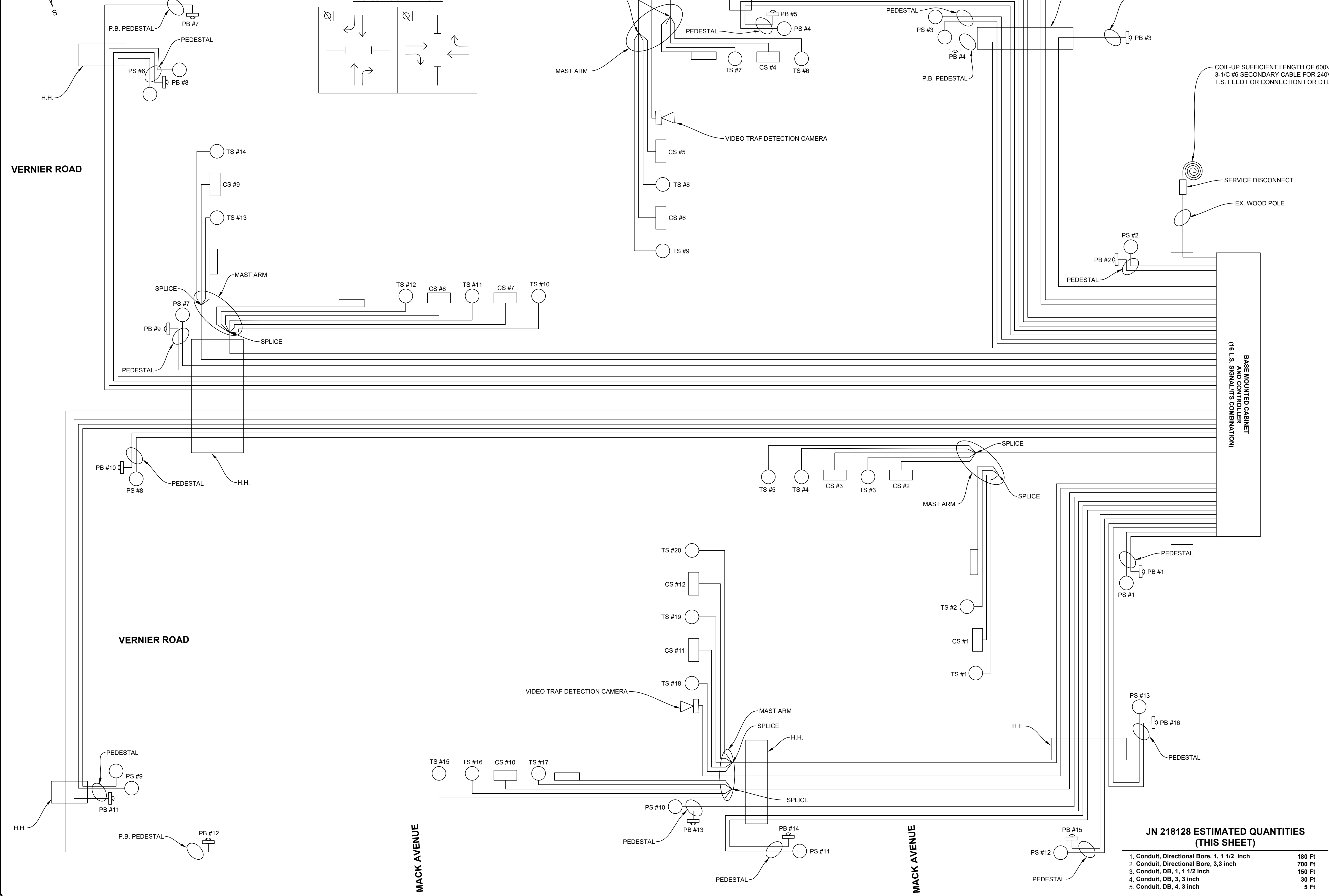
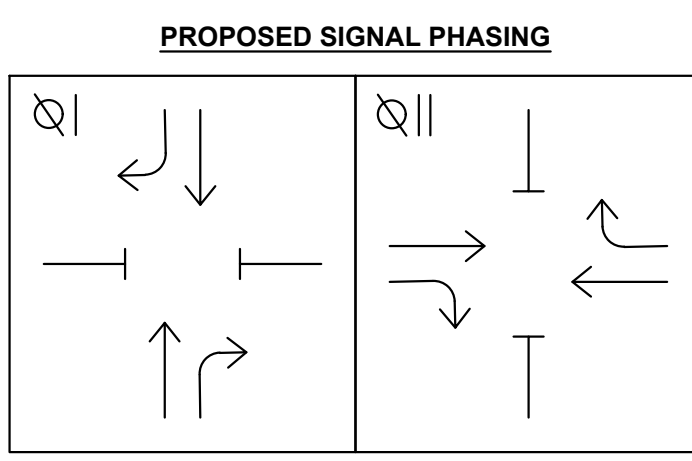
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ENGINEERING STRONG COMMUNITIES

CONDUIT TYPICALS

- H.H. TO H.H. - 3-3"
- CONTROLLER TO H.H. - 4-3" & 1-1 1/2"
- MAST ARM POLE TO H.H. - 3-3" & 1-1 1/2"
- H.H. TO PEDESTAL - 1-1 1/2"

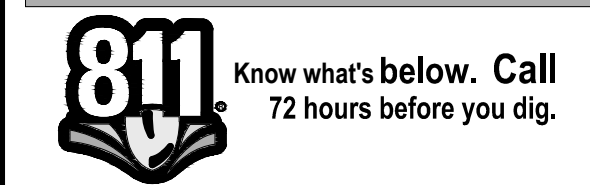
- CABLES TO BE USED UNLESS SPECIFIED OTHERWISE
1. TRAFFIC SIGNAL CABLES ARE 7/C#14P.J.
  2. CASE SIGN CABLES ARE 7/C#14P.J.
  3. PEDESTRIAN SIGNAL CABLES ARE 7/C#14P.J.
  4. PUSHBUTTON CABLES ARE 2/C#16 SHIELDED P.J.
  5. GPS MODULE CABLES ARE 600V 1-8/C#28 FOIL SHIELDED
  6. CABLE TO VIDEO CAMERA TO BE COMBINED COAXIAL/POWER CABLE R6 59-3 CONDUCTOR 16 AWG, CAT 6 FTP, OR APPROVED EQUAL



COIL-UP SUFFICIENT LENGTH OF 600V, 3-1/C #6 SECONDARY CABLE FOR 240V, T.S. FEED FOR CONNECTION FOR DTE

DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	
<b>VERNIER &amp; MACK INTERSECTION IMPROVEMENTS</b>	
SHEET TITLE:	
<b>WIRING DIAGRAM MACK AVENUE &amp; VERNIER ROAD</b>	
CLIENT:	
CITY OF GROSSE POINTE WOODS	
<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION
<input type="checkbox"/> RECORD	
DRAWN BY: CAD	CHECKED BY: MTL
	DATE: MAY 2023
SCALE: N.T.S.	

CLIENT: CITY OF GROSSE POINTE WOODS		
<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: N.T.S.		



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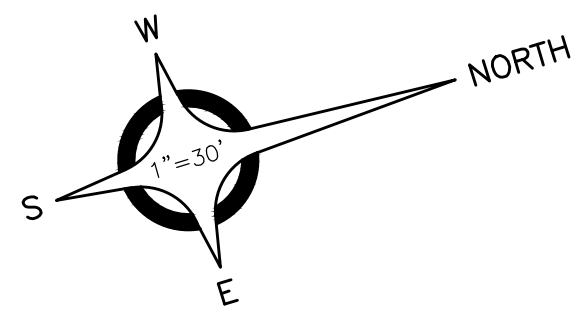
PROJECT NO. 0160-0455

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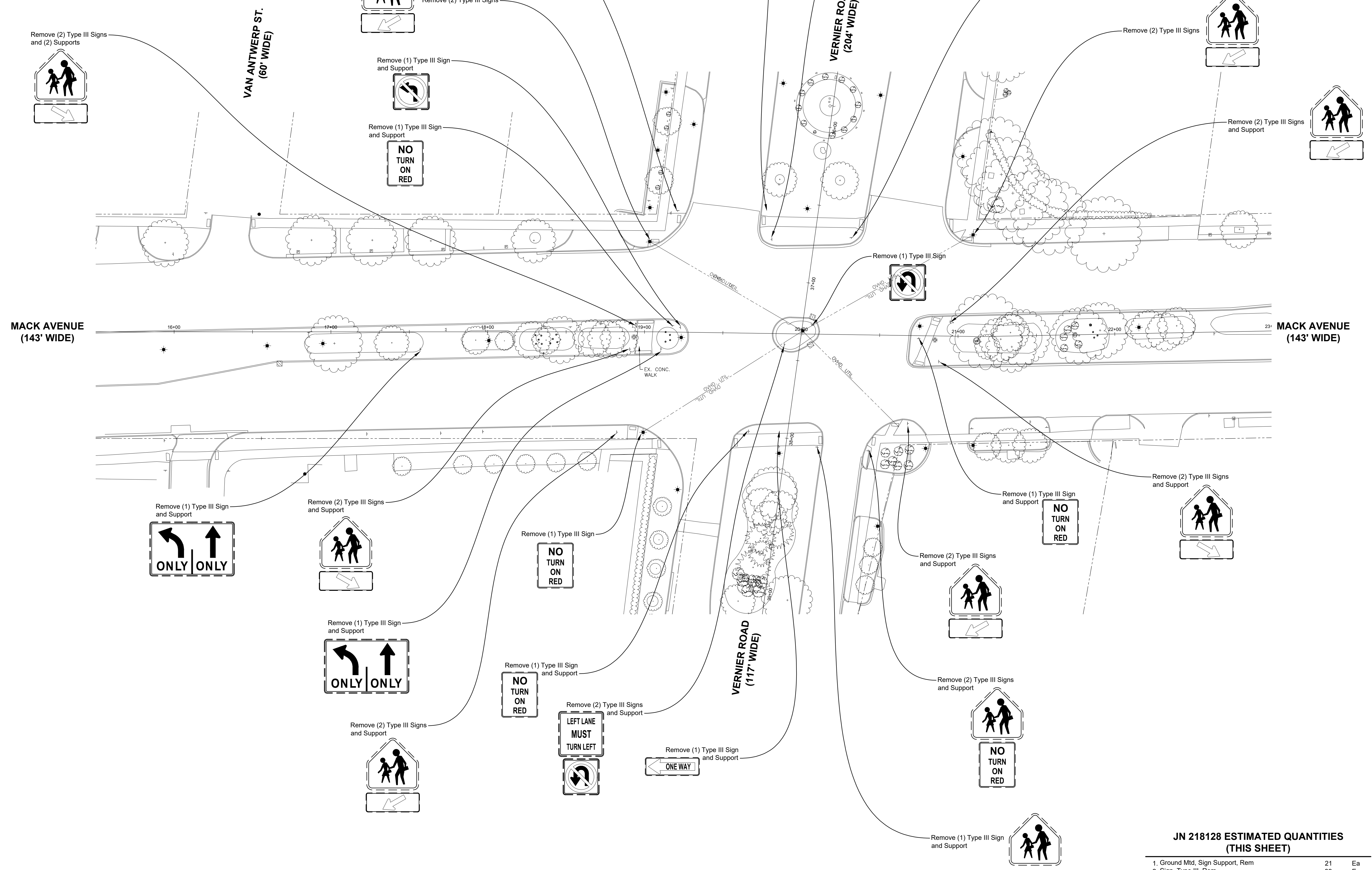
SHEET NO.

**JN 218128 ESTIMATED QUANTITIES (THIS SHEET)**

1. Conduit, Directional Bore, 1, 1 1/2 inch	180 Ft
2. Conduit, Directional Bore, 3,3 inch	700 Ft
3. Conduit, DB, 1, 1 1/2 inch	150 Ft
4. Conduit, DB, 3, 3 inch	30 Ft
5. Conduit, DB, 4, 3 inch	5 Ft



NOTE: RETAIN ALL PARKING RELATED SIGNS



DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

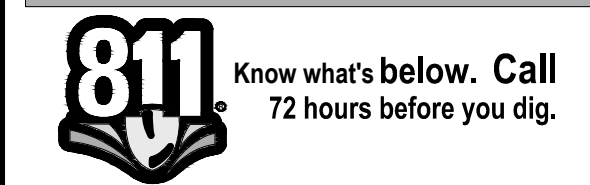
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**PERMANENT SIGNING PLAN**  
 REMOVAL  
 MACK AVENUE

CLIENT:  
 CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: 1" = 30'		
0 15 30 60		



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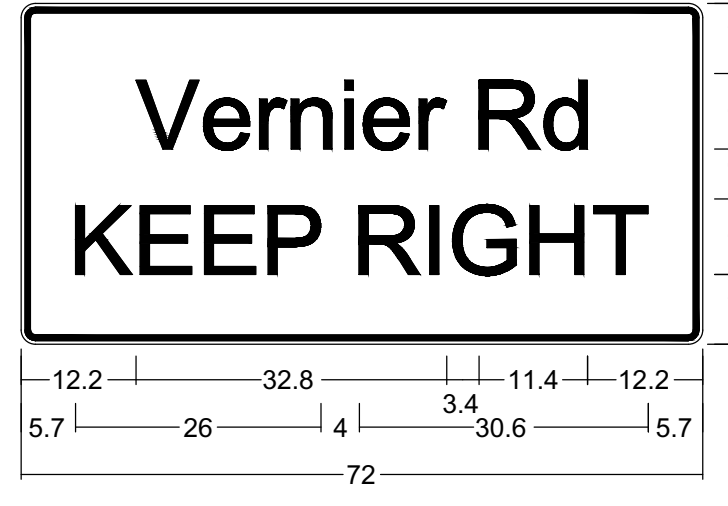
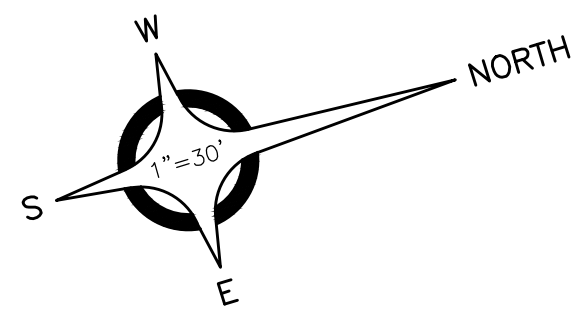
PROJECT NO. 0160-0455

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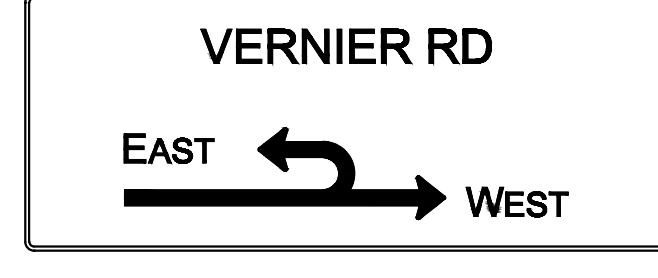
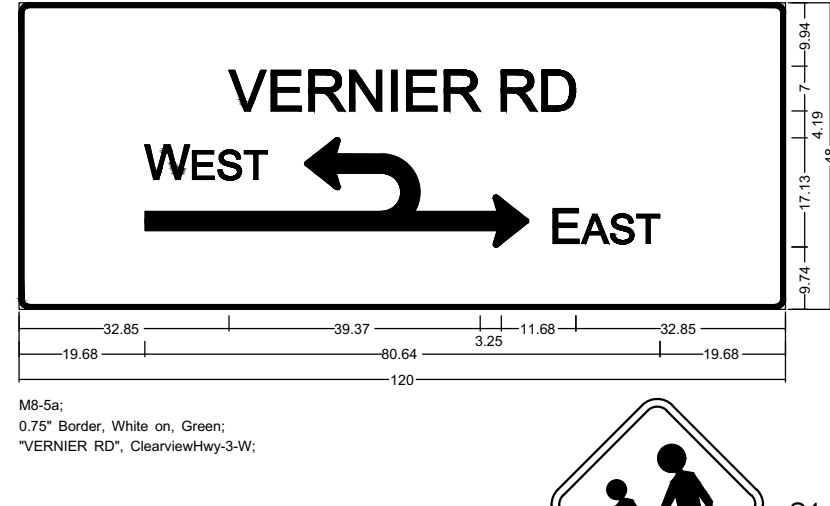
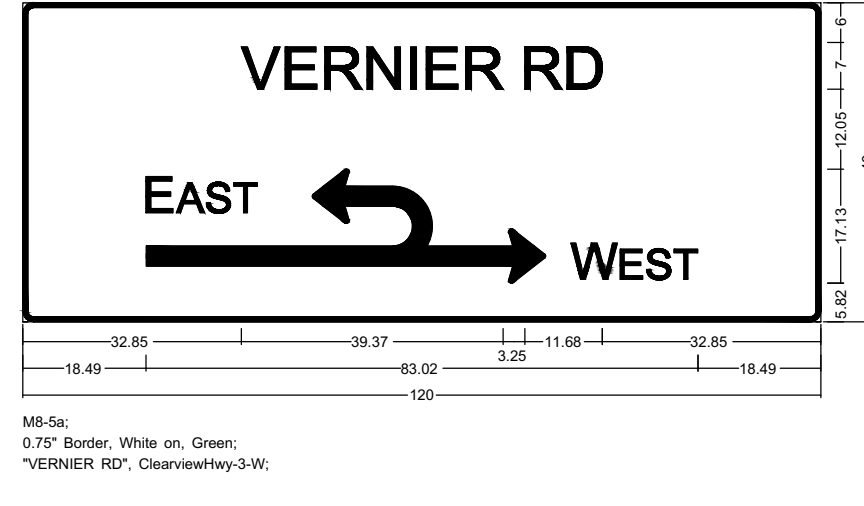
SHEET NO.

**JN 218128 ESTIMATED QUANTITIES (THIS SHEET)**

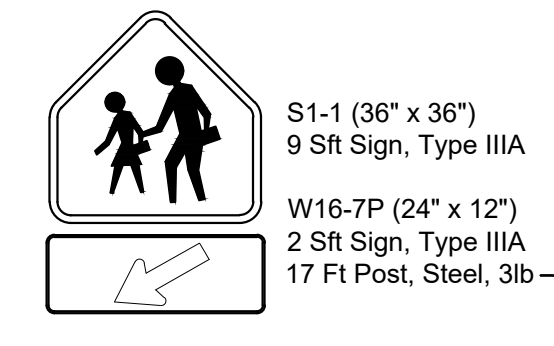
1. Ground Mtd, Sign Support, Rem	21	Ea
2. Sign, Type III, Rem	39	Ea



R4-7:  
1.5" Radius, 0.6" Border, 0.4" Indent, White on, Green;  
"Vernier Rd", ClearviewHwy-3-W;  
"KEEP RIGHT", ClearviewHwy-3-W;

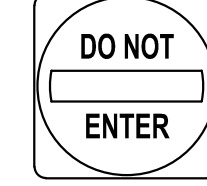


M8-5a (120" x 48")  
40 Sft Sign, Type IIB  
(2) 14 Ft Post, Wood,  
4 inch by 6 inch



S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
17 Ft Post, Steel, 3lb

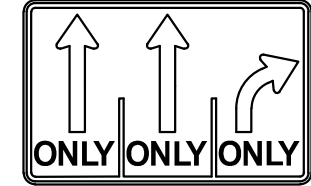
NOTE: RETAIN ALL  
PARKING RELATED SIGNS



R5-1 (30" x 30")  
6.25 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3lb



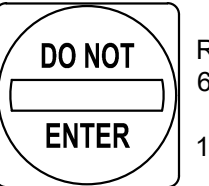
Retain Existing S1-1



R3-8q (48" x 30")  
10 Sft Sign, Type IIB  
(2) 14 Ft Post, Wood, 4 inch by 6 inch



Retain Existing R3-7(L)



R5-1 (30" x 30")  
6.25 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3lb



S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
Mount to Ex Pole



S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
17 Ft Post, Steel, 3lb

MACK AVENUE

MACK AVENUE



R6-1(L) (54" X 18")  
6.75 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3lb



S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
17 Ft Post, Steel, 3lb



R5-1 (30" x 30")  
6.25 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3lb



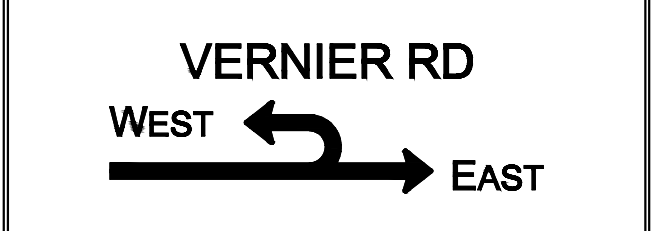
S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
17 Ft Post, Steel, 3lb



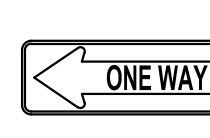
R6-1(L) (54" X 18")  
6.75 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3lb



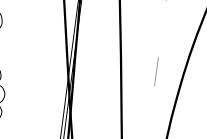
S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
17 Ft Post, Steel, 3lb



M8-5a (120" x 48")  
40 Sft Sign, Type IIB  
(2) 14 Ft Post, Wood, 4 inch by 6 inch



R6-1(L) (54" X 18")  
6.75 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3lb



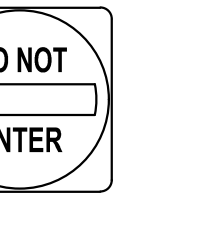
S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
17 Ft Post, Steel, 3lb



S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
17 Ft Post, Steel, 3lb



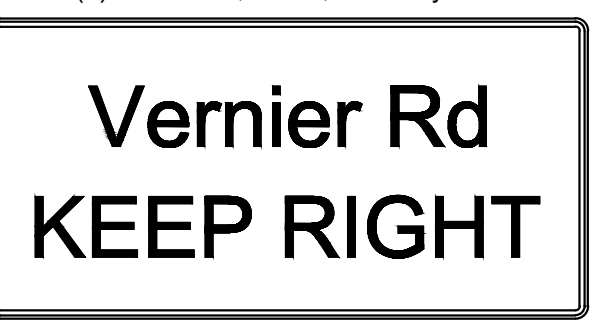
S1-1 (36" x 36")  
9 Sft Sign, Type IIIA  
W16-7P (24" x 12")  
2 Sft Sign, Type IIIA  
17 Ft Post, Steel, 3lb



R5-1 (30" x 30")  
6.25 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3lb



R6-1(R) (54" X 18")  
6.75 Sft Sign, Type IIIA  
14 Ft Post, Steel, 3lb



R4-7 (72" x 36")  
18 Sft Sign, Type IIB  
(2) 14 Ft Post, Wood, 4 inch by 6 inch



Retain Existing R3-7(R)

JN 218128 ESTIMATED QUANTITIES  
(THIS SHEET)

1. Post, Steel, 3 lb	465	Ft
2. Post, Wood, 4 inch by 6 inch	140	Ft
3. Sign, Type IIIA	263	Sft
4. Sign, Type IIB	136	Sft
5. Band, Sign	4	Ea

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

DATE	SUBMITTALS/REVISIONS	
PROJECT NAME:		
<b>VERNIER &amp; MACK INTERSECTION IMPROVEMENTS</b>		
SHEET TITLE:		
<b>PERMANENT SIGNING PLAN CONSTRUCTION MACK AVENUE</b>		
CLIENT:	CITY OF GROSSE POINTE WOODS	
PRELIMINARY	CONSTRUCTION	RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: 1" = 30'		
0 15 30 60		

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

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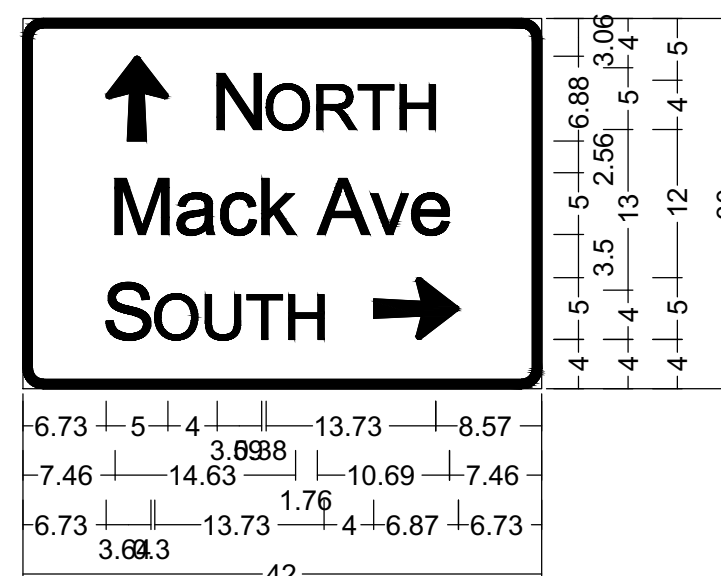
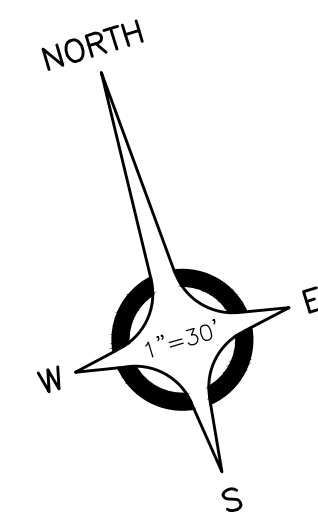
DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR ANY AND ALL OVERHEAD AND / OR BURIED UTILITIES.

PROJECT NO. 0160-0455

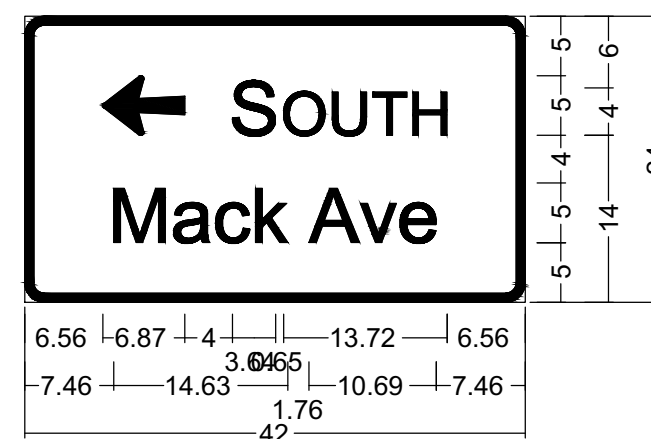
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SHEET NO.



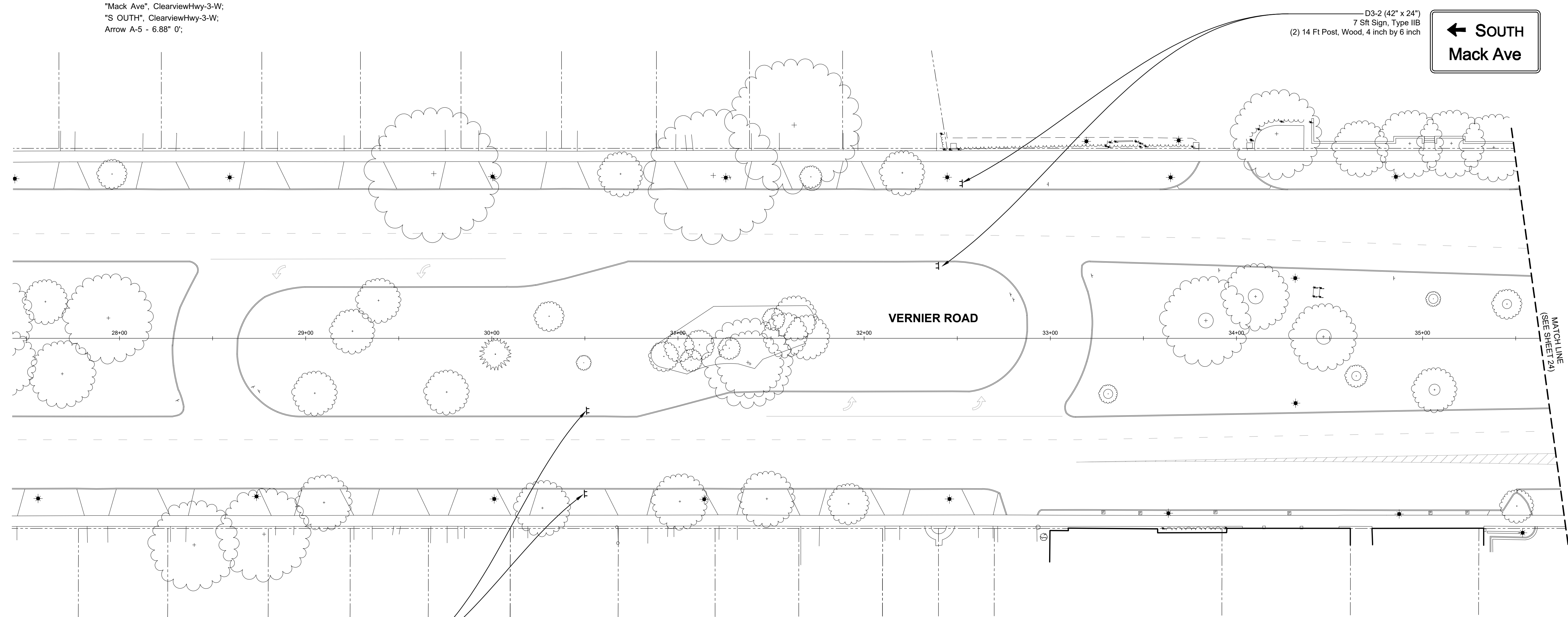


D3-2 (1.6) 35 mph or less;  
 1.63" Radius, 0.75" Border, White on, Green;  
 Arrow A-5 - 6.88" 90°;  
 "N ORTH", ClearviewHwy-3-W;  
 "Mack Ave", ClearviewHwy-3-W;  
 "S OUTH", ClearviewHwy-3-W;  
 Arrow A-5 - 6.88" 0°;



D3-2 (1.7) 35 mph or less;  
 1.63" Radius, 0.75" Border, White on, Green;  
 Arrow A-5 - 6.88" 180°;  
 "S", ClearviewHwy-3-W;  
 "OUTH", ClearviewHwy-3-W;  
 "Mack Ave", ClearviewHwy-3-W;

NOTE: RETAIN ALL PARKING RELATED SIGNS



D3-2 (42" x 30")  
 8.75 Sft Sign, Type IIB  
 (2) 14 Ft Post, Wood, 4 inch by 6 inch

D3-2 (42" x 24")  
 7 Sft Sign, Type IIB  
 (2) 14 Ft Post, Wood, 4 inch by 6 inch

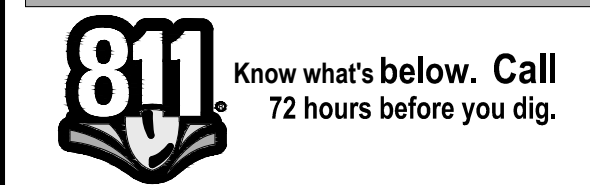
DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

**PERMANENT SIGNING PLAN CONSTRUCTION VERNIER ROAD**

CLIENT:  
 CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: 1" = 30'		



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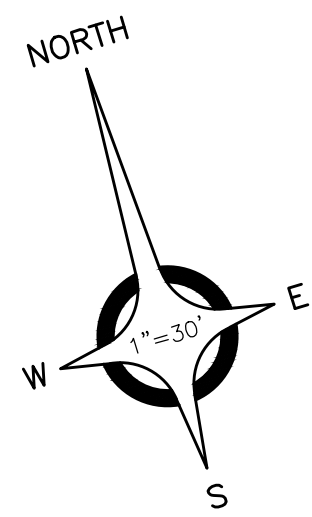
PROJECT NO. 0160-0455

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SHEET NO.

**JN 218128 ESTIMATED QUANTITIES (THIS SHEET)**

1. Post, Wood, 4 inch by 6 inch	112	Ft
6. Sign, Type IIB	31.5	Sft



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CIVIL ENGINEERS SURVEYORS ARCHITECTS

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

www.aewinc.com

ENGINEERING STRONG COMMUNITIES

DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**PERMANENT SIGNING PLAN  
REMOVAL  
VERNIER ROAD**

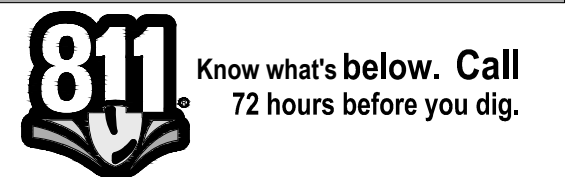
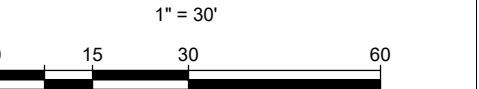
CLIENT:

CITY OF GROSSE POINTE WOODS

PRELIMINARY  CONSTRUCTION  RECORD

DRAWN BY:	CHECKED BY:	DATE:
CAD	MTL	MAY 2023

SCALE: 1" = 30'



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PROJECT NO.

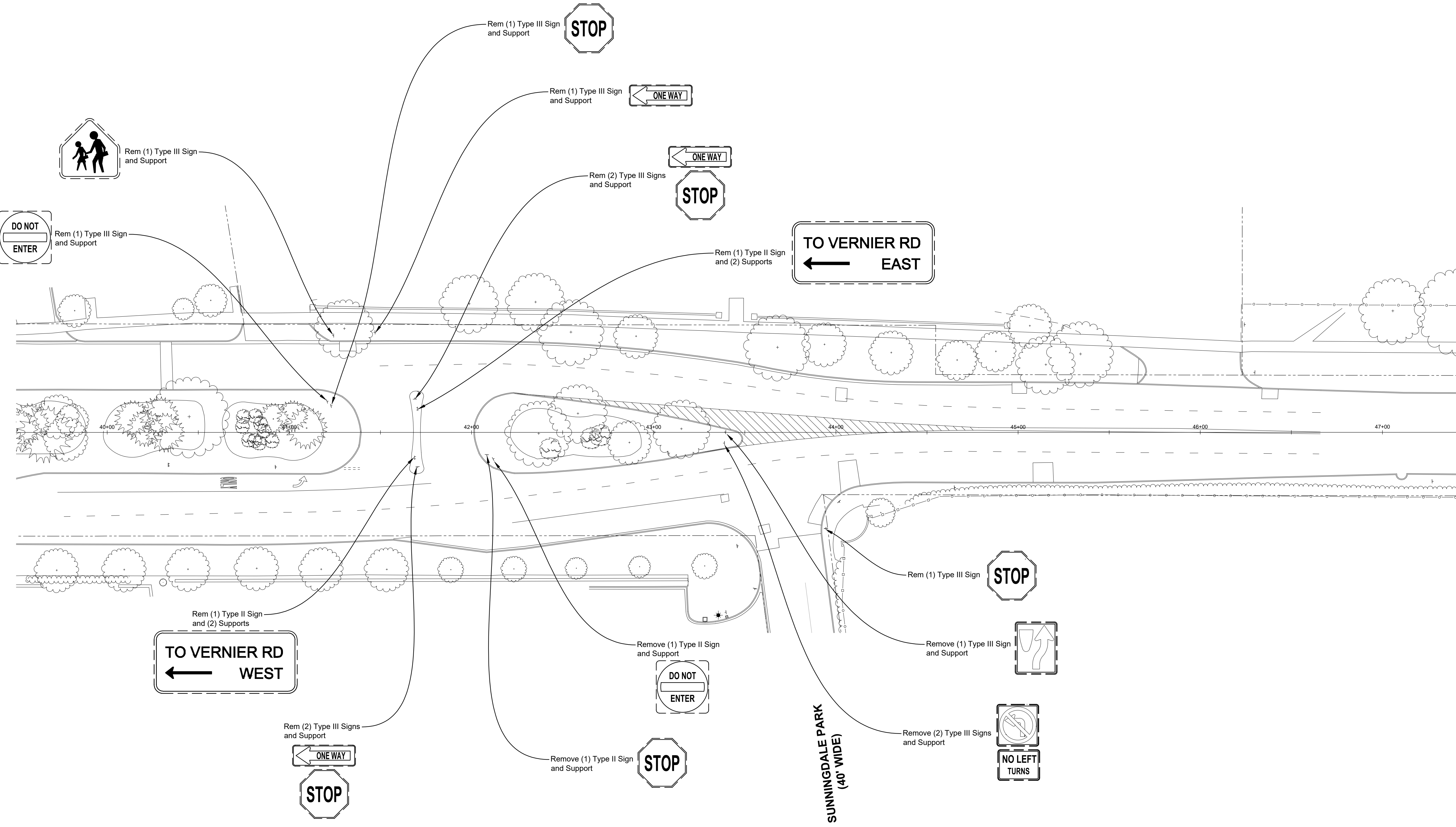
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SHEET NO.

26

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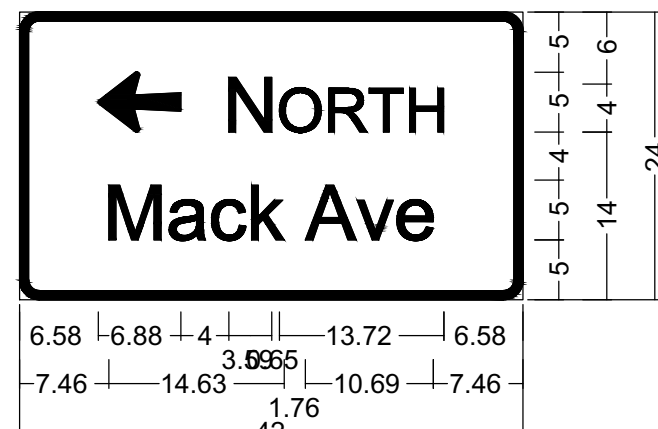
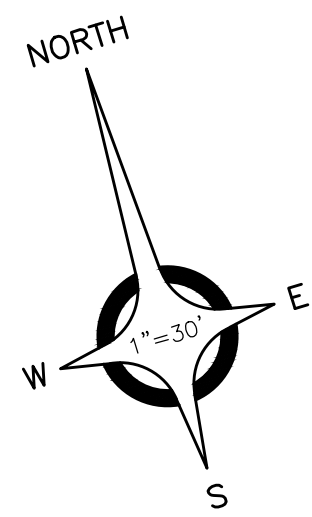


**VERNIER ROAD  
(204' WIDE)**

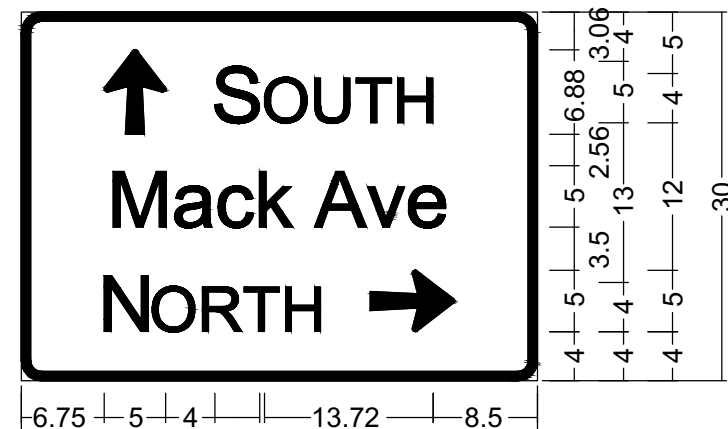
**SUNNINGDALE PARK  
(40' WIDE)**

**JN 219533A ESTIMATED QUANTITIES  
(THIS SHEET)**

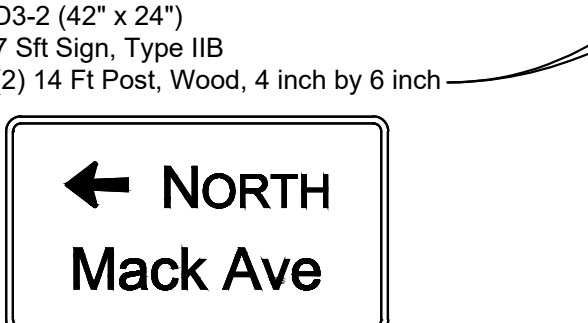
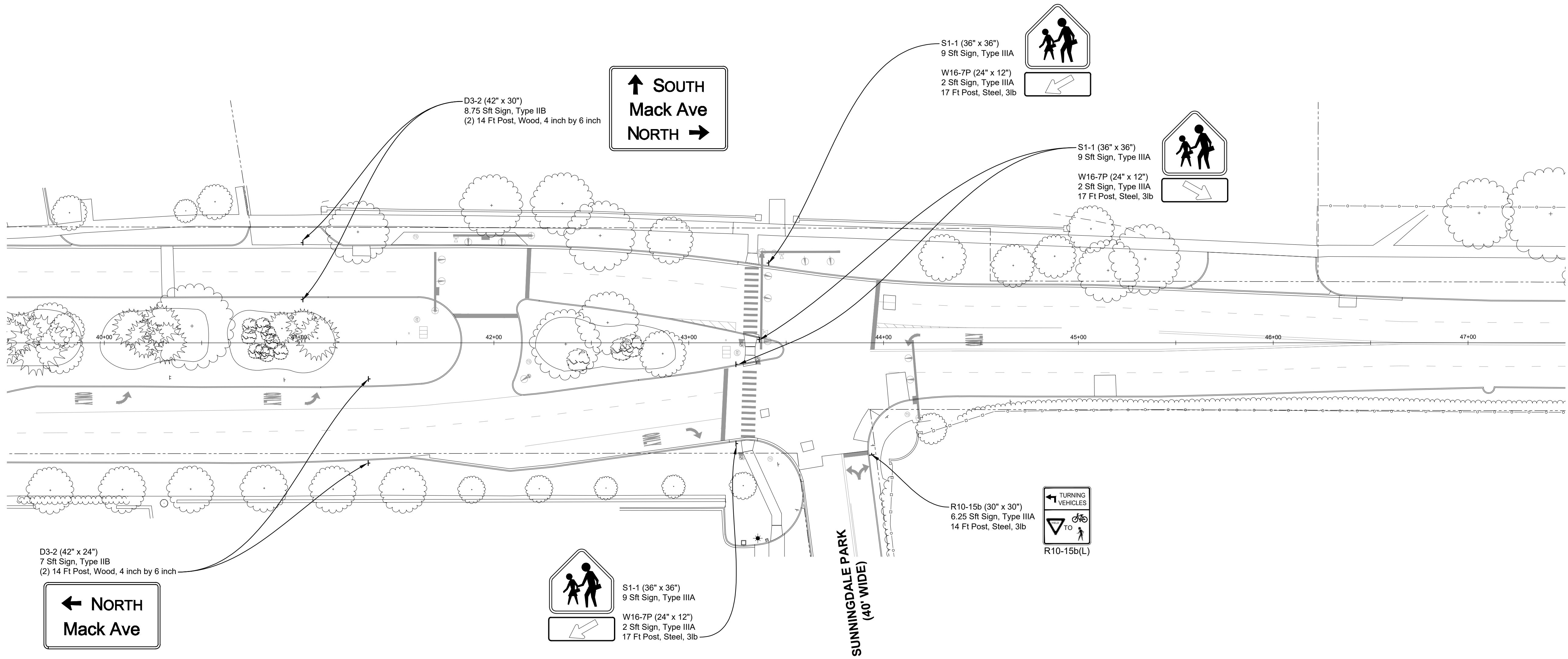
1. Ground Mtd Sign Support, Rem	13	Ea
2. Sign, Type III, Rem	13	Ea
3. Sign, Type II, Rem	2	Ea



D3-2 (1.7) 35 mph or less;  
 1.63" Radius, 0.75" Border, White on, Green;  
 Arrow A-5 - 6.88" 180°;  
 "N", ClearviewHwy-3-W;  
 "ORTH", ClearviewHwy-3-W;  
 "Mack Ave", ClearviewHwy-3-W;



D3-2 (1.6) 35 mph or less;  
 1.63" Radius, 0.75" Border, White on, Green;  
 Arrow A-5 - 6.88" 90°;  
 "S OUTH", ClearviewHwy-3-W;  
 "Mack Ave", ClearviewHwy-3-W;  
 "N ORTH", ClearviewHwy-3-W;  
 Arrow A-5 - 6.88" 0°;



D3-2 (42" x 24")  
 7 Sft Sign, Type IIB  
 (2) 14 Ft Post, Wood, 4 inch by 6 inch

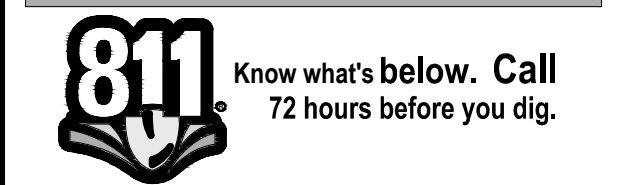
DATE	SUBMITTALS/REVISIONS

PROJECT NAME:  
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:  
**PERMANENT SIGNING PLAN  
 VERNIER ROAD CONSTRUCTION PLAN**

CLIENT:  
 CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: 1" = 30'		



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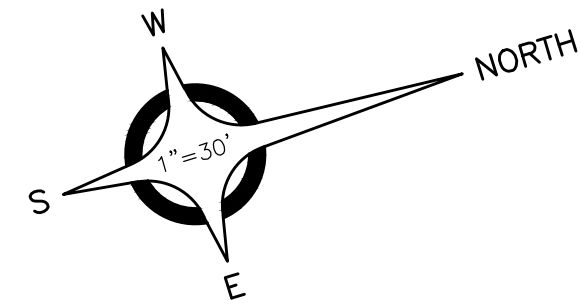
PROJECT NO. 0160-0455

**JN 219533A ESTIMATED QUANTITIES (THIS SHEET)**

1. Post, Steel, 3lb	82	Ft
2. Post, Wood, 4 inch by 6 inch	112	Ft
3. Sign, Type IIIA	50.25	Sft
4. Sign, Type IIB	31.5	Sft

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SHEET NO. 27



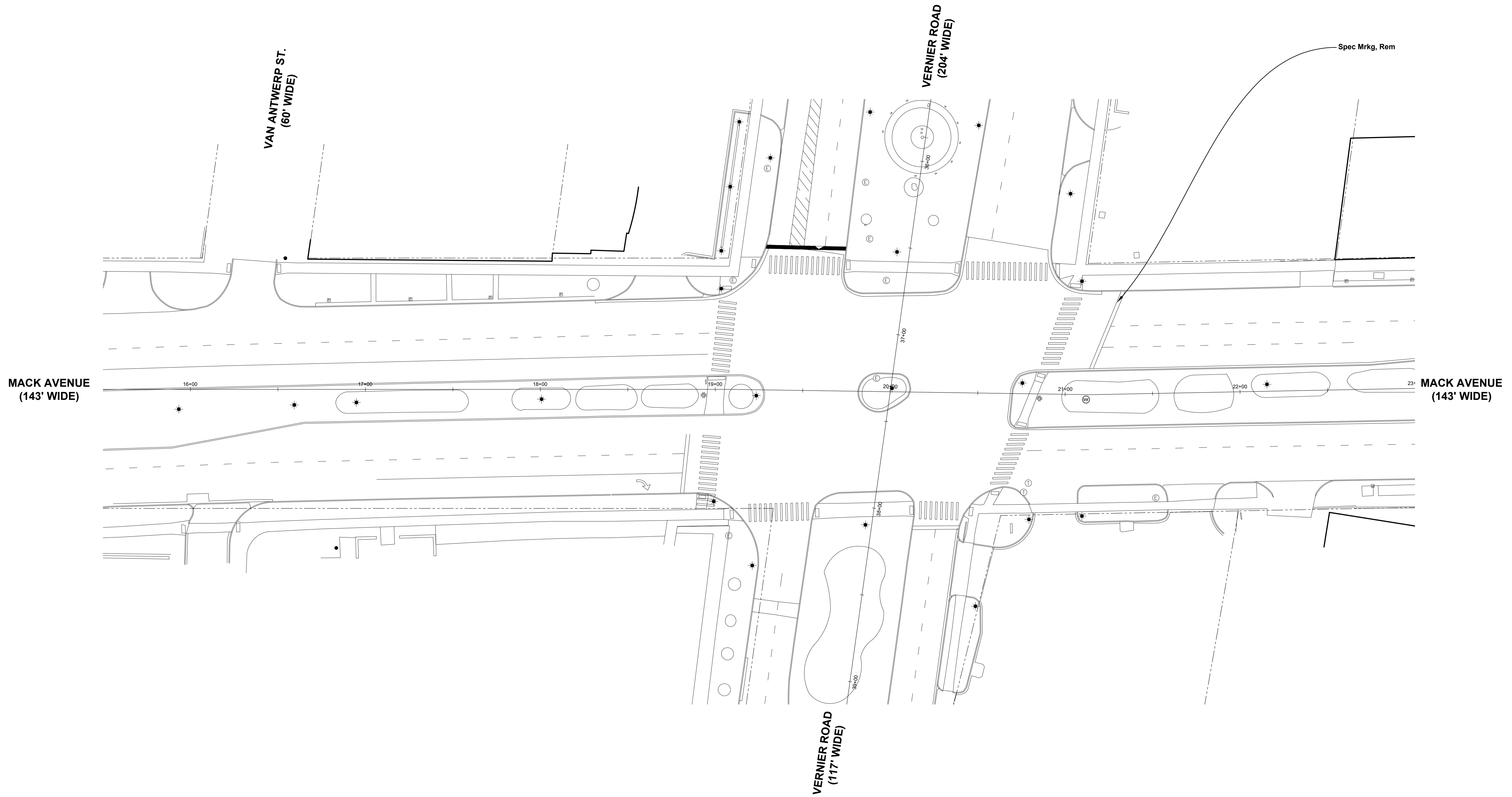
ANDERSON, ECKSTEIN AND WESTRICK, INC.

CIVIL ENGINEERS SURVEYORS ARCHITECTS

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

www.aewinc.com

ENGINEERING STRONG COMMUNITIES



DATE	SUBMITTALS/REVISIONS
PROJECT NAME:	

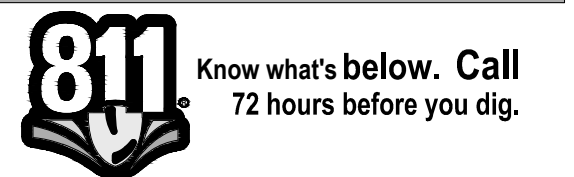
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**PAVEMENT MARKING PLAN  
REMOVAL  
MACK AVENUE**

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: 1" = 30'		
0 15 30 60		



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

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PROJECT NO. 0160-0455

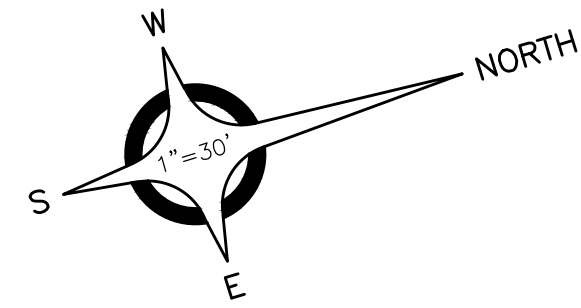
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SHEET NO.

28

JN 218128 ESTIMATED QUANTITIES  
(THIS SHEET)

1. Rem Spec Mrkg 90 Sft



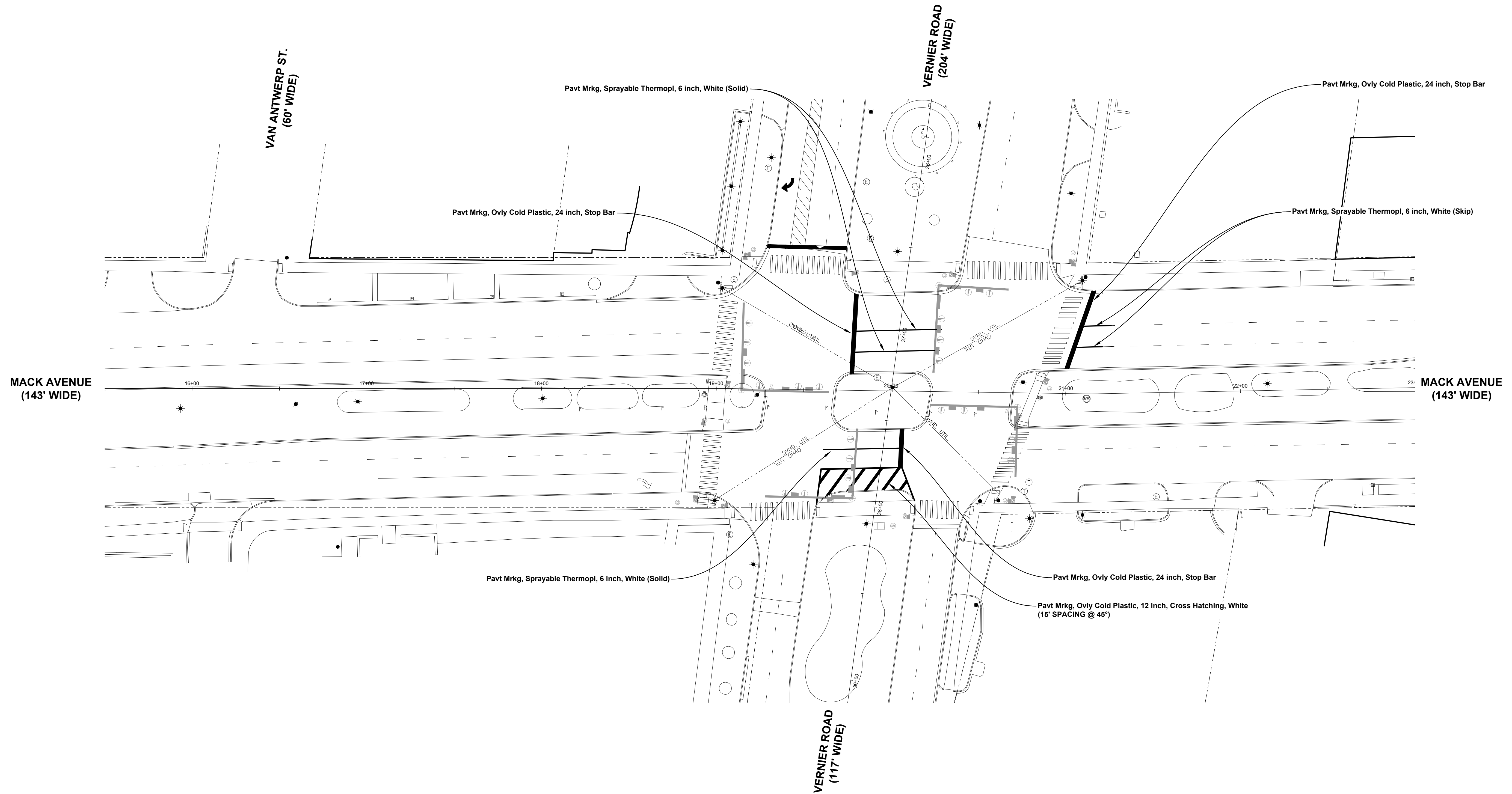
ANDERSON, ECKSTEIN AND WESTRICK, INC.

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PROJECT NAME:

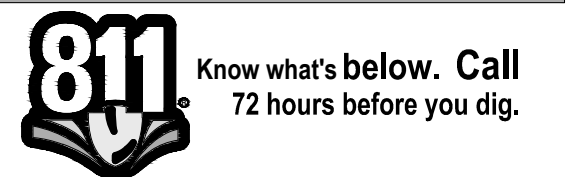
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**PAVEMENT MARKING PLAN CONSTRUCTION MACK AVENUE**

CLIENT:  
CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: 1" = 30'		
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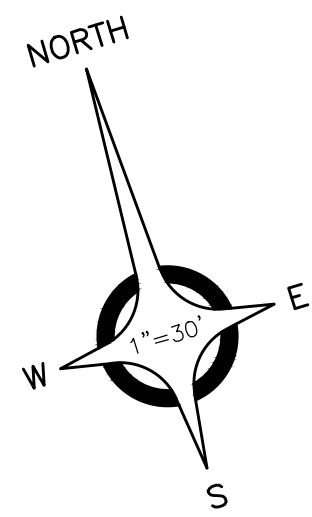
PROJECT NO. 0160-0455

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SHEET NO.

**JN 218128 ESTIMATED QUANTITIES (THIS SHEET)**

1. Pavt Mrkg, Sprayable Thermopl, 6 inch, White	230	FT
2. Pavt Mrkg, Ovly Cold Plastic, 24 inch, Stop Bar	114	FT
3. Pavt Mrkg, Ovly Cold Plastic, 12 inch Cross Hatching, White	80	FT



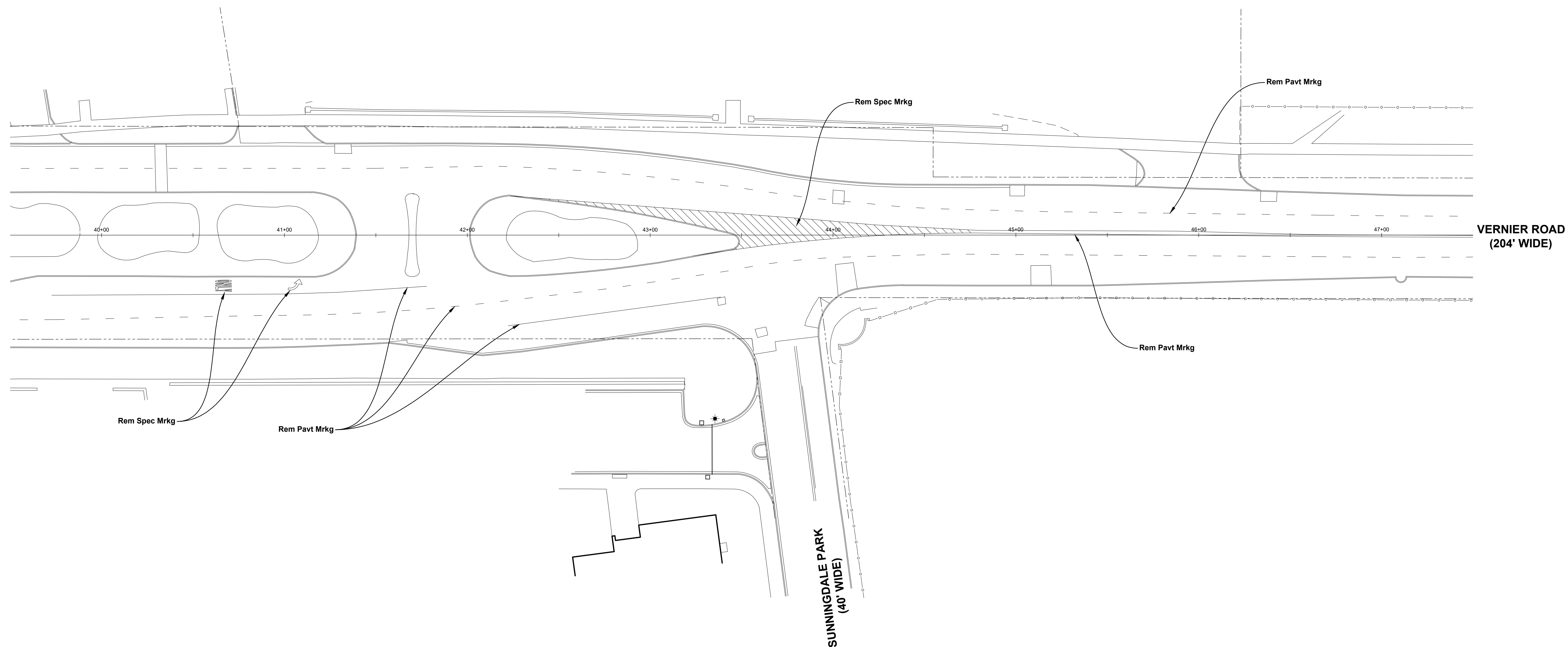
ANDERSON, ECKSTEIN AND  
WESTRICK, INC.

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ENGINEERING STRONG COMMUNITIES



VERNIER ROAD  
(204' WIDE)

SUNNINGDALE PARK  
(40' WIDE)

DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**VERNIER & MACK  
INTERSECTION  
IMPROVEMENTS**

SHEET TITLE:

**PAVEMENT  
MARKING PLAN  
REMOVAL  
VERNIER ROAD**

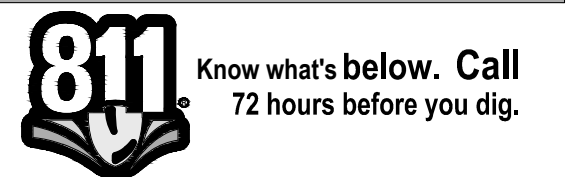
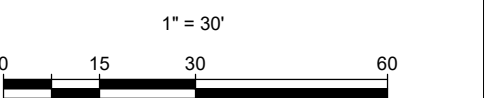
CLIENT:

CITY OF GROSSE POINTE WOODS

PRELIMINARY  CONSTRUCTION  RECORD

DRAWN BY:	CHECKED BY:	DATE:
CAD	MTL	MAY 2023

SCALE:



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PROJECT NO.

0160-0455

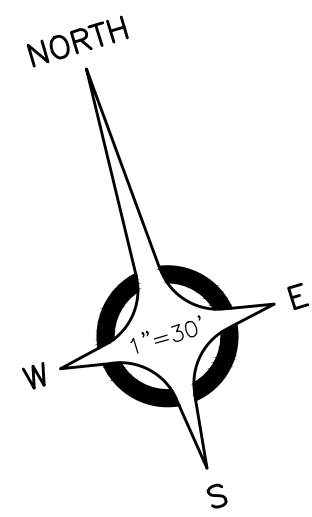
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SHEET NO.

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**JN 219533A ESTIMATED QUANTITIES  
(THIS SHEET)**

1. Rem Spec Mrkg	120	Sft
2. Rem Pavt Mrkg	1,800	Ft



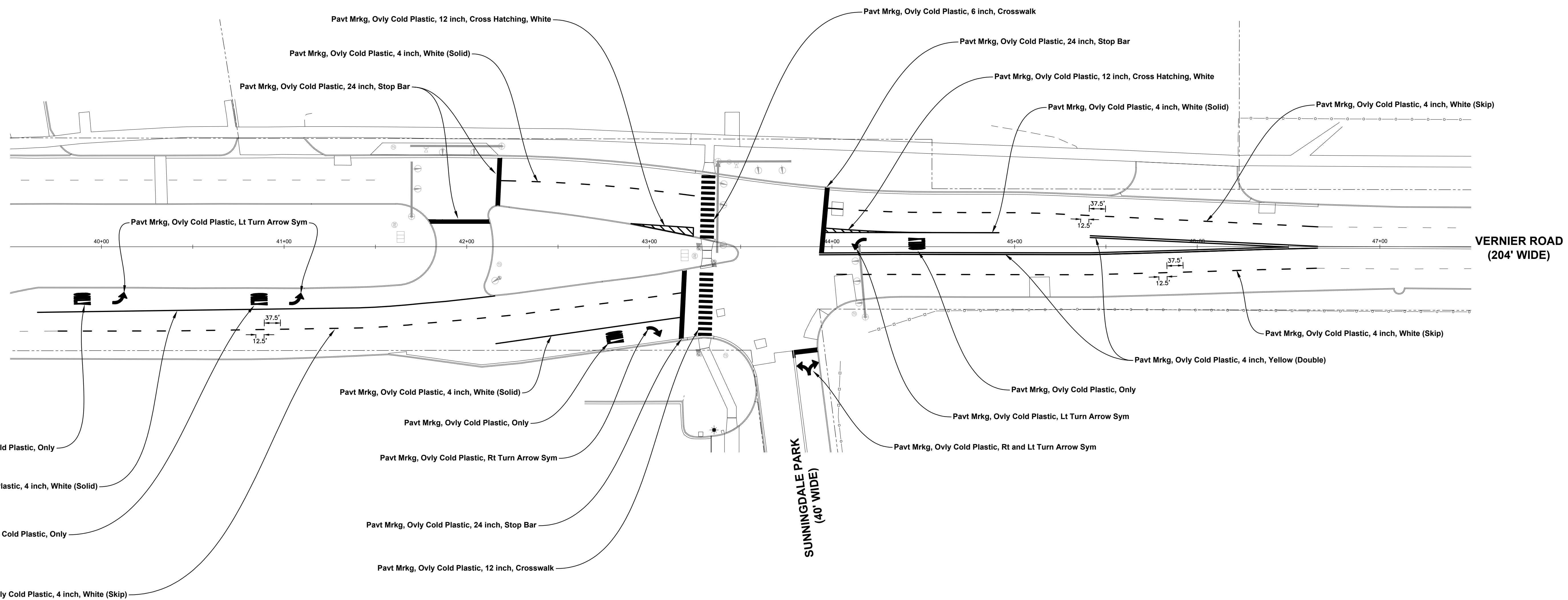
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Shelby Township Michigan 48315 Fax 586 726 8780

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ENGINEERING STRONG COMMUNITIES



DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

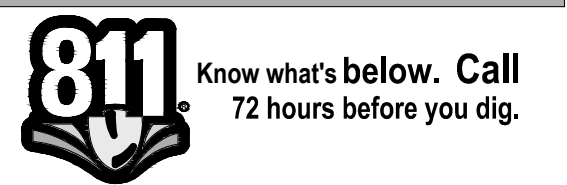
**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**PAVEMENT MARKING PLAN CONSTRUCTION VERNIER ROAD**

CLIENT: CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: CAD	CHECKED BY: MTL	DATE: MAY 2023
SCALE: N.T.S.		



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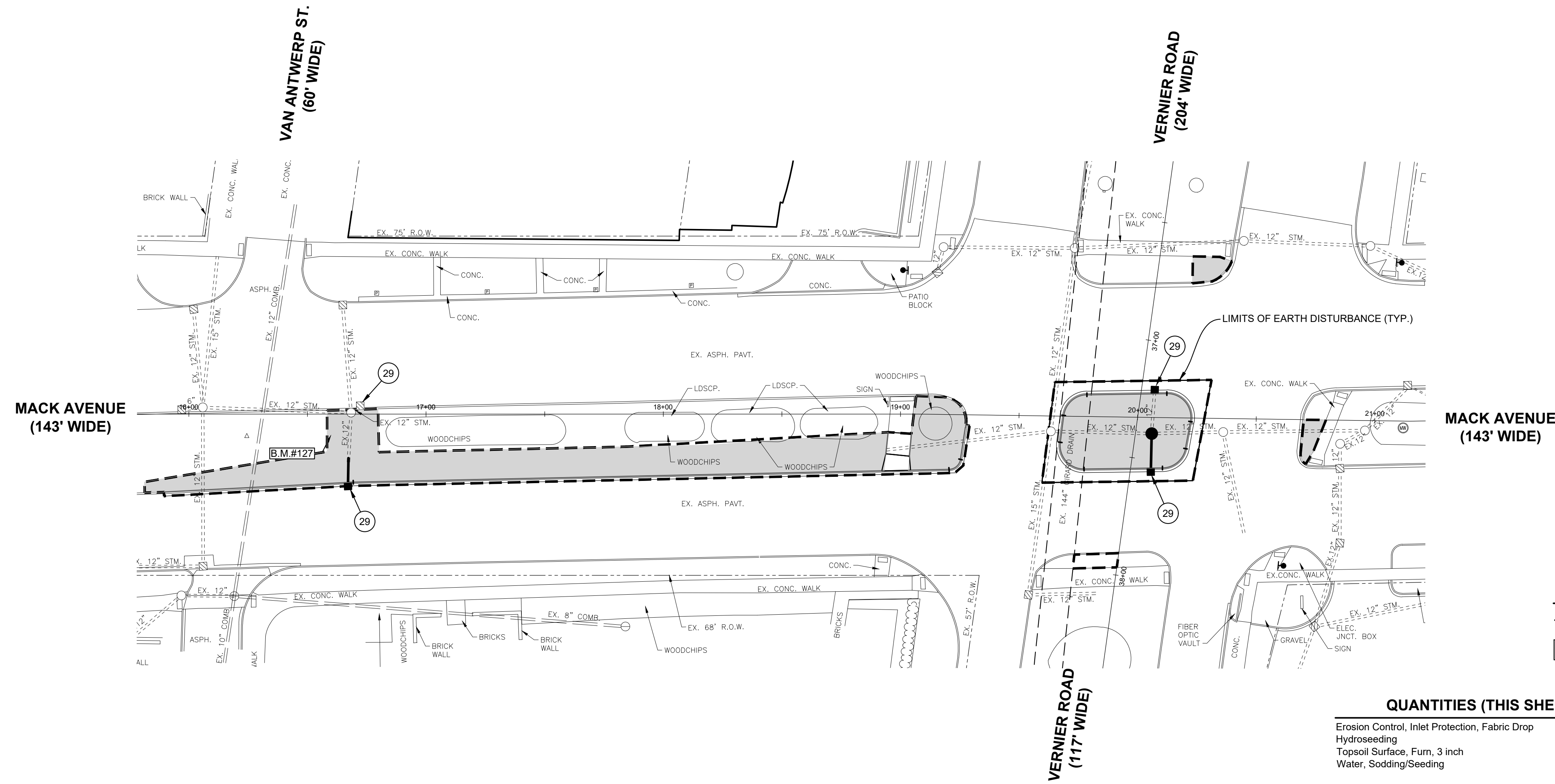
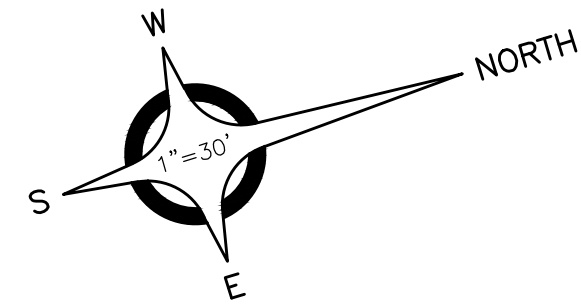
**JN 219533A ESTIMATED QUANTITIES (THIS SHEET)**

1. Pavt Mrkg, Ovly Cold Plastic, 4 inch, White	1,690	Ft
2. Pavt Mrkg, Ovly Cold Plastic, 4 inch, Yellow	761	Ft
3. Pavt Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym	1	Ea
4. Pavt Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym	3	Ea
5. Pavt Mrkg, Ovly Cold Plastic, Rt and Lt Turn Arrow Sym	1	Ea
6. Pavt Mrkg, Ovly Cold Plastic, Only	4	Ea
7. Pavt Mrkg, Ovly Cold Plastic, 12 inch, Crosswalk	168	Ft
8. Pavt Mrkg, Ovly Cold Plastic, 24 inch, Stop Bar	140	Ft
9. Pavt Mrkg, Ovly Cold Plastic, 12 inch Cross Hatching, White	32	Ft

PROJECT NO. 0160-0455

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**LEGEND**

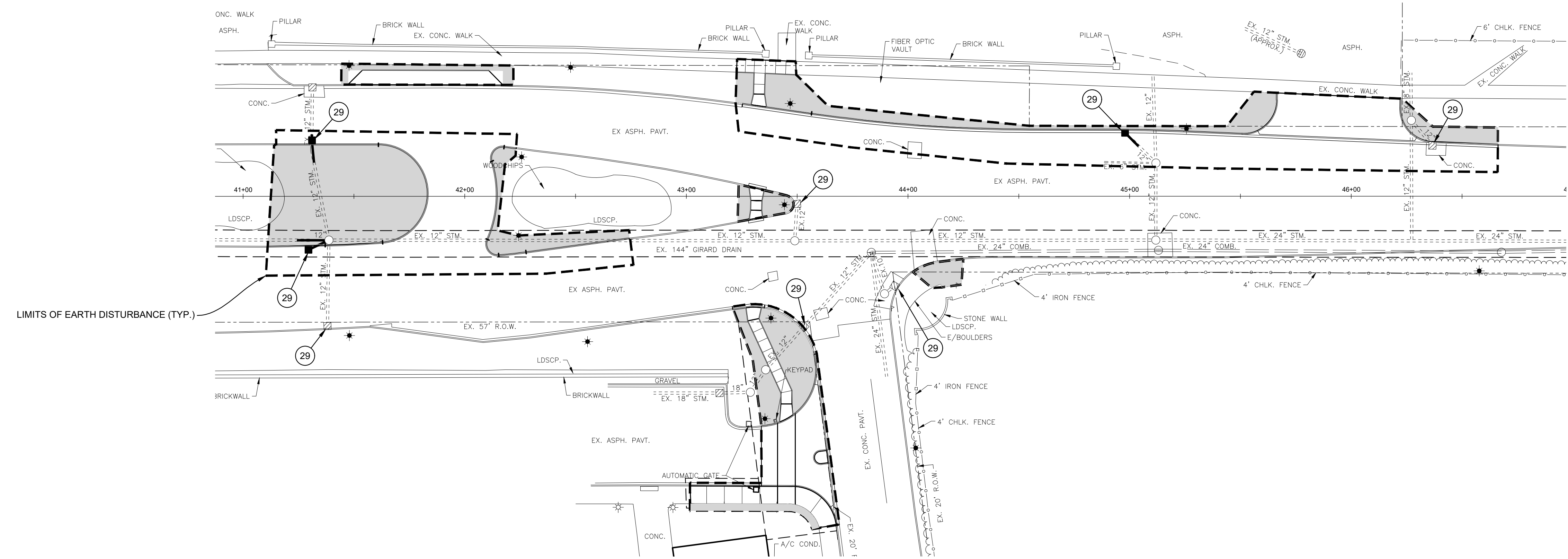
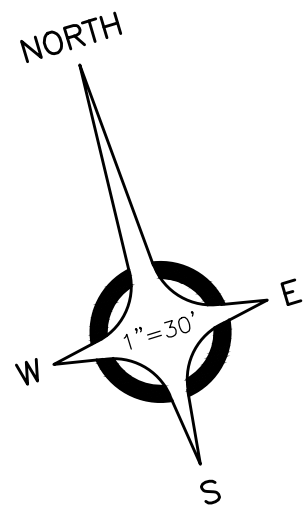
---	LIMITS OF DISTURBANCE
■	Topsil Surface, Furn, 3 inch AND Sodding (TYP.)

**QUANTITIES (THIS SHEET)**

Erosion Control, Inlet Protection, Fabric Drop	12 EA
Hydroseeding	1,000 Syd
Topsil Surface, Furn, 3 inch	1,000 Syd
Water, Sodding/Seeding	35 Unit

**GROSS AC. DIST.**

0.70 AC.
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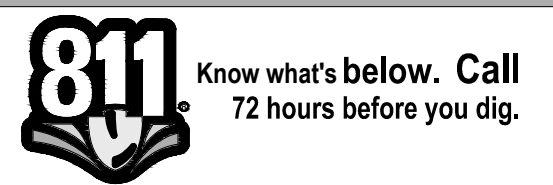
DATE	SUBMITTALS/REVISIONS

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

**SOIL EROSION PLAN**

CLIENT:  
 CITY OF GROSSE POINTE WOODS

<input checked="" type="checkbox"/> PRELIMINARY	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> RECORD
DRAWN BY: DBK	CHECKED BY: RW	DATE: JUNE 2023
SCALE: 1" = 30'		



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PROJECT NO. 0160-0455

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SHEET NO.



**SOIL EROSION AND SEDIMENTATION NOTES AND MAINTENANCE NOTES**

THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AS AMENDED, THE SOIL EROSION AND SEDIMENTATION CONTROL ACT AND THE MACOMB COUNTY SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.

ALL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE MACOMB COUNTY PUBLIC WORKS OFFICE.

EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.

STAGING THE WORK WILL BE DONE BY THE LANDOWNER OR LANDOWNER'S REPRESENTATIVE AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH CHANGE.

THE LANDOWNER OR LANDOWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF SOIL EROSION AND SEDIMENTATION CONTROL DEVICES.

THE LANDOWNER OR LANDOWNER'S REPRESENTATIVE SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS BEFORE AND AT ALL TIMES DURING CONSTRUCTION ON THIS PROJECT. ANY MODIFICATIONS OR ADDITIONS TO SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE COMPLIED WITH AS REQUIRED OR DIRECTED BY THE MACOMB COUNTY PUBLIC WORKS OFFICE.

IF ANY OF THE SESC MEASURES ON THE SITE ARE DEEMED INADEQUATE OR INEFFECTIVE, THE MACOMB COUNTY PUBLIC WORKS OFFICE SESC DIVISION HAS THE RIGHT TO REQUIRE ADDITIONAL SESC MEASURES AT THE EXPENSE OF THE LANDOWNER.

INSTALL INLET FILTER ON ALL PAVEMENT CATCH BASINS PER DETAIL.

- A. INLET FILTERS SHALL BE INSPECTED WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF A RAINFALL AND DAILY DURING A PROLONGED RAIN EVENT.
- B. BUILDUP OF SEDIMENT AND DEBRIS SHALL BE REMOVED PROMPTLY.
- C. IF FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF EXPECTED USABLE LIFE AND THE BARRIER IS STILL REQUIRED, THE FABRIC SHALL BE REPLACED PROMPTLY.

NO STOCKPILED SOIL IS PLANNED FOR THIS PROJECT.

ALL DISTURBED AREAS WILL BE RESTORED WITH 3" OF TOPSOIL AND SODDING.

NO DEWATERING IS PLANNED DURING CONSTRUCTION.

ALL DIRT TRACKED ONTO ANY ROADWAY SHALL BE REMOVED IMMEDIATELY.

STREETS AND OR PARKING AREAS WILL BE SCRAPED ON A DAILY BASIS AND SWEEPED AT A MINIMUM OF ONCE PER WEEK BY THE LANDOWNER OR LANDOWNER'S REPRESENTATIVE.

DURING DRY PERIODS, ALL DISTURBED AREAS SHALL BE WATERED FOR DUST CONTROL.

PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER EARTH CHANGE ACTIVITY CEASES, TEMPORARILY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. ALL TEMPORARY SOIL EROSION CONTROL SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.

FINAL GRADE, ESTABLISH VEGETATION AND OR LANDSCAPE ALL DISTURBED AREAS NOT BUILT OR PAVED UPON.

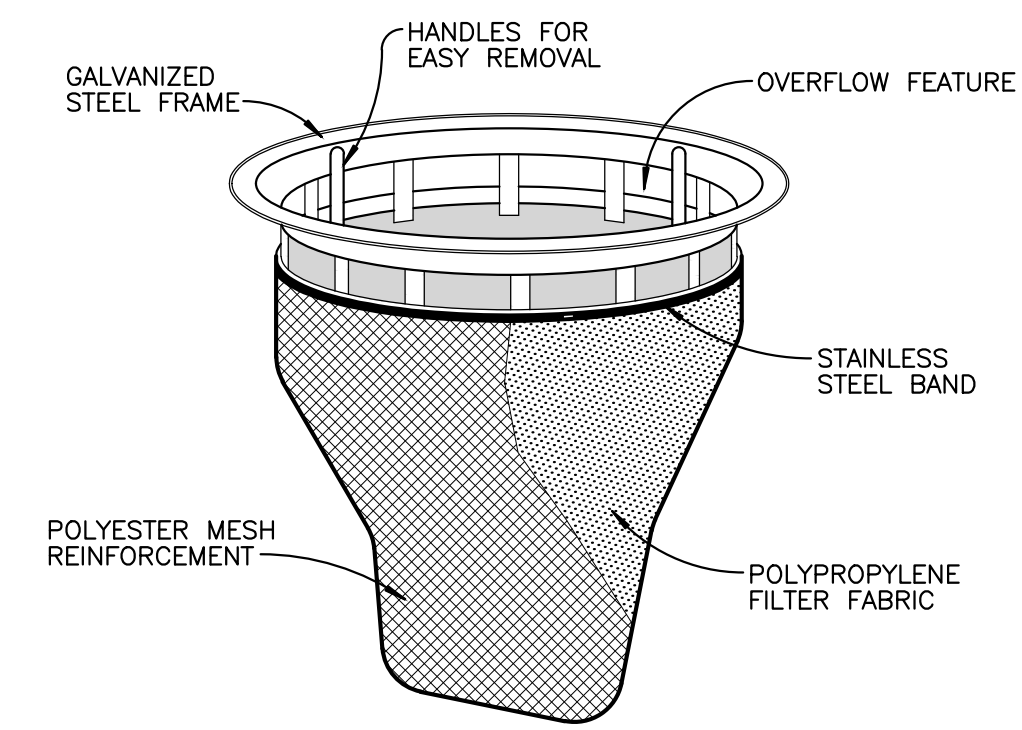
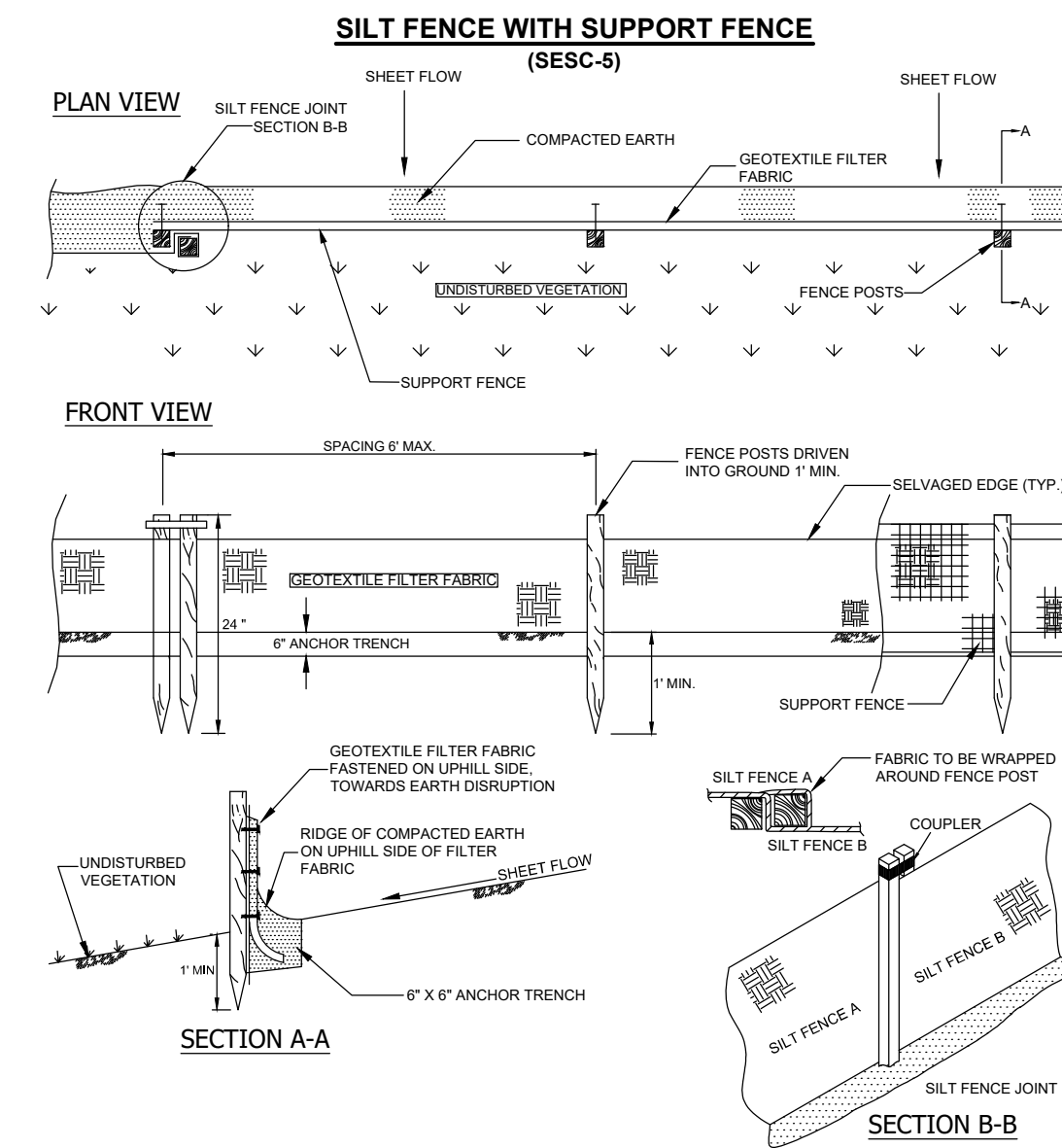
REMOVE ALL TEMPORARY SOIL EROSION DEVICES AFTER PERMANENT STABILIZATION IS ESTABLISHED.

SOIL TYPES: UrbarB, TedubB, ZfsuaA

NAME OF AND DISTANCE TO NEAREST OPEN WATERCOURSE: GIRARD DRAIN - ONSITE.

PERSON RESPONSIBLE FOR THE MAINTENANCE OF ALL TEMPORARY SOIL EROSION CONTROL MEASURES WILL BE PROVIDED WHEN THE CONTRACTOR IS DETERMINED.

	JUNE				JULY					AUGUST				SEPTEMBER				
	6/3	6/10	6/17	6/24	7/1	7/8	7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23	9/30
MOBILIZE																		
INSTALL INLET FILTERS																		
REMOVALS & EARTHWORK, TRAFFIC SIGNALS																		
PAVEMENT, DRIVE AND SIDEWALK																		
RESTORATION																		
PERMANENT SESC MEASURES																		
REMOVE TEMPORARY SESC MEASURES																		



**DROP-IN FILTER**

NOT TO SCALE



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ENGINEERING STRONG COMMUNITIES

DATE	SUBMITTALS/REVISIONS

PROJECT NAME:

**VERNIER & MACK INTERSECTION IMPROVEMENTS**

SHEET TITLE:

**SOIL EROSION DETAILS**

CLIENT: CITY OF GROSSE POINTE WOODS

PRELIMINARY  
  CONSTRUCTION  
  RECORD

DRAWN BY: DBK	CHECKED BY: RW	DATE: JUNE 2023
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SCALE: 1" = 30'



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