

# WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES

IN COOPERATION WITH  
**MICHIGAN DEPARTMENT OF TRANSPORTATION**

**PROPOSED INTERSECTION AND SIGNAL IMPROVEMENTS FOR  
DIX AVENUE AND SCHAEFER HWY, SCHAEFER HWY AND  
OAKWOOD BLD. AND OAKWOOD BLD AND PLEASANT AVE**

**CITY OF DETROIT  
WAYNE COUNTY, MICHIGAN**

**CONTROL SECTION EDA 82500      JOB NO. 103445A**

*In conformance with the project proposal, the City of Detroit Special Provision for Drainage Structures, Block (1) and the City of Detroit DPWS City Engineering Division Standard Plan C-5025.*

BUREAU OF STREETS, CITY ENGINEERING DEPT.  
DPW - CITY OF DETROIT  
APPROVED BY: *[Signature]*  
DATE: *4/20/09*

A CITY ENGINEERING DEPT. PERMIT IS REQUIRED FOR ALL WORK WITHIN STREET RIGHT OF WAY

**NOTES:**  
THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2003 STANDARD SPECIFICATIONS FOR CONSTRUCTION AS MODIFIED BY WAYNE COUNTY SPECIAL PROVISIONS.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH THE AASHTO: A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, 2004.

ALL SIGNAGE SHALL BE IN CONFORMANCE WITH THE MMUTCD 2003 AND THE 2005 SUPD

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS (DIX/SCHAEFER)
3	GENERAL NOTES
4	VICINITY SHEET
5	REMOVAL SHEET (DIX/SCHAEFER)
6	ALIGNMENT PLAN/PROFILE (DIX/SCHAEFER)
7	UTILITY PLAN (DIX/SCHAEFER)
8	CONSTRUCTION PLAN (DIX/SCHAEFER)
9	GRADING PLAN/INTERSECTION DETAIL (DIX/SCHAEFER)
10	PAVEMENT JOINT LAYOUT PLAN (DIX/SCHAEFER)
11	PAVING/SIDEWALK IMPROVEMENTS (SCHAEFER/OAKWOOD)
12	FUTURE LAYOUT (PLEASANT/OAKWOOD)
13	MAINTENANCE OF TRAFFIC - DETOUR OF TRAFFIC-STAGE 1 & 2 (DIX/SCHAEFER)
14	MAINTENANCE OF TRAFFIC - PEDESTRIAN DETOUR STAGES 1, 2 & 3 (DIX/SCHAEFER)
15	MAINTENANCE OF TRAFFIC - STAGE 1 & 2 (DIX/SCHAEFER)
16	MAINTENANCE OF TRAFFIC - STAGE 3 (DIX/SCHAEFER)
17	MAINTENANCE OF TRAFFIC - ADVANCED WARNING SIGNAGE
18	TRAFFIC SIGNALS - GENERAL NOTES
19	TRAFFIC SIGNALS - LEGEND SHEET
20	TRAFFIC SIGNALS - REMOVAL PLAN (DIX/SCHAEFER)
21	TRAFFIC SIGNALS - REMOVAL PLAN (SCHAEFER/OAKWOOD)
22	TRAFFIC SIGNALS - SIGNAL PLAN (DIX/SCHAEFER)
23	TRAFFIC SIGNALS - SIGNAL PLAN (SCHAEFER/OAKWOOD)
24	TRAFFIC SIGNALS - SIGNAL PLAN (PLEASANT/OAKWOOD)
25	STRIPING/TRAFFIC CONTROL (DIX/SCHAEFER)
WAYNE COUNTY TRAFFIC SIGNAL SPECIAL DETAILS (IN PROPOSAL) CITY OF DETROIT TRAFFIC SIGNAL SPECIAL DETAILS (IN PROPOSAL) STATEWIDE TRAFFIC SIGNAL SPECIAL DETAILS (IN PROPOSAL)	

**TRAFFIC DATA**

ROAD	2008	2028
<b>SCHAEFER ROAD</b>		
A. D. T.	21720	26520
D. H. V.	2180	2660
COMMERCIAL	10%	10%
DESIGN SPEED	40 MPH	
POSTED SPEED	35 MPH	
<b>DIX AVENUE</b>		
A. D. T.	5400	6920
D. H. V.	540	690
COMMERCIAL	10%	10%
DESIGN SPEED	30 MPH	
POSTED SPEED	25 MPH	

- PROJECT DESCRIPTION**
- RECONSTRUCTION OF THE SCHAEFER ROAD AND DIX AVENUE INTERSECTION.
  - 410 FEET (0.07 MILES) OF DIX AVENUE RECONSTRUCTION.
  - SIGNALIZATION IMPROVEMENTS AT THE DIX/SCHAEFER, SCHAEFER/OAKWOOD AND OAKWOOD/PLEASANT INTERSECTIONS.

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION**  
415 CLIFFORD, DETROIT, MICHIGAN, 48226

DIRECTOR OF ENGINEERING ENGINEERING DIVISION	DATE
DIVISION DESIGN ENGINEER ENGINEERING DIVISION	DATE
ASSISTANT DIVISION DESIGN ENGINEER ENGINEERING DIVISION	DATE

PLANS PREPARED BY:

**The Mannik & Smith Group, Inc.**  
Civil Engineering, Surveying and Environmental Consulting  
2365 Haggerty Road South  
Canton, Michigan 48188  
(734) 397-3100

BY: *Brian P. Geer*  
BRIAN GEER, P.E.  
PROFESSIONAL ENGINEER #44247

DATE: 4-20-09



**NOTE:**  
CONTRACTOR TO CALL WAYNE COUNTY TRAFFIC DEPARTMENT FOR ADDITIONAL UNDERGROUND UTILITY INFORMATION AT: (734) 955-2154



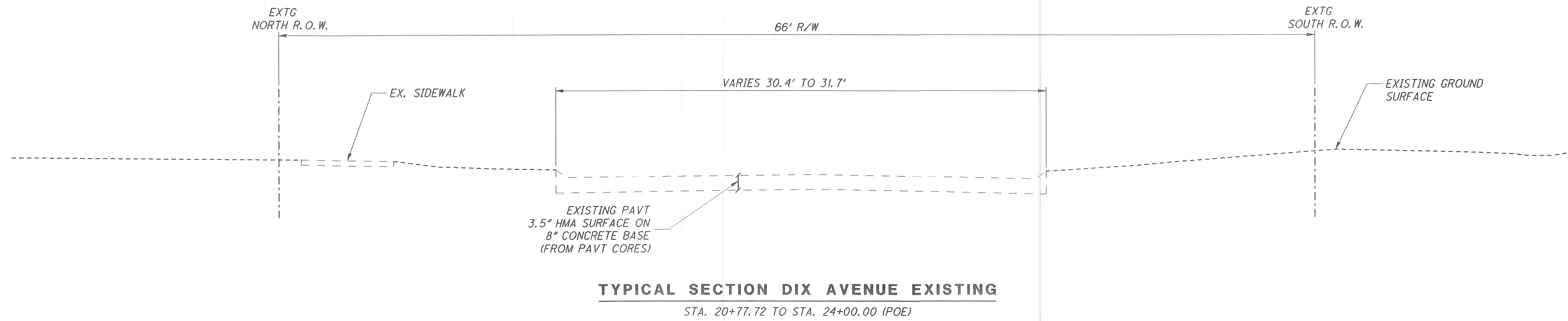
STANDARD PLANS	
CONSTRUCTION OF THE FOLLOWING ITEMS, WHERE CALLED FOR ON THE PLANS, WILL BE CONSTRUCTED ACCORDING TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION AND WAYNE COUNTY STANDARD PLANS AS INDICATED. ALL STANDARD PLANS NECESSARY FOR THIS PROJECT ARE ON FILE AT THE ENGINEER'S OFFICE.	
ITEM OF WORK	MDOT STANDARD PLAN NO.
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS	* R-28-F
DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS	R-29-E
TRANSVERSE PAVEMENT JOINTS (PLAIN CONCRETE PAVEMENT)	R-39P-B
LOAD TRANSFER ASSEMBLIES FOR TRANSVERSE JOINTS	R-40-F
LONGITUDINAL PAVEMENT JOINTS	R-41-E
LOCATION OF TRANSVERSE JOINTS IN PLAIN CONCRETE PAVEMENT	* R-43P-B
SOIL EROSION & SEDIMENTATION CONTROL MEASURES	R-96-D
SEEDING AND TREE PLANTING	* R-100-E
* SPECIAL DETAIL INCLUDED IN PROPOSAL	
WAYNE CO. STANDARD PLAN NO.	
DRAINAGE STANDARD PLAN GENERAL NOTES	D1-03
CATCH BASIN A	D6-03
SEWER TRENCH A, B	D12-03
UNDERDRAIN	D14-03
FRAME AND COVER S	D17-03
PLAN CONVENTIONS	M1-03
STREET NAME (D3-I) SIGNS	M3-03
PAVING STANDARD PLAN GENERAL NOTES	P1-03
CURB DETAILS	P2-03
LONGITUDINAL PAVEMENT JOINTS	P3-03
TRANSVERSE PAVEMENT JOINTS	P4-03
COMMERCIAL DRIVEWAY	P5-03
JOINT LAYOUT	P7-03
CONCRETE SIDEWALK	P9-03

7/8/2008  
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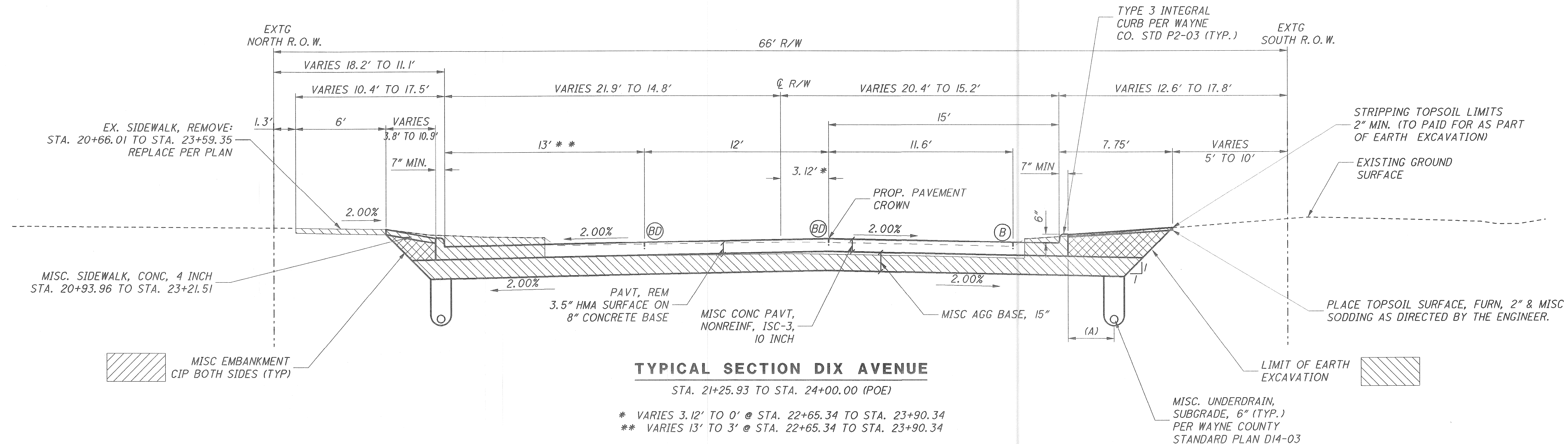


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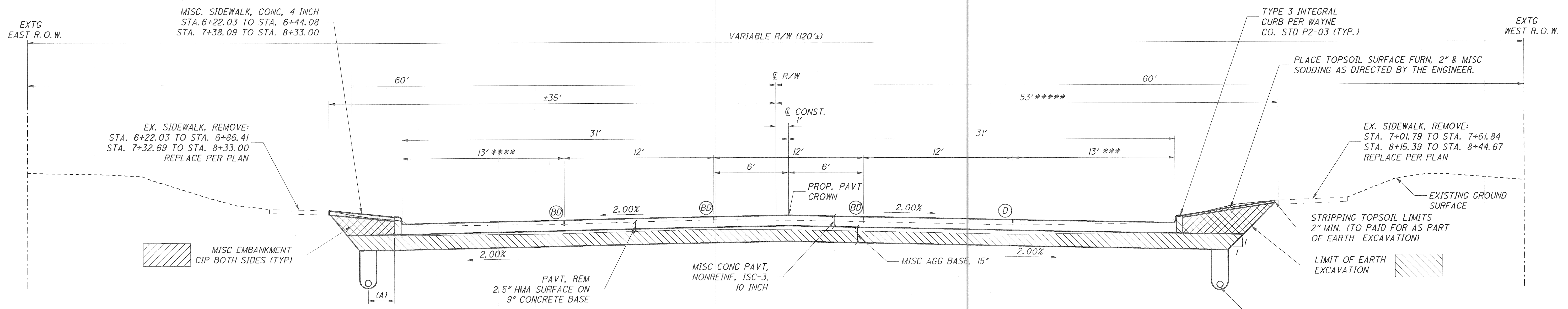
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**TYPICAL SECTION DIX AVENUE EXISTING**  
STA. 20+77.72 TO STA. 24+00.00 (POE)



**TYPICAL SECTION DIX AVENUE**  
STA. 21+25.93 TO STA. 24+00.00 (POE)  
\* VARIES 3.12' TO 0' @ STA. 22+65.34 TO STA. 23+90.34  
\*\* VARIES 13' TO 3' @ STA. 22+65.34 TO STA. 23+90.34



**TYPICAL SECTION SCHAEFER HIGHWAY**  
STA. 6+17.03 (POB) TO STA. 8+33.00 (POE)  
\*\*\* VARIES 13' TO 11.89' @ STA. 7+40.55 TO STA. 8+29.12  
\*\*\*\* VARIES 13' TO 12.31' @ STA. 6+17.03 TO STA. 7+69.30  
\*\*\*\*\* 53' @ STA. 6+17.03 TO STA. 7+57.05  
37' @ STA. 8+20.54 TO STA. 8+33.00

NOTES:  
(A) = 3' PER WAYNE COUNTY STANDARD PLAN S-14 UNLESS IN CONFLICT WITH EXISTING OR PROPOSED SIDEWALK. LOCATION TO BE ADJUSTED ACCORDINGLY.  
(BD) (D) DENOTES JOINT TYPE AND LOCATION

NO.	DATE	BY	DESCRIPTION
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT
4	9-23-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
5	10-01-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
6	12-22-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
7	04-06-09	SJE	RE-SUBMITTAL TO CITY OF DETROIT

DRAWN BY MRS	CHECKED BY TEW	DATE 4/10/2009	CORRECT
CORRECT			APPROVED
SQUAD LEADER			DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

**DIX / SCHAEFER**  
**INTERSECTION IMPROVEMENTS**  
**TYPICAL SECTIONS**

PLANS PREPARED BY:  
**Mannik & Smith**  
Group, Inc.  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT	SCALE 1"=4'
ISSUE NO.	SHEET NO. 2
DATE	



ROAD PLANS  
GENERAL NOTES

THE LOCATION OF ALL UTILITIES SHOWN ON THESE PLANS IS TAKEN FROM THE BEST AVAILABLE DATA. THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES WILL NOT BE RESPONSIBLE FOR ANY OMISSIONS OR VARIATION FROM THE LOCATIONS SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS REGARDING THEIR FACILITIES INCLUDING SERVICE CONNECTIONS PRIOR TO STARTING THE WORK. UTILITY SERVICE CONNECTIONS ARE NOT SHOWN ON THE PLANS AND NOT THE RESPONSIBILITY OF THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES.

EXISTING CASTINGS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.

MOWING HYDRANTS AND ADJUSTING TO GRADE ALL PRIVATE UTILITY STRUCTURES WILL BE DONE BY THE OWNER OF THE FACILITY UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL SEWERS SHALL BE PLACED AS REQUIRED WITHIN THE PARTICULAR TRENCH TYPE NOTED ON THE PLANS. WHERE THE PARTICULAR TRENCH TYPE HAS NOT BEEN CALLED FOR, THE REQUIREMENT FOR TRENCH DETAIL "B" SHALL BE USED.

THE EDGE OF EXISTING PAVEMENTS SHALL BE CLEANED OF EARTH OR OTHER FOREIGN MATERIAL WITH A WIRE BROOM BEFORE ADJACENT HMA OR CONCRETE PAVEMENT IS PLACED AND SHALL BE INCLUDED IN THE PAVEMENT ITEMS.

CLASS "A" SLOPES WILL BE REQUIRED WITH 4 FOOT VERTICAL CURVES AT TOP AND TOE OF SLOPES.

STREET OR ROAD NAME SIGNS AND STOP SIGNS, IN THE WAY OF CONSTRUCTION, WILL BE REMOVED AND RESET IMMEDIATELY IN A TEMPORARY LOCATION AS DIRECTED BY THE ENGINEER. STREET NAME SIGNS SHALL BE FINALLY SET BY THE CONTRACTOR IN A LOCATION DESIGNATED BY THE ENGINEER UPON COMPLETION OF FINAL GRADING IN THE ROAD SECTION INVOLVED. THIS WORK SHALL BE INCLUDED IN THE ITEM, *Misc Sign, Type B, Perm.*

ALL PROPOSED STREET RETURN RADII SHALL BE 25 FEET UNLESS OTHERWISE SHOWN.

REMOVE AND RESET ALL MAIL BOXES, AS DIRECTED BY THE ENGINEER, TO A POSITION ON THE INTERSECTING STREETS BEFORE THE ROAD IS CLOSED TO THROUGH TRAFFIC AND AGAIN TO A STANDARD POSITION AFTER THE ROAD IS OPENED TO THROUGH TRAFFIC. ALL WORK TO BE INCLUDED IN THE WORK PAY ITEM EARTH, EXCAVATION.

WHEN CALLED FOR ON THE PLANS OR DIRECTED BY THE ENGINEER, COMMERCIAL DRIVES SHALL BE REPLACED WITH 8 INCH NON-REINFORCED CONCRETE PAVEMENT.

WHERE PROPOSED CONCRETE DRIVES OR CONCRETE STREET RETURNS BUTT INTO AGGREGATE BASE WITH AN HMA SURFACE, THE RESTORATION WITH HMA MATERIAL OF DISTURBED AREAS AS DIRECTED BY THE ENGINEER, SHALL BE INCLUDED IN THE ITEMS FOR CONCRETE PAVEMENT OR CONCRETE BASE COURSE.

WHERE DETAIL "A" IS REQUIRED, AS SHOWN ON THE COUNTY STANDARD PLAN P11 SERIES, THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEMS FOR CONCRETE PAVEMENT OR CONCRETE BASE COURSE.

HMA PAVEMENT THICKNESS SHOWN IS THE ESTIMATED THICKNESS OF HMA PAVEMENT MIXTURES BASED UPON THE APPLICATION RATES AND COMPACTION METHODS.

REMOVAL OF SIDEWALK RAMP AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS *Sidewalk, Rem.*

UNAUTHORIZED ENCROACHMENTS (i.e. BENCHES, PARKING BLOCKS, R.R. TIES, LANDSCAPING, ETC.) REMAINING AT THE TIME OF CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. THE WORK OF REMOVAL SHALL BE PAID FOR AS *Misc Obstruction, Rem* UNLESS OTHERWISE INDICATED.

THE FOLLOWING CONTINGENCY QUANTITY IS AVAILABLE FOR USE AS DIRECTED BY THE ENGINEER: ITEM 403, *Misc Str Reconstruct*, 5 FT.

THE FOLLOWING CONTINGENCY QUANTITY IS AVAILABLE FOR USE AS DIRECTED BY THE ENGINEER: ITEM 502, *Misc Bit Mixture for Patching, Temp*, 25 Ton.

THE FOLLOWING CONTINGENCY QUANTITY IS AVAILABLE FOR USE AS DIRECTED BY THE ENGINEER: ITEM 205, *Misc Subgrade Undercutting Type IV*, 100 Cyd.

UTILITIES

THE FOLLOWING PUBLIC UTILITIES HAVE FACILITIES LOCATED WITHIN THE RIGHT-OF-WAY, OR WITHIN THE VICINITY OF THE PROJECT:

UTILITY	TYPE OF SERVICE
AMOCO BP-AMOCO PIPELINE CO TULSA CONTROL CENTER TULSA, OK 74135 CONTACT: BOBBY ROYE (800) 548-6482	GAS
AT&T 54 N. MILL ST. PONTIAC, MI 48342 CONTACT: BERNIE MCKENZIE (248) 972-0102	PHONE/CABLE
BP AMOCO GROUP PO BOX 138 GOSHEN, IN 46527 CONTACT: LEROY P. CRABTREE (574) 534-1486	PHONE/CABLE
BUCKEYE PIPELINE 4400 TREADWELL WAYNE, MI 48184 CONTACT: THOMAS WESTON (734) 721-8834	GAS
COMCAST 12775 LYNDON DETROIT, MI 48227 CONTACT: DARYL WOOD (248) 359-6582	PHONE/CABLE
CENTURYTEL MICHIGAN NETWORK PO BOX 597 KALKASKA, MI 49646 CONTACT: JIM OLIVER (989) 790-5809	PHONE/CABLE
DETROIT EDISON 15600 19 MILE ROAD CLINTON TWP, MI 48038-3502 CONTACT: BOB BARRETTE	ELECTRIC
DETROIT CITY DPW - CITY ENGINEERING 900 CADILLAC TOWER DETROIT, MI 48226-2873 CONTACT: LESLIE LORD (313) 224-3935	SIGNALS
DETROIT PUBLIC LIGHTING ENGINEERING DEPARTMENT 9449 GRINNELL DETROIT, MI 48213 CONTACT: (313) 267-7227	ROADWAY
DETROIT WATER AND SEWER 735 RANDOLPH DETROIT, MI 48226 CONTACT: BHARAT DOSHI (313) 224-4735	SEWER/WATER MAIN
MARATHON PIPELINE LLC 24400 ALLEN ROAD WOODHAVEN, MI 48183 CONTACT: CLAUDE GORDON (734) 676-7775	GAS
MICH CON GAS DISTRIBUTION 14207 SCHAEFER DETROIT, MI 48227 CONTACT: (313) 260-9764	GAS
MICH CON GAS DISTRIBUTION DISPACH 11043 FRENCH ROAD DETROIT, MI 48234 CONTACT: (313) 226-8841	GAS
QWEST COMMUNICATIONS 930 15TH STREET, STE-130 DENVER, CO 80202 CONTACT: SCOTT PLUMMER (303) 992-0213	PHONE/CABLE
SUNOCO PIPELINE L.P. 525 FRITZTOWN ROAD SINKING SPRING, PA 19608 CONTACT: JOMARIE JENKINS (610) 670-3256	GAS
WOLVERINE PIPELINE CO 8105 VALLEYWOOD LANE PROTAGE, MI 49024 CONTACT: FRED HIPSHEAR (269) 323-2491	GAS

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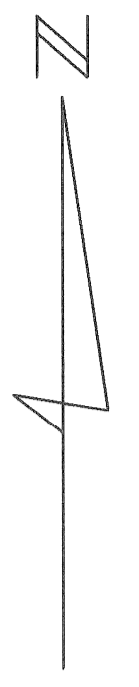
NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	MRS	TEW	7/9/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							SQUAD LEADER
							DIVISION DESIGN ENGINEER

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION

DIX/SCHAEFER/OAKWOOD  
INTERSECTION IMPROVEMENTS  
WAYNE CO. GENERAL NOTES

PLANS PREPARED BY: <b>Mannik &amp; Smith</b> Group, Inc. Civil Engineering, Surveying and Environmental Consulting	COUNTY PROJECT	SCALE N/A
ISSUE NO. _____	SHEET NO. 3	
DATE _____		





**BENCHMARKS**

**BENCHMARK A**  
 SET COTTON SPINDLE IN S. FACE  
 OF LIGHT & POWER POLE  
 N 289212.83, E 13451015.47  
 EL=579.66

**BENCHMARK B**  
 FOUND RR SPIKE IN S. FACE  
 OF LIGHT & POWER POLE  
 N 289166.89, E 13450886.65  
 EL=578.60

**BENCHMARK C**  
 SET COTTON SPINDLE IN S. FACE  
 OF POWER POLE  
 N 289031.80, E 13450472.16  
 EL=579.83

**BENCHMARK D**  
 FOUND SMALL RR SPIKE IN S. FACE  
 OF POWER POLE  
 N 288913.74, E 13450102.43  
 EL=583.48

**CONTROL POINTS**

**CP105**  
 N: 289271.47990  
 E: 13451176.86236  
 EL=579.049  
 CAPPED IRON ROD

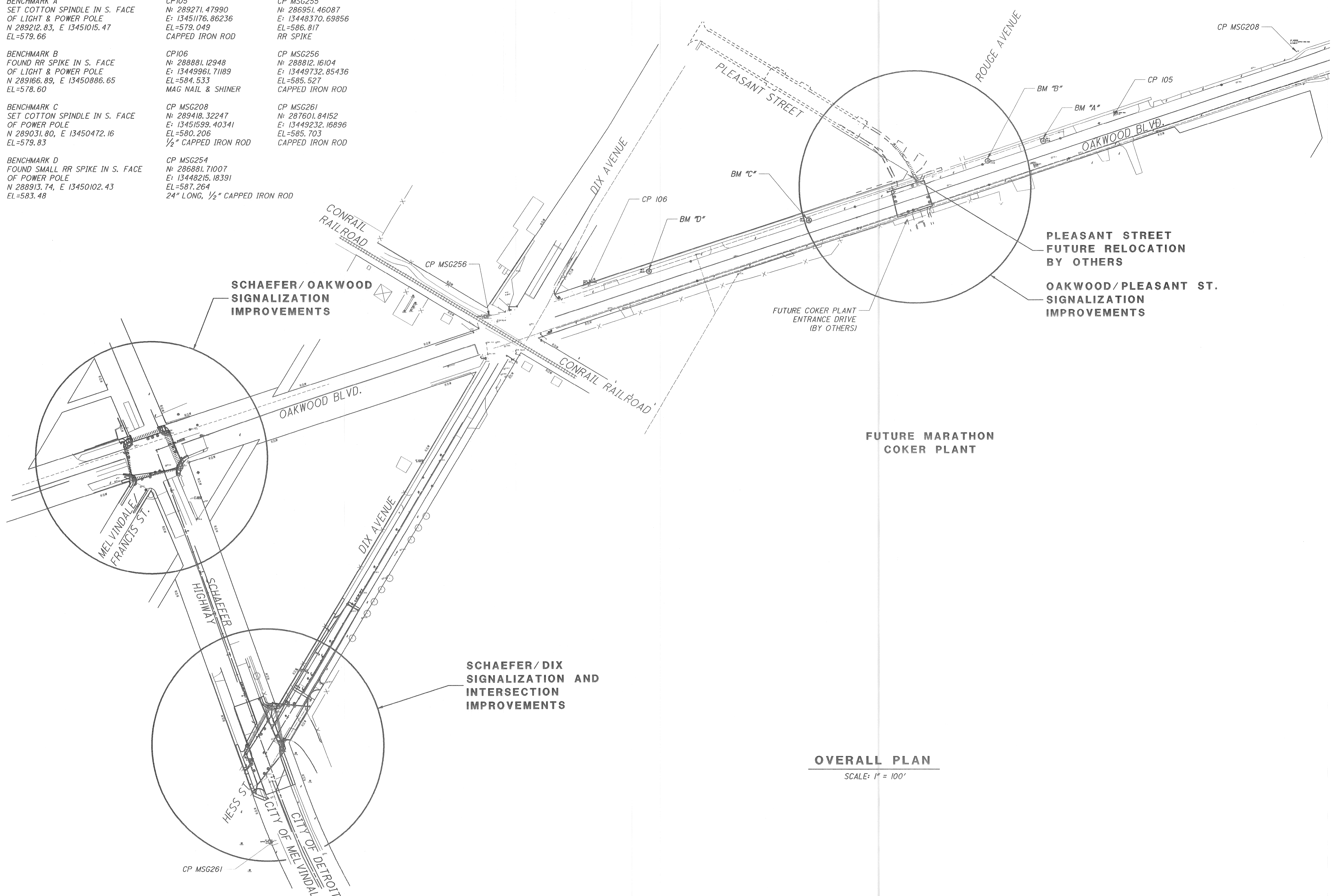
**CP106**  
 N: 288881.12948  
 E: 13449961.71189  
 EL=584.533  
 MAG NAIL & SHINER

**CP MSG208**  
 N: 289418.32247  
 E: 13451599.40341  
 EL=580.206  
 1/2" CAPPED IRON ROD

**CP MSG254**  
 N: 286881.71007  
 E: 13448215.18391  
 EL=587.264  
 24" LONG, 1/2" CAPPED IRON ROD

**CP MSG255**  
 N: 286951.46087  
 E: 13448370.69856  
 EL=586.817  
 RR SPIKE

**CP MSG256**  
 N: 287601.84152  
 E: 13449232.16896  
 EL=585.703  
 CAPPED IRON ROD



**SCHAEFER / OAKWOOD  
 SIGNALIZATION  
 IMPROVEMENTS**

**PLEASANT STREET  
 FUTURE RELOCATION  
 BY OTHERS**

**OAKWOOD / PLEASANT ST.  
 SIGNALIZATION  
 IMPROVEMENTS**

**FUTURE COKER PLANT  
 ENTRANCE DRIVE  
 (BY OTHERS)**

**FUTURE MARATHON  
 COKER PLANT**

**SCHAEFER / DIX  
 SIGNALIZATION AND  
 INTERSECTION  
 IMPROVEMENTS**

**OVERALL PLAN**  
 SCALE: 1" = 100'

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NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	RSP	JSM	7/8/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							SQUAD LEADER
							DIVISION DESIGN ENGINEER

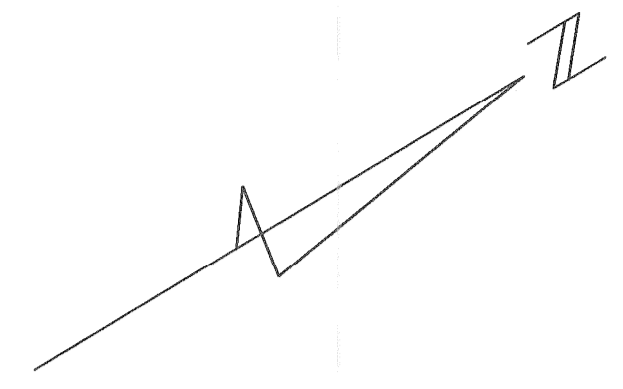
**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

**DIX / SCHAEFER / OAKWOOD  
 INTERSECTION IMPROVEMENTS  
 VICINITY SHEET**

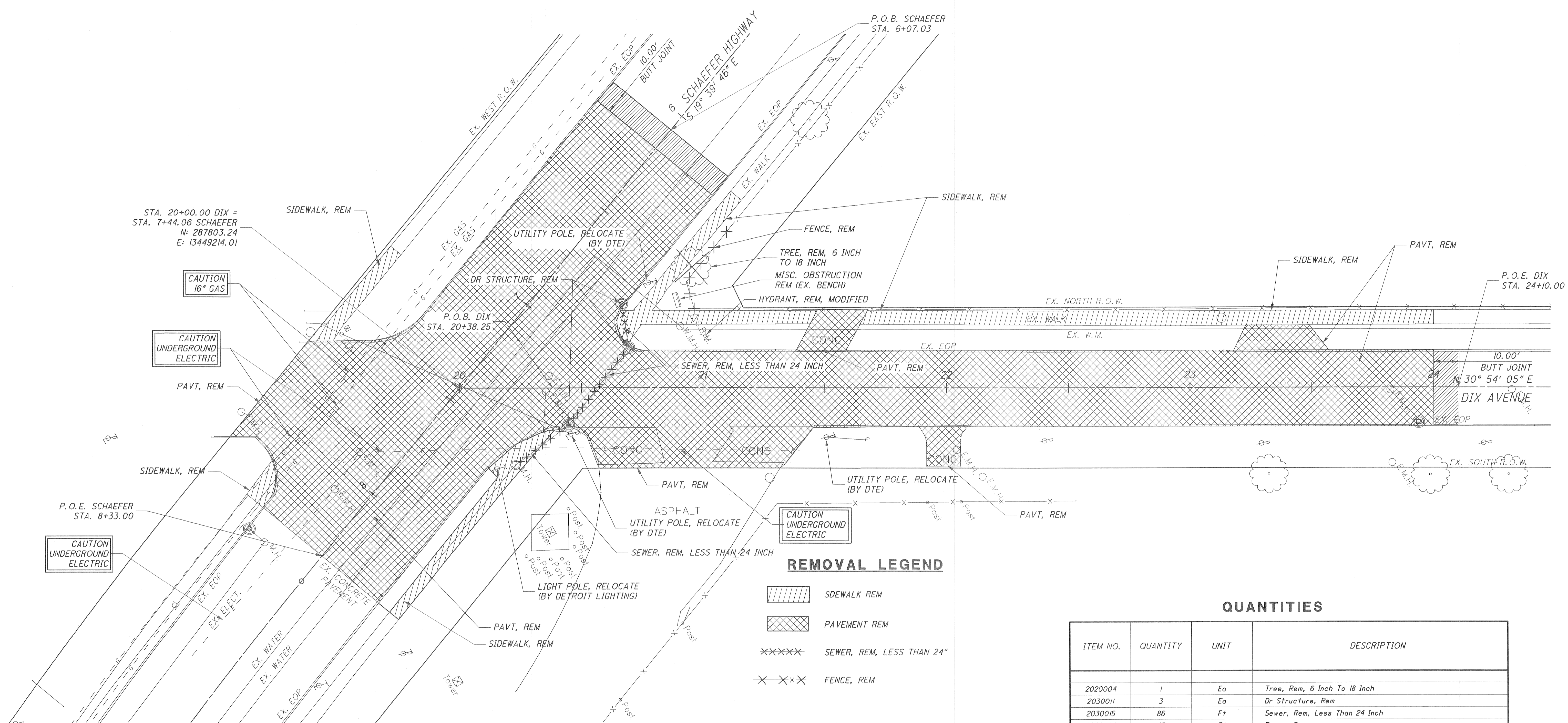
PLANS PREPARED BY:  
**Mannik & Smith**  
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 Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT	SCALE
	1"=100'
ISSUE NO.	SHEET NO.
	4
DATE	





7/8/2008  
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**LEGEND**

- |                  |  |        |            |  |          |
|------------------|--|--------|------------|--|----------|
| ELECTRIC MANHOLE |  | E.M.H. | POST       |  | Post     |
| SEWER MANHOLE    |  | M.H.   | BENCH MARK |  | △ S.B.M. |
| WATER MANHOLE    |  | W.M.H. | TOWER      |  | Tower    |
| SIGN             |  |        | TREE       |  | Tree     |
| POWER POLE       |  |        | HYDRANT    |  | Hydrant  |
| ELEC./TELE. POLE |  |        |            |  |          |
| CATCH BASIN      |  |        |            |  |          |

NOTE:  
REMOVE ALL EX. SIGNS  
THAT READ "PARKING  
ALLOWED BEHIND CURB"  
WITHIN PROJECT LOCATION.

**REMOVAL LEGEND**

- |  |                           |
|--|---------------------------|
|  | SDEWALK REM               |
|  | PAVEMENT REM              |
|  | SEWER, REM, LESS THAN 24" |
|  | FENCE, REM                |

**QUANTITIES**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
2020004	1	Ea	Tree, Rem, 6 Inch To 18 Inch
2030011	3	Ea	Dr Structure, Rem
2030015	86	Ft	Sewer, Rem, Less Than 24 Inch
2040009	45	Ft	Fence, Rem
2040011	3213	Syd	Pavt, Rem
2040013	335	Syd	Sidewalk, Rem
2047021	10	Cyd	Misc. Obstruction, Rem
2050016	8640	Cyd	Excavation, Earth
2057021	475	Cyd	Misc Embankment, CIP
2057021	100	Cyd	Misc. Subgrade Undercutting Type IV
2080023	10	Cyd	Erosion Control, Maintenance Sediment Rem
2080025	1200	Ft	Erosion Control, Silt Fence
2087050	4	Ea	Misc. Erosion Control, Stone Filter At Structure
8100201	3	Ea	Sign, Type II, Rem
8120077	1155	Ft	Pavt Mrkg, Longit, 6 inch or Less Width, Rem
8257050	1	Ea	Hydrant, Rem, Method I, Modified

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	MRS	TEW	7/8/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							SQUAD LEADER
							DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

**DIX / SCHAEFER**  
**INTERSECTION IMPROVEMENTS**  
**REMOVAL SHEET**

PLANS PREPARED BY:  
**Mannik & Smith**  
Group, Inc.  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT: \_\_\_\_\_ SCALE: 1"=20'  
ISSUE NO.: \_\_\_\_\_ SHEET NO.: 5  
DATE: \_\_\_\_\_

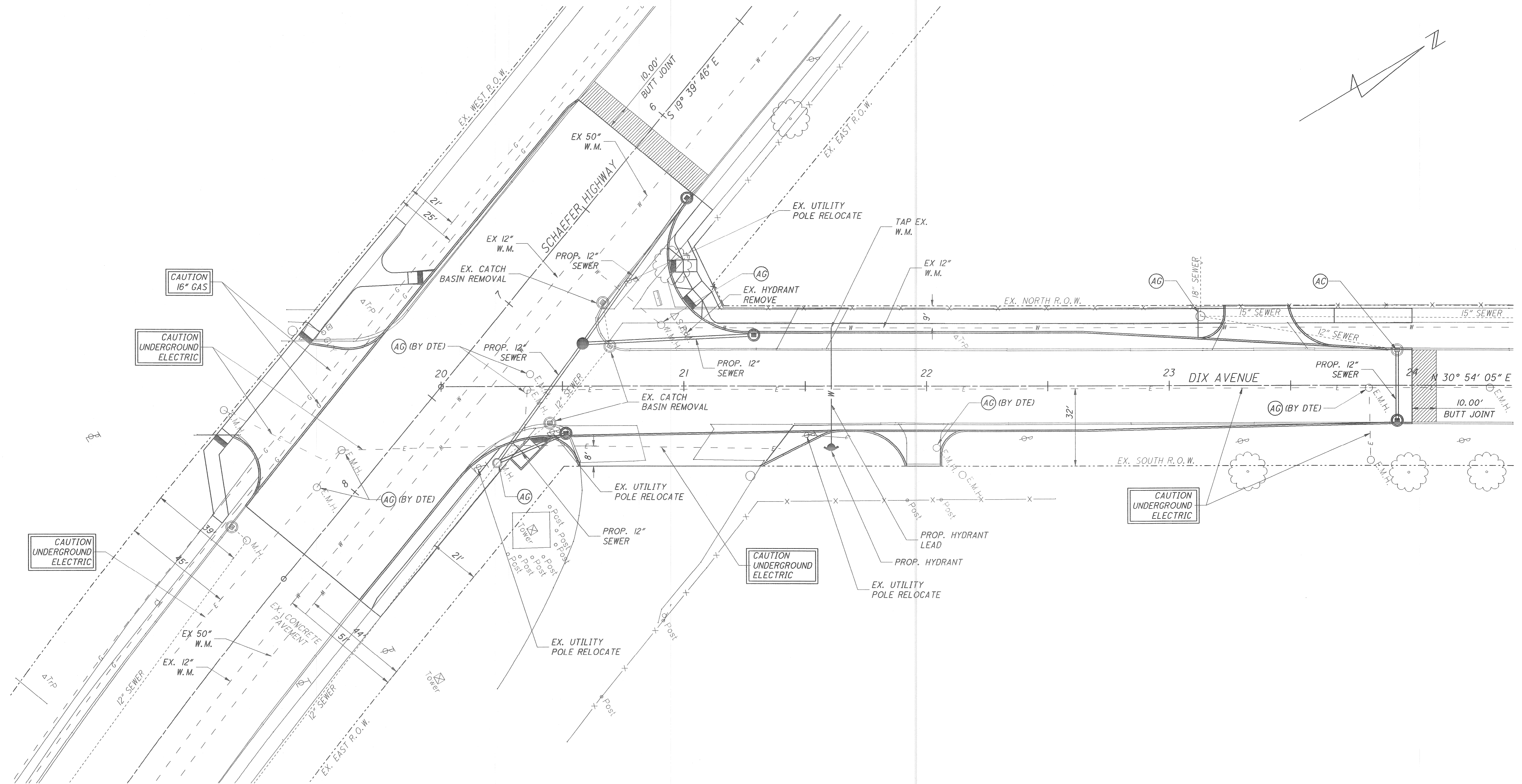






4/10/2009

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**LEGEND**

- |                      |          |                        |           |
|----------------------|----------|------------------------|-----------|
| EX. ELECTRIC MANHOLE | ○ E.M.H. | EX. POST               | ○ Post    |
| EX. SEWER MANHOLE    | ○ M.H.   | EX. BENCH MARK         | △ S.B.M.  |
| EX. WATER MANHOLE    | ○ W.M.H. | EX. TOWER              | ⊗ Tower   |
| EX. SIGN             | ○        | EX. TREE               | ⊗ Tree    |
| EX. POWER POLE       | ○        | EX. HYDRANT            | ⊕ Hydrant |
| EX. ELEC./TELE. POLE | ○        | PR. HYDRANT            | ⊕ Hydrant |
| EX. CATCH BASIN      | ⊕        | MANHOLE ADJUSTMENT     | ⊕ AG      |
| PR. CATCH BASIN      | ⊕        | CATCH BASIN ADJUSTMENT | ⊕ AC      |
| PR. MANHOLE          | ●        |                        |           |

**NOTES:**

- SEE SHEET 2 FOR TYPICAL SECTIONS
- SEE SHEET 6 FOR THE ALIGNMENT PLAN
- SEE SHEET 8 FOR THE CONSTRUCTION PLAN

NO.	DATE	BY	DESCRIPTION
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT
4	9-23-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
5	10-01-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
6	12-22-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
7	04-06-09	SJE	RE-SUBMITTAL TO CITY OF DETROIT

DRAWN BY	CHECKED BY	DATE	CORRECT
MRS		4/10/2009	
CORRECT			ASSISTANT DIVISION DESIGN ENGINEER
CORRECT			APPROVED
SQUAD LEADER			DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

**DIX / SCHAEFER**  
**INTERSECTION IMPROVEMENTS**  
**UTILITIES PLAN**

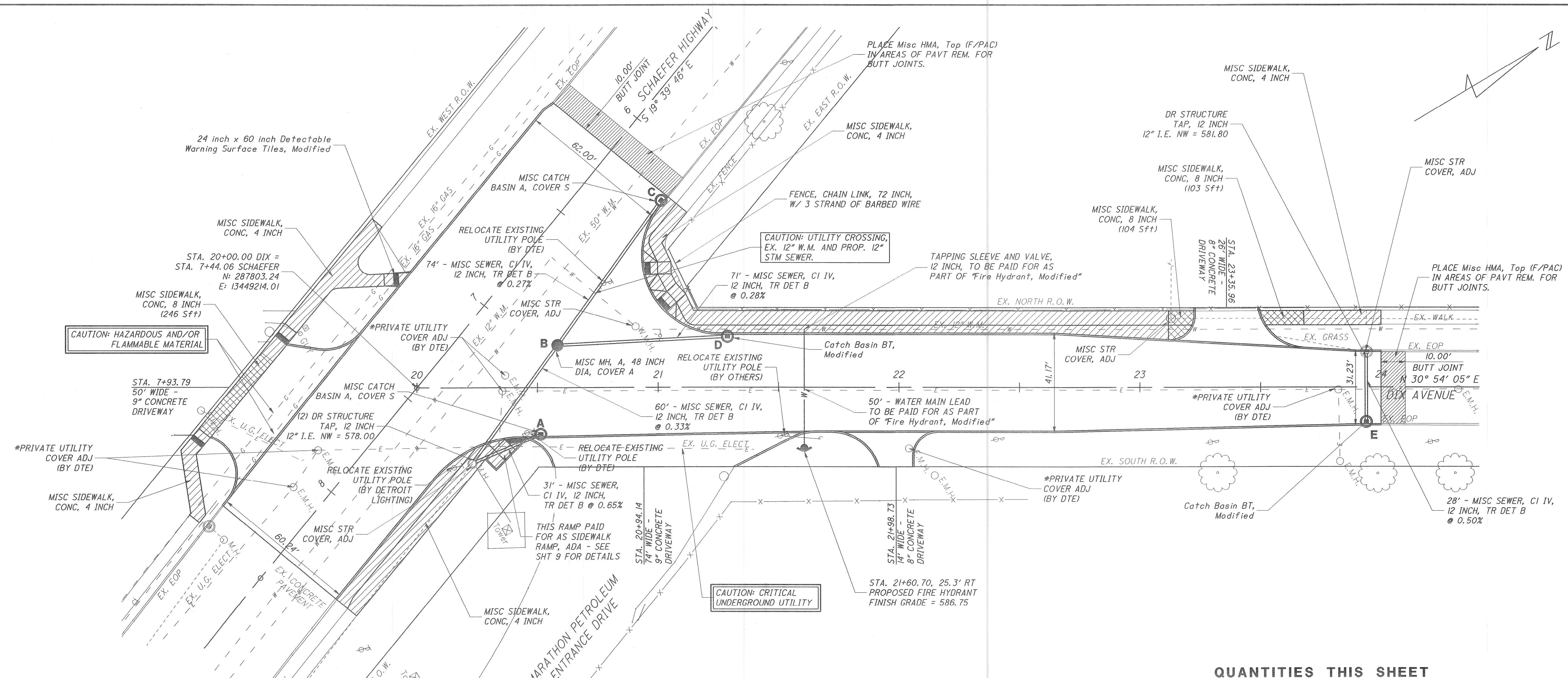
PLANS PREPARED BY:  
**The Mannik & Smith Group, Inc.**  
 Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT	SCALE
	1"=20'
ISSUE NO.	SHEET NO.
	7
DATE	



4/10/2009

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CAUTION: HAZARDOUS AND/OR FLAMMABLE MATERIAL

CAUTION: CRITICAL UNDERGROUND UTILITY

**NOTES:**

- SEE SHEET 2 FOR TYPICAL SECTIONS
- SEE SHEET 6 FOR THE ALIGNMENT PLAN
- SEE SHEET 7 FOR THE UTILITY PLAN

CONTRACTOR TO CONTACT DTE SENIOR UNDERGROUND TECHNICIAN TO SCHEDULE STRUCTURE COVER ADJUSTS PRIOR TO ANY PROSED PAVING OPERATIONS:

Kerry Gugnitz  
Senior Underground Technician DTE  
Ph. (313) 235-2332

**DR. STRUCTURE INFORMATION**

- (A)** STA. 7+48.58, 33.0' LT.  
RIM = 584.19  
12" I.E. SW = 578.20
- (B)** STA. 20+58.35, 17.6' LT.  
RIM = 584.88  
12" I.E. NW, NE & SE = 578.20
- (C)** STA. 6+20.00, 29.2' LT.  
RIM = 585.50  
12" I.E. SE = 578.40
- (D)** STA. 21+28.87, 21.1' LT.  
RIM = 584.92  
12" I.E. SW = 578.40
- (E)** STA. 23+93.87, 14.5' RT.  
RIM = 584.96  
12" I.E. SW = 581.96

**LEGEND**

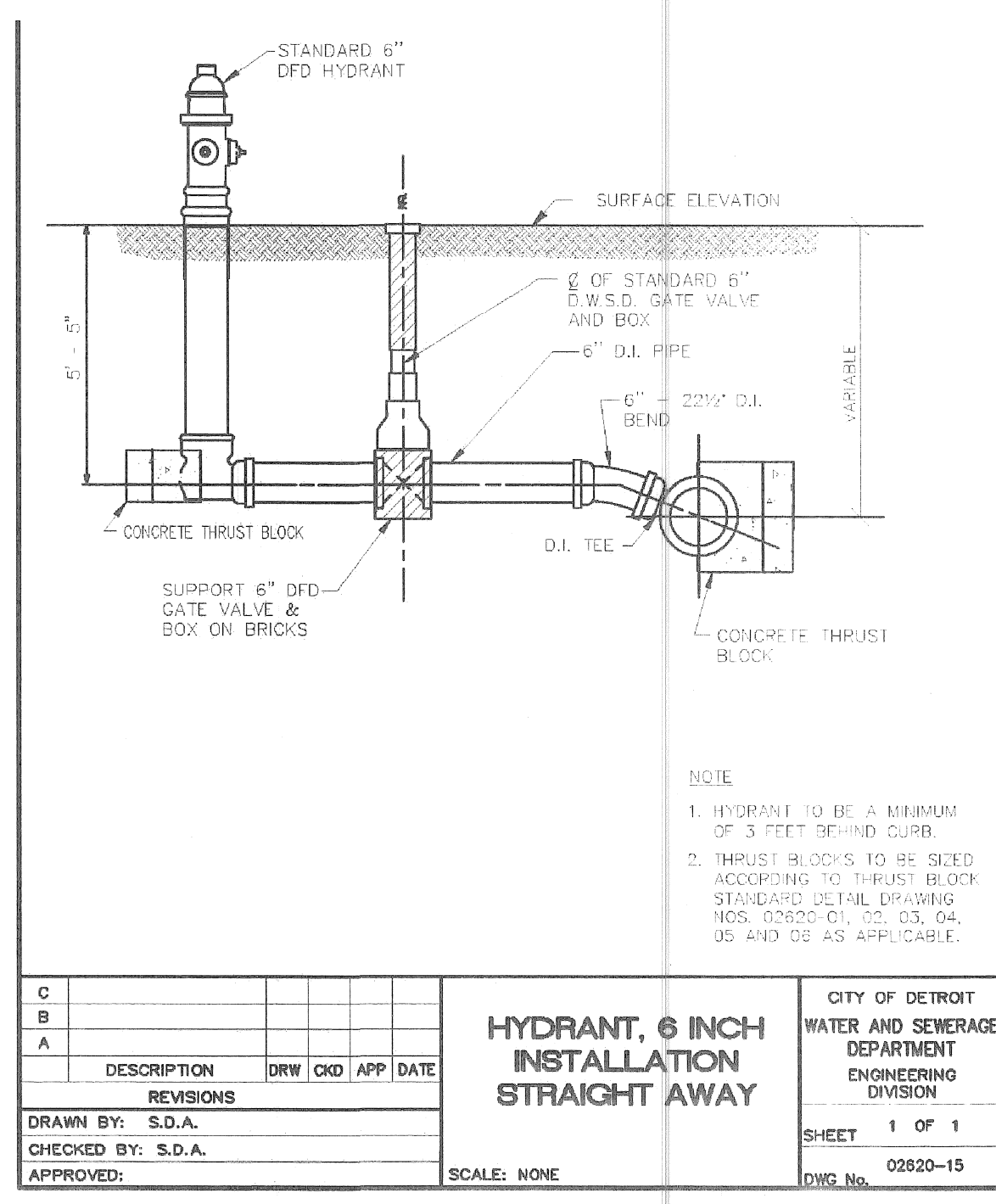
EX. ELECTRIC MANHOLE	○ E.M.H.	EX. POST	○ Post
EX. SEWER MANHOLE	○ M.H.	EX. BENCH MARK	△ S.B.M.
EX. WATER MANHOLE	○ W.M.H.	EX. TOWER	□ Tower
EX. SIGN	○	EX. TREE	○ Tree
EX. POWER POLE	○	EX. HYDRANT	○ Hydrant
EX. ELEC./TELE. POLE	○	PR. HYDRANT	○
EX. CATCH BASIN	○		
PR. CATCH BASIN	○		
PROPOSED CONCRETE/SIDEWALK PAVEMENT	▨		

**NOTES:**  
ALL HYDRANT AND WATERMAIN WORK TO BE PER CITY OF DETROIT WATER AND SEWAGE DEPARTMENT DETAILS AND SPECIFICATIONS  
ALL "Catch Basin BT, Modified" SHALL BE IN ACCORDANCE WITH CITY OF DETROIT STANDARD PLAN C-5028.

**QUANTITIES THIS SHEET**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
3027011	3900	Syd	Misc Agg Base, 15 Inch
4021275	105	Ft	Video Taping Sewer and Culv Pipe
4027001	264	Ft	Misc Sewer, CI IV, 12 Inch, Tr Det B
4030064	3	Ea	Dr Structure, Tap, 12 inch
4037050	1	Ea	Misc Mh, A, 48 inch dia, Cover A
* 4037050	2	Ea	Misc Catch Basin A, Cover S
* 4037050	2	Ea	Catch Basin BT, Modified
4037050	4	Ea	Misc Str Cover, Adj
4047001	1050	Ft	Misc Underdrain, Subgrade, 6 Inch
5027031	25	Ton	Misc Bit Mixture for Patching, Temp
6020215	20	Ft	Pavt Gapping
6027011	3215	Syd	Misc Conc Pavt, Nonreinf, ISC-3, 10 Inch
8010006	65	Syd	Driveway, Nonreinf Conc, 8 Inch
8010008	313	Syd	Driveway, Nonreinf Conc, 9 Inch
* 8030011	76	Syd	Sidewalk Ramp, ADA
* 8037010	707	Sft	Sidewalk Ramp, ADA, 6 Inch, Modified
* 8037010	3723	Sft	Misc Sidewalk, Conc, 4 Inch
* 8037010	666	Sft	Misc Sidewalk, Conc, 8 Inch
8080072	40	Ft	Fence, Chain Link, 72 inch, with 3 Strand of Barbed Wire
8160060	1010	Syd	Topsoil Surface, Furn, 2 Inch
8167011	1010	Syd	Misc Sodding
8257050	6	Ea	24 inch x 60 inch Detectable Warning Surface Tiles, Modified
8257050	1	Ea	Fire Hydrant, Modified

\* MODIFICATIONS FOR CITY OF DETROIT PERMIT



**HYDRANT, 6 INCH INSTALLATION STRAIGHT AWAY**

CITY OF DETROIT WATER AND SEWAGE DEPARTMENT ENGINEERING DIVISION

SCALE: NONE

REVISIONS: [Table with columns for Description, Date, and Initials]

DRAWN BY: S.D.A.  
CHECKED BY: S.D.A.  
APPROVED: [Signature]

SHEET 1 OF 1  
DWG. No. 02820-15

NO.	DATE	BY	DESCRIPTION
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT
4	9-23-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
5	10-01-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
6	12-22-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
7	04-06-09	SJE	RE-SUBMITTAL TO CITY OF DETROIT

NO.	DATE	BY	DESCRIPTION
1	4/10/2009	MRS	CORRECT
2	4/10/2009	TEW	CORRECT
3	4/10/2009	TEW	CORRECT
4	4/10/2009	TEW	CORRECT
5	4/10/2009	TEW	CORRECT
6	4/10/2009	TEW	CORRECT
7	4/10/2009	TEW	CORRECT

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**

**ENGINEERING DIVISION**

ASSISTANT DIVISION DESIGN ENGINEER

DIVISION DESIGN ENGINEER

**DIX / SCHAEFER**

**INTERSECTION IMPROVEMENTS**

**CONSTRUCTION PLAN**

PLANS PREPARED BY:

**Mannik & Smith**

Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT: \_\_\_\_\_

SCALE: 1"=20'

SHEET NO.: 8

ISSUE NO.: \_\_\_\_\_

DATE: \_\_\_\_\_

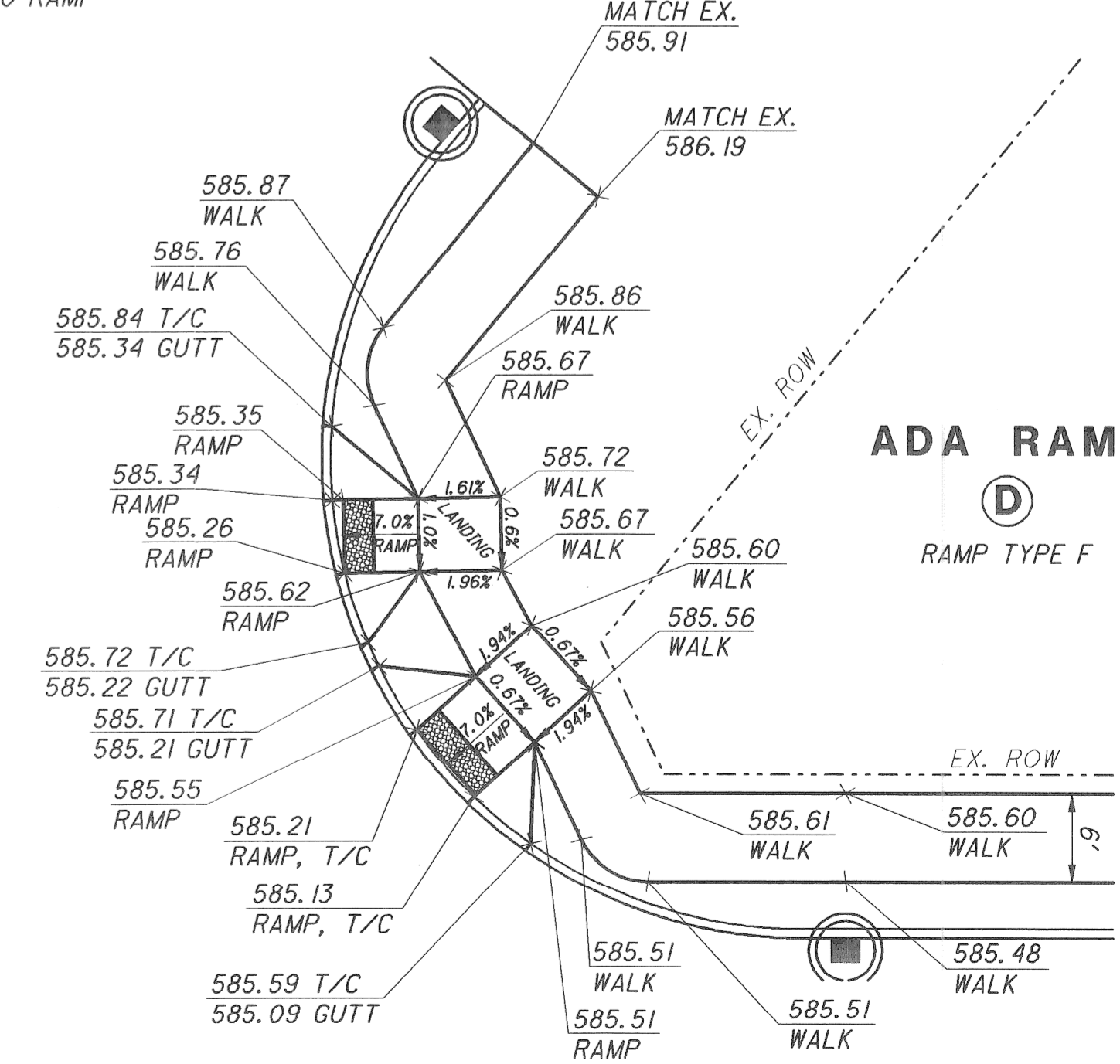
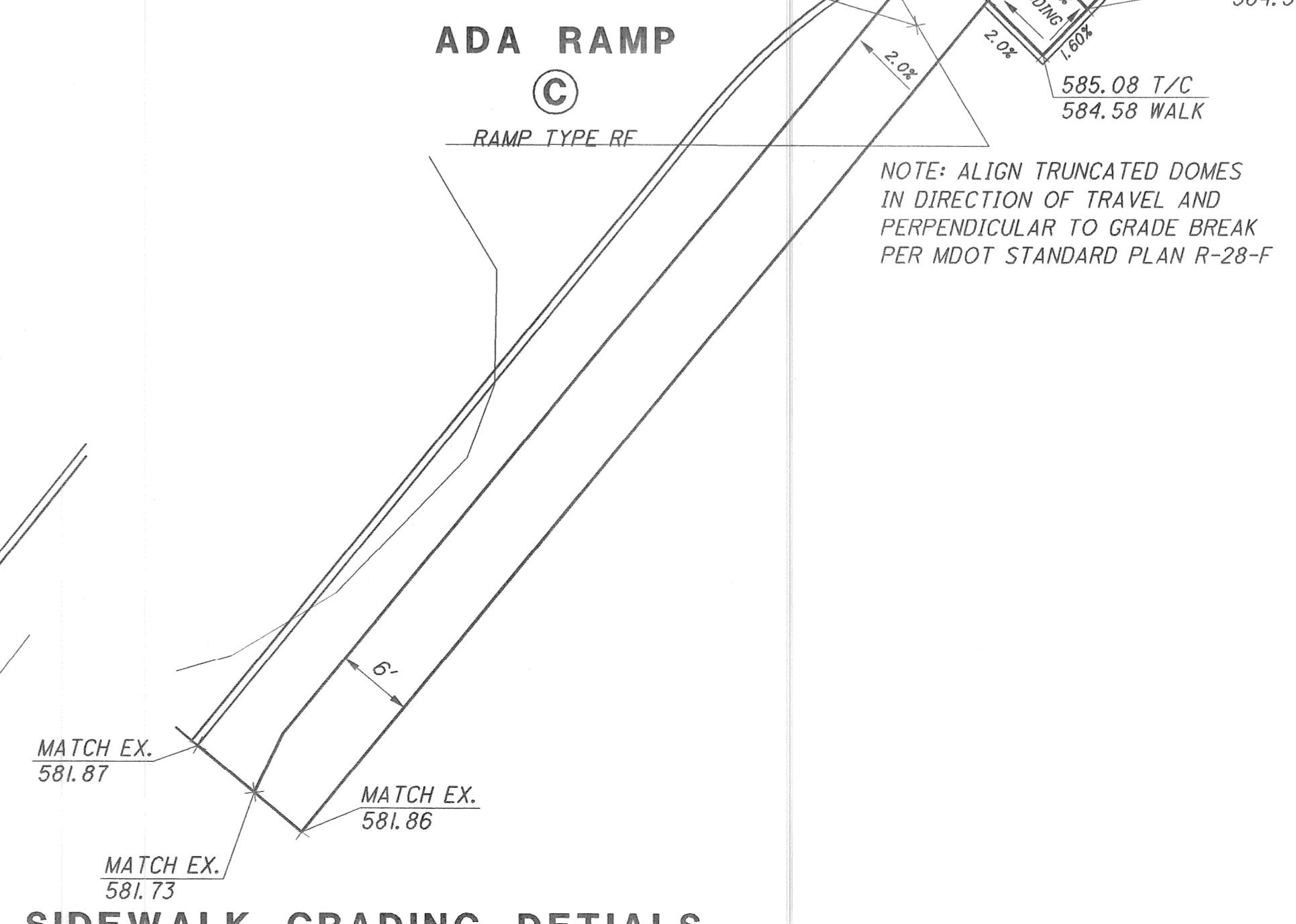
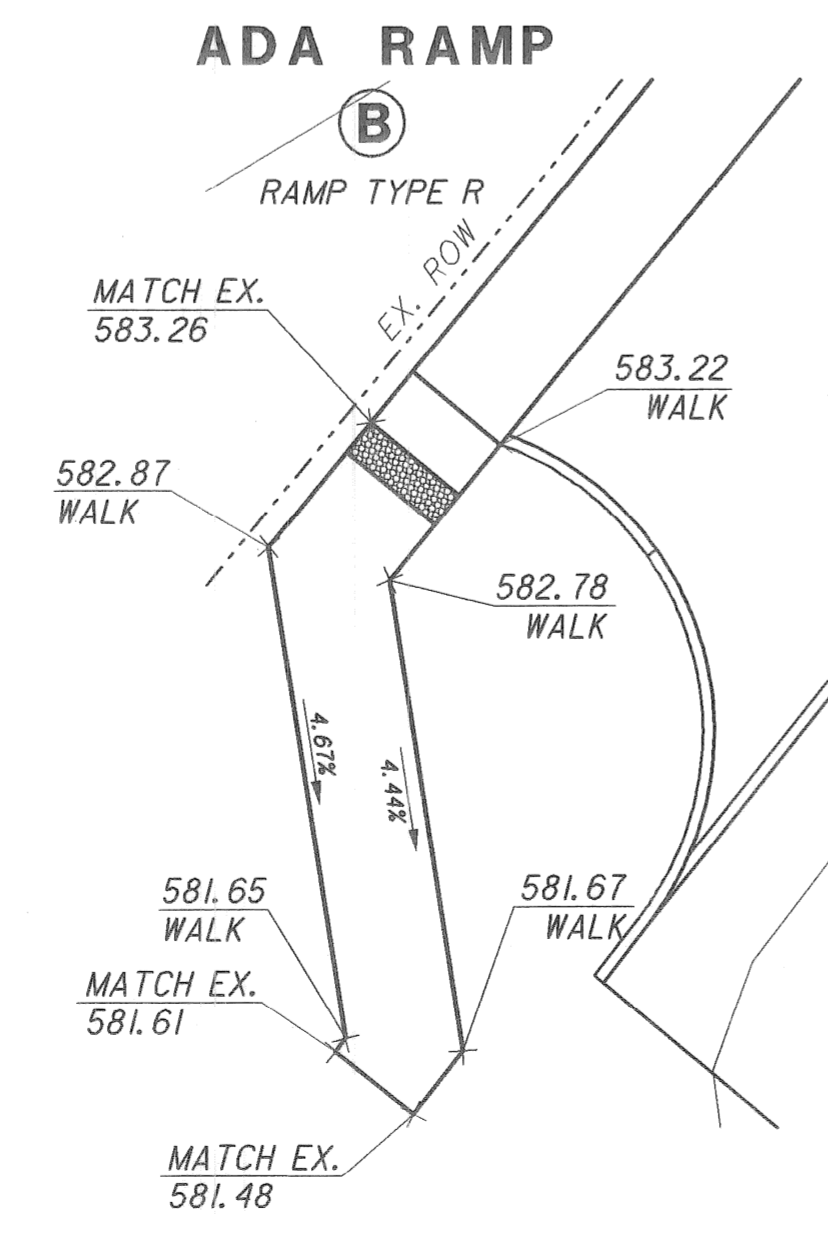
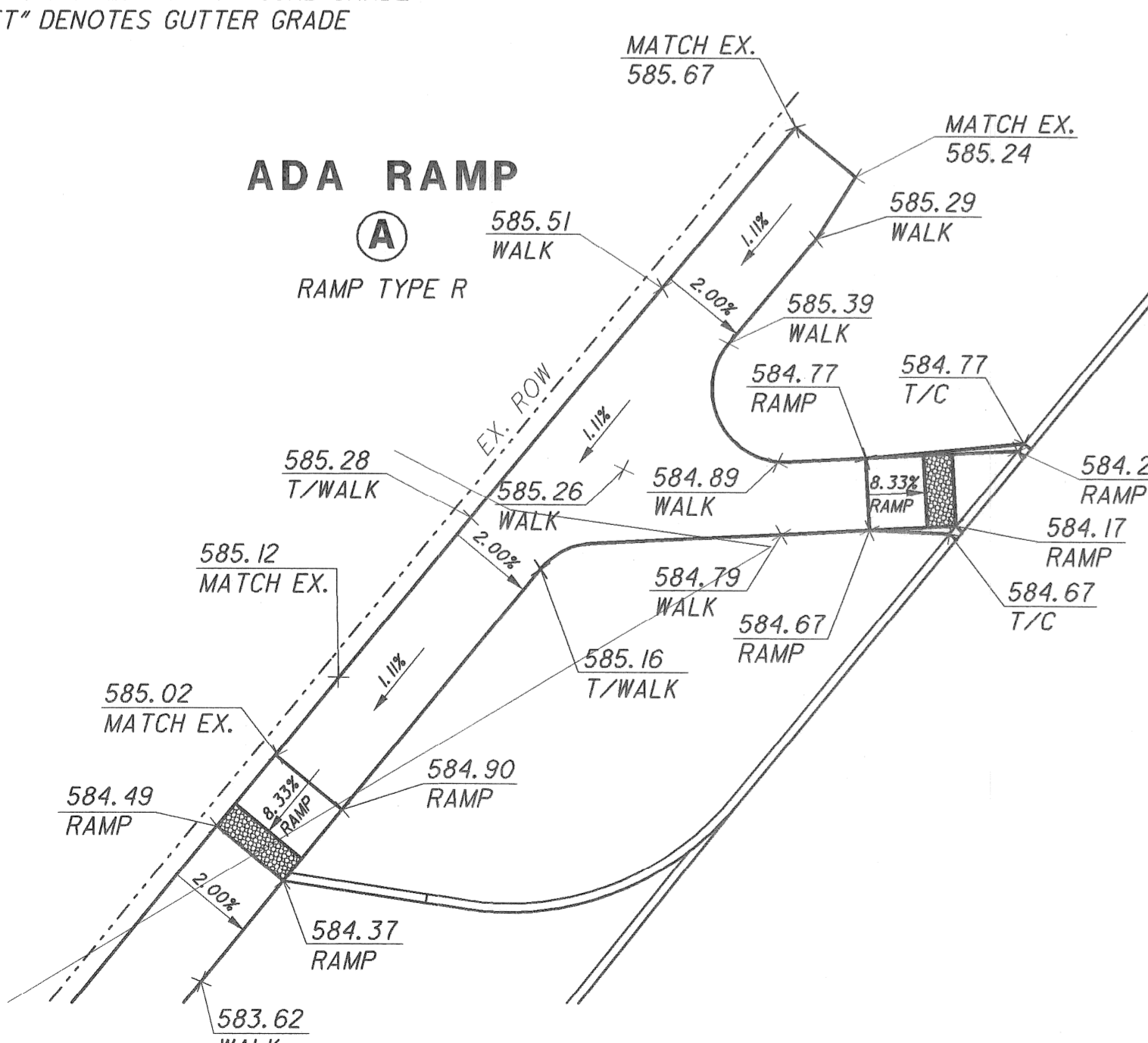
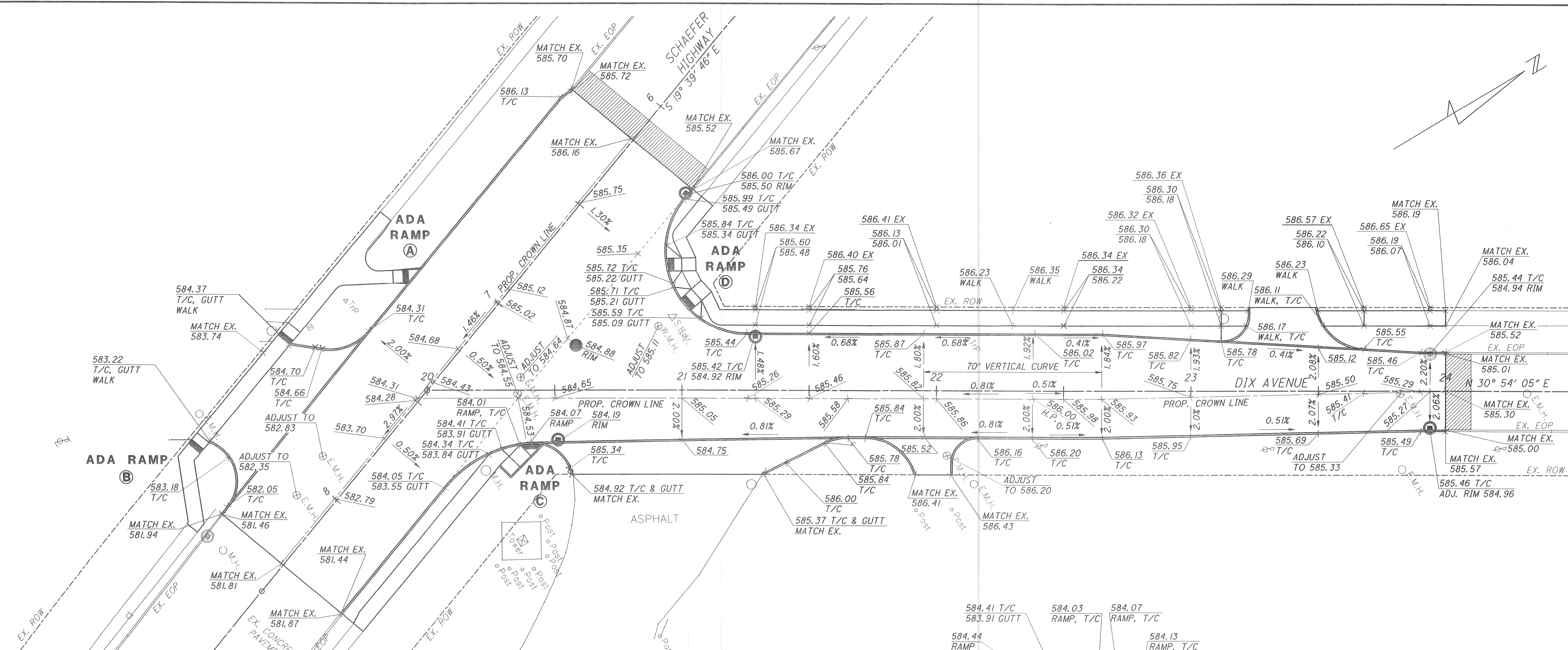


4/10/2009

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NOTES:  
FOR CITY OF DETROIT DATUM, SUBTRACT  
479.151 FROM ALL ELEVATIONS SHOWN  
(NAVD88 DATUM).

"T/C" DENOTES TOP OF CURB GRADE  
"GUTT" DENOTES GUTTER GRADE



**SIDEWALK GRADING DETAILS**  
SCALE: 1" = 10'

NO.	DATE	BY	DESCRIPTION
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOOT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOOT
3	7-09-08	DAR	RE-SUBMITTAL TO MDOOT
4	9-23-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
5	10-01-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
6	12-22-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
7	04-06-09	SJE	RE-SUBMITTAL TO CITY OF DETROIT

DRWING BY	CHECKED BY	DATE	STATUS
MRS	SJE	4/10/2009	CORRECT
CORRECT			APPROVED
SOUND LEADER			DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
ENGINEERING DIVISION

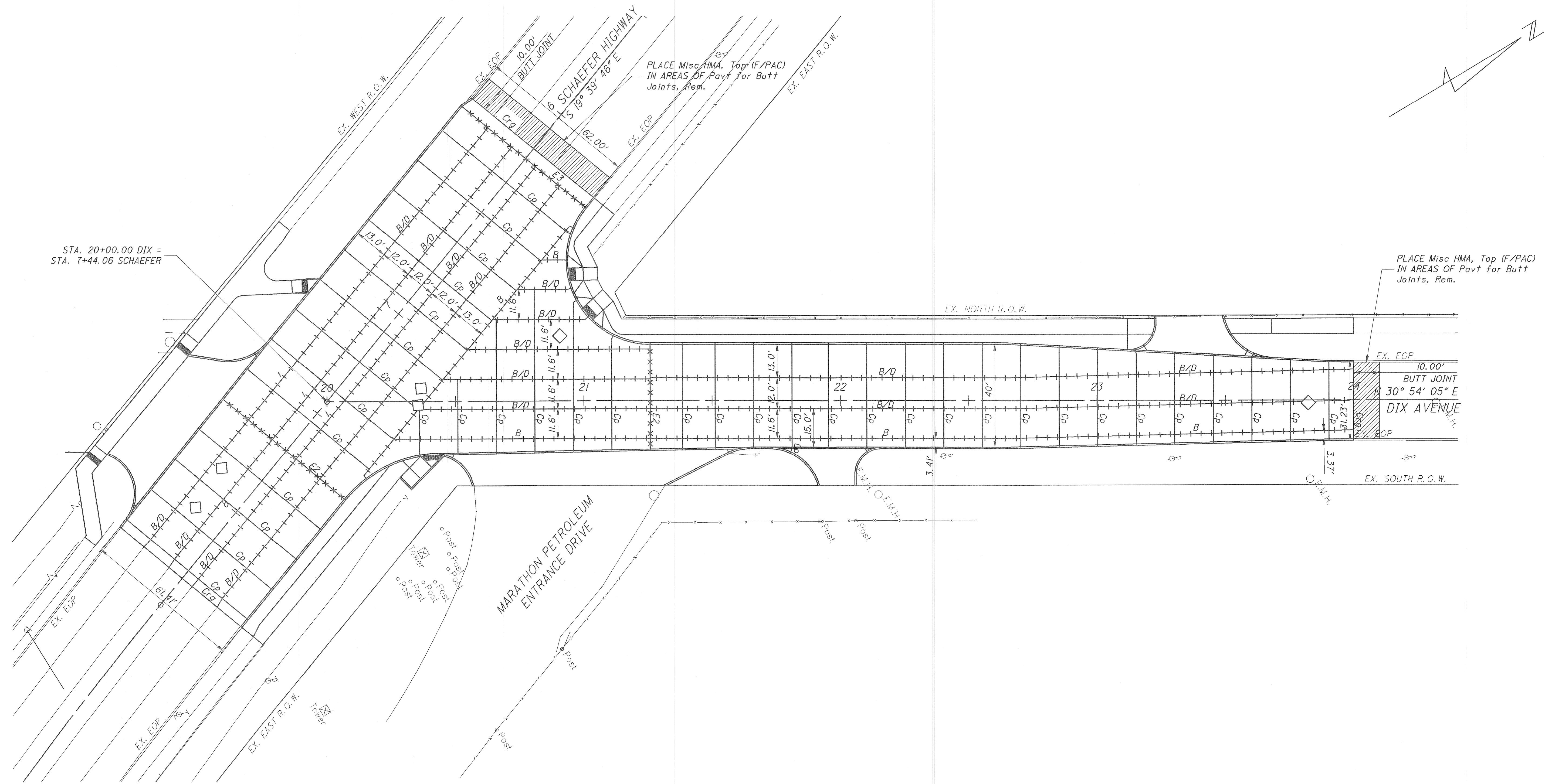
**DIX / SCHAEFER**  
INTERSECTION IMPROVEMENTS  
GRADING PLAN/INTERSECTION DETAIL

PLANS PREPARED BY: <b>Mannik &amp; Smith</b> Civil Engineering, Surveying and Environmental Consulting	COUNTY PROJECT	SCALE 1"=20'
ISSUE NO.	SHEET NO. 9	
DATE		



4/10/2009

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**QUANTITIES**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
5020008	101	Syd	Pavt for Butt Joints, Rem
5027031	1.25	Ton	Misc HMA, Top (F/PAC)
6020200	1735	Ft	Joint, Contraction, Cp
6020207	104	Ft	Joint, Expansion, E2
6030020	155	Ft	Joint, Contraction, Crg

NO.	DATE	BY	DESCRIPTION
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT
4	9-23-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
5	10-01-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
6	12-22-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
7	04-06-09	SJE	RE-SUBMITTAL TO CITY OF DETROIT

DRAWN BY MRS	CHECKED BY TEW	DATE 4/10/2009	CORRECT
CORRECT			APPROVED
SQUAD LEADER			DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION**

**DIX / SCHAEFER  
INTERSECTION IMPROVEMENTS  
PAVEMENT JOINT LAYOUT PLAN**

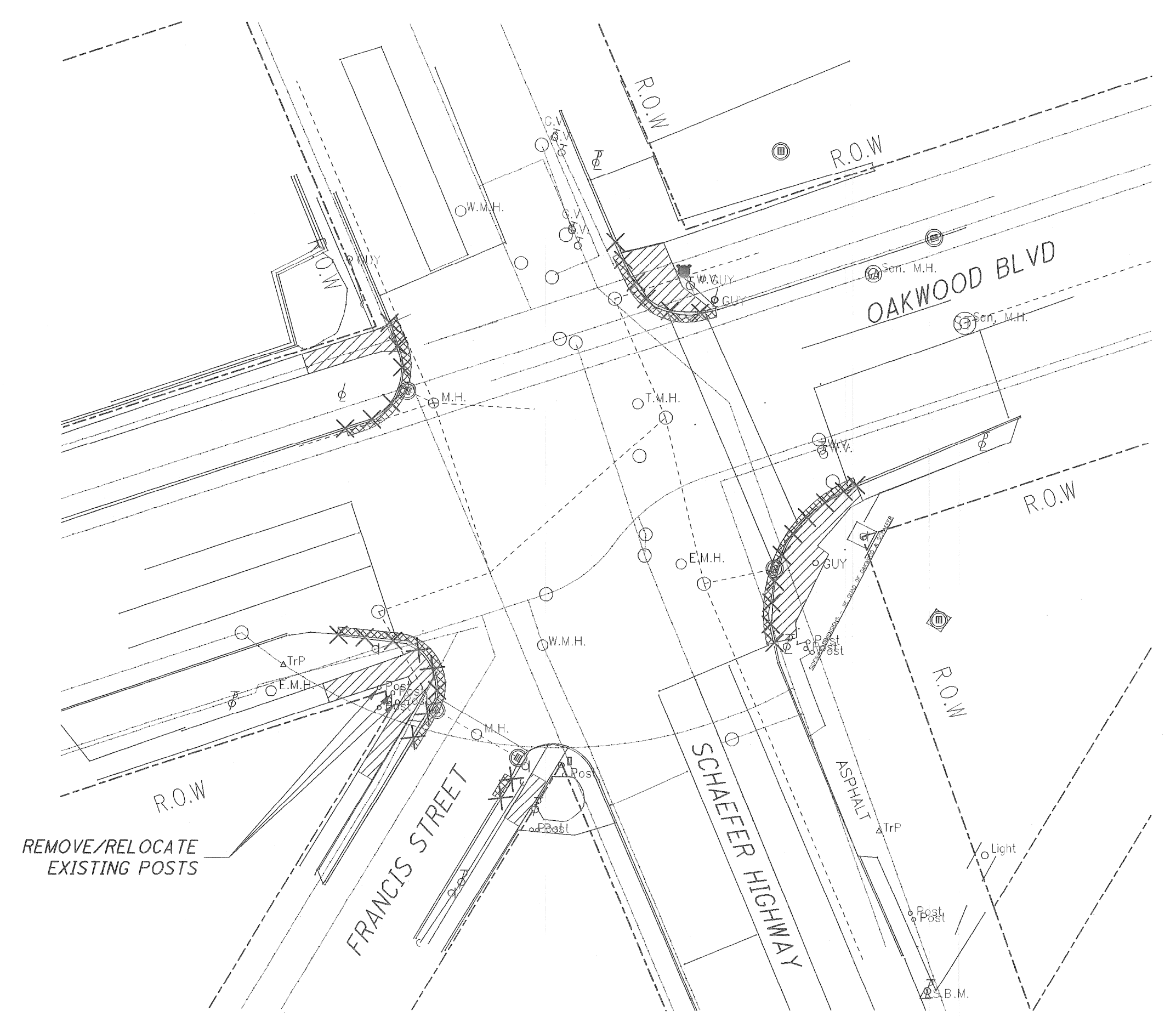
PLANS PREPARED BY:  
**Mannik & Smith**  
Group, Inc.  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT	SCALE 1"=20'
ISSUE NO.	SHEET NO. 10
DATE	



4/20/2009

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**ADA RAMP INTERSECTION IMPROVEMENTS  
DEMOLITION PLAN**  
SCALE: 1" = 30'

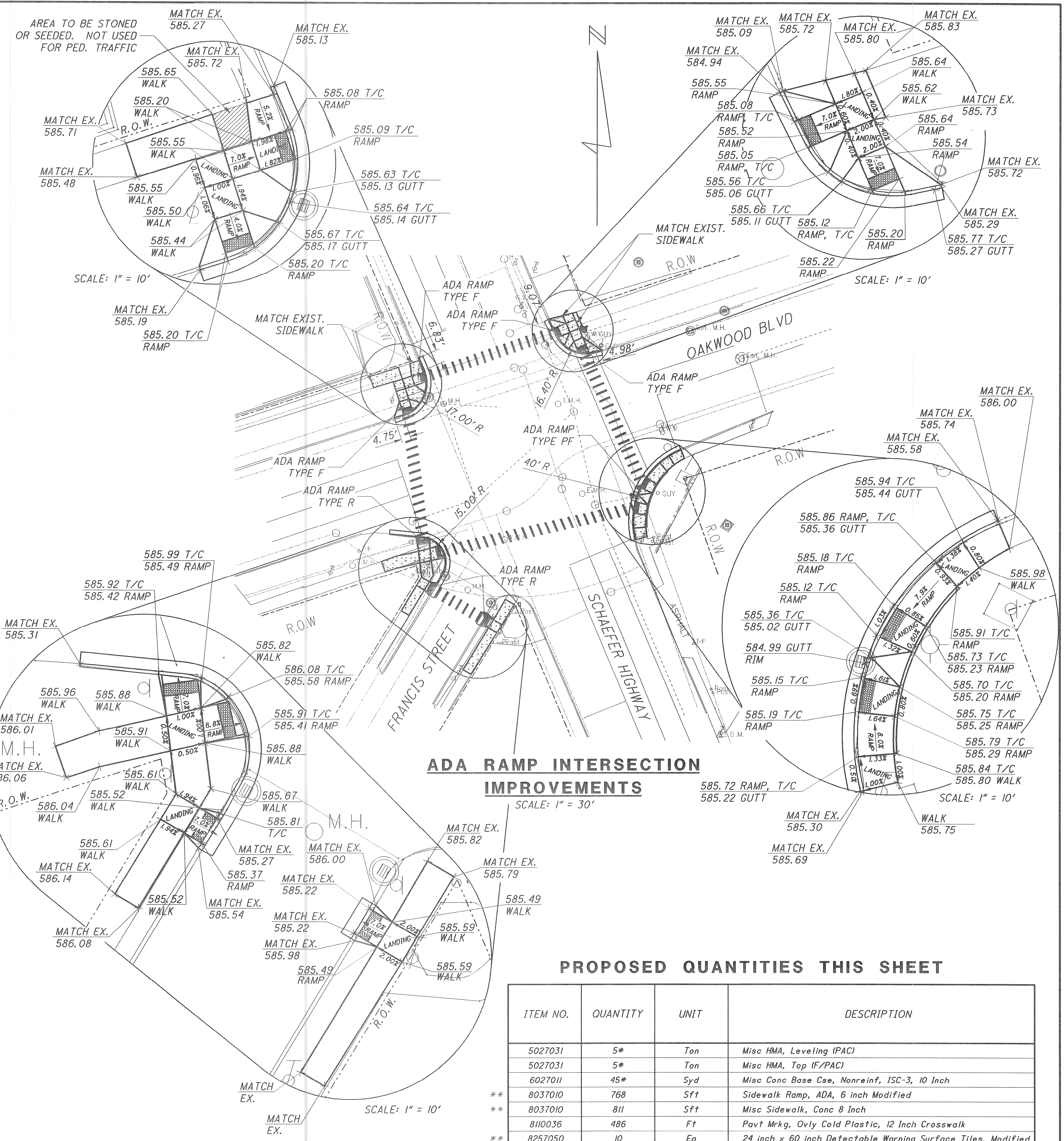
**LEGEND**

- EXIST. SIDEWALK TO BE REMOVED
- EXIST. PAVEMENT REMOVAL (ESTIMATED FOR USE BY CONTRACTOR)
- EXIST. CURB AND GUTTER TO BE REMOVED

**REMOVALS QUANTITIES**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
2040005	77	Ft	Curb, Rem
2040011	45*	Syd	Pavt, Rem
2040013	41	Syd	Sidewalk, Rem
2047021	1	Cyd	Misc. Obstruction, Rem

\* CONTINGENCY QUANTITY ADDED FOR USE BY THE CONTRACTOR DURING CONSTRUCTION OF ALL PROPOSED CURB AND SIDEWALK AT THIS INTERSECTION.



**ADA RAMP INTERSECTION  
IMPROVEMENTS**  
SCALE: 1" = 30'

**PROPOSED QUANTITIES THIS SHEET**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
5027031	5*	Ton	Misc HMA, Leveling (PAC)
5027031	5*	Ton	Misc HMA, Top (F/PAC)
6027011	45*	Syd	Misc Conc Base Cse, Nonreinf, ISC-3, 10 Inch
** 8037010	768	Sft	Sidewalk Ramp, ADA, 6 inch Modified
** 8037010	811	Sft	Misc Sidewalk, Conc 8 Inch
** 8110036	486	Ft	Pavt Mrkg, Ovlv Cold Plastic, 12 Inch Crosswalk
** 8257050	10	Ea	24 inch x 60 inch Detectable Warning Surface Tiles, Modified

\* CONTINGENCY QUANTITY ADDED FOR USE BY THE CONTRACTOR DURING CONSTRUCTION OF ALL PROPOSED CURB AND SIDEWALK AT THIS INTERSECTION.  
\*\* MODIFICATION FOR CITY OF DETROIT PERMIT

PROPOSED SIDEWALK/CONCRETE AREAS

NOTES:  
FOR CITY OF DETROIT DATUM, SUBTRACT 479.151 FROM ALL ELEVATIONS SHOWN (NAVD88 DATUM).

"T/C" DENOTES TOP OF CURB GRADE  
"GUTT" DENOTES GUTTER GRADE

NO.	DATE	BY	DESCRIPTION
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT
4	9-23-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
5	10-01-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
6	12-22-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
7	04-20-09	SJE	RE-SUBMITTAL TO CITY OF DETROIT

NO.	DATE	BY	DESCRIPTION
1	4/20/2009	MRS	CORRECT
2		SJE	APPROVED

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION**

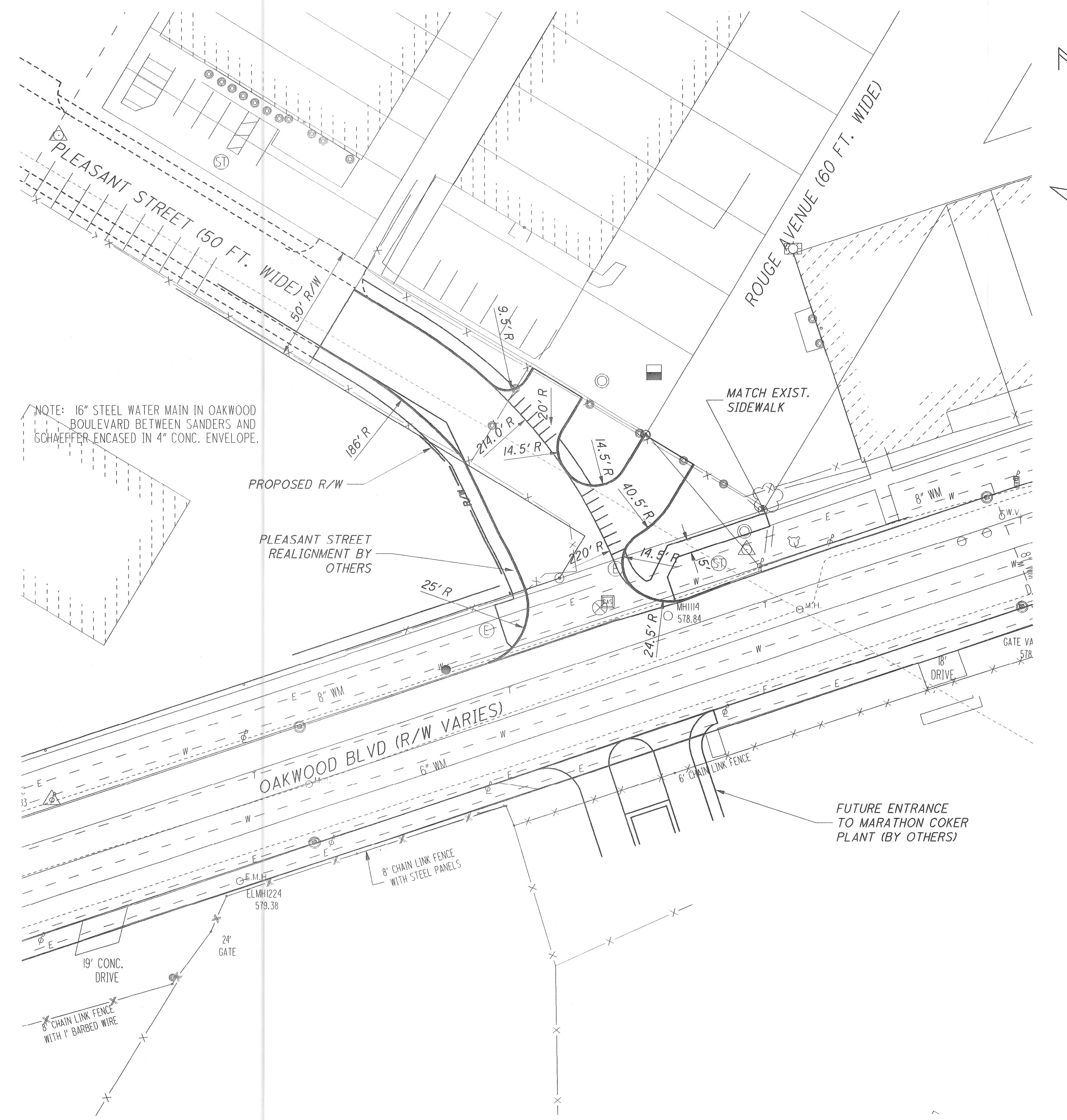
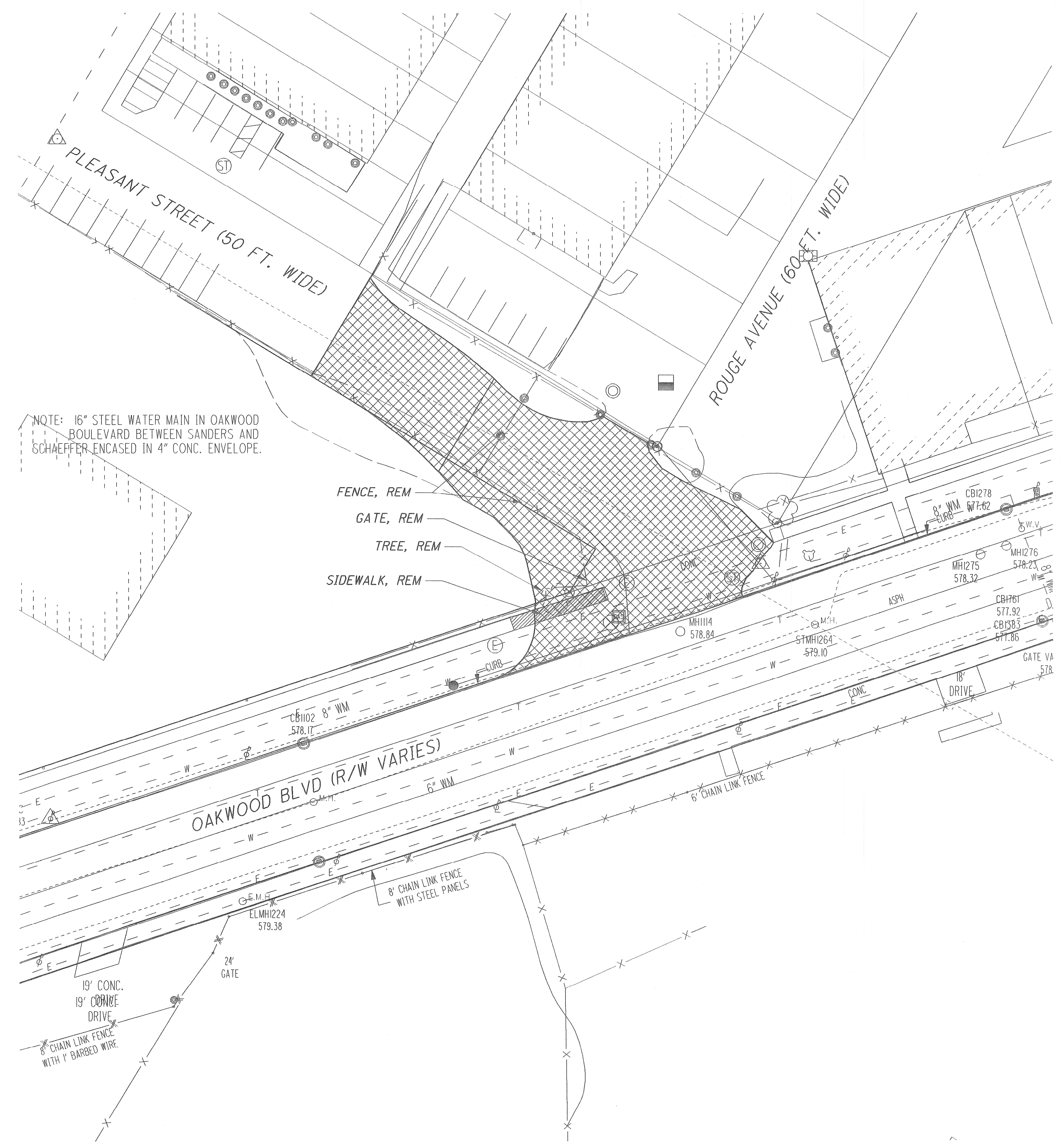
**SCHAEFER/OAKWOOD  
INTERSECTION IMPROVEMENTS  
PAVING/SIDEWALK IMPROVEMENTS**

PLANS PREPARED BY:  
**Mannik & Smith**  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT: \_\_\_\_\_ SCALE: 1"=30'  
SHEET NO.: 11  
ISSUE NO.: \_\_\_\_\_ DATE: \_\_\_\_\_



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**OAKWOOD/PLEASANT AVE. INTERSECTION FUTURE IMPROVEMENTS (BY OTHERS)  
DEMOLITION PLAN**

- LEGEND**
- EXIST. SIDEWALK TO BE REMOVED
  - EXIST. PAVEMENT TO BE REMOVED

**NOTES:**  
THIS SHEET DEPICTS THE FUTURE PROPOSED LAYOUT OF THE PLEASANT STREET/OAKWOOD BLVD. INTERSECTION FOR REFERENCE WITH THE PROPOSED SIGNAL/CROSSWALK LAYOUT SHOWN ON SHEET 24. ACTUAL PAVEMENT DIMENSIONS AND QUANTITIES FOR ALL IMPROVEMENTS TO THIS INTERSECTION WILL BE DESIGNED AT A LATER DATE AS PART OF ANOTHER PROJECT.

THE CONSTRUCTION OF PLEASANT STREET REALIGNMENT IS CURRENTLY PROGRAMMED TO OCCUR PRIOR TO THE PROPOSED IMPROVEMENTS IN THIS PLAN SET.

**THIS SHEET PROVIDED FOR INFORMATIONAL USE ONLY**

**OAKWOOD/PLEASANT AVE. INTERSECTION FUTURE IMPROVEMENTS (BY OTHERS)**

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	RSP	JSM	7/8/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							SQUAD LEADER
							DIVISION DESIGN ENGINEER

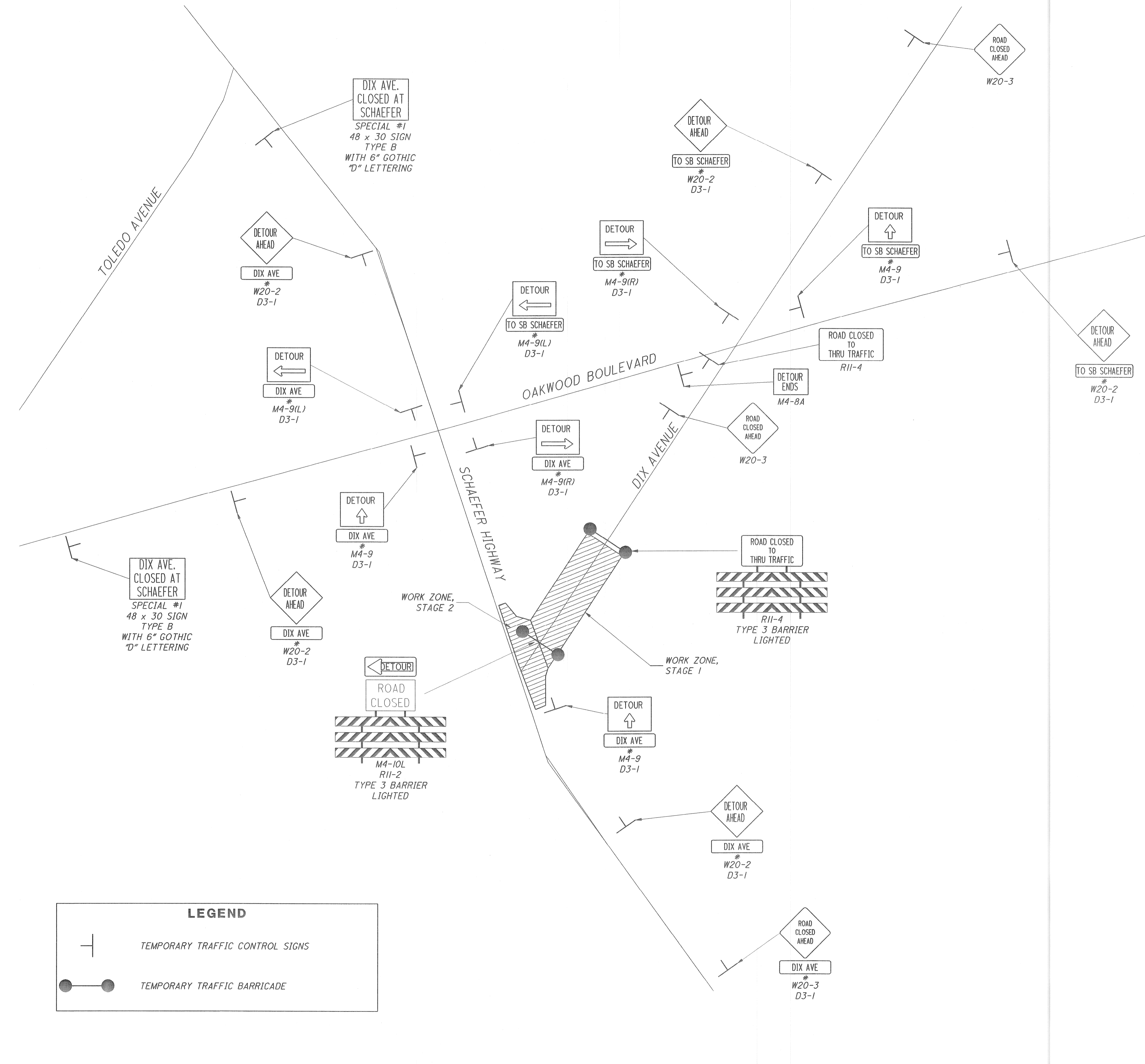
**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION**

**PLEASANT/OAKWOOD  
INTERSECTION IMPROVEMENTS  
FUTURE LAYOUT**

PLANS PREPARED BY: <b>The Mannik &amp; Smith Group, Inc.</b> Civil Engineering, Surveying and Environmental Consulting	COUNTY PROJECT SCALE <b>1"=30'</b> SHEET NO. <b>12</b> ISSUE NO. DATE
--	---



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LEGEND	
	TEMPORARY TRAFFIC CONTROL SIGNS
	TEMPORARY TRAFFIC BARRICADE

**TEMPORARY SIGNING SCHEDULE**

SIGN CODE	LEGEND	SIZE (INxIN)	QUANTITY	AREA (FT <sup>2</sup> )
SIGNAGE DETOUR STAGES 1 & 2				
D3-1	DIX AVE (BLACK ON ORANGE)	48 x 12	8	32
D3-1	WB DIX AVE (BLACK ON ORANGE)	48 x 12	1	4
D3-1	TO SB SCHAEFER (BLACK ON ORANGE)	48 x 12	5	20
M4-8A	DETOUR ENDS	24 x 18	1	3
M4-9	DETOUR (STRAIGHT) ARROW	30 x 24	3	15
M4-9(L)	DETOUR (LEFT) ARROW	30 x 24	2	10
M4-9(R)	DETOUR (RIGHT) ARROW	30 x 24	2	10
M4-10(L)	DETOUR ARROW (LEFT)	30 x 24	2	10
R11-2	ROAD CLOSED	48 x 30	4	40
R11-4	ROAD CLOSED TO THRU TRAFFIC	60 x 30	5	62.5
W20-2	DETOUR AHEAD	36 x 36	5	45
W20-3	ROAD CLOSED AHEAD	36 x 36	4	36
SPECIAL #1	DIX AVE. CLOSED AT SHAEFER	48 x 30	2	20
ADVANCED WARNING SIGNAGE STAGES 2 & 3 (SEE SHT. 17)				
W20-1	ROAD WORK AHEAD	36 x 36	4	36
R15-18b	INJURE/KILL A WORKER \$1500 + 15 YEARS	48 x 60	2	40
R15-18a	TO PROTECT HIGHWAY WORKERS, ETC.	96 x 60	2	80
W20-5a*	CENTER & LEFT LANES CLOSED AHEAD	36 x 36	1	9
W20-5	RIGHT LANE CLOSE AHEAD	36 x 36	1	9
W4-2	LANE ENDS (SYMBOL)	36 x 36	2	18
R5-18C	WORK ZONE BEGINS	48 x 48	2	32
R2-1-35	SPEED LIMIT 35	24 x 30	2	10
W1-4-L	REVERSE CURVE (SYMBOL)	30 x 30	1	6.25
W1-4	REVERSE CURVE (SYMBOL)	30 x 30	1	6.25
W1-6	ARROW (SYMBOL)	48 x 24	6	48
G20-2-36	END ROAD WORK	48 x 24	2	16

**MAINTENANCE OF TRAFFIC QUANTITIES**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
8120005	8	Ea	Barricade, Type III, High Intensity, Lighted, Furn
8120006	8	Ea	Barricade, Type III, High Intensity, Lighted, Oper
8120040	2	Ea	Lighted Arrow, Type B, Furn
8120041	2	Ea	Lighted Arrow, Type B, Oper
8120080	211	Ft	Pavt Mrkg, Type NR, Paint, 4 Inch, White, Temp
8120081	211	Ft	Pavt Mrkg, Type NR, Paint, 4 Inch, Yellow, Temp
8120090	701	Ft	Pavt Mrkg, Type R, 4 Inch, White, Temp
8120091	1341	Ft	Pavt Mrkg, Type R, 4 Inch, Yellow, Temp
8120102	45	Ea	Plastic Drum, High Intensity, Lighted, Furn
8120103	45	Ea	Plastic Drum, High Intensity, Lighted, Oper
8120135	524	Sft	Sign, Type B, Temp, Prismatic, Furn
8120136	524	Sft	Sign, Type B, Temp, Prismatic, Oper

NOTE: THESE QUANTITIES INCLUDE ALL WORK ON SHEET 17

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	MRS	TEW	7/8/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							SQUAD LEADER
							DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
ENGINEERING DIVISION

**DIX / SCHAEFER**  
INTERSECTION IMPROVEMENTS  
DETOUR OF TRAFFIC-STAGE 1 & 2

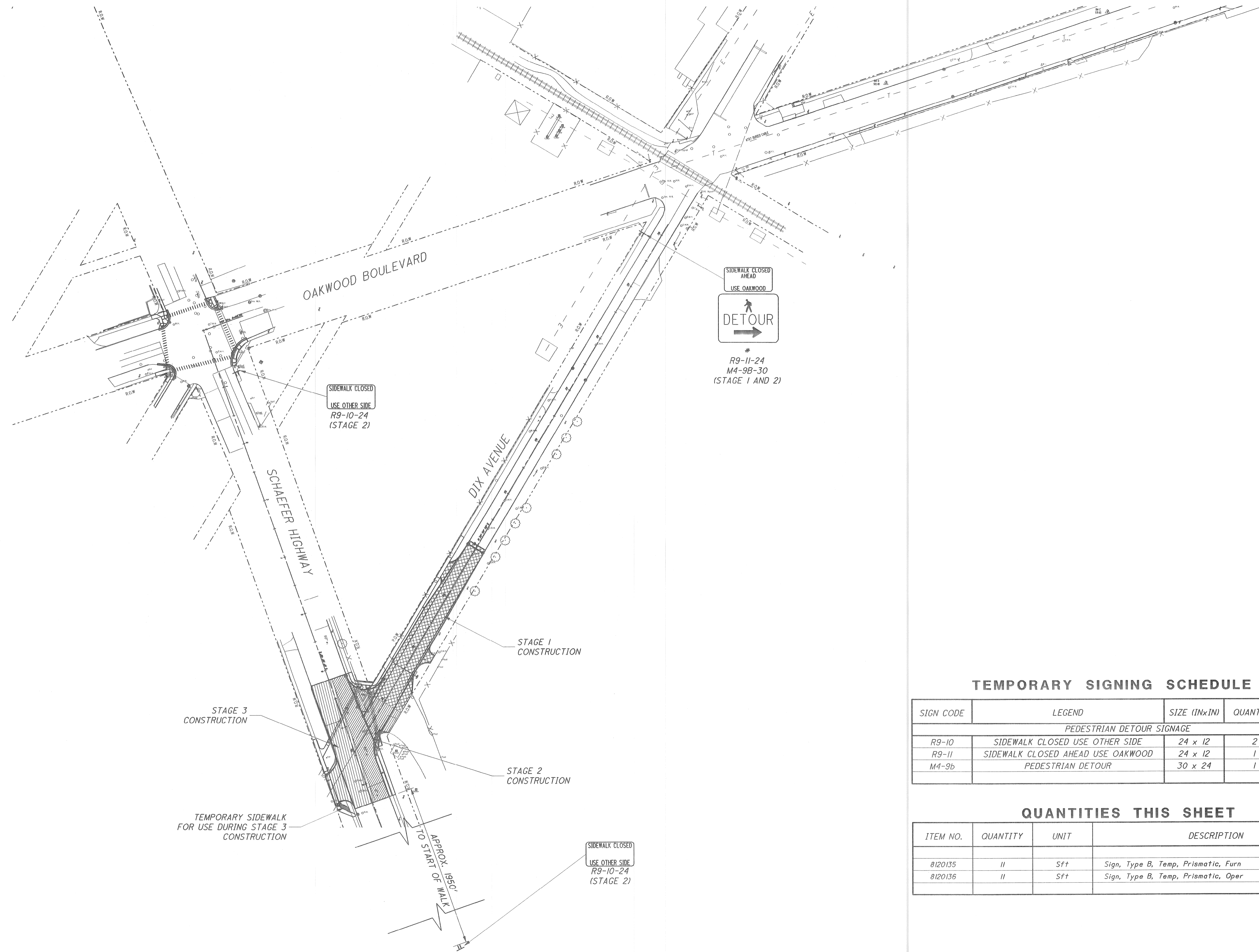
PLANS PREPARED BY:  
**Mannik & Smith**  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT: \_\_\_\_\_ SCALE: **NONE**  
ISSUE NO.: \_\_\_\_\_ SHEET NO.: **13**  
DATE: \_\_\_\_\_



7/8/2008

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**TEMPORARY SIGNING SCHEDULE**

SIGN CODE	LEGEND	SIZE (INxIN)	QUANTITY	AREA (FT <sup>2</sup> )
PEDESTRIAN DETOUR SIGNAGE				
R9-10	SIDEWALK CLOSED USE OTHER SIDE	24 x 12	2	4
R9-11	SIDEWALK CLOSED AHEAD USE OAKWOOD	24 x 12	1	2
M4-9b	PEDESTRIAN DETOUR	30 x 24	1	5

**QUANTITIES THIS SHEET**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
8/20135	11	Sft	Sign, Type B, Temp, Prismatic, Furn
8/20136	11	Sft	Sign, Type B, Temp, Prismatic, Oper

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	MRS		7/8/2008	
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							DIVISION DESIGN ENGINEER
							SQUAD LEADER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

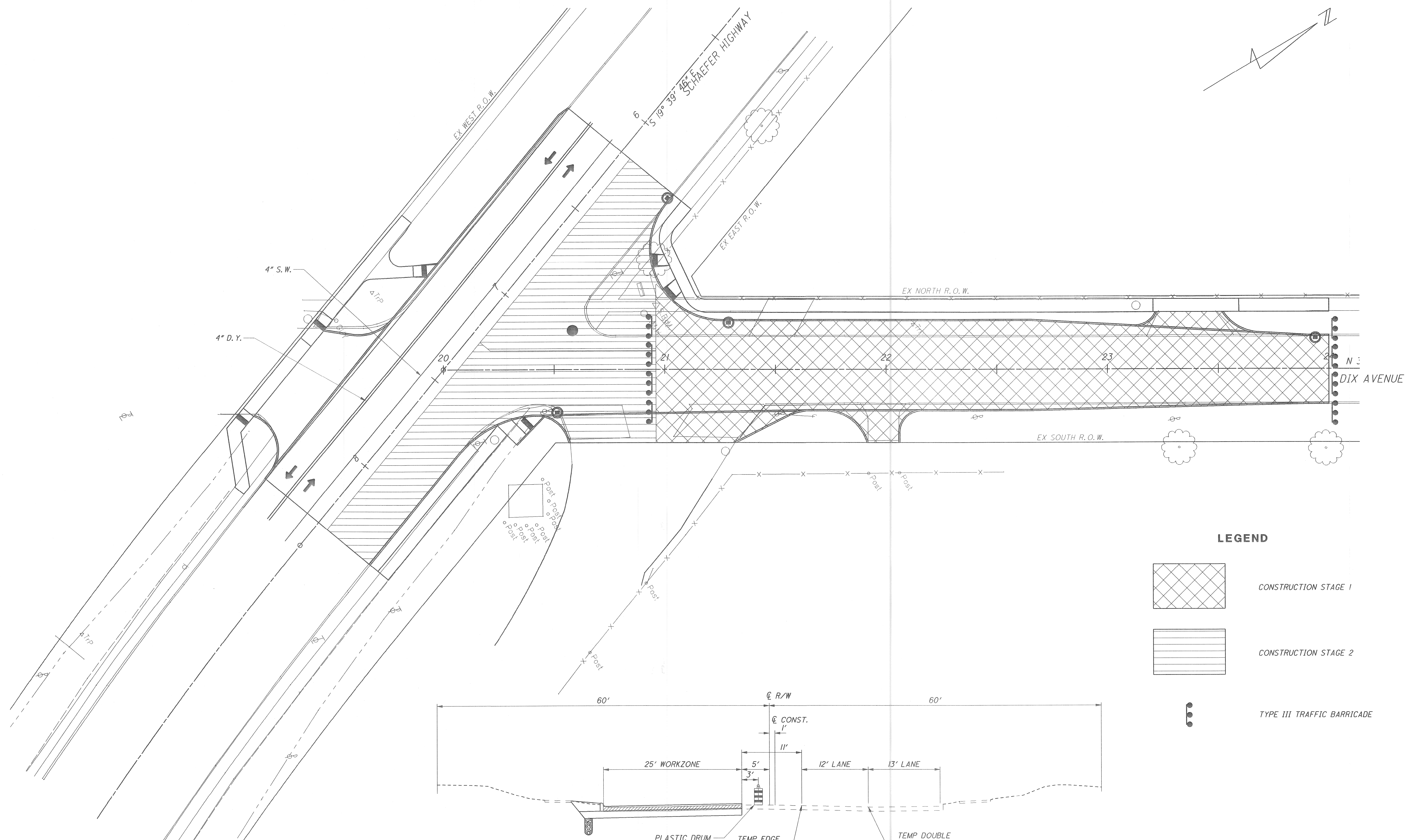
**DIX / SCHAEFER**  
**INTERSECTION IMPROVEMENTS**  
**PEDESTRIAN DETOUR-STAGES 1, 2 & 3**

PLANS PREPARED BY:  
**Mannik & Smith**  
 Group, Inc.  
 Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT: \_\_\_\_\_ SCALE: **NONE**  
 SHEET NO.: **14**  
 ISSUE NO.: \_\_\_\_\_  
 DATE: \_\_\_\_\_



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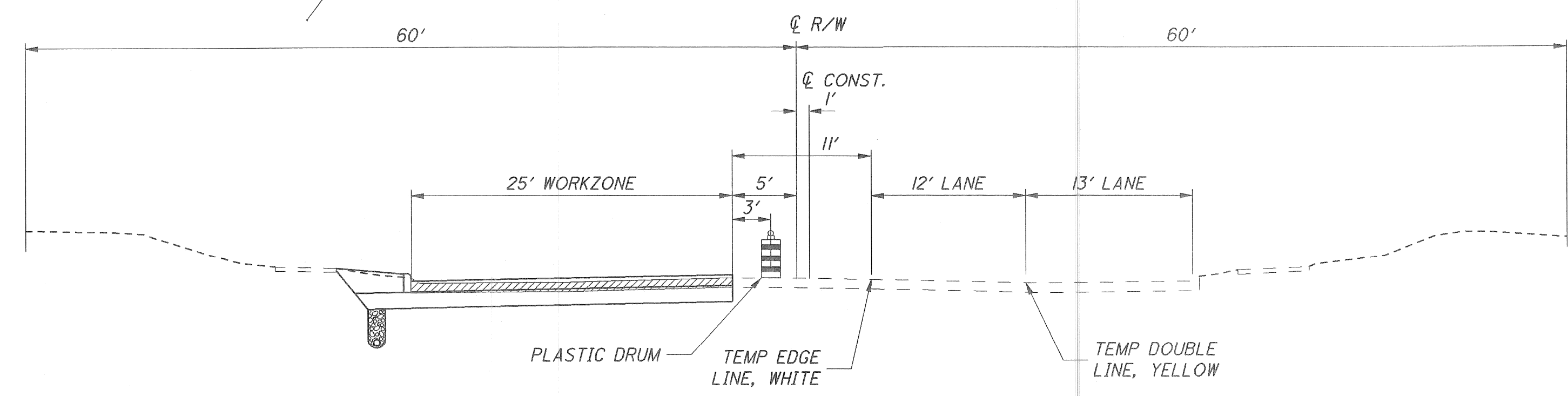


**LEGEND**

- CONSTRUCTION STAGE 1
- CONSTRUCTION STAGE 2
- TYPE III TRAFFIC BARRICADE

**NOTES:**  
SEE SHEET 17 FOR ALL ADVANCED WARNING SIGNAGE AND CHANNELIZING DEVICE PLACEMENT INFORMATION.

CONTRACTOR TO MODIFY EXISTING SIGNAL HEADS TO ACCOMMODATE ALL TRAFFIC DURING ALL CONSTRUCTION STAGES, AND PROVIDE A TEMPORARY SIGNAL POLE AND SIGNAL IF NECESSARY TO BE PAID FOR AS PART OF "ITEM 812 MINOR TRAF DEVICES".



**MOT TYPICAL SECTION - STAGE 2**  
(LOOKING UP-STATION)

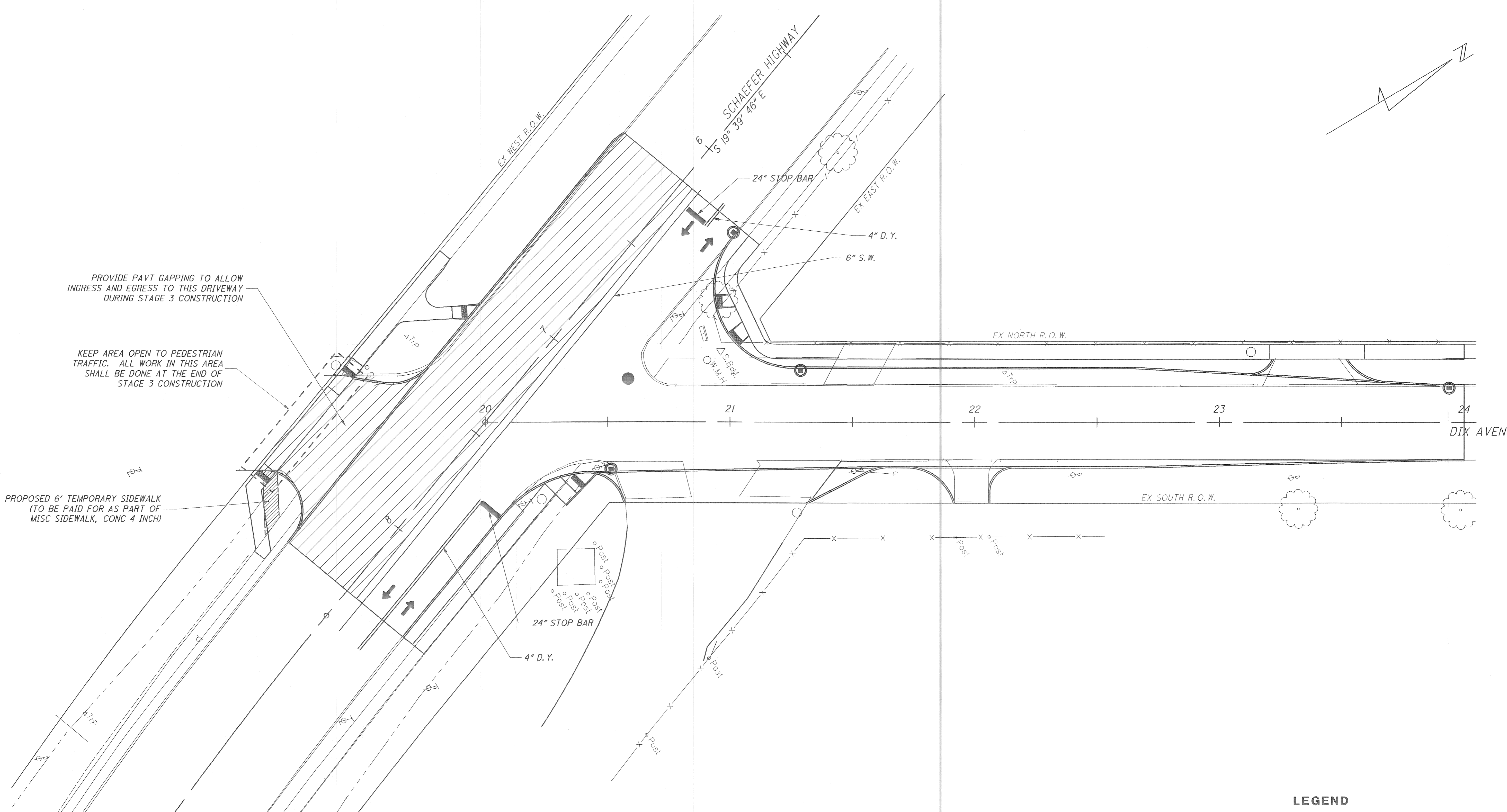
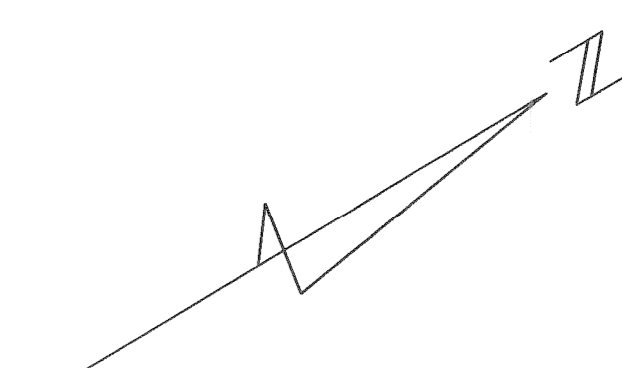
NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	MRS	TEW	7/8/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
				CORRECT			DIVISION DESIGN ENGINEER
				SQUAD LEADER			

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

**DIX / SCHAEFER**  
**INTERSECTION IMPROVEMENTS**  
**MAINTENANCE OF TRAFFIC-STAGES 1 & 2**

PLANS PREPARED BY: <b>Mannik &amp; Smith</b> Group, Inc. Civil Engineering, Surveying and Environmental Consulting	COUNTY PROJECT	SCALE <b>1"=20'</b>
ISSUE NO. _____	DATE _____	SHEET NO. <b>15</b>

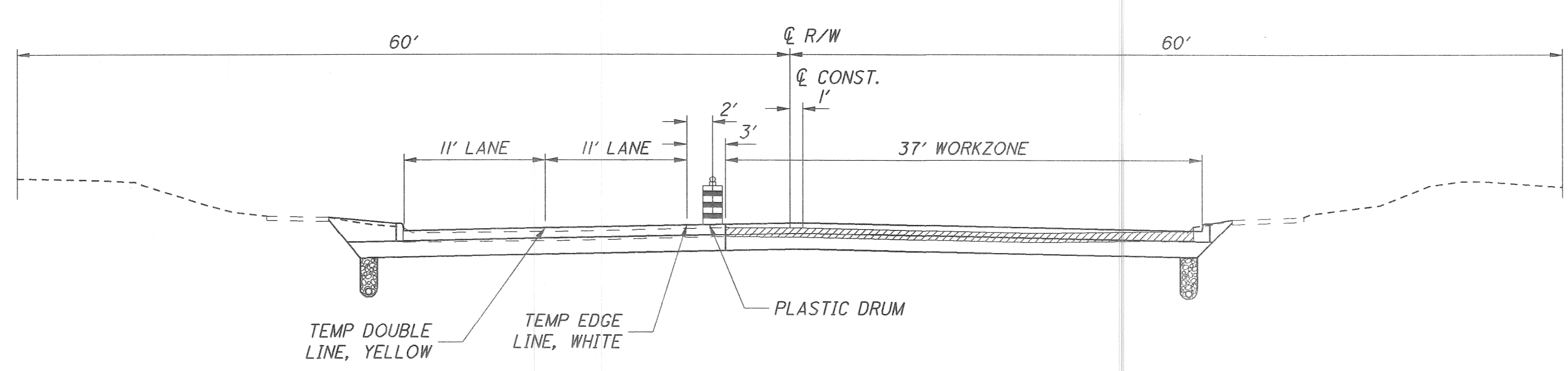




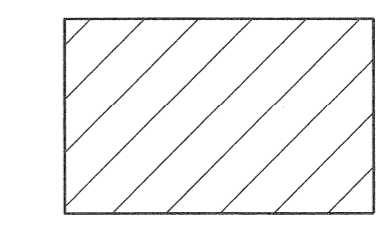
PROVIDE PAVT GAPPING TO ALLOW INGRESS AND EGRESS TO THIS DRIVEWAY DURING STAGE 3 CONSTRUCTION

KEEP AREA OPEN TO PEDESTRIAN TRAFFIC. ALL WORK IN THIS AREA SHALL BE DONE AT THE END OF STAGE 3 CONSTRUCTION

PROPOSED 6' TEMPORARY SIDEWALK (TO BE PAID FOR AS PART OF MISC SIDEWALK, CONC 4 INCH)



**LEGEND**



CONSTRUCTION STAGE 3

NOTES:  
SEE SHEET 17 FOR ALL ADVANCED WARNING SIGNAGE AND CHANNELIZING DEVICE PLACEMENT INFORMATION.

CONTRACTOR TO MODIFY EXISTING SIGNAL HEADS TO ACCOMMODATE ALL TRAFFIC DURING ALL CONSTRUCTION STAGES, AND PROVIDE A TEMPORARY SIGNAL POLE AND SIGNAL IF NECESSARY TO BE PAID FOR AS PART OF "ITEM 812 MINOR TRAF DEVICES".

**MOT TYPICAL SECTION - STAGE 3**  
(LOOKING UP-STATION)

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NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDO	MRS	TEW	7/8/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDO				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDO				APPROVED
							DIVISION DESIGN ENGINEER
							SQUAD LEADER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

**DIX / SCHAEFER**  
**INTERSECTION IMPROVEMENTS**  
**MAINTENANCE OF TRAFFIC-STAGE 3**

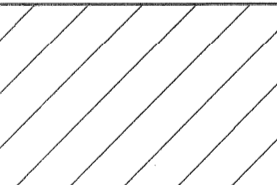
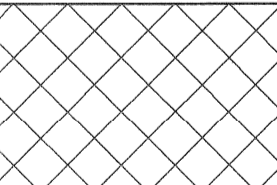



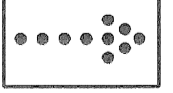
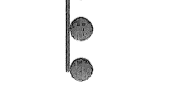
PLANS PREPARED BY:	THE MANNIK & SMITH GROUP, INC.	COUNTY PROJECT	SCALE
	Civil Engineering, Surveying and Environmental Consulting		1"=20'
ISSUE NO.		DATE	SHEET NO.
			16

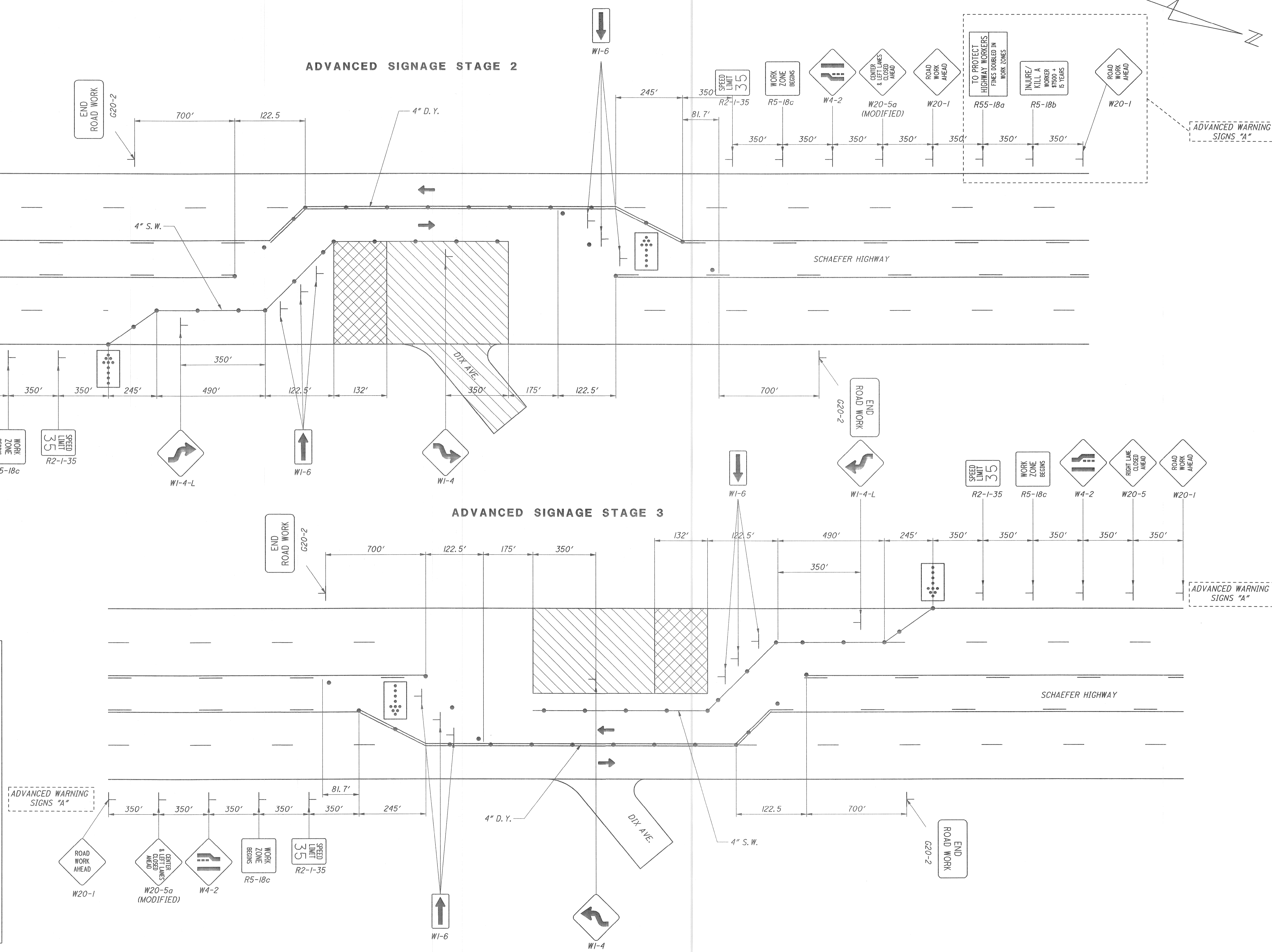


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NOTE:  
THE CONTRACTOR MAY ADJUST THE SPACING OF ADVANCED WARNING SIGNAGE IF EXISTING FIELD CONDITIONS DICTATE THAT SUCH AN ADJUSTMENT IS NECESSARY.

**LEGEND**

-  CONSTRUCTION STAGE
-  BUFFER SPACE
-  TRAFFIC CONTROL ARROWS
-  PLASTIC CONSTRUCTION DRUMS
-  TEMPORARY TRAFFIC SIGNS
-  LIGHTED ARROW SIGN, TYPE C
-  LIGHTED ARROW SIGN, TYPE C



NO.	DATE	BY	DESCRIPTION
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT

DRAWN BY	CHECKED BY	DATE	CORRECT
MRS	TEW	7/8/2008	
CORRECT			APPROVED
SQUAD LEADER			DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
ENGINEERING DIVISION

**DIX / SCHAEFER**  
INTERSECTION IMPROVEMENTS  
NOT ADVANCED WARNING SIGNAGE

PLANS PREPARED BY: <b>Mannik &amp; Smith</b> Group, Inc. Civil Engineering, Surveying and Environmental Consulting	COUNTY PROJECT	SCALE N/A
ISSUE NO.	SHEET NO. 17	
DATE		



# GENERAL INFORMATION SHEET

## PLD NOTES

1. CALL MISS DIG \*800-482-7171\* 3 WORKING DAYS PRIOR TO ANY EXCAVATION FOR THE LOCATIONS OF UNDERGROUND UTILITIES.
2. WHERE ABANDONING OF U.G. CABLES IS CALLED FOR ON PLANS OR DIAGRAMS, CONTRACTOR SHALL CUT & REMOVE CABLES WITHIN MANHOLES & HANDHOLES.
3. WHERE INSTALLATION OF NEW MANHOLES OVER EXISTING CONDUITS \*TO ACCOMMODATE NEW & EXISTING CONDUITS\* IS CALLED FOR ON PLANS, CONTRACTOR SHALL CAREFULLY & SO NOT AS TO DAMAGE THE EXISTING. CABLES, REMOVE THE EXISTING CONDUITS & ENCASEMENT WITHIN MANHOLES. EXISTING CABLES SHALL BE EXTENDED & PROPERLY TRAINED, RACKED & SUPPORTED.
4. ALL EXISTING STREET LIGHTING, TRAFFIC SIGNAL, PRIMARY TRANSMISSION ETC. CIRCUITS SHALL ALWAYS BE MAINTAINED IN AN OPERATIONAL CONDITION \*EXCEPT WHERE OTHERWISE NOTED\*.
5. ALL CONDUITS NOT TERMINATING IN STRUCTURES SUCH AS MANHOLES, HANDHOLES OR FOUNDATIONS SHALL EXTEND 2 FT. BEYOND PAVEMENT LIMIT \*EXCEPT AS OTHERWISE INDICATED\*. ALL UNOCCUPIED CONDUITS SHALL BE PLUGGED.
6. ALL TREE TRIMMING REQUIRED TO CLEAR NEW OR SALVAGED ST. LTG. & TRAFFIC SIGNAL STD.'S O.H. ST. LTG. & TRAFFIC SIGNAL UNITS SHALL BE INCLUDED IN THE PAY-ITEM & NO EXTRA PAYMENT SHALL BE MADE.
7. EXISTING O.H. & T.S. FACILITIES ARE NOT NECESSARILY SHOWN ON PLANS.
8. ALL OVERHEAD WIRES & UNDERGROUND CABLES SHALL CONSIST OF STRANDED COPPER CONDUCTORS AS PER SPECIFICATIONS. SOLID WIRE NOT ACCEPTED.
9. NEW CONDUITS BROKEN INTO EXISTING MANHOLES OR HANDHOLES SHALL NOT INTERFERE WITH RACKING AND/OR TRAINING OF CABLES.
10. ALL NEW ANCHOR GUYS SHALL BE INSTALLED ON A 1:1 RATIO OR AS NEARLY AS POSSIBLE \*EXCEPT WHERE OTHERWISE NOTED\*. \*STRUT GUYS ARE EXCEPTED\*.
11. ALL CABLES SHALL BE TAGGED IN ALL MANHOLES AND HANDHOLES.
12. INSTALL WOOD POLES AS TO NOT INTERFERE WITH TRAFFIC OR FUTURE CONSTRUCTION STAGES.
13. ALL SALVAGED WOOD POLES SHALL BE PREVIOUSLY INSTALLED NEW ON THIS CONTRACT.
14. ALL TRAFFIC STREET SIGNS SUCH AS "NO PARKING", "NO STANDING", ETC. SHALL BE TRANSFERRED FROM OLD STD. OR POLE TO NEW STD. OR POLE AT THE SAME LOCATION OR IN CLOSE PROXIMITY BY THE CONTRACTOR.
15. ALL TRAFFIC SIGNALS SHALL BE MOUNTED WITH NEW STANDARD TRAFFIC SIGNAL BRACKETS & FITTINGS.
16. ALL TRAFFIC SIGNAL ITEMS, AS CALLED FOR ON PLANS, SHALL HAVE INCLUDED IN THE TRAFFIC SIGNAL ITEM ALL CABLES FROM THE CONTROLLER TO THE TRAFFIC SIGNALS, FOUNDATIONS & PIPE EXTENSIONS NEEDED TO MAINTAIN 17'-0" UNDERCLEARANCE AS INDICATED.
17. WHEN ENTERING PROPOSED CONDUIT INTO EXISTING MANHOLES & HANDHOLES EXERCISE CAUTION NOT TO DISTURB EXISTING CABLES.
18. ALL SALVAGED TRAFFIC SIGNALS SHALL BE TRAFFIC SIGNALS PREVIOUSLY INSTALLED NEW ON THIS CONTRACT. \*EXCEPT AS OTHERWISE INDICATED\*.
19. FOR TRAFFIC SIGNAL SPAN WIRE USE EXTRA HIGH STRENGTH GRADE AS PER SPECIFICATIONS.
20. CROSSARMS SHALL BE REMOVED AFTER ALL CONTACTS ARE REMOVED. \*INCLUDED IN REMOVAL OF OVERHEAD LINES\*.
21. SEAL END OF CABLE WHERE COILING OF CABLE IS CALLED FOR ON PLANS. \*CONTRACTOR SHALL RECEIVE PAYMENT FOR COILED-UP CABLES\*. ALL EXPOSED CONDUCTORS OF ALL I.M.S.A. SERVICE CABLE COLORS, OTHER THAN BLACK, SHALL BE WRAPPED WITH BLACK TAPE TO PROTECT AGAINST SUNLIGHT DETERIORATION.
22. CONTRACTOR SHALL DELIVER WHERE REQUIRED TO THE WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICE T.S. CONTROLLER FOR TIMING. CONTRACTOR SHALL PICK-UP CONTROLLER FROM W.C.D.P.S. WHEN READY FOR INSTALLATION.
23. PROPOSED T.S. SHALL BE PUT INTO OPERATION AT TIME OF REMOVAL OF EXISTING T.S. FACILITIES, CONTRACTOR SHALL NOTIFY W.C.D.P.S. IF UNABLE TO MAINTAIN T.S. IN OPERABLE CONDITION AT ALL TIMES.
24. A MINIMUM CLEARANCE OF 3'-6" HORIZONTAL AND 1'-0" VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED FACILITIES & EXISTING U.G. WATER FACILITIES.
25. CONTACT AMERITECH AND W.C.D.P.S. FOR INSTALLATION OF AMERITECH SERVICE \*INTERCONNECT\* BY AMERITECH.
26. UTILITY CO. SERVICE INSTALLATION FEES, METERED SERVICE CHARGES AND OTHER CHARGES ESTIMATED ON THE PLANS (FOR LENGTH OF CONTRACT) ARE TO BE ORDERED AND PAID BY THE CONTRACTOR. (INCLUDED IN THE INSTALLATION OF T.S. ON THIS CONTRACT).
27. CONTACT MR. MIKE WISNIEWSKI (W.C.D.P.S.) (734) 955-3277 48 HOURS PRIOR TO INSTALLATION OF TRAFFIC SIGNALS.
28. ALL MATERIAL REMOVED ON THIS CONTRACT SHALL BECOME THE PROPERTY OF W.C.D.P.S. BAGGING OF TEMP. OR FINAL T.S. REQUIRED BY THE ENGINEER SHALL
29. STORED ON SITE AND PICKED-UP BY W.C.D.P.S. (OR AS INDICATED ON PLANS) BE INCLUDED ON THE INSTALLATION & INSPECTION OF TRAFFIC SIGNALS.
30. ALL OVERHEAD FED LOW LEVEL AND OR PEDESTRIAN TRAFFIC SIGNALS SHALL BE FED USING I.S.M.A. 20-3 TRAFFIC SIGNAL CABLE WITH 1/4" INTEGRAL MESSENGER.
31. FOR TYPICAL PEDESTRIAN T.S. WIRING ON POLES; (W.C.D.P.S. STEEL POLES, WOOD POLES OR STEEL POLES OWNED BY OTHERS) SEE DETAILS ON SHEET WC-4A, ALL STEEL POLES SHALL BE ASSUMED TO BE OWNED BY W.C.D.P.S UNLESS OTHERWISE NOTED ON PLANS.
32. ALL TRAFFIC SIGNAL SPANS WITH SOLID STATE CONTROLLERS SHALL BE GROUNDED. THE GROUNDED OF BOTH SHALL NOT HAVE A RESISTANCE GREATER THAN 10 OHM WHEN INSTALLED.
33. ALL CONDUIT BENDS SHALL HAVE MINIMUM RADIUS IN ACCORDANCE WITH THE CURRENT N.E.C.
34. ALL TRAFFIC SIGNAL FITTINGS (SCREWS, BOLTS, PINNACLES, ETC.) SHALL BE GREASED WITH A NON-OXIDE TYPE GREASE. (INCLUDED IN THE INSTALLATION OF T.S. ON THIS CONTRACT).
35. INSTALL STEEL POLE HANDHOLE, AS DESCRIBED ON DETAIL SHEET WC-2, IN ALL EXIST. STEEL POLES AS DIRECTED BY THE ENGINEER. (INCLUDED IN THE INSTALLATION OF T.S. ON THIS CONTRACT).
36. WHEN SPLICING TEMPORARY OVERHEAD OR UNDERGROUND TRAFFIC SIGNAL CABLE, USE WIRE NUTS. TAPE EACH INDIVIDUAL SPLICE. THEN TAPE OVERALL SPLICE USING TWO LAYERS OF TAPE 1/2 LAPPED, COVERING SPLICES FROM CABLE JACKET TO CABLE JACKET, OVERLAPPING CABLE JACKET BY ONE INCH. NO SPLICE ALLOWED IN POLYMER CONCRETE HANDHOLES (IN GROUND) FOR PERMANENT INSTALLATION.
37. WHEN CABLING LOW LEVEL INDICATIONS MOUNTED ON STEEL POLES OR ALUMINUM POSTS, PROVIDE SEPARATE CABLE FROM LOW LEVEL HEADS TO POLE BASE HANDHOLE. SPLICE TERMINUS OF LOW LEVEL SIGNAL CABLE TO TERMINUS OF OVERHEAD SIGNAL CABLE IN POLE BASE, MAKING ACTUAL SPLICE WITH WIRE NUTS. TAPE AS ABOVE.
38. NO CHANGES FROM PLANS IN LOCATION OF SUPPORTING STRUCTURES, SIGNAL HEAD PLACEMENT OR TRAFFIC SIGNAL EQUIPMENT WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF W.C.D.P.S., DIVISION OF ROADS (734) 955-2154.
39. INSTALLATION OF ENCASED CONDUIT CALLED FOR ON PLANS SHALL BE CONCRETE ENCASED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
40. STEMMING OF SIGNAL HEADS TO MAINTAIN EQUAL UNDERCLEARANCE FOR EACH SPAN WIRE MOUNTED SIGNAL HEAD. (AT ALL INTERSECTIONS ON THIS CONTRACT) IS INCLUDED IN THE INSTALLATION OF T.S. IN THIS CONTRACT.
41. ALL PEDESTRIAN SIGNAL HEADS SHALL BE 12-INCH SYMBOLIC LED INDICATIONS CONSTRUCTED OF POLYCARBONATE MATERIAL UNLESS OTHERWISE INDICATED.
42. ALL JACK-BORED, OPEN CUT OR DIRECT BURIAL CONDUIT CALLED FOR ON PLANS IS THE PREFERRED METHOD OF INSTALLATION. IF THE METHOD OF CONDUIT INSTALLATION IS IMPOSSIBLE TO CONSTRUCT OR IF THE CONTRACTOR PREFERENCES TO USE ANY OTHER METHOD, THE CHANGE OF METHOD MAY BE MADE UPON APPROVAL BY THE PROJECT ENGINEER.  
  
THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING OR ANTICIPATING HIS NEED OR DESIRE TO INSTALL CONDUIT BY ANY OTHER METHOD AND TO INCLUDE THE COST IN HIS CONTRACT BID.  
  
NO EXTRA PAYMENT WILL BE ALLOWED FOR ANY CHANGE IN THE METHOD OF CONDUIT INSTALLATION.
43. FOR ALL I.M.S.A. SERVICE CABLE, WHERE PLASTIC JACKET IS REMOVED, TAPE OVER THE INSULATION OF EACH EXPOSED CONDUCTOR WITH BLACK ELECTRICAL TAPE, HALF LAPPED.
44. AT ALL LOCATIONS WHERE TRAFFIC SIGNAL OR SECONDARY CABLE IS ATTACHED TO A WOOD POLE LESS THAN 10' ABOVE GRADE, IT SHALL BE ROUTED IN METAL CONDUIT (HEAVY WALL) OF THE SPECIFIED SIZE.
45. ALL PEDESTRIAN TRAFFIC SIGNALS NOT IN USE ON THIS PROJECT SHALL BE BAGGED AS DIRECTED BY THE ENGINEER. (INCLUDED IN THE INSTALLATION OF T.S. ON THIS CONTRACT).
46. ALL BAGS USED FOR BAGGING OF TRAFFIC SIGNALS AND PEDESTRIAN SIGNALS SHALL BE MADE OF BURLAP.
47. ALL MAST ARM MOUNTED TRAFFIC SIGNALS SHALL BE MOUNTED SUCH THAT A 17'-0" UNDERCLEARANCE IS MAINTAINED AT ALL TIMES.
48. SIGNAL POLE FOUNDATION SHALL BE UNCASED OR CASED AS DIRECTED BY THE ENGINEER.
49. ANY SAW CUTTING FOR INTEGRAL CURB IS INCLUDED.
50. EXTREME CAUTION SHALL BE USED WHEN DIGGING NEAR OIL OR GAS LINES. IF A CONFLICT OCCURS WITH A PEDESTAL SUCH THAT THE FOUR (4) FOOT FOUNDATION CONFLICTS WITH A SHALLOW OIL OR GAS LINE, THE DEPTH OF THE PEDESTAL FOUNDATION MAY BE REDUCED AT THE DISCRETION OF THE ENGINEER.

ALL REMOVED STREET LIGHTING POLES, MAST ARMS, LIGHT FIXTURES, TRANSFORMER BASES, COILS, WIRE CABLE, DISTRIBUTION CABINETS, TRAFFIC SIGNAL POLES, MAST ARMS, CONTROLLER CABINETS, CONTROLLERS, SIGNAL HEADS AND FITTINGS, WIRE, CABLE, MANHOLE, AND HANDHOLE FRAMES AND COVERS AND TRANSFORMERS SHALL BE DELIVERED TO THE PUBLIC LIGHTING DEPARTMENT, 9449 GRINNELL, DETROIT, MICHIGAN 48213 AND SHALL BECOME THE PROPERTY OF THE PUBLIC LIGHTING DEPARTMENT.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING OF SIGNAL CONTROLLER, WIRING OF CABINET AND INSTALLATION OF TRANSFORMER.  
  
TIMING PERMIT TO BE PROVIDED BY CITY OF DETROIT, TRAFFIC ENGINEERING DIVISION.

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NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	ACT	JMH	4/10/2009	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				
4	9-23-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT				
5	10-01-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT				
6	12-22-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT				
7	04-06-09	SJR	RE-SUBMITTAL TO CITY OF DETROIT				

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

**TRAFFIC SIGNAL**  
**GENERAL NOTES**

PLANS PREPARED BY: <b>The Mannik &amp; Smith Group, Inc.</b> Civil Engineering, Surveying and Environmental Consulting	COUNTY PROJECT	SCALE N/A
ISSUE NO. _____	SHEET NO. 18	
DATE _____		



# LEGEND SHEET

## UNDERGROUND

- M.H. 1234 EXISTING MANHOLE
  - EXISTING HANDHOLE
  - EXISTING DUCT RUN
  - ABANDON EXISTING DUCT RUN
  - BUILD ENCASED CONDUIT (E.C.) OR DIRECT BURIAL CONDUIT (D.B.) (4-4" E.C. SHOWN)
  - M.H. 5678 BUILD NEW MANHOLE (2-WAY)
  - M.H. 9012 BUILD NEW MANHOLE (3-WAY)
  - M.H. 3456 BUILD NEW MANHOLE (4-WAY)
  - M.H. 7890 BUILD NEW MANHOLE (CORNER)
  - BUILD HANDHOLE (ROUND OR SQUARE AS INDICATED ON THE PLANS).
  - BUILD POLYMER CONCRETE HANDHOLE
  - BUILD TYPE "D" HANDHOLE
  - EXISTING DIRECT BURIAL OR PARKWAY CABLE
  - ABANDON DIRECT BURIAL OR PARKWAY CABLE
  - INSTALL DIRECT BURIAL CABLE (NO. & SIZE AS INDICATED)
  - INSTALL DIRECT BURIAL CONDUIT (1-3"), (UNLESS NOTED OTHERWISE ON PLAN)
  - EXISTING U.G.-FED ST. LTG. UNIT
  - REMOVE U.G.-FED ST. LTG. UNIT & FDN. (EXCEPT AS OTHERWISE INDICATED)
  - INSTALL COMB. T.S. & ST. LTG. STD. 6' CLAMP-ON BRACKET ARM WITH 3'-0" RISE ON NEW FDN. INSTALL 400W. TYPE LUMINAIRE.
- ## OVERHEAD
- EXISTING WOOD POLE (M.B.T. POLE SHOWN)
  - REMOVE WOOD POLE (D.E. CO. POLE SHOWN)
  - REPLACE WOOD POLE (HEIGHT & CLASS AS INDICATED)
  - INSTALL WOOD POLE (HEIGHT & CLASS AS INDICATED) (USE SALVAGED POLE WHERE INDICATED)
  - EXISTING OVERHEAD ST. LTG. UNIT
  - REMOVE OVERHEAD ST. LTG. UNIT
  - INSTALL OVERHEAD ST. LTG. UNIT
  - EXISTING OVERHEAD LINE
  - REMOVE OVERHEAD LINE
  - INSTALL OVERHEAD LINE
  - INSTALL & LATER REMOVE OVERHEAD LINE
  - INSTALL GUY & ANCHOR (1/2" GUY SHOWN)
  - REMOVE GUY & ANCHOR ROD
  - INSTALL POLE GUY (1/2" GUY SHOWN)
  - INSTALL ARM GUY (3/8" GUY SHOWN)
  - REMOVE GUY (TYPE AS SHOWN)
  - MATERIAL TO BE INSTALLED
  - MATERIAL TO BE REMOVED
  - MAKE WOOD POLE SELF-SUPPORTING IN CONCRETE
  - CABLE POLE

## TRAFFIC SIGNAL

- INSTALL 3-SECTION TRAFFIC SIGNAL (1-WAY SHOWN)
- INSTALL 3-SECTION TRAFFIC SIGNAL WITH SALVAGED HEADS (2-WAY SHOWN)
- REMOVE 3-SECTION TRAFFIC SIGNAL (3-WAY SHOWN)
- EXISTING 3-SECTION TRAFFIC SIGNAL (4-WAY SHOWN)
- INSTALL 3-SECTION, 12" TRAFFIC SIGNAL (1-WAY SHOWN)
- INSTALL 2-WAY ILLUMINATED CASE SIGN
- INSTALL 2-WAY ILLUMINATED CASE SIGN (SALVAGED)
- REMOVE 2-WAY ILLUMINATED CASE SIGN
- EXISTING 2-WAY ILLUMINATED CASE SIGN
- INSTALL 4-WAY ILLUMINATED CASE SIGN
- INSTALL 4-WAY ILLUMINATED CASE SIGN (SALVAGED)
- REMOVE 4-WAY ILLUMINATED CASE SIGN
- EXISTING 4-WAY ILLUMINATED CASE SIGN
- INSTALL 2-SECTION, 12" PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (2-WAY SHOWN)
- INSTALL 2-SECTION PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL WITH SALVAGED HEAD (2-WAY SHOWN)
- REMOVE 2-SECTION PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
- EXISTING 2-SECTION PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
- INSTALL TRAFFIC SIGNAL CONTROLLER (NEW OR SALVAGED AS INDICATED) ON NEW FDN. (EXCEPT AS OTHERWISE INDICATED)
- INSTALL TRUSS TYPE MAST ARM STD. & MAST ARM ON NEW FOUNDATION (EXCEPT AS OTHERWISE INDICATED)
- INSTALL 8' TRAFFIC SIGNAL PEDESTAL ON NEW FOUNDATION (EXCEPT AS OTHERWISE INDICATED)
- INSTALL STEEL STRAIN POLE ON NEW FOUNDATION (POLE HEIGHT AS INDICATED ON PLANS)
- EXISTING TRAFFIC SIGNAL CONTROLLER
- EXISTING MAST ARM STANDARD
- EXISTING PEDESTAL
- EXISTING STEEL STRAIN POLE
- INSTALL OVERHEAD PLASTIC JACKETED CABLE
- EXISTING OVERHEAD PLASTIC JACKETED CABLE
- REMOVE OVERHEAD PLASTIC JACKETED CABLE

## TRAFFIC SIGNAL

- INSTALL JUNCTION BOX
- INSTALL SALVAGED JUNCTION BOX
- REMOVE JUNCTION BOX
- EXISTING JUNCTION BOX
- BACK-OUT LAMPS & HOOD SIGNALS (INCIDENTAL TO INSTALLATION OF T.S. ON THIS CONTRACT)
- REMOVE HOOD & INSTALL LAMPS (INCIDENTAL TO INSTALLATION OF T.S. ON THIS CONTRACT)
- POLE CONTACT HEIGHT OF T.S. SPAN WIRE
- LOW CONTACT HEIGHT OF SPAN WIRE T.S. TO SPAN WIRE
- INSTALL WARNING SIGN (TYPE AS INDICATED ON PLANS).
- INSTALL LOOP DETECTOR & CABINET (EXCEPT AS OTHERWISE INDICATED).
- REMOVE PREEMPTION DETECTOR
- INSTALL PREEMPTION DETECTOR
- SPREAD SPECTRUM RADIO COMMUNICATIONS ANTENNA

## DIAGRAMS

- (U.G.-FED ST. LTG. STD. SYMBOLS SAME AS UNDERGROUND LEGEND OF THIS SHEET)
- PROPOSED MANHOLE
  - EXISTING MANHOLE
  - PROPOSED HANDHOLE
  - EXISTING HANDHOLE
  - PROPOSED MANHOLE IN SAME LOCATION AS EX. HOLE
  - INSTALL U.G. CABLE (NO. & SIZE AS INDICATED)
  - EXISTING U.G. CABLE
  - U.G. CABLE TO BE ABANDONED
  - U.G. CABLE TO BE REMOVED
  - DISCONNECT, INSULATE & CAP CABLE END
  - SPLICE STRAIGHT THRU
  - SPLICES

## GENERAL

- PROPERTY (ROW) LINE
- PAVEMENT JOINTLINE & CURB
- FUTURE PAVEMENT
- SEWER LINE, MANHOLE & CATCH BASIN
- DET. ED. CO. U.G. LINE & MANHOLE
- MICH. BELL TEL. CO. U.G. LINE & M.H.
- WATERMAIN & GATEWELL (OTHER UTILITIES SIMILAR)

W:\Projects\Projects K-O\M2070004\CAD\19\_M2070004\_I\_LC01.dgn 7/8/2008

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	ACT	JMH	7/8/2008	
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							SQUAD LEADER
							DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
ENGINEERING DIVISION

**TRAFFIC SIGNALS**  
LEGEND SHEET

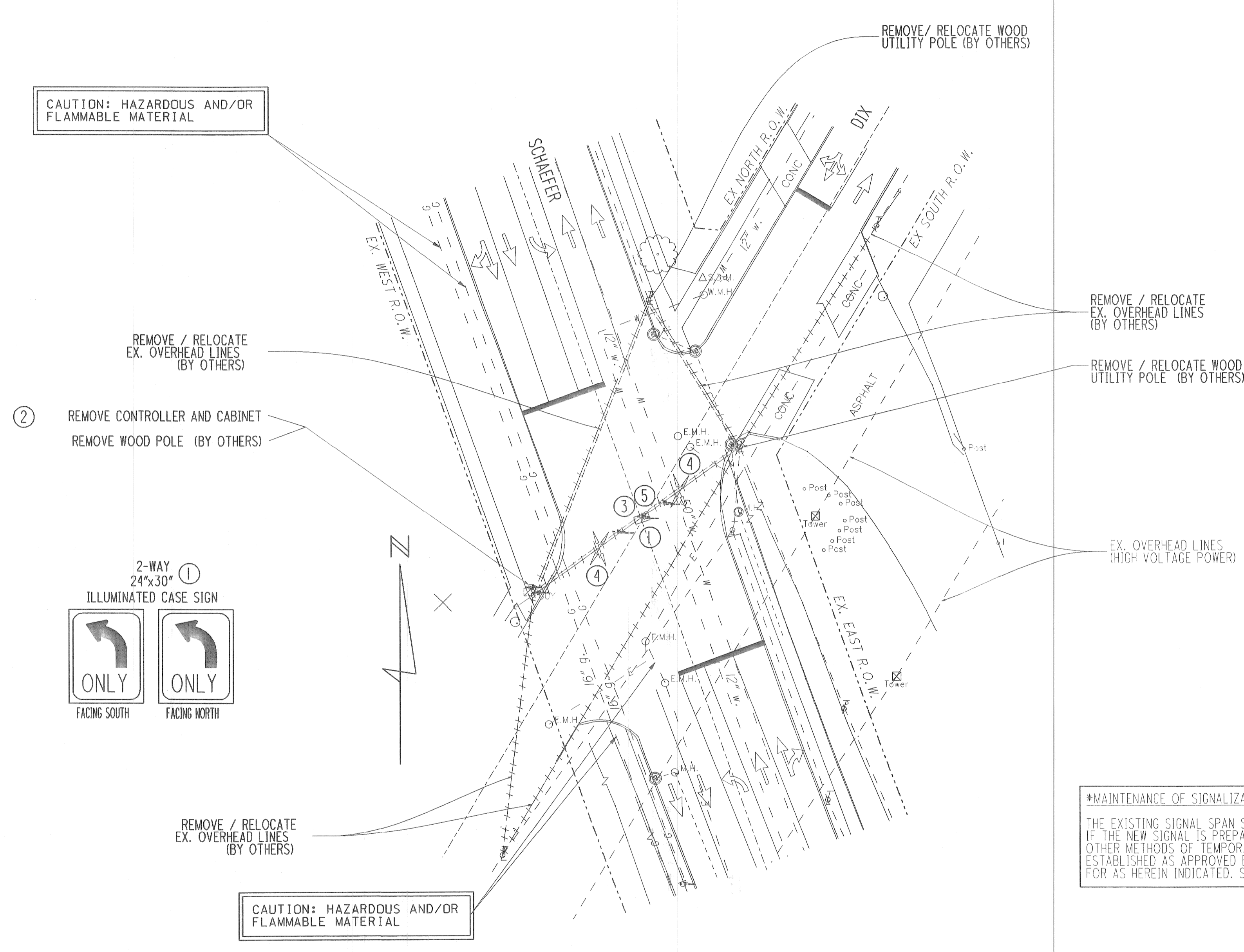
PLANS PREPARED BY:  
**Mannik & Smith**  
Group, Inc.  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT	SCALE
ISSUE NO.	SHEET NO.
DATE	19



7/8/2008

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REMOVAL DIAGRAM  
NOT TO SCALE

**\*MAINTENANCE OF SIGNALIZATION**  
THE EXISTING SIGNAL SPAN SHALL ONLY BE REMOVED IF THE NEW SIGNAL IS PREPARED FOR ACTIVATION OR OTHER METHODS OF TEMPORARY SIGNALIZATION ARE ESTABLISHED AS APPROVED BY W.C.D.P.S. AND PAID FOR AS HEREIN INDICATED. SEE MOT PLANS.

UTILITIES ON EXISTING POLES REQUIRING RELOCATION ARE TO BE RELOCATED BY THEIR RESPECTIVE OWNERS. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH UTILITY COMPANIES, INCLUDING CONTACT AND COORDINATION OF CABLE RELOCATIONS.

ALL PERTINENT TRAFFIC SIGNAL MATERIALS (AS COORDINATED WITH W.C.D.P.S.) REMOVED ON THIS PROJECT SHALL BECOME THE PROPERTY OF THE W.C.D.P.S. THE CONTRACTOR SHALL NOTIFY THE W.C.D.P.S. ONCE ALL SIGNAL MATERIALS ARE REMOVED AND COORDINATE PICK-UP.

LIST OF MATERIAL				
NO.	ITEM DESCRIPTION	QTY.	UNITS	ITEM CODE
①	Case Sign, Rem	1	Ea	8200020
②	Controller and Cabinet, Rem	1	Ea	8200030
③	Span Wire, Rem	1	Ea	8200141
④	TS, Span Wire Mtd, Rem	2	Ea	8200182
⑤	Splice Box, Rem	1	Ea	8207089
⑥				
⑦				

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	ACT	JMH	7/8/2008	
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							DIVISION DESIGN ENGINEER

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION

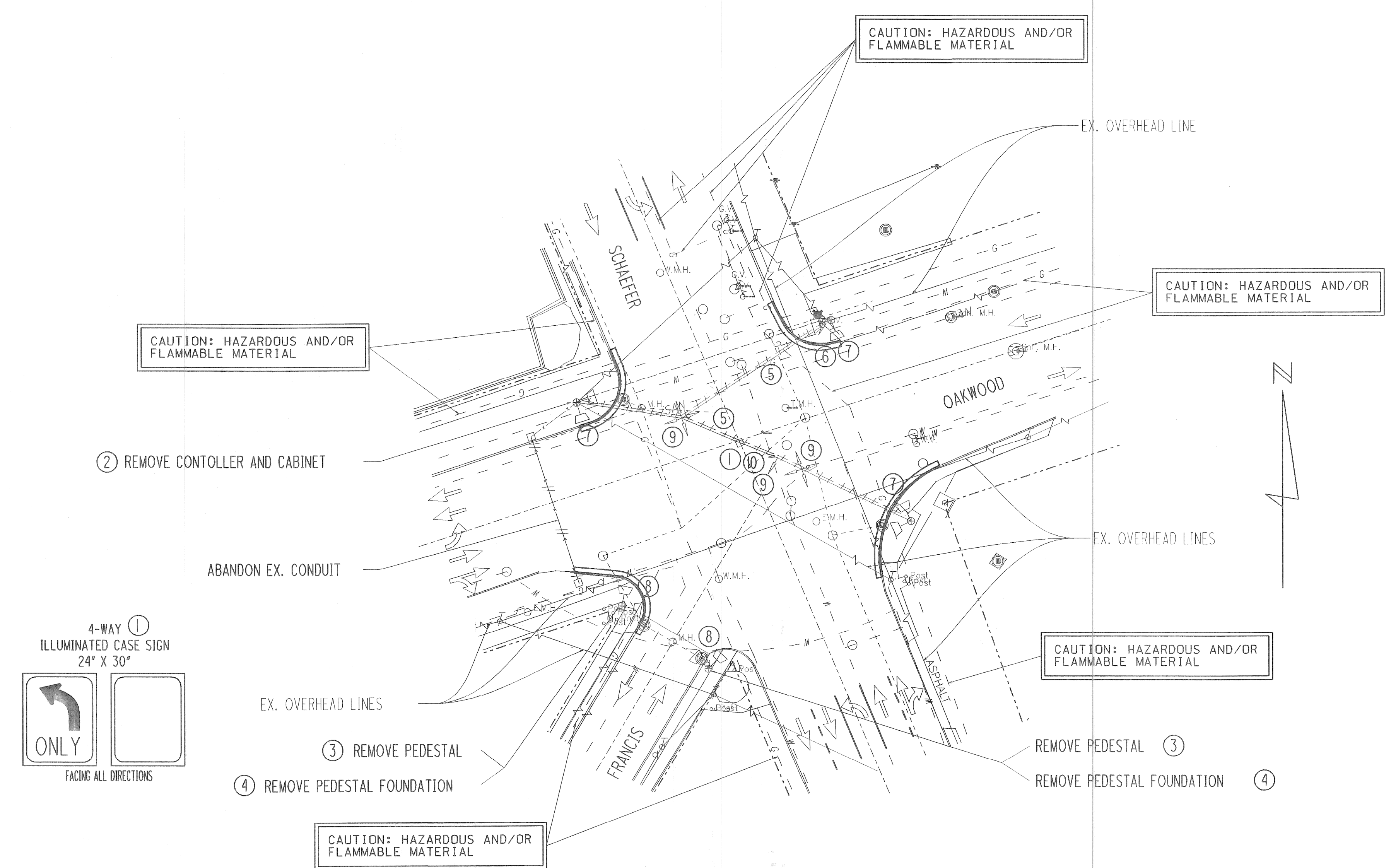
**DIX / SCHAEFER**  
SIGNAL IMPROVEMENTS (WAYNE COUNTY)  
REMOVAL PLAN

PLANS PREPARED BY:	THE MANNIK & SMITH GROUP, INC.	COUNTY PROJECT	SCALE
	Civil Engineering, Surveying and Environmental Consulting		N/A
ISSUE NO.		DATE	20



7/8/2008

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REMOVAL DIAGRAM  
NOT TO SCALE

LIST OF MATERIAL				
NO.	ITEM DESCRIPTION	QTY.	UNITS	ITEM CODE
①	Case Sign, Rem	1	Ea	8200020
②	Controller and Cabinet, Rem	1	Ea	8200030
③	Pedestal Fdn, Rem	2	Ea	8200106
④	Pedestal, Rem	2	Ea	8200110
⑤	Span Wire, Rem	2	Ea	8200141
⑥	TS, Bracket Arm Mtd, Rem	1	Ea	8200175
⑦	TS, Pedestrian, Bracket Arm Mtd, Rem	3	Ea	8200180
⑧	TS, Pedestrian, Pedestal Mtd, Rem	2	Ea	8200181
⑨	TS, Span Wire Mtd, Rem	3	Ea	8200182
⑩	Splice Box, Rem	1	Ea	8207089

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	ACT	JMH	7/8/2008	CORRECT
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3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							DIVISION DESIGN ENGINEER
							SQUAD LEADER

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION

SCHAEFER/OAKWOOD  
SIGNAL IMPROVEMENTS (WAYNE COUNTY)  
REMOVAL PLAN

PLANS PREPARED BY: <b>Mannik &amp; Smith</b> Group, Inc. Civil Engineering, Surveying and Environmental Consulting	COUNTY PROJECT	SCALE N/A
ISSUE NO. _____	DATE _____	SHEET NO. 21

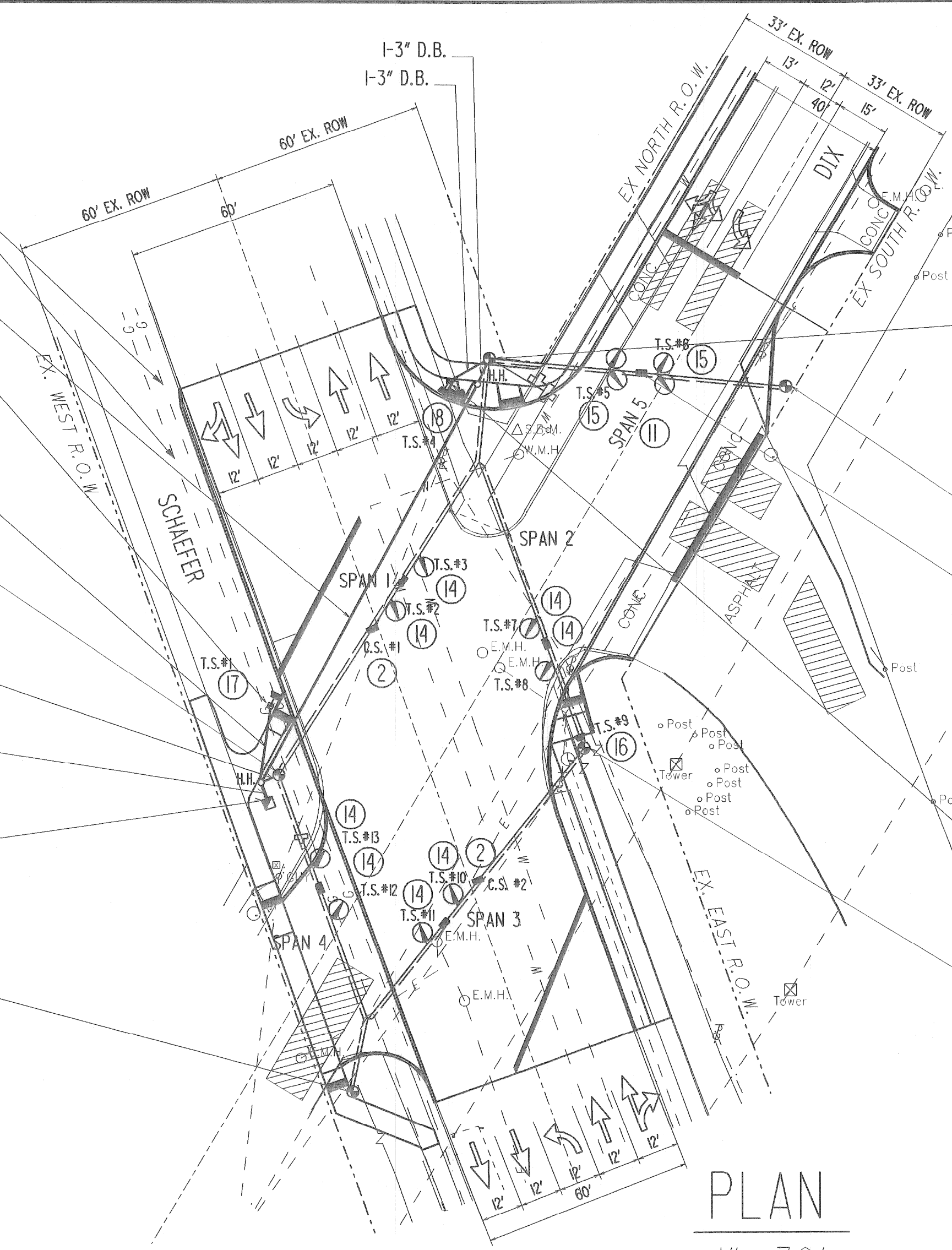


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CAUTION: HAZARDOUS AND/OR FLAMMABLE MATERIAL

- ⑥ 8" ALUMINUM PEDESTAL
- ⑦ PEDESTAL FOUNDATION
- ⑨ PUSHBUTTON AND SIGN (RIO-3B-R) FACING SOUTH TO CROSS SCHAEFER
- ⑬ 30' ANCHOR BASE STEEL STRAIN POLE
- ⑫ STRAIN POLE FOUNDATION
- ⑰ ⑱ VIDEO DETECTION CAMERA ON 18 FOOT TRUSS ARM
- ⑧ ⑩ POWER SERVICE
- 2-3" D.B. AND 1-1/2" D.B.
- 3-3" D.B. AND 1-1/2" D.B.
- ④ ③ CONTROLLER & CABINET
- ⑤ CONTROLLER & CABINET FOUNDATION
- ⑳ VIDEO DETECTION SYSTEM
- ⑬ 30' ANCHOR BASE STEEL STRAIN POLE
- ⑫ STRAIN POLE FOUNDATION

VIDEO DETECTION ZONE, EXACT LOCATION, SIZE, AND/OR ORIENTATION TO BE APPROVED IN THE FIELD BY THE W.C.D.P.S. FIELD ENGINEER



PLAN  
1" = 30'

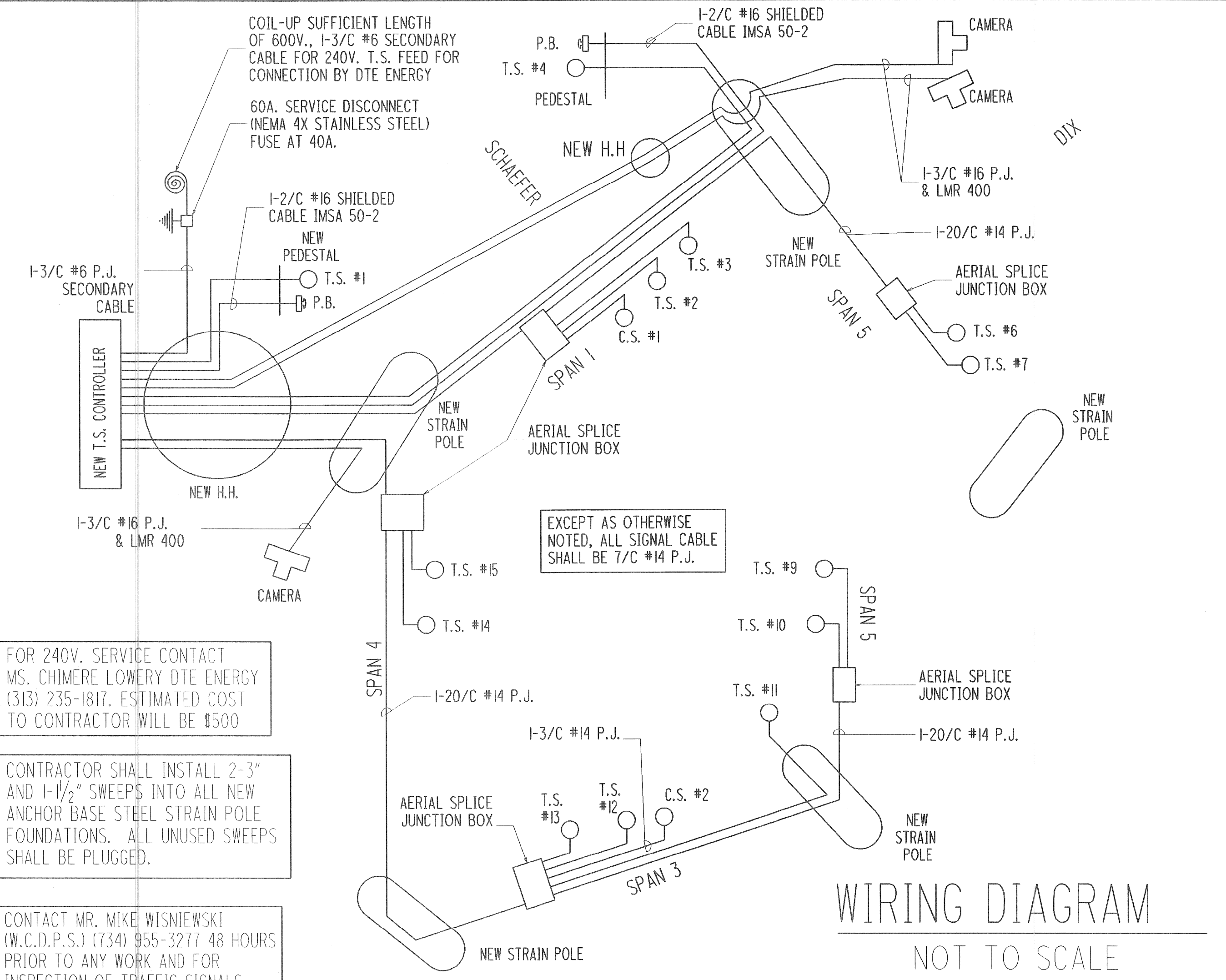
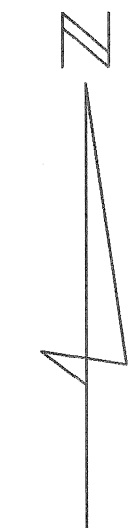
- ⑬ 30' ANCHOR BASE STEEL STRAIN POLE
- ⑫ STRAIN POLE FOUNDATION
- ⑰ ⑱ VIDEO DETECTION CAMERAS ON 18 FOOT TRUSS ARM
- ⑬ 30' ANCHOR BASE STEEL STRAIN POLE
- ⑫ STRAIN POLE FOUNDATION
- AERIAL SPLICE JUNCTION BOX (TYP.)
- ⑥ 8" ALUMINUM PEDESTAL
- ⑦ PEDESTAL FOUNDATION
- ⑨ PUSHBUTTON AND SIGN (RIO-3B-L) FACING SOUTH TO CROSS SCHAEFER
- ⑬ 30' ANCHOR BASE STEEL STRAIN POLE
- ⑫ STRAIN POLE FOUNDATION

**\*MAINTENANCE OF SIGNALIZATION**  
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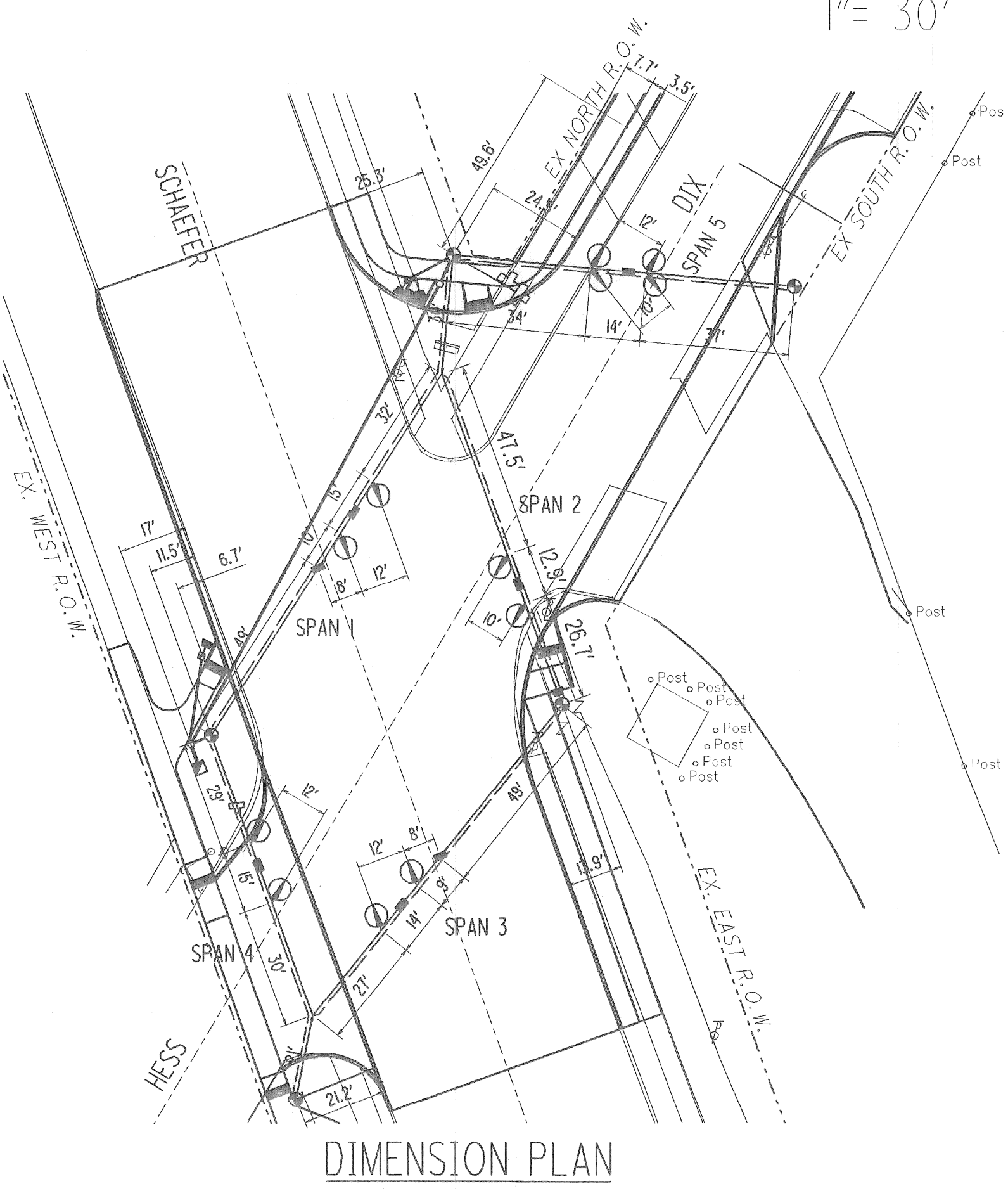
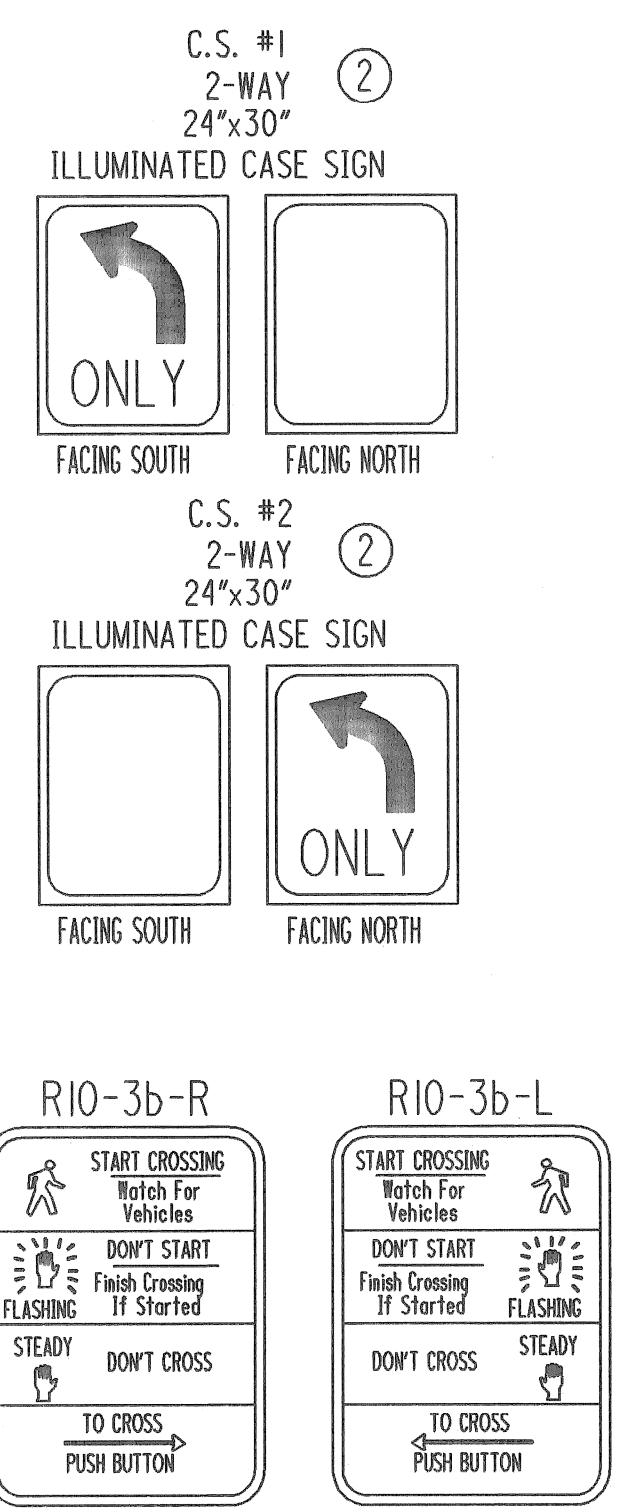
FOR 240V. SERVICE CONTACT MS. CHIMERE LOWERY DTE ENERGY (313) 235-1817. ESTIMATED COST TO CONTRACTOR WILL BE \$500

CONTRACTOR SHALL INSTALL 2-3" AND 1-1/2" SWEEPS INTO ALL NEW ANCHOR BASE STEEL STRAIN POLE FOUNDATIONS. ALL UNUSED SWEEPS SHALL BE PLUGGED.

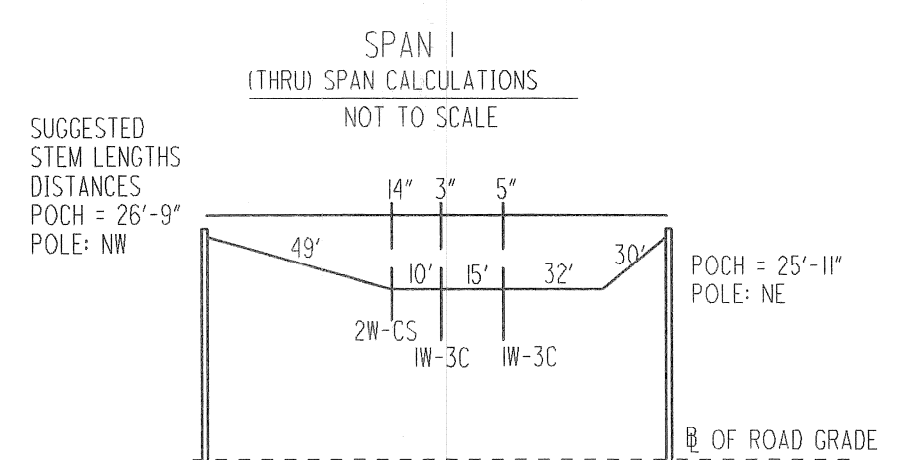
CONTACT MR. MIKE WISNIEWSKI (W.C.D.P.S.) (734) 955-3277 48 HOURS PRIOR TO ANY WORK AND FOR INSPECTION OF TRAFFIC SIGNALS.



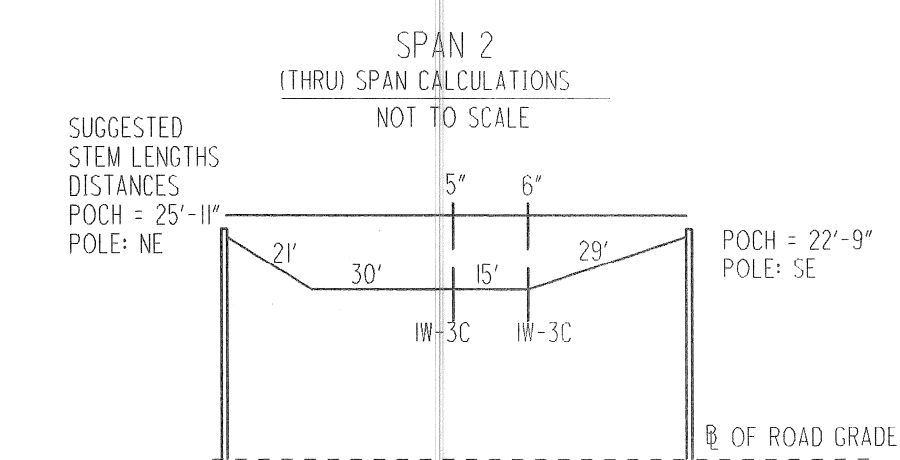
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NOT TO SCALE



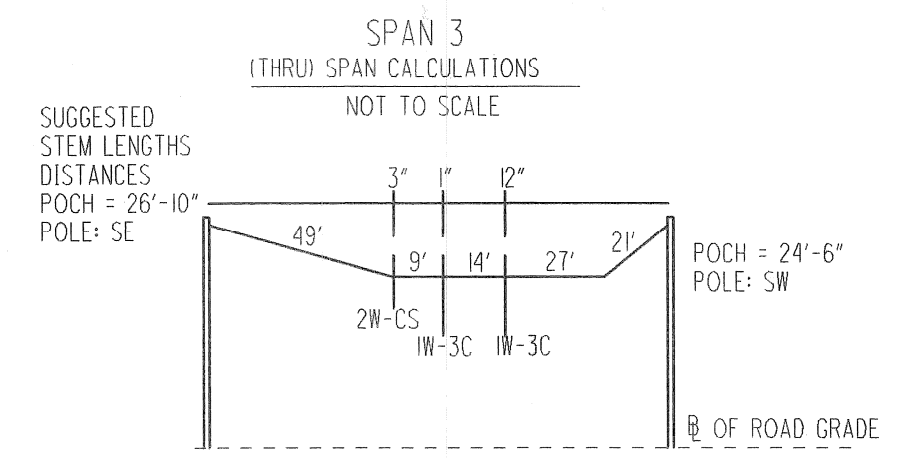
DIMENSION PLAN



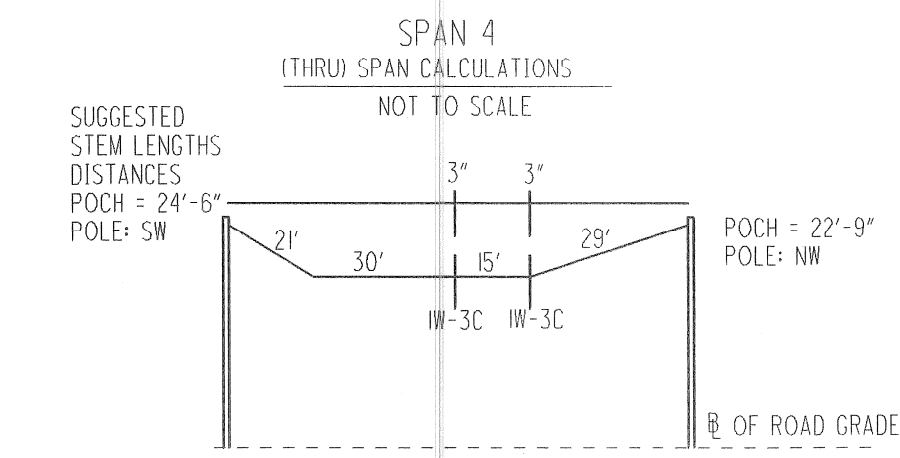
NOTE: POCH (POLE CONTACT HEIGHT) IS SHOWN ABOVE R. GRADE. FIELD ADJUSTMENTS ARE TO BE MADE FOR ANY DIFFERENCE IN GRADE AT POLE VS. ROAD GRADE. POCH IS CALCULATED AT 1200 POUNDS TENSION.



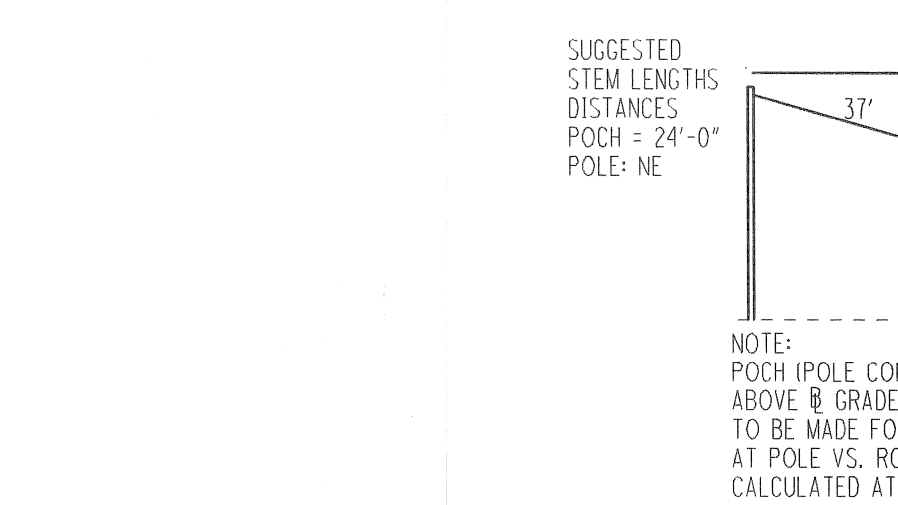
NOTE: POCH (POLE CONTACT HEIGHT) IS SHOWN ABOVE R. GRADE. FIELD ADJUSTMENTS ARE TO BE MADE FOR ANY DIFFERENCE IN GRADE AT POLE VS. ROAD GRADE. POCH IS CALCULATED AT 1200 POUNDS TENSION.



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LIST OF MATERIAL				
NO.	ITEM DESCRIPTION	QTY.	UNITS	ITEM CODE
①	Hh, Round	2	Ea	8190260
②	Case Sign (LED), Two Way, 24 inch by 30 inch	2	Ea	8200022
③	Controller and Cabinet, Solid State Actuated	1	Ea	8200035
④	Controller and Cabinet, Solid State Actuated, Delivered	1	Ea	8200036
⑤	Controller Fdn, Base Mount	1	Ea	8200045
⑥	Pedestal, Alum	2	Ea	8200100
⑦	Pedestal, Fdn	2	Ea	8200105
⑧	Power Co. (Est. Cost to Contractor)	500	Dir	8200115
⑨	Pushbutton and Sign	2	Ea	8200121
⑩	Serv Disconnect	1	Ea	8200135
⑪	Span Wire	5	Ea	8200140
⑫	Strain Pole Fdn, Cased	60	Ft	8200150
⑬	Strain Pole, Steel, Anchor Base, 30 foot	5	Ea	8200155
⑭	TS, One Way Span Wire Mtd (LED)	8	Ea	8200313
⑮	TS, Two Way Span Wire Mtd (LED)	2	Ea	8200322
⑯	TS, Pedestrian, One Way Bracket Arm Mtd (LED)	1	Ea	8200337
⑰	TS, Pedestrian, One Way Pedestal Mtd (LED)	1	Ea	8200344
⑱	TS, Pedestrian, Two Way Pedestal Mtd (LED)	1	Ea	8200346
⑲	Bracket, Truss, With 18 Foot Arm	2	Ea	8200378
⑳	Video Traffic Detection System	1	Ea	8200380
㉑	Video Traffic Detection Camera	3	Ea	8200381
	Splice Box	5	Ea	8200408
	Conduit, DB, 1, 1/2 inch	12	Ft	8190027
	Conduit, DB, 1, 3 inch	223	Ft	8190029
	Conduit, DB, 2, 3 inch	6	Ft	8190032
	Conduit, DB, 3, 3 inch	6	Ft	8190035
	Exploratory Trenching for Signal Cable	50	Ft	8200060

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	ACT	JMH	7/18/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
4	7-17-08	DAR	RE-SUBMITTAL TO MDOT				

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION

DIX/SCHAEFER  
SIGNAL IMPROVEMENTS (WAYNE COUNTY)  
SIGNAL PLAN

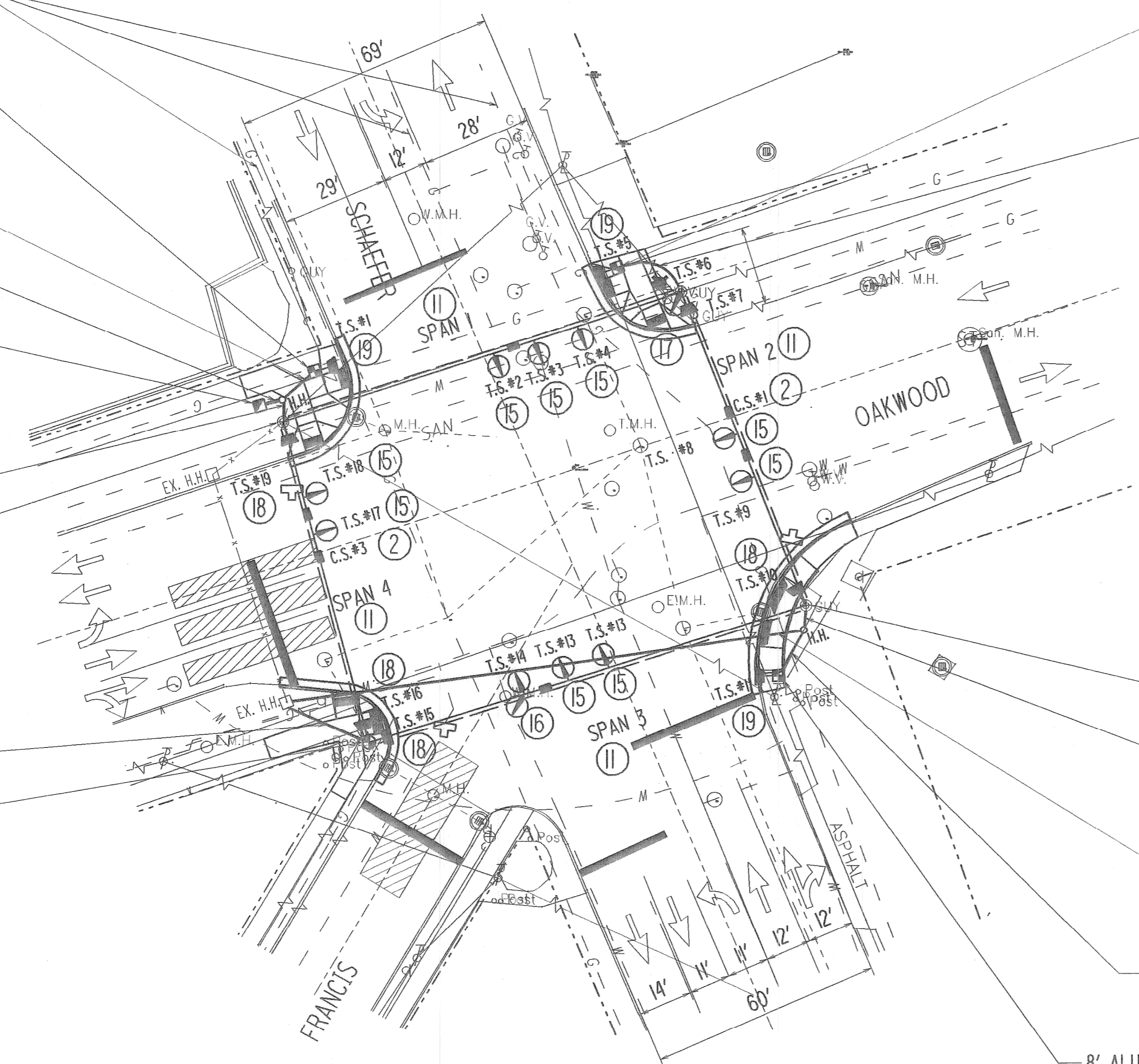
PLANS PREPARED BY: **Mannik & Smith**  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT: \_\_\_\_\_  
SCALE: 1"=30'  
SHEET NO.: 22



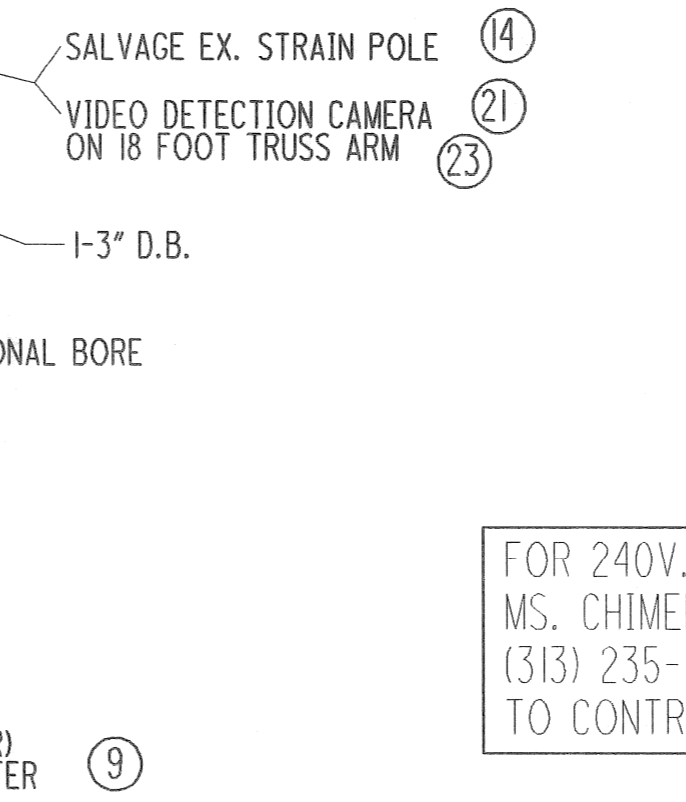
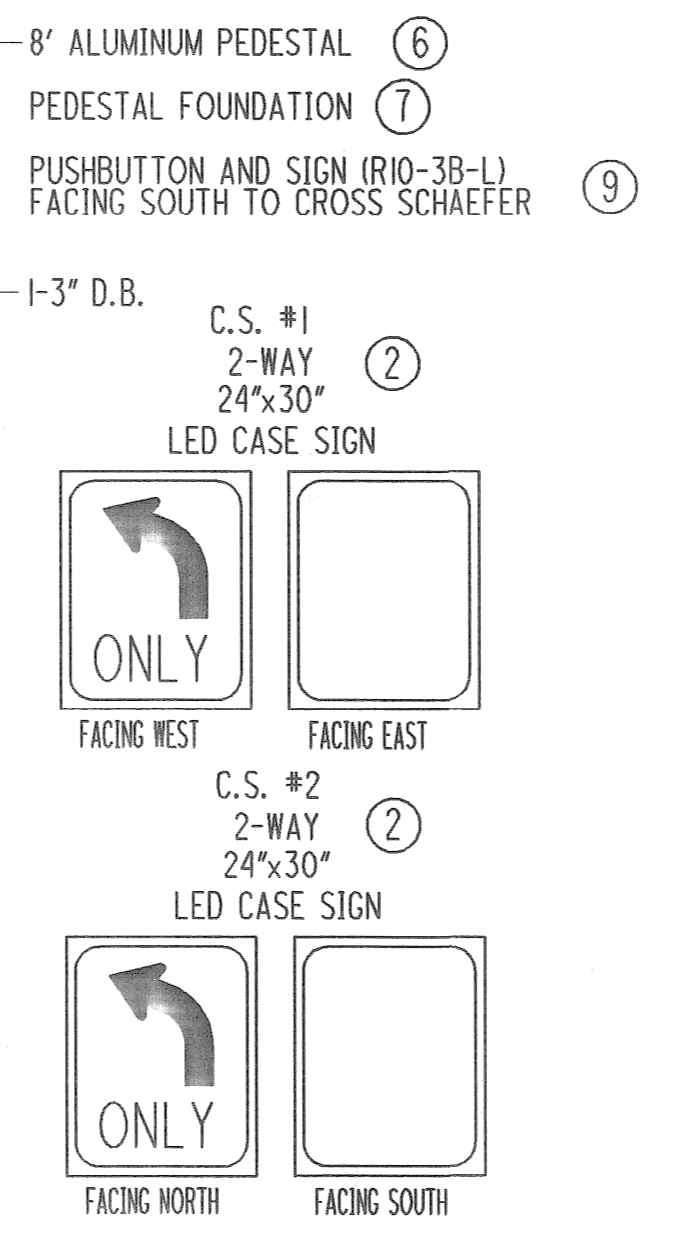
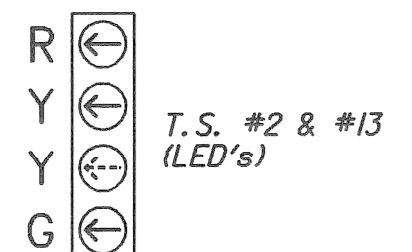
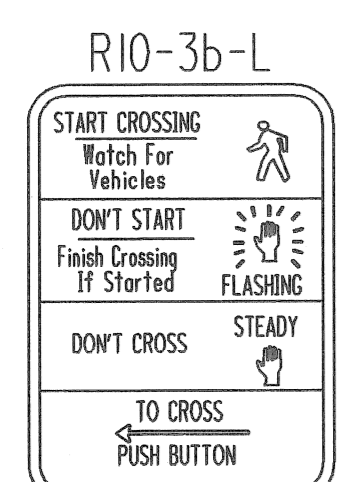
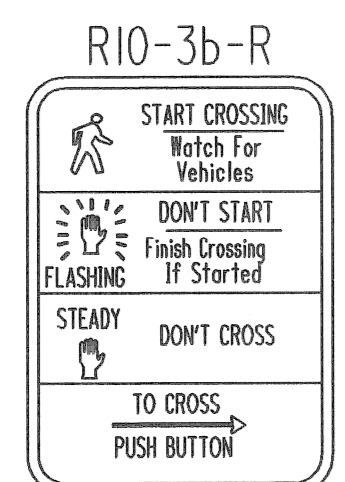
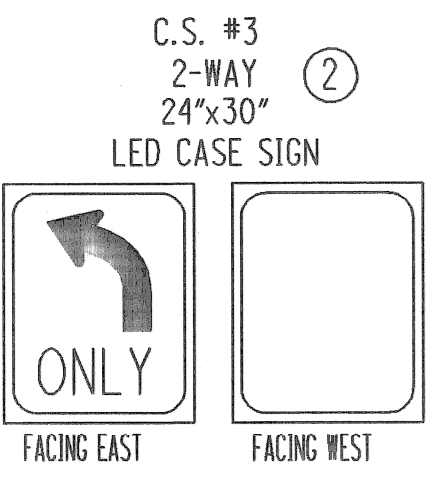
CAUTION: HAZARDOUS AND/OR FLAMMABLE MATERIAL

- ⑥ 8' ALUMINUM PEDESTAL
- ⑦ PEDESTAL FOUNDATION
- ⑨ PUSHBUTTON AND SIGN (R10-3B-R) FACING SOUTH TO CROSS SCHAEFER
- 1-3" D.B.
- 3-3" D.B. AND 1-1/2" D.B.
- ③ ④ CONTROLLER & CABINET
- ⑤ CONTROLLER & CABINET FOUNDATION
- ②② VIDEO DETECTION SYSTEM
- 2-3" D.B. AND 1-1/2" D.B.
- ②① VIDEO DETECTION CAMERA ON 18 FOOT TRUSS ARM
- ②③ VIDEO DETECTION CAMERA ON 18 FOOT TRUSS ARM
- 1-3" D.B.
- ⑬ 30" ANCHOR BASE STEEL STRAIN POLE
- ⑫ STRAIN POLE FOUNDATION
- ⑧ PUSHBUTTON AND SIGN (R10-3B-L) FACING NORTH TO CROSS SCHAEFER
- ②① VIDEO DETECTION CAMERA ON 18 FOOT TRUSS ARM



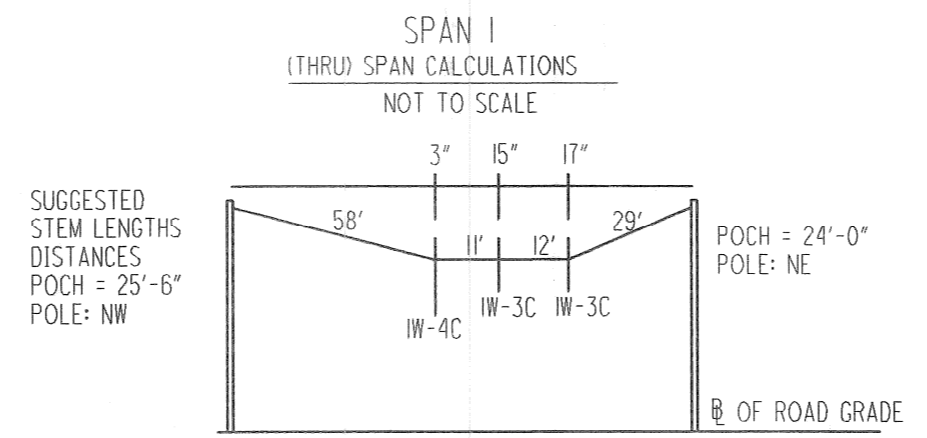
PLAN  
1" = 30'

VIDEO DETECTION ZONE, EXACT LOCATION, SIZE, AND/OR ORIENTATION TO BE APPROVED IN THE FIELD BY THE W.C.D.P.S. FIELD ENGINEER

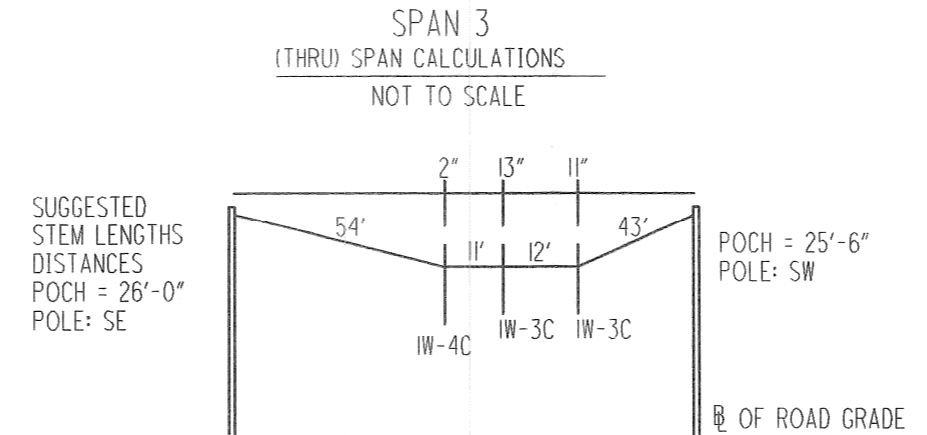


NOTES RELATED TO RE-USE OF EXISTING STRAIN POLES

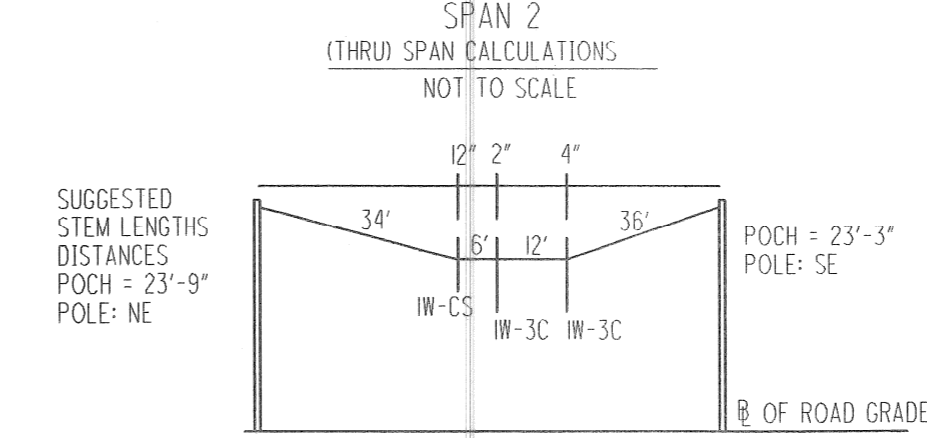
- THE CONTRACTOR SHALL IMPLEMENT TEMPORARY ANCHOR GUYS PER MDOT ST-24 AS NECESSARY TO BRACE EXISTING STRAIN POLES THROUGHOUT CONSTRUCTION ACTIVITIES INVOLVING ANY PROPOSED SIGNAL LOADING IN COMBINATION WITH EXISTING.
- THE CONTRACTOR SHALL ASSURE ALL TEMPORARY ANCHOR GUYS REMAIN WITHIN EXISTING ROW AND DO NOT IMPEDE INTERSECTION ACCESSIBILITY FOR PEDESTRIANS UNLESS ACCEPTABLE PEDESTRIAN DETOURS ARE ESTABLISHED AS APPROVED BY W.C.D.P.S.
- THE EXISTING SIGNAL SPAN SHALL ONLY BE REMOVED IF THE NEW SIGNAL IS PREPARED FOR ACTIVATION OR OTHER METHODS OF TEMPORARY SIGNALIZATION ARE ESTABLISHED AS APPROVED BY W.C.D.P.S.



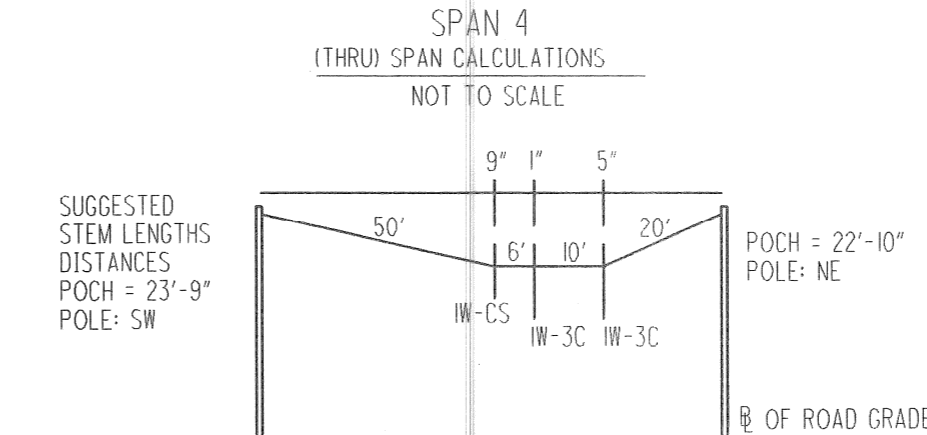
NOTE: POCH (POLE CONTACT HEIGHT) IS SHOWN ABOVE B GRADE. FIELD ADJUSTMENTS ARE TO BE MADE FOR ANY DIFFERENCE IN GRADE AT POLE VS. ROAD GRADE. POCH IS CALCULATED AT 1200 POUNDS TENSION.



NOTE: POCH (POLE CONTACT HEIGHT) IS SHOWN ABOVE B GRADE. FIELD ADJUSTMENTS ARE TO BE MADE FOR ANY DIFFERENCE IN GRADE AT POLE VS. ROAD GRADE. POCH IS CALCULATED AT 1200 POUNDS TENSION.



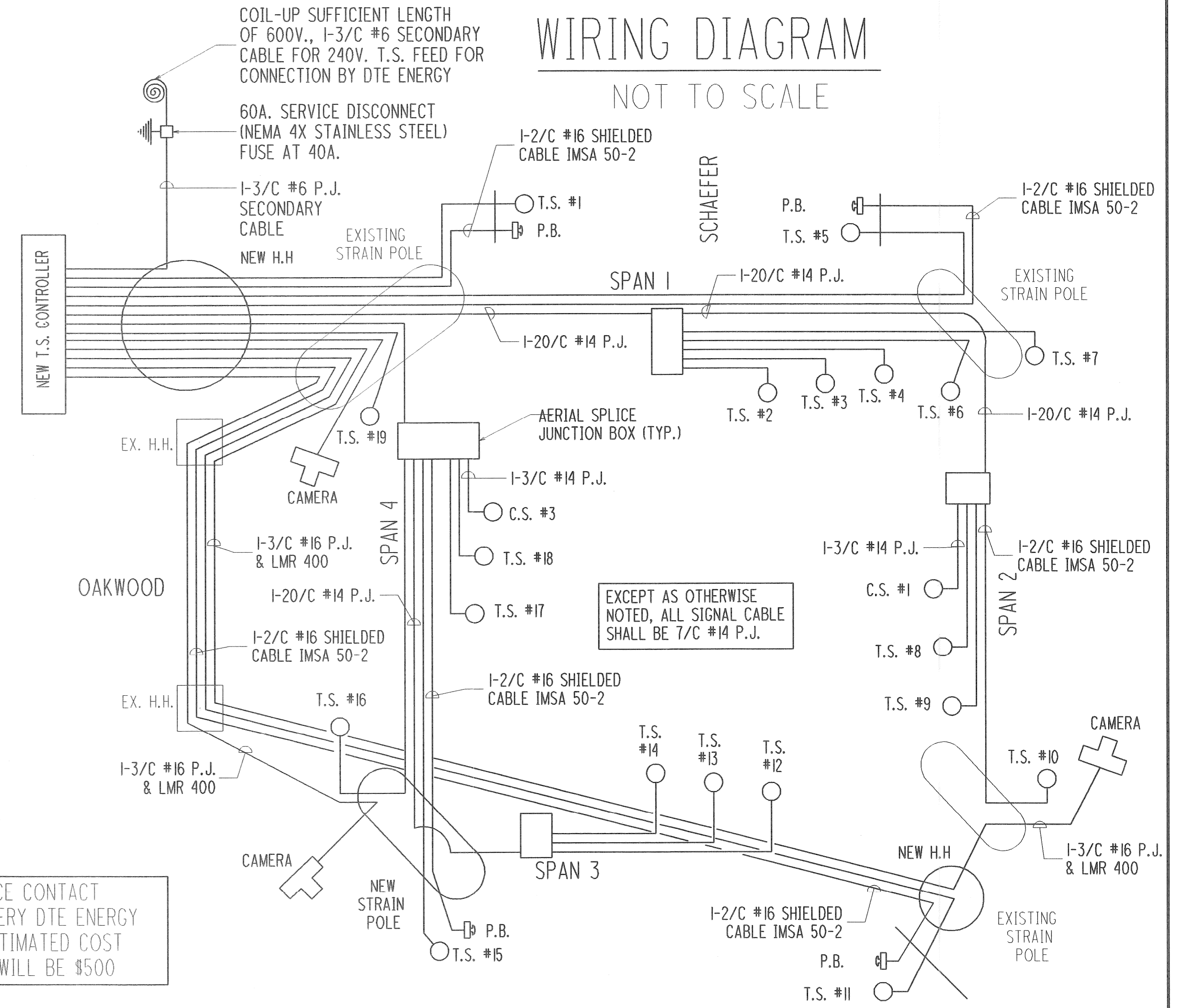
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WIRING DIAGRAM

NOT TO SCALE



FOR 240V. SERVICE CONTACT MS. CHIMERE LOWERY DTE ENERGY (313) 235-1817. ESTIMATED COST TO CONTRACTOR WILL BE \$500

CONTACT MR. MIKE WISNIEWSKI (W.C.D.P.S.) (734) 955-3277 48 HOURS PRIOR TO ANY WORK AND FOR INSPECTION OF TRAFFIC SIGNALS.

CONTRACTOR SHALL INSTALL 2-3" AND 1-1/2" SWEEPS INTO ALL NEW ANCHOR BASE STEEL STRAIN POLE FOUNDATIONS. ALL UNUSED SWEEPS SHALL BE PLUGGED.

LIST OF MATERIAL

NO.	ITEM DESCRIPTION	QTY.	UNITS	ITEM CODE
①	Hh. Round	2	Ea	8190260
②	Case Sign (LED), Two Way, 24 inch by 30 inch	2	Ea	820022
③	Controller and Cabinet, Solid State Actuated	1	Ea	8200035
④	Controller and Cabinet, Solid State Actuated, Delivered	1	Ea	8200036
⑤	Controller Fdn, Base Mount	1	Ea	8200045
⑥	Pedestal, Fdn	4	Ea	8200100
⑦	Pedestal, Fdn	4	Ea	8200105
⑧	Power Co. (Est. Cost to Contractor)	500	Dlr	8200115
⑨	Pushbutton and Sign	4	Ea	8200121
⑩	Serv Disconnect	1	Ea	8200135
⑪	Span Wire	4	Ea	8200140
⑫	Strain Pole Fdn, Cased	12	Ft	8200150
⑬	Strain Pole Steel, Anchor Base, 30 foot	1	Ea	8200155
⑭	Strain Pole, Steel, Ancho Base, 30 foot, Salv	3	Ea	8200156
⑮	TS, One Way Span Wire Mtd (LED)	9	Ea	8200313
⑯	TS, Two Way Span Wire Mtd (LED)	1	Ea	8200322
⑰	TS, One Way Bracket Arm Mtd (LED)	1	Ea	8200333
⑱	TS, Pedestrian, One Way Bracket Arm Mtd (LED)	5	Ea	8200337
⑲	TS, Pedestrian, One Way Pedestal Mtd (LED)	3	Ea	8200344
⑳	TS, Pedestrian, Two Way Pedestal Mtd (LED)	1	Ea	8200346
㉑	Bracket, Truss, With 18 Foot Arm	3	Ea	8200378
㉒	Video Traffic Detection System	1	Ea	8200380
㉓	Video Traffic Detection Camera	3	Ea	8200381
	Splice Box	4	Ea	8200408
	Conduit, DB, 1, 1/2 inch	11	Ft	8190027
	Conduit, DB, 1, 3 inch	42	Ft	8190029
	Conduit, DB, 2, 3 inch	6	Ft	8190032
	Conduit, DB, 3, 3 inch	6	Ft	8190035
	Conduit, Directional Bore, 1, 3 inch	137	Ft	8190602
	Exploratory Trenching for Signal Cable	50	Ft	8200060

7/18/2008  
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NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	ACT	JMH	7/18/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
4	7-17-08	DAR	RE-SUBMITTAL TO MDOT				DIVISION DESIGN ENGINEER

WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES  
ENGINEERING DIVISION

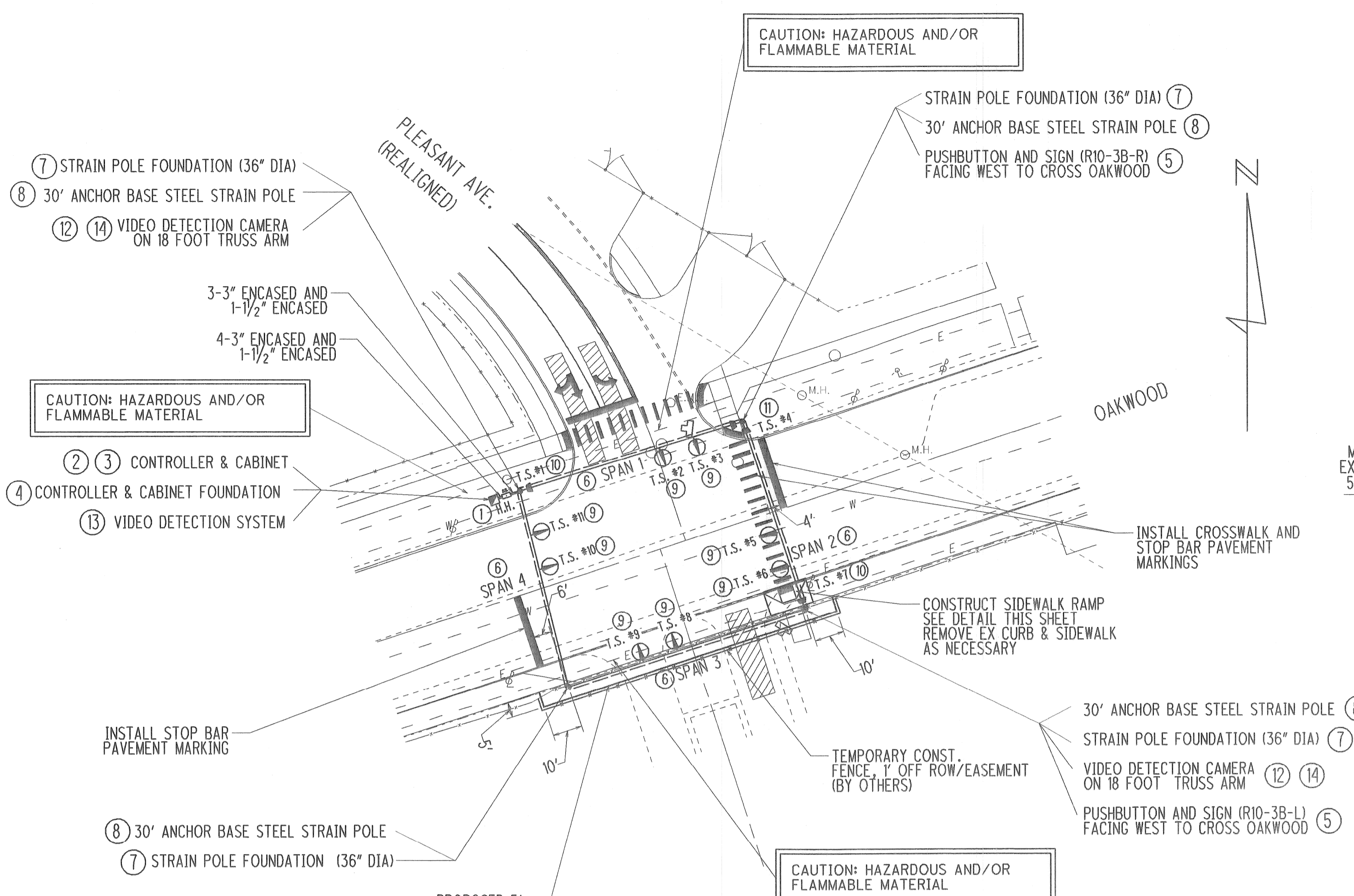
SCHAEFER/OAKWOOD  
SIGNAL IMPROVEMENTS (WAYNE COUNTY)  
SIGNAL PLAN

PLANS PREPARED BY: **Mannik & Smith**  
Civil Engineering, Surveying and Environmental Consulting  
ISSUE NO. \_\_\_\_\_  
DATE \_\_\_\_\_

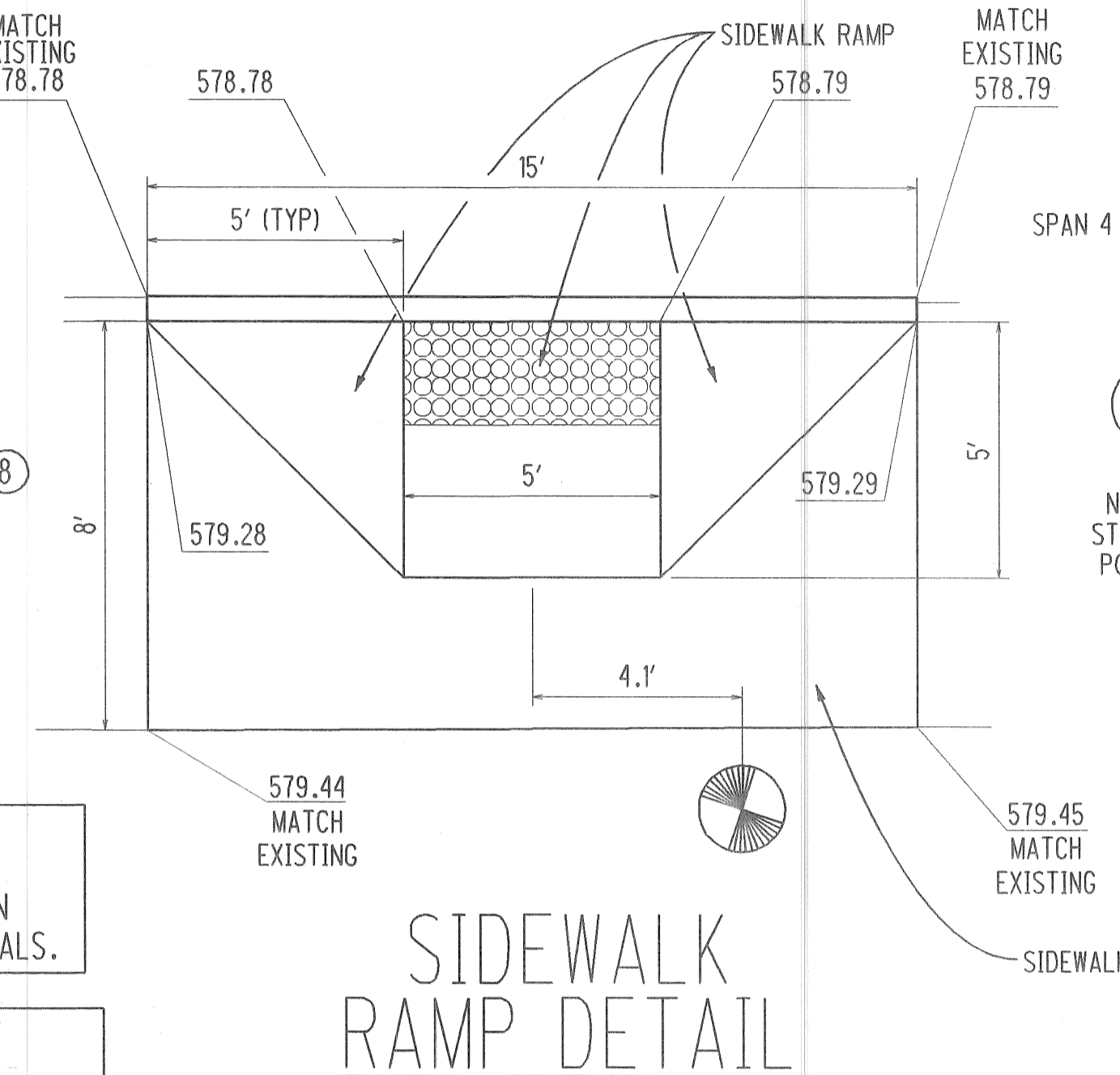
COUNTY PROJECT \_\_\_\_\_  
SCALE 1"=30'  
SHEET NO. 23



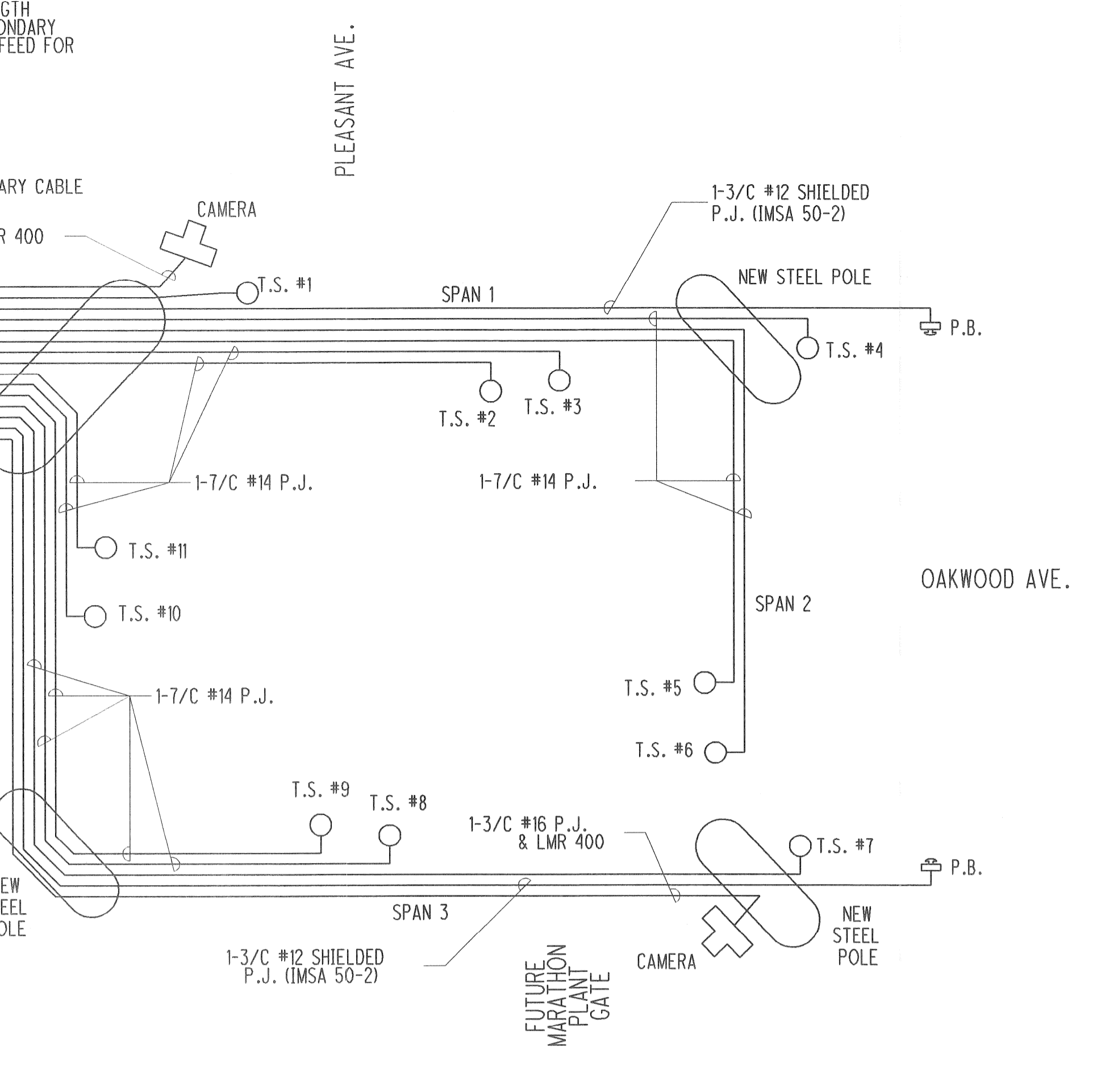
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PLAN  
1" = 30'



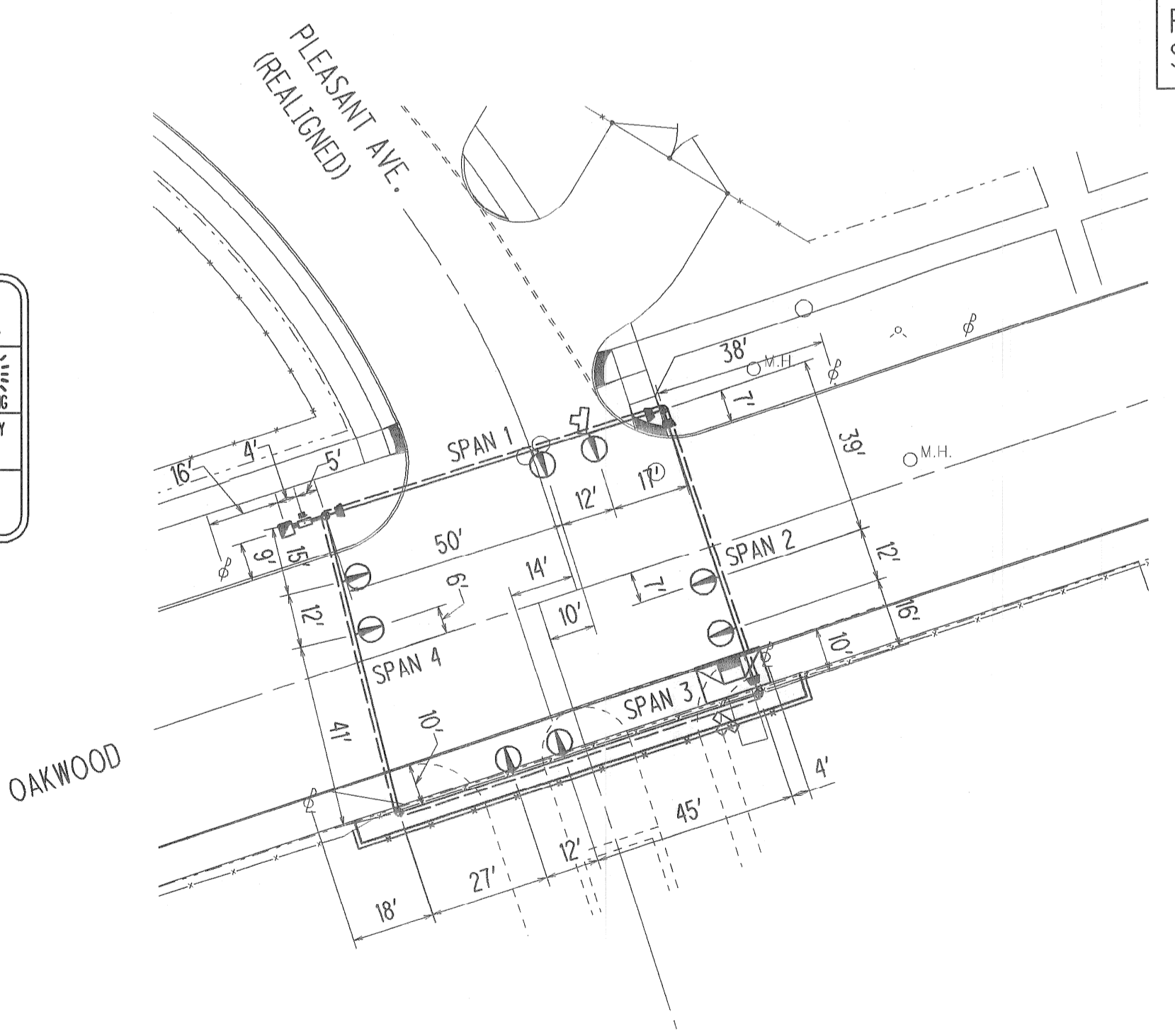
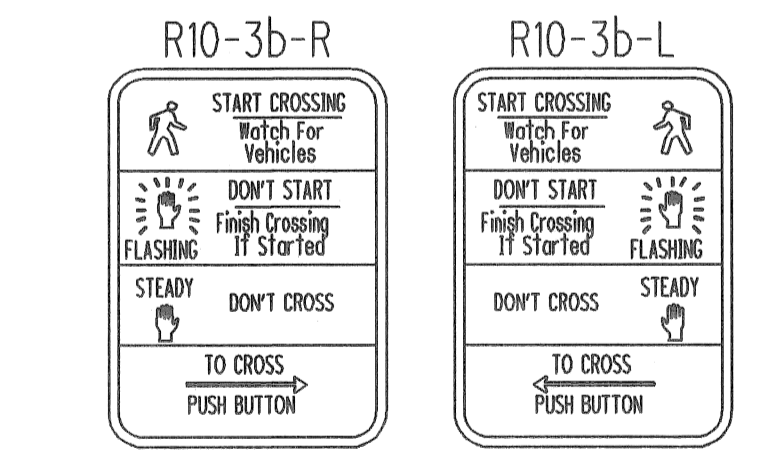
SIDEWALK RAMP DETAIL



WIRING DIAGRAM  
NOT TO SCALE

LIST OF MATERIAL				
NO.	ITEM DESCRIPTION	QTY.	UNITS	ITEM CODE
1	Hh, S-Type	1	Ea	8197050
2	Controller and Cabinet, Solid State Actuated	1	Ea	8200035
3	Controller and Cabinet, Solid State Actuated, Delivered	1	Ea	8200036
4	Controller Fdn, Base Mount	1	Ea	8200045
5	Pushbutton and Sign	2	Ea	8200121
6	Span Wire	4	Ea	8200140
7	Strain Pole Fdn, Cased	48	Ft	8200150
8	Strain Pole, Steel, Anchor Base, 30 foot	4	Ea	8200155
9	TS, One Way Span Wire Mtd (LED)	8	Ea	8200313
10	TS, Pedestrian, One Way Bracket Arm Mtd (LED)	2	Ea	8200337
11	TS, Pedestrian, Two Way Bracket Arm Mtd (LED)	1	Ea	8200338
12	Bracket, Truss, With 18 Foot Arm	2	Ea	8200378
13	Video Traffic Detection System	1	Ea	8200380
14	Video Traffic Detection Camera	2	Ea	8200381
*	Conduit, Encased, 1, 1/2 inch	10	Ft	8197001
*	Conduit, Encased, 3, 3 inch	5	Ft	8190060
*	Conduit, Encased, 4, 3 inch	5	Ft	8190061
*	Exploratory Trenching for Signal Cable	30	Ft	8200060
*	Curb, Rem	15	Ft	2040005
*	Sidewalk, Rem	20	Syd	2040013
*	Hand Patching	1	Ton	5020025
*	Curb, Conc, Det E1	15	Ft	8020001
*	Sidewalk Ramp, ADA, 6 inch, Modified	50	Sft	8037010
*	Misc Sidewalk, Conc, 4 inch	69	Sft	8037010
*	24 inch x 60 inch Detectable Warning Surface Tiles, Modified	1	Ea	8257050
*	Pavt Mrkg, Ovly Cold Plastic, 12 Crosswalk	78	Ft	8110036
*	Pavt Mrkg, Ovly Cold Plastic, 24 inch Stop Bar	48	Ft	8110040

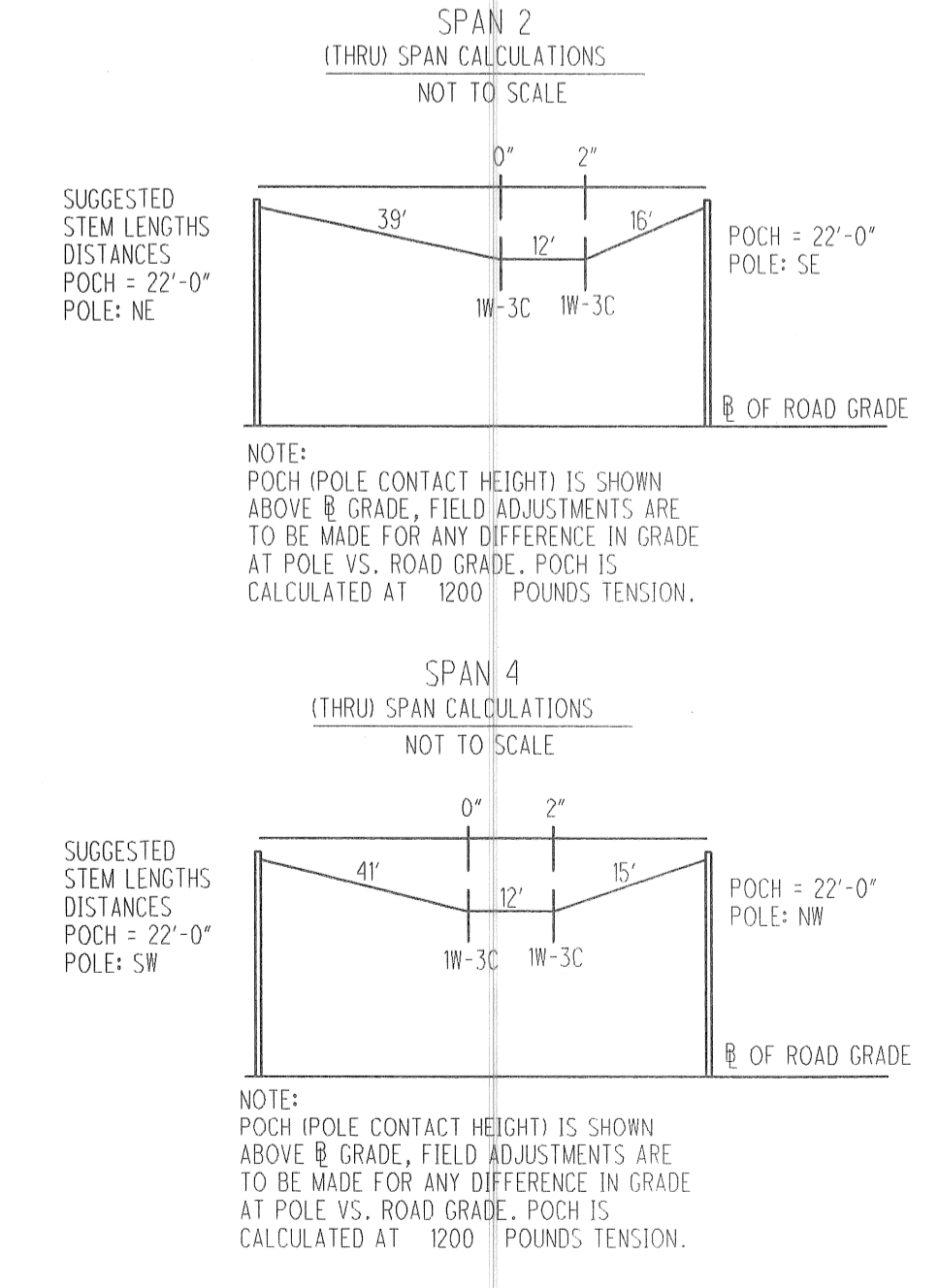
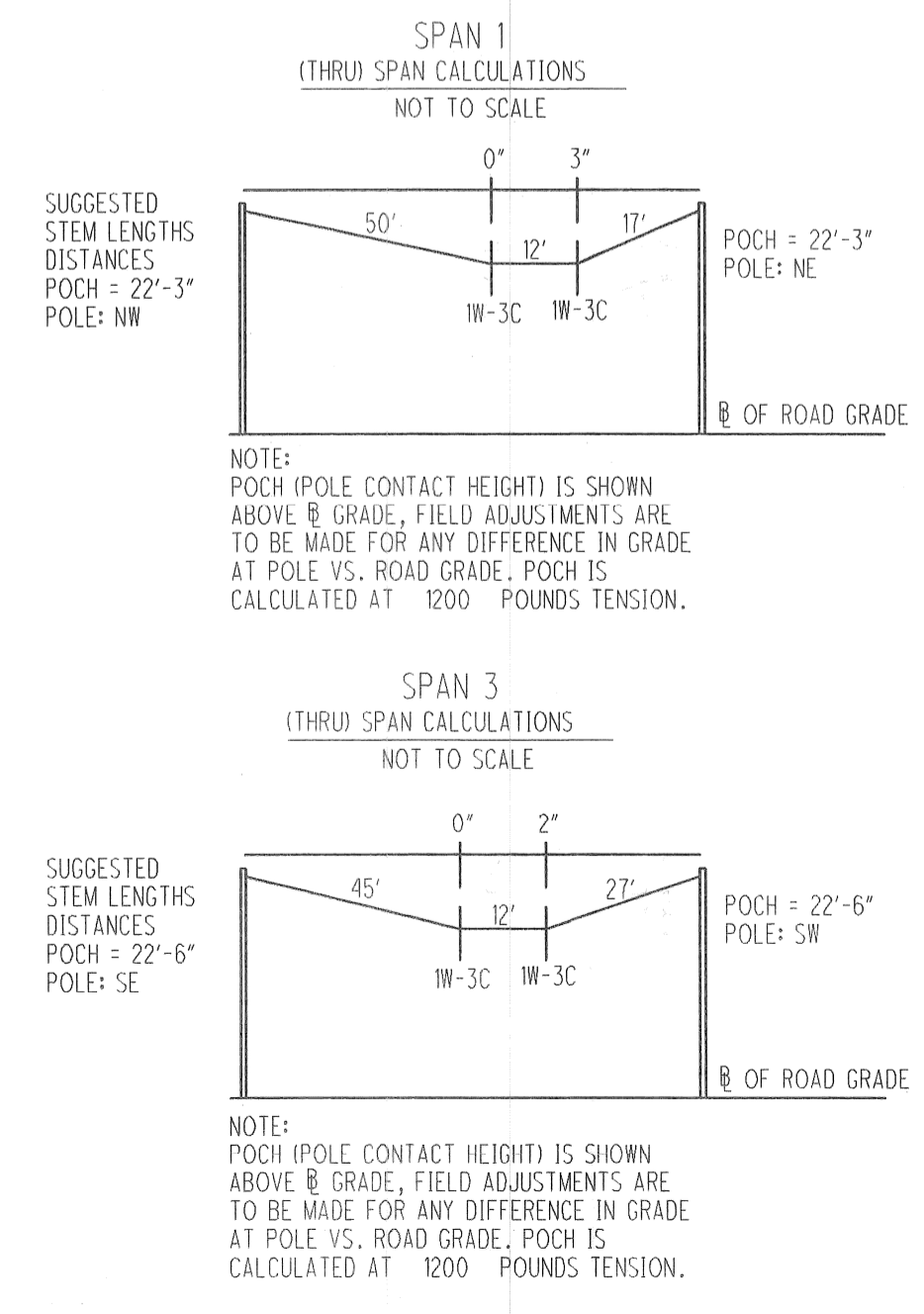
\* MODIFICATIONS TO PAY ITEMS/QUANTITIES  
NOTE: PAY ITEMS FOR Power Co. (Est Cost to Contractor) & Serv Disconnect HAVE BEEN REMOVED FROM LIST



DIMENSION PLAN

CONTACT MS. CAROLYN DAVIS (PLD) (313) 267-7270 48 HOURS PRIOR TO INSTALLATION FOR INSPECTION OF TRAFFIC SIGNALS.

CONTRACTOR SHALL INSTALL 3-3" AND 1-1/2" SWEEPS INTO ALL NEW ANCHOR BASE STEEL STRAIN POLE FOUNDATIONS. ALL UNUSED SWEEPS SHALL BE PLUGGED.



NO.	DATE	BY	DESCRIPTION
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT
4	9-23-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
5	10-01-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
6	12-22-08	DAR	RE-SUBMITTAL TO CITY OF DETROIT
7	04-06-09	SJE	RE-SUBMITTAL TO CITY OF DETROIT

DRAWN BY	CHECKED BY	DATE	STATUS
ACT	JMH	4/10/2009	CORRECT
CORRECT			APPROVED

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

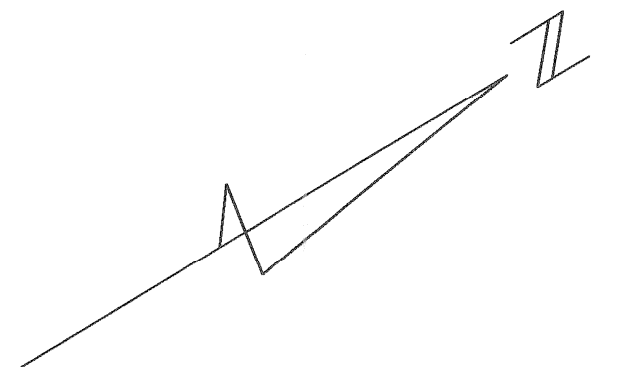
ASSISTANT DIVISION DESIGN ENGINEER  
DIVISION DESIGN ENGINEER

**PLEASANT / OAKWOOD**  
**SIGNAL IMPROVEMENTS (CITY OF DETROIT)**  
**SIGNAL PLAN**

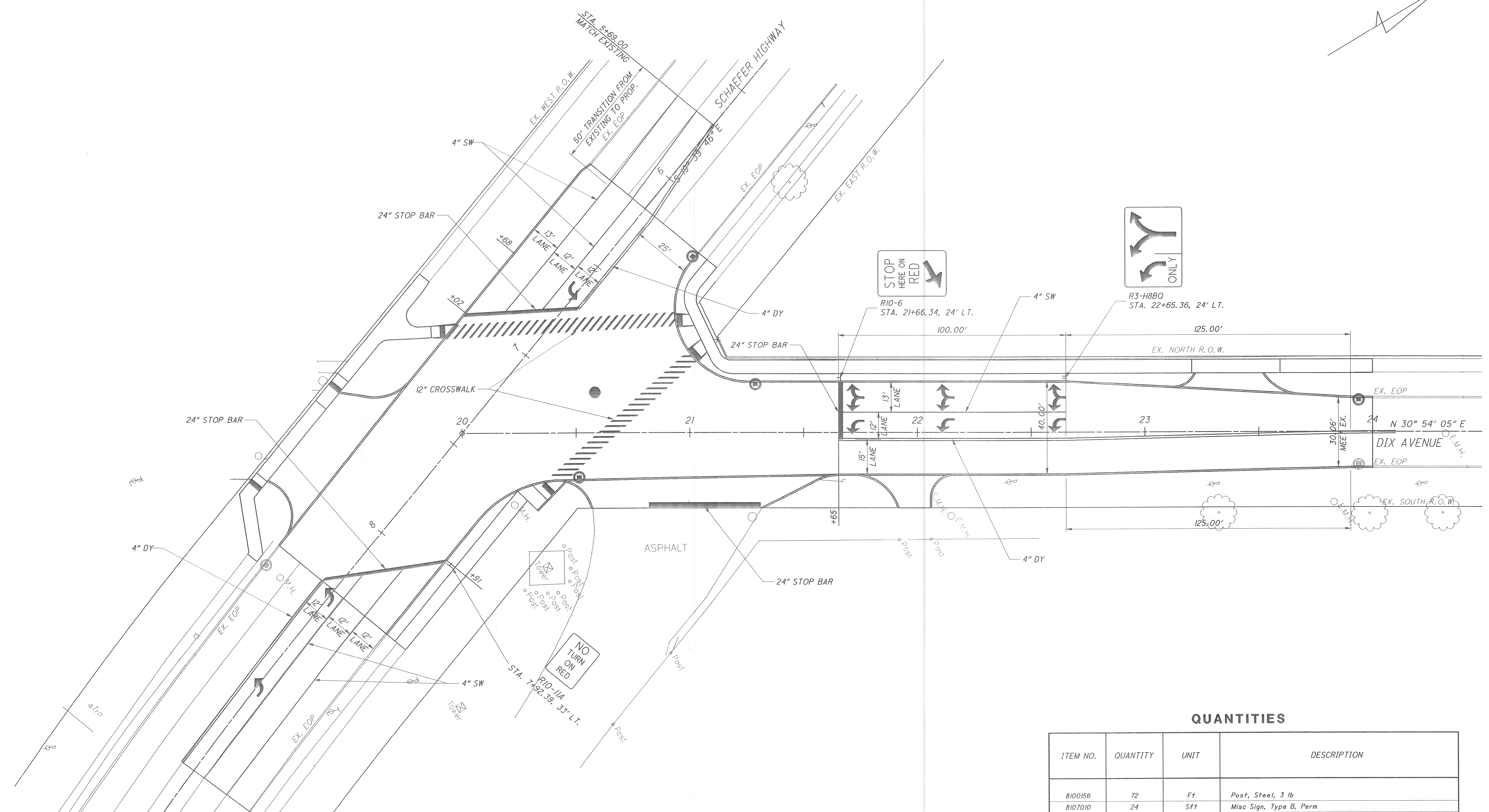
PLANS PREPARED BY:  
**Mannik & Smith**  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT: \_\_\_\_\_ SCALE: 1"=30'  
SHEET NO.: 24  
ISSUE NO.: \_\_\_\_\_  
DATE: \_\_\_\_\_





W:\Projects\Projects K-O\M2070004\CAD\25\_M2070004\_I\_TC01.dgn 7/8/2008



NOTE:  
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST MDOT PAVEMENT MARKING STANDARD PLANS AND SPECIAL DETAILS, AND MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2003.

CONTRACTOR TO CONTACT WAYNE COUNTY TRAFFIC DEPARTMENT PRIOR TO ANY PAVEMENT MARKING WORK.

**QUANTITIES**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
8100156	72	Ft	Post, Steel, 3 lb
8107010	24	Sft	Misc Sign, Type B, Perm
8110025	572	Ft	Pavt Mrkg, Ovly Cold Plastic, 4 Inch, White
8110026	435	Ft	Pavt Mrkg, Ovly Cold Plastic, 4 Inch, Yellow
8110036	451	Ft	Pavt Mrkg, Ovly Cold Plastic, 12 Inch Crosswalk
8110040	178	Ft	Pavt Mrkg, Ovly Cold Plastic, 24 Inch Stop Bar
8110045	6	Ea	Pavt Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym
8110055	3	Ea	Pavt Mrkg, Ovly Cold Plastic, Rt Turn, Lt Turn Arrow Sym

NO.	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	CORRECT
1	4-23-08	DAR	INITIAL GI SUBMITTAL TO MDOT	MRS	TEW	7/8/2008	CORRECT
2	6-10-08	DAR	RE-SUBMITTAL TO MDOT				ASSISTANT DIVISION DESIGN ENGINEER
3	7-09-08	DAR	RE-SUBMITTAL TO MDOT				APPROVED
							DIVISION DESIGN ENGINEER

**WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES**  
**ENGINEERING DIVISION**

**DIX / SCHAEFER**  
**INTERSECTION IMPROVEMENTS**  
**STRIPING / TRAFFIC CONTROL**

PLANS PREPARED BY: **The Mannik & Smith Group, Inc.**  
Civil Engineering, Surveying and Environmental Consulting

COUNTY PROJECT: \_\_\_\_\_ SCALE: **1"=20'**  
SHEET NO.: **25**  
ISSUE NO.: \_\_\_\_\_  
DATE: \_\_\_\_\_