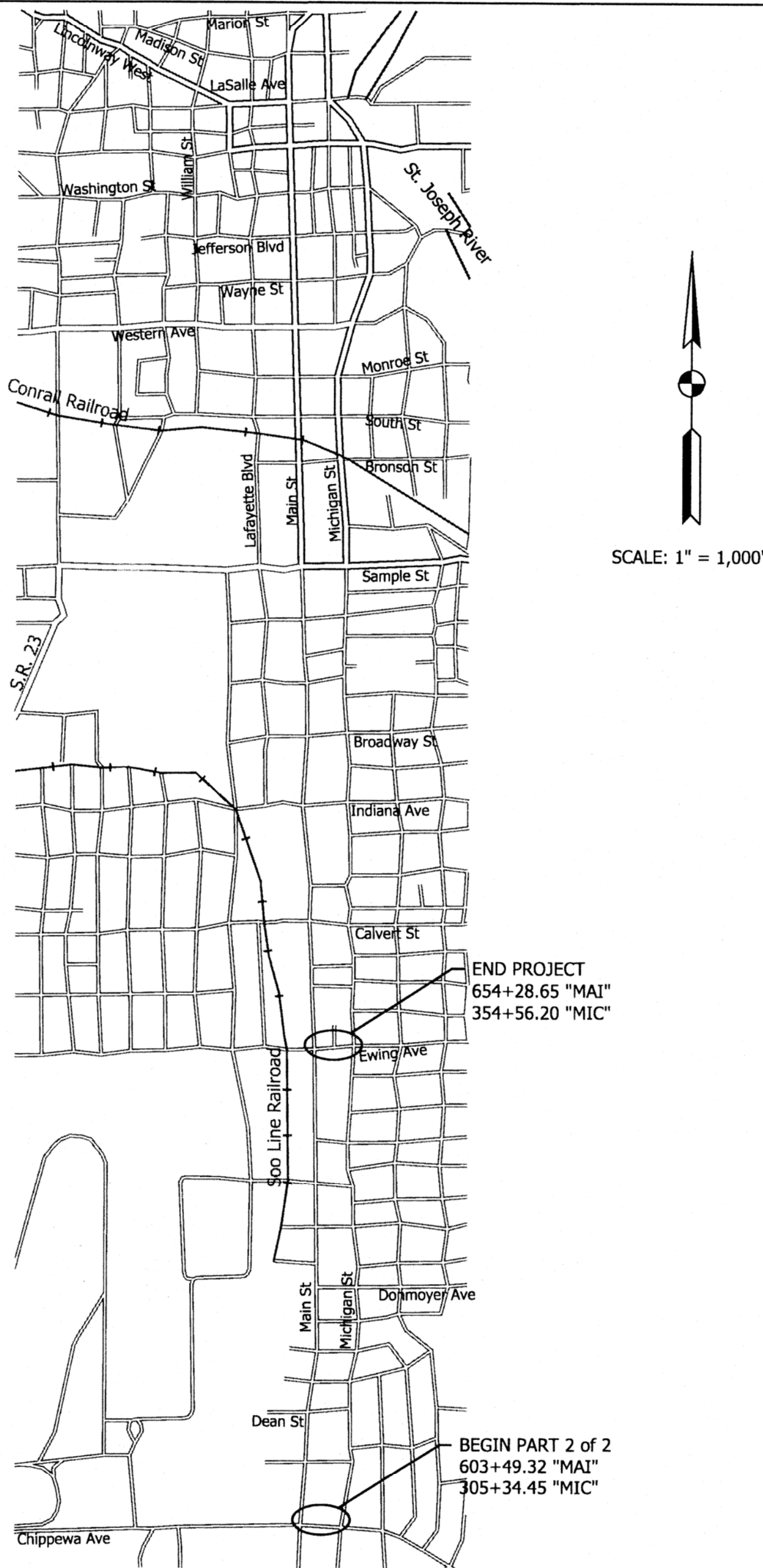


CITY OF SOUTH BEND, INDIANA

DEPARTMENT OF PUBLIC WORKS

PROJECT ☒ SEWER ☐ WATER ☒ TRAFFIC ☒ STREET ☐ OTHER

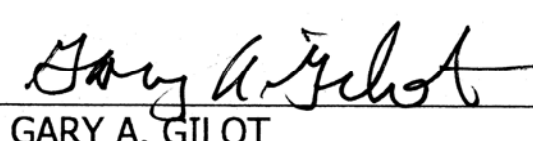
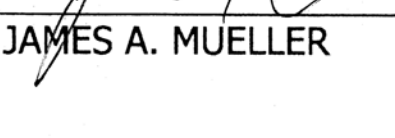
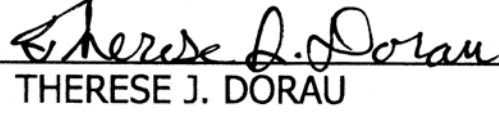


ONE-WAY TO TWO-WAY TRAFFIC CONVERSION OF MAIN & MICHIGAN STREETS

FROM CHIPPEWA AVENUE TO EWING AVENUE

CITY PROJECT NO. 115-019 (DIV. A)
(PART 2 OF 2)

APPROVED BY BOARD OF PUBLIC WORKS

DATE	12/22/15
	
GARY A. GILOT	PRESIDENT
	
DAVID P. REJOS	MEMBER
	
JAMES A. MUELLER	MEMBER
ELIZABETH A. MARADIK	MEMBER
	
THERESE J. DORAU	MEMBER

RECOMMENDATION OF CITY STAFF

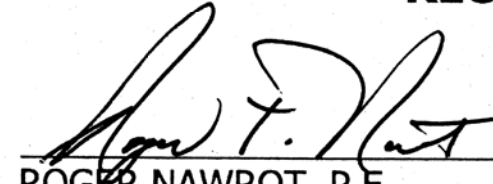
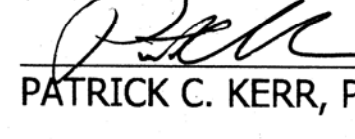
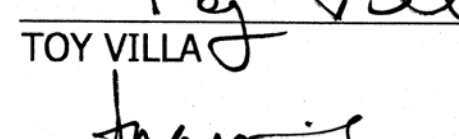
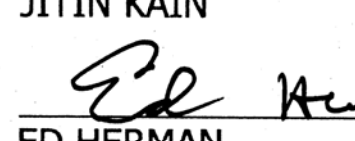
		DATE
		12/21/15
ROGER NAWROT, P.E.	ADMINISTRATION & DESIGN	
		12-21-15
PATRICK C. KERR, PH.D., P.E.	CITY ENGINEER	
		1-4-16
TOY VILLA	CONSTRUCTION	
		1-4-16
JITIN KAIN	COMMUNITY INVESTMENT	
		1/4/16
ED HERMAN	SOUTH BEND WATER WORKS	
		1-4-16
PETE KAMINSKI	STREET COMMISSIONER	

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SEE NEXT PAGE

STANDARD DRAWINGS

SEE PROJECT SPECIFICATIONS FOR CITY OF
SOUTH BEND AND 2016 INDIANA DEPARTMENT OF
TRANSPORTATION STANDARD DRAWINGS.

PLANS PREPARED FOR:

CITY OF SOUTH BEND, INDIANA
DEPARTMENT OF PUBLIC WORKS
227 W. JEFFERSON BLVD., SUITE 1300 N
SOUTH BEND, IN 46601



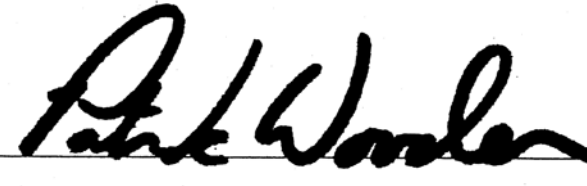
AMERICAN
STRUCTUREPOINT
INC.

7260 SHADELAND STATION
INDIANAPOLIS, IN 46256-3957
TEL 317.547.5580 FAX 317.543.0270
www.structurepoint.com



VS ENGINEERING, INC.

4275 North High School Road
Indianapolis, Indiana 46254
vse@vsengineering.com www.vsengineering.com
Phone: (317) 293-3642 Fax: (317) 293-4737

CERTIFIED BY: 
INDIANA
PROFESSIONAL ENGINEER No. 10504741

12/17/15
DATE



UTILITIES

ELECTRIC American Electric Power 2929 Lathrop Street South Bend, IN 46628 (574) 236-1651 Contact: Donna Irion	CABLE/TV Comcast North 1920 McKinley Avenue Mishawaka, IN 46545 (874) 789-1039 Contact: Jay Castello	GAS & PIPELINE NIPSCO 724 Hoham Dr. Plymouth, IN 46563 (574) 935-8124 Contact: Jim Bettin	Buckeye Pipe Line Company, LP Five Tek Park 9999 Hamilton Blvd. Breinigsville, PA 18031 (610) 904-4404 Contact: Linda Conrad
<u>TELEPHONE/COMMUNICATIONS</u>			
MCI/Verizon 730 W. Henry Street Indianapolis, IN 46625 (317) 685-8050 Contact: Chris Fowler	Level 3 Communications 1025 Eldorado Blvd. Broomfield, CO 80021 (720) 888-0336 Contact: Tim Boykin	CenturyLink 213 W. Laporte Street Plymouth, IN 46563 (574) 935-1247 Contact: Bruce Emerick	<u>SANITARY SEWER/WATER</u> City of South Bend-Sanitary 227 W. Jefferson Blvd. South Bend, IN 46601 (574) 235-9251 Contact: Tony Mulnar
Infinity Fiber, LLC 6561 Lonestarf Dr., Suite 100 South Bend, IN 46628 (574) 472-0751 Contact: Ralph Acito	Sprint 5600 N. River Road, Suite 300 Rosemont, IL 60018 (847) 318-3010 Contact: Gerry Crain	SBC (AT&T-Distribution) 307 S. Main Street South Bend, IN 46601 (574) 237-8380 Contact: Dennis Bunch	
Windstream Communications 3701 Communications Dr. Evansville, IN 47715 (618) 648-2420 Contact: Richard Cunico	Lightcore, A CenturyLink Co. 1151 Centurytel Dr., Bldg. A Wentzville, MO 63385 (636) 887-4752 Contact: Kirk Thoele	St. Joe Valley Metronet 121 S. Michigan Street South Bend, IN 46601 (574) 968-5353 Contact: Thoson Stranz	City of South Bend-Water 209 N. Main Street South Bend, IN 46601 (574) 235-5633 Contact: Ed Herman
Job 8, LLC 800 Woodlands Parkway Ridgeland, MS 39157 (601) 956-0861 Contact: David Barksdale	Zayo Bandwidth 5200 E. 64th Street Indianapolis, IN 46220 (765) 506-0933 Contact: Ken Arrrendale	RVP Fiber Company No Contact Info	

GENERAL NOTES	
---------------	--

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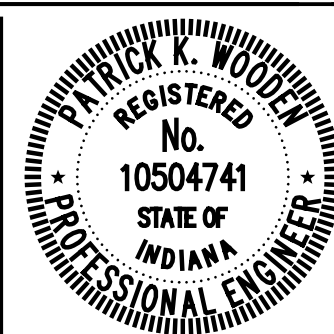
** REPRESENTS GENERAL NOTES REQUIRED

INDEX

[illegible]

REVISIONS

SHEET NO.	DATE	REVISED

RECOMMENDED
FOR APPROVAL

Patrick Warden 1/7/2016
DESIGN ENGINEER DATE

DESIGNED: MRR

CHECKED: PKW

CITY OF SOUTH BEND

INDEX AND GENERAL NOTES

HORIZONTAL SCALE

N/A

VERTICAL

VERTICAL SCALE

VERTICAL	
N/A	

SURVEY BOOK
N/A

CONTRACT

CONTRACT
N/A

BRIDGE FILE

N/A

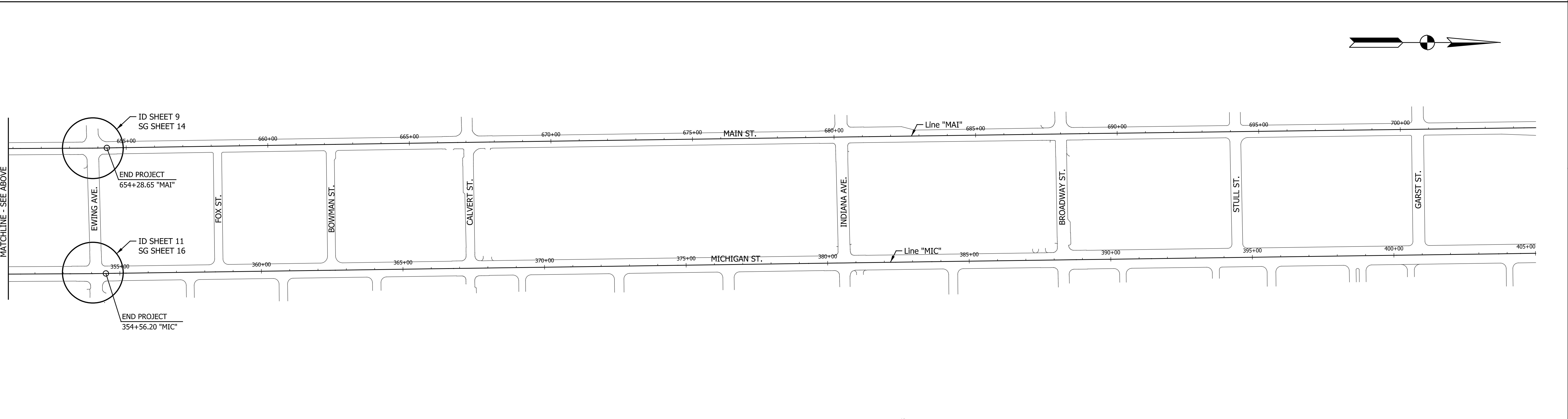
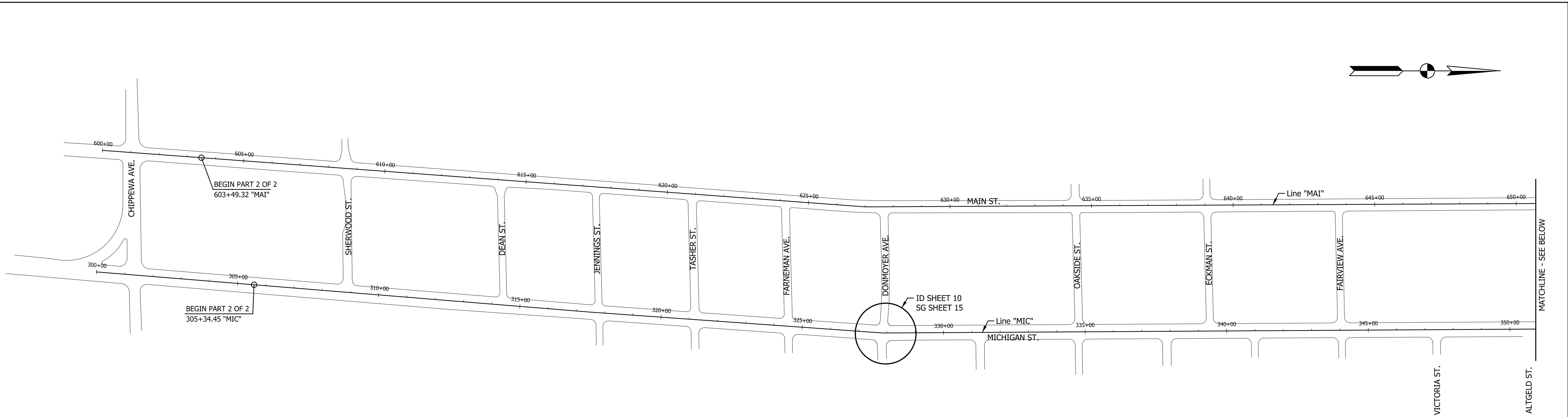
DESIGNATION

DESIGNATION
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SHEETS		
	of	

PROJECT	01	
---------	----	--

115-019 (RTV A)



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201601351_South Bend.dgn

LEGEND
SG - Signal Detail
ID - Intersection Detail



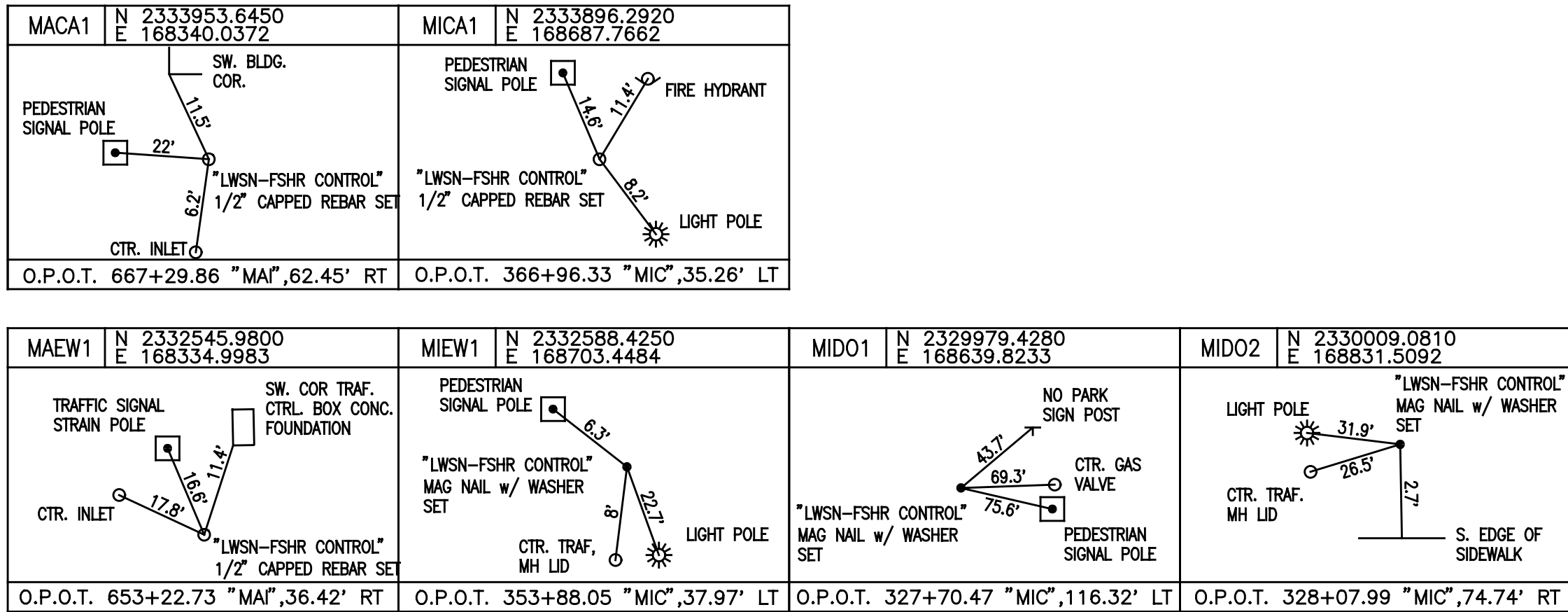
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DESIGNED:	MRR	DRAWN:	JRG	
CHECKED:	PKW	CHECKED:	PKW	

CITY OF SOUTH BEND

INDEX LOCATION MAP
INTERSECTION & SIGNAL DETAIL SHEETS

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	3 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

Info-ProJ.ctb
201401351_South.dwg



TBM 'MICA-A' ELEV. 743.70' (NAVD88)
CUT CIRCLE IN SW COR. OF CONC. BASE OF THE TRAFFIC SIGNAL CONTROL BOX
LOCATED IN THE NE QUAD. OF MICHIGAN ST. & CALVERT ST.
STA. 367+72.4 "MIC", 35.3' RT.

TBM 'MIDO-A' ELEV. 787.78' (NAVD88)
CUT CIRCLE IN SE COR. OF CONC. BASE OF THE TRAFFIC SIGNAL CONTROL BOX
LOCATED IN THE NE QUAD. OF MICHIGAN ST. & DONMOYER ST.
STA. 328+13.6 "MIC", 35.2' RT.

TBM 'MIEW-A' ELEV. 743.08' (NAVD88)
CUT CIRCLE IN SW COR. OF CONC. BASE OF THE TRAFFIC SIGNAL CONTROL BOX
LOCATED IN THE NE QUAD. OF MICHIGAN ST. & EWING ST.
STA. 354+54.0 "MIC", 34.7' RT

TBM 'MACA-A' ELEV. 742.75' (NAVD88)
CUT CIRCLE IN SW COR. OF CONC. BASE OF THE TRAFFIC SIGNAL CONTROL BOX
LOCATED IN THE NE QUAD. OF MAIN ST. & CALVERT ST.
STA. 667+39.0 "MAI", 39.1' RT.

TBM 'MAEW-A' ELEV. 747.00' (NAVD88)
CUT CIRCLE IN NW COR. OF CONC. BASE OF THE TRAFFIC SIGNAL CONTROL BOX
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STA. 653+37.8 "MAI", 40.2' RT.

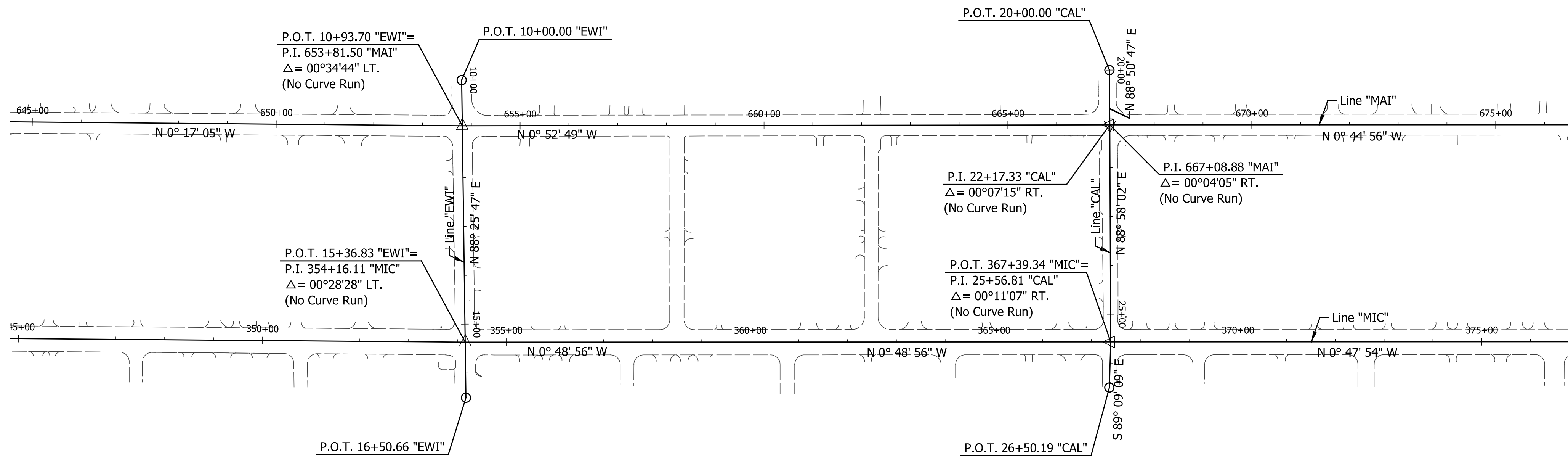
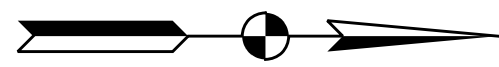
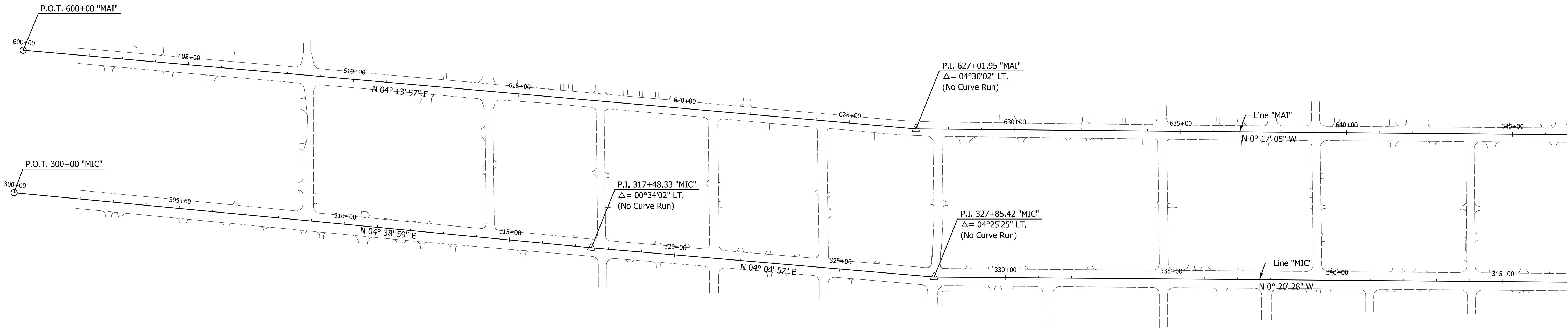
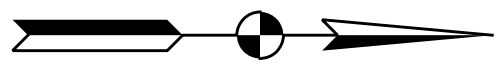


RECOMMENDED FOR APPROVAL		1/7/2016
	DESIGN ENGINEER	DATE
DESIGNED: _____	MRR	DRAWN: _____
		JRG
CHECKED: _____	PKW	CHECKED: _____
		PKW

CITY OF SOUTH BEND

WITNESSES AND BENCHMARKS

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	4 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)



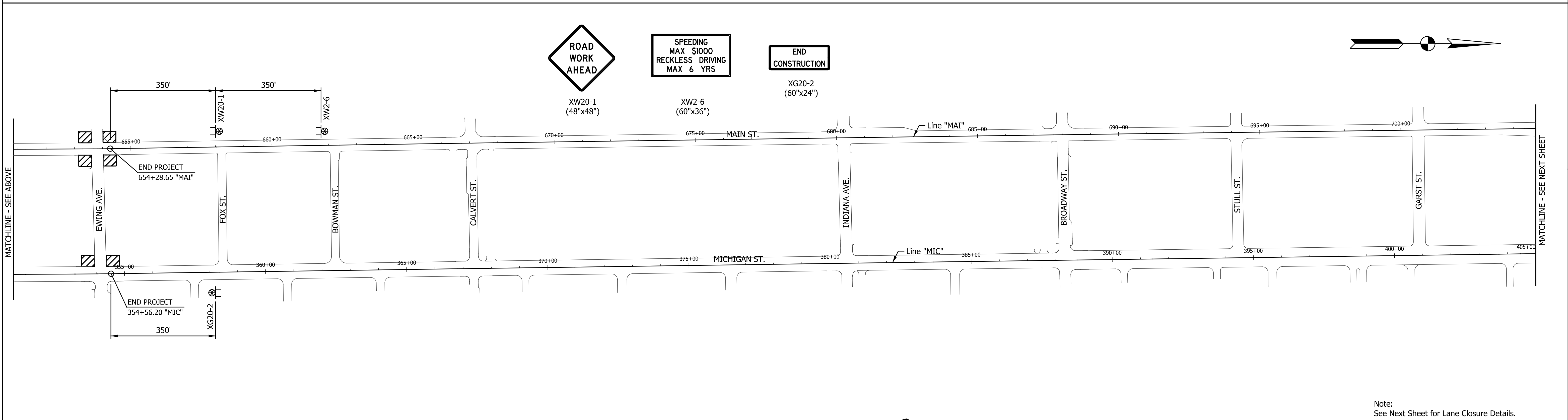
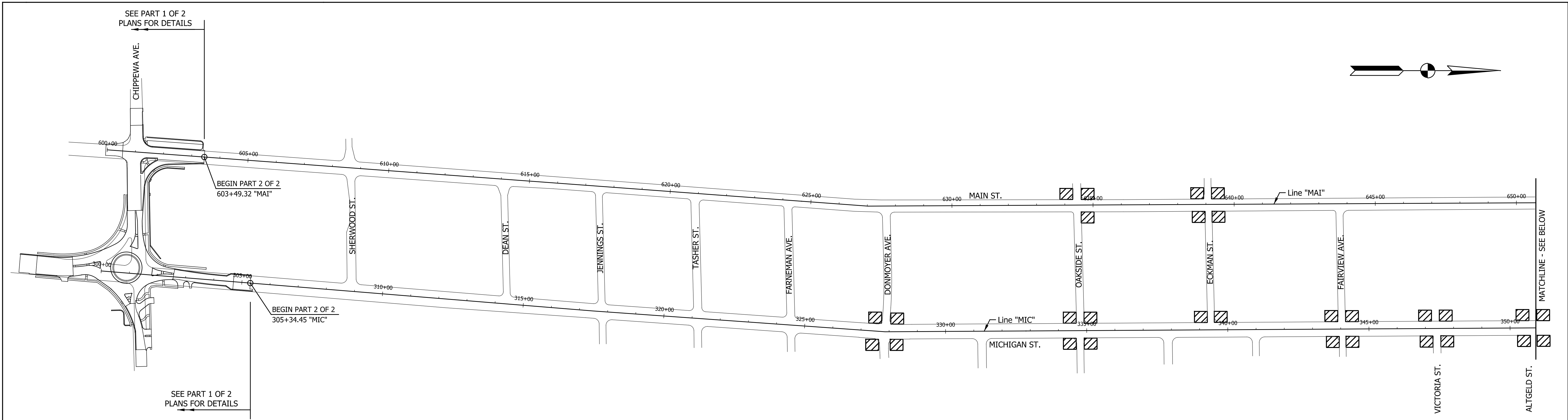
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201401351_South Bend



RECOMMENDED FOR APPROVAL	<i>Patrick Wooden</i>	1/7/2016
DESIGNED: MRR	DRAWN: JRG	DATE
CHECKED: PKW	CHECKED: PKW	

CITY OF SOUTH BEND
GEOMETRIC TIE-UP DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1" = 150'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	5 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)



Construction Area

REGISTERED
No.
10504741
STATE OF
INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL

Patrick K. Wooden

DESIGN ENGINEER

1/7/2016

DATE

DESIGNED: MRR

DRAWN: JRG

CHECKED: PKW

CHECKED: PKW

CITY OF SOUTH BEND

ADVANCE SIGNING LAYOUT

HORIZONTAL SCALE

N/A

VERTICAL SCALE

N/A

SURVEY BOOK

N/A

CONTRACT

N/A

BRIDGE FILE

N/A

DESIGNATION

N/A

SHEETS

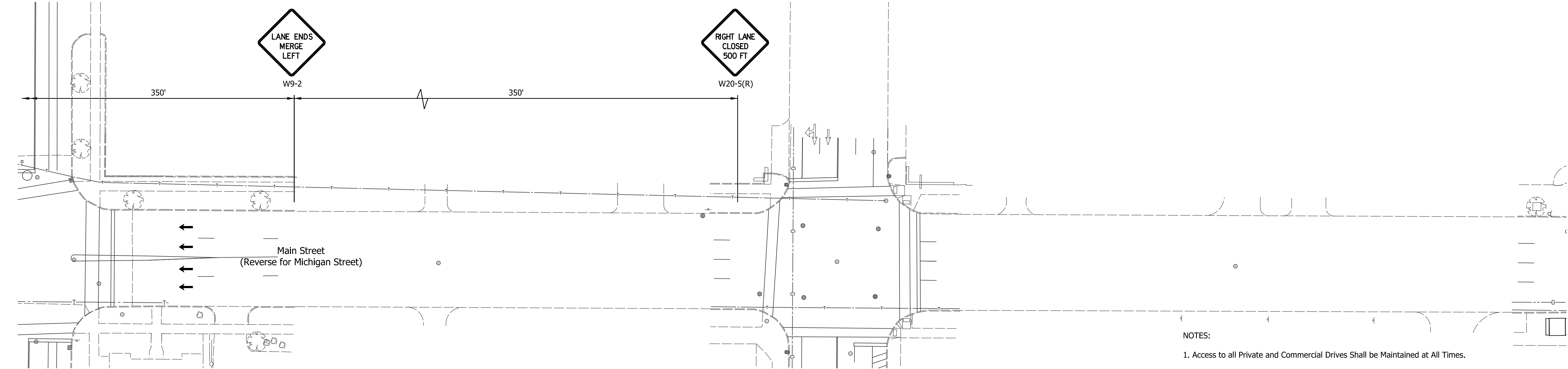
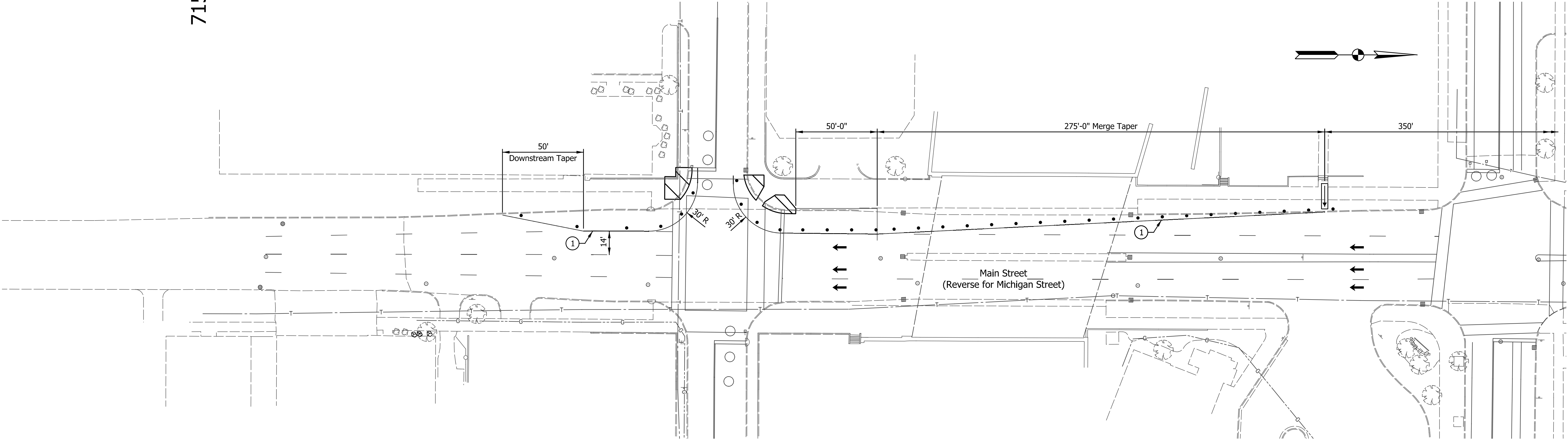
6 of 27

PROJECT

115-019 (DIV A)

Note:
See Next Sheet for Lane Closure Details.

Info: P:\101\1351\1351_Signage.dgn
20160131_1351_Signage.dgn



NOTES:
1. Access to all Private and Commercial Drives Shall be Maintained at All Times.

- Construction Sign, Type "A"

Type "A" Construction Warning Light

Barricade

Construction Area

Direction of Traffic
- Flashing Arrow Sign

Standard Drum

Temp. Pavm't Marking, Removable, White, 4 in.

Temp. Pavm't Marking, Removable, Yellow, 4 in.

Temp. Pavm't Marking, Removable, White, 24 in.

Construction Zone Design Speed = 35 MPH
Construction Clear Zone = 8'-0"

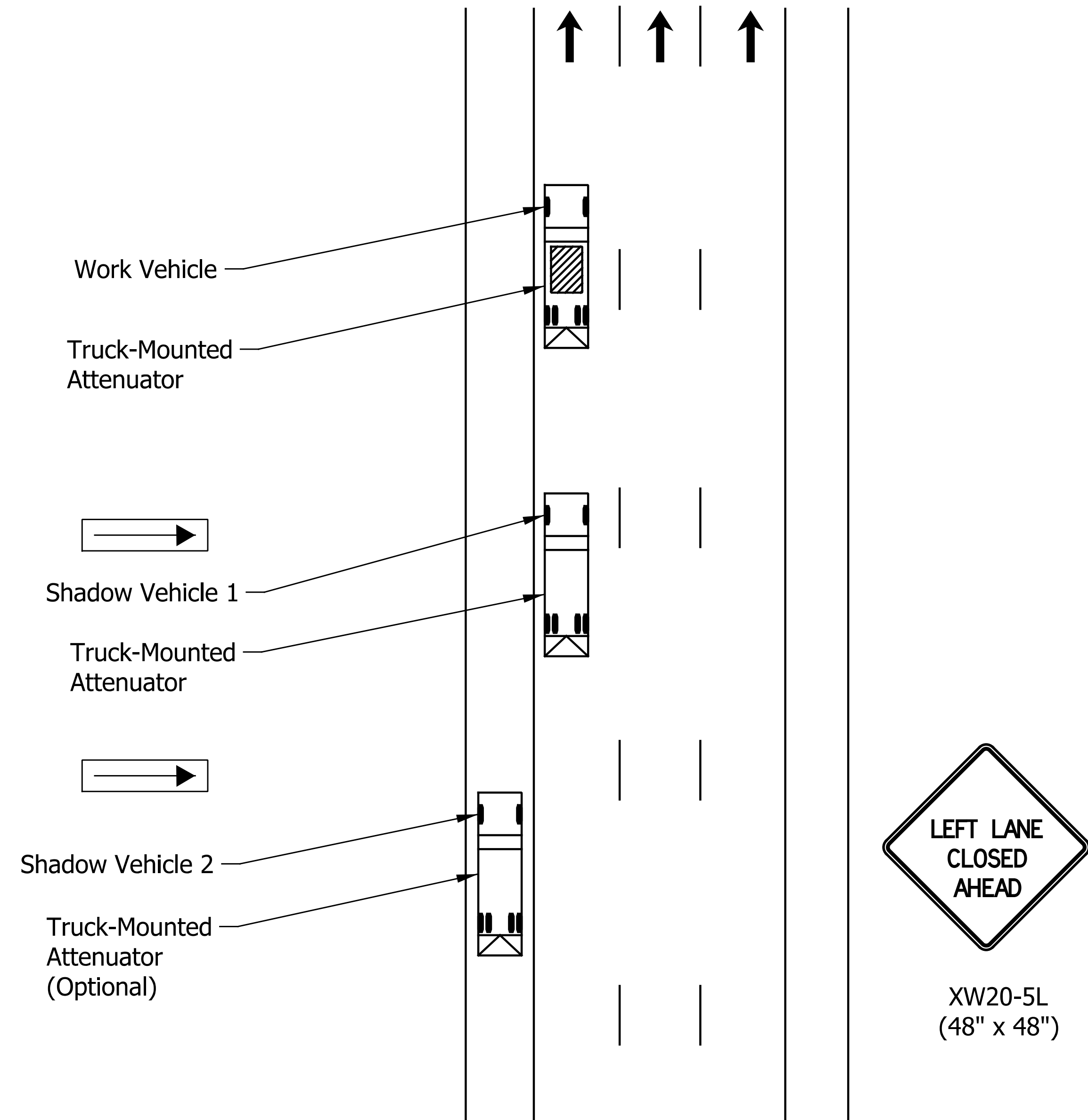
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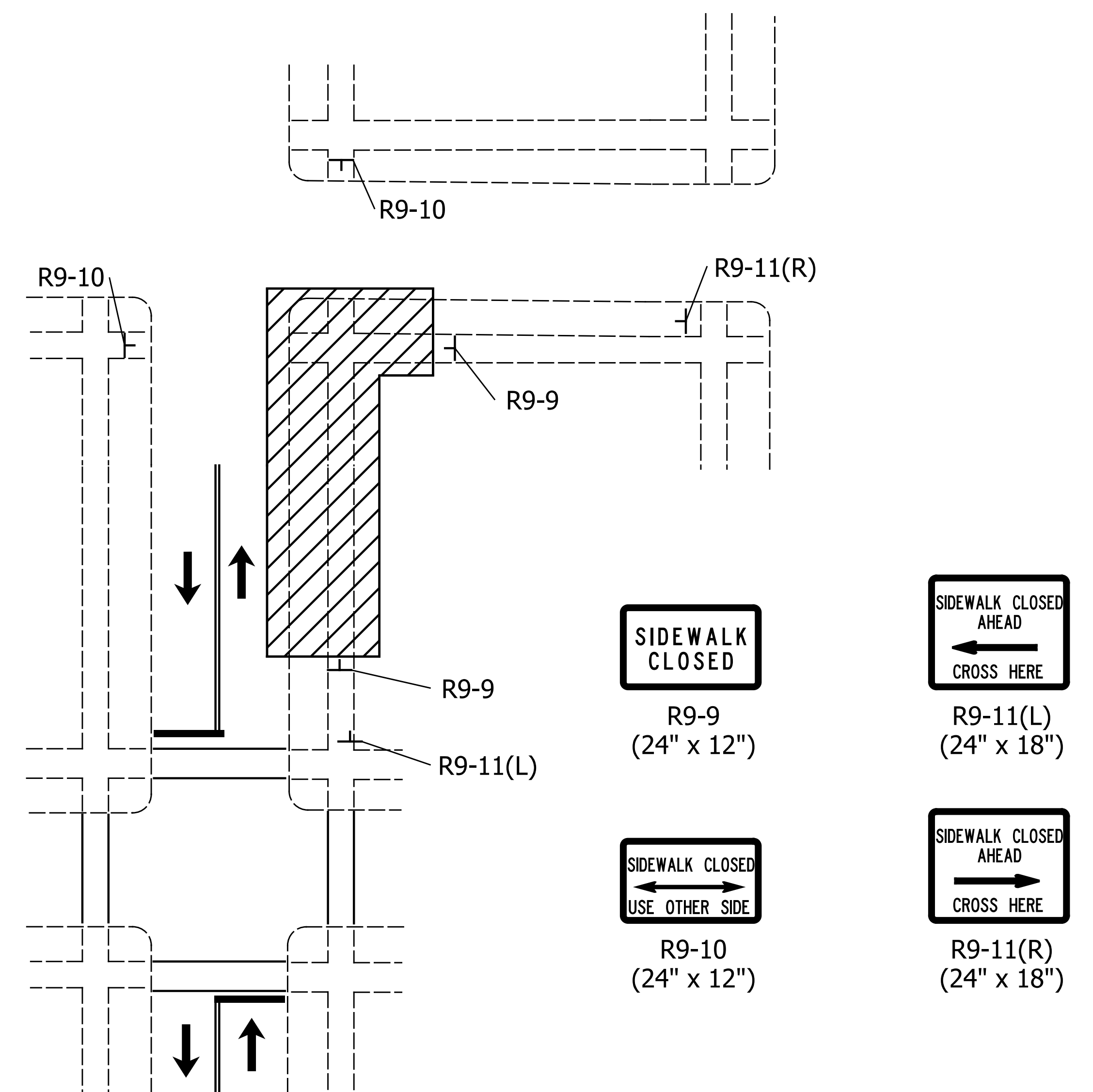
RECOMMENDED FOR APPROVAL		1/7/2016
DESIGNED: MRR	DRAWN: JRG	DATE
CHECKED: PKW	CHECKED: PKW	

CITY OF SOUTH BEND
MAINTENANCE OF TRAFFIC TYPICAL LANE CLOSURE DETAIL

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS
N/A	7 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

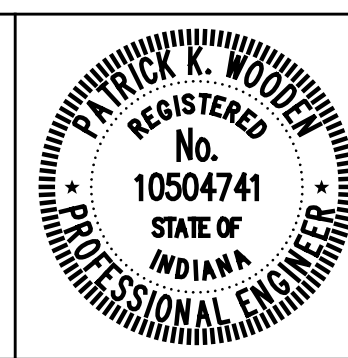


Mobile Operation for Pavement Marking Installation Detail



Sidewalk Closure Detour

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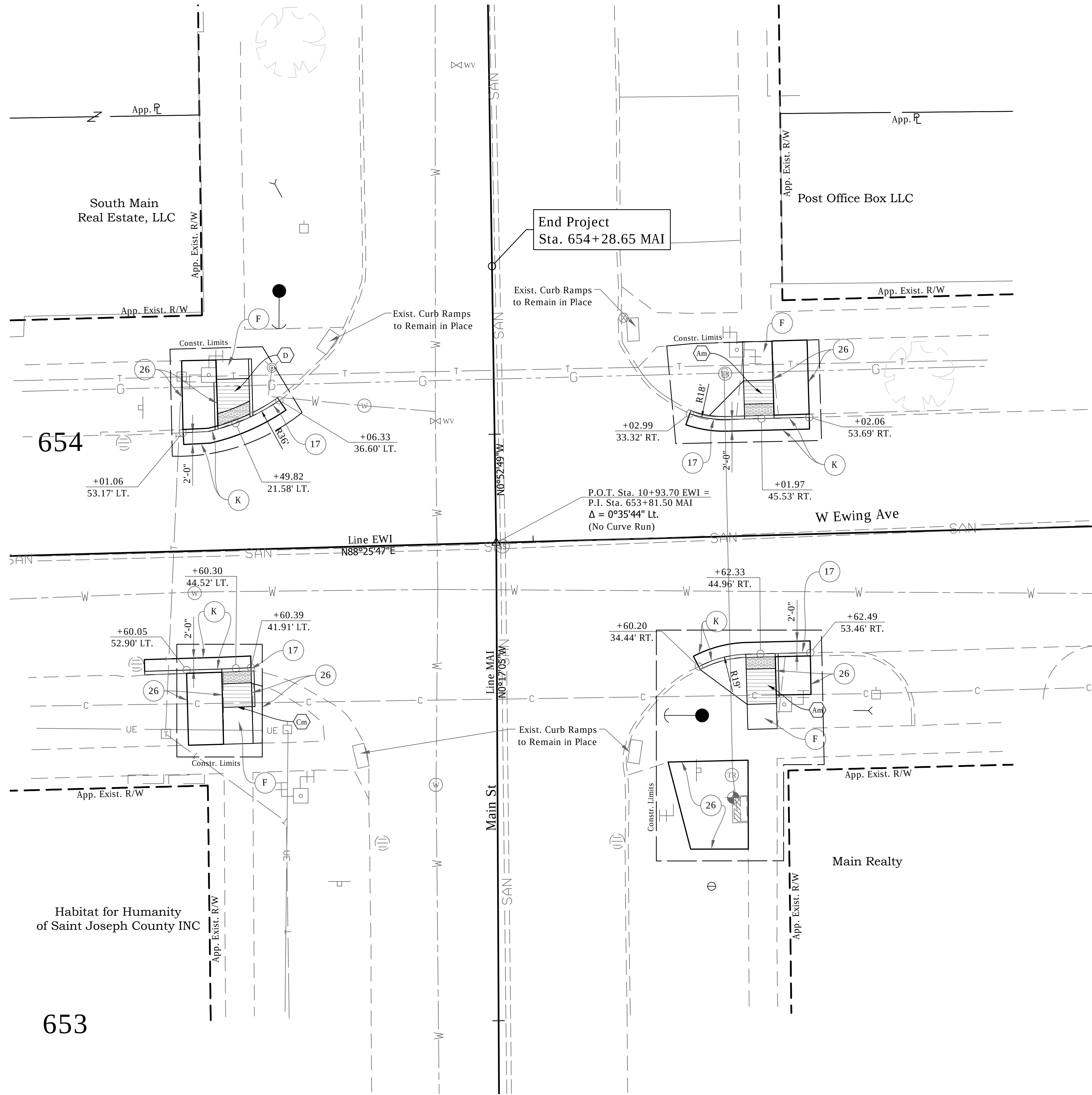


RECOMMENDED FOR APPROVAL	<i>Patrick K. Wooden</i>	1/7/2016
DESIGNED: MRR	DRAWN: JRG	DATE
CHECKED: PKW	CHECKED: PKW	

CITY OF SOUTH BEND
MAINTENANCE OF TRAFFIC DETAILS
MISCELLANEOUS DETAILS

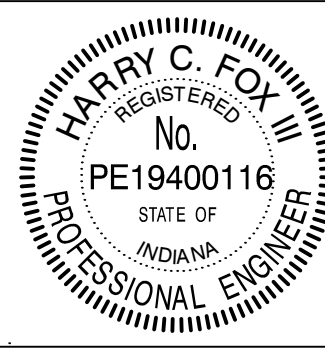
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VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	8 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

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FILE:.....3329 CD MAIN - ewing ST.dwg
DWSCALE: 1 LTSCALE: 10
PLOT BY: JG
DATE: 05/20/16 4:30pm



LEGEND

- (15) Combine Curb & Gutter, Type B (City of South Bend)
- (17) Curb, Concrete
- (26) Sodding
- (F) Concrete, Sidewalk, 4"
- (K) Widening with HMA (See Typical Sections)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5mm
- (S) Sawcut
- (X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
- (Xm) Modified Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)



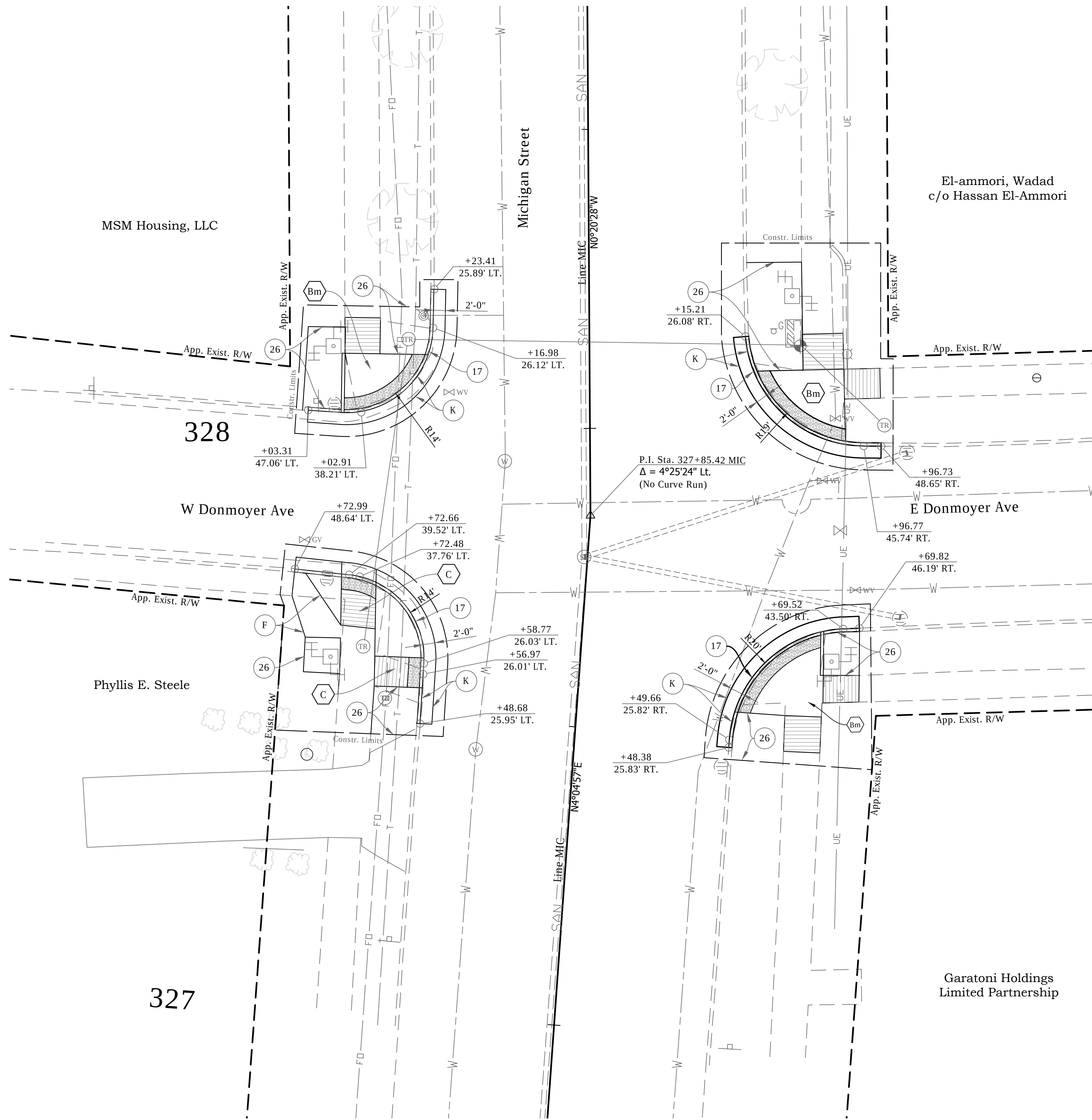
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DESIGN ENGINEER		DATE	
DESIGNED: _____	HCF III	DRAWN: _____	BRD
CHECKED: _____	JG	CHECKED: _____	JG

CITY OF SOUTH BEND

INTERSECTION DETAILS
MAIN ST. AT EWING AVE.

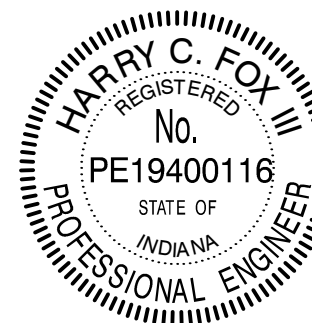
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VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	9 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

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FILE:.....3329 CD MICHIGAN ST_.dwg
DWS:.....1 L1SCALE.....10
PLOT BY: JG
DATE:.....15-05-2016 - 4:31pm



LEGEND

- (15) Combine Curb & Gutter, Type B (City of South Bend)
- (17) Curb, Concrete
- (26) Sodding
- (K) Widening with HMA (See Typical Sections)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm
- (S) Sawcut
- (X) Concrete Curb Ramp
(Type Indicate by Letter inside Hexagon)
- (Xm) Modified Concrete Curb Ramp
(Type Indicate by Letter inside Hexagon)

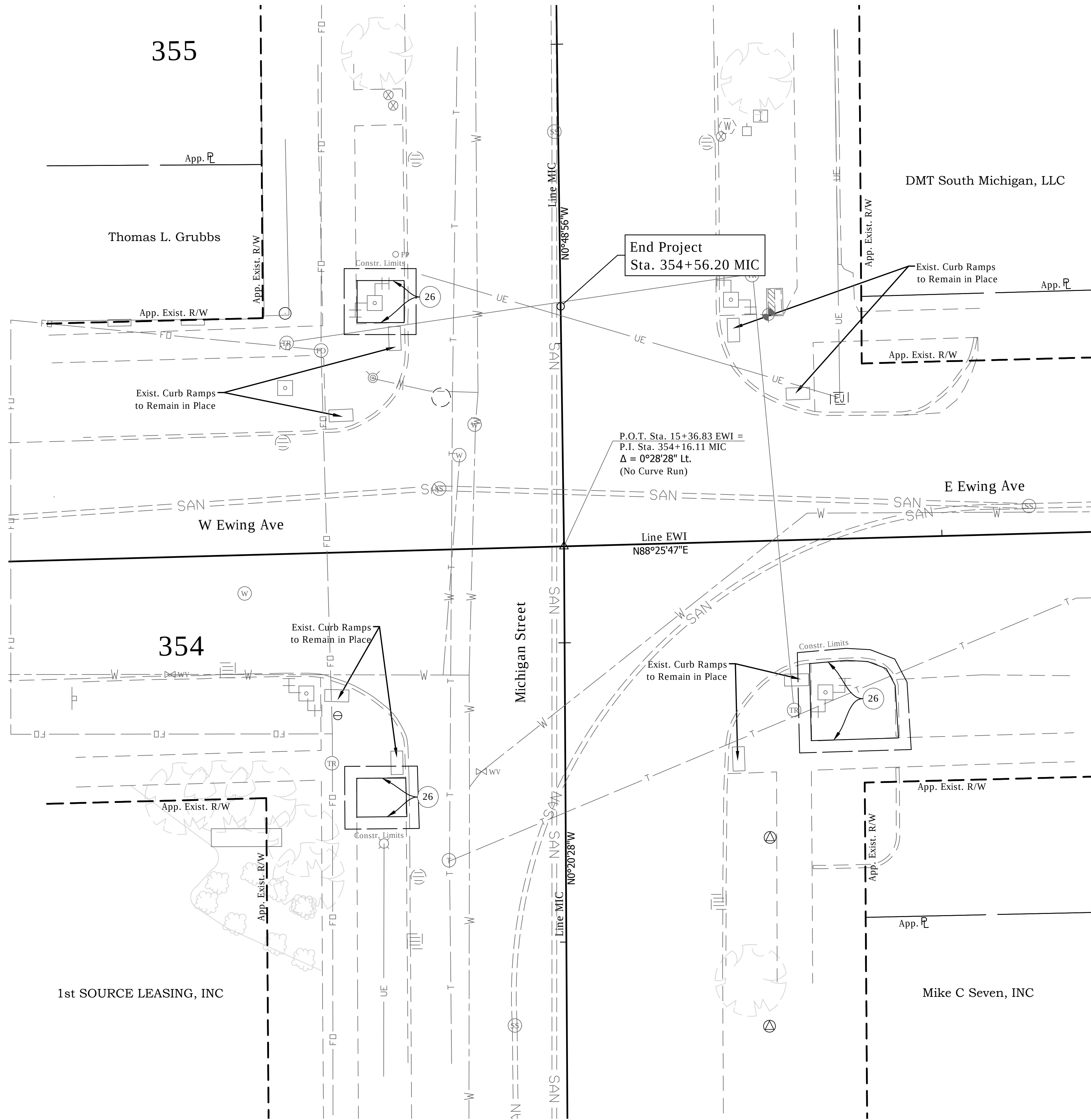


RECOMMENDED FOR APPROVAL		01/07/2016
DESIGN ENGINEER		DATE
DESIGNED: _____ HCF III		DRAWN: _____ BRD
CHECKED: _____ JG		CHECKED: _____ JG

CITY OF SOUTH BEND
INTERSECTION DETAILS MICHIGAN ST. AT DONMEYER AVE.

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	10 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

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DIMS SCALE...1 ITS SCALE.....10
PLOT BY: JG
DATE: 05/15/2016 4:32pm



LEGEND

- (15) Combine Curb & Gutter, Type B (City of South Bend)
- (17) Curb, Concrete
- (26) Sodding
- (K) Widening with HMA (See Typical Sections)
- (M) Milling, Asphalt, 1.5"
- (R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm
- (S) Sawcut
- (X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER
DATE

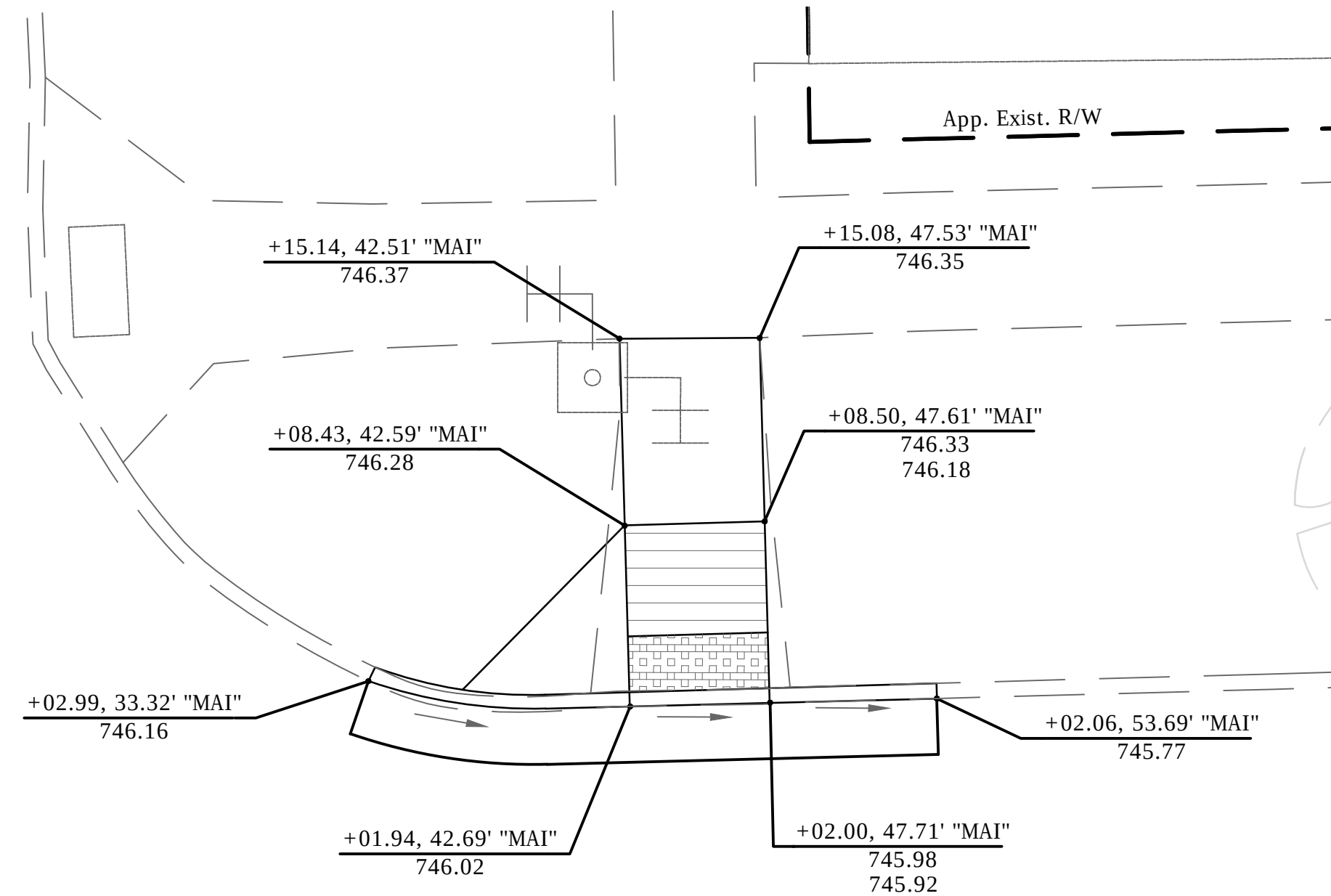
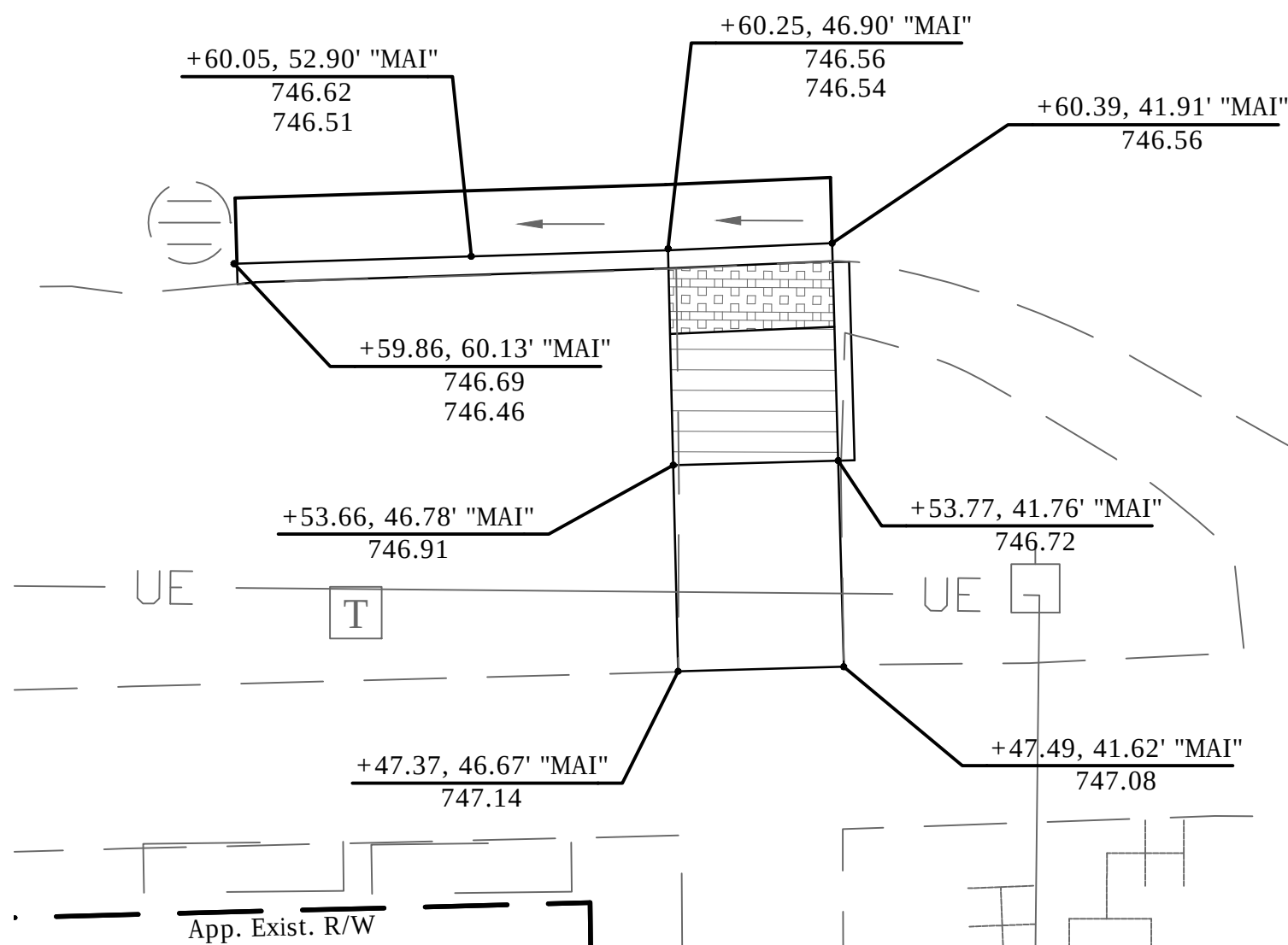
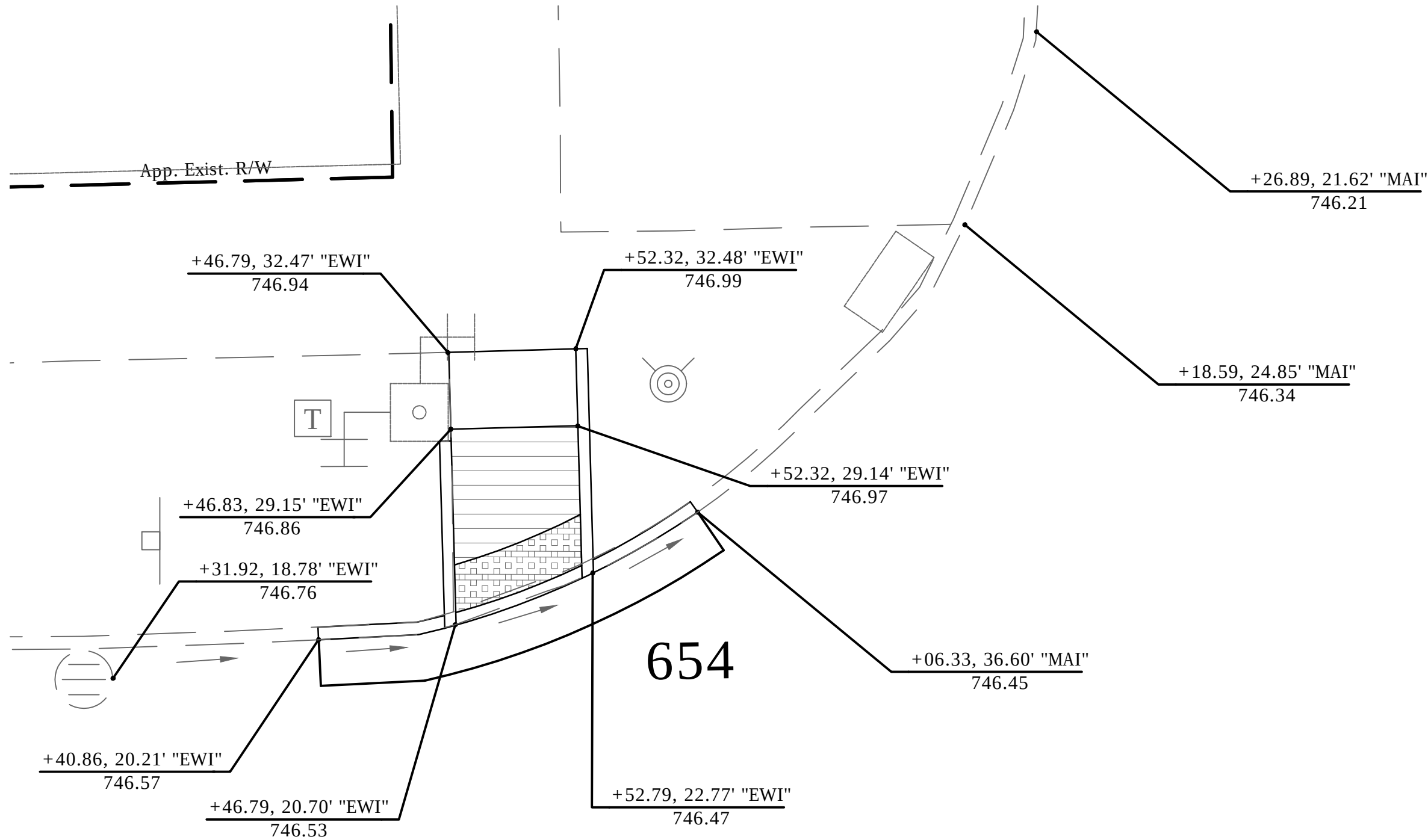
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DRAWN: BRD
CHECKED: JG
CHECKED: JG

CITY OF SOUTH BEND

INTERSECTION DETAILS
MICHIGAN ST. AT EWING AVE.

HORIZONTAL SCALE	BRIDGE FILE	
1"=10'	N/A	
VERTICAL SCALE	DESIGNATION	
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SURVEY BOOK	SHEETS	
N/A	11	of 27
CONTRACT	PROJECT	
N/A	115-019 (DIV A)	

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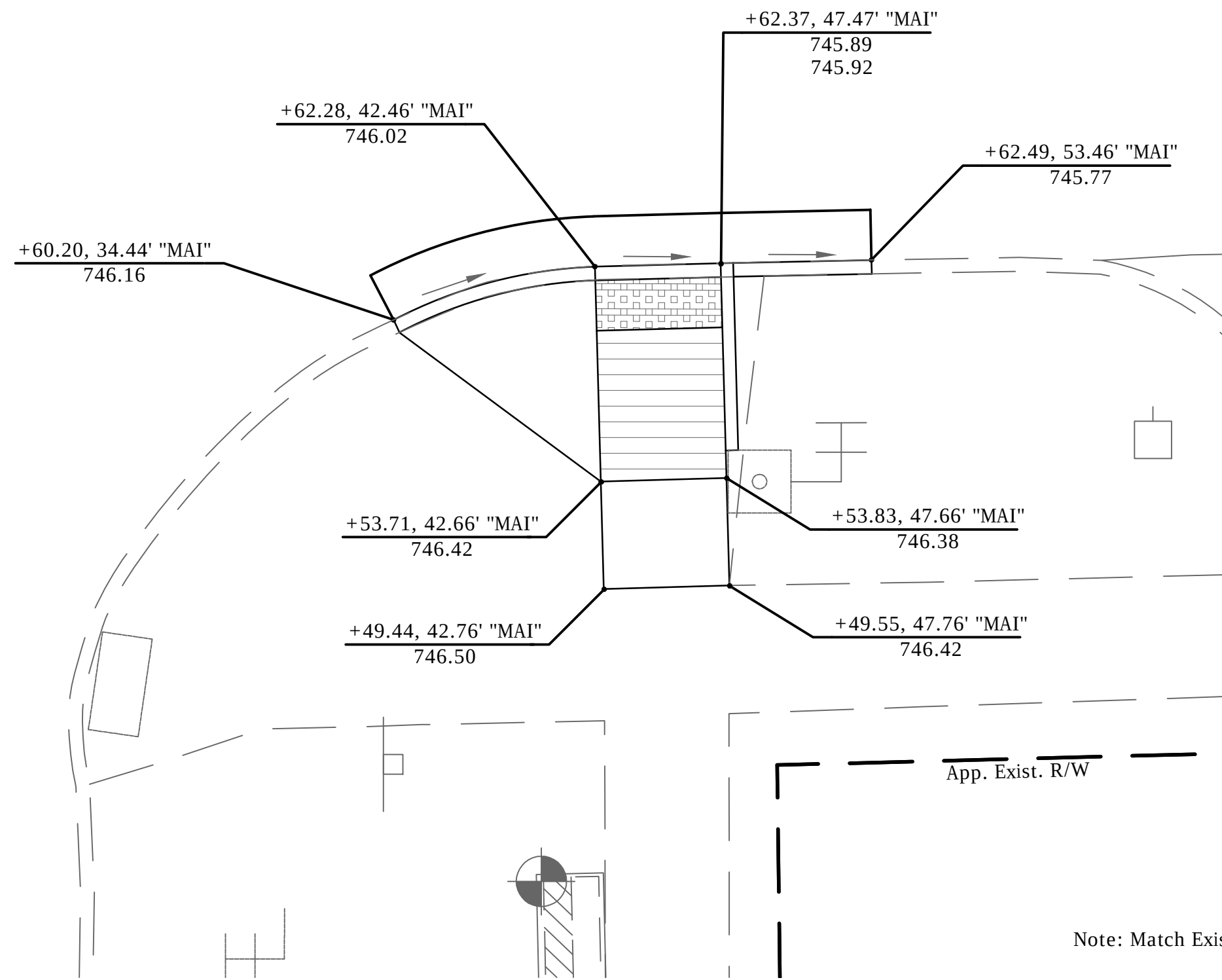


P.O.T. Sta. 10+93.70 EWI =
P.I. Sta. 653+81.50 MAI
 $\Delta = 0^\circ 35' 44''$ Lt.
(No Curve Run)

W Ewing Ave

Main St

Line MAI
N0°17'05\"/>



Station "Line"
Existing Elevation
Proposed Elevation

Note: Match Existing Elevation Unless Proposed is Indicated



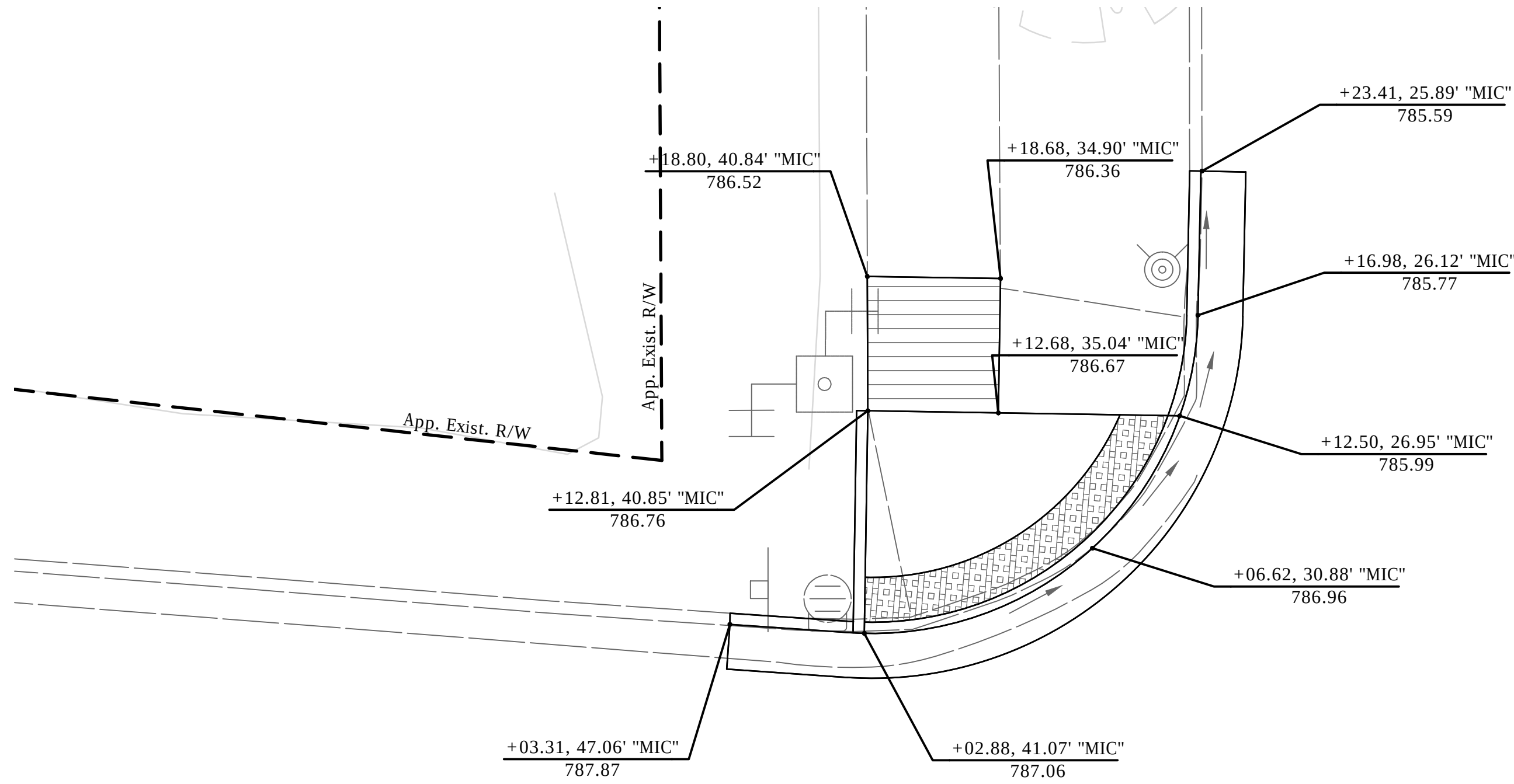
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CHECKED:	JG	CHECKED:	JG	

CITY OF SOUTH BEND

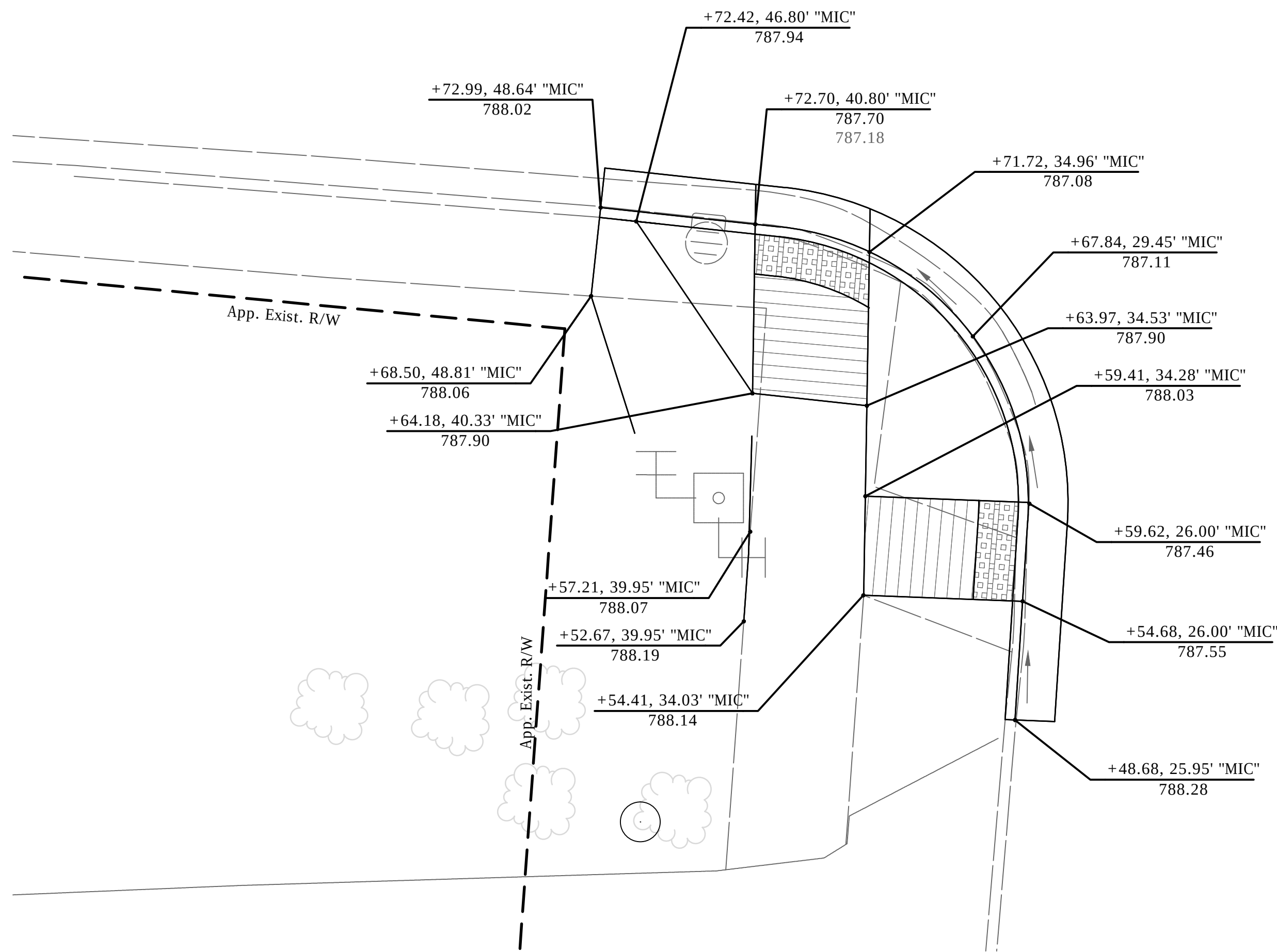
SPOT ELEVATION DETAILS
MAIN ST. AT EWING AVE.

HORIZONTAL SCALE	BRIDGE FILE		
1"=5'	N/A		
VERTICAL SCALE	DESIGNATION		
	N/A		
SURVEY BOOK	SHEETS		
N/A	12	of	27
CONTRACT	PROJECT		
N/A	115-019 (DIV A)		

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DISCALE: 1 LTSKALE: 5
PLOT BY: EBC
DATE: 05/05/2016 4:33pm



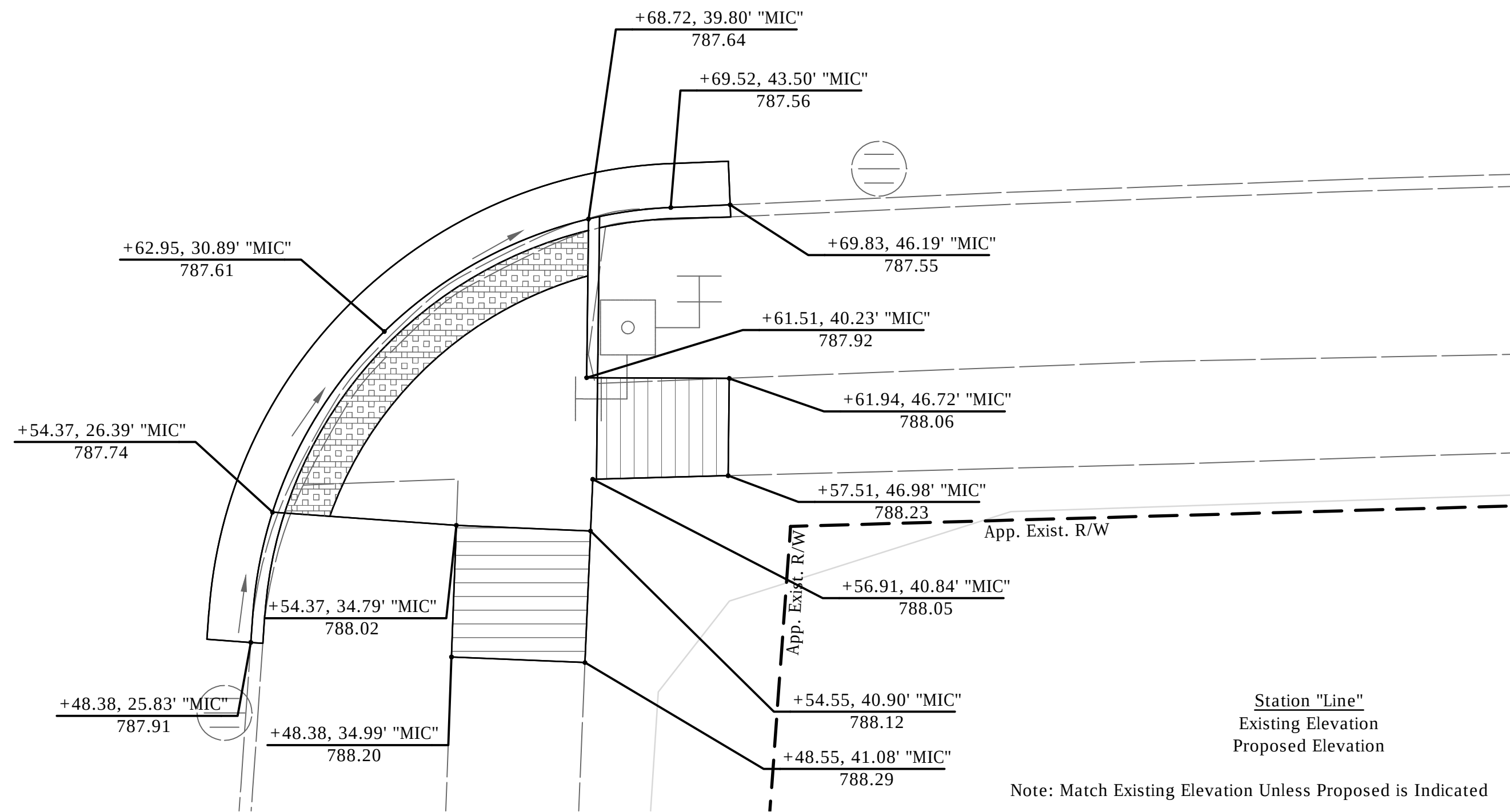
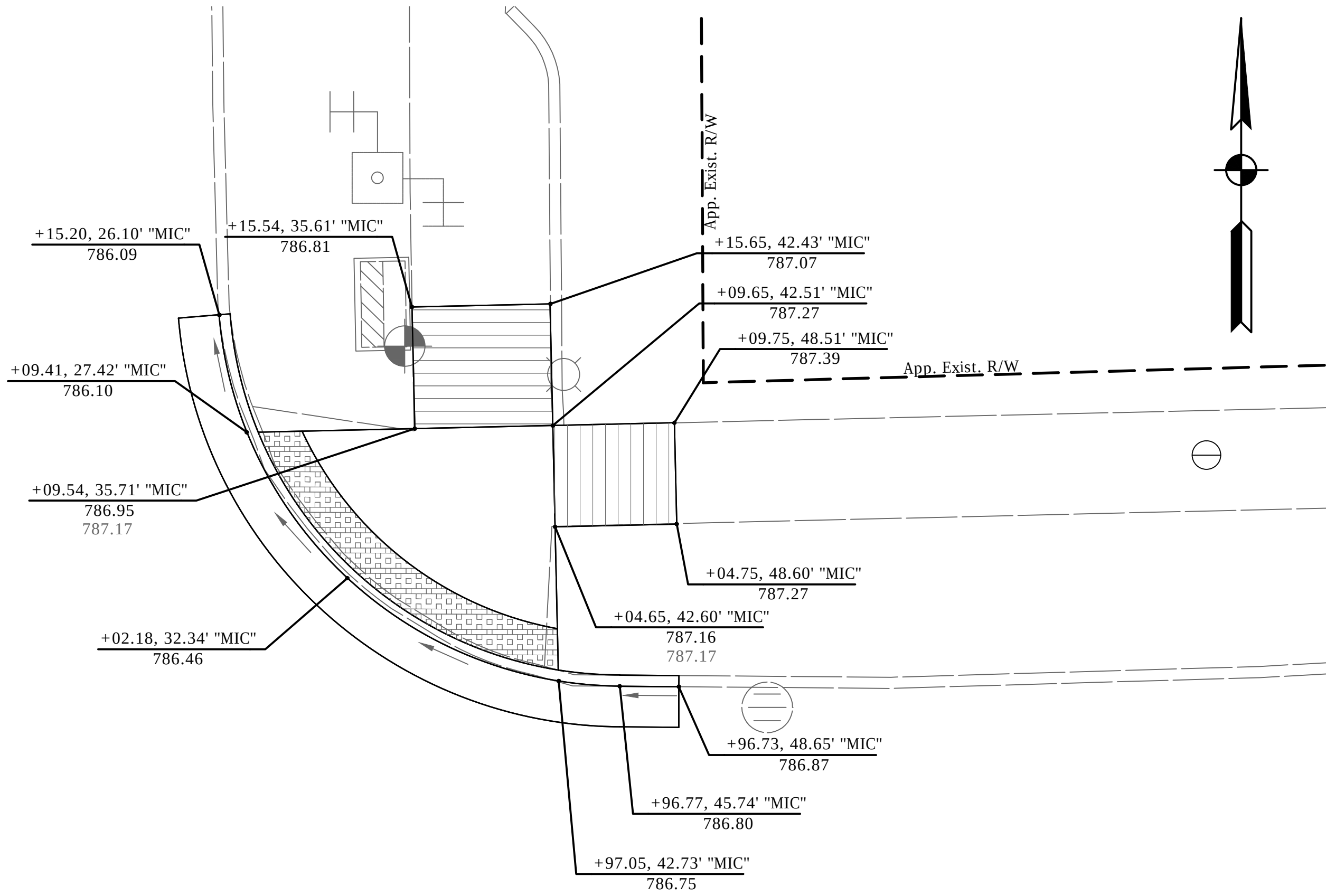
DONMOYER AVE



MICHIGAN ST

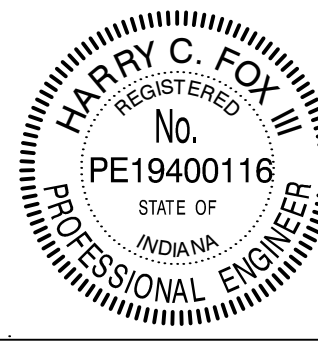
Line "MIC"
N0°20'28"W

Line "MIC"
N4°04'57"E



Station "Line"
Existing Elevation
Proposed Elevation

Note: Match Existing Elevation Unless Proposed is Indicated



RECOMMENDED FOR APPROVAL	<i>Harry Fox</i>	DESIGN ENGINEER	01/07/2016	DATE
DESIGNED:	HCF III	DRAWN:	BRD	
CHECKED:	JG	CHECKED:	JG	

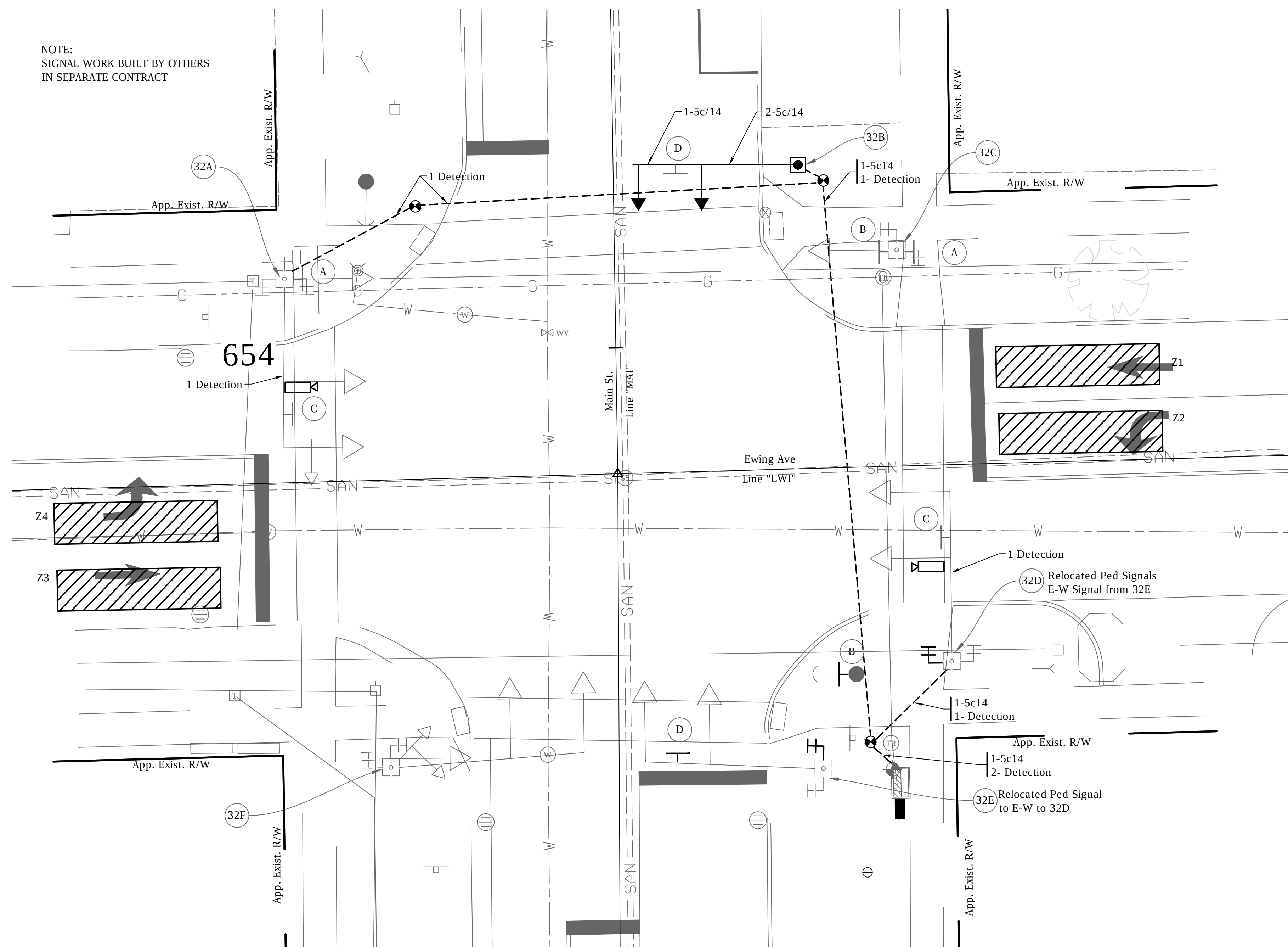
CITY OF SOUTH BEND
SPOT ELEVATION DETAILS MICHIGAN ST & DONMOYER AVE

HORIZONTAL SCALE	BRIDGE FILE
1"=5'	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	13 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

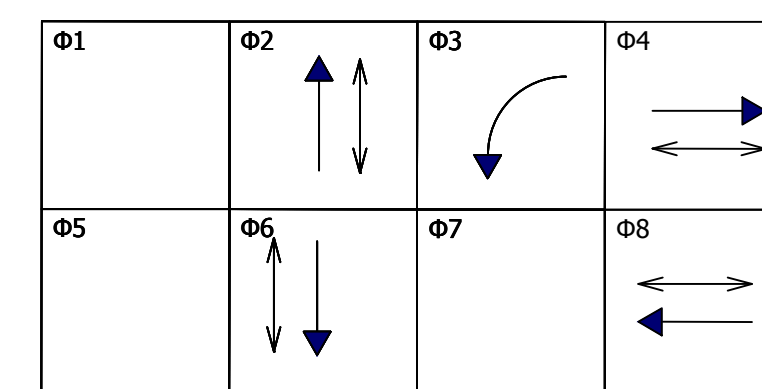
Signal Supports

- 32A Relocate to Remain
- 32B Relocated From 32E
- 32C Relocate to Remain
- 32D Relocate to Remain
- 32E Relocate to 32B
- 32F Relocate to Remain

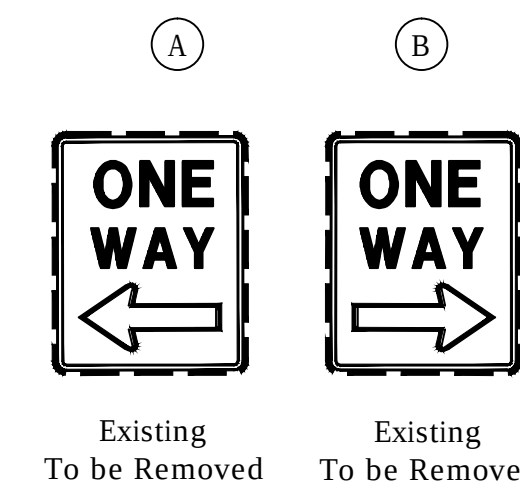
NOTE:
SIGNAL WORK BUILT BY OTHERS
IN SEPARATE CONTRACT



PHASE DIAGRAM



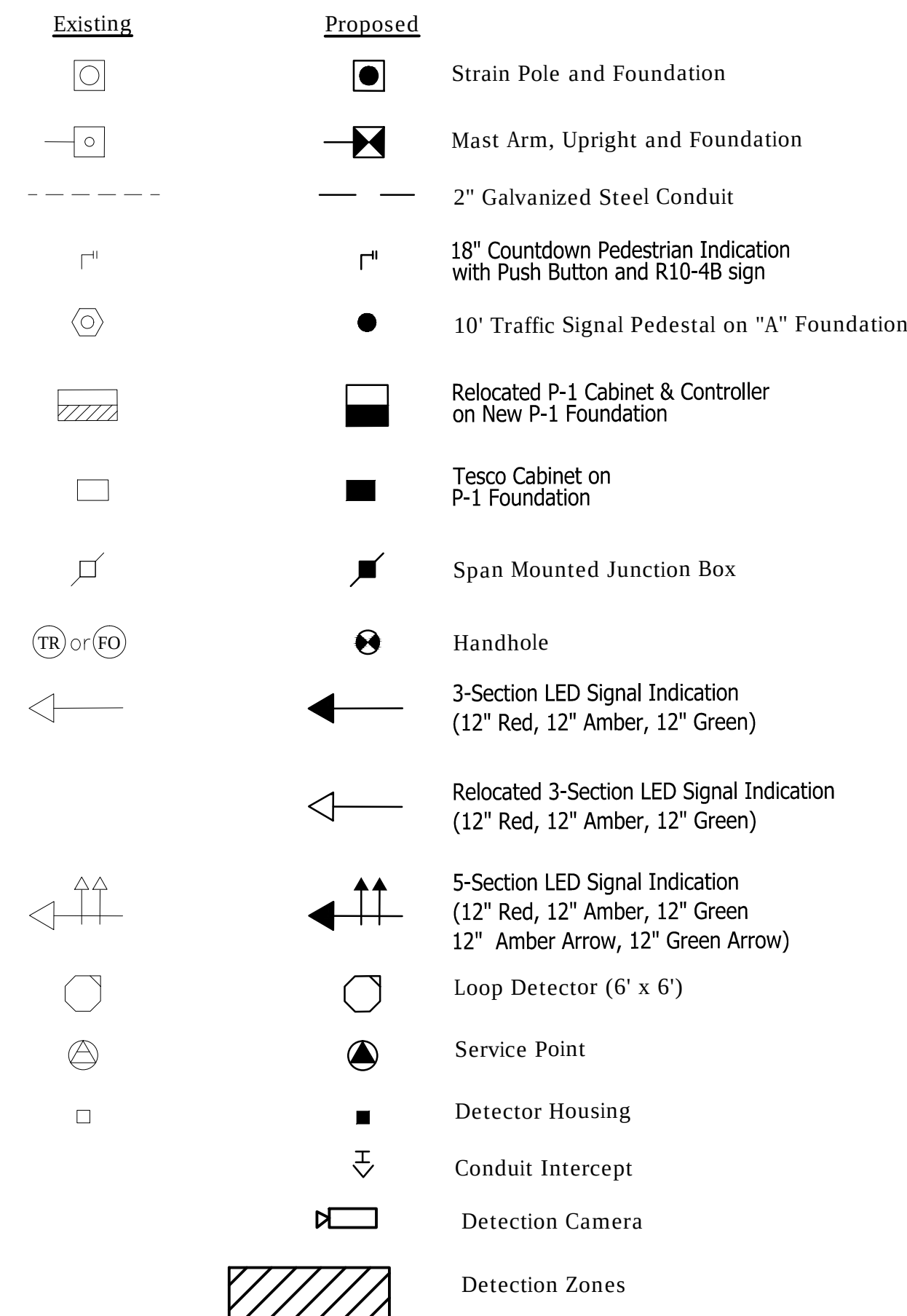
ALL APPROACHES FLASH RED



Existing

Existing

Legend

Proposed

General Notes:

1. Pavement markings and intersection dimensions are shown here for informational purposes only. See applicable sheets for construction details.
2. Location and type of underground traffic signal equipment and signal cable has been assumed based on field reviews. Existing signal cable is shown for the purpose of construction sequencing only. Contractor shall field verify the location and type of existing traffic signal equipment and cable as necessary.
3. Remove existing signal equipment as noted. Foundations shall be removed to two feet below finished grade. Hand hole removal shall be performed in a manner that allows the signal to remain operable. Signal conduit that is no longer in use shall be abandoned in place with existing wiring removed.
4. Contractor shall coordinate with local power company regarding location of power feed to new service cabinet.
5. Proposed mast arm foundations, pedestal foundations and cabinet footpads shall be constructed with a finished surface that is flush with the proposed sidewalk.
6. Existing & proposed mast arms, pedestal poles and controller cabinets shall be painted black (FS 17038).
7. Salvaged signal equipment shall be delivered to the City at the following address: 731 S Lafayette Blvd, South Bend, IN 46601
8. EMNET equipment is mounted to various traffic signal equipment within the project limits. The contractor shall contact Jeremy Slater of EMNET at (574) 387-9387 to arrange for pickup of any EMNET equipment removed as part of traffic signal equipment removal.
9. Replace Hand Hole Covers on Existing Mast Arms as Necessary.
10. All Conduit Under Pavement Shall Utilize the Directional Bore Method for Installation.

Detection Zone		
<u>Zone</u>	<u>Phase</u>	<u>Delay</u>
Z1	8	5 Sec.
Z2	8	5 Sec.
Z3	4	5 Sec.
Z4	4	5 Sec.

Detection Notes:

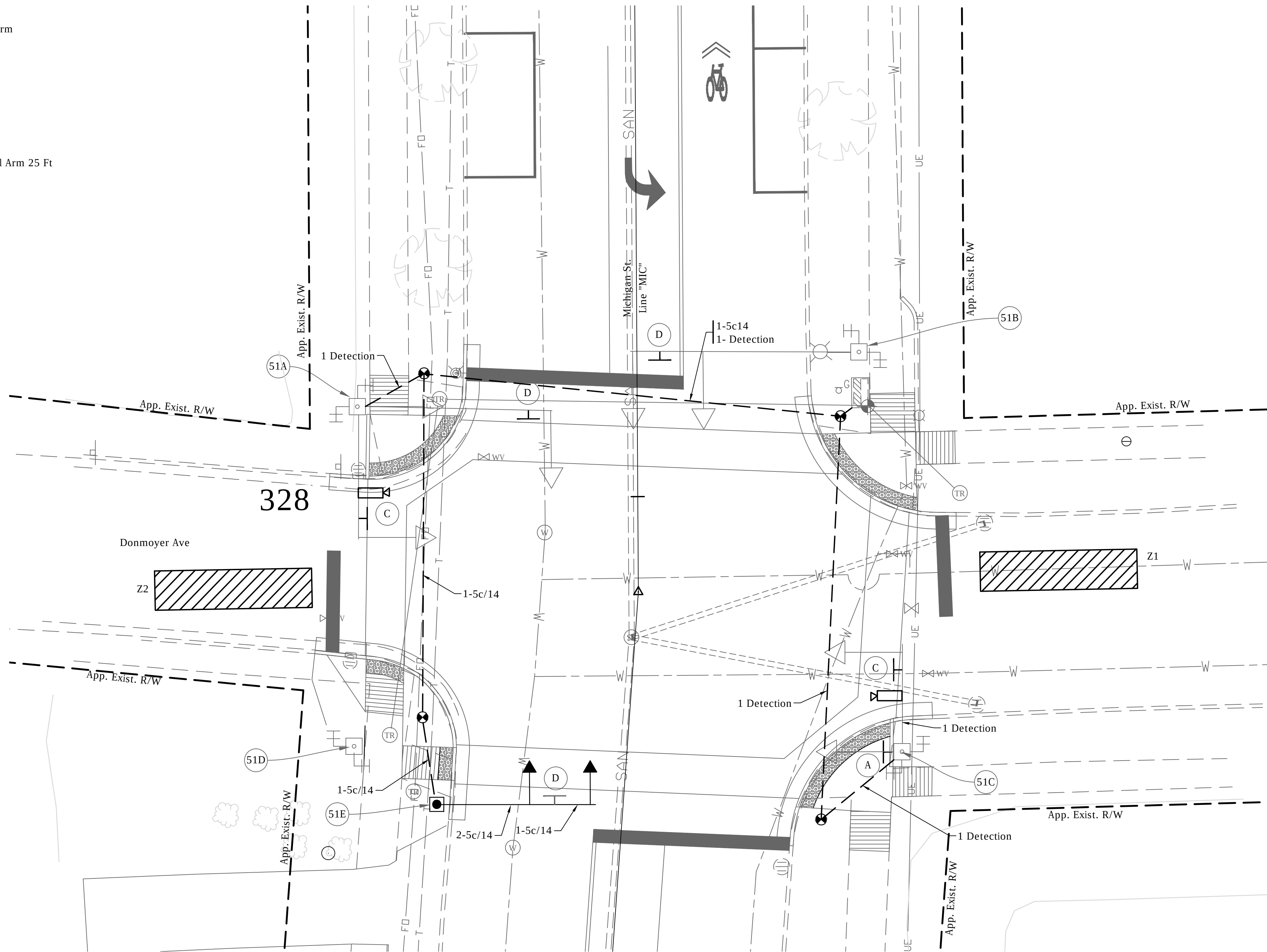
- (1) All Detection Zones Shall be 6'x25' (min.) and Shall Provide Presence Detection.
- (2) Detection Cabling Denotes Hybrid Coax/Power Cable Connecting Detection Cameras to in Cabinet Equipment

CITY OF SOUTH BEND

DESIGNER		DATE:	
DESIGN ENG. <i>Harry Fox</i>		DATE: 01/07/2016	
TRAFFIC SIGNAL DETAIL MAIN ST & EWING AVE			
CONTRACT NO. N/A		DRAWN BY BRD	
COMM. NO. N/A		SCALE: 1" = 10'	
		YEAR 2016	SHEET 14
		TOTAL 27	
DES. NO. N/A		PROJECT NO. 115-019 (DIV 1)	

Signal Supports

- 51A To Remain, Remove N.B. Mast Arm
51B To Remain
51C To Remain
51D To Remain
51E New, Cantilever Structure, Signal Arm 25 Ft



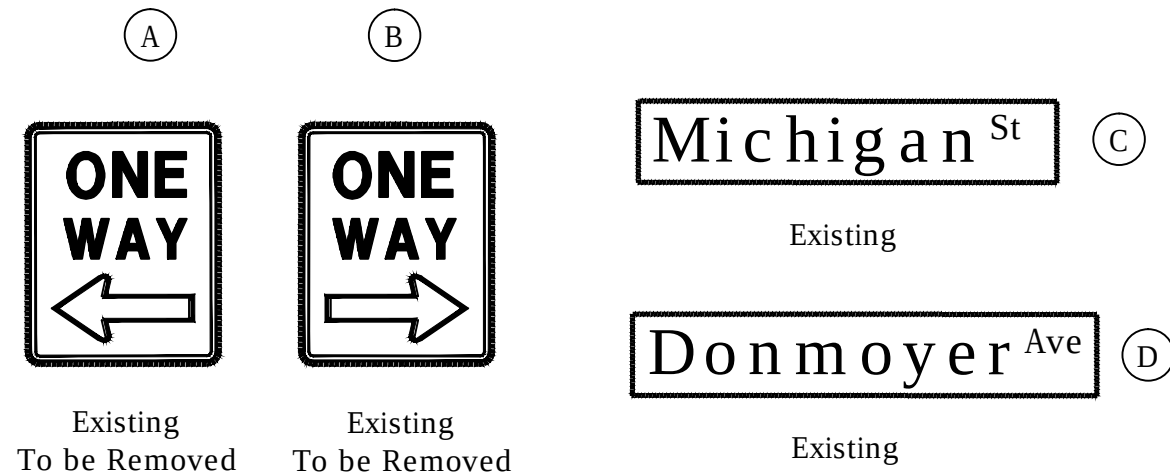
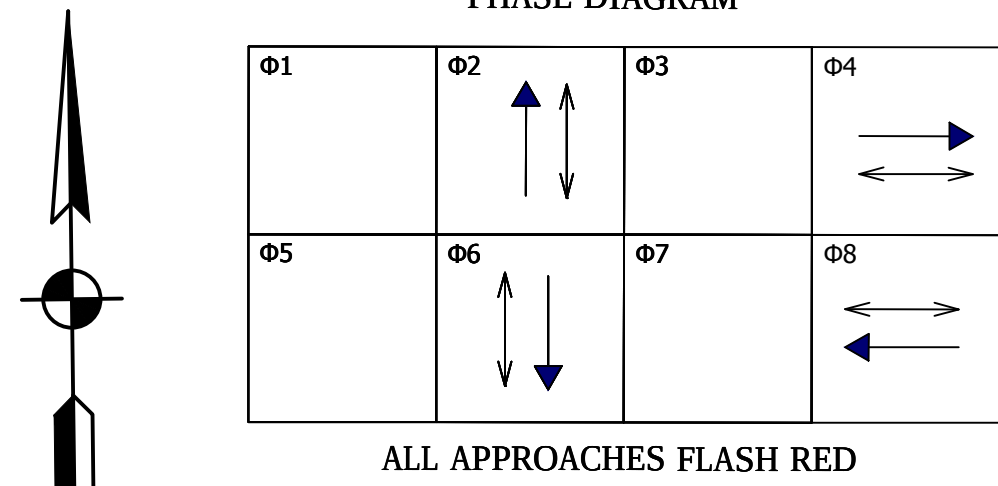
Zone	Phase	Delay
Z1	8	5 Sec.
Z2	4	5 Sec.

- Detection Notes:
(1) All Detection Zones Shall be 6'x25' (min.) and Shall Provide Presence Detection.
(2) Detection Cabling Denotes Hybrid Coax/Power Cable Connecting Detection Cameras to in Cabinet Equipment

General Notes:

- Pavement markings and intersection dimensions are shown here for informational purposes only. See applicable sheets for construction details.
- Location and type of underground traffic signal equipment and signal cable has been assumed based on field reviews. Existing signal cable is shown for the purpose of construction sequencing only. Contractor shall field verify the location and type of existing traffic signal equipment and cable as necessary.
- Remove existing signal equipment as noted. Foundations shall be removed to two feet below finished grade. Hand hole removal shall be performed in a manner that allows the signal to remain operable. Signal conduit that is no longer in use shall be abandoned in place with existing wiring removed.
- Contractor shall coordinate with local power company regarding location of power feed to new service cabinet.
- Proposed mast arm foundations, pedestal foundations and cabinet footpads shall be constructed with a finished surface that is flush with the proposed sidewalk.
- Existing & proposed mast arms, pedestal poles and controller cabinets shall be painted black (FS 17038).
- Salvaged signal equipment shall be delivered to the City at the following address: 731 S Lafayette Blvd, South Bend, IN 46601
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- Replace Hand Hole Covers on Existing Mast Arms as Necessary.
- All Conduit Under Pavement Shall Utilize the Directional Bore Method for Installation.

INTERSECTION
NO.
51



Existing	Proposed	Legend
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2 inch Galvanized Steel Conduit
		18 inch Countdown Pedestrian Indication with Push Button and R10-4B sign
		10 inch Traffic Signal Pedestal on "A" Foundation
		Relocated P-1 Cabinet & Controller on New P-1 Foundation
		Tesco Cabinet on P-1 Foundation
		Span Mounted Junction Box
		Handhole
		3-Section LED Signal Indication (12 inch Red, 12 inch Amber, 12 inch Green)
		Relocated 3-Section LED Signal Indication (12 inch Red, 12 inch Amber, 12 inch Green)
		5-Section LED Signal Indication (12 inch Red, 12 inch Amber, 12 inch Green, 12 inch Amber Arrow, 12 inch Green Arrow)
		Loop Detector (6 inch x 6 inch)
		Service Point
		Detector Housing
		Conduit Intercept
		Detection Camera
		Detection Zones

CITY OF SOUTH BEND

DESIGNER
DESIGN ENG. *Harry Fox* DATE: 01/07/2016

TRAFFIC SIGNAL DETAIL
MICHIGAN ST & DONMOYER AVE

CONTRACT NO. N/A

DRAWN BY
BRD

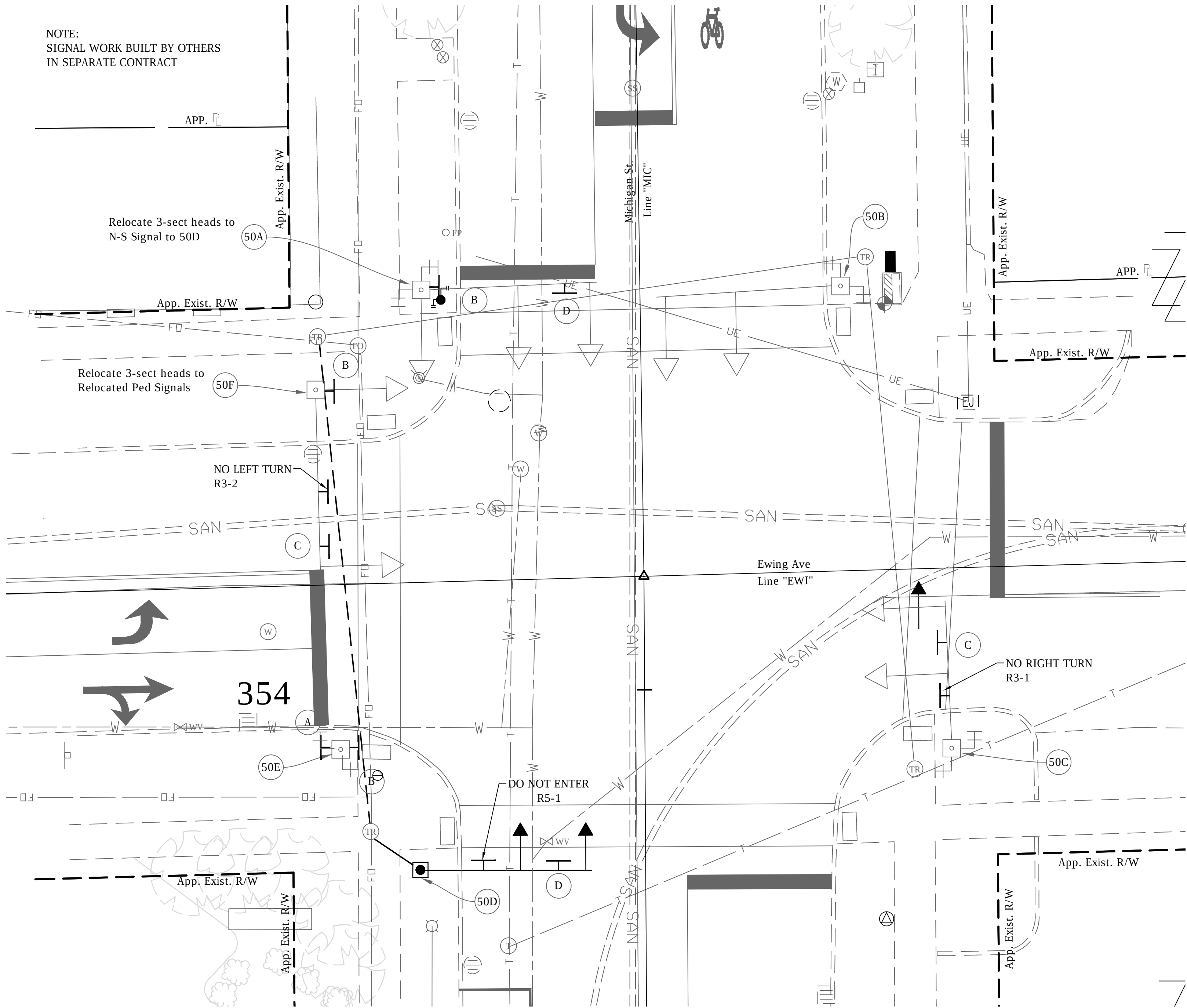
COMM. NO. N/A

SCALE: 1" = 10'		
YEAR	SHEET	TOTAL
2016	15	27
S. NO.		PROJECT NO.
N/A		115-019 (DIV A)

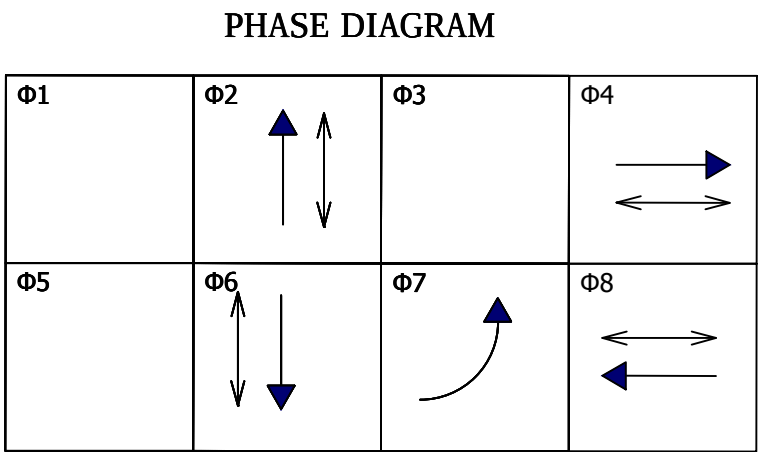
Signal Supports

- 50A Relocate to 50D
50B To Remain
50C To Remain
50D Relocated From 50A
50E To Remain
50F To Remain

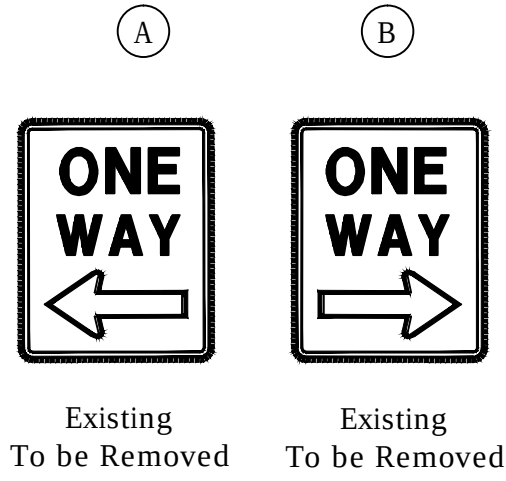
NOTE:
SIGNAL WORK BUILT BY OTHERS
IN SEPARATE CONTRACT



INTERSECTION
NO.
50



ALL APPROACHES FLASH RED

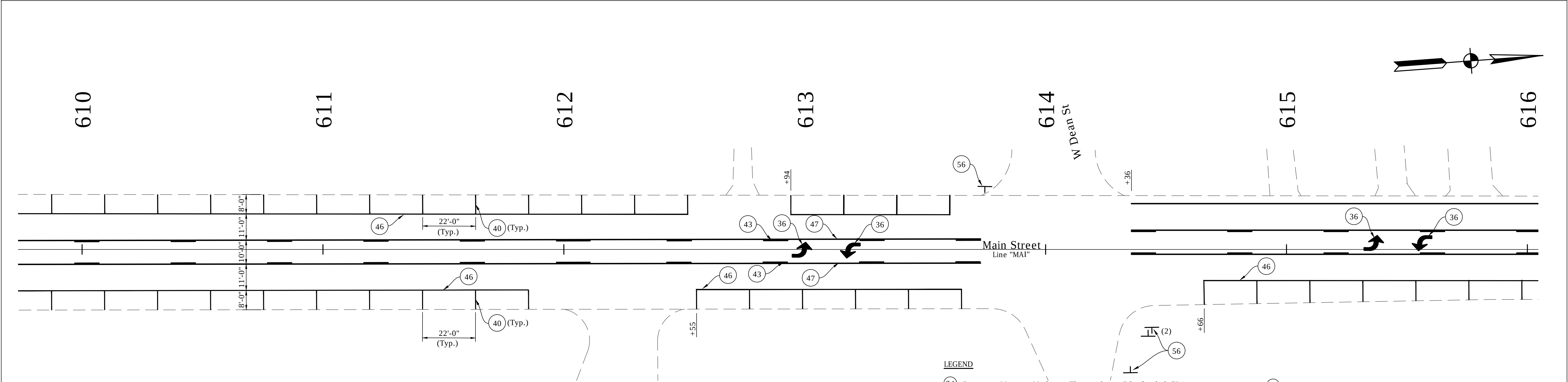
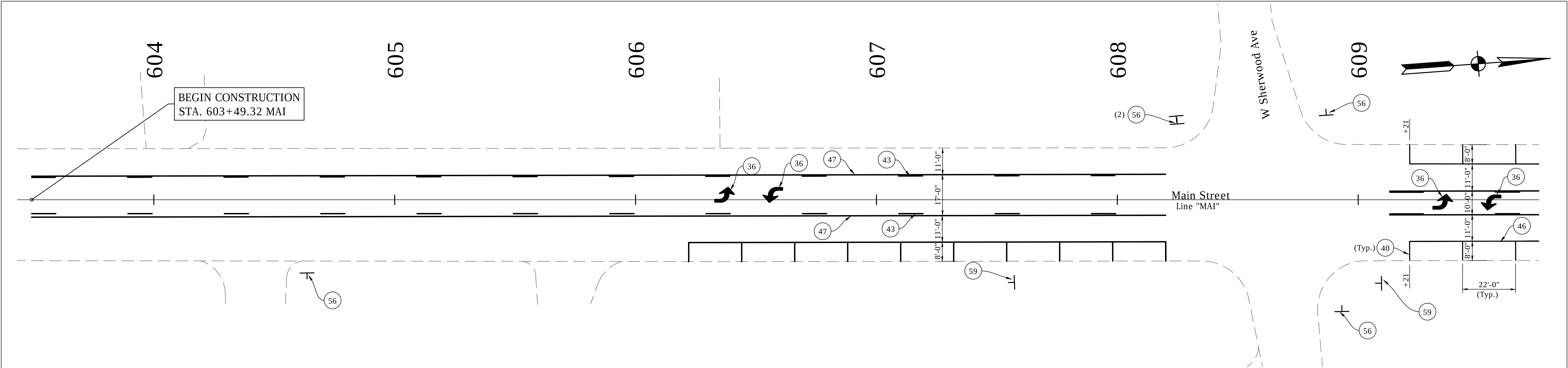


Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" Galvanized Steel Conduit
		18" Countdown Pedestrian Indication with Push Button and R10-4B sign
		10" Traffic Signal Pedestal on "A" Foundation
		Relocated P-1 Cabinet & Controller on New P-1 Foundation
		Tesco Cabinet on P-1 Foundation
		Span Mounted Junction Box
		Handhole
		3-Section LED Signal Indication (12" Red, 12" Amber, 12" Green)
		Relocated 3-Section LED Signal Indication (12" Red, 12" Amber, 12" Green)
		5-Section LED Signal Indication (12" Red, 12" Amber, 12" Green 12" Amber Arrow, 12" Green Arrow)
		Loop Detector (6' x 6')
		Service Point
		Detector Housing
		Conduit Intercept

General Notes:

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- All Conduit Under Pavement Shall Utilize the Directional Bore Method for Installation.

CITY OF SOUTH BEND			
DESIGNER	DATE:	REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER	
DESIGN ENG. Harry Fox	DATE: 01/07/2016		
TRAFFIC SIGNAL DETAIL MICHIGAN ST & EWING AVE			
CONTRACT NO. N/A	DRAWN BY BRD	YEAR 2016	SHEET 16
COMM. NO. N/A		DES. NO. N/A	PROJECT NO. 115-019 (DIV A)



NOTES:

See Traffic Signal Detail Sheets For Additional Signage on Signal Poles.

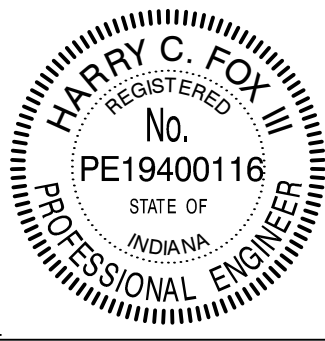
Existing Signs to Remain in Place, Unless Otherwise Noted.

All Stationing Described from Line "MIA", Except as Noted.

- LEGEND**
- | | | | |
|------|---|------|--|
| (34) | Pavement Message Markings, Thermoplastic, Bike Symbol, 72 in. | (45) | Line, Thermoplastic, Solid, White, 6 in. |
| (35) | Pavement Message Markings, Thermoplastic, Arrow, 72 in. | (46) | Line, Thermoplastic, Solid, White, 4 in. |
| (36) | Pavement Message Markings, Thermoplastic, Lane Indication Arrow | (47) | Line, Thermoplastic, Solid, Yellow, 4 in. |
| (38) | Transverse Markings, Thermoplastic, Stop Line, White, 24 in. | (55) | Pavement Message Markings, Thermoplastic, Share the Road |
| (40) | Parallel Parking Spaces, See Detail | (56) | Sign, Sheet, and Supports, Remove |
| (41) | Line, Thermoplastic, Dotted, White, 6 in. (2' Line, 2' Gap) | (58) | Sign, Sheet, Relocate |
| (43) | Line, Thermoplastic, Broken, Yellow, 4 in. | (59) | Sign, Sheet, Remove & Reset |
| | | (72) | Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in. |

SPRINT

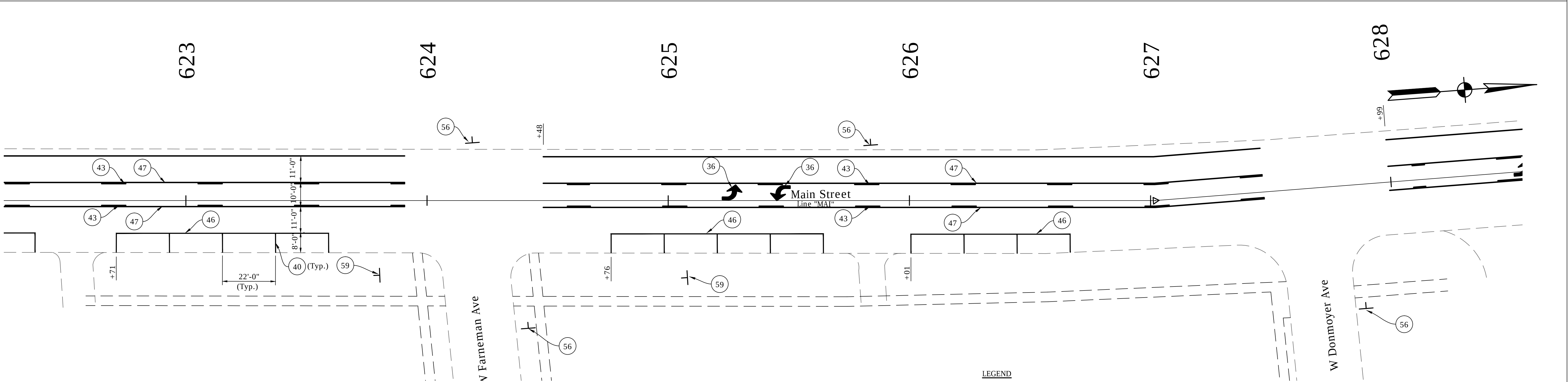
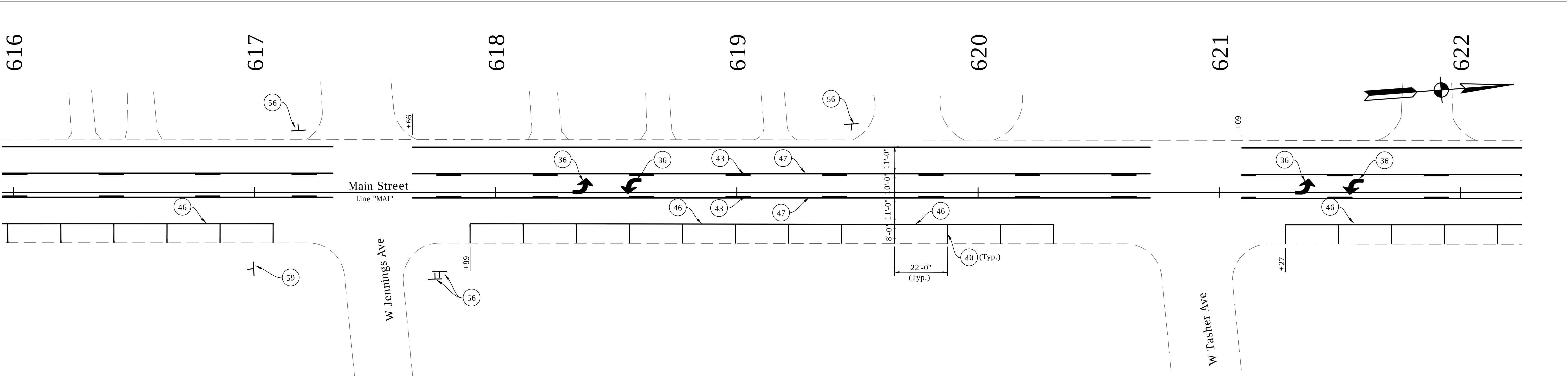
\$USER \$DATES \$TIMES \$FILES\$



RECOMMENDED FOR APPROVAL	<i>Harry C. Fox</i>	01/07/2016
DESIGNED:	HCF III	DATE
CHECKED:	JG	DESIGN ENGINEER
		BRD
		JG

CITY OF SOUTH BEND
PAVEMENT MARKINGS & SIGNING DETAILS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	17 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)



NOTES:

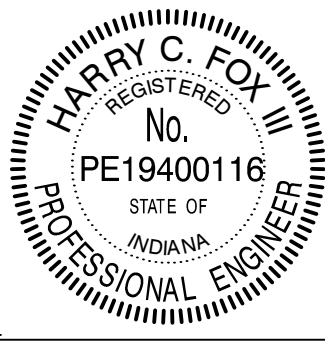
See Traffic Signal Detail Sheets For Additional Signage on Signal Poles.

Existing Signs to Remain in Place, Unless Otherwise Noted.

All Stationing Described from Line "MAI", Except as Noted.

- LEGEND**
- | | | | |
|----|---|----|--|
| 34 | Pavement Message Markings, Thermoplastic, Bike Symbol, 72 in. | 45 | Line, Thermoplastic, Solid, White, 6 in. |
| 35 | Pavement Message Markings, Thermoplastic, Arrow, 72 in. | 46 | Line, Thermoplastic, Solid, White, 4 in. |
| 36 | Pavement Message Markings, Thermoplastic, Lane Indication Arrow | 47 | Line, Thermoplastic, Solid, Yellow, 4 in. |
| 38 | Transverse Markings, Thermoplastic, Stop Line, White, 24 in. | 55 | Pavement Message Markings, Thermoplastic, Share the Road |
| 40 | Parallel Parking Spaces, See Detail | 56 | Sign, Sheet, and Supports, Remove |
| 41 | Line, Thermoplastic, Dotted, White, 6 in. (2' Line, 2' Gap) | 58 | Sign, Sheet, Relocate |
| 43 | Line, Thermoplastic, Broken, Yellow, 4 in. | 59 | Sign, Sheet, Remove & Reset |
| | | 72 | Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in. |

DATE: 01/07/2016
BY: HCF III

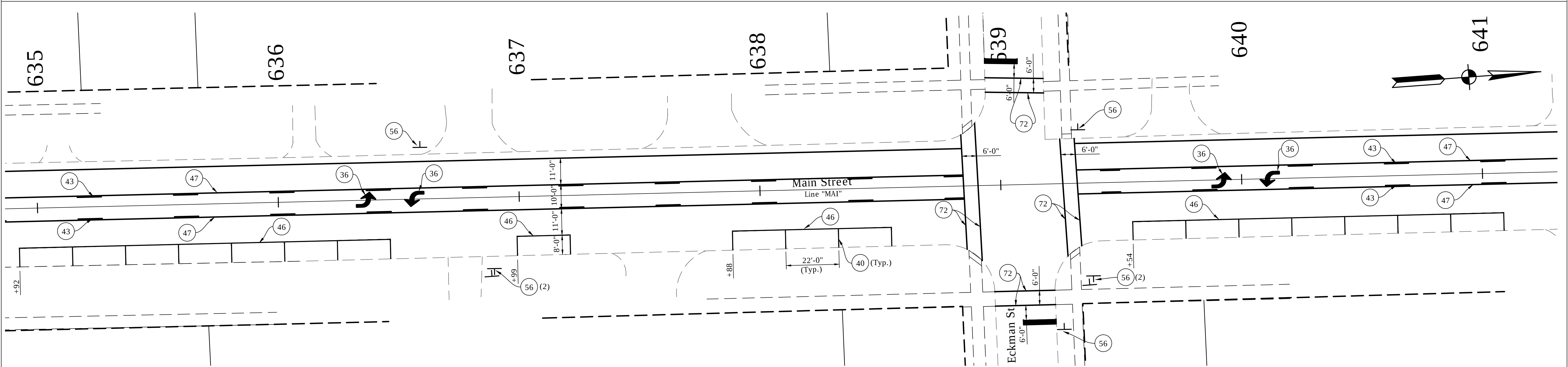
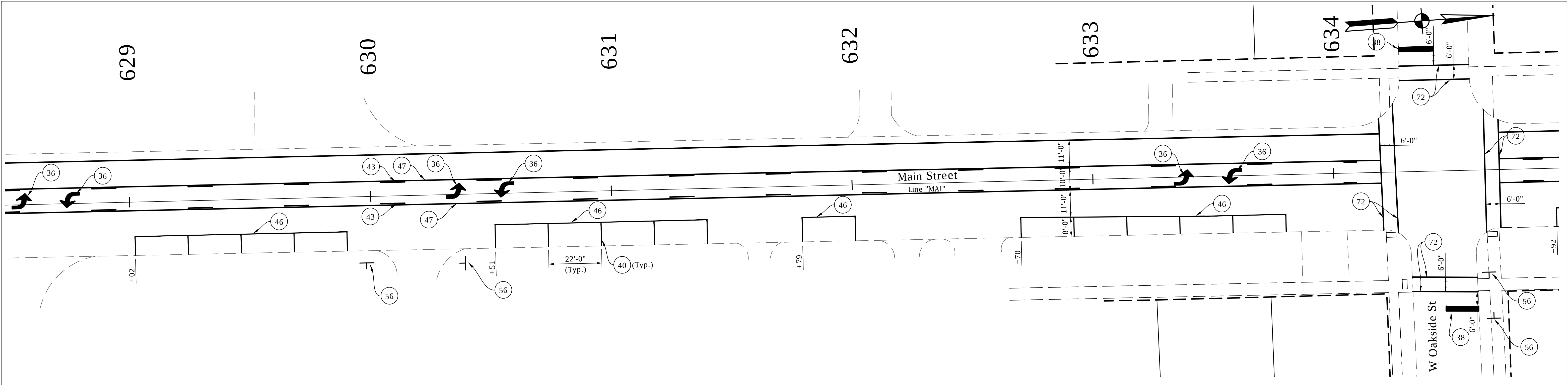


RECOMMENDED FOR APPROVAL		01/07/2016	
DESIGN ENGINEER		DATE	
DESIGNED: _____	HCF III	DRAWN: _____	BRD
CHECKED: _____	JG	CHECKED: _____	JG

CITY OF SOUTH BEND
PAVEMENT MARKINGS & SIGNING DETAILS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	18 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

\$USER \$DATES \$TIMES \$FILEAS



NOTES:

See Traffic Signal Detail Sheets For Additional Signage on Signal Poles.

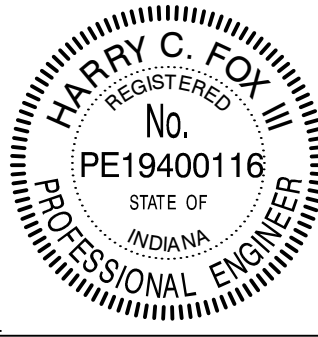
Existing Signs to Remain in Place, Unless Otherwise Noted.

All Stationing Described from Line "MAI", Except as Noted.

- LEGEND
- | | | | |
|----|---|----|--|
| 34 | Pavement Message Markings, Thermoplastic, Bike Symbol, 72 in. | 45 | Line, Thermoplastic, Solid, White, 6 in. |
| 35 | Pavement Message Markings, Thermoplastic, Arrow, 72 in. | 46 | Line, Thermoplastic, Solid, White, 4 in. |
| 36 | Pavement Message Markings, Thermoplastic, Lane Indication Arrow | 47 | Line, Thermoplastic, Solid, Yellow, 4 in. |
| 38 | Transverse Markings, Thermoplastic, Stop Line, White, 24 in. | 55 | Pavement Message Markings, Thermoplastic, Share the Road |
| 40 | Parallel Parking Spaces, See Detail | 56 | Sign, Sheet, and Supports, Remove |
| 41 | Line, Thermoplastic, Dotted, White, 6 in. (2' Line, 2' Gap) | 58 | Sign, Sheet, Relocate |
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| | | 72 | Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in. |

CITY OF SOUTH BEND

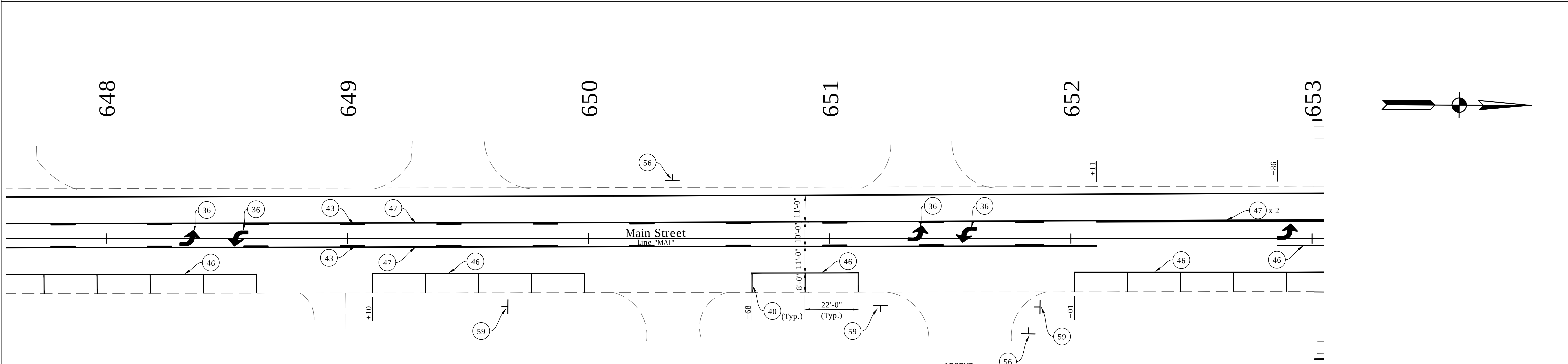
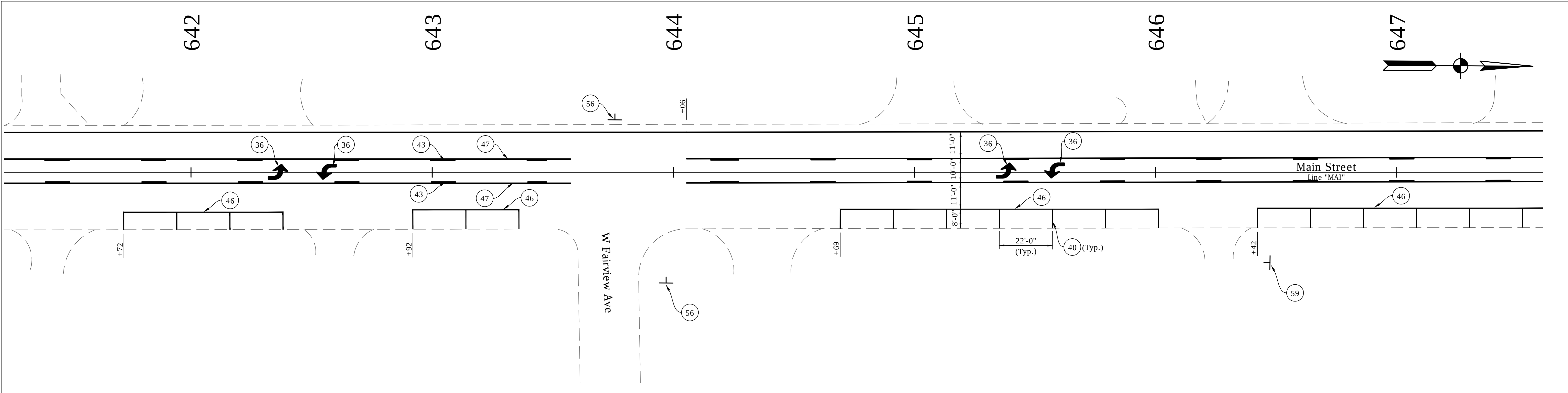
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RECOMMENDED FOR APPROVAL		01/07/2016	
DESIGN ENGINEER		DATE	
DESIGNED: _____	HCF III	DRAWN: _____	BRD
CHECKED: _____	JG	CHECKED: _____	JG

CITY OF SOUTH BEND
PAVEMENT MARKINGS & SIGNING DETAILS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	19 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)



NOTES:

See Traffic Signal Detail Sheets For Additional Signage on Signal Poles.

Existing Signs to Remain in Place, Unless Otherwise Noted.

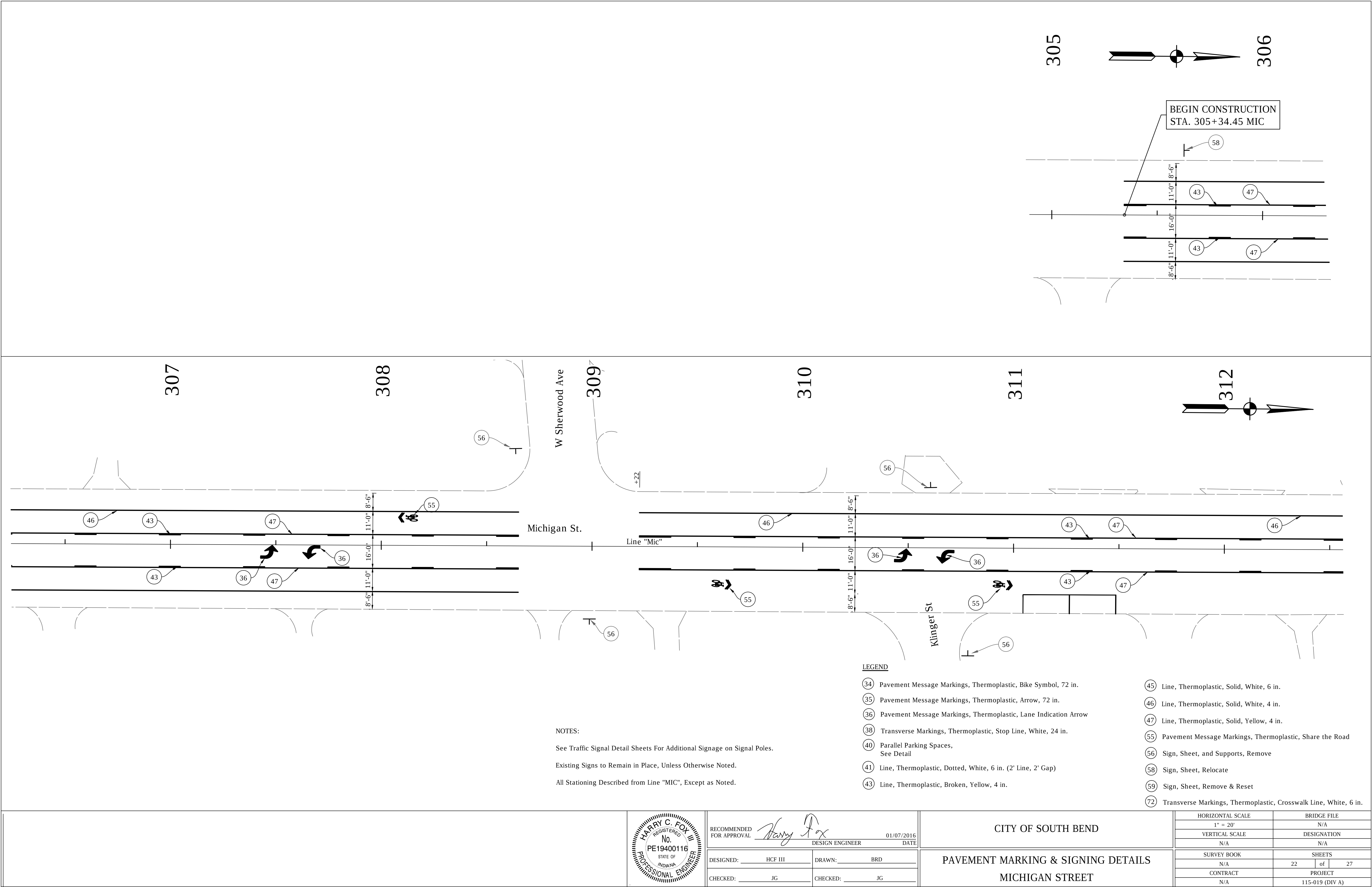
All Stationing Described from Line "MAI", Except as Noted.

- LEGEND**
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 - 41 Line, Thermoplastic, Dotted, White, 6 in. (2' Line, 2' Gap)
 - 43 Line, Thermoplastic, Broken, Yellow, 4 in.
 - 45 Line, Thermoplastic, Solid, White, 6 in.
 - 46 Line, Thermoplastic, Solid, White, 4 in.
 - 47 Line, Thermoplastic, Solid, Yellow, 4 in.
 - 55 Pavement Message Markings, Thermoplastic, Share the Road
 - 56 Sign, Sheet, and Supports, Remove
 - 58 Sign, Sheet, Relocate
 - 59 Sign, Sheet, Remove & Reset
 - 72 Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

CITY OF SOUTH BEND

		RECOMMENDED FOR APPROVAL <i>Harry Fox</i> 01/07/2016 DESIGN ENGINEER DATE	CITY OF SOUTH BEND	HORIZONTAL SCALE		BRIDGE FILE	
				1" = 20'		N/A	
				VERTICAL SCALE		DESIGNATION	
				N/A		N/A	
		DESIGNED: HCF III CHECKED: JG	DRAWN: BRD CHECKED: JG	PAVEMENT MARKINGS & SIGNING DETAILS			
				MAIN STREET			
				SURVEY BOOK			
				N/A		20	of
CONTRACT							
N/A				PROJECT			
N/A				115-019 (DIV A)			

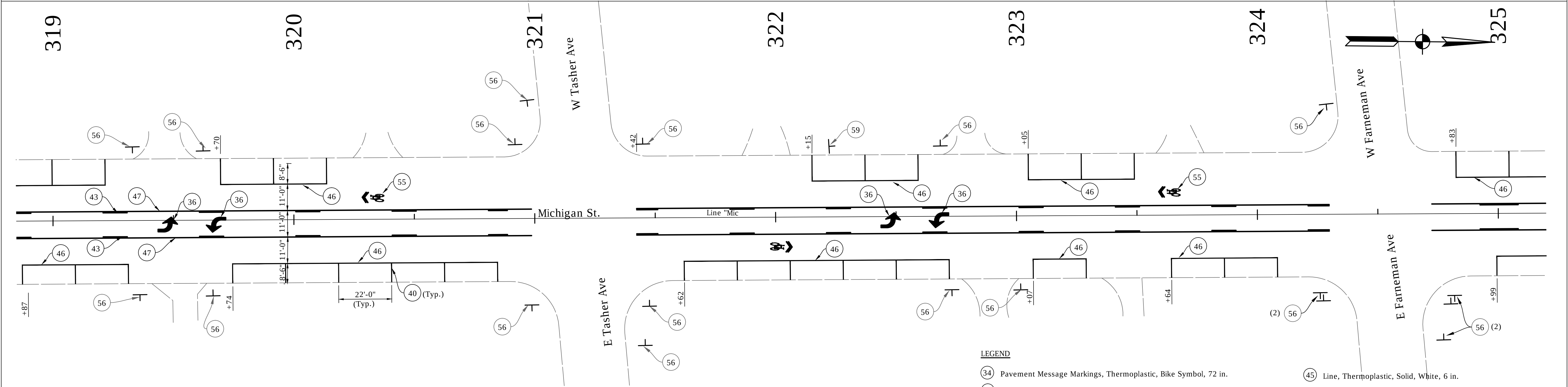
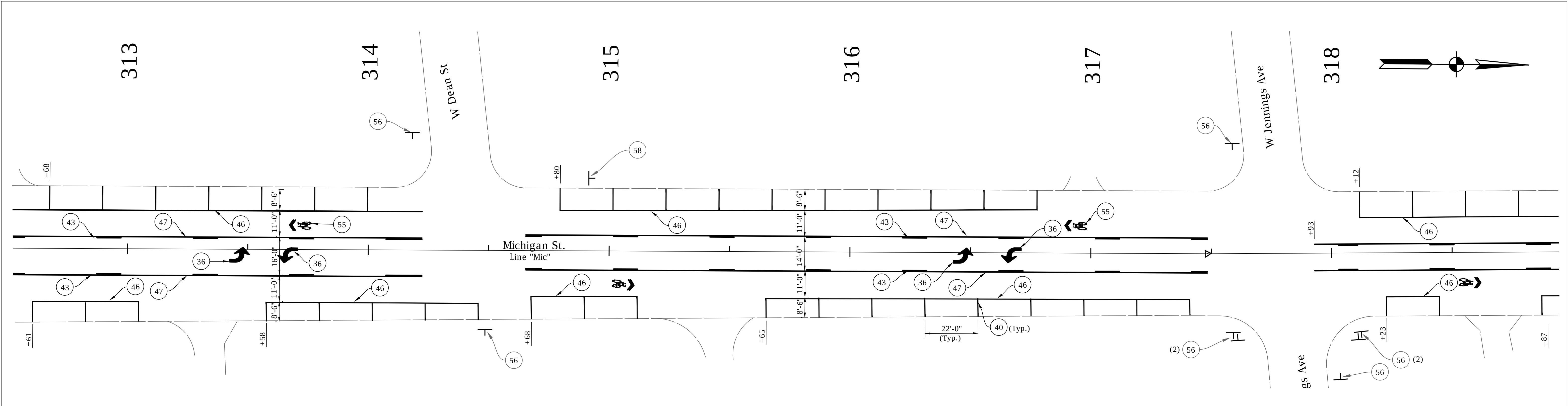
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RECOMMENDED FOR APPROVAL	<i>Harry Fox</i>	01/07/2016
	DESIGN ENGINEER	DATE
DESIGNED:	HCF III	DRAWN: BRD
CHECKED:	JG	CHECKED: JG

CITY OF SOUTH BEND
PAVEMENT MARKING & SIGNING DETAILS
MICHIGAN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	22 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)



NOTES:

See Traffic Signal Detail Sheets For Additional Signage on Signal Poles.

Existing Signs to Remain in Place, Unless Otherwise Noted.

All Stationing Described from Line "MIC", Except as Noted.

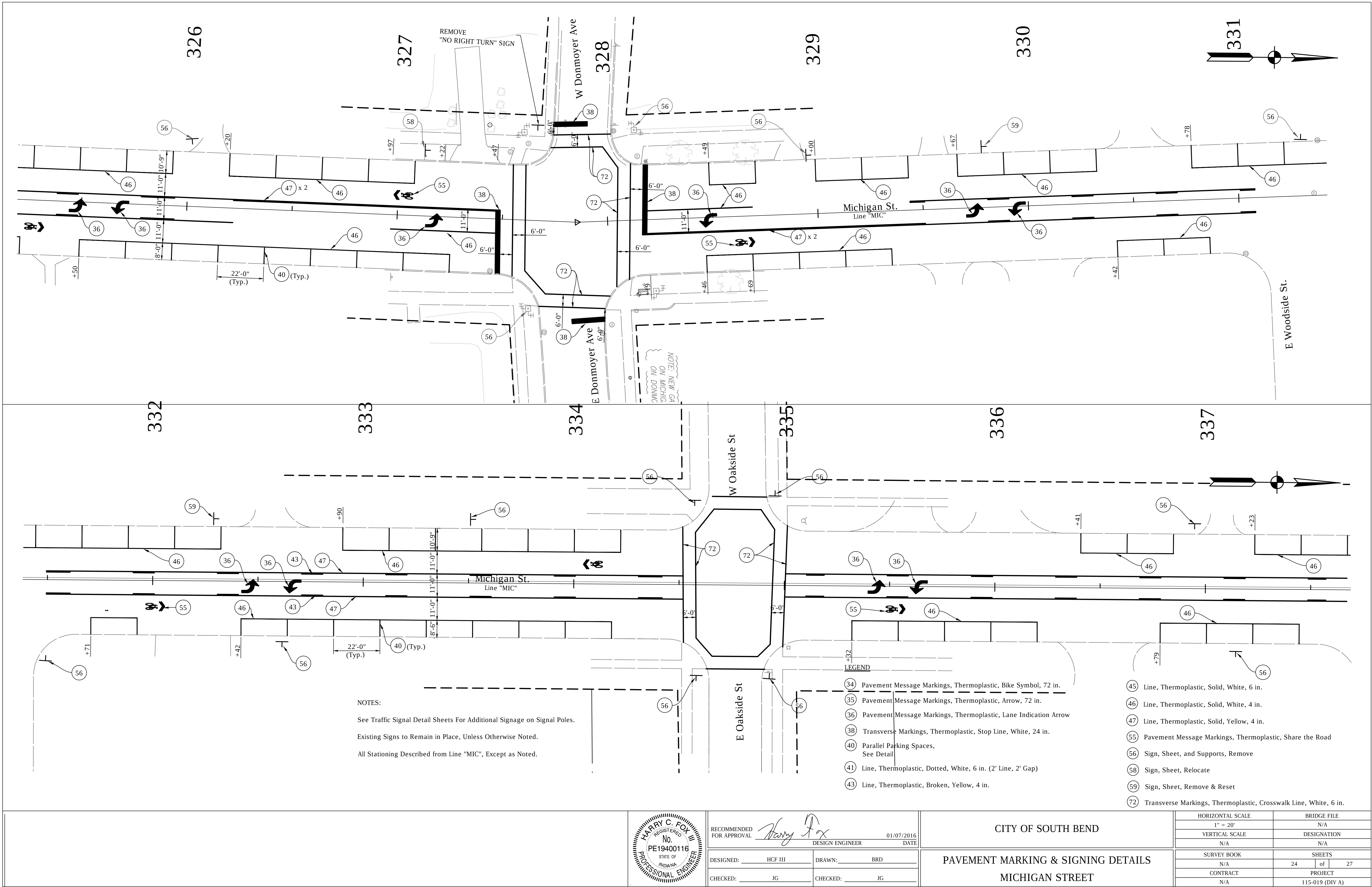
- LEGEND**
- 34 Pavement Message Markings, Thermoplastic, Bike Symbol, 72 in.
 - 35 Pavement Message Markings, Thermoplastic, Arrow, 72 in.
 - 36 Pavement Message Markings, Thermoplastic, Lane Indication Arrow
 - 38 Transverse Markings, Thermoplastic, Stop Line, White, 24 in.
 - 40 Parallel Parking Spaces, See Detail
 - 41 Line, Thermoplastic, Dotted, White, 6 in. (2' Line, 2' Gap)
 - 43 Line, Thermoplastic, Broken, Yellow, 4 in.
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 - 47 Line, Thermoplastic, Solid, Yellow, 4 in.
 - 55 Pavement Message Markings, Thermoplastic, Share the Road
 - 56 Sign, Sheet, and Supports, Remove
 - 58 Sign, Sheet, Relocate
 - 59 Sign, Sheet, Remove & Reset
 - 72 Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

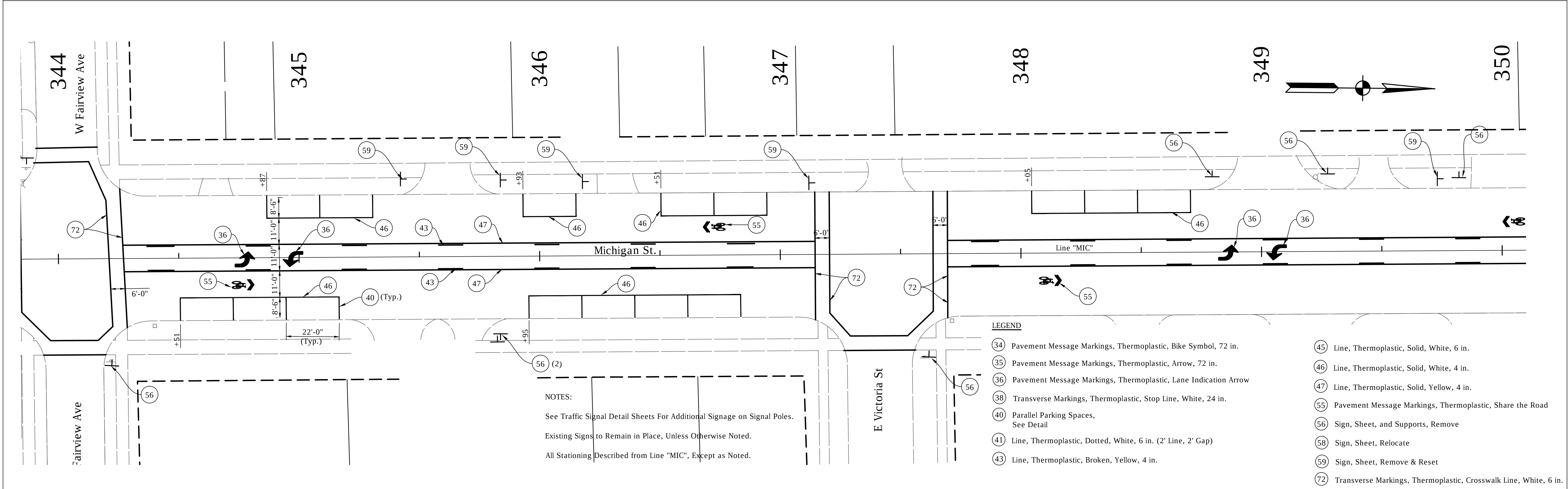
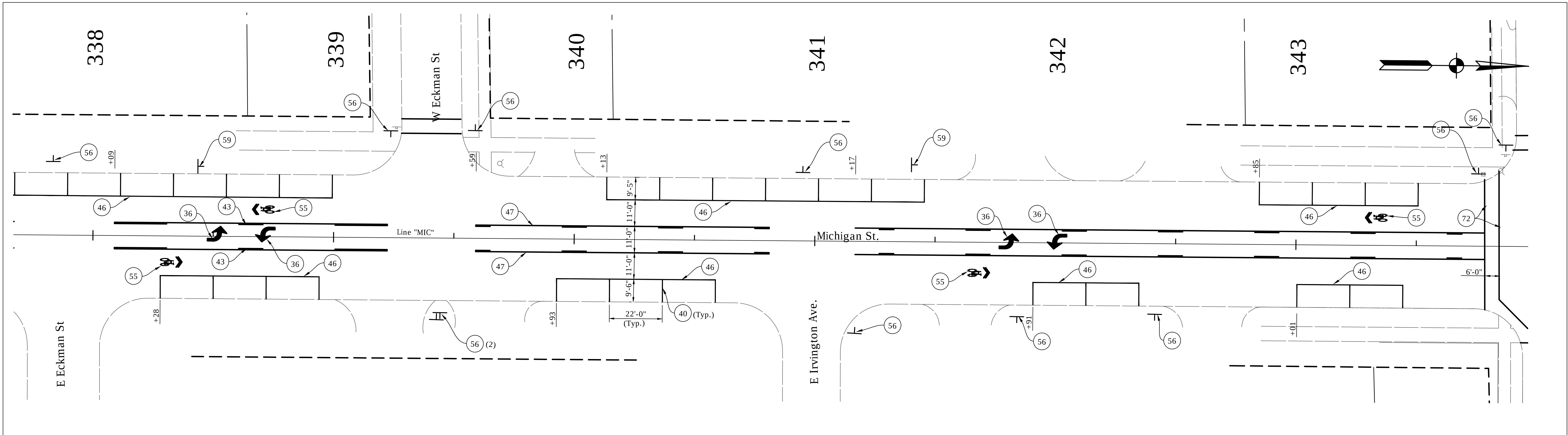


RECOMMENDED FOR APPROVAL	<i>Harry Fox</i>	01/07/2016
	DESIGN ENGINEER	DATE
DESIGNED:	HCF III	DRAWN: BRD
CHECKED:	JG	CHECKED: JG

CITY OF SOUTH BEND
PAVEMENT MARKING & SIGNING DETAILS
MICHIGAN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	23 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

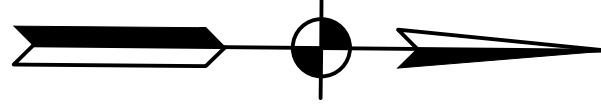
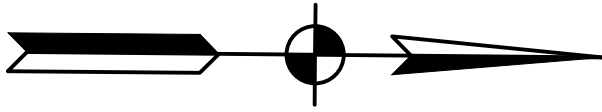
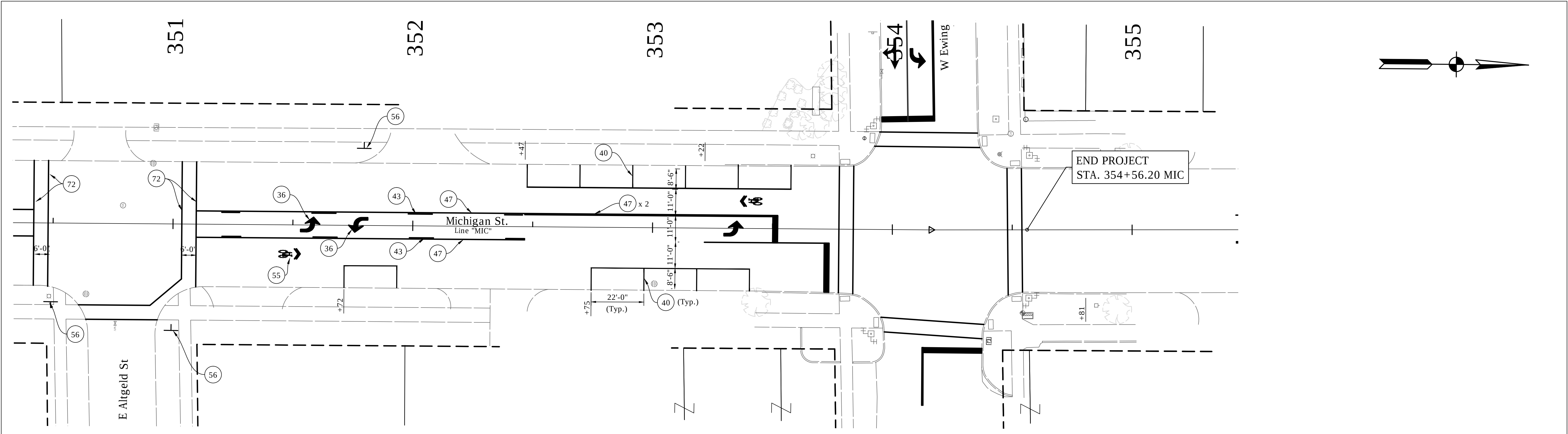




RECOMMENDED FOR APPROVAL	<i>Harry Fox</i>	DESIGN ENGINEER	01/07/2016	DATE
DESIGNED:	HCF III	DRAWN:	BRD	
CHECKED:	JG	CHECKED:	JG	

CITY OF SOUTH BEND		BRIDGE FILE	
		N/A	
		DESIGNATION	
		N/A	
SURVEY BOOK		SHEETS	
N/A		25	of 27
CONTRACT		PROJECT	
N/A		115-019 (DIV A)	

PAVEMENT MARKING & SIGNING DETAILS
MICHIGAN STREET



NOTES:

See Traffic Signal Detail Sheets For Additional Signage on Signal Poles.

Existing Signs to Remain in Place, Unless Otherwise Noted.

All Stationing Described from Line "MIC", Except as Noted.

- LEGEND**
- 34

Pavement Message Markings, Thermoplastic, Bike Symbol, 72 in.

35

Pavement Message Markings, Thermoplastic, Arrow, 72 in.

36

Pavement Message Markings, Thermoplastic, Lane Indication Arrow

38

Transverse Markings, Thermoplastic, Stop Line, White, 24 in.

40

Parallel Parking Spaces,
See Detail

41

Line, Thermoplastic, Dotted, White, 6 in. (2' Line, 2' Gap)

43

Line, Thermoplastic, Broken, Yellow, 4 in.

45

Line, Thermoplastic, Solid, White, 6 in.

46

Line, Thermoplastic, Solid, White, 4 in.

47

Line, Thermoplastic, Solid, Yellow, 4 in.

55

Pavement Message Markings, Thermoplastic, Share the Road

56

Sign, Sheet, and Supports, Remove

58

Sign, Sheet, Relocate

59

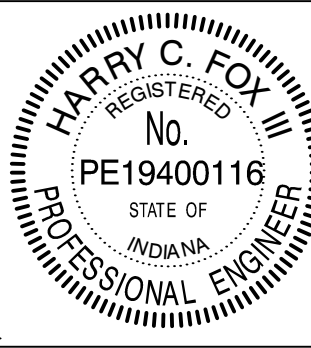
Sign, Sheet, Remove & Reset

72

Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

CITY OF SOUTH BEND

\$USER \$DATES \$TIMES \$FILEAS



RECOMMENDED FOR APPROVAL	<i>Harry Fox</i>	01/07/2016
	DESIGN ENGINEER	DATE
DESIGNED:	HCF III	DRAWN: BRD
CHECKED:	JG	CHECKED: JG

CITY OF SOUTH BEND
PAVEMENT MARKING & SIGNING DETAILS
MICHIGAN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	26 of 27
CONTRACT	PROJECT
N/A	115-019 (DIV A)

