UTILITIES

ELECTRIC

American Electric Power
Transmission Electric
700 Morrison Road
Gahanna, OH 432320
(614) 552-1893
Contact: Barbara Dunlap

MCI/Verizon
720 W. Henry Street
Indianapolis, IN 46225
(317) 685-8050
Contact: Chris Fowler

Infinity Fiber/Union Station/GAP
5520 W 76th Street
Inidianapolis, IN 46268
(317) 777-7583
Contact: Keith Hamm

Windstream Communications
30486 E 400 N
Strawn, IL 61775
(309) 838-0788
Contact: Jeff Taylor

Indiana Michigan Power-Distribution Electric
2929 Lathrop Street
South Bend, IN 46628
(574) 236-1658
Contact: Antonio Macias

TELEPHONE/COMMUNICATIONS

Level 3 Communications
1025 Eldorado Blvd.
Broomfield, CO 80021
(720) 888-7280
Contact: Michael Karacson

Sprint
400 W Grand Ave.
Elmhurt, IL 90216
(847) 737-1869
Contact: Gerry Crain

Rogers Telecom
4804 N 40th Street
Sheboygan, WI 53083
(920) 395-7125
Contact: Vicki Moran

Zayo Bandwidth
1710 Directors Row
Ft Wayne, IN 46808
(260) 570-5677
Contact: Jason Gilpin

Qwest/CenturyLink
13057 S. Monitor Ave.
Palos Heights, IL 60463
(708) 837-7927
Contact: Kevin Huff

AT&T-Distribution
307 S. Main Street
South Bend, IN 46601
(574) 237-8380
Contact: Dennis Bunch

AT&T-Transmission
110 N. Main Street
Culver, IN 46511
(574) 842-8830
Contact: Dean Norwich

St. Joe Valley Metronet
121 S. Michigan Street
South Bend, IN 46601
(574) 360-7812
Contact: Ben Hudson

US Signal
7020 Southbelt Dr. SE
Caledonia, MI 49315
(614) 483-6350
Contact: Rick Andricks

GAS & PIPELINE

NIPSCO
1039 Pennsylvania
South Bend, IN 46601
(574) 284-2214
Contact: Phil Griffin

CABLE/TV

Comcast
1920 McKinley Avenue
Mishawaka, IN 46545
(847) 789-1039 ext. 71039
Contact: Jay Castello

SANITARY SEWER/WATER

City of South Bend-Sanitary
227 W. Jefferson Blvd.
South Bend, IN 46601
(574) 235-9251
Contact: Tony Mulnar

City of South Bend-Water
209 N. Main Street
South Bend, IN 46601
(574) 235-5633
Contact: Ed Herman

1

REVISIONS

SHEET NO.	DATE	REVISED
1 2,7,8,20,51,56,63-68,71,72,75-81,91, 96-100,102,107,138-155,156-161, 163-175,178-180,182,183,185-190,195-199 217,219,223,229,230,232-234,240,243	1/15/2016	Revised Elevations & Grades
91-1,91-2,91-3,91-4,91-5,107-1, 107-2,107-3,107-4,107-5,107-6, 107-7	1/15/2016	Added Sheets for Construction Elevation Details

GENERAL NOTES

**	All earth shoulders, median areas, and cut and fill slopes shall be plain or mulch seeded except where sodding is specified
	Contractor shall verify existing flowline elevations to set the appropriate sump depth.

** REPRESENTS GENERAL NOTES REQUIRED

INDEX

SHEET NO.	DRAWING INDEX
1	Title Sheet
2	Index and General Notes
3-4	Plan Index Location Maps
5-14	Typical Sections
15	Witnesses and Benchmarks
16-17	Geometric Tie-Up Details
18-47	Maintenance of Traffic Details
48-52	Plan Sheets - Main Street
53-58	Plan Sheets - Michigan Street & St. Joseph Street
59-60	Plan Sheets - Bronson Stret & LaSalle Avenue
61-62	Superelevation Transition Diagrams
63-74	Intersection Details - Main Street
75-85	Intersection Details - Michigan Street & St. Joseph Street
86	Miscellaneous Details
87	Paver Brick Detail
88-89	Structural Wall Details
90	Parking Bumpout Details
91-122	Curb Ramp & Spot Elevation Details
123-132	Demolition Plans
133-141	Landscaping Details
142-155	Traffic Signal Details - Main Street
156-177	Traffic Signal Details - Michigan Street & St. Joseph Street
178-184	Lighting Details
185-194	Pavement Marking & Signing Plans - Main Street
195-204	Pavement Marking & Signing Plans - Michigan Street & St. Joseph Street
205-221	Pavement Marking & Signing Plans - Sample Street, Bronson Street, Monroe Street, Western Avenue, Wayne Street, Jefferson Blvd., Washington Street, Colfax Avenue, LaSalle Avenue
222-223	Sign Summary Table
224	Patching Table
225-227	Erosion Control Tables
228-230	Summary of Quantities and Approach Tables
231-237	Structure Data Tables
238-239	Pipe Material Table
240-246	Cross Sections - Main Street & Bronson Street Reconstruction

PATRICK R. WOODEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

INDEX AND GENERAL NOTES

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	2 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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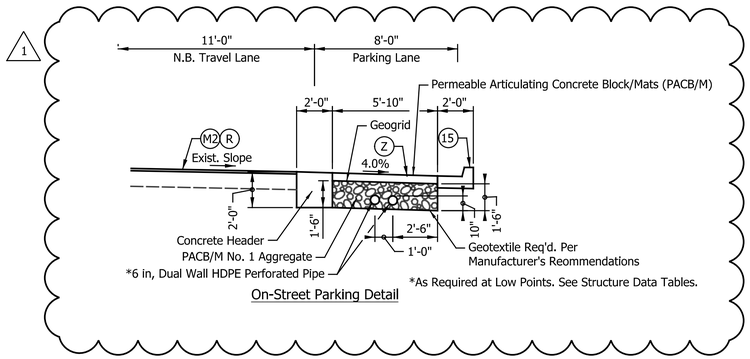
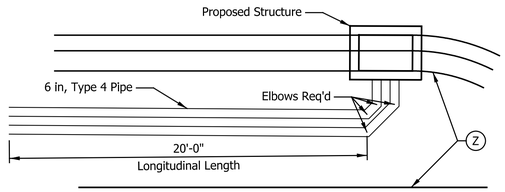
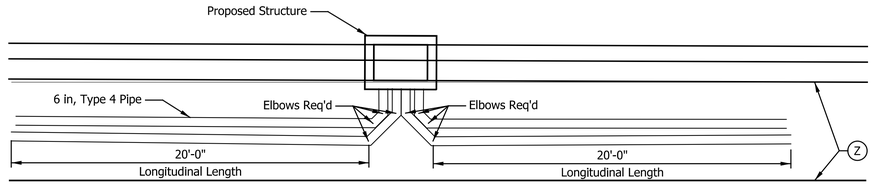


On-Street Parking Detail



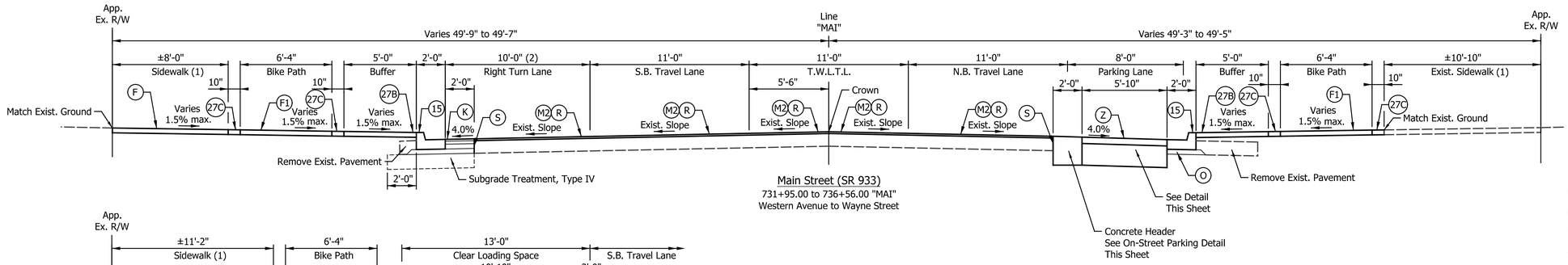
Single-Side Perforated Pipe Detail



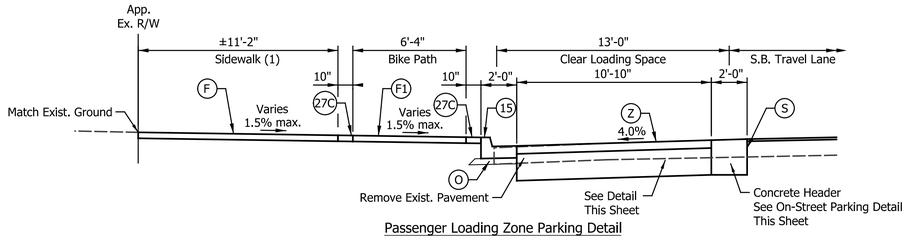
Dual-Side Perforated Pipe Detail

(1) See Plan Details for Curb Ramp Construction Information

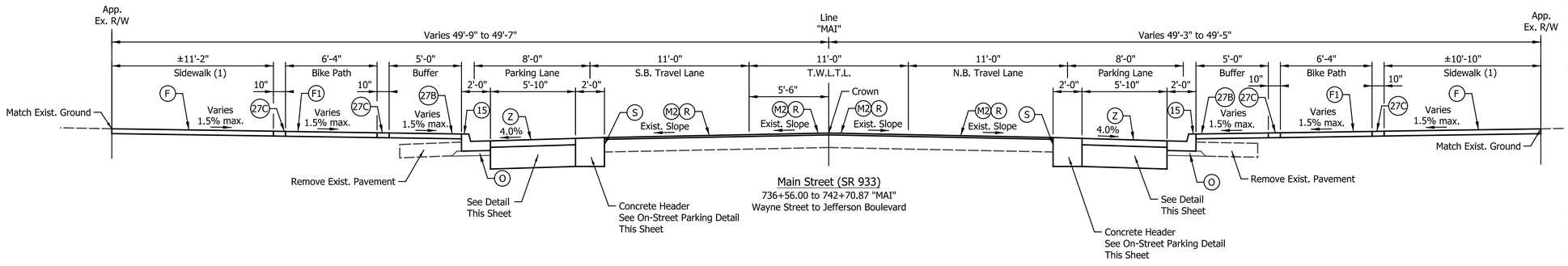
(2) Varies 10'-0" to 5'-10" from 736+00.00 to 736+30.00 "MAI"
Equals 5'-10" from 736+30.00 to 736+50.00 "MAI"



Main Street (SR 933)
731+95.00 to 736+56.00 "MAI"
Western Avenue to Wayne Street



Passenger Loading Zone Parking Detail
See Plan Sheets for Locations



Main Street (SR 933)
736+56.00 to 742+70.87 "MAI"
Wayne Street to Jefferson Boulevard

See Landscaping Detail Sheets for Decorative Brick Details.

LEGEND

14	Curb, Integral, Concrete
15	Combine Curb & Gutter, Type B (City of South Bend)
16	Combine Curb & Gutter, Type B, Inverted
17	Curb, Concrete
26	Sodding, Nursery
27	Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
27A	Brick, Decorative, 12"x12"
27B	Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
27C	Brick, Decorative, Permeable, 10"x10"
A	10" QC/QA-PCCP, on Subgrade Treatment Type IB
B	Center Curb, D, Concrete
F	Concrete, Sidewalk, 4"
F1	Concrete, Sidewalk, 5"
F3	PCCP, 4"
K	165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on Widening with HMA, Type D consisting of: 275 #/Syd HMA Intermediate, Type D on 330 #/Syd HMA Base, Type D on 440 #/Syd HMA Base, Type D
K1	Full Depth HMA Pavement consisting of: 165 #/Syd QC/QA-HMA, 2, 70, Surface, 9.5 mm on 275 #/Syd QC/QA-HMA, 2, 70, Inter., 19.0 mm on 330 #/Syd QC/QA-HMA, 2, 64, Base, 19.0 mm on 3 in. Compacted Aggregate, No. 53 Base
L	Landscaping Area
M	Milling, Asphalt, 1.5"
M1	Milling, Asphalt, Variable Depth
M2	Milling, Asphalt, 2.5"
O	3" Compacted Aggregate, No. 53 Base
R	165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm
S	Sawcut (Not a Pay Item)
Z	Full Depth Permeable Pavement

DATE	REVISION
1/15/2016	REV 1: Adjusted Permeable Pavement Detail Per Manufacturer's Recommendations

PATRICK K. WOOLEY REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: MRR

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

TYPICAL CROSS SECTIONS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	7 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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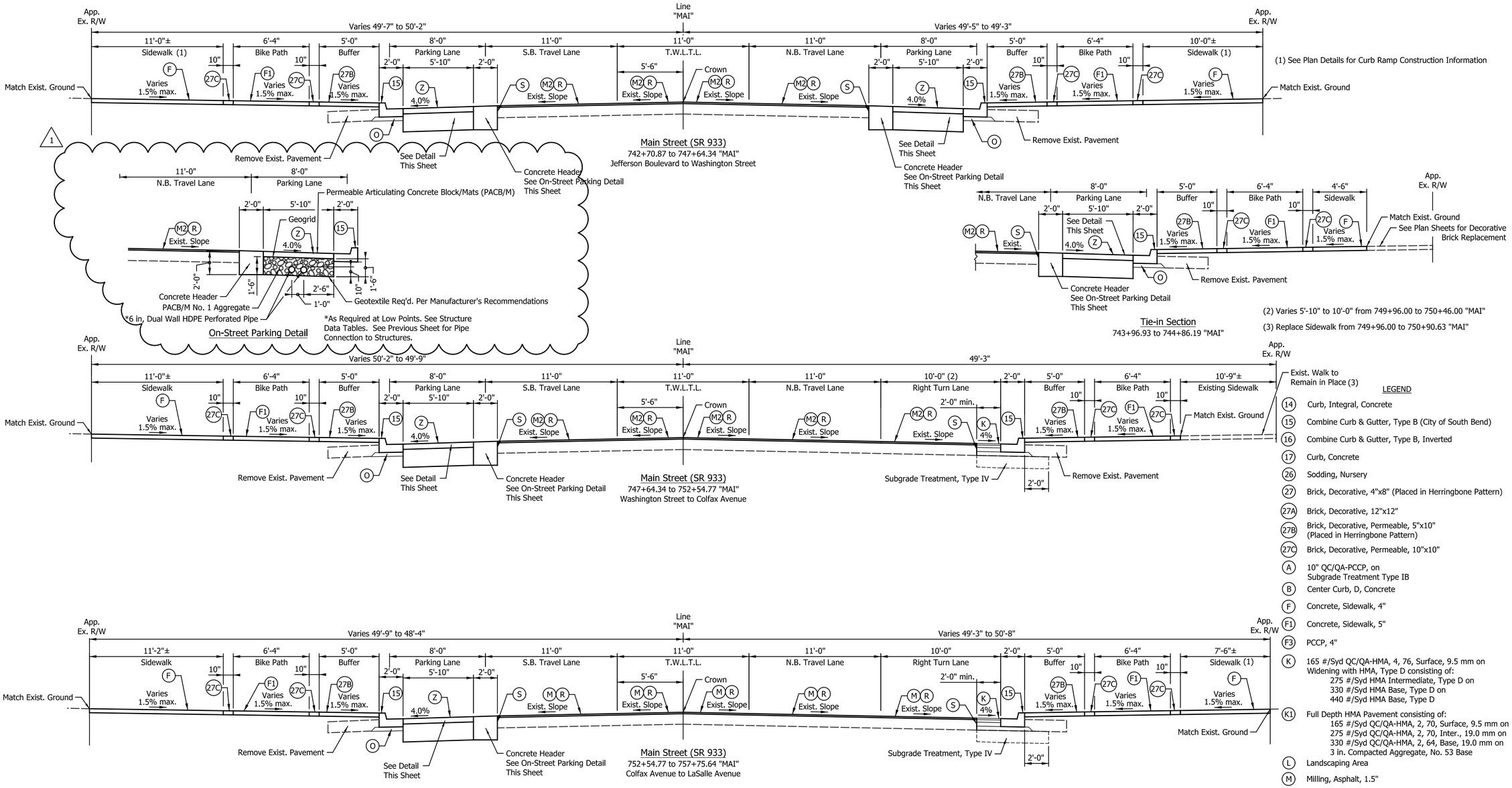

See Landscaping Detail Sheets for Decorative Brick Details.

LEGEND

14	Curb, Integral, Concrete
15	Combine Curb & Gutter, Type B (City of South Bend)
16	Combine Curb & Gutter, Type B, Inverted
17	Curb, Concrete
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27C	Brick, Decorative, Permeable, 10"x10"
A	10" QC/QA-PCCP, on Subgrade Treatment Type IB
B	Center Curb, D, Concrete
F	Concrete, Sidewalk, 4"
F1	Concrete, Sidewalk, 5"
F3	PCCP, 4"
K	165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on Widening with HMA, Type D consisting of: 275 #/Syd HMA Intermediate, Type D on 330 #/Syd HMA Base, Type D on 440 #/Syd HMA Base, Type D
K1	Full Depth HMA Pavement consisting of: 165 #/Syd QC/QA-HMA, 2, 70, Surface, 9.5 mm on 275 #/Syd QC/QA-HMA, 2, 70, Inter., 19.0 mm on 330 #/Syd QC/QA-HMA, 2, 64, Base, 19.0 mm on 3 in. Compacted Aggregate, No. 53 Base
L	Landscaping Area
M	Milling, Asphalt, 1.5"
M1	Milling, Asphalt, Variable Depth
M2	Milling, Asphalt, 2.5"
O	3" Compacted Aggregate, No. 53 Base
R	165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm
S	Sawcut (Not a Pay Item)
Z	Full Depth Permeable Pavement

DATE	REVISION
1/15/2016	REV 1: Adjusted Permeable Pavement Detail Per Manufacturer's Recommendations

PATRICK R. WOOLER REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: MRR

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

TYPICAL CROSS SECTIONS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	8 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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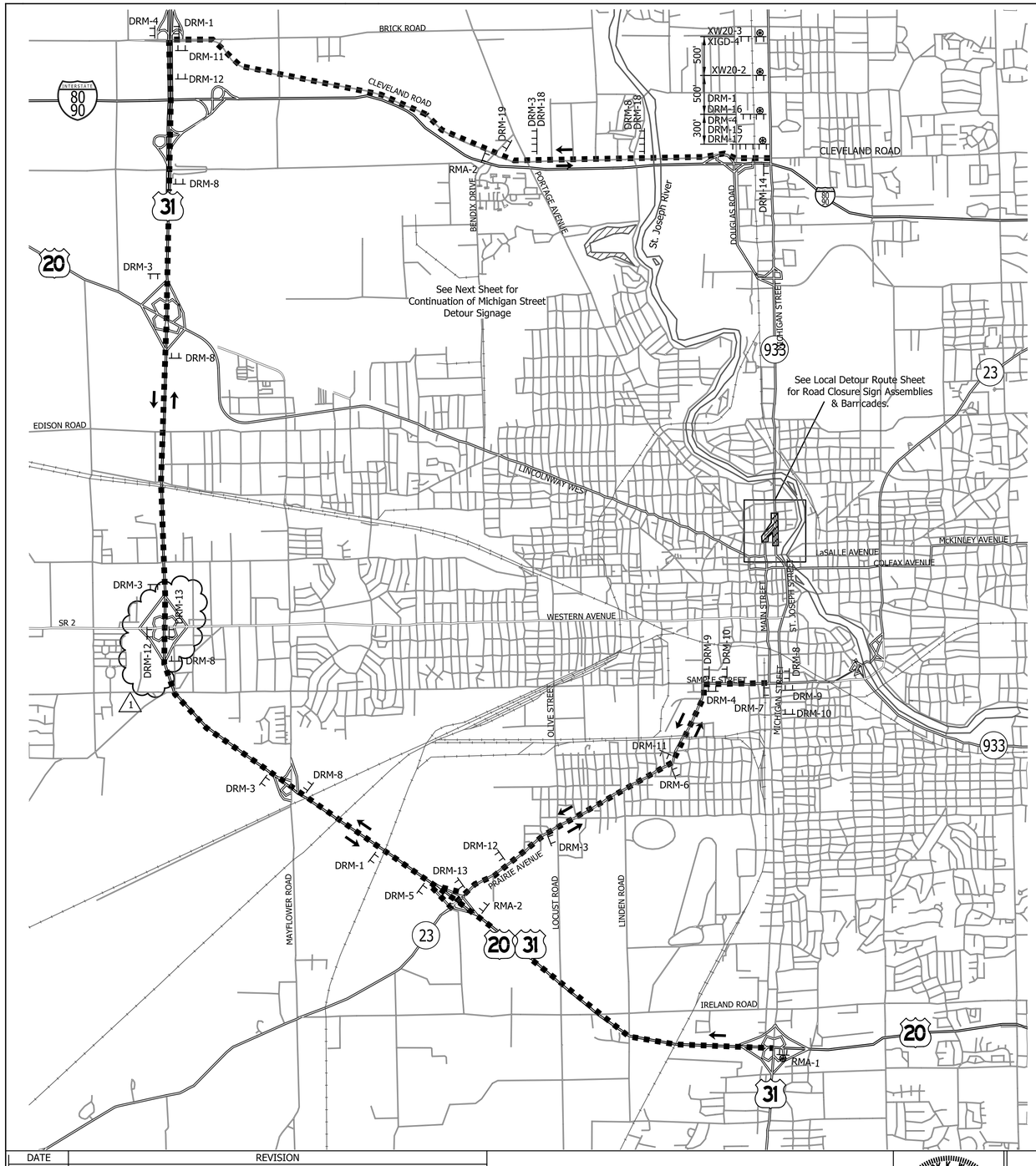

DRM-1

DRM-3

DRM-4

DRM-5

DRM-6

DRM-7

DRM-8

DRM-9

DRM-10

DRM-11

DRM-12

DRM-13

DRM-14

DRM-15

DRM-16

DRM-17

DRM-18

DRM-19

XW20-2
(48" x 48")

XW20-3
(48" x 48")

RMA-1

RMA-2

XIGD-4
(60" x 30")

LEGEND

- Road Closure Area
- Direction of Traffic
- Detour Route
- Construction Sign, Type "A"
- Type "A" Construction Warning Light
- Barricade

DATE	REVISION
1/15/2016	REV 1: Added DRM-12 & DRM-13 Signs

PATRICK R. WOOLER REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

TRAFFIC MAINTENANCE DETAILS
DETOUR ROUTE - SR 933

HORIZONTAL SCALE	BRIDGE FILE
1" = 2,000'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	20 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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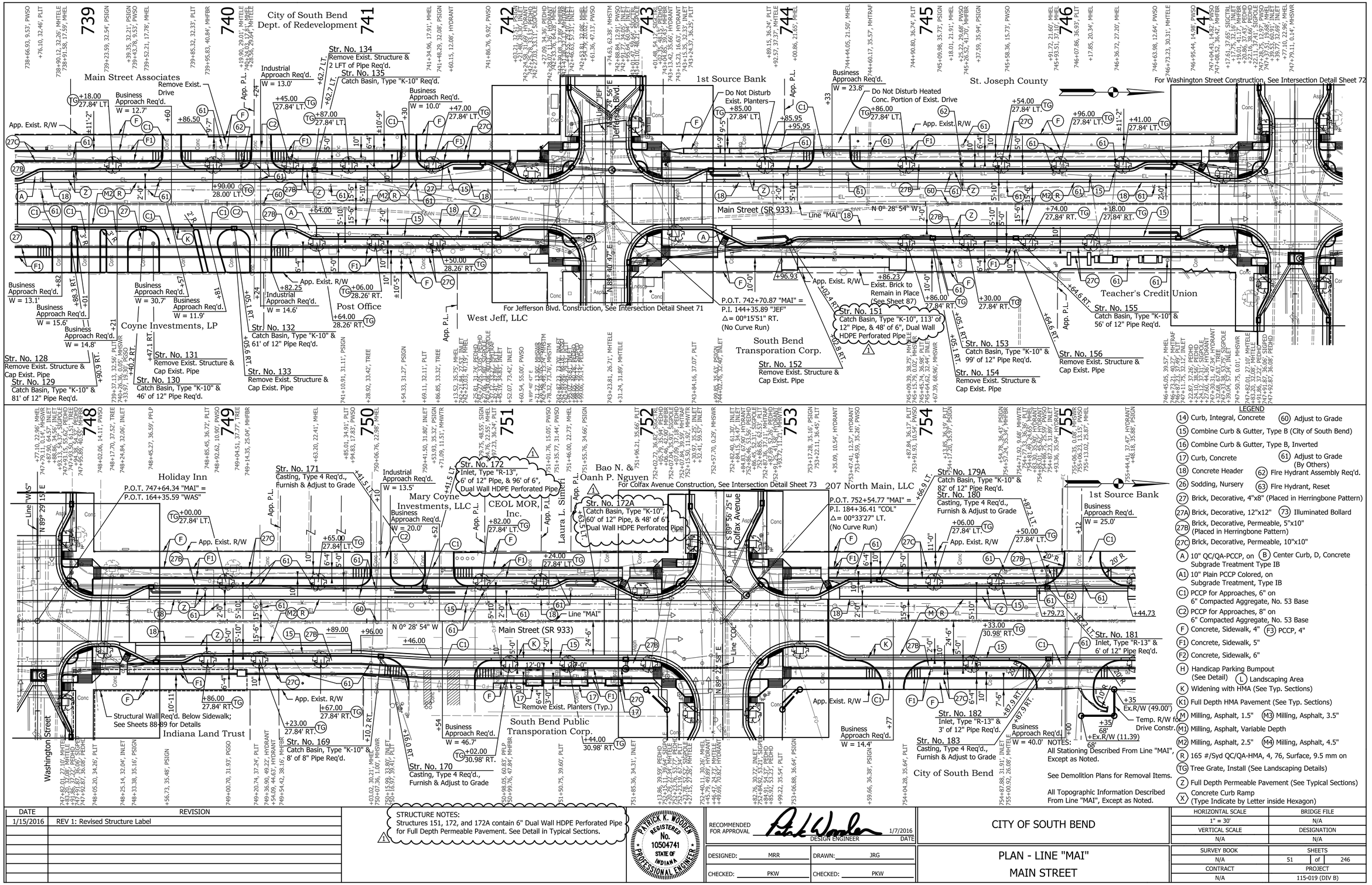

DATE	REVISION
1/15/2016	REV 1: Revised Structure Label

STRUCTURE NOTES:
Structures 151, 172, and 172A contain 6" Dual Wall HDPE Perforated Pipe for Full Depth Permeable Pavement. See Detail in Typical Sections.

PATRICK K. WOODEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

PLAN - LINE "MAI"
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	51 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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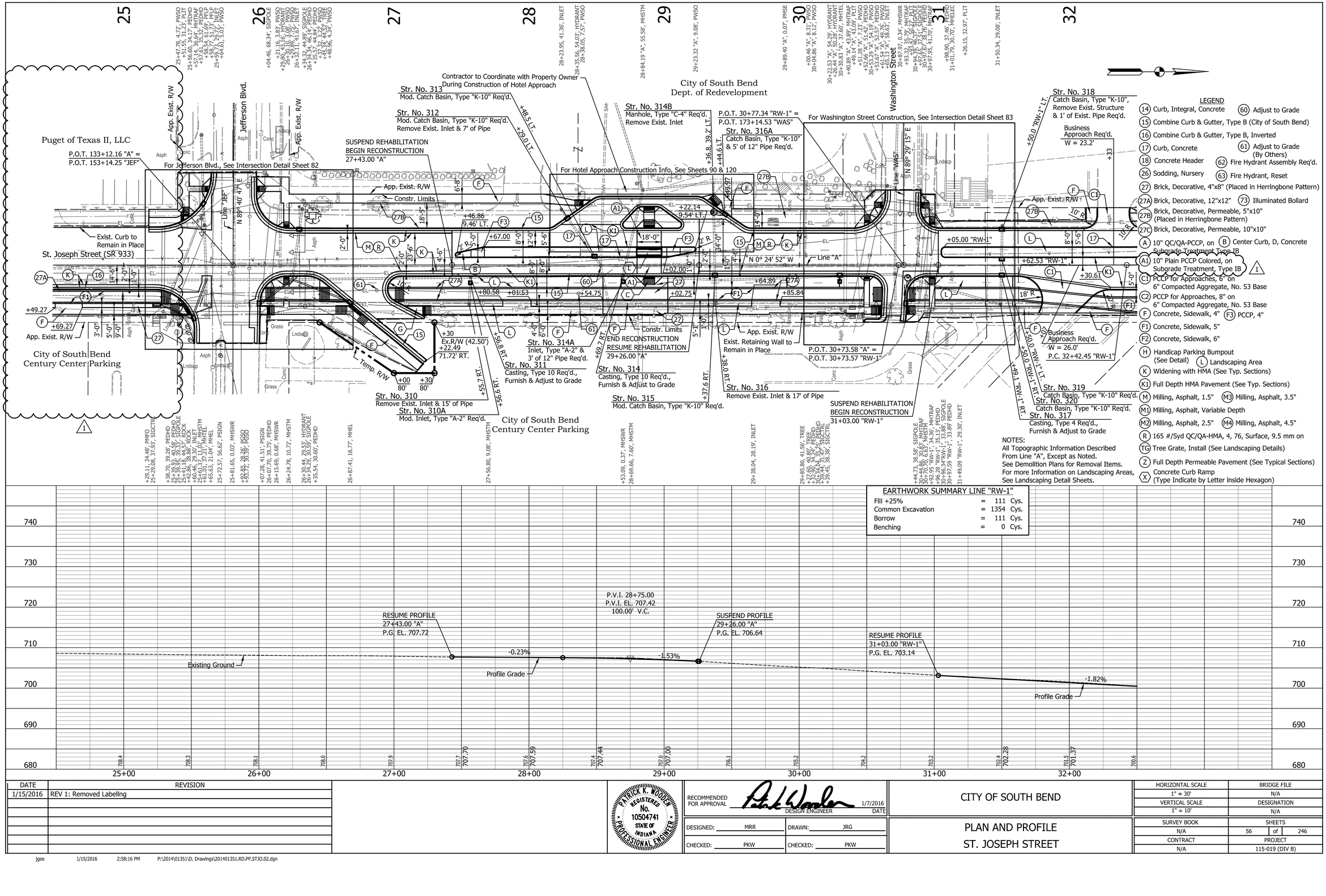
Puget of Texas II, LLC
P.O.T. 133+12.16 "A" =
P.O.T. 153+14.25 "JEF"
For Jefferson Blvd., See Intersection Detail Sheet 82
App. Exist. R/W
Jefferson Blvd.
Line "JEF"
N 89° 40' 47" E
Exist. Curb to Remain in Place
St. Joseph Street (SR 933)
App. Exist. R/W
City of South Bend Century Center Parking
Contractor to Coordinate with Property Owner During Construction of Hotel Approach
Str. No. 313
Mod. Catch Basin, Type "K-10" Req'd.
Str. No. 312
Mod. Catch Basin, Type "K-10" Req'd.
Remove Exist. Inlet & 7' of Pipe
SUSPEND REHABILITATION
BEGIN RECONSTRUCTION
27+43.00 "A"
Constr. Limits
For Hotel Approach Construction Info, See Sheets 90 & 120
Str. No. 314B
Manhole, Type "C-4" Req'd.
Remove Exist. Inlet
P.O.T. 30+77.34 "RW-1" =
P.O.T. 173+14.53 "WAS"
Str. No. 316A
Catch Basin, Type "K-10" & 5' of 12" Pipe Req'd.
For Washington Street Construction, See Intersection Detail Sheet 83
Washington Street
Line "WAS"
N 89° 29' 15" E
Str. No. 318
Catch Basin, Type "K-10", Remove Exist. Structure & 1' of Exist. Pipe Req'd.
Business Approach Req'd.
W = 23.2'
Line "A"
N 0° 24' 52" W
+05.00 "RW-1"
+62.53 "RW-1"
+50.0 "RW-1" LT.
+50.0 "RW-1" RT.
+49.1 "RW-1" RT.
Str. No. 319
Catch Basin, Type "K-10" Req'd.
Str. No. 320
Catch Basin, Type "K-10" Req'd.
Str. No. 317
Casting, Type 4 Req'd., Furnish & Adjust to Grade
Business Approach Req'd.
W = 26.0'
P.C. 32+42.45 "RW-1"
Str. No. 310
Remove Exist. Inlet & 15' of Pipe
Str. No. 310A
Mod. Inlet, Type "A-2" Req'd.
Temp. R/W
Str. No. 311
Casting, Type 10 Req'd., Furnish & Adjust to Grade
Str. No. 314A
Inlet, Type "A-2" & 3' of 12" Pipe Req'd.
RESUME REHABILITATION
29+26.00 "A"
Str. No. 314
Casting, Type 10 Req'd., Furnish & Adjust to Grade
Str. No. 315
Mod. Catch Basin, Type "K-10" Req'd.
Str. No. 316
Remove Exist. Inlet & 17' of Pipe
Exist. Retaining Wall to Remain in Place
P.O.T. 30+73.58 "A" =
P.O.T. 30+73.57 "RW-1"
SUSPEND REHABILITATION
BEGIN RECONSTRUCTION
31+03.00 "RW-1"
City of South Bend
Dept. of Redevelopment
Z
SHA
Grass
Asph
Conc
Lndscp
Bridge
Curb
Fence
EL
Temp. R/W
+48.5 LT.
+29.0 LT.
+36.8 39.2' LT.
+44.6 LT.
+49.97
+67.00
+46.86
9.46' LT.
+22.14
9.54' LT.
+80.58
+01.53
+54.75
+02.00
+02.75
+64.89
+85.84
+69.7 RT.
+80.8 RT.
+37.6 RT.
+55.7 RT.
+56.9 RT.
+68.8 RT.
+30
Ex.R/W (42.50')
+22.49
71.72' RT.
+00
80'
+30
80'
+33
+30.61
+49.27
+69.27
3'-0"
5'-0"
9'-0"
14'-6"
2'-0"
11'-0"
2'-0"
23'-6"
4'-6"
18'-0"
34'-0"
1'-0"
4'-6"
2'-0"
5'-6"
8'-0"
5'-0"
18' R.
10' R.
2 R-5'-0"
2 R-2'-0"
6'-8"
18'-5"
8'-0"
5'-6"
5'-0"
1'-0"
2'-0"
10' R.
18' R.
+0.00 "RW-1"
+0.00 "RW-1" LT.
+0.00 "RW-1" RT.

668

667

App. ℄

App. Exist. R/W

App. Exist. R/W

William A. Geyer

SHN

S00°48'44"W

Line MAI
N00°52'49"W

Main St

P.I. Sta. 21+12.21 CAL
Δ = 0°07'15" Rt.
(No Curve Run)

P.I. Sta. 667+08.88 MAI
Δ = 0°04'05" Rt.
(No Curve Run)

Line CAL
N88°50'47"E

W Calvert St
N88°58'02"E

+57.66 "CAL"
16.66' LT.

+59.11 "CAL"
16.63' LT.

+62.18 "CAL"
16.70' RT.

+74.89
22.92' RT.

+67.76
21.77' RT.

Exist. Curb Ramps
to Remain in Place

2'-0"

R25'

Constr. Limits

App. ℄

App. Exist. R/W

Elvis E. Balentine

App. Exist. R/W

App. Exist. R/W

App. Exist. R/W

General Sheet
Metal Works, INC

General Sheet
Metal Works, INC

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)

DATE	REVISION

HARRY C. FOX III
REGISTERED
No. PE19400116
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

CHECKED: JG | CHECKED: JG

CITY OF SOUTH BEND

INTERSECTION DETAILS
MAIN ST. AT CALVERT ST.

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	63 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\CONST DET\north\
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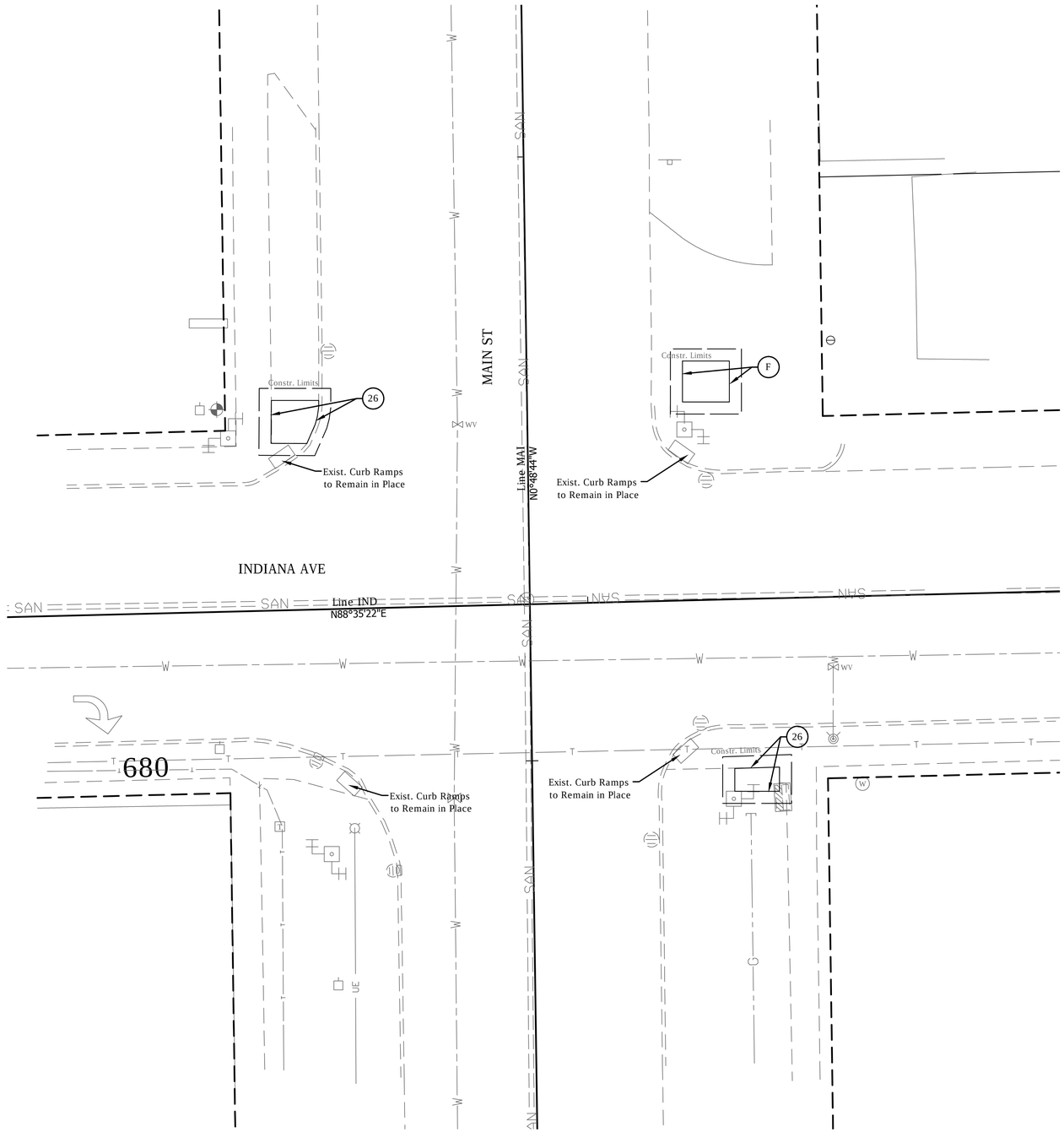
DIMSCALE.....1"DRAW"=10
PLOTTED BY.....Brian Rhodes
DATE.....Jan 14,2016 - 8:16pm



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)

DATE	REVISION

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

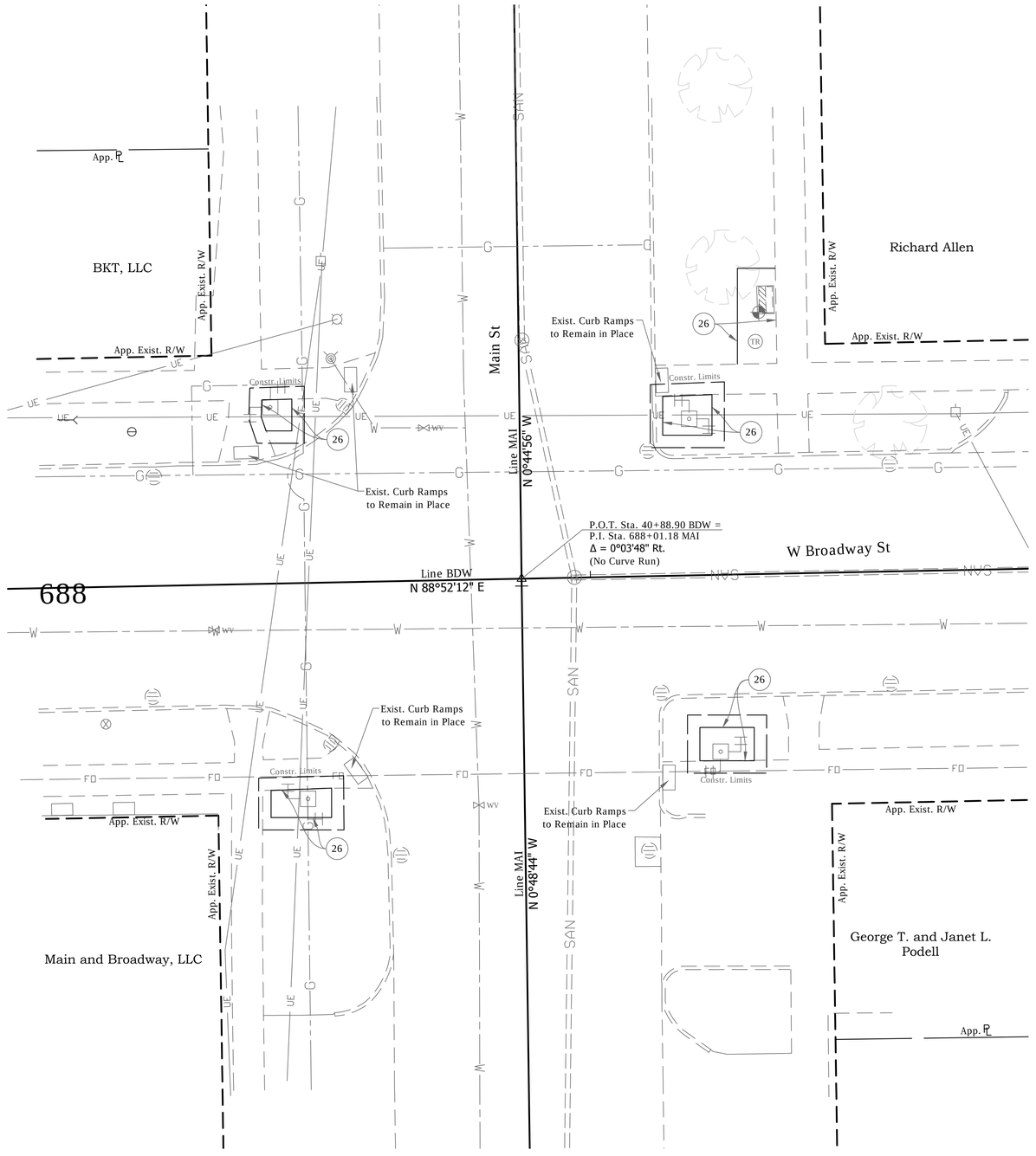
CHECKED: JG | CHECKED: JG

CITY OF SOUTH BEND

INTERSECTION DETAILS
MAIN ST. AT INDIANA AVE.

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	64 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\CONST DET\north\
FILE.....3329 CD Main. - Indiana.dwg
DISSCALE.....1 HTSCALE.....10
PLOTTED BY.....Brad Dillon
DATE.....Jan 14,2016 - 8:17pm



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)

DATE	REVISION

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

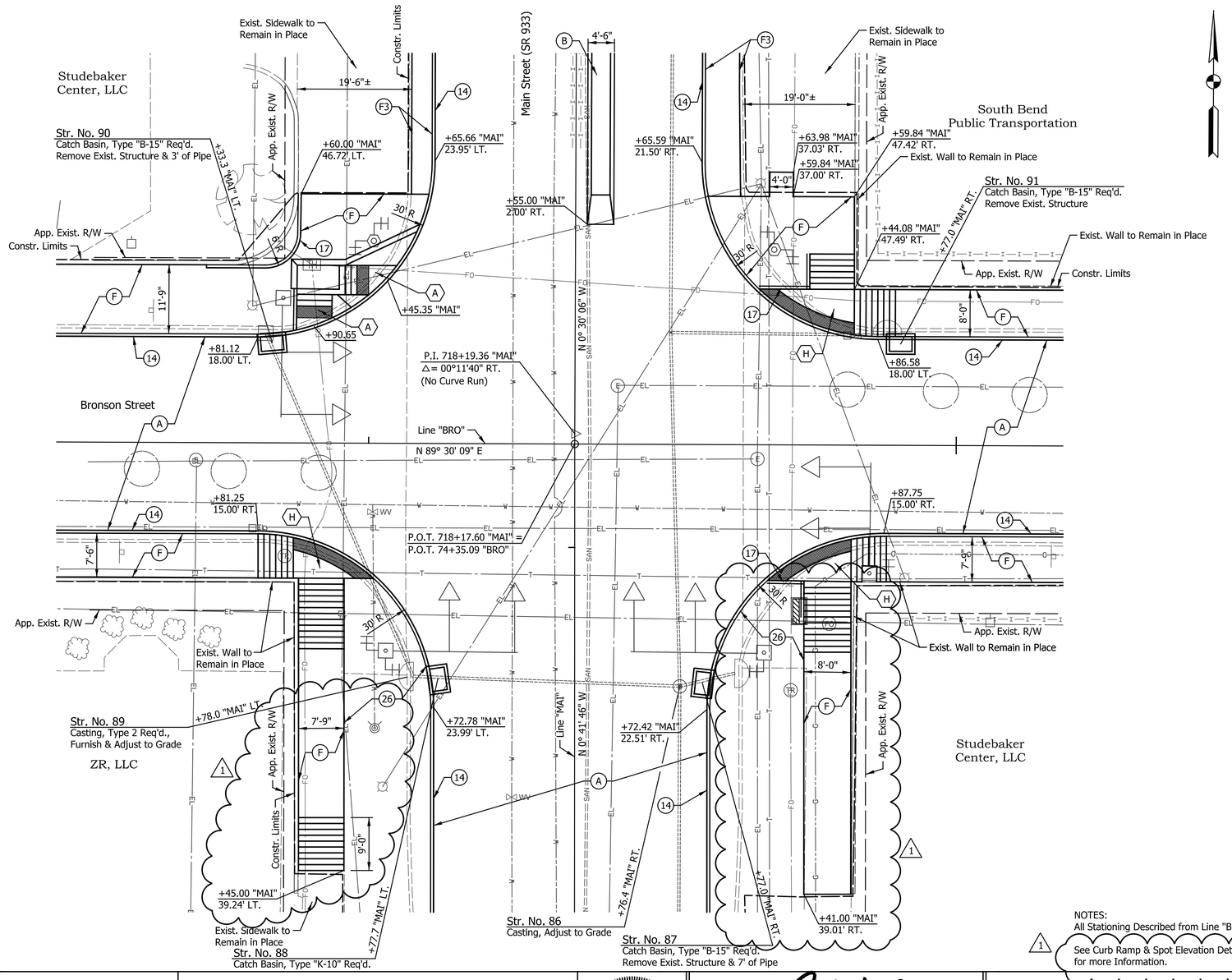
CHECKED: JG | CHECKED: JG

CITY OF SOUTH BEND

INTERSECTION DETAILS
MAIN ST. AT BROADWAY ST.

HORIZONTAL SCALE	BRIDGE FILE
1"= 10'	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	65 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\CONST DET\month\
FILE.....3329 CD MAIN - broadway ST.dwg
DISSCALE.....ITSCALE.....10
PLOTTED BY.....Brad Hall
DATE.....Jan 14,2016 - 8:18pm



LEGEND

- (14) Curb, Integral, Concrete
- (15) Combine Curb & Gutter, Type B (City of South Bend)
- (16) Combine Curb & Gutter, Type B, Inverted
- (17) Curb, Concrete
- (18) Concrete Header
- (26) Sodding, Nursery
- (27) Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
- (27A) Brick, Decorative, 12"x12"
- (27B) Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
- (27C) Brick, Decorative, Permeable, 10"x10"
- (A) 10" QC/QA-PCCP, on (B) Center Curb, D, Concrete Subgrade Treatment Type IB
- (A1) 10" Plain PCCP Colored, on Subgrade Treatment, Type IB
- (C1) PCCP for Approaches, 6" on 6" Compacted Aggregate, No. 53 Base
- (C2) PCCP for Approaches, 8" on 6" Compacted Aggregate, No. 53 Base
- (F) Concrete, Sidewalk, 4" (F3) PCCP, 4"
- (F1) Concrete, Sidewalk, 5"
- (F2) Concrete, Sidewalk, 6"
- (H) Handicap Parking Bumpout (See Detail) (L) Landscaping Area
- (K) Widening with HMA (See Typ. Sections)
- (K1) Full Depth HMA Pavement (See Typ. Sections)
- (M) Milling, Asphalt, 1.5" (M3) Milling, Asphalt, 3.5"
- (M1) Milling, Asphalt, Variable Depth
- (M2) Milling, Asphalt, 2.5" (M4) Milling, Asphalt, 4.5"
- (R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
- (TG) Tree Grate, Install (See Landscaping Details)
- (Z) Full Depth Permeable Pavement (See Typical Sections)
- (X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
- (60) Adjust to Grade
- (61) Adjust to Grade (By Others)
- (62) Fire Hydrant Assembly Req'd.
- (63) Fire Hydrant, Reset
- (73) Illuminated Bollard

NOTES:
All Stationing Described from Line "BRO", Except as Shown.

(1) See Curb Ramp & Spot Elevation Detail Sheets 91-1 & 91-2 for more Information.

DATE	REVISION
1/15/2016	REV 1: Revised Sidewalk

PATRICK R. WOOLEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

INTERSECTION DETAILS MAIN ST. AT BRONSON ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	66 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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84

85

86

City of
South Bend

Ronald E. Koehler

Studebaker Center, LLC

South Bend
Public Transportation

Main Street (SR 933)

South Street

App. Exist. R/W

Constr. Limits

Exist. Sidewalk to
Remain in Place

Exist. Curb to
Remain in Place

+80.60 "MAI"
28.74' LT.

+76.74 "MAI"
27.83' LT.

+64.18 "MAI"
21.55' LT.

+59.21 "MAI"
20.38' LT.

+82.69
38.72' LT.

+87.37
43.18' LT.

+46.79 "MAI"
20.38' LT.

+87.35
38.71' LT.

+35.91 "MAI"

+82.67
32.85' LT.

+71.45
19.83' LT.

+90.68

+88.40
19.82' LT.

BEGIN CONSTRUCTION
83+71.44 "SOU"

N 89° 16' 27" E

+72.16
21.21' RT.

+89.77

+86.31
21.20' RT.

+64.57 "MAI"

+91.28
38.98' RT.

+71.90
38.96' RT.

+91.23
43.95' RT.

+49.35 "MAI"
18.50' LT.

+77.52 "MAI"
27.27' RT.

+73.61 "MAI"
26.33' RT.

END RECONSTRUCTION
RESUME REHABILITATION
723+59.55 "MAI"

+64.34 "MAI"
21.59' RT.

+59.28 "MAI"
20.38' RT.

+46.95 "MAI"
20.38' RT.

+35.95 "MAI"

+80.46
42.99' LT.

+80.47
38.21' LT.

+86.29
38.36' LT.

+88.00
19.92' LT.

+78.00

+81.59
19.94' LT.

END CONSTRUCTION
84+88.00 "SOU"

Line "SOU"
N 89° 40' 35" E

P.O.T. 723+00.74 "MAI" =
P.I. 84+35.02 "SOU"
△= 00°24'08" RT.
(No Curve Run)

N 0° 30' 06" W

+88.00
19.59' RT.

+07.28
20.16' RT.

+78.00

+64.70 "MAI"

+54.01 "MAI"
29.00' RT.

+10
Ex.R/W(41.51')

+24.57
48.86' RT.

+21.81
51.83' RT.

+27.24
42.50' RT.

+72.52
46.72' RT.

+80
Ex.R/W(41.42')

+10
55'

+80
55'

+46

Remove Curb

Industrial Approach Req'd.
W = 37.0'

Temp. R/W for
Approach Constr.

+52.0 RT.

+76.90
20.06' RT.

Str. No. 104
Catch Basin, Type "K-10" Req'd.
Remove Exist. Structure

Str. No. 105
Casting, Adjust to Grade

Str. No. 401
Casting, Type 13 Req'd.,
Furnish & Adjust to Grade

Str. No. 103
Catch Basin, Type "C-15" Req'd.

Str. No. 101
Casting, Type 2 Req'd.,
Furnish & Adjust to Grade

Str. No. 100
Catch Basin, Type "B-15" &
9' of 12" Pipe Req'd.

Str. No. 102
Casting, Adjust to Grade

+20.4 "MAI" LT.

+38.9 "MAI" RT.

+79.0 "MAI" LT.

+51.5 "MAI" LT.

+49.7 "MAI" LT.

+52.5 "MAI" RT.

Line "MAI"

10' R

2'-0"

25' R

30' R

21' R

20' R

13' R

LEGEND

(14) Curb, Integral, Concrete
(15) Combine Curb & Gutter, Type B (City of South Bend)
(16) Combine Curb & Gutter, Type B, Inverted
(17) Curb, Concrete
(18) Concrete Header
(26) Sodding, Nursery
(27) Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
(27A) Brick, Decorative, 12"x12"
(27B) Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
(27C) Brick, Decorative, Permeable, 10"x10"
(A) 10" QC/QA-PCCP, on
(A1) 10" Plain PCCP Colored, on Subgrade Treatment, Type IB
(C1) PCCP for Approaches, 6" on 6" Compacted Aggregate, No. 53 Base
(C2) PCCP for Approaches, 8" on 6" Compacted Aggregate, No. 53 Base
(F) Concrete, Sidewalk, 4"
(F1) Concrete, Sidewalk, 5"
(F2) Concrete, Sidewalk, 6"
(H) Handicap Parking Bumpout (See Detail)
(K) Widening with HMA (See Typ. Sections)
(K1) Full Depth HMA Pavement (See Typ. Sections)
(M) Milling, Asphalt, 1.5"
(M1) Milling, Asphalt, Variable Depth
(M2) Milling, Asphalt, 2.5"
(R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
(TG) Tree Grate, Install (See Landscaping Details)
(Z) Full Depth Permeable Pavement (See Typical Sections)
(X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
(B) Center Curb, D, Concrete Subgrade Treatment Type IB
(L) Landscaping Area
(60) Adjust to Grade
(61) Adjust to Grade (By Others)
(62) Fire Hydrant Assembly Req'd.
(63) Fire Hydrant, Reset
(73) Illuminated Bollard
(F3) PCCP, 4"
(M3) Milling, Asphalt, 3.5"
(M4) Milling, Asphalt, 4.5"

NOTES:
All Stationing Described from Line "SOU", Except as Shown.

1 See Curb Ramp & Spot Elevation Detail Sheets 91-3 & 91-4 for more Information.

DATE	REVISION
1/15/2016	REV 1: Added Note

PATRICK K. WOODEN
REGISTERED
No.
10504741
STATE OF
INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

INTERSECTION DETAILS
MAIN ST. AT SOUTH ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	67 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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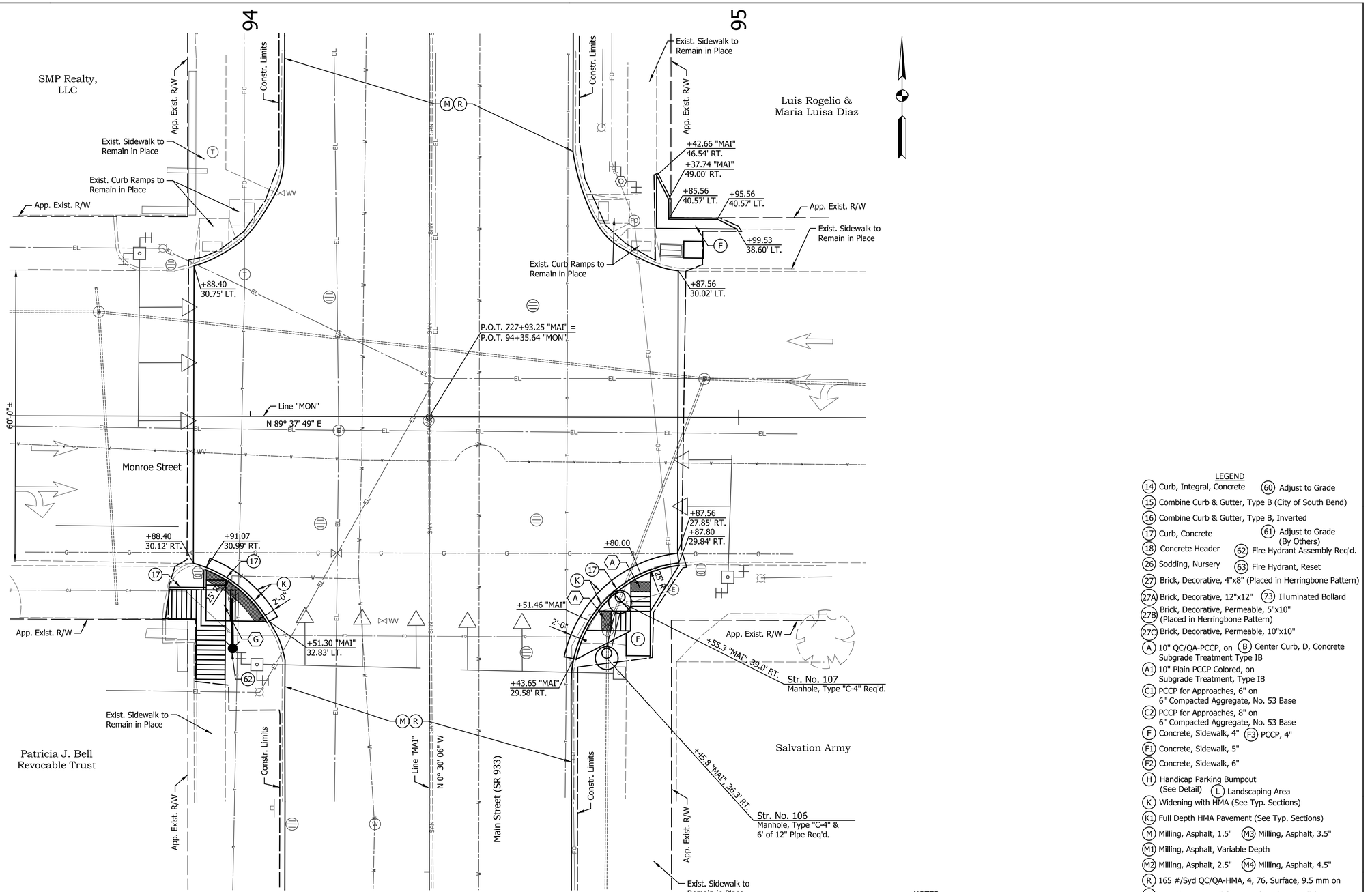

LEGEND

- (14) Curb, Integral, Concrete
- (15) Combine Curb & Gutter, Type B (City of South Bend)
- (16) Combine Curb & Gutter, Type B, Inverted
- (17) Curb, Concrete
- (18) Concrete Header
- (26) Sodding, Nursery
- (27) Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
- (27A) Brick, Decorative, 12"x12"
- (27B) Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
- (27C) Brick, Decorative, Permeable, 10"x10"
- (A) 10" QC/QA-PCCP, on (B) Center Curb, D, Concrete Subgrade Treatment Type IB
- (A1) 10" Plain PCCP Colored, on Subgrade Treatment, Type IB
- (C1) PCCP for Approaches, 6" on 6" Compacted Aggregate, No. 53 Base
- (C2) PCCP for Approaches, 8" on 6" Compacted Aggregate, No. 53 Base
- (F) Concrete, Sidewalk, 4" (F3) PCCP, 4"
- (F1) Concrete, Sidewalk, 5"
- (F2) Concrete, Sidewalk, 6"
- (H) Handicap Parking Bumpout (See Detail) (L) Landscaping Area
- (K) Widening with HMA (See Typ. Sections)
- (K1) Full Depth HMA Pavement (See Typ. Sections)
- (M) Milling, Asphalt, 1.5" (M3) Milling, Asphalt, 3.5"
- (M1) Milling, Asphalt, Variable Depth
- (M2) Milling, Asphalt, 2.5" (M4) Milling, Asphalt, 4.5"
- (R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
- (TG) Tree Grate, Install (See Landscaping Details)
- (Z) Full Depth Permeable Pavement (See Typical Sections)
- (X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
- (60) Adjust to Grade
- (61) Adjust to Grade (By Others)
- (62) Fire Hydrant Assembly Req'd.
- (63) Fire Hydrant, Reset
- (73) Illuminated Bollard

NOTES:
All Stationing Described from Line "MON", Except as Shown.

(1) See Curb Ramp & Spot Elevation Detail Sheet 91-5 for more Information.

DATE	REVISION
1/15/2016	REV 1: Added Note

PATRICK K. WOODEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

INTERSECTION DETAILS
MAIN ST. AT MONROE ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	68 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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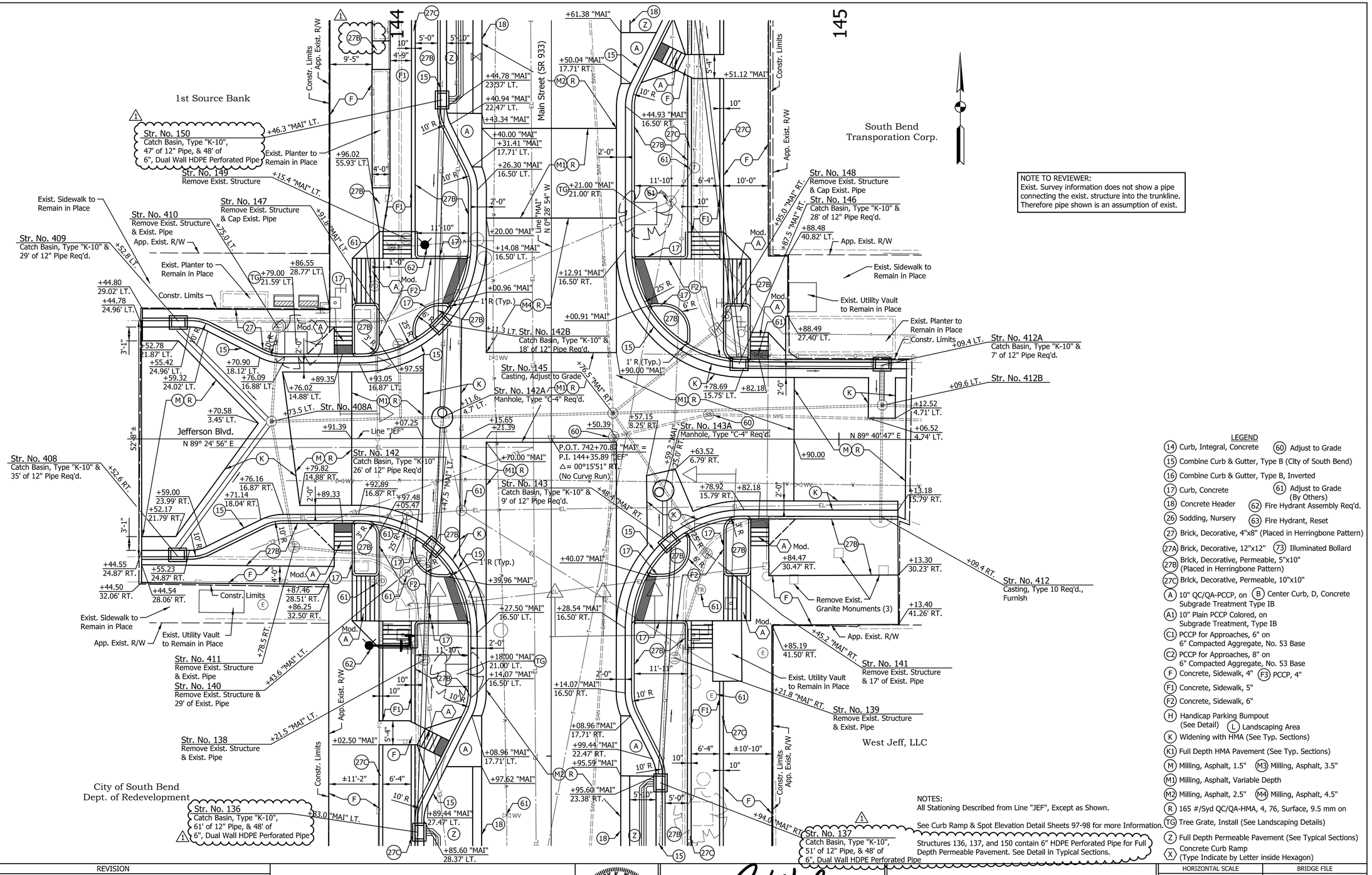

DATE	REVISION
1/15/2016	REV 1: Added Material Bubble & Revised Structure Label

PATRICK R. WOOLEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

INTERSECTION DETAILS
MAIN ST. AT JEFFERSON BLVD.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	71 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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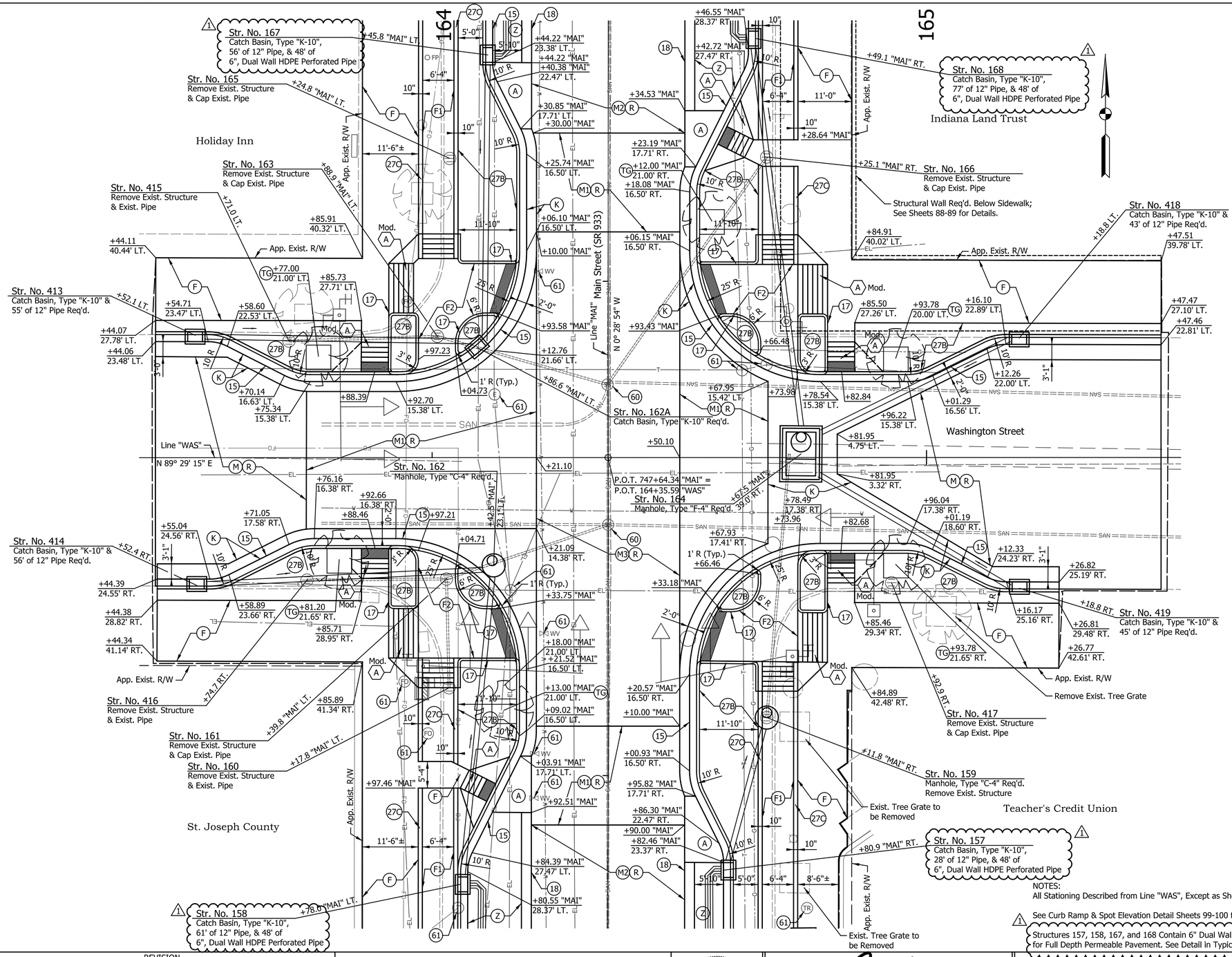

NOTES:
All Stationing Described from Line "WAS", Except as Shown.

See Curb Ramp & Spot Elevation Detail Sheets 99-100 for more Information.

Structures 157, 158, 167, and 168 Contain 6" Dual Wall HDPE Perforated Pipe for Full Depth Permeable Pavement. See Detail in Typical Sections.

LEGEND

- (14) Curb, Integral, Concrete
- (15) Combine Curb & Gutter, Type B (City of South Bend)
- (16) Combine Curb & Gutter, Type B, Inverted
- (17) Curb, Concrete
- (18) Concrete Header
- (26) Sodding, Nursery
- (27) Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
- (27A) Brick, Decorative, 12"x12"
- (27B) Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
- (27C) Brick, Decorative, Permeable, 10"x10"
- (A) 10" QC/QA-PCCP, on (B) Center Curb, D, Concrete Subgrade Treatment Type IB
- (A1) 10" Plain PCCP Colored, on Subgrade Treatment, Type IB
- (C1) PCCP for Approaches, 6" on 6" Compacted Aggregate, No. 53 Base
- (C2) PCCP for Approaches, 8" on 6" Compacted Aggregate, No. 53 Base
- (F) Concrete, Sidewalk, 4" (F3) PCCP, 4"
- (F1) Concrete, Sidewalk, 5"
- (F2) Concrete, Sidewalk, 6"
- (H) Handicap Parking Bumpout (See Detail) (L) Landscaping Area
- (K) Widening with HMA (See Typ. Sections)
- (K1) Full Depth HMA Pavement (See Typ. Sections)
- (M) Milling, Asphalt, 1.5" (M3) Milling, Asphalt, 3.5"
- (M1) Milling, Asphalt, Variable Depth
- (M2) Milling, Asphalt, 2.5" (M4) Milling, Asphalt, 4.5"
- (R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
- (TG) Tree Grate, Install (See Landscaping Details)
- (Z) Full Depth Permeable Pavement (See Typical Sections)
- (X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
- (60) Adjust to Grade
- (61) Adjust to Grade (By Others)
- (62) Fire Hydrant Assembly Req'd.
- (63) Fire Hydrant, Reset
- (73) Illuminated Bollard

DATE	REVISION
1/15/2016	REV 1: Revised Structure Label

PATRICK R. WOOLEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

INTERSECTION DETAILS
MAIN ST. AT WASHINGTON ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	72 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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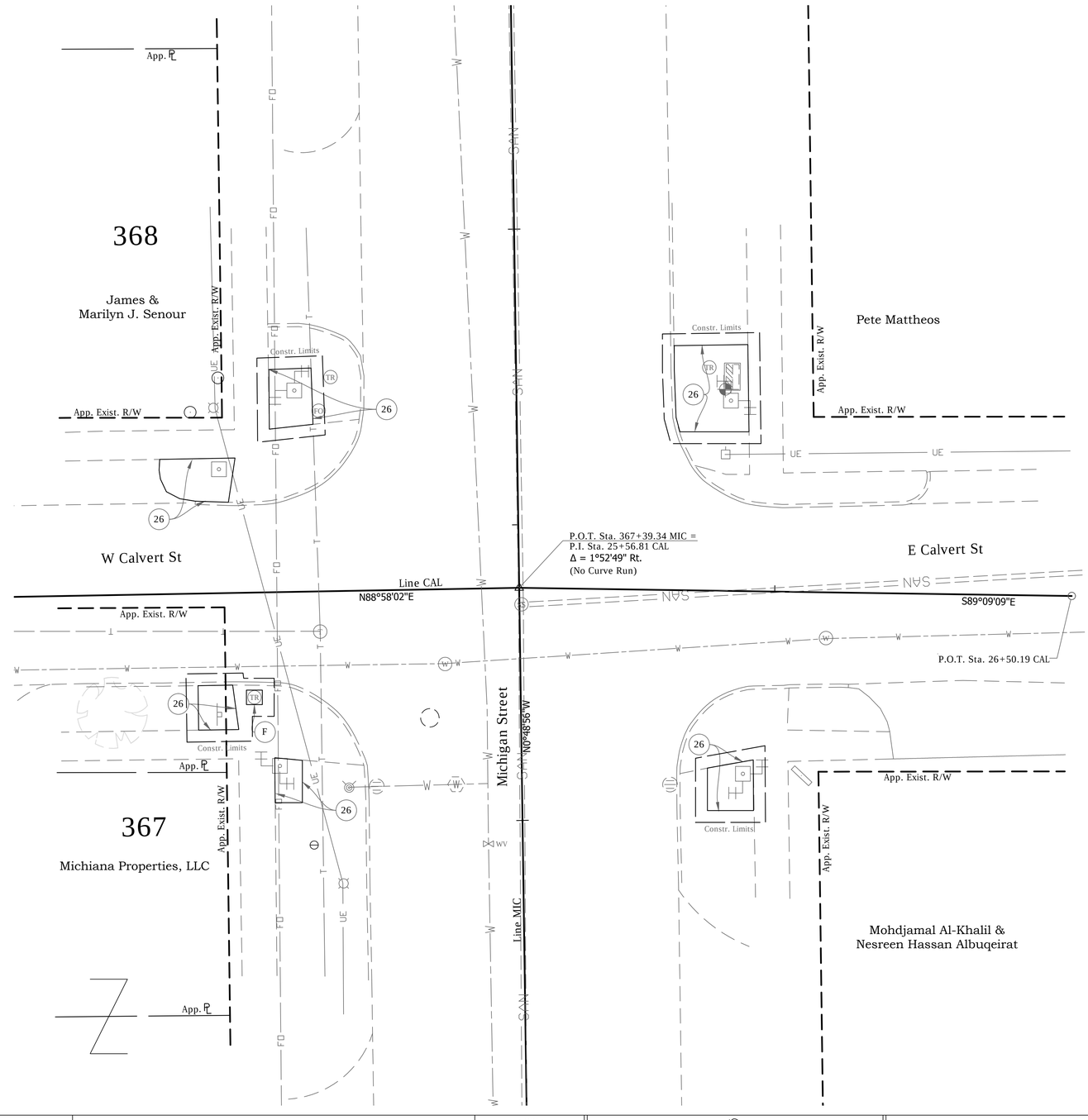


LEGEND

- (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)

DATE	REVISION

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III — DRAWN: BRD

CHECKED: JG — CHECKED: JG

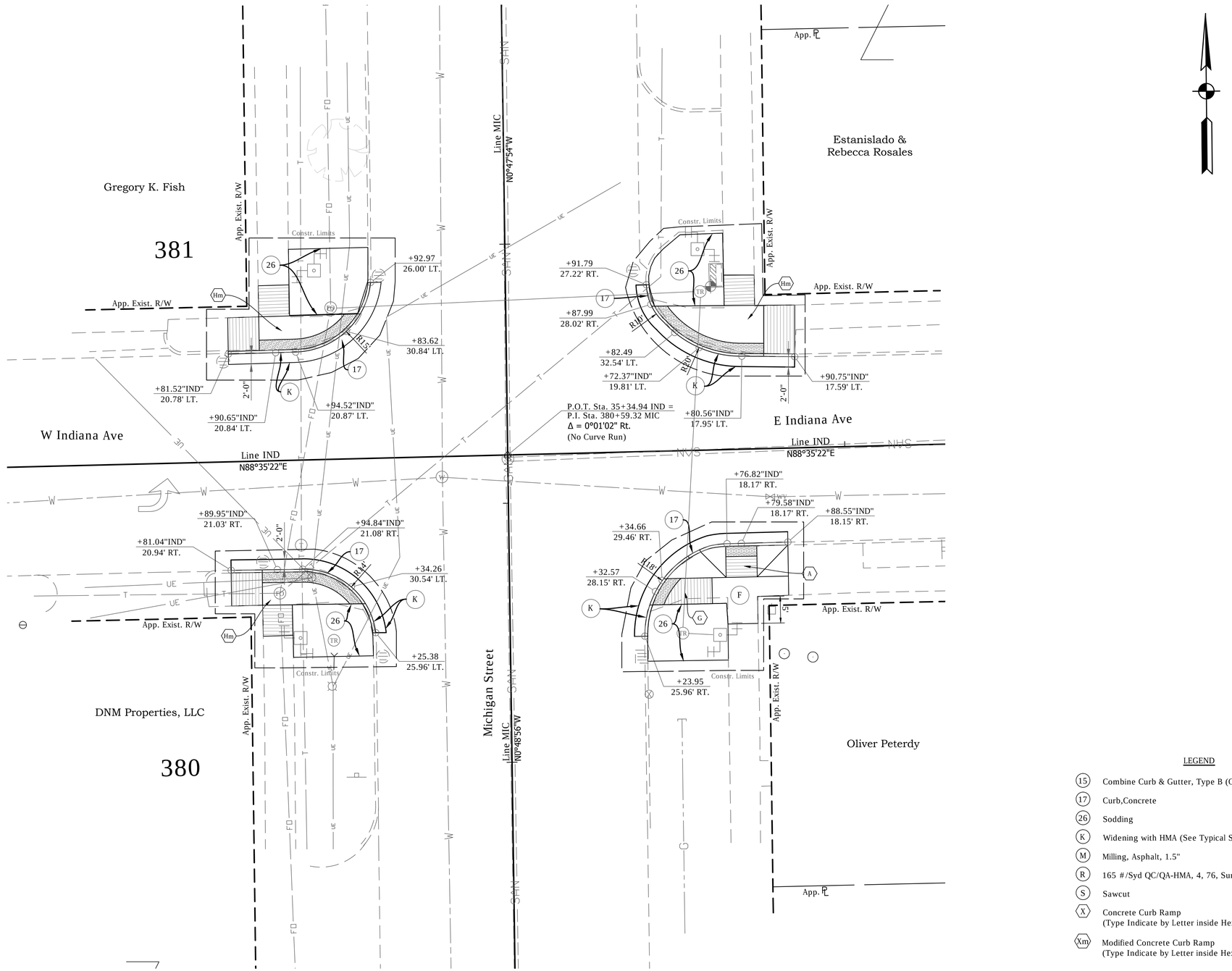
CITY OF SOUTH BEND

INTERSECTION DETAILS
MICHIGAN ST. AT CALVERT ST.

HORIZONTAL SCALE	BRIDGE FILE
1"= 10'	N/A
VERTICAL SCALE	DESIGNATION
	N/A

SURVEY BOOK	SHEETS
N/A	75 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\CONST DET\north\
FILE.....3329 CD MICHIGAN ST - calvert.dwg
DESIGN.....TSCALE.....10
PLOTTED BY.....Brad
DATE.....Jan 14,2016 - 8:18pm



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)

DATE	REVISION

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III — DRAWN: BRD

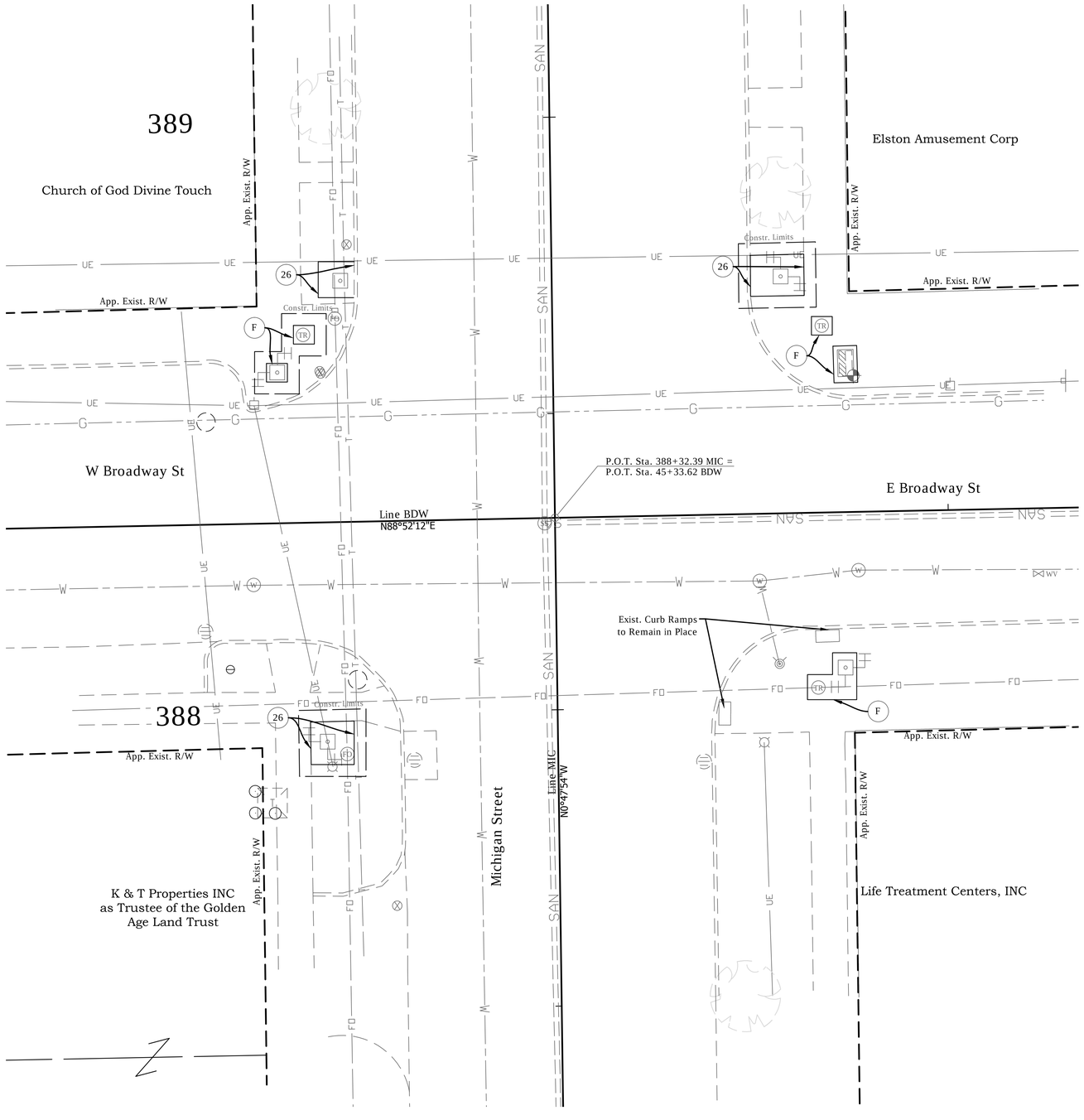
CHECKED: JG — CHECKED: JG

CITY OF SOUTH BEND

INTERSECTION DETAILS
MICHIGAN ST. AT INDIANA AVE.

HORIZONTAL SCALE	BRIDGE FILE
1"= 10'	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	76 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\CONST DET\north\
FILE.....3329 CD MICHIGAN ST - indiana.dwg
TIME.....17 SCALE.....10
PLOTTED BY.....BRD
DATE.....Jan 14,2016 - 8:19pm



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)

DATE	REVISION

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

CHECKED: JG | CHECKED: JG

CITY OF SOUTH BEND

INTERSECTION DETAILS
MICHIGAN ST. AT BROADWAY ST.

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	N/A
VERTICAL SCALE	DESIGNATION
	N/A

SURVEY BOOK	SHEETS
N/A	77 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\CONST DET\north\
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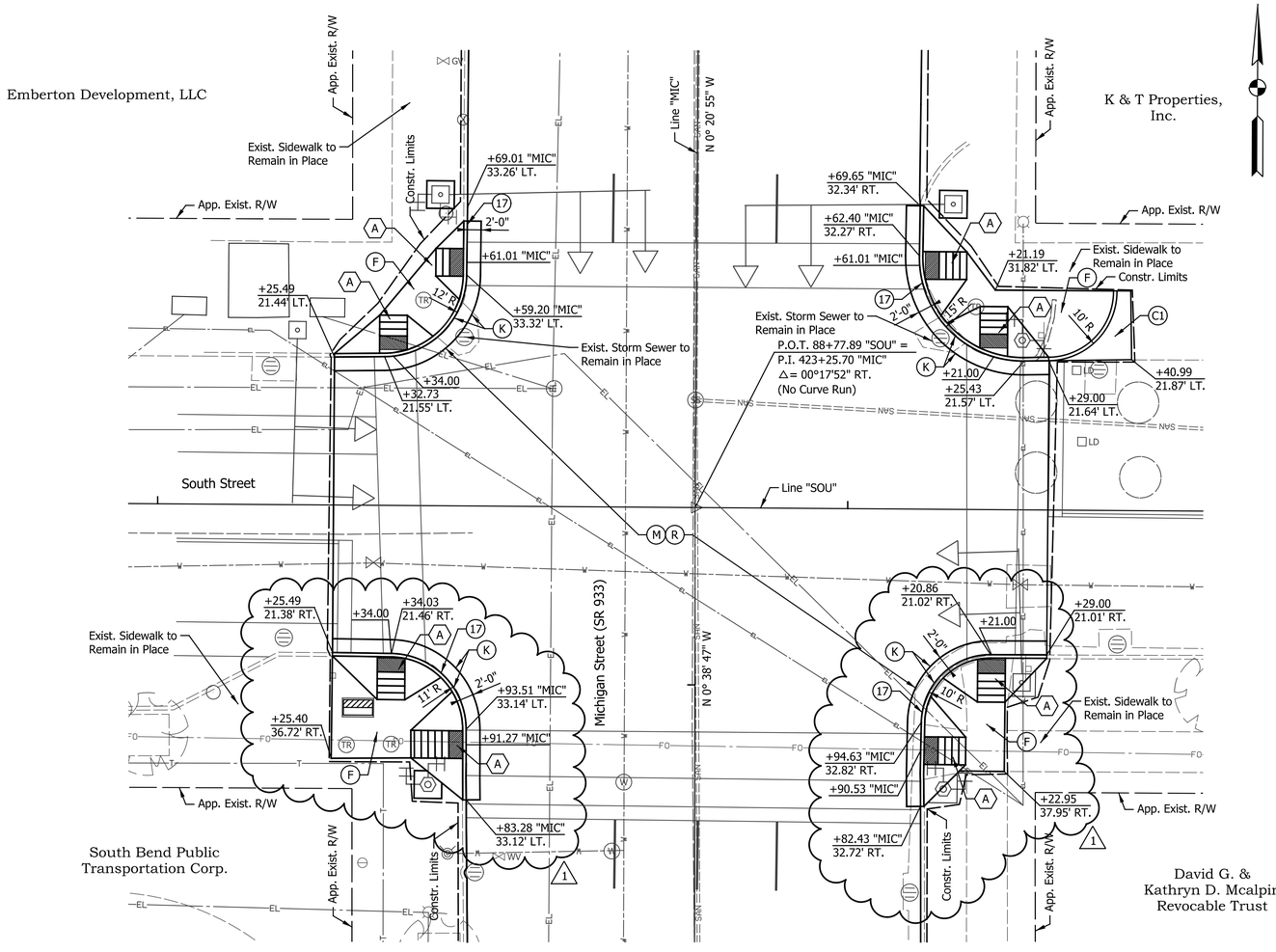
DISK/CAE#1 11SC.....10
PW CITED.....Broadway
DATE.....Jan 14,2016 - 8:19pm

88

89



LEGEND

- (14) Curb, Integral, Concrete
- (15) Combine Curb & Gutter, Type B (City of South Bend)
- (16) Combine Curb & Gutter, Type B, Inverted
- (17) Curb, Concrete
- (18) Concrete Header
- (26) Sodding, Nursery
- (27) Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
- (27A) Brick, Decorative, 12"x12"
- (27B) Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
- (27C) Brick, Decorative, Permeable, 10"x10"
- (A) 10" QC/QA-PCCP, on (B) Center Curb, D, Concrete Subgrade Treatment Type IB
- (A1) 10" Plain PCCP Colored, on Subgrade Treatment, Type IB
- (C1) PCCP for Approaches, 6" on 6" Compacted Aggregate, No. 53 Base
- (C2) PCCP for Approaches, 8" on 6" Compacted Aggregate, No. 53 Base
- (F) Concrete, Sidewalk, 4" (F3) PCCP, 4"
- (F1) Concrete, Sidewalk, 5"
- (F2) Concrete, Sidewalk, 6"
- (H) Handicap Parking Bumpout (See Detail) (L) Landscaping Area
- (K) Widening with HMA (See Typ. Sections)
- (K1) Full Depth HMA Pavement (See Typ. Sections)
- (M) Milling, Asphalt, 1.5" (M3) Milling, Asphalt, 3.5"
- (M1) Milling, Asphalt, Variable Depth
- (M2) Milling, Asphalt, 2.5" (M4) Milling, Asphalt, 4.5"
- (R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
- (TG) Tree Grate, Install (See Landscaping Details)
- (Z) Full Depth Permeable Pavement (See Typical Sections)
- (X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
- (60) Adjust to Grade
- (61) Adjust to Grade (By Others)
- (62) Fire Hydrant Assembly Req'd.
- (63) Fire Hydrant, Reset
- (73) Illuminated Bollard

NOTES:
All Stationing Described from Line "SOU", Except as Shown.

(1) See Curb Ramp & Spot Elevation Detail Sheets 107-1 & 107-2 for more Information.

DATE	REVISION
1/15/2016	REV 1: Added Note, Revised S.W. & S.E. Quadrants

PATRICK R. WOOLEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

INTERSECTION DETAILS MICHIGAN ST. AT SOUTH ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	78 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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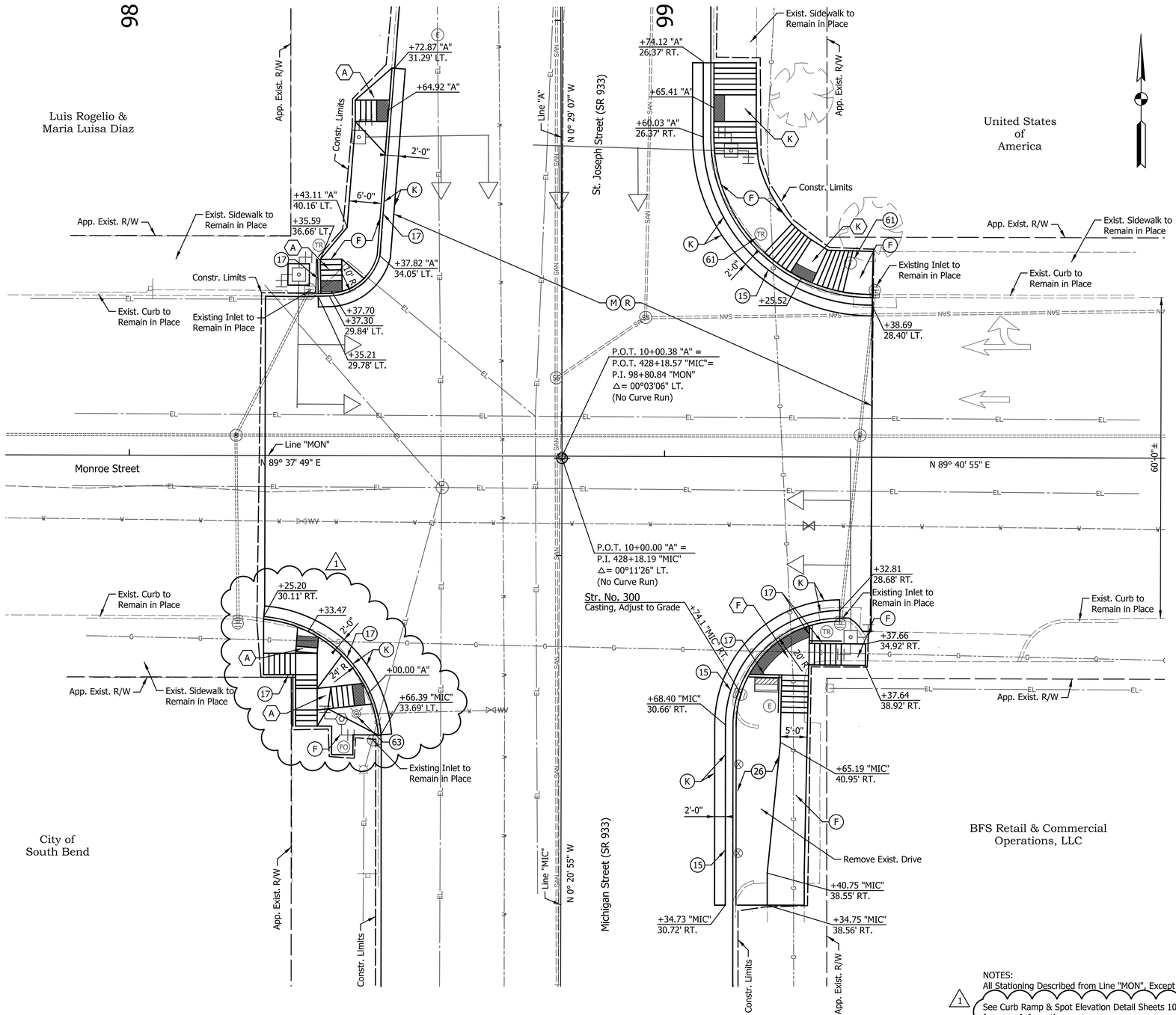

LEGEND

- (14) Curb, Integral, Concrete
- (15) Combine Curb & Gutter, Type B (City of South Bend)
- (16) Combine Curb & Gutter, Type B, Inverted
- (17) Curb, Concrete
- (18) Concrete Header
- (26) Sodding, Nursery
- (27) Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
- (27A) Brick, Decorative, 12"x12"
- (27B) Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
- (27C) Brick, Decorative, Permeable, 10"x10"
- (A) 10" QC/QA-PCCP, on (B) Center Curb, D, Concrete Subgrade Treatment Type IB
- (A1) 10" Plain PCCP Colored, on Subgrade Treatment, Type IB
- (C1) PCCP for Approaches, 6" on 6" Compacted Aggregate, No. 53 Base
- (C2) PCCP for Approaches, 8" on 6" Compacted Aggregate, No. 53 Base
- (F) Concrete, Sidewalk, 4" (F3) PCCP, 4"
- (F1) Concrete, Sidewalk, 5"
- (F2) Concrete, Sidewalk, 6"
- (H) Handicap Parking Bumpout (See Detail) (L) Landscaping Area
- (K) Widening with HMA (See Typ. Sections)
- (K1) Full Depth HMA Pavement (See Typ. Sections)
- (M) Milling, Asphalt, 1.5" (M3) Milling, Asphalt, 3.5"
- (M1) Milling, Asphalt, Variable Depth
- (M2) Milling, Asphalt, 2.5" (M4) Milling, Asphalt, 4.5"
- (R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
- (TG) Tree Grate, Install (See Landscaping Details)
- (Z) Full Depth Permeable Pavement (See Typical Sections)
- (X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
- (60) Adjust to Grade
- (61) Adjust to Grade (By Others)
- (62) Fire Hydrant Assembly Req'd.
- (63) Fire Hydrant, Reset
- (73) Illuminated Bollard

NOTES:
All Stationing Described from Line "MON", Except as Shown.

1 See Curb Ramp & Spot Elevation Detail Sheets 107-3 & 107-4 for more Information.

DATE	REVISION
1/15/2016	REV 1: Added Note & Revised S.W. Quadrant

PATRICK K. WOODEN
REGISTERED
No.
10504741
STATE OF
INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

INTERSECTION DETAILS
ST. JOSEPH ST. AT MONROE ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	79 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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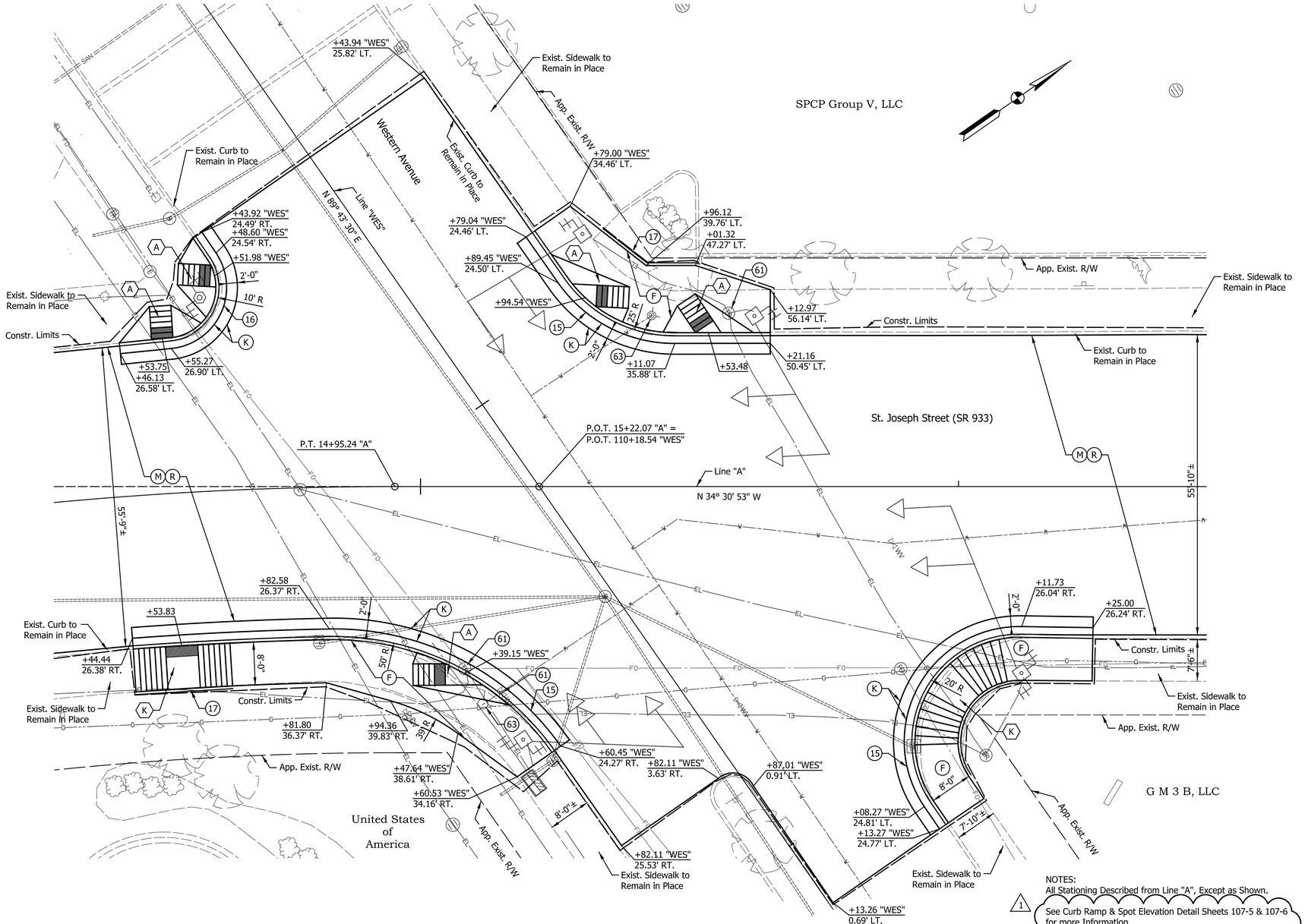
16



LEGEND

(14) Curb, Integral, Concrete
(15) Combine Curb & Gutter, Type B (City of South Bend)
(16) Combine Curb & Gutter, Type B, Inverted
(17) Curb, Concrete
(18) Concrete Header
(26) Sodding, Nursery
(27) Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
(27A) Brick, Decorative, 12"x12"
(27B) Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
(27C) Brick, Decorative, Permeable, 10"x10"
(A) 10" QC/QA-PCCP, on (B) Center Curb, D, Concrete Subgrade Treatment Type IB
(A1) 10" Plain PCCP Colored, on Subgrade Treatment, Type IB
(C1) PCCP for Approaches, 6" on 6" Compacted Aggregate, No. 53 Base
(C2) PCCP for Approaches, 8" on 6" Compacted Aggregate, No. 53 Base
(F) Concrete, Sidewalk, 4" (F3) PCCP, 4"
(F1) Concrete, Sidewalk, 5"
(F2) Concrete, Sidewalk, 6"
(H) Handicap Parking Bumpout (See Detail) (L) Landscaping Area
(K) Widening with HMA (See Typ. Sections)
(K1) Full Depth HMA Pavement (See Typ. Sections)
(M) Milling, Asphalt, 1.5" (M3) Milling, Asphalt, 3.5"
(M1) Milling, Asphalt, Variable Depth
(M2) Milling, Asphalt, 2.5" (M4) Milling, Asphalt, 4.5"
(R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
(TG) Tree Grate, Install (See Landscaping Details)
(Z) Full Depth Permeable Pavement (See Typical Sections)
(X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
(60) Adjust to Grade
(61) Adjust to Grade (By Others)
(62) Fire Hydrant Assembly Req'd.
(63) Fire Hydrant, Reset
(73) Illuminated Bollard

NOTES:
All Stationing Described from Line "A", Except as Shown.

1 See Curb Ramp & Spot Elevation Detail Sheets 107-5 & 107-6 for more Information.

DATE	REVISION
1/15/2016	REV 1: Added Note

PATRICK R. WOODEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

INTERSECTION DETAILS
ST. JOSEPH ST. AT WESTERN AVE.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	80 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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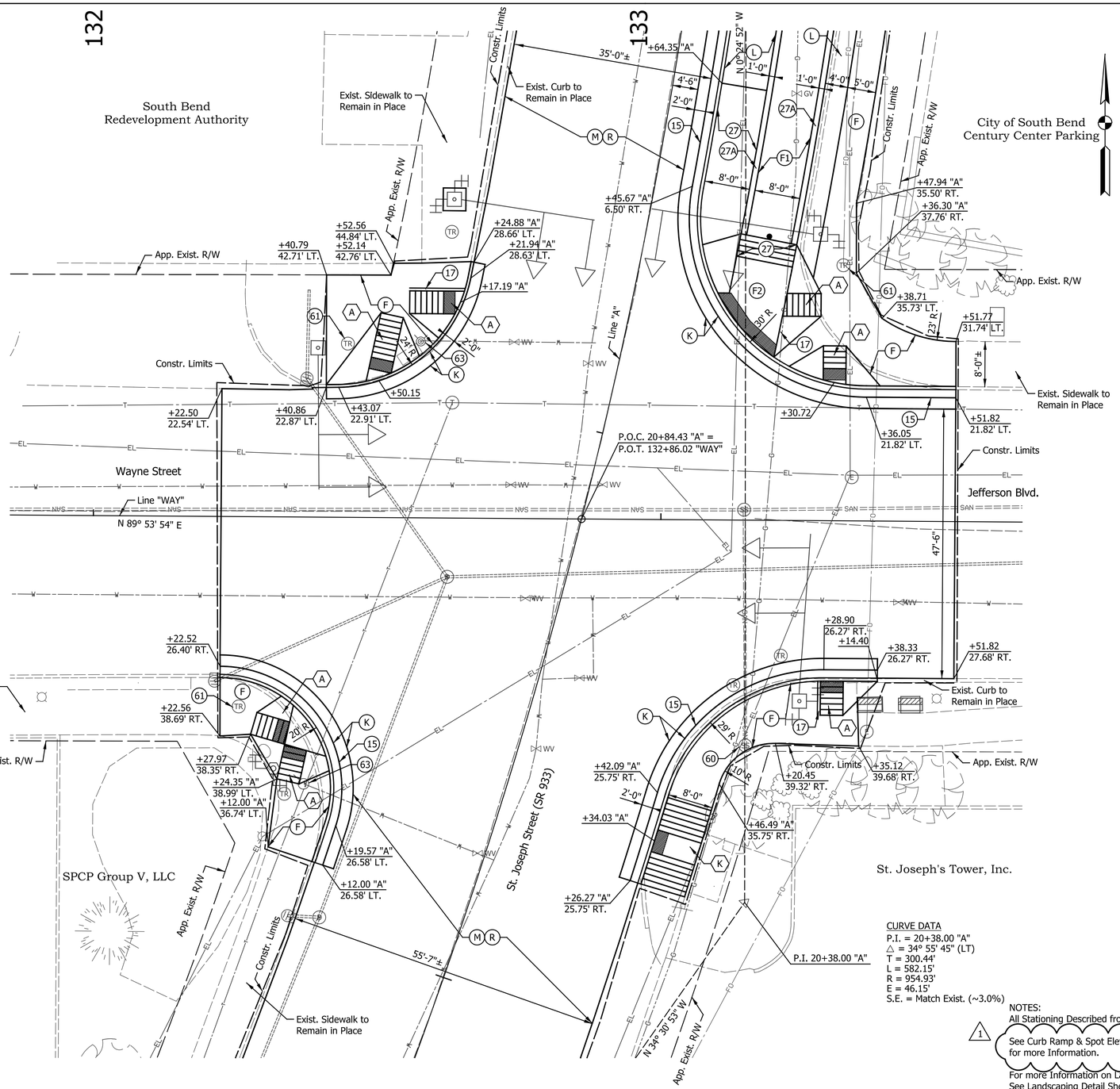

CURVE DATA
P.I. = 20+38.00 "A"
△ = 34° 55' 45" (LT)
T = 300.44'
L = 582.15'
R = 954.93'
E = 46.15'
S.E. = Match Exist. (~3.0%)

NOTES:
All Stationing Described from Line "WAY", Except as Shown.

1 See Curb Ramp & Spot Elevation Detail Sheets 107-7 & 108 for more Information.

For more Information on Landscaping Areas, See Landscaping Detail Sheets.

LEGEND

(14) Curb, Integral, Concrete
(15) Combine Curb & Gutter, Type B (City of South Bend)
(16) Combine Curb & Gutter, Type B, Inverted
(17) Curb, Concrete
(18) Concrete Header
(26) Sodding, Nursery
(27) Brick, Decorative, 4"x8" (Placed in Herringbone Pattern)
(27A) Brick, Decorative, 12"x12"
(27B) Brick, Decorative, Permeable, 5"x10" (Placed in Herringbone Pattern)
(27C) Brick, Decorative, Permeable, 10"x10"
(A) 10" QC/QA-PCCP, on (B) Center Curb, D, Concrete Subgrade Treatment Type IB
(A1) 10" Plain PCCP Colored, on Subgrade Treatment, Type IB
(C1) PCCP for Approaches, 6" on 6" Compacted Aggregate, No. 53 Base
(C2) PCCP for Approaches, 8" on 6" Compacted Aggregate, No. 53 Base
(F) Concrete, Sidewalk, 4" (F3) PCCP, 4"
(F1) Concrete, Sidewalk, 5"
(F2) Concrete, Sidewalk, 6"
(H) Handicap Parking Bumpout (See Detail) (L) Landscaping Area
(K) Widening with HMA (See Typ. Sections)
(K1) Full Depth HMA Pavement (See Typ. Sections)
(M) Milling, Asphalt, 1.5" (M3) Milling, Asphalt, 3.5"
(M1) Milling, Asphalt, Variable Depth
(M2) Milling, Asphalt, 2.5" (M4) Milling, Asphalt, 4.5"
(R) 165 #/Syd QC/QA-HMA, 4, 76, Surface, 9.5 mm on
(TG) Tree Grate, Install (See Landscaping Details)
(Z) Full Depth Permeable Pavement (See Typical Sections)
(X) Concrete Curb Ramp (Type Indicate by Letter inside Hexagon)
(60) Adjust to Grade
(61) Adjust to Grade (By Others)
(62) Fire Hydrant Assembly Req'd.
(63) Fire Hydrant, Reset
(73) Illuminated Bollard

DATE	REVISION
1/15/2016	REV 1: Added Note

PATRICK R. WOOLEY REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

INTERSECTION DETAILS
ST. JOSEPH ST. AT WAYNE ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	81 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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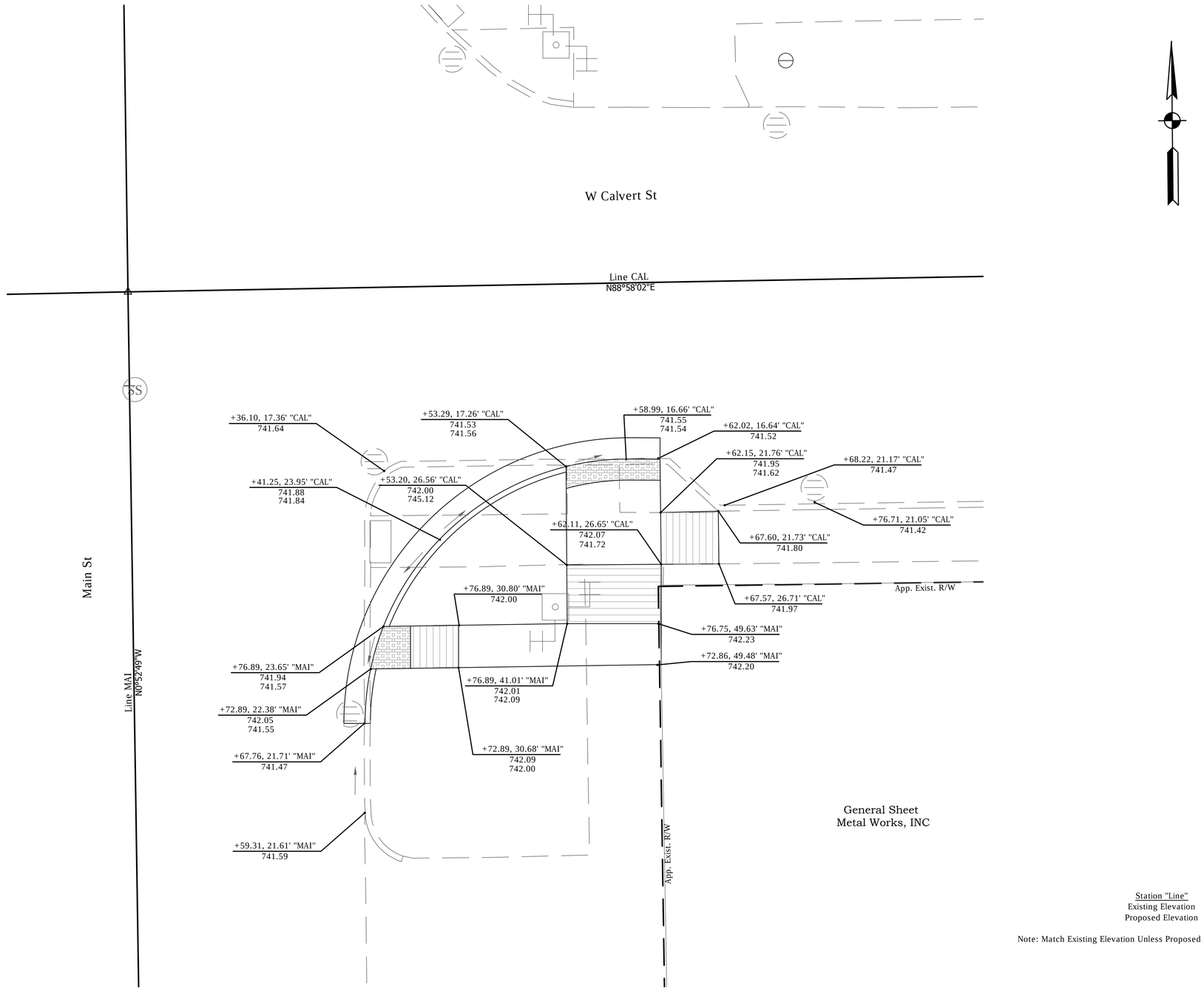


General Sheet
Metal Works, INC

Station "Line"
Existing Elevation
Proposed Elevation

Note: Match Existing Elevation Unless Proposed is Indicated

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\MISC\
FILE.....3329 SPOT MAIN <alvert ST.dwg
DISSCALE.....IT\SCALE.....10
PLOTTED BY.....Brad Dodd
DATE.....Jan 14,2016 - 8:20pm

DATE	REVISION

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

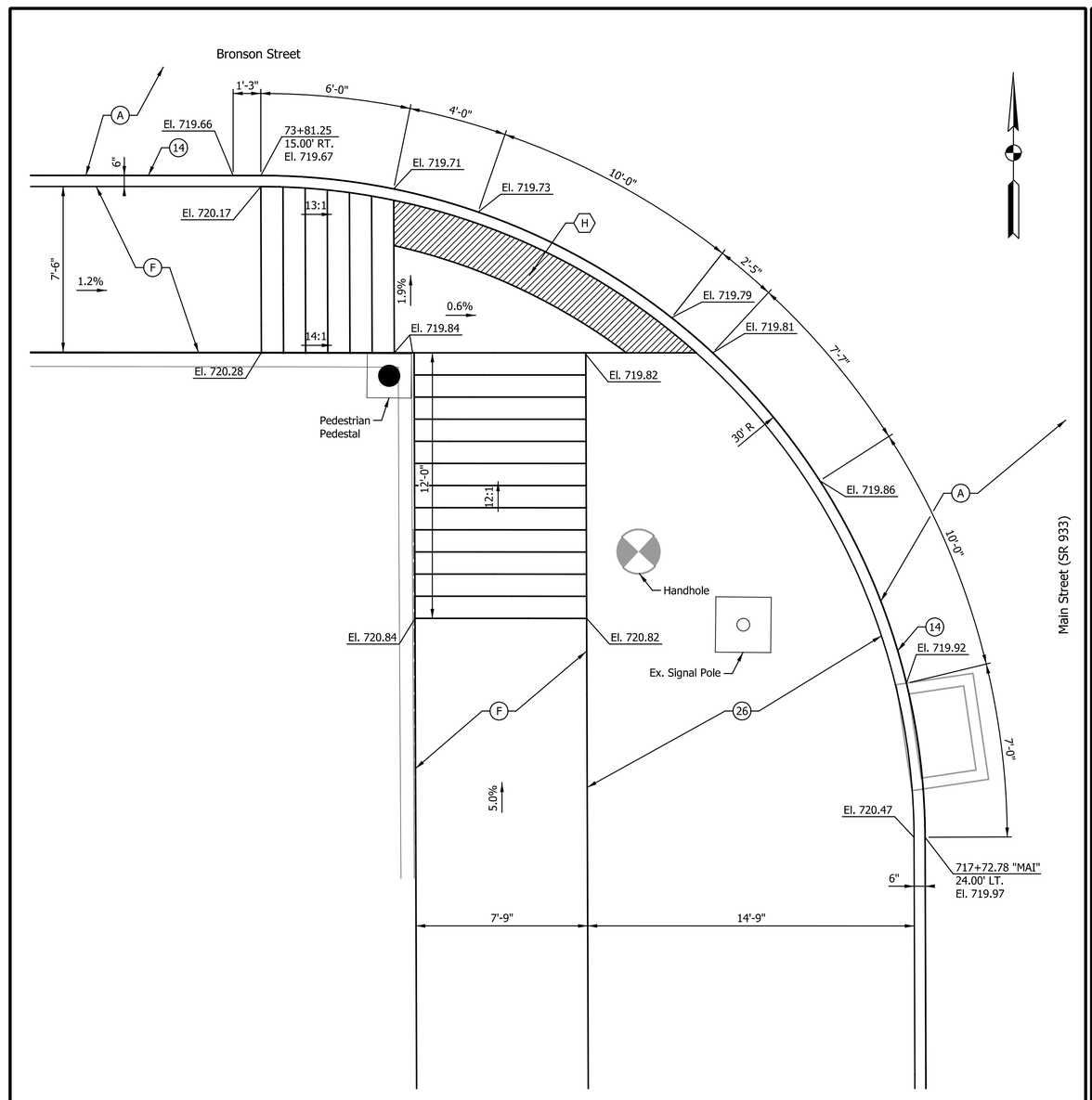
CHECKED: JG | CHECKED: JG

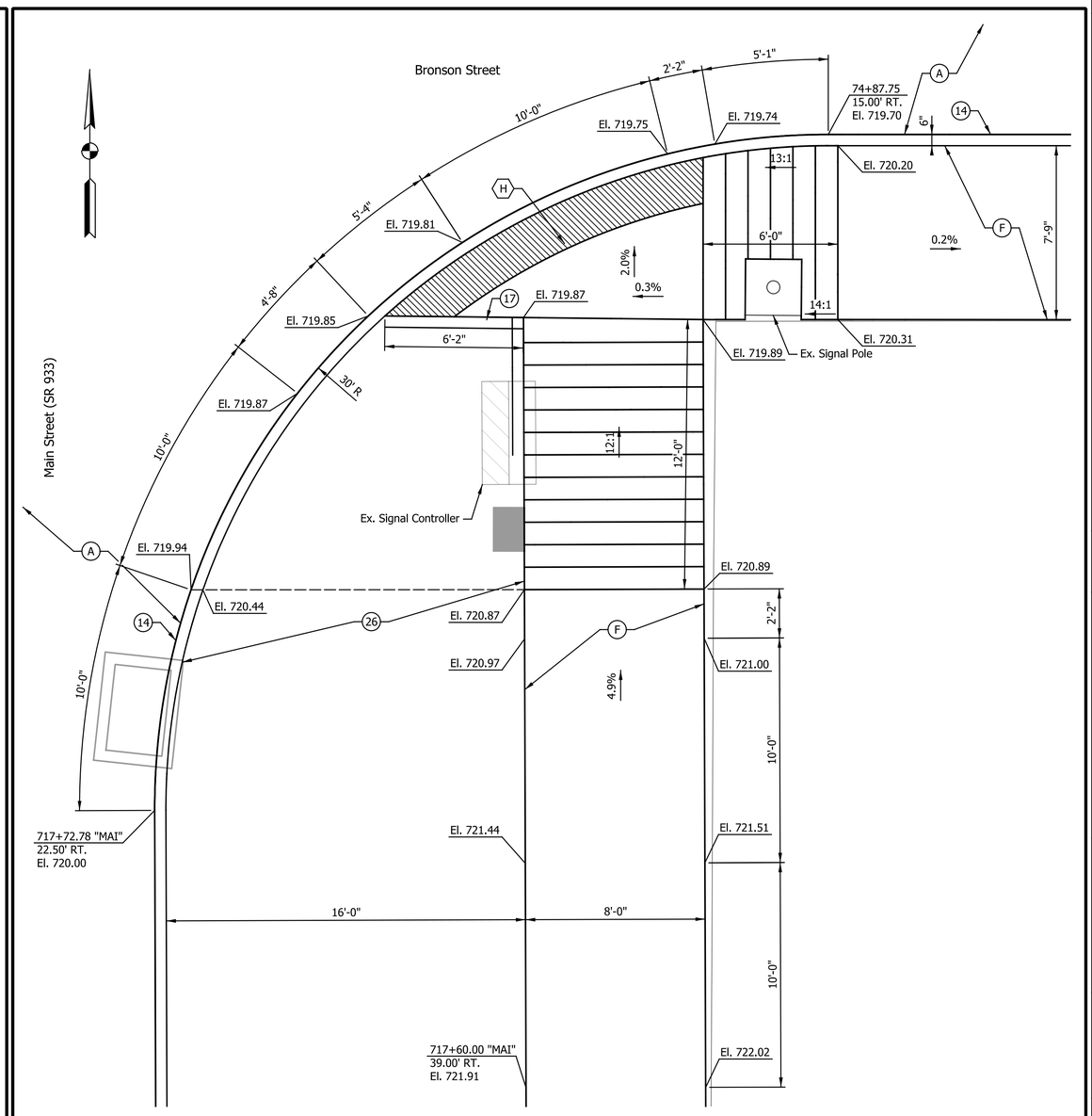
CITY OF SOUTH BEND

SPOT ELEVATION DETAILS
MAIN ST. AT CALVERT ST.

HORIZONTAL SCALE	BRIDGE FILE
1"=5'	N/A
VERTICAL SCALE	DESIGNATION
	N/A

SURVEY BOOK	SHEETS
N/A	91 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)





NOTES:
All Stationing Described from Line "BRO", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOOLEN
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/15/2016 DATE

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

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT BRONSON ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	91-1 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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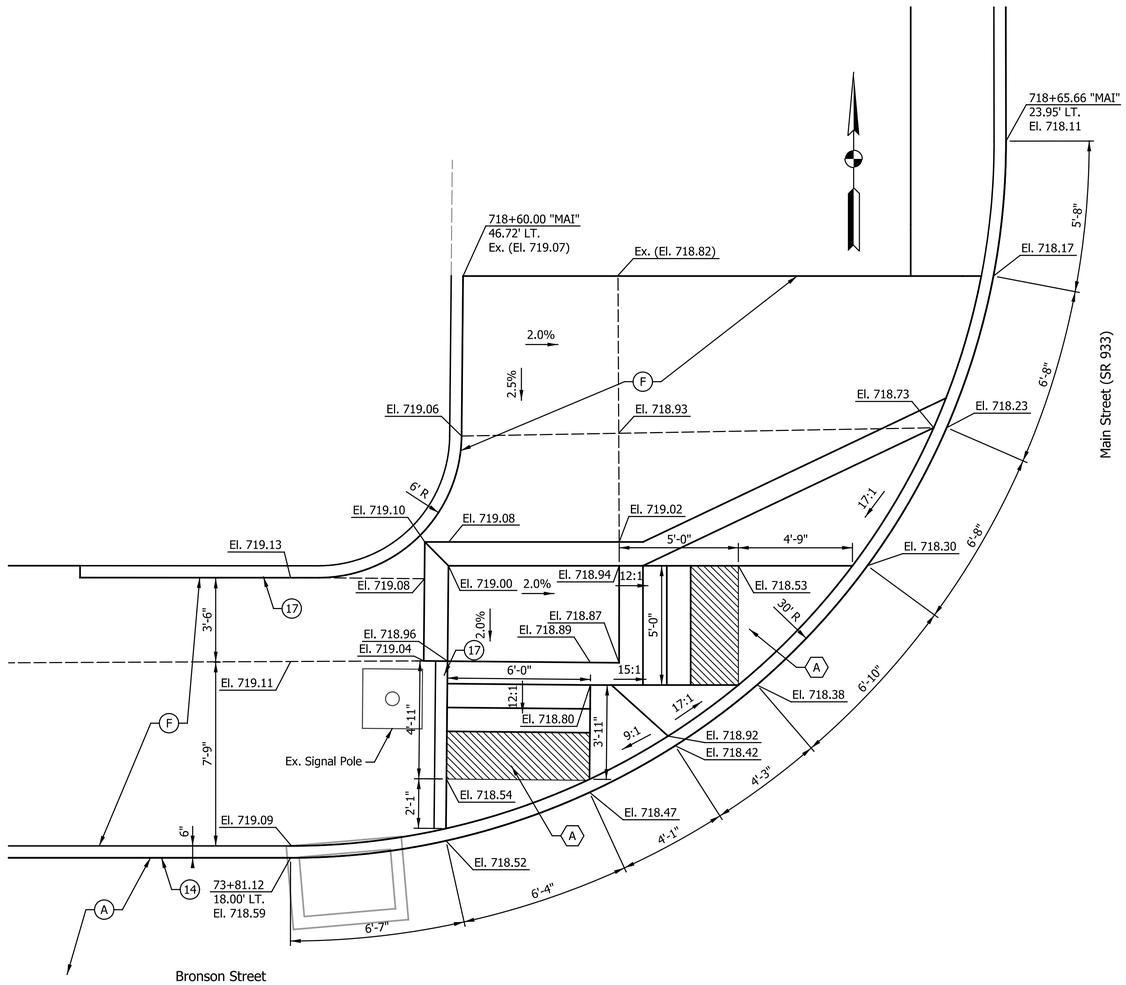
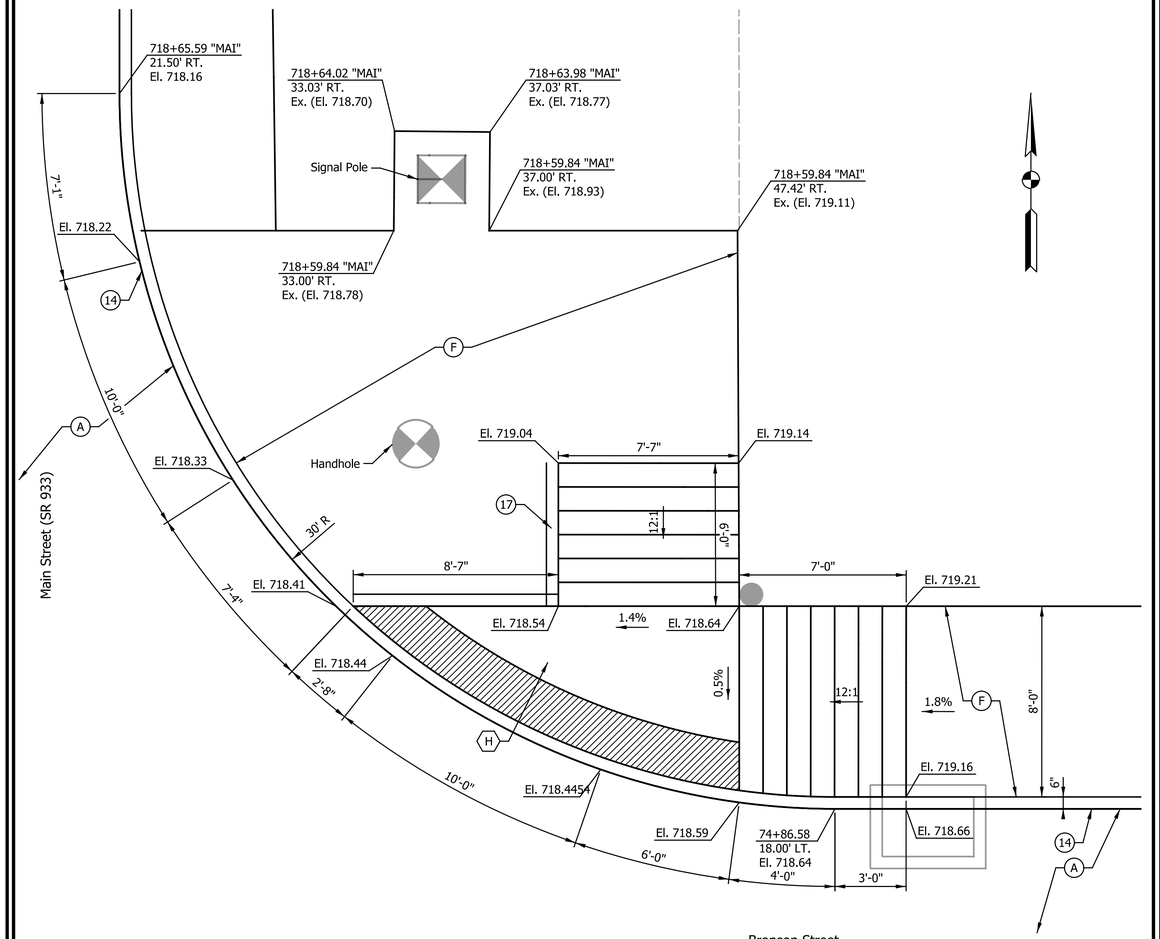




NOTES:
All Stationing Described from Line "BRO", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOOLEN
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

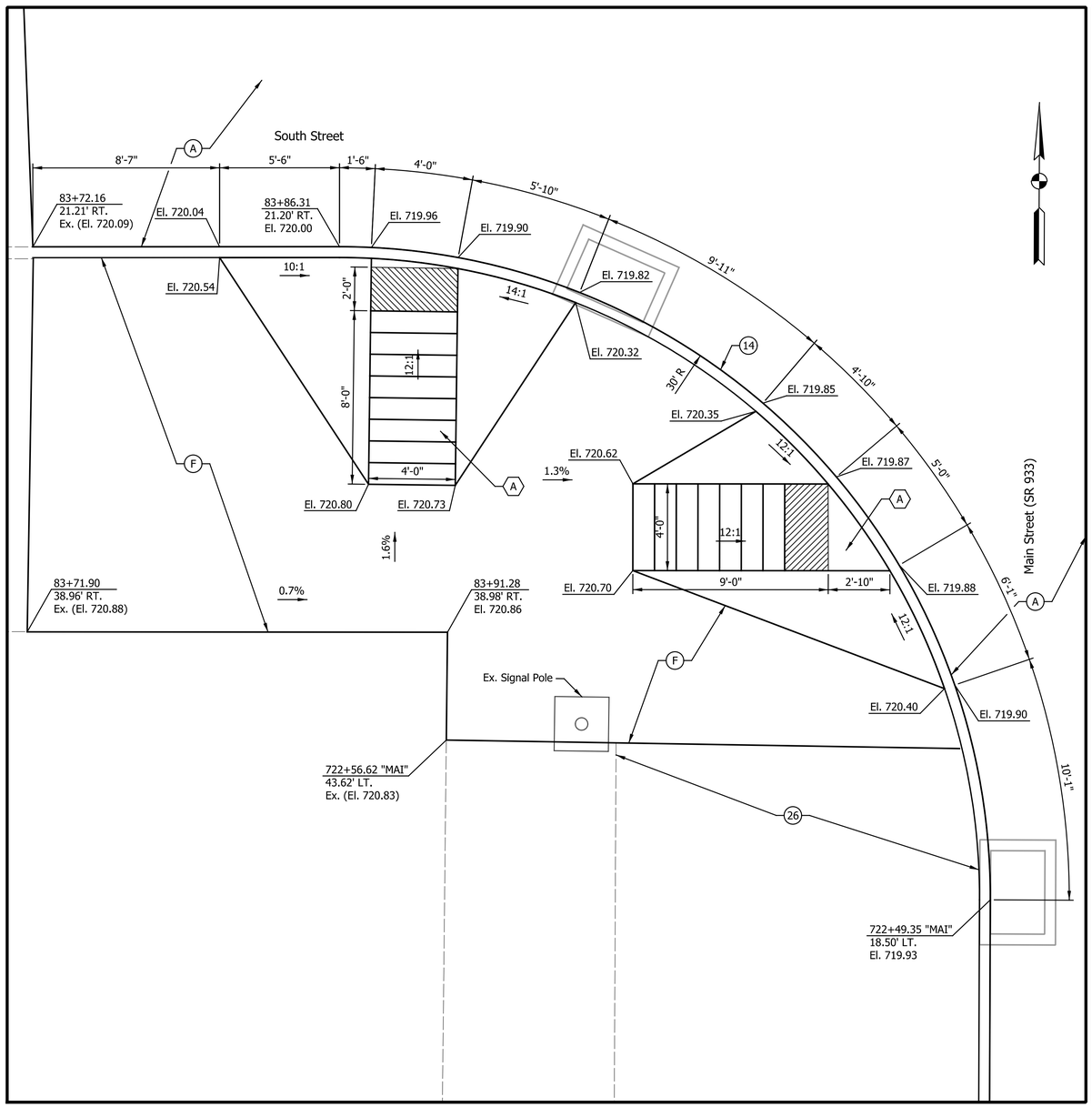
RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/15/2016 DATE

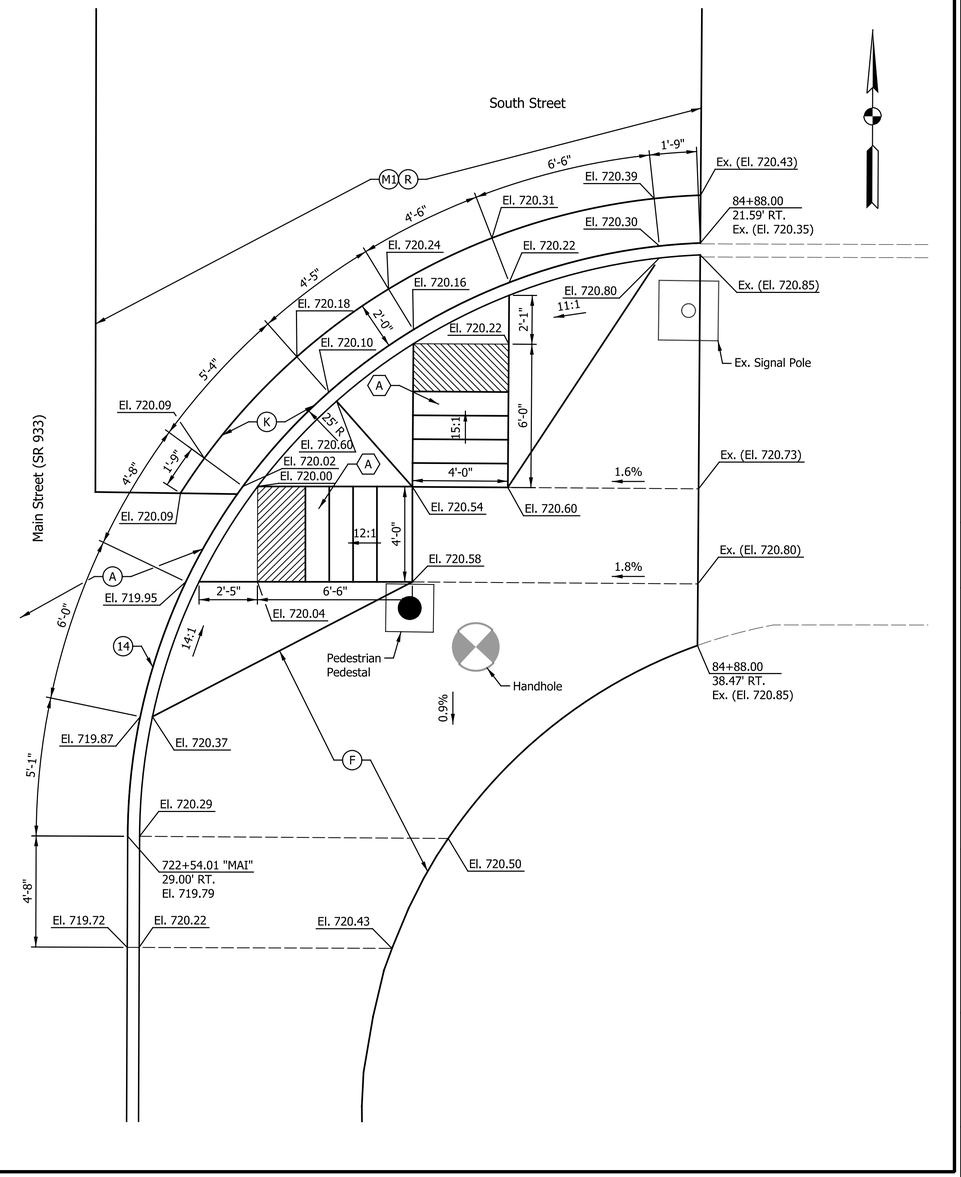
DESIGNED: MRR | DRAWN: JRG
CHECKED: PKW | CHECKED: PKW

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT BRONSON ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	91-2 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)





NOTES:
All Stationing Described from Line "SOU", Except as Shown.

DATE	
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOODEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/15/2016 DATE

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

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT SOUTH ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	91-3 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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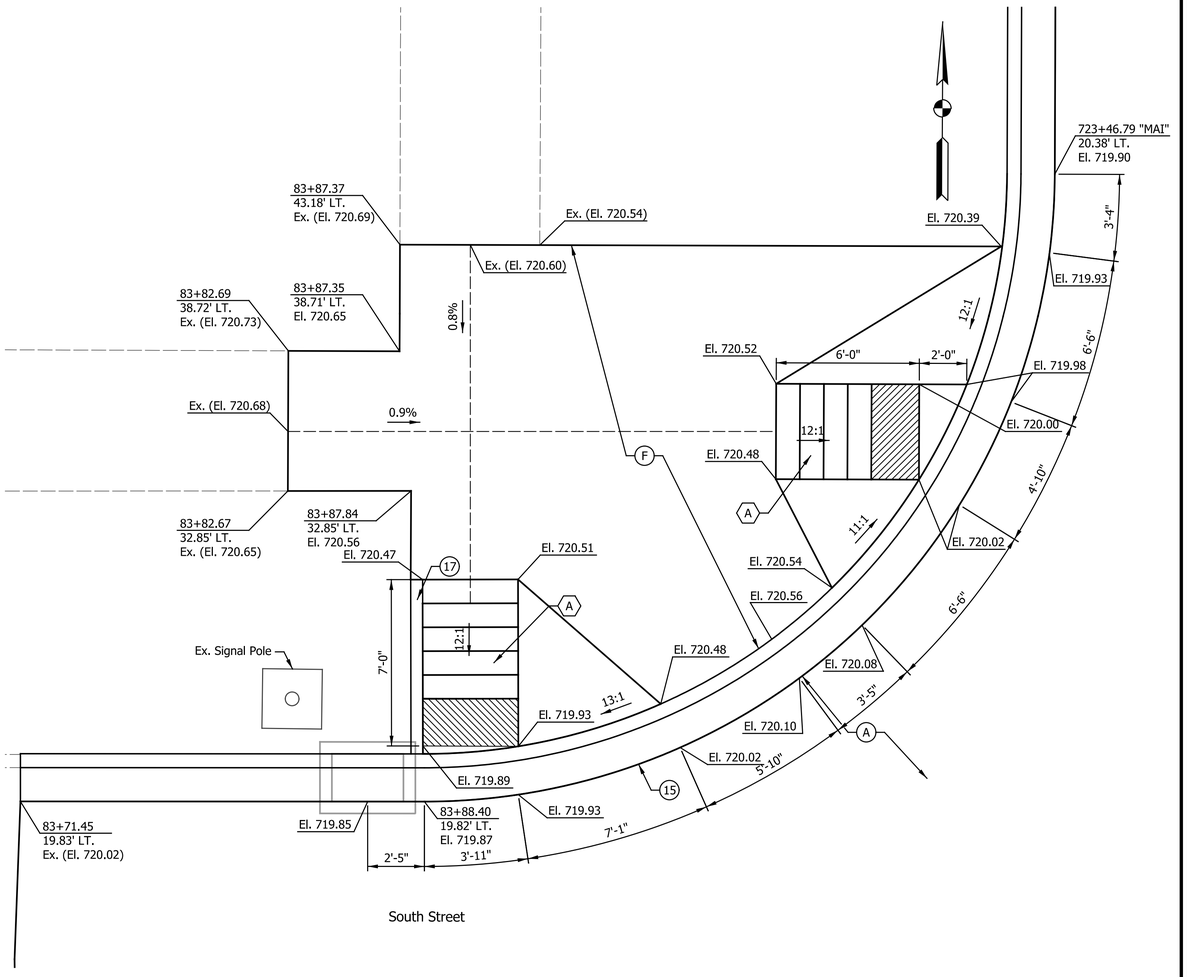

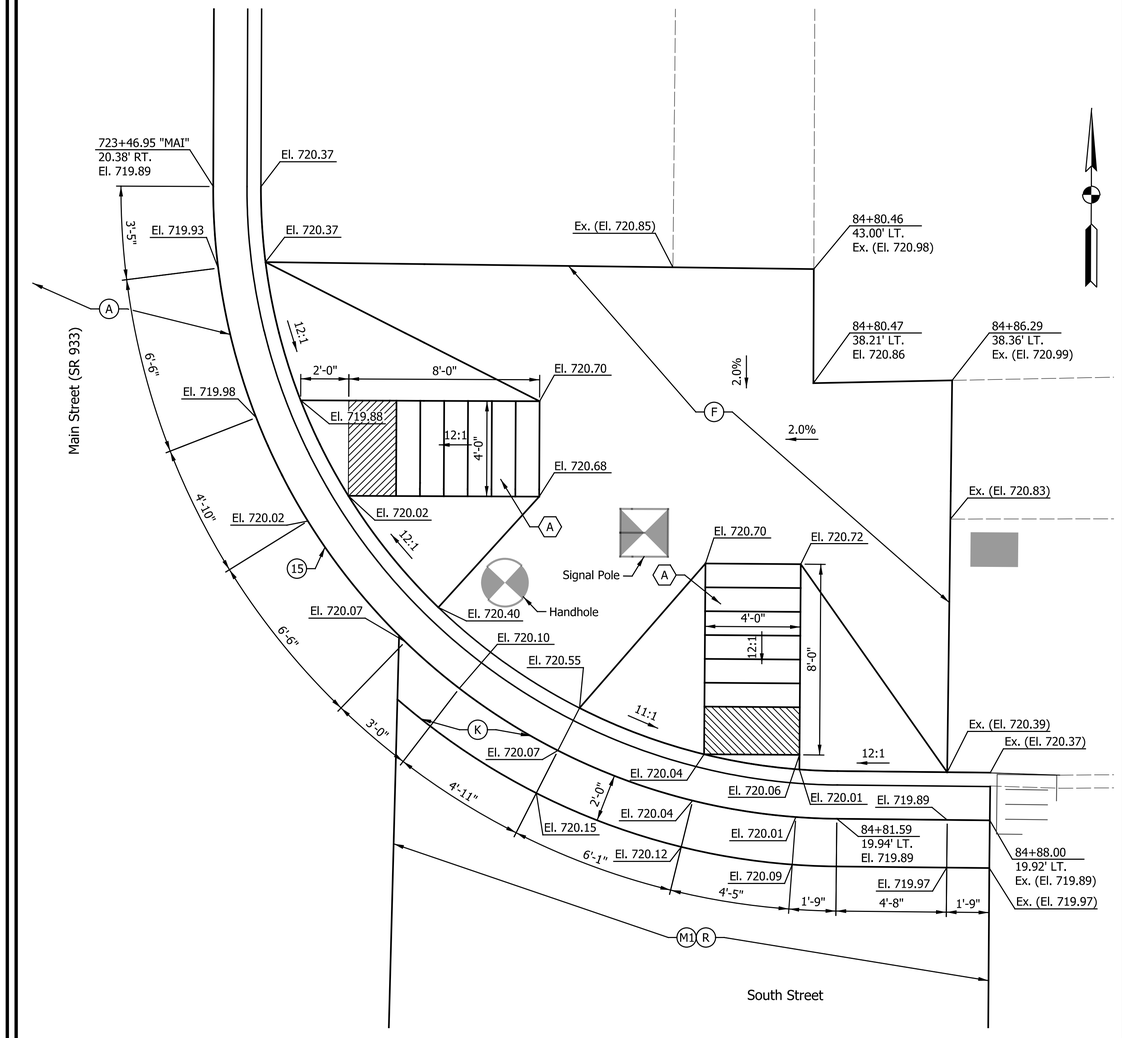

NOTES:
All Stationing Described from Line "SOU", Except as Shown.

DATE	
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK R. WOOLER
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 1/15/2016
DESIGN ENGINEER DATE

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

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT SOUTH ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	91-4 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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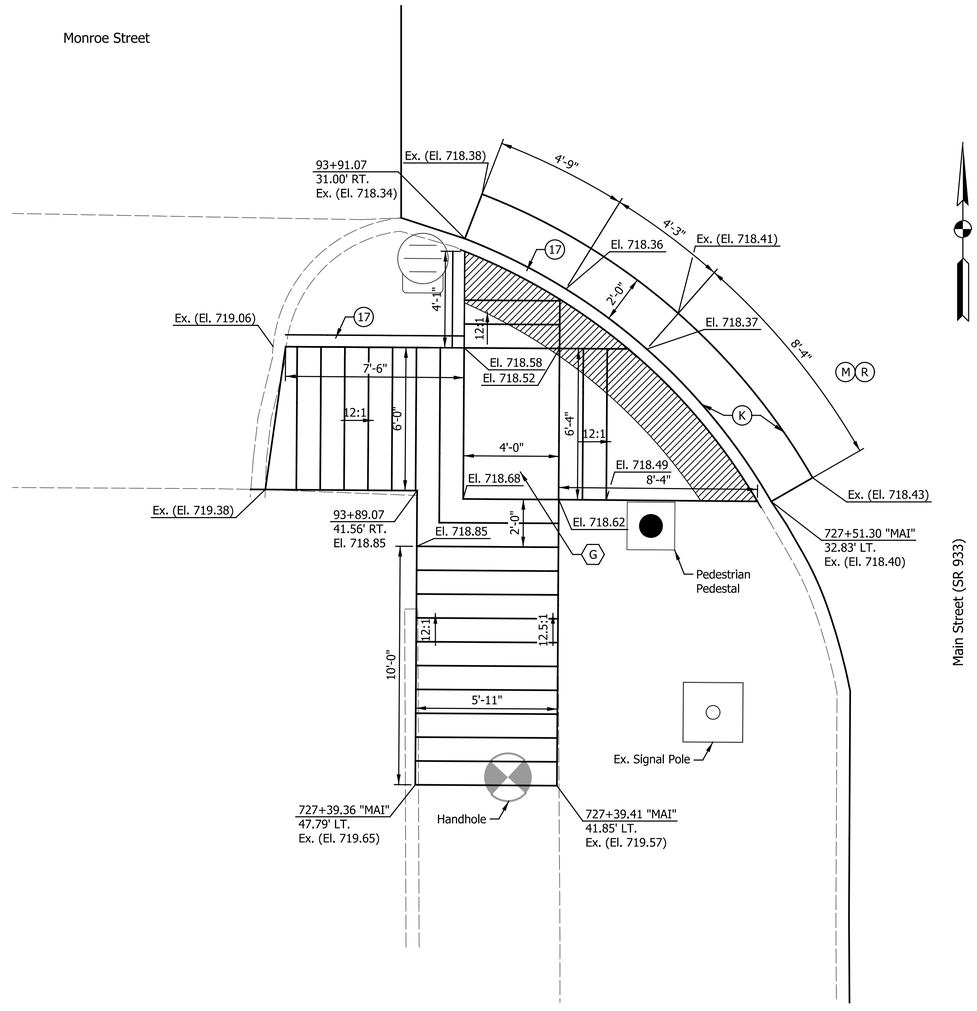
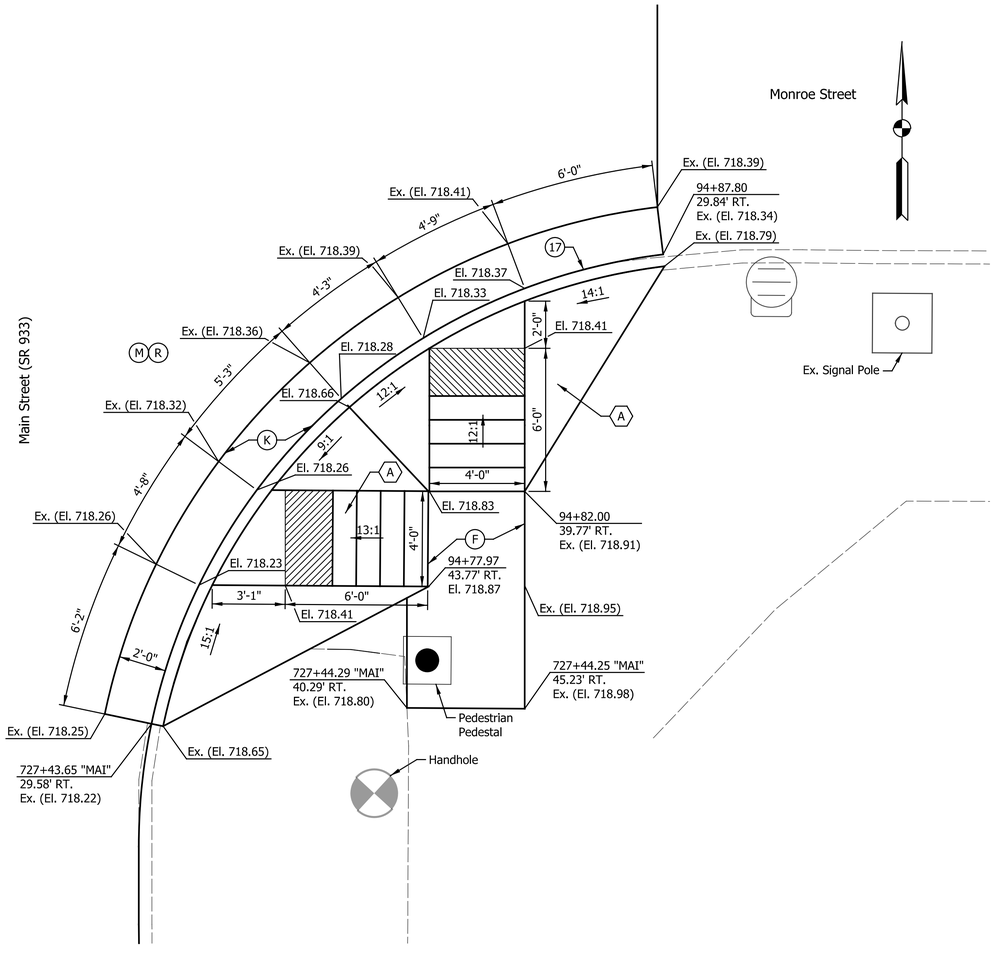




NOTES:
All Stationing Described from Line "MON", Except as Shown.

DATE	
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOOLEY
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — 1/15/2016 DATE

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

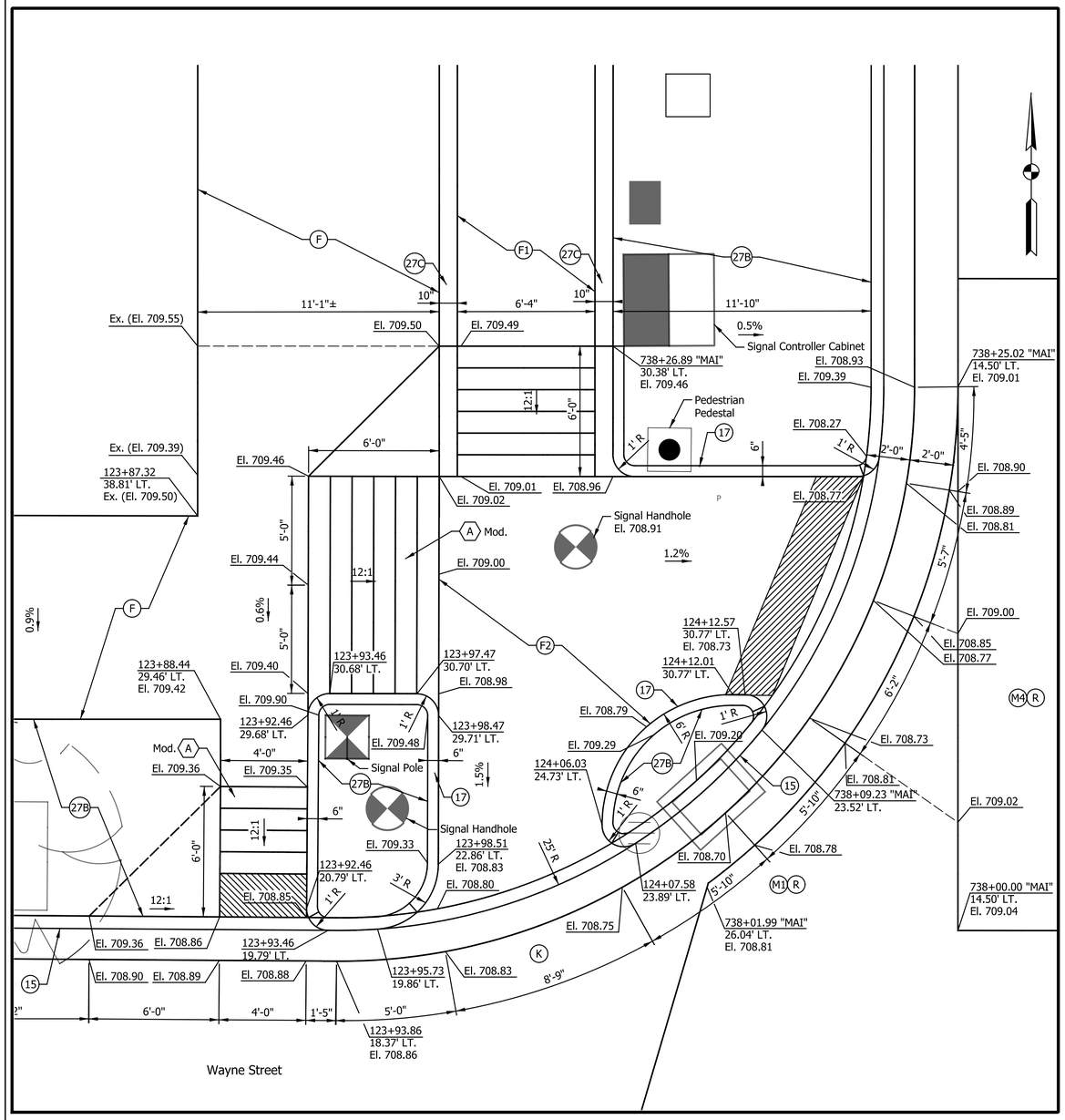
CITY OF SOUTH BEND

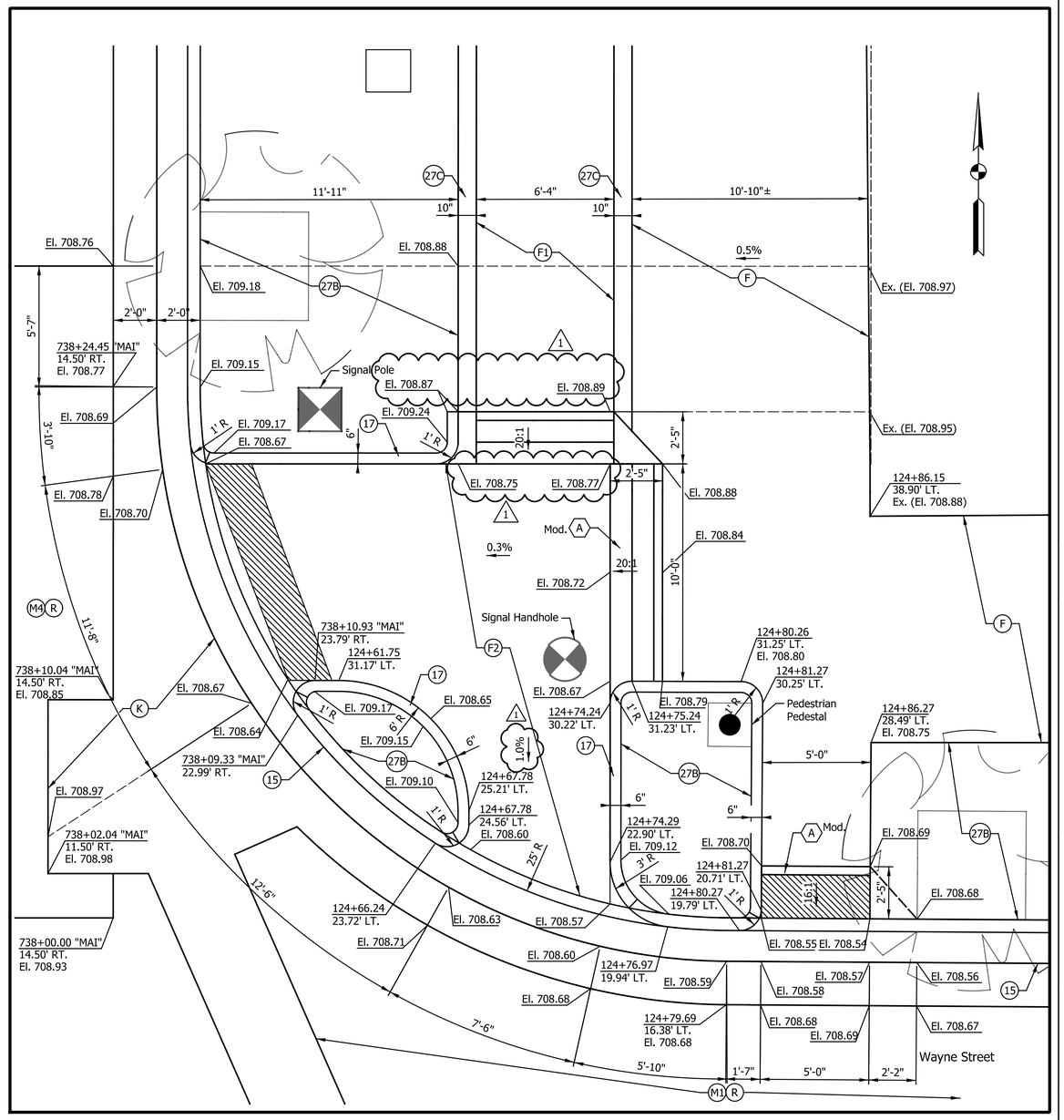
CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT MONROE ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	91-5 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Jgee 1/15/2016 2:58:45 PM P:\2014\01351\D. Drawings\201401351.RD.MD.MON_MAIN.dgn

Indx-Pdf.dfcfg
20140135I_Slsde.tbl





NOTES:
All Stationing Described from Line "WAY", Except as Shown.

DATE	REVISION
1/15/2016	REV: 1 Revised Elevations & Grades

LEGEND
See Plan Sheets for Material Descriptions

PATRICK R. WOOLER
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

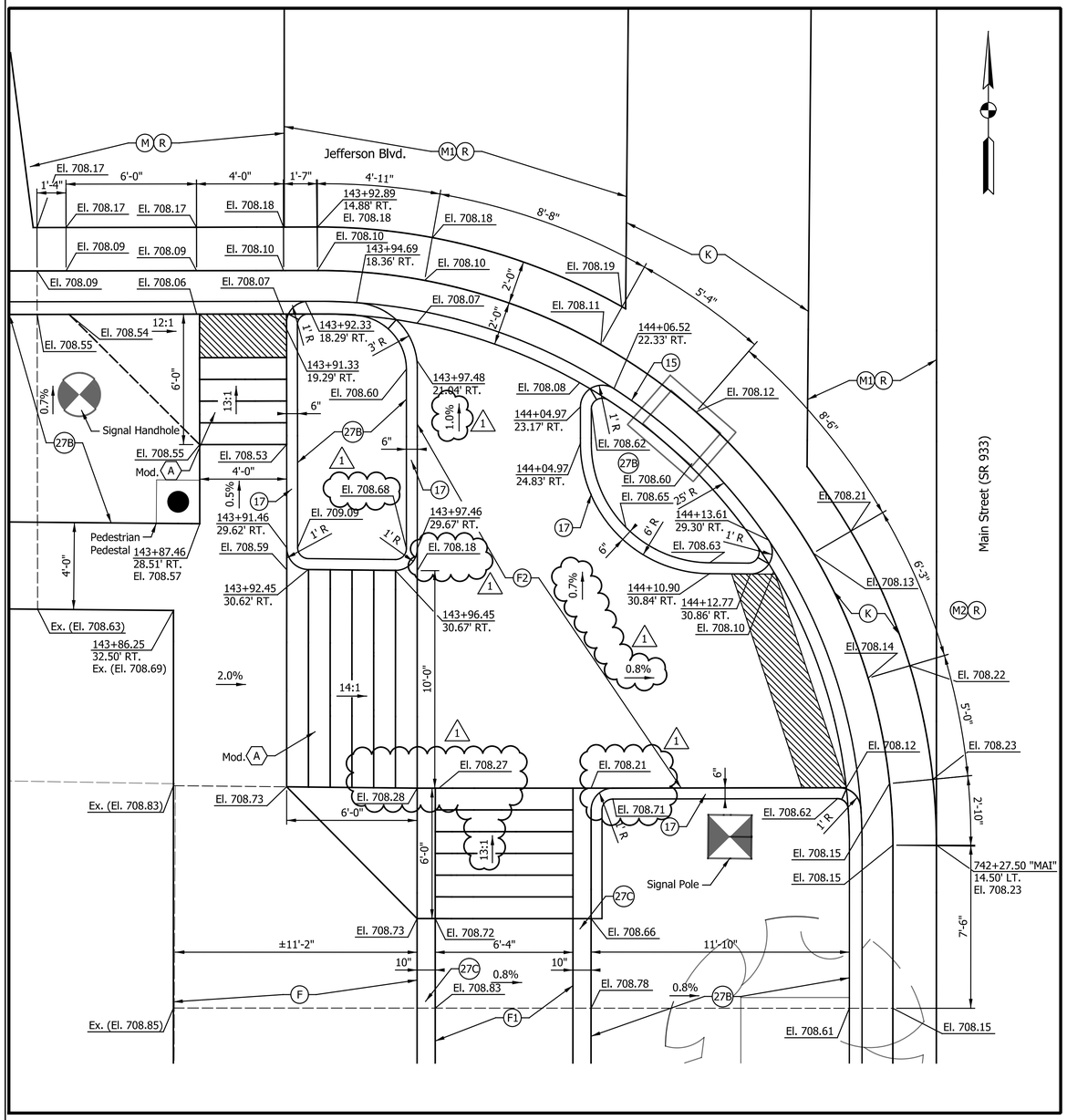
CITY OF SOUTH BEND

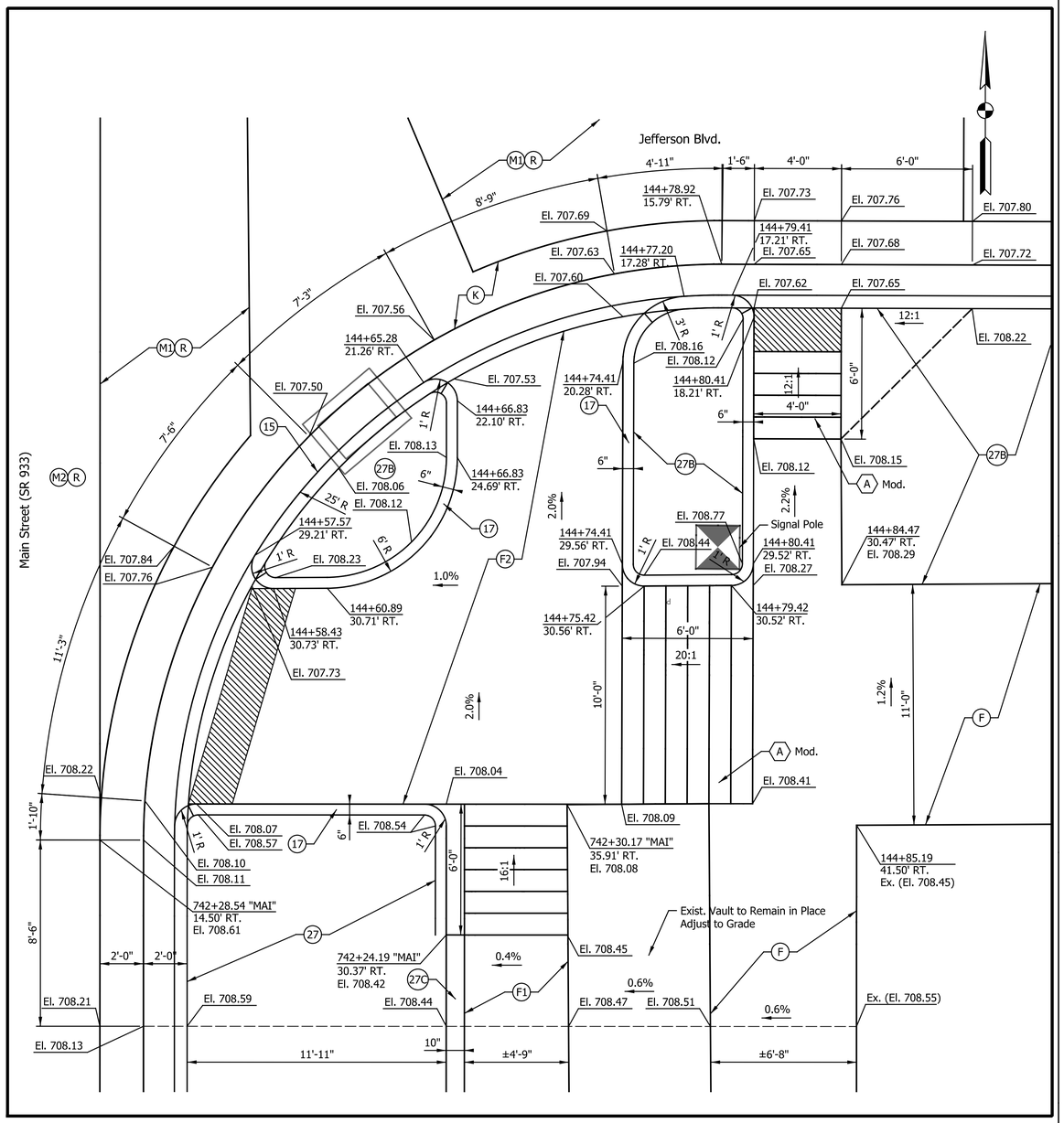
CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT WAYNE ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	96 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

lndx-Prof.dgn
201401351_Slade.tbl

Jgee 1/15/2016 2:58:47 PM P:\2014\01351\D. Drawings\201401351.RD.MD.WAY_MAIN_N.dgn





NOTES:
All Stationing Described from Line "JEF", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Revised Elevations & Grades

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOOLEY
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

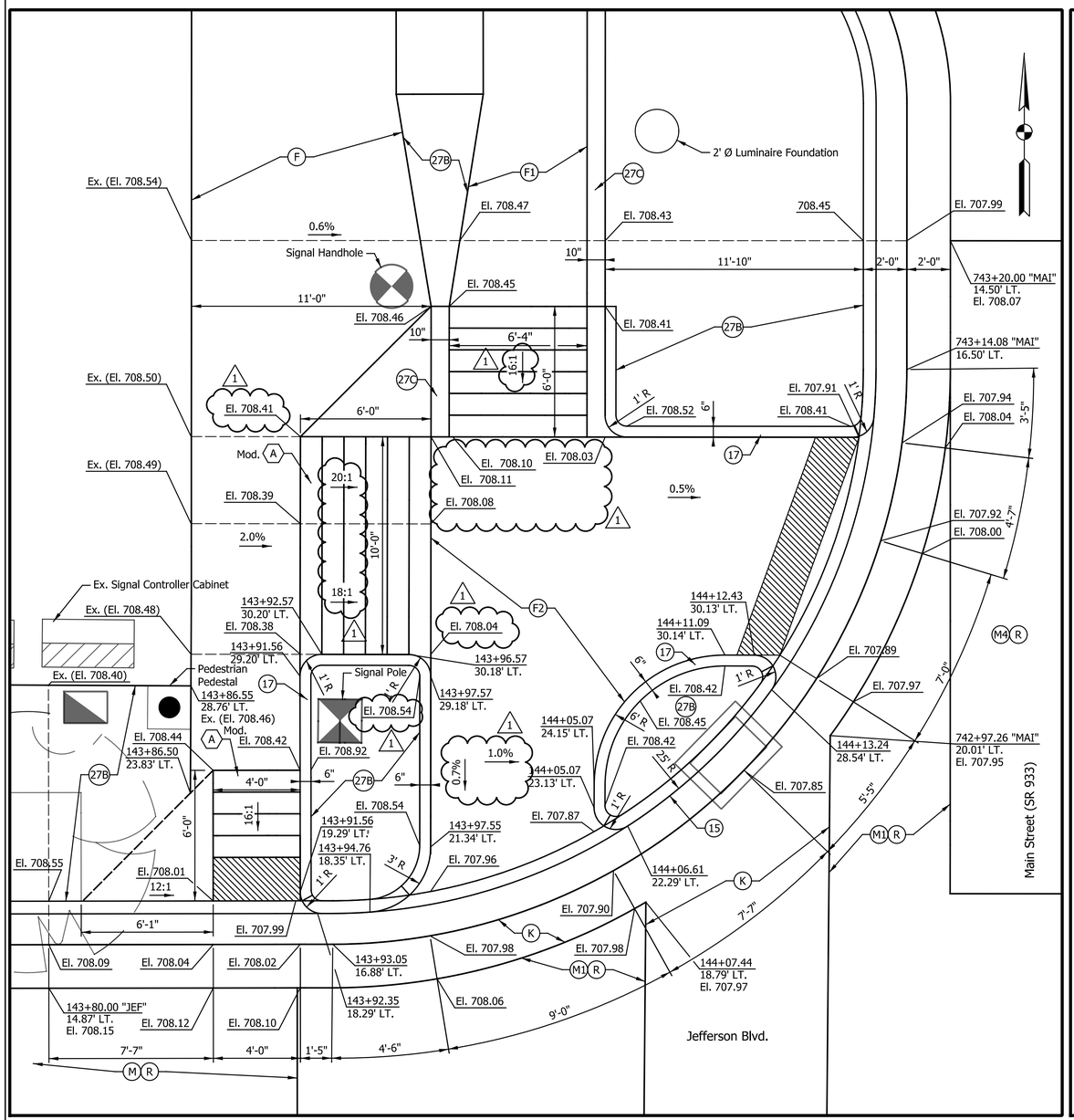
CITY OF SOUTH BEND

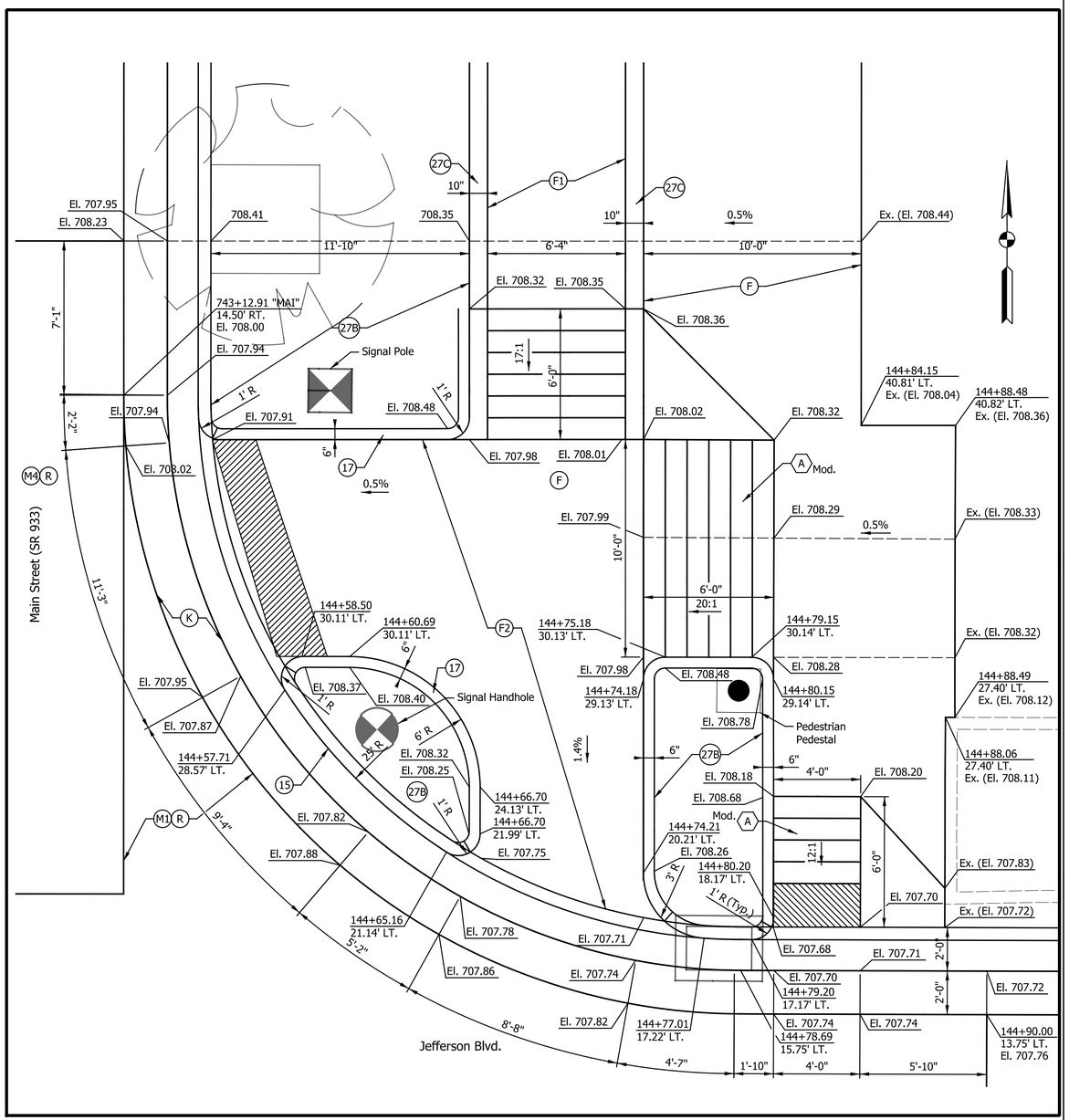
CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT JEFFERSON BLVD.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	97 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Indx-Pdf.dfcfg
20140135l_Slide.tbl

jgee 1/15/2016 2:58:49 PM P:\2014\01351\D. Drawings\201401351.RD.MD.JEF_MAIN_S.dgn





NOTES:
All Stationing Described from Line "JEF", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Revised Elevations & Grades

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOODEN
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT JEFFERSON BLVD.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	98 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Indy-hdf.dfn
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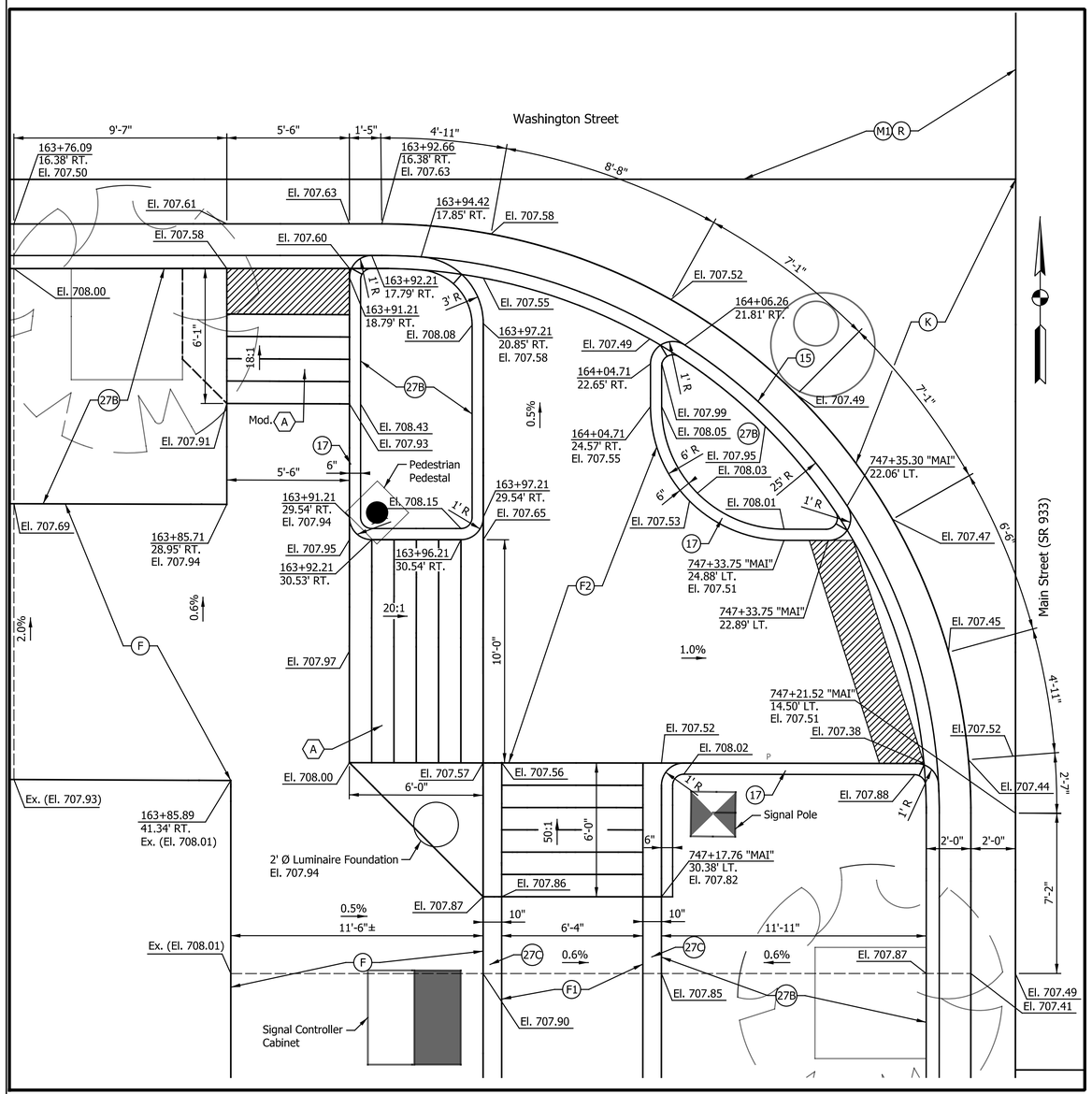

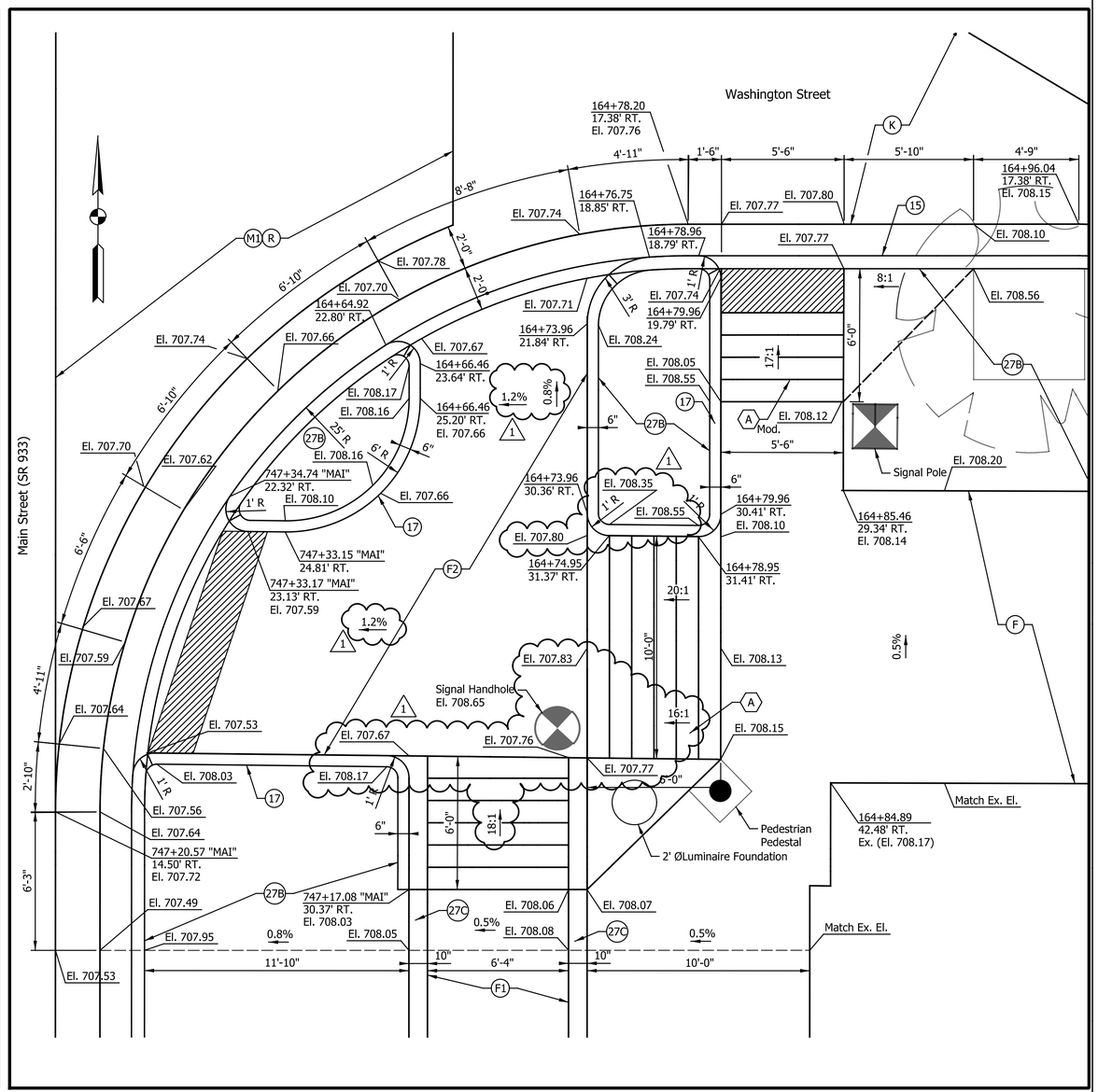

NOTES:
All Stationing Described from Line "WAS", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Revised Elevations & Grades

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOODEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT WASHINGTON ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	99 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Indy-hdf.dfn
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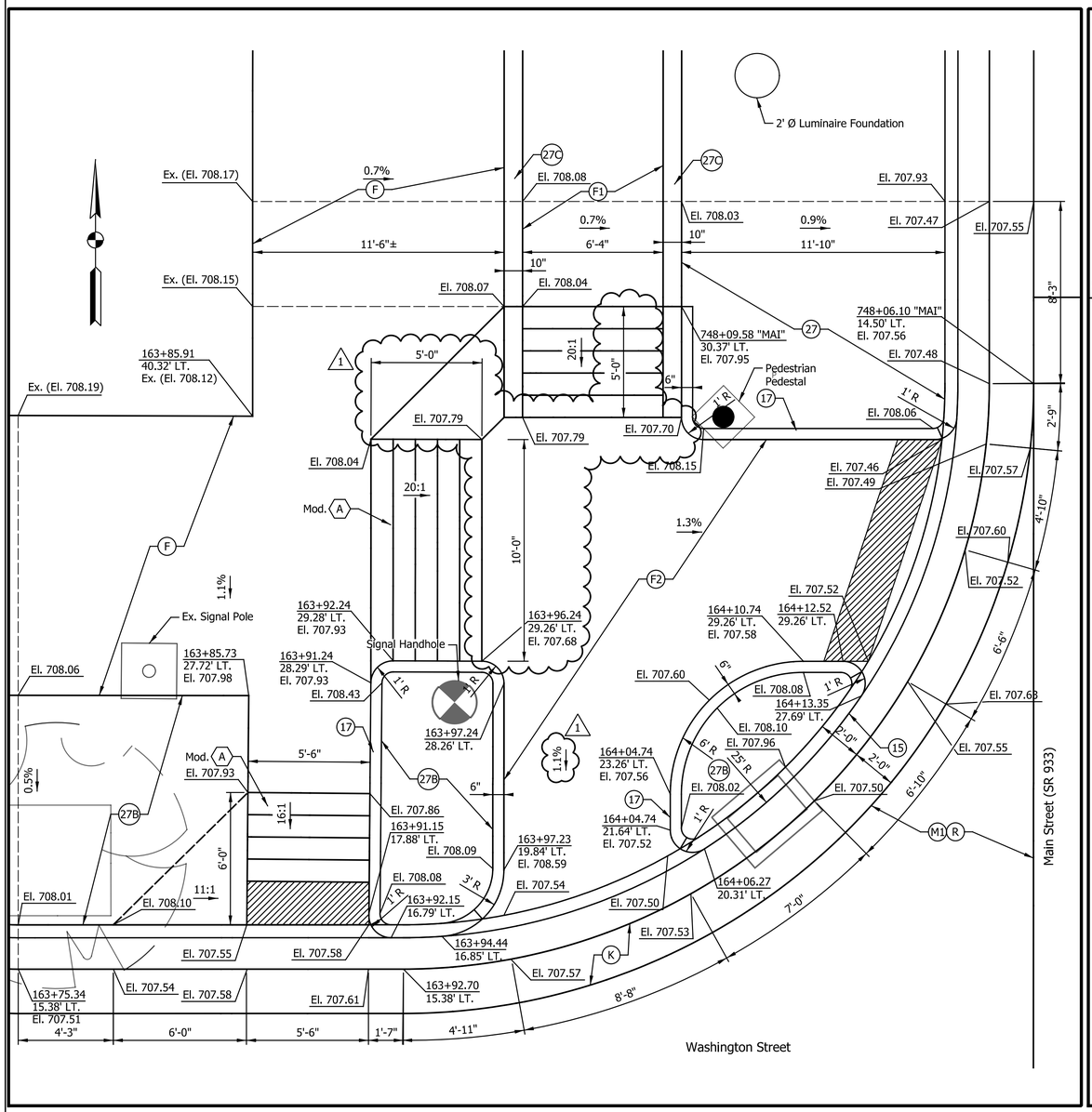
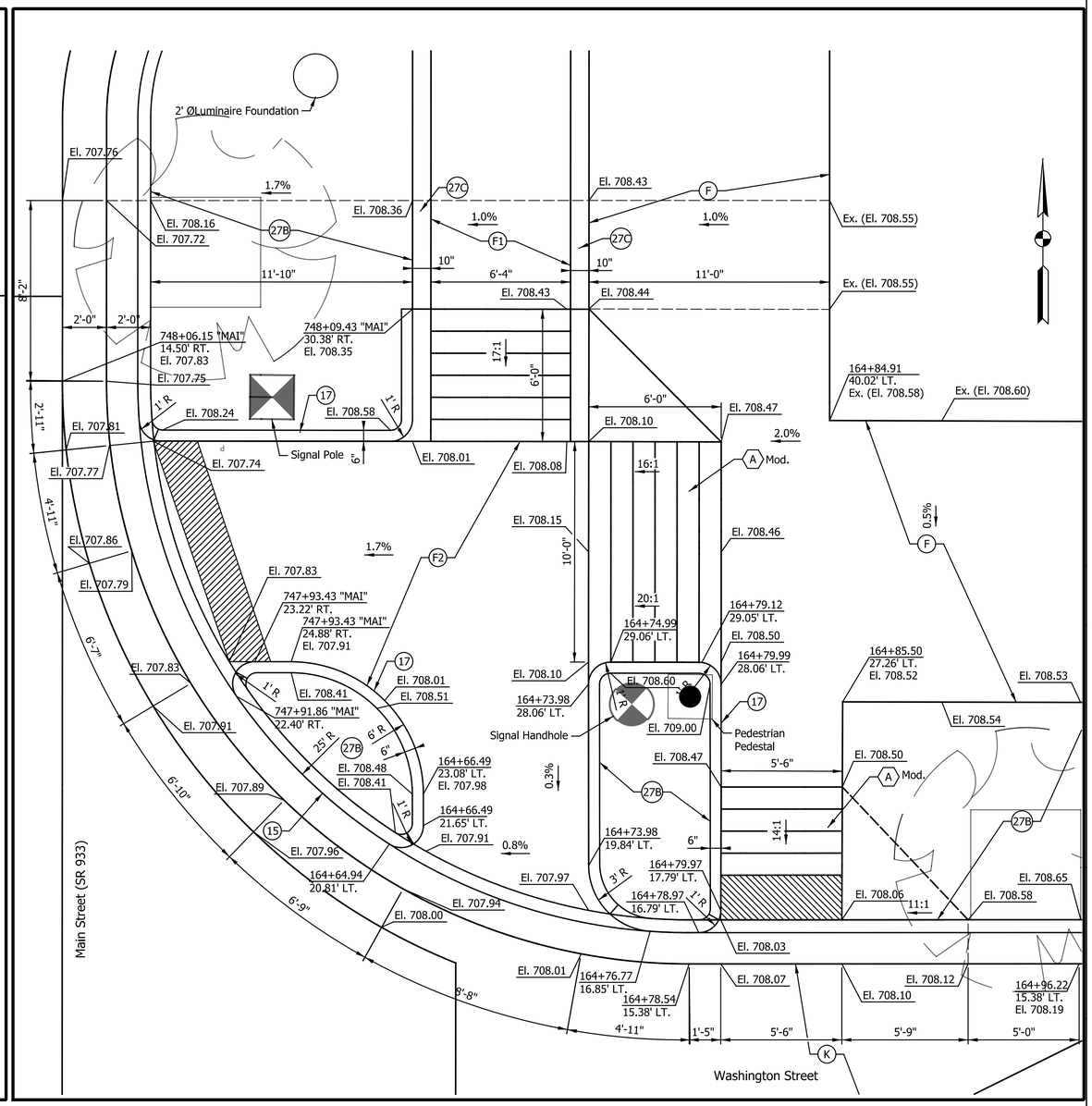




NOTES:
All Stationing Described from Line "WAS", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Revised Elevations & Grades

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOOLER
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

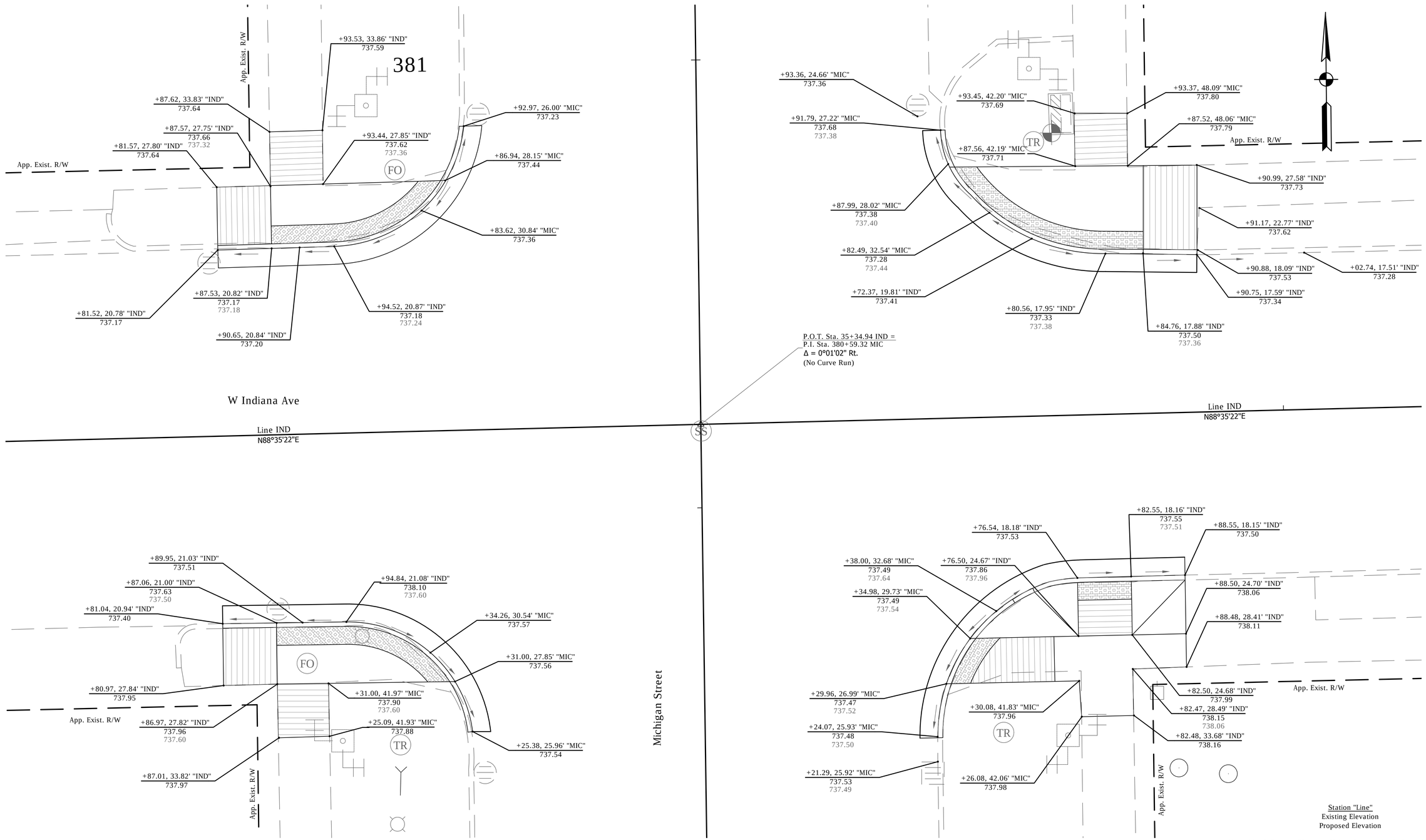
CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MAIN ST. AT WASHINGTON ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	100 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

lndx-Prof.dgn
201401351_Slade.tbl

Jgee 1/15/2016 2:58:55 PM P:\2014\01351\D. Drawings\201401351.RD.MD.WAS_MAIN_N.dgn



Station "Line"
Existing Elevation
Proposed Elevation

Note: Match Existing Elevation Unless Proposed is Indicated

DATE	REVISION

HARRY C. FOX III
REGISTERED
No. PE19400116
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

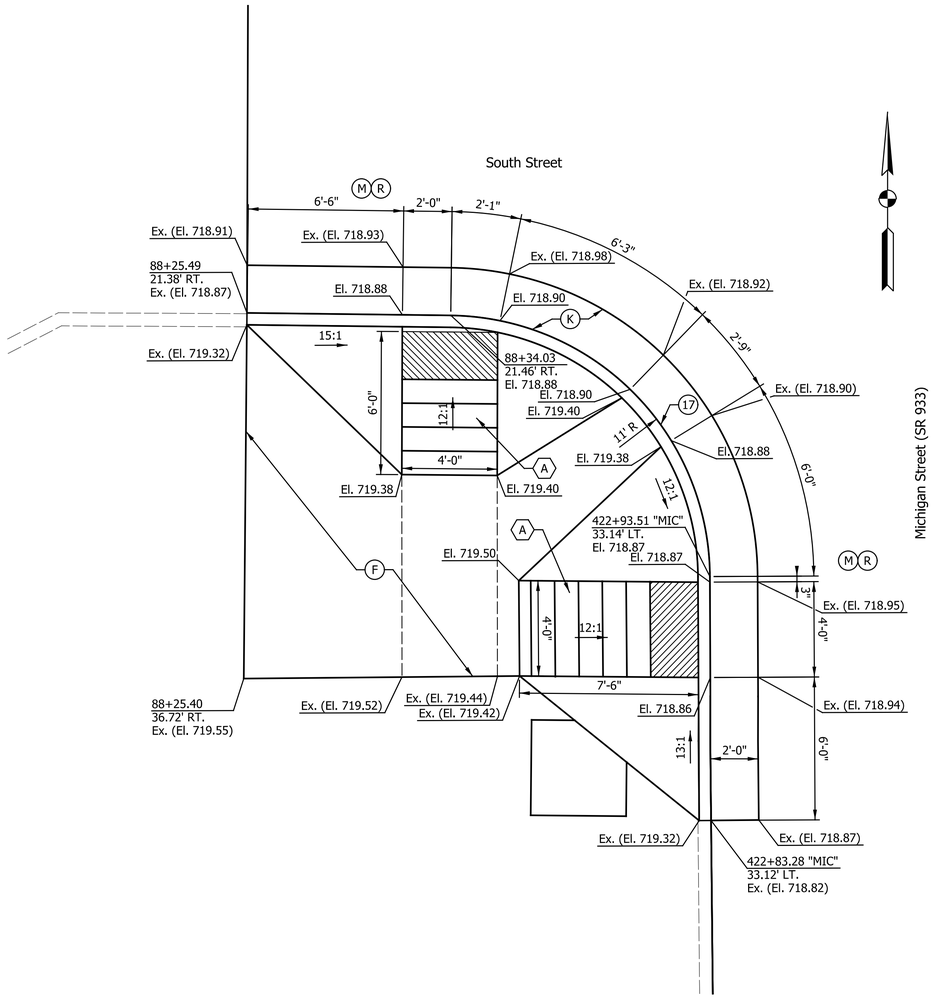
DESIGNED: HCF III | DRAWN: BRD
CHECKED: JG | CHECKED: JG

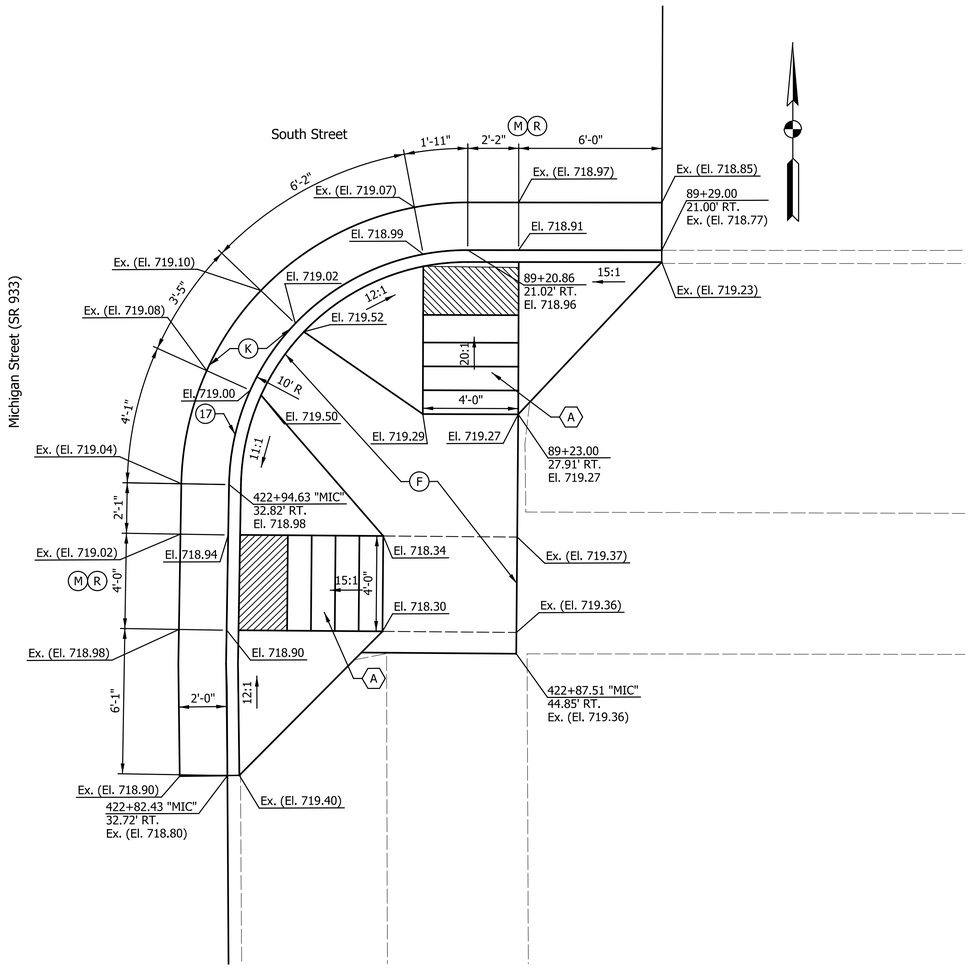
CITY OF SOUTH BEND

SPOT ELEVATION DETAILS
MICHIGAN ST. AT INDIANA AVE.

HORIZONTAL SCALE	BRIDGE FILE
1"=5'	N/A
VERTICAL SCALE	DESIGNATION
	N/A
SURVEY BOOK	SHEETS
N/A	107 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\MISC\
FILE.....3329 SPOT MICHIGAN ST - indiana.dwg
DISPLAY BY.....HSC
PLOTTED BY.....Brad Rose
DATE.....Jan 14,2016 - 8:20pm





NOTES:
All Stationing Described from Line "SOU", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOODEN
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER — 1/15/2016 DATE

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

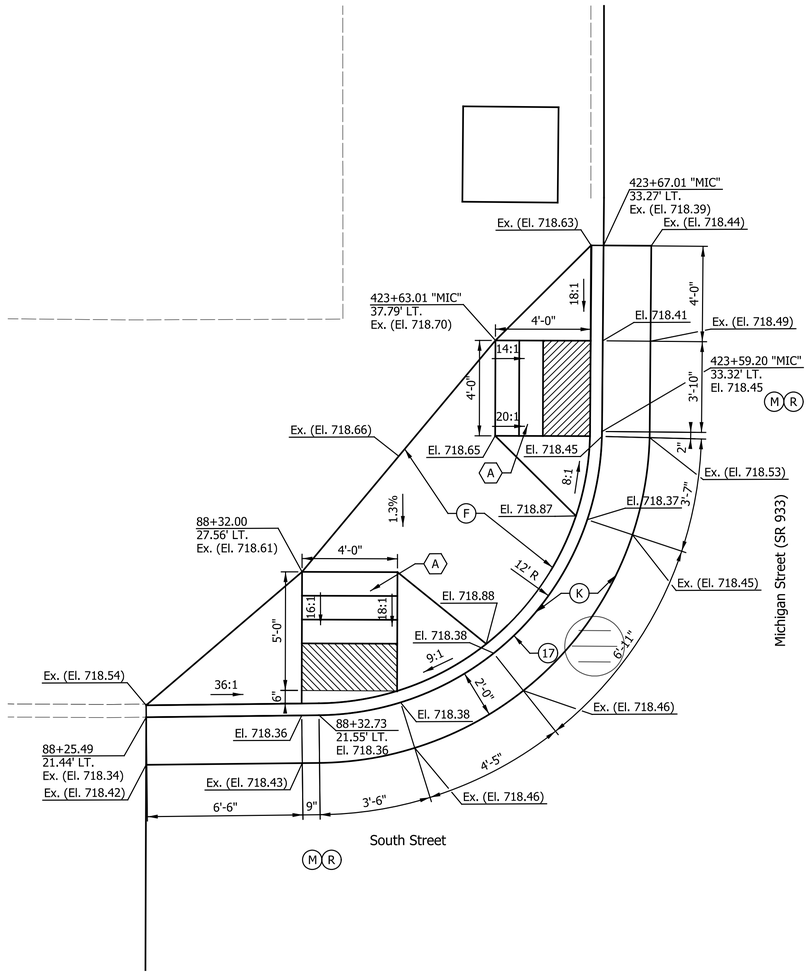
CITY OF SOUTH BEND

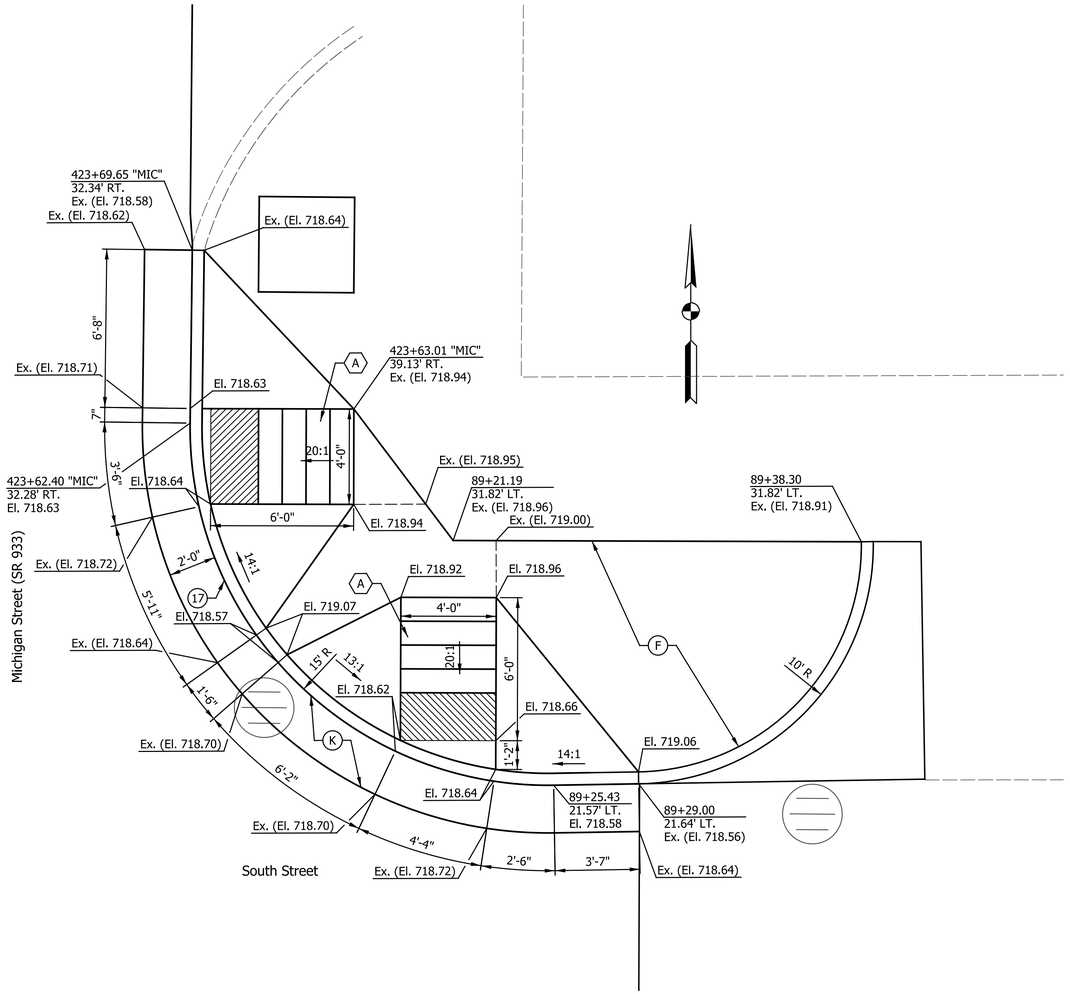
CURB RAMP & SPOT ELEVATION DETAILS
MICHIGAN ST. AT SOUTH ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	107-1 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Indx-def.dfn
20140135I_Shade.tbl

jgee 1/15/2016 2:58:57 PM P:\2014\01351\D. Drawings\201401351.RD.MD.SOU.MIC_S.dgn





NOTES:
All Stationing Described from Line "SOU", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Materials Descriptions

PATRICK K. WOODEN
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/15/2016 DATE

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

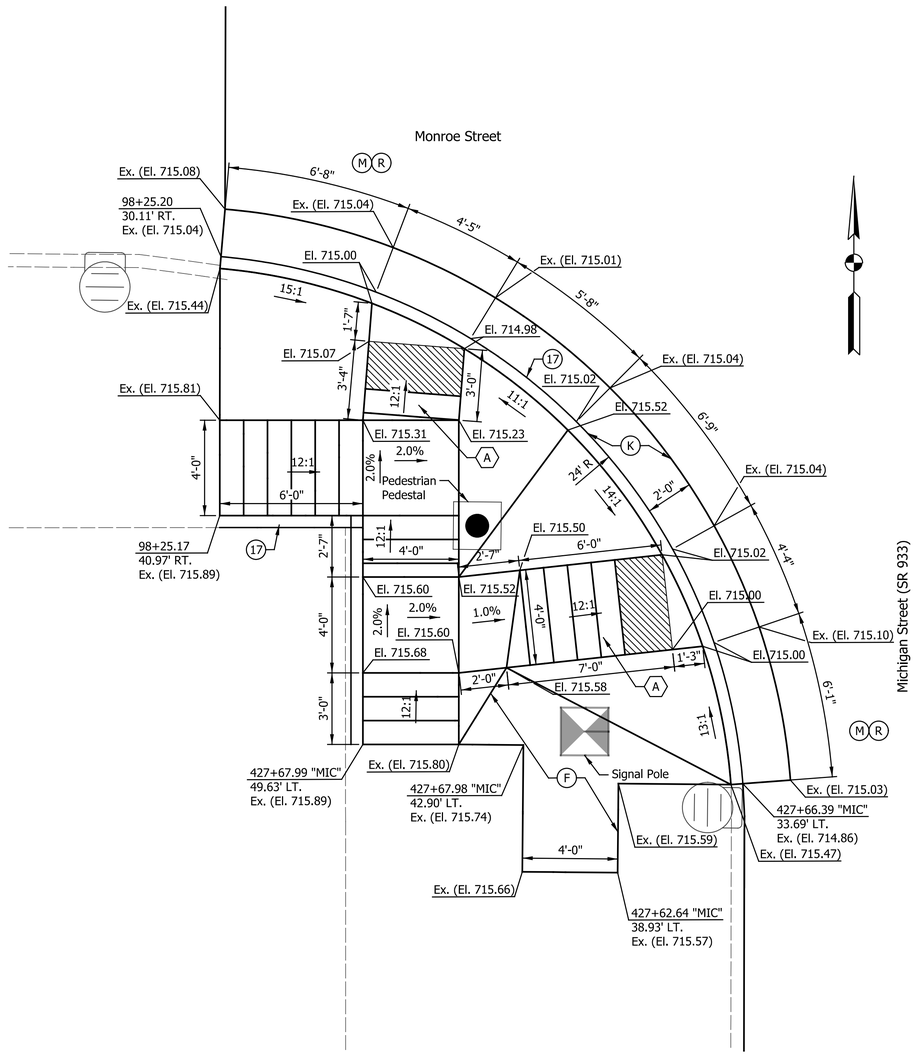
CITY OF SOUTH BEND

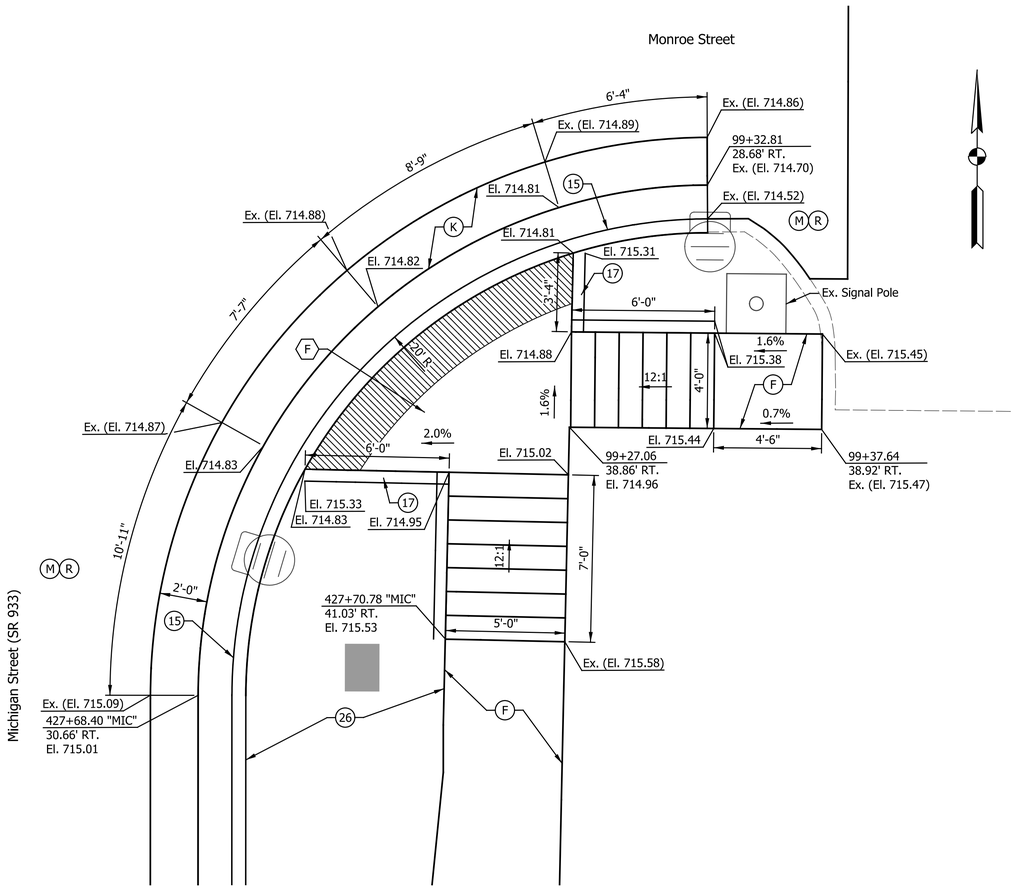
CURB RAMP & SPOT ELEVATION DETAILS
MICHIGAN ST. AT SOUTH ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	107-2 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Indx-dtlf.dft.cfg
20140135I_Shade.tbl

Jgee 1/15/2016 2:58:59 PM P:\2014\01351\D. Drawings\201401351.RD.MD.SOU.MIC_N.dgn





NOTES:
All Stationing Described from Line "MON", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOOLEY
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL
DESIGN ENGINEER
1/15/2016
DATE

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

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MICHIGAN ST. AT MONROE ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	107-3 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Indy+Std.dft.cfg
20140135_Stade.tbl

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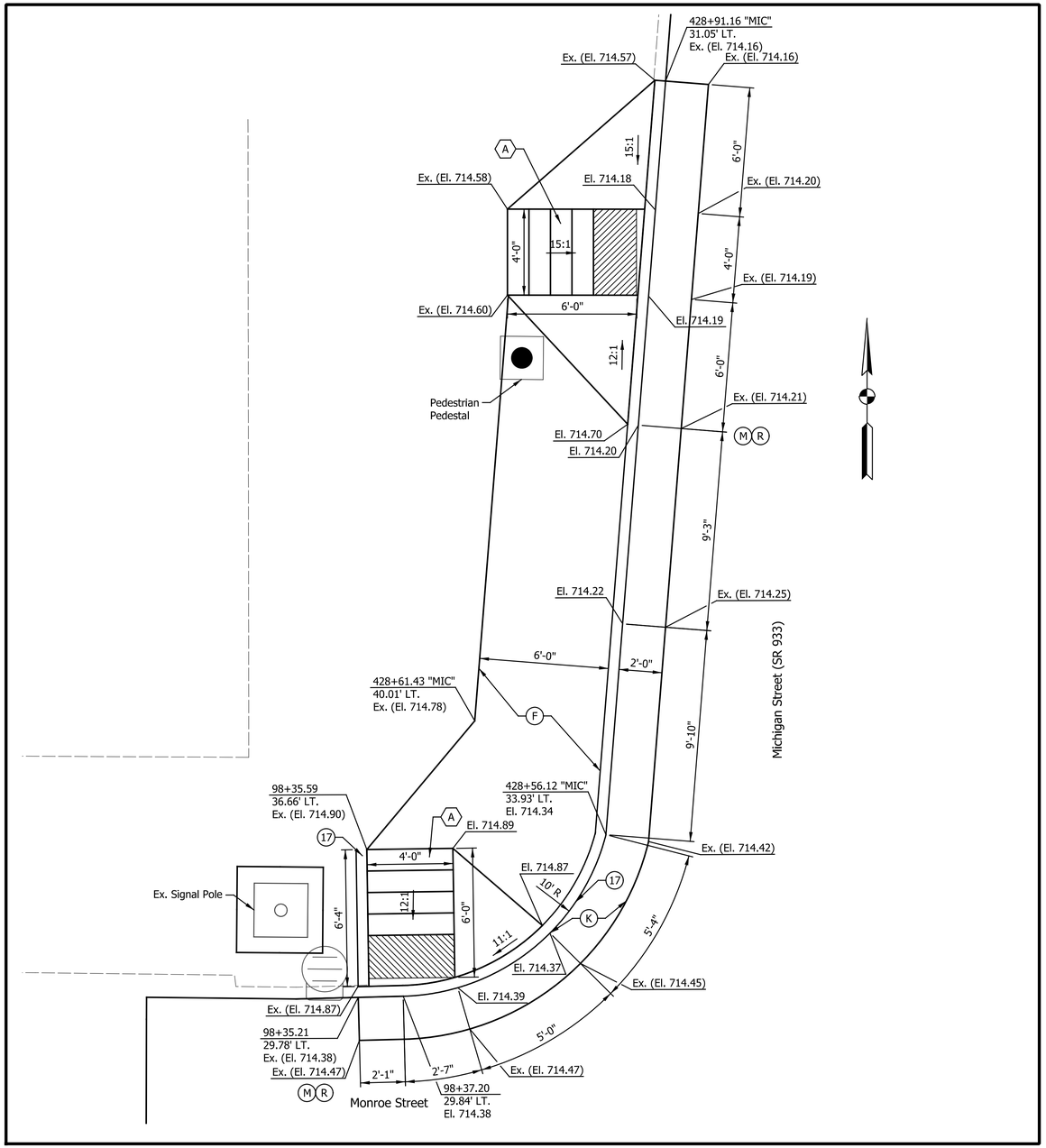
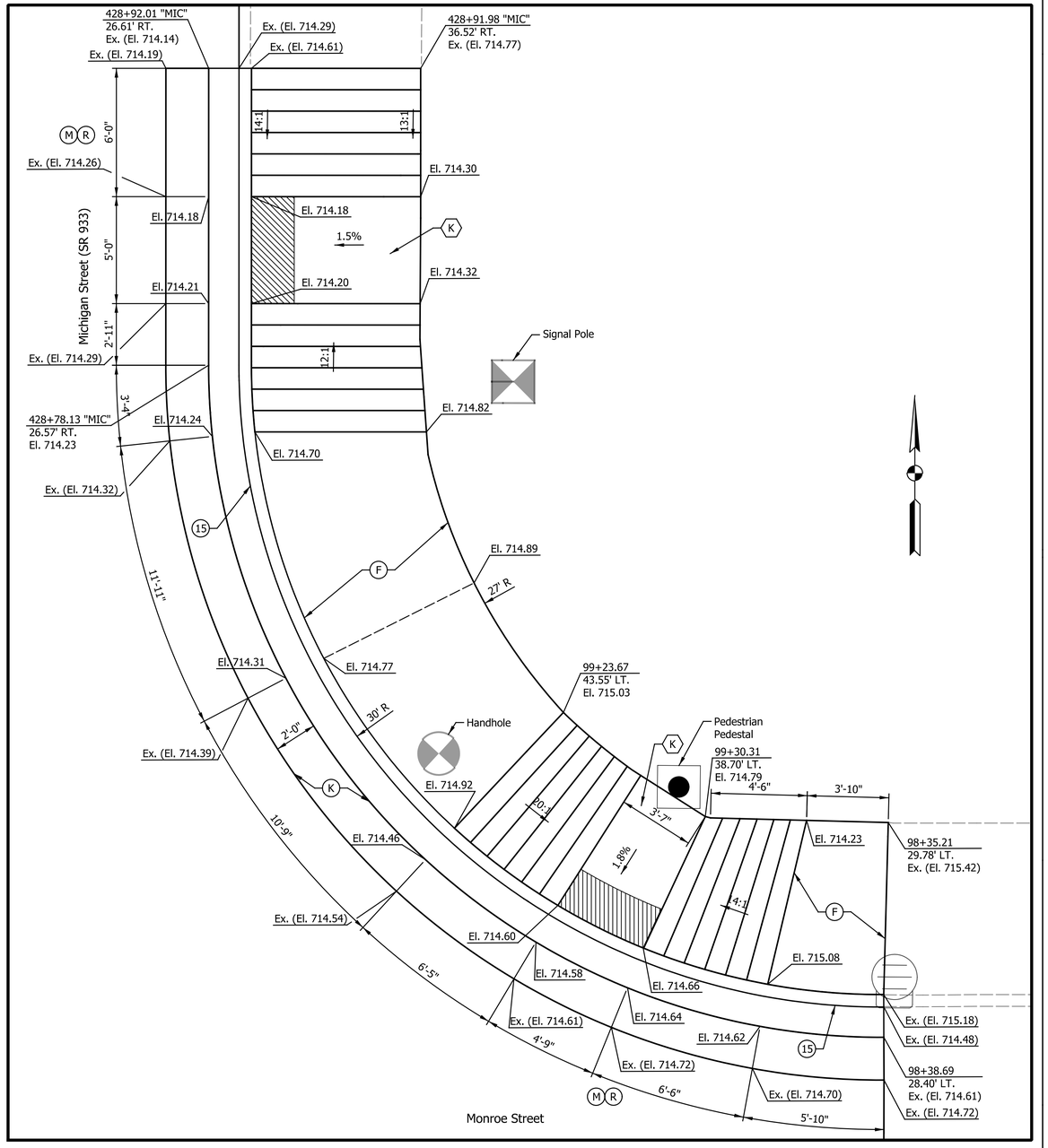




NOTES:
All Stationing Described from Line "MON", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK R. WOOLER
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/15/2016 DATE

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

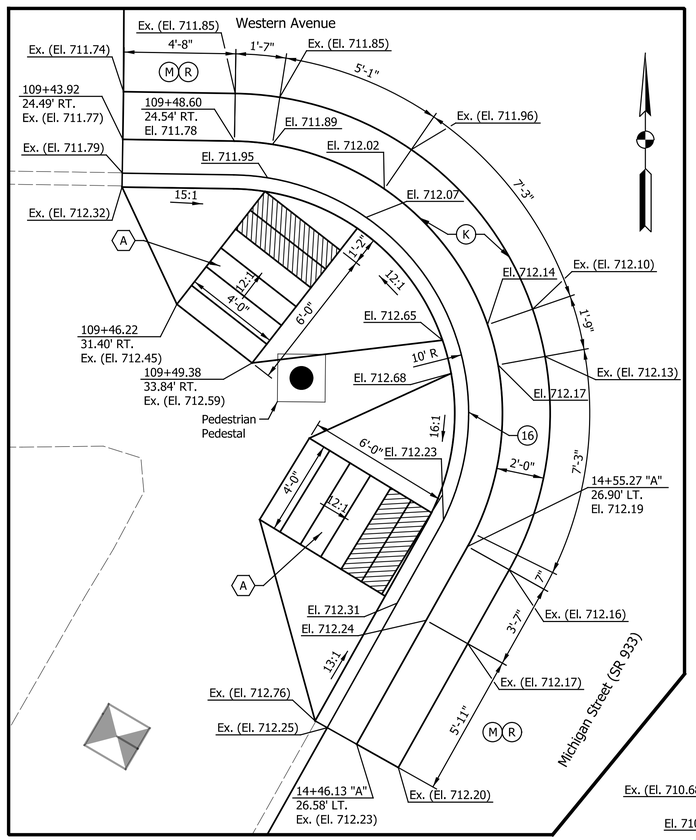
CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MICHIGAN ST. AT MONROE ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	107-4 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Indy-Pdf.dfrb
20140135I_Slade.tbl

Jgee 1/15/2016 2:59:02 PM P:\2014\01351\D. Drawings\20140135I.RD.MD.MON.MIC_N.dgn



NOTES:
All Stationing Described from Line "WES", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Materials Descriptions

PATRICK K. WOODEN
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/15/2016 DATE

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

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
MICHIGAN ST. AT WESTERN AVE.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	107-5 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

lrcb-shtf.dft-tg
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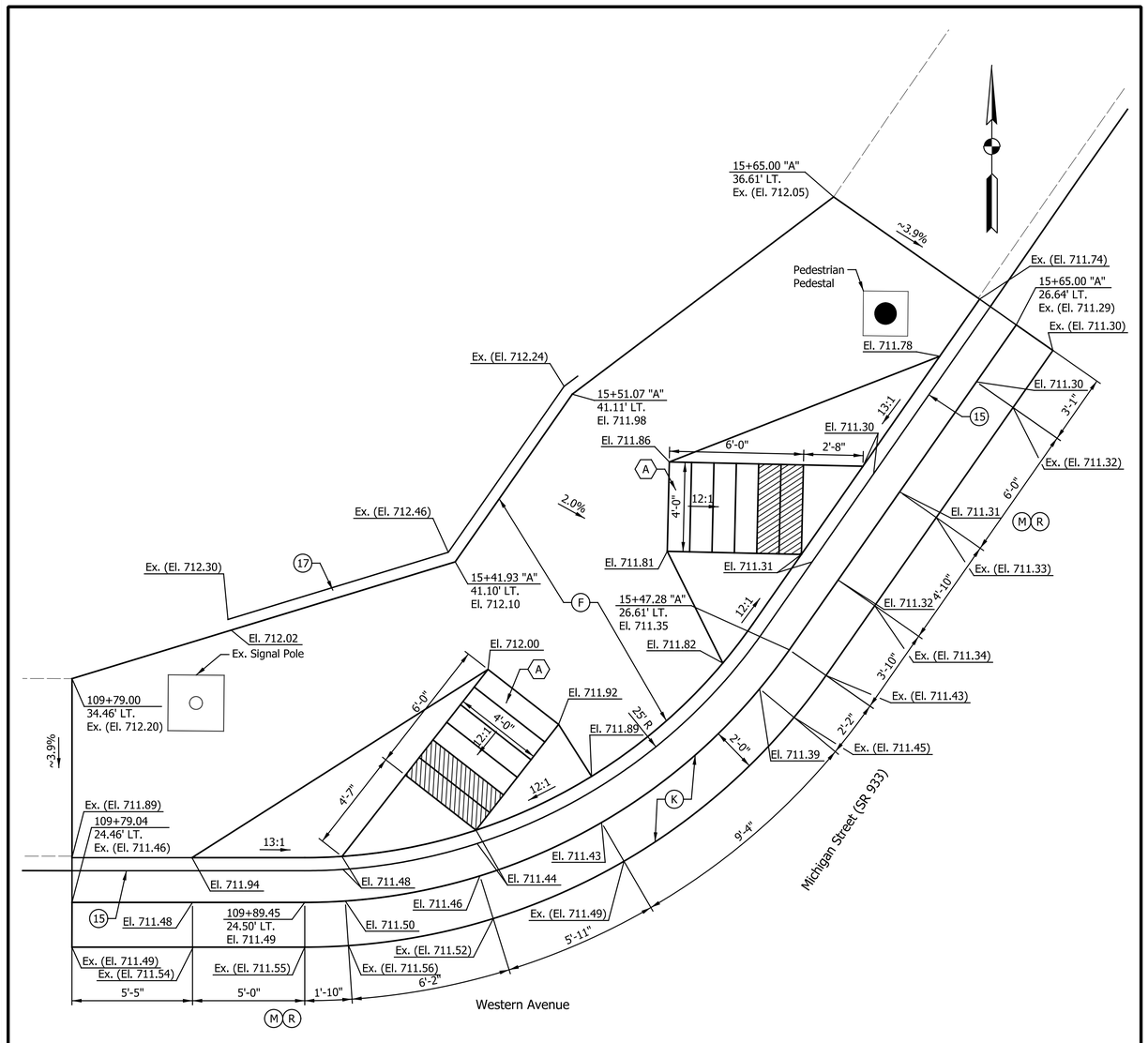
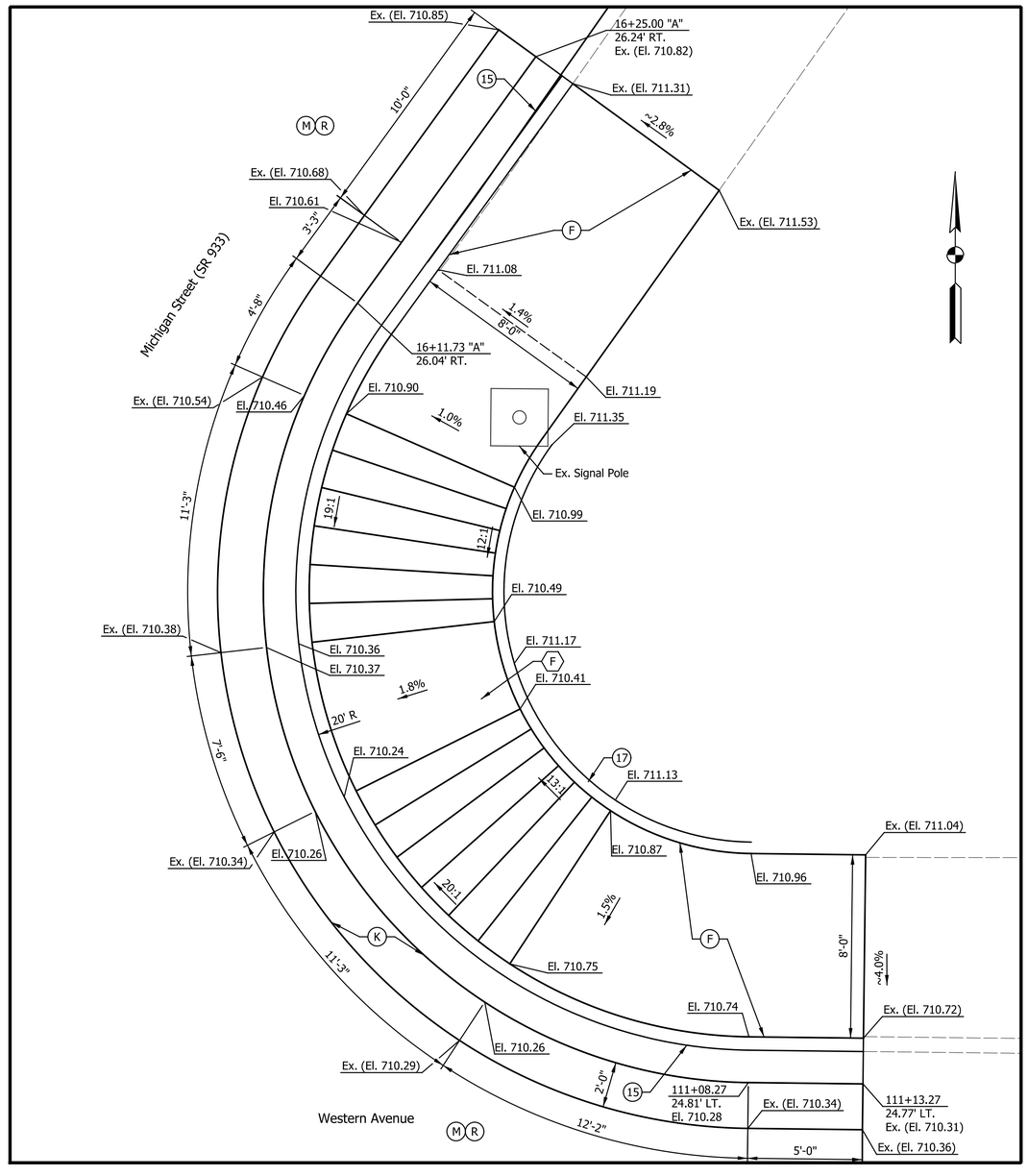




NOTES:
All Stationing Described from Line "WES", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOODEN
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/15/2016 DATE

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

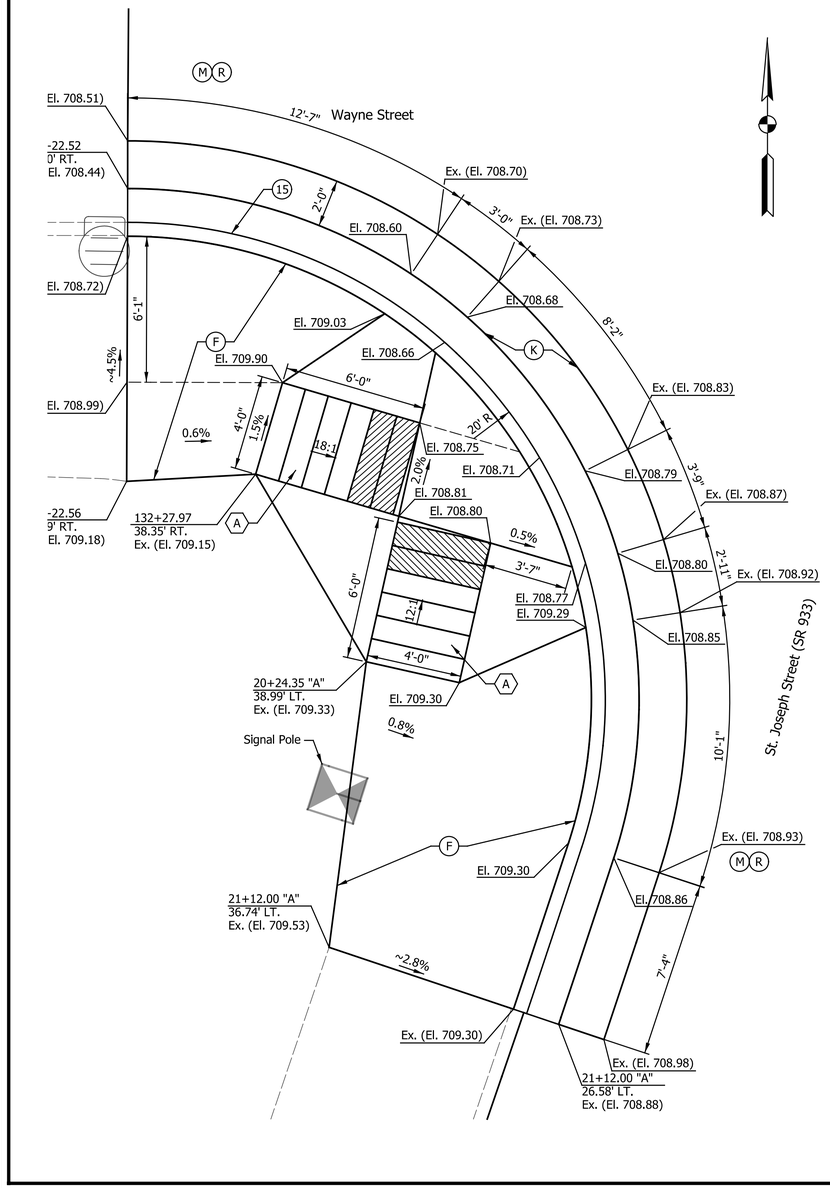
CITY OF SOUTH BEND

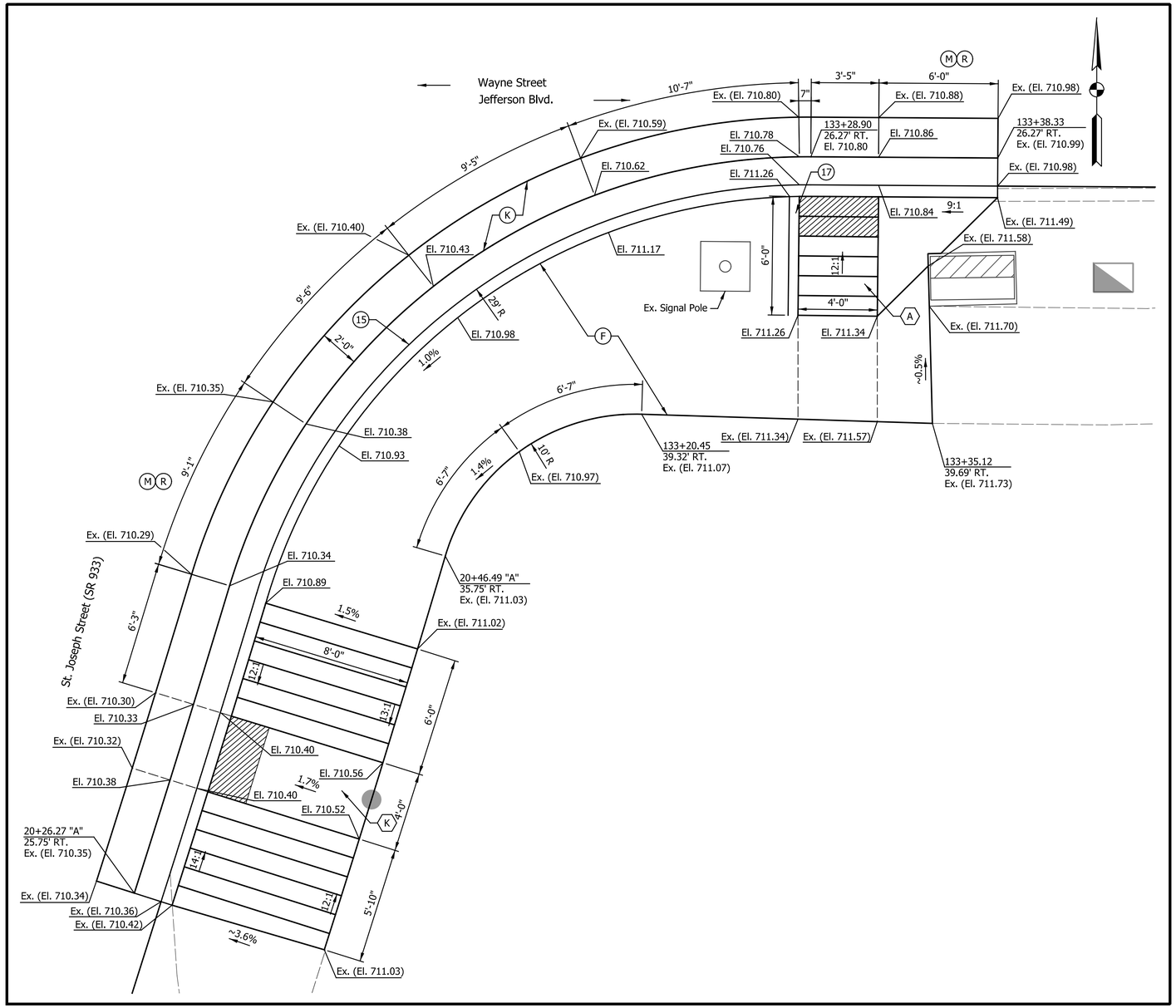
CURB RAMP & SPOT ELEVATION DETAILS
MICHIGAN ST. AT WESTERN AVE.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	107-6 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

lgdv-dhf.dftcfg
20140135I_Shade.tbl

jgee 1/15/2016 2:59:06 PM P:\2014\01351\D. Drawings\20140135I.RD.MD.WES.MIC_N.dgn





NOTES:
All Stationing Described from Line "WAY", Except as Shown.

DATE	REVISION
1/15/2016	REV 1: Added Sheet

LEGEND
See Plan Sheets for Material Descriptions

PATRICK K. WOOLER
REGISTERED
No. 10504741
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/15/2016 DATE

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

CITY OF SOUTH BEND

CURB RAMP & SPOT ELEVATION DETAILS
ST. JOSEPH ST. AT JEFFERSON BLVD. & WAYNE ST.

HORIZONTAL SCALE	BRIDGE FILE
1" = 3'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	107-7 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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PLANT MATERIALS SCHEDULE

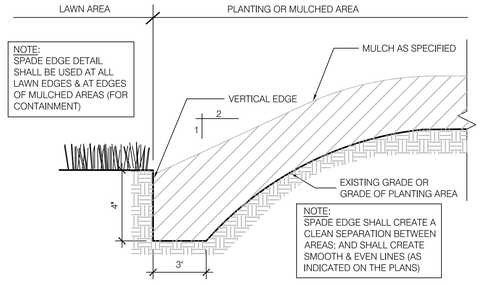
QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	CALIPER	COND.	SPACING	NOTES	PAY ITEM
DECIDUOUS TREES:								
3	AC	Amelanchier x grandiflora ' Autumn Brilliance'	Autumn Brilliance Serviceberry	2" Cal.	N/A	As Shown	MILTI-TRUNK, DENSE BRANCHING, DARK GREEN FOLIAGE	ORNAMENTAL TREE 2" CAL.
2	AS	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	2" Cal.	N/A	As Shown	STRAIGHT TRUNK, CENTRAL LEADER, DENSE BRANCHING, DARK GREEN FOLIAGE	OVER STORY TREE 2" CAL.
11	CV	Crateagus Virdis 'Winter King'	Winter King Hawthorn	2" Cal.	N/A	As Shown	STRAIGHT TRUNK, CENTRAL LEADER, DENSE BRANCHING, DARK GREEN FOLIAGE	OVER STORY TREE 2" CAL.
10	GT	Gleditsia triacanthos 'Impcole'	Imperial Honeylocust	2" Cal.	N/A	As Shown	STRAIGHT TRUNK, CENTRAL LEADER, DENSE BRANCHING, DARK GREEN FOLIAGE	OVER STORY TREE 2" CAL.
33	UF	Ulmus 'Frontier'	Frontier Elm	2" Cal.	N/A	As Shown	STRAIGHT TRUNK, CENTRAL LEADER, DENSE BRANCHING, DARK GREEN FOLIAGE	OVER STORY TREE 2" CAL.
24	UM	Ulmus Morton 'Accolade'	Accolade Elm	2" Cal.	N/A	As Shown	STRAIGHT TRUNK, CENTRAL LEADER, DENSE BRANCHING, DARK GREEN FOLIAGE	OVER STORY TREE 2" CAL.
24	ZS	Zelkova Serrata 'Musashino'	Musashino Columnar Zelkova	2" Cal.	N/A	As Shown	STRAIGHT TRUNK, CENTRAL LEADER, DENSE BRANCHING, DARK GREEN FOLIAGE	OVER STORY TREE 2" CAL.
SHRUBS AND GRASSES:								
82	CD	Caryopteris x clandonensis 'Blue Mist'	Blue Mist Spirea	3 Gal	Cont.	3' O.C.		SHRUB, NO. 3
126	PA	Pennisetum alopecuroides	Fountain Grass	1 Gal.	Cont.	3' O.C.		ORNAMENTAL GRASS, NO. 1
20	PE	Pennisetum alopecuroides 'Hameln'	Dwarf Fountain Grass	1 Gal.	Cont.	2' O.C.		ORNAMENTAL GRASS, NO. 1
109	RA	Rhus aromatica 'Gro-Lo'	Gro- Lo Sumac	3 Gal.	Cont.	3' O.C.		SHRUB, NO. 3
50	RN	Rosa 'Nearly Wild'	Nearly Wild Rose	3 Gal	Cont.	3' O.C.		SHRUB, NO. 3
38	SJ	Spirea japonica 'Neon Flash'	Neon Flash Spirea	3 Gal.	Cont.	3' O.C.		SHRUB, NO. 3
PERENNIALS:								
628	HM	Hemerocallis 'Happy Returns'	Happy Returns Daylily	1 Gal.	Cont.	18" O.C.	FULL IN POT, DARK GREEN FOLIAGE, HEALTHY	PERENNIAL, NO. 1
304	RF	Rudbeckia fulgida 'Goldstrum'	Brown Eyed Susan	1 Gal.	Cont.	18" O.C.	FULL IN POT, DARK GREEN FOLIAGE, HEALTHY	PERENNIAL, NO. 1
159	SA	Sedum 'Autumn Fire'	Autumn Fire Sedum	1 Gal.	Cont.	18" O.C.	FULL IN POT, DARK GREEN FOLIAGE, HEALTHY	PERENNIAL, NO. 1
191	SS	Schizachyrium scoparium	Little Bluestem	Plug	Cont.	18" O.C.	FULL IN POT, DARK GREEN FOLIAGE, HEALTHY	PLUG

GENERAL PLANTING NOTES:

1. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES ASSOCIATED WITH WORK. UTILITIES SHALL BE REPAIRED TO SATISFACTION OF THE UTILITY OWNER AND/OR OPERATING AUTHORITY AT NO ADDITIONAL COST.
2. A MINIMUM OF 4" OF TOPSOIL SHALL BE PLACED ON ALL AREAS TO BE SEEDED AND 12" FOR PLANTING BEDS. USE SUITABLE TOPSOIL FROM STOCKPILED SITE STRIPPING. TOPSOIL SHALL BE FREE FROM SUBSOIL, VEGETATION, WEEDS OR ANY EXTRANEOUS OR DELETERIOUS MATERIALS LARGER THAN 1", REMOVE ANY UNSUITABLE AND EXCESS TOPSOIL, AS DETERMINED BY SOILS ENGINEER, FROM THE SITE. FURNISH ANY ADDITIONAL TOPSOIL NEEDED AT NO ADDITIONAL COST. ADDED TOPSOIL SHALL BE INCORPORATED INTO EXISTING SOIL.
3. IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE. IF IN QUESTION, CONTACT THE LANDSCAPE ARCHITECT.
4. ALL PLANTING BEDS SHALL HAVE A 3" THICK LAYER OF SHREDDED HARDWOOD BARK MULCH. NO UTILITY MULCH OR PROCESSED TREE TRIMMINGS WILL BE ALLOWED. ALL PLANTING BEDS SHALL HAVE PRE-EMERGENT HERBICIDE APPLIED AS PER MANUFACTURERS RECOMMENDATION, AFTER INSTALLATION IS COMPLETE.
5. FINAL PLACEMENT OF PLANT MATERIALS, ETC. SHALL BE APPROVED BY LANDSCAPE ARCHITECT BEFORE PLANTING OPERATIONS ARE TO PROCEED. ALL TREE LOCATIONS SHALL BE MARKED WITH A WOODEN STAKE INDICATING VARIETY AND SIZE OF TREE.
6. NO SUBSTITUTIONS OF PLANT MATERIAL WILL BE ALLOWED. IF PLANTS ARE SHOWN TO BE UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT PRIOR TO BID DATE IN WRITING. ALL PLANTS SHALL BE INSPECTED AND TAGGED WITH PROJECT IDENTIFICATION AT NURSERY OR CONTRACTOR'S OPERATION PRIOR TO MOVING TO JOB SITE. PLANTS MAY ALSO BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE.
7. ALL PLANTS ARE TO MEET OR EXCEED AMERICAN STANDARDS FOR NURSERY STOCK, 2004 EDITION, AS SET FORTH BY AMERICAN ASSOCIATION OF NURSERYMEN.
8. PLANTS AND ALL OTHER MATERIALS TO BE STORED ON SITE WILL BE PLACED WHERE THEY WILL NOT CONFLICT WITH CONSTRUCTION AND AS DIRECTED BY OWNER.
9. ALL NEW LANDSCAPE PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FOLLOWING FINAL INSPECTION BY LANDSCAPE ARCHITECT, AT END OF THIS PERIOD, PLANT MATERIAL TERMED DEAD OR UNSATISFACTORY BY LANDSCAPE ARCHITECT SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE LANDSCAPE CONTRACTOR.
10. SHRUB AND GROUNDCOVER MASS QUANTITIES ARE SHOWN ON PLANS. UNDERPLANT ALL TREES WITH THE ADJACENT SHRUB AND/OR GROUNDCOVER AS INDICATED BY THE PLANS. PLANTS SHALL BE INSTALLED WITH TRIANGULAR SPACING. PLANT GROUNDCOVERS TO WITHIN 36" OF TREE TRUNK OR 12" OF SHRUBS STEMS.
11. ALL ROCKS AND DEBRIS ONE INCH (1") AND LARGER SHALL BE REMOVED FROM PLANTING AREAS TO A DEPTH OF 1'-0" AND THEN FROM THE SITE TO A LEGAL SITE OF DISPOSAL. WHERE GRASS IS TO BE PLANTED, ALL ROCKS AND DEBRIS ONE HALF INCH (½") AND LARGER SHALL BE REMOVED.

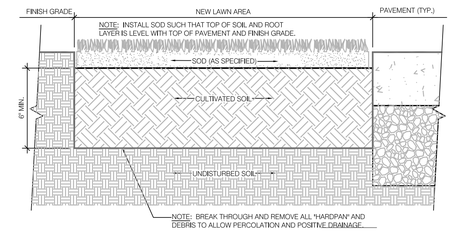
GENERAL LAWN NOTES:

1. ALL DISTURBED LAWN AREAS SHALL BE HYDRO-SEEDED OR SODDED AS SHOWN PER THE LANDSCAPE AND EROSION CONTROL PLANS.
2. LAWN AND SOD AREAS ARE TO BE GRADED UNIFORMLY WITHOUT ANY UNDULATIONS OR IRREGULARITIES IN THE SURFACE PRIOR TO ANY HYDRO-SEED OR SOD WORK.
3. ALL LAWN AND SOD IS TO BE A BLUEGRASS BLEND AS FOLLOWS: HYDRO-SEED AND SOD AREAS ARE TO HAVE 0% NOXIOUS WEED AND FREE OF DISEASE. THE FOLLOWING BLEND OF TURFGRASS SHALL BE AS FOLLOWS:
   - FULL SUN
     KENTUCKY BLUEGRASS (2 VARIETIES): 50%
     PERENNIAL RYEGRASS (2 VARIETIES): 50%
   - PARTIAL SHADE
     KENTUCKY BLUEGRASS (1 VARIETIES): 10%
     PERENNIAL RYEGRASS (1 VARIETIES): 35%
     RED FESCUE GRASS (2 VARIETIES): 55%
4. PROTECT LAWN SEEDED AREAS WITH STRAW MULCH. SPREAD MULCH UNIFORMLY AT A MINIMUM RATE OF 2 TONS PER ACRE TO FORM A CONTINUOUS BLANKET 1 ½ INCHES IN LOOSE THICKNESS OVER SEEDED AREAS.
5. LAY SOD WITHIN 24 HOURS OF HARVESTING. DO NOT LAY SOD IF DORMANT OR IF GROUND IS FROZEN OR MUDDY.
6. LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD; DO NOT STRETCH OR OVERLAP. STAGGER SOD STRIPS OR PADS TO OFFSET JOINTS IN ADJACENT COURSES. AVOID DAMAGE TO SOIL OR SOD DURING INSTALLATION. TAMP AND ROLL LIGHTLY TO ENSURE CONTACT WITH SOIL. ELIMINATE AIR POCKETS, AND FORM A SMOOTH SURFACE. WORK SIFTED SOIL OR FINE SAND INTO MINOR CRACKS BETWEEN PIECES OF SOD; REMOVE EXCESS TO AVOID SMOTHERING SOD AND ADJACENT GRASS.



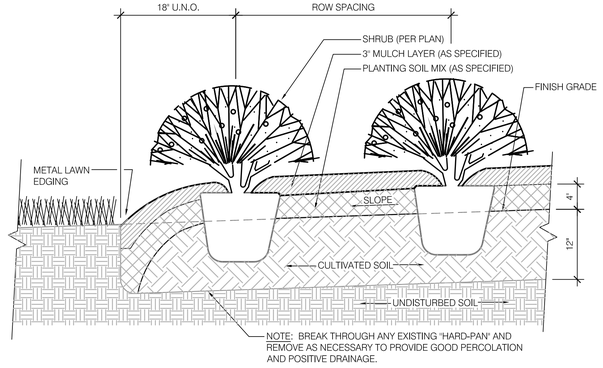
06 138 SPADE EDGE DETAIL

NOT TO SCALE



05 138 SOD PLANTING DETAIL

NOT TO SCALE



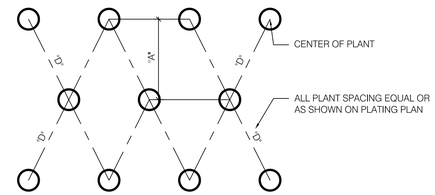
PLANTING PROCEDURE

1. LAYOUT BED AND OUTLINE WITH SPADE EDGE. PLACE SOIL FROM SPADE EDGE WITHIN BED.
2. ROTOTILL BED TO 12" DEPTH. SPREAD 4" MIN. LAYER OF PLANTING SOIL MIX OVER BED. ROTOTILL PLANTING SOIL MIX INTO TOP OF BED.
3. INSTALL PLANTS, MULCH AND WATER THOROUGHLY. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.

04 138 SHRUB PLANTING DETAIL

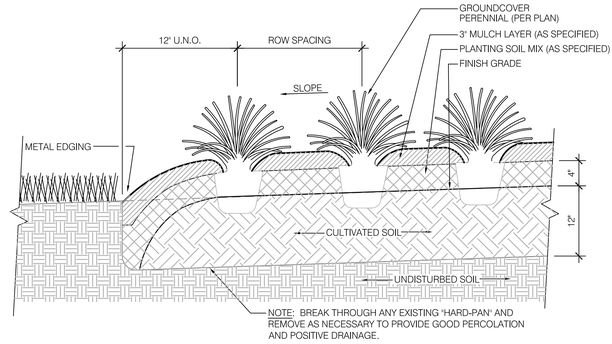
NOT TO SCALE

*D"	*A"	NO. OF PLANTS/SF
6" O.C.	5.2"	4.61
8" O.C.	6.93"	2.6
10" O.C.	8.66"	1.66
12" O.C.	10.4"	1.15
15" O.C.	13.0"	.738
18" O.C.	15.6"	.512
24" O.C.	20.8"	.29
30" O.C.	26.0"	.185
36" O.C.	30.0"	.128



03 138 PLANT SPACING DETAIL

NOT TO SCALE

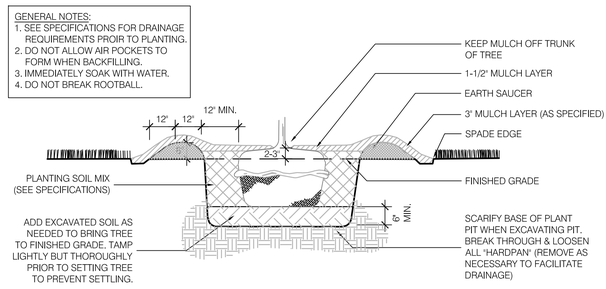


PLANTING PROCEDURE

1. LAYOUT BED AND OUTLINE WITH SPADE EDGE. PLACE SOIL FROM SPADE EDGE WITHIN BED.
2. ROTOTILL BED TO 12" DEPTH. SPREAD 4" MIN. LAYER OF PLANTING SOIL MIX OVER BED. ROTOTILL PLANTING SOIL MIX INTO TOP OF BED.
3. INSTALL PLANTS, MULCH AND WATER THOROUGHLY. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.

02 138 GROUNDCOVER DETAIL

NOT TO SCALE



PLANTING PROCEDURE

1. EXCAVATE ROOTBALL PIT
2. ADD EXCAVATED SOIL & TAMP. SET TREE SUCH THAT TOP OF ROOTBALL IS 2-3" HIGHER THAN FINISHED GRADE.
3. BACKFILL WITH SOIL MIX & "WATER IN"
4. COMPLETE BACKFILLING, CONSTRUCT SAUCER, SPADE EDGE & ADD MULCH
5. STAKE & GUY SECURELY (AS REQUIRED)

01 138 ROOTBALL PLANTING DETAIL

NOT TO SCALE

DATE	REVISION
1/15/16	REV 1: MODIFY PLANT SCHEDULE

CATHERINE E. CLARK REGISTERED No. LA20700081 STATE OF INDIANA LANDSCAPE ARCHITECT

RECOMMENDED FOR APPROVAL _____ 01/07/2016
DESIGN ENGINEER DATE

DESIGNED: CEC DRAWN: CEC
CHECKED: CEC CHECKED: CEC

CITY OF SOUTH BEND

PLANTING PLANS
PLANTING DETAILS

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
N/A	138 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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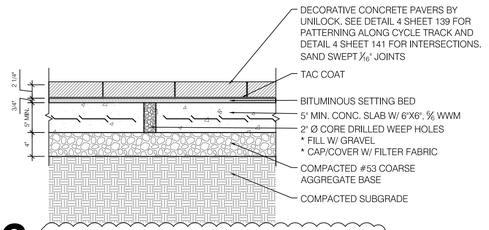
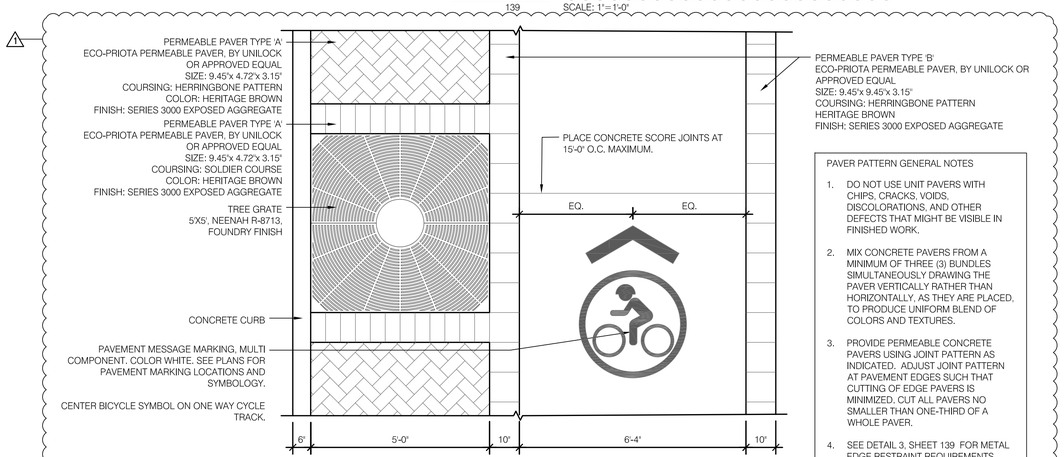
$USER $DATE$ $TIME$ $FILEA$



06 BRICK, DECORATIVE DETAIL ⚠1

139 SCALE: 1"=1'-0"

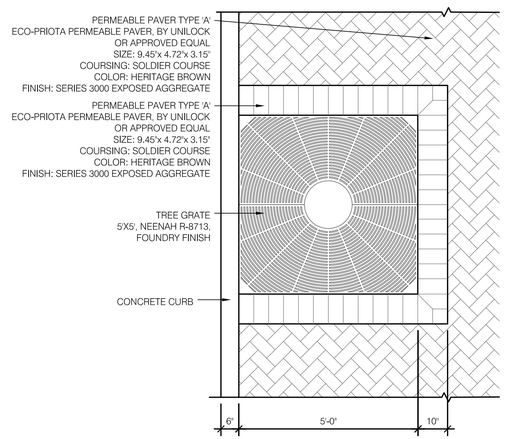


PAVER PATTERN GENERAL NOTES

1. DO NOT USE UNIT PAVERS WITH CHIPS, CRACKS, VOIDS, DISCOLORATIONS, AND OTHER DEFECTS THAT MIGHT BE VISIBLE IN FINISHED WORK.
2. MIX CONCRETE PAVERS FROM A MINIMUM OF THREE (3) BUNDLES SIMULTANEOUSLY DRAWING THE PAVER VERTICALLY RATHER THAN HORIZONTALLY, AS THEY ARE PLACED, TO PRODUCE UNIFORM BLEND OF COLORS AND TEXTURES.
3. PROVIDE PERMEABLE CONCRETE PAVERS USING JOINT PATTERN AS INDICATED. ADJUST JOINT PATTERN AT PAVEMENT EDGES SUCH THAT CUTTING OF EDGE PAVERS IS MINIMIZED. CUT ALL PAVERS NO SMALLER THAN ONE-THIRD OF A WHOLE PAVER.
4. SEE DETAIL 3, SHEET 139 FOR METAL EDGE RESTRAINT REQUIREMENTS.

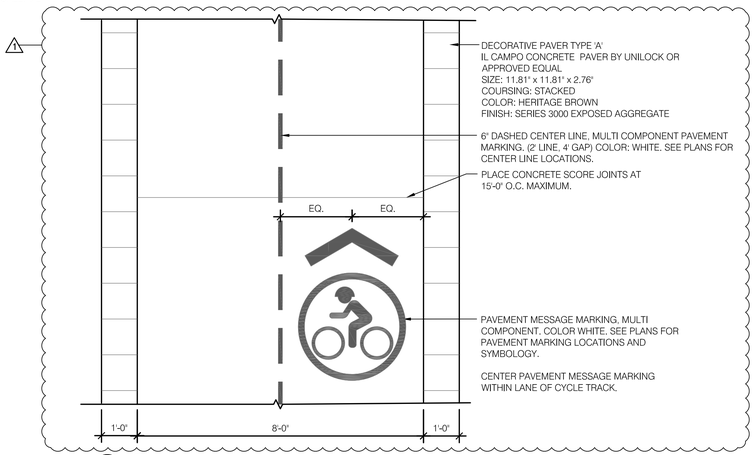
05 ONE WAY CYCLE TRACK PAVEMENT PATTERN

139 SCALE: 1/2"=1'-0"



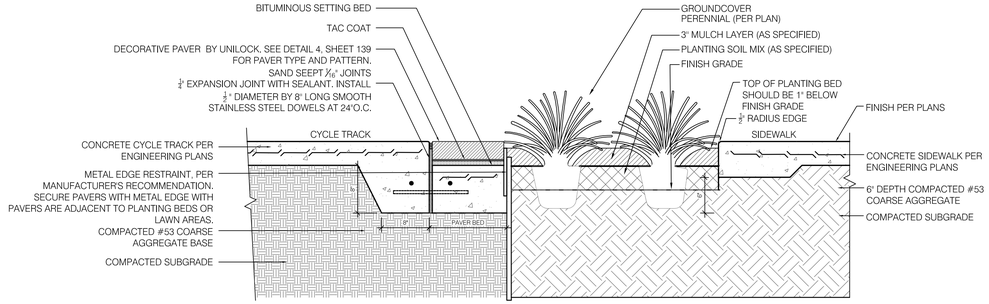
07 TREE GRATE PAVER PATTERN

139 SCALE: 1/2"=1'-0"



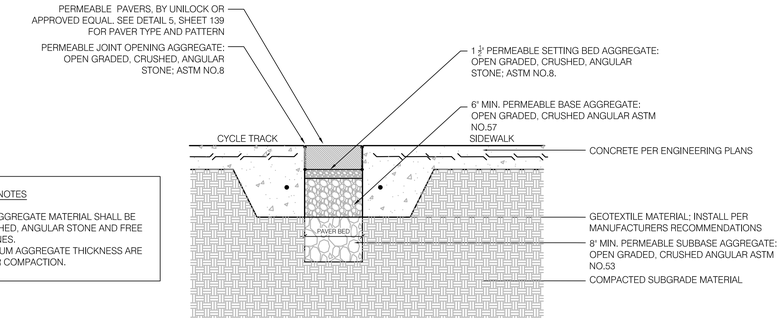
04 TWO WAY CYCLE TRACK PAVEMENT PATTERN

139 SCALE: 1/2" 1'-0"



03 BRICK, DECORATIVE EDGE AT TWO WAY CYCLE TRACK ⚠1

139 SCALE: 1"=1'-0"

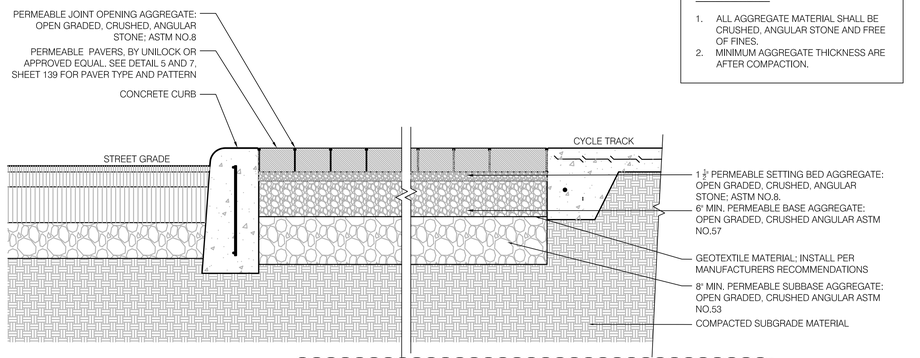


GENERAL NOTES

1. ALL AGGREGATE MATERIAL SHALL BE CRUSHED, ANGULAR STONE AND FREE OF FINES.
2. MINIMUM AGGREGATE THICKNESS ARE AFTER COMPACTION.

02 BRICK, DECORATIVE PERMEABLE BAND ⚠1

139 SCALE: 1"=1'-0"



GENERAL NOTES

1. ALL AGGREGATE MATERIAL SHALL BE CRUSHED, ANGULAR STONE AND FREE OF FINES.
2. MINIMUM AGGREGATE THICKNESS ARE AFTER COMPACTION.

01 BRICK, DECORATIVE, PERMEABLE DETAIL ⚠1

139 SCALE: 1"=1'-0"

DATE	REVISION
1/15/16	REV 1: MODIFY DETAIL 1, 2, 3, 4, 5 AND 6.

CATHERINE E. CLARK REGISTERED No. LA20700081 STATE OF INDIANA LANDSCAPE ARCHITECT

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: CEC DRAWN: CEC

CHECKED: CEC CHECKED: CEC

CITY OF SOUTH BEND

MISCELLANEOUS DETAILS

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
N/A	139 of 246
CONTRACT	PROJECT
N/A	115-01 (DIV B)

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$PENTBL$$

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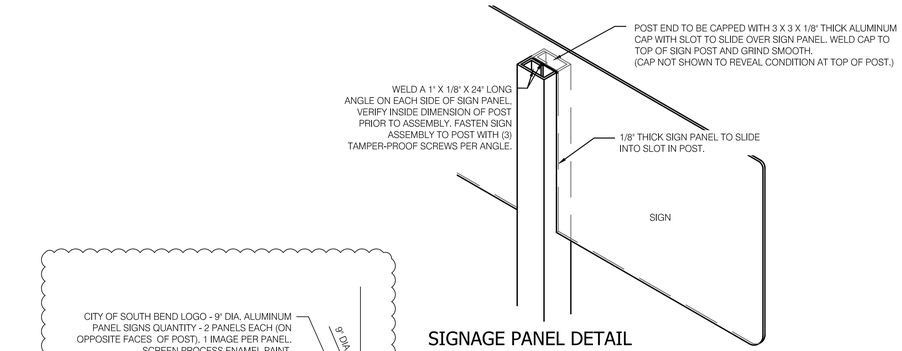


SIGNAGE PANEL DETAIL

NOTES: ALUMINUM PANEL SIGNS ARE TO BE SANDED AND DEBURRED, WITH SURFACES SCUFFED TO IMPROVE PAINT ADHESION AND ACID WASHED. USE ZINC CHROMATE PRIMER, WITH FINAL COAT OF POLYURETHANE ENAMEL. ALL EDGES TO BE SMOOTH AND FREE OF BURRS.

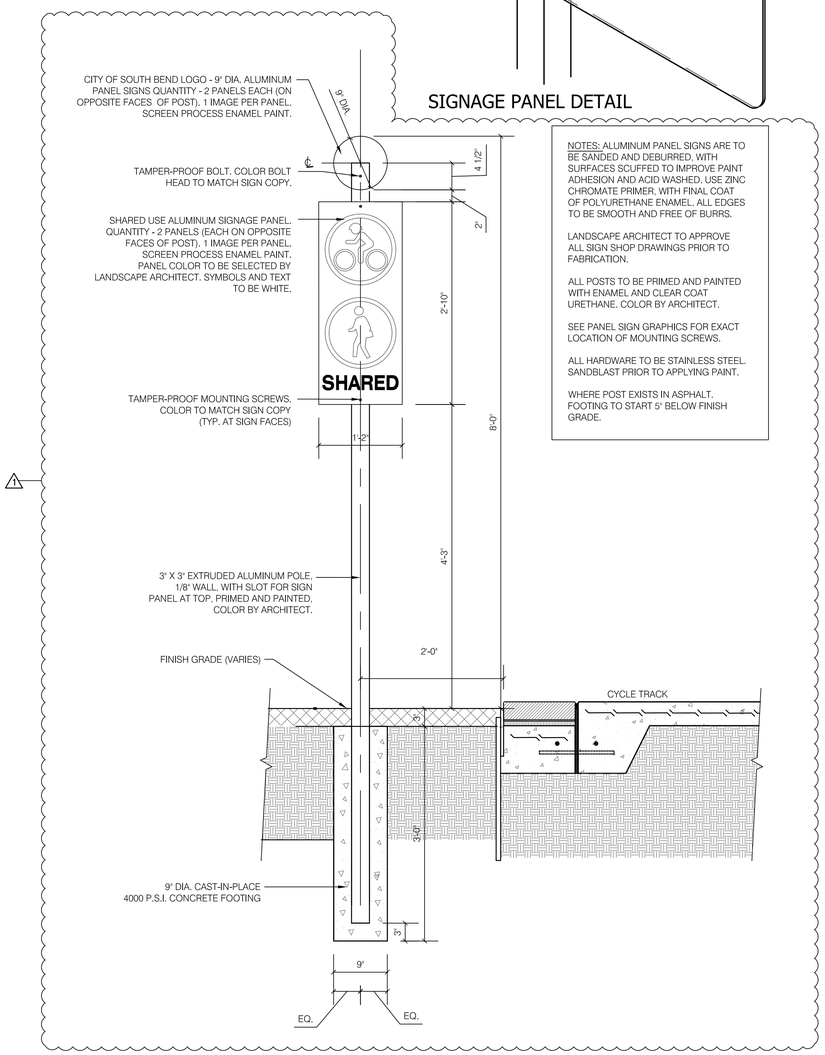
LANDSCAPE ARCHITECT TO APPROVE ALL SIGN SHOP DRAWINGS PRIOR TO FABRICATION.

ALL POSTS TO BE PRIMED AND PAINTED WITH ENAMEL AND CLEAR COAT URETHANE. COLOR BY ARCHITECT.

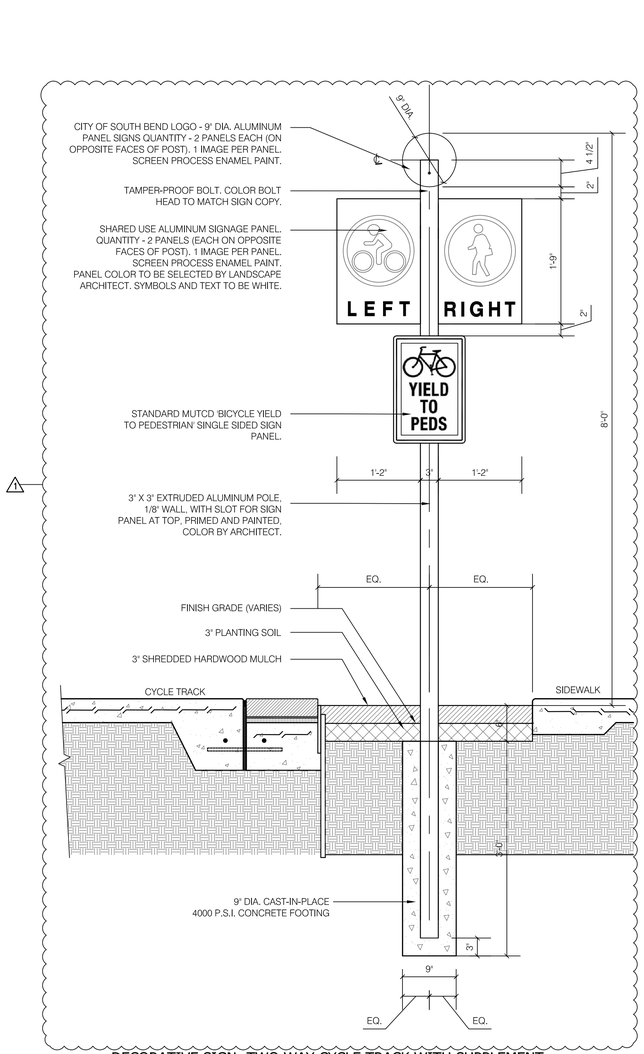
SEE PANEL SIGN GRAPHICS FOR EXACT LOCATION OF MOUNTING SCREWS.

ALL HARDWARE TO BE STAINLESS STEEL. SANDBLAST PRIOR TO APPLYING PAINT.

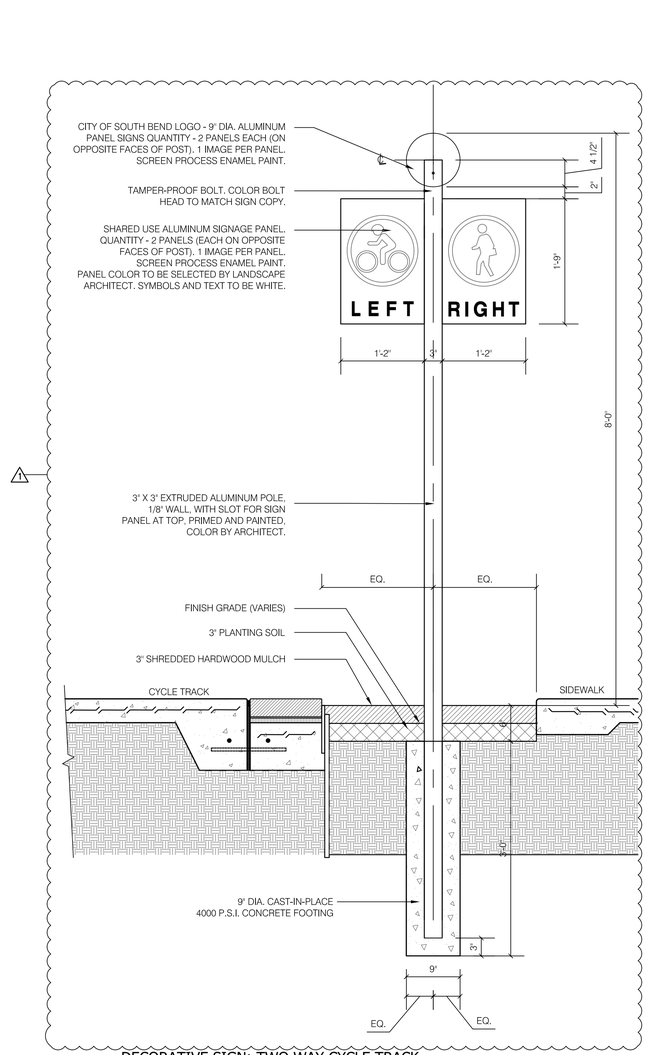
WHERE POST EXISTS IN ASPHALT. FOOTING TO START 5' BELOW FINISH GRADE.



03 140 DECORATIVE SIGN: SHARED USE PATH
CYCLE TRACK SIGN (3)
SCALE: 1"=1'-0"



02 140 DECORATIVE SIGN: TWO WAY CYCLE TRACK WITH SUPPLEMENT
CYCLE TRACK SIGN (2)
SCALE: 1"=1'-0"



01 140 DECORATIVE SIGN: TWO WAY CYCLE TRACK
CYCLE TRACK SIGN (1)
SCALE: 1"=1'-0"

DATE	REVISION
1/15/16	REV 1: MODIFIED DETAIL 1, 2 AND 3

CATHERINE E. CLARK REGISTERED No. LA20700081 STATE OF INDIANA LANDSCAPE ARCHITECT

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: CEC | DRAWN: CEC | CHECKED: CEC | CHECKED: CEC

CITY OF SOUTH BEND

MISCELLANEOUS DETAILS
SIGNAGE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
N/A	140 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

$RLTDRVS$
$PENTBLS$

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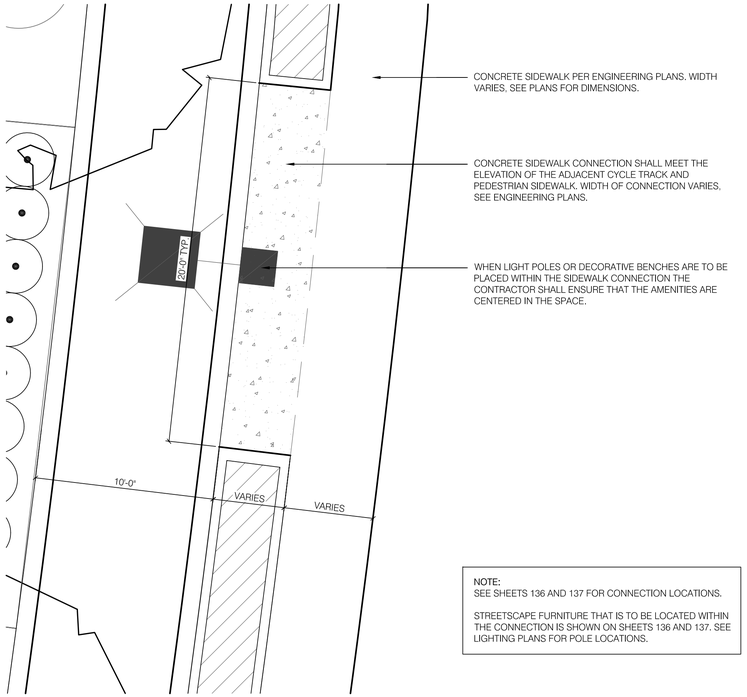


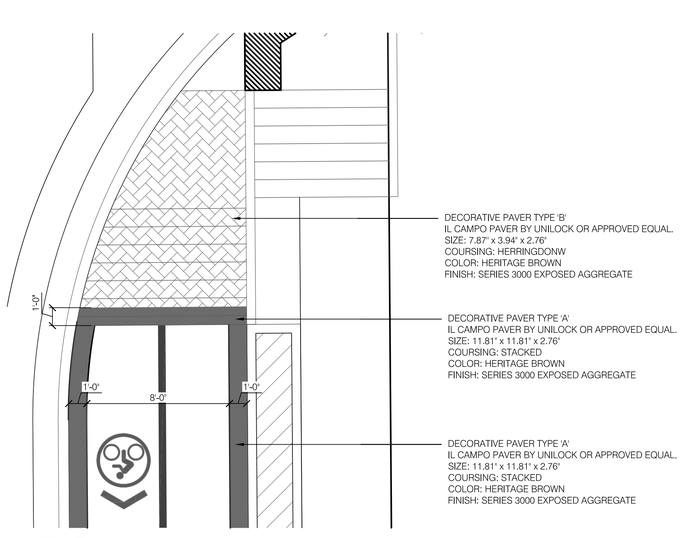
NOTE:
SEE SHEETS 136 AND 137 FOR CONNECTION LOCATIONS.

STREETSCAPE FURNITURE THAT IS TO BE LOCATED WITHIN THE CONNECTION IS SHOWN ON SHEETS 136 AND 137. SEE LIGHTING PLANS FOR POLE LOCATIONS.

03 CONCRETE SIDEWALK CONNECTION

141

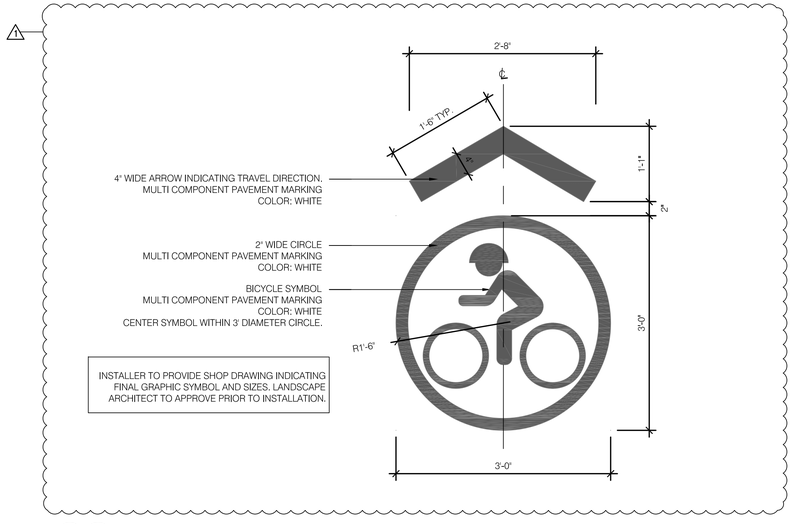
SCALE: 1/4"=1'-0"



04 DECORATIVE PAVER AT INTERSECTION

141

SCALE: 1/4"=1'-0"

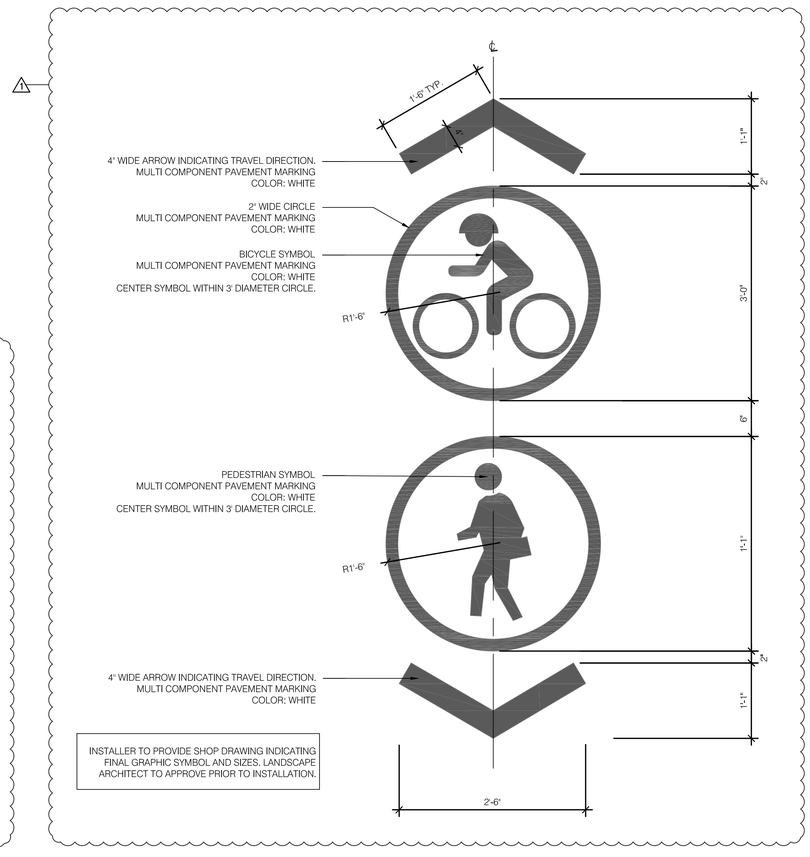


INSTALLER TO PROVIDE SHOP DRAWING INDICATING FINAL GRAPHIC SYMBOL AND SIZES. LANDSCAPE ARCHITECT TO APPROVE PRIOR TO INSTALLATION.

02 PAVEMENT MESSAGE MARKING, CYCLE TRACK SYMBOL

141

SCALE: 1"=1'-0"



INSTALLER TO PROVIDE SHOP DRAWING INDICATING FINAL GRAPHIC SYMBOL AND SIZES. LANDSCAPE ARCHITECT TO APPROVE PRIOR TO INSTALLATION.

01 PAVEMENT MESSAGE MARKING, SHARED CYCLE TRACK

141

SCALE: 1"=1'-0"

DATE	REVISION
1/15/16	REV 1: MODIFIED DETAIL 1 AND 2

CATHERINE E. CLARK
REGISTERED
No. LA20700081
STATE OF INDIANA
LANDSCAPE ARCHITECT

RECOMMENDED FOR APPROVAL _____ 01/07/2016
DESIGN ENGINEER DATE

DESIGNED: CEC DRAWN: CEC
CHECKED: CEC CHECKED: CEC

CITY OF SOUTH BEND

MISCELLANEOUS DETAILS

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
N/A	141 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

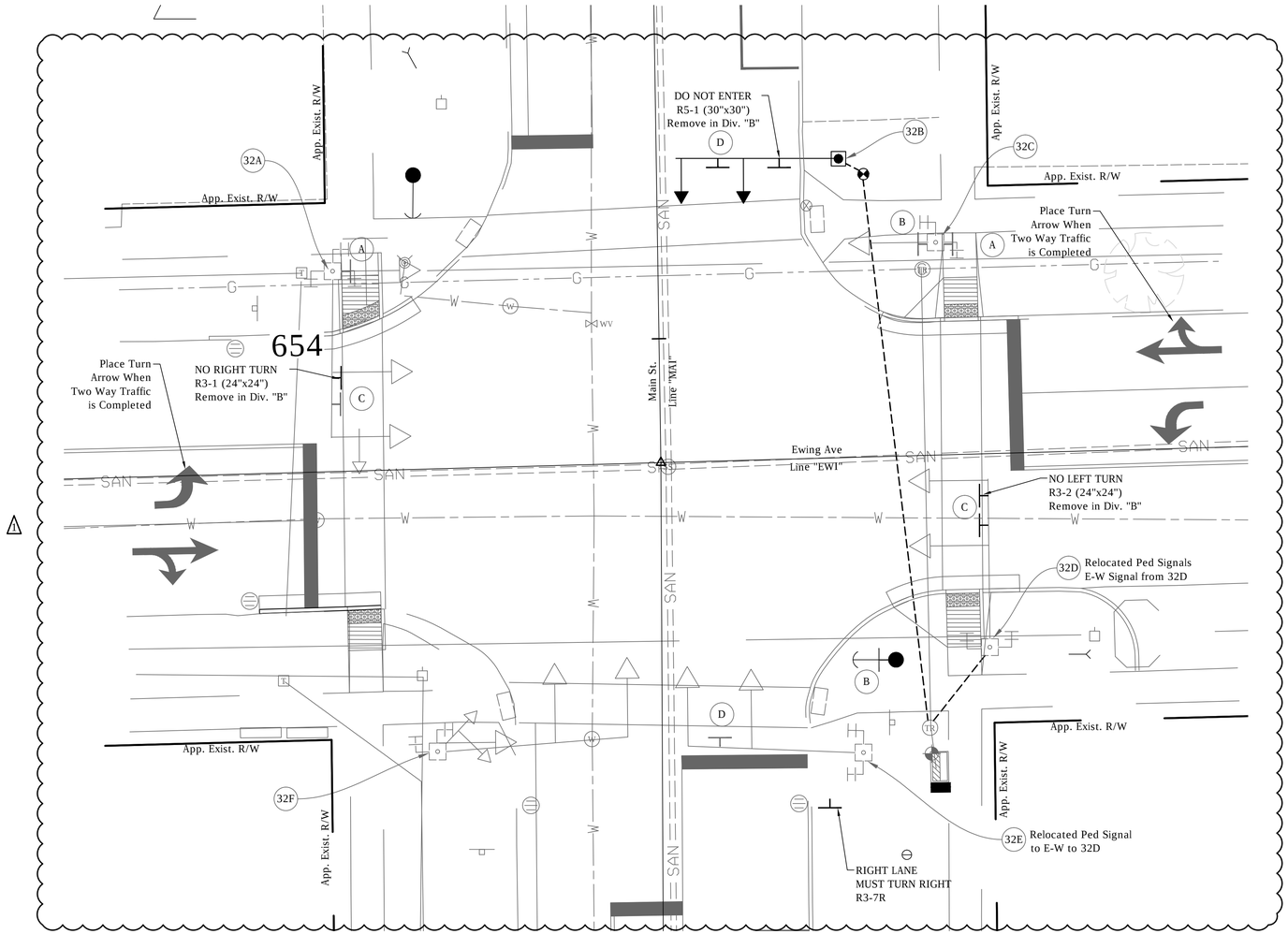
$PLTDRV$
$PENTBL$

$USER $DATE$ $TIME$ $FILEA$

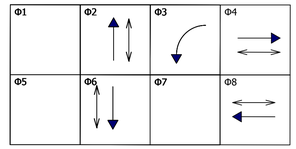
INTERSECTION NO.
32

Signal Supports

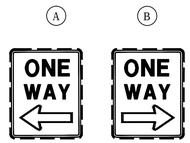
- 32A To Remain
- 32B To Remain
- 32C To Remain
- 32D To Remain
- 32E To Remain
- 32F To Remain



PHASE DIAGRAM

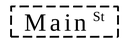


ALL APPROACHES FLASH RED

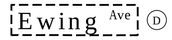


Existing
To be Removed

Existing
To be Removed



Existing



Existing

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		HDPE Schedule 80 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
TR or FO		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:

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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	Rev 1: Revise Gen. Notes and Sign Call Outs

CITY OF SOUTH BEND

DESIGNER DATE:

DESIGN ENG. DATE: 01/07/2016

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MAIN ST & EWING AVE

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY BRD

YEAR	SHEET	TOTAL
2016	142	246

COMM. NO. N/A

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\SIGNAL DETAILS\Signal Plans North\
FILE.....15-3329 Signal Plans corr north main-ewing.dwg
DISTILLED.....LTISCALE.....10
PLOTTED BY.....Brian Dowling
DATE.....Jan 15,2016 - 3:48pm

INTERSECTION NO.
31

Signal Supports

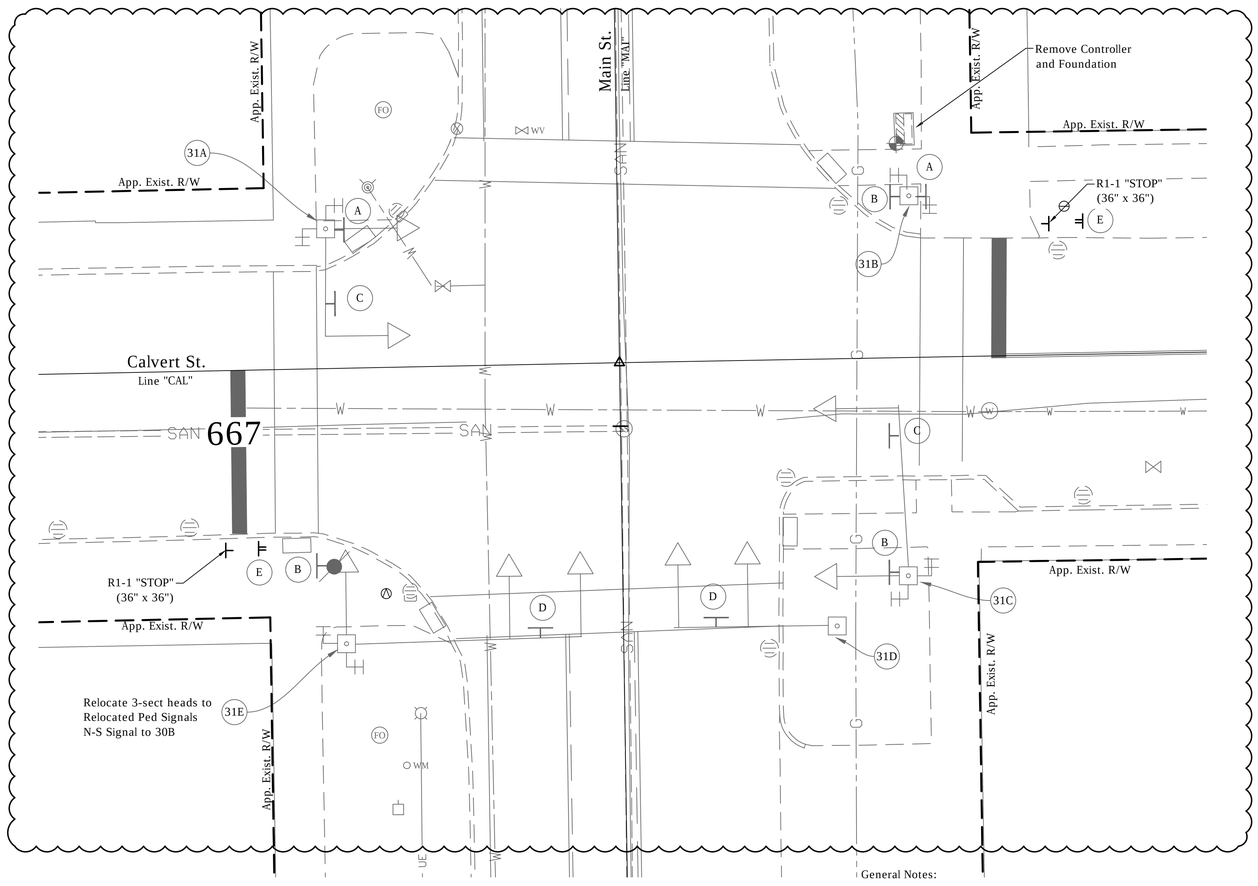
(31A) Remove and Salvage

(31B) Remove and Salvage

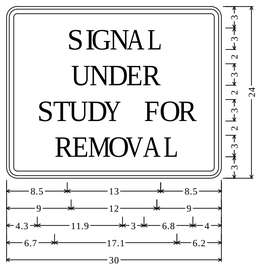
(31C) Remove and Relocate to 23B

(31D) Remove and Relocate to 21E

(31E) Remove and Relocate to 30B



(E)



R4-3_18x24;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Yellow;
[SIGNAL] D 2K 75} spacing;
[UNDER] D 2K 75} spacing;
[STUDY FOR] D 2K 75} spacing;
[REMOVAL] D 2K 75} spacing;

(A) ONE WAY — Existing To be Removed

(B) ONE WAY — Existing To be Removed

(C) Main St — Existing

(D) Calvert St — Existing

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		HDPE Schedule 80 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
TR or FO		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:

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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.
11. A 90 Day Flashing Period is Required Prior to Removal of This Traffic Signal. Flashing Operation Shall be Yellow for all North-South Movements and Red for all East-West Movements. Install SIGNAL UNDER STUDY FOR REMOVAL Sign on all Approaches Prior to Beginning 90 day Flashing Period. Remove Said Signs with Removal of Traffic Signal.

DATE	REVISION
1/15/2016	Rev 1: Revise Gen. Notes and Sign Callouts

CITY OF SOUTH BEND

DESIGNER — DATE:

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

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MAIN ST & CALVERT ST

CONTRACT NO. N/A

DRAWN BY: BRD

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	143	246

COMM. NO. N/A

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

DIRECTORY....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\SIGNAL DETAILS\Signal Plans North\
FILE.....15-3329 Signal Plans north.dwg
PLOTTED BY...BLOUGH
DATE.....Jan 15,2016 - 3:49pm

INTERSECTION NO.
30

Signal Supports

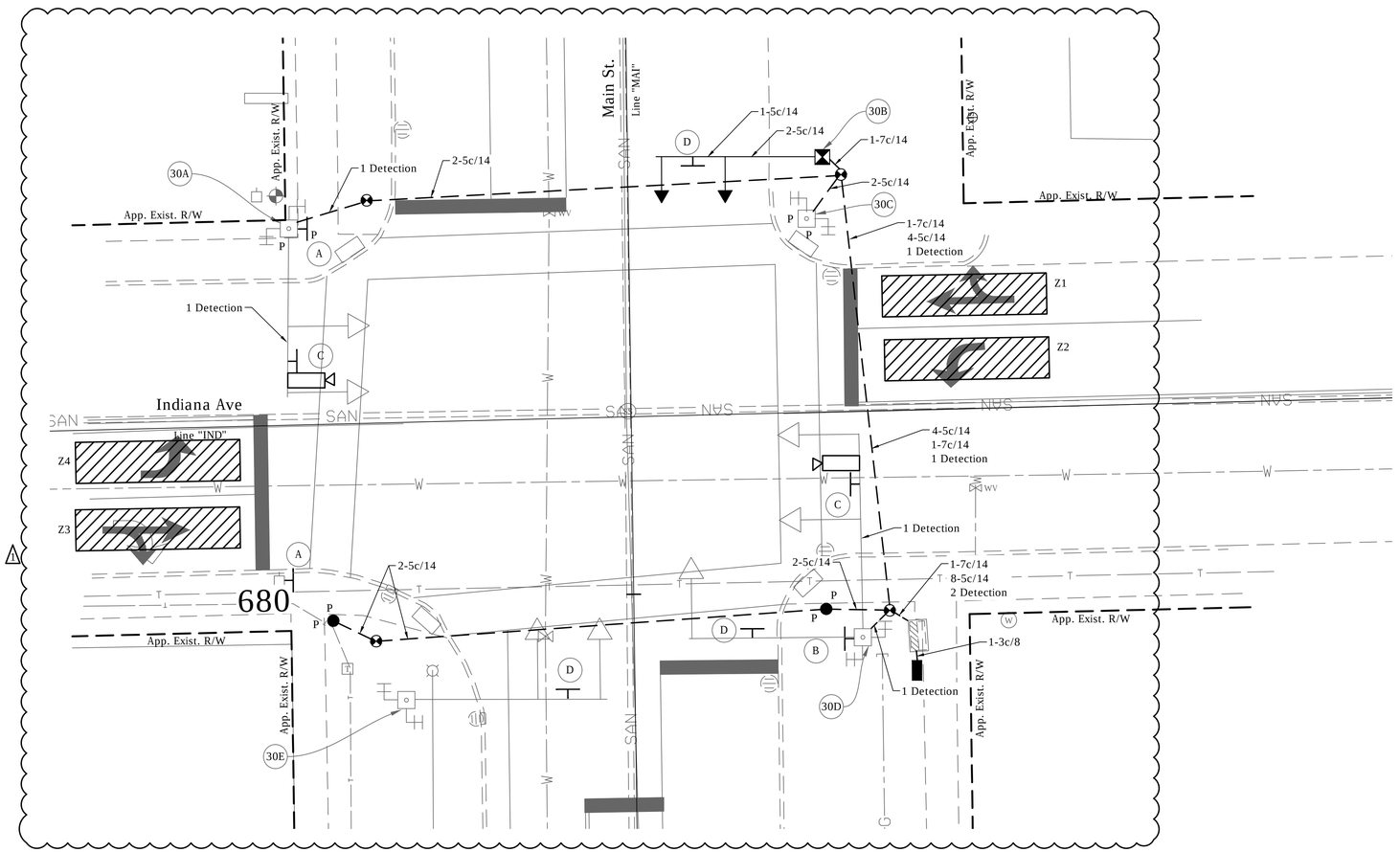
(30A) To Remain in Place

(30B) Relocated from 31E

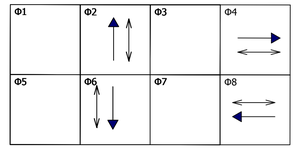
(30C) To Remain in Place

(30D) To Remain in Place, Remove SB Mast Arm

(30E) To Remain in Place



PHASE DIAGRAM



ALL APPROACHES FLASH RED

(A) (B)

Existing To be Removed — Existing To be Removed

Main St (C) — Existing

Indiana Ave (D) — Existing

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		HDPE Schedule 80 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
		4' Traffic Signal Pedestal on "A" Foundation
	P	Pedestrian Push Button W/ R10-4B Sign
		Detection Camera
		Detection Zones

Detection Zone

Zone	Phase	Delay
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

DATE	REVISION
1/15/2016	Rev 1: Add Pedestrian & Push Button & Conduit & Revised Gen. Notes

General Notes:

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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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
5. Proposed mast arm foundations, pedestal foundations and cabinet footpads shall be constructed with a finished surface that is flush with the proposed sidewalk.
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9. Replace Hand Hole Covers on Existing Mast Arms as Necessary.
10. All Conduit Under Pavement Shall Utilize the Directional Bore Method for Installation.

CITY OF SOUTH BEND

DESIGNER — DATE:

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

TRAFFIC SIGNAL DETAIL
MAIN ST & INDIANA AVE

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

CONTRACT NO. N/A

DRAWN BY: BRD

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	144	246

COMM. NO. N/A

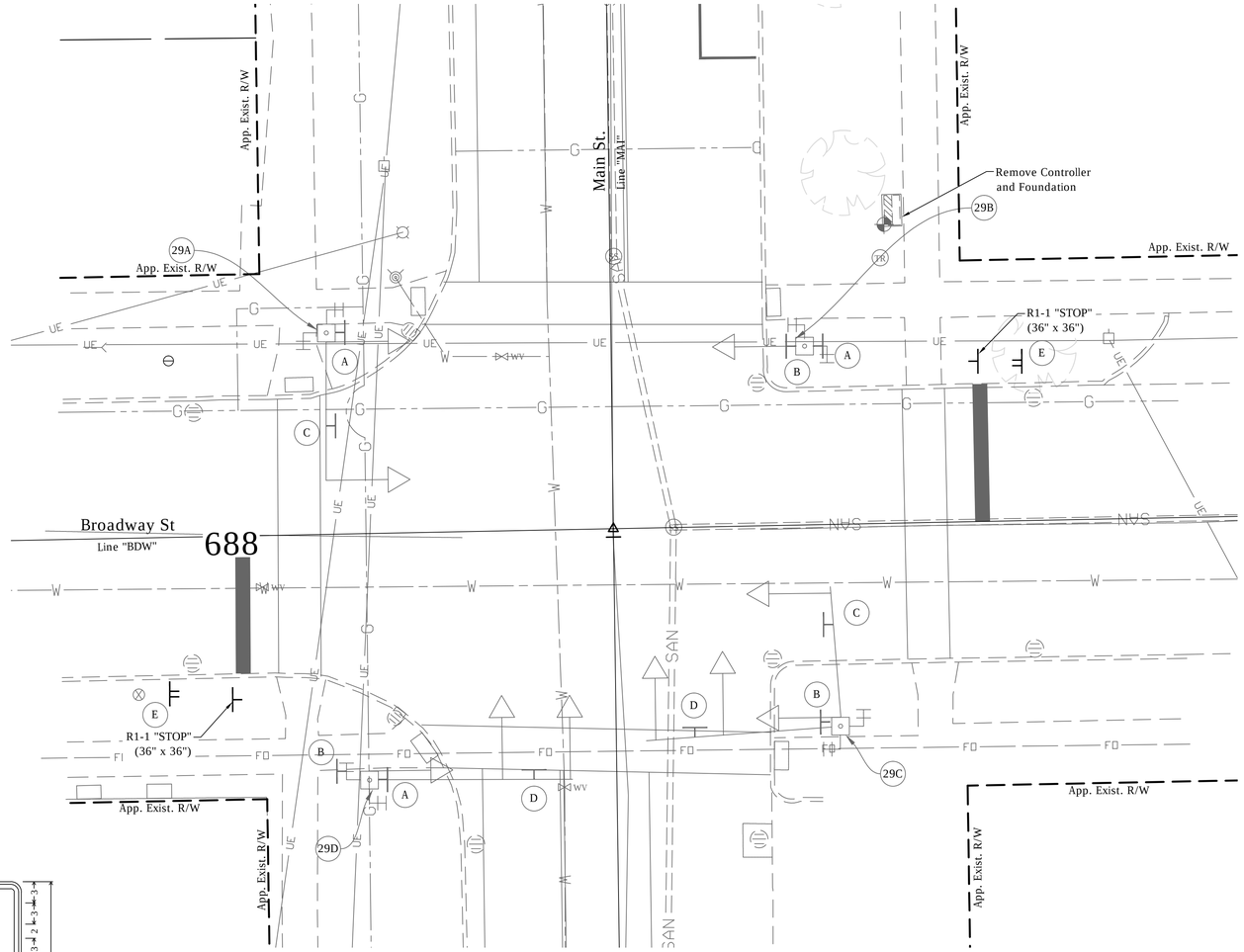
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

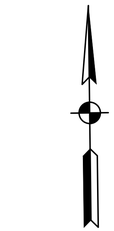
DIRECTORY...F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\SIGNAL DETAILS\Signal Plans North\
FILE.....15-3329 Signal Plans north.dwg
IMAGE FILE.....ITSCALE....!
PLOTTED BY...BRD
DATE.....Jan 15,2016 - 3:49pm

INTERSECTION NO.
29

Signal Supports

- (29A) Remove and Relocate to 20A
- (29B) Remove to Salvage Yard
- (29C) Remove and Dispose
- (29D) Remove and Relocate to 21E





Existing To be Removed

Existing To be Removed

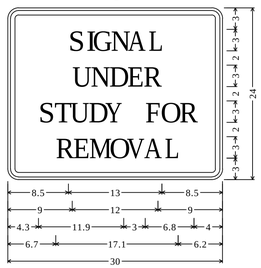
Main St (C) — Existing

Broadway St (D) — Existing

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		HDPE Schedule 80 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

(E)



R4-3_18x24;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Yellow;
[SIGNAL] D 2K 75} spacing;
[UNDER] D 2K 75} spacing;
[STUDY FOR] D 2K 75} spacing;
[REMOVAL] D 2K 75} spacing;

DATE	REVISION
1/15/2016	Rev 1: Revise Gen. Notes

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.
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4. Contractor shall coordinate with local power company regarding location of power feed to new service pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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).
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9. Replace Hand Hole Covers on Existing Mast Arms as Necessary.
10. All Conduit Under Pavement Shall Utilize the Directional Bore Method for Installation.
11. A 90 Day Flashing Period is Required Prior to Removal of This Traffic Signal. Flashing Operation Shall be Yellow for all North-South Movements and Red for all East-West Movements. Install SIGNAL UNDER STUDY FOR REMOVAL Sign on all Approaches Prior to Beginning 90 day Flashing Period. Remove Said Signs with Removal of Traffic Signal.

CITY OF SOUTH BEND

DESIGNER — DATE:

DESIGN ENG. Harry C. Fox — DATE: 01/07/2016

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MAIN ST & BROADWAY ST

SCALE: 1" = 10'

CONTRACT NO.	DRAWN BY	YEAR	SHEET	TOTAL
N/A	BRD	2016	145	246

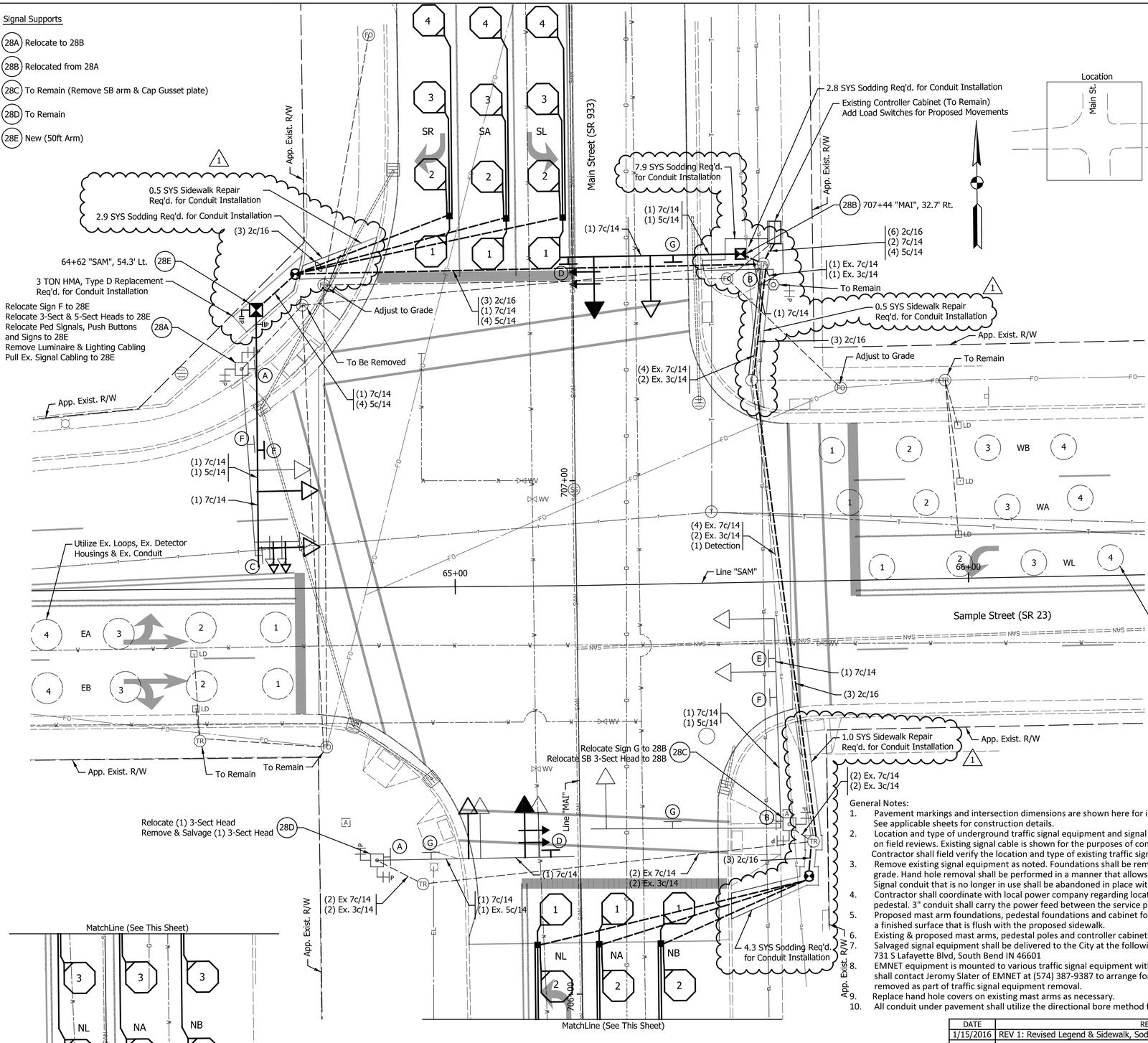
COMM. NO.	DES. NO.	PROJECT NO.
N/A	N/A	115-019 (DIV B)

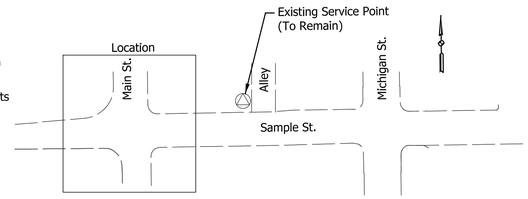
DIRECTORY....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\SIGNAL DETAILS\Signal Plans North\
FILE.....15-3329 Signal Plans north.dwg
DWG SCALE.....1"=1'SCALE...1
PLOTTED BY.....Brad Dillon
DATE.....Jan 15,2016 - 3:49pm

INTERSECTION NO. **28**

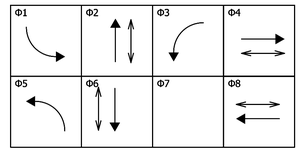
Signal Supports

- (28A) Relocate to 28B
- (28B) Relocated from 28A
- (28C) To Remain (Remove SB arm & Cap Gusset plate)
- (28D) To Remain
- (28E) New (50ft Arm)

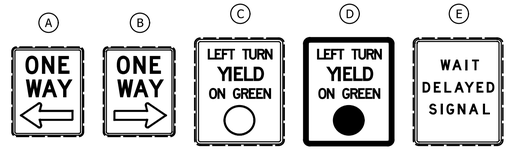


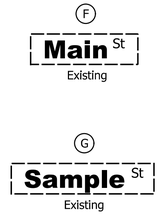


PHASE DIAGRAM



ALL APPROACHES FLASH RED





Legend

Existing	Proposed
	Mast Arm, Upright and Foundation
	2" HDPE Conduit Schedule 80 (1)
P	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
	Single Meter Service Pedestal on Base
	Span Mounted Junction Box
TR or FO	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
LD	Detector Housing
	Detection Zone
	Detection Camera
	Conduit Intercept

LOOP TAGGING TABLE

LANE	TAG NUMBER
SL	SL1-1,2,3,4
NA	NA2-1,2,3,4
NB	NB2-1,2,3,4
WL	WL3-1,2,3,4
EA	EA4-1,2,3,4
EB	EB4-1,2,3,4
NL	NL5-1,2,3,4
SA	SA6-1,2,3,4
SR	SR6-1,2,3,4
WA	WA8-1,2,3,4
WB	WB8-1,2,3,4

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 have a galvanized finish.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Sidewalk, Sodding Limits

CITY OF SOUTH BEND

DESIGNER CRP DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUESMANN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MAIN STREET & SAMPLE STREET

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY JRG

YEAR	SHEET	TOTAL
2016	146	246

COMM. NO. 01-071-109

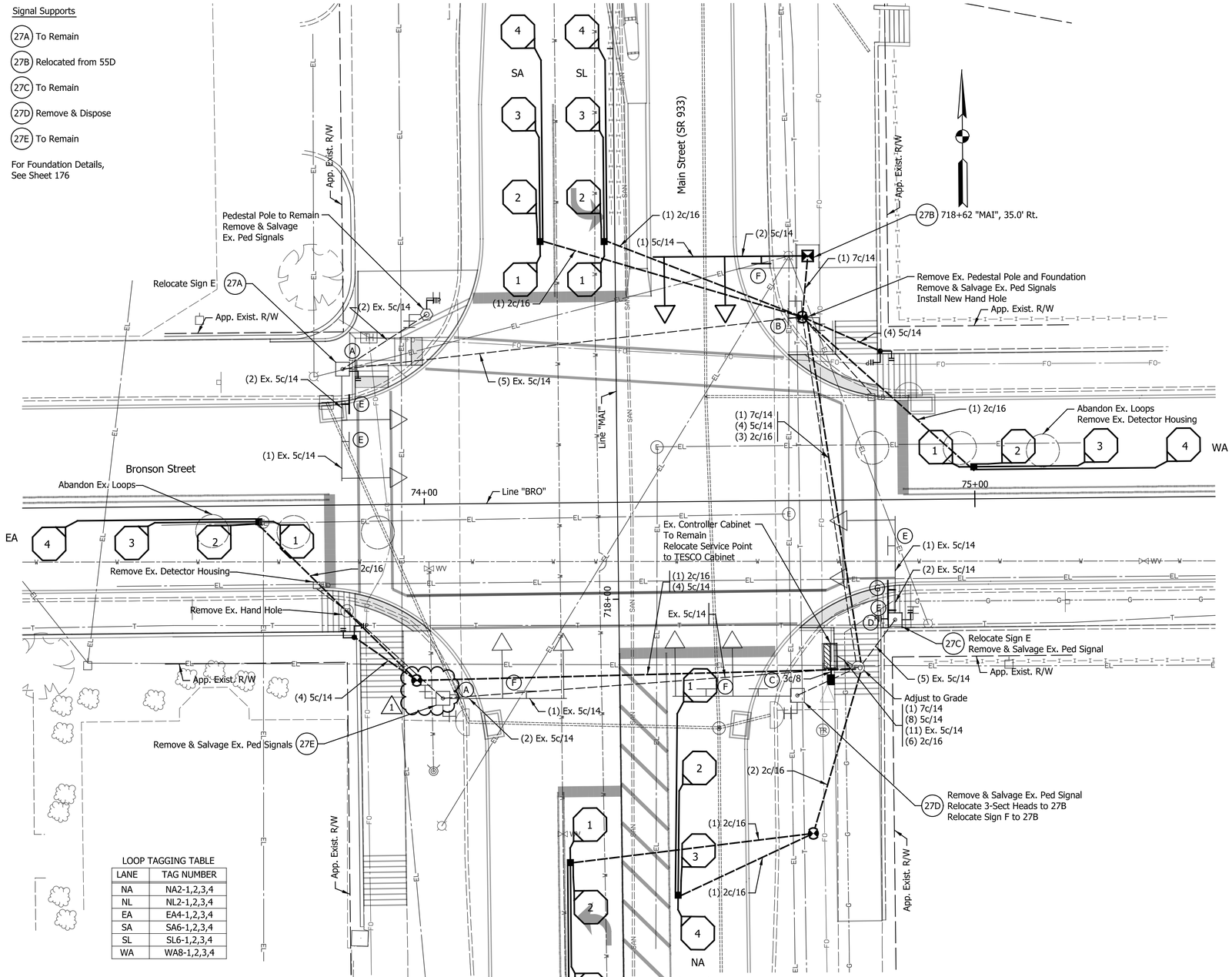
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **27**

Signal Supports

- (27A) To Remain
- (27B) Relocated from 55D
- (27C) To Remain
- (27D) Remove & Dispose
- (27E) To Remain

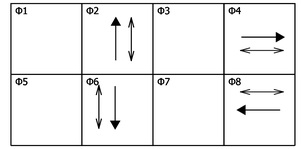
For Foundation Details, See Sheet 176



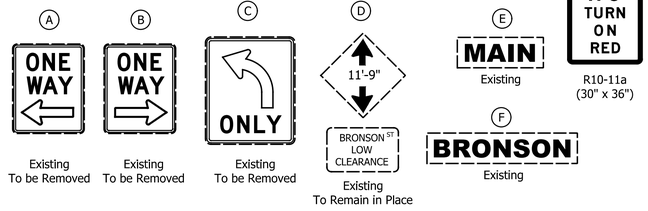
LOOP TAGGING TABLE

LANE	TAG NUMBER
NA	NA2-1,2,3,4
NL	NL2-1,2,3,4
EA	EA4-1,2,3,4
SA	SA6-1,2,3,4
SL	SL6-1,2,3,4
WA	WA8-1,2,3,4

PHASE DIAGRAM



ALL APPROACHES FLASH RED



Existing To be Removed | Existing To be Removed | Existing To be Removed | Existing To Remain in Place | Existing | Existing

Legend

Existing	Proposed
	Strain Pole and Foundation
	Mast Arm, Upright and Foundation
	2" HDPE Conduit Schedule 80 (1)
	18" Countdown Pedestrian Indication
P	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
	Single Meter Service Pedestal on Base
	Span Mounted Junction Box
TR or FO	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
LD	LD Detector Housing
	Conduit Intercept
	Detection Zone
	Detection Camera

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Conduit

CITY OF SOUTH BEND

DESIGNER CRP DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. PERSEMAN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MAIN STREET & BRONSON STREET

SCALE: 1" = 10'

CONTRACT NO. N/A	DRAWN BY	YEAR	SHEET	TOTAL
	JRG	2016	147	246

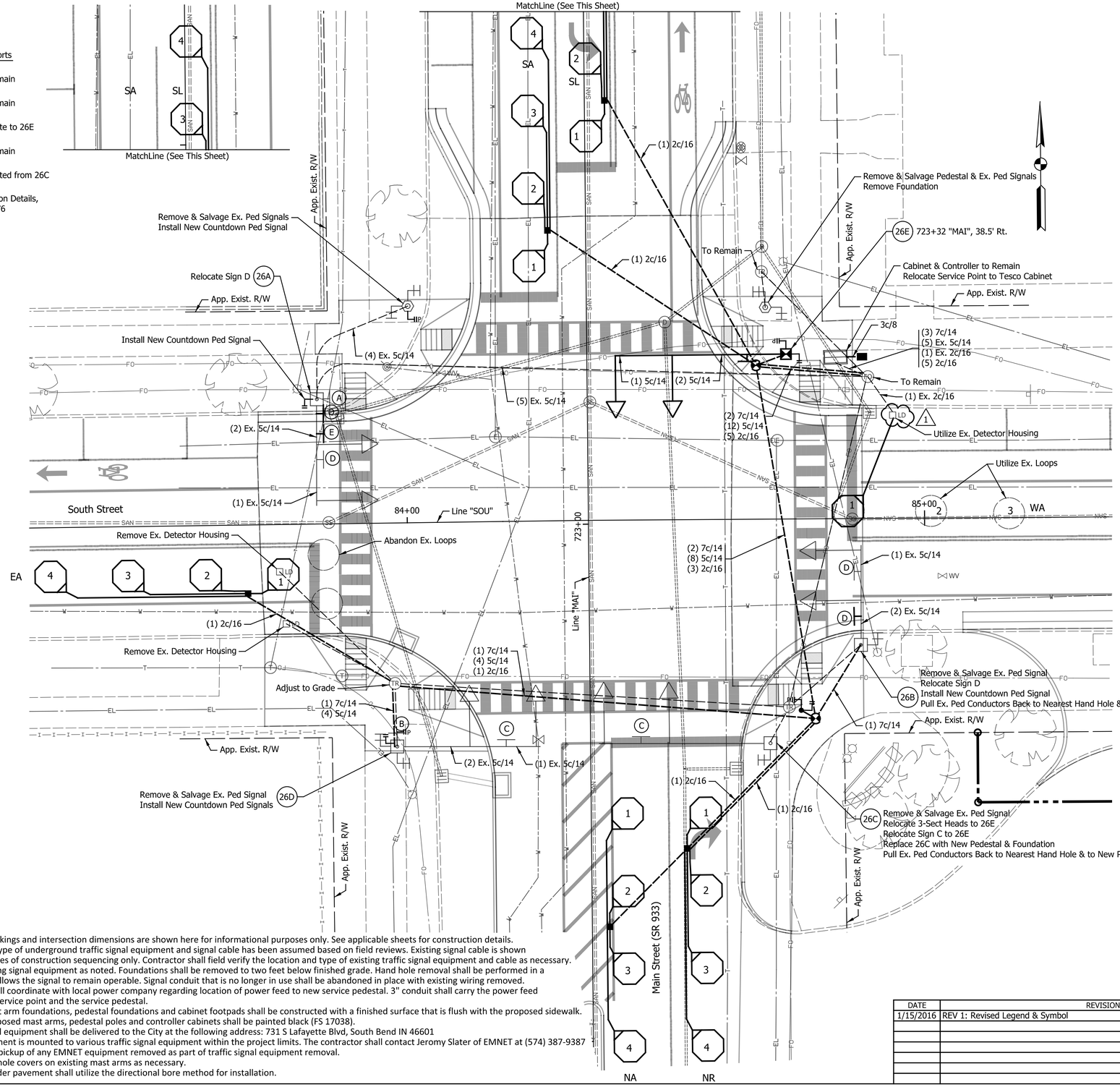
COMM. NO. 01-071-139	DES. NO.	PROJECT NO.
	N/A	115-019 (DIV B)

INTERSECTION NO. **26**

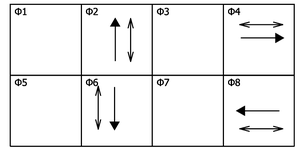
Signal Supports

- (26A) To Remain
- (26B) To Remain
- (26C) Relocate to 26E
- (26D) To Remain
- (26E) Relocated from 26C

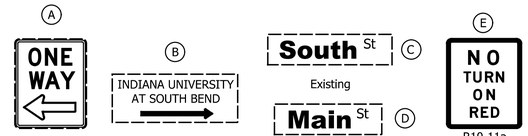
For Foundation Details, See Sheet 176



PHASE DIAGRAM



ALL APPROACHES FLASH RED



Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" HDPE Conduit Schedule 80
		18" Countdown Pedestrian Indication
		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
		Single Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
LD	LD	Detector Housing
		Conduit Intercept
		Detection Zone
		Detection Camera

LOOP TAGGING TABLE

LANE	TAG NUMBER
NA	NA2-1,2,3,4
NL	NL2-1,2,3,4
EA	EA4-1,2,3,4
SA	SA6-1,2,3,4
SL	SL6-1,2,3,4
WA	WA8-1,2,3

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Symbol

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUEBNER REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL MAIN STREET & SOUTH STREET

SCALE: 1" = 10'

CONTRACT NO. N/A	DRAWN BY	YEAR	SHEET	TOTAL
	JRG	2016	148	246

COMM. NO. 01-071-140

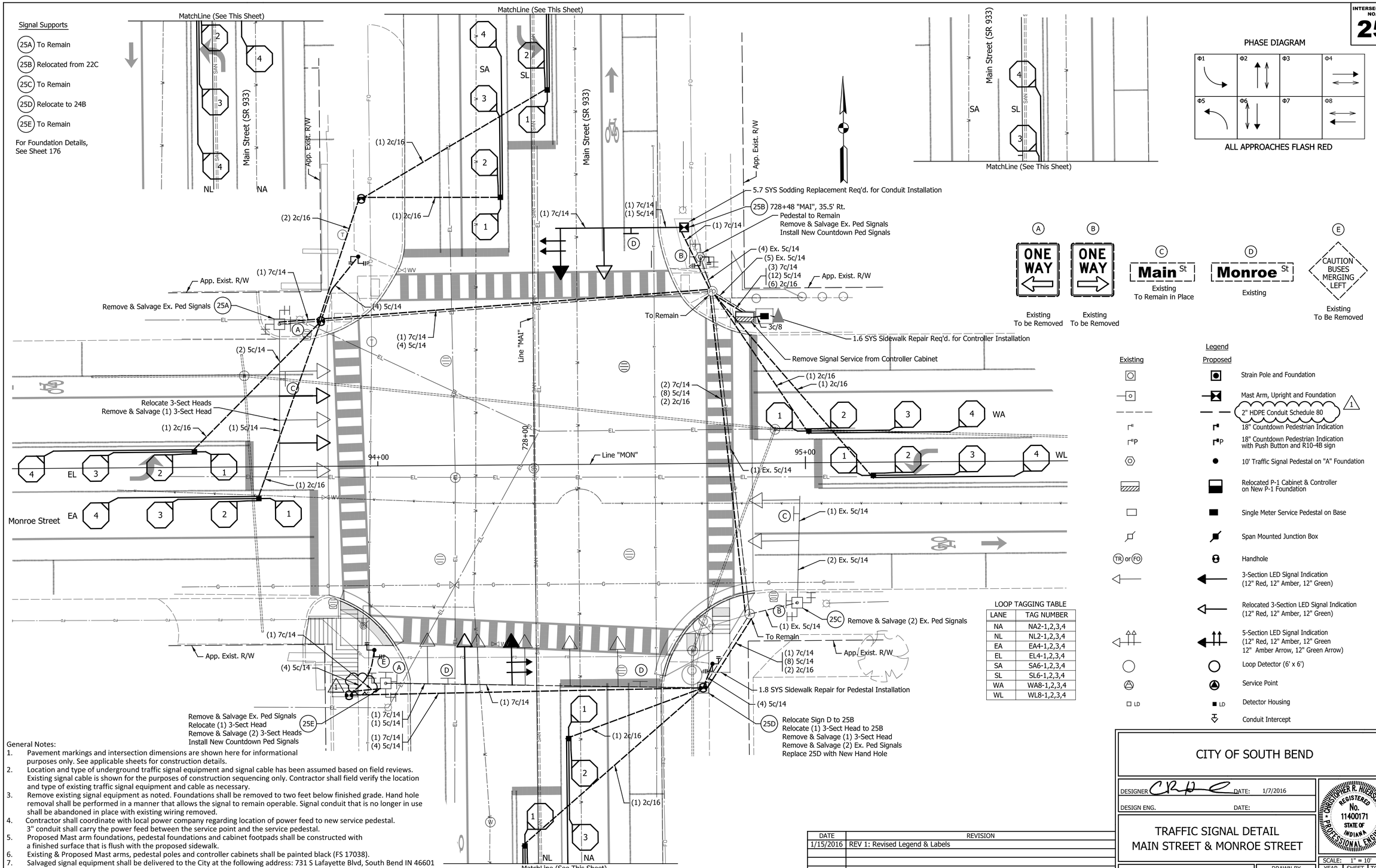
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **25**

Signal Supports

- (25A) To Remain
- (25B) Relocated from 22C
- (25C) To Remain
- (25D) Relocate to 24B
- (25E) To Remain

For Foundation Details, See Sheet 176



PHASE DIAGRAM

ALL APPROACHES FLASH RED

LOOP TAGGING TABLE

LANE	TAG NUMBER
NA	NA2-1,2,3,4
NL	NL2-1,2,3,4
EA	EA4-1,2,3,4
EL	EL4-1,2,3,4
SA	SA6-1,2,3,4
SL	SL6-1,2,3,4
WA	WA8-1,2,3,4
WL	WL8-1,2,3,4

Legend

Existing	Proposed	
○	●	Strain Pole and Foundation
○	●	Mast Arm, Upright and Foundation
- - - -	2" HDPE Conduit Schedule 80 (1)	
⌐	⌐	18" Countdown Pedestrian Indication
⌐P	⌐P	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
▭	■	Single Meter Service Pedestal on Base
⌐	◣	Span Mounted Junction Box
(TR) or (FO)	◉	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
□ LD	■ LD	Detector Housing
	⇩	Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Labels

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
MAIN STREET & MONROE STREET

CHRISTOPHER R. HUERKAMP REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY JRG

YEAR	SHEET	TOTAL
2016	149	246

COMM. NO. 01-071-141

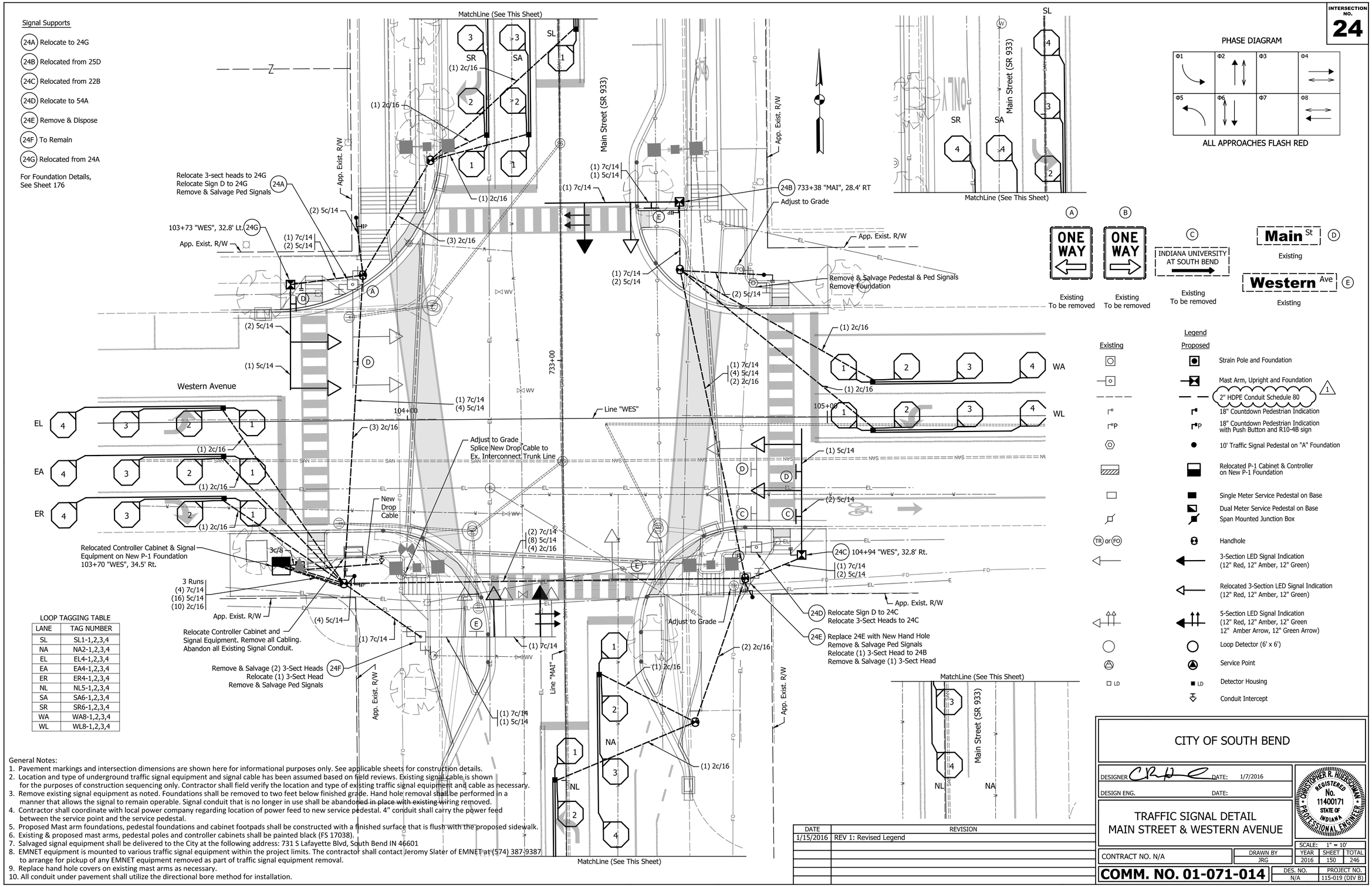
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **24**

Signal Supports

- (24A) Relocate to 24G
- (24B) Relocated from 25D
- (24C) Relocated from 22B
- (24D) Relocate to 54A
- (24E) Remove & Dispose
- (24F) To Remain
- (24G) Relocated from 24A

For Foundation Details, See Sheet 176



PHASE DIAGRAM

ALL APPROACHES FLASH RED

A	B	C	D	E
ONE WAY	ONE WAY	INDIANA UNIVERSITY AT SOUTH BEND	Main St	Western Ave
Existing To be removed	Existing To be removed	Existing To be removed	Existing	Existing

LOOP TAGGING TABLE

LANE	TAG NUMBER
SL	SL1-1,2,3,4
NA	NA2-1,2,3,4
EL	EL4-1,2,3,4
EA	EA4-1,2,3,4
ER	ER4-1,2,3,4
NL	NL5-1,2,3,4
SA	SA6-1,2,3,4
SR	SR6-1,2,3,4
WA	WA8-1,2,3,4
WL	WL8-1,2,3,4

Legend

Existing	Proposed
	Strain Pole and Foundation
	Mast Arm, Upright and Foundation
	2" HDPE Conduit Schedule 80 (1)
	18" Countdown Pedestrian Indication
	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
	Single Meter Service Pedestal on Base
	Dual Meter Service Pedestal on Base
	Span Mounted Junction Box
TR or FO	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
LD	Detector Housing
	Conduit Intercept

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 purposes 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 pedestal. 4" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
MAIN STREET & WESTERN AVENUE

CHRISTOPHER R. HUBERMANN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

CONTRACT NO. N/A

DRAWN BY JRG

SCALE:	1" = 10'	
YEAR	SHEET	TOTAL
2016	150	246

COMM. NO. 01-071-014

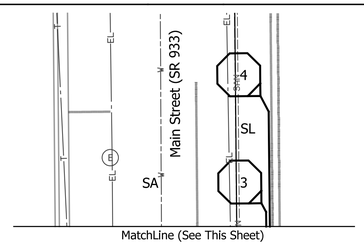
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

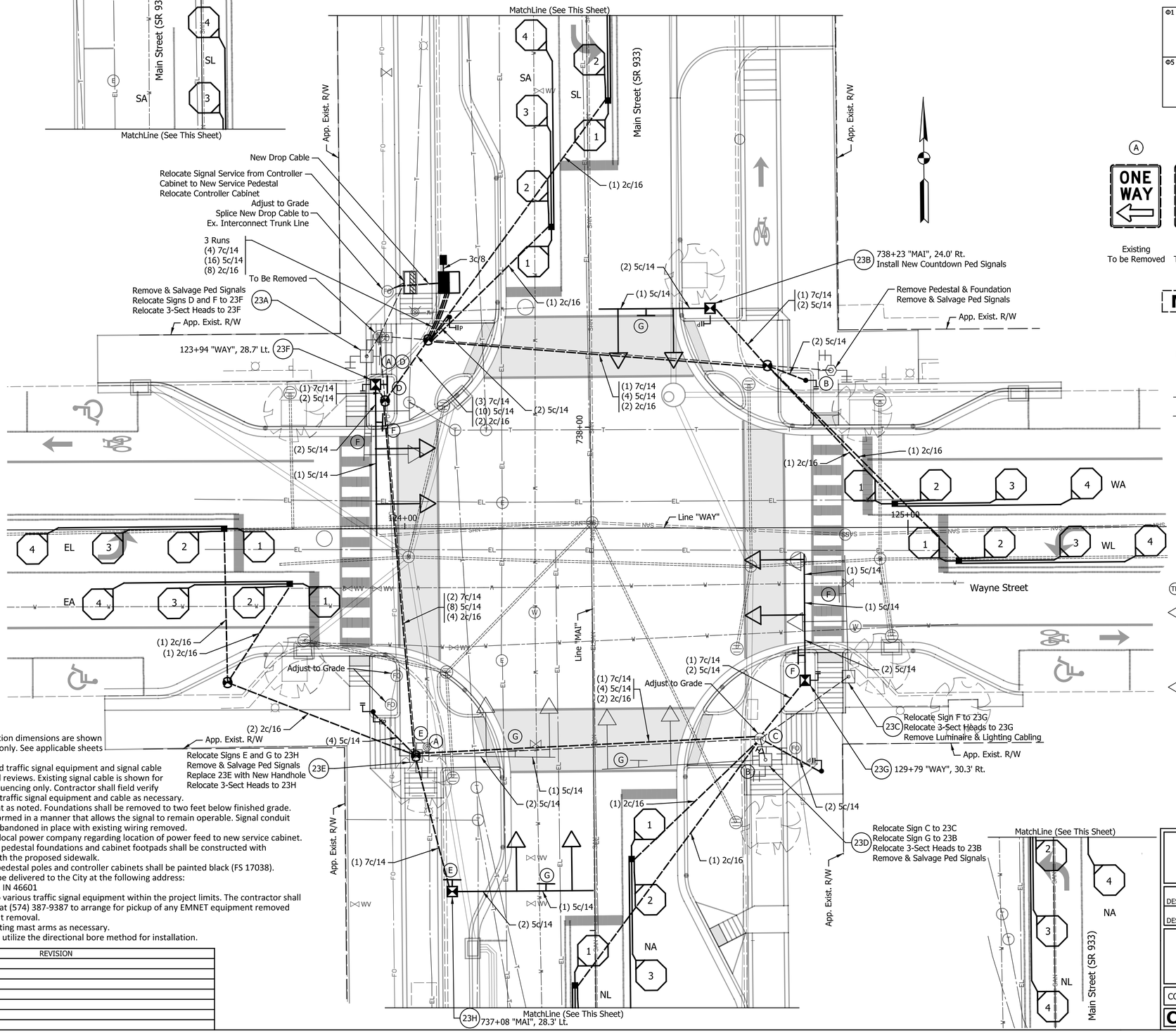
INTERSECTION NO. **23**

Signal Supports

- (23A) Relocate to 21G
- (23B) Relocated from 31C
- (23C) Relocate to 23G
- (23D) Remove & Dispose
- (23E) Relocate to 23H
- (23F) Relocated from 38A
- (23G) Relocated from 23C
- (23H) Relocated from 23E

For Foundation Details, See Sheet 176





LOOP TAGGING TABLE

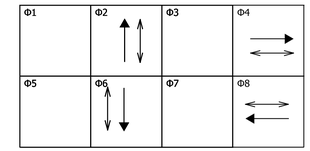
LANE	TAG NUMBER
NA	NA2-1,2,3,4
NL	NL2-1,2,3,4
EL	EL4-1,2,3,4
EA	EA4-1,2,3,4
SA	SA6-1,2,3,4
SL	SL6-1,2,3,4
WA	WA8-1,2,3,4
WL	WL8-1,2,3,4

General Notes:

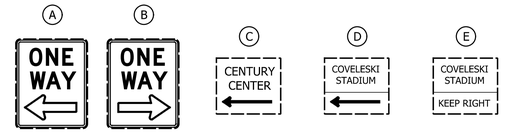
1. Pavement markings and intersection dimensions are shown here for informational purposes only. See applicable sheets for construction details.
2. Location and type of underground traffic signal equipment and signal cable has been assumed based on field reviews. Existing signal cable is shown for the purposes 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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend

PHASE DIAGRAM



ALL APPROACHES FLASH RED



Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" HDPE Conduit Schedule 80 (1)
		18" Countdown Pedestrian Indication
	P	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
		Single Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
LD		Detector Housing
		Conduit Intercept
		Detection Zone
		Detection Camera

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUBERSHAW REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL MAIN STREET & WAYNE STREET

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY JRG

YEAR	SHEET	TOTAL
2016	151	246

COMM. NO. 01-071-142

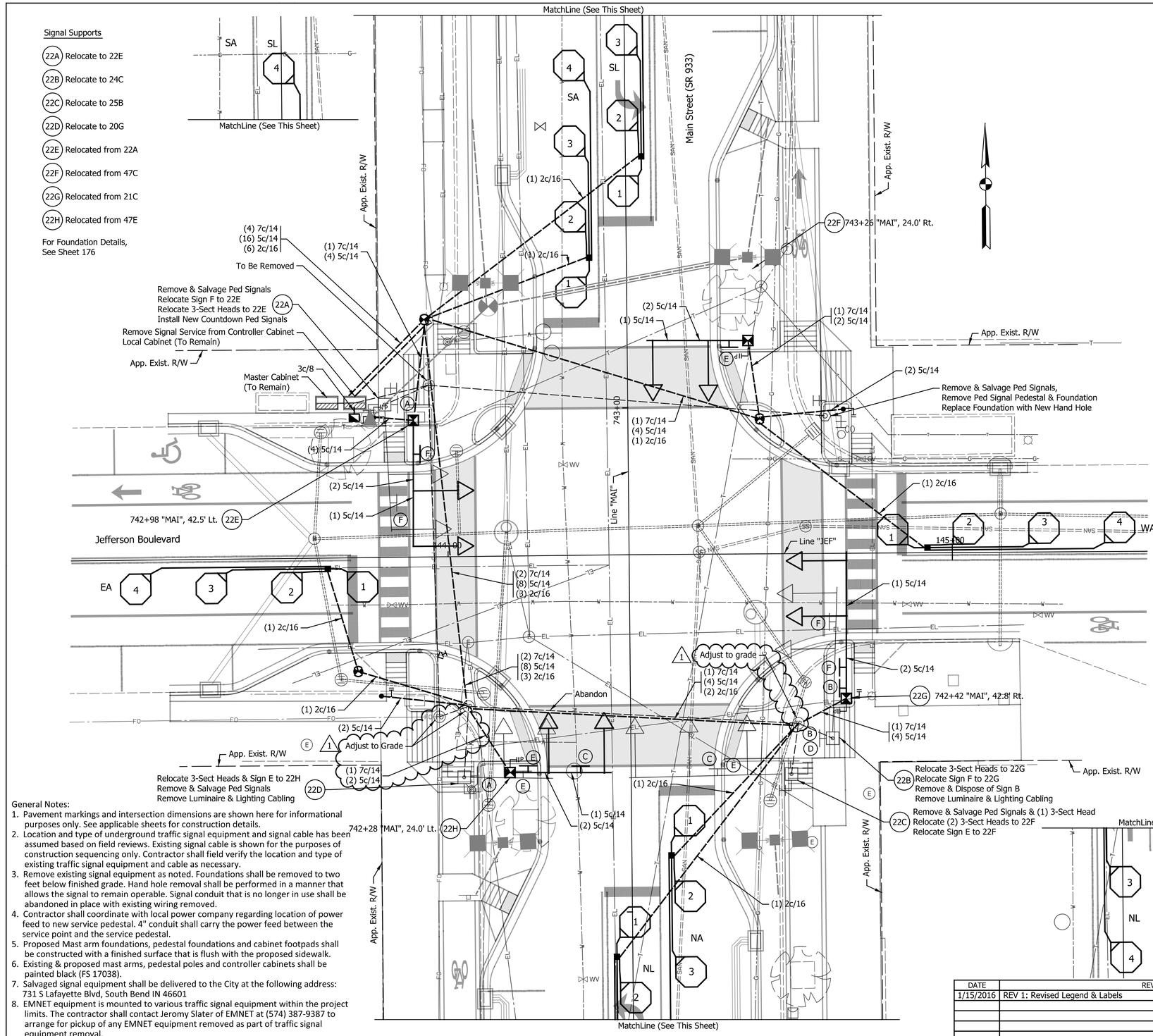
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **22**

Signal Supports

- 22A Relocate to 22E
- 22B Relocate to 24C
- 22C Relocate to 25B
- 22D Relocate to 20G
- 22E Relocated from 22A
- 22F Relocated from 47C
- 22G Relocated from 21C
- 22H Relocated from 47E

For Foundation Details, See Sheet 176



PHASE DIAGRAM

Φ1	Φ2	Φ3	Φ4
Φ5	Φ6	Φ7	Φ8

ALL APPROACHES FLASH RED

A — ONE WAY — Existing To Be Removed

B — Existing

C — CENTURY CENTER — Existing To be removed

D — ONE WAY — Existing To Be Removed

E — Jefferson Blvd — Existing

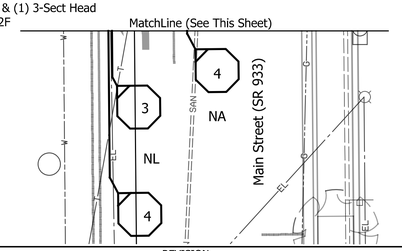
F — Main St — Existing

LOOP TAGGING TABLE

LANE	TAG NUMBER
NA	NA2-1,2,3,4
NL	NL2-1,2,3,4
EA	EA4-1,2,3,4
SA	SA6-1,2,3,4
SL	SL6-1,2,3,4
WA	WA8-1,2,3,4

Legend

Existing	Proposed	
○	●	Strain Pole and Foundation
○—□	■	Mast Arm, Upright and Foundation
— — —	— — —	2" HDPE Conduit Schedule 80 (1)
⌐ᴵ	⌐ᴵ	18" Countdown Pedestrian Indication
⌐ᴵP	⌐ᴵP	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
▭	◪	Dual Meter Service Pedestal on Base
◿	◿	Span Mounted Junction Box
TR or FO	◓	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
□ LD	■ LD	Detector Housing
	⇩	Conduit Intercept
	▨	Detection Zone
▱	▰	Detection Camera



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 purposes 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 pedestal. 4" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Labels

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUECKMAN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL MAIN STREET & JEFFERSON BLVD.

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY JRG

YEAR	SHEET	TOTAL
2016	152	246

COMM. NO. 01-071-143

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **21**

Signal Supports

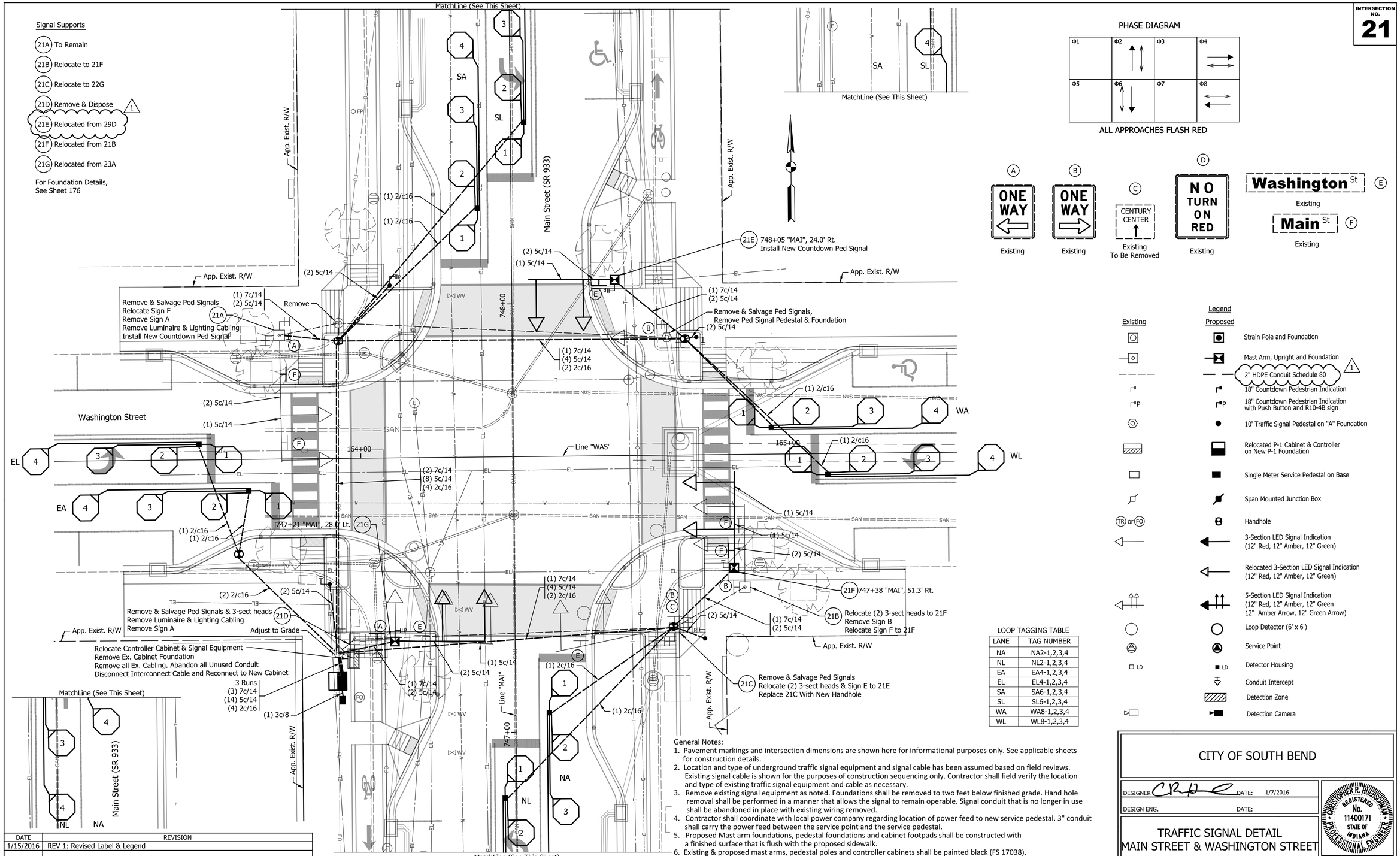
- (21A) To Remain
- (21B) Relocate to 21F
- (21C) Relocate to 22G
- (21D) Remove & Dispose
- (21E) Relocated from 29D
- (21F) Relocated from 21B
- (21G) Relocated from 23A

For Foundation Details, See Sheet 176

PHASE DIAGRAM

Φ1	Φ2	Φ3	Φ4
Φ5	Φ6	Φ7	Φ8

ALL APPROACHES FLASH RED



LOOP TAGGING TABLE

LANE	TAG NUMBER
NA	NA2-1,2,3,4
NL	NL2-1,2,3,4
EA	EA4-1,2,3,4
EL	EL4-1,2,3,4
SA	SA6-1,2,3,4
SL	SL6-1,2,3,4
WA	WA8-1,2,3,4
WL	WL8-1,2,3,4

Legend

Existing	Proposed
	Strain Pole and Foundation
	Mast Arm, Upright and Foundation
	2" HDPE Conduit Schedule 80 (1)
	18" Countdown Pedestrian Indication
	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
	Single Meter Service Pedestal on Base
	Span Mounted Junction Box
TR or FO	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
LD	LD Detector Housing
	Conduit Intercept
	Detection Zone
	Detection Camera

DATE	REVISION
1/15/2016	REV 1: Revised Label & Legend

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 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.

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
MAIN STREET & WASHINGTON STREET

CHRISTOPHER R. HESSMAN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

SCALE: 1" = 10'

DRAWN BY	YEAR	SHEET	TOTAL
JRG	2016	153	246

CONTRACT NO. N/A

COMM. NO. 01-071-144

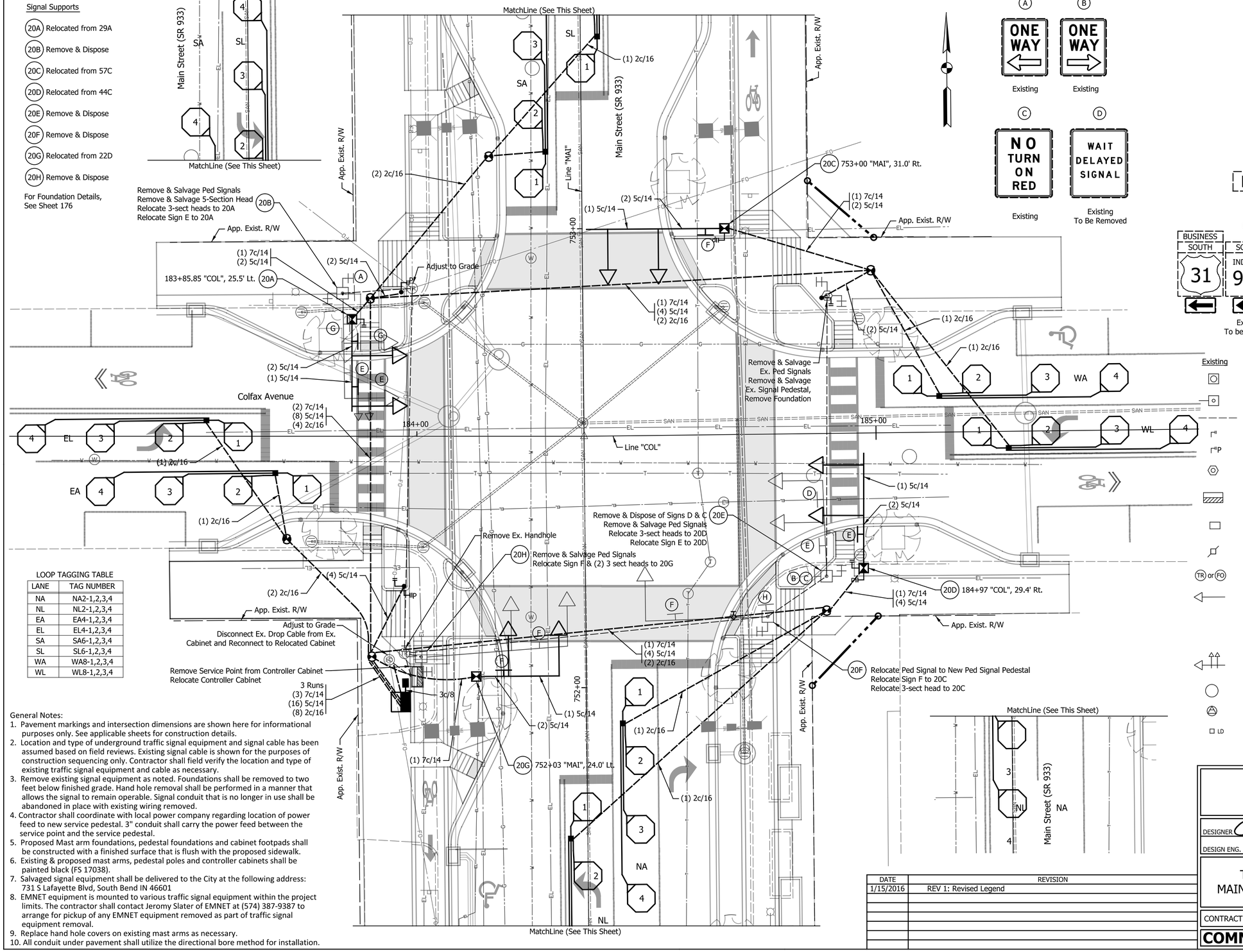
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **20**

Signal Supports

- (20A) Relocated from 29A
- (20B) Remove & Dispose
- (20C) Relocated from 57C
- (20D) Relocated from 44C
- (20E) Remove & Dispose
- (20F) Remove & Dispose
- (20G) Relocated from 22D
- (20H) Remove & Dispose

For Foundation Details, See Sheet 176

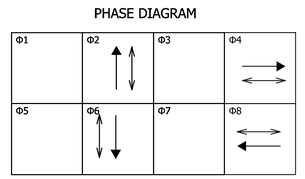


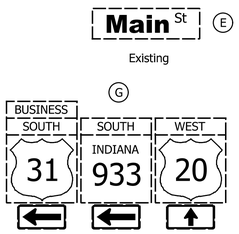
LOOP TAGGING TABLE

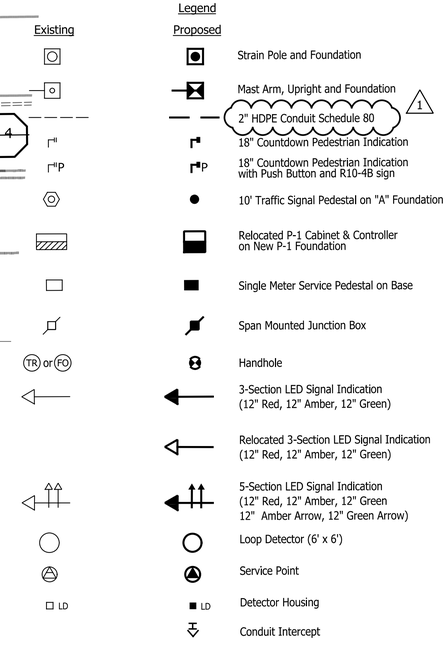
LANE	TAG NUMBER
NA	NA2-1,2,3,4
NL	NL2-1,2,3,4
EA	EA4-1,2,3,4
EL	EL4-1,2,3,4
SA	SA6-1,2,3,4
SL	SL6-1,2,3,4
WA	WA8-1,2,3,4
WL	WL8-1,2,3,4

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.







DATE	REVISION
1/15/2016	REV 1: Revised Legend

CITY OF SOUTH BEND

DESIGNER CRP DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
MAIN STREET & COLFAX AVENUE

CHRISTOPHER R. HIVERSHIM – REGISTERED No. 11400171 STATE OF INDIANA – PROFESSIONAL ENGINEER

CONTRACT NO. N/A

DRAWN BY: JRG

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	154	246

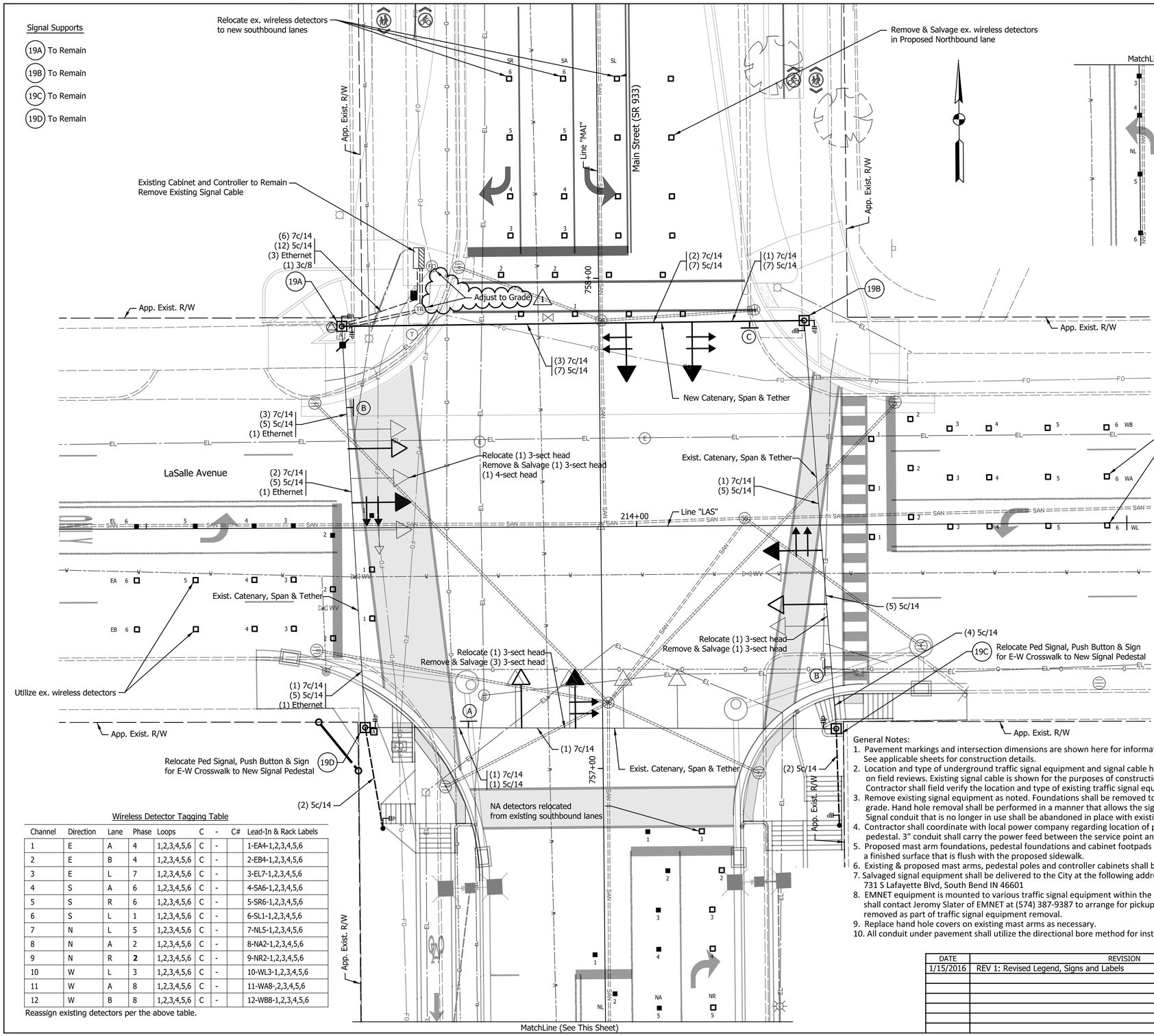
COMM. NO. 01-071-025

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **19**

Signal Supports

- 19A To Remain
- 19B To Remain
- 19C To Remain
- 19D To Remain



Wireless Detector Tagging Table

Channel	Direction	Lane	Phase	Loops	C	-	C#	Lead-In & Rack Labels
1	E	A	4	1,2,3,4,5,6	C	-		1-EA4-1,2,3,4,5,6
2	E	B	4	1,2,3,4,5,6	C	-		2-EB4-1,2,3,4,5,6
3	E	L	7	1,2,3,4,5,6	C	-		3-EL7-1,2,3,4,5,6
4	S	A	6	1,2,3,4,5,6	C	-		4-SA6-1,2,3,4,5,6
5	S	R	6	1,2,3,4,5,6	C	-		5-SR6-1,2,3,4,5,6
6	S	L	1	1,2,3,4,5,6	C	-		6-SL1-1,2,3,4,5,6
7	N	L	5	1,2,3,4,5,6	C	-		7-NL5-1,2,3,4,5,6
8	N	A	2	1,2,3,4,5,6	C	-		8-NA2-1,2,3,4,5,6
9	N	R	**2**	1,2,3,4,5,6	C	-		9-NR2-1,2,3,4,5,6
10	W	L	3	1,2,3,4,5,6	C	-		10-WL3-1,2,3,4,5,6
11	W	A	8	1,2,3,4,5,6	C	-		11-WA8-,2,3,4,5,6
12	W	B	8	1,2,3,4,5,6	C	-		12-WB8-1,2,3,4,5,6

Reassign existing detectors per the above table.

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" HDPE Conduit Schedule 80
		18" Countdown Pedestrian Indication
		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
		Single Meter Service Pedestal on Base
		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)
		Service Point
		Wireless Sensor
		Wireless Receiver

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend, Signs and Labels

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HIVERNAUER REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL MAIN STREET & LaSALLE AVENUE

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY JRG

YEAR	SHEET	TOTAL
2016	155	246

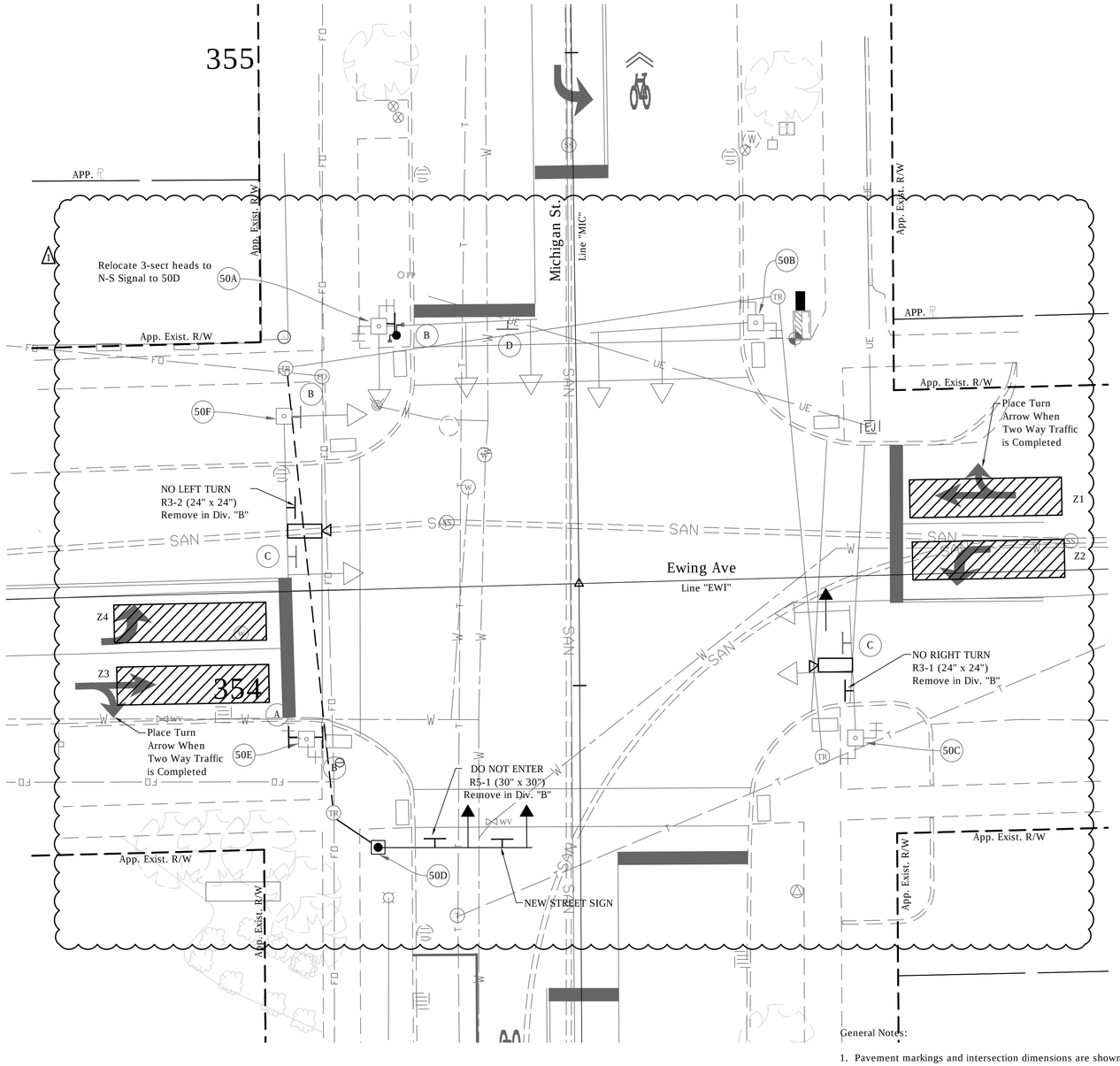
COMM. NO. 01-071-024

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

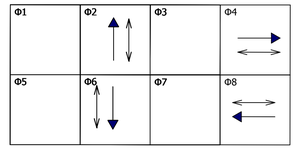
INTERSECTION NO. 50

Signal Supports

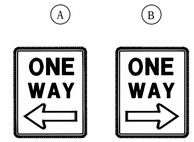
- 50A To Remain
- 50B To Remain
- 50C To Remain
- 50D To Remain
- 50E To Remain
- 50F To Remain



PHASE DIAGRAM



ALL APPROACHES FLASH RED



Existing To be Removed

Existing To be Removed

Michigan St C

Existing

Ewing Ave D

Existing

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		HDPE Schedule 80 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
TR or FO		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
		Detection Camera
		Detection Zones

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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	Rev 1: Revise Gen. Notes and Sign Call Outs

CITY OF SOUTH BEND

DESIGNER DATE:

DESIGN ENG. DATE: 01/07/2016

TRAFFIC SIGNAL DETAIL
MICHIGAN ST & EWING AVE

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

CONTRACT NO. N/A

DRAWN BY BRD

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	156	246

COMM. NO. N/A

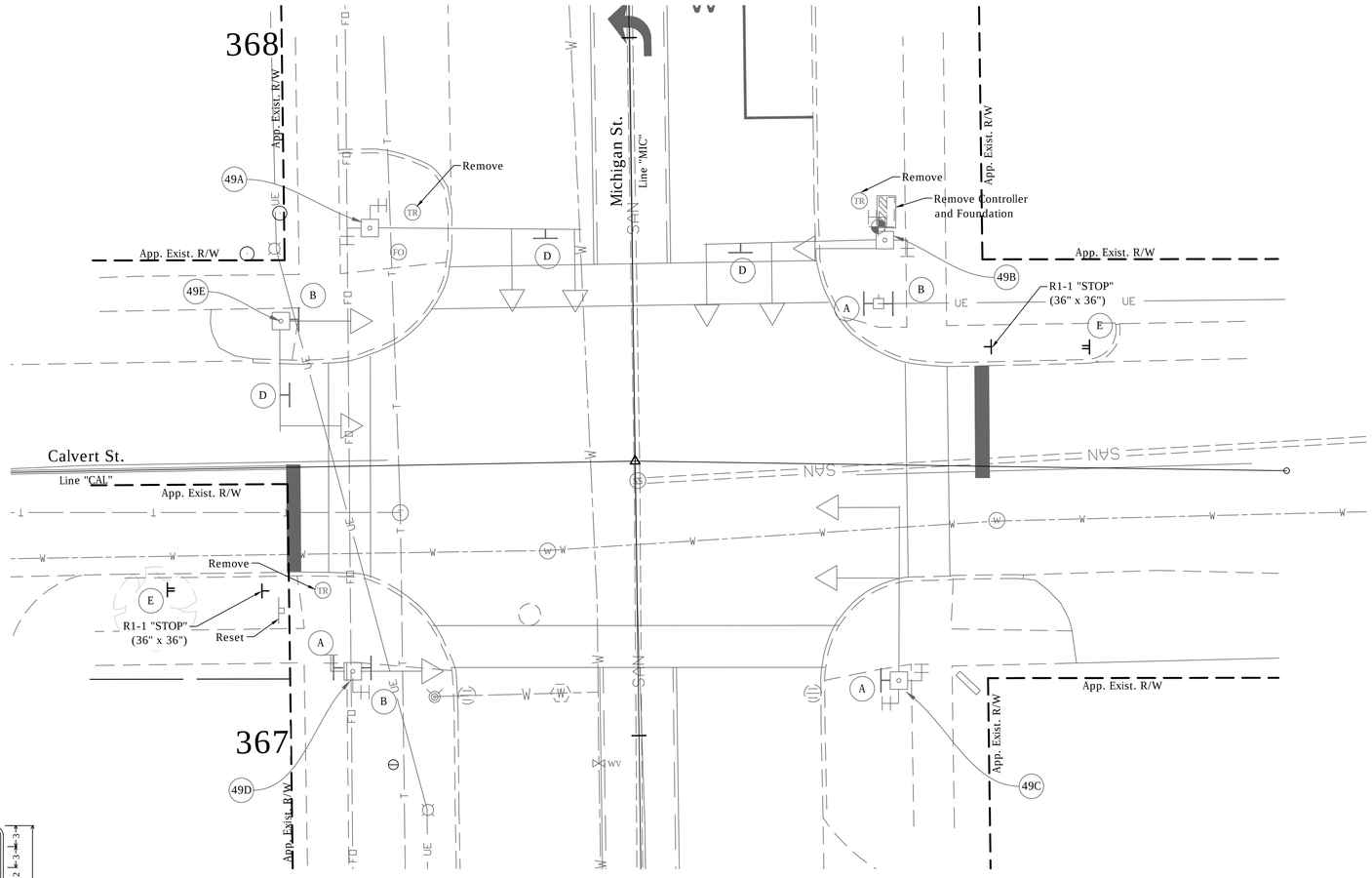
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

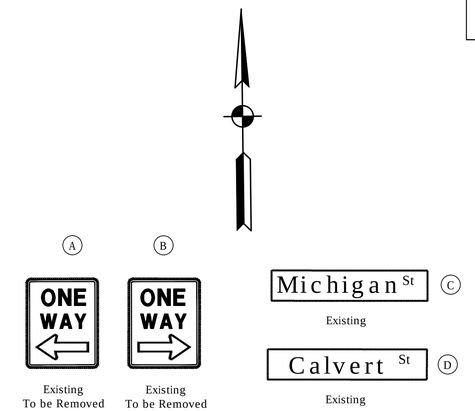
DIRECTORY....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\SIGNAL DETAILS\Signal Plans North\
FILE.....15-3329 Signal Plans north.dwg
MASTER.....11SCALE...1
PLOTTED BY...Brandon Dye
DATE.....Jan 15,2016 - 3:50pm

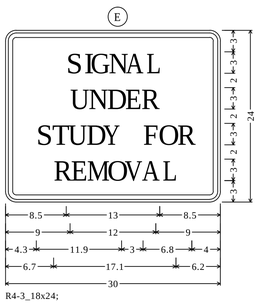
INTERSECTION NO.
49

Signal Supports

- 49A Remove and Dispose
- 49B To Remain, Remove Mast Arm
- 49C Remove and Relocate to 38G
- 49D Remove and Dispose
- 49E Remove and Dispose







R4-3_18x24;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Yellow;
[SIGNAL] D 2K 75} spacing;
[UNDER] D 2K 75} spacing;
[STUDY FOR] D 2K 75} spacing;
[REMOVAL] D 2K 75} spacing;

DATE	REVISION
1/15/2016	Rev 1: Revise Gen. Notes

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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.
11. A 90 Day Flashing Period is Required Prior to Removal of This Traffic Signal. Flashing Operation Shall be Yellow for all North-South Movements and Red for all East-West Movements. Install SIGNAL UNDER STUDY FOR REMOVAL Sign on all Approaches Prior to Beginning 90 day Flashing Period. Remove Said Signs with Removal of Traffic Signal.

CITY OF SOUTH BEND

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

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MICHIGAN ST & CALVERT ST

SCALE: 1" = 10'

CONTRACT NO. N/A	DRAWN BY	YEAR	SHEET	TOTAL
	BRD	2016	157	246

COMM. NO. N/A	DES. NO.	PROJECT NO.
	N/A	115-019 (DIV B)

DIRECTORY...F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\SIGNAL DETAILS\Signal Plans North\
FILE.....15-3329 Signal Plans north.dwg
DNSCALE...[TSCALE...]
PLOTTED BY..BRD
DATE.....Jan 15,2016 — 3:50pm

INTERSECTION NO.
48

Signal Supports

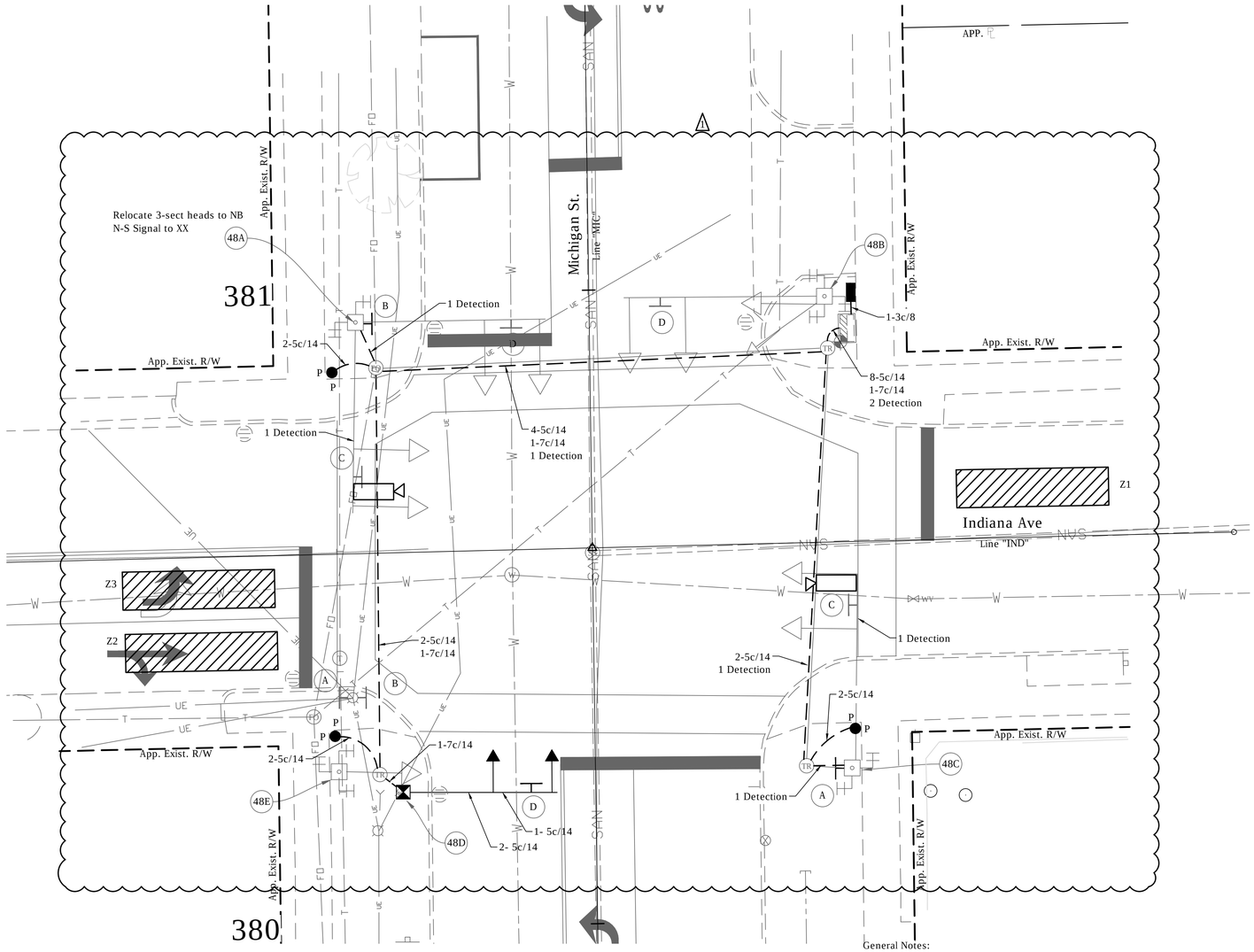
(48A) To Remain in Place, Remove NB Mast Arm.

(48B) To Remain

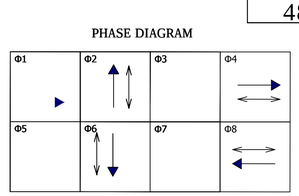
(48C) To Remain

(48D) Relocated from 31D

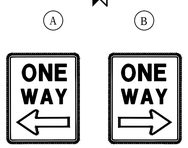
(48E) To Remain in Place.



PHASE DIAGRAM



ALL APPROACHES FLASH RED



(A) Existing To be Removed

(B) Existing To be Removed

Michigan St (C) Existing

Indiana Ave (D) Existing

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		HDPE Schedule 80 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
TR or FO		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
		Detection Camera
		Detection Zones
		4' Traffic Signal Pedestal on "A" Foundation
	P	Pedestrian Push Button W/ R10-4B Sign

Detection Zone

Zone	Phase	Delay
Z1	8	5 Sec.
Z2	4	5 Sec.
Z3	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

DATE	REVISION
1/15/2016	Rev 1: Add Pedestrian & Push Button & Conduit & Revised Gen Notes

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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

CITY OF SOUTH BEND

DESIGNER DATE:

DESIGN ENG. DATE: 01/07/2016

TRAFFIC SIGNAL DETAIL
MICHIGAN ST & INDIANA AVE

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

CONTRACT NO. N/A

DRAWN BY BRD

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	158	246

COMM. NO. N/A

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\SIGNAL DETAILS\Signal Plans North\
FILE.....15-3329 Signal Plans north.dwg
DIST/SU/C.....1"=10'SCALE...1
PLOTTED BY.....Brad Rowland
DATE.....Jan 15,2016 - 3:50pm

INTERSECTION NO.
47

Signal Supports

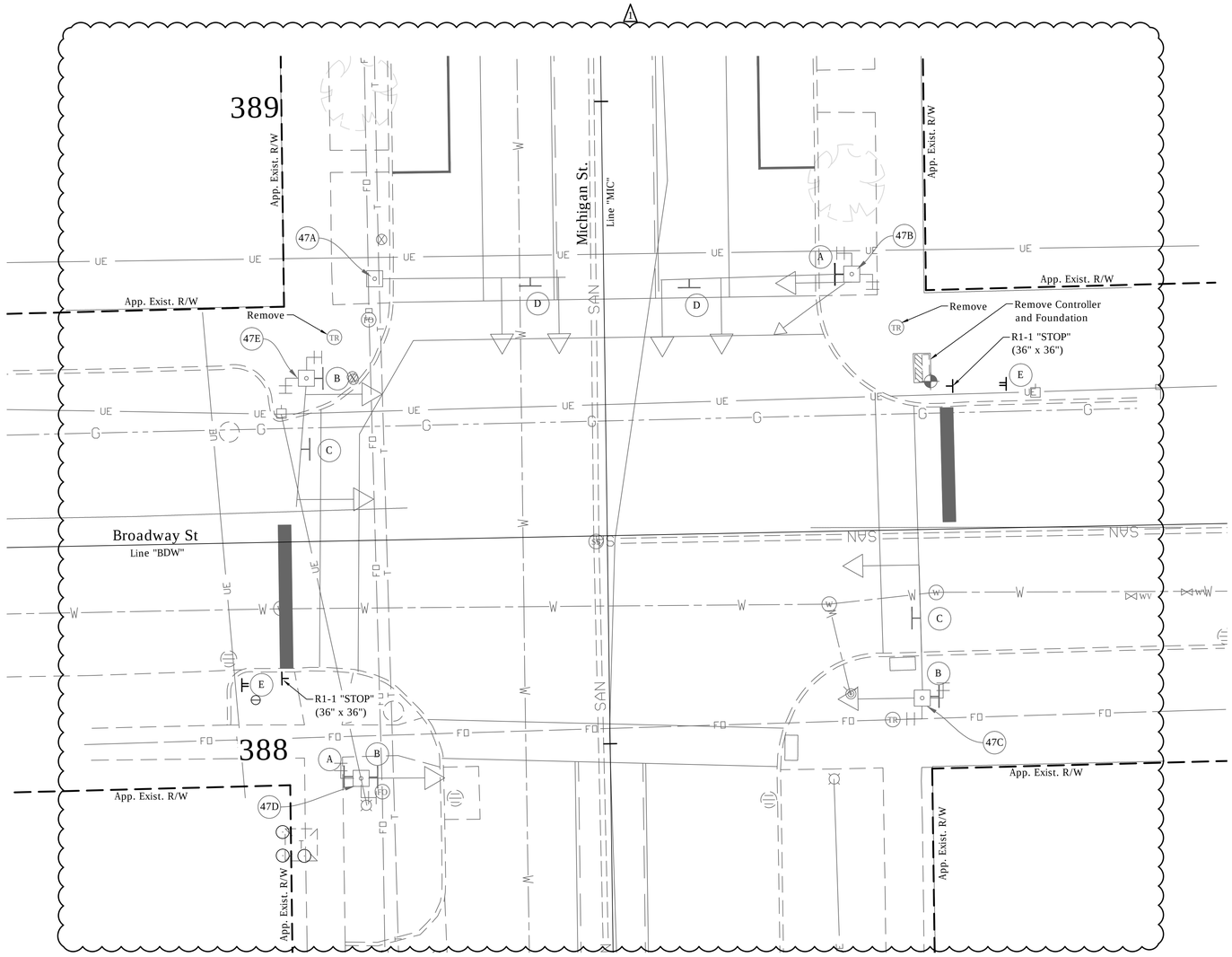
47A To Remain in Place, Remove Mast Arm.

47B Remove and Relocate to 55A

47C Remove and Relocate to 22F

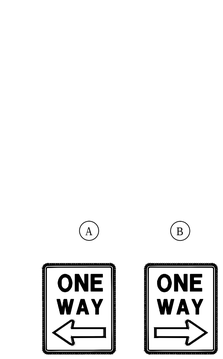
47D Remove and Dispose

47E Remove and Relocate to 22H



R4-3_18x24;
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Yellow;
[SIGNAL] D 2K 75} spacing;
[UNDER] D 2K 75} spacing;
[STUDY FOR] D 2K 75} spacing;
[REMOVAL] D 2K 75} spacing;

DATE	REVISION
1/15/2016	Rev 1: Revise Gen. Notes and Sign Call Outs



Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		HDPE Schedule 80 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
TR or FO		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:

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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.
11. A 90 Day Flashing Period is Required Prior to Removal of This Traffic Signal. Flashing Operation Shall be Yellow for all North-South Movements and Red for all East-West Movements. Install SIGNAL UNDER STUDY FOR REMOVAL Sign on all Approaches Prior to Beginning 90 day Flashing Period. Remove Said Signs with Removal of Traffic Signal.

CITY OF SOUTH BEND

DESIGNER DATE:

DESIGN ENG. DATE: 01/07/2016

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MICHIGAN ST & BROADWAY ST

CONTRACT NO. N/A

DRAWN BY BRD

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	159	246

COMM. NO. N/A

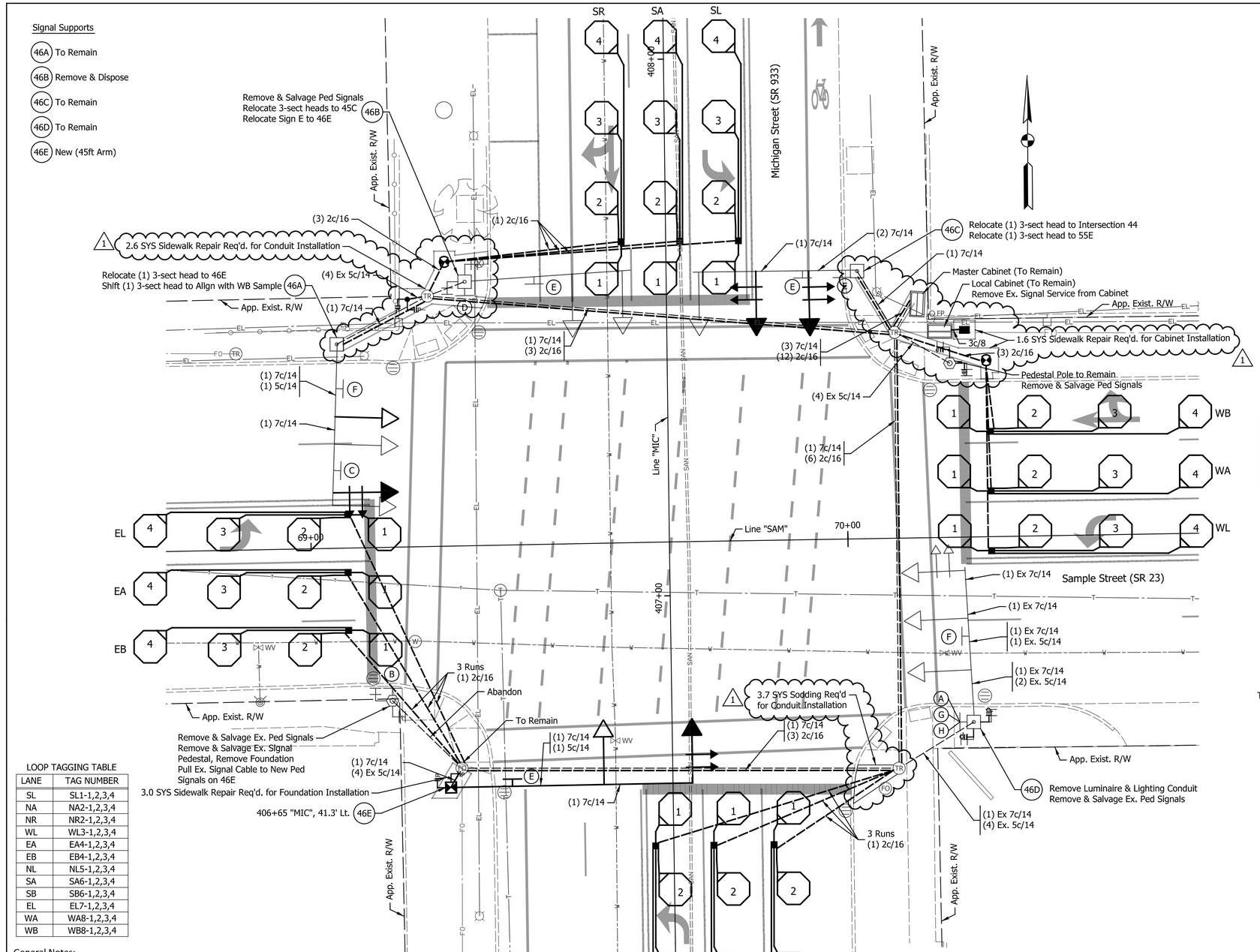
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\SIGNAL DETAILS\Signal Plans North\
FILE.....15-3329 Signal Plans north.dwg
DISTRICT.....FISCALE...1
PLOTTED BY.....Brad Rowland
DATE.....Jan 15,2016 - 3:51pm

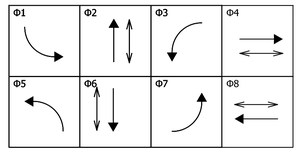
INTERSECTION NO. **46**

Signal Supports

- 46A To Remain
- 46B Remove & Dispose
- 46C To Remain
- 46D To Remain
- 46E New (45ft Arm)



PHASE DIAGRAM



ALL APPROACHES FLASH RED

A — ONE WAY — Existing To be Removed

B — ONE WAY — Existing To be Removed

C — WAIT DELAYED SIGNAL — Existing To Be Removed

D — COVELESKI STADIUM / KEEP LEFT — Existing To be removed

E — Sample St — Existing

F — Michigan St — Existing

G — MONROE INDUSTRIAL PARK — Existing To Be Removed

H — NORTH / INDIANA / 23 — Existing To Remain in Place

Legend

Existing	Proposed	
○	●	Strain Pole and Foundation
○	⊠	Mast Arm, Upright and Foundation
- - -	⌒ 1	2" HDPE Conduit Schedule 80
⌐	⌐	18" Countdown Pedestrian Indication
⌐P	⌐P	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
▭	■	Single Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
□ LD	■ LD	Detector Housing
		Conduit Intercept
		Detection Zone
		Detection Camera

LOOP TAGGING TABLE

LANE	TAG NUMBER
SL	SL1-1,2,3,4
NA	NA2-1,2,3,4
NR	NR2-1,2,3,4
WL	WL3-1,2,3,4
EA	EA4-1,2,3,4
EB	EB4-1,2,3,4
NL	NL5-1,2,3,4
SA	SA6-1,2,3,4
SB	SB6-1,2,3,4
EL	EL7-1,2,3,4
WA	WA8-1,2,3,4
WB	WB8-1,2,3,4

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 have a galvanized finish.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Sodding, Sidewalk Limits

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HIVERNAUER — REGISTERED No. 11400171 STATE OF INDIANA — PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MICHIGAN STREET & SAMPLE STREET

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY: JRG

YEAR	SHEET	TOTAL
2016	160	246

COMM. NO. 01-071-050

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **45**

Signal Supports

(45A) To Remain

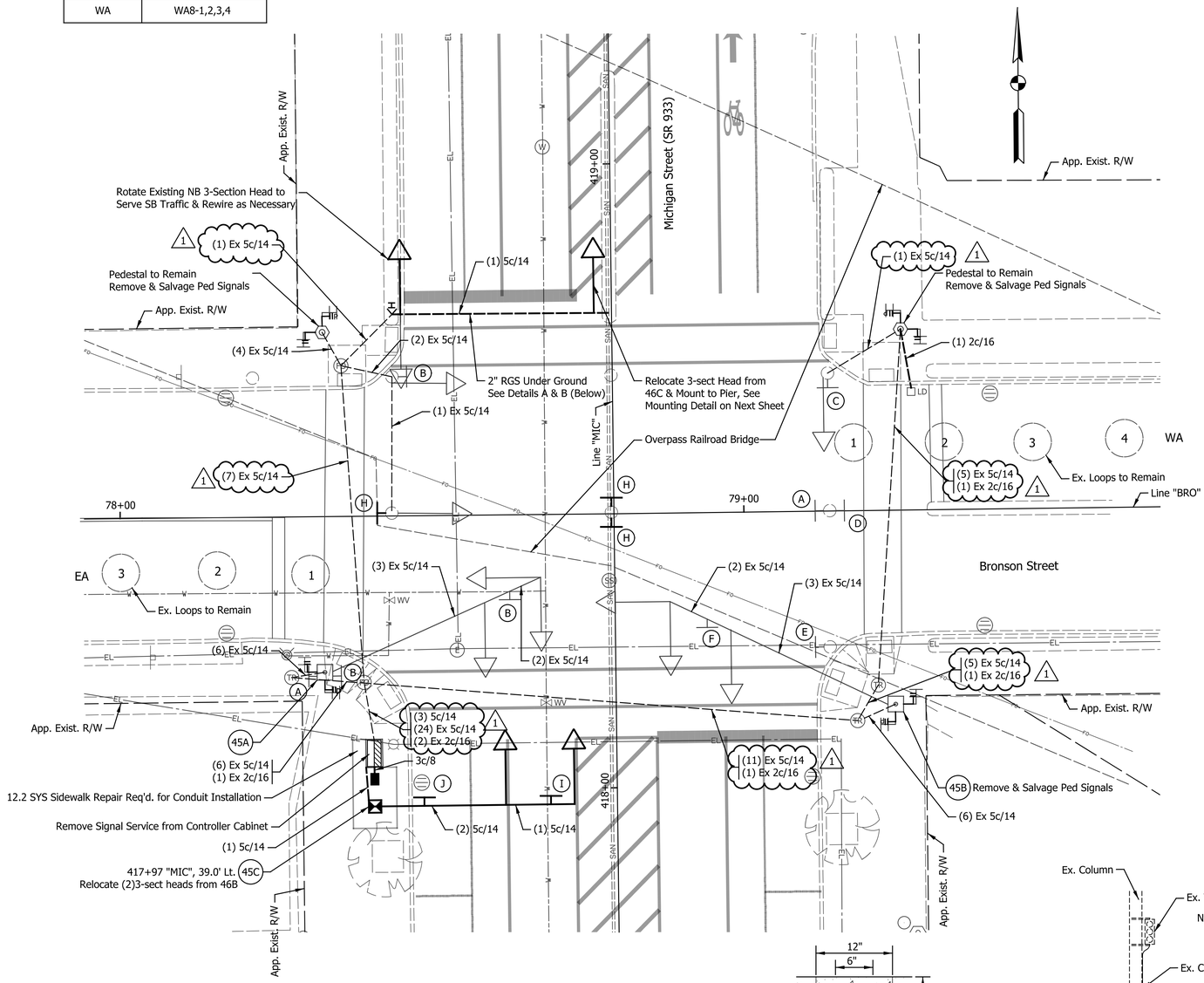
(45B) To Remain

(45C) Relocated from 58B

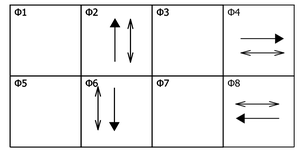
For Foundation Details, See Sheet 176

LOOP TAGGING TABLE

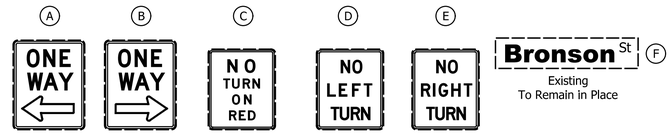
LANE	TAG NUMBER
EA	EA4-1,2,3
WA	WA8-1,2,3,4



PHASE DIAGRAM



ALL APPROACHES FLASH RED



Existing To be Removed

Existing To be Removed

Existing To Remain in Place

Existing To Remain in Place

Existing To be Removed

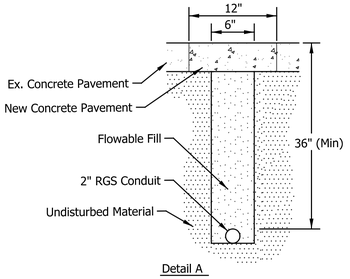
Existing To Remain in Place

Existing To be Removed

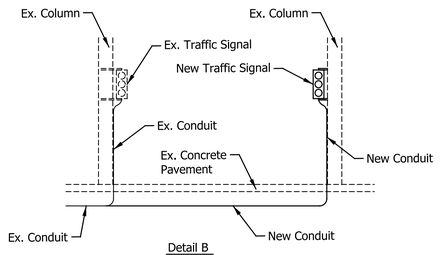
Existing To be Removed

Legend

Existing	Proposed
	Strain Pole and Foundation
	Mast Arm, Upright and Foundation
	2" HDPE Conduit Schedule 80 (1)
	18" Countdown Pedestrian Indication
P	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
	Single Meter Service Pedestal on Base
	Span Mounted Junction Box
TR or FO	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
LD	Detector Housing
	Conduit Intercept



Detail A



Detail B

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Labels. Added Sign J Details.

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUECKMAN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL MICHIGAN STREET & BRONSON STREET

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY JRG

YEAR	SHEET	TOTAL
2016	161	246

COMM. NO. 01-071-052

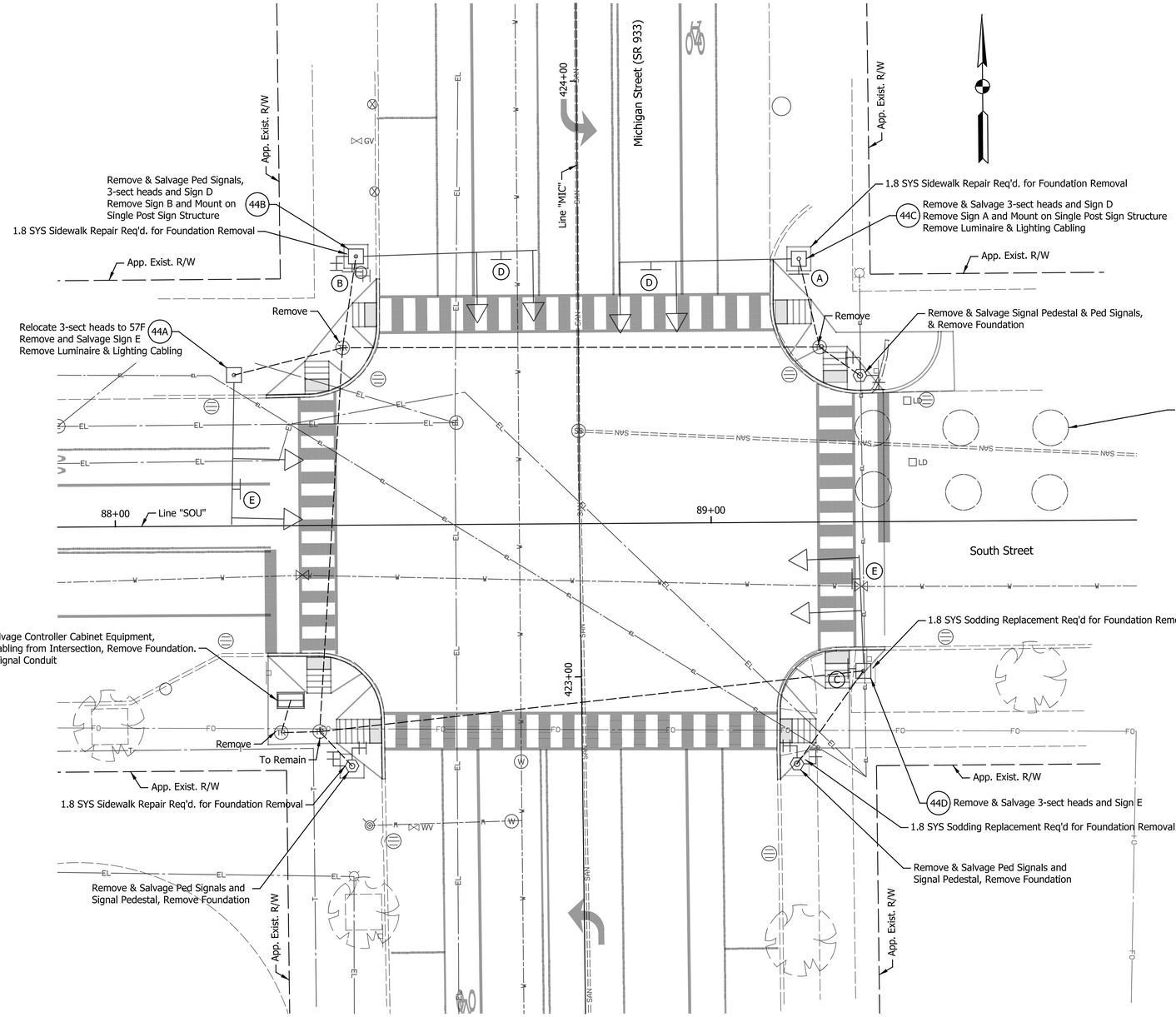
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

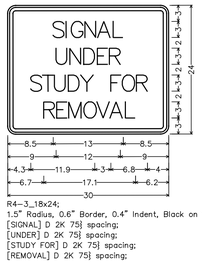
INTERSECTION NO. **44**

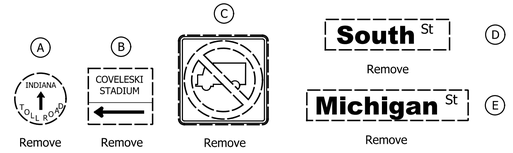
Signal Supports

- (44A) Relocate to 57F
- (44B) Remove & Dispose
- (44C) Relocate to 20D
- (44D) Relocate to 58F

For Foundation Details, See Sheet 176







Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" HDPE Conduit Schedule 80 (1)
		18" Countdown Pedestrian Indication
	P	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
		Single Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
LD	LD	Detector Housing
		Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.
11. A 90 day flashing period is required prior to removal of this traffic signal. Flashing operation shall be YELLOW for all north-south movements and RED for all east-west movements. Install SIGNAL UNDER STUDY FOR REMOVAL sign on all approaches prior to begining 90 day flashing period. Remove said signs with removal of traffic signal.

DATE	REVISION
1/15/2016	REV 1: Revised Legend

CITY OF SOUTH BEND

DESIGNER CRP DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. PRESSMAN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MICHIGAN STREET & SOUTH STREET

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY JRG

YEAR	SHEET	TOTAL
2016	163	246

COMM. NO. 01-071-053

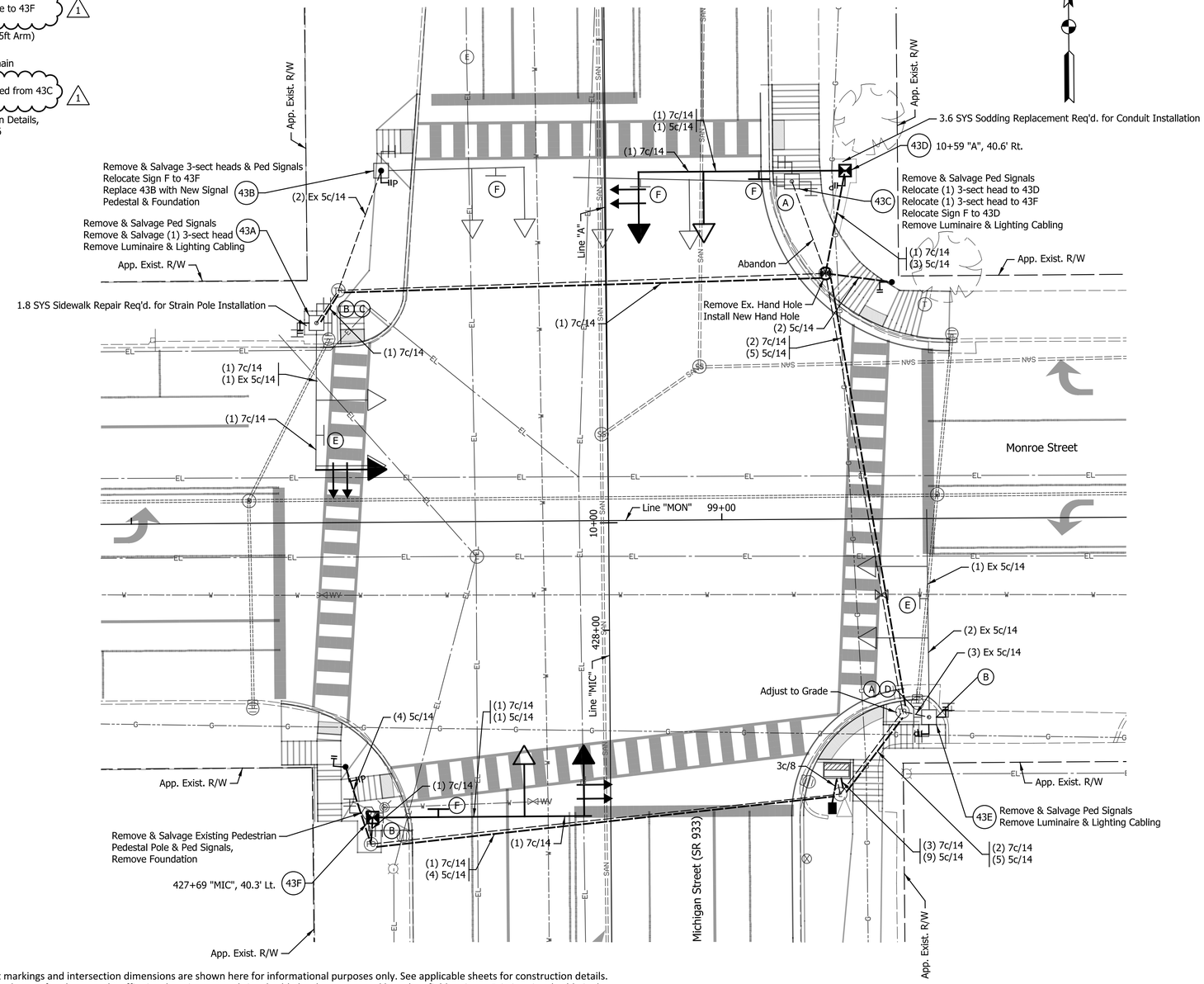
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **43**

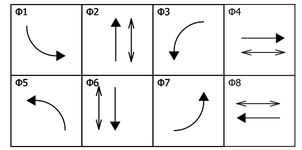
Signal Supports

- 43A To Remain
- 43B Relocate to 56F
- 43C Relocate to 43F (1)
- 43D New (35ft Arm)
- 43E To Remain
- 43F Relocated from 43C (1)

For Foundation Details, See Sheet 176



PHASE DIAGRAM



ALL APPROACHES FLASH RED

A	B	C	D
ONE WAY ←	ONE WAY →	NO LEFT TURN	NO RIGHT TURN
Existing To be Removed	Existing To be Removed	Existing To be Removed	Existing To be Removed

Michigan St (E) Existing

Monroe St (F) Existing

Legend

Existing	Proposed
	Strain Pole and Foundation
	Mast Arm, Upright and Foundation
	2" HDPE Conduit Schedule 80 (1)
"I"	18" Countdown Pedestrian Indication
"IP"	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
	Single Meter Service Pedestal on Base
	Span Mounted Junction Box
TR or FO	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
LD	Detector Housing
	Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Labels

CITY OF SOUTH BEND

DESIGNER CRP DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HIVERNAUGH REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MICHIGAN STREET & MONROE STREET

SCALE: 1" = 10'

CONTRACT NO. N/A	DRAWN BY	YEAR	SHEET	TOTAL
	JRG	2016	164	246

COMM. NO. 01-071-054

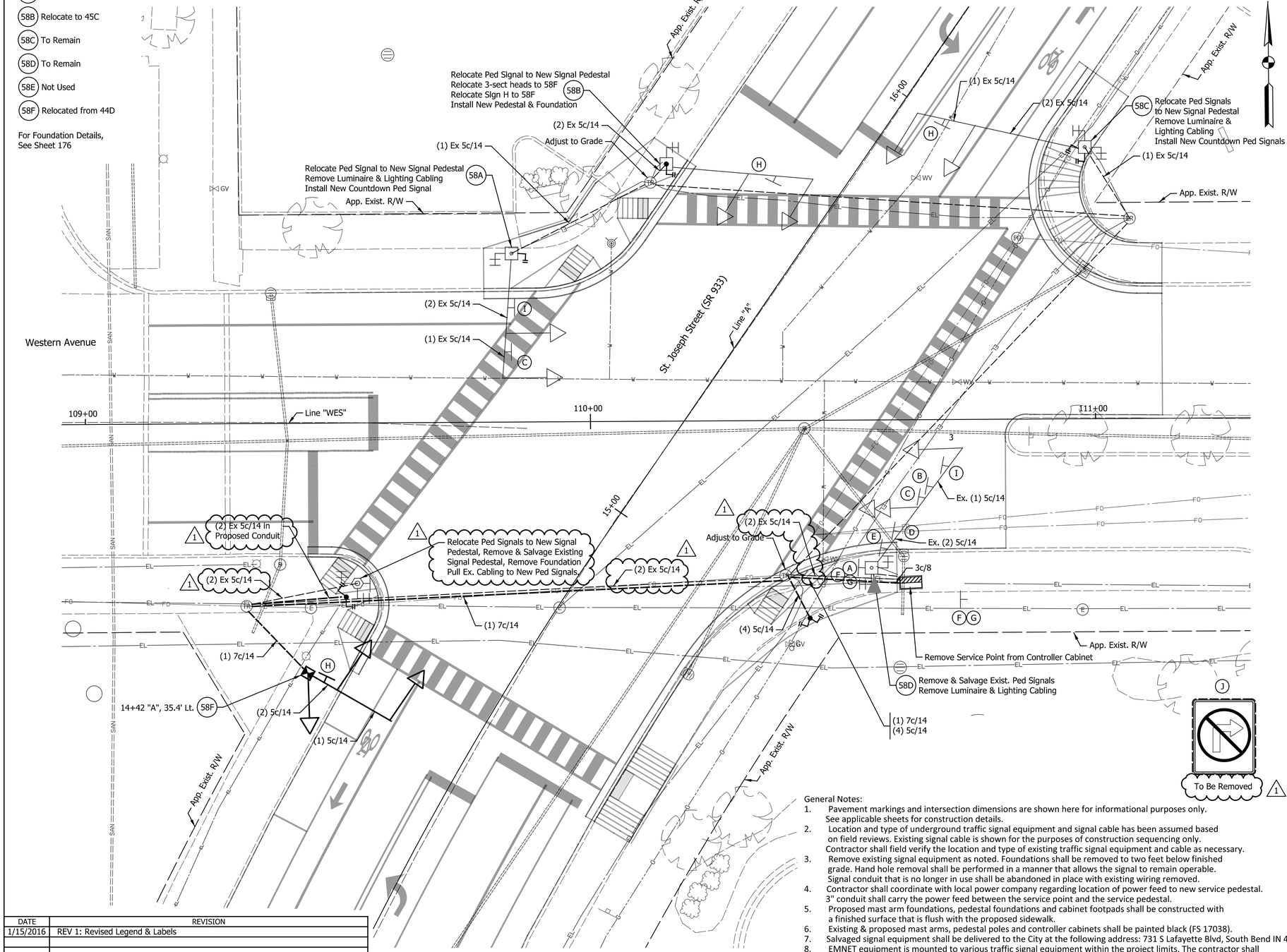
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **58**

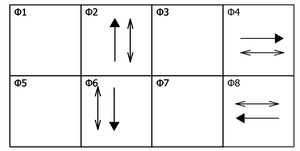
Signal Supports

- 58A To Remain
- 58B Relocate to 45C
- 58C To Remain
- 58D To Remain
- 58E Not Used
- 58F Relocated from 44D

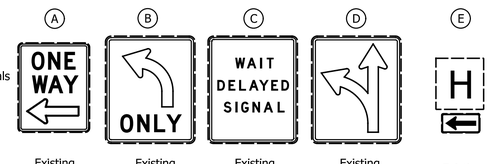
For Foundation Details, See Sheet 176



PHASE DIAGRAM



ALL APPROACHES FLASH RED



A Existing To be Removed
B Existing To be Removed
C Existing To Be Removed
D Existing To Be Removed
E Existing
F Existing
G Existing
H Existing
I Existing

Legend

Existing	Proposed	
○	●	Strain Pole and Foundation
○	⊠	Mast Arm, Upright and Foundation
- - -	2" HDPE Conduit Schedule 80	1
⌐I	⌐I	18" Countdown Pedestrian Indication
⌐IP	⌐IP	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
□	■	Single Meter Service Pedestal on Base
◿	◿	Span Mounted Junction Box
TR or FO		Handhole
◁	◀	3-Section LED Signal Indication (12" Red, 12" Amber, 12" Green)
◁	◀	Relocated 3-Section LED Signal Indication (12" Red, 12" Amber, 12" Green)
↑◁	↑◀	4-Section LED Signal Indication (12" Red, 12" Amber Arrow, 12" Green Arrow, 12" Green)
↑◁	↑◀	3-Section LED Signal Indication (12" Red, 12" Amber Arrow, 12" Green Arrow)
○	○	Loop Detector (6' x 6')
⏢	▲	Service Point
□ LD	■ LD	Detector Housing
	⇩	Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Labels

CITY OF SOUTH BEND

DESIGNER CRP DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
ST JOSEPH STREET &
WESTERN AVENUE

CONTRACT NO. N/A

DRAWN BY JRG

COMM. NO. 01-071-127

CHRISTOPHER R. WIEDEMANN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	165	246

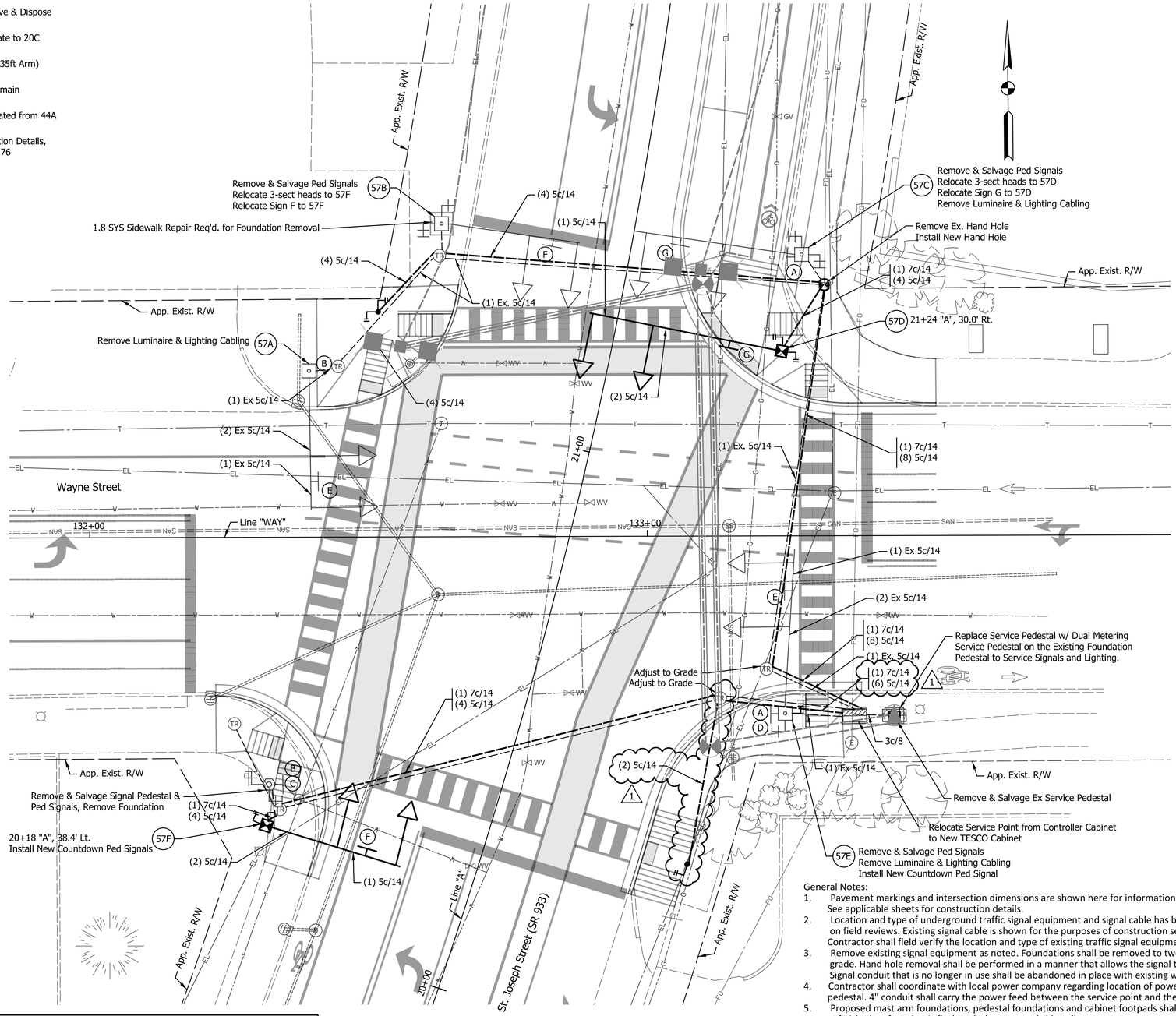
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **57**

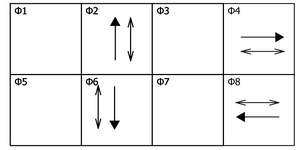
Signal Supports

- 57A To Remain
- 57B Remove & Dispose
- 57C Relocate to 20C
- 57D New (35ft Arm)
- 57E To Remain
- 57F Relocated from 44A

For Foundation Details, See Sheet 176



PHASE DIAGRAM



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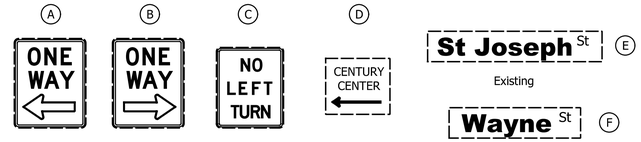


Legend

Existing	Proposed	
○	●	Strain Pole and Foundation
○	⊠	Mast Arm, Upright and Foundation
— — —	— — —	2" HDPE Conduit Schedule 80 (1)
		18" Countdown Pedestrian Indication
	P	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
▭	◪	Dual Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
□ LD	■ LD	Detector Housing

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 purposes 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 pedestal. 4" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Pedestrian Signal Location.

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUBER REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
ST. JOSEPH STREET &
WAYNE STREET

SCALE: 1" = 10'		
YEAR	SHEET	TOTAL
2016	166	246

CONTRACT NO. N/A

DRAWN BY JRG

COMM. NO. 01-071-128

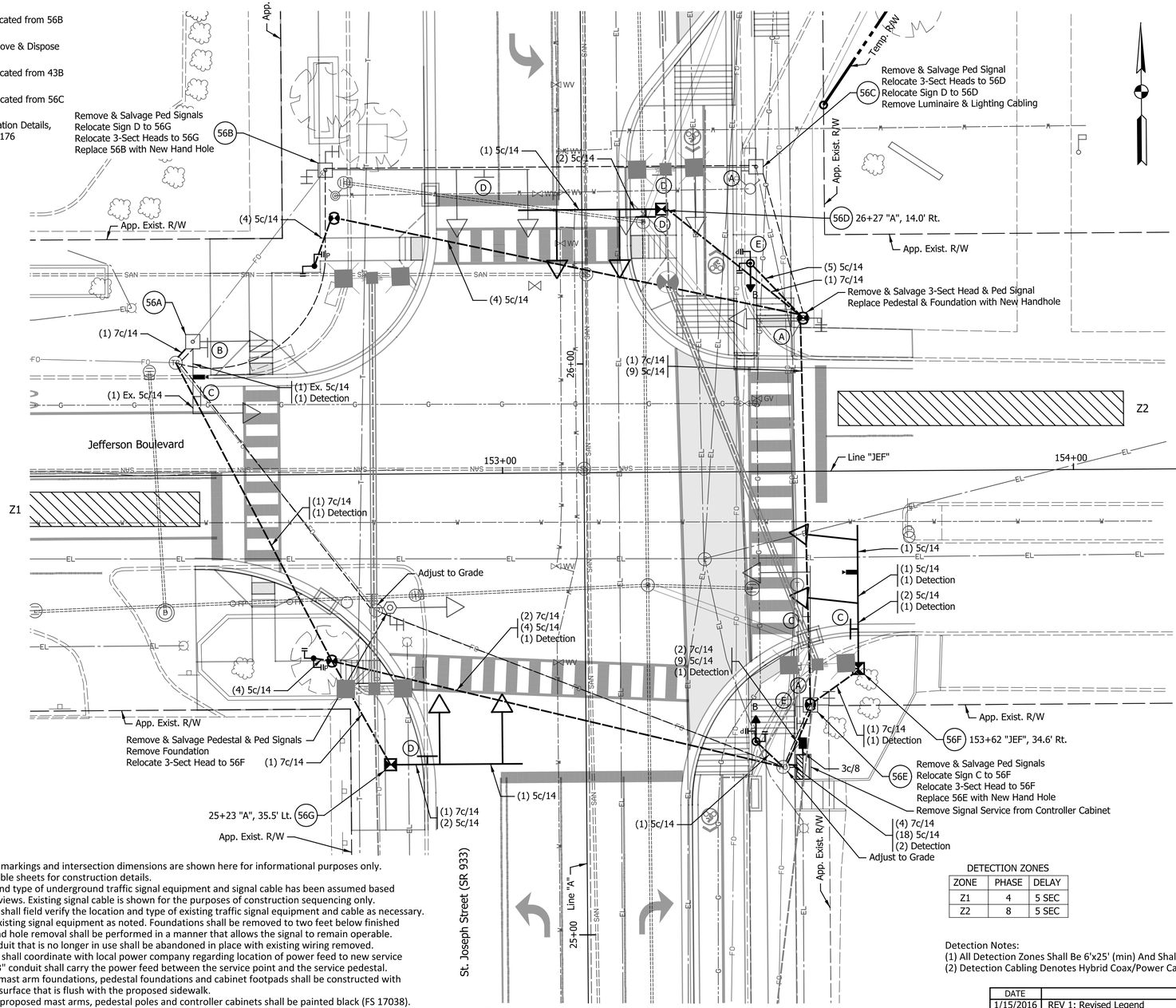
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

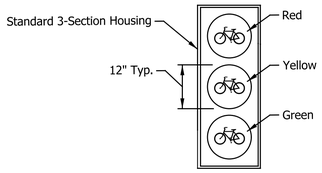
INTERSECTION NO. **56**

Signal Supports

- 56A To Remain
- 56B Relocate to 56D
- 56C Relocate to 56G
- 56D Relocated from 56B
- 56E Remove & Dispose
- 56F Relocated from 43B
- 56G Relocated from 56C

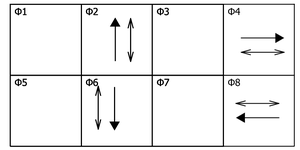
For Foundation Details, See Sheet 176



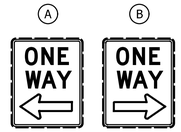


BIKE SIGNAL DETAIL

PHASE DIAGRAM



ALL APPROACHES FLASH RED



Existing
To be Removed

Existing
To be Removed

R9-5(Mod.)
12" x 18"
(Mounted below Bike Signal)

Legend

Existing	Proposed
	Strain Pole and Foundation
	Mast Arm, Upright and Foundation
	2" HDPE Conduit Schedule 80 (1)
	18" Countdown Pedestrian Indication
P	18" Countdown Pedestrian Indication with Push Button and R10-4B sign
	10' Traffic Signal Pedestal on "A" Foundation
	15' Traffic Signal Pedestal on "A" Foundation
	Relocated P-1 Cabinet & Controller on New P-1 Foundation
	Single Meter Service Pedestal on Base
	Span Mounted Junction Box
TR or FO	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)
	Detection Zone
	Service Point
LD	Detector Housing
	Detection Camera
B	3-Section LED Bike Signal Indication (See Detail)

DETECTION ZONES

ZONE	PHASE	DELAY
Z1	4	5 SEC
Z2	8	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 Cameras to in Cabinet Equipment.

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
ST. JOSEPH STREET &
JEFFERSON BLVD.

CHRISTOPHER R. HUBENBECKMAN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY: JRG

YEAR	SHEET	TOTAL
2016	167	246

COMM. NO. 01-071-129

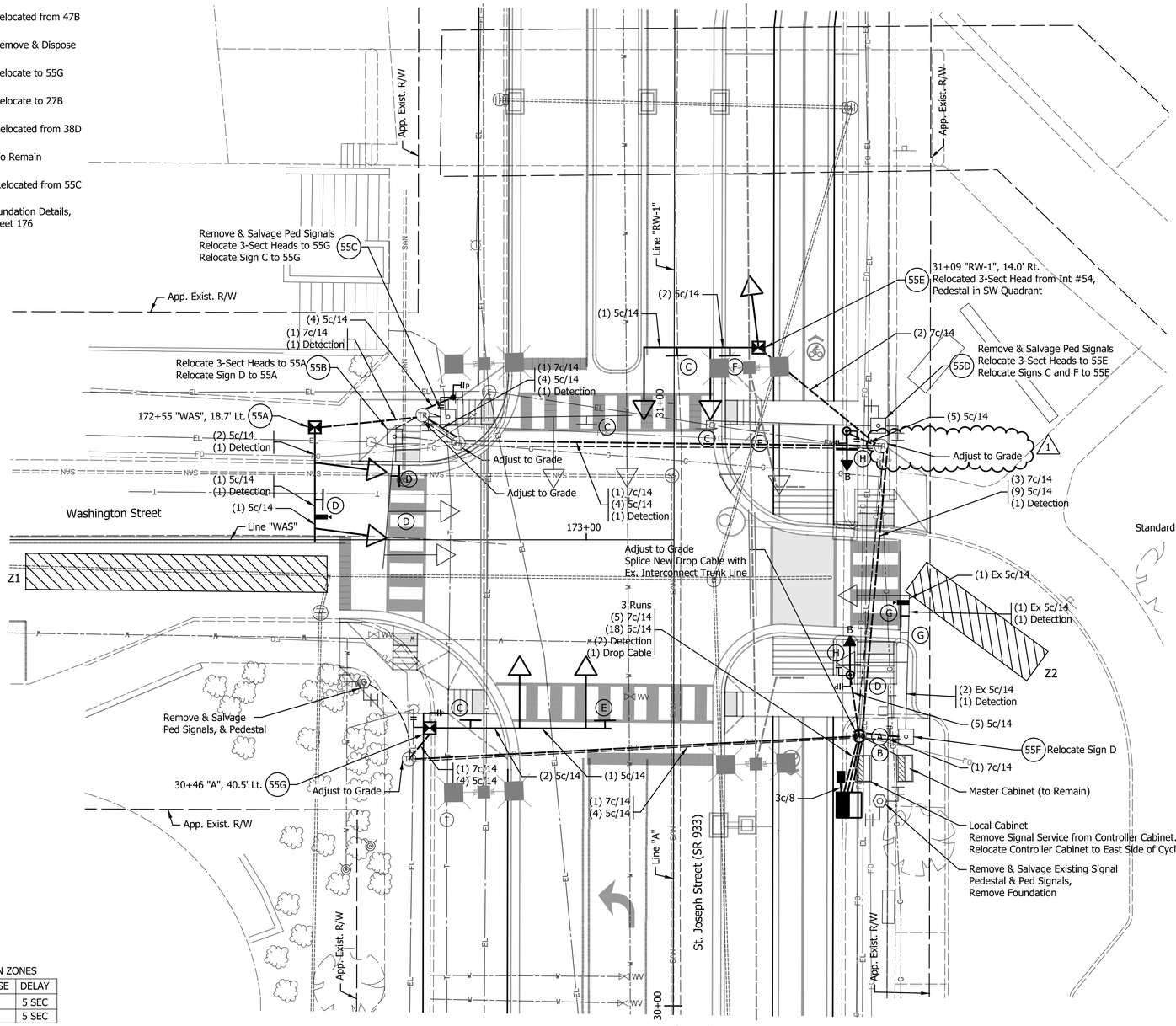
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **55**

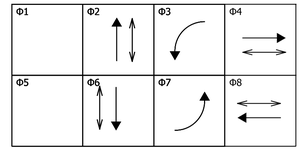
Signal Supports

- (55A) Relocated from 47B
- (55B) Remove & Dispose
- (55C) Relocate to 55G
- (55D) Relocate to 27B
- (55E) Relocated from 38D
- (55F) To Remain
- (55G) Relocated from 55C

For Foundation Details, See Sheet 176



PHASE DIAGRAM



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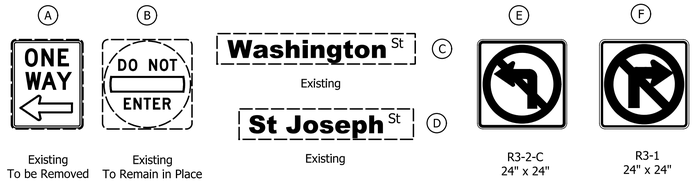


Existing To be Removed

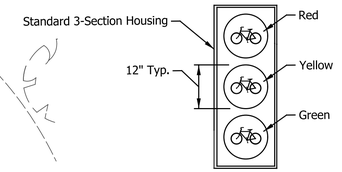
Existing To Remain in Place

Existing

R3-2-C 24" x 24"

R3-1 24" x 24"

R9-5(Mod.) 12" x 18" (Mounted below Bike Signal)



BIKE SIGNAL DETAIL

R3-27 24" x 24"

Legend

Existing	Proposed	
○	●	Strain Pole and Foundation
○	⊠	Mast Arm, Upright and Foundation
———	———	2" HDPE Conduit Schedule 80 (1)
⌜	⌜	18" Countdown Pedestrian Indication
⌜P	⌜P	18" Countdown Pedestrian Indication with Push Button and R10-4B sign
⬡	●	10' Traffic Signal Pedestal on "A" Foundation
	⊙	15' Traffic Signal Pedestal on "A" Foundation
▨	▬	Relocated P-1 Cabinet & Controller on New P-1 Foundation
□	■	Single Meter Service Pedestal on Base
⌐	⌐	Span Mounted Junction Box
(TR) or (FO)	⊗	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)
	▨	Detection Zone
△	▲	Service Point
□ LD	■ LD	Detector Housing
	▬	Detection Camera
B ◁	B ◀	3-Section LED Bike Signal Indication (See Detail)

DETECTION ZONES

ZONE	PHASE	DELAY
Z1	4	5 SEC
Z2	8	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 Cameras to in Cabinet Equipment.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Label

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUESMANN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
ST. JOSEPH STREET &
WASHINGTON STREET

SCALE: 1" = 10'

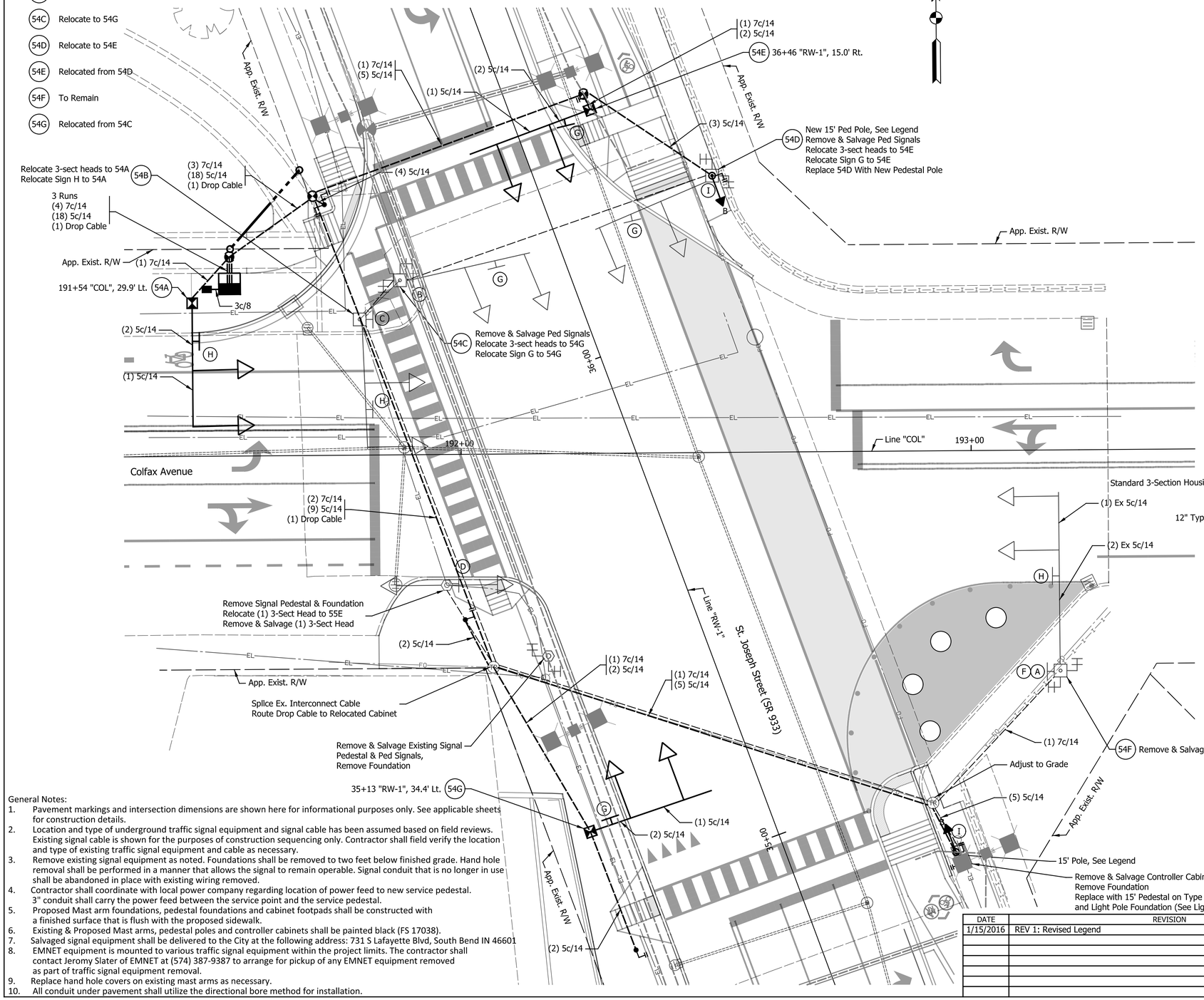
CONTRACT NO. N/A	DRAWN BY	YEAR	SHEET	TOTAL
	JRG	2016	168	246

COMM. NO. 01-071-130	DES. NO.	PROJECT NO.
	N/A	115-019 (DIV B)

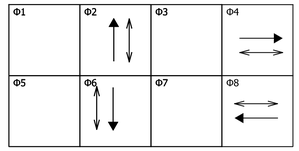
INTERSECTION NO. **54**

SIGNAL SUPPORTS

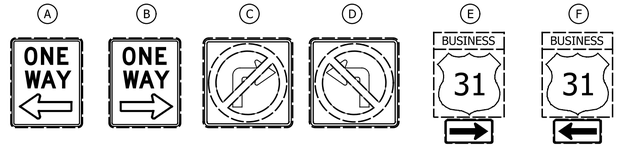
- 54A Relocated from 24D
- 54B Remove & Dispose
- 54C Relocate to 54G
- 54D Relocate to 54E
- 54E Relocated from 54D
- 54F To Remain
- 54G Relocated from 54C



PHASE DIAGRAM

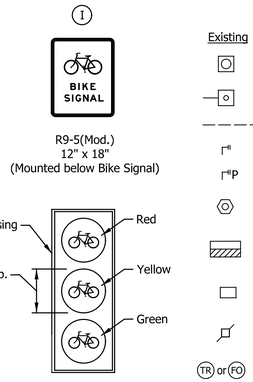


ALL APPROACHES FLASH RED



Colfax Ave (G) — Existing

St Joseph St (H) — Existing



BIKE SIGNAL DETAIL

Legend	Existing	Proposed
Strain Pole and Foundation		
Mast Arm, Upright and Foundation		
2" HDPE Conduit Schedule 80		1
18" Countdown Pedestrian Indication		
18" Countdown Pedestrian Indication with Push Button and R10-4B sign		
10' Traffic Signal Pedestal on "A" Foundation		
15' Traffic Signal Pedestal on "A" Foundation		
Relocated P-1 Cabinet & Controller on New P-1 Foundation		
Single Meter Service Pedestal on Base		
Span Mounted Junction Box		
Handhole	TR or FO	
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	LD	LD
Conduit Intercept		
B 3-Section LED Bike Signal Indication (See Detail)		

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy 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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUECKMANN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
ST. JOSEPH STREET & COLFAX AVENUE

SCALE: 1" = 10'

CONTRACT NO.	DRAWN BY	YEAR	SHEET	TOTAL
N/A	JRG	2016	169	246

COMM. NO. 01-071-131

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **38**

LOOP TAGGING TABLE

LANE	TAG NUMBER
SL	SL1-1,2,3,4
NA	NA2-1,2,3,4
NR	NR2-1,2,3,4
WL	WL3-1,2,3,4
EA	EA4-1,2,3,4
EB	EB4-1,2,3,4
NL	NL5-1,2,3,4
SA	SA6-1,2,3,4
EL	EL7-1,2,3,4
WA	WA8-1,2,3,4
WB	WB8-1,2,3,4

Signal Supports

- (38A) Relocate to 23F
- (38B) New (35ft Arm)
- (38C) Relocate to 38E
- (38D) Relocate to 55E
- (38E) Relocated from 38C
- (38F) New (35ft Arm)
- (38G) Relocated from 49C

Michigan Street (SR 933)

App. Exist. R/W

SA SL NA NR NL WL EA EB WA WB EL

(1) 2c/16
(2) 2c/16
(4) 5c/14
(1) 7c/14
(4) 5c/14
(2) 2c/16
(1) 5c/14

217+90 "LAS", 31.9' Lt. (38G)

Remove & Salvage Ped Signals
Relocate NB 3-Sect Heads to 38F
Relocate (1) EB 3-Sect Head to 38G
Remove & Salvage (1) EB 3-Sect Head
Relocate Sign H to 38G
Replace 38A with New Hand Hole (38A)

Remove & Salvage Ped Signals & (1) 3-Sect Head
Relocate (1) 3-Sect Head to 38B
Relocate Sign G to 38B
Replace 38C with New Hand Hole (38C)

Remove Service Point from Controller Cabinet
Relocate Controller Cabinet & Signal
Equipment to New P-1 Foundation
Remove Existing Foundation
Remove & Dispose of Existing Signal Cable

218+00
219+00
42+00
41+00

38B 42+47 "RW-1", 35.3' Rt.
(3) 2c/16
(9) 5c/14
(2) 7c/14
(5) 2c/16
(1) 2c/16

LaSalle Avenue
Line "LAS"

(1) 7c/14
Remove & Salvage Ped Signals
(38D) Relocate 3-Sect Head & 5-Sect Head to 38E
Relocate Sign E to 38E

(38E) 219+07 "LAS", 33.3' Rt.
(1) 7c/14
(1) 5c/14
(1) 7c/14
(2) 5c/14

Remove Signal Pedestal & Foundation
Remove & Salvage Ped Signals
(3) 2c/16
Abandon
(4) 5c/14
(2) 7c/14
(5) 2c/14
(3) 2c/16
(1) 7c/14
(1) 5c/14
41+70 "RW-1", 33.5' Lt. (38F)

(3) 5c/14
3c/8
(1) 2c/16
3 Runs
(5) 7c/14
(19) 5c/14
(11) 2c/16
Adjust to Grade
Connect Ex. Drop Cable
to Relocated Cabinet

St. Joseph Street (SR 933)
Line "RW-1"

(K) TRUCKS NO LEFT TURN

R14-1_24x18; 1.5" Radius, 0.6" Border, 0.4" Indent, Black on White; [TRUCKS] D 2K 84% spacing; [NO LEFT TURN] B 2K spacified length; Table of letter and object kefts.

T	R	U	C	K	IS
5.8	9.6	13.7	18.0	22.3	26.3

N	O	L	E	F	T	T	U	R	N
3.3	6.1	11.5	13.8	16.2	18.3	23.3	25.7	28.5	31.2

(A) ONE WAY — Existing To be Removed

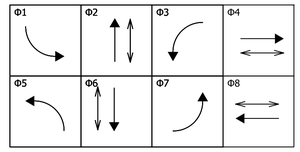
(B) ONE WAY — Existing To be Removed

(C) BIKE SIGNAL — R9-5(Mod.) 12" x 18" (Mounted Below Bike Signal) (1)

(D) Existing To be Removed

(E) H — Existing To Remain in Place

PHASE DIAGRAM



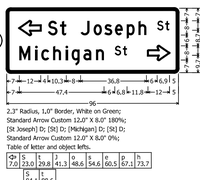
ALL APPROACHES FLASH RED

(F) Michigan St — Existing To Be Removed

(G) LaSalle Ave — Existing

(J) LaSalle Ave — See Details on Intersection No. 19

(H)



2.3" Radius, 1.0" Border, White on Green; Standard Arrow Custom 12.0" X 8.0" 180%; [St Joseph] D; [St] D; [Michigan] D; [St] D; Standard Arrow Custom 12.0" X 8.0" 0%; Table of letter and object lefts.

S	t	J	o	s	e	p	h
7.0	23.0	29.8	41.3	48.6	54.6	60.5	67.1	73.7

S	t
84.1	88.6

M	i	c	h	i	g	a	n
7.0	16.0	19.3	25.9	33.0	36.3	42.9	49.9	60.4	64.9

S	t
84.8	89.3

S	t	J	o	s	e	p	h	S	t
6.4	13.2	24.7	31.9	37.9	43.8	50.4	57.0	67.4	72.0

(I)

2.3" Radius, 1.0" Border, White on Green; Standard Arrow Custom 12.0" X 8.0" 180%; [Michigan] D; [St] D; [St Joseph] D; [St] D; Standard Arrow Custom 12.0" X 8.0" 0%; Table of letter and object lefts.

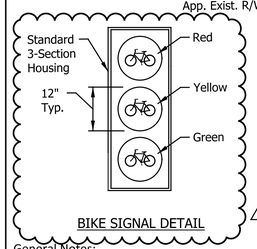
M	i	c	h	i	g	a	n
6.4	31.4	40.4	43.7	50.3	57.4	60.7	67.2	74.3

S	t	J	o	s	e	p	h	S	t
6.4	13.2	24.7	31.9	37.9	43.8	50.4	57.0	67.4	72.0

Legend

Existing	Proposed	
○	●	Strain Pole and Foundation
—o—	—⊠—	Mast Arm, Upright and Foundation
- - - -	———	2" HDPE Conduit Schedule 80 (1)
⌐I	⌐I	18" Countdown Pedestrian Indication
⌐IP	⌐IP	18" Countdown Pedestrian Indication with Push Button and R10-4B sign
⬡	●	10' Traffic Signal Pedestal on "A" Foundation
	◉	15' Traffic Signal Pedestal on "A" Foundation
▨	▬	Relocated P-1 Cabinet & Controller on New P-1 Foundation
▭	◥	Dual Meter Service Pedestal on Base
◿	◢	Span Mounted Junction Box
(TR) or (FO)	⊗	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
□ LD	■ LD	Detector Housing
	B◀	Conduit Intercept 3-Section LED Bike Signal Indication (See Detail)

BIKE SIGNAL DETAIL (1)



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 purposes 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 pedestal. 4" conduit shall carry the power feed between the service point and the service pedestal.
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.

DATE	REVISION
1/15/2016	REV 1: Revised Legend & Labels. Replaced Sign C. Added Bike Signal Detail.

CITY OF SOUTH BEND

DESIGNER CRP DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
St. JOSEPH STREET & LaSALLE AVENUE

CONTRACT NO. N/A

DRAWN BY: JRG

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	170	246

COMM. NO. 01-071-058

DES. NO.: N/A

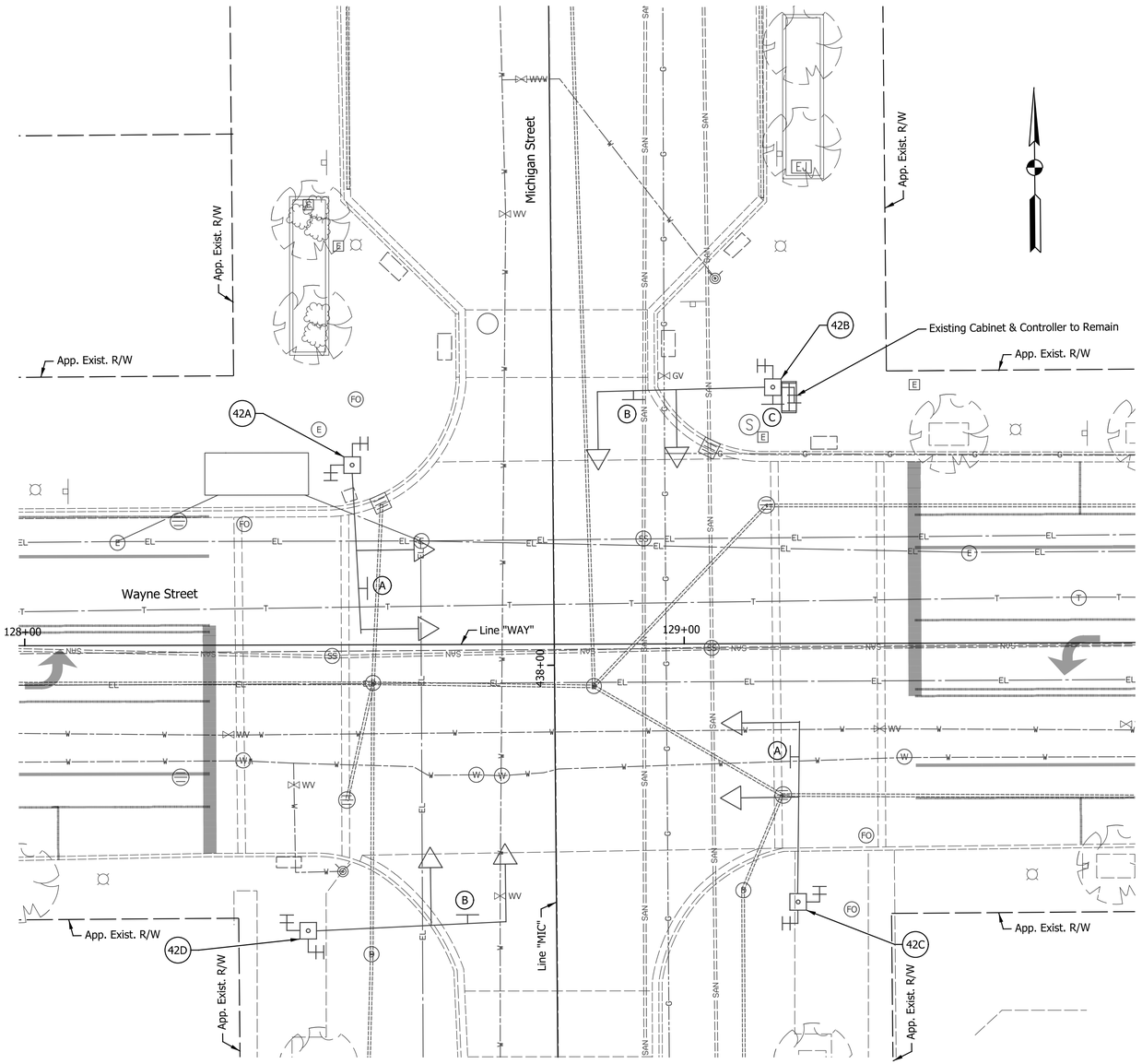
PROJECT NO.: 115-019 (DIV B)

CHRISTOPHER R. HIVERNAUER — REGISTERED No. 11400171 STATE OF INDIANA — PROFESSIONAL ENGINEER

INTERSECTION NO. **42**

Signal Supports

- (42A) To Remain
- (42B) To Remain
- (42C) To Remain
- (42D) To Remain



Michigan St (A)
To Remain

Wayne St (B)
To Remain

CENTURY CENTER (C)
To Remain

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" HDPE Conduit Schedule 80 (1)
		18" Countdown Pedestrian Indication
	P	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
		Single Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
LD	LD	Detector Housing
		Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy Slater of EMNET at (574) 387-9387 to arrange for pickup of any EMNET equipment removed as part of traffic signal equipment removal.
9. All conduit under pavement shall utilize the directional bore method for installation.

DATE	REVISION
1/15/2016	REV 1: Revised Legend

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUERKAMP REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
MICHIGAN STREET & WAYNE STREET

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	171	246

CONTRACT NO. N/A

DRAWN BY JRG

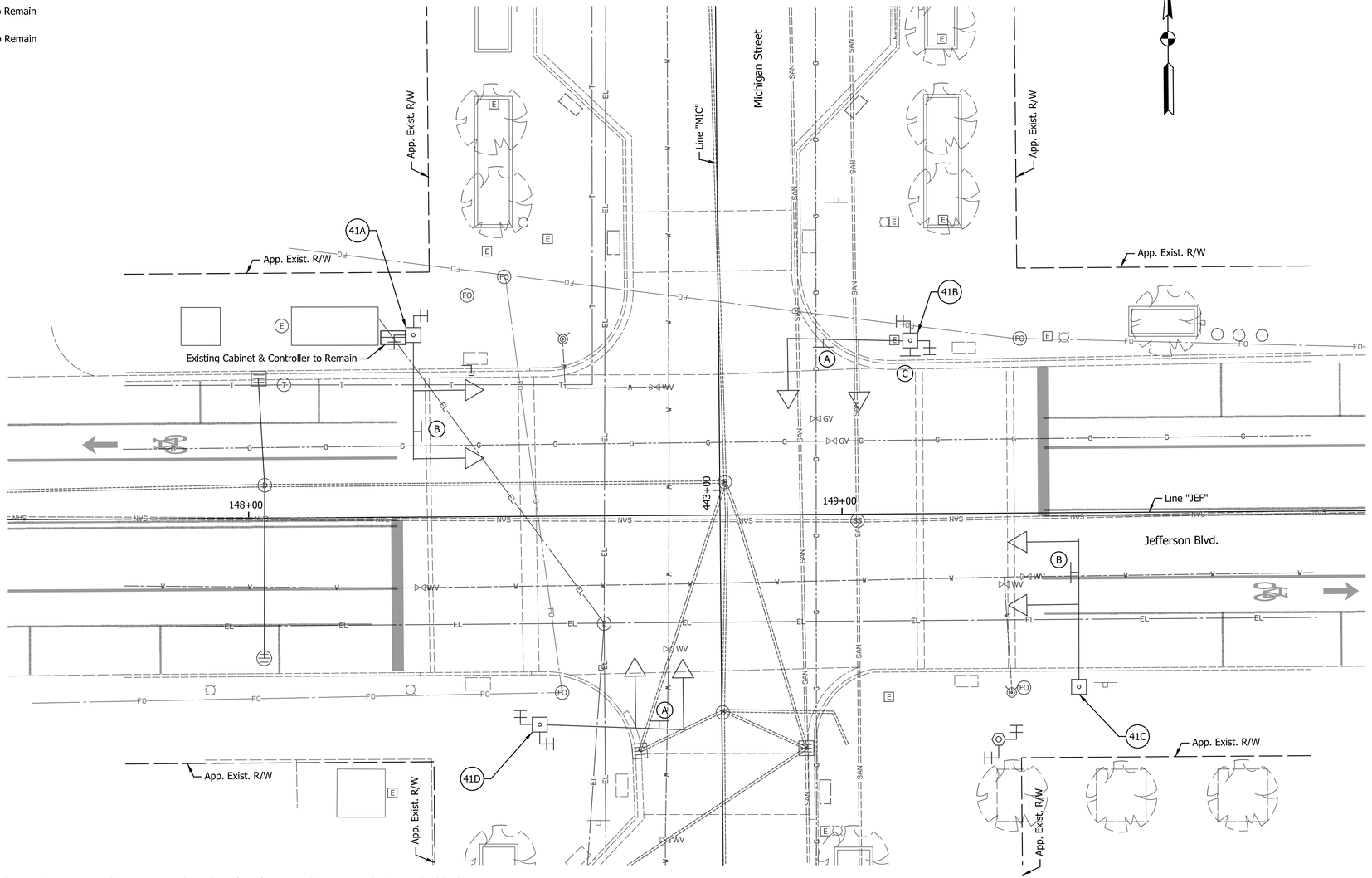
COMM. NO. N/A

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **41**

Signal Supports

- 41A To Remain
- 41B To Remain
- 41C To Remain
- 41D To Remain



Jefferson Blvd (A)
To Remain

Michigan St (B)
To Remain

CENTURY CENTER (C)
To Remain

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" HDPE Conduit Schedule 80 (1)
		18" Countdown Pedestrian Indication
		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
		Single Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
LD	LD	Detector Housing
		Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy Slater of EMNET at (574) 387-9387 to arrange for pickup of any EMNET equipment removed as part of traffic signal equipment removal.
9. All conduit under pavement shall utilize the directional bore method for installation.

DATE	REVISION
1/15/2016	REV 1: Revised Legend

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
MICHIGAN STREET & JEFFERSON BLVD.

CHRISTOPHER R. HUCKSMAN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

SCALE: 1" = 10'

CONTRACT NO. N/A

DRAWN BY JRG

YEAR	SHEET	TOTAL
2016	172	246

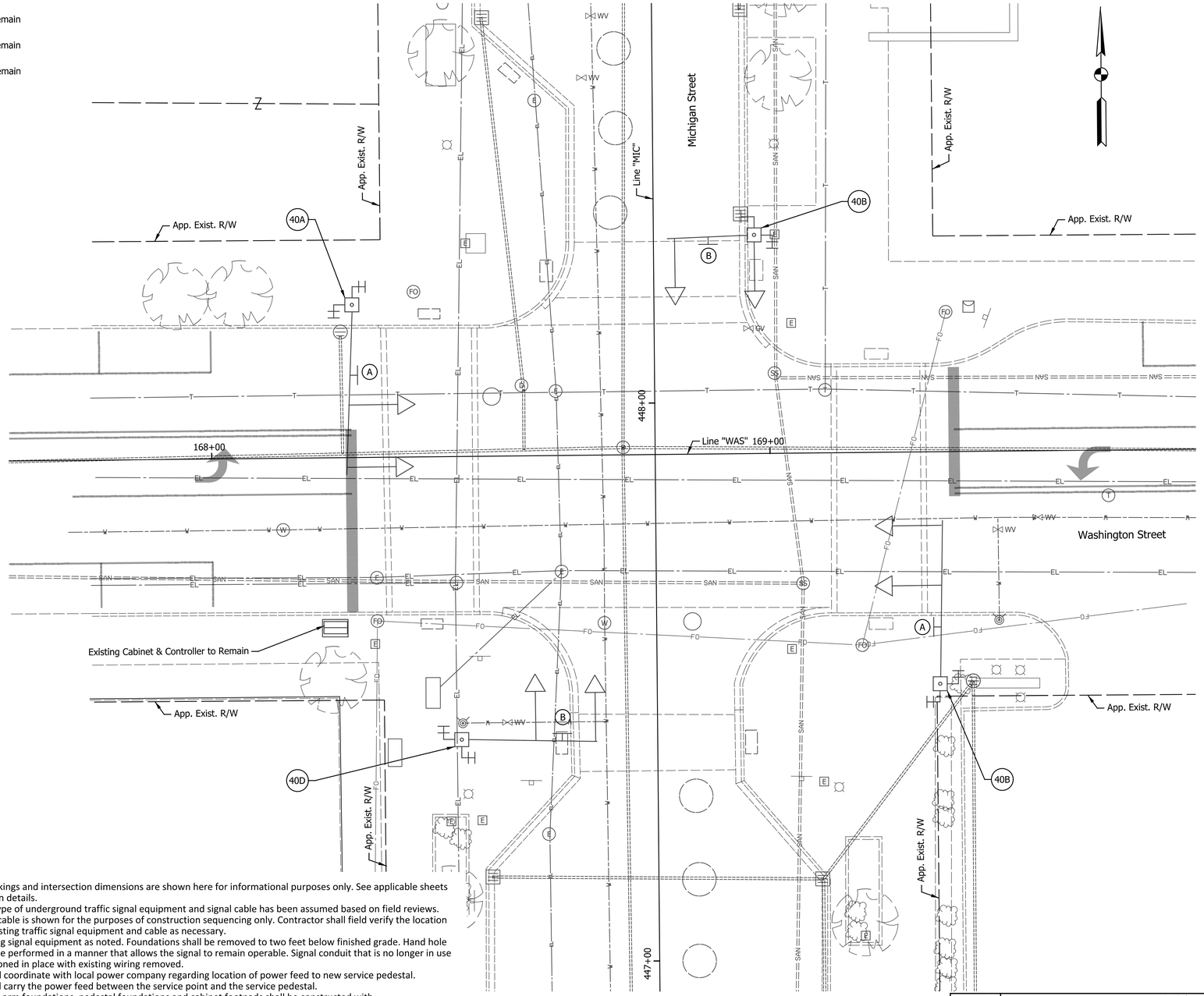
COMM. NO. N/A

DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **40**

Signal Supports

- (40A) To Remain
- (40B) To Remain
- (40C) To Remain
- (40D) To Remain



Michigan St (A)
To Remain

Washington St (B)
To Remain

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" HDPE Conduit Schedule 80 (1)
		18" Countdown Pedestrian Indication
	P	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
		Single Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
LD	LD	Detector Housing
		Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy Slater of EMNET at (574) 387-9387 to arrange for pickup of any EMNET equipment removed as part of traffic signal equipment removal.
9. All conduit under pavement shall utilize the directional bore method for installation.

DATE	REVISION
1/15/2016	REV 1: Revised Legend

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
MICHIGAN STREET &
WASHINGTON STREET

CHRISTOPHER R. HUBER — REGISTERED No. 11400171 STATE OF INDIANA — PROFESSIONAL ENGINEER

CONTRACT NO. N/A

DRAWN BY JRG

SCALE: 1" = 10'

YEAR	SHEET	TOTAL
2016	173	246

COMM. NO. N/A

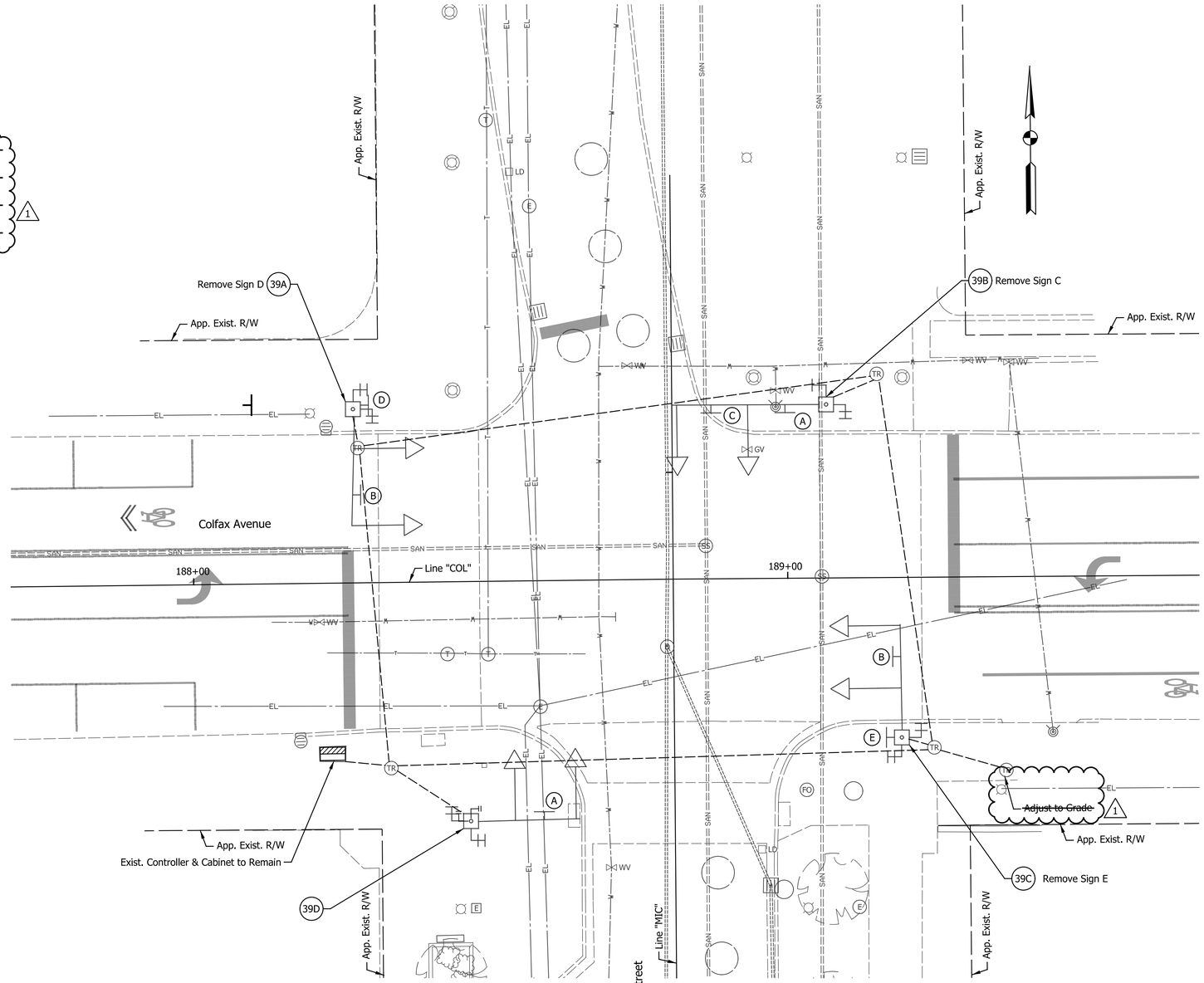
DES. NO.	PROJECT NO.
N/A	115-019 (DIV B)

INTERSECTION NO. **39**

Signal Supports

- 39A To Remain
- 39B To Remain
- 39C To Remain
- 39D To Remain
- ~~39E To Remain~~
- ~~39F To Remain~~
- ~~39G To Remain~~
- ~~39H To Remain~~

1



PHASE DIAGRAM

Φ1	Φ2	Φ3	Φ4
Φ5	Φ6	Φ7	Φ8

ALL APPROACHES FLASH RED

A **Colfax** Ave — To Remain

B **Michigan** St — To Remain

C DO NOT ENTER — To be Removed

D — To be Removed

E — To be Removed

Legend

Existing	Proposed	
		Strain Pole and Foundation
		Mast Arm, Upright and Foundation
		2" HDPE Conduit Schedule 80 (1)
		18" Countdown Pedestrian Indication
	P	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
		Single Meter Service Pedestal on Base
		Span Mounted Junction Box
TR or FO		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
LD	LD	Detector Housing
		Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy Slater of EMNET at (574) 387-9387 to arrange for pickup of any EMNET equipment removed as part of traffic signal equipment removal.
9. All conduit under pavement shall utilize the directional bore method for installation.

DATE	REVISION
1/15/2016	REV 1: Revised Legend and Labels

CITY OF SOUTH BEND

DESIGNER CRP DATE: 1/7/2016

DESIGN ENG. DATE:

TRAFFIC SIGNAL DETAIL
MICHIGAN STREET & COLFAX AVENUE

CHRISTOPHER R. WIERSCHEM REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

SCALE: 1" = 10'

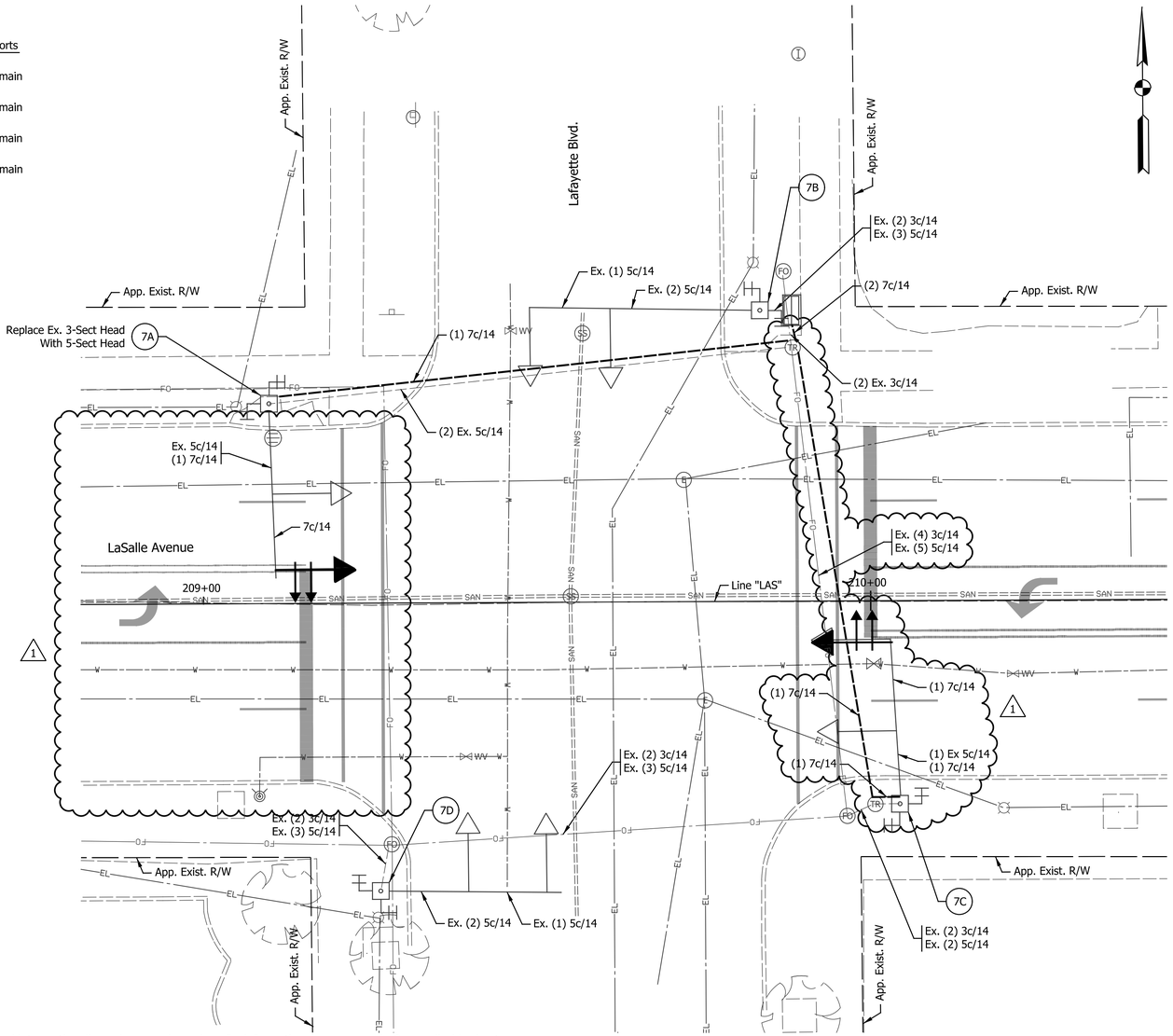
CONTRACT NO. N/A	DRAWN BY	YEAR	SHEET	TOTAL
	JRG	2016	174	246

COMM. NO. N/A	DES. NO.	PROJECT NO.
	N/A	115-019 (DIV B)

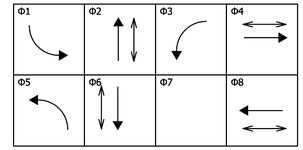
INTERSECTION NO. **07**

Signal Supports

- 07A To Remain
- 07B To Remain
- 07C To Remain
- 07D To Remain



PHASE DIAGRAM



ALL APPROACHES FLASH RED

Legend

Existing	Proposed	
○	●	Strain Pole and Foundation
—○—	—◆—	Mast Arm, Upright and Foundation
- - - -	——	2" HDPE Conduit Schedule 80 (1)
⌐	⌐	18" Countdown Pedestrian Indication
⌐P	⌐P	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
▭	■	Single Meter Service Pedestal on Base
◪	◪	Span Mounted Junction Box
TR or FO	⊗	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
□ LD	■ LD	Detector Housing
	⇩	Conduit Intercept

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 purposes 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 pedestal. 3" conduit shall carry the power feed between the service point and the service pedestal.
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 Jeromy Slater of EMNET at (574) 387-9387 to arrange for pickup of any EMNET equipment removed as part of traffic signal equipment removal.
9. All conduit under pavement shall utilize the directional bore method for installation.

DATE	REVISION
1/15/2016	REV 1: Revised Legend. Revised EB Approach Markings & Signals.

CITY OF SOUTH BEND

DESIGNER CRH DATE: 1/7/2016

DESIGN ENG. DATE:

CHRISTOPHER R. HUSSMANN REGISTERED No. 11400171 STATE OF INDIANA PROFESSIONAL ENGINEER

TRAFFIC SIGNAL DETAIL
LAFAYETTE BLVD. & LaSALLE AVENUE

SCALE: 1" = 10'

CONTRACT NO. N/A	DRAWN BY	YEAR	SHEET	TOTAL
	JRG	2016	175	246

COMM. NO. N/A	DES. NO.	PROJECT NO.
	N/A	115-019 (DIV B)

731 732 733 734 735 736 737 738

Service Point "B", Type II
See Note 5

Handhole, Type C
732+56 "MAI", 37' LT.

Luminaire B2-1
732+51 "MAI", 35' LT.

App. Exist. R/W

Western Avenue

Line "WES"

Luminaire B2-2
733+51 "MAI", 32' LT.

Luminaire B2-3
734+30 "MAI", 32' LT.

Luminaire B2-4
735+60 "MAI", 32' LT.

Luminaire B2-5
736+56 "MAI", 28' LT.

Luminaire B2-6
737+48 "MAI", 41' LT.

Line "WAY"

Wayne Street

Luminaire B2-7
738+34 "MAI", 27' LT.

B-1 B-2 B-3

Line "MAI"

Main Street (SR 933)

Luminaire B1-1
732+51 "MAI", 35' RT.

Luminaire B1-2
733+50 "MAI", 28' RT.

Luminaire B1-3
734+66 "MAI", 28' RT.

Luminaire B1-4
735+90 "MAI", 28' RT.

Luminaire B1-5
737+30 "MAI", 39' RT.

Luminaire B1-6
738+39 "MAI", 27' RT.

NOTES:
1. Contractor to field verify offsets to ensure center of foundation is at least 3' from face of curb.
2. Contractor to level luminaires in field.
3. Remove existing luminaires from existing poles. Remove any existing poles not carrying electrical service.
4. Service points to be in same cabinet as signal service points. See Special Provisions.
5. Each light pole to include 120V receptacles.
6. Do not place lighting conduit through tree grates.
7. Abandon all existing lighting cableduct and conduit.
8. All conduit under pavement shall utilize directional bore method for installation.

LEGEND

- Service Point, 120/240V
- Lighting Handhole (Type as Shown)
- Illuminated Bollard
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 PVC Conduit
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 HDPE Conduit Under Roadway (1)
- A-1 Lighting Circuit Number
- Luminaire, Ornamental, 55W LED, 18' Mounting Height, Dual Arm Mount
- Luminaire, Ornamental, 90W LED, 18' Mounting Height, Post Top Mount

DATE	REVISION
1/15/2016	REV 1: Revised Legend Item

AMANDA M. JOHNSON
REGISTERED
No. 11200692
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 1/7/2016
DESIGN ENGINEER DATE

DESIGNED: AMJ DRAWN: JRG
CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

LIGHTING DETAILS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	178 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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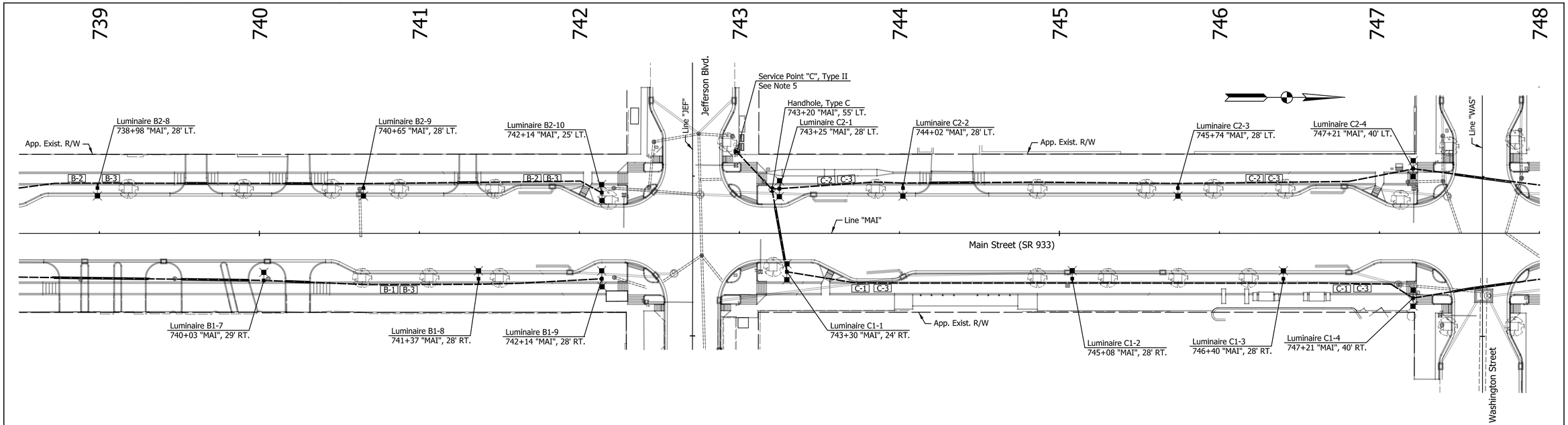

NOTES:
1. Contractor to field verify offsets to ensure center of foundation is at least 3' from face of curb.
2. Contractor to level luminaires in field.
3. Remove existing luminaires from existing poles. Remove any existing poles not carrying electrical service.
4. Service points to be in same cabinet as signal service points. See Special Provisions.
5. Each light pole to include 120V receptacles.
6. Do not place lighting conduit through tree grates.
7. Abandon all existing lighting cableduct and conduit.
8. All conduit under pavement shall utilize directional bore method for installation.

LEGEND

- Service Point, 120/240V
- Lighting Handhole (Type as Shown)
- Illuminated Bollard
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 PVC Conduit (1)
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 HDPE Conduit Under Roadway
- A-1 Lighting Circuit Number
- Luminaire, Ornamental, 55W LED, 18' Mounting Height, Dual Arm Mount
- Luminaire, Ornamental, 90W LED, 18' Mounting Height, Post Top Mount

DATE	REVISION
1/15/2016	REV 1: Revised Legend Item

AMANDA M. JOHNSON REGISTERED No. 11200692 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: AMJ | DRAWN: JRG | CHECKED: PKW | CHECKED: PKW

CITY OF SOUTH BEND

LIGHTING DETAILS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	179 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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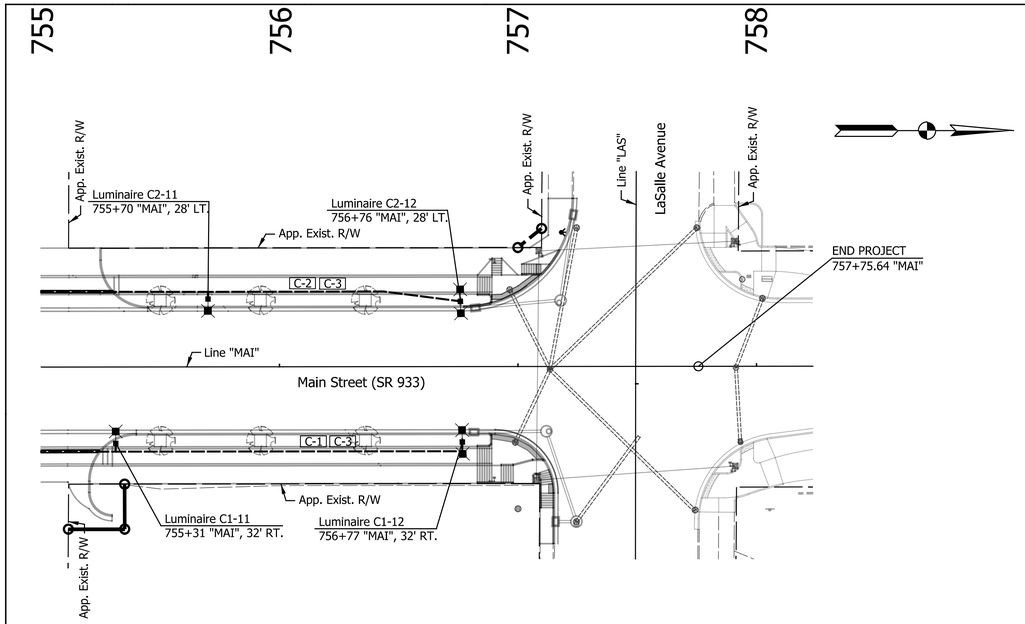

SERVICE POINT AMP TABLE (MAIN STREET)							
SERVICE POINT	MAIN BREAKER	BRANCH CIRCUIT	DESCRIPTION	COMPUTED AMPS BLACK	COMPUTED AMPS RED	COMPUTED AMPS TOTAL	BRANCH CIRCUIT BREAKER
B	200 AMP	B-1	LUMINAIRES	11.6	11.6	23.2	30 AMP
		B-2	LUMINAIRES	11.8	11.8	23.7	30 AMP
		B-3	RECEPTACLES	14.8	13.3	28.1	60 AMP
C	200 AMP	C-1	LUMINAIRES	13.1	13.1	26.1	30 AMP
		C-2	LUMINAIRES	14.5	14.5	29.0	60 AMP
		C-3	RECEPTACLES	17.8	17.8	35.5	60 AMP

DESIGN DATA TABLE - MAIN STREET	
INITIAL LAMP LUMEN (LL)	Absolute
LAMP LUMEN DEPRECIATION FACTOR (LLD)	0.95
LUMINAIRE DIRT DEPRECIATION FACTOR (LDD)	0.95
MAINTENANCE FACTOR (LLD * LDD)	0.90
AVERAGE MAINTAINED ILLUMINATION (fc)	1.0
UNIFORMITY RATIO	4.0:1
EFFECTIVE MOUNTING HEIGHT	18'
LUMINAIRE CLASSIFICATION	Type IV

NOTES:
1. Contractor to field verify offsets to ensure center of foundation is at least 3' from face of curb.
2. Contractor to level luminaires in field.
3. Remove existing luminaires from existing poles. Remove any existing poles not carrying electrical service.
4. Service points to be in same cabinet as signal service points. See Special Provisions.
5. Each light pole to include 120V receptacles.
6. Do not place lighting conduit through tree grates.
7. Abandon all existing lighting cableduct and conduit.
8. All conduit under pavement shall utilize directional bore method for installation.

LEGEND
- Service Point, 120/240V
- Lighting Handhole (Type as Shown)
- Illuminated Bollard
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 PVC Conduit
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 HDPE Conduit Under Roadway (1)
- A-1 Lighting Circuit Number
- Luminaire, Ornamental, 55W LED, 18' Mounting Height, Dual Arm Mount
- Luminaire, Ornamental, 90W LED, 18' Mounting Height, Post Top Mount

DATE	REVISION
1/15/2016	REV 1: Revised Legend Item

AMANDA M. JOHNSON REGISTERED No. 11200692 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 1/7/2016
DESIGN ENGINEER DATE

DESIGNED: AMJ DRAWN: JRG
CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

LIGHTING DETAILS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	180 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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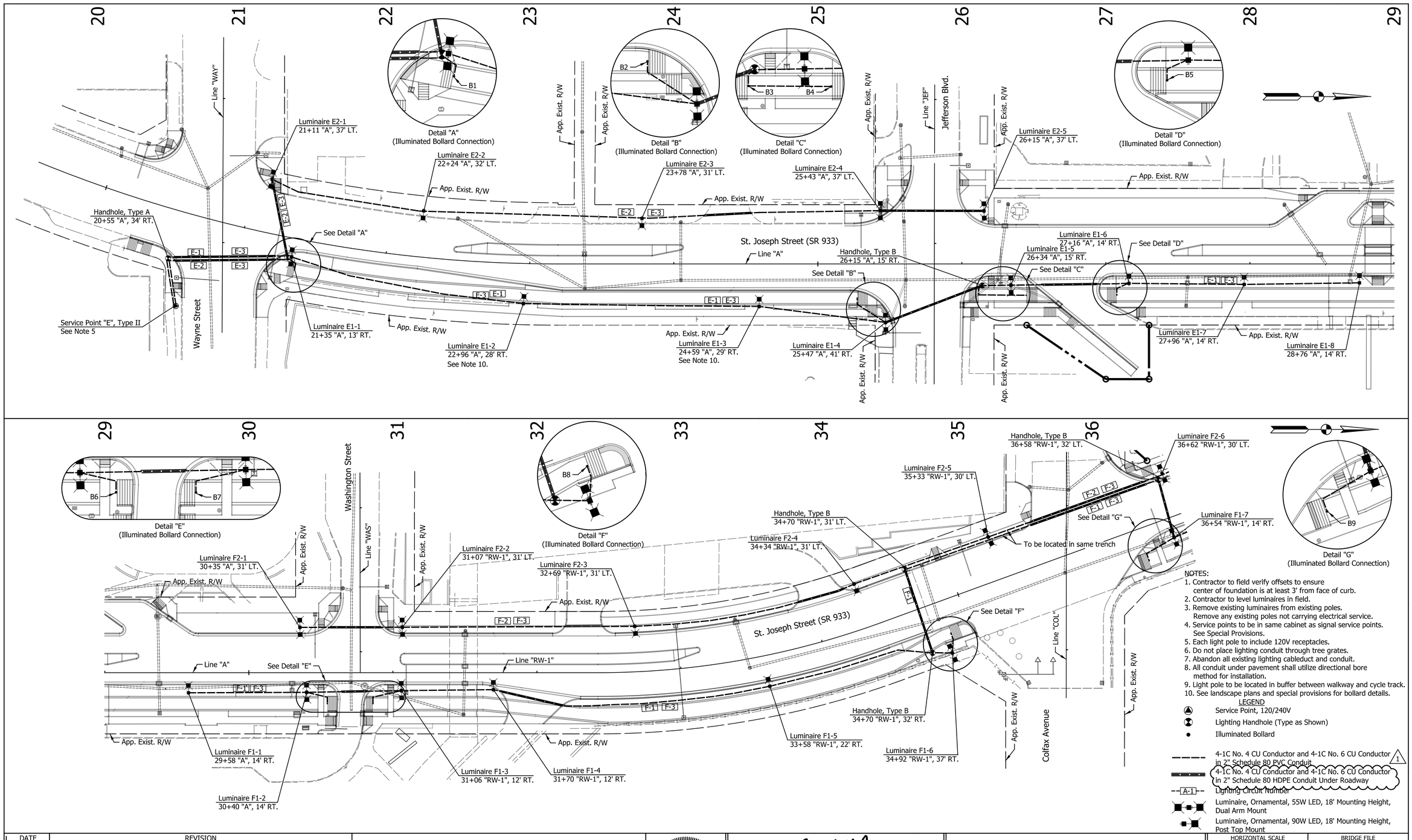

NOTES:
1. Contractor to field verify offsets to ensure center of foundation is at least 3' from face of curb.
2. Contractor to level luminaires in field.
3. Remove existing luminaires from existing poles. Remove any existing poles not carrying electrical service.
4. Service points to be in same cabinet as signal service points. See Special Provisions.
5. Each light pole to include 120V receptacles.
6. Do not place lighting conduit through tree grates.
7. Abandon all existing lighting cableduct and conduit.
8. All conduit under pavement shall utilize directional bore method for installation.
9. Light pole to be located in buffer between walkway and cycle track.
10. See landscape plans and special provisions for bollard details.

LEGEND

- Service Point, 120/240V
- Lighting Handhole (Type as Shown)
- Illuminated Bollard
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 PVC Conduit (1)
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 HDPE Conduit Under Roadway
- A-1 Lighting Circuit Number
- Luminaire, Ornamental, 55W LED, 18' Mounting Height, Dual Arm Mount
- Luminaire, Ornamental, 90W LED, 18' Mounting Height, Post Top Mount

DATE	REVISION
1/15/2016	REV 1: Revised Legend Item

AMANDA M. JOHNSON REGISTERED No. 11200692 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: AMJ | DRAWN: JRG

CHECKED: PKW | CHECKED: PKW

CITY OF SOUTH BEND

LIGHTING DETAILS
ST. JOSEPH STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	182 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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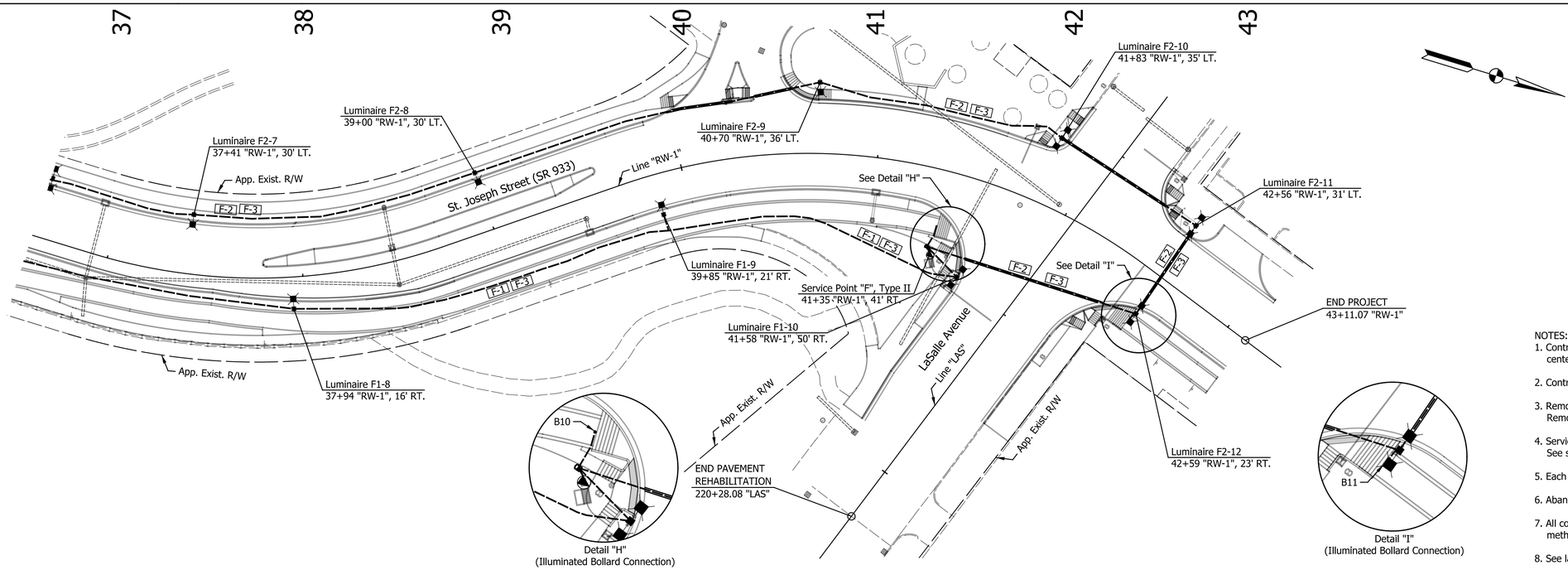
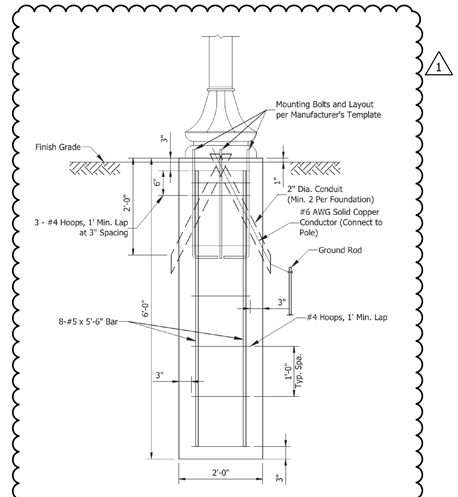


NOTES:
1. Contractor to field verify offsets to ensure center of foundation is at least 3' from face of curb.
2. Contractor to level luminaires in field.
3. Remove existing luminaires from existing poles. Remove any existing poles not carrying electrical service.
4. Service points to be in same cabinet as signal service points. See special provisions.
5. Each light pole to include 120V receptacle.
6. Abandon all existing lighting cableduct and conduit.
7. All conduit under pavement shall utilize directional bore method for installation.
8. See landscape plans and special provisions for bollard details.

SERVICE POINT AMP TABLE (MICHIGAN/ST JOSEPH STREETS)							
SERVICE POINT	MAIN BREAKER	BRANCH CIRCUIT	DESCRIPTION	COMPUTED AMPS BLACK	COMPUTED AMPS RED	COMPUTED AMPS TOTAL	BRANCH CIRCUIT BREAKER
E	200 AMP	E-1	LUMINAIRES	15.8	14.1	29.9	60 AMP
		E-2	LUMINAIRES	5.8	5.8	11.6	30 AMP
		E-3	RECEPTACLES	11.8	7.4	19.2	30 AMP
F	200 AMP	F-1	LUMINAIRES	17.0	15.5	32.5	60 AMP
		F-2	LUMINAIRES	13.1	10.2	23.2	60 AMP
		F-3	RECEPTACLES	14.8	17.8	32.6	60 AMP

DESIGN DATA TABLE - MICHIGAN/ST JOSEPH STREETS	
INITIAL LAMP LUMEN (LL)	Absolute
LAMP LUMEN DEPRECIATION FACTOR (LLD)	0.95
LUMINAIRE DIRT DEPRECIATION FACTOR (LDD)	0.95
MAINTENANCE FACTOR (LLD * LDD)	0.90
AVERAGE MAINTAINED ILLUMINATION (fc)	1.0
UNIFORMITY RATIO	4.0:1
MOUNTING HEIGHT	18'
LUMINAIRE CLASSIFICATION	Type IV



ORNAMENTAL LIGHT POLE FOUNDATION
Scale: N.T.S.

LEGEND
- Service Point, 120/240V
- Lighting Handhole (Type as Shown)
- Illuminated Bollard
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 PVC Conduit
- 4-1C No. 4 CU Conductor and 4-1C No. 6 CU Conductor in 2" Schedule 80 HDPE Conduit Under Roadway (1)
- A-1 Lighting Circuit Number
- Luminaire, Ornamental, 55W LED, 18' Mounting Height, Dual Arm Mount
- Luminaire, Ornamental, 90W LED, 18' Mounting Height, Post Top Mount

DATE	REVISION
1/15/2016	REV 1: Revised Legend Item & Added Detail

AMANDA M. JOHNSON REGISTERED No. 11200692 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/7/2016 DATE

DESIGNED: AMJ DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

LIGHTING DETAILS
ST. JOSEPH STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	183 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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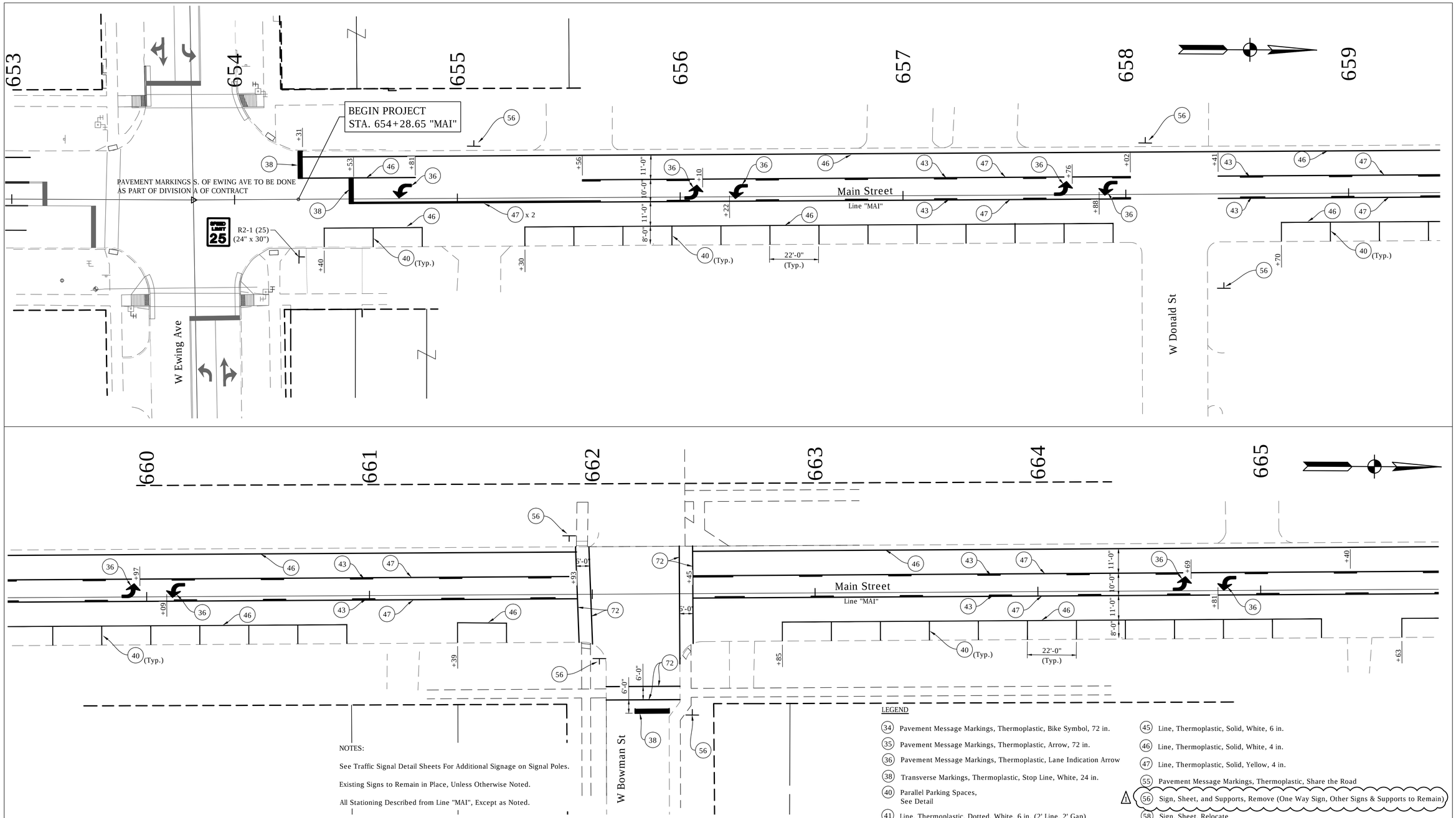

NOTES:

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.
- (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 (One Way Sign, Other Signs & Supports to Remain)
- (58) Sign, Sheet, Relocate
- (59) Sign, Sheet, Remove & Reset
- (72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Sign

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: DESIGN ENGINEER — 01/07/2016 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	185 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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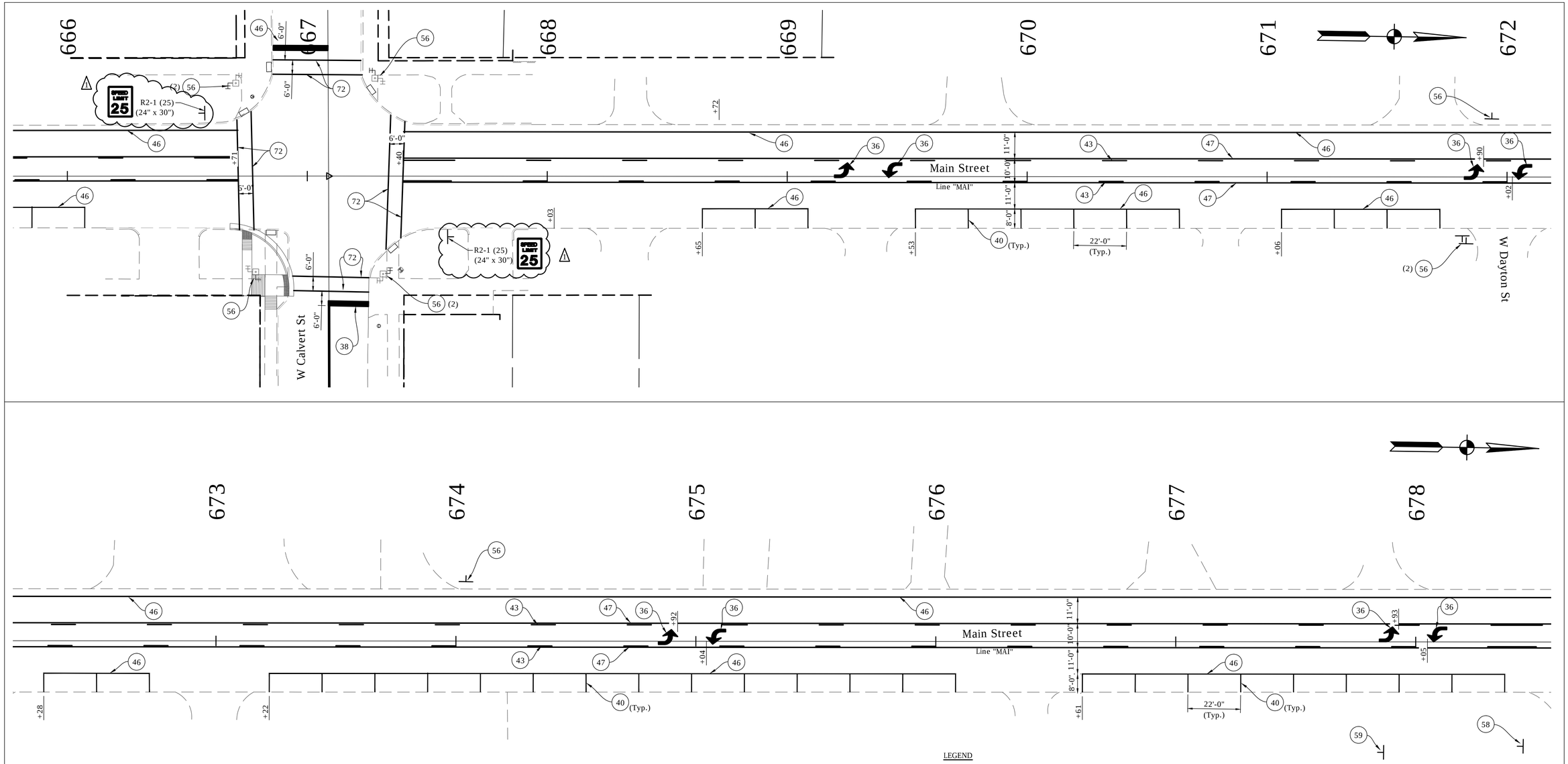
PLOTTED BY...Bob Bowser
DATE.....Jan 15,2016 - 3:51pm



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.
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 (One Way Sign, Other Signs & Supports to Remain)
58 Sign, Sheet, Relocate
59 Sign, Sheet, Remove & Reset
72 Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Signs

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 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	186 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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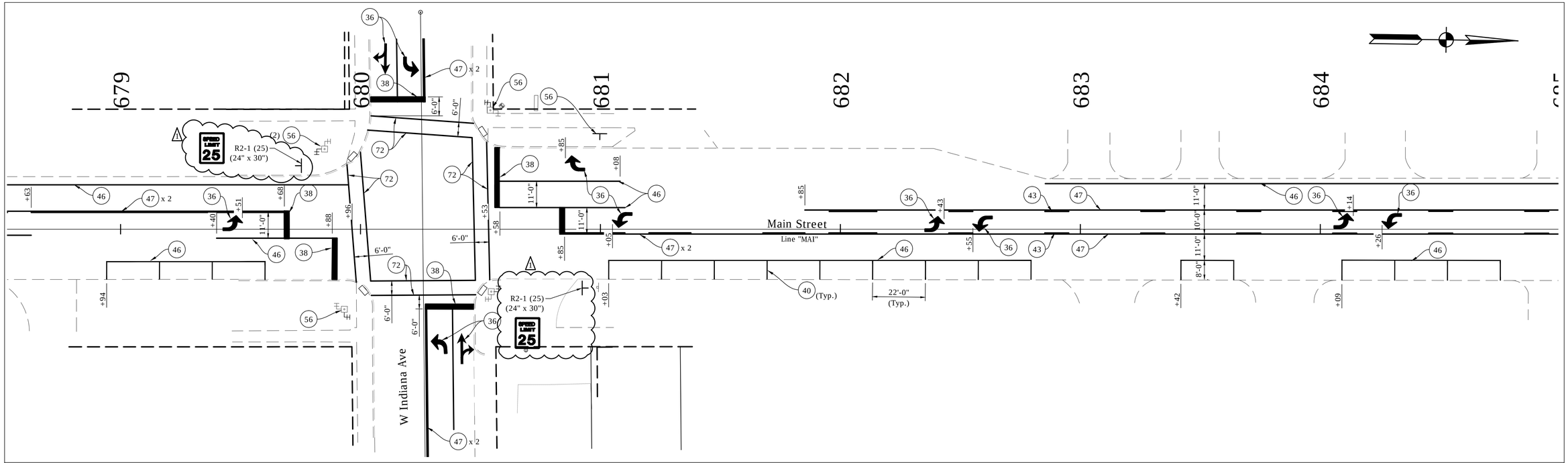


NOTES:

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.
- (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
- ⚠1 (56) Sign, Sheet, and Supports, Remove (One Way Sign, Other Signs & Supports to Remain)
- (58) Sign, Sheet, Relocate
- (59) Sign, Sheet, Remove & Reset
- (72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Signs

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III — DRAWN: BRD

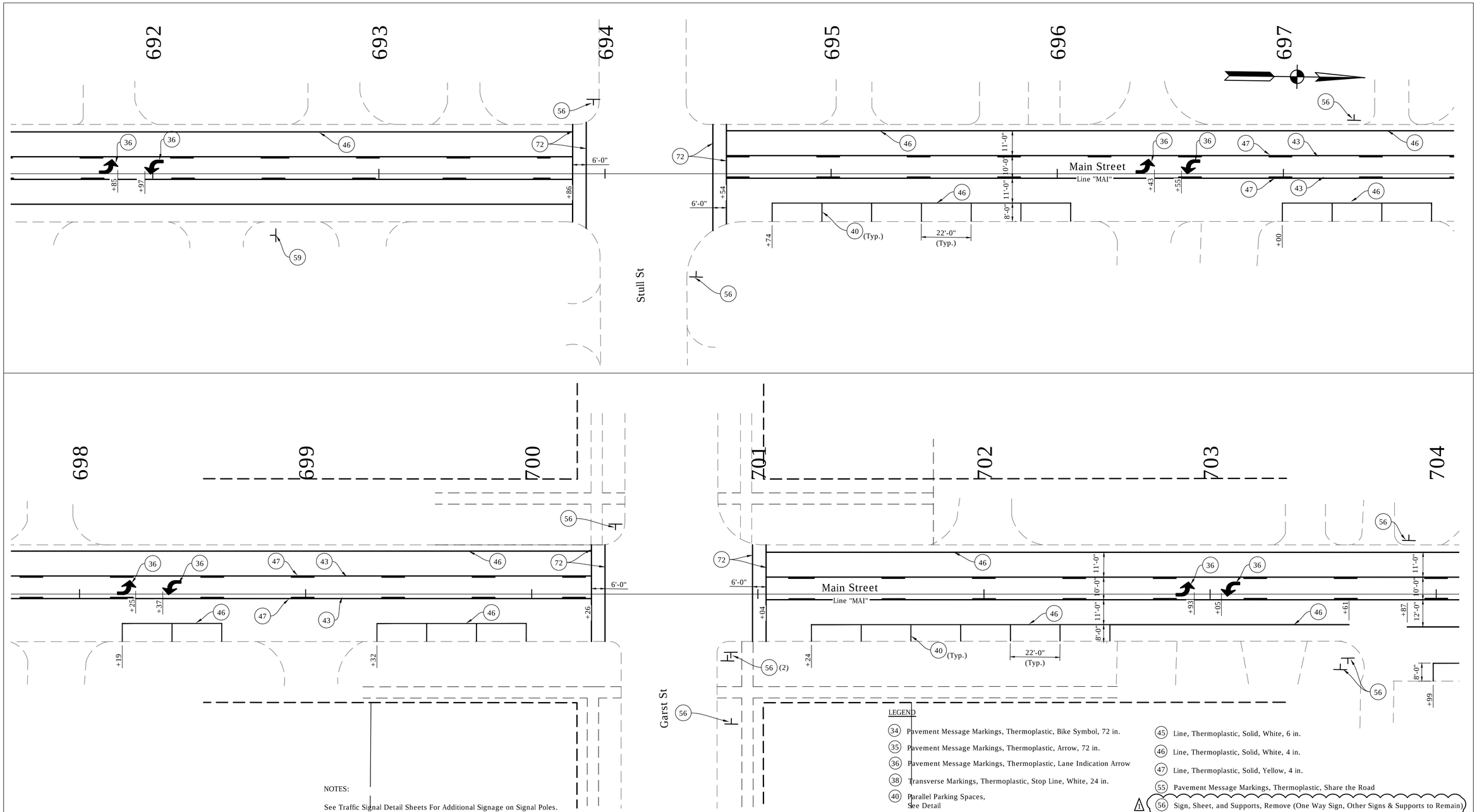
CHECKED: JG — CHECKED: JG

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	187 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY...F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\PAVEMENT MARKINGS\PM North\
FILE.....15-3329_PM Main st NORTH.dwg
PLOTTED BY...Bill Bonnell
DATE.....Jan 15,2016 - 3:52pm



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 "MA1", 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 (One Way Sign, Other Signs & Supports to Remain)
58 Sign, Sheet, Relocate
59 Sign, Sheet, Remove & Reset
72 Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III DRAWN: BRD

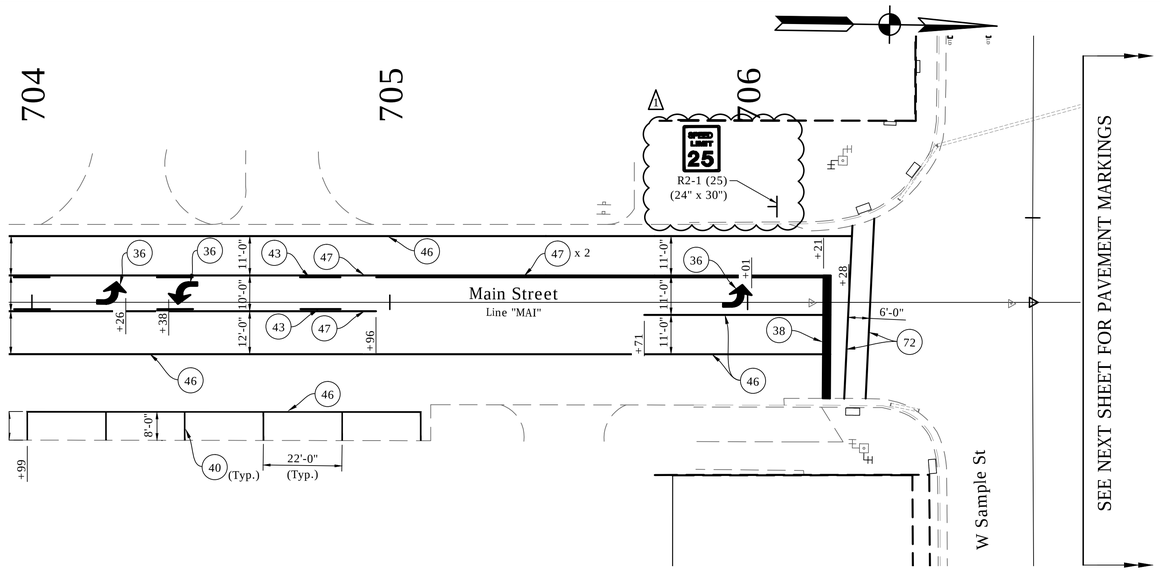
CHECKED: JG CHECKED: JG

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	188 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY.....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\PAVEMENT MARKING\PM North\
FILE.....15-3329 PM Main st NORTH.dwg
DISCALE BY.....LISCALE....1
PLOTTED BY.....Brian Rowe
DATE.....Jan 15,2016 - 3:52pm



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.
- (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 (One Way Sign, Other Signs & Supports to Remain)
- (58) Sign, Sheet, Relocate
- (59) Sign, Sheet, Remove & Reset
- (72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Sign

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

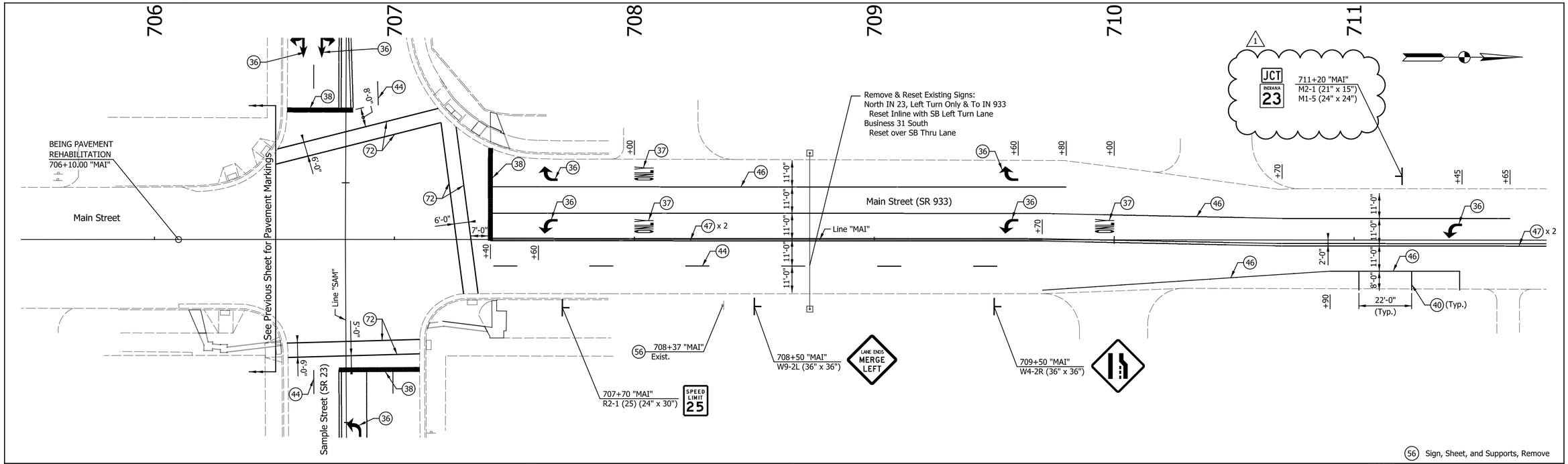
CHECKED: JG | CHECKED: JG

CITY OF SOUTH BEND

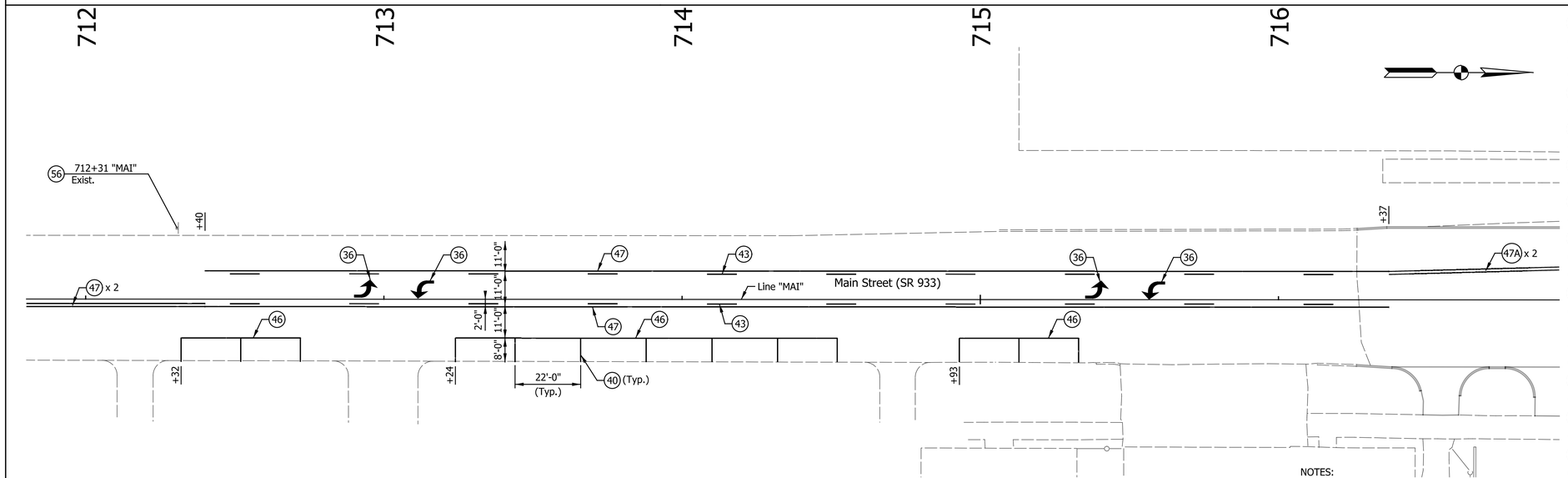
PAVEMENT MARKINGS & SIGNING DETAILS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	189 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY...F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\PAVEMENT MARKING\PM North\
FILE.....15-3329 PM Main st NORTH.dwg
DIMSCALE.....1'SCALE....1
PLOTTED BY...Bdavis
DATE.....Jan 15,2016 - 3:52pm



56 Sign, Sheet, and Supports, Remove



LEGEND

- 31A Transverse Markings, Multi-Component, Crosshatch Line, White, 8 in.
- 32 Line, Thermoplastic, Solid, Yellow, 6 in.
- 33 Transverse Markings, Thermoplastic, Crosshatch Line, Yellow, 8 in.
- 34 Pavement Message Markings, Thermoplastic, Bike Symbol, 72 in.
- 34A Pavement Message Markings, Multi-Component, Bike Symbol, 72 in.
- 35 Pavement Message Markings, Thermoplastic, Arrow, 72 in.
- 35A Pavement Message Markings, Multi-Component, Arrow, 72 in.
- 36 Pavement Message Markings, Thermoplastic, Lane Indication Arrow
- 36A Pavement Message Markings, Multi-Component, Lane Indication Arrow
- 37 Pavement Message Markings, Thermoplastic, Word (ONLY)
- 37A Pavement Message Markings, Multi-Component, Word (ONLY)
- 38 Transverse Markings, Thermoplastic, Stop Line, White, 24 in.
- 38A Transverse Markings, Multi-Component, Stop Line, White, 24 in.
- 40 Parallel Parking Spaces, See Detail
- 41 Line, Thermoplastic, Dotted, White, 6 in. (3' Line, 3' Gap)
- 41A Line, Multi-Component, Dotted, White, 6 in. (3' Line, 3' Gap)
- 42 Line, Mulit-Component, Dotted, Yellow, 6 in. (3' Line, 3' Gap)
- 43 Line, Thermoplastic, Broken, Yellow, 4 in.
- 44 Line, Thermoplastic, Broken, White, 4 in.
- 45 Line, Thermoplastic, Solid, White, 6 in.
- 45A Line, Multi-Component, Solid, White, 6 in.
- 46 Line, Thermoplastic, Solid, White, 4 in.
- 46A Line, Multi-Component, Solid, White, 4 in.
- 47 Line, Thermoplastic, Solid, Yellow, 4 in.
- 47A Line, Multi-Component, Solid, Yellow, 4 in.
- 48 Line, Multi-Component, Solid, Blue, 4 in.
- 49 Line, Thermoplastic, Solid, Blue, 4 in.
- 74 Pavement Marking, Multi-Comp., Solid, Green
- 75 Pavement Marking, Multi-Comp., Solid, Red
- 76 Tubular Marker
- 55 Pavement Message Markings, Thermoplastic, Share the Road
- 71 Transverse Markings, Thermoplastic, Crosswalk Line, White, 24 in.
- 71A Transverse Markings, Multi-Component, Crosswalk Line, White, 24 in.
- 72 Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.
- 72A Transverse Markings, Multi-Component, Crosswalk Line, White, 6 in.

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

Existing Signs to Remain in Place, Unless Otherwise Noted.

See Sheets 205-206 for Sample Street Markings.

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

DATE	REVISION
1/15/2016	REV 1: Revised Sign

PATRICK R. WOOLER REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

PAVEMENT MARKING & SIGNING DETAILS
MAIN STREET

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	190 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

Jgee 1/15/2016 3:03:54 PM P:\2014\01351\D. Drawings\201401351.RD.PM.MAIN.01.dgn

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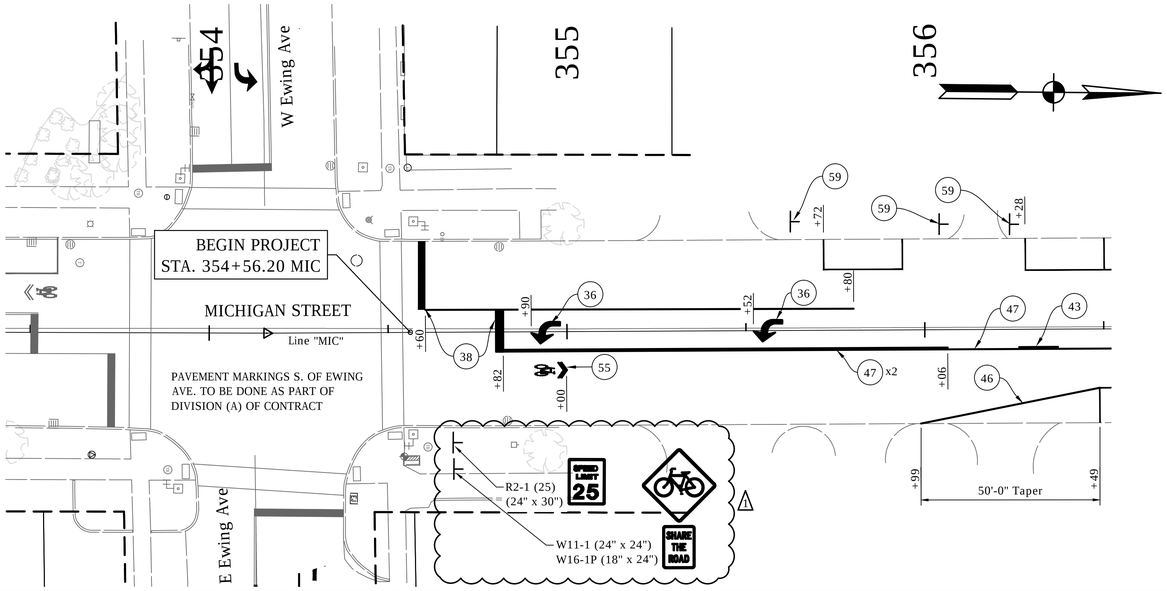
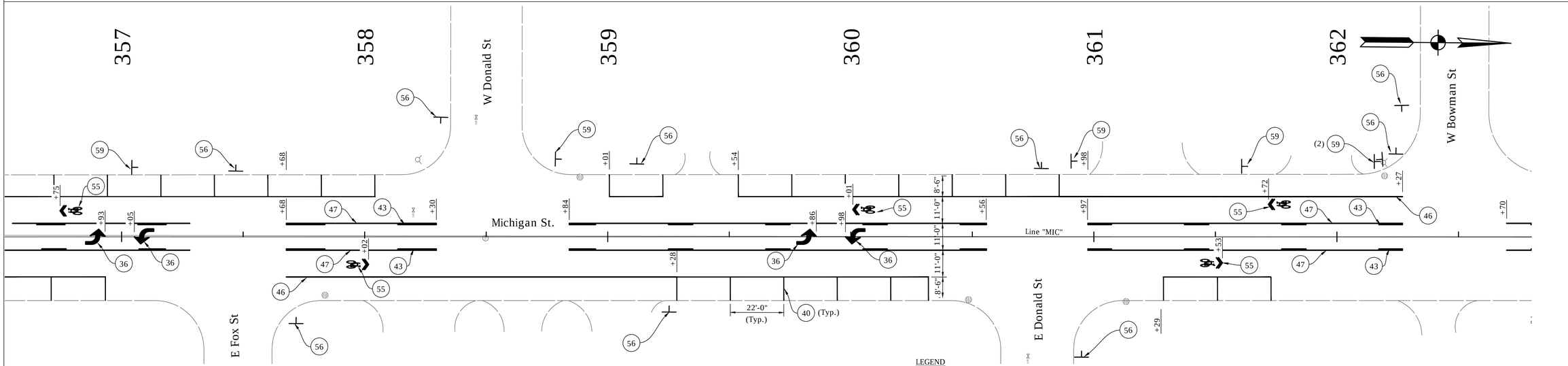




NOTES:

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
⚠1 (56) Sign, Sheet, and Supports, Remove (One Way Sign, Other Signs & Supports to Remain)
(58) Sign, Sheet, Relocate
(59) Sign, Sheet, Remove & Reset
(72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Signs

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

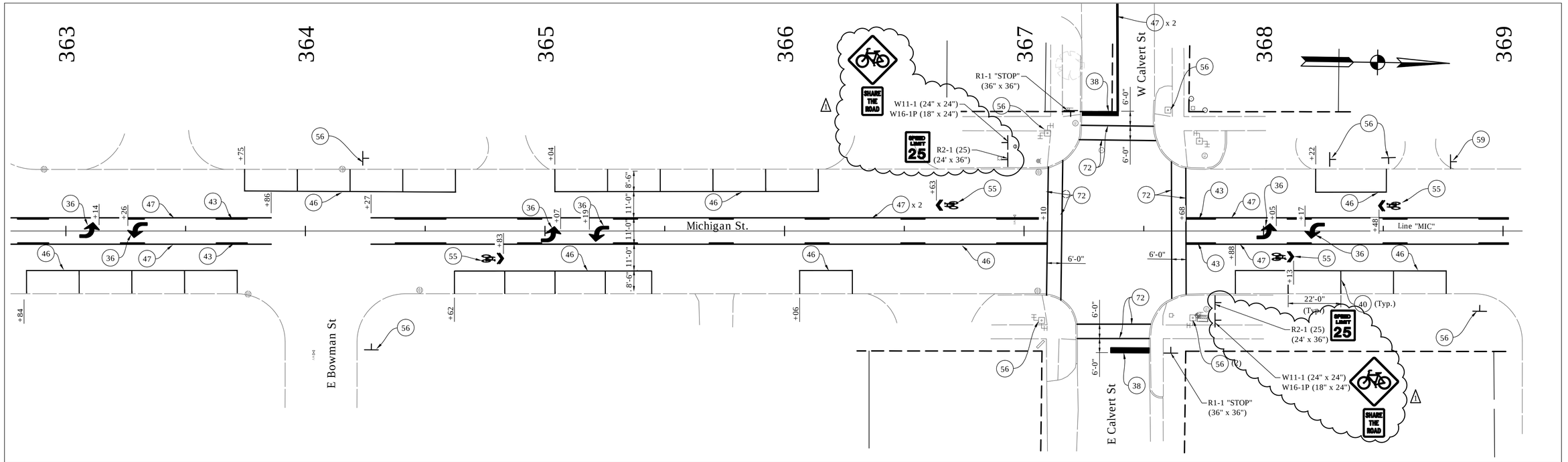
CHECKED: JG | CHECKED: JG

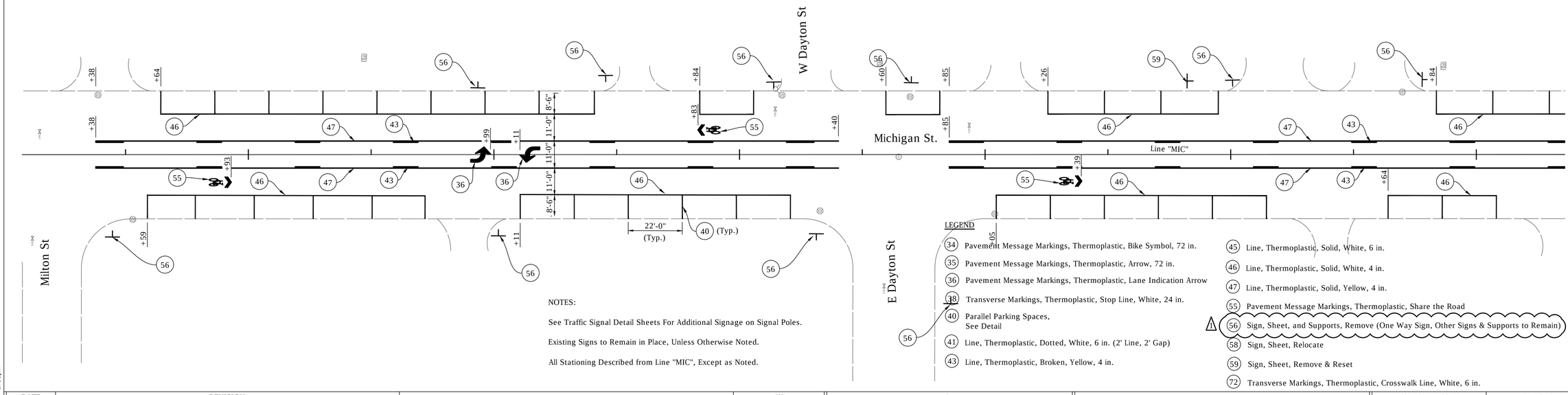
CITY OF SOUTH BEND

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	195 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\PAVEMENT MARKING\PM North\
FILE.....15-3329 PM Michigan st north.dwg
DIVISCALE....1
PLOTTED BY..BRD
DATE.....Jan 15,2016 - 3:53pm





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 (One Way Sign, Other Signs & Supports to Remain)
- (58) Sign, Sheet, Relocate
- (59) Sign, Sheet, Remove & Reset
- (72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Signs

HARRY C. FOX REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

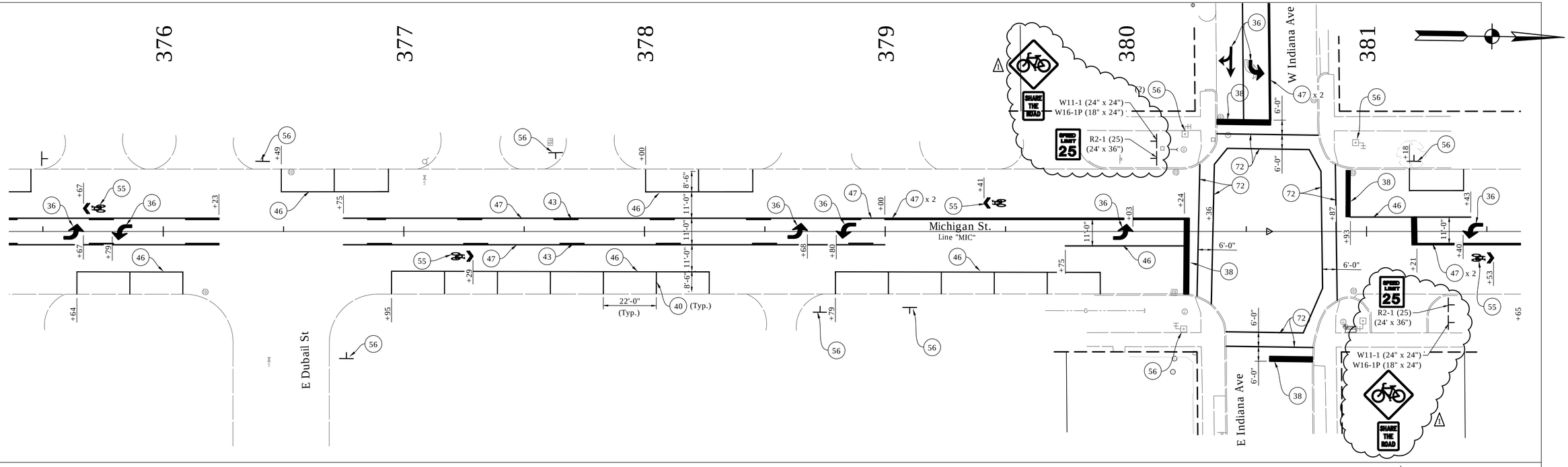
CHECKED: JG | CHECKED: JG

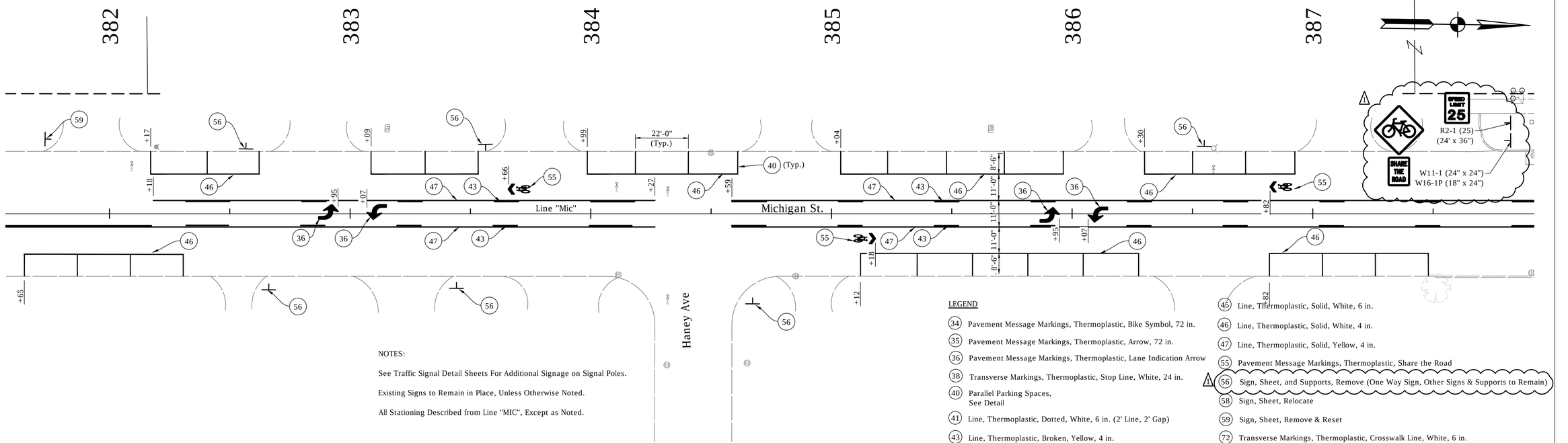
CITY OF SOUTH BEND

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	196 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY...F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\PAVEMENT MARKING\PM North\
FILE.....15-3329 PM Michigan st north.dwg
DIMSTYLE.....BLD_ISCALE...1
PLOTTED BY.....Brad Dodd
DATE.....Jan 15,2016 - 3:53pm





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)
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- (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 (One Way Sign, Other Signs & Supports to Remain)
- (58) Sign, Sheet, Relocate
- (59) Sign, Sheet, Remove & Reset
- (72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Signs

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III | DRAWN: BRD

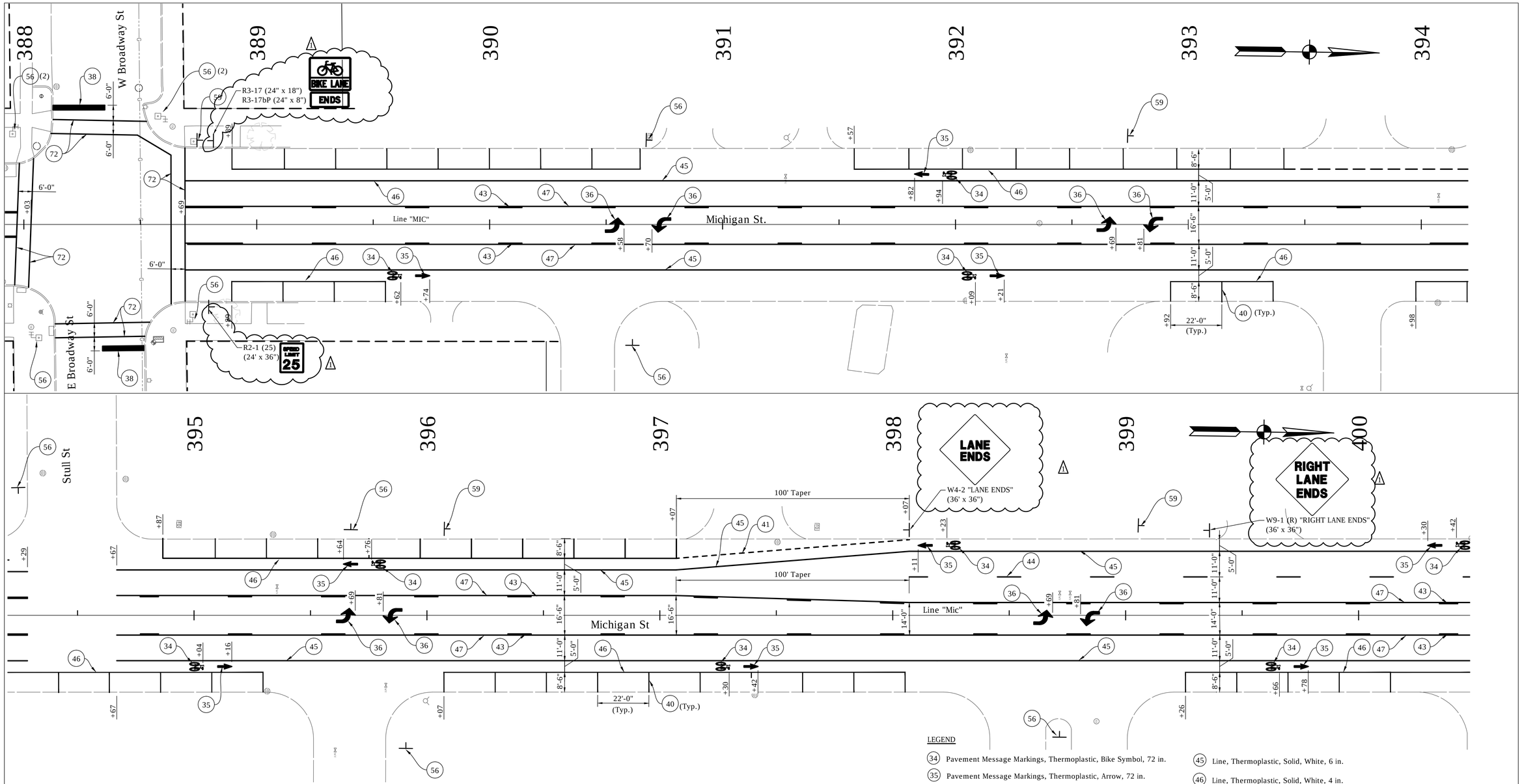
CHECKED: JG | CHECKED: JG

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	197 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\PAVEMENT MARKING\PM North\
FILE.....15-3329 PM Michigan st north.dwg
DISCIPLINE....TSC
PLOTTED BY....Bob Bourdon
DATE.....Jan 15,2016 - 3:54pm



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
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- (45) Line, Thermoplastic, Solid, White, 6 in.
- (46) Line, Thermoplastic, Solid, White, 4 in.
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- (56) Sign, Sheet, and Supports, Remove (One Way Sign, Other Signs & Supports to Remain)
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- (59) Sign, Sheet, Remove & Reset
- (72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Signs

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 01/07/2016 DATE

DESIGNED: HCF III — DRAWN: BRD

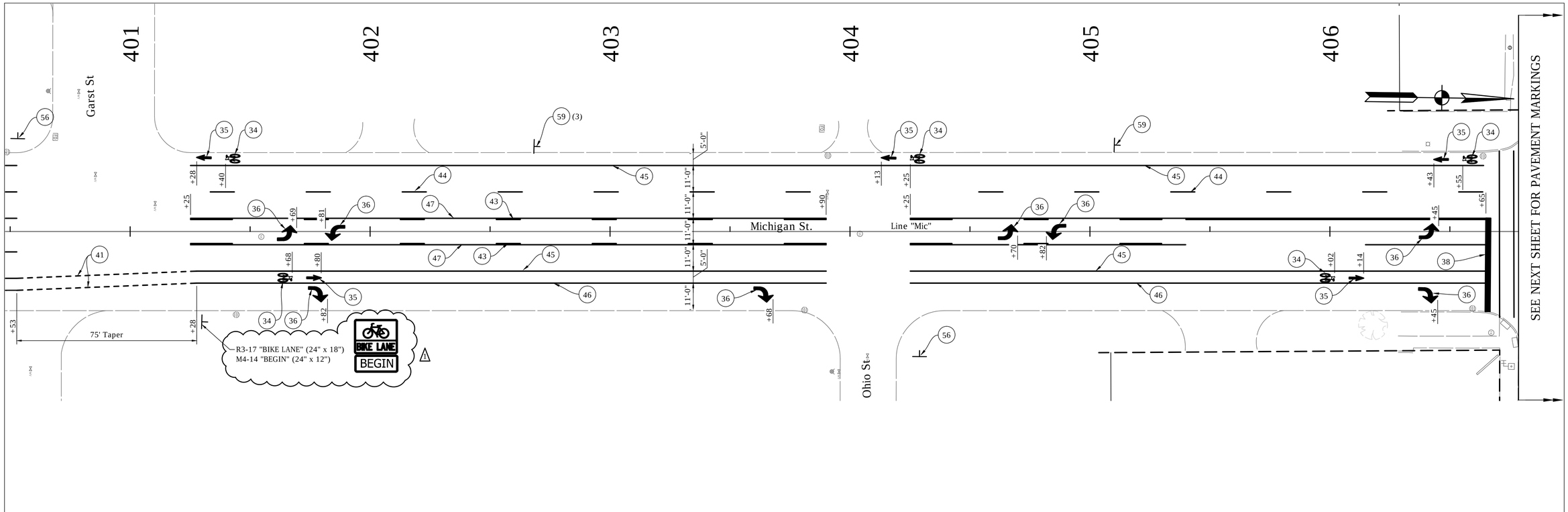
CHECKED: JG — CHECKED: JG

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	198 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY....F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\PAVEMENT MARKING\PM North\
FILE.....15-3329 PM Michigan st north.dwg
DISCIPLE BY..LTSCALE....1
PLOTTED BY..Brad Bluhm
DATE.....Jan 15,2016 - 3:54pm



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.
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(40) Parallel Parking Spaces, See Detail
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(55) Pavement Message Markings, Thermoplastic, Share the Road
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(58) Sign, Sheet, Relocate
(59) Sign, Sheet, Remove & Reset
(72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.

DATE	REVISION
1/15/2016	Rev 1: Revise Legend & Add Sign

HARRY C. FOX III REGISTERED No. PE19400116 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 01/07/2016
DESIGN ENGINEER DATE

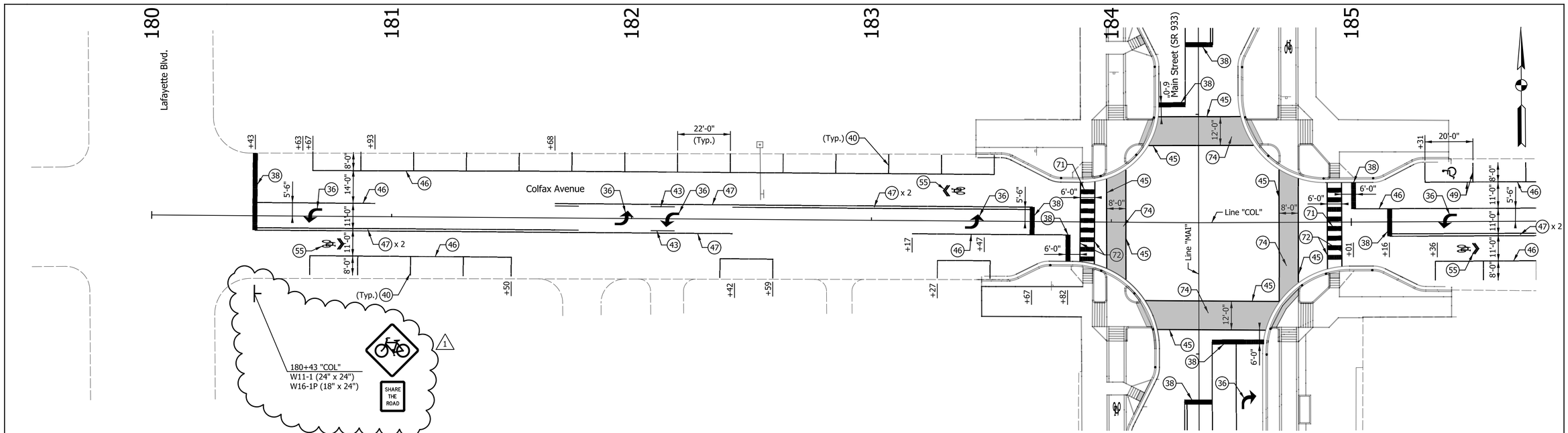
DESIGNED: HCF III | DRAWN: BRD
CHECKED: JG | CHECKED: JG

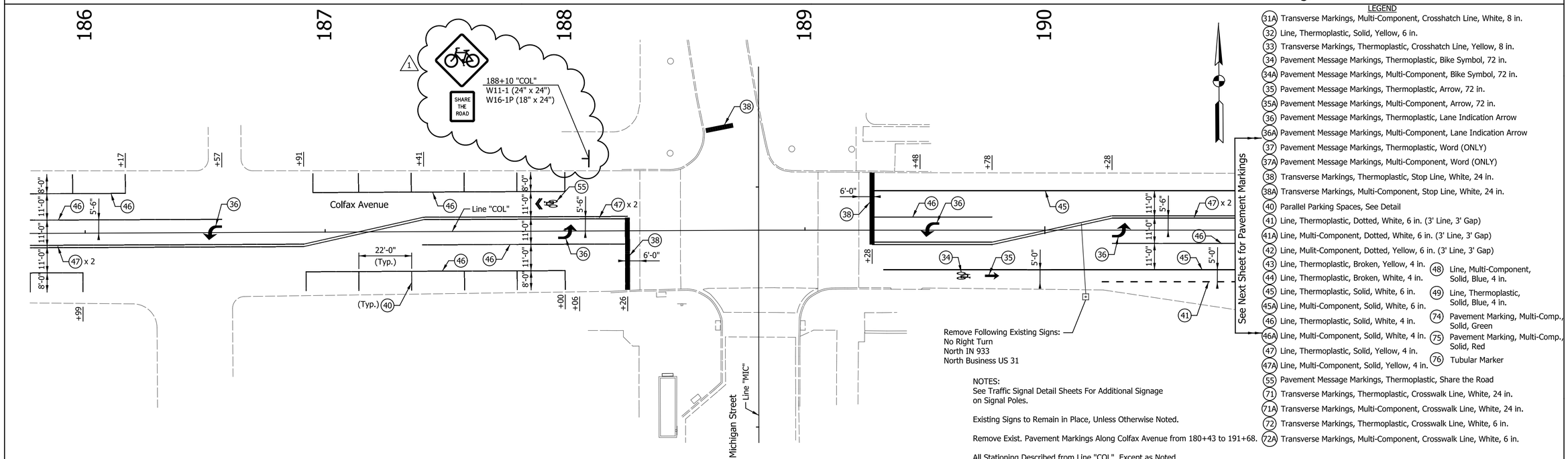
CITY OF SOUTH BEND

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	199 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

DIRECTORY...F:\2015\15-3329 South Bend 2-Way Conversion\DRAWINGS\PAVEMENT MARKING\PM North\
FILE.....15-3329 PM Michigan st north.dwg
DIMSCALE.....1"DSCALE...1
PLOTTED BY...Bob Jones
DATE.....Jan 15,2016 - 3:54pm





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

Existing Signs to Remain in Place, Unless Otherwise Noted.

Remove Exist. Pavement Markings Along Colfax Avenue from 180+43 to 191+68.

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

LEGEND

- (31A) Transverse Markings, Multi-Component, Crosshatch Line, White, 8 in.
- (32) Line, Thermoplastic, Solid, Yellow, 6 in.
- (33) Transverse Markings, Thermoplastic, Crosshatch Line, Yellow, 8 in.
- (34) Pavement Message Markings, Thermoplastic, Bike Symbol, 72 in.
- (34A) Pavement Message Markings, Multi-Component, Bike Symbol, 72 in.
- (35) Pavement Message Markings, Thermoplastic, Arrow, 72 in.
- (35A) Pavement Message Markings, Multi-Component, Arrow, 72 in.
- (36) Pavement Message Markings, Thermoplastic, Lane Indication Arrow
- (36A) Pavement Message Markings, Multi-Component, Lane Indication Arrow
- (37) Pavement Message Markings, Thermoplastic, Word (ONLY)
- (37A) Pavement Message Markings, Multi-Component, Word (ONLY)
- (38) Transverse Markings, Thermoplastic, Stop Line, White, 24 in.
- (38A) Transverse Markings, Multi-Component, Stop Line, White, 24 in.
- (40) Parallel Parking Spaces, See Detail
- (41) Line, Thermoplastic, Dotted, White, 6 in. (3' Line, 3' Gap)
- (41A) Line, Multi-Component, Dotted, White, 6 in. (3' Line, 3' Gap)
- (42) Line, Mulit-Component, Dotted, Yellow, 6 in. (3' Line, 3' Gap)
- (43) Line, Thermoplastic, Broken, Yellow, 4 in.
- (44) Line, Thermoplastic, Broken, White, 4 in.
- (45) Line, Thermoplastic, Solid, White, 6 in.
- (45A) Line, Multi-Component, Solid, White, 6 in.
- (46) Line, Thermoplastic, Solid, White, 4 in.
- (46A) Line, Multi-Component, Solid, White, 4 in.
- (47) Line, Thermoplastic, Solid, Yellow, 4 in.
- (47A) Line, Multi-Component, Solid, Yellow, 4 in.
- (48) Line, Multi-Component, Solid, Blue, 4 in.
- (49) Line, Thermoplastic, Solid, Blue, 4 in.
- (55) Pavement Message Markings, Thermoplastic, Share the Road
- (71) Transverse Markings, Thermoplastic, Crosswalk Line, White, 24 in.
- (71A) Transverse Markings, Multi-Component, Crosswalk Line, White, 24 in.
- (72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.
- (72A) Transverse Markings, Multi-Component, Crosswalk Line, White, 6 in.
- (74) Pavement Marking, Multi-Comp., Solid, Green
- (75) Pavement Marking, Multi-Comp., Solid, Red
- (76) Tubular Marker

1/15/2016	REV 1: Added Sign

PATRICK R. WOOLER REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

PAVEMENT MARKING & SIGNING DETAILS
COLFAX AVENUE

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	217 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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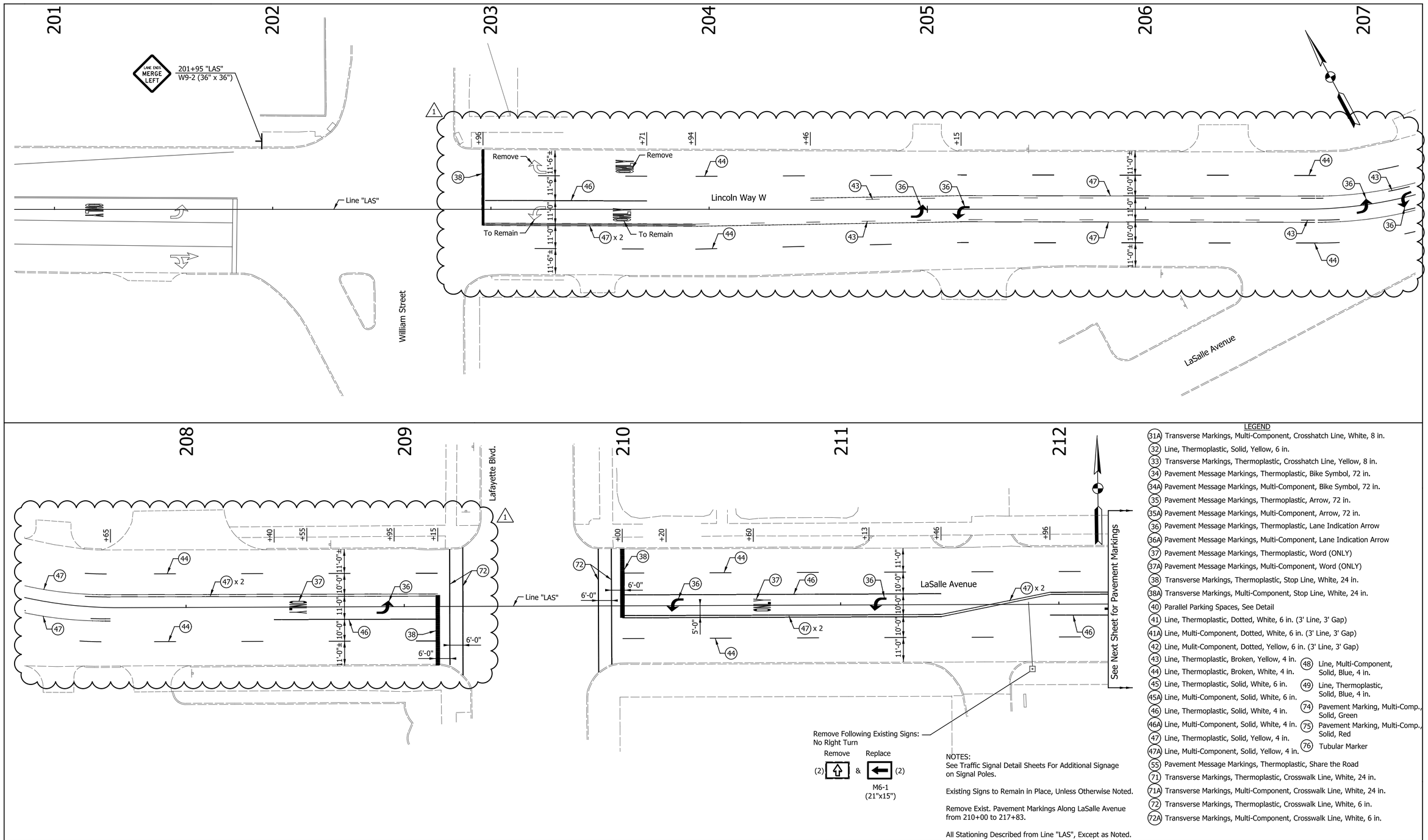

LEGEND

- (31A) Transverse Markings, Multi-Component, Crosshatch Line, White, 8 in.
- (32) Line, Thermoplastic, Solid, Yellow, 6 in.
- (33) Transverse Markings, Thermoplastic, Crosshatch Line, Yellow, 8 in.
- (34) Pavement Message Markings, Thermoplastic, Bike Symbol, 72 in.
- (34A) Pavement Message Markings, Multi-Component, Bike Symbol, 72 in.
- (35) Pavement Message Markings, Thermoplastic, Arrow, 72 in.
- (35A) Pavement Message Markings, Multi-Component, Arrow, 72 in.
- (36) Pavement Message Markings, Thermoplastic, Lane Indication Arrow
- (36A) Pavement Message Markings, Multi-Component, Lane Indication Arrow
- (37) Pavement Message Markings, Thermoplastic, Word (ONLY)
- (37A) Pavement Message Markings, Multi-Component, Word (ONLY)
- (38) Transverse Markings, Thermoplastic, Stop Line, White, 24 in.
- (38A) Transverse Markings, Multi-Component, Stop Line, White, 24 in.
- (40) Parallel Parking Spaces, See Detail
- (41) Line, Thermoplastic, Dotted, White, 6 in. (3' Line, 3' Gap)
- (41A) Line, Multi-Component, Dotted, White, 6 in. (3' Line, 3' Gap)
- (42) Line, Mulit-Component, Dotted, Yellow, 6 in. (3' Line, 3' Gap)
- (43) Line, Thermoplastic, Broken, Yellow, 4 in.
- (44) Line, Thermoplastic, Broken, White, 4 in.
- (45) Line, Thermoplastic, Solid, White, 6 in.
- (45A) Line, Multi-Component, Solid, White, 6 in.
- (46) Line, Thermoplastic, Solid, White, 4 in.
- (46A) Line, Multi-Component, Solid, White, 4 in.
- (47) Line, Thermoplastic, Solid, Yellow, 4 in.
- (47A) Line, Multi-Component, Solid, Yellow, 4 in.
- (48) Line, Multi-Component, Solid, Blue, 4 in.
- (49) Line, Thermoplastic, Solid, Blue, 4 in.
- (74) Pavement Marking, Multi-Comp., Solid, Green
- (75) Pavement Marking, Multi-Comp., Solid, Red
- (76) Tubular Marker
- (55) Pavement Message Markings, Thermoplastic, Share the Road
- (71) Transverse Markings, Thermoplastic, Crosswalk Line, White, 24 in.
- (71A) Transverse Markings, Multi-Component, Crosswalk Line, White, 24 in.
- (72) Transverse Markings, Thermoplastic, Crosswalk Line, White, 6 in.
- (72A) Transverse Markings, Multi-Component, Crosswalk Line, White, 6 in.

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

Existing Signs to Remain in Place, Unless Otherwise Noted.

Remove Exist. Pavement Markings Along LaSalle Avenue from 210+00 to 217+83.

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

DATE	REVISION
1/15/2016	REV 1: Added Markings (William St. to Lafayette Blvd.)

PATRICK R. WOOLER REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

PAVEMENT MARKING & SIGNING DETAILS
LASALLE AVENUE

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	219 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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SHEET SIGN & POST SUMMARY

LINE	SIGN LOCATION	SIGN CODE	SIGN SIZE (IN x IN)	SIGN: GROUND - MOUNTED SIGN AREA (SFT) 0.080"	0.100"	0.125"	SQUARE 2" x 2" - 12 GA. (TYPE 2) REINFORCED ANCHOR POST LENGTH (FT) 1	2	TOTAL	SQUARE 2 1/4" x 2 1/4" - 12 GA. (TYPE 1) REINFORCED ANCHOR POST LENGTH (FT) 1	TOTAL
SAM	62+08	M6-1	21 x 15	2.2						Attach to OH Mast Arm	
SOU	80+50	R3-17	24 x 18	3.0						9.2	9.2
		R3-17bP	24 x 8	1.3							
SOU	88+16	R3-17	24 x 18	3.0						9.5	9.5
		M4-14	24 x 12	2.0							
SOU	88+27	R1-1	30 x 30	6.3						9.5	9.5
SOU	89+28	R1-1	30 x 30	6.3						9.5	9.5
MON	90+60	R3-17	24 x 18	3.0						9.2	9.2
		R3-17bP	24 x 8	1.3							
MON	90+60	R3-17	24 x 18	3.0						9.5	9.5
		M4-14	24 x 12	2.0							
MON	98+15	R3-17	24 x 18	3.0						9.5	9.5
		M4-14	24 x 12	2.0							
MON	98+20	R3-17	24 x 18	3.0						9.2	9.2
		R3-17bP	24 x 8	1.3							
MON	100+75	R3-7R	30 x 30	6.3						9.5	9.5
WES	106+50	R5-1	30 x 30	6.3						9.5	9.5
WES	108+25	R10-6	24 x 36	6.0						10	10
WES	108+40	R10-7	24 x 30	5.0						9.5	9.5
WAY	120+48	R3-17	24 x 18	3.0						9.5	9.5
		M4-14	24 x 12	2.0							
WAY	120+60	R3-17	24 x 18	3.0						9.2	9.2
		R3-17bP	24 x 8	1.3							
JEF	152+35	R3-17	24 x 18	3.0						9.2	9.2
		R3-17bP	24 x 8	1.3							
JEF	152+50	R3-17	24 x 18	3.0						9.5	9.5
		M4-14	24 x 12	2.0							
COL	180+43	W11-1	24 x 24	4.0						12.0	12.0
		W16-1P	18 x 24	3.0							
COL	188+10	W11-1	24 x 24	4.0						12.0	12.0
		W16-1P	18 x 24	3.0							
LAS	201+95	W9-2	36 x 36		9.0					10.0	10.0
LAS	211+80	M6-1	21 x 15	2.2						Attach to OH Mast Arm	
		M6-1	21 x 15	2.2						Attach to OH Mast Arm	
TOTALS				103.3 (1)	9.0						185.0 (1)

DATE	REVISION
1/15/2016	REV 1: Added Signs & Revised Totals

PATRICK K. WOOLEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR DRAWN: MRR

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

SHEET SIGN & POST SUMMARY

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	223 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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SUMMARY OF QUANTITIES AND APPROACH TABLE

LOCATION (STATION)	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII	DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE			EXCAVATION		PCCP MATERIALS			HMA MATERIALS					PERMEABLE PAVEMENT	MILLING ASPHALT, 1.5"	MILLING ASPHALT, 2.5"	MILLING ASPHALT, 3.5"	MILLING ASPHALT, 4.5"	MILLING ASPHALT, VARIABLE DEPTH	6" PCCP APPROACH	8" PCCP APPROACH	JOINT ADHESIVE, SURFACE	LIQUID ASPHALT SEALANT	ASPHALT FOR TACK COAT	6" COMPACTED AGGREGATE FOR BASE NO. 53	D-1 CONTRACTION JOINT	STONE, NO. 8	REMARKS
						COMPACTED AGGREGATE BASE	HMA	CONCRETE			QC/QA PCCP	PLAIN PCCP, COLORED	PLAIN PCCP (1)	QC/QA- HMA, 2, 70, SURFACE 9.5mm	QC/QA- HMA, 4, 76, SURFACE 9.5mm	QC/QA- HMA, 2, 70, INTER. 19.0mm	QC/QA- HMA, 2, 64, BASE 19.0mm	WIDENING WITH HMA, TYPE D														
														LBS. PER SYD.																		
		"W"	"L"	"R"					CYS.		10 IN	10 IN	4 IN																				
		ft.	ft.	ft.	ft.				CUT	FILL	SYS	SYS	SYS	TON	TON	TON	TON	TON	SYS.	SYS.	SYS.	SYS.	SYS.	SYS.	SYS.	SYS.	LFT	LFT	TON	TON	LFT	SYS.	
Line "MIC"																																
406+57.00 to 428+18.57	Mainline	65.0	2162												1409			65		16978							8972	8972	5.1				
Line "A"																																
10+00.00 to 30+73.58	Mainline	65.0	2162									48	27	93	899	155	186	437		10305							5763	5763	3.2	219.0			
Line "RW-1"																																
30+73.57 to 43+11.07	Mainline	42.0	1238								37		88	114	225	190	228	477		2093							2071	2071	0.9	268.0			
30+75.0 Rt.	Business	15.0	29	10/10	5.0																				56.0				19.0			
32+07.0 Rt.	Business	26.0	26	18/20																					45.0				15.0			
32+33.0 Lt.	Business	23.2	16	10/10																					52.0				18.0			
34+23.0 Lt.	Business	25.4	18	15/10																												
40+15.0 Lt.	Mod. Street Approach	47.0	43	20/50																					51.0				17.0			
42+80.0 Lt.	Business	23.7	16	20/10																												
SUB TOTALS											37	48	115	207	2533	345	414	979	0	29376	0	0	0	0	204	0	16806	16806	9.2	556	0	0	

DATE	REVISION
1/15/2016	REV 1: PCCP Material Type

PATRICK R. WOOLEN REGISTERED NO. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

DESIGNED: MRR — DRAWN: MRR

CHECKED: PKW — CHECKED: PKW

CITY OF SOUTH BEND

SUMMARY OF QUANTITIES AND APPROACH TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	229 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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SUMMARY OF QUANTITIES AND APPROACH TABLE

LOCATION (STATION)	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII	DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE			EXCAVATION		PCCP MATERIALS			HMA MATERIALS					PERMEABLE PAVEMENT	MILLING ASPHALT, 1.5"	MILLING ASPHALT, 2.5"	MILLING ASPHALT, 3.5"	MILLING ASPHALT, 4.5"	MILLING ASPHALT, VARIABLE DEPTH	6" PCCP APPROACH	8" PCCP APPROACH	JOINT ADHESIVE, SURFACE	LIQUID ASPHALT SEALANT	ASPHALT FOR TACK COAT	6" COMPACTED AGGREGATE FOR BASE NO. 53	D-1 CONTRACTION JOINT	STONE, NO. 8	REMARKS
						COMPACTED AGGREGATE BASE	HMA	CONCRETE			QC/QA PCCP	PLAIN PCCP, COLORED	PLAIN PCCP (1)	QC/QA- HMA, 2, 70, SURFACE 9.5mm	QC/QA- HMA, 4, 76, SURFACE 9.5mm	QC/QA- HMA, 2, 70, INTER. 19.0mm	QC/QA- HMA, 2, 64, BASE 19.0mm	WIDENING WITH HMA, TYPE D														
														LBS. PER SYD.																		
		"W"	"L"	"R"					CYS.		10 IN	10 IN	4 IN																				
		ft.	ft.	ft.	ft.				CUT	FILL	SYS	SYS	SYS	TON	TON	TON	TON	TON	SYS.	SYS.	SYS.	SYS.	SYS.	SYS.	SYS.	SYS.	LFT	LFT	TON	TON	LFT	SYS.	
Line "BRO"																																
72+33.94 to 76+36.58	Mainline	32.0	403								1424																			759		
Line "SOU"																									110.0				37.0			
85+46.0 Rt.	Industrial	37.0	22	20/13	10.3																											
Line "LAS"																																
210+00.00 to 220+28.08	Mainline	52.0	1028												183					1998				210			558	558	0.6				
SUBTOTALS											1424	0	0	0	183	0	0	0	0	1998	0	0	0	210	0	110	558	558	0.6	37	759	0	
TOTAL											5284	48	599	207	4827	345	414	2182	1622	46192	6090	882	191	2288	988	279	32251	32251	17.4	1030	2866	811	

DATE	REVISION
1/15/2016	REV 1: PCCP Material Type

PATRICK K. WOODEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/7/2016 DATE

DESIGNED: MRR DRAWN: MRR

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

SUMMARY OF QUANTITIES AND APPROACH TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	230 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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STRUCTURE DATA

STRUCTURE NUMBER	LOCATION					SIZE	DESCRIPTION		LENGTH	SKEW	FLOW LINE			SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL	TYPE	FLOWABLE BACKFILL	TYPE	GEOTEXTILES	REVETMENT RIPRAP	SCOUR PROTECTION				CONCRETE CLASS A FOR STRUCTURES	VIDEO INSPECTION	PIPE END SECTION	PIPE, 6 IN, DUAL WALL HDPE FOR PERMEABLE PAVEMENT OUTLET			SAFETY METAL END SECTION			CONNECT TO STR. NO.	REMARKS
	STATION	LEFT	RIGHT	CROSS	OFFSET		PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE			COVER	UP STREAM	DOWN STREAM							FLOWABLE BACKFILL					SUMP DEPTH	GEOTEXTILE	RIPRAP												
					FT	IN			LFT		FT	ELEV.	ELEV.	YR.				CYS		CYS		SYS	TON	IN	SYS	TYPE	TONS	CYS	LFT	EA	LFT			TYPE	SLOPE	EA		
Line "MAI"																																						
115	733+11.1	x				12	2	Catch Basin K-10	36		1.0	710.02	709.70	75	N/A	7.0	1	10.4	1																			116	
116	733+13.4	x			30.7			Manhole C-4				Ex. (~709.40)																										Remove Exist. Structure, Tie Into Exist. Pipe
117	733+42.6	x				12	2	Catch Basin K-10	27		0.5	709.54	709.40	75	N/A	7.0	1	8.3	1																			116	
118	736+96.7	x				12	2	Catch Basin K-10	76		0.5	706.48	705.95	75	N/A	7.0	1	22.5	1															48						125	
119	736+79.7		x			12	2	Catch Basin K-10	90		1.5	705.50	704.70	75	N/A	7.0	1	24.2	1															48						124	
120	737+21.2		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
121	737+30.6	x						Existing Inlet																														Remove Exist. Structure & Exist. Pipe
122	737+51.6	x						Existing Inlet																														Casting, Furnish Type "10" & Adj. to Grade
123	737+55.7		x					Existing Inlet																														Remove Exist. Structure & Exist. Pipe
124	737+72.0		x					Existing Manhole				Ex. (~703.70)																										Casting, Adjust to Grade
124A	738+06.3		x		16.6	12	2	Manhole C-4	34		2.1	704.94	704.70	75	N/A	7.0	1	15.0	1																			124	
125	737+74.6	x						Existing Manhole																														Casting, Adjust to Grade
126	738+04.5	x						Existing Inlet																														Remove Exist. Structure & Exist. Pipe
126A	738+06.1	x				12	2	Catch Basin K-10	31		1.1	705.90	705.65	75	N/A	7.0	1	10.1	1																			125	
127	738+08.2		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
128	738+88.3		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
129	738+90.9		x			12	2	Catch Basin K-10	81		1.5	705.37	704.94	75	N/A	7.0	1	30.0	1																			128	
130	739+40.2		x			12	2	Catch Basin K-10	46		1.1	705.60	705.37	75	N/A	7.0	1	16.4	1																			131	
131	739+47.1		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
132	740+05.1		x			12	2	Catch Basin K-10	61		0.8	705.91	705.60	75	N/A	7.0	1	19.0	1																			133	
133	740+05.6		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
134	740+62.7	x						Existing Inlet																														Remove Exist. Structure & 2 LFT of Pipe
135	740+62.7	x						Catch Basin K-10				Ex. (~705.34)																										Connect to Exist. Pipe
136	741+83.0	x				12	2	Catch Basin K-10	61		1.2	704.80	704.31	75	N/A	7.0	1	23.2	1															48						142	
137	741+94.0		x			12	2	Catch Basin K-10	51		0.7	705.30	704.86	75	N/A	7.0	1	15.8	1															48						143	
138	742+21.5	x						Existing Inlet																														Remove Exist. Structure & Exist. Pipe
139	742+21.8		x					Existing Inlet																														Remove Exist. Structure & Exist. Pipe
140	742+43.6	x						Existing Inlet																														Remove Exist. Sturcture & 29 LFT of Pipe
141	742+45.2		x					Existing Inlet																														Remove Structure & 17 LFT of Exist. Pipe
142	742+47.5	x				12	2	Catch Basin K-10	26		1.8	704.31	704.10	75	N/A	7.0	1	7.4	1																			142A	
142A	742+75.6	x			24.3			Manhole C-4				Ex. (~703.00)																										
142B	742+96.3	x				12	2	Catch Basin K-10	18		1.6	704.35	703.50	75	N/A	7.0	1	4.6	1																			142A	

DATE	REVISION
1/15/2016	REV 1: Revised Pipe Type

PATRICK K. WOOLEY REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

STRUCTURE DATA TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	232 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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STRUCTURE DATA

STRUCTURE NUMBER	LOCATION					SIZE	DESCRIPTION		LENGTH	SKEW	FLOW LINE			SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL	TYPE	FLOWABLE BACKFILL	TYPE	GEOTEXTILES	REVETMENT RIPRAP	SCOUR PROTECTION				CONCRETE, CLASS A, FOR STRUCTURES	VIDEO INSPECTION	PIPE END SECTION	PIPE, 6 IN, DUAL WALL HDPE FOR PERMEABLE PAVEMENT OUTLET			SAFETY METAL END SECTION			CONNECT TO STR. NO.	REMARKS
	STATION	LEFT	RIGHT	CROSS	OFFSET		PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE			COVER	UP STREAM	DOWN STREAM											SCOUR PROTECTION															
																								SUMP DEPTH	GEOTEXTILE	RIPRAP												
					FT	IN			LFT		FT	ELEV.	ELEV.	YR.				CYS		CYS		SYS	TON	IN	SYS	TYPE	TONS	CYS	LFT	EA	LFT			TYPE	SLOPE	EA		
Line "MAI"																																						
143	742+48.4		x			12	2	Catch Basin K-10	9		1.0	704.89	704.82	75	N/A	7.0	1	1.7	1																			143A	
143A	742+59.2		x		25.0			Manhole C-4				Ex. (~704.40)																										
144																																					Structure Deleted
145	742+76.5		x					Existing Manhole				Ex. (~702.34)																									Casting, Adjust to Grade
146	742+87.5		x			12	2	Catch Basin K-10	28		2.7	703.04	702.77	75	N/A	7.0	1	10.1	1																			412A	
147	742+91.8	x						Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
148	742+95.0		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
149	743+15.4	x						Existing Inlet																														Remove Exist. Structure
150	743+46.3	x				12	2	Catch Basin K-10	47		1.2	704.75	704.35	75	N/A	7.0	1	8.7	1																48				142B	
151	744+02.4		x			12	2	Catch Basin K-10	113		2.1	703.67	703.04	75	N/A	7.0	1	36.0	1																48				146	
152	744+02.8		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
153	745+05.1		x			12	2	Catch Basin K-10	99		1.4	704.17	703.67	75	N/A	7.0	1	23.3	1																			151	
154	745+05.1		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
155	745+64.6		x			12	2	Catch Basin K-10	56		1.0	704.45	704.17	75	N/A	7.0	1	10.3	1																			153	
156	745+64.6		x					Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
157	746+88.6		x			12	2	Catch Basin K-10	28		1.0	704.34	704.20	75	N/A	7.0	1	3.3	1																48				159	
158	746+78.0	x				12	2	Catch Basin K-10	61		1.2	704.15	703.84	75	N/A	7.0	1	21.4	1																48				162	
159	747+11.8		x					Manhole C-4				Ex. (~704.20)																										Remove Exist. Structure
160	747+17.8	x						Existing Inlet																														Remove Exist. Structure & Exist. Pipe
161	747+39.8	x						Existing Inlet																														Remove Exist. Structure and 12 LFT of Exist. Pipe
162	747+42.5	x			23.1			Manhole C-4				Ex. (~701.80)																										Connect to Exist. Pipe
162A	747+85.9	x			25.9			Mod. Catch Basin K-10				Ex. (~702.60)																										Connect to Exist. Pipe
162B																																				Structure Deleted
163	747+88.9	x						Existing Inlet																														Remove Exist. Structure and 9 LFT of Exist. Pipe
164	747+67.5		x		39.0			Manhole F-4				Ex. (~694.20)																										Connect to Exist. 84" Storm Sewer
165	748+24.8	x						Existing Inlet																														Remove Exist. Structure and Cap Exist. Pipe
166	748+25.1		x					Existing Inlet																														Remove Exist. Structure, Remove 25 LFT and Cap Exist. Pipe
167	748+38.2	x				12	2	Catch Basin K-10	56		1.1	704.20	703.86	75	N/A	7.0	1	11.8	1																48				162A	
168	748+49.1		x			12	2	Catch Basin K-10	77		1.2	704.25	703.75	75	N/A	7.0	1	20.8	1																48				164	
169	750+10.2		x			8	2	Catch Basin K-10	8		0.8	705.14	705.10	75	N/A	7.0	1	2.0	1																			170	
170	750+16.0		x					Existing Inlet				Ex. (~705.10																										Casting, Furnish Type "4" & Adj. to Grade
171	750+41.5	x						Existing Inlet																														Casting, Furnish Type "4" & Adj. to Grade

DATE	REVISION
1/15/2016	REV 1: Revised Pipe Type

PATRICK K. WOOLEN REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 1/7/2016 DATE

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

CITY OF SOUTH BEND

STRUCTURE DATA TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	233 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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STRUCTURE DATA

STRUCTURE NUMBER	LOCATION					SIZE	DESCRIPTION		LENGTH	SKEW	FLOW LINE			SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL	TYPE	FLOWABLE BACKFILL	TYPE	GEOTEXTILES	REVETMENT RIPRAP	SCOUR PROTECTION				CONCRETE CLASS A FOR STRUCTURES	VIDEO INSPECTION	PIPE END SECTION	PIPE, 6 IN, DUAL WALL HDPE FOR PERMEABLE PAVEMENT OUTLET (1)	SAFETY METAL END SECTION			CONNECT TO STR. NO.	REMARKS
	STATION	LEFT	RIGHT	CROSS	OFFSET		PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE			COVER	UP STREAM	DOWN STREAM											SUMP DEPTH	GEOTEXTILE	RIPRAP											
					FT	IN			LFT		FT	ELEV.	ELEV.	YR.				CYS		CYS		SYS	TON	IN	SYS	TYPE	TONS	CYS	LFT	EA	LFT			TYPE	SLOPE	EA	
Line "MAI"																																					
172	750+41.5	x				12	2	Inlet R-13	6		1.5	704.18	704.15	75	N/A	7.0	1	2.2	1												96						171	
172A	751+63.5	x				12	2	Catch Basin K-10	60		1.1	704.55	704.19	75	N/A	7.0	1	19.3	1												48						175	
173	751+85.4		x			12	2	Catch Basin K-10	3		0.9	704.80	704.78	75	N/A	7.0	1	1.0	1																		174	
174	751+85.4		x		34.3			Manhole C-4				Ex. (~704.78)																									Remove Exist. Structure
175	752+25.9	x				12	2	Catch Basin K-10	30		1.5	704.19	704.00	75	N/A	7.0	1	11.6	1																		175A	
175A	752+59.4	x			29.4	12	2	Manhole C-4	12		2.1	704.00	703.89	75	N/A	7.0	1	5.1	1																		177A	
176	752+31.0	x						Existing Inlet																													Remove Exist. Structure and Cap Exist. Pipe
177	752+82.0	x				12	2	Catch Basin K-10	9		1.2	704.60	704.53	75	N/A	7.0	1	2.9	1																		177A	
177A	752+71.7	x			18.4			Manhole C-4																													Connect to Exist. Pipe
178	752+82.8		x					Catch Basin K-10																													Connect to Exist. Pipe
179	752+84.2	x						Existing Inlet																													Remove Exist. Structure and Cap Exist. Pipe
179A	753+66.9	x				12	2	Catch Basin K-10	82		0.5	704.70	704.60	75	N/A	7.0	1	31.7	1																		177	
180	754+87.2	x						Existing Inlet																													Casting, Furnish Type "4" & Adj. to Grade
181	754+87.2	x				12	2	Inlet R-13	6		1.5	703.06	703.03	75	N/A	7.0	1	2.3	1																		180	
182	754+87.9		x			12	2	Inlet R-13	3		1.5	702.91	702.89	75	N/A	7.0	1	1.1	1																		183	
183	754+87.9		x					Existing Inlet																													Casting, Furnish Type "4" & Adj. to Grade
184	756+81.6		x			12	2	Catch Basin K-10	26		0.9	702.49	702.31	75	N/A	7.0	1	7.5	1																		184A	
184A	757+11.9		x		27.2	12	2	Manhole C-4	36		1.1	702.31	702.06	75	N/A	7.0	1	7.6	1																		430	
184B																																					Structure Deleted
185	756+82.2	x				12	2	Catch Basin K-10	32		1.3	702.20	702.03	75	N/A	7.0	1	10.3	1																		185A	
185A	757+17.9	x			27.6			Manhole C-4																													Connect to Exist. Pipe
186	756+96.6	x						Existing Inlet																													Remove Exist. Structure and Cap Exist. Pipe
187	756+98.8		x					Existing Inlet																													Remove Exist. Structure and Cap Exist. Pipe
Line "A"																																					
300																																					Structure Deleted
301																																					Structure Deleted
302																																					Structure Deleted
303	23+38.0	x						Mod. Inlet A-3				Ex. (~701.19)																									Connect to Exist. Pipe
304	23+38.3		x		17.1			Existing Manhole																													Casting, Furnish Type "10"
304A	25+24.5		x			8	2	Inlet S-14	25		1.5	704.45	704.29	75	N/A	7.0	1	4.7	1																		304B	
304B	25+52.8		x		39.1	12	2	Catch Basin K-10	27		1.5	704.29	704.15	75	N/A	7.0	1	4.5	1																		304D	
304C	25+60.5		x					Existing Inlet																													Remove Exist. Structure and 19 LFT of Exist. Pipe
304D	25+61.1		x					Existing Manhole																													
305	25+58.3	x						Catch Basin K-10				Ex. (~704.35)																									Connect to Exist. Pipe
306	25+59.7	x						Existing Inlet																													Casting, Furnish Type "4" & Adj. to Grade
307	26+24.8		x		10.7			Existing Manhole																													Casting, Adj. to Grade

DATE	REVISION
1/15/2016	REV 1: Revised Pipe Type

PATRICK K. WOOLEY REGISTERED No. 10504741 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 1/7/2016 DATE

DESIGNED: MRR DRAWN: JRG

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

STRUCTURE DATA TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	N/A
SURVEY BOOK	SHEETS
N/A	234 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

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CROSS SECTIONS

Scale: 1 inch = 10 feet

CUT | FILL

150 140 130 120 110 100 90 80 70 60 50 40 30 20 | 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

730
720

718 + 00

See Line "BRO" Cross Sections

See Line "BRO" Cross Sections

720.4

P.G. 719.90

Ac = 24.2 Af = 0.0

Vc = 80 Vf = 6

730
720

717 + 50

722.0

P.G. 720.90

Ac = 62.1 Af = 6.0

Vc = 93 Vf = 13

730
720

717 + 00

Business Approach Req'd.
(See Previous Section)

722.7

P.G. 721.88

Ac = 38.6 Af = 7.9

Vc = 47 Vf = 7

730
720

716 + 95

Business Approach Req'd.
W = 17.8', L = 17.0'

722.7

P.G. 721.97

8.71%

1

730
720

716 + 55

Business Approach Req'd.
W = 12.0', L = 16.0'

722.9

P.G. 722.96

5.87% 2.0%

730
720

716 + 50

Business Approach Req'd.
(See Next Section)

Ac = 12.5 Af = 0.0

Vc = 5 Vf = 0

722.9

P.G. 722.67

BEGIN RECONSTRUCTION
716+26.22 "MAI"
Ac = 0.0 Af = 0.0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 | 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

DATE	REVISION
1/15/2016	REV 1: Added Drive Section

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MRR DRAWN: MRR

CHECKED: PKW CHECKED: PKW

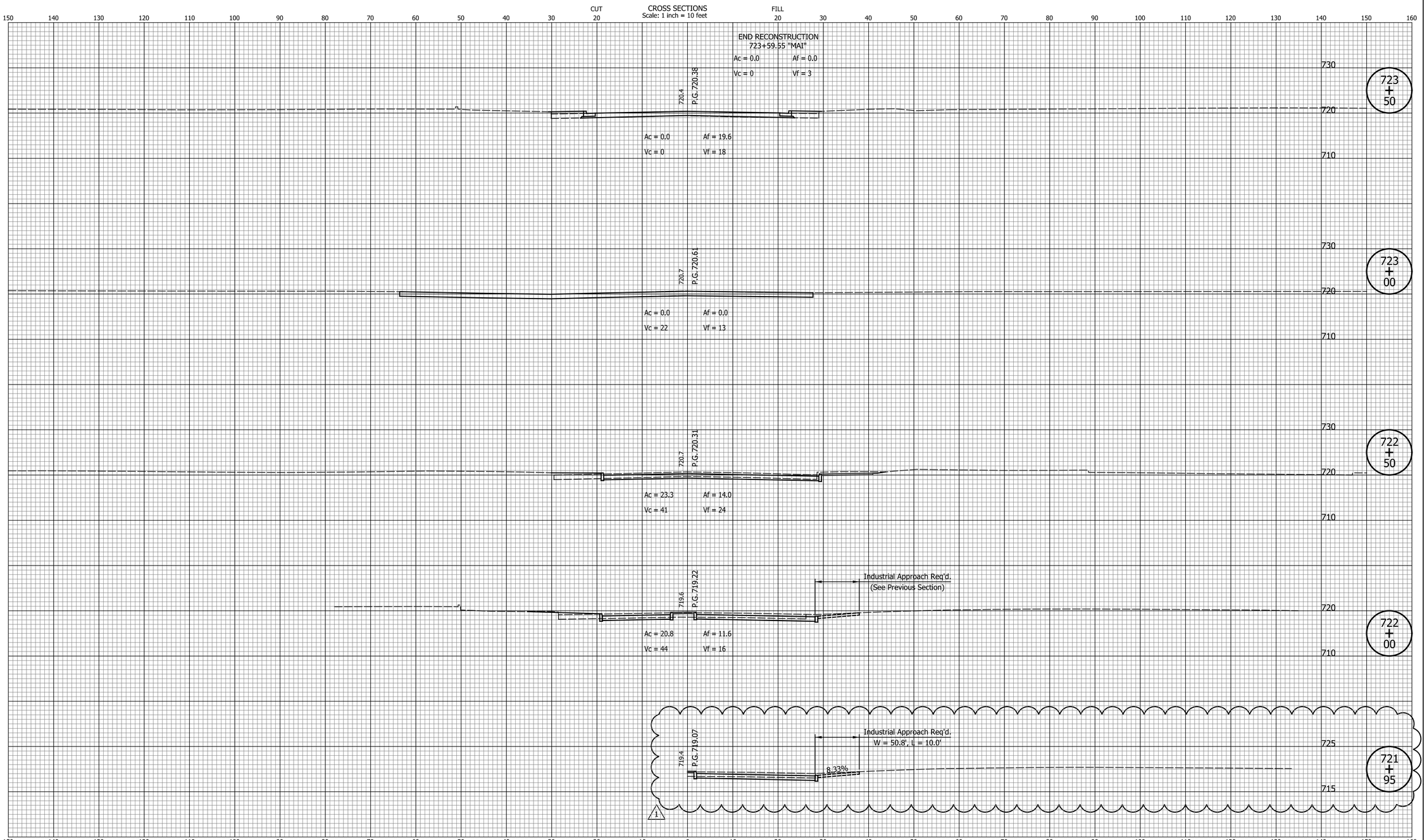
CITY OF SOUTH BEND

CROSS SECTIONS
LINE "MAI"

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	AAA
SURVEY BOOK	SHEETS
N/A	240 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)

CROSS SECTIONS

Scale: 1 inch = 10 feet



DATE	REVISION
1/15/2016	REV 1: Added Drive Section

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MRR DRAWN: MRR

CHECKED: PKW CHECKED: PKW

CITY OF SOUTH BEND

CROSS SECTIONS
LINE "MAI"

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	AAA
SURVEY BOOK	SHEETS
N/A	243 of 246
CONTRACT	PROJECT
N/A	115-019 (DIV B)