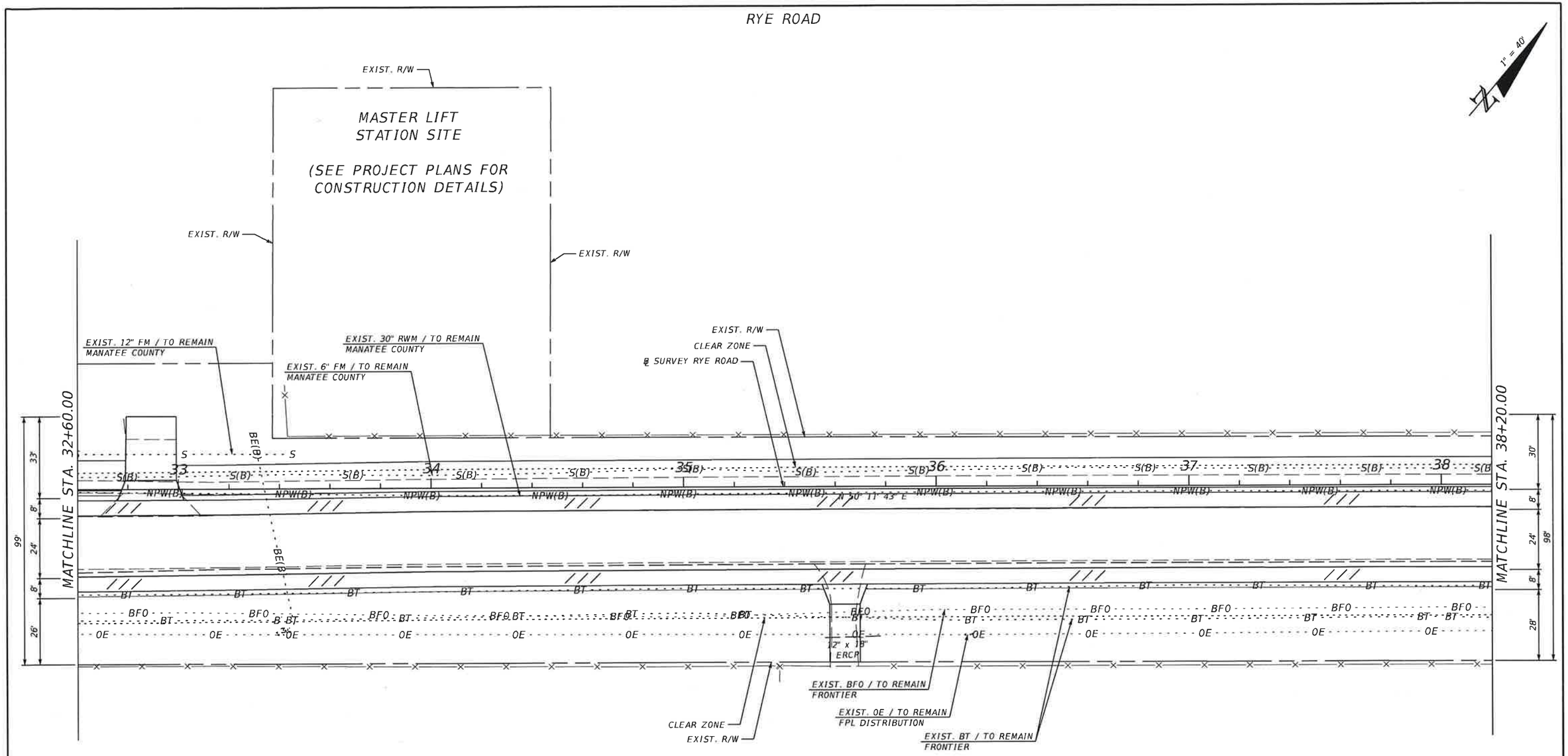
RYE ROAD



JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

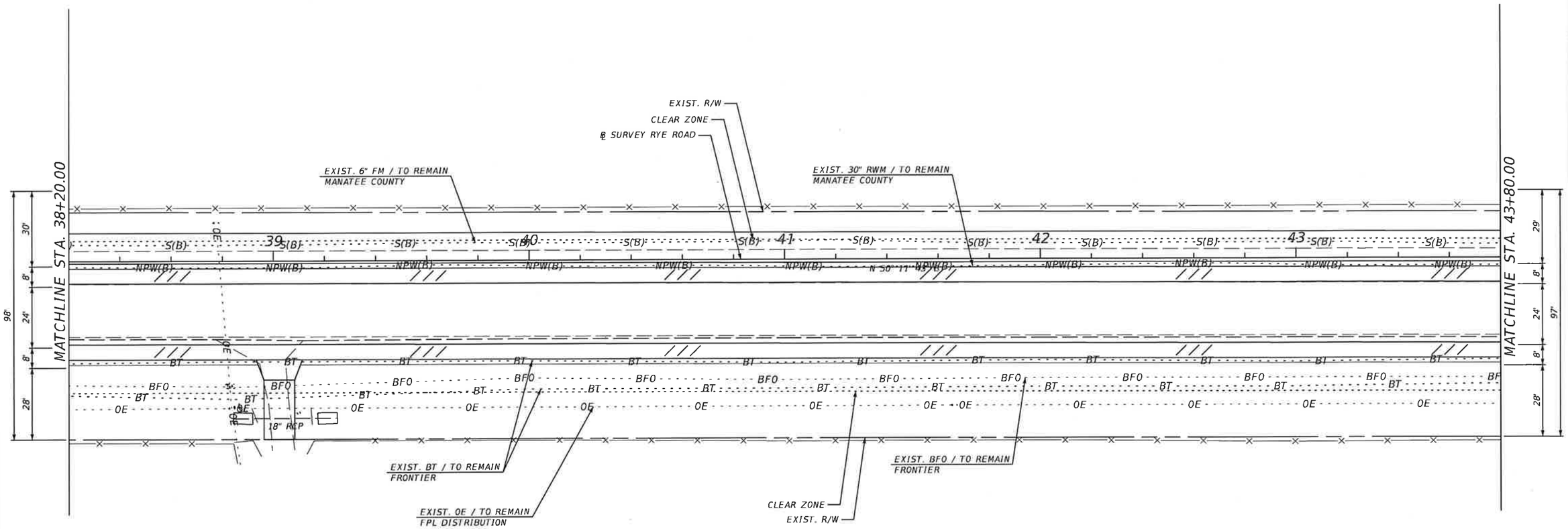
UTILITY ADJUSTMENTS (21)

SHEET NO.: 101

1:13:38 PM 3/13/2018 PW:\007982\CON0086775\00000000225338\13.00 CAD\12345615201\roadway\UTADRD21.DGN

RYE ROAD

1" = 40'



JASON L. STARR
LICENSE
No. 70171
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (22)

SHEET NO.: 102

1:13:51 PM 3/13/2018 PW:\007982\CON0086775\0000000000225338\13.00 CAD\12345615201\roadway\UTADRD22.DGN

RYE ROAD

1" = 40'

MATCHLINE STA. 43+80.00

MATCHLINE STA. 49+40.00

EXIST. R/W

CLEAR ZONE

℄ SURVEY RYE ROAD

EXIST. 6" FM / TO REMAIN
MANATEE COUNTY

EXIST. 30" RWM / TO REMAIN
MANATEE COUNTY

44 45 46 47 48 49

S(B) NPW(B) BT BFO OE

N 50° 11' 43" E

97' 24' 8' 28' 29' 8' 27' 8' 27' 107' 37'

EXIST. R/W

EXIST. BT / TO REMAIN
FRONTIER

EXIST. OE / TO REMAIN
FPL DISTRIBUTION

CLEAR ZONE

EXIST. R/W

EXIST. BFO / TO REMAIN
FRONTIER

JASON L. STARR LICENSE No. 70171 STATE OF FLORIDA PROFESSIONAL ENGINEER

3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (23)

SHEET NO.: 103

1:14:04 PM 3/13/2018 PW:\007982\CON0086775\0000000000225338\13.00_CAD\12345615201\roadway\UTADRD23.DGN

RYE ROAD

1" = 40'

EXIST. R/W
CLEAR ZONE
℄ SURVEY RYE ROAD
EXIST. 30" RWM / TO REMAIN
MANATEE COUNTY
EXIST. 6" FM / TO REMAIN
MANATEE COUNTY
EXIST. BT / TO REMAIN
FRONTIER
EXIST. WM VALVE / TO BE ADJUSTED
MANATEE COUNTY
EXIST. FM VALVE / TO BE ADJUSTED
MANATEE COUNTY
N 50° 11' 43" E
14" x 23" ERCP
EXIST. OE / TO REMAIN
FPL DISTRIBUTION
EXIST. BFO / TO REMAIN
FRONTIER
EXIST. BT / TO REMAIN
FRONTIER
EXIST. PULL BOX / TO BE ADJUSTED
FRONTIER
MATCHLINE STA. 49+40.00
MATCHLINE STA. 55+00.00
167TH BOULEVARD NORTHEAST

JASON L. STARR
LICENSE
No. 70171
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

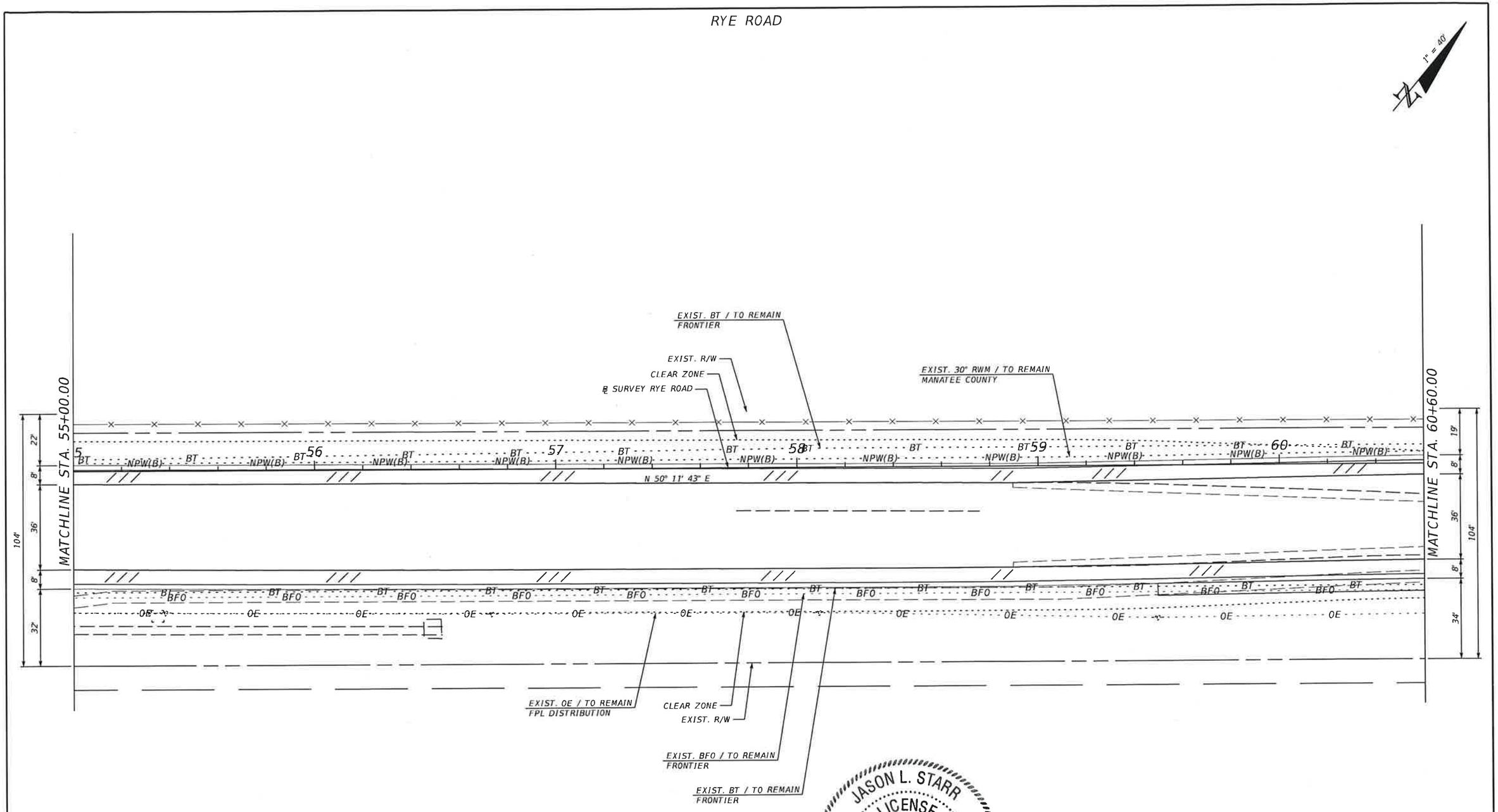
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (24)

SHEET NO.: 104

1:14:17 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\roadway\UTADRD24.DGN

RYE ROAD



JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

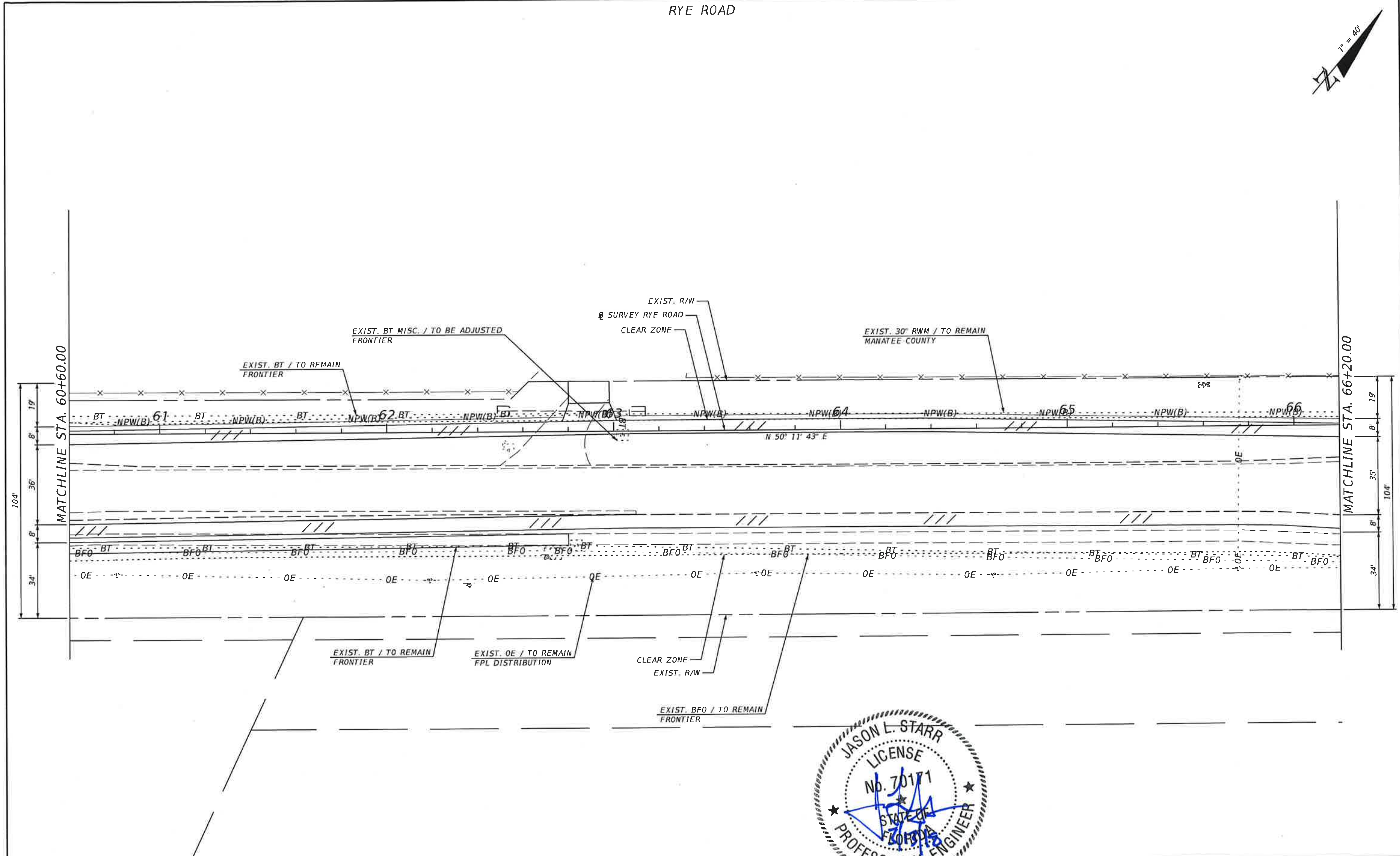
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (25)

SHEET NO.: 105

1:14:31 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\roadway\UTADRD25.DGN



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (26)

SHEET NO.: 106

1:14:44 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\roadway\UTADRD26.DGN

RYE ROAD

1" = 40'

EXIST. 30" RWM / TO REMAIN
MANATEE COUNTY

EXIST. BFO / TO REMAIN
FRONTIER

EXIST. R/W
℄ SURVEY RYE ROAD
CLEAR ZONE

END PROJECT
END CONSTRUCTION
STA. 69+22.65

MATCHLINE STA. 66+20.00

104'
35'
8'
34'
19'
8'

67 68 69 70 71

NPW(B) BFO BT OE

N 50° 11' 43" E

POT STA. 71+19.78

CLEAR ZONE
EXIST. R/W

EXIST. OE / TO REMAIN
FPL DISTRIBUTION

CLEAR ZONE

EXIST. WM VALVE / TO BE ADJUSTED
MANATEE COUNTY

EXIST. BT / TO REMAIN
FRONTIER

EXIST. BFO / TO REMAIN
FRONTIER

169TH COURT
NORTHEAST

JASON L. STARR
LICENSE
No. 70171
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

UTILITY ADJUSTMENTS (27)

SHEET NO.: 107

1:14:57 PM 3/13/2018 PW:\007982\CON0086775\0000000022533B\13.00 CAD\12345615201\roadway\UTADRD27.DGN

RYE ROAD

RYE ROAD
PROFESSIONAL CENTER

1" = 40'

539

540

541

542

SR 64

STOP

DIVIDED HIGHWAY

BEGIN PROJECT
BEGIN SIGNING
BEGIN PAVEMENT MARKING
STA. 100+38.32
MATCH EXISTING

POT STA. 100+00.00

700-1-11
M2-1
M1-5
STA. 104+00

JCT 64

EXIST. R/W

700-1-50 TO RELOCATE

STOP

6" WHITE

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

6" WHITE

100 101 102 103 104

12'

12'

12'

12'

MATCH EXIST.
+38.32

MATCHLINE STA. 104+20.00

6" WHITE

EXIST. R/W

EXIST. R/W

HIGH WATER AHEAD

SPECIAL-1
STA. 101+20
700-1-11

NEXT 3 MILES

(PICTURE OF SANDHILL CRANES)

SPECIAL-2
W7-3AP
STA. 101+80
(CONTACT MANATEE CO.)
700-1-11

FLORIDA SHERIFFS YOUTH RANCHES

SPECIAL-3
STA. 103+07
700-1-11

19 Pt. E

W2-1
W16-8P
STA. 103+43
700-1-11

JASON L. STARR
LICENSE
No. 70171
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	JHC
CHECKED BY	JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE 09/2017
PROJECT NO. 6086160

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER
JASON L. STARR
FL. LICENSE NO.
70171

SIGNING AND PAVEMENT MARKING PLAN (1)

SHEET NO.
S-1

1:15:11 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP01.DGN

RYE ROAD

18TH PLACE EAST

1" = 40'

MATCHLINE STA. 104+20.00

MATCHLINE STA. 109+80.00

6" WHITE

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

TO REMAIN

STOP

DEAD END

EXIST. R/W

700-1-11
W2-1
W16-8P
STA. 107+43

18 PLE

105 106 107 108 109

12' +47.35 +02.00

12' +48.61

+85.00 +41.55 +85.69 +93.50

+41.59

12'

6" WHITE

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

EXIST. R/W

6" WHITE

6" YELLOW (10'-30' SKIP) TYP. WITH Y/Y RPM'S @ 40' OC

SPEED LIMIT 45

R2-1
STA. 104+27
700-1-11

STOP

TO REMAIN

18TH PLACE EAST

JASON L. STARR LICENSE No. 70171 STATE OF FLORIDA PROFESSIONAL ENGINEER

3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

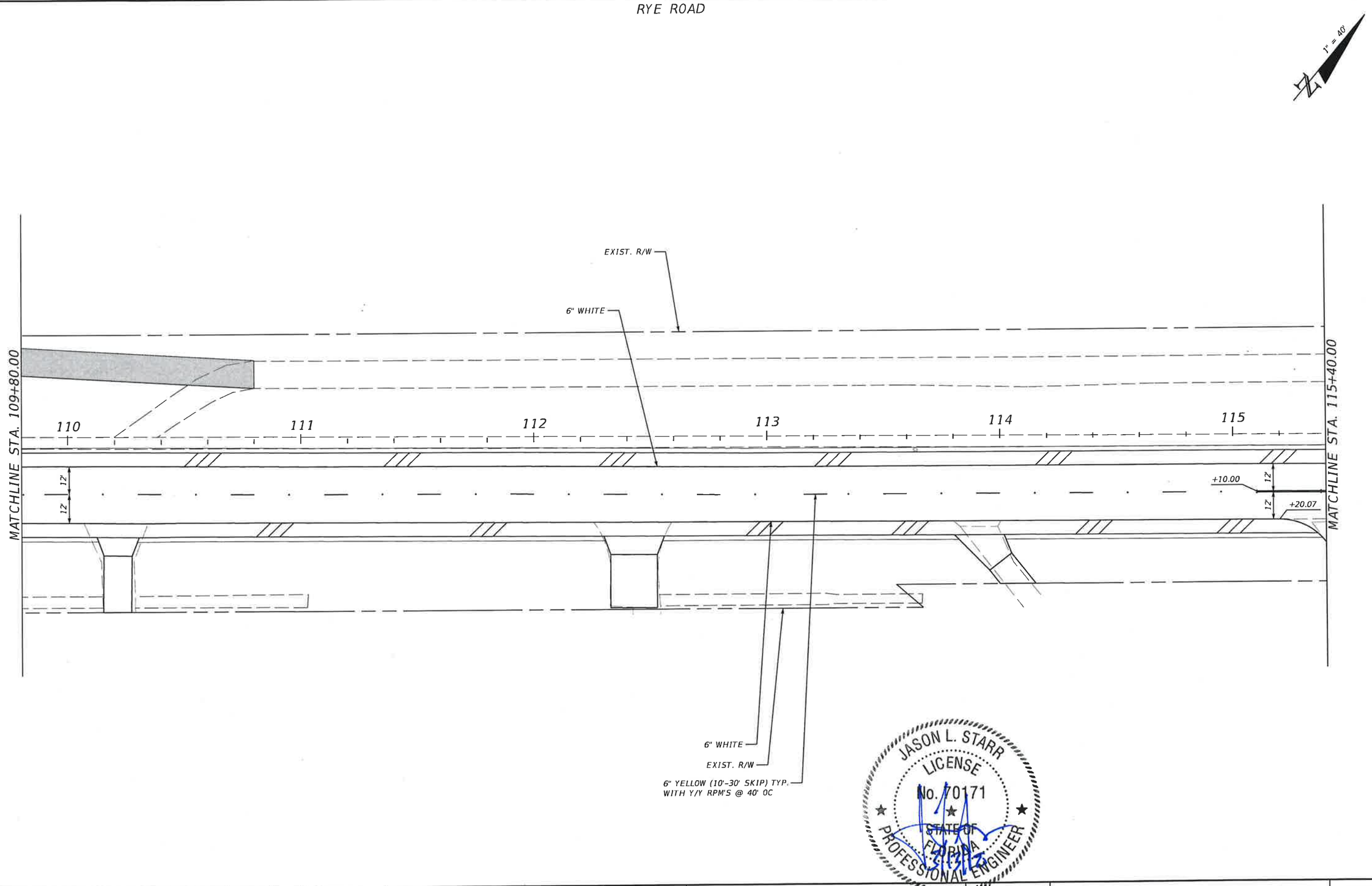
DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (2)

SHEET NO.: S-2

1:15:24 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP02.DGN

RYE ROAD



JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (3)

SHEET NO.: S-3

1:15:38 PM 3/13/2018 PW:\007982\CON0086775\0000000000225338\13.00_CAD\12345615201\signing\PLANSP03.DGN

RYE ROAD

WOODVIEW WAY

1" = 40'

700-1-11
W2-1
W16-8aP
STA. 120+80

15' Dr E
Woodview Way

EXIST. R/W

6" WHITE

TO REMAIN

STOP

6" YELLOW (10'-30' SKIP) TYP.
WITH Y/Y RPM'S @ 40' OC

MATCHLINE STA. 115+40.00

116 117 118 119 120

MATCHLINE STA. 121+00.00

12'

12'

+10.53

+18.00

+73.96

+09.99

+03.62

+02.00

+97.81

STOP

TO RELOCATE

700-1-50

6" WHITE

EXIST. R/W

STOP

TO RELOCATE

700-1-50

15' Dr E
Woodview Way

W2-1
W16-8aP
STA. 116+40

700-1-11

JASON L. STARR
LICENSE
No. 70171
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

15TH DRIVE EAST

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
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CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

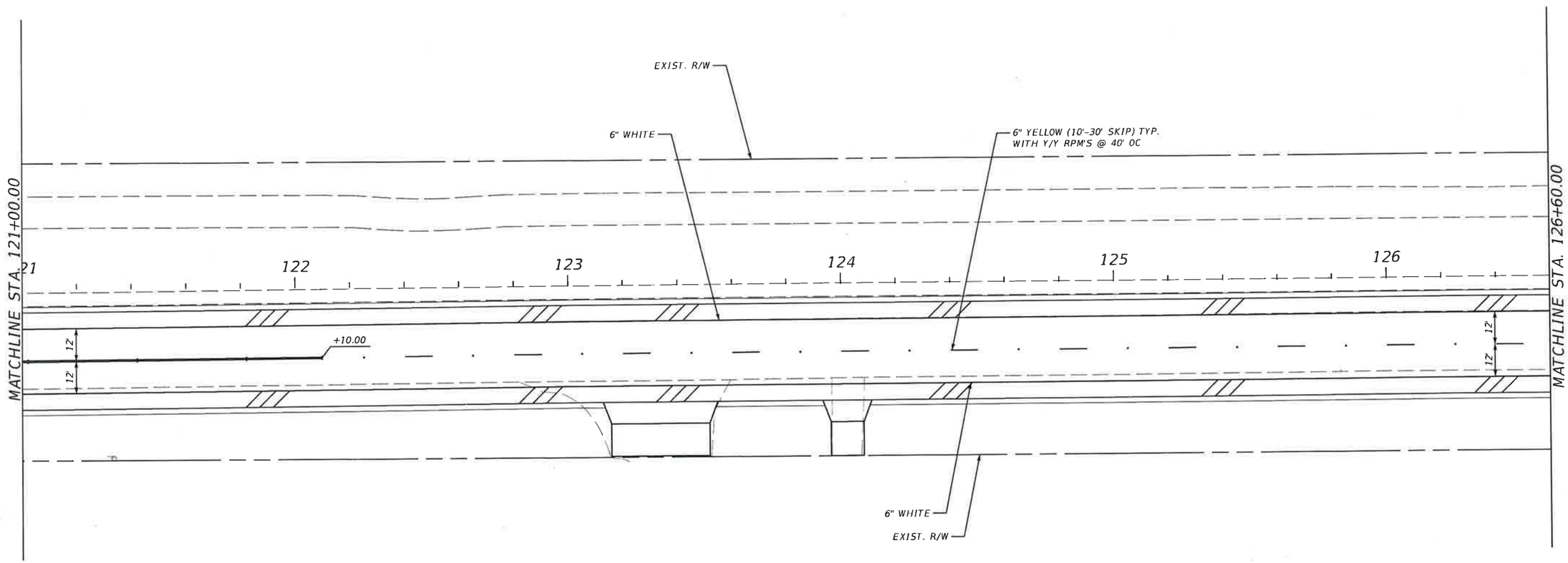
SIGNING AND PAVEMENT MARKING PLAN (4)

SHEET NO.: S-4

1:15:51 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP04.DGN

RYE ROAD

1" = 40'



JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

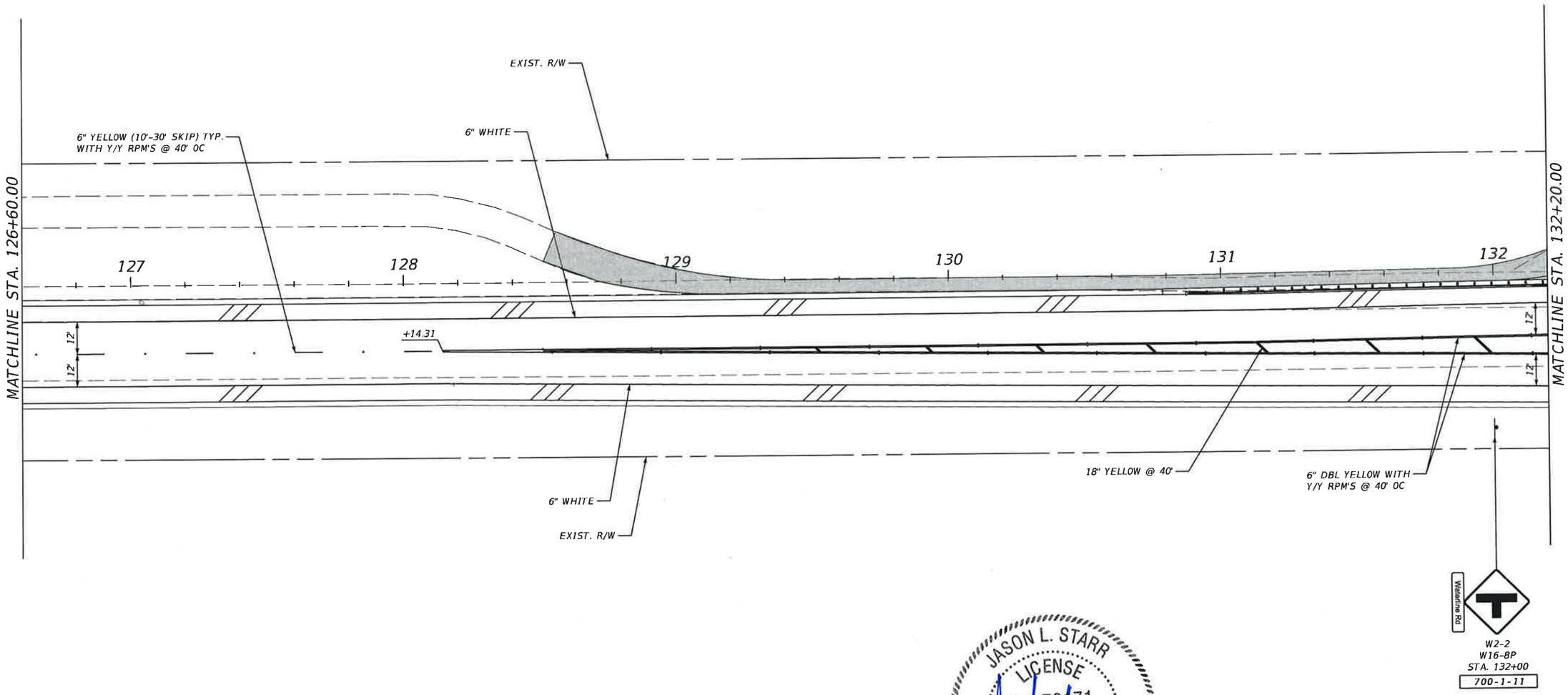
SIGNING AND PAVEMENT MARKING PLAN (5)

SHEET NO.: S-5

1:16:03 PM 3/13/2018 PW:\007982\CON0086775\0000000022533B\13.00_CAD\12345615201\signing\PLANSP05.DGN

RYE ROAD

1" = 40'



JASON L. STARR
LICENSE
No. 70171
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (6)

SHEET NO.: S-6

1:16:17 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00 CAD\12345615201\signing\PLANSP06.DGN

RYE ROAD

1" = 40'

700-1-11
W2-2
W16-8P
STA. 136+80

Waterline Rd

700-1-11
OM1-1
STA. 133+69

700-1-11
OM1-1
STA. 133+76

700-1-11
W1-7
STA. 133+83

700-1-11
OM1-1
STA. 133+90

6" WHITE

EXIST. R/W

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

DIRECTIONAL ARROWS

6" WHITE WITH W/R
RPM'S @ 20' OC

MATCHLINE STA. 132+20.00

MATCHLINE STA. 137+80.00

133 134 135 136 137

N 50° 11' 43" E

+52.11

+78.06

+04.84

5' R

+57.63

50' R

24" WHITE

+05.92

+89.00

+47.97

35' R

12'

18" YELLOW @ 40'

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

6" WHITE

RYE RD

STOP

WATERLINE RD

R1-1
D-3 (2)
STA. 134+87
700-1-11

+84.49

+98.84

6" WHITE

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

EXIST. R/W

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

+86.31

WATERLINE SERVICE ROAD

JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

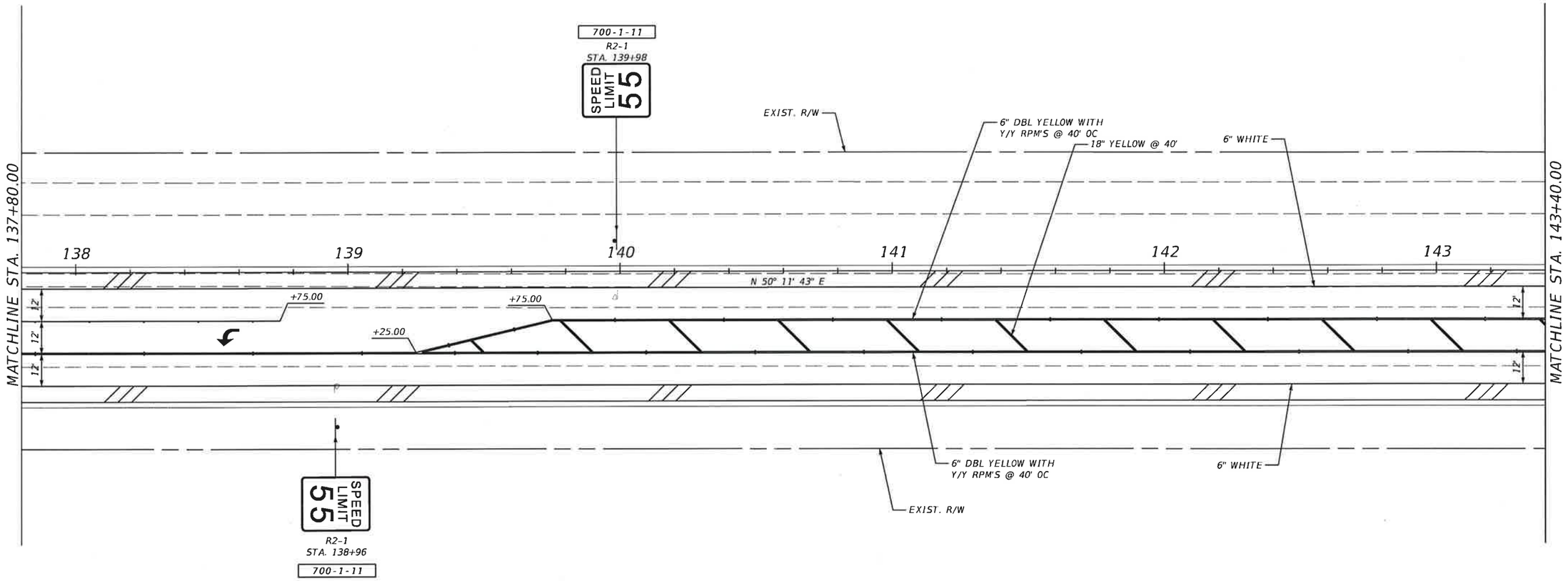
SIGNING AND PAVEMENT MARKING PLAN (7)

SHEET NO.: S-7

1:16:31 PM 3/13/2018 PW:\007982\CON0086775\00000000225338\13.00 CAD\12345615201\signing\PLANSP07.DGN

RYE ROAD

1" = 40'



JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER
3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (8)

SHEET NO.: S-8

1:16:43 PM 3/13/2018 PW:\007982\CON0086775\00000000225338\13.00_CAD\12345615201\signing\PLANSP08.DGN

RYE ROAD

147TH STREET EAST

1" = 40'

MATCHLINE STA. 143+40.00

MATCHLINE STA. 149+00.00

700-1-50
TO RELOCATE

STOP

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

EXIST. R/W

18" YELLOW @ 40'

6" WHITE

+74.55

6" WHITE (6'-10' SKIP)

+06.86

144 145 146 147 148

12'

+02.55

+05.00

+55.00

+55.00

+32.44

12'

12'

12'

12'

EXIST. R/W

DIRECTIONAL ARROWS

6" WHITE

6" WHITE WITH W/R RPM'S @ 20' OC

147 ST. E

W2-2
W16-8P
STA. 146+00
700-1-11

JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER
3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (9)

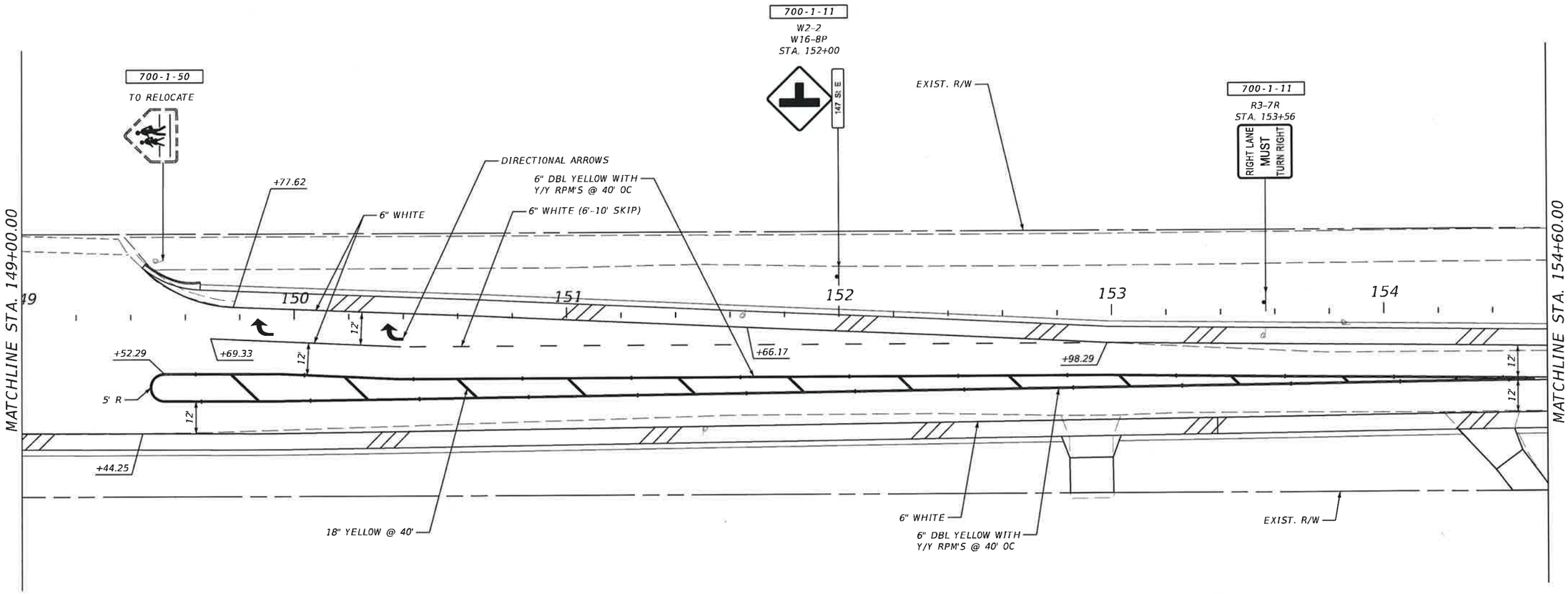
SHEET NO.: S-9

1:16:56 PM 3/13/2018 PW:\007982\CON0086775\0000000000225338\13.00_CAD\12345615201\signing\PLANSP09.DGN

RYE ROAD

147TH STREET EAST

1" = 40'



JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

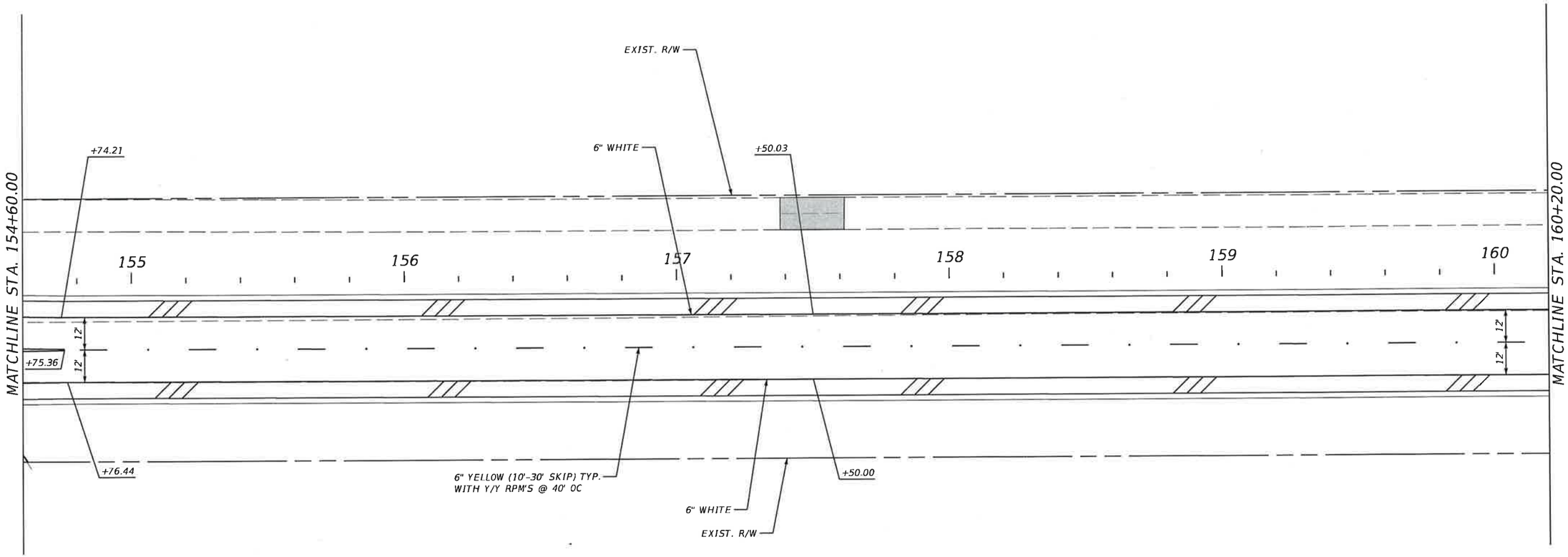
SIGNING AND PAVEMENT MARKING PLAN (10)

SHEET NO.: S-10

1:17:09 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP10.DGN

RYE ROAD

1" = 40'



JASON L. STARR
LICENSE
No. 70171
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

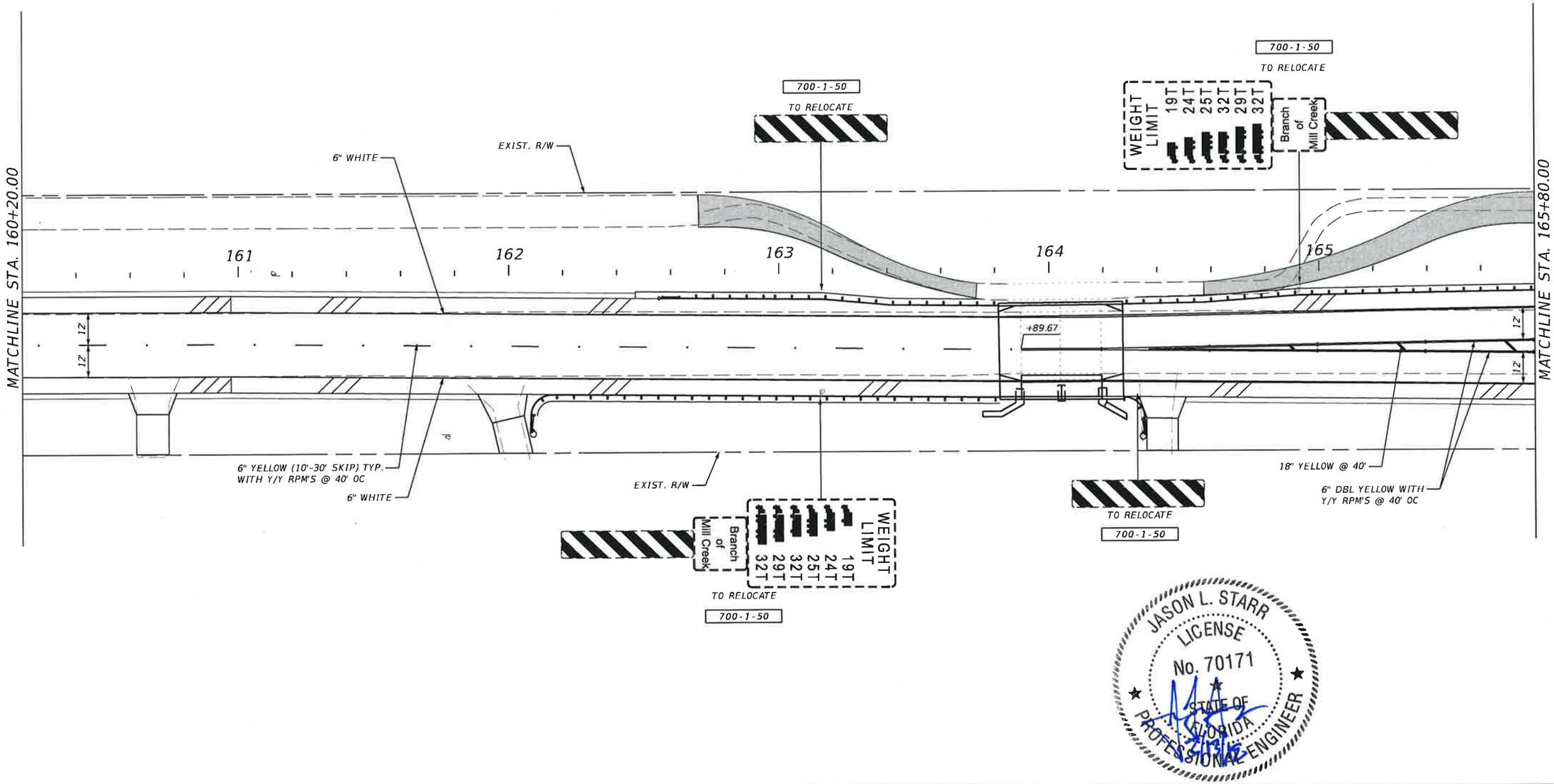
SIGNING AND PAVEMENT MARKING PLAN (11)

SHEET NO.: S-11

1:17:22 PM 3/13/2018 PW:\007982\CON0086775\00000000225338\13.00_CAD\12345615201\signing\PLANSP11.DGN

RYE ROAD

1" = 40'



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No.	REVISIONS	DATE	BY

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SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

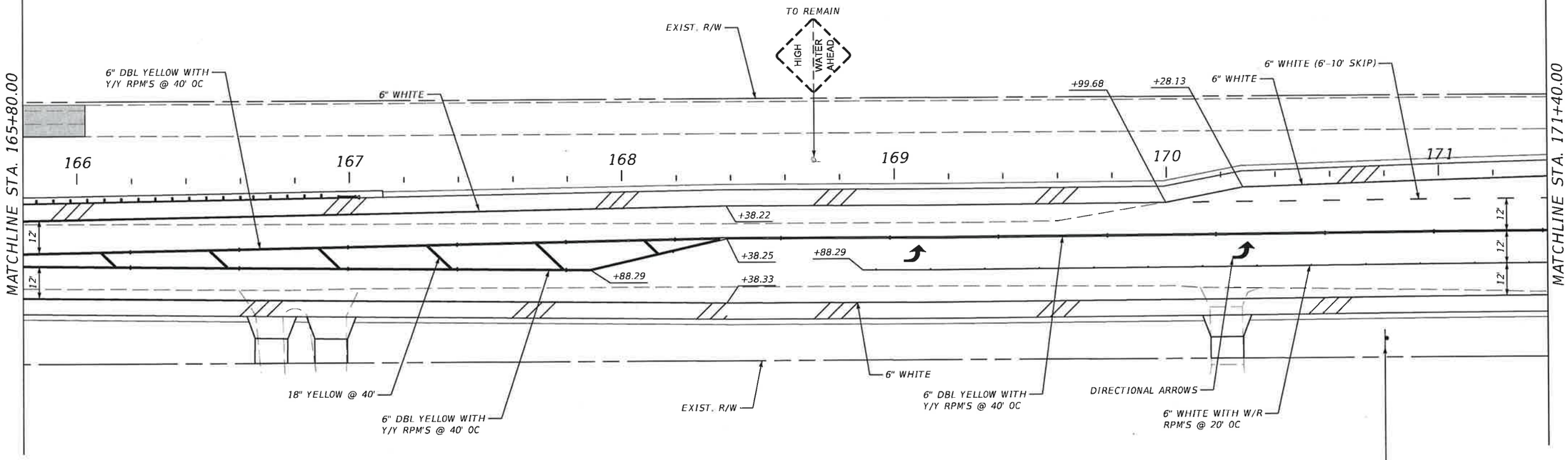
SIGNING AND PAVEMENT MARKING PLAN (12)

SHEET NO.: S-12

1:17:35 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP12.DGN

RYE ROAD

1" = 40'



No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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CHECKED BY: JLS

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SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (13)

SHEET NO.: S-13

1:17:47 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP13.DGN

RYE ROAD

3RD DRIVE EAST

1" = 40'

MATCHLINE STA. 171+40.00

MATCHLINE STA. 177+00.00

TO REMAIN

STOP

700-1-11
W2-2
W16-8P
STA. 175+80

3 Dr E

700-1-11
R2-1
STA. 175+44

SPEED LIMIT 55

EXIST. R/W

18" YELLOW @ 10'

6" WHITE (6'-10' SKIP)

6" WHITE

+62.24

+69.93

+92.47

172

173

174

175

176

11'

+64.22

+84.93

+86.93

+71.15

12'

3' R

+71.04

60' R

+92.85

+93.29

+87.87

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

6" WHITE WITH W/R RPM'S @ 20' OC

DIRECTIONAL ARROWS

EXIST. R/W

6" WHITE

18" YELLOW @ 10'

DIRECTIONAL ARROWS

6" YELLOW (10'-30' SKIP) TYP. WITH Y/Y RPM'S @ 40' OC

6" YELLOW WITH Y/Y RPM'S @ 40' OC

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SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
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DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (14)

SHEET NO.: S-14

1:17:59 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP14.DGN

RYE ROAD

1" = 40'

MATCHLINE STA. 177+00.00

MATCHLINE STA. 182+60.00

700-1-11
R1-1
STA. 179+63

700-1-11
R5-1
STA. 180+09

700-1-11
S5-2
STA. 180+45

EXIST. R/W

6" WHITE

DIRECTIONAL ARROWS

177 178 179 180 181 182

12' 12' 12'

+47.19

+97.17

SCHOOL

6" WHITE

6" YELLOW (10'-30' SKIP) TYP.
WITH Y/Y RPM'S @ 40' OC

6" YELLOW WITH Y/Y
RPM'S @ 40' OC

EXIST. R/W

18" YELLOW @ 10'

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

AHEAD

S1-1
W16-9P
STA. 178+20
700-1-11

SCHOOL SPEED LIMIT 20 WHEN FLASHING

S5-1
STA. 180+45
700-1-11

SPEEDING FINES DOUBLED

R10-29
STA. 181+45
700-1-11

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3/13/18

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DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
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FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (15)

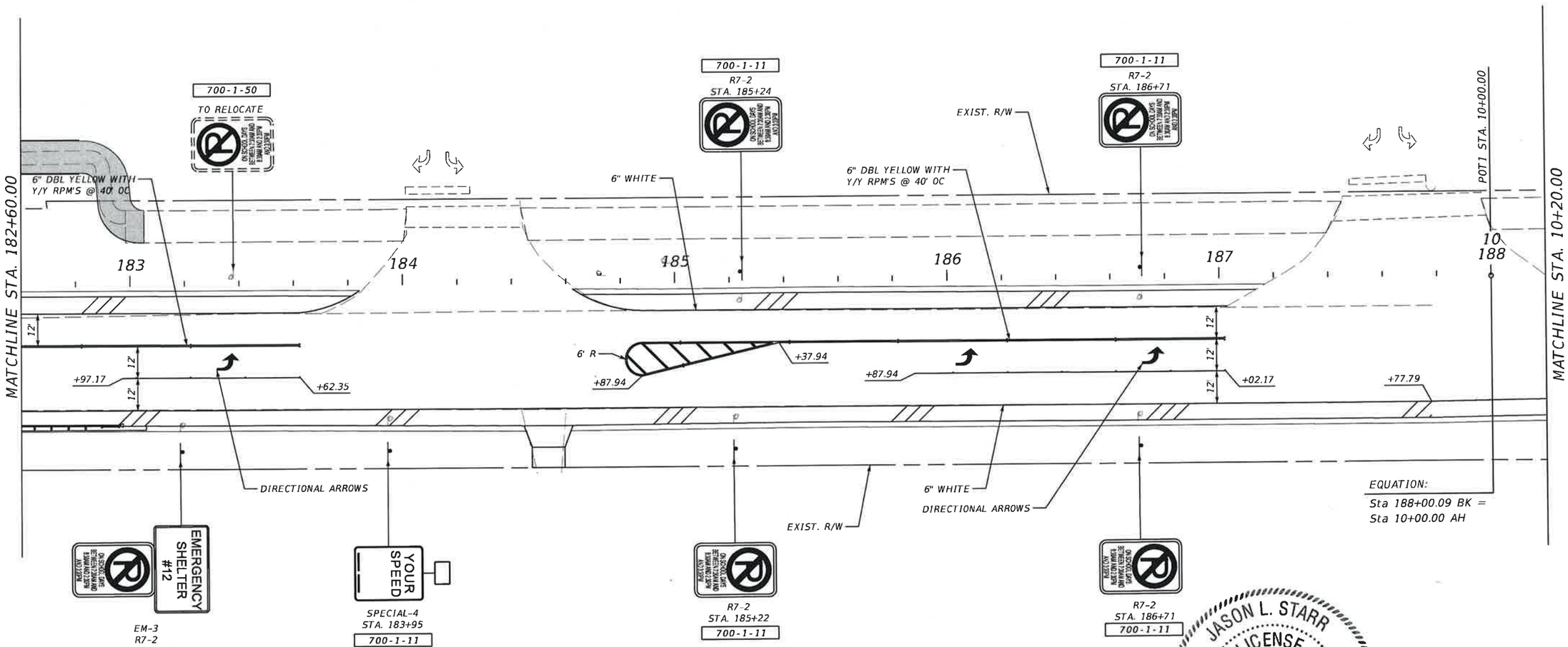
SHEET NO.: S-15

1:18:11 PM 3/13/2018 PW:\007982\CON0086775\00000000225338\13.00 CAD\12345615201\signing\PLANSP15.DGN

RYE ROAD

1" = 40'

GENE WITT
ELEMENTARY
SCHOOL



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DRAWN BY	JHC
CHECKED BY	JLS

HDR ENGINEERING, INC.
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SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE 09/2017
PROJECT NO. 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER
JASON L. STARR
FL. LICENSE NO.
70171

SIGNING AND PAVEMENT MARKING PLAN (16)

SHEET NO.
S-16

1:18:26 PM 3/13/2018 PW:\007982\CON0086775\00000000225338\13.00_CAD\12345615201\signing\PLANSP16.DGN

RYE ROAD

1" = 40'

MATCHLINE STA. 10+20.00

MATCHLINE STA. 15+80.00

700-1-11
R10-29
STA. 11+25
SPEEDING FINES DOUBLED

700-1-11
R7-2
STA. 11+45

700-1-11
S5-1
STA. 12+25
SCHOOL SPEED LIMIT 20 WHEN FLASHING

700-1-50
TO RELOCATE
STOP

700-1-50
TO RELOCATE
DO NOT ENTER

700-1-50
TO RELOCATE
DO NOT ENTER

700-1-11
R10-7
STA. 14+38
DO NOT BLOCK DRIVEWAY

700-1-11
S1-1
W16-9P
STA. 14+77
AHEAD

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

+32.74

6" WHITE

EXIST. R/W

11 12 13 14 15

+78.56

12'

SCHOOL

5.66' R

+78.56

12'

18" YELLOW @ 40'

6" WHITE

EXIST. R/W

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

R7-2
STA. 11+32
700-1-11

W11-8
STA. 11+60
700-1-11

S5-02
STA. 12+25
700-1-11

END SCHOOL ZONE

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No.	REVISIONS	DATE	BY

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DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
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DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (17)

SHEET NO.: S-17

1:18:38 PM 3/13/2018 PW:\007982\CON0086775\0000000000225338\13.00_CAD\12345615201\signing\PLANSP17.DGN

RYE ROAD

1" = 40'

MATCHLINE STA. 15+80.00

700-1-11
W11-8
STA. 16+23

700-1-50
TO RELOCATE

700-1-50
TO RELOCATE

EXIST. R/W

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

6" WHITE

+90.74

16 17 18 19 20 21

12'
12'

+40.74

+90.74

+90.74

12'
12'
12'

MATCHLINE STA. 21+40.00

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

18" YELLOW @ 40'

EXIST. R/W

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

6" WHITE

DIRECTIONAL ARROWS

6" WHITE WITH W/R
RPM'S @ 20' OC

TO RELOCATE
700-1-50

TO RELOCATE
700-1-50

Grande Vista Blvd

W2-2
W16-8P
STA. 20+00
700-1-11

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No.	REVISIONS	DATE	BY

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SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (18)

SHEET NO.: S-18

1:18:51 PM 3/13/2018 PW:\0079B2\CON0086775\00000000225338\13.00_CAD\12345615201\signing\PLANSP18.DGN

RYE ROAD

PROPOSED DEL TIERRA SITE
(BY OTHERS)

1" = 40'

GRANDE VISTA BLVD

MATCHLINE STA. 21+40.00

MATCHLINE STA. 27+00.00

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

EXIST. R/W

6" WHITE WITH
W/R RPM'S @ 20' OC

DIRECTIONAL ARROWS

6" WHITE

22 23 24 25 26

+49.81

+09.96

+90.74

2.5' R

+77.17

5.66' R

+97.37

12' 12' 12' 12' 4' 12'

6" WHITE WITH W/R
RPM'S @ 20' OC

DIRECTIONAL ARROWS

6" WHITE

EXIST. R/W

18" YELLOW @ 40'

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

SPEED LIMIT 55

R2-1
STA. 22+68
700-1-11

JASON L. STARR
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STATE OF FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (19)

SHEET NO.: S-19

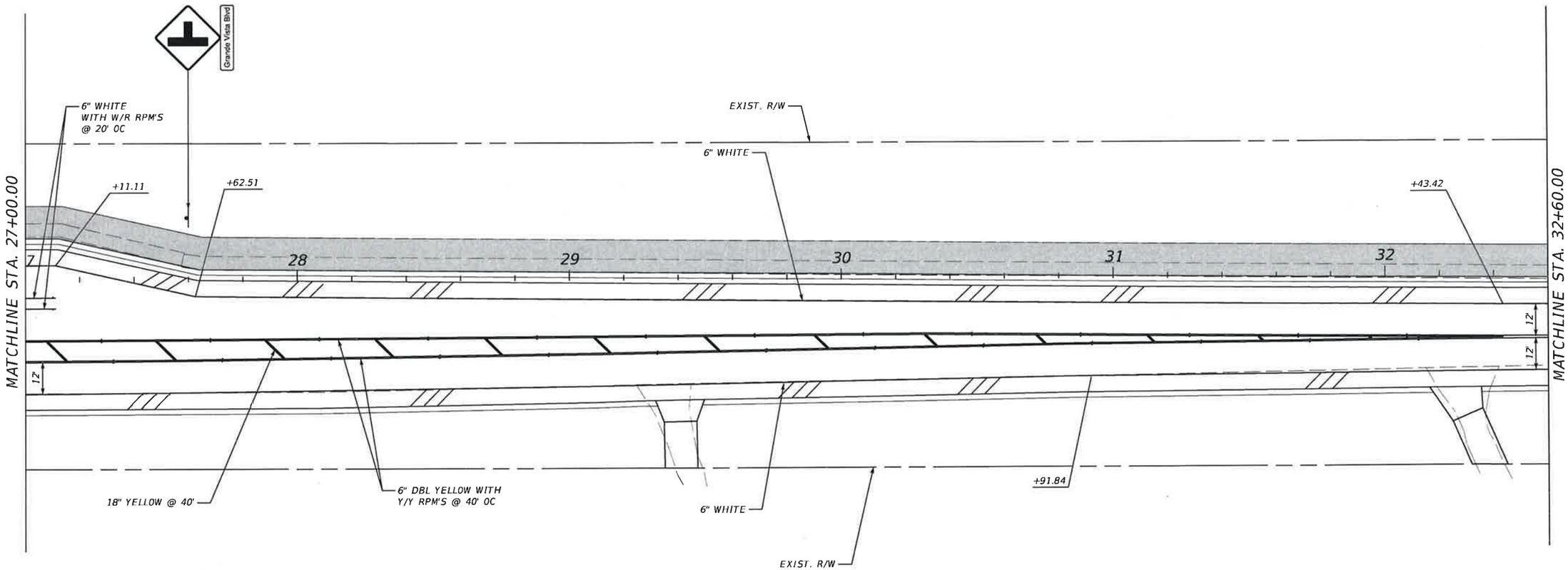
1:19:03 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP19.DGN

RYE ROAD

1" = 40'

700-1-11
W2-2
W16-8P
STA. 27+60

Grande Vista Blvd



JASON L. STARR
LICENSE
No. 70171
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (20)

SHEET NO.: S-20

1:19:17 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00 CAD\12345615201\signing\PLANSP20.DGN

RYE ROAD

1" = 40'

EXIST. R/W

6" WHITE

MATCHLINE STA. 32+60.00

33 34 35 36 37 38

MATCHLINE STA. 38+20.00

12'

+18.30

12'

12'

12'

6" DBL YELLOW WITH
Y/Y RPM'S @ 40' OC

6" YELLOW (10'-30' SKIP) TYP.
WITH Y/Y RPM'S @ 40' OC

6" WHITE

EXIST. R/W

JASON L. STARR
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STATE OF
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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
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DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

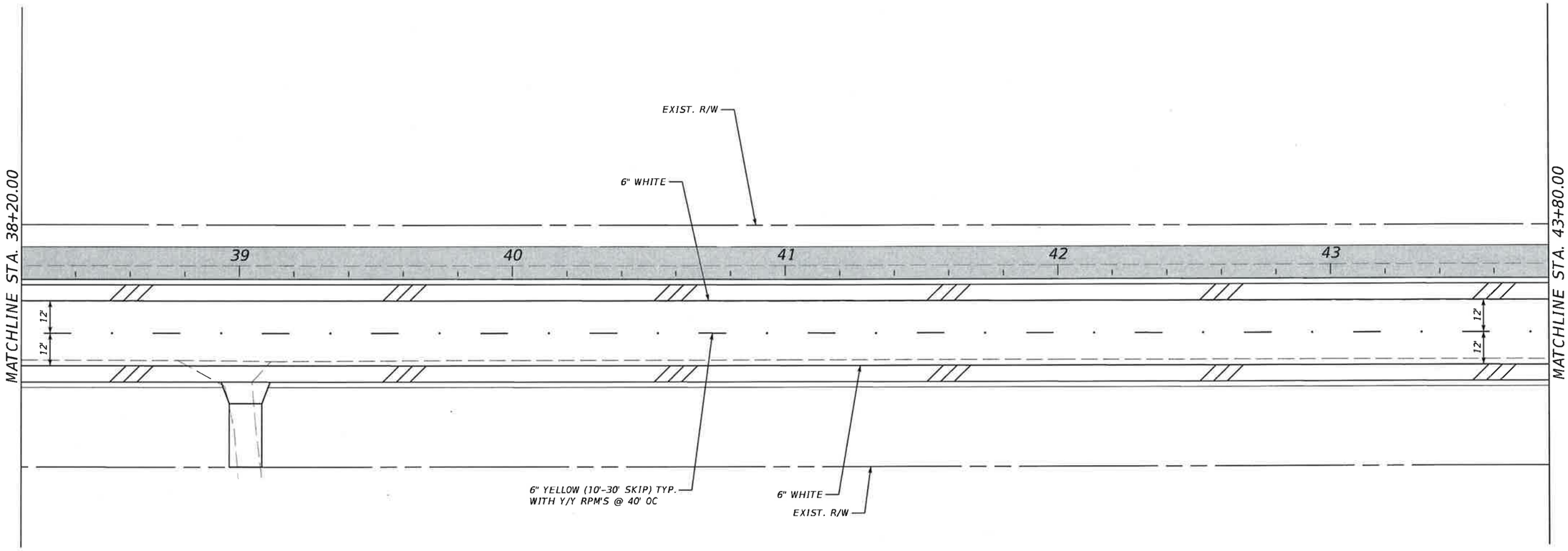
SIGNING AND PAVEMENT MARKING PLAN (21)

SHEET NO.: S-21

1:19:31 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP21.DGN

RYE ROAD

1" = 40'



JASON L. STARR
LICENSE
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STATE OF FLORIDA
PROFESSIONAL ENGINEER
3/13/18

No.	REVISIONS	DATE	BY

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SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

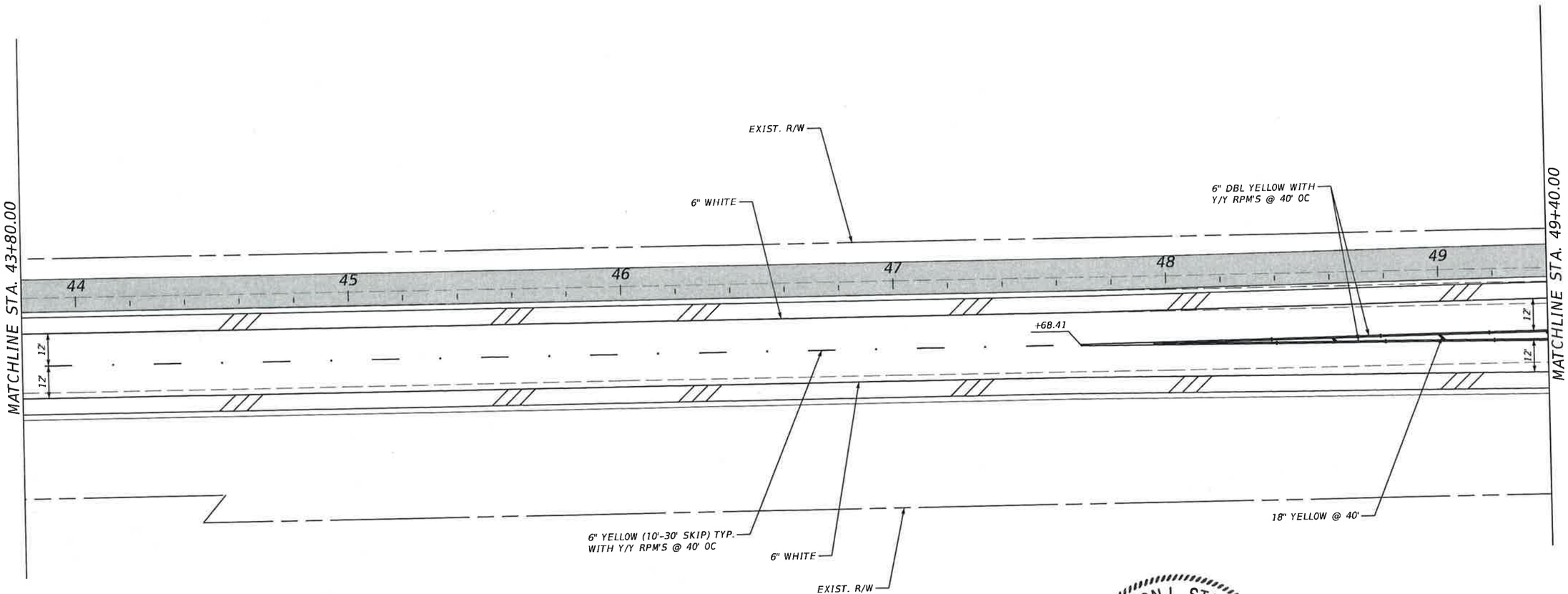
SIGNING AND PAVEMENT MARKING PLAN (22)

SHEET NO.: S-22

1:19:46 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP22.DGN

RYE ROAD

1" = 40'



JASON L. STARR
LICENSE
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STATE OF
FLORIDA
PROFESSIONAL ENGINEER
3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
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2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
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DATE: 09/2017
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Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (23)

SHEET NO.: S-23

1:20:00 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP23.DGN

RYE ROAD

1" = 40'

MATCHLINE STA. 49+40.00

700-1-11
R2-1
STA. 49+63
SPEED LIMIT 55

50 51 52 53 54 5

EXIST. R/W

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

6" WHITE

6" WHITE WITH W/R RPM'S @ 20' OC

DIRECTIONAL ARROWS

12'

+48.50

4.5' R

12" WHITE

+69.26

+04.96

+71.30

+77.08

+53.00

+05.24

+69.25

+21.30

+61.08

18" YELLOW @ 40'

6" WHITE

EXIST. R/W

6" WHITE WITH W/R RPM'S @ 20' OC

DIRECTIONAL ARROWS

6" WHITE

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

MATCHLINE STA. 55+00.00

167TH BOULEVARD NORTHEAST

W2-2
W16-8P
STA. 49+80
700-1-11

STOP
TO REMAIN

JASON L. STARR
LICENSE
No. 70171
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DESIGN ENGINEER: JASON L. STARR
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SIGNING AND PAVEMENT MARKING PLAN (24)

SHEET NO.: S-24

1:20:13 PM 3/13/2018 PW:\007982\CON0086775\00000000225338\13.00_CAD\12345615201\signing\PLANSP24.DGN

RYE ROAD

1" = 40'

700-1-11
W2-2
W16-8P
STA. 58+80

I-167 Blvd NE

MATCHLINE STA. 55+00.00

MATCHLINE STA. 60+60.00

EXIST. R/W

DIRECTIONAL ARROWS

6" WHITE WITH W/R RPM'S @ 20' OC

6" WHITE

18" YELLOW @ 40'

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

55 56 57 58 59 60

+75.00 +50.00 +00.00

12' 12' 12' 12' 12'

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

6" WHITE

EXIST. R/W

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

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SIGNING AND PAVEMENT MARKING PLAN (25)

SHEET NO.: S-25

1:20:26 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP25.DGN

RYE ROAD

1" = 40'

MATCHLINE STA. 60+60.00

MATCHLINE STA. 66+20.00

61 62 63 64 65 66

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

EXIST. R/W

6" WHITE

+39.50

12'

12'

12'

6" WHITE

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

EXIST. R/W

18" YELLOW @ 40'

+93.90

169 Ct NE

W2-2
W16-8P
STA. 65+40
700-1-11

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DATE: 09/2017
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Manatee County FLORIDA

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DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (26)

SHEET NO.: S-26

1:20:38 PM 3/13/2018 PW:\007982\CON0086775\0000000000225338\13.00 CAD\12345615201\signing\PLANSP26.DGN

RYE ROAD

1" = 40'

700-1-11
W2-2
W16-8P
STA. 70+40

169 Ct. NE

END PROJECT
END SIGNING
END PAVEMENT MARKING
STA. 69+22.65
MATCH EXIST.

6" WHITE WITH W/R RPM'S @ 20' OC

+59.54

EXIST. R/W

6" WHITE

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

MATCHLINE STA. 66+20.00

67 68 69 70 71

12'

+24.10

6' R

+36.71

MATCH EXIST.
+22.65

POT STA. 71+19.78

+29.54

6" WHITE
18" YELLOW @ 40'

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

EXIST. R/W

STOP
TO REMAIN

6" WHITE

DIRECTIONAL ARROWS

6" DBL YELLOW WITH Y/Y RPM'S @ 40' OC

169TH COURT NORTHEAST

JASON L. STARR
LICENSE
No. 70171
STATE OF FLORIDA
PROFESSIONAL ENGINEER

3/13/18

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

SIGNING AND PAVEMENT MARKING PLAN (27)

SHEET NO.: S-27

1:20:51 PM 3/13/2018 PW:\007982\CON0086775\000000000225338\13.00_CAD\12345615201\signing\PLANSP27.DGN

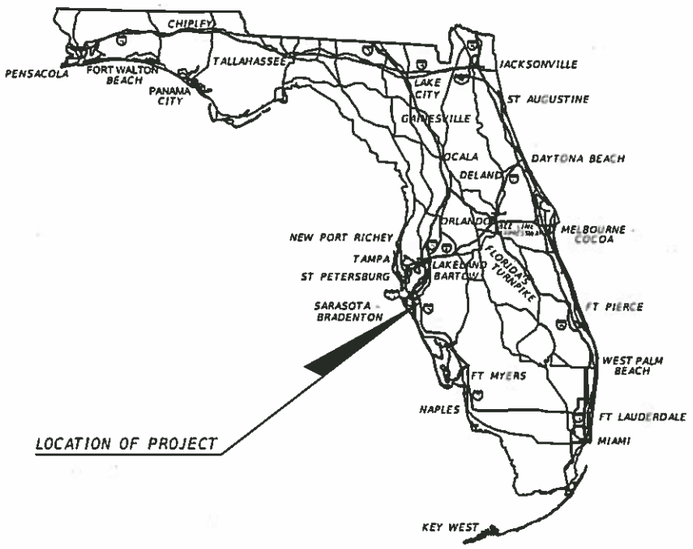
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT

CONTRACT PLANS

MANATEE COUNTY
(6086160)

RYE ROAD
FROM SR 64 TO UPPER MANATEE RIVER ROAD

BRIDGE NO. 134025 - RYE ROAD OVER MILL CREEK BRANCH
BRIDGE NO. 134026 - RYE ROAD OVER MILL CREEK BRANCH



INDEX OF STRUCTURE WIDENING PLANS

STRUCTURE SHOP DRAWINGS
TO BE SUBMITTED TO:

ANANDA B. KELLEY, P.E.
CARDNO, INC.
380 PARK PLACE BLVD., SUITE 300
CLEARWATER, FLORIDA 33759

PLANS PREPARED BY:

CARDNO
380 PARK PLACE BLVD, STE 300,
CLEARWATER, FL 33759
TEL: (727) 531- 3505
(800) 861-8314

www.cardno.com

Certificate of Authorization No. 29915

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

ANANDA BERGERON KELLEY
LICENSE
No 65632
STATE OF FLORIDA
PROFESSIONAL ENGINEER
11/23/16

MANATEE COUNTY PROJECT MANAGER: MICHAEL STURM, P.E.

KEY SHEET REVISIONS	
DATE	DESCRIPTION

STRUCTURE PLANS
ENGINEER OF RECORD: ANANDA B. KELLEY, P.E.

P.E. NO.: 65632

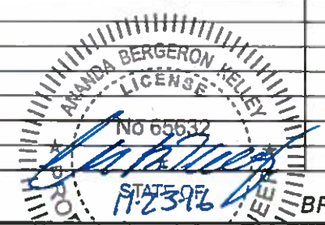
FISCAL YEAR	SHEET NO.
16	B1

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 134025

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
LUMP SUM ITEMS	110-3	REMOVAL OF EXISTING STRUCTURE	LEFT CURB, RIGHT 1'-10"	LS/SF	117					
FOUNDATION	455-35	STEEL PILING - HP14X73	PILES 1-7, 3-6, & 4-7	LF	117					
	455-133-3	STEEL SHEET PILING, F&I PERMANENT	END BENTS 1 & 4	SF	519					
	455-144	TEST PILES - STEEL, HP14X73	PILE 2-6	LF	50					
SUBSTRUCTURE	400-4-5	CONCRETE CLASS IV, SUBSTRUCTURE	BENTS 1 - 4	CY	12					
	415-1-5	REINFORCING STEEL, SUBSTRUCTURE	BENTS 1 - 4	LB	892					
APPROACH SLABS	400-2-10	CONCRETE CLASS II, APPROACH SLABS	APPROACH SLAB 1 & 2	CY	7					
	415-1-9	REINFORCING STEEL, APPROACH SLABS	APPROACH SLAB 1 & 2	LB	1209					
SUPERSTRUCTURE	400-2-4	CONCRETE CLASS II, SUPERSTRUCTURE	SPANS 1 - 3	CY	29					
	415-1-4	REINFORCING STEEL, SUPERSTRUCTURE	SPANS 1 - 3	LB	5770					
	458-1-11	BRIDGE DECK EXPANSION JOINT	AT EACH BENT	LF	43					
RAILING/ BARRIERS	460-71-1	METAL TRAFFIC RAILING, THRIE BEAM RETROFIT	LEFT & RIGHT BARRIERS	LF	122					

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 134026

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
LUMP SUM ITEMS	110-3	REMOVAL OF EXISTING STRUCTURE	LEFT CURB, RIGHT 1'-10"	LS/SF	76					
FOUNDATION	455-35	STEEL PILING - HP14X73	PILES 1-7 & 3-7	LF	46					
	455-133-3	STEEL SHEET PILING, F&I PERMANENT	END BENTS 1 & 4	SF	594					
	455-144	TEST PILES - STEEL, HP14X73	PILE 2-6	LF	40					
SUBSTRUCTURE	400-4-5	CONCRETE CLASS IV, SUBSTRUCTURE	BENTS 1 - 3	CY	11					
	415-1-5	REINFORCING STEEL, SUBSTRUCTURE	BENTS 1 - 3	LB	773					
APPROACH SLABS	400-2-10	CONCRETE CLASS II, APPROACH SLABS	APPROACH SLAB 1 & 2	CY	7					
	415-1-9	REINFORCING STEEL, APPROACH SLABS	APPROACH SLAB 1 & 2	LB	1200					
SUPERSTRUCTURE	400-2-4	CONCRETE CLASS II, SUPERSTRUCTURE	SPANS 1 & 2	CY	20					
	415-1-4	REINFORCING STEEL, SUPERSTRUCTURE	SPANS 1 & 2	LB	3756					
	458-1-11	BRIDGE DECK EXPANSION JOINT	AT EACH BENT	LF	32					
RAILING/ BARRIERS	460-71-1	METAL TRAFFIC RAILING, THRIE BEAM RETROFIT	LEFT & RIGHT BARRIERS	LF	92					



BRIDGES NO. 134025 & NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: FXH
CHECKED BY: ABK

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: AMANDA B. KELLEY
FL. LICENSE NO.: 65632

SUMMARY OF QUANTITIES

SHEET NO.: B2

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CONSTRUCTION SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2016 EDITION) WITH SUPPLEMENTS THERETO.

MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS (FLORIDA GREEN BOOK) (2013 EDITION).

DESIGN SPECIFICATIONS:
FDOT STRUCTURES DESIGN GUIDELINES (SDG) FOR LOAD AND RESISTANCE FACTOR DESIGN (2016 EDITION). FDOT STRUCTURES MANUAL 2016.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), LRFD BRIDGE DESIGN SPECIFICATIONS SEVENTH EDITION/2014 WITH 2015 INTERIM REVISIONS.

DESIGN METHOD:
LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD) FOR ALL NEW ELEMENTS UNLESS OTHERWISE NOTED. DESIGN METHOD FOR EXISTING STRUCTURE TO REMAIN IS UNKNOWN.

DESIGN LOADING:
DEAD LOADS:

UNIT WEIGHT OF REINFORCED CONCRETE (INCLUDING REINFORCEMENT)	150 pcf
FUTURE WEARING SURFACE ALLOWANCE (APPLIED OVER PROJECTED PLAN AREA OF THE EXPOSED BRIDGE DECK)	15 psf
GUARDRAIL	40 plf

LIVE LOADS:
HL-93 LOADING FOR ALL NEW CONSTRUCTION. ORIGINAL DESIGN LOADING FOR EXISTING STRUCTURE TO REMAIN IS UNKNOWN.

WIND LOADS:
WIND LOADS ARE IN ACCORDANCE WITH AASHTO, SECTION 3.8., & SDG 2.4.

EARTHQUAKE LOADS:
THE MINIMUM BEARING SUPPORT LENGTH IS DETERMINED IN ACCORDANCE WITH AASHTO, SECTION 4.7.4.4. NO SEISMIC FORCES ARE APPLIED IN ACCORDANCE WITH THE "STRUCTURES DESIGN GUIDELINES", SECTION 2.3.1.

TEMPERATURE EFFECTS:
STRUCTURE MATERIAL: CONCRETE

MEAN	RISE FROM MEAN	FALL FROM MEAN	RANGE
70°	+35°	+35°	70°

COEFFICIENT OF THERMAL EXPANSION: 0.000006 PER °F.

ENVIRONMENT:
SUPERSTRUCTURE - SLIGHTLY AGGRESSIVE
SUBSTRUCTURE - SLIGHTLY AGGRESSIVE (CONCRETE)
MODERATELY AGGRESSIVE (STEEL)

CONCRETE:

CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH(PSI)	LOCATION OF CONCRETE IN STRUCTURE
II (BRIDGE DECK)	f'c = 4,500	C.I.P. CONCRETE DECK, APPROACH SLABS
IV	f'c = 5,500	C.I.P. SUBSTRUCTURE

CONCRETE COVER:
CONCRETE COVER SHOWN IN PLANS DOES NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE TOLERANCES.

CHAMFERS:
PROVIDE ¾" CHAMFER ON ALL EXPOSED EDGES, EXCEPT AS NOTED OTHERWISE.

SCREEDING DECK SLABS:
THE RIDING SURFACE OF THE BRIDGE DECK SHALL BE SCREEDED TO FINISHED GRADE WITH NO ALLOWANCE FOR PERMANENT CAMBER.

REINFORCING STEEL:
ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60. ALL DIMENSIONS LOCATIONS OF REINFORCING ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.

PILE REQUIREMENTS:
SEE "FOUNDATION LAYOUT SHEET" FOR PILE SIZES.

UTILITIES:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO UNCOVER AND VERIFY THE LOCATION OF THE EXISTING UTILITIES IN THE VICINITY OF PILE DRIVING OPERATION. UNLESS DIRECTED OTHERWISE BY THE ENGINEER, EXISTING UTILITIES MUST BE PROTECTED DURING CONSTRUCTION BY THE CONTRACTOR.

TURBIDITY CONTROL:
PROVIDE AND MAINTAIN FLOATING TURBIDITY BARRIERS AS REQUIRED TO CONTROL TURBIDITY CAUSED BY CONSTRUCTION OPERATIONS IN ACCORDANCE WITH PERMIT REQUIREMENTS.

JOINTS IN CONCRETE:
CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT LOCATIONS INDICATED IN THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER. ALL CONTACTING SURFACES SHALL BE COATED WITH AN APPROVED EPOXY BONDING COMPOUND IN ACCORDANCE WITH THE SPECIFICATIONS IMMEDIATELY PRIOR TO CASTING THE NEW CONCRETE ADJACENT TO EXISTING CONCRETE. THE EPOXY BONDING COMPOUND SHALL BE APPLIED IN A MANNER THAT MINIMIZES THE ELAPSED TIME BETWEEN APPLICATION AND THE CASTING OF THE NEW CONCRETE. THE USE OF OTHER METHODS NOT UTILIZING EPOXY BONDING COMPOUND WILL REQUIRE THE PRIOR APPROVAL OF THE ENGINEER.

EXPANSION JOINTS:
EXISTING EXPANSION JOINTS TO REMAIN. PROVIDE NEW EXPANSION JOINTS FOR WIDENED SECTIONS IN ACCORDANCE WITH STANDARD SPECIFICATION 400-10.

VERTICAL DATUM:
ELEVATIONS ARE ACCORDING TO THE NATIONAL GEODECTIC VERTICAL DATUM OF 1929 (NGVD 29).

EXISTING CONDITIONS:
THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND SHALL ADVISE THE ENGINEER OF ANY DISCREPANCIES BETWEEN SUCH FIELD CONDITIONS AND THE INFORMATION CONTAINED IN THESE PLANS, PRIOR TO THE BEGINNING OF CONSTRUCTION OF THE AFFECTED ELEMENT.

CONSTRUCTION SEQUENCE:
REFER TO THE CONSTRUCTION SEQUENCE PLAN SHEET FOR DETAILS.

BID ITEMS NOTES:
1. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL PAY ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE BID ITEMS.
2. REMOVAL OF EXISTING STRUCTURES. REMOVE EXISTING GUARDRAIL CONCRETE CURB. THE ESTIMATED PLAN AREA OF CURB TO BE REMOVED UNDER PAY ITEM 110-3, REMOVAL OF EXISTING STRUCTURES IS APPROX. 117 SQ FT.
3. NO SEPARATE PAYMENT WILL BE MADE FOR EXCAVATIONS FOR CONSTRUCTION OF STRUCTURES. ALL COSTS FOR EXCAVATION SHALL BE INCIDENTAL TO THE ELEMENT REQUIRING SUCH WORK.
4. AFTER REMOVING THE EXISTING GUARDRAIL FROM THE LEFT EDGE OF THE BRIDGE, GRIND THE EXPOSED ANCHOR BOLTS TO 1" BELOW THE SURFACE OF THE ADJACENT CONCRETE, COAT WITH ZINC RICH PAINT, AND PATCH. COST SHALL BE INCLUDED UNDER PAY ITEM 110-3, REMOVAL OF EXISTING STRUCTURES.
5. THE COST OF THE TYPE HSHV ADHESIVE BONDING MATERIAL SHALL BE INCLUDED WITH THE COST OF REINFORCING STEEL, PAY ITEMS 415-1-4, 415-1-5, AND 415-1-9.
6. THE COST OF THE NS CONCRETE, CLEAN COMPACTED FILL, AND MISCELANEOUS ASPHALT BEHIND THE WINGWALLS SHALL BE INCLUDED WITH THE COST OF SUBSTRUCTURE CONCRETE, PAY ITEM 400-4-5.
7. THE CONTRACTOR SHOULD BE AWARE THAT SOME OF THE PAY ITEMS (PRICE SCHEDULE) MAY HAVE CONTINGENCY QUANTITIES. PAYMENT SHALL BE MADE ONLY FOR FINAL IN-PLACE QUANTITIES.

SURVEY MARKER ON BRIDGE No. 134025:
1. A MANATEE COUNTY DISK STAMPED **BM R-5 24.90** IS LOCATED ON TOP OF THE CAP OF END BENT 1 AT THE EAST END, 16± EAST OF THE CENTERLINE OF RYE ROAD. THE ELEVATION IS RECORDED AS ELEV. 24.913' NGVD '29.
2. THE CONTRACTOR SHALL SECURE THE SERVICES OF A FLORIDA LICENSED SURVEYOR TO COORDINATE WITH THE MANATEE COUNTY SURVEYOR. THE CONTRACTOR'S SURVEYOR SHALL PROVIDE A TEMPORARY BENCHMARK PRIOR TO DEMOLITION OF THE BRIDGE AND DELIVER THE DISK TO THE COUNTY AT THE LOCATION BELOW. THE CONTRACTOR IS TO THEN INSTALL A BENCHMARK IN THE NEW END BENT CAP AT THE EAST END OF END BENT 1 TO THE NAVD '88 DATUM. THE BENCHMARK DISK WILL BE FURNISHED BY MANATEE COUNTY. THE CONTRACTOR'S SURVEYOR SHALL THEN DETERMINE THE ELEVATION AND PROVIDE THE DATA TO MANATEE COUNTY.
3. THE CONTRACTOR'S SURVEYOR IS TO COORDINATE WITH THE MANATEE COUNTY SURVEYOR, TODD BOYLE, SURVEY DIVISION MANAGER, 1112 MANATEE AVE WEST, BRADENTON, FLORIDA, 34205, (941) 749-3024 EXT. 3024. TODD.BOYLE@MYMANATEE.ORG.
4. THE COST OF INSTALLING THE MARKERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE END BENT CAP CONSTRUCTION, CONC. CLASS IV, SUBSTRUCTURE.

ANANDA BERGERON KELLEY LICENSE No 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER
11-23-16

BRIDGES NO. 134025 & NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

GENERAL NOTES (1 OF 2)

SHEET NO.: B3

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SURVEY MARKER ON BRIDGE No. 134026:

1. A MANATEE COUNTY RIVET AND DISK MARKED "MAN. CTY. B.M." IS LOCATED ON TOP OF THE CURB AT END BENT 3 AT THE NORTHEAST CORNER OF THE BRIDGE, 12'± EAST OF THE CENTERLINE OF RYE ROAD. THE ELEVATION IS RECORDED AS ELEV. 25.476' NGVD '29. ALSO, AT THE SOUTHEAST CORNER OF THE BRIDGE, AN ADDITIONAL MANATEE COUNTY DISK IS LOCATED ON TOP OF THE CAP OF END BENT 1 AT THE EAST END, 16'± EAST OF THE CENTERLINE OF RYE ROAD. HOWEVER, NO ELEVATION IS RECORDED.

2. THE CONTRACTOR SHALL SECURE THE SERVICES OF A FLORIDA LICENSED SURVEYOR TO COORDINATE WITH THE MANATEE COUNTY SURVEYOR. THE CONTRACTOR'S SURVEYOR SHALL PROVIDE A TEMPORARY BENCHMARK PRIOR TO DEMOLITION OF THE BRIDGE AND DELIVER THE DISKS TO THE COUNTY AT THE LOCATION BELOW. THE CONTRACTOR IS TO THEN INSTALL A BENCHMARK IN THE NEW END BENT CAP AT THE EAST END OF END BENT 1 TO THE NAVD '88 DATUM. THE BENCHMARK DISK WILL BE FURNISHED BY MANATEE COUNTY. THE CONTRACTOR'S SURVEYOR SHALL THEN DETERMINE THE ELEVATION AND PROVIDE THE DATA TO MANATEE COUNTY.

3. THE CONTRACTOR'S SURVEYOR IS TO COORDINATE WITH THE MANATEE COUNTY SURVEYOR, TODD BOYLE, SURVEY DIVISION MANAGER, 1112 MANATEE AVE WEST, BRADENTON, FLORIDA, 34205, (941) 749-3024 EXT. 3024. TODD.BOYLE@MYMANATEE.ORG.

4. THE COST OF INSTALLING THE MARKERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE END BENT CAP CONSTRUCTION, CONC. CLASS IV, SUBSTRUCTURE.

UTILITY COORDINATION.

1. MR. GREG COOKER, WEST AREA RELOCATIONS COORDINATOR WITH FLORIDA POWER & LIGHT (FP&L) SHALL BE NOTIFIED TO ATTEND MANATEE COUNTY'S RYE BRIDGE WIDENINGS PRE-CONSTRUCTION MEETING.

   FP&L CONTACT INFORMATION:
   MR. GREG COKER
   FLORIDA POWER & LIGHT - DISTRIBUTION
   WEST AREA RELOCATIONS COORDINATOR
   1253 12th AVENUE EAST
   PALMETTO, FL 34221
   941-723-4430 (W)
   941-704-9087 (C)
   Greg.Coker@fpl.com

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE POWER LINE PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE PILE DRIVING ACTIVITIES WITH FP&L; AND DETERMINE IF DE-ENERGIZING POWER LINES IS REQUIRED.

3. IN THE EVENT DE-ENERGIZING IS REQUIRED CONTRACTOR SHALL NOTIFY FP&L AT LEAST SIX WEEKS IN ADVANCE PRIOR TO DE-ENERGIZING POWER LINES.

DESIGNATIONS:

PCF = POUNDS PER CUBIC FOOT	ES = EACH SIDE
PLF = POUNDS PER LINEAL FOOT	BTWN = BETWEEN
BOTT. = BOTTOM	EJ = EXPANSION JOINT
EF = EACH FACE	E = EXPANSION

ANANDA BERGERON KELLEY LICENSE No. 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER
11-23-16

BRIDGES NO. 134025 & NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

GENERAL NOTES (2 OF 2)

SHEET NO.: B4

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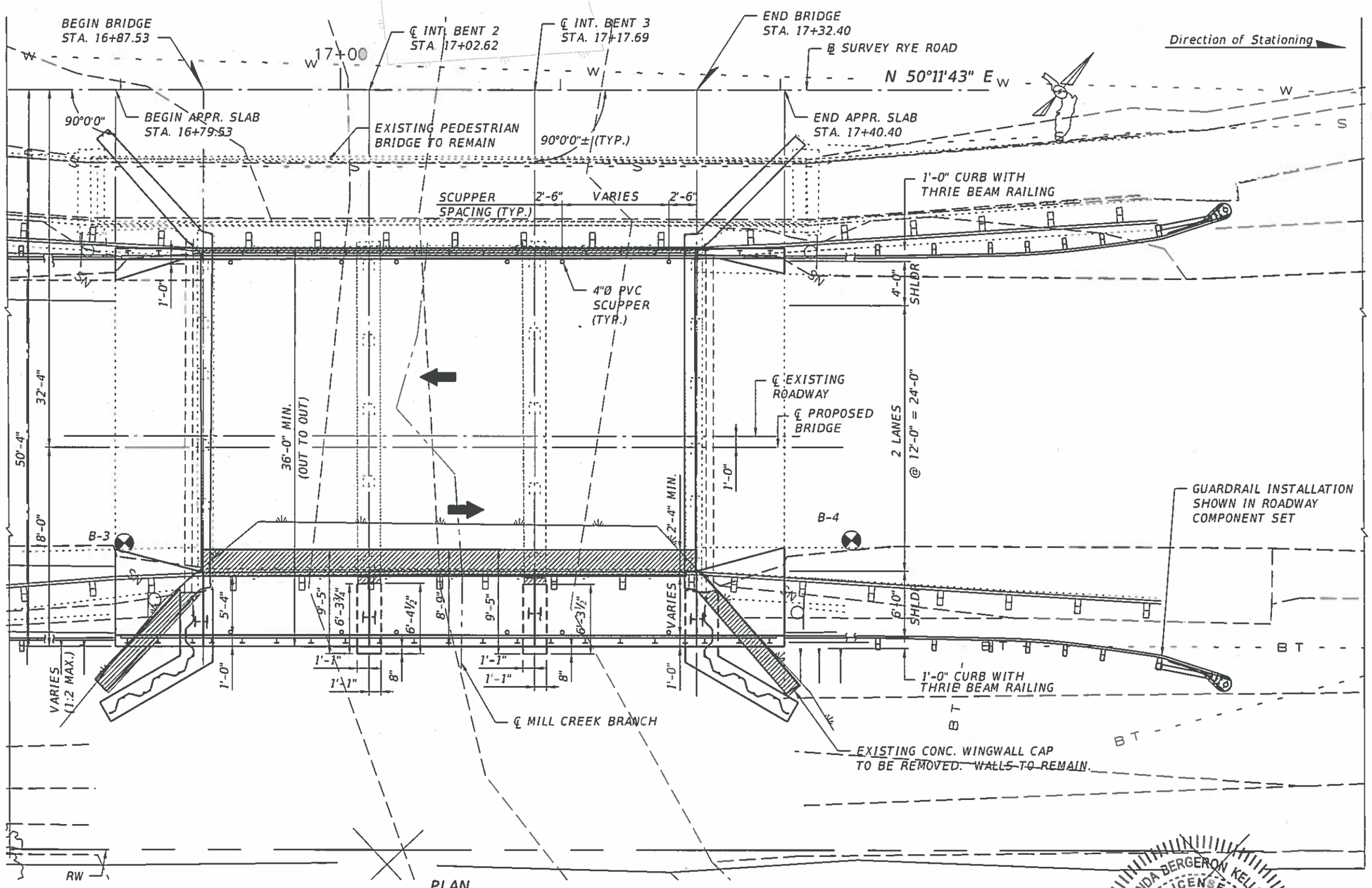

PLAN

LEGEND:

- EXISTING CONCRETE PILE
- PROPOSED HP14x73 STEEL PILE
- PROPOSED SHEET PILE
- EXISTING TO BE REMOVED
- SPT BORING LOCATION

ANANDA BERGERON KELLEY
LICENSE
No 65632
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

PLAN

SHEET NO.: BI-1

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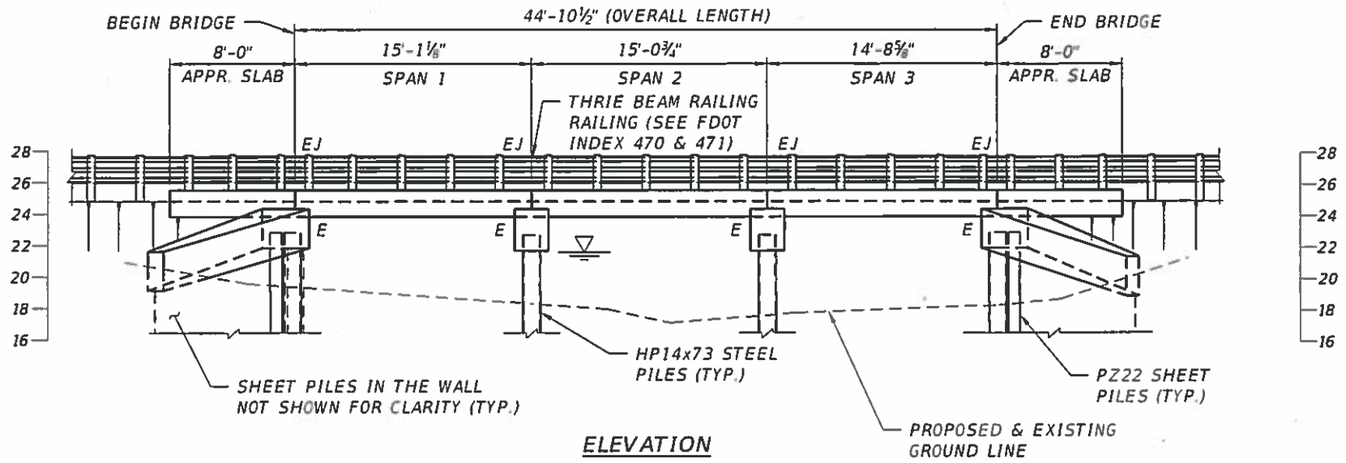

ELEVATION

ANANDA BERGERON KELLEY
LICENSE
No 65632
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
11-23-16

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

ELEVATION

SHEET NO.: BI-2

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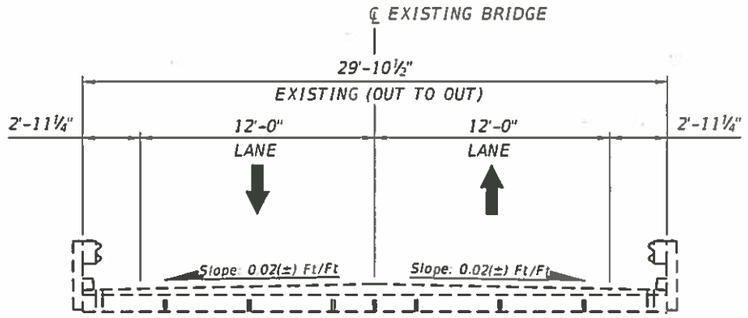
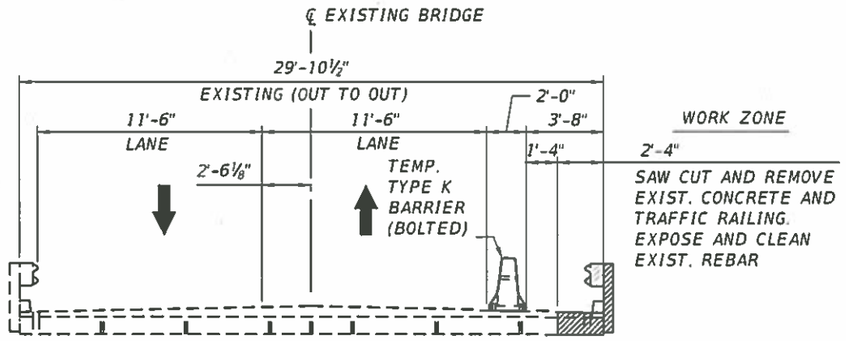


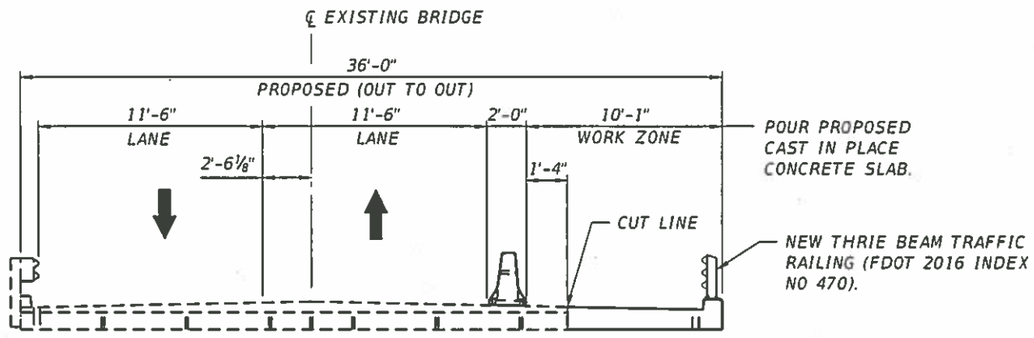
EXISTING CONDITION

NOTE: COMPLETE SUBSTRUCTURE WIDENING AND INSTALLATION OF TYPE K BARRIER PRIOR TO PHASE 1. TEMPORARY LANE CLOSURES PERMITTED.



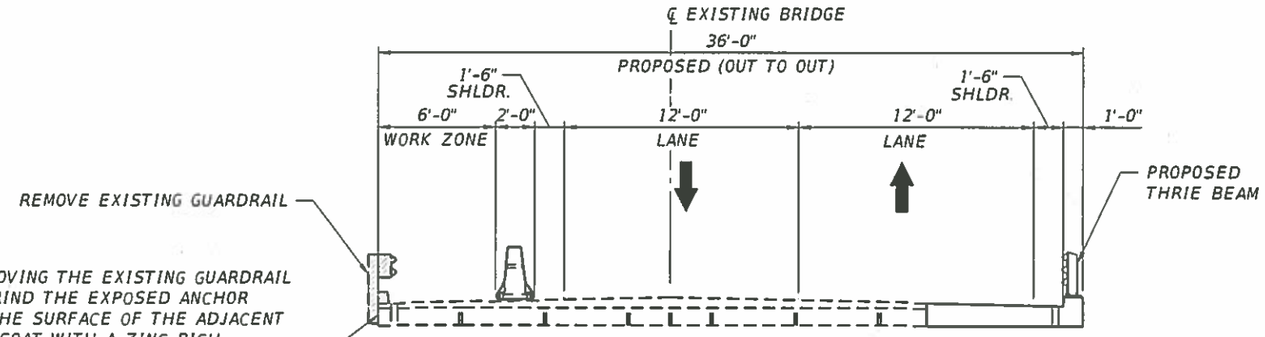
PHASE 1 - CONSTRUCTION, STEP 1

1. SHIFT TRAFFIC LANES TO THE WEST - MAKE EACH LANE 11'-6" FOOT WIDE.
2. INSTALL TEMPORARY K BARRIER.
3. REMOVE EAST SIDE EXISTING BARRIER.
4. SAW CUT AND REMOVE 2'-4" OF EXISTING CONCRETE.
5. EXPOSE AND CLEAN EXISTING REBAR.



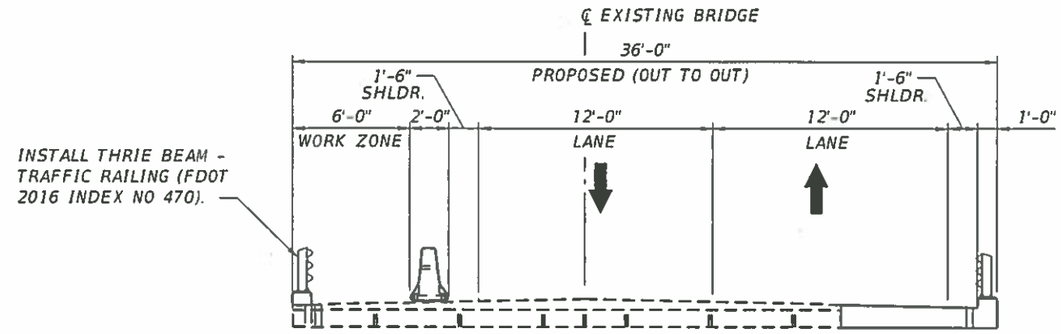
PHASE 1 - CONSTRUCTION, STEP 2

1. PLACE PROPOSED SLAB REINFORCEMENT.
2. POUR PROPOSED CAST IN PLACE CONCRETE SLAB UNIT.
3. INSTALL NEW THRIE BEAM TRAFFIC RAILING.



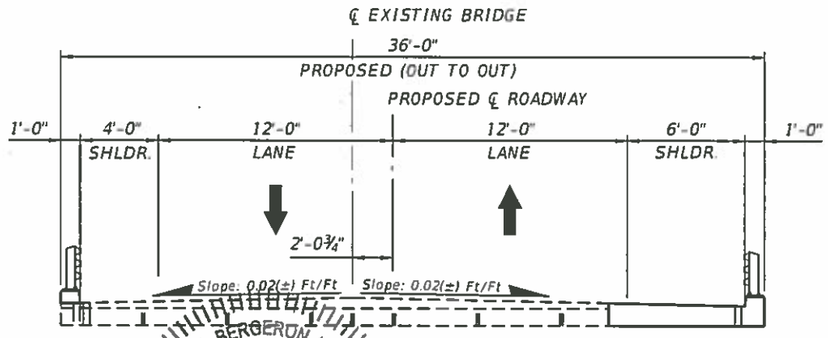
PHASE 2 - CONSTRUCTION, STEP 1

1. SHIFT TRAFFIC LANES TO THE EAST - MAKE EACH LANE 12 FEET WIDE.
2. MOVE TEMPORARY K BARRIER TO NEW LOCATION.
3. REMOVE WEST SIDE EXISTING GUARDRAIL.



PHASE 2 - CONSTRUCTION, STEP 2

1. INSTALL NEW THRIE BEAM TRAFFIC RAILING.
2. INSTALL NEW SCUPPER.
3. REMOVE TEMPORARY K BARRIER.
4. SHIFT TRAFFIC LANES TO FINAL LOCATION.



PROPOSED TYPICAL SECTION

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: MAV
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO. 225338

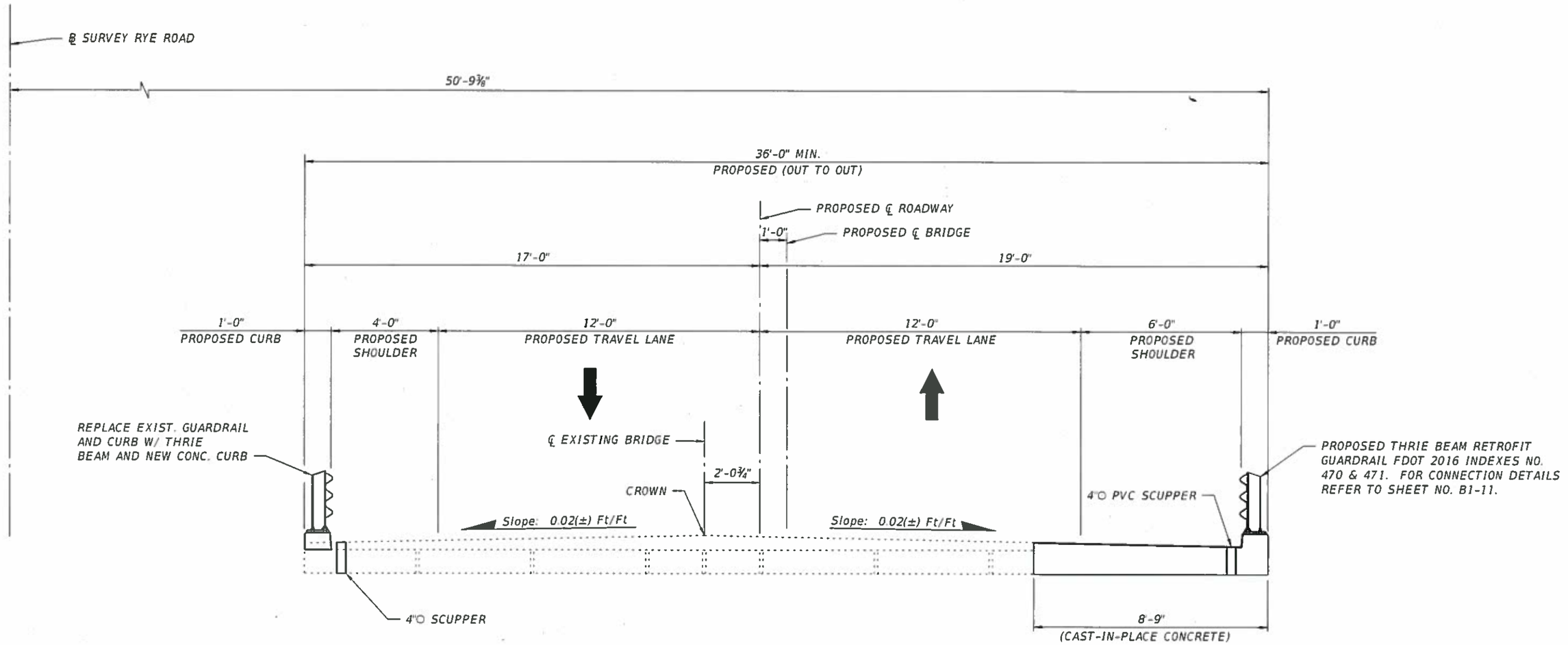
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

ANANDA BERGERON KELLER LICENSE NO 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER
ANANDA B. KELLER
FL LICENSE NO. 65632

CONSTRUCTION SEQUENCE

SHEET NO. BI-3

4:40:01 PM 11/23/2016 J:\00193\00193010.07\ms\struct\Br 134025\B01ConstSeq01.dgn



TYPICAL SECTION

NOTE: SCUPPER TO BE RELOCATED TO THE NEW CURB LINE ALONG THE ROADWAY STATIONING TO MATCH THE EXISTING SCUPPER LOCATIONS.

ANANDA BERGERON KELLEY LICENSE No 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER
11.23.16

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

TYPICAL SECTION

SHEET NO.: B1-4

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SOURCE: GOOGLE EARTH PRO

0' 10' 20' 40'

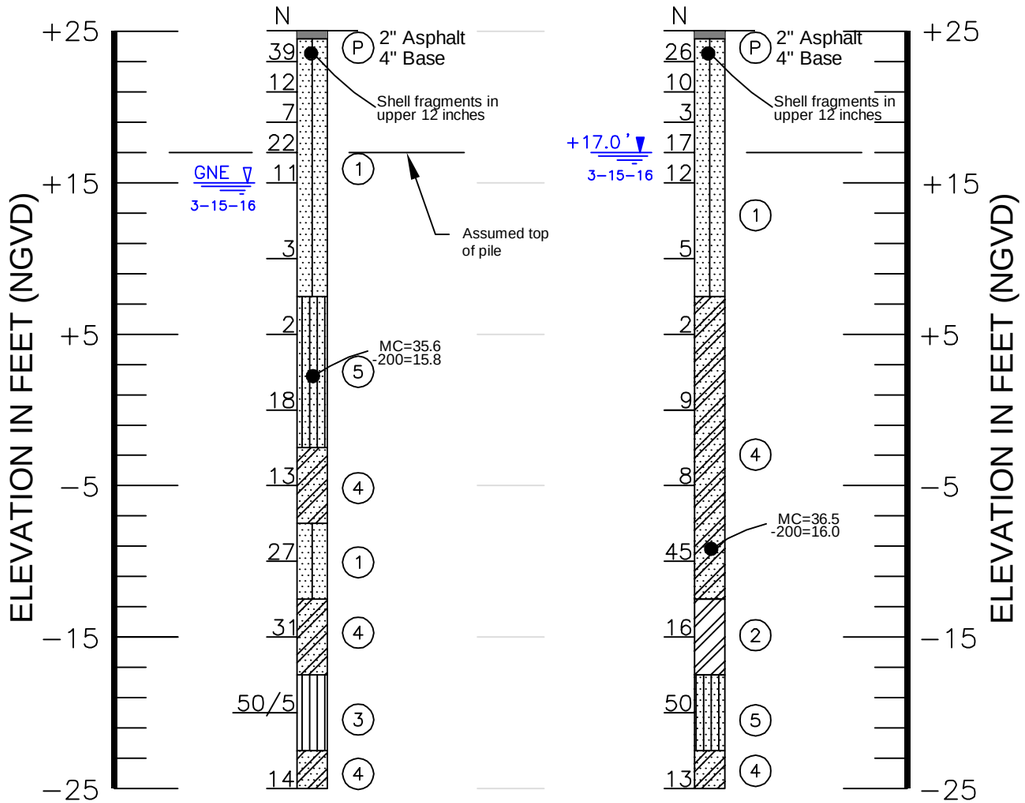
B-3 APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

CORROSION TEST RESULTS

Sample Location	RESISTIVITY ohm-cm	CHLORIDES ppm	SULFATES ppm	pH
B-3 (2'-4' & 4'-6') & B-4 (2'-4')	4,600	21.6	<1.6	7.2

	Steel	Concrete
Substructure Environment Classification:	Moderately Aggressive	Slightly Aggressive

BORING NO.	B-3	B-4
STATION:	16+80	17+40
OFFSET:	40' Rt.	40' Rt.
ELEVATION:	+25' +/-	+25' +/-



GENERAL LEGEND

- P — Asphaltic concrete over limestone gravel base
- 1 — Gray, dark gray, and brown fine SAND with trace to slight amounts of silt (SP, SP-SM)
- 2 — Light gray silty, sandy CLAY (CL)
- 3 — Light gray to gray sandy, clayey SILT (ML) (Weathered Limestone)
- 4 — Gray to brown clayey SAND (SC)
- 5 — Gray to dark gray silty SAND with sand size to gravel size limestone gravel fragments (SM)

N – Indicates the number of blows of a 140 pound hammer, freely falling a distance of 30 inches, required to drive a 2-inch diameter sampler 12 inches (ASTM D 1586)

B-3 – Standard Penetration Test (SPT) Boring and number

SP – Unified Soil Classification System Group Symbol (ASTM D 2487)

+17.0 ▽ 3-15-16 – Elevation of groundwater (feet-NGVD) & date measured

GNE ▽ 3-15-16 – Groundwater not encountered prior to the introduction of drilling mud

50/5 – Indicates fifty SPT hammer blows were required to drive the sampler 5 inches

MC – Moisture Content (%)

-200 – Amount Finer Than The U.S. Standard No. 200 Sieve (%)

ENGINEERING CLASSIFICATION (SAFTEY HAMMER)

GRANULAR MATERIALS

Relative Density	SPT BLOW-COUNTS
Very Loose	Less than 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

SILTS AND CLAYS

Consistency	BLOW-COUNTS
Very Soft	Less than 2
Soft	2 - 4
Firm	4 - 8
Stiff	8 - 15
Very Stiff	15 - 30
Hard	Greater than 30

STANDARD PENETRATION TEST DATA

SPOON INSIDE DIA.	1.375 inch
SPOON OUTSIDE DIA.	2.00 inches
AVG. HAMMER DROP	30 inches
HAMMER WEIGHT	140 pounds

James M. Jackson, P.E.
FL Reg. No. 77733

NOTES

(1) Borings were drilled on March 15, 2016 using a track-mounted BR-2500 drilling rig.

(2) Strata boundaries are approximate and represent soil strata at each test hole location only. Soil transitions may be more gradual than implied.

(3) Groundwater depths shown on the subsurface profiles represent the groundwater surfaces on the dates shown. Groundwater level fluctuations should be anticipated throughout the year.

(4) Station, offset, and elevation were estimated based on the topographic survey provided by Cardno.

No.	REVISIONS	DATE	BY
1	ADD BORING ELEVATION	5-11-16	JMJ
2	ADD SIGNATURE BLOCK	11-28-16	JMJ

SCALE AS_NOTED
DESIGNED BY JMJ
DRAWN BY JMJ
CHECKED BY KEA

DUNKELBERGER ENGINEERING & TESTING
8260 VICO COURT, UNIT B
SARASOTA, FLORIDA 34240
CERTIFICATE OF AUTHORIZATION 6870

DATE 4/2016
PROJECT NO. 225338

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JAMES M. JACKSON
FL. LICENSE NO. 77733

REPORT OF CORE BORINGS FOR STRUCTURES
PROJECT NAME: RYE ROAD BRIDGE 134025 MANATEE COUNTY, FLORIDA

SHEET NO. B1-5

Direction of Stationing

BEGIN BRIDGE
STA. 16+87.53

℄ INT. BENT 2
STA. 17+02.62

℄ INT. BENT 3
STA. 17+08.25

END BRIDGE
STA. 17+32.40

℄ SURVEY RYE ROAD

17+00

± 90°00'00" (TYP.)

1- 1
1-2
1-3
1-4
1-5
1-6
1-7
43'-1½"±
5'-0"

2- 1
2- 2
2- 3
2- 4
2- 5
2- 6
42'-8½"±
5'-0"

3- 1
3- 2
3- 3
3- 4
3- 5
3- 6
42'-4¼"±
5'-0"

4- 1
4- 2
4- 3
4- 4
4- 5
4- 6
4- 7
42'-10¼"±
5'-0"

B-3

B-4

℄ MILL CREEK BRANCH

HP14x73 STEEL
PILE (TYP.)

2"
15'-1⅛"
15'-0¾"
14'-8⅝"

PLAN

℄ OF PROPOSED PILES
℄ OF EXISTING PILES
℄ OF PROPOSED
AND EXISTING PILES

PZ22 SHEET PILE WALL (TYP.)
REFER TO THE END
BENT SHEET FOR DETAILS.

RW

W
S
BT
OE

NOTES:

1. REFER TO THE GENERAL NOTES FOR INFORMATION REGARDING WORK AROUND EXISTING POWER LINE
2. FIELD VERIFY EXISTING EXTERIOR PILE LOCATIONS PRIOR CONSTRUCTION

LEGEND:

- SOIL BORING APROXIMATE LOCATIONS (REFER TO THE REPORT OF CORE BORING SHEETS FOR MORE INFORMATION)
- 12" EXISTING PILE (PLUMB)
- 12" EXISTING PILE (BATTERED 1:12)
- HP14x73 STEEL PILE
- HP14x73 STEEL TEST PILE

ANANDA BERGERON KELLEY
LICENSE
No 65632
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
11/23/16

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

FOUNDATION LAYOUT

SHEET NO.: BI-6

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PILE DATA TABLE

INSTALLATION CRITERIA								DESIGN CRITERIA								
BENT NUMBER / PILE NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	NOMINAL UPLIFT RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	FACTORED DESIGN UPLIFT LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	LONG TERM SCOUR ELEVATION (ft.)	Ø COMPRESSION	Ø UPLIFT
1-7	HP14x73	40	N/A	-6.0	N/A	N/A	N/A	24	N/A	N/A	2	0	12.8	12.8	0.65	0.65
2-6	HP14x73	54	N/A	-6.0	50	N/A	N/A	33	N/A	N/A	2	0	12.8	12.8	0.65	0.65
3-6	HP14x73	54	N/A	-6.0	N/A	N/A	N/A	33	N/A	N/A	2	0	12.8	12.8	0.65	0.65
4-7	HP14x73	40	N/A	-6.0	N/A	N/A	N/A	24	N/A	N/A	2	0	12.8	12.8	0.65	0.65

PILE CUT-OFF ELEVATIONS		
PIER or BENT NUMBER	PILE 6	PILE 7
1	NA	22.93
2	22.76	NA
3	22.76	NA
4	NA	22.93

$$\frac{\text{Factored Design Load} + \text{Net Scour Resistance} + \text{Down Drag}}{\emptyset} \leq \text{Nominal Bearing Resistance}$$

TENSION RESISTANCE - The ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires tension capacity).

TOTAL SCOUR RESISTANCE - An estimate of the ultimate static side friction resistance provided by the scourable soil.

NET SCOUR RESISTANCE - An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.

100-YEAR SCOUR ELEVATION - Estimated elevation of scour due to the 100 year storm event.

LONG TERM SCOUR ELEVATION - Estimated elevation of scour used in design for extreme event loading.

PILE INSTALLATION NOTES:

Piles to be coated per FDOT Standard Specification 560.

Contractor to verify location of all utilities prior to any pile installation activities.

Minimum Tip Elevation is required for lateral stability.

When a required jetting elevation is shown, the jet shall be lowered to the elevation and continue to operate at this elevation until the pile driving is completed. If jetting or preforming elevations differ from those shown on the table, the Engineer shall be responsible for determination of the required driving resistance.

No jetting will be allowed without the approval of the Engineer.

The Contractor should not anticipate being allowed to jet piles below the 100-year scour elevation or required jet elevation, whichever is deeper.

At each Bent, pile driving is to commence at the center of the Bent and proceed outward.

PILE CUT-OFF NOTE:

Contractor shall verify the existing top-of-bent elevations on which the pile cut-off elevations are based. Refer to the End Bent plan sheet for more information.

ANANDA BERGERON KELLEY LICENSE No 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER 11-23-16

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

PILE DATA TABLE

SHEET NO.: BI-7

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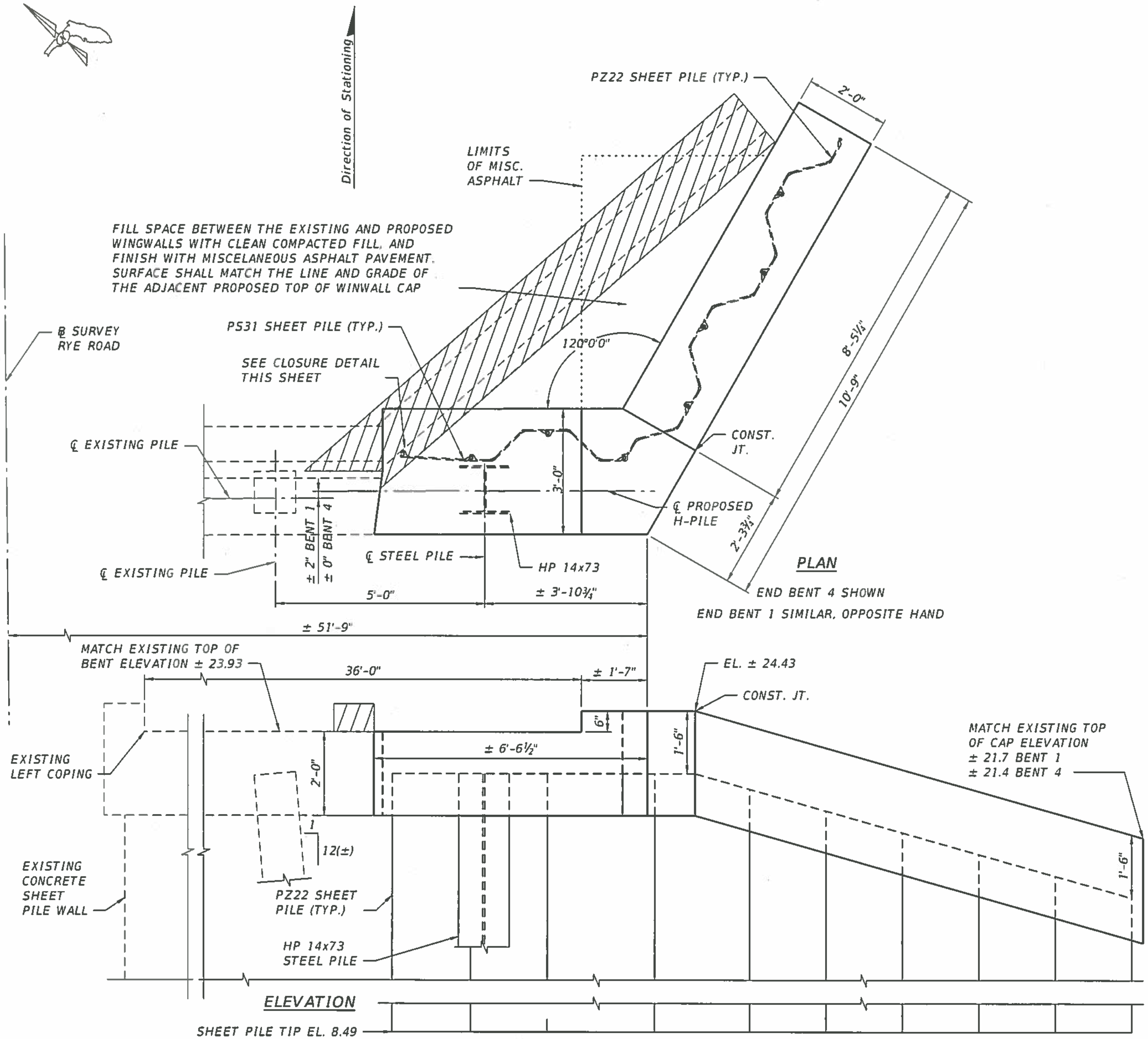

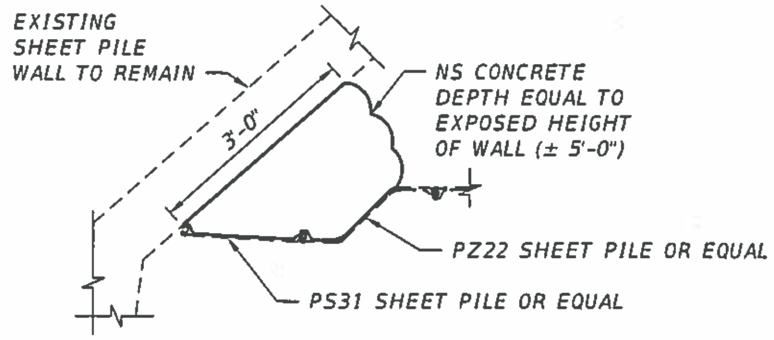

CLOSURE DETAIL

LEGEND:

- ▨ EXISTING TO BE REMOVED
- ⬚ EXISTING CONCRETE PILE
- PROPOSED PS31 SHEET PILE
- PROPOSED PZ22 SHEET PILE
- PROPOSED HP 14x73 STEEL PILE

NOTES:

1. WORK THIS SHEET WITH THE END BENT DETAILS SHEET. REFER TO THE END BENT DETAILS SHEET FOR SECTIONS A-A, B-B, AND C-C.

2. REMOVE EXISTING WINGWALL CAP TO PROVIDE FOR INSTALLATION OF THE PROPOSED STEEL SHEET PILE WALL. ABANDON EXISTING WINGWALL SHEET PILES IN PLACE.

3. AFTER REMOVING THE EXISTING CHEEKWALL, GRIND THE EXPOSED REINFORCING STEEL TO THE SURFACE OF THE ADJACENT CONCRETE AND APPLY A ZINC-RICH PAINT. FINISH SURFACE TO MATCH THE LINE AND GRADE OF THE ADJACENT CONCRETE.

4. MINIMUM SHEET PILE SECTON PROPERTIES (HOT ROLL), USE PZ22 OR EQUAL:

   THICKNESS OF FLANGE: TF=0.375 IN
   THICKNESS OF WEB:TW=0.375 IN
   YIELD STRENGTH:FY=39,000 PSI
   SECTION MODULUS:S=18.1 IN3/FT
   MOMENT OF INERTIA:I=84.38 IN4/FT

   A PS31 SHEET PILE MAY BE USED ADJACENT TO THE EXISTING SHEET PILE WALL TO REMAIN. REFER TO THE CLOSURE DETAIL IN THIS SHEET FOR MORE INFORMATION.

   SHEET PILING TO BE COATED PER FDOT STANDARD SPECIFICATION 560.

5. CONTRACTOR SHALL VERIFY DIMENSIONS AND ELEVATIONS SHOWN ON THIS SHEET INCLUDING BATTER OF EXISTING EXTERIOR PILES.

ANANDA BERGERON KELLEY
LICENSE
No 65632
STATE OF FLORIDA
PROFESSIONAL ENGINEER
[illegible]
11-23-16

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	ABK
DRAWN BY	AAM
CHECKED BY	FMH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE 4/2016
PROJECT NO. 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER ANANDA B. KELLEY
FL. LICENSE NO. 65632

END BENT

SHEET NO. BI-8

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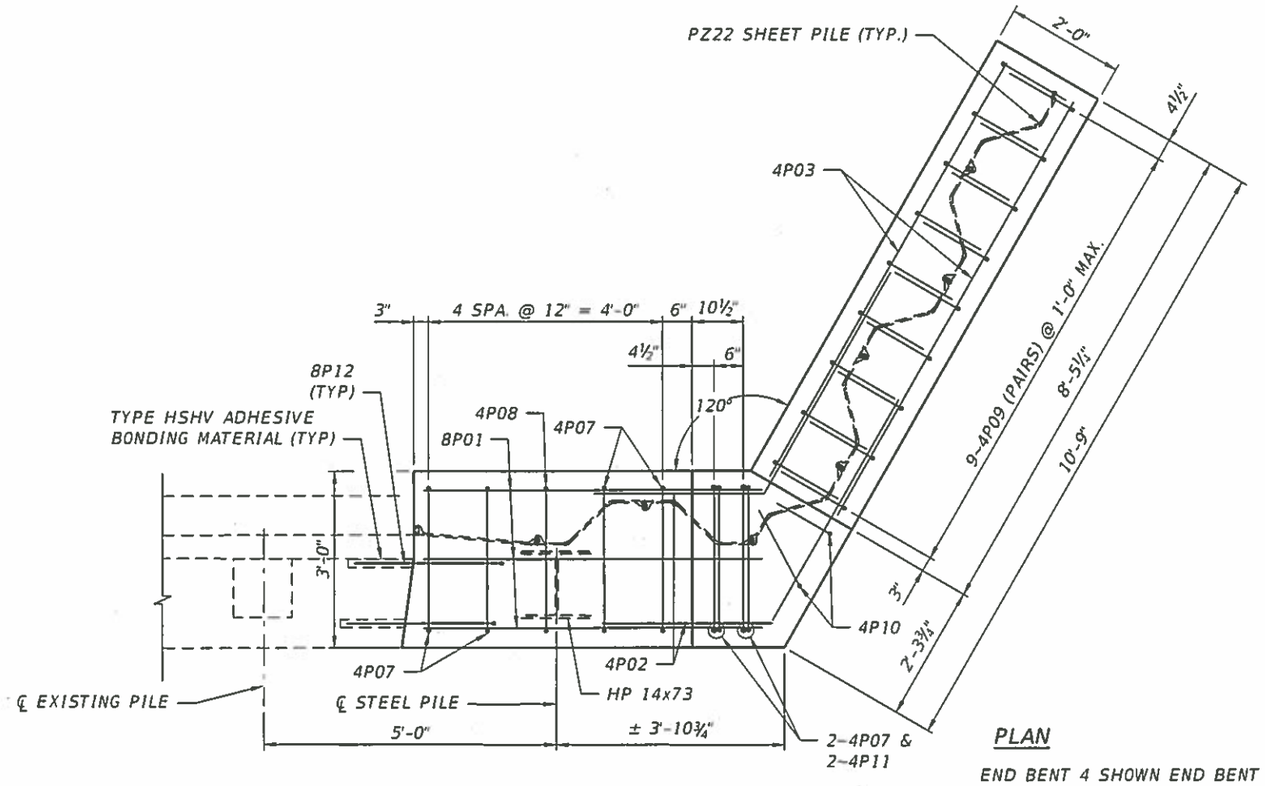
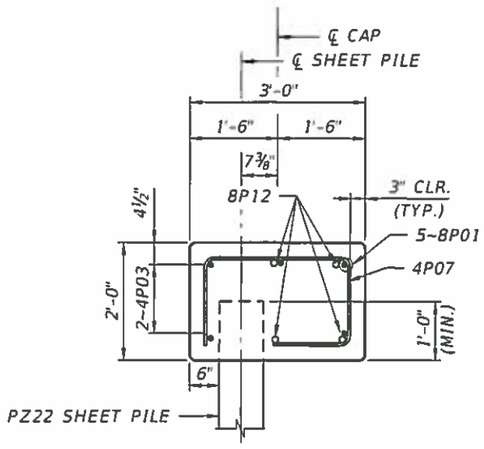
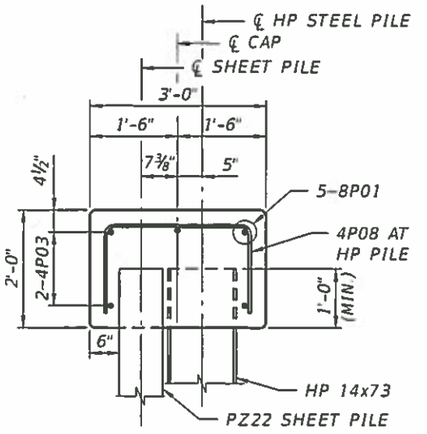


PLAN

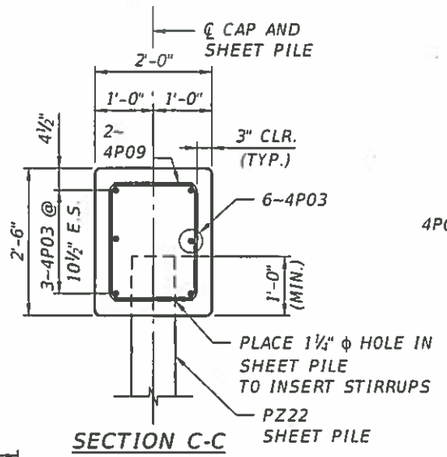
END BENT 4 SHOWN END BENT 1 SIMILAR, OPPOSITE HAND REFER TO VIEW D-D FOR TOP LAYER OF STEEL ON CORNER.



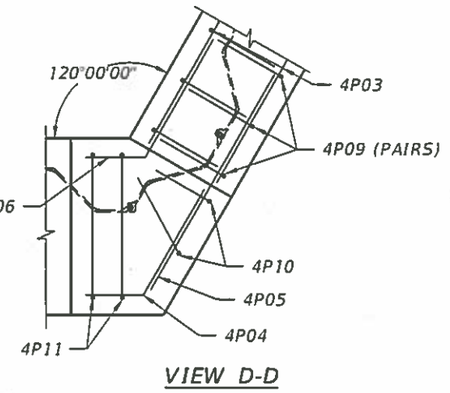
SECTION A-A



SECTION B-B

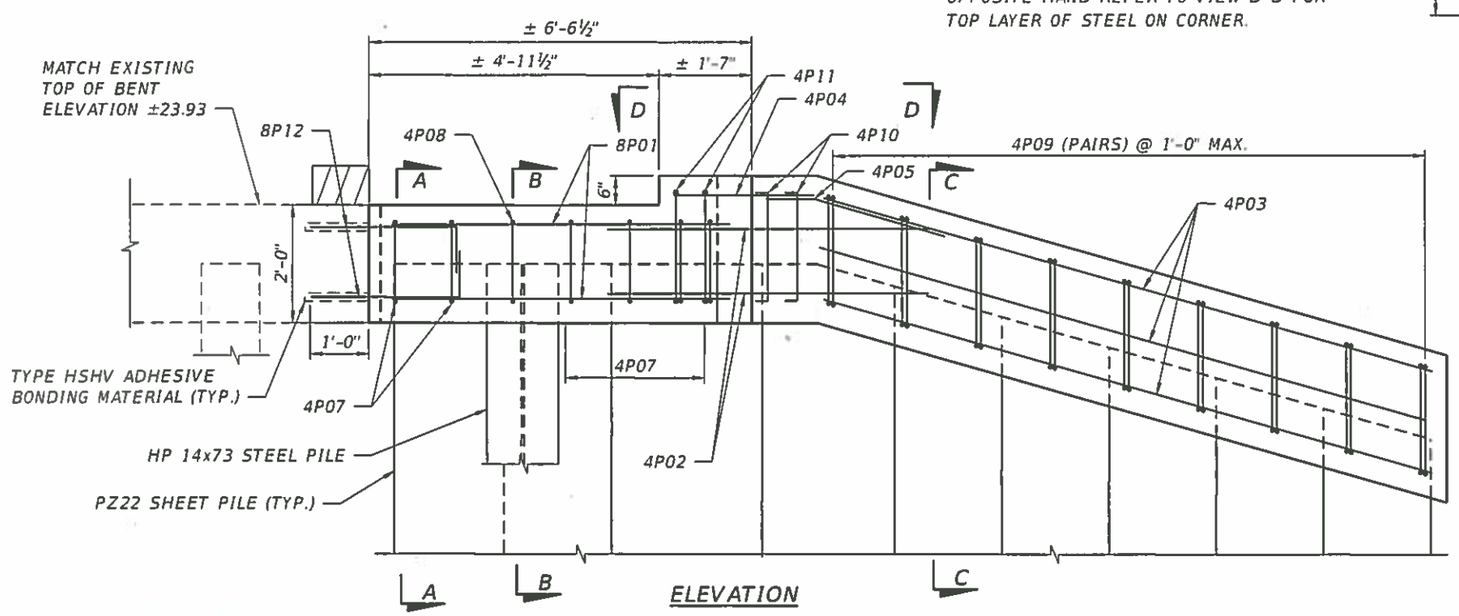


SECTION C-C



VIEW D-D

FOR CLARITY, ONLY TOP LAYER OF REINFORCING STEEL IS SHOWN



ELEVATION

NOTES:

1. WORK THIS SHEET WITH THE END BENT SHEET.

ANANDA BERGERON KELLEY LICENSE No 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER 11/23/16

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA — MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

END BENT DETAILS

SHEET NO.: BI-9

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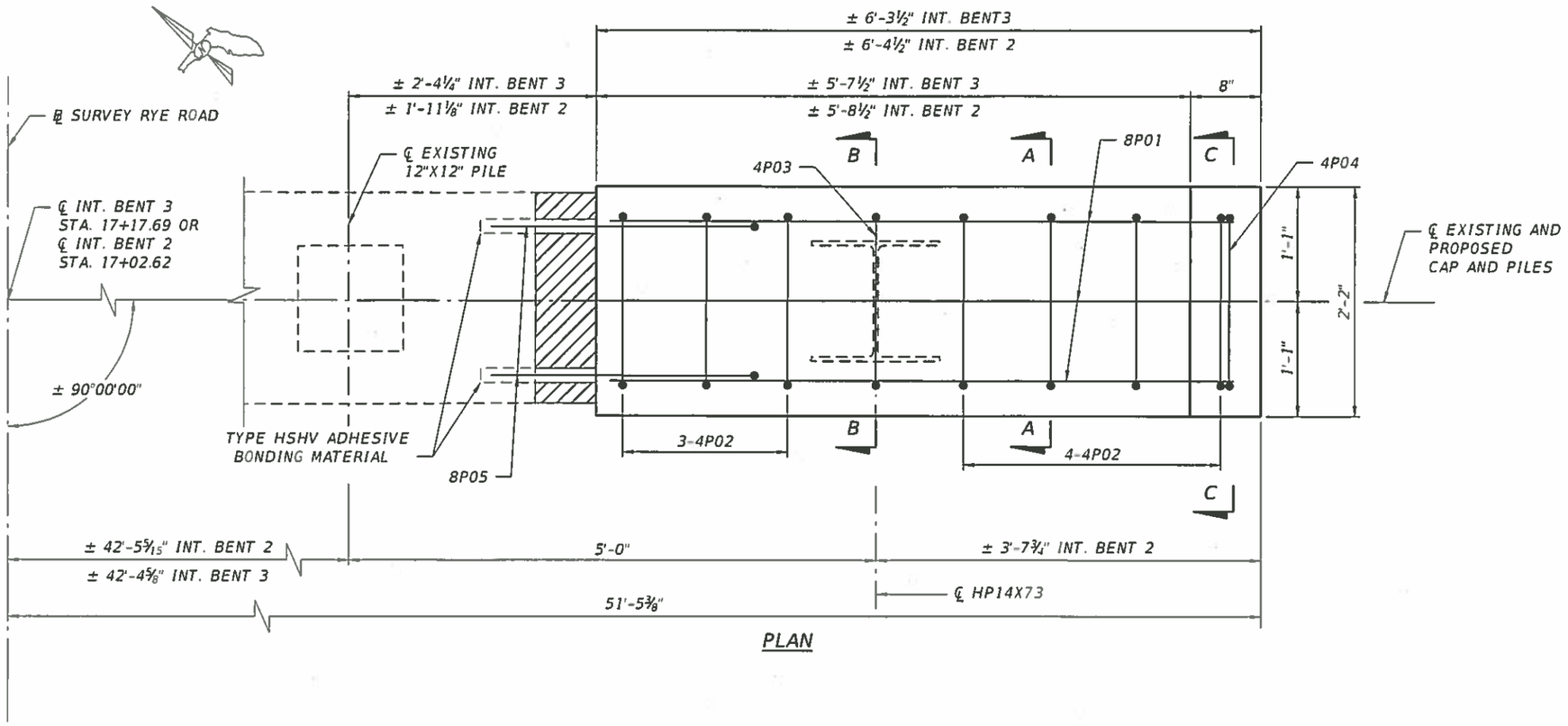
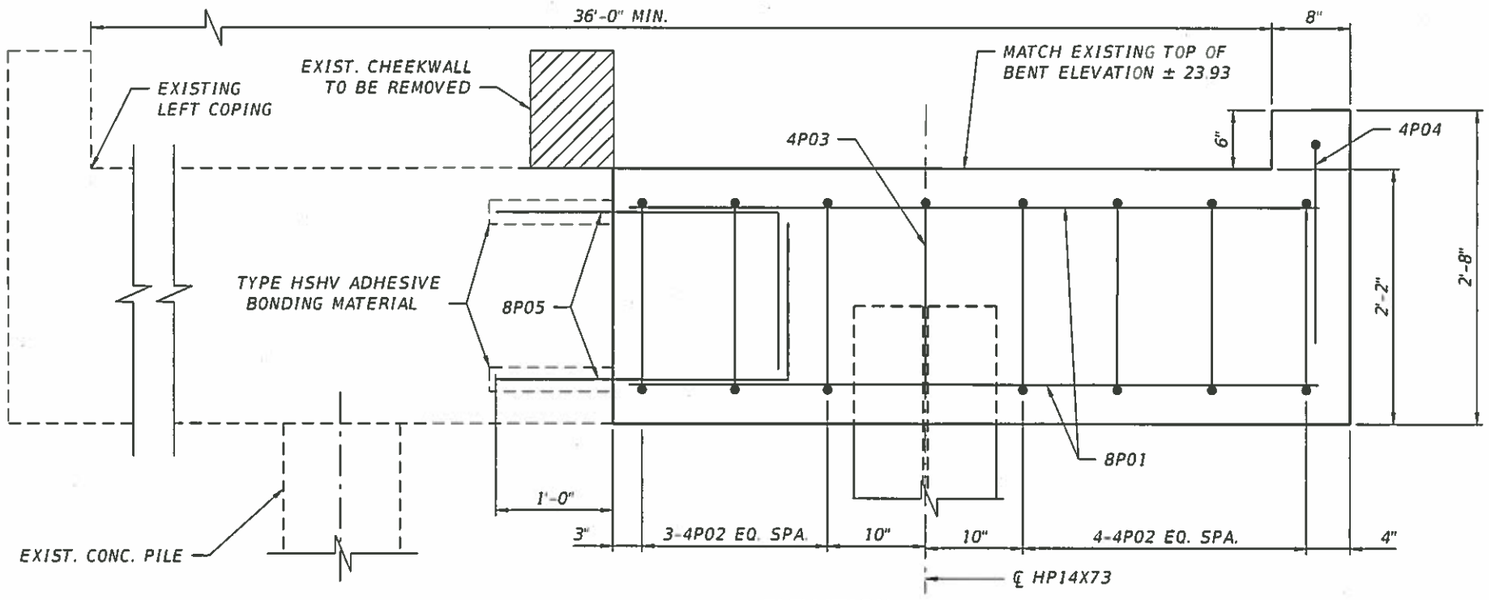


PLAN



ELEVATION

NOTES:

1. WORK THIS SHEET WITH THE INTERMEDIATE BENT DETAILS SHEET.
2. AFTER REMOVING THE EXISTING CHEEKWALL, CUT GRIND THE EXPOSED REINFORCING STEEL TO 1" THE SURFACE ZINC RICH OF THE ADJACENT CONCRETE AND APPLY PAINT. FINISH SURFACE TO MATCH THE LINE AND GRADE OF THE ADJACENT CONCRETE.
3. CONTRACTOR SHALL VERIFY DIMENSIONS AND ELEVATIONS SHOWN ± ON THIS SHEET.

LEGEND:

EXISTING TO BE REMOVED

EXISTING CONCRETE PILE

PROPOSED HP14x73 STEEL PILE

ANANDA BERGERON KELLEY LICENSE NO 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER 11-23-16

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	ABK
DRAWN BY	AAM
CHECKED BY	

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE 4/2016
PROJECT NO. 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO. 65632

INTERMEDIATE BENT

SHEET NO. BI-10

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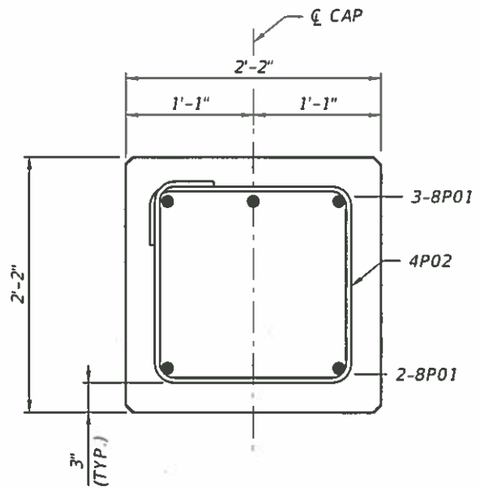
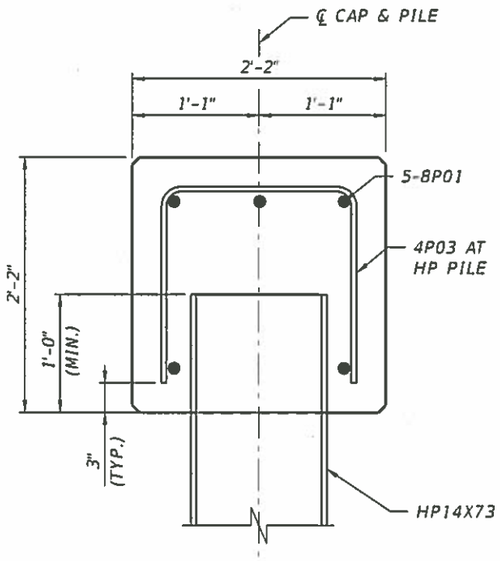
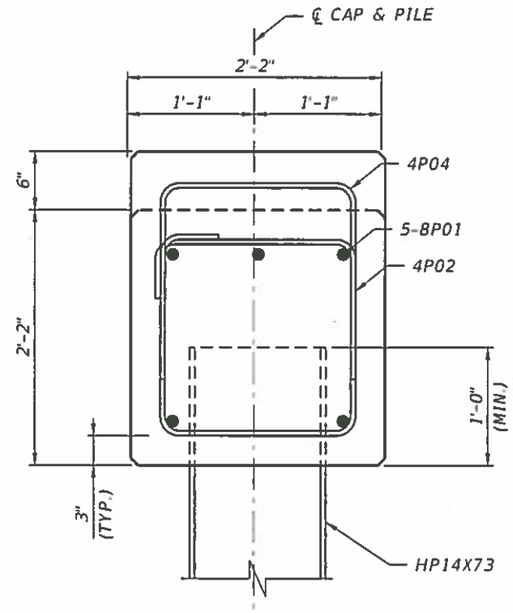


SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. WORK THIS SHEET WITH THE INTERMEDIATE BENT SHEET.

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

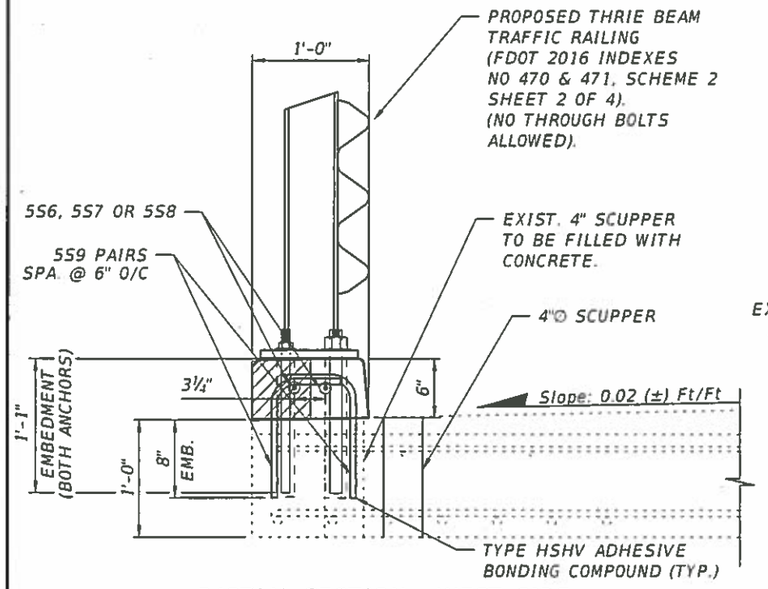
DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

ANANDA BERGERON KELLEY LICENSE No 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER
11-23-16

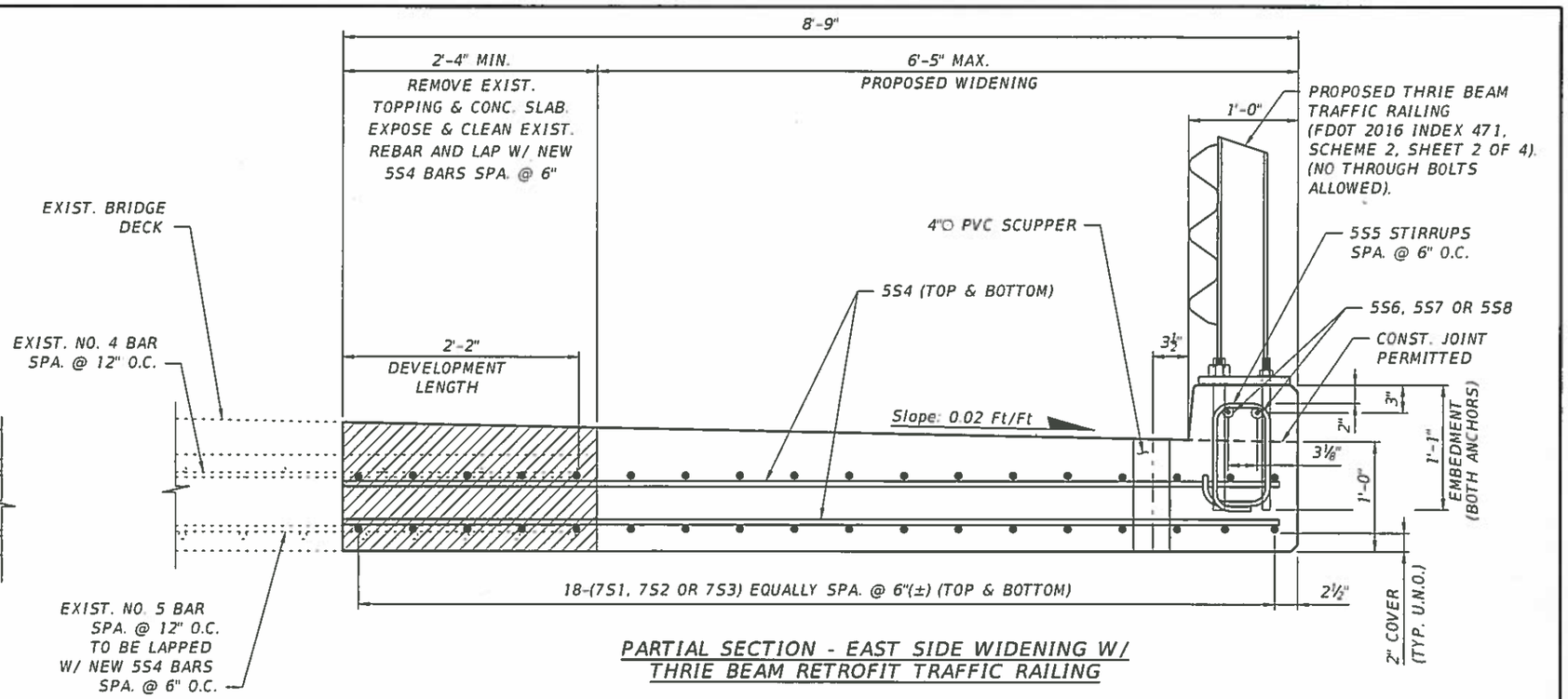
INTERMEDIATE BENT DETAILS

SHEET NO.: BI-II

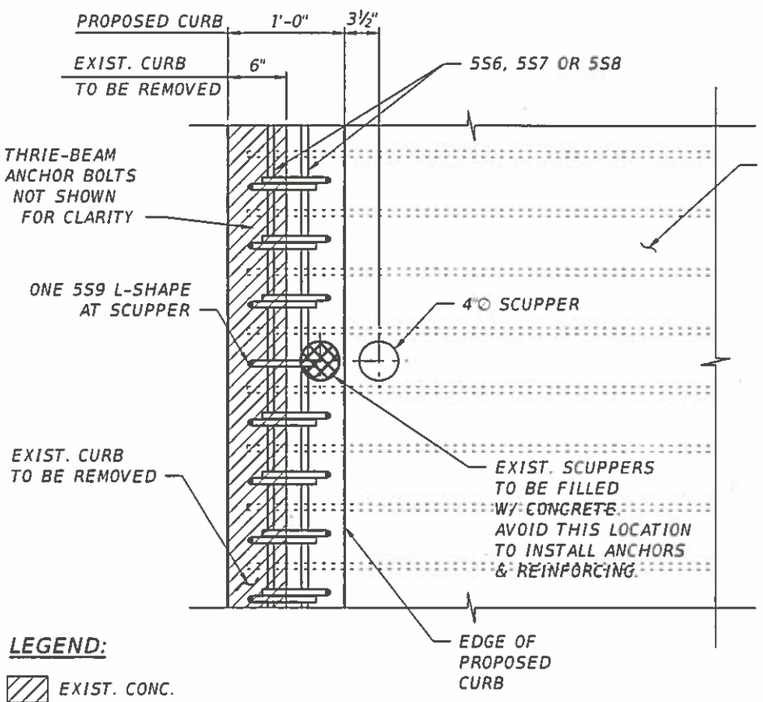
4:40:03 PM 11/23/2016 J:\00193\00193010.07\ms\struct\Br 134025\BO1IntBentDet01.dgn



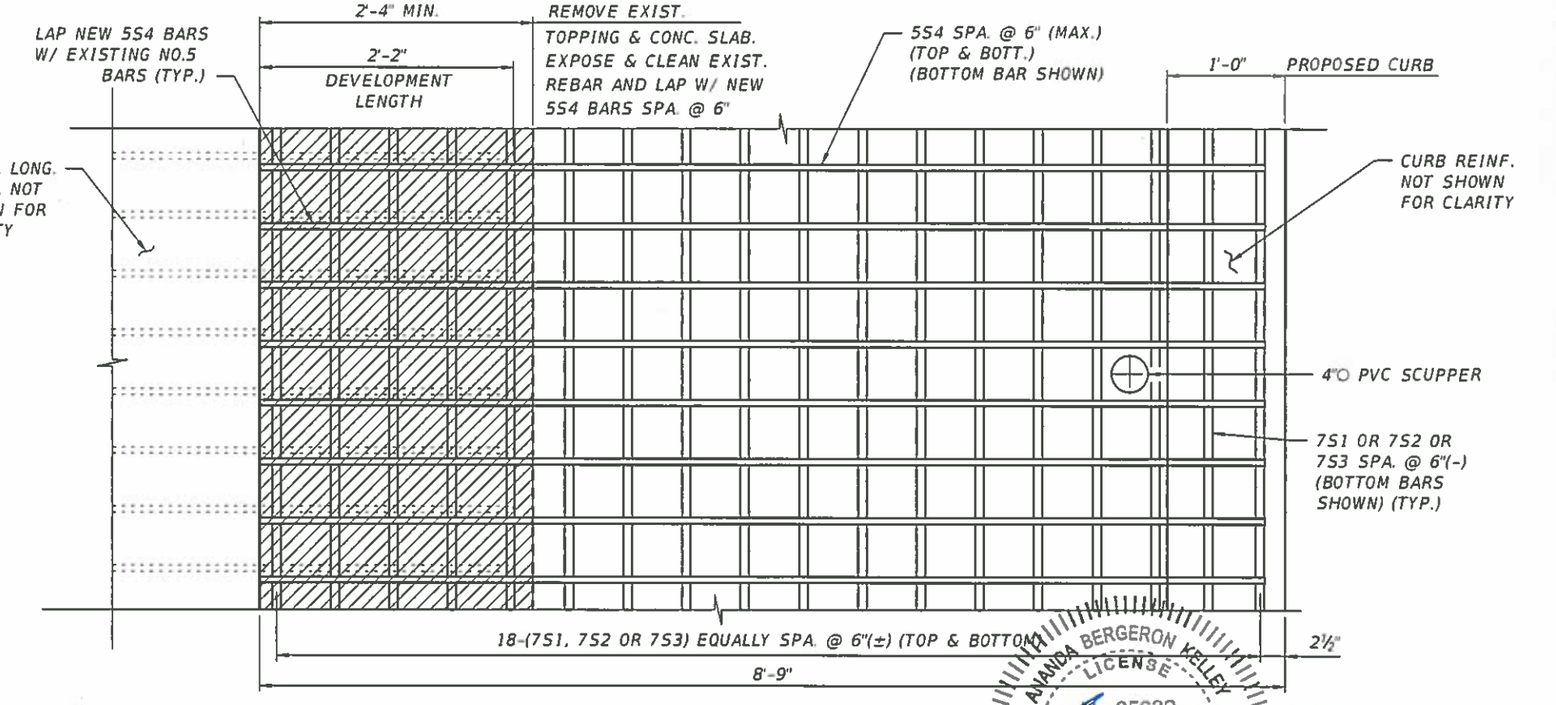
PARTIAL SECTION - WEST SIDE
THRIE-BEAM RETROFIT
TRAFFIC RAILING



PARTIAL SECTION - EAST SIDE WIDENING W/
THRIE BEAM RETROFIT TRAFFIC RAILING



PARTIAL PLAN - WEST SIDE



PARTIAL PLAN - EAST SIDE WIDENING

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: MAV
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

ANANDA BERGERON KELLEY LICENSE No 65632 STATE OF FLORIDA PROFESSIONAL ENGINEER 11/23/16

SUPERSTRUCTURE DETAILS

SHEET NO.: B1-12

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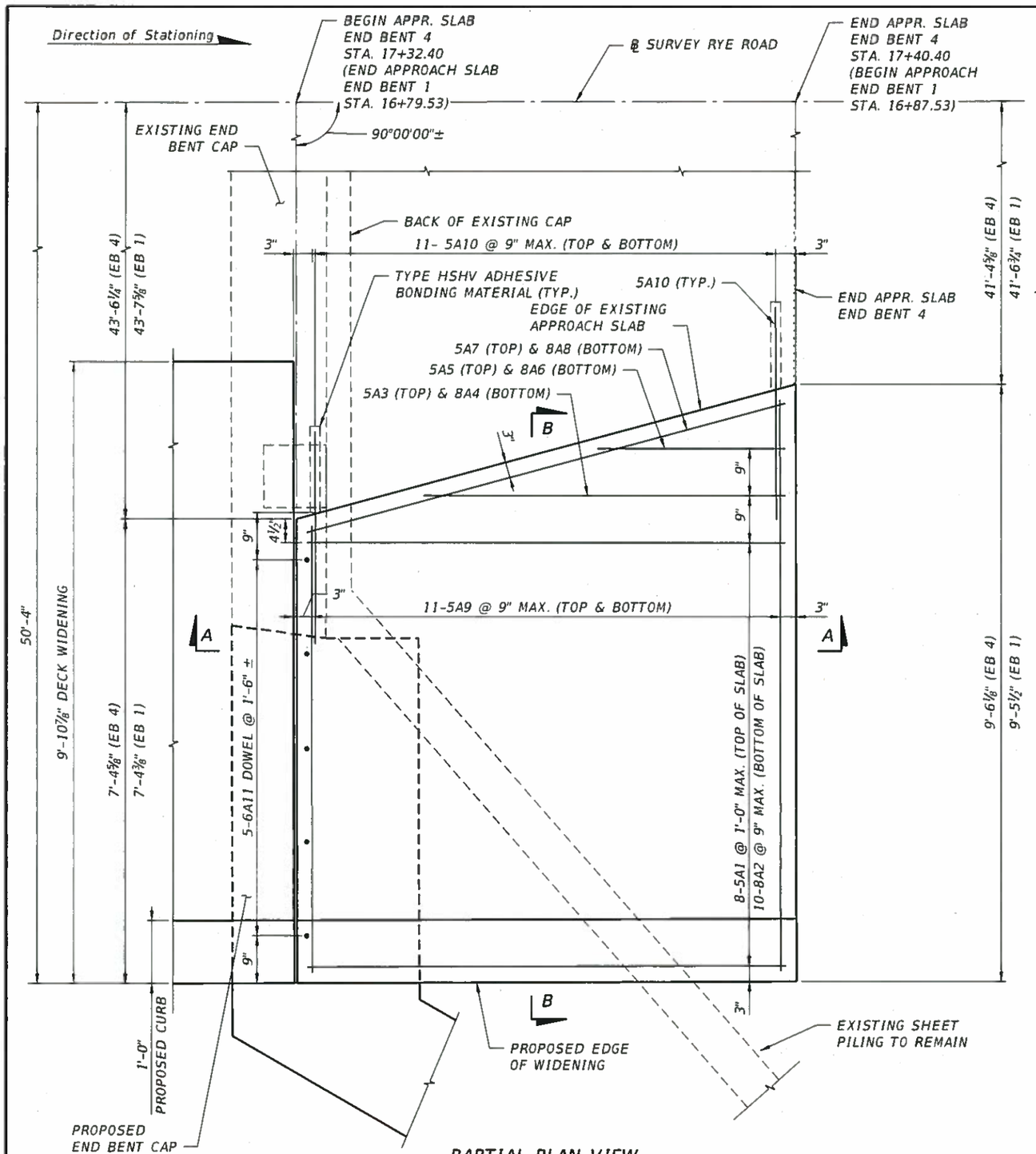
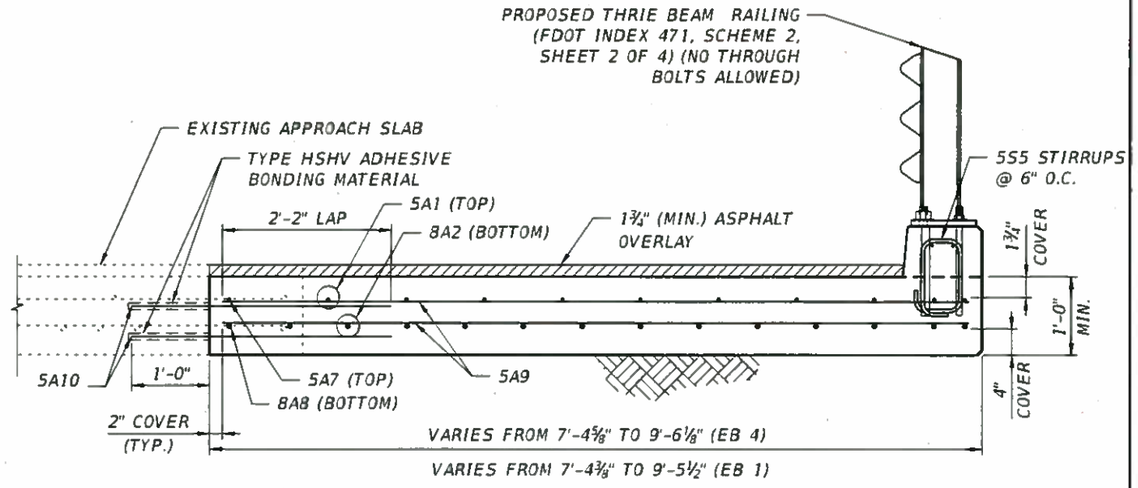


PARTIAL PLAN VIEW

END BENT (EB) 4 SHOWN, END BENT (EB) 1 SIMILAR



SECTION B-B

NOTE: ADJUST BARS 5A7 TO AVOID CONFLICT WITH EXISTING APPROACH SLAB REINFORCING.

SECTION A-A

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: APP
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
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Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
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ANANDA BERGERON KELLEY
LICENSE
NO 65632
STATE OF FLORIDA
PROFESSIONAL ENGINEER
11-23-16

APPROACH SLAB

SHEET NO.: BI-13

4:40:00 PM 11/23/2016 J:\00193\00193010.07\ms\struct\Br 134025\B01ApproachSlab01.dgn