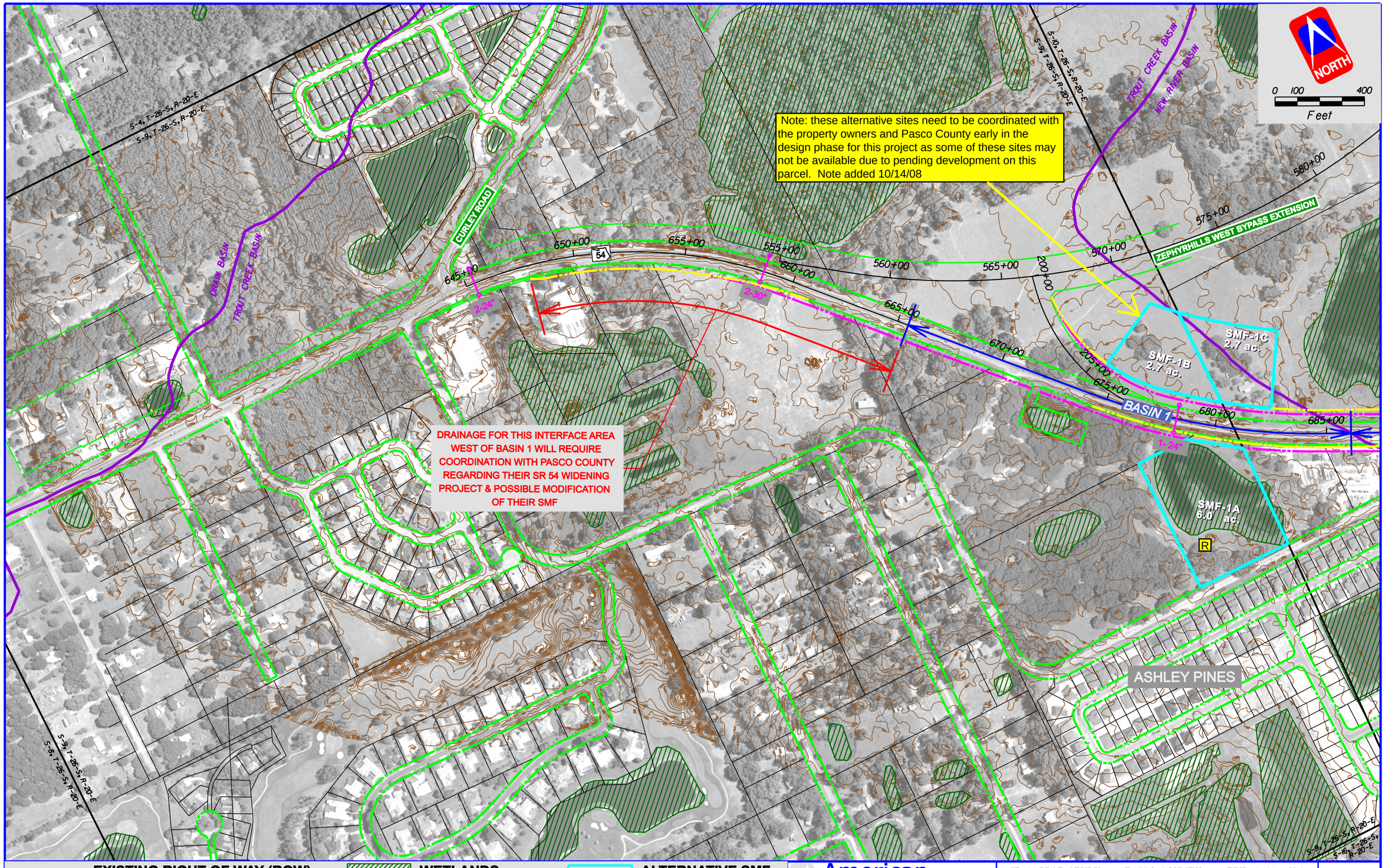
APPENDIX A

Drainage Maps With Alternative Pond Sites



American Consulting Engineers of Florida, LLC
18250 North US Highway 41
Lutz, FL 33549
Phone: (813) 496-7400 Fax: (813) 496-7401
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

SR 54 PD&E STUDY PASCO COUNTY FPID 416561-1-22-01

CONCEPTUAL DRAINAGE MAP

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 1

USER: 5longd 12/13/2007 12:31:42 PM F:\PROJECT\5067054\416561\220l\drainage\drplan01.dgn

NORTH

0 50 200

Feet

Note: these alternative sites need to be coordinated with the property owners and Pasco County early in the design phase for this project as some of these sites may not be available due to pending development on this parcel. Note added 10/14/08

ZEPHYRHILLS WEST BYPASS EXTENSION

ACCOUNTED FOR IN B0TH PROJECTS 0.45 ac.

IMPERVIOUS AREAS (PAVEMENT) TO BE REMOVED 0.62 ac.

SMF-BY OTHERS

SMF-1C 2.7 ac.

SMF-1B 2.7 ac.

SMF-1A 6.0 ac.

BASIN 1

2-30"

1- 24"

655+00 660+00 665+00 670+00 555+00 560+00 565+00 570+00 575+00 205+00 675+00 680+00

PROPOSED IMPROVEMENTS BY OTHERS (MPI #42II40-2)

PROPOSED

8' Shared Use Path

5' Sidewalk

Wesley Oaks Professional Park (approved development)

Harrison - Bennett Properties

Wesley Chapel Nursery & Landscape Supply Co

Billboard

CAROL DR

ELMORY

EXISTING RIGHT OF WAY (ROW)
ALTERNATIVE A PROPOSED ROW
ALTERNATIVE B PROPOSED ROW

WETLANDS
FLOODPLAINS
CROSS DRAINS

ALTERNATIVE SMF
ALTERNATIVE FPC

AERIAL PHOTO DATE: 4/24/06

SMF = STORMWATER MANAGEMENT FACILITY

FPC = FLOODPLAIN COMPENSATION SITE

American Consulting Engineers of Florida, LLC
18250 North US Highway 41
Lutz, FL 33549
Phone: (813) 496-7400 Fax: (813) 496-7401
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

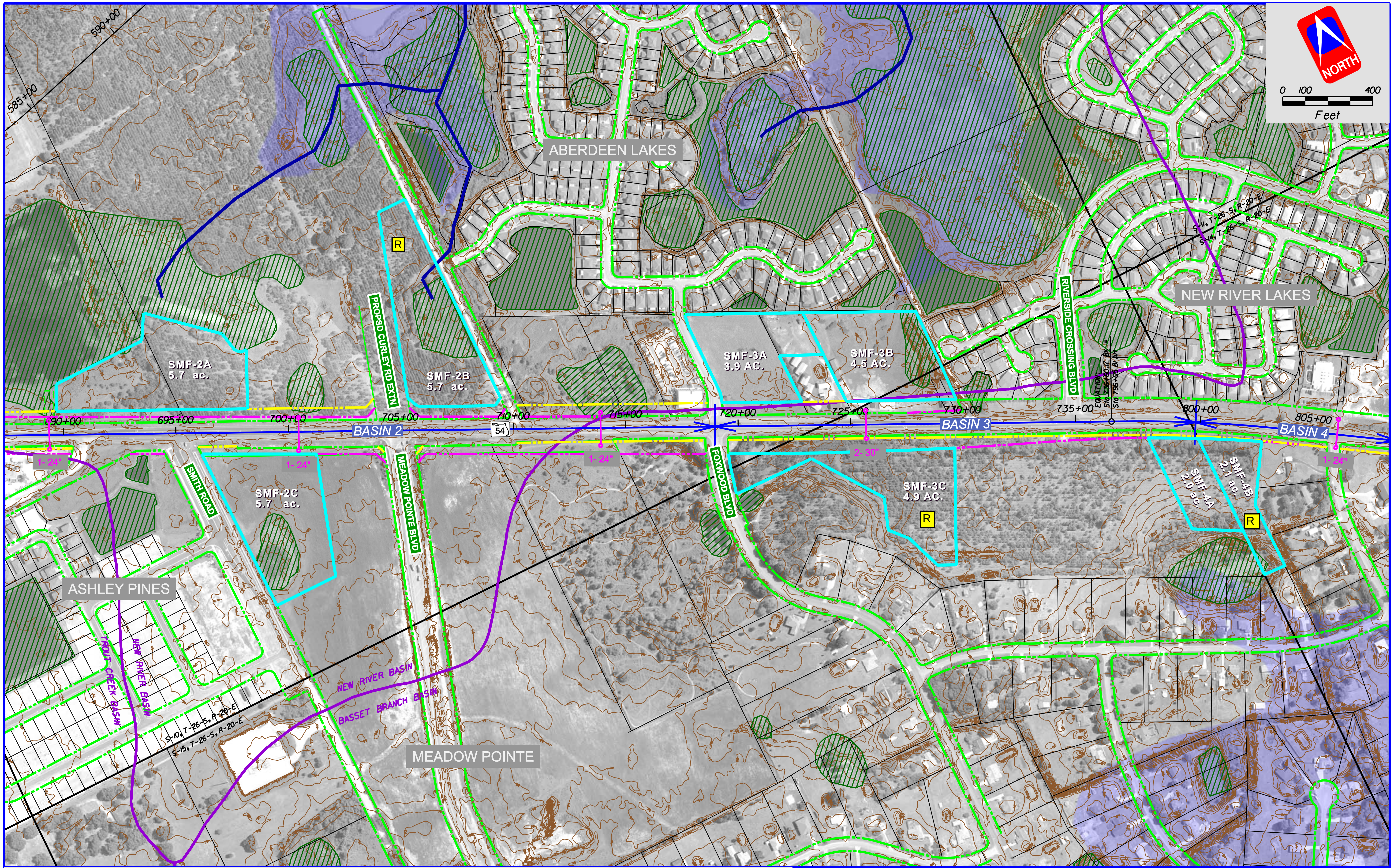
Supplemental information for drainage map sheet 1

CONCEPTUAL DRAINAGE MAP

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. EX-1

USER: 5maysl 9/27/2008 9:17:38 AM F:\Project\5067054\4il656il220l\drainage\drplan01_lam_ex.dgn



NORTH
0 100 400
Feet
ABERDEEN LAKES
NEW RIVER LAKES
ASHLEY PINES
MEADOW POINTE
SMF-2A
5.7 ac.
SMF-2B
5.7 ac.
SMF-2C
5.7 ac.
SMF-3A
3.9 AC.
SMF-3B
4.5 AC.
SMF-3C
4.9 AC.
SMF-4A
2.0 ac.
SMF-4B
2.1 ac.
PROPSD CURLEY RD EXTN
RIVERSIDE CROSSING BLVD
SMITH ROAD
MEADOW POINTE BLVD
FOXWOOD BLVD
BASIN 2
BASIN 3
BASIN 4
54
585+00
590+00
690+00
695+00
700+00
705+00
710+00
715+00
720+00
725+00
730+00
735+00
800+00
805+00
1- 24"
2- 30"
NEW RIVER BASIN
BASSET BRANCH BASIN
TROUT CREEK BASIN
S-10, T-26-S, R-20-E
S-15, T-26-S, R-20-E
S-11, T-26-S, R-20-E
S-14, T-26-S, R-20-E

EXISTING RIGHT OF WAY (ROW)
ALTERNATIVE A PROPOSED ROW
ALTERNATIVE B PROPOSED ROW
WETLANDS
FLOODPLAINS
CROSS DRAINS
ALTERNATIVE SMF
ALTERNATIVE FPC

AERIAL PHOTO DATE: 4/24/06
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Lutz, FL 33549
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Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

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CONCEPTUAL DRAINAGE MAP

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 2

NORTH

0 100 400

Feet

S-14, T-26-S, R-20-E

S-13, T-26-S, R-20-E

NEW RIVER LAKES

NEW RIVER TOWNSHIP

ASHTON OAKS

WYNDFIELDS

NEW RIVER

BASIN 5

BASIN 6

BASIN 7

PROPOSED WYNDFIELDS BLVD

RIVER GLEN BLVD

ASHTON OAKS BLVD

BASSET BRANCH

BASSET BRANCH BASIN

NEW RIVER BASIN

SMF-4C 2.0 ac.

SMF-5A 2.7 ac.

FPC-5A 0.5 ac.

SMF-5B 2.7 ac.

SMF-6B 2.0 ac.

SMF-6C 2.0 ac.

SMF-5C 2.7 ac.

FPC-5B 0.5 ac.

FPC-5C 0.5 ac.

SMF-6A 2.0 ac.

FPC-7A 2.4 AC.

SMF-7A 5.8 ac.

FPC-7B 1.5 ac.

SMF-7B 5.1 ac.

FPC-7C 1.5 ac.

SMF-7C 5.1 ac.

810+00 815+00 820+00 825+00 830+00 835+00 840+00 845+00 850+00 855+00 860+00 865+00

3-42"

1-24"

54

R

EXISTING RIGHT OF WAY (ROW)

ALTERNATIVE A PROPOSED ROW

ALTERNATIVE B PROPOSED ROW

WETLANDS

FLOODPLAINS

CROSS DRAINS

ALTERNATIVE SMF

ALTERNATIVE FPC

AERIAL PHOTO DATE: 4/24/06

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American Consulting Engineers of Florida, LLC
18250 North US Highway 41
Lutz, FL 33549
Phone: (813) 496-7400 Fax: (813) 496-7401
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

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CONCEPTUAL DRAINAGE MAP

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 3

USER: 5longd 12/13/2007 12:07:37 PM F:\PROJECT\5067054\416561\2201\drainage\drplan03.dgn

NORTH

0 100 400

Feet

NEW RIVER

FPC-8A
0.8 ac.

SMF-8A
4.2 ac.

R

HAMILTON PARK

S-13, T-26-S, R-20-E

S-18, T-26-S, R-21-E

SMF-9B
6.0 ac.

SMF-9C
6.0 ac.

HANBURY DRIVE

SMF-7B
5.1 ac.

870+00

875+00

880+00

885+00

890+00

895+00

900+00

905+00

910+00

915+00

920+00

925+00

BASIN 8

BASIN 9

54

3-11'x8' CBC

SMF-8B
4.7 ac.

SMF-7C
5.1 ac.

FPC-8B
1.0 ac.

SMF-8C
6.8 ac.

FPC-8C
1.0 ac.

NEW RIVER ROAD

SMF-8A
6.2 ac.

S-18, T-26-S, R-21-E

S-19, T-26-S, R-21-E

S-13, T-26-S, R-20-E

S-24, T-26-S, R-20-E

EXISTING RIGHT OF WAY (ROW)

ALTERNATIVE A PROPOSED ROW

ALTERNATIVE B PROPOSED ROW

WETLANDS

FLOODPLAINS

CROSS DRAINS

ALTERNATIVE SMF

ALTERNATIVE FPC

AERIAL PHOTO DATE: 4/24/06

SMF = STORMWATER MANAGEMENT FACILITY

FPC = FLOODPLAIN COMPENSATION SITE

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Consulting Engineers of Florida, LLC
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Lutz, FL 33549
Phone: (813) 496-7400 Fax: (813) 496-7401
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

SR 54 PD&E STUDY PASCO COUNTY FPID 416561-1-22-01

CONCEPTUAL DRAINAGE MAP

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 4

USER: 5longd 12/13/2007 11:53:38 AM F:\PROJECT\5067054\416561\2201\drainage\drplan04.dgn

NORTH

0 100 400

Feet

SMF-9C
6.0 ac.

SMF-9A
6.2 ac.

SMF-10C
3.8 ac.

SMF-10A
2.5 ac.

SMF-10B
2.5 ac.

BASIN 9

BASIN 10

NEW RIVER BASIN

INDIAN CREEK BASIN

EILAND BLVD

LAKE CRYSTAL BLVD

MORRIS BRIDGE ROAD

I-24

54

925+00

930+00

935+00

940+00

945+00

950+00

955+00

960+00

965+00

970+00

S-18, T-26-S, R-21-E

S-19, T-26-S, R-21-E

EXISTING RIGHT OF WAY (ROW)

ALTERNATIVE A PROPOSED ROW

ALTERNATIVE B PROPOSED ROW

WETLANDS

FLOODPLAINS

CROSS DRAINS

ALTERNATIVE SMF

ALTERNATIVE FPC

AERIAL PHOTO DATE: 4/24/06

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Jeffrey S. Novotny, P.E. No. 51083

SR 54 PD&E STUDY PASCO COUNTY FPID 416561-1-22-01

CONCEPTUAL DRAINAGE MAP

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 5

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APPENDIX B

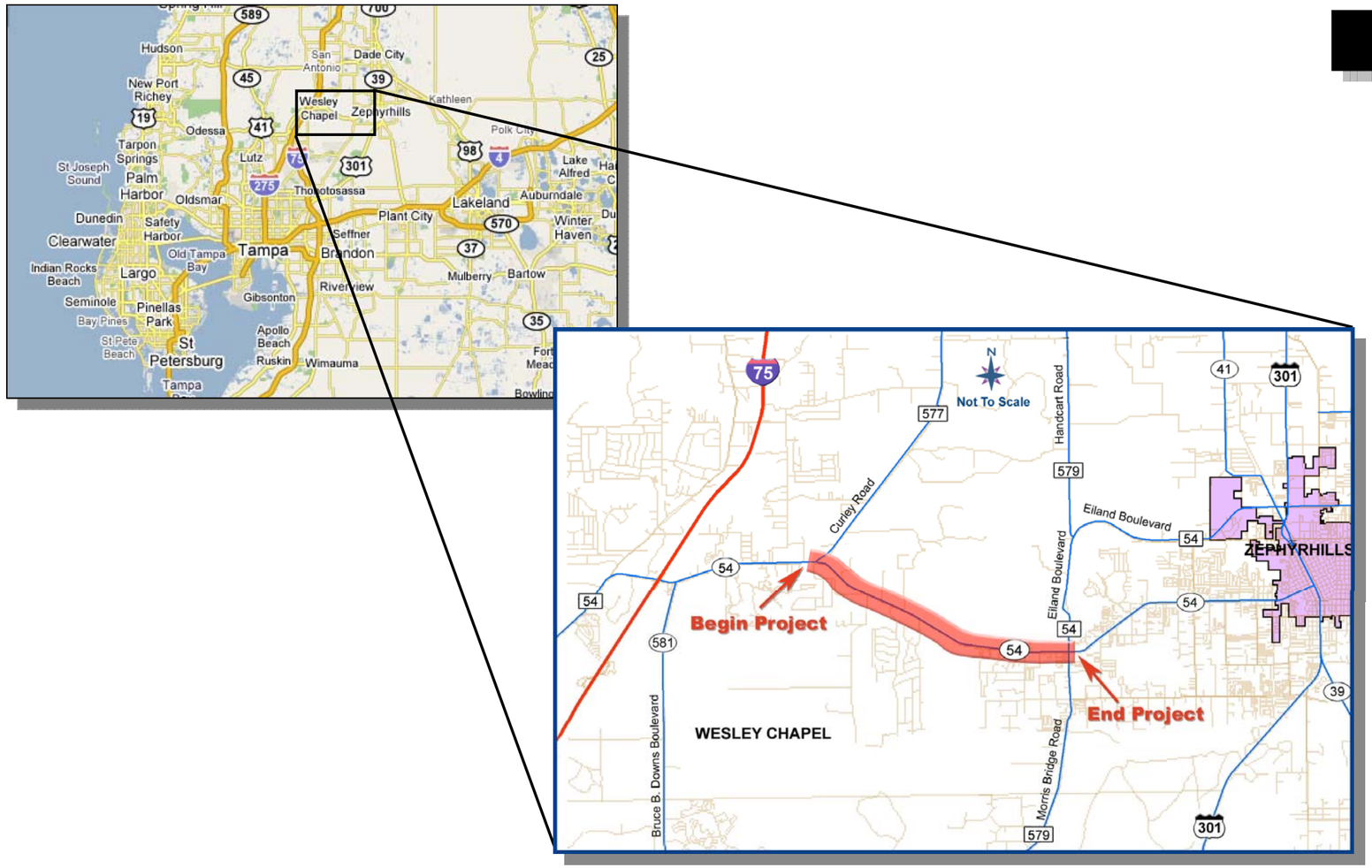
Conceptual Design Plans (Recommended Alternative)

Preliminary
Conceptual Design Plans

SR 54 PD&E STUDY

From CR 577 (Curley Rd) to CR 579 / CR 54 (Morris Bridge Rd)

WPI Segment Number 416561-1



Preferred Alternative

Prepared For:
The Florida Department of Transportation District Seven Modal Planning and Development Section

By:

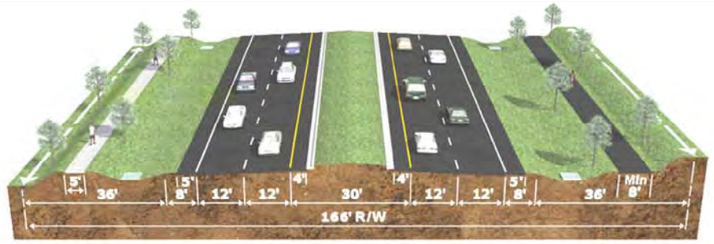
American Consulting Engineers of Florida, LLC

Rev. October 6, 2008

Sheets 3, 5, and 6 Rev. 3/25/09

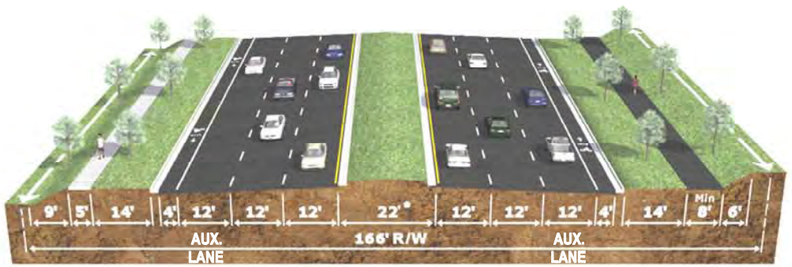
FDOT Project Manager: Manny Santos, EI

Sheet No.



FOUR-LANE DIVIDED SUBURBAN TYPICAL SECTION

FOUR-LANE DIVIDED URBAN TYPICAL SECTION



FOUR-LANE DIVIDED WITH AUXILIARY LANES URBAN TYPICAL SECTION

NORTH

ELLERBEE ROAD
CURLEY ROAD (CR 577)
REALIGNED CURLEY ROAD
WESLEY CHAPEL LOOP
SMITH ROAD
JIREH ROAD
RONNOCH BOULEVARD
BILLMAR ROAD
RIVERSIDE CROSSING BOULEVARD
ZEPHYRHILLS WEST BYPASS EXTENSION
PAT ROAD
WILDPINE BOULEVARD
WESLEY CHAPEL LOOP
MEADOW POINTE BLVD
NEW RIVER GLEN BLVD.
NEW RIVER TOWNSHIP
END 4 LANE SUBURBAN TYPICAL
BEGIN 4 LANE URBAN TYPICAL
HANBURY DRIVE
BROOK MANOR DRIVE
EILAND BOULEVARD (CR 54)
END 4 LANE WITH AUXILIARY LANES URBAN TYPICAL
BEGIN 4 LANE SUBURBAN TYPICAL
FOXWOOD BOULEVARD
FOXRIDGE BOULEVARD
WYNDFIELDS BOULEVARD
ASHTON OAKS BOULEVARD
LINDA DRIVE
LOURY DRIVE
LADO DRIVE
ERNEST DRIVE
NEW RIVER ROAD
APPEL ROAD
MOWREY ROAD
COBB DRIVE
BALL LANE
MORRIS BRIDGE ROAD (CR 579)
CHANCEY ROAD
54

0 400 2000
Feet

DATE OF AERIAL: APRIL 24, 2006

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

American Consulting Engineers of Florida, LLC
18250 North US Highway 41
Lutz, FL 33549
Phone: (813) 496-7400 Fax: (813) 496-7401
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	416561-1-22-01

SR 54 PD&E STUDY

SHEET INDEX

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO.
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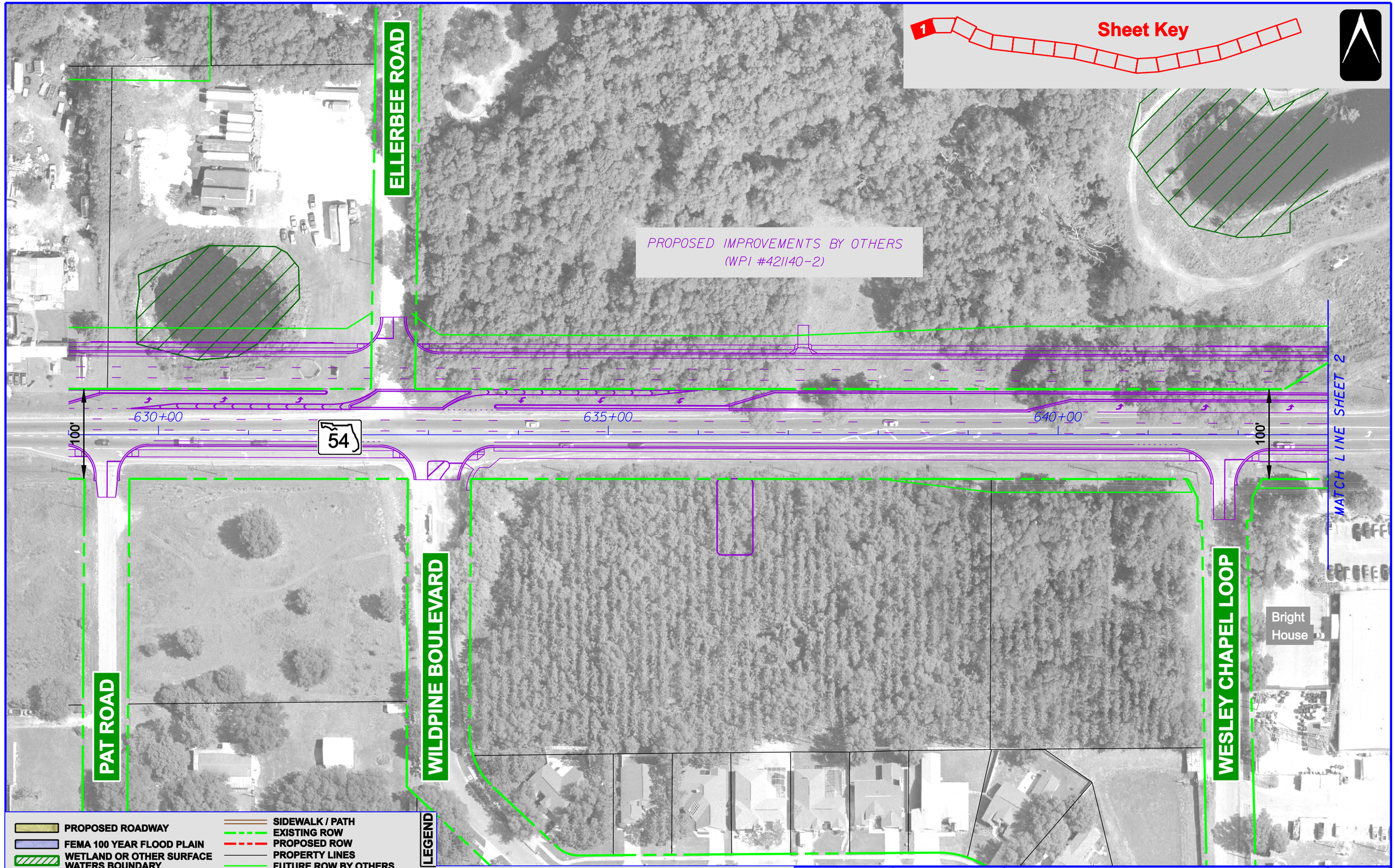

American
Consulting Engineers of Florida, LLC
18250 North US Highway 41
Lutz, FL 33549
Phone: (813) 496-7400 Fax: (813) 496-7401
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

SR 54 PD&E STUDY PASCO COUNTY FPID 416561-1-22-01

PREFERRED ALTERNATIVE
CONCEPTUAL DESIGN PLANS
CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 1

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Sheet Key

2

PROPOSED IMPROVEMENTS BY OTHERS
(WPI #421140-2)

CURLEY ROAD

PASCO 577 COUNTY

Wesley Chapel
Veterinary Clinic

Bright House

John Deere
Landscaping

Wetland 1

650+00

645+00

655+00

54

100'

100'

8' Shared Use Path

MATCH LINE SHEET 1

MATCH LINE SHEET 3

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIAL BUSINESS RELOCATION — NUMBER OF BUSINESSES WITHIN PARCEL
- POTENTIAL RESIDENTIAL RELOCATION — NUMBER OF RESIDENCES WITHIN PARCEL
- SIDEWALK / PATH
- EXISTING ROW
- PROPOSED ROW
- PROPERTY LINES
- FUTURE ROW BY OTHERS
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- FUTURE ELEC. POLE BY OTHERS
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- POTENTIAL FULL MEDIAN OPENING
- EXIST. 3' DIA. ELEC. POLE

0 20 100
Feet

DATE OF AERIAL: APRIL 24, 2006

American
Consulting Engineers of Florida, LLC
18250 North US Highway 41
Lutz, FL 33549
Phone: (813) 496-7400 Fax: (813) 496-7401
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PREFERRED ALTERNATIVE
CONCEPTUAL DESIGN PLANS
CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 2

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Sheet Key

3

PROPOSED IMPROVEMENTS BY OTHERS (WPI #421140-2), WHICH IS INCLUDED IN PASCO COUNTY'S CIP, IS EXPECTED TO BE COMPLETED PRIOR TO THE CONSTRUCTION OF THIS PROJECT. IF IT IS NOT CONSTRUCTED PRIOR TO THE CONSTRUCTION OF THIS PROJECT, AN APPROPRIATE TRANSITION WILL BE DESIGNED DURING THE DESIGN PHASE FOR THIS PROJECT, ALONG WITH CONDUCTING A REEVALUATION OF THE PD&E STUDY.

Wetland 2

PROPOSED

Billboard

MATCH LINE SHEET 2

MATCH LINE SHEET 4

660+00

665+00

670+00

100'

100'

54

8' Shared Use Path

Wesley Oaks Professional Park
(approved development)

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIAL BUSINESS RELOCATION — NUMBER OF BUSINESSES WITHIN PARCEL
- POTENTIAL RESIDENTIAL RELOCATION — NUMBER OF RESIDENCES WITHIN PARCEL
- SIDEWALK / PATH
- EXISTING ROW
- PROPOSED ROW
- PROPERTY LINES
- FUTURE ROW BY OTHERS
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- FUTURE ELEC. POLE BY OTHERS
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- POTENTIAL FULL MEDIAN OPENING
- EXIST. 3' DIA. ELEC. POLE

0 20 100
Feet

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SR 54 PD&E STUDY PASCO COUNTY FPID 416561-1-22-01

PREFERRED ALTERNATIVE
CONCEPTUAL DESIGN PLANS
CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 3

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Sheet Key

4

Harrison - Bennett Properties

5' Sidewalk

MATCH LINE SHEET 3

100'

675+00

680+00

685

100'

MATCH LINE SHEET 5

54

8' Shared Use Path

Wetland 3

Surface Water 1

Billboard

Wesley Chapel Nursery & Landscape Supply Co

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIAL BUSINESS RELOCATION — NUMBER OF BUSINESSES WITHIN PARCEL
- POTENTIAL RESIDENTIAL RELOCATION — NUMBER OF RESIDENCES WITHIN PARCEL
- SIDEWALK / PATH
- EXISTING ROW
- PROPOSED ROW
- PROPERTY LINES
- FUTURE ROW BY OTHERS
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- FUTURE ELEC. POLE BY OTHERS
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- POTENTIAL FULL MEDIAN OPENING
- EXIST. 3' DIA. ELEC. POLE

0 20 100

Feet

DATE OF AERIAL: APRIL 24, 2006

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PREFERRED ALTERNATIVE CONCEPTUAL DESIGN PLANS

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 4

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Sheet Key

5

Wetland 4

Harrison - Bennett Properties

5' Sidewalk

Billboard

MATCH LINE SHEET 4

+00

690+00

695+00

MATCH LINE SHEET 6

100'

125'

110'

120'

45'

54

8' Shared Use Path

Wesley Chapel Nursery & Landscape Supply Co

WESLEY CHAPEL LOOP

Surface Water 2

Ashley Pines

Surface Water 3

SMITH ROAD

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIAL BUSINESS RELOCATION — NUMBER OF BUSINESSES WITHIN PARCEL
- POTENTIAL RESIDENTIAL RELOCATION — NUMBER OF RESIDENCES WITHIN PARCEL
- SIDEWALK / PATH
- EXISTING ROW
- PROPOSED ROW
- PROPERTY LINES
- FUTURE ROW BY OTHERS
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- FUTURE ELEC. POLE BY OTHERS
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- POTENTIAL FULL MEDIAN OPENING
- EXIST. 3' DIA. ELEC. POLE

0 20 100

Feet

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PREFERRED ALTERNATIVE

CONCEPTUAL DESIGN PLANS

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 5

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PROPOSED ROW & LANE CONFIGURATION
FOR CURLEY RD EXTENSION BY OTHERS

CURLEY RD EXTENSION

JIREH ROAD

MEADOW POINTE BLVD

Wetland 6

Wetland 7

Harrison - Bennett
Properties

Curley Rd. Office Park
(approved development)

Wesley Chapel Lakes / Meadow Pointe

5' Sidewalk

8' Shared Use Path

700+00

705+00

710+00

54

120'

35'

110'

MATCH LINE SHEET 5

MATCH LINE SHEET 7

Sheet Key

6

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIAL BUSINESS RELOCATION — NUMBER OF BUSINESSES WITHIN PARCEL
- POTENTIAL RESIDENTIAL RELOCATION — NUMBER OF RESIDENCES WITHIN PARCEL
- SIDEWALK / PATH
- EXISTING ROW
- PROPOSED ROW
- PROPERTY LINES
- FUTURE ROW BY OTHERS
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- FUTURE ELEC. POLE BY OTHERS
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- POTENTIAL FULL MEDIAN OPENING
- EXIST. 3' DIA. ELEC. POLE

0 20 100
Feet

DATE OF AERIAL: APRIL 24, 2006

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PREFERRED ALTERNATIVE
CONCEPTUAL DESIGN PLANS
CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 6

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Sheet Key

7

To Aberdeen

RONNOCH BOULEVARD

Fox Crossings
Professional Office
and Retail Plaza
(approved development)

Wetland 8

Billboard

Storage Building

Wesley Chapel
Daycare & Retail Center
(approved development)

Payless
Homes

5' Sidewalk

MATCH LINE SHEET 6

MATCH LINE SHEET 8

715+00

720+00

725+00

110'

100'

54

45'

Pasco Heights
Development

FOXWOOD BLVD

8' Shared Use Path

Catholic Diocese of St. Petersburg

Wetland 10

Wetland 9

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIAL BUSINESS RELOCATION — NUMBER OF BUSINESSES WITHIN PARCEL
- POTENTIAL RESIDENTIAL RELOCATION — NUMBER OF RESIDENCES WITHIN PARCEL
- SIDEWALK / PATH
- EXISTING ROW
- PROPOSED ROW
- PROPERTY LINES
- FUTURE ROW BY OTHERS
- POTENTIALLY CONTAMINATED SITE
- POTENTIAL POND SITE
- FUTURE ELEC. POLE BY OTHERS
- POTENTIAL DIRECTIONAL MEDIAN OPENING
- POTENTIAL FULL MEDIAN OPENING
- EXIST. 3' DIA. ELEC. POLE

0 20 100
Feet

DATE OF AERIAL: APRIL 24, 2006

American
Consulting Engineers of Florida, LLC
18250 North US Highway 41
Lutz, FL 33549
Phone: (813) 496-7400 Fax: (813) 496-7401
Certificate of Authorization No. 9302
Jeffrey S. Novotny, P.E. No. 51083

SR 54 PD&E STUDY PASCO COUNTY FPID 416561-1-22-01

PREFERRED ALTERNATIVE
CONCEPTUAL DESIGN PLANS
CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 7

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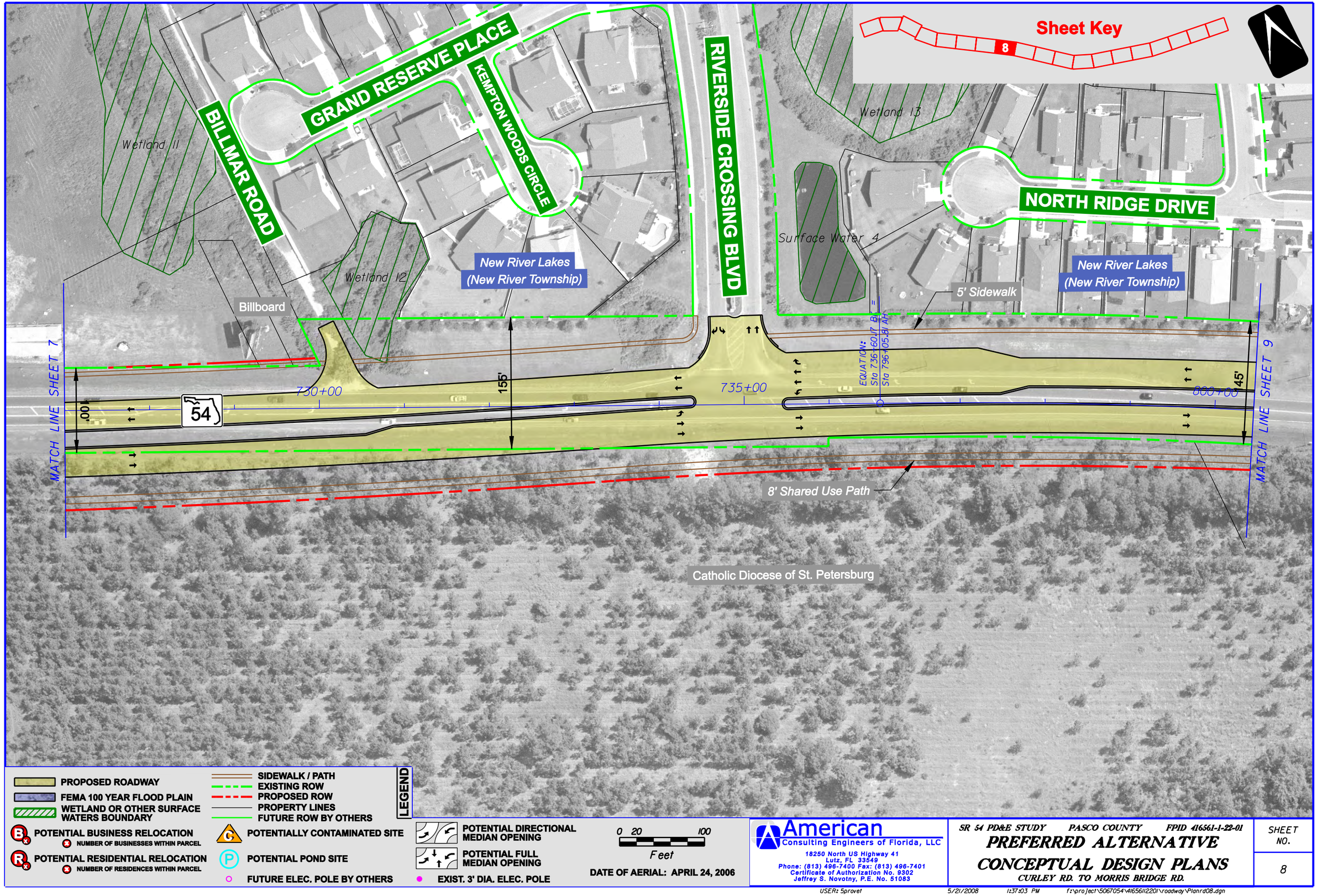

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIAL BUSINESS RELOCATION (Bx) — x = NUMBER OF BUSINESSES WITHIN PARCEL
- POTENTIAL RESIDENTIAL RELOCATION (Rx) — x = NUMBER OF RESIDENCES WITHIN PARCEL
- SIDEWALK / PATH
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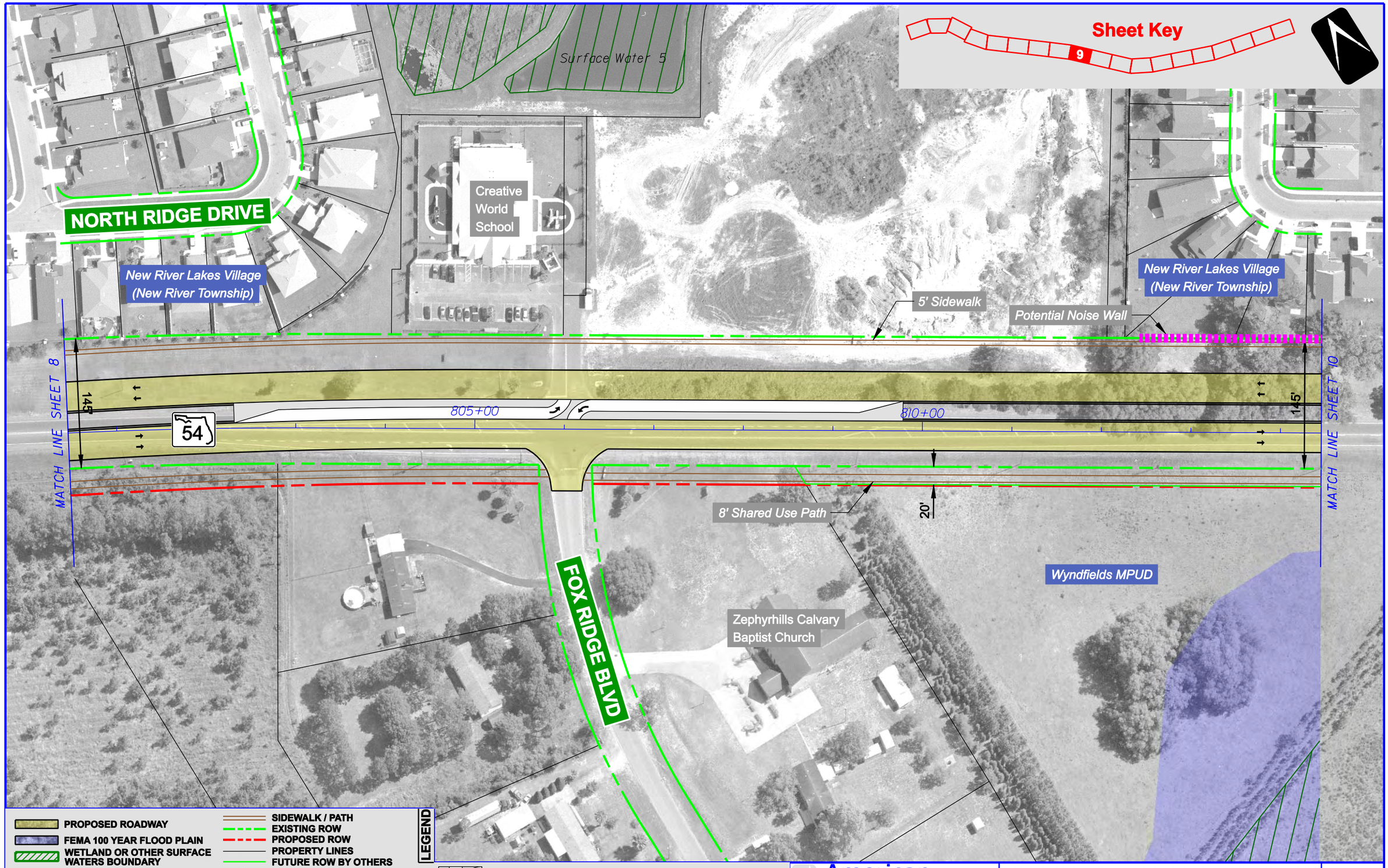

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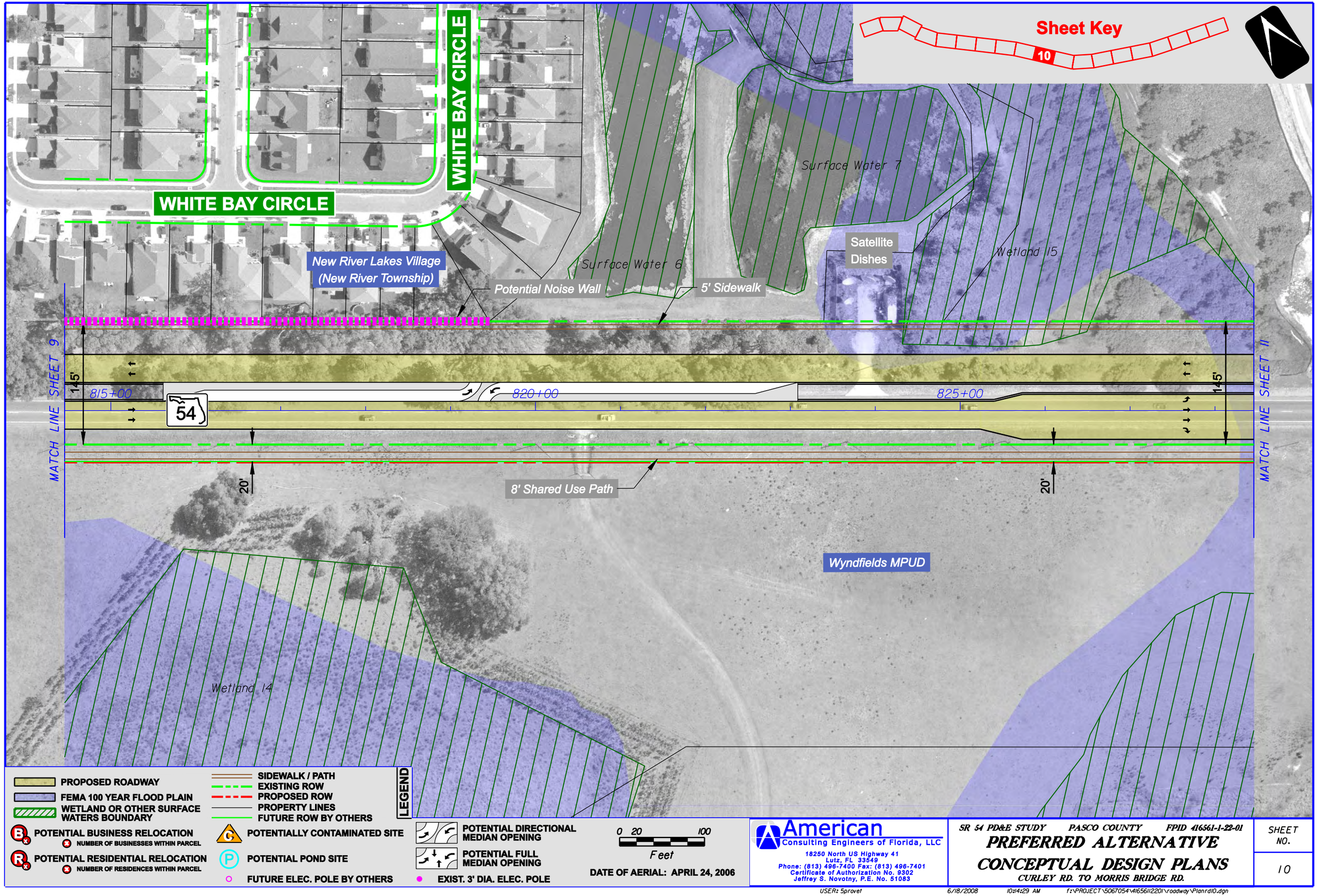

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
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0 20 100
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SHEET NO. 10

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Sheet Key

11

RIVER GLEN BLVD

Wetland 17

5' Sidewalk

45'

145'

830+00

835+00

840+00

143'

54

MATCH LINE SHEET 10

MATCH LINE SHEET 12

20'

PROPOSED WYNDFIELDS BLVD

8' Shared Use Path

Kimball Hill
Homes FL, INC

ASHTON MEADOWS WAY

Ashton Oaks
(The Crossings MPUD)

Wetland 16

Wetland 18

LEGEND

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0 20 100
Feet

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SHEET NO. 11

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Sheet Key

12

Wetland 19

Wetland 20

5' Sidewalk

MATCH LINE SHEET 11

MATCH LINE SHEET 13

100'

110'

845+00

850+00

855+00

54

8' Shared Use Path

ASHTON OAKS BLVD

Kimball Hill
Homes FL, INC

Houck Corporation

Ashton Oaks
(The Crossings MPUD)

LEGEND

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0 20 100
Feet

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CONCEPTUAL DESIGN PLANS

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 12

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Sheet Key

13

Tiki Huts

Wetland 22

5' Sidewalk

Billboard

45'

MATCH LINE SHEET 12

100'

860+00

865+00

870+00

100'

MATCH LINE SHEET 14

54

8' Shared Use Path

Potential Noise Wall

LINDA DRIVE

Wetland 21

River Haven
Mobile Homes

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
- POTENTIAL BUSINESS RELOCATION
  - NUMBER OF BUSINESSES WITHIN PARCEL
- POTENTIAL RESIDENTIAL RELOCATION
  - NUMBER OF RESIDENCES WITHIN PARCEL
- SIDEWALK / PATH
- EXISTING ROW
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- POTENTIAL FULL MEDIAN OPENING
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0 20 100
Feet

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CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 13

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Sheet Key

14

Wetland 23

New River Township

5' Sidewalk

45'

Trinity United Methodist Church

MATCH LINE SHEET 13

100'

875+00

54

880+00

100'

110'

MATCH LINE SHEET 15

8' Shared Use Path

River Haven Mobile Homes

LOURY DRIVE

LADO DRIVE

7th Day Adventist Church

Beginning Point RV Park

Wetland 24

LEGEND

- PROPOSED ROADWAY
- FEMA 100 YEAR FLOOD PLAIN
- WETLAND OR OTHER SURFACE WATERS BOUNDARY
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0 20 100

Feet

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CURLEY RD. TO MORRIS BRIDGE RD.

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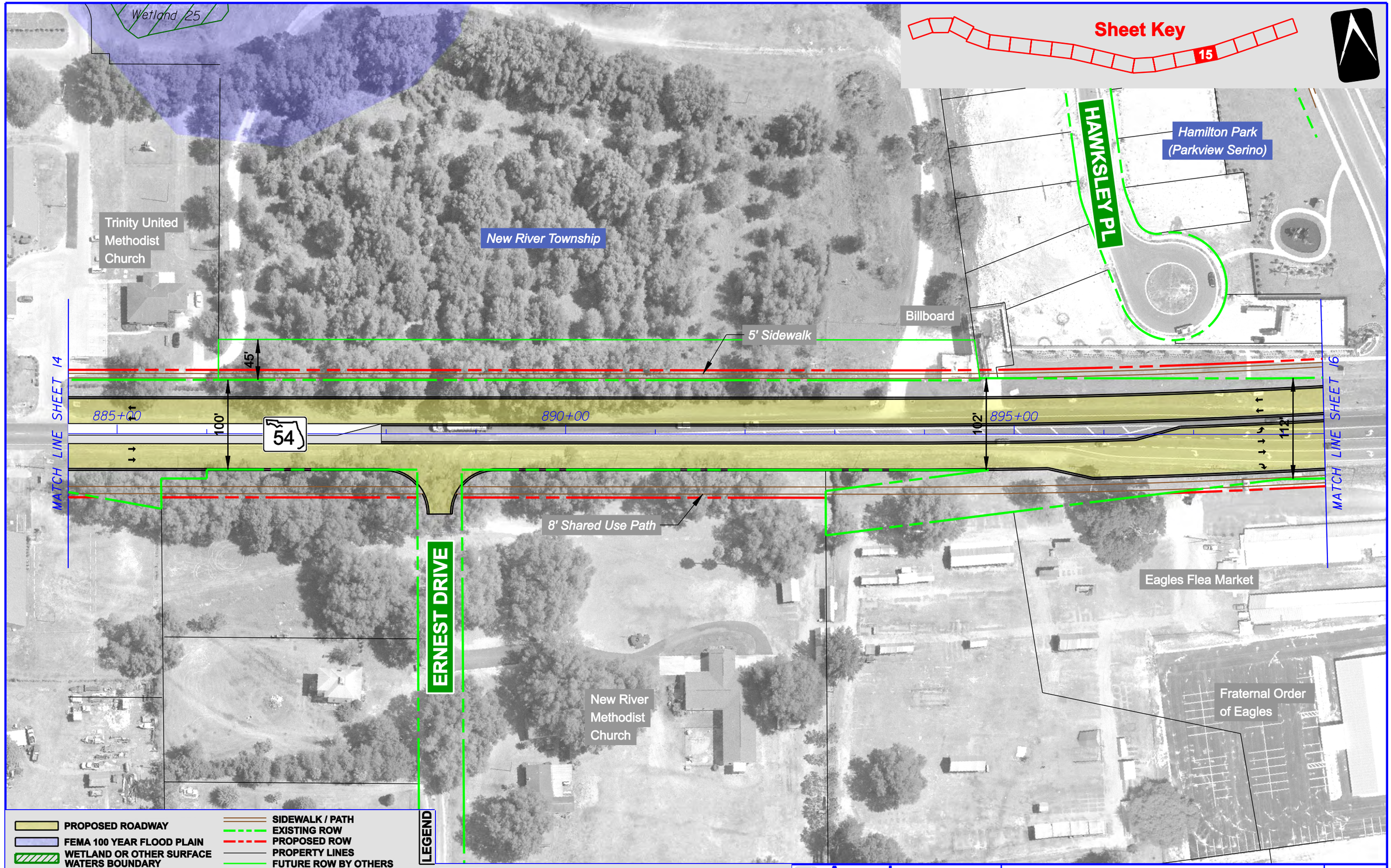

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CURLEY RD. TO MORRIS BRIDGE RD.

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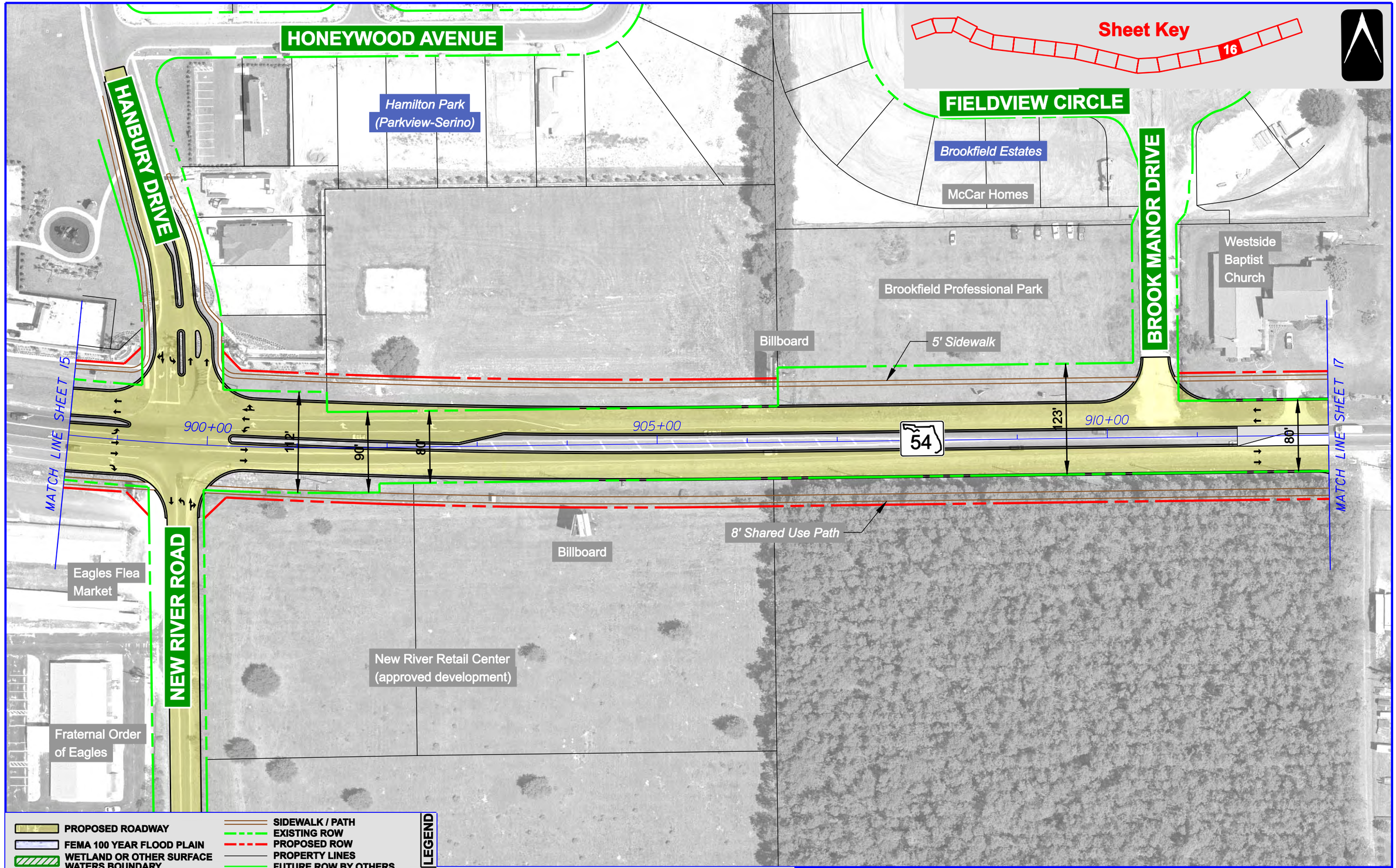

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PREFERRED ALTERNATIVE
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CURLEY RD. TO MORRIS BRIDGE RD.

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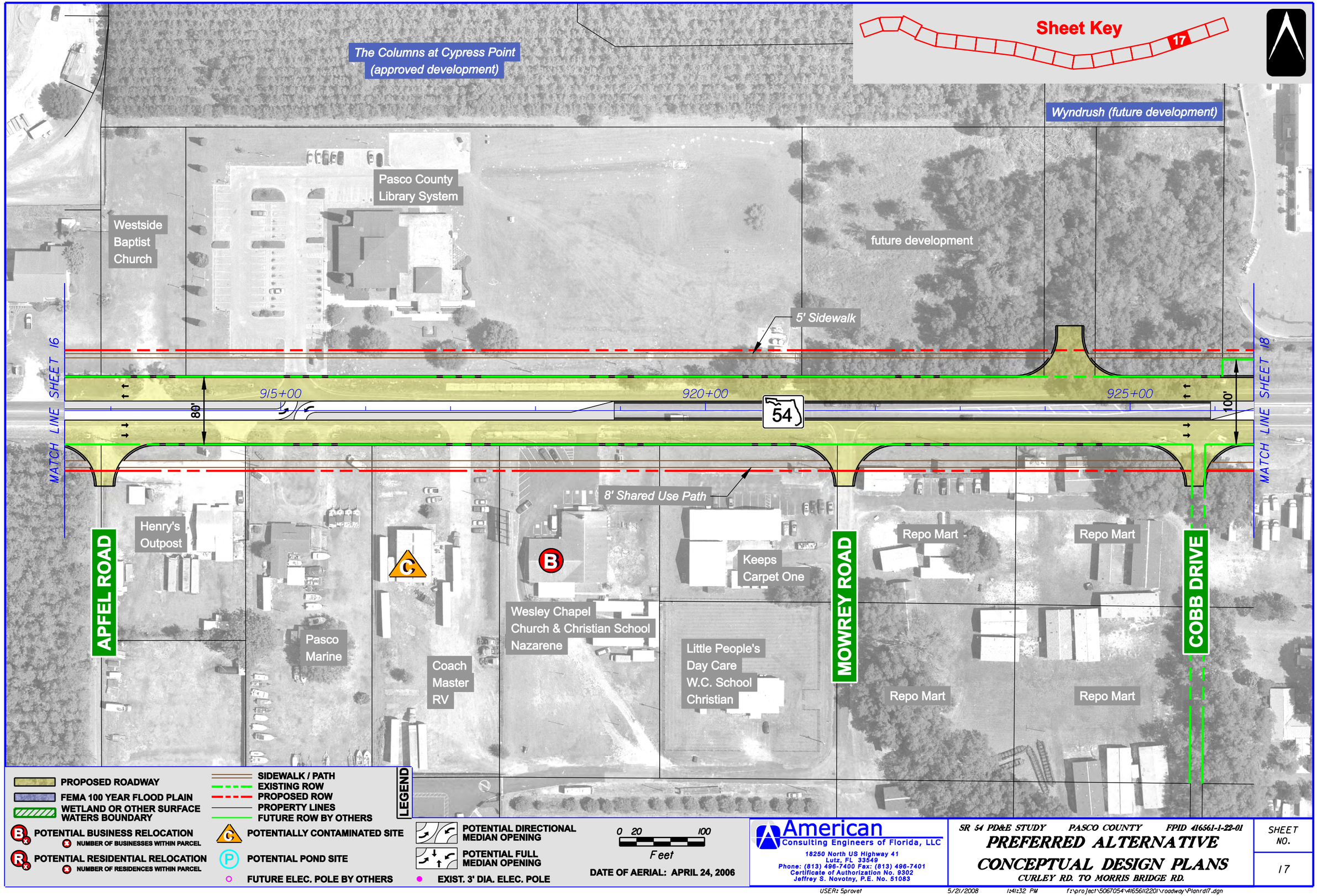

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CONCEPTUAL DESIGN PLANS
CURLEY RD. TO MORRIS BRIDGE RD.

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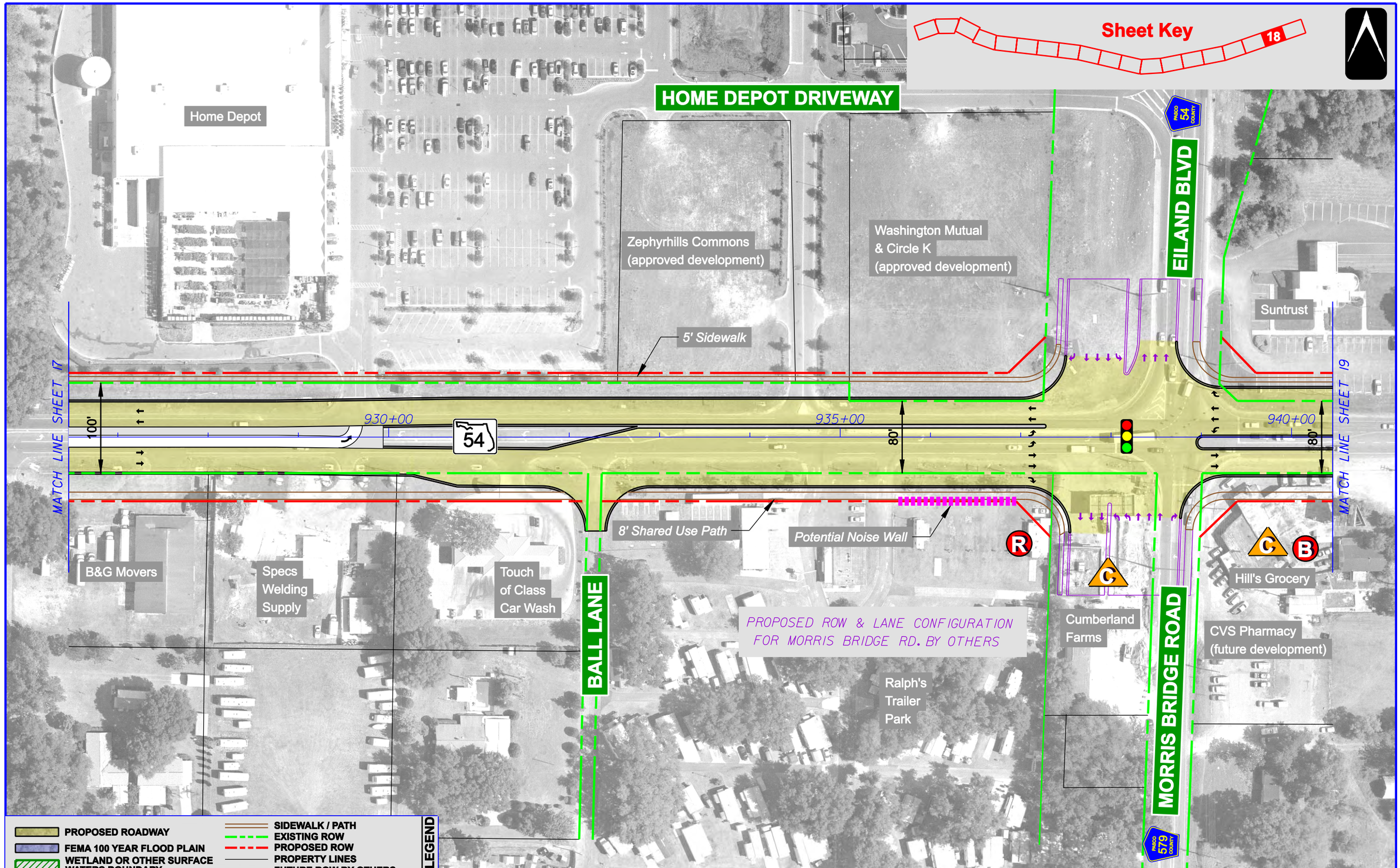

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CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 18

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Sheet Key

19

Suntrust

Bill Nye Reality

Discount Auto Parts (approved development)

5' Sidewalk

MATCH LINE SHEET 18

80'

100'

110'

945+00

950+00

955+00

110'

54

Park and Store (approved development)

8' Shared Use Path

Billboard

Lolita's Cafe (approved development)

LEGEND

- PROPOSED ROADWAY
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- POTENTIAL FULL MEDIAN OPENING
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0 20 100

Feet

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PREFERRED ALTERNATIVE CONCEPTUAL DESIGN PLANS

CURLEY RD. TO MORRIS BRIDGE RD.

SHEET NO. 19

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APPENDIX C

Design Variation for Multiuse Path Width

To: **Ron Chin, P.E.** Date: **December 17, 2008**

District Design Engineer

Financial Project ID: **416561-1-22-01** New Const. (X) RRR ( )

Federal Aid Number:

Project Name: **SR 54 From CR 577 (Curley Rd) to CR 579/CR 54 (Morris Bridge Rd/Eiland Blvd)**

State Road Number: **54** Co./Sec./Sub.: **14090**

Begin Project MP: **11.611** End Project MP: **16.356**

Full Federal Oversight: Yes ( ) No ( )

Request for Design Exception: ( ), Design Variation: (X)

(For Design Exception or Variations Requiring Central Office Approval)

Re-submittal: Yes ( ) No (X) Original Ref #: _____

Requested for the following element(s):

( ) Design Speed	( ) Lane Widths	( ) Shoulder Widths	( ) Bridge Widths
( ) Structural Capacity	( ) Vertical Clearance	( ) Grades	( ) Cross Slope
( ) Superelevation	( ) Horizontal Alignment	( ) Vertical Alignment	( ) Stopping Sight Distance
( ) Horizontal Clearance	(X) Other **Shared-Use Path Width**		

SR 54 in Pasco County is currently a two-lane rural facility with one segment classified as a Rural Principal Arterial-Other and two segments classified as Urban Principal Arterial Other. The proposed improvements include widening to a four lane arterial from Curley Road to east of Morris Bridge Road. A 4-lane urban section with auxiliary lanes and 4 foot bike lanes is proposed from Curley Road to Foxwood Boulevard; a 4-lane suburban section is proposed from Foxwood Boulevard to Linda Drive, and a 4-lane urban section with 4 foot bike lanes is proposed from Linda Drive to east of Morris Bridge Road.

There are currently no pedestrian facilities on SR 54. Proposed improvements include adding a 5 foot sidewalk on the north side of SR 54 and a minimum 8-foot shared use path on the south side of SR 54 for the entire length of the project. A design variation is being requested for the reduced shared-use path minimum width of 8 feet from the FDOT requirement of 12 feet. This is to be consistent with the Department's previous commitments to Pasco County to be consistent with their typical sections and the Department's unwritten understanding that this roadway will be turned over to Pasco County once SR 56 has been extended eastward to US 301.

Recommended by:

_____ Date: 12-15-2008

Responsible Professional Engineer

Approvals:

_____ Date: 12/22/08

District Design Engineer

_____ Date:

District Structures Design Engineer

_____ Date:

State Roadway Design Engineer

_____ Date:

State Structures Design Engineer

_____ Date:

State Chief Engineer

_____ Date:

FHWA Division Administrator

INTRODUCTION

This Design Variation is being requested in conjunction with the PD&E Study for the widening of SR 54 between Curley Road and Morris Bridge Road. The total length of the proposed project limits is approximately 4.5 miles. The segment of SR 54 to the west, from I-75 to east of Curley Road (CR 577), is currently programmed by Pasco County for widening to six lanes. That project also includes a connection to the planned Zephyrhills West Bypass Extension.

The existing SR 54 facility is functionally classified by FDOT as:

- "Urban Principal Arterial Other" from west of the project limits to Smith Rd
- "Rural Principal Arterial Other" from Smith Rd to west of New River
- "Urban Principal Arterial Other" from west of New River to east of the project limits

Traffic signals currently exist (or will be in operation) at Curley Road, Meadow Pointe Boulevard, River Glen Boulevard/Wyndfields Boulevard, and Morris Bridge Road. The existing right-of-way typically varies between 80 ft and 100 ft. The existing highway is classified by FDOT as Access Management Class 3.

EXISTING CONDITION (Typical Section and Speed Limits)

The existing typical section is a two-lane undivided rural roadway with 12-foot travel lanes and 12-foot shoulders (5-foot paved). Several areas have been widened to provide left-turn and right-turn lanes. From west to east, the posted speed limit varies from 55 miles per hour (mph) to 50 mph, changing in the vicinity of Linda Drive.

PROPOSED IMPROVEMENTS

Proposed typical sections from the PD&E Study are shown in **Figure 1**. All travel lanes are 12 feet in width, and all typical sections include a 5-foot sidewalk on the north side and a 8-foot (minimum width) multiuse trail on the south side.

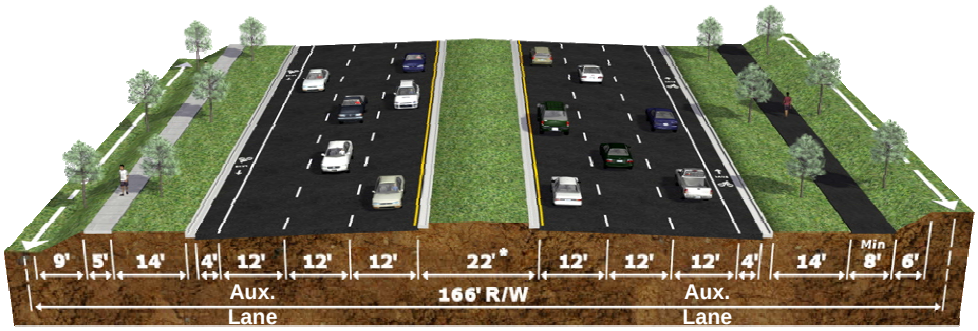
Between Curley Road and Foxwood Boulevard, the proposed typical section is a four-lane divided urban roadway with two auxiliary lanes and 4-foot bike lanes. The proposed right-of-way is 166 feet.

Between Foxwood Boulevard and Linda Drive, a 4-lane divided suburban typical section with 5-foot paved outside shoulders is proposed. The proposed right-of-way is 166 feet.

Between Linda Drive and Morris Bridge Road, a 4-lane divided urban typical section with 4-foot bike lanes is proposed. The proposed right-of-way is 142 feet.

The border areas are wider than FDOT's standard typical sections and would be generally consistent with Pasco County's standard typical section border areas **(Figure 2)** which include a 5-ft sidewalk on one side and a minimum 8-ft path on the other side.

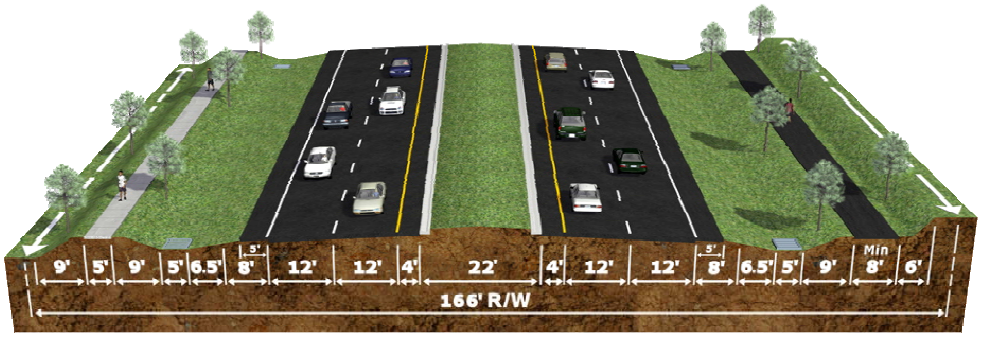
(Looking east for all sections)



Four-Lane Divided with Auxiliary Lanes Urban Typical Section

From Curley Road to Foxwood Blvd

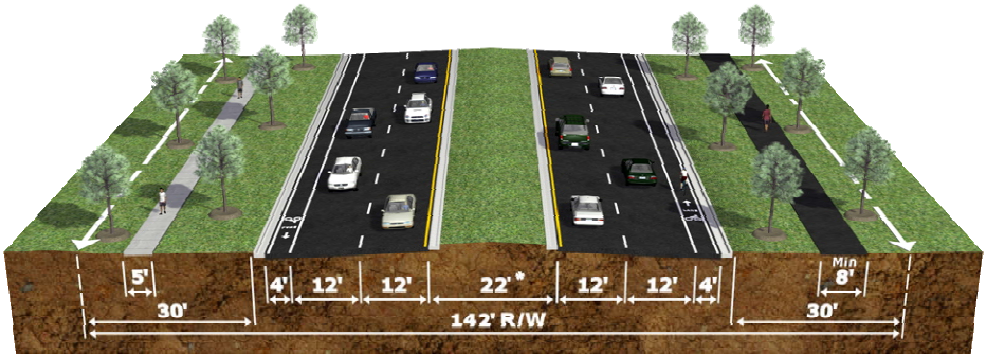
Design Speed = 45 mph



Four-Lane Divided Suburban Typical Section

From Foxwood Blvd to Linda Drive

Design Speed = 55 mph



Four-Lane Divided Urban Typical Section

From Linda Drive to Morris Bridge Road

Design Speed = 45 mph

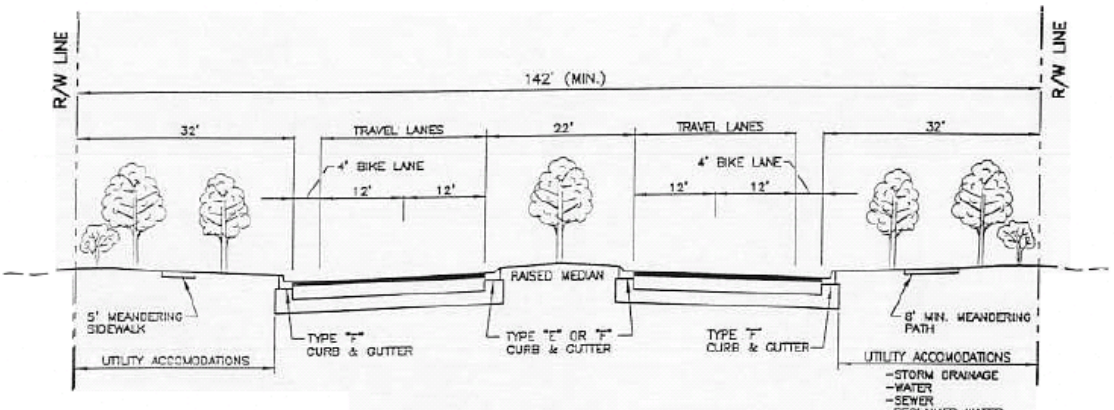
*For the few areas where a 30' median would be required for dual left turn lanes at signalized intersections, the outside border areas would be reduced by 4' on each side to provide the extra median width required.

Rev. 5/13/08

SR 54 PD&E Study
From Curley Road to Morris Bridge Road
Pasco County, Florida
WPI Segment No. 416561-1

SR 54 Proposed Typical Sections

Figure 1

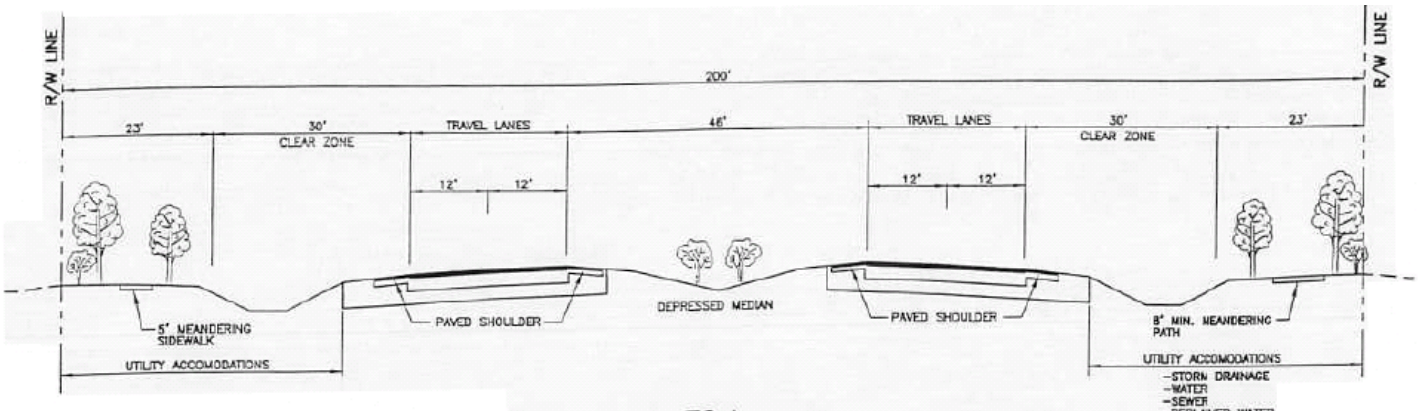


TS-1
FOUR LANE DIVIDED
URBAN TYPICAL SECTION
NTS

45 MPH - 142' R/W

PASCO COUNTY
DEVELOPMENT SERVICES BRANCH
ENGINEERING SERVICES DEPARTMENT
CREATED: 5/14/04
B.C.C. APPROVAL DATE: _____

(Note: the border areas for TS-2 (Six Lane Divided Urban Typical Section) look the same as those of TS-1)



TS-4
FOUR LANE DIVIDED
RURAL TYPICAL SECTION
NTS

55-60 MPH - 200' R/W
EXPANDABLE TO SIX LANE
WITH 22' RAISED MEDIAN - 50 MPH

PASCO COUNTY
DEVELOPMENT SERVICES BRANCH
ENGINEERING SERVICES DEPARTMENT
CREATED: 5/14/04
B.C.C. APPROVAL DATE: _____

Figure 2

DESIGN VARIATION

This Design Variation request is for a reduction of the minimum shared-use path width (outlined in the FDOT Plans Preparation Manual - Chapter 2 and summarized in the Design Criteria section below). The proposed path width requested is (a minimum of) 8 feet for the length of this project.

DESIGN CRITERIA

FDOT Criteria for Median Width

Per the PPM Vol. I Section 8.6.2, the width of a shared use path (for two-way "traffic") shall be **12** ft.

REASON CRITERIA IS NOT APPROPRIATE

While the FDOT PPM Volume I states that a shared use path must be 12 foot wide, other applicable design criteria does allow the use of a 10 foot wide shared use path with a minimum 8 foot width. AASHTO "*Guide for the Development of Bicycles Facilities*", 1999 Edition, page 35 states:

"…Under most conditions, a recommended paved width for a two-directional shared use path is 3.0 m (10 ft). In rare instances, a reduced width of 2.4 m (8 ft) can be adequate".

Also, the Florida "Green Book" Chapter 9, Section C.2 Width, states:

"The paved width and operating width required for a shared use path are primary design considerations. The minimum recommended width for a paved two-way path is 10 ft. …In a few cases, it may be acceptable to decrease the trail width to 8 feet. This width should only be used where the following conditions prevail:

- Bicycle traffic is expected to be low, even on peak days or during peak hours.
- Pedestrian use of the facility is not expected to be more than occasional.
- There will be good horizontal and vertical alignment, providing safe and frequent passing opportunities.
- During normal maintenance activities, the path will not be subjected to maintenance vehicles causing pavement edge damage."

JUSTIFICATION & BACKGROUND INFORMATION

Pasco County has adopted standard roadway typical sections to achieve uniformity for the County's multi-lane collector and arterial roadways. The Department made commitments to Pasco County previously during the PD&E Study to provide typical sections which are consistent with the county's standard typical sections. The rationale for this is that there is an unwritten understanding between the Department and the county that this segment of SR 54 will be turned over to the county at such time that SR 56 is extended eastward to US 301. This understanding was stated during the PD&E Study in several meetings by Mr. Bob Clifford, Department Head of Intermodal Systems Development at District Seven.

Applicable criterion (both AASHTO and Florida Green Book) do allow for the use of an 8-foot path. Therefore, a variation is justified as part of 416561-1 for the reasons indicated above and below.

(1) AASHTO "*Guide for the Development of Bicycle Facilities*" allows that a shared use path can be a minimum of 8 feet wide,
(2) Florida Green Book states that it may be acceptable to decrease the trail width to 8 feet.
(3) Pasco County Standard Roadway Typical Sections for Collector and Arterial Roadways (Resolution #04-212 adopted by the BOCC on June 29, 2004).

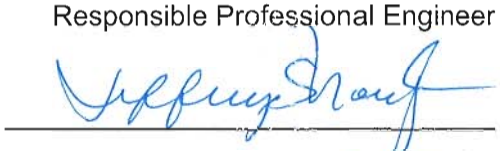
Since the proposed typical sections include either designated bike lanes or paved shoulders, the more experienced cyclists will be expected to use these facilities, which will result in lower bicycle volumes on the multiuse trail. Construction of a narrower path would also, of course, result in some savings in construction costs. If this narrower path were applied to the entire project, the estimated savings could be approximately $140,000.

OTHER DESIGN VARIATIONS

Not Applicable

Recommended by:

Jeffrey Novotny, P.E. No. 51083
Responsible Professional Engineer



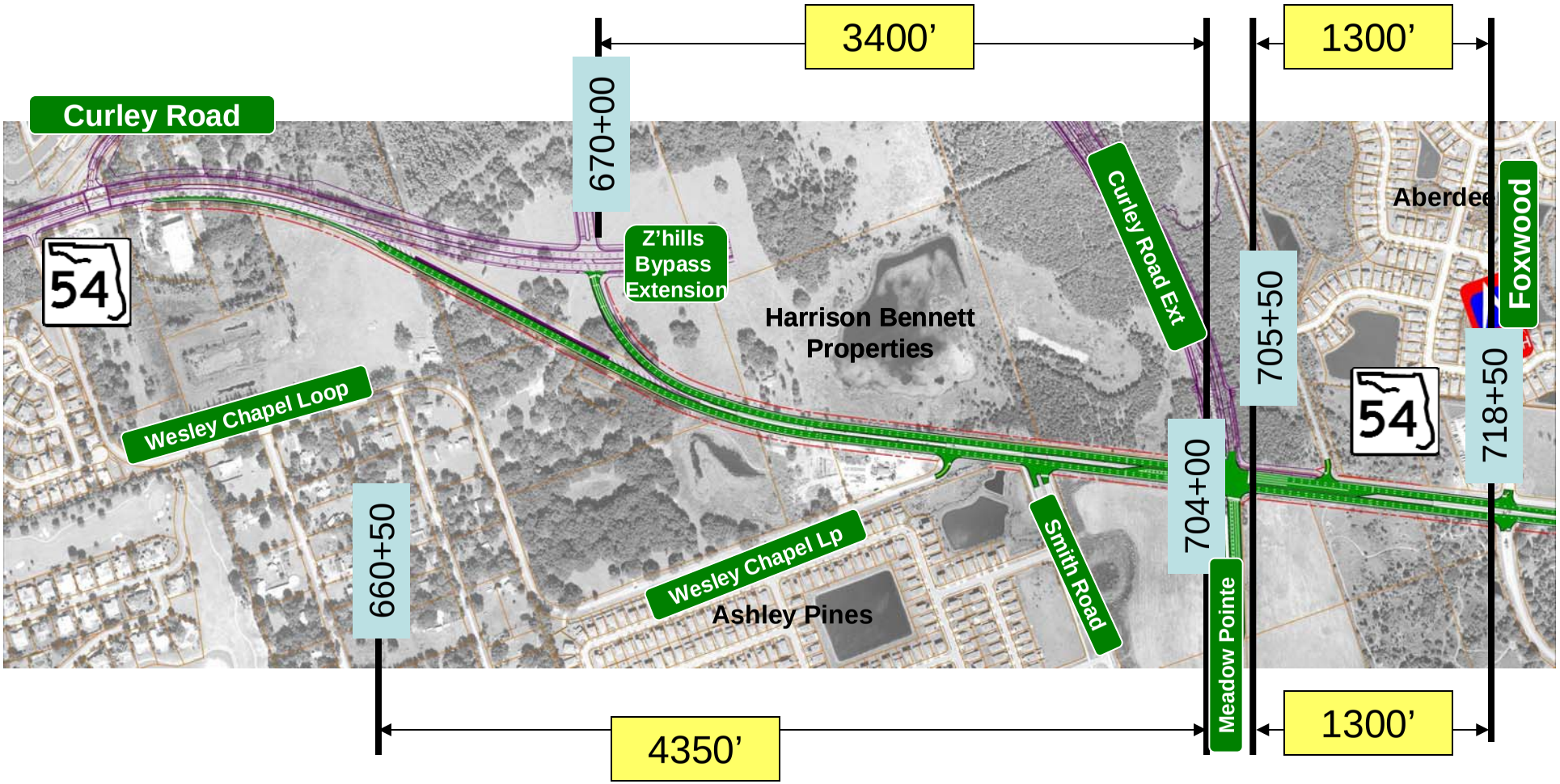
Date: 12/18/2008

American Consulting Engineers of Florida, LLC

APPENDIX D

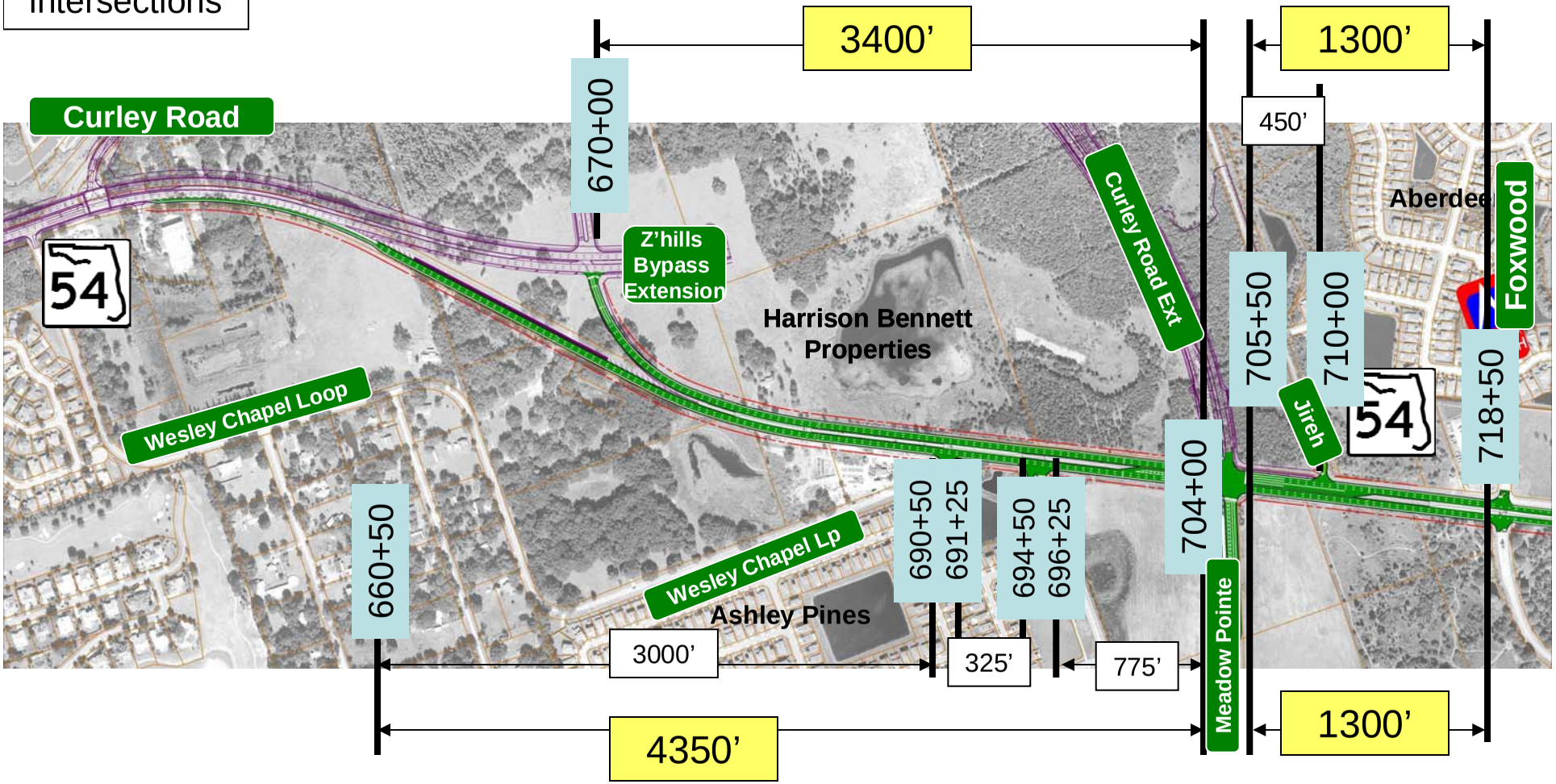
Auxiliary Lane Length Documentation

Auxiliary Lane Length

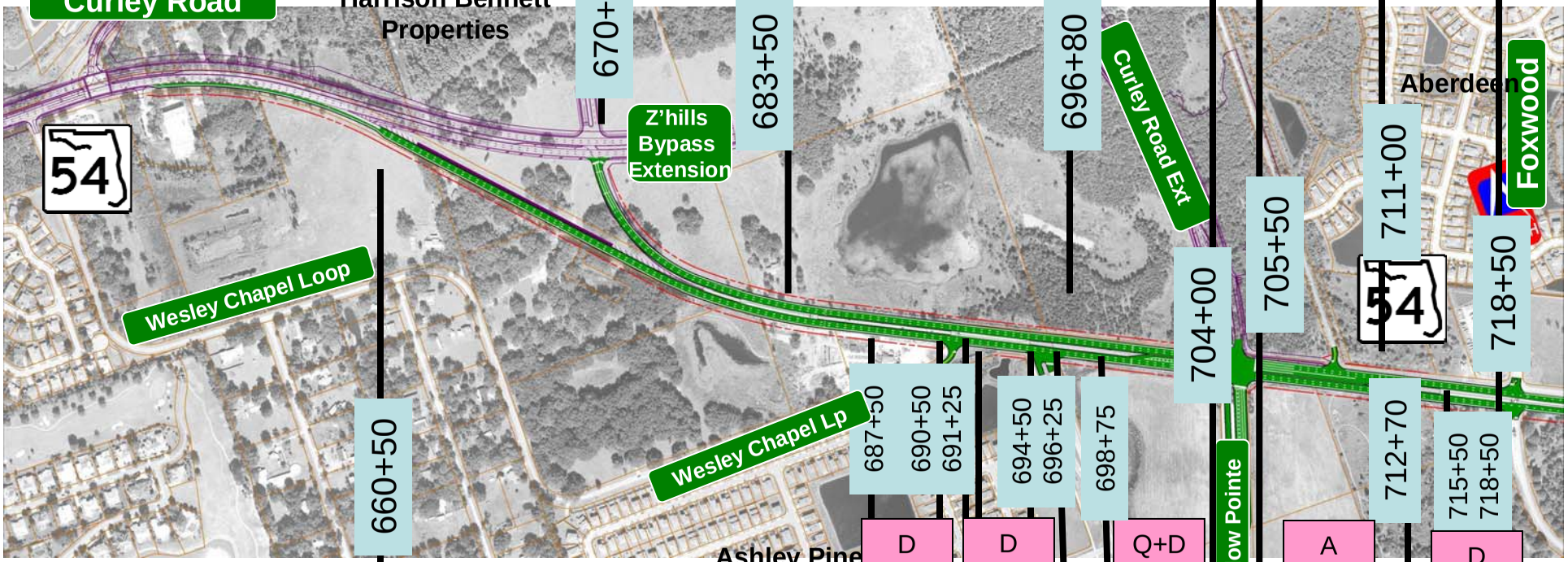


Auxiliary Lane Length

Distances between intersections



Auxiliary Lane Length	Accel, Decel, Queue Lengths
Distances between intersections	



3400’

1300’

Q+D 1350’

A 720’

Q+D 550’

670+00

683+50

696+80

704+00

705+50

711+00

718+50

660+50

687+50

690+50

691+25

694+50

696+25

698+75

712+70

715+50

718+50

D 300’

D 300’

Q+D 525’

A 720’

D 300’

3000’

325’

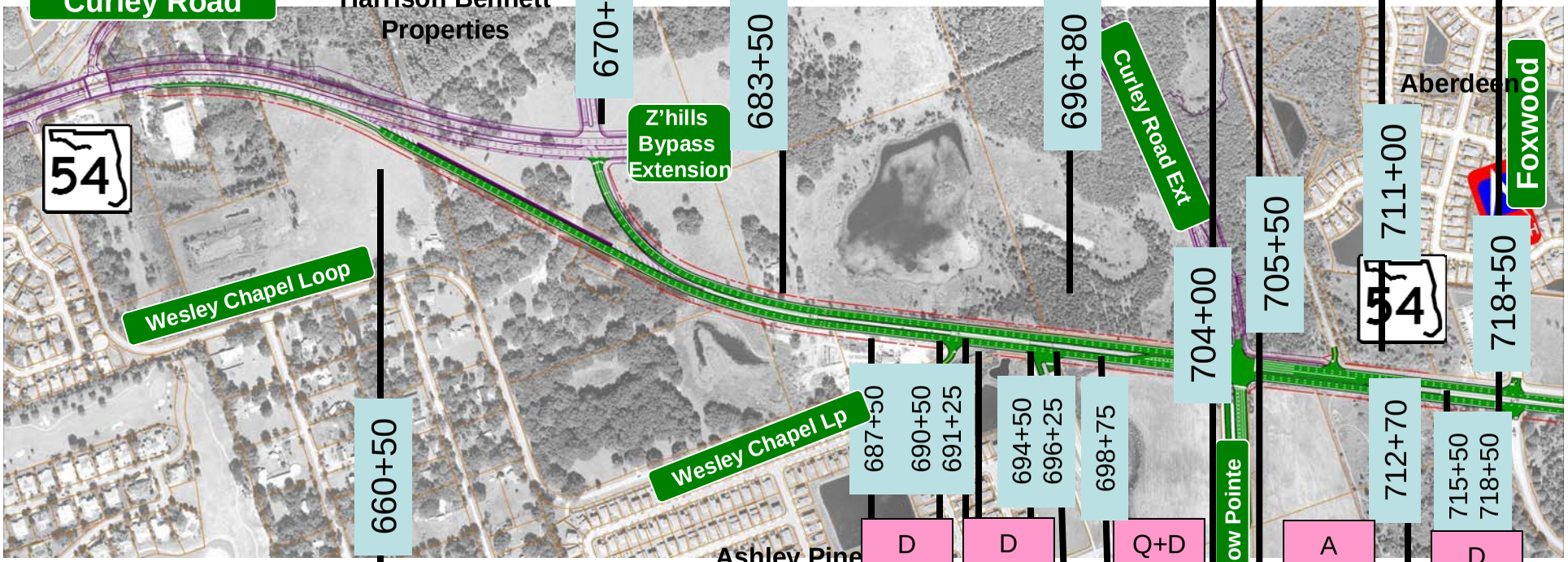
775’

1300’

4350’

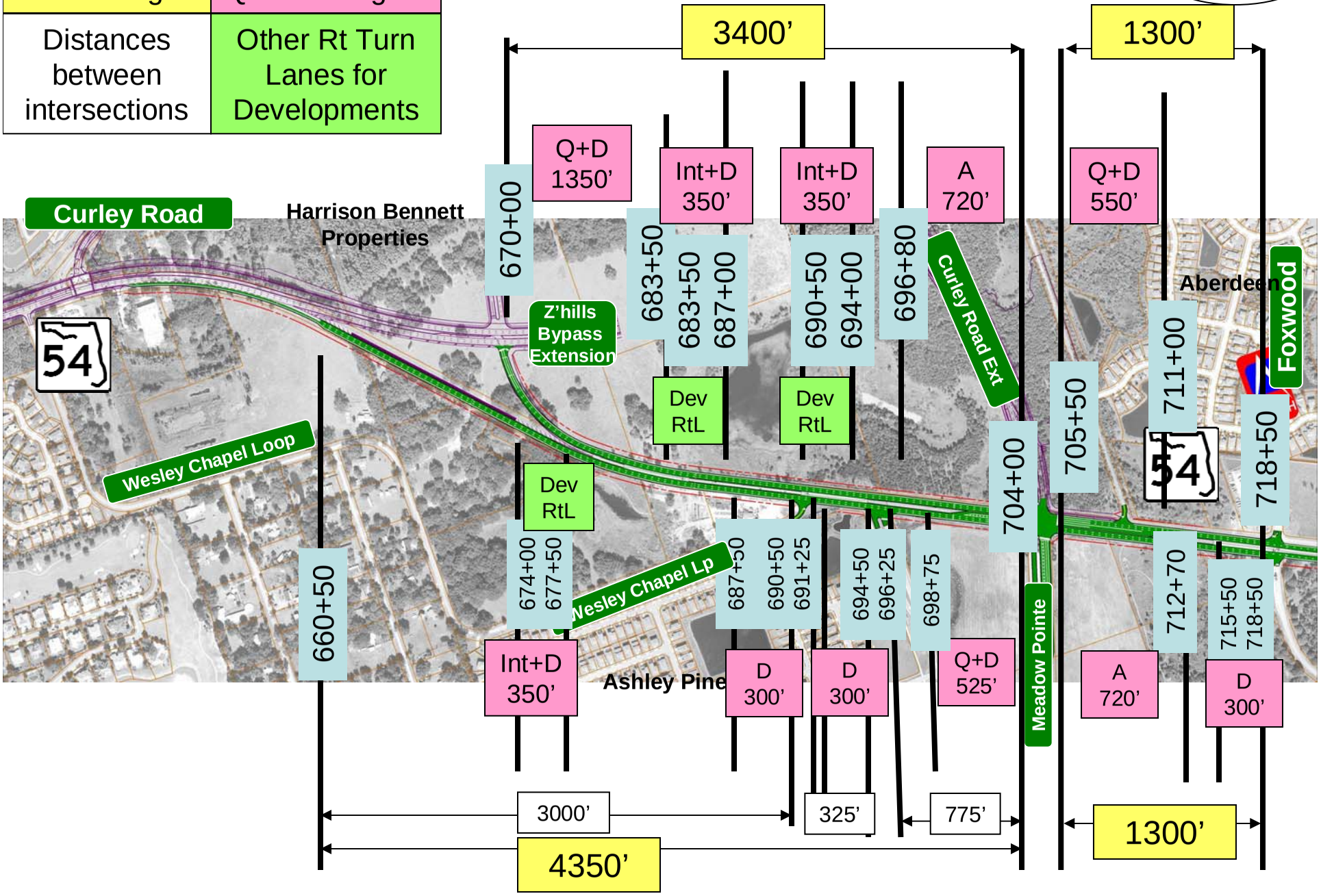
Auxiliary Lane Length	Accel, Decel, Queue Lengths	Remaining

Distances between intersections

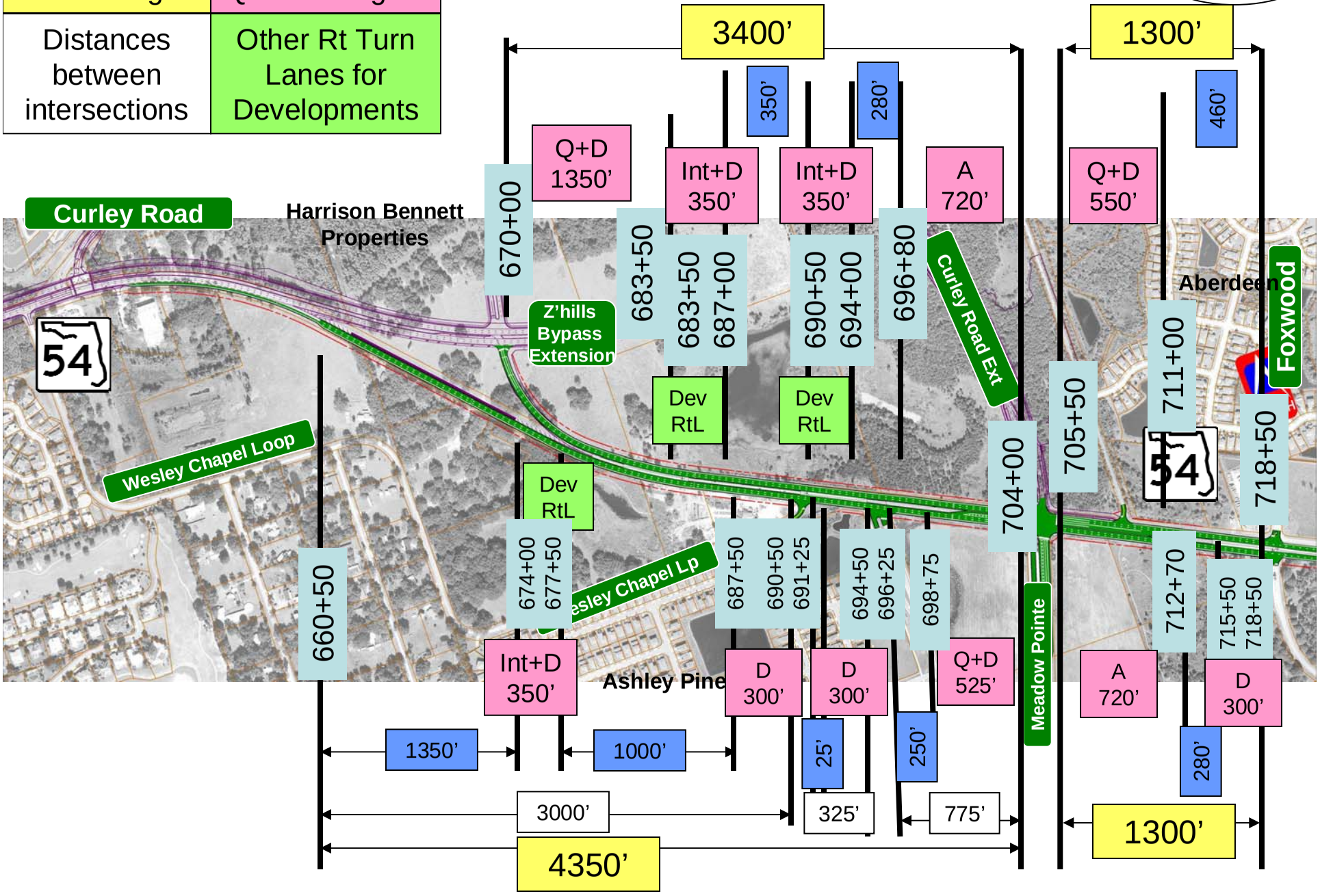


3400'
1330'
1300'
460'
Q+D 1350'
A 720'
Q+D 550'
670+00
683+50
696+80
704+00
705+50
711+00
718+50
660+50
687+50
690+50
691+25
694+50
696+25
698+75
712+70
715+50
718+50
D 300'
D 300'
Q+D 525'
A 720'
D 300'
2700'
25'
250'
280'
3000'
325'
775'
4350'
1300'

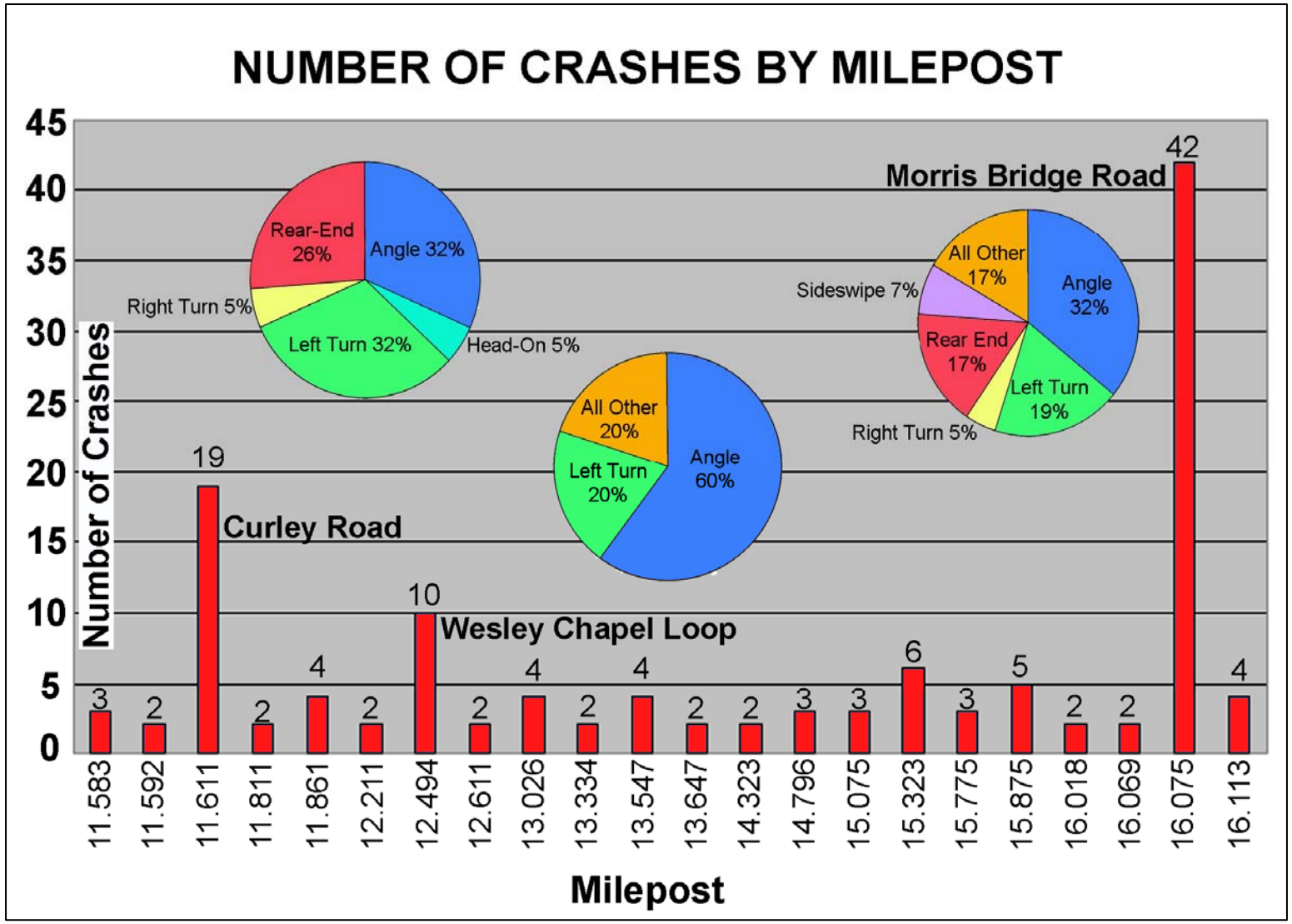
Auxiliary Lane Length	Accel, Decel, Queue Lengths
Distances between intersections	Other Rt Turn Lanes for Developments



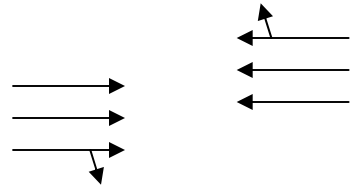
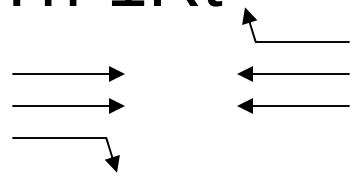
Auxiliary Lane Length	Accel, Decel, Queue Lengths	Remaining
Distances between intersections	Other Rt Turn Lanes for Developments	



- 5-year number of crashes = 155
- 5 fatal crashes



SR 54/Meadow Pointe Intersection Level of Service (2030) am/pm

	East Leg (WB)	West Leg (EB)	North Leg (SB)	South Leg (NB)	Overall Inter-section
Aux Lane 	D / D	D /E	E / D	D / E	D / D
2Th-1Rt 	F / D	E / F	E / D	D / E	E / E

Metric							US Customary						
Design speed (km/h)	Stopping sight distance (m)						Design speed (mph)	Stopping sight distance (ft)					
	Downgrades			Upgrades				Downgrades			Upgrades		
	3 %	6 %	9 %	3 %	6 %	9 %		3 %	6 %	9 %	3 %	6 %	9 %
20	20	20	20	19	18	18	15	80	82	85	75	74	73
30	32	35	35	31	30	29	20	116	120	126	109	107	104
40	50	50	53	45	44	43	25	158	165	173	147	143	140
50	66	70	74	61	59	58	30	205	215	227	200	184	179
60	87	92	97	80	77	75	35	257	271	287	237	229	222
70	110	116	124	100	97	93	40	315	333	354	289	278	269
80	136	144	154	123	118	114	45	378	400	427	344	331	320
90	164	174	187	148	141	136	50	446	474	507	405	388	375
100	194	207	223	174	167	160	55	520	553	593	469	450	433
110	227	243	262	203	194	186	60	598	638	686	538	515	495
120	263	281	304	234	223	214	65	682	728	785	612	584	561
130	302	323	350	267	254	243	70	771	825	891	690	658	631
							75	866	927	1003	772	736	704
							80	965	1035	1121	859	817	782

Exhibit 3-2. Stopping Sight Distance on Grades

Decision Sight Distance

Stopping sight distances are usually sufficient to allow reasonably competent and alert drivers to come to a hurried stop under ordinary circumstances. However, these distances are often inadequate when drivers must make complex or instantaneous decisions, when information is difficult to perceive, or when unexpected or unusual maneuvers are required. Limiting sight distances to those needed for stopping may preclude drivers from performing evasive maneuvers, which often involve less risk and are otherwise preferable to stopping. Even with an appropriate complement of standard traffic control devices in accordance with the MUTCD (**6**), stopping sight distances may not provide sufficient visibility distances for drivers to corroborate advance warning and to perform the appropriate maneuvers. It is evident that there are many locations where it would be prudent to provide longer sight distances. In these circumstances, decision sight distance provides the greater visibility distance that drivers need.

Decision sight distance is the distance needed for a driver to detect an unexpected or otherwise difficult-to-perceive information source or condition in a roadway environment that may be visually cluttered, recognize the condition or its potential threat, select an appropriate speed and path, and initiate and complete the maneuver safely and efficiently (**7**). Because decision sight distance offers drivers additional margin for error and affords them sufficient length to maneuver their vehicles at the same or reduced speed, rather than to just stop, its values are substantially greater than stopping sight distance.

Drivers need decision sight distances whenever there is a likelihood for error in either information reception, decision making, or control actions (**8**). Examples of critical locations where these kinds of errors are likely to occur, and where it is desirable to provide decision sight distance include interchange and intersection locations where unusual or unexpected maneuvers are required, changes in cross section such as toll plazas and lane drops, and areas of concentrated

demand where there is apt to be "visual noise" from competing sources of information, such as roadway elements, traffic, traffic control devices, and advertising signs.

The decision sight distances in Exhibit 3-3 (1) provide values for sight distances that may be appropriate at critical locations, and (2) serve as criteria in evaluating the suitability of the available sight distances at these locations. Because of the additional safety and maneuvering space provided, it is recommended that decision sight distances be provided at critical locations or that critical decision points be moved to locations where sufficient decision sight distance is available. If it is not practical to provide decision sight distance because of horizontal or vertical curvature or if relocation of decision points is not practical, special attention should be given to the use of suitable traffic control devices for providing advance warning of the conditions that are likely to be encountered.

Metric						US Customary					
Design speed (km/h)	Decision sight distance (m) Avoidance maneuver					Design speed (mph)	Decision sight distance (ft) Avoidance maneuver				
	A	B	C	D	E		A	B	C	D	E
50	70	155	145	170	195	30	220	490	450	535	620
60	95	195	170	205	235	35	275	590	525	625	720
70	115	235	200	235	275	40	330	690	600	715	825
80	140	280	230	270	315	45	395	800	675	800	930
90	170	325	270	315	360	50	465	910	750	890	1030
100	200	370	315	355	400	55	535	1030	865	980	1135
110	235	420	330	380	430	60	610	1150	990	1125	1280
120	265	470	360	415	470	65	695	1275	1050	1220	1365
130	305	525	390	450	510	70	780	1410	1105	1275	1445
						75	875	1545	1180	1365	1545
						80	970	1685	1260	1455	1650

Avoidance Maneuver A: Stop on rural road—t = 3.0 s
Avoidance Maneuver B: Stop on urban road—t = 9.1 s
Avoidance Maneuver C: Speed/path/direction change on rural road—t varies between 10.2 and 11.2 s
Avoidance Maneuver D: Speed/path/direction change on suburban road—t varies between 12.1 and 12.9 s
Avoidance Maneuver E: Speed/path/direction change on urban road—t varies between 14.0 and 14.5 s

Exhibit 3-3. Decision Sight Distance

Decision sight distance criteria that are applicable to most situations have been developed from empirical data. The decision sight distances vary depending on whether the location is on a rural or urban road and on the type of avoidance maneuver required to negotiate the location properly. Exhibit 3-3 shows decision sight distance values for various situations rounded for design. As can be seen in the exhibit, shorter distances are generally needed for rural roads and for locations where a stop is the appropriate maneuver.

For the avoidance maneuvers identified in Exhibit 3-3, the pre-maneuver time is increased above the brake reaction time for stopping sight distance to allow the driver additional time to detect and recognize the roadway or traffic situation, identify alternative maneuvers, and initiate

response at critical locations on the highway (**9**). The pre-maneuver component of decision sight distance uses a value ranging between 3.0 and 9.1 s (**10**).

The braking distance from the design speed is added to the pre-maneuver component for avoidance maneuvers A and B as shown in Equation (3-4). The braking component is replaced in avoidance maneuvers C, D, and E with a maneuver distance based on maneuver times between 3.5 and 4.5 s, that decrease with increasing speed (**9**) in accordance with Equation (3-5).

The decision sight distances for avoidance maneuvers A and B are determined as:

Metric	US Customary
$d = 0.278Vt + 0.039\frac{V^2}{a}$	$d = 1.47Vt + 1.075\frac{V^2}{a}$ **(3-4)**
where: t = pre-maneuver time, s (see notes in Exhibit 3-3); V = design speed, km/h; a = driver deceleration, m/s^2	where: t = pre-maneuver time, s (see notes in Exhibit 3-3); V = design speed, mph; a = driver deceleration, ft/s^2

The decision sight distances for avoidance maneuvers C, D, and E are determined as:

Metric	US Customary
$d = 0.278Vt$	$d = 1.47Vt$ **(3-5)**
where: t = total pre-maneuver and maneuver time, s (see notes in Exhibit 3-3); V = design speed, km/h	where: t = total pre-maneuver and maneuver time, s (see notes in Exhibit 3-3); V = design speed, mph

In computing and measuring decision sight distances, the same 1 080-mm [3.5-ft] eye-height and 600-mm [2.0-ft] object-height criteria used for stopping sight distance have been adopted. Although drivers may have to be able to see the entire roadway situation, including the road surface, the rationale for the 600-mm [2.0-ft] object height is as applicable to decision sight distance as it is to stopping sight distance.