



# UPPER MANATEE RIVER ROAD ROADWAY FUNCTIONAL IMPROVEMENTS

## 307-6082660

**UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 COVER SHEET**

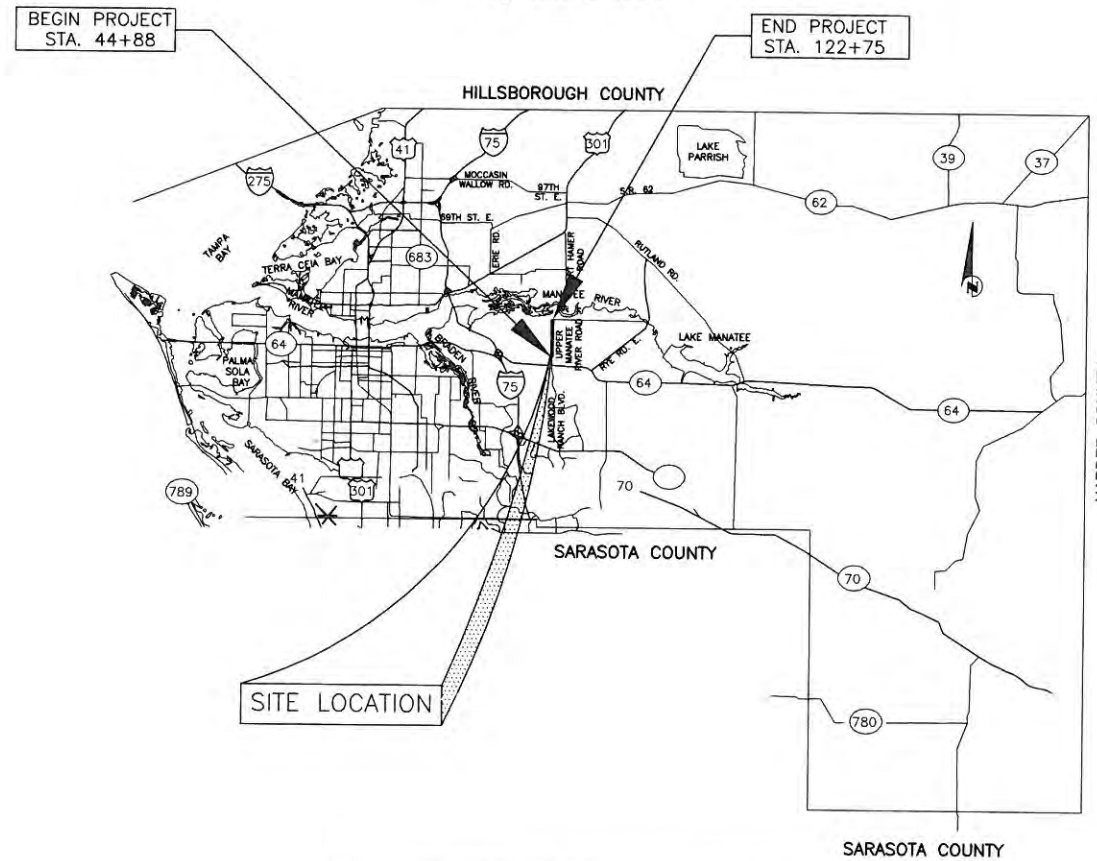
September 2014

**BID SET**



VICINITY MAP  
 N.T.S.

PROJECT SITE



SITE LOCATION

NO.	INDEX OF SHEETS
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2	GENERAL NOTES
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**PROJECT DESCRIPTION**

THIS PROJECT CONSISTS OF WIDENING THE EXISTING SHOULDER TO 8', RELOCATING EXISTING ROADSIDE DITCHES; ADDING AND REPAIRING SIDEWALK ON THE WEST SIDE OF THE ROAD; ADDING RIGHT AND LEFT TURN LANES AT EACH INTERSECTION.

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	7,439	1.40
SIDEWALK	3,604	.68
NET LENGTH OF PROJECT	7,787	1.47
EXCEPTIONS	N/A	N/A
GROSS LENGTH OF PROJECT	7,787	1.47

**NOTES:**

THIS PROJECT TO BE LET TO CONTRACT WITH MANATEE COUNTY PROJECT NUMBER 6035560 & MANATEE COUNTY PROJECT NUMBER 6054764.

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

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20,
SCALE	29-30,34S/19E
SCALE	NTS
BY	DATE
SURVEYED	ZNS/04/27/12
DESIGNED	JP/PBF/06/20/12
DRAWN	KR/CB/06/20/12
CHECKED	GS/SF/09/20/14
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777
Signature & Date	

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**EMERGENCY CONTACTS**

MANATEE COUNTY  
PUBLIC WORKS DEPT.  
INFRASTRUCTURE ENGINEERING  
CHRIS MOWBRAY, P.E.  
1022 26TH AVENUE EAST  
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2101 47TH TERRACE EAST  
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DAVE.SCHOFIELD@MYMANATEE.ORG

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BILL.ELMORE@MYMANATEE.ORG

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EMERGENCY: 1-877-832-6911  
djshanahan@tecoenergy.com

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FAX: (941) 373-7660

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SAFETY HARBOR TEAM  
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CELL : (727) 639-7512  
christopher.lee@sug.com

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(941) 748-3816 EXT. 21348  
tom.wright@mybriighthouse.com

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PROTECTION  
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TEMPLE TERRACE, FL 33637  
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FAX: (813) 632-7662

PEACE RIVER ELECTRIC  
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WACHULA, FL 33873  
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(863) 767-4660  
david.mcclintock@preco.coop

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Denise.Hutton@verizon.com

FLORIDA GAS TRANSMISSION  
CHAD HARRELL  
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PHONE: (813) 466-3327  
E-mail: chad.harrell@sug.com

SUNSHINE STATE ONE CALL OF  
FLORIDA 1-(800) 432-4770

EXISTING		PROPOSED	
BM	BENCH MARK		
CM	CONCRETE MONUMENT		
IP	IRON PIPE		
IR	IRON ROD		
HUB	HUB		
N&D	NAIL & DISK		
	ELEVATION		
1234	PARCEL ID NO.		
1478	PARCEL ID NO.		
777	LOT NO.		
GW	GUY WIRE		
PP	POWER POLE		
LP	LIGHT POLE		
MB	MAIL BOX		
SN	SIGN		
REF	REFLECTOR		
SPRK	SPRINKLER		
GM	GAS MARKER		
BFP	BACKFLOW PREVENTER		
BO	BLOW OFF VALVE		
FH	FIRE HYDRANT		
WV	WATER VALVE		
ARV	AIR RELEASE VALVE		
WM	WATER METER		
SMH	SANITARY SEWER MANHOLE		
CO	SANITARY SEWER CLEAN OUT		
SB#1	SOIL BORING LOCATION		
TEL	TELEPHONE SERVICE BOX		
	FLOW DIRECTION		
GI	GRATE INLET		
	MITERED END SECTION		
M.C. STD.	MANATEE COUNTY STANDARD		
	BUSH		
	TREE		
	OAK TREE		
	PALM TREE		
	PINE TREE		
	EDGE OF VEGETATION		
	CHAIN LINK FENCE		
	WOOD FENCE		
	BARBED WIRE FENCE		
	FORCE MAIN		
	POTABLE WATER		
	RECLAIMED WATER		
	SANITARY SEWER		
	STORM DRAIN		
	GAS LINE		
	OVERHEAD TV		
	UNDERGROUND TV		
	OVERHEAD ELECTRIC		
	UNDERGROUND ELECTRIC		
	OVERHEAD VERIZON		
	UNDERGROUND VERIZON		
	VERIZON		
	UNDERGROUND UTILITY		
	OVERHEAD UTILITY		
	RAIL ROAD TRACKS		
	EDGE OF CONCRETE		
	EDGE OF ROAD		
	TOE OF SLOPE		
	TOP OF BANK		
	PROPERTY LINE		
	RIGHT OF WAY		
	ABBREVIATIONS		
	R/W	RIGHT OF WAY	
	CONC	CONCRETE	
	ASPH	ASPHALT	
	DRWY	DRIVEWAY	
	SWK	SIDEWALK	
	EP	EDGE OF PAVEMENT	
	BOC	BACK OF CURB	
	MAIN		
	SERVICE LINE		
	PROPOSED EASEMENT		
	FIRE HYDRANT		
	VALVE		
	SANITARY SEWER MANHOLE		
	BLOW OFF ASSEMBLY		
	REDUCER		
	TEE		
	HORIZONTAL BEND		
	VERTICAL BEND		
	PLUG		
	MASTER METER ASSEMBLY		
	SERVICE LINE & METER		
	DOUBLE SERVICE		

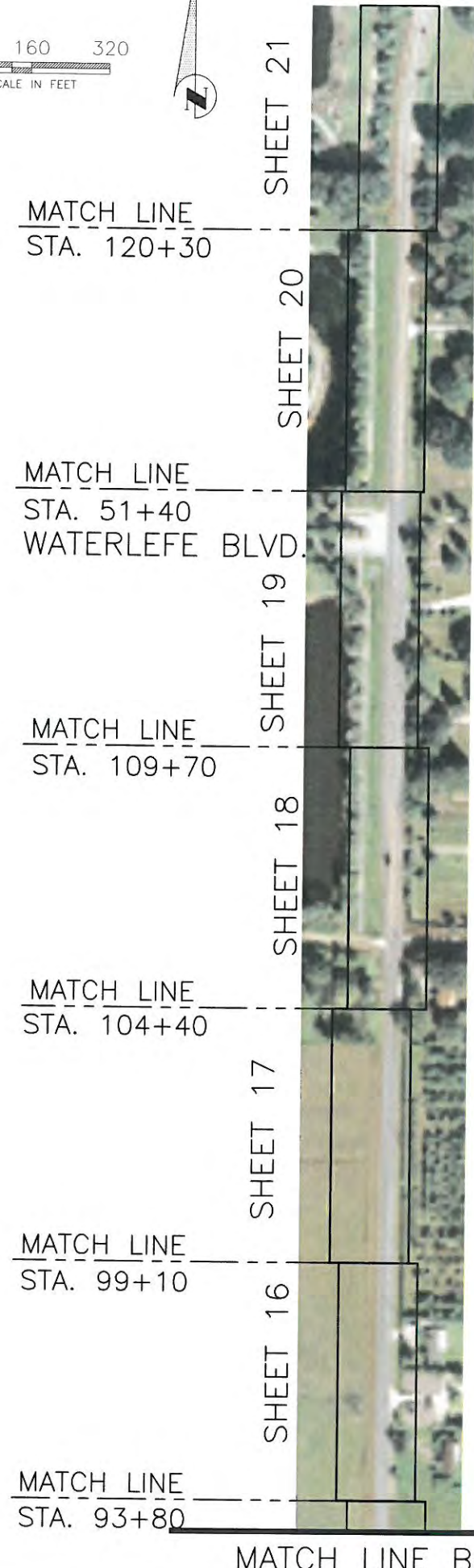
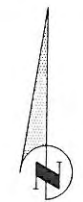
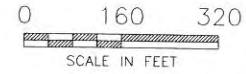
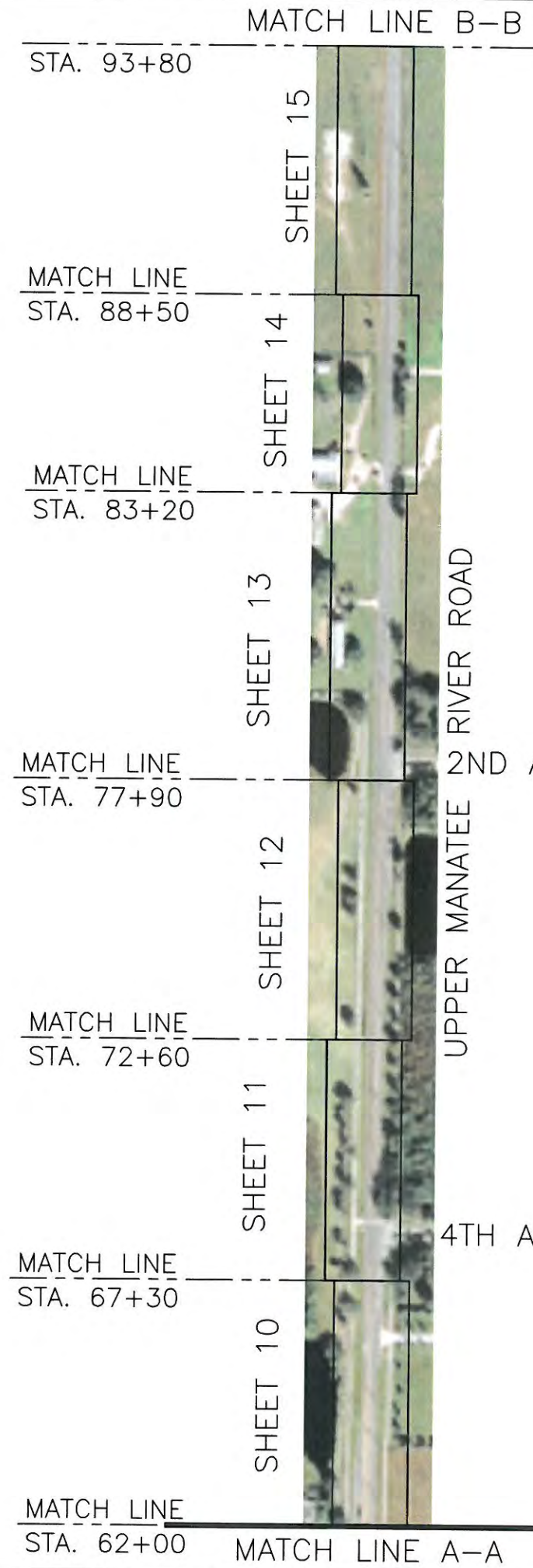
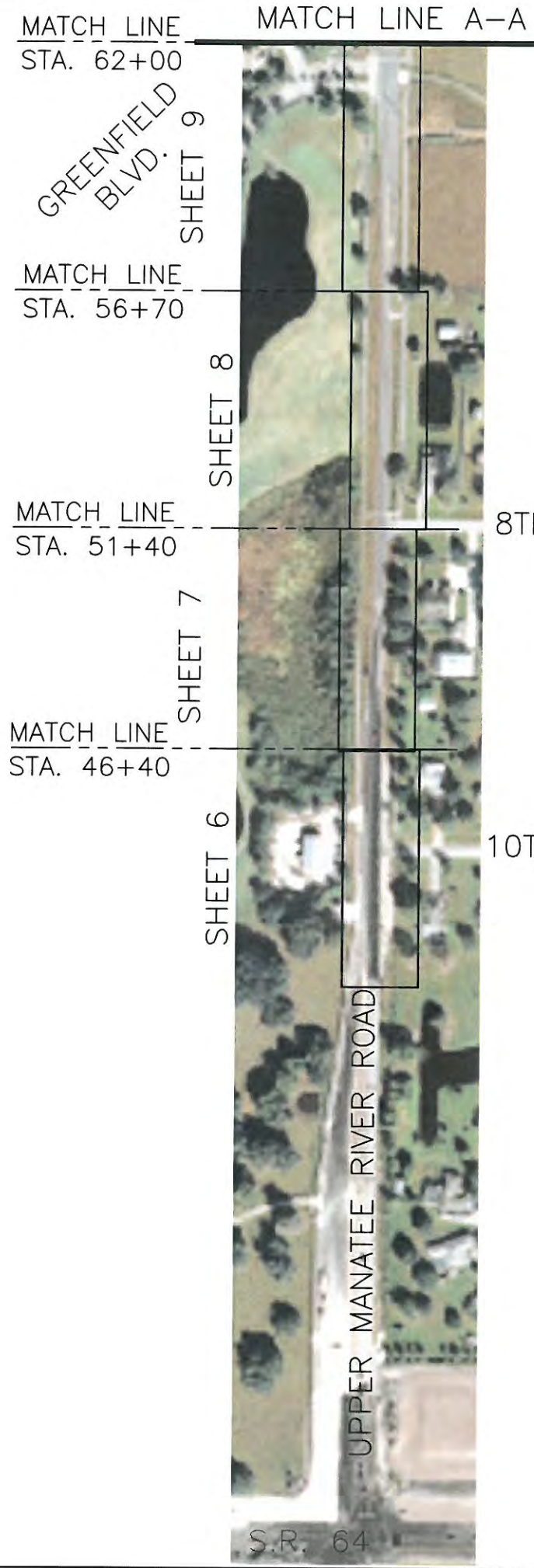
**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
EMERGENCY CONTACTS & LEGEND**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20 29-30.34S/19E
SCALE	NTS
DESIGNED	JR/PBF 06/20/12
DRAWN	KB/CB 06/20/12
CHECKED	JR/PBF 06/20/12
STATE OF FLORIDA	PROFESSIONAL ENGINEER
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777
Signature & Date	

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**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PROJECT LAYOUT SHEET**



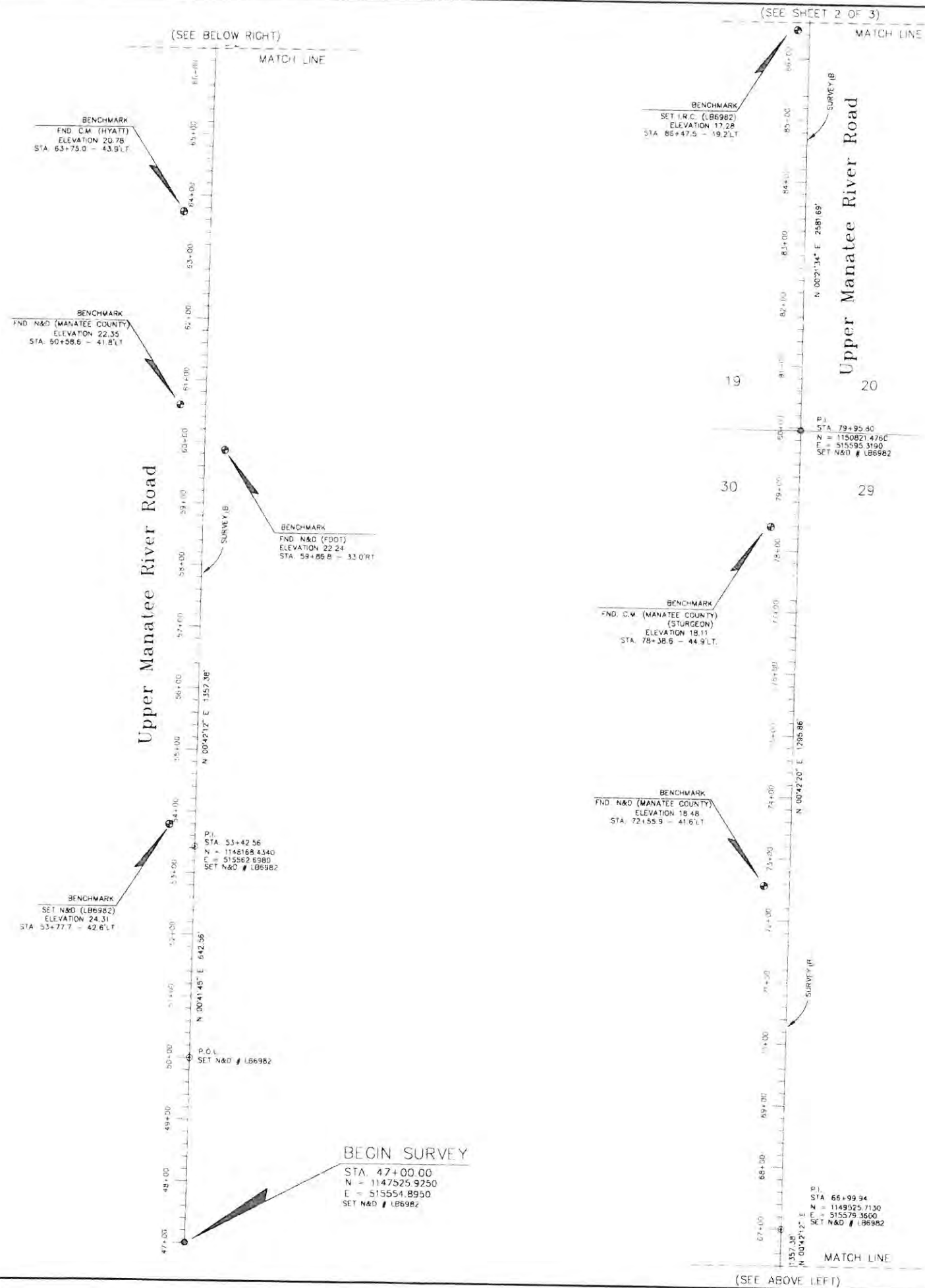
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	1"=160' HORIZ.
SURVEYED	ZNS 04/27/12
DESIGNED	JE/PBF 06/20/12
DRAWN	KRY/OB 06/20/12
CHECKED	JP/PBF 06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

Signature & Date

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**NOTES:**

- THE BEARINGS SHOWN ARE BASED ON THE SURVEY BASELINE OF UPPER MANATEE RIVER ROAD FROM STATION 79+95.60 TO STATION 105+77.49. HAVING A BEARING OF N 00°21'14" E AND ARE RELATED TO FLORIDA STATE PLANE COORDINATE SYSTEM (LATEST ZONE) AND WERE DERIVED USING REAL-TIME KINEMATIC METHOD AND THE FLORIDA DEPARTMENT OF TRANSPORTATION PERMANENT REFERENCE NETWORK. THE PUBLISHED VALUES OF HYATT (P.D. BOOK 38) AND T.M. STAPLES (P.D. BOOK 60) WERE USED TO VALIDATE THE PROJECT COORDINATES.
  - BEARINGS AND DISTANCES ARE FIELD MEASUREMENTS UNLESS NOTED OTHERWISE.
  - THIS SURVEY MEETS THE REQUIREMENTS OF CHAPTER 50-17, FLORIDA ADMINISTRATIVE CODE AS IT PERTAINS TO SPECIFIC PURPOSE SURVEYS FOR RIGHT-OF-WAY MARKING PURPOSES.
  - THIS DRAWING IS NOT VALID WITHOUT THE ORIGINAL RAISED SEAL AND SIGNATURE OF THE FLORIDA REGISTERED SURVEYOR AND MAPPER SHOWN HEREON. AN ELECTRONIC COPY OF THIS DRAWING MUST BE VERIFIED WITH A SEALED DRAWING OF THE SAME.
  - ANY CONDITIONS OR DEVIATIONS TO THIS SPECIFIC PURPOSE SURVEY EXIST ONLY IF THE SIGNING PARTY IS PROHIBITED WITHOUT WRITTEN PERMISSION TO DO SO. A COPY OF THIS DRAWING MUST BE VERIFIED WITH A SEALED DRAWING OF THE SAME.
  - ELEVATIONS SHOWN HEREON ARE BASED ON 1985 NGVD. THE BENCHMARKS THESE ELEVATIONS ARE DERIVED FROM ARE:
    - BENCHMARK 21-29-23, RIVET AND MANATEE COUNTY BSA IN THE CENTER OF A CONCRETE HEADWALL, 12 FEET ± SOUTH OF THE CENTER OF A DISK CURVE TO HOUSE #300, AND 27 FEET ± WEST OF THE CENTERLINE OF UPPER MANATEE RIVER ROAD. ELEVATION = 13.26'
    - BENCHMARK 21-29-27, RIVET AND MANATEE COUNTY BSA IN THE CORNER OF SIDEWALK 70 FEET ± SOUTH OF GREENFIELD BOULEVARD AND 40 FEET ± WEST OF THE CENTERLINE OF UPPER MANATEE RIVER ROAD. ELEVATION = 13.25'
- THE INTENDED DISPLAY SCALE OF THIS DRAWING IS 1" = 100' (24"x36") OR 1" = 200' (11"x17") PAPER. A REDUCTION OF THIS SURVEY TO A DIFFERENT SIZE MEDIA WILL RESULT IN A NON-CALIBRATED DRAWING. AN ELECTRONIC DATA FILE OF THIS SURVEY IN WORK SHALL BE TO BE A STANDARD TO 1/10" TO 1/100".

**LEGEND:**

- MARKER LOCATION (DESCRIPTION AS NOTED)
- I.R.C. IRON ROD & CAP
- C.M. CONCRETE MONUMENT
- N&D NAIL AND DISK
- R&D RIVET AND DISK
- FND FOUND
- STA STATION
- LB LICENSED BUSINESS
- LT LEFT
- RT RIGHT
- P.I. POINT OF INTERSECTION
- B BASELINE
- ⊗ BENCHMARK

**NOT A BOUNDARY SURVEY**  
**CERTIFIED AS TO PURPOSE OF SURVEY**  
**SPECIFIC PURPOSE SURVEY**  
 OF  
**SURVEY CONTROL LINE OF**  
**UPPER MANATEE RIVER ROAD**  
 LOCATED IN  
**SECTIONS 19, 20, 29 & 30, TOWNSHIP 34 SOUTH, RANGE 19 EAST**  
**MANATEE COUNTY, FLORIDA**

**SHEET S1 OF S3**

UPDATED: 05/07/14 bernie  
 NOTE: THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

**CERTIFICATE OF SURVEYOR**

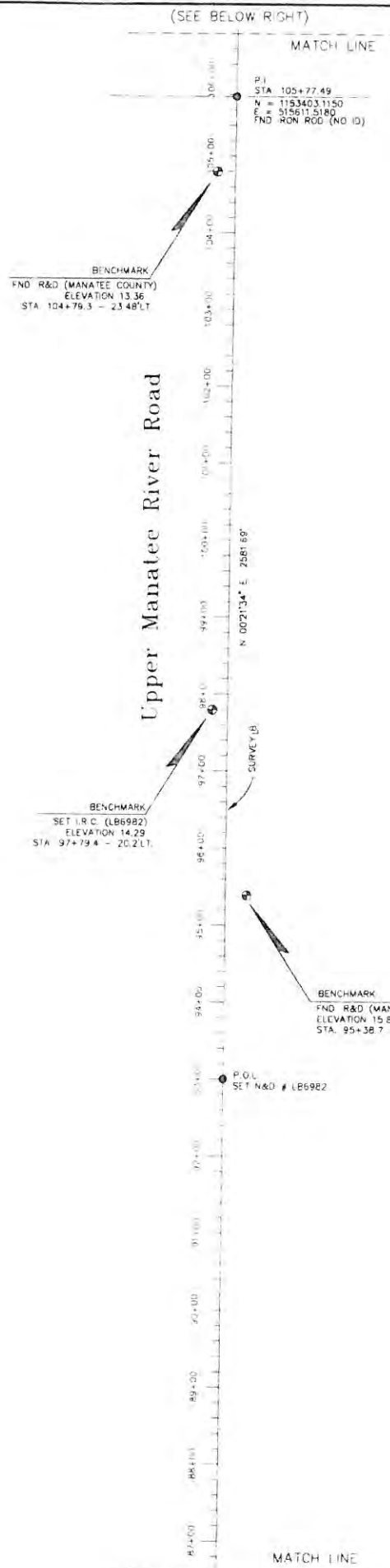
I, THE UNDERSIGNED PROFESSIONAL SURVEYOR & MAPPER, HEREBY CERTIFY THAT THIS RECORD OF LAND SURVEY WAS PREPARED UNDER MY DIRECT SUPERVISION THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF IS A TRUE AND CORRECT REPRESENTATION OF THE LAND AS SHOWN AND DESCRIBED HEREON, AND THAT IT MEETS THE MINIMUM TECHNICAL STANDARDS FOR SURVEYING IN THE STATE OF FLORIDA, CHAPTER 50-17-050, OF THE FLORIDA ADMINISTRATIVE CODE.

FLORIDA CERTIFICATE No. LS 4295  
 DATE OF CERTIFICATION 07/25/12  
 DATE OF FIELD SURVEY 07/25/12

BY: *James N. Gaiter, Jr.*  
 JAMES N. GAITER, JR., P.S.M.

**ZNS ENGINEERING**  
 ENGINEERS PLANNERS SURVEYORS  
 LANDSCAPE ARCHITECTS ENVIRONMENTAL CONSULTANTS  
 201 500 AVENUE DRIVE EAST BRACKENRIDGE, FL 34208  
 TEL: (904) 748-0080 FAX: (904) 748-3378

DRAWING: Upper Manatee River Rd/UMRR-Control.dwg DATE: JULY 24, 2012 SCALE: 1" = 100'  
 DRAWN: bernie COMP: JOB NO: 00-43031 F.B. NO: SHEET 1 OF 3



(SEE BELOW RIGHT)

MATCH LINE

Upper Manatee River Road

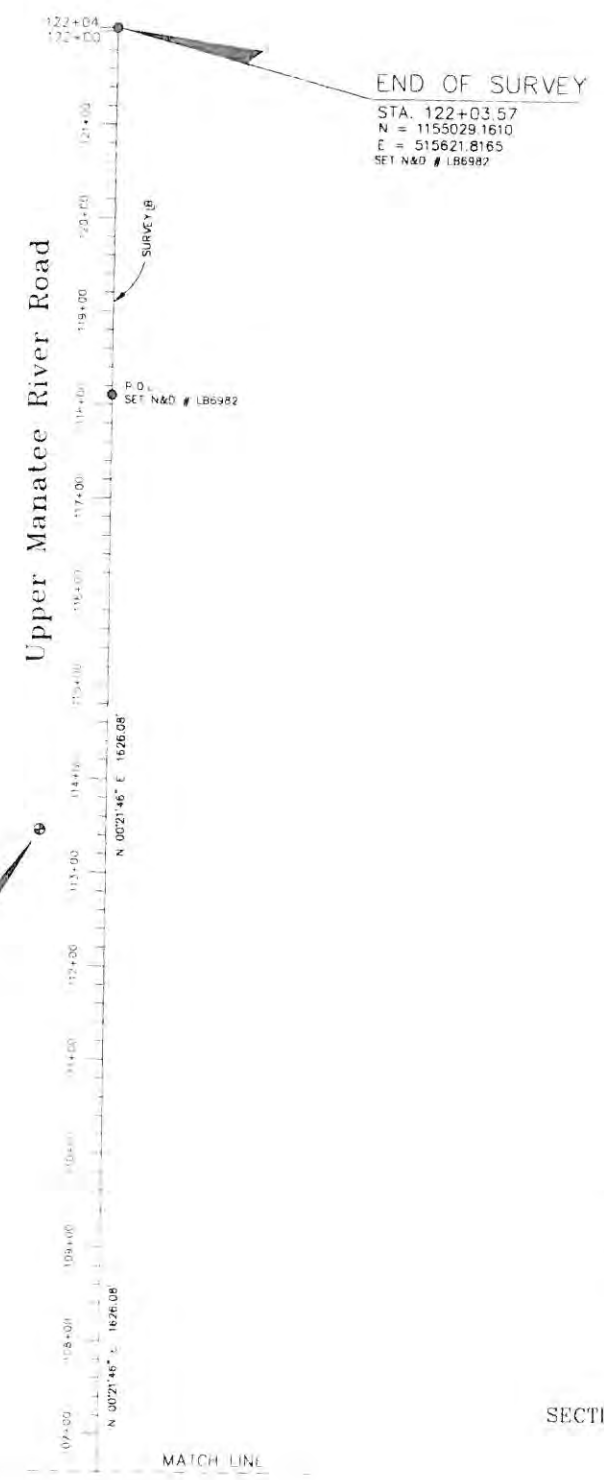
BENCHMARK  
FND R&D (MANATEE COUNTY)  
ELEVATION 13.36  
STA 104+79.3 - 23.48'LT

BENCHMARK  
SET I.R.C. (LB6982)  
ELEVATION 14.29  
STA 97+00 - 20.2'LT

BENCHMARK  
FND R&D (MANATEE COUNTY)  
ELEVATION 15.83  
STA 95+38.7 - 27.46'RT

MATCH LINE

(SEE SHEET 1 OF 3)



END OF SURVEY  
STA. 122+03.57  
N = 1155029.1610  
E = 515621.8165  
SET N&O # LB6982

Upper Manatee River Road

BENCHMARK  
FND C.M. (MANATEE COUNTY)  
(JIM STAPLES)  
ELEVATION 11.65  
STA 113+44.8 - 71.3'LT

MATCH LINE

(SEE ABOVE LEFT)



LEGEND:

- MARKER LOCATION (DESCRIPTION AS NOTED)
- I.R.C. IRON ROD & CAP
- C.M. CONCRETE MONUMENT
- N&O NAIL AND DISK
- R&D RIVET AND DISK
- FND FOUND
- STA STATION
- LB LICENSED BUSINESS
- LT LEFT
- RT RIGHT
- P.I. POINT OF INTERSECTION
- E BASELINE
- ⊗ BENCHMARK

NOT A BOUNDARY SURVEY  
CERTIFIED AS TO PURPOSE OF SURVEY

SPECIFIC PURPOSE SURVEY  
OF  
SURVEY CONTROL LINE OF  
UPPER MANATEE RIVER ROAD  
LOCATED IN  
SECTIONS 19, 20, 29 & 30, TOWNSHIP 34 SOUTH, RANGE 19 EAST  
MANATEE COUNTY, FLORIDA

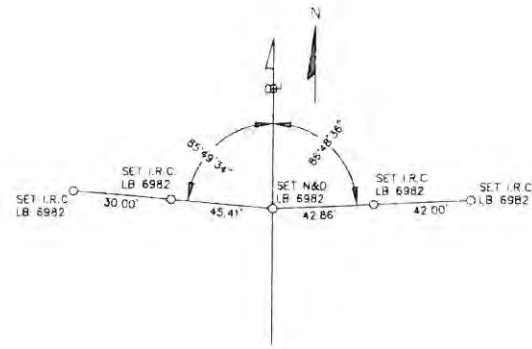
SHEET S2 OF S3

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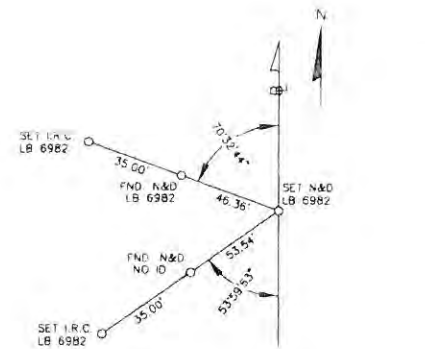
**ZNS ENGINEERING**  
ENGINEERS PLANNERS SURVEYORS  
ARCHITECTS ARCHITECTS ENVIRONMENTAL CONSULTANTS  
201 20th AVENUE, ORMA EAST, BRADENTON, FL 34208  
E-MAIL: ZNS@ZNSENGINEERING.COM TELEPHONE: (941) 748-8080 FAX: (941) 748-3318

UPDATED: 05/07/14 berme

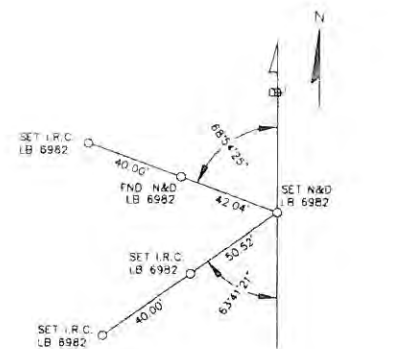
DRAWING: T:\Manatee\Upper Manatee River Rd\UMRR - Control.dwg DATE: JULY 24, 2012 SCALE: 1" = 100'  
DRAWN: berme COMP: JOB NO: 00-43031 FB NO: SHEET 2 OF 3



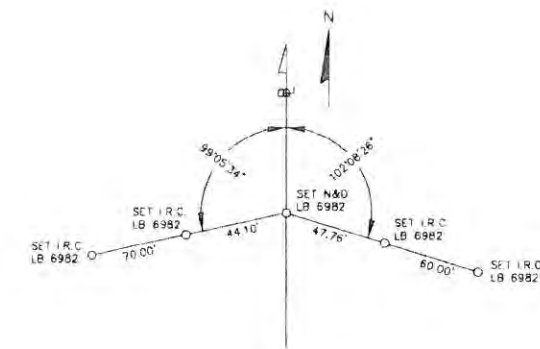
BEGIN SURVEY  
STA. 47+00.00  
UPPER MANATEE RIVER ROAD



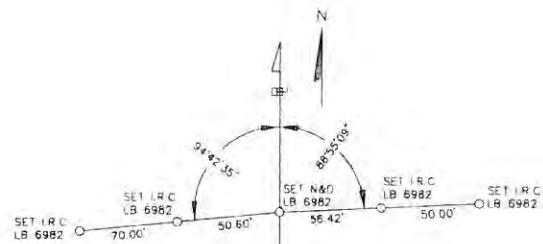
P.O.L.  
STA. 50+00.00  
UPPER MANATEE RIVER ROAD



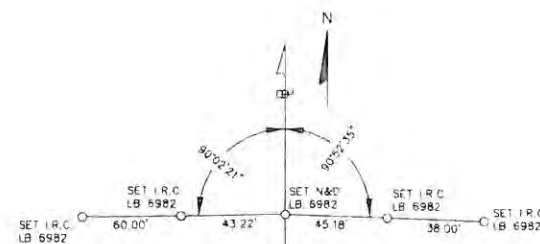
P.I.  
STA. 53+42.56  
UPPER MANATEE RIVER ROAD



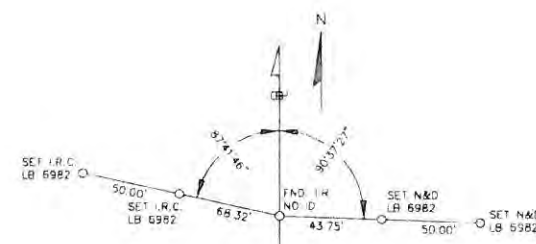
P.I.  
STA. 66+99.94  
UPPER MANATEE RIVER ROAD



P.I.  
STA. 79+95.80  
UPPER MANATEE RIVER ROAD



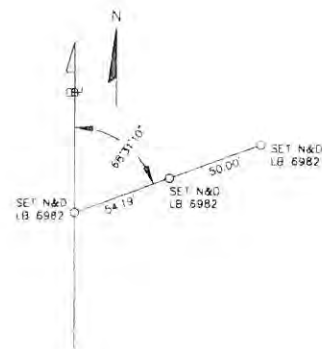
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UPPER MANATEE RIVER ROAD



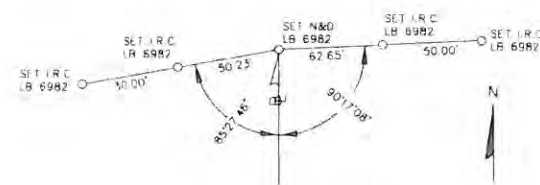
P.I.  
STA. 105+77.49  
UPPER MANATEE RIVER ROAD

LEGEND:

- O MARKER LOCATION (DESCRIPTION AS NOTED)
- I.R.C. IRON ROD & CAP
- I.R. IRON ROD
- N&D NAIL AND DISK
- P.O.L. POINT ON LINE
- P.I. POINT OF INTERSECTION
- STA. STATION
- FND FOUND
- LB LICENSED BUSINESS
- ID IDENTIFICATION
- ± BASELINE



P.O.L.  
STA. 118+10.30  
UPPER MANATEE RIVER ROAD



END OF SURVEY  
STA. 122+03.57  
UPPER MANATEE RIVER ROAD

NOT A BOUNDARY SURVEY  
CERTIFIED AS TO PURPOSE OF SURVEY

SPECIFIC PURPOSE SURVEY  
OF  
REFERENCE POINTS  
UPPER MANATEE RIVER ROAD  
LOCATED IN

SECTIONS 19, 20, 29 & 30, TOWNSHIP 34 SOUTH, RANGE 19 EAST  
MANATEE COUNTY, FLORIDA

SHEET S3 OF S3

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UPDATED: 06/30/14 bernie Sta105+77.49  
UPDATED: 05/07/14 bernie



ZNS ENGINEERING

ENGINEERS PLANNERS SURVEYORS  
LANDSCAPE ARCHITECTS ENVIRONMENTAL CONSULTANTS  
L.C. 0000365  
301 5TH AVENUE, SUITE 401, BRADENTON, FL 34208  
E-MAIL: ZNS@ZNSINC.COM TELEPHONE (941) 748-6600 FAX (941) 748-3316

DRAWING: Upper Manatee River Rd\UMRR-RW-Base.dwg DATE: JULY 24, 2012 SCALE: NO SCALE  
DRAWN: bernie COMP: JOB NO: 00-43031 I.B. NO: SHEET 3 OF 3

### UPPER MANATEE RIVER ROAD: SUMMARY OF PAY ITEMS



ITEM NO.	DESCRIPTION	EST. QTY	U/M
<b>Mobilization &amp; MOT</b>			
0101-1	Mobilization	1.00	LS
0102-1	Maintenance of Traffic (MOT)	1.00	LS
<b>Roadway</b>			
0104-10-3	Sediment Barrier	14,886.00	LF
0104-11	Floating Turbidity Barrier	30.00	LF
0104-18	Inlet Protection System	25.00	EA
0110-1-1	Clearing & Grubbing	8.00	AC
0110-7-1	Mailbox (Furnish & Install), Single	13.00	EA
0120-1	Regular Excavation	6,974.74	CY
0120-4	Subsoil Excavation	1,000.00	CY
0120-6	Embankment (Regular)	4,669.76	CY
0120-MC1	Clean Sand	500.00	CY
0160-4	12" Type B Stabilization (LBR 60)	13,520.21	SY
0285-709	Optional Base Group 9	13,520.21	SY
0327-70-1	Milling Existing Asphalt Pavement (1" Avg. Depth)	25,354.91	SY
0334-1-13	Superpave Asphalt Concrete, Traffic C	1,271.00	TN
0337-7-42	Asphaltic Concrete, Friction Course, Type C	2,030.00	TN
0400-1-2	Concrete Class 1 (Endwalls & Pipe Support), Including Reinforcing Steel	2.00	CY
0400-1-2	Concrete Class 1 (Misc. Concrete Spillway, Swale Crossing), Including Reinforcing Steel	16.00	CY
0425-MC1	Concrete Block Box 4'3" W/Solid Access Cover	1.00	EA
0425-MC2	Concrete Block Box 4'5" W/Traffic Bearing Access	2.00	EA
0425-MC3	Concrete Block Box 4'5" W/Case Iron Grate	1.00	EA
0425-MC4	Junction Box/Conflict Box	2.00	EA
0425-11	Drainage Structure Modify	3.00	EA
0425-1-MC1	Adjust/Reconstruct Existing Rim Elevation to Grade	3.00	EA
0425-1-MC2	Drop Inlet 4'3" W/ Closed Flume	1.00	EA
0425-1-MC3	Inlets, Curb	1.00	EA
0425-1-351	Inlets, Curb (Type P-5) (<10')	3.00	EA
0425-1-521	Inlet, Ditch Bottom, Type C (<10')	6.00	EA
0425-1-541	Inlet, Ditch Bottom, Type D (<10')	3.00	EA
0425-1-551	Inlet, Ditch Bottom, Type E (<10')	11.00	EA
0430-174-MC1	Pipe Culvert, Optional Material, Round A2000, 10"/SD	36.00	LF
0430-174-115	Pipe Culvert, Optional Material, Round A2000, 15"/SD	658.00	LF
0430-174-118	Pipe Culvert, Optional Material, Round A2000, 18"/SD	639.00	LF
0430-174-121	Pipe Culvert, Optional Material, Round A2000, 21"/SD	858.00	LF
0430-174-124	Pipe Culvert, Optional Material, Round A2000, 24"/SD	761.00	LF
0430-174-130	Pipe Culvert, Optional Material, Round A2000, 30"/SD	181.00	LF
0430-174-130	Pipe Culvert, Optional Material, (RCP) 30"/SD	152.00	LF
0430-174-218	Pipe Culvert, Optional Material, (ERCP) 14"x23"/SD	245.00	LF
0430-174-224	Pipe Culvert, Optional Material, (ERCP) 19"x30"/SD	30.00	LF
0430-175-118	Pipe Culvert, Optional Material, (RCP) 18"/CD	471.00	LF
0430-175-215	Pipe Culvert, Optional Material, (ERCP) 12"x18"/CD	117.00	LF
0430-175-218	Pipe Culvert, Optional Material, (ERCP) 14"x23"/CD	14.00	LF
0430-175-230	Pipe Culvert, Optional Material, (ERCP) 24"x38"/CD	111.00	LF
0430-175-236	Pipe Culvert, Optional Material, (ERCP) 29"x45"/CD	14.00	LF
0430-830	Pipe Filling and Plugging- Place out of Service	10.90	CY
0430-982-125	MES Optional, (RCP) 18"/CD	2.00	EA
0430-982-623	MES Optional Other, (ERCP) 12" X 18"/CD	1.00	EA
0430-982-625	MES Optional Other, (ERCP) 14" X 23"/CD	1.00	EA
0430-982-633	MES Optional Other, (ERCP) 24" X 38"/CD	2.00	EA
0430-984-123	MES Optional Round A2000 15"/SD	2.00	EA
0430-984-123	MES Optional, (RCP) 15"/SD	4.00	EA
0430-984-125	MES Optional, (RCP) 18"/SD	2.00	EA
0430-984-125	MES Optional Round A2000 18"/SD	2.00	EA
0430-984-129	MES Optional Round A2000 24"/SD	11.00	EA
0430-984-629	MES Optional Other, (ERCP) 19" X 30"/SD	2.00	EA
0430-984-638	MES Optional Other, (ERCP) 29" X 45"/SD	1.00	EA
0515-1-2	Pipe Handrail-Guardrail Aluminum	170.00	LF
0520-1-10	Concrete Curb and Gutter, Type F	1,065.00	LF
0520-1-MC1	Concrete Curb and Gutter, Type AB	60.00	LF
0522-1	Sidewalk Concrete 4" Thick	2,001.00	SY
0522-2	Sidewalk Concrete 6" Thick, Reinforced Driveway	618.00	SY
0524-1-1	Concrete Ditch Pavement, non Reinforced, 3"	5.56	SY
0527-2	Detectable Warnings	180.00	SF
0530-3-4	Rip-Rap, Rubble, F&I Ditch Lining	18.24	TN
0536-1-1	Guardrail-Roadway	110.00	LF
0536-7	Special Guardrail Post	16.00	EA
0550-10-221	Fence Removal & Relocation(Multiple Types)	1,710.00	LF
0570-1-2	Sodding (Performance Turf, Bahia)(Includes Mowing)	35,439.87	SY

ITEM NO.	DESCRIPTION	EST. QTY	U/M
<b>Signage &amp; Pavement Marking</b>			
0700-1-11	Single Post Sign, F&I, Less than 12 SF	33.00	AS
0700-1-50	Single Post Sign, Relocate	28.00	AS
0706-3	Retro-Reflective Pavement Markers	1,400.00	EA
710-11-290	Painted Pavement Markings, Standard, Yellow, Island Nose	150.00	SF
0711-11-111	Thermoplastic, Standard, White, Solid, 6"	2.40	NM
0711-11-122	Thermoplastic, Standard, White, Solid, 8"	150.00	LF
0711-11-123	Thermoplastic, Standard, White, Solid, 12" (Crosswalk)	1,080.00	LF
0711-11-124	Thermoplastic, Standard, White, Solid, 18"	25.00	LF
0711-11-125	Thermoplastic, Standard, White, Solid, 24"	117.00	LF
0711-15-151	Thermoplastic, Standard, White, 6'-10' Skip, 6"	375.00	LF
0711-15-151	Thermoplastic, Standard, White, 2'-4' Skip, 6"	1,250.00	LF
0711-11-160	Thermoplastic, Standard, White, (Message) (Bike Sym)	19.00	EA
0711-11-160	Thermoplastic, Standard, White, (Message) (Bike Arrow)	19.00	EA
0711-11-160	Thermoplastic, Standard, White, (Message) (School)	2.00	EA
0711-11-170	Thermoplastic, Standard, White, Arrow	39.00	EA
0711-11-211	Thermoplastic, Standard, Yellow, Solid, 6"	2.66	NM
0711-11-224	Thermoplastic, Standard, Yellow, Solid, 18"	1,746.00	LF
0711-11-231	Thermoplastic, Standard, Yellow, Skip 6'/10-30 Skip	0.32	GM
<b>Interconnect</b>			
630-2-11	Conduit, Open Trench (F&I)	7,280	LF
630-2-12	Conduit, Directional Bore (F&I)	1,910	LF
633-1-121	ITS Fiber Optic Cable, SM, UG, 12 Fiber (F&I)	30	LF
633-1-122	ITS Fiber Optic Cable, SM, UG, 48 Fiber (F&I)	10,060	LF
633-2-31	Fiber Optic Connection, Install Splice	50	EA
633-3-11	Fiber Optic Connection Hardware, (F&I), Splice Enclosure	3	EA
633-3-12	Fiber Optic Connection Hardware, (F&I), Splice Tray	8	EA
635-2-12	Pull & Splice Box, (24" x 36"), (F&I)	16	EA
635-2-13	Pull & Splice Box, (30" x 60" x 48"), (F&I)	3	EA
<b>Water</b>			
U1	Relocate 6" to 10" Waterline PVC (C900) DR 18	25.00	LF
U2	Relocate 6" to 10" DI Water Main (C1350)	25.00	LF
U3	DI Fittings	200.00	LB
U4	Pipe Restraints 6" to 10"	15.00	EA
U5	Replace Water Service (Single, Short)	1.00	EA
U6	Adjust Valve Box or Meter Box	5.00	EA
U7	Relocate Fire Hydrant Assembly	1.00	EA
U8	8" Gate Valve w/box	1.00	EA
U9	Miscellaneous Concrete	1.00	CY
U10	BFP Incl. Vacuum Breakers & Exp. Tank	1.00	EA
<b>Sanitary</b>			
U11	Relocate 6" to 10" Waterline PVC (C900) DR 21	75.00	LF
U12	DI Fittings	350.00	LB
U13	Pipe Restraints 6" to 10"	25.00	EA
U14	Adjust Valve Box or Meter Box	4.00	EA
U15	ARV Assembly Inc. Manhole	1.00	EA
U16	Miscellaneous Concrete	4.00	CY
U17	Connect to Existing Force Main	2.00	EA

UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
SUMMARY OF PAY ITEMS

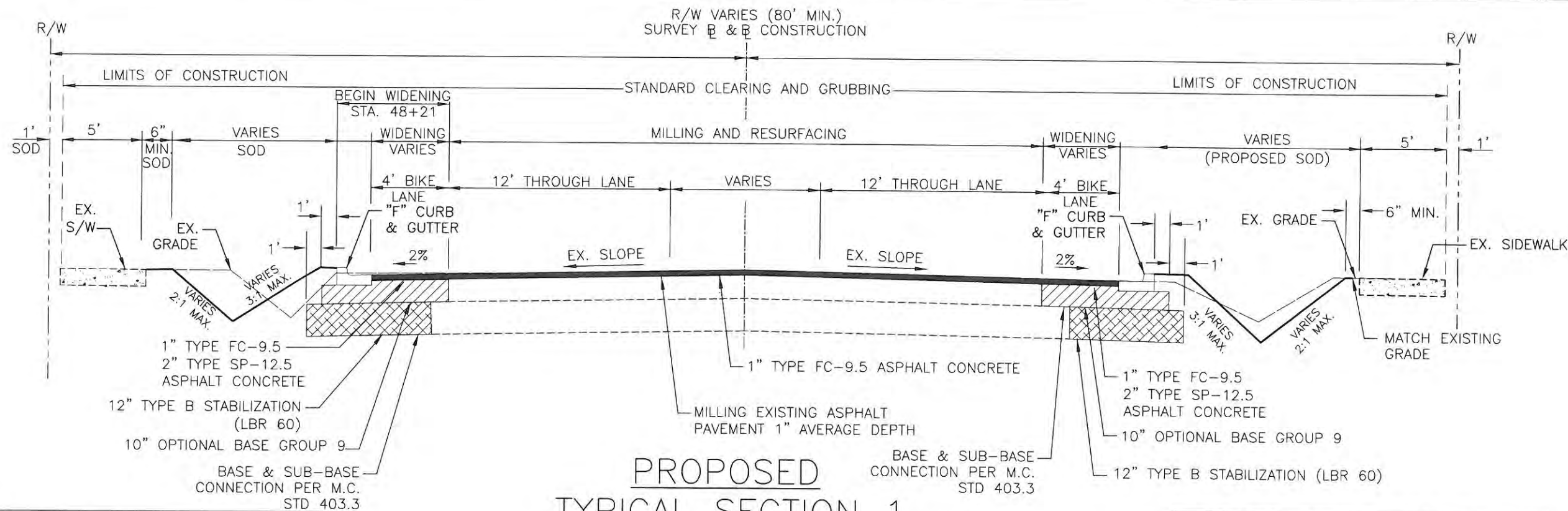
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT # 307-6082660  
 SURVEY # FILE 00-42783  
 SEC./TWN./RGE 19-20,  
 29-30, 34S/19E  
 SCALE NTS

9/2/12  
 SURVEYED BY ZNS 09/27/12  
 DESIGNED BY JP/PBF 05/20/12  
 DRAWN KR/CB 06/20/12  
 CHECKED BY JP/PBF 06/20/12  
 CHRISTOPHER L. MOWBRAY, P.E.  
 FLORIDA P.E. # 46774  
 SIGNATURE & DATE



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
TYPICAL SECTION**

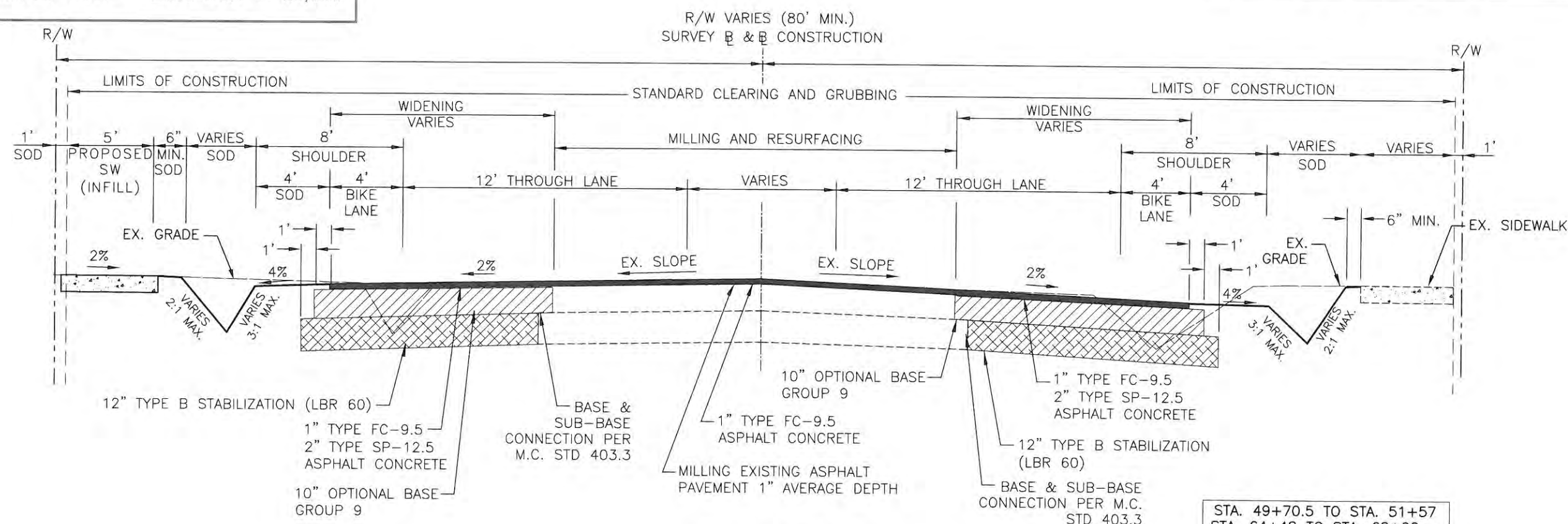


**PROPOSED  
TYPICAL SECTION 1  
N.T.S.**

STA. 48+21.0 TO STA. 49+70.5 (WEST SIDE)  
STA. 44+88.0 TO STA. 49+70.5 (EAST SIDE)  
6' SIDEWALK, CURB & GUTTER - STA. 61+69  
TO STA. 63+81.5 (WEST)

**TRAFFIC DATA**

DESIGN SPEED = 45 MPH  
CURRENT YEAR = 2012 ADT = 8,240  
ESTIMATED YEAR = 2035 ADT = 23,600



**PROPOSED  
TYPICAL SECTION 2  
N.T.S.**

STA. 49+70.5 TO STA. 51+57  
STA. 64+48 TO STA. 68+00  
STA. 101+80 TO STA. 108+70

NO.	REVISION DESCRIPTION	DATE	BY

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	NTS
BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	JP/PBF 06/20/12
DRAWN	KR/CE 06/20/12
CHECKED	JP/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 4577	

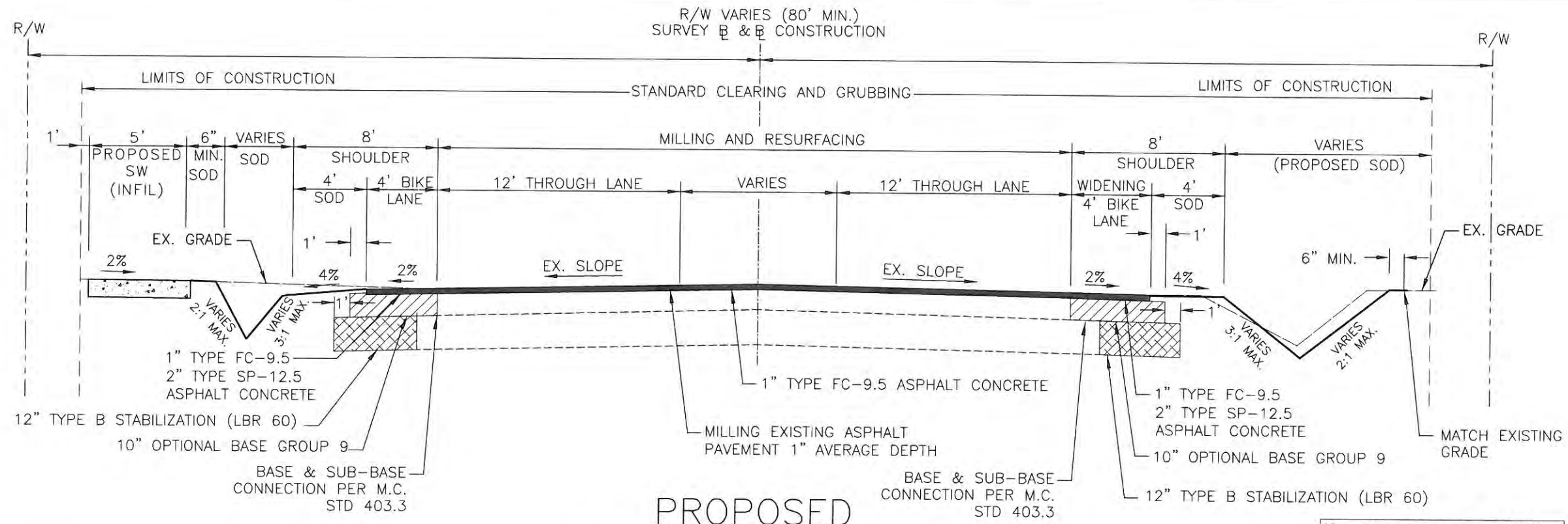
**STATE OF FLORIDA**  
PROFESSIONAL ENGINEER

Signature & Date

**SHEET 5B**

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**UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 TYPICAL SECTION**



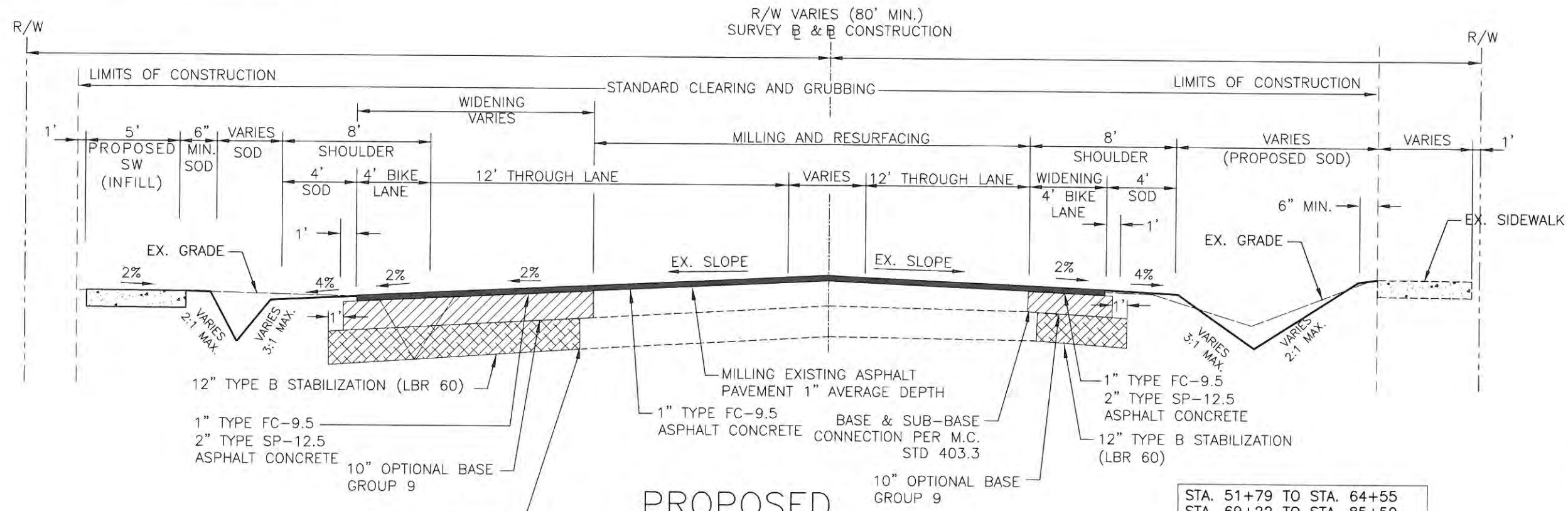
**PROPOSED  
 TYPICAL SECTION 3**

N.T.S.

STA. 56+40 TO STA. 64+20  
 STA. 85+50 TO STA. 101+80  
 STA. 108+80 TO STA. 114+56

**TRAFFIC DATA**

DESIGN SPEED = 45 MPH  
 CURRENT YEAR = 2012 AADT = 8,240  
 ESTIMATED YEAR = 2035 AADT = 23,600



**PROPOSED  
 TYPICAL SECTION 4**

N.T.S.

STA. 51+79 TO STA. 64+55  
 STA. 69+22 TO STA. 85+50  
 STA. 114+56 TO STA. 119+27

NO.	REVISION DESCRIPTION	DATE

PROJECT # 307-6082660  
 SURVEY # FILE 00-42783  
 SEC./TWN./RGE 19-20,  
 29-30,34S/19E  
 SCALE NTS

BY	DATE
DESIGNED	04/27/12
DRAWN	06/20/12
CHECKED	06/20/12

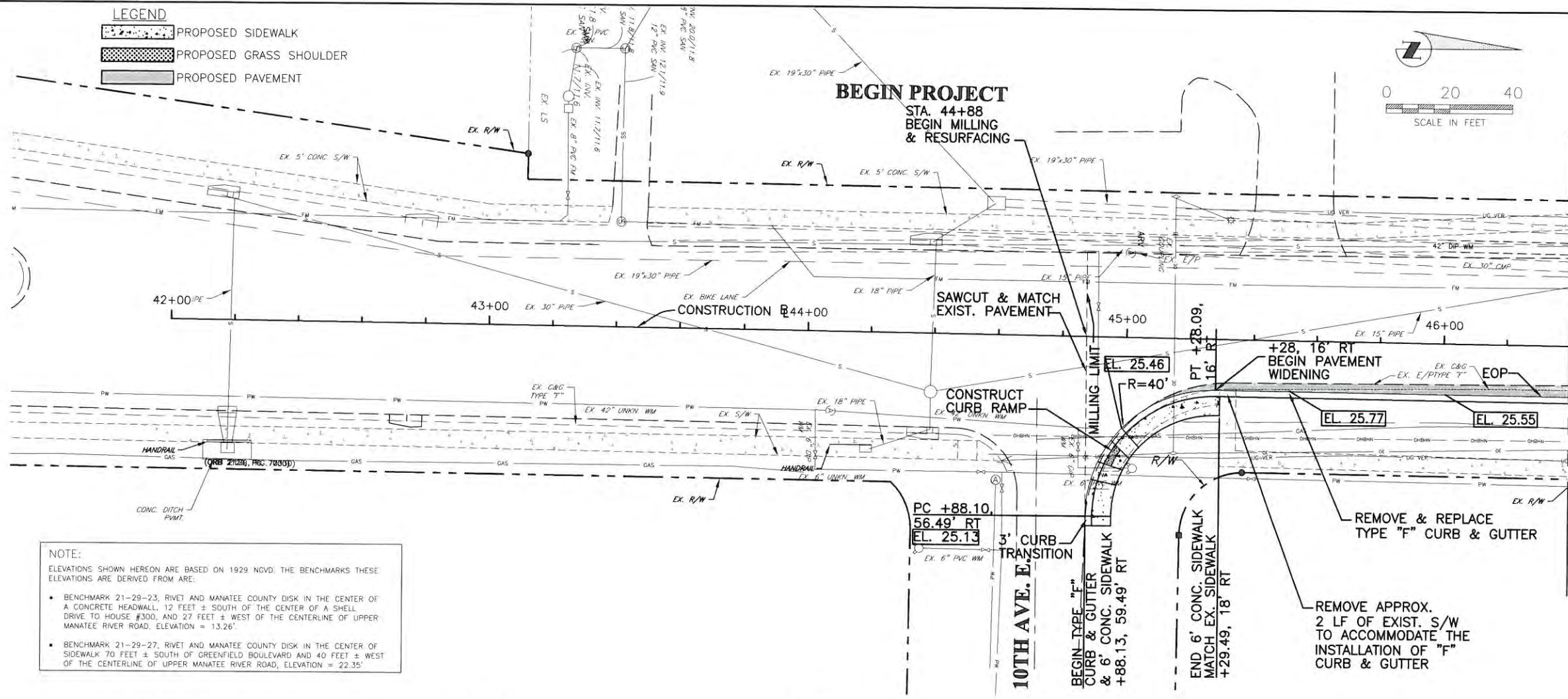
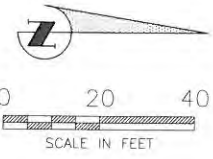
CHRISTOPHER L. MOWBRAY, P.E.  
 FLORIDA P.E. # 46772

STATE OF FLORIDA  
 PROFESSIONAL ENGINEER

Signature & Date

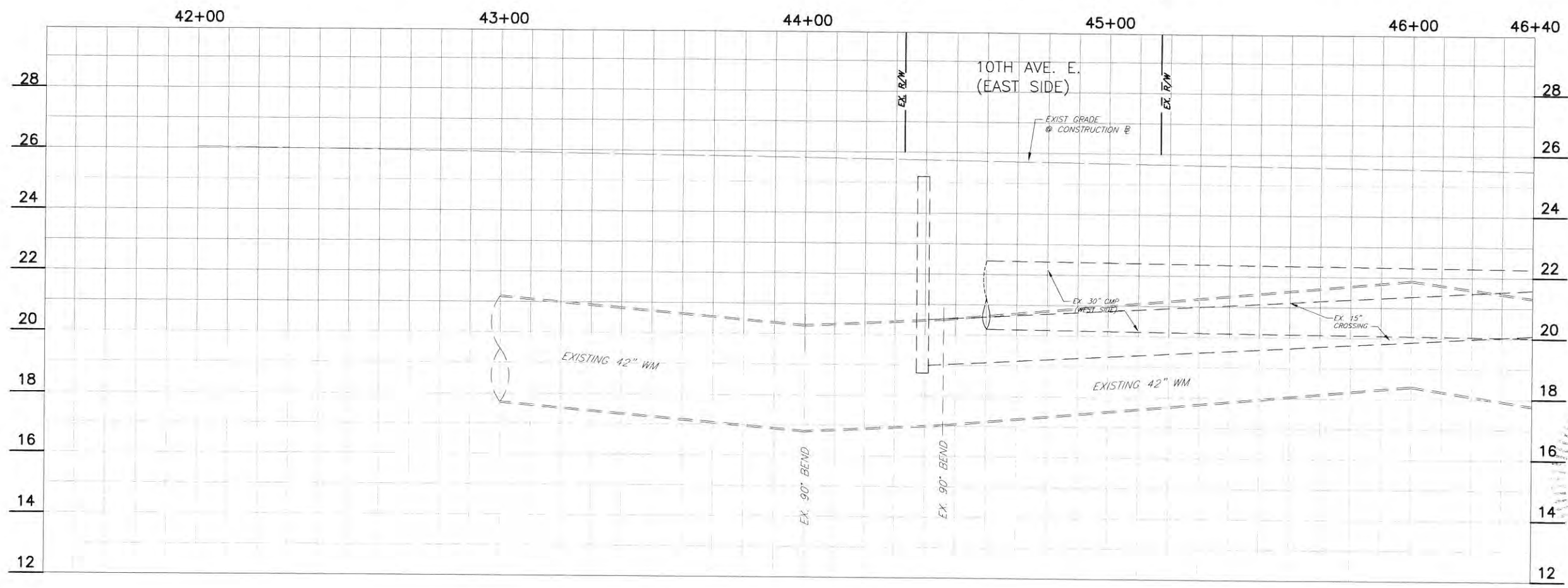
**LEGEND**

- PROPOSED SIDEWALK
- PROPOSED GRASS SHOULDER
- PROPOSED PAVEMENT



**NOTE:**  
ELEVATIONS SHOWN HEREON ARE BASED ON 1929 NGVD. THE BENCHMARKS THESE ELEVATIONS ARE DERIVED FROM ARE:

- BENCHMARK 21-29-23, RIVET AND MANATEE COUNTY DISK IN THE CENTER OF A CONCRETE HEADWALL, 12 FEET ± SOUTH OF THE CENTER OF A SHELL DRIVE TO HOUSE #300, AND 27 FEET ± WEST OF THE CENTERLINE OF UPPER MANATEE RIVER ROAD, ELEVATION = 13.26'.
- BENCHMARK 21-29-27, RIVET AND MANATEE COUNTY DISK IN THE CENTER OF SIDEWALK 70 FEET ± SOUTH OF GREENFIELD BOULEVARD AND 40 FEET ± WEST OF THE CENTERLINE OF UPPER MANATEE RIVER ROAD, ELEVATION = 22.35'.



MATCH LINE STA. 46+40

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE STA. 41+50 TO 46+40**

NO.	REVISION DESCRIPTION	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20,
SCALE	1"=40' HORIZ. / 1"=4' VERT.
BY	DATE
SURVEYED	04/23/12
DESIGNED	JP/PBF 06/20/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 66777	

Signature & Date

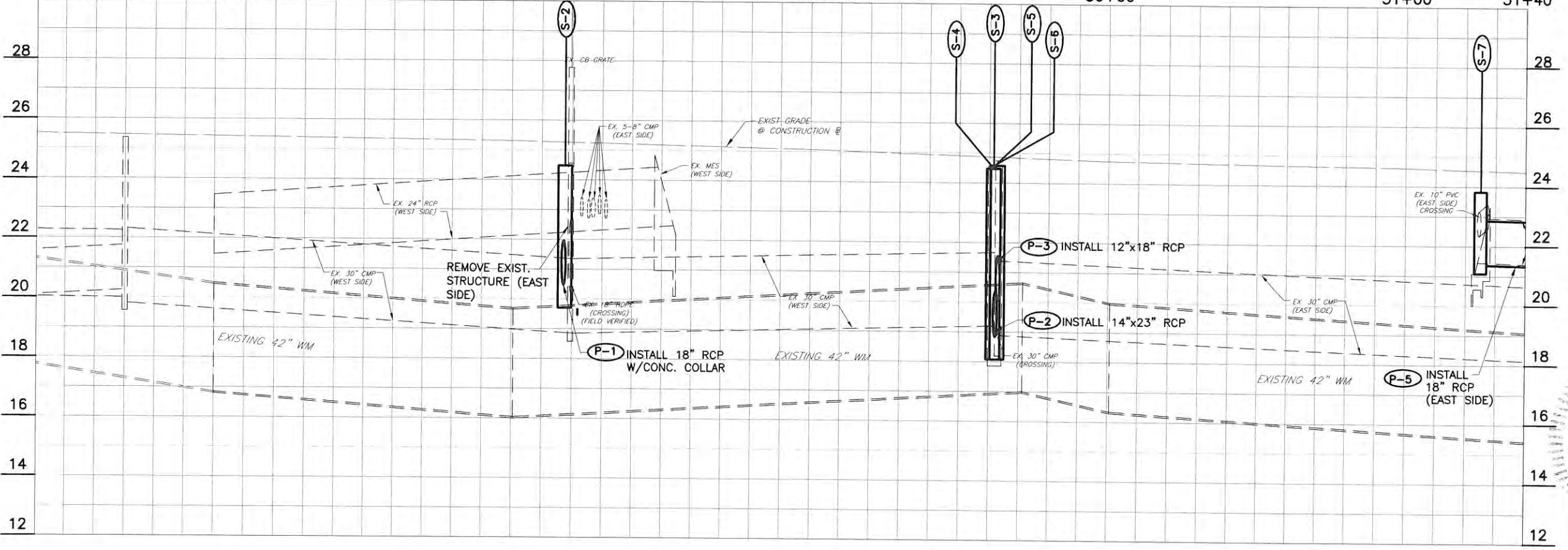
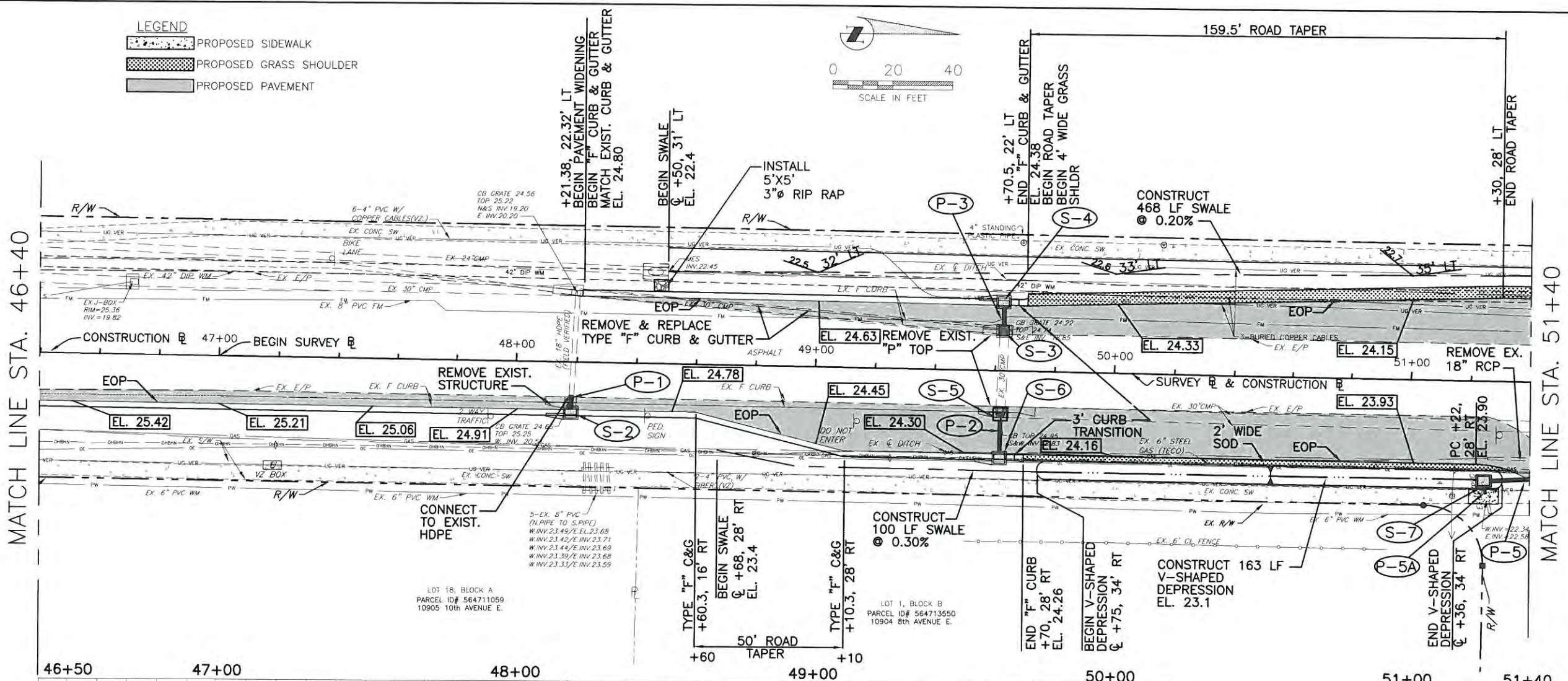
**LEGEND**

	PROPOSED SIDEWALK
	PROPOSED GRASS SHOULDER
	PROPOSED PAVEMENT



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS**

PLAN & PROFILE STA. 46+40 TO 51+40



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20
SCALE	1"=40' HORIZ 1"=4' VERT
DESIGNED	JP/PBF 06/20/12
DRAWN	JP/PBF 06/20/12
CHECKED	JP/PBF 06/20/12
DATE	06/27/12
BY	CHRISTOPHER L. MOWBRAY, P.E.
FLORIDA P.E. #	16277

Signature & Date

COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT | S:\P\W\Engineering\Shore\Highway Engineering\ROADS\Upper Manatee River Road\DWG\UMRR\_Active\_0314.dwg:RPO7\_11/3/2014 11:03 AM Scott Babay, 1:2, 11417

COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT | S:\P\DWG\Engineering\Roadway\Upper Manatee River\Roadway\IMR Active 0314.dwg\PPR\_11/2/2014 11:10 AM Kona Robey, L.S., 11x17

REMOVE & REPLACE 5' SIDEWALK (1' OFF R/W) STA. 51+80, 45' LT TO STA. 56+10, 45' LT

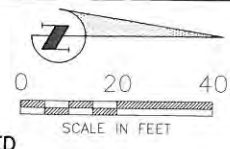
**LEGEND**

PROPOSED SIDEWALK

PROPOSED GRASS SHOULDER

PROPOSED PAVEMENT

PID # 566801028  
10325 GREENFIELD BLVD.  
10405 S.R. 64 EAST



PROP. BACK OF S.W. EL.=23.3  
SEE "BACK OF SIDEWALK TAPER AT STRUCTURE" DETAIL SH. 37

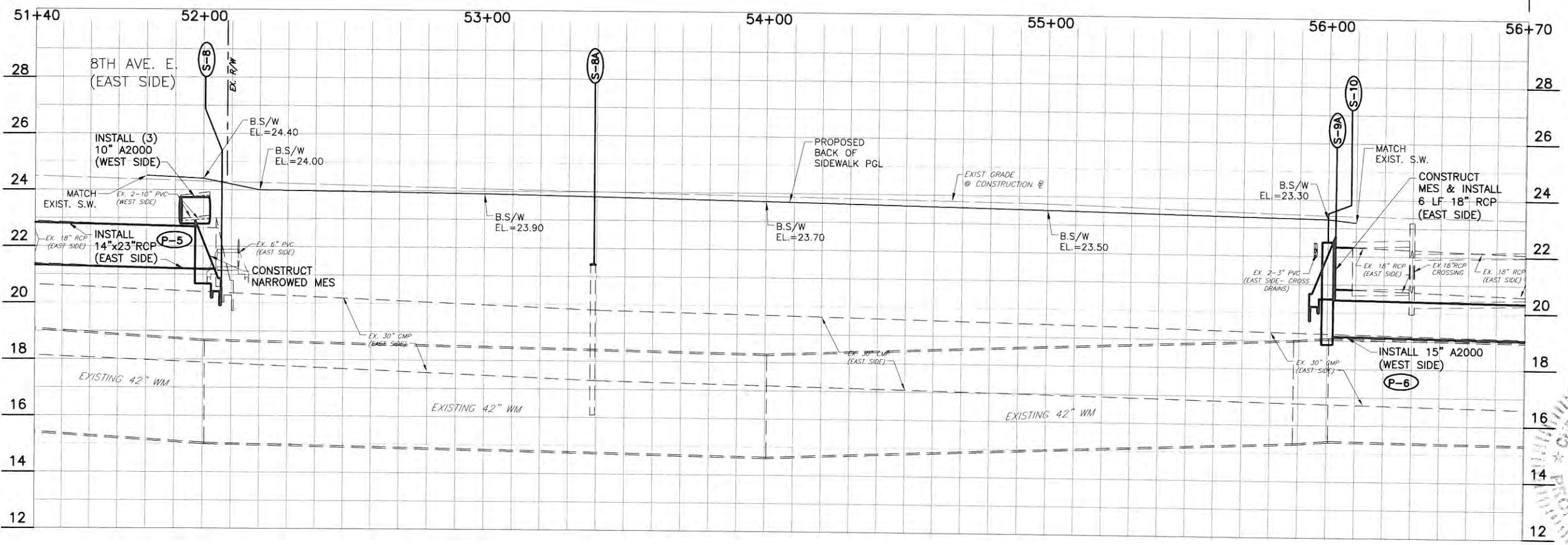
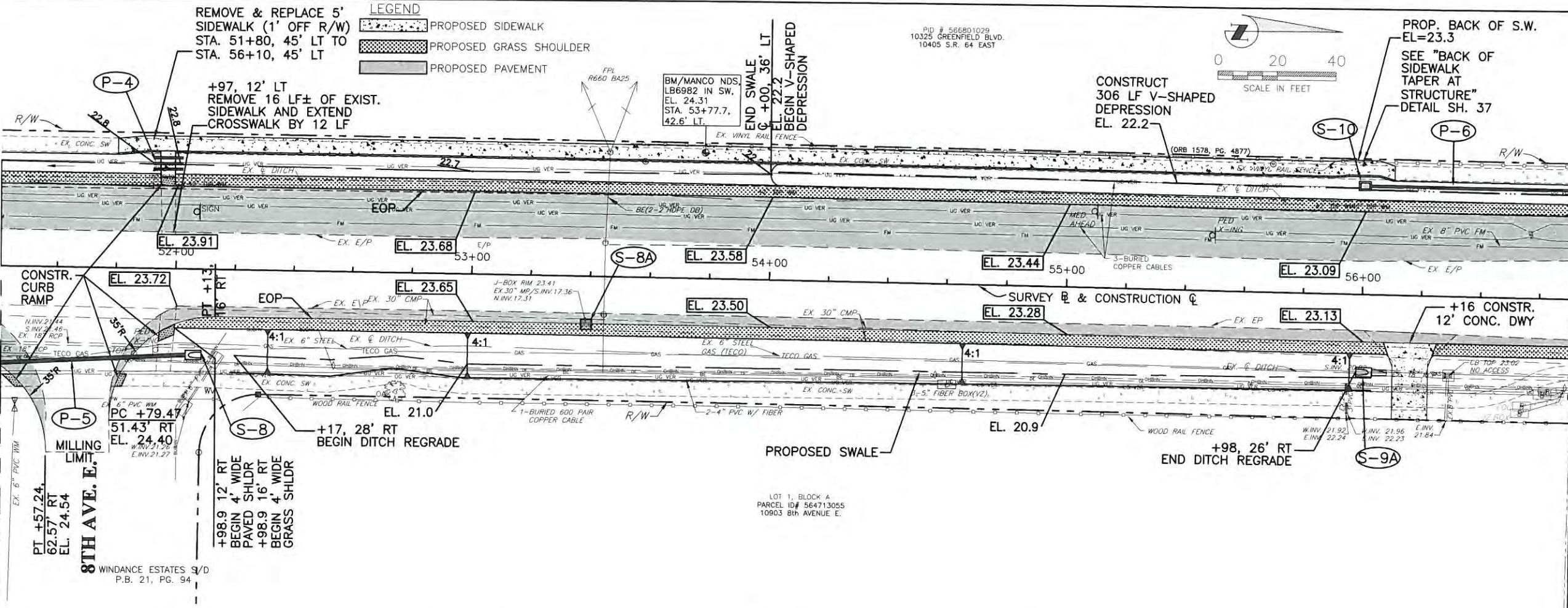


MATCH LINE STA. 51+40

MATCH LINE STA. 56+70

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS**

**PLAN & PROFILE STA. 51+40 TO 56+70**



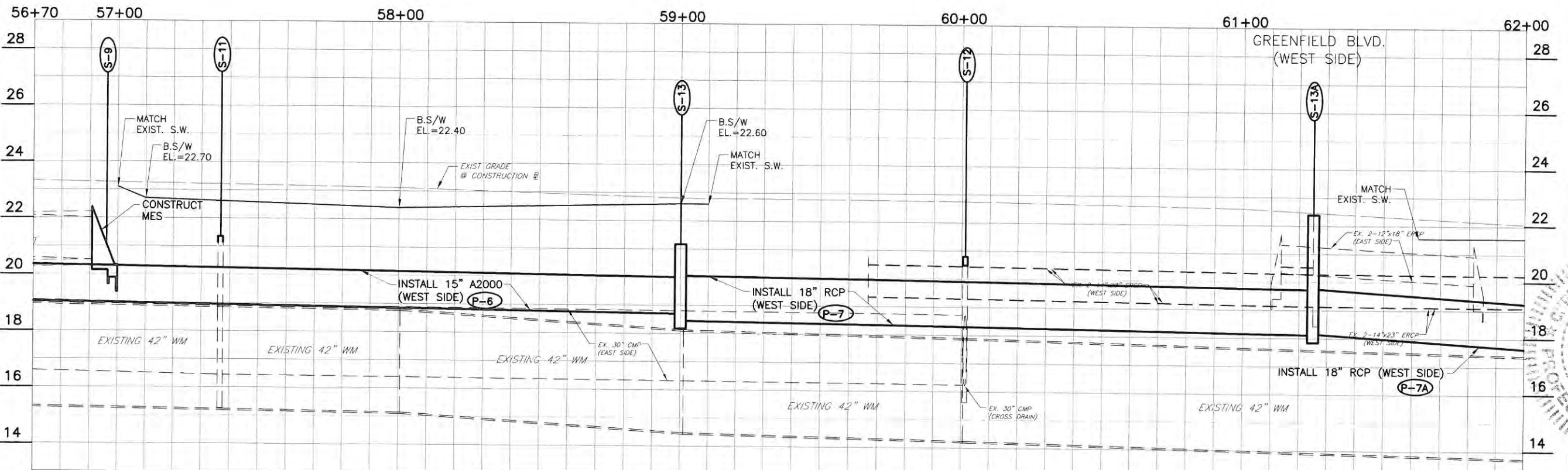
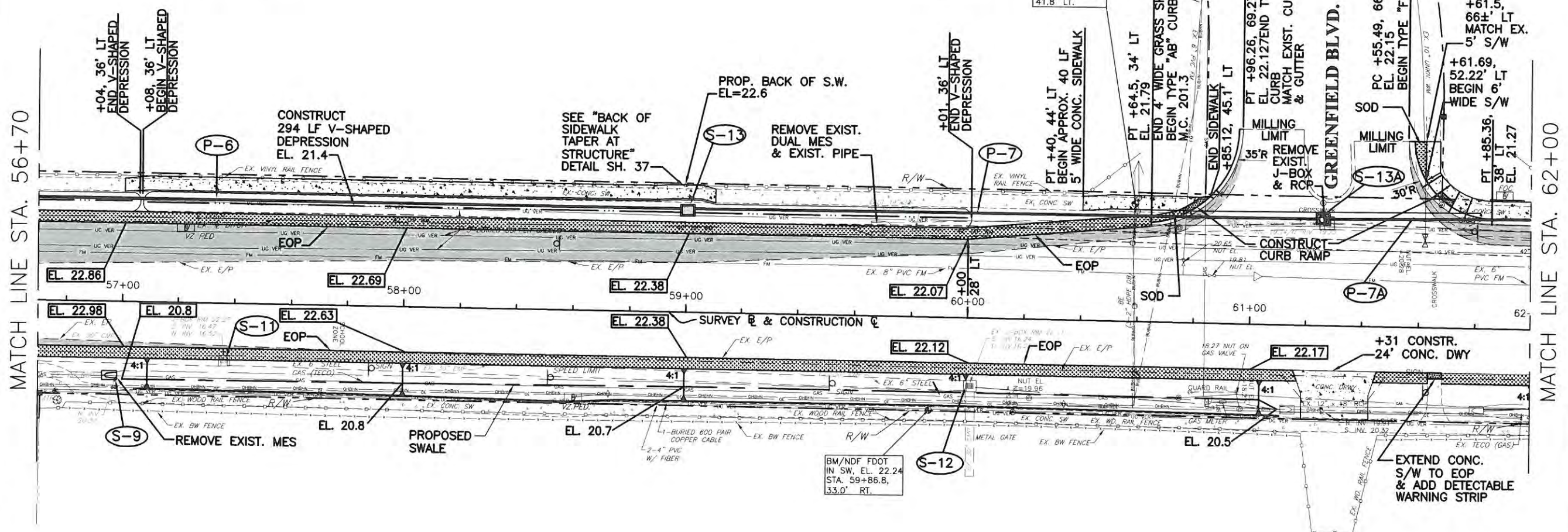
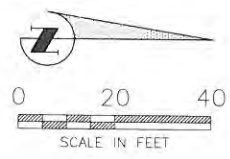
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE.	19-20, 24-25, 34S, 19E
SCALE	HORIZONTAL: 1"=40' VERTICAL: 1"=4'
DESIGNED	JP/PBF 06/20/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PBF 06/20/12
DESIGNED BY	DATE
SURVEYED	04/27/12
DESIGNED	06/20/12
DRAWN	06/20/12
CHECKED	06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777	
Signature & Date	

**LEGEND**

- PROPOSED SIDEWALK
- PROPOSED GRASS SHOULDER
- PROPOSED PAVEMENT



**UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 PLAN & PROFILE STA. 56+70 TO 62+00**

NO.	REVISION DESCRIPTION	BY	DATE

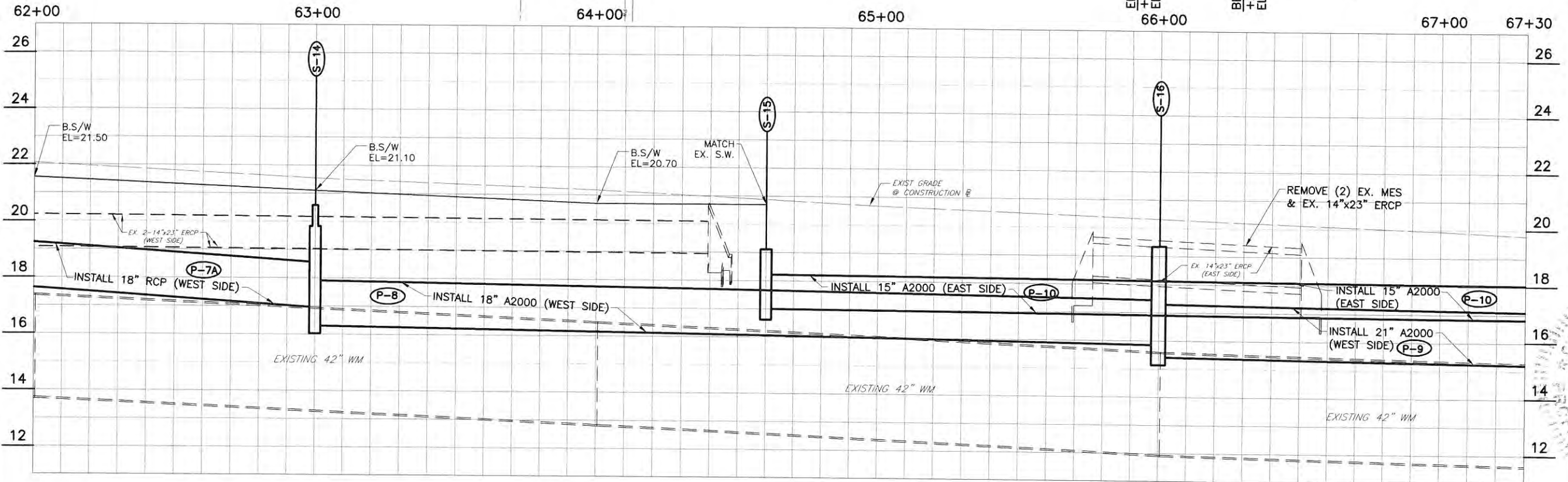
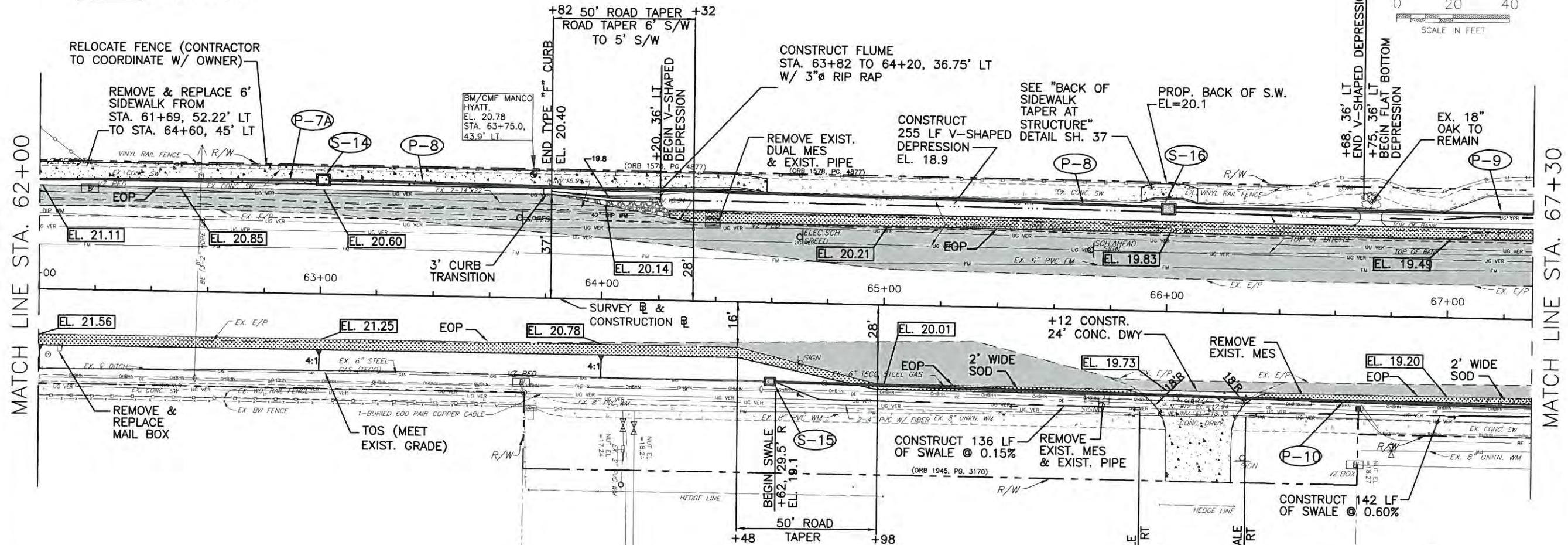
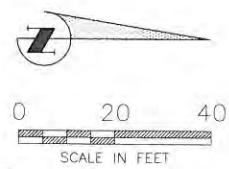
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC. TOWN/RGE	19-20, 24-30, 34S/19E
SCALE	1"=40' HORIZ. 1"=4' VERT.
BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	JR/PBF 06/20/12
DRAWN	KR/CB 06/20/12
CHECKED	JR/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA REG.# 46777	
Signature & Date	

LEGEND

- PROPOSED SIDEWALK
- PROPOSED GRASS SHOULDER
- PROPOSED PAVEMENT



PUBLIC WORKS DEPARTMENT  
ENGINEERING SERVICES  
1622 26th Avenue East, Bradenton, FL 34208



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE STA. 62+00 TO 67+30**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20,
SCALE	28-30 34S/19E
DATE	1-4/12
SURVEYED	J.P.B./P.F.B. 04/27/12
DESIGNED	JP/PBF 06/20/12
DRAWN	JP/PBF 06/20/12
CHECKED	JP/PBF 06/20/12
DESIGNED BY	CHRISTOPHER T. MOWBRAY, E.L.
FLORIDA P.E. #	46777

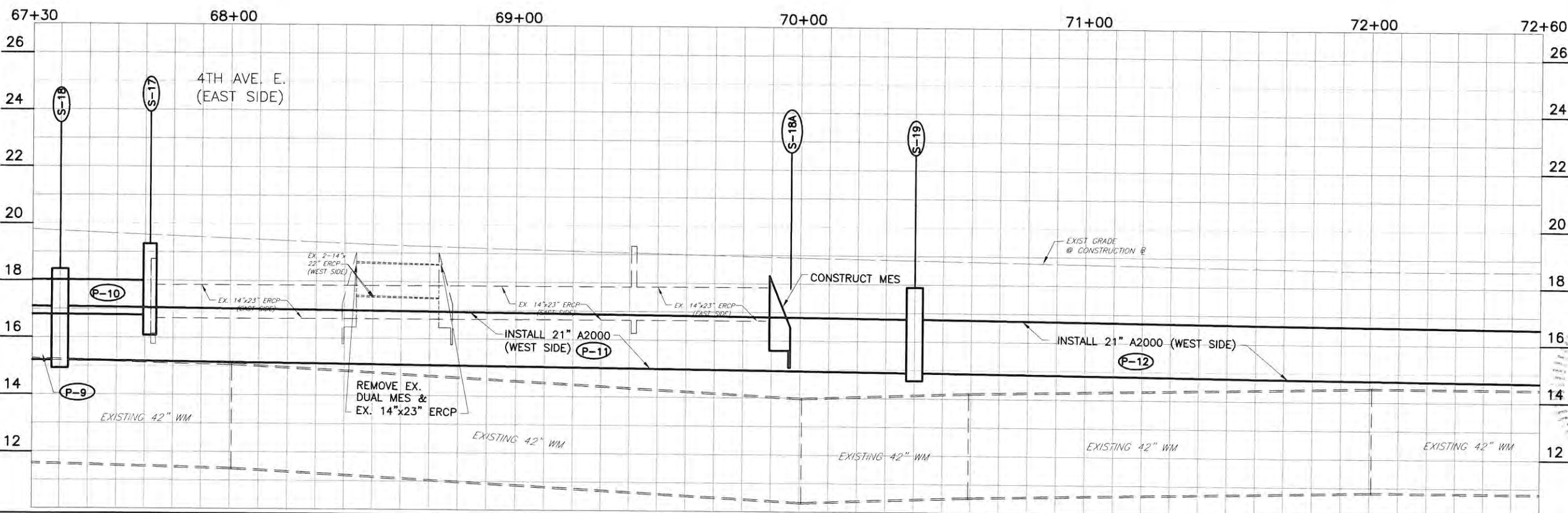
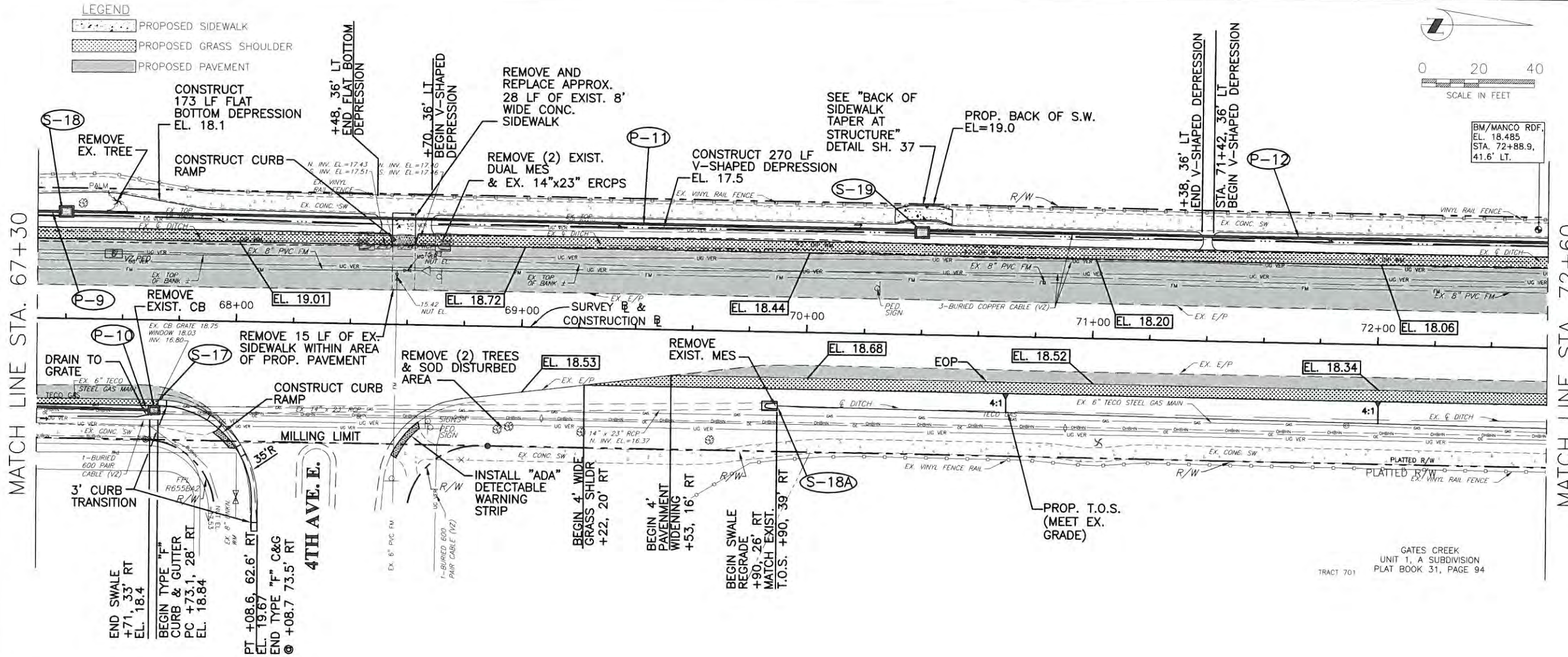
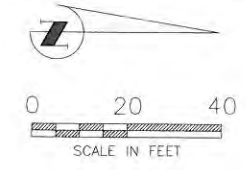
Signature & Date

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**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE STA. 67+30 TO 72+60**

- LEGEND**
- PROPOSED SIDEWALK
  - PROPOSED GRASS SHOULDER
  - PROPOSED PAVEMENT



NO.	REVISION DESCRIPTION	BY	DATE

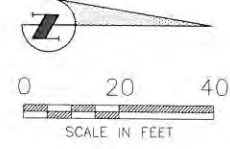
  

PROJECT #	307-6082660
SURVEY #	FILE 00-42763
SEC./TWN./RGE	20-30-34S/19E
SCALE	HORIZ.
SURVEYED BY	DATE
DESIGNED	DATE
DRAWN	DATE
CHECKED	DATE
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777

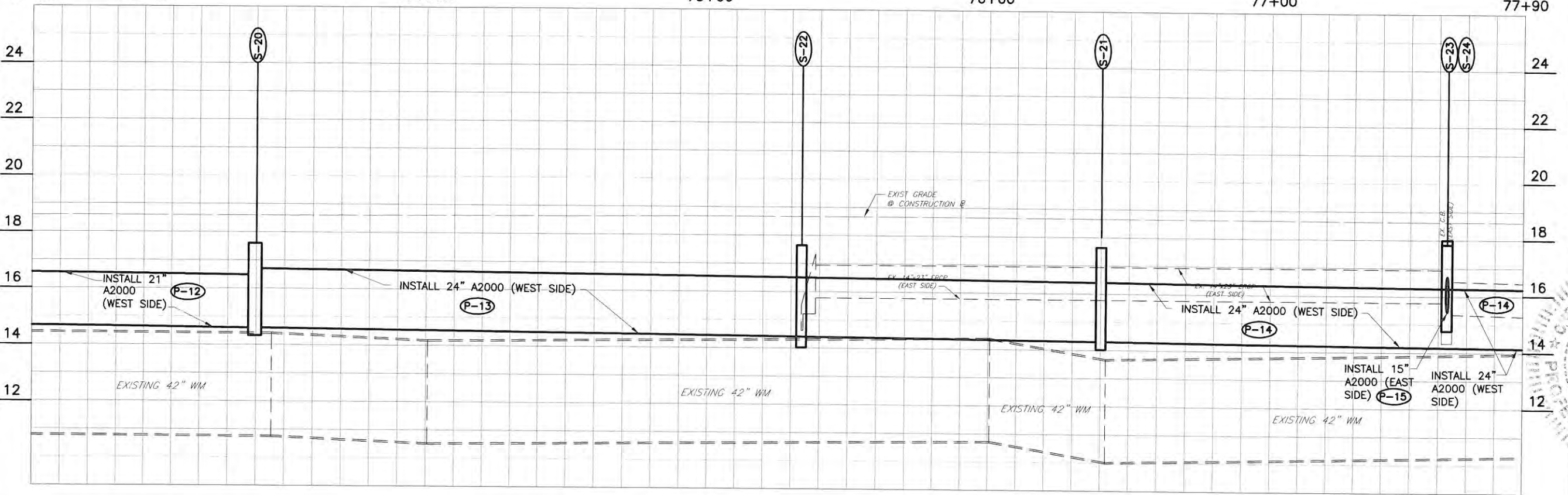
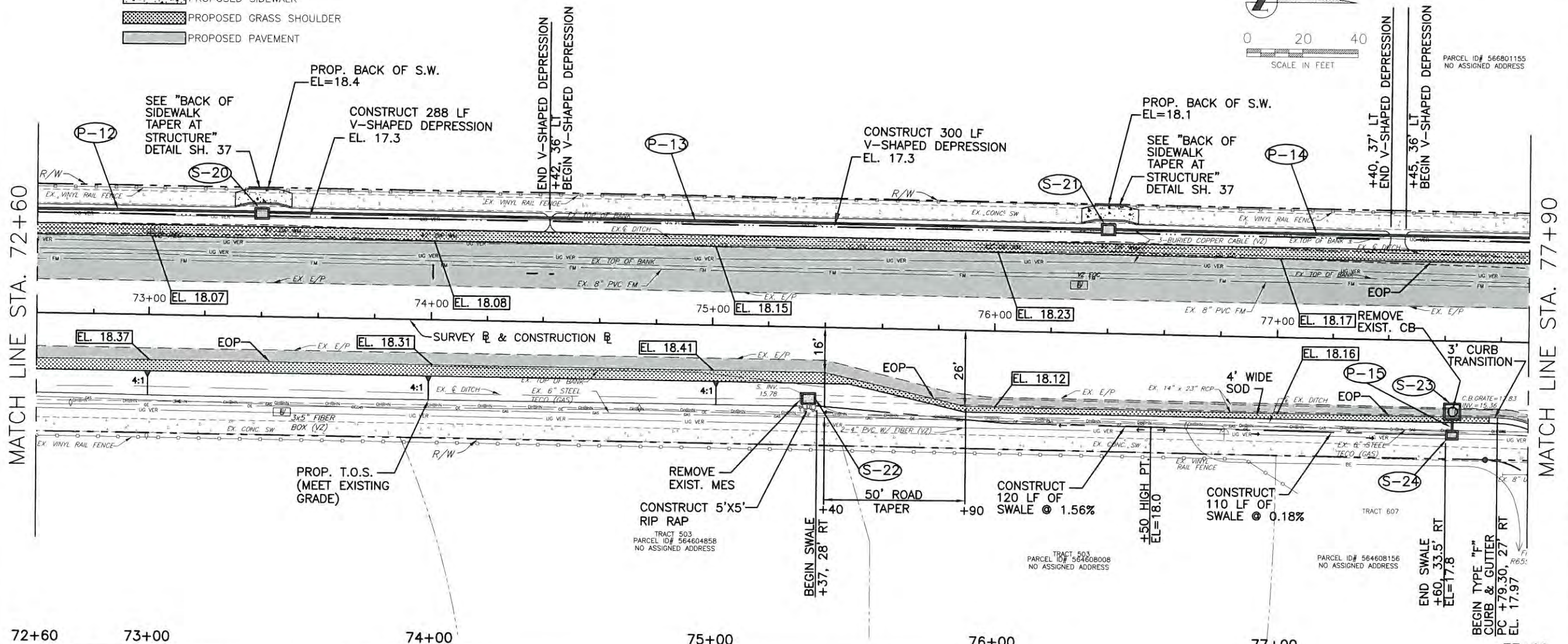
Signature & Date



- LEGEND**
- PROPOSED SIDEWALK
  - PROPOSED GRASS SHOULDER
  - PROPOSED PAVEMENT



PARCEL ID# 566801155  
NO ASSIGNED ADDRESS



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE STA. 72+60 TO 77+90**

NO.	REVISION DESCRIPTION	BY	DATE

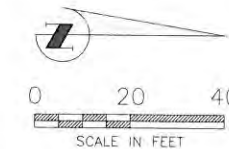
  

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	29-30.64/19E
SCALE	AS SHOWN
SURVEYED	ZNS 04/24/12
DESIGNED	JR/PBF 06/29/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PBF 06/29/12
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777

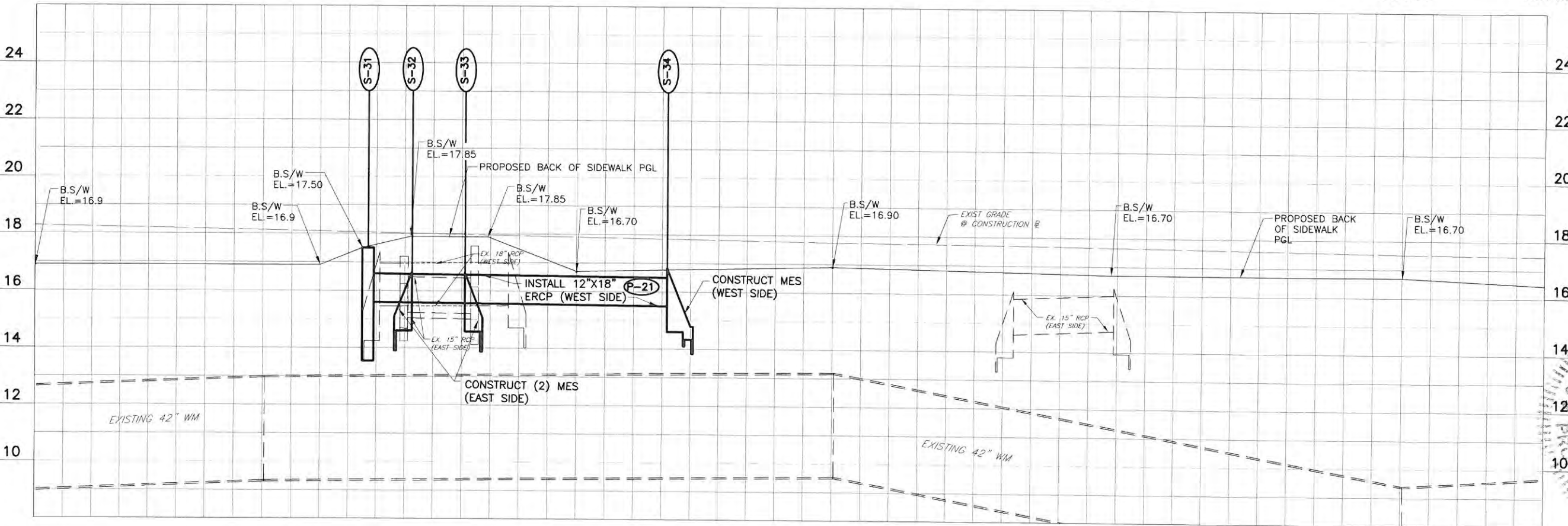
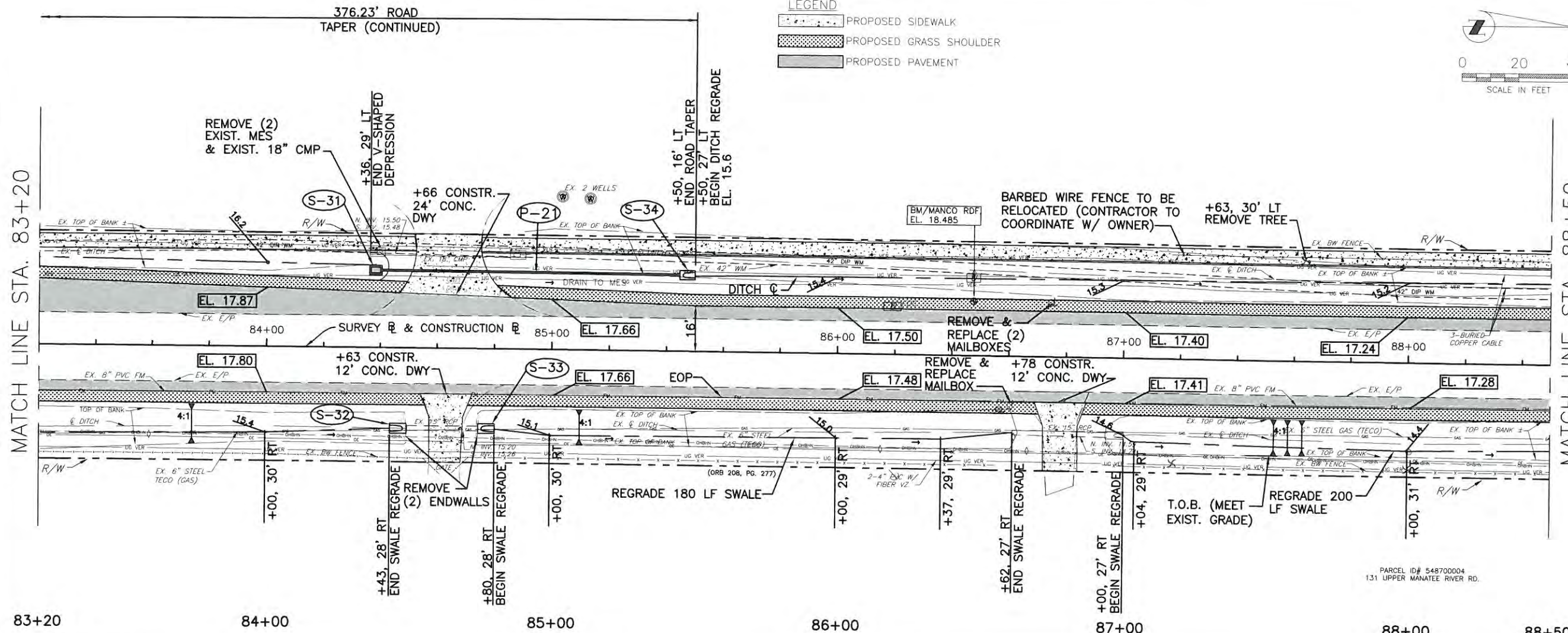
Signature & Date

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- LEGEND**
- PROPOSED SIDEWALK
  - PROPOSED GRASS SHOULDER
  - PROPOSED PAVEMENT



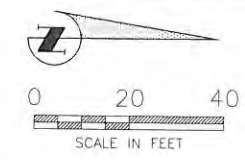
**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE STA. 83+20 TO 88+50**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	29-30.34S/19E
SCALE	1"=40' HORIZ 1/2"=4' VERT
BY	DATE
SURVEYED	2/15/12
DESIGNED	3/8/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PE 06/28/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777	

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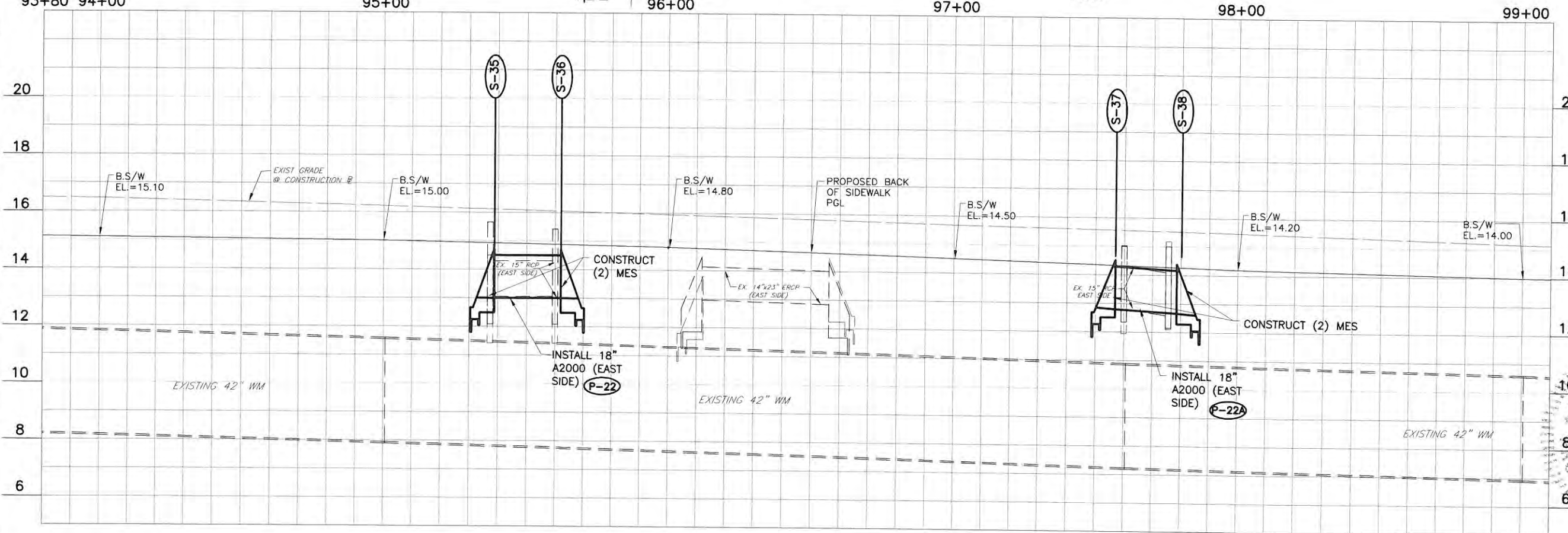
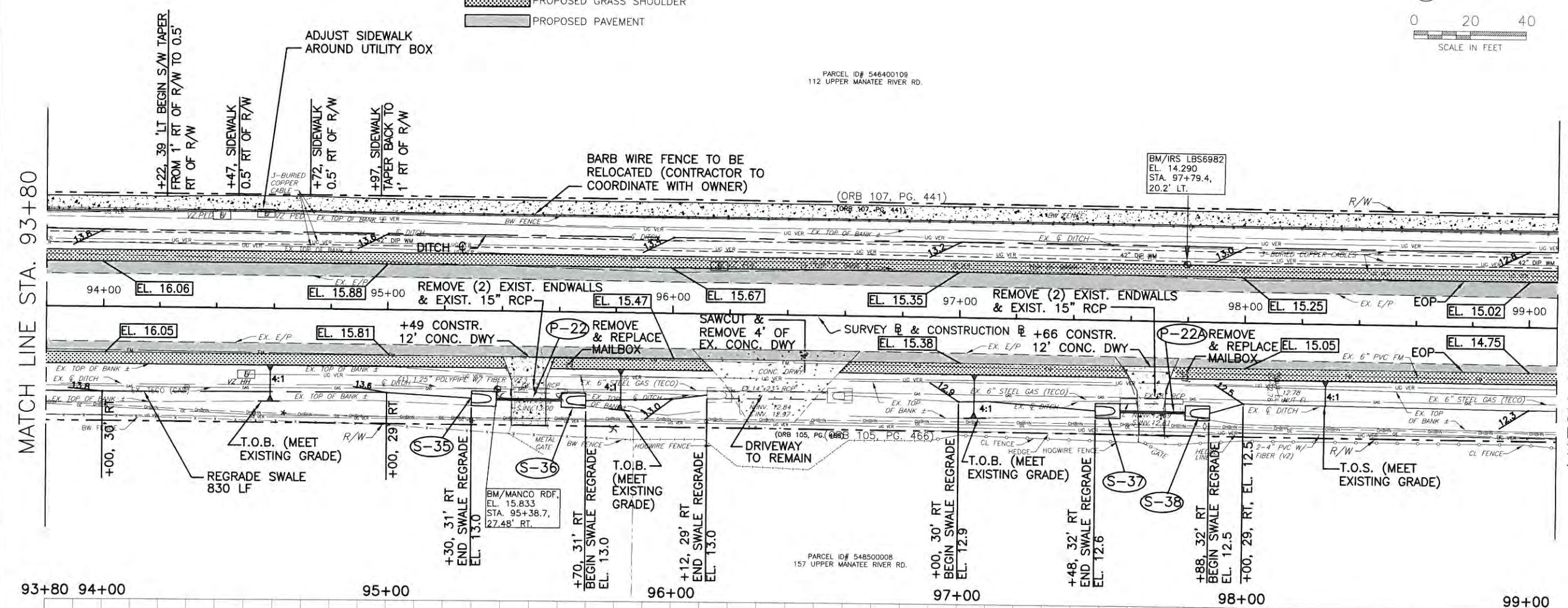


- LEGEND**
- PROPOSED SIDEWALK
  - PROPOSED GRASS SHOULDER
  - PROPOSED PAVEMENT

PARCEL ID# 546400109  
112 UPPER MANATEE RIVER RD.

MATCH LINE STA. 93+80

MATCH LINE STA. 99+10



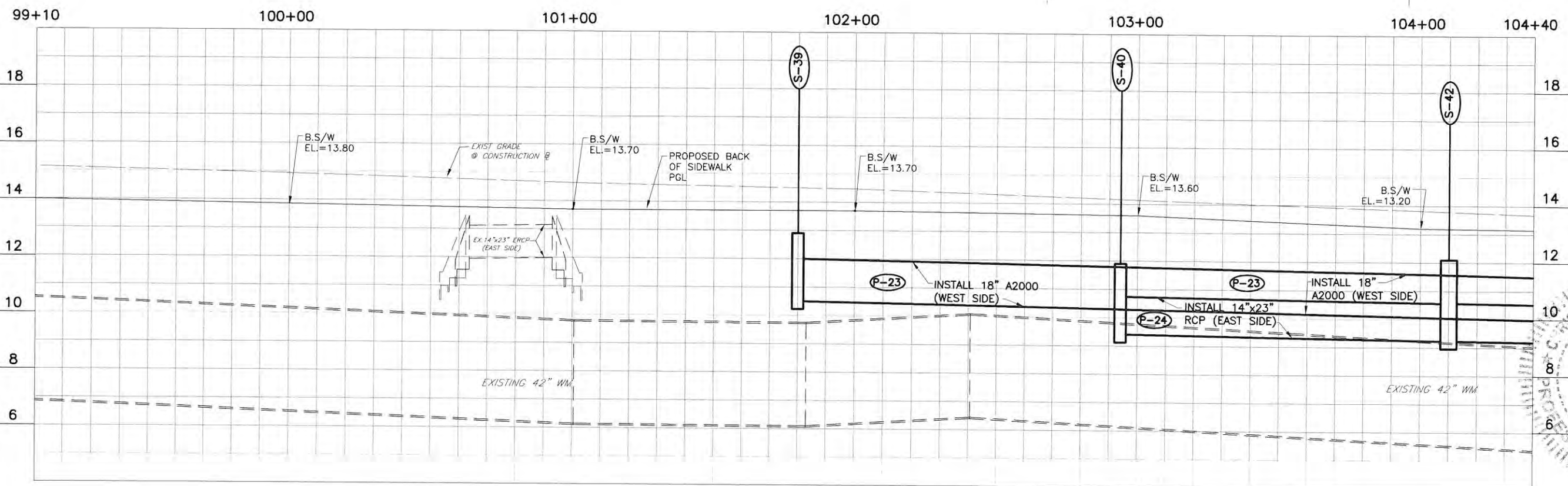
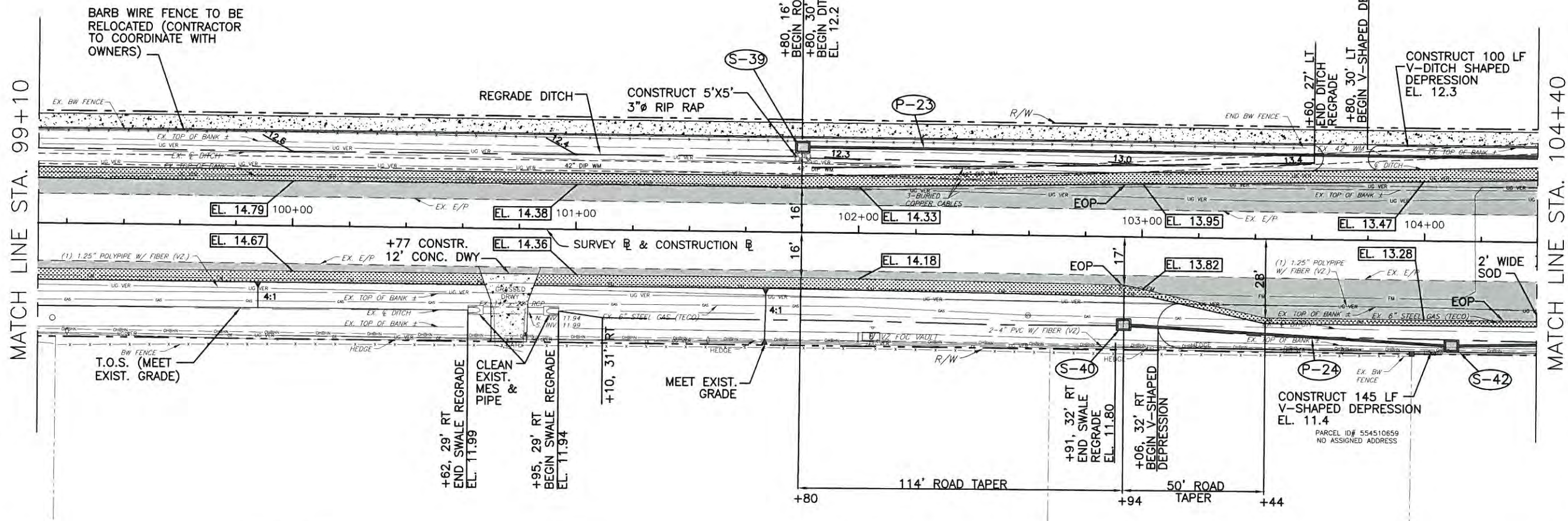
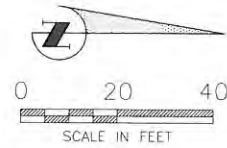
**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE STA. 93+80 TO 99+10**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	29-30-34S/19E
SCALE	1" = 40' HORIZ. 1" = 4' VERT.
DESIGNED	JF/PBF 06/20/12
CHECKED	JF/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777 Signature & Date	

- LEGEND**
- PROPOSED SIDEWALK
  - PROPOSED GRASS SHOULDER
  - PROPOSED PAVEMENT

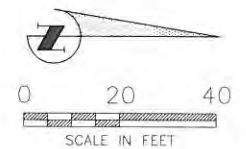


**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE  
STA. 99+10 TO STA. 104+40**

NO.	REVISION DESCRIPTION	BY	DATE

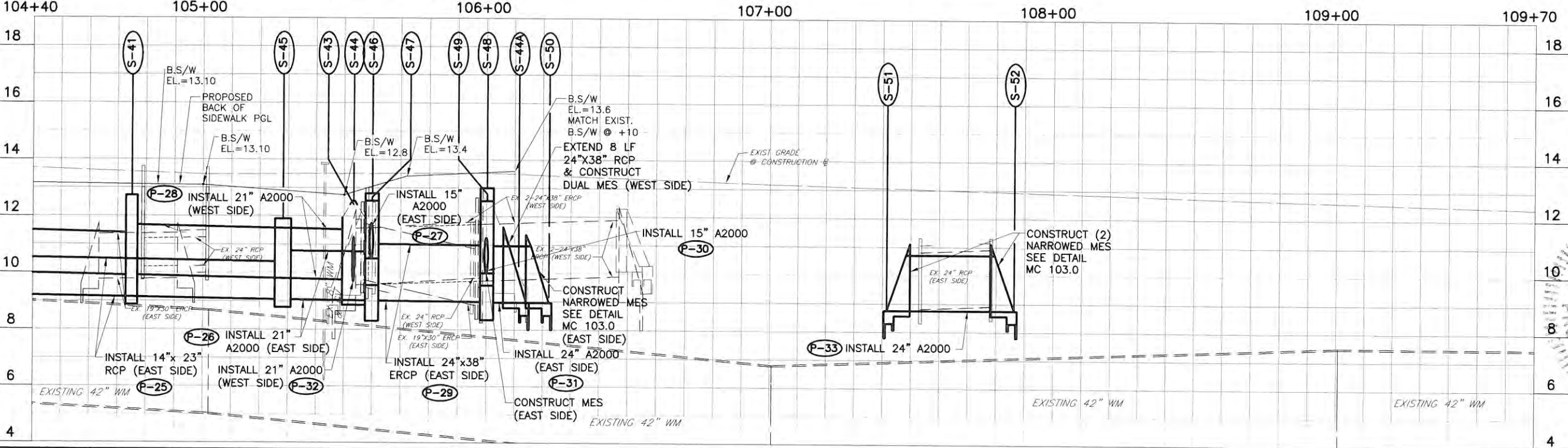
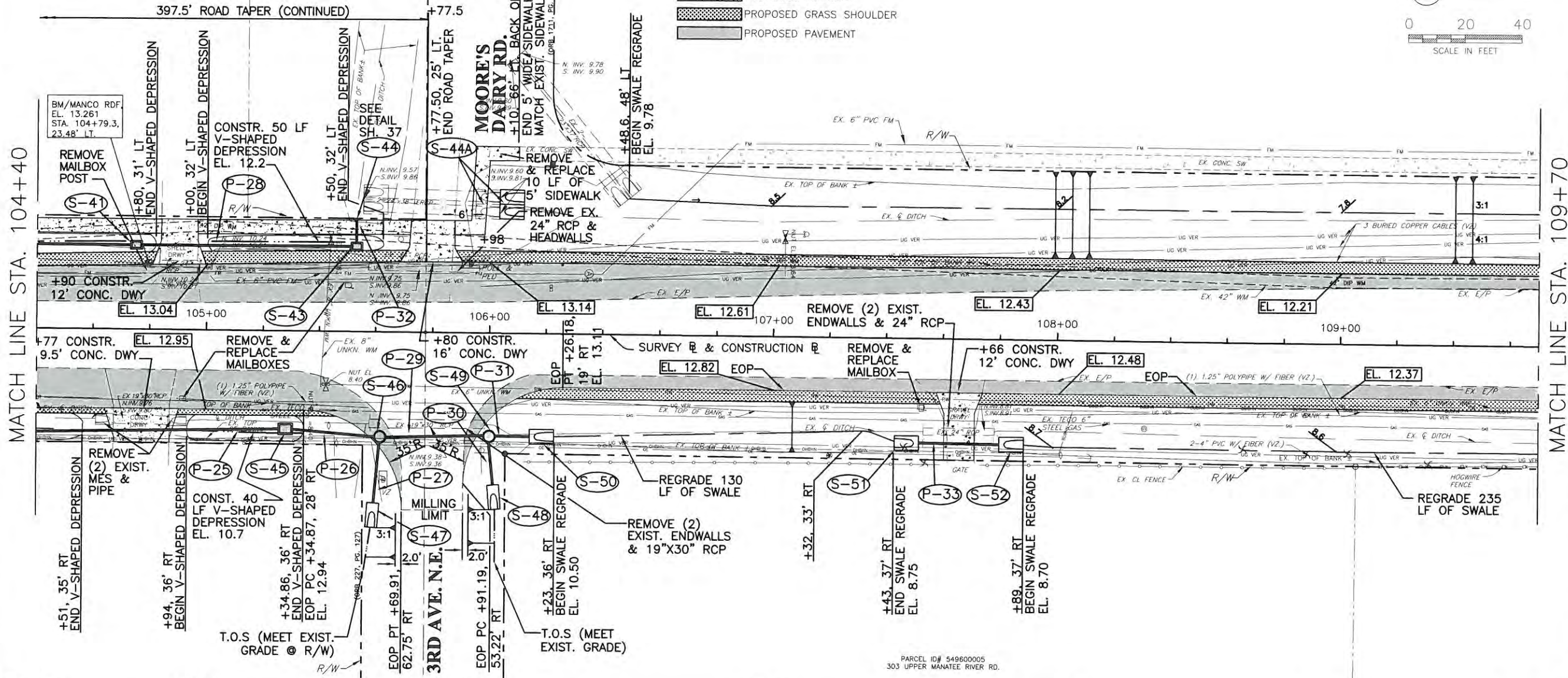
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWP./RGE.	19-20, 29-30 34S/19E
SCALE	1"=40' HORIZ. 1"=4' VERT.
BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	JR/PBF 06/20/12
DRAWN	KR/CB 08/20/12
CHECKED	JP/PBF 08/20/12
STEPHEN L. MOWBRAY, P.E. FLORIDA P.E. # 46734	

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**LEGEND**  
[Stippled Pattern] PROPOSED SIDEWALK  
[Cross-hatched Pattern] PROPOSED GRASS SHOULDER  
[Solid Grey] PROPOSED PAVEMENT

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE  
STA. 104+40 TO STA. 109+70**



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT # 307-6082660  
SURVEY # FILE 00-42783  
SEC. T/W/R/G/E 29-50.37/19E  
SCALE 1"=40' HORIZ.  
1"=8' VERT.

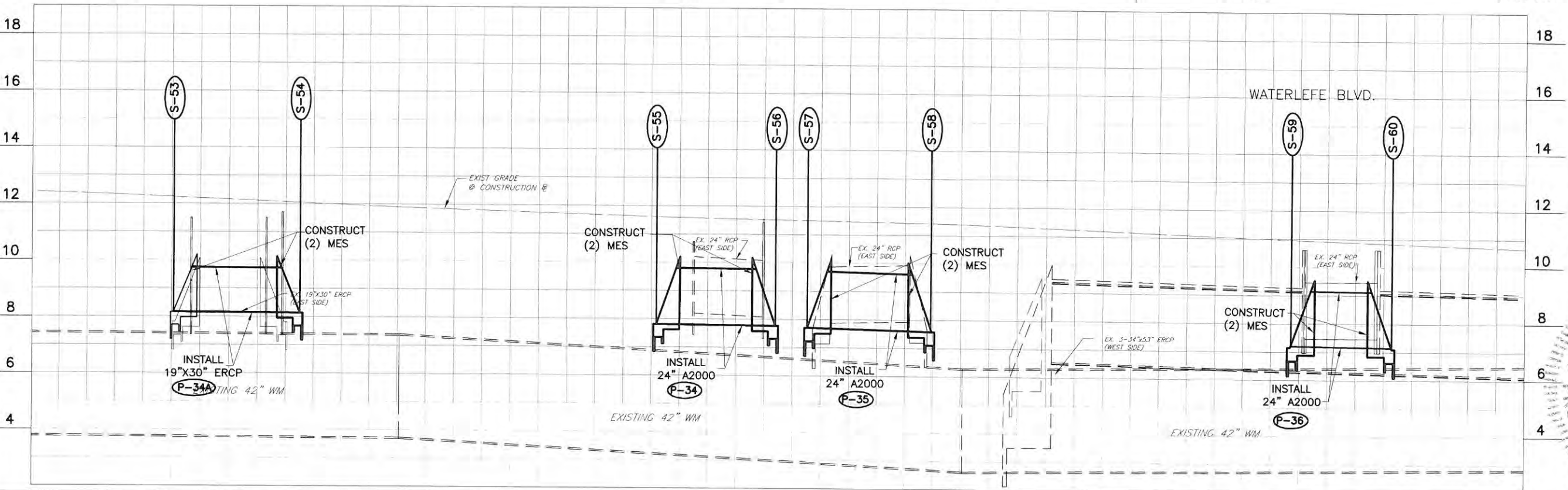
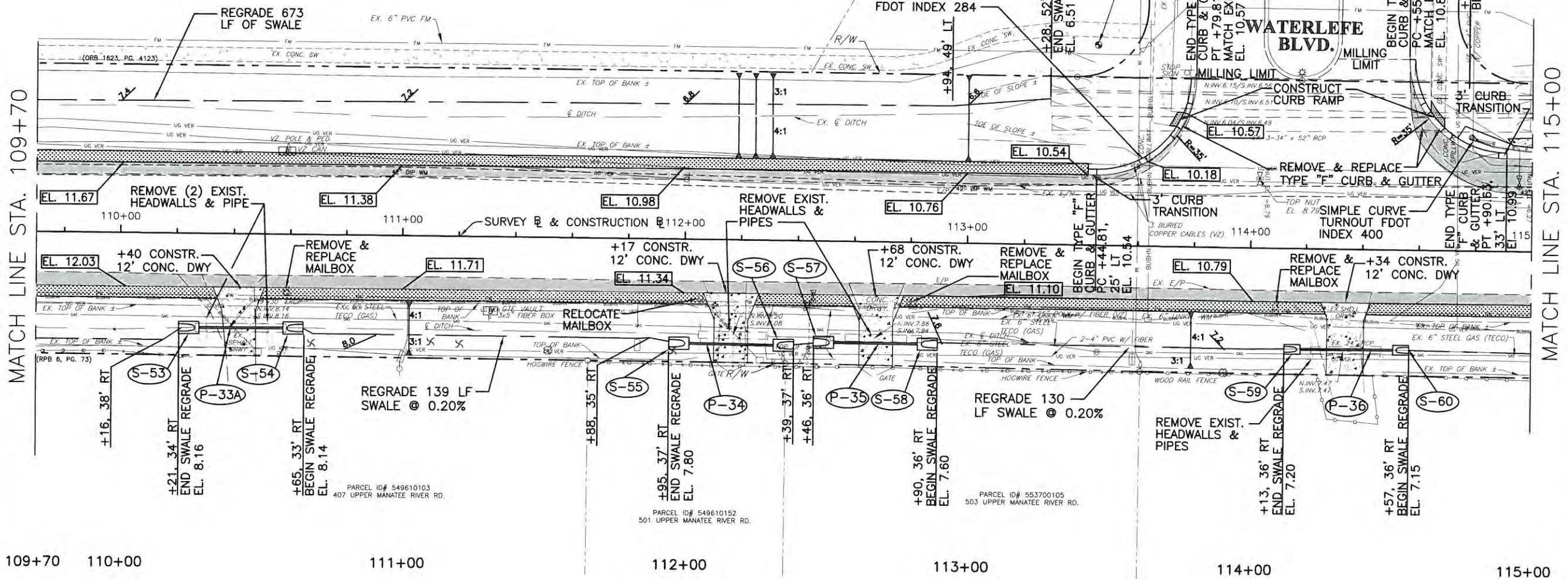
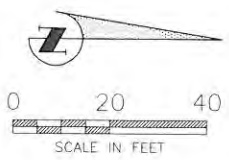
BY DATE  
DESIGNED JF/PBF 06/20/12  
DRAWN KR/CB 06/20/12  
CHECKED JF/PBF 06/20/12

CHRISTOPHER W. MOWBRAY, P.E.  
FLORIDA P.E. # 46777

Signature & Date

**LEGEND**

[Pattern: Dashed lines]	PROPOSED SIDEWALK
[Pattern: Stippled]	PROPOSED GRASS SHOULDER
[Pattern: Solid grey]	PROPOSED PAVEMENT



## UPPER MANATEE RIVER ROAD ROADWAY FUNCTIONAL IMPROVEMENTS PLAN & PROFILE STA. 109+70 TO STA. 115+00

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20,
SCALE	29-30, 34S/19E 1"=40' HORIZ. 1"=4' VERT.
BY	DATE
SURVEYED	1/23/12 04/27/12
DESIGNED	4/2/12 06/20/12
DRAWN	KR/CB 06/20/12
CHECKED	07/18/12 06/20/12
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777

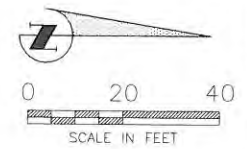
Signature & Date  
**SHEET 19**

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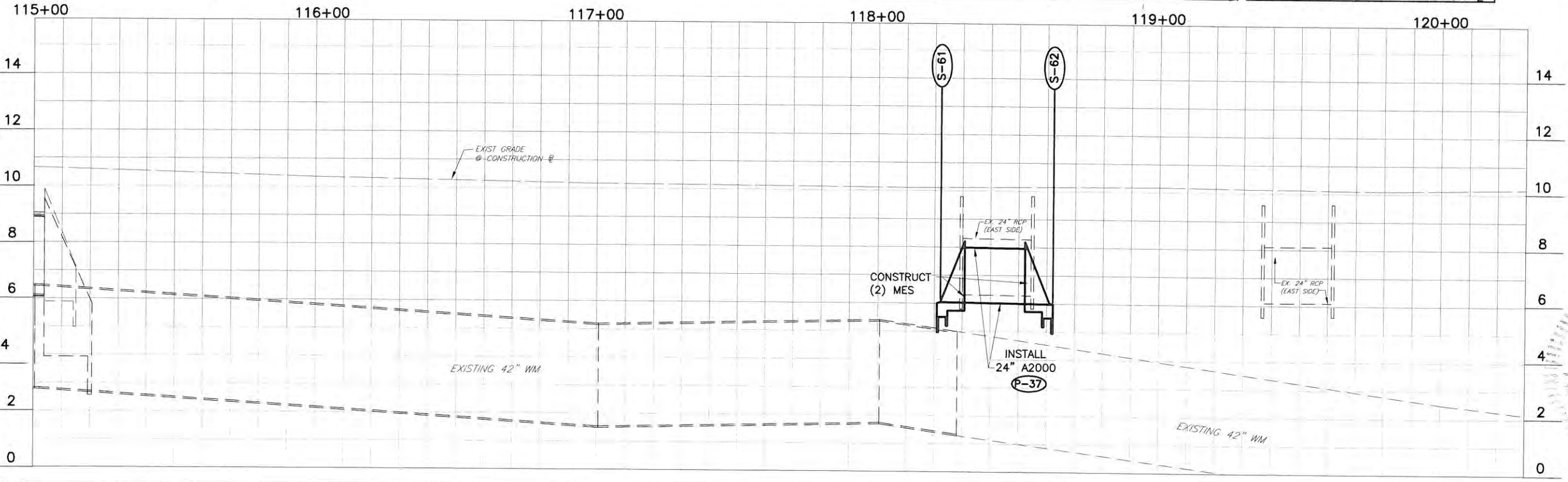
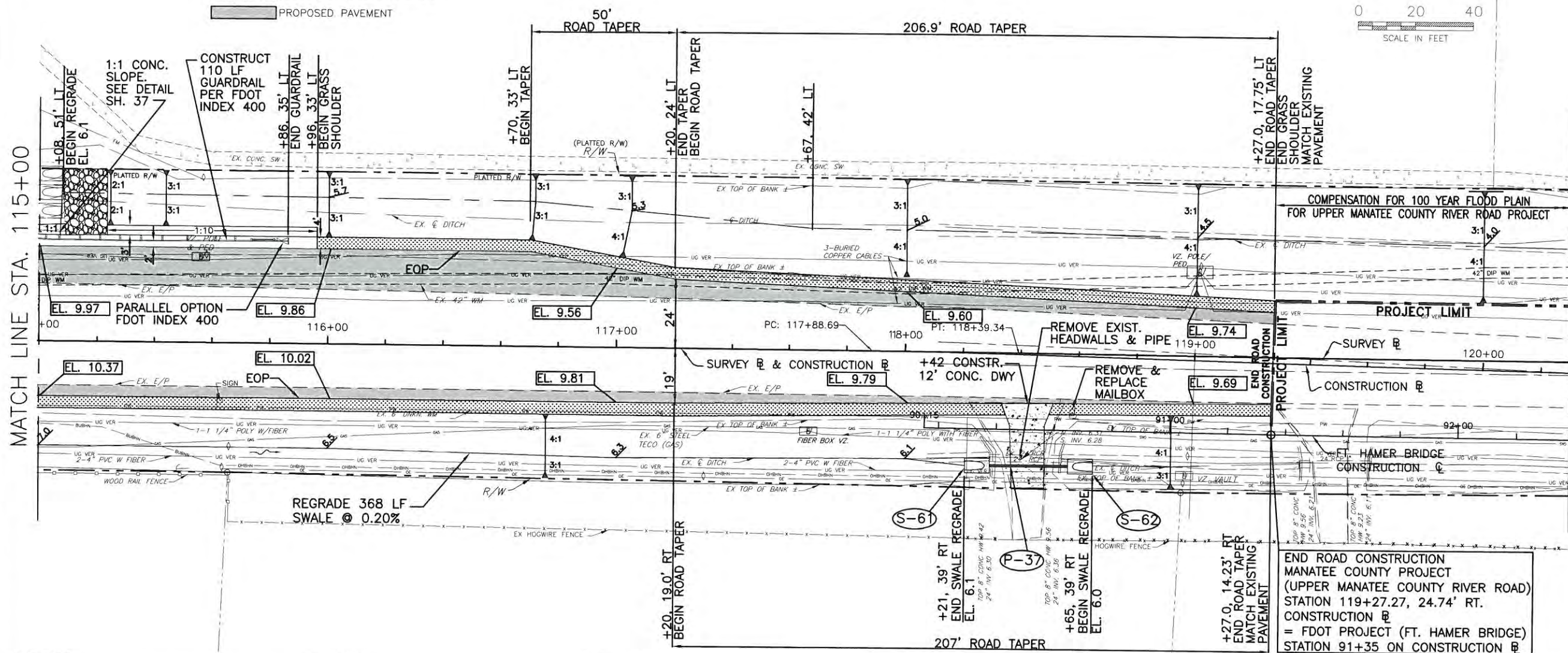
**LEGEND**

- PROPOSED SIDEWALK
- PROPOSED GRASS SHOULDER
- PROPOSED PAVEMENT



MATCH LINE STA. 115+00

MATCH LINE STA. 120+30



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE  
STA. 115+00 TO STA. 120+30**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30, 34S/19E
SCALE	1"=40' HORIZ 1"=4' VERT
BY	DATE
SURVEYED	ZNS 06/20/12
DESIGNED	JP/PBB 06/20/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PBB 06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777

Signature & Date

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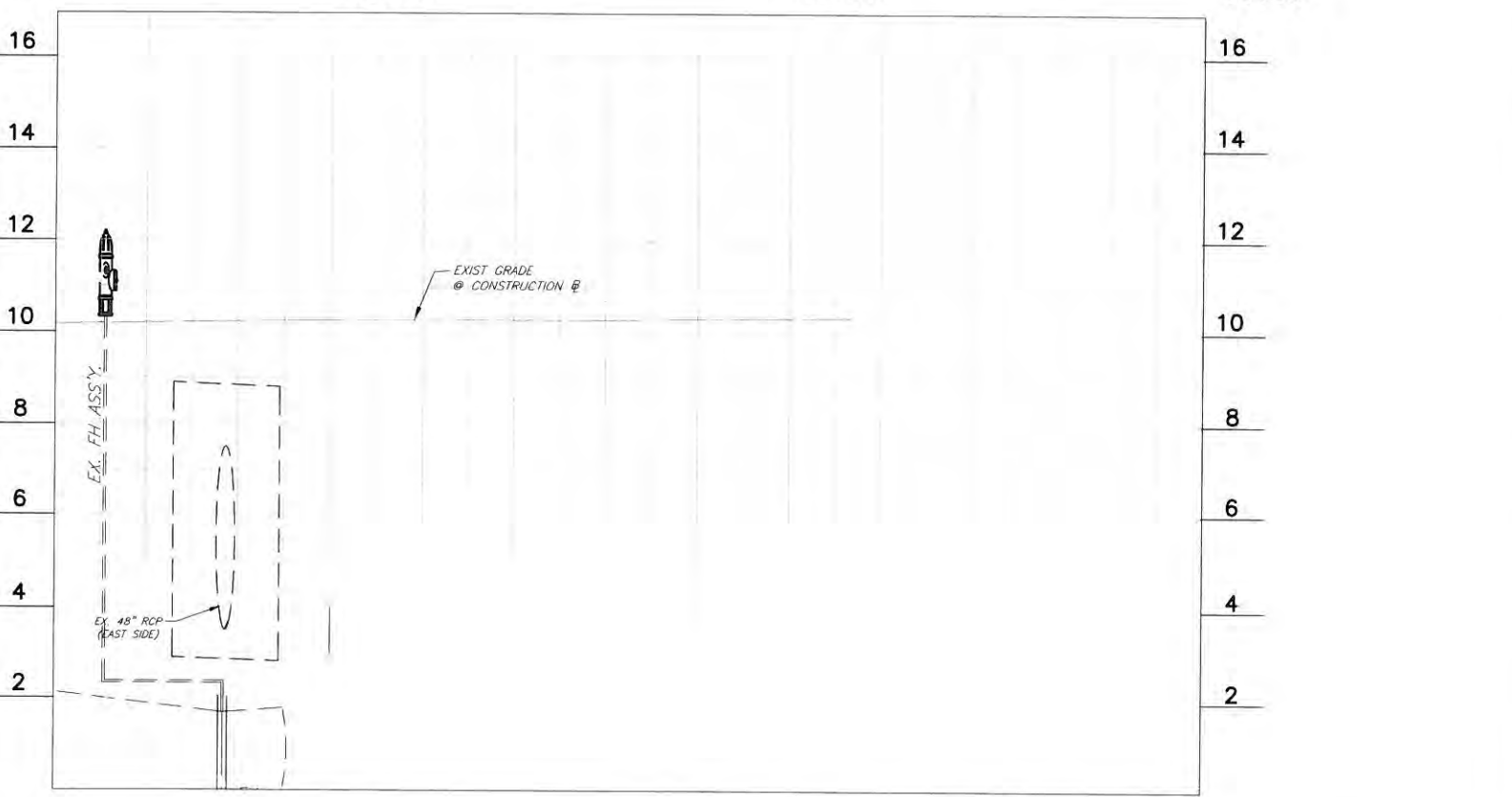
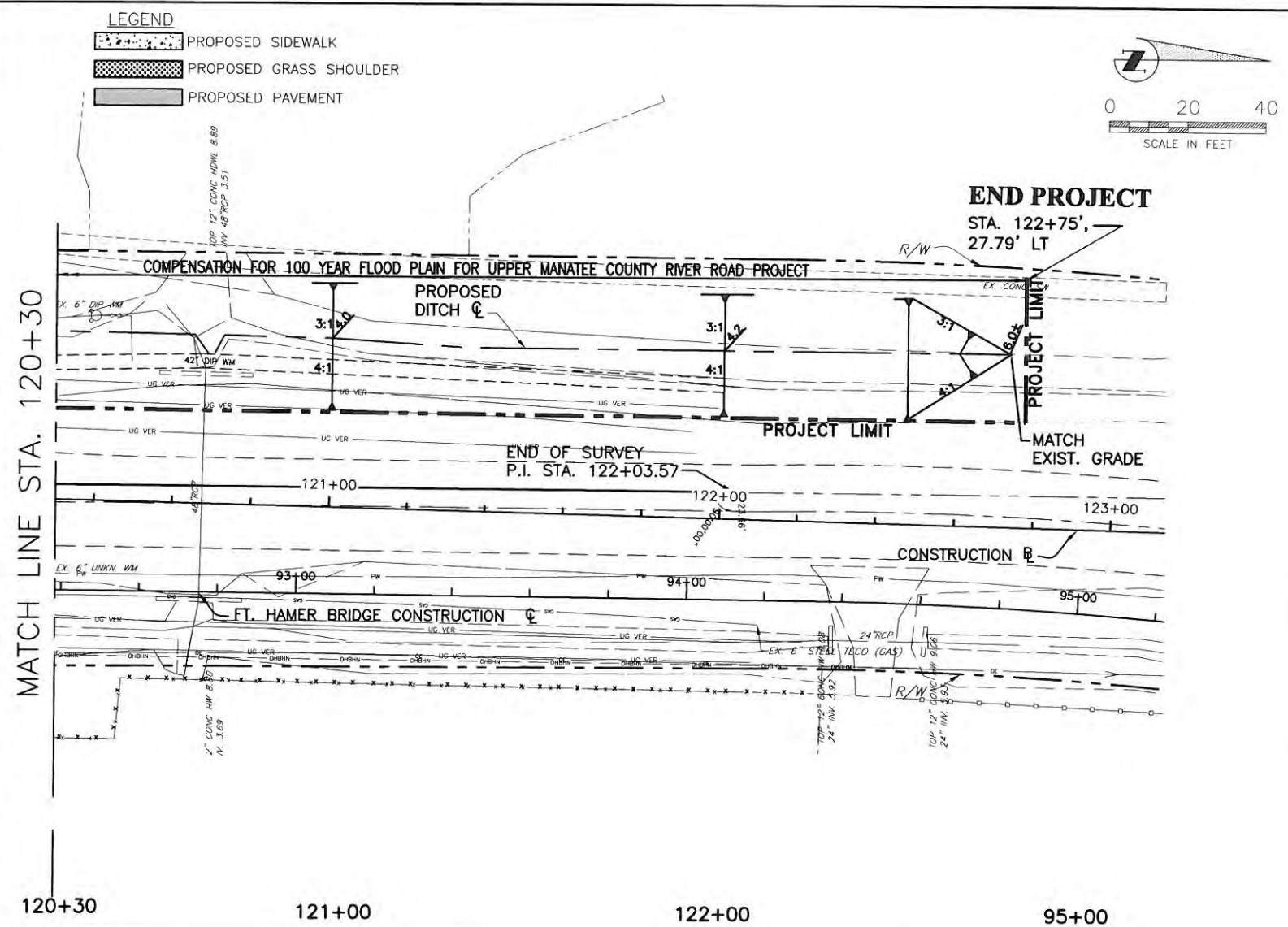


PUBLIC WORKS DEPARTMENT  
ENGINEERING SERVICES  
1822 26th Avenue East, Bradenton, FL 34208

**Upper Manatee River Road Construction Baseline Station and Curve Report**

Alignment: CONST\_BASELINE

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
PLAN & PROFILE  
STA. 120+30 TO END**



Description	Tangent Data		
	PT Station	Northing	Easting
Start:	42+00.00	1147025.962	515548.823
End:	53+42.56	1148168.434	515562.698
Length:	1142.56	Course: N 00° 41' 45" E	
Description	Tangent Data		
	PT Station	Northing	Easting
Start:	66+99.94	1149525.713	515579.36
End:	79+95.80	1150821.476	515595.319
Length:	1357.38	Course: N 00° 42' 12" E	
Description	Tangent Data		
	PT Station	Northing	Easting
Start:	66+99.94	1149525.713	515579.36
End:	79+95.80	1150821.476	515595.319
Length:	1295.86	Course: N 00° 42' 20" E	
Description	Tangent Data		
	PT Station	Northing	Easting
Start:	79+95.80	1150821.476	515595.319
End:	105+77.49	1153403.115	515611.518
Length:	2581.69	Course: N 00° 21' 34" E	
Description	Tangent Data		
	PT Station	Northing	Easting
Start:	105+77.49	1153403.115	515611.518
End:	117+88.69	1154614.288	515619.189
Length:	1211.2	Course: N 00° 21' 46" E	
Description	Curve Point Data		
	Station	Northing	Easting
PC:	117+88.69	1154614.288	515619.189
RP:	1154596.143	518484.131	
PT:	118+39.34	1154664.931	515619.957
Parameter	Circular Curve Data		
	Value	Parameter	Value
Delta:	01° 00' 47"	Type:	RIGHT
Radius:	2865		
Length:	50.65	Tangent:	25.33
Mid-Ord:	0.11	External:	0.11
Chord:	50.65	Course:	N 00° 52' 10" E
Description	Tangent Data		
	PT Station	Northing	Easting
Start:	118+39.34	1154664.931	515619.957
End:	123+20.00	1155145.457	515631.498
Length:	480.66	Course: N 01° 22' 33" E	

NO.	REVISION DESCRIPTION	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30, 34S/19E
SCALE	1"=40' HORIZ. 1"=4' VERT.
BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	UP/PBF 06/20/12
DRAWN	KR/CB 06/20/12
CHECKED	UP/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777	
Signature & Date	

SHEET 21

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STR.#	STATION, OFFSET	STRUCTURE SCHEDULE	TOP/RIM ELEVATION	INVERT ELEVATION
S-1	DELETED			
S-2	STA. 48+18.27, 17.25' RT	CONSTRUCT CURB INLET TYPE 5 TOP W/TYPE P BOTTOM PER FDOT INDEX 200, 211 AND INSTALL (P-1) TO THE WEST	TOP EL. 25.25	INV. EL. 20.55 (W)
S-3	STA. 49+62.8, 13.15' LT.	REMOVE EXIST. "P" TOP & GRATE AND REPLACE WITH TRAFFIC BEARING LID & ACCESS COVER PER M.C. STD. 202.5, 203.1 AND CONNECT (P-3) FROM THE WEST	RIM EL. 24.58	INV. EL. 21.65 (W), INV. EL. 18.85 (S&E)
S-4	STA. 49+62.41, 23.27' LT	CONSTRUCT CURB INLET TYPE 5 TOP W/TYPE P BOTTOM PER FDOT INDEX 200, 211 AND INSTALL (P-2) TO THE EAST	TOP EL. 24.73	INV. EL. 21.70 (E)
S-5	STA. 49+62.71, 14.0' RT.	REMOVE EXIST. "TYPE 5" TOP & GRATE AND REPLACE WITH TRAFFIC BEARING ACCESS COVER PER M.C. STD. 202.5, 203.1 AND INSTALL (P-4) TO THE EAST	RIM EL. 24.58	INV. EL. 18.86 (E)
S-6	STA. 49+62, 29.25' RT.	CONSTRUCT CURB INLET TYPE 5 TOP W/TYPE P BOTTOM PER FDOT INDEX 200, 211 AND CONNECT (P-3) FROM THE WEST	TOP EL. 24.62	INV. EL. 18.90 (W), EOP EL. 24.26
S-7	STA. 51+24.8, 33.5' RT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-5) TO THE NORTH	GRATE EL. 23.45	INV. EL. 21.25 (S)
S-8	STA. 52+09, 29' RT.	CONSTRUCT NARROWED MITERED END SECTION PER M.C. 103.0 (MODIFIED) DETAIL AND CONNECT (P-5) FROM THE SOUTH	N/A	INV. EL. 21.1 (S)
S-8A	STA. 53+38.76, 16.37' RT	REPLACE TOP WITH TRAFFIC BEARING LID AND ADJUST RIM TO GRADE	ADJUST TO GRADE	N/A
S-9	STA. 56+98.36, 26.24' RT	REMOVE AND REPLACE MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO EXIST. 18 IN. RCP FROM THE SOUTH	ADJUST TO GRADE	N/A
S-9A	STA. 56+04.35, 26.14' RT	CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO EXIST. 18 IN. RCP FROM THE NORTH	N/A	INV. EL. 20.82 (S)
S-10	STA. 56+00, 36.7 ' LT.	CONSTRUCT DITCH BOTTOM INLET TYPE C WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-6) TO THE NORTH	GRATE EL. 22.50	INV. EL. 19.15 (N) SEE DETAIL
S-11	STA. 57+37, 20' RT.	ADJUST EXIST. RIM ELEVATION TO GRADE	ADJUST TO GRADE	N/A
S-12	STA. 60+01, 24' LT.	ADJUST EXIST RIM ELEVATION TO GRADE	ADJUST TO GRADE	N/A
S-13	STA. 59+00, 36.2' LT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-7) TO THE NORTH AND CONNECT (P-6) FROM THE SOUTH	GRATE EL. 21.70	INV. EL. 18.70 (S), INV. EL. 18.45 (N) SEE DETAIL
S-13A	STA. 61+25, 37.9' LT.	CONSTRUCT CONCRETE BLOCK BOX 4'x3' PER M.C. STD. 202.1, 202.4 WITH ACCESS COVER AND INSTALL (P-7) TO THE SOUTH AND (P-7A) FROM THE NORTH	RIM EL. 22.38	INV. EL. 18.12 (N&S)
S-14	STA. 63+00, 40.5' LT.	CONSTRUCT CURB INLET PER M.C. 4'x3' STD. 202.2, 203.2 AND INSTALL (P-8) TO THE NORTH AND CONNECT (P-7A) FROM THE SOUTH	TOP EL. 20.96	INV. EL. 16.95 (S), INV. EL. 16.3 (N) EOP EL. 20.6
S-15	STA. 64+60, 28' RT.	CONSTRUCT DITCH BOTTOM INLET TYPE C WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-10) TO THE NORTH	GRATE EL. 19.10	INV. EL. 17.00 (N)
S-16	STA. 66+00, 36.4 LT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-9) TO THE NORTH AND CONNECT (P-8) FROM THE SOUTH	GRATE EL. 19.30	INV. EL. 15.85 (S), INV. EL. 15.41 (N) SEE DETAIL
S-17	STA. 67+71, 32' RT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232, SPAN=36" AND CONNECT TO (P-10) FROM THE SOUTH	GRATE EL. 19.10	INV. EL. 16.80 (S), WINDOW EL. 18.60 (S), EX. 14x23 RCP INV. EL. 16.80 (N)
S-18	STA. 67+40, 37.6' LT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-11) TO THE NORTH AND CONNECT (P-9) FROM THE SOUTH	GRATE EL. 18.40	INV. EL. 15.20 (N&S)
S-18A	STA. 69+90, 26' RT.	REMOVE AND REPLACE MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO EXIST. 14"x23" RCP TO THE NORTH	N/A	INV. EL. 16.37 (N)
S-19	STA. 70+40, 36.0' LT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-12) TO THE NORTH AND CONNECT (P-11) FROM THE SOUTH	GRATE EL. 17.9	INV. EL. 14.90 (N&S) SEE DETAIL
S-20	STA. 73+40, 36.7' LT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-13) TO THE NORTH AND CONNECT (P-12) FROM THE SOUTH	GRATE EL. 17.60	INV. EL. 14.60 (N&S) SEE DETAIL
S-21	STA. 76+40, 36.9' LT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-14) TO THE NORTH AND CONNECT (P-13) FROM THE SOUTH	GRATE EL. 17.65	INV. EL. 14.30 (N&S) SEE DETAIL
S-22	STA. 75+34, 25.4' RT.	CONSTRUCT CONCRETE DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232, SPAN=48" AND CONNECT TO EXIST. 14"x23" RCP	GRATE EL. 18.10	INV. EL. 15.78 (N) WINDOW EL. 16.20 (E)
S-23	STA. 77+63, 25.1' RT.	REMOVE & REPLACE GRATE ON INLET WITH TRAFFIC BEARING ACCESS COVER PER M.C. STD. 203.5 AND INSTALL (P-15) TO THE EAST	RIM EL. 18.00	INV. EL. 15.45 (E)
S-24	STA. 77+63, 33.5' RT.	CONSTRUCT DITCH BOTTOM INLET TYPE C WITH STEEL GRATE PER FDOT INDEX 232 AND CONNECT TO (P-15) FROM THE WEST	GRATE EL. 17.80	INV. EL. 15.50 (W)
S-25	STA. 79+78, 36.9' LT.	CONSTRUCT CONCRETE DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT INDEX 232 AND INSTALL (P-18) TO THE NORTH AND CONNECT (P-14) FROM THE SOUTH	GRATE EL. 17.50	INV. EL. 13.96 (N&S) SEE DETAIL
S-26	STA. 81+59, 22' RT.	CONSTRUCT CONCRETE BLOCK BOX 4'x4' PER M.C. STD. 202.1, 202.4 WITH TRAFFIC BEARING ACCESS COVER AND INSTALL (P-20) TO THE WEST AND CONNECT (P-17A) FROM THE SOUTH	RIM EL. 18.00	INV. EL. 13.74 (W&S)
S-27	STA. 80+09, 38' RT.	CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-17) TO THE WEST	N/A	INV. EL. 13.60 (W)
S-28	STA. 80+09, 24' RT.	CONSTRUCT CONCRETE BLOCK BOX 4'x5' PER M.C. STD. 202.1, 202.4 WITH 28"x36" CASE IRON GRATE AND CONNECT (P-17) FROM THE EAST AND INSTALL (P-17A) TO THE NORTH AND (P-16) TO THE SOUTH	GRATE EL. 17.80	INV. EL. 13.62 (N&E), 14.70 (S)
S-29	DELETED			
S-30	STA. 81+59, 34' LT.	CONSTRUCT 4'x3' CONC. BOX W/SOLID ACCESS COVER PER M.C. STD. 202.1, 203.1 W/ CLOSED FLUME INLET PER FDOT INDEX 216, SPAN=36" CONNECT (P-18) TO THE SO. AND (P-20) TO EAST	RIM EL. 18.35	INV. EL. 13.8 (S&E), WINDOW EL. 16.90 (W) SEE DETAIL
S-31	STA. 84+38, 29' LT.	CONSTRUCT TYPE C DITCH BOTTOM INLET WITH GRATE PER FDOT INDEX 232, SPAN=24" AND INSTALL (P-21) TO THE NORTH	GRATE EL. 17.50	INV. EL. 15.60 (N), WINDOW EL. 16.20 (S)
S-32	STA. 84+43, 28' RT.	REMOVE EXIST. ENDWALL AND REPLACE WITH MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO EXIST. 15" RCP TO THE NORTH	N/A	INV. EL. 15.20 (N)
S-33	STA. 84+80, 28' RT.	REMOVE EXIST. ENDWALL AND REPLACE WITH MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO EXIST. 15" RCP FROM THE SOUTH	N/A	INV. EL. 15.26 (S)
S-34	STA. 85+50, 27' LT.	CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT (P-21) FROM THE SOUTH	N/A	INV. EL. 15.50 (S)
S-35	STA. 95+30, 31' RT.	REMOVE EXIST. HEADWALL AND REPLACE WITH MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-22) TO THE NORTH	N/A	INV. EL. 13.00 (N)
S-36	STA. 95+70, 31' RT.	REMOVE EXIST. HEADWALL AND REPLACE WITH MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-22) FROM THE SOUTH	N/A	INV. EL. 13.00 (S)
S-37	STA. 97+48, 32' RT.	REMOVE EXIST. HEADWALL AND REPLACE WITH MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-22A) TO THE NORTH	N/A	INV. EL. 12.81 (N)
S-38	STA. 97+88, 32' RT.	REMOVE EXIST. HEADWALL AND REPLACE WITH MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-22A) TO THE SOUTH	N/A	INV. EL. 12.60 (S)
S-39	STA. 101+80, 30' LT.	CONSTRUCT TYPE D DITCH BOTTOM INLET WITH GRATE PER FDOT INDEX 232, SPAN=49" AND INSTALL (P-23) TO THE NORTH	GRATE EL. 13.10	INV. EL. 10.30 (N), WINDOW EL. 12.20 (E)
S-40	STA. 102+94, 31' RT.	CONSTRUCT TYPE D DITCH BOTTOM INLET WITH GRATE PER FDOT INDEX 232 AND INSTALL (P-24) TO THE NORTH	GRATE EL. 11.80	INV. EL. 9.40 (N)
S-41	STA. 104+75, 29.7' LT.	CONSTRUCT TYPE C DITCH BOTTOM INLET PER FDOT INDEX 232, SPAN=24" AND INSTALL (P-28) TO THE NORTH AND CONNECT (P-23) FROM THE SOUTH	GRATE EL. 12.95	INV. EL. 9.90 (N&S) WINDOW EL. 12.45 (S) SEE DETAIL
S-42	STA. 104+10, 37' RT.	CONSTRUCT DITCH BOTTOM INLET TYPE E WITH STEEL GRATE PER FDOT 232 AND INSTALL (P-25) TO THE NORTH AND CONNECT (P-24) FROM THE SOUTH	GRATE EL. 11.70	INV. EL. 9.23 (N&S) SEE DETAIL
S-43	STA. 105+53, 30.0' LT.	CONSTRUCT TYPE C DITCH BOTTOM INLET PER FDOT INDEX 232, (2) SPANS = 18"/18" AND INSTALL (P-32) TO THE WEST AND CONNECT (P-28) FROM THE SOUTH	GRATE EL. 12.80	INV. EL. 9.80 (W&S) (2) WINDOWS EL. 12.30 (S & N) SEE DETAIL
S-44	STA. 105+53, 39' LT.	CONSTRUCT CONCRETE ENDWALL PER FDOT INDEX NOS. 250, 862 & 310.		
S-44A	STA. 106+12, 45.4' LT.	REMOVE EXIST. DUAL MES. & EXTEND (2) 8 LF SECTIONS OF 24"x38" ERCP AND INSTALL NEW DUAL MES	TOP EL. 12.80	INV. EL. 9.75 (W)
S-45	STA. 105+28, 37' RT.	CONSTRUCT DITCH BOTTOM INLET TYPE D WITH STEEL GRATE PER FDOT INDEX 232, (2) SPANS = 10" & 49", AND INSTALL (P-26) TO THE NORTH AND CONNECT (P-25) FROM THE SOUTH	N/A	INV. EL. 9.82 (N)
S-46	STA. 105+62, 37' RT.	CONSTRUCT CONC. BLOCK BOX 5'x4' WITH TRAFFIC BEARING ACCESS COVER PER M.C. STD. 202.1, 203.1, 202.5 & INSTALL (P-29) TO THE NORTH & (P-27) TO THE EAST & (P-26) TO SOUTH	GRATE EL. 11.90	INV. EL. 9.05 (N&S), (2) WINDOWS 10.90 (E & S) SEE DETAIL
S-47	STA. 105+59, 69' RT.	CONSTRUCT NARROWED MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT (P-27) TO THE WEST	RIM EL. 12.80	INV. EL. 9.02 (N&S), EL. 9.30 (E)
S-48	STA. 106+02.4, 62.2' RT.	CONSTRUCT NARROWED MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT (P-30) TO THE WEST	N/A	INV. EL. 10.60 (W)
S-49	STA. 106+00, 37' RT.	CONSTRUCT CONCRETE BLOCK BOX 5'x4' WITH TRAFFIC BEARING ACCESS COVER PER M.C. STD. 202.1, 203.1, 202.5 AND INSTALL (P-31) TO THE NORTH, (P-30) TO THE EAST AND CONNECT (P-29) FROM THE SOUTH	RIM EL. 12.90	INV. EL. 8.98 (N&S), EL. 10.00 (E)
S-50	STA. 106+15, 37' RT.	CONSTRUCT NARROWED MITERED END SECTION PER M.C. 103.0 (MODIFIED) DETAIL AND CONNECT (P-31) FROM THE SOUTH	N/A	INV. EL. 8.96 (S)



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
STRUCTURE & PIPE SCHEDULE**

REVISION	DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	11 19 20
SCALE	1" = 40' HORIZ. 1" = 4' VERT.
BY	DATE
SURVEYED	ZNS 08/27/20
DESIGNED	JP/PBE 06/20/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. 4746777	
Signature & Date	

C:\pwworking\2010 MANATEE COUNTY GOVERNMENT\IS\pwworking\2010 MANATEE COUNTY GOVERNMENT\Engineering\ROADS\Upper Manatee River Road\DWG\UWR-Active\0316.dwg, 21A, 11/23/2014 11:15 AM, Keith Raboy, 1/2, 11x17



PUBLIC WORKS DEPARTMENT  
ENGINEERING SERVICES  
1022 26th Avenue East, Bradenton, FL 34208

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
STRUCTURE & PIPE SCHEDULE**

STR.#	STATION, OFFSET	STRUCTURE SCHEDULE	TOP/RIM ELEVATION	INVERT ELEVATION
S-51	STA. 107+45, 37' RT.	REMOVE EXIST. HEADWALL AND CONSTRUCT NARROWED MITERED END SECTION PER M.C. 103.0 (MODIFIED) DETAIL AND INSTALL (P-33) TO THE NORTH	N/A	INV. EL. 8.75 (N)
S-52	STA. 107+87, 37' RT.	REMOVE EXIST. HEADWALL AND CONSTRUCT NARROWED MITERED END SECTION PER M.C. 103.0 (MODIFIED) DETAIL AND CONNECT TO (P-33) FROM THE SOUTH	N/A	INV. EL. 8.70 (S)
S-53	STA. 110+21, 34' RT.	REMOVE EXIST. HEADWALL AND EXIST. PIPE AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-33A) TO THE NORTH	N/A	INV. EL. 8.16 (N)
S-54	STA. 110+65, 34' RT.	REMOVE EXIST. HEADWALL AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-33A) FROM THE SOUTH	N/A	INV. EL. 8.14 (S)
S-55	STA. 111+98, 37' RT.	REMOVE EXIST. HEADWALL & EXIST. PIPE AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-34) TO THE NORTH	N/A	INV. EL. 7.80 (N)
S-56	STA. 112+37, 37' RT.	REMOVE EXIST. HEADWALL AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-34) FROM THE SOUTH	N/A	INV. EL. 7.75 (S)
S-57	STA. 112+49, 36' RT.	REMOVE EXIST. MES AND PIPE AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-35) TO THE NORTH	N/A	INV. EL. 7.70 (N)
S-58	STA. 112+87, 36' RT.	REMOVE EXIST. MES AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-35) FROM THE SOUTH	N/A	INV. EL. 7.60 (S)
S-59	STA. 114+17, 36' RT.	REMOVE EXIST. HEADWALL & EXIST. 24 IN. RCP AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-36) TO THE NORTH	N/A	INV. EL. 7.20 (N)
S-60	STA. 114+53, 36' RT.	REMOVE EXIST. HEADWALL AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-36) FROM THE SOUTH	N/A	INV. EL. 7.15 (S)
S-61	STA. 118+21, 38' RT.	REMOVE EXIST. HEADWALL & EXIST. 24 IN. RCP AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND INSTALL (P-37) TO THE NORTH	N/A	INV. EL. 5.65 (N)
S-62	STA. 118+63, 38' RT.	REMOVE EXIST. HEADWALL AND CONSTRUCT MITERED END SECTION PER M.C. STD. 103.0 AND CONNECT TO (P-37) FROM THE SOUTH	N/A	INV. EL. 5.60 (S)

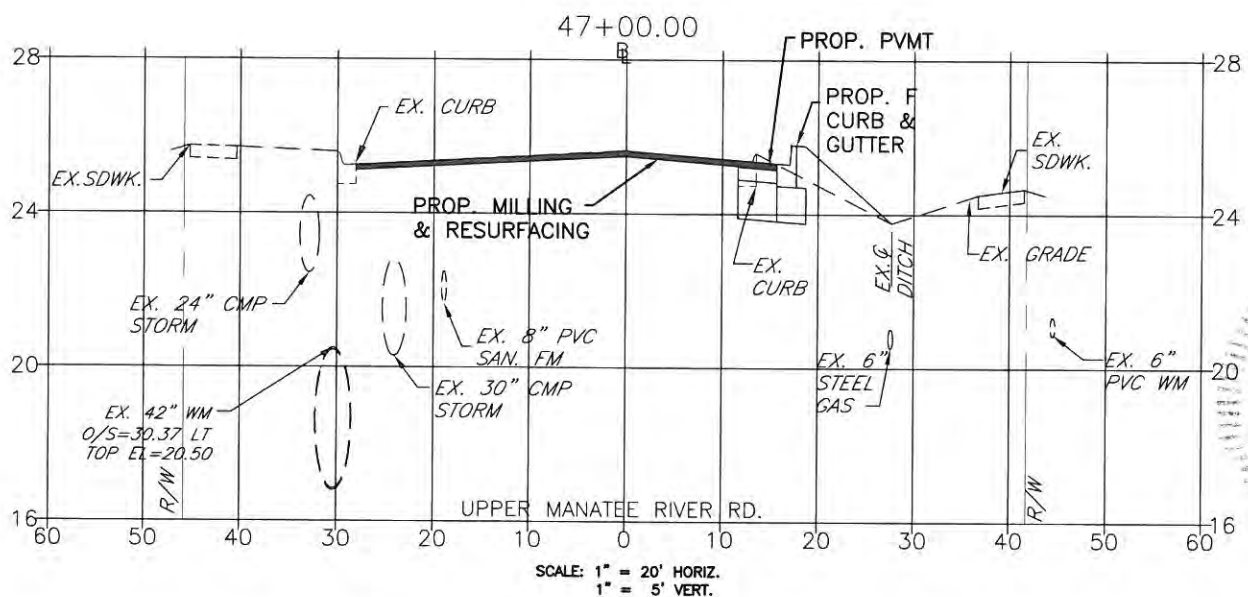
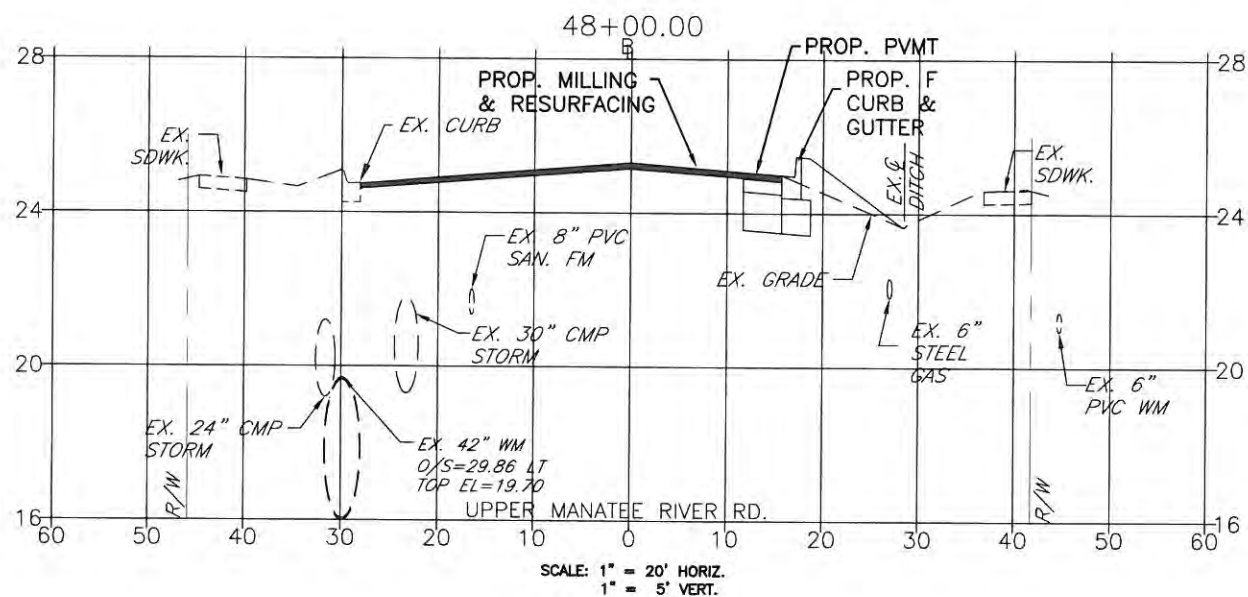
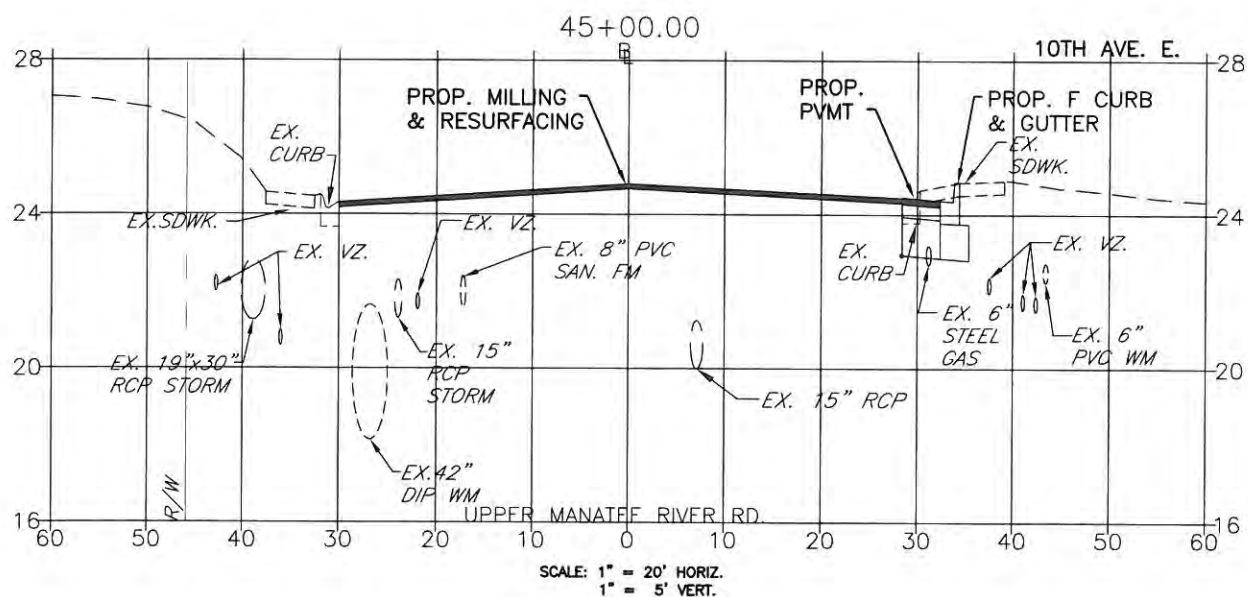
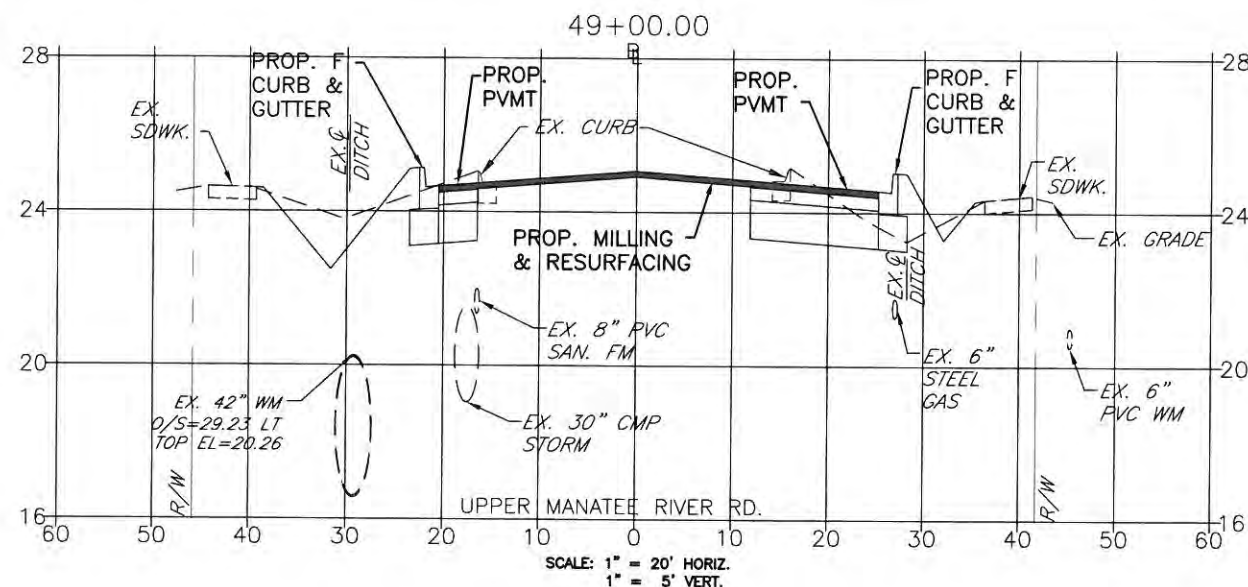
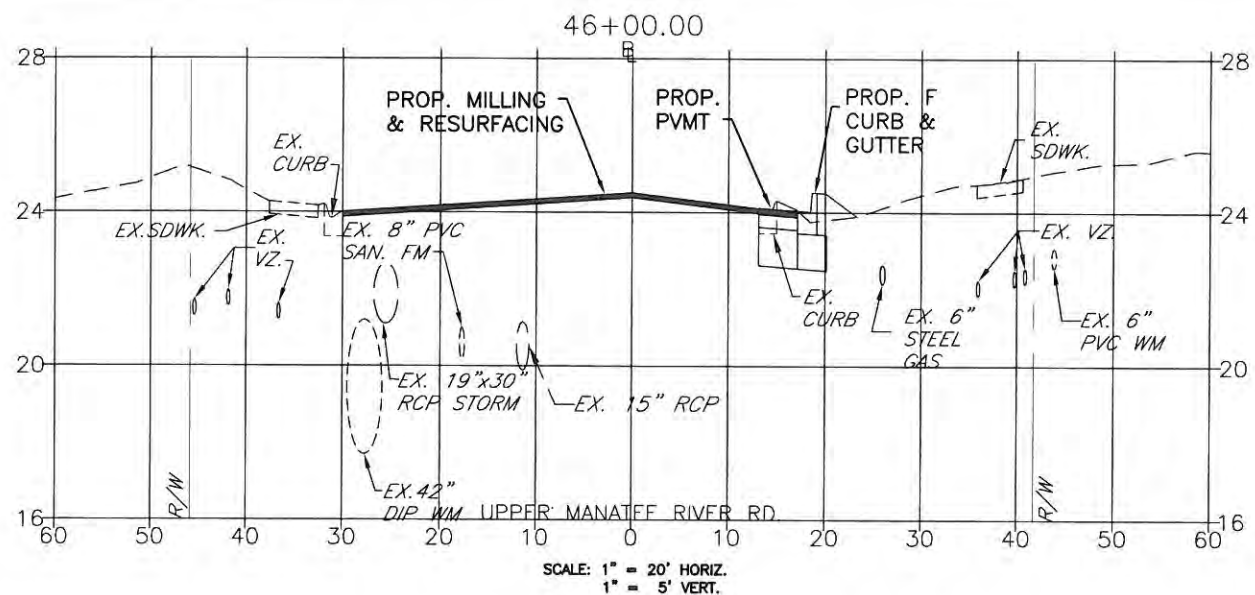
PIPE #	STATION, OFFSET	PIPE SCHEDULE	INVERT ELEVATION
P-1	STA. 48+18.23, 17.25' RT. STA. 48+18, 11' RT.	INSTALL 6 LF OF 18" RCP @ 0.66% FROM CURB INLET (S-2) AND CONNECT TO EXIST. 18 IN. HDPE TO THE WEST	INV. EL. 20.55 (E) & INV. EL. 20.51 (W)
P-2	STA. 49+62.4, 23.27' LT.- STA. 49+63, 14' LT.	INSTALL 9 LF 14"x23" ERCP @ 0.20% FROM CURB INLET (S-4) TO THE EAST AND CONNECT TO RECONSTRUCTED INLET (S-3)	INV. EL. 18.86 (E) & INV. EL. 18.83 (W)
P-3	STA. 49+62.4, 23.27' LT.- STA. 49+62.8, 13.15' LT.	INSTALL 10 LF OF 12"x18" ERCP @ 0.62% FROM CURB INLET (S-6) TO THE WEST AND CONNECT TO RECONSTRUCTED INLET (S-5)	INV. EL. 21.7 (W) & INV. EL. 21.65 (E)
P-4	STA. 51+92 - 52+02 33' LT, 35' LT, 37' LT	INSTALL (3) 10 LF SECTIONS OF 10 IN. A2000 UNDER SIDEWALK	INV. EL. 22.80 (S&N)
P-5	STA. 51+24.8, 33.5' RT. - STA. 52+09, 29' RT.	INSTALL 77 LF OF 14"x23" RCP @ 0.20% FROM (S-7) TO THE SOUTH AND CONNECT TO MES (S-8)	INV. EL. 21.25 (S) & INV. EL. 21.10 (N)
P-5A	STA. 51+24.8, 35' RT. - STA. 52+09, 29' RT.	INSTALL 6 LF OF 10" PVC @ 10.0% FROM DITCH BOTTOM INLET (S-7) TO THE WEST AND CONNECT TO EXIST. 10" PVC W/PVC FITTINGS	INV. EL. 22.34 (E) & INV. EL. 21.75 (W)
P-6	STA. 56+00, 36.7' LT.- STA. 59+00, 36.2' LT.	INSTALL 297 LF OF 15 IN. A2000 @ 0.15% DITCH BOTTOM INLET (S-10) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-13)	INV. EL. 19.15 (S) & INV. EL. 18.70 (N)
P-7	STA. 59+00, 36.2' LT.- STA. 61+25, 37.9' LT.	INSTALL 225 LF OF 18 IN. RCP @ 0.15% FROM DITCH BOTTOM INLET (S-13) TO THE NORTH AND CONNECT TO CONC. BLOCK BOX (S-13A)	INV. EL. 18.45 (S) & INV. EL. 18.12 (N)
P-7A	STA. 61+25, 37.9' LT. - STA. 63+00, 40.5' LT.	INSTALL 175 LF OF 18 IN. A2000 @ 0.67% FROM CONC. BLOCK BOX (S-13A) TO THE NORTH AND CONNECT TO CURB INLET (S-14)	INV. EL. 18.12 (S) & INV. EL. 16.95 (N)
P-8	STA. 63+00, 40.5' LT. - STA. 66+00, 36.4' LT.	INSTALL 300 LF OF 18 IN. A2000 @ 0.15% FROM CURB INLET (S-14) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-16)	INV. EL. 16.30 (S) & INV. EL. 15.85 (N)
P-9	STA. 66+00, 36.4' LT.- STA. 67+40, 37.6' LT.	INSTALL 140 LF OF 21 IN. A2000 @ 0.15% FROM DITCH BOTTOM INLET (S-16) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-18)	INV. EL. 15.41 (S) & INV. EL. 15.20 (N)
P-10	STA. 64+60, 28' RT. - STA. 67+71, 32' RT.	INSTALL 311 LF OF 15 IN. A2000 @ 0.66% FROM MES (S-15) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-17)	INV. EL. 19.10 (S) & INV. EL. 16.00 (N)
P-11	STA. 67+40, 37.6' LT.- STA. 70+40, 36.0' LT.	INSTALL 300 LF OF 21 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-18) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-19)	INV. EL. 15.20 (S) & INV. EL. 14.90 (N)
P-12	STA. 70+40, 36.0' LT.- STA. 73+40, 36.7' LT.	INSTALL 300 LF OF 21 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-19) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-20)	INV. EL. 14.90 (S) & INV. EL. 14.60 (N)
P-13	STA. 73+40, 36.7' LT.- STA. 76+40, 36.9' LT.	INSTALL 300 LF OF 24 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-20) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-21)	INV. EL. 14.60 (S) & INV. EL. 14.30 (N)
P-14	STA. 76+40, 36.9' LT.- STA. 79+78, 36.9' LT.	INSTALL 338 LF OF 24 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-21) TO THE NORTH AND CONNECT TO DITCH BOTTOM INLET (S-25)	INV. EL. 14.30 (S) & INV. EL. 13.96 (N)
P-15	STA. 77+63, 25.1' RT. - STA. 77+63, 33.5' RT.	INSTALL 8 LF OF 15 IN. A2000 @ 0.63% FROM DITCH BOTTOM INLET (S-24) TO THE EAST TO AND CONNECT TO RECONSTRUCTED INLET S-23)	INV. EL. 15.50 (E) & INV. EL. 15.45 (W)
P-16	STA. 79+89, 25' RT. - STA. 80+09, 24' RT.	REMOVE EXIST. MES, INSTALL 20 LF OF 14x23 RCP @ 0.40% AND CONNECT TO EXIST 14"x23" RCP TO THE SOUTH AND CONNECT TO CONC. BLOCK BOX (S-28)	EX. INV. EL. 14.78 (S) & INV. EL. 14.7 (N)
P-17	STA. 80+09, 24' RT. - STA. 80+09, 38' RT.	INSTALL 14 LF OF 29"x45" ERCP @ 0.14% FROM CONC. BLOCK BOX (S-28) TO THE NORTH TO CONC. BLOCK BOX (S-27)	INV. EL. 13.60 (E) & INV. EL. 13.62 (W)
P-17A	STA. 81+59, 22' RT. - STA. 80+09, 24' RT.	INSTALL 150 LF OF 30 IN. RCP @ 0.09% FROM CONC. BLOCK BOX (S-26) TO THE NORTH TO CONC. BLOCK BOX (S-28)	INV. EL. 13.74 (N) & INV. EL. 13.62 (S)
P-18	STA. 79+78, 36.9' LT.- STA. 81+59, 34' LT.	INSTALL 181 LF OF 30 IN. A2000 @ 0.09% FROM CONC. BLOCK BOX (S-25) TO THE NORTH TO CURB INLET (S-30)	INV. EL. 13.96 (S) & INV. EL. 13.80 (N)
P-20	STA. 81+59, 34' LT. - STA. 81+59, 22' RT.	INSTALL 57 LF OF 24"x38" RCP @ 0.10% FROM CURB INLET (S-30) TO THE EAST TO CONC. BLOCK BOX (S-26)	INV. EL. 13.80 (W) & INV. EL. 13.74 (E)
P-21	STA. 84+38, 29' LT. - STA. 85+50, 27' LT.	INSTALL 112 LF OF 12"x18" ERCP @ 0.10% FROM DITCH BOTTOM INLET (S-31) TO THE NORTH TO MES (S-34)	INV. EL. 15.60 (S) & INV. EL. 15.50 (N)
P-22	STA. 95+30, 31' RT. - STA. 95+70, 31' RT.	INSTALL 40 LF OF 18 IN. A2000 FROM MES (S-35) TO THE NORTH TO MES (S-36)	INV. EL. 13.00 (S) & INV. EL. 13.00 (N)
P-22A	STA. 97+48, 32' RT. - STA. 97+88, 32' RT.	INSTALL 40 LF OF 18 IN. A2000 FROM MES (S-37) TO THE NORTH TO MES (S-38)	INV. EL. 12.60 (S) & INV. EL. 12.50 (N)
P-23	STA. 101+80, 30' LT. - STA. 104+75, 29.7' LT.	INSTALL 295 LF OF 18 IN. A2000 @ 0.14% FROM DITCH BOTTOM INLET (S-39) TO THE NORTH TO BACK OF SIDEWALK INLET (S-41)	INV. EL. 10.30 (S) & INV. EL. 9.90 (N)
P-24	STA. 102+94, 31' RT. - STA. 104+10, 37' RT.	INSTALL 116 LF OF 14"x23" RCP @ 0.15% FROM DITCH BOTTOM INLET (S-40) TO THE NORTH TO DITCH BOTTOM INLET (S-42)	INV. EL. 9.40 (S) & INV. EL. 9.23 (N)
P-25	STA. 104+10, 37' RT. - STA. 105+28, 37' RT.	INSTALL 118 LF OF 14"x23" RCP @ 0.15% FROM CONC. BLOCK BOX (S-42) TO THE NORTH TO DITCH BOTTOM INLET (S-45)	INV. EL. 9.23 (S) & INV. EL. 9.05 (N)
P-26	STA. 105+28, 37' RT. - STA. 105+62, 37' RT.	INSTALL 34 LF OF 21 IN. A2000 @ 0.10% FROM DITCH BOTTOM INLET (S-45) TO THE NORTH TO CONCRETE BLOC BOX (S-46)	INV. EL. 9.05 (S) & INV. EL. 9.02 (N)
P-27	STA. 105+62, 37' RT. - STA. 105+59, 69' RT.	INSTALL 32 LF OF 15 IN. A2000 @ 4.0% FROM CONCRETE BLOCK BOX (S-46) TO THE EAST TO MES (S-47)	INV. EL. 9.30 (W) & INV. EL. 10.60 (E)
P-28	STA. 104+75, 29.7' LT.- STA. 105+53, 30.0' LT.	INSTALL 78 LF OF 21 IN. A2000 @ 0.13% FROM DITCH BOTTOM INLET (S-41) TO THE NORTH TO DITCH BOTTOM INLET (S-43)	INV. EL. 9.90 (S) & INV. EL. 9.80 (N)
P-29	STA. 105+62, 37' RT. - STA. 106+00, 37' RT.	REMOVE EXIST. 19"x30" ERCP AND INSTALL 38 LF OF 24"x38" ERCP @ 0.10% FROM CONCRETRE BLOCK BOX (S-46) TO THE NORTH TO CONCRETE BLOCK BOX (S-49)	INV. EL. 9.02 (S) & INV. EL. 8.98 (N)
P-30	STA. 106+00, 37' RT. - STA. 106+02.4, 62.2' RT.	INSTALL 26 LF OF 15 IN. A2000 @ 2.3% FROM CONCRETE BLOCK BOX (S-49) TO THE EAST TO MES (S-48)	INV. EL. 10.00 (W) & INV. EL. 10.60 (E)
P-31	STA. 106+00, 37' RT. - STA. 106+15, 37' RT.	INSTALL 15 LF OF 24 IN. A2000 @ 0.13% FROM CONCRETE BLOCK BOX (S-49) TO THE NORTH TO MES (S-50)	INV. EL. 8.98 (S) & INV. EL. 8.96 (N)
P-32	STA. 105+53, 30.0' LT.- STA. 105+53, 39' LT.	INSTALL 6 LF OF 21 IN. A2000 @ 0.62% FROM DITCH BOTTOM INLET (S-43) TO THE EAST AND ENDWALL (S-44) TO THE WEST	INV. EL. 9.80 (E) & INV. EL. 9.75 (W)
P-33	STA. 107+45, 37' RT. - STA. 107+87, 37' RT.	INSTALL 42 LF OF 24 IN. A2000 @ 0.12% FROM MES (S-51) TO THE NORTH TO MES (S-52)	INV. EL. 8.75 (S) & INV. EL. 8.70 (N)
P-34	STA. 111+98, 37' RT. - STA. 112+37, 37' RT.	INSTALL 39 LF OF 24 IN. A2000 @ 0.13% FROM MES (S-55) TO THE NORTH TO MES (S-56)	INV. EL. 7.80 (S) & INV. EL. 7.75 (N)
P-34A	STA. 110+29, 34' RT.- STA. 110+59, 34' RT.	INSTALL 38 LF OF 19"x30" ERCP @ 0.26% FROM MES (S-57) TO THE NORTH TO MES (S-58)	INV. EL. 7.70 (S) & INV. EL. 7.60 (N)
P-35	STA. 112+49, 36' RT. - STA. 112+87, 36' RT.	INSTALL 38 LF OF 24 IN. A2000 @ 0.26% FROM MES (S-53) TO THE NORTH TO MES (S-54)	INV. EL. 7.70 (S) & INV. EL. 7.60 (N)
P-36	STA. 114+17, 36' RT. - STA. 114+53, 36' RT.	INSTALL 38 LF OF 24 IN. A2000 @ 0.13% FROM MES (S-59) TO THE NORTH TO MES (S-60)	INV. EL. 7.20 (S) & INV. EL. 7.15 (N)
P-37	STA. 118+21, 38' RT. - STA. 118+63, 38' RT.	INSTALL 39 LF OF 24 IN. A2000 @ 0.13% FROM MES (S-61) TO THE NORTH TO MES (S-62)	INV. EL. 5.65 (S) & INV. EL. 5.60 (N)

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30 34S/19E
SCALE	1" = 40' HORIZ. 1" = 4' VERT.
DESIGNED	JP/PBF 06/20/12
DRAWN	JP/PBF 06/20/12
CHECKED	JP/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777
Signature & Date	

COPYRIGHT 2012 MANATEE COUNTY GOVERNMENT | L:\PWD-Engineering\Shara\Highway Engineering\ROADS\Upper Manatee River Road\DWG\Upper Manatee River Road\Roadway Functional Improvements Structure & Pipe Schedule.dwg, 17/1/2012 4:09 PM Kiana Reedy, 12, 11x17

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 45+00 TO 49+00**



NO.	REVISION DESCRIPTION	DATE

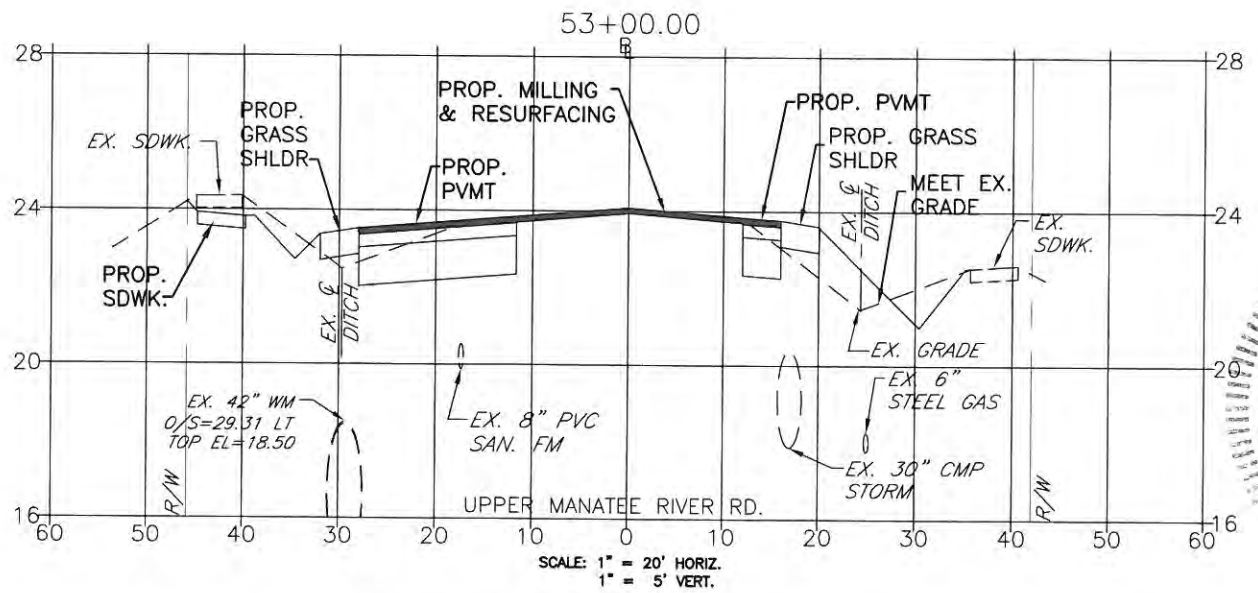
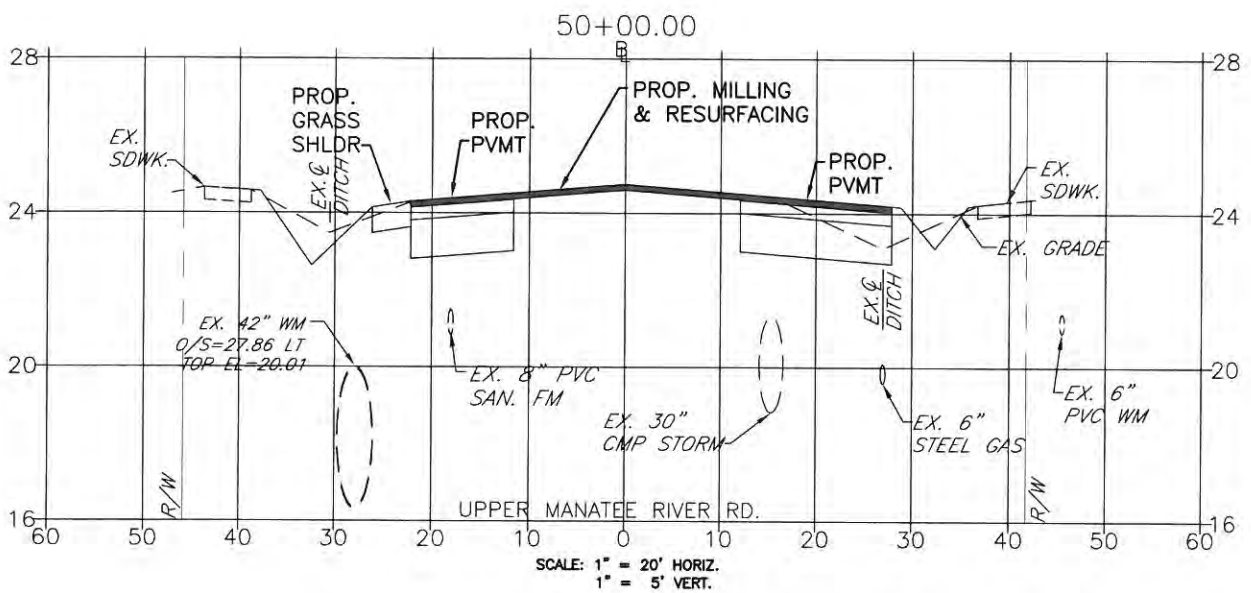
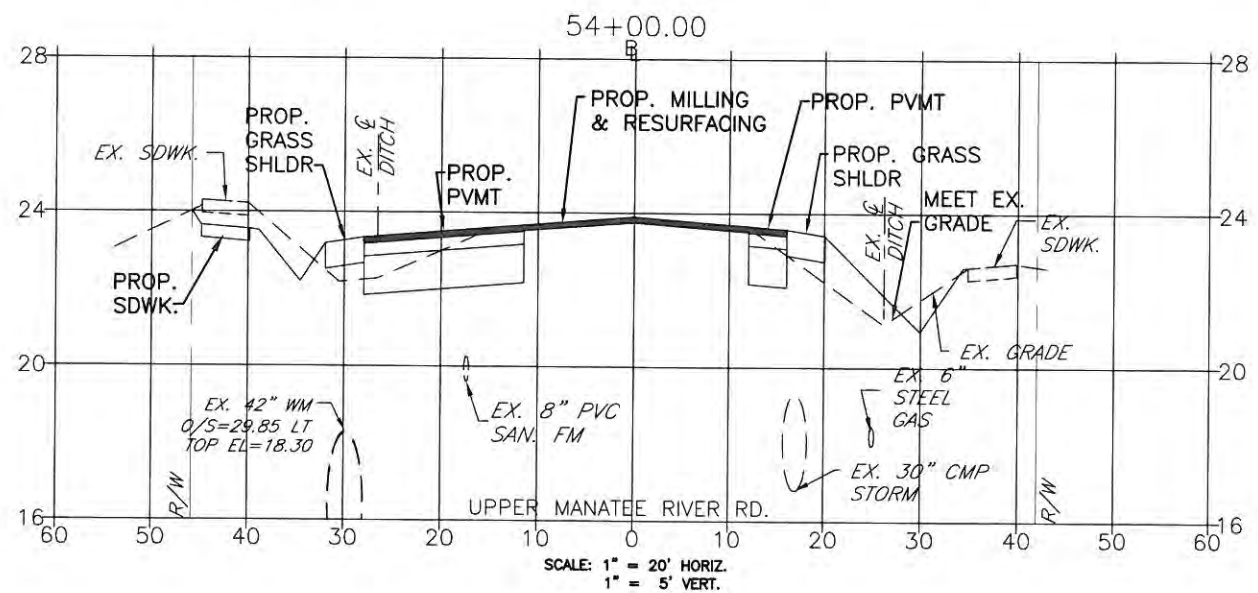
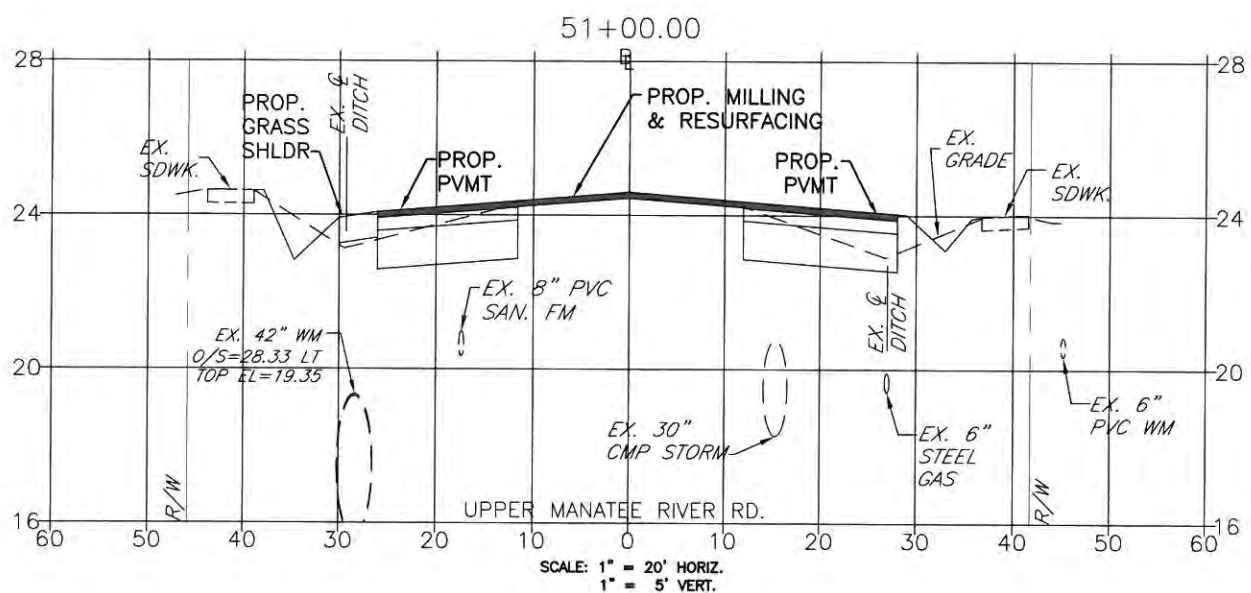
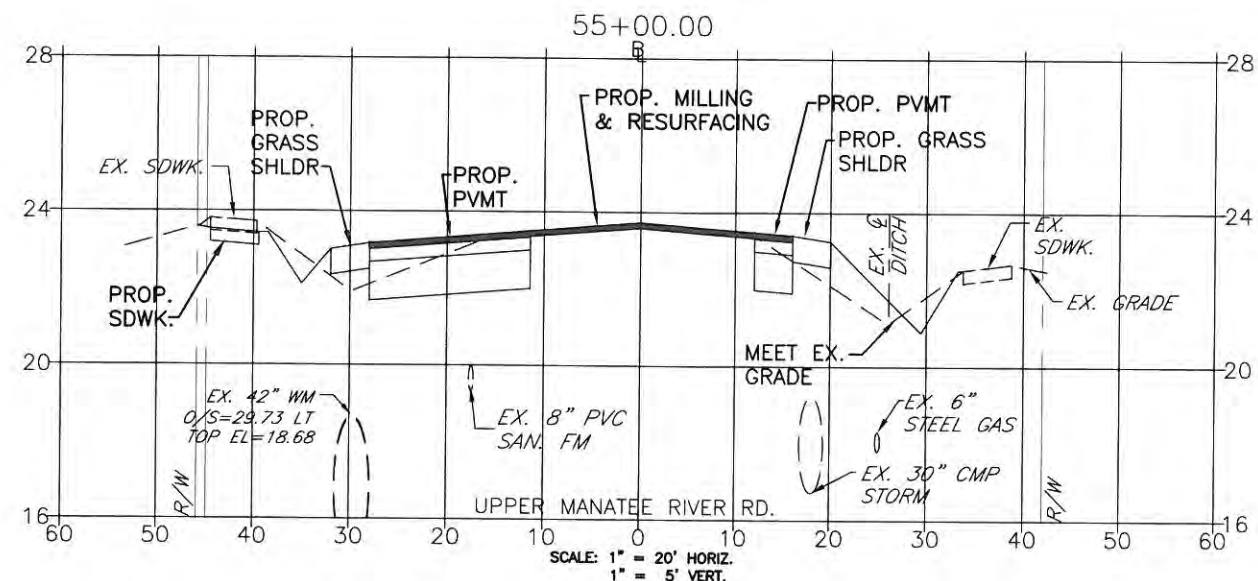
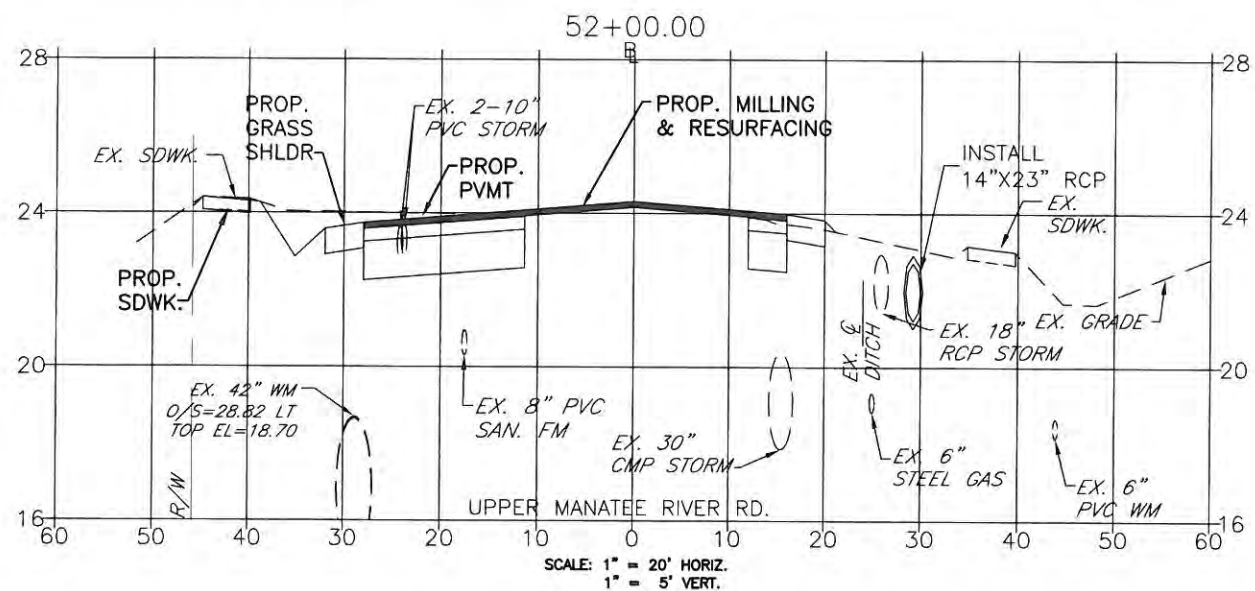
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN/RGE	19-20, 29-30/34S/19E
SCALE	AS SHOWN
SURVEYED	
DESIGNED	
DRAWN	
CHECKED	

Signature & Date



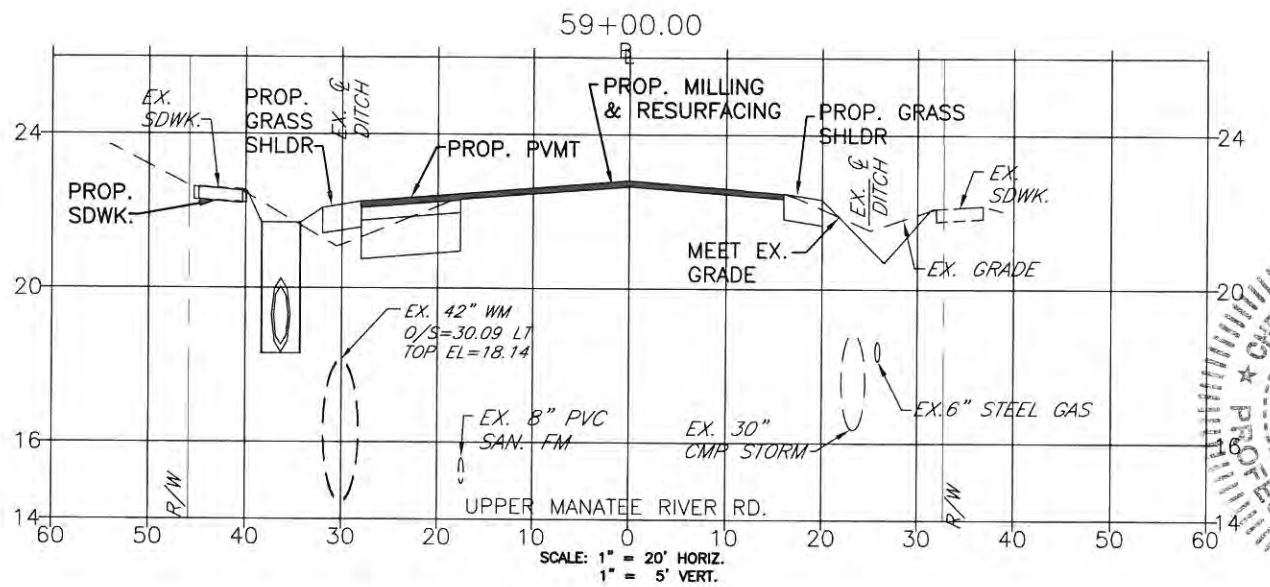
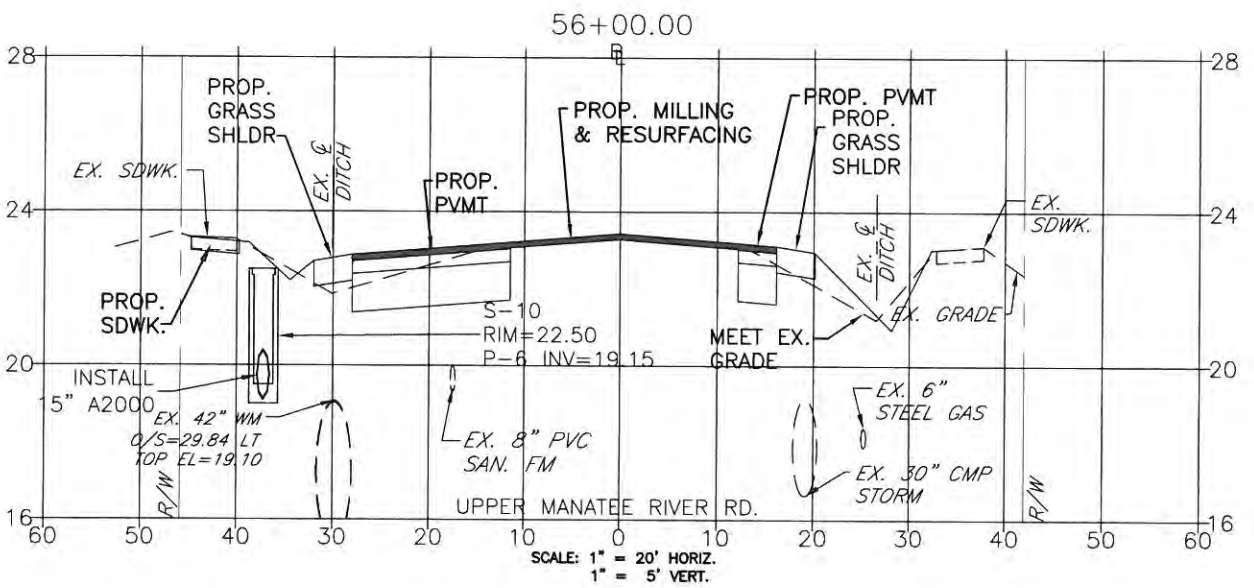
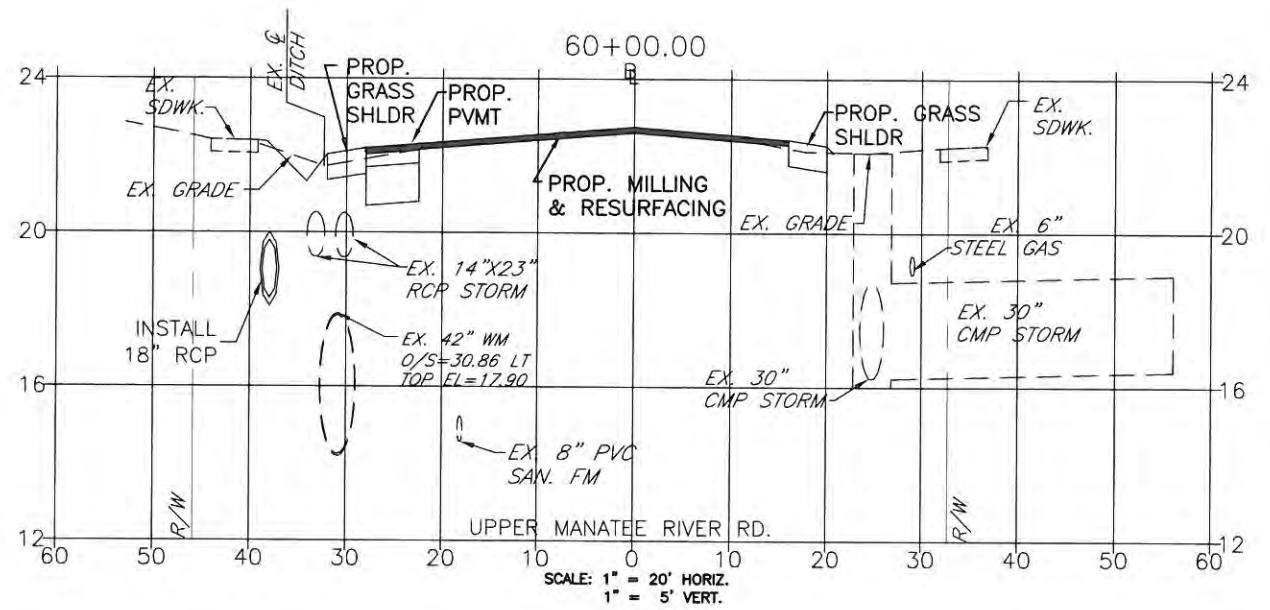
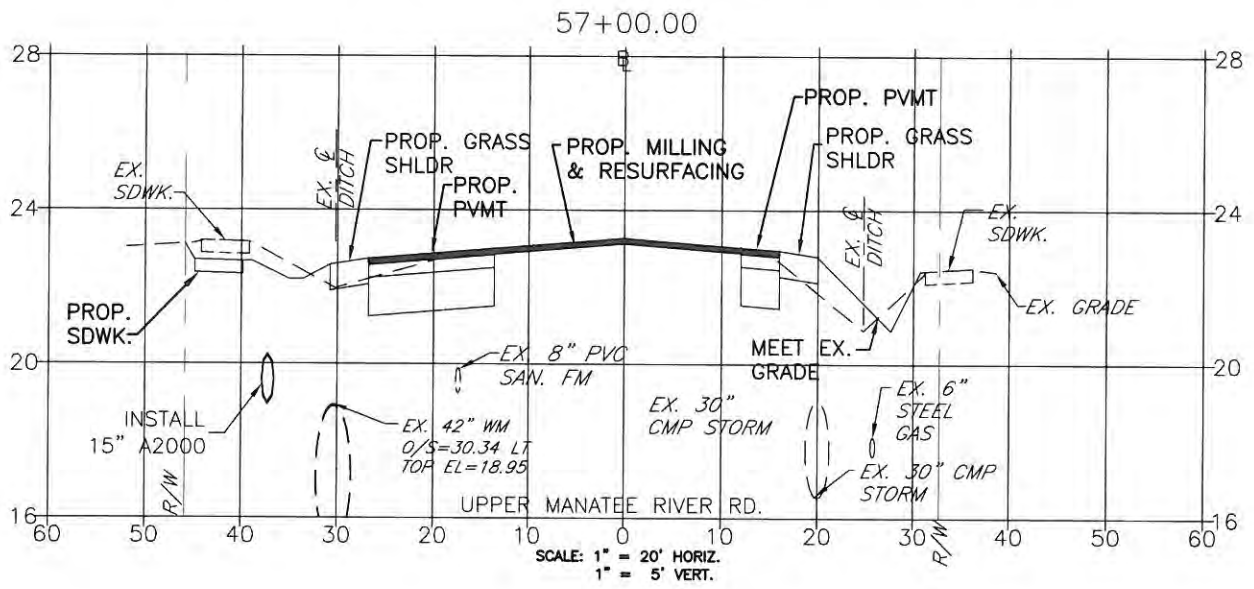
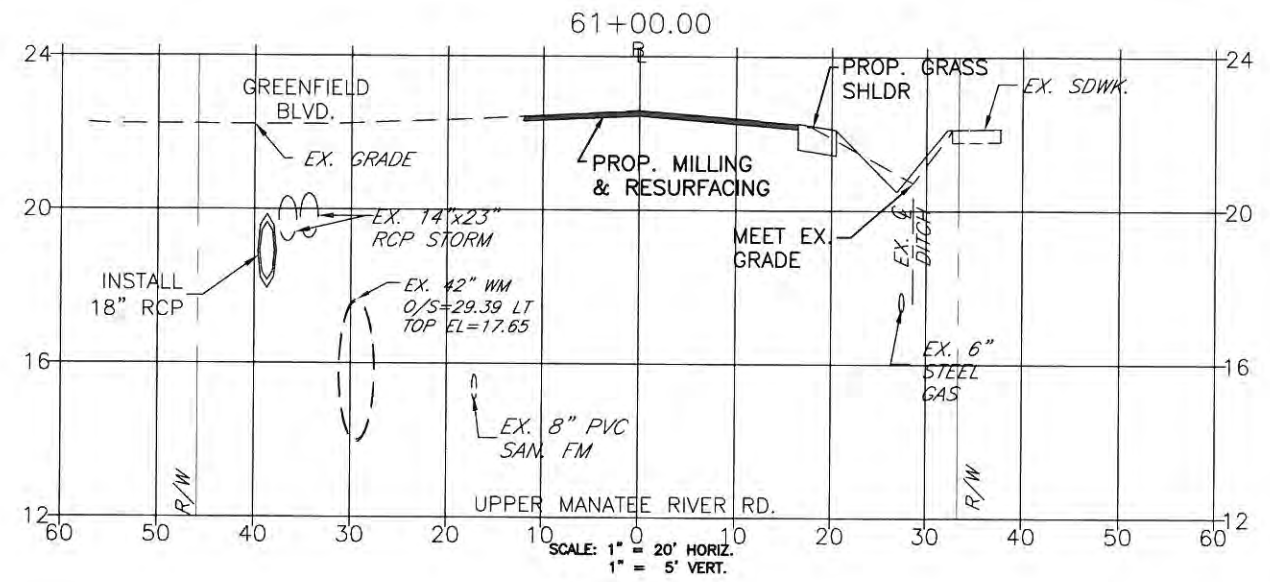
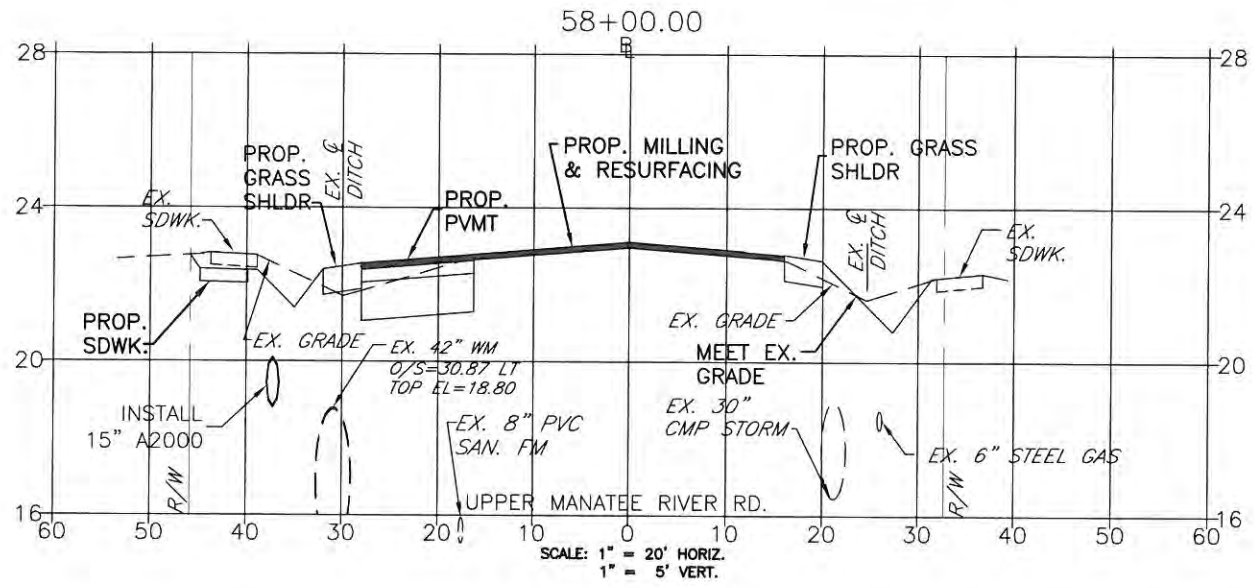
Manatee County Florida  
PUBLIC WORKS DEPARTMENT  
ENGINEERING SERVICES  
1022 26th Avenue East, Bradenton, FL 34208

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 50+00 TO 55+00**

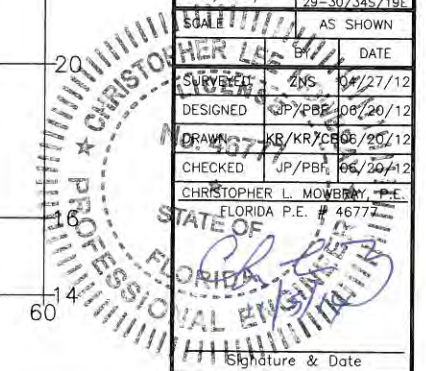


REVISION	DATE								
BY									
NO.									
PROJECT #	307-6082660								
SURVEY #	FILE 00-42783								
SEC./TWN/RGE	19-20, 29-30/34S/19E								
SCALE	AS SHOWN								
DRAWN	JP/PBF	DATE	06/20/12						
CHECKED	JP/PBF	DATE	06/20/12						
DESIGNED	JP/PBF	DATE	06/20/12						
Signature & Date									

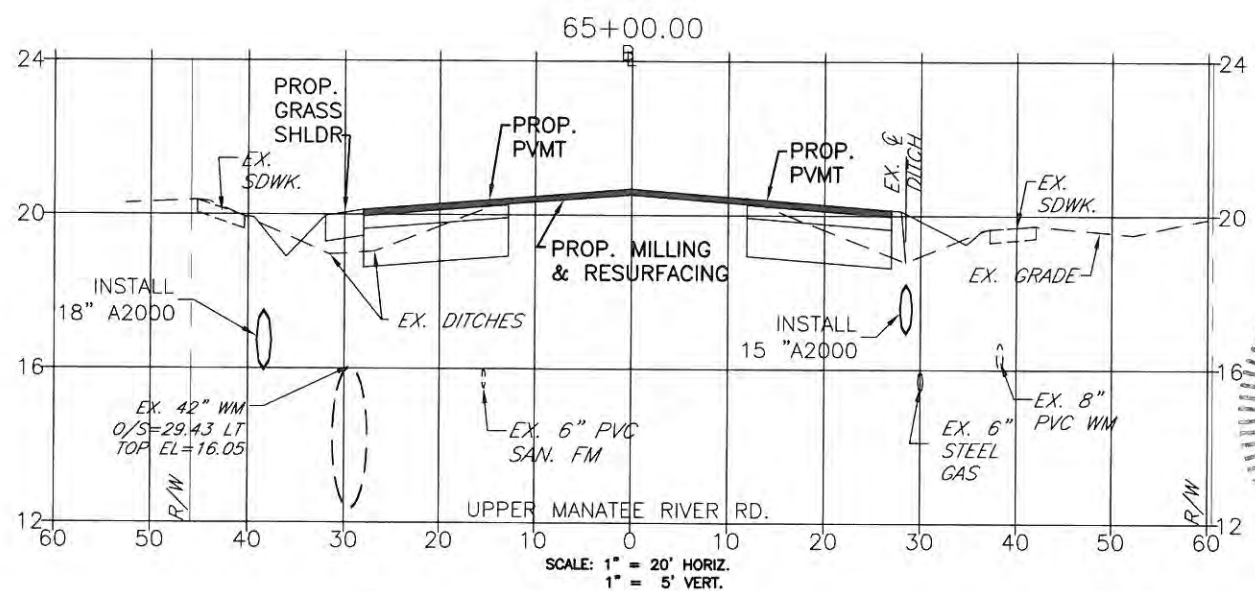
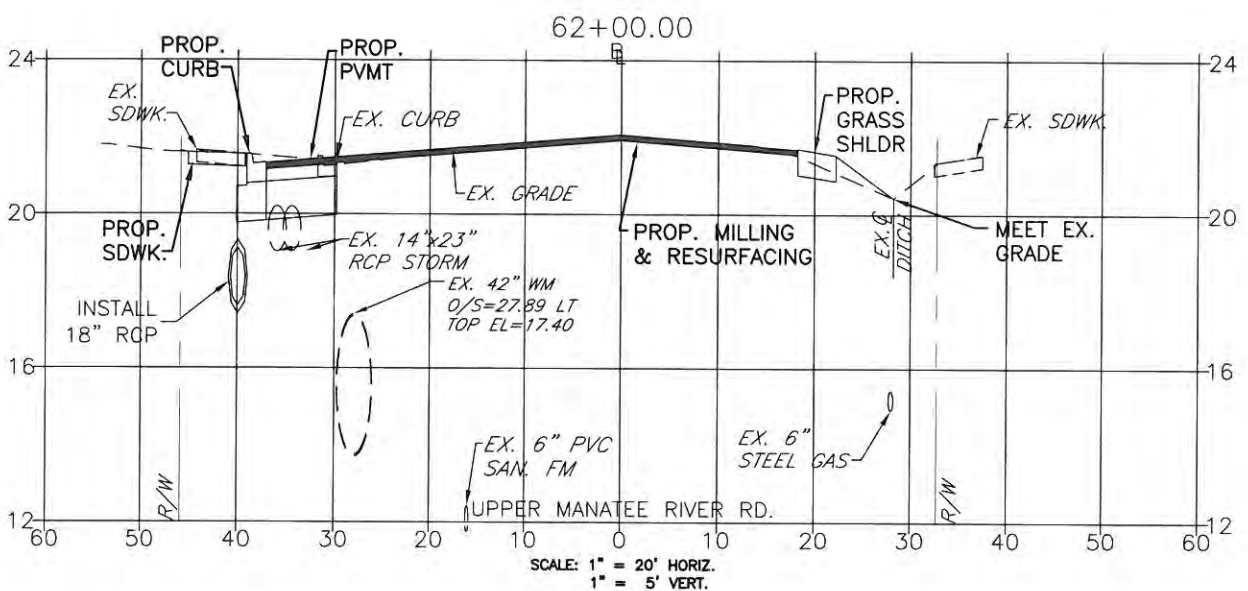
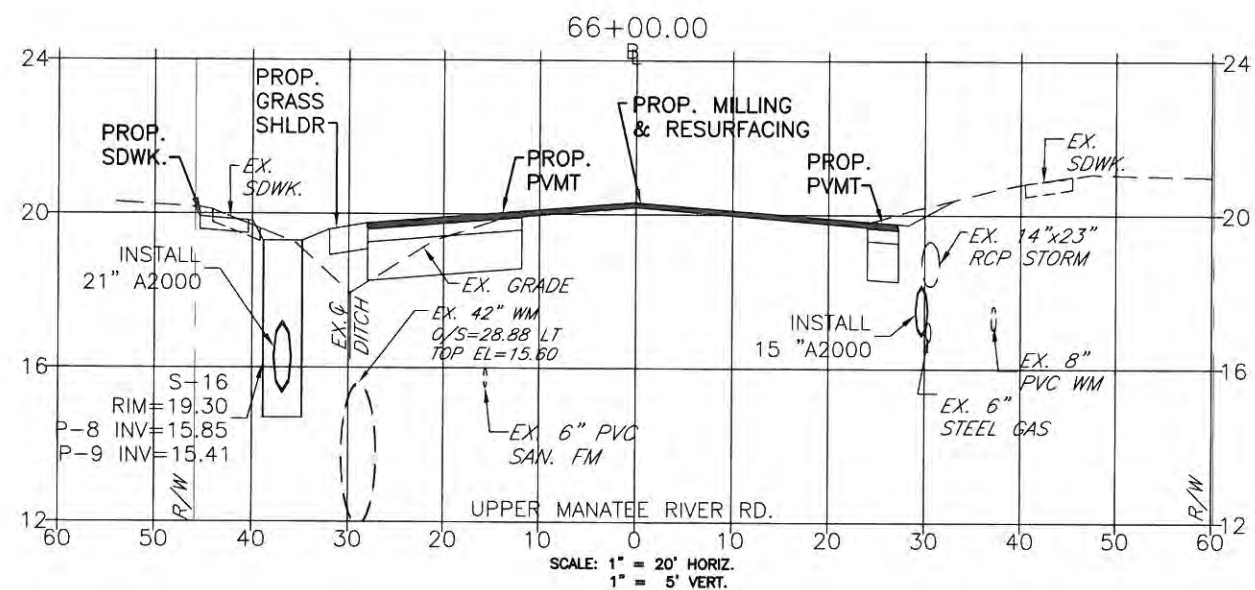
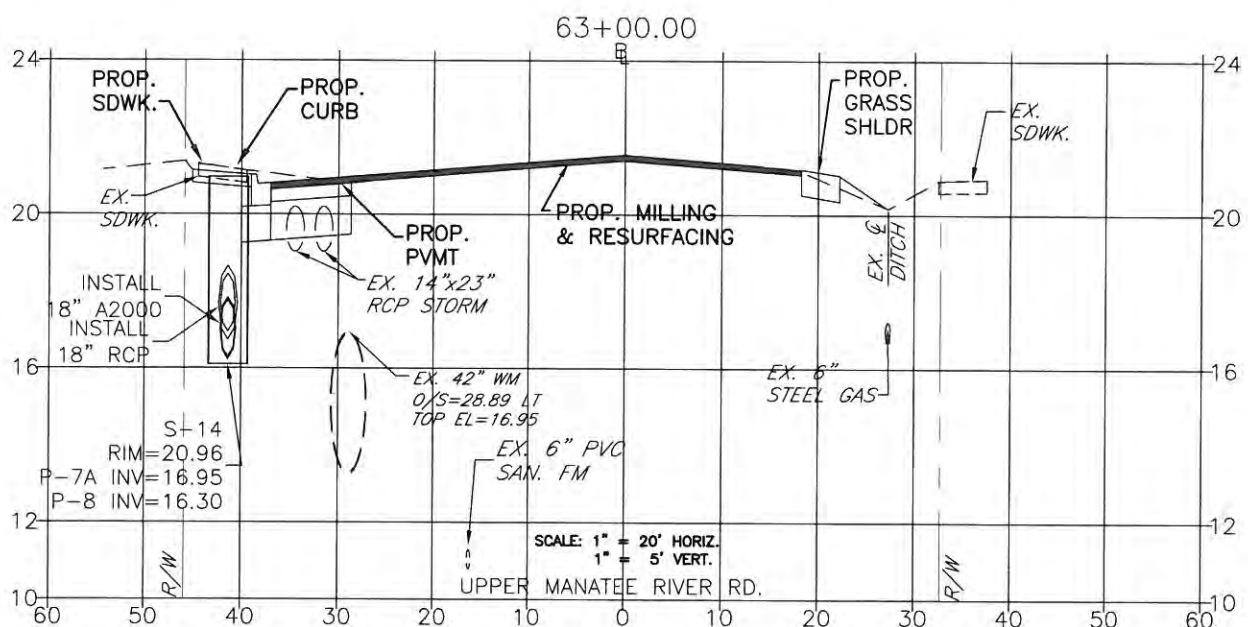
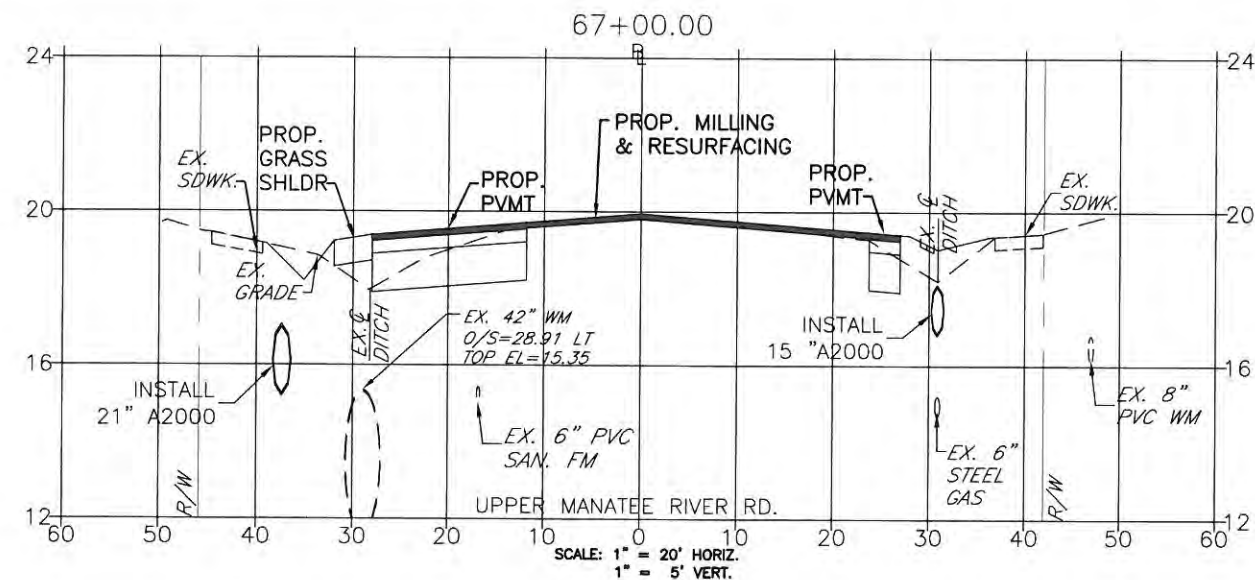
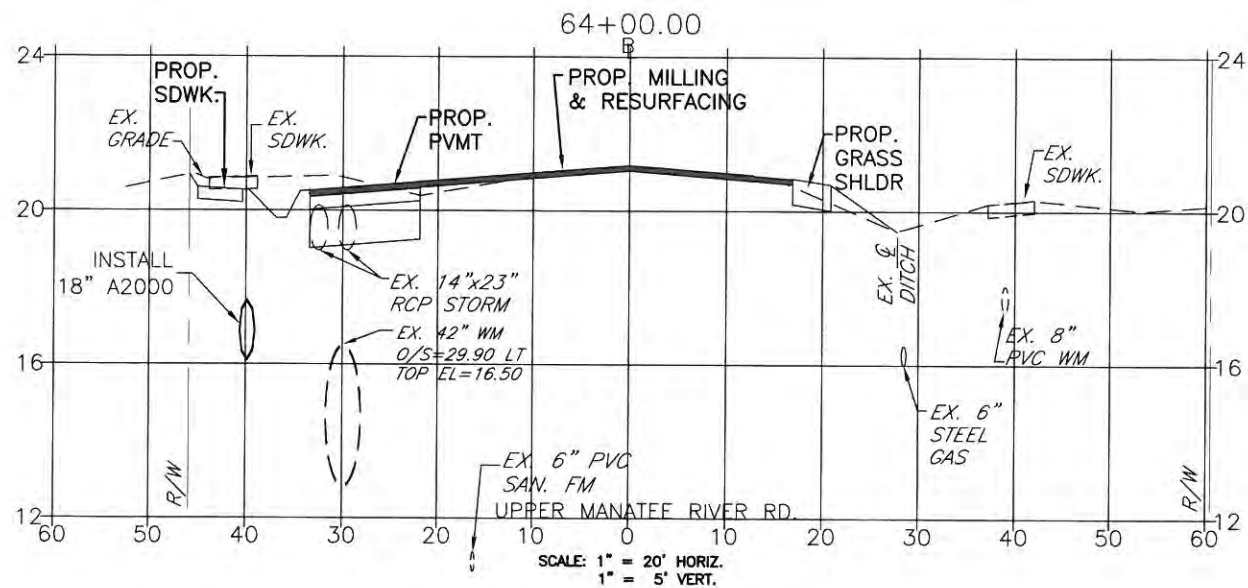
**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 56+00 TO 61+00**



DATE					
BY					
REVISION DESCRIPTION					
NO.					
PROJECT #	307-6082660				
SURVEY #	FILE 00-42783				
SEC./TWN./RGE	19-20, 29-30/34S/19E				
SCALE	AS SHOWN				
DATE					
DESIGNED	JP/PBR	06/20/12			
DRAWN	KR/KR/CEB	06/20/12			
CHECKED	JP/PBR	06/20/12			
CHRISTOPHER L. MOWBRAY, P.E.					
FLORIDA P.E. # 46777					
STATE OF FLORIDA					
PROFESSIONAL ENGINEER					
SIGNATURE & DATE					



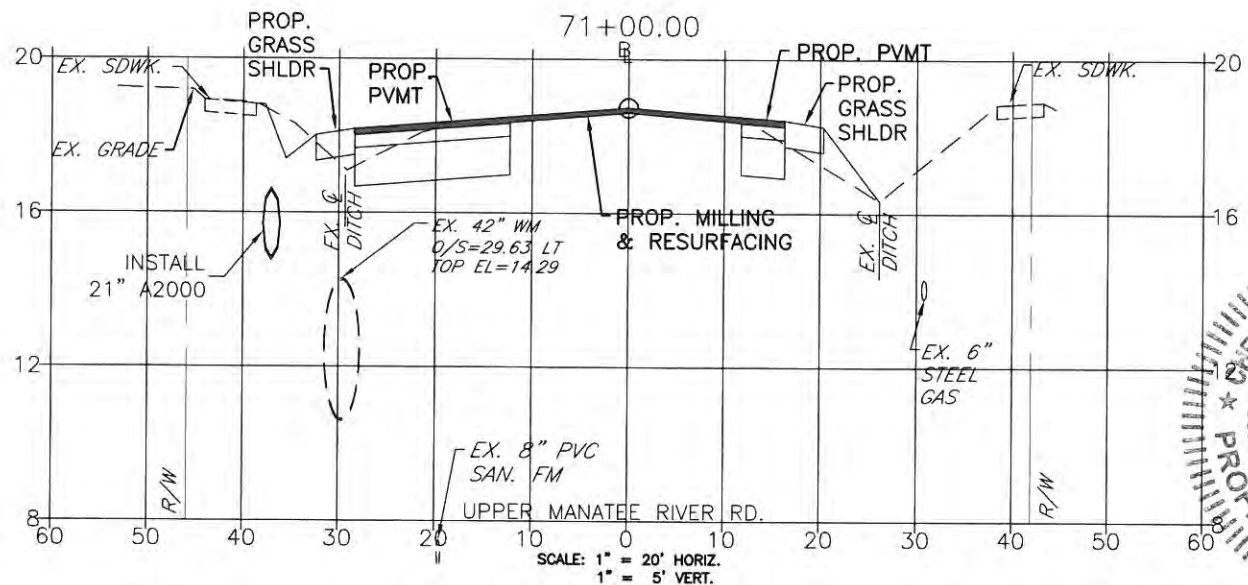
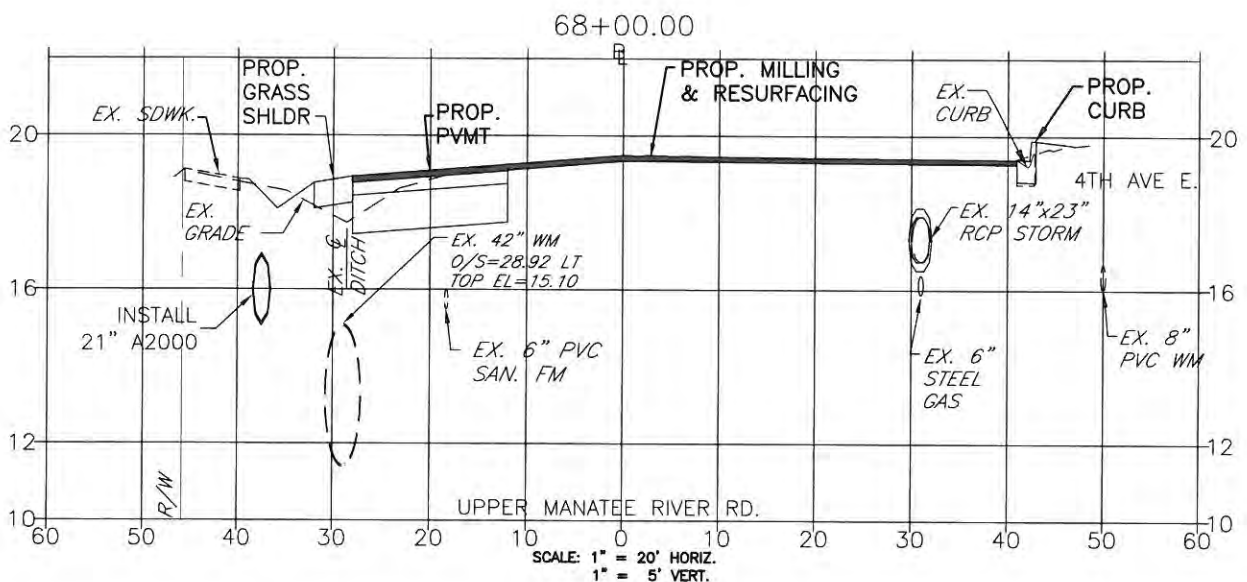
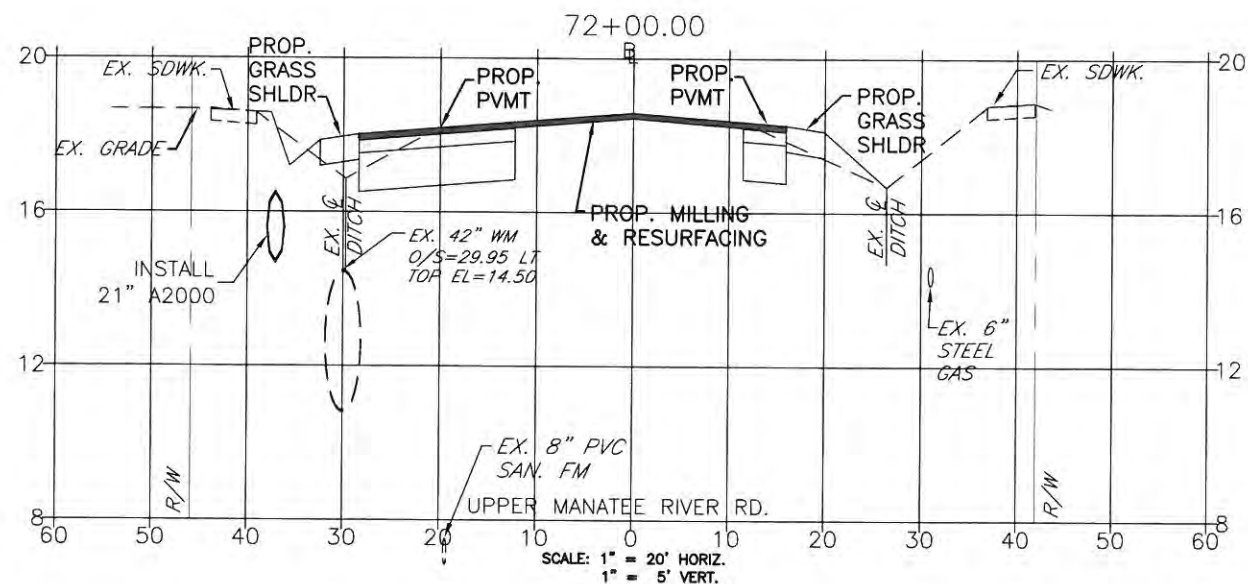
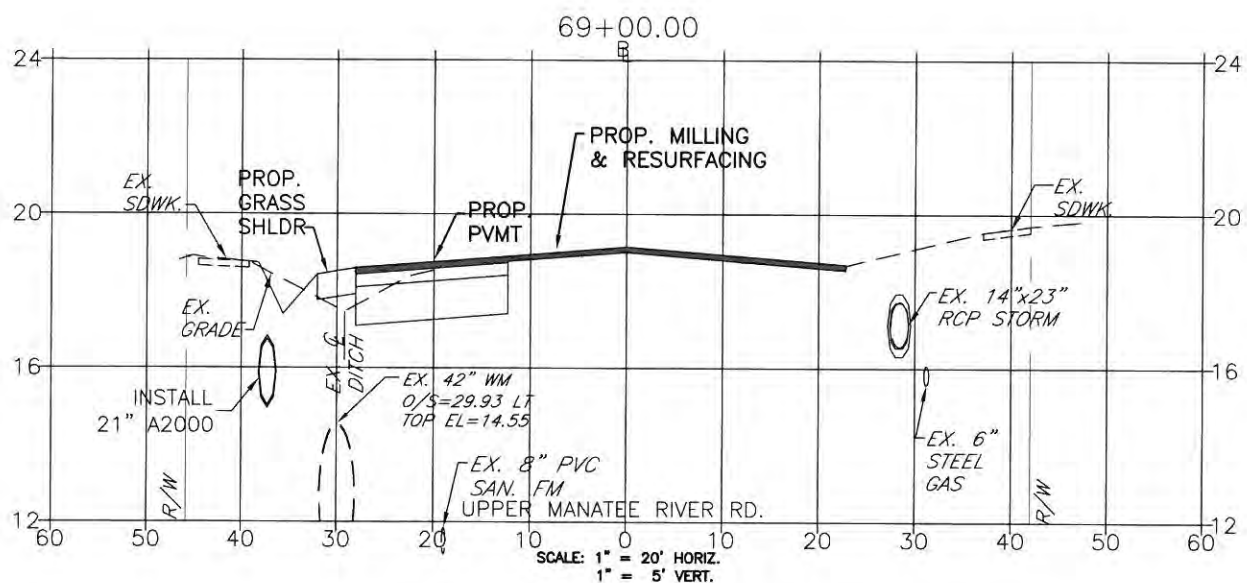
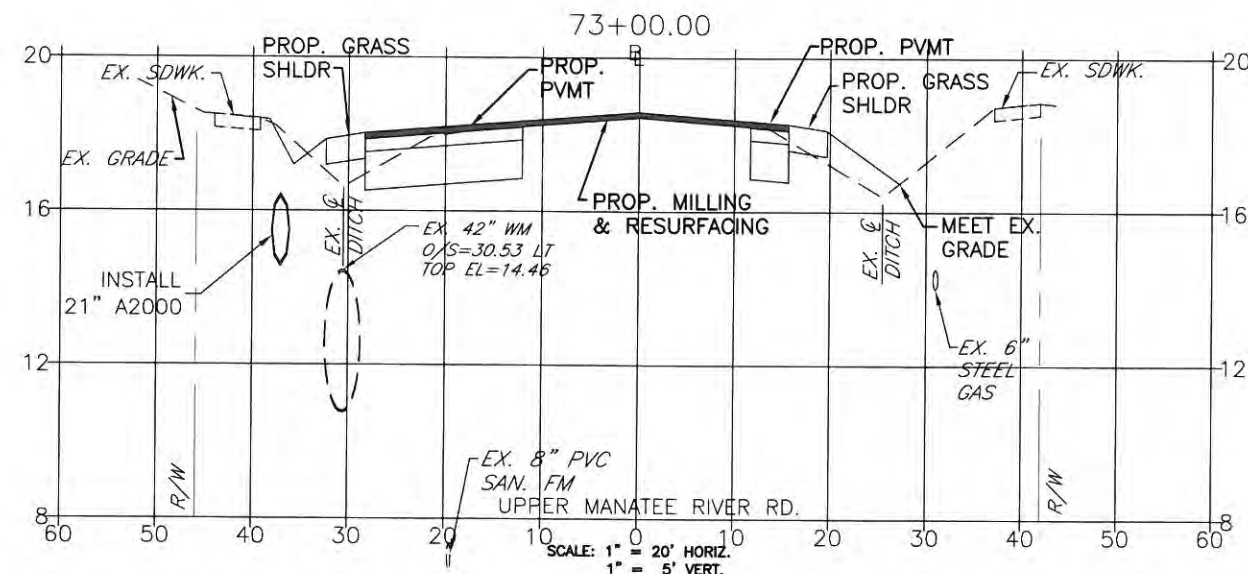
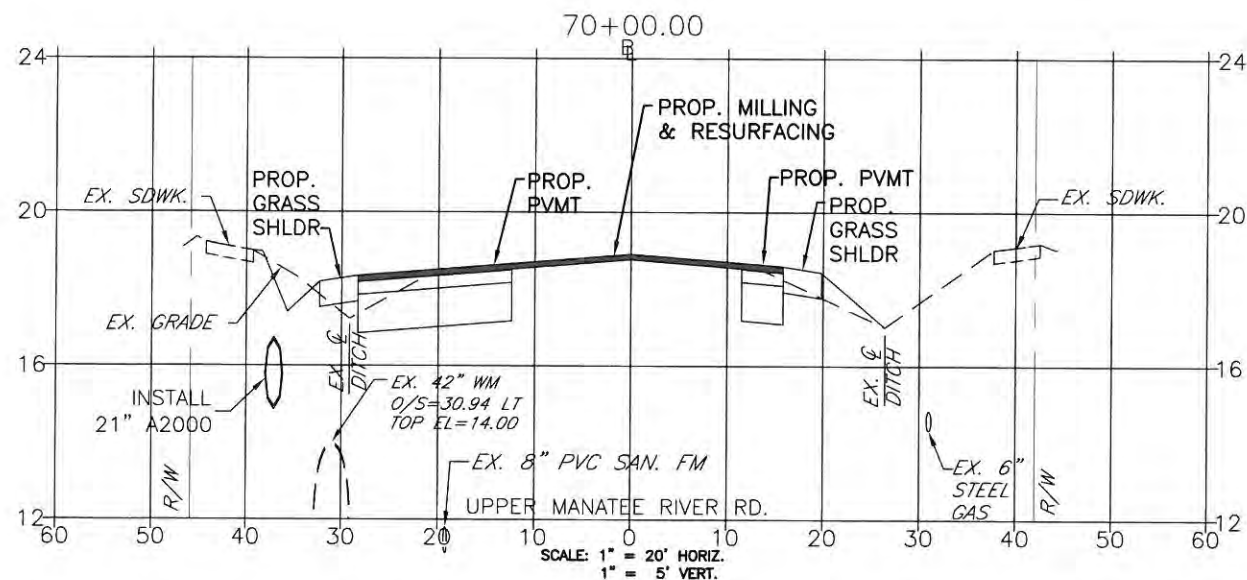
**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 62+00 to 67+00**



NO.	DATE	BY	REVISION DESCRIPTION
PROJECT #	307-6082660		
SURVEY #	FILE 00-42783		
SEC./TWN./RGE	19-20, 29-30/34S/19E		
SCALE	AS SHOWN		
DESIGNED	JP/PBF 06/20/12		
CHECKED	JP/PBF 06/20/12		
DRAWN	KR/KR/CE06/20/12		
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 48777 STATE OF FLORIDA PROFESSIONAL ENGINEER			
Signature & Date SHEET 25			



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 68+00 to 73+00**



NO.	REVISION DESCRIPTION	DATE	BY

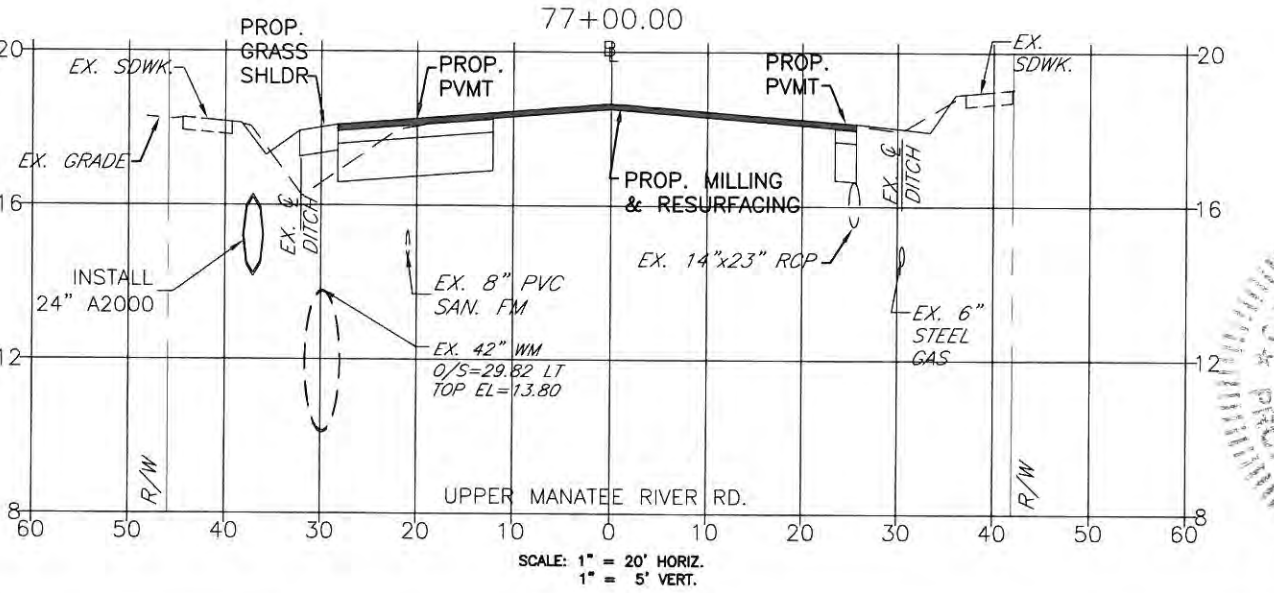
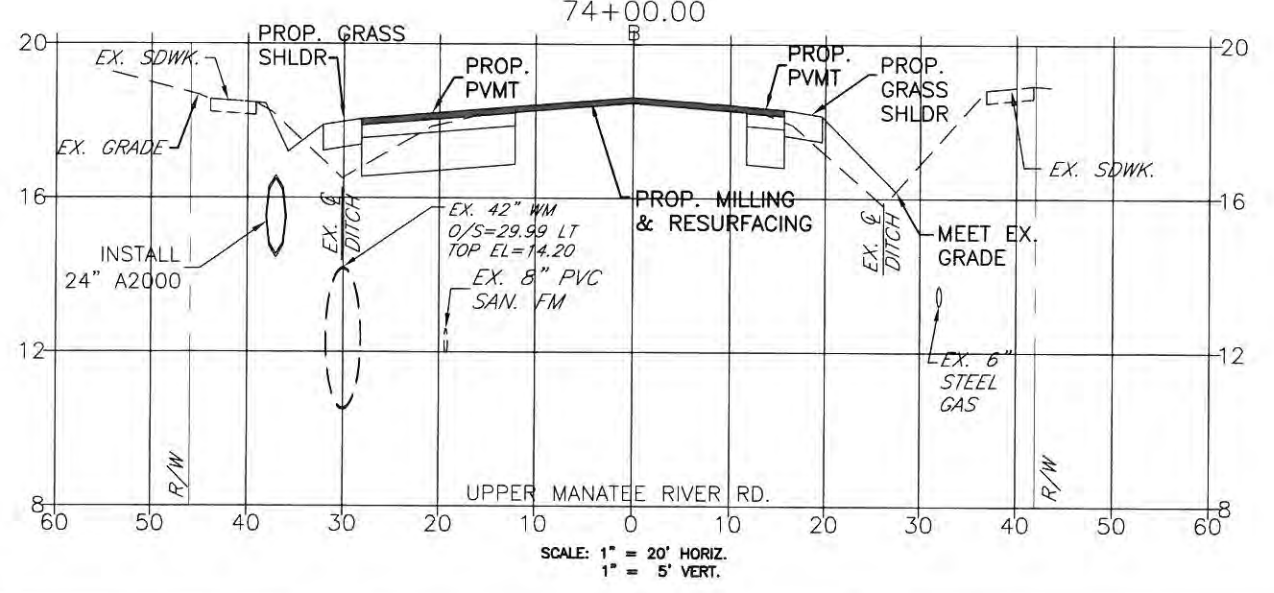
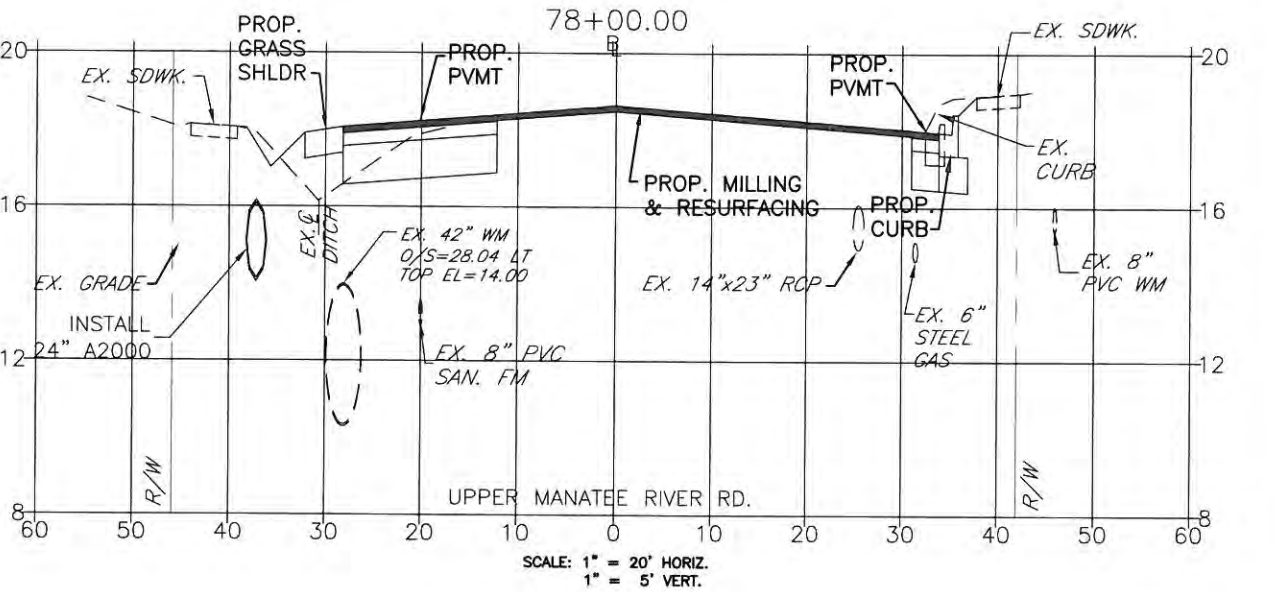
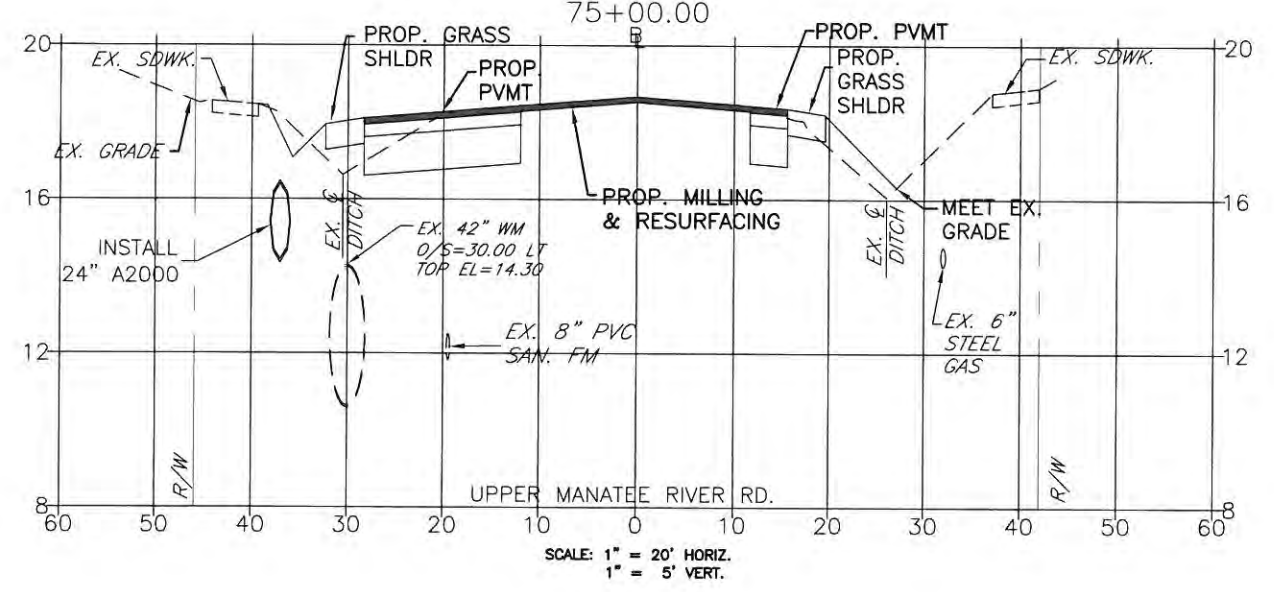
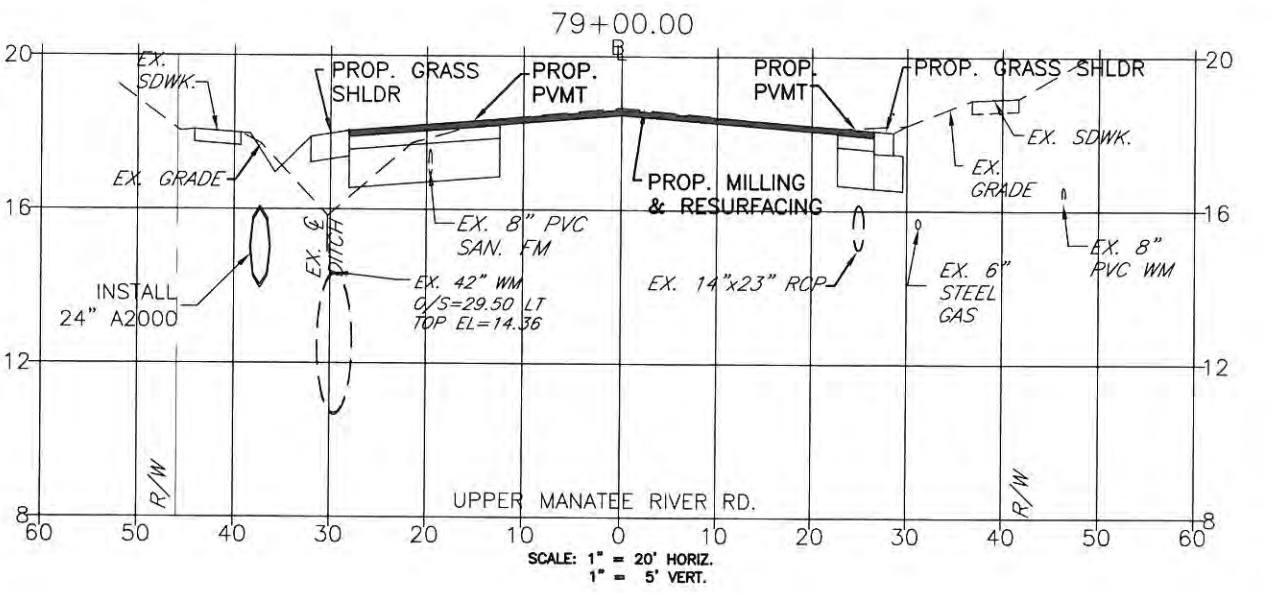
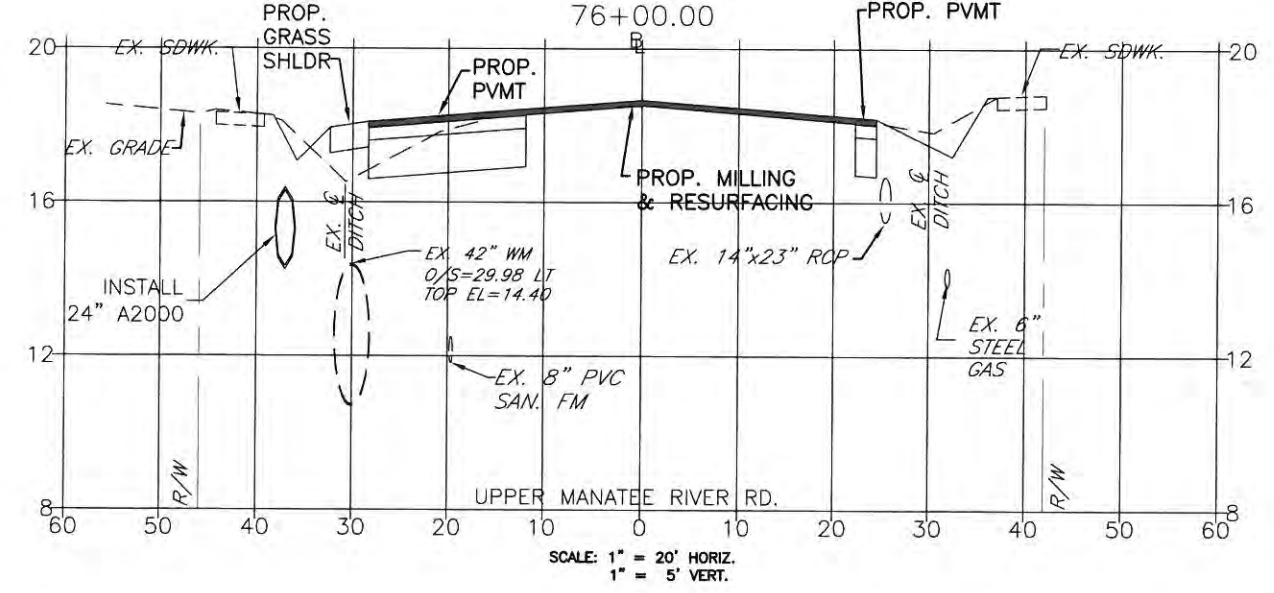
  

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30/34S/19E
SCALE	AS SHOWN
DATE	04/27/12
BY	ZNS
CHECKED	JP/PBB 05/20/12
DRAWN	KR/CR 06/20/12
IN CHARGE	JP/PBB 06/20/12
DESIGNED	JP/PBB 06/20/12
DATE	06/20/12
BY	JP/PBB
DATE	06/20/12
BY	JP/PBB
DATE	06/20/12

STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777

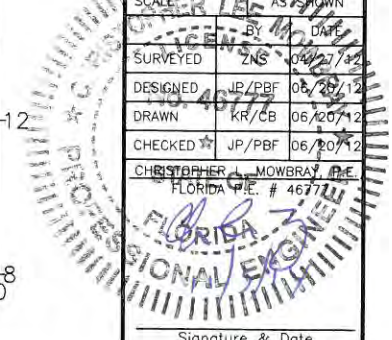
Signature & Date



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 74+00 to 79+00**

NO.	REVISION DESCRIPTION	DATE	BY

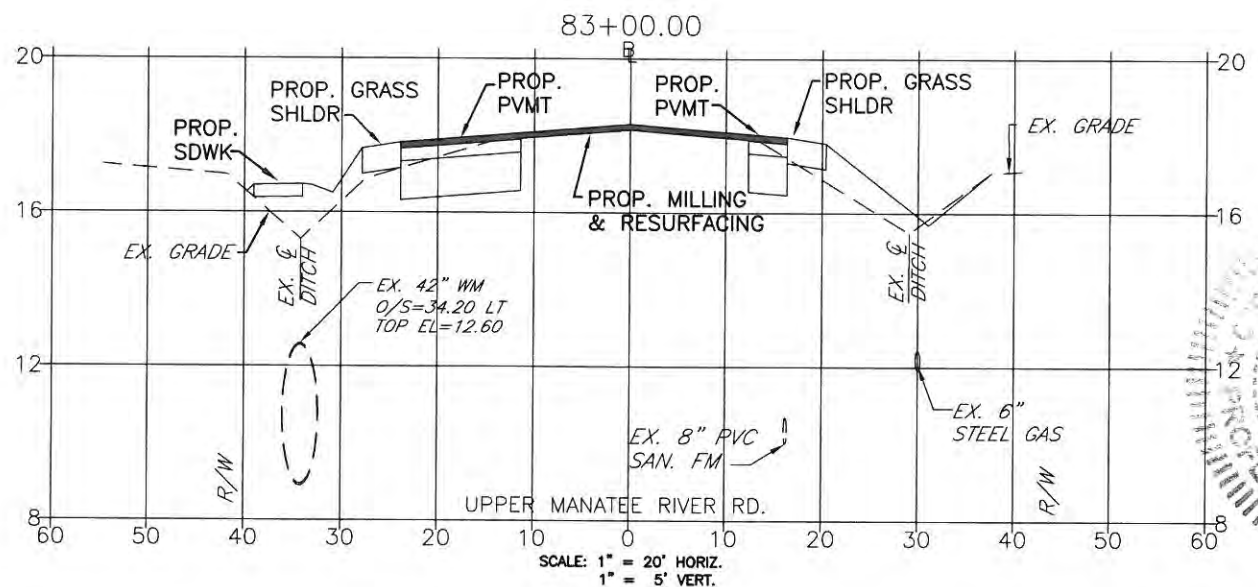
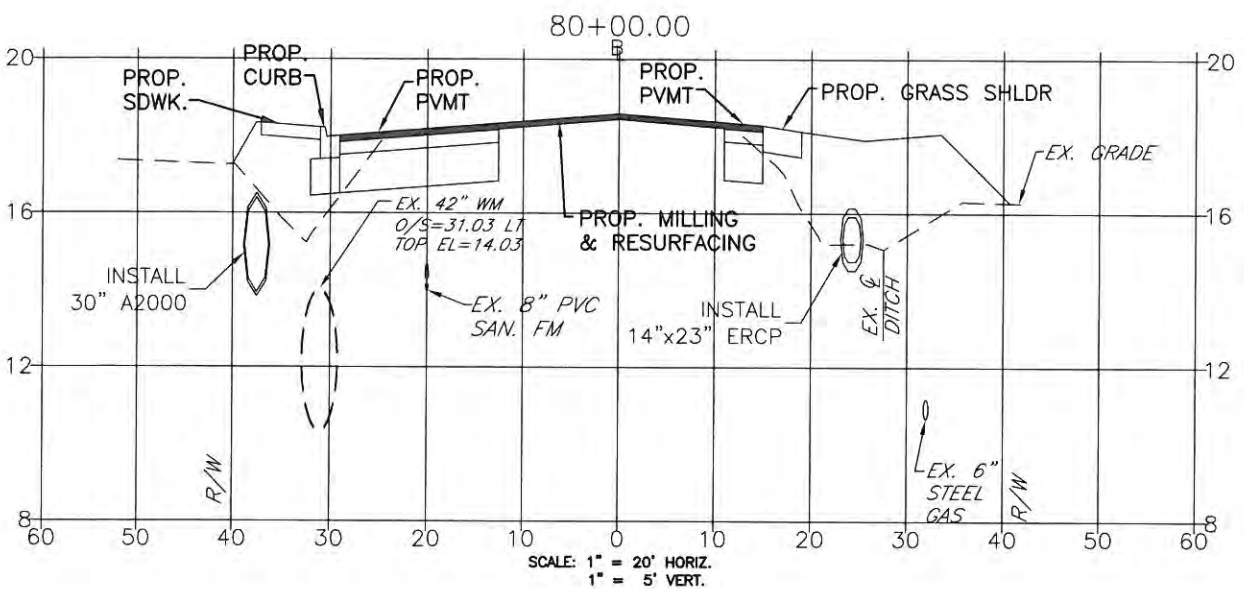
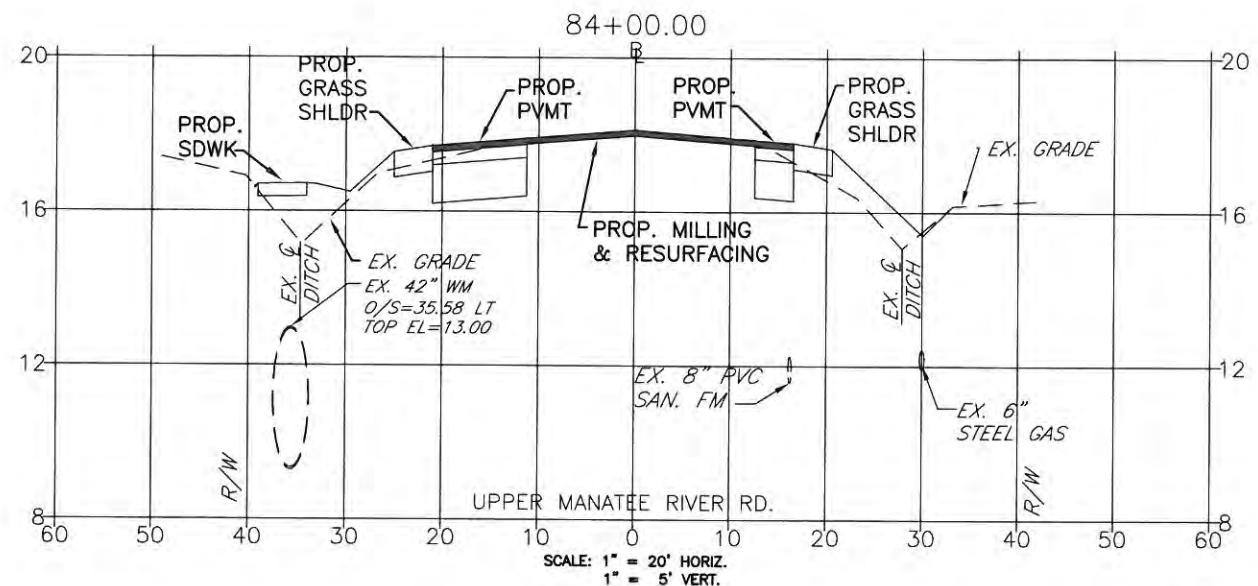
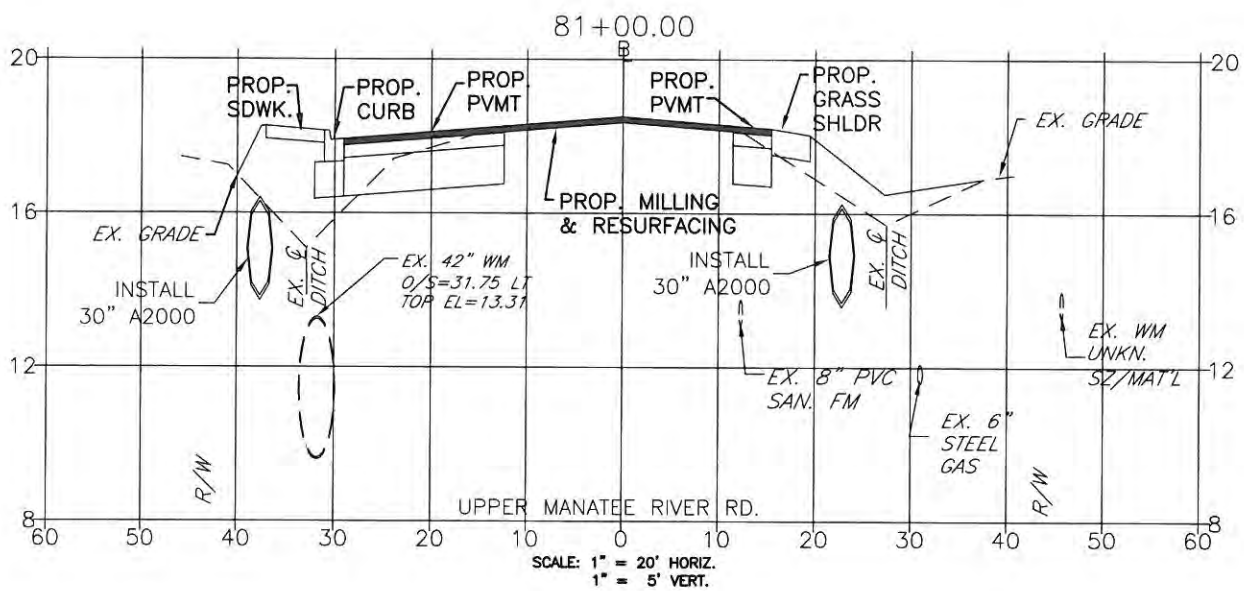
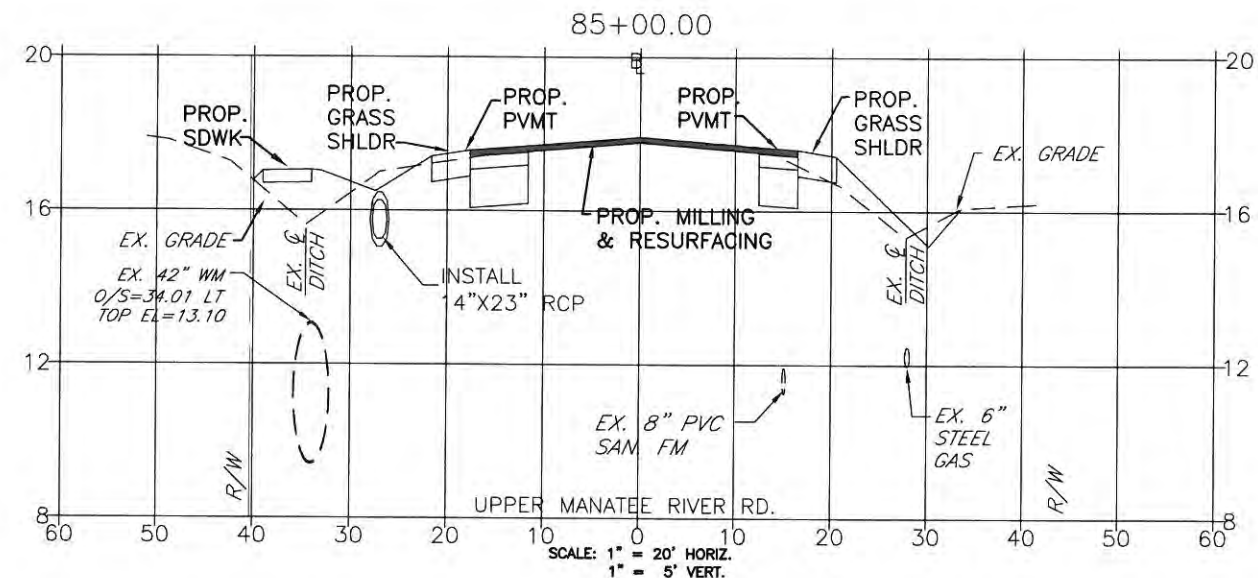
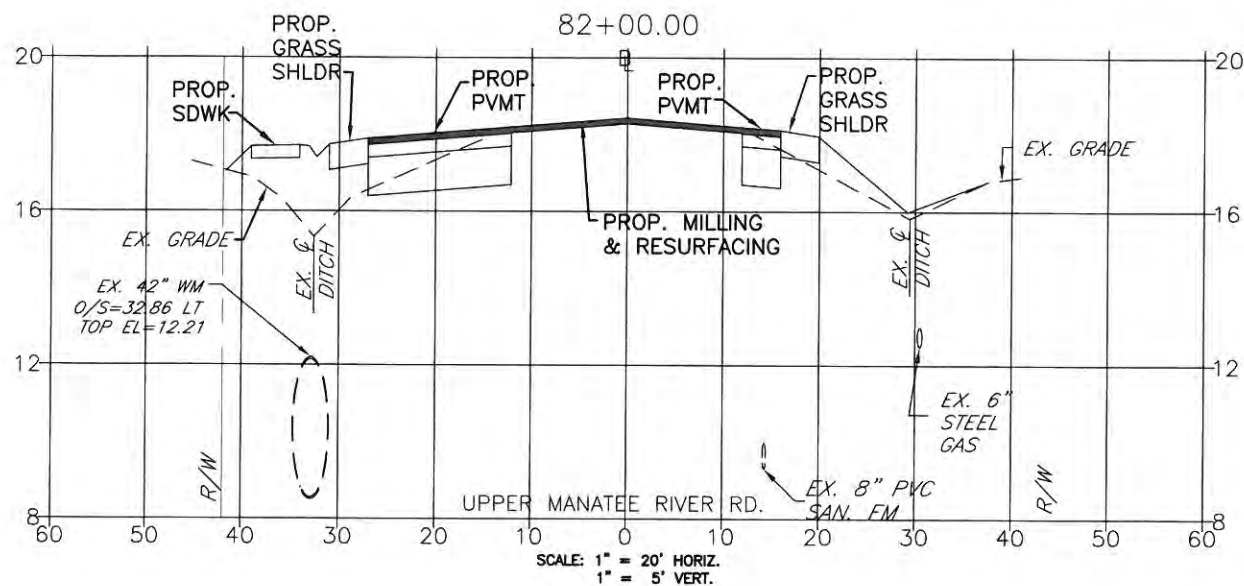
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC. / TWP. / RANG.	19-20, 29-30 / 34S / 19E
SCALE	AS SHOWN
SURVEYED	ZNS 04/27/12
DESIGNED	JP/PBF 06/28/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PBF 06/20/12
DESIGNED BY	CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46771



UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 80+00 to 85+00

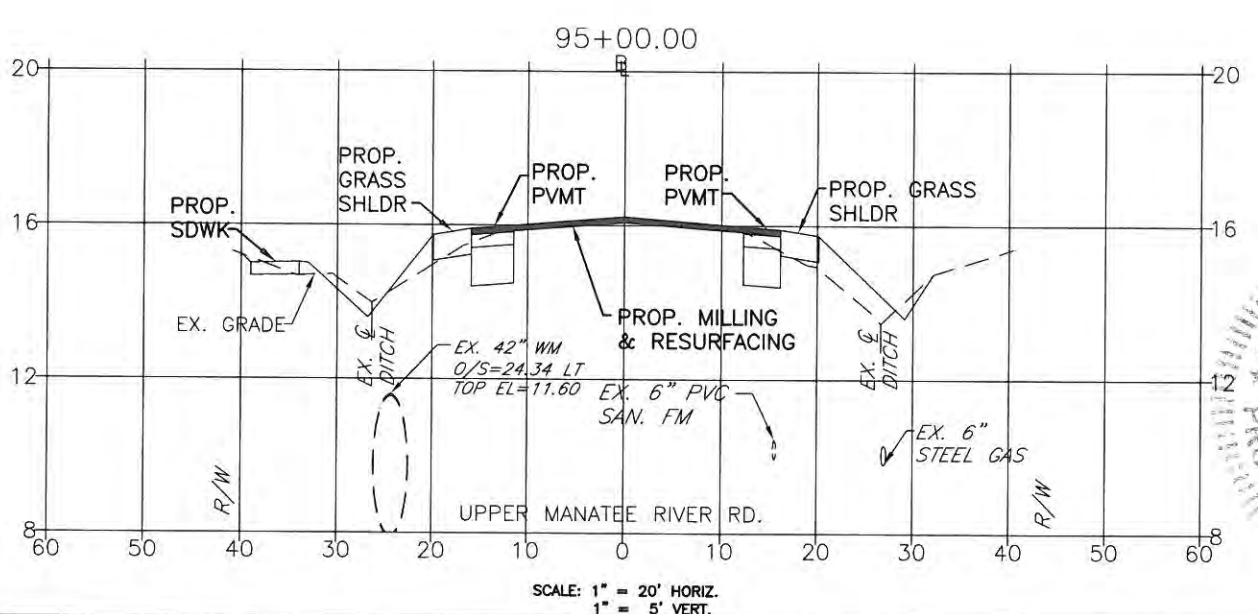
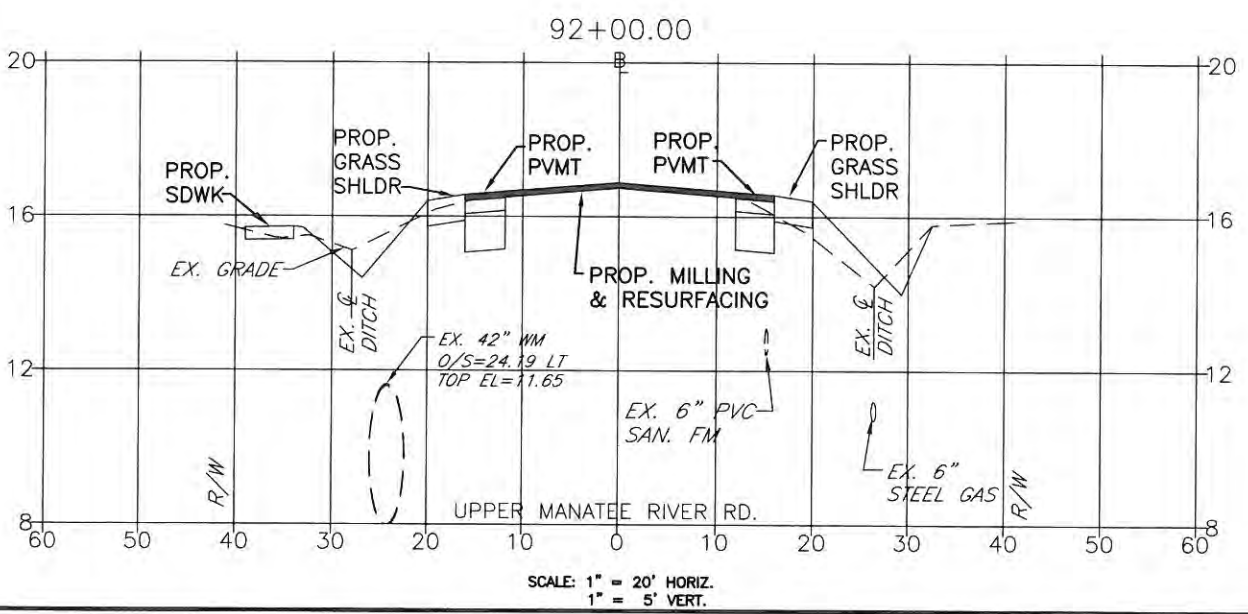
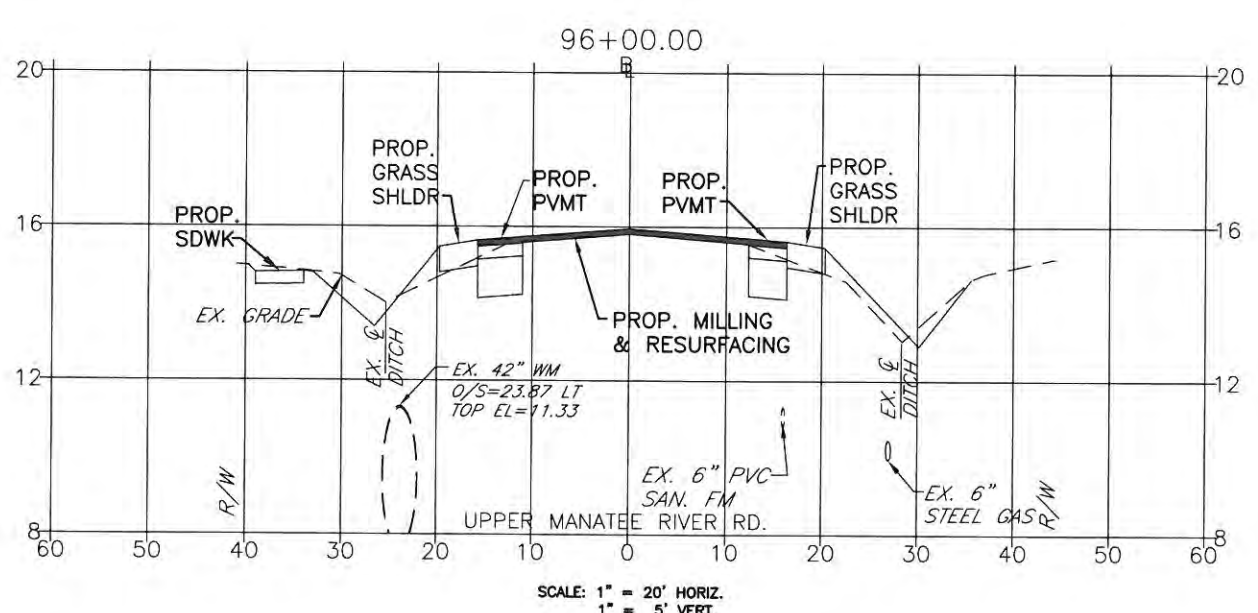
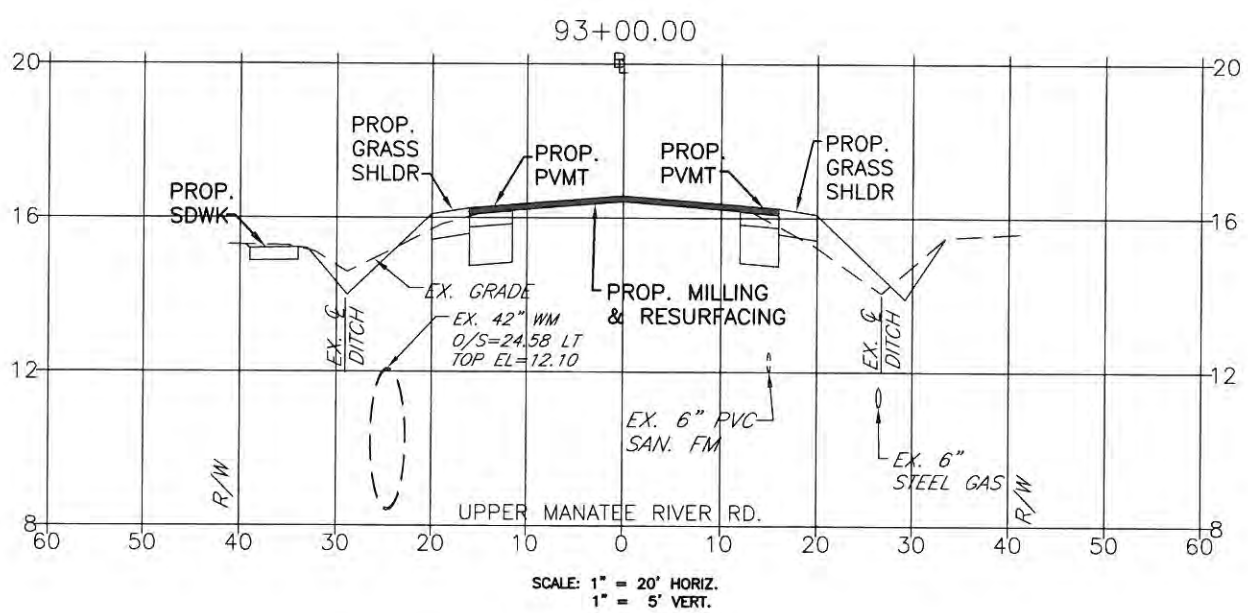
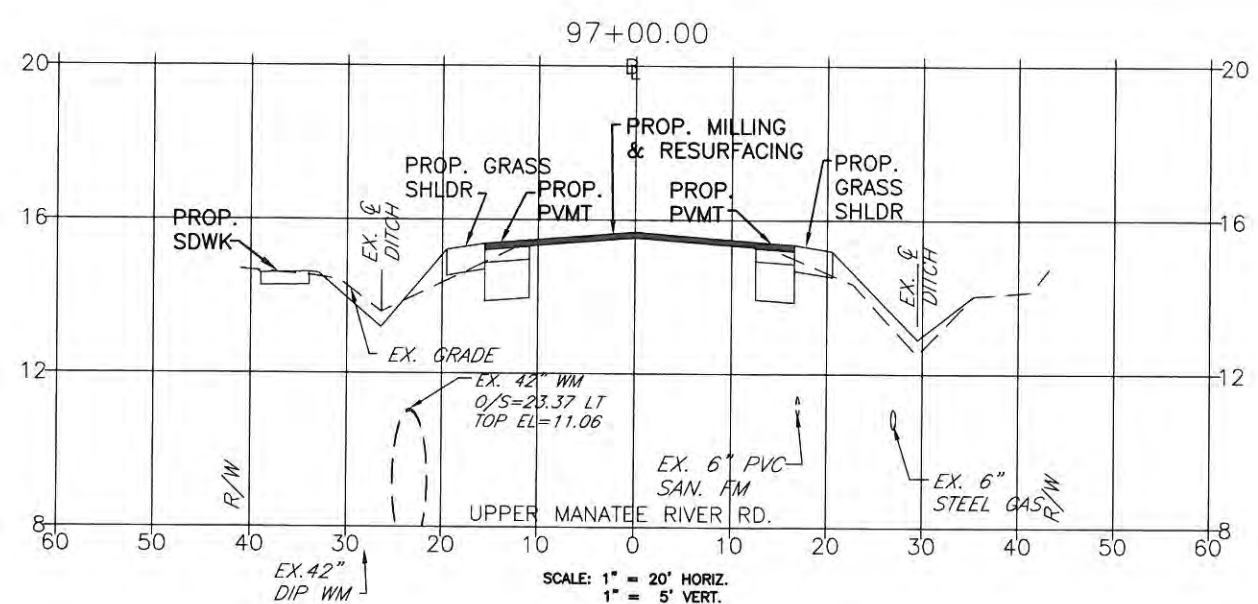
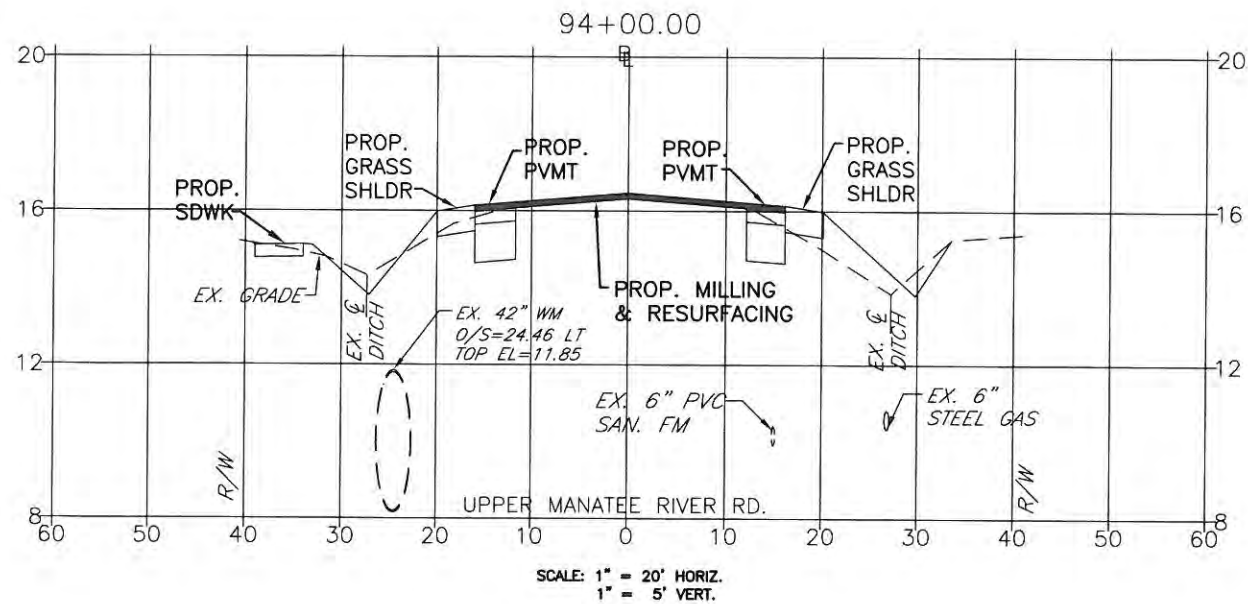
NO.	REVISION DESCRIPTION	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC/TWN./RGE	19-20, 29-30/34S/19E
SCALE	AS SHOWN
BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	JP/PBF 08/20/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E.	06/20/12
FLORIDA PROFESSIONAL ENGINEER	27367
Signature & Date	





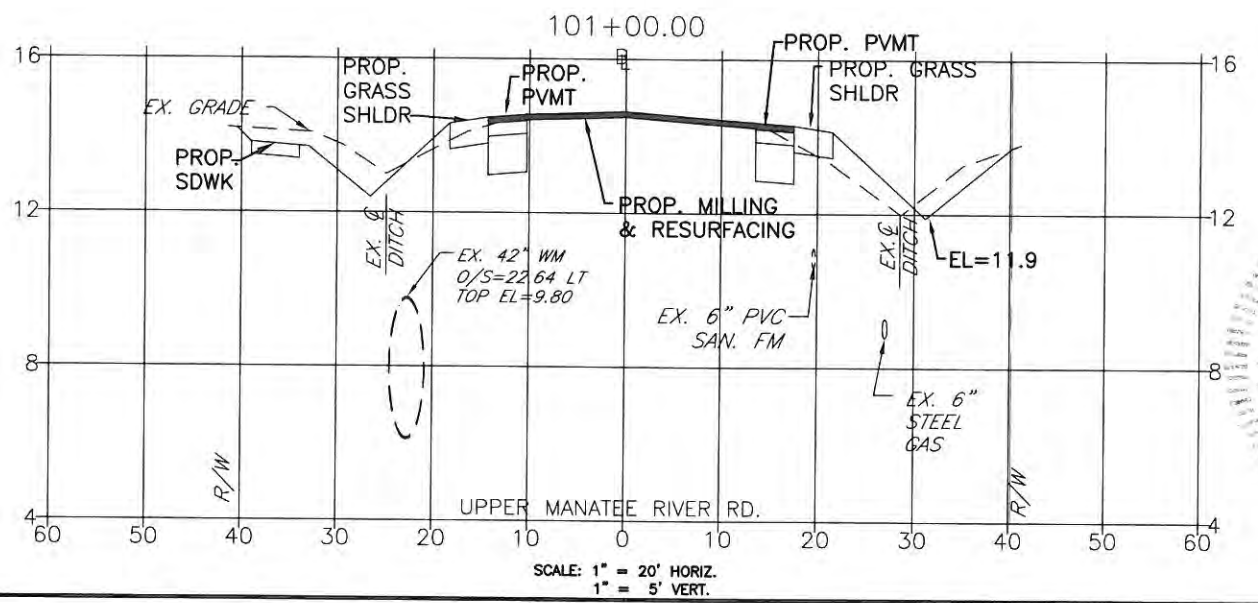
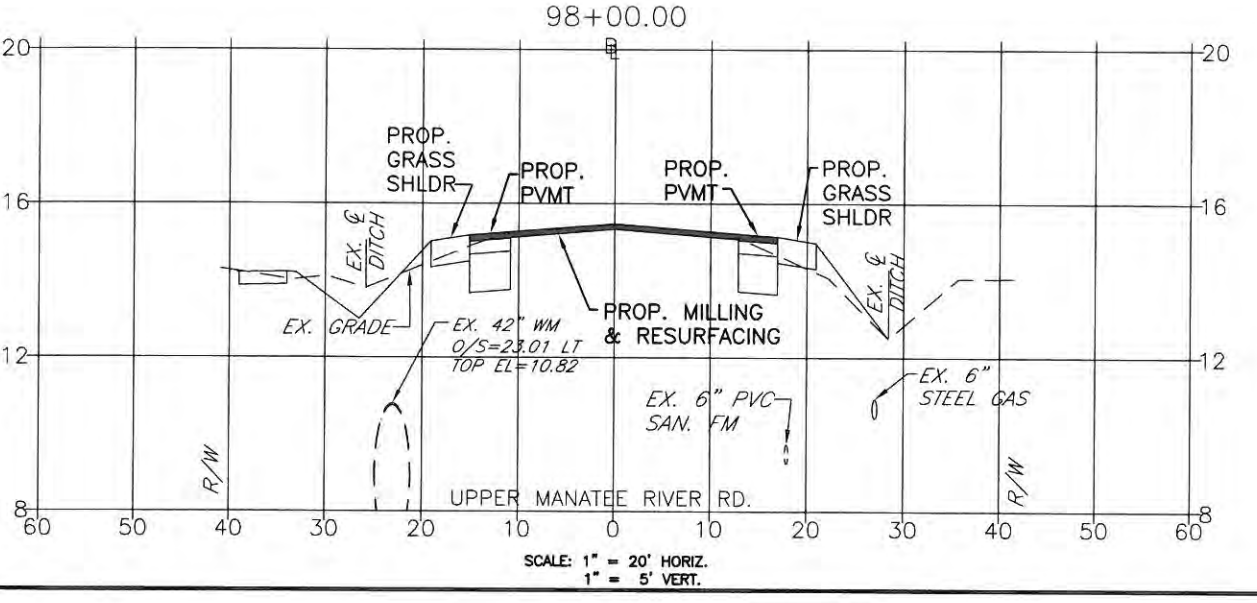
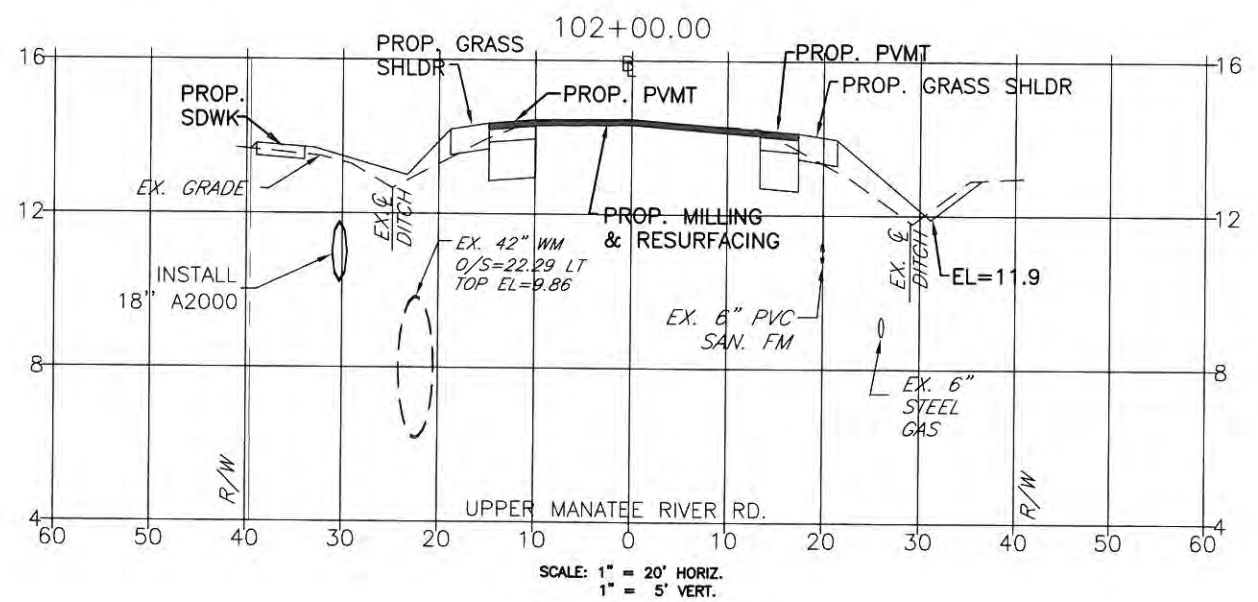
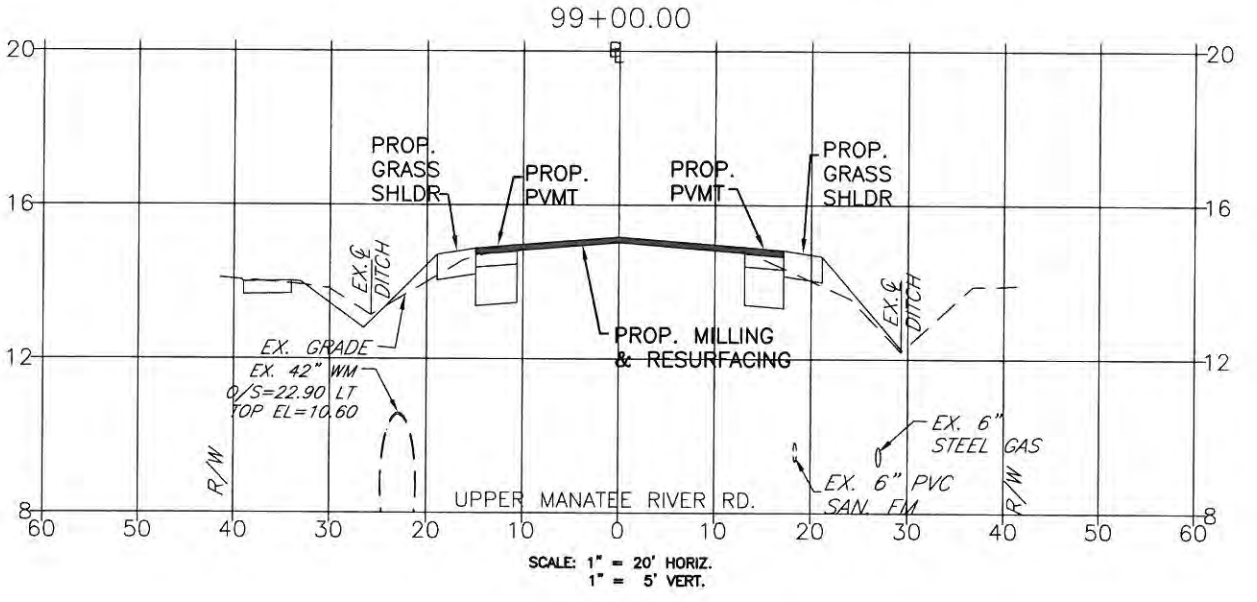
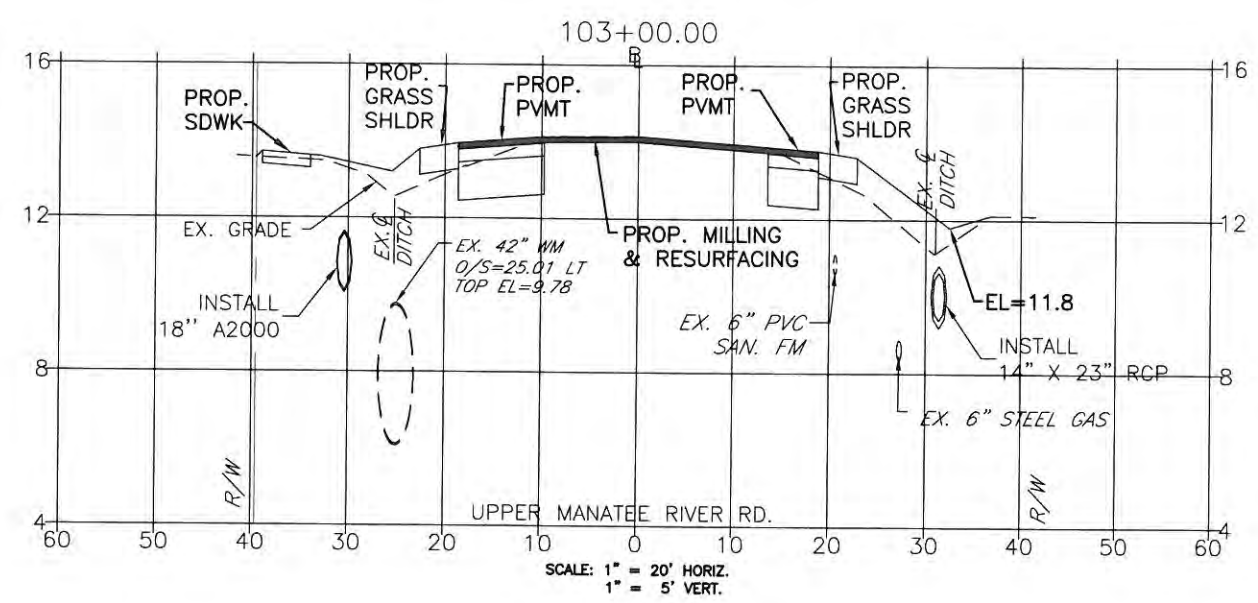
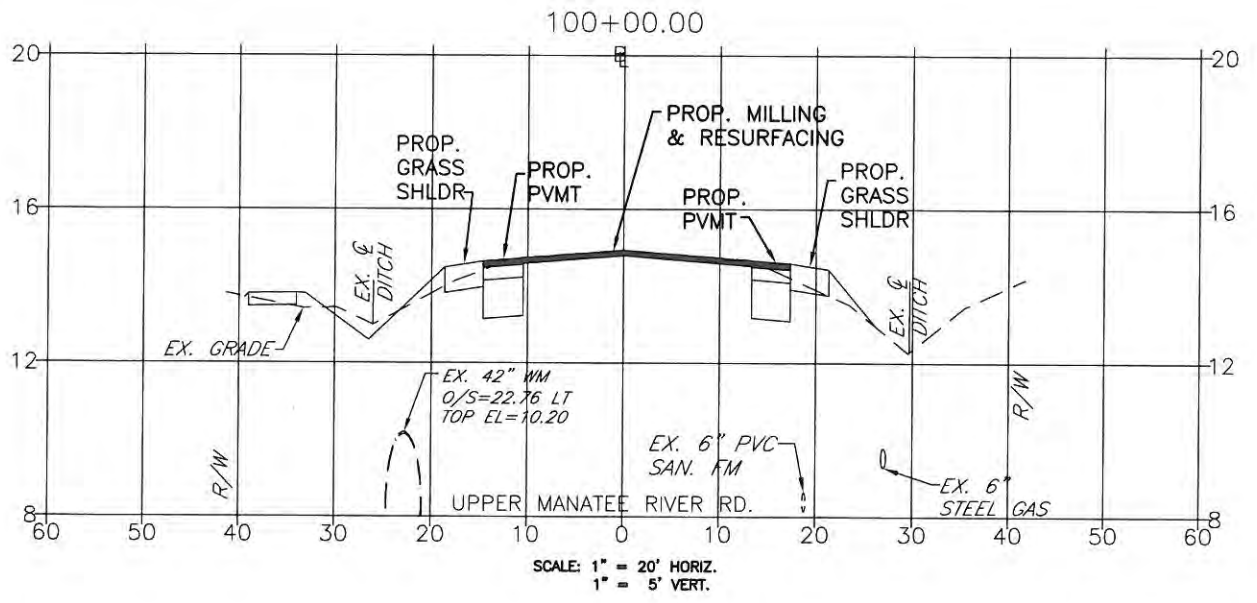
**UPPER MANATEE RIVER ROAD**  
**ROADWAY FUNCTIONAL**  
**IMPROVEMENTS**  
**CROSS SECTIONS 92+00 to 97+00**



NO.	REVISION DESCRIPTION	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30/34S/19E
SCALE	AS SHOWN
DRAWN BY	DATE
DESIGNED	DATE
CHECKED	DATE
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777
STATE OF	
Signature & Date	

UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 CROSS SECTIONS 98+00 TO 103+00

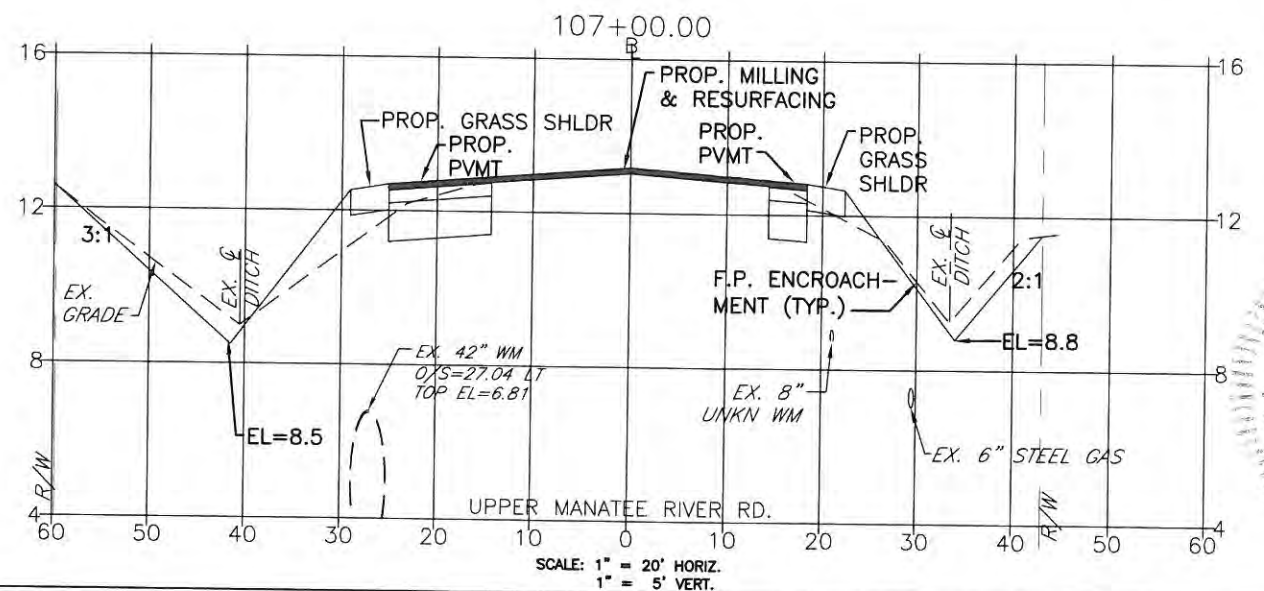
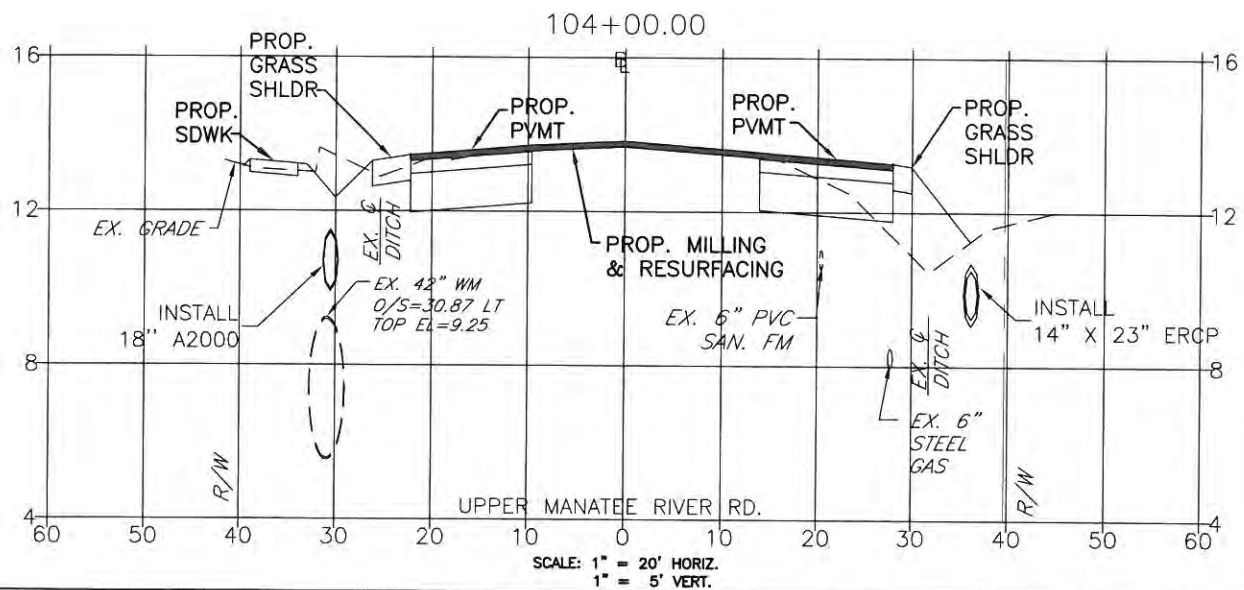
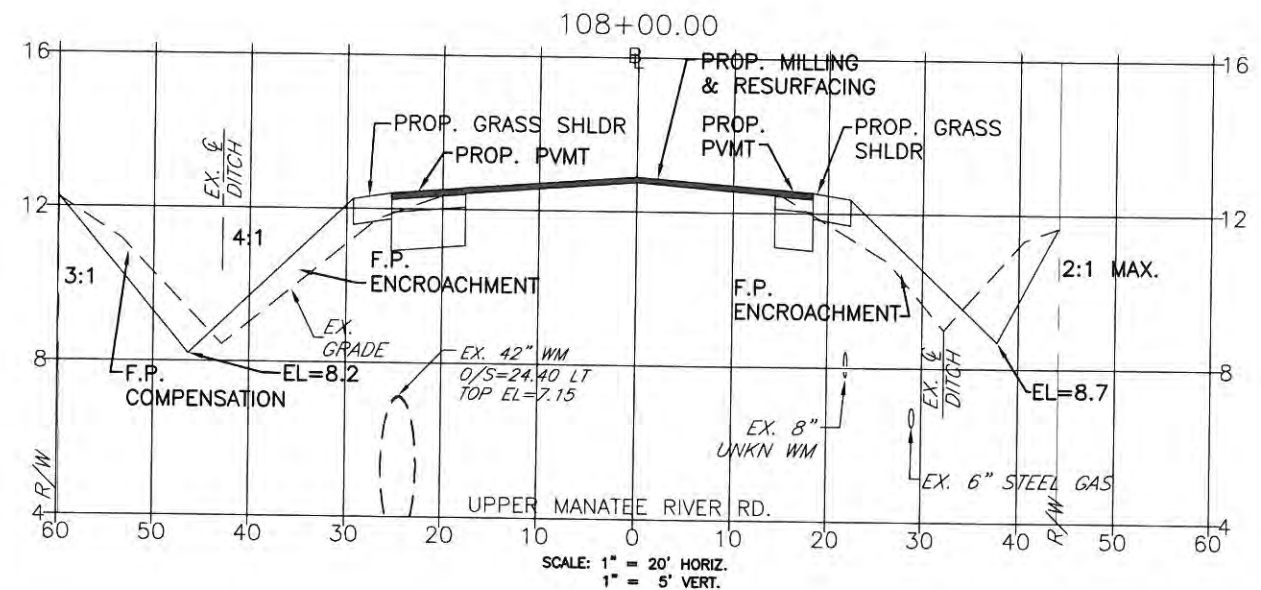
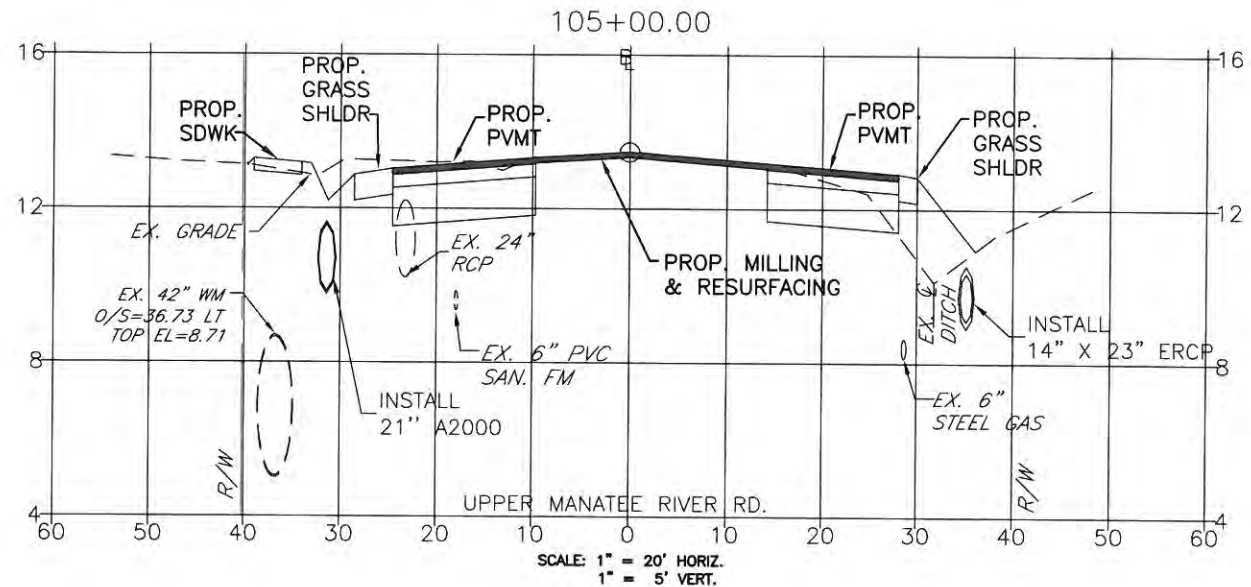
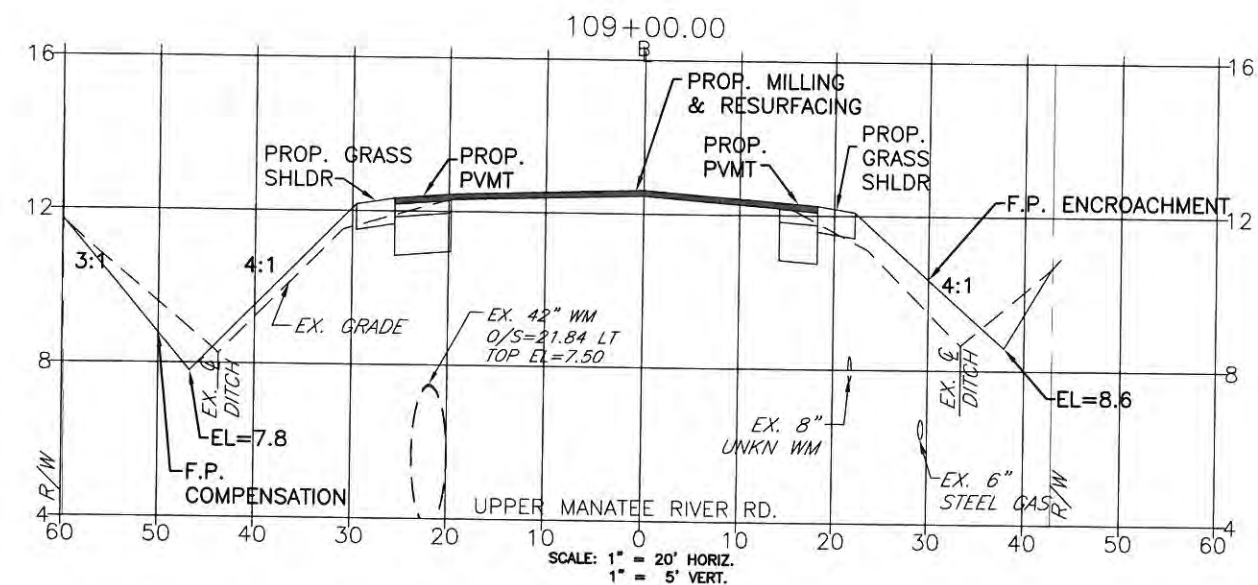
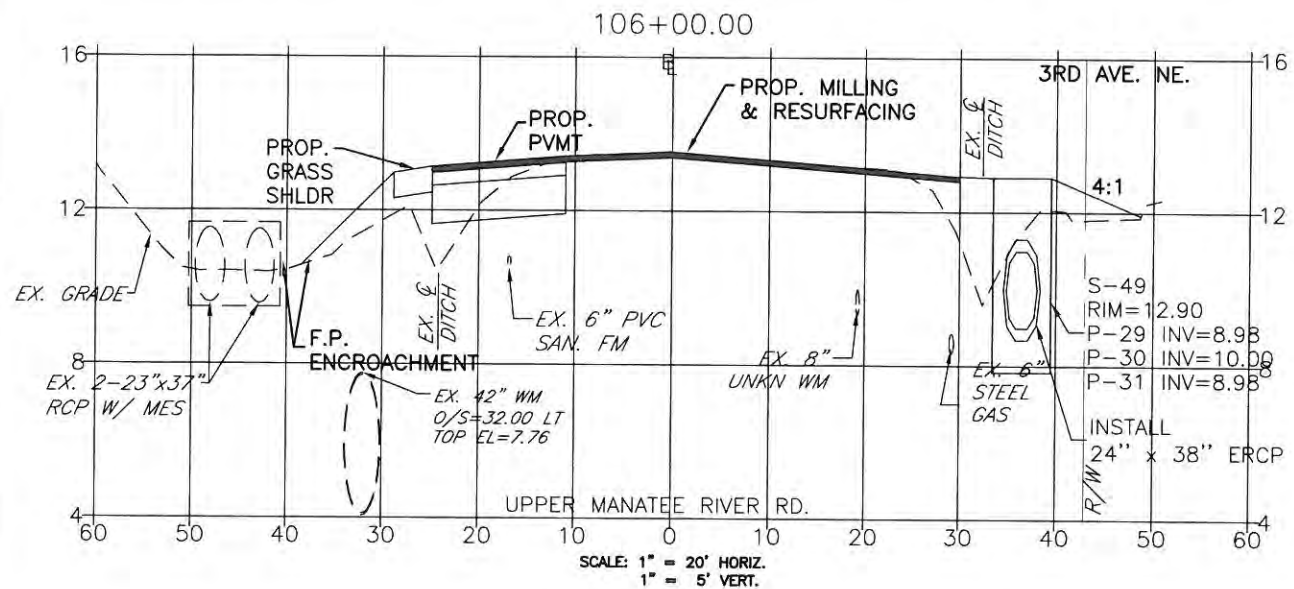


NO.	REVISION DESCRIPTION	DATE	BY

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC/TWN/RGE	19-20, 29E-80/34S/19E
SCALE	AS SHOWN
DESIGNED BY	JP/PBF 06/20/12
DRAWN BY	KR/CB 06/20/12
CHECKED BY	JP/PBF 06/20/12
DESIGNED	JP/PBF 06/20/12
DRAWN	KR/CB 06/20/12
CHECKED	JP/PBF 06/20/12

Signature & Date  
 SHEET 31

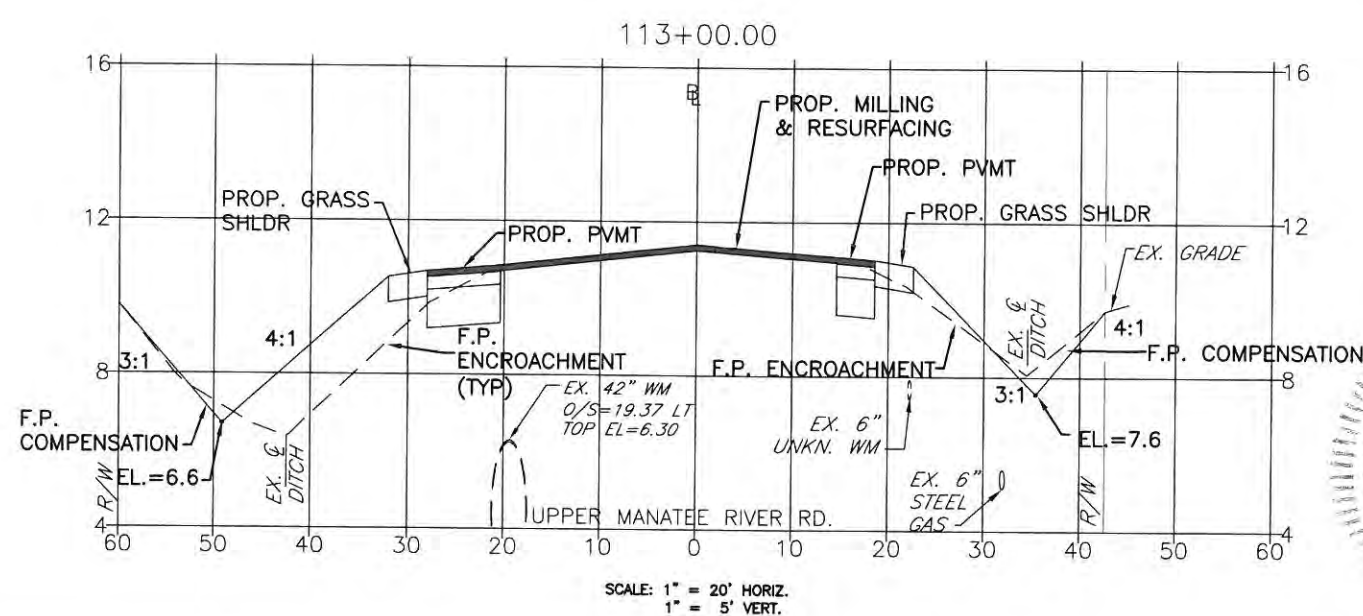
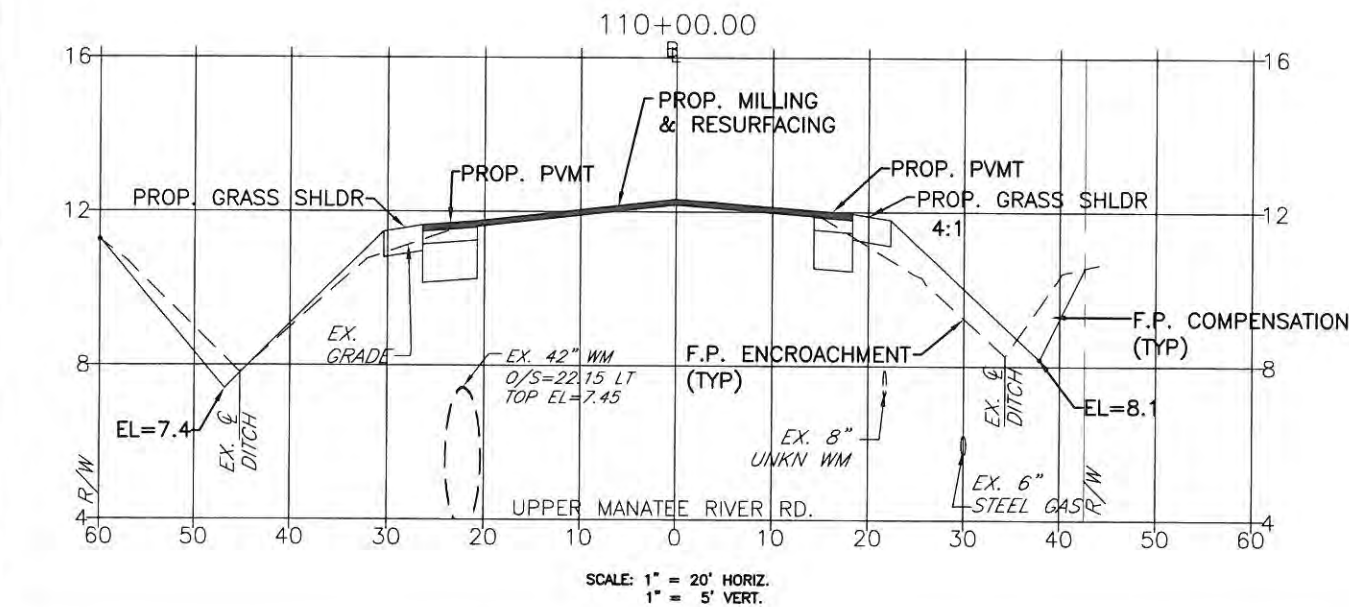
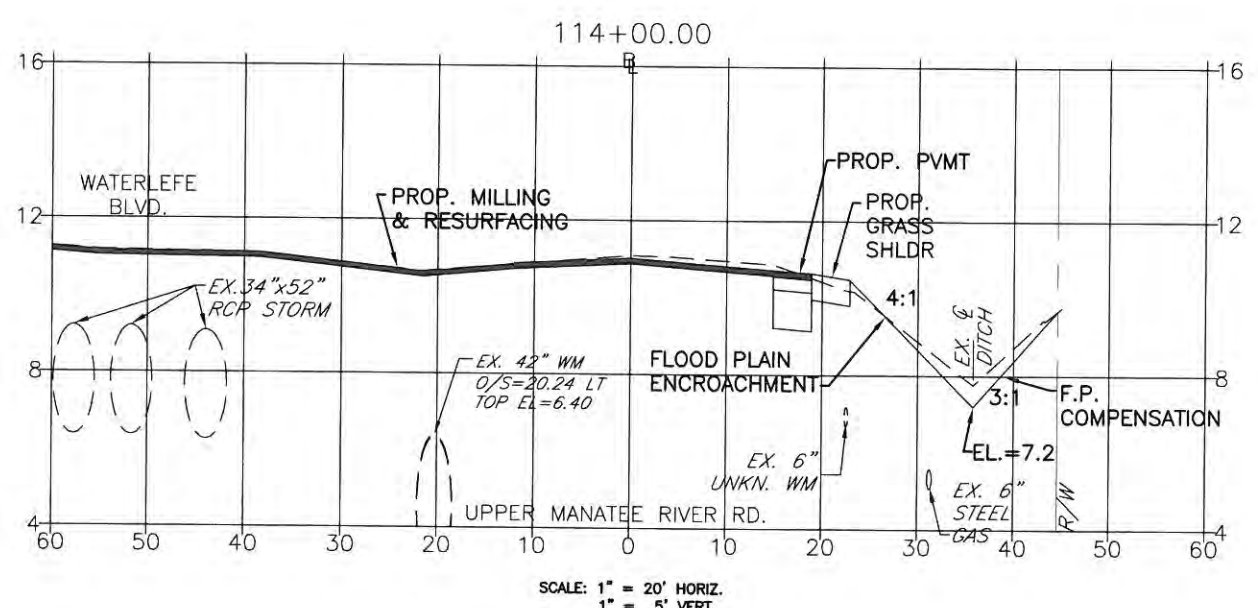
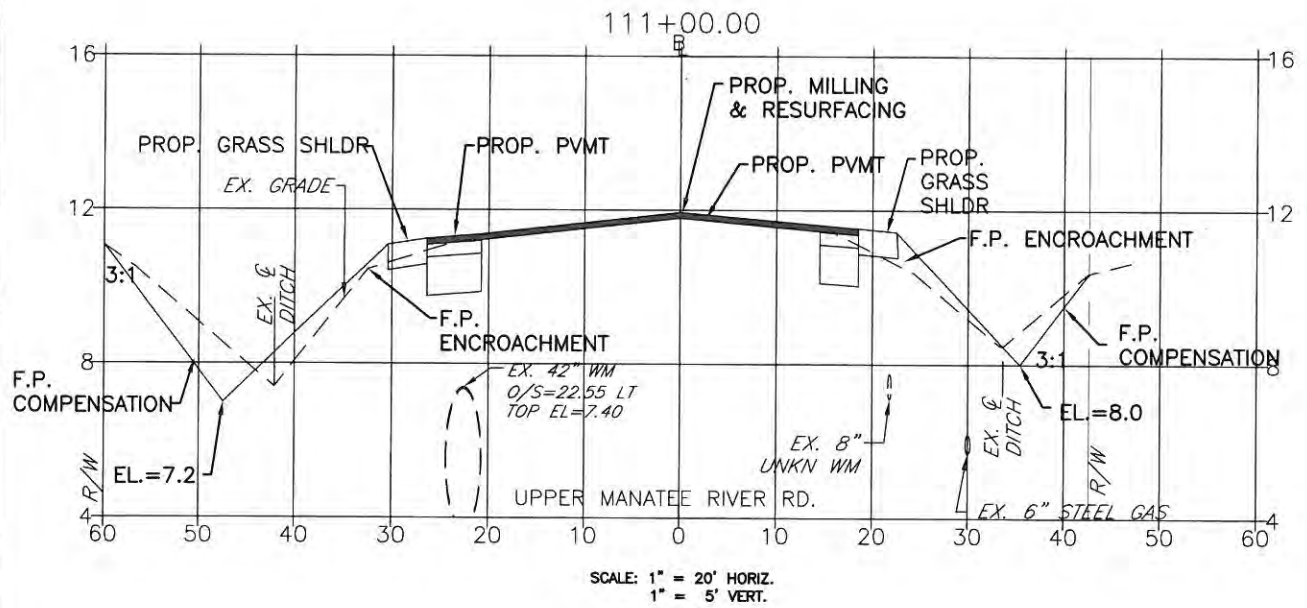
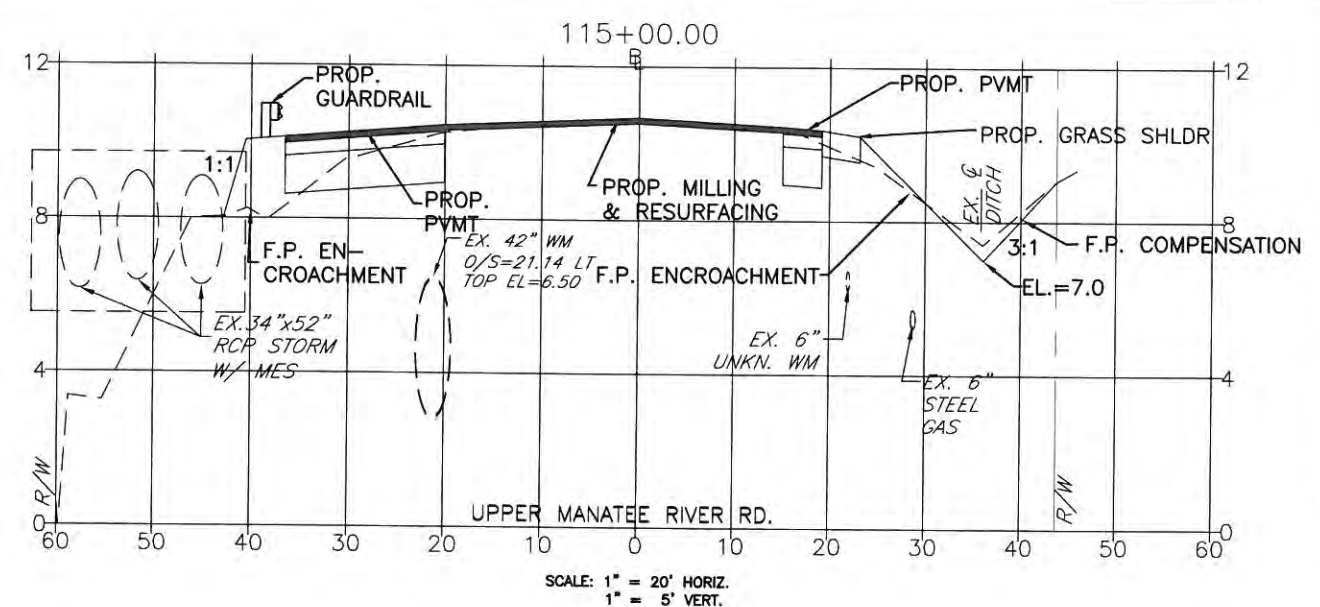
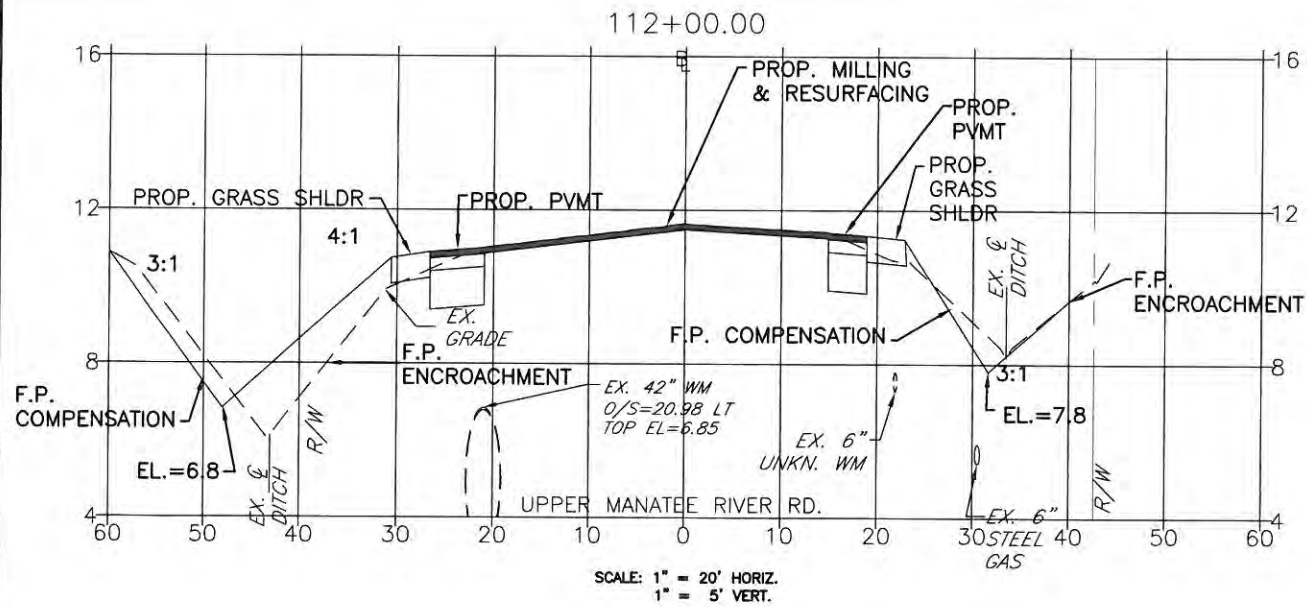
**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 104+00 TO 109+00**



NO.	REVISION DESCRIPTION	BY	DATE

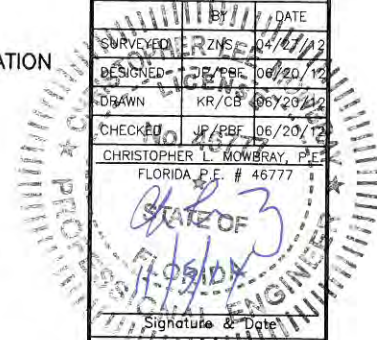
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE.	19-20, 29-30/34S/19E
SCALE	AS SHOWN
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CHECKED	JP/PBF 06/26/12
DRAWN	KR/CB 06/29/12
DATE	04/27/12
BY	ZNS
DATE	06/26/12
DRAWN	KR/CB
CHECKED	JP/PBF
DESIGNED	JP/PBF
DATE	06/26/12
BY	JP/PBF
DATE	06/26/12
PROJECT	UPPER MANATEE RIVER ROAD ROADWAY FUNCTIONAL IMPROVEMENTS
CROSS SECTIONS	104+00 TO 109+00
SHEET	32

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 110+00 TO 115+00**



NO.	REVISION DESCRIPTION	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	18-20
SCALE	29-30/34S/19E AS SHOWN
DATE	
SURVEYED	
DESIGNED	
DRAWN	
CHECKED	
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777	
Signature & Date	
<b>SHEET 133</b>	

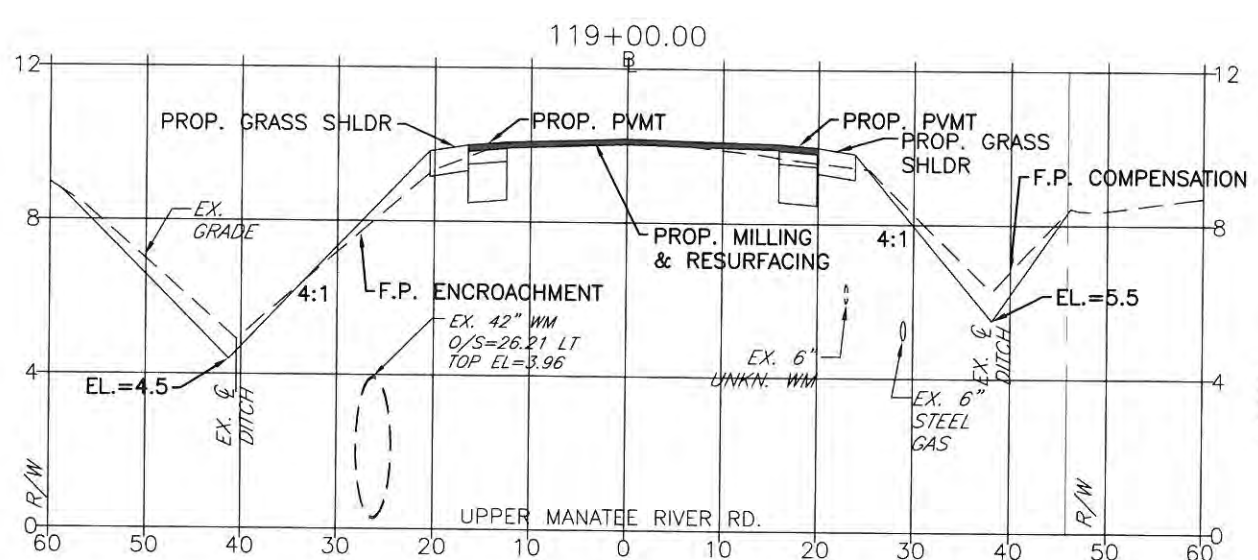
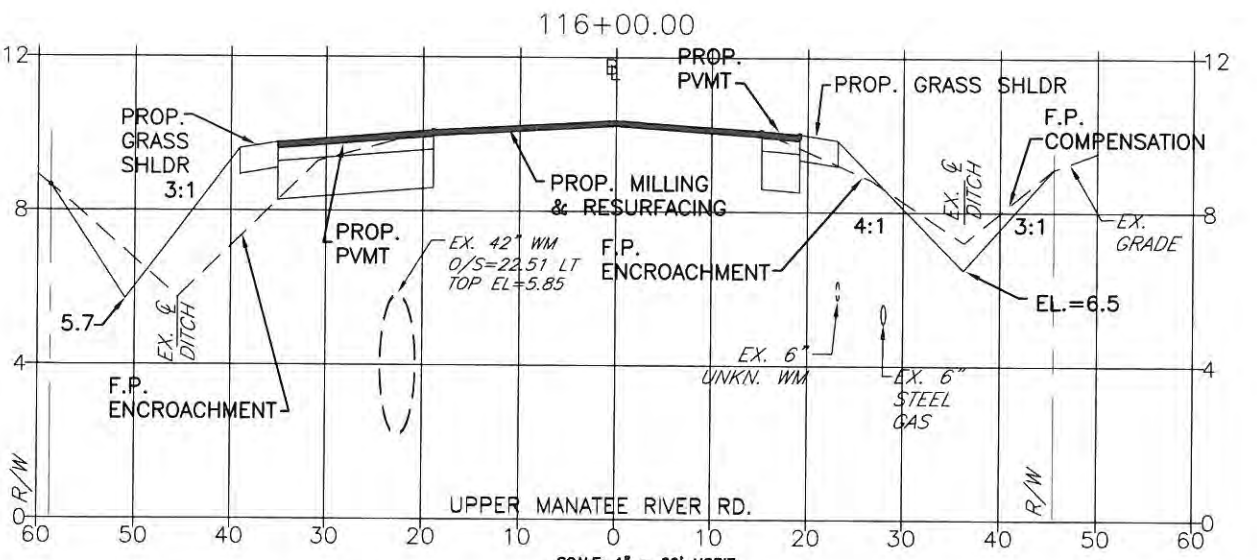
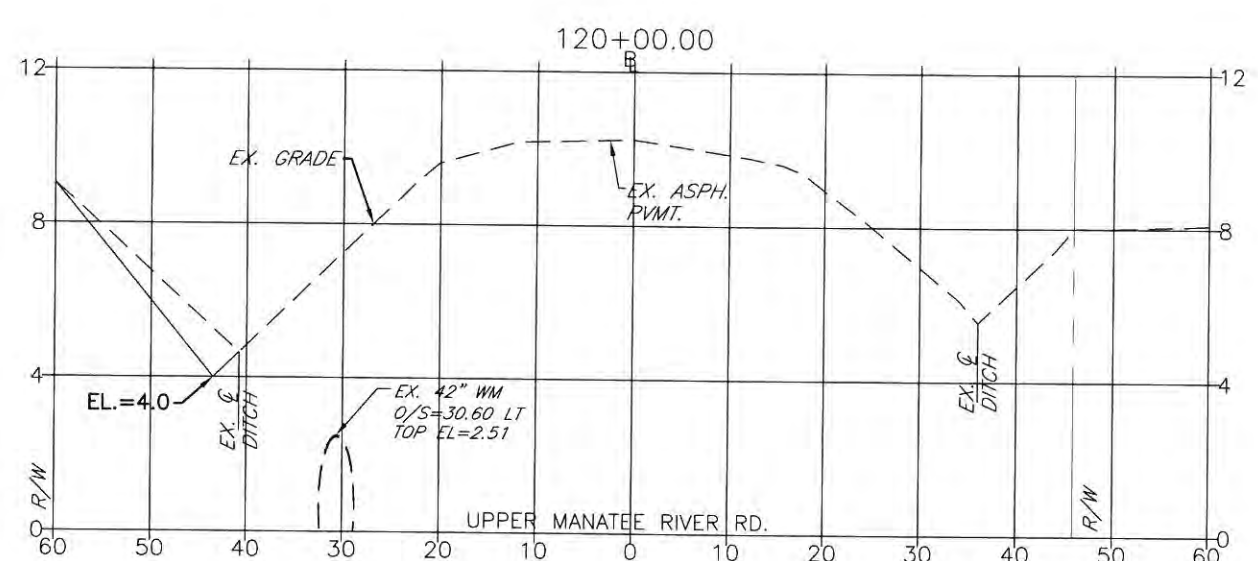
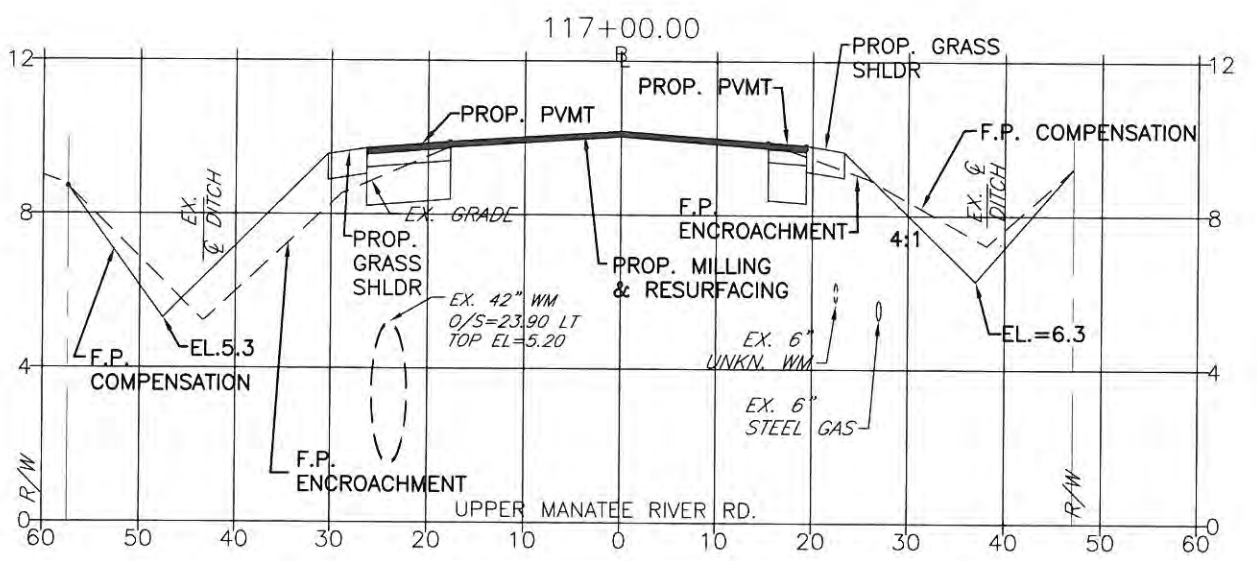
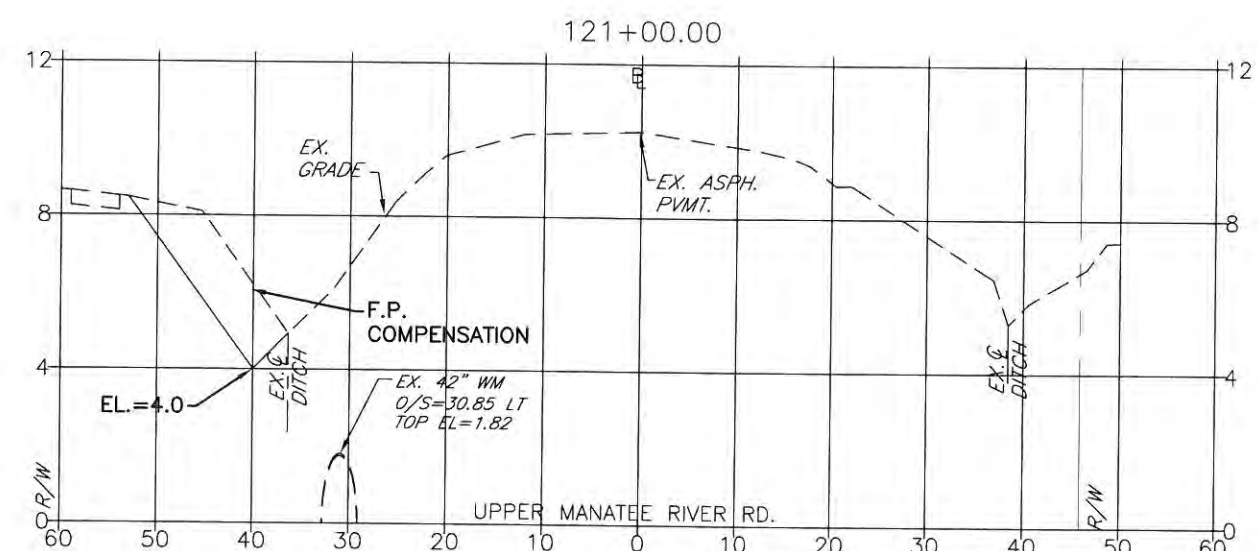
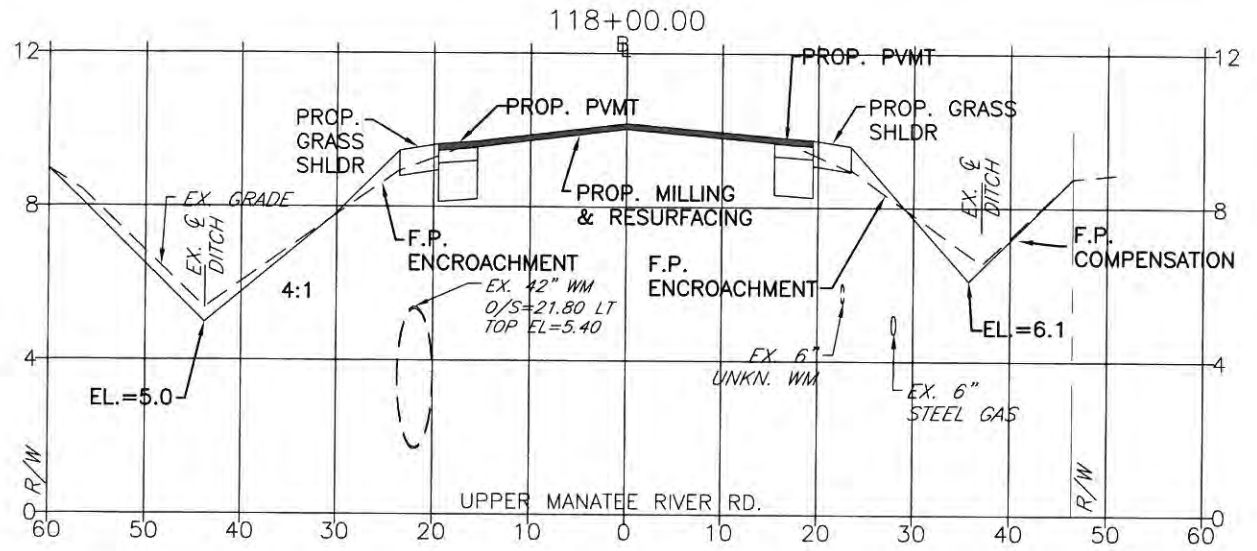






PUBLIC WORKS DEPARTMENT  
ENGINEERING SERVICES  
1022 26th Avenue East, Bradenton, FL 34208

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 116+00 to 121+00**



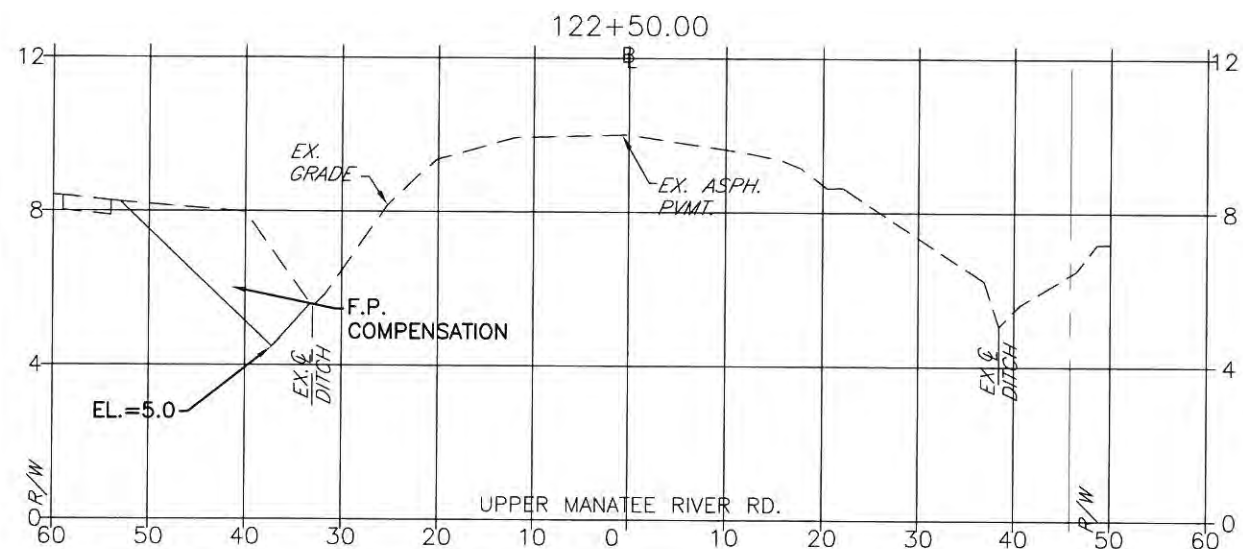
SCALE: 1" = 20' HORIZ.  
1" = 5' VERT.

NO.	DATE	BY	REVISION DESCRIPTION
PROJECT #	307-6082660		
SURVEY #	FILE 00-42783		
SEC./TWN./RGE	19-20 29-30/34S/19E		
SCALE	AS SHOWN		
DESIGNED BY	ZNS	04/27/12	
DRAWN	KR/CB	06/20/12	
CHECKED	JP/PBF	06/20/12	
DESIGNED BY	CHRISTOPHER L. MOWBRAY, P.E.		
FLORIDA P.E. #	46777		
STATE OF FLORIDA			
PROFESSIONAL ENGINEER			
SIGNATURE & DATE			

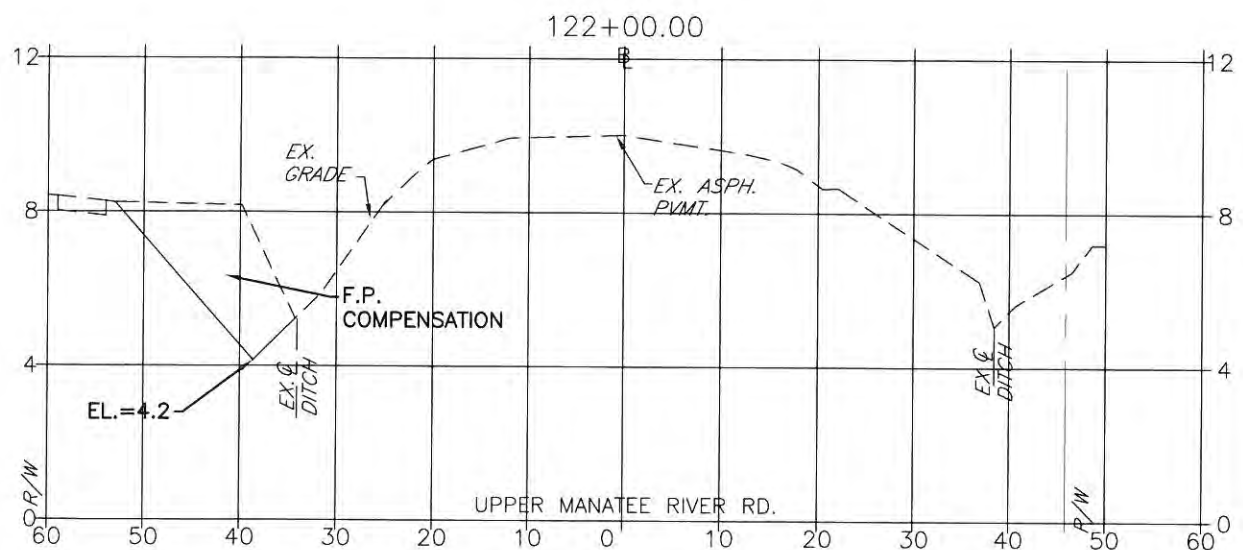


PUBLIC WORKS DEPARTMENT  
ENGINEERING SERVICES  
1022 26th Avenue East, Bradenton, FL 34208

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
CROSS SECTIONS 122+00 to 122+50**



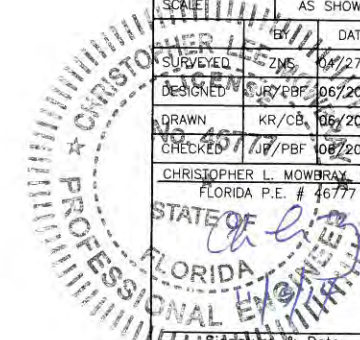
SCALE: 1" = 20' HORIZ.  
1" = 5' VERT.



SCALE: 1" = 20' HORIZ.  
1" = 5' VERT.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30/34S/19E
SCALE	AS SHOWN
BY	DATE
SURVEYED	08/27/12
DESIGNED	06/20/12
DRAWN	06/20/12
CHECKED	08/20/12
CHRISTOPHER L. MOWBRAL, P.E. FLORIDA P.E. # 46777	
Signature & Date	



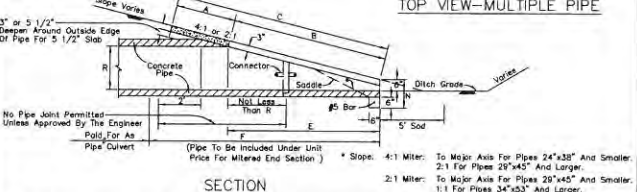
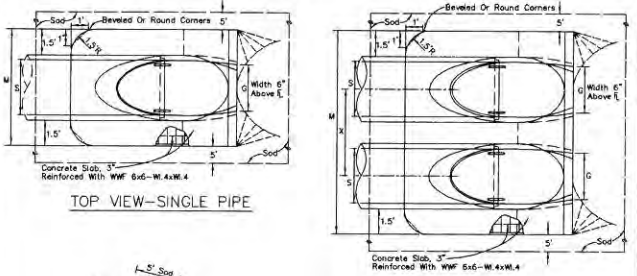


# UPPER MANATEE RIVER ROAD ROADWAY FUNCTIONAL IMPROVEMENTS DETAILS

**ELLIPTICAL PIPE**

DIMENSIONS & QUANTITIES

Rise R	Span S	X	A	B	C	E	F	G	M			
									Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
12"	18"	2'-10"	1.87	1.82	3.58	1.58	4"	1.50	4.92	7.75	10.58	13.42
14"	23"	3'-0"	2.11	1.99	4.09	1.69	5"	1.90	5.36	8.21	11.04	13.79
16"	30"	4'-0"	2.37	2.25	5.03	2.13	6"	2.37	6.04	10.04	14.04	18.04
24"	36"	5'-0"	3.05	2.95	6.55	3.00	8"	3.05	8.28	13.28	19.04	25.28
30"	45"	6'-11"	3.54	3.49	7.73	3.50	8"	3.19	7.50	13.42	19.33	25.28
36"	54"	7'-10"	3.82	3.72	8.72	4.00	8"	3.57	8.25	15.20	22.25	29.25
42"	60"	9'-0"	4.22	4.10	9.80	4.50	8"	3.95	9.00	16.75	24.50	32.40
48"	68"	10'-11"	4.62	4.50	10.81	5.00	10"	4.28	9.67	18.58	27.50	36.42
54"	78"	12'-0"	5.05	4.95	11.84	5.50	10"	4.69	10.45	20.33	30.25	40.17
60"	84"	13'-11"	5.48	5.38	12.89	6.00	12"	5.05	11.25	22.15	33.00	43.00
66"	91"	14'-11"	5.92	5.83	13.96	6.50	12"	5.45	12.07	23.92	35.75	45.75
72"	99"	16'-0"	6.38	6.33	15.06	7.00	15"	5.83	12.92	25.72	38.50	48.50
78"	107"	17'-0"	6.85	6.80	16.19	7.50	15"	6.23	13.80	27.55	41.25	51.25
84"	115"	18'-0"	7.34	7.29	17.34	8.00	15"	6.65	14.71	29.42	44.00	54.00



MANATEE COUNTY TRANSPORTATION DEPARTMENT

MITERED END SECTION FOR ELLIPTICAL, SINGLE, AND MULTIPLE PIPES

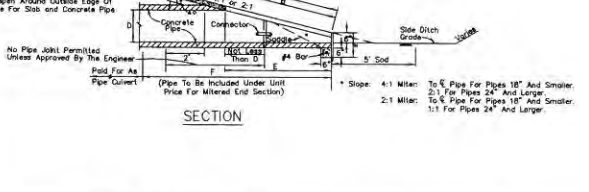
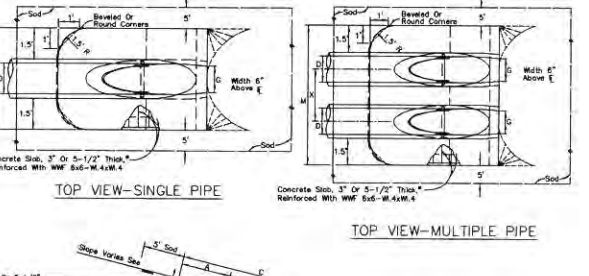
102.1

6/12/07  
DATE OF B.O.C.C. APPROVAL

**ROUND PIPE**

DIMENSIONS & QUANTITIES

D	X	A	B	C	E	F	G	M			
								Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
18"	2'-7"	1.92	2.18	4.10	2.06	5"	1.92	4.83	7.21	9.79	12.37
24"	3'-10"	2.87	2.74	4.71	2.56	6"	2.87	6.50	7.99	11.50	14.18
30"	4'-3"	3.10	3.05	5.31	3.06	6"	3.10	7.50	8.99	12.93	15.79
36"	5'-0"	3.35	3.30	6.00	3.56	8"	3.35	8.50	10.33	14.50	18.43
42"	5'-9"	3.60	3.55	6.70	4.06	8"	3.60	9.50	11.77	16.25	21.07
48"	6'-6"	3.85	3.80	7.40	4.56	10"	3.85	10.50	13.21	18.25	23.71
54"	7'-3"	4.10	4.05	8.10	5.06	10"	4.10	11.50	14.65	20.25	26.35
60"	8'-0"	4.35	4.30	8.80	5.56	12"	4.35	12.50	16.09	22.25	28.99
66"	8'-9"	4.60	4.55	9.50	6.06	12"	4.60	13.50	17.53	24.25	31.63
72"	9'-6"	4.85	4.80	10.20	6.56	12"	4.85	14.50	18.97	26.25	34.27
78"	10'-3"	5.10	5.05	10.90	7.06	15"	5.10	15.50	20.41	28.25	36.91
84"	11'-0"	5.35	5.30	11.60	7.56	15"	5.35	16.50	21.85	30.25	39.55

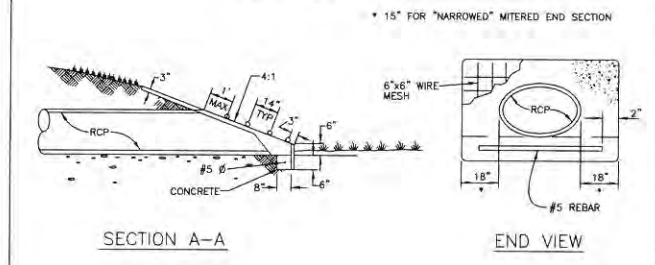
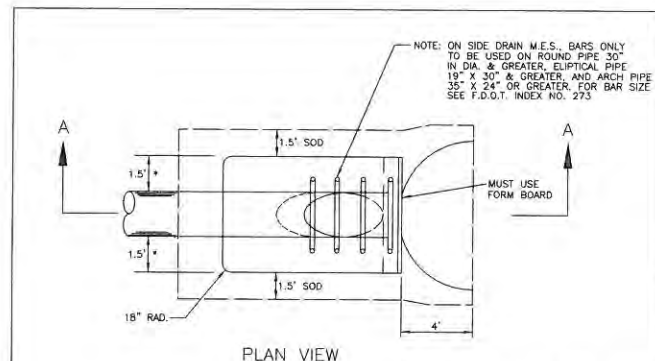


MANATEE COUNTY TRANSPORTATION DEPARTMENT

MITERED END SECTION FOR ROUND, SINGLE & MULTIPLE PIPES

102.2

6/12/07  
DATE OF B.O.C.C. APPROVAL



1. ALL CURB & GUTTER SHALL PROVIDE A 0.125" TO 0.25" CONTRACTION JOINT AT 10' CENTERS.

2. ALL CURB & GUTTER SHALL BE CONSTRUCTED IN COMPLIANCE WITH FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.

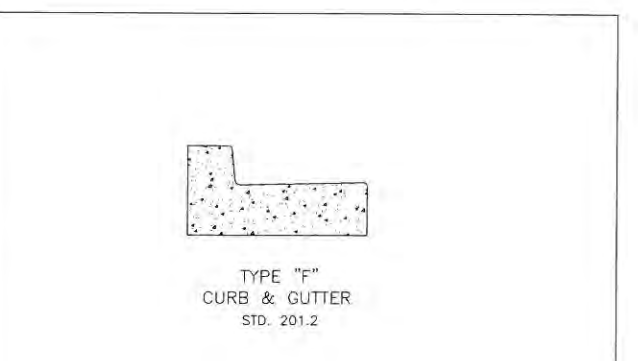
3. TOP OF FINISHED PAVEMENT SHALL BE 0.25" ABOVE LIP OF GUTTER, LOW SIDE.

MANATEE COUNTY TRANSPORTATION DEPARTMENT

DRIVEWAY AND ROAD PIPE MITERED END SECTION

103.0

6/12/07  
DATE OF B.O.C.C. APPROVAL



TYPE "F" CURB & GUTTER  
STD. 201.2

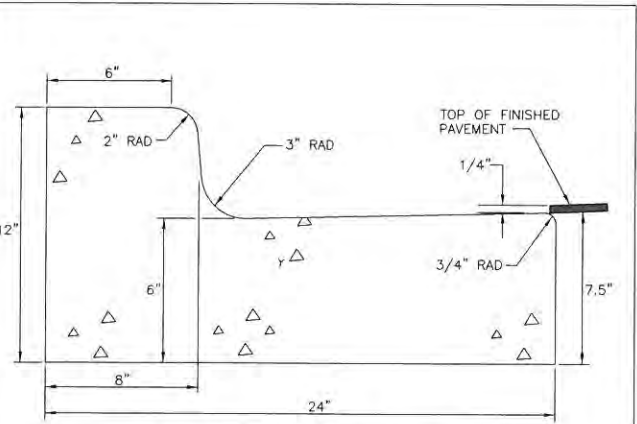
TYPE "AB" MODIFIED CURB & GUTTER  
STD. 201.3

MANATEE COUNTY TRANSPORTATION DEPARTMENT

CURB & GUTTER CONTROL SHEET

201.0

6/12/07  
DATE OF B.O.C.C. APPROVAL



TYPE "F" BARRIER CURB & GUTTER

A) CLASS 1 CONCRETE 3,000 P.S.I. AT 28 DAYS.

B) CURB AND GUTTER SHALL MEET THE SPECIFICATIONS ESTABLISHED BY FLORIDA D.O.T. STANDARD SPECIFICATIONS PER F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS INDEX NO. 300, LATEST REVISION.

MANATEE COUNTY TRANSPORTATION DEPARTMENT

TYPE F CURB & GUTTER

201.2

6/12/07  
DATE OF B.O.C.C. APPROVAL

GENERAL NOTES

1. ALL REFERENCED STANDARDS SHALL BE LATEST REVISION.
2. CONCRETE SHALL BE CLASS "1" AS SPECIFIED IN SECTION 345 OF F.D.O.T. SPECIFICATIONS.
3. SEE SECTION 425-2.2 "MORTAR" OF FLORIDA D.O.T. SPECIFICATIONS.
4. IRON CASTING SHALL BE AS SPECIFIED IN SECTION 982-B OF F.D.O.T. SPECIFICATIONS. SEE SECTION 425-5.
5. ALL REINFORCEMENT STEEL SHALL BE AS SPECIFIED IN SECTIONS 415 & 931-1 OF F.D.O.T. SPECIFICATIONS.
6. SEE FLORIDA D.O.T. SPECIFICATIONS FOR GRATINGS.
7. SEE FLORIDA D.O.T. SPECIFICATIONS FOR SECTION 125 "EXCAVATION FOR STRUCTURES."
8. PRECAST TOP AND BOTTOM TO BE F.D.O.T. STANDARDS WITH MINIMUM TRAFFIC BEARING 8" THICKNESS.
9. ALL STORMWATER PIPE SHALL BE INSTALLED BEHIND THE CURB OR EDGE OF PAVEMENT AND WITHIN THE RIGHT OF WAY AND WITHIN THE DRAINAGE EASEMENTS.
10. THE FOLLOWING IS THE DRAINAGE STRUCTURE WALL MINIMUM THICKNESS:
 

PRECAST BLOCK	NON-TRAFFIC 6"	8" EITHER WAY
---------------	----------------	---------------

NOTE: FOR DRAINAGE STRUCTURES WITH PIPE DIAMETERS UP TO AND INCLUDING 24", 6" PRECAST WALLS ARE ACCEPTABLE FOR TRAFFIC BEARING.

DIMENSION INDEX

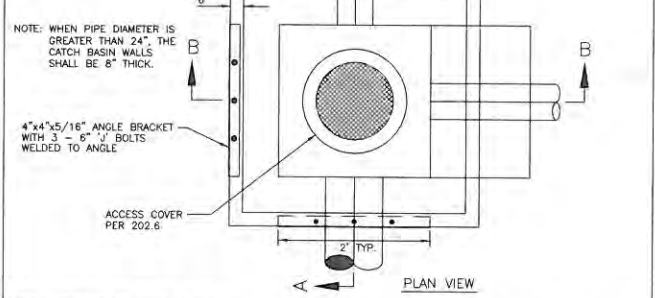
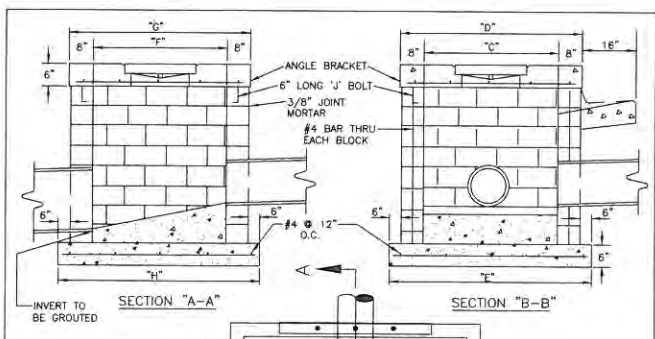
PIPE SIZE	TYPE	"C"	"D"	"E"	"F"	"G"	"H"
15"	RCP	2'8"	4'	5'	4'	5'4"	6'4"
12"x18"	RCP	"	"	"	"	"	"
18"	RCP	"	"	"	"	"	"
14"x23"	RCP	"	"	"	"	"	"
24"	RCP	3'4"	4'8"	5'8"	"	"	"
19"x30"	RCP	4'	5'4"	6'4"	"	"	"
30"	RCP	"	"	"	"	"	"
24"x38"	RCP	5'	6'4"	7'4"	"	"	"
36"	RCP	5'	6'4"	"	"	"	"
66"	RCP	8'5"	9'9"	10'9"	4'8"	6'0"	7'0"

MANATEE COUNTY TRANSPORTATION DEPARTMENT

DRAINAGE CONTROL SHEET

202.0

6/12/07  
DATE OF B.O.C.C. APPROVAL



NOTE: DIMENSIONS PER SECTION 202.0

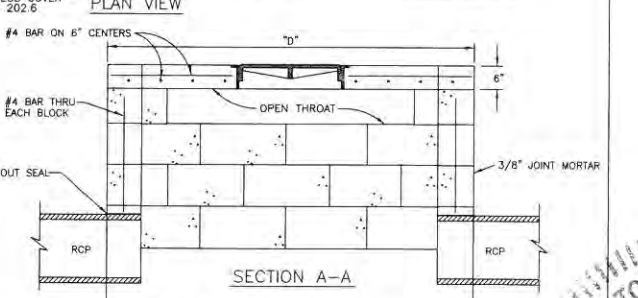
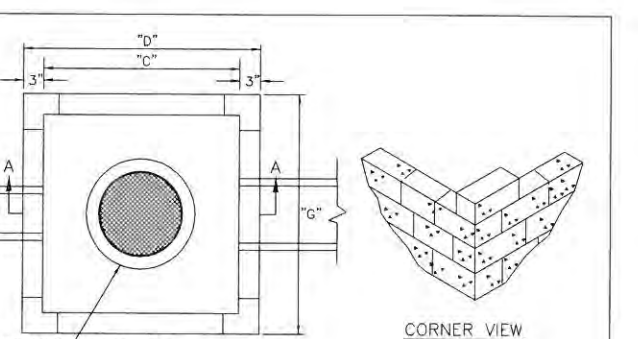
- A) THE FOLLOWING MATERIALS TO BE AS SPECIFIED IN THE FLORIDA D.O.T. SPEC'S, 1991, SECTION 346 CONCRETE, SECTION 982-B IRON CASTING, SECTION 931-1 REINFORCEMENT STEEL, SECTION 425 INLETS, MANHOLES & JUNCTION BOXES.
- B) FILL BLOCKS WITH 3,000 PSI CONCRETE, USE #4 ROD IN EACH BLOCK, 16" O/C.
- C) 2" MINIMUM COVER ON ALL REBAR.
- D) USE #4 REBARS ON 6" CENTERS BOTH WAYS ON LID; NO.4 REBARS ON 12" CENTERS BOTH WAYS ON FLOOR SLAB.
- E) SEE SHEET 202.0 FOR GENERAL NOTES AND DIMENSION INDEX.
- F) ALL EXPOSED CORNERS AND EDGES TO BE CHAMFERED 3/4".
- G) PRECAST BOXES AS SPECIFIED IN F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS (2000) ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.
- H) ALL PIPE ENTRIES TO CATCH BASIN TO BE GROUDED AND SEALED.

MANATEE COUNTY TRANSPORTATION DEPARTMENT

TYPICAL CONC. BLOCK BOX

202.1

6/12/07  
DATE OF B.O.C.C. APPROVAL



- A) DROP INLET IS NOT DESIGNED TO BE SUBJECTED TO VEHICULAR TRAFFIC.
- B) NUMBER OF SIDES OPEN FOR DRAINAGE DEPENDS UPON FLOW VOLUME REQUIREMENTS.
- C) THE FOLLOWING MATERIALS SHALL BE AS SPECIFIED IN FLORIDA D.O.T. SPEC'S, 2000, SEC 346 CONCRETE, SEC 982-B IRON CASTING, SEC 931-1 REINFORCED STEEL.
- D) FILL BLOCKS WITH 3,000 P.S.I. CONCRETE (EACH CELL), USE #4 ROD IN EACH BLOCK, 16" O/C.
- E) USE #4 ROD ON 6" CENTERS BOTH WAYS ON LID.
- F) SEE SHEET # 202.0 GENERAL NOTES AND DIMENSIONS INDEX, ALSO SHEET 202.1 TYP. CONC. BOX.
- G) PRECAST BOXES TO BE F.D.O.T. SPECIFICATIONS ARE AN ACCEPTABLE ALTERNATE.
- H) INVERT TO BE GROUDED (SEE 202.1).
- I) PRECAST BOXES AS SPECIFIED IN F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.
- J) ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

MANATEE COUNTY TRANSPORTATION DEPARTMENT

THROAT DETAIL FOR DROP INLET

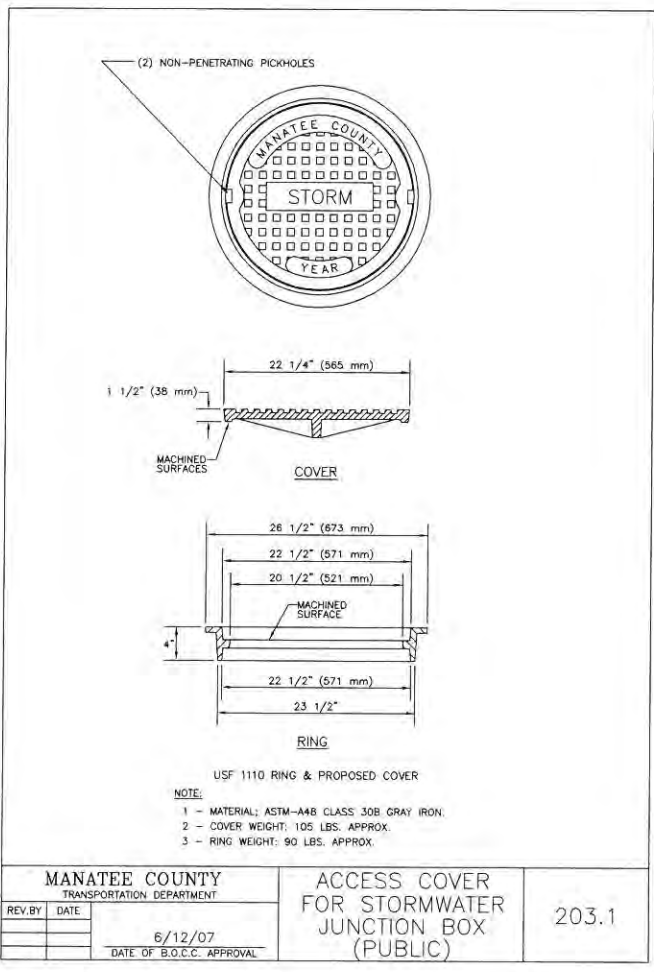
202.3

6/12/07  
DATE OF B.O.C.C. APPROVAL

REVISION	DESCRIPTION	DATE

PROJECT # 307-6082660  
 SURVEY # FILE 00-42783  
 SEC./TWN/RGE 19-20, 29-30, 34S/19E  
 SCALE 1/2" = 1'-0" NTSS  
 DESIGNED JP/PBF 06/20/12  
 DRAWN KR/CB 06/20/12  
 CHECKED JP/PBF 06/20/12  
 AUTHORITY FLORIDA PROFESSIONAL ENGINEERS  
 SIGNATURE & DATE  
 SHEET 35

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
DETAILS**



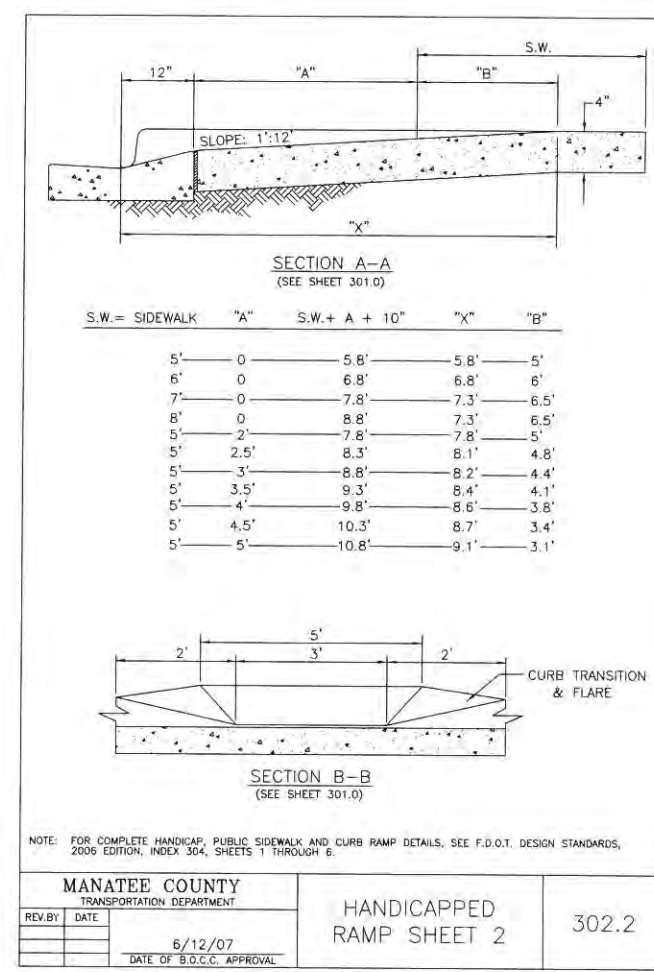
MANATEE COUNTY TRANSPORTATION DEPARTMENT		ACCESS COVER FOR STORMWATER JUNCTION BOX (PUBLIC)	203.1
REV. BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	

**GENERAL NOTES**

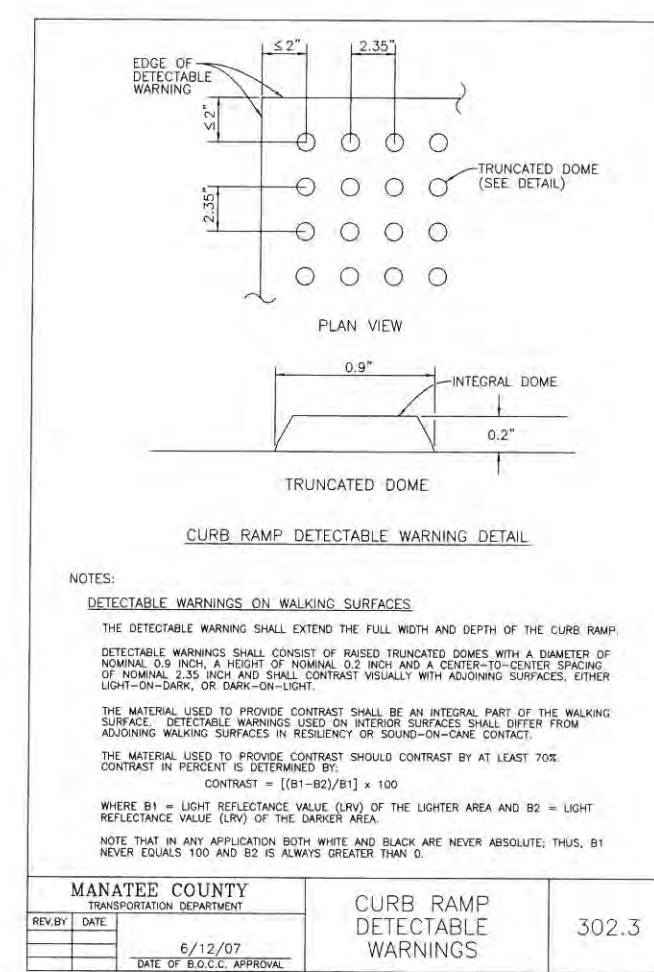
- SIDEWALK SHALL BE CONSTRUCTED A MINIMUM OF 4" THICK, USING 3000 PSI CONCRETE, WHERE SIDEWALK BISECTS A DRIVEWAY, THE MINIMUM SHALL BE 6" OF CLASS 1 CONCRETE REINFORCED WITH 6"x6" #10 WIRE MESH. \* SEE SHEETS #101.2 & 101.3.
- ALL SIDEWALKS SHALL BE CONSTRUCTED TO THE SPECIFICATIONS OF THE MANATEE COUNTY LAND DEVELOPMENT CODE, SECTION 722. A MINIMUM (5) FOOT WIDE SIDEWALK SHALL BE INSTALLED ALONG THE NORTH AND WEST SIDES OF ALL NEW LOCAL STREETS WHICH ARE CONSTRUCTED IN CONJUNCTION WITH A NEW RESIDENTIAL DEVELOPMENT. A SIDEWALK A MINIMUM OF (5) FEET IN WIDTH SHALL BE INSTALLED ON BOTH SIDES OF ALL THOROUGHFARES. REFER TO F.O.D.T. ROADWAY AND TRAFFIC STANDARDS, LATEST REVISION FOR CURB CUT RAMP SPECIFICATIONS.
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH, THE SURFACE VARIATIONS SHALL NOT BE MORE THAN 1/4" UNDER A TEN FOOT STRAIGHTEDGE, NOR MORE THAN 1/8" ON A FIVE-FOOT TRAVERSE SECTION. THE EDGE OF THE SIDEWALK SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
- EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE SIDEWALKS AND THE CURB, OR DRIVEWAY OR AT FIXED OBJECTS AND SIDEWALK INTERSECTIONS SHALL BE 1/2" MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213. FOR LONG POURS, AN EXPANSION JOINT SHALL BE PLACED AT INTERVALS NOT TO EXCEED 120'.
- CONTRACTION JOINTS:  
OPEN TYPE JOINTS  
OPEN TYPE CONTRACTION JOINTS SHALL BE FORMED BY STAKING A METAL BULKHEAD IN PLACE AND DEPOSITING THE CONCRETE ON BOTH SIDES. AFTER THE CONCRETE HAS SET SUFFICIENTLY TO PRESERVE THE WIDTH AND THE SHAPE OF THE JOINT, THE BULKHEAD SHALL BE REMOVED. AFTER THE SIDEWALK HAS BEEN FINISHED OVER THE JOINT, THE SLOT SHALL BE FINISHED WITH A TOOL HAVING A 1/2" RADIUS.  
SAWED JOINTS  
A SLOT APPROXIMATELY 3/16" WIDE AND NOT LESS THAN 1" DEEP AT 10' CENTERS SHALL BE CUT WITH A CONCRETE SAW AFTER THE CONCRETE HAS SET.
- SIDEWALKS ALONG OTHER STREETS SHALL BE CONSTRUCTED AND DEDICATED AS REQUIRED BY THE APPROVING AUTHORITY WHEN NECESSARY TO CONTINUE AN EXISTING OR PROPOSED SIDEWALK.
- HANDICAP RAMPS SHALL MEET FLORIDA ACCESSIBILITIES STANDARDS, AND SECTIONS 301.0, 301.1 AND 301.2.
- ALL SIDEWALKS ON R/W WITHIN 10' OF AN EXISTING OR PROPOSED TREE THAT WILL EXCEED 6" IN DIAMETER AT MATURITY SHALL BE 5" THICK AND CONTAIN 2-#3 REBAR CENTERED VERTICALLY AND SPACED 3' ON CENTER. PALMS ARE NOT CONSIDERED TREES.

\*NOTE: FOR COMPLETE SIDEWALK DETAILS, SEE F.O.D.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6 AND INDEX 310, SHEETS 1 & 2.

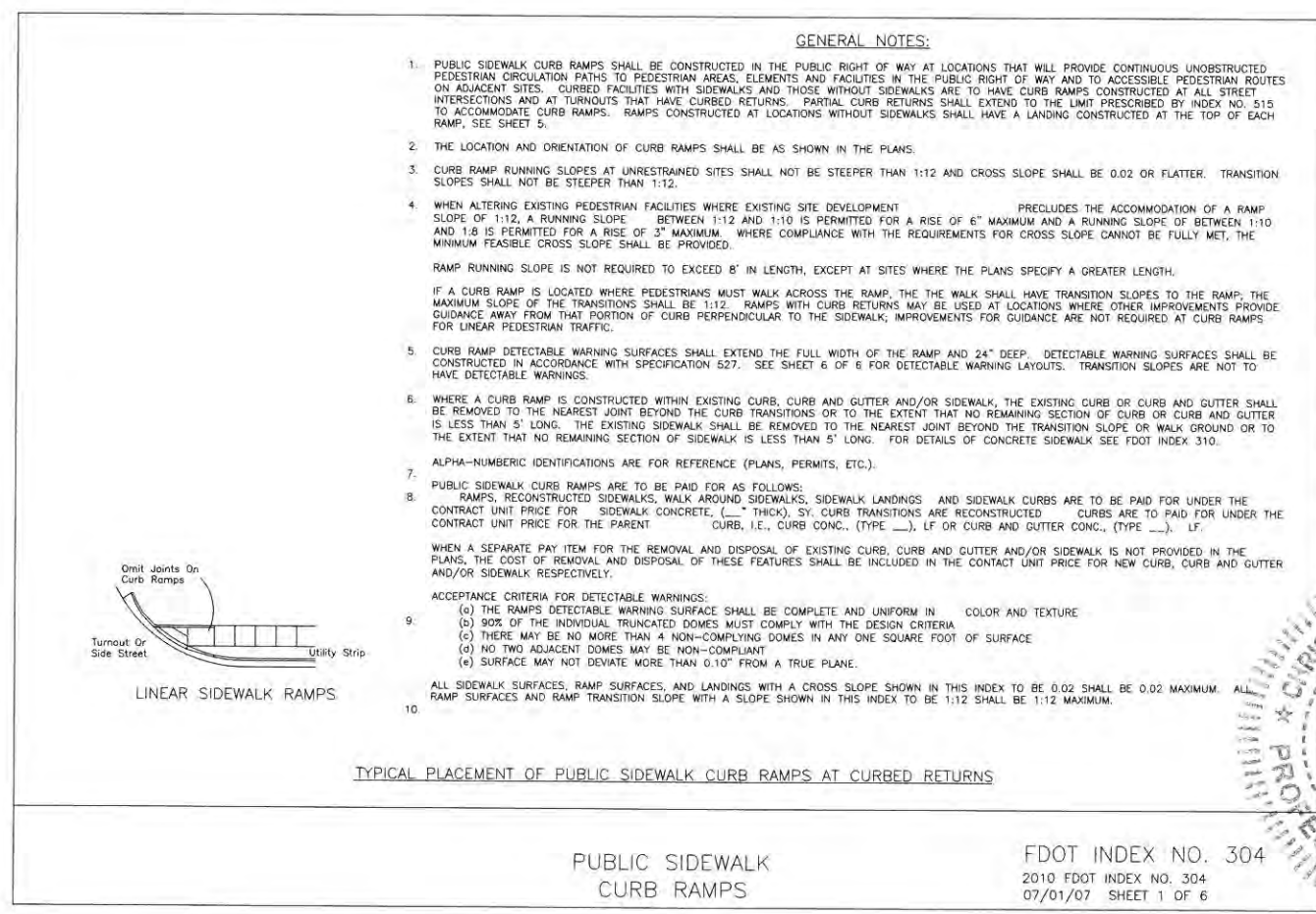
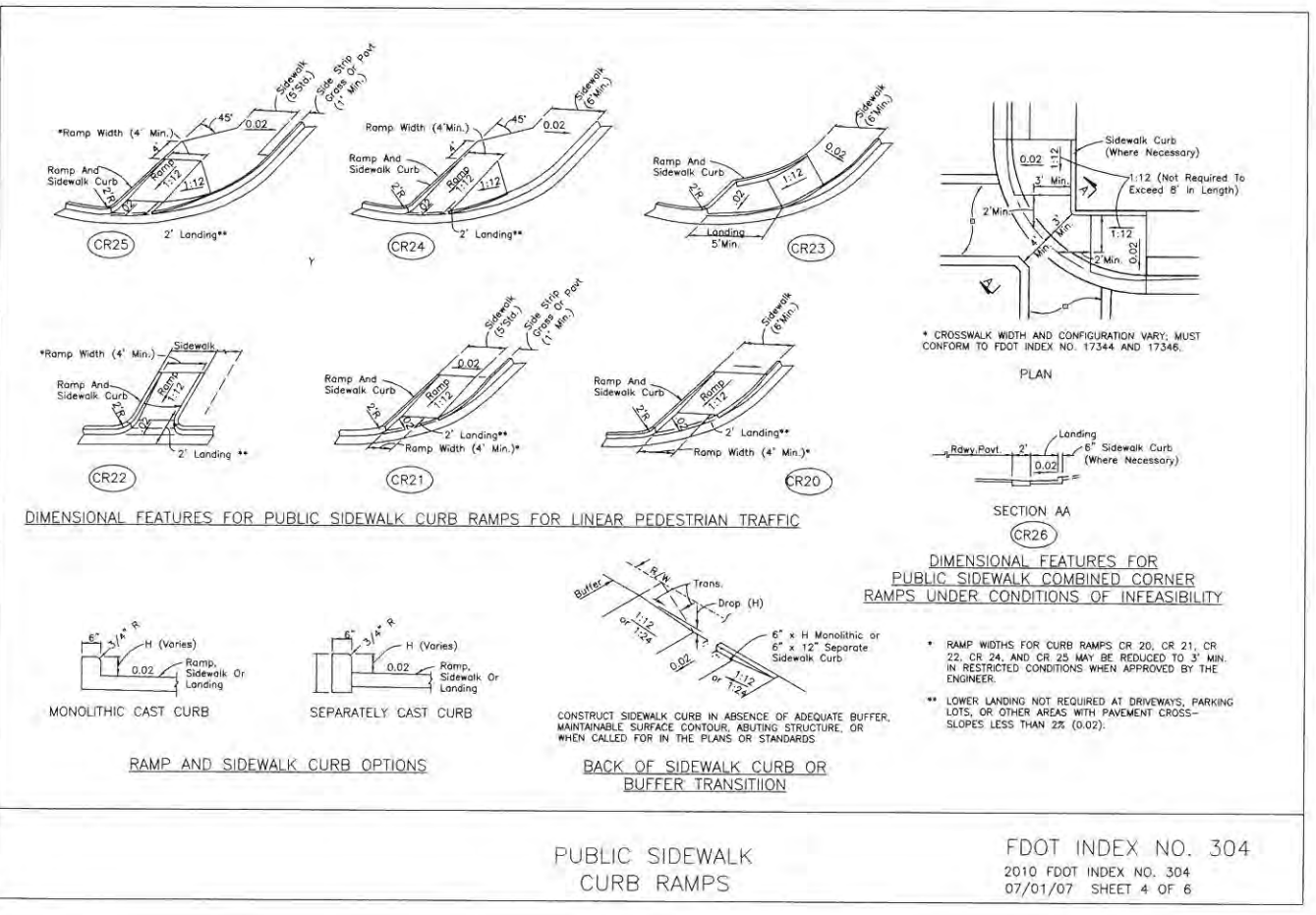
MANATEE COUNTY TRANSPORTATION DEPARTMENT		SIDEWALKS GENERAL NOTES	301.0
REV. BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	



MANATEE COUNTY TRANSPORTATION DEPARTMENT		HANDICAPPED RAMP SHEET 2	302.2
REV. BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	

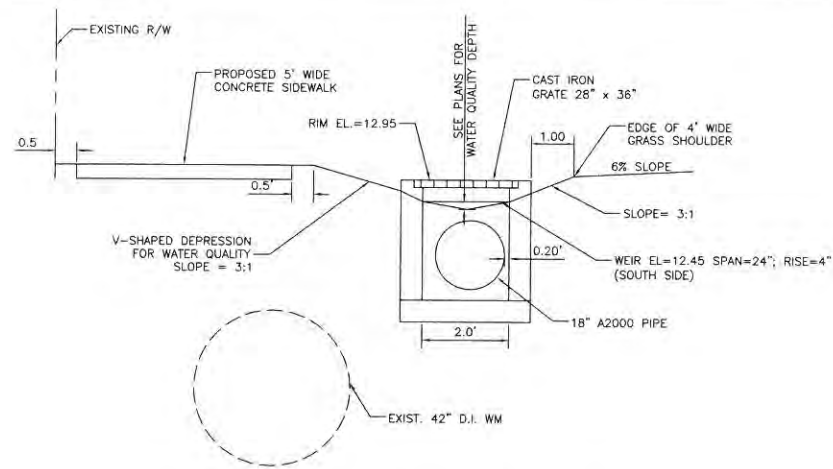


MANATEE COUNTY TRANSPORTATION DEPARTMENT		CURB RAMP DETECTABLE WARNINGS	302.3
REV. BY	DATE	6/12/07 DATE OF B.O.C.C. APPROVAL	



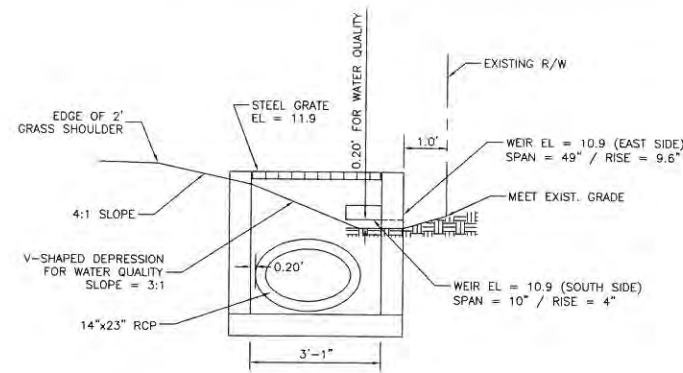
NO.	REVISION DESCRIPTION	BY	DATE
PROJECT #	307-6082660		
SURVEY #	FILE 00-42783		
SEC./TWN./RGE	19-20, 29-30,34S/19E		
SCALE	NTS		
		DATE	
SURVEYED	CZNS	04/27/12	
DESIGNED	JP/PBF	06/20/12	
DRAWN	KR/GB	06/20/12	
CHECKED	JP/PBF	06/20/12	
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46277			
STATE OF FLORIDA			
PROFESSIONAL ENGINEER			
Signature & Date			
SHEET 36			

**UPPER MANATEE RIVER ROAD**  
**ROADWAY FUNCTIONAL**  
**IMPROVEMENTS**  
**DRAINAGE DETAILS**



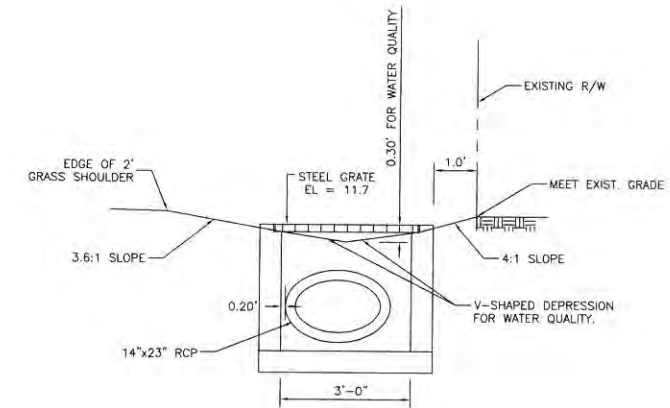
DBI TYPE 'C' PER FDOT INDEX 232

STATION: 104+75, 29.7' LT



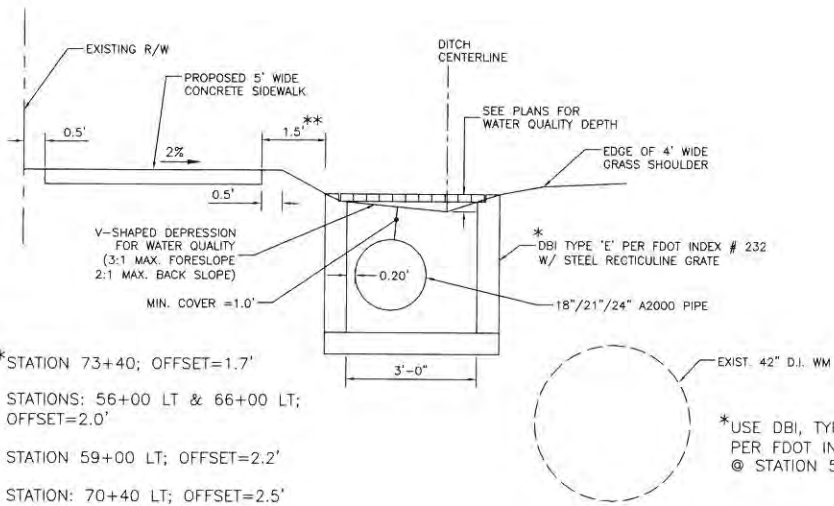
DBI TYPE 'D' FDOT INDEX # 232

STATION: 105+28, 37' RT



DBI TYPE 'E' FDOT INDEX # 232

STATION: 104+10, 37.0' RT



\*\*STATION 73+40; OFFSET=1.7'

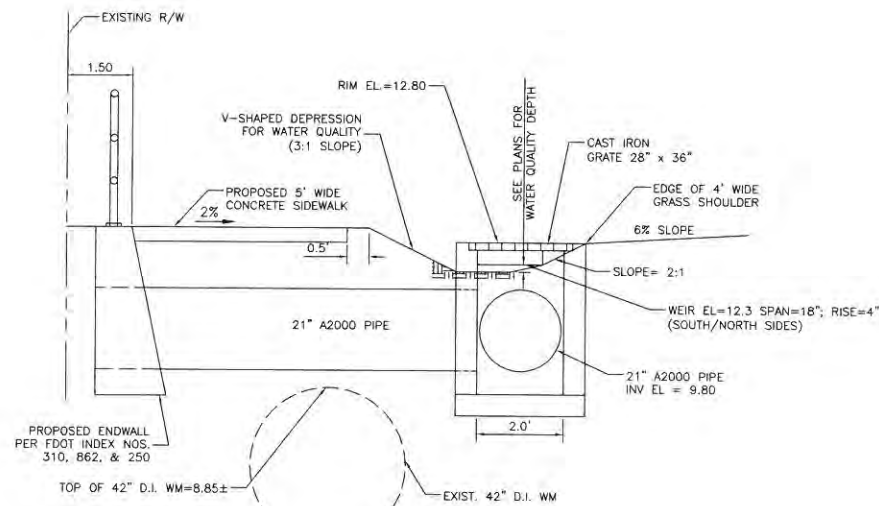
STATIONS: 56+00 LT & 66+00 LT;  
OFFSET=2.0'

STATION 59+00 LT; OFFSET=2.2'

STATION: 70+40 LT; OFFSET=2.5'

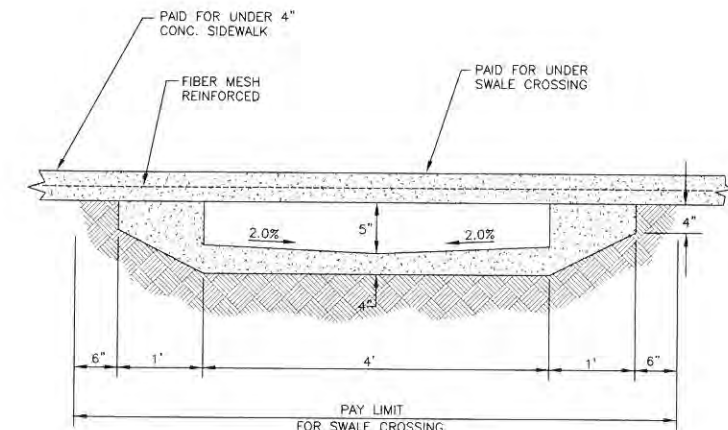
DBI TYPE 'E' PER FDOT INDEX # 232

STATIONS: 56+00 LT, 59+00 LT 66+00 LT,  
70+40 LT, 73+40 LT, 76+40 LT & 79+78 LT

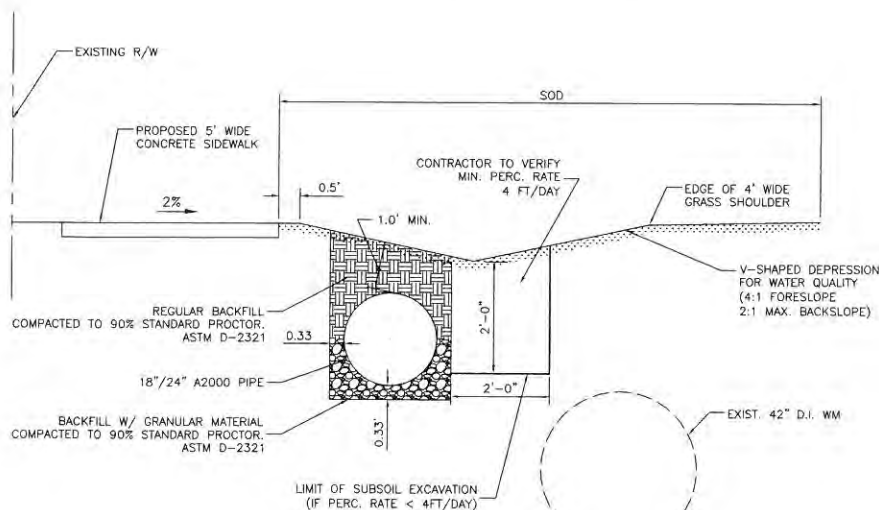


DBI TYPE 'C' PER FDOT INDEX 232

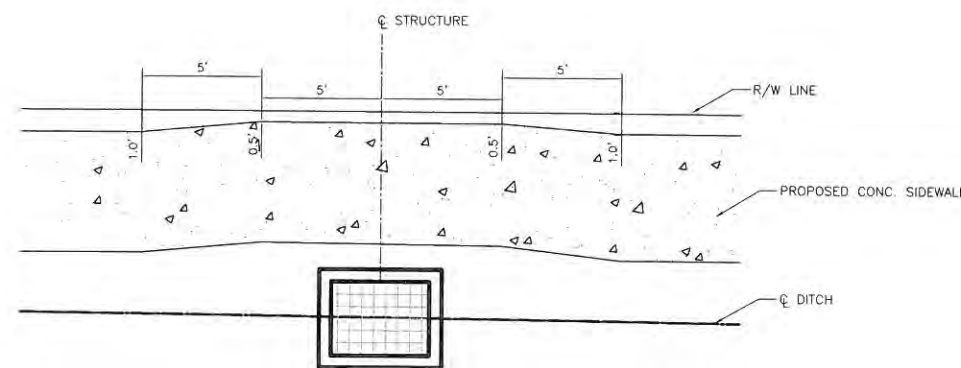
STATION: 105+53, 30.0' LT



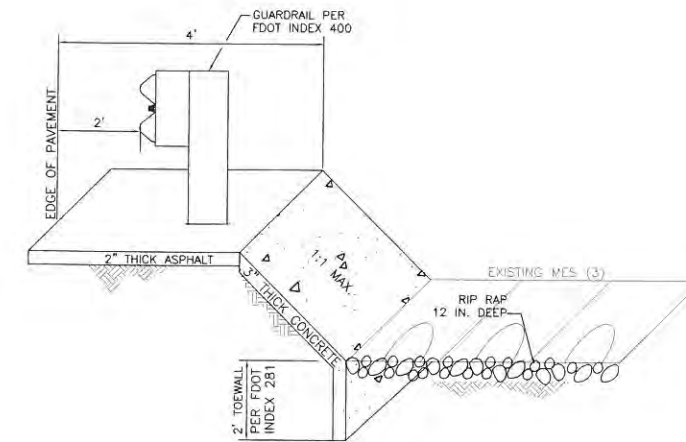
SWALE CROSSING



DEPRESSIONAL AREA DETAIL



BACK OF SIDEWALK TAPER AT STRUCTURE



GUARDRAIL AT SLOPE DETAIL

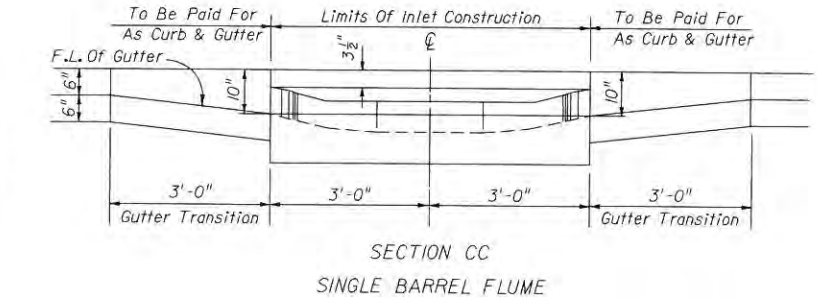
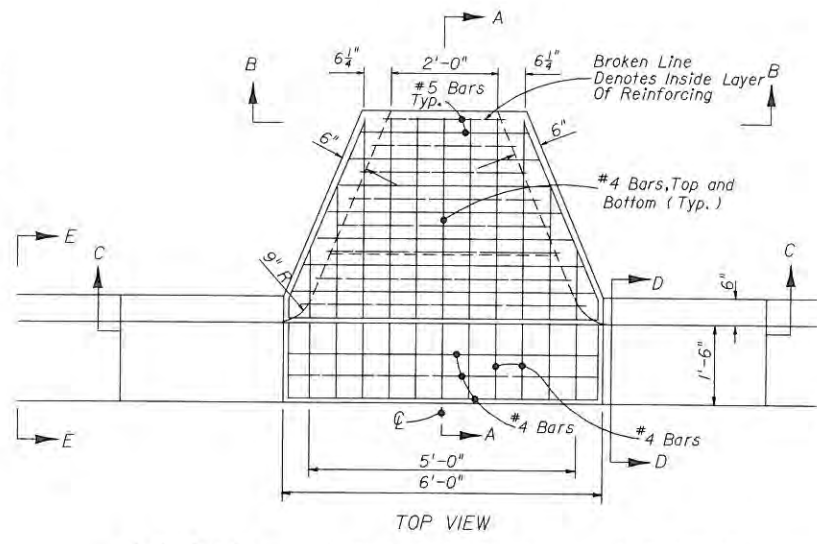
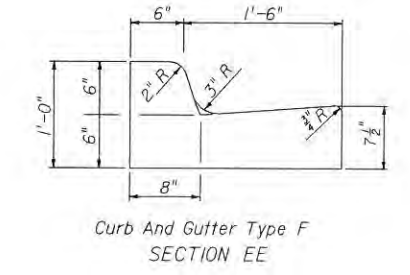
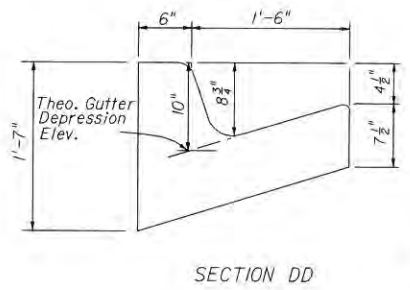
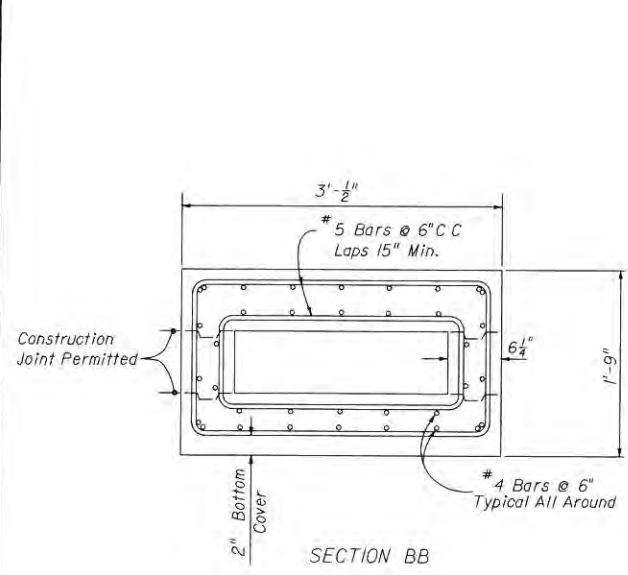
STA. 114+77 LT TO STA. 115+87 LT

NO.	DATE	BY	REVISION DESCRIPTION

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	NTS
DATE	04/27/12
DESIGNED BY	J.P/PBF
DRAWN BY	KR/CB
CHECKED BY	J.P/PBF
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777



UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 DRAINAGE DETAILS

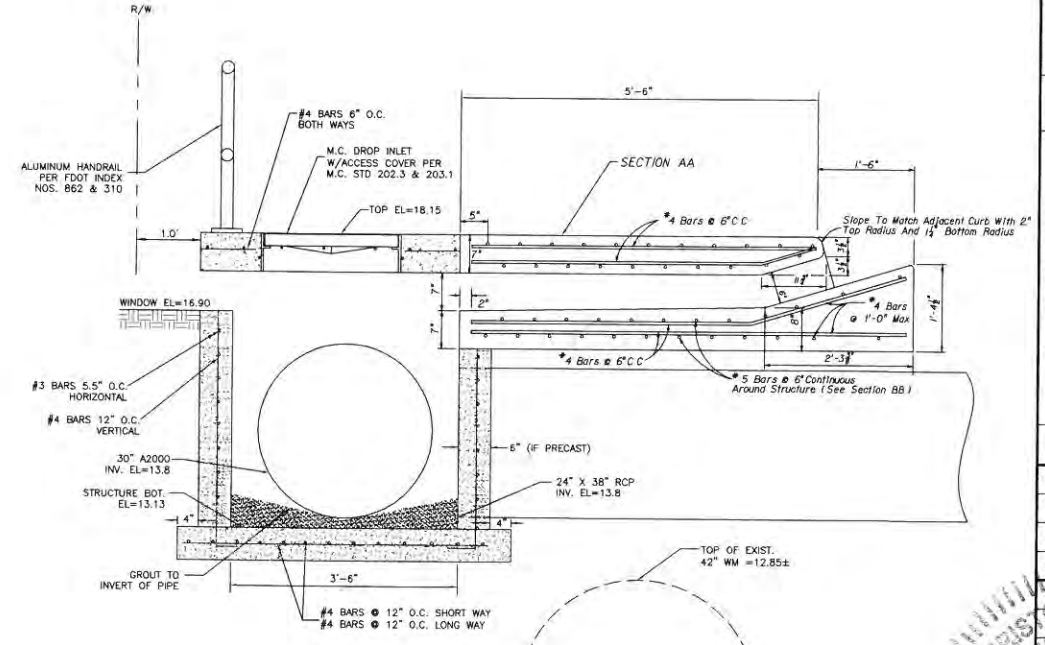
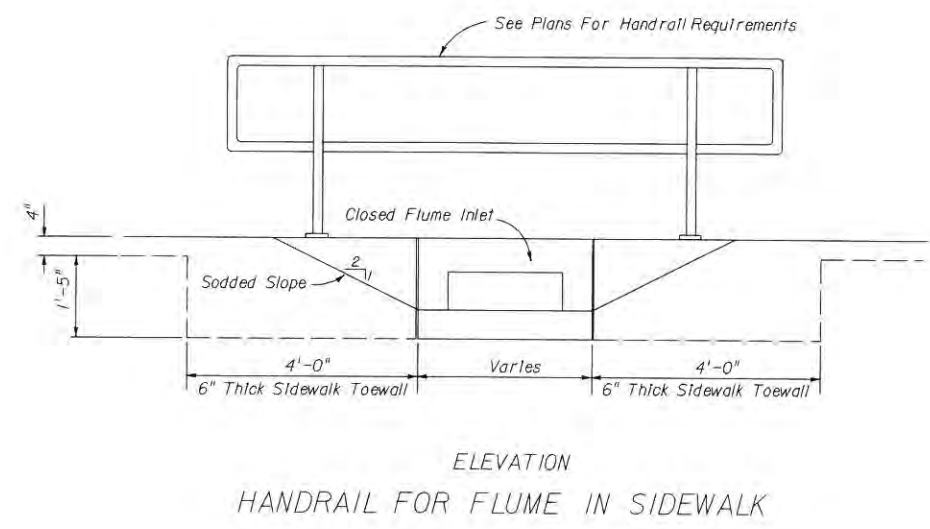
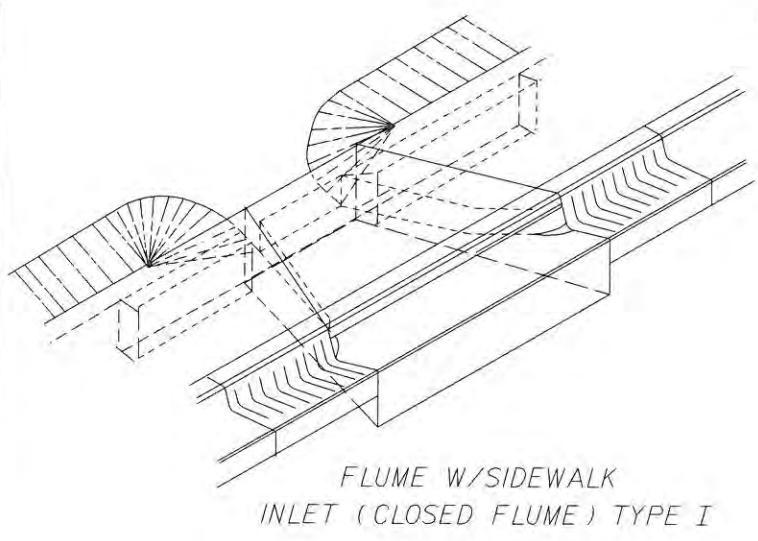


GENERAL NOTES

1. The finished grade and slope of the inlet top are to conform with the finished cross slope and grade of the proposed sidewalk and/or border.
2. When inlets are to be constructed on a curve, refer to the plans to determine the radius and, where necessary, modify the inlet details accordingly. Bend steel when necessary.
3. All steel shall have 1/4" minimum cover unless otherwise shown. Inlets can be either cast-in-place or precast concrete. Chamfer all exposed edges 3/4".
4. All reinforcement is ASTM A615/A615M Grade 60 steel, either smooth or deformed. Equivalent area grade 40 steel or 65 ksi welded wire fabric may be substituted.
5. Precasting of this inlet will be permitted. Precast units shall conform to the dimensions shown or in accordance with approved shop drawings. Request for shop drawing approval shall be directed to the State Drainage Engineer.
6. Inlets to be paid for under the contract unit price for Inlets (Closed Flume) EA.
7. **EXTREME CAUTION SHOULD BE EXERCISED WHEN WORKING NEAR THE 42 INCH WATERMAIN.**

DESIGN NOTES

1. These inlets are designed for use with Type F curb and gutter only. Locate inlet outside of curb ramp area. The Single Barrel Flume is intended for locations with light to moderate flows. Multiple Barrel Flumes must be selected to meet design heavy flows.



- NOTES:
1. CONTRACTOR TO USE #4 BAR STEEL DOWELS (12" MIN. LENGTH) WITH 4" MINIMUM EMBEDMENT TO CONNECT CLOSED FLUME TO DROP INLET (IF CAST IN PLACE CONSTRUCTION W/ STEEL DOWELS IS UTILIZED).
  2. A MINIMUM OF 3 BARS PER JOINT APPROXIMATELY EVENLY SPACED.

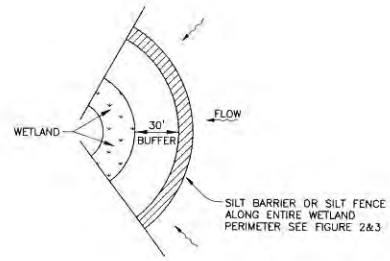
M.C. 4.5'x 3.5' DROP INLET W/CLOSED FLUME PER FDOT INDEX 216, MOD.  
 © STA. 81+59 LT.

NO.	REVISION DESCRIPTION	BY	DATE

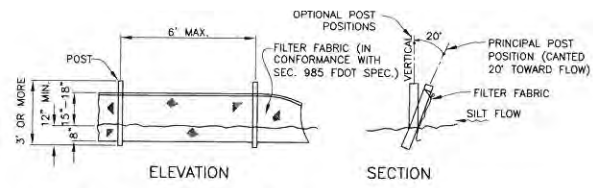
  

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	NTS
DESIGNED	BY PBF 10/20/12
DRAWN	KR/CB 06/20/12
CHECKED	KR/PBF 06/20/12
DATE	06/27/12
BY	CRS
STATE OF FLORIDA	PROFESSIONAL ENGINEER
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46774
Signature & Date	

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
BEST MANAGEMENT PRACTICES DETAILS**

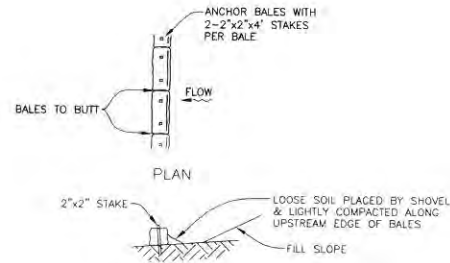


**WETLAND BUFFER**  
FIGURE 1

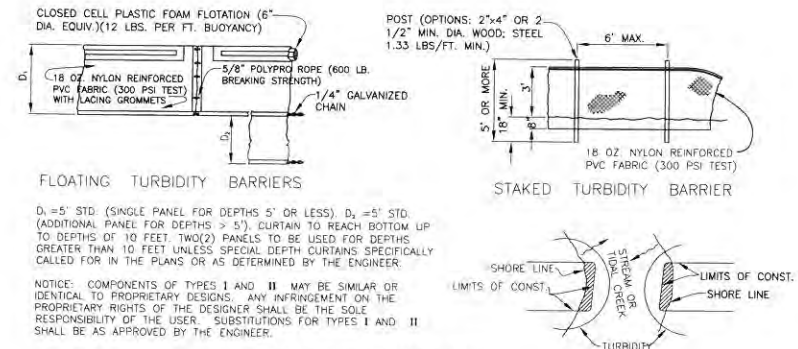


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF)

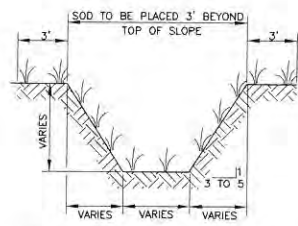
**TYPICAL SILT FENCE**  
FIGURE 2



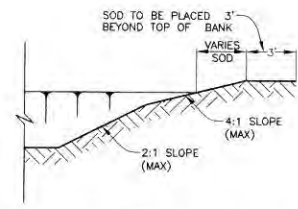
**TYPICAL BALE SILT BARRIER**  
FIGURE 3



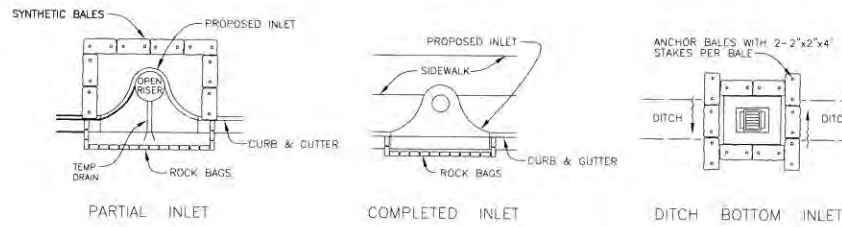
**TURBIDITY BARRIERS**  
FIGURE 4



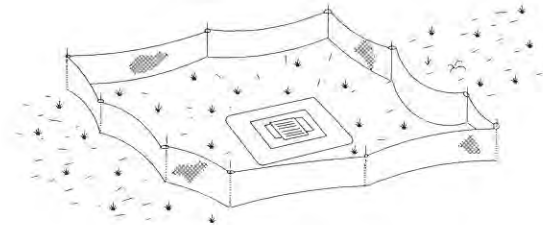
**TYPICAL SWALE SECTION**  
FIGURE 5



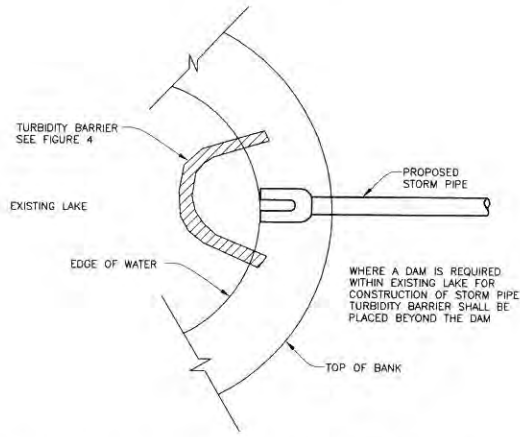
**TYPICAL RETENTION/DETENTION POND SECTION**  
FIGURE 6



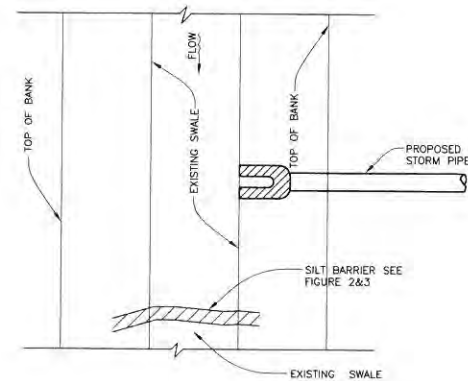
**SYNTHETIC BALE PROTECTION AROUND  
INLETS OR SIMILAR STRUCTURES**  
FIGURE 7



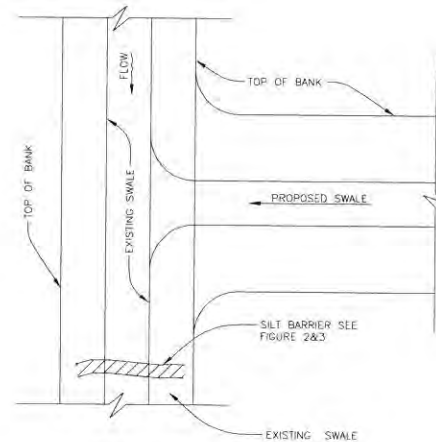
**TYPE III SILT FENCE PROTECTION  
AROUND DITCH BOTTOM INLETS**  
**STAKED SILT BARRIER OR SILT FENCE  
PROTECTION AROUND DITCH BOTTOM INLETS**  
FIGURE 8



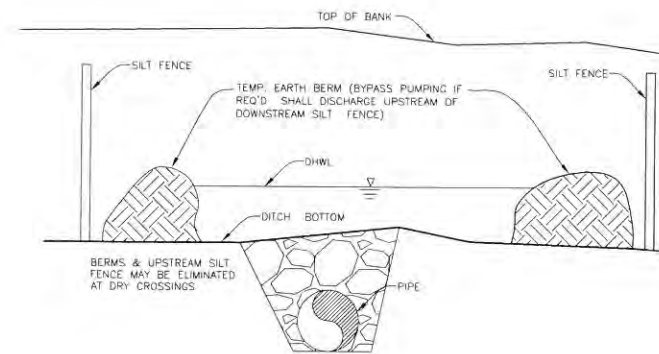
**TURBIDITY BARRIER AT CONNECTION OF  
STORM PIPE TO EXISTING LAKE**  
FIGURE 9



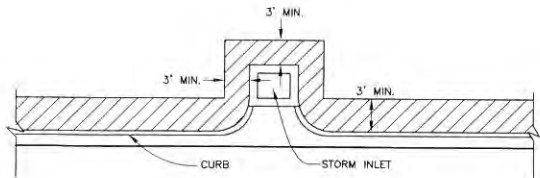
**SILT BARRIER AT CONNECTION OF  
STORM PIPE TO EXISTING SWALE**  
FIGURE 10



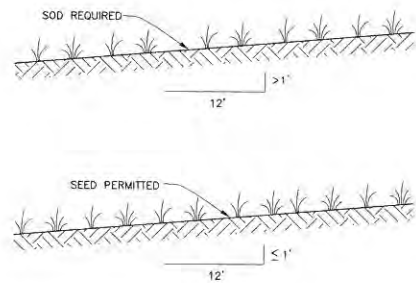
**SILT BARRIER AT CONNECTION  
OF SWALE TO EXISTING SWALE**  
FIGURE 11



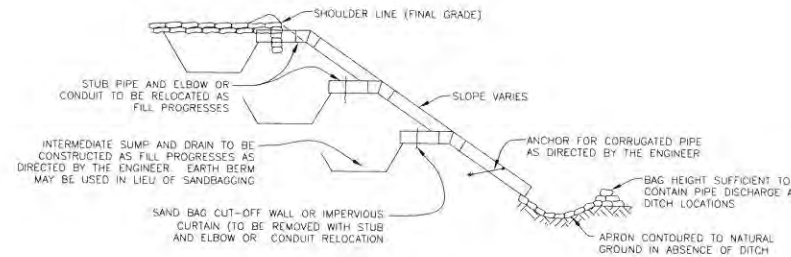
**UNDERGROUND PIPE CROSSING**  
FIGURE 12



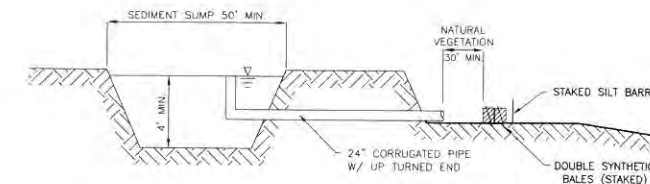
**SOD ALONG CURB  
AND AROUND INLET**  
FIGURE 14



**GRASS SLOPES**  
FIGURE 13



**SECTION AA  
TEMPORARY SLOPE DRAIN**  
FIGURE 15



**SEDIMENT SUMP SECTION**  
FIGURE 16

NOTE:  
REFERENCE THE FDOT DESIGN STANDARDS  
LATEST EDITION FOR ALL TEMPORARY  
EROSION CONTROL MEASURES.

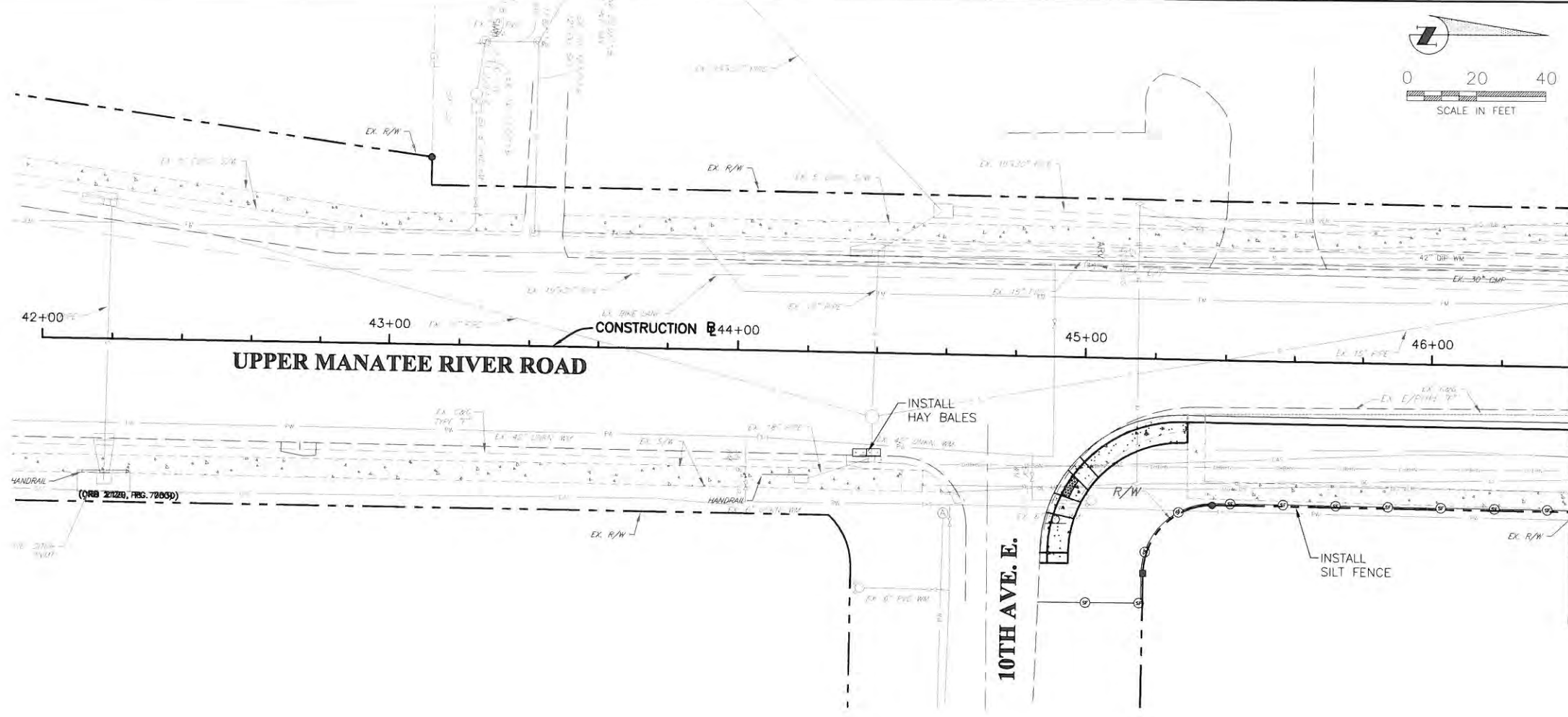
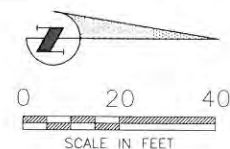
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	NTS.

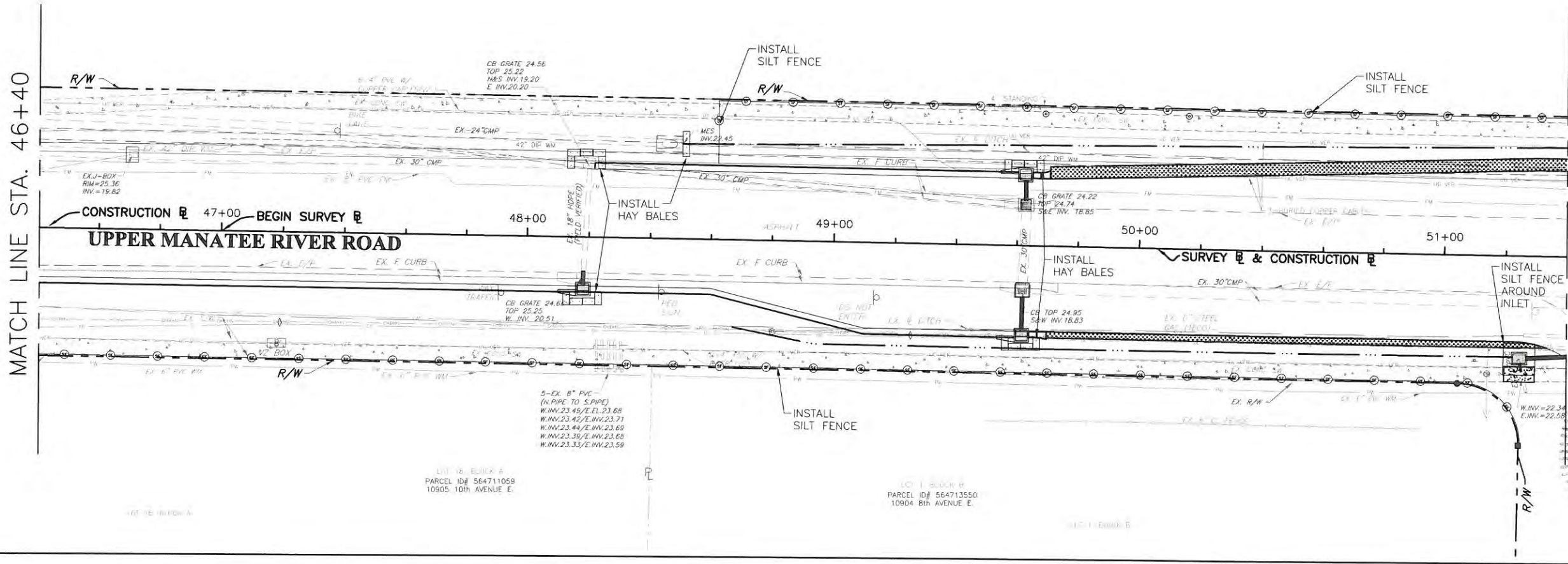
DESIGNED	BY	DATE
DRAWN	BY	DATE
CHECKED	BY	DATE

CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER





MATCH LINE STA. 46+40



MATCH LINE STA. 46+40

MATCH LINE STA. 51+40

**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
BEST MANAGEMENT PRACTICES  
STA. 42+00 TO STA. 51+40**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	1"=40' HORIZ.

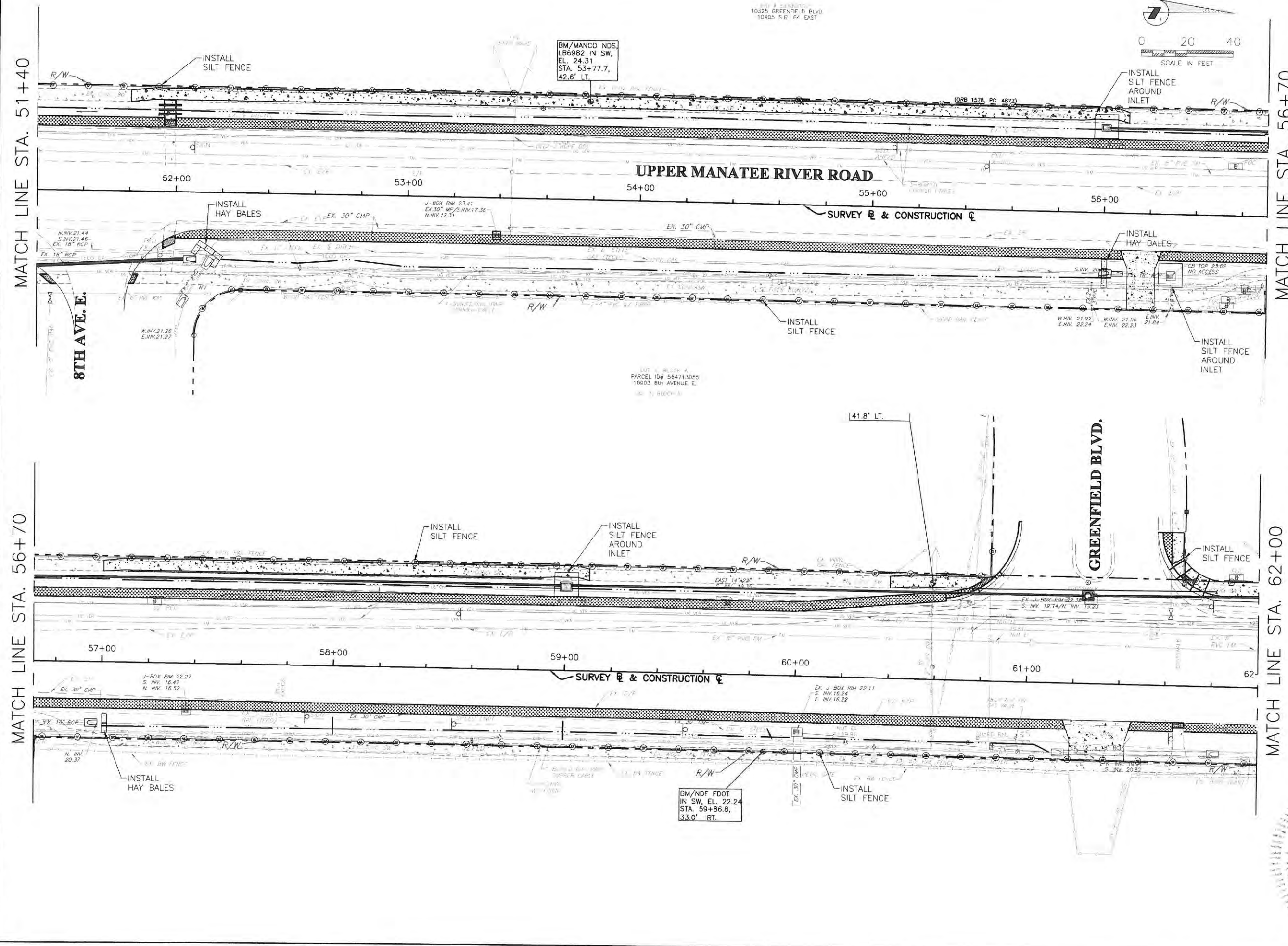
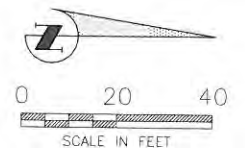
BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	GP/PBF 06/20/12
DRAWN	GP/PBF 06/20/12
CHECKED	JP/PBF 06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777  
*Signature*  
STATE OF FLORIDA  
REGISTERED PROFESSIONAL ENGINEER  
SHEET 38A

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**UPPER MANATEE RIVER ROAD ROADWAY FUNCTIONAL IMPROVEMENTS BEST MANAGEMENT PRACTICES STA. 51+40 TO STA. 62+00**



MATCH LINE STA. 51+40

MATCH LINE STA. 56+70

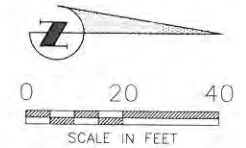
MATCH LINE STA. 56+70

MATCH LINE STA. 62+00

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NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20,
SCALE	29-30.34S/19E
SCALE	1"=40' HORIZ.
BY	DATE
SURVEYED	04/27/12
DESIGNED	06/20/12
DRAWN	06/20/12
CHECKED	06/20/12
CHRISTOPHER L. MOWBRAY, P.E.	FLORIDA P.E. # 46777
SHEET 38B	

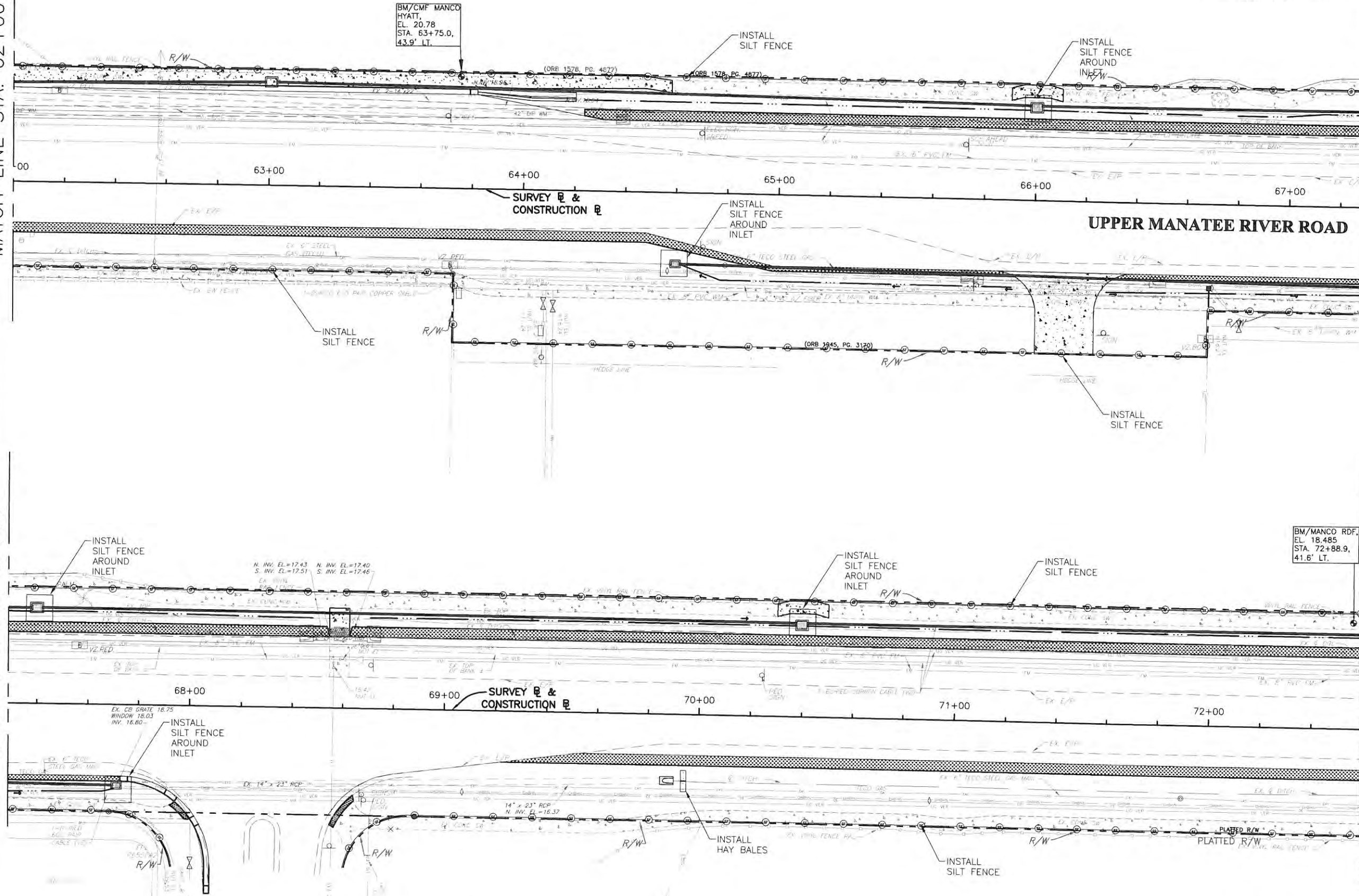


MATCH LINE STA. 62+00

MATCH LINE STA. 67+30

MATCH LINE STA. 67+30

MATCH LINE STA. 72+60



**UPPER MANATEE RIVER ROAD**

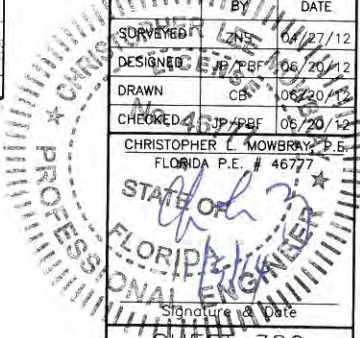
**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
BEST MANAGEMENT PRACTICES  
STA. 62+00 TO STA. 72+60**

NO.	REVISION DESCRIPTION	BY	DATE

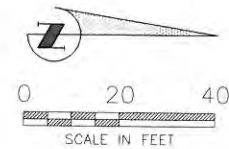
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30, 34S/19E
SCALE	1"=40' HORIZ.

BY	DATE
DESIGNED	06/27/12
DESIGNED	06/20/12
DRAWN	06/20/12
CHECKED	06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777



GATES CREEK  
UNIT 1, A SUBDIVISION  
PLAT BOOK 31, PAGE 94



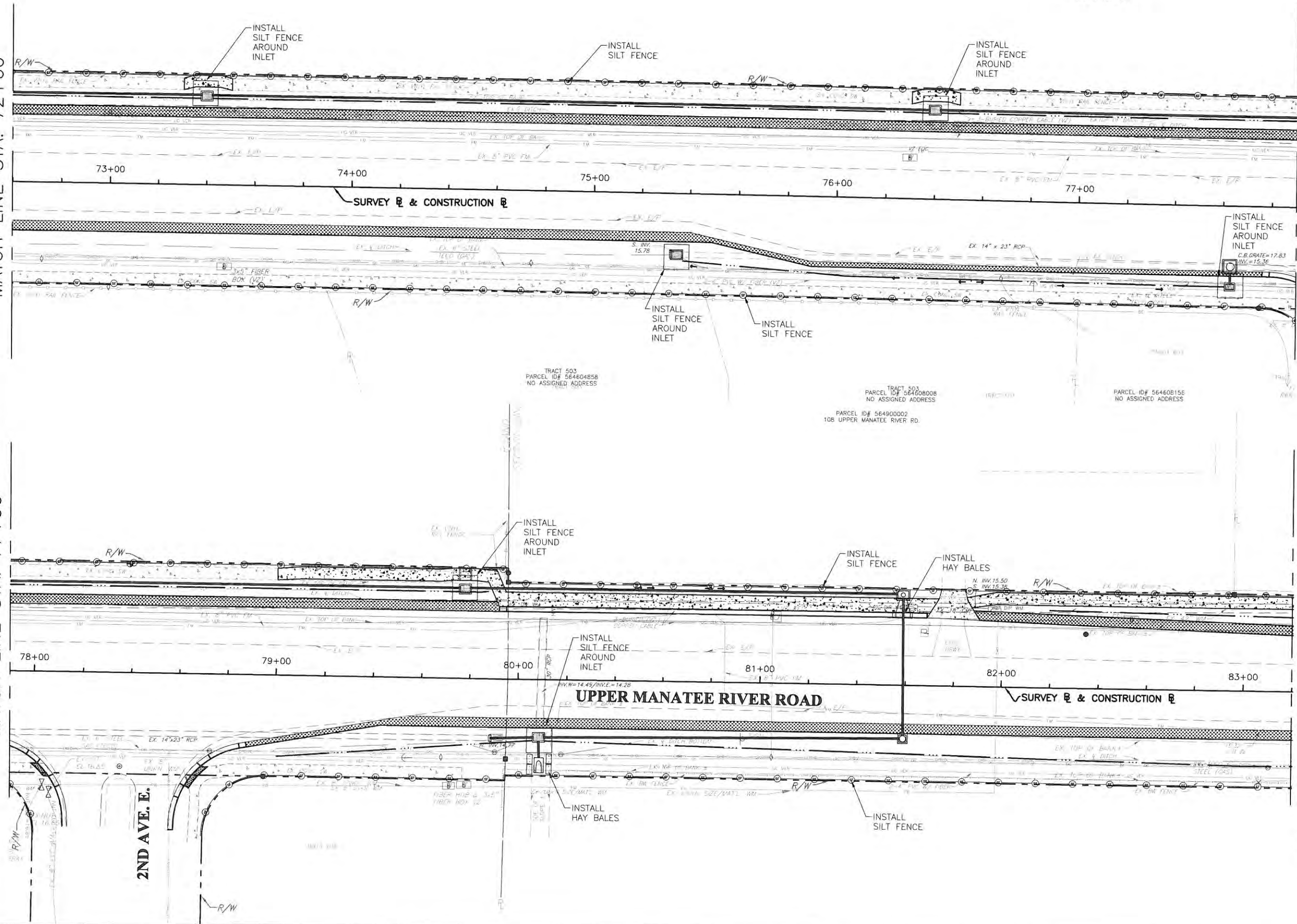
PARCEL ID# 566801155  
NO ASSIGNED ADDRESS

MATCH LINE STA. 72+60

MATCH LINE STA. 77+90

MATCH LINE STA. 77+90

MATCH LINE STA. 83+20



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
BEST MANAGEMENT PRACTICES  
STA. 72+60 TO STA. 83+20**

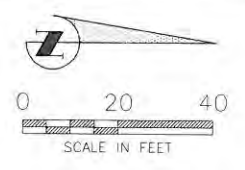
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	1"=40' HORIZ.

	BY	DATE
SURVEYED	ZNS	04/27/12
DESIGNED	JP/PBF	06/20/12
DRAWN	CAJ	06/20/12
CHECKED	JP/PBF	06/20/12

CHRISTOPHER C. MOWBRAY  
FLORIDA P.E. # 46777

Signature & Date  
SHEET 138D

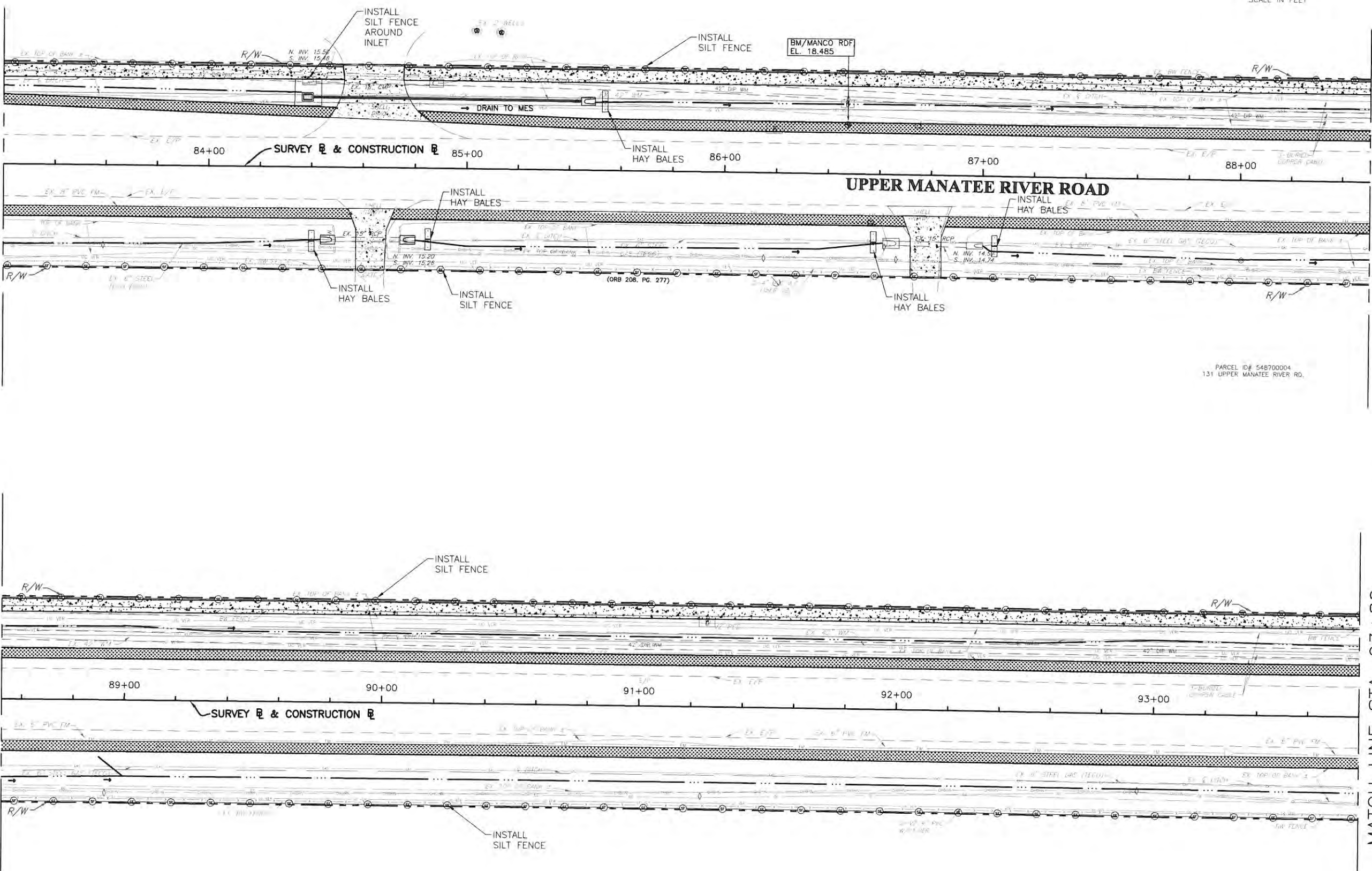


MATCH LINE STA. 83+20

MATCH LINE STA. 88+50

MATCH LINE STA. 88+50

MATCH LINE STA. 93+80



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
BEST MANAGEMENT PRACTICES  
STA. 83+20 TO STA. 93+80**

NO.	REVISION DESCRIPTION	BY	DATE

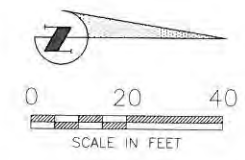
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30.34S/19E
SCALE	1"=40' HORIZ.

	BY	DATE
SURVEYED	JNE	04/27/12
DESIGNED	JP/PBF	06/20/12
DRAWN	JP/PBF	06/20/12
CHECKED	JP/PBF	08/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777  
*[Signature]*  
Signature & Date

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PARCEL ID# 546400109  
112 UPPER MANATEE RIVER RD.

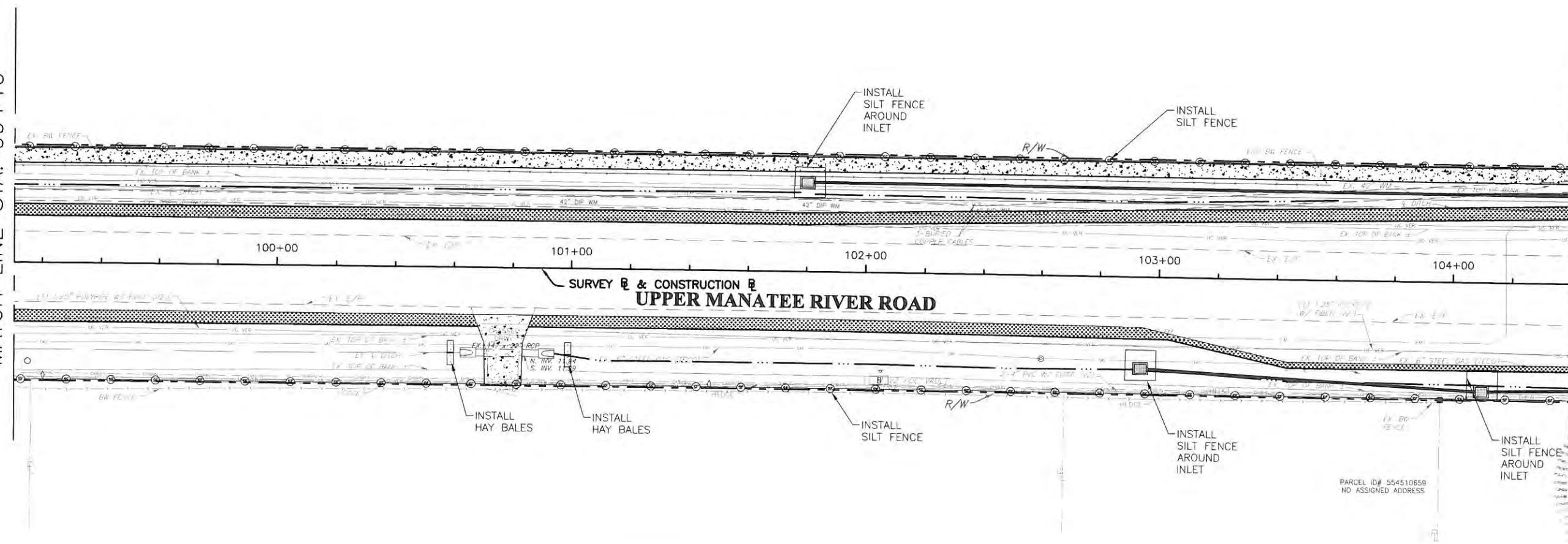
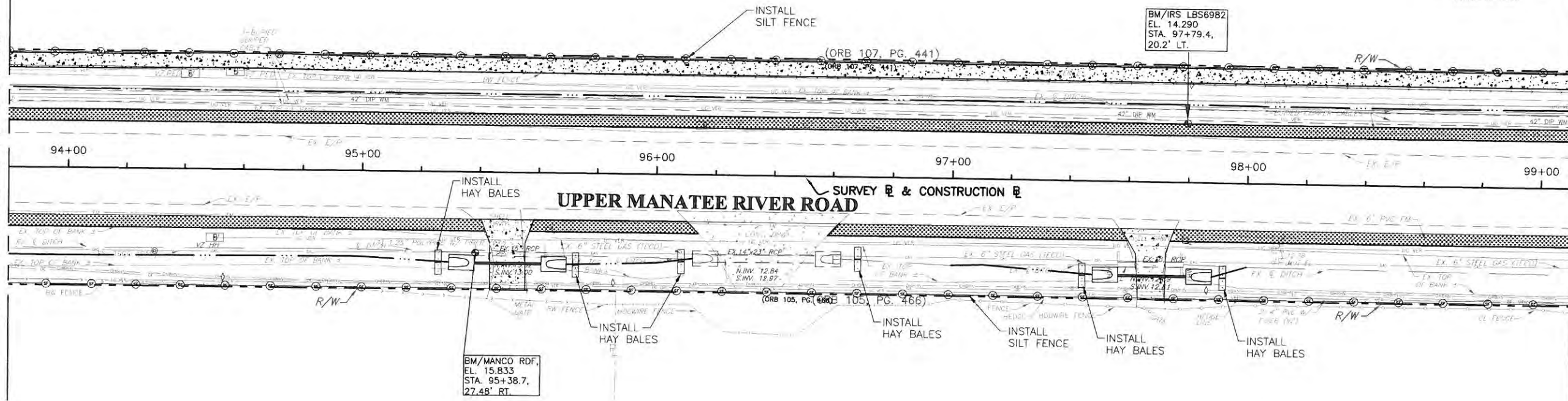


MATCH LINE STA. 93+80

MATCH LINE STA. 99+10

MATCH LINE STA. 99+10

MATCH LINE STA. 104+40



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
BEST MANAGEMENT PRACTICES  
STA. 93+80 TO STA. 104+40**

NO.	REVISION DESCRIPTION	BY	DATE

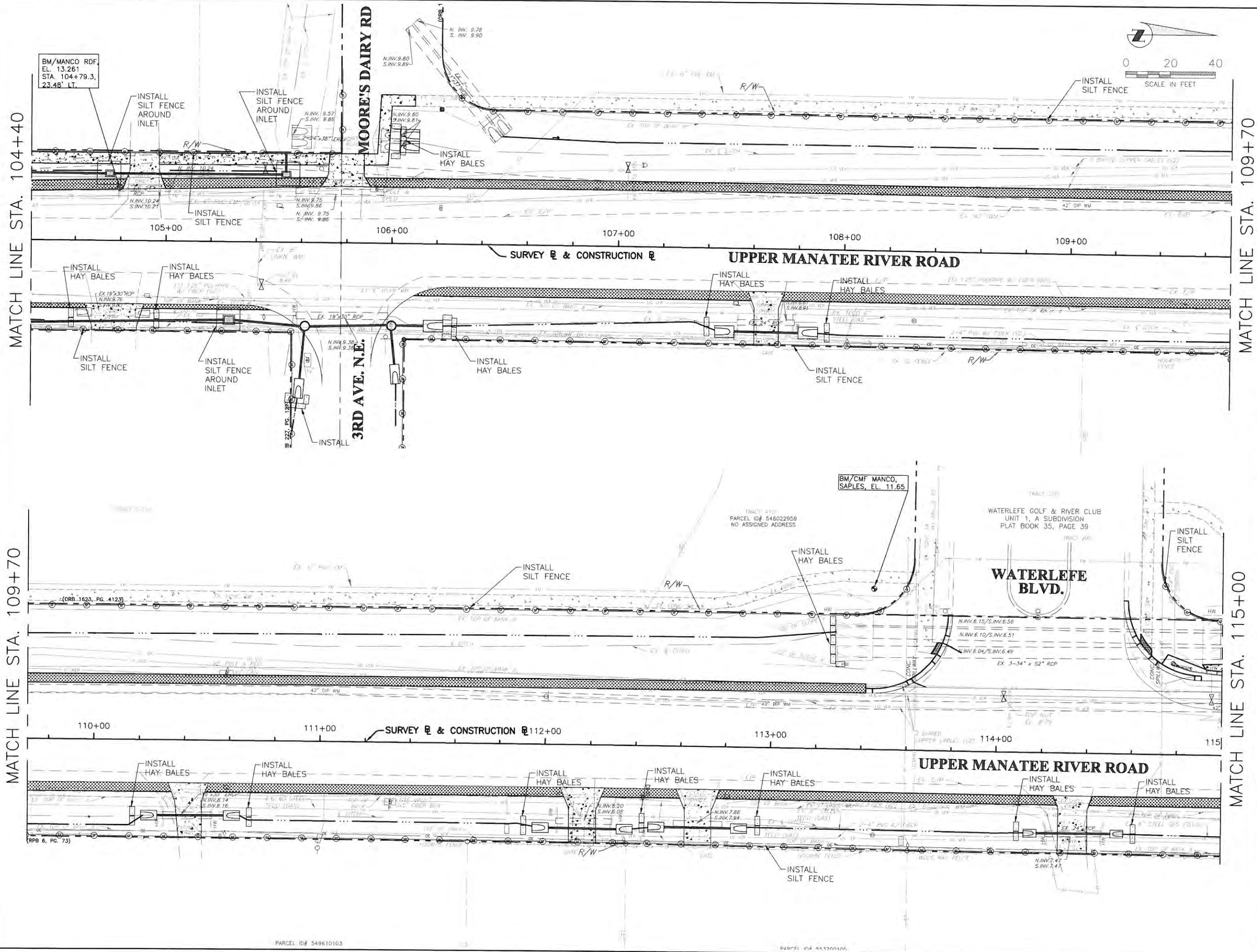
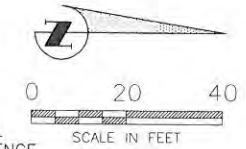
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30.34S/19E
SCALE	1"=40' HORIZ.

	BY	DATE
SURVEYED	JNS	04/27/12
DESIGNED	JP/PBF	06/20/12
DRAWN	CB	06/20/12
CHECKED	JP/ABE	06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46773

*[Signature]*  
Signature & Date

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**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
BEST MANAGEMENT PRACTICES  
STA. 104+40 TO STA. 115+00**

NO.	REVISION DESCRIPTION	BY	DATE

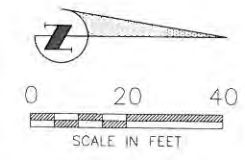
PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30, 34S/19E
SCALE	1"=40' HORIZ.
BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	JP/PBF 06/20/12
DRAWN	CB 06/20/12
CHECKED	JP/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 48777  Signature & Date 11/5/14	



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PARCEL ID# 549610103

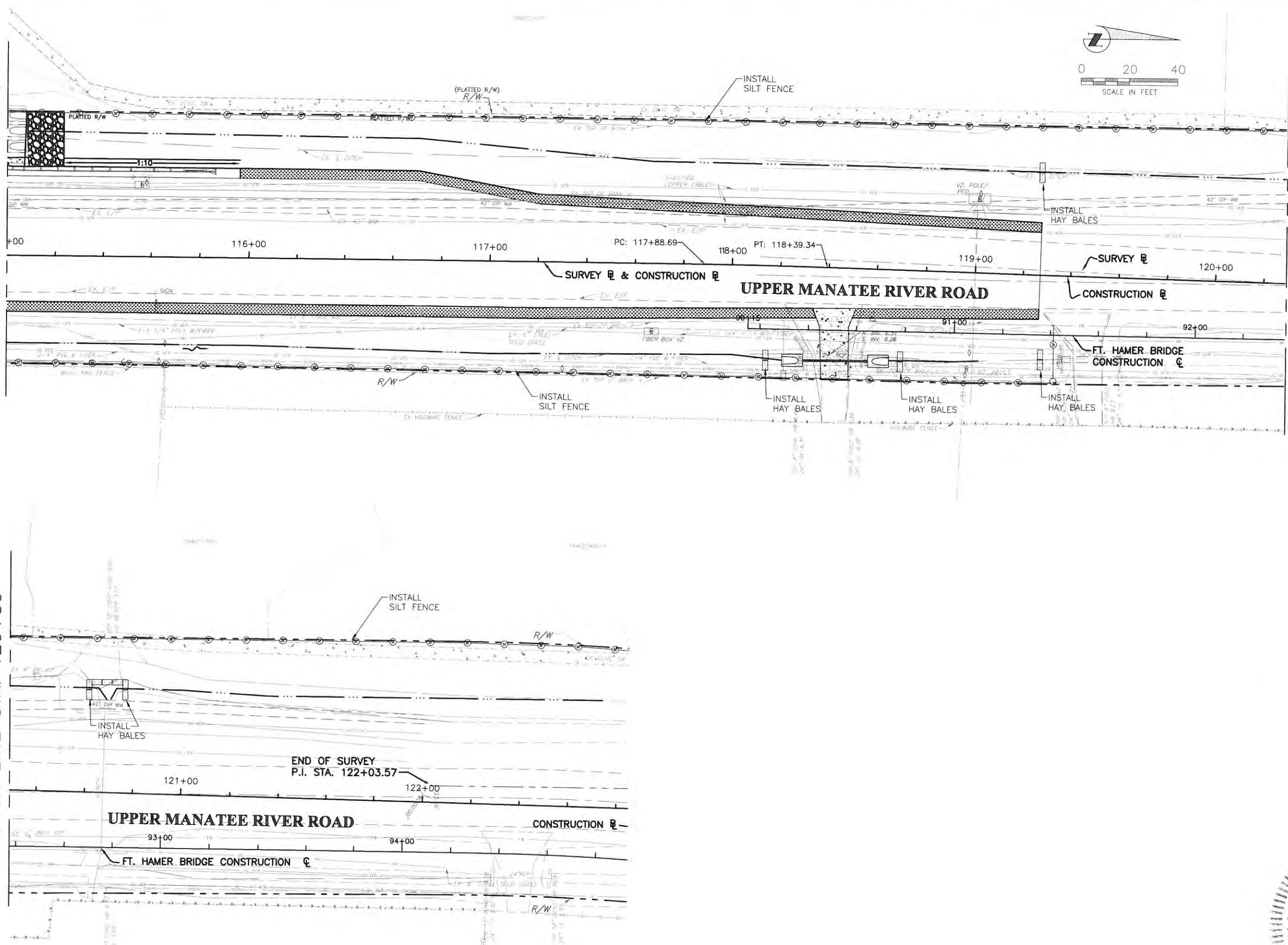
PARCEL ID# 551205106



MATCH LINE STA. 115+00

MATCH LINE STA. 120+30

MATCH LINE STA. 120+30



**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
BEST MANAGEMENT PRACTICES  
STA. 115+00 TO STA. 123+00**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	1"=40' HORIZ.

	BY	DATE
SURVEYED	ZNS	04/27/12
DESIGNED	JP/PBF	06/20/12
DRAWN	GB	08/20/12
CHECKED	JP/PBF	06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777

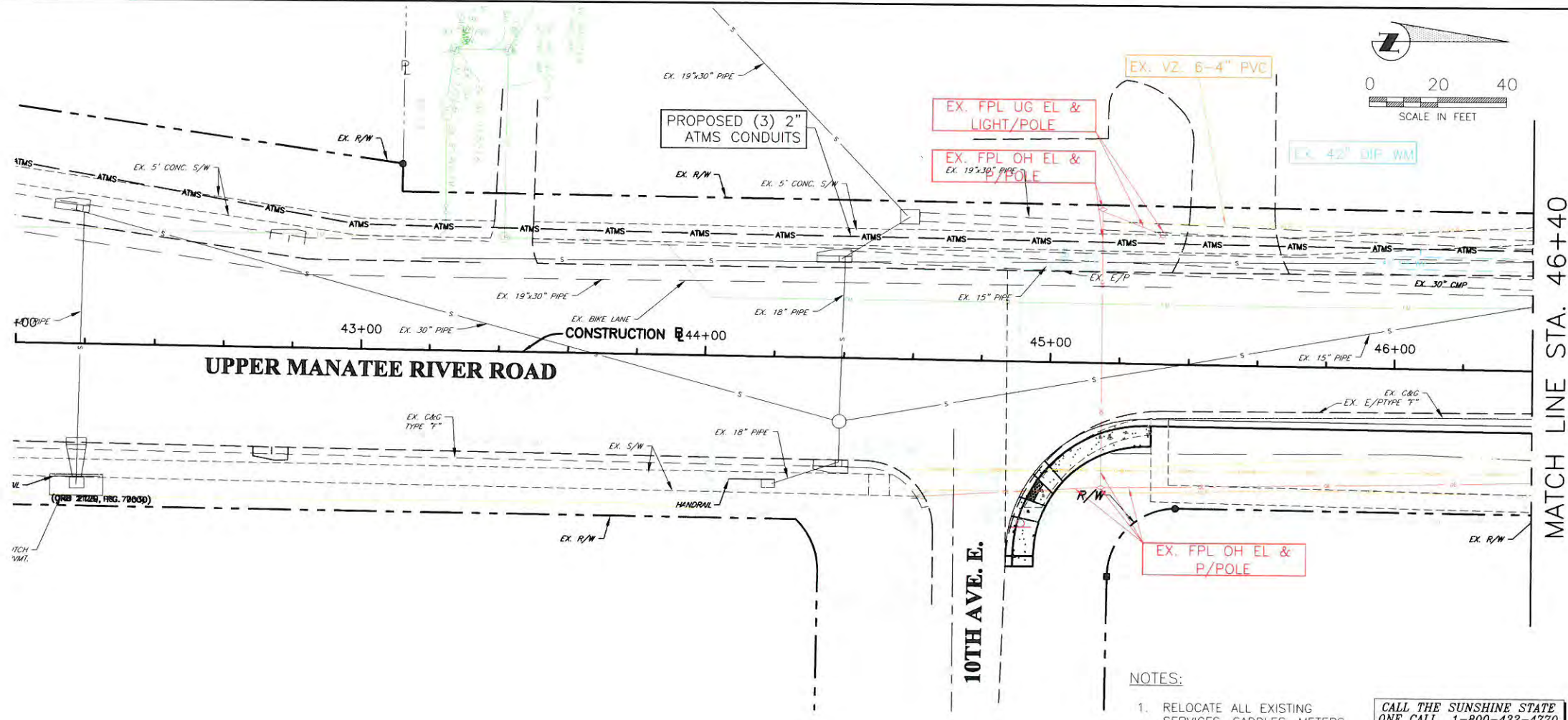
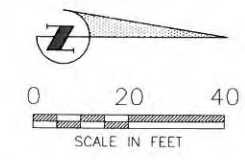
*Christopher L. Mowbray*  
Signature & Date  
07/15/14



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**UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 UTILITY ADJUSTMENT SHEET  
 STA. 42+00 TO STA. 51+40**

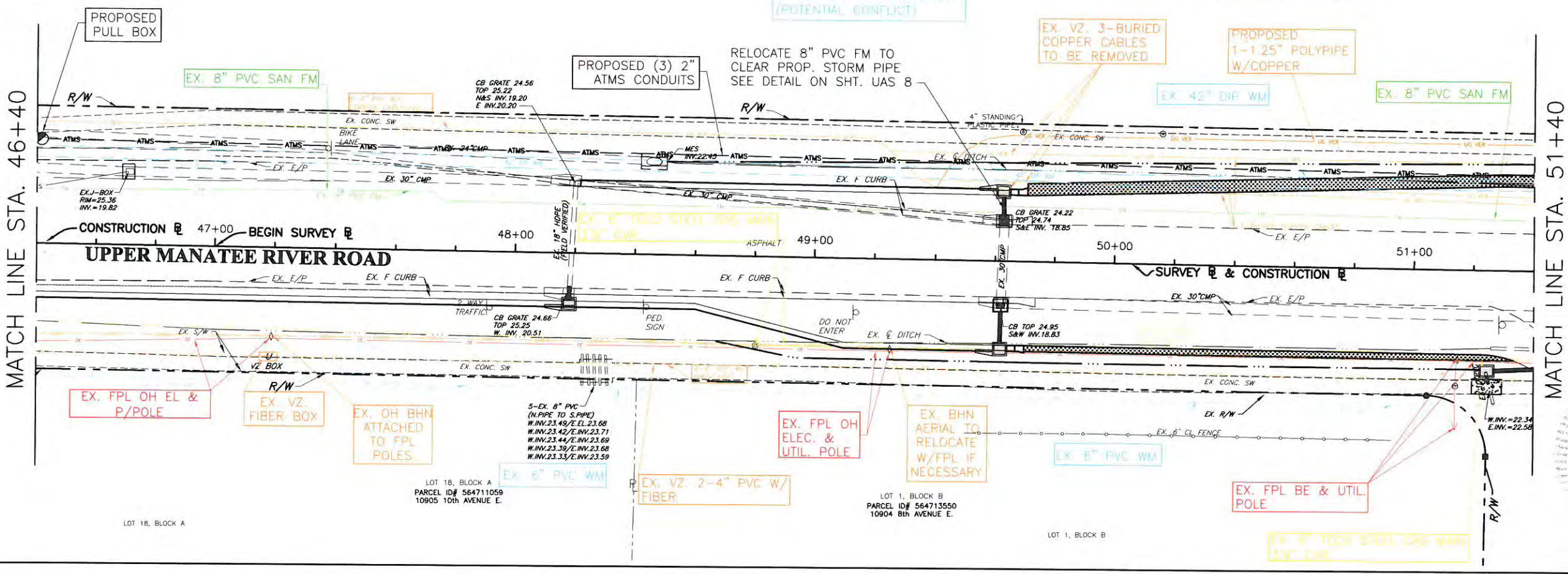


MATCH LINE STA. 46+40

**NOTES:**

1. RELOCATE ALL EXISTING SERVICES, SADDLES, METERS, BACKFLOW PREVENTERS AND HYDRANTS AS NEEDED.
2. ADJUST ALL MANHOLES, VALVE BOXES AND COVERS AS NEEDED.

**CALL THE SUNSHINE STATE ONE CALL 1-800-432-4770**  
 48 HOURS BEFORE DIGGING FOR THE LOCATION OF UNDERGROUND UTILITIES



MATCH LINE STA. 46+40

MATCH LINE STA. 51+40

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30, 34S/19E
SCALE	1"=40' HORIZ.

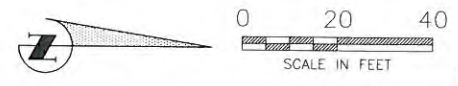
BY	DATE
SURVEYED ZNS	04/27/12
DESIGNED JP/PBF	06/20/12
DRAWN ICE	06/20/12
CHECKED JP/PBF	06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
 FLORIDA P.E. # 46977

Signature: [Signature]  
 Date: [Date]

SHEET UAS 11

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MATCH LINE STA. 51+40

MATCH LINE STA. 56+70

MATCH LINE STA. 56+70

MATCH LINE STA. 62+00

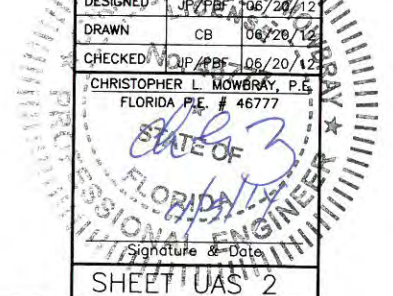


**UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 UTILITY ADJUSTMENT SHEET  
 STA. 51+40 TO STA. 62+00**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	1"=40' HORIZ.
BY	DATE
SURVEYED	ZNS 04/21/12
DESIGNED	JFP/PFB 06/20/12
DRAWN	CB 06/20/12
CHECKED	JFP/PFB 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777	
Signature & Date	

- NOTES:
1. RELOCATE ALL EXISTING SERVICES, SADDLES, METERS, BACKFLOW PREVENTERS AND HYDRANTS AS NEEDED.
  2. ADJUST ALL MANHOLES, VALVE BOXES AND COVERS AS NEEDED.



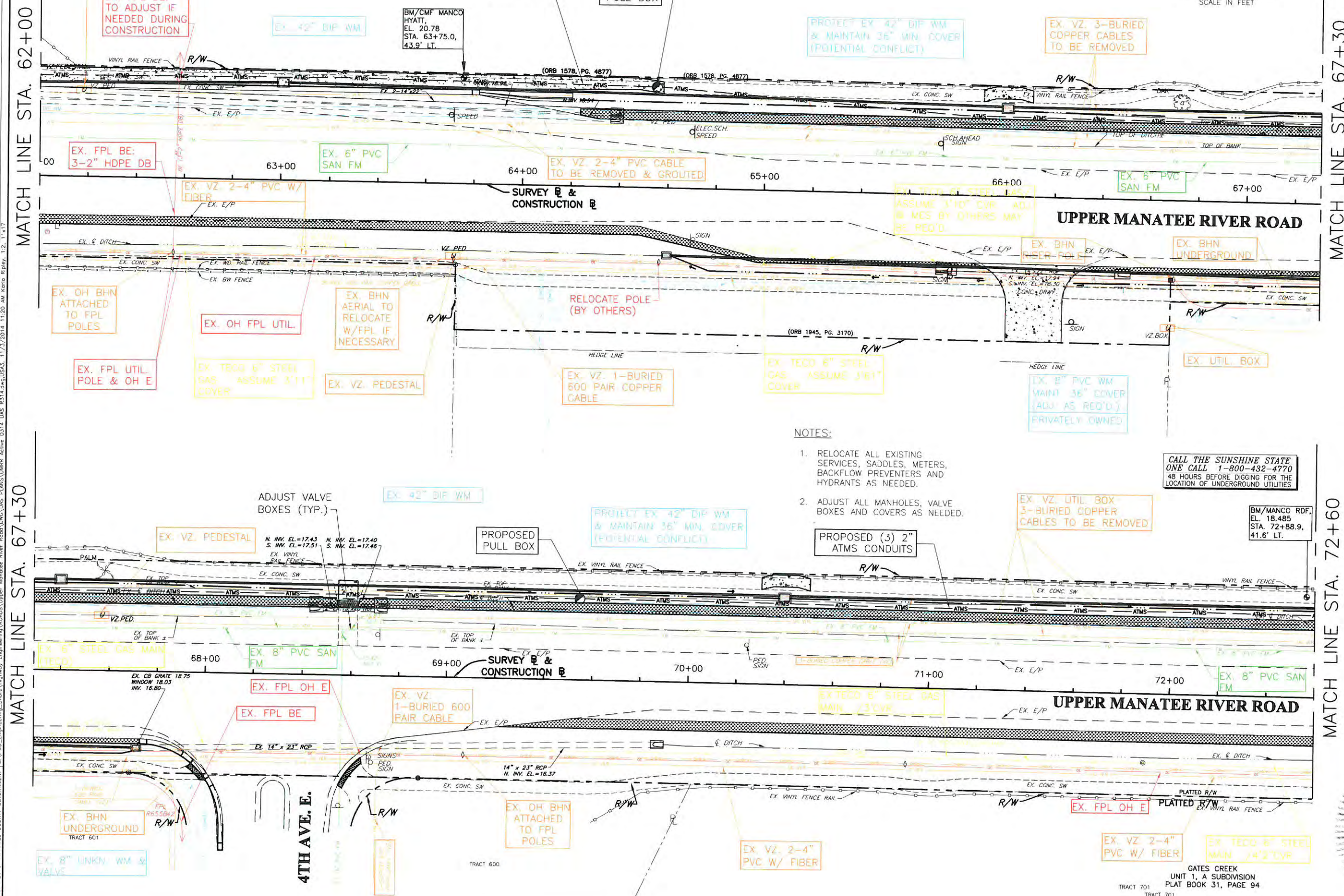
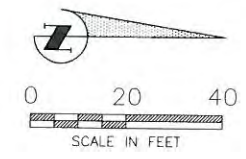
COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT | S:\P\O - Engineering - Shared\Highway Engineering\ROADS\Upper Manatee River Road\UAS\UAS PLANS\UMR Active\0314 UAS R314.dwg\UAS2\_11/23/2014 11:20 AM Keith Ripley, 1:2, 11x17



PUBLIC WORKS DEPARTMENT  
ENGINEERING SERVICES  
1922 26th Avenue East, Bradenton, FL 34208

# UPPER MANATEE RIVER ROAD ROADWAY FUNCTIONAL IMPROVEMENTS UTILITY ADJUSTMENT SHEET

STA. 62+00 TO STA. 72+60



### NOTES:

- 1. RELOCATE ALL EXISTING SERVICES, SADDLES, METERS, BACKFLOW PREVENTERS AND HYDRANTS AS NEEDED.
- 2. ADJUST ALL MANHOLES, VALVE BOXES AND COVERS AS NEEDED.

CALL THE SUNSHINE STATE  
ONE CALL 1-800-432-4770  
48 HOURS BEFORE DIGGING FOR THE  
LOCATION OF UNDERGROUND UTILITIES

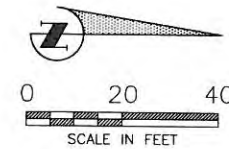
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	1"=40' HORIZ.

DESIGNED	JR/PE	06/26/17
DRAWN	CB	06/20/17
CHECKED	JL/JP/PE	06/20/17

PROFESSIONAL ENGINEER  
CHRISTOPHER L. MOWBRAY, P.E.  
FLORIDA P.E. # 46777  
Signature & Date

GATES CREEK  
UNIT 1, A SUBDIVISION  
PLAT BOOK 31, PAGE 94  
TRACT 701  
TRACT 701

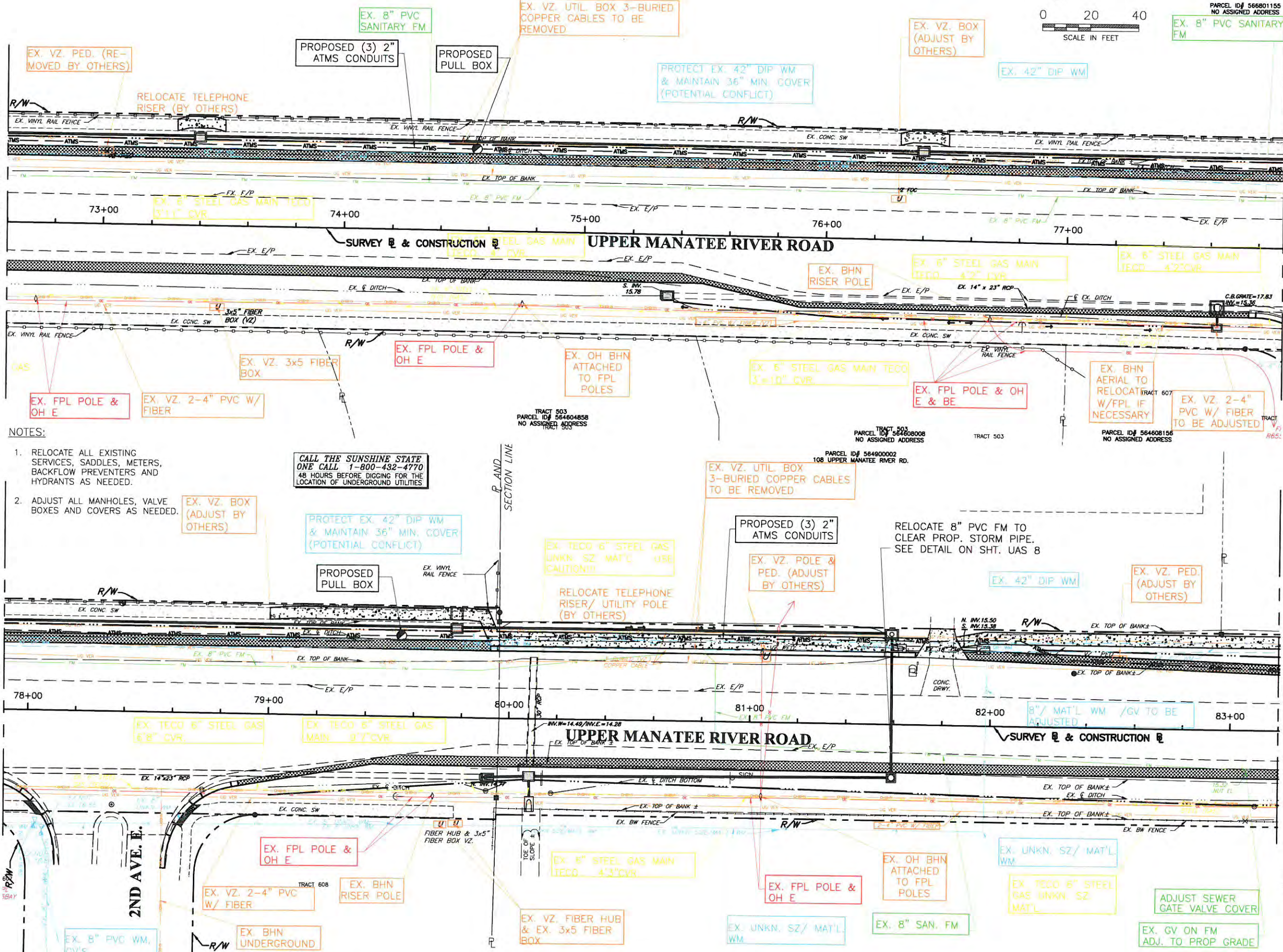


MATCH LINE STA. 72+60

MATCH LINE STA. 77+90

MATCH LINE STA. 77+90

MATCH LINE STA. 83+20



- NOTES:**
- RELOCATE ALL EXISTING SERVICES, SADDLES, METERS, BACKFLOW PREVENTERS AND HYDRANTS AS NEEDED.
  - ADJUST ALL MANHOLES, VALVE BOXES AND COVERS AS NEEDED.

**CALL THE SUNSHINE STATE ONE CALL 1-800-432-4770**  
 48 HOURS BEFORE DIGGING FOR THE LOCATION OF UNDERGROUND UTILITIES

**UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 UTILITY ADJUSTMENT SHEET  
 STA. 72+60 TO STA. 83+20**

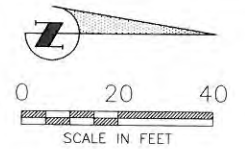
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30.34S/19E
SCALE	1"=40' HORIZ.

BY	DATE
SURVEYED ZNS	06/27/12
DESIGNED JP/PBF	06/26/12
DRAWN CBS	06/26/12
CHECKED JP/PBF	06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
 FLORIDA P.E. # 46777

Signature & Date

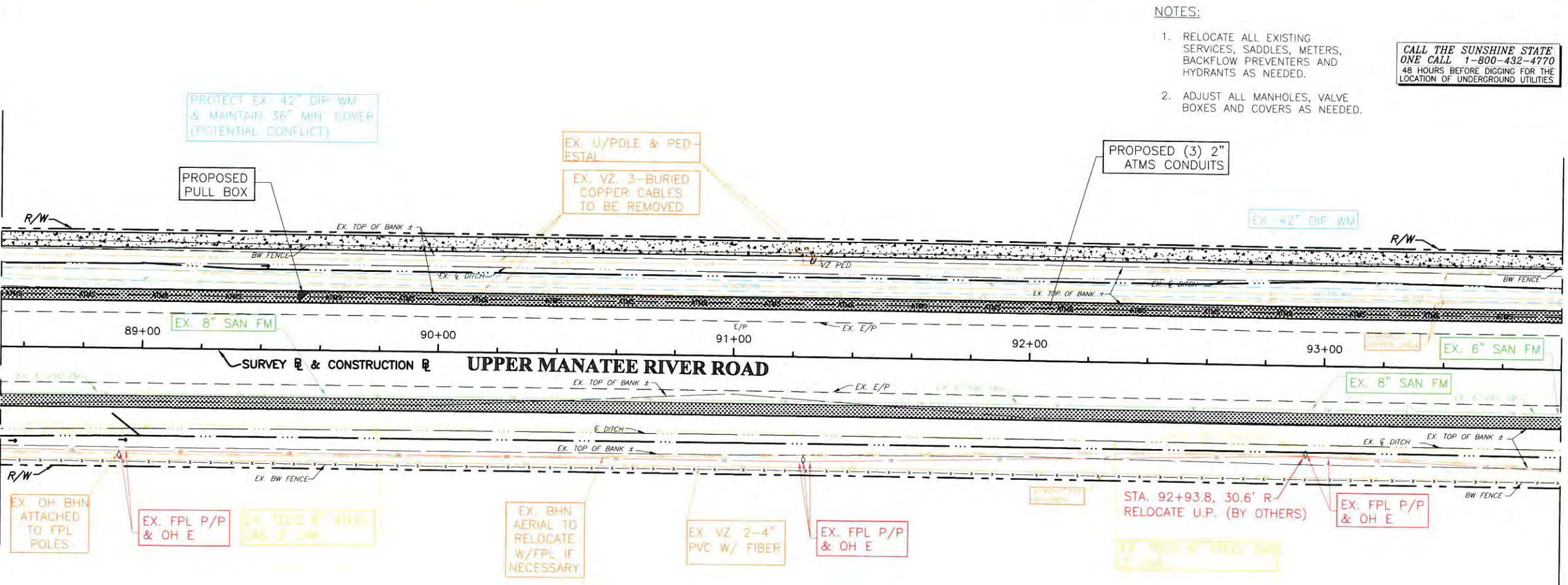
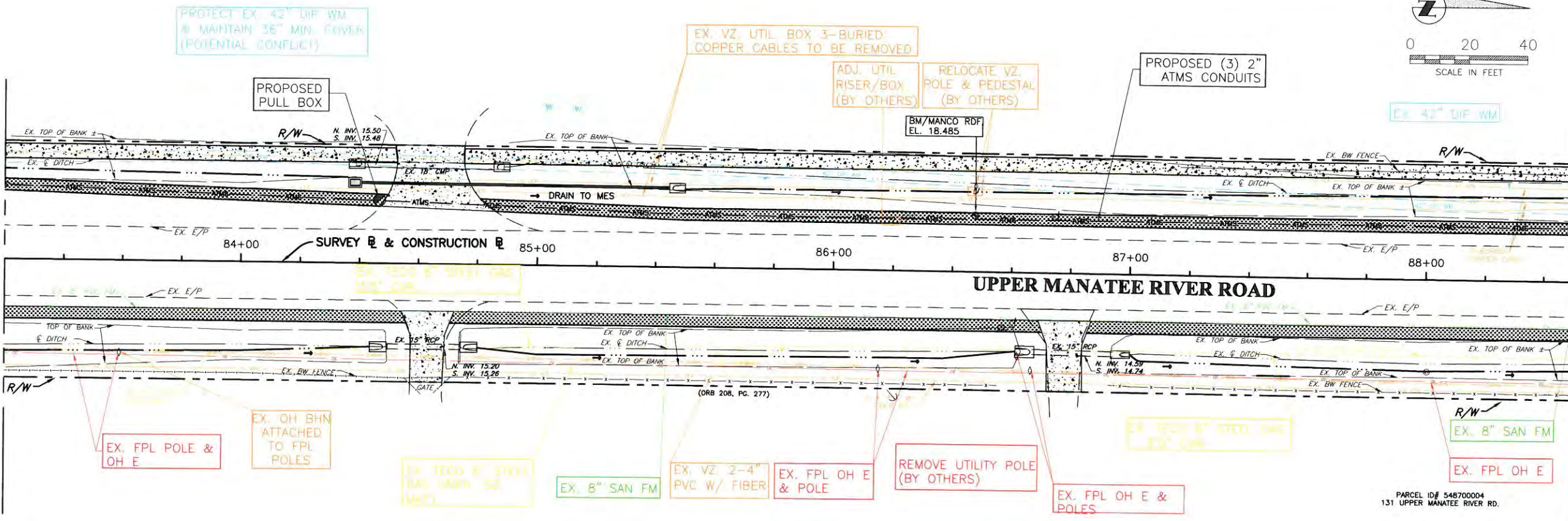


MATCH LINE STA. 83+20

MATCH LINE STA. 88+50

MATCH LINE STA. 88+50

MATCH LINE STA. 93+80



- NOTES:**
1. RELOCATE ALL EXISTING SERVICES, SADDLES, METERS, BACKFLOW PREVENTERS AND HYDRANTS AS NEEDED.
  2. ADJUST ALL MANHOLES, VALVE BOXES AND COVERS AS NEEDED.

CALL THE SUNSHINE STATE ONE CALL 1-800-432-4770 48 HOURS BEFORE DIGGING FOR THE LOCATION OF UNDERGROUND UTILITIES

**UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 UTILITY ADJUSTMENT SHEET  
 STA. 83+20 TO STA. 93+80**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30.34S/19E
SCALE	1"=40' HORIZ.

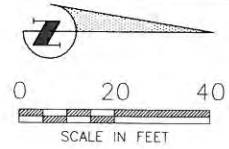
BY	DATE
SURVEYED ZNS	04/27/12
DESIGNED JP/PBF	06/20/12
DRAWN JCB	06/20/12
CHECKED JP/PBF	08/20/12

CHRISTOPHER L. NOWBRY, P.E.  
 FLORIDA P.E. # 4877

*[Signature]*  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER

SHEET 145

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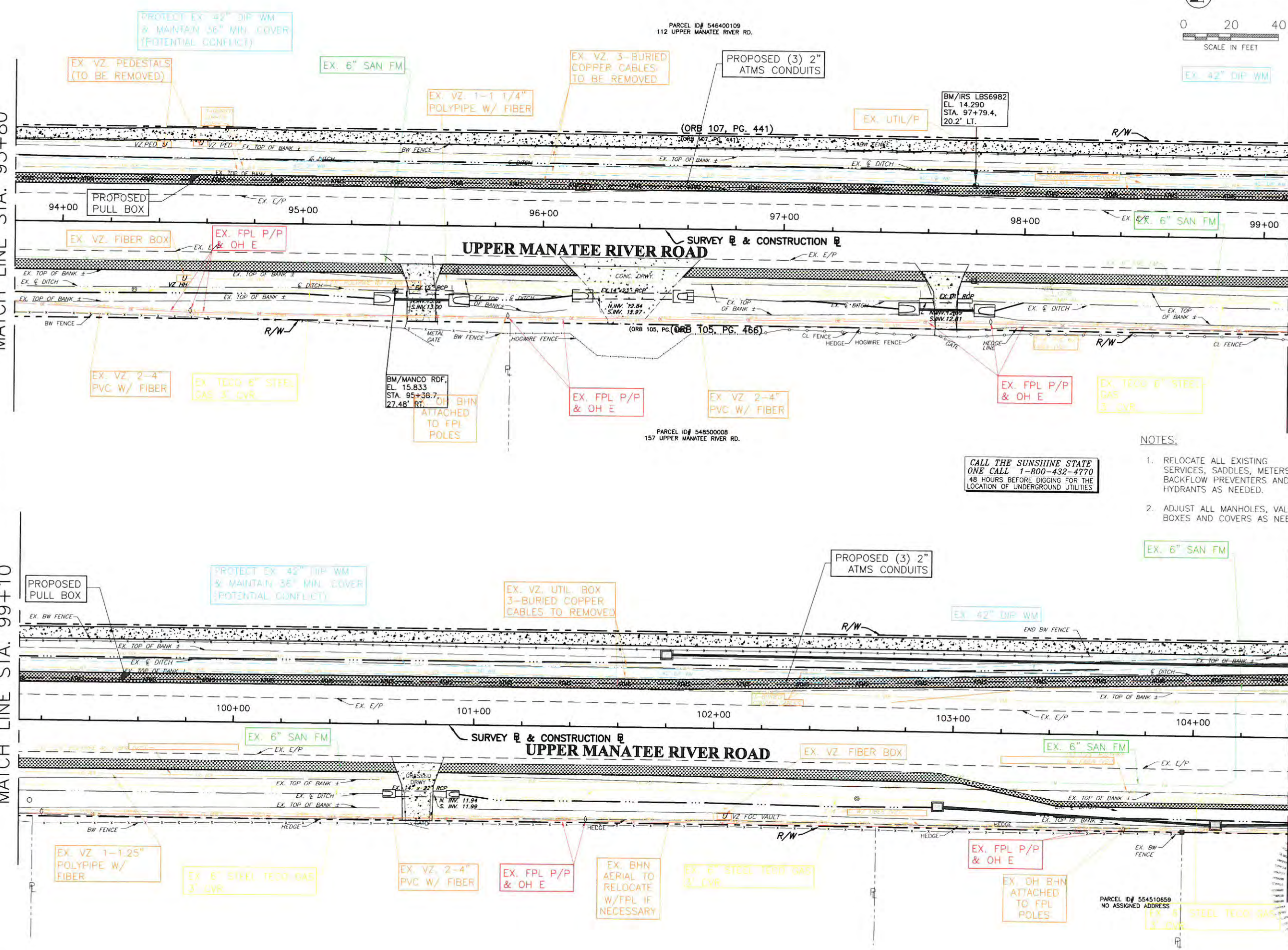


MATCH LINE STA. 93+80

MATCH LINE STA. 99+10

MATCH LINE STA. 99+10

MATCH LINE STA. 104+40



- NOTES:**
1. RELOCATE ALL EXISTING SERVICES, SADDLES, METERS, BACKFLOW PREVENTERS AND HYDRANTS AS NEEDED.
  2. ADJUST ALL MANHOLES, VALVE BOXES AND COVERS AS NEEDED.

**CALL THE SUNSHINE STATE ONE CALL 1-800-432-4770 48 HOURS BEFORE DIGGING FOR THE LOCATION OF UNDERGROUND UTILITIES**

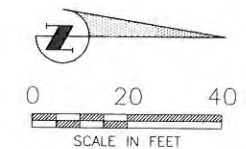
**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
UTILITY ADJUSTMENT SHEET  
STA. 93+80 TO STA. 104+40**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	1"=40' HORIZ.
DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46772	
Signature & Date	
SHEET UAS 6	

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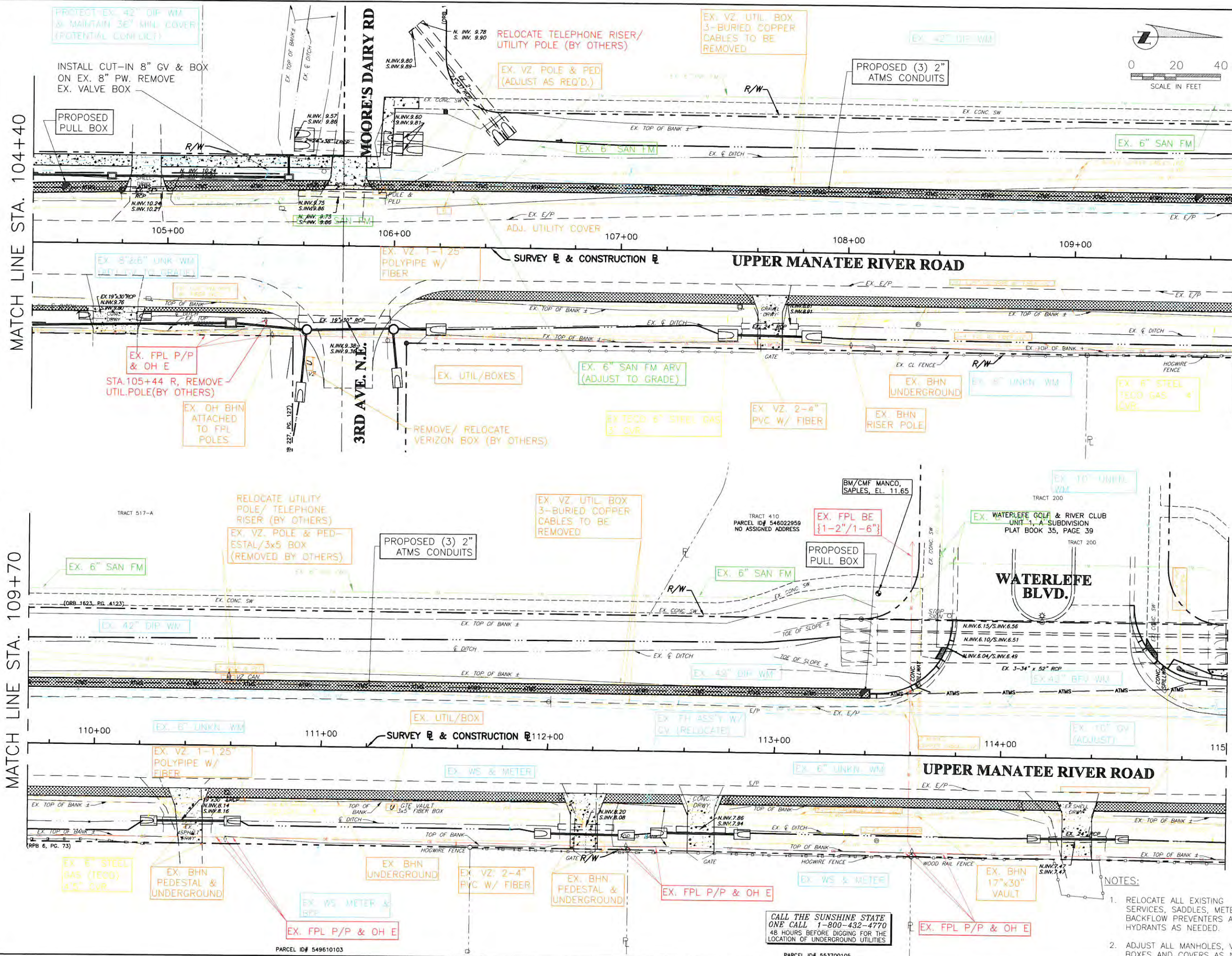
**UPPER MANATEE RIVER ROAD  
 ROADWAY FUNCTIONAL  
 IMPROVEMENTS  
 UTILITY ADJUSTMENT SHEET  
 STA. 104+40 TO STA. 115+00**

MATCH LINE STA. 104+40

MATCH LINE STA. 109+70

MATCH LINE STA. 109+70

MATCH LINE STA. 115+00



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30,34S/19E
SCALE	1"=40' HORIZ.

BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	JP/PBE 06/20/12
DRAWN	CB 06/20/12
CHECKED	JP/PBE 06/20/12

CHRISTOPHER L. MOWBRAY, P.E.  
 FLORIDA REG. # 48777

STATE OF FLORIDA  
 PROFESSIONAL ENGINEER

- NOTES:
1. RELOCATE ALL EXISTING SERVICES, SADDLES, METERS, BACKFLOW PREVENTERS AND HYDRANTS AS NEEDED.
  2. ADJUST ALL MANHOLES, VALVE BOXES AND COVERS AS NEEDED.

CALL THE SUNSHINE STATE  
 ONE CALL 1-800-432-4770  
 48 HOURS BEFORE DIGGING FOR THE  
 LOCATION OF UNDERGROUND UTILITIES

PARCEL ID# 549610103

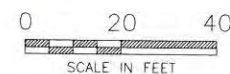
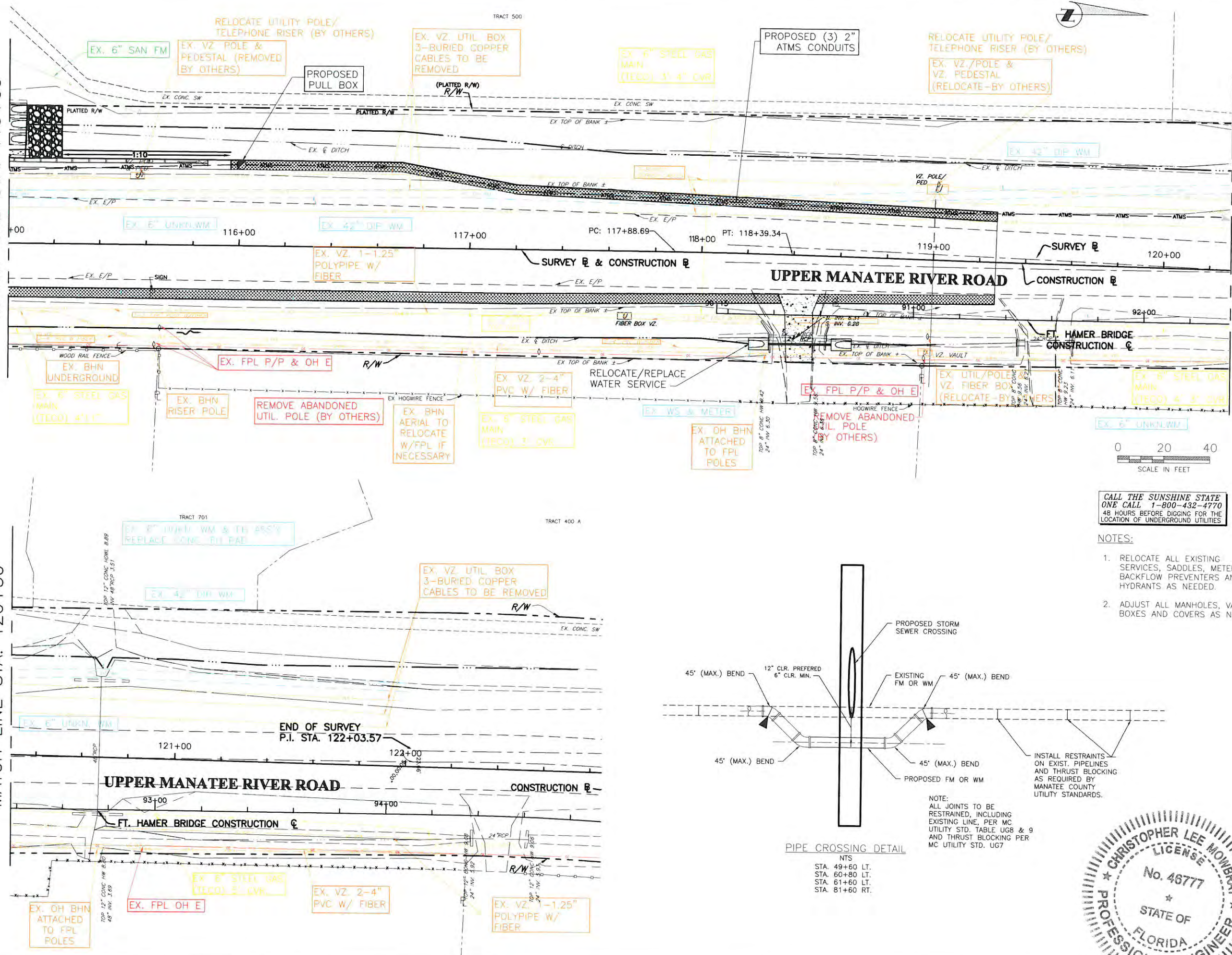
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**UPPER MANATEE RIVER ROAD  
ROADWAY FUNCTIONAL  
IMPROVEMENTS  
UTILITY ADJUSTMENT SHEET  
STA. 115+00 TO STA. 123+00**

MATCH LINE STA. 115+00

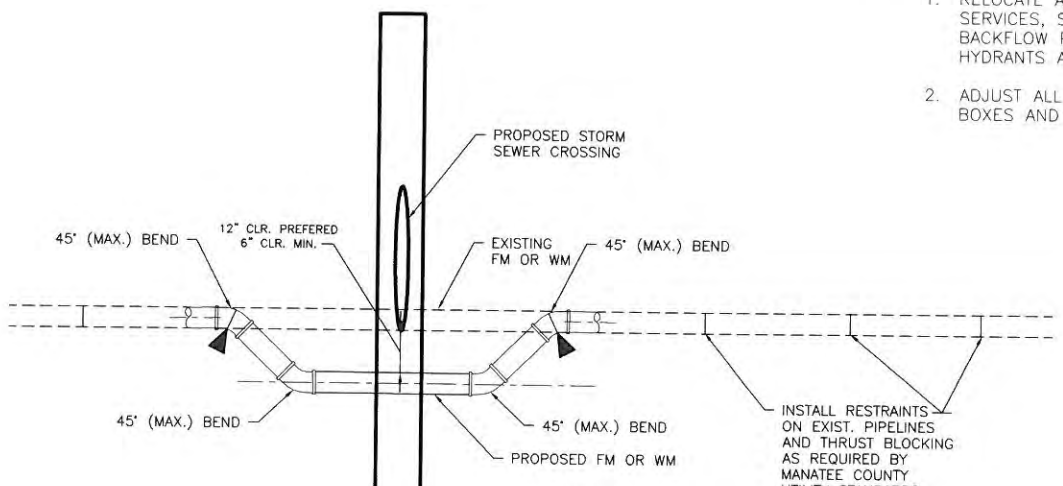
MATCH LINE STA. 120+30

MATCH LINE STA. 120+30

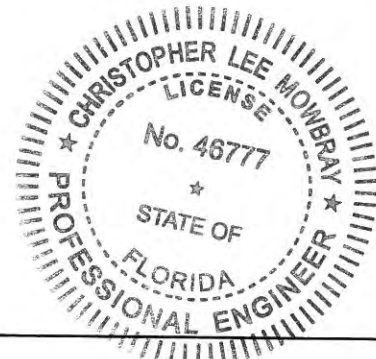


CALL THE SUNSHINE STATE  
ONE CALL 1-800-432-4770  
48 HOURS BEFORE DIGGING FOR THE  
LOCATION OF UNDERGROUND UTILITIES

- NOTES:
1. RELOCATE ALL EXISTING SERVICES, SADDLES, METERS, BACKFLOW PREVENTERS AND HYDRANTS AS NEEDED.
  2. ADJUST ALL MANHOLES, VALVE BOXES AND COVERS AS NEEDED.



PIPE CROSSING DETAIL  
NTS  
STA. 49+60 LT.  
STA. 60+80 LT.  
STA. 61+60 LT.  
STA. 81+60 RT.



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	307-6082660
SURVEY #	FILE 00-42783
SEC./TWN./RGE	19-20, 29-30.34S/19E
SCALE	1"=40' HORIZ.
BY	DATE
SURVEYED	ZNS 04/27/12
DESIGNED	JP/PBF 06/20/12
DRAWN	CB 06/20/12
CHECKED	JP/PBF 06/20/12
CHRISTOPHER L. MOWBRAY, P.E. FLORIDA P.E. # 46777	
 Signature & Date 11/9/14	

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