

### TRANSIT BUS STOP UPGRADES MANATEE COUNTY, FLORIDA 436-9008930

May 2012

### PROJECT DESCRIPTION:

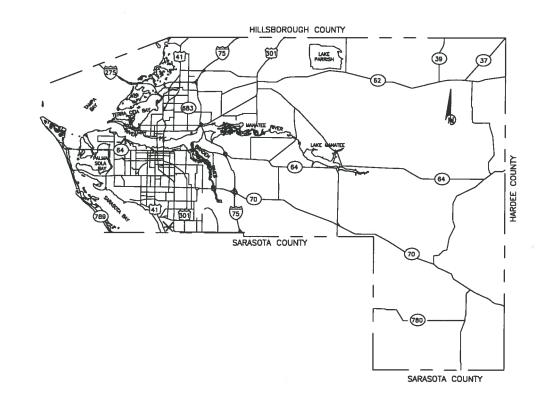
DESIGN AND CONSTRUCT SIDEWALKS AND PLATFORMS TO MAKE ADA COMPLIANT

### STANDARD SPECIFICATIONS:

GOVERNING STANDARDS AND SPECIFICATIONS: FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS, DATED 2010, AND APPLICABLE ARTICLES AND SUBARTICLES OF DIVISION I AND ALL OF DIVISIONS II & III OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2010, AS AMENDED BY CONTRACT DOCUMENTS OR MCPWD STANDARDS. AS

### STANDARDS SPECIFICATION USED FOR BUS STOP DESIGN:

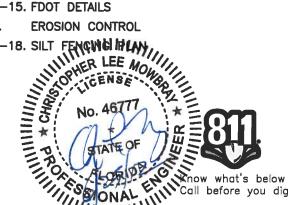
- FDOT TRANSIT FACILITY HANDBOOK (2007) • FDOT TRANSIT FACILITIES GUIDELINES
- ACCESSING TRANSIT DESIGN HANDBOOK FOR FLORIDA BUS PASSENGER FACILITIES VERSION II, (2008).



### **BID PACKAGE** 100%

### INDEX OF SHEETS

- **COVER SHEET**
- 2-2A. SUMMARY OF PAY ITEMS
- LOCATION MAP
- BUS STOP #24
- BUS STOP #256
- BUS STOP #438
- BUS STOP #560
- BUS STOP #705
- BUS STOP #884
- 10-12. MANATEE COUNTY DETAIL SHEET
- 13-15. FDOT DETAILS





STOP UPGRADE FLORID TRANSIT BUS MANATEE

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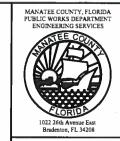
C. MOWBRAY P.E. FLORIDA P.E. # 46777

PROTE	CT NA MF	Bus Stop Number # 24		
PROJECT NAME:		DESCRIPTION	UNIT	QUANTITY
		ROADWAY		
1	0101-1	MOBILIZATION	LS	1
2	0102-1	MAINTENANCE OF TRAFFIC		1
3	01104	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	43
4	0104-10-3	SEDIMENT BARRIER	LF	90
5	0120 1	REGULAR EXCAVATION	CY	16
6	0400-1-2	TYPE D CURB CONCRETE CLASS I	CY	2.13
8	0522-1	SIDEW ALK CONCRETE, 4" THICK	SY	37
9	522-2	SIDEW ALK CONCRETE, 6" THICK	SY	31
10	0570-1-2	PERFORMANCE TURF, SOD	SY	92
11	700-20-40	SINGLE POST SIGN, RELOCATE	AS	1

PROJEC	CT NAME:	Bus Stop Number # 438		878
	ITEM			
	NO.	DESCRIPTION	UNIT	QUANTITY
		ROADWAY		
1	0101-1	MOBILIZATION	LS	1
2	0102-1	MAINTENANCE OF TRAFFIC	LS	1
3	01104	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	4
4	0104-10-3	SEDIMENT BARRIER	LF	77
6	0110-4	TYPE D CURB TO BE REMOVED	SY	4
7	0120-1	REGULAR EXCAVATION	CY	1
8	0120-6	EMBANKMENT	CY	7
9	0520-1-10	CONCRETE CURB & GUTTER, TYPE F	LF	21
10	0522-2	SIDEW ALK CONCRETE, 6" THICK	SY	34
11	0570-1-2	PERFORMANCE TURF, SOD	SY	6
12	700-20-40	SINGLE POST SIGN, RELOCATE	AS	2

PROJE	CT NAME:	Bus Stop Number # 256		
	NO.	DESCRIPTION	UNIT	QUANTITY
		ROADWAY		
1	0101-1	MOBILIZATION	LS	1
2	0102-1	MAINTENANCE OF TRAFFIC		1
3	01104	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	18
4	0104-10-3	SEDIMENT BARRIER	LF	140
5	0120 1	REGULAR EXCA VATION	CY	5
6	0522-1	SIDEWALK CONCRETE, 4" THICK	SY	13
7	522-2	SIDEWALK CONCRETE, 6" THICK	SY	17
8	0570-1-2	PERFORMANCE TURF, SOD	SY	7
9	700-20-40	SINGLE POST SIGN, RELOCATE	AS	1

PROJEC	T NAME:	Bus Stop Number # 560		
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
		ROADWAY		
1	0101-1	MOBILIZATION	LS	1
2	0102-1	MAINTENANCE OF TRAFFIC	LS	1
3	0104-10-3	SEDIMENT BARRIER	LF	90
4	01201	REGULAR EXCAVATION	CY	7
5	0400-1-25	TRENCH DRAIN CONCRETE CLASS I	CY	1
6	0520-1-7	CONCRETE CURB & GUTTER, TYPE E	LF	15
7	0522-1	SIDEW ALK CONCRETE, 4" THICK	SY	16
8	522-2	SIDEW ALK CONCRETE, 6" THICK	SY	14
9	0570-1-2	PERFORMANCE TURF, SOD	SY	115
10	700-20-40	SINGLE POST SIGN, RELOCATE	AS	1
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# TRANSIT BUS STOP UPGRADES MANATEE COUNTY, FLORIDA SUMMARY OF PAY ITEMS

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FLORIDA P.E. # 46777

PROJEC	T NAME:	Bus Stop Number # 705		
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
		ROADWAY		
1	0101-1	MOBILIZATION	LS	1
2	0102-1	MAINTENANCE OF TRAFFIC	LS	1
3	102-911-2	PA VEMENT MARKING REMOVABLE	SF	361
4	0104-10-3	SEDIMENT BARRIER	LF	140
5	0120 1	REGULAR EXCA VATION	CY	23
6	0120-6	EMBA NKMENT	CY	66
7	MC-XXX	RECONSTRUCT GRATE INLET	EA	1
8	430174201	14x23 ERCP	LF	59
9	430984629	MITERED END SECT, OPTIONAL - ELLIPTICAL 14" x 23"	EA	1
10	0520-1-7	CONCRETE CURB & GUTTER, TYPE E	LF	15
11	0522-1	SIDEW A LK CONCRETE, 4" THICK	SY	44
12	522-2	SIDEW A LK CONCRETE, 6" THICK	SY	15
13	0570-1-2	PERFORMANCE TURF, SOD	SY	101
13	700-20-40	SINGLE POST SIGN, RELOCATE	AS	1
14	0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12"	LF	60

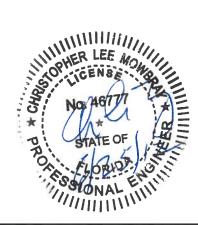
PROJECT NAME:		Bus Stop Number # 884		
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
		ROADWAY		
1	0101-1	MOBILIZATION	LS	1
2	0102-1	MAINTENANCE OF TRAFFIC	LS	1
3	0104-10-3	SEDIMENT BARRIER	LF	140
4	0120 1	REGULAR EXCAVATION	CY	8
5	0400-1-25	TRENCH DRAIN CONCRETE CLASS I	CY	1
6	0520-1-7	CONCRETE CURB & GUTTER, TYPE E	LF	15
7	0522-1	SIDEWALK CONCRETE, 4" THICK	SY	16
8	522-2	SIDEWALK CONCRETE, 6" THICK	SY	14
9	0570-1-2	PERFORMANCE TURF, SOD	SY	105
10	700-20-40	SINGLE POST SIGN, RELOCATE	AS	1

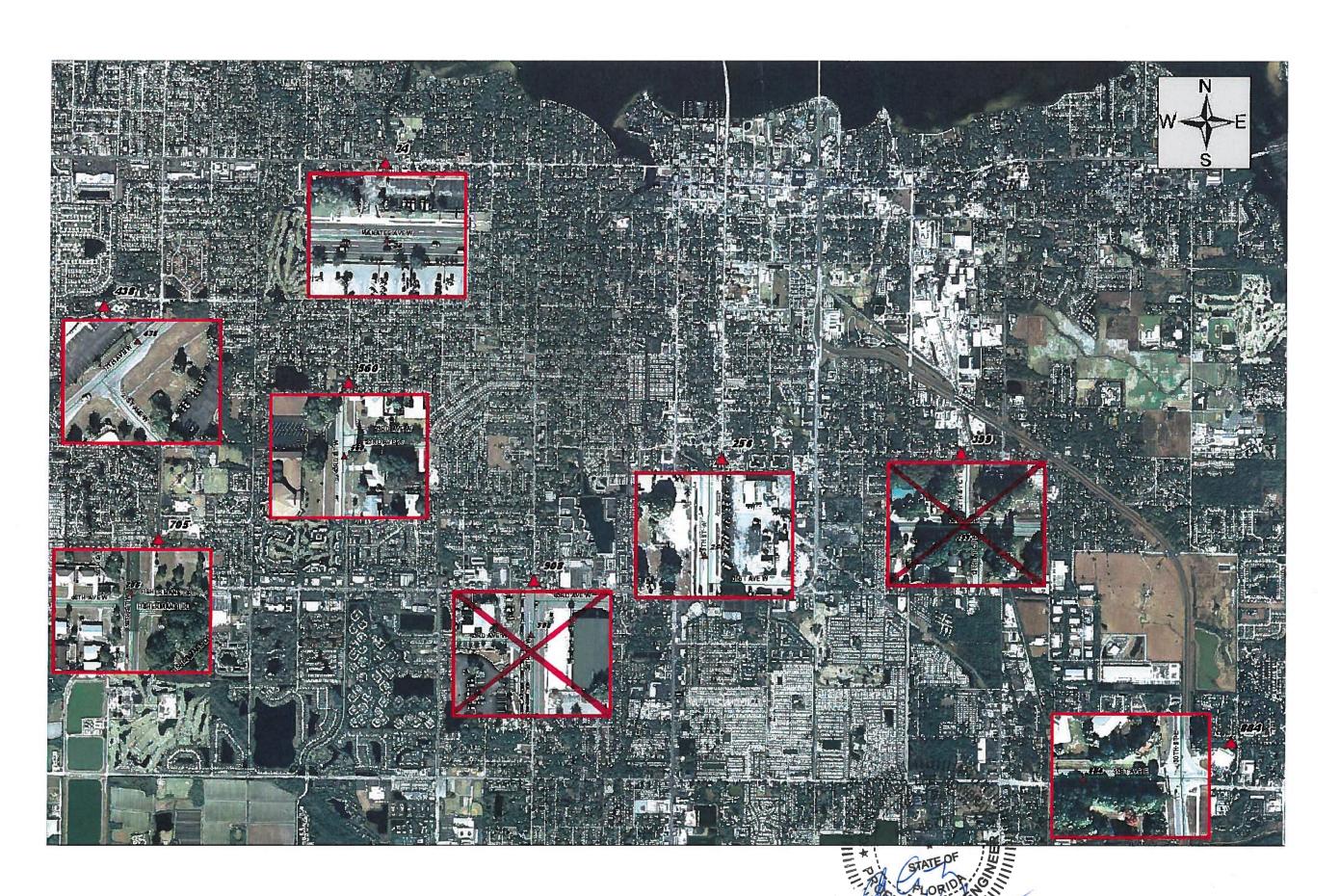


### TRANSIT BUS STOP UPGRADES MANATEE COUNTY, FLORIDA SUMMARY OF PAY ITEMS

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C. MOWBRAY P.E. FLORIDA P.E. # 46777







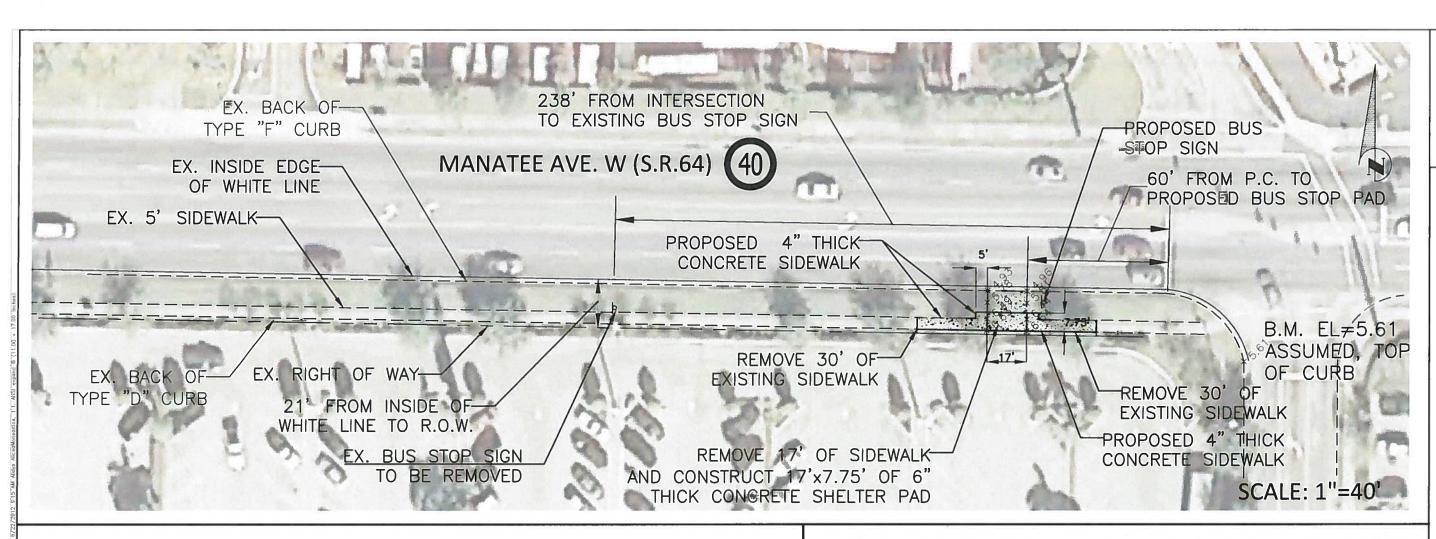
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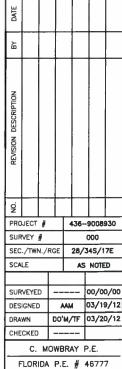
Signature & Date

SHEET 3



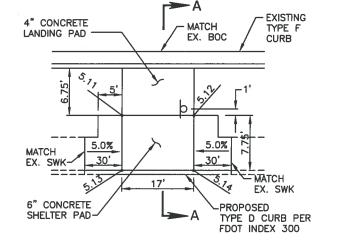






Signature & Date

SHEET 4



**EXISTING** TYPE F CURB 6" CONCRETE MATCH SHELTER PAD \_ MATCH **EXISTING EXISTING** CURB CONSTRUCT 77 L.F.
OF TYPE D CURB, MOD—
SEE NOTE 4" CONCRETE LANDING PAD CONTRACTOR TO PROVIDE SHOP DRAWINGS WITH REBAR SIZE AND LOCATION.

**SECTION A-A** 

DISTURBED AREAS

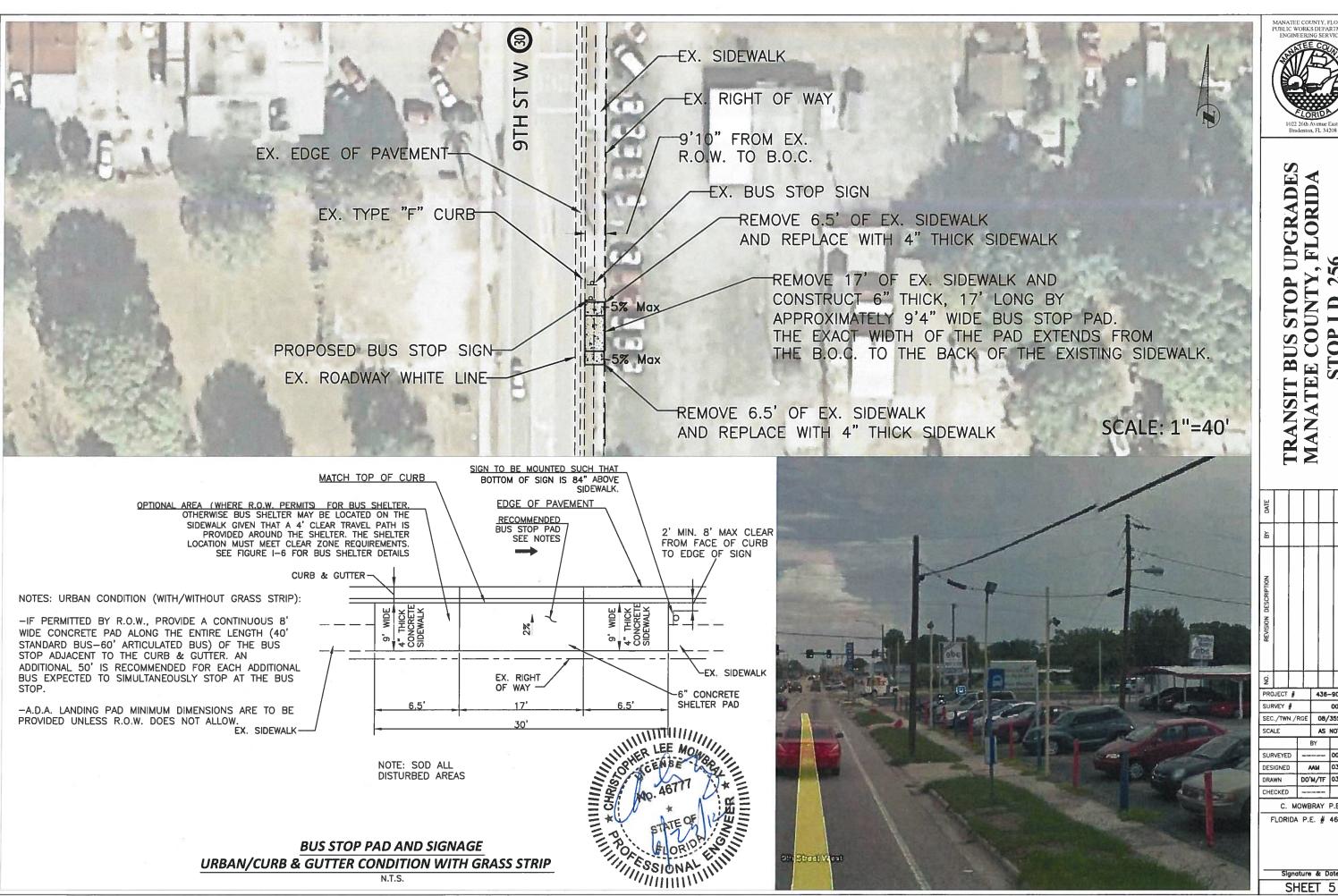
### NOTES URBAN CONDITION (WITH/WITHOUT GRASS STRIP):

-IF PERMITTED BY R.O.W., PROVIDE A CONTINUOUS 8' WIDE CONCRETE PAD ALONG THE ENTIRE LENGTH (40' STANDARD BUS-60' ARTICULATED BUS) OF THE BUS STOP ADJACENT TO THE CURB & GUTTER, AN ADDITIONAL 50' LENGTH IS RECOMMENDED FOR EACH ADDITIONAL BUS EXPECTED TO SIMULTANEOUSLY STOP AT THE BUS STOP.

-A.D.A. LANDING PAD MINIMUM DIMENSIONS ARE TO BE PROVIDED UNLESS R.O.W. DOES NOT ALLOW.

> **BUS STOP PAD AND SIGNAGE URBAN/CURB CONDITION**

N.T.S.



# TRANSIT BUS STOP UPGRADES MANATEE COUNTY, FLORIDA STOP I.D. 256

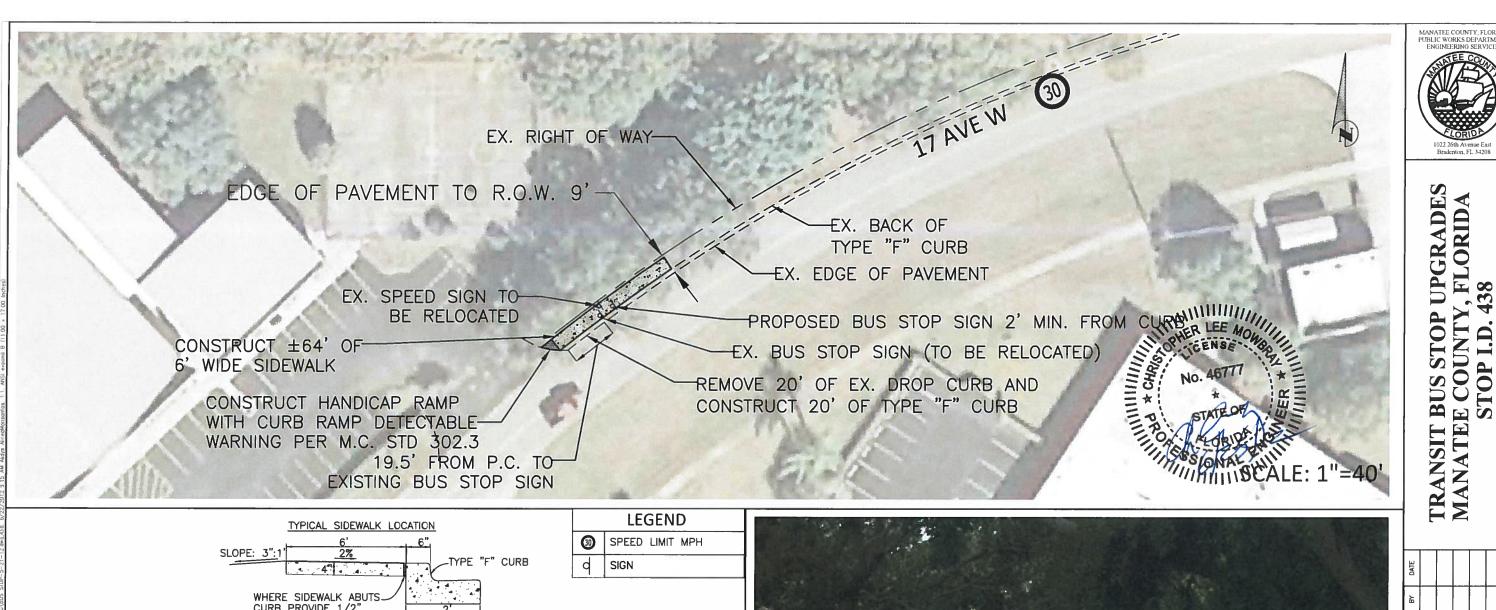
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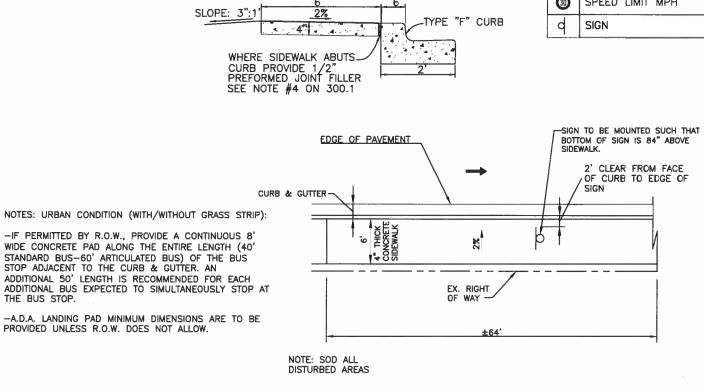
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C. MOWBRAY P.E.

FLORIDA P.E. # 46777

Signature & Date

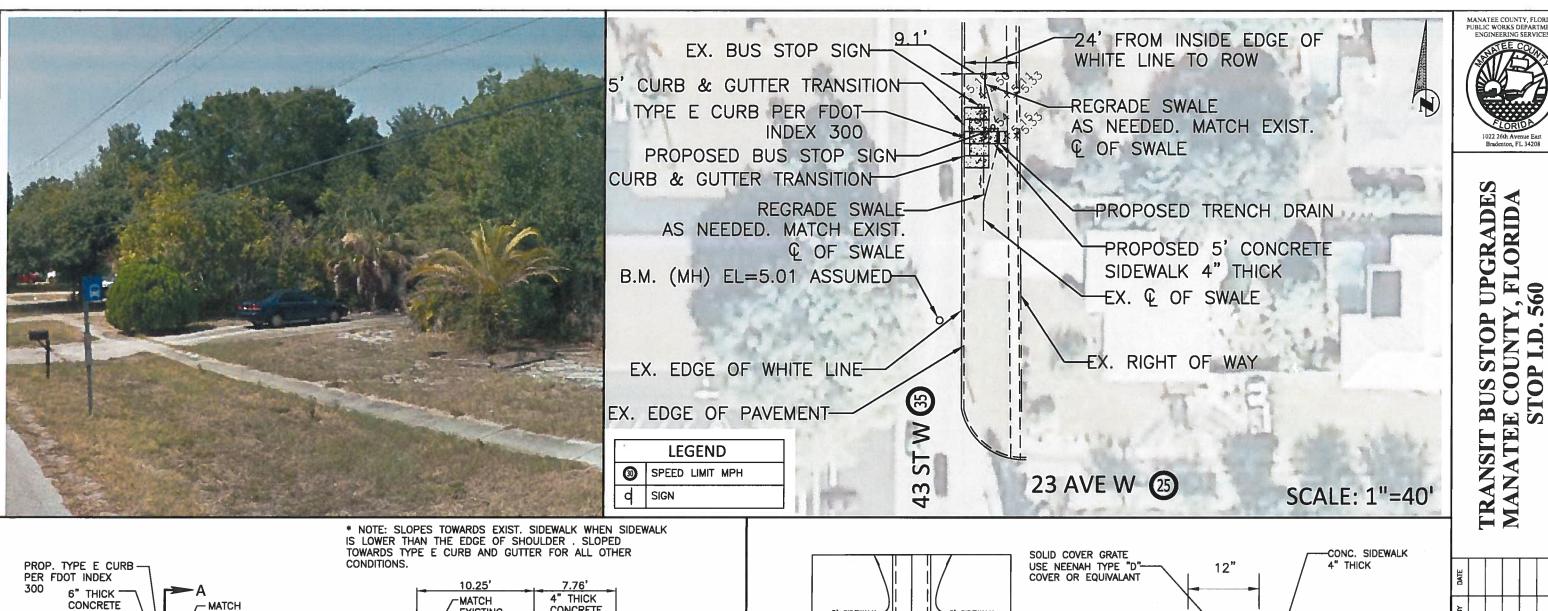


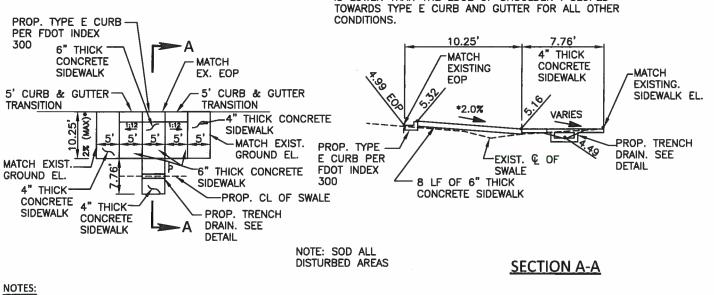


BUS STOP PAD AND SIGNAGE
URBAN/CURB & GUTTER CONDITION WITHOUT GRASS STRIP
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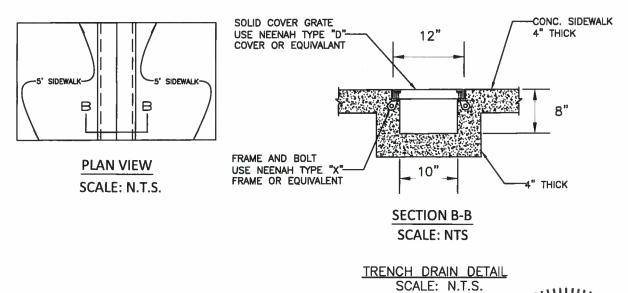
-FOR A BUS STOP IN RURAL CONDITIONS, THE BUS STOP SIGN SHOULD BE LOCATED OUTSIDE THE CLEAR ZONE OF THE ROAD; WHERE POSSIBLE IT IS DESIRABLE TO BUILD A CONCRETE PAD FOR A SHELTER.

-SLOPES ARE REPRESENTATIVE AND VARY WITH LOCATION. ADJUST DESIGN TO LOCAL CONDITIONS.

- CONCRETE SIDEWALK WITHIN CLEAR ZONE SHOULD MEET ADA CRITERIA

### **BUS STOP PAD AND SINAGE** RURAL/SHOULDER CONDITION

N.T.S.

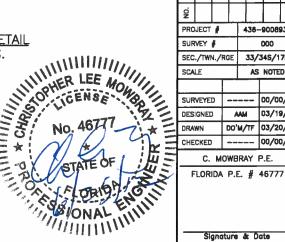


TYPE "E" CURB

WHERE SIDEWALK ABUTS-CURB PROVIDE 1/2" PREFORMED JOINT FILLER SEE NOTE #4 ON 300.1

### **TYPICAL SIDEWALK LOCATION**

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436-9008930

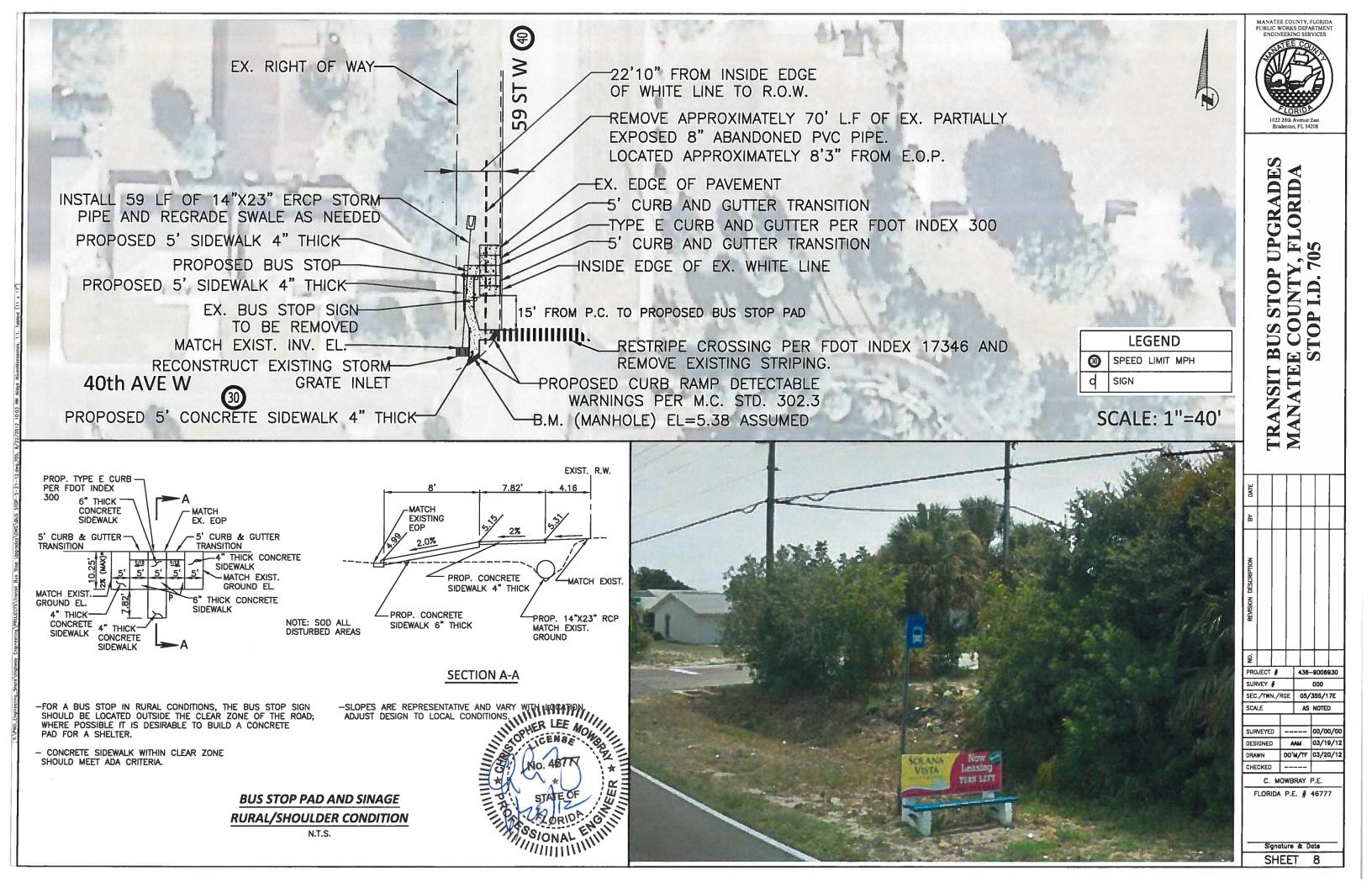
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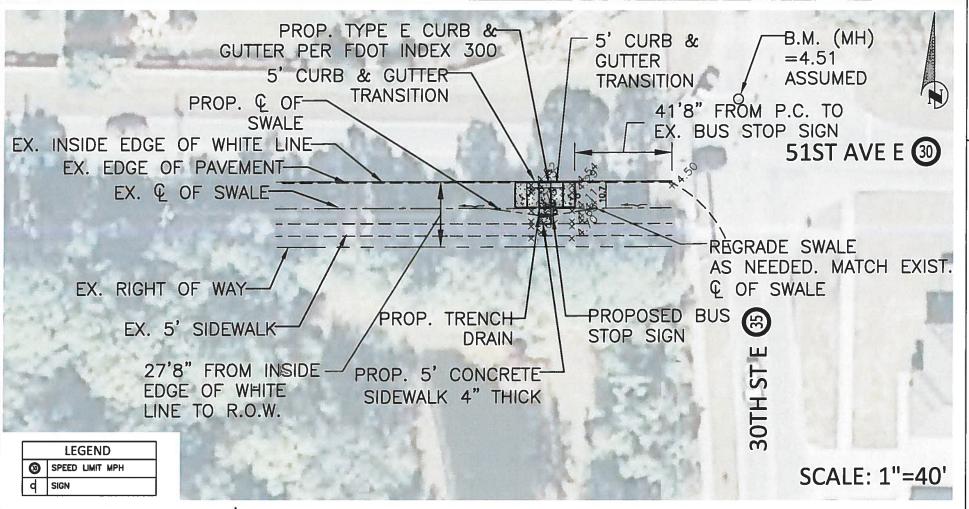
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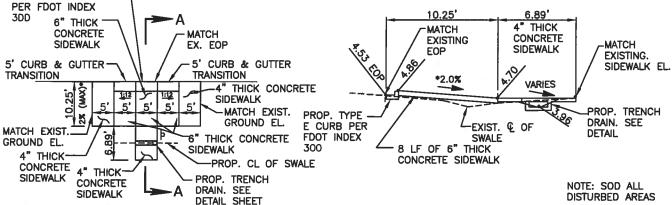
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### SECTION A-A

### NOTES:

FOR A BUS STOP IN RURAL CONDITIONS, THE BUS STOP SIGN SHOULD BE LOCATED OUTSIDE THE CLEAR ZONE OF THE ROAD; WHERE POSSIBLE IT IS DESIRABLE TO BUILD A CONCRETE PAD FOR A SHELTER.

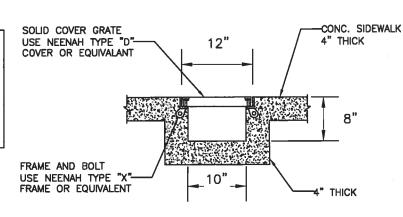
-SLOPES ARE REPRESENTATIVE AND VARY WITH LOCATION. ADJUST DESIGN TO LOCAL CONDITIONS.

 CONCRETE SIDEWALK WITHIN CLEAR ZONE SHOULD MEET ADA CRITERIA.

### BUS STOP PAD AND SINAGE RURAL/SHOULDER CONDITION

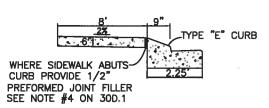
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PLAN VIEW
SCALE: N.T.S.



SECTION B-B
SCALE: NTS

### TRENCH DRAIN DETAIL SCALE: N.T.S.

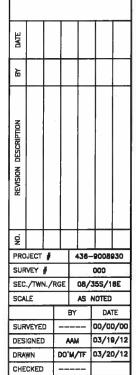


TYPICAL SIDEWALK LOCATION N.T.S.





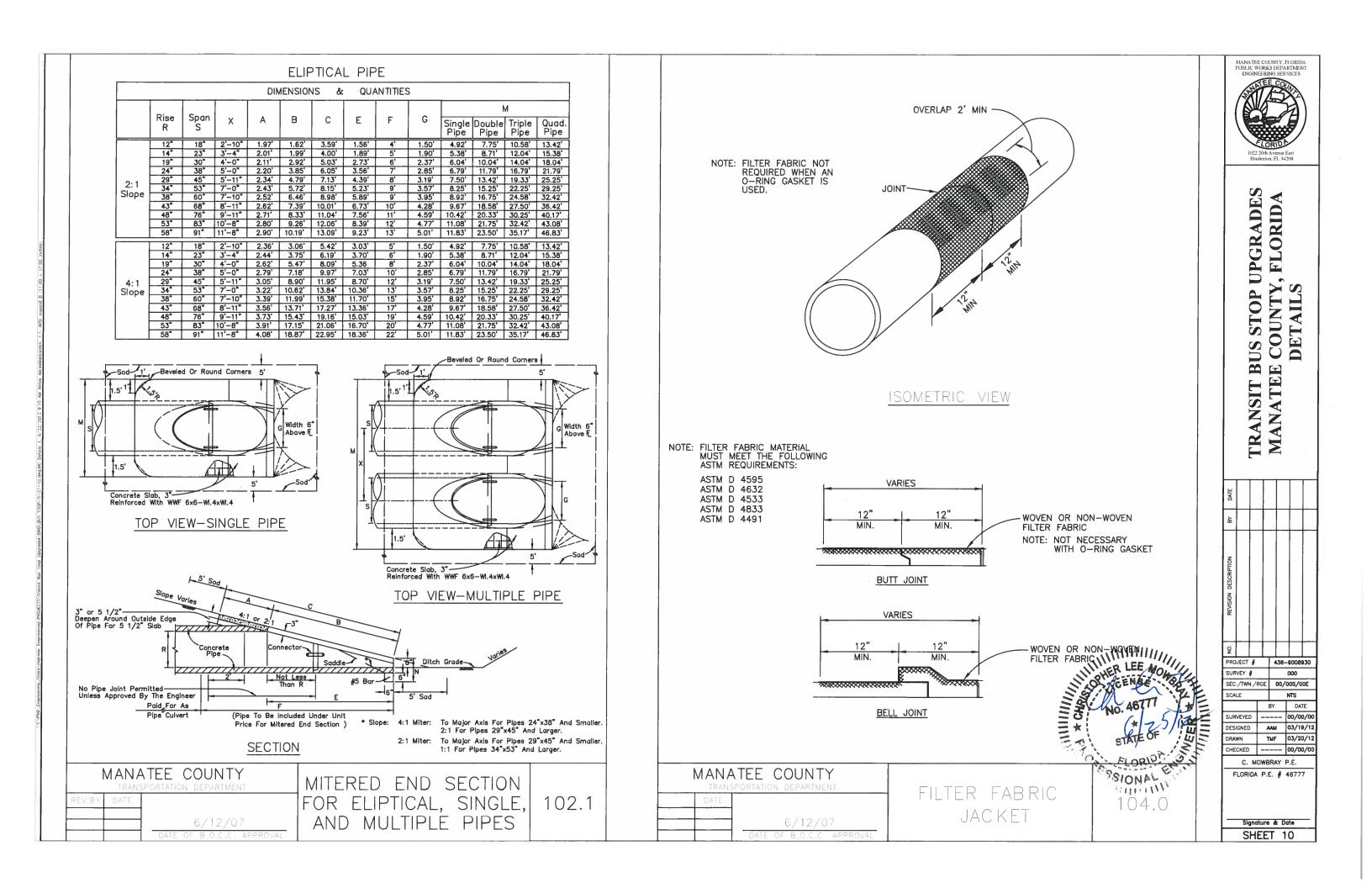
### TRANSIT BUS STOP UPGRADES MANATEE COUNTY, FLORIDA STOP I.D. 884

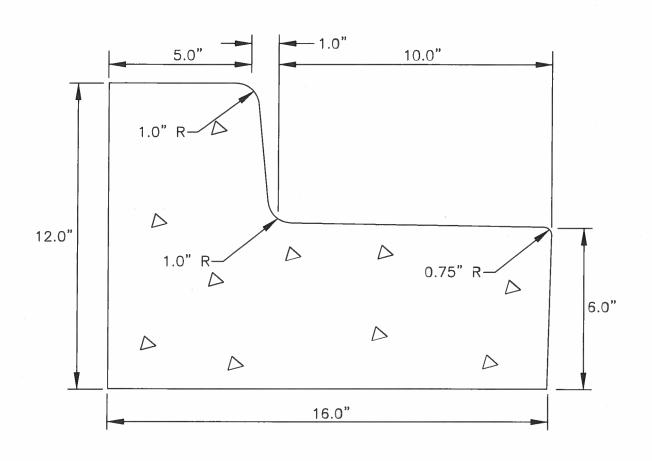


Signature & Date

C. MOWBRAY P.E. FLORIDA P.E. # 46777

SHEET 9

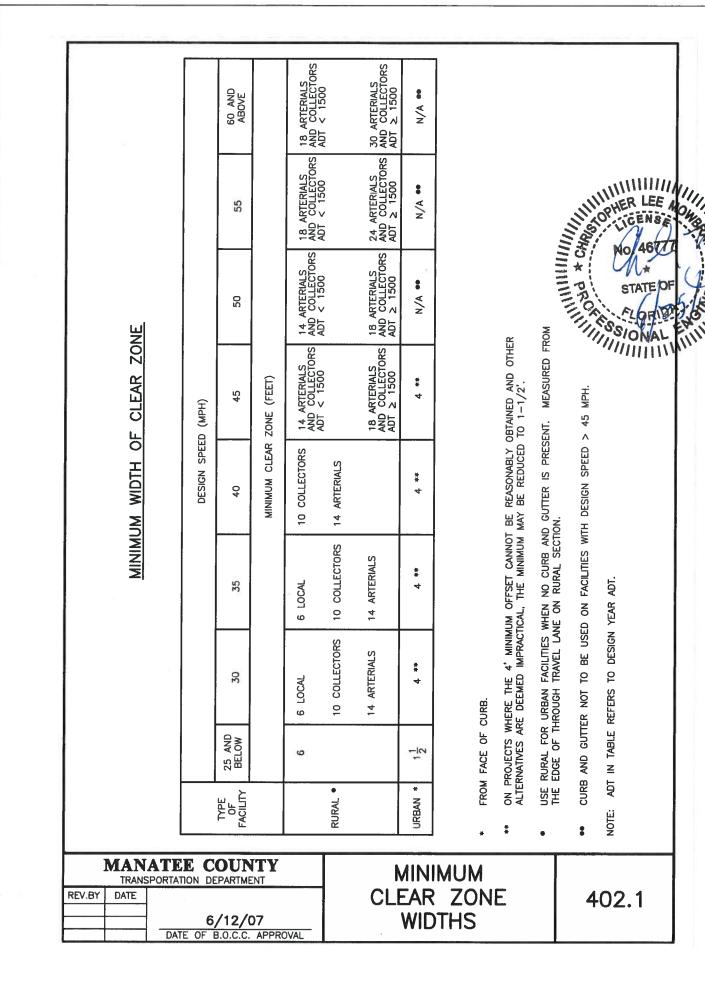




- TYPE "AB"

  MODIFIED CURB & GUTTER
- A) CLASS 1 CONCRETE 3,000 PSI 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 STANDARDS INDEX NO. 300, LATEST REVISION.

	ATEE COUNTY SPORTATION DEPARTMENT	TYPE "AR"	MODIEIED	
REV.BY DATE	6/12/07	CURB &		201,.3



TRANSIT BUS STOP UPGRADES MANATEE COUNTY, FLORIDA

PROJECT #

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BY DATE --- 00/00/00

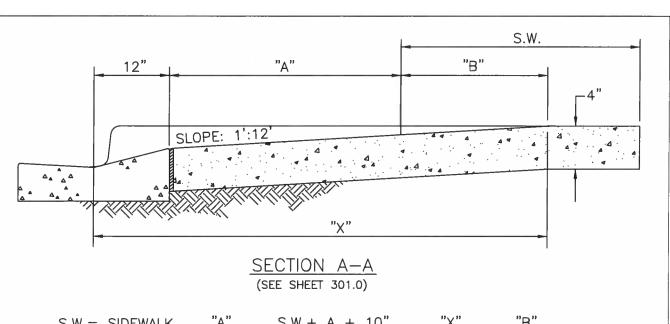
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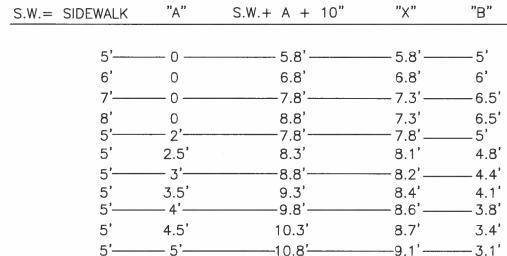
C. MOWBRAY P.E.

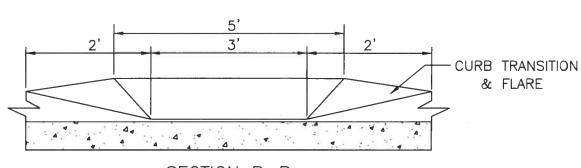
FLORIDA P.E. # 46777

Signature & Date

DETAILS



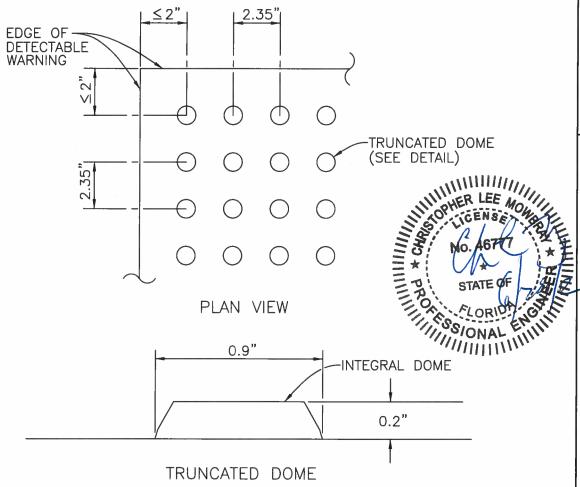




SECTION B-B (SEE SHEET 301.0)

NOTE: FOR COMPLETE HANDICAP, PUBLIC SIDEWALK AND CURB RAMP DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6.

MANATEE COUNTY TRANSPORTATION DEPARTMENT			HANDIC APPED	
REV.BY	DATE		RAMP SHEET 2	302.2
		6/12/07 Date of B.O.C.C. Approval	INAIVII JIILLI Z	



### CURB RAMP DETECTABLE WARNING DETAIL

NOTES:

### DETECTABLE WARNINGS ON WALKING SURFACES

THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCH, A HEIGHT OF NOMINAL 0.2 INCH AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCH AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND—ON—CANE CONTACT.

THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70%. CONTRAST IN PERCENT IS DETERMINED BY:

 $CONTRAST = [(B1-B2)/B1] \times 100$ 

WHERE B1 = LIGHT REFLECTANCE VALUE (LRV) OF THE LIGHTER AREA AND B2 = LIGHT REFLECTANCE VALUE (LRV) OF THE DARKER AREA.

NOTE THAT IN ANY APPLICATION BOTH WHITE AND BLACK ARE NEVER ABSOLUTE; THUS, B1 NEVER EQUALS 100 AND B2 IS ALWAYS GREATER THAN 0.

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

PUBLIC WORKS DIPARTMENT ENGINEERING SERVICES

MANATEE COUNTY, FLORIDA

TRANSIT BUS STOP UPGRADES
MANATEE COUNTY, FLORIDA
DETAILS

NOISCT # 436-9008930

SURVEY # 000

SEC./TWN./RGE 00/005/00E

SCALE NTS

BY DATE

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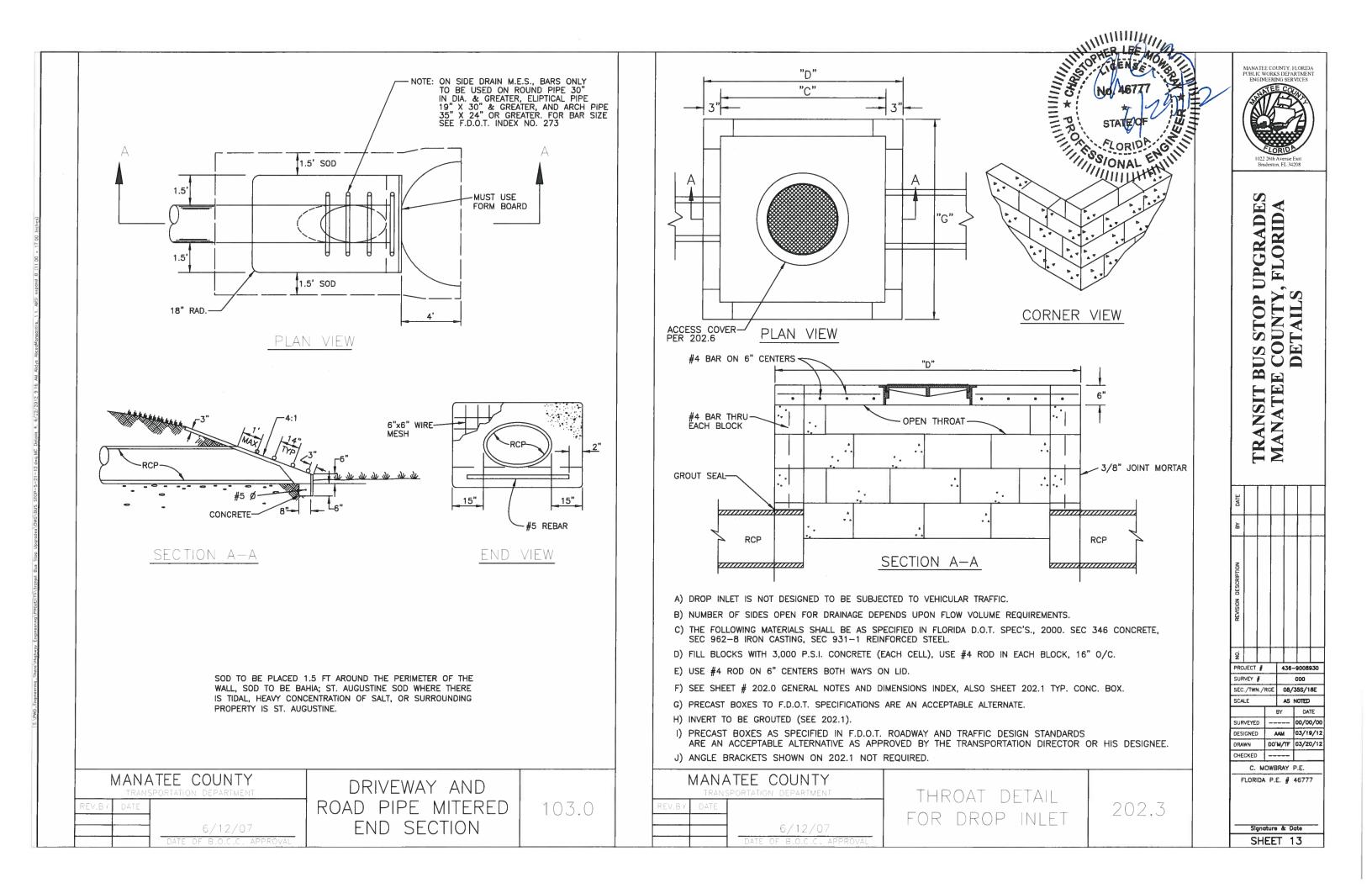
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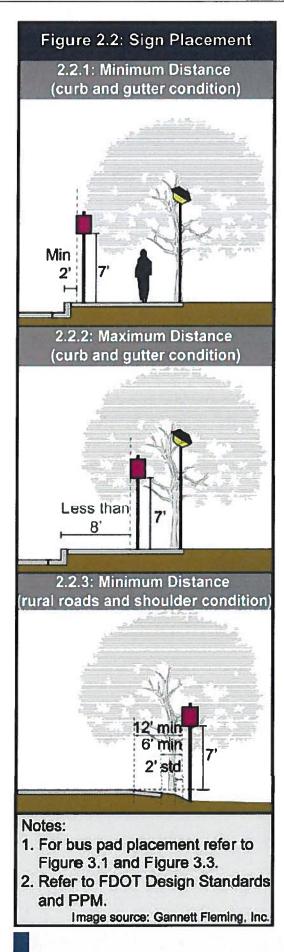
C. MOWBRAY P.E.

AAM 03/19/12

DESIGNED

C. MOWBRAY P.E. FLORIDA P.E. # 46777





### 2.1.2 Street Signage

Bus stop signs help direct passengers and drivers to the bus stop, and publicize transit services. Bus stop signs are approved signs indicating the operators and routes that serve the stop. All signs must be in compliance with Manual on Uniform Traffic Control Devices (MUTCD). The following should be considered while designing and placing bus stop signs.

- The sign must be securely mounted at an angle perpendicular to the street. Existing signposts can be used depending on the policies of the sign maintaining agency and the transit agencies' design specifications.
- The bus stop sign should neither block jurisdictional signs nor be blocked by other signs, trees or buildings.
- The sign must be easily visible to the approaching bus driver. For curb and gutter sections, the FDOT Design Standards require a minimum 2 foot distance from the face of the curb to the bus stop sign (Figures 2.2.1-2). For typical rural shoulder sections, the minimum distance is 12 feet from the edge of the traveled way and 6 feet from edge of the shoulder (Figure 2.2.3). The minimum distance will vary according to the design speed of the road.

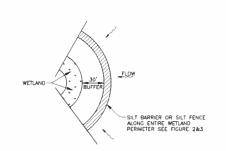
- To comply with Americans with Disability Act requirements, signage should include the following:
- Signs shall provide a minimum 7-foot vertical clearance from the paved surface (sidewalk or roadway pavement). If the vertical clearance is less than 7 feet, a barrier to warn people with visual impairment should be provided.
- Wherever required or applicable, signs should include the international symbol of accessibility (wheelchair logo).
- Where the circulation path is different, signage complying with the items listed above along with all other applicable clauses should be provided to indicate direction and to identify accessible route and entrance(s).
- The Access Board has developed the guidance in section 409.5 of its Revised Draft Guidelines for signs on public right-of-way. This guidance has not been formally adopted in federal rulemaking but is considered best practice at this time.



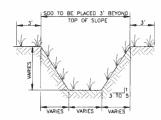
## TRANSIT BUS STOP UPGRADES MANATEE COUNTY, FLORIDA FDOT DETAILS

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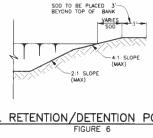
WETLAND BUFFER



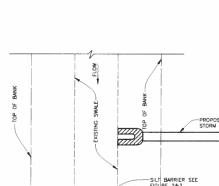
TYPICAL SWALE SECTION FIGURE 5

EXISTING LAKE

EDGE OF WATER



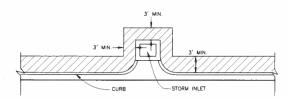
TYPICAL RETENTION/DETENTION POND SECTION



SILT BARRIER AT CONNECTION OF

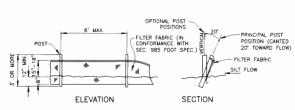
STORM PIPE TO EXISTING SWALE

TURBIDITY BARRIER AT CONNECTION OF STORM PIPE TO EXISTING LAKE



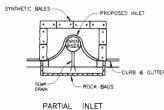
SOD ALONG CURB AND AROUND INLET

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



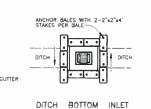
NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF)

### TYPICAL SILT FENCE



COMPLETED INLET

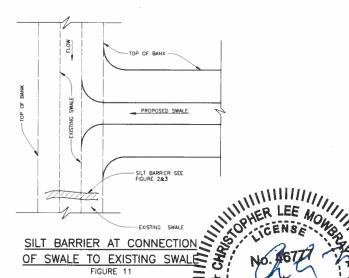
BALES TO BUTT-



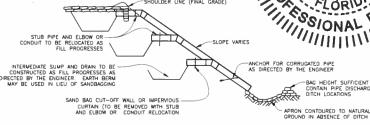
TYPICAL BALE SILT BARRIER

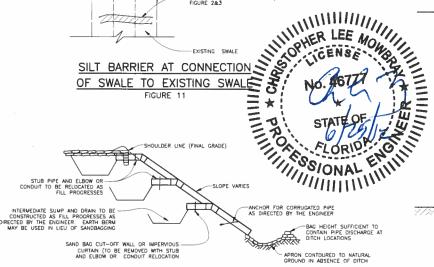
### SYNTHETIC BALE PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

- ROCK BAGS



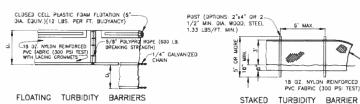
SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE FIGURE 11



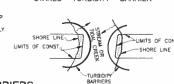


SECTION AA

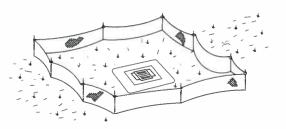
TEMPORARY SLOPE DRAIN



D, =5' STO. (SINGLE PANEL FOR DEPTHS 5' OR LESS). D, =5' STO. (ADDITIONAL PANEL FOR DEPTHS > 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. WROC2/ PANELS TO BE USED FOR DEPTHS ORGATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE FLANS OR AS DETERMINED BY THE ENGINEER.

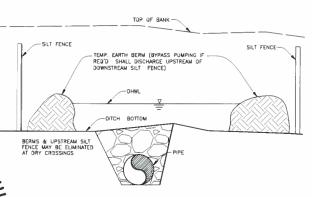


TURBIDITY BARRIERS FIGURE 4

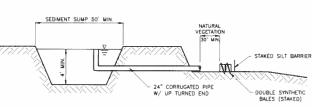


TYPE III SILT FENCE PROTECTION

### STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS



UNDERGROUND PIPE CROSSING



SEDIMENT SUMP SECTION
FIGURE 16



## **UPGRADES** TRANSIT BUS STOP UPGRADES MANATEE COUNTY, FLORIDA EROSION CONTROL

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CHECKED			00/00/00			

C. MOWBRAY P.E.

FLORIDA P.E. # 46777

