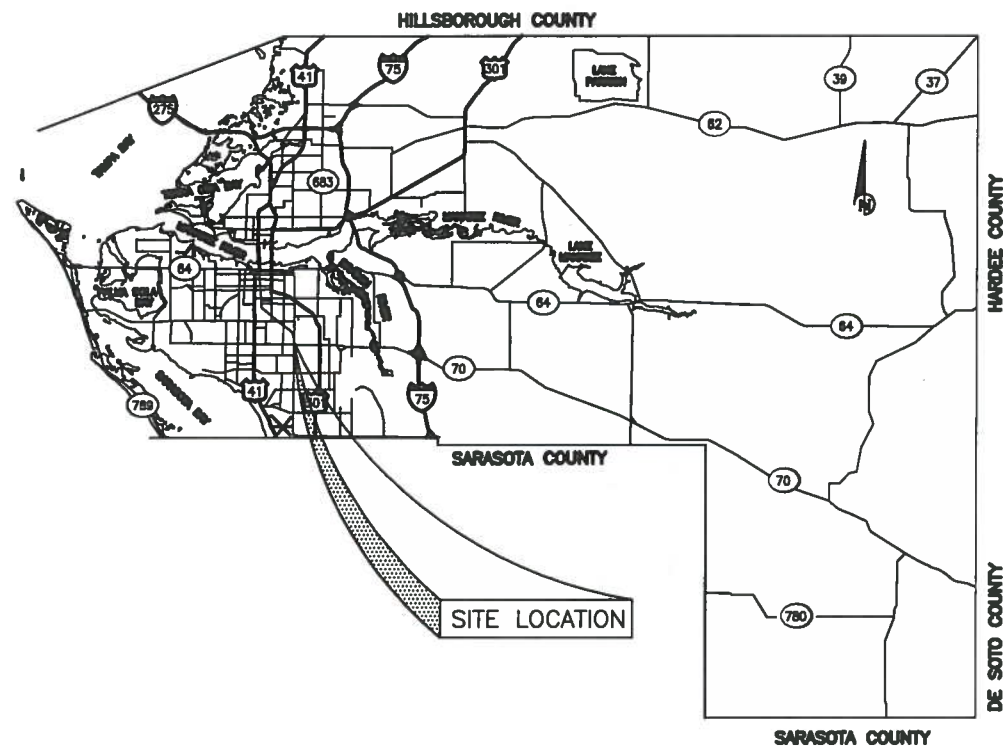


TOPOGRAPHIC SURVEY

US 301/15th St. E.

MANATEE COUNTY, FLORIDA

APRIL 2009



LEGEND

●	IRON ROD	⊙	SANITARY SEWER MANHOLE
○	IRON PIPE	○	SANITARY SEWER CLEAN-OUT
■	CONCRETE MONUMENT	⊕	STORM SEWER MANHOLE
PKD	PK NAIL W/DISC	□	STORM INLET
IRC	IRON ROD W/CAP	○	DRAINAGE PIPE
⊕	BENCHMARK	■	GRATE INLET
PARCEL ID # 586800108 (TYP.)		▭	MITERED END SECTION
17.14'	SPOT ELEVATION (TYP.)	⊕	FIRE HYDRANT
R	RADIUS	⊗	WATER VALVE
R/W	RIGHT OF WAY	⊕	WATER METER
Conc	CONCRETE	⊕	UTILITY POLE
Asph	ASPHALT	⊕	GUY WIRE
INV	INVERT	⊕	LIGHT POLE
TOB	TOP OF BANK	⊕	TELEPHONE UTILITY
🌴	PALM TREE	●	GAS UTILITY
🌳	DAK TREE	□	MAIL BOX
🌲	PINE TREE	⊕	SIGN
🌳	TREE	—	UNDERGROUND UTILITY
⊕	ELECTRIC UTILITY	—	CHAIN LINK FENCE
⊕	TRAFFIC SIGNAL MAST ARM	—	WOOD FENCE

GENERAL NOTES

- THESE PLANS DO NOT REFLECT A TRUE BOUNDARY OR RIGHT-OF-WAY SURVEY. THE LOCATION OF THE STREET RIGHT-OF-WAY LINES SHOWN ARE APPROXIMATE AND HAVE BEEN BASED ON INFORMATION CONTAINED IN THE SUBDIVISION PLATS, RIGHT-OF-WAY MAPS ON RECORD IN MANATEE COUNTY AND TOPOGRAPHIC DATA COLLECTED ALONG EACH OF THE RIGHTS-OF-WAY. CONSEQUENTLY, THE RIGHT-OF-WAY LINES SHOWN ARE NOT INTENDED TO INDICATE THE EXACT BOUNDARIES.
- THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
- TITLE WORK WAS NOT PROVIDED FOR THIS SURVEY.
- THE BEARINGS INDICATED HEREIN ARE A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/1990).
- THE ELEVATIONS SHOWN HEREIN HAVE BEEN BASED ON THE FOLLOWING BENCHMARKS CONTAINED IN MANATEE COUNTY BENCH RUN # 124:
124-29-01: X-CUT AT THE TOP CENTER ON THE EAST SIDE OF A CONCRETE GRATE INLET, LOCATED 45' +/- SOUTH OF THE CENTERLINE OF THE ENTRANCE TO ONECO SQUARE PLAZA, 510' +/- SOUTH OF THE CENTERLINE INTERSECTION OF 51ST AVE EAST AND 15TH ST. EAST (301 BLVD), AND 36' +/- WEST OF THE CENTERLINE OF 15TH ST. EAST (301 BLVD). ELEV. = 34.226' (N.G.V.D. 1929 DATUM)
- THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTY OR PARTIES CERTIFIED TO BELOW FOR THE EXPRESS PURPOSE STATED HEREON AND/OR CONTAINED IN THE CONTRACT BETWEEN HYATT SURVEY SERVICES, INC. AND THE CLIENT FOR THIS PROJECT. COPYING, DISTRIBUTING AND/OR USING THIS DRAWING, IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN ORIGINALLY INTENDED WITHOUT WRITTEN CONSENT FROM HYATT SURVEY SERVICES, INC. IS STRICTLY PROHIBITED AND RENDERS THE SURVEYOR'S CERTIFICATION, SIGNATURE AND SEAL NULL AND VOID. ANY QUESTIONS CONCERNING THE CONTENT OR PURPOSE OF THIS DRAWING SHOULD BE DIRECTED TO HYATT SURVEY SERVICES, INC.
- THE UTILITIES LISTED BELOW WERE PROVIDED FOR THIS SITE BY "SUNSHINE STATE ONE CALL" ON FEBRUARY 25, 2009:
TECO/PEOPLES GAS COMPANY CONTACT: CHRIS COLEMAN 841 815 8915
VERIZON FLORIDA INC. CONTACT: DARRELL DAWSON 813 753 8171
FLORIDA POWER & LIGHT
BRIGHT HOUSE NETWORKS
MANATEE COUNTY UTILITY OPERATIONS CONTACT: JOHN GARDNER
MANATEE COUNTY TRANSPORTATION DEPARTMENT

SHEET INDEX

SHEET 1	COVER SHEET
SHEET 2	PLAN INDEX/SURVEY CONTROL
SHEETS 3-11	PLAN SHEETS

REDUCED COPY

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PUBLIC WORKS DEPT.-ENGINEERING DIVISION



4422-B 66th Street West, Bradenton, FL 34210

NO.	REVISION DESCRIPTION	BY	DATE
1.	REVISED 15TH ST. RIGHT-OF-WAY LINE	CBW	7/30/10
2.	ADDED SR 70 SOUTH RIGHT-OF-WAY	CBW	1/13/11

Hyatt Survey Services, Inc.

LB No.: 7203 Geographic Data Specialists

11007 8th Avenue East Bradenton, Florida 34212

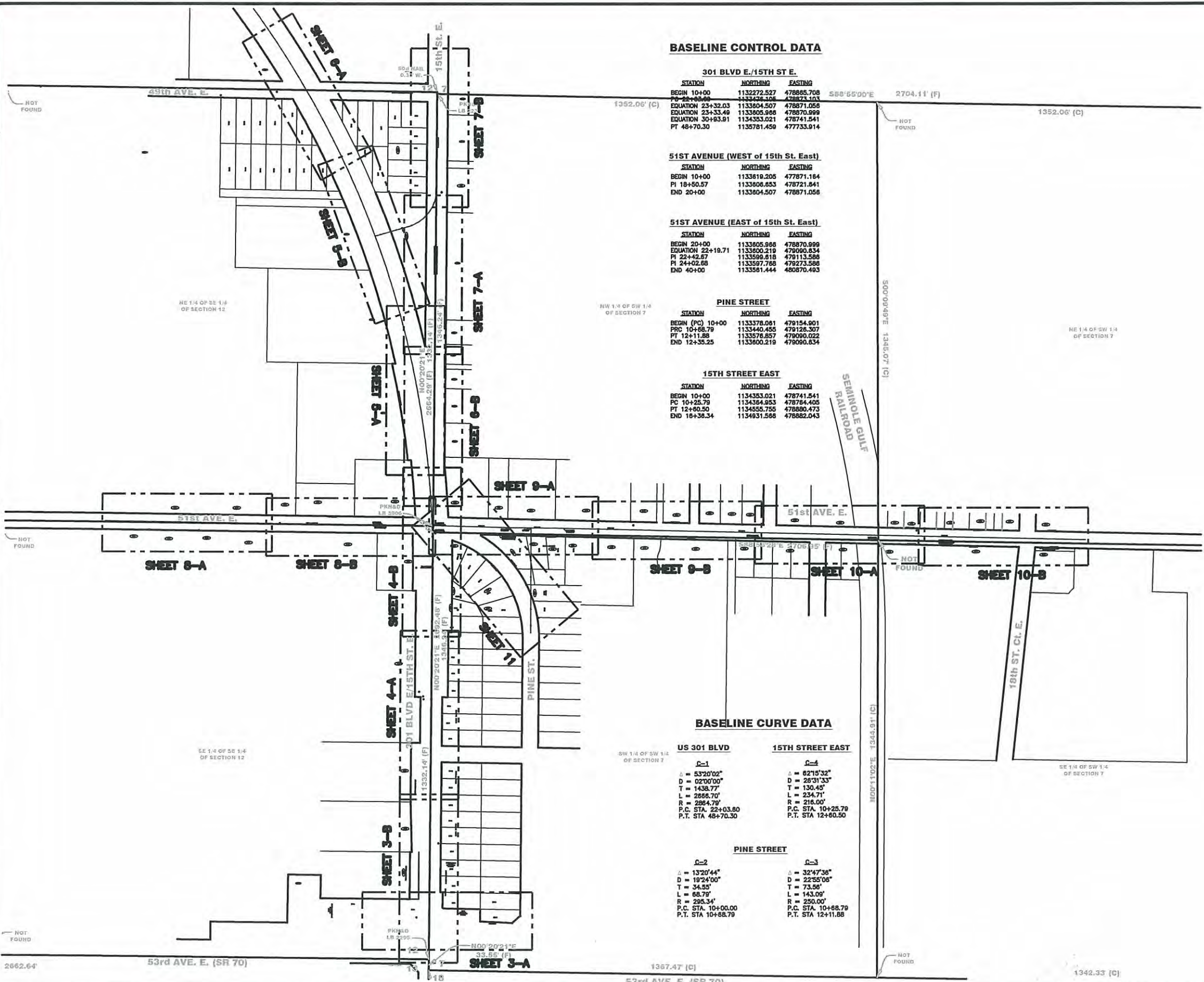
Phone: (941) 748-4693 Fax: (941) 744-1643

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[Signature]
RUSSELL P. HYATT, P.E.
FLORIDA SURVEYORS REGISTRATION NO. 5303

COVER SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA

SHEET
1
OF 11



BASELINE CONTROL DATA

301 BLVD E./15TH ST. E.

STATION	NORTHING	EASTING
BEGIN 10+00	1132272.527	478885.708
END 24+88.89	1133436.408	478873.103
EQUATION 23+32.03	1133804.507	478871.056
EQUATION 23+33.49	1133805.988	478870.999
EQUATION 30+83.91	1134353.021	478741.541
PT 48+70.30	1135781.458	477733.914

51ST AVENUE (WEST of 15th St. East)

STATION	NORTHING	EASTING
BEGIN 10+00	1133619.205	477871.184
PI 18+50.57	1133606.853	478721.841
END 20+00	1133604.507	478871.056

51ST AVENUE (EAST of 15th St. East)

STATION	NORTHING	EASTING
BEGIN 20+00	1133605.988	478870.999
EQUATION 22+19.71	1133600.219	479090.634
PI 22+42.57	1133599.818	479113.588
PI 24+02.88	1133597.788	479273.588
END 40+00	1133581.444	480870.493

PINE STREET

STATION	NORTHING	EASTING
BEGIN (PC) 10+00	1133378.061	479154.601
PRC 10+68.79	1133440.455	479126.307
PT 12+11.88	1133578.857	479090.022
END 12+35.25	1133800.219	479090.634

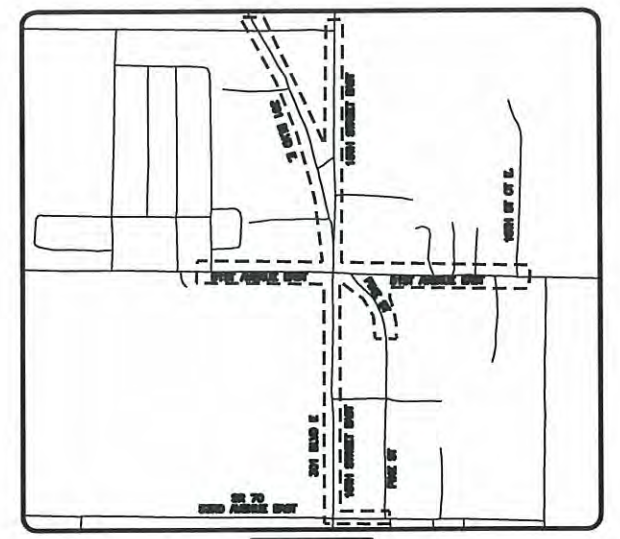
15TH STREET EAST

STATION	NORTHING	EASTING
BEGIN 10+00	1134353.021	478741.541
PC 10+25.79	1134384.953	478784.405
PT 12+80.50	1134555.755	478880.473
END 16+36.34	1134931.588	478882.043

BASELINE CURVE DATA

US 301 BLVD		15TH STREET EAST	
C-1	C-4	C-1	C-4
Δ = 53°20'02"	Δ = 62°15'32"	Δ = 26°51'33"	Δ = 22°55'08"
D = 02°00'00"	D = 26°51'33"	D = 1438.77'	D = 130.45'
T = 1438.77'	T = 130.45'	L = 288.70'	L = 234.71'
R = 288.79'	R = 216.00'	P.C. STA. 22+03.80	P.C. STA. 10+25.79
P.T. STA. 48+70.30	P.T. STA. 12+80.50		

PINE STREET		C-3	
C-2	C-3	C-3	C-3
Δ = 13°20'44"	Δ = 32°47'36"	Δ = 32°47'36"	Δ = 32°47'36"
D = 19°24'00"	D = 22°55'08"	D = 22°55'08"	D = 22°55'08"
T = 54.55'	T = 73.56'	T = 73.56'	T = 73.56'
L = 68.79'	L = 143.09'	L = 143.09'	L = 143.09'
R = 295.34'	R = 250.00'	R = 250.00'	R = 250.00'
P.C. STA. 10+06.00	P.C. STA. 10+88.79	P.C. STA. 10+88.79	P.C. STA. 10+88.79
P.T. STA. 10+88.79	P.T. STA. 12+11.88	P.T. STA. 12+11.88	P.T. STA. 12+11.88



SITE CALIBRATION DATA

DESIGNATION	NORTHING	EASTING
M 080	1128710.76	478878.34
M 081	1143115.24	478968.28
M 082	1143108.22	482931.59
MANAT RESET	1138850.97	484198.48

SITE HORIZONTAL/VERTICAL CONTROL

301 BLVD E./15TH ST. E.

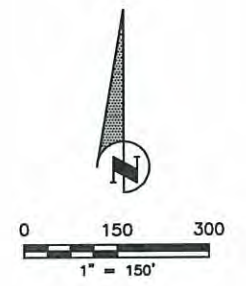
NUMBER	DESCRIPTION	STATION/OFFSET	NORTHING	EASTING	ELEVATION
101	NAIL & TIN TAB	18+00.25 23.88' L	1133072.802	478846.988	34.60'
115	NAIL & TIN TAB	12+54.77 28.41' L	1132527.456	478840.865	35.44'
116	NAIL & TIN TAB	28+20.02 22.63' R	1133594.376	478867.993	37.31'
20004	IRC # 7203	37+28.28 39.83' L	1134810.754	478452.888	37.38'
20007	PRK&D # 7203	32+52.90 24.89' R	1134512.071	478713.015	37.59'

15TH STREET EAST

NUMBER	DESCRIPTION	STATION/OFFSET	NORTHING	EASTING	ELEVATION
20001	IRC # 7203	12+02.72 29.49' R	1134490.802	478901.028	35.28'
20002	IRC # 7203	18+52.74 22.32' R	1134947.870	478904.429	33.73'

51ST AVENUE

NUMBER	DESCRIPTION	STATION/OFFSET	NORTHING	EASTING	ELEVATION
224	IRC # 7203	31+41.93 18.46' R	1133562.488	480012.227	30.06'
233	IRC # 7203	38+54.51 18.84' L	1133591.592	480725.421	32.58'
15389	IRC # 7203	24+28.58 18.95' R	1133878.234	479299.053	28.51'
16216	PRK&D # 7203	16+23.80 14.88' L	1133824.882	478464.909	38.02'



SEE SHEET 1 OF 11 FOR GENERAL NOTES AND LEGEND

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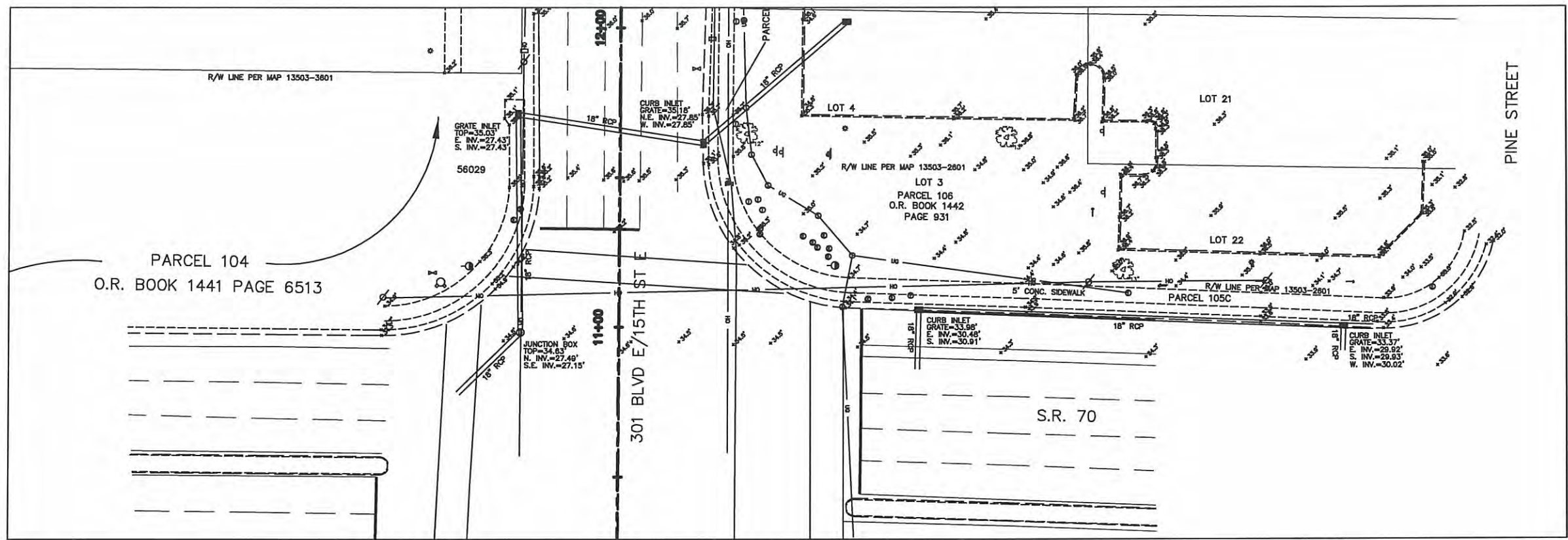
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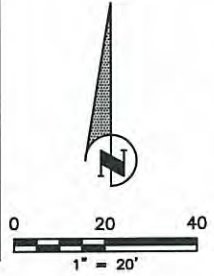
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RUSSELL P. HYATT, PSM
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KEY SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA



SHEET 3-A



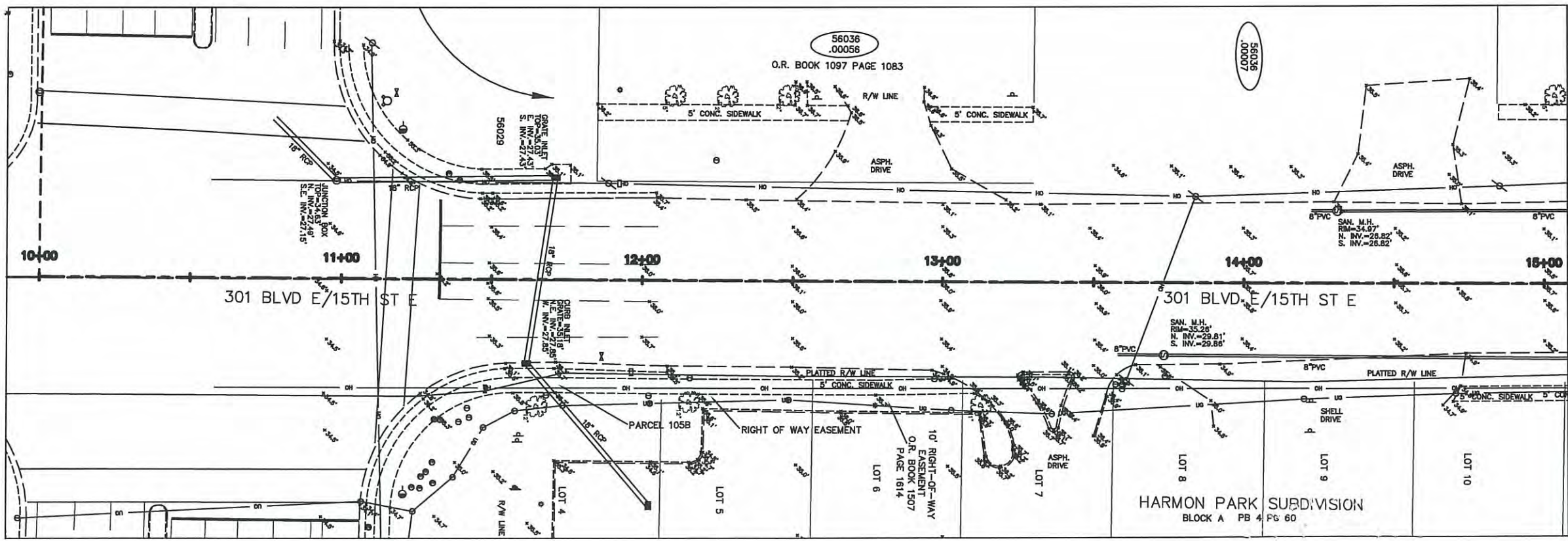
11+00 EAST
SR 70 (53RD AVE)



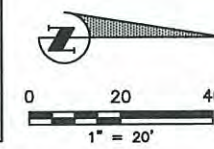
11+00 NORTH



11+00 WEST
SR 70 (53RD AVE)



SHEET 3-B



12+00 NORTH



14+00 NORTH

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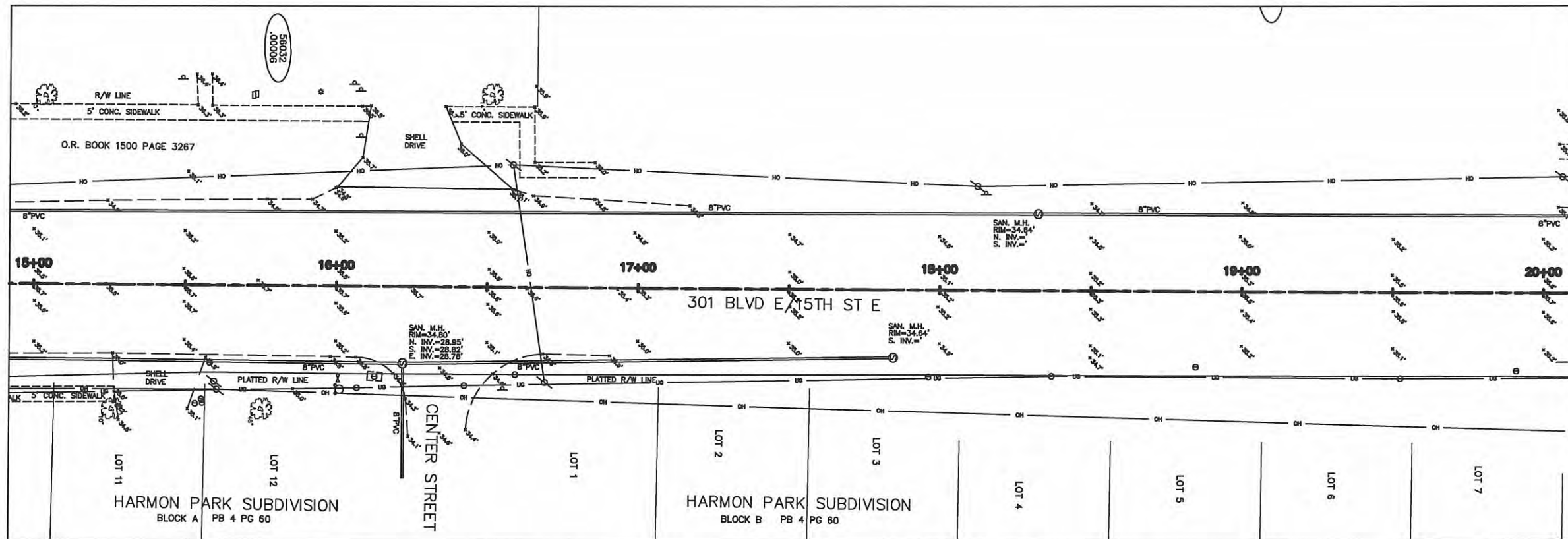
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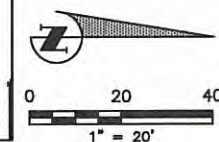
RUSSELL P. HYATT, P.E.M.
 FLORIDA SURVEYORS REGISTRATION NO. 5303

PLAN SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA

SHEET
3
 OF 11



SHEET 4-A



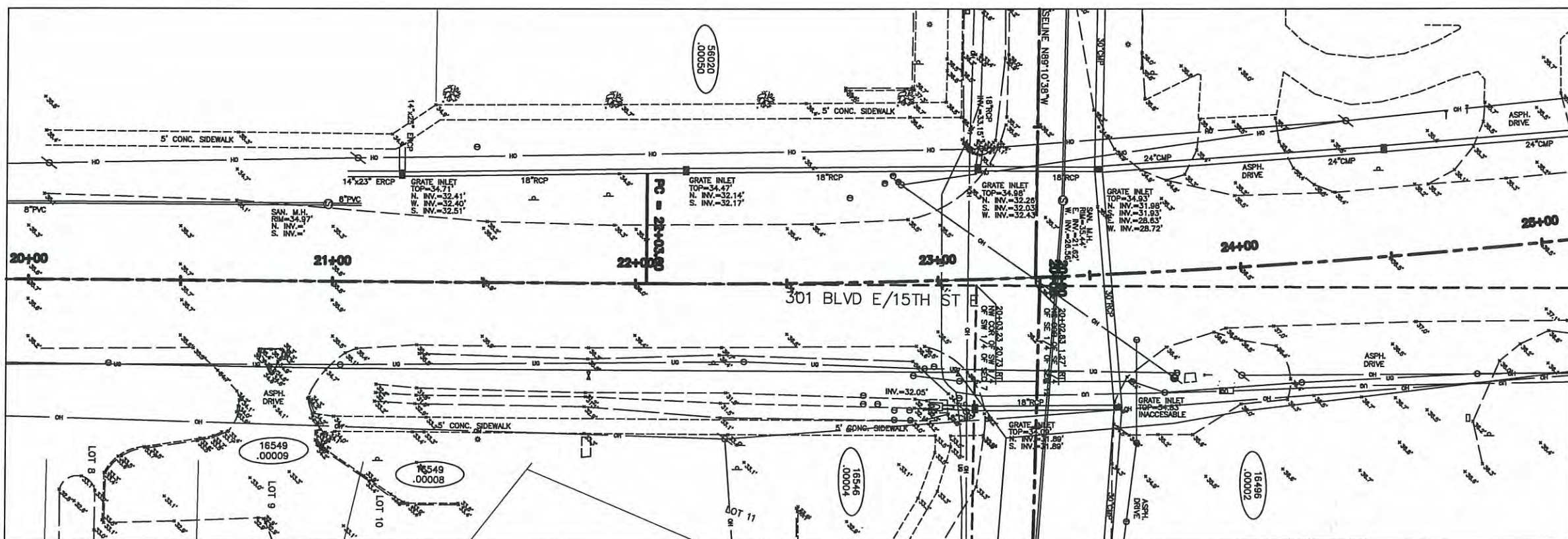
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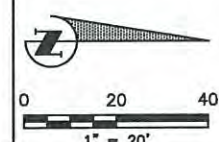
18+00 NORTH



20+00 NORTH



SHEET 4-B



22+00 NORTH



24+00 NORTH

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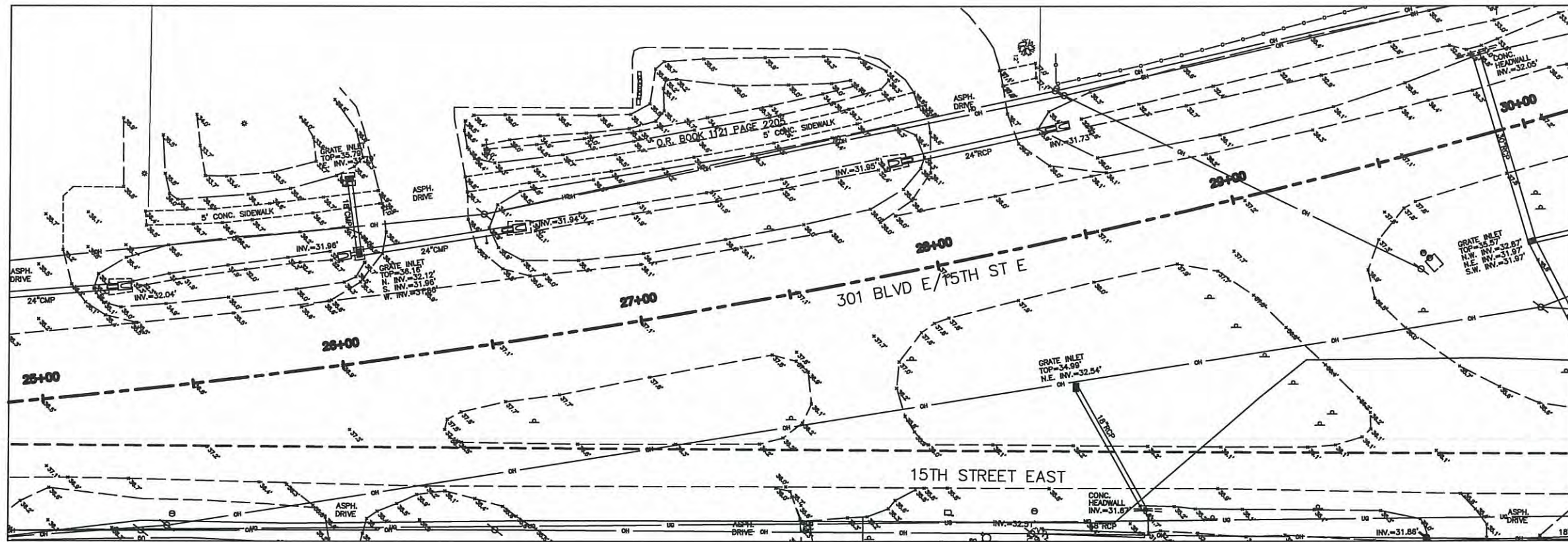
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PLAN SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA

SHEET
4
 OF 11



SHEET 5-A



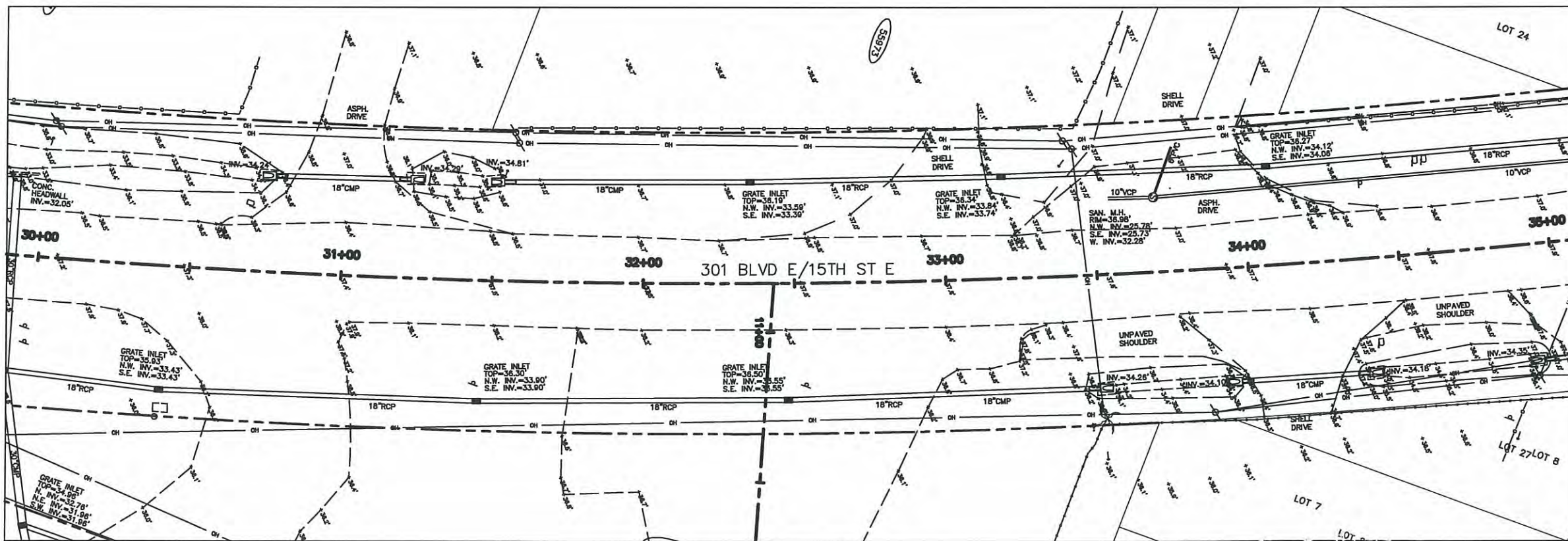
26+00 NORTH



28+00 NORTH



30+00 NORTH



SHEET 5-B



32+00 NORTH



34+00 NORTH

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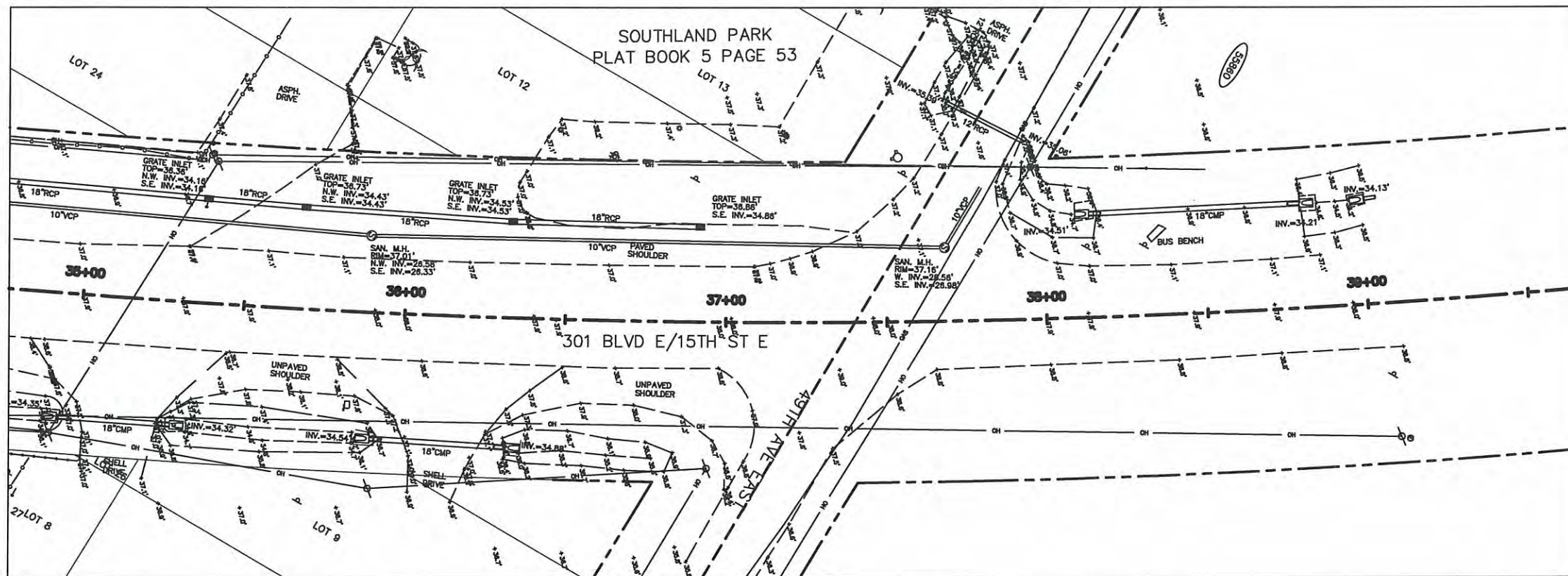
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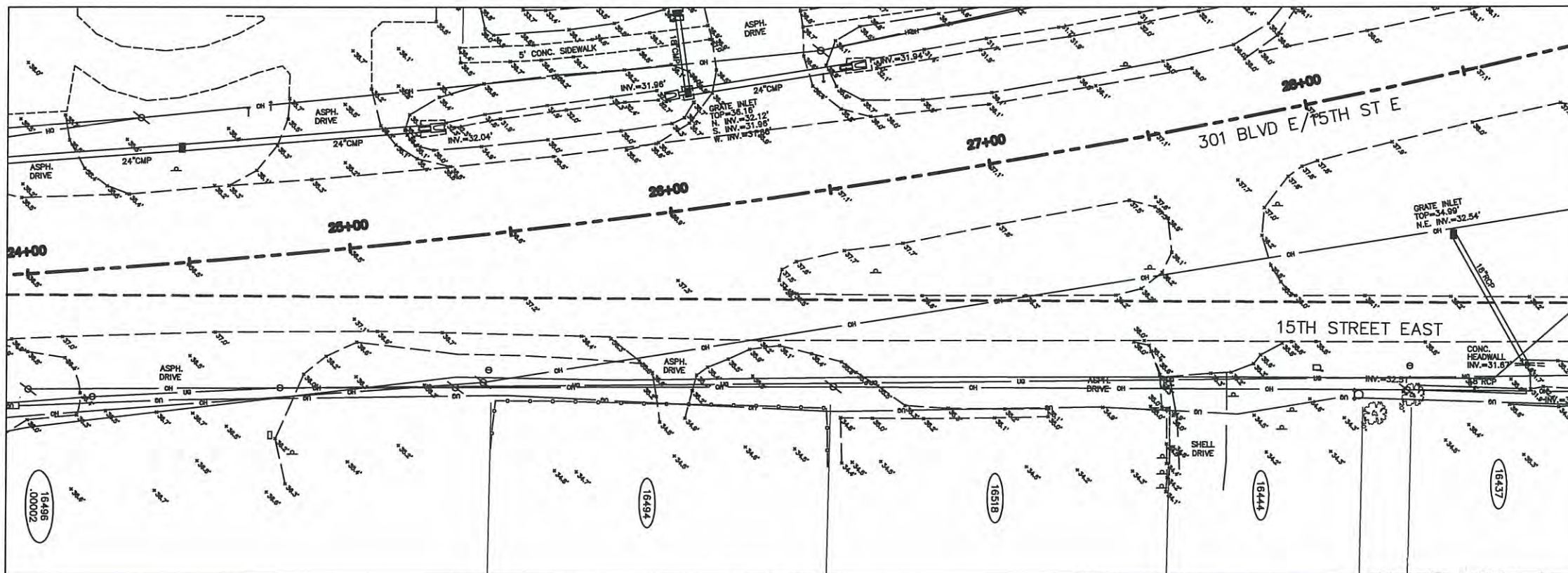

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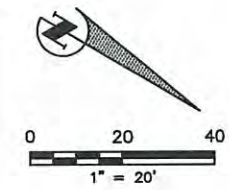
SHEET
5
 OF 11



SHEET 6-A



SHEET 6-B



36+00 NORTH



37+00 NORTH



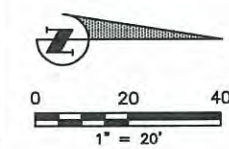
38+00 NORTH



26+00 NORTH
15th St. E.



28+00 NORTH
15th St. E.



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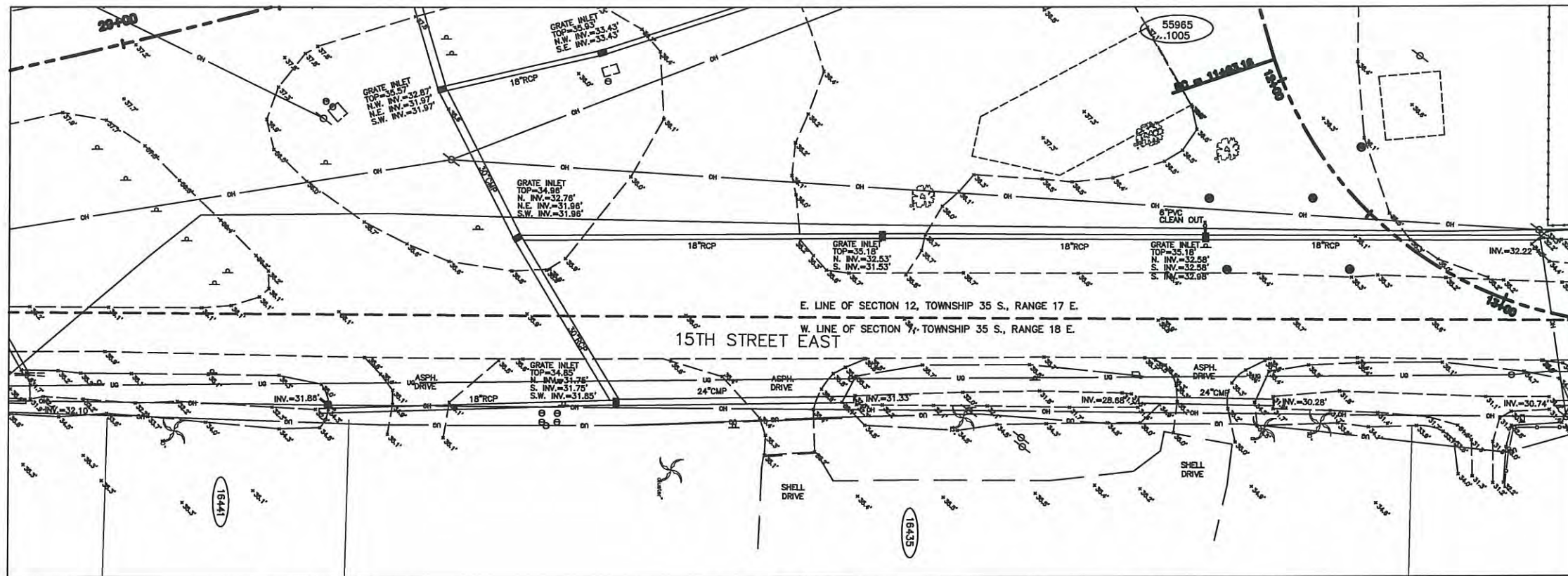
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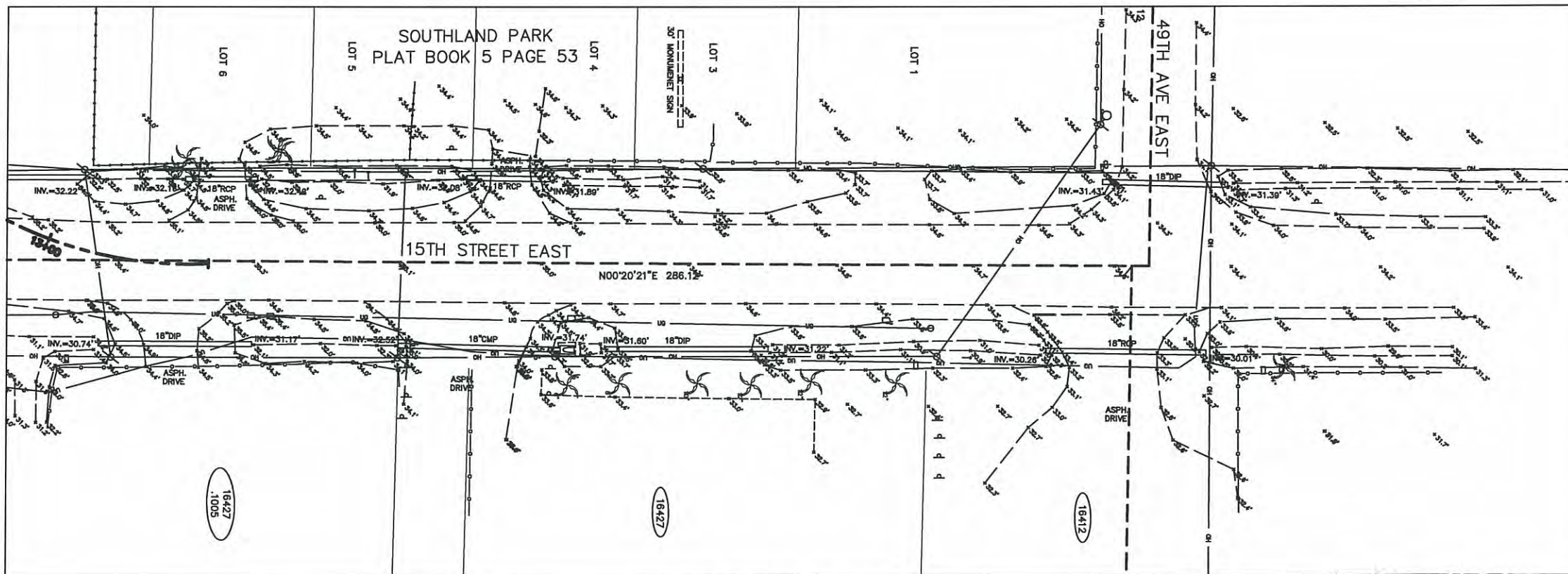
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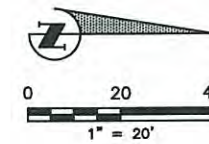
SHEET
6
 OF 11



SHEET 7-A



SHEET 7-B



10+00 NORTH



12+00 NORTH



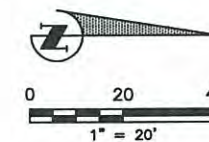
14+00 NORTH



16+00 NORTH



16+36 WEST



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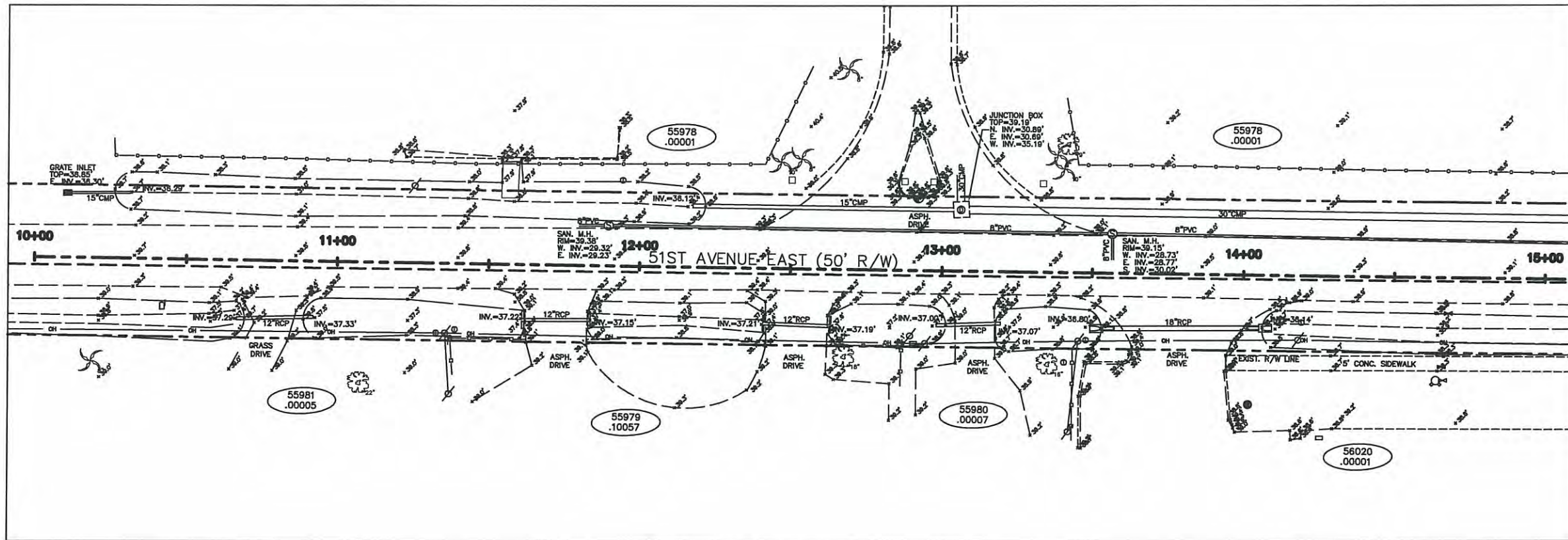
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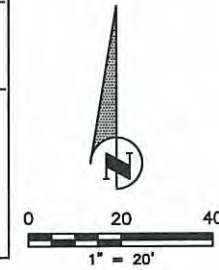
RUSSELL P. HYATT, P.E.M.
FLORIDA SURVEYORS REGISTRATION NO. 5303

PLAN SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA

SHEET
7
OF 11



SHEET 8-A



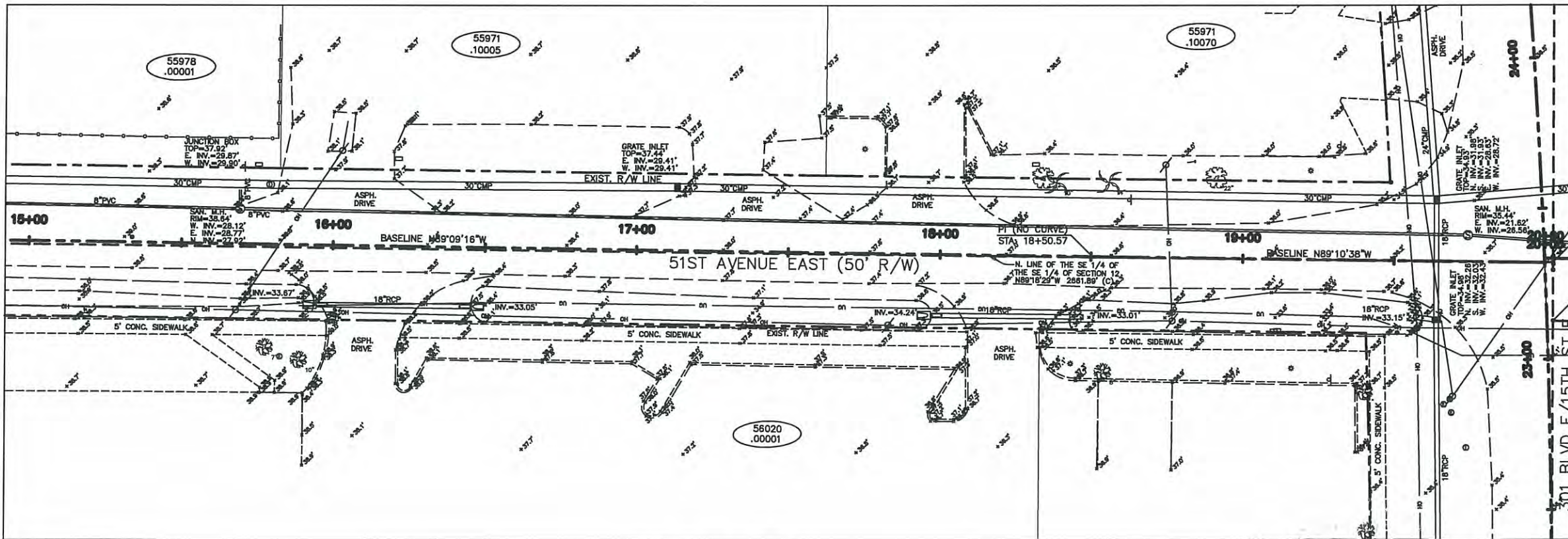
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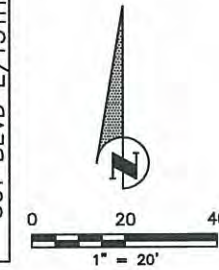
13+00 EAST



15+00 EAST



SHEET 8-B



17+00 EAST



19+00 EAST

SEE SHEET 1 OF 11 FOR GENERAL NOTES AND LEGEND

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PUBLIC WORKS DEPT.—ENGINEERING DIVISION



4422-B 66th Street West, Bradenton, FL 34210

NO.	REVISION DESCRIPTION	BY	DATE
1.	REVISED 15TH ST. RIGHT-OF-WAY LINE	CBW	7/30/10
2.	ADDED SR 70 SOUTH RIGHT-OF-WAY	CBW	1/13/11

Hyatt Survey Services, Inc.

LB No.: 7203 Geographic Data Specialists
11007 8th Avenue East Bradenton, Florida 34212
Phone: (941) 748-4693 Fax: (941) 744-1643

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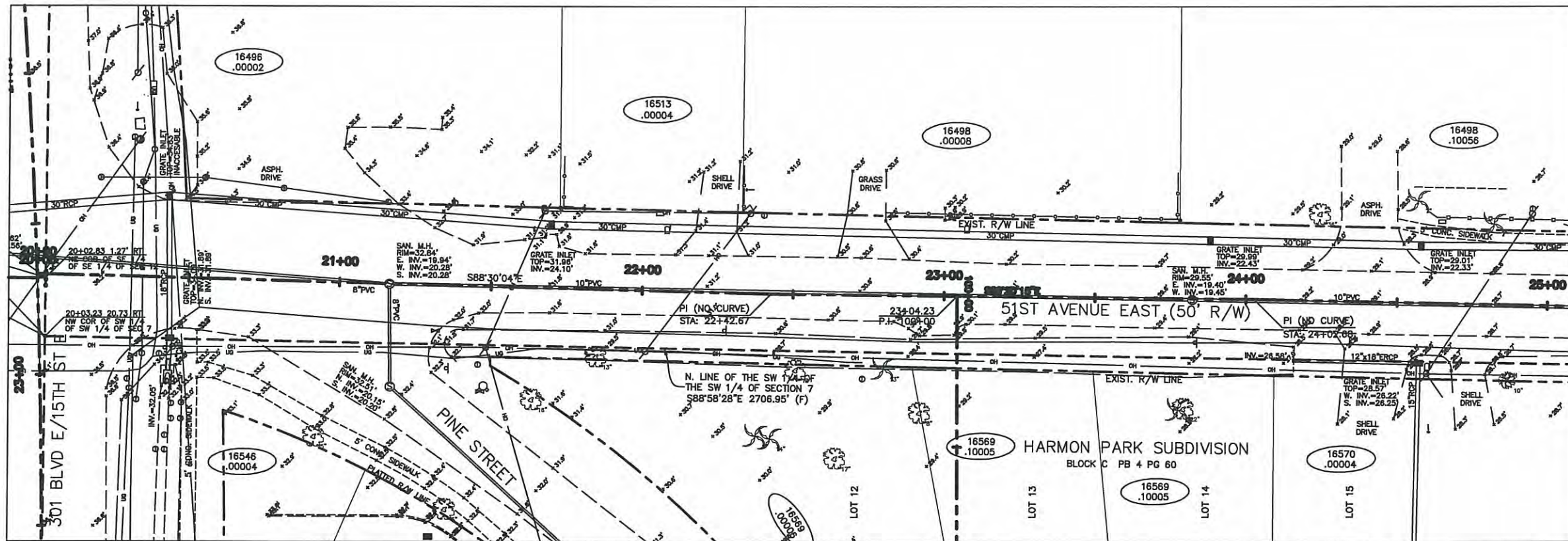

RUSSELL P. HYATT, P.E.
FLORIDA SURVEYORS REGISTRATION NO. 5303

PLAN SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA

SHEET

8

OF 11



SHEET 9-A



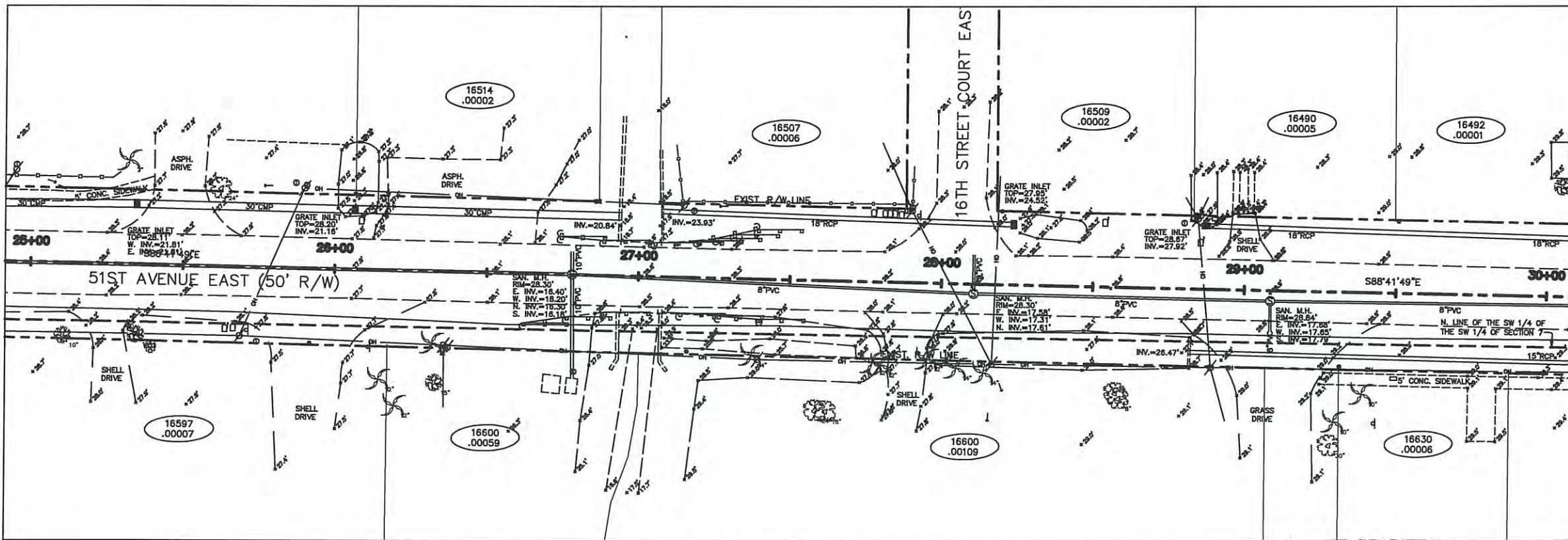
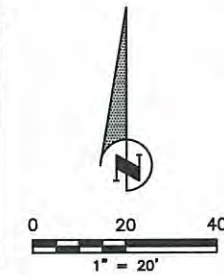
21+00 WEST



23+00 WEST



25+00 WEST



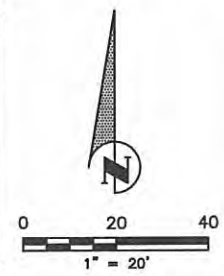
SHEET 9-B



27+00 WEST



29+00 WEST



SEE SHEET 1 OF 11 FOR GENERAL NOTES AND LEGEND

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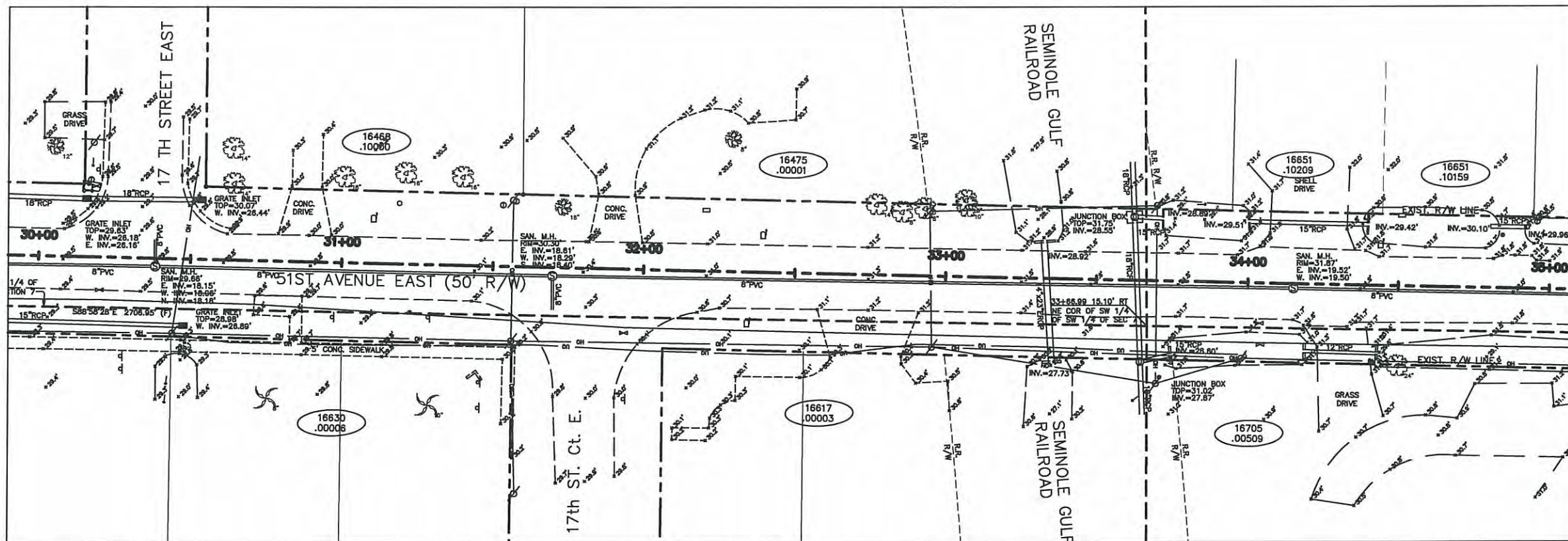
11007 8th Avenue East Bradenton, Florida 34212
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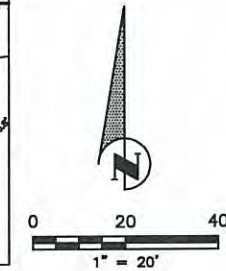
[Signature]
 RUSSELL P. HYATT, PSM
 FLORIDA SURVEYORS REGISTRATION NO. 5303

PLAN SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA

SHEET
9
 OF 11



SHEET 10-A



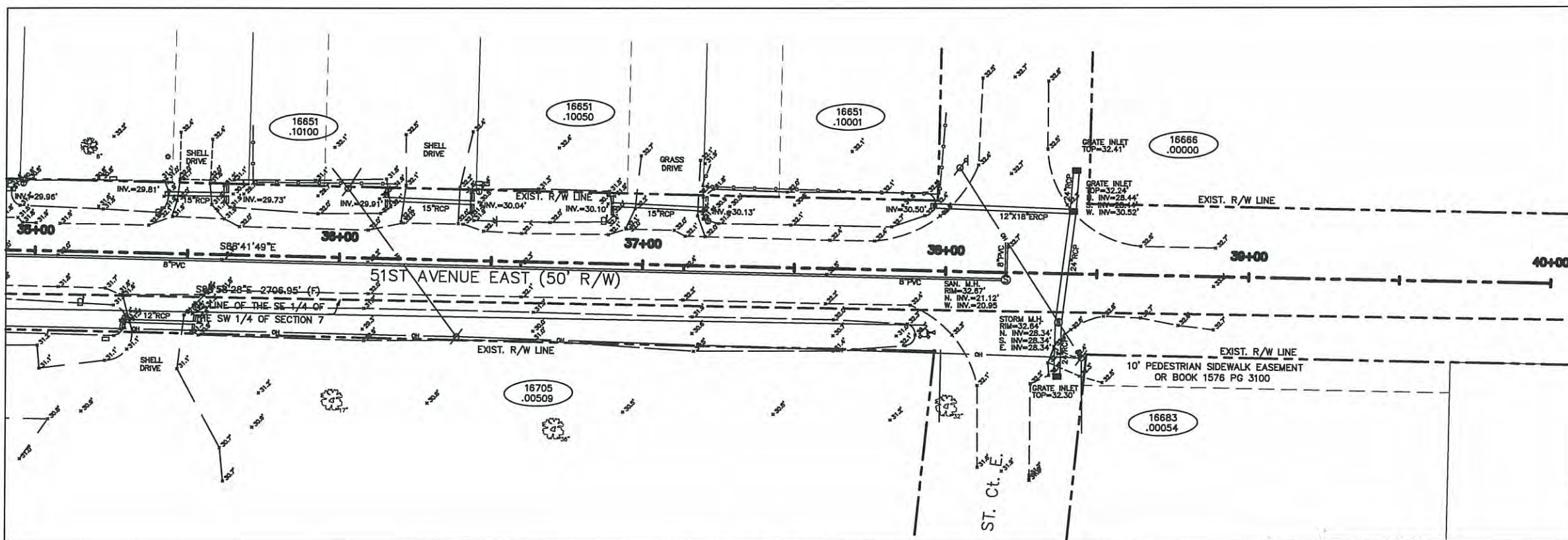
31+00 WEST



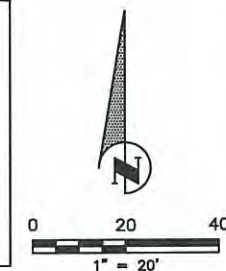
33+00 WEST



35+00 WEST



SHEET 10-B



37+00 WEST



39+00 WEST

SEE SHEET 1 OF 11 FOR GENERAL NOTES AND LEGEND

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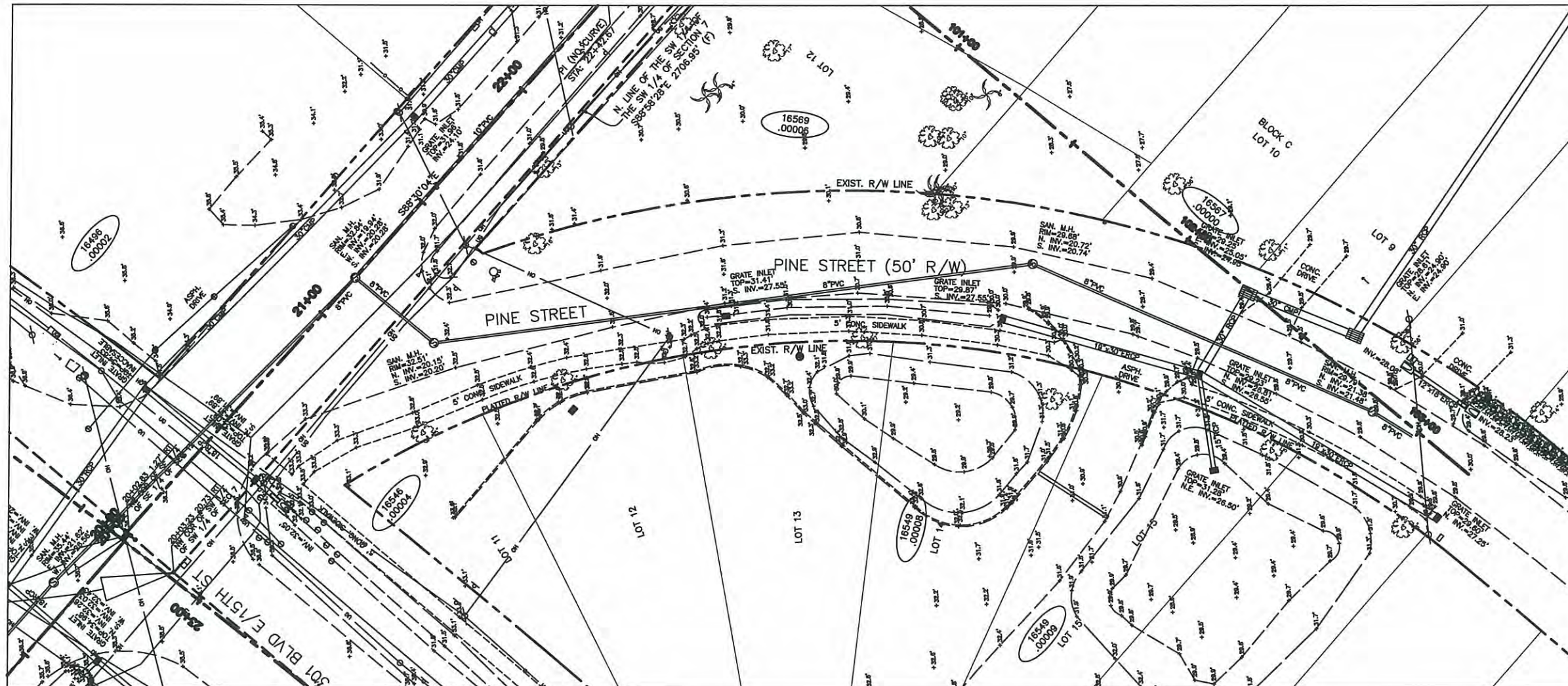
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[Signature]
 RUSSELL P. HYATT, PSM
 FLORIDA SURVEYORS REGISTRATION NO. 5303

PLAN SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA

SHEET
10
 OF 11



10+00 NORTH



11+00 NORTH

SHEET 4-A

SEE SHEET 1 OF 11 FOR GENERAL NOTES AND LEGEND

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[Signature]
 RUSSELL P. HYATT, PSM
 FLORIDA SURVEYORS REGISTRATION NO. 5303

PLAN SHEET
US 301/15th St. E.
MANATEE COUNTY, FLORIDA

SHEET
11
 OF 11

**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
QUANTITY SHEET**

LINE NO.	ITEM NO.	DESCRIPTION	EST. QTY	UM
ROAD WORK				
1.	101-1	MOBILIZATION	1.00	LS
2.	102-1	MAINTENANCE OF TRAFFIC	1.00	LS
3.	104-10-3	SEDIMENT BARRIER (INCL'S SILT FENCE AND SYNTHETIC BALES)	6,000	LF
4.	104-11	FLOATING TURBIDITY BARRIER	90	LF
5.	110-1-1	CLEARING & GRUBBING	5	AC
6.	110-4	REMOVAL OF EXISTING CONC. PAVEMENT (EXIST. SIDEWALK & CONC. DRIVES)	360	SY
7.	110-7-1	MAILBOX, F&I SINGLE	7	EA
8.	120-1	REGULAR EXCAVATION (PINE ST. EXIST. BASE AND SUB-BASE TO BE REMOVED)	300	CY
9.	120-1	REGULAR EXCAVATION (INCLUDES PONDS)	4,731	CY
10.	120-5	EMBANKMENT (EXISTING PINE STREET)	300	CY
11.	120-6	EMBANKMENT (REGULAR)	2,400	CY
12.	327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	5,352	SY
13.	MC-001	12" TYPE B STABILIZATION (LBR 60)	6,563	SY
14.	MC-002	6" OF STABILIZED SUB-BASE-NEW PINE ST. (LBR 60)	1,453	SY
15.	285-706	6" OF OPTIONAL BASE GROUP 4	1,361	SY
16.	285-709	10" OF OPTIONAL BASE GROUP 9	6,203	SY
17.	334-MC	2" TYPE S-I ASPHALT	735	TN
18.	337-MC	1" TYPE S-III ASPHALT	669	TN
19.	MC-003	GRATE INLET MC STD. 202.1, 202.3, 202.4	4	EA
20.	MC-004	THROAT INLET MC STD. 202.1, 202.3, 202.4	1	EA
21.	MC-005	JUNCTION BOX BLOCK BOX-MC STD. 202.1, 202.4, 203.1	1	EA
22.	MC-006	INLETS (CURB)-MC STD. 202.1, 202.2, 202.3, 202.4, 203.2	5	EA
23.	MC-007	INLETS (CURB)-MC STD. 202.1, 202.2, 202.4, 203.2	2	EA
24.	MC-008	JUNCTION BOX BLOCK BOX-MC STD. 202.1, 202.5, 203.1	4	EA
25.	MC-009	GRATE INLET-PROP. CONCRT. BLOCK BOX-MC STD. 202.1, 202.5	8	EA
26.	0425-2 91	MANHOLE, J-8, <10"	1	EA
27.	0425-1529	INLETS, DT BOT, TYPE C, MODIFY	1	EA
28.	0425-1563	INLETS, DT BOT, TYPE F, J BOTTOM <10"	1	EA
29.	0400-1-2	ENDWALL 15" PIPE	1	CY
30.	430-173-101	PIPE STORM SEWER CULV(RCP)(15")	17.00	LF
31.	430-173-101	PIPE STORM SEWER CULV(RCP)(18")	837.00	LF
32.	430-174-201	PIPE STORM SEWER CULV(ERCP)(12"X18")	278.00	LF
33.	430-174-102	PIPE STORM SEWER CULV(ERCP)(30")	1,478.00	LF
34.	430-982-125	MITERED END SECTION-RCP-ROUND/18"	2.00	EA
35.	430-984-623	MITERED END SECTION-RCP ROUND 12"X 18"	4.00	EA
36.	515-23-11	PEDESTRIAN BICYCLE RAILING, ALUMINUM ONLY 42" TYPE 1	91.00	LF
37.	522-1	SIDEWALK CONCRETE 4"	1,034	SY
38.	522-2	SIDEWALK CONCRETE 6" THICK (DRIVEWAYS)	660	SY
39.	522-3	BUS BOARDING PAD-CONCRETE	30	SY
40.	522-4	BUS SHELTER PAD-CONCRETE	30	SY
41.	520-3	VALLEY GUTTER, CONCRETE	207	LF
42.	530-3-3	RIP RAP-RUBBLE, BANK AND SHORE	3	TN
43.	520-1-10	TYPE F CURB & GUTTER	1,000	LF
44.	536-1-2	GUARDRAIL	19	LF
45.	570-1-2	PERFORMANCE TURF (BAHIA SOD)	5,592.15	SY
46.	MC-011	TYPE AB CURB&GUTTER	46.00	LF
47.	MC-012	MIAMI CURB&GUTTER	153	LF
PROPOSED 6" WATERLINE RELOCATION FOR ROAD PROJECT				
48.	MC-012	6" DI WATERLINE (CL 350) DIRECT BURY	265	LF
49.	MC-013	6" X 24" TAPPING SLEEVE WITH VALVE	1	EA
50.	MC-014	DI FITTINGS	250	LB
51.	MC-015	RELOCATE WATER SERVICE(SINGLE, LONG)	6	LF
52.	MC-016	RELOCATE WATER SERVICE(SINGLE, SHORT)	8	LF
53.	MC-017	RELOCATE 2" HDPE WATERLINE (C 906) DR 9	30	LF
54.	MC-018	ADJUST VALVE BOX	7	EA
55.	MC-019	RELOCATE/ADJUST METER BOX	3	EA
56.	MC-020	REMOVE FIRE HYDRANT ASSEMBLY	1	EA
57.	MC-021	FIRE HYDRANT ASSEMBLY	1	EA
58.	MC-022	REMOVE 6" WATERLINE	260	LF
59.	MC-023	6" HDPE FORCE MAIN AND BYPASS (C 906) DR 11	270	LF
60.	MC-024	RELOCATE 6" PVC SEWER SERVICE LATERALS	150	LF
61.	MC-025	ADJUST MANHOLE LID & COVER	8	EA
62.	MC-026	CONNECT TO EXISTING WATERLINE	1	EA
63.	MC-027	ARV IN MANHOLE (SANITARY)	1	EA
64.	MC-028	6" GATE VALVE W/BOX	1	EA
65.	MC-029	RELOCATE LIFT STATION ELECT. PANEL & SERVICE	1	LS

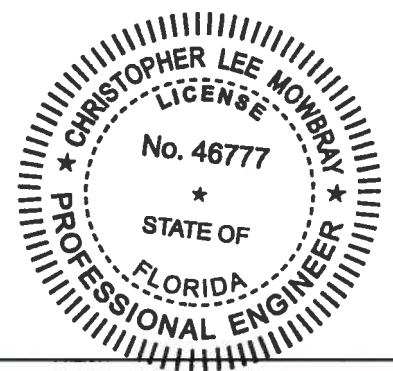
SIGNALIZATION				
66.	555-1-1	DIRECTIONAL BORE (LESS THAN 6")	128	LF
67.	630-1-12	CONDUIT (F & I) (UNDERGROUND)	442	LF
68.	632-7-1	CABLE, SIGNAL (F&I)	1	PI
69.	635-1-11	PULL & JUNCTION BOXES (F&I) (PULL BOX)	12	EA
70.	639-1-22	ELECTRICAL POWER SERVICE (UNDERGROUND)	1	AS
71.	639-2-1	ELECTRICAL SERVICE WIRE (F&I)	415	LF
72.	641-2-12	PRESTRESSED CONCRETE POLE (F&I) (TYPE P-11 SRV. POLE.)	1	EA
73.	646-1-11	SIGNAL POLE, PEDESTAL (F&I)	6	EA
74.	649-31-202	MAST ARM (F&I) (WS -130) (SING. ARM) (W/O LUM.) (40")	1	EA
75.	649-31-213	MAST ARM (F&I)(WS -130)(DBL. ARM) (W/O LUM.)(36-70.5")	1	EA
76.	650-1-311	TRAFFIC SIGNAL (F&I) (3 SECT) (1 WAY) (STANDARD)	6	AS
77.	650-1-511	TRAFFIC SIGNAL (F&I) (5 SECT) (1 WAY) (STANDARD)	2	AS
78.	653-191	PEDESTRIAN SIGNAL (F&I) (LED-COUNTDOWN) (1 WAY)	6	AS
79.	653-192	PEDESTRIAN SIGNAL (F&I) (LED-COUNTDOWN) (2 WAY)	1	AS
80.	663-74-15	VEHICLE DETECTOR ASSEMBLIES (F&I) (VIDEO)	4	EA
81.	665-13	PEDESTRIAN DETECTOR (F&I) (DETECTOR WITH SIGN ONLY)	7	EA
82.	670-5-300	TRAFFIC CONTROLLER ASSEMBLY (INSTALL)	1	AS
83.	670-5-400	TRAFFIC CONTROLLER ASSEMBLY (MODIFY)	1	AS
84.	685-106	SYSTEM AUX (F&I) (UNINTERRUPTIBLE POWER SOURCE)	1	EA
84.	690-10	TRAFFIC SIGNAL HEAD ASSEMBLY, REMOVAL	8	EA
85.	690-20	SIGNAL PEDESTRIAN ASSEMBLY, REMOVE	4	EA
86.	690-34-1	POLE REMOVAL -DEEP (DIRECT BURIAL)	2	EA
87.	690-60	DETECTOR VEHICLE ASSEMBLY, REMOVE	6	EA
88.	690-80	SPAN WIRE ASSEMBLY REMOVE	1	EA
89.	690-90	REMOVE CONDUIT & CABLING	1	PI
90.	690-100	SIGNAL EQUIPMENT, MISCELLANEOUS REMOVE	1	PI
91.	699-1-1	INTERNALLY ILLUMINATED SIGN (F&I)	4	EA
92.	783-1-421	ITS FO CABLE (RELOCATE) (UNDERGROUND) (2 TO 12)	20	LF
93.	783-4-112	ITS CONDUIT (F&I) (UNDERGROUND)	20	LF
94.	783-5-5	ITS PULL BOX FOR FIBER OPTIC CABLE, ADJUST AND MODIFY	1	EA
SIGNING AND PAVEMENT MARKING				
95.	700-20-11	SINGLE POST SIGN (F&I) (< 12 SF)	4	AS
96.	700-20-12	SINGLE POST SIGN (F&I) (12-20 SF)	2	AS
97.	700-20-60	SINGLE POST SIGN (REMOVE)	7	AS
98.	700-48-48	SIGN PANEL RELOCATE, 15 OR LESS	2	EA
99.	706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	424	EA
100.	711-11-111	THERMOPLASTIC (STD., WHITE, SOLID, 6")	1,014	NM
101.	711-11-122	THERMOPLASTIC (STD., WHITE, SOLID, 8")	107	LF
102.	711-11-123	THERMOPLASTIC (STD., WHITE, SOLID, 12")	443	LF
103.	711-11-125	THERMOPLASTIC (STD., WHITE, SOLID, 24")	124	LF
104.	711-11-151	THERMOPLASTIC (STD., WHITE, 2'-4' SKIP & 6'-10' SKIP, 6")	76	LF
105.	711-11-160	THERMOPLASTIC (STD., WHITE, MESSAGE) (ONLY)	3	EA
106.	711-11-170	THERMOPLASTIC (STD., WHITE, ARROWS)	23	EA
107.	711-11-211	THERMOPLASTIC (STD., YELLOW, SOLID, 6")	1,054	NM
108.	711-11-224	THERMOPLASTIC (STD., YELLOW, SOLID, 18")	516	LF
109.	711-11-231	THERMOPLASTIC (STD., YELLOW, 10'-30' SKIP, 6")	0.125	GM
55' PEDESTRIAN BRIDGE				
110.	120-1	REGULAR EXCAVATION (FOUNDATION)	29.00	CY
111.	0400-4-5	CONCRETE CLASS IV 5500 PSI (FOUNDATION)	14.00	CY
112.	0415-1-5	REINFORCING STEEL-SUBSTRUCTURE (FOUNDATION)	1,124.00	LB
113.	0530-1	RIPRAP, SAND CEMENT 4"	10.00	CY
114.	MC-031	ALUMINUM BRIDGE	1.00	EA

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT # 232-6029960
SURVEY # 5303
SEC./TWN./RGE 7/35S/18E
SCALE N.T.S.

	BY	DATE
SURVEYED		00/00/00
DESIGNED	AAM	08/10
DRAWN	TMF	05/12
CHECKED	AAM	05/12

C. MOWBRAY P.E.
FLORIDA P.E. # 45777
[Signature]
2/6/13
Signature & Date



GENERAL

- 1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: VINCE CANNA AND CAN BE REACHED AT (941) 708-7450; EXT. 7338.
2. SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH THE PROJECT MANAGER.
3. ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS AND/OR FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS OTHERWISE INDICATED ON THE PLANS.
4. VERTICAL CONTROL FOR THIS PROJECT WAS ESTABLISHED BY A MINIMUM OF TWO REFERENCE BENCHMARKS DESCRIBED ON THE "THE NATIONAL GEODETIC VERTICAL DATUM OF 1929", (NGVD '29).
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.
6. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
7. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
8. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.
9. NO WORK, EXCEPT FOR EMERGENCY TYPE, SHALL BE PERFORMED AFTER 7:00 PM AND BEFORE 7:00 AM. FOR ADDITIONAL PROJECT RESTRAINTS, REFER TO SECTION 01310 OF THE SPECIFICATIONS.
10. ALL STATIONS AND OFFSETS REFER TO BASELINE OF CONSTRUCTION, UNLESS OTHERWISE NOTED.
11. THE CONSTRUCTION LENGTHS IN THESE PLANS ARE APPROXIMATE. ACTUAL LIMITS MAY BE SET IN THE FIELD AS DIRECTED BY THE ENGINEER.
12. SEPARATE PAYMENT SHALL BE MADE ONLY FOR THE ITEMS OF WORK LISTED AND IDENTIFIED BY APPROPRIATE PAY ITEM ON THE BID FORM. THE COST OF ANY RELATED WORK NOT SPECIFICALLY IDENTIFIED, BUT WHICH IS REQUIRED FOR SATISFACTORY COMPLETION OF THE WORK, SHALL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT PRICE FOR THE APPROPRIATE BID ITEM.
13. THE CONTRACTOR SHALL HAVE A FOREMAN, OR RESPONSIBLE PARTY, ON SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. ALL WORKERS ON THE JOB SITE WILL BE COURTEOUS TO THE PUBLIC AT ALL TIMES, AND SHALL REFER ANY QUESTIONS OR CONCERNS TO THE CONTRACTOR'S FOREMAN OR THE COUNTY INSPECTOR. THE FOREMAN SHALL SPEAK AND UNDERSTAND ENGLISH AND SHALL BE AVAILABLE AT ALL TIMES FOR TIMELY RESOLUTION OF PROJECT-RELATED ISSUES.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE COORDINATION OF CONSTRUCTION SCHEDULING BETWEEN CONTRACTOR AND ALL UTILITY AGENCIES.
NOTE: THIS INCLUDED MEETING WITH UTILITY AGENCIES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE TO ADJUST THEIR SCHEDULES TO COINCIDE WITH THE CONTRACTORS CONSTRUCTION SCHEDULE. (REFERENCE CONTRACT DOCUMENTS)
15. ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTORY OF THE COUNTY PROJECT MANAGER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
16. ALL CONSTRUCTION WITHIN FDOT RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH CURRENT FDOT STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION AND THE DESIGN STANDARDS.
17. ALL SIGNING, STRIPING AND RPM PLACEMENT WITHIN THE FDOT RIGHT-OF-WAY IS TO BE IN ACCORDANCE WITH FDOT STANDARD INDEX 17346.

SAFETY

- 18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA EFFECTIVE OCTOBER 1, 1990 AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.850, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.
19. THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.
20. THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.
21. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

ENVIRONMENTAL

- 22. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION ALL SEDIMENT AND EROSION CONTROL (SEC) DEVICES (E.G., BARRIERS, SEDIMENT TRAPS/BASINS, VEGETATIVE BUFFERS, ETC.) AS SPECIFIED IN THE FINAL APPROVED PLANS FOR THE PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SEC DEVICES UTILIZED DURING THE PROJECT, AS WELL AS INSTALLATION & MAINTENANCE OF ANY ADDITIONAL MEASURES DEEMED NECESSARY DURING PROJECT IMPLEMENTATION, TO PREVENT EROSION AND OFF-SITE SEDIMENT MIGRATION. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL OF ALL SEC DEVICES UPON CONCLUSION OF THE PROJECT, AND UPON ADEQUATE STABILIZATION OF DISTURBED SOILS.
23. WHEN A BENTONITE SPILL OR FRACK-OUT OCCURS OR THERE IS A LOSS OF RETURN INDICATING EXCESSIVE SEEPAGE OR LOSS OF DRILLING FLUID, DRILLING MUST BE STOPPED UNTIL THE LOCATION OF THE SPILL IS IDENTIFIED. UNDER NO CIRCUMSTANCES WILL DRILLING CONTINUE WHEN A SPILL IS APPARENT.
24. ONCE LOCATED, THE BENTONITE SPILL MUST BE ISOLATED AND SEEPAGE INTO ANY NEARBY WATER BODIES WILL BE BLOCKED DEPENDING ON THE DEGREE OF THE SPILL. THE ISOLATED BENTONITE MUST BE REMOVED MANUALLY OR MECHANICALLY AND DISPOSED OF BY APPROPRIATE MEANS OR REUSED.
25. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORM WATER, EROSION, AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE FDEP "FLORIDA STORM WATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION.
26. STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.
27. STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY AND STATE.
28. SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.

- 29. ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.
30. SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.
31. ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.
32. THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.
33. FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

RIGHT-OF-WAY

- 34. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.
35. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO REFERENCE AND RESTORE PROPERTY CORNER MONUMENTS, PINS, AND LANDMARKS THAT MAY BE DISTURBED BY CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
36. THE CONTRACTOR, PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.
37. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS, THAT ARE TO REMAIN, WHETHER SHOWN ON THE PLANS OR NOT.
38. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD THE RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT. ROADWAY PLANS AND PROPOSED DESIGN ARE BASED ON TOPOGRAPHIC SURVEYS PROVIDED BY MANATEE COUNTY PROJECT MANAGEMENT AND ZOLLAR NAJJAR & SHROYER UNDER COUNTY PROJECT NO'S 334-6001060 AND 319-6045661. REFER TO THE ORIGINAL SIGNED AND SEALED SURVEY CONTROL SHEETS IN THE PROJECT FILE.
39. THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER SPEC. 2575. THE CONTRACTOR SHALL COORDINATE WITH THE AFFECTED UTILITY COMPANY FOR THE ADJUSTMENT OF ANY EXISTING UTILITIES AND STRUCTURES IN ORDER TO MATCH THE PROPOSED ELEVATIONS AND ALIGNMENTS.
40. A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE PROJECT MANAGER FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

UTILITIES

- 41. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE NOT BEEN LOCATED OR IDENTIFIED, MAY NOT BE IN THE EXACT LOCATION SHOWN OR RELOCATED SINCE THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES STRUCTURES AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) THAT MAY AFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION. UTILITIES DESIGNATED VV, VH, AND VVH ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING NEAR THE 20"/24" WATERLINE.
42. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAIL BOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
43. THE CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED OR OFFERED BY FLORIDA POWER AND LIGHT TO PREVENT UNDERMINING OF POWER POLES DURING CONSTRUCTION. IF HOLDING OF POWER POLES IS RECOMMENDED OR REQUIRED BY THE UTILITY, THE CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH THE UTILITY AND BEAR ALL RELATED COSTS.
44. ANY TEMPORARY SHUTDOWNS FOR MODIFICATIONS OF EXISTING COUNTY SEWER, POTABLE & RECLAIM WATER SYSTEMS THAT MUST REMAIN IN SERVICE DURING CONSTRUCTION SHALL BE KEPT TO A MINIMUM AND SHALL BE COORDINATED WITH AND APPROVED BY THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IT IS NOTED THAT TEMPORARY SHUTDOWNS MAY BE RESTRICTED TO CERTAIN HOURS AT ANY TIME OF THE DAY OR NIGHT AND WILL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.
45. EXCEPT WHERE THE PLANS AND SPECIFICATIONS PROVIDE THAT SUCH WORK SHALL BE PERFORMED UNDER THE CONTRACT FOR THIS PROJECT, ALL UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE REMOVED, RELOCATED OR ADJUSTED BY THEIR OWNERS, AT THEIR EXPENSE. THE CONTRACTOR SHALL ARRANGE HIS SCHEDULE TO ALLOW UTILITY OWNERS TIME FOR THE NECESSARY RELOCATION AND ADJUSTMENT OF UTILITIES AND RELATED STRUCTURES.
46. A FLORIDA POWER AND LIGHT SPECIAL PROVISION IS THAT THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/FOUNDATIONS, OVERHEAD/CANTILEVER SIGNS/FOUNDATIONS, AND THE MOVEMENT/INSTALLATION OF STRAIN POLES SHALL MEET THE FOLLOWING REQUIREMENTS: 1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY 2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS (SEPARATION SHALL FOLLOW FPL GUIDELINES). ANY COST ASSOCIATED WITH THIS TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS. PLEASE REFER TO THE SPECIAL CONDITIONS IN THE UTILITY WORK SCHEDULE AND UTILITY COORDINATION.
47. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITY COMPANIES FOR THE RELOCATION AND ADJUSTMENT OF ALL UTILITIES, INCLUDING, ANY EXISTING POWER POLES AND/OR UTILITY CONDUITS WITHIN RIGHT-OF-WAY.
48. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE APPROPRIATE PARTIES TO DETERMINE THE COUNTY'S FIBER COMMUNICATION NETWORK, KNOWN AS ATMS (COUNTY ISD, SCHOOL BOARD, AND TRAFFIC MANAGEMENT CENTER) IN THE AREA TO ACCOMMODATE ANY POTENTIAL CONFLICTS. AS-BUILT INFORMATION FOR EXISTING COMMUNICATION CONDUIT AND FIBER IS AVAILABLE FROM DLGA ROSIER, WITH UTILITY RECORDS (941-792-8811 EXT. 5059). CONSTRUCTION PLAN INFORMATION FOR PROJECTS UNDER CONSTRUCTION WITH THE COUNTY'S TRAFFIC MANAGEMENT CENTER ARE AVAILABLE AT WWW.MANATEEATMS.COM AND WWW.MANATEEATMS2.COM.
49. CONTRACTOR SHALL MINIMIZE EROSION OF THE AREA SURROUNDING FPL TRANSMISSION POLES.
50. THE ROADWAY CONTRACTOR MUST MAINTAIN CLEARANCES, AS REQUIRED BY OSHA, WHEN WORKING IN THE PROXIMITY OF FPL'S HIGH-VOLTAGE TRANSMISSION AND LOW VOLTAGE DISTRIBUTION CONDUCTORS.
51. THE ROADWAY CONTRACTOR MUST MAINTAIN ACCESS TO ALL FPL FACILITIES AT ALL TIMES DURING HIS CONSTRUCTION, AND PROVIDE PROPER TRAFFIC CONTROL AROUND THEM.

DRAINAGE AND GRADING

- 52. ALL CONSTRUCTION IS TO BE STAKED IN THE FIELD BY OR UNDER THE SUPERVISION OF A FLORIDA REGISTERED LAND SURVEYOR.
53. THE CONTRACTOR IS TO PROVIDE THE ENGINEER OF RECORD WITH REPRODUCIBLE RECORD DRAWINGS SHOWING ALL IMPROVEMENT LOCATIONS AND ELEVATIONS IN ACCORDANCE WITH LATEST MANATEE COUNTY TRANSPORTATION

- DEPARTMENT STANDARDS AND SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD) STANDARDS. THE CONTRACTOR SHALL ALSO PROVIDE FIVE SETS OF PRINTS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR, OF THE RECORD DRAWINGS TO THE ENGINEER OF RECORD. THESE RECORD DRAWINGS SHALL BE CERTIFIED TO THE OWNER, APPROPRIATE GOVERNMENTAL AGENCIES. RECORD DRAWINGS SHALL SPECIFICALLY INCLUDE STORMWATER FACILITY LOCATIONS, INCLUDING TOP OF BANK, UNDERDRAIN AND CONTROL STRUCTURES, SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE AND PAYMENT. BENCH MARKS WITH THE ELEVATION CLEARLY AND PERMANENTLY MARKED ARE TO BE PLACED ON THE TOP OF ALL PROPOSED OUTFALL CONTROL STRUCTURES. RECORD DRAWINGS OF ALL MITIGATION AREAS INCLUDING ELEVATIONS, ZONES AND LIMITS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR AND REVIEWED BY THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE AND PAYMENT. THE RECORD DRAWINGS SHALL SPECIFICALLY INCLUDE THE SURFACE AREA OF STORMWATER FACILITY AREAS AT NORMAL WATER), TOP OF BANK AND ELEVATION (NWLs), AT HIGH WATER ELEVATION (HWL ALL MITIGATION AND/OR LITTORAL SHELF AREAS.
54. TO PREVENT SEDIMENTARY RUNOFF DURING CONSTRUCTION, STAKED HAY BALES, STAKED SILT SCREENS OR INLET DEBRIS CONTROL SCREENS ARE TO BE PLACED AT STORM INLETS, OUTFALL LOCATIONS AND ADJACENT PROPERTY LINES AS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSTALLED AND THEN VERIFIED/INSPECTED BY MANATEE COUNTY INFRASTRUCTURE INSPECTIONS RESOURCES DIVISION (708-7450) PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SEDIMENTATION BARRIERS IN A WORKING MANNER FOR THE DURATION OF CONSTRUCTION AND SHOULD BE CHECKED DAILY. SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF OF THE DEPTH OF THE SEDIMENTATION BARRIER SHALL BE IMMEDIATELY REMOVED AND REPLACED IN UPLAND AREAS. IN ADDITION TO SPECIFIED EROSION CONTROL LOCATIONS, THE CONTRACTOR SHALL PERFORM DAILY SITE INSPECTIONS FOR POTENTIAL EROSION PROBLEMS. IF PROBLEMS OCCUR, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE EROSION CONTROL IMMEDIATELY. AN INSPECTION LOG SHALL BE MAINTAINED AND AVAILABLE ONSITE AT ALL TIMES. STORMWATER TREATMENT FACILITIES INCLUDING OUTFALL PER DETAIL ARE TO BE CONSTRUCTED EARLY IN SITE DEVELOPMENT, WITH NO OFF-SITE UNTREATED RUN-OFF OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING TEMPORARY EROSION CONTROL DEVICES FOLLOWING COMPLETION OF ALL CONSTRUCTION AND FINAL STABILIZATION.
55. ALL PIPE LENGTHS SHOWN ON PLAN VIEW ARE TO THE END OF THE MITERED END SECTION. REFER TO MITERED END SECTION DETAIL FOR LENGTH OF PIPE TO BE INCLUDED IN PRICE FOR MITERED END SECTION.
56. TOPOGRAPHIC AND PROPERTY SURVEYS GIVING LOT SIZE, GROUND ELEVATIONS, OBSTRUCTIONS ON SITE, LOCATIONS AND DEPTHS OF SEWERS, CONDUITS, PIPES, EXISTING STRUCTURES, CURBS, PAVEMENTS, TRACTS, AND SOIL BORING DATA GIVING THE NATURE OF GROUND AND SUBSURFACE CONDITIONS HAVE BEEN OBTAINED FROM RELIABLE SOURCES. THE ACCURACY OF THIS DATA IS NOT GUARANTEED, AND IS FURNISHED SOLELY AS AN ACCOMMODATION TO THE CONTRACTOR. USE OF THIS DATA SHALL BE MADE AT THE CONTRACTOR'S DISCRETION. NO ADDITIONAL COMPENSATION WILL BE GRANTED DUE TO THE CONTRACTOR'S LACK OF KNOWLEDGE OF SITE CONDITIONS. PRIOR TO BID SUBMISSION, THE CONTRACTOR SHALL CONDUCT ANY ADDITIONAL SURVEYS AND SOILS TESTS HE MAY DEEM NECESSARY TO VERIFY THE ACCURACY OF THE INFORMATION PROVIDED.
57. THE CONTRACTOR SHALL VERIFY TOPOGRAPHY AND SATISFY HIMSELF AS TO THE EXTENT OF FILL NECESSARY TO ACHIEVE FINISHED GRADE PRIOR TO AWARD OF CONTRACT. THERE SHALL BE NO CLAIM FOR EXTRAS NOTWITHSTANDING SITE PLAN REVISIONS PROMULGATED SUBSEQUENT TO AWARD OF CONTRACT.
58. ROADSIDE UNDERDRAIN SHOWN ON PLAN IS MINIMUM AND EXTENSION SHALL BE REQUIRED AS DETERMINED NECESSARY BY THE ENGINEER OF RECORD AND/OR MCPWD INSPECTION DEPARTMENT DURING THE COURSE OF CONSTRUCTION.
59. SUITABLE FILL MATERIAL FROM EXCAVATION SHALL BE UTILIZED FOR PROJECT FILL PER GRADING SPECIFICATIONS. UNSUITABLE MATERIAL SHALL BE PLACED IN OPEN AREAS ONLY AS DIRECTED BY THE PROJECT ENGINEER AND SOILS ENGINEER IN ACCORDANCE WITH FDOT INDEX 505.
60. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURES PRIOR TO INSTALLATIONS.
61. REFER TO CONSTRUCTION TECHNICAL SPECIFICATIONS FOR COMPACTION REQUIREMENTS, GRASSING/SODDING REQUIREMENTS, AND PAVING CONSTRUCTION MATERIAL SPECIFICATIONS.
62. ALL FILL AREAS ARE TO BE CONSTRUCTED IN 12" MAXIMUM LIFTS.
63. THE CONTRACTOR SHALL REVIEW SOILS TESTS AS PERFORMED BY THE SOIL CONSULTANT AND IS ENCOURAGED TO CONDUCT ON-SITE TESTING TO SATISFY HIMSELF AS TO ACTUAL LIMITS OF REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIALS PRIOR TO BIDDING.
64. ON SLOPES GREATER THAN 3:1 PEGGING OR PINNING OF SOD MAY BE REQUIRED.
65. STATION LOCATIONS AND OFFSETS FOR STORM DRAIN INLETS AND MANHOLES REFERENCE THE CENTER OF THE SPECIFIED STRUCTURE BOTTOM. STATION LOCATION IS CENTER OF STRUCTURE BOTTOM FOR JUNCTION BOXES, CENTER OF RISER FOR CURB INLETS. FOR PIPES WITH MITERED END SECTIONS, THE PROPOSED LENGTHS SHOWN ON THE PLANS INCLUDE THE LENGTH OF THE MITERED END SECTION. PAYMENT FOR PIPE SHALL NOT INCLUDE THE LENGTH OF THE MITERED END SECTION, AS SPECIFIED BY DIMENSION "F" AS SHOWN IN FDOT INDEX 272 AND 273. PAYMENT SHALL BE FROM INSIDE STRUCTURE WALL TO INSIDE STRUCTURE WALL. ANY EXTRA PIPE LENGTH LISTED SHALL BE CONSIDERED CONTINGENT.
66. ALL CURB INLET AND JUNCTION BOX STORMWATER STRUCTURES SHALL HAVE HEAVY DUTY RING AND COVER MANHOLE ACCESS.
67. DURING DEWATERING OPERATIONS, THE CONTRACTOR SHALL NOT DISCHARGE DIRECTLY TO RECEIVING WATERS, EXISTING CONVEYANCES TO RECEIVING WATERS, OR WETLAND SYSTEMS. TEMPORARY SEDIMENT BASINS, TRAPS, OR SILTATION REDUCTION DEVICES SHALL BE UTILIZED TO COLLECT THE DISCHARGE FROM DEWATERING ACTIVITIES TO ELIMINATE THE POTENTIAL FOR OFFSITE SEDIMENT TRANSPORT AND TO ENSURE THAT DIRECT DISCHARGE DOES NOT OCCUR.



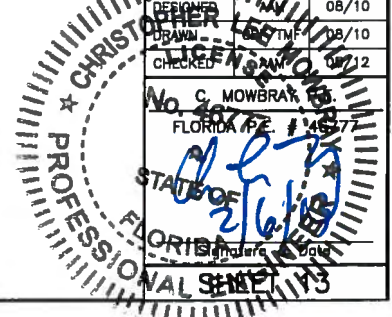
1022 26th Avenue East Bradenton, FL 34208

15th ST EAST @ 51st AVE EAST AND PINE ST RELOCATION GENERAL NOTES & LEGEND

Table with columns: REVISION DESCRIPTION, NO., DATE, BY

Table with columns: PROJECT #, SURVEY #, SEC./TWN./RGE, SCALE

Table with columns: BY, DATE



15:PM:Engineering_Shaun_Vigilant_Engineering_INTERSECTION_STUDIES_AND_IMPROVEMENTS_15th_St_E@51st_Ave_CAD(DWG)Sheet_13_GN_1.dwg, 2/2/2013, 4:00 PM Gregory_Bushman, 11, 10260 (11 x 17)



**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
GENERAL NOTES & LEGEND**

RESTORATION

1. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.
2. ALL DISTURBED GRASSED AREAS SHALL BE SODDED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER. ALL EXISTING SHRUBS, TREES, PLANTINGS AND OTHER VEGETATION, OUTSIDE OF RIGHT-OF-WAY DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH EQUIVALENT MATERIAL BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
3. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITIONS OF THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN, SECTION 522, AND SECTION 310 OF THE F.D.O.T. DESIGN STANDARDS LATEST REVISION.
4. ALL CONCRETE THRUST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE OPERATION OF THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.
5. WHENEVER A PERMANENT ROADWAY SURFACE IS NOT PLACED IMMEDIATELY AFTER BACKFILLING AND COMPACTION OF THE NEWLY INSTALLED PIPE LINE IN AREAS WHERE TRAFFIC MUST PASS, THE CONTRACTOR SHALL INSTALL A TEMPORARY SURFACE CONSISTING OF NINE INCHES OF COMPACTED LIME ROCK BASE AND A COAT OF ASPHALT EMULSION. PERMANENT ROADWAY REPAIR SHALL BE PERFORMED A MAXIMUM OF TWENTY-ONE CALENDAR DAYS AFTER THE INITIAL OPEN CUTTING.
6. RESTORATION OF CURBS, DRIVEWAYS, SIDEWALKS, AND PLACEMENT OF SOD SHALL BE COMPLETED WITHIN FORTY-FIVE CALENDAR DAYS OF INITIAL DISTURBANCE, OR TWENTY-ONE CALENDAR DAYS OF SUBSTANTIAL COMPLETION, WHICHEVER OCCURS FIRST.

CONSTRUCTION

7. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL INSTALL NOISE ABATEMENT BARRIERS POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.
8. NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS. ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY. ROADS SHALL BE SWEEPED DAILY AS PART OF DAILY CLEAN UP.
9. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.
10. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.
11. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA, UNLESS OTHERWISE NOTED ON THE PLANS.
12. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM. THE CONTRACTOR SHALL SUBMIT DEWATERING PLAN TO DISTRICT FOR APPROVAL PRIOR TO CONSTRUCTION.
13. ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES.
14. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.
15. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.
16. ALL FITTINGS FOR PRESSURE CLASS-RATED PIPE SHALL BE RESTRAINED DUCTILE IRON. RESTRAINED LENGTHS OF PIPE SHALL ADHERE TO THE REQUIREMENTS AS SHOWN ON THE DETAIL SHEETS.
17. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS AND STATION OFFSETS ARE TO CENTER OF STRUCTURES OR FITTINGS. REFER TO DETAIL SHEET FOR ALL REFERENCE POINTS.
18. ALL EXISTING MAINS THAT ARE BEING REPLACED SHALL BE ABANDONED IN PLACE UPON ACCEPTANCE AND ACTIVATION OF THE NEW MAINS. ABANDONED MAINS SHALL BE CUT, FILLED WITH GROUT, AND CAPPED. REFER TO SECTION 02064 OF THE SPECIFICATIONS FOR GROUTING OF ABANDONED PIPE.
19. WATER MAINS CROSSING OVER OR UNDER SANITARY SEWERS, FORCE MAINS, AND RECLAIMED WATER LINES SHALL BE LAID PER CURRENT EDITION OF "10 STATE STANDARDS" AND MANATEE COUNTY UTILITY STANDARDS UNLESS NOTED OTHERWISE ON THE PLANS.
20. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.
21. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 14 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO THE OWNER. RECORD DRAWINGS SHALL BE SIGNED & SEALED BY A SURVEYOR CURRENTLY LICENSED BY THE STATE OF FLORIDA. ALL RECORD DRAWING INFORMATION REQUIREMENTS IN SECTION 14 SHALL BE STRICTLY ENFORCED. A COPY OF SECTION 14 WILL BE PROVIDED UPON REQUEST.
22. ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN ONE FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO INCH DIAMETER.
23. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.
24. ALL CONCRETE AND REBAR PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.
25. CONTRACTOR IS RESPONSIBLE FOR ALL UNSUITABLE MATERIAL REMOVAL WITHIN PROJECT LIMITS. EXCAVATION, EMBANKMENT, INCLUDING UTILIZATION, AND UNSUITABLE MATERIAL REMOVAL SHALL BE IN ACCORDANCE WITH FOOT DESIGN STANDARDS, LATEST VERSION.
26. WHERE EXCAVATION IS REQUIRED FOR CONSTRUCTION OF SIDEWALK, ALL STUMPS, ROOTS, ETC. SHALL BE REMOVED COMPLETELY FROM THE SIDEWALK AREA. ALL STUMPS WITHIN THE PROJECT LIMITS SHALL BE REMOVED COMPLETELY AND REPLACED WITH COMPACTED BACKFILL BEFORE THE AREA IS FILLED. TREE ROOTS IN AREA OF PROPOSED SIDEWALK, RAMP, OR DRIVEWAY REPLACEMENT SHALL BE GROUND OUT TO A DEPTH OF 6" BELOW BOTTOM OF NEW SIDEWALK OR DRIVEWAY. ALL PRUNED ROOT DEBRIS SHALL BE REMOVED FROM THE SUB-BASE MATERIAL PRIOR TO POURING CONCRETE, ASPHALT, OR APPLICATION OF OTHER SPECIFIED MATERIALS. THIS WORK SHALL BE INCLUDED IN AND PAID FOR UNDER THE PAY ITEM FOR CLEARING AND GRUBBING.
27. ALL STUMPS, ROOTS, AND OTHER DEBRIS PROJECTING THROUGH OR APPEARING ON THE SURFACE OF THE GROUND SHALL BE REMOVED TO A DEPTH OF 1-FOOT BELOW THE COMPLETED SURFACE. THIS WORK SHALL BE INCLUDED IN AND PAID FOR UNDER THE PAY ITEM FOR CLEARING AND GRUBBING.
28. ALL MATERIALS NOT CLAIMED BY THE COUNTY SHALL BECOME PROPERTY OF THE CONTRACTOR, AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN AREAS PROVIDED BY THE CONTRACTOR. THIS WORK SHALL BE INCLUDED IN AND PAID UNDER THE PAY ITEM CLEARING AND GRUBBING.
29. THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING, AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES OR TO MINIMIZE TRENCH WIDTH. WHERE A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST OF ALL SHEETING, SHORING, AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE ITEM OF WORK FOR WHICH SHEETING, SHORING, AND BRACING IS REQUIRED.
30. THE CONTRACTOR SHALL DISTURB NO MORE GROUND THAN WHAT IS NECESSARY FOR CONSTRUCTION. NO OPEN EXCAVATED TRENCH, OR OTHER UNSAFE CONDITION WILL BE LEFT OVERNIGHT. ALL WORK SITES WILL BE COMPLETELY RESTORED WITHIN SEVEN (7) CALENDAR DAYS OF THE CONCRETE POUR FOR SIDEWALK. THE INTENT OF THIS PROVISION IS TO "SAFE-UP" THE PROJECT SITE AS WORK PROGRESSES, AND SHALL INCLUDE REMOVING FORMS, FILLING HOLES, GRADING, AND REMOVAL OF DEBRIS.
31. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.

32. ANY EXISTING SIGN TO REMAIN THAT IS DISTURBED OR RELOCATED DURING CONSTRUCTION SHALL BE RESET TO CURRENT STANDARDS FOR HEIGHT, OFFSET, AND METHOD OF INSTALLATION AT NO ADDITIONAL COST TO THE COUNTY.
33. ALL EXISTING SWALES NOT DESIGNATED FOR RECONSTRUCTION SHALL BE REGRADED TO PROMOTE POSITIVE DRAINAGE AND MATCH PROPOSED CENTERLINE SWALE ELEVATION AND ALIGNMENT.
34. ALL STORM DRAINS AND STRUCTURES TO REMAIN SHALL BE CLEANED OF DEBRIS, DIRT, VEGETATION AND OTHER MATERIAL. STORM SEWER INLETS SHALL BE MODIFIED (RAISED/LOWERED) TO MATCH PROPOSED FINISHED GRADE.
35. ALL EXISTING FENCES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST. (EXISTING FENCES WITHIN R/W TAKING LIMITS SHALL BE RECONSTRUCTED TO THE NEW R/W LINE AND ARE TO BE REIMBURSED UNDER THE MISCELLANEOUS BID ITEM).
36. ALL EXISTING TREES LOCATED WITHIN R/W LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED.
37. ALL EXISTING STORM DRAINAGE STRUCTURES SHALL REMAIN UNLESS OTHERWISE NOTED ON DEMOLITION PLAN.
38. ALL EXISTING BUILDINGS SHALL REMAIN UNLESS OTHERWISE NOTED.
39. REMOVE AND REPLACE BASE AND SUB-BASE ACCORDING TO FDOT STANDARDS

CONTACTS

MANATEE COUNTY
PUBLIC WORKS DEPT.
INFRASTRUCTURE ENGINEERING
WAYNE TROXLER, P.E.
1022 26TH AVENUE EAST
BRADENTON, FL 34208
(941) 708-7450 EXT. 7650
FAX: (941) 708-7431

TECO/PEOPLES GAS CO.
DAN SHANAHAN
8281 VICO COURT
SARASOTA, FL 34240
(941) 342-4030
FAX: (941) 342-4011
EMERGENCY: 1-877-832-6911
dshanahan@tecoenergy.com

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

VERIZON FLORIDA INC.
WAYNE SUMNER
1701 RINGLING BLVD.
SARASOTA, FL 34236
(941) 330-9203
WAYNE.SUMNER@verizon.com

FLORIDA POWER & LIGHT
DISTRIBUTION
GREG COKER
1253 12TH AVENUE EAST
PALMETTO, FL 34221
(941) 723-4430
FAX: (941) 723-4444
EMERGENCY: 1-800-4-OUTAGE
Greg.Coker@fpl.com

FLORIDA POWER & LIGHT
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JUNO BEACH, FL 33408
Peter.H.Washio@fpl.com

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BRADENTON, FL 34208
(941) 748-0747 EXT. 1342
FAX: (941) 750-9364
hans_roese@doh.state.fl.us

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MANAGEMENT DISTRICT
SARASOTA SERVICE OFFICE
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SARASOTA, FL 34240
(941) 377-3722
FAX: (941) 373-7680

FLORIDA GAS TRANSMISSION
SAFETY HARBOR TEAM
7804 ANDERSON RD.
TAMPA, FL 33634
CHRIS LEE
(813) 466-3327
CELL : (727) 639-7512
christopher.lee@aug.com

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TOM WRIGHT
5413 E. STATE ROAD 64
BRADENTON, FL 34208-5535
(941) 748-3816 EXT. 21348
tom.wright@mybighthouse.com

DEPARTMENT OF ENVIRONMENTAL
PROTECTION
STEPHANIE BARIOS
13051 N. TELECOM PKWY
TEMPLE TERRACE, FL 33637
PHONE: (813) 632-7600, EXT. 408
FAX: (813) 632-7662

PEACE RIVER ELECTRIC
COOPERATIVE, INC.
P.O. BOX 1310
WACHULA, FL 33873
KENDELL COKER
(863) 767-4660
kendell.coker@preco.coop

MANATEE COUNTY
PUBLIC WORK DEPT.
TRAFFIC ENGINEERING
PAUL VILLALUZ, P.E.
(941) 749-3500 EXT. 7859
FAX: (941) 749-3571

EXISTING LEGEND

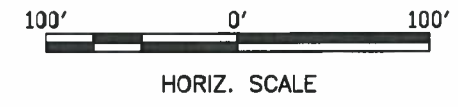
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--	---	--

PROPOSED


—	MAN
—	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

NO.	DATE
BY	
REVISION DESCRIPTION	
PROJECT #	232-6029960
SURVEY #	5303
SEC./TWN./RGE	7/355/18E
SCALE	1"=100'
DATE	
CHECKED	AAW
DATE	08/02/10
DESIGNED	AAW
DATE	08/02/10
DRAWN	AAW
DATE	08/02/10
PROJECT ENGINEER	AAW
DATE	08/02/10
FLORIDA P.E. # 46777	
STATE OF FLORIDA	
PROFESSIONAL ENGINEER	
SHEET 14	

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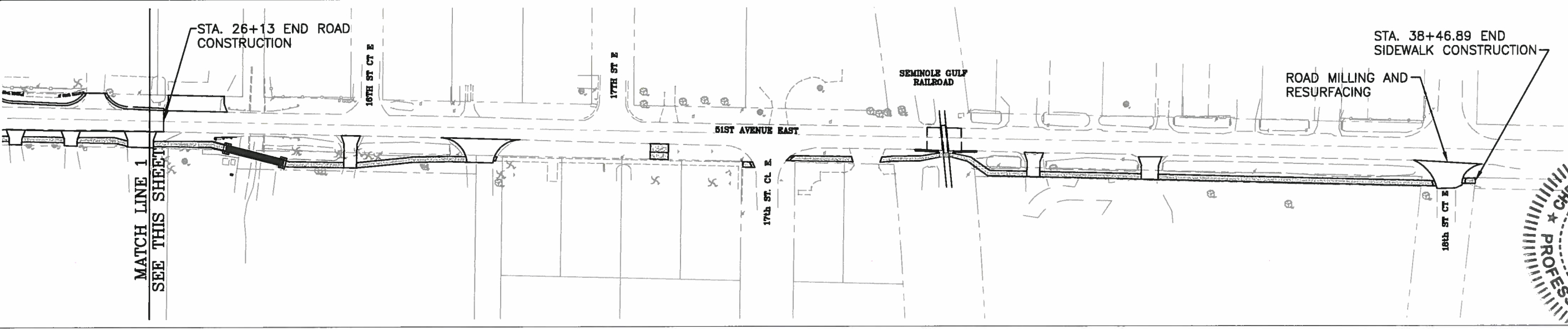
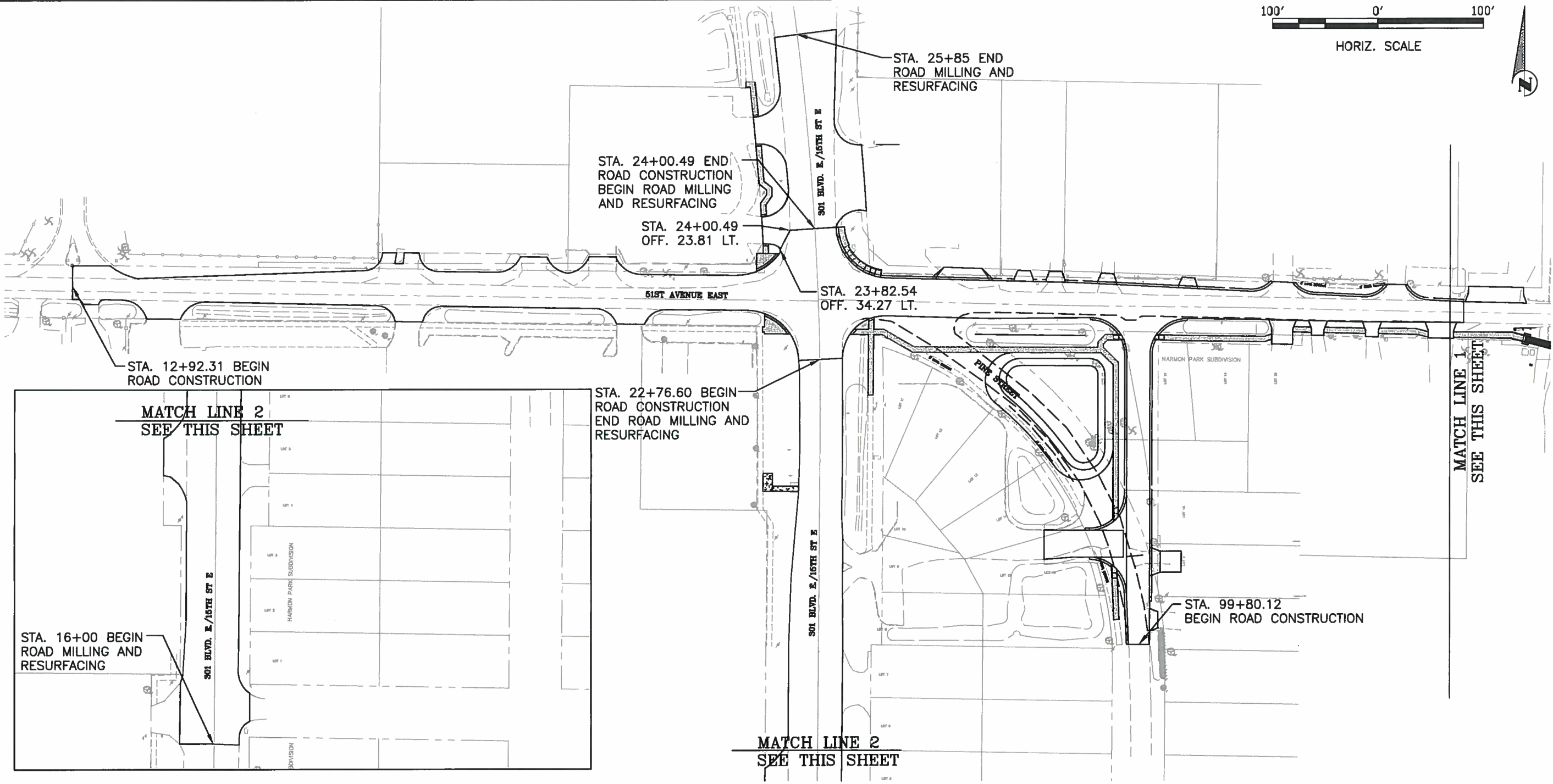


MANATEE COUNTY, FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES



1022 26th Avenue East
Bradenton, FL 34208

**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
LIMITS OF CONSTRUCTION**

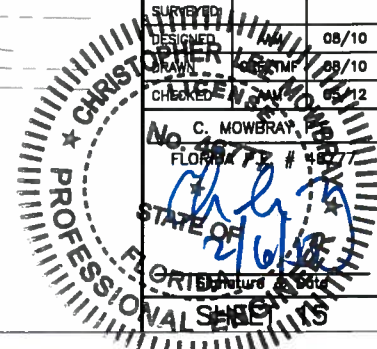


NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	232-8029880
SURVEY #	5303
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SCALE	1"=100'

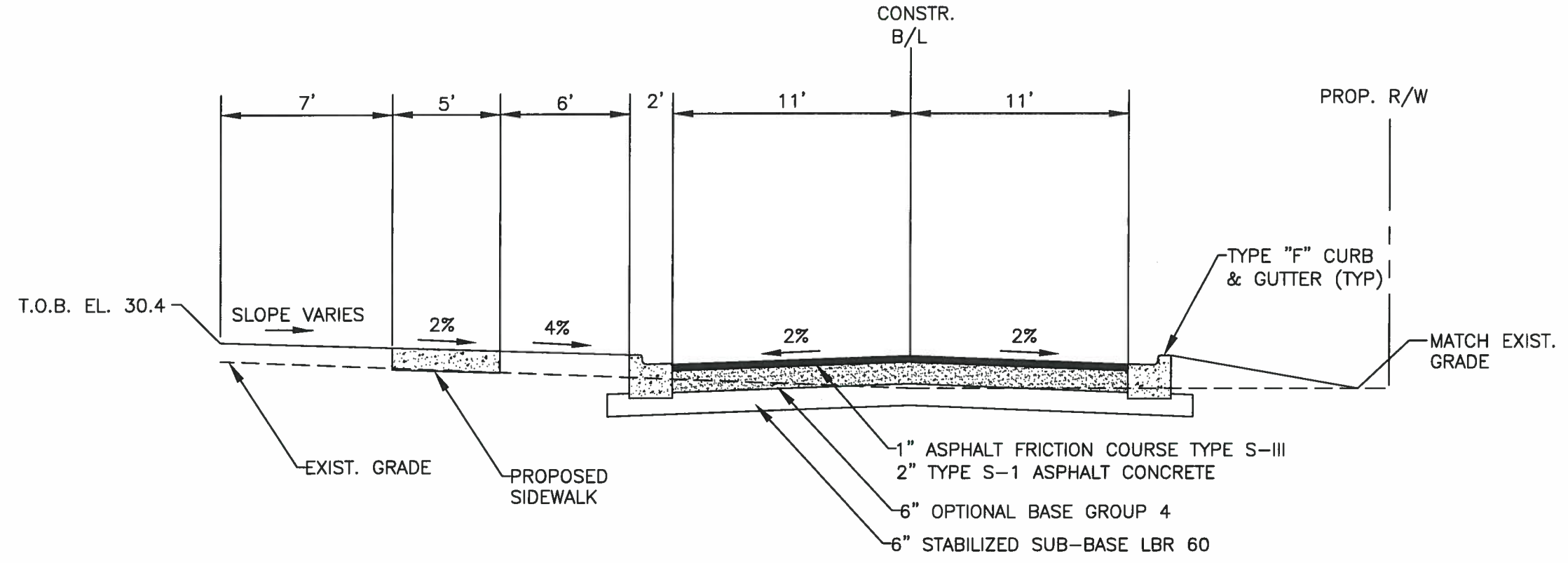
SURVEYED	DESIGNED	DATE
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		08/10
		08/12

C. MOWERAY
FLORIDA P.E. # 48877



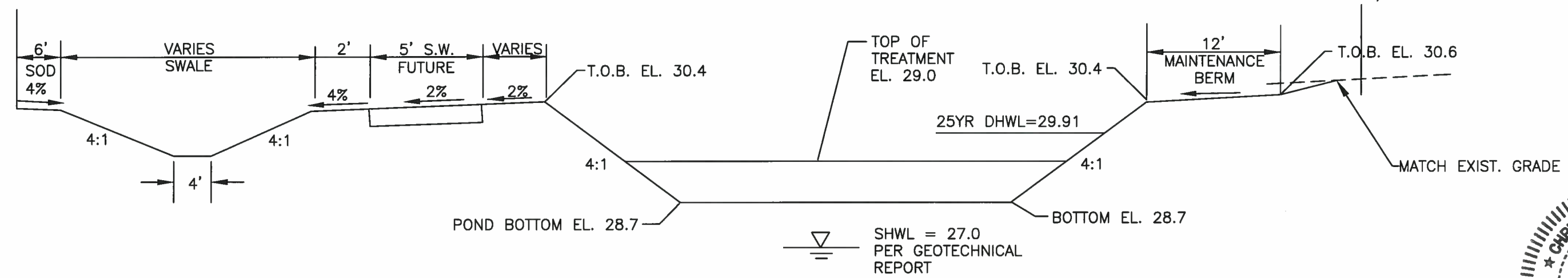
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**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
TYPICAL SECTIONS**



TYPICAL SECTION - PINE STREET

E.O.P. 51ST AVENUE EAST



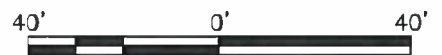
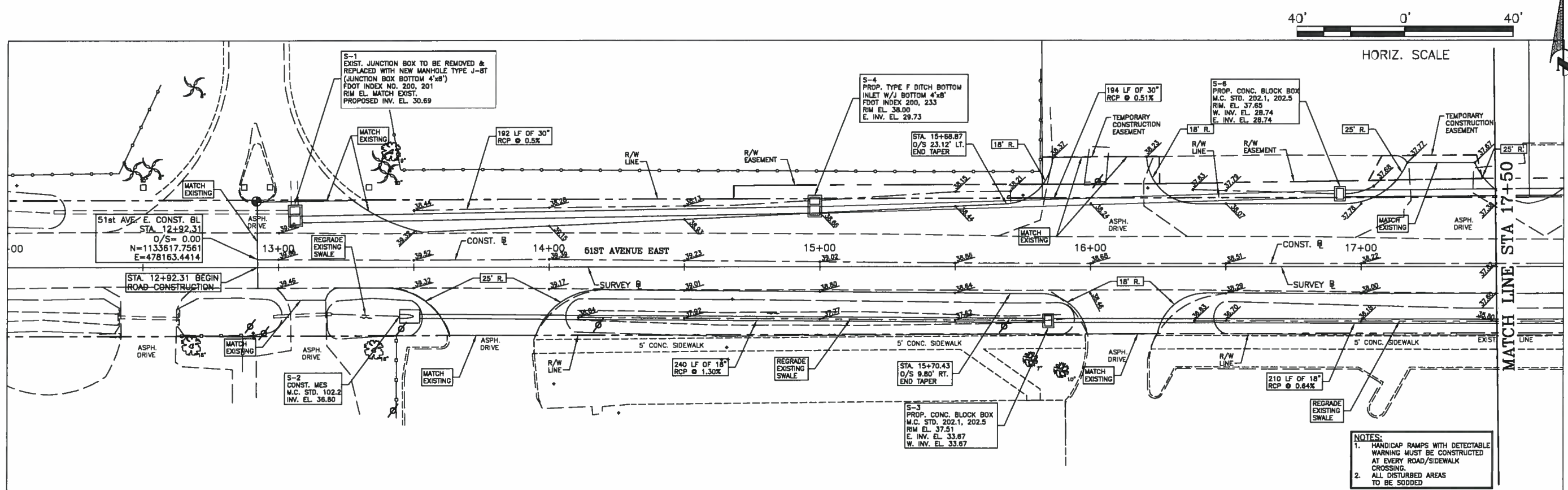
TYPICAL SECTION - DRY POND
PINE STREET

DATE	
BY	
REVISION DESCRIPTION	
NO.	
PROJECT #	232-6029960
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	N.T.S.
DATE	00/00/00
DESIGNED	
DRAWN	GRF
CHECKED	AM
DATE	09/10
C. MOWBRAY P.E.	
PROFESSIONAL ENGINEER	
FLORIDA	
2300	
Signature & Date	

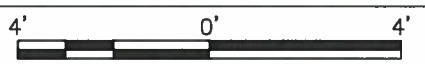
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**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
PLAN & PROFILE 51st AVE. EAST**



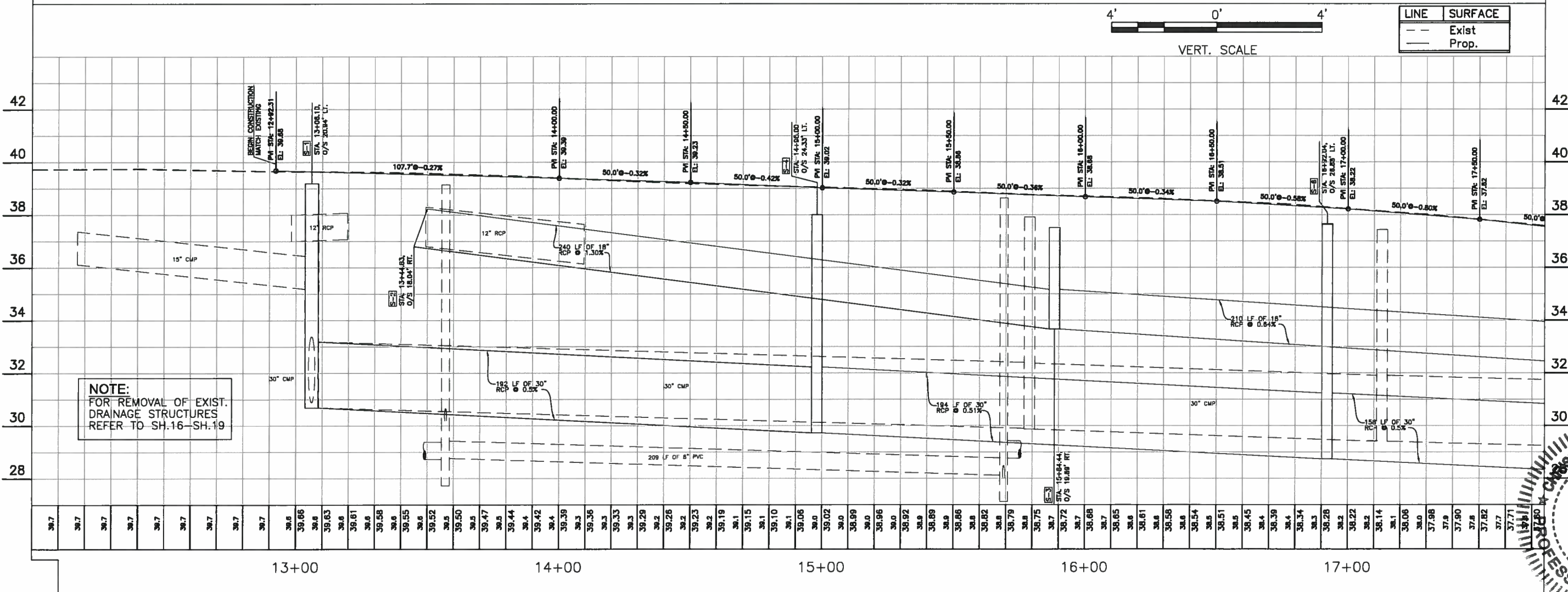
HORIZ. SCALE



VERT. SCALE

LINE	SURFACE
---	Exist
---	Prop.

- NOTES:**
- HANDICAP RAMPS WITH DETECTABLE WARNING MUST BE CONSTRUCTED AT EVERY ROAD/SIDEWALK CROSSING.
 - ALL DISTURBED AREAS TO BE SODED.



NOTE:
FOR REMOVAL OF EXIST. DRAINAGE STRUCTURES REFER TO SH.16-SH.19

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-6029980
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	H:1"=40' V:1"=4'
DATE	00/00/00
DESIGNED	10
DRAWN	00
CHECKED	NAM
NO. 487	
CHRISTOPHER LEE MOWBRAY, P.E.	

FLORIDA P.E. # 4577

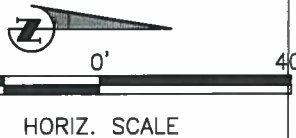
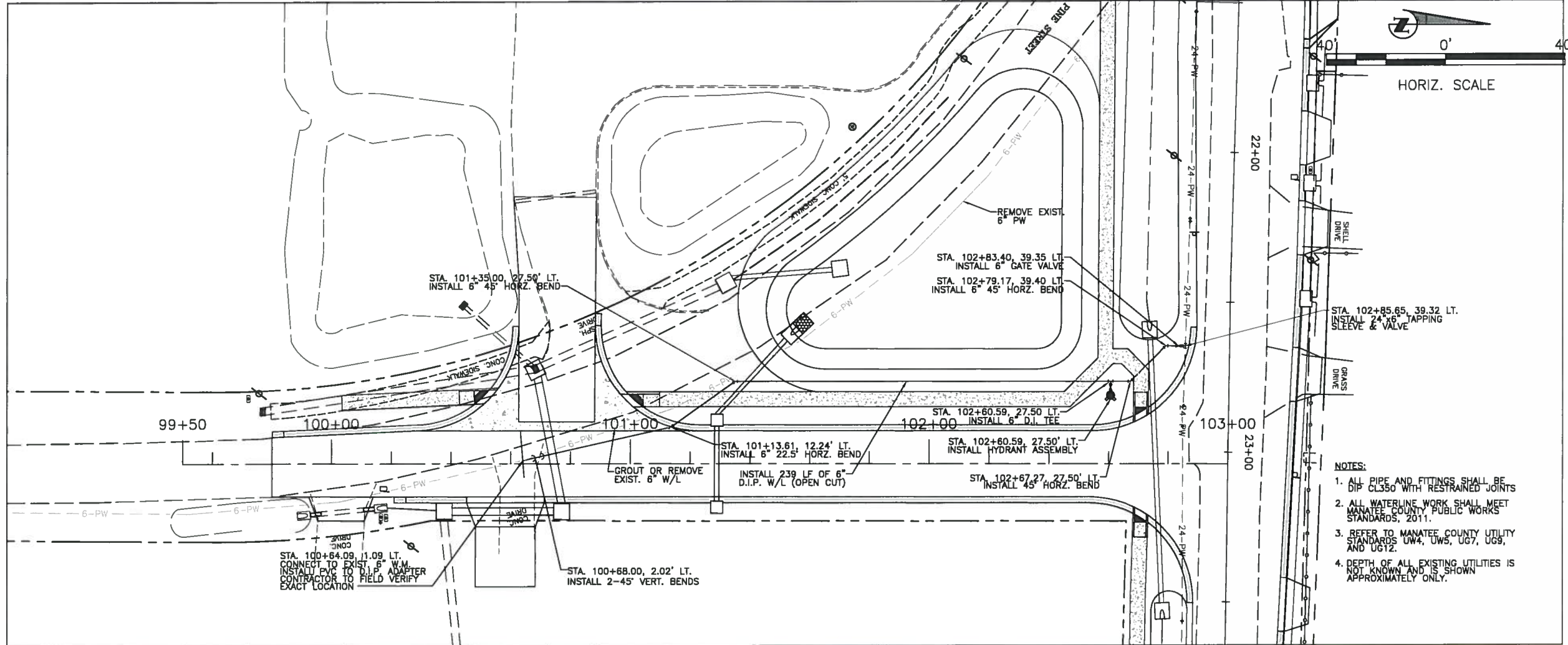
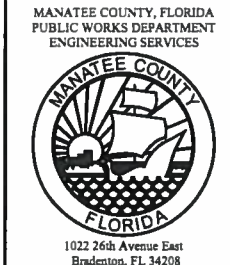
STATE OF FLORIDA

PROFESSIONAL ENGINEER

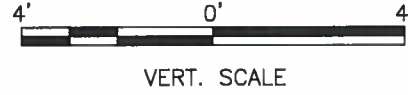
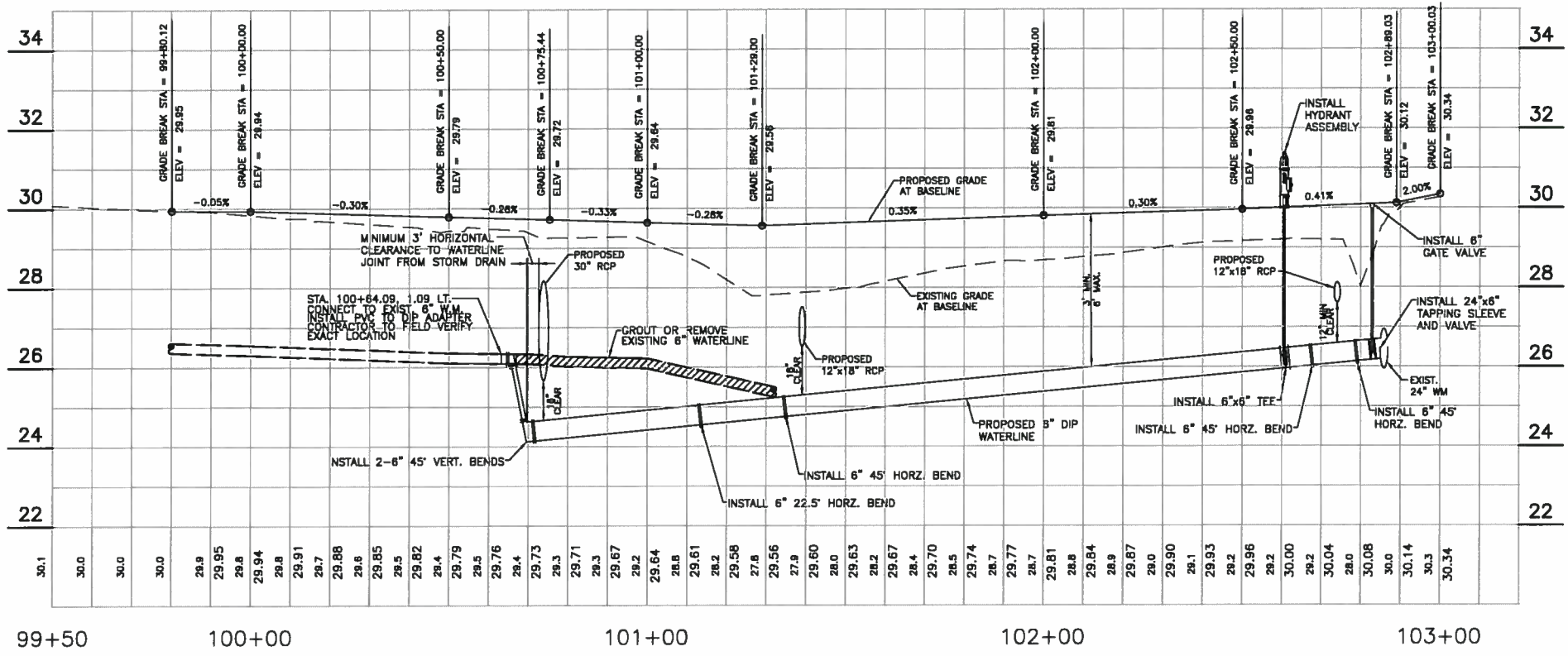
SHEET 22

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CONTRACTOR SHALL REFERENCE SECTION 14 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS FOR RECORD DRAWING REQUIREMENTS.



- NOTES:
1. ALL PIPE AND FITTINGS SHALL BE DIP CL350 WITH RESTRAINED JOINTS
 2. ALL WATERLINE WORK SHALL MEET MANATEE COUNTY PUBLIC WORKS STANDARDS, 2011.
 3. REFER TO MANATEE COUNTY UTILITY STANDARDS UW4, UWS, UG7, UG9, AND UG12.
 4. DEPTH OF ALL EXISTING UTILITIES IS NOT KNOWN AND IS SHOWN APPROXIMATELY ONLY.



**15th ST EAST @ 51st AVE EAST
 AND PINE ST RELOCATION
 PROPOSED 6" WATERLINE RELOCATION**

NO.	REVISION DESCRIPTION	DATE

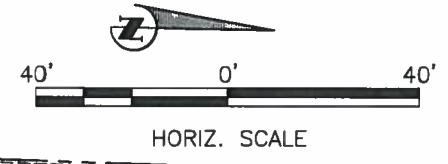
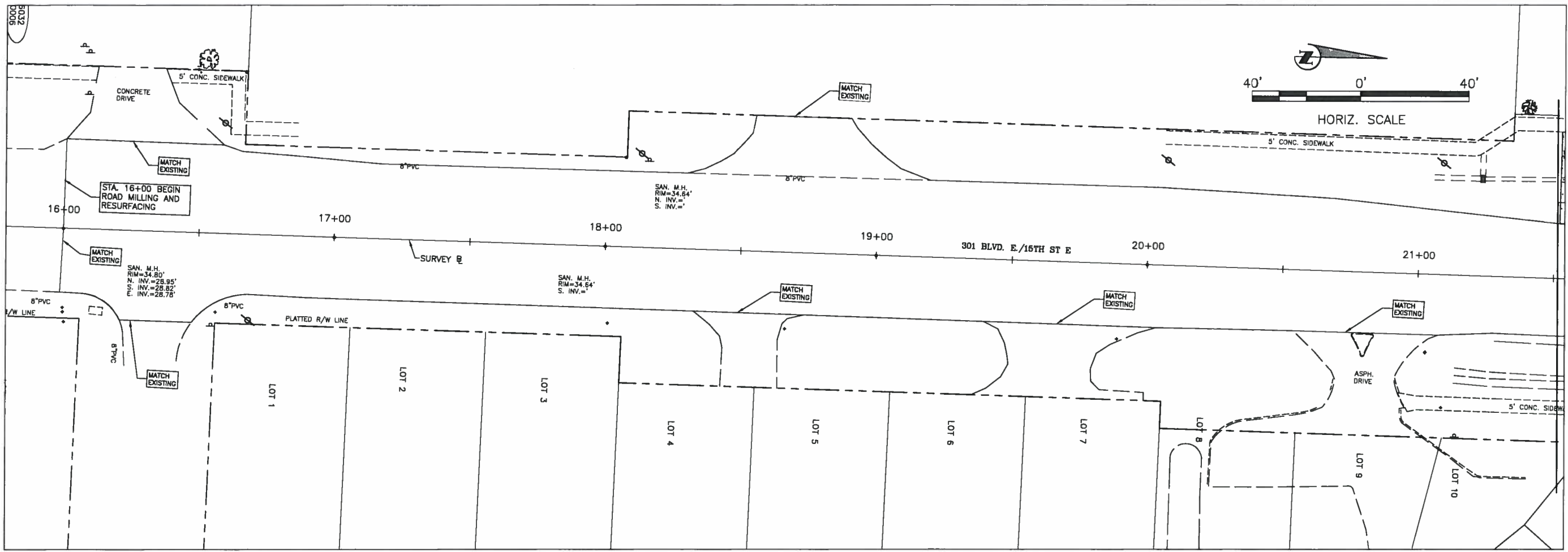
PROJECT #	323-6029960
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	H:1"=40' V:1"=4'
BY	DATE
SURVEYED	00/00/00
DESIGNED	8/10
DRAWN	8/10
CHECKED	2/12
JAMES STOCKWELL, P.E. FLORIDA REG. NO. 12488 Signature: <i>[Signature]</i> Date: <i>[Date]</i>	



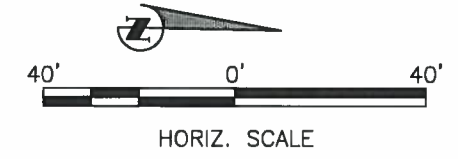
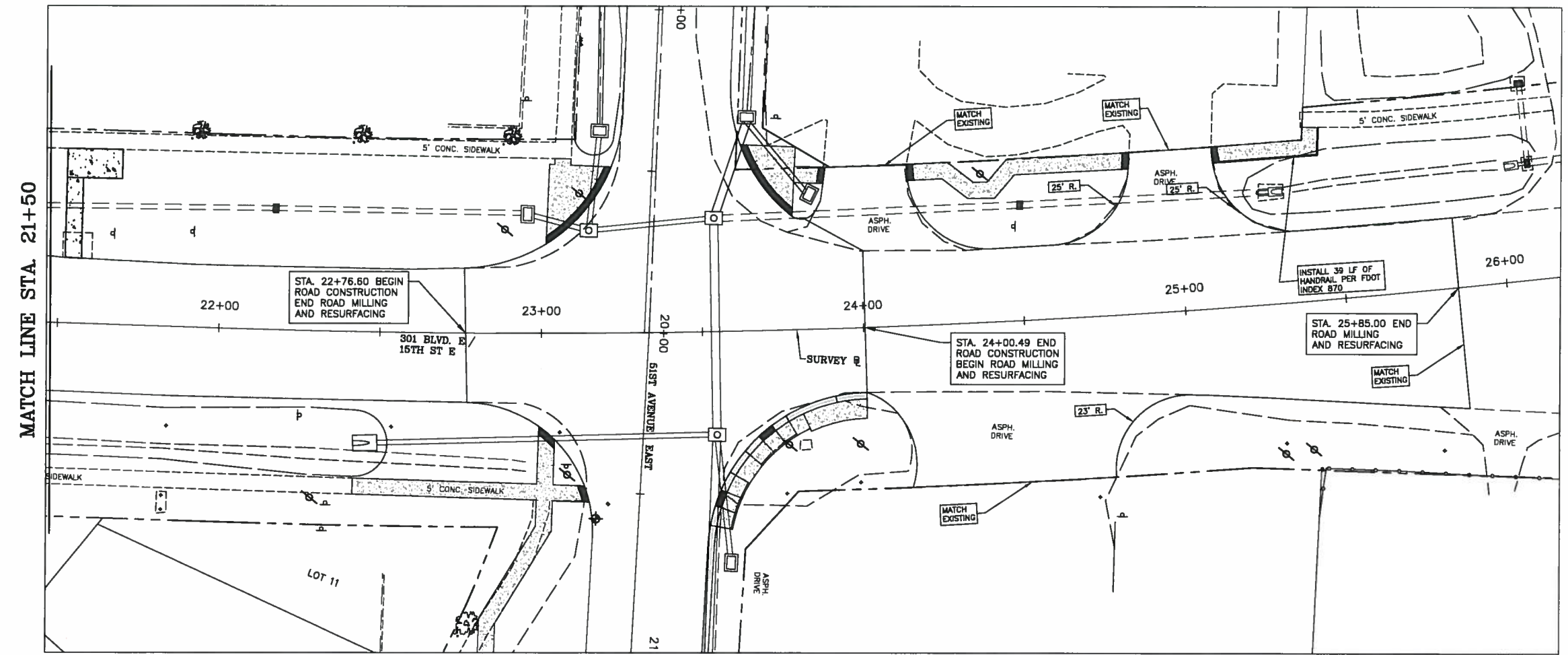
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**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
PLAN 301 BLVD. E./15th ST. EAST**



MATCH LINE STA. 21+50

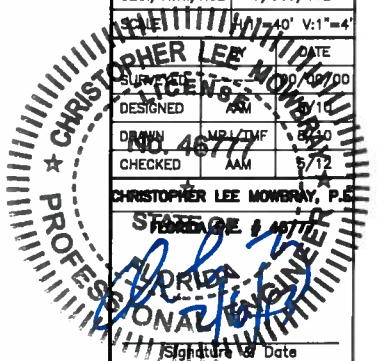


NOTE:
FOR REMOVAL OF EXIST.
DRAINAGE STRUCTURES
REFER TO SH.16-SH.19

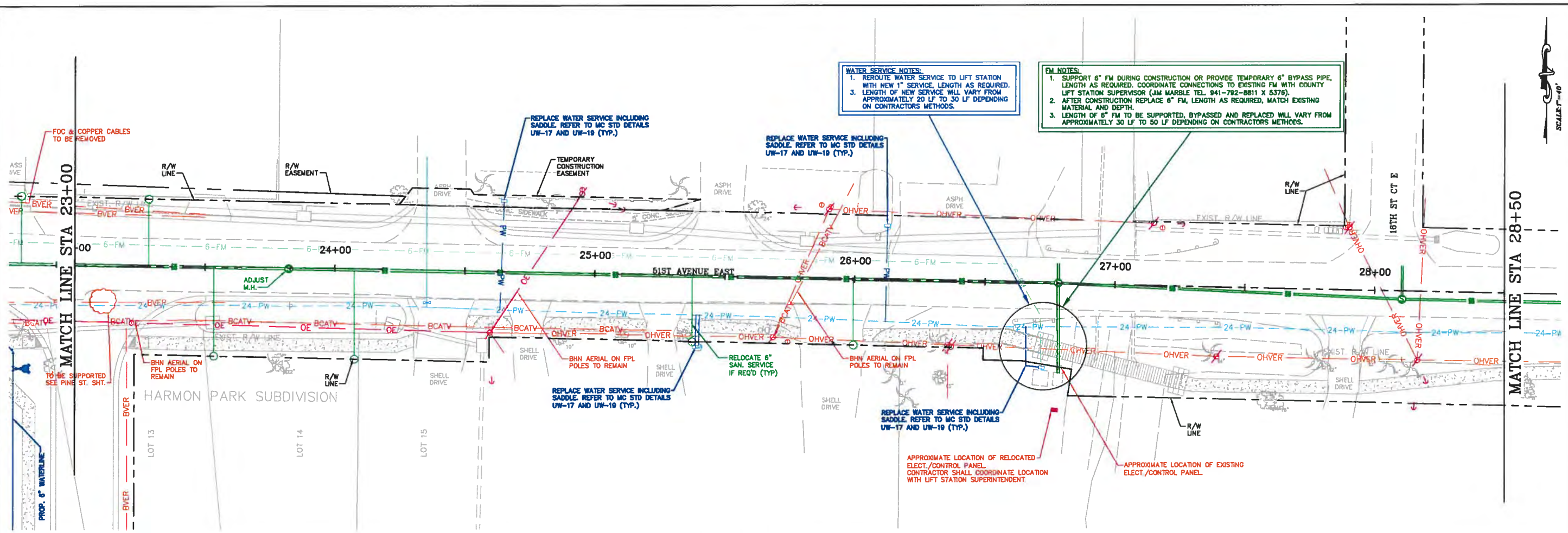
MATCH LINE STA. 21+50

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-6029960
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
DATE	NOV 11 2010
DESIGNED	AM
DRAWN	AM
CHECKED	AM
DATE	5/23
DESIGNED BY	CHRISTOPHER LEE
CHECKED BY	AM
DATE	NOV 11 2010
PROJECT	323-6029960
DATE	NOV 11 2010
DESIGNED BY	CHRISTOPHER LEE
CHECKED BY	AM
DATE	NOV 11 2010



15th ST EAST @ 51st AVE EAST AND PINE ST RELOCATION UTILITY ADJUSTMENT SHEET



UAS STA. 23+00 TO 28+50



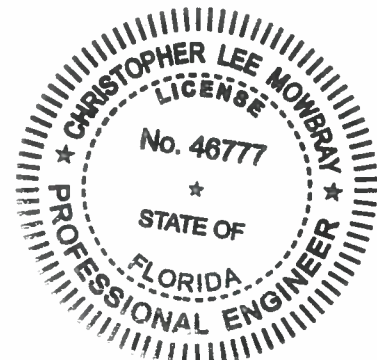
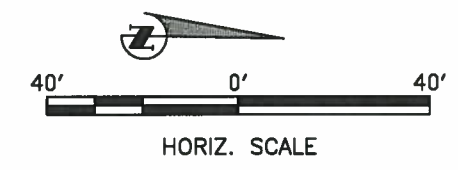
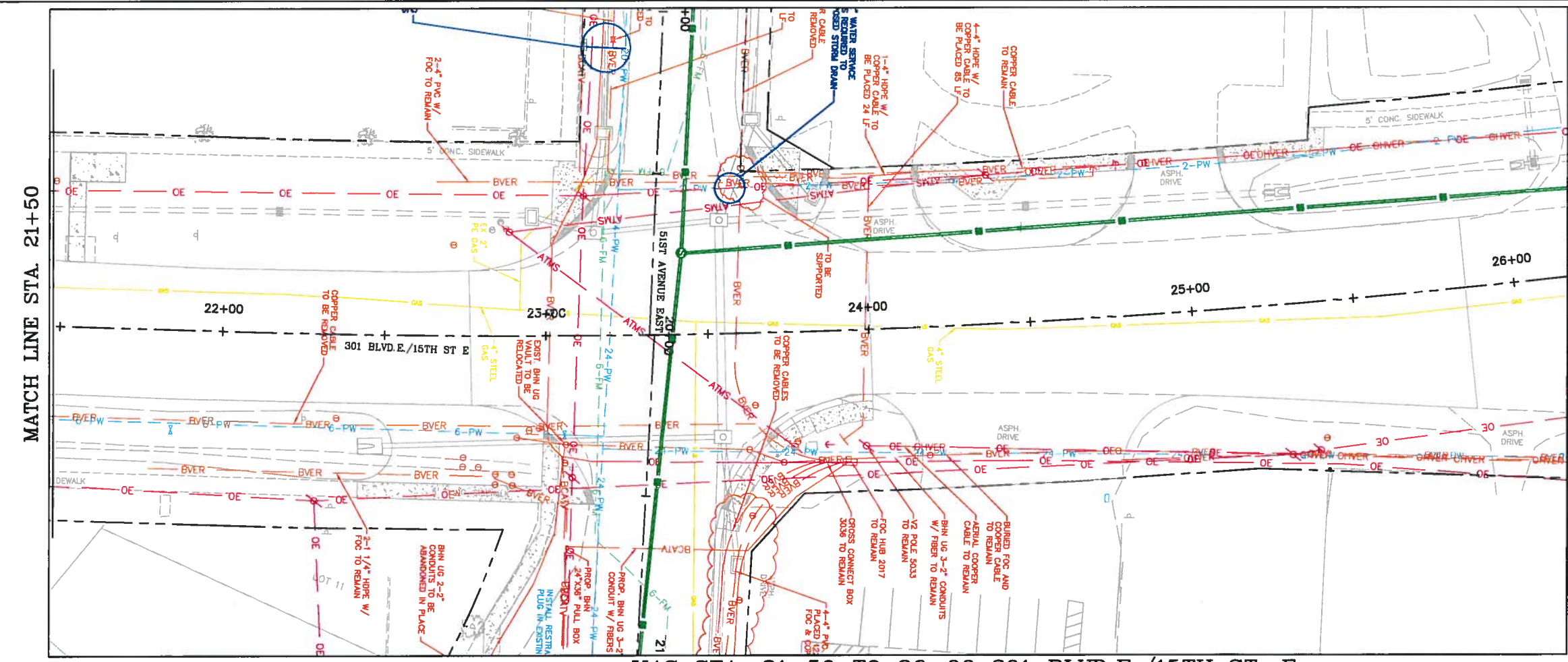
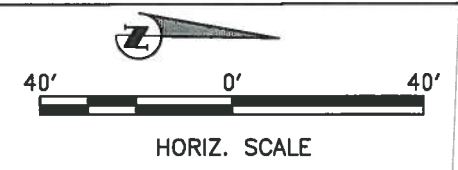
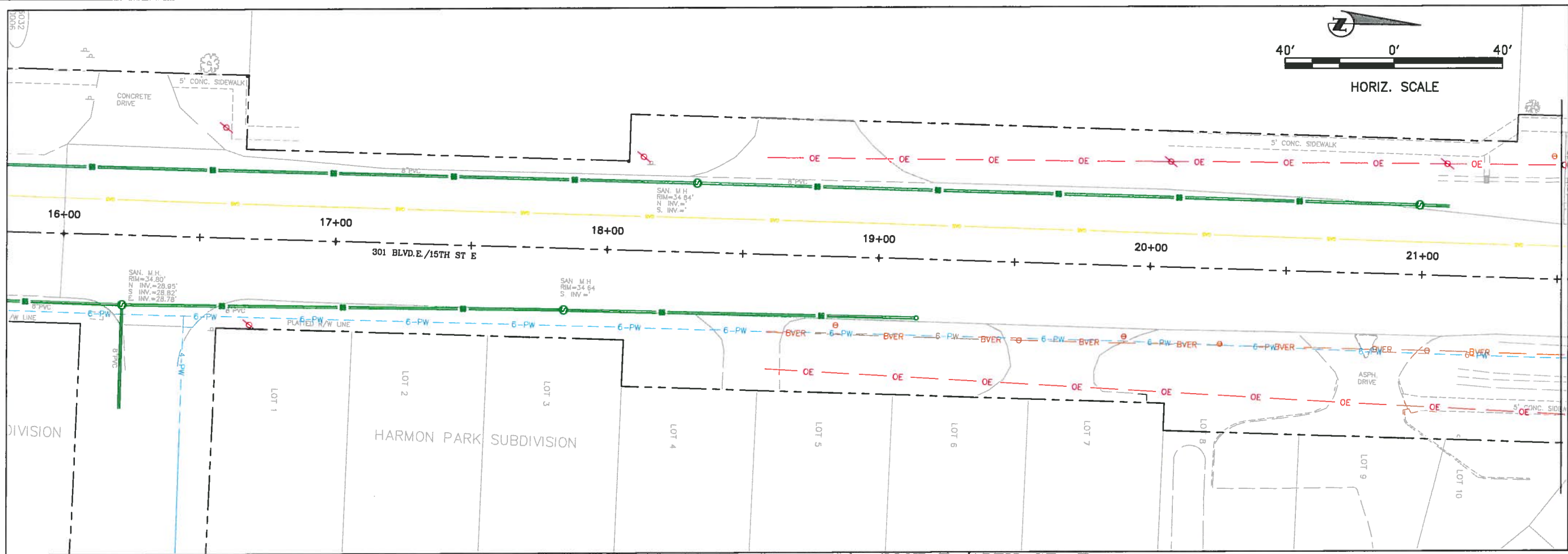
UAS STA. 28+50 TO 34+00

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-802980
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	1"=20'
DATE	06/00/00
CHECKED	AM 00/00/00
C. MOWBRAY, P.E.	
FLORIDA P.E. # 48774	
STATE OF FLORIDA	
PROFESSIONAL ENGINEER	

S:\P\01_Engineering_Sharesh Highway Engineering\INTERSECTION STUDIES AND IMPROVEMENTS\15th St E @ 51st Ave E\CAO\DWG\UAS.dwg, 30... UAS: 2/15/2013 5:04 PM Copy: Burkhman, L.L. Tabbed (11 x 17)

**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
UTILITY ADJUSTMENT SHEET**



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-6029960
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	1"=20'
SURVEYED	00/00/00
DESIGNED	AAM 07/21/11
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CHECKED	AAM 00/00/00

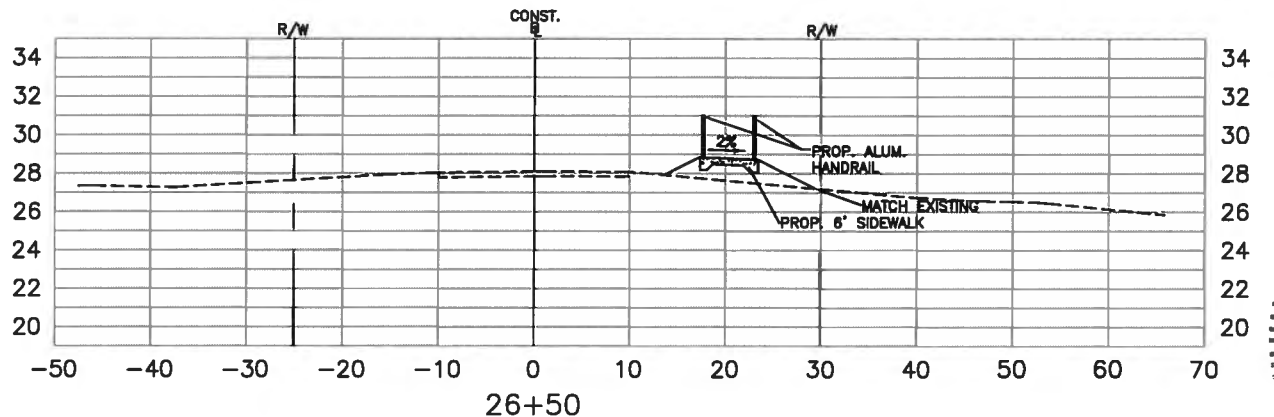
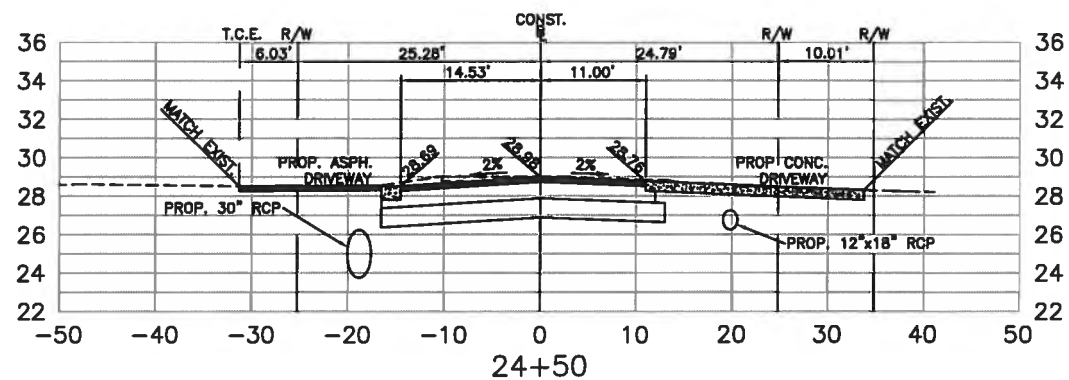
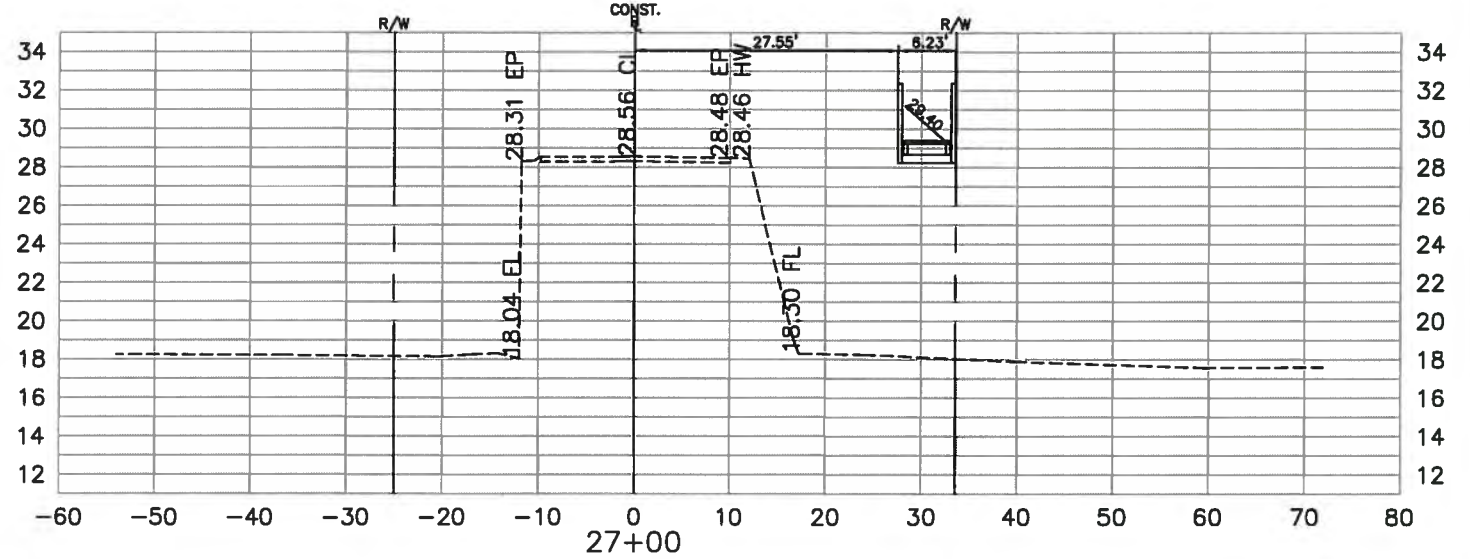
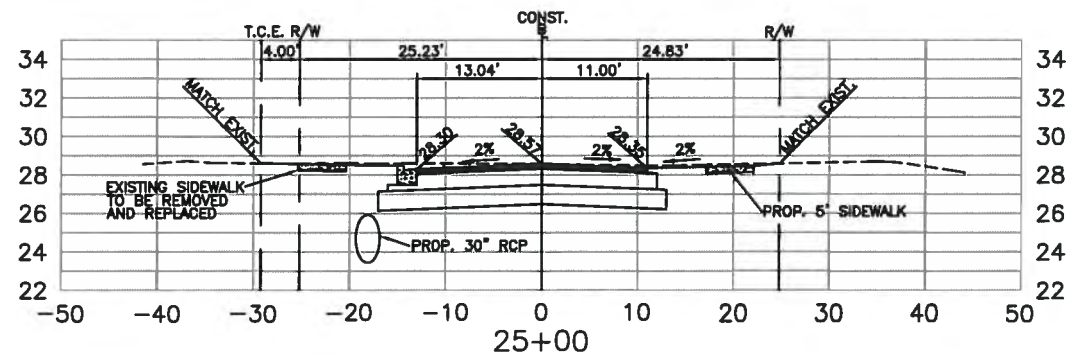
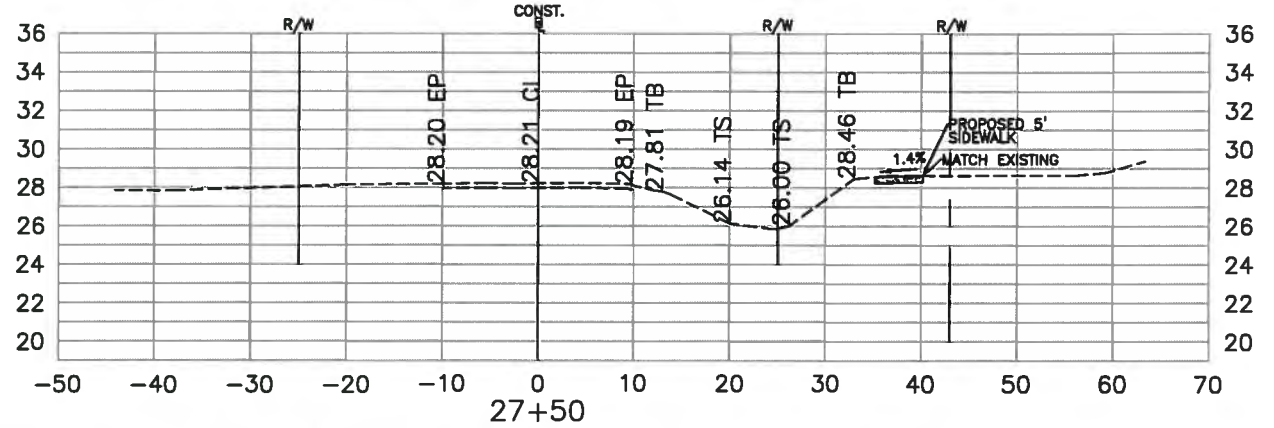
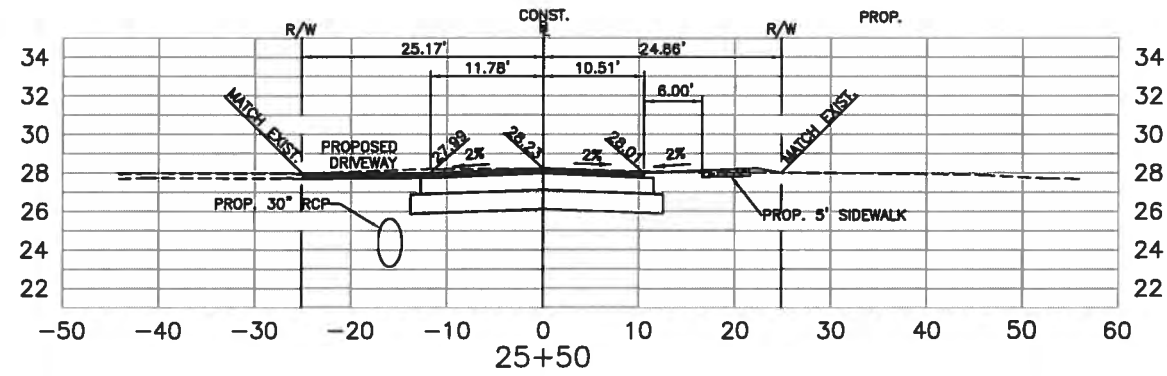
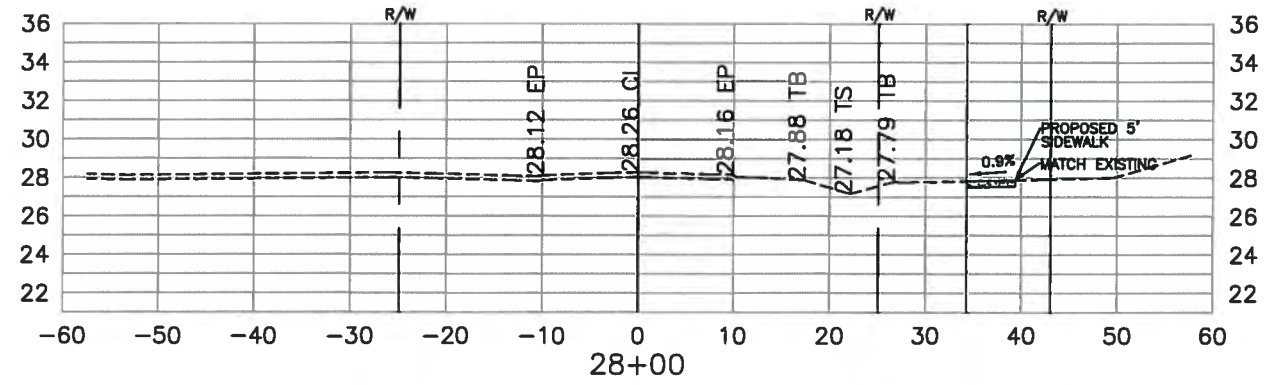
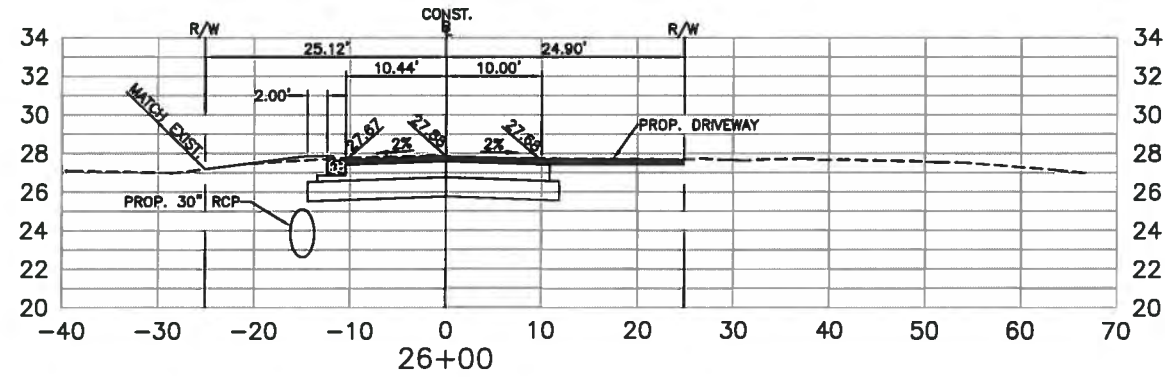
C. MOWBRAY P.E.		
FLORIDA P.E. # 46777		
<i>Chris Mowbray</i>		
Signature & Date		

SHEET 32

I:\PVD_Engineering_Short\Highway_Engineering\INTERSECTION STUDIES AND IMPROVEMENTS\15th St. E @ 51st Ave E\CAD\DWG\UAS.dwg, 2/5/2013 4:02 PM Gregory Berthelmann, 11, Tabbed (11 x 17)



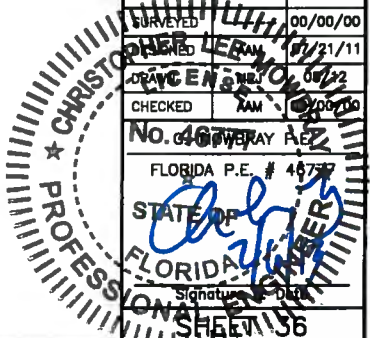
**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
CROSS SECTIONS 51ST AVE. EAST**



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-6029980
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	H:1"=20'/V:1"=10'

BY	DATE
SURVEYED	00/00/00
DRAWN	07/21/11
CHECKED	06/12
NO. 467	06/06/10
FLORIDA P.E. # 4477	
STATE OF FLORIDA	
PROFESSIONAL ENGINEER	



S:\PMD\Engineering\Shore Highway Engineering\INTERSECTION STUDIES AND IMPROVEMENTS\15th St. E @ 51st Ave E\CAD\DWG\X-SEC.dwg, 30-SEC, 2/5/2013 4:02 PM Gagey, Benjamin, 11, Tabbed (11 x 17)



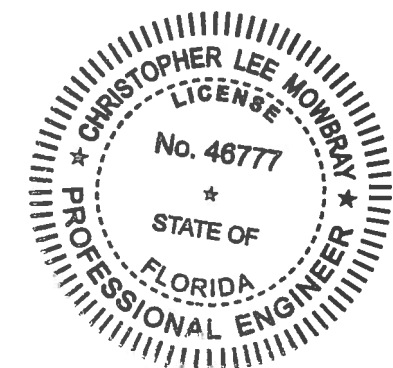
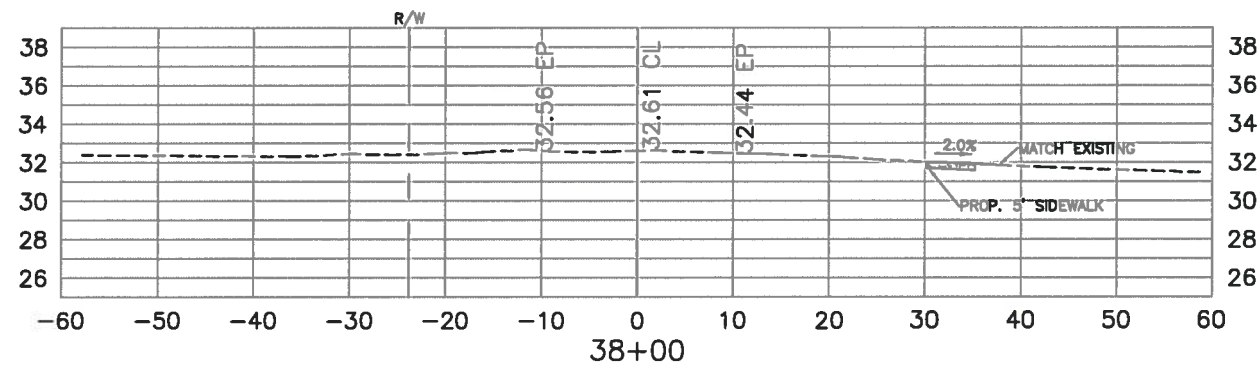
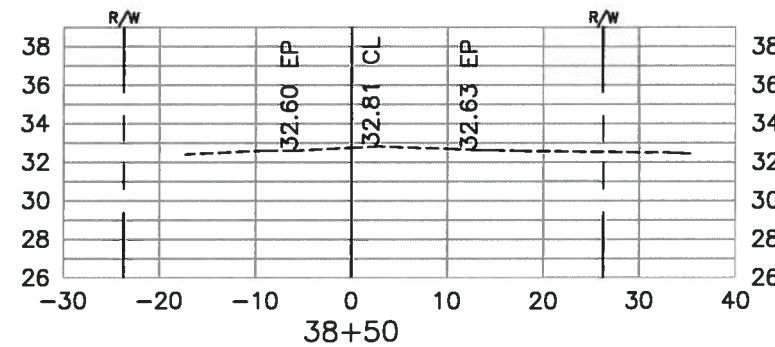
**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
CROSS SECTIONS 51ST AVE. EAST**

CUT-FILL VOLUME TABULATION					
51ST STREET EAST ROAD LEFT SIDE					
STATION	AREA CUT (sf)	AREA FILL (sf)	DIST. (ft)	VOL CUT (cf)	VOL FILL (cf)
12+50	0.0	0.0			
13+00	65.17	0	50	1629	0
13+50	54.2	8.68	50	2985	217
14+00	55.5	2.0	50	2743	267
14+50	42.01	17.7	50	2438	491.75
15+00	51.57	16.9	50	2340	864.25
15+50	71.58	14.7	50	3079	789.5
15+88	71.46	11.1	38.32	2741	493.7532
16+00	101.4	0.67	11.68	1010	68.6784
16+50	76.9	8.84	50	4458	237.75
17+00	72.6	7.42	50	3737	406.5
17+50	73.5	5.85	50	3652	331.75
18+00	79.99	1.3	50	3837	177.75
18+50	77.0	7.2	50	3925	211.5
19+00	81.0	10.65	50	3950	446.25
19+50	74.0	16.5	50	3875	678.75
20+00	282.0	0.0	50	8900	412.5
20+50	48.00	85.00	50	8250	2125
21+00	72.00	57.00	50	3000	3550
21+50	73.43	8.9	50	3636	1648.25
22+00	85.43	13.0	50	3972	548.25
22+50	100	10.0	50	4636	575
23+00	116.62	0.7	50	5416	266.75
23+50	89.65	2.1	50	5157	70.25
24+00	74.94	0.7	50	4115	70.5
24+50	78.66	0.0	50	3840	17
25+00	68.18	0.0	50	3671	0
25+50	59.67	1.3	50	3196	32
26+00	57.2	1.1	50	2922	59
26+50	1.3	11.0	50	1464	302
27+00	0.0	0.0	50	34	275
27+50	1.8	0.0	50	45	0
28+00	1.7	0.0	50	86	0
28+50	1.5	0.0	50	80	0
29+00	11.2	0.0	50	318	0
29+50	0.0	0.0	50	280	0
32+00	0.0	0.0	250	0	0
32+50	1.1	0.3	50	27	7
33+00	1.5	0.1	50	64	9.5
33+50	1.9	0.0	50	85	2.5
34+00	1.7	0.0	50	89	0
34+50	1.7	0.0	50	84	0
35+00	1.7	0.1	50	85	1.25
35+50	1.7	0.0	50	85	1.25
36+00	1.7	0.0	50	85	0
36+50	1.7	0.0	50	85	0
37+00	1.7	0.1	50	85	2.5
37+50	1.7	0.1	50	85	5
38+00	1.7	0.0	50	85	2.5
38+10	0.0	0.0	10	9	0
SUBTOTAL VOLUMES				110,364	15,665

CUT-FILL VOLUME TABULATION					
PINE STREET @ 51ST AVENUE EAST ROAD					
STATION	AREA CUT (sf)	AREA FILL (sf)	DIST. (ft)	VOL CUT (cf)	VOL FILL (cf)
99+95	-	-	-	-	-
100+00	26.51	0.60	5.00	66.28	19.88
100+25	24.79	8.00	75.00	1,923.75	8,272.13
101+25	0.03	29.30	75.00	930.75	17,358.40
101+50	0.33	32.91	76.00	13.68	425.52
102+00	7.00	29.00	77.00	282.21	4,643.68
102+35	12.59	19.71	78.00	764.01	7,529.32
103+00	-	-	79.00	497.31	4,900.94
SUBTOTAL VOLUMES				4,477.98	43,149.95

TOTAL CUT-FILL VOLUME TABULATION		
	VOL CUT (CY)	VOL FILL (CY)
51ST AVENUE EAST ROAD AND SWALES	96,263.96	15,122.68
15TH STREET EAST	12,570.00	5,345.00
PINE STREET POND	-	-
PINE STREET ROAD	4,477.98	43,149.95
SUBTOTAL VOLUMES	4,209.11	2,356.21

CUT-FILL VOLUME TABULATION					
15TH STREET EAST					
STATION	AREA CUT (sf)	AREA FILL (sf)	DIST. (ft)	VOL CUT (cf)	VOL FILL (cf)
20+00	-	-	-	-	-
21+00	-	-	50	0.00	0.00
21+50	-	-	50	0.00	0.00
22+00	-	-	50	0.00	0.00
22+50	-	25.00	50	0.00	625.00
23+00	126.00	72.00	50	3150.00	2,425.00
23+40	-	-	50	3150.00	1,800.00
SUBTOTAL VOLUMES				12,570.00	5,345.00

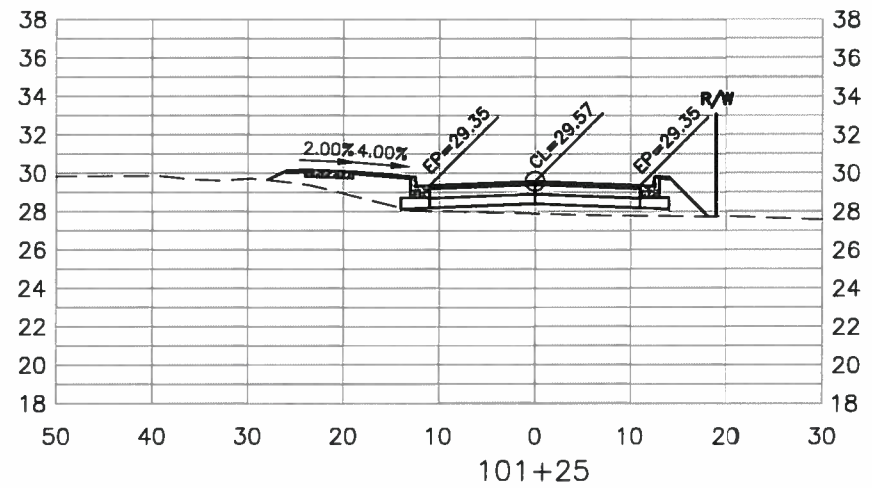
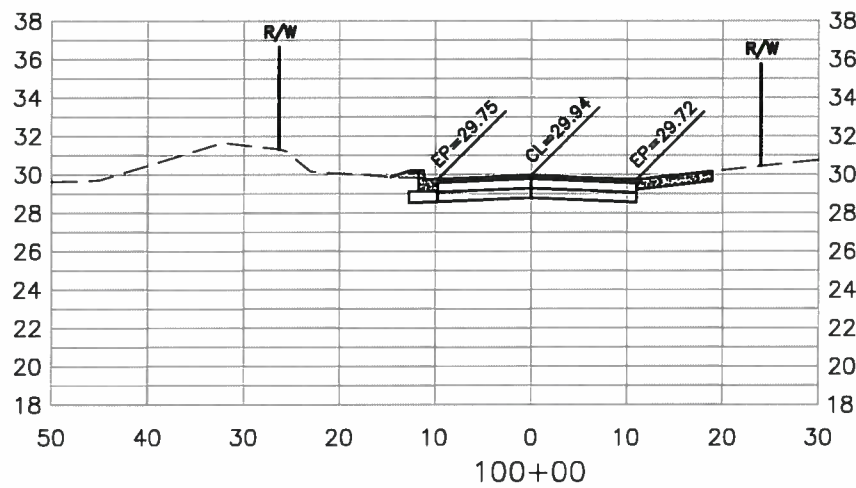
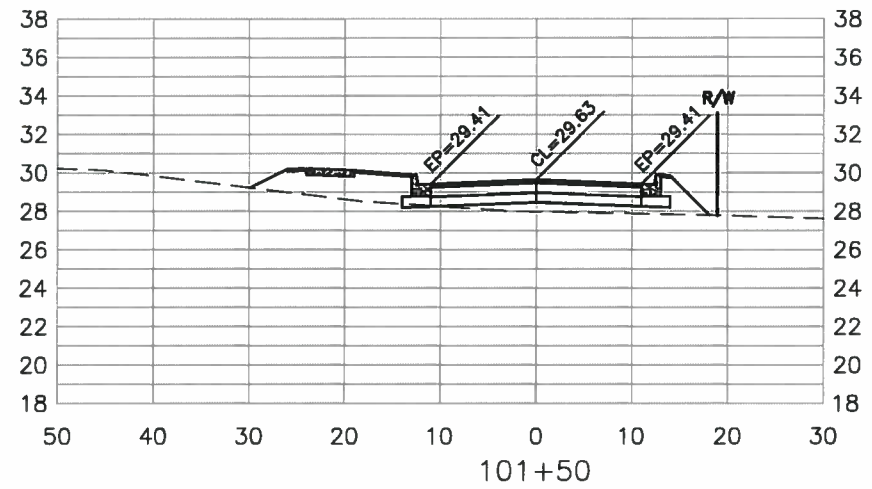
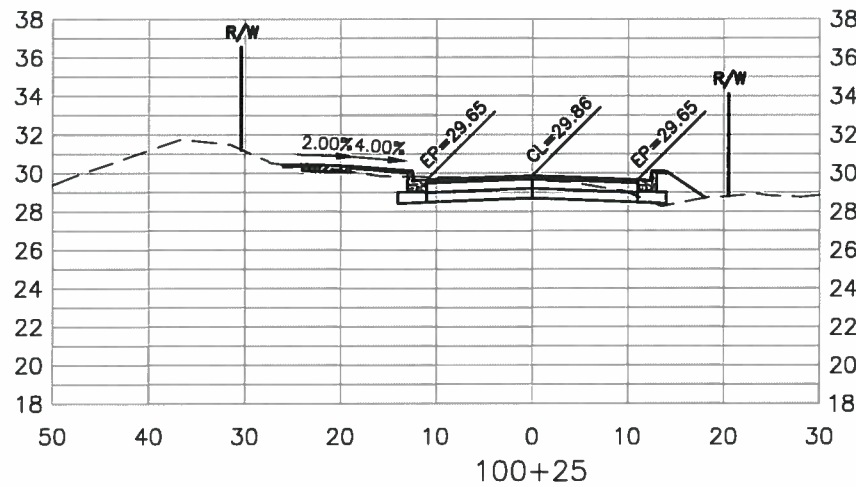
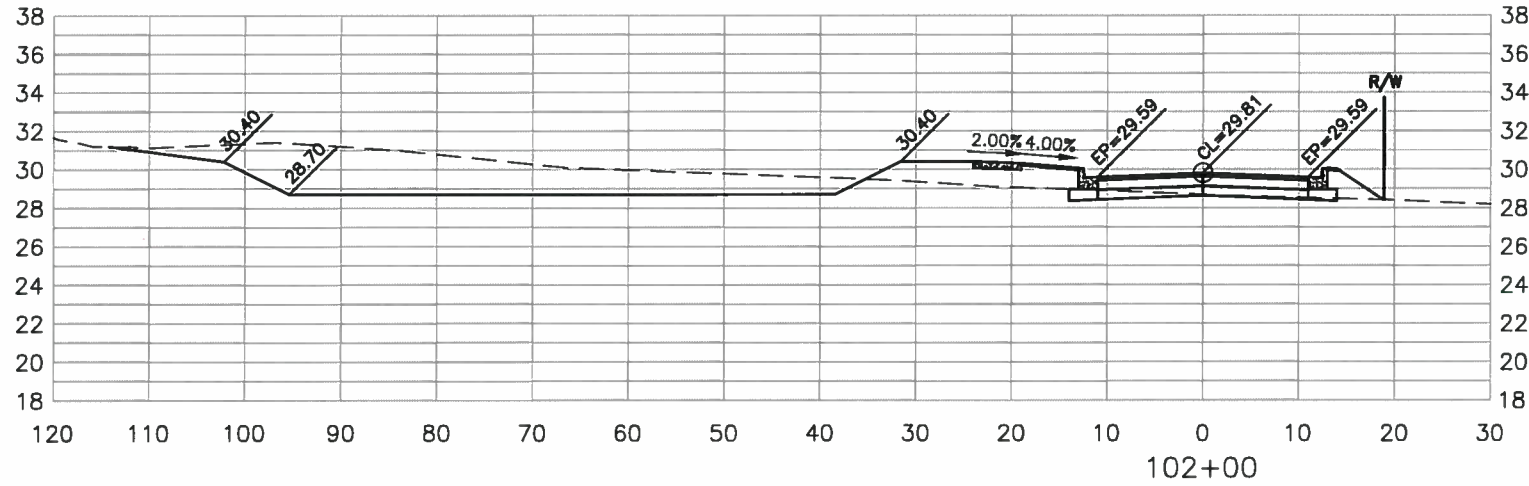
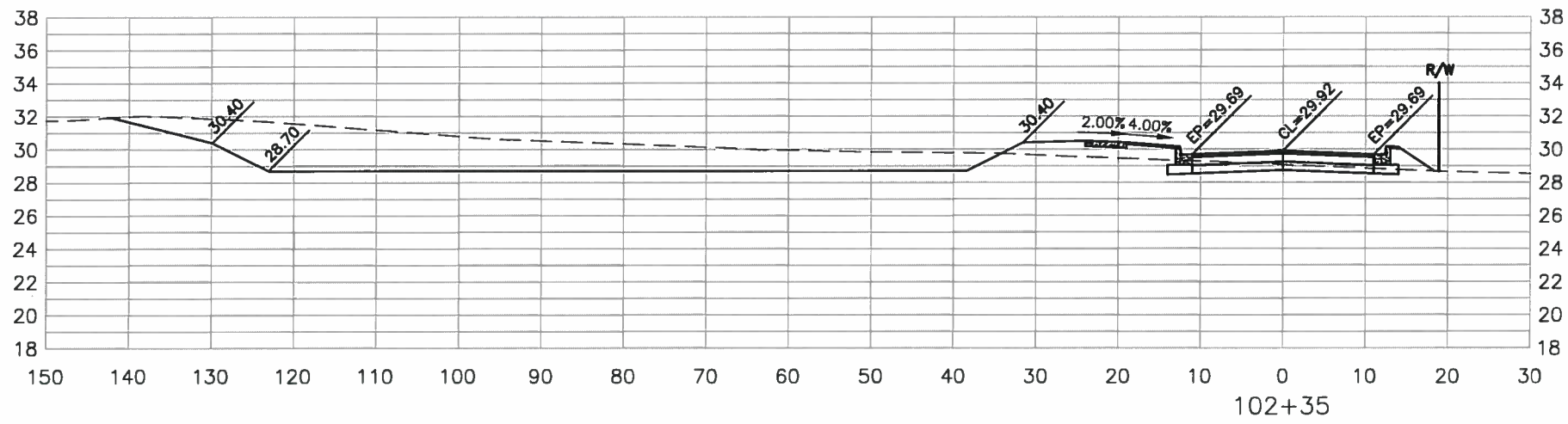


NO.	REVISION DESCRIPTION	BY	DATE

PROJECT # 323-8029860
 SURVEY # 5303
 SEC./TWN./RGE 7/35S/18E
 SCALE H:1"=20'/V:1"=10'
 SURVEYED BY DATE 00/00/00
 DESIGNED AAM 07/21/11
 DRAWN MRJ 08/12
 CHECKED AAM 00/00/00
 C. MOWBRAY P.E.
 FLORIDA P.E. # 46777
 Signature & Date
 SHEET 38

I:\Projects\15th St East @ 51st Ave E\CAD\DWG\SEC.dwg, 30_X_SEC_DMT, 2/25/2013 4:02 PM, Gregory, Berthman, I.I., Tabloid (11 x 17)

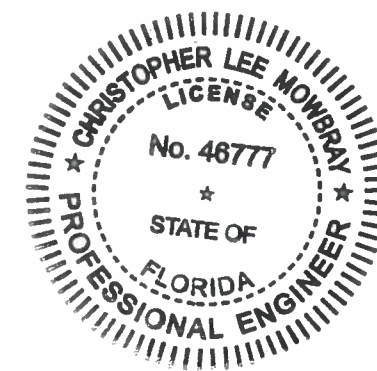
**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
PINE ST. CROSS SECTIONS**



NO.	DATE	BY	REVISION DESCRIPTION

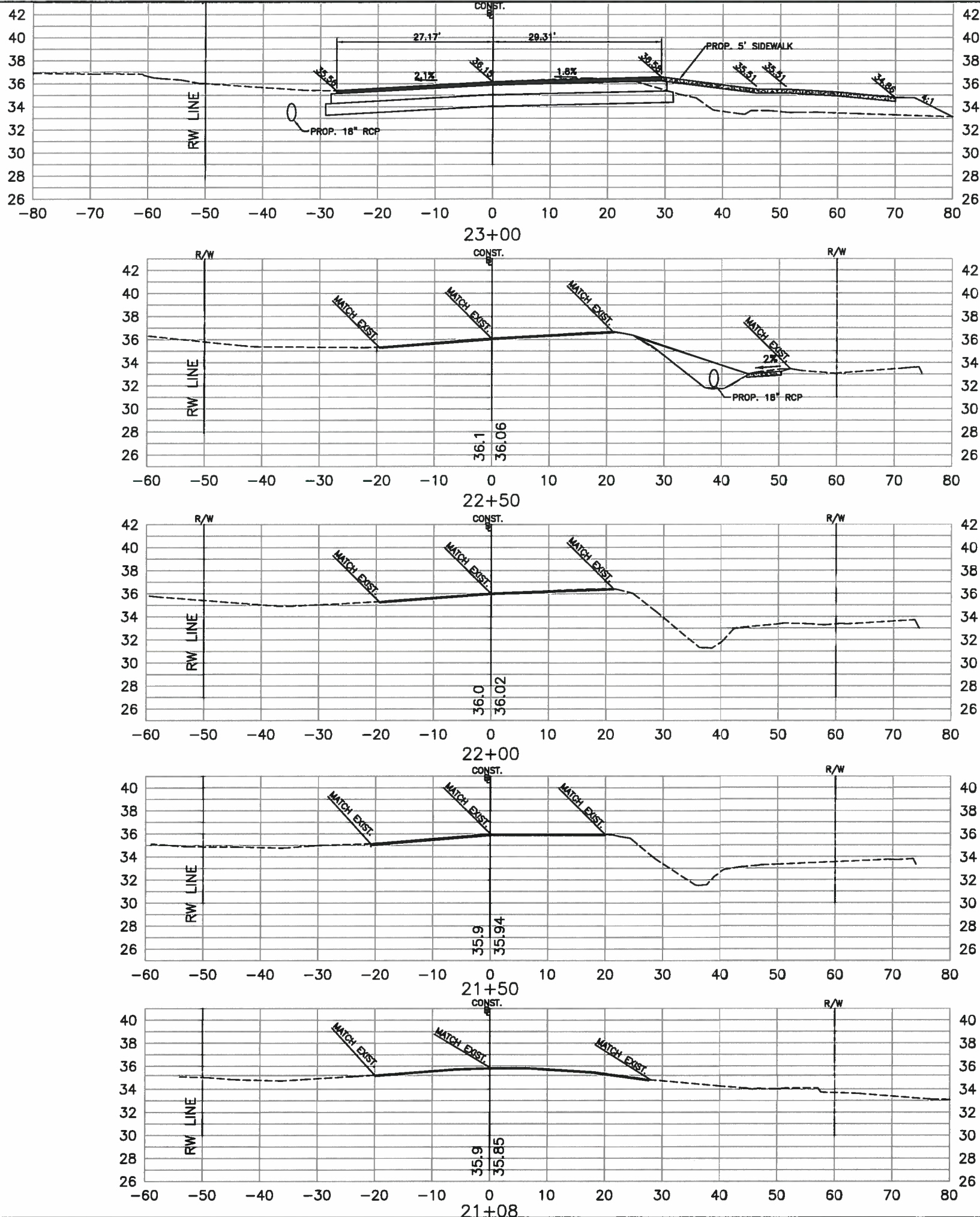
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SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	H:1"=20' V:1"=10'
SURVEYED	00/00/00
DESIGNED	AAM 07/21/11
DRAWN	MRJ 08/12
CHECKED	AAM 00/00/00

C. MOWBRAY P.E.
FLORIDA P.E. #46777
Christopher Lee Mowbray
2/6/13
Signature & Date



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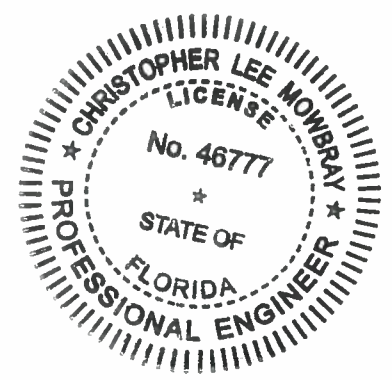
**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
CROSS SECTIONS 15th ST. EAST**



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-8029980
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	H:1"=20' / V:1"=10'
SURVEYED	00/00/00
DESIGNED	AAM 07/21/11
DRAWN	MRJ 08/12
CHECKED	AAM 00/00/00

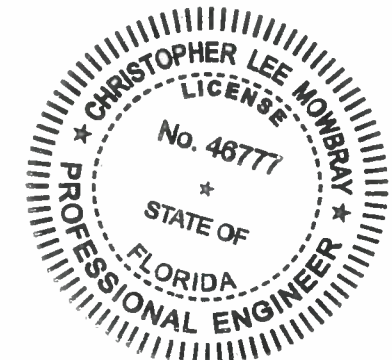
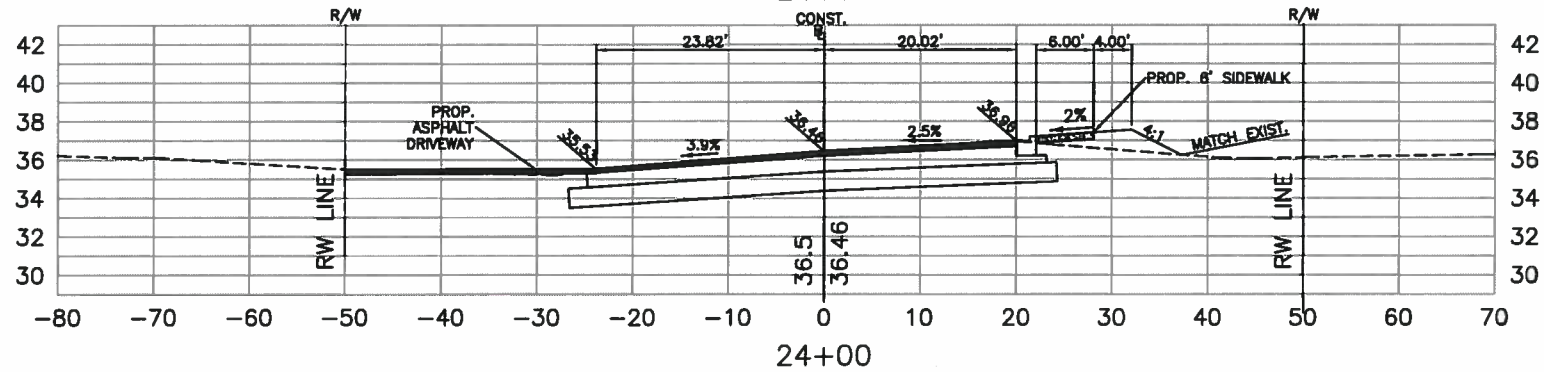
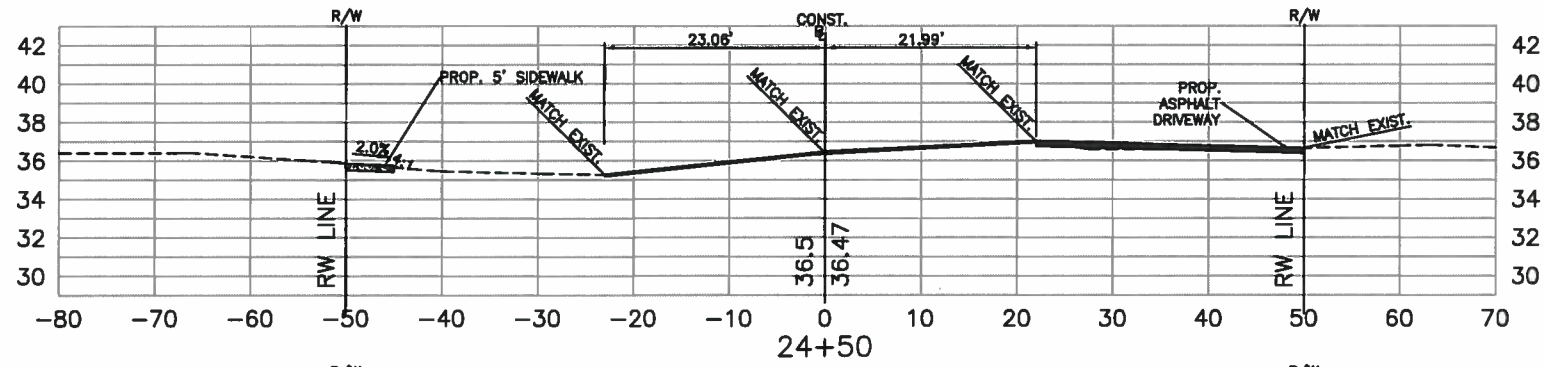
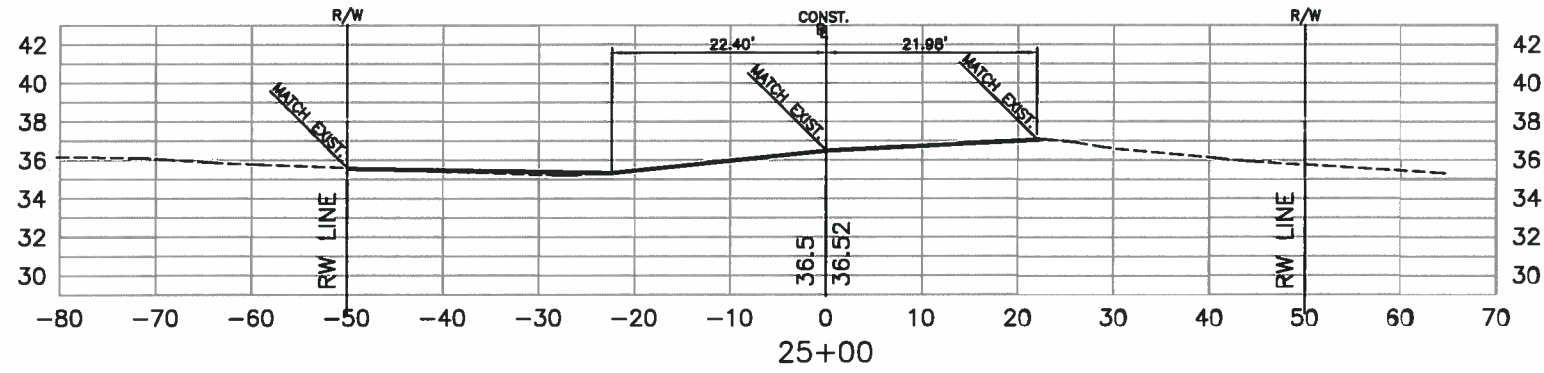
C. MOWBRAY P.E.
FLORIDA P.E. # 45777
Christopher Lee Mowbray
2/6/13
Signature & Date



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**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
CROSS SECTIONS 15th ST. EAST**



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-8029980
SURVEY #	5303
SEC./TWN./RGE	7/38S/18E
SCALE	H:1"=20' / V:1"=10'
SURVEYED	00/00/00
DESIGNED	AAM 07/21/11
DRAWN	MRJ 08/12
CHECKED	AAM 00/00/00

C. MOWBRAY P.E.
FLORIDA P.E. # 46771
Christopher Lee Mowbray
2/6/12
Signature & Date

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15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
GENERAL DETAIL

GENERAL NOTES

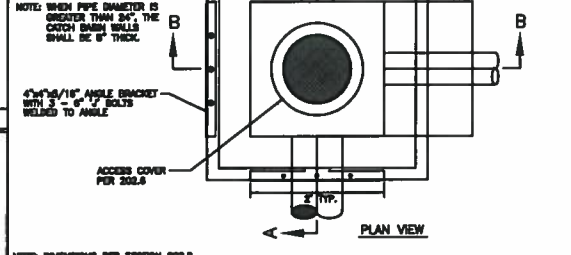
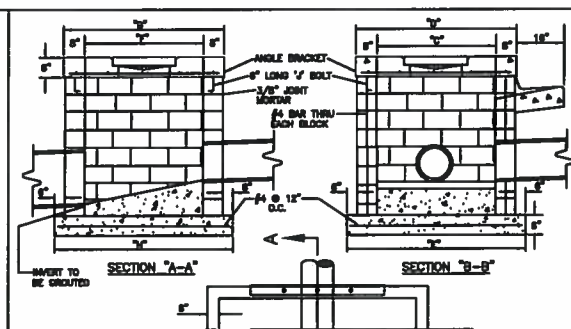
- ALL REFERENCED STANDARDS SHALL BE LATEST EDITION.
- CONCRETE SHALL BE CLASS "1" AS SPECIFIED IN SECTION 345 OF F.A.D.T. SPECIFICATIONS.
- SEE SECTION 425-2.2 "NOTES" OF FLORIDA D.O.T. SPECIFICATIONS.
- IRON CASTING SHALL BE AS SPECIFIED IN SECTION 902-9 OF F.A.D.T. SPECIFICATIONS. SEE SECTION 425-4.
- ALL REINFORCEMENT STEEL SHALL BE AS SPECIFIED IN SECTIONS 418 & 931.1 OF F.A.D.T. SPECIFICATIONS.
- SEE FLORIDA D.O.T. SPECIFICATIONS FOR CURBS.
- SEE FLORIDA D.O.T. SPECIFICATIONS FOR SECTION 125 "EXCAVATION FOR STRUCTURES".
- PRECAST TOP AND BOTTOM TO BE F.A.D.T. STANDARDS WITH MINIMUM THICKNESS 8" THICKNESS.
- ALL STORMWATER PIPE SHALL BE INSTALLED BEHIND THE CURB OR EDGE OF PAVEMENT AND WITHIN THE RIGHT OF WAY AND WITHIN THE DRAINAGE EASEMENTS.
- THE FOLLOWING IS THE DRAINAGE STRUCTURE WALL MINIMUM THICKNESS:

PRECAST	BLOCK
NON-Traffic 8"	8" OTHER WAY

NOTE: FOR DRAINAGE STRUCTURES WITH PIPE DIAMETERS UP TO AND INCLUDING 36", 8" PRECAST WALLS ARE ACCEPTABLE FOR TRAFFIC BEARING.

PIPE SIZE	TYPE	DIMENSION INDEX					
		1"	2"	3"	4"	5"	6"
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"	-	-	-
18"x30"	RCP	4'	5'4"	6'4"	-	-	-
30"	RCP	-	-	-	-	-	-
24"x38"	RCP	5'	6'4"	7'4"	-	-	-
36"	RCP	5'	6'4"	-	-	-	-
66"	RCP	6'5"	9'9"	10'9"	4'8"	6'0"	7'0"

MANATEE COUNTY FLORIDA	DRAINAGE CONTROL SHEET	202.0
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL

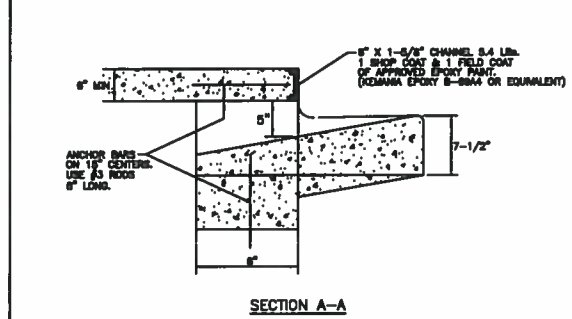
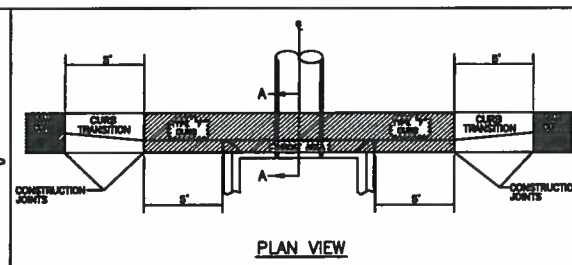


NOTE: WHEN PIPE DIAMETER IS GREATER THAN 36", THE CURB RAMP SHALL BE 8" THICK.

NOTE: DIMENSIONS PER SECTION 302.0

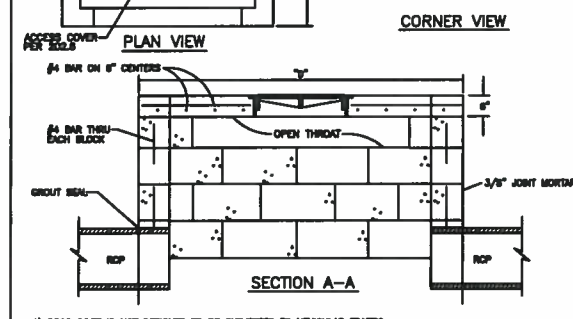
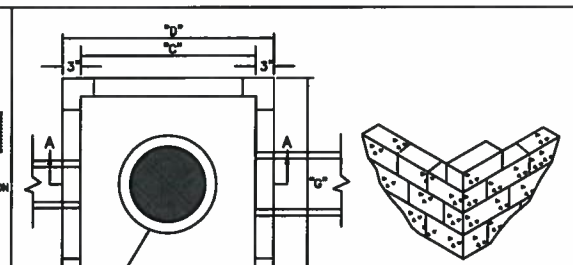
- THE FOLLOWING MATERIALS TO BE AS SPECIFIED IN THE FLORIDA D.O.T. SPEC'S, 1991, SECTION 346 CONCRETE, SECT. 902-9 IRON CASTING, SECT. 931-1 REINFORCEMENT STEEL, SECT. 425 INLETS, MANHOLES & JUNCTION BOXES.
- FILL BLOCKS WITH 3000 PSI CONCRETE, USE #4 ROD IN EACH BLOCK, 16" O/C.
- 5" MINIMUM COVER ON ALL REBAR.
- USE #4 REBAR ON 8" CENTERS BOTH WAYS ON L.S.; NO.4 REBAR ON 12" CENTERS BOTH WAYS ON FLOOR SLAB.
- SEE SHEET 202.0 FOR GENERAL NOTES AND DIMENSION INDEX.
- ALL EXPOSED CORNERS AND EDGES TO BE CHAMFERED 3/4".
- PRECAST BOXES AS SPECIFIED IN F.A.D.T. ROADWAY AND TRAFFIC DESIGN STANDARDS (2004) ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.
- ALL PIPE ENTRIES TO CATCH BASIN TO BE GROUTED AND SEALED.

MANATEE COUNTY FLORIDA	TYPICAL CONC. BLOCK BOX	202.1
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL



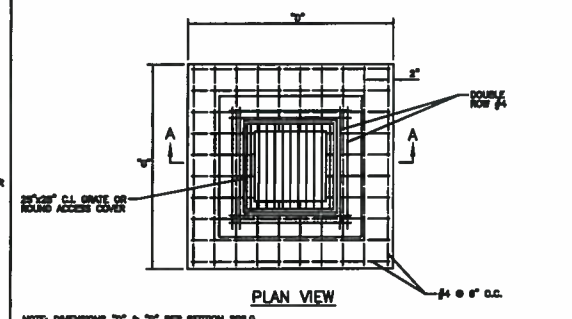
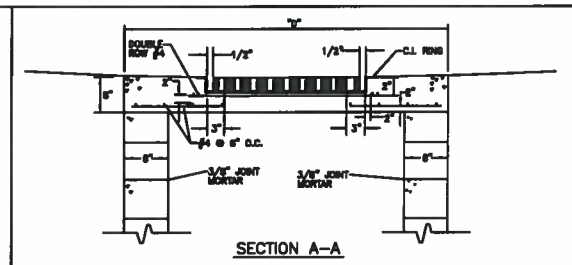
- USE STANDARD CATCH BASIN & JUNCTION BOX DIMENSION INDEX (SHEET # 202.0) DETAILS AND COVER (SHEET # 202.0).
- SEE CURB & GUTTER INDEX (SHEET # 201.0) FOR APPLICABLE CURB TYPE.
- SEE SHEET # 202.0 "GENERAL NOTES" FOR APPLICABLE INFORMATION.
- PRECAST BOXES AS SPECIFIED IN F.A.D.T. ROADWAY AND TRAFFIC DESIGN STANDARDS (2004) ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.
- ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

MANATEE COUNTY FLORIDA	CURB INLET	202.2
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL



- DROP INLET IS NOT DESIGNED TO BE SUBJECTED TO VEHICULAR TRAFFIC.
- NUMBER OF SIDES OPEN FOR DRAINAGE DEPENDS UPON FLOW VOLUME REQUIREMENTS.
- THE FOLLOWING MATERIALS SHALL BE AS SPECIFIED IN FLORIDA D.O.T. SPEC'S, 2000, SEC 346 CONCRETE, SEC 902-9 IRON CASTING, SEC 931-1 REINFORCED STEEL.
- FILL BLOCKS WITH 3000 PSI CONCRETE (SUCH CELL), USE #4 ROD IN EACH BLOCK, 16" O/C.
- USE #4 ROD ON 8" CENTERS BOTH WAYS ON L.S.
- SEE SHEET # 202.0 GENERAL NOTES AND DIMENSION INDEX, ALSO SHEET 202.1 TYP. CONC. BOX.
- PRECAST BOXES TO F.A.D.T. SPECIFICATIONS ARE AN ACCEPTABLE ALTERNATIVE.
- PRECAST BOXES AS SPECIFIED IN F.A.D.T. ROADWAY AND TRAFFIC DESIGN STANDARDS (2004) ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.
- ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

MANATEE COUNTY FLORIDA	THROAT DETAIL FOR DROP INLET	202.3
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL

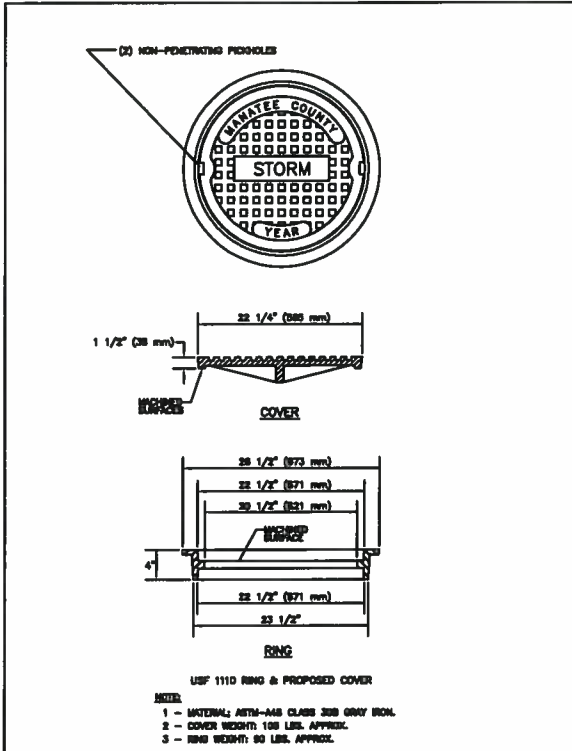


NOTE: DIMENSIONS "D" & "E" PER SECTION 202.0

- ALTERNATE C.I. INLETS, 18" X 24", 24" X 24", 24" X 36" OR ACCESS COVER (202.0).
- 8" TRAFFIC BEARING LID W/ REINFORCED C.I. RING & DOUBLE ROW OF #4 REBAR.
- FOLLOWING MATERIALS ARE SPECIFIED IN FLORIDA D.O.T. SPEC'S, 2000, SEC 346 CONCRETE, SEC 902-9 IRON CASTING, SEC 931-1 REINFORCED STEEL.
- FILL BLOCKS WITH 3000 PSI CONCRETE (SUCH CELL), USE #4 ROD IN EACH BLOCK, 16" O/C.
- USE #4 ROD ON 8" CENTERS BOTH WAYS ON L.S. (SEE 202.3 C).
- SEE SHEET # 202.0 GENERAL NOTES AND DIMENSION INDEX, ALSO SHEET 202.1 TYP. CONC. BOX.
- PRECAST BOXES AS SPECIFIED IN F.A.D.T. ROADWAY AND TRAFFIC DESIGN STANDARDS ARE AN ACCEPTABLE ALTERNATIVE AS APPROVED BY THE TRANSPORTATION DIRECTOR OR HIS DESIGNEE.
- ANGLE BRACKETS SHOWN ON 202.1 NOT REQUIRED.

MANATEE COUNTY FLORIDA	TRAFFIC BEARING BOX LID	202.5
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL

REFER TO MANATEE COUNTY STANDARDS 2007



MANATEE COUNTY FLORIDA	ACCESS COVER FOR STORMWATER JUNCTION BOX (PUBLIC)	203.1
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL

GENERAL NOTES

- SIDWALK SHALL BE CONSTRUCTED A MINIMUM OF 4" THICK, USING 3000 PSI CONCRETE. WHERE SIDEWALK ADJACENT TO 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 CONSTRUCTION IN CONNECTION WITH A NEW RESIDENTIAL DEVELOPMENT. A SIDEWALK A MINIMUM OF (5) FEET IN WIDTH SHALL BE INSTALLED ON BOTH SIDES OF ALL THROUGHFARES. REFER TO F.A.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 1/8" UNDER A TEN FOOT STRAIGHTEDGE, NOR MORE THAN 1/2" ON A FIVE-FOOT TRANSVERSE SECTION. THE EDGE OF THE SIDEWALK SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
- EXPANSION JOINTS: 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 ASHTO M193 OR ASHTO M213. FOR LOW FLOORS, AN EXPANSION JOINT SHALL BE PLACED AT INTERVALS NOT TO EXCEED 120".
- CONTRACTION JOINTS:
OPEN TYPE JOINTS
OPEN TYPE CONSTRUCTION JOINTS SHALL BE FORMED BY STAKING A METAL STRIP IN PLACE AND COVERED BY THE CURB OR DRIVEWAY ON BOTH SIDES. AFTER THE JOINT THE BULGED 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 3/8" 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 RAMP 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 5' ON CENTER. PALMS ARE NOT CONSIDERED TREES.

NOTE: FOR COMPLETE SIDEWALK DETAILS, SEE F.A.D.T. DESIGN STANDARDS, 2006 EDITION, BOOK 204, SHEETS 1 THROUGH 8 AND BOOK 310, SHEETS 1 & 2.

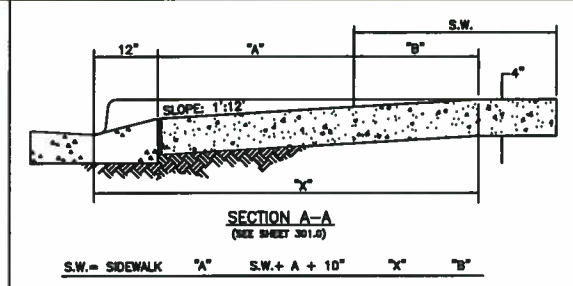
MANATEE COUNTY FLORIDA	SIDEWALKS GENERAL NOTES	301.0
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL



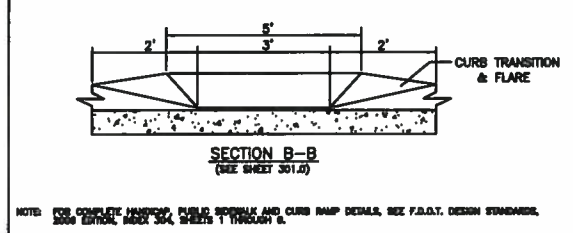
- CURB CUT RAMP ARE TO BE LOCATED AS SHOWN ON PLANS.
- SEE SHEETS # 301.1 "GENERAL NOTES" & # 301.2 "HANDICAPPED RAMP" SHEET 2 FOR FURTHER REQUIREMENTS.
- RADIUS OF CURB VARIES AS FOLLOWS:
A) 25' RAD. LOCAL STREET WITH ALLEY.
B) 25' RAD. LOCAL STREET WITH LOCAL STREET.
C) 25' RAD. LOCAL STREET WITH THROUGHFARE OR COLLECTOR.
D) 25' RAD. THROUGHFARE WITH THROUGHFARE.
- CURB RAMP SHOULD BE A MINIMUM OF 25' WIDE WHERE INDUSTRIAL AND BUS TRAFFIC (25 OR MORE) IS ANTICIPATED OR LOCAL THROUGHFARE THROUGHFARE.
- WITH LOCATION OPTIONS FOR HANDICAPPED RAMP ARE SHOWN. ENGINEER MAY SELECT OTHER, BRACKETED BY THE ARCHITECT.

NOTE: FOR COMPLETE HANDICAP RAMP, SIDEWALK AND CURB RAMP DETAILS, SEE F.A.D.T. DESIGN STANDARDS, 2006 EDITION, BOOK 204, SHEETS 1 THROUGH 8.

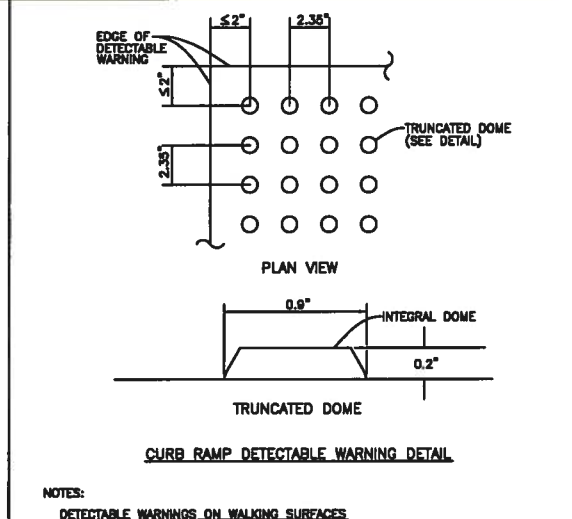
MANATEE COUNTY FLORIDA	HANDICAPPED RAMP SHEET 1	302.1
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL



S.W. = SIDEWALK	"A"	S.W. + A + 10"	"X"	"B"
5'	0	5.8'	5.8'	5'
6'	0	6.8'	6.8'	6'
7'	0	7.8'	7.3'	6.5'
8'	0	8.8'	7.3'	6.5'
8'	2.5'	7.8'	7.8'	5'
5'	2.5'	8.3'	8.1'	4.5'
5'	3'	8.8'	8.2'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5'	10.8'	9.1'	3.1'



MANATEE COUNTY FLORIDA	HANDICAPPED RAMP SHEET 2	302.2
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL



NOTES:

DETECTABLE WARNINGS ON WALKING SURFACES

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

DETECTABLE WARNING SHALL CONSIST OF PAVED TRUNCATED DOME WITH A DIAMETER OF NOMINAL 0.9 INCH, A HEIGHT OF NOMINAL 0.3 INCH AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.50 INCH AND SHALL CONTRAST VISUALLY WITH ADJACENT SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.

THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTERNAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJACENT SURFACES IN REFLECTIVITY OR SOUND-ON-CURE CONTRAST.

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

$$\text{CONTRAST} = \frac{[(L1) - (L2) / (L1)] \times 100}{1}$$

WHERE L1 = LIGHT REFLECTANCE VALUE (LRV) OF THE LIGHTER AREA AND L2 = LIGHT REFLECTANCE VALUE (LRV) OF THE DARKER AREA.

NOTE THAT IN ANY APPLICATION BOTH WHITE AND BLACK ARE NEVER ABSOLUTE; THAT IS, NEVER EQUALS 100 AND L2 IS ALWAYS GREATER THAN 0.

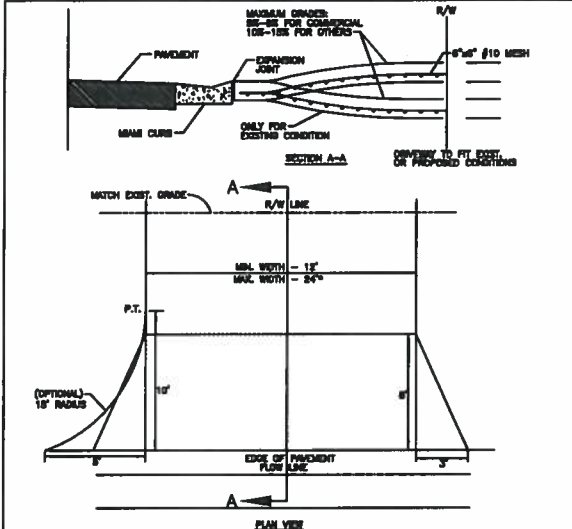
MANATEE COUNTY FLORIDA	CURB RAMP DETECTABLE WARNINGS	302.3
REV./BY DATE		
	8/12/07	DATE OF ENGINEER APPROVAL

DATE	
BY	
REVISION DESCRIPTION	
NO.	
PROJECT #	323-6029960
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	N.T.S.
DATE	08/09/07
BY	CHRISTOPHER M. MOWBRAY
CHECKED	AM 8/10/07
DATE	08/10/07
BY	CHRISTOPHER M. MOWBRAY
DATE	08/10/07
BY	CHRISTOPHER M. MOWBRAY
DATE	08/10/07

FLORIDA P.E. # 48777
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SHEET 42

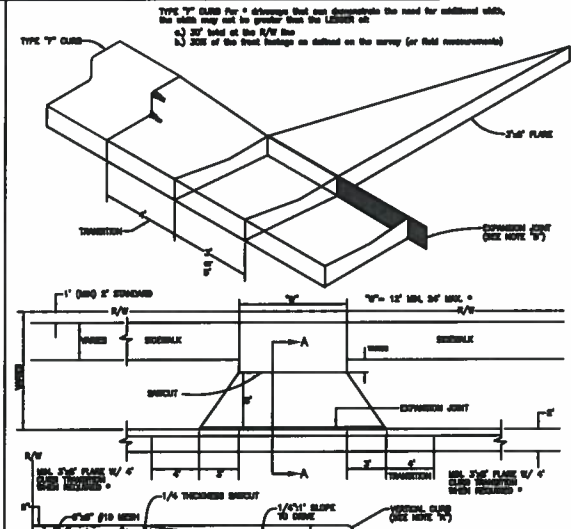


**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
GENERAL DETAIL**



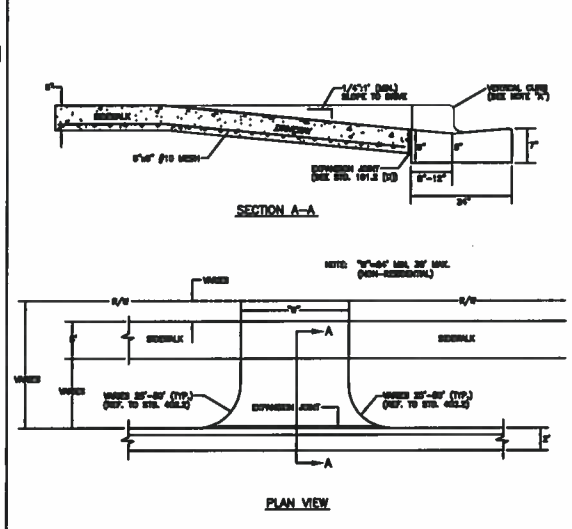
- 1) For driveway that are drivable the road for additional width, the width may not be greater than the LESSER of:
- 30' total of the R/W less
 - Size of the front setback as defined on the survey (or field measurement, 30' min.)
- CONSTRUCT WITH 8" REINFORCED CONCRETE 3000 PSI @ 28 DAYS, 6"x6" #10 WIRE MESH FROM BACK OF CURB- TO R/W LINE.
 - DRIVEWAY ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ON PREVIOUS PAGE (STN. 101.0).
 - REMOVE EXISTING SIDEWALK FLOORING, FOR PAVING SPECIFICATIONS REFER TO F.D.O.T. STANDARD SPECIFICATIONS SECTION 430. SEE NOTE 4, PAGE 100.1. SEE SECTION 200- DRAINAGE (STD. SOGA, SOGL, SEE STD. TYPES). NO CHANGE WITH 3' VALLEY CROSSING - SEE STD. 201.A, 201.1, 201.2, 201.A, 201.B, 201.E.
 - EXPANSION JOINT 1/2" PREFORMED JOINT FILLER OR APPROVED ALTERNATE, SPACES WIDER THAN 12" (SECOND FLARE) PLACE JOINT ON 10' CENTER.
 - LATERAL ALIGNMENT 45 DEGREES FOR DOUBLE DRIVE PER LOT, 90 DEGREES FOR SINGLE DRIVE, OFF CENTER LINE.

MANATEE COUNTY FLORIDA	URBAN DRIVES	101.1
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL



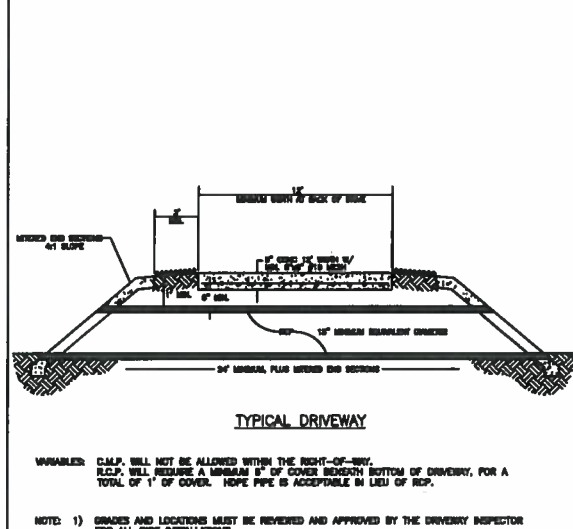
- 1) REMOVE TYPE "C" CURB AND GUTTER, REPLACE WITH SIDE CURB AND GUTTER.
* NO CHANGE WITH 3' VALLEY CROSSING
- REMOVE EXISTING SIDEWALK, REPLACE WITH 8" CONCRETE, 6"x6" #10 WIRE MESH 3000 PSI AT 28 DAYS.
 - DRIVEWAY CONSTRUCTED WITH 8" CONCRETE WITH 6"x6" #10 WIRE MESH, 3000 PSI AT 28 DAYS.
 - EXPANSION JOINT 1/2" PREFORMED JOINT FILLER PER FOOT SECTION 632-1.1 OR APPROVED ALTERNATE.
 - 8" SIDEWALK ON LOCAL STREETS, 6" SIDEWALK ON THROUGHFARES. (SEE USE PAVES MAY REQUIRE 8" SIDEWALK PER LAND DEVELOPMENT CODE.)
 - REMOVE 1/4" THICKNESS SIDEWALK ON 10' CENTERS, IF DRIVE IS WIDER THAN 12', ADD JOINTS AT 10' CENTERS.

MANATEE COUNTY FLORIDA	CURB CUT & TRANSITION W/ T-FLARE FOR RESIDENTIAL DRIVES	101.2
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL



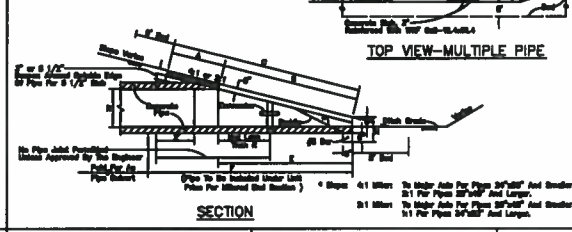
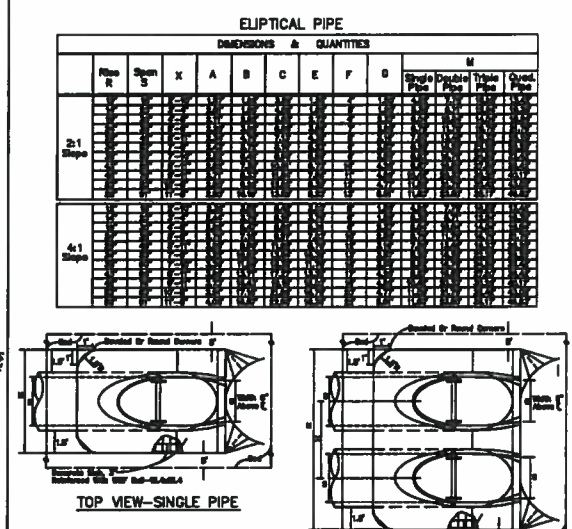
- IF REPLACING VERTICAL CURB AND GUTTER, REPLACE WITH SIDE CURB AND GUTTER.
* NO CHANGE WITH 3' VALLEY CROSSING.
- SIDEWALK, CONSTRUCT WITH 8" CONCRETE, 6"x6" #10 WIRE MESH, 3000 PSI AT 28 DAYS.
- DRIVEWAY CONSTRUCTED WITH 8" CONCRETE WITH 6"x6" #10 WIRE MESH, 3000 PSI AT 28 DAYS.
- EXPANSION JOINT 1/2" PREFORMED JOINT FILLER PER FOOT SECTION 632-1.1 OR APPROVED ALTERNATE.
* IF DRIVE IS WIDER THAN 12', ADD JOINTS AT 10' CENTERS.
- 8" SIDEWALK ON LOCAL STREETS, 6" SIDEWALK ON THROUGHFARES. (SEE USE PAVES MAY REQUIRE 8" SIDEWALK PER LAND DEVELOPMENT CODE.)

MANATEE COUNTY FLORIDA	COMMERCIAL & INDUSTRIAL DRIVE	101.3
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL



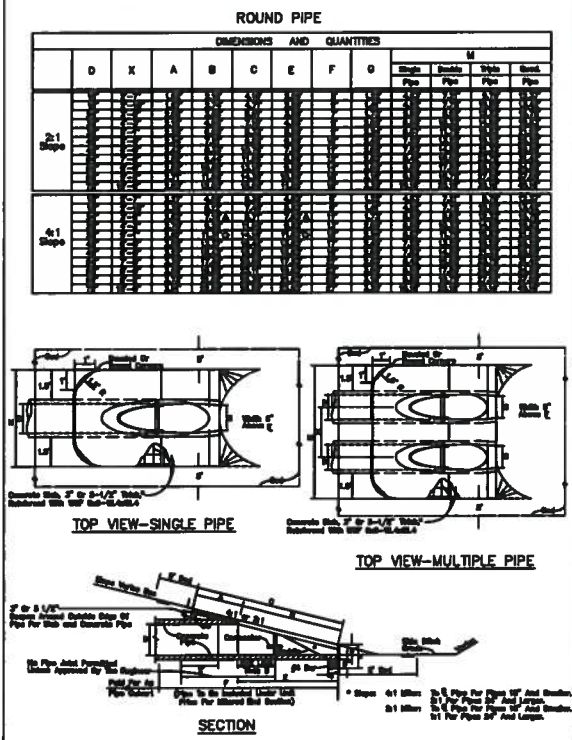
- 1) GRADES AND LOCATIONS MUST BE REVIEWED AND APPROVED BY THE DRIVEWAY INSPECTOR FOR ALL PIPE INSTALLATIONS.
- 2) ACTUAL REQUIRED PIPE DIAMETER WILL BE BASED ON THE FLOW RATE REQUIRED TO PASS THROUGH PIPE SO AS NOT TO IMPOUND WATER UPSTREAM.
- 3) PIPE SIZE TO BE DETERMINED AND APPROVED BY MANATEE COUNTY.

MANATEE COUNTY FLORIDA	TYPICAL DRIVEWAY PIPE CROSS SECTION	102.0
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL

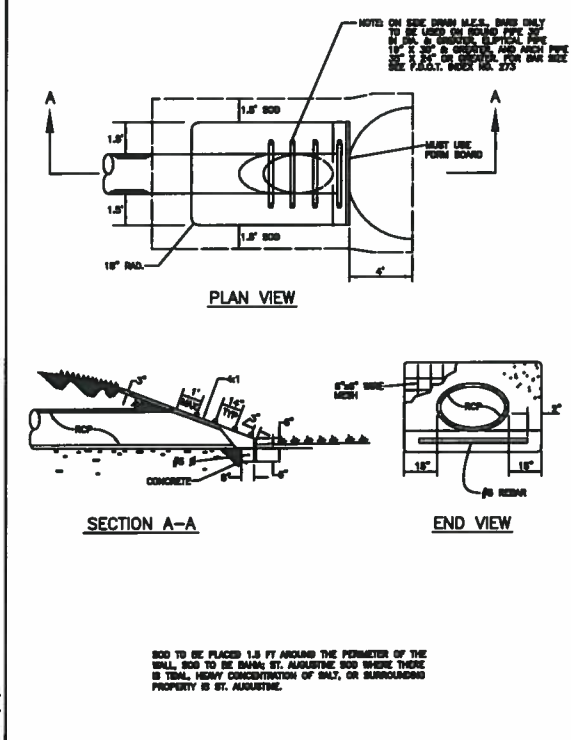


MANATEE COUNTY FLORIDA	MITERED END SECTION FOR ELLIPTICAL, SINGLE, AND MULTIPLE PIPES	102.1
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL

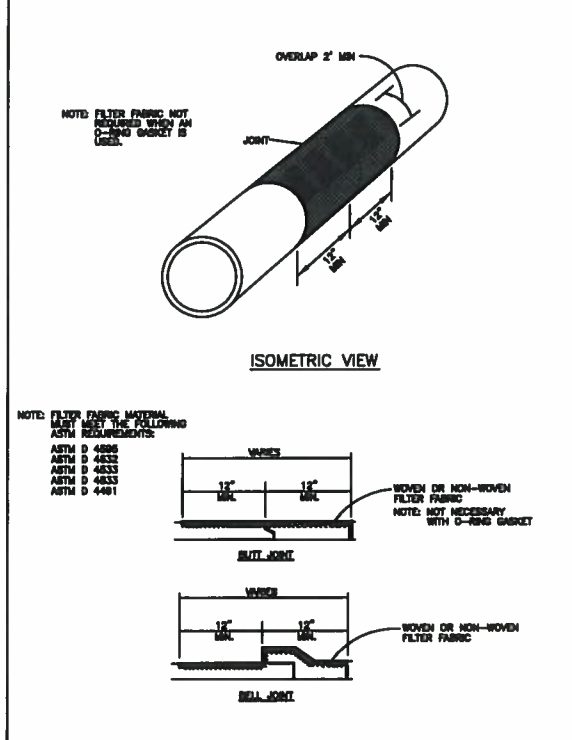
REFER TO MANATEE COUNTY STANDARDS 2007



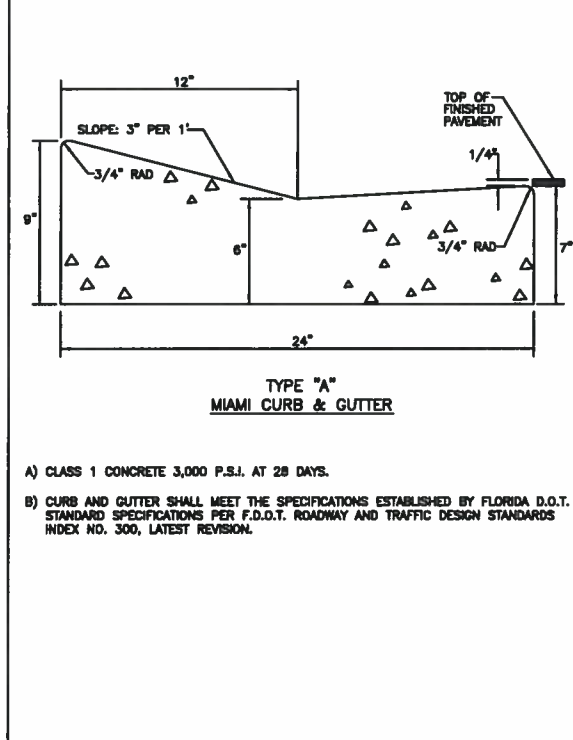
MANATEE COUNTY FLORIDA	MITERED END SECTION FOR ROUND, SINGLE & MULTIPLE PIPES	102.2
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL



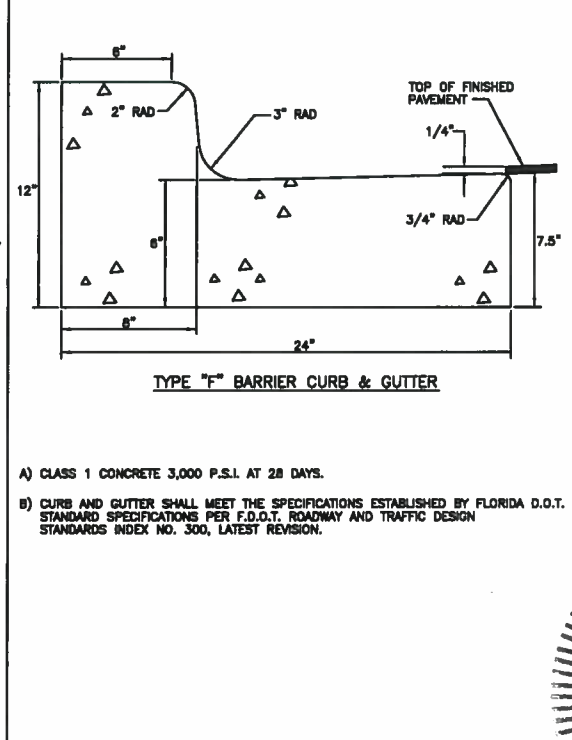
MANATEE COUNTY FLORIDA	DRIVEWAY AND ROAD PIPE MITERED END SECTION	103.0
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL



MANATEE COUNTY FLORIDA	FILTER FABRIC JACKET	104.0
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL



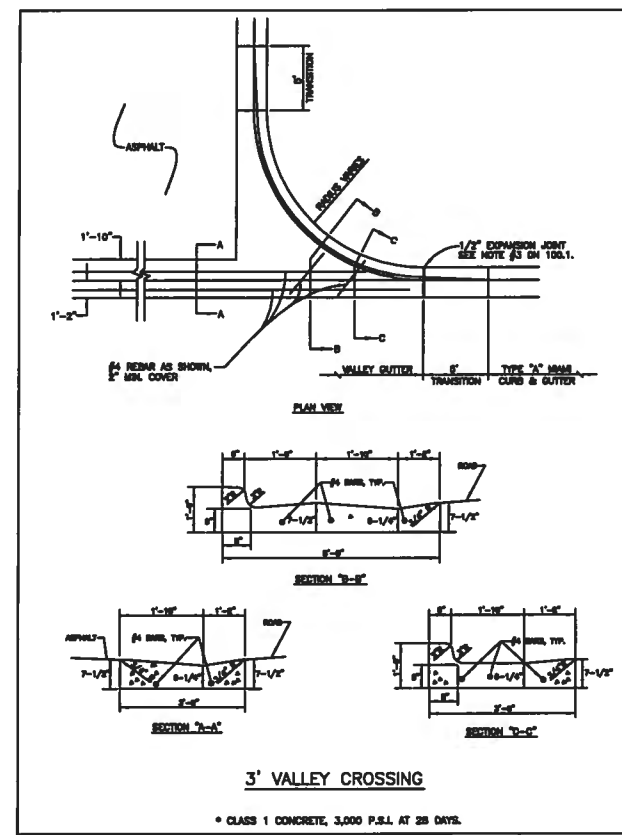
MANATEE COUNTY FLORIDA	TYPE A MIAMI CURB & GUTTER	201.1
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL



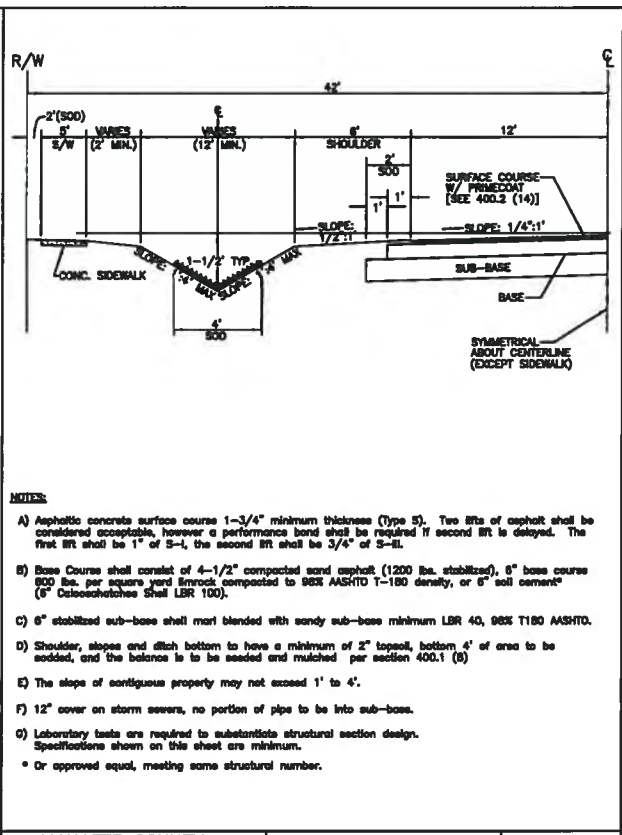
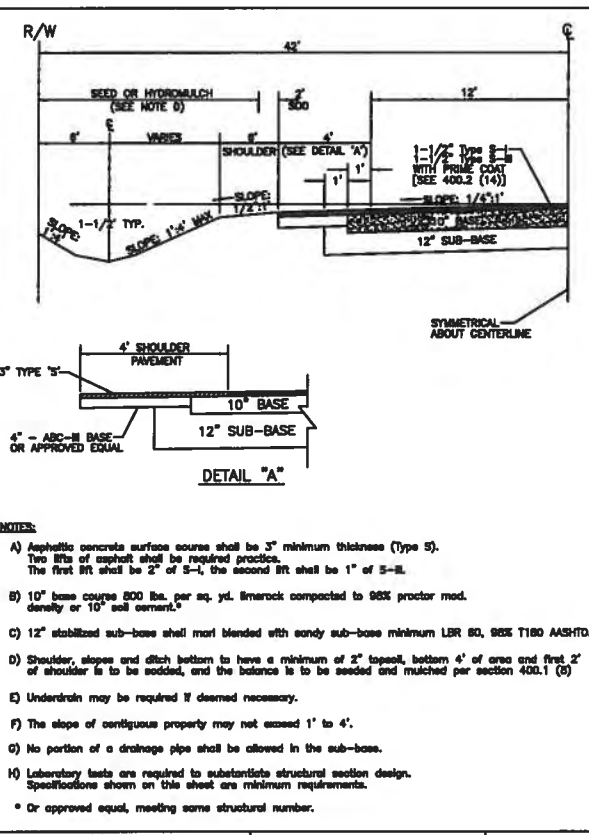
MANATEE COUNTY FLORIDA	TYPE F CURB & GUTTER	201.2
REV. DATE		
	8/12/07	DATE OF LOCAL APPROVAL

DATE	
BY	
REVISION DESCRIPTION	
NO.	
PROJECT #	323-8029980
SURVEY #	5303
SEC./TWN./RCE	35S/18E
SIGNATURE	CHRISTOPHER S. MOWBRAY
DESIGNED	AM 07/28/11
DRAWN	AM 02/02/12
CHECKED	AM 00/00/00
PROFESSIONAL ENGINEER	CHRISTOPHER S. MOWBRAY, P.E.
FLORIDA P.E. #	48777
Signature & Date	
SHEET	43

15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
GENERAL DETAIL



- GENERAL NOTES**
- All county road construction shall conform to these Manatee County Department Of Transportation Standards.
 - Asphaltic Concrete Type S: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 331.
Asphaltic Concrete Type III: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 333.
(A) Superpave mixes equivalent to F.D.O.T. Type S mixes are an accepted alternative upon directors approval.
(B) Surface material will be consistent with existing surface, or better.
 - Unerrock Base Course: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 200.
 - Crushed concrete base course is acceptable unless otherwise noted.
 - Stabilized Sub-Grade: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Sections 180, and 914.
 - Drainage: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 941.
Soft, yielding or super-saturated material that will not readily compact shall be considered unacceptable for backfill. This is at the discretion of the field engineer. This type of existing material must be excavated from the road footprint to a depth as set by an approved testing lab.
 - Soil Cement: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 270, excluding Sub-Section 270-4.3.1 ("Mix in place").
 - Concrete Gutters: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 520.
 - Topsoil: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 987.
Sodding: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 575.
Grassing: Shall be per Florida Department Of Transportation 2000 Standard Specifications; Section 570.
 - Entire R/W between road and property line, including median, shall be fertilized (1000 lbs. of slow-release 8-12-8 per acre), and seeded (30 lbs. Bahia and 30 lbs. of Rye per acre) and mulched, or sodded, as directed by the engineer.
(B) Hydromulch: Shall be per Florida Department Of Transportation Specifications Section 571.
 - Visibility Triangles: Shall be in accordance with the Manatee County Land Development Code 1994; Section 713, latest revision, and Section 800.7-800.9.
 - Handicap Ramps shall meet Florida Accessibility Standards, and Section 302 series.
 - Prime coat shall be applied @ a rate of 0.2 gal/sy. Tack coat of 0.08 gal/sy rate to be applied for overlay of existing roads.



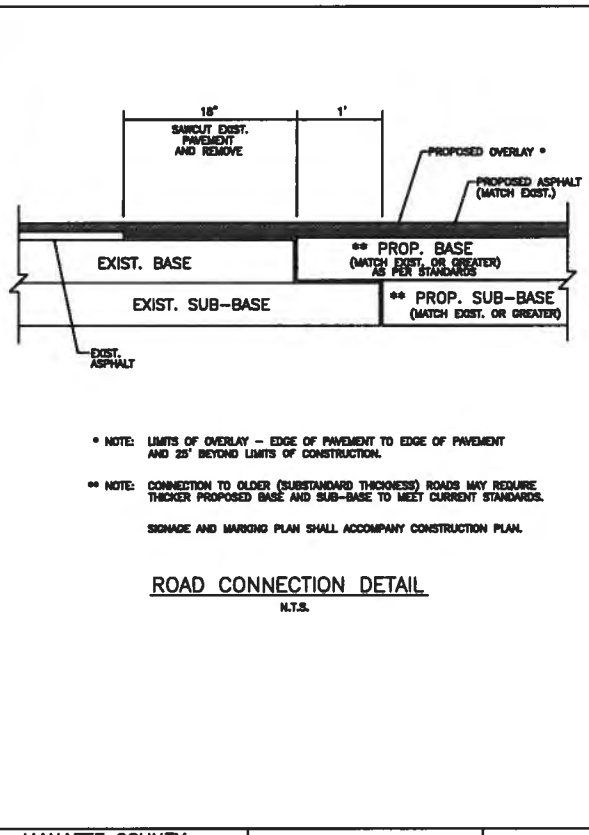
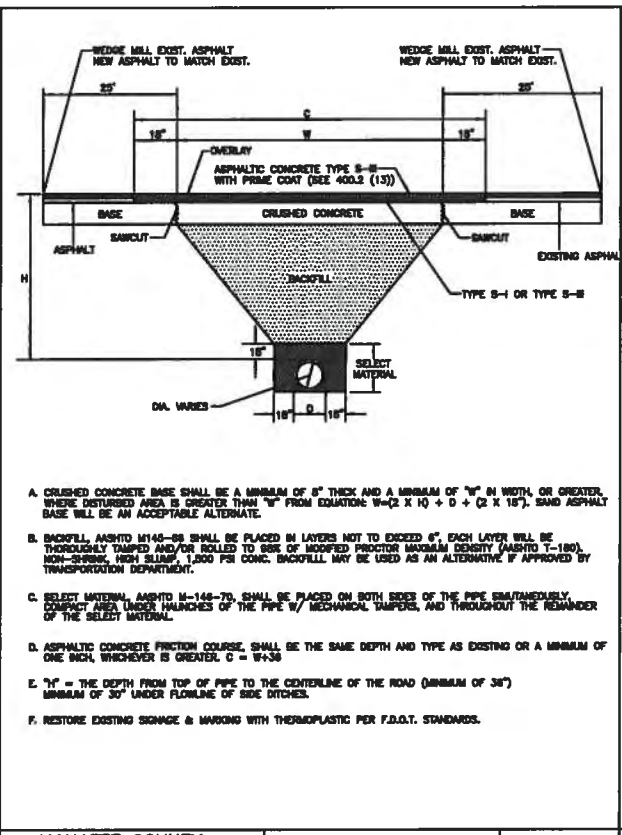
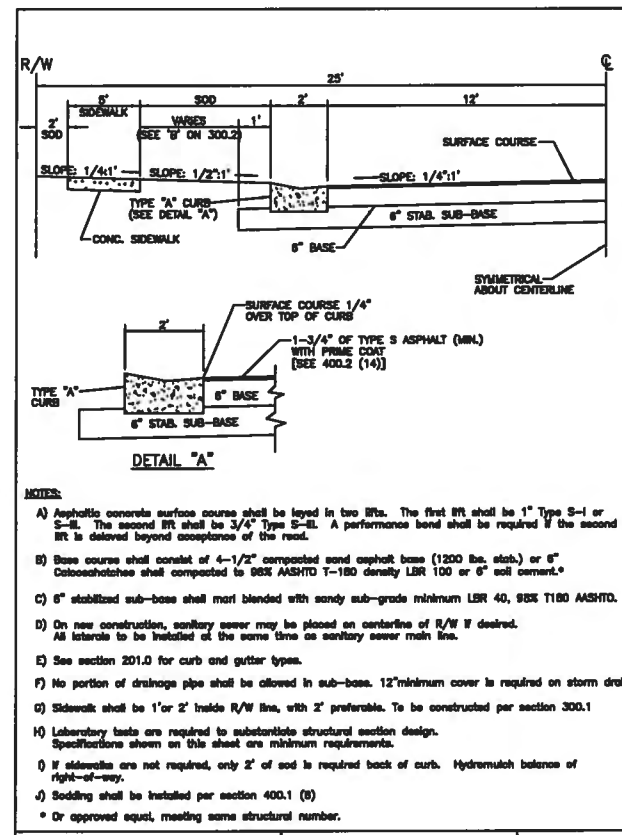
MANATEE COUNTY FLORIDA	VALLEY CROSSING	201.6
REV./BY DATE		
	6/12/07	
	DATE OF B.O.D.C. APPROVAL	

MANATEE COUNTY FLORIDA	GENERAL NOTES	400.1
REV./BY DATE		
	6/12/07	
	DATE OF B.O.D.C. APPROVAL	

MANATEE COUNTY FLORIDA	RURAL INDUSTRIAL	401.5
REV./BY DATE		
	6/12/07	
	DATE OF B.O.D.C. APPROVAL	

MANATEE COUNTY FLORIDA	LOCAL RURAL RESIDENTIAL	401.7
REV./BY DATE		
	6/12/07	
	DATE OF B.O.D.C. APPROVAL	

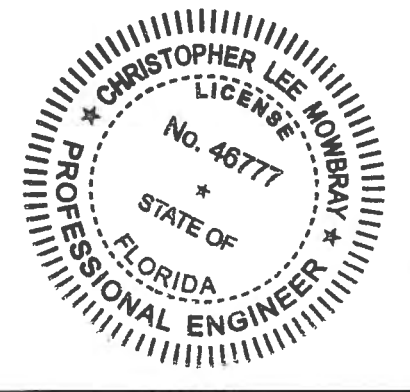
REFER TO MANATEE COUNTY STANDARDS 2007



MANATEE COUNTY FLORIDA	LOCAL URBAN RESIDENTIAL	401.8
REV./BY DATE		
	6/12/07	
	DATE OF B.O.D.C. APPROVAL	

MANATEE COUNTY FLORIDA	UTILITY ROAD CUT REPLACEMENT	403.2
REV./BY DATE		
	6/12/07	
	DATE OF B.O.D.C. APPROVAL	

MANATEE COUNTY FLORIDA	ROAD CONNECTION DETAIL	403.3
REV./BY DATE		
	6/12/07	
	DATE OF B.O.D.C. APPROVAL	

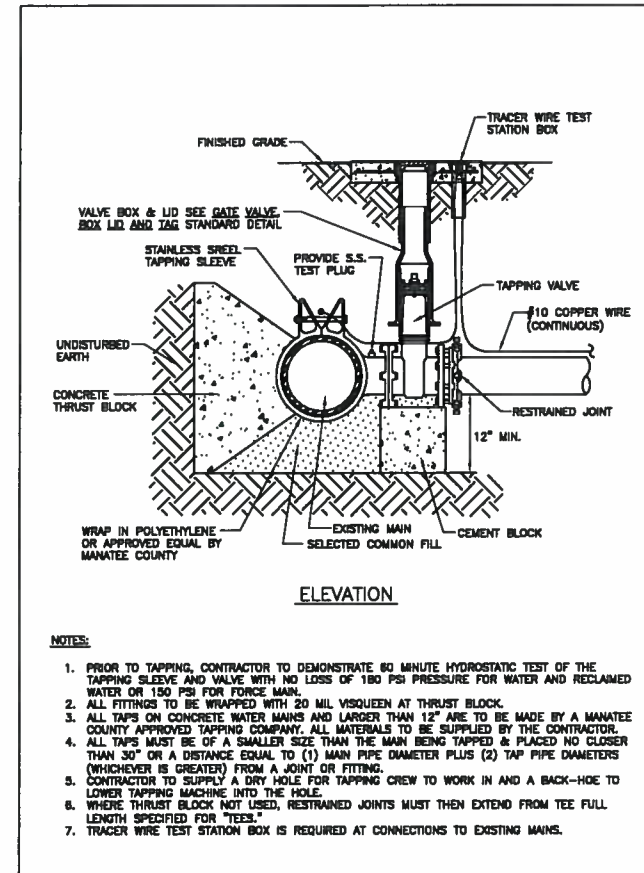


DATE	
BY	
REVISION DESCRIPTION	
NO.	
PROJECT #	323-8029980
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	N.T.S.
SURVEYED	BY DATE
DESIGNED	AAM 07/21/11
DRAWN	TMF 05/02/12
CHECKED	AAM 00/00/00
CHRISTOPHER LEE MOWBRAY, P.E.	
FLORIDA P.E. # 46777	
Signature & Date	
SHEET	44



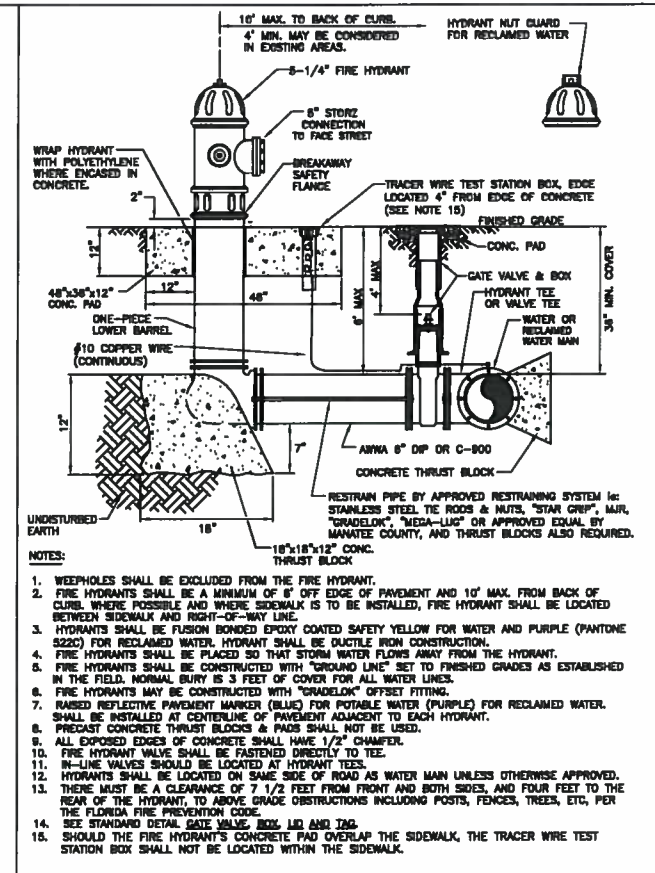
15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
GENERAL DETAIL

REFER TO MANATEE COUNTY STANDARDS 2007



- NOTES:
- 1. PRIOR TO TAPPING, CONTRACTOR TO DEMONSTRATE 60 MINUTE HYDROSTATIC TEST OF THE TAPPING SLEEVE AND VALVE WITH NO LOSS OF 180 PSI PRESSURE FOR WATER AND RECLAIMED WATER OR 150 PSI FOR FORCE MAIN.
 - 2. ALL FITTINGS TO BE WRAPPED WITH 20 MIL VULCANIZED AT THRUST BLOCK.
 - 3. ALL TAPS ON CONCRETE WATER MAINS AND LARGER THAN 12\"/>
 - 4. ALL TAPS MUST BE OF A SMALLER SIZE THAN THE MAIN BEING TAPPED & PLACED NO CLOSER THAN 30\"/>
 - 5. CONTRACTOR TO SUPPLY A DRY HOLE FOR TAPPING CREW TO WORK IN AND A BACK-HOE TO LOWER TAPPING MACHINE INTO THE HOLE.
 - 6. WHERE THRUST BLOCK NOT USED, RESTRAINED JOINTS MUST THEN EXTEND FROM TEE FULL LENGTH SPECIFIED FOR TEES.
 - 7. TRACER WIRE TEST STATION BOX IS REQUIRED AT CONNECTIONS TO EXISTING MAINS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TAPPING SLEEVE AND VALVE	UW-4
REV. BY DATE CLB/RE 11/10	MAY 10, 2011 DATE OF APPROVAL	PAGE 122



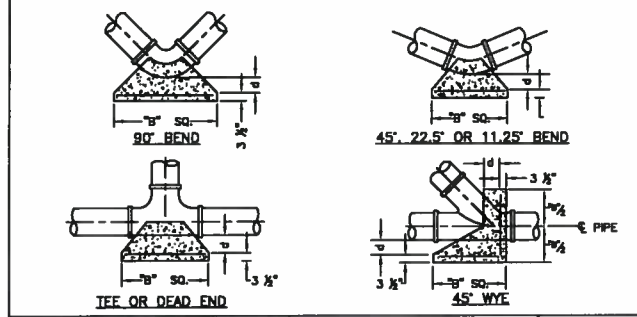
- NOTES:
- 1. WEEPHOLES SHALL BE EXCLUDED FROM THE FIRE HYDRANT.
 - 2. FIRE HYDRANTS SHALL BE A MINIMUM OF 6\"/>
 - 3. HYDRANTS SHALL BE FUSION BONDED EPOXY COATED SAFETY YELLOW FOR WATER AND PURPLE (PAINT CODE 2220) FOR RECLAIMED WATER. HYDRANT SHALL BE DUCTILE IRON CONSTRUCTION.
 - 4. FIRE HYDRANTS SHALL BE PLACED SO THAT STORM WATER FLOWS AWAY FROM THE HYDRANT.
 - 5. FIRE HYDRANTS SHALL BE CONSTRUCTED WITH "GROUND LINE" SET TO FINISHED GRADES AS ESTABLISHED IN THE FIELD. NORMAL BURY IS 3 FEET OF COVER FOR ALL WATER LINES.
 - 6. FIRE HYDRANTS MAY BE CONSTRUCTED WITH "GRADELOK" OFFSET FITTING.
 - 7. RAISED REEF TO BE PAVED FOR POTABLE WATER (PURPLE) FOR RECLAIMED WATER. SHALL BE INSTALLED AT CENTERLINE OF PAVEMENT ADJACENT TO EACH HYDRANT.
 - 8. PRECAST CONCRETE THRUST BLOCKS & PADS SHALL NOT BE USED.
 - 9. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2\"/>
 - 10. FIRE HYDRANT VALVE SHALL BE FASTENED DIRECTLY TO TEE.
 - 11. IN-LINE VALVES SHOULD BE LOCATED AT HYDRANT TEES.
 - 12. HYDRANTS SHALL BE LOCATED ON SAME SIDE OF ROAD AS WATER MAIN UNLESS OTHERWISE APPROVED. THERE MUST BE A CLEARANCE OF 7 1/2 FEET FROM FRONT AND FOUR FEET TO THE REAR OF THE HYDRANT, TO ABOVE GRADE OBSTRUCTIONS INCLUDING POSTS, FENCES, TREES, ETC. PER THE FLORIDA FIRE PREVENTION CODE.
 - 14. SEE STANDARD DETAIL GATE VALVE, BOX LID AND TAG.
 - 15. SHOULD THE FIRE HYDRANT'S CONCRETE PAD OVERLAP THE SIDEWALK, THE TRACER WIRE TEST STATION BOX SHALL NOT BE LOCATED WITHIN THE SIDEWALK.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	FIRE HYDRANT ASSEMBLY	UW-5
REV. BY DATE CLB/RE 11/10	MAY 10, 2011 DATE OF APPROVAL	PAGE 123

PIPE SIZE (IN.)	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END		45° WYE	
	B	d	B	d	B	d	B	d	B	d	B	d
4	1.5	3 1/2	1.1	3 1/2	0.8	3 1/2	0.8	3 1/2	1.3	3 1/2	1.1	3 1/2
6	2.2	5 1/2	1.6	3 3/4	1.2	3 3/4	0.8	3 3/4	1.9	4 1/2	1.6	3 3/4
8	2.8	7	2.1	5	1.5	3 1/2	1.1	3 1/2	2.4	5 1/2	2.0	4 1/2
10	3.5	8 1/2	2.6	6 1/2	1.9	4 1/2	1.3	3 3/4	3.0	7 1/2	2.5	6
12	4.2	10	3.1	7 1/2	2.2	5 1/2	1.6	3 3/4	3.5	8 1/2	3.0	7 1/2
14	4.9	11 1/2	3.6	8 1/2	2.6	6 1/2	1.8	4 1/2	4.1	9 1/2	3.4	8 1/2
18	6.5	13 1/2	4.1	9 3/4	2.9	7	2.1	5	4.7	11 1/2	3.9	9 1/2
18	6.2	15	4.6	11	3.3	8	2.3	6 1/2	5.2	12 1/2	4.4	10 1/2
20	6.9	16 1/2	5.0	12	3.6	8 3/4	2.6	6 1/2	5.6	14	4.9	11 1/2
24	8.2	19 1/2	6.0	14 1/2	4.3	10 1/2	3.1	7 1/2	6.9	18 1/2	6.8	14
30	10.1	24 1/2	7.5	18	5.3	12 1/2	3.8	9	8.5	20 1/2	7.2	17 1/2
36	12.1	29	8.6	21 1/2	6.4	15 1/2	4.5	10 1/2	10.2	24 1/2	8.6	20 1/2

REINFORCEMENT MAT SCHEDULE
FOR DIM. "B" BETWEEN 5.75" & 12.5" USE #4 @ 8" EACH WAY
FOR DIM. "B" LESS THAN 5.75" USE #3 @ 8" EACH WAY

- NOTE:
- 1. ALL THRUST BLOCKS SHALL BE CAST IN PLACE. FITTINGS ADJACENT TO THRUST BLOCKS SHALL BE WRAPPED IN POLYETHYLENE.
 - 2. THIS TABLE IS BASED ON WATER PRESSURE=180 PSI WITH AN ALLOWABLE SOIL BEARING PRESSURE=3000 PSF. CONCRETE STRENGTH & REINFORCEMENT & SOIL RES. THRUST BLOCK SHALL BE CAST ADJACENT FROM UNDISTURBED SOIL.
 - 3. FOR LARGER "B" DIMENSIONS IT IS NECESSARY TO CHECK THAT PIPE IS SUFFICIENTLY DEEP TO ALLOW 18" MIN. SOIL COVER OVER TOP EDGE OF THRUST BLOCK.
 - 4. RESTRAINED JOINTS MAY BE USED IN LIEU OF THRUST BLOCKS TO SAVE SPACE. THRUST BLOCKS SHALL BE USED IN SITUATIONS WHERE THRUST BLOCKS AND RESTRAINED JOINTS ARE BOTH REQUIRED.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	CONCRETE THRUST BLOCKS	UG-7
REV. BY DATE CLB/BR 11/10	MAY 10, 2011 DATE OF APPROVAL	PAGE 107

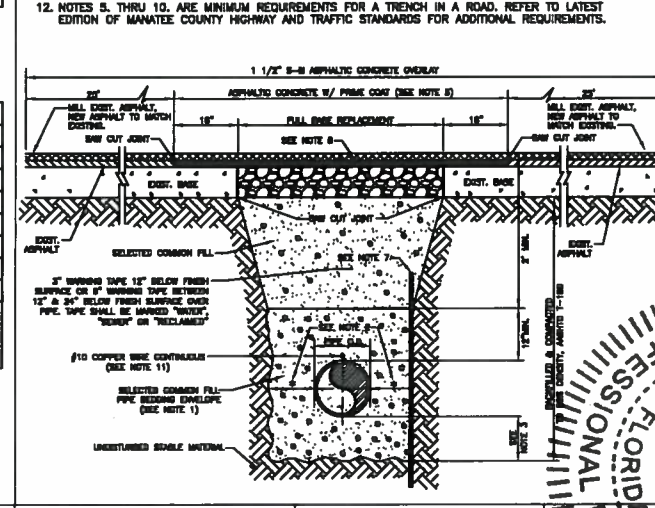
MAIN PIPE SIZE	HORIZ. BENDS	TEES				REDUCERS				PLUGS & VALVES
		90°	45°	22.5°	11.25°	90°	45°	22.5°	11.25°	
36	142	68	28	136	136	136	136	136	453	
30	124	61	25	124	124	124	124	124	391	
24	108	44	21	108	108	108	108	108	327	
20	92	38	18	92	92	92	92	92	280	
18	77	32	15	77	77	77	77	77	231	
12	61	25	12	61	61	61	61	61	181	
10	52	22	10	52	52	52	52	52	153	
8	44	18	9	44	44	44	44	44	128	
6	34	14	7	34	34	34	34	34	98	
4	24	10	5	24	24	24	24	24	69	

MAIN PIPE SIZE	HORIZ. BENDS	TEES				REDUCERS				PLUGS & VALVES
		90°	45°	22.5°	11.25°	90°	45°	22.5°	11.25°	
36	100	42	20	100	100	100	100	100	188	
30	88	37	18	88	88	88	88	88	162	
24	78	31	15	78	78	78	78	78	138	
20	68	27	13	68	68	68	68	68	118	
18	64	22	11	64	64	64	64	64	98	
12	43	18	8	43	43	43	43	43	75	
10	37	15	7	37	37	37	37	37	63	
8	30	13	6	30	30	30	30	30	53	
6	24	10	5	24	24	24	24	24	41	
4	17	7	3	17	17	17	17	17	29	

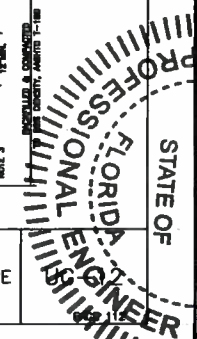
NOTE:
SEE RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 8 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT	RESTRAINED LENGTHS FOR DIP	UG-9
REV. BY DATE CLB/BR 03/11	MAY 10, 2011 DATE OF APPROVAL	PAGE 108

- NOTES:
- 1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE BEDDING MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS GREATER.
 - 3. TYPICALLY 4" TO 6".
 - 4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 5. ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1 1/4 INCH, WHICHEVER IS GREATER.
 - 6. MILL 25' BACK FROM TRENCH SAW CUT. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY LIMITS ARE FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCREPANCY AT JOINT. MILLING LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
 - 7. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
 - 8. BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
 - 9. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
 - 10. RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
 - 11. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
 - 12. NOTES 5, 7 THRU 10, ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



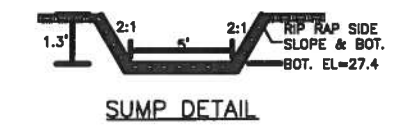
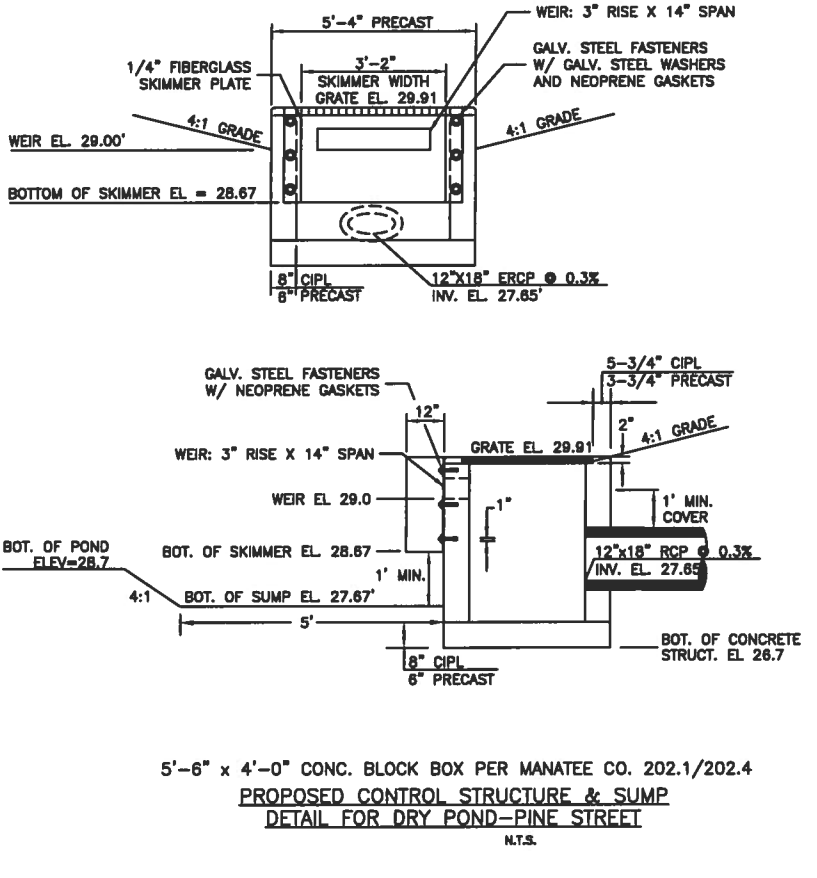
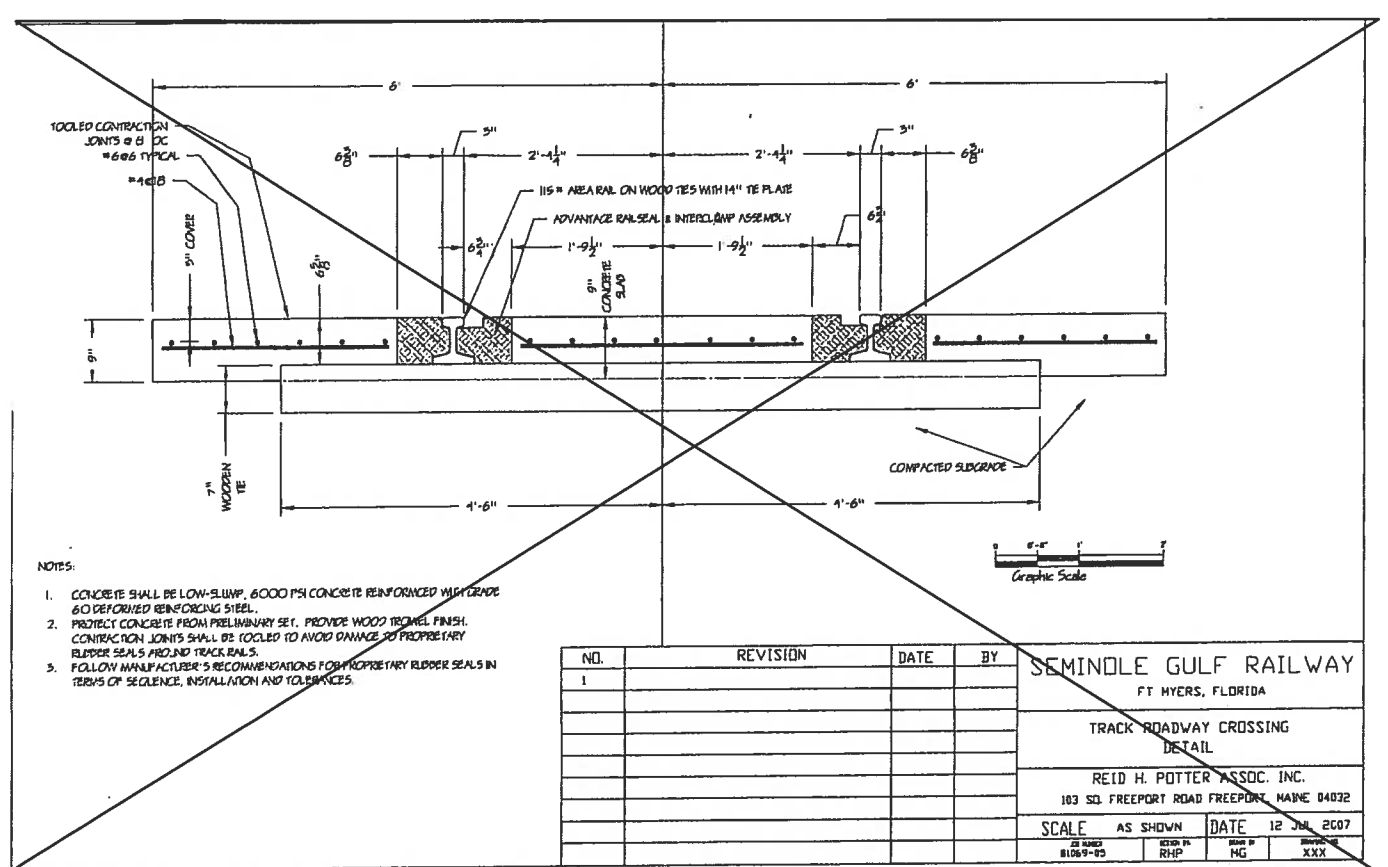
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-9
REV. BY DATE CLB/RE 03/11	MAY 10, 2011 DATE OF APPROVAL	PAGE 108



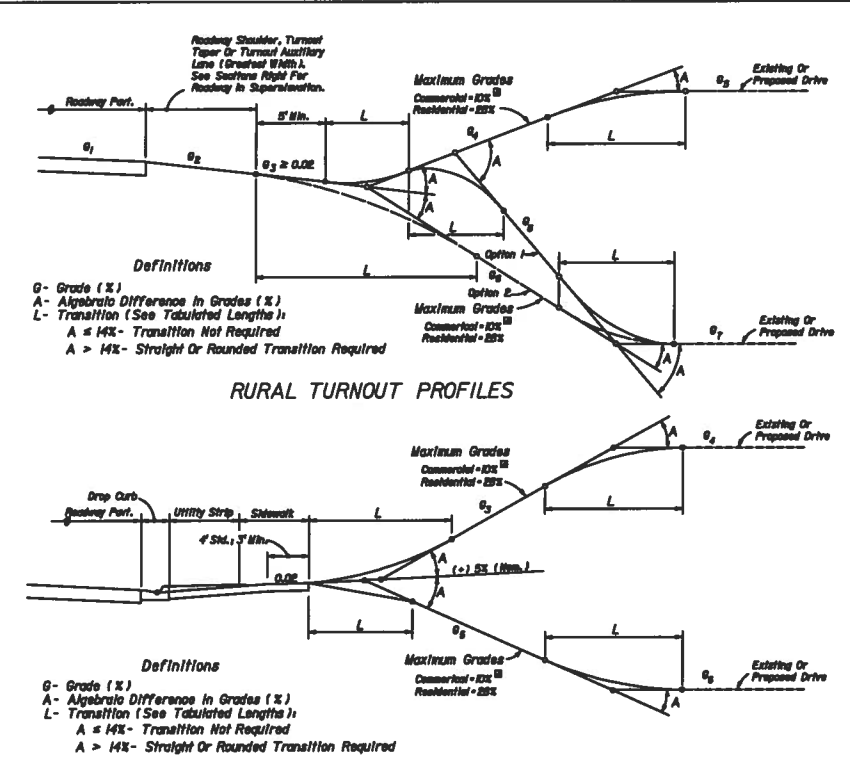
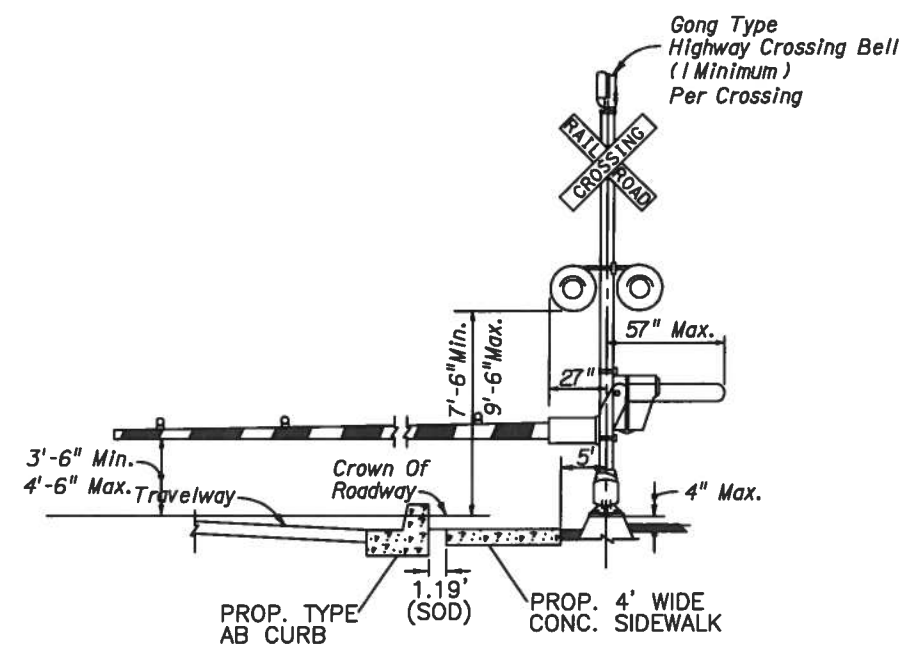
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT # 323-8029960
SURVEY # 5303
SEC./TWN./RGE 7/35S/18E
SCALE N.T.S.
BY DATE
SURVEYED 00/00/00
DESIGNED 07/21/11
DRAWN 05/02/12
CHECKED 00/00/00
JAMES STEWART P.E.
FLORIDA REG. # 667198
Signature & Date
SHEET 45

15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION
GENERAL DETAIL

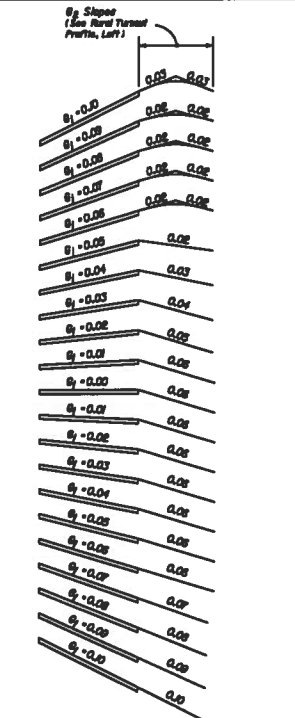


PROPOSED TRACK ROADWAY CROSSING DETAIL
AT EXISTING R.R.-51th AVE. E.
N.T.S.



A	LENGTHS (L) (FT.)							
	CRESTS				SAGS			
	STRAIGHT	ROUNDED	STRAIGHT	ROUNDED	STRAIGHT	ROUNDED	STRAIGHT	ROUNDED
6-25%	3	0	0	0	3	0	0	0
14%	3	0	0	0	3	0	0	0
15%	3	2.5	10	3	6	3	10	6
16%	5	3	10	4	6	4	10	6
17%	6	3.5	10	5	6	5	10	7
18%	6	4	10	6	6	6	10	8
19%	7	4.5	10	7	11	7	12	9
20%	8	5	11	8	12	8	13	10
21%	9	5.5	12	9	13	8.5	14	11
22%	10	6	13	10	14	9	15	12
23%	10	6.5	14	10.5	14	9.5	16	12.5
24%	11	7	15	11	15	10	17	13
25%	12	7.5	15	11.5	16	10.5	18	13.5
26%	12	8	16	12	17	11	19	14
27%	13	8.5	17	12.5	17	11.5	20	14.5
28%	14	9	17	13	18	12	21	15
29%	NA	NA	22	14	NA	NA	22	17
30-32%	NA	NA	23	15	NA	NA	22	18
32-33%	NA	NA	24	16	NA	NA	23	19
34-35%	NA	NA	26	17	NA	NA	25	20
37-38%	NA	NA	27	18	NA	NA	26	22
39-41%	NA	NA	29	19	NA	NA	28	24
42-43%	NA	NA	30	20	NA	NA	29	25
44-46%	NA	NA	32	21	NA	NA	31	26
47-49%	NA	NA	33	22	NA	NA	32	27
49-51%	NA	NA	34	23	NA	NA	34	29
52-54%	NA	NA	36	24	NA	NA	35	30
55-58%	NA	NA	37	25	NA	NA	36	31

Recommended Turnout Profile Transition Lengths (L) (FT)



STORMWATER RUNOFF AND PROFILE OPTION NOTES
1. Turnouts shall neither cause water to flow on or across the roadway pavement, nor cause water ponding or erosion within the State right of way. On all rural turnouts the transition (L) nearest the roadway shall be sloped or crowned to direct stormwater runoff to the roadside ditch. Inlets, flumes or other appropriate runoff control devices shall be constructed when runoff volumes are sufficient to cause erosion of the shoulder. Shoulder runoff control devices shall be constructed as necessary to properly direct and control the stormwater runoff on urban turnouts.
2. The Option 1 profile is intended for locations where roadway, turnout taper and auxiliary lane stormwater runoff volumes are relatively large. The Option 2 profile is intended for locations where runoff volumes are relatively small and/or where there is no roadside ditch.

ROADWAY PAVEMENT SLOPES AND SLOPES OF ABUTTING RURAL TURNOUT SURFACES (G₁)
SURVEY ELEVATION SECTIONS
LICENSE
No. 46777
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
515

TURNOUT PROFILES

When restoring or reconstructing existing commercial turnout connections on new construction and reconstruction projects, the maximum 10% commercial grade may be exceeded provided this does not create any adverse roadway operational or safety impacts. This shall be approved by the District Design Engineer and be supported by documented site specific findings.

NO.	DATE	BY	REVISION DESCRIPTION

PROJECT # 323-6029880
SURVEY # 5303
SEC./TWN./RGE 7/35S/18E
SCALE N.T.S.

	BY	DATE
SURVEYED		00/00/00
DESIGNED	AAM	07/21/11
DRAWN	TMF	05/02/12
CHECKED	AAM	00/00/00

CHRISTOPHER LEE MOWBRAY, P.E.
FLORIDA P.E. # 4777
Signature & Date
2/6/13
SHEET 46

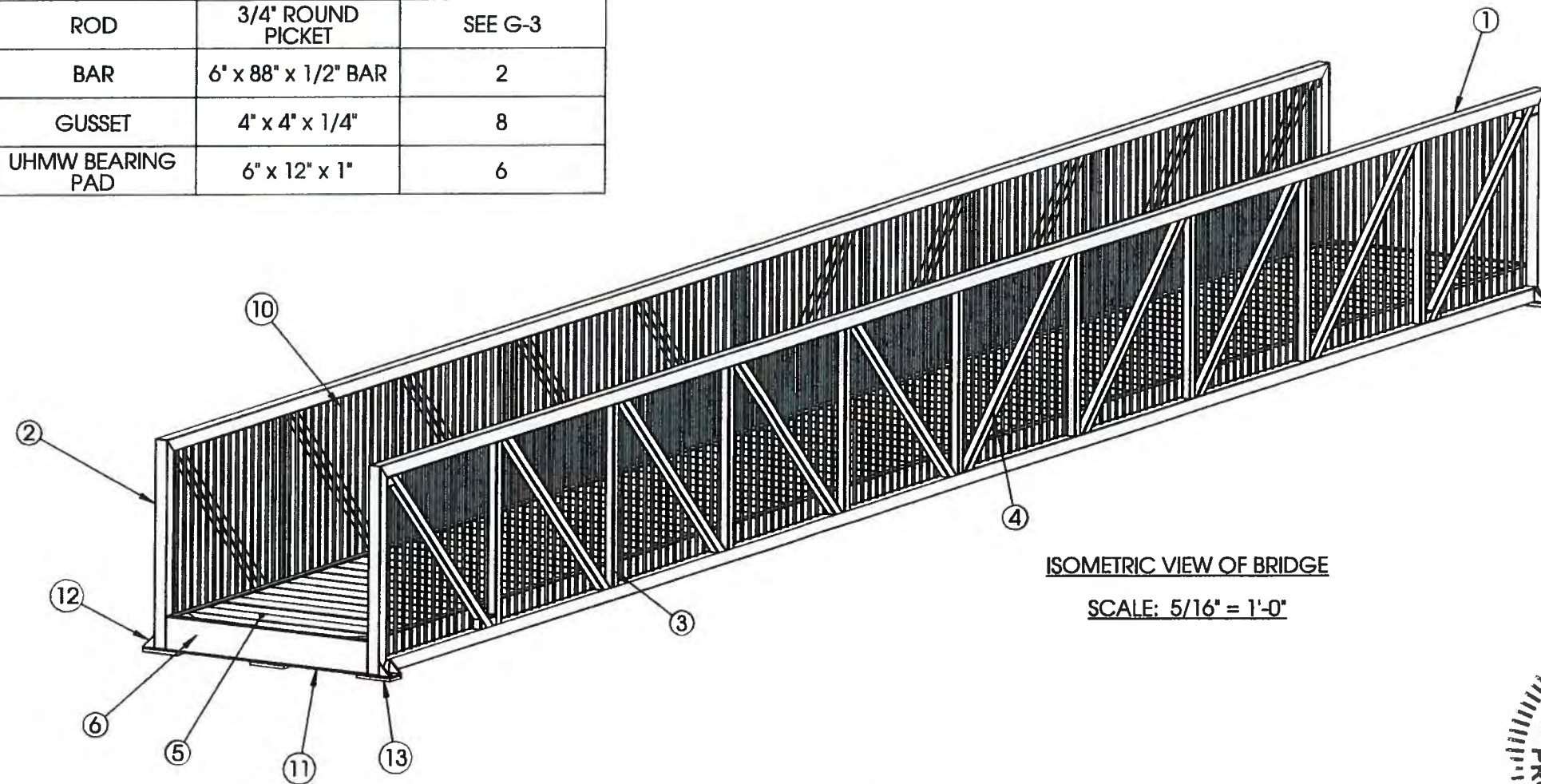


**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION**
PEDESTRIAN BRIDGE FOUNDATION DETAIL

BILL OF MATERIALS			
ITEM #	TYPE	DESCRIPTION	QTY/COMMENTS
1	TUBE	4" x 4" x 1/4" TOP & BOTTOM CHORDS	4
2	TUBE	4" x 4" x 1/4" END POSTS	4
3	TUBE	3" x 3" x 3/16" TRUSS POSTS	18
4	TUBE	3" x 3" x 3/16" TRUSS DIAGONALS	20
5	ALUMINUM DECKING	8 5/8" WIDE PLANK	3/16" GAP BETWEEN PLANKS
6	E-CHANNEL BOX FRAME	10" DEEP	1
7	C-CHANNEL	6" DEEP CROSS MEMBER	9
8	TUBE	2" x 2" x 3/16" STRINGER	1
9	C-CHANNEL	6" DEEP HORIZONTAL BRACING	10
10	ROD	3/4" ROUND PICKET	SEE G-3
11	BAR	6" x 88" x 1/2" BAR	2
12	GUSSET	4" x 4" x 1/4"	8
13	UHMW BEARING PAD	6" x 12" x 1"	6

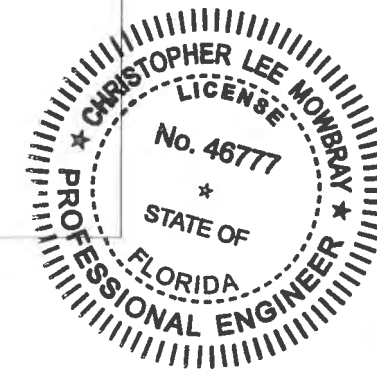
NOTES:

1. ALL PRIMARY STRUCTURAL ALUMINUM IS 6061-T6. ALL SECONDARY AND NON-STRUCTURAL ALUMINUM SHALL BE 6XXX SERIES.
2. ALL HARDWARE IS STAINLESS STEEL, TYPE 18/8, SERIES 304.
3. ALL WELDED FABRICATION IN ACCORDANCE WITH AWS D1.2, UNLESS NOTED OTHERWISE. FILLER METAL TO BE 5356 SERIES WIRE.
4. ALL DIMENSIONS ARE FRAME TO FRAME UNLESS NOTED OTHERWISE.
5. ALUMINUM DECK TO BE MILL FINISHED WITH INTEGRATED NON-SLIP PATTERN.
6. PEDESTRIAN BRIDGE DESIGNED FOR 85PSF LIVE LOAD, L/500 DEFLECTION.
7. BEARING PADS TO BE UHMW.
8. INSTALLATION BY OTHERS-NO RESPONSIBILITY IS ACCEPTED FOR WORK BY OTHERS.
9. SEE CALCULATION PACKAGE FOR DESIGN AND LOADING CRITERIA.



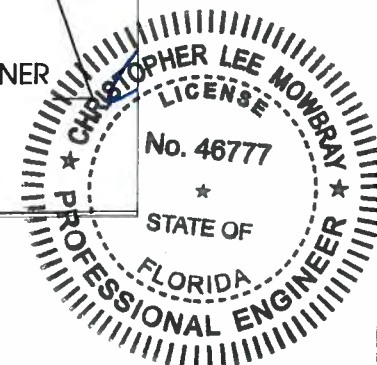
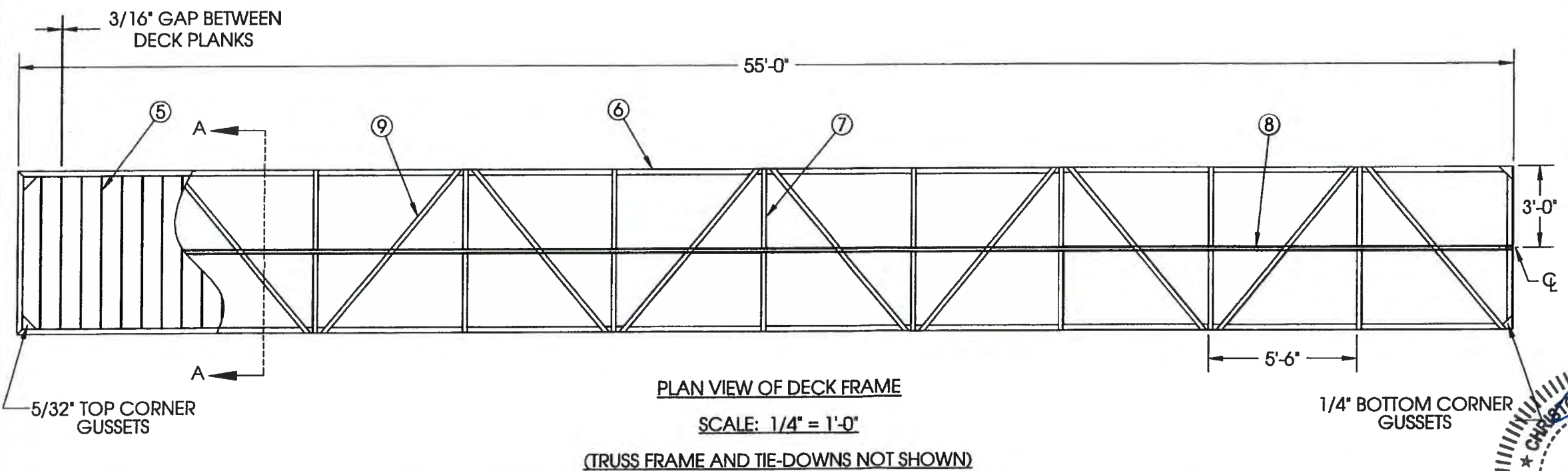
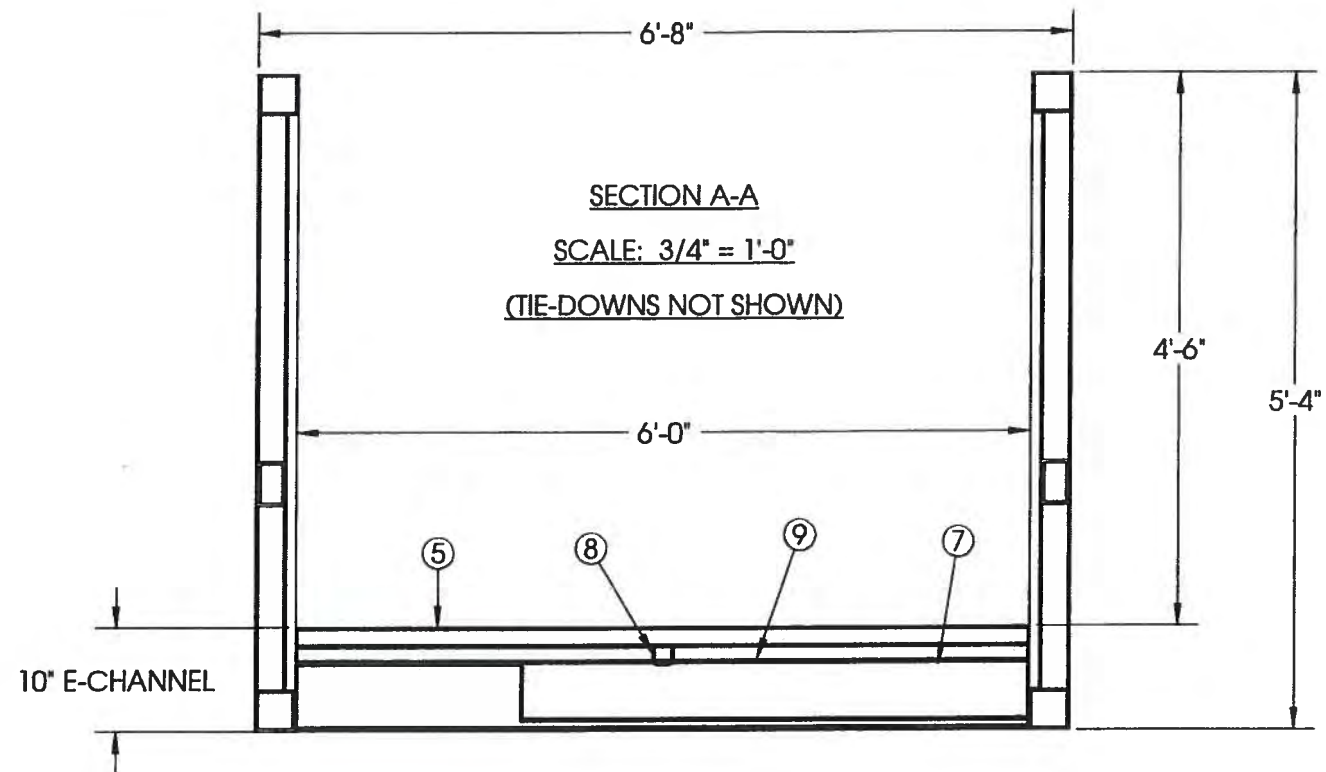
ISOMETRIC VIEW OF BRIDGE

SCALE: 5/16" = 1'-0"



NO.				
REVISION DESCRIPTION				
BY				
DATE				
PROJECT #	323-6028960			
SURVEY #	5303			
SEC./TWN./RGE	7/355/18E			
SCALE	N.T.S.			
	BY	DATE		
SURVEYED	---	00/00/00		
DESIGNED	AAM	07/21/11		
DRAWN	TMF	05/02/12		
CHECKED	AAM	00/00/00		
CHRISTOPHER LEE MOWBRAY, P.E.				
FLORIDA P.E. # 46777				
Signature & Date				
SHEET 48				

**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION**
PEDESTRIAN BRIDGE FOUNDATION DETAIL




NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-6029960
SURVEY #	5303
SEC./TWN./RGE	7/355/18E
SCALE	N.T.S.

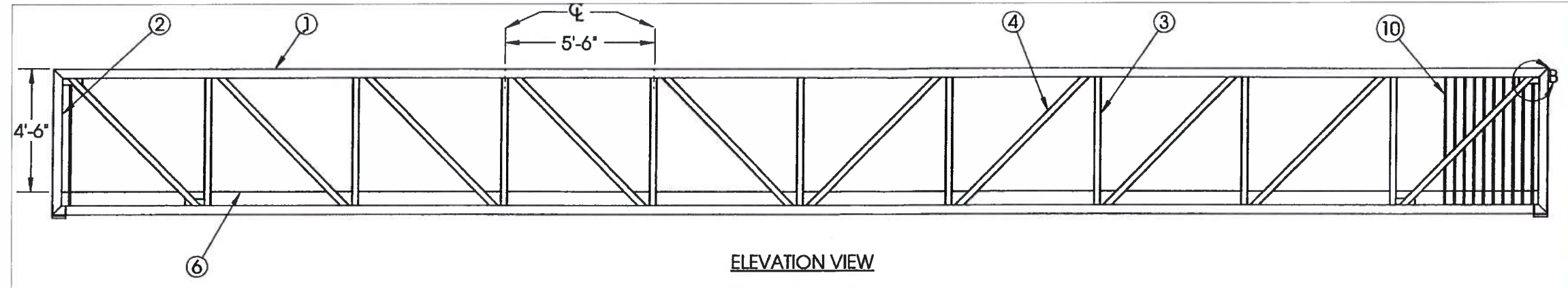
	BY	DATE
SURVEYED	---	00/00/00
DESIGNED	AAM	07/21/11
DRAWN	TMF	05/02/12
CHECKED	AAM	00/00/00

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

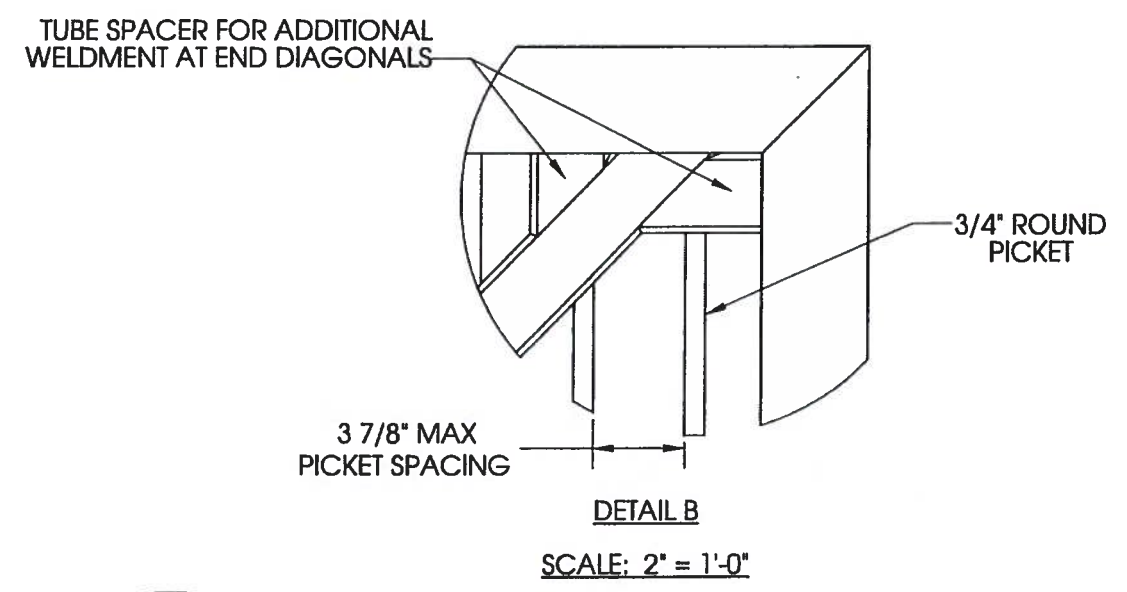


Signature & Date

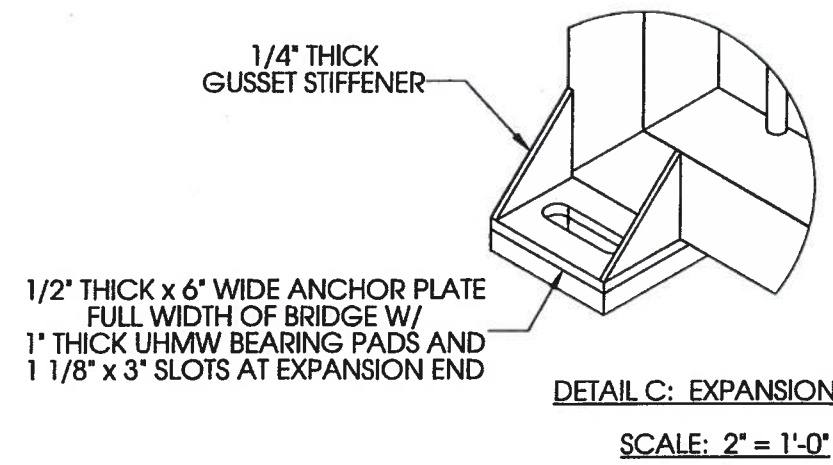
**15th ST EAST @ 51st AVE EAST
AND PINE ST RELOCATION**
PEDESTRIAN BRIDGE FOUNDATION DETAIL



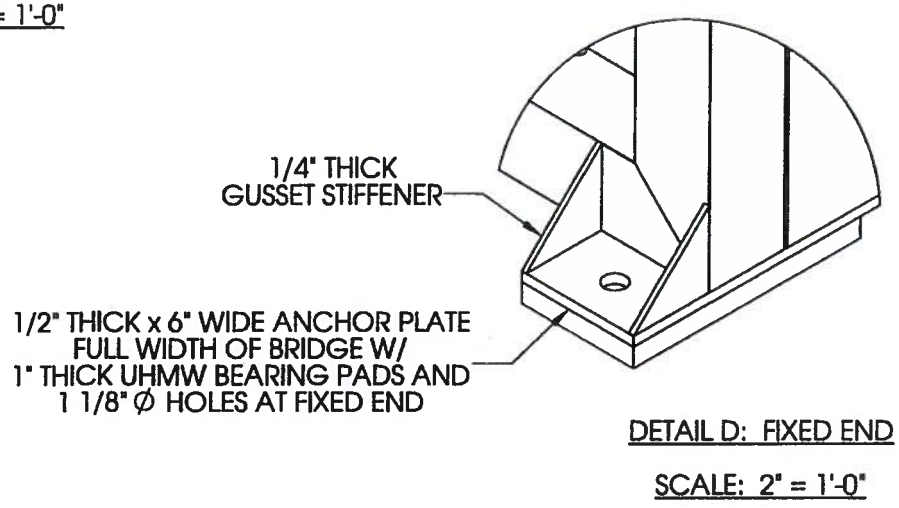
ELEVATION VIEW
SCALE: 1/4" = 1'-0"



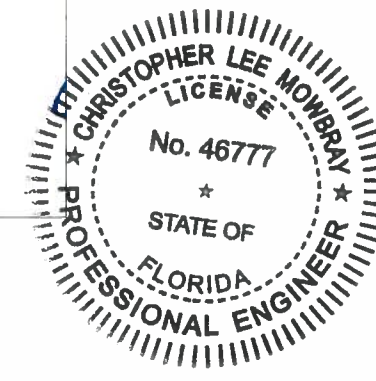
DETAIL B
SCALE: 2" = 1'-0"



DETAIL C: EXPANSION END
SCALE: 2" = 1'-0"



DETAIL D: FIXED END
SCALE: 2" = 1'-0"



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	323-8028980
SURVEY #	5303
SEC./TWN./RGE	7/35S/18E
SCALE	N.T.S.

	BY	DATE
SURVEYED	---	00/00/00
DESIGNED	AAM	07/21/11
DRAWN	TWF	05/02/12
CHECKED	AAM	00/00/00

CHRISTOPHER LEE MOWBRAY, P.E.

FLORIDA P.E. # 46777

Christopher Lee Mowbray
2/6/13

Signature & Date

SHEET 50

**MANATEE COUNTY
PUBLIC WORKS DEPARTMENT**

CONTRACT PLANS

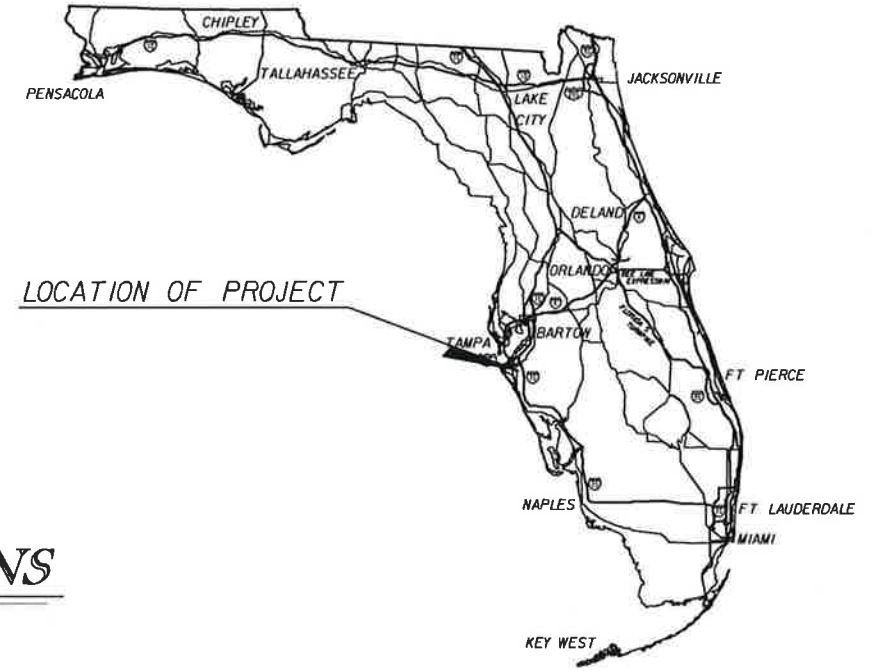
MANATEE COUNTY
(6029960)

INDEX OF SIGNING AND PAVEMENT MARKING PLANS

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
S-1	KEY SHEET
S-2	TABULATION OF QUANTITIES
S-3	GENERAL NOTES
S-4 THRU S-8	SIGNING AND PAVEMENT MARKING PLAN
S-9	GUIDE SIGN WORKSHEET

15TH STREET EAST AT 51ST AVENUE EAST

SIGNING AND PAVEMENT MARKING PLANS



SIGNING AND PAVEMENT MARKING SHOP DRAWINGS
TO BE SUBMITTED TO:
SUJEEVA A. WEERASURIYA, P.E.
HDR ENGINEERING, INC.
5426 BAY CENTER DRIVE, STE. 400
TAMPA, FLORIDA 33609-3444
PHONE NO. (813) 282-2300

PLANS PREPARED BY:
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD., STE. 400
SARASOTA, FLORIDA 34232-6233
PHONE NO. (941) 342-2700
FAX (941) 342-6589
CONTRACT NO. 12348
VENDOR NO. VF-470680568
CERTIFICATE OF AUTHORIZATION No. 4213



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

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2013,
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED 2013,
AS AMENDED BY CONTRACT DOCUMENTS.

Sujeeva Weerasuriya
Feb 6, 2013

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

SIGNING AND PAVEMENT
MARKING PLANS
ENGINEER OF RECORD: SUJEEVA A. WEERASURIYA, P.E.

P.E. NO.: 57629

FISCAL YEAR	SHEET NO.
13	S-1

MANATEE COUNTY PROJECT MANAGER: VINCENT CANNA

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			S-4		S-5		S-6		S-7		S-8																
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL					
700-20-11	SINGLE POST SIGN (F&I) (< 12 SF)	AS	1		2		1															4		4			
700-20-12	SINGLE POST SIGN (F&I) (12-20 SF)	AS			1		1															2		2			
700-20-60	SINGLE POST SIGN (REMOVE)	AS	1		3		1															5		5			
700-48-48	SIGN PANEL RELOCATE, 15 OR LESS	EA					2															2		2			
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS (WHITE/RED)	EA			34		3															54		424			
	(YELLOW/YELLOW)	EA	90		100		122		14													370					
711-11-111	THERMOPLASTIC (STD., WHITE, SOLID, 6")	NM	0.117		0.39		0.181		0.102													1.014		1.014			
711-11-122	THERMOPLASTIC (STD., WHITE, SOLID, 8")	LF			107																	107		107			
711-11-123	THERMOPLASTIC (STD., WHITE, SOLID, 12")	LF			443																	443		443			
711-11-124	THERMOPLASTIC (STD., WHITE, SOLID, 18")	LF			8																	8		8			
711-11-125	THERMOPLASTIC (STD., WHITE, SOLID, 24")	LF			111		13															124		124			
711-11-151	THERMOPLASTIC (STD., WHITE, 2'-4' SKIP, 6")	LF																				46		46			
711-11-151	THERMOPLASTIC (STD., WHITE, 6'-10' SKIP, 6")	LF																				36		36			
711-11-160	THERMOPLASTIC (STD., WHITE, MESSAGE) (ONLY)	EA																				3		3			
711-11-170	THERMOPLASTIC (STD., WHITE, ARROWS)	EA																							23		
	LEFT				8		1															16					
	RIGHT																					7					
711-11-211	THERMOPLASTIC (STD., YELLOW, SOLID, 6")	NM	0.168		0.322		0.268		0.102													1.054		1.054			
711-11-224	THERMOPLASTIC (STD., YELLOW, SOLID, 18")	LF			180		175															516		516			
711-11-231	THERMOPLASTIC (STD., YELLOW, 10'-30' SKIP, 6")	GM	0.015																			0.125		0.125			



Sujeeva Weerasuriya
Feb 6, 2013

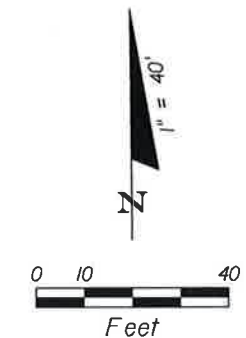
	SCALE: AS NOTED	 HDR <small>Employee-owned</small>	HDR Engineering, Inc. 2621 Cattleman Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE 12/14/12	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER SUJEEVA A. WEERASURIYA	TABULATION OF QUANTITIES	SHEET NO. S-2
	DESIGNED BY: LIR		PROJECT NO.: 6029960	FL. LICENSE NO.: 57629				
	DRAWN BY: GAS							
	CHECKED BY: SAW							
No.	REVISIONS	DATE	BY					

SIGNING AND PAVEMENT MARKING GENERAL NOTES:

1. PAVEMENT MARKINGS SHOULD BE PLACED AS SHOWN IN THE PLANS AND THE APPROPRIATE FDOT DESIGN STANDARDS INDEX.
2. THE SIGN LOCATIONS SHOWN ARE APPROXIMATE AND MAY REQUIRE FIELD ADJUSTMENT AS DIRECTED BY THE ENGINEER.
3. THE RETRO REFLECTIVE PAVEMENT MARKER ADHESIVE USED SHALL BE THE ONE CURRENTLY ON THE FDOT QUALIFIED PRODUCTS LIST (QPL).
4. REFER TO FDOT STANDARD INDEX NO. 17352 FOR RPM PLACEMENT DETAILS.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LENGTH OF SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
6. ANY EXISTING SIGN TO REMAIN THAT IS DISTURBED DURING CONSTRUCTION OR RELOCATED SHALL BE RESET TO CURRENT STANDARDS FOR HEIGHT, OFFSET, AND METHOD OF INSTALLATION. COST OF THIS WORK SHALL BE REFLECTED IN THE PAY ITEM No. 102-1 IN THE SUMMARY OF ROADWAY PAY ITEMS.
7. ALL STRIPING SHALL BE APPLIED BEFORE RAISED MARKERS ARE INSTALLED.
8. FOR MARKING PLACEMENT REQUIREMENTS SEE FDOT DESIGN STANDARD INDEX NO. 17346.
9. SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 11860 AND NO. 17302.
10. ALL EXISTING STRIPING THAT IS IN CONFLICT WITH PROPOSED STRIPING AS SHOWN IN THESE PLANS IS TO BE REMOVED PER FDOT SPECIFICATIONS.
11. CROSSWALKS SHALL BE 10' IN WIDTH UNLESS OTHERWISE INDICATED.
12. SIZES FOR ALL PROPOSED SIGNS SHALL CONFIRM TO SIZES SHOWN IN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
13. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OR EXISTING LOOP AND LEAD IN WIRES, OVERHEAD TRANSMISSION LINES AND UNDERGROUND UTILITIES.
14. FORTY EIGHT HOURS PRIOR TO DIGGING, THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, TELEPHONE NUMBER 1-800-432-4770, AND THE UTILITY OWNER TO REQUEST UTILITY LOCATIONS. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN THE UTILITY COMPANY LOCATES THEIR FACILITIES.
15. THE NEW PAVEMENT STRIPING ENDS MUST MATCH EXISTING STRIPING.
16. SEE MANATEE COUNTY TRANSPORTATION DEPARTMENT TRAFFIC SUPPLEMENTAL SPECIFICATION 553 FOR STREET SIGN SPECIFICATIONS.

Sujeeva A. Weerasuriya
Feb 6, 2013

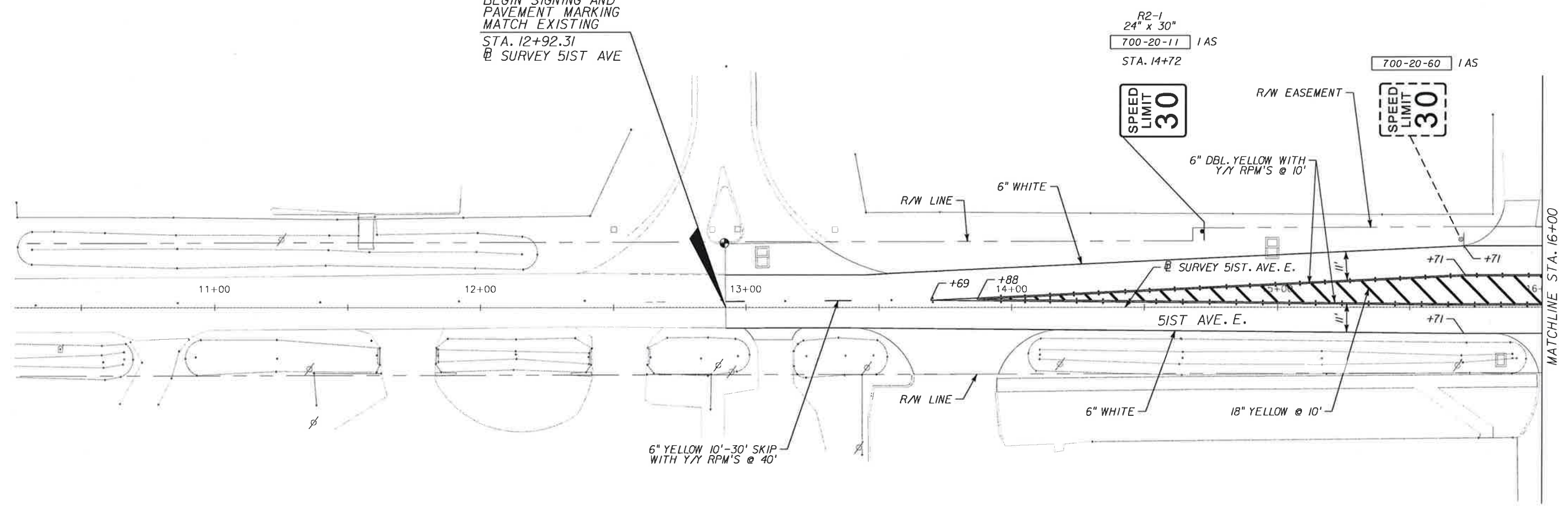
		SCALE	AS NOTED	 HDR Employee-owned HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	SUJEEVA A. WEERASURIYA	GENERAL NOTES	SHEET NO.			
		DESIGNED BY	LIR		PROJECT NO.		6029960	FL. LICENSE NO.		57629	S-3		
		DRAWN BY	GAS										
		CHECKED BY	SAW										
No.	REVISIONS	DATE	BY										



BEGIN SIGNING AND
PAVEMENT MARKING
MATCH EXISTING
STA. 12+92.31
@ SURVEY 51ST AVE

R2-1
24" x 30"
700-20-11 1 AS
STA. 14+72

700-20-60 1 AS



6" YELLOW 10'-30' SKIP
WITH Y/Y RPM'S @ 40'

Sujeeva A. Weerasuriya
Feb 6, 2013

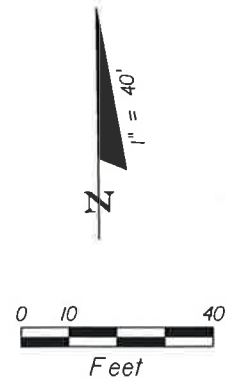
SCALE AS NOTED			HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE		MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	SIGNING AND PAVEMENT MARKING PLAN	SHEET NO.
DESIGNED BY LIR				12/14/12			SUJEEVA A. WEERASURIYA		NO.
DRAWN BY GAS				PROJECT NO.			FL. LICENSE NO.		
CHECKED BY SAW				6029960			57629		S-4
No.	REVISIONS	DATE	BY						

SIGN A
6'-6" x 3'-0"
IAS 700-20-12
STA. 27+94.00

51ST AVE E
NEXT SIGNAL

END SIGNING
STA. 27+94
@ SURVEY
15TH ST. E.
@ SURVEY
15TH ST. E.

MATCH LINE STA. 25+25
(SEE DETAIL A)



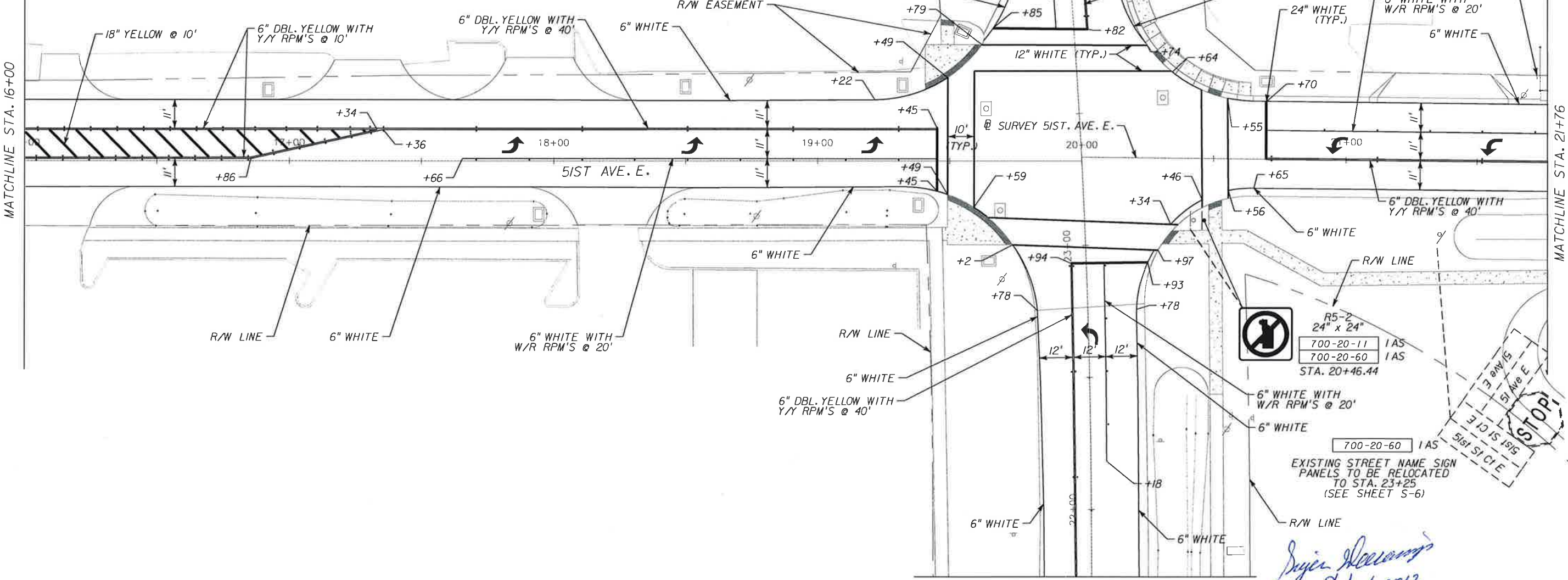
END PAVEMENT MARKING
STA. 25+85.00
@ SURVEY 15TH ST. E.
MATCH EXISTING



R5-2
24" x 24"
M6-1
21" x 15"
700-20-11 IAS
700-20-60 IAS
STA. 24+48.20



MATCH LINE STA. 25+25
DETAIL A



MATCHLINE STA. 21+76
SEE SHEET S-8

SCALE AS NOTED	
DESIGNED BY	LIR
DRAWN BY	GAS
CHECKED BY	SAW
No.	REVISIONS
	DATE BY

HDR
Employee-owned

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE
12/14/12

PROJECT NO.
6029960

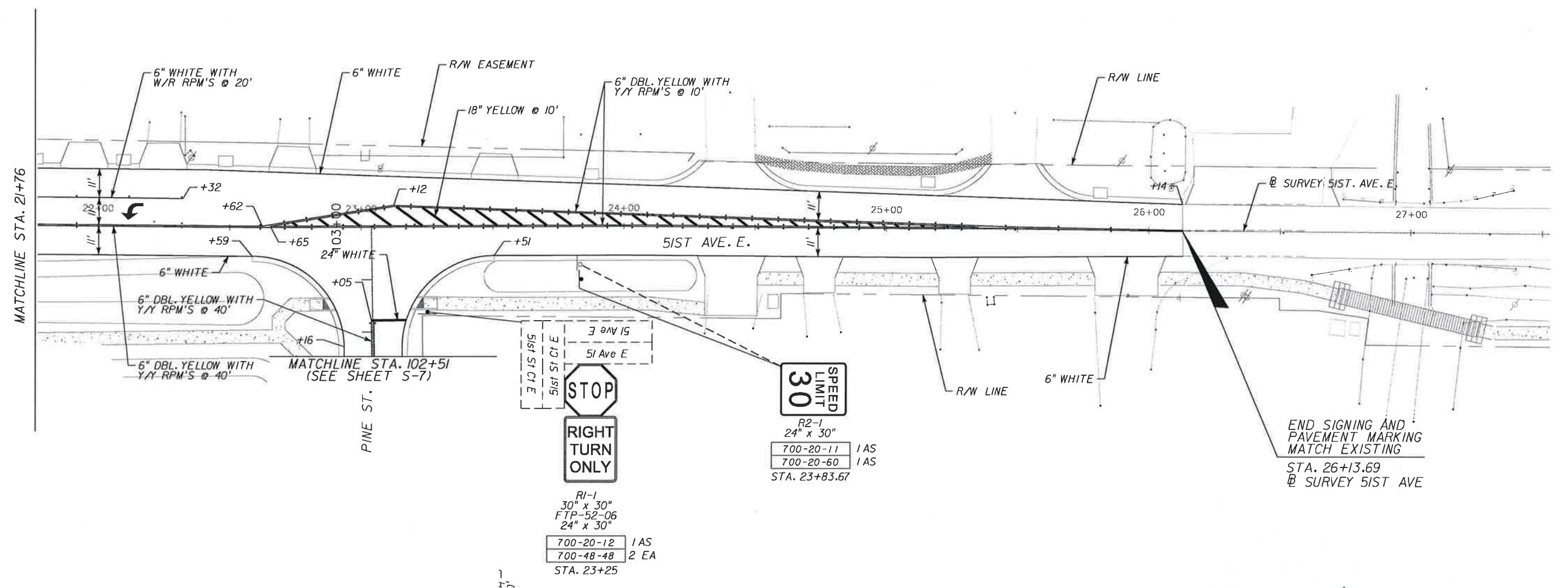
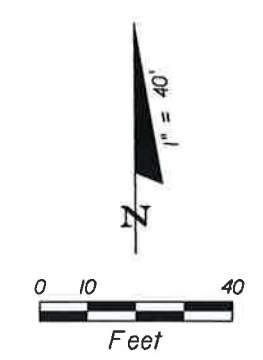
**MANATEE COUNTY
PUBLIC WORKS**

DESIGN ENGINEER
SUJEEVA A.
WEERASURIYA

FL. LICENSE NO.
57629

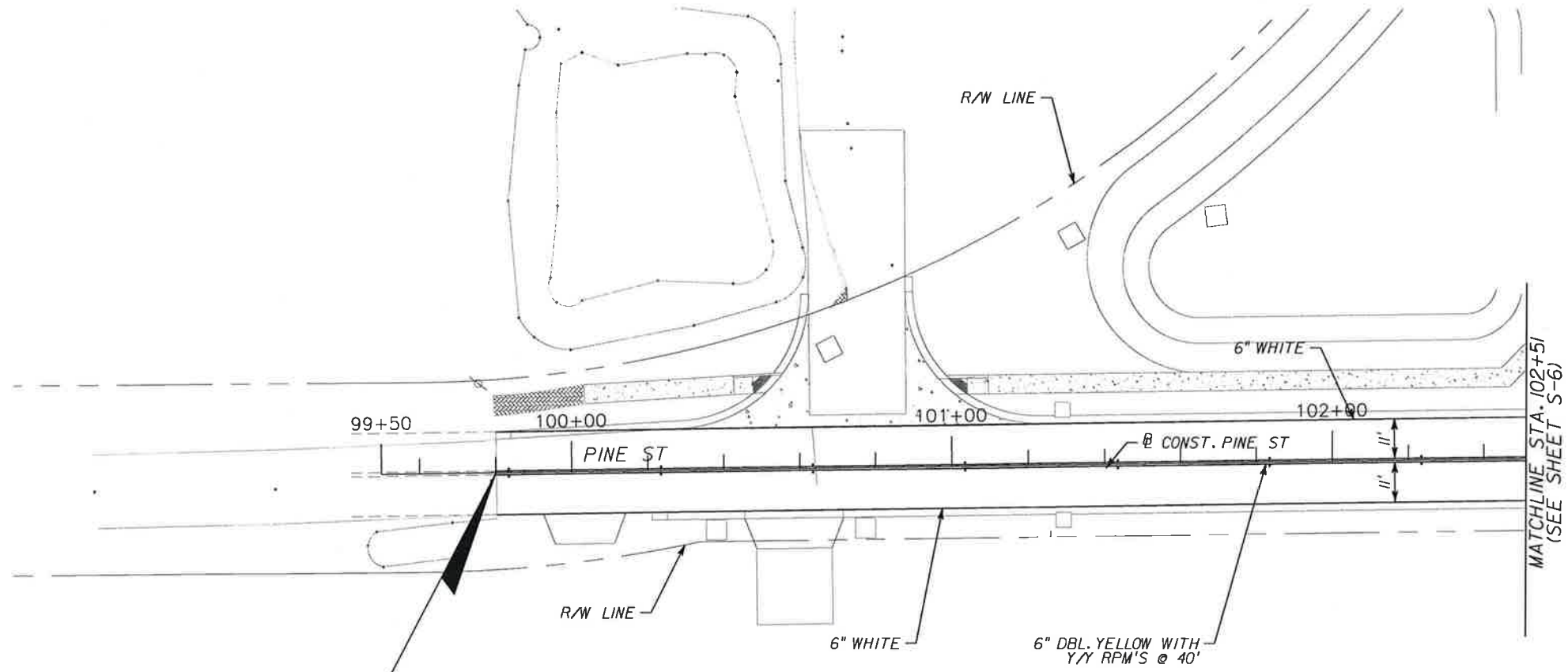
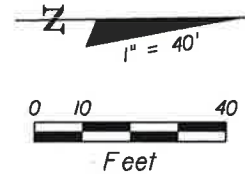
**SIGNING AND PAVEMENT
MARKING PLAN**

SHEET NO.
S-5



Sujeeva Weerasuriya
Feb 6, 2013

No.	REVISIONS	DATE	BY	SCALE		HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE		DESIGN ENGINEER SUJEEVA A. WEERASURIYA FL. LICENSE NO. 57629	SHEET NO. S-6
				AS NOTED			12/14/12			
				DESIGNED BY			PROJECT NO.			
				LIR			6029960			
				DRAWN BY						
				GAS						
				CHECKED BY						
				SAW						

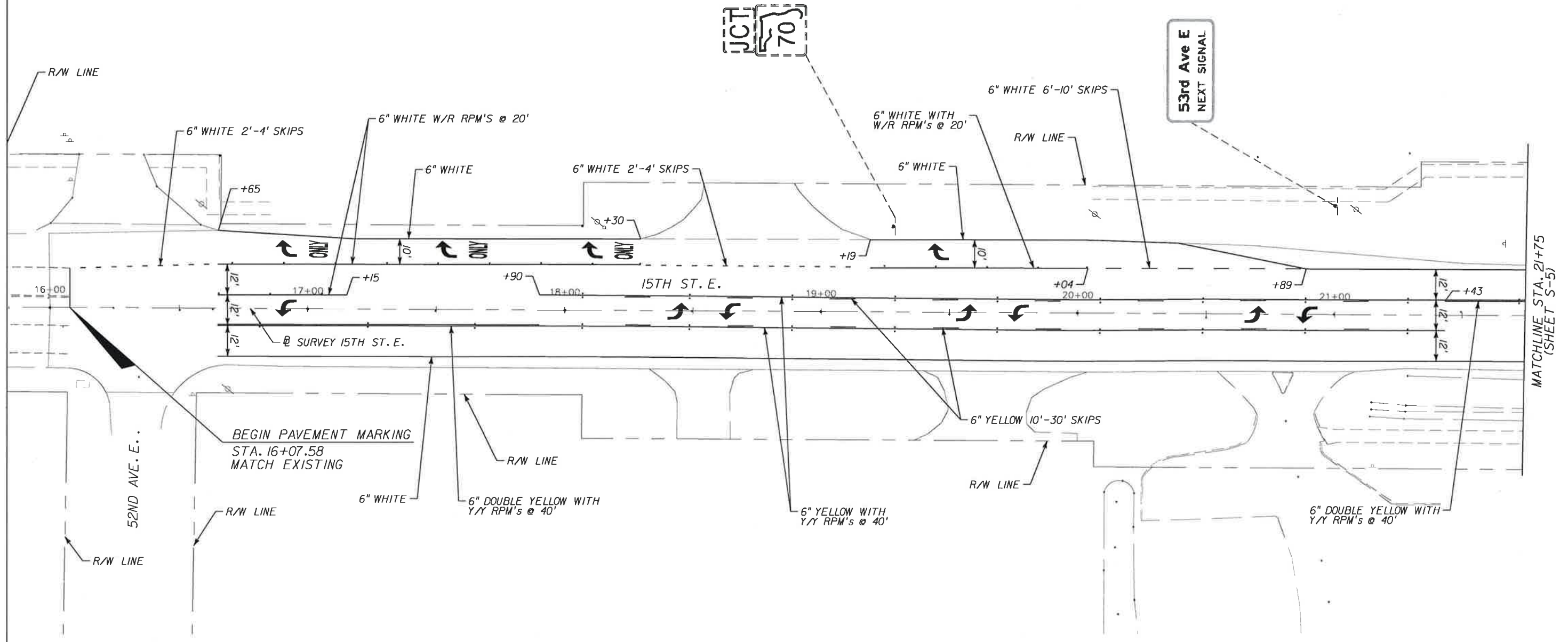
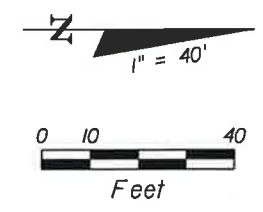


END SIGNING AND
PAVEMENT MARKING
MATCH EXISTING
STA. 99+80.12
@ CONSTRUCTION
PINE ST

MATCHLINE STA. 102+51
(SEE SHEET S-6)

Sujeeva A. Weerasuriya
Feb 6, 2013

SCALE AS NOTED			HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE		MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	SIGNING AND PAVEMENT MARKING PLAN	SHEET NO.				
DESIGNED BY				LIR			12/14/12		SUJEEVA A. WEERASURIYA	No. REVISIONS DATE BY SAW	6029960	57629	S-7
DRAWN BY				GAS			PROJECT NO.		FL. LICENSE NO.				
CHECKED BY				SAW			6029960		57629				



Project Closing Feb 6, 2013

No.	REVISIONS	DATE	BY	SCALE		HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-8212 FBPR Certificate of Authorization No. 4213	DATE		MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	SIGNING AND PAVEMENT MARKING PLAN	SHEET NO.
				AS NOTED			12/14/12			SUJEEVA A. WEERASURIYA		6029960

SIGN NAME	QTY	SIGN NUMBER	STATION(S)		
PANEL	BORDER	1	27+94		
WIDTH 6'-6"	WIDTH 1.75"				
HEIGHT 3'-0"	RADII 5"				
LEGEND White	COLOR White				
COLOR Green					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE	AVERAGE LENGTH	



NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY		5	1	s	t		A	v	e	E	L				
SPACE	7.1	8.3	4.2	7	4.2	6	9.1	7.8	5.3	6	5.9	7.1	63.8		
COPY		N	E	X	T		S	I	G	N	A	L	L		
SPACE	8.9	6.4	5.3	5.9	4.5	6	6.1	2.5	6.2	5.9	7.1	4.5	8.6	80.4	
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															

SIGN NAME	QTY	SIGN NUMBER	STATION(S)		
PANEL	BORDER				
WIDTH	WIDTH				
HEIGHT	RADII				
LEGEND	COLOR				
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE	AVERAGE LENGTH	

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															

SIGN NAME	QTY	SIGN NUMBER	STATION(S)		
PANEL	BORDER				
WIDTH	WIDTH				
HEIGHT	RADII				
LEGEND	COLOR				
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE	AVERAGE LENGTH	

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															

SIGN NAME	QTY	SIGN NUMBER	STATION(S)		
PANEL	BORDER				
WIDTH	WIDTH				
HEIGHT	RADII				
LEGEND	COLOR				
COLOR					
SYMBOL(S)	ANGLE	X	Y	WID	HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge Of Lane	COLUMN SIZE	AVERAGE LENGTH	

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															
COPY															
SPACE															

Sujeeva A. Weerasuriya
Feb 6, 2013

SCALE	AS NOTED		
DESIGNED BY	LIR		
DRAWN BY	GAS		
CHECKED BY	SAW		
No.	REVISIONS	DATE	BY

HDR
Employee-owned

HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of
Authorization No. 4213

DATE	12/14/12
PROJECT NO.	6029960

 **MANATEE COUNTY
PUBLIC WORKS**

DESIGN ENGINEER	SUJEEVA A. WEERASURIYA
FL. LICENSE NO.	57629

GUIDESIGN WORKSHEET

SHEET NO.	S-9
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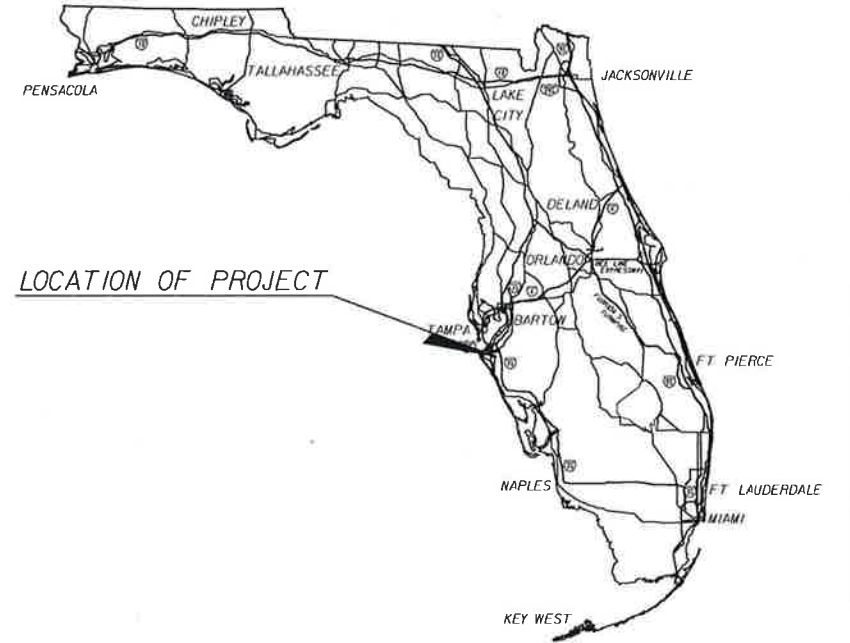
**MANATEE COUNTY
PUBLIC WORKS DEPARTMENT**

CONTRACT PLANS

MANATEE COUNTY
(6029960)

15TH STREET EAST AT 51ST AVENUE EAST

SIGNALIZATION PLANS



INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	TABULATION OF QUANTITIES
T-3 TO T-4	GENERAL NOTES
T-5	SIGNALIZATION PLAN
T-6	GUIDESIGN WORKSHEET
T-7	MAST ARM TABULATION
T-8	MAST ASSEMBLIES DATA TABLE (STANDARD)
GT-1	REPORT OF CORE BORINGS

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2013,
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED 2013,
AS AMENDED BY CONTRACT DOCUMENTS.

SIGNALIZATION SHOP DRAWINGS
TO BE SUBMITTED TO:
SUJEEVA A. WEERASURIYA, P.E.
HDR ENGINEERING, INC.
5426 BAY CENTER DRIVE, STE. 400
TAMPA, FLORIDA 33609-3444
PHONE NO. (813) 282-2300

PLANS PREPARED BY:
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD., STE. 400
SARASOTA, FLORIDA 34232-6233
PHONE NO. (941) 342-2700
FAX (941) 342-6589
CONTRACT NO. 12348
VENDOR NO. VF-470680568
CERTIFICATE OF AUTHORIZATION No. 4213



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

Sujeeva Weerasuriya
Feb 6, 2013

SIGNALIZATION PLANS
ENGINEER OF RECORD: SUJEEVA A. WEERASURIYA, P.E.

57629

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

FISCAL YEAR	SHEET NO.
13	T-1

MANATEE COUNTY PROJECT MANAGER: VINCENT CANNA

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			T-5																								
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL							
555-1-1	DIRECTIONAL BORE (LESS THAN 6")	LF	128																		128		128				
630-1-12	CONDUIT (F & I) (UNDERGROUND)	LF	442																		442		442				
632-7-1	CABLE, SIGNAL (F&I)	PI	1																		1		1				
635-1-11	PULL & JUNCTION BOXES (F&I) (PULL BOX)	EA	12																		12		12				
639-1-22	ELECTRICAL POWER SERVICE (UNDERGROUND)	AS	1																		1		1				
639-2-1	ELECTRICAL SERVICE WIRE (F&I)	LF	415																		415		415				
641-2-12	PRESTRESSED CONCRETE POLE (F&I) (TYPE P-11 SRV. POLE.)	EA	1																		1		1				
646-1-11	SIGNAL POLE, PEDESTAL (F&I)	EA	6																		6		6				
649-31-202	MAST ARM (F&I) (WS - 130) (SING. ARM) (W/O LUM.) (40')	EA	1																		1		1				
649-31-213	MAST ARM (F&I) (WS - 130) (DBL. ARM) (W/O LUM.) (36-70.5')	EA	1																		1		1				
650-1-311	TRAFFIC SIGNAL (F&I) (3 SECT) (1 WAY) (STANDARD)	AS	6																		6		6				
650-1-511	TRAFFIC SIGNAL (F&I) (5 SECT) (1 WAY) (STANDARD)	AS	2																		2		2				
653-191	PEDESTRIAN SIGNAL (F&I) (LED-COUNTDOWN) (1 WAY)	AS	6																		6		6				
653-192	PEDESTRIAN SIGNAL (F&I) (LED-COUNTDOWN) (2 WAY)	AS	1																		1		1				
663-74-15	VEHICLE DETECTOR ASSEMBLIES (F&I) (VIDEO)	EA	4																		4		4				
665-13	PEDESTRIAN DETECTOR (F&I) (DETECTOR WITH SIGN ONLY)	EA	7																		7		7				
670-5-300	TRAFFIC CONTROLLER ASSEMBLY (INSTALL)	AS	1																		1		1				
670-5-400	TRAFFIC CONTROLLER ASSEMBLY (MODIFY)	AS	1																		1		1				
685-106	SYSTEM AUX (F&I) (UNINTERRUPTIBLE POWER SOURCE)	EA	1																		1		1				
690-10	TRAFFIC SIGNAL HEAD ASSEMBLY, REMOVAL	EA	8																		8		8				
690-20	SIGNAL PEDESTRIAN ASSEMBLY, REMOVE	EA	4																		4		4				
690-34-1	POLE REMOVAL - DEEP (DIRECT BURIAL)	EA	2																		2		2				
690-60	DETECTOR VEHICLE ASSEMBLY, REMOVE	EA	6																		6		6				
690-80	SPAN WIRE ASSEMBLY REMOVE	EA	1																		1		1				
690-90	REMOVE CONDUIT & CABLING	PI	1																		1		1				
690-100	SIGNAL EQUIPMENT, MISCELLANEOUS REMOVE	PI	1																		1		1				
699-1-1	INTERNALLY ILLUMINATED SIGN (F&I)	EA	4																		4		4				
783-1-421	ITS FO CABLE (RELOCATE) (UNDERGROUND) (2 TO 12)	LF	20																		20		20				
783-4-112	ITS CONDUIT (F&I) (UNDERGROUND)	LF	20																		20		20				
783-5-5	ITS PULL BOX FOR FIBER OPTIC CABLE, ADJUST AND MODIFY	EA	1																		1		1				

Sujeeva A. Weerasuriya
Feb 6, 2013

		SCALE AS NOTED	HDR <small>Employee-owned</small>	HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE 12/14/12	MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER SUJEEVA A. WEERASURIYA FL. LICENSE NO. 57629	TABULATION OF QUANTITIES	SHEET NO. T-2
No.	REVISIONS	DATE	BY	CHECKED BY SAW	PROJECT NO. 6029960				

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT MANATEE COUNTY PROJECT MANAGEMENT DIVISION BEFORE STARTING WORK. COUNTY STANDARD UPDATES OR OTHER INFORMATION SHALL BE OBTAINED.
2. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY'S TRAFFIC ENGINEERING DIVISION (941-749-3502), AT LEAST TWO WEEKS, BEFORE ANY CABINET MODIFICATIONS ARE TO BE PERFORMED. MANATEE COUNTY ENGINEERING DIVISION PERSONNEL WILL REVIEW, ASSIST AND PROVIDE TECHNICAL SUPPORT RELEVANT TO ANY FIELD MODIFICATIONS THAT ARE NECESSARY. THE CONTRACTOR MAY OPTION OUT OF THIS PROPOSITION, IF THEY FEEL ASSISTANCE AND OVERSIGHT ARE NOT NECESSARY.
3. ONE WEEK PRIOR TO THE BEGINNING OF THE TRAFFIC SIGNAL INSTALLATION OR TURN ON OF A NEW SIGNAL, THE CONTRACTOR SHALL NOTIFY:

MANATEE COUNTY PROJECT MANAGEMENT DIVISION
1026 26TH AVENUE EAST
BRADENTON, FLORIDA 34208
PHONE: 941-708-7510

MANATEE COUNTY TRAFFIC ENGINEERING DIVISION
2101 47TH TERRACE EAST
BRADENTON, FLORIDA 34203
PHONE: 941-749-3502.

4. THE CONTRACTOR SHALL PERFORM ALL WORK AS PER LATEST FDOT SPECIFICATIONS AT TIME OF BID, INCLUDING THE 2013 DESIGN STANDARDS AND THE 2013 FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WITH CURRENT SUPPLEMENTAL SPECIFICATIONS THERETO. FDOT SPECIFICATIONS SHALL BE FOLLOWED. WHEN FDOT AND MANATEE COUNTY SPECIFICATIONS DIFFER, THE MORE STRINGENT SPECIFICATIONS WILL TAKE PRECEDENCE. MANATEE COUNTY TRAFFIC SPECIFICATIONS SHALL BE OBTAINED BY THE CONTRACTOR FROM THE PROJECT MANAGEMENT DIVISION.
5. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE SIGNAL MAINTENANCE, TIMING AND OPERATION OF ALL SIGNALS AND SIGNAGE FROM THE COMMENCEMENT OF WORK TO FINAL ACCEPTANCE OF THE PROJECT (I.E. EXISTING LOOPS CUT, SYSTEM COMMUNICATION TERMINATED, LANE OR PAVEMENT MODIFICATIONS, PEDESTRIAN MODIFICATIONS). MANATEE COUNTY WILL ASSIST IN PROVIDING EXISTING SYSTEM TIMING WHEN POSSIBLE.
6. THE CONTRACTOR SHALL HAVE AN I.M.S.A. CERTIFIED LEVEL II (ELECTRONICS OR ELECTRICAL TECHNICIAN) ON THE JOB SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. ALL SIGNAL INSTALLATION TECHNICIANS SHALL HAVE A MINIMUM OF I.M.S.A. LEVEL I CERTIFICATION. CERTIFICATIONS OF ALL TECHNICIANS SHALL BE PROVIDED TO THE COUNTY PRIOR TO BEGINNING WORK.

UPON PROJECT COMMENCEMENT THE SIGNAL SUBCONTRACTOR SHALL BE AVAILABLE TO RESPOND TO ALL SIGNAL RELATED MALFUNCTIONS AND POWER OUTAGES. THE CONTRACTOR SHALL MAINTAIN A ADEQUATE REPAIR INVENTORY, EQUIPMENT AND NEARBY PERSONNEL TO RESPOND AND CORRECT TRAFFIC SIGNAL MALFUNCTIONS AND NOT RELATED PHASING AND TIMING ISSUES FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE A QUALIFIED SIGNAL TECHNICIAN WHO CAN RESPOND WITHIN A MINIMUM OF TWO HOURS, 24 HOURS A DAY, 7 DAYS A WEEK.

FAILURE TO MEET THE TIME REQUIREMENTS SHALL GIVE THE COUNTY, AT ITS DISCRETION, THE RIGHT TO REQUEST ASSISTANCE FROM THE MANATEE COUNTY SHERIFF'S DEPARTMENT TO CONTROL TRAFFIC FOR THE PERIOD OF TIME UNTIL THE CONTRACTOR RESPONDS AND MAKES THE NEEDED REPAIRS. THE COST FOR THE MANATEE COUNTY SHERIFF'S OFFICE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.



7. PRIOR TO ORDERING MATERIALS, THE SIGNAL CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS DIVISION THROUGH THE PROJECT MANAGEMENT DIVISION AND VERIFY CURRENT COLOR CODES TO BE USED FOR SIGNAL CABLE.

8. WHEN A CONTRACTOR IS WORKING ON A SIGNAL IN AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, INSTALLING SIGNAL EQUIPMENT, OR TURNING ON OF NEW SIGNAL) WHERE A LANE IS CLOSED, THE PROJECT MANAGER MAY REQUIRE AN OFF DUTY LAW ENFORCEMENT OFFICER TO DIRECT TRAFFIC. THE HOURLY RATE OF PAY FOR AN OFF DUTY LAW ENFORCEMENT OFFICER CAN BE OBTAINED FROM THE LOCAL LAW ENFORCEMENT OFFICE. THE COST OF THE OFFICER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. DELIVER THREE SETS OF RECORD DRAWINGS TO THE MANATEE COUNTY TRAFFIC ENGINEERING DIVISION MANAGER AT 2101 47TH TERRACE EAST BRADENTON, FL 34203. RECORD DRAWINGS MUST BE DELIVERED TO THE COUNTY 48 HOURS PRIOR TO SCHEDULING THE FINAL INSPECTION.
10. UPON PASSING THE FINAL INSPECTION THE CONTRACTOR SHALL SEND A WRITTEN REQUEST TO THE PROJECT MANAGEMENT DIVISION AND THE TRANSPORTATION DIVISION TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO MANATEE COUNTY. MANATEE COUNTY WILL RESPOND WITHIN 5 WORKING DAYS TO ESTABLISH A TIME TABLE FOR THE TRANSFER OF MAINTENANCE RESPONSIBILITY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL POWER COMPANY PROVIDING ELECTRICAL POWER TO DETERMINE IF A SERVICE PROCESSING FEE IS REQUIRED. ANY FEE SHALL BE INCLUDED AS PART OF PAYMENT FOR THE ELECTRICAL POWER SERVICE ASSEMBLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS OF THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION, INSPECTION AND ENERGIZING OF THE NEW POWER SERVICE IN A TIMELY MANNER IN ORDER TO PROMOTE PROJECT COMPLETION WITHIN CONTRACT TIME.
12. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR, VIA SUNSHINE STATE ONE CALL OF FLORIDA, INC., IN COORDINATION WITH UNDERGROUND AND OVERHEAD UTILITY OWNERS. A MINIMUM OF 2 FULL BUSINESS DAYS PRIOR TO DIGGING IS REQUIRED.
13. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS IN ADVANCE OF POLE SETTING OPERATIONS WHERE CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED AND IN ALL CASES WHERE JOINT USE POLES ARE CALLED FOR.
14. THE CONTRACTOR SHALL HAND DIG THE FIRST 48 INCHES OF THE HOLE FOR THE POLE FOUNDATION OR CONDUIT RUN WHERE UTILITIES ARE IN CLOSE PROXIMITY.
15. THE CONTRACTOR IS TO DE-WATER THE POLE FOUNDATION EXCAVATION IF THE ELEVATION OF WATER IS HIGHER THAN THE ELEVATION OF THE FOUNDATION BASE.
16. ALL MATERIALS, EQUIPMENT, AND OTHER CONTRACTOR SUPPLIED ITEMS SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS, UNLESS SPECIFICALLY DIRECTED OTHERWISE BY MANATEE COUNTY.
17. #14 XHHW PULL WIRE SHALL BE INSTALLED IN ALL CONDUITS. AT LEAST 2 FEET OF PULL WIRE SHALL BE ACCESSIBLE AT EACH CONDUIT TERMINATION AND SECURED IN THE PULL BOX OR PLACE OF TERMINATION.
18. UNLESS OTHERWISE NOTED ALL REMOVED EQUIPMENT EXCEPT CONCRETE POLES SHALL BE TURNED OVER TO MANATEE COUNTY AND DELIVERED TO THE TRAFFIC OPERATIONS DIVISION LOCATED AT 2404 12TH STREET COURT EAST, BRADENTON, FLORIDA 34208, AS DIRECTED BY THE ENGINEER. CONCRETE POLES SHALL BE DISPOSED OF BY THE SIGNAL CONTRACTOR IN AREAS PROVIDED BY THE CONTRACTOR.
19. THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR ITS ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES AT SIGNAL POLE LOCATIONS SUCH AS THE INSTALLATION OF SIGNAL CABLE, FIBERGLASS INSULATORS, AND SIGNAL POLES.

AT LOCATIONS WHERE THE REQUIRED VERTICAL CLEARANCE TO THE POWER LINES CANNOT BE MAINTAINED, A QUALIFIED REPRESENTATIVE FROM THE POWER COMPANY SHALL BE PRESENT DURING ALL WORK UNDER POWER LINES. ANY COST ASSOCIATED WITH THIS SHALL BE INCLUDED IN THE RELATED PAY ITEMS.

20. ALL ELECTRICAL WIRING SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION.
21. GROUNDING: ALL ITEMS SHALL BE GROUNDED IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 620 AND THE CURRENT SUPPLEMENTS THERETO AT TIME OF BID. ALL COSTS FOR GROUNDING SHALL BE INCLUDED IN THE COST OF THE ITEM BEING GROUNDED. ALL GROUND ROD ASSEMBLIES FOR POLES, SERVICES, CABINETS, AND OTHER RELATED EQUIPMENT SHALL BE BONDED TOGETHER TO FORM AN INTEGRATED GROUNDING SYSTEM USING #6 AWG THHN COPPER WIRE. THE UPPER END OF ALL GROUND RODS SHALL BE 18 INCHES BELOW GROUND ELEVATION. MARK GROUND ROD LOCATION WITH PERMANENT MARKER SUCH AS AN EPOXIED STICKER LOCATED ON THE NEAREST CURB, AND PROVIDE AS-BUILT DRAWINGS WITH THE LOCATION OF GROUND RODS MARKED. GROUNDING CONDUCTOR MUST BE #6 OR LARGER INSULATED COPPER.
22. CONNECTING DEVICES SHALL BE NON-CORROSIVE SPLIT BOLTS, CLAMPS, PRESSURE CONNECTORS, OR OTHER APPROVED MEANS TO ENSURE A POSITIVE CONNECTION.
23. GROUND RESISTANCE TESTER, OR OTHER APPROVED MEANS WILL BE USED TO ACQUIRE THE GROUND ROD RESISTANCE. A MEMBER OF THE TRAFFIC OPERATIONS DIVISION STAFF SHALL BE PRESENT DURING THE TEST.
24. ELEVATION OF THE TOP OF THE MAST ARM FOUNDATION SHALL BE SIX INCHES ABOVE EXISTING GRADE. IF LOCATED DIRECTLY BACK OF SIDEWALK, THE FOUNDATION ELEVATION SHALL MATCH SIDEWALK GRADE.
25. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING OR BORING.
26. CONTRACTOR SHALL SUPPLY ALL MATERIAL SUBMITTALS TO MANATEE COUNTY TRAFFIC OPERATIONS DIVISION PRIOR TO CONSTRUCTION FOR APPROVAL.
27. THE TYPE OF EQUIPMENT USED IN THE INSTALLATION OF MAST ARMS/ FOUNDATIONS SHALL MEET THE FOLLOWING REQUIREMENTS: 1) OVERHEAD LINES SHALL STAY IN PLACE BOTH VERTICALLY AND HORIZONTALLY; AND 2) CONTRACTOR SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS (10 FOOT MINIMUM DISTANCE MAINTAINED BETWEEN THE EQUIPMENT AND THE ELECTRICAL OVERHEAD FACILITY). ANY COST ASSOCIATED WITH THE TYPE OF EQUIPMENT REQUIRED FOR THIS INSTALLATION IS INCLUDED IN THE RELATED PAY ITEMS.

Super Solutions
Dec 6, 2013

SCALE AS NOTED		 HDR Employee-owned HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE 12/14/12	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER SUJEEVA A. WEERASURIYA	GENERAL NOTES	SHEET NO. T-3
DESIGNED BY LIR			PROJECT NO. 6029960		FL. LICENSE NO. 57629		
DRAWN BY GAS							
CHECKED BY SAW							
No.	REVISIONS	DATE	BY				

PAY ITEM NOTES

1. 555-1-1: CONDUITS INSTALLED WITH THE DIRECTIONAL BORE METHOD SHALL BE HDPE WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE NOTED IN THE PLANS. COST OF PULL WIRE SHALL BE INCLUDED UNDER THIS PAY ITEM.
2. 630-1-12: ALL CONDUIT RUNS SHOWN ON THE PLANS ARE SCHEMATIC AND FIELD ADJUSTMENTS MAY BE NECESSARY. WITH THE EXCEPTION OF ELECTRICAL POWER SERVICE DUCTS, JACK & BORE SLEEVES, AND DIRECTIONAL BORE CONDUITS, ALL UNDERGROUND AND UNDER PAVEMENT CONDUITS SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF 2" UNLESS OTHERWISE SPECIFIED IN THE PLANS. COST OF PULL WIRE SHALL BE INCLUDED UNDER THIS PAY ITEM.

TWO SEPARATE UNDERGROUND CONDUIT RUNS LOCATED 180 DEGREES APART ARE REQUIRED FOR ALL MAST ARMS. THE SPARE CONDUIT SHALL BE CAPPED IN THE NEAREST PULL BOX. THERE SHALL BE A MINIMUM OF TWO RUNS OF 2" CONDUIT BETWEEN THE LAST LOW VOLTAGE PULL BOX LOCATED NEAR THE CONTROLLER CABINET & THE CONTROLLER CABINET, ITSELF.
3. 635-1-11: PULL BOXES SHALL BE TRAFFIC BEARING, ALL POLYMER CONSTRUCTION (NOT CONCRETE), PULL BOXES AND LIDS. (QUAZITE OR ANOTHER EQUIVALENT FDOT APPROVED MANUFACTURER).
4. 639-1-22: THIS PAY ITEM SHALL INCLUDE THE COST OF ALL SPECIAL IMPACT CONNECTION FEES CHARGED BY LOCAL POWER COMPANIES FOR ELECTRICAL SERVICE CONNECTION. IT SHALL ALSO INCLUDE INSTALLATION OF THE PHOTOELECTRIC CONTROL ASSEMBLY. THE CONTRACTOR SHALL FURNISH & INSTALL A LEVER-TYPE METER SOCKET.

IT SHALL ALSO INCLUDE THE COST OF INSTALLING SERVICE RISER ON FPL SERVICE POLE. THE SERVICE RISER MUST HAVE A WEATHERHEAD TERMINATING AT A POINT 40" MINIMUM BELOW THE BOTTOM OF FPL TRANSFORMER.
5. 639-2-1: THE PAYMENT OF THIS ITEM SHALL BE BASED ON THE LINEAR FOOT OF A SINGLE CONDUCTOR.
6. 649-31-202\649-31-213: THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES AT SIGNAL POLE(S), SUCH AS THE INSTALLATION OF MAST ARM FOUNDATIONS OR POLES.
7. 646-1-11: SHALL INCLUDE ADDITIONAL COST TO FURNISH & INSTALL A BREAKAWAY TRANSFORMER BASE. INSIDE DIAMETER OF PEDESTALS SHALL BE 4".
8. 650-1-311 & 650-1-511: USE SIGNAL HEAD SUPPORTING TUBE THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5'.

THE EXTERNAL COLOR OF SIGNAL HOUSING SHALL BE BLACK. ALL TRAFFIC SIGNAL HEAD INDICATIONS SHALL BE 12" LED. ALL SIGNAL HEADS SHALL HAVE TUNNEL VISORS. THE COST FOR THE TUNNEL VISORS SHALL BE INCLUDED UNDER THIS PAY ITEM.

ALL SIGNAL HEADS SHALL HAVE ALUMINUM LOUVERED BACK PLATES INSTALLED. BACKPLATES SHALL BE MANUFACTURED FOR THE SIGNAL HEADS USED & INSTALLED AS PER MANUFACTURE'S RECOMMENDATIONS. THE BACK PLATE SHALL HAVE A 2" YELLOW REFLECTORIZED (TYPE III REFLECTIVITY) OUTER EDGE BORDER UNLESS SPECIFIED OTHERWISE IN THE PLANS.
9. 653-191: PEDESTRIAN SIGNALS SHALL BE LED COUNTDOWN WITH OVERLAY/FILLED/FILLED HAND AND PEDESTRIAN SYMBOLS, AND SHALL BE ON FDOT APPROVED PRODUCT LIST.

10. 663-74-15: THE CONTRACTOR SHALL INSTALL THE VANTAGE VIDEO DETECTION SYSTEM IN STRICT ACCORDANCE WITH THE GUIDANCE CONTAINED IN THE VIDEO DETECTION SYSTEM'S INSTALLATION MANUALS. THE CONTRACTOR SHALL ONLY USE MANUFACTURER APPROVED CABLING CONNECTORS AND COMPONENTS TO COMPLETE THE INSTALLATION OF THE VIDEO DETECTION SYSTEM. THE SIGNAL CONTRACTOR SHALL CONSULT WITH THE TECHNICAL REPRESENTATIVES PRIOR TO ORDERING THE SYSTEM COMPONENTS AND TO OBTAIN OPTIMUM CAMERA PLACEMENT AND MOUNTING HEIGHT FOR EACH CAMERA PRIOR TO INSTALLATION. AFTER THE SYSTEM INSTALLATION IS COMPLETE THE CONTRACTOR SHALL REQUEST A SYSTEM CRITIQUE FROM THE VIDEO DETECTION EQUIPMENT SUPPLY MANUFACTURER. THE RESULTS OF THE SYSTEM CRITIQUE SHALL BE PROVIDED, IN WRITING, TO MANATEE COUNTY PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL SYSTEM.

SEE PLAN SHEETS FOR THE NUMBER OF VIDEO CAMERAS INCLUDED IN THE VIDEO DETECTION ASSEMBLY.

THE COST OF THIS ITEM SHALL ALSO INCLUDE A FACTORY CERTIFIED REPRESENTATIVE FROM THE SUPPLIER TO BE ON-SITE DURING INSTALLATION & SETUP.
11. 665-13: SHALL INCLUDE ADDITIONAL COST OF LABOR AND MATERIALS REQUIRED FOR INSTALLATION OF PEDESTRIAN SIGNAL SIGN FTP-68B-06. THIS SIGN SHALL BE MOUNTED ABOVE EACH PEDESTRIAN DETECTOR. ALL PEDESTRIAN PUSH BUTTONS SHALL BE A.D.A. COMPLIANT. STREET NAMES SHALL BE IN ACCORDANCE WITH THE STREET NAMES ON THE PLAN SHEETS.
12. 670-5-330: THIS ITEM SHALL INCLUDE THE INSTALLATION OF CONCRETE BASES FOR THE RELOCATED EXISTING CONTROLLER ASSEMBLY AND FOR MOUNTING OF AN EMERGENCY GENERATOR CABINET. THE CONTROLLER ASSEMBLY FOUNDATION SHALL HAVE A MINIMUM OF (4) 2" CONDUIT SPARES. TWO OF THE SPARES SHALL BE TERMINATED IN THE NEAREST FIBER OPTIC PULL BOX AND FITTED WITH WEATHERPROOF CAP. THE OTHER TWO SPARES SHALL BE TERMINATED IN THE SIGNAL CABLE AND LOW VOLTAGE PULL BOXES. THE EMERGENCY GENERATOR CABINET (EGC) BASE SHALL HAVE DIMENSIONS OF 48" x 36" FOR CABINET MOUNTING WITH A FDOT STANDARD TECHNICIAN PAD OR STEPS. IT SHALL BE LOCATED ADJACENT TO THE CONTROLLER BASE WITH TWO (2) 2" CONDUITS AND ONE (1) 1/4" CONDUITS INSTALLED DIRECTLY TO THE CONTROLLER BASE. MANATEE COUNTY WILL FURNISH THE GENERATOR CABINET TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY TO PICK UP AND INSTALL THE GENERATOR CABINET ON THE NEW FOUNDATION. ALL COSTS OF LABOR, CONCRETE & OTHER MATERIALS FOR THE CONTROLLER ASSEMBLY AND EGC BASES, TECHNICIAN PADS, STEP AS REQUIRED, AND INSTALLATION OF THE GENERATOR CABINET ARE INCLUDED IN THIS PAY ITEM. THE CONTROLLER AND EGC BASE SHALL BE AT LEAST 2' HIGH OR THE SAME ELEVATION AS THE CROWN OF THE ROADWAY, WHICHEVER IS GREATER. THE MAXIMUM DISTANCE FROM THE TECHNICIAN PAD OR STEP TO THE FOUNDATION TOP IS 4". THE CABINET DOORS SHALL OPEN TOWARDS OR PARALLEL TO THE RIGH-OF-WAY LINE AND AWAY FROM TRAFFIC.

WHEN INSTALLING GROUND WIRE IN THE CONTROLLER CABINET, THE COPPER GROUND WIRE SHALL NOT COME IN CONTACT WITH THE ALUMINUM CABINET, EXCEPT AT THE TERMINATION POINT.



THE SIGNAL CONTRACTOR SHALL SIZE THE ELECTRICAL SUPPLY WIRE TO PRESENT A VOLTAGE DROP AT THE SIGNAL HEADS AS SPECIFIED IN SECTION 210-19 OF THE N.E.C.

THE CABINET FIELD WIRING, INCLUDING SIGNAL HEAD WIRING AND LEAD-INS (CABLES, NEUTRALS, AND SPARES) SHALL BE IDENTIFIED FOR DIRECTION AND PHASE WITH CLEARLY MARKED WEATHERPROOF TAGS. THE PROPOSED TAGGING SYSTEM SHALL BE IN ACCORDANCE WITH THE FDOT'S STANDARD SPECIFICATIONS. ONLY WHITE AND WHITE/BLACK CONDUCTORS WILL BE USED AS A NEUTRAL RETURN.

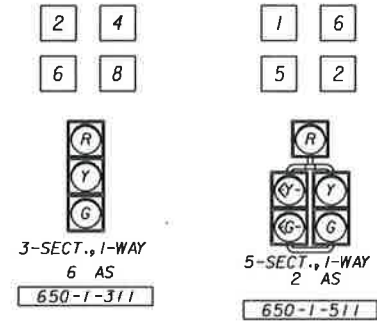
THE HEIGHT OF THE MOUNTING BASE FOR THE SIGNAL CONTROLLER CABINET SHALL BE EQUAL TO OR GREATER THAN THE ELEVATION OF THE CENTER CROWN OF THE ROADWAY.
13. 670-5-430: MODIFY EXISTING CONTROLLER TO ADD VIDEO DETECTION AND AN UNINTERRUPTED POWER SUPPLY UNIT (UPS) AND PERFORM ANY CABINET AND FIELD WIRING NECESSARY.

14. 685-106: THE UNINTERRUPTED POWER SUPPLY UNIT (UPS) SHALL HAVE AN 8 HOUR RUN TIME AT 450 WATTS. ATTACH UPS UNIT TO THE OUTSIDE OF THE CONTROLLER CABINET. INSTALL UPS UNITS IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. UPS EQUIPMENT SHALL BE COMPATIBLE WITH MANATEE COUNTY'S EXISTING SYSTEM AND SHALL INCLUDE ETHERNET CONNECTION AND SNMP V3 SUPPORT.
15. 690-100: SHALL INCLUDE REMOVAL OF EXISTING PULL BOXES.
16. 699-1-1: ALL INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE EDGE LIT LED TYPE AND SHALL BE LISTED IN THE FDOT APPROVED PRODUCT LIST. THE COST OF THIS ITEM SHALL INCLUDE PROPERLY DESIGNED AND SIZED ADJUSTABLE HANGERS, BRACKETS, CLAMPS, AND ALL MISCELLANEOUS HARDWARE NECESSARY TO RIGID MOUNT THE SIGNS AS SHOWN IN THE PLANS. THE SIGNS SHALL BE POWERED USING IMSA 50-2 CABLE. THIS ITEM SHALL ALSO INCLUDE INSTALLATION OF THE PHOTOCCELL ON THE SERVICE POLE.
17. 783-1-421: SHALL INCLUDE ALL COSTS ASSOCIATED WITH ADJUSTING THE EXISTING FIBER OPTIC DROP CABLE.

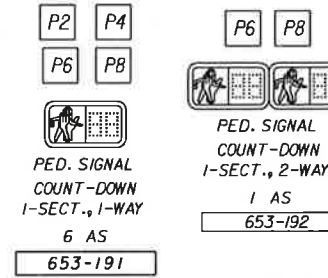
Sujeeva A. Weerasuriya
Feb 6, 2013

				SCALE AS NOTED	 HDR Engineering, Inc. 2621 Cattlemen Road Suite 106 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213	DATE	 MANATEE COUNTY PUBLIC WORKS	DESIGN ENGINEER	SUJEEVA A. WEEERASURIYA FL. LICENSE NO. 57629	SHEET NO.	
				DESIGNED BY LIR		12/14/12					
				DRAWN BY GAS		PROJECT NO.					
				CHECKED BY SAW		6029960					
No.	REVISIONS	DATE	BY	SAW					T-4		

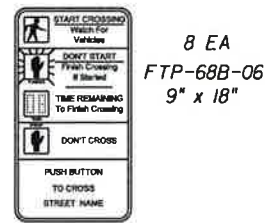
SIGNAL HEAD DETAILS



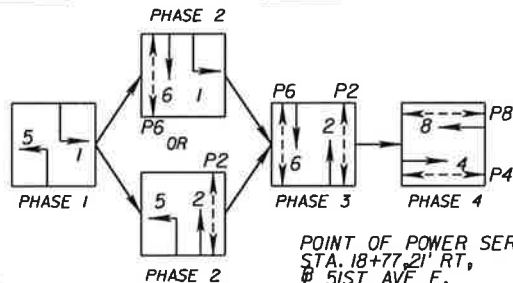
PEDESTRIAN HEAD DETAILS



PEDESTRIAN DETECTOR SIGN



S.O.P. 7



POINT OF POWER SERVICE
STA. 18+77.21 RT,
@ 51ST AVE. E.

90 LF 630-1-12
2 EA 635-1-11 (100 LF COIL IN PULL BOX)
370 LF 639-2-1

CONTROLLER OPERATIONS:

- MAJOR STREET IS 15TH ST. E. (MOVEMENTS 2 AND 6) AND MINOR STREET IS 51ST AVE. E. (MOVEMENTS 4 AND 8).
- CONTROLLER CABINET SHALL BE WIRED FOR S.O.P. 10. CONTROLLER SHALL OPERATE WITH S.O.P. 7 (SHOWN).
- WHILE IN FLASH MODE, MOVEMENTS 2 & 6 SHALL FLASH YELLOW, AND MOVEMENTS 4 & 8 SHALL FLASH RED. A 5-SECTION HEAD SHALL FLASH THE SAME COLOR AS THE APPROACH THROUGH LANE COLOR.
- EACH PHASE/MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT. THIS INCLUDES LEFT TURN MOVEMENTS. EACH LEFT TURN MOVEMENT SHALL HAVE CONDUCTORS AVAILABLE FOR PROTECTED AND PERMISSIVE OPERATION.
- POWER SERVICE METER BASE AND DISCONNECT SHALL BE INSTALLED ON THE CONCRETE SERVICE POLE AS SHOWN ON THE PLANS AND PER INDEX NUMBERS 17504 AND 17736.

699-1-1 4 EA



CONTROLLER TIMINGS

TIMING FUNCTION	1	2	3	4	5	6	7	8
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN*	7	20		7	7	20		7
EXTENSION*	3.0	4.0		3.0	3.0	4.0		3.0
MAXIMUM GREEN 1*	25	65		35	35	65		35
MAXIMUM GREEN 2	-	-		-	-	-		-
YELLOW CLEARANCE	3.0	4.0		4.0	3.0	4.0		4.0
ALL RED	2.0	1.5		3.0	2.0	1.5		3.0
PEDESTRIAN WALK	-	7.0		7.0	-	7.0		7.0
PED. CLEARANCE	-	15		20	-	15		20
RECALL	-	MAX		-	-	MAX		-

* EXISTING TIMINGS TO REMAIN
TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

VIDEO VEHICLE DETECTION ASSIGNMENTS

VIDEO DETECTION	DETECTION ZONE	DELAY TIME (SECS.)
VD 1	D 2	
	D 5	5
VD 2	D 1	5
	D 6	
VD 3	D 4	
	D 7	5
VD 4	D 3	5
	D 8	

DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

LEGEND

- oe DETECTION ZONE (VIRTUAL LOOPS) (30' x 6') POSITIONED 2' BEYOND STOP BAR
- o DETECTION ZONE (VIRTUAL LOOPS) (6' x 6') POSITIONED 24' BEHIND STOP BAR
- VD VIDEO VEHICLE DETECTOR

IPI 632-7-1
IAS 670-5-300
IAS 670-5-400
IEA 685-106

(SEE NOTE 1)

EMERGENCY GENERATOR CABINET

EXISTING FO PULL BOX TO REMAIN

20 LF 783-1-421
20 LF 783-4-112

(SEE NOTE 3)

SCALE AS NOTED
DESIGNED BY LIR
DRAWN BY GAS
CHECKED BY SAW

HDR
Employee-owned
HDR Engineering, Inc.
2621 Cattlemen Road
Suite 106
Sarasota, FL 34232-6212
FBPR Certificate of Authorization No. 4213

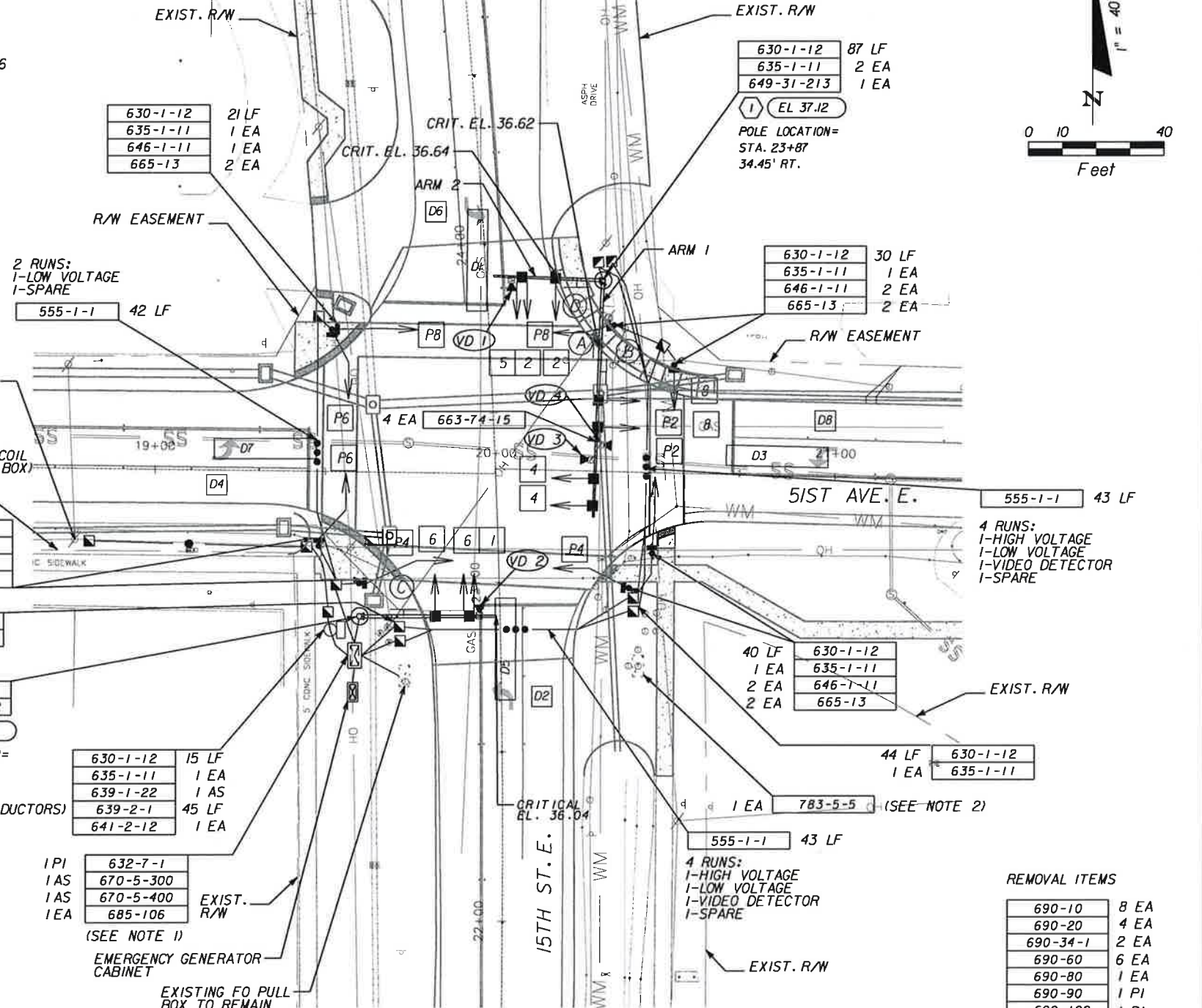
DATE 12/14/12
PROJECT NO. 6029960

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER
SUJEEVA A. WEERASURIYA
FL. LICENSE NO. 57629

SIGNALIZATION PLAN
15TH ST. E. & 51ST AVE. E.

SHEET NO. T-5



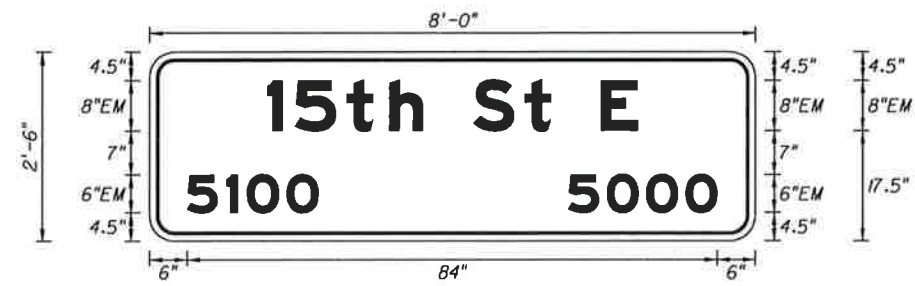
NOTES:

- RELOCATE THE EXISTING CONTROLLER CABINET TO A NEW FOUNDATION AND MODIFY THE CONTROLLER FOR VIDEO DETECTION.
- RESET THE EXISTING FO PULL BOX TO MATCH WITH THE PROPOSED GRADING ELEVATIONS.
- DISCONNECT THE FO CABLE FROM THE EXISTING CONTROLLER AND PULL THE CABLE OUT AT THE EXISTING PULL BOX. TIE IN THE NEW FO CONDUIT (FROM THE RELOCATED CONTROLLER CABINET) TO THE EXISTING PULL BOX. REINSTALL THE FO CABLE IN THE NEW CONDUIT AND SPLICE INSIDE THE RELOCATED CONTROLLER CABINET. COST SHALL BE INCLUDED UNDER PAY ITEM 783-1-421.
- LOCATIONS OF THE EXISTING PULL BOXES ARE APPROXIMATE ONLY. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS.

Sujeeva Weerasureya
12/14/12

No.	REVISIONS	DATE	BY

SIGN NAME A		QTY	SIGN NUMBER	STATION(S)
PANEL		BORDER		none
WIDTH 8'-0"	WIDTH 0.5"			
HEIGHT 2'-6"	RADII 3"			
LEGEND White	COLOR White			
COLOR Green				
SYMBOL(S)	ANGLE	X	Y	WID HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge of Lane	COLUMN SIZE	AVERAGE LENGTH

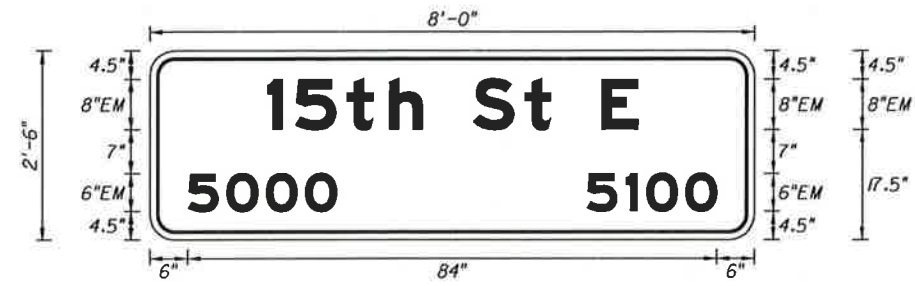


* SIGN ASSEMBLY SHALL BE SINGLE-PANEL, ONE-WAY, INTERNALLY ILLUMINATED STREET SIGN ASSEMBLY.

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	1	5	t	h	S	l	E	L				
SPACE	18.6	4.4	6.2	6.7	5.3	8	8.2	4.2	8	5.9	18.6	58.8
COPY	5	1	0	0	5	0	0	0	L			
SPACE	6	6.2	3.2	6.2	5	39.6	6.1	6.2	6.2	5	6	84
COPY												
SPACE												
COPY												
SPACE												
COPY												
SPACE												
COPY												
SPACE												

SIGN NAME B		QTY	SIGN NUMBER	STATION(S)
PANEL		BORDER		none
WIDTH 8'-0"	WIDTH 0.5"			
HEIGHT 2'-6"	RADII 3"			
LEGEND White	COLOR White			
COLOR Green				
SYMBOL(S)	ANGLE	X	Y	WID HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge of Lane	COLUMN SIZE	AVERAGE LENGTH



* SIGN ASSEMBLY SHALL BE SINGLE-PANEL, ONE-WAY, INTERNALLY ILLUMINATED STREET SIGN ASSEMBLY.

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	1	5	t	h	S	l	E	L				
SPACE	18.6	4.4	6.2	6.7	5.3	8	8.2	4.2	8	5.9	18.6	58.8
COPY	5	0	0	0	5	1	0	0	L			
SPACE	6	6.1	6.2	6.2	5	39.6	6.2	3.2	6.2	5	6	84
COPY												
SPACE												
COPY												
SPACE												
COPY												
SPACE												
COPY												
SPACE												

SIGN NAME C		QTY	SIGN NUMBER	STATION(S)
PANEL		BORDER		none
WIDTH 8'-0"	WIDTH 0.5"			
HEIGHT 2'-6"	RADII 3"			
LEGEND White	COLOR White			
COLOR Green				
SYMBOL(S)	ANGLE	X	Y	WID HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge of Lane	COLUMN SIZE	AVERAGE LENGTH



* SIGN ASSEMBLY SHALL BE SINGLE-PANEL, ONE-WAY, INTERNALLY ILLUMINATED STREET SIGN ASSEMBLY.

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	5	1	s	l	A	v	e	E	L				
SPACE	14.2	8.3	4.2	7	4.2	8	9.1	7.8	5.3	8	5.9	14.1	67.8
COPY	1	5	0	0	1	4	0	0	L				
SPACE	6	3.3	6.1	6.2	5	42.2	2.8	7	6.2	5	6	84	
COPY													
SPACE													
COPY													
SPACE													
COPY													
SPACE													
COPY													
SPACE													

SIGN NAME D		QTY	SIGN NUMBER	STATION(S)
PANEL		BORDER		none
WIDTH 8'-0"	WIDTH 0.5"			
HEIGHT 2'-6"	RADII 3"			
LEGEND White	COLOR White			
COLOR Green				
SYMBOL(S)	ANGLE	X	Y	WID HT
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge of Lane	COLUMN SIZE	AVERAGE LENGTH



* SIGN ASSEMBLY SHALL BE SINGLE-PANEL, ONE-WAY, INTERNALLY ILLUMINATED STREET SIGN ASSEMBLY.

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	5	1	s	l	A	v	e	E	L				
SPACE	14.2	8.3	4.2	7	4.2	8	9.1	7.8	5.3	8	5.9	14.1	67.8
COPY	1	4	0	0	1	5	0	0	L				
SPACE	6	2.8	7	6.2	5	42.2	3.3	6.1	6.2	5	6	84	
COPY													
SPACE													
COPY													
SPACE													
COPY													
SPACE													

No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	LIR
DRAWN BY	GAS
CHECKED BY	SAW

HDR Employee-owned
 HDR Engineering, Inc.
 2621 Cattlemen Road
 Suite 106
 Sarasota, FL 34232-6212
 FBPR Certificate of Authorization No. 4213

DATE	12/14/12
PROJECT NO.	6029960

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER	SUJEEVA A. WEERASURIYA
FL. LICENSE NO.	57629

GUIDE SIGN WORKSHEET

SHEET NO.	T-6
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Signature
 7/25/2013

STANDARD MAST ARM ASSEMBLIES DATA TABLE																	Table Date 01-01-12		
STRUCTURE ID NUMBERS	ASSEMBLY NUMBERS ⁽¹⁾	FIRST ARM			SECOND ARM			UF (deg)	LL (deg)	POLE				SPECIAL DRILLED SHAFT ⁽⁴⁾					
		ARM TYPE	FAA ⁽²⁾ (ft.)	FBA ⁽²⁾ (in.)	ARM TYPE	FAA ⁽²⁾ (ft.)	FBA ⁽²⁾ (in.)			POLE TYPE	UAA ⁽³⁾ (ft.)	UB (ft.)	UCA ⁽³⁾ (in.)	DA (ft.)	DB (ft.)	RA	RB	RC	RD (in.)
POLE 1	D6-D2-S4	D6	38.9	9.56	D2	32.0	9.52	270		S4	22	20	22.92						
POLE 2	E3-T2	E3	30.3	7.9						T2	22	20	12.92	13	4	11	14	10	12

TABLE NOTES:

1. Assembly Number Legend

Single Arm:
 Arm Type - Pole Type = D# - S#
 = E# - T#

Double Arm:
 First Arm Type - Second Arm Type - Pole Type = D# - D# - S#
 = E# - E# - T#

2. If an entry appears in columns "FAA" and "FBA", a shorter arm is required. This is obtained by removing length from the arm tip. For these cases the mast arm length shall be shortened from "FA" to "FAA" and the tip diameter shall be increased from "FB" to "FBA".

3. If an entry appears in columns "UAA" and "UCA", a shorter pole is required. This is obtained by removing length from the pole tip. For these cases the pole height shall be shortened from "UA" to "UAA" and the pole tip diameter shall be increased from "UC" to "UCA".

4. The foundations for Standard Mast Arm Assemblies are pre-designed and are based upon the following conservative soil criteria which covers the great majority of soil types found in Florida. Only complete the "Special Drilled Shaft" data information if site conditions dictate drilled shafts with additional foundation capacity.

Classification = Cohesionless (Fine Sand)
 Friction Angle = 30 Degrees (30°)
 Unit Weight = 50 lbs./cu. ft. (assumed saturated)

GENERAL NOTES:

1. Work this sheet with the Signal Designer's "Mast Arm Tabulation". See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.

2. Work with Index Nos. 17743 and 17745.



3. See Section 649 of the FDOT Specifications for Galvanized Mast Arm Assembly.

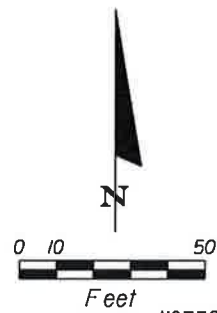
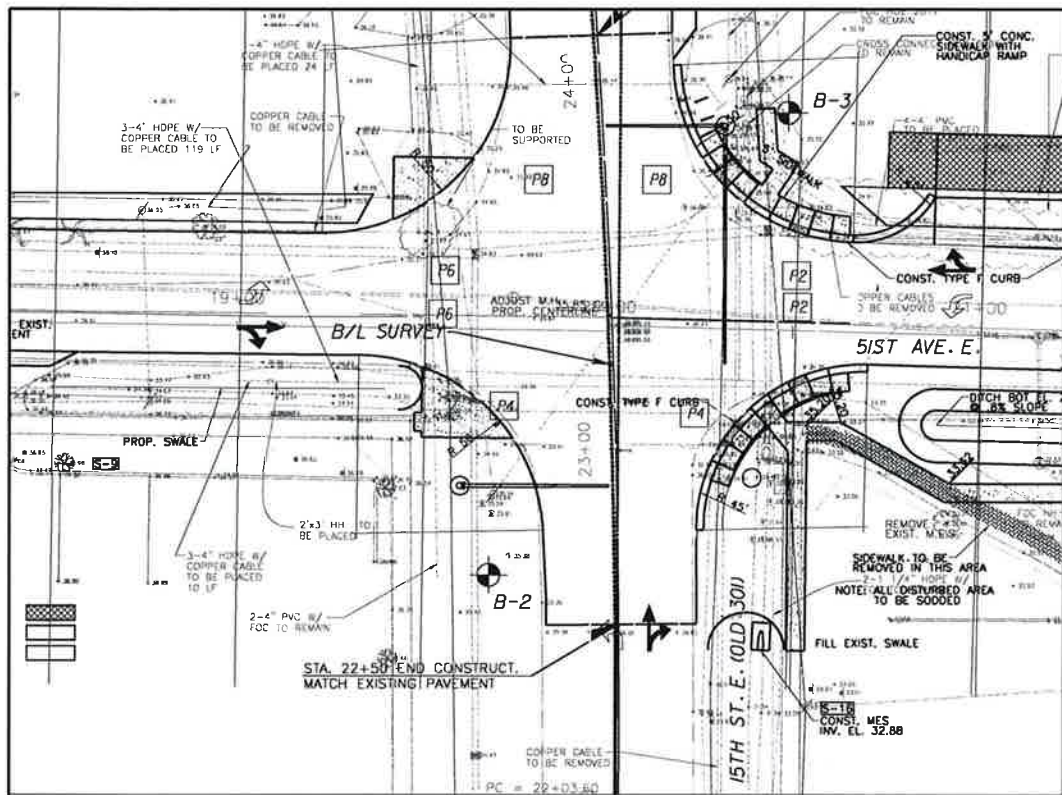
4. Design based on borings taken and signed & sealed by Larry P. Moore, P.E. of Tierra, Inc. dated December 16, 2010.

5. Soil parameters used for Special Drilled Shaft (for Pole 1).

Classification = Cohesionless (Fine Sand)
 Friction Angle = 29 Degrees (29°)
 Unit Weight = 42.6 lbs./cu. ft. (assumed saturated)

Handwritten signature
 02-06-2013

No.		REVISIONS		DATE	BY	CHECKED BY	CAS	SCALE	NTS	DESIGNED BY	SK	DRAWN BY	JSR	SCALE	NTS	DESIGNED BY	SK	DRAWN BY	JSR	CHECKED BY	CAS
 HDR Engineering, Inc. 2601 Cattleman Road Suite 400 Sarasota, FL 34232-6212 FBPR Certificate of Authorization No. 4213																					
DATE 12/14/12 PROJECT NO. 6029960																					
 MANATEE COUNTY PUBLIC WORKS												DESIGN ENGINEER SHINJI KONNO FL. LICENSE NO. 39536		MAST ARM ASSEMBLIES DATA TABLE (STANDARD)				SHEET NO. T-8			



NOTES:

- WEATHERED LIMESTONE WAS ENCOUNTERED WITHIN THE BORING DEPTHS. FOUNDATION EXCAVATION INTO AND/OR THROUGH THIS MATERIAL MAY BE DIFFICULT AND MAY REQUIRE SPECIALIZED EQUIPMENT. THE CONTRACTOR SHOULD BE PREPARED FOR EXCAVATION INTO OR THROUGH THIS MATERIAL.
- TEMPORARY CASING FOR SHAFT INSTALLATION MAY BE REQUIRED IN ORDER TO PREVENT THE COLLAPSE/SLOUGHING OF THE SANDY SOILS AND/OR GROUNDWATER INTRUSION DURING THE SHAFT EXCAVATION.
- STATION, OFFSET AND ELEVATION OF BORINGS WERE ESTIMATED USING MICROSTATION FILES IN CONJUNCTION WITH THE UTM COORDINATES OBTAINED IN THE FIELD BY TIERRA, INC. USING A GPS DEVICE AND THEREFORE SHOULD BE CONSIDERED APPROXIMATE.

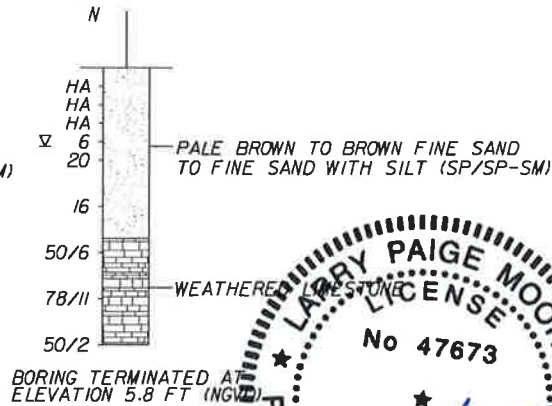
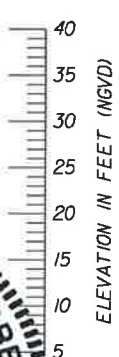
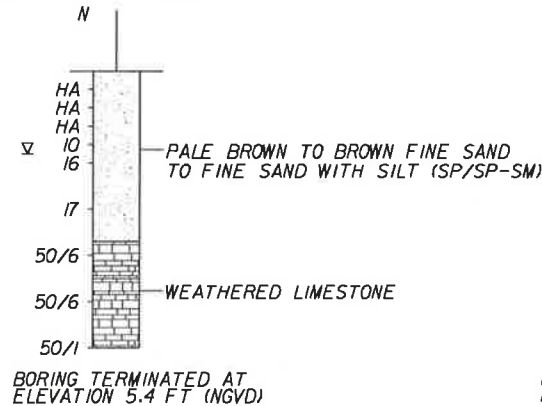
LEGEND

- PALE BROWN TO BROWN FINE SAND TO FINE SAND WITH SILT (SP/SP-SM)
- WEATHERED LIMESTONE
- GREEN SANDY CLAY TO CLAY (CL/CH)
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- HA HAND AUGERED TO VERIFY UTILITY CLEARANCE
- ∇ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- APPROXIMATE SPT BORING LOCATION
- B/L SURVEY BASELINE OF SURVEY OF 15TH ST. E. (OLD 301)
- NGVD NATIONAL GEODETIC VERTICAL DATUM OF 1929

BORING LOCATION PLAN

BOR # B-2
 STA. 22+65
 REF. B/L SURVEY
 OFF. 34 LT
 ELEV. 35.4
 DATE 12/6/2010
 DRILLER I. POORAN
 HAMMER SAFETY
 RIG D-25

BOR # B-3
 STA. 23+88
 REF. B/L SURVEY
 OFF. 52 RT
 ELEV. 35.8
 DATE 12/6/2010
 DRILLER I. POORAN
 HAMMER SAFETY
 RIG D-25



BORING NUMBER	DEPTH	N	SOIL CLASSIFICATION	SOIL UNIT WEIGHT (PCF)		SOIL ANGLE OF FRICTION (DEGREES)	COHESION (PSF)	EARTH PRESSURE COEFFICIENT	
				γ SAT	γ SUB			ACTIVE (Ka)	PASSIVE (Kp)
B-2	0 to 6	HA	SP/SP-SM	105	42.6	29	0	0.347	2.88
	6 to 18.5	10 to 17	SP/SP-SM	110	47.6	30	0	0.333	3.00
	18.5 to 30	50/6 to 50/1	WEATHERED LIMESTONE	135	72.6	0	12000*	1.000	1.00
B-3	0 to 8	HA to 6	SP/SP-SM	105	42.6	29	0	0.347	2.88
	8 to 18.5	16 to 20	SP/SP-SM	110	47.6	30	0	0.333	3.00
	18.5 to 30	78/11 to 50/2	WEATHERED LIMESTONE	135	72.6	0	12000*	1.000	1.00

* ULTIMATE SHEAR STRENGTH

SAFETY HAMMER	
GRANULAR MATERIALS-RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4
LOOSE	4 to 10
MEDIUM DENSE	10 to 30
DENSE	30 to 50
VERY DENSE	GREATER THAN 50
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2
SOFT	2 to 4
FIRM	4 to 8
STIFF	8 to 15
VERY STIFF	15 to 30
HARD	GREATER THAN 30

15TH STREET EAST/51ST AVENUE EAST

SCALE AS NOTED		E.O.R.: LARRY P. MOORE P.E. LICENSE NUMBER 47673		DESIGN ENGINEER LARRY P. MOORE		SHEET NO. GT-1
DESIGNED BY BJS		TIERRA INC 7351 TEMPLE TERRACE HIGHWAY, TAMPA, FL. 33637 CERTIFICATE OF AUTHORIZATION: 6486		FL. LICENSE NO. 47673		
DRAWN BY BJS		PROJECT NO. 6029960		MANATEE COUNTY PUBLIC WORKS		REPORT OF CORE BORINGS
CHECKED BY IK						
No.	REVISIONS	DATE	BY			