

CITY of TAMPA



MOBILITY DEPARTMENT

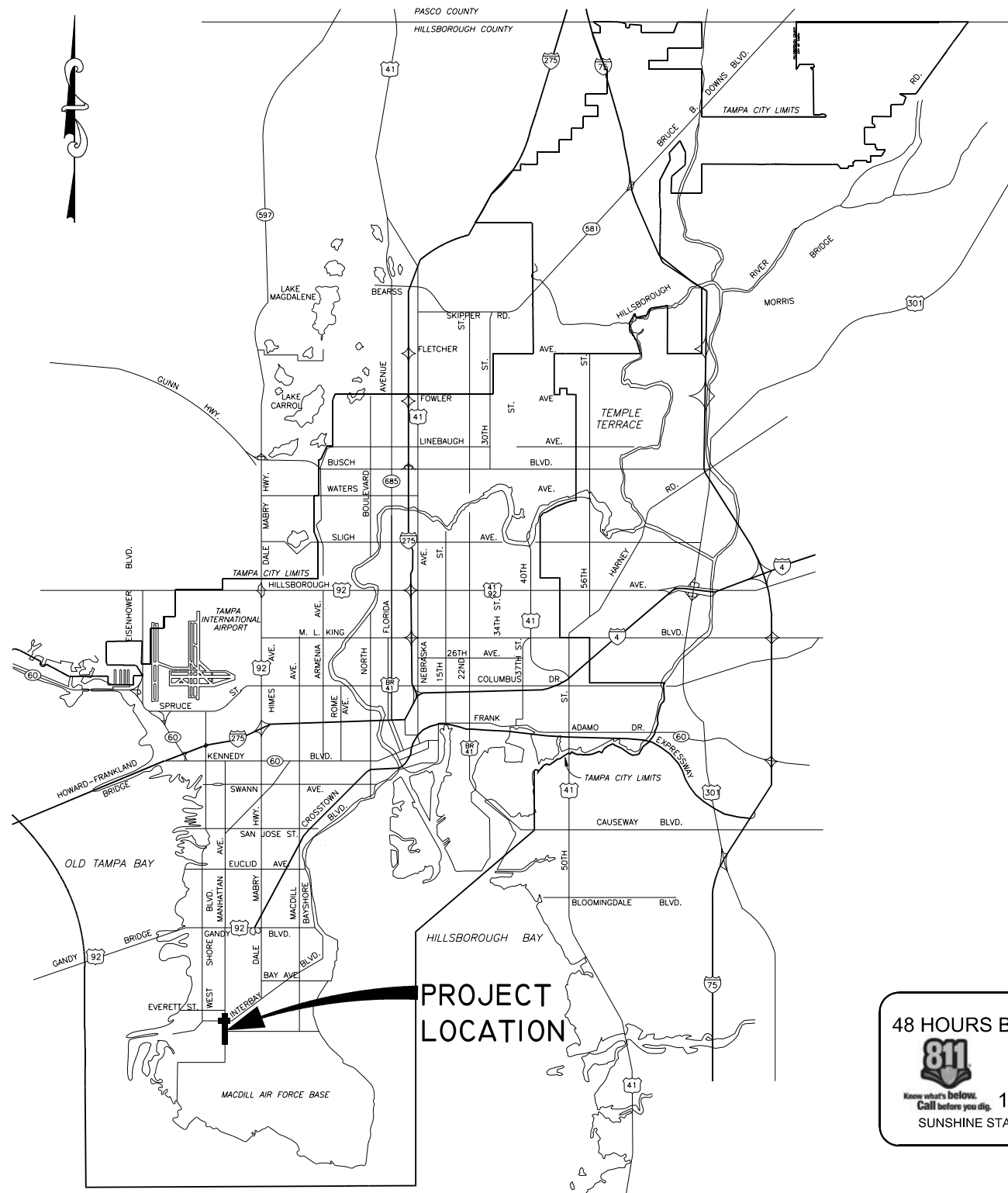
PLANS FOR S. MANHATTAN AVE. AND INTERBAY BLVD. ROADWAY AND INTERSECTION IMPROVEMENT PROJECT

C.I.P. # 1000980

100% SUBMITTAL - JUN. 22, 2021

CITY PROJECT MANAGER: BEN MONEY, PE

48 HOURS BEFORE DIGGING
 CALL 811
 OR
 TOLL FREE
 1-800-432-4770
 SUNSHINE STATE ONE CALL CENTER



**PROJECT
LOCATION**

GOVERNING STANDARDS AND SPECIFICATIONS:
 FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD PLANS
 FISCAL YEAR 2020-21.
 FLORIDA DEPARTMENT OF TRANSPORTATION, JULY 2020 STANDARD SPECIFICATIONS
 FOR ROAD AND BRIDGE CONSTRUCTION.
 SPECIFICATIONS CAN BE FOUND AT THE FOLLOWING WEBSITE:
[HTTP://WWW.FDOT.GOV/PROGRAMMANAGEMENT/IMPLEMENTED/SPECBOOKS](http://www.fdot.gov/PROGRAMMANAGEMENT/IMPLEMENTED/SPECBOOKS)



APPROVED BY:
 BALA PADMANABHAN, P.E. #37332
 BALA CONSULTING SERVICES, LLC
 18527 BITTERN AVE., LUTZ, FL 33558
 T: (813) 962-4697 E: balapadman@balacs.net
 CERTIFICATE OF AUTHORIZATION NO: 31398

No.	DATE	REVISIONS
3		
2		
1		

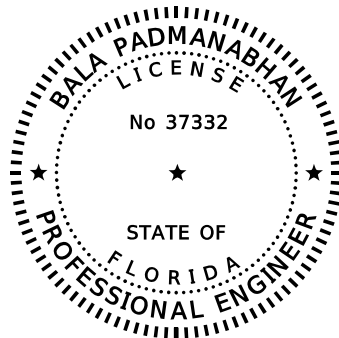
DES: RL
 DRN: RL
 CKD: BP
 DATE: 6/22/21

CITY of TAMPA
 MOBILITY DEPARTMENT
 C.I.P. No. 1000980

S. MANHATTAN AVE. and INTERBAY BLVD.
 ROADWAY and INTERSECTION IMPROVEMENT PROJECT
 COVER SHEET

FILE PATH: C:\Projects\City of Tampa\Manhattan Ave\Cadd\Signal\1_KEYSSG01.dwg
 DATE: 6/27/2021 PLOT TIME: 3:55:32 AM

SHEET NO.	SHEET DESCRIPTION
1	COVER SHEET
2	INDEX AND SIGNATURE SHEET
3	SUMMARY OF QUANTITIES
4	GENERAL NOTES
5	SIGNALIZATION PLAN
6	MAST ARM TABULATION SHEET
7	MAST ARM DATA TABLE
8	GUIDESIGN WORKSHEET
9	REPORT OF CORE BORINGS



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

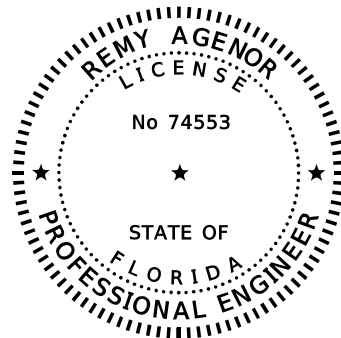
ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

BALA CONSULTING SERVICES, LLC
18527 BITTERN AVE.
LUTZ, FL 33558
CERTIFICATE OF AUTHORIZATION NO: 31398
BALA PADMANABHAN, P.E. NO. 37332

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

- 1 COVER SHEET
- 2 INDEX AND SIGNATURE SHEET
- 3 TABULATION OF QUANTITIES
- 4 GENERAL NOTES
- 5 SIGNALIZATION PLAN
- 6 MAST ARM TABULATION SHEET
- 8 GUIDESIGN WORKSHEET



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

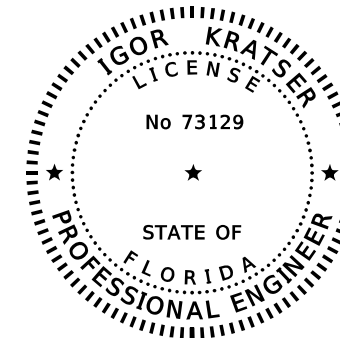
ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

AGENOR & CAMPBELL STRUCTURAL ENGINEERS, LLC
670 ISLAND WAY, SUITE 301
CLEARWATER, FL 33767
CERTIFICATE OF AUTHORIZATION NO: 30109
REMY AGENOR, P.E. NO. 74553

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

- 2 INDEX AND SIGNATURE SHEET
- 7 MAST ARM DATA TABLE



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

TEST LAB INC.
4112 W. OSBORNE AVE.
TAMPA, FLORIDA 33614
CERTIFICATE OF AUTHORIZATION NO: 1450
IGOR KRATSER, P.E. NO. 73129

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

- 2 INDEX AND SIGNATURE SHEET
- 9 REPORT OF CORE BORINGS

FILE PATH: C:\Projects\City of Tampa\Manhattan Ave\Cadd\Signal\2_INDEXSG01.dwg
DATE: 6/27/2021 PLOT TIME: 3:55:57 AM



APPROVED BY: _____ DATE: _____
BALA PADMANABHAN, P.E. #37332
BALA CONSULTING SERVICES, LLC
18527 BITTERN AVE., LUTZ, FL 33558
T: (813) 962-4697 E: balapadman@balacs.net
CERTIFICATE OF AUTHORIZATION NO: 31398

No.	DATE	REVISIONS
3		
2		
1		

DES: RL
DRN: RL
CKD: BP
DATE: 6/22/21

CITY of TAMPA
MOBILITY DEPARTMENT
C.I.P. No. 1000980

S. MANHATTAN AVE. and INTERBAY BLVD.
ROADWAY and INTERSECTION IMPROVEMENT PROJECT
INDEX AND SIGNATURE SHEET

PAY ITEM #	PAY ITEM DESCRIPTION	UNIT	QUANTITY
0630 2 11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	650
0630 2 12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	800
0632 7 1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL	PI	1
0632 7 6	SIGNAL CABLE, REMOVE- INTERSECTION	PI	1
0633 4 6	SIGNALS COMMUNICATION CABLE- TWISTED PAIR CABLE, REMOVE	LF	400
0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	28
0639 1122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS	1
0639 2 1	ELECTRICAL SERVICE WIRE, FURNISH & INSTALL	LF	10
0639 2 6	ELECTRICAL SERVICE WIRE, REMOVE	LF	20
0639 3 11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA	1
0641 2 12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA	1
0641 2 80	PRESTRESSED CONCRETE POLE, COMPLETE POLE REMOVAL- POLE 30' AND GREATER	EA	1
0646 1 11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	8
0646 1 60	ALUMINUM SIGNALS POLE, REMOVE	EA	4
0649 21 21	STEEL MAST ARM ASSEMBLY, FURNISH AND INSTALL, SINGLE ARM 78'	EA	1
0650 1 14	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY	AS	8
0650 1 16	TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY	AS	1
0653 1 11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	AS	8
0660 3 11	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT	EA	1
0660 3 12	VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	1
0665 1 11	PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD	EA	8
0670 5111	TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 1 PREEMPTION	AS	1
0670 5600	TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET	AS	1
0685 1 11	UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE	EA	1
0700 5 22	INTERNALLY ILLUMINATED SIGN, FURNISH & INSTALL, OVERHEAD MOUNT, 12-18 SF	EA	2

FILE PATH: C:\Projects\City of Tampa\Manhattan Ave\Cadd\Signal\3_SUMQSG01.dwg
DATE: 7/9/2021 PLOT TIME: 3:23:07 PM



APPROVED BY: _____ DATE: _____
BALA PADMANABHAN, P.E. #37332
BALA CONSULTING SERVICES, LLC
18527 BITTERN AVE., LUTZ, FL 33558
T: (813) 962-4697 E: balapadman@balacs.net
CERTIFICATE OF AUTHORIZATION NO: 31398

No.	DATE	REVISIONS
3		
2		
1		

DES: RL
DRN: RL
CKD: BP
DATE: 6/22/21

CITY of TAMPA
MOBILITY DEPARTMENT
C.I.P. No. 1000980

S. MANHATTAN AVE. and INTERBAY BLVD.
ROADWAY and INTERSECTION IMPROVEMENT PROJECT
SUMMARY OF QUANTITIES

GENERAL NOTES:

- NO AS BUILTS ARE AVAILABLE FOR INTERSECTION SHOWN IN THE SIGNALIZATION PLANS.
- ONE WEEK PRIOR TO THE START OF THE TRAFFIC SIGNAL INSTALLATION, THE SIGNAL CONTRACTOR SHALL CONTACT:
A) MR. DAVE WORLEY, TRAFFIC SIGNAL SUPERVISOR
CITY OF TAMPA
3802 E. 26TH AVENUE
TAMPA, FLORIDA 33605
PHONE: (813) 393-8425
EMAIL: DAVE.WORLEY@TAMPAGOV.NET
- PRIOR TO ALL TRAFFIC SIGNAL CHANGES (I.E., MAINTENANCE OF TRAFFIC CHANGES, NEW SIGNAL INSTALLATIONS, DIFFERENT PAVEMENT CONFIGURATIONS, ETC.), CONTACT CITY OF TAMPA, DAVE WORLEY AT (813) 393-8425 AT LEAST 48 HOURS IN ADVANCE FOR IMPLEMENTATION OF APPROPRIATE SIGNAL TIMINGS.
- THE CONTRACTOR SHALL CONTACT THE LOCAL POWER COMPANY FOR THEIR ASSISTANCE IN PERFORMING ALL NECESSARY WORK UNDER POWER LINES. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE INSTALLATION OF SPAN WIRE, SIGNAL CABLE, FIBERGLASS INSULATORS, AND / OR SIGNAL POLES.
- ANY TRAFFIC SIGNAL EQUIPMENT RELOCATION WILL BE PERFORMED BY CITY FORCES, CONTACT DAVE WORLEY (813) 393-8425 WHEN THE INITIAL PAVEMENT MARKINGS ARE COMPLETE.
- CONTRACTOR SHALL REQUEST GENERAL INFORMATION PACKAGE FROM SIGNAL SHOP. NO DAISY CHAINING OF PEDESTRIAN CABLE. CONTACT JAMES COOK WITH PLANNING AND DEVELOPMENT TO VERIFY ADDRESS FOR ILLUMINATED STREET NAME SIGNS AT (813) 274-7707, EMAIL ADDRESS: JAMES.COOK@TAMPAGOV.NET.
- THE CONTRACTOR SHALL SUBMIT THE AS-BUILT PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO THE 48 HOUR TEST. UPON THE 48 HOUR TEST, THE ENGINEER SHALL PROVIDE AT LEAST ONE COPY OF THE FINAL AS-BUILT PLANS AND BORE LOGS TO CITY OF TAMPA AND ONE COPY TO DISTRICT TRAFFIC OPERATIONS IN CAD AND PDF.
- THE CONTRACTOR IS TO REQUEST AND OBTAIN APPROVAL FROM THE ENGINEER FOR AVIAN ABATEMENT TO PREVENT NESTING IN THE MAST ARM ASSEMBLY, INCLUDING THE ARM CONNECTION AREA.
- UNLESS OTHERWISE NOTED, TURN OVER ALL REMOVED CONTROLLER CABINETS AND UPS CABINETS TO THE CITY OF TAMPA SIGNAL SHOP IN EXISTING CONDITION, DISPOSE OF ALL OTHER EQUIPMENT INCLUDING POLES AND SPAN WIRE IN AREAS PROVIDED BY THE CONTRACTOR. COST OF DELIVERY WILL BE INCLUDED IN THE UNIT PRICE OF THE REMOVED PAY ITEMS.
- ALL FIELD WIRING MUST BE NEATLY BUNDLED AND CLEARLY IDENTIFIED WITH PERMANENT, LEGIBLE, WEATHER-PROOF TAGS SECURELY ATTACHED TO EACH CABLE. THE TAGGING SYSTEM PROPOSED SHALL BE SUBMITTED FOR APPROVAL WITH THE OTHER EQUIPMENT SUBMITTALS REQUIRED FOR THIS PROJECT.
- SIGNALIZATION PULL BOXES AND COVERS MUST INCLUDE THE RAISED LOGO "TRAFFIC SIGNAL", INTERCONNECT PULL BOXES AND SPLICE BOXES MUST INCLUDE THE RAISED LOGO "CITY OF TAMPA FIBER OPTIC". ALL PULL & SPLICE BOXES TO INCLUDE CONCRETE MOW PADS AT SODDED AREAS PER CITY DETAILS.
- VEHICLE DETECTION SHALL BE 'GRID SMART VIDEO' DETECTION. CAMERA SHALL BE MOUNTED ON MAST ARM AS SHOWN ON PLANS. CONTACT DAVE WORLEY, CITY OF TAMPA, TRAFFIC SIGNAL SUPERVISOR AT (813) 393-8425 FOR EQUIPMENT SPECIFICATIONS AND JOHN GASKINS AT (813) 351-9973 FOR GRID SMART VIDEO INFORMATION AND INSTALLATION.

POLE MOUNT INSTALLATION: CAMERA SHOULD BE MOUNTED AT LEAST 30 FT ABOVE THE ROADWAY, NO MORE THAN 75 FT FROM THE CENTER OF THE INTERSECTION AND NO MORE THAN 150 FT FROM THE FRONT OF THE FARTHEST STOP LINE. THIS DIRECTION INCLUDES A DUAL CAMERA APPLICATION. MAST ARM MOUNT: CAMERA SHOULD BE NO MORE THAN 50 FT FROM THE CENTER OF THE INTERSECTION AND SHOULD BE NO LESS THAN 25 FT IN HEIGHT.
- FIRE STATION PRE-EMPTION: THERE IS AN EXISTING FIRE STATION PRE-EMPTION CABLE RUNNING TO THE FIRE STATION ON THE SOUTHEAST CORNER. EXISTING CABLE CAN BE REUSED IF IT WILL REACH THE NEW CONTROLLER CABINET LOCATION. CABLE IS TO BE INTERCEPTED AT THE PROPERTY LINE AS SHOWN ON THE SIGNAL PLAN. A PULL BOX SHALL BE PLACED AT THE INTERCEPT POINT AND NEW CONDUIT RUN TO THE NEW CONTROLLER CABINET. IF EXISTING CABLE DOES NOT REACH CABINET LOCATION, THE ENTIRE CABLE SHALL BE REPLACED BACK TO THE FIRE STATION. IF THE PRE-EMPT CABLE IS DAMAGED DURING THE REBUILD, THE CONTRACTOR MUST REPLACE THE CABLE AT THEIR EXPENSE.


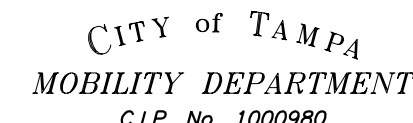
PAY ITEM FOOTNOTES:

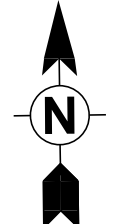
- 630-2-11:
ALL CONDUIT RUNS SHOWN ON THE PLANS ARE SCHEMATIC AND FIELD ADJUSTMENTS MAY BE NECESSARY. WITH THE EXCEPTION OF ELECTRICAL POWER SERVICE DUCTS, AND JACK AND BORE SLEEVES, ALL UNDERGROUND AND UNDER PAVEMENT CONDUITS SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF TWO INCHES, UNLESS OTHERWISE SPECIFIED IN THE PLANS. DETERMINE THE EXACT LOCATIONS OF ALL UTILITIES PRIOR TO DIGGING. ALL CONDUITS SHALL BE TERMINATED WITH A BELL END. SPARES ARE TO BE CAPPED AND HAVE TRACK WIRE OR MULE TAPE.
- 632-7-1:
WIRE EACH PHASE/MOVEMENT FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT. THIS INCLUDES THE LEFT TURN MOVEMENT AND ENSURE THAT CONDUCTORS ARE AVAILABLE FOR EITHER PROTECTED OR PERMISSIVE MOVEMENTS. VERIFY COLOR CODES FOR SIGNAL CABLE AND INTERCONNECT CABLE WITH THE CITY OF TAMPA TRAFFIC SIGNAL SUPERVISOR BEFORE ORDERING AND WIRE THE SIGNAL IN ACCORDANCE WITH THAT COLOR CODE AND FDOT SPECIFICATIONS ENSURING THERE IS ONE NEUTRAL PER APPROACH.
- 635-2-11:
ALL PULL & SPLICE BOXES TO INCLUDE CONCRETE MOW PADS AT SODDED AREAS PER CITY DETAILS.
- 646-1-11:
ALL ALUMINUM SIGNAL PEDESTAL POLES SHALL BE MOUNTED ON TRANSFORMER BASES AND SHALL BE GROUNDED AT THE TRANSFORMER BASE. MUST INCLUDE ADDITIONAL COST OF LABOR AND MATERIAL REQUIRED FOR INSTALLATION OF PEDESTRIAN SIGNAL SIGN FTP-86B-06.
- 653-1-11:
50-2 CONDUCTOR CABLE FOR EACH PEDESTRIAN BUTTON AND (1) 5-CONDUCTOR FOR EACH PEDESTRIAN SIGNAL HEAD. PUSH BUTTON SHALL BE MOUNTED NO FURTHER THAN 5 FT FROM THE EXTENSION OF THE CROSSWALK LINES, AND WITHIN 10 FT OF THE CURB LINE. CENTER OF PED. BUTTON SHALL BE EXACTLY 42 INCHES IN HEIGHT FROM THE FLAT LANDING OF THE SIDEWALK.
- 660-3-11 AND 660-3-12:
THIS ITEM INCLUDES ALL LABOR AND MATERIALS REQUIRED TO FURNISH AND INSTALL A MICROWAVE DETECTION SYSTEM INCLUDING MICROWAVE DETECTORS, PROCESSORS, INTERFACE UNITS, CABLE PLANTS, MOUNTING BRACKETS, AND ANY ADDITIONAL EQUIPMENT REQUIRED TO MAKE A COMPLETE AND ACCEPTABLE SYSTEM. DO NOT SPLICE THE CABLE BETWEEN THE MICROWAVE DETECTION AND THE CONTROLLER CONNECTION. MICROWAVE DETECTION SYSTEM IS TO BE COMPATIBLE WITH THE CITY OF TAMPA CONTROLLER EQUIPMENT, CABINET, AND TRAFFIC SIGNAL COMPUTER SYSTEM. COORDINATE WITH THE MAINTAINING AGENCY FOR UNIT ACCEPTANCE.
- 670-5-111:
THIS PAY ITEM SHALL INCLUDE ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING A FULLY LOADED TS2 TYPE-1, SIZE P-44 CONTROLLER CABINET ASSEMBLY WITH AN EIGHT PHASE BACKPLANE, MINIMUM SIXTEEN LOAD BAY POSITIONS, NO PAINT OUTSIDE, WHITE PAINT INSIDE, GPS CLOCK SYNC, TWO QUAD OUTLETS, ONE DUPLEX GFI, WALL-MOUNT PATCH PANEL (12X SINGLE MODE WITH SC-CONNECTORS), ETHERNET EDGE SWITCH, CONTROLLER WITH CENTRAL 51SOFTWARE LICENSE COMPATIBLE WITH THE CITY'S CENTRACS TRAFFIC CONTROL SYSTEM AND MMU. THE CONTRACTOR SHALL NOTIFY THE CITY OF TAMPA SIGNAL SHOP AND FDOT DISTRICT SEVEN TRAFFIC OPERATIONS AT LEAST 48 HOURS IN ADVANCE OF TURNING ON A NEW OR MODIFIED CONTROLLER CABINET ASSEMBLY. CABINET DOOR SHALL OPEN AWAY FROM TRAFFIC, THE TECHNICIAN SLAB SHALL BE A MAXIMUM OF 4" BELOW THE TOP OF THE CONCRETE PAD, THIS MUST INCLUDE ADDITIONAL COST OF LABOR, CONCRETE AND OTHER MATERIALS FOR CONTROLLER BASE, PAD AND STEPS AS ONE UNIT.

TEST HOLE FIELD DATA AT PROP. MAST ARM LOCATION:

Subsurface Utility Engineering Test Hole Field Data										
GFY Project No.:	14Y217025U			Date:	10/30/2020		Revised:			
Client name:	Bala Consulting Services, LLC			Vac Truck/Trailer No.:	169		SUE Crew:	PW,AD,KN		
Proj. Name:	Manhattan Ave and Interbay Blvd Intersection Improvement Project			Prepared By:	JC		Checked By:	MJC		
Proj. Limits:	Manhattan Ave and Interbay Blvd Intersection			Units:	U.S. Survey Feet		Field Books:	821,911		
City / County / State:	Tampa/Hillsborough/Florida			Horizontal Datum:	NAD 83/11		Vertical Datum:	NAVD 88		
Legend:	N/A Not Applicable			O.D.	Outside Diameter		VVH	Verified Vertical and Horizontal		
	N-S North-South			PVC	Polyvinyl Chloride					
Test Hole Date	Test Hole Number	Utility Size, Material & Type (Size measured in inches and is O.D.)	Northing	Easting	Ground Elevation	Manual Depth (Top)	Utility Elevation (Top)	Utility Owner	Utility Direction	Surface Type
10/26/2020	VVH101	4" PVC (x2) + 2" Direct Buried Telephone	1284346.98	488562.07	9.19'	2.10'	7.09'	Frontier	N-S	Soil
10/26/2020	VVH102	Bottom of Excavation	1284344.93	488565.81	8.98'	10.0'	-1.0'	N/A	N/A	Soil
10/26/2020	VVH103	Bottom of Excavation	1284348.40	488568.97	9.03'	10.0'	-1.0'	N/A	N/A	Soil
10/26/2020	VVH104	Bottom of Excavation	1284352.29	488565.89	8.63'	10.0'	-1.4'	N/A	N/A	Soil
10/26/2020	VVH105	Bottom of Excavation	1284348.80	488565.54	9.11'	10.0'	-0.9'	N/A	N/A	Soil

FILE PATH: C:\Projects\City of Tampa\Manhattan Ave\Cadd\Signal\4_GNWTS001.dwg
DATE: 7/9/2021 PLOT TIME: 3:23:47 PM

	APPROVED BY:	No.	DATE	REVISIONS	DES: RL		S. MANHATTAN AVE. and INTERBAY BLVD. ROADWAY and INTERSECTION IMPROVEMENT PROJECT GENERAL NOTES	SHEET 4 of 9
	BALA PADMANABHAN, P.E. #37332 BALA CONSULTING SERVICES, LLC 18527 BITTERN AVE., LUTZ, FL 33558 T: (813) 962-4697 E: balapadman@balacs.net CERTIFICATE OF AUTHORIZATION NO: 31398	3			DRN: RL			
		2			CKD: BP			
		1			DATE: 6/22/21			



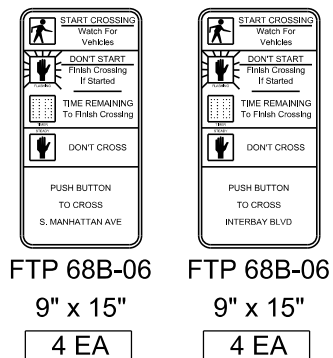
CONTROLLER OPERATION NOTES:

1. THE MAJOR STREET IS INTERBAY BLVD.
2. THE MINOR STREET IS S. MANHATTAN AVE.
3. STANDARD SIGNAL OPERATING PLAN NO. 11 WITH ACTUATED PEDESTRIAN TIMING FOR MOVEMENTS 2 (P2), 4 (P4), 6 (P6) AND 8 (P8).
4. EACH PHASE/MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT.
5. WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2, B2W, B6E SHALL FLASH YELLOW AND ALL OTHER MOVEMENTS SHALL FLASH RED.
6. THE POSTED SPEED LIMITS ARE 35 MPH FOR BOTH STREETS.
7. MEET ALL APPLICABLE OSHA REQUIREMENTS (10' MINIMUM DISTANCE MAINTAINED BETWEEN THE EQUIPMENT AND THE ELECTRICAL OVERHEAD FACILITY).
8. INSTALL POWER SERVICE METER BASE & DISCONNECT ON THE CONCRETE SERVICE POLE AS SHOWN ON THE PLANS AND PER INDEX NUMBERS 639-001 AND 639-002.
9. CONTRACTOR SHALL RETURN ALL PEDESTRIAN POLES AND EQUIPMENT TO CITY OF TAMPA SIGNAL SHOP.
10. SEE GENERAL NOTES SHEET NO. 4, NOTE 13 FOR FIRE STATION PRE-EMPTION DETAILS.

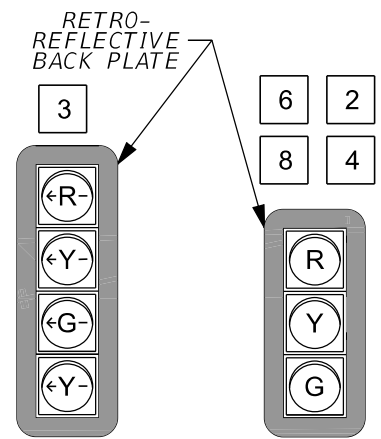
CONTROLLER TIMINGS						
TIMING FUNCTION	WB	SBLT	NB	NB	EB	SB
MOVEMENT NUMBER	2	3	4	4	6	8
MINIMUM GREEN	10	10	10	60	10	10
EXTENSION	3.0	3.0	3.0	0.0	3.0	3.0
MAXIMUM GREEN 1	30	35	35	60	30	35
MAXIMUM GREEN 2	40	45	45	60	40	45
YELLOW CLEARANCE	3.7	4.0	4.0	4.0	3.7	4.0
ALL RED	2.0	2.0	2.0	2.0	2.0	2.0
PEDESTRIAN WALK	7.0	--	7.0	-	7.0	7.0
PED. CLEARANCE	15.0	--	21.0	-	15.0	21.0
RECALL	OFF	OFF	OFF	OFF	OFF	OFF

EXISTING CONTROLLING TIMINGS TO REMAIN. THESE TIMINGS WILL NEED TO BE REVISED BY THE CITY OF TAMPA PRIOR TO CONSTRUCTION.

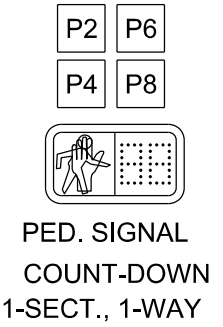
1 POLE LOCATION= STATION 53+68.00
OFFSET 36.0' LT.
GROUND EL. = 8.80
TOP OF FDN. EL. = 9.00



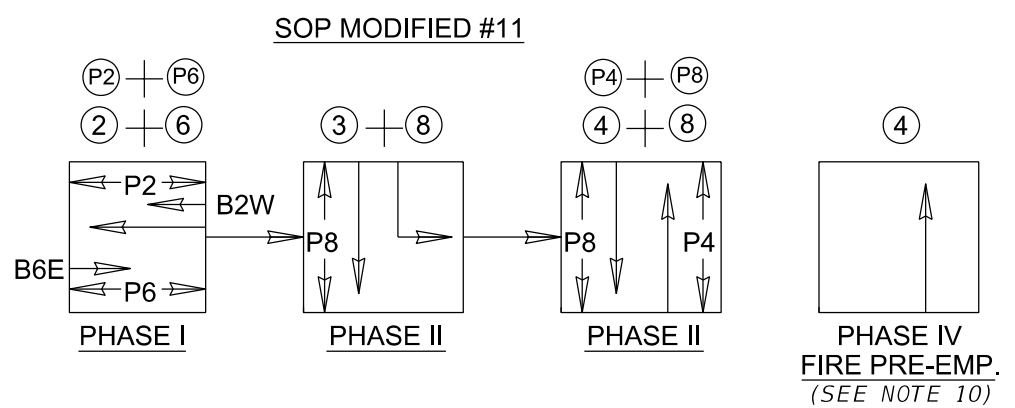
PED. CROSSING SIGN DETAILS



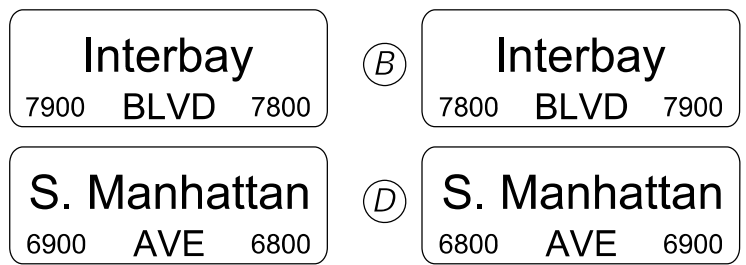
SIGNAL HEAD DISPLAY DETAILS
PROVIDE FLEXIBLE BACKPLATES WITH RETROREFLECTIVE BORDERS



8 AS
PED. SIGNAL COUNT-DOWN 1-SECT., 1-WAY

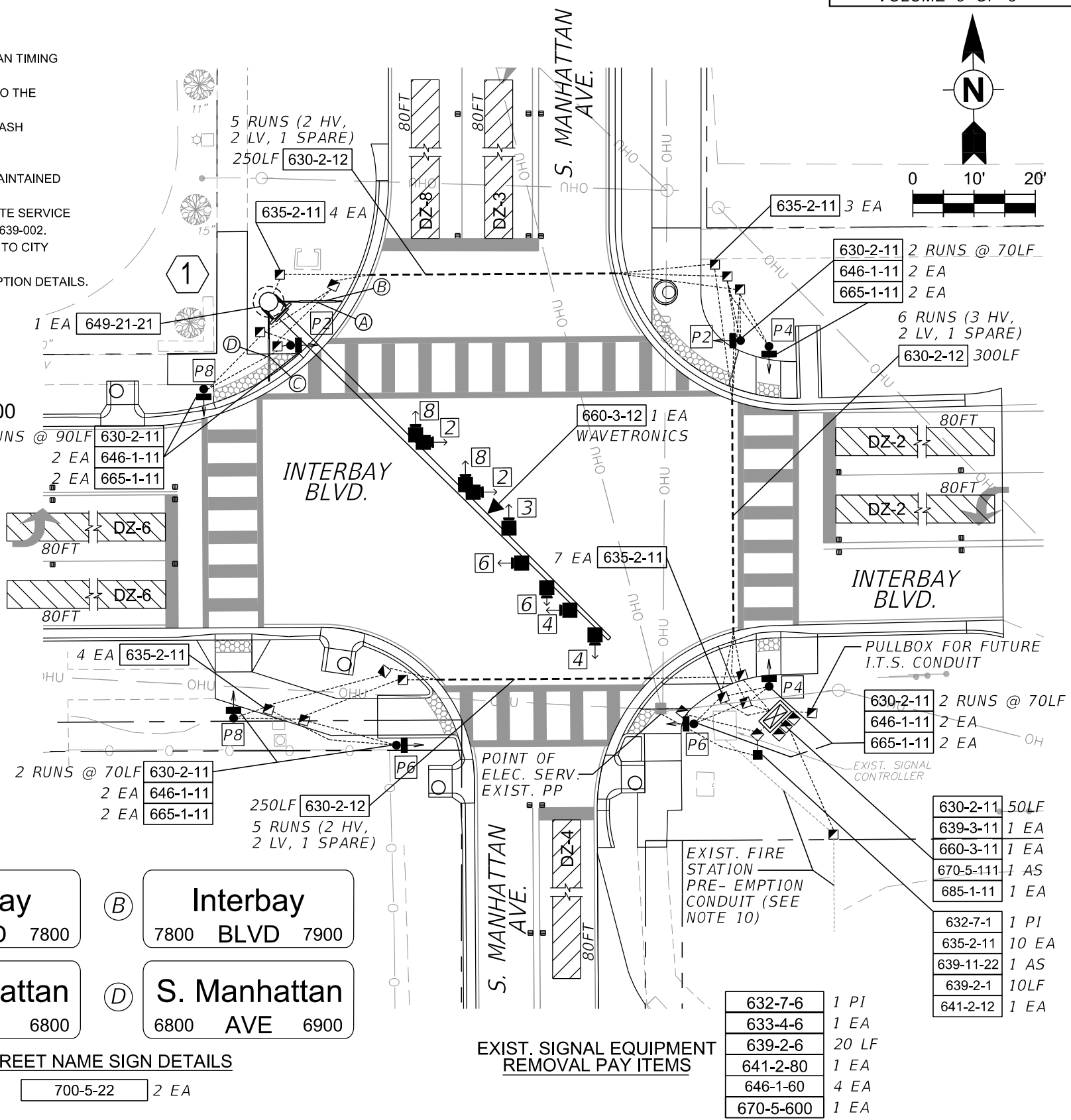


SOP MODIFIED #11



STREET NAME SIGN DETAILS

700-5-22 2 EA



EXIST. SIGNAL EQUIPMENT REMOVAL PAY ITEMS

632-7-6	1 PI
633-4-6	1 EA
639-2-6	20 LF
641-2-80	1 EA
646-1-60	4 EA
670-5-600	1 EA

630-2-11	50LF
639-3-11	1 EA
660-3-11	1 EA
670-5-111	1 AS
685-1-11	1 EA
632-7-1	1 PI
635-2-11	10 EA
639-11-22	1 AS
639-2-1	10LF
641-2-12	1 EA

FILE PATH: C:\Projects\City of Tampa\Manhattan Ave\Cadd\Signal\5_PLANS\SG01.dwg
DATE: 7/9/2021
PLOT TIME: 3:24:50 PM



APPROVED BY: _____ DATE: _____
BALA PADMANABHAN, P.E. #37332
BALA CONSULTING SERVICES, LLC
18527 BITTERN AVE., LUTZ, FL 33558
T: (813) 962-4697 E: balapadman@balacs.net
CERTIFICATE OF AUTHORIZATION NO: 31398

No.	DATE	REVISIONS
3		
2		
1		

DES: RL
DRN: RL
CKD: BP
DATE: 6/22/21

CITY of TAMPA
MOBILITY DEPARTMENT
C.I.P. No. 1000980

S. MANHATTAN AVE. and INTERBAY BLVD.
ROADWAY and INTERSECTION IMPROVEMENT PROJECT
SIGNALIZATION PLAN

STANDARD MAST ARM ASSEMBLIES DATA TABLE											Table Date 06/28/21
POLE ID NUMBER	DESIGNATION	FIRST ARM		SECOND ARM		UF (deg)	LL (deg)	POLE			DRILLED SHAFT ID
		ARM ID	FAA (ft.)	ARM ID	SAA (ft.)			POLE ID	UAA (ft.)	UB (ft.)	
Pole 1 Sta. 53+68	A78/S/H - P6/S	A78/S/H	36					P6/S	23.5	20.5	DS/25/5.0

NOTES [Notes Date 06-10-21]:


1. If an entry appears in column FAA, a shorter arm is required. This is obtained by removing length from the arm tip and the arm length shortened from FA to FAA. SAA Similar.
2. If an entry appears in column UAA, a shorter pole is required. This is obtained by removing length from the pole tip and the pole height shortened from UA to UAA.
3. Arm mounting height UB must be between 18-22 feet.
4. Work with Index 649-030 and 649-031.

FOUNDATION NOTES:

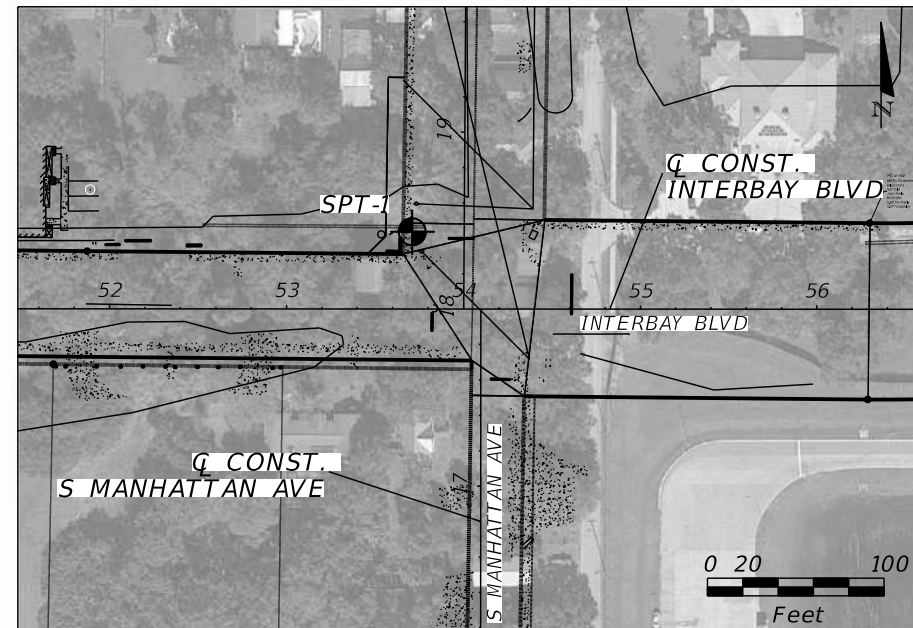
1. Design based on Borings taken by TEST LAB, Inc. See Report of Core Borings Sheet.
2. Assumptions and Values used in design for:

Pole 1, Sta. 53+68
Soil Type = Sand (Cohesionless)
Soil Friction Angle = 29 deg.
Soil Weight = 42.6 pcf
3. Due to the geologic conditions of the geographic area, anticipate the need for temporary casing to stabilize the excavation during construction. Concrete volume overruns may occur during the shaft installation process.

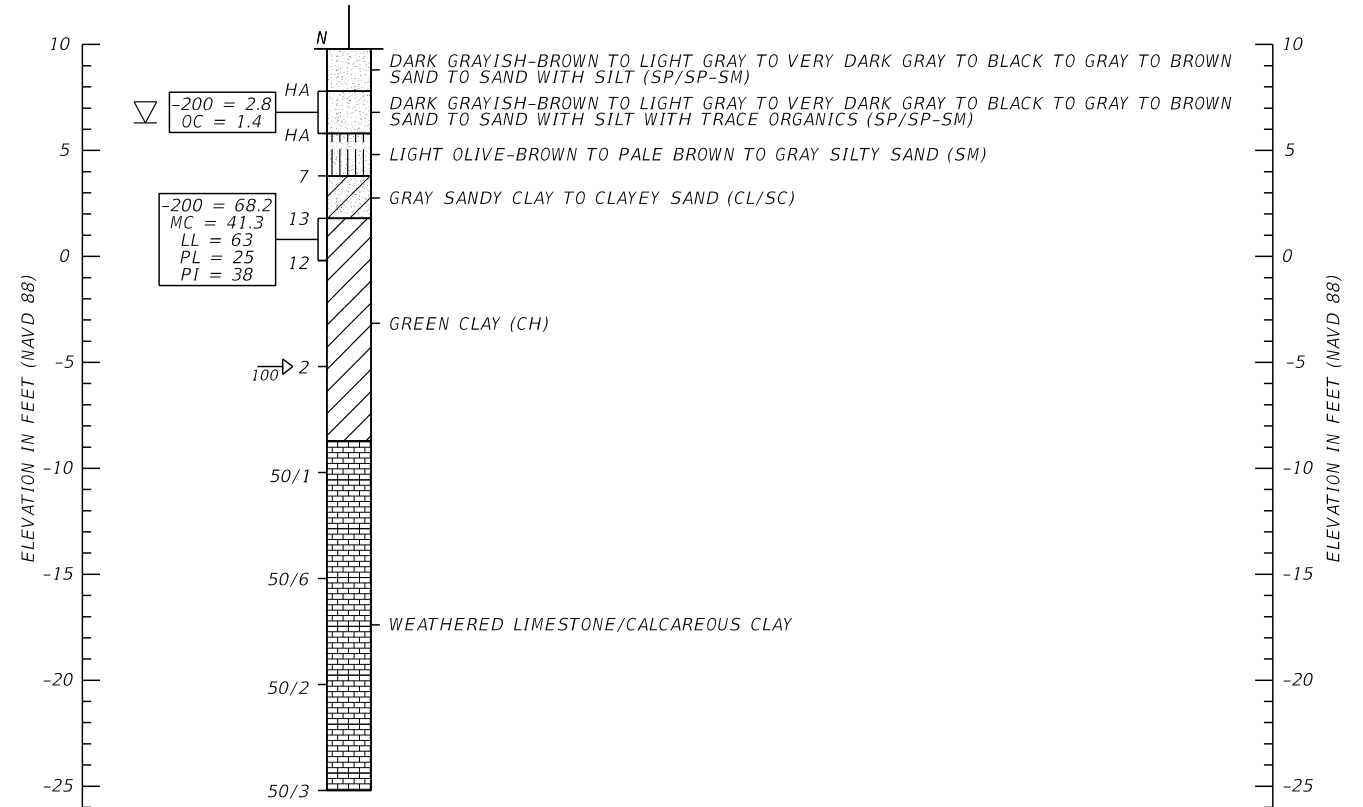
FILE PATH: F:\2020\City of Tampa Manhattan\B1\MiscDet01.dgn
DATE: 6/28/2021 PLOT TIME: 10:15:37 AM

	APPROVED BY:	No.	DATE	REVISIONS	DES: RA	<p style="text-align: center;">CITY of TAMPA MOBILITY DEPARTMENT C.I.P. No. 1000980</p>	<p style="text-align: center;">S. MANHATTAN AVE. and INTERBAY BLVD. ROADWAY and INTERSECTION IMPROVEMENT PROJECT</p> <p style="text-align: center;">MAST ARM DATA TABLE</p>	<p style="text-align: center;">SHEET 7 OF 9</p>
		3			DRN: RA			
	REMY AGENOR, P.E. #74553 DATE AGENOR & CAMPBELL STRUCTURAL ENGINEERS, LLC 670 ISLAND WAY, SUITE 301, CLEARWATER, FL 33767 T: (727) 219-7059 E: remy@ac-structural.com	2			CKD: CJC			
		1			DATE: 06/28/21			

BORING LOCATION PLAN



BOR # SPT-1
STA 53 + 71
REF. ϕ CONST. INTERBAY BLVD
OFF. 44' LT
ELEV. 9.8
DATE 7/16/2020



AUTOMATIC HAMMER			
GRANULAR MATERIALS - RELATIVE DENSITY	SPT N-VALUE (BLOW/FOOT)	SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOW/FOOT)
VERY LOOSE	LESS THAN 3	VERY SOFT	LESS THAN 1
LOOSE	3 TO 8	SOFT	1 TO 3
MEDIUM DENSE	8 TO 24	FIRM	3 TO 6
DENSE	24 TO 40	STIFF	6 TO 12
VERY DENSE	GREATER THAN 40	VERY STIFF	12 TO 24
		HARD	GREATER THAN 24

LEGEND

- DARK GRAYISH-BROWN TO LIGHT GRAY TO VERY DARK GRAY TO BLACK TO GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- LIGHT OLIVE-BROWN TO PALE BROWN TO GRAY SILTY SAND (SM)
- GRAY SANDY CLAY TO CLAYEY SAND (CL/SC)
- GREEN CLAY (CH)
- WEATHERED LIMESTONE/CALCAREOUS CLAY
- SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2488) GROUP SYMBOL AS DETERMINED BY VISUAL AND/OR LABORATORY TESTING
- HA HAND AUGERED TO AVOID UTILITY CONFLICTS
- NAVD 88 NORTH AMERICAN VERTICAL DATUM OF 1988
- ELEV. 9.8 GROUND SURFACE ELEVATION (NAVD 88) AT TEST LOCATION
- GROUNDWATER TABLE AT TIME OF DRILLING
- LOSS OF CIRCULATION OF DRILLING FLUID (%)
- ϕ CENTERLINE OF CONSTRUCTION
- APPROXIMATE SPT BORING LOCATION
- 200 FINES PASSING THE #200 STANDARD SIEVE (%)
- MC MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- PL PLASTIC LIMIT (%)
- PI PLASTICITY INDEX (%)
- LL LIQUID LIMIT (%)
- NOTE: ELEVATIONS WERE ESTIMATED USING THE SURVEY DATA PROVIDED BY BALA CONSULTING SERVICES, LLC.

NOTES:

- STATION AND OFFSET WERE DETERMINED USING THE BORING LOCATION PLAN PROVIDED BY BALA CONSULTING SERVICES, LLC. IN CONJUNCTION WITH THE RECORDED GPS COORDINATES OBTAINED BY TEST LAB, INC. IN THE FIELD AT THE BORING LOCATION.
- BASED ON A REVIEW OF THE POTENTIOMETRIC SURFACE MAPS, THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER ALONG THE PROJECT ALIGNMENT IS REPORTED AT APPROXIMATELY +0 TO +10 FEET, NAD 83. ARTESIAN CONDITIONS WERE NOT ENCOUNTERED AT THE TIME OF OUR FIELD ACTIVITIES. HOWEVER, THE CONTRACTOR'S DEWATERING EQUIPMENT AND METHODS SHALL BE ADEQUATE TO HANDLE ARTESIAN WATER UP TO HEAD ELEVATION OF +10 FEET, NAD 83.
- DUE TO THE GEOLOGIC CONDITIONS OF THE GEOGRAPHIC AREA, THE CONTRACTOR SHOULD ANTICIPATE THE NEED FOR TEMPORARY CASING TO STABILIZE THE EXCAVATION DURING CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHOULD ANTICIPATE THAT CONCRETE VOLUME OVERRUNS MAY OCCUR DURING THE SHAFT INSTALLATION PROCESS.

FILE PATH: C:\Projects\City of Tampa\Manhattan Ave\Cadd\Signal\9_SCGE001.dwg
DATE: 6/27/2021 PLOT TIME: 4:04:44 AM

TEST LAB INC.	APPROVED BY:	No.	DATE	REVISIONS	DES:	CITY of TAMPA MOBILITY DEPARTMENT C.I.P. No. 1000980	S. MANHATTAN AVE. and INTERBAY BLVD. ROADWAY and INTERSECTION IMPROVEMENT PROJECT	REPORT OF CORE BORINGS	SHEET 9 OF 9
	IGOR KRATSER, P.E. #73129	3			DRN:				
	TEST LAB INC. 4112 W. OSBORNE AVE. TAMPA, FLORIDA 33614 CERTIFICATE OF AUTHORIZATION NO: 1450	2			CKD:				
		1			DATE: 6/22/21				