### **UTILITIES PROVIDING SERVICE:**

Charlotte County Utilities Dept Dean Campbell Dean.Campbell@charlottecountyfl.gov (941) 456-0041 25550 Harborview Rd. #1 Port Charlotte, FL 33980

Charlotte County Lighting District Andy Amendola andy.amendola@charlottefl.com (941) 575-3648 7000 Florida Street Punta Gorda, FL 33950

Amerigas Teresa Shattuck teresa.shattuck@amerigas.com O. 941-255-9900 C. 239-560-5839 1402 Market Circle Port Charlotte, FL 33953

CenturyLink Bryan Corrigan Bryan.Corrigan@centurylink.com (941) 637-5167 4195 Kings Highway Port Charlotte, FL 33980

Comcast Gonzalo Rojas or Joshua Davis gonzalo\_rojas@cable.comcast.com Joshua Davis4@comcast.com 941-342-3578

> 3490 Technology Drive Venice, FL 34275

SHEET NO.

L01 L02

L03

L04

L05

L06 - L14

L15 - L16

L17 - L25

L26 - L30

L31 - L32

L33

Florida Power & Light Scott Overbaugh O. 239-332-9154 C. 239-246-1021 2425 Thompson St. Fort Myers, FL 33901

Crown Castle Fiber Danny Haskett Project Manager Danny.Haskett@FibernetDirect.com T: 786-610-7073 | M: 786-246-7827 1601 NW 136th Avenue, Suite A-200, Sunrise, FL 33323 Fiber CrownCastle.com

TECO (Peoples Gas) Marilyn D. Aloi or Tracy Yalledy mdaloi@tecoenergy.com atyalledy@tecoenergy.com 239-690-5517 5901 Enterprise Parkway Fort Myers, FL 33905

# Scott.Overbaugh@fpl.com

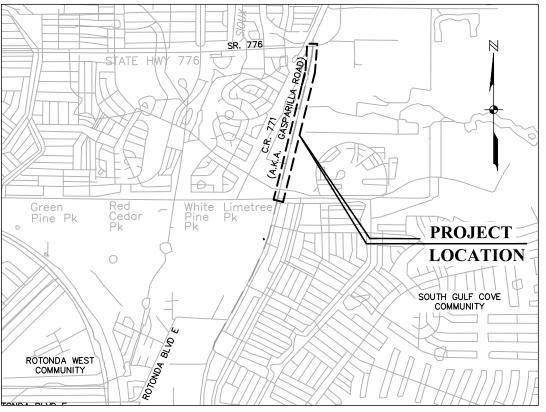
# C.R. 771

(AKA GASPARILLA RD.)

# MEDIAN LANDSCAPE **IMPROVEMENT PLANS**

(1.12 MILES)

# SECTION 41, TOWNSHIP 21 S., RANGE 08 E. **CHARLOTTE COUNTY, FLORIDA**



LOCATION MAP

**JUNE 2022** 

Prepared for: Charlotte County Public Works 7000 Florida Street Punta Gorda, Florida 33950 Phone: (941) 575-3658 Fax: (941) 575-3653



Governing Standards: Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways April 2018

GASPARILLA ROAD DESIGN SPEED POSTED SPEED STA, 175+00 - STA, 211+ 69.03: 50 MPH STA, 211+69.03 - STA, 238+40.00: 45 MPH 45 MPH

### **County Commissioners**

Ken Doherty, District 1 Chris Constance, District 2 Bill Truex, District 3 Stephen R. Deutsch, District 4 Joe Tiseo, District 5

### **Public Works Department**

John Elias, Director Jason Ouimet, Maintenance Operations Manager

# **County Project Manager**

Chuck Peters



# LANDSCAPE AND **IRRIGATION PLANS**



JOHNSON ENGINEERING, INC. 18501 MURDOCK CIRCLE NORTH HOUR CHECK SUITE 404

PORT CHARLOTTE, FLORIDA 33948

PHONE: (941) 625—9919

FAX: (239) 334—3661

E.B. #642 & L.B. #642

REGISTERED LANDSCAPE ARCHITECT FLORIDA LICENSE NO. LA-6667059

JEFFREY NAGLE, RLA

DATE

L01

**INDEX OF PLANS** 

GENERAL NOTES.

LANDSCAPE PLAN

IRRIGATION PLAN

LANDSCAPE DETAILS

IRRIGATION DETAILS

MAINTENANCE OF TRAFFIC PLAN

**EROSION CONTROL DETAILS** 

ABBREVIATIONS, LEGEND

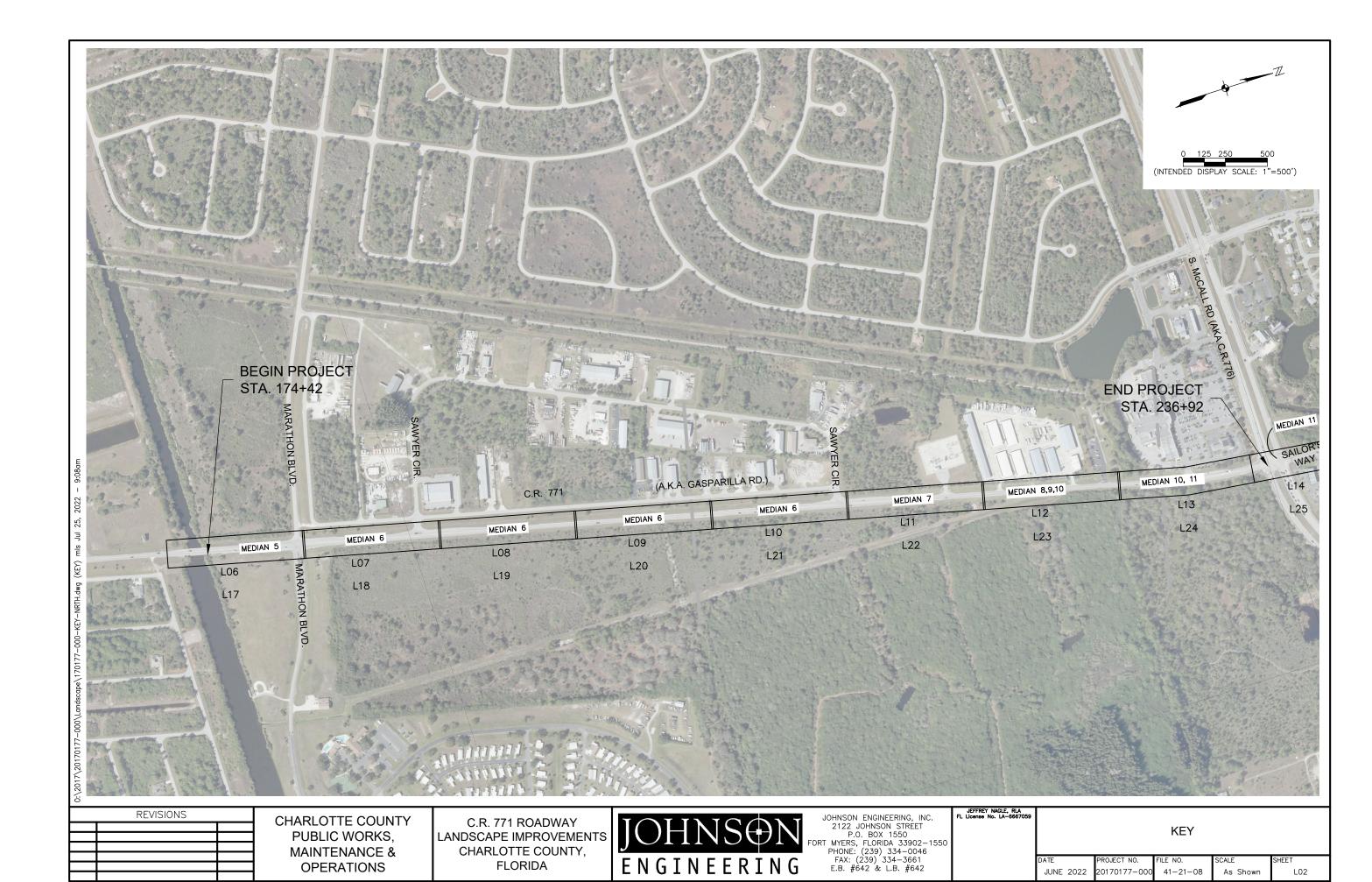
**COVER** 

KEY

DESCRIPTION

LANDSCAPE TABULATION OF QUANTITIES

IRRIGATION TABULATION OF QUANTITIES



щ
5:03
1
8, 2022
28,
Jul
tjr
(103)
)
RTH.dwg
_NORTH
-000-SUMMARY
170177
pe\1
Landscap
\000-
177.
\20
\2017\20170

		100% (	CR 771 NOR	TH -	LANDSC	APE TAI	BULATIO	ON OF Q	UANTIT	IES					
PAY ITEM NO.	Key	DESCRIPTION	SIZE	UNIT	PLAN SHEET	PLAN SHEET L07	PLAN SHEET L08	PLAN SHEET L09	PLAN SHEET L10	PLAN SHEET L11	PLAN SHEET L12	PLAN SHEET L13	PLAN SHEET L14	SUB TOTAL THIS SHEET FINAL	PROJECT TO TAL FINAL
SEC	TION A	LANDSCAPE INSTALLATION			<u>'</u>				•						
PALMS															
1	PR	Pygmy Date Palm ( Phoenix roebelenii) 8' C	t., triple	EA	-	3	3	6	-	5	-	-	-	17	17
2	PS	Sylvester Palm (Phoenix sylvestris) 10'	Ct., FG	EA	3	-	-	-	-	-	-	-	-	3	3
ACCENT	SHRUBS														
3	CE	Silver Buttonwood (Conocarpus erectus 'Sericeus') 5 Ht	t., 3' Spr., multi-trunk.	EA	u	7	7	16	8	-	2	-	-	38	38
4	LX	Muskogee Crape Myrtle (Lagerstroemia x "Muskogee") 10' I	Ht., 4' Spr., multi-trunk	EA	- F	-	8	1	-	5	-	-	1	15	15
5	LJ		t., 3' Spr., multi-trunk. 3' ar Trunk	EA	-	4	2	9	3	5	-	-	-	23	23
SHRUBS	3														•
6	ВМ	Bougainvillea Ms. Alice (Bougainvillea x "Ms. Alice") 10"	Ht., 3g., 30" o.c.	EA	U	-	201	ū.	-	65	U	-	-	266	266
7	DR		Ht., 3g., 24" o.c.	EA	-	148	428	449	74	89	-	-	-	1,188	1,188
8	FM	Green Island Ficus ( Ficus microcarpa "Green Island") 18"	Ht., 7g., 30" o.c.	EA	-	65	65	195	-	-	-	-	52	377	377
9	GG	Thryallis (Galphimia gracillas) 16"	Ht., 3g., 36" o.c.	EA	п	-		ī	-	-	ā	-	46	46	46
10	HP	Firebush (Hamelia patens 'compacta')	Ht., 3g., 36" o.c.	EA	-	¥	-	-	-	-	-	-	46	46	46
11	LR	Ruby Loropetalum (Loropetalum chinese "Ruby") 16"	Ht., 3g., 36" o.c.	EA	E	57	179	173	40	37	¥	=	-	486	486
12	NO	Petite Pink Oleander ( Nerium oleander "Petite Pink")	Ht., 3g., 36" o.c.	EA	-	109	41	225	75	-	-	-	-	450	450
13	PA	Plumbago (Plumbago auriculata 'Imperial Blue')	Ht., 3g., 36" o.c.	EA	60	35	-1	-	-	=	=	-	-	95	95
14	SC	Silver Saw Palmetto (Serenoa repens "Cinera")	Ht., 7g., 48" o.c.	EA	п	=2	25	п	-		ā	-	-	25	25
15	SR	Bird of Paradise (Strelitza reginae)	Ht., 3g., 48" o.c.	EA	-	-	16	-	-	-	-	-	-	16	16
16	TD	Fakahatchee Grass (Tripsacum dactyloides) 16"	Ht., 3g., 36" o.c.	EA	31	47	=1	-	-	=	=	-	-	78	78
17	ZP	Coontie (Zamia pumila) 16"	Ht., 3g., 36" o.c.	EA	55	3	-	-	-	-	-	-	1-5	58	58
GROUNE	OCOVER														
18	AG	Perennial Peanut ( Arachis glabrata) Sod	i	SF	-	-	-	-	-	-	331	549	-	880	880
19	DV	Varigated Flax Lily (Dianella tasmanica "Variegata") 12"	Ht., 1g., 24" o.c.	EA	-	-	322	-	-	-	-	-	-	322	322
20	LG	Liriope "Evergreen Giant (" Liriope muscari 'Evergreen Giant") 4" H	fГ., 1g., 36" о.с.	EA	-	-	74	147	-	-	-	-	-	221	221
21	CME	Dwarf Carissa 'Emerald Blanket', (Ficus macrocarpa 'Emerald Blanket') 12"	HT., 3g., 30" o.c.	EA	-	270	131	373	191	73	-	-	-	1,038	1,038
22	SP2	Purple Queen (Tradescantia pallida) 6"H	T, 1g., 12" o.c.	EA	498	64	-	U	-	-	ū	-	-	562	562
SOD															
23	PN	Bahia Grass ( Paspalum notatum) (trenching repair) Sod	ı	SF	440	1,000	-	-	1,266	2,400	1,450	1,600	-	8,156	8,156
MULCH															
24	MU	Mulch, Flori-mulch 3" d	lepth	CY	34	75	141	142	35	24	-	7	6	464	464
				- 12											10000

REVISIONS	
·	

CHARLOTTE COUNTY PUBLIC WORKS, MAINTENANCE & **OPERATIONS** 

C.R. 771 ROADWAY CHARLOTTE COUNTY, **FLORIDA** 



JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 FORT MYERS, FLORIDA 33902–1550 PHONE: (239) 334–0046 FAX: (239) 334–3661 E.B. #642 & L.B. #642

JEFFREY NAGLE, RLA FL License No. LA-6667059

### LANDSCAPE TABULATION OF QUANTITIES

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
JUNE 2022	20170177-000	41-21-08	As Shown	L03

PAY ITEM NO.	Key	DESCRIPTION	SIZE	PLAN SHEET L17	PLAN SHEET L18	PLAN SHEET L19	PLAN SHEET L20	PLAN SHEET L21	PLAN SHEET L22	PLAN SHEET L23	PLAN SHEET L24	PLAN SHEET L25	SUBTOTAL THIS SHEET FINAL	PROECT TOTAL FINAL
SECT	TION B	IRRIGATION INSTALLATION		-	-	-	-	1	-	-	-	-	1	1
7.1	RU	CONNECTION TO CITY REUSE LINE ICLUDING 1 - 1/2" WATER METER	EA	-	-	-	-	1	-	-	-	-	1	1
7.2	EC	ELECTRICAL CONNECTION TO POWER SUPPY PROVIDED BY CHARLOTTE COUNTY	EA	-	-	-	-	1	-	-	-	-	1	1
7.3	BP	BOOSTER PUMP (APPROXIMATE LOCATION STATION 206 + 00)	EA	2	J.	-	-	1	3	-	-	-	1	1
7.4	С	RAIN BIRD ESP-LXD-LXMMPED with (1) ESPLXD-SM75 (INCLUDING MISC, ELECTRICAL)	EA	-	-	-	-	1	-	-	-	-	1	1
7.5	RS	RAIN BIRD RSD-BEX RAIN SENSOR	EA	5	21	-	-	1	1	-	Ų.	-	1	1
7.6	SS	RAIN BIRD MSP-1/ MGP-1 (CONTROLLER SURGE PROTECTION AND SURGE GROUND MOUNTING PLATE.	EA	-	-	-	-	1	-	-	-	-	đ	1
7.7	FS	SLFSI-T20 2" TEE TYPE INSERT FLOW SENSOR WITH RAIN BIRD 200-PESBR-PRS-D MASTER VALVE	EA	-	-	-	-	1		0	0	-	1	1
7.8	FD	RAINBIRD FD-101TURF	EA	0	3	3	2	2	-	2	1	1	14	14
7.9	D	RAINBIRD FD-102TURF	EA	1	2	0	2	-	2	-	-	-	7	7
7.10	ML	FURNISH AND INSTALL MAINLINE: 2.5" SCHEDULE 40 PVC, (PANTONE PURPLE) 522 C, GASKETED RRIGATION PPING WITH D.I. FITTINGS & THRUST BLOCKING, BY TRENCHING, SEE NOTES, SPECFICATIONS AND DETAILS FOR INSTALLATION REQUIREMENTS AND REQUIRED COMPONENTS. INCLUDING BALL MARKERS AT CHANGES IN PIPE DIRECTION AND DEPTH.	IF	333	826	816	816	1,053	874	864	713	50	6345	6345
7.11	ILL	FURNISHAND INSTALL IRRIGATION LATERAL LINE: 1" PVC CLASS 200 SDR21 (PANTONE PURPLE)	LF	41	0	5	15	14	14	0	47	115	237	237
7.12	LL	FURNISHAND INSTALL IRRIGATION LATERAL LINE: 1.25° PVC CLASS 200 SDR21 (PANTONE PURPLE)	LF	676	1,339	1,379	1,290	536	804	492	300	55	6871	6871
7.13	LL	FURNISHAND INSTALL IRRIGATION LATERAL LINE: 1.5" PVC CLASS 200 SDR21 (PANTONE PURPLE)	LF	99	193	31	150	80	75	48	Ľ	-	676	676
7.14	LL	FURNISHAND INSTALL IRRIGATION LATERAL LINE: 2" PVC CLASS 200 SDR21 (PANTONE PURPLE)	LF	28	240	8	5	83	9	-	п	-	373	373
7.15	EL	ELECTRICAL PVC CONDUIT 1.25"	LF	259	794	870	924	919	886	730	601	-	5983	5983
7.16	DB 1	DIRECTIONAL BORE INCLUDING 1.25" PVC (ALL PAVEMENT CROSSINGS AS SHOWN ON PLANS)	LF.	110	140	-	-	170	60	60	Е	-	540	540
7.17	DB 2	DIRECTIONAL BORE INCLUDING 2" HDPE (ALL PAVEMENT CROSSINGS AS SHOWN ON PLANS)	LF	85	140	-	-	-	-	120	65	115	525	525
7.18	DB 6	DIRECTIONAL BORE INCLUDING 6" HDPE (ALL PAVEMENT CROSSINGS AS SHOWN ON PLANS)	LF	110	-	-	-	170	60	60	-	-	400	400
7.19	w	SMARTLINE - SLWIRE (2 PATH WIRE) 12 AWG	LF	369	934	870	924	1,089	946	900	781	-	6813	6813
7.20	PB	IRRIGATION WIRE PULL BOX (INCLUDE PULL STRING)	EA	1	1	1	-	4	2	4	1	2	16	16
7.21	sv	RAIN BIRD PESBR 1", DURABLE CHLORINE-RESISTANT VALVES FOR RECLAIMED WATER APPLICATIONS. WITH SCRUBBER MECHANISM TECHNOLOGY, AND PURPLE FLOW CONTROL HANDLE, INCLUDE MANUAL GATE VALVE PER VALVE DETAIL.	EA	0	1	1	1	-	1	1	1	-	6	6
7.22	SV1	RAIN BIRD PESBR 1-12", DURABLE CHLORINE-RESISTANT SOLENOID VALVES FOR RECLAIMED WATER APPLICATIONS. WITH SORUBBER MECHANISM TECHNOLOGY, AND PURPLE FLOW CONTROL HANDLE. NOLLUDE MANUAL GATE VALVE PER DETAIL	EA	2	3		1	1	2	1	-	-	10	10
7.23	SV2	FURNISH & INSTALL RAIN BIRD XCZ-150-PRB-R 1.5" HIGH FLOW CONTROL ZONE KIT WITH 2 -1" PRESSURE REGULATING QUICK CHECK BASKET FILTERS AND ISOLATION VALVE. INSTALL ASSEMBLY IN NOS PRO 14" X10" VALVE BOX 213°PBCR (PANTONE PURPLE). LID LABEL TO READ "IRRIGATION". TO NCLUDE 6" EXTENSIONS AS NEEDED.	EA	3	3	2	4	1	1	-	£	1	12	12
7.24	DL	NETAFIM TURW-06-12(16) TECHUNE RW LANDSCAPE DRIPLINE WITH PURPLE STRIPE. 0.6GPH EMITTERS AT 12" O.C.	SF	2,095	4,979	11,659	11,405	2,790	1,848	-	570	570	35916	35916
7.25	FV	NETAFIM TL050MFV-1 AUTOMATIC FLUSH VALVE	EA	1	2	7	5	2	2	-	-	2	21	21
7.26	GV	MATCO NORCA 759 BRASS SHUT OFF VALVE (INCLUDE VALVE BOX)	EA	1	-	*1		1	1	3	2	-	8	8
7.27	SB	RAIN BIRD VBSTDPL STANDARD BOX (REMOTE VALVES ONLY) (PANTONE PURPLE)  RAIN BIRD VBJMBPL JUMBO BOX (REMOTE VALVES ONLY) (PANTONE PURPLE) (USE WITH	EA	1	1	3	2	3	1	3	2	-	16	16
7.28	JB	COMBINATIONS OF 2-3 VALVES)  RAIN BIRD RD-06-P30-F-NP SPRAY, 6,0" POP-UP, WITH 30 PSI IN-STEM PRESSURE REGULATION, FLOW-	EA	1	3	-	2	2	2	-	-	-	10	10
7.29	SH	SHIELD TECHNOLOGY, AND NON-POTABLE COVER (PURPLE CAP). 1/2" NPT FEMALE THREADED INLET. (INCLUDE NOZZLES AS SPECIFIED PER PLANS)	EA	61	66	-	-	34	50	47	31	-	289	289
7.30	FB	RAINBIRD 1800-1400 FLOOD BUBBLER (1402 FIXTED RATE), 1/2" FIPT. WITH PURPLE CAP FOR RECLAIMED WATER USE.	EA	6	30	41	64	23	30	-	-	2	196	196
7.31	BA	FURNISH & NISTALL MAIN AND SUBMAN FLUSHY BLOW OFF ASSEMBLIES PER PLAN NOTES & DETALS. SVES TO MATCH MAIN SVE. VALVE BOXES (PANTONE PURPLE) AND ALL MATERIALS AS ILLUSTRATED PER INSTALLATION DETAIL	EA	1	70	E)	-	,-	97	-	Ē	1	2	2
7.32	SP1	RAIN BIRD LSP1TURF INLINE SURGE PROTECTION	EA	1	5	3	4	2	2	2	1	1	21	21
7.33	F	NETAFIM FILTER 25A30-140	EA		-			1				-	1	1
7.34	EA	FURNISH AND INSTALL #6 AW G SOUD COPPER BARE GROUND ROD (10' LENGTH)	EA	1	5	3	4	2	2	2	2	-	21	21
7.35	GP	FURNISHAND INSTALL 4"X96" COPPER GROUND PLATE	EA	-1	-	-1	-	1	-	-	-	-	1	1
7.36	DI	RAINBIRD DRIP SYSTEM OPERATION INDICATOR	EA	-	3	3	4	1	1	-	-	1	13	13

REVISIONS

CHARLOTTE COUNTY PUBLIC WORKS, MAINTENANCE & **OPERATIONS** 

C.R. 771 ROADWAY CHARLOTTE COUNTY, **FLORIDA** 



JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 FORT MYERS, FLORIDA 33902–1550 PHONE: (239) 334–0046 FAX: (239) 334–3661 E.B. #642 & L.B. #642

IRRIGATION TABULATION OF QUANTITIES

JUNE 2022 20170177-000 41-21-08 As Shown

### **ABBREVIATIONS SYMBOLS EXISTING** PLUG VALVE 8 GATE VALVE BUILDING BENCH MARK BOTTOM CATCH BASIN CHARLOTTE COUNTY UTILITIES CHARLOTTE COUNTY UTILITY CUBIC FEET CUBIC FEET PER MINUTE CAST IRON CAST IRON PIPE CONSTRUCTION JOINT CENTER LINE CALLERING WATER METER CENTER LINE CAULKING CHAIN LINK FENCE CANAL MAINTENANCE EASEMENT CORRUGATED METAL PIPE CLEANOUT CUBIC INCH COLOR CONCRETE CONSTRUCTION CONTINUOUS CENTERS CUBIC YARD DIAGONAL DISTANCE DIAGONAL DISTANCE DISTANCE DISTANCE CRITTER DISTANCE DISTANCE CRITTER CRITTER DISTANCE CRITTER AIR RELEASE VALVE BACKFLOW VALVE ASSEMBLY TELEPHONE PEDESTAL TELEPHONE MANHOLE 0 CABLE PEDESTAL CONCRETE UTILITY POLE WOOD UTILITY POLE ELEVATION EQUIPMENT ELLIPTICAL REINFORCED CONCRETE PIPE ELECTRICAL SERVICE BOX UTILITY POLE ANCHOR EXISTING FOUNDATION FLARED END SECTION MAIL BOX MAIN POWER JUNCTION BOX GALLON GALVANIZED GENERAL CONTRACTOR GALVANIZED IRON GALLONS PER MINUTE GRADE STREET SIGN BURIED CABLE GRADE GRADE GATE VALVE HIGH DENSITY POLYETHYLENE HORIZONTAL HIGH POINT BURIED GAS LINE HIGH POINT HYDRANT INSIDE DIAMETER INVERT LINEAL FEET DRAINAGE INLET (SEE PLAN FOR TYPES) MAXIMUM MATCH EXISTING MITERED END SECTION MACHANICAL MITERED END SECTION MANUFACTURER MANHOLE MINIMUM MISCELLANEOUS MECHANICAL JOINT EXISTING PALM EXISTING TREE NOMINAL NOT TO SCALE EXISTING SHRUB NORTHWEST ON CENTER EACH WAY OUTSIDE DIAMETER PAVEMENT POINT OF CURVATURE POUNDS PER CUBIC FOC PROPOSED GRADE LINE POINT OF INTERSECTION POWER JUNCTION BOX PROPERTY LINE PLYWOOD EXISTING TRAFFIC SIGNAL PLYWOOD POLYETHYLENE PROPOSED PROPOSED POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POINT OF TANCENCY PUBLIC UTILITY EASEMENT PLUG VALVE POLYYNMY CHLORIDE POINT OF VERTICAL INTERSECTION OUANITY RADIUS REINFORCED CONCRETE PIPE LINETYPES SCHEDULE SECTION SEWER SHEET SPECIFICATION SQUARE SANITARY SEWER STREET PROJECT LIMIT - - -SWALE CENTER LINE -----FORCE MAIN --- -- FM --- --SUMFACE SYMMETRICAL TEMPORARY CONSTRUCTION EASEMENT TELEPHONE TEMPORARY IRRIGATION MAIN --- -- IRR --- ---OVERHEAD UTILITY LINES — — — OHE— — — FENCE LINE TRANSFORMER TEMPORARY RIGHT-OF-ENTRY TELEPHONE SERVICE BOX TRAFFIC SIGNAL CONTROL BOX RE-USE WATER — — — RII — — — UTILITY EASEMENT VERTICAL CABLE TV CONDUIT — — — CATV — — DRAINAGE \_\_\_\_\_\_D\_\_\_ —D—— GUARDRAIL . O O WITH WITHOUT WOOD WEIGHT WATER VALVE ADVANCED TRANSPORTATION MANAGEMENT SYSTEM EXISTING GENERAL VEGETATION FUTURE PROPOSED HIGH MAST LIGHTING (BY OTHERS) **REVISIONS** CHARLOTTE COUNTY

### CONSTRUCTION NOTES:

- CONCRETE SIDEWALKS SHALL BE CONSTRUCTED PER F.D.O.T. INDEX NO. 310 AND F.D.O.T. STANDARD SPECIFICATION NO. 522 EXCEPT FOR CUBB CUT RAMP RUNS WHICH SHALL BE FINISHED IN ACCORDANCE WITH INDEX NO. 304 EXCEPT AMENDMENTS TO DESIGN PER CHARLOTTE COUNTY PUBLIC WORKS ENGINEERING DIVISION.
- THERE SHALL BE NO CHANGE OR DEVIATION OF THESE PLANS OR SPECIFICATIONS UNLESS PRIOR WRITTEN APPROVAL FROM THE ENGINEER IS OBTAINED.
- 3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF AND WHEN A POSSIBLE ERROR IS FOUND IN THE PLANS OR STAKED AUGNNENT AND/OR GRADES. THE ENGINEER MAY ACCEPT, REVISE TO ACCOMMODATE CONDITIONS, OR REJECT THE FACILITY BEING CONSTRUCTED. IT IS IMPERATURE THAT THE CONTRACTOR NOTIFY THE ENGINEER OF THESE STUATIONS AS SOON AS POSSIBLE, PRIOR
- 4. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND COORDINATE RELOCATIONS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND REPORT THE EXACT LOCATION OF ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS, WHETHER THEY ARE IDENTIFIED ON THE DRAWINGS OR NOT.
- ONSTRUCTION OF THE CONTRACTOR. THE METHOUS WINCH SHOULD BE USED INCLUDE BUT AND TO LIMITED TO:

  A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SILTATION CAUSED BY CONSTRUCTION ACTIVITY ENTERING THE STORM DRAINAGE SYSTEM, BOTH ON-SITE AND OFF-SITE. THE CONTRAC SHALL UTILIZE SAND BAGS AND SYNTHETIC BALES OR OTHER EROSION CONTROL METHODS TO
- SMANUL LEGGEN.

  B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AT ALL TIMES DURING CONSTRUCTION BY UTILIZING WATER TRUCKS, ANTI-DRAFT FENCING, OR OTHER APPROVED METHODS, AND BY COVERING OPEN BODIED TRUCKS TRANSPORTING DEBIGS.

  C. EROSION CONTROL MEASURES SHALL BE PROVIDED PER F.D.O.T. INDEX NOS. 100-106 AS
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE, INCLUDING MOWING AND CLEANUP UNTIL THE PROJECT IS ACCEPTED. IF, BY THEN, THE GROWTH IS NOT FIRMLY ESTABLISHED, THE CONTRACTOR WILL CONTINUE TO BE RESPONSIBLE FOR MAINTENANCE, UNTIL THE GROWTH IS ESTABLISHED.
- 7. THE CONTRACTOR SHALL USE EXTREME CARE NOT TO DAMAGE THE ROOT SYSTEMS OF TREES AND OTHER LANDSCAPE FEATURES WHICH ARE TO BE SAYED, AND/OR SALVACED, FOR RESTORATION PURPOSES. NO EQUIPMENT, SUPPLIES, OR VEHICLES SHALL BE STORED WITHIN THE DRIP LINE OF TREES TO REMAIN AND BE PRESERVED. SEE SPECS FOR ADDITIONAL INFORMATION.
- AS PART OF CLEARING AND GRUBBING, ALL DEBRIS IS TO BE REMOVED FROM THE PROJECT SITE AND SALVAGED BY THE CONTRACTOR OR TRANSPORTED TO A LEGAL DISPOSAL AREA.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE JOB SITE, REVIEW THE CONSTRUCTION AND DESIGN REQUIREMENTS, PROJECT PERMITS, CONDITIONS, SIPPLUATIONS, AND RESTRICTIONS AS NECESSARY TO FAMILIARZE HIMSELF WITH THE ENTIRE PROJECT PRIOR TO BIDDING.
- 10. THE COUNTY SHALL SECURE AN INDEPENDENT TESTING LABORATORY DURING CONSTRUCTION TO PERFORM SUCH TESTING AS NEGEDE TO CERTIFY THAT THE MATERIAL AND STRUCTURAL COMPONENT SPECIFICATIONS NOTICE HAVE BEEN MET. THE CONTRACTOR SHALL ALSO SUBMIT, FOR REVIEW AND APPROVAL, TO THE ENGINEER OF RECORD, A MININUM OF FOUR COPIES OF SHOP DRAWINGS AND/OR MATERIAL CERTIFICATIONS FOR ALL MATERIALS PRIOR TO ORDERING SAME FOR THE PROJECT.
- 11. THE CONTRACTOR SHALL CLEAR THE SITE ONLY TO THE EXTENT NECESSARY TO CONSTRUCT THE REQUIRED IMPROVEMENTS. DEBRIS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR, AT HIS EXPENSE.
- 12. ALL DISTURBED GRASSED AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE AND STABILIZED BY SODDING.
- 13. ALL CONSTRUCTION SHALL COMPLY WITH THE FLORIDA ACCESSIBILITY CODE AT CURBS, GUTTERS, SIDEMALES, NITERSECTIONS, ETC. HANDICAP RAMPS SHALL ALSO COMPLY. SAW CUTTING GROOVES IN RAMPS IS NON-CONFORMING AND POSES A LUBBLITY.
- 14. CLASS I CONCRETE, 3,000 PSI © 28 DAYS SHALL BE USED FOR ALL SIDEWALKS AND CONCRETE STRUCTURES. SIDEWALKS TO RECEIVE FIBERMESH REINFORCING.
- 15. MITERED END SECTIONS (MES), WHERE SPECIFIED, SHALL BE CONSTRUCTED PER F.D.O.T. INDEX NO. 272. CULVERT LENGTHS SHOWN ON PLANS EXCLUDE THE MITERED END SECTION.
- 16. ALL PIPE JOINTS SHALL BE WRAPPED PER F.D.O.T. INDEX NO. 280.
- 18. FILL MATERIAL UTILIZED SHALL BE TYPE A-3.
- 19. CONTRACTOR TO ADHERE TO THE GUIDELINES OF THE FLORIDA "TRENCH AND SAFETY ACT".
- 20. PLAN GRADES, ON GRASSED AREAS, INDICATE TOP OF SOD.
- 21. SEE SIGNING AND PAVEMENT MARKING PLANS FOR RELOCATION OF ALL SIGNS AFFECTED BY SIDEWALK DESIGNS.
- 22. CULVERT EXTENSION LENGTHS SHOWN ON PLANS DO NOT INCLUDE THE LENGTH OF DAMAGED ENDS OF EXISTING CULVERTS. THE EXTENT OF DAMAGE SHALL BE DETERMINED AND THE LENGTH OF EXTENSION INCREASED, ACCORDINGLY. PIPE ENDS SHALL BE SAWCUT BY THE CONTRACTOR AT HIS EXPENSE.
- 23. CONTRACTOR SHALL VERIFY EXISTING CULVERT SIZES, WHERE PROPOSED EXTENSIONS OR CONNECTIONS ARE SPECIFIED ON PLANS, PRIOR TO ORDERING NEW CULVERT MATERIAL.
- 24. MODIFICATION OF EXISTING UTILITIES SHALL CONFORM TO CHARLOTTE COUNTY UTILITIES DESIGN COMPLIANCE STANDARDS DATED NOV. 1, 2011.
- 25. WATER METER RELOCATION, WHERE SPECIFIED ON PLANS, SHALL INCLUDE SERVICE PIPE RECONNECTION.
- 26. MAILBOX INSTALLATION AND RELOCATION, WHERE SPECIFIED ON PLANS, SHALL CONFORM TO F.D.O.T. INDEX NO. 532.
- 27. REMOVAL OF PROTECTED TREE SPECIES SHALL REQUIRE A TREE REMOVAL PERMIT.
- 28. CONCRETE JACKETS, AROUND METAL CULVERTS, SHALL BE INSTALLED WHERE EXTENSIONS REQUIRING BENDS ARE DESIGNATED ON THE PLANS. EXISTING METAL CULVERTS TO BE SAWCUT AT APPROPRIATE ANGLE.
- ). IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE PROVISIONS FOR TEMPORARY MAIL SERVICE, WITHOUT INTERRUPTION OF SERVICE, WHERE NEW OR RELOCATED MAILBOXES ARE SPECIFIED ON THE PLANS. THIS PROVISION SHALL BE INCIDENTAL TO THE COST OF THE PROJECT.
- 31. TRAFFIC BEARING GRATES AND RIMS SHALL BE UTILIZED ON ALL PROPOSED STRUCTURES
- 32. ALL INLET GRATING, DESIGNATED ON PLANS TO BE REMOVED, SHALL BE RETURNED TO THE COUNTY
- OF PAVEMENT, ON PAVED RETURNS, (RADII) AND SHALL EXTEND SIDEWALK TO CUT PAVEMENT EDGE.
- 34. WHERE ASPHALT DRIVEWAYS ARE DESIGNATED TO BE REPLACED ON THE PLANS, THE ADJACENT ROADWAY PAVEMENT EDGE SHALL BE TRIMMED BY SAWCUTTING AND REMOVED.
- 36. IF EXISTING CULVERT PIPES ARE TO BE CUT TO PROVIDE A CLEAN CONNECTION FOR PIPE EXTENSIONS, THE COST OF CUTTING PIPE MULL BE CONSIDERED INCIDENTAL TO THE PROJECT, AND SHALL BE INCLUDED BY THE CONTRACTOR AT HIS EXPENSE.
- 37. ALL CONCRETE COLLARS SHALL INCLUDE MITER CUTTING PIPES TO PROVIDE A CLOSE FITTING JOINT. JOINT SHALL NOT BE BRIDGED WITH CONCRETE.
- 38. PRIVATE IRRIGATION SPRINKLER SYSTEMS: CONTRACTOR TO COORDINATE WITH INSPECTOR AND HOME OWNER TO CUT/CAP OR MODIFY THE IRRIGATION SYSTEM.

### GENERAL NOTES:

- 1. ELEVATIONS ARE REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.) OF
- WRITTEN DIMENSIONS TO TAKE PRECEDENCE OVER SCALE. NORMAL SHEET SIZE IS 24"x36" TO SCALE. ALL REDUCED SHEET SETS ARE NOT TO SCALE.
- THE LOCATION OF EXISTING UTILITIES, PAVEMENT, VEGETATION, AND MISCELLANEOUS IMPROVEMENTS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE TO CONTACT ALL UTILITY COMPANIES TO COORDINATE WORK.
- ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHOULD NOTIFY THE CONNER/TEMBERS WITHOUT DELAY. ANY DANAGE WILL BE REPAIRED BY THE CONTRACTOR VIA A LICENSED FLORIDA SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- EXISTING FACILITIES SHALL BE RESTORED TO A CONDITION EQUIVALENT OR BETTER TO THAT WHICH EXISTED PRIOR TO COMMENCING CONSTRUCTION, AT NO ADDITIONAL COST TO OWNER.
- LOCATIONS OF INLETS AND STORM DRAINS MAY BE FIELD ADJUSTED TO PRESERVE EXISTING VEGETATION WITH OWNER/COUNTY APPROVAL.
- 8. THE CONTRACTOR IS REQUIRED TO ADJUST ALL VALVE BOXES, MANHOLE RIMS, GRATES, ETC. AS NECESSARY TO MATCH PROPOSED GRADES.
- CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCIES A MINIMUM OF 72 HOURS PRIOR TO ALL REQUIRED INSPECTIONS.
- 10. CONTRACTOR TO PROVIDE SILT FENCE, STAKED SYNTHETIC BALES, TURBIDITY BARRIERS AND OTHER APPROPRIATE MEASURES TO EFFECT THE FILTRATION OF SUBFACE WATER FLOWS AND TO PROVIDE EROSION PROTECTION DURING CONSTRUCTION ACTIVITIES. PROTECTION IS TO BE MAINTAINED DURING THE CONSTRUCTION PERIOD UNTIL DISTURBED SOILS HAVE BEEN STABILIZED WITH GRASS OR SUITABLE EROSION PROTECTION TREATMENT. CONSTRUCTION AND STAGING AREAS WILL BE MAINTAINED IN A FASHION TO PREVENT EROSION OR TURBIDITY PROBLEMS. CONTRACTOR WILL MEET ALL LOCAL, STATE, AND FEDERAL WATER QUALITY REQUIREMENTS. ALL DISTURBED AREAS TO BE SODDED AS CONSTRUCTION.
- 11. EXISTING OFF-SITE DRAINAGE PATTERNS SHALL BE MAINTAINED DURING CONSTRUCTION CONTRACTOR SHALL RETAIN, ON THE WORK SITE, COPIES OF ANY PERMITS NECESSARY FOR CONSTRUCTION.
- 13. CONTRACTOR SHALL PROMPTLY REPORT ALL FIELD CHANGES TO THE ENGINEER.
- 15. SITE GRADES MAY BE ADJUSTED IN FIELD BY ENGINEER.
- 16. THE LOCATIONS OF EXISTING UTILITIES AND STORM SEWERS SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM RECORD DRAWINGS AND FIELD INFORMATION. IT IS THE
- 17. DURING CONSTRUCTION, GRATE INLET AND JUNCTION BOX OPENINGS SHALL BE COVERED WITH FILTER FABRIC (MIRAFI 140N OR APPROVED EQUAL) TO PREVENT DEBRIS AND FILL FROM FALLING MITO THE INLET.
- 18. THE CONTRACTOR SHALL PREPARE AND PROVIDE AS—BUILT AND RECORD DRAWINGS IN COMPLIANCE TO ALL AGENCIES GOVERNING PERMITS, CERTIFICATION, AND TRANSFER TO OPERATIONS STANDARDS AND SPECIFICATIONS, AS REQUIRED BY TS—OI INCLUDING ALL SIGNED & SEALED PLANS AND ELECTRONIC COPIES, WHICH SHALL BE DELIVERED TO THE ENGINEER.
- 19. CONTRACTOR IS REQUIRED TO OBTAIN FROM THE ENGINEER AND OWNER WRITTEN APPROVAL FOR ANY DEVATIONS FROM THE PLANS AND/OR SPECIFICATIONS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST ASSOCIATED WITH OBITAINING APPROVAL FROM ANY PERMITTING ACENCY FOR PROPOSED DEVATIONS AND WILL SUBMIT ELECTRONIC COPIES AS WELL AS SIGNED & SEALED HARD COPIES TO THE ENGINEER AND OWNER.
- 20. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC AND USAGE OF THE EXISTING STREETS ADJACENT TO THE PROJECT, ALL TRAFFIC MAINTENANCE CONTROL SHALL BE IN ACCORDANCE WITH THE FLORIDA MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS AND APPROVED BY CHARTOTTE COUNTY.
- 22. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH APPLICABLE REGULATION.

### PAVING, GRADING AND DRAINAGE NOTES:

- STORM DRAINAGE CULVERT SIZES, SUMPS AND MATERIALS ARE SUBJECT TO CHANGE AS A FUNCTION OF DESIGN REQUIREMENTS, TUTURE DRAINAGE PROJECTS OR FIELD CONDITIONS AS DETERMINED BY CHARLOTTE COUNTY RIGHT-OF-WAY DEPARTMENT AT THE TIME OF LINE AND GRADE INSPECTIONS.
- STORM DRAINAGE DIMENSIONING CALLED OUT IN THIS PLAN SET IS BASED ON THI LINEAL DIMENSIONS FROM THE CENTROID OF THE DRAINAGE STRUCTURES. THE METHOD OF MEASUREMENT FOR THE BID ITEM IS BASED ON THIS NUMBER. THE
- ALL STORM STRUCTURE BASINS TO BE SUMPED A MINIMUM OF SIX (6) INCHES WITH A TWELVE (12) INCH SUMP PREFERABLE.
- CONTRACTOR SHALL NOTIFY THE OWNER AND CONTACT ALL UTILITY COMPANIES FOR LOCATIONS OF EXISTING UTILITIES IN THE AREA 72 HOURS (MIN.) PRIOR TO COMMENCING CONSTRUCTION.
- . ANY LAND DISTURBED BY CONSTRUCTION SHALL BE SODDED, USE ARGENTINE BAHIA OR LIKE KIND AND CONFORM TO FDOT SECTION 575. SOD ALONG EDGES OF PAVEMENT OF ALL ROADS, SIDEWALKS AND/OR CURB SHALL BE 1" BELOW FINISHED PAVEMENT GRADE.
- . THE STORM DRAINAGE PIPING AND FILTRATION SYSTEM SHALL BE SUBJECTED TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCED TO SCHEDULE INSPECTION.
- THE CONTRACTOR SHALL MAINTAIN THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE INSPECTED BY THE OWNER'S ENGINEER PRIOR TO FINAL ACCEPTANCE.

### N.P.D.E.S. PERMIT NOTE:

TOTAL DISTURBED PROJECT AREA IS  $\pm .32$  ACRES, CONTRACTOR WILL BE REQUIRED TO OBTAIN AN NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND EXECUTE ITS REQUIREMENTS THROUGHOUNT THE PROJECT

### SIGNING AND PAVEMENT MARKING NOTES:

- ALL SIGNING AND PAYEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH FDOT STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION, FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES," AND THE CURRENT CHARLOTTE COUNTY PUBLIC WORKS - ENGINEERING DIVISION.
- MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS.
- 4. CONTRACTOR SHALL SET ROADWAY GROUND MOUNT SIGNS AT PROPER DEFLECTION ANGLE TO THE ROADWAY IN ACCORDANCE WITH FDOT INDEX NUMBER 17302.
- SEE FDOT INDEX NUMBERS 17346 AND 17352 FOR ADDITIONAL DFTAILS

### CHARLOTTE COUNTY UTILITES NOTES

- WATER SERVICE CONFLICTS: CONTRACTOR SHALL RELOCATE ANY EXISTING WATER SERVICE LINE WHERE IN CONFLICT WITH PROPOSED IMPROVEMENTS INCLUDING NEW DRAINAGE PIESS. SERVICE LINE SHALL HAVE A MINIMUM 18 OF COVER AND A MINIMUM OF 6° CLEARANCE FROM THE NEW PIES. SERVICE LINE SPLICES SHALL NOT BE ALLOWED SERVICE LINES SHALES SHALL NOT BE ALLOWED SERVICE LINES SHALES SHALL NOT BE ALLOWED STANDARDS.
- WATER METER CONFLICTS: WHERE EXISTING WATER METERS ARE IN CONFLICT WITH THE NEW SIDEWALK IMPROVEMENTS, RELOCATE THE METER AND METER BOX OUT OF THE FOOTPRINT OF THE SIDEWALK TO THE PROPERTY SIDE AND SET FLUSH WITH EXISTING GRADE.
- WATER MAIN CONFLICTS: WHERE THE EXISTING WATER MAIN IS IN UNDER OF WITH THE NEW DRAINAGE PIPES, DEFLECT THE WATER MAIN UNDER OF OVER THE STORM DRAIN MAINTAINING A MINIMUM CLEARANCE OF 18. THE WATER MAIN DEFLECTION SHALL BE PER CCU DESIGN COMPLIANCE STANDARDS DATED NOV. 1, 2011.

### FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD DETAIL NOTES:

ALL REFERENCES TO FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD NIDEXES ARE FROM THE 2016 EDITION FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DESIGN STANDARDS (ENGLISH UNITS), THESE INDEXES WERE PREPARED BY OR AT THE DIRECTION OF FDOT AND WERE FURNISHED TO JOHNSON ENGINEERING, INC.

THE DESIGN STANDARDS REFERENCED WITHIN THIS PLAN SET HAVE BEEN INCORPORATED HEREIN VERBATTM AS SET FORTH WITHIN THE ABOVE REFERENCED FOOT DESIGN STANDARDS.

### PRIVATE UTILITY NOTES:

- 1. CONTRACTOR SHALL COORDINATE WITH ALL PRIVATE UTILITIES FOR THE RELOCATION OF ANY/ALL UTILITY INFRASTRUCTURE.
- ALL UTILITIES COMPANIES WERE NOTIFIED VIA EMAIL OF THE PROJECT DETAILS AT THE TIME OF DESIGN.
- FOR A LIST OF THE COUNTY & PRIVATE UTILITIES AND THEIR CONTACT INFORMATION SEE COVER SHEET.

**GENERAL NOTES AND ABBREVIATIONS** 

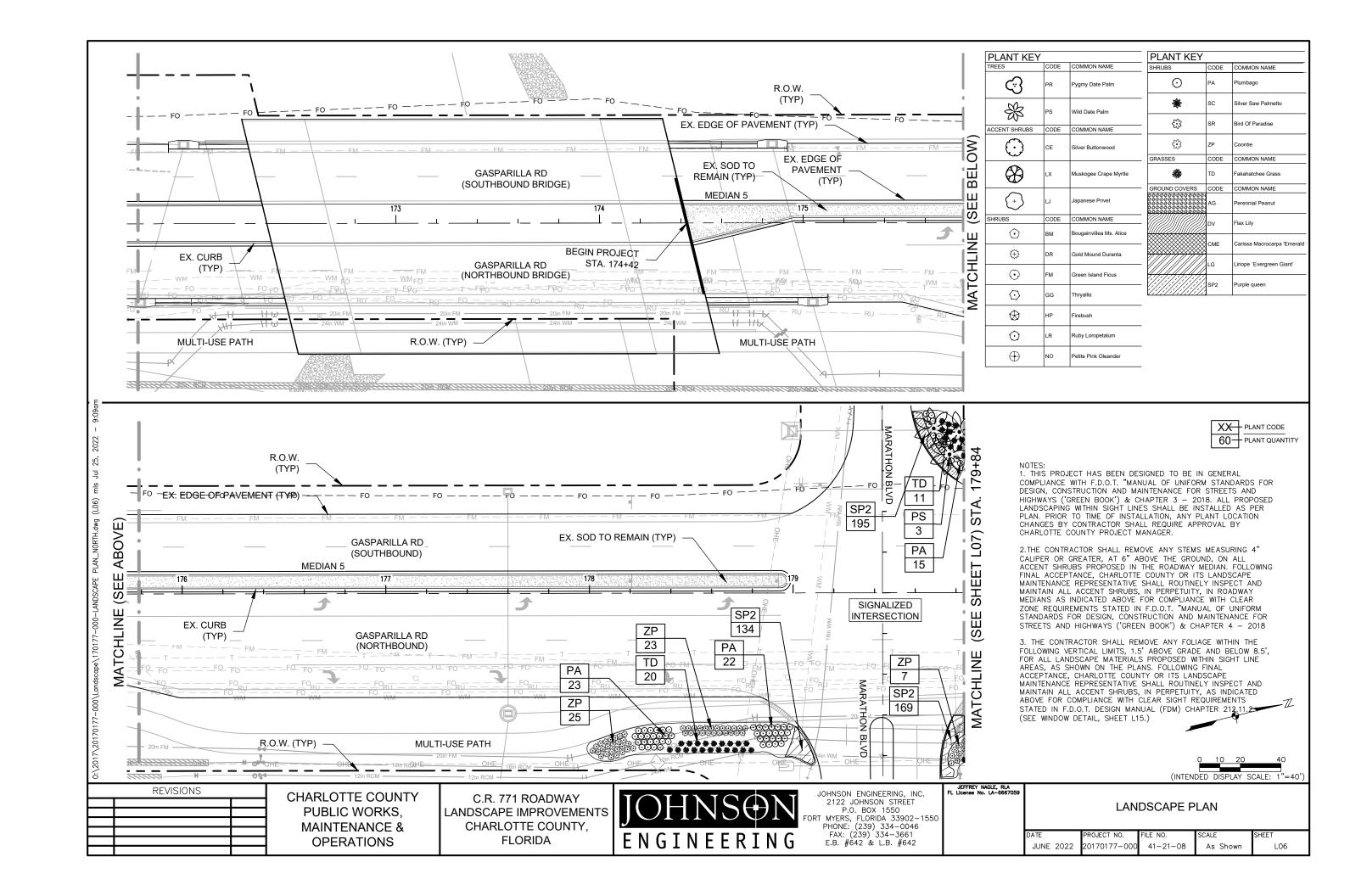
ROJECT NO. JUNE 2022 20170177-000 L05 41-21-08 As Shown

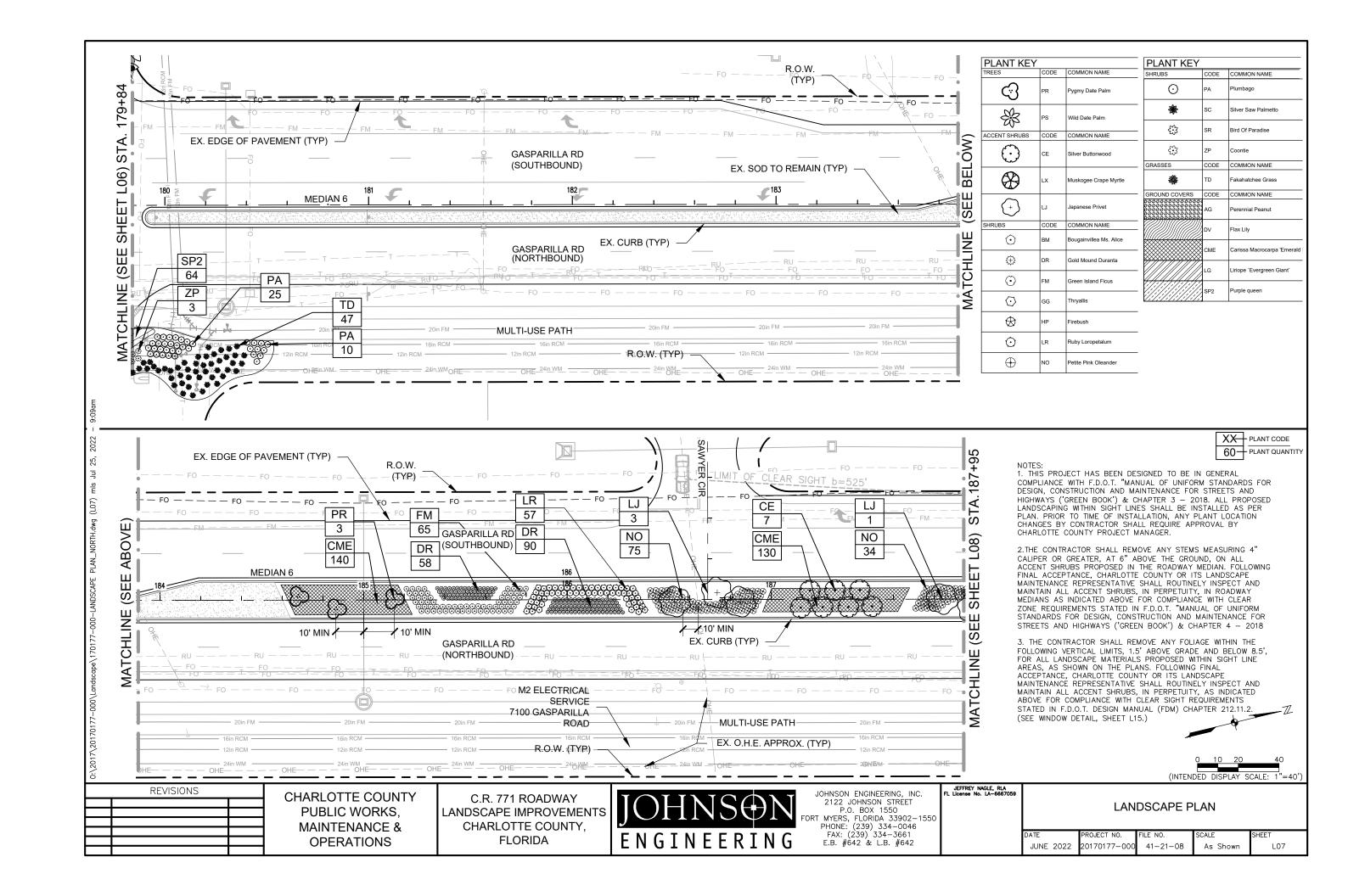
PUBLIC WORKS. **MAINTENANCE & OPERATIONS** 

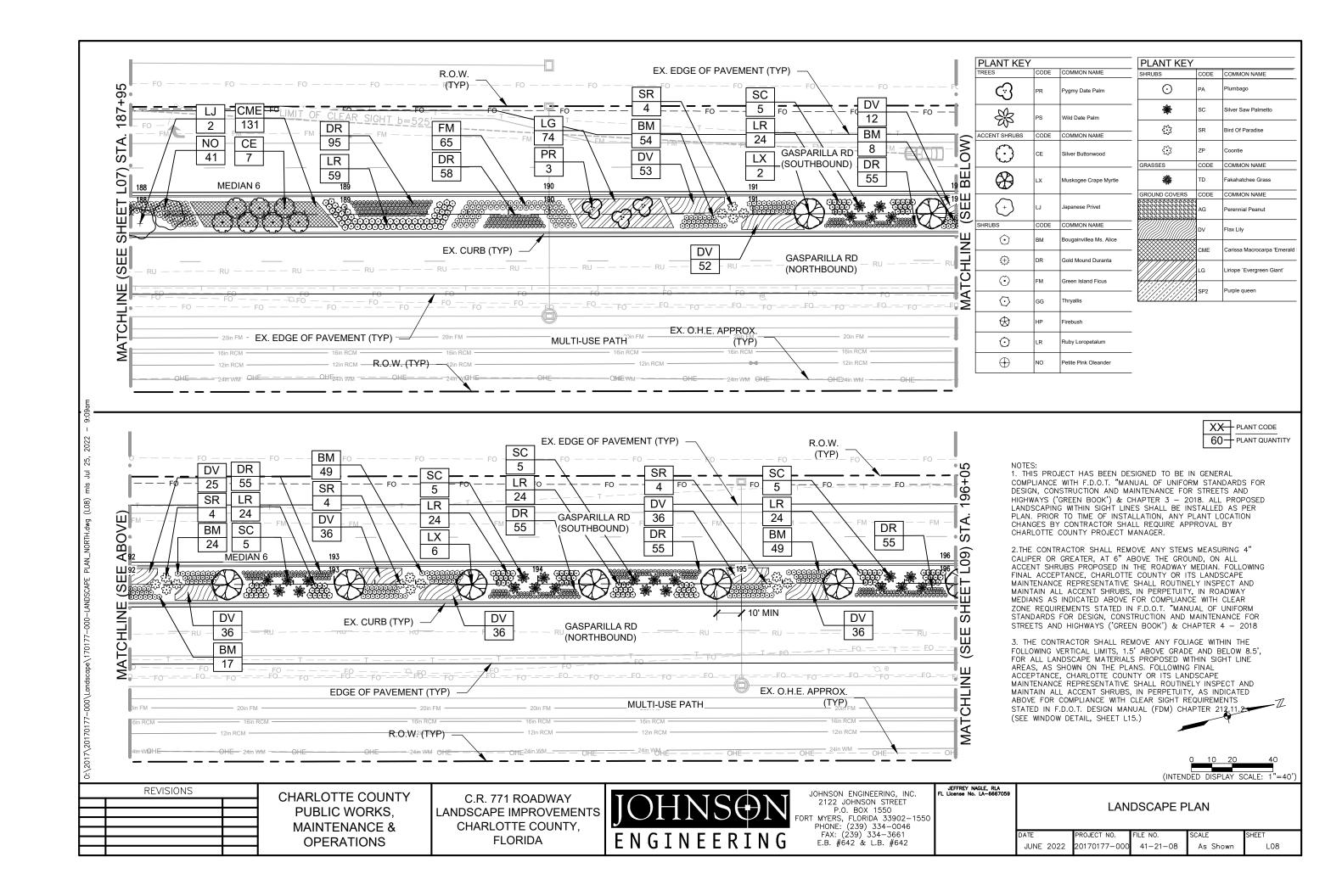
C.R. 771 ROADWAY LANDSCAPE IMPROVEMENTS CHARLOTTE COUNTY. **FLORIDA** 

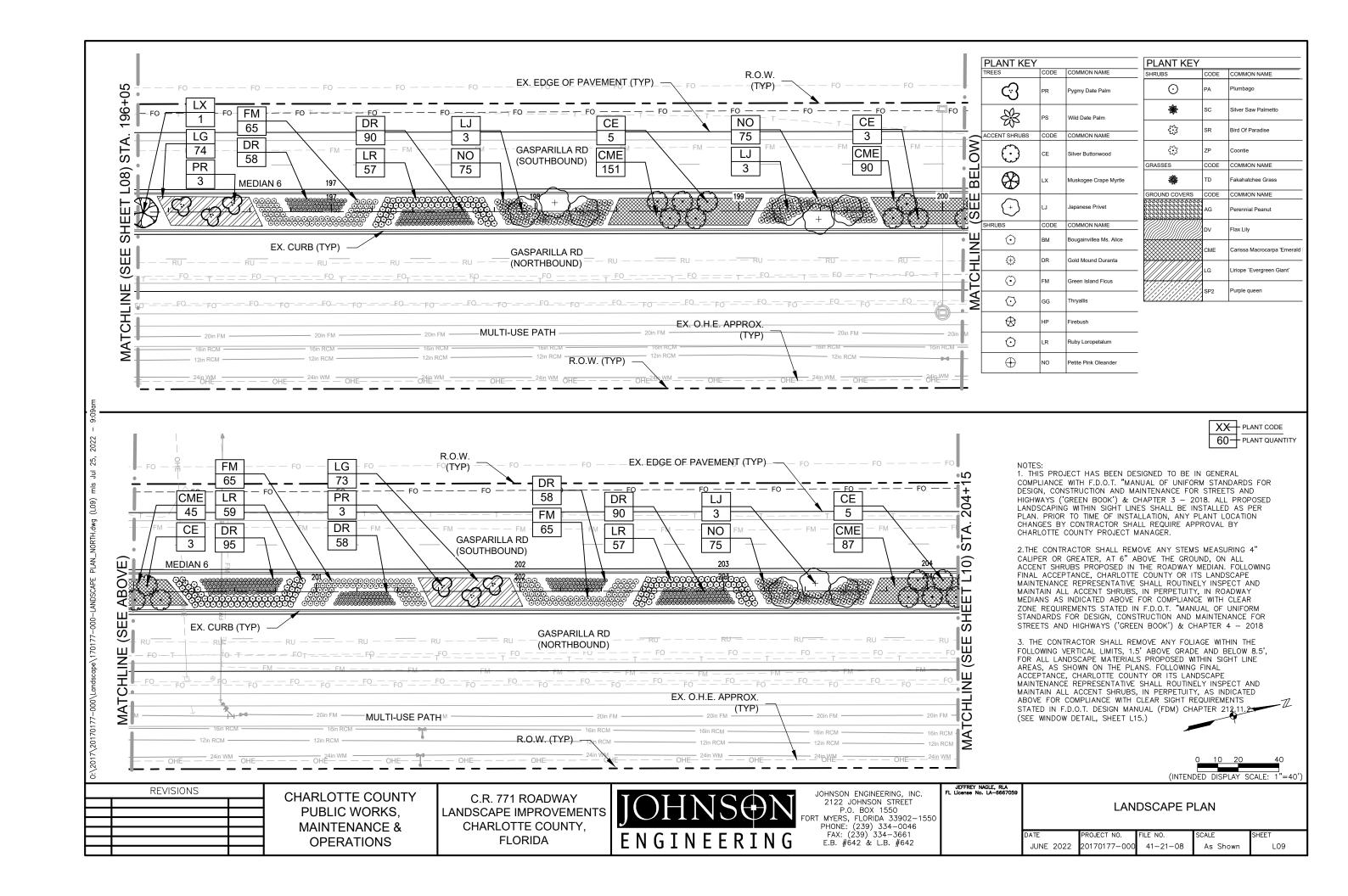


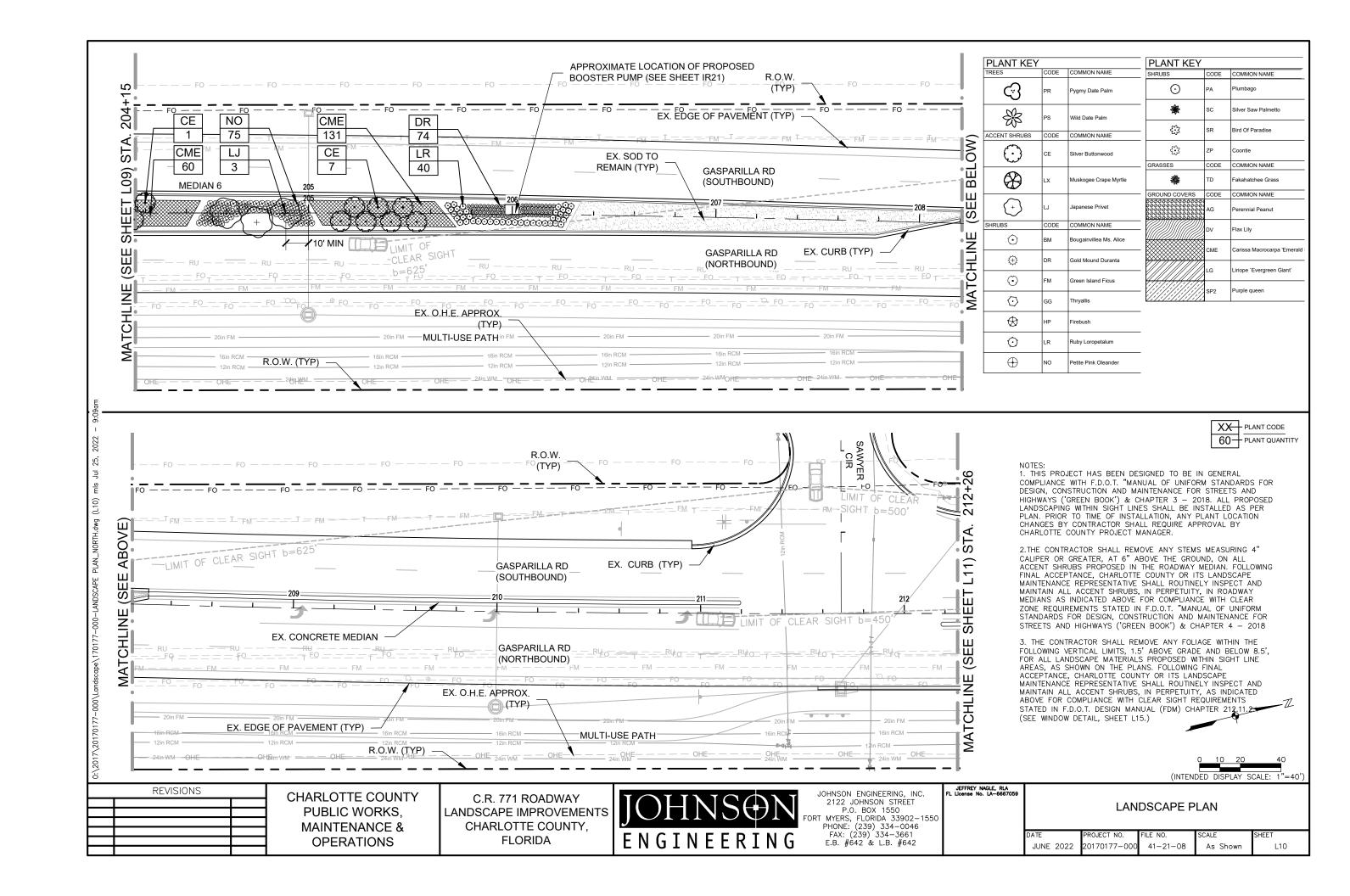
JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 ORT MYERS, FLORIDA 33902-1550 PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642

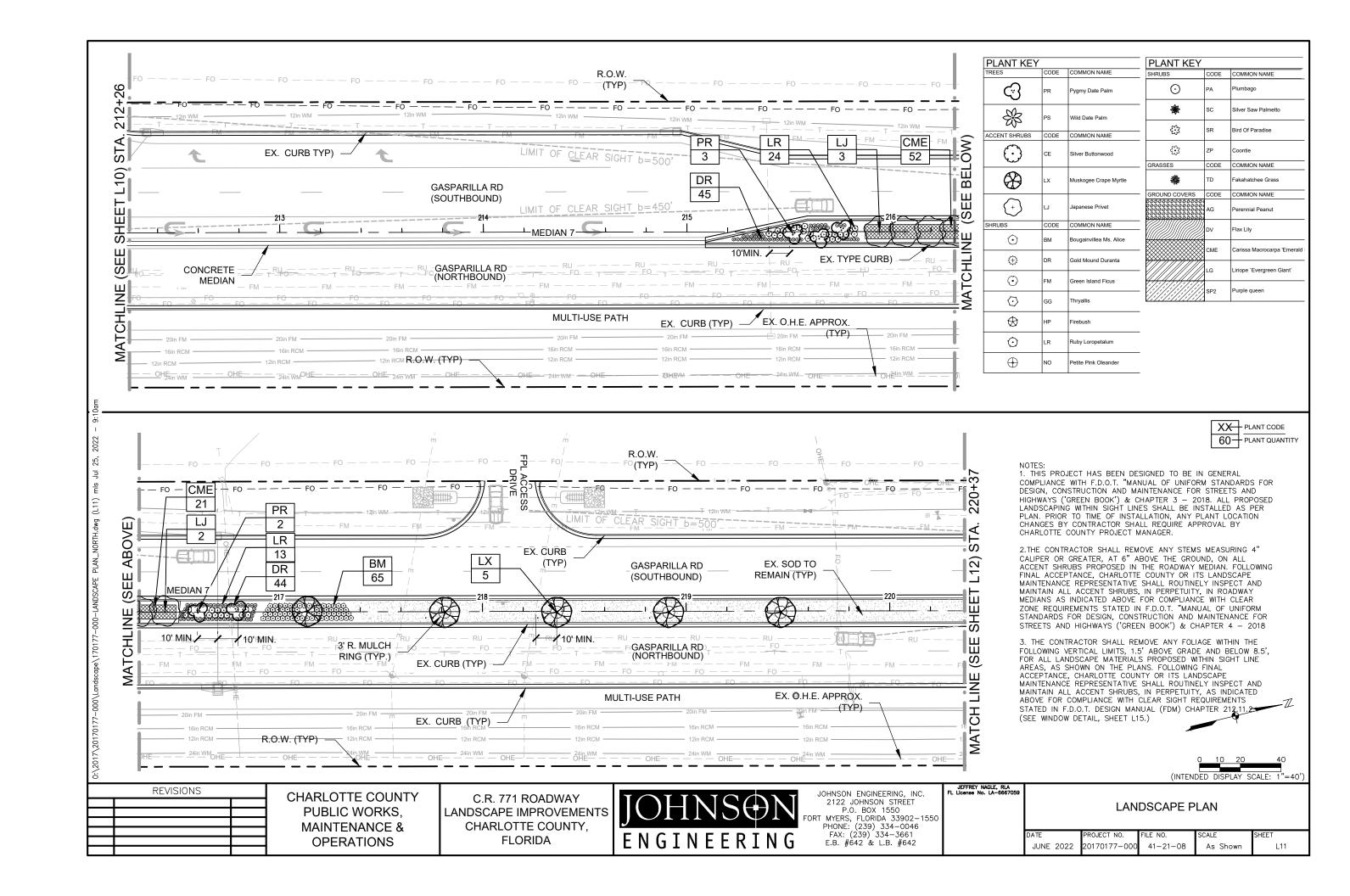


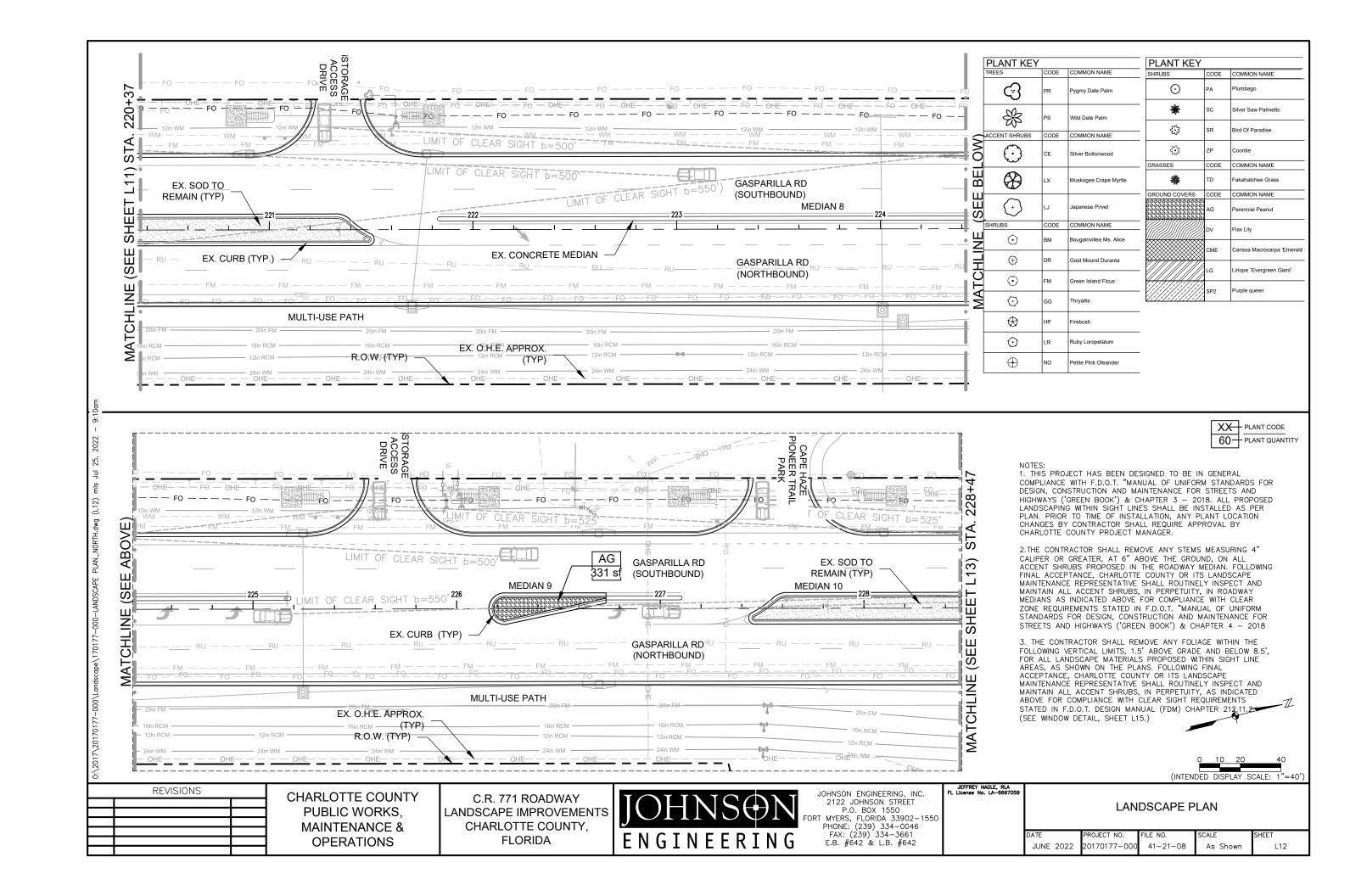


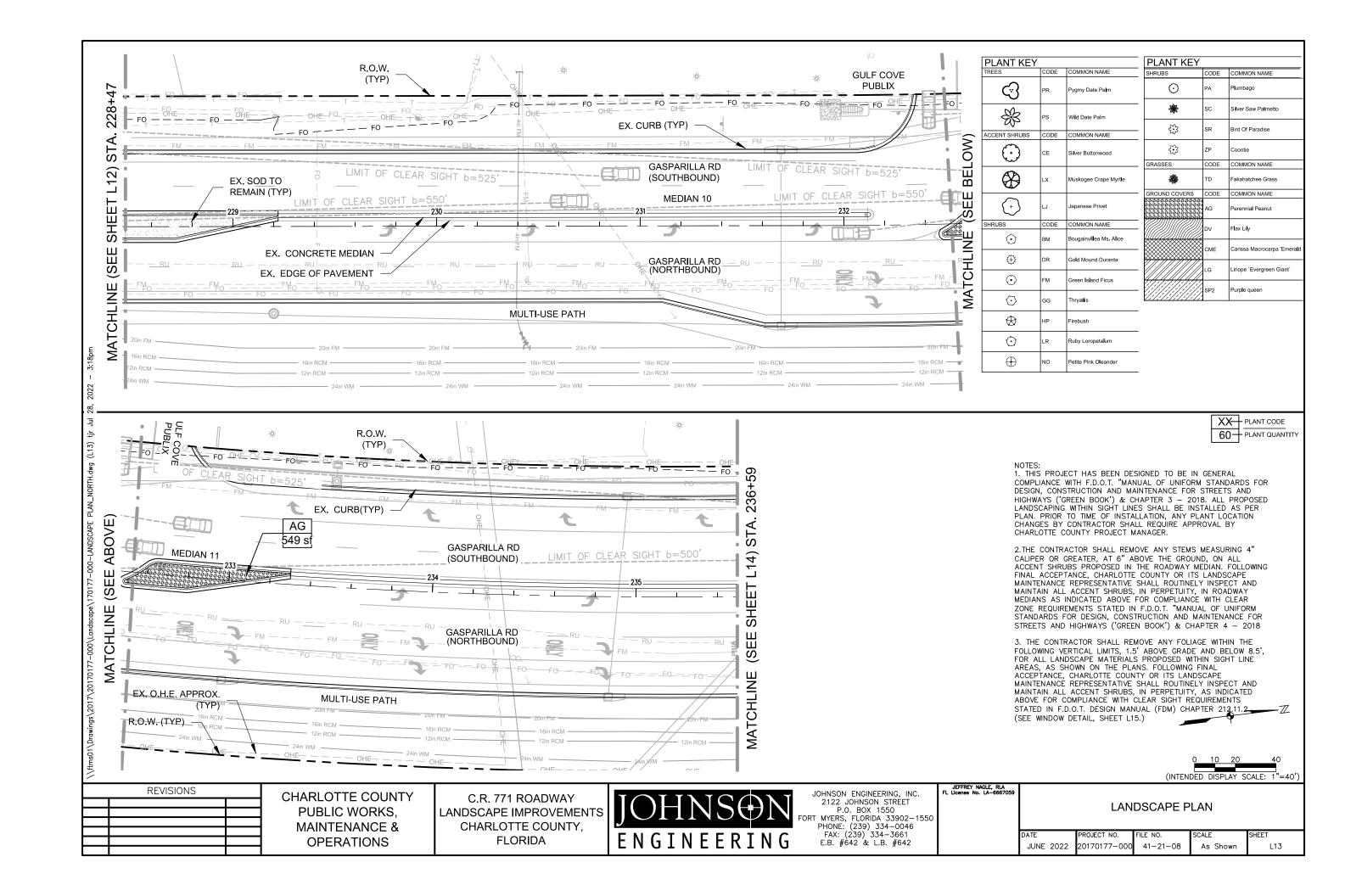


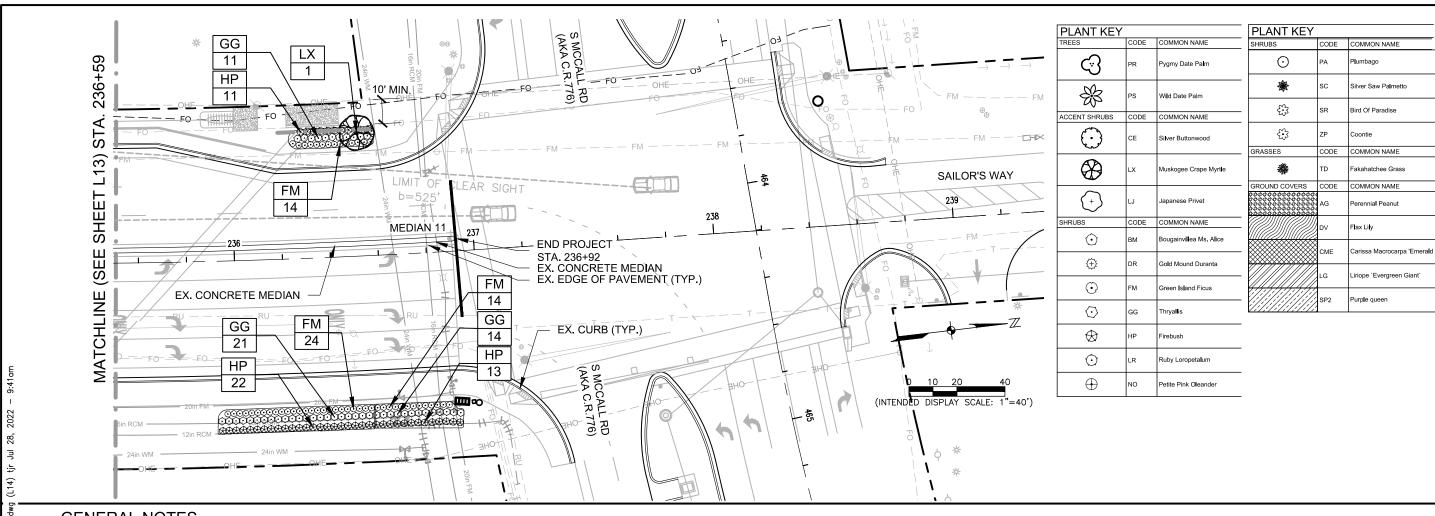












# **GENERAL NOTES**

- 1. ALL PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES, AND GROWN FOR AT LEAST TWO YEARS UNDER THE SAME CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. UNLESS APPROVAL IS GIVEN BY THE OWNER'S REPRESENTATIVE PRIOR TO DELIVERY TO SITE.
- 2. PLANTS SHALL HAVE A HABIT OF GROWTH THAT IS NORMAL TO THE SPECIES AND SHALL BE SOUND, HEALTHY AND VIGOROUS, AND FREE FROM INSECT PESTS.
- PLANT SHALL BE EQUAL OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST, WHICH ARE MINIMAL ACCEPTABLE SIZES. PLANTS SHALL BE MEASURED BEFORE PRUNING WITH BRANCHES IN NORMAL POSITION, ANY NECESSARY PRUNING SHALL BE DONE AT THE TIME OF PLANTING. REQUIREMENTS FOR MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING AND BURLAPPING OF PLANTS IN THE PLANT LIST GENERALLY FOLLOW THE CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK.
- 4. PLANT MATERIALS SHALL BE GRADED FLORIDA NO. 1 OR BETTER AS OUTLINED UNDER GRADES AND STANDARDS FOR NURSERY PLANTS, STATE PLANT BOARD OF FLORIDA. PLANTS THAT MEET THE REQUIREMENTS SPECIFIED, BUT DO NOT HAVE THE NORMAL BALANCE OF HEIGHT AND SPREAD TYPICAL FOR THE RESPECTIVE PLANT, SHALL NOT BE ACCEPTED. THE CONTRACTOR SHALL PROVIDE CERTIFICATION THAT ALL PALMS AND TREES ARE A MINIMUM FLORIDA NO. 1 OR BETTER AS OUTLINED UNDER GRADES AND STANDARDS FOR NURSERY PLANTS, STATE PLANT BOARD OF FLORIDA, THIS SHALL BE REQUIRED AT TIME OF DELIVERY.

- 5. ALL PLANTS SHALL BE FREE OF WEEDS OR OTHER OBJECTIONABLE VEGETATION. PLANTS GROWN IN "GROW BAGS" SHALL NOT BE ACCEPTED.
- ALL PLANT MATERIAL SHALL BE PROTECTED FROM POSSIBLE BARK INJURY OR BREAKAGE OF BRANCHES. PLANTS TRANSPORTED IN AN OPEN TRUCK SHALL BE ADEQUATELY COVERED TO PREVENT WINDBURN, DRYING OR DAMAGE TO THE PLANTS.
- 7. PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY ON DELIVERY TO THE SITE SHALL HAVE THEIR ROOT BALL COVERED WITH MOIST SOIL, MULCH OR OTHER SUITABLE MATERIAL TO PROTECT THEM FROM DRYING OF WIND AND SUN. ALL PLANTS SHALL BE WATERED AS NECESSARY UNTIL PLANTED. STORAGE PERIOD SHALL NOT EXCEED SEVENTY TWO (72) HOURS
- TREES AND PALMS MOVED BY WINCH OR CRANE SHALL BE THOROUGHLY PROTECTED FROM CHAIN MARKS, GIRDLING OR BARK SLIPPAGE BY MEANS OF BURLAP, WOOD BATTENS OR OTHER APPROVED METHOD,
- DURING TRANSPORT ON TRUCK OR TRAILER, PALMS SHOULD BE WELL SUPPORTED ALONG THEIR ENTIRE LENGTH. UNSUPPORTED CROWNS MAY CRACK OR DAMAGE THE BUD, RESULTING IN REDUCED SURVIVAL RATES.
- 10. THE CONTRACTOR SHALL REPLACE ALL BAHIA SOD DISTURBED BY ASSOCIATED CONSTRUCTION ACTIVITY, OUTSIDE PROPOSED LANDSCAPE ENHANCEMENTS SHOWN ON PLANS, SEE TABULATION OF QUANTITIES FOR ANTICIPATED QUANTITY REQUIRED FOR REPLACING SOD DISTURBED BY TRENCHING MAINLINE.

# XX PLANT CODE 60 PLANT QUANTITY

1. THIS PROJECT HAS BEEN DESIGNED TO BE IN GENERAL COMPLIANCE WITH F.D.O.T. "MANUAL OF UNIFORM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS ('GREEN BOOK') & CHAPTER 3 - 2018. ALL PROPOSED LANDSCAPING WITHIN SIGHT LINES SHALL BE INSTALLED AS PER PLAN. PRIOR TO TIME OF INSTALLATION, ANY PLANT LOCATION CHANGES BY CONTRACTOR SHALL REQUIRE APPROVAL BY CHARLOTTE COUNTY PROJECT MANAGER.

2.THE CONTRACTOR SHALL REMOVE ANY STEMS MEASURING 4" CALIPER OR GREATER, AT 6" ABOVE THE GROUND, ON ALL ACCENT SHRUBS PROPOSED IN THE ROADWAY MEDIAN. FOLLOWING FINAL ACCEPTANCE, CHARLOTTE COUNTY OR ITS LANDSCAPE MAINTENANCE REPRESENTATIVE SHALL ROUTINELY INSPECT AND MAINTAIN ALL ACCENT SHRUBS, IN PERPETUITY, IN ROADWAY MEDIANS AS INDICATED ABOVE FOR COMPLIANCE WITH CLEAR ZONE REQUIREMENTS STATED IN F.D.O.T. "MANUAL OF UNIFORM STANDARDS FOR DESIGN CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS ('GREEN BOOK') & CHAPTER 4 - 2018

3. THE CONTRACTOR SHALL REMOVE ANY FOLIAGE WITHIN THE FOLLOWING VERTICAL LIMITS, 1.5' ABOVE GRADE AND BELOW 8.5', FOR ALL LANDSCAPE MATERIALS PROPOSED WITHIN SIGHT LINE AREAS, AS SHOWN ON THE PLANS, FOLLOWING FINAL ACCEPTANCE, CHARLOTTE COUNTY OR ITS LANDSCAPE MAINTENANCE REPRESENTATIVE SHALL ROUTINELY INSPECT AND MAINTAIN ALL ACCENT SHRUBS, IN PERPETUITY, AS INDICATED ABOVE FOR COMPLIANCE WITH CLEAR SIGHT REQUIREMENTS STATED IN F.D.O.T. DESIGN MANUAL (FDM) CHAPTER 212.11.2. (SEE WINDOW DETAIL, SHEET L15.)

CHARLOTTE COUNTY	REVISIONS	
PUBLIC WORKS,		
MAINTENANCE &		
1		
OPERATIONS		

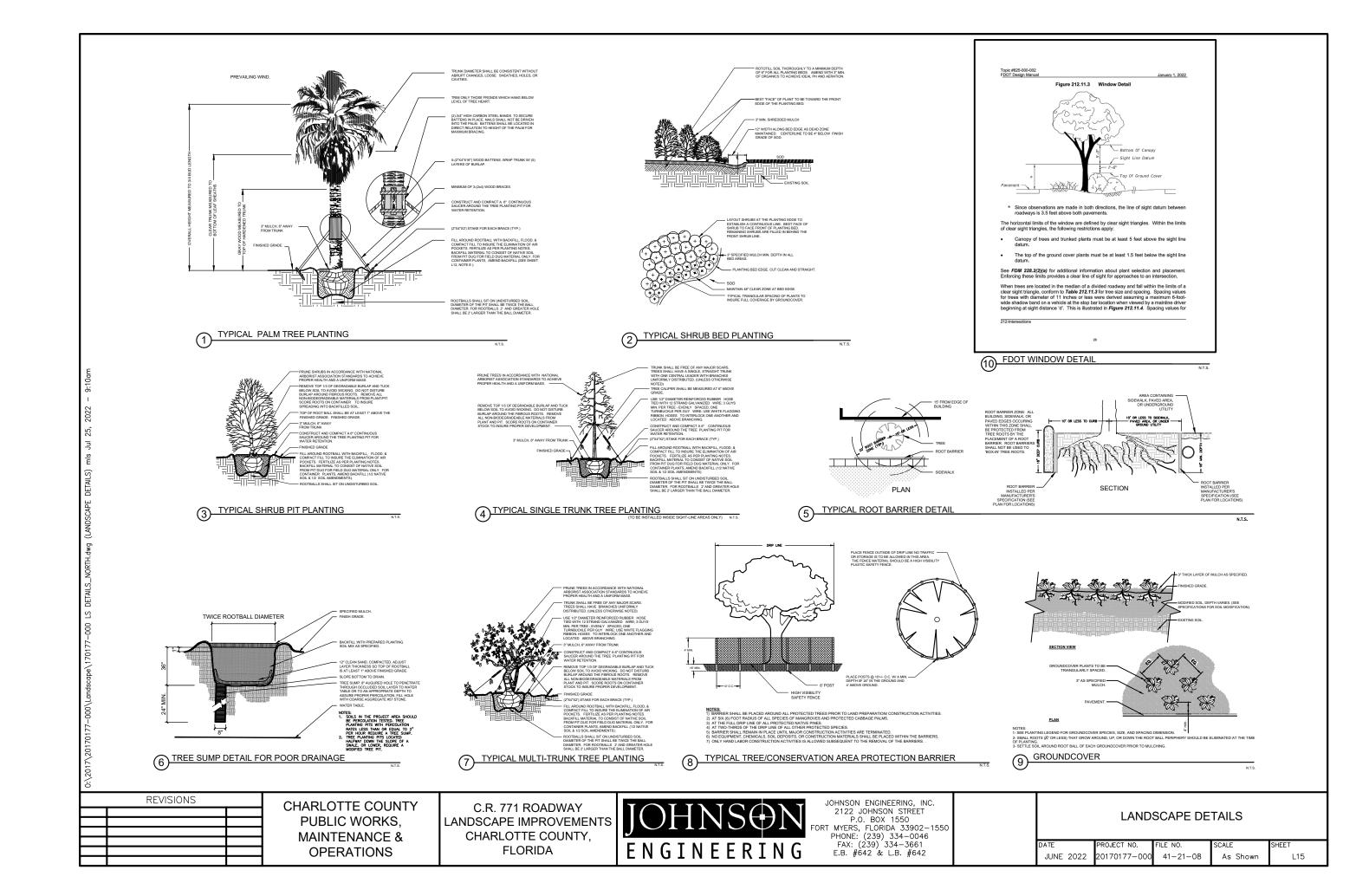
C.R. 771 ROADWAY LANDSCAPE IMPROVEMENTS CHARLOTTE COUNTY, **FLORIDA** 



JOHNSON ENGINEERING, INC. 2122 JOHNSON STRFFT P.O. BOX 1550 MYERS, FLORIDA 33902-1550 PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642

# LANDSCAPE PLAN

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
JUNE 2022	20170177-000	41-21-08	As Shown	L14



- A. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.
- B. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER OR OWNER'S REPRESENTATIVE

### 2. PROTECTION OF EXISTING STRUCTURES

ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND ALL EAST ING BOILDINGS, WALLS, WALLS, FAMING, PIPING, OF HER STIE CONSTRUCTION TEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

### 3. PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKINGI INSIDE THE DRIP-LINE AND SPILLING OIL. GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED WHERE HEAT WILL DAMAGE ANY PLANT. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/ OR LINSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED MISSIAPEN AND VR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTROL OR OF ONE HOUNDED DOLLARS (\$100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES (OR PER PROJECT JURISDICTIONAL CODE, WHICHEVER IS MORE STRINGENT), CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR, QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OF OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR FRRORS, SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY. THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION, ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK, ALL PAYED ARRAS HALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE

### 6. PLANT MATERIAL MAINTENANCE

ALL PLANTS AND PLANTING INCLUDED LINDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY CULTIVATING, SHAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAINING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. MAINTENANCE AFTER THE CERTIFICATION OF ACCEPTABILITY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THIS SECTION. CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE TO COVER LANDSCAPE AND IRRIGATION MAINTENANCE FOR A PERIOD OF 90 CALENDAR DAYS COMMENCING AFTER ACCEPTANCE.

### 7. LAWN MAINTENANCE

- A. WITHIN THE CONTRACT LIMITS. THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED. SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER OR OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).
- B. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE B' CONTRACTOR REPORTSING THE OF ESTABLISHING AND MAINTAINING SOLDAWN UNIT ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON SUBSTANTIAL COMPLETION, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE FOR MAINTENANCE FOLLOWING SUBSTANTIAL COMPLETION... CONTRACTORS MAINTENANCE WILL BE LIMITED TO INSTALLED IRRIGATION AND LANDSCAPING AREAS INCLUDING, SOD/LAWN MOWING WITHIN 10 FEET OF THE MULCHED PLANT BEDS LIMITS. MAINTENANCE PERIOD ON A COST-PER-MONTH BASIS.

### 9. FINAL INSPECTION AND ACCEPTANCE OF WORK

FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

- A. THE LIFE AND SATISFACTORY CONDITION OF ALL OTHER PLANT MATERIAL (INCLUDING SOD) INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER OR OWNER'S REPRESENTATIVE.
- B. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE MARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS THE STEED OF THE SAME KIND AND SIZE AS SPECIFIED IN THE FLANT LIST. THEY SHALL BE FLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FLANTED AND MULCHED AS SPECIFIED UNDER "PLANTING", AT NO ADDITIONAL COST TO THE OWNER.
- C. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE (AND IRRIGATION) MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OF CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS

### PLANT SPECIFICATION NOTES

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON THE SITE OR AS OTHERWISE DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE. UPON SAMPLES' APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

# SAMPLE SIZE ONE (1) CUBIC FOOT

PLANTING / TOPSOIL MIX ONE (1) CUBIC FOOT (INCLUDING EXISTING SOILS REPORT) ONE (1) PHOTO OF EACH VARIETY (OR TAGGED IN NURSERY)

### 2. PLANT MATERIALS

- A. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL SIZES SPECIFIED ARE MINIMUMS AT THE TIME OF INSTALLATION. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER OR OWNER'S REPRESENTATIVE. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER OR OWNER'S REPRESENTATIVE.
- B. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES STALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER OR OWNERS REPRESENTATIVE. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT
- C. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE. AS DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE. FOR QUALITY, SIZE, AND VARIETY: SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND QUALITY, SIZE, AND VARIELY; SUCH APPROVAL SHALL NOT IMPAIN THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BIT REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN ITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATI
- D. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION, FLORIDA #1 OR BETTER.

AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE. ALL TREE ROOTBALLS SHALL BE SHAVED - 1 1/2" OFF ON ALL SIDES WITH EITHER A SHARP SPADE OR BLADE BEFORE PLANTING OR FROM TOP TO

SUBSTITUTION OF NON-CONTAINER GROWN MATERIAL FOR MATERIAL EXPLICITLY SPECIFIED TO B CONTAINER GROWN WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL IS OBTAINED FROM THE OWNER OR OWNER'S REPRESENTATIVE

### RPG = "ROOTS PLUS GROWER" CONTAINER WHERE SPECIFIED

- E. WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE. THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.
- F. PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) BROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE

### 3. DIGGING AND HANDLING

- A. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO SITE SHALL BE SPRAYED WITH A ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
- B. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF BALLED FINITY SIZE TO ENCOMPASS THE FIRE OF SHEAD STATE THE THINK, NATURAL BALLS OF SUIL OF SHEAD STATES TO ENCOMPASS THE FIRE OF SHEAD STATES OF THE PLANTS. NO PLANTS IN WITH A PEOD BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN, PLANTS BALLED AND BURLAPPED OR CONTAINED STATES.
- C. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS, COMPLYING WITH F<u>LORIDA</u>
  GRADES AND STANDARDS FOR NURSERY PLANTS, CURRENT EDITION. CARE SHALL BE EXERCISED THAT
  THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
- D. PROTECTION OF PALMS (IF APPLICABLE): ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING, CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
- E. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB- BASED.

### 4. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

- A. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW
- B. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) ICENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH ITING RESULTS FOR APPROVAL.

### PLANT SPECIFICATION NOTES CONTINUED

- C. <u>SAND</u> SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL BY THE OWNER OR OWNER'S REPRESENTATIVE.
- UNSUITABLE AT WHICH POINT THE CONTRACTOR SHALL CONTACT THE OWNER OR OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION <u>PRIOR TO PLANTING.</u>
- E. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR THE OWNER OR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE

WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OF THE SITE AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR TO CHECK TO SEE IF WATERING/IRRIGATION RESTRICTIONS MAY ARBILY DESERT OR DOWNER. APPLY, REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

### 6. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER OR OWNER'S REPRESENTATIVE, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED. CONTRACTOR TO CHECK TO SEE IF FERTILIZER RESTRICTIONS MAY APPLY, REFER TO PROPERTY'S JURISDICTIONAL

MULCH MATERIAL SHALL BE FLORIMULCH, 100% MELALEUCA OR APPROVED EQUAL, FREE FROM WEED SEEDS, AND APPLIED TO A MINIMUM 3" DEPTH, CYPRESS MULCH IS NOT ACCEPTABLE...

THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.

### PLANTING PROCEDURE NOTES

- 1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL, SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER OR OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTO
- VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL NATIONAL ONE CALL 811 TO LOCATE UTILITIES OR REFER TO THE CIVIL PLANS IF APPLICABLE.
- 3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36". CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE
- 4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND
- GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK: CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED
- 6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
- FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
- 8. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. THIS CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
- 9 ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.
- 10. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 260.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW. FULL HOSE STREAM, ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SION OF A QUALIFIED I ANDSCAPE FOREMAN, PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED
- 11. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES

### PLANTING PROCEDURE NOTES CONTINUED

- 12. SOIL MIXTURE SHALL BE AS SPECIFIED UNDER PLANT SPECIFICATIONS
- 13. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER
- 14. ALL PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. SUBMIT PRODUCT INFORMATION PRIOR TO INCOLLATION FOR APPROVAL.
- 15. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE, DO NOT COVER TOP OF BALL WITH SOIL MIXTURE, ONLY WITH MULCH ALL BURLAP ROPE WIRES BASKETS ETC. SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH
- 16. TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY LICENSED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
- 17. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO FIELD ADJUST ANY PLANT MATERIALS. LANDSCAPE ARCHITECT TO APPROVE FINAL LOCATIONS, SIZE, SPECIES OF ALL PLANT MATERIALS. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6" REMOVE AND DISPOSE ALL DEBRIS. MIX OP 4" WITH THE PLANTING SOIL MIXTURE AND THOROUGHLY WATER ALL PLANTS AFTER
- 18. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
- 19 PROVIDE A THREE INCH (MINIMUM) LAYER OF SPECIFIED MUI CH OVER THE ENTIRE AREA OF EACH SHRUB BED. GROUND COVER, VINE BED, AND TREE PIT PLANTED UNDER THIS
- 20.ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER (AS ALLOWED BY JURISDICTIONAL AUTHORITY).
- 21 ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS WEEDS, AND DEBRIS, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED SUBFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE. PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.
- DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY
- 23 SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS, IMMEDIATELY FOLLOWING SOD HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED, IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN EFETIL IZE INSTALL BE SON AS ALL OWNER ON YEAR POR POPPOSED TO TIONAL AUTHORITY. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY
- 24.DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS. THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE
- 25.CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH CHARLOTTE COUNTY PUBLIC WORKS, MAINTENANCE AND OPERATING LANDSCAPE STANDAR

**REVISIONS CHARLOTTE COUNTY** PUBLIC WORKS. **MAINTENANCE &** 

**OPERATIONS** 

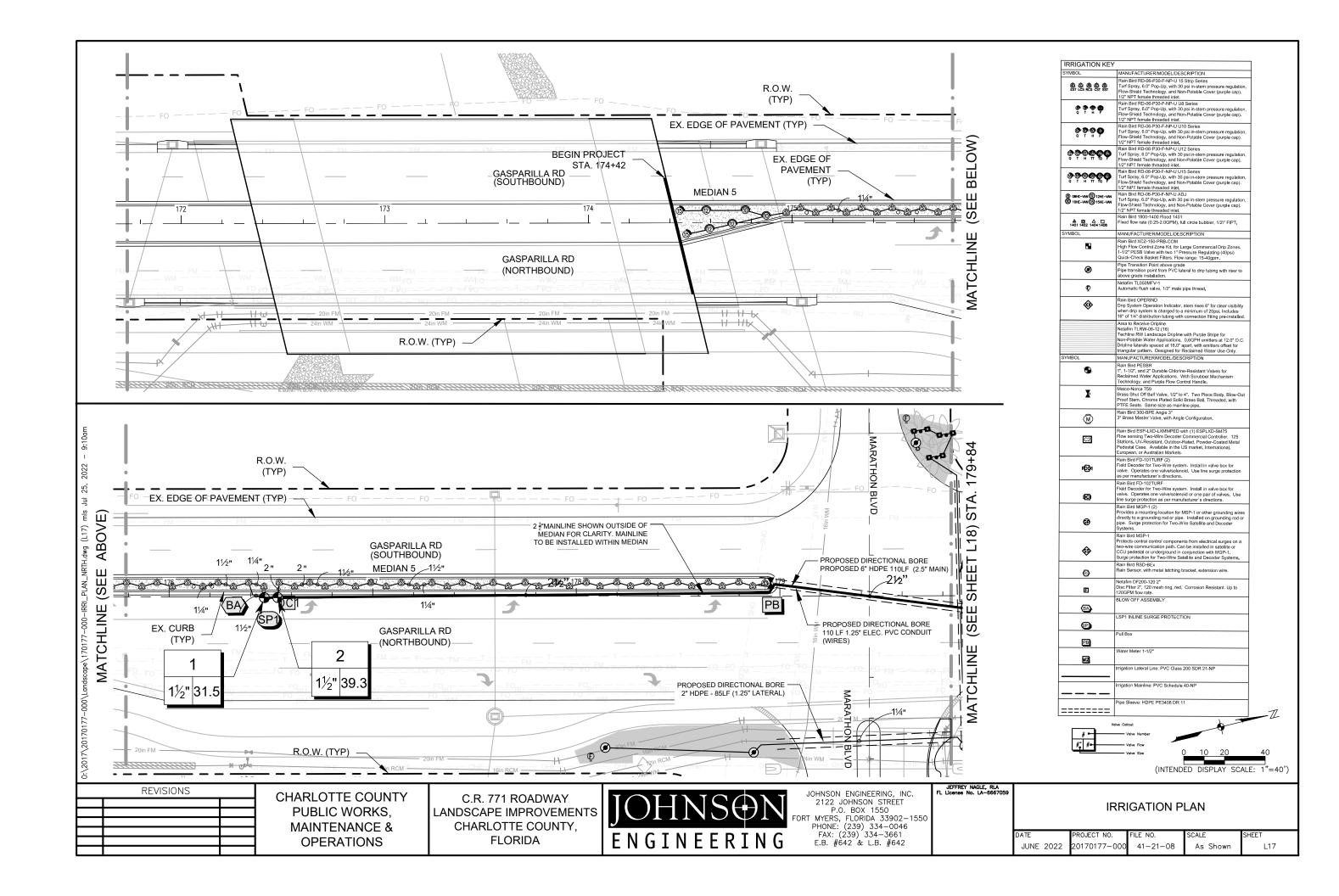
C.R. 771 ROADWAY CHARLOTTE COUNTY. **FLORIDA** 

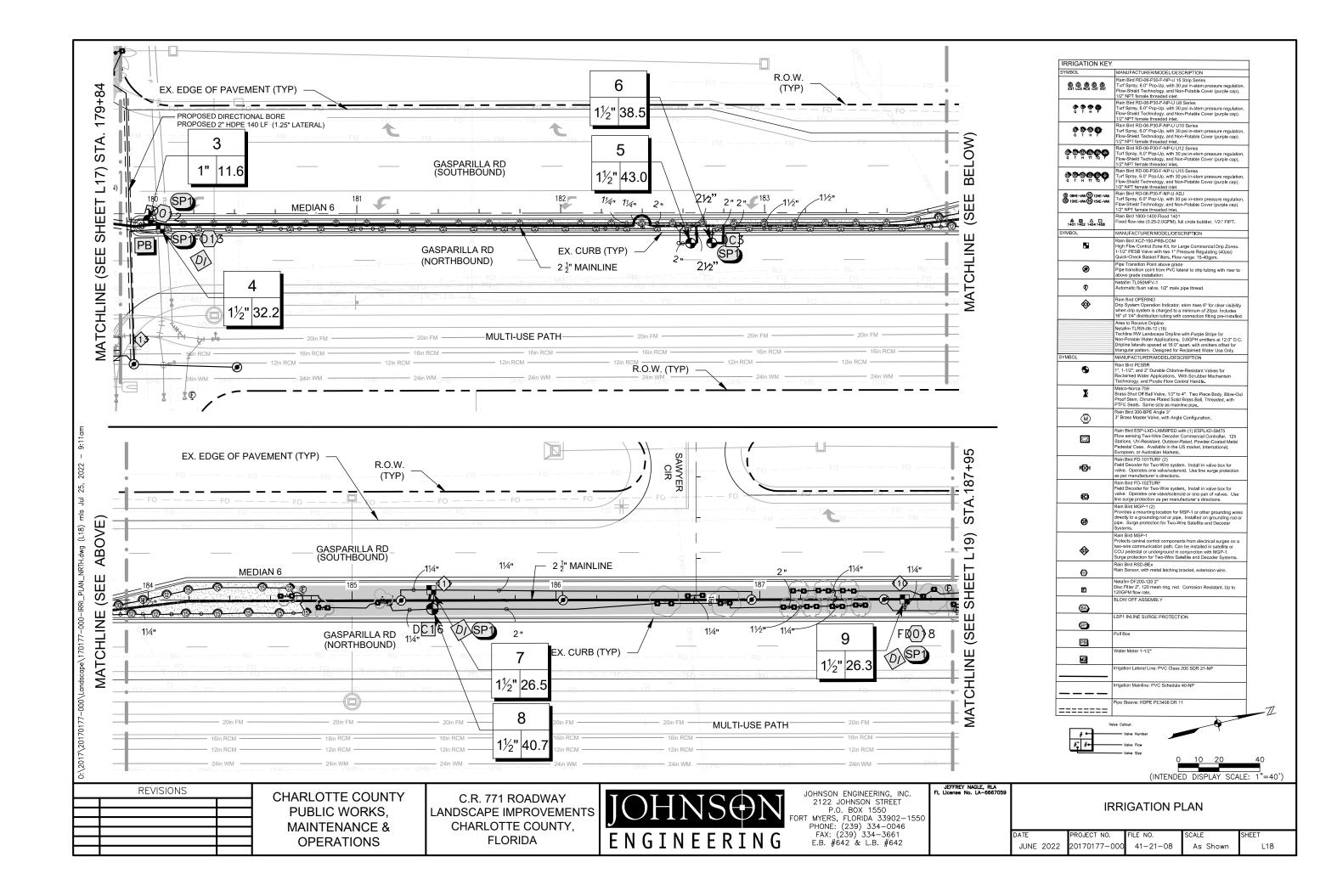


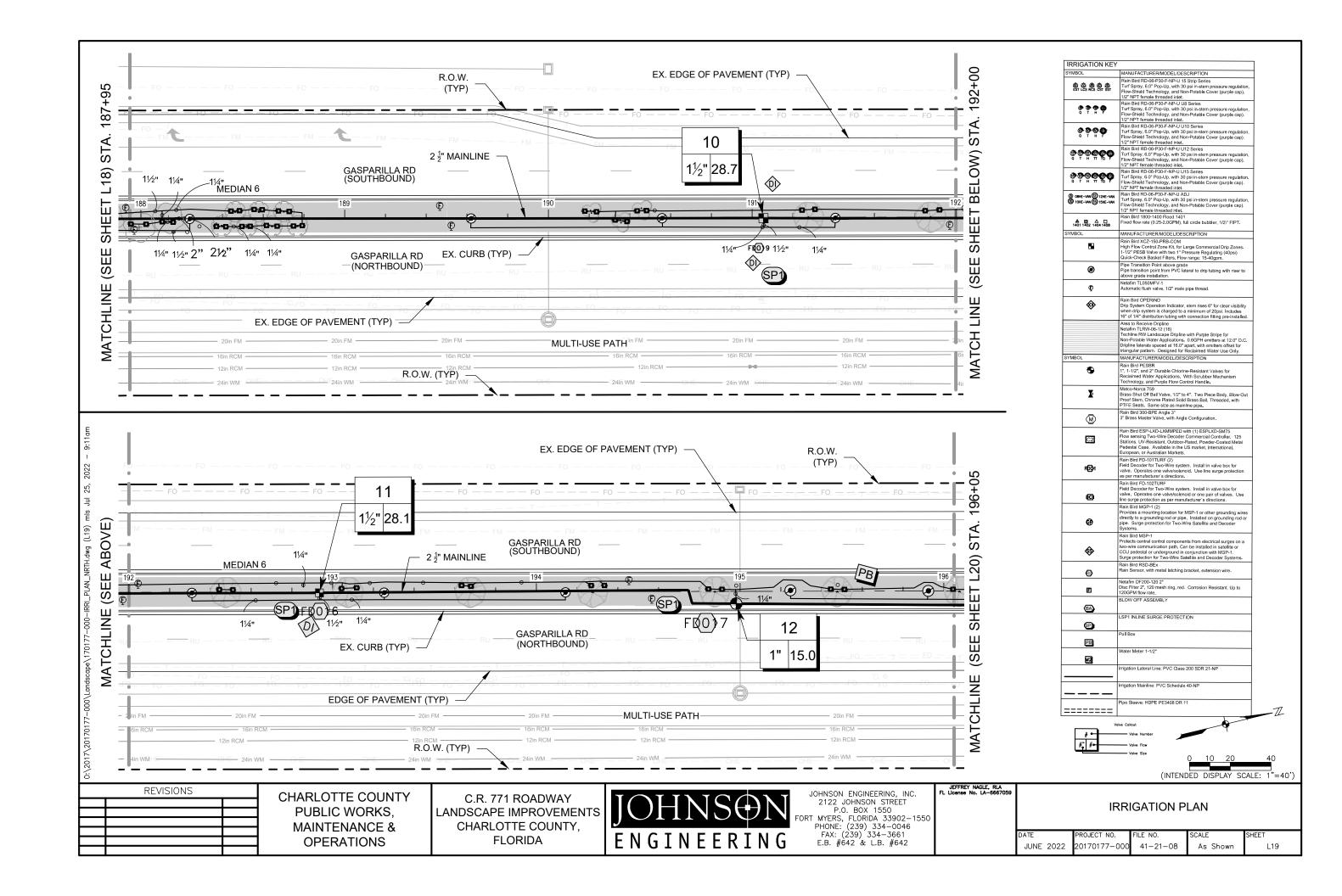
JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 FORT MYERS, FLORIDA 33902-1550 PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642

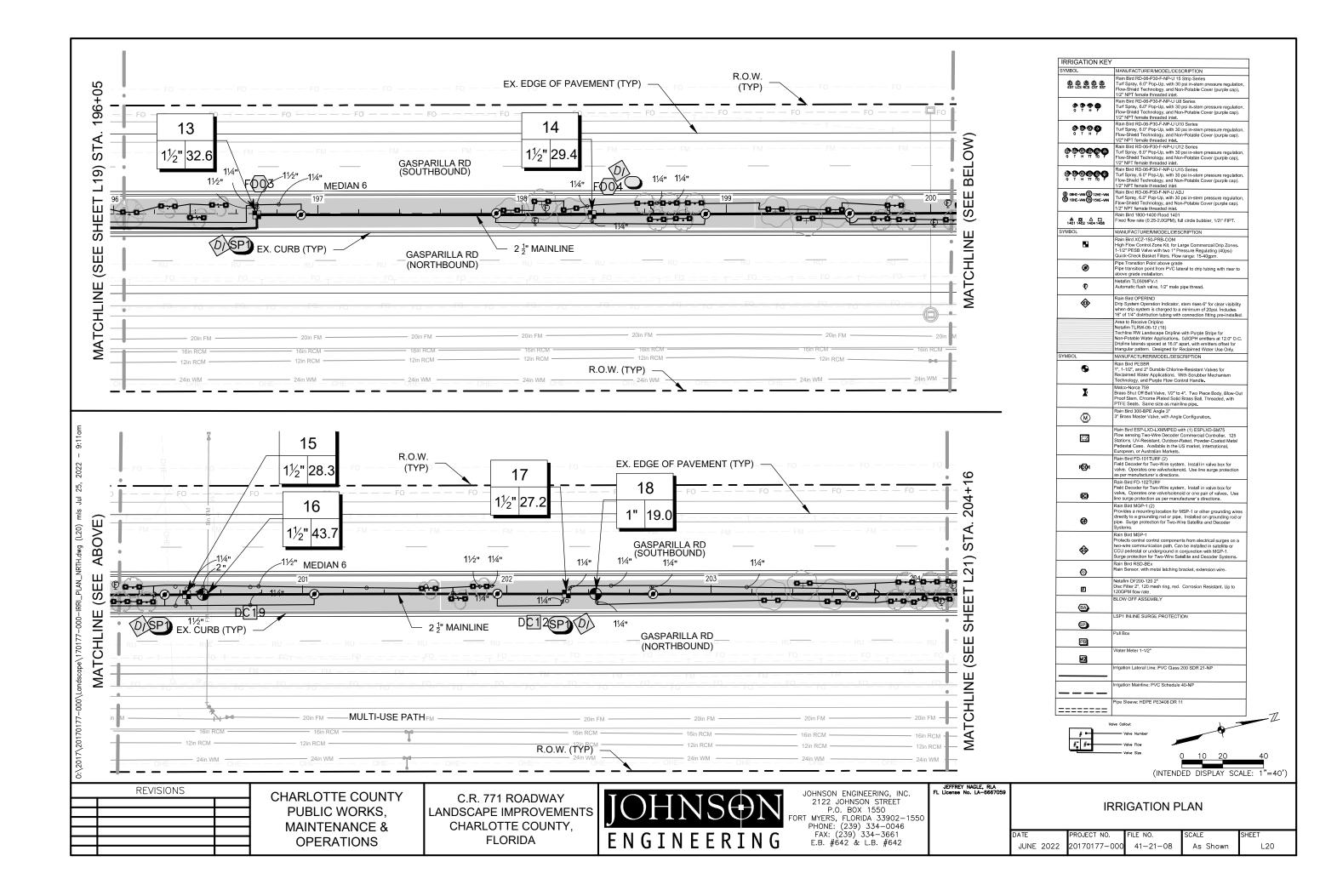
LANDSCAPE NOTES

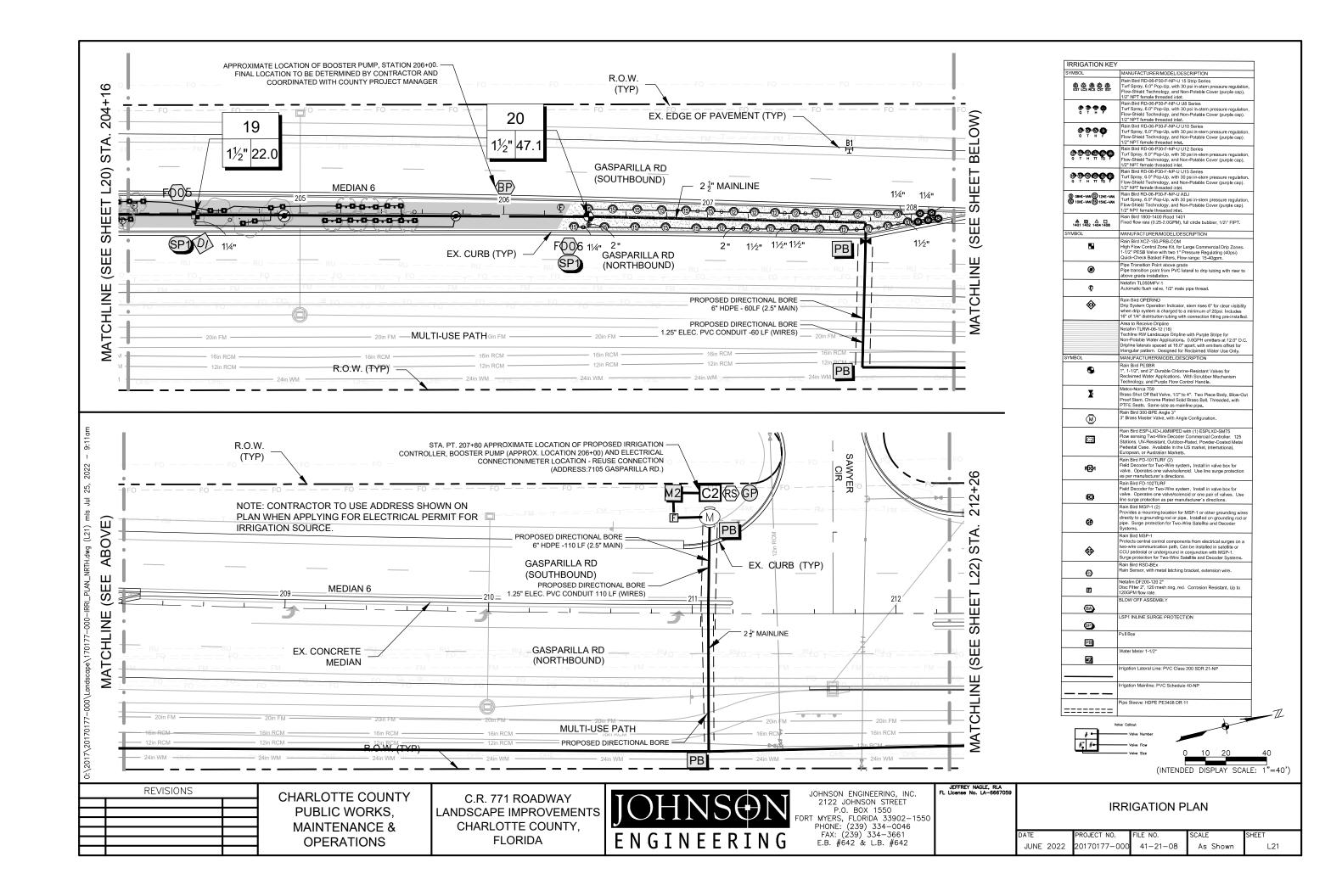
ROJECT NO. 20170177-000 L16 JUNE 2022 41-21-08 As Shown

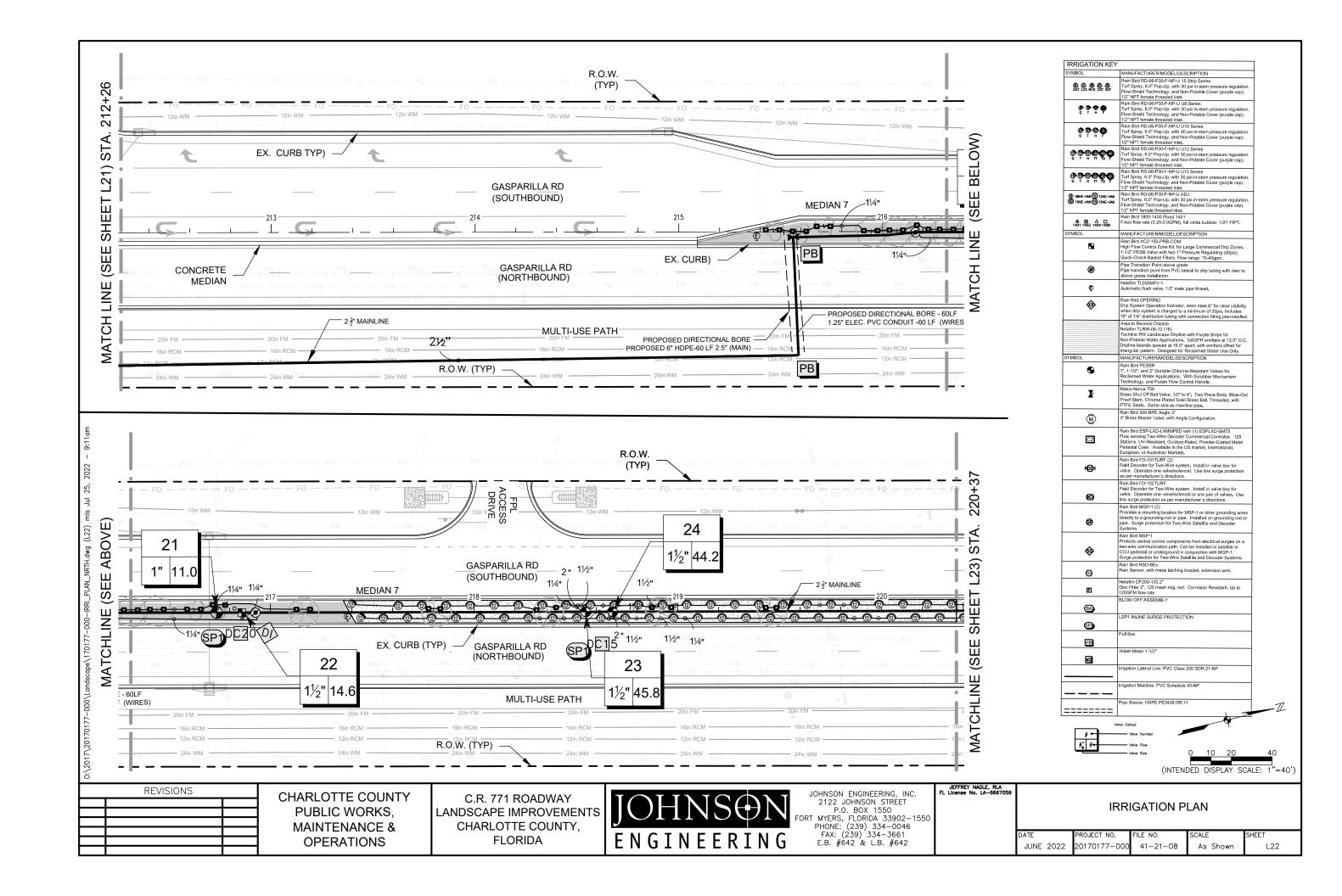


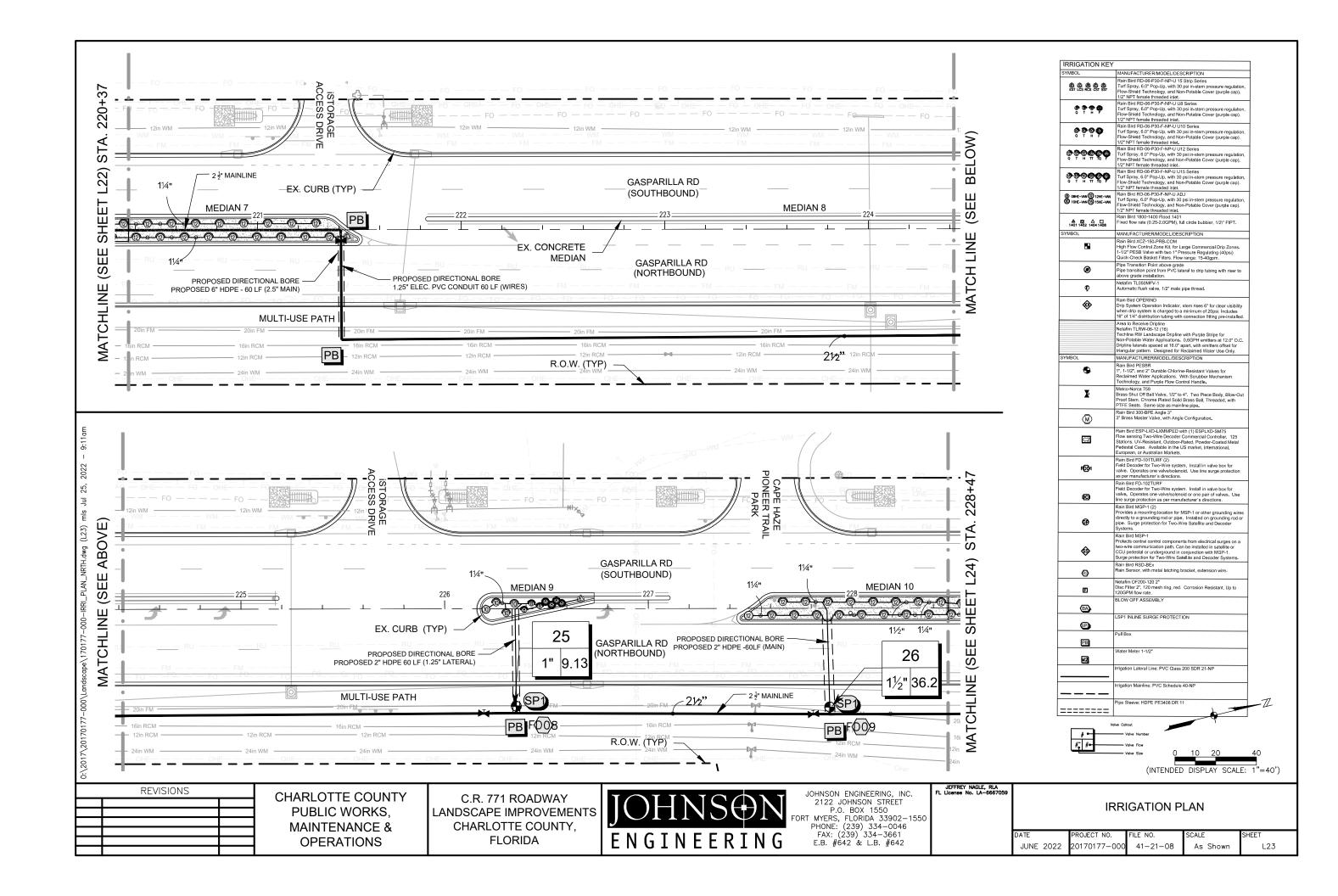


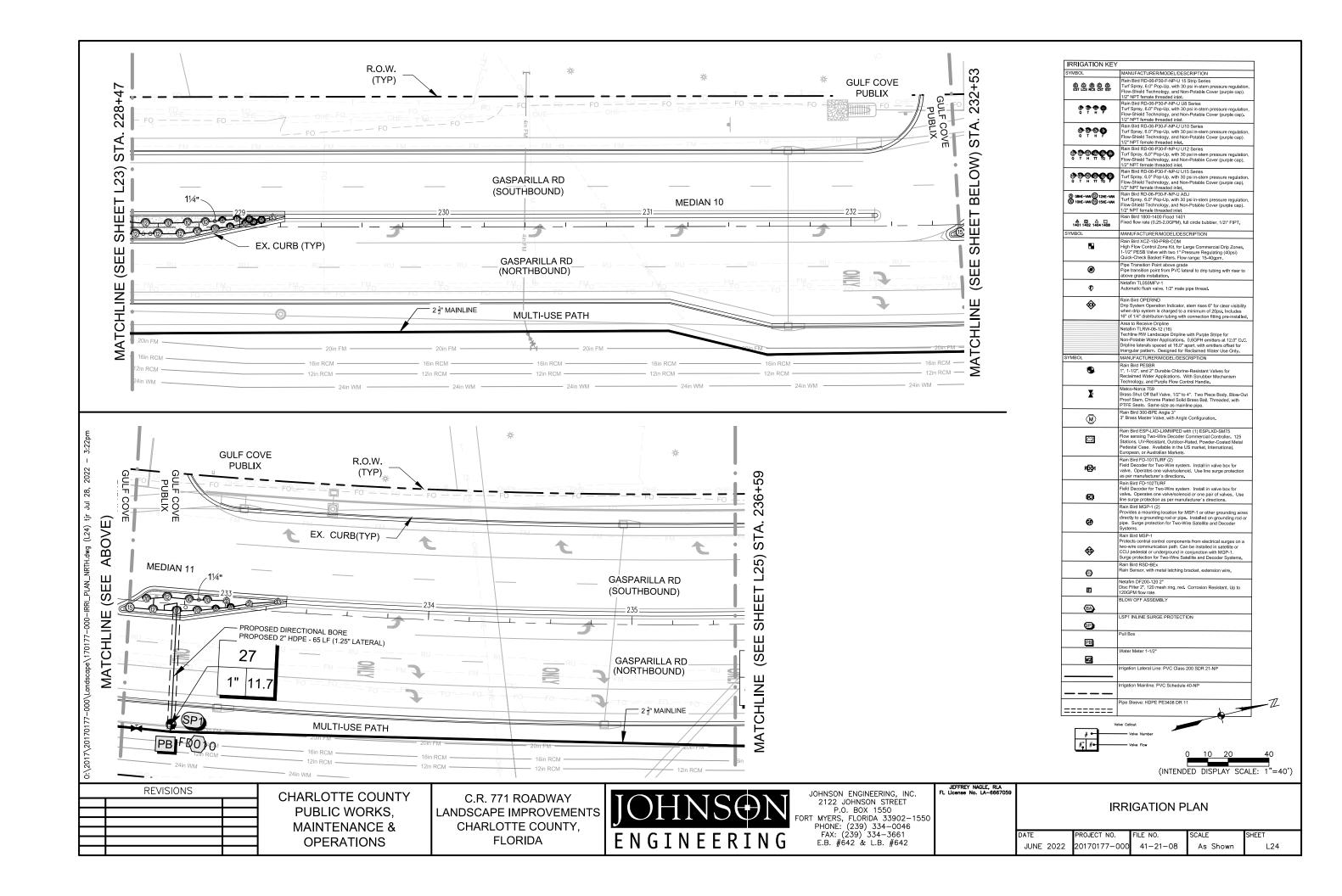


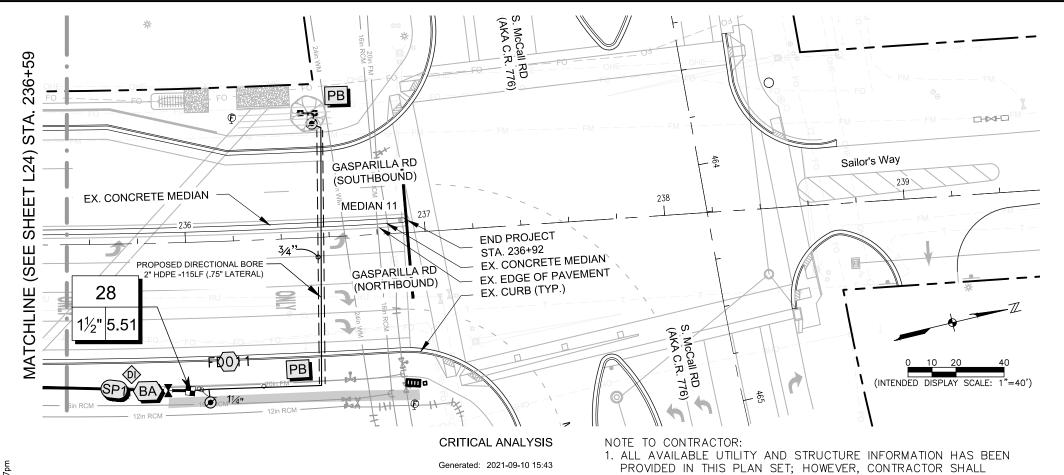












P.O.C. NUMBER: 01 Water Source Information:

FLOW AVAILABLE Water Meter Size: 1-1/2" Flow Available: 75.00 gpm

PRESSURE AVAILABLE Static Pressure at POC: 80.00 PSI Elevation Change: 5.00 ft Service Line Size: 3" Length of Service Line: 20 ft Pressure Available:78.00 psi

Maximum Station Flow: 47.08 gpm Flow Available at POC: 75.00 gpm Residual Flow Available: 27.92 gpm

Critical Station: 2 Design Pressure: 30.00 psi Friction Loss: 3.58 psi Fittings Loss: 0.36 psi Elevation Loss: 0.00 psi Loss through Valve: 2.35 psi Pressure Req. at Critical Station: Loss for Fittings: 1.58 psi Loss for Main Line: 15.81 psi

Loss for Backflow: 0.00 psi Loss for Master Valve: 6.80 psi Loss for Water Meter: 3.21 psi Critical Station Pressure at POC:

- VERIFY THE LOCATION OF ANY/ALL UTILITIES PRIOR TO MATERIAL PROCUREMENT, SITE PREPARATION, AND INSTALLATION OF ANY
- 2. IF ANY CONFLICTS SHALL ARISE DURING INSTALLATION, CONTRACTOR SHALL NOTIFY PROJECT MANAGER AND DESIGN LANDSCAPE ARCHITECT IMMEDIATELY.
- 3. ALL PROPOSED SLEEVING AS SHOWN TO BE INSTALLED BY IRRIGATION CONTRACTOR.
- 4. IRRIGATION COMPONENTS SHOWN IN ROAD FOR CLARITY ONLY. ALL IRRIGATION COMPONENTS TO BE INSTALLED IN LANDSCAPE AREAS.
- 5. COORDINATE WITH COUNTY REGARDING BOOSTER PUMP INSTALLATION.

D D D D D D D D D D D D D D D D D D D	Rain Bird RD-06-P30-F-NP-U 15 Strip Series Turf Spray, 6.0" Pop-Up, with 30 psi in-stem pressure regulation, Flow-Shield Technology, and Non-Potable Cover (purple cap). 1/2" NPT Female threaded inlet	110	30	
<b>******</b>	Rain Bird RD-06-P30-F-NP-U U8 Series Turf Spray, 6,0" Pop-Up, with 30 psi in-stem pressure regulation, Flow-Shield Technology, and Non-Potable Cover (purple cap), 12"> NPT famale throadect intel	21	30	
<b>⊕ ⊕ ⊕</b> • • • • • • • • • • • • • • • • • • •	Rain Bird RD-06-P30-F-NP-U U10 Series Turf Spray, 6,0" Pop-Up, with 30 psi in-stem pressure regulation, Flow-Shield Technology, and Non-Potable Cover (purple cap). 1/2" NIPT female throaded tide!	19	30	
<b>№ № № №</b>	Rain Bird RD-06-P30-F-NP-U U12 Series Turf Spray, 6,0" Pop-Up, with 30 psi in-stem pressure regulation, Flow-Shield Technology, and Non-Potable Cover (purple cap). 10" NET famale throaded inlet	112	30	
<b>№ ® Ф Ф</b> о т н п то г	Rain Bird RD-06-P30-F-NP-U U15 Series Turf Spray, 6.0" Pop-Up, with 30 psi in-stem pressure regulation, Flow-Shield Technology, and Non-Potable Cover (purple cap). 4/2" NPT female threaded inlet	22	30	
® 08HE-VAN 12HE-VAN 10 10HE-VAN 15 15HE-VAN	Rain Bird RD-06-P30-F-NP-U ADJ Turf Spray, 6.0" Pop-Up, with 30 psi in-stem pressure regulation, Flow-Shield Technology, and Non-Potable Cover (purple cap).  10" NET female threaded inlet	4	30	
A □ A □ 1401 1402 1404 1408	Rain Bird 1800-1400 Flood 1401 Fixed flow rate (0.25-2.0GPM), full circle bubbler, 1/2\" FIPT.	192	30	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	ОТУ		DETAIL
5	Rain Bird XCZ-150-PRB-COM High Flow Control Zone Kit, for Large Commercial Drip Zones. 1-1/2" PESB Valve with two 1" Pressure Regulating (40psi) Quick-Check Basket Filters. Flow rance: 15-40gnm.	12		
◉	Pipe Transition Point in Drip Box Pipe transition point from PVC lateral to drip tubing with riser in 6" (150mm) drip box.	3		
Φ	Netafim TL050MFV-1 Automatic flush valve, 1/2" male pipe thread.	23		
•	Rain Bird OPERIND Drip System Operation Indicator, stem rises 6* for clear visibility when drip system is charged to a minimum of 20psi. Includes 16' 1/4' distribution tubing with connection fitting ore-installed.	13		
	Area to Receive Dripline Notafim TLRW-06-12 (16) Techline RW Landscape Dripline with Purple Stripe for Non-Potable Water Applications. 0.6GPH emitters at 12.0° O.C. Dripline laterals spaced at 16.0° apart, with emitters offset for triangular patter. Designed for Reclaimed Water Use Only.	34,803 s.f.		
	MANUFACTURER/MODEL/DESCRIPTION	OTY		DETAIL
•	Rain Bird PESBR 1" 1", 1-1/2", and 2" Durable Chlorine-Resistant Valves for Reclaimed Water Applications. With Scrubber Mechanism Tachnology, and Purple Flow Control Handle,	6		
•	Rain Bird PESBR 1-1/2" 11, 1-1/2", and 2" Durable Chlorine-Resistant Valves for Reclaimed Water Applications. With Scrubber Mechanism Tachnology, and Purple Flow Control Handle,	10		
¥	Matco-Norca 759 Brass Shut Off Ball Valve, 1/2" to 4". Two Piece Body, Blow-Out Proof Stem, Chrome Plated Solid Brass Ball, Threaded, with PTFE Seats. Same size as mainline piole.	8		
W	Rain Bird 300-BPE Angle 3" 3" Brass Master Valve, with Angle Configuration.	1		
C2	Rain Bird ESP-LXD-LXMMPED with (1) ESPLXD-SM75 Flow sensing Two-Wire Decoder Commercial Controller. 125 Stations. UV-Resistant, Outdoor-Rated, Powder-Coated Metal Pedestal Case. Available in the US market, International, European. or Australian Market.	1		
€	Rain Bird MGP-1 (2) Provides a mounting location for MSP-1 or other grounding wires directly to a grounding rod or pipe. Installed on grounding rod or pipe. Surge protection for Two-Wire Satellite and Decoder Systems.	1		
	Rain Bird RSD-BEx	1		
	Rain Sensor, with metal latching bracket, extension wire. Booster Pump	1		
	Netafim DF200-120 2" Disc Filter 2", 120 mesh ring, red. Corrosion Resistant. Up to	1		
	120GPM flow rate BLOW OFF ASSEMBLY	2		
	LSP1 INLINE SURGE PROTECTION	20	$\neg$	
РВ	Pull Box	16	╛	
	Water Meter 1-1/2"	1		
	Point of Connection 3" 50 PSI Booster Pump	1		
	Irrigation Lateral Line: PVC Class 200 SDR 21-NP	411,1 l.f.		
	rrigation Lateral Line: PVC Class 200 SDR 21-NP 1 1/4*	6,658 l.f.	$\neg$	
	rrigation Lateral Line: PVC Class 200 SDR 21-NP 1 1/2*	661.4 l.f.		
	rrigation Lateral Line: PVC Class 200 SDR 21-NP 2"	364.5 Lf.	一	
	Irrigation Mainline: PVC Schedule 40-NP 2"	0.0 l.f.	一	
			_	
	rrigation Mainline: PVC Schedule 40-NP 2 1/2*	6,402 l.f.	I	
	rrigation Mainline: PVC Schedule 40-NP 2 1/2* Pipe Sleeve: HDPE PE3408 DR 11	6,402 l.f. 763.1 l.f.	$\dashv$	

36.29 psi Loss for POC to Valve Elevation: 0.00 psi 63.69 psi Pressure Available: 78.00 psi
Residual Pressure Available: 14.31 psi

REVISIONS **CHARLOTTE COUNTY** PUBLIC WORKS, **MAINTENANCE & OPERATIONS** 

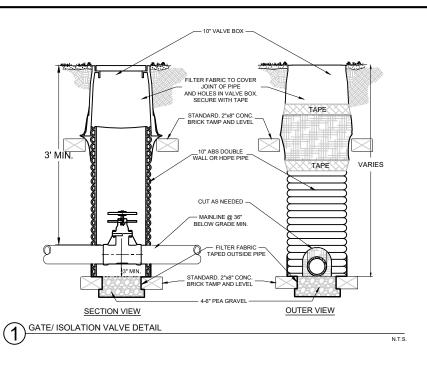
C.R. 771 ROADWAY LANDSCAPE IMPROVEMENTS CHARLOTTE COUNTY, **FLORIDA** 

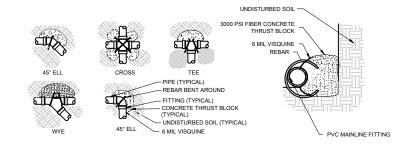


JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 FORT MYERS, FLORIDA 33902-1550 PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642

**IRRIGATION PLAN** 

JUNE 2022 20170177-000 41-21-08 As Shown L25





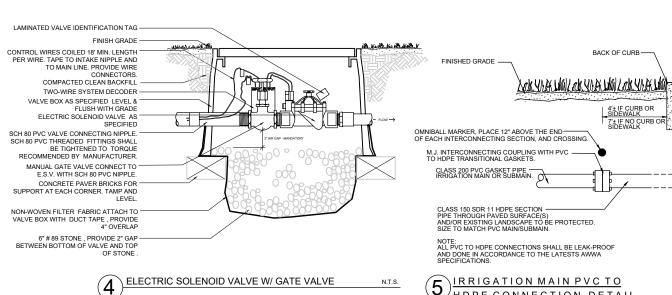
THRUST BLOCK DETAILS NOTES:

SUPPLY LINES 2.0 INCHES IN DIAMETER AND LARGER SHALL RECEIVE

HDPE CONNECTION DETAIL

SUPPLY LINES 20 INCHES IN SUBME LER AND LARGERY SHALL RECEIVE CONCRETE THRUST BLOCKS AS SPECIFIED HERRIN A SA APPLICABLE.
 ALL CONCRETE TO BE 2800 PS OR STRONGER.
 ALL REBAR SHALL BE RUST-FREE.
 ALL REBAR SHALL BE RUST-FREE.
 FITTINGS TO BE WRAPPED IN VISQUEEN BEFORE POURING THE THRUST BLOCK.
 S. CONCRETE IS NOT TO INCASE THE IRRIGATION MAINLINE.

Assing or invalid reference J:\standards\Landscape Notes and Details\Collier County\Valve Wiring Pull Box.pdf Sheet: 1



TREE OR PALM TO BE IRRIGATED -NOTE REFER TO PLANS FOR BUBBLER FLOW VOLUME AND BUBBLER QUANTITIES PER TREE. IF CONNECTED TO ROTOR HEAD ZONE PROVIDE SCREW CLAMP AT FLEXIBLE PIPE CONNECTING POINTS. BUBBLER IS TO BE INSTALLED ADJACENT TO ROOTBALL PERIMETER DO NOT INSTALL BUBBLER ON TOP OF ROOTBALL, NEXT TO TRUNK. INSTALL 4-6 GALVANIZED METAL PIPE STAKES AT BUBBLER AND HOSE TO PIPE JUNCTION. ANY ABOVE GRADE LATERALS TO BUBBLER

N.T.S.

MANY O WYCHON WILLO WOO TA CHILO AN OLICE OLICE SCH 40 FITTINGS FOR CONNECTION FUNNY PIPE ", 18" MIN. LENGTH SCH 40 COMBINATION ELBOW INS x MF NOTES: NO SPRINKLER HEADS SHALL OCCUR WITHIN 18" FROM THE BACK OF CURB AT SOD AREAS, OR 24" FROM THE BACK OF CURB AT PLANTING AREAS.

DO NOT OPERATE AT HIGH PRESSURE LEVELS. ADJUST THE ZONE
CONTROL VALVE PRESSURE REGULATOR DIAL DOWN TO 50 PSI FOR ROTOR
HEADS AND 30 PSI FOR SPRAY HEADS

<u>6"HIGH POP-UP SPRINKLER HEAD</u> INSTALLATION DETAIL

IRRIGATION CONTRACTOR SHALL FIELD DETERMINE NIPPLE LENTHS. MAINLINE OUTLET TEE, INTERCONNECTING NIPPLES AND ALL OTHER INTERCONNECTING FITTINGS SHALL BE SIZED TO THE VALVES INLET OPENINGS COORDINATE WITH UTILITIES CONTRACTOR

1. LOCATE VALVE BOXES WITHIN 24" OF PAVEMENT EDGE IN PLANTING AREA WHERE EASILY ACCESSIBLE

3. ALL WIRE RUNS SHALL BE CONTINUOUS WITHOUT ANY SPLICES UNLESS APPROVED BY THE CHARLOTTE

3. ALL WIRE NOWS SPALL BE CONTINUOUS WITHOUT ANY SPECIOES STREAMS OF THE CHARLOTTE COUNTY PROJECT MANAGER. SEE SPLICE BOX DETAIL.
 4. VALVE BOX SHALL BE WRAPPED WITH 3 MIL. THICK PLASTIC AND SECURED WITH DUCT/ELECTRICAL TAPE.
 5. VALVE BOXES SHALL BE LOCATED WITHIN PLANTING AREAS.
 6. FURNISH AND INSTALL PULL STRING THE LENGTH OF THE MAINLINE FROM CONTROLLER TO LAST VALVE.

7. CONTRACTOR TO PROVIDE 18' SPARE WIRE AT EACH VALVE.

8. CONTRACTOR TO INCLUDE ISOLATION GATE VALVE WITH EACH REMOTE VALVE ASSEMBLY.

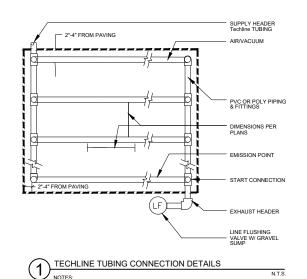
BELOW GRADE, INSTALLATION DETAIL

HOSE CONNECTIONS TO BE PINNED AT

CALL 48 HOURS BEFORE YOU DIG

It's the Law! 1-800-432-4770 SUNSHINE STATE ONE CALL OF FLORIDA, INC.

**REVISIONS** JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET **CHARLOTTE COUNTY** C.R. 771 ROADWAY IRRIGATION DETAILS LANDSCAPE IMPROVEMENTS P.O. BOX 1550 PUBLIC WORKS, ORT MYERS, FLORIDA 33902-1550 CHARLOTTE COUNTY, PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642 **MAINTENANCE &** ENGINEERING ROJECT NO. **OPERATIONS FLORIDA** JUNE 2022 20170177-000 L26 41-21-08 As Shown



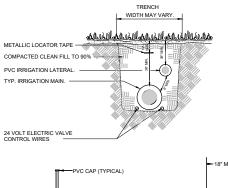
NOTES:

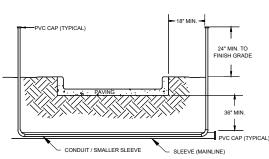
1. DRIP IRRIGATION ZONES SHOULD BE SIZED AND SPACED PER MANUFACTURE RECOMMENDATION FOR SANDY SOIL AND MUST INCLUDE A PROPERLY SIZED FILTER AND PRESSURE REGULATOR.

2. DRIP LINE NETAFIN TECHLINE® CV (17MM DRIPLINE) BRAND WITH 18° SPACING AT .9 GPH RATE. ASSEMBLED USING TECHLINE FITTINGS AND APPROPRIATE SIZED NETAFIM PRESSURE REGULATORS AND FILTER SYSTEM PER THE TECHLINE CV DESIGN GUIDE.

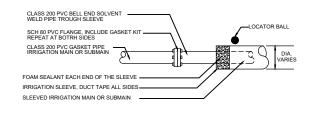
BLANK TECHLINE . PVC TEE (SxSxT) 2 TECHLINE PVC CONNECTION

TECHLINE TEE



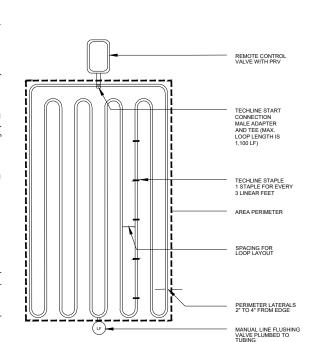


YORAND TIPOTOR AND THE THE THE TOP TO THE THE

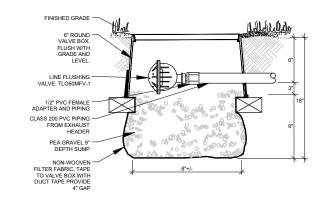


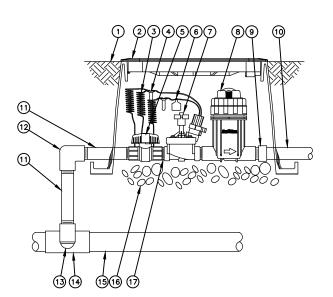
IRRIGATION SLEEVE SEALING DETAIL

SLEEVING AND TRENCHING DETAIL



MULCH- SEE SPECS FOR DEPT 4) TECHLINE BED DETAIL





1 FINISH GRADE/TOP OF MULCH

2 VALVE BOX WITH COVER: RAIN BIRD VB-STD

3) 30-INCH LINEAR LENGTH OF WIRE, COILED

4 WATERPROOF CONNECTION: RAIN BIRD DB SERIES

5 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)

(6) ID TAG

7 REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUCED IN XCZ-PRB-150-COM KIT)

(8) PRESSURE REGULATING QUICK CHECK BASKET FILTER:
RAIN BIRD PRB-QKCHK-150
(INCLUDED IN XCZ-PRB-150-COM KIT)

9 PVC SCH 40 FEMALE ADAPTOR

10 LATERAL PIPE

11) PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)

12 PVC SCH 40 ELL

13 PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL

14) PVC SCH 40 TEE OR ELL

(15) MAINLINE PIPE

(16) 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

7 PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

TECHLINE SAMPLE SHRUB LOOP LAYOUT

NOTES:

1. DRIP IRRIGATION ZONES SHOULD BE SIZED AND SPACED PER MANUFACTURES RECOMMENDATION FOR SANDY SOIL AND MUST INCLUDE A PROPERLY SIZED FILTER AND PRESSURE REGULATOR.
2. DRIP LINE NETAFIM TECHLINE® CV (17MM DRIPLINE) BRAND WITH 18' SPACING AT. 9 GPH RATE. ASSEMBLED USING TECHLINE FITTINGS AND APPROPRIATE SIZED NETAFIM PRESSURE REGULATORS AND FILTER SYSTEM PER THE TECHLINE CV DESIGN GUIDE.

DRIP LINE FLUSHING VALVE

NOTES:

1. IN THE EVENT THAT THICK WALLED PE TUBING IS USED FOR EXHAUST PIPING, INSTALL COMPRESSION FITTING ADAPTERS AT ALL SCH 40 PVC FITTINGS. IF GLUING ADAPTER TO FITTING, USE ABS TO PVC BONDING SOLVENT. USE TEFLON TAPE AT ALL THREADED PVC COMPRESSION. CONNECTIONS.
2. AT LEAST ONE LINE FLUSH SHALL BE INSTALLED ON EACH DRIP ZONE

ENGINEERING

XCZ-PRB-150-COM

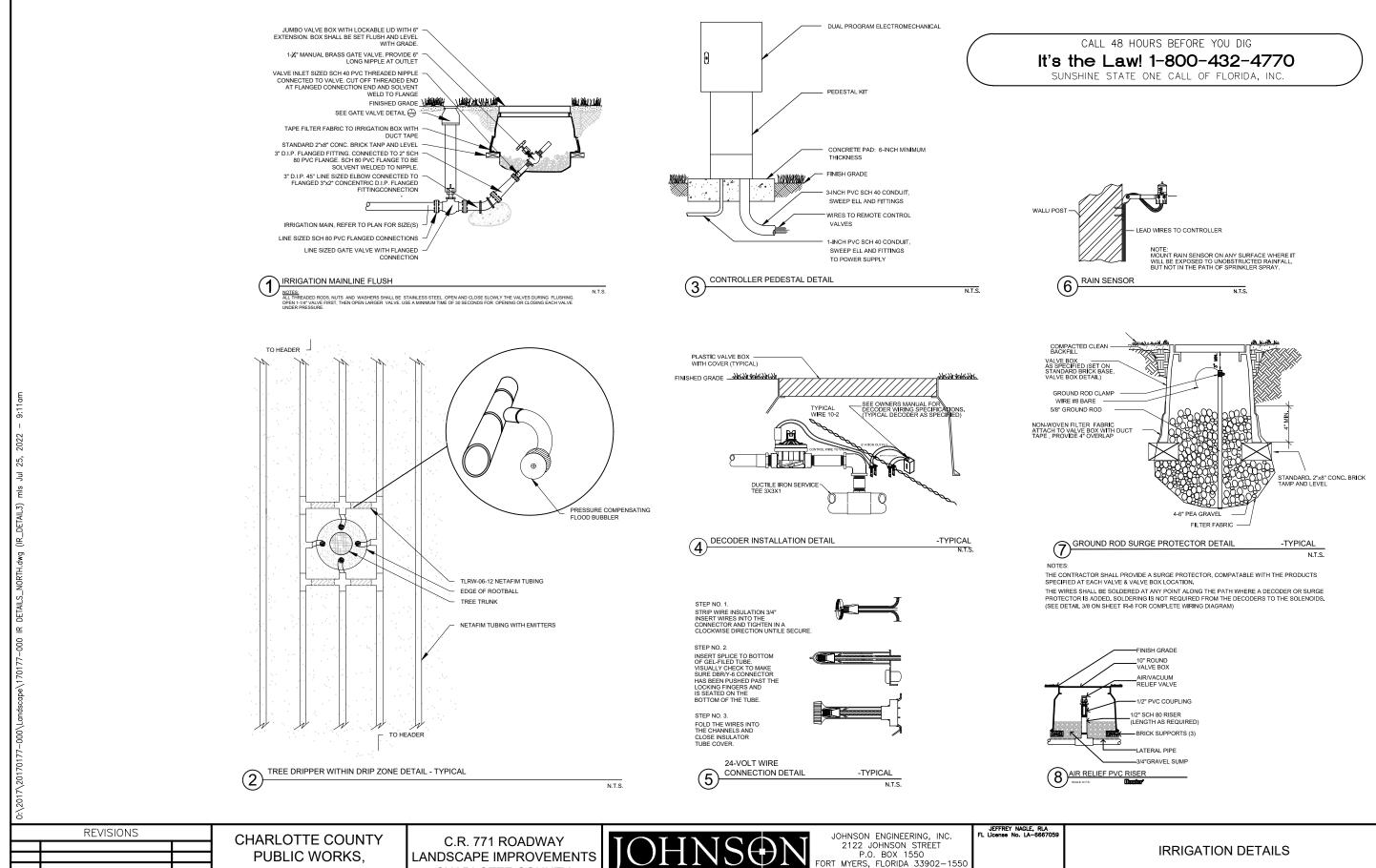
JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 FORT MYERS, FLORIDA 33902-1550

1.5" COMMERCIAL CONTROL ZONE KIT IN VALVE BOX

REVISIONS **CHARLOTTE COUNTY** PUBLIC WORKS, **MAINTENANCE & OPERATIONS** 

C.R. 771 ROADWAY LANDSCAPE IMPROVEMENTS CHARLOTTE COUNTY, **FLORIDA** 

**IRRIGATION DETAILS** PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642 ROJECT NO. JUNE 2022 20170177-000 41-21-08 L27 As Shown



ENGINEERING

CHARLOTTE COUNTY,

**FLORIDA** 

**MAINTENANCE &** 

**OPERATIONS** 

PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642 PROJECT NO. FILE NO. SCALE SHEET
20170177-000 41-21-08 As Shown L28

JUNE 2022

NOTE: SUCTION PIPE SHALL BE SCHED 40 GALV STEEL WITH GALVANIZED GROOVED OR FLANGED FITTINGS. CHECK VALVE SHALL BE CAST IRON SWING TYPE. ALL EXPOSED SUCTION & DISCHARGE PIPE ADJACENT TO THE PUMP SYSTEM SHALL BE GALVANIZED STEEL. BUTTERFLY OR BALLVALVE PROVIDED AT EACH PUMP. \* FEATURES ARE INCLUDED IF MARKED WITH AN "X" IRRIGATION CONTROLLER \_ STATIONS, WITH RAIN SENSOR ON 8' POLE X PRESSURE TANK FOR PRESSURE DEMAND SYSTEMS HOOVER FLOWGUARD REMOTE MONITORING AND CONTROL COMMUNICATION VIA CELLULAR MODEM. USER DEFINED INTERNET BASED CONTROL PARAMETERS USING STANDARD WEB BROWSER WITH EVENT LOGGING AND EMAIL ALERTS FOR WARNINGS AND ALARMS AS FOLLOWS: LOGGING AND EMAIL ALERTS FOR WARNINGS AND ALARMS AS FOLLOWS:
HMI DISPLAY ON CONTROL PANEL
MAXIMUM GALLON PER MINUTE USAGE WITH ADJUSTABLE TIME DELAY AND NUMBER
OF RESTART ATTEMPTS
MINIMUM TOTAL DAILY WATER USAGE
DAILY, MONTHLY AND ANNUAL WATER USAGE BUDGETS
GRAPHING OF REAL TIME AND HISTORICAL FLOW AND PRESSURE (INCOMING SUPPLY & DISCHARGE)
AND SYSTEM EVENTS EVENTS WITH TIME AND DATE SHOWN
RAIN SENSOR STATUS
HISTORIC WATER USAGE BY DAY AND MONTH
LOSS OF PRIME
USAGE BY DAY AND MONTH
LOSS OF PRIME
USAGE BY DAY AND MONTH
LOSS OF PRIME
USAGE BY DAY AND MONTH
LOSS OF PRIME SAFETY FEATURES PRESSURE DEMAND -TRANSIENT SURGE -LOSS OF PRIME -PUMP OVERHEAT -HIGH FLOW -LOW PRESSURE PUMP HIGH TEMPERATURE PUMP RAPID CYCLE SHUTOFF VALVE STATUS FIBERGLASS REINFORCED ENCLOSURE 6'L X 4'W CLAM SHELL DESIGN FOREST GREEN GELCOAT STIPPLED VARIABLE FREQUENCY DRIVE LOCKABLE HANDLE REINFORCED PRECAST CONCRETE PAD BY 4' X 6' GALV STEEL SKID HODVER NO PENETRATIONS  $5' \times 7' \times 4'$ CONTROL PANEL ASSEMBLY ULLISTED 304 STAINLESS STEEL ENCLUSURE MAINTAIN 42' CLEARANCE PRESSURE TANK MAGNETIC FLOW SENSOR

MASTER/SHUTOFF VALVE CONNECTED TO IRRIGATION CONTROLLER
AND HODVER FLOWGUARD CENTRIFUGAL PUMP SEE MODEL FOR HORSEPOWER (HIGH EFFICIENCY ODP MOTOR) 0 PRESSURE TRANSDUCER AND HOUVER PLEINGERING POR CONNECTION TO DISCHARGE GALV. STEEL DISCH. HDR. -3' CHECK VALVE ON INTAKE DISCHARGE ISOLATION VALVE — 3' ISDLATION VALVE JUNCTION BOX WITH 110VAC POWER-PRESSURE TRANSDUCER 3' GALV STEEL FPT FITTING FOR CONNECTION TO RECLAIMED SUPPLY LINE TO RECLAIMED SUPPLY LINE FOR CONNECTION TO IRRIGATION CONTROLLER BY IRRIGATION CONTRACTOR ELECTRIC SERVICE CHASEWAY -TO CONTROL PANEL PUMP PERFORMANCE 50 GPM @ 130 TDH, 80 PSI AT DISCHARGE PLAN VIEW NTS WITH UP TO 40 PSI PRESSURE BOOST NOTE: 12" RECLAIM MAIN WITH PRESSURE BETWEEN 50 PSI & 90 PSI, AVG 70 pei ELECTRIC SERVICE TO BE, IN ORDER OF PREFERENCE: 460V 3-PHASE. 230V CLOSED-DELTA 3-PHASE, 230 OPEN-DELTA 3-PHASE, 208 WYE 3-PHASE, 230 1-PHASE, 208V 1-PHASE, HOOVER PUMPING MODEL: HCBF-5PDV-208/3-M,R3,Q,Z FILE PN16121.DWG 09/21 Pompano Beach, Florida, Tel: 954-971-7350 GASPARILLA ROADWAY CR771 BOOSTER PUMP CENTRIFUGAL PUMP SYSTEM DETAIL FIBERGLASS ENCLOSED SINGLE RECLAIMED WATER PRESSURE DEMAND VARIABLE FREQUENCY DRIVE (VFD) HOOVER FLOWGUARD®

BOOSTER PUMP DETAIL

CHARLOTTE COUNTY
PUBLIC WORKS,
MAINTENANCE &
OPERATIONS

C.R. 771 ROADWAY LANDSCAPE IMPROVEMENTS CHARLOTTE COUNTY, FLORIDA



JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 FORT MYERS, FLORIDA 33902-1550 PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642

	JEFFRE				
FL	License	No.	LA-	6667	059

IRRIGATION DETAIL

DATE PROJECT NO. FILE NO. SCALE SHEET

JUNE 2022 20170177-000 41-21-08 As Shown L29

- 1. THE PLANS AND DRAWINGS ARE DIAGRAMMATIC OF THE WORK TO BE PERFORMED. SOME COMPONENTS MAY BE SHOWN OUTSIDE THE WORK AREA FOR CLARITY. THE WORK SHALL BE EXECUTED IN A MANNER TO AVOID CONFLICTS WITH UTILITIES AND OTHER ELEMENTS OF CONSTRUCTION. INCLUDING LANDSCAPE MATERIALS. ALL DEVIATIONS FROM THE PLANS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE BEING INSTALLED. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY ASPECT OF THE IRRIGATION SYSTEM AS SHOWN ON THE PLANS AND DRAWINGS, WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DISCREPANCIES EXIST THAT MIGHT NOT HAVE BEEN KNOWN DURING THE DESIGN OF THE IRRIGATION SYSTEM. IN THE EVENT THAT NOTIFICATION OF THE CONFLICT IS NOT APPROVED BY THE OWNER'S REPRESENTATIVE, THE CONTRACTOR WILL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS
- 2. THE IRRIGATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS, IRRIGATION SYSTEM SPECIFICATIONS AND ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COMPLY WITH ALL PREVAILING LOCAL CODES, ORDINANCES, AND REGULATIONS,
- 3. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS, INCLUDING UTILITY LOCATIONS, BEFORE INSTALLATION OF THE IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THE PLANS CONTRACTOR TO VERIFY. COORDINATE ALL IRRIGATION SYSTEM CONSTRUCTION WITH EXISTING AND NEW PLANTINGS TO AVOID CONFLICT OR INTERFERENCE WITH LOCATION OF PIPING, SLEEVING, CABLES, AND SERVICE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION WITH ALL OTHER CONSTRUCTION ON SITE, ESPECIALLY LANDSCAPE INSTALLATION, IRRIGATION SYSTEM SHALL BE RELOCATED AT NO ADDITIONAL COST FOR ANY CONFLICT WITH LANDSCAPE INSTALLATION OR ANY OTHER SITE CONSTRUCTION OR EXISTING CONDITIONS. ALL COMPONENTS THAT ARE NOT CONTAINED WITHIN THE SPECIFIC AREAS SHOWN OR CALLED OUT ON THE DRAWINGS WILL NOT BE ACCEPTED. ALL PIPING AND OTHER COMPONENTS ARE TO REMAIN WITHIN THE PROPERTY OF THE OWNER.
- 4. WHERE EXISTING OR NEW TREES, LIGHT STANDARDS, SIGNS, ELECTRONIC CONTROLLERS AND/OR OTHER OBJECTS ARE AN OBSTRUCTION TO AN IRRIGATION SPRINKLER'S PATTERN, THE COMPONENT AND PIPING SHALL BE RELOCATED AS NECESSARY TO OBTAIN PROPER COVERAGE OF AN IRRIGATION SPRINKLER'S PATTERN, THE COMPONENT AND PIPING SHALL BE RELOCATED AS NECESSARY TO OBTAIN THE PROPER COVERAGE WITHOUT DAMAGING THE OBSTRUCTION OWNER'S REPRESENTATIVE SHALL DETERMINE WHETHER AN OBSTRUCTION OCCURS OR NOT.
- 5. COMPONENT SPACINGS ARE MAXIMUM. DO NOT EXCEED SPACINGS SHOWN OR NOTED ON THE PLANS. COMPONENT SPACINGS MAY BE ADJUSTED TO ACCOMMODATE CHANGES IN TERRAIN AND PLANTING LAYOUT AS LONG AS THE MODIFIED SPACINGS DO NOT EXCEED THE SPACINGS SHOWN IN THE PLANS. UNLESS SHOWN OTHERWISE, CONTRACTOR SHALL PROVIDE 100% COVERAGE
- 6. ALL MATERIALS AND EQUIPMENT SHOWN SHALL BE NEW AND INSTALLED AS DETAILED ON THE PLANS. IF THE DRAWINGS DO NOT THOROUGHLY DESCRIBE THE TECHNIQUES TO BE USED. THE INSTALLER SHALL FOLLOW THE INSTALLATION METHODS AND INSTRUCTIONS RECOMMENDED BY THEIR MANUFACTURER.
- 7. THE LOCATION OF THE IRRIGATION MAINLINE SHALL BE IDENTIFIED IN THE FIELD AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
- 8. IRRIGATION CONTRACTOR SHALL ADJUST ALL SPRINKLERS, CONTROLLER AND OTHER DEVICES TO OBTAIN SPECIFIED OPERATING PARAMETERS, INCLUDING COVERAGE, OPERATING PRESSURE, FLOW RATES AND OPERATION TIME, AS INDICATED ON THE DRAWINGS AND IN THE IRRIGATION SYSTEM SPECIFICATIONS.
- 9. CONTRACTOR TO PROVIDE INSTALLATION SHOP DRAWINGS AND MANUFACTURER PRODUCT INFORMATION FOR ALL IRRIGATION COMPONENTS, ALL INSTALLATIONS SHALL BE AS RECOMMENDED BY MANUFACTURERS. THE QUANTITIES SHOWN IN THE LEGENDS AND SYMBOL SHEETS SHALL NOT BE USED FOR BIDDING PURPOSES THE CONTRACTOR WILL BE RESPONSIBLE FOR CONDUCTING A COMPREHENSIVE MATERIALS TAKEOFF TO DETERMINE THE ACTUAL QUANTITIES OF MATERIAL NECESSARY TO EXECUTE THE WORK DESCRIBED IN THE DOCUMENTS.
- 10. ALL TRENCHES SHALL BE BACKFILLED TO 90% DENSITY WITH CLEAN, DEBRIS-FREE MATERIALS. CLEAN SAND SHALL BE USED FOR BEDDING MATERIAL IF PARENT SOIL CANNOT BE ADEQUATELY RID OF ROCK AND OTHER EXTRANEOUS DEBRIS. PULLING PIPE SHALL BE PROHIBITED.
- 11. ALL SOLVENT WELDING SHALL BE PRECEDED BY PRIMING OF THE FITTINGS AND PIPE AS RECOMMENDED BY THE MANUFACTURER
- 12.PRIOR TO INSTALLATION, CONTRACTOR TO VERIFY LOCATION OF ALL REFLECTIVE PAVEMENT MARKERS WITH THE CHARLOTTE COUNTY PROJECTS MANAGER.
- 13 CONTRACTOR TO PLACE TREE BUBBLERS AT OUTER EDGE OF ROOT BALL. NOT OUTER EDGE OF PLANTING HOLE
- 14 PIPING INCLUDING MAINLINES AND LATERALS SHALL BE COLOR CODED PANTONE PURPLE 522C FOR FUTURE CONVERSION OF THE SYSTEM TO RELISE WATER PER COUNTY ORDINANCES AND STATE STATUTES. THE IRRIGATION SYSTEM COMPONENTS SHALL BE COMPATIBLE FOR USE WITH REUSE WATER AND FLORIDA ADMINISTRATIVE CODE 62-610 REUSE OF RECLAIMED WATER AND LAND APPLICATION. ALL VALVES, VALVE BOX COVERS, AND OTHER APPLICABLE EQUIPMENT SHALL BE COLOR CODED PANTONE PURPLE 522C (EXCEPT FOR SCH. 40 DRIPLINE HEADER/EXHAUST PIPE).
- 15.ELECTRICAL CONNECTIONS: CONTRACTOR WILL BE RESPONSIBLE FOR THE LOW VOLTAGE ELECTRICAL CONNECTION(S) TO THE IRRIGATION CONTROLLER. THE ELECTRICAL CONNECTION FOR THE CONTROLLER WILL BE WITHIN 25' OF THE DESIGNATED CONTROLLER LOCATION AS SHOWN ON THE IRRIGATION PLANS. CHARLOTTE COUNTY WILL BE RESPONSIBLE FOR MAKING ALL PROJECT RELATED ELECTRICAL CONNECTIONS BEYOND LOW VOLTAGE CONNECTION FOR THE IRRIGATION SYSTEM FOLIPMENT
- 16. ALL CONNECTIONS TO THE IRRIGATION MAINLINE (2.1/2" OR LARGER) SHALL BE ACCOMPLISHED VIA THE USE OF DUCTILE IRON SERVICE TEES. ALL CHANGES OF DIRECTION SHALL BE ACCOMPLISHED VIA THE USE OF DUCTILE IRON 45 DEGREE ELBOWS W/ PROPER THRUST BLOCKING
- 17.LOCATE ALL VALVES IN PLANTING BEDS OR MULCHED AREAS WITH A MINIMUM OFFSET OF 3'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT. VALVES LOCATED IN MEDIANS SHALL BE INSTALLED AS CLOSE TO THE MEDIAN CENTER AS POSSIBLE
- 18. ALL VALVES (SOLENOID, GATE, ISOLATION, AIR RELIEF AND FLUSH), SURGE PROTECTORS AND FILTERS SHALL BE LOCATED WITHIN RAINBIRD VALVE BOXES
- 19. ALL IRRIGATION LINES UNDER PAVEMENT SHALL BE INSTALLED WITHIN HDPE DR 11 OR 19. IRRIGATION LINES UNDER PAVEMENT SHALL BE INSTALLED WITHIN HDPE DR 11 OR EXISTING SCH 40 PVC SLEEVES AS NOTED. IRRIGATION COMMUNICATION CABLE SHALL HAVE IT'S OWN SEPARATE SLEEVE UNLESS NOTED OTHERWISE.
  WHERE ELECTRIC CONTROL VALVE WIRES PASS THROUGH A SLEEVE WITH MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER SCH
- 20.THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR ALL SLEEVING AND DIRECTIONAL BORES, UNLESS OTHERWISE NOTED.
- 21.CONTRACTOR SHALL FURNISH AND INSTALL TECHLINE AS REQUIRED TO REFLECT THE PROPOSED PLANT MATERIAL SPACING AS SHOWN ON THE LANDSCAPE PLANS.
- 22. ALL UNSIZED PIPE SHALL BE 1".
- 23 EACH TREE AND PALM SHALL HAVE PRESSURE COMPENSATING FLOOD BURBLERS AS SHOWN ON THE PLANS. EACH BURBLERS SHALL BE ON A MINIMUM 5'-0" LENGTH OF FUNNY PIPE TO ALLOW ITS POSITIONING AT THE TREE. LOCATE BUBBLERS ON THE UPHILL SIDE OF TREES ON ALL SLOPES. LOCATE BUBBLERS IN THE CENTER OF
- 24. THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED DETECTABLE METAL MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: WATER LINE BURIED BELOW". TAPE SHALL BE MANUFACTURED BY LINEGUARD, INC., OR APPROVED EQUAL AND SHALL BE ONE (1) FOOT BELOW SITE FINISH GRADE
- 25.IRRIGATION LATERAL LINES TO BE BURIED AT A DEPTH OF 24" UNLESS NOTED OTHERWISE
- 26.IRRIGATION MAINLINES TO BE BURIED AT A DEPTH OF 36" UNLESS NOTED OTHERWISE.

- 27.ALL COMPONENTS INSTALLED BY THE IRRIGATION CONTRACTOR, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE EXACT LOCATION AND DEPTH BELOW FINISH GRADE OF ALL COMPONENTS SHALL BE NOTED ON THE "AS-BUILT" DRAWINGS. EACH POINT OF IRRIGATION SHALL BE MEASURED FROM 2 FIXED POINTS OF
- 28.CAP SLEEVES UNTIL PIPE IS INSTALLED. SEAL EACH END OF SLEEVES WITH FOAM-A-SEAL AFTER PIPE AND WIRE IS INSTALLED.
- 29 IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE LANDSCAPE SUPERVISOR. WORK IN THE RIGHT OF WAY SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE HIGHWAY JURISDICTION
- 30.INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY FLOW OF VEHICULAR TRAFFIC AND COMPLETION OF ALL WORK ON THE SITE.
- 31.RESTORE ALL TRENCHING DISTURBED AREAS, OUTSIDE EDGE OF PAVEMENT (EOP) AND WITHIN R.O.W., WITH ARGENTINE BAHIA GRASS SEED AT THE RATE OF 10 LBS. PER 100 SQUARE FEET. SOD AREAS 12" OR WIDER WITH ARGENTINE BAHIA GRASS SOD. PROVIDE A SMOOTH TRANSITION BETWEEN THE REPAIRED DISTURBED AREAS AND THE LINDISTLIBRED AREAS
- 32.PIPE LOCATIONS SHOWN ARE SCHEMATIC. THE MAINLINE SHALL BE INSTALLED 36" FROM THE EDGE OF PAVEMENT BUT NO CLOSER THAN 12". THE CONTRACTOR IS RESPONSIBLE FOR LOCATION ADJUSTMENTS WHEN NECESSARY TO AVOID CONFLICTS.
- 33 ALL MAINLINES SHALL BE INSTALL WITH A CONTINUOUS METALLIC TAPE FOR FUTURE LOCATING PURPOSES.
- 34. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL IRRIGATION SYSTEM INCIDENTALS NOT SPECIFICALLY LISTED IN THE BID FORM, NECESSARY TO PROVIDE A FULLY FUNCTIONAL AUTOMATIC IRRIGATION SYSTEM. I.E. FITTINGS, WIRE ENDS, SWEEPS, SPLICES, GLUE, ETC.
- 35.COMMON WIRE GROUND WILL BE WHITE. CONTROL WIRE HOT WILL BE RED. GAUGE WILL DEPEND ON LENGTH OF WIRE RUN. LONGER RUNS REQUIRE LARGER WIRES.
- 36 ALL VALVES SHALL BE LOCATED ON EITHER SIDE OF THE MEDIAN WITH REFLECTIVE PAVEMENT MARKERS (GREEN)
- 37.ALL SLEEVE TERMINALS SHALL BE ACCOMPANIED WITH OMNI MARKERS (MODEL 168-PURPLE)
- 38.CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUPPLEMENTAL IRRIGATION/ HAND WATERING OF ALL PROPOSED LANDSCAPE MATERIAL AT NO ADDITIONAL COST SHOULD THE PROPOSED IRRIGATION NOT BE AVAILABLE OR OPERATIONAL AT THE TIME OF PLANT INSTALLATION. USE OF WATER BAGS IS NOT AN ACCEPTABLE ALTERNATIVE.

### FINAL ACCEPTANCE

FINAL ACCEPTANCE OF THE IRRIGATION SYSTEM WILL BE GIVEN AFTER THE FOLLOWING DOCUMENTS AND CONDITIONS HAVE BEEN COMPLETED AND APPROVED. FINAL PAYMENT WILL NOT BE RELEASED UNTIL THESE CONDITIONS ARE SATISFIED.

- FINAL WALK-THRU AND CORRECTION OF ALL PUNCH LIST ITEMS.
- COMPLETION AND ACCEPTANCE OF 'AS-BUILT' DRAWINGS.
- ACCEPTANCE OF REQUIRED CONTROLLER CHARTS AND PLACEMENT INSIDE OF CONTROLLERS.
- TURN OVER OF ALL REQUIRED PARTS AND TOOLS AS OUTLINED IN THE PROJECT SPECIFICATIONS.
- TURN OVER OF THE "IRRIGATION MANUAL" AS OUTLINED IN THE PROJECT SPECIFICATIONS.

GUARANTEE: THE IRRIGATION SYSTEMS SHALL BE GUARANTEED FOR A MINIMUM OF ONE CALENDAR YEAR FROM THE TIME OF FINAL ACCEPTANCE

# MINIMUM RECOMMENDED IRRIGATION MAINTENANCE PROCEDURES FOR CHARLOTTE COUNTY UNTIL AND UPON FINAL ACCEPTANCE

- 1. EVERY IRRIGATION ZONE SHOULD BE CHECKED MONTHLY AND WRITTEN REPORTS GENERATED DESCRIBING THE DATE(S) EACH ZONE WAS INSPECTED, PROBLEMS IDENTIFIED, DATE PROBLEMS REPAIRED, AND A LIST OF MATERIALS USED IN THE REPAIR. AT MINIMUM. THESE INSPECTIONS SHOULD INCLUDE THE FOLLOWING TASKS:
- TURN ON EACH ZONE FROM THE CONTROLLER TO VERIFY AUTOMATIC OPERATION.
- CHECK SCHEDULES TO ENSURE THEY ARE APPROPRIATE FOR THE SEASON, PLANT AND SOIL TYPE, AND IRRIGATION METHOD. CONSULT AN I.A. CERTIFIED AUDITOR FOR METHODS USED IN DETERMINING PROPER IRRIGATION SCHEDULING REQUIREMENTS
  - CHECK REMOTE CONTROL VALVE TO ENSURE PROPER OPERATION.
- CHECK SETTING ON PRESSURE REGULATOR TO VERIFY PROPER SETTING, IF PRESENT.
- CHECK FLOW CONTROL AND ADJUST AS NEEDED; ENSURE VALVE CLOSURE WITHIN 10-15 SECONDS AFTER DEACTIVATION 1.5. BY CONTROLLER
- CHECK FOR LEAKS MAINLINE, LATERAL LINES, VALVES, HEADS, ETC.
- CHECK CONTROLLER GROUNDS FOR RESISTANCE (10 OHMS OR LESS) ONCE PER YEAR. SUBMIT WRITTEN REPORTS.
- CHECK RAIN SHUT-OFF DEVICE MONTHLY TO ENSURE IT FUNCTIONS PROPERLY.
- INSPECT ALL FILTERS MONTHLY AND CLEAN/REPAIR/REPLACE AS NEEDED.
- INSPECT ALL VALVE BOXES TO ENSURE THEY ARE IN GOOD CONDITION, LIDS ARE IN PLACE AND LOCKED.
  CHECK CONTROLLER STATIONS FOR PROPER OPERATION, PRESSURES, FILTRATION, SETTINGS, ETC. REFER TO PUMP
- STATION OPERATIONS MANUAL
- CHECK AND CLEAN INTAKE SCREENS ON ALL SUCTION LINES QUARTERLY, AT MINIMUM, CLEAN AND/OR REPAIR, AS NEEDED.
- CONDUCT ADDITIONAL INSPECTIONS, MAINTENANCE TASKS, ETC. THAT ARE PARTICULAR FOR YOUR SITE.

REVISIONS **CHARLOTTE COUNTY** PUBLIC WORKS. **MAINTENANCE & OPERATIONS** 

C.R. 771 ROADWAY LANDSCAPE IMPROVEMENTS CHARLOTTE COUNTY. **FLORIDA** 

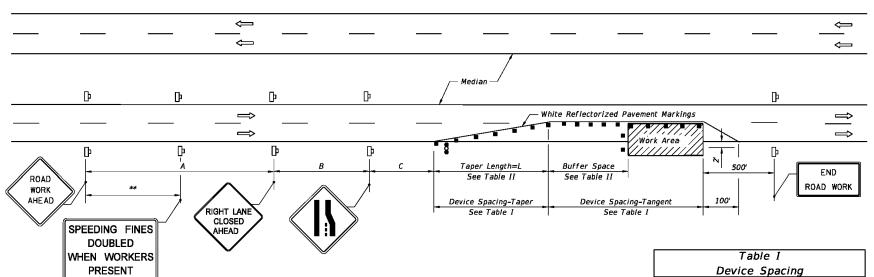


JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 ORT MYERS, FLORIDA 33902-1550 PHONE: (239) 334-0046

FAX: (239) 334-3661 E.B. #642 & L.B. #642

**IRRIGATION NOTES** 

ROJECT NO. 20170177-000 L30 JUNE 2022 41-21-08 As Shown



DISTANCE BETWEEN SIGNS						
Speed		Spacing (ft.)				
·	Α	В	С			
40 mph or less	200	200	200			
45 mph	350	350	350			
50 mph	500	500	500			
*55 mph or greater	2640	1640	1000			

- \* The ROAD WORK 1 MILE sign may be used as an alternate to the ROAD WORK AHEAD sign and the RIGHT LANE CLOSED 1/2 MILE sign may be used as an alternate to the RIGHT LANE CLOSED AHEAD sign.
- \*\* 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

### **SYMBOLS**

Work Area

Channelizing Device (See Index No. 600)

Work Zone Sign

Advance Warning Arrow Board

### GENERAL NOTES

- 1. Work operations shall be confined to one traffic lane, leaving the adjacent lane open to traffic.
- 2. On undivided highways the median signs as shown are to be omitted.
- 3. When work is performed in the median lane on divided highways, the channelizing device plan is inverted and left lane closed and lane ends signs substituted for the right lane closed and lane end signs.

The same applies to undivided highways with the following exceptions: a. Work shall be confined within one median lane.

b. Additional barricades, cones, or drums shall be placed along the centerline abutting the work area and across the trailing end of the work area.

When work on undivided highways occurs across the centerline so as to encroach on both median lanes, the inverted plan is applied to the approach of both roadways.

- 4. Signs and traffic control devices are to be modified in accordance with INTERMITTENT WORK STOPPAGE details (sheet 2 of 2) when no work is being performed and the highway is open to traffic.
- 5. The two channelizing devices directly in front of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
- 6. When paved shoulders having a width of 8 ft. or more are closed, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the travel way. See Index No. 612 for shoulder taper formulas.
- 7. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
- 8. This TCZ plan does not apply when work is being performed in the middle lane(s) of a six or more lane highway. See Index No. 614.
- 9. For general TCZ requirements and additional information, refer to Index No. 600.

	Device Spacing								
Max. Distance Between Devices (ft.)									
Speed (mph)	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums						
	Taper	Tangent	Taper	Tangent					
25	25	50	25	50					
10 to 45	25	50	30	50					
0 to 70	25	50	50	100					

Table II Buffer Space and Taper Length

bui i ei	Space	anu ra	per Lengu
Speed	Buffer Space	(12	er Length ' Lateral ansition)
(mph)	Dist. (ft.)	L (ft.)	Notes (Merge)
25	155	125	
30	200	180	$I = \frac{WS^2}{1}$
35	250	245	L = <u>60</u>
40	305	320	
45	360	540	
50	425	600	
55	495	660	] <u>.</u>
60	570	720	L = WS
65	645	780	
70	730	840	

When Buffer Space cannot be attained due to geometric constraints, the greatest attainable length shall be used, but not less than 200 ft.

For lateral transitions other than 12', use

L = Length of taper in feet

W = Width of lateral transition in feet

S = Posted speed limit (mph)

### **DURATION NOTES**

- 1. Temporary white edgeline may be omitted for work operations less than 3 consecutive calandar days.
- 2. For work operations up to approximately 15 minutes, signs, channelizing devices, arrow board, and buffer space may be omitted if all of the following conditions are met:
- a. Speed limit is 45 mph or less.
- b. No sight obstructions to vehicles approaching the work area for a distance equal to the buffer space and the taper length combined.
- c. Volume and complexity of the roadway has been considered.
- d. The closed lane is occupied by a class 5 or larger, medium duty truck(s) with a minimum gross weight vehicle rating (GWVR) of 16,001 lb with high-intensity, rotating, flashing, oscillating, or strobe lights mounted above the cab height and operating.
- 3. For work operations up to 60 minutes, arrow board and buffer space may be omitted if conditions a, b, and c in DURATION NOTE 2 are met, and vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

### **CONDITIONS**

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH ON THE LANE ADJACENT TO EITHER SHOULDER AND THE AREA 2' OUTSIDE THE EDGE OF TRAVEL WAY

REVISION 07/01/15

≥ DESCRIPTION:

2016 FDOT DESIGN STANDARDS

MULTILANE, WORK WITHIN TRAVEL WAY MEDIAN OR OUTSIDE LANE

613 1 of 2

- BASIS OF MAINTENANCE OF TRAFFIC PLAN REFERS TO FDOT INDEX 600 SERIES, SEE CURRENT EDITION. CONTRACTOR TO SUBMIT M.O.T. PHASE RECOMMENDATIONS FOR APPROVAL BY COUNTY AND ENGINEER
- SEE GENERAL NOTE #20 ON SHEET C2. THIS CONCEPTUAL MOT IS INTENDED FOR THE LANDSCAPE AND IRRIGATION

CONSTRUCTION ONLY, THE CONTRACTOR SHALL PREPARE, SUBMIT AND OBTAIN COUNTY APPROVAL FOR THIS MOT PLAN.

THIS DRAWING CONTAINS DETAILS DESIGNED BY, STANDARD TO, AND FURNISHED BY FLORIDA DEPARTMENT OF TRANSPORTATION SAID DETAILS WERE NOT DESIGNED BY JOHNSON ENGINEERING.

REVISIONS

**CHARLOTTE COUNTY** PUBLIC WORKS. **MAINTENANCE & OPERATIONS** 

C.R. 771 ROADWAY LANDSCAPE IMPROVEMENTS CHARLOTTE COUNTY, **FLORIDA** 



JOHNSON ENGINEERING, INC. 2122 JOHNSON STRFFT P.O. BOX 1550 ORT MYERS, FLORIDA 33902-1550

PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642

### MOBILZATION OF TRAFFIC PLAN

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
JUNE 2022	20170177-000	41-21-08	As Shown	L31

1.0 SITE DESCRIPTION:

1.A NATURE OF CONSTRUCTION ACTIVITY:

THE PROJECT IS THE PROPOSED LANDSCAPING AND IRRIGATION IMPROVEMENTS OF JONES LOOP ROAD. THIS INVOLVES LANDSCAPE AND IRRIGATION INSTALLATION. THE PROJECT EXTENDS A DISTANCE OF APPROXIMATELY 1.15 MILES.

### 1.B SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL PROVIDE A DETAILED SEQUENCE OF CONSTRUCTION FOR ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF MAJOR ACTIVITIES DESCRIBED BELOW, UNLESS THE CONTRACTOR PROPOSES A DIFFERENT SEQUENCE THAT IS EQUAL OR BETTER AT CONTROLLING EROSION AND TRAPPING SEDIMENT AND IS APPROVED BY THE ENGINEER.

FOR EACH CONSTRUCTION PHASE, INSTALL PERIMETER CONTROLS AFTER CLEARING AND GRUBBING NECESSARY FOR INSTALLATION OF LANDSCAPE AND IRRIGATION BUT BEFORE BEGINNING OTHER WORK FOR THE CONSTRUCTION PHASE. REMOVE PERIMETER CONTROLS ONLY AFTER ALL UPSTREAM AREAS ARE STABILIZED.

- 1. INSTALLATION OF IRRIGATION SYSTEM.
- 2. INSTALLATION OF LANDSCAPING
- 1.C AREA ESTIMATES:

TOTAL SITE AREA: 0.37 ACRES
TOTAL AREA TO BE DISTURBED: 0.37 ACRES

1.D. RUNOFF DATA:

RUNOFF COEFFIECIENTS:

BEFORE: N/A DURING: N/A AFTER: N/A

OUTFALL INFORMATION:

THERE ARE O OUTFALLS.

1.E SITE MAP:

THE CONSTRUCTION PLANS ARE BEING USED AS THE SITE MAPS. THE LOCATION OF THE REQUIRED INFORMATION IS DESCRIBED BELOW. THE SHEET NUMBERS FOR THE PLAN SHEETS REFERENCED ARE IDENTIFIED ON THE KEY SHEET OF THESE CONSTRUCTION PLANS.

DRAINAGE PATTERNS: N/A

APPROXIMATE SLOPES: N/A

\*AREAS OF SOIL DISTURBANCE: THE AREAS TO BE DISTURBED ARE INDICATED ON THE PLAN SHEETS. ANY AREAS WHERE PERMANENT FEATURES, LANDSCAPE AND IRRIGATION ARE SHOWN TO BE CONSTRUCTED ABOVE OR BELOW GROUND WILL BE DISTURBED.

\*AREAS NOT TO BE DISTURBED: ANY AREA OUTSIDE THE PLANTING AND IRRIGATION INSTALLATION.

\*LOCATIONS OF TEMPORARY CONTROLS: THESE ARE SHOWN ON THE EROSION CONTROL SHEETS

- \* OLD LOCATIONS OF PERMANENT CONTROLS: N/A
- \* AREAS TO BE STABILIZED: N/A
- \* SURFACE WATERS: N/A
- \* DISCHARGE POINTS TO SURFACE WATERS: ROADSIDE SWALES JUST ALONG THE ROADWAY SHOULDERS.
- 1.F. RECEIVING WATERS: N/A
- 2.0 CONTROLS:
- 2.A EROSION AND SEDIMENT CONTROLS:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE PROPOSED STABILIZATION AND STRUCTURAL PRACTICES BASED ON THE CONTRACTOR'S PROPOSED TEMPORARY TRAFFIC CONTROL (TTC) PLAN. THE FOLLOWING RECOMMENDED GUIDELINES ARE BASED ON THE TEMPORARY TRAFFIC CONTROL PLAN OUTLINED IN THE CONSTRUCTION PLANS. WHERE FOLLOWING THE TEMPORARY TRAFFIC CONTROL PLAN OUTLINED IN THESE CONSTRUCTION PLANS, THE CONTRACTOR MAY CHOSE TO ACCEPT THE FOLLOWING GUIDELINES OR MODIFY THEM IN THE SEDIMENT AND EROSION CONTROL PLAN, SUBJECT TO APPROVAL BY THE ENGINEER. AS WORK PROGRESSES, THE CONTRACTOR SHALL MODIFY THE PLAN TO ADAPT TO SEASONAL VARIATION, CHANGES IN CONSTRUCTION ACTIVITIES, AND THE NEED FOR RETTER PRACTICES

FOR EACH CONSTRUCTION PHASE, INSTALL PERIMETER CONTROLS AFTER CLEARING AND GRUBBING NECESSARY FOR INSTALLATION OF CONTROLS BUT BEFORE BEGINNING OTHER WORK FOR THE CONSTRUCTION PHASE. REMOVE PERIMETER CONTROLS ONLY AFTER ALL UPSTREAM AREAS ARE STABILIZED.

PHASE I OF TEMPORARY TRAFFIC CONTROL PLANS:

IMMEDIATELY AFTER LANDSCAPE AND IRRIGATION INSTALLATION, STABILIZE THE ENTIRE AREA OF DISTURBANCE USING SOD.

### 2.A.1 STABILIZATION PRACTICES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE STABILIZATION PRACTICES PROPOSED TO CONTROL EROSION. THE CONTRACTOR SHALL INITIATE ALL STABILIZATION MEASURES AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. THE STABILIZATION PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

### TEMPORARY:

- \* ARTIFICIAL COVERINGS IN ACCORDANCE WITH SPECIFICATION SECTION 104.
- \* TURF AND SOD IN ACCORDANCE WITH SPECIFICATION SECTION 104.

PERMANENT: SOD

2.A.2 STRUCTURAL PRACTICES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE PROPOSED STRUCTURAL PRACTICES TO CONTROL OR TRAP SEDIMENT AND OTHERWISE PREVENT THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. SEDIMENT CONTROLS SHALL BE IN PLACE BEFORE DISTURBING SOIL UPSTREAM OF THE CONTROL. THE STRUCTURAL PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER:

### TEMPORARY:

- \* SEDIMENT BARRIERS IN ACCORDANCE WITH DESIGN STANDARD 102 AND SPECIFICATION SECTION 104.
- $\star$  inlet protection in accordance with design standard 102 and special details shown in the TTC plan.
- \* SEDIMENT CONTAINMENT SYSTEM: THE PERMANENT STORMWATER PONDS WILL BE TEMPORARILY MODIFIED ACCORDING TO THE DETAILS IN THE TTC PLAN.

PERMANENT: SOD

- 2.B STORMWATER MANAGEMENT: N/A
- 2.C OTHER CONTROLS:
- 2.C.1 WASTE DISPOSAL:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE PROPOSED METHODS TO PREVENT THE DISCHARGE OF SOLID MATERIALS, INCLUDING BUILDING MATERIALS, TO WATERS OF THE UNITED STATES. THE PROPOSED METHODS SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER:

- $\mbox{*}$  Providing litter control and collection within the project during construction activities.
- \* DISPOSING OF ALL FERTILIZER OR OTHER CHEMICAL CONTAINERS ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.
- \* DISPOSING OF SOLID MATERIALS INCLUDING BUILDING AND CONSTRUCTION MATERIALS OFF THE PROJECT SITE BUT NOT IN SURFACE WATERS, OR WETLANDS.
- 2.C.2 OFF-SITE VEHICLE TRACKING & DUST CONTROL:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE PROPOSED METHODS FOR MINIMIZING OFFSITE VEHICLE TRACKING OF SEDIMENTS AND GENERATING DUST. THE PROPOSED METHODS SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

- \* COVERING LOADED HAUL TRUCKS WITH TARPAULINS.
- \* REMOVING EXCESS DIRT FROM ROADS DAILY
- $\boldsymbol{\star}$  STABILIZING CONSTRUCTION ENTRANCES ACCORDING TO DESIGN STANDARD 106.
- \* USING ROADWAY SWEEPERS DURING DUST GENERATING ACTIVITIES SUCH AS EXCAVATION AND MILLING OPERATIONS.
- 2.C.3 STATE AND LOCAL REGULATIONS FOR WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC TANK REGULATIONS:

IN THE SECTION 104 EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE PROPOSED PROCEDURES TO COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS FOR WASTE DISPOSAL, AND SANITARY SEWER OR SEPTIC SYSTEMS.

### 2.C.4 FERTILIZERS AND PESTICIDES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE PROCEDURES FOR APPLYING FERTILIZERS AND PESTICIDES. THE PROPOSED PROCEDURES SHALL COMPLY WITH APPLICABLE SUBSECTIONS OF SECTION 570 OF THE SPECIFICATIONS.

### 2.C.5 TOXIC SUBSTANCES:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL PROVIDE A LIST OF TOXIC SUBSTANCES THAT ARE LIKELY TO BE USED ON THE JOB AND PROVIDE A PLAN ADDRESSING THE GENERATION, APPLICATION,

MIGRATION, STORAGE, AND DISPOSAL OF THESE SUBSTANCES.

- 2.D.4 APPROVED STATE AND LOCAL PLANS AND PERMITS:
- \* FDFP RULE CHAPTER 62-25 F.A.C.
- \* CITY OF NARCOOSSEE ENVIRONMENTAL MANAGEMENT ORDINANCE NUMBER 90-0-0044AA.
- 3.0 MAINTENANCE:

IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL PROVIDE A PLAN FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROLS THROUGHOUT CONSTRUCTION. THE MAINTENANCE PLAN SHALL AT A MINIMUM, COMPLY WITH THE FOLLOWING:

- \* SILT FENCE: MAINTAIN PER SECTION 104. THE CONTRACTOR SHOULD ANTICIPATE REPLACING SILT FENCE ON 12 MONTH INTERVALS.
- \* SEDIMENT BARRIERS: REMOVE SEDIMENT AS PER MANUFACTURER'S RECOMMENDATIONS OR WHEN WATER PONDS IN UNACCEPTABLE AMOUNTS OR AREAS.
- \* PONDS ONE AND TWO: THE PONDS ARE TEMPORARY SEDIMENT BASINS UNTIL THE AREAS THAT DRAIN TO THEM ARE STABILIZED, SO UNTIL THEN, REMOVE SEDIMENT FROM THE POND WHEN IT BECOMES 1.5' DEEP AT ANY POINT.

### 4.0 INSPECTIONS:

QUALIFIED PERSONNEL SHALL INSPECT THE FOLLOWING ITEMS AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.50 INCHES OR GREATER. TO COMPLY, THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES AND RECORD THE DAILY RAINFALL. WHERE SITES HAVE BEEN PERMANENTLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH. THE CONTRACTOR SHALL ALSO INSPECT THAT CONTROLS INSTALLED IN THE FIELD AGREE WITH THE LATEST STORMWATER POLLUTION PREVENTION PLAN.

- \* POINTS OF DISCHARGE TO WATERS OF THE UNITED STATES.
- \* POINTS OF DISCHARGE TO MUNICIPAL SEPARATE STORM DRAIN SYSTEMS.
- \* DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- \* AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
- \* STRUCTURAL CONTROLS.
- \* STORMWATER MANAGEMENT SYSTEMS.
- \* LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.

THE CONTRACTOR SHALL INITIATE REPAIRS WITHIN 24 HOURS OF INSPECTIONS THAT INDICATE ITEMS ARE NOT IN GOOD WORKING ORDER.

IF INSPECTIONS INDICATE THAT THE INSTALLED STABILIZATION AND STRUCTURAL PRACTICES ARE NOT SUFFICIENT TO MINIMIZE EROSION, RETAIN SEDIMENT, AND PREVENT DISCHARGING POLLUTANTS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES, AS APPROVED BY THE ENGINEER.

### 5.0 NON-STORMWATER DISCHARGES:

IN THE SECTION 104 EROSION CONTROL PLAN, THE CONTRACTOR SHALL IDENTIFY ALL ANTICIPATED NON-STORMWATER DISCHARGES (EXCEPT FLOWS FROM FIRE FIGHTING ACTIVITIES). THE CONTRACTOR SHALL DESCRIBE THE PROPOSED MEASURES TO PREVENT POLLUTION OF THESE NON-STORMWATER DISCHARGES. IF THE CONTRACTOR ENCOUNTERS CONTAMINATED SOIL OR GROUNDWATER, CONTACT DAVE LETTERMAN, DISTRICT HAZARDOUS MATERIALS COORDINATOR AT (305) 63B-R549.

CHARLOTTE COUNTY
PUBLIC WORKS,
MAINTENANCE &
OPERATIONS

C.R. 771 ROADWAY
LANDSCAPE IMPROVEMENTS
CHARLOTTE COUNTY,
FLORIDA



JOHNSON ENGINEERING, INC. 2122 JOHNSON STREET P.O. BOX 1550 FORT MYERS, FLORIDA 33902-1550 PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642 JEFFREY NAGLE, RLA icense No. LA—666705

MOBILIZATION OF TRAFFIC PLAN

DATE PROJECT NO. FILE NO. SCALE SHEET

JUNE 2022 20170177-000 41-21-08 As Shown L32

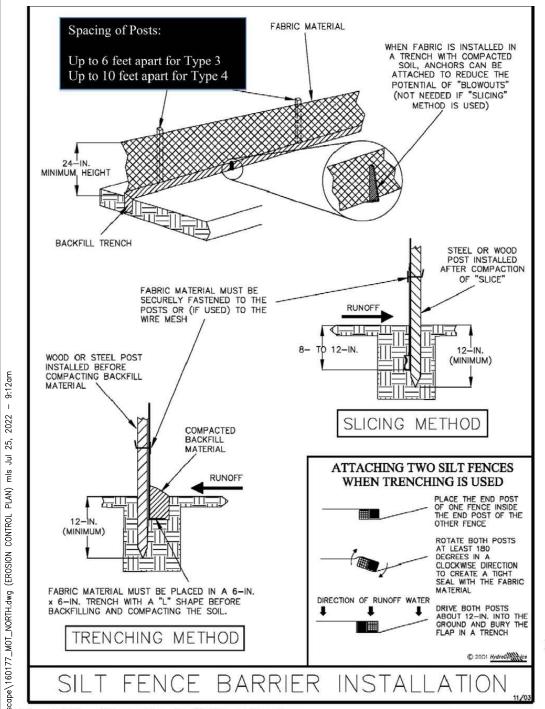


Figure V-3: Illustration of Silt Fence Priority 2 – Black Band

Silt Fence - Priority 2 - Black Band

TOE IN AND COMPACT

B' MAX O.C.

SILT FENCE BARRIER INSTALLATION

SIDE VIEW

FRONT ELEVATION

Illustration of a Silt Fence Barrier

Approved Alternate

FDOT TYPE III Silt Fence System

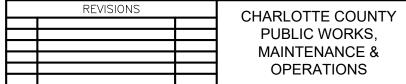
State of Florida Erosion & Sediment Control Designer & Reviewer Manual

# **BEST MANAGEMENT PRACTICES**

- INSTALL SILT FENCE AND ALL EROSION CONTROL MEASURES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OR IMMEDIATELY AFTER INITIAL CLEARING
- STABILIZE ALL DISTURBED AREAS AS EARLY IN THE CONSTRUCTION PROCESS AS
- ADDITIONAL TEMPORARY EROSION/SEDIMENT CONTROLS (NOT SHOWN ON THE CONSTRUCTION PLAN) THAT ARE NECESSARY TO MAINTAIN COMPLIANCE WITH STATE FLORIDA WATER QUALITY STANDARDS, AS AMENDED, SHALL BE DESIGNED, SPECIFIED, LOCATED AND INSTALLED IN THE FIELD UNDER THE SUPERVISION OF THE ENGINEER/CONTRACTOR OR DESIGNATED REPRESENTATIVE.
- TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIERS TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- DO NOT PLACE SILT FENCE IN MANNER THAT THE SILT FENCE WILL ACT AS DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER
- TURBID OFFSITE DISCHARGE (I.E. IN EXCESS OF 29 NTUS ABOVE BACKGROUND LEVEL.) SHALL BE REPORTED WITHIN 24 HOURS TO THE ENGINEER OF RECORD. CORRECTIVE ACTION TAKEN TO REMEDIATE THE DISCHARGE SHOULD BE INCLUDED AS PART OF THE NOTIFICATION A SITE SPECIFIC TURBIDITY MONITORING PLAN MAY BE REQUIRED FOR PERSISTENT PROBLEM AREAS.
- FUEL OR OTHER PETROLEUM PRODUCT SPILLS IN EXCESS OF 25 GALLONS THAT MAY OCCUR DUE TO OPERATION AND MAINTENANCE OF HEAVY EQUIPMENT DURING CONSTRUCTION SHALL BE CONTAINED/CLEANED UP AND IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD. SMALLER GROUND SURFACE SPILLS SHALL BE CLEANED UP BY THE CONTRACTOR AS SOON AS PRACTICAL.
- THE UNDERSIGNED, BEING FIRST DULY SWORN, CERTIFY THAT I/WE AM/ARE THE OWNER(S) OF THE PROPERTY AND WILL COMPLY WITH ALL MEASURES SHOWN IN THE CONSTRUCTION PLAN AND REPORTS AS IT RELATES TO EROSION CONTROL DURING CONSTRUCTION OF THE PROPOSED PROJECT.

# Figure V-2: Illustration of a Silt Fence Barrier

Permission is given by HydroDynamics Incorporated to copy and reproduce this detail



C.R. 771 ROADWAY LANDSCAPE IMPROVEMENTS CHARLOTTE COUNTY, **FLORIDA** 



JOHNSON ENGINEERING, INC. 2122 JOHNSON STRFFT P.O. BOX 1550 ORT MYERS, FLORIDA 33902-1550

POST (OAK)

REPAIR DETAIL

ATTACHING TWO SIILT FENCES

PHONE: (239) 334-0046 FAX: (239) 334-3661 E.B. #642 & L.B. #642

**EROSION CONTROL PLAN** 

JUNE 2022 20170177-000 41-21-08 L33 As Shown