

CITY OF NAPLES
 CITY COUNCIL
 CONTRACT PLANS
 COVE LANE (Cul-De-Sac)
 MEDIAN LANDSCAPE & IRRIGATION RENOVATION
 PROJECT ID 00-0000

COMPONENTS OF CONTRACT PLANS SET

LANDSCAPE PLANS

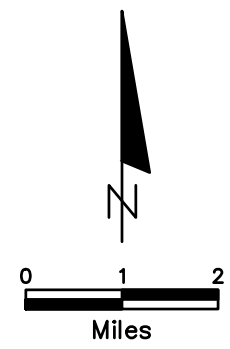
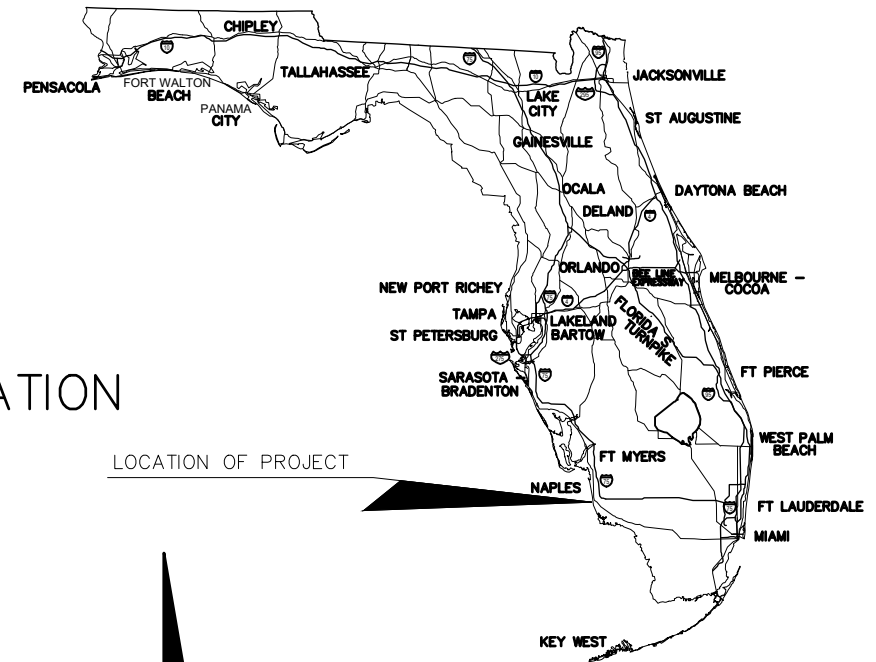
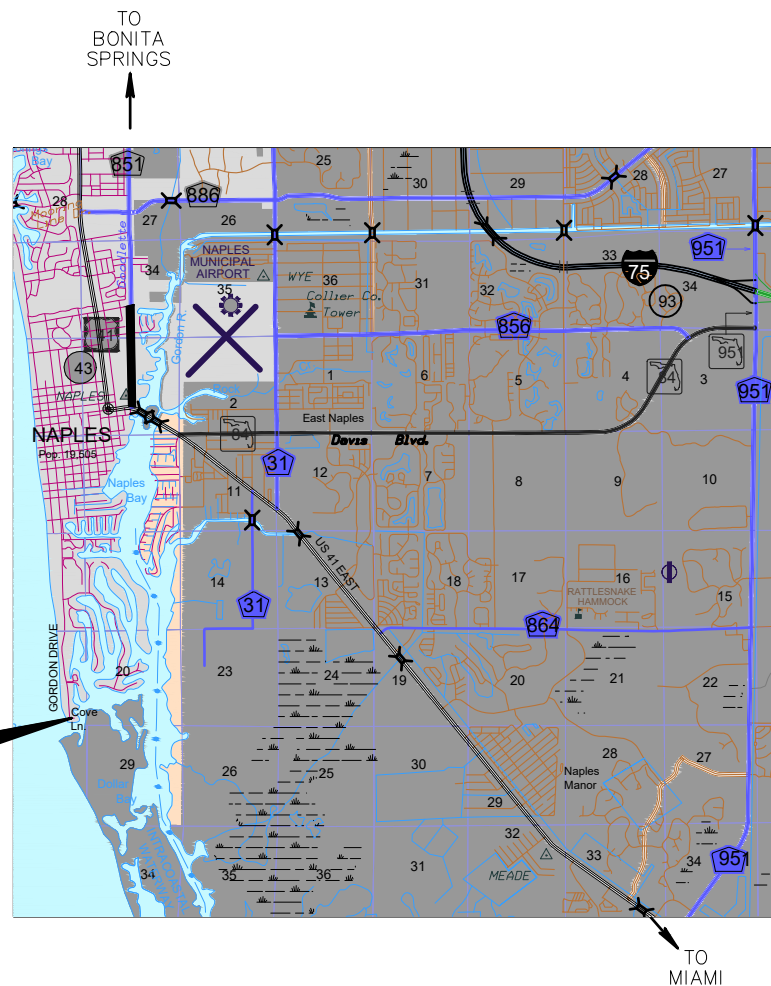
INDEX OF LANDSCAPE PLANS

SHEET NO.	SHEET DESCRIPTION
LD-1	KEY SHEET
LD-2	SIGNATURE SHEET
LD-3	SUMMARY OF QUANTITIES
LD-4 & 5	GENERAL NOTES & DETAILS
LD-6 & 7	LANDSCAPE PLANS
LD-8	IRRIGATION INSTALLATION NOTES
LD-9	IRRIGATION INSTALLATION NOTES & LEGEND
LD-10 & 11	IRRIGATION PLANS
LD-12 & 13	SITE PREPARATION PLANS
LD-14 - 19	LANDSCAPE PLANTING SPECIFICATIONS
LD-20 & 21	IRRIGATION SPECIFICATIONS & DETAILS

PREPARED FOR: CITY OF NAPLES
 CITY COUNCIL
 NAPLES CITY HALL
 735 8TH AVE. SOUTH
 NAPLES, FLORIDA 34102

COORDINATING CITY AGENCY: COMMUNITY SERVICES DEPARTMENT
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PROJECT LOCATION
 COVE LANE



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LANDSCAPE PLANS
 LANDSCAPE ARCHITECT OF RECORD:
 MICHAEL A. MCGEE, RLA, ISA
 L.A. NO.: LA0000864

SUBMITTALS & SHOP DRAWINGS TO BE SUBMITTED TO:
 CITY PROJECT MANAGER

GOVERNING STANDARD PLANS:
 Florida Department of Transportation, FY 2023-24 Standard plans for Road and Bridge Construction and applicable Interm Revisions (Irs).

GOVERNING STANDARD SPECIFICATIONS:
 Florida Department of Transportation, FY 2023-24, Standard Specifications for Road and Bridge Construction at the following website:

<http://www.fdot.gov/programmanagement/implemented/SpecBooks>

FISCAL YEAR	SHEET NO.
23	LD-1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G10-11.011, F.A.C.



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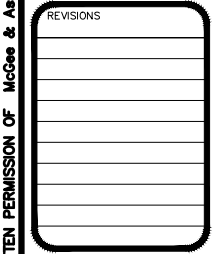
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THE ABOVE NAMED LANDSCAPE ARCHITECT SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G10-11.011, F.A.C.

INDEX OF LANDSCAPE PLANS

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
LD-1	KEY SHEET
LD-2	SIGNATURE SHEET
LD-3	SUMMARY OF QUANTITIES
LD-4 & 5	GENERAL NOTES & DETAILS
LD-6 & 7	LANDSCAPE PLANS
LD-8	IRRIGATION INSTALLATION NOTES
LD-9	IRRIGATION INSTALLATION NOTES & LEGEND
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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES FLORIDA
SHEET TITLE: SIGNATURE SHEET

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 2	

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EXHIBIT A: 2023-002 PLANS R1 100 7-24-23

BASE PROJECT MATERIALS AND ACTIVITIES SUMMARY OF QUANTITIES CITY OF NAPLES COVE LANE MEDIAN LANDSCAPE & IRRIGATION RENOVATION				
LINE #	BID / PAY ITEM	BID / ITEM NAME	ITEM DESCRIPTION/COMMON NAME	UNIT QTY
1	102-1	SUPPLY & INSTALL: MAINTENANCE OF TRAFFIC		LS. 1
2	104-18	SUPPLY & INSTALL: INLET PROTECTION SYSTEM		EA. 5
3	110-1-1 (STANDARD)	CLEARING & GRUBBING	REMOVE EXISTING FLEXIBLE PAVEMENT, CONCRETE CURB TREES, SHRUBS AND TURF IN MEDIAN	LS./AC. 0.3
4	162-1-13 (SPEICAL DEPTH)	PREPARED SOIL LAYER (FINISHED SOIL LAYER)	FINISHED SOIL LAYER - TOPSOIL, PLACED AND GRADED: TOPDRESSING, LANDSCAPE MOUNDING, TREE REMOVAL BACKFILL, PLANTING PIT BACKFILL MATERIAL WHEN REQUIRED, REFER TO FDOT SPECIFICATION SECTION 162 (6" TO 24" DEPTH)	C.Y. 200
5	580-1-101 SHRUBS - SR	SUPPLY & INSTALL: STRELITZIA REGINAE	7 GAL., 24"-30" HT./SPR., 4PPP, ORANGE BIRD OF PARADISE	EA. 25
6	580-1-102 SHRUBS - AZ	SUPPLY & INSTALL: ALPINIA ZERUMBET 'VARIEGATA'	30" HT./SPR. 7-10 GAL.	EA. 81
7	580-1-104 SHRUBS - BS	SUPPLY & INSTALL: BOUGAINVILLEA SPECTABILIS 'HELEN JOHNSON'	3 GAL., 20" HT./SPR., 4" O.C., FULL	EA. 33
8	580-1-105 SHRUBS - CV	SUPPLY & INSTALL: CODIAEUM VARIEGATUM 'PETRA'	3 GAL., 16"-18" HT./SPR., 3' O.C., SHADE GROWN	EA. 59
9	580-1-105 SHRUBS - CF	SUPPLY & INSTALL: CORDYLIN FRUTICOSA 'RED SISTER'	3 GAL., 36" HT., 3PPP, HAWAIIAN TI, SUN GROWN	EA. 4
10	580-1-106 SHRUBS - CF	SUPPLY & INSTALL: CORDYLIN FRUTICOSA 'RED SISTER'	7 GAL., 48" HT., 3PPP, HAWAIIAN TI, SUN GROWN	EA. 2
11	580-1-107 SHRUBS - MC	SUPPLY & INSTALL: MUHLENBERGIA CAPILLARIS	3 GAL., 36" HT., 3' O.C., MUHLY GRASS	EA. 64
12	580-1-108 SHRUBS - FM	SUPPLY & INSTALL: FICUS MICROCARPA 'GREEN ISLAND'	3 GAL., 12" HT./SPR., 3' O.C.	EA. 72
13	580-1-109 SHRUBS - HL	SUPPLY & INSTALL: HYMENOCALLIS LITTORALIS	3 GAL., 18" HT./SPR., 3' O.C., BEACH SPIDER LILY	EA. 19
14	580-1-110 GROUND COVERS - BF	SUPPLY & INSTALL: BULBINE FRUTESCENS 'HALLMARK'	1 GAL., 10" HT./SPR., 18" O.C., FULL, ORANGE BULBINE	EA. 260
15	580-1-111 GROUND COVERS - LM	SUPPLY & INSTALL: LIRIOPE MUSCARI 'SUPER BLUE'	1 GAL., 10" HT./SPR., 18" O.C., LILY TURF	EA. 505
16	580-1-112 GROUND COVERS - AG	SUPPLY & INSTALL: ARACHIS GLABRATA 'GOLDEN GLORY'	1 GAL., PERENNIAL PEANUT, 6" HT./SPR., 12" O.C.	EA. 106
17	580-1-113 PALMS - TR	SUPPLY & INSTALL: THRINAX RADIATA	4' OA. HT., F.G.-B&B, SINGLE TRUNK	EA. 6
18	580-1-114 PALMS - TR	SUPPLY & INSTALL: THRINAX RADIATA	8' OA. HT., F.G.-B&B, SINGLE TRUNK	EA. 3
19	580-1-115 PALMS - AM	SUPPLY & INSTALL: ADONIDIA MERRILLII	6', 10' & 14' CW. HT., STAGGERED HT. TRIPLE TRUNKS, SPECIMEN, CHRISTMAS PALM	EA. 1
20	580-1-116 PALMS - RE	SUPPLY & INSTALL: ROYSTONIA ELATA	10' CW. HT., F.G.-B&B, FLORIDA ROYAL PALM	EA. 5
21	580-1-117 TREE - HC	SUPPLY & INSTALL: HANDROANTHUS CHRYSOTRICHUS	11'-13' Ht., 3.5 Cal., 5'-6' Spr., 36" dia. B&B or 65 Gal., GOLDEN TRUMPET TREE	EA. 3
22	580-1-118 TREE - CB	SUPPLY & INSTALL: CORDIA BOISSIERI 'WHITE GEIGER'	8'-10' Ht., 2"-2.5" Cal., 3'-4' Spr., 28"-32" dia. B&B or 25-45 Gal., TEXAS OLIVE	EA. 4
23	570-1-2	SUPPLY & INSTALL: PERFORMANCE TURF (ST. AUGUSTINE 'FLORATAM')	PROPOSED TURF AREAS	S.F. 4100

ALTERNATE (ALT.) MATERIALS AND ACTIVITIES SUMMARY OF QUANTITIES CITY OF NAPLES COVE LANE MEDIAN LANDSCAPE & IRRIGATION RENOVATION				
LINE #	BID / PAY ITEM	BID / ITEM NAME	ITEM DESCRIPTION/COMMON NAME	UNIT QTY
1	SOIL IMPROVEMENT	PNEUMATIC SOIL EXCAVATION	AIR SPADE TO LOOSEN AND EXCAVATE EXISTING SOIL TO A 6" TO 16" DEPTH BASED UPON NOTES & DETAILS	S.F. 3550
2	520-2-4	SUPPLY & INSTALL: CONCRETE CURB, TYPE D	TO INCLUDE ASPHALT SAW CUT, ASPHALT BED & MISCELLANIOUS ASPHALT PAVEMENT PATCHING OR JOINT SEALER AS NEEDED	L.F. 511
3	520-1-12	SUPPLY & INSTALL: CONCRETE CURB & GUTTER, TYPE F	TO INCLUDE ASPHALT SAW CUT, ASPHALT BED & MISCELLANIOUS ASPHALT PAVEMENT PATCHING OR JOINT SEALER AS NEEDED	L.F. 30
4	520-2100	SUPPLY & INSTALL: CONCRETE CURB (RIBBON CURB)	TO INCLUDE ASPHALT SAW CUT, MODIFIED SLOPED TO ROAD, SHAPE & WIDTHS, TO INCLUDE ASPHALT LIFT BEDDING & MISCELLANIOUS ASPHALT PAVEMENT PATCHING OR JOINT SEALER AS NEEDED	L.F. 16
5	570-1-2	SUPPLY & INSTALL: PERFORMANCE TURF (ST. AUGUSTINE 'FLORATAM')	ADDITIONAL TURF ALONG ASPHALT PAVEMENT IF CURB ALTERNATE IS NOT INSTALLED	S.F. 1200

BASE PROJECT IRRIGATION SUMMARY OF QUANTITIES CITY OF NAPLES COVE LANE MEDIAN LANDSCAPE & IRRIGATION RENOVATION				
LINE #	BID / PAY ITEM	BID / ITEM NAME AND DESCRIPTION	UNIT	QTY
1		BY CITY: RAINBIRD TBOS BATTERY OPERATED CONTROLLERS	EA.	2
2	590-70-100	FURNISH & INSTALL MAIN LINE: 2.5" PVC PANTONE PURPLE 522C, 1120-1220 CLASS 200 SOLVENT WELD IRRIGATION PIPING. TO INCLUDE REMOVAL OF EXISTING VALVES, BOXES & PIPING BACK TO EX. SYSTEM FILTER ASSEMBLY, SEE PLAN NOTES AND DETAILS.	L.F.	20
3	590-70-101	FURNISH & INSTALL CONTROLLER POST AND VALVE MANIFOLD ASSEMBLY: TO INCLUDE ALL COMPONENTS, CONTROLLER WIRING, FLUSH SUMP, PIPING, SLPICE BOX, WIRING, 3/4" CONDUITS AND FITTINGS PER DETAILS AND NOTES FOR 100% OPERATIONAL ASSEMBLY. (5) RAINBIRD 150-PESBR-PRS-D: 1.5" PESB-R SERIES ELECTRIC DC POTTED LATCHING SOLENOID VALVE & TBOS-ADAPP SOLENOID ADAPTER AS REQUIRED.	EA.	1
4	590-70-102	RAINBIRD 1800 SERIES SPRAY MODEL 1806-PRS-NPCAP 6" POP-UP WITH MPR OR VAN NOZZLES. RADIUS AND COVERAGE PATTERN VARY. INCLUDES PVC PANTONE PURPLE 522C 1120-1220 CLASS 200 SOLVENT WELD LATERAL PIPING FROM ZONE VALVES TO SPRINKLERS.	EA.	5
5	590-70-103	RAINBIRD 1800 SERIES SPRAY MODEL 1812-PRS-NPCAP 12" POP-UP WITH MPR OR VAN NOZZLES. RADIUS AND COVERAGE PATTERN VARY. INCLUDES PVC PANTONE PURPLE 522C 1120-1220 CLASS 200 SOLVENT WELD LATERAL PIPING FROM ZONE VALVES TO SPRINKLERS.	EA.	54
6	590-70-104	RAINBIRD 1800 SERIES SPRAY MODEL 1812-PRS-NPCAP 6" HT. ROTOR 5006+PC30RNP WITH - 3.0 NOZZLES. INCLUDES PVC PANTONE PURPLE 522C 1120-1220 CLASS 200 SOLVENT WELD LATERAL PIPING FROM ZONE VALVES TO SPRINKLERS.	EA.	16
7	590-70-105	FURNISH & INSTALL: RAINBIRD 1400 SERIES FULL CIRCLE BUBBLERS. (2) 1402 .50 GPM FOR TREES/PALMS OR (4) 1404 1.0 GPM. BUBBLERS PER ROYAL PALM, INCLUDES PVC PANTONE PURPLE 522C 1120-1220 CLASS 200 SOLVENT WELD LATERAL PIPING FROM ZONE VALVES TO TREES AND FLEX PIPING AT TREE LOCATIONS. SIZE PIPE FOR PROPER FLOWS AS RECOMMENDED IN THE PIPE SIZING SCHEDULE.	EA.	22
8	590-70-106	FURNISH & INSTALL: GREEN (RPM) REFLECTIVE PAVEMENT MARKERS ON TOP OF CURBING OR ON PAVEMENT EDGE AT EACH VALVE OR GROUPS OF VALVES. ONE ON CURBING OE PAVEMENT. EXPOXY SET PER FDOT SPECIFICATIONS.	EA.	2

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McGee & Associates

PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE
SUMMARY OF QUANTITIES

DRAWN BY: MAM DATE: 6/23
SCALE: AS SHOWN
SHEET NO. LD - 3

GENERAL NOTES & INSTRUCTIONS TO BIDDERS:

GENERAL:

1. THE CONTRACTOR SHALL FOLLOW THE LATEST VERSION OF FDOT'S "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION."
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CITY, COUNTY & STATE ORDINANCES, STATUTES, OR POLICY REQUIREMENTS RELATED TO ANY ASPECTS OF THE PROJECT.
3. THE LANDSCAPE ARCHITECT OF RECORD (LAOR) SHALL APPROVE ANY DEVIATIONS FROM THE PLANS THAT WILL EFFECT THE DESIGN OR IN FIELD LAYOUT.
4. DO NOT INSTALL MATERIALS THAT BLOCK OR CREATE CONFLICTS WITH EXISTING SIGNS, LIGHTS, OVERHEAD UTILITIES, AND UNDERGROUND UTILITIES. NOTIFY THE PROJECT MANAGER IMMEDIATELY WHEN ANY OF THESE ISSUES ARE ENCOUNTERED.
5. THE CONTRACTOR SHALL PREPARE A TEMPORARY TRAFFIC CONTROL PLAN (TTCP) FOR PERMITTING PURPOSES ACCORDING TO CITY'S PERMIT REQUIREMENTS.
6. ANY PRODUCT SPECIFIED OR REFERENCED IN THESE PLANS BY PRODUCT OR MANUFACTURER'S NAME IS PROVIDED ONLY TO SET A LOCAL STANDARD. ALL PRODUCTS AND MANUFACTURERS ARE SUBJECT TO THE 'APPROVED EQUAL' DESIGNATION. THIS DESIGNATION MAKES ALL PRODUCTS OR MANUFACTURERS ELIGIBLE FOR BIDDING, PROVIDING THEY ARE EQUAL TO OR BETTER THAN THE SPECIFIED PRODUCT OR MANUFACTURER.
7. THE CONTRACTOR SHALL REMOVE ALL LITTER WITHIN THE DESIGNATED PROJECT AREAS THROUGHOUT THE INSTALLATION PERIOD UNTIL FINAL ACCEPTANCE.
8. THE CONTRACTOR IS NOT ALLOWED TO STOCKPILE MATERIAL, EQUIPMENT, AND DEBRIS IN THE RIGHTS-OF-WAY OR MEDIANS THAT WOULD INTERFERE WITH ROADWAY TRAFFIC SIGHTLINES.
9. LICENSES AND CERTIFICATIONS:
THE CONTRACTOR SHALL BE PROPERLY LICENSED WITH STATE OF FLORIDA, COLLIER COUNTY AND CITY OF NAPLES REQUIREMENTS.
10. UTILITY LOCATES:
THE CONTRACTOR IS CAUTIONED TO BE AWARE OF UNDERGROUND AND OVERHEAD UTILITIES. PRIOR TO EXCAVATION AND INSTALLATION, THE CONTRACTOR SHALL CONTACT WITH SUNSHINE STATE ONE-CALL OF FLORIDA / "811", AND LOCAL UTILITY AGENCIES FOR CURRENT CONTACT INFORMATION AND LOCATION OF ALL UTILITIES PER FLORIDA STATUTE 553.851 (1979) OR AS AMENDED BEFORE BEGINNING WORK.
 - a. PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL FIELD LOCATE ALL ABOVE GROUND, AT GRADE AND UNDERGROUND UTILITIES. ALL AT GRADE UTILITY BOXES AND MANHOLE ACCESS POINTS WITHIN THE MEDIANS AND RIGHTS-OF-WAY AREAS WHERE WORK IS TO BE PERFORMED SHALL BE LOCATED AND MARKED OFF FOR PROTECTION.
11. CONTRACTOR TO BE AWARE THERE ARE ALTERNATE (ALT.) PROJECT ITEMS LISTED IN THE PLANS WHICH MAY OR MAY NOT BE INCLUDED IN THE FINAL PROJECT SCOPE, (SEE ALTERNATE MATERIALS SCHEDULE). ANY PROJECT ITEMS DIRECTLY ASSOCIATED TO AN ALTERNATE PROJECT ITEM SHALL NOT BE INCLUDED IN BASE BID.

SUBMITTALS:

1. THE CONTRACTOR SHALL PROVIDE A TEMPORARY TRAFFIC CONTROL PLAN COMPLIANT WITH FDOT DESIGN MANUAL, SECTION 321, STANDARD PLANS, SECTION 102 AND CITY OF NAPLES TEMPORARY TRAFFIC CONTROL PLAN (TTCP) POLICIES (CURRENT EDITIONS) FOR THE ENTIRE PROJECT AREAS. THE CONTRACTOR SHALL PROVIDE THE TRAFFIC CONTROL PLAN TO THE CITY DURING THE RIGHT-OF-WAY PERMIT APPLICATION PROCESS.
 - a. LAOR AND/OR PROJECT MANAGER SHALL APPROVE ALL MATERIALS TO BE INSTALLED FOR THIS PROJECT BEFORE PROCUREMENT.
2. THE CONTRACTOR WILL PROVIDE THE FOLLOWING ITEMS FOR REVIEW & APPROVAL:
 - a. EXAMPLE PHOTO SUBMITTALS OF ALL PLANT MATERIALS THAT CLEARLY SHOW THE CLEAR TRUNK HEIGHT, ROOT BALL MEASUREMENT, FOLIAGE, & EVIDENCE OF REGENERATED ROOTS (WHEN APPLICABLE).
 - b. PHOTOS SHALL CONTAIN A MEASURING DEVICE TO SHOW HEIGHTS AND WIDTHS.
 - c. SUBMIT PHOTOS FOR EACH PLANT TYPE. ALL PLANTS SHALL MEET FLORIDA GRADES & STANDARDS NO. 1 OR BETTER.
 - d. THE CONTRACTOR WILL PROVIDE DATED AND SIGNED RECORD DRAWING MARK-UPS OF FIELD REVISIONS TO THE LAOR AFTER THE PROJECT'S FINAL COMPLETION DATE.

GRADING & SODDING:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINISH GRADING. TO INCLUDE REMOVING OF LARGE CLUMPS OF EXISTING VEGETATION, SOIL, ROCKS, AND OTHER UNDESIRABLE DEBRIS. CONTRACTOR TO HAND RAKE TO PROVIDE A SMOOTH SURFACE IN TURF SOD AND PLANTING AREAS BEFORE INSTALLING TURF AND PLANTS.
2. ROCKS (2) INCHES IN DIAMETER & GREATER AND OTHER UNDESIRABLE DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR TO BE REMOVED & DISPOSED OF OFFSITE BY THE CONTRACTOR.
3. NEW TURF SOD AREAS ABUTTING EXISTING TURF AREAS SHALL HAVE THE GRADE ADJUSTED BEFORE INSTALLING NEW SOD SO THAT THE NEW SOD BLENDS INTO THE EXISTING EVENLY.
4. STAGGER SOD JOINTS.
5. ALL TURF SOD TO BE ROLLED IMMEDIATELY AFTER INSTALLATION.
6. ALL EROSION CONTROL AS REQUIRED IN THE RIGHT-OF-WAY SHALL COMPLY WITH FDOT'S FLORIDA EROSION SEDIMENT CONTROL MANUAL AND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 104 (MOST CURRENT EDITION).

IRRIGATION SYSTEM:

1. CONTRACTOR SHALL ADJUST AND/OR INSTALL IRRIGATION COMPONENTS AS SHOWN IN THE PLANS TO PROVIDE FOR 100% COVERAGE OF NEWLY PLANTED MATERIAL OR TURF.
2. NEW TREES SHALL BE IRRIGATED WITH TWO OR FOUR FLOOD TYPE BUBBLERS SPACED EVENLY AROUND THE ROOT BALL OR AS SHOWN IN THE IRRIGATION PLANS.
3. CONTRACTOR IS RESPONSIBLE FOR IRRIGATION WATERING DURING CONSTRUCTION UNTIL FINAL PROJECT ACCEPTANCE.

PLANTING INSTALLATION NOTES

TREE AND LARGE SHRUB PLANTING PITS:

1. PLANTING PITS CONTAINING LIME ROCK OR OTHERWISE UNSUITABLE PLANT GROWING MATERIAL SHALL HAVE THE MATERIAL REMOVED TWELVE-INCHES (12") BEYOND THE PLANTING PIT DEPTHS & WIDTHS AS SHOWN IN FDOT STANDARD PLANS "LANDSCAPE INSTALLATION" INDEX 580-001. REPLACE UNSUITABLE SOIL MATERIAL WITH LANDSCAPE SOIL THAT COMPLIES WITH FDOT STANDARD SPECIFICATION 981 "SOIL LAYER MATERIALS" SECTION 987-2.4 LANDSCAPE SOILS OR SOIL SPECIFICATIONS WITHIN PLANS.
2. THE EXISTING SOIL BELOW THE PLANTING PIT SHALL BE LOOSENEED OR SCARIFIED AN ADDITIONAL SIX-INCHES (6") MINIMUM TO PROVIDE PROPER WATER PERCOLATION BEFORE BACKFILLING.
3. AFTER SCARIFYING THE EXISTING MATERIAL BELOW THE PLANT PIT AND BEFORE BACKFILLING TEST THE PIT FOR PERCOLATION RATE. IF IT DOES NOT DRAIN, THEN AUGER A SIX-INCH (6") DIAMETER THREE-FOOT DEPTH HOLE AND BACKFILL WITH CLEAN BUILDING GRADE COARSE SILICA SAND. PERFORM A SECOND PERCOLATION TEST AND IF IT DOES NOT PASS CONTACT PROJECT MANAGER.
4. REMOVAL AND REPLACEMENT OF UNSUITABLE PLANTING PIT SOIL AS DESCRIBED ABOVE IS CONSIDERED INCIDENTAL TO TREE OR LARGE SHRUB PLANTINGS.

WEED CONTROL:

1. MAINTAIN ALL PLANTS, MULCH AND TURF AREAS WEED FREE THROUGH THE INSTALLATION PERIOD UNTIL FINAL PROJECT ACCEPTANCE.

MAINTENANCE:

1. THE CONTRACTOR SHALL MAINTAIN THE PORTIONS OF THE WORK AREAS INCLUDED IN THE PROJECT LIMITS. THE AREAS INCLUDE ALL NEWLY PLANTED AREAS, AREAS AFFECTED BY PLANT REMOVAL, AND ANY AREAS THAT REQUIRE RESTORATION.
2. ALL DEBRIS FROM INSTALLATION SHALL BE PICKED UP BY THE CONTRACTOR DAILY.
3. MAINTENANCE INCLUDES WEED CONTROL, TRASH PICK-UP, TRIMMING SHRUBS & TREES AS NEEDED, MOWING AND PEST CONTROL FOR NEW PLANTS AND TURF.
4. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE NEW INSTALLATION AREAS UNTIL FINAL ACCEPTANCE.

WATERING:

1. DURING THE PROJECT INSTALLATION PERIOD, KEEP THE SOIL MOISTURE IN ALL PLANTING AREAS TO A POINT AS DEFINED AS FIELD CAPACITY.
2. DURING THE INSTALLATION PERIOD, IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR & APPLYING WATER TO THE PROJECT PLANTINGS UNDER IRRIGATION OR NOT UNTIL FINAL PROJECT ACCEPTANCE.
3. IF THE IRRIGATION IS NOT OPERATING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO WATER ALL PLANT MATERIALS UNTIL FINAL PROJECT ACCEPTANCE.

PRUNING:

1. PRUNING SHALL COMPLY WITH THE MOST CURRENT EDITION OF ANSI A300 PART 1 STANDARDS.
2. A CERTIFIED ARBORIST SHALL PERFORM OR OVERSEE ALL PRUNING OPERATIONS AS REQUIRED DURING THE CONSTRUCTION PERIOD:
 - a. PRUNE NEW TREE ROOT SYSTEMS TO ADDRESS ALL CROSSING, DEFLECTING, AND CIRCLING ROOTS.
 - b. PRUNE TREES TO MAINTAIN THE VISIBILITY OF SIGNS.
 - c. PRUNING OF ANY DAMAGED MATERIALS SHALL BE APPROVED BY THE PROJECT MANAGER PRIOR TO PRUNING.

MULCH: (BY CITY)

1. APPLY MULCH TO ALL PLANTINGS PER FDOT STANDARD PLANS "LANDSCAPE INSTALLATION" INDEX 580-001 TO A MINIMUM DEPTH OF THREE (3") INCHES SETTLED. MINIMUM MULCH DEPTH SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE INSTALLATION PERIOD UNTIL PROJECT FINAL ACCEPTANCE.
2. MULCH AREAS ARE TO EXTEND AROUND ABOVE-GROUND TREE BRACING, AND GUYING COMPONENTS. NO MULCH SHALL BE IN CONTACT WITH ANY TREE OR SHRUB TRUNKS OR PLANT BASES.
3. ALL MULCH QUANTITIES AND AREAS OF MEASUREMENTS PROVIDED IN THE DRAWINGS ARE ESTIMATES. THE CONTRACTOR IS RESPONSIBLE FOR QUANTIFYING THE ACTUAL REQUIRED MULCH QUANTITIES TO PROVIDE THE REQUIRED COVERAGE FOR THE ENTIRE PROJECT.

LANDSCAPE MATERIAL INSTALLATION:

1. ALL PLANT MATERIALS SHALL COMPLY WITH "FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS 2022."
2. ALL TREES AND PALMS MUST MEET THE MINIMUM 6-FOOT LATERAL OFFSET FROM THE FACE OF CURB IN RAISED CURBED MEDIANS.
3. ALL TREES AND PALMS PLANTED IN TURF OR PLANTING BEDS SHALL HAVE A FOUR-FOOT (4') MINIMUM UNPLANTED CLEAR AREA AROUND THE ENTIRE TRUNKS. DO NOT PLACE SHRUBS OR GROUND COVERS IN THIS AREA.
4. IN MEDIANS, THE SHRUB & WALKABLE (I.E. PERENNIAL PEANUT), GROUND COVER PLANTING BEDS SHALL HAVE THE FIRST ROW OF PLANTS OFFSET A MINIMUM OF FOUR (4) FEET FROM THE BACK-OF-CURB (BOC) OR AS DIRECTED IN THE PLANS.
5. MAINTAIN A MINIMUM TWO-FOOT (2') WIDE MULCH BAND BETWEEN THE EDGE OF THE FOLIAGE AND THE BACK OF CURBING.
6. THE LAOR SHALL APPROVE TREE LOCATIONS & PLANTING LAYOUTS ON-SITE BEFORE PLANTING.
7. SEE "LANDSCAPE SCHEDULE" FOR SPECIFIED SIZES, SPECIES, AND GRADES OF ALL TREES AND PLANTS.
8. SEE THE TREE, PALM, AND SHRUB INSTALLATION DETAILS FOR PLANTING GUIDANCE.
9. REMOVE ANY REMAINING TRUNK WRAP, CLOSE/POLE STAKING, POLE STAKING TAPE, GROW BAG, TAGS, AND TAGGING TAPE AT THE TIME OF PLANTING. DO NOT PLACE WRAPS ON THE TRUNK.
10. DO NOT INSTALL MULCH WITHIN SIX INCHES (6") OF TREE OR SHRUB TRUNKS.
11. TREE PLANTING PITS SHALL BE BACKFILLED WITH EXISTING MEDIAN SOIL. IF EXISTING MEDIAN SOIL AT PLANTING PITS IS CONSIDERED UNSUITABLE THEN REFER TO "INSTALLATION NOTES, PLANTING PITS NOTES". TO REMOVE AIR POCKETS FILL IN SIX-INCH (6") LIFTS (DO NOT OVER-COMPACT SOIL). SETTLE BACKFILL BY HOSE WATERING IN THE TREE WITH LOW VOLUME/PRESSURE WATER SOURCE.

City of Naples Cove Lane Utility Contacts	First Name	Last Name	Address	City	State	Zip	Phone Number	Fax Number
CenturyLink	Bill	McCloud	1325 Blairstone Rd. RM. 113	Tallahassee	FL	32301	850-599-1444	
Comcast	Josh	Davis	12600 WestlinksDr.	Ft. Myers	FL	33913	239-253-7642	
Florida Power & Light	Joel	Bray					386-586-6403	
City of Naples (Water) & (Sewer)	Alicia	Acevedo	380 Riverside Cr.	Naples	FL	34102	239-213-4712	239-213-4798

INFORMATION PROVIDED MAY NOT BE ALL INCLUSIVE.

CONTRACTOR & SUBCONTRACTORS ARE REQUIRED TO CONTACT SUNSHINE 811 FOR LOCATES PRIOR TO ANY SITE ACTIVITIES.

Description: Cove Lane

City: Naples

County: Collier

EOR: Michael McGee, R. L. A., McGee & Associates

M&A Design Ticket 04-05-23 #00000 095305698-000

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COVE LANE
LANDSCAPE MEDIAN RENOVATION
FLORIDA
CITY OF NAPLES
GENERAL NOTES

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 4	

LANDSCAPE MATERIAL INSTALLATION: (Continued)

- ADDRESS THE TREE CROWN AND THE ROOT BALL AS REQUIRED FOR PROPER CANOPY GROWTH AND ROOT DEVELOPMENT FOLLOWING FLORIDA GRADES & STANDARDS, APPENDIX A, "BEST MANAGEMENT PRACTICES" PART 1, 2, & 4.
- TREE AND PALM BRACING AND STAKING SHALL BE PER FDOT "LANDSCAPE INSTALLATION" INDEX 580-001 TREE AND PALM STAKING DETAILS OR AS DETAILED OR NOTED IN THE PLANS.

REFERENCED DOCUMENTS:

(CONTRACTOR TO PERFORM INTERNET SEARCH FOR MOST CURRENT URL'S)

DOCUMENT TITLES:

- FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT ADDITION)
- FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION (CURRENT EDITION)
- FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS (CURRENT EDITION)
- CITY OF NAPLES APPLICABLE STANDARDS FOR WORK WITHIN THE PUBLIC RIGHTS-OF-WAY
- CITY OF NAPLES APPLICABLE LANDSCAPE AND IRRIGATION SPECIFICATIONS FOR LANDSCAPE IMPROVEMENTS WITHIN THE PUBLIC RIGHTS-OF-WAY
- FDOT'S EROSION SEDIMENT CONTROL MANUAL AND STANDARD SPECIFICATION, SECTION 104:
- FDOT DESIGN MANUAL, SECTION 228 LANDSCAPE DESIGN, 215 ROADSIDE SAFETY, SECTION 212 INTERSECTIONS
- THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION, TABLE 4D-1
- ANSI A300 (PART 1) - PRUNING, (Part 2)-2011 "SOIL MANAGEMENT" STANDARD PRACTICES, (Part 8)-2013 "ROOT MANAGEMENT" STANDARD PRACTICES (LATEST EDITIONS)

CITY OF NAPLES APPLICABLE LANDSCAPING AND FERTILIZATION ORDINANCES

MEDIAN BACKFILL (FINISHED SOIL LAYER - TOPSOIL) SPECIFICATION

- TOPSOIL SOURCE FOR PLANTING SHALL BE PROVIDED BY THE CONTRACTOR FROM OFF SITE SOURCES.
 - TOPSOIL SHALL BE SUITABLE FOR ORNAMENTAL PLANT GROWTH AND FREE FROM HARD CLODS, STIFF CLAY, HARDPAN, GRAVEL, SUBSOIL, BRUSH, LARGE ROOTS, REFUSE, OR OTHER DELETERIOUS MATERIAL, AND OF REASONABLE UNIFORM QUALITY. TOPSOIL AFTER PLACEMENT SHALL BE TREATED WITH PRE- AND POST-EMERGENT HERBICIDES TO REMOVE WEEDS.
 - MECHANICAL ANALYSIS: TOPSOIL AND SOIL MIXTURE(S) SHALL MEET THESE SPECIFICATIONS AND THE FOLLOWING MECHANICAL ANALYSIS:

SIEVE SIZE	PERCENTAGE
1 INCH	99-100
1/2 INCH	97-99
NO. 200	LESS THAN 7%

MATERIALS LARGER THAN ONE INCH SHALL BE DISPOSED OF OFF THE SITE. EXISTING LEAF LITTER AND PLANT MATERIAL SHALL BE REMOVED FROM TOPSOIL AND SOIL MIX.
 - MAXIMUM SOLUBLE SALTS: 0-250 PPM. SOIL SALINITY: 0-4 MMHO/CM
 - CONTRACTOR SHALL ASSURE EXISTING SOILS ARE FREE OF ANY VISIBLE WEEDS.
 - IN THE EVENT TOPSOIL ON SITE DOES NOT MEET THE ABOVE REQUIREMENTS, TOPSOIL MEETING THE REQUIREMENTS SHALL BE IMPORTED FROM OFF-SITE SOURCES AFTER APPROVAL BY PROJECT MANAGER/LANDSCAPE ARCHITECT.
- MINIMUM OFF-SITE TOPSOIL REQUIREMENTS:
 TOPSOIL SHALL BE FRIABLE, FERTILE SOIL WITH REPRESENTATIVE CHARACTERISTICS OF LOCAL SOILS. IT SHALL BE FREE OF HEAVY CLAY, MARL, STONE, EXTRANEIOUS LIME, PLANT ROOTS, REFUSE, STICKS, BRUSH, LITTER, AND ANY HARMFUL MATERIALS. THERE SHALL BE NO EXOTIC OR NOXIOUS WEEDS OR WEED SEEDS (I.E. NUT GRASS, BERMUDA GRASS, SEDGES AND THE LIKE). IN NO CASE SHALL THERE BE MORE THAN FIVE PERCENT (5%) BY VOLUME OF STONES, COARSE SAND, GRAVEL OR CLAY LUMPS LARGER THAN ONE INCH (1") IN DIAMETER. THE SOIL SHALL TEST IN THE PH RANGE OF 5.5 TO 7.0 AND SHALL CONTAIN NO SUBSTANCE WHICH WILL IMPEDE PLANT GROWTH. ADJUSTMENT OF THE PH SHALL ONLY BE ALLOWED FOR INCREASING THE PH LEVEL BY ADDING DOLOMITIC LIMESTONE. THE TOPSOIL SHALL BE SAMPLED, AND LABORATORY TESTED FOR CERTIFICATION AND APPROVAL PRIOR TO INSTALLATION.
 TOPSOIL SHALL CONFORM TO THE FOLLOWING COMPOSITION RANGES:
- | COMPONENTS | VOLUME MEASURE | PARTICLE SIZE |
|--|----------------|---|
| ORGANIC MATTER OR AMENDMENTS (HIGH-LIGNIN COMPOST PREFERRED) | 3% TO 5% | |
| SILT | 4% TO 5% | .002 TO .05 MM |
| SAND | 75% TO 85% | .25 TO 2.0 MM (25% COARSE SAND)
.25 TO .50 MM (30% MEDIUM SAND)
.05 TO .25 MM (45% FINE SAND) |
| CLAY | 6% TO 8% | .002 MM & BELOW |
- COMPACTION: REDUCE THE MINIMUM REQUIRED DENSITY FROM 100% TO 70% OF AASHTO T99 METHOD C FOR ALL EARTHWORK ITEMS WHERE LANDSCAPE PLANTINGS WILL OCCUR.

ROOT PRUNING SPECIFICATIONS FOR CURB INSTALLATION AND IRRIGATION TRENCHING:

- OWNER AND CONTRACTOR ARE CAUTIONED ABOUT MATURE EXISTING OAK TREE ROOT SYSTEMS WITHIN THE WORK AREAS, AND PROPOSED CONSTRUCTION ACTIVITIES WITHIN ROOT ZONES MAY RESULT IN TREE DECLINE AND/OR DESTABILIZATION. ALTERNATIVE EXCAVATION METHODS (I.E. AIR SPADE) TO EXPOSE ROOTS FOR PRUNING. CURBING WILL HAVE AN ESTIMATED EXCAVATION DEPTH OF 12-INCHES AND IRRIGATION PIPING WILL HAVE AN ESTIMATED DEPTH OF 24-INCHES.
- ROOT SYSTEM PRUNING SHALL BE CONSISTENT WITH ANSI A300 (Part 8)-2013 OR LATEST EDITION "ROOT MANAGEMENT" STANDARD PRACTICES AND THESE SPECIFICATIONS.
- ROOT PRUNING OBJECTIVE IS TO PERFORM SELECTIVE AND NON-SELECTIVE ROOT PRUNING TO MINIMIZE ROOT SYSTEM REMOVAL.
 - MINIMIZE AMOUNT OF REQUIRED ROOT PRUNING FOR PROPOSED IMPROVEMENTS.
 - ROOTS SHALL BE CUT AS FAR AWAY FROM THE TREE TRUNK AS PRACTICAL.
 - OAK TREES WILL HAVE INTERMINGLED ROOT SYSTEMS DUE TO THE MATURITY AND CLOSE SPACING OF THE TREES SO LOCATING ROOTS WITHIN CONSTRUCTION AREAS PRIOR TO PRUNING WILL BE REQUIRED.
 - ROOTS MAY RUN PARALLEL TO PAVED ROADWAY EDGES AND CURBING SO THESE AREAS NEED TO HAVE ROOTS EXPOSED PRIOR TO PRUNING.
- PROPOSED EXCAVATION AREAS FROM STATION 0+17± THRU 2+75± FOR CURBING AND IRRIGATION PIPING INSTALLATIONS WILL REQUIRE A 3-FOOT WIDE AREA ALONG UNCURBED PAVEMENT EDGES AND 2-FOOT WIDE AREA ALONG ANY EXISTING CURBING.
- A 10-FOOT LENGTH BY 1-FOOT WIDTH BY 12-INCH DEPTH HAND DUG ROOT INSPECTION TRENCH SHALL OCCUR ON EACH SIDE OF THE EXISTING OAK TREES ALONG PAVEMENT EDGES OR CURBING PRIOR TO ANY MECHANICAL EXCAVATION OR TRENCHING. THE OBSERVATION TRENCHES WILL DETERMINE IF AN ADDITIONAL 1-FOOT WIDTH & DEPTH HAND TRENCH WILL BE REQUIRED AHEAD OF ANY MECHANICAL EXCAVATION.
- ROOTS SHALL BE ONLY PRUNED WITH SHARP TOOLS.
 - ROOTS LESS THAN 3/4-INCHES IN DIAMETER SHALL BE PRUNED WITH BYPASS HAND OR LOPPING SHEARS.
 - ROOTS GREATER THAN 3/4-INCH TO LESS THAN 3-INCHES SHALL BE PRUNED WITH CURVED BLADE HANDSAW. ROOTS 3-INCHES IN DIAMETER AND GREATER SHALL BE PRUNED WITH RECIPROCATING OR CHAIN SAW.
- ALL ROOTS WITHIN THE PROPOSED EXCAVATION AREAS SHALL BE EXPOSED TO A POINT 4- FEET FROM ASPHALT PAVEMENT EDGES AND 2- FEET FROM ANY EXISTING CURBING WHERE THE PRUNING POINT IS TO OCCUR. ANY ROOTS 3-INCHES OR GREATER IN DIAMETER OR RUNNING PARALLEL WITH THE PROPOSED EXCAVATION AREAS WILL REQUIRE INSPECTION BY THE PROJECT MANAGER PRIOR TO PRUNING IN ORDER TO ASSIST IN THE ROOT PRUNING.
- ALL ROOT PRUNING DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR LAW DISPOSAL.

SITE PREPARATION NOTES

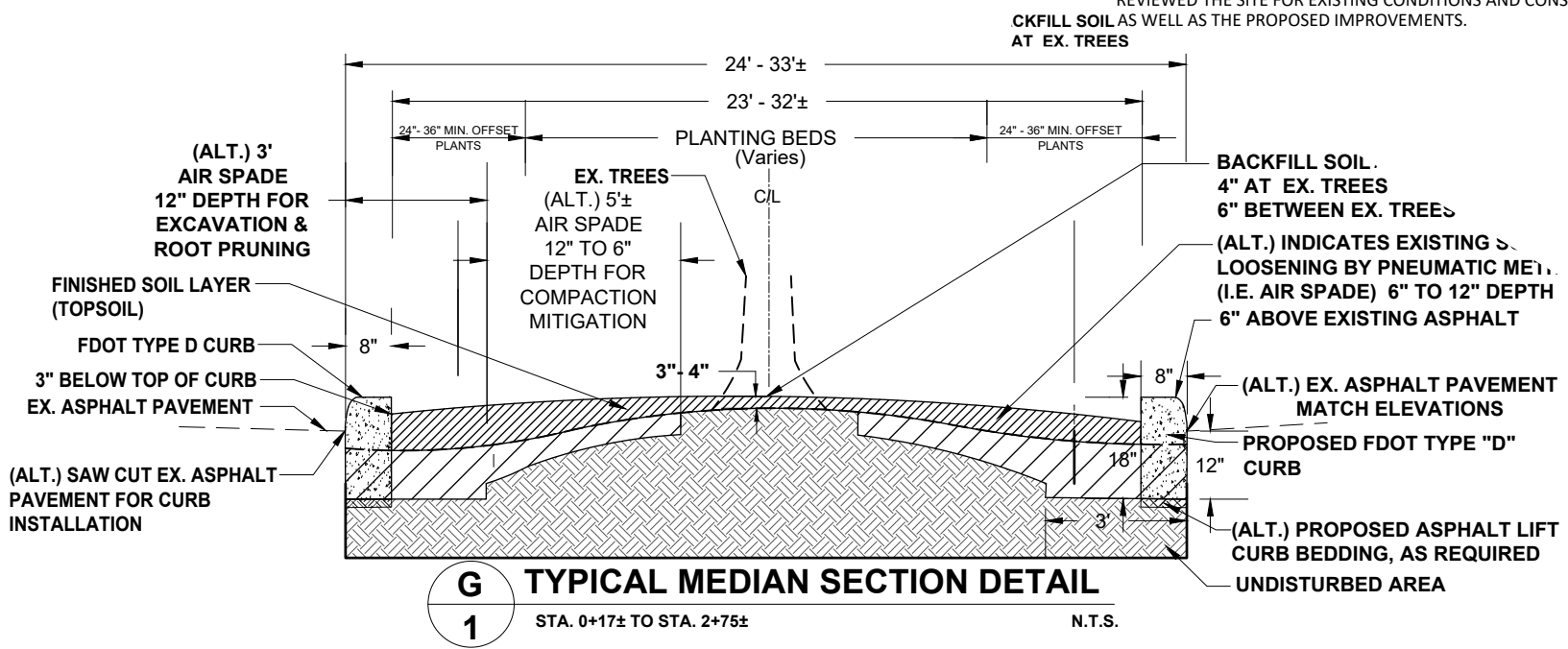
- SPRAY ENTIRE EXISTING MEDIAN SURFACE VEGETATION (I.E. GRASS) WITH A CONTACT HERBICIDE TO OBTAIN A 100% KILL OF THE VEGETATION.
- CLEAR & GRUB DEAD SURFACE VEGETATION AND EXISTING SHRUB BEDS AS INDICATED IN THE PLANS. LOWER EX. GRADE ALONG BACK OF EX. CURB TO 4-INCHES BELOW TOP OF CURB.
- ADD FINISHED SOIL LAYER TOPSOIL AS REQUIRED TO PROVIDE PROPOSED SOIL GRADES, DRAINAGE SLOPES AND PROFILES, AS WELL AS BACKFILL TREE REMOVAL HOLES AS INDICATED IN THE PLANS.
- ADJUST SOIL GRADES AS REQUIRED AT EXISTING AND PROPOSED STORM DRAIN LOCATIONS.

(ALTERNATE) SOIL COMPACTION MITIGATION

- SOIL COMPACTION MITIGATION SHALL OCCUR CONSISTENT WITH ANSI A300 (Part 2)-2011 (LATEST EDITION) "SOIL MANAGEMENT" STANDARD PRACTICES.
- SOIL COMPACTION MITIGATION OBJECTIVE IS TO LOOSEN PREVIOUSLY FLOODED SOIL SETTLEMENT AND VEHICULAR PARKING SOIL COMPACTION WITHIN THE ROOT ZONES OF THE EXISTING OAK TREES FROM STA. 0+17 THRU STA. 2+75 ALONG THE INSIDE NORTH AND SOUTH ASPHALT PAVEMENT EDGES.
- PNEUMATIC SOIL EXCAVATION BY AIR SPADE OF THE SOIL COMPACTION MITIGATION AREAS FROM EDGE OF PAVEMENT 3- FEET INWARD UP TO A 12-INCH DEPTH FOR THE PROPOSED CURBING, IRRIGATION PIPING EXCAVATIONS AND LOCATION OF OAK TREE ROOTS PRUNING PURPOSES. CONTINUE AIR SPADE SOIL COMPACTION MITIGATION INWARD ANOTHER 5-FOOT ± AT A 6 TO 8-INCH DEPTH.
- SOIL COMPACTION MITIGATION AREAS SHALL BE WET TO WHAT IS CONSIDERED FIELD CAPACITY PRIOR TO AIR SPADING.
- DURING AIR SPADING ACTIVITIES ROADWAY AREAS AND EXISTING TREE TRUNKS SHALL BE PROTECTED FROM AIR SPADE DEBRIS.

(ALTERNATE) CONCRETE CURB INSTALLATION NOTES

- FDOT CONCRETE TYPE 'F', 'D' & DROP CURBS SHALL BE INSTALLED PER FDOT FY 2023-24 STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION SECTION 520 AND STANDARD PLANS 520-001 CURB & GUTTER. MODIFIED CURBING AREAS SHALL BE CONSIDERED INCIDENTAL TO CURBING PAY ITEMS FOR TYPE 'F', 'D' & DROP CURB.
- CURB BEDDING AS REQUIRED SHALL BE CONSIDERED INCIDENTAL TO CURBING INSTALLATION. IF BEDDING IF REQUIRED IT SHALL BE ACCOMPLISHED WITH LIFTS OF ASPHALT.
- EXISTING ASPHALT EDGE SHALL BE SAW CUT TO CREATE STRAIGHT CONTINUOUS LINE OF CURBING. CUTTING AND REMOVAL OF ASPHALT PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO CURB INSTALLATION AND INCLUDED IN CURB TYPE BID PRICING.
- ASPHALT PAVEMENT MISCELLANEOUS PATCHING ALONG NEW CURBING SHALL BE CONSIDERED INCIDENTAL TO CURB INSTALLATION AND INCLUDED IN CURB TYPE BID PRICING.
- TYPE D CURBING SHALL BE TRENCHED IN PLACE EXTRUDED CURB.
- CONTRACTORS / BIDDERS SHALL EXAMINE THE PROJECT SITE PRIOR TO BIDDING AND BY SUBMITTING A BID CONFIRM THEY HAVE REVIEWED THE SITE FOR EXISTING CONDITIONS AND CONSTRAINTS, CKFILL SOIL AS WELL AS THE PROPOSED IMPROVEMENTS.



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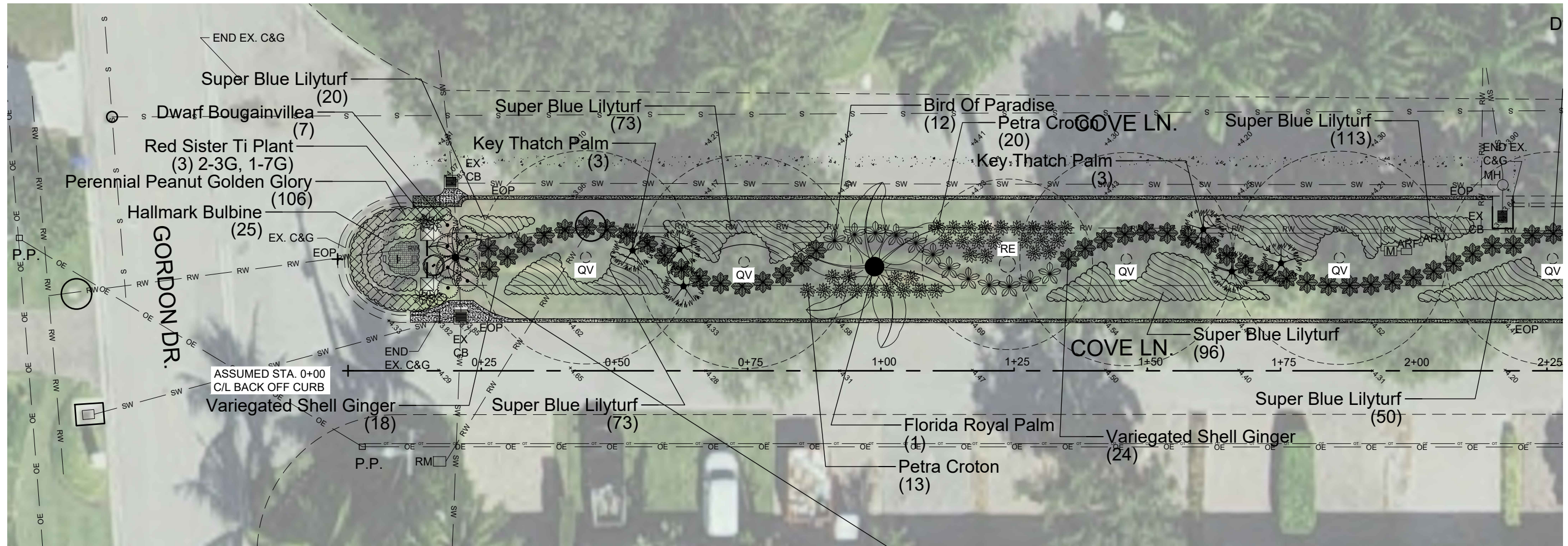
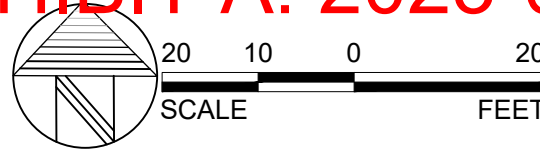


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PROJECT:
 COVE LANE
 LANDSCAPE MEDIAN RENOVATION
 CITY OF NAPLES
 SHEET TITLE: GENERAL NOTES & DETAILS
 FLORIDA

DRAWN BY: MAM DATE: 6/23
 SCALE: AS SHOWN
 SHEET NO. LD - 5



PLANT LEGEND

TREES	COMMON / BOTANICAL NAME	SHRUBS	COMMON / BOTANICAL NAME	SHRUB AREAS	COMMON / BOTANICAL NAME
	Christmas Palm / <i>Adonia merrilli</i>		Variegated Shell Ginger / <i>Alpinia zerumbet</i> 'Variegata'		Green Island Ficus / <i>Ficus microcarpa</i> 'Green Island'
	White Geiger / <i>Cordia boissieri</i> 'White Geiger'		Dwarf Bougainvillea / <i>Bougainvillea</i> x 'Helen Johnson'		Spider Lily / <i>Hymenocallis latifolia</i>
	Golden Trumpet Tree / <i>Handroanthus chrysotrichus</i>		Petra Croton / <i>Codiaeum variegatum</i> 'Petra'		Perennial Peanut Golden Glory / <i>Arachis glabrata</i> 'Golden Glory'
	Key Thatch Palm / <i>Leucothrinax morrisii</i>		Red Sister Ti Plant / <i>Cordyline fruticosa</i> 'Red Sister'		Hallmark Bulbine / <i>Bulbine frutescens</i> 'Hallmark'
	Florida Royal Palm / <i>Roystonea elata</i>		Pink Muhly / <i>Muhlenbergia capillaris</i>		Super Blue Lilyturf / <i>Liriope muscari</i> 'Super Blue'
			Bird Of Paradise / <i>Strelitzia reginae</i>		'Floritam' St. Augustine Sod / <i>Stenotaphrum secundatum</i> 'Floritam'

MATCH LINE 2+25

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Michael A. McGee, r.l.c.
Fla. Lic. # LA 864
Fla. Lic. # LC 098
Date: _____

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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE: LANDSCAPE PLANTING PLAN

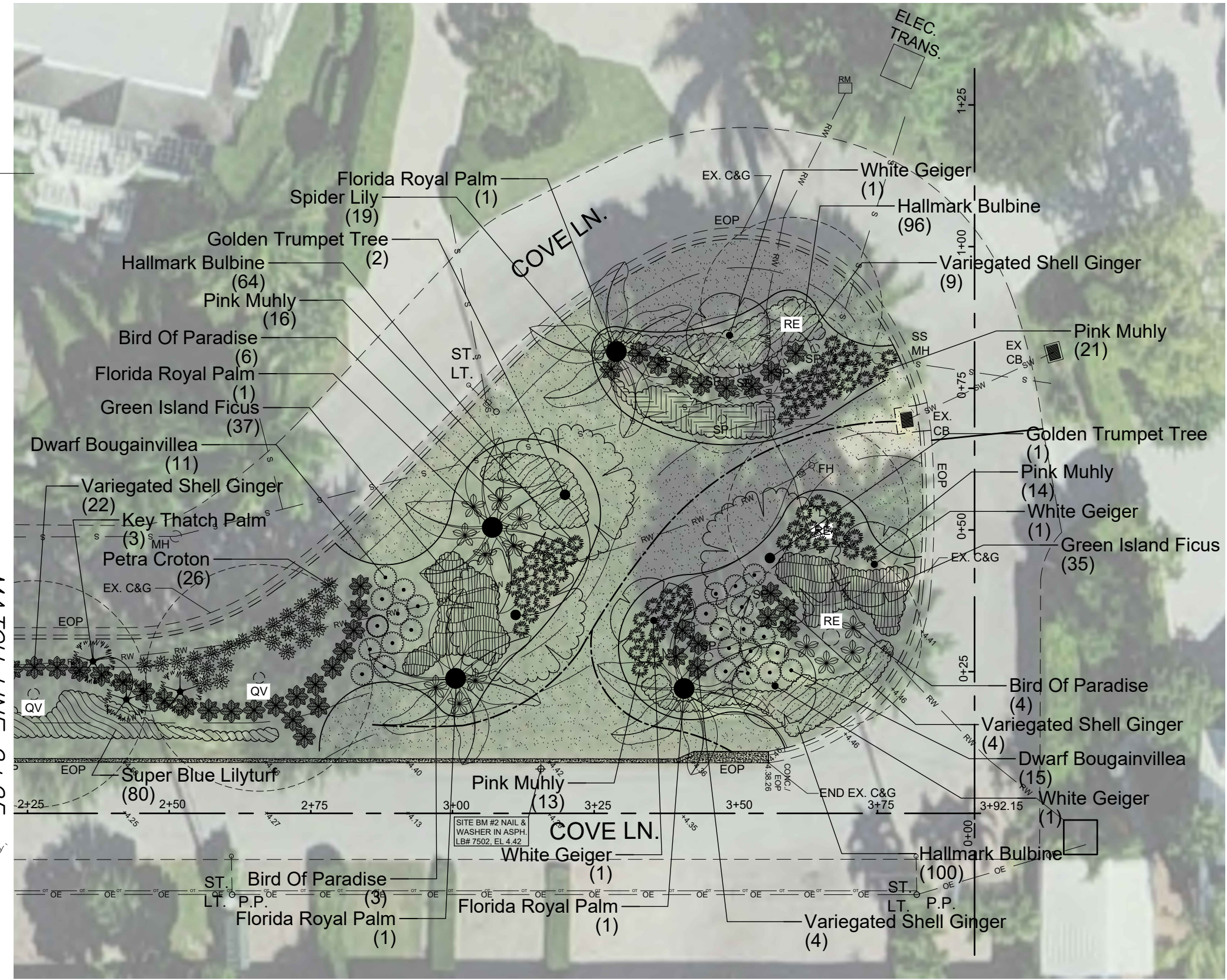
DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 6	



PLANT LEGEND

TREES	COMMON / BOTANICAL NAME
	Christmas Palm / <i>Adonia merrillii</i>
	White Geiger / <i>Cordia boissieri</i> 'White Geiger'
	Golden Trumpet Tree / <i>Handroanthus chrysotrichus</i>
	Key Thatch Palm / <i>Leucothrinax morrisii</i>
	Florida Royal Palm / <i>Roystonea elata</i>
SHRUBS	COMMON / BOTANICAL NAME
	Variegated Shell Ginger / <i>Alpinia zerumbet</i> 'Variegata'
	Dwarf Bougainvillea / <i>Bougainvillea</i> x 'Helen Johnson'
	Petra Croton / <i>Codiaeum variegatum</i> 'Petra'
	Red Sister Ti Plant / <i>Cordyline fruticosa</i> 'Red Sister'
	Pink Muhly / <i>Muhlenbergia capillaris</i>
	Bird Of Paradise / <i>Strelitzia reginae</i>
SHRUB AREAS	COMMON / BOTANICAL NAME
	Green Island Ficus / <i>Ficus microcarpa</i> 'Green Island'
	Spider Lily / <i>Hymenocallis latifolia</i>
GROUND COVERS	COMMON / BOTANICAL NAME
	Perennial Peanut Golden Glory / <i>Arachis glabrata</i> 'Golden Glory'
	Hallmark Bulbine / <i>Bulbine frutescens</i> 'Hallmark'
	Super Blue Lilyturf / <i>Liriope muscari</i> 'Super Blue'
	'Floritam' St. Augustine Sod / <i>Stenotaphrum secundatum</i> 'Floritam'

MATCH LINE 2+25



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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE:
LANDSCAPE PLANTING PLAN

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 7	

A. GENERAL IRRIGATION INSTALLATION NOTES:

1. THE PLANS AND/OR DRAWINGS ARE DIAGRAMMATIC OF THE WORK TO BE PERFORMED. THE WORK SHALL BE EXECUTED IN A MANNER TO AVOID CONFLICTS WITH UTILITIES AND OTHER SITE ELEMENTS, INCLUDING LANDSCAPE MATERIALS. ANY AND ALL DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER. 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. IN THE EVENT THAT NOTIFICATION OF THE CONFLICT IS NOT GIVEN TO THE PROJECT MANAGER, THE CONTRACTOR WILL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS.
2. IRRIGATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND ALL CONTRACT DOCUMENTS. CONTRACTOR SHALL COMPLY WITH ALL PREVAILING FLORIDA BUILDING CODES, NATIONAL ELECTRICAL CODES, ORDINANCES AND/OR REGULATIONS WITH REGARDS TO INSTALLATION AND GROUNDING.
3. CHECK AND VERIFY ALL SITE CONDITIONS, INCLUDING SERVICE UTILITY LOCATIONS, PRIOR TO TRENCHING OR DIGGING. COORDINATE ALL IRRIGATION SYSTEM CONSTRUCTION WITH EXISTING AND/OR NEW PLANTINGS TO AVOID CONFLICT OR INTERFERENCE.
4. WHERE PROPOSED OR EXISTING SITE ELEMENTS AND/OR OTHER OBJECTS ARE AN OBSTRUCTION TO THE IRRIGATION PIPING THE PIPING SHALL BE RELOCATED AS NECESSARY TO ADVERT THE OBSTRUCTION.
5. IRRIGATION COMPONENT LOCATIONS SHALL BE AS SHOWN OR NOTED ON THE PLANS. IRRIGATION COMPONENT SPACING MAYBE ADJUSTED TO ACCOMMODATE CHANGES IN TERRAIN.
6. ALL MATERIALS AND EQUIPMENT SHOWN SHALL BE INSTALLED AS NOTED OR DETAILED IN THE PLANS. IF THE DRAWINGS DO NOT THOROUGHLY DESCRIBE THE TECHNIQUES TO BE USED, THE INSTALLER SHALL FOLLOW THE INSTALLATION METHODS/INSTRUCTIONS RECOMMENDED BY ITS MANUFACTURER.
7. IRRIGATION CONTRACTOR SHALL ADJUST ALL BUBBLERS, CONTROLLER AND OTHER DEVICES TO OBTAIN SPECIFIED OPERATING CHARACTERISTICS, INCLUDING COVERAGE, OPERATING PRESSURE, FLOW RATES AND OPERATION TIME.
8. CONTRACTOR TO PROVIDE INSTALLATION SHOP DRAWINGS AND MANUFACTURER PRODUCT INFORMATION FOR ALL IRRIGATION COMPONENTS.
9. ALL TRENCHES SHALL BE BACKFILLED WITH CLEAN, DEBRIS-FREE MATERIALS TO 90% DENSITY. 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.
10. ALL SOLVENT WELDING SHALL BE PRECEDED BY PRIMING OF THE FITTINGS AND PIPE AS RECOMMENDED BY THE MANUFACTURER.
11. CONTRACTOR TO LABEL/NUMBER ALL ZONE VALVES. PROVIDE TAGS TO ALL VALVES AS SHOWN PER DETAILS.
12. ALL IRRIGATION SYSTEM COMPONENTS AS MANUFACTURED SHALL BE REUSE WATER COLOR CODED (I.E. PANTONE PURPLE 522C).

B. MAINLINE & PIPING:

1. ALL IRRIGATION PIPING SHALL BE 1120-1220 CLASS 200 PVC SOLVENT WELD PIPE.
2. THE DEPTH OF ALL LINES SHALL BE AS SPECIFIED PER PLANS AND DETAILS. MEASUREMENTS SHALL BE FROM TOP OF PIPE(S) TO FINISH GRADE.
3. ALL MAINLINE WILL BE INSTALLED WITH A TRACING TAPE LABELED "NON-POTABLE IRRIGATION MAIN".
4. THE CONTRACTOR SHALL SIZE ALL PIPE WHEN NOT SHOWN ON PLANS TO MAINTAIN AN OPERATING PRESSURE BETWEEN 35 to 45 PSI ON ALL ZONES. THE MINIMUM SIZE PIPE SHALL BE 3/4 INCH DIA.
5. ALL IRRIGATION AT GRADE OR ABOVE GRADE COMPONENTS (e.g. VALVES & BOXES) SHALL BE INSTALLED ALONG CENTERLINE OF MEDIANS, BUT NO LESS THAN 5- FEET OFF BACK OF CURBING.

C. ISOLATION VALVES:

1. ISOLATION VALVES SHALL BE SIZED AS SHOWN IN THE PLAN DETAILS OR BY MATCHING THE SIZE OF THE PIPES THEY OCCUR WITHIN. VALVES OF 3/4" THROUGH 2-1/2" SHALL BE THREADED.

2. ALL ISOLATION VALVES INSTALLED ALONG THE MAIN LINE SHALL BE INSTALLED WITHIN A JUMBO SIZE VALVE BOXES. REFER TO DETAILS AND SPECIFICATIONS FOR VALVE INSTALLATIONS. CONTRACTOR SHALL PROVIDE VALVE BOX EXTENSIONS WHEN NECESSARY.

D. CONTROL SYSTEM: (BY CITY)

1. CONTROLLER TO HAVE A RAIN SENSOR AND BY-PASS SWITCH INSTALLED TO MEET STATE CODES. RAIN SENSORS AND BY-PASS SWITCHES ALSO WILL BE INSTALLED IN ACCORDANCE TO MANUFACTURER'S GUIDELINES.
2. CONTRACTOR TO COORDINATE WITH THE CITY IRRIGATION CONTROL STAFF FOR THE IRRIGATION SYSTEM DURING CONSTRUCTION AND UNTIL FINAL ACCEPTANCE BY THE PROJECT MANAGER.
3. ALL IRRIGATION CONTROLLERS SHALL BE UL LISTED, CONFORM TO THE PROVISIONS OF THE NATIONAL ELECTRIC CODE (NEC), AND BE PROPERLY GROUNDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. EQUIPPED WITH SOLID STATE CONTROLS AND SURGE SUPPRESSORS ON THE PRIMARY AND SECONDARY WIRING. CONTROLLER SHALL CONTAIN WATER CONSERVING AND/OR SAVING PROGRAMMING.
4. THE CONTROLLER HOUSING OR ENCLOSURE SHALL BE CONSTRUCTED OF WEATHER RESISTANT MATERIALS AND PROTECT THE CONTROLLER FROM THE HAZARDS OF THE ENVIRONMENT IN WHICH IT IS INSTALLED.

E. REMOTE ZONE CONTROL VALVE WIRING:

1. ALL IRRIGATION WIRE SHALL BE 24 VOLT, COATED SOLID COPPER, UL APPROVED, FOR DIRECT BURIAL WIRE IN #18 GAUGE SIZE FOR COMMON WIRE AND FOR ACTIVATION WIRES. COMMON WIRE SHALL BE TYPICALLY WHITE.
2. ALL ELECTRICAL SPLICES SHALL BE MADE USING SCREW AND SEAL PACK TYPE CONNECTORS AS DETAILED HEREIN.
3. ALL VALVE WIRING SHALL BE INSTALLED PER PIPE TRENCHING DETAIL IN A DEDICATED CONDUIT AND SHALL NOT SHARE THE SAME SLEEVE WITH ANY MAIN OR LATERAL PIPING.

F. VALVE & SPLICE BOXES:

1. ALL VALVE BOXES SHALL BE SIZED AND INSTALLED AS SHOWN AND DETAILED HEREIN. TOP OF VALVE BOXES SHALL BE 4 INCHES HIGHER THAN ADJACENT FINISHED SOIL GRADE WHEN INSTALLED. CONTRACTOR TO REINSTALL AND LEVEL BOXES IF SOIL SETTLING OCCURS.
2. VALVE BOXES SHALL NOT BE INSTALLED WITHIN 12 FEET OF PAVEMENT EDGE OF UNCURBED ROADWAYS. IN MEDIANS VALVE BOXES SHALL BE INSTALLED ALONG CENTERLINE OF THE MEDIAN AND NOT WITHIN 5 FEET OF THE BACK OF CURB OR PAVER EDGES. DO NOT INSTALL AT THE BOTTOM OF SWALE(S) OR ANY OTHER LOW POINT.
3. CONTRACTOR SHALL LOCATE AND FLAG ALL VALVE LOCATIONS PRIOR TO INSTALLATION FOR APPROVAL BY THE PROJECT MANAGER.
4. ALL VALVE AND PULL BOXES SHALL BE HIGH DENSITY STRENGTH BOXES WITH LOCKING AND LABELED LIDS.
5. VALVE BOX EXTENSIONS SHALL BE INCLUDED ON AN AS NEEDED BASIS.

G. BUBBLERS HEADS:

1. ALL BUBBLER HEADS WILL BE INSTALLED AND CONNECTED TO LATERAL LINES AS PER DETAIL.
2. ALL TREES AND PALMS DESIGNATED TO HAVE SUPPLEMENTAL IRRIGATION SHALL HAVE IT IN THE FORM OF LOW VOLUME ADJUSTABLE FLOOD TYPE BUBBLERS. THE BUBBLERS SHALL BE INSTALLED ADJACENT TO THE ROOT BALL PERIMETER AND AWAY FROM THE TRUNK. ALL BUBBLER HEADS AND FLEX PIPE SHALL BE PINNED DOWN WITH U-SHAPED SIX INCH LENGTH GALVANIZED METAL PINS.

H. PERMITS AND PERMITTING:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL REQUIRED INSTALLATION PERMITTING FROM THE APPROPRIATE AUTHORITIES AS REQUIRED.

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PROJECT: COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES FLORIDA
SHEET TITLE: IRRIGATION INSTALLATION NOTES

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 8	

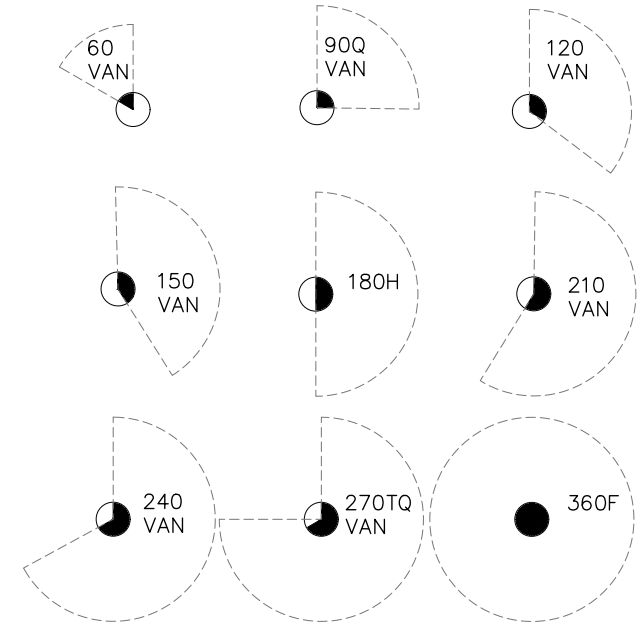
IRRIGATION SYSTEM CONTROLLER C1 - WATER DEMAND / USE						
VALVE ZONE	GPM PER ZONE	RUN TIME PER CYCLE (MINUTES)	TOTAL GPM PER CYCLE	VALVE SIZE (DIA.)	APPLICATION SPRINKLER TYPE	PLANT MATERIAL TYPE
1	8	20	248	1.5"	SPRAY	ANNUALS
2	31	30	930	1.5"	ROTORS	SHRUBS
3	46	15	690	1.5"	SPRAY	SHRUBS
4	45	15	675	1.5"	SPRAY	TURF
5	37	15	555	1.5"	BUBBLERS	TREES/PALMS
			3098	TOTAL GALLONS PER RUN CYCLE		
			3	DAYS PER WEEK SCHEDULE		
			9294	TOTAL GALLONS PER WEEKLY CYCLE AFTER INITIAL PLANT ESTABLISHMENT		

IRRIGATION WATER SOURCE: MINIMUM 50 GPM

IRRIGATION SYSTEM LEGEND

- EXISTING/PROPOSED CONTROLLER: BATTERY OPERATED CONTROLLER BY CITY WITH AUTOMATIC RAIN SHUTOFF SENSOR. RAINBIRD TBOS SERIES (4 & 2 STATION)
 - EXISTING REUSE WATER METER LOCATION FOR IRRIGATION WATER SOURCE:
 - PROPOSED IRRIGATION MAIN 2.5" 1120-1220 CLASS 200 PVC TO INCLUDE ALL FITTINGS AND COMPONENTS.
 - 1120-1220 CLASS 200 PVC LATERAL PIPING SIZES VARY BASED UPON FLOW, MINIMUM PIPE SIZE DIAMETER 3/4"
 - RAINBIRD PESB-R SERIES 24V ELECTRIC DC TBOS POTTED LATCHING SOLENOID ZONE CONTROL VALVE, 1.5" DIA. SIZE VALVES.
 - RAINBIRD 5000 PLUS SERIES 12" POP-UP ROTOR 5012-PL-PC-NP WITH MPR-25-180 & 90 NOZZLES
 - RAINBIRD 1800 SERIES SPRAY SPRINKLERS WITH MPR & VAN ADJUSTABLE SERIES NOZZLES. RADIUS & PATTERN VARIES.
 - TURF, ANNUALS & PERENNIAL PEANUT APPLICATIONS: 1806-PRS-NPCAP, 6" POP-UP PLANT/SHRUB APPLICATIONS: 1812-PRS-NPCAP, 12" POP-UP
 - RAINBIRD MPR SERIES 15SST 4' X 30' NOZZLES.
 - RAINBIRD 1400 SERIES FULL CIRCLE BUBBLERS ON FLEX TUBE. (2 OR 4) BASE ON TREE TYPE.
FLOW RATES:
(2) 1402: 0.50 GPM - THATCH PALMS, TRUMPET TREES, GEIGER TREES
(4) 1404: 1.00 GPM - ROYAL PALMS
 - GREEN RPM- REFLECTIVE PAVEMENT MARKER EPOXY TO TOP OF CURB
- | | |
|-----------|--|
| C1-01 | PROPOSED CONTROLLER AND ZONE CONTROL VALVE NUMBER |
| 1.5" (DC) | PROPOSED IRRIGATION ZONE CONTROL VALVE SIZE & SOLENOID CURRENT TYPE |
| 40 GPM | PROPOSED IRRIGATION ZONE ESTIMATED FLOW DEMAND |
| BUBBLER | PROPOSED IRRIGATION ZONE WATER APPLICATION METHOD OR TYPE |
| TREES | PROPOSED IRRIGATION ZONE PLANT MATERIAL TYPES
(E.G. SHRUBS, GRASSES, GRN CVR - GROUND COVERS, TREES - PALM OR CANOPY) |
| 8 / 16 | PROPOSED VALVE CONTROL WIRE GAUGE SIZES, COMMON (WHITE) & ACTIVATION (RED) |

NOZZLE SPRAY PATTERN DIAGRAMS



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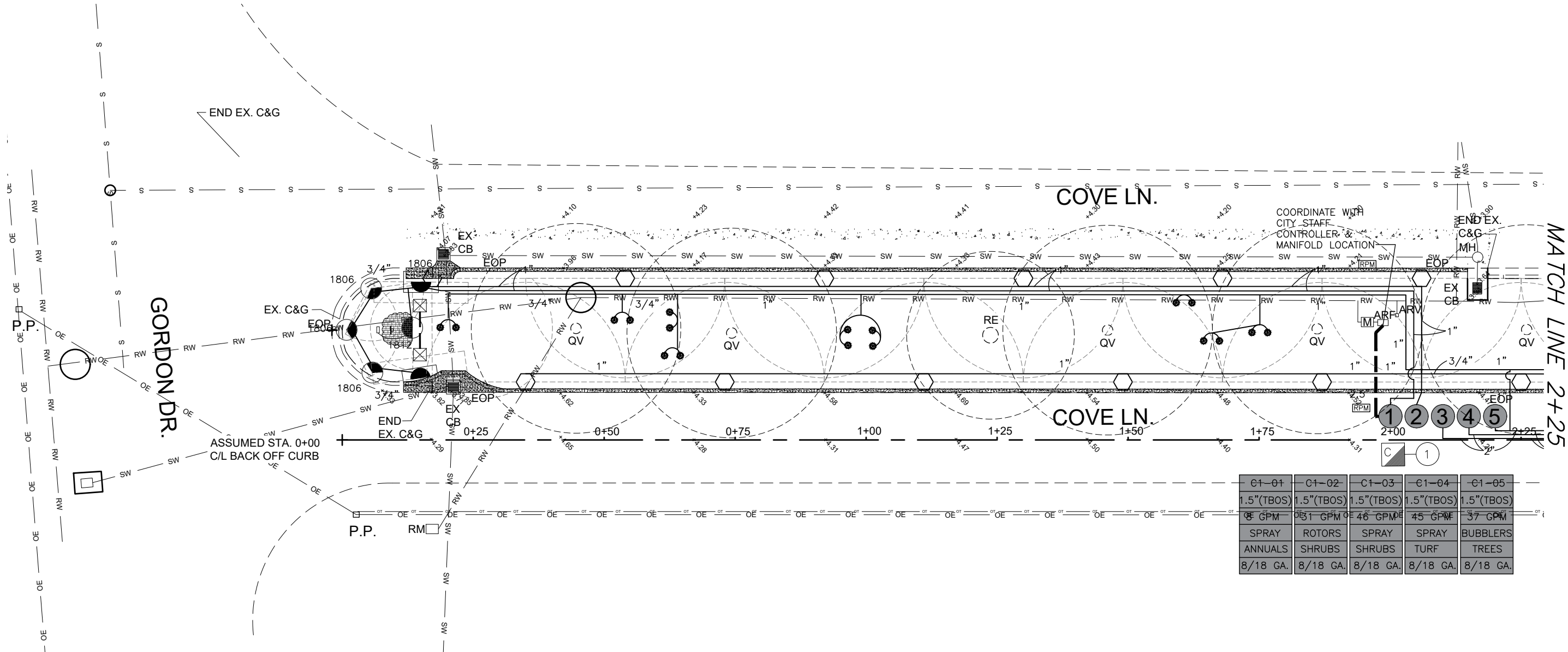
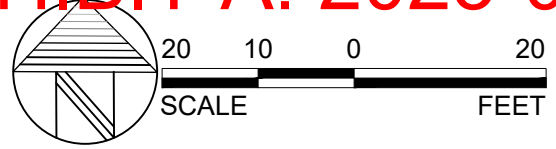


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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE
IRRIGATION INSTALLATION NOTES & LEGEND

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 9	



C1-01	C1-02	C1-03	C1-04	C1-05
1.5" (TBOS)	1.5" (TBOS)	1.5" (TBOS)	1.5" (TBOS)	1.5" (TBOS)
45 GPM	51 GPM	46 GPM	45 GPM	37 GPM
SPRAY	ROTORS	SPRAY	SPRAY	BUBBLERS
ANNUALS	SHRUBS	SHRUBS	TURF	TREES
8/18 GA.	8/18 GA.	8/18 GA.	8/18 GA.	8/18 GA.

IRRIGATION SYSTEM LEGEND

- EXISTING/PROPOSED CONTROLLER: BATTERY OPERATED CONTROLLER BY CITY WITH AUTOMATIC RAIN SHUTOFF SENSOR. RAINBIRD TBOS SERIES (4 & 2 STATION)
- EXISTING REUSE WATER METER LOCATION FOR IRRIGATION WATER SOURCE:
- PROPOSED IRRIGATION MAIN 2.5" 1120-1220 CLASS 200 PVC TO INCLUDE ALL FITTINGS AND COMPONENTS.
- 1120-1220 CLASS 200 PVC LATERAL PIPING SIZES VARY BASED UPON FLOW, MINIMUM PIPE SIZE DIAMETER 3/4"
- RAINBIRD PESB-R SERIES 24V ELECTRIC DC TBOS POTTED LATCHING SOLENOID ZONE CONTROL VALVE, 1.5" DIA. SIZE VALVES.
- RAINBIRD 5000 PLUS SERIES 12" POP-UP ROTOR 5012-PL-PC-NP WITH MPR-25-180 & 90 NOZZLES
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- TURF, ANNUALS & PERENNIAL PEANUT APPLICATIONS: 1806-PRS-NPCAP, 6" POP-UP PLANT/SHRUB APPLICATIONS: 1812-PRS-NPCAP, 12" POP-UP

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FLOW RATES:
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(4) 1404: 1.00 GPM - ROYAL PALMS
- GREEN RPM- REFLECTIVE PAVEMENT MARKER EPOXY TO TOP OF CURB
- C1-01 - PROPOSED CONTROLLER AND ZONE CONTROL VALVE NUMBER
- 1.5" (DC) - PROPOSED IRRIGATION ZONE CONTROL VALVE SIZE & SOLENOID CURRENT TYPE
- 40 GPM - PROPOSED IRRIGATION ZONE ESTIMATED FLOW DEMAND
- BUBBLER - PROPOSED IRRIGATION ZONE WATER APPLICATION METHOD OR TYPE
- TREES - PROPOSED IRRIGATION ZONE PLANT MATERIAL TYPES (E.G. SHRUBS, GRASSES, GRN CVR - GROUND COVERS, TREES - PALM OR CANOPY)
- 8 / 16 - PROPOSED VALVE CONTROL WIRE GAUGE SIZES, COMMON (WHITE) & ACTIVATION (RED)

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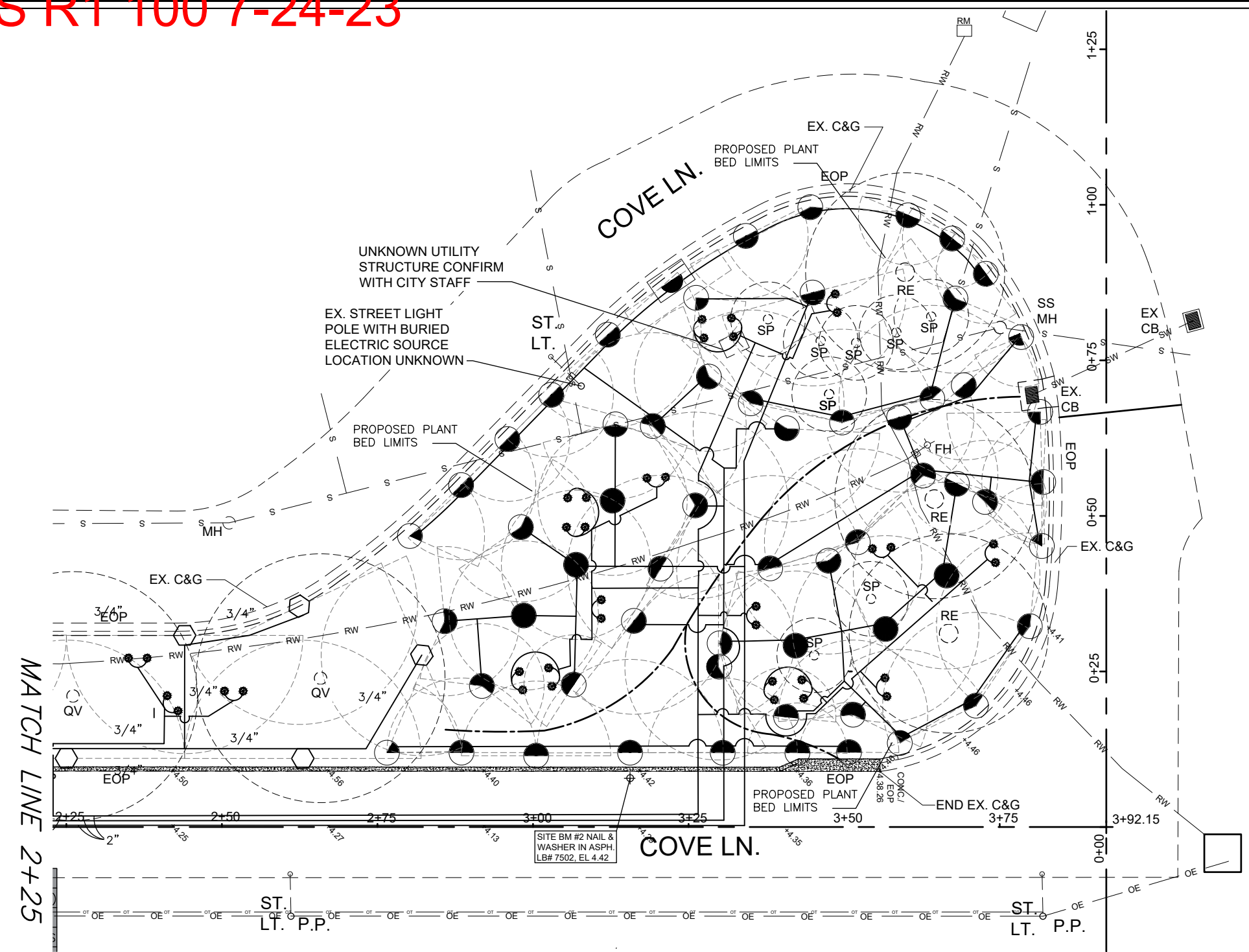
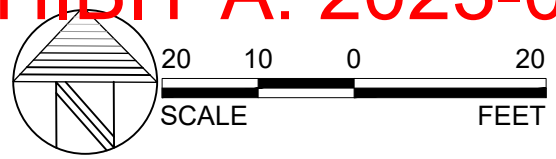


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PROJECT: COVE LANE LANDSCAPE MEDIAN RENOVATION FLORIDA
CITY OF NAPLES
SHEET TITLE: IRRIGATION PLAN (1)

DRAWN BY: MAM DATE: 6/23
SCALE: AS SHOWN
SHEET NO. LD - 10



IRRIGATION SYSTEM LEGEND

- 1 EXISTING/PROPOSED CONTROLLER: BATTERY OPERATED CONTROLLER BY CITY WITH AUTOMATIC RAIN SHUTOFF SENSOR. RAINBIRD TBOS SERIES (4 & 2 STATION)
- M EXISTING REUSE WATER METER LOCATION FOR IRRIGATION WATER SOURCE:
- 2.5" PROPOSED IRRIGATION MAIN 2.5" 1120-1220 CLASS 200 PVC TO INCLUDE ALL FITTINGS AND COMPONENTS.
- VARIES 1120-1220 CLASS 200 PVC LATERAL PIPING SIZES VARY BASED UPON FLOW, MINIMUM PIPE SIZE DIAMETER 3/4"
- 2 RAINBIRD PESB-R SERIES 24V ELECTRIC DC TBOS POTTED LATCHING SOLENOID ZONE CONTROL VALVE, 1.5" DIA. SIZE VALVES.
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- TURF, ANNUALS & PERENNIAL PEANUT APPLICATIONS: 1806-PRS-NPCAP, 6" POP-UP PLANT/SHRUB APPLICATIONS: 1812-PRS-NPCAP, 12" POP-UP

- RAINBIRD MPR SERIES 15SST 4' X 30' NOZZLES.
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FLOW RATES:
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(4) 1404: 1.00 GPM - ROYAL PALMS
- GREEN RPM- REFLECTIVE PAVEMENT MARKER EPOXY TO TOP OF CURB
- C1-01 PROPOSED CONTROLLER AND ZONE CONTROL VALVE NUMBER
- 1.5" (DC) PROPOSED IRRIGATION ZONE CONTROL VALVE SIZE & SOLENOID CURRENT TYPE
- 40 GPM PROPOSED IRRIGATION ZONE ESTIMATED FLOW DEMAND
- BUBBLER PROPOSED IRRIGATION ZONE WATER APPLICATION METHOD OR TYPE
- TREES PROPOSED IRRIGATION ZONE PLANT MATERIAL TYPES (E.G. SHRUBS, GRASSES, GRN CVR - GROUND COVERS, TREES - PALM OR CANOPY)
- 8 / 16 PROPOSED VALVE CONTROL WIRE GAUGE SIZES, COMMON (WHITE) & ACTIVATION (RED)

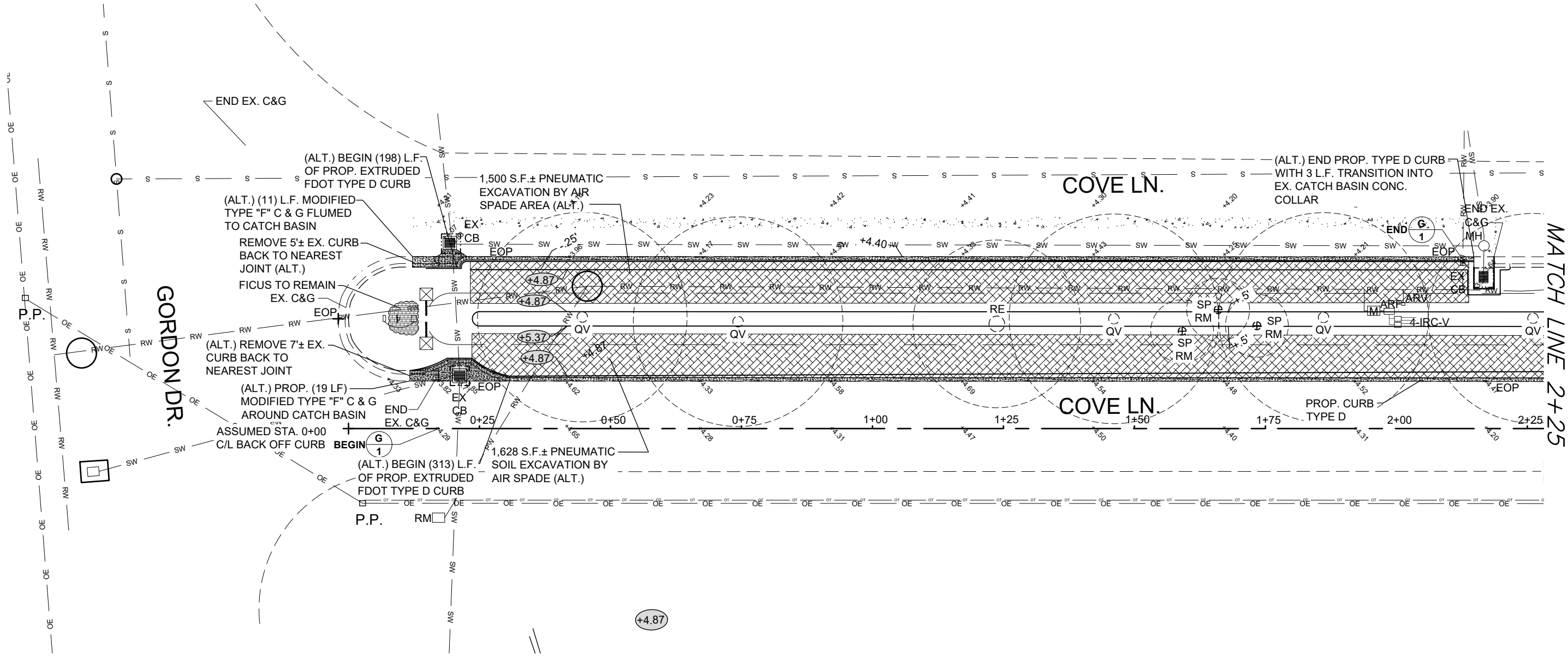
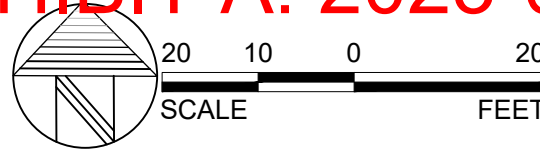
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PROJECT: COVE LANE LANDSCAPE MEDIAN RENOVATION FLORIDA CITY OF NAPLES SHEET TITLE: IRRIGATION PLAN (2)

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 11	



PLAN LEGEND:

- EXISTING CANOPY TREES
- QV-OAKS (5)
- EXISTING PALMS
- SP-SABAL PALM (15)
- RE-ROYAL PALM (4)
- EXISTING SABAL PALMS TO BE REMOVED
- SP-SABAL PALM (7)
- EXISTING SHRUB BEDS
- FM-GREEN ISLAND FICUS
- BG-BOUGAINVILLEA,
- INDICATES EXISTING DECORATIVE POST AND FENCE
- INDICATES EXISTING STORMWATER DRAIN
- INDICATES PROPOSED CURBING FLUME LOCATIONS
- INDICATES PROPOSED FDOT TYPE "F" CURB & GUTTER
- INDICATES PROPOSED SOIL COMPACTION MITIGATION AREAS
- INDICATES PROPOSED CONTOURS AND/OR SPOT ELEVATIONS BASED OFF TOP OF PROPOSED CURBING
- INDICATES PROPOSED SEDIMENT BARRIERS

ABBREVIATIONS LEGEND

- SW BURIED STORM WATER
- BS BURIED SANITARY SEWER
- OE OVERHEAD ELECTRIC LINE
- RW BURIED REUSE WATER
- OT OVERHEAD TELEPHONE
- EOP EDGE OF PAVEMENT
- MH MANHOLE
- FH FIRE HYDRANT
- CB STORMWATER CATCH BASIN
- C&G CURB & GUTTER
- ARF IRRIGATION AIR RELIEF VALVE
- ARV AIR RELIEF VALVE
- RM REUSE WATER METER
- IR IRRIGATION
- C-V IRRIGATION CONTROLLER & VALVES
- (ALT.) INDICATES ALTERNATE PROJECT ITEMS

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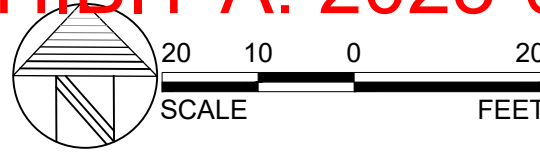


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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE
SITE PREPARATION (1)

DRAWN BY: MAM DATE: 6/23
SCALE: AS SHOWN
SHEET NO. LD - 12

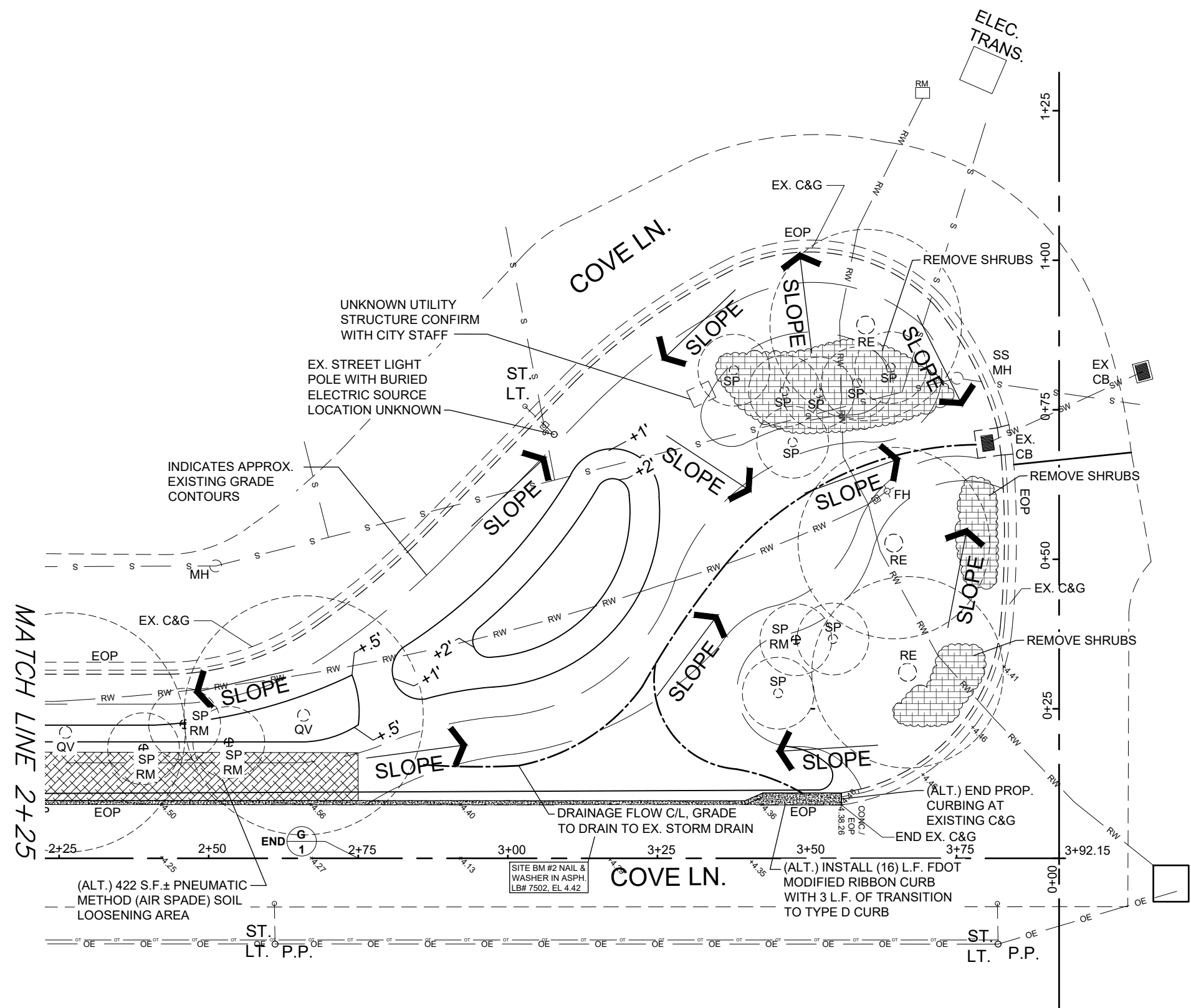


PLAN LEGEND:

- EXISTING CANOPY TREES
QV-OAKS (5)
- EXISTING PALMS
SP-SABAL PALM (15)
RE-ROYAL PALM (4)
- EXISTING SABAL PALMS TO BE REMOVED
SP-SABAL PALM (7)
- EXISTING SHRUB BEDS
FM-GREEN ISLAND FICUS
BG-BOUGAINVILLEA,
- INDICATES EXISTING DECORATIVE POST AND FENCE
- INDICATES EXISTING STORMWATER DRAIN
- INDICATES PROPOSED CURBING FLUME LOCATIONS
- INDICATES PROPOSED FDOT TYPE 'F' CURB & GUTTER
- INDICATES PROPOSED SOIL COMPACTION MITIGATION AREAS
- INDICATES PROPOSED CONTOURS AND/OR SPOT ELEVATIONS BASED OFF TOP OF PROPOSED CURBING
- INDICATES PROPOSED SEDIMENT BARRIERS

ABBREVIATIONS LEGEND

- SW — BURIED STORM WATER
- S — BURIED SANITARY SEWER
- OE — OVERHEAD ELECTRIC LINE
- RW — BURIED REUSE WATER
- OT — OVERHEAD TELEPHONE
- EOP — EDGE OF PAVEMENT
- MH — MANHOLE
- FH — FIRE HYDRANT
- CB — STORMWATER CATCH BASIN
- C&G — CURB & GUTTER
- ARF — IRRIGATION AIR RELIEF VALVE
- ARV — AIR RELIEF VALVE
- RM — REUSE WATER METER
- IR — IRRIGATION
- C-V — IRRIGATION CONTROLLER & VALVES
- (ALT.) — INDICATES ALTERNATE PROJECT ITEMS



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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE
SITE PREPARATION (2)

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	SHEET NO. LD - 13

PLANTING SPECIFICATIONS SECTION

PART I. GENERAL

1.1 GENERAL LANDSCAPE SPECIFICATIONS

1.2 DESCRIPTION

The work includes furnishing all plants, materials, equipment and labor necessary for installation of plant material as indicated on the Drawings and described in these Specifications. A schedule of plant materials, and plant locations are provided on the plans.

1.3 QUANTITIES

All quantities indicated on the plant schedule are the amounts to be bid upon. The plant schedule is intended as a guide and does not relieve the Bidder of its responsibilities to do a comprehensive plant and/or materials take-off. Should a discrepancy occur between the bidder's take off and the plant schedule quantity; the Landscape Architect/Owner's Representative is to be notified prior to bid acceptance.

PART II

PLANT MATERIAL

A. Abbreviations

All plant material shall be nursery grown, unless otherwise noted.

Abbreviations on the plant schedule are as follows:

- Ctr. (Indicates container)
- F.G. (Indicates Field Grown plant material)
- C.T. (Indicates clear trunk measurement from top of root ball to first branching)
- Clr. Wd. (Indicates clearwood)
- BT. (Indicates booted trunk from top of root ball to first branching)
- O.A. (Indicates overall height from top of ball to mid-point of current season's growth)
- B&B (Indicates balled & burlaped root ball)
- o.c. (Indicates on center spacing)
- Ht. (Indicates height)
- Std. (Standard)
- Grn. (Ground)
- Spr. (Indicates spread)

B. Quality and Size

All plants furnished by the Contractor unless otherwise specified shall be Florida #1 or better in accordance with and to the most current or updated edition of the State of Florida, Department of Agriculture's "Grades and Standards for Nursery Plants" Volume I & 11. Plants shall have a habit of growth that is normal to the species and shall be sound, healthy, vigorous, and free from insects, pests, disease, and injury. All plants shall equal or exceed the measurements as specified in the plant schedule, which are considered minimum acceptable sizes, and shall be measured after pruning with the branches in normal position. Requirements for the measurement, branching, grading, quality, ball and burlapping of plants shall be in accordance with the most current horticultural practices, State Standards, local codes or proven landscape practices; and in a manner acceptable the Landscape Architect/Owner's Representative.

C. Rejection of Materials

The Landscape Architect/Owner's Representative shall have the right, at any stage of the planting operations, to reject any and all work and materials which, in his opinion, do not meet with the requirements of the plans and specifications. Such rejected material shall be immediately removed from the site and replaced by acceptable material.

D. Substitutions

Plant substitution requests by the Contractor shall be considered by the Landscape Architect/Owner's Representative only upon submission of proof that the plants requested are not available in the type or size specified. The Landscape Architect/Owner's Representative shall determine the nearest equivalent replacement in an obtainable size and variety. The unit price of the substitute item shall not exceed the bid item replaced without prior written approval of the Landscape Architect/Owner's Representative.

2.2 FERTILIZER

Two fertilizers shall be used in all plantings. Granular fertilizer shall be uniform in composition, dry and free flowing. This fertilizer shall be delivered to the site in the original unopened bags, each bearing the manufacturers statement of analysis, and shall meet the following requirements: (8) percent nitrogen, (0) percent phosphorous, (12) percent potassium, plus micro-nutrients. Tablet fertilizer shall be Agriform or equal, in 21 gram size with the following analysis: (20) percent nitrogen, (10) percent phosphorus, (5) percent potassium.

A. Fertilizer Schedules:

1. Agriform, 21 gram tablets:

Trees and Palms	2 per 1" of caliper
B&B Shrubs	6 Tablets per plant
#7 or #10 container shrubs	4 Tablets per plant
#3 or #5 container shrubs	2 Tablets per plant
#1 cont. shrub or grn. cover	1 Tablet per plant
2. Annuals shall be fertilized with 4 to 6 month Osmocote at one (1) tablespoon per plant.
3. Granular 8-0-12 fertilizer shall be applied at the following rates:

Trees and Palms	1 lb. (16oz) per 1" caliper
#7 to #10 cont. shrubs	1 lb. (16oz) per 3 ft. Ht./Spr.
#3 to #5 cont. shrubs	1/2 lb. (8oz) per plant
#1 cont. shrubs or grn. cover	1/4 lb. (4oz) per plant
4. Palms shall be fertilized at a rate of 1 lb. per inch of trunk caliper to a eight (8) pound maximum per tree. Any fertilizer that becomes caked or otherwise damaged shall not be acceptable.
5. Refer to adopted local fertilization codes and/or ordinances and contact Project Manager prior to applying any fertilizers.

2.3 PLANTING MIX, TOPSOIL & ANNUAL SOIL MIXTURES (Alternate to FDOT "Finished Soil Layer")

- A. Planting Mix will be used with all trees, shrubs and ground covers. Planting soil shall be 80 percent #1 ground screened peat, 20 percent wood product,(50 percent wood chips – 50 percent wood sawdust), 10 percent sharp builder's sand, Compost material: (10 lbs of 6-6-6 fertilizer, 100 percent organic; calcium level elevated to a minimum 700 parts per million, Magnesium level elevated to a minimum 120 parts per million. Soil shall be delivered in a loose friable condition and applied in accordance with the planting specifications. PH range to be 5.5 to 6.5.
- B. Blended Topsoil: 50 percent clean sand, 50 percent pulverized peat/mulch with a PH range of 5.5 to 7.0.
- C. Native topsoil to have PH range of 6.5 to 7.0.
- D. Annual Bed soil: 1/3 Florida #1 ground screened peat, 1/3 Pine bark, 1/3 Sharp builder's sand with a PH range of 6.5 to 7.0.
- E. Palm trees shall be planted in existing site soils unless specified otherwise in the plan specifications and notes.

REVISIONS



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PROJECT: COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES FLORIDA
SHEET TITLE: TYPICAL PLANTING SPECIFICATIONS (1)

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 14	

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2.4 MULCH

- A. Mulch material shall be uniformly applied as specified in the plans details and/or specifications within 48 hours after the plant material is installed. Maintain 6 inch radius off all plant trunks.
- B. Organic wood type mulch shall be applied to a fluffed depth of 4 inches and settled 3 inches over all plant beds. Mulch type as specified on the plans shall be shredded wood mulch, and shall be approved by the Landscape Architect/Owner's Representative.
- C. If specified, Non-organic gravel or stone type mulches shall be as specified and applied to the depth as listed in the Plans or Materials Schedule. This type of mulch shall be installed on top of a filter fabric or drainage cloth material and not on plastic type materials.
- D. If specified, Washed shell mulch shall be applied to a minimum depth of 3 inches and then fan raked to level surface. A 2 foot area adjacent to the back of curbing or paving shall be rolled and compacted.

PART III INSTALLATION

3.1 PREPARATION

- A. Grading
The finish grade or sub-grade of planting areas shall be established to within one (1) inch prior to beginning any planting.
- B. Removal of Rubbish
Should any objectionable materials such as stones, roots, limestone or construction debris be encountered during planting operations, it shall be removed from the site by the Landscape Contractor. Any compacted material or pavement base material and asphalt paving must be removed from sod and planting areas.
- C. Plant material
All plant materials shall be subject to inspection at any time by the Landscape Architect/Owner's Representative to determine adherence to location, quality, and size.

3.2 PROTECTION OF PLANTS

- A. Root Protection
 - 1. Balled and Burlapped Plants:
Plants designated F.G. or B&B shall be dug with firm natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant, but in no case shall the ball have a radius smaller than twelve (12) inches from the outside surface of the trunk. Balls shall be firmly wrapped with burlap or similar materials and bound with twine or cord. All collected plants shall be balled and burlapped except large specimen plants or Cabbage palms.
 - 2. Container Grown Plants:
Container grown plants shall meet plant sizes as specified in the plant schedule and on the plans, and shall not be governed by container sizes.
- B. Protection During Transporting
All plant material shall be protected from possible bark injury or breakage of branches. All plants transported by open trucks shall be adequately covered to prevent windburn, drying or damage to plants.

C. Protection of Palms

Only a minimum of fronds shall be removed from the crown of the palm trees to facilitate moving and handling. Clear trunk with no fire damage shall be as specified after the minimum of fronds have been removed. Sabal palm trunks shall be of uniform caliper and straight with tight "boots" when specified. Sabal palm fronds shall be completely removed to leave only a portion of the terminal bud spear or leaf showing referred to as (Cigared). All palms shall be braced and staked with new and clean pressure treated lumber of appropriate size and strength to resist tree displacement or as specified per the details. Strapped wood battens, with burlap rapped trunks, for nailing are required for all smooth trunk palms.

D. Protection During Planting

Trees moved by winch or crane shall be thoroughly protected from chain marks, girdling or bark damage by means of burlap and wood battens or other approved methods. It is recommended that all large plants be lifted using nylon or polyester round straps or web slings.

3.3 PLANTING OPERATIONS

A. Layout

- 1. Locations for plants and outlines of bed areas are indicated on the plan. All plant locations shall be flagged in the field by the Contractor to the satisfaction of the Landscape Architect/Owner's Representative. Locations where construction, utilities below ground or overhead utilities, are encountered necessary adjustments will be approved by the Landscape Architect/Owner's Representative. It is the Contractors responsibility to locate (Call 811) and avoid damage to underground utilities. Utility damage resulting from planting is the Contractors responsibility.

B. Soil Preparation

Refer to plan notes for soli preparations. Soil mixtures maybe supplied and used as directed otherwise by the Landscape Architect/Owner's Representative or plan notes. (See Section 2.3).

C. Excavation for Planting

Excavation of plant pits shall be circular in out line, and shall be as specified in planting details. The minimum depth and diameter of plant pits shall be as specified in Section F. Mass planting beds shall be stripped of all vegetation prior to planting and shall be excavated to inches below finish grade and back filled with a depth of six (6) planting soil mix as specified.

D. Field Grown or Ball & Burlap Plants

After final setting, loosen burlap wrapping to exposing top 1/3 of the root ball, leaving the ball unbroken. Remove excessive amounts of burlap to eliminate voids which may be caused upon decomposition.

E. Container Grown Plants

Container grown plants shall, when delivered have sufficient root growth to hold earth intact when removed from container and shall not be root bound. Plant pits for container materials shall be mounded on the bottom to avoid air pockets at the bottom of root balls and containers shall be removed carefully to prevent damage to plant or root systems. Root bound root balls maybe shaved at the direction of the Landscape Architect.

NO.	REVISIONS



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PROJECT: COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES FLORIDA
SHEET TITLE: TYPICAL PLANTING SPECIFICATIONS (2)

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 15	

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F. Pit Sizes for Trees and Plants Requiring Plantina Soil Mixtures

1. Minimum diameter and depth of planting pits shall be as follows:
 - A. Diameter Trees – 24” greater than diameter of root ball or spread of roots.
 - B. Diameter Shrubs – 12” greater than diameter Of root ball or spread of roots.
 - C. Depth: Trees & Shrubs – 6” greater than depth of root ball so as to provide 6” of planting soil under the root ball. (Large, heavy trees and shrubs may sit directly on unexcavated pit bottom if it is to be determined that undue settling may occur & no rock exist.)
 - D. Depth: Ground covers and Vines – Pits shall equal the plant pot depth plus one inch or conform to accepted nursery practice for the particular species.

G. Backfilling

When the pit has been excavated as specified above and the plant has been set the pit shall be back- filled with soil mixtures as specified,

H. Setting Trees and Shrubs

Unless otherwise specified, all trees and shrubs shall be planted in pits, centered, and set on six (6) inches of mounded tamped soil. The top of the root ball shall be set at 1 inch above the planting grade. They shall be planted upright and faced to give the best appearance or relationship to adjacent structures. No burlap shall be pulled out from under the balls. Platforms, wire and surplus binding from top and sides of the balls shall be removed. All broken or frayed roots shall be cut off cleanly. Back fill planting soil shall be tamped thoroughly, and settled by watering. After the soil settles, additional soil shall be used to bring the ground to finished grade; allowing for four (4) inches of mulch. Form a shallow saucer around each tree by placing a ridge of soil along the edge of the plant pit. This saucer ridge shall be a maximum of six (6) inches and minimum of four (4) inches high.

I. Pruning

The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches and to compensate for the loss of roots as a result of transplanting operations. Prune to retain typical growth habit for individual species with as much height and spread as is practicable. All pruning cuts shall be per ANSI A300 Part 1, 6 & 8 standards performed with sharp and clean instruments.

J. Staking and Guying

Refer to planting details, but minimally guy all trees over 6 feet, or 1.5 inches or more in caliper, in three (3) directions. Use double strands of No. 10 galvanized wire attached to approved anchors driven below grade. When securing wires to trees, cover all wires which may come in contact with any part of the tree with new 3/4 inch diameter rubber hose. Place guys not less than 1/3 of the height of the tree above finished grade and above substantial limbs one (1) inch in diameter or more, if possible. All hoses shall be interlocked around tree trunk. Place anchors so that guys are equally spaced and at 45 degree angles to horizon. Keep guys tight until project completion. All palms above six (6) feet in height shall be supported and held in an upright position by staking and guying in accordance with best current horticultural and landscape practices, or as specified in the details and in a manner acceptable to the Landscape Architect/Owner’s Representative.

K. Mulching

All trees and shrub beds shall be mulched within 48 hours after planting. Apply fertilizer before placing mulch. Water in fertilizer apply mulch, and water again.

3.4 SOD SPECIFICATIONS

A. Soil Preparation

1. Remove all roadway base (crushed lime rock or gravel), concrete chips and other construction debris. The Contractor shall replace such removed materials with local native topsoil to restore grade levels.

B. Grades

1. It shall be the responsibility of the Contractor to finish, (fine), grade all landscape areas, eliminating all bumps, depressions, sticks, stones, and other debris to the satisfaction of the Landscape Architect/Owner’s Representative, prior to the application of sod or seed.
2. All sprinkler head and valve locations are to be clearly marked with flags and be raised 3 inches above finish grade to avoid covering with sod. The sprinkler head location flagss are to remain in position until the new sod or seed is installed and all lines are flushed.
3. Pre-delivery watering of sod base: The Contractor shall water the soil daily prior to sod delivery to maintain moisture level. Hot dry soil is difficult to rewet, and if not moistened deeply enough, sticks to shoes and equipment tends to separate from the underlying dry soil, making working conditions difficult. The Contractor shall water the area to be sodded thoroughly the day before the sod is to be transported and laid.
4. The Contractor shall lay the sod as early as possible after delivery is received. A light watering immediately prior to the laying of the sod shall be ordered by the Landscape Architect/Owner’s Representative if deemed to be necessary due to higher than normal temperatures.
5. The Contractor shall apply a soil amendment to the soil before the sod is laid, as directed by the Landscape Architect/Owner’s Representative. The soil amendments to be added shall be based upon a soil test.
6. It shall be the responsibility of the Contractor to provide topsoil to fill any depressions or low areas evident after pre-delivery watering, (#3 above), is completed. Such refilled areas shall be watered again to compact soil.
7. Topsoil shall be applied to all wide joints between sod sections and washed in. All joints must be filled to the surface after watering is completed.
8. Optional: Only if noted in plans. Top dressing after transplanted sod is in place: To level the sod, apply soil similar to the soil on which the sod was grown. The decision to top dress or not to top dress will remain with the Landscape Architect/Owner’s Representative after the new sod has been rolled. In no case shall more than 1/2 inch of topsoil be applied.

C. Type of Sod

1. The Contractor shall order sod which has been sod field grown for sodding purposes. The Contractor shall require the Grower to provide sod which has been mowed regularly and carefully at a height of 3 inches and otherwise maintained from planting to harvest to maintain reasonable quality and uniformity,
2. The sod shall be as specified in the plant schedule or on the plan, which is true to variety and free of noxious weeds, diseases, and pests at time of delivery.
3. The Contractor shall request proof of certification from the shipper at time of delivery and shall furnish such proof to the Landscape Architect/Owner’s Representative to assure compliance with Item 2 above.
4. Thickness of cut shall be standard for the industry. The sod shall be of uniform soil thickness and such soil thickness shall exclude top growth and thatch, if any.
5. Pad Size: Individual pieces of sod shall be cut to supplier’s standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 5 percent in length. Broken pads or ends will not be acceptable. uneven
6. Standard size sections shall be strong enough to support their own weight and maintain their size and shape when suspended vertically when held with a firm grasp on the upper 10 percent of the section. Moisture Content: The sod shall not be machine cut by grower when moisture content is either excessively wet or excessively dry.
8. Time Limitations: The sod shall be cut and delivered to the site and transplanted within a period of 24 hours. Any sod not transplanted within the 24 hour period, shall not be used unless inspected and approved by the Landscape Architect/ Owner’s Representative before transplantation takes place. It shall be the responsibility of the Contractor to notify the Landscape Architect/Owner’s Representative of the time of departure of the sod shipment from the sod nursery, and the estimated date and time of arrival at the site. The normal delivery time to be requested for arrival is 8 a.m., but earlier delivery time may be requested by the Contractor.
9. The Contractor shall request the supplier to mow the grass uniformly at a height of three (3) inches before cutting and shipping.
10. Defective turf: Pieces with broken edges or which are not uniform in thickness are not to be laid.

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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE
TYPICAL PLANTING SPECIFICATIONS (3)

DRAWN BY: MAM	DATE: 6/23
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SHEET NO. LD - 16	

11. All unused turf shall be retained by the Contractor to be used in repairing areas.
12. Acceptance shall be based upon two (2) inspections of work to verify that the sod is alive and in satisfactory condition. Such inspections shall be by the Owner/Representative. The first inspection at the completion of sodding installation shall be made at the written request of the Contractor. The second inspection shall be made approximately 30 days thereafter on a date and time mutually agreed to by the Contractor and the Owner/Representative. When inspection is complete; the Contractor shall be notified in writing of the acceptance of the sod and workmanship to that date. The guarantee period for sod will commence at the date of acceptance of installation and extend for an additional 60 days. It shall be the Contractor's responsibility to maintain the sod during the guarantee period to ensure a vigorous stand of grass.

9. Post-Transplant Care of Sod: The new sod shall be watered twice daily lightly for 15 minutes at 10 a.m. and again at 3 p.m. under manual control. The sprinkler control should then be set for an automatic sprinkling daily between 12 midnight and sunrise. The length of run per zone shall be 30 minutes during this period. The daily watering in early morning hours may be altered to less frequent intervals after the turf is "pegged down". After the sod is fully established, watering shall be on an "as needed basis" (see below). Daytime sprinkling shall continue until the sod becomes sufficiently rooted to withstand nighttime watering only. When watering is reduced, the Contractor shall first discontinue the 10 a.m. misting, then discontinue the 3 p.m. light sprinkling, if no ill effects are observed after four (4) days, Nighttime frequency and water volume shall then be adjusted to avoid daytime wilting. Overall neglect of proper watering practice can damage or kill the new sod if the sprinkling practices are terminated before sufficient rooting has occurred. The Owner/Representative will inspect the turf daily for ten consecutive days, and shall give the Contractor instructions for any schedule modifications.

2. By mechanical hand seeder spread in two successive sowings with the second perpendicular to the first. Application rate shall be at one half the total rate for each sowing. The seeds shall then be raked into top quarter inch of soil.

The seeded areas shall be thoroughly watered before and after the application.

- D. MULCHING: All seeded areas shall be covered with straw or wood cellulose fiber at a rate of 100 pounds per 1000 sq. ft.
- E. HYDROSEEDING: Application of the grass seed with wood fiber mulch tinted green shall be applied by approved spraying machine. Application with the machine shall be at equal quantities as the required rate above.
- P. ESTABLISHMENT: All areas seeded shall be dense lawn free of bare spots, areas of washout or erosion damage upon final inspection. At 21 day intervals reseeding shall take place until a dense lawn is established.

D. LAYING OF SOD:

1. Transplanting shall begin promptly after soil amendments have been applied.
2. The Contractor shall establish a mid-point line attached to stakes on an east-west line and a north-south line.
3. A starter strip as a first row of sod shall be laid in a straight line along the longest dimension. Each piece of turf shall be placed by hand, and abutting edges shall be aligned evenly and close together to avoid gaps.
4. The second row of sod shall be placed so that lateral joints will occur at the mid-point of the first laid strips of sod. Lateral joints (running bond, rather than dead- mans bond) on this staggered basis promotes greater strength and more uniform growth. The Contractor shall take care to ensure that sod sections are not overlapped or stretched, and that all joints are butted tightly together to prevent voids which could cause air drying of the roots or edges of the sod sections,
5. The Contractor shall avoid unnecessary traffic of equipment or labor over freshly laid sod to avoid soil compaction.
6. The Contractor shall water the sod after Watering and Rolling: transplanting is completed to avoid excessive drying. The sod shall be rolled with a weighted roller, but only of sufficient weight to ensure firm contact between sod and the underlying soil. Weight of roller shall be 300-450 pounds.
7. The Contractor shall blow out Activation of Sgrinkler System: lines, install sprinkler heads, and then thoroughly water the soil prior to installing the sod. After laying the sod it shall be watered to thoroughly wet the underside of the new sod pad and the soil immediately below the sod.
8. Fertilization: Apply a 16-0-8 analysis fertilizer two weeks after the sod has been laid. The Contractor shall water the fertilizer into the soil immediately following application.

NOTE: Daytime sprinkling of newly laid sod should not be construed as a contradiction of recommended midnight to sunrise practices. The soil surface, and accompanying organic matter of freshly laid sod, are easily dried out, and can become water-repellent or hydrophilic. The daytime light sprinkling scheduled for 10 a.m. and 3 p.m. not only moderate peak temperatures and associated stress, but also keep soil surfaces moist and in a condition to accept new water. Failure to keep sod soil surfaces moist during the day can easily result in the sod becoming water. This situation causes applied water to be shedded to the edges of sod pieces, and then down to the underlying soil.

The net result is that the sod eventually dries out and dies, even though it is being watered. It shall be the Contractor's responsibility to replace all dead sod after correcting all causal factors.

SEEDING SPECIFICATIONS (IF APPLICABLE):

- A. MIXTURE: The mix shall be a 50/50 blend of Coastal Bahia seed and either Rye or Japanese Millet seed. Rye to be used only during the months of Nov., Dec, Jan.
- B. SOIL PREPARATION: The area to be seeded shall be treated with a post-emergent herbicide seven days prior to the following., Once the final grading is completed the entire areas shall be rotor tilled with a reverse type rotor tiller to a minimum six inch depth.
- C. SEED APPLICATION: Following the soil preparation the area shall be fine graded and the seeds applied as follows:
 1. By a seed drill at a rate of 20 lbs. per acre.

3.5 CLEAN UP:

- A. Any excess soil or debris resulting from landscape operations onto any paved areas shall be removed promptly; keeping these areas clean as the work progresses. Upon completion of the planting, all excess soil, stones and other debris which has not been previously cleaned up, shall be removed from the site, or disposed of as directed by the Landscape Architect/Owner's Representative.

3.6 INSTALLATION MAINTENANCE AND ESTABLISHMENT PERIOD MAINTENANCE, (IF APPLICABLE)

- A. Maintenance shall begin immediately after each plant is planted, and shall continue until all planting has passed final inspection and acceptance. Maintenance shall include watering, edging, weeding, pruning, cultivating, fertilizing, removal of dead materials, resetting plants to proper planting saucer, and any other necessary maintenance operations. Proper protection to adjacent areas shall be provided, and any damage resulting from planting operations shall be repaired promptly at no cost to the Landscape Architect/Owner's Representative.
- B. In the event of the threat of serious damage resulting from insects or disease prior to final acceptance; the plants shall be treated by preventative or remedial measures approved for good horticultural practices at no cost to the Landscape Architect/Owner's Representative.
- C. If applicable, the Establishment Period Maintenance shall begin on the first day after all planting and installation of all landscape elements is complete and initially accepted.

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PROJECT: COVE LANE
 LANDSCAPE MEDIAN RENOVATION FLORIDA
 CITY OF NAPLES
 SHEET TITLE: TYPICAL PLANTING SPECIFICATIONS (4)

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 17	

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3.7 OBSERVATION AND ACCEPTANCE:

A. Observation

- At least two observations will be made. All plants must be approved by the Landscape Architect/Owner's Representative prior to planting. A second observation of work to determine completion of contract, exclusive of the possible replacement of plants, will be made by the Landscape Architect/Owner's Representative at the conclusion of all planting operations and at the request of the Contractor.

B. Acceptance

- After each observation, the Contractor will be notified by the Landscape Architect/Owner's Representative of the acceptance of all plant material and workmanship; exclusive of the possible replacement of plants subject to guarantee.

3.8 GUARANTEE:

- The Contractor, as part of this contract, shall furnish a written guarantee warranting all materials, workmanship, and plant materials per Contract Documents. All plant material shall be alive and in vigorous growing condition for each specific type of plant at the end of the guarantee period. Any maintenance care which becomes necessary during the completion period will be the responsibility of the Contractor to insure a vigorous stand of grass.
- The Contractor shall be responsible for inspecting the project site at regular intervals during the guarantee period. The frequency of such inspections shall be at the discretion of the Contractor; however the frequency shall be such that the Contractor is satisfied that the maintenance is being performed properly and protect his interests in the Guarantee of materials and workmanship. The Contractor must notify in writing to the Owner any potential maintenance concerns.

3.9 REPLACEMENT:

- At the end of the guarantee period, any plants that are dead, or not in satisfactory growth as determined by the Owner/Representative, shall be removed and replaced at the Contractor's expense. Replacement plants shall be guaranteed as specified in Section 3.8, after date of replacement.
- All replacements shall be plants of the same kind and size as those specified in the Plant Schedule. They shall be furnished and planted as specified herein at no additional cost to the Owner; providing the plants have been properly maintained by the Owner/Representative after completion of the work and expiration of the maintenance period.

3.10 CARE AND MAINTENANCE SCHEDULE:

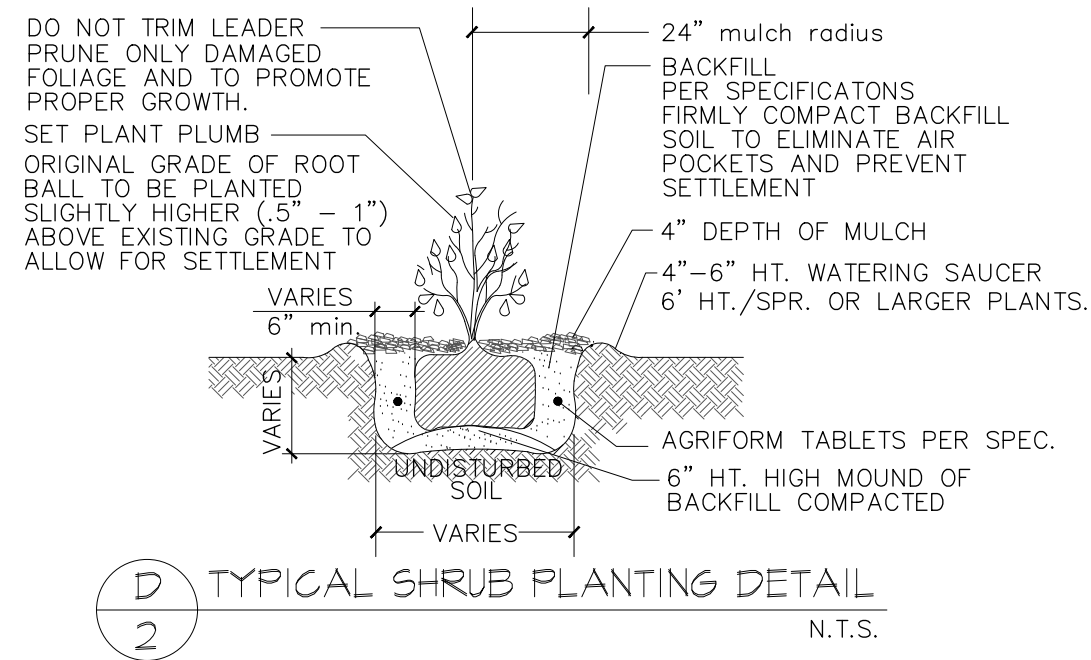
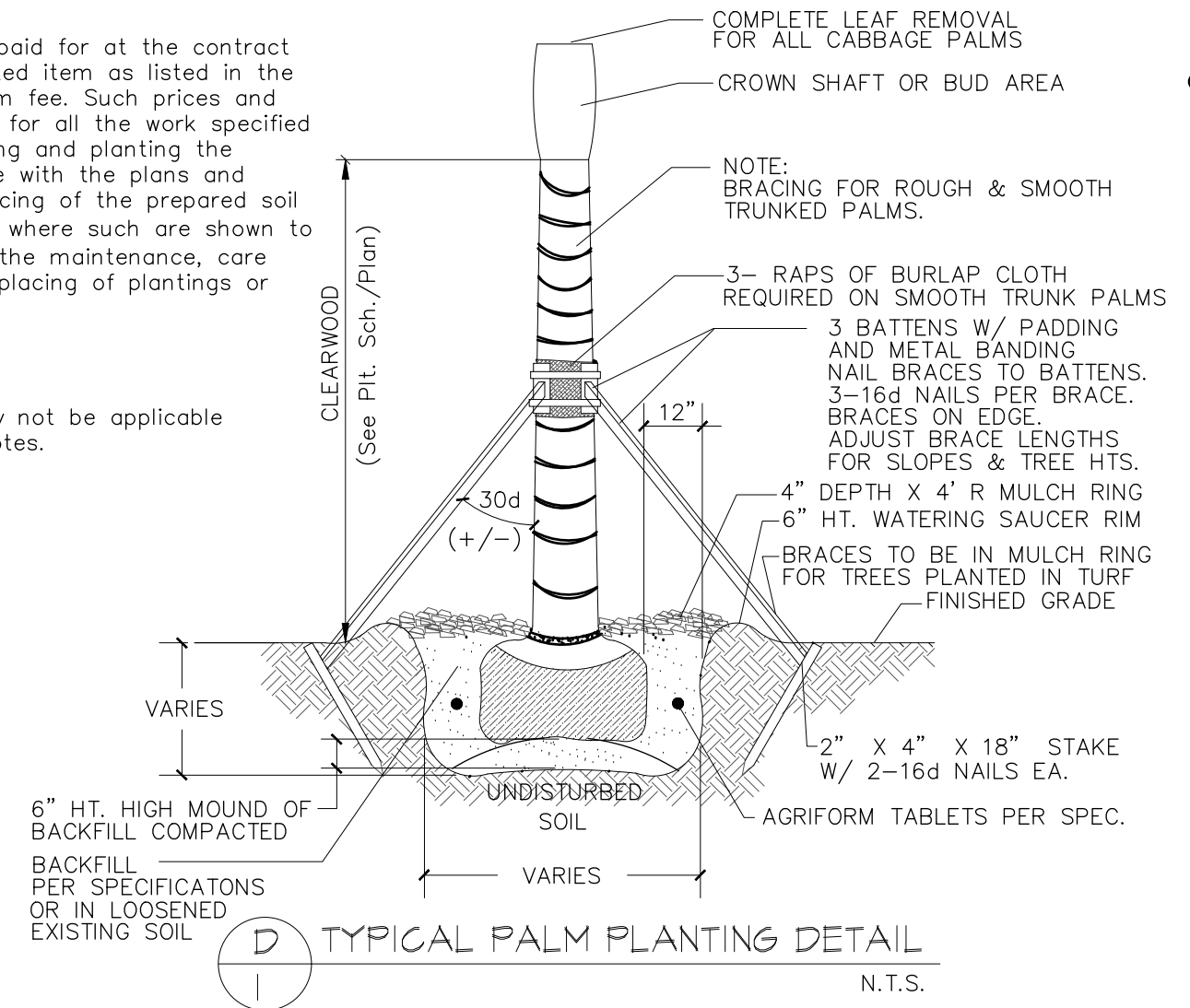
The Contractor shall furnish the Owner with a written and detailed description for the care and maintenance of all plant material at the time of final observation and acceptance. The Owner agrees to execute the instructions for such care and maintenance.

3.11 COMPENSATION:

The work under this Section will be paid for at the contract unit installed price for each designated item as listed in the proposal or per the agreed lump sum fee. Such prices and payments shall be full compensation for all the work specified under this Section, including furnishing and planting the designated plant types in accordance with the plans and specifications, the furnishing and placing of the prepared soil mixes, fertilizers and mulch, (except where such are shown to be paid for under a separate item) the maintenance, care etc., and all cost of any required replacing of plantings or restoring of damaged areas.

3.12 SPECIAL CONDITIONS:

Specifications and details shown may not be applicable to all projects refer to plans and notes.



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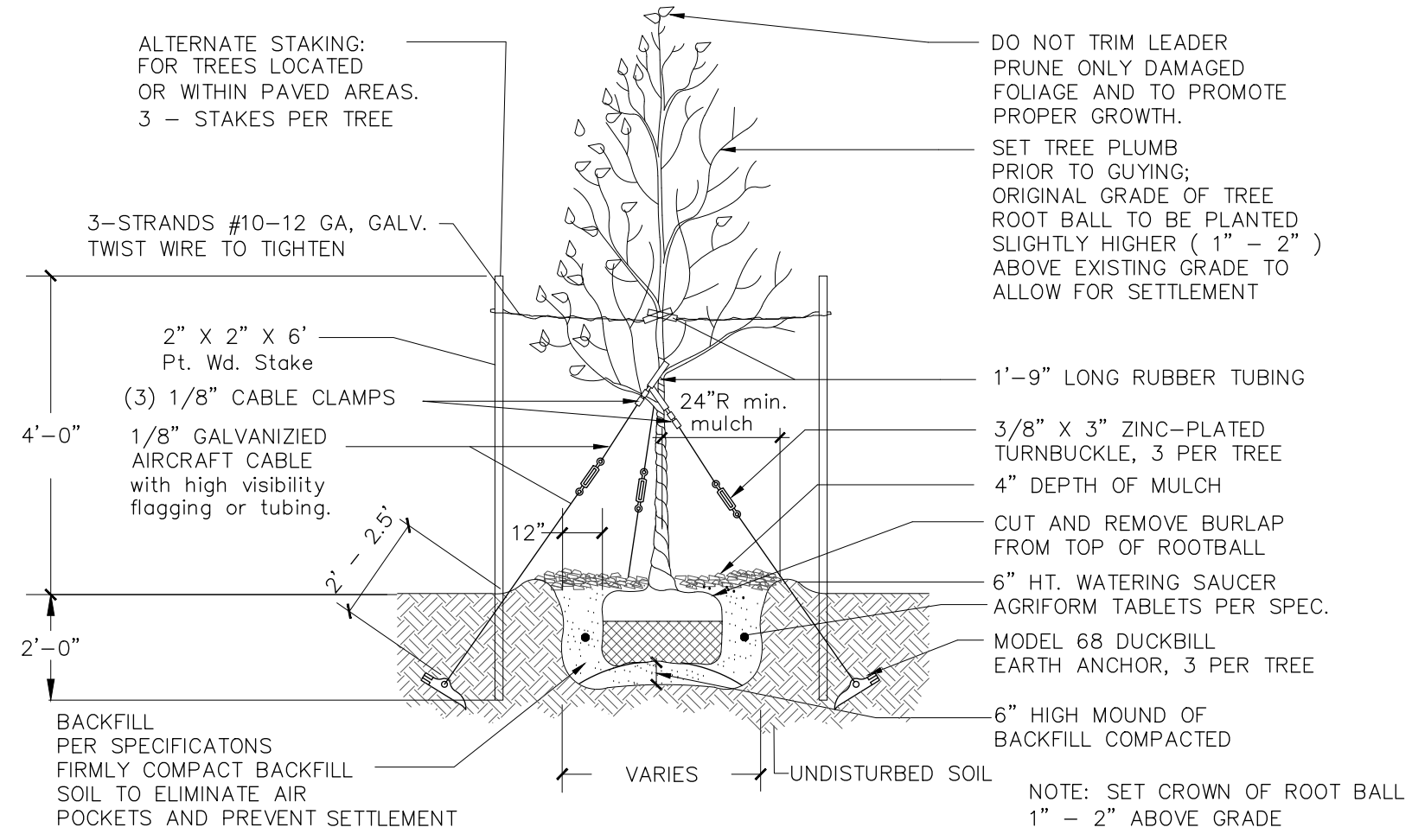


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PROJECT: COVE LANE LANDSCAPE MEDIAN RENOVATION FLORIDA CITY OF NAPLES
SHEET TITLE: TYPICAL PLANTING SPECIFICATIONS (5)

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 18	



ALTERNATE STAKING:
FOR TREES LOCATED
OR WITHIN PAVED AREAS.
3 - STAKES PER TREE

DO NOT TRIM LEADER
PRUNE ONLY DAMAGED
FOLIAGE AND TO PROMOTE
PROPER GROWTH.

SET TREE PLUMB
PRIOR TO GUYING;
ORIGINAL GRADE OF TREE
ROOT BALL TO BE PLANTED
SLIGHTLY HIGHER (1" - 2")
ABOVE EXISTING GRADE TO
ALLOW FOR SETTLEMENT

3-STRANDS #10-12 GA, GALV.
TWIST WIRE TO TIGHTEN

2" X 2" X 6'
Pt. Wd. Stake

(3) 1/8" CABLE CLAMPS

1/8" GALVANIZED
AIRCRAFT CABLE
with high visibility
flagging or tubing.

2' - 2.5'

24"R min.
mulch

1'-9" LONG RUBBER TUBING

3/8" X 3" ZINC-PLATED
TURNBUCKLE, 3 PER TREE

4" DEPTH OF MULCH

CUT AND REMOVE BURLAP
FROM TOP OF ROOTBALL

6" HT. WATERING SAUCER
AGRIFORM TABLETS PER SPEC.

MODEL 68 DUCKBILL
EARTH ANCHOR, 3 PER TREE

6" HIGH MOUND OF
BACKFILL COMPACTED

BACKFILL
PER SPECIFICATONS
FIRMLY COMPACT BACKFILL
SOIL TO ELIMINATE AIR
POCKETS AND PREVENT SETTLEMENT

VARIES

UNDISTURBED SOIL

NOTE: SET CROWN OF ROOT BALL
1" - 2" ABOVE GRADE

D TYPICAL TREE PLANTING & ANCHORING DETAIL
3 DUCKBILL MODEL-68 1-800-325-5360 N.T.S.

SPECIFICATIONS FOR CANOPY TREES LARGER THAN 3" CALIPER OR 12' OVERALL HT.:

1. MODEL 68-DS DUCKBILL ANCHORS
2. 13' OF 1/8" 7x7 GALVANIZED STEEL CABLE ATTACHED TO EACH ANCHOR WITH TURNBUCKLE ATTACHED MID-CABLE. CABLE TO BE VINYL COATED AS PER SPECIFICATIONS.
3. 3 TURNBUCKLES, EYE AND EYE TYPE, ZINC PLATED, 3/8" THREAD DIAMETER WITH 3" TAKE-UP.
4. 3 TREE COLLARS 1'-8" LONG, MADE FROM 1/2" ID X 5/64" WALL PVC TUBING WITH ULTRA-VIOLET INHIBITORS.
5. SIX 1/8" CABLE CLAMPS, ZINC PLATED.
6. ALL COMPONENTS ARE FACTORY ASSEMBLIES. (DR-1 STEEL ASSEMBLED INTO 3 COMPLETE GUYLINE DRIVE ROD 3' LONG WITH 1/2" ROUND DRIVING TIP NEEDED TO INSTALL ANCHORS, ROD NOT INCLUDED IN KIT).

NOTE: ALL TREES SUBJECT TO HAVE DELAYED ROOT SYSTEM DEVELOPMENT SHALL BE STAKED WITH DUCKBILL ANCHORING SYSTEMS, (E.G. HANDROANTHUS SPP., CAESALPINA SPP.).

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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE
TYPICAL PLANTING SPECIFICATIONS (5)

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 19	

EXHIBIT A: 2023-002 PLANS R1 100 7-24-23

AUTOMATIC SPRINKLER SYSTEM TYPICAL SPECIFICATIONS

SCOPE OF WORK:

The work specified in this Section consists of installing a complete underground irrigation system as shown on the plans and as here in after specified including the furnishing of labor, parts, equipment, and materials required to perform all operations in connection with the construction of the irrigation system. It shall include furnishing and installing all piping, fittings, valves, sprinkler heads, controller, electric wiring, etc., as required for the complete installation of the system as shown on the plans and called for in these specifications, or as may be required for proper operation of the system. The system shall be constructed to finished grades and conform to areas and locations as shown on the project drawings or as occurs on-site.

Sprinkler lines and heads shown on the drawings are essentially diagrammatic. Locations of all sprinkler heads, valves, piping, wiring, etc., shall be established by the Contractor at the time of construction. Spacing of the sprinkler heads be per manufacturer's recommendations and shall only be exceeded with permission of the Landscape Architect/Owner's Representative.

Unless otherwise specified or indicated on the drawings, the construction of the sprinkler system shall include the furnishing, installing, and testing of all mains, laterals, risers and fittings, the furnishing and installing of sprinkler heads, valves, controller and all necessary specialties and accessories, the removal and/or restoration of existing improvements, excavation and backfill, and all other work in accordance with the plans and specifications as required for a complete 100% operational system.

GENERAL

- A. Approval: Whenever the terms "approve," "approval" or "approved" are used in the specifications, they shall mean the approval of the Landscape Architect/Owner's Representative in writing.
- B. Coordination: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and efficiently as possible.
- C. Observation of Site: The Contractor shall acquaint it's self with all site conditions. Should utilities not shown on the plans be found during excavations, the Contractor shall promptly notify the Owner for instructions for further action. Failure to do so will make the Contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities not shown in plans. Contractor shall call "811" or Sunshine One" for utility locates.
- The Contractor shall make necessary adjustments in the layout as may be required to provide for proper coverage and operation of the system. All alterations shall be approved by the Landscape Architect/Owner's Representative.
- D. Protection of Existing Plants and Site Conditions: The Contractor shall take necessary precautions to protect existing vegetation or site conditions and features as they exist. Should damage incurred, the Contractor shall repair the damage to its original conditions at Contractor's own expense.
- The Owner reserves the right to substitute, add or delete any material or work as the work progresses. Adjustment to the contract price shall be negotiated if deemed necessary by the Owner. The Owner reserves the right to reject material or work which does not conform to the Contract Documents. Rejected work shall be removed or corrected at the earliest possible time.
- E. Work Schedule: Within ten (10) days after award of the Contract, the Contractor shall submit to the Owner a work schedule.
- F. As-Built Irrigation Drawings: The Contractor shall provide three (3) sets of "As-Built or Record" drawings/plans, on blue-line prints, which shall show any deviations from the plans made during construction affecting the main line, controller, valves, and sprinkler heads. The drawings shall also indicate and show approved substitutions of materials with manufacturer's name and model numbers. The drawings shall be delivered to the Owner before final acceptance of work.
- G. Final Acceptance: Final acceptance of the work maybe obtained from the Owner upon satisfactory completion of all work.
- H. The Contractor shall not be held responsible for the system until accepted by the Owner. Contractor shall not be responsible for damages or acts caused on the part of the Owner or his agents. The Contractor shall take every reasonable precaution in the preparation of it's work and materials in an effort to avoid such acts.
- I. Guarantee: All work shall be guaranteed for one year (1) from date of acceptance against all defects in material, equipment and workmanship. Guarantee shall also cover repair or damage to any part of the premises resulting from leaks or other defects in material, equipment and workmanship to the satisfaction of the Owner. Repairs, if required, shall be done promptly and at no cost to the Owner.

MATERIALS

- A. General: All materials throughout the system shall be new and in perfect condition. All components shall be installed per manufacturer's details and specifications unless noted or amended within the plans and details.
- B. Pipe: All main lines under pressure shall be PVC Class 200 PSI plastic pipe, (1120, 1220), SDR 21 or better. All remaining pipe shall be PVC Class 160 PSI plastic pipe, (1120, 1220), SDR 26 or better. Unless otherwise specified. All roadway crossing main lines greater than 3" dia. shall be with HDPE Class 150, SDR 11 purple dripe pipe with HDPE to PVC mechanical joint connectors.
- C. Plastic Fittings: All plastic fittings shall be schedule 40 or 80, polyvinyl chloride (PVC) standard weight.
- D. Electric Control Wire: Multi-wire control wire (24 volt) from the controller to the valves shall be direct burial type wire. The 24 volt common ground shall be white in color and installed with a spare, continuous along or around main line loop. All individual valve wires with one spare wire shall be color coded or numbered at the controller and valve. All high voltage (110 volt AC) wiring shall be installed in accordance with Local, State and National Electric Codes.
- E. Automatic Controller: Controllers shall be capable of operating all zone valves shown in drawings or installed on-site. The controller shall be installed with an automatic rain shut off sensor, (e.g. Mini Click II) with a bypass switch or soil sensor or both. The controller shall have multiple runtime programing and water saving option capabilities.
- F. Valves: The valves shall be as specified or approved equal. All valves shall be buried in jumbo size valve boxes with labeled lids or as shown in detailed.
- G. Isolation or Gate Valves: 3/4" to 2" valves shall be non-rising stem of bronze construction with screwed connections and with a minimum pressure rating of 125 PSI. All 2.5" or larger gates valve shall be non-rising stem series 2500 resilient wedge gate valves as produced by American Flow Control or approved equal. All gate valves shall be installed using valve boxes as detailed to provide access to the handle with extensions as needed. Gate valves shall also be installed in any case where a manual flush valve or stubout assembly is required.
- H. Miscellaneous System Components: Air relief valves, automatic drain valves, concrete vaults or meter boxes, valve markers and caps, etc., shall be of the type and size as indicated in the irrigation plans, details or specifications.

INSTALLATION

- A. Excavation and Trenching: Perform all excavations as required for the installation of the work included under this section, including shoring of earth banks to prevent movement. Restore all surfaces, underground utilities, etc., damaged or cut as a result of the excavations to their original condition and in a manner approved by the Owner.
- Trenches for pipe lines shall be made to sufficient depths to provide the minimum cover from finish grade as follows:
 - 36" minimum cover over main lines
 - 18" minimum cover over lateral lines to heads
 Maintain all warning signs, shoring, barricades, flares and red lanterns as required by the Safety Orders of the Division of Industrial Safety and any local ordinances.
- B. Pipe Line Assembly: Plastic pipe and fittings shall be solvent welded using solvents and methods as recommended by manufacturer of the pipe, except where screwed connections are required. pipe and fittings shall be thoroughly cleaned of dirt, dust and moisture before applying solvent. Make all connections between plastic pipe and metal valves or steel pipe with threaded fittings using plastic make adapters. Use pipe joint compound on galvanized fittings. Main line piping 3" dia. and larger must have concrete thrust blocks or mechanical joint restraints installed per manufacturer's and/or industry standards.
- C. Sprinkler Heads: Install all sprinklers as detailed on drawings. Use teflon tape on screw type PVC fittings, except no tape shall be used between riser and sprinkler. Heads in lawn areas shall be flush with the top of the soil. Heads on risers shall be of sufficient height to provide coverage after 12 months and installed with coated rebar supports.
- D. Closing of Pipe and Flushing Lines: Cap or plug all openings as soon as lines have been installed to prevent the entrance of materials that would obstruct the pipe. Leave in place until removal is necessary for completion of installation.
- E. Testing System: Upon completion of the irrigation system and after sufficient time has been allowed for solvent weld joints to cure, the entire system shall be pressure tested for proper operation. All air will be flushed from the system prior to testing and all components will be checked for proper operation by the Contractor.
- F. Automatic Controller: All automatic controllers shall be installed following the recommendations of the manufacturer of said equipment. The location of all controllers shall be approved by the Owner before the actual installation of said controller.
- G. Automatic Valve Control Wiring: Install multi-wire control wires, irrigation mains and laterals in common trenches wherever possible. Install control wires and conduits along side the irrigation mains. When not along mains install at a minimum (24") depth. Provide (30") expansion coils at valves, end of sleeves, direction changes, splice boxes and snake wires in trenches to allow for contraction of wires. (30") expansion coils shall be provided every (250') for bundled wire runs greater than (500'). Expansion curls shall occur within all valve boxes prior to wire connectors. Expansion curls shall be formed by wrapping at least five (5) turns of wire around a one inch (1") diameter pipe. Bundled wire runs shall be wrapped with duck tape or wire ties every ten (10) feet.

Two-wire control wire systems shall be in 1.25 inch sch. 40 PVC gray electrical conduits. Conduits shall sweep in and out of all boxes.

Control wire splices will be allowed only in runs more than 500 feet. Connections shall be permanent and water-tight. The main line shall have two (2) spare wires installed it's entire length into valve boxes and extend to the automatic controller. Label each end "spare wire".

All pipe and wire passing under existing or future paving shall be encased in schedule 40 or 80 PVC sleeves extending at least five feet beyond edges of paving or curbing. Wiring installed within sleeve with piping shall be separately sleeved.

- H. Backfill and Compaction: After the system is operating and required tests and observations have been completed all pipe excavations or trenches shall be backfilled with clean soil, free of rubbish or rocks.

Backfill for all trenches, regardless of type of pipe covered, shall be compacted to a minimum 90 percent density and elevated to the required proposed finished or existing grade before trenching.

- I. Balancing and Adjustment: The Contractor shall balance and adjust the various components of the sprinkler system so that the overall operation of the system is most efficient. This includes a synchronization of the controllers, adjustments to pressure regulators, pressure relief valves, sprinkler heads, and individual station adjustments on the controllers. The Contractor has the right to calling the designer or Owner to aid in the balancing and adjustment of the system. System shall be adjusted toso that no spray is upon buildings or paving.

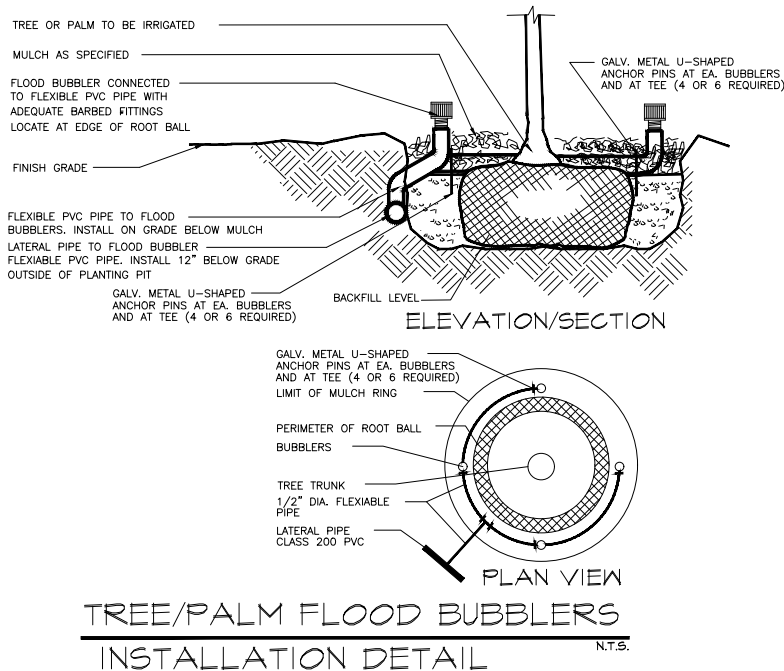
- J. Clean-up: Remove from the site all debris resulting from the work of this section.

- K. Drawing Details: Drawn details shown in these plans are not applicable to all systems, plans or projects, unless they are specified in the system or shown on the irrigation plans.

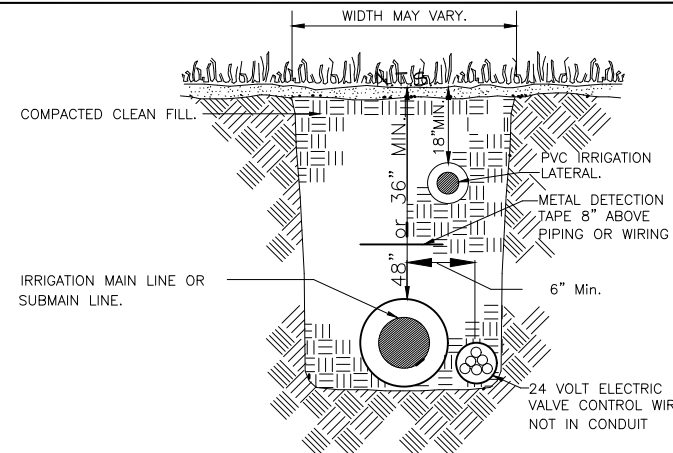
N/A - Indicates not applicable.

RECOMMENDED FLOW RATE PIPE SIZING SCHEDULE:

Pipe Size:	Gallons Per Minute Flow (GPM)		
	Sch. 160 Pipe	Sch. 40 Pipe	Class 200 Pipe
1/2" dia.	less than 7 GPM	less than 4 GPM	N/A
3/4" dia.	8 to 10 GPM	5 to 8 GPM	less than 10 GPM
1" dia.	11 to 15 GPM	9 to 10 GPM	11 to 16 GPM
1.25" dia.	16 to 25 GPM	11 to 20 GPM	17 to 26 GPM
1.50" dia.	26 to 35 GPM	21 to 30 GPM	26 to 35 GPM
2.0" dia.	36 to 50 GPM	31 to 50 GPM	27 to 55 GPM
2.5" dia.	50 to 80 GPM	51 to 70 GPM	56 to 80 GPM
3.0" dia.	81 to 125 GPM	71 to 100 GPM	81 to 120 GPM



TREE/PALM FLOOD BUBBLERS INSTALLATION DETAIL N.T.S.



TRENCHING DEPTH FOR ALL MAIN LINES SHALL BE 48 INCHES UNLESS APPROVED BY LANDSCAPE ARCHITECT TO BE REDUCED BECAUSE OF MAIN LINE LOCATION OR DEPTH CONFLICTS.

ALL TRENCHING DEPTHS SHOWN ARE MINIMUM. IN THE EVENT THAT MINIMUM TRENCHING DEPTHS ARE NOT MET, THE TRENCHES SHALL BE RE-EXCAVATED.

DEPTH MEASUREMENTS ARE TO BE DONE FROM FLUSH GRADE TO TOP OF PIPE.

PROVIDE A 6" MINIMUM VERTICAL SEPARATION BETWEEN MAIN LINE(S) AND LATERAL LINE(S).

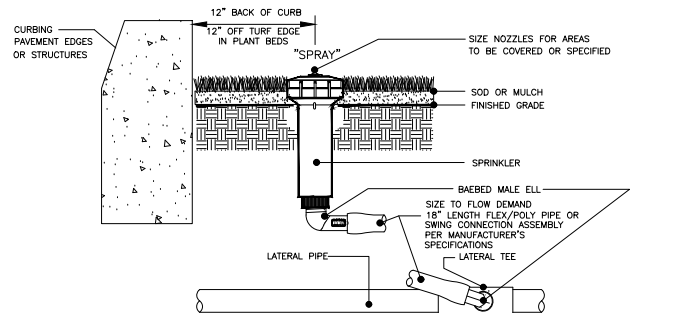
TRENCHES SHALL BE COMPACTED TO A 90% STANDARD PROCTOR DENSITY, ASTM D698-78.

PIPE PULLING THROUGH UN-TRENCHED SOIL IS NOT ALLOWED UNDER ANY CIRCUMSTANCE.

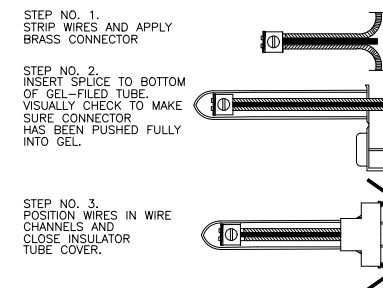
ALL TRENCHES SHALL BE BACKFILLED WITH CLEAN SOIL FREE OF DEBRIS & NOXIOUS WEEDS.

TYPICAL TRENCHING DETAIL

N.T.S.



TYPICAL FLEX PIPE SPRINKLER HEAD N.T.S.



ALL ZONE CONTROL WIRE CONNECTIONS SHALL BE DONE IN ACCORDANCE TO HIT'S DBC-BR INSTALLATION SPECIFICATIONS.

24 VOLT WIRE CONNECTION DETAIL N.T.S.

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REVISIONS

McGe & Associates

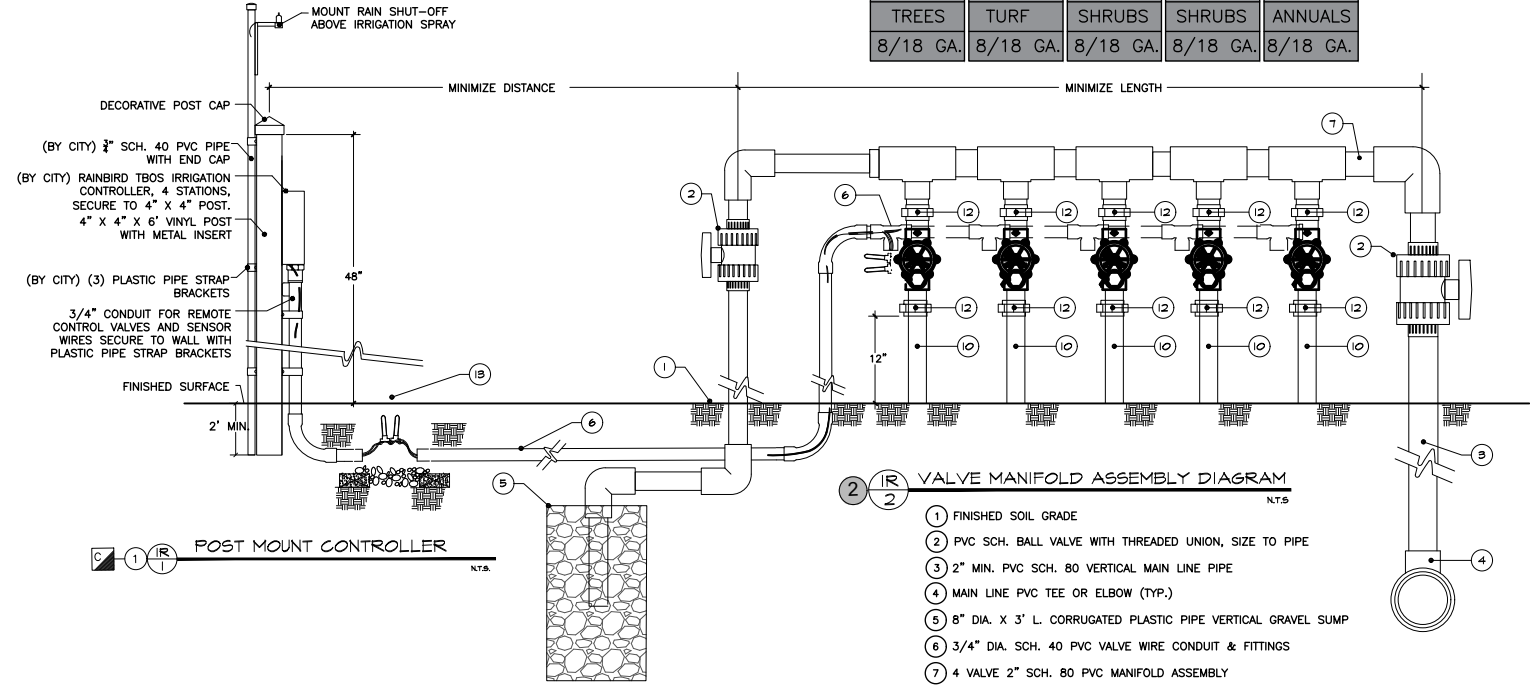
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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES
FLORIDA
SHEET TITLE
TYPICAL IRRIGATION SPECIFICATIONS (1)

DRAWN BY: MAM	DATE: 6/23
SCALE: AS SHOWN	
SHEET NO. LD - 20	

C1-05	C1-04	C1-03	C1-02	C1-01
1.5"(TBOS)	1.5"(TBOS)	1.5"(TBOS)	1.5"(TBOS)	1.5"(TBOS)
37 GPM	45 GPM	46 GPM	31 GPM	8 GPM
BUBBLERS	SPRAY	SPRAY	ROTORS	SPRAY
TREES	TURF	SHRUBS	SHRUBS	ANNUALS
8/18 GA.	8/18 GA.	8/18 GA.	8/18 GA.	8/18 GA.



- NOTES:
1. VALVE MANIFOLD TO BE ALIGNED ALONG CENTERLINE OF MEDIAN.
 2. ALL CONDUIT OPENINGS SHALL BE SEALED WITH REMOVABLE MATERIAL.

- VALVE MANIFOLD ASSEMBLY DIAGRAM
N.T.S.
- 1 FINISHED SOIL GRADE
 - 2 PVC SCH. BALL VALVE WITH THREADED UNION, SIZE TO PIPE
 - 3 2" MIN. PVC SCH. 80 VERTICAL MAIN LINE PIPE
 - 4 MAIN LINE PVC TEE OR ELBOW (TYP.)
 - 5 8" DIA. X 3' L. CORRUGATED PLASTIC PIPE VERTICAL GRAVEL SUMP
 - 6 3/4" DIA. SCH. 40 PVC VALVE WIRE CONDUIT & FITTINGS
 - 7 4 VALVE 2" SCH. 80 PVC MANIFOLD ASSEMBLY
 - 8 DRIP TUBE ZONE RAINBIRD LCRBY150D 1.5" DISC FILTER
 - 9 PSI-H40X-150 FLOW REGULATOR DOWNSTREAM OF VALVE
 - 10 1.5" SCH. 80 PVC VERTICAL PIPE TO ZONE CLASS 200 LATERAL PIPE
 - 11 1.5" SCH. 80 PVC VERTICAL PIPE TO ZONE CLASS 200 LATERAL PIPE
 - 12 SCH. 80 PVC SLIP UNIONS SIZE TO PIPE
 - 13 8" DIA. PLASTIC WIRE SPLICE BOX

CONTROLLER AND VALVE MANIFOLD ASSEMBLY DETAIL

N.T.S.

REVISIONS



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PROJECT:
COVE LANE
LANDSCAPE MEDIAN RENOVATION
CITY OF NAPLES FLORIDA
SHEET TITLE
TYPICAL IRRIGATION SPECIFICATIONS (2)

DRAWN BY: MAM DATE: 6/23
SCALE: AS SHOWN
SHEET NO. LD - 21

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