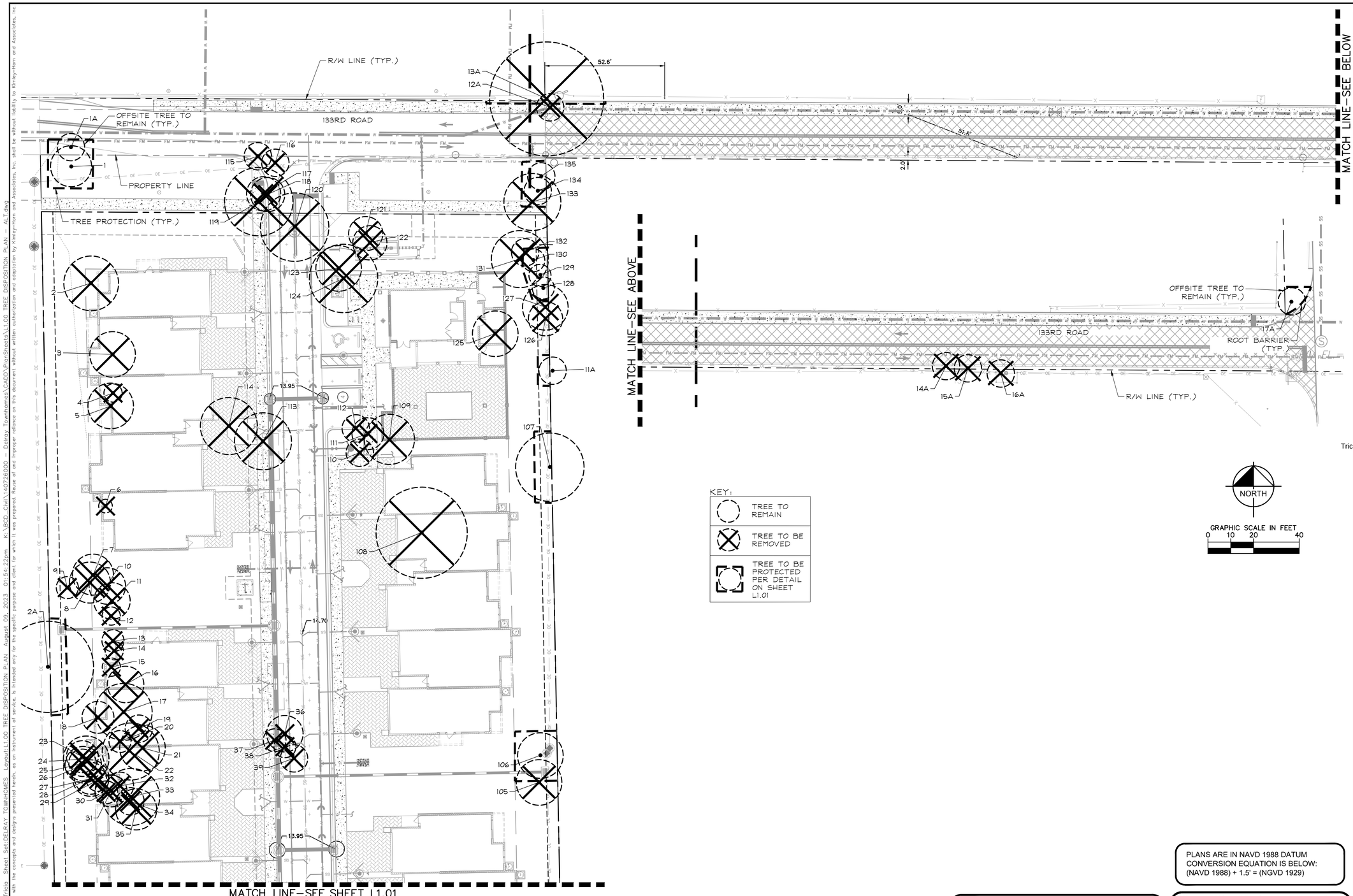

KEY:

	TREE TO REMAIN
	TREE TO BE REMOVED
	TREE TO BE PROTECTED PER DETAIL ON SHEET L1.01

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

PLANS ARE IN NAVD 1988 DATUM
CONVERSION EQUATION IS BELOW:
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THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023 KIMLEY-HORN AND ASSOCIATES, INC.
1615 S CONGRESS AVE., SUITE 201, DELRAY BEACH, FL 33445
PHONE: 561-330-2345 FAX: 561-863-8175
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

LICENSED PROFESSIONAL
TRICIA C. RICHTER, PLA
FLORIDA LICENSE NUMBER LA0012244
DATE: 07/28/2023

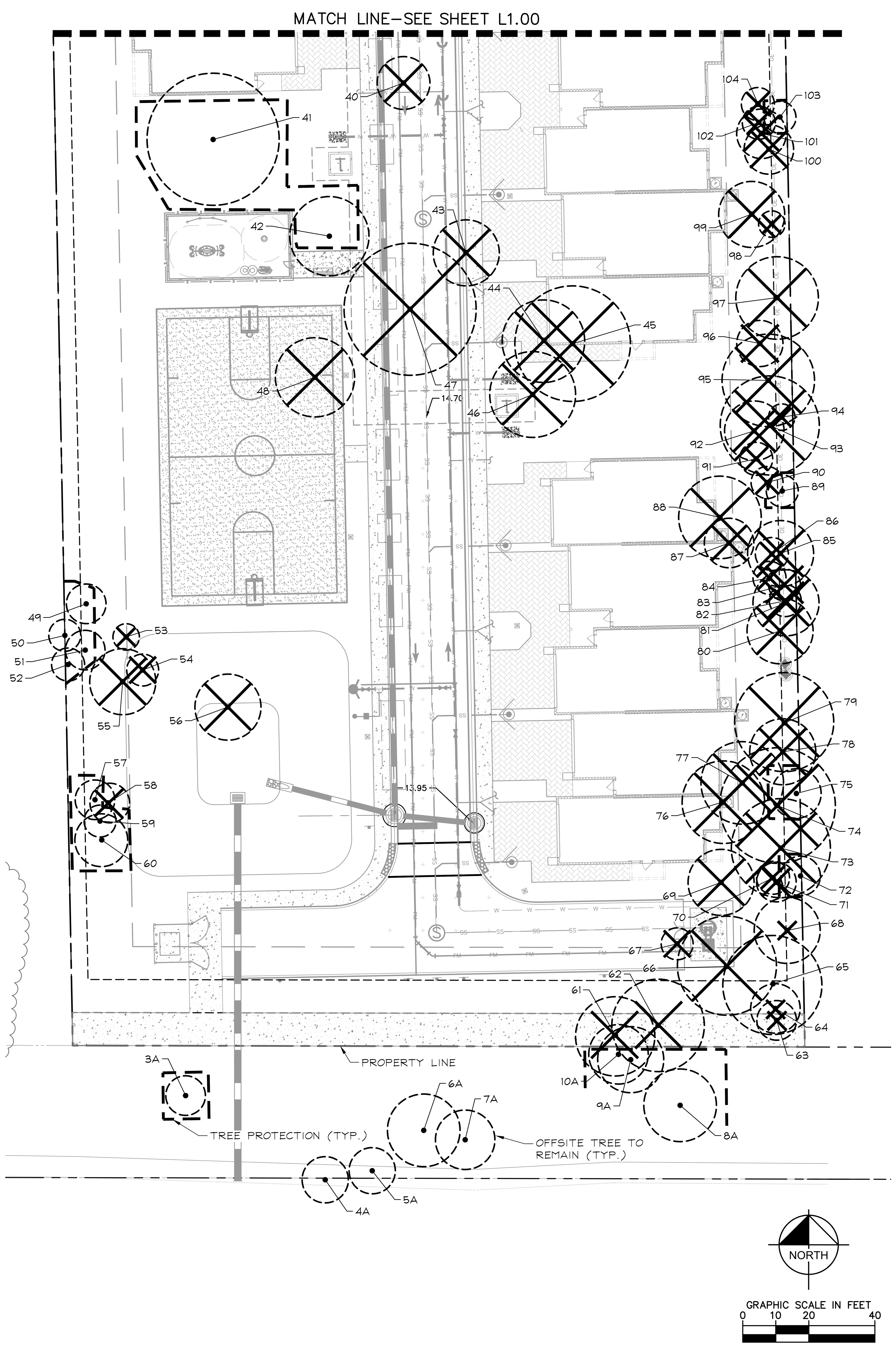
Tricia C. Richter
Digitally signed by Tricia C. Richter
DN: C=US, E=tricia.richter@kimley-horn.com, CN=Tricia C. Richter
Date: 2023.08.09 13:18:03 -04'00'

KHA PROJECT	140726000
DATE	JULY 2023
SCALE	AS SHOWN
DESIGNED BY	AVB
DRAWN BY	AVB
CHECKED BY	TCR

TREE DISPOSITION PLAN

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L1.00



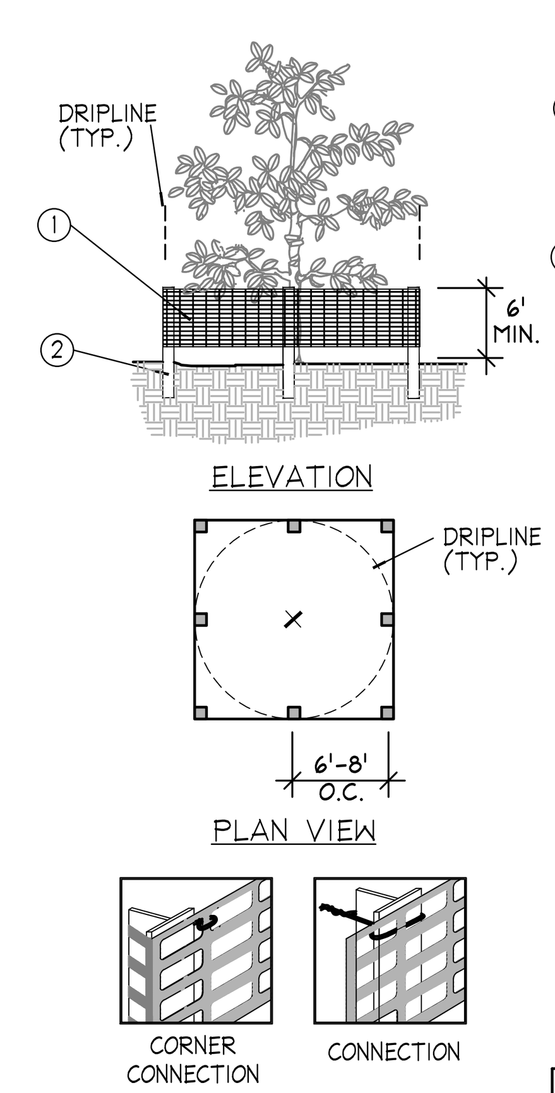
TREE RELOCATION

TREE RELOCATION GENERAL NOTES

1. Trees shall be relocated once from their present location to a designated location per the direction of the Project Engineer who shall determine the exact location for each relocated tree and/or palm. Relocation activities will include planting on slopes and/or level grade.
2. An ISA - Certified Arborist or a Certified Landscape Contractor certified by the Florida Nurserymen and Growers Association shall perform and monitor all tree root pruning and relocation activities.
3. Landscape Specifications provided in this construction set shall apply to all relocated trees and/or palms.
4. Contractor shall stake and guy all trees at the time of relocation as per details provided in this construction set. Contractor shall be responsible for the maintenance and/or repair of staking and guying during the warranty period. All trees and/or palms shall be braced at least one (1) year or as directed by the Owner's Representative.
5. Soil backfill for the installation of trees, palms, shrubs, and ground covers shall be uniform mix of 25% well-rotted compost, 25% topsoil, and 50% clean, weed-free loosened native soil backfill.
6. Contractor shall submit manufacturers certified analysis for soil amendments to the Owner's Representative.
7. Contractor shall pay to have the backfill lab tested if requested by the Owner's Representative. Non-soluble wetting agent shall be added to the backfill per the manufacturer's specifications.

ROOT PRUNING

1. The Landscape Architect has observed trees that could be impacted by construction of the proposed improvements.
2. If construction activities occur within the dripline (or the horizontal extent of the canopy) of a tree, then that tree is a candidate for root pruning.
3. Root pruning must occur prior to trenching operations to insure that the roots are cut clean and at proper angles and not mechanically ripped from the earth during construction.
4. For trees requiring root pruning, a tree assessment shall be conducted and a root-pruning plan shall be developed by a Certified Arborist or Consulting Arborist. This plan should identify:
   - Maximum allowable size of roots to be cut
   - Allowable proximity to the trunk for cuts
   - Time of year when root cutting is allowable
     (Note: In Florida, it is best to avoid root pruning during times of the May through September, when the potential for damaging wind loads on trees are greatest.)
   - Method for making cuts
   - Mitigating canopy pruning
   - Type and extent of necessary structural support
   - Schedule for watering/fertilization after pruning
5. Implement the root pruning plan per the Arborist's recommendation.



1. 6'H "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
2. 8' TALL METAL "T" POSTS OR 2" x 2" X 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

INSTALLATION NOTES:

A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.

B. POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/4 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 8' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.

C. SPACE POSTS EVERY 6' (MIN.) TO 8' (MAX.).

D. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

NOTE: IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH FENCE. WIRE MAY DAMAGE FENCE OVER TIME.

A Tree/Shrub Protector
Barrier Detail
NTS

EXISTING TREE - PRUNING NOTES:

1. TREE PRUNING WORK MUST BE PERFORMED BY OR DIRECTLY SUPERVISED BY AN ISA CERTIFIED ARBORIST.
2. CONTRACTOR SHALL HOLD A PRE-PRUNING CONFERENCE WITH THE OWNER AND LANDSCAPE ARCHITECT PRIOR TO COMMENCING PRUNING OPERATIONS.
3. PRUNE TREES PER ANSI A300 FOR THE FOLLOWING:
   3.1. MAINTENANCE - TO MAINTAIN OR IMPROVE THE TREE'S HEALTH AND STRUCTURE
   3.2. HAZARD REDUCTION - TO REMOVE DEAD LIMBS OR OTHER VISIBLE HAZARDS FROM THE TREE CANOPY
   3.3. CROWN CLEANING - TO SELECTIVELY REMOVE DEAD, DYING OR DISEASED BRANCHES, WEAK BRANCHES, AND SUCKER SPROUTS.
   3.4. CROWN RAISING - TO REMOVE LOWER BRANCHES TO PROVIDE VERTICAL CLEARANCE

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LICENSED PROFESSIONAL
TRICIA C. RICHTER, PLA
FLORIDA LICENSE NUMBER
LA6667244
DATE: 07/26/2023
Tricia C. Richter
Digitally signed by Tricia C. Richter
DN: C=US, E=tricia.richter@kimley-horn.com, CN=Tricia C. Richter
Date: 2023.08.09 17:19:00-04'00'

KHA PROJECT 140726000
DATE JULY 2023
SCALE AS SHOWN
DESIGNED BY AVB
DRAWN BY AVB
CHECKED BY TCR

TREE DISPOSITION PLAN

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L1.01

TREE DISPOSITION

	COMMON NAME	BOTANICAL NAME	DBH	HT	SPR	CONDITION	DISPOSITION	MITIGATION
1.	GOLDEN RAIN TREE	KOELREUTERIA ELEGANS	7.3"	20'	18'	94%	REMAIN	
2.	LEAD TREE	LEUCAENA LAUCOCEPHALA	5"	22'	24'	N/A	REMOVE	NOT REQUIRED
3.	CHRISTMAS PALM	ADONIDIA MERRILLII	20"	16'	20'	84%	REMOVE	ON SITE
4.	CHRISTMAS PALM	ADONIDIA MERRILLII	5"	14'	8'	75%	REMOVE	ON SITE
5.	LEAD TREE	LEUCAENA LAUCOCEPHALA	12"	20'	20'	N/A	REMOVE	NOT REQUIRED
6.	CHRISTMAS PALM	ADONIDIA MERRILLII	6"	22'	6'	50%	REMOVE	ON SITE
7.	CHRISTMAS PALM	ADONIDIA MERRILLII	13"	14'	6'	75%	REMOVE	ON SITE
8.	CHRISTMAS PALM	ADONIDIA MERRILLII	13"	15'	6',	75%	REMOVE	ON SITE
9.	CHINESE FAN PALM	LIVISTONA CHINENSIS	10.5"	12'	10'	34%	REMOVE	1:1 PALM
10.	CHRISTMAS PALM	ADONIDIA MERRILLII	9"	15'	8'	75%	REMOVE	ON SITE
11.	STRANGLER FIG	FICUS AUREA	6.3"	16'	16'	84%	REMOVE	ON SITE
12.	CHRISTMAS PALM	ADONIDIA MERRILLII	4.5"	12'	8'	84%	REMOVE	ON SITE
13.	CHRISTMAS PALM	ADONIDIA MERRILLII	4.6"	18'	10'	72%	REMOVE	ON SITE
14.	CHRISTMAS PALM	ADONIDIA MERRILLII	4.3"	15'	8'	38%	REMOVE	1:1 PALM
15.	CHRISTMAS PALM	ADONIDIA MERRILLII	4.1"	15'	8'	38%	REMOVE	1:1 PALM
16.	GREEN BUTTONWOOD	CONOCARPUS ERECTUS	9"	28'	16'	63%	REMOVE	ON SITE
17.	WEST INDIES MAHOGANY	SWEITENIA MAHAGONI	9.5"	25'	25'	72%	REMOVE	ON SITE
18.	COCONUT PALM	COCOS NUCIFERA	9.7"	28'	14'	75%	REMOVE	ON SITE
19.	MONTGOMERY PALM	VEITCHIA MONTGOMERYANA	7.9"	28'	12'	88%	REMOVE	ON SITE
20.	UNKNOWN	UNKNOWN	5"	N/A	N/A	N/A	REMOVE	1:1 PALM
21.	CABBAGE PALM	SABAL PALMETTO	14.5"	20'	10'	88%	REMOVE	ON SITE
22.	STRANGLER FIG	FICUS AUREA	12"	30'	25'	84%	REMOVE	ON SITE
23.	GUMBO LIMBO	BURSERA SIMARUBA	8.8"	16'	20'	72%	REMOVE	ON SITE
24.	GUMBO LIMBO	BURSERA SIMARUBA	8"	14'	14'	31%	REMOVE	1:1 TREE
25.	GUMBO LIMBO	BURSERA SIMARUBA	6.8"	14'	12'	31%	REMOVE	1:1 TREE
26.	SPINELESS YUCCA	YUCCA ELEPHANTIPES	24"	15'	16'	31%	REMOVE	1:1 TREE
27.	GUMBO LIMBO	BURSERA SIMARUBA	5"	18'	14'	72%	REMOVE	ON SITE
28.	GUMBO LIMBO	BURSERA SIMARUBA	4.8"	14'	16'	72%	REMOVE	ON SITE
29.	GUMBO LIMBO	BURSERA SIMARUBA	3"	14'	10'	72%	REMOVE	ON SITE
30.	GUMBO LIMBO	BURSERA SIMARUBA	6.1"	15'	14'	72%	REMOVE	ON SITE
31.	GUMBO LIMBO	BURSERA SIMARUBA	4.7"	12'	12'	72%	REMOVE	ON SITE
32.	GUMBO LIMBO	BURSERA SIMARUBA	3.8"	10'	10'	75%	REMOVE	ON SITE
33.	ROYAL POINCIANA	DELONIX REGIA	11.7"	28'	25'	81%	REMOVE	ON SITE
34.	GUMBO LIMBO	BURSERA SIMARUBA	4.3"	12'	12'	72%	REMOVE	ON SITE
35.	GUMBO LIMBO	BURSERA SIMARUBA	5.7"	12'	18'	72%	REMOVE	ON SITE
36.	COCONUT PALM	COCOS NUCIFERA	11.5"	28'	16'	63%	REMOVE	ON SITE
37.	CHINESE FAN PALM	LIVISTONA CHINENSIS	6.5"	14'	10'	75%	REMOVE	ON SITE
38.	CABBAGE PALM	SABAL PALMETTO	10"	14'	10'	81%	REMOVE	ON SITE
39.	CABBAGE PALM	SABAL PALMETTO	15.7"	20'	12'	88%	REMOVE	ON SITE
40.	ROYAL PALM	ROYSTONEA REGIA	17.7"	26'	16'	63%	REMOVE	ON SITE
41.	WEEPING FIG	FICUS BENJAMINA	60"	40'	50'	84%	REMAIN	
42.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	12"	25'	30'	81%	REMAIN	
43.	FLORIDA TREMA	TREMA MICRANTHA	13"	20'	20'	75%	REMOVE	ON SITE
44.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	12"	25'	25'	N/A	REMOVE	NOT REQUIRED
45.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	17"	30'	35'	84%	REMOVE	ON SITE
46.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	10"	28'	26'	78%	REMOVE	ON SITE
47.	STRANGLER FIG	FICUS AUREA	18"	30'	40'	75%	REMOVE	ON SITE
48.	ROYAL POINCIANA	DELONIX REGIA	8.6"	16'	24'	72%	REMOVE	ON SITE
49.	CABBAGE PALM	SABAL PALMETTO	12.4"	25'	12'	88%	REMAIN	
50.	CABBAGE PALM	SABAL PALMETTO	16"	16'	10'	47%	REMAIN	
51.	CABBAGE PALM	SABAL PALMETTO	12.3"	28'	12'	88%	REMAIN	
52.	CABBAGE PALM	SABAL PALMETTO	11.7"	22'	10'	88%	REMAIN	
53.	QUEEN PALM	SYAGRUS ROMANZOFFIANUM	10.3"	22'	8'	31%	REMOVE	1:1 PALM
54.	QUEEN PALM	SYAGRUS ROMANZOFFIANUM	11.3"	25'	10'	31%	REMOVE	1:1 PALM
55.	GUMBO LIMBO	BURSERA SIMARUBA	17.8"	28'	12'	84%	REMOVE	ON SITE
56.	SCREWPINE	PANDANUS UTILIS	24"	12'	20'	31%	REMOVE	1:1 TREE
57.	GUMBO LIMBO	BURSERA SIMARUBA	5.1"	25'	12'	75%	REMAIN	
58.	AFRICAN TULIP	SPATHODEA CAMPANULATA	4.6"	16'	12'	31%	REMOVE	1:1 TREE
59.	COCONUT PALM	COCOS NUCIFERA	8.3"	30'	16'	91%	REMAIN	
60.	UNKNOWN PALM	UNKNOWN PALM	6"	N/A	N/A	N/A	REMAIN	
61.	TREMA	TREMA MICRANTHA	11"	18'	24'	78%	REMOVE	ON SITE
62.	TREMA	TREMA MICRANTHA	9.2"	22'	28'	78%	REMOVE	ON SITE
63.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	4.5"	14'	12'	N/A	REMOVE	NOT REQUIRED
64.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	6"	18'	15'	72%	REMOVE	ON SITE
65.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	30"	25'	30'	50%	REMAIN	
66.	BANYAN	FICUS BENGHALENSIS	8"	25'	30'	72%	REMOVE	ON SITE
67.	TREMA	TREMA MICRANTHA	12.2"	22'	22'	78%	REMOVE	ON SITE
68.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	10.8"	30'	20'	N/A	REMOVE	NOT REQUIRED
69.	BANYAN	FICUS BENGHALENSIS	6"	22'	20'	72%	REMOVE	ON SITE
70.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	6.6"	15'	10'	N/A	REMOVE	NOT REQUIRED
71.	CABBAGE PALM	SABAL PALMETTO	12"	16'	12'	72%	REMOVE	ON SITE
72.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	6"	25'	12'	72%	REMAIN	
73.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	30"	30'	30'	50%	REMOVE	ON SITE
74.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	14"	25'	35'	63%	REMOVE	ON SITE
75.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	11"	25'	15'	84%	REMAIN	
76.	BANYAN	FICUS BENGHALENSIS	7.2"	25'	25'	72%	REMOVE	ON SITE
77.	BANYAN	FICUS BENGHALENSIS	6.8"	25'	25'	72%	REMOVE	ON SITE
78.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	9"	25'	20'	72%	REMOVE	ON SITE
79.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	13"	40'	30'	72%	REMOVE	ON SITE
80.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	10"	18'	20'	72%	REMOVE	ON SITE
81.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	8"	20'	20'	N/A	REMOVE	NOT REQUIRED
82.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	5"	15'	10'	N/A	REMOVE	NOT REQUIRED
83.	CABBAGE PALM	SABAL PALMETTO	12"	20'	10'	88%	REMOVE	ON SITE
84.	CABBAGE PALM	SABAL PALMETTO	12"	20'	10'	88%	REMOVE	ON SITE
85.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	11"	22'	20'	N/A	REMOVE	NOT REQUIRED
86.	SOUTHERN LIVE OAK	QUERCIS VIRGINIANA	6"	20'	10'	50%	REMOVE	ON SITE
87.	STRANGLER FIG	FICUS AUREA	5.7"	15'	15'	50%	REMOVE	ON SITE
88.	FLORIDA TREMA	TREMA MICRANTHA	6.5"	25'	25'	78%	REMOVE	ON SITE
89.	CABBAGE PALM	SABAL PALMETTO	14"	20'	10'	81%	REMAIN	
90.	CABBAGE PALM	SABAL PALMETTO	12"	18'	10'	88%	REMOVE	ON SITE
91.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	4.7"	15'	10'	47%	REMOVE	1:1 TREE
92.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	4.9"	25'	18'	72%	REMOVE	ON SITE
93.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	20"	28'	30'	47%	REMOVE	1:1 TREE
94.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	7.2"	25'	8'	50%	REMOVE	ON SITE
95.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	13"	25'	28'	N/A	REMOVE	NOT REQUIRED
96.	CABBAGE PALM	SABAL PALMETTO	14"	12'	14'	88%	REMOVE	ON SITE
97.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	23.4"	25'	25'	47%	REMOVE	1:1 TREE
98.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	4.1"	25'	8'	72%	REMOVE	ON SITE
99.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	24"	25'	20'	81%	REMOVE	ON SITE
100.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	7.3"	25'	15'	88%	REMOVE	ON SITE
101.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	6"	20'	15'	81%	REMOVE	ON SITE
102.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	15"	22'	20'	88%	REMOVE	ON SITE
103.	SLASH PINE	PINUS ELLIOTTII 'DENSA'	10"	N/A	N/A	N/A	REMAIN	
104.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	7.7"	10'	10'	N/A	REMOVE	NOT REQUIRED
105.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	7.5"	22'	20'	N/A	REMOVE	NOT REQUIRED
106.	GUMBO LIMBO	BURSERA SIMARUBA	7.2"	25'	20'	88%	REMAIN	
107.	STRANGLER FIG	FICUS AUREA	48"	25'	30'	88%	REMAIN	
108.	LEAD TREE	LEUCAENA LEUCOCOEPHALA	14.5"	30'	40'	N/A	REMOVE	NOT REQUIRED
109.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	19"	25'	22'	N/A	REMOVE	NOT REQUIRED
110.	CABBAGE PALM	SABAL PALMETTO	12"	26'	12'	97%	REMOVE	ON SITE
111.	CABBAGE PALM	SABAL PALMETTO	16"	25'	14'	97%	REMOVE	ON SITE
112.	CABBAGE PALM	SABAL PALMETTO	13"	22'	12'	97%	REMOVE	ON SITE
113.	FLORIDA TREMA	TREMA MICRANTHA	8"	25'	25'	81%	REMOVE	ON SITE
114.	FLORIDA TREMA	TREMA MICRANTHA	7"	25'	25'	81%	REMOVE	ON SITE
115.	CABBAGE PALM	SABAL PALMETTO	12"	12'	12'	91%	REMOVE	ON SITE
116.	CABBAGE PALM	SABAL PALMETTO	16"	18'	12'	91%	REMOVE	ON SITE
117.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	6.5"	25'	15'	N/A	REMOVE	NOT REQUIRED
118.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	6"	25'	15'	N/A	REMOVE	NOT REQUIRED
119.	LEAD TREE	LEUCAENA LEUCOCEPHALA	46"	25'	30'	N/A	REMOVE	NOT REQUIRED
120.	LEAD TREE	LEUCAENA LEUCOCEPHALA	31"	30'	40'	N/A	REMOVE	NOT REQUIRED
121.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	8"	20'	15'	N/A	REMOVE	NOT REQUIRED
122.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	5.5"	25'	15'	N/A	REMOVE	NOT REQUIRED
123.	LEAD TREE	LEUCAENA LEUCOCEPHALA	12"	35'	30'	N/A	REMOVE	NOT REQUIRED
124.	LEAD TREE	LEUCAENA LEUCOCEPHALA	7"	35'	20'	N/A	REMOVE	NOT REQUIRED
125.	FLORIDA TREMA	TREMA MICANTHRA	6"	18'	20'	34%	REMOVE	1:1 TREE
126.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	6"	20'	15'	N/A	REMOVE	NOT REQUIRED
127.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	17"	25'	20'	N/A	REMOVE	NOT REQUIRED
128.	CABBAGE PALM	SABAL PALMETTO	14"	16'	10'	94%	REMAIN	
129.	CABBAGE PALM	SABAL PALMETTO	17"	20'	10'	94%	REMAIN	
130.	CABBAGE PALM	SABAL PALMETTO	13"	16'	10'	94%	REMAIN	
131.	LEAD TREE	LEUCAENA LEUCOCEPHALA	8"	25'	25'	N/A	REMOVE	NOT REQUIRED
132.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDEA	5"	18'	12'	N/A	REMOVE	NOT REQUIRED
133.	LEAD TREE	LEUCAENA LEUCOCEPHALA	9"	25'	25'	N/A	REMOVE	NOT REQUIRED
134.	CABBAGE PALM	SABAL PALMETTO	12"	25'	12'	91%	REMAIN	
135.	CABBAGE PALM	SABAL PALMETTO	15"	25'	12'	94%	REMAIN	

TREE DISPOSITION - OFF SITE TREES

	COMMON NAME	BOTANICAL NAME	DBH	HT	SPR	CONDITION	DISPOSITION	MITIGATION
1A.	CABBAGE PALM	SABAL PALMETTO	18"	25'	12'	94%	REMAIN	
2A.	STRANGLER FIG	FICUS AUREA	41"	35'	40'	84%	REMAIN	
3A.	CABBAGE PALM	SABAL PALMETTO	13"	14'	12'	91%	REMAIN	
4A.	CABBAGE PALM	SABAL PALMETTO	14"	15'	14'	91%	REMAIN	
5A.	CABBAGE PALM	SABAL PALMETTO	13"	22'	14'	91%	REMAIN	
6A.	TREMA	TREMA MICRANTHA	6.1"	25'	22'	88%	REMAIN	
7A.	TREMA	TREMA MICRANTHA	6.5"	25'	18'	81%	REMAIN	
8A.	TREMA	TREMA MICRANTHA	8.9"	25'	22'	81%	REMAIN	
9A.	LIVE OAK	QUERCUS VIRGINIANA	9.5"	24'	20'	84%	REMAIN	
10A.	TREMA	TREMA MICRANTHA	5.1"	22'	18'	81%	REMAIN	
11A.	CABBAGE PALM	SABAL PALMETTO	14"	20'	12'	91%	REMAIN	
12A.	CABBAGE PALM	SABAL PALMETTO	12"	18'	12'	88%	REMOVE	ON SITE
13A.	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	22"	40'	50'	88%	REMOVE	ON SITE
14A.	CARROTWOOD	CUPANIOPSIS ANACARDIOIDES	11.2"	25'	22'	N/A	REMOVE	NOT REQUIRED
15A.	CABBAGE PALM	SABAL PALMETTO	14"	16'	12'	91%	REMOVE	ON SITE
16A.	CABBAGE PALM	SABAL PALMETTO	13"	18'	12'	91%	REMOVE	ON SITE
17A.	MONTGOMERY PALM	VEITCHIA ARECINA	6"	20'	10'	91%	REMAIN	

TREE DISPOSITION SUMMARY:

		MITIGATION REQUIRED	MITIGATION PROVIDED
TOTAL TREES PROTECTED ON SITE	10		
OFFSITE	6		
TOTAL TREES REMOVED ON SITE < 50% INCLUDES 27 INVASIVE TREES ON SITE > 50%	 36 45	 9 TREES @ 1:1 423.2"	 9 TREES @ 1:1 423.2"
OFF SITE < 50% INCLUDES 1 INVASIVE TREE OFF SITE > 50%	1 1	0 22"	0 22"
TOTAL PALMS PROTECTED ON SITE	12		
OFFSITE	6		
TOTAL PALMS REMOVED ON SITE < 50% ON SITE > 50% OFF SITE < 50% OFF SITE > 50%	 6 26 0 3	 6 PALMS @ 1:1 493' 52'	 6 PALMS @ 1:1 493' 52'

NOTE: PLEASE REFER TO TREE MITIGATION EXCEL DOCUMENT INCLUDED IN THE SUBMITTAL FOR ADDITIONAL BREAKDOWN.

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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LA #6667244
DATE: 07/26/2023

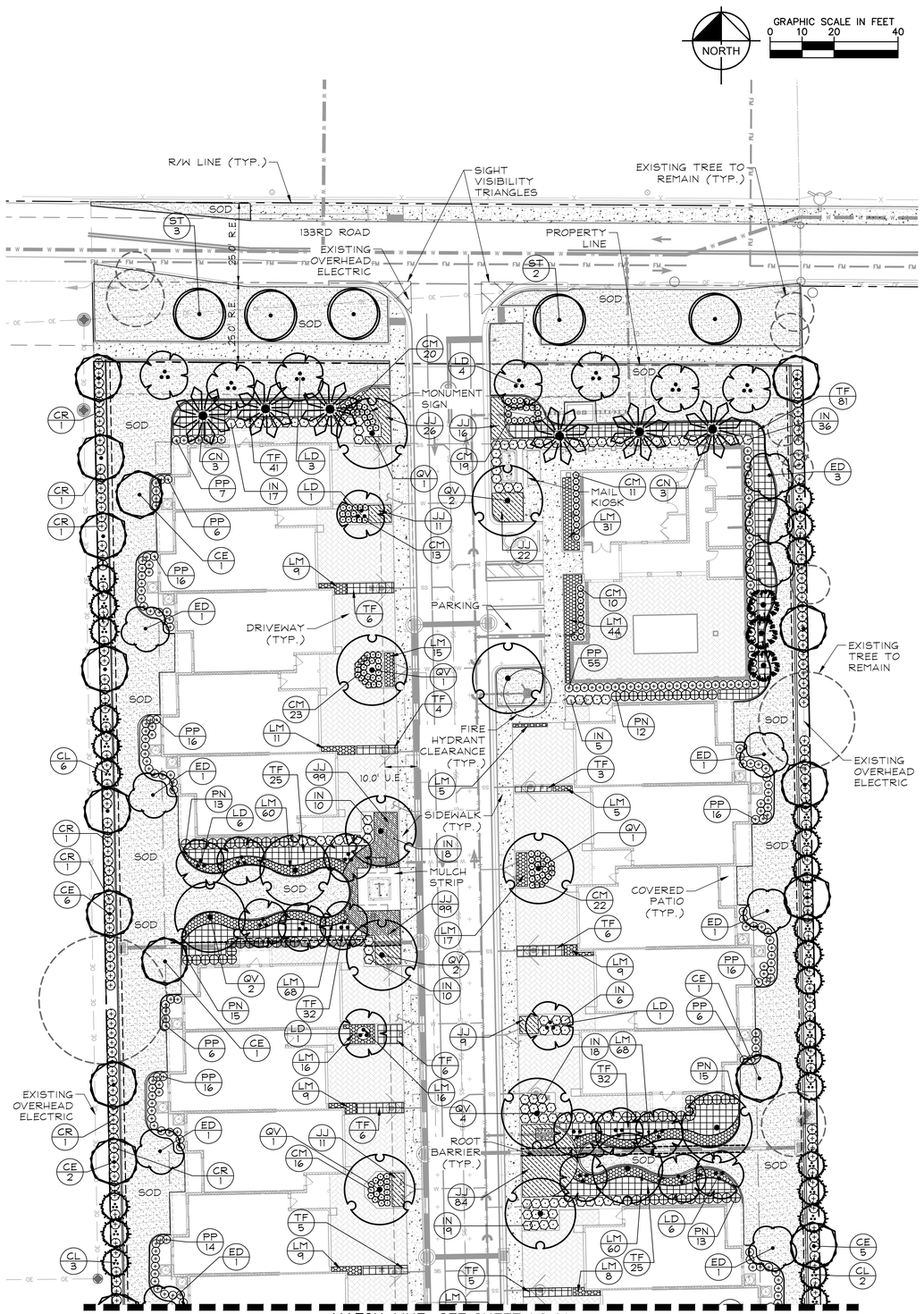
KHA PROJECT 140726000
DATE JULY 2023
SCALE AS SHOWN
DESIGNED BY AVB
DRAWN BY AVB
CHECKED BY TCR

TREE DISPOSITION PLAN

DELRAY TOWNHOMES

PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L1.02



PLANT SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	NATIVE	QTY
BS	Bursera simaruba 6' Standard Trunk, 8' CT	Gumbo Limbo	B & B	4" Cal.	16' HT x 7' SPR	Yes	6
CE	Conocarpus erectus 'Sericeus' 6' Standard Trunk, 8' CT	Silver Buttonwood	B & B	3.5" Cal.	16' HT x 7' SPR	Yes	22
ED	Elaeocarpus decipiens 6' Standard Trunk, 8' CT	Japanese Blueberry	B & B	3.5" Cal.	16' HT x 7' SPR		14
LD	Lagerstroemia indica 'Tuscarora' 6' Standard Trunk, 8' CT	'Tuscarora' Crape Myrtle	B & B	3.5" Cal.	16' HT x 6' SPR		31
QV	Quercus virginiana 'Cathedral' 6' Standard Trunk, 8' CT	'Cathedral' Live Oak	B & B	4" Cal.	16' HT x 7' SPR	Yes	34
ST	Tabebuia aurea 6' Standard Trunk, 8' CT	Silver Trumpet	B & B	3.5" Cal.	16' H x 7' SPR	Yes	5
TD	Taxodium distichum 6' Standard Trunk, 8' CT	Bald Cypress	B & B	4" Cal.	16' H x 7' SPR		4
TD2	Taxodium distichum 6' Standard Trunk, 8' CT	Bald Cypress	B & B	8" Cal.	20' HT X 9' SPR		11

PALM TREES	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	NATIVE	QTY
CL	Dypsis lutescens 8' CT	Areca Palm	F.G.		16' OA		40
CN	Cocos nucifera Single Trunk. 8' CT	Coconut Palm	F.G.		16' OA		6
SS	Sabal palmetto	Sabal Palm	F.G.		18' - 22' CT	Yes	18
VA	Veitchia arecina Single Trunk. 8' CT	Montgomery Palm	F.G.		16' OA		6

SHRUBS	BOTANICAL NAME	COMMON NAME	CONT	O.C.	SIZE	NATIVE	QTY
CM	Codiaeum variegatum 'Mammey'	'Mammey' Croton	Cont.	24" O.C.	24"		178
CR	Chrysobalanus icaco 'Red Tip'	'Red Tip' Cocoplum	Cont.	36" O.C.	24"x24"	Yes	449
IN	Ixora coccinea 'Nora Grant'	'Nora Grant' Red Ixora	Cont.	36" O.C.	24"x24"		231
PN	Psychotria nervosa	Wild Coffee	Cont.	36" O.C.	24"x24"		109
PP	Podocarpus macrophyllus 'Pringles'	Pringles Dwarf Podocarpus	Cont.	30" O.C.	24"x24"		257

SHRUB AREAS	BOTANICAL NAME	COMMON NAME	CONT	O.C.	SIZE	NATIVE	QTY
JJ	Jasminum volubile	Wax Jasmine	Cont.	24" O.C.	15"x15"		725
LM	Liriope muscari 'Emerald Goddess'	'Emerald Goddess' Liriope	Cont.	18" O.C.	12"x12"		1,006
TF	Tripsacum floridanum 'Dwarf'	'Dwarf' Florida Gamagrass	Cont.	36" O.C.	18"x18"	Yes	384

GROUND COVERS	BOTANICAL NAME	COMMON NAME	CONT	O.C.	SIZE	NATIVE	QTY
SOD	Stenotaphrum secundatum 'Floratam'	Floratam St. Augustine Grass	Sod				± 33,743 sf

CITY OF DELRAY BEACH CODE REQUIREMENTS: # ALL CALCULATIONS BASED ON PROPERTY LIMITS.	
A. TOTAL LOT AREA:	132,689 SF
B. TOTAL STRUCTURES, PARKING, WALKWAYS, DRIVES, ETC.	80,298 SF
C. TOTAL PERVIOUS LOT AREA: C = 132,689 SF - 80,298 SF	52,391 SF
D. AREA OF SHRUBS AND GROUND COVER REQUIRED: D = 52,391 # .3	15,718 SF
E. AREA OF SHRUBS AND GROUND COVERS PROVIDED:	20,605 SF
F. NATIVE VEGETATION REQUIRED: F = 15,718 SF # .25	3,930 SF
G. NATIVE VEGETATION PROVIDED:	6,656 SF
H. TOTAL PAVED VEHICULAR USE AREA:	28,479 SF
I. TOTAL INTERIOR LANDSCAPE AREA REQUIRED: I = 28,479 # .10	2,848 SF
J. TOTAL INTERIOR LANDSCAPE AREA PROVIDED:	3,193 SF
K. TOTAL INTERIOR SHADE TREES REQUIRED: K = 2,848 / 125 SF	23 TREES
L. TOTAL INTERIOR SHADE TREES PROVIDED:	23 TREES
M. TOTAL LINEAR FEET SURROUNDING PARKING OR VEHICULAR USE AREAS:	1,484 LF
N. TOTAL NUMBER OF PERIMETER TREES REQUIRED: NORTH = 198 LF / 30 LF= 7 SOUTH = 222 LF / 30 LF= 8 EAST = 625 LF / 30 LF= 21 WEST = 625 LF / 30 LF= 21	7 TREES 8 TREES 21 TREES 21 TREES
O. TOTAL NUMBER OF PERIMETER TREES PROVIDED:	57 TREES
P. TOTAL NUMBER OF STREET TREES 198 LF / 40 LF = 5	5 TREES
Q. TOTAL NUMBER OF FOUNDATION PLANTING TREES 104 LF / 20 LF = 6	6 TREES
R. TOTAL NUMBER OF PARKING ISLAND TREES 2 ISLAND = 2	2 TREES

PLANTING NOTES:

1. CONTRACTOR SHALL REFER TO THE LANDSCAPE PLANTING DETAILS, PLANT LIST, GENERAL NOTES AND ALL CONTRACT DOCUMENTS FOR FURTHER AND COMPLETE INSTRUCTIONS.
2. PLANT LIST QUANTITIES ARE PROVIDED FOR CONVENIENCE. IN THE EVENT OF QUANTITY DISCREPANCIES THE DRAWING SHALL TAKE PRECEDENCE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BIDDING.
3. PLANT SIZES LISTED ARE THE MINIMUM SIZE THAT WILL BE ACCEPTED FOR THAT PLANT.
4. ANY SUBSTITUTION IN SIZE AND/OR PLANT MATERIAL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT IN WRITING. ALL PLANTS WILL BE SUBJECT TO APPROVAL BY LANDSCAPE ARCHITECT AND/OR OWNERS REPRESENTATIVE BEFORE PLANTING CAN BEGIN.
5. CONTRACTOR SHALL FIELD ADJUST LOCATION OF PLANT MATERIAL AS NECESSARY TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES AND/OR INTERFERE WITH EXISTING ABOVE GROUND ELEMENTS. ALL CHANGES REQUIRED SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AND SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT.
6. THE CONTRACTOR SHALL BEAR ALL COSTS OF TESTING OF SOILS, AMENDMENTS, ETC. ASSOCIATED WITH THE WORK AND INCLUDED IN THE SPECIFICATIONS.
7. CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE LIMITS OF WORK AND EXISTING CONDITIONS AND VERIFY ALL INFORMATION. IF DISCREPANCIES EXIST, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IN WRITING WITHIN SEVEN CALENDAR DAYS OF NOTICE TO PROCEED.
8. ALL NEW AND TRANSPLANTED PLANT MATERIAL SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM DESIGNED TO ALLOW FOR HEAD TO HEAD COVERAGE, 100% COVERAGE WITH 100% OVERLAP.
9. ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER, OR DRAINAGE EASEMENTS SHALL CONFORM TO CITY OF DELRAY BEACH STANDARD DETAILS LD 1.1 AND LD 1.2.
10. ALL PROHIBITED PLANT SPECIES SHALL BE ERADICATED FROM THE DEVELOPMENT SITE AND REESTABLISHMENT OF PROHIBITED SPECIES SHALL NOT BE PERMITTED.
11. HEDGES IN THE SITE VISIBILITY TRIANGLE SHALL BE MAINTAINED AT 30" IN HEIGHT.

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Tricia C. Richter
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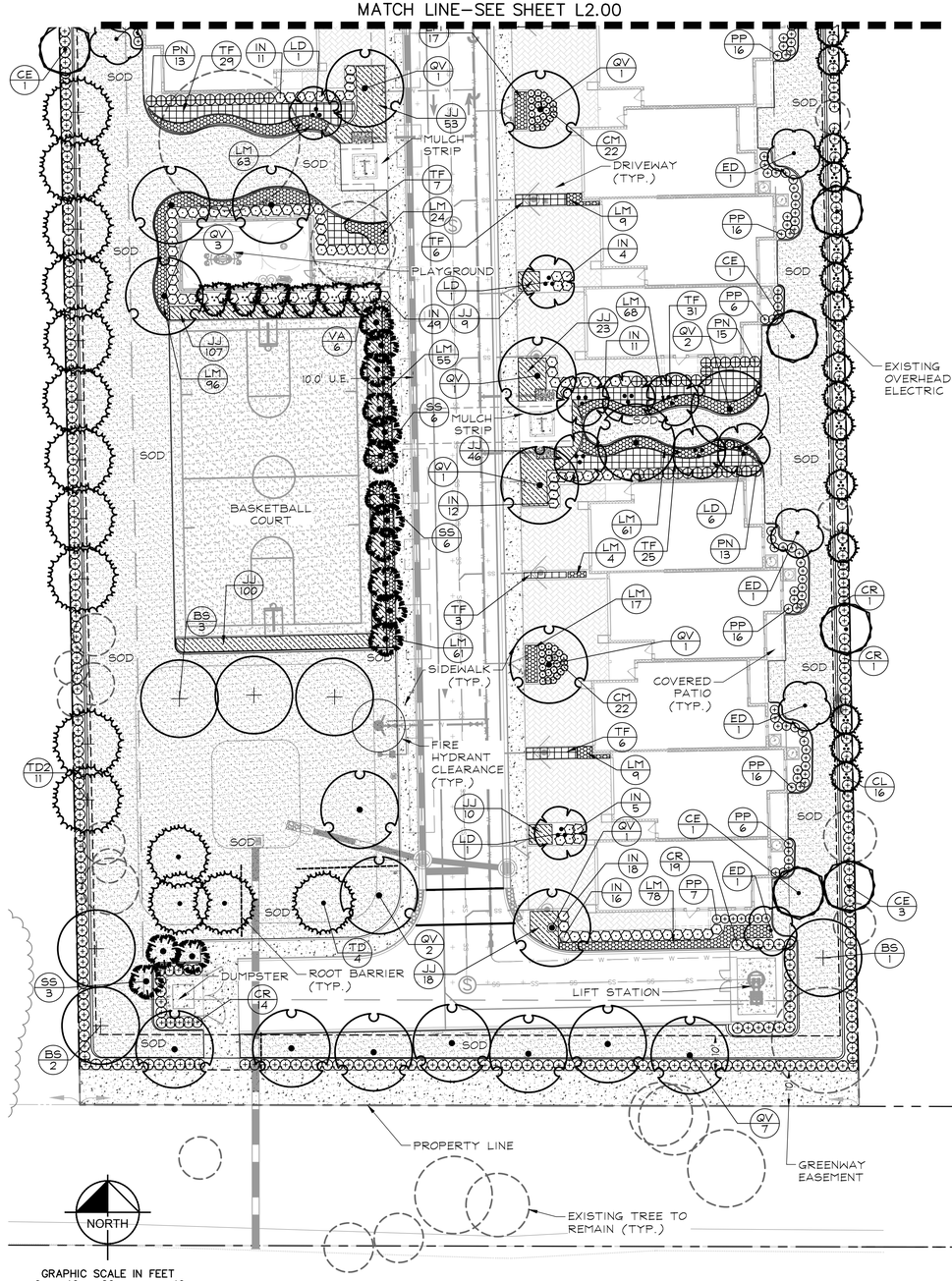
DN: C=US, E=tricia.richter@kimley-horn.com, CN=Tricia C. Richter
Date: 2023.08.09 14:19:20 -04'00'

KHA PROJECT	140726000
DATE	JULY 2023
SCALE	AS SHOWN
DESIGNED BY	AVB
DRAWN BY	AVB
CHECKED BY	TCR

LANDSCAPE PLAN

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L2.00

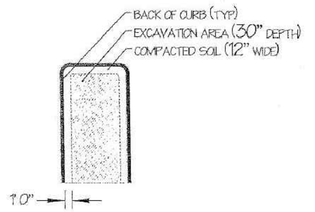


PLANT SCHEDULE

TREES	COMMON NAME
BS	Gumbo Limbo
CE	Silver Buttonwood
ED	Japanese Blueberry
LD	'Tuscarora' Crape Myrtle
QV	'Cathedral' Live Oak
ST	Silver Trumpet
TD	Bald Cypress
TD2	Bald Cypress
PALM TREES	**COMMON NAME**
CL	Areca Palm
CN	Coconut Palm
SS	Sabal Palm
VA	Montgomery Palm
SHRUBS	**COMMON NAME**
CM	'Mammey' Croton
CR	'Red Tip' Cocoplum
IN	'Nora Grant' Red Ixora
PN	Wild Coffee
PP	Pringles Dwarf Podocarpus
SHRUB AREAS	**COMMON NAME**
JJ	Wax Jasmine
LM	'Emerald Goddess' Liriope
TF	'Dwarf' Florida Gamagrass
GROUND COVERS	**COMMON NAME**
SOD	Floratam St. Augustine Grass

KEY:

- VEHICULAR USE AREA 28,479 SF
- INTERIOR LANDSCAPE AREA 3,193 SF
- FOUNDATION PLANTINGS AREA 2,423 SF
- OPEN SPACE AREA 31,503 SF
- LANDSCAPE BUFFER AREA 15,735 SF
- PARKING AND VEHCILUAR USE PERIMETER 1,484 LF



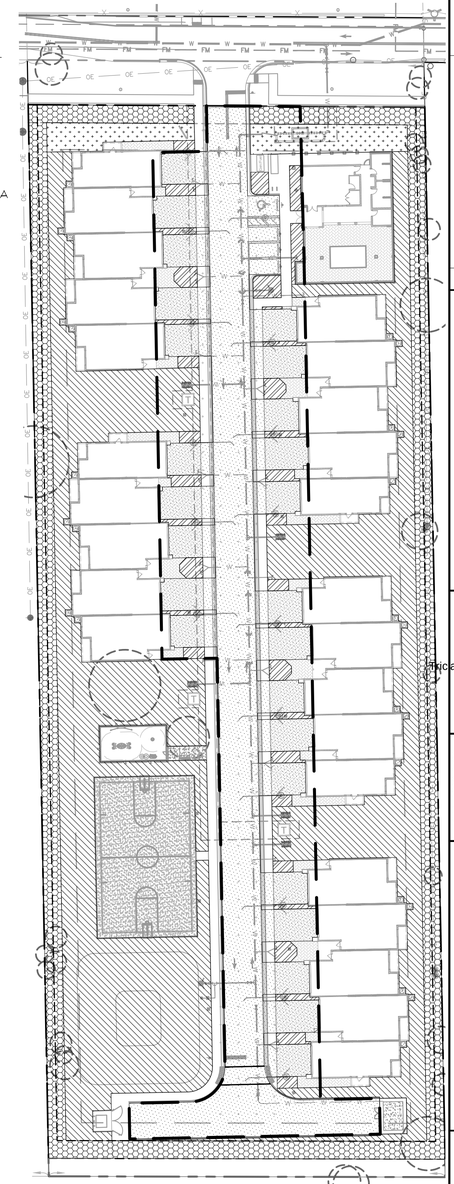
NOTES:

1. ALL EXISTING SOIL WITHIN LANDSCAPE AREAS ADJACENT TO VEHICULAR USE AREAS IS REQUIRED TO BE REMOVED (TO 30" BELOW GRADE), INSPECTED AND THEN REPLACED WITH A TOPSOIL MIX AS NEEDED IN SPECIFICATION E/LI.11. TOPSOIL MIX SHALL BE SCREENED OF ROCK.

2. ALL PROPERTIES UNDER THIS SECTION SHALL BE REQUIRED TO HAVE AN OPEN LANDSCAPE BED INSPECTION PRIOR TO BACKFILLING TO INSURE THE THIRTY (30) INCH DEPTH HAS BEEN MET.

A Typical Parking Island Excavation Detail

NTS



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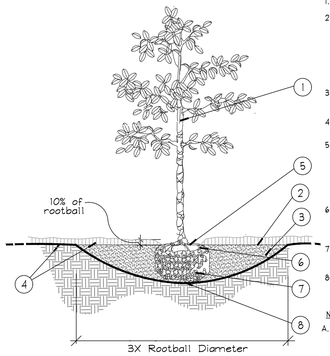
LANDSCAPE PLAN

DELRAY TOWNHOMES

PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L2.01



1. TRUNK
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES COVER ROOTBALL SIDES AND EXTEND 18" BEYOND ON ALL SIDES. NO MULCH SHALL BE PLACED OVER TRUNK.
3. SHALLOW/ WIDE PLANT HOLE; TOP SHALL BE 3X THE SIZE OF ROOTBALL.
4. FINISHED GRADE - LANDSCAPE SOIL
5. FIND TOP-MOST ROOT ON ROOTBALL; POSITION ROOTBALL SO THIS TOP ROOT IS 1-2" ABOVE LANDSCAPE SOIL. (APPROX. 10% OF ROOTBALL SHALL BE ABOVE LANDSCAPE SOIL)
6. B & B OR CONTAINER (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).
7. REMOVE ALL SYNTHETIC MATERIALS FROM ROOTBALL.
8. ROOTBALLS SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT SETTLING.

NOTES:

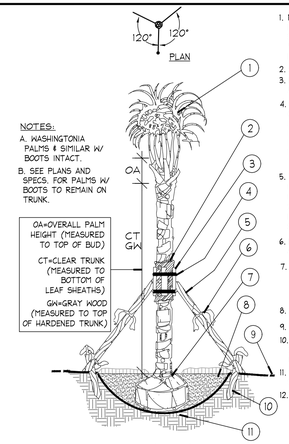
A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

C. SEE PRE-APPROVED STAKING METHODS, THIS SHEET

* ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

A Tree Planting
SECTION — NTS



NOTES:

A. WASHINGTONIA PALMS # SIMILAR W/ BOOTS INTACT.

B. SEE PLANS AND SPECS. FOR PALMS W/ BOOTS TO REMAIN ON TRUNK.

OA=OVERALL PALM HEIGHT (MEASURED TO TOP OF BUD)

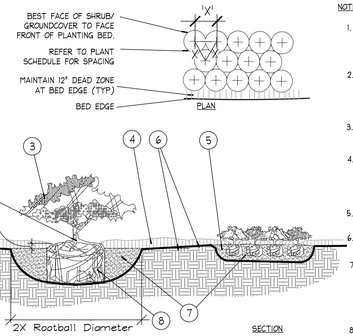
CT=CLEAR TRUNK (MEASURED TO BOTTOM OF LEAF SHEATHS)

GW=GRAY WOOD (MEASURED TO TOP OF HARDENED TRUNK)

1. MINIMUM OF NINE (9) GOOD PALM FRONDS; PRUNE AND TIE FRONDS WITH HEMP TWINE. SABAL PALMS TO BE SELECTIVELY "HURRICANE CUT", LEAVING ONLY NEWLY-EMERGING GROWTH.
2. 5 LAYERS OF BURLAP TO PROTECT TRUNK.
3. FIVE (5) 18'L, 2X4 WOOD BATTENS. UNTREATED, #2
4. SECURE BATTENS WITH TWO (2) 3/4" CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. NO NAILS SHALL BE DRIVEN INTO PALM. HEIGHT OF BATTENS SHALL BE LOCATED PROPORTIONATELY TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
5. THREE (3) 8'L 2X4 SUPPORTS. NAIL (DRILL AND NAIL IF NECESSARY) TO BATTENS AND 2" X 4" STAKES. PALMS SHALL BE PLUMB VERTICALLY UNLESS OTHERWISE NOTED.
6. PROVIDE FLAGGING AT MIDPOINT AND BASE OF SUPPORTS.
7. TOP-MOST ROOT SHALL BE VISIBLE AT THE SURFACE OF THE ROOTBALL, SLIGHTLY ABOVE SURROUNDING GRADE.
8. 3" SPECIFIED MULCH
9. FINISH GRADE
10. 24"L (MIN.) 2X4 P.T. WOOD STAKES, NAIL TO SUPPORT POLES
11. PREPARED PLANTING SOIL AS SPECIFIED
12. ALTERNATE PALM ANCHORING SYSTEMS MAY BE SUBSTITUTED UPON APPROVAL BY OWNER OR OWNER'S REPRESENTATIVE

PRE-APPROVED SYSTEMS:
#BROOKS TREE BRACE SYSTEM
#ARBOR TIE TREE BRACING

B Palm Planting and Staking
SECTION — NTS

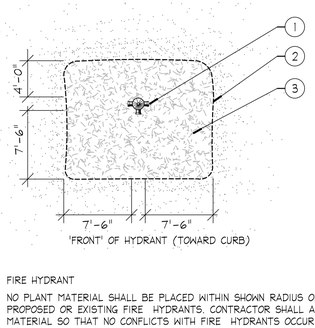


NOTES:

1. FIND POINT WHERE TOPMOST ROOT EMERGES FROM TRUNK WITHIN 2" OF SURFACE. CLEAR EXCESS SOIL IF NECESSARY.
2. TOP 10% OF SHRUB AND GROUNDCOVER ROOTBALLS TO BE PLANTED ABOVE THE LANDSCAPE GRADE. DO NOT COVER EXPOSED 10% ON SIDES WITH SOIL.
3. PRUNE ALL LIKE SHRUBS WITHIN A PLANTED MASS TO ACHIEVE A UNIFORM MASS/HEIGHT.
4. 3" MINIMUM MULCH AS SPECIFIED - DO NOT COVER ENTIRE SHRUB ROOTBALL OR CREATE 'WATER RINGS'. ONLY COVER SIDES OF ROOTBALL WITH MULCH
5. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
6. FINISHED GRADE (SEE GRADING PLAN).
7. PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND-COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
8. SCARIFY ROOTBALL SIDES AND BOTTOM.

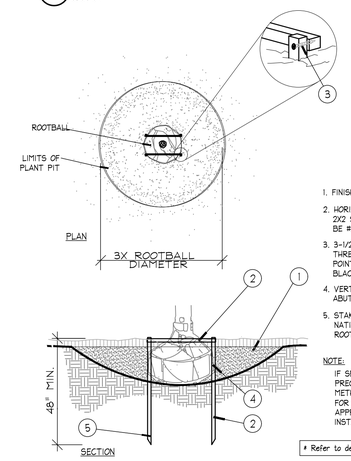
* ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

C Shrub / Groundcover Planting
PLAN/SECTION — NTS



1. FIRE HYDRANT
2. NO PLANT MATERIAL SHALL BE PLACED WITHIN SHOWN RADIUS OF ALL PROPOSED OR EXISTING FIRE HYDRANTS. CONTRACTOR SHALL ADJUST PLANT MATERIAL SO THAT NO CONFLICTS WITH FIRE HYDRANTS OCCUR ON SITE.
3. PROVIDE A MULCH, 3" DEPTH MIN., SURROUNDING AREA INDICATED.

D Fire Hydrant Clear Zone
PLAN — NTS

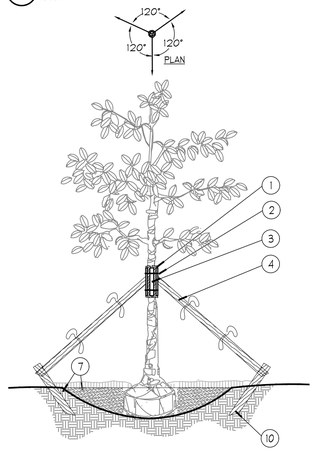


1. FINISH GRADE
2. HORIZONTAL 2X2 SCREWED TO 2X2 STAKE. ALL WOOD SHALL BE #2 UNTREATED.
3. 3-1/2" DRYWALL SCREW, THREAD SIZE 12, SHARP POINT, FULL THREAD, BLACK PHOSPHATE FINISH
4. VERTICAL STAKES SHALL ABUT SIDE OF ROOTBALL
5. STAKES TO EXTEND INTO NATIVE SOIL BY 1-1/2 X THE ROOTBALL DEPTH MIN.

NOTE:
IF SPATIAL REQUIREMENTS PRECLUDE STAKING WITH THIS METHOD, SUBMIT ALTERNATE FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLING PLANT.

* Refer to details B and D for planting

E Staking - up to 65 gal. or B&B to 3-1/2" Cal.
PLAN/SECTION — NTS



1. FIVE (5) LAYERS OF BURLAP TO PROTECT TRUNK
2. TWO STEEL BANDS TO SECURE BATTENS
3. FIVE 2 X 4 X 18'L WOOD BATTENS
4. THREE (3) 2" X 8' LODGE POLES. DRILL, USING GALVANIZED SCREWS, TO BATTENS AND 2" X 4" STAKES. NO SCREWS SHALL PENETRATE TREE. FLAG AT MIDPOINT AND AT BASE.
10. 2" x 4" x 3' (MIN), P.T. WOOD STAKES BURIED 3" BELOW FINISHED GRADE.
7. FINISHED GRADE (SEE GRADING PLAN.)

NOTES:

A. ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

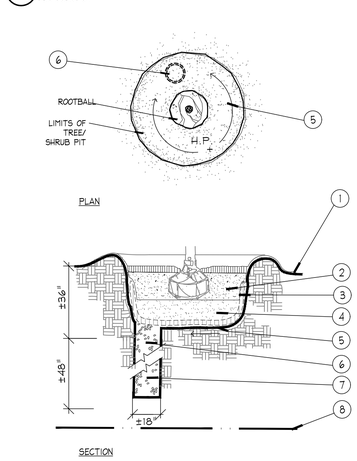
C. ALTERNATE TREE ANCHORING SYSTEMS MAY BE SUBSTITUTED FOR WOOD STAKING SYSTEM UPON APPROVAL BY OWNER OR OWNER'S REPRESENTATIVE

PRE-APPROVED SYSTEMS:
#BROOKS TREE BRACE SYSTEM
#ARBOR TIE TREE BRACING

D. RUBBER HOSE/WIRE SYSTEMS ARE NOT ALLOWED.

* Refer to details B and D for planting

F Large Tree Staking - 100 Gal + or B&B 4" +
SECTION — NTS

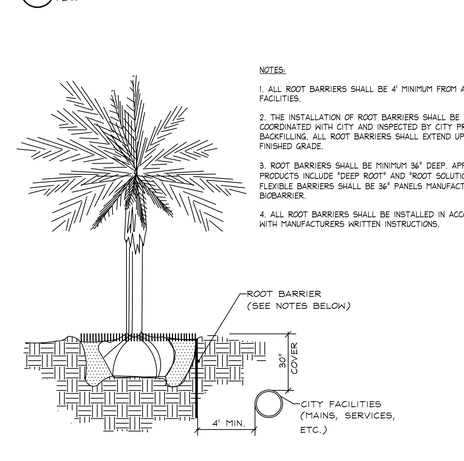


1. FINISH GRADE
2. BACKFILL WITH PREPARED PLANTING SOIL MIX AS SPECIFIED.
3. FILTER CLOTH, MIRAFI 500X OR BETTER
4. 12" CLEAN SAND, COMPACTED. ADJUST LAYER THICKNESS SO TOP OF ROOTBALL IS AT LEAST 1" ABOVE FINISHED GRADE.
5. SLOPE BOTTOM TO DRAIN
6. 1'@'s AUGURED HOLE PENETRATE THROUGH OCCLUDING LAYER TO WATER TABLE OR TO A DEPTH OF 7' TO ASSURE PROPER PERCOLATION.
7. BACKFILL WITH 1/2" - 3/4" GRAVEL.
8. WATER TABLE. (DEPTH VARIES)

NOTE:
FOR A PARKING ISLAND PLANTING SITUATION, CONTRACTOR TO BACKFILL ENTIRE LENGTH OF PLANTING AREA TO WITHIN 6" OF BACK OF CURB OR EDGE OF PAVEMENT.

REFER TO NOTE 0.3 OF WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

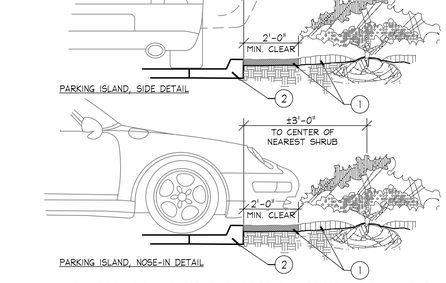
G Poor Drainage Condition
PLAN/SECTION — NTS



NOTES:

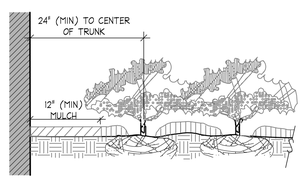
1. ALL ROOT BARRIERS SHALL BE 4' MINIMUM FROM ALL CITY FACILITIES.
2. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH CITY AND INSPECTED BY CITY PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
3. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE 'DEEP ROOT' AND 'ROOT SOLUTIONS'. FLEXIBLE BARRIERS SHALL BE 36" PANELS MANUFACTURED BY BIOBARRIER.
4. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

H Typical Tree with Root Barrier LD 1.1
NTS



1. INSTALL CONTINUOUS MULCH BED ADJACENT TO PARKING SPACES AS SHOWN. MULCH SHALL BE MIN. 3" DEEP.
   NO POP-UP IRRIGATION HEADS SHALL BE LOCATED WITHIN 24" OF A PARKING SPACE ON ANY SIDE
2. CURB OR PARKING LOT EDGE, BY OTHERS

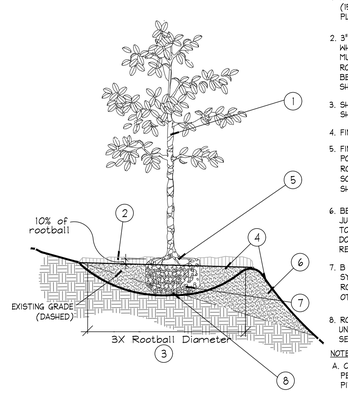
I Parking Space/Curb Planting
SECTION — NTS



NOTES

* CLEAR ZONE: 24" MIN. FROM BUILDING TO CENTER OF NEAREST SHRUB.

J Plantings Adjacent to Buildings
SECTION — NTS



1. TREES, PALMS, AND LARGE SHRUBS (15 GAL OR GREATER) SHALL BE PLANTED IN SIMILAR MANNER
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES COVER ROOTBALL SIDES AND EXTEND 18" BEYOND ON ALL SIDES. NO MULCH SHALL BE PLACED OVER TRUNK.
3. SHALLOW/ WIDE PLANT HOLE; TOP SHALL BE 3X THE SIZE OF ROOTBALL.
4. FINISHED GRADE - LANDSCAPE SOIL
5. FIND TOP-MOST ROOT ON ROOTBALL; POSITION ROOTBALL SO THIS TOP ROOT IS 1-2" ABOVE LANDSCAPE SOIL. (APPROX. 10% OF ROOTBALL SHALL BE ABOVE LANDSCAPE SOIL)
6. BERM SOIL SO THAT TOP OF BERM IS JUST BELOW THE TOP 10% OF THE TOP OF THE ROOTBALL. SLOPE DOWNHILL PORTION OF BERM AS REQUIRED TO MEET EXISTING GRADE.
7. B & B OR CONTAINER REMOVE ALL SYNTHETIC MATERIALS FROM ROOTBALL. (SEE SPECIFICATIONS FOR OTHER ROOT BALL REQUIREMENTS)
8. ROOTBALLS SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT SETTLING.

NOTES:

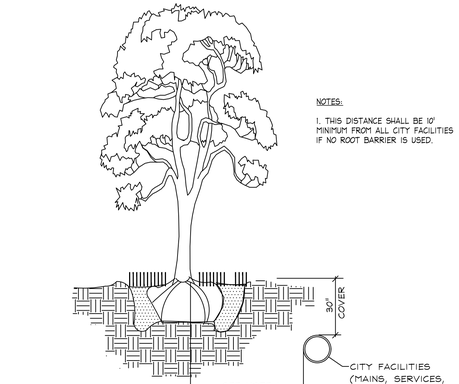
A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

C. SEE PRE-APPROVED STAKING METHODS, THIS SHEET

* ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

K Planting on a Slope
SECTION — NTS



NOTES:

1. THIS DISTANCE SHALL BE 10' MINIMUM FROM ALL CITY FACILITIES IF NO ROOT BARRIER IS USED.

L Typical Tree without Root Barrier LD 1.2
NTS

No.	REVISIONS	DATE	BY

Kimley»Horn
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LICENSED PROFESSIONAL
TRICIA C. RICHTER, PLA
FLORIDA LICENSE NUMBER
LA0012244
DATE: 07/07/2023

Tricia C. Richter
Digitally signed by Tricia C. Richter
DN: C=US, E=Tricia.richter@kimley-horn.com, CN=Tricia C. Richter
Date: 2023.08.09 07:19:23 -04'00'

KHA PROJECT	140726000
DATE	JULY 2023
SCALE	AS SHOWN
DESIGNED BY	AVB
DRAWN BY	AVB
CHECKED BY	TCR

LANDSCAPE DETAILS

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L2.10

GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK

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

B. PROTECTION OF EXISTING STRUCTURES

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

C. PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

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

D. MATERIALS

1. GENERAL

MATERIALS LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL. UPON SUBMITTALS' APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SUBMITTAL
MULCH	PRODUCT DATA
TOPSOIL MIX	AMENDMENT MIX/ PRODUCT DATA/ TEST RESULTS
PLANTS	PHOTOGRAPHS OF ONE (1) OF EACH SPECIES (OR TAGGED IN NURSERY) CLIENT-REQUESTED TAGGING MAY SUBSTITUTE PHOTOS. INDICATE SIZES (HEIGHT/WIDTH) AND QUALITY PER SPEC.
FERTILIZER	PRODUCT DATA
INNOCULANT	PRODUCT DATA
HERBICIDE	PRODUCT DATA
STAKING/GUYING	FOR ALTERNATE TO DETAILS: SEND PRODUCT DATA, DETAIL

2. PLANT MATERIALS

A. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE

B. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

C. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

1. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF 20% CLEAN FLORIDA MUCK AND 80% PARTS CLEAN SAND. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.
2. MUCK (OR MUCKY PEAT) FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, AND OF A VERY HIGH ORGANIC CONTENT DERIVED FROM FLORIDA SOURCES; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.
3. SAND FOR USE IN PREPARING SOIL MIXTURE SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL BY THE OWNER.
4. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.
5. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

F. WATER

WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

*WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

G. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

*FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. MULCH

MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A MINIMUM DEPTH OF 3 INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE). TYPE OF MATERIAL: "FLORIMULCH" OR SHREDDED, STERILE EUCALYPTUS MULCH

I. DIGGING AND HANDLING

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

J. CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION, FLORIDA #1 OR BETTER.
2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
3. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.
4. SUBSTITUTION OF NON-CONTAINER GROWN MATERIAL FOR MATERIAL EXPLICITLY SPECIFIED TO BE CONTAINER GROWN WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL IS OBTAINED FROM THE OWNER OR OWNER'S REPRESENTATIVE.

K. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK

PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST

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

N. FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. THIS CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES.

O. PLANTING PROCEDURES

1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL NATIONAL ONE CALL - 811 - TO LOCATE UTILITIES.
3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 30". CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 30" DEEP EXCAVATION BY THE CONTRACTOR, AND ADEQUATE PERCOLATION CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.
4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
5. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE , PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES, METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 260.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACKFILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER PERCOLATION. IF POOR PERCOLATION EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.
8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.
9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.
10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACKFILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.
12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE, ONLY WITH MULCH. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
13. PRUNING: TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY LICENSED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" TO ACHEIVE SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
16. MULCHING: PROVIDE A THREE INCH (MINIMUM) LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT PLANTED UNDER THIS CONTRACT.
17. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

P. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
2. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.
3. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.
4. SODDING

A. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.

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

C. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED - REFER TO DETAILS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.

5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.
6. LAWN MAINTENANCE:

A. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).

B. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

Q. CLEANUP

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

R. PLANT MATERIAL MAINTENANCE

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

S. MAINTENANCE (ALTERNATE BID ITEM)

CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE FOR MAINTENANCE FOLLOWING THE INITIAL 90-DAY MAINTENANCE PERIOD ON A COST-PER-MONTH BASIS.

T. FINAL INSPECTION AND ACCEPTANCE OF WORK

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

U. WARRANTY

1. THE LIFE AND SATISFACTORY CONDITION OF ALL 7 GALLON AND LARGER PLANT MATERIAL INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
2. THE LIFE AND SATISFACTORY CONDITION OF ALL OTHER PLANT MATERIAL (INCLUDING SOD) INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
3. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED UNDER "PLANTING", AT NO ADDITIONAL COST TO THE OWNER.
4. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE (AND IRRIGATION) MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.

No.	REVISIONS	DATE	BY

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WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

LICENSED PROFESSIONAL
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FLORIDA LICENSE NUMBER
LA #[illegible]67244
DATE: 07/26/2023

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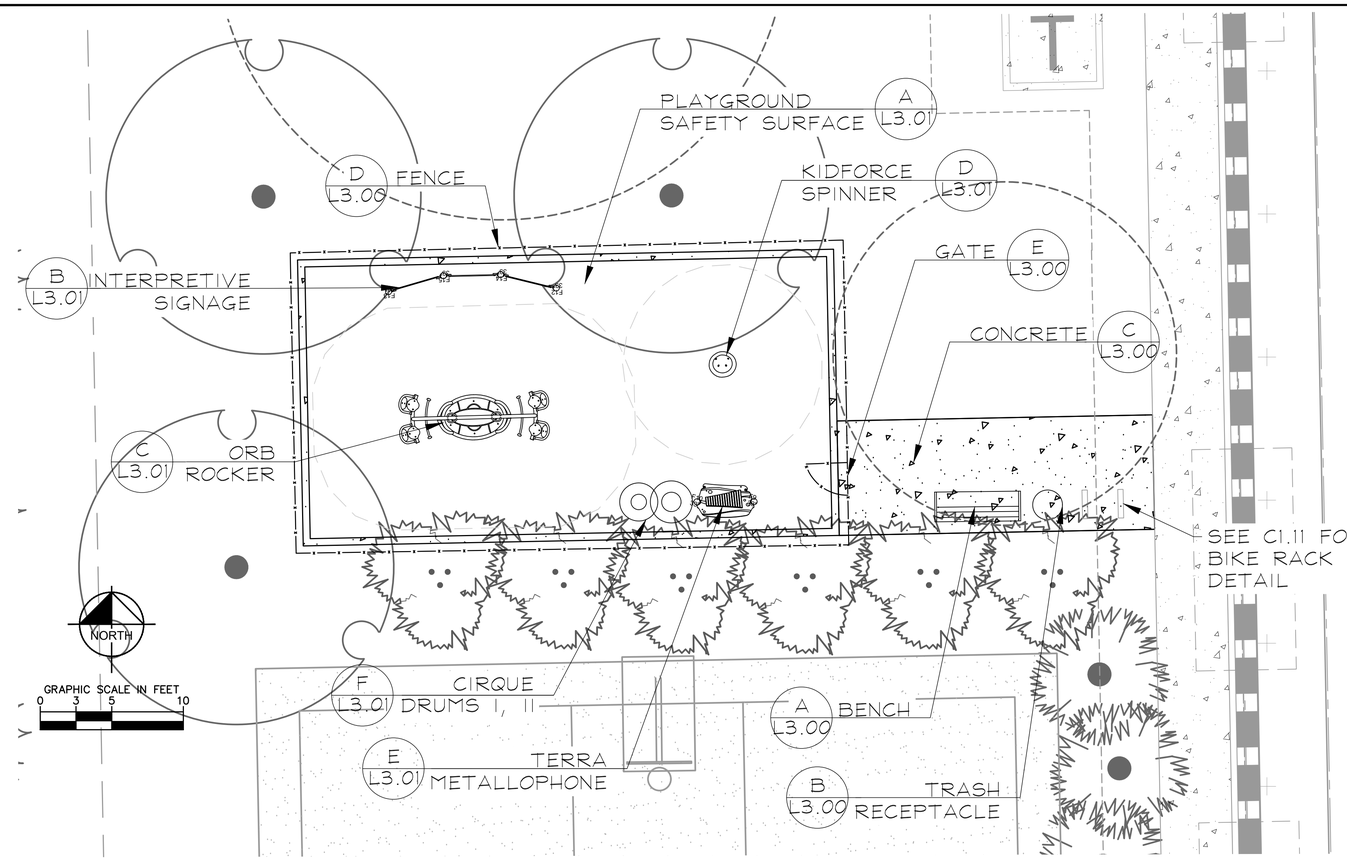
Date: 2023.08.09 17:19:04-04'00'

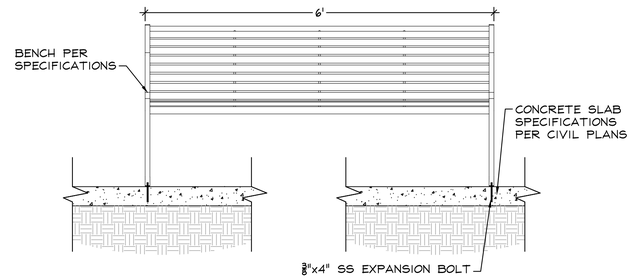
KHA PROJECT	140726000
DATE	JULY 2023
SCALE	AS SHOWN
DESIGNED BY	AVB
DRAWN BY	AVB
CHECKED BY	TCR

LANDSCAPE NOTES

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L2.11



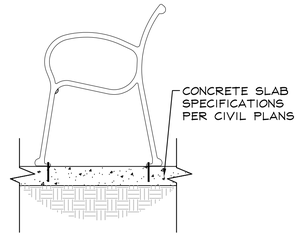


SCARBOROUGH BENCH - 72"
BACKED - STRAP
FINISH: BLACK
MANUFACTURER: LANDSCAPE FORMS
URL: (WWW.LANDSCAPEFORMS.COM)

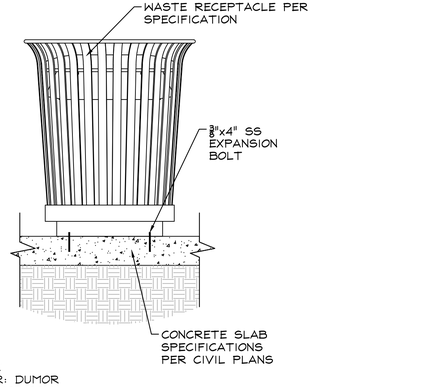
ESTIMATED QUANTITY: 1

INSTALLATION:
SURFACE MOUNT PER MANUFACTURER'S SPECIFICATION

NOTES:
1. CONTRACTOR TO PROVIDE AND INSTALL BENCHES



A BENCH



DUMOR-84-32
FINISH: BLACK
MANUFACTURER: DUMOR
URL: (WWW.DUMOR.COM)

ESTIMATED QUANTITY: 1

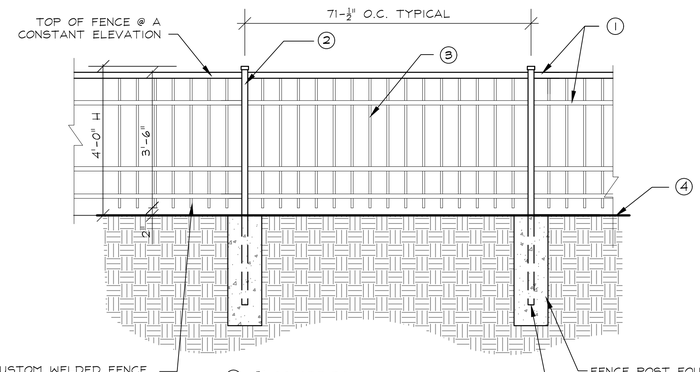
INSTALLATION:
SURFACE MOUNT PER MANUFACTURER'S SPECIFICATION

NOTES:
1. CONTRACTOR TO PROVIDE AND INSTALL WASTE RECEPTACLE.

B WASTE RECEPTACLE

REFER TO CIVIL SHEETS FOR CONCRETE SECTION DETAILS FOR PEDESTRIAN USE

C CONCRETE



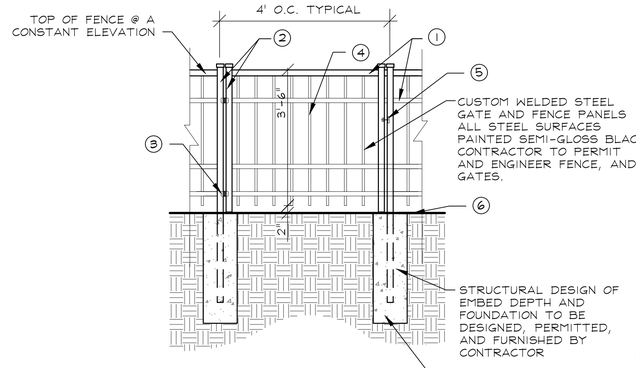
CUSTOM WELDED FENCE PANELS, ALL STEEL SURFACES PAINTED SEMI-GLOSS BLACK. CONTRACTOR TO PERMIT AND ENGINEER FENCE AND CONNECTION TO CONCRETE COLUMNS.

1. 1 5/8" SQUARE RAIL
2. 2 1/2" INTERMEDIATE FENCE POST W CAP
3. 1" PICKET (TYP.) COLOR: BLACK FINISH: POWDER COAT SEMI-GLOSS
4. FINISH GRADE

FENCE POST FOUNDATION TO BE DESIGNED AND PERMITTED BY CONTRACTOR

STRUCTURAL DESIGN OF EMBED DEPTH AND FOUNDATION TO BE DESIGNED, PERMITTED, AND FURNISHED BY CONTRACTOR

D ALUMINUM FENCE



CUSTOM WELDED STEEL GATE AND FENCE PANELS ALL STEEL SURFACES PAINTED SEMI-GLOSS BLACK. CONTRACTOR TO PERMIT AND ENGINEER FENCE, AND GATES.

STRUCTURAL DESIGN OF EMBED DEPTH AND FOUNDATION TO BE DESIGNED, PERMITTED, AND FURNISHED BY CONTRACTOR

FENCE POST FOUNDATION TO BE DESIGNED AND PERMITTED BY CONTRACTOR

1. 1 5/8" SQUARE RAIL
2. 2 1/2" INTERMEDIATE FENCE POST W CAP
3. HEAVY DUTY HINGES
4. 1" PICKET (TYP.) COLOR: BLACK FINISH: POWDER COAT SEMI-GLOSS
5. HEAVY DUTY GRAVITY LATCH WITH LOCKING MECHANISM
6. FINISH GRADE

E ALUMINUM SINGLE GATE

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

PLANS ARE IN NAVD 1988 DATUM CONVERSION EQUATION IS BELOW:
(NAVD 1988) + 1.5' = (NGVD 1929)

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2023 KIMLEY-HORN AND ASSOCIATES, INC.
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LICENSED PROFESSIONAL
TRICIA C. RICHTER, PLA
FLORIDA LA LICENSE NO. 6672244
DATE: 07/17/2023

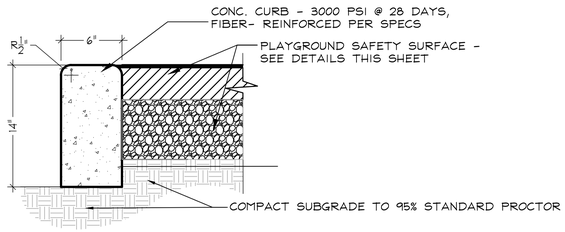
Tricia C. Richter Digitally signed by Tricia C. Richter DN: C=US, E=tricia.richter@kimley-horn.com, CN=Tricia C. Richter Date: 2023.08.09 01:19:04 -04'00'

KHA PROJECT 140726000	DATE JULY 2023	SCALE AS SHOWN	DESIGNED BY YXY	DRAWN BY YXY	CHECKED BY JAW

HARDSCAPE PLAN

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L3.00



NOTES:
1. EXPANSION JOINTS @ 30', CONTROL JOINTS @ 10' O.C. MAX.
2. INSTALL TOP OF CONCRETE FLUSH WITH TOP OF SAFETY SURFACE

CAST IN PLACE CONCRETE HEADER

NOT TO SCALE

PLAYGROUND SURFACING BY SAFETY 1ST PLAYGROUNDS OR APPROVED EQUAL.
CONTACT: 516-713-5980

PRODUCT: SAFETY 1ST SURFACING
COLOR: TO BE SELECTED BY OWNER

SUBMIT 6"X6" SAMPLES FOR APPROVAL PRIOR TO CONSTRUCTION.

SAFETY SURFACING MATERIAL MUST BE DESIGNED TO HAVE A CRITICAL HEIGHT VALUE OF AT LEAST THE HEIGHT OF THE HIGHEST ACCESSIBLE PART/FALL HEIGHT OF THE ADJACENT EQUIPMENT. (REF. CONSUMER PRODUCT SAFETY COMMISSION (CPSC) GUIDELINES, SECTION 10: SURFACING.)

A PLAYGROUND SAFETY SURFACE - POURED IN PLACE

ORB ROCKER:
PRODUCT ID: 560-2676
COLOR: TO BE SELECTED BY OWNER
MANUFACTURER: BURKE www.bciburke.com 920-921-9220
INSTALL PER MANUFACTURER'S SPECIFICATIONS
ESTIMATED QUANTITY: 1

C ORB ROCKER

KIDFORCE SPINNER:
PRODUCT ID: 560-2573
COLOR: TO BE SELECTED BY OWNER
MANUFACTURER: BURKE www.bciburke.com 920-921-9220
INSTALL PER MANUFACTURER'S SPECIFICATIONS
ESTIMATED QUANTITY: 1

D KIDFORCE SPINNER

B INTERACTIVE PANELS

INTERACTIVE PANELS:
1. MODEL: VARIES
COLOR/FINISH: VARIES; TO BE SELECTED BY OWNER
2. MANUFACTURER:
BURKE www.bciburke.com
920-921-9220
3. INSTALL PER MANUFACTURER'S SPEC.
4. ESTIMATED QUANTITY: 3

PLAYENSEMBLE TERRA METALLOPHONE:
PRODUCT ID: 570-0412
COLOR: TO BE SELECTED BY OWNER
MANUFACTURER: BURKE www.bciburke.com 920-921-9220
INSTALL PER MANUFACTURER'S SPECIFICATIONS
ESTIMATED QUANTITY: 1

E PLAYENSEMBLE TERRA METALLOPHONE

PLAYENSEMBLE CIRQUE DRUMS:
PRODUCT ID: CIRQUE DRUM I: 560-0059
CIRQUE DRUM II: 560-0058
COLOR: TO BE SELECTED BY OWNER
MANUFACTURER: BURKE www.bciburke.com 920-921-9220
INSTALL PER MANUFACTURER'S SPECIFICATIONS
ESTIMATED QUANTITY: 1 EACH

F PLAYENSEMBLE CIRQUE DRUMS I & II

PLANS ARE IN NAVD 1988 DATUM
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THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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Sunshine811.com

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LICENSED PROFESSIONAL
TRICIA C. RICHTER, PLA
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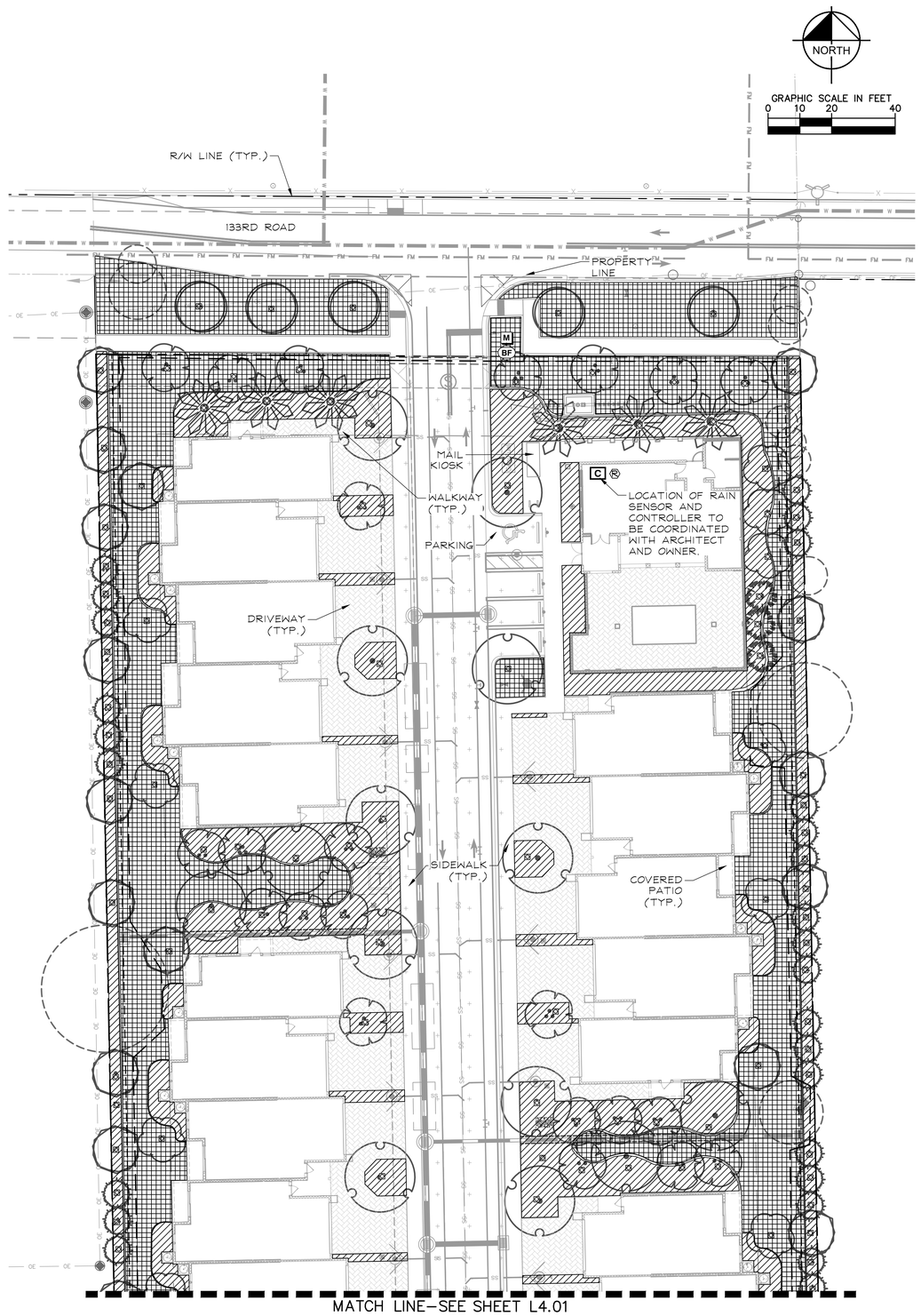
Date: 2023.08.09 13:01:36-04'00'

KHA PROJECT	140726000
DATE	JULY 2023
SCALE	AS SHOWN
DESIGNED BY	YXY
DRAWN BY	YXY
CHECKED BY	JAW

HARDSCAPE DETAILS

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L3.01



IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION	QTY
	SHRUB SPRAY 4'-15' radius (1,2m-4,6m), triangular spaced, head to head coverage.	19,974 s.f.
	TURF SPRAY 4'-15' radius (1,2m-4,6m), triangular spaced, head to head coverage.	34,028 s.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
1401 1402 1404 1408	Rain Bird 1804-PRS-1400 Flood 1401 Flood Bubbler 4" popup on IPS Flex Hose per detail.	199	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	AS NEEDED
BF	Backflow Preventer 1-1/2" See Civil Plans	1
C	Rain Bird ESP8LXME w/ (1) ESPLXMSM12 20 Station, Traditionally-Wired, Commercial Controller. (1) ESP8LXME 8-Station, Indoor/Outdoor, Plastic Wall-Mount Enclosure w/ (1) ESPLXMSM12 - 12-Station Expansion Modules.	1
R	Rain Bird WR2-RC Wireless Rain Sensor Combo, includes 1 receiver and 1 rain sensor transmitter.	1
M	Water Meter 1-1/2"	1
	Irrigation Lateral Line: PVC Class 200 SDR 21	AS NEEDED
	Irrigation Mainline: PVC Schedule 40	AS NEEDED
	Pipe Sleeve: PVC Schedule 40	AS NEEDED

Valve Callout
- Valve Number
- Valve Flow
- Valve Size

Sleeve Callout
- Number of Sleeves
- Sleeve Size

REFER TO DETAILS ON SHEETS L2.10, L2.11, & L2.12.

PLAN IS DIAGRAMMATIC. CONTRACTOR SHALL INSTALL ALL IRRIGATION EQUIPMENT IN LANDSCAPE OR TURF AREAS WITHIN PROJECT LIMITS.

PLANS ARE IN NAVD 1988 DATUM
CONVERSION EQUATION IS BELOW:
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THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

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FLORIDA LICENSE NUMBER
LA0001244
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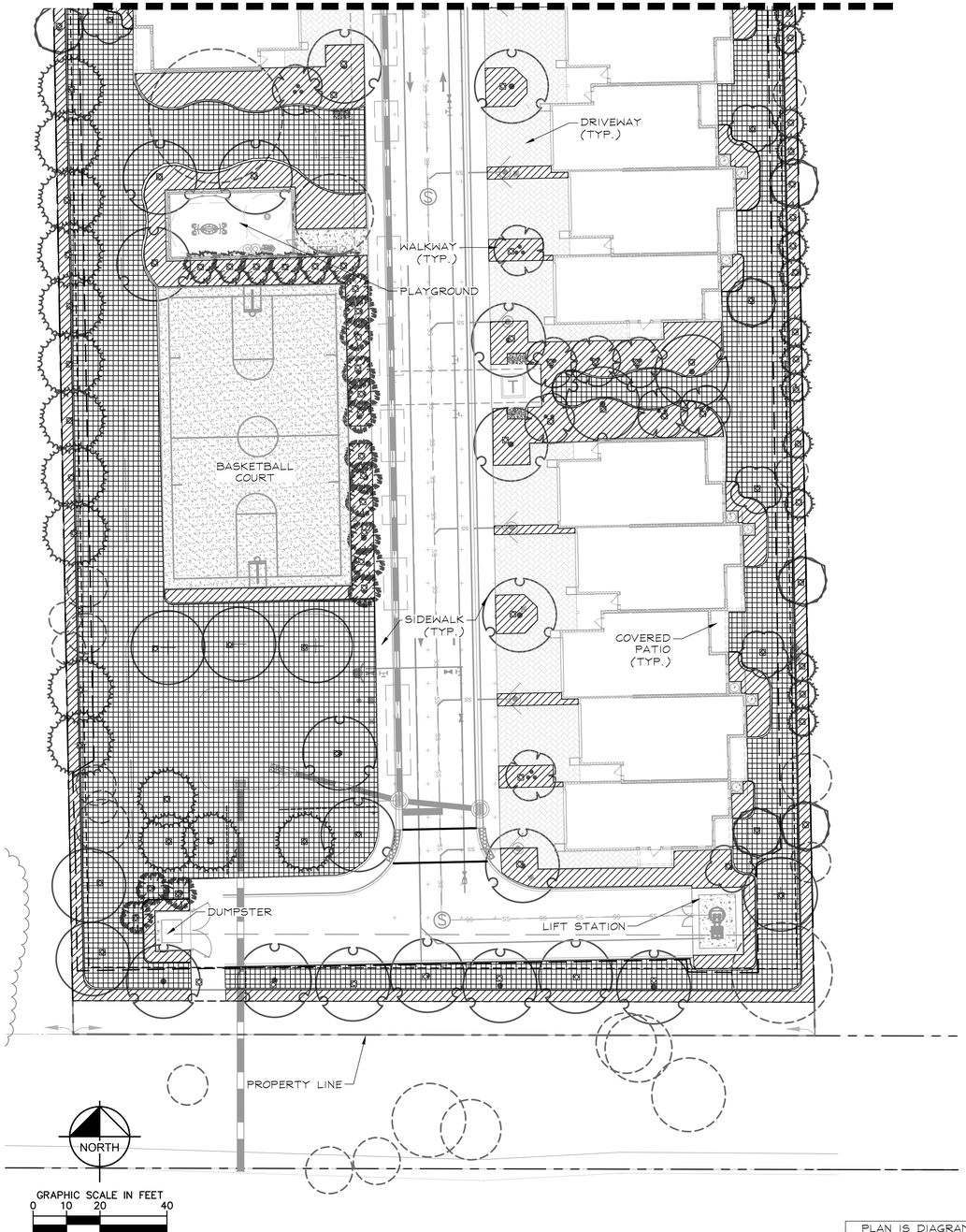
Date: 2023.08.09 07:19:05 -04'00'

KHA PROJECT	140726000
DATE	JULY 2023
SCALE	AS SHOWN
DESIGNED BY	YXY
DRAWN BY	YXY
CHECKED BY	JAW

IRRIGATION PLAN

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L4.00



IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION
	SHRUB SPRAY
	TURF SPRAY

SYMBOL	MANUFACTURER/MODEL
1401 1402 1404 1408	Rain Bird 1804-PRS-1400 Flood 1401

SYMBOL	MANUFACTURER/MODEL
	Rain Bird PEB
BF	Backflow Preventer 1-1/2"
C	Rain Bird ESP8LXME w/ (1) ESPLXMSM12
R	Rain Bird WR2-RC
M	Water Meter 1-1/2"
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Schedule 40
	Pipe Sleeve: PVC Schedule 40

Valve Callout
- # — Valve Number
- # — Valve Flow
- #" — Valve Size

Sleeve Callout
- (#) — Number of Sleeves
- #" — Sleeve Size

IRRIGATION SYSTEM NOTES

1. CONTRACTOR SHALL REFER TO THE IRRIGATION DETAILS, IRRIGATION SCHEDULE, SPECIFICATIONS AND ALL CONTRACT DOCUMENTS FOR FURTHER AND COMPLETE INSTRUCTIONS.
2. IRRIGATION QUANTITIES ARE PROVIDED FOR CONVENIENCE. IN THE EVENT OF QUANTITY DISCREPANCIES THE DRAWING SHALL TAKE PRECEDENCE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BIDDING.
3. ANY SUBSTITUTIONS FOR SPECIFIED IRRIGATION EQUIPMENT MUST BE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE IN WRITING PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL FIELD ADJUST LOCATION OF IRRIGATION EQUIPMENT AS NECESSARY TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES AND/OR INTERFERE WITH EXISTING ABOVE GROUND ELEMENTS. ALL FIELD ADJUSTMENTS SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AND SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT.
5. CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE LIMITS OF WORK AND EXISTING CONDITIONS AND VERIFY ALL INFORMATION. IF DISCREPANCIES EXIST, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IN WRITING WITHIN SEVEN CALENDAR DAYS OF NOTICE TO PROCEED.
6. IRRIGATION PLAN IS DIAGRAMMATIC. EQUIPMENT SHOWN ON IMPERVIOUS SURFACES IS FOR GRAPHIC CLARITY UNLESS OTHERWISE NOTED. CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITHIN LANDSCAPE AREAS IN PROPERTY LIMITS.

THE IRRIGATION SYSTEM IS DESIGNED TO OPERATE WITH A SOURCE PROVIDING 75 GPM AT 60 PSI.

SPRAY HEAD DESIGN PRESSURE: 30 PSI
BUBBLER DESIGN PRESSURE: 30 PSI

PLAN IS DIAGRAMMATIC. CONTRACTOR SHALL INSTALL ALL IRRIGATION EQUIPMENT IN LANDSCAPE OR TURF AREAS WITHIN PROJECT LIMITS.

PLANS ARE IN NAVD 1988 DATUM CONVERSION EQUATION IS BELOW:
(NAVD 1988) + 1.5' = (NGVD 1929)

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No.	REVISIONS	DATE	BY

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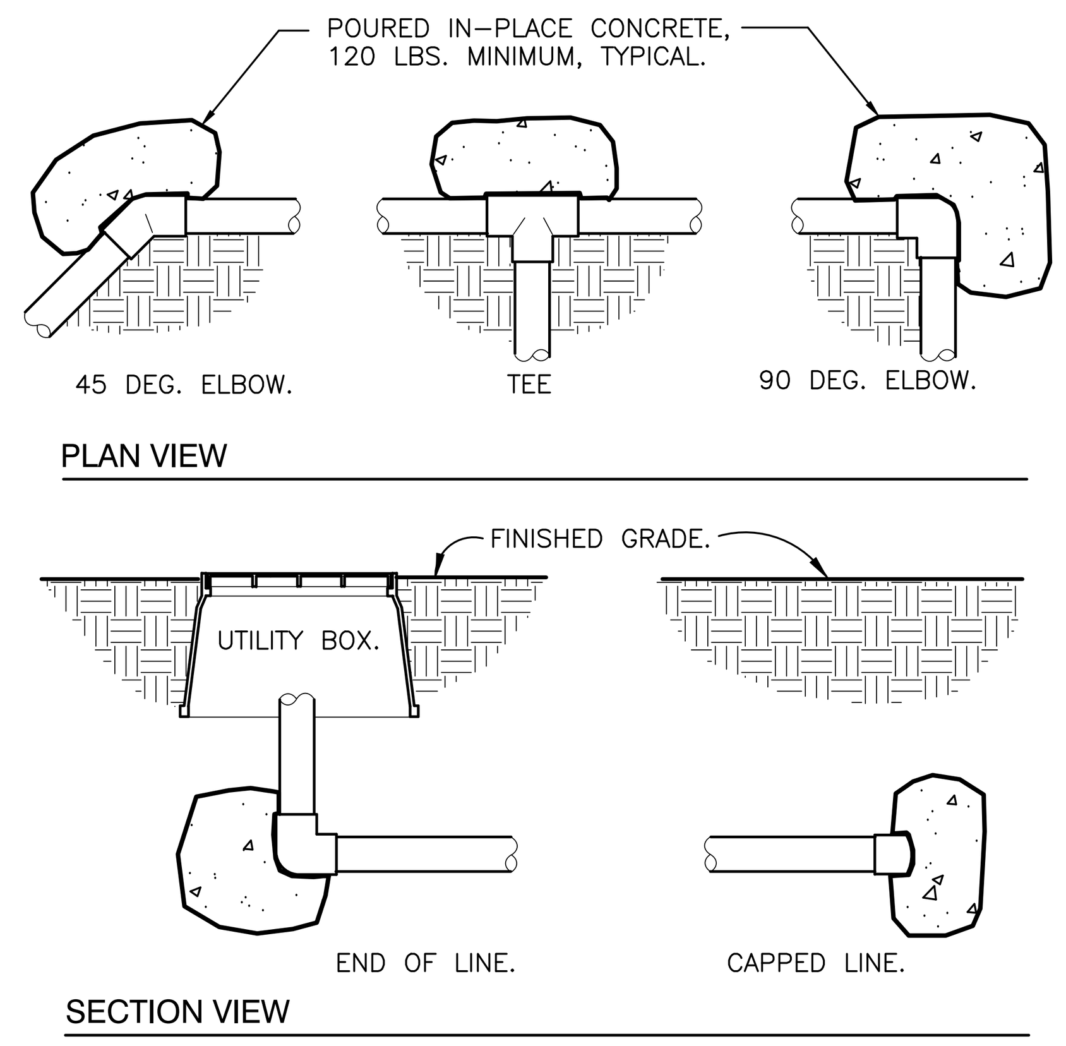
Date: 2023.08.09 13:21:04 -04'00'
TRICIA C. RICHTER, PLA
FLORIDA REGISTRATION NUMBER LA0001244
DATE: 07/2023

KHA PROJECT	140726000
DATE	JULY 2023
SCALE	AS SHOWN
DESIGNED BY	YXY
DRAWN BY	YXY
CHECKED BY	JAW

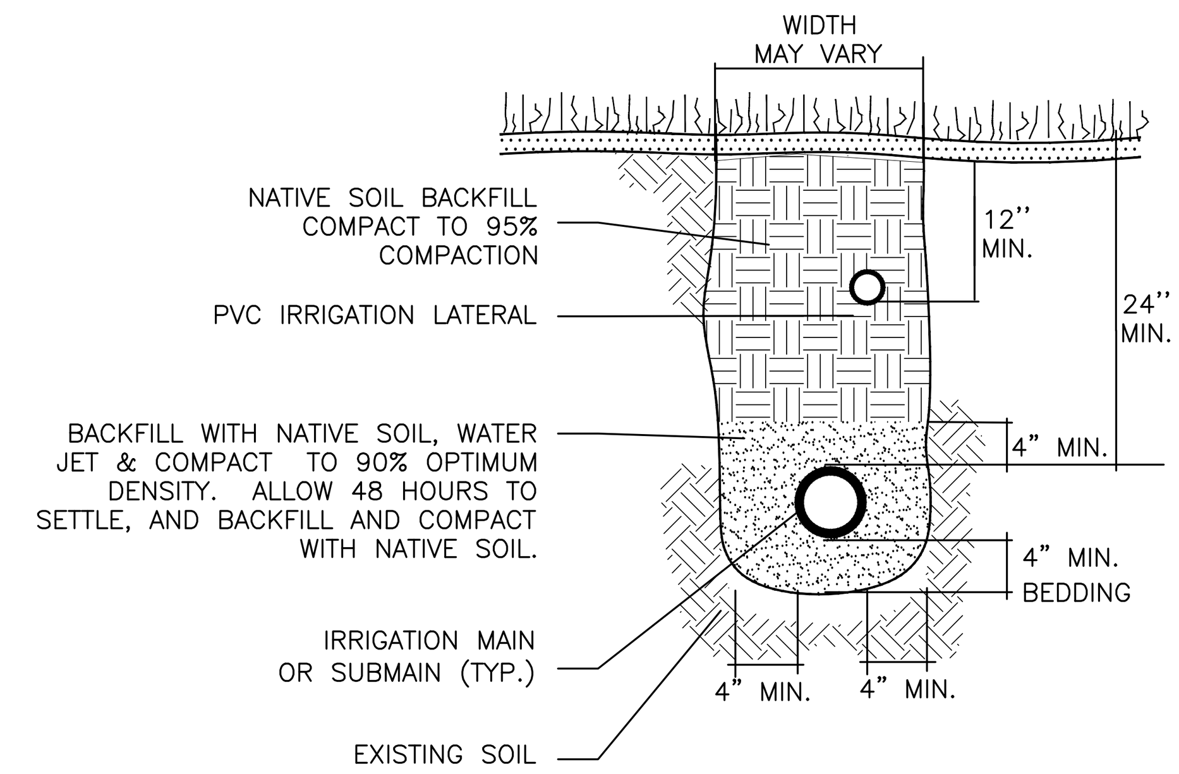
IRRIGATION PLAN

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

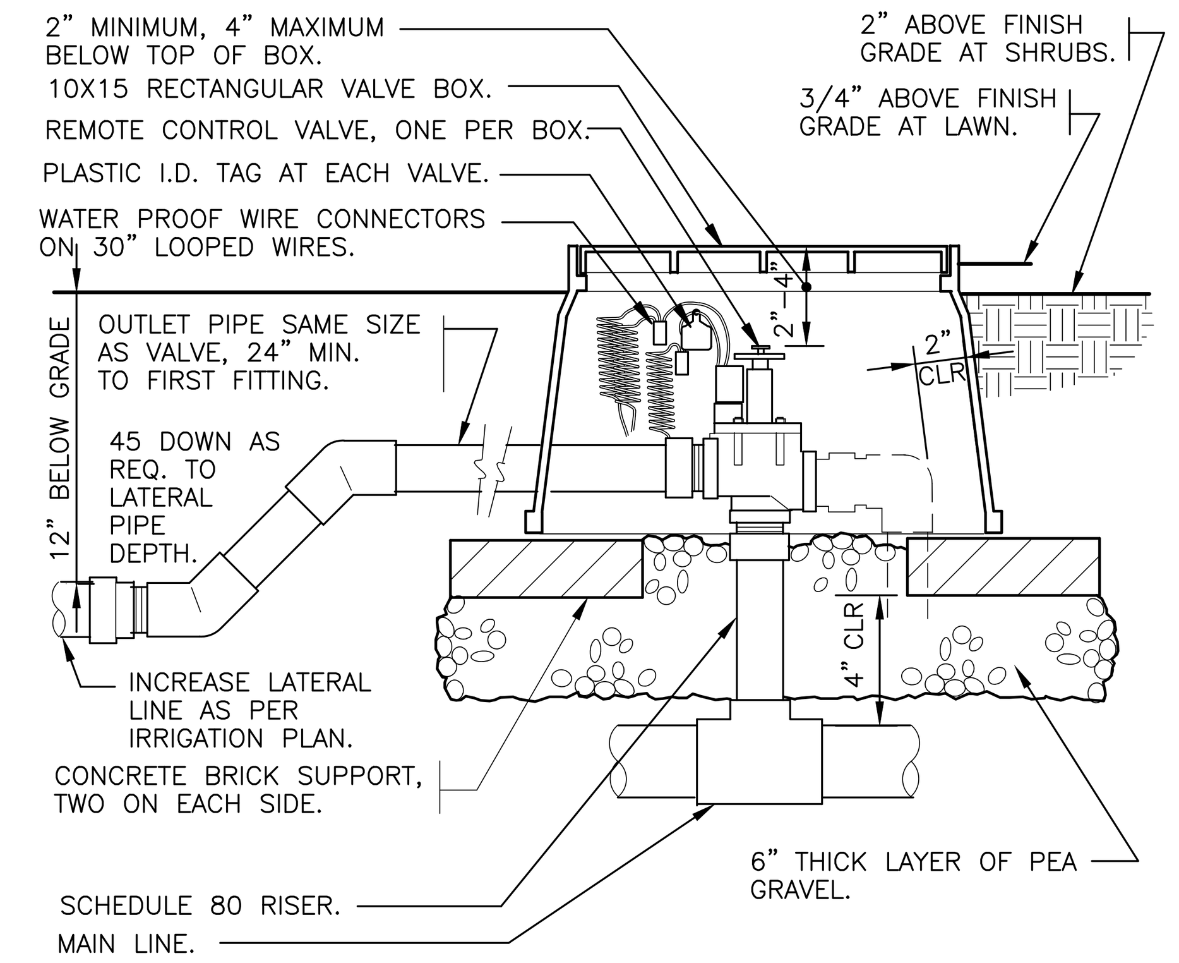
SHEET NUMBER
L4.01



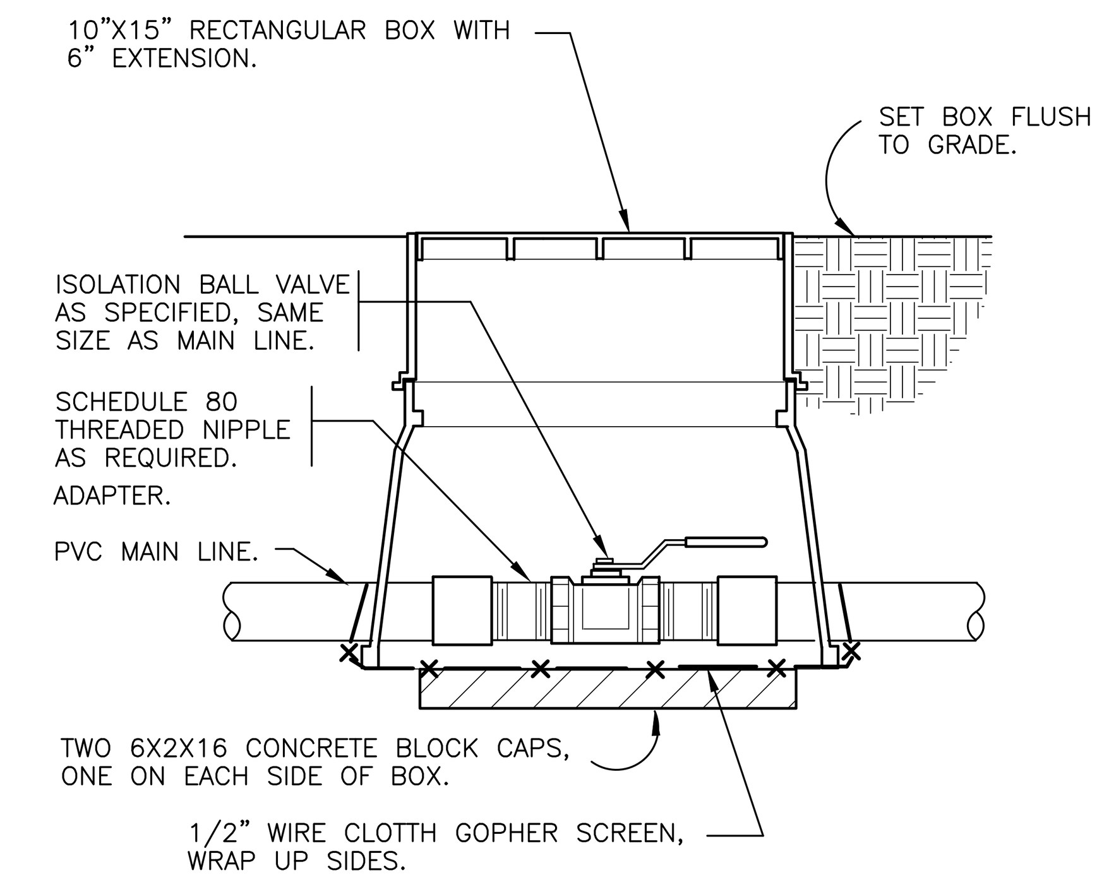
1 THRUST BLOCKING
3/4" = 1'-0" 32 8409.76-01



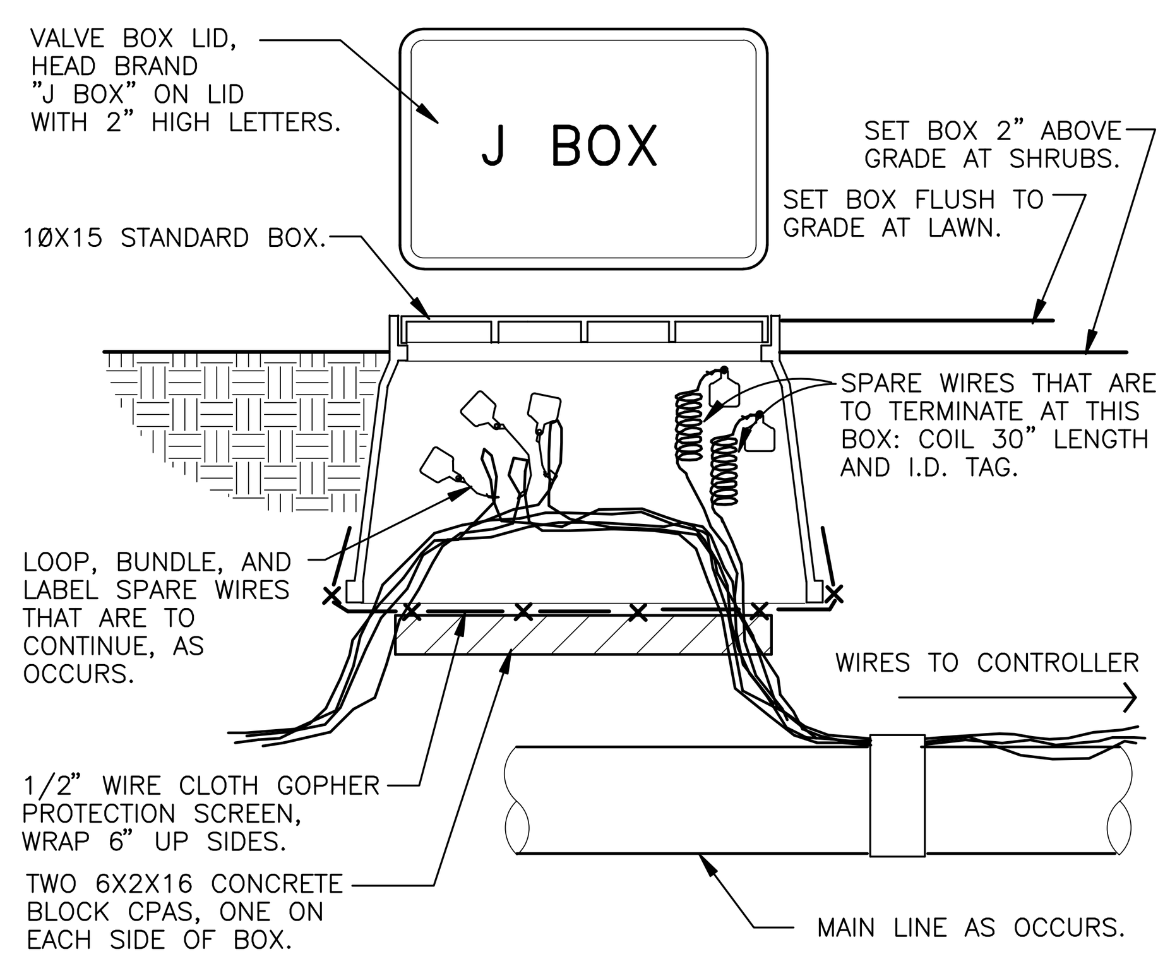
2 TRENCHING DETAIL
NOT TO SCALE 32 8409.76-03



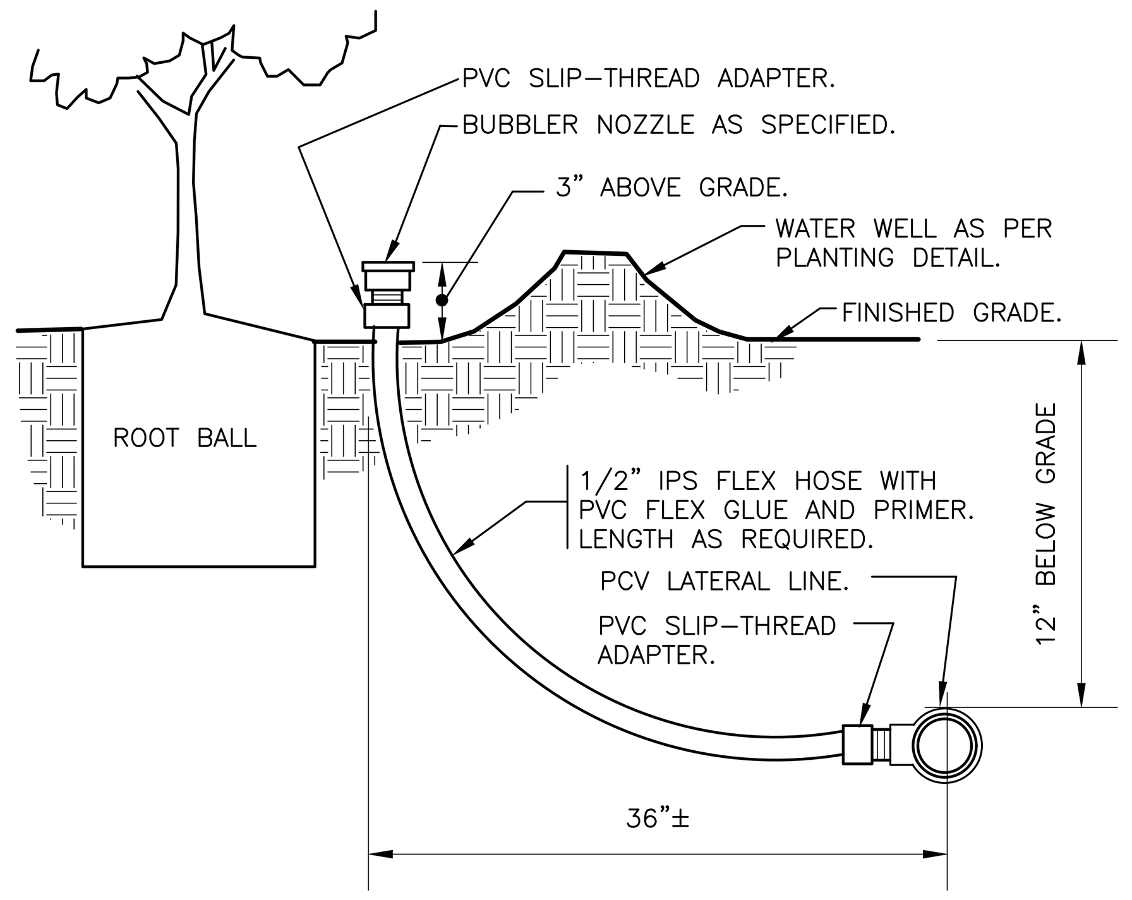
3 ELECTRIC REMOTE CONTROL VALVE
1 1/2" = 1'-0" 32 8406.13-01



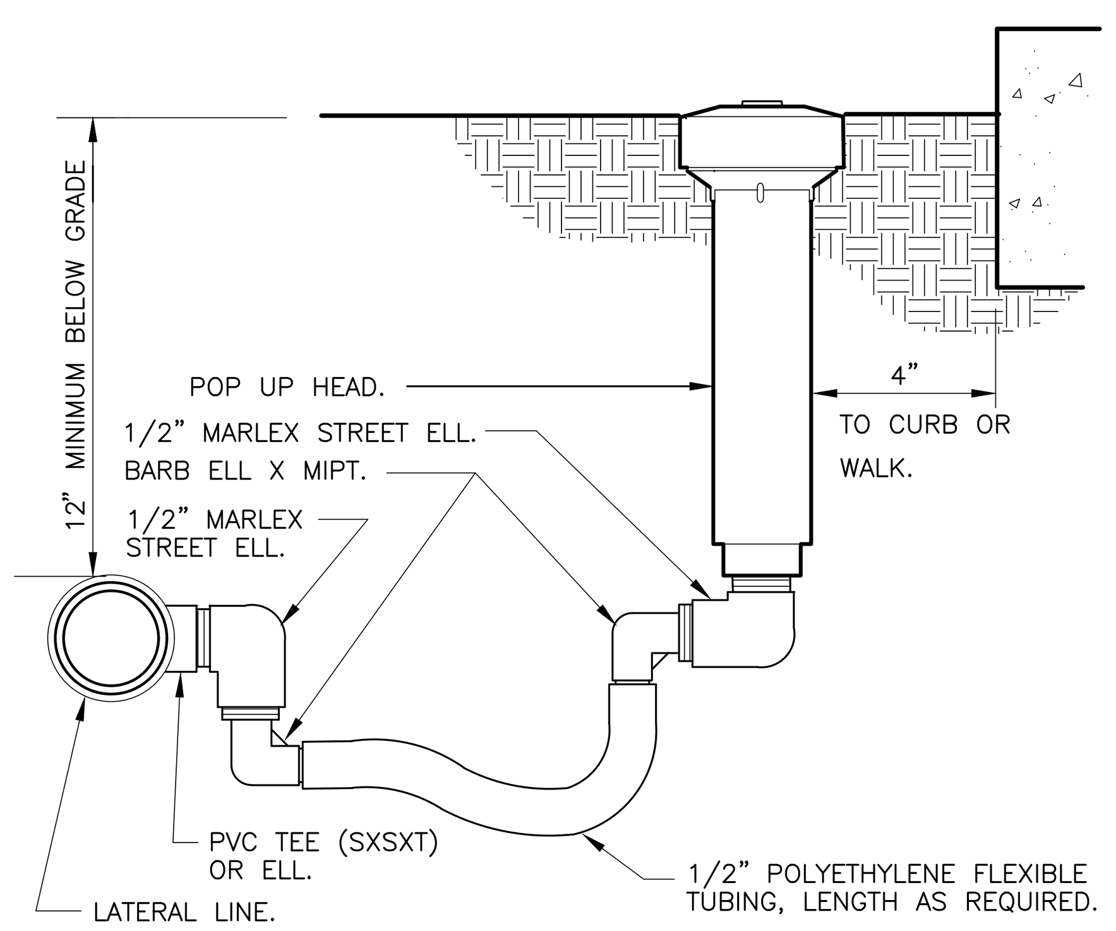
4 BRASS BALL ISOLATION VALVE
1 1/2" = 1'-0" 32 8406.33-02



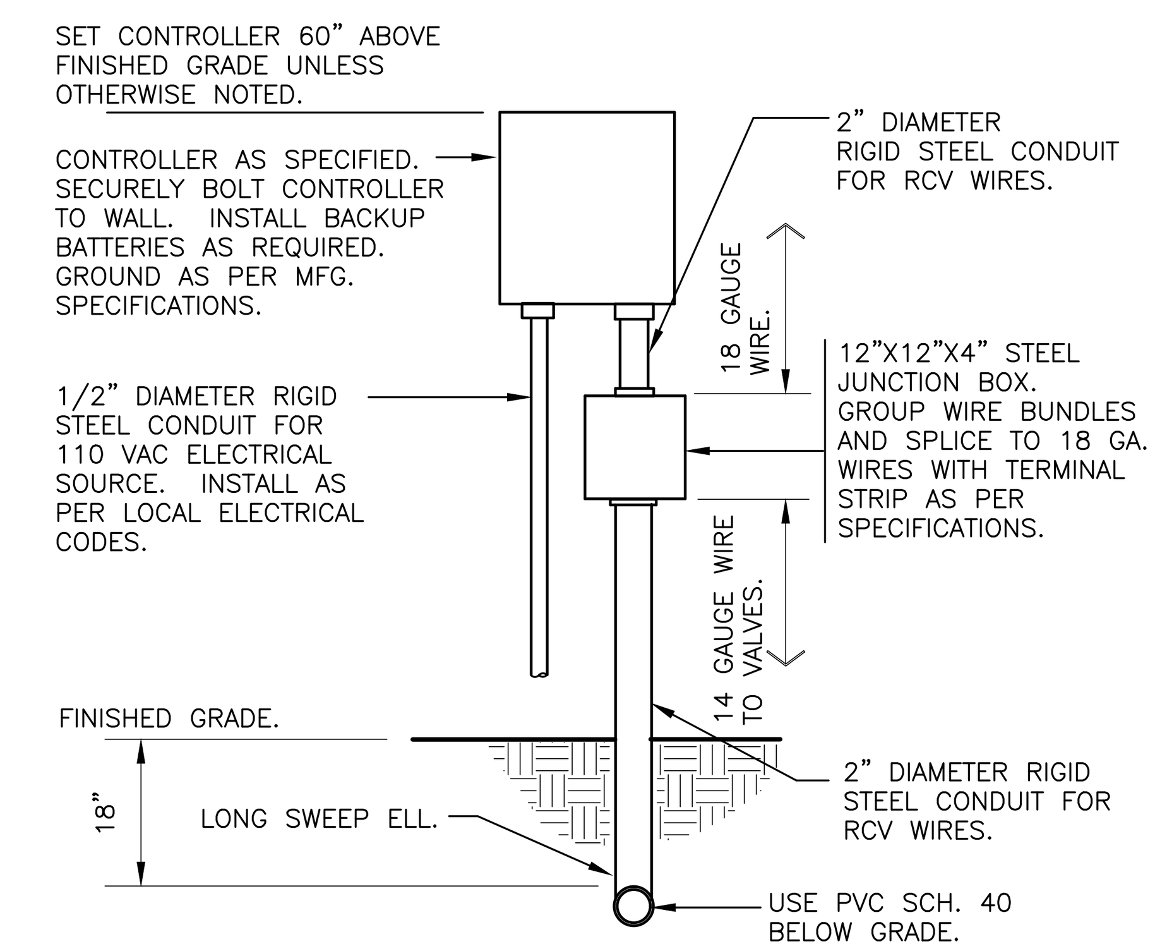
5 WIRE BUNDLE JUNCTION BOX
1 1/2" = 1'-0" 32 8409.79-01



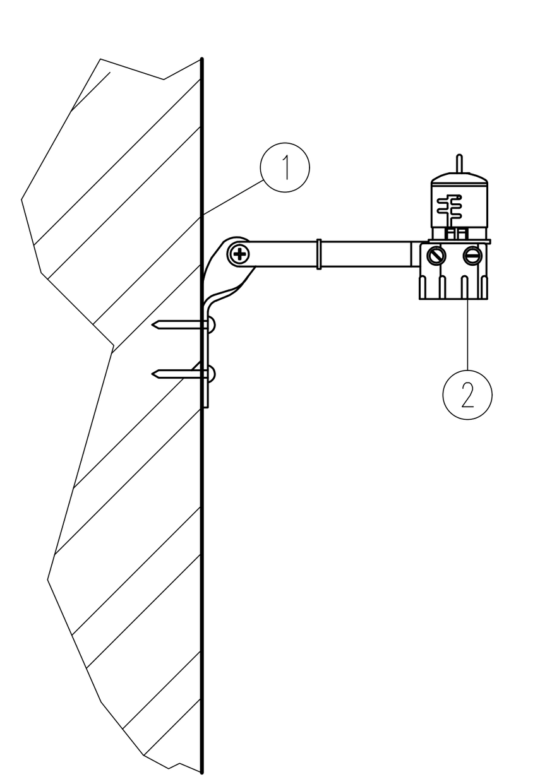
6 BUBBLER ON FLEX HOSE RISER
3" = 1'-0" DETAIL-FILE



7 POP-UP SPRAY FLEX ASSEMBLY
3" = 1'-0" 32 8403.13-02



8 WALL MOUNT CONTROLLER
1" = 1'-0" 328409.13-02

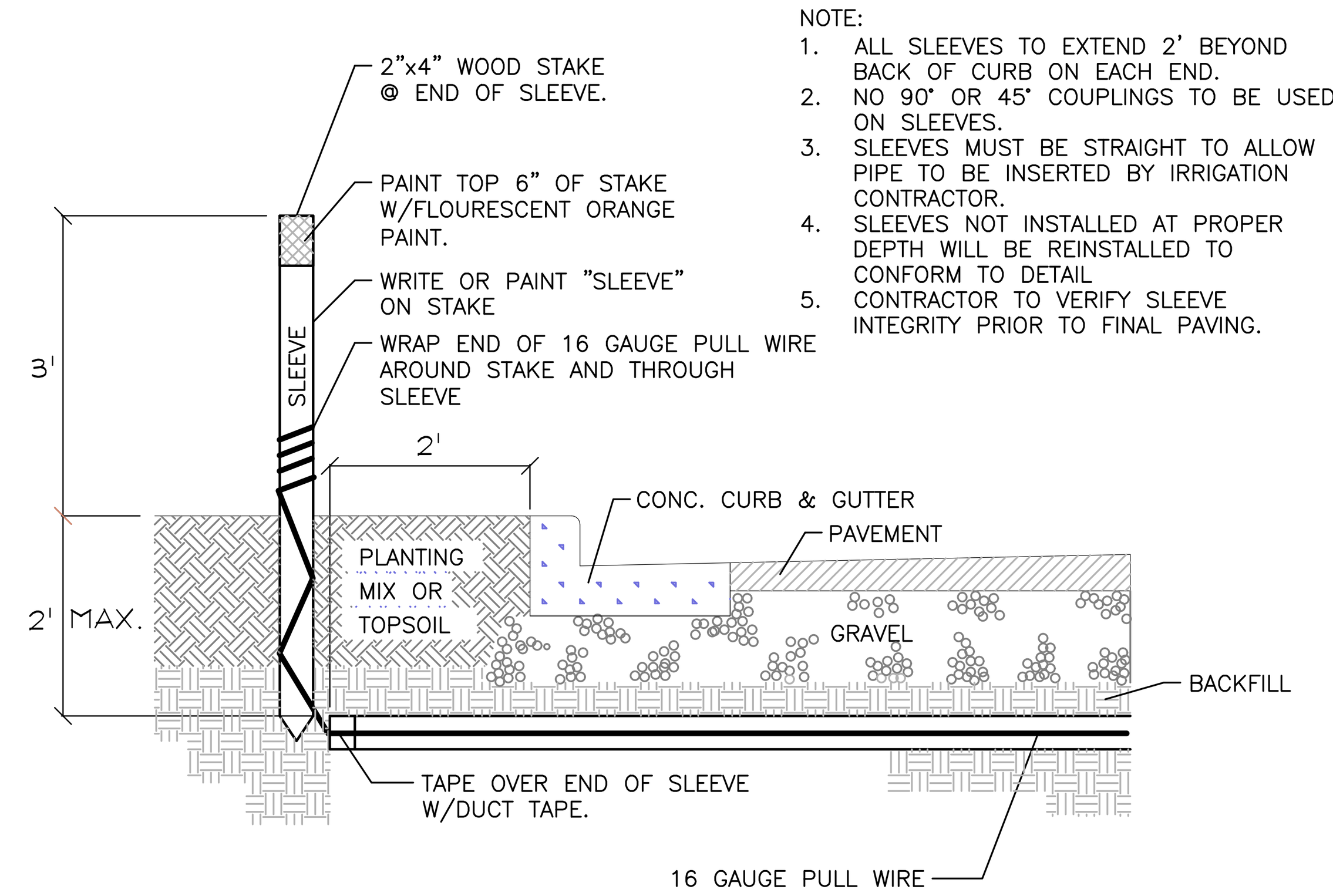


1 EXTERIOR WALL (SEE NOTE)

2 MODEL WR2-RC

NOTE:
MOUNT SENSOR ON SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY. COORDINATE MOUNTING WITH OWNER AND ARCHITECT.

9 RAIN SENSOR
3" = 1'-0"



NOTE:
1. ALL SLEEVES TO EXTEND 2' BEYOND BACK OF CURB ON EACH END.
2. NO 90° OR 45° COUPLINGS TO BE USED ON SLEEVES.
3. SLEEVES MUST BE STRAIGHT TO ALLOW PIPE TO BE INSERTED BY IRRIGATION CONTRACTOR.
4. SLEEVES NOT INSTALLED AT PROPER DEPTH WILL BE REINSTALLED TO CONFORM TO DETAIL
5. CONTRACTOR TO VERIFY SLEEVE INTEGRITY PRIOR TO FINAL PAVING.

10 IRRIGATION SLEEVING
NTS

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Date: 2023.08.09 17:19:07-04'00'

KHA PROJECT	140726000
DATE	JULY 2023
SCALE	AS SHOWN
DESIGNED BY	YXY
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CHECKED BY	JAW

IRRIGATION DETAILS

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L4.10

UNDERGROUND IRRIGATION SYSTEM

PART 1: GENERAL

1.01 SCOPE

A. The work covered by this specification shall include the furnishing of all labor, materials, tools and equipment necessary to perform and complete the installation of an automatic irrigation system as specified herein and as shown on the drawings and any incidental work not shown or specified which can reasonably be determined to be part of the work and necessary to provide a complete and functional system.

B. The work covered by this specification also includes all permits, federal, state and local taxes and all other costs, both foreseeable and unforeseeable at the time of construction.

C. No deviation from these specifications, the accompanying drawings, or agreement is authorized or shall be made without prior written authorization signed by the Owner or his duly appointed representative.

1.02 QUALITY ASSURANCE

A. Installer Qualifications: A firm specializing in irrigation work with not less than five (5) years of experience in installing irrigation systems similar to those required for this project.

B. Coordination: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and efficiently as possible.

C. Inspection of Site: The Contractor shall acquaint himself with all site conditions, including underground utilities before construction is to begin. Contractor shall coordinate placement of underground materials with contractors previously working underground in the vicinity or those scheduled to do underground work in the vicinity. Contractor is responsible for minor adjustments in the layout of the work to accommodate existing facilities.

D. Protection of Existing Plants and Site Conditions: The Contractor shall take necessary precautions to protect site conditions to remain. Should damages be incurred, this Contractor shall repair the damage to its original condition at his own expense. Any disruption, destruction, or disturbance of any existing plant, tree, shrub, or turf, or any structure shall be completely restored to the satisfaction of the Owner and his representatives, solely at the Contractor's expense.

E. Protection of Work and Property: The Contractor shall be liable for and shall take the following actions as required with regard to damage to any of the Owner's property.

1. Any existing building, equipment, piping, pipe coverings, electrical systems, sewers, sidewalks, roads, grounds, landscaping or structure of any kind (including without limitation, damage from leaks in the piping system being installed or having been installed by Contractor) damaged by the Contractor, or by his agents, employees, or subcontractors, during the course of his work, whether through negligence or otherwise, shall be replaced or repaired by Contractor at his own expense in a manner satisfactory to Owner, which repair or replacement shall be a condition precedent to Owner's obligation to make final payment under the Contract.

2. Contractor shall also be responsible for damage to any work covered by these specifications before final acceptance of the work. He shall securely cover all openings into the systems and cover all apparatus, equipment and appliances, both before and after being set in place to prevent obstructions on the pipes and the breakage, misuse or disfigurement of the apparatus, equipment or appliance.

3. All trenching or other work under the leaf canopy of any and all trees shall be done by hand or by other methods so that no branches are damaged in any way.

   Buildings, walks, walls, and other property shall be protected from damage. Open ditches left exposed shall be flagged and barricaded by the Contractor by approved means. The Contractor shall restore disturbed areas to their original condition.

4. The Contractor shall be responsible for requesting the proper utility company to stake the exact location of any underground lines including but not limited to electric, gas, telephone service, water, and cable.

   The Contractor shall take whatever precautions are necessary to protect these underground lines from damage. In the event damage does occur, all damage shall be completely repaired to its original condition, at no additional cost to the Owner.

5. The Contractor shall request the Owner, in writing, to locate any private utilities (i.e., electrical service to outside lighting) before proceeding with any excavation. If, after such requests and necessary staking, private utilities which were not staked are encountered and damaged by the Contractor, they shall be repaired by the Owner at no cost to the Contractor. If the Contractor damages staked or located utilities, they shall be repaired at the Contractor's expense.

F. Codes and Inspections: The entire installation shall comply fully with all local and state laws and ordinances and with all established codes arrange for all necessary inspections and shall pay all fees and expenses in connection with same, as part of the work under this Contract. Upon completion of the work, he shall furnish to the "Owner" all inspection certificates customarily issued in connection with the class of work involved.

G. The Contractor shall keep on his work, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Owner, or Owner's representative.

H. The superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor.

I. The Owner's Landscape Architect or designated individual shall have full authority to approve or reject work performed by the Contractor. The Owner's Authorized Representative shall also have full authority to make field changes that are deemed necessary.

J. Final Acceptance: Final acceptance of the work may be obtained from the Owner upon the satisfactory completion of all work. Acceptance by the Landscape Architect and/or Owner in no way removes the Contractor of his responsibility to make further repairs, corrections and adjustments to eliminate any deficiencies which may later be discovered.

K. Guarantee: All work shall be guaranteed for one year from date of final acceptance against all defects in material, equipment and workmanship to the satisfaction of the Owner. Repairs, if required, shall be done promptly at no cost to the Owner.

1. The guarantee shall also cover repair of damage to any part of the premises resulting from leaks or workmanship, to the satisfaction of the Owner. The Contractor shall not be responsible for work damaged by others. Repairs, if required, shall be done promptly. The guarantee shall state the name of the Owner, provide full guarantee terms, effective and termination date, name and license number of Contractor providing guarantee, address, and telephone number. It shall be signed by the chief executive of the Contractor of his liability under the guarantee. Such warranties shall only supplement the guarantee.

2. If, within ten (10) days after mailing of written notice by the Owner to the Contractor requesting repairs or replacement resulting from a breach of warranty, the Contractor shall neglect to make or undertake with due diligence to make the same, the Owner may make such repairs at the Contractor's expense; provided, however, that in the case of emergency where, in the judgment of the Owner, delay would cause serious loss or damage, repairs or replacement may be made without notice being sent to the Contractor, and Contractor shall pay the cost thereof.

L. The Contractor shall provide full, 100% irrigation coverage in all areas designed with proposed plantings, in accordance with the site's governing permitting requirements and as designed.

M. On-site Observation: At any time during the installation of the irrigation system by the Contractor, the Owner or Landscape Architect may visit the site to observe work underway. Upon request, the Contractor shall be required to uncover specified work as directed by the Owner or material, workmanship or method of installation not meet the standards specified herein, the Contractor shall replace the work at his own expense.

N. Workmanship: All work shall be installed by qualified, skilled personnel, proficient in the trades required, in a neat, orderly, and responsible manner with recognized standards of workmanship. The Contractor shall have had considerable experience and demonstrated ability in the installation of sprinkler irrigation systems of this type.

1.04 SUBMITTALS

All materials shall be those specified and/or approved by the Landscape Architect.

A. Product Data: After the award of the Contract and prior to beginning work, the Contractor shall submit for approval by the Owner and Landscape Architect, two copies of the complete list of materials, manufacturer's technical data, and installation instructions which he proposes to install.

B. Commence no work before approval of material list and descriptive material by the Landscape Architect.

C. Record Drawings: The Contractor shall record on reproducibles, all changes that may be made during actual installation of the system. Provide controller sequencing and control valve locations.

1. Immediately upon installation of any piping, valves, wiring, sprinklers, etc., in locations other than shown on the original drawings or of sizes other than indicated, the Contractor shall clearly indicate such changes on a set of blueline prints. Records shall be made on a daily basis. All records shall be neat and subject to the approval of the Owner.

2. The Contractor shall also indicate on the record prints the location of all wire splices, original or due to repair, that are installed underground in a location other than the controller pedestal, remote control valve box, power source or connection to a valve-in-head sprinkler.

3. These drawings shall also serve as work progress sheets. The Contractor shall make neat and legible notations thereon daily as the work proceeds, showing the work as actually installed. These drawings shall be available at all times for review and shall be kept in a location designated by the Owner's Representative.

4. Progress payment request and record drawing information must be approved by Landscape Architect before payment is made.

5. If in the opinion of the Owner or his representative, the record drawing information is not being properly or promptly recorded, construction payment may be stopped until the proper information has been recorded and submitted.

6. Before the date of the final site observation and approval, the Contractor shall deliver one set (copies) of reproducible record drawing plans and notes to the Landscape Architect. Record drawing information shall be approved by the Landscape Architect prior to submittal to Owner for final payments, including retentions.

D. Operations and Maintenance Manuals: The Contractor shall prepare and deliver to the Owner, or his designated representative within ten (10) calendar days prior to completion of construction, a hard cover binder with three rings containing the following information:

1. Index sheet stating the Contractor's address and business telephone number, list of equipment with name(2) and address(es) of local manufacturer's representative(s).

2. Catalog and parts sheets on every material and equipment installed under this Contract.

3. Complete operating and maintenance instruction on all major equipment. Include initial controller schedule and recommended schedule after establishment period.

4. Demonstrate to and provide the Owner's maintenance personnel with instructions for major equipment and show evidence in writing to the Owner, or his designated representative at the conclusion of the project that this service has been rendered.

1.05 EXPLANATION OF DRAWINGS

A. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings and sleeves which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of the work and plan his work accordingly, furnishing such offsets, fittings and sleeves as may be required to meet such conditions.

B. The drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation systems, planting and architectural features. Deviations shall be brought to the Landscape Architects attention.

C. All work called for a on the drawings by notes or details shall be furnished and installed whether or not specifically mentioned in the specifications.

D. The Contractor shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been known in engineering. Such obstructions or differences should be brought to the attention of the Landscape Architect. In the event that notification is not performed, the Contractor shall assume full responsibility for any revision necessary.

E. If, in the opinion of the Landscape Architect, the labor furnished by the Contractor is incompetent, unskilled, or unreliable, his equipment inadequate, improper or unsafe, or if the Contractor shall fail to continuously and diligently execute the construction, the Landscape Architect or Owner shall, in writing, instruct the Contractor to remove all such causes of noncompliance and the Contractor shall promptly comply.

F. The Contractor shall be responsible for full and complete coverage of all irrigation areas. The Landscape Architect shall be notified of any necessary adjustments at no additional cost to the Owner. Any revisions to the irrigation system must be submitted and answered in written form, along with any change in Contract price. Layout may be modified, if necessary to obtain coverage. Spacing not to exceed 60% of the diameter.

PART II: PRODUCTS

2.01 MATERIALS

Material and equipment shall be supplied by the Contractor. No substitutions shall be allowed without the prior written approval of the Owner/Landscape Architect. The Contractor shall inspect all materials and equipment prior to installation, and defective materials shall be replaced with the proper materials and equipment. Those items used in the installation found to be defective, improperly installed or not as specified, shall be removed and the proper materials and equipment installed in the proper manner, as interpreted by the Owner/Landscape Architect. The Contractor shall remove all damaged and defective pipe and equipment from the site.

2.02 PIPING

A. General Provisions: All materials throughout the system shall be new and in perfect condition unless otherwise directed by the Landscape Architect.

B. Polyvinyl Chloride Pipe (PVC): (Where indicated on plan, use non-potable purple piping.)

1. Laterals: PVC shall conform to the requirements of ASTM Designation D 2241, Class 1120 or 1220. All lateral piping less than 3" in diameter shall be Class 200 SDR-21.

2. Main Line Under Pressure: PVC shall conform to the requirements of ASTM Designation D 2241, Class 1120 or 1220, Schedule 40 with belled end for solvent weld connection.

3. Pipe Markings: All PVC pipe shall bear the following markings:
   - o Manufacturer's Name
   - o Nominal Pipe Size
   - o Schedule or Class
   - o Pressure Rating of PSI
   - o NSF (National Sanitation Foundation) Approval
   - o Date of Extrusion

2.04 PVC JOINTS

Joints in PVC pipe smaller than 3" shall be solvent welded in accordance with the recommendations of the pipe manufacturer; the solvent cleaner and welding compound furnished with the pipe.

2.05 THREADED CONNECTIONS

A. Threaded PVC connections shall be made up using Teflon tape only.

B. Connection between mainline pipe fittings and automatic or manual control valves shall be made using Schedule 80 threaded fittings and nipples.

2.06 SOLVENT CEMENT

A. General: Provide solvent cement and primer for PVC solvent weld pipe and fittings recommended by the manufacturer. Pipe joints for solvent weld pipe to be belled end. Pipe joints for gasketted pipe to be intrical ring type. Insert gaskets will not be accepted.

B. Thrust Blocks: Main line piping 3" or greater in diameter shall have thrust blocks sized and placed in accordance with the pipe manufacturer's recommendations or, in the absence of specified recommendations by the pipe manufacturer. 3000 PSI concrete thrusts shall be properly installed at tees, elbows, 45's, crosses, reducers, plugs, caps and valves.

2.07 PIPE AND WIRE SLEEVES

A. Sleeves to be installed:

1. The Contractor shall install irrigation system pipe and wire sleeves conforming to the following:

   a. All pipe sleeves shall extend a minimum of 36" beyond the edges of pavement.

   b. All pipe sleeves to be installed beneath future/existing road surfaces shall be PVC pipe Schedule 40 or jack and bore steel pipe as per FDOT specifications, and as shown on plans.

   c. All irrigation system wires shall be sleeved seperately from main or lateral lines.

   d. All pipe sleeves shall be installed at the minimum depth specified for main lines, lateral lines, and electric wire.

   e. Contractor shall coordinate all pipe sleeve locations and depths prior to initiating installation of the irrigation system.

2.08 SPRINKLER HEADS

A. Spray Sprinklers: The sprinkler shall be a fixed spray type designed for in-ground installation. The nozzle shall elevate 6" (or as designed on plan) when in operation. The body of the sprinkler shall be constructed of non-corrosive heavy duty Cycolac. A filter screen shall be in the nozzle piston. All sprinkler parts shall be removable through the tip of the unit by removal of a threaded cap.

   Riser mounted spray shall be as indicated on the plans. The sprinkler shall consist of a nozzle and body. The body of the riser-mount sprinkler shall be constructed of non-corrosive materials. A cone strainer shall be a separate part with the nozzle assembly to allow for easy flushing of the sprinkler. Maximum working pressure at the base of the sprinkler shall be 40 PSI.

(continued...)

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KHA PROJECT 140726000
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IRRIGATION NOTES

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L4.11

2.09 AUTOMATIC CONTROL VALVE

The automatic remote control valves shall be as specified on the plans, or approved equal.

2.10 GATE VALVES

A. Gate valves for 3/4" through 2-1/2" shall be of brass or bronze construction, solid wedge, IPS threads, non-rising stem with wheel operating handle, for a continuous working pressure of 150 PSI.

B. Gate valves for 3" and larger: Iron body, brass or bronze mounted AWWA gate valves, with a clear waterway equal to the full nominal diameter of the valve, rubber gasket for a continuous working pressure of 150p PSI. Valve shall be equipped with a square operating nut.

2.11 VALVE BOXES

A. For gate valves, use AMETEK #10-181-014 box with #10-181-015 locking lid, or as per the drawings.

B. For control valves 3/4" through 2", the drip valve assemblies, use AMETEK #10-181-014 box with #10-181-015 locking lid, or sized as necessary to effectively house the equipment

C. For control wiring splices, use AMETEK #10-181-014 box with #10-181-015 locking lid, or as per the drawings.

2.12 IRRIGATION WIRING

A. Wiring used for connecting the electric control valves to the controllers shall be Type UF, 600 volt, single strand, solid copper with PVC insulation 4/64" thick. Size shall be 14 gauge, red for "hot" or lead wires, and common wire to be 14 gauge, white in color.

B. Contractor shall perform an ohm test on ground to assure adequate protection against surges and indirect lightning strikes.

2.13 MISCELLANEOUS MATERIALS

A. Drainage Backfill: Cleaned gravel or crushed stone, graded from 1" maximum to 3/4" minimum.

B. Metalized Underground Tape: The detectable, underground utility marking tape shall consist of a minimum: 5 mil (0.005") overall thickness; five-ply composition; ultra-high molecular weight, 100% virgin polyethylene; acid, alkaline and corrosion resistant; with no less than 150 pounds of tensile break strength per 6" width; color-code impregnated with color stable, lead-free, organic pigments suitable for direct burial. Tapes utilizing reprocessed plastics or resins shall not be acceptable. The detectable, underground utility marking tape shall have a 35 gauge (0.0035") solid aluminum foil, core encapsulated within a 2.55 mil (0.00255") polyethylene backing and a 0.6 mil (0.006") PET cover coating. The laminate on each side shall consist of a 0.75 mil (0.00075") layer of hot LPDE, poly-fusing the "sandwich" without use of adhesives.

2.14 AUTOMATIC CONTROL SYSTEM

An Independent Station Controller: Furnish a solid state controller, as specified on the plans. Each station shall be capable of timing from zero (0) minute to 99 minutes per station in one (1) minute increments.

Each station shall be capable of operating two (2) 7VA electric valve-in-head solenoids.

The stand-alone controller shall have two (2) possible programs.

The stand-alone controller shall provide global percentage increase/decrease (water budget) for all stations simultaneously, from ten (10) to two hundred (200) percent, in ten (10) percent increments.

All stations shall be able to be turned on/off manually buy operating timing mechanism or by manual switch at station output.

The stand-alone controller shall incorporate an integral MOV surge protection into the terminal block for each of its 24 VAC field wire outputs. Controller power input wires will also incorporate surge protection.

The control panel shall provide continuous display time. It shall have alphanumeric displays of descriptive English menus and legend identifiers with cursor selection of function and precision value adjustment by rotary dial input.

The stand-alone controller shall be UL listed and FCC approved.

The stand-alone controller shall have 117 VAC, 60 Hz input, 26.5 VAC, 60 Hz output for operating 24 VAC solenoids.

The stand-alone controller cabinet shall be a lockable and weather-resistant outdoor cabinet. Mount as noted on plans.

The controller shall be equipped with lightening protection, by the Contractor, on both the primary (120v) and each secondary (24v) circuit. The controller circuits shall be grounded to a copper clad grounding rod located at each controller.

The controller shall be equipped for a water conservation device. as specified.

PART III: EXECUTION

3.01 INSPECTION

The Contractor shall examine the areas and conditions under which landscape irrigation system is to be installed and notify the Landscape Architect in writing of conditions detrimental to the proper and timely completion of the work. The Contractor shall proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the Landscape Architect.

3.02 PREPARATION

The Contractor shall provide sleeves to accommodate piping under walks or paving. The Contractor shall coordinate with other trades and install to accurate levels prior to paving work. Cutting and patching of paving and concrete will not be permitted. The Contractor shall maintain all warning signs, shoring, barricades, flares and red lanterns, as required by any local codes, ordinances or permits.

3.03 TRENCHING AND BACKFILLING

A. Excavation: The Contractor shall stake out the location of each run of pipe, sprinkler heads, sprinkler valves and isolation valves prior to trenching. Excavation shall be open vertical construction sufficiently wide to provide free working space around the work installed and to provide ample space or backfilling and tamping. Trenches for pipe shall be cut to required grade lines, and compacted to provide accurate grade and uniform bearing for the full length of the line. The bottom of the trenches shall be free of rock or other sharp edged objects. Minimum cover shall be as follows:

Pipe and Wire Depth

Pressure Mainline	18" at top of pipe from Finish Grade
Lateral Piping (rotor)	12" at top of pipe from Finish Grade
Lateral Piping (pop-up)	12" at top of pipe from Finish Grade
Control Wiring	Side of main Line

B. Minimum Clearances: All pipelines shall have a minimum clearance of six inches from each other and from lines of other crafts. Parallel lines shall not be installed directly over one another. No lateral line shall be installed in the main-line trench.

3.04 INSTALLATION OF PIPING

A. PVC Pipe and Joints: The Contractor shall not install solvent wild pipe when air temperature is below 40ø F. Installation shall be in accordance with the manufacturer's instructions.

1. Only the solvent recommended by the pipe manufacturer shall be used. All PVC pipe and fittings shall be installed as outlined and instructed by the pipe manufacturer, and it shall be the Contractor's full responsibility to make arrangements with the pipe manufacturer for any field assistance that may be necessary. The Contractor shall assume full responsibility for the correct installation.

3.05 BACKFILLING PROCEDURES

Initial backfill on PVC lines shall be pulverized native soil, free of foreign matter. Within radius of 4" of the pipe shall be clean soil or sand. Plant locations shall take precedence over sprinkler and pipe locations. The Contractor shall coordinate the location of trees and shrubs with the routing of lines and final head locations.

A. Backfill and Compaction: The Contractor shall leave trenches slightly mounded to allow for settlement after the backfilling is completed. The Contractor shall clean the site of the work continuously of excess waste materials as the backfilling progresses, and leave in a neat condition. No trenches shall be left open for a period of more than 48 hours. Protect open trenches as required.

The Contractor shall carefully backfill excavated materials approved for backfilling, consisting of earth, loam, sand, and other approved materials, free of rock and debris over 1" in size. Backfill shall be compacted to original density of surrounding soil without dips, sunken areas, or irregularities.

The Contractor shall conform to DOT requirements for methods and required compaction percentages, for roads and paving.

The Contractor shall hand place the first 6" of backfill (or to top of pipe) and have it walked on so as to secure the position of the pipe and wire.

No wheel rolling will be allowed. The Contractor shall remove rock or debris extracted from backfill materials and dispose of offsite. The Contractor shall fill any voids left in backfill with approved backfill materials.

B. Existing Lawns: Where trenching is required across existing lawns, uniformly cut strips of sod 6" wider than trench. The Contractor shall remove sod in rolls of suitable size for handling and keep moistened until replanted. The Contractor shall replant sod within 48 hours after removal, roll and water generously. The Contractor shall resod any areas not in healthy condition equal to adjoining lawns 10 days after replanting.

C. Seeded Area: Trenching will be required across existing seeded areas, primarily roadway edging. The Contractor shall conform to the requirements of seeding, Section 02930 for the reseeding of the disturbed trench area.

D. Pavements: Jack and bore or directional bore piping under paving materials as per local regulatory codes. No cutting and patching of pavement will be permitted.

3.06 VALVES

A. Isolation Valves: Shall be sized corresponding to adjacent pipe size. Specified valve boxes shall be installed flush with finish grade in such a manner that surface forces applied to their exposed area will not be transmitted to the piping in which the valve is installed nor any other piping, wiring or other lines in the vicinity of said valves.

B. Gate Valves: Install where shown, in valve boxes.

C. Electric Control Valves: Shall be installed in specified valve boxes. The valve shall have 6" of 3/4" pea gravel installed below the bottom of the valve. If the valve box does not extend to the base of the valve, a valve box extension shall be installed. Electric control valves shall be installed where shown and grouped together where practical. The Contractor shall place no closer than 24" to walk edges, bikeway edges, buildings and walls. The Contractor shall adjust the valve to provide flow rate or rated operating pressure required for each sprinkler circuit.

3.07 CONDUIT AND SLEEVES

A. Conduit and Sleeves for Control Wiring and Main/Lateral Pipe: The Contractor shall provide and install where necessary. Contractor shall coordinate locations of previously installed sleeving with the General Site Contractor.

The Contractor shall coordinate installation of sleeves with work of other disciplines.

3.08 CONTROLS

A. The Contractor shall connect electric control valves to controllers in a clockwise sequence to correspond with station settings beginning with Stations 1, 2, 3, etc. Automatic controllers shall be provided and installed by the Contractor as noted on the drawings. All zones will be labeled on the controller.

B. Controllers shall be equipped with lightning protection and grounded to a standard 5/8" copper clad steel ground rod driven a minimum of 8' into the ground and clamped.

C. The electrical service to the controllers shall be performed by an electrical subcontractor in compliance with NEC requirements.

3.09 CONTROL WIRE

A. Control wiring between the controller and electric valves shall be buried in main line trenches or in separate trenches. Electrical connection at valve will allow for pigtail so solenoid can be removed from valve with sufficient slack to allow ends to be pulled 12" above ground for examination and cleaning.

B. An expansion loop shall be provided at every valve at 100' o.c. Expansion loop shall be formed by wrapping wire at least eight times around a 3/4" pipe and withdrawing pipe.

C. The wire shall be bundled and taped every ten feet. The wire shall be laid in the trench prior to installing the pipe being careful to install wire beneath and 6" to the side of the main pipe line.

D. Electrical connections to electric control valves shall be made with Rainbird Pen-Tite or Techdel GT-3-GEL - Tite connectors or equal.

Power Connections: Electrical connections to power and signal wires shall be made using 3M 82-A2 power cable splice kits.

3.10 SPRINKLER HEADS

A. General Provisions:

1. Sprinkler heads shall be installed as designated on the shop drawings. Heads shall be installed on flexible PVC. Top to be flush with finish grade or top of curb.

2. Spacing of heads shall not exceed the maximum indicated on the shop drawings (unless directed by the Landscape Architect). In no case shall the spacing exceed the maximum recommended by the manufacturer.

B. Head Types:

1. Pop-up- Rotary Sprinkler Heads: Shall be installed on flex joint and be set with top of head flush with finish grade. Heads installed at curb shall have 6" to 10" between perimeter of head and concrete. Heads placed at edge of pavement having no curb shall be installed 24" from edge of pavement.

2. Spray Pop-up Sprinkler Heads: Shall be installed on flexible PVC and be set with top of head flush with finished grade. Sprinkler heads placed adjacent to curbs will be installed 9" from concrete. Sprinkler heads placed adjacent to pavement having no curb shall be installed 24" from the edge of pavement.

3.11 COMPLETION

A. Flushing: Before sprinkler heads are set, the Contractor shall flush the lines thoroughly to make sure there is no foreign matter in the lines.

The Contractor shall flush the main lines from dead end fittings for a minimum of five minutes under a full head of pressure.

B. Testing: The Contractor shall notify Landscape Architect and Owner forty-eight (48) hours in advance of testing.

Prior to backfilling of main line fittings, Contractor shall fill the main line piping with water, in the presence of the Owner/Landscape Architect, taking care to purge the air from it by operating all the sprinkler control valves one or more times and/or such other means as may be necessary. A small, high pressure pump or other means of maintaining a continuous water supply shall be connected to the main line and set so as to maintain 100 PSI in the main line system for two (2) hours without interruption. When this has been accomplished and while the pressure in the system is still 100 PSI, leakage testing shall be performed in accordance with AWWA Standard C-600. Pressure readings shall be noted and make up water usage shall be recorded. Should the rate of make up water usage indicate significant leakage, the source of such leakage shall be found and corrected and the system then retested until the Owner/Landscape Architect is satisfied that the system is reasonably sound. Lateral line testing shall be conducted during the operating testing of the system by checking visually the ground surface until no leaks in this portion of the system are evident. Leaks shall be repaired or paid for by the Contractor at any time they appear during the warranty period.

C. Adjustment and Coverage of System: Coordinate pressure testing with adjustments and coverage test of system so both may occur at the same time. The Contractor shall balance and adjust the various components of the 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, part circle sprinkler heads, and individual station adjustments on the controllers.

3.12 WARRANTY

A. The Contractor shall fully warrant the landscape irrigation system for a period of one (1) year after the written final acceptance and will receive a written confirmation from the Landscape Architect that the warranty period is in effect.

B. During the warranty period, the Contractor will enforce all manufacturer's and supplier's warranties as if made by the Contractor himself. Any malfunctions, deficiencies, breaks, damages, disrepair, or other disorder due to materials, workmanship, or installation by the Contractor and his suppliers shall be immediately and properly corrected to the proper order as directed by the Owner and/or Landscape Architect.

C. Any damages caused by system malfunction shall be the responsibility of the Contractor who shall make full and immediate restoration for said damages.

PLANS ARE IN NAVD 1988 DATUM CONVERSION EQUATION IS BELOW:
(NAVD 1988) + 1.5' = (NGVD 1929)

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE AND OBTAINING ALL NECESSARY PERMITS.

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

No.	REVISIONS	DATE	BY

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LICENSED PROFESSIONAL
TRICIA C. RICHTER, PLA
FLORIDA LICENSE NUMBER
LA0001244
DATE: 07/19/2023

Tricia C. Richter
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KHA PROJECT 140726000
DATE JULY 2023
SCALE AS SHOWN
DESIGNED BY YXY
DRAWN BY YXY
CHECKED BY JAW

IRRIGATION NOTES

DELRAY TOWNHOMES
PREPARED FOR
OCEAN RIDGE RENTALS
DELRAY BEACH FLORIDA

SHEET NUMBER
L4.12