



DEVELOPMENT SERVICES

BUILDING | HISTORIC PRESERVATION | PLANNING & ZONING

SITE PLAN REVIEW AND APPEARANCE BOARD

Rainberry Bay Circle

Meeting	File No.	Application Type
May 22, 2024	2024-011-SPI-SPR-CL1	Level 1 Site Plan Modification with Landscape Waivers
Property Owner		Authorized Agent
Lois Wiesler, Master Board President		John Haley PE

Request

Consideration of a Level 1 Site Plan Modification for Rainberry Bay Circle including landscape mitigation, replacement of ROW curbs, and a landscape waiver request for LDR Section 4.6.16(H)(6).

Site Data & Information

Location: 2801 Rainberry Circle South

PCN: 12-43-46-07-04-007-0000

Total Development Area: 4.82 acres

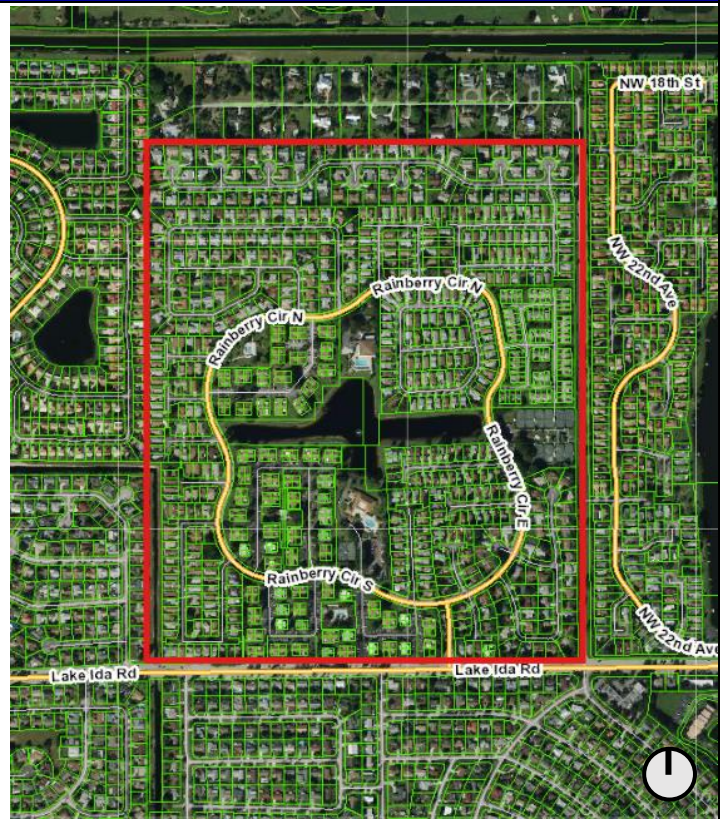
Land Use Designation: Medium Density Residential (MD)

Zoning District: Planned Residential Development (PRD) District

Adjacent Zoning:

- North, South, West & East: PRD

Use: Residential Clubhouse





Background

Rainberry Bay is a single family and multifamily community with approximately 900 dwelling units. The community was constructed in the 1970's and early 1980's. The planned residential development, Rainberry Bay, has recently re-paved Rainberry Circle through the issuance of permits. After the completion of the re-paved ROW, the applicant is requesting the removal of 19 trees due to the damaging of the existing roads and sidewalk. The removal of trees will require the mitigation of 37 trees.

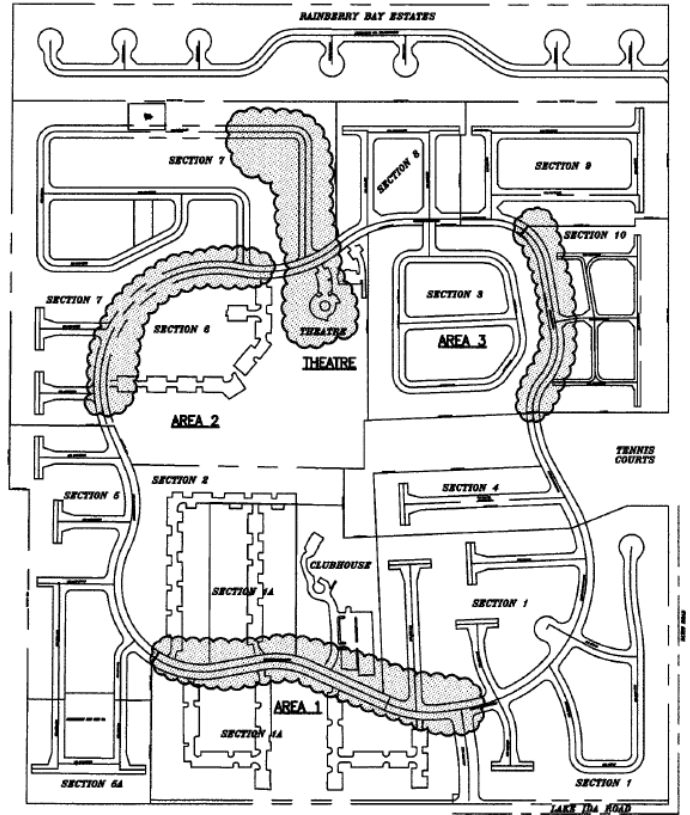
Description of Proposal

The proposed modification is limited to the mitigation of removed trees, and the replacement of curbs to Type "D" curbs for the recently re-paved ROW (Rainberry Circle). The areas clouded to the right are the areas the mitigated trees are proposed.

The request also includes a landscape waiver for LDR Section 4.6.16(H)(6). The waiver is limited to the mitigated trees utilized as the street trees along Rainberry Circle (North, South, and East).

The below table provides breakdown of tree mitigation requirement, pursuant to the mitigation requirement in LDR Section 4.6.19(E)(5)(b).

TREE #	COMMON NAME	BOTANICAL NAME	CANOPY HEIGHT (ft)	CANOPY WIDTH (ft)	DIAMETER AT BREAST HEIGHT (in)	HEALTH CONDITION	HEALTH CONDITION RATING %	NOTES	MITIGATION
1	Black Olive	<i>Bucida buxiana</i>	40	60	28	POOR	40%	See Arborist Report	1 - Tree
2	Black Olive	<i>Bucida buxiana</i>	40	40	25	FAR	45%	See Arborist Report	1 - Tree
3	Black Olive	<i>Bucida buxiana</i>	40	45	22	POOR	40%	See Arborist Report	1 - Tree
4	Black Olive	<i>Bucida buxiana</i>	45	52	31	FAR	60%	See Arborist Report	8 - Trees
5	Black Olive	<i>Bucida buxiana</i>	35	40	17	FAR	45%	See Arborist Report	1 - Tree
6	Black Olive	<i>Bucida buxiana</i>	40	50	19	FAR	45%	See Arborist Report	1 - Tree
7	Black Olive	<i>Bucida buxiana</i>	45	60	27	FAR	45%	See Arborist Report	1 - Tree
8	Black Olive	<i>Bucida buxiana</i>	45	48	25	POOR	40%	See Arborist Report	1 - Tree
9	Black Olive	<i>Bucida buxiana</i>	40	40	19	FAR	50%	See Arborist Report	5 - Trees
10	Black Olive	<i>Bucida buxiana</i>	40	35	21	FAR	45%	See Arborist Report	1 - Tree
11	Black Olive	<i>Bucida buxiana</i>	45	40	25	POOR	40%	See Arborist Report	1 - Tree
12	Black Olive	<i>Bucida buxiana</i>	40	35	23	FAR	45%	See Arborist Report	1 - Tree
14	Black Olive	<i>Bucida buxiana</i>	45	35	26	POOR	35%	See Arborist Report	1 - Tree
15	Black Olive	<i>Bucida buxiana</i>	40	40	19	FAR	50%	See Arborist Report	5 - Trees
16	Black Olive	<i>Bucida buxiana</i>	45	35	21	FAR	55%	See Arborist Report	5 - Trees
17	Black Olive	<i>Bucida buxiana</i>	40	40	21	POOR	35%	RECOMMEND REMOVAL ASAP - See Arborist Report	1 - Tree
21	Black Olive	<i>Bucida buxiana</i>	45	45	32	FAR	45%	See Arborist Report	1 - Tree
24	Black Olive	<i>Bucida buxiana</i>	40	45	32	FAR	40%	See Arborist Report	1 - Tree
25	Betehood	<i>Betula pinnatifida</i>	35	35	29	FAR	45%	FLEPPC ISB (as a Category I Invasive species)	1 - Tree
								Total Mitigation Trees Required:	37 Trees
								Total Mitigation Trees Provided:	37 Trees



Review & Analysis: Site Plan

LDR Section 2.4.10(A)(2)(d), Board Review

Level 1 and Level 2 Site Plan applications that are dependent upon waiver relief require action by the SPRAB and/or the City Commission.

LDR Section 2.1.6(E)(1), Board Action

The SPRAB has the authority to take action on the following items pursuant to the procedures and standards of the LDR, except where authority is granted to the Historic Preservation Board:

- (a) Level 1 or Level 2 Site Plan applications when associated with the following requests for relief:
 1. Waivers that do not require City Commission action.
 2. Reduction in the number of parking spaces required for specific uses, pursuant to Section 4.6.9(F)(1).
 3. Waivers to Section 4.6.16, Landscape Regulations.

LDR Section 2.4.10(A)(3)(a), Findings

Formal findings are not required for Level 1 Site Plan applications.

Due to the Level 1 Site Plan application requesting a waiver to LDR Section 4.6.16, the Level 1 must be reviewed by the Site Plan Review and Appearance Board.



Review & Analysis: Landscape Plan

LDR Section 2.4.10(A)(3)(c), Findings

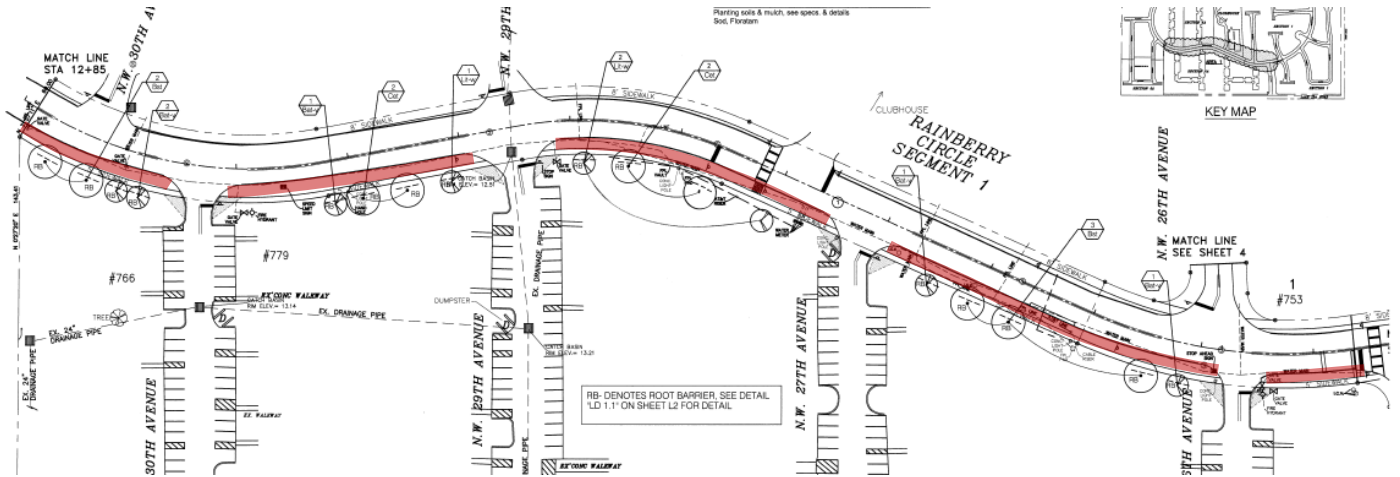
Landscape Plans, including modifications to existing landscaping, shall be consistent with Section 4.6.16, Landscape Regulations.

LDR Section 2.4.11(B)(5), Findings Prior to granting a waiver, the granting body shall make findings that the granting of the waiver:

- (a) Shall not adversely affect the neighboring area;
- (b) Shall not significantly diminish the provision of public facilities;
- (c) Shall not create an unsafe situation; and
- (d) Does not result in the grant of a special privilege in that the same waiver would be granted under similar circumstances on other property for another applicant or owner.
- (e) Within the CBD, the following additional findings apply:
 1. The waiver shall not result in an inferior pedestrian experience along a Primary Street, such as exposing parking garages or large expanses of blank walls.
 2. The waiver shall not allow the creation of significant incompatibilities with nearby buildings or uses of land.
 3. The waiver shall not erode the connectivity of the street and sidewalk network or negatively impact any adopted bicycle/pedestrian master plan.
 4. The waiver shall not reduce the quality of civic open spaces provided under this code.

LDR Section 4.6.16, Landscape Regulations

LDR Section 4.6.16(H)(6), Street trees for new residential developments. A themed landscape is very important for creating unity and common character within residential developments. Street trees are an integral component of creating a themed landscape and shall be required as per this section. All trees shall be in accordance with Section 4.6.16(E)(5). Tree selection shall be approved by City Staff. One street tree shall be required for every 40 linear feet of street frontage with a minimum of one tree per property. Street trees shall be located between the inside edge of sidewalk and edge of road pavement. Typical spacing for some commonly used street trees are listed in the below chart.



Pursuant to LDR Section 4.6.16(H)(6), street trees are required to be located between the inside edge of sidewalk and edge of road pavement (highlighted in red). If the trees were to be placed in the required location per LDR Section 4.6.16(H)(6), the trees would not comply with the AASHTO Green Book standards; the distance from edge of travel lane to any hazardous vehicle obstruction such as a tree for roadways with speed 35 to 45 mph, is 14 feet minimum. There is also an existing watermain and other utilities (AT&T, FP&L and cable TV) conflict with the required location of the street trees. The request is to locate the trees on the outside of the sidewalk adjacent to Rainberry Circle (North, South, and East).

Overall, the request is not anticipated to negatively affect the area or create an unsafe situation. The request will still be providing the required street trees, however, due to the Green Book standards and the conflicting utility lines, the trees cannot be placed in the required location without creating a hazardous situation and damaging existing utilities.



LDR Section 4.6.19, Tree preservation, protection, enforcement, and maintenance

LDR Section 4.6.19(E)(5)(b), Mitigation, *Mitigation is required as follows:*

Table 4.6.196(E)(5)(b)(i)			
	Condition Rating	Measurement	Replacement
Tree	50% or greater	Total diameter at breast height (DBH) inches of trees	Equivalent caliper inches of tree
	Less than 50%	Number of trees	Tree-for-tree basis
Palm	50% of greater	Number of palms	Comparable size and species on palm-for-palm basis
	Less than 50%	Number of palms	Palm-for palm basis

Of the removed trees, 15 of the trees have a rating less than 50% and will be replaced with a one-to-one ratio. The remaining four removed trees have a rating greater than 50% and will require replacement equivalent to the caliper inches of each tree. The total amount of trees required for mitigation is 37 trees.

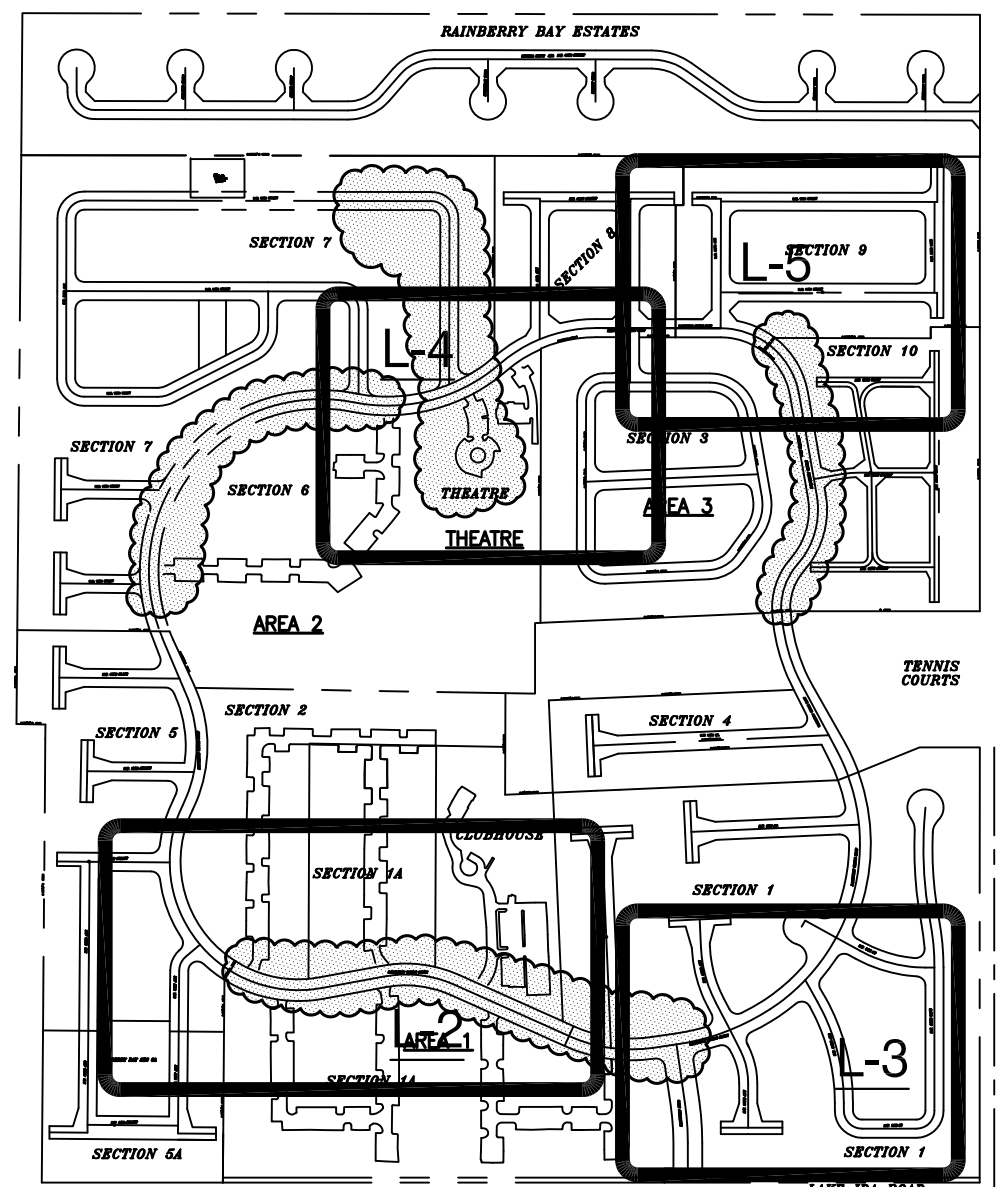
Review By Others

No other review is required for request.

Optional Board Motions

- A. Move to **approve** the Level 1 Site Plan Modification for **Rainberry Bay Circle** including landscape mitigation, addition of sidewalk, replacement of ROW curbs, and a landscape waiver request for LDR Section 4.6.16(H)(6), by finding that the request is consistent with the Comprehensive Plan and meets criteria set forth in the Land Development Regulations.
- B. Move to **approve, as amended**, the Level 1 Site Plan Modification for **Rainberry Bay Circle** including landscape mitigation, addition of sidewalk, replacement of ROW curbs, and a landscape waiver request for LDR Section 4.6.16(H)(6), by finding that the request is consistent with the Comprehensive Plan and meets criteria set forth in the Land Development Regulations.
- C. Move to **denial** the Level 1 Site Plan Modification for **Rainberry Bay Circle** including landscape mitigation, addition of sidewalk, replacement of ROW curbs, and a landscape waiver request for LDR Section 4.6.16(H)(6), by finding that the request is inconsistent with the Comprehensive Plan and does not meet criteria set forth in the Land Development Regulations.
- D. **Move to continue with direction.**

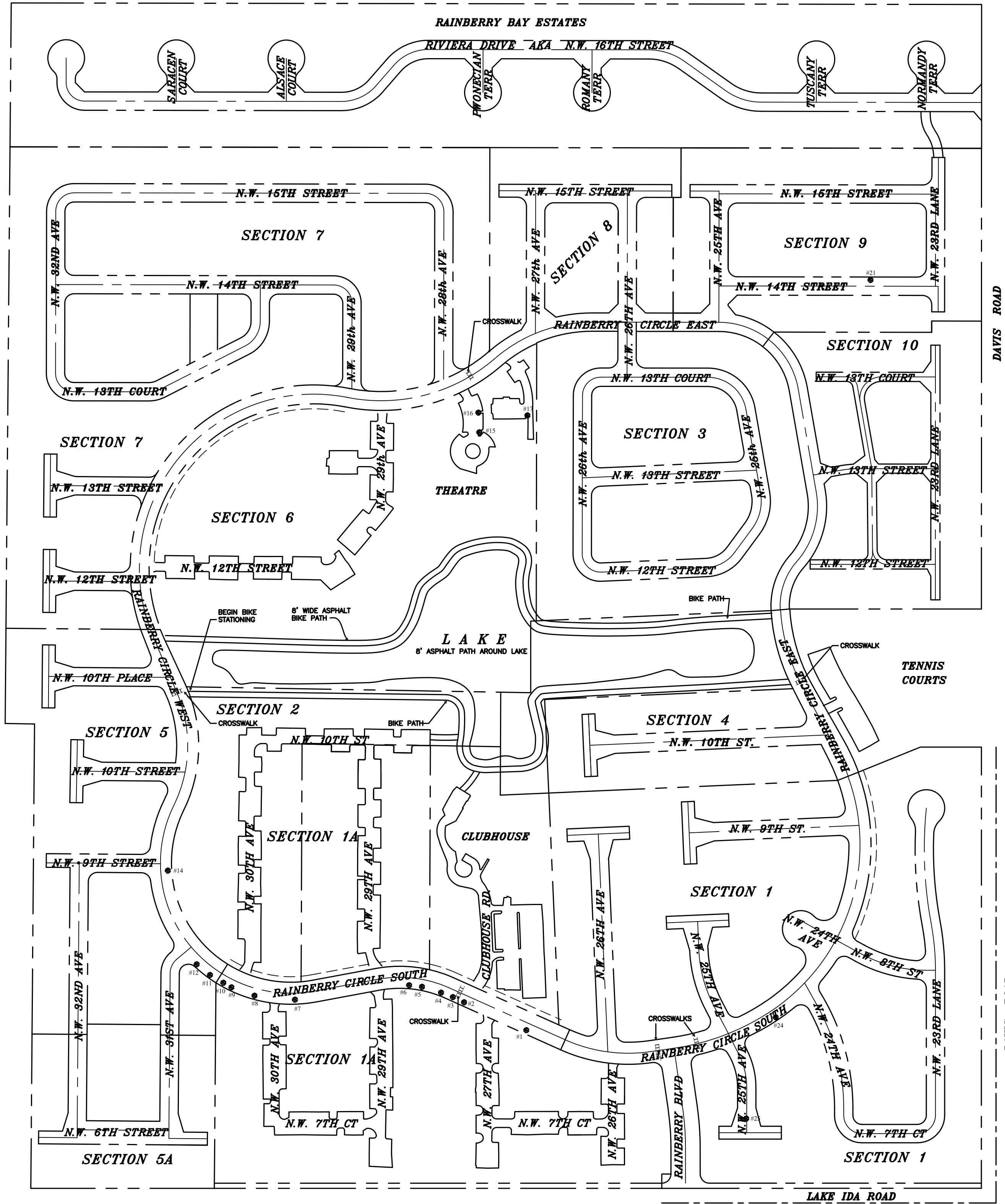
REVISIONS	BY
8/23/23 SPRAB SUBMITTAL SET	
REVISED PER REVISED SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISED CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	



Existing Tree Disposition Sheet Legend

REMOVAL NOTES:

- All tree's to be removed shall be completely removed from the site.
 - The root systems, of the removals, shall be removed in such a manner to facilitate the installation of new tree's, or palms. Root system removal shall be a minimum of 24" depth, and a 6 foot diameter around the trunk.
 - TREE REMOVAL PERMITS WILL BE REQUIRED BY THE GOVERNING MUNICIPALITY, AND IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS.
- ALL UNDERGROUND UTILITIES SHALL BE LOCATED PRIOR TO COMMENCING ANY WORK ON THE SITE, PER FLORIDA LAW.



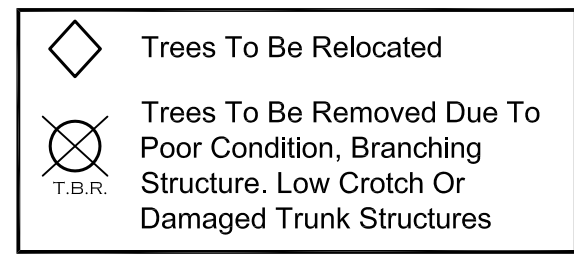
Overall Street Plan / Existing Tree Disposition Plan

TREE #	COMMON NAME	BOTANICAL NAME	CANOPY HEIGHT (ft)	CANOPY WIDTH (ft)	DIAMETER AT BREAST HEIGHT (in)	HEALTH CONDITION	HEALTH CONDITION RATING %	NOTES	MITIGATION
1	Black Olive	<i>Bucida buceras</i>	40	60	28	POOR	40%	See Arborist Report	1 - Tree
2	Black Olive	<i>Bucida buceras</i>	40	40	25	FAIR	45%	See Arborist Report	1 - Tree
3	Black Olive	<i>Bucida buceras</i>	40	45	22	POOR	40%	See Arborist Report	1 - Tree
4	Black Olive	<i>Bucida buceras</i>	45	52	31	FAIR	60%	See Arborist Report	8 - Trees
5	Black Olive	<i>Bucida buceras</i>	35	40	17	FAIR	45%	See Arborist Report	1 - Tree
6	Black Olive	<i>Bucida buceras</i>	40	50	19	FAIR	45%	See Arborist Report	1 - Tree
7	Black Olive	<i>Bucida buceras</i>	45	60	27	FAIR	45%	See Arborist Report	1 - Tree
8	Black Olive	<i>Bucida buceras</i>	45	48	26	POOR	40%	See Arborist Report	1 - Tree
9	Black Olive	<i>Bucida buceras</i>	40	40	19	FAIR	50%	See Arborist Report	5 - Trees
10	Black Olive	<i>Bucida buceras</i>	40	35	21	FAIR	45%	See Arborist Report	1 - Tree
11	Black Olive	<i>Bucida buceras</i>	45	40	25	POOR	40%	See Arborist Report	1 - Tree
12	Black Olive	<i>Bucida buceras</i>	40	35	23	FAIR	45%	See Arborist Report	1 - Tree
14	Black Olive	<i>Bucida buceras</i>	45	35	26	POOR	35%	See Arborist Report	1 - Tree
15	Black Olive	<i>Bucida buceras</i>	40	40	19	FAIR	50%	See Arborist Report	5 - Trees
16	Black Olive	<i>Bucida buceras</i>	45	35	21	FAIR	55%	See Arborist Report	5 - Trees
17	Black Olive	<i>Bucida buceras</i>	40	40	21	POOR	35%	RECOMMEND REMOVAL ASAP - See Arborist Report	1 - Tree
21	Black Olive	<i>Bucida buceras</i>	45	45	32	FAIR	45%	See Arborist Report	1 - Tree
24	Black Olive	<i>Bucida buceras</i>	40	45	32	FAIR	40%	See Arborist Report	1 - Tree
25	Bishopwood	<i>Bischofia javanica</i>	35	35	29	FAIR	45%	FLEPPC lists it as a Category I invasive species	1 - Tree
Total Mitigation Trees Required:									37 Trees
Total Mitigation Trees Provided:									37 Trees

Tree & Palm Health Evaluation & Inventory By Arborist

NOTE: Remove All Exotic Nuisance Species, Including But Not Limited To (Fl. Holly, Australian Pine, Melaleuca, etc.) Per State and Local Zoning & Landscape Code(s).

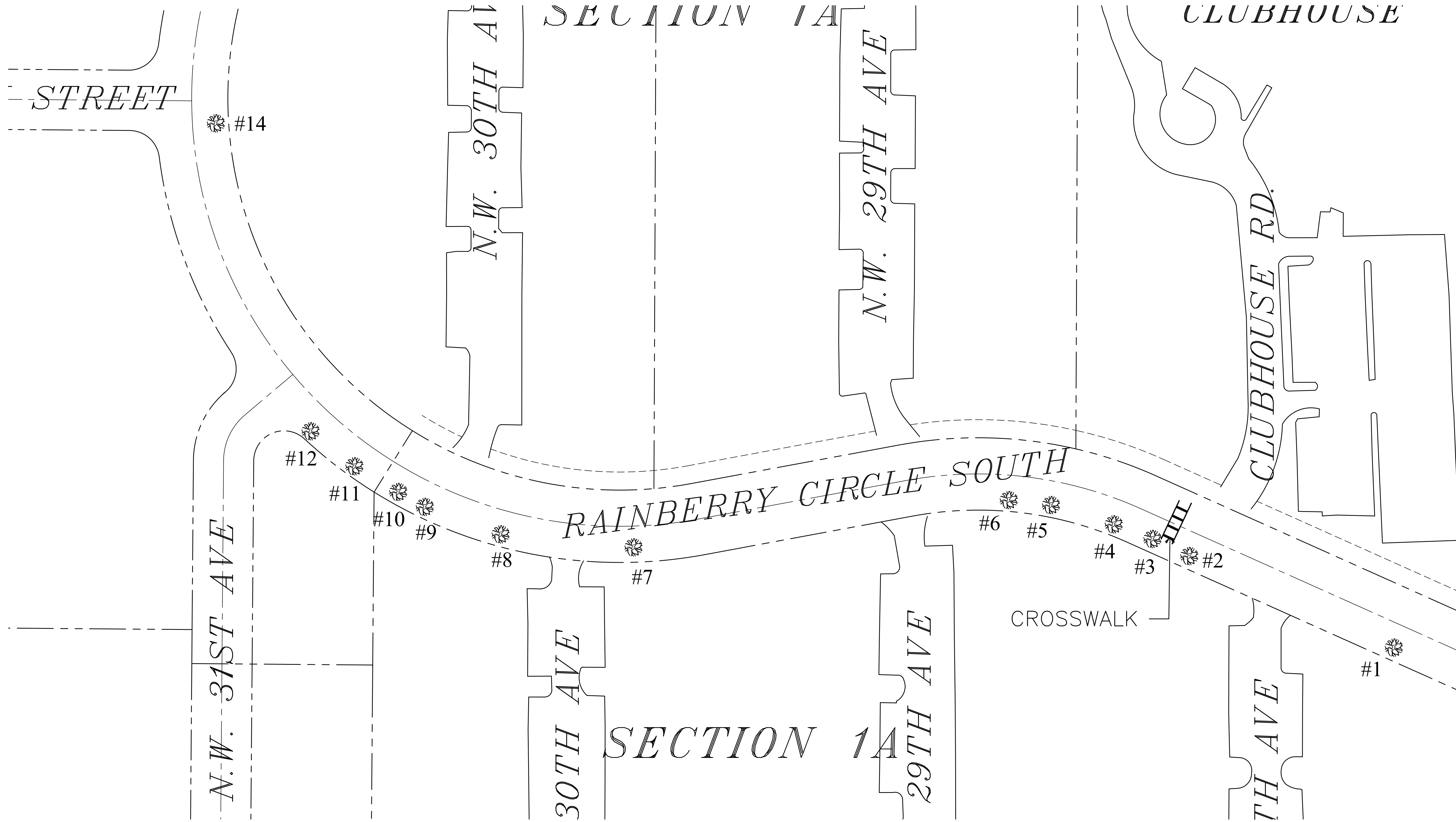
NOTE: All undeveloped portions of a parcel of land shall be left undisturbed or planted with ground cover, or lawn, as to leave no exposed soils in order to prevent dust or soil erosion, as per ULDR 47-21.9.M



DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
 74 N.E. 5th AVE. Delray Beach, FL 33483
 LA. 831
 561-272-9621

Landscape for:
Rainberry Bay
 Delray Beach, Florida

DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	



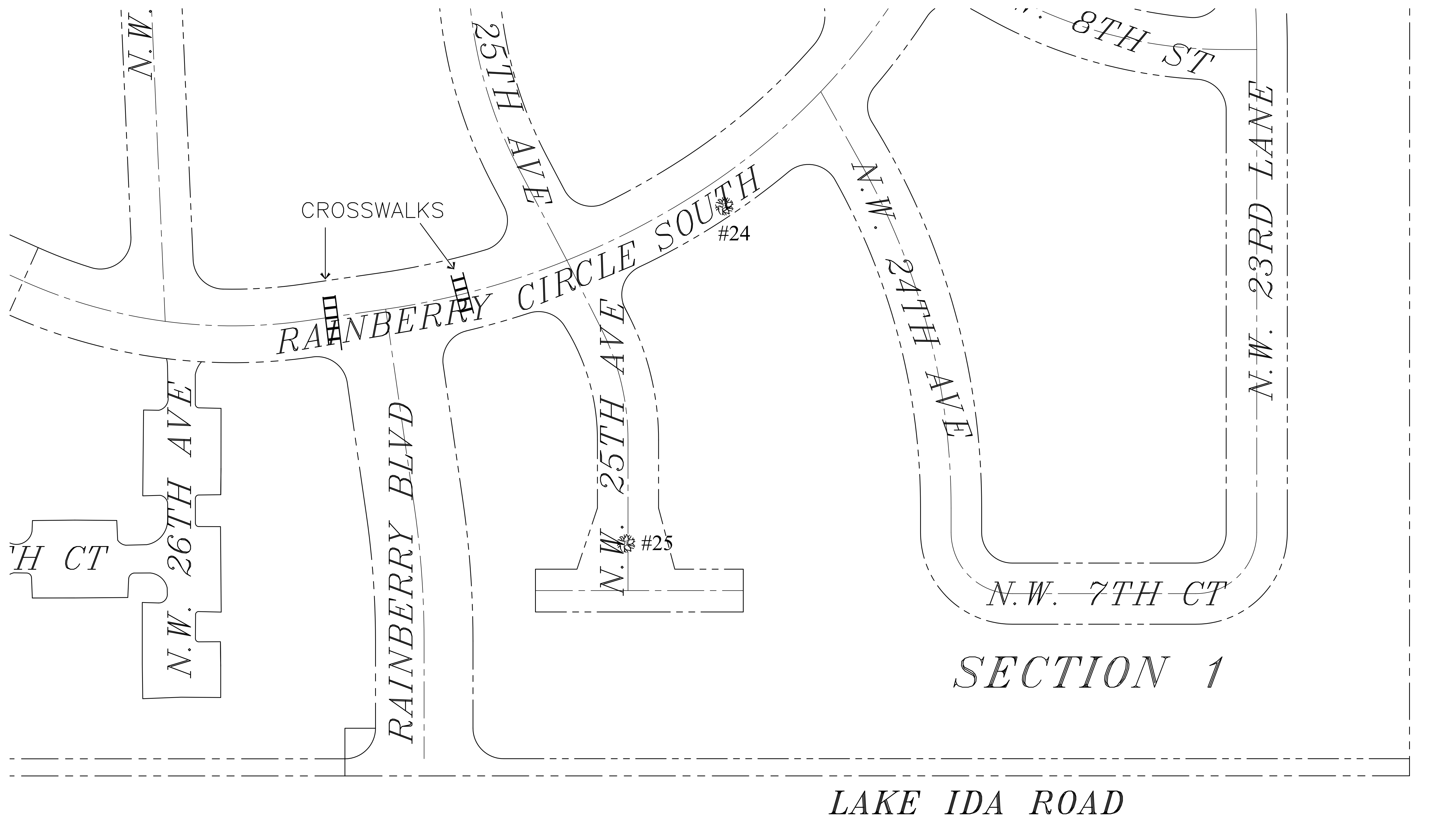
Existing Tree Disposition Plan "A"

REVISIONS	BY
8/23/23 SPRAB SUBMITTAL SET	
REVISED PER REVISION SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISION CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	

DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
 74 N.E. 5th AVE. Delray Beach, FL 33483
 LA. 831
 561-272-9621

Landscape for:
Rainberry Bay
 Delray Beach, Florida

DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	



SECTION 1

LAKE IDA ROAD

Existing Tree Disposition Plan "B"

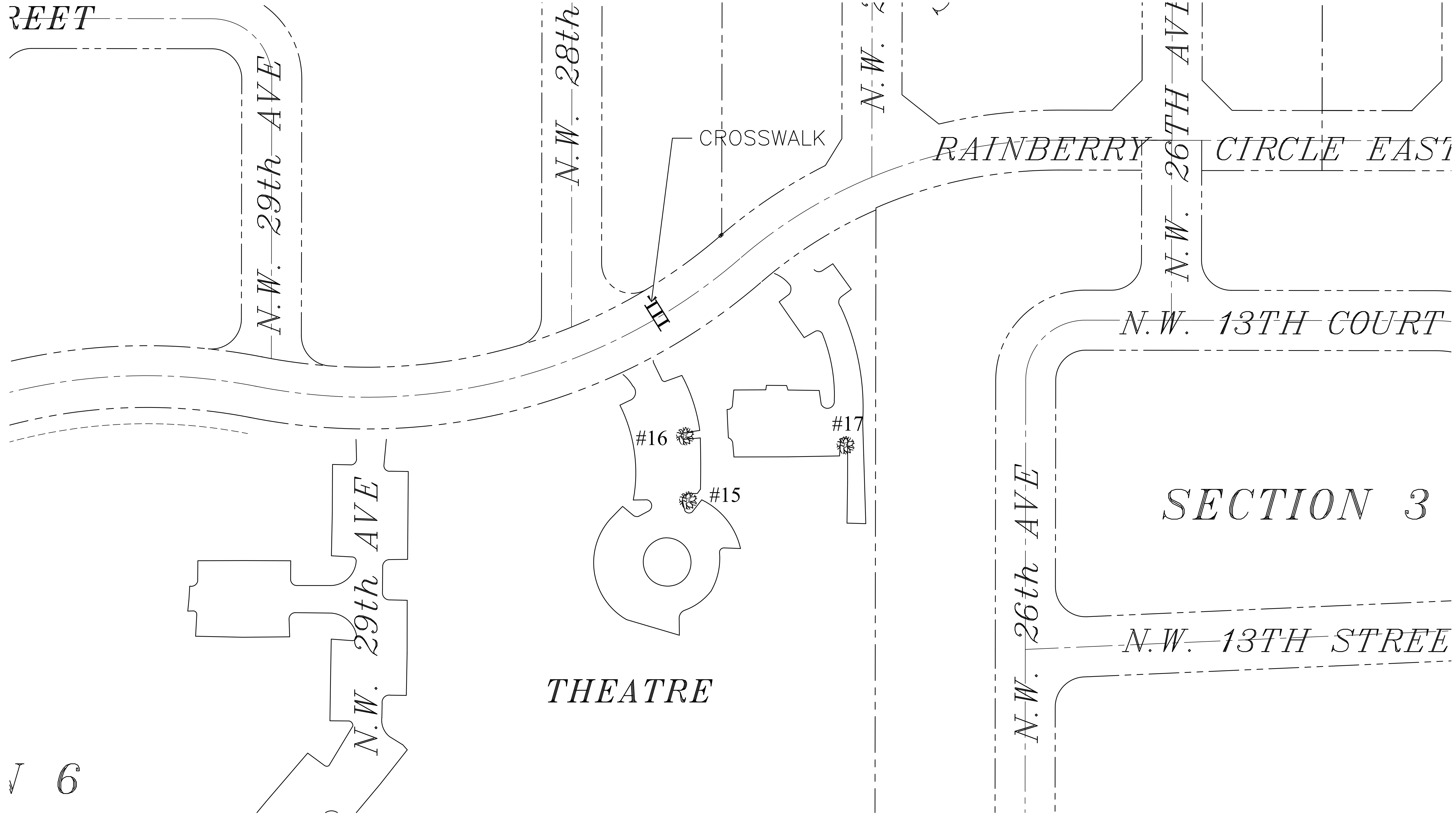
REVISIONS	BY
8/23/23 SPRAB SUBMITTAL SET	
REVISED PER REVISD SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISD CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	

DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
 74 N.E. 5th AVE. Delray Beach, FL 33483
 LA. 831
 561-272-9621

Landscape for:
Rainberry Bay
 Delray Beach, Florida

DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	

HEET



6

THEATRE

CROSSWALK

RAINBERRY CIRCLE EAST

N.W. 13TH COURT

SECTION 3

N.W. 13TH STREET

N.W. 26th AVE

N.W. 26TH AVE

N.W. 28th

N.W. 29th AVE

N.W. 29th AVE

#16

#15

#17

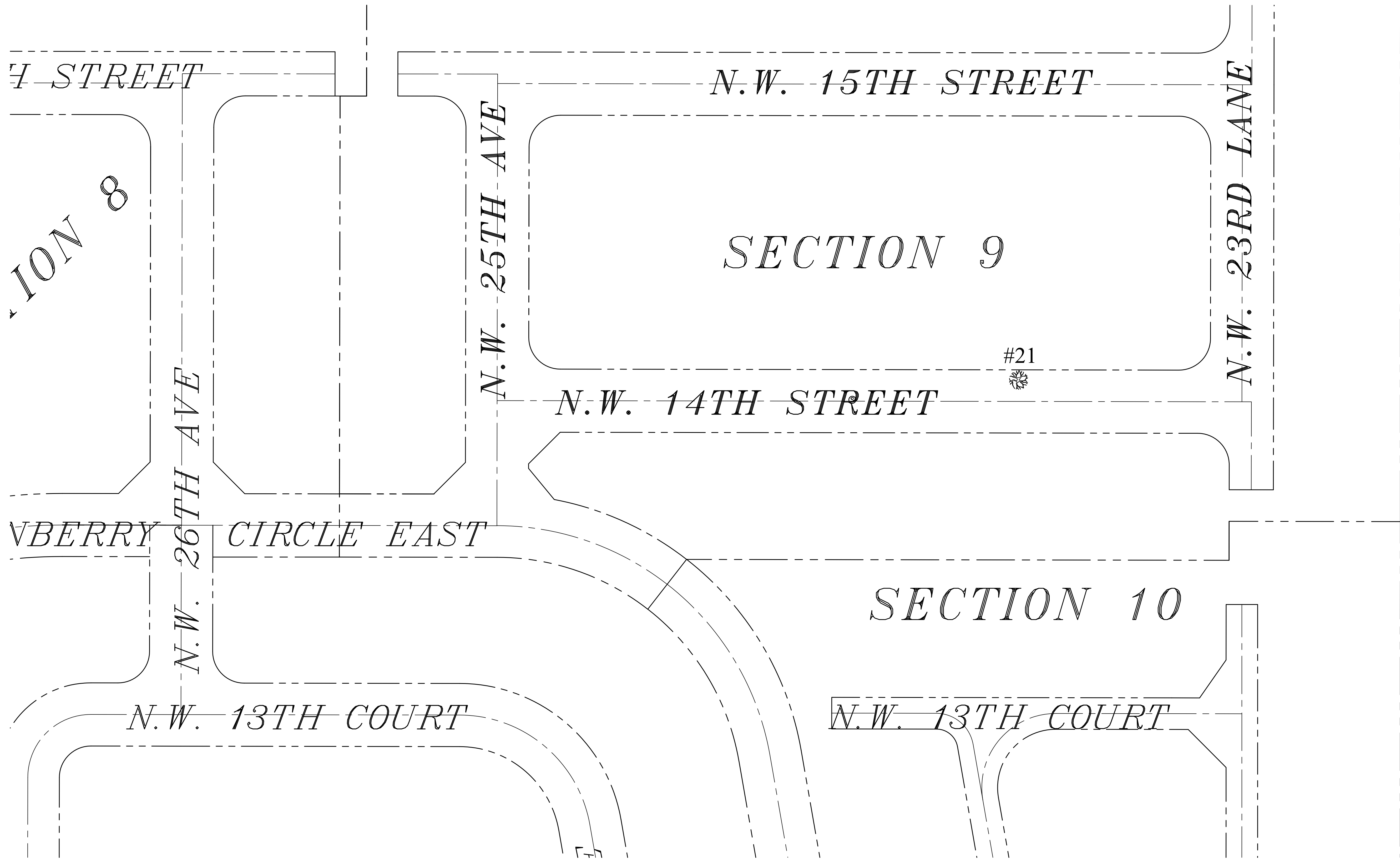
REVISIONS	BY
8/23/23 SPRAB SUBMITTAL SET	
REVISED PER SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISED CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	

DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
 74 N.E. 5th AVE. Delray Beach, FL 33483
 LA. 831
 561-272-9621

Landscape for:
Rainberry Bay
 Delray Beach, Florida

DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	

Existing Tree Disposition Plan "C"



Existing Tree Disposition Plan "D"

REVISIONS	BY
8/23/23 SPRAB SUBMITAL SET	
REVISED PER REVISION SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISION CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	

DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
 74 N.E. 5th AVE. Delray Beach, FL 33483
 LA. 831
 561-272-9621

Landscape for:
Rainberry Bay
 Delray Beach, Florida

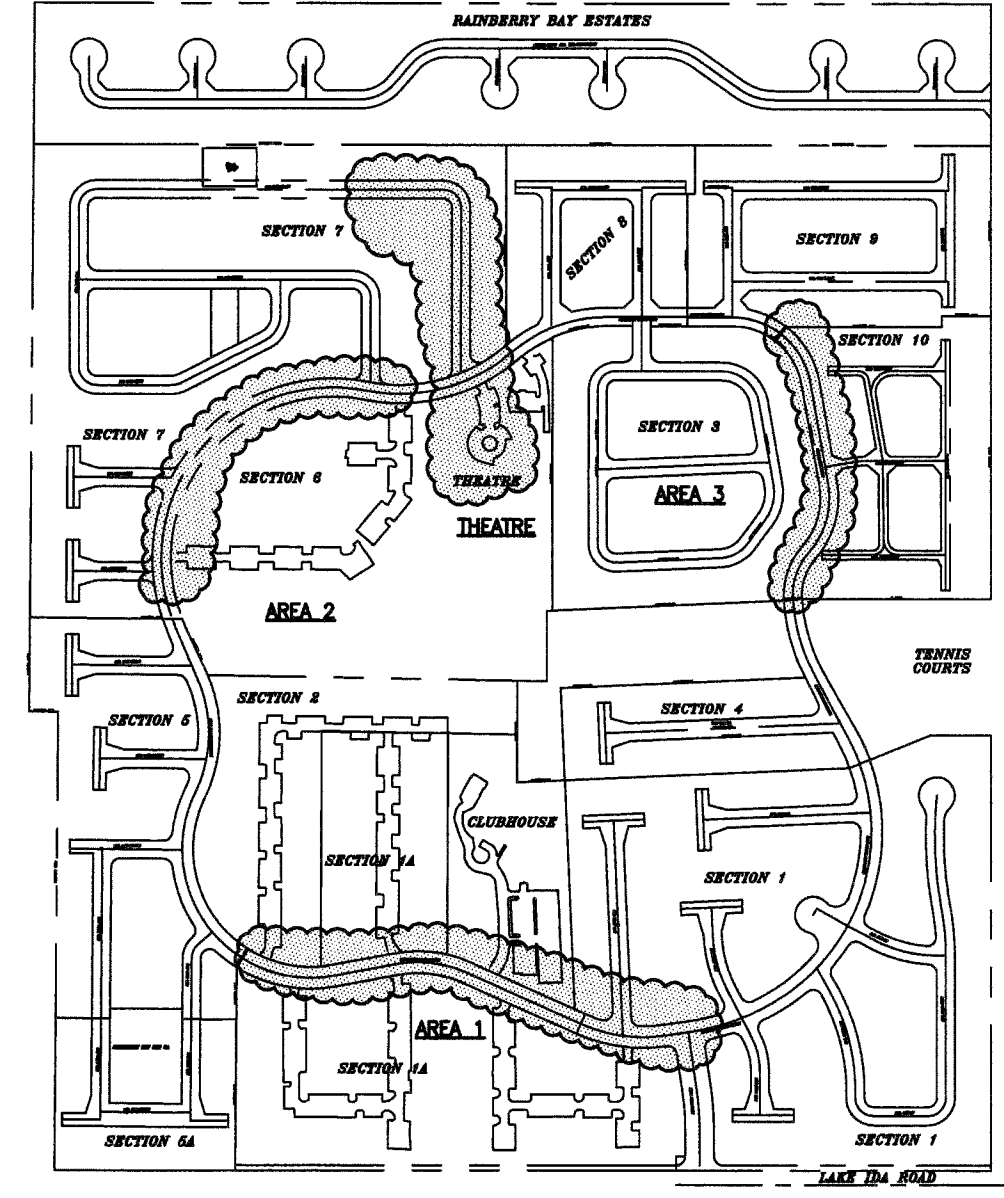
DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	

REVISIONS	BY
8/23/23 SPRAB	
SUBMITTAL SET	
REVISED PER REVISED SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISED CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	
REVISED 4.30.24 PER CITY CMMNTS (Cat Lit)	DC

DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
 74 N.E. 5th Ave. Delray Beach, FL 33483
 LA. 831
 561-272-9621

Landscape for:
Rainberry Bay
 Delray Beach, Florida

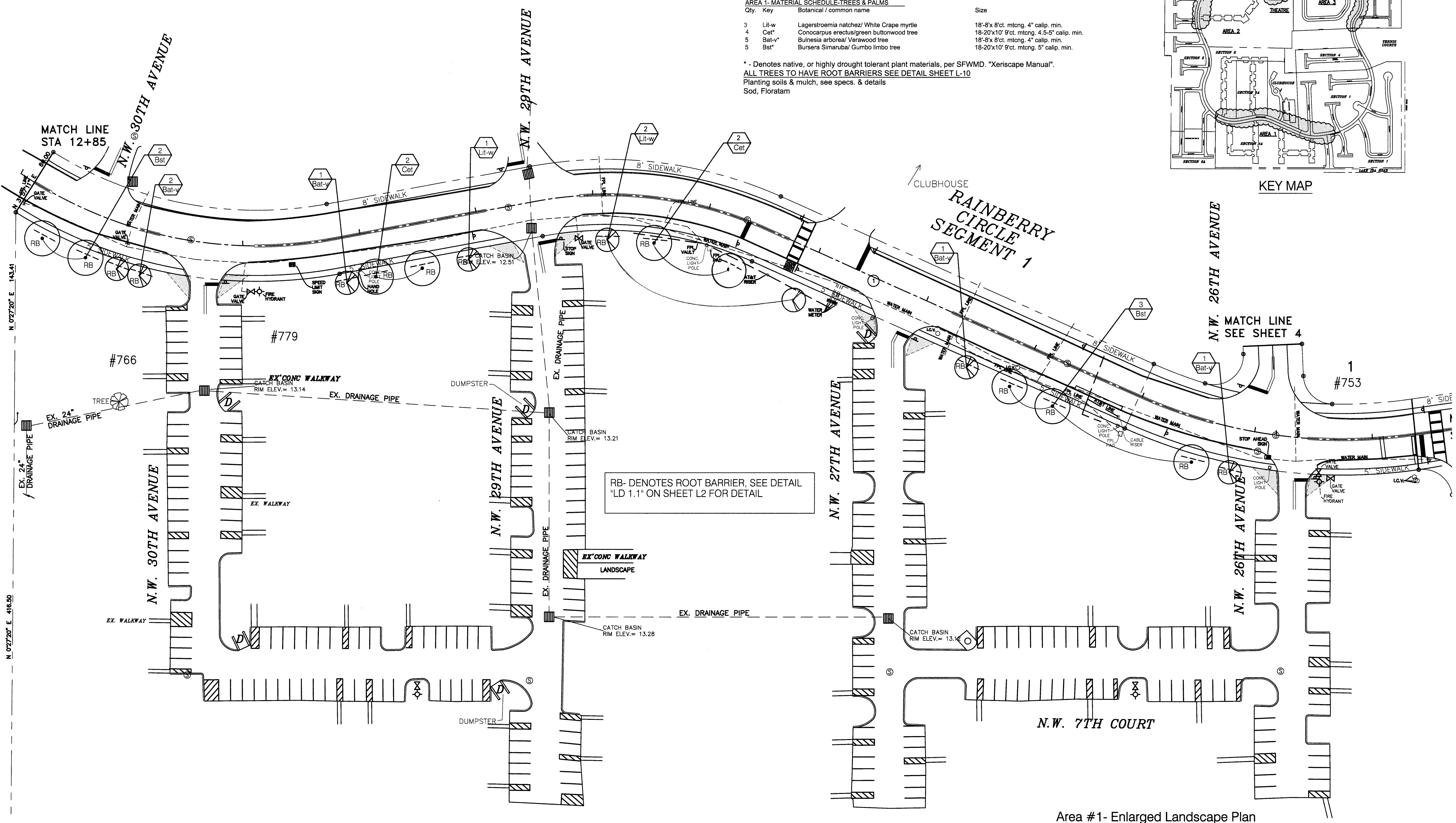
DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	
L-6	
OF	9 SHEETS



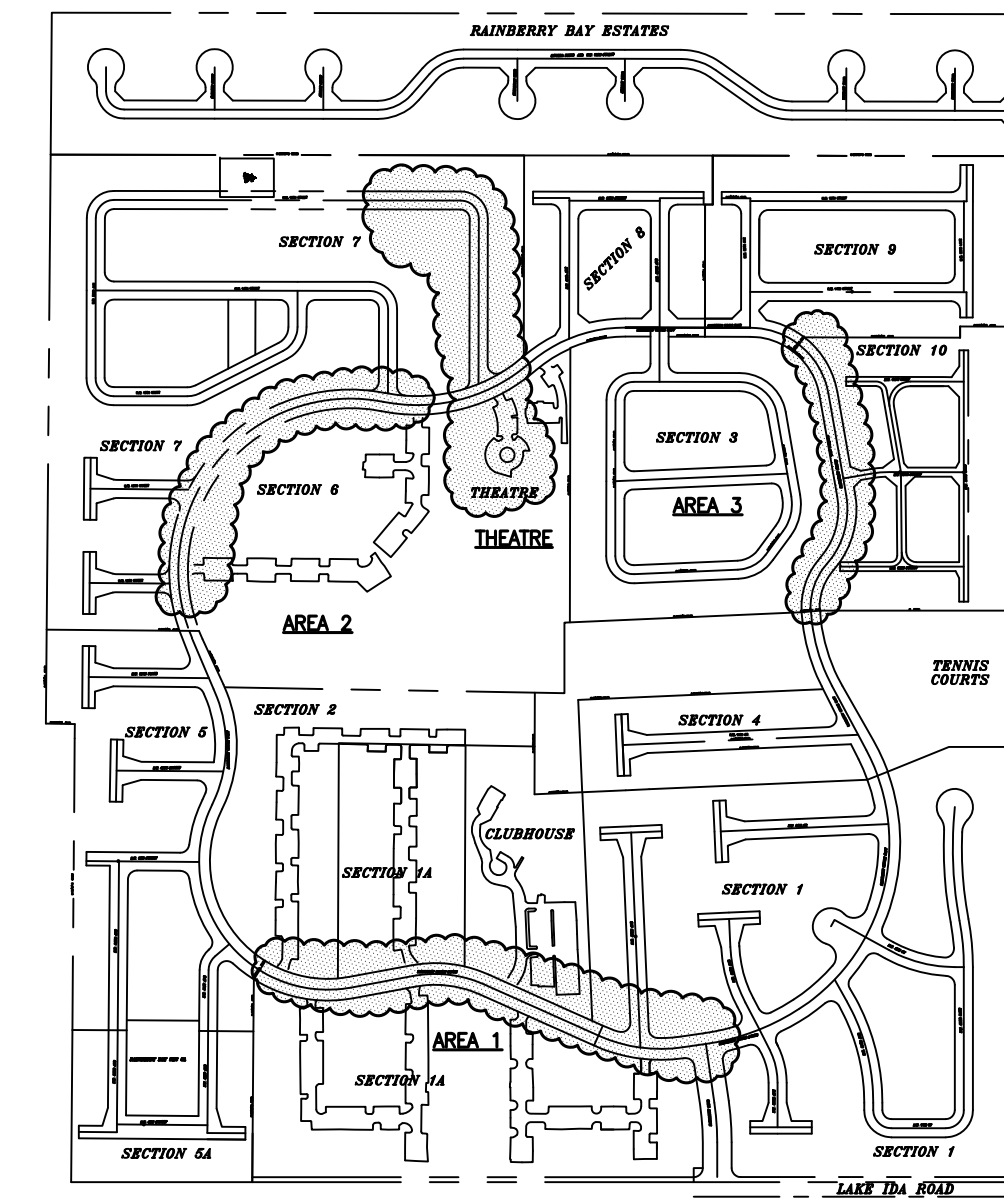
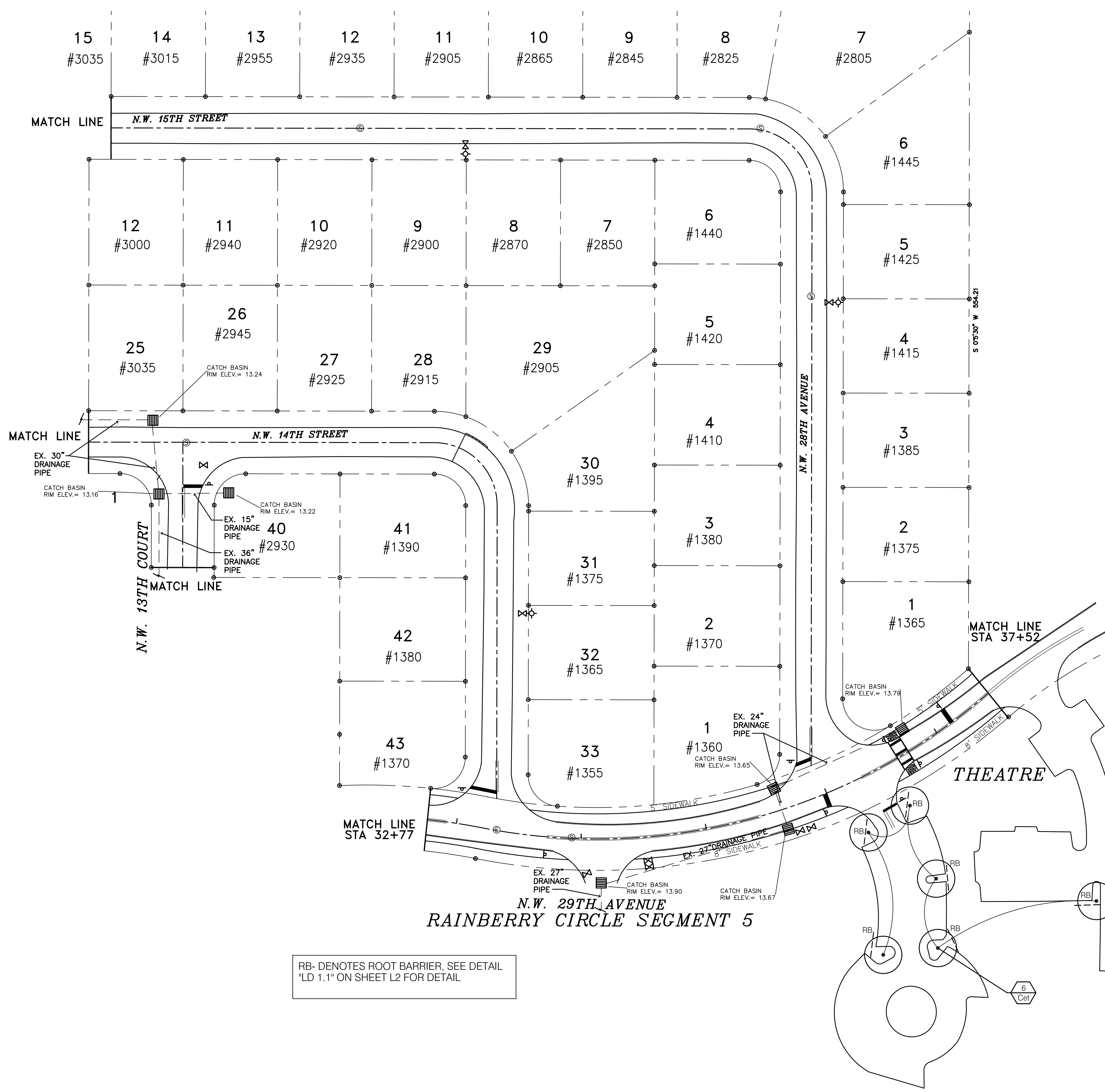
AREA 1- MATERIAL SCHEDULE-TREES & PALMS

Qty.	Key	Botanical / common name	Size
3	Lit-w	Lagerstroemia natchez/ White Crape myrtle	18'-8"x 8'ct. mtong. 4" calip. min.
4	Cet*	Conocarpus erectus/green buttonwood tree	18'-20"x10' 9'ct. mtong. 4.5-5" calip. min.
5	Bat-v*	Bulnesia arborea/ Vervewood tree	18'-9"x 8'ct. mtong. 4" calip. min.
5	Bst*	Bursera Simaruba/ Gumbo limbo tree	18'-20"x10' 9'ct. mtong. 5" calip. min.

* - Denotes native, or highly drought tolerant plant materials, per SFWMD. "Xeriscape Manual".
 ALL TREES TO HAVE ROOT BARRIERS SEE DETAIL SHEET L-10
 Planting soils & mulch, see specs. & details
 Sod, Floratam



Area #1- Enlarged Landscape Plan



KEY MAP

THEATRE AREA-MATERIAL SCHEDULE-TREES & PALMS

Qty.	Key	Botanical / common name	Size
6	Lil-w	Lagerstroemia natchez/ White Crape myrtle	18'-8"x 8'ct. mtng. 4" calip. min.
14	Cet*	Conocarpus erectus/green buttonwood tree	18-20'x10' 9'ct. mtng. 4.5-5" calip. min.
10	Bal-v*	Bulnesia arborea/ Verawood tree	18'-8"x 8'ct. mtng. 4" calip. min.
9	Bst*	Bursera Simaruba/ Gumbo limbo tree	18-20'x10' 9'ct. mtng. 5" calip. min.

* - Denotes native, or highly drought tolerant plant materials, per SFWMD. "Xeriscape Manual".
ALL TREES TO HAVE ROOT BARRIERS SEE DETAIL SHEET L-10
 Planting soils & mulch, see specs. & details
 Sod, Floratam

RB- DENOTES ROOT BARRIER, SEE DETAIL "LD 1.1" ON SHEET L2 FOR DETAIL

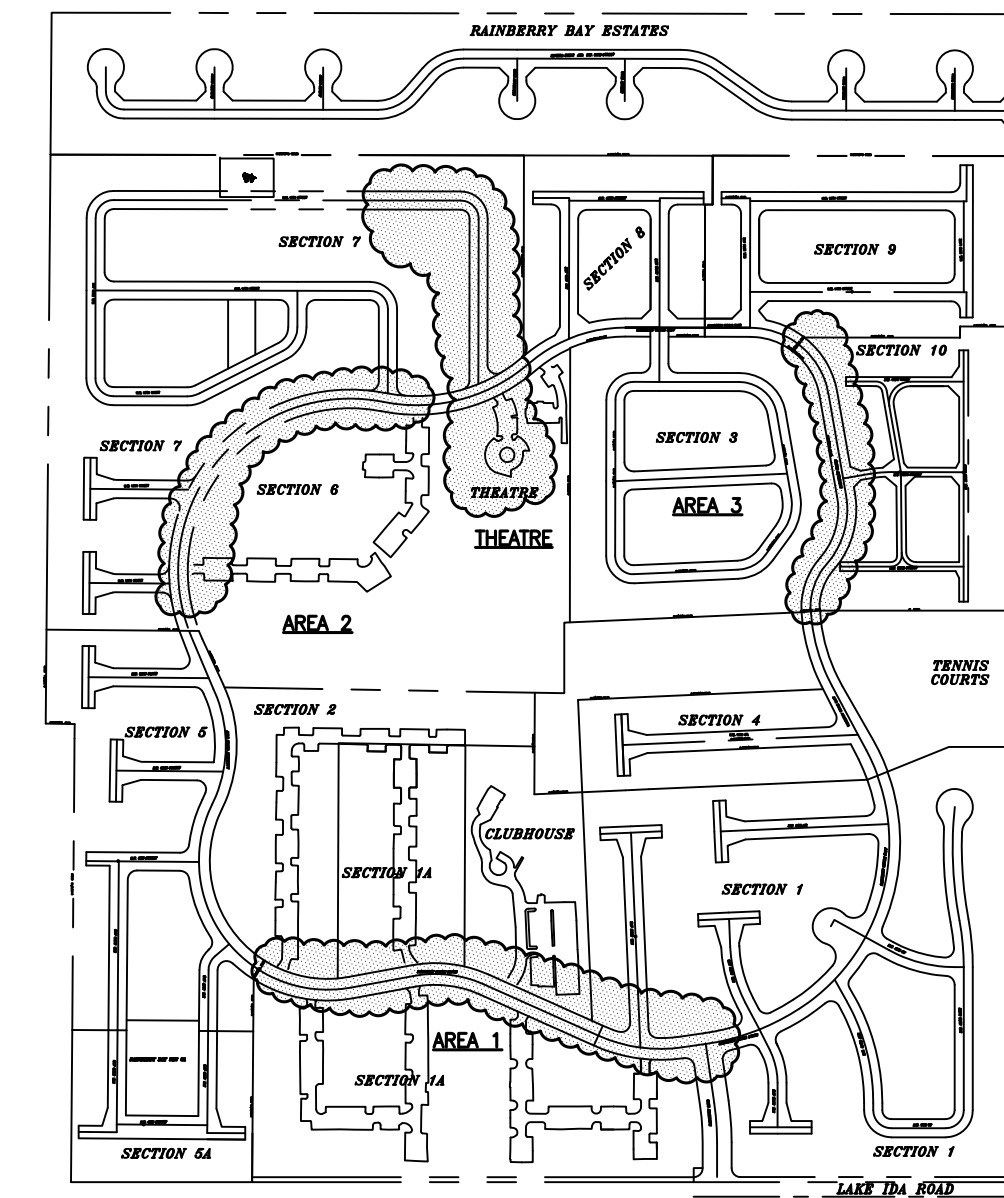
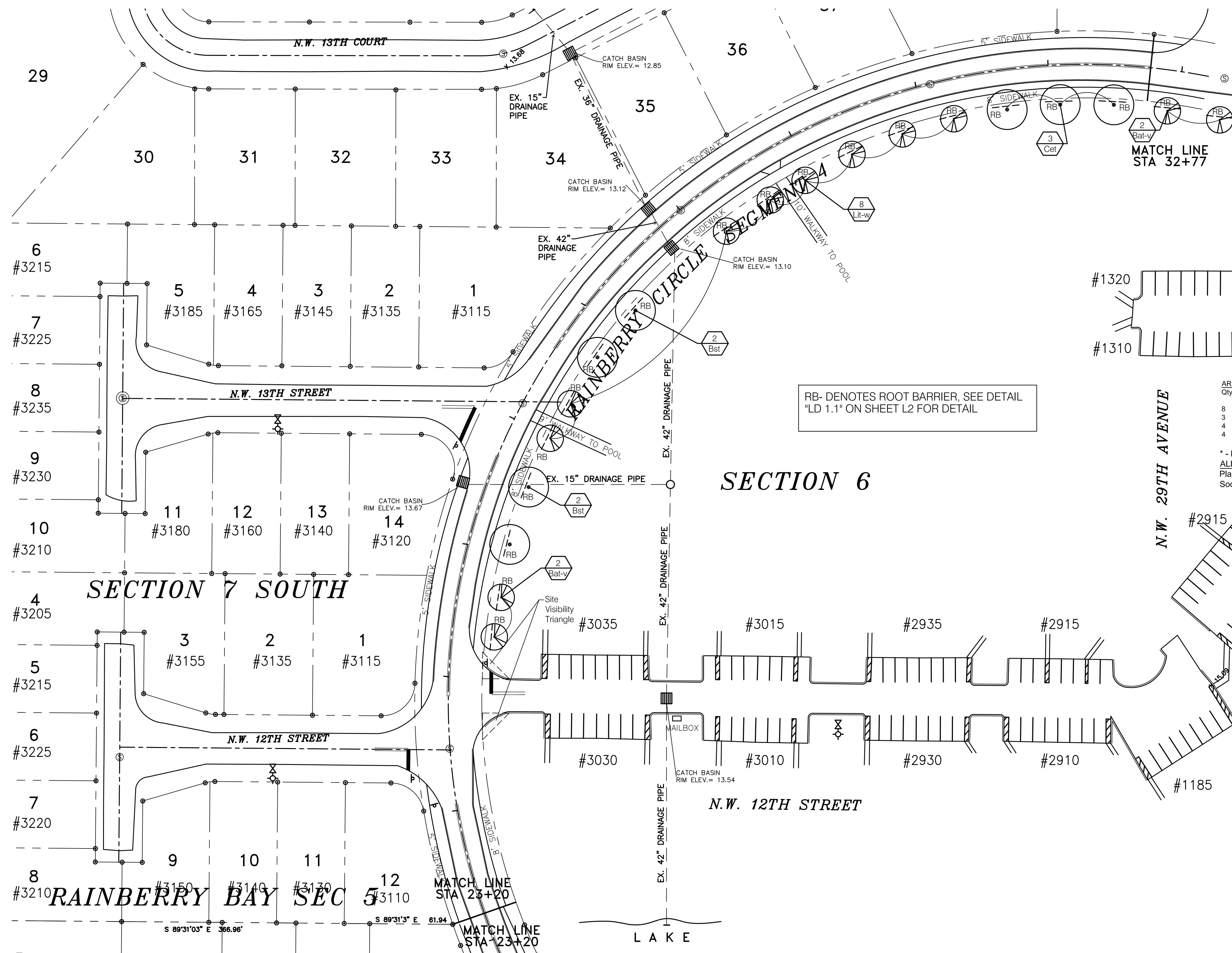
Theatre Area - Enlarged Landscape Plan

REVISIONS	BY
8/23/23 SPRAB SUBMITTAL SET	
REVISED PER REVISED SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISED CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	

DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
 74 N.E. 5th AVE. Delray Beach, FL 33483
 LA. 831
 561-272-9621

Landscape for:
Rainberry Bay
 Delray Beach, Florida

DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	



KEY MAP

RB- DENOTES ROOT BARRIER, SEE DETAIL "LD 1.1" ON SHEET L2 FOR DETAIL.

AREA 2-MATERIAL SCHEDULE-TREES & PALMS

Qty.	Key	Botanical / common name	Size
8	Lit-w	Lagerstroemia natchez/ White Crape myrtle	18'-8" x 8'ct. mtng. 4" calip. min.
3	Cet*	Conocarpus erectus/green buttonwood tree	18'-20" x 10' 9'ct. mtng. 4.5-5" calip. min.
4	Bat-v*	Bulnesia arborea/ Verawood tree	18'-8" x 8'ct. mtng. 4" calip. min.
4	Bst*	Bursera Simaruba/ Gumbo limbo tree	18'-20" x 10' 9'ct. mtng. 5" calip. min.

* - Denotes native, or highly drought tolerant plant materials, per SFWMD, "Xeriscape Manual".
 ALL TREES TO HAVE ROOT BARRIERS SEE DETAIL SHEET L-10
 Planting soils & mulch, see specs. & details
 Sod, Floratam

REVISIONS	BY
8/23/23 SPRAB SUBMITTAL SET	
REVISED PER REVISED SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISED CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	
REVISED 4.13.24 PER C.E. COMMENTS	

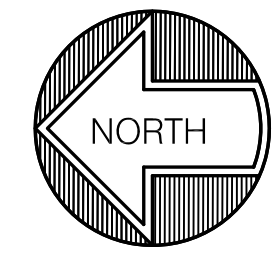
DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
 74 N.E. 5th AVE. Delray Beach, FL 33483
 LA. 831

Landscape for:
Rainberry Bay
 Delray Beach, Florida

DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	

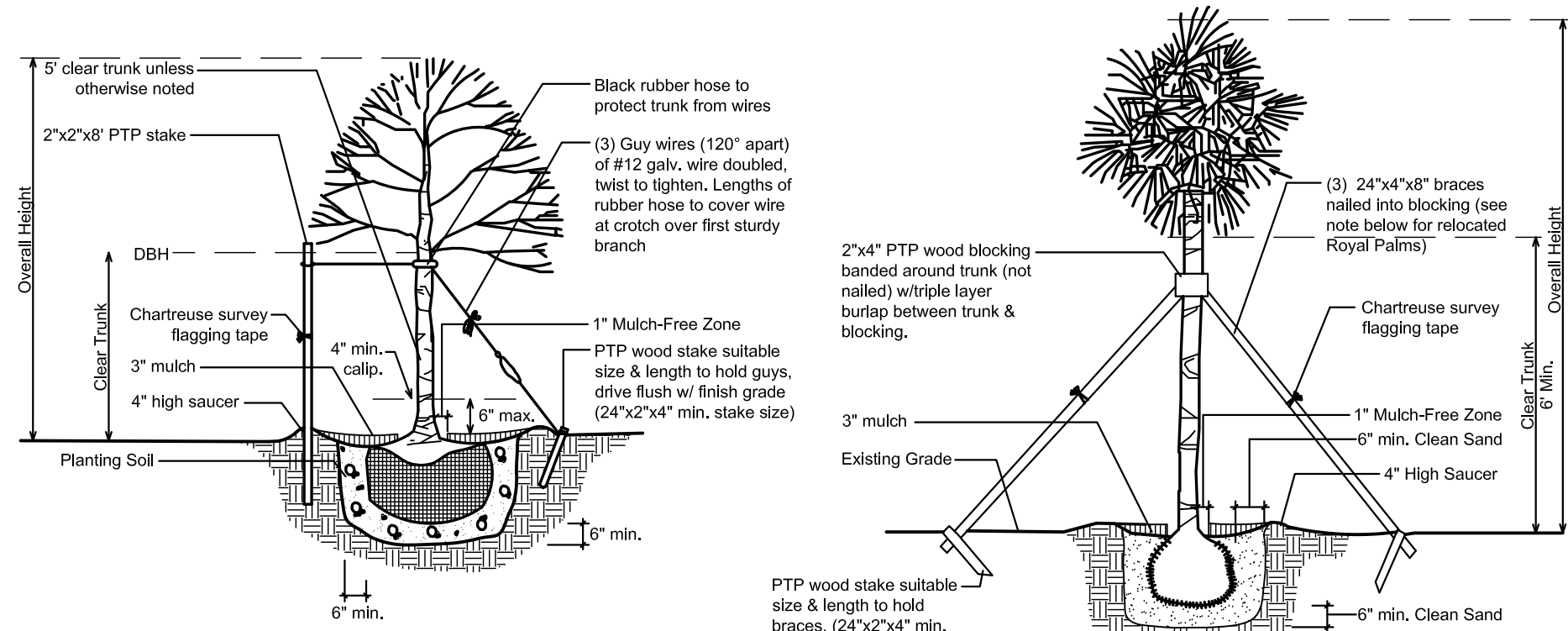
L-8

Area #2- Enlarged Landscape Plan



GENERAL LANDSCAPE NOTES:

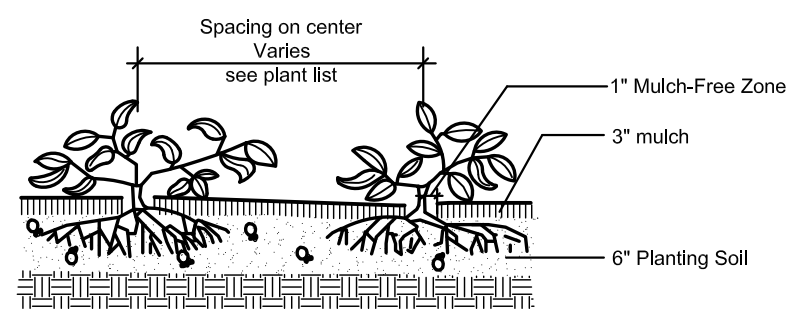
1. All plant material shall be F1, #1, or better, as per the latest addition of F1, Grades & standards. All "specimen" quality materials shall be F, Fancy, and shall be pre-approved by the Landscape Architect.
2. All plant materials shall be true to name & size, as per F1, Grades & Standards. Plant materials which do not meet, or exceed these standards will not be accepted.
3. Quantities, sizes, and locations of plants will be determined by the plan and material schedule. Sizes of the specified plants shall take precedence over the container size. Spacing of the ground covers will be determined by the material schedule. Quantities shown on the material schedule are to be used as a guideline. The landscape contractor shall be responsible for the actual quantities shown on the plan. The plans will take precedence over the material schedule. Discrepancies shall be brought to the attention of the Landscape Architect, prior to commencing.
4. No substitutions shall be accepted without the Landscape Architect's written approval. All substitution requests shall be made in writing.
5. Planting soils shall be clean, sterile, and free of debris. Soil shall consist of 50% Fl. muck % 50% clean sand. Tree's shall be installed with a minimum of 12" on sides & bottom of root balls. Shrubs, plants & ground covers shall be installed with a minimum of 6" on sides & bottom of root balls. Rooted cuttings shall be installed with a minimum of 4" of planting soils worked into the top 6" of the existing soils. Sabal palms and Phoenix specie shall be installed with a clean well drained sand.
6. Milargantite, or equal, fertilizer shall be applied to all plantings, per manufactures recommendations. In addition, "Agriform" tablets (20-10-5) shall also be applied to all plants 1 gal., and above, per manufactures recommendations.
7. All tree's & palms shall be mulched with arsenic free mulch with a 3ft. diameter circle. 3" minimum depth. All planting beds shall receive 3" finished depth, mulch upon completion of planting process. Mulch shall "Eucalyptus", or approved equal. NO CYPRESS MULCH SHALL BE UTILIZED ON THE PROJECT.
8. All plants shall be planted at soil levels which they were previously grown. Shrubs and hedges are to be planted 2ft. away from any wall, or structures. Materials with a six greater than overhangs shall be planted so as not to impede the natural growth habit of the plant.
9. All materials are to be watered-in immediately after planting, so as to remove all air pockets. BIB materials are to be hand-watered for a minimum of 1 week after installation, and there-after as required. Contractor shall advise the owner of any additional hand-watering requirements.
10. All tree's 8ft., or larger, are to be staked, or guyed, to provide ample support such that materials remain straight & true in an up-right position through the guarantee period. Staking & guying shall be performed at the option of the landscape contractor, except where required by code. However, the landscape contractor shall be responsible for all tree's & palms remaining straight & true through the guarantee period. In the event that a material shifts after it has been properly staked, or guyed, the landscape contractor shall not be held responsible.
11. All sod shall be "Floratom", unless otherwise specified. Sod shall be dense, green, well-rooted, and free of debris, weeds, disease, or insects. A complete 6-6-6 fertilizer shall be applied at a rate of 10lbs. per 1,000sq. ft.. Sod is to be watered to a depth of 3" immediately after installation. Grades are to be raked smooth, and all debris removed, prior to installation.
12. All tree's, palms, plants & ground-covers shall be guaranteed for a period of 360 days, after the date of substantial completion. Phoenix canariensis & dactylifera palms are to be maintained, per growers/suppliers recommendations, by a qualified person, or firm. Said maintenance program shall be the responsibility of the owner. The landscape invoice will be deemed as rejection of the plant materials. The landscape contractor shall remove any, or all of the rejected materials from the site as their discretion.
14. The removal of "base rock" is not included in the landscape contract.
15. All grades are to be within 2" of finished grades, prior to the landscape contractor commencing work.



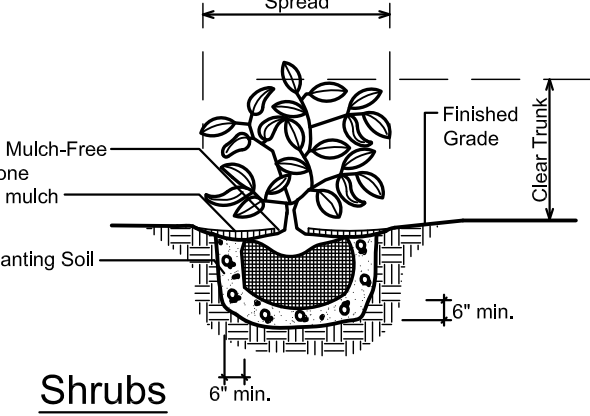
NOTE: Stake all trees up to 2" cal. @ 2 per tree. Guy all trees larger than 2" cal. Pull butrap from top of root ball. Remove all non-biodegradable materials such as wire, twine, etc. on rootball

Trees

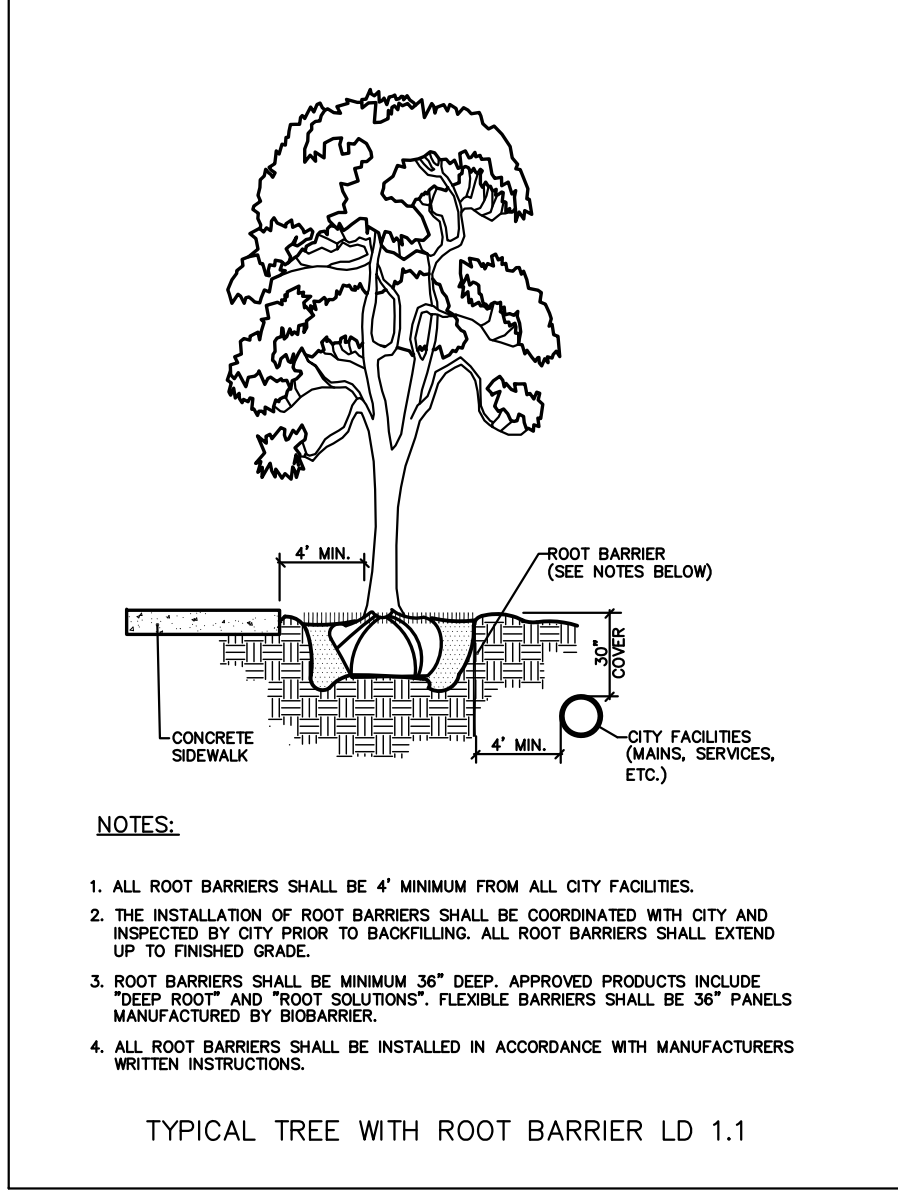
Straight Trunk Palms



Groundcovers

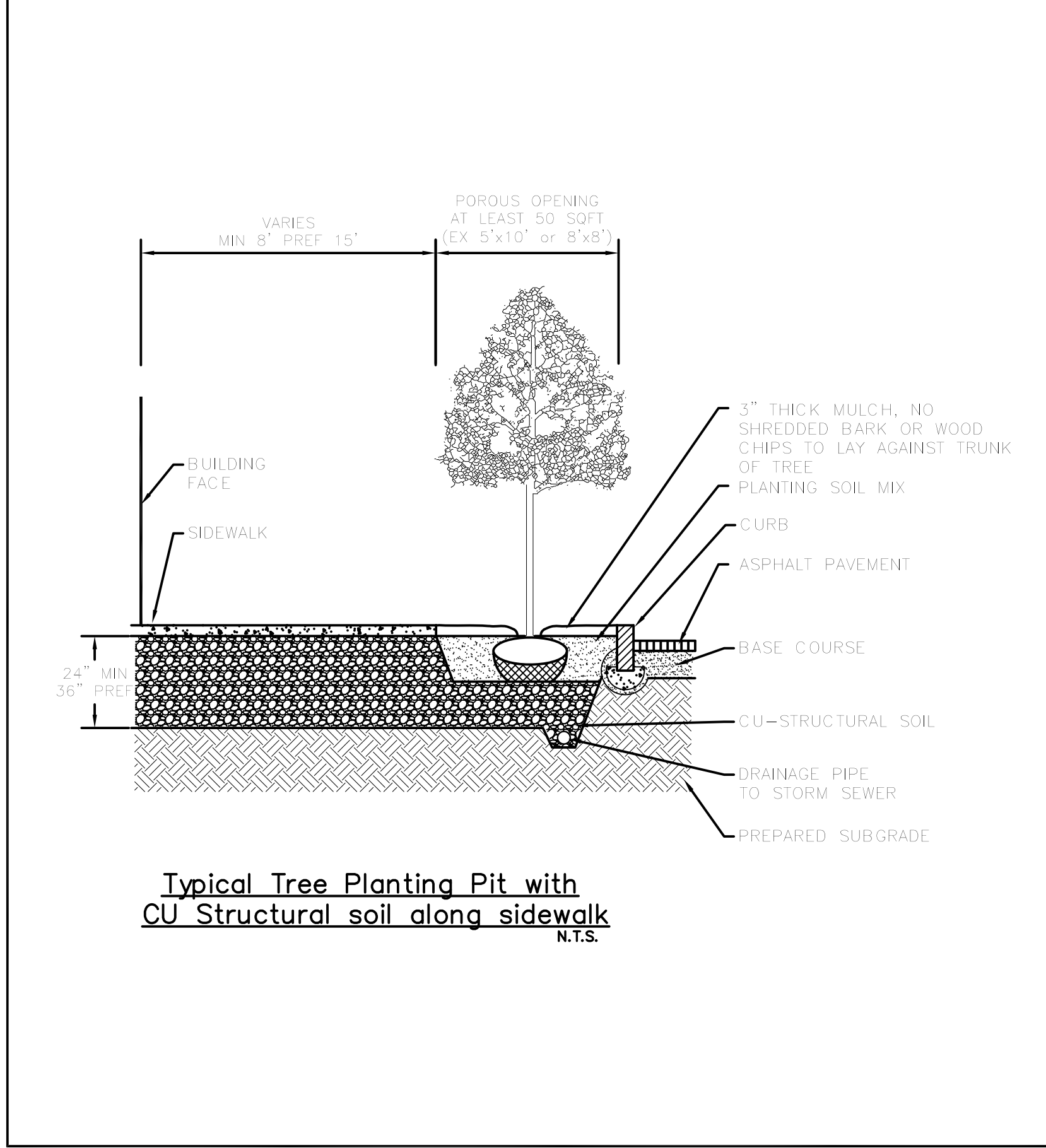


Shrubs



- 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 BOWARDED.
 4. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

Any Trees or shrubs placed within water, sewer or drainage easements shall conform to Details L.D. 1.1 requirements. RB: Denotes Root Barrier



Typical Tree Planting Pit with CU Structural soil along sidewalk N.T.S.

IRRIGATION PLANS TO BE COMPLETED UPON SITE PLAN APPROVAL, AND PRIOR TO BUILDING PERMIT APPLICATION

Landscape Details

AREA 1- MATERIAL SCHEDULE-TREES & PALMS			
Qty.	Key	Botanical / common name	Size
2	Lit-w	Lagerstroemia natchez/ White Crape myrtle	18'-8x 8'ct. mtng. 4" calip. min.
3	Cet*	Conocarpus erectus/green buttonwood tree	18-20'x10' 9'ct. mtng. 4.5-5" calip. min.
5	Bat-v*	Bulnesia arborea/ Verawood tree	18'-8x 8'ct. mtng. 4" calip. min.
4	Bst*	Bursera Simaruba/ Gumbo limbo tree	18-20'x10' 9'ct. mtng. 5" calip. min.
AREA 2-MATERIAL SCHEDULE-TREES & PALMS			
Qty.	Key	Botanical / common name	Size
8	Lit-w	Lagerstroemia natchez/ White Crape myrtle	18'-8x 8'ct. mtng. 4" calip. min.
3	Cet*	Conocarpus erectus/green buttonwood tree	18-20'x10' 9'ct. mtng. 4.5-5" calip. min.
4	Bat-v*	Bulnesia arborea/ Verawood tree	18'-8x 8'ct. mtng. 4" calip. min.
4	Bst*	Bursera Simaruba/ Gumbo limbo tree	18-20'x10' 9'ct. mtng. 5" calip. min.
THEATRE AREA-MATERIAL SCHEDULE-TREES & PALMS			
Qty.	Key	Botanical / common name	Size
6	Lit-w	Lagerstroemia natchez/ White Crape myrtle	18'-8x 8'ct. mtng. 4" calip. min.
14	Cet*	Conocarpus erectus/green buttonwood tree	18-20'x10' 9'ct. mtng. 4.5-5" calip. min.
10	Bat-v*	Bulnesia arborea/ Verawood tree	18'-8x 8'ct. mtng. 4" calip. min.
9	Bst*	Bursera Simaruba/ Gumbo limbo tree	18-20'x10' 9'ct. mtng. 5" calip. min.

* - Denotes native, or highly drought tolerant plant materials, per SFWMD, "Xeriscape Manual". ALL TREES TO HAVE ROOT BARRIERS SEE DETAIL THIS SHEET
Planting soils & mulch, see specs. & details
Sod, Floratom

REVISIONS	BY
8/23/23 SPRAB SUBMITAL SET	
REVISED PER REVISED SITE/CIVIL PLAN DATED 12.20.23	
REVISED 1.23.24 PER REVISED CIVIL BASE PLAN	
REVISED 3.28.24 PER CITY REVIEW	
REVISED 4.13.24 PER C.E. COMMENTS	

DESIGNED BY:
CARTER & ASSOCIATES
LANDSCAPE ARCHITECTS INC.
74 N.E. 5th AVE. Delray Beach, FL 33483
LA. 831
561-272-9621

Landscape for:
Rainberry Bay
Delray Beach, Florida

DRAWN	SKP
CHECKED	D.H.C.
DATE	08.01.2023
SCALE	1" = 40'-0"
JOB NO.	080123
SHEET	

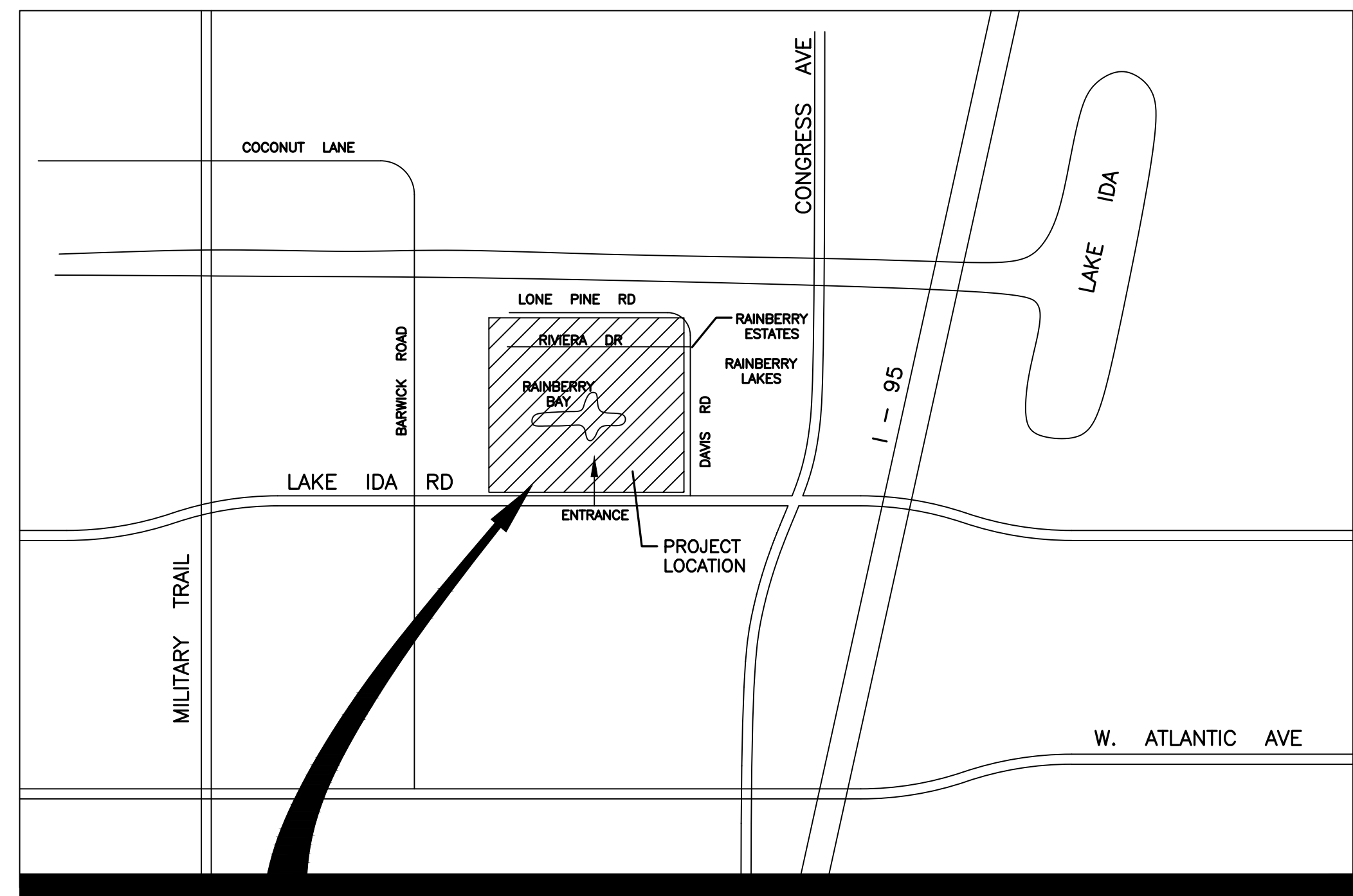
RAINBERRY BAY DELRAY BEACH, FLORIDA

RAINBERRY BAY-TREE REPLACEMENT IMPROVEMENT PLANS

INDEX OF SHEETS

SPECIAL ADDENDUM "TREE REPLACEMENT ROADWAY IMPROVEMENTS FOR ASPHALT OVERLAY PLANS"

COVER SHEET	1
OVERALL PLAN	2
SECTION No.1 SOUTH	3A
SECTION 1A RAINBERRY CIRCLE	5A
SECTION No. 5 RAINBERRY CIRCLE	7A
PAVING DETAILS	21
PAVING DETAILS	22
PAVEMENT MARKING AND STRIPING	23
PAVEMENT MARKING AND STRIPING	25
PAVEMENT MARKING AND STRIPING	27



LOCATION SKETCH
N.T.S.

RAINBERRY CIRCLE

SEGMENT	SHEET
SEGMENT 1	5
SEGMENT 2	7
SEGMENT 3	9
SEGMENT 4	10
SEGMENT 5	11
SEGMENT 6	13
SEGMENT 7	15
SEGMENT 8	16
SEGMENT 9	17
SEGMENT 10	18
SEGMENT 11	3

PREPARED FOR

RAINBERRY BAY H.O.A.

HALEY ENGINEERING, INC.
CIVIL ENGINEERING SERVICES.

1680 SE 4th Street – Deerfield Beach, Fla. 33441
Phone: (954) 260-6194
Email: johnjhaley@comcast.net
F.B.P.E. Authorization No. 9463

Approved : _____ Date: _____
John J. Haley, P.E.
Registered Engineer No. 40023
State of Florida

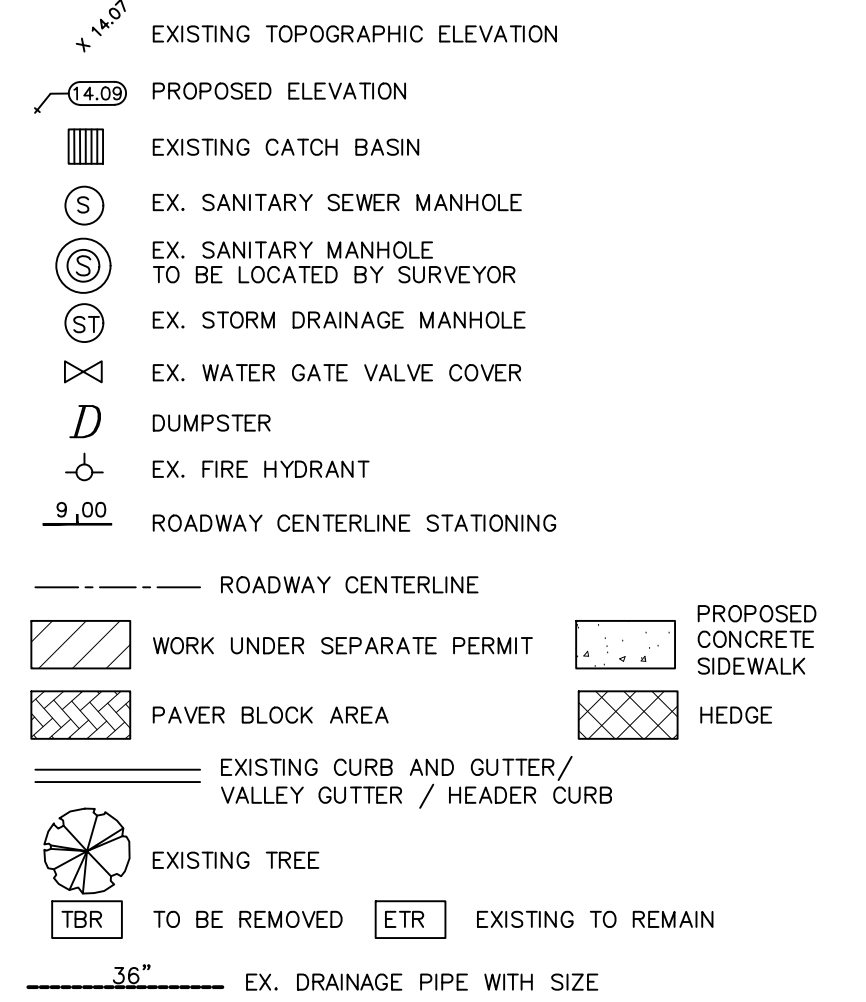
N.P.D.E.S., D.E.P., AND E.P.A.

SUMMARY OF SCOPE:

- MILL EXISTING ASPHALT 1" DEPTH AND INSTALL NEW 1" TYPE S-111 ASPHALT OVERLAY AFTER PRIMECOAT AND TACK PER FDOT SPECIFICATIONS.
- INSTALL NEW PAVEMENT MARKINGS SIMILAR TO EXISTING CONDITIONS PER LATEST CODE AND STANDARDS. REFER TO STRIPING AND MARKING PLANS.
- FROM STATION 0+50 TO 13+50 RAINBERRY CIRCLE, MILL EXISTING 1.5" DEPTH AND INSTALL NEW 1.5" TYPE S-111 ASPHALT OVERLAY AFTER PRIMECOAT AND TACK PER FDOT SPECIFICATIONS.

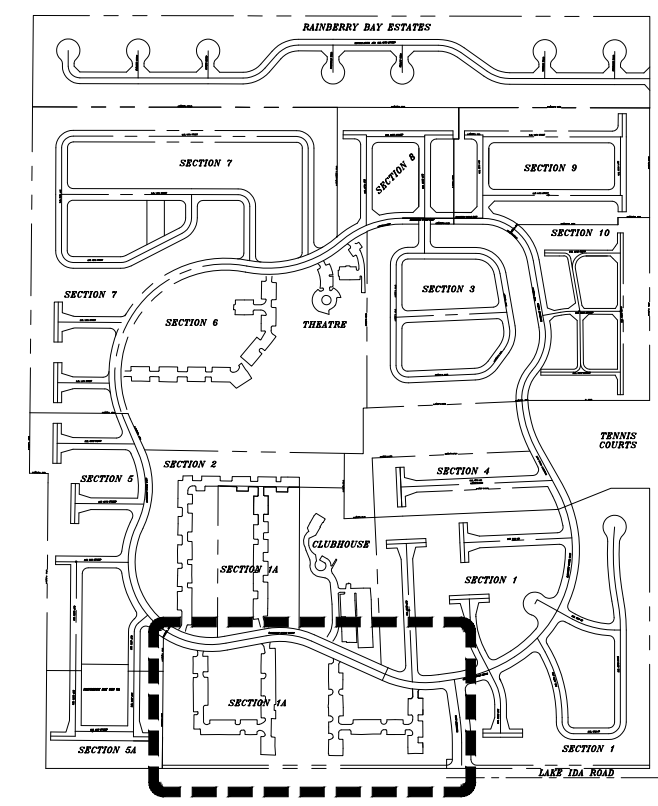
SAWCUT NOTES:

- SAWCUT EXISTING PAVEMENT. MATCH NEW ASPHALT GRADE TO EXISTING ASPHALT GRADE.



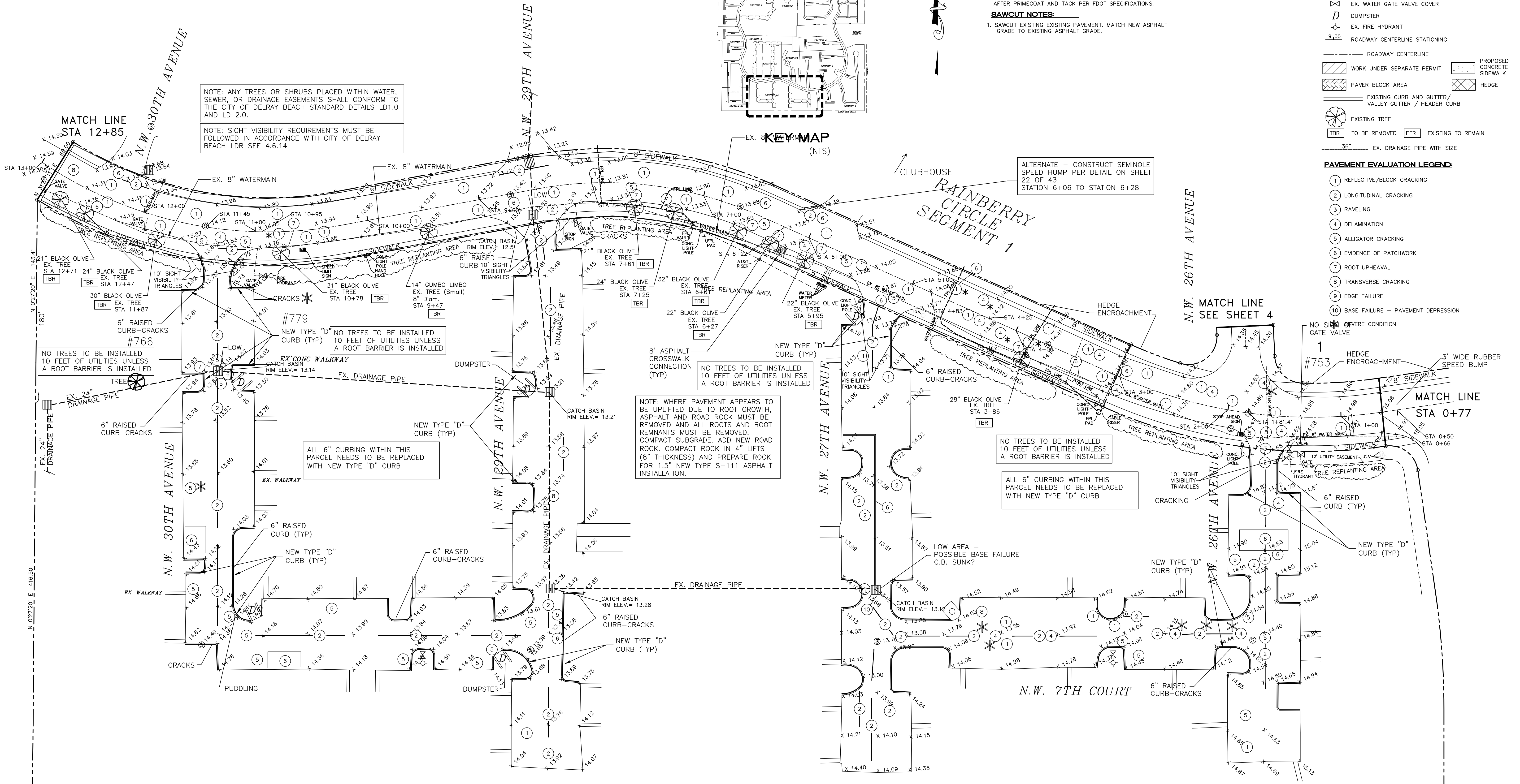
PAVEMENT EVALUATION LEGEND:

- REFLECTIVE/BLOCK CRACKING
- LONGITUDINAL CRACKING
- RAVELING
- DELAMINATION
- ALLIGATOR CRACKING
- EVIDENCE OF PATCHWORK
- ROOT UPHEAVAL
- TRANSVERSE CRACKING
- EDGE FAILURE
- BASE FAILURE - PAVEMENT DEPRESSION



NOTE: ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER, OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS LD1.0 AND LD 2.0.

NOTE: SIGHT VISIBILITY REQUIREMENTS MUST BE FOLLOWED IN ACCORDANCE WITH CITY OF DELRAY BEACH LDR SEE 4.6.14



RAINBERRY BAY SEC 1A SOUTH

Designed	J.J.H.
Drawn	E.L.H.
Checked	J.J.H.

11-24-20	ISSUED FOR BID		
4-4-22	Delineated work under separate permit		
12-18-23	Added locations from P.Davis		
	5/23 survey		
NO.	DATE	REVISION	BY

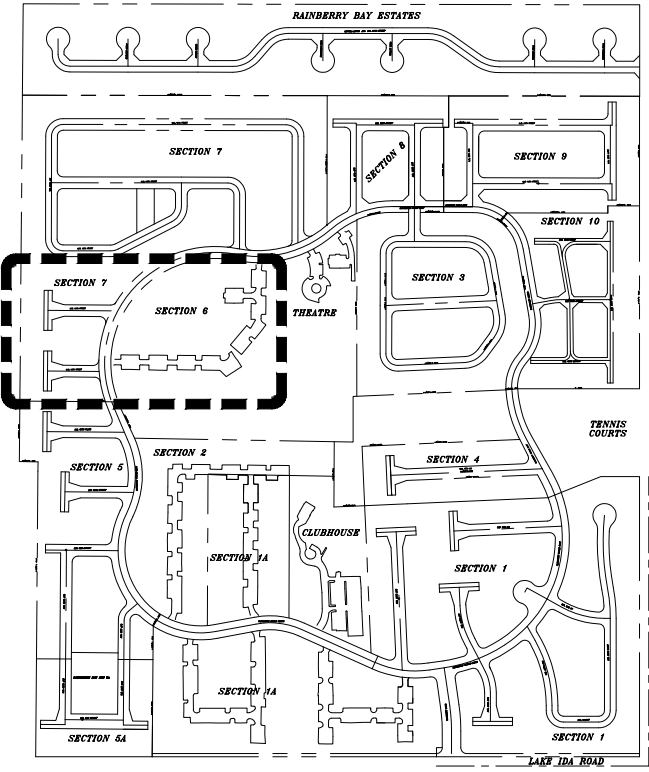
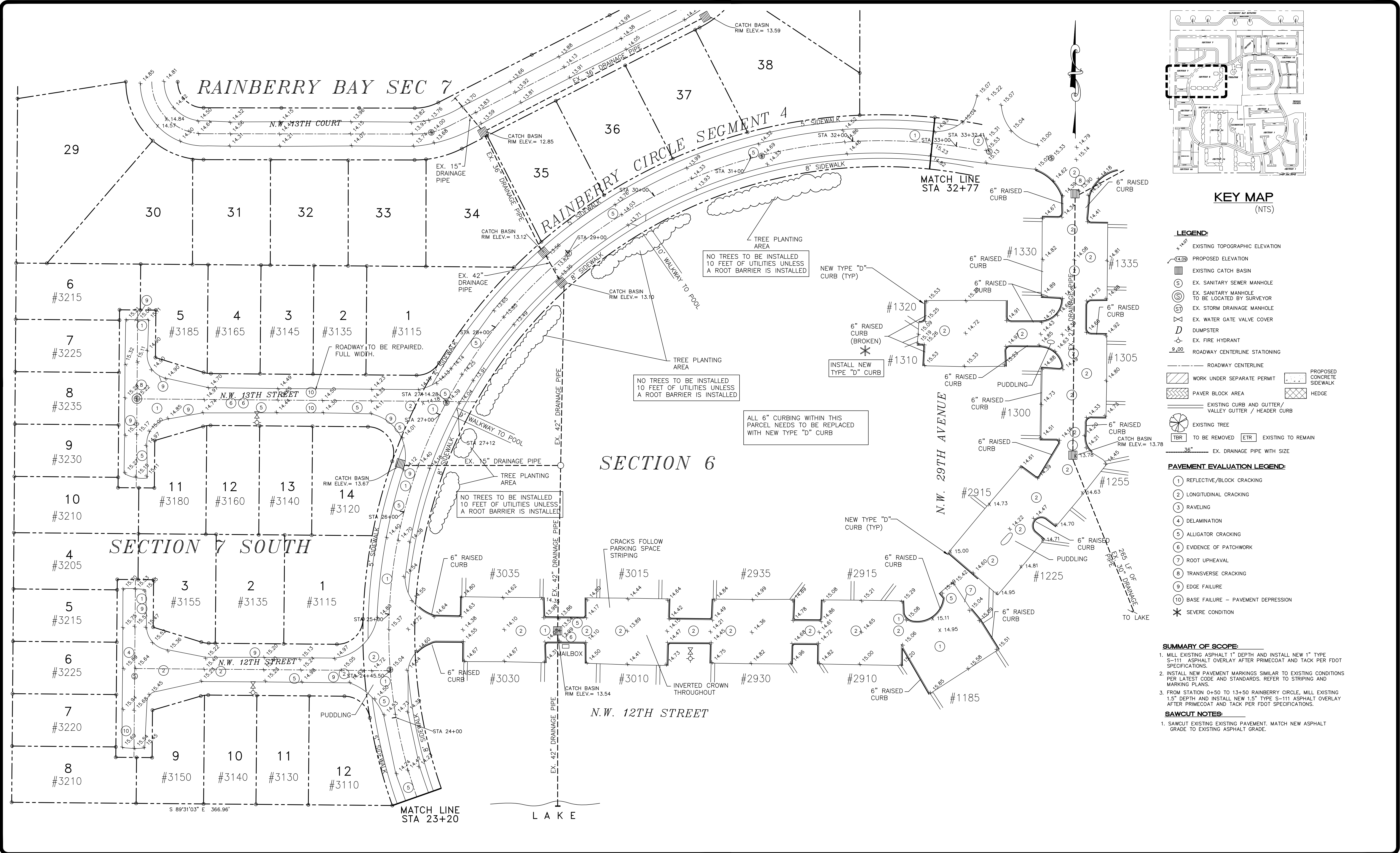
HALEY ENGINEERING, INC.
 CIVIL ENGINEERING SERVICES.
 1680 SE 4th Street - Deerfield Beach, Fla. 33441
 Phone: (954) 260-6194
 Email: johnjhaley@comcast.net
 F.B.P.E. Authorization No. 9463

RAINBERRY BAY SECTION No. 1A
 DELRAY BEACH, FLORIDA

TREE REPLACEMENT ROADWAY IMPROVEMENTS FOR ASPHALT OVERLAY PLAN

APPROVED: _____ DATE: _____
 JOHN J. HALEY, P.E.
 REGISTERED ENGINEER NO. 40023
 STATE OF FLORIDA

SCALE	PROJECT NUMBER	5A
1" = 40'	18-2470A	43



KEY MAP
(NTS)

- LEGEND:**
- X 14.03 EXISTING TOPOGRAPHIC ELEVATION
 - (4.00) PROPOSED ELEVATION
 - EXISTING CATCH BASIN
 - EX. SANITARY SEWER MANHOLE
 - (S) EX. SANITARY MANHOLE TO BE LOCATED BY SURVEYOR
 - (ST) EX. STORM DRAINAGE MANHOLE
 - EX. WATER GATE VALVE COVER
 - D DUMPSTER
 - EX. FIRE HYDRANT
 - 9.00 ROADWAY CENTERLINE STATIONING
 - ROADWAY CENTERLINE
 - WORK UNDER SEPARATE PERMIT
 - PAVER BLOCK AREA
 - EXISTING CURB AND GUTTER / VALLEY GUTTER / HEADER CURB
 - EXISTING TREE
 - TBR TO BE REMOVED
 - ETR EXISTING TO REMAIN
 - 36" EX. DRAINAGE PIPE WITH SIZE
 - PROPOSED CONCRETE SIDEWALK
 - HEDGE

- PAVEMENT EVALUATION LEGEND:**
- (1) REFLECTIVE/BLOCK CRACKING
 - (2) LONGITUDINAL CRACKING
 - (3) RAVELING
 - (4) DELAMINATION
 - (5) ALLIGATOR CRACKING
 - (6) EVIDENCE OF PATCHWORK
 - (7) ROOT UPHEAVAL
 - (8) TRANSVERSE CRACKING
 - (9) EDGE FAILURE
 - (10) BASE FAILURE - PAVEMENT DEPRESSION
 - * SEVERE CONDITION

- SUMMARY OF SCOPE:**
1. MILL EXISTING ASPHALT 1" DEPTH AND INSTALL NEW 1" TYPE S-111 ASPHALT OVERLAY AFTER PRIMECOAT AND TACK PER FDOT SPECIFICATIONS.
 2. INSTALL NEW PAVEMENT MARKINGS SIMILAR TO EXISTING CONDITIONS PER LATEST CODE AND STANDARDS. REFER TO STRIPING AND MARKING PLANS.
 3. FROM STATION 0+50 TO 13+50 RAINBERRY CIRCLE, MILL EXISTING 1.5" DEPTH AND INSTALL NEW 1.5" TYPE S-111 ASPHALT OVERLAY AFTER PRIMECOAT AND TACK PER FDOT SPECIFICATIONS.

- SAWCUT NOTES:**
1. SAWCUT EXISTING EXISTING PAVEMENT. MATCH NEW ASPHALT GRADE TO EXISTING ASPHALT GRADE.

Designed	J.J.H.
Drawn	E.L.H.
Checked	J.J.H.

11-24-20 ISSUED FOR BID			
NO.	DATE	REVISION	BY

HALEY ENGINEERING, INC.
CIVIL ENGINEERING SERVICES.
1680 SE 4th Street - Deerfield Beach, Fla. 33441
Phone: (954) 260-6194
Email: johnhaley@comcast.net
F.B.P.E. Authorization No. 9463

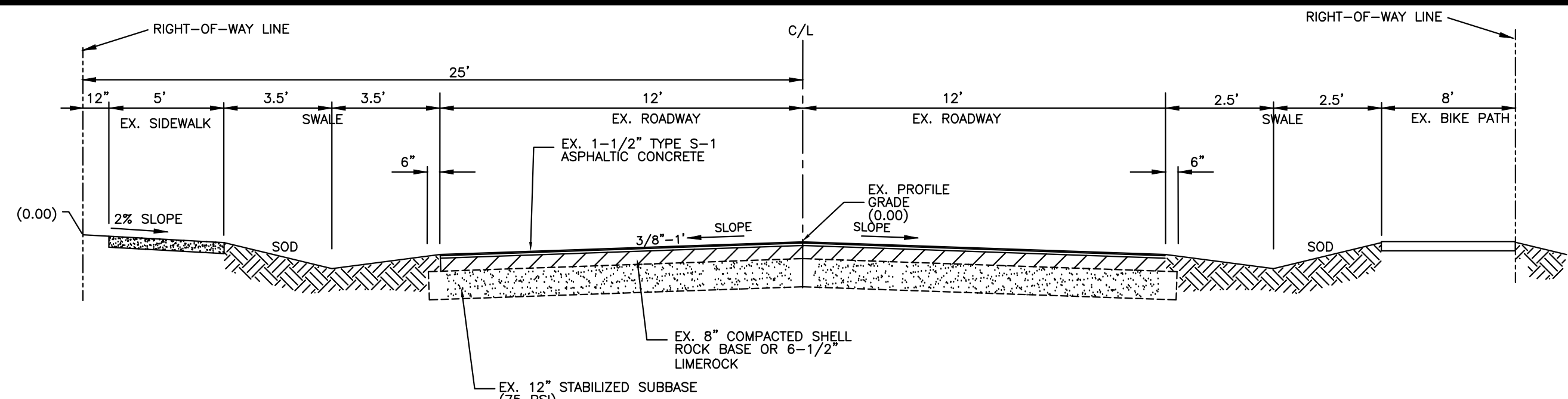
RAINBERRY BAY
SECTION No. 7-SW, 6
DELRAY BEACH, FLORIDA

TREE REPLACEMENT
ROADWAY IMPROVEMENTS
FOR ASPHALT OVERLAY PLAN

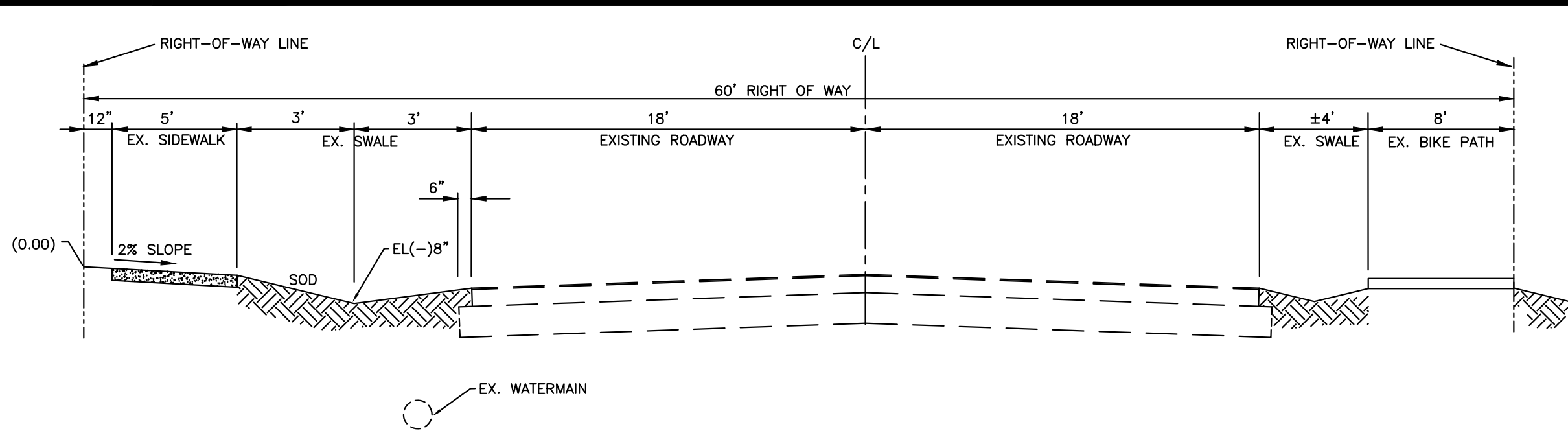
APPROVED:
DATE: _____
JOHN J. HALEY, P.E.
REGISTERED ENGINEER NO. 40023
STATE OF FLORIDA

SCALE
PROJECT NUMBER
1" = 40'
18-2470A

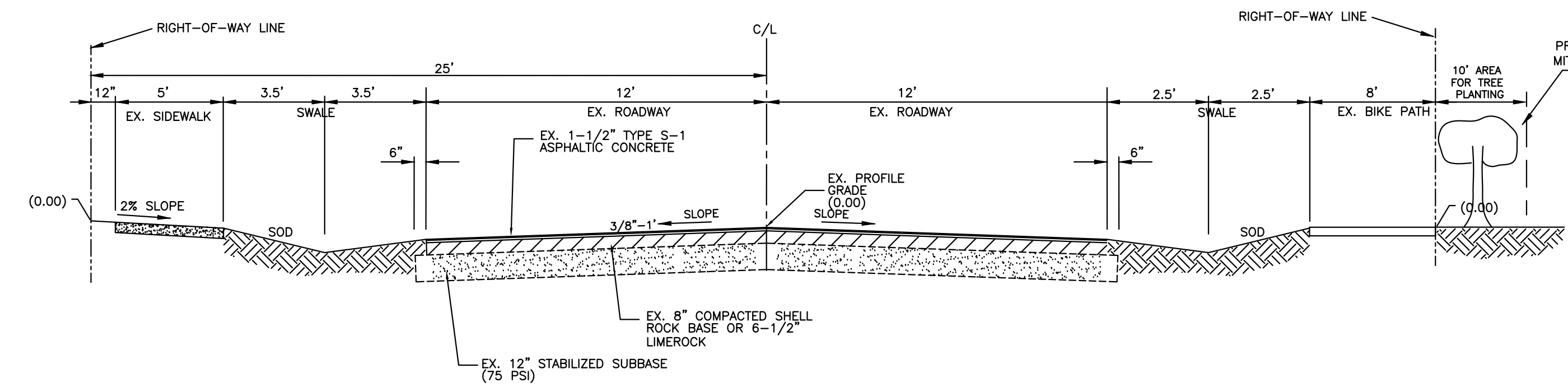
10A
43



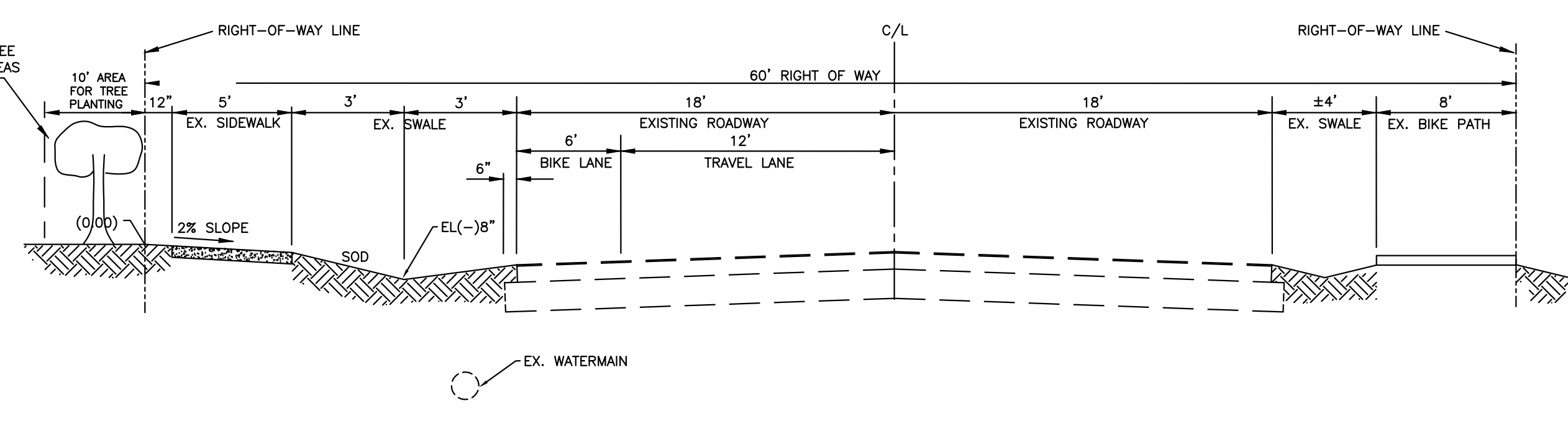
① EXISTING TYPICAL ROAD SECTION FOR RAINBERRY CIRCLE (50' R/W)



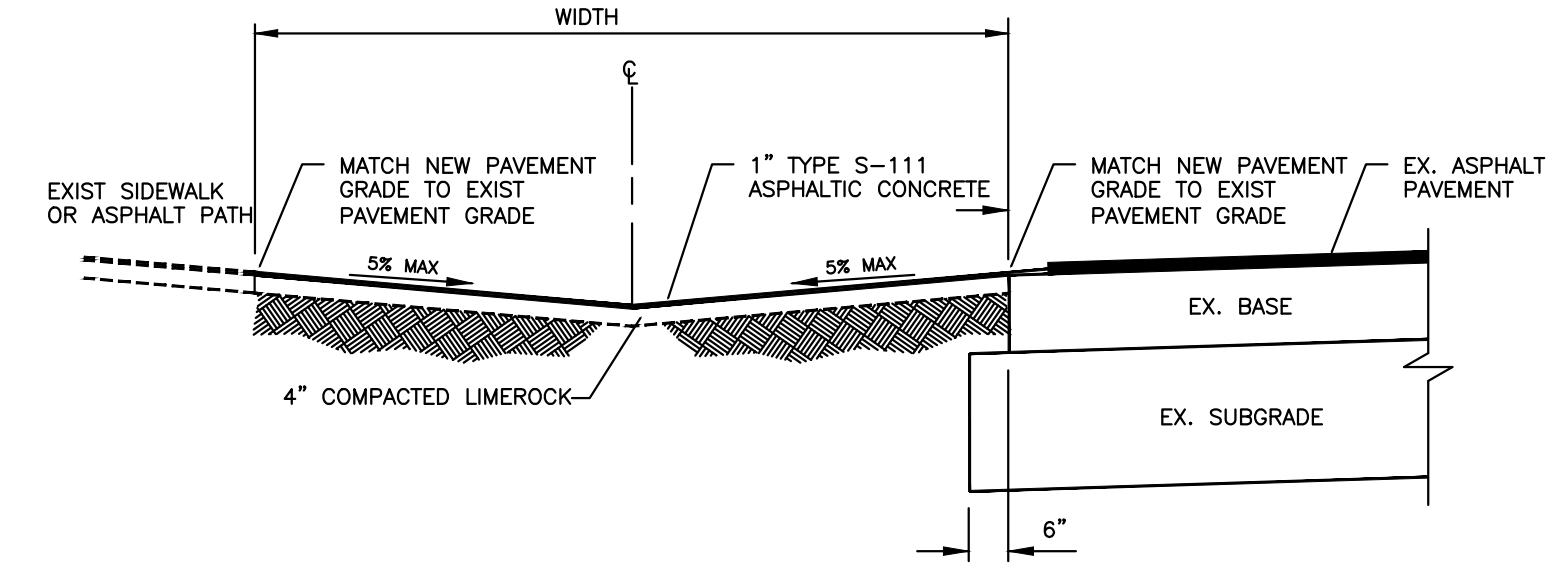
② EXISTING TYPICAL ROAD SECTION FOR RAINBERRY CIRCLE (60' R/W)



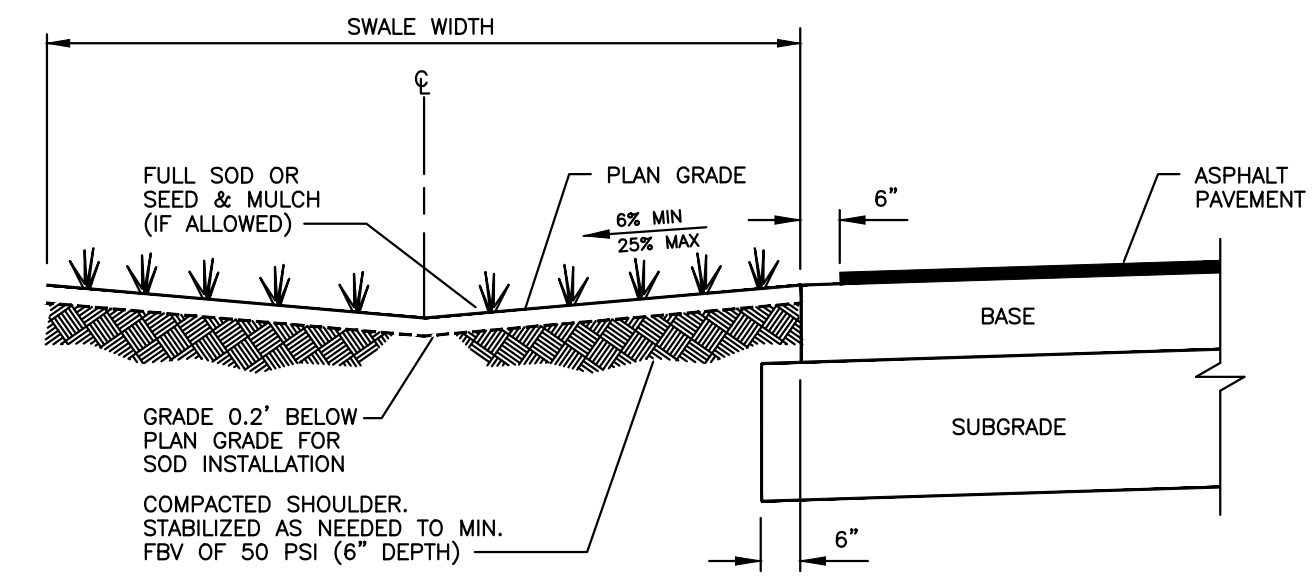
③ PROPOSED OPTIONAL ROAD SECTION FOR RAINBERRY CIRCLE (50' R/W)



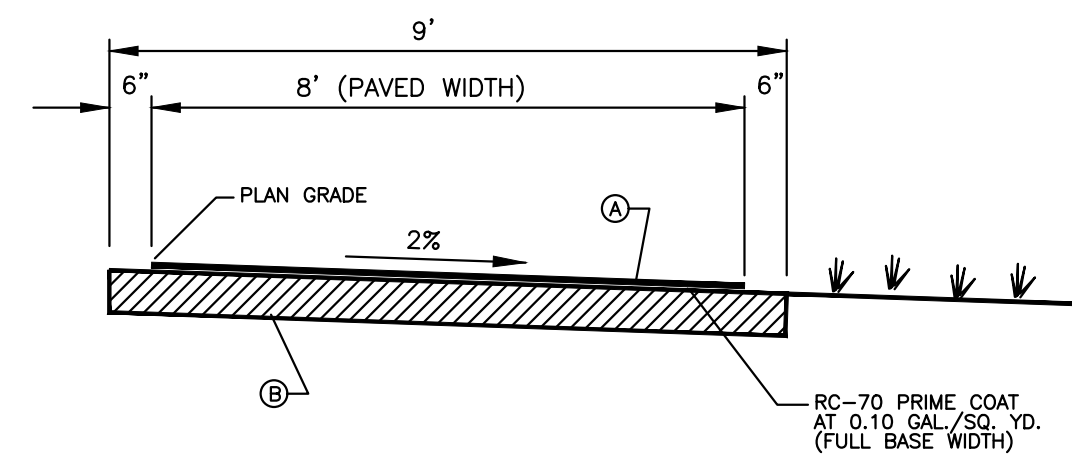
④ PROPOSED OPTIONAL ROAD SECTION FOR RAINBERRY CIRCLE (60' R/W) Station 2+00 to Station 12+85



CROSSWALK CONNECTION DETAIL

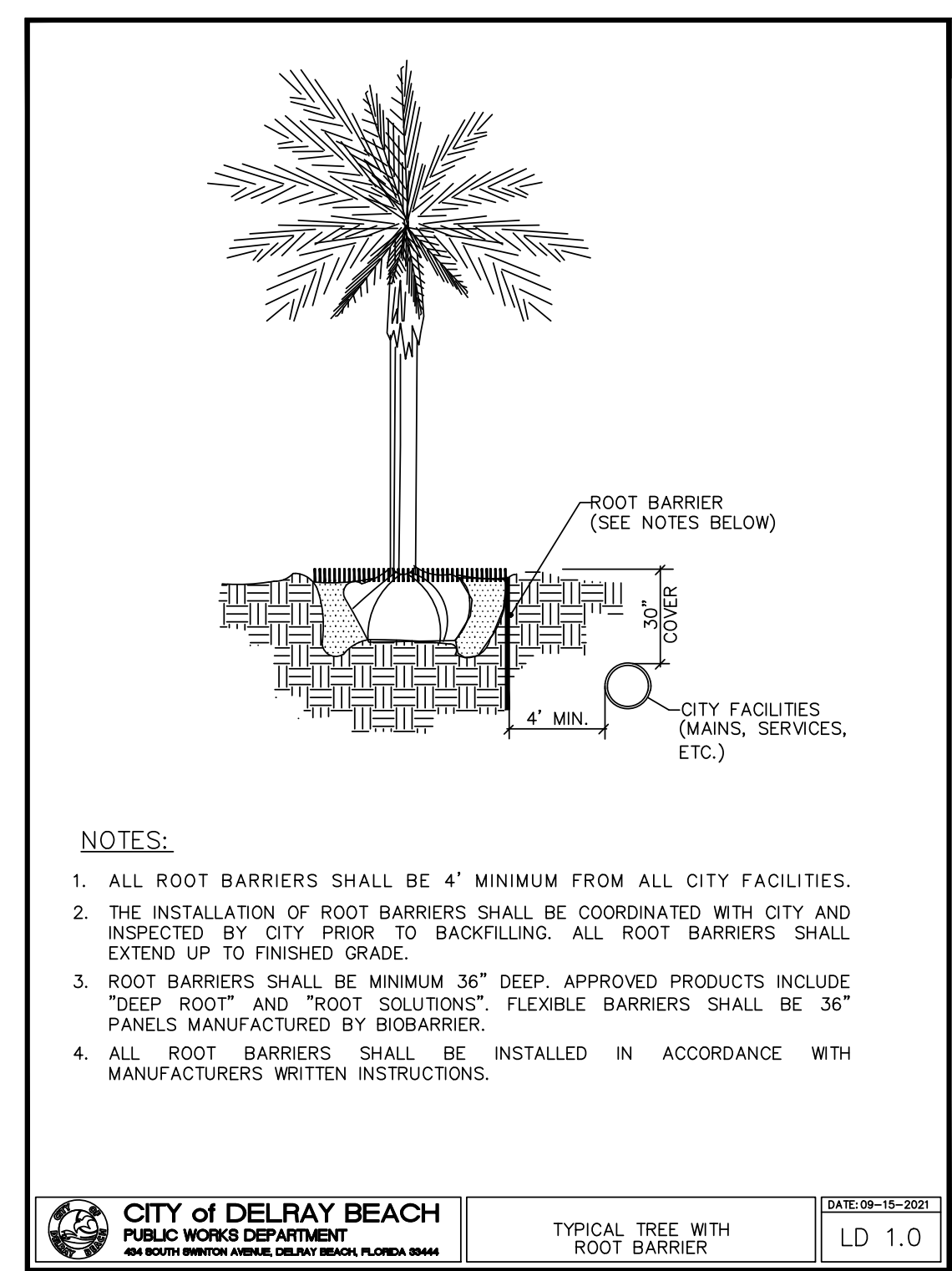


SWALE/SHOULDER AND PAVEMENT EDGE DETAIL



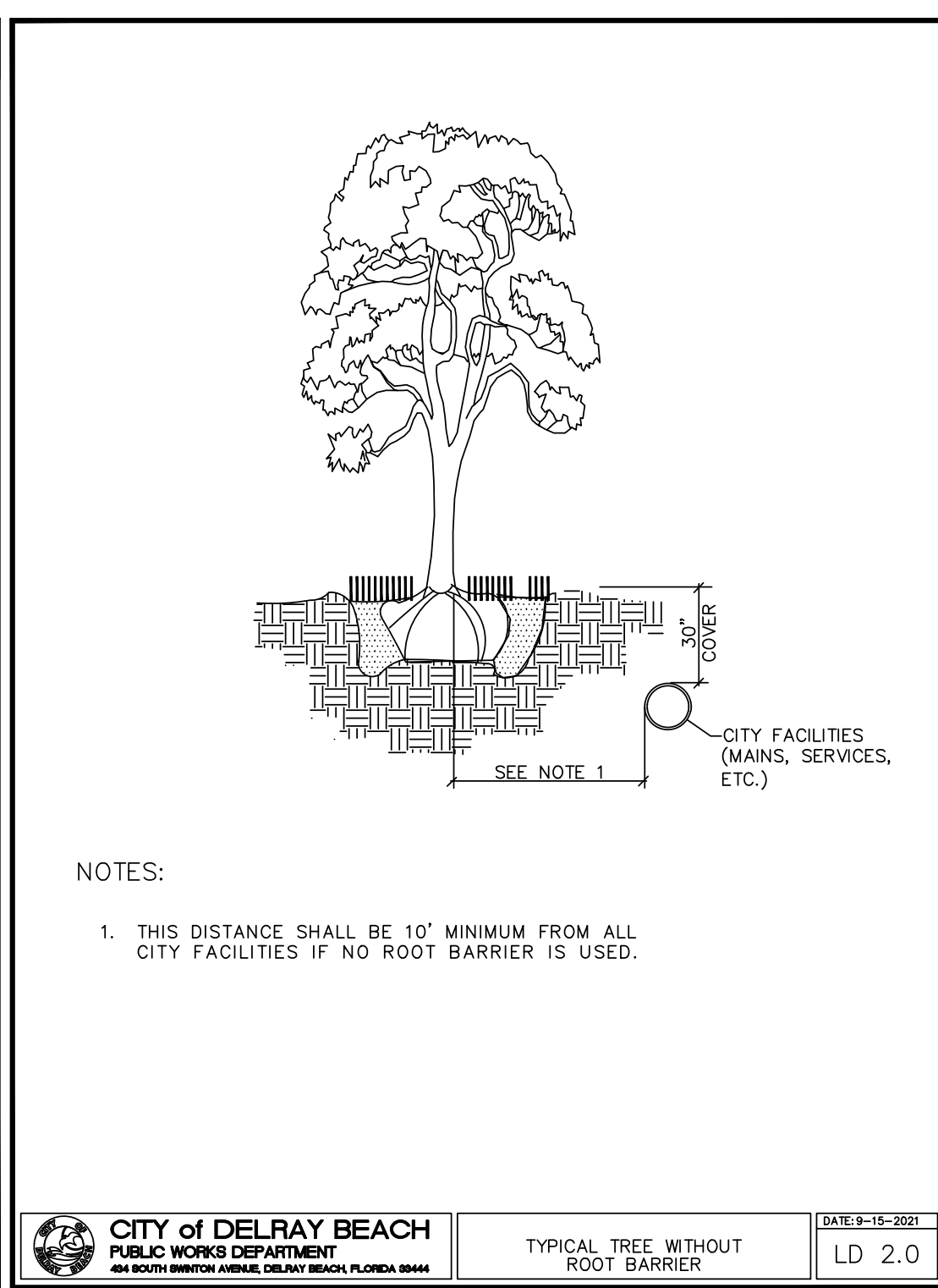
ASPHALT BIKE PATH/WALKWAY

Ⓐ WEARING SURFACE: 1" TYPE S-3 ASPHALTIC CONCRETE.
 Ⓑ BASE: 4" COMPACTED SHELLROCK OR LIMEROCK TO 98% MAX. DENSITY PER AASHTO T-180 SPECIFICATIONS.



- 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.

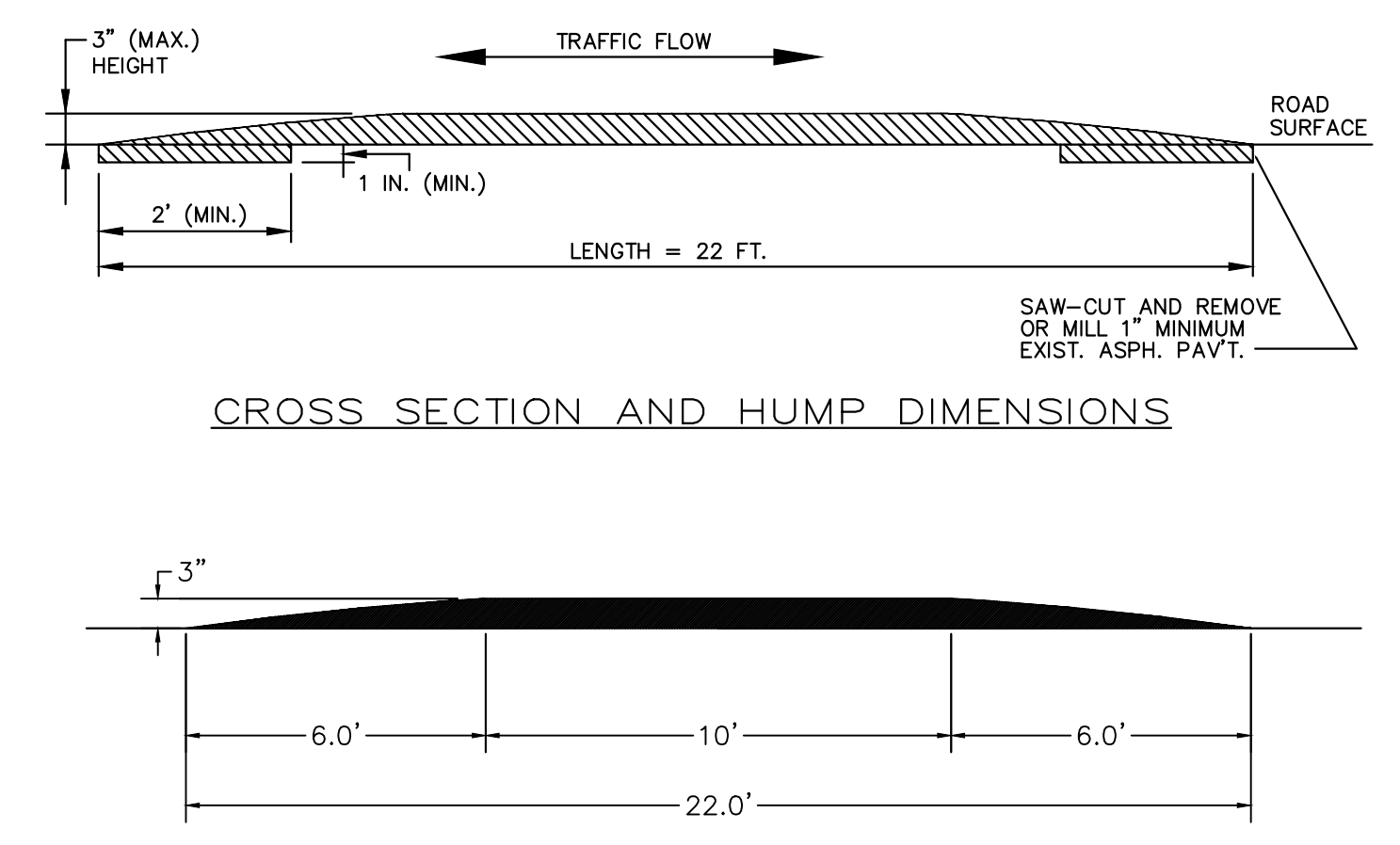
CITY OF DELRAY BEACH PUBLIC WORKS DEPARTMENT
 400 SOUTH BEACH AVENUE, DELRAY BEACH, FLORIDA 33441
 DATE: 09-15-2021
 LD 1.0



- NOTES:
1. THIS DISTANCE SHALL BE 10" MINIMUM FROM ALL CITY FACILITIES IF NO ROOT BARRIER IS USED.

CITY OF DELRAY BEACH PUBLIC WORKS DEPARTMENT
 400 SOUTH BEACH AVENUE, DELRAY BEACH, FLORIDA 33441
 DATE: 09-15-2021
 LD 2.0

NOTE: NO TREES TO BE INSTALLED WITHIN 10FT OF UTILITIES UNLESS A ROOT BARRIER IS INSTALLED.



CROSS SECTION AND HUMP DIMENSIONS

SEMINOLE SPEED HUMP (ALTERNATE) N.T.S.

HUMP HEIGHT	SURFACE RADIUS	SPEED LIMIT
5"	43.43'	15
4"	54.22'	20
3"	72.12'	25

TRAFFIC CALMING STANDARD SPEED HUMP CONSTRUCTION DETAILS

(ALTERNATE)

Designed	J.J.H.
Drawn	E.L.H.
Checked	J.J.H.

NO.	DATE	REVISION	BY
	11-24-20	ISSUED FOR BID	

HALEY ENGINEERING, INC.
 CIVIL ENGINEERING SERVICES.
 1680 SE 4th Street - Deerfield Beach, Fla. 33441
 Phone: (954) 260-6194
 Email: johnhaley@comcast.net
 F.B.P.E. Authorization No. 9463

RAINBERRY BAY
 DELRAY BEACH, FLORIDA

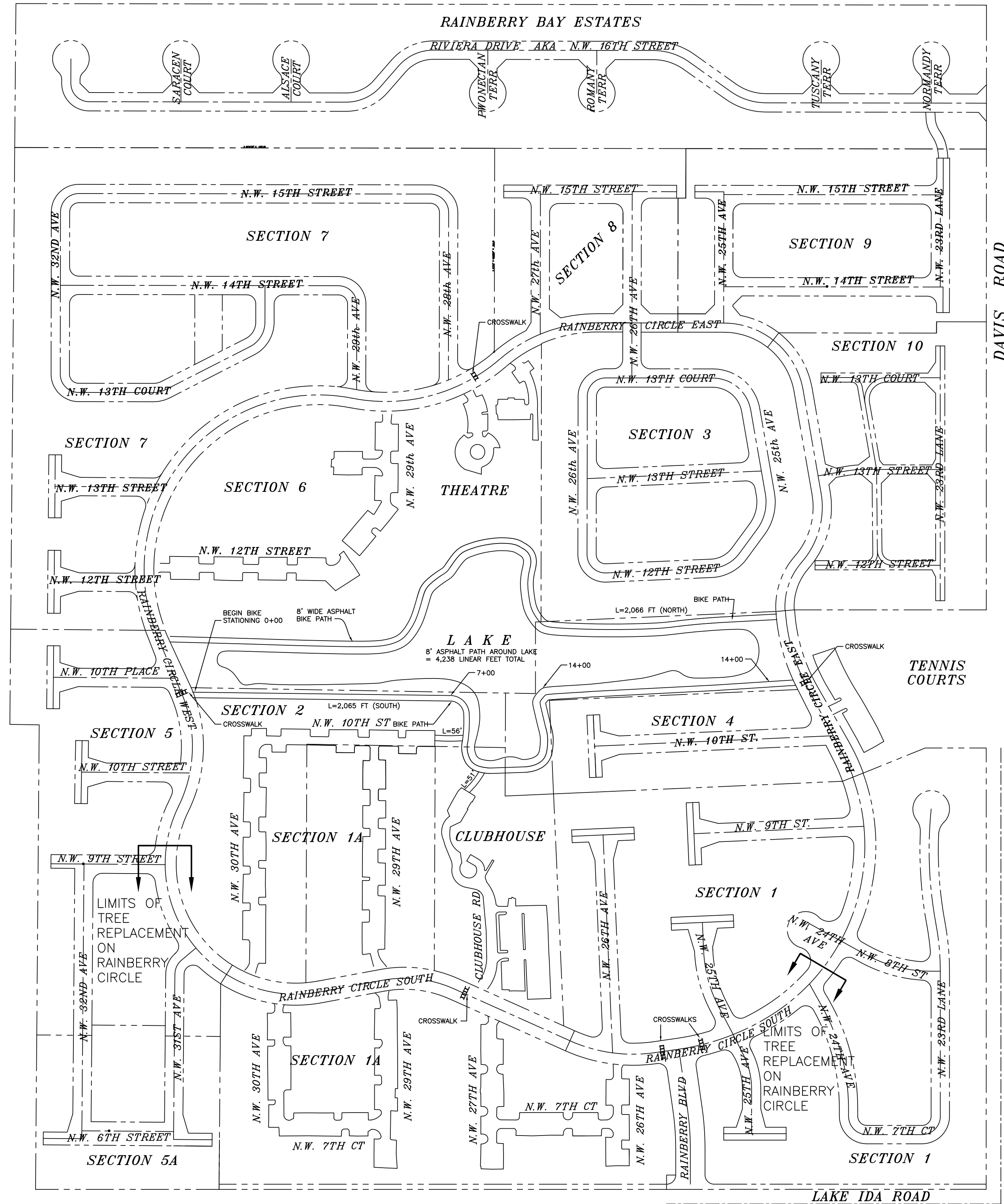
PAVING DETAILS

APPROVED:

 DATE: _____
 JOHN J. HALEY, P.E.
 REGISTERED ENGINEER NO. 40023
 STATE OF FLORIDA

SCALE
 PROJECT NUMBER
 NTS
 18-2470A

22
 43



SCALE: 1" = 200'

- CONSTRUCTION NOTES:**
- CONTRACTOR TO FIELD LOCATE ALL EXISTING WATER SERVICES, SEWER SERVICES, CLEANOUTS, DRAINAGE CATCH BASINS AND MANHOLES, GATE VALVES, AND SANITARY SEWER MANHOLES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER WITH INFORMATION.
 - ALL UTILITIES AND RELATED STRUCTURES REQUIRES ADJUSTMENT SHALL BE ADJUSTED PRIOR TO COMMENCEMENT OF MILLING AND RESURFACING OPERATIONS.
 - ALL MILLING OPERATIONS SHALL BE IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS SECTION 327. MILLING DEPTH SHALL BE 1" THICK UNLESS OTHERWISE NOTED.
 - PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED WITH THE ENGINEER OF RECORD AND CONTRACTOR. AFTER A REVIEW OF SITE CONDITIONS, ANY PLAN DEVIATION MUST BE BROUGHT TO THE ATTENTION OF ENGINEER.
 - ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF CITY OF DELRAY BEACH. ALL REQUIRED PERMITS MUST BE SECURED BY CONTRACTOR.
 - PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL GIVE TIMELY NOTIFICATION TO ALL UTILITY COMPANIES WITH FACILITIES IN THE AREA.
 - THE LOCATION OF EXISTING FACILITIES WERE PLOTTED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SAFEGUARD ALL EXISTING STRUCTURES, UTILITIES, AND SURVEY MARKERS. ALL ABOVE GROUND UTILITIES, VALVE COVERS, MANHOLE COVERS, ETC. MUST BE LOCATED, NOTED, AND PRESERVED TO PREVENT ANY NEW PAVEMENT COVERING UP THE DEVICE.
 - ALL CONSTRUCTION STAKEOUT MUST BE PROVIDED BY REGISTERED LAND SURVEYOR.
 - WHERE APPLICABLE, REMOVE EXISTING WHEEL STOPS AT PARKING SPACES TO BE PAVED PRIOR TO CONSTRUCTION, STORE WHEEL STOPS IN SECURE PLACE FOR RE-INSTALLATION WHEN READY.
 - ALL ELEVATIONS SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.**
 - NO ASPHALT OVERLAY SHALL BE PLACED OVER ANY CONCRETE SLAB, SIDEWALK OR PAVEMENT. ASPHALT AND CONCRETE WILL JOIN WITH A STRAIGHT LINE AND SEPARATED WITH A JOINT. SAWCUT EXISTING AS NECESSARY.
 - FOR PAVED AREAS ADJACENT TO TREE REMOVAL, LOCATIONS, ROADWAY MUST BE FREE OF ROOT MATERIAL. IF SIGNS OF ROOT UPLIFT ARE EVIDENT, ASPHALT AND ROAD ROCK MUST BE REMOVED ALONG WITH ALL ROOTS AND ROOT REMNANTS. AFTER REMOVAL COMPACT SUBGRADE, ADD AND COMPACT NEW ROAD ROCK. PRIME COAT AND TACK FOR NEW 1-1/2" ASPHALT INSTALLATION.
 - TO MINIMIZE THE RISK OF FUTURE REFLECTIVE CRACKING, IMMEDIATELY FOLLOWING THE MILLING OPERATION, THE PAVEMENT SURFACE WILL BE INSPECTED FOR CRACKS. THE CRACKS SHOULD BE FILLED WITH A SUITABLE AIRPORT GRADE ASPHALT FILLER.
 - THE SLOPE OF THE SURFACE OF ACCESSIBLE PARKING SPACES CANNOT EXCEED 2% IN ANY DIRECTION.
 - ALL AREAS IDENTIFIED BY PUDDLING ON THE ENGINEERING PLANS REQUIRE SPECIAL ATTENTION. REMEDIAL ACTION SHALL BE TAKEN BY CREATING A FINAL SMOOTH UNIFORM PAVEMENT SURFACE FREE OF VALLEYS, DIPS, AND HOLES BY ADJUSTING THE ASPHALT OVERLAY THICKNESS AS NEEDED.
 - WHERE EDGE OF PAVEMENT FAILURE IS INDICATED AND APPARENT, A CORRECTED PAVEMENT EDGE SHOULD BE ACHIEVED BY USE OF ADDITIONAL ASPHALT AND COMPACTION. SEVERE FAILURE MAY REQUIRE ADDED ROCK BASE BELOW ASPHALT LEVEL AND 6" BEYOND THE PAVEMENT EDGE WHERE FEASIBLE.
 - PRIOR TO CONSTRUCTION, CONTRACTOR WILL CONTACT TRAFFIC SIGNAL AND VEHICLE GATE LOOP DETECTOR SPECIALISTS TO COORDINATE THEIR INSTALLATIONS WITH THE ASPHALT OVERLAY OPERATIONS.
 - FULLY LOADED TRUCKS TRANSPORTING ASPHALT OR OTHER PAVEMENT MATERIALS SHOULD AVOID NEWLY INSTALLED PAVEMENT AREAS TO AVOID TRUCK TRACKING.
 - TREE REMOVAL SHOULD INCLUDE STUMP GRINDING TO DEPTH 6 INCHES BELOW EXISTING GRADE. ALL RESIDUAL MATERIAL WILL BE DISPOSED PROPERLY.
 - "RAISED CROSSWALKS" INCLUDE THE SEMINOLE SPEED HUMP AND THE 10 FOOT WIDE "LADDER TYPE" WHITE CROSSWALK STRIPING.
 - THE CONTRACTOR IS RESPONSIBLE FOR SECURING ALL LOCAL, STATE, AND FEDERAL PERMITS ASSOCIATED WITH THE CONSTRUCTION PHASE OF THIS PROJECT, INCLUDING N.P.D.E.S., D.E.P., AND E.P.A.

- ALTERNATES:**
- BIKE PATH ALTERNATES:**
- ALTERNATE 1A - REPAIR BASE/ROOT REMOVAL AT THE EIGHT (8) SPECIFIC LOCATIONS LISTED BELOW AND MILL 1" OF EXISTING ASPHALT FOR ENTIRE LENGTH OF BIKE PATH. REPAVE 1" OF ASPHALT.
 - ALTERNATE 1B - REPAIR BIKE PATH ONLY AT THE EIGHT (8) SPECIFIC LOCATIONS LISTED BELOW.
- BIKE PATH REPAIR LOCATIONS: STA 7+84
 STA 7+94
 STA 8+50 (ESTIMATE)
 STA 10+40
 STA 11+8
 STA 16+18
 STA 16+30
 STA 16+24
- CROSSWALK ALTERNATES:**
- ALTERNATE 2 - CONSTRUCTION OF FOUR TRAFFIC CALMING SPEED HUMPS/RAISED CROSSWALKS ON RAINBERRY CIRCLE AS SHOWN ON THE DRAWINGS. WHERE A SPEED HUMP/RAISED CROSSWALK IS MADE A CONTRACTED OPTION, THE PAINTED CROSSWALK STRIPING REMAINS THE SAME.

Designed	J.J.H.
Drawn	E.L.H.
Checked	J.J.H.

NO.	DATE	REVISION	BY
	11-24-20	ISSUED FOR BID	

HALEY ENGINEERING, INC.
 CIVIL ENGINEERING SERVICES.
 1680 SE 4th Street - Deerfield Beach, Fla. 33441
 Phone: (954) 260-6194
 Email: johnjhaley@comcast.net
 F.B.P.E. Authorization No. 9463

RAINBERRY BAY
 DELRAY BEACH, FLORIDA

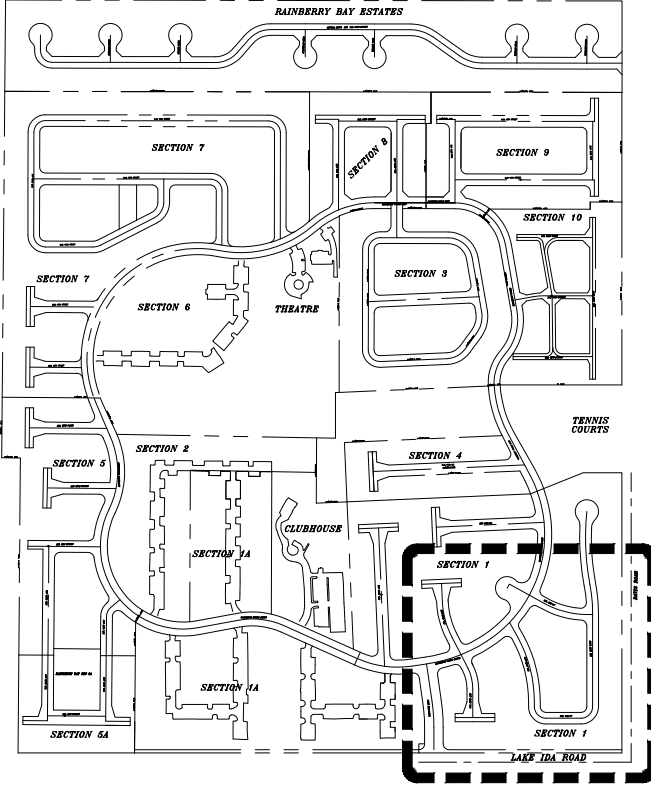
OVERALL PLAN

APPROVED: _____
 DATE: _____
 JOHN J. HALEY, P.E.
 REGISTERED ENGINEER NO. 40023
 STATE OF FLORIDA

SCALE	PROJECT NUMBER	2
1" = 200'	18-2470A	43

NOTE: ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER, OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS LD1.0 AND LD 2.0.

NOTE: SIGHT VISIBILITY REQUIREMENTS MUST BE FOLLOWED IN ACCORDANCE WITH CITY OF DELRAY BEACH LDR SEE 4.6.14



- 14.00 EXISTING TOPOGRAPHIC ELEVATION
- 14.00 PROPOSED ELEVATION
- EXISTING CATCH BASIN
- EX. SANITARY SEWER MANHOLE
- EX. SANITARY MANHOLE TO BE LOCATED BY SURVEYOR
- EX. STORM DRAINAGE MANHOLE
- EX. WATER GATE VALVE COVER
- D DUMPSTER
- EX. FIRE HYDRANT
- 9.00 ROADWAY CENTERLINE STATIONING
- ROADWAY CENTERLINE
- WORK UNDER SEPARATE PERMIT
- PAVER BLOCK AREA
- EXISTING CURB AND GUTTER/ VALLEY GUTTER / HEADER CURB
- EXISTING TREE
- TBR TO BE REMOVED
- ETR EXISTING TO REMAIN
- 36" EX. DRAINAGE PIPE WITH SIZE
- PROPOSED CONCRETE SIDEWALK
- HEDGE

PAVEMENT EVALUATION LEGEND:

- 1 REFLECTIVE/BLOCK CRACKING
- 2 LONGITUDINAL CRACKING
- 3 RAVELING
- 4 DELAMINATION
- 5 ALLIGATOR CRACKING
- 6 EVIDENCE OF PATCHWORK
- 7 ROOT UPHEAVAL
- 8 TRANSVERSE CRACKING
- 9 EDGE FAILURE
- 10 BASE FAILURE - PAVEMENT DEPRESSION
- * SEVERE CONDITION

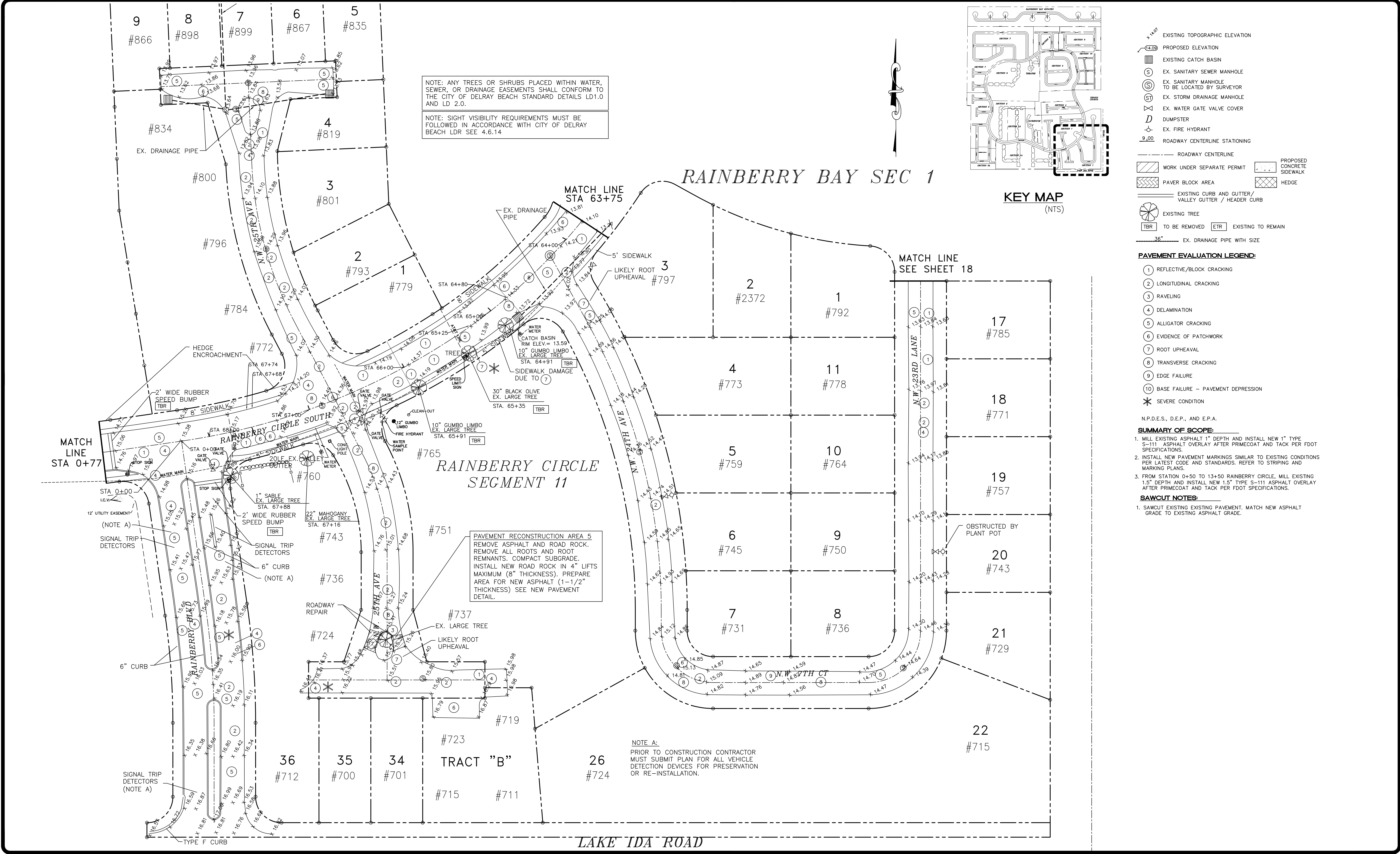
N.P.D.E.S., D.E.P., AND E.P.A.

SUMMARY OF SCOPE:

1. MILL EXISTING ASPHALT 1" DEPTH AND INSTALL NEW 1" TYPE S-111 ASPHALT OVERLAY AFTER PRIMECOAT AND TACK PER FDOT SPECIFICATIONS.
2. INSTALL NEW PAVEMENT MARKINGS SIMILAR TO EXISTING CONDITIONS PER LATEST CODE AND STANDARDS. REFER TO STRIPING AND MARKING PLANS.
3. FROM STATION 0+50 TO 13+50 RAINBERRY CIRCLE, MILL EXISTING 1.5" DEPTH AND INSTALL NEW 1.5" TYPE S-111 ASPHALT OVERLAY AFTER PRIMECOAT AND TACK PER FDOT SPECIFICATIONS.

SAWCUT NOTES:

1. SAWCUT EXISTING PAVEMENT. MATCH NEW ASPHALT GRADE TO EXISTING ASPHALT GRADE.



PAVEMENT RECONSTRUCTION AREA 5
 REMOVE ASPHALT AND ROAD ROCK.
 REMOVE ALL ROOTS AND ROOT REMNANTS. COMPACT SUBGRADE.
 INSTALL NEW ROAD ROCK IN 4" LIFTS MAXIMUM (8" THICKNESS). PREPARE AREA FOR NEW ASPHALT (1-1/2" THICKNESS) SEE NEW PAVEMENT DETAIL.

NOTE A:
 PRIOR TO CONSTRUCTION CONTRACTOR MUST SUBMIT PLAN FOR ALL VEHICLE DETECTION DEVICES FOR PRESERVATION OR RE-INSTALLATION.

Designed	J.J.H.
Drawn	E.L.H.
Checked	J.J.H.

NO.	DATE	REVISION	BY
11-24-20		ISSUED FOR BID	
4-4-22		Delineated work under separate permit	
12-18-23		Added locations from P.Davis	
		6/23 survey	

HALEY ENGINEERING, INC.
 CIVIL ENGINEERING SERVICES.
 1680 SE 4th Street - Deerfield Beach, Fla. 33441
 Phone: (954) 260-6194
 Email: johnjhaley@comcast.net
 F.B.P.E. Authorization No. 9463

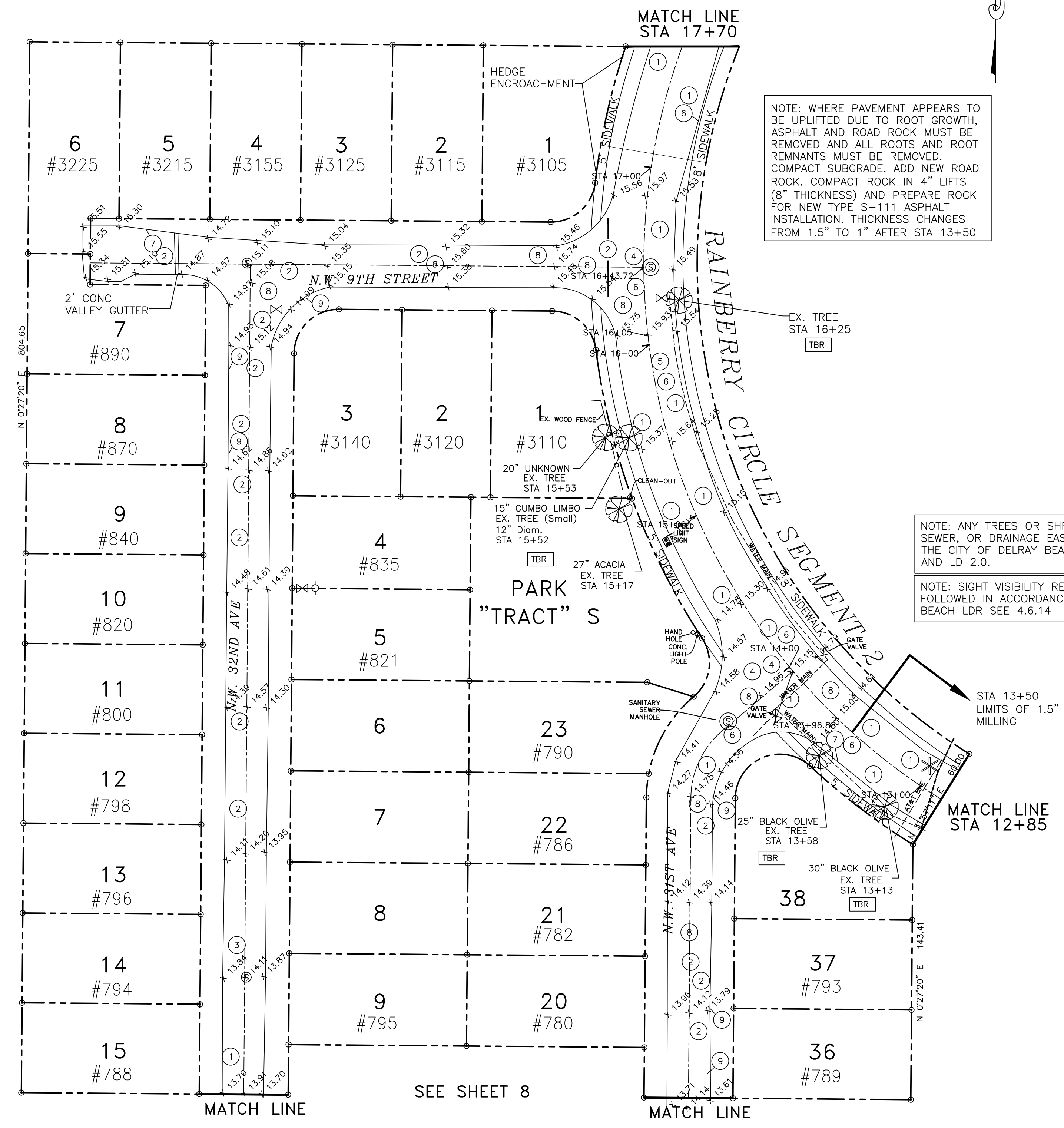
RAINBERRY BAY SECTION No. 1 SOUTH DELRAY BEACH, FLORIDA

TREE REPLACEMENT ROADWAY IMPROVEMENTS FOR ASPHALT OVERLAY PLAN

APPROVED: _____
 DATE: _____
 JOHN J. HALEY, P.E.
 REGISTERED ENGINEER NO. 40023
 STATE OF FLORIDA

SCALE: 1" = 40'
 PROJECT NUMBER: 18-2470A

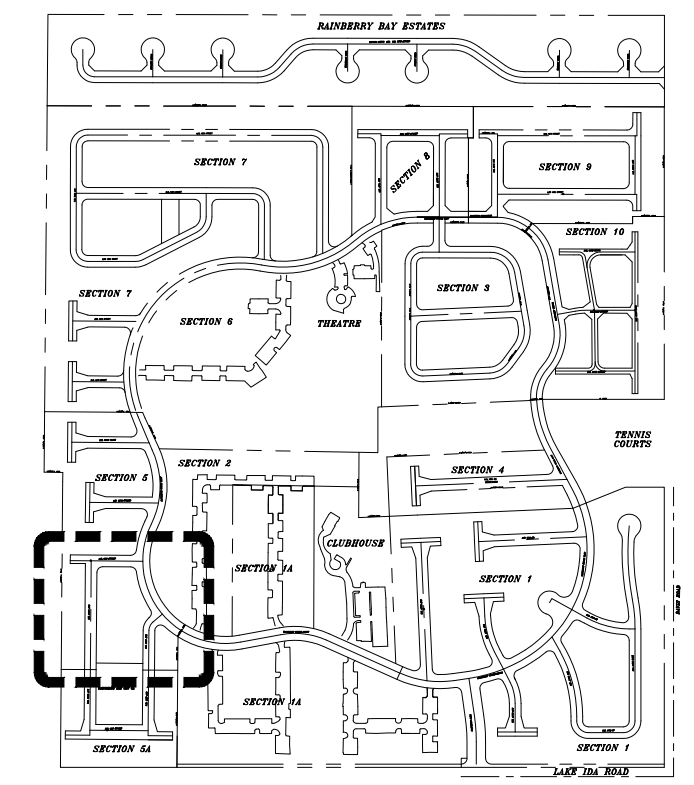
3A
 43



NOTE: WHERE PAVEMENT APPEARS TO BE UPLIFTED DUE TO ROOT GROWTH, ASPHALT AND ROAD ROCK MUST BE REMOVED AND ALL ROOTS AND ROOT REMNANTS MUST BE REMOVED. COMPACT SUBGRADE. ADD NEW ROAD ROCK. COMPACT ROCK IN 4" LIFTS (8" THICKNESS) AND PREPARE ROCK FOR NEW TYPE S-111 ASPHALT INSTALLATION. THICKNESS CHANGES FROM 1.5" TO 1" AFTER STA 13+50

NOTE: ANY TREES OR SHRUBS PLACED WITHIN WATER, SEWER, OR DRAINAGE EASEMENTS SHALL CONFORM TO THE CITY OF DELRAY BEACH STANDARD DETAILS LD1.0 AND LD 2.0.

NOTE: SIGHT VISIBILITY REQUIREMENTS MUST BE FOLLOWED IN ACCORDANCE WITH CITY OF DELRAY BEACH LDR SEE 4.6.14



- 14.00 EXISTING TOPOGRAPHIC ELEVATION
- 14.00 PROPOSED ELEVATION
- EXISTING CATCH BASIN
- EX. SANITARY SEWER MANHOLE
- EX. SANITARY MANHOLE TO BE LOCATED BY SURVEYOR
- EX. STORM DRAINAGE MANHOLE
- EX. WATER GATE VALVE COVER
- DUMPSTER
- EX. FIRE HYDRANT
- 9.00 ROADWAY CENTERLINE STATIONING
- ROADWAY CENTERLINE
- WORK UNDER SEPARATE PERMIT
- PAVER BLOCK AREA
- EXISTING CURB AND GUTTER/ VALLEY GUTTER / HEADER CURB
- EXISTING TREE
- TBR TO BE REMOVED ETR EXISTING TO REMAIN
- 36" EX. DRAINAGE PIPE WITH SIZE

PAVEMENT EVALUATION LEGEND:

- 1 REFLECTIVE/BLOCK CRACKING
- 2 LONGITUDINAL CRACKING
- 3 RAVELING
- 4 DELAMINATION
- 5 ALLIGATOR CRACKING
- 6 EVIDENCE OF PATCHWORK
- 7 ROOT UPHEAVAL
- 8 TRANSVERSE CRACKING
- 9 EDGE FAILURE
- 10 BASE FAILURE - PAVEMENT DEPRESSION
- * SEVERE CONDITION

SUMMARY OF SCOPE:

1. MILL EXISTING ASPHALT 1" DEPTH AND INSTALL NEW 1" TYPE S-111 ASPHALT OVERLAY AFTER PRIMECOAT AND TACK PER FDOT SPECIFICATIONS.
2. INSTALL NEW PAVEMENT MARKINGS SIMILAR TO EXISTING CONDITIONS PER LATEST CODE AND STANDARDS. REFER TO STRIPING AND MARKING PLANS.
3. FROM STATION 0+50 TO 13+50 RAINBERRY CIRCLE, MILL EXISTING 1.5" DEPTH AND INSTALL NEW 1.5" TYPE S-111 ASPHALT OVERLAY AFTER PRIMECOAT AND TACK PER FDOT SPECIFICATIONS.

SAWCUT NOTES:

1. SAWCUT EXISTING EXISTING PAVEMENT. MATCH NEW ASPHALT GRADE TO EXISTING ASPHALT GRADE.

Designed	J.J.H.
Drawn	E.L.H.
Checked	J.J.H.

NO.	DATE	REVISION	BY
11-24-20		ISSUED FOR BID	
4-4-22		Delineated work under separate permit	
12-18-23		Added locations from P.Davis	
		5/23 survey	

HALEY ENGINEERING, INC.
CIVIL ENGINEERING SERVICES.
1680 SE 4th Street - Deerfield Beach, Fla. 33441
Phone: (954) 260-6194
Email: johnjhaley@comcast.net
F.B.P.E. Authorization No. 9463

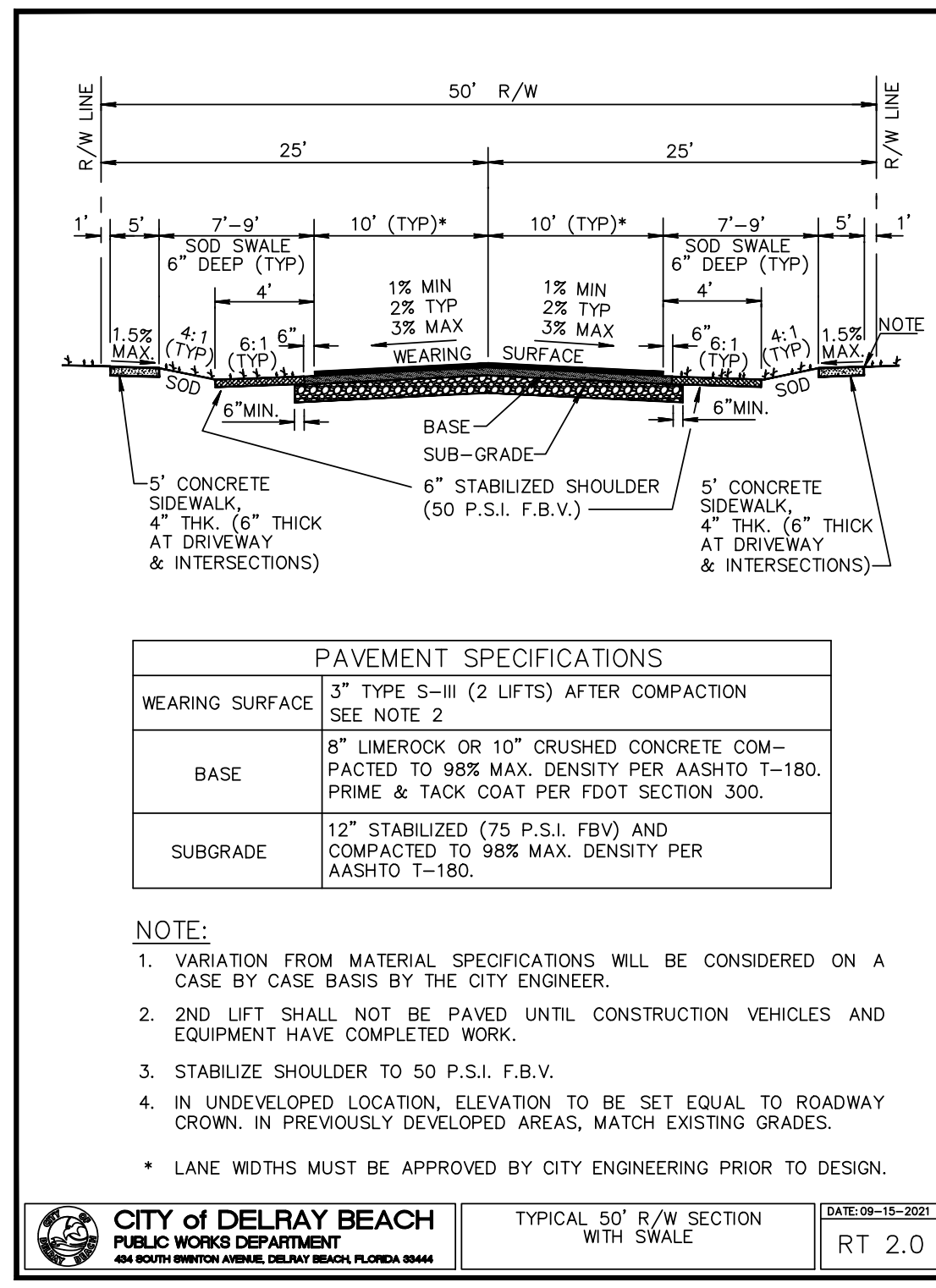
RAINBERRY BAY
SECTION No. 5 SOUTH
DELRAY BEACH, FLORIDA

TREE REPLACEMENT
ROADWAY IMPROVEMENTS
FOR ASPHALT OVERLAY PLAN

APPROVED: _____
DATE: _____
JOHN J. HALEY, P.E.
REGISTERED ENGINEER NO. 40023
STATE OF FLORIDA

SCALE: 1" = 40'
PROJECT NUMBER: 18-2470A

7A
43



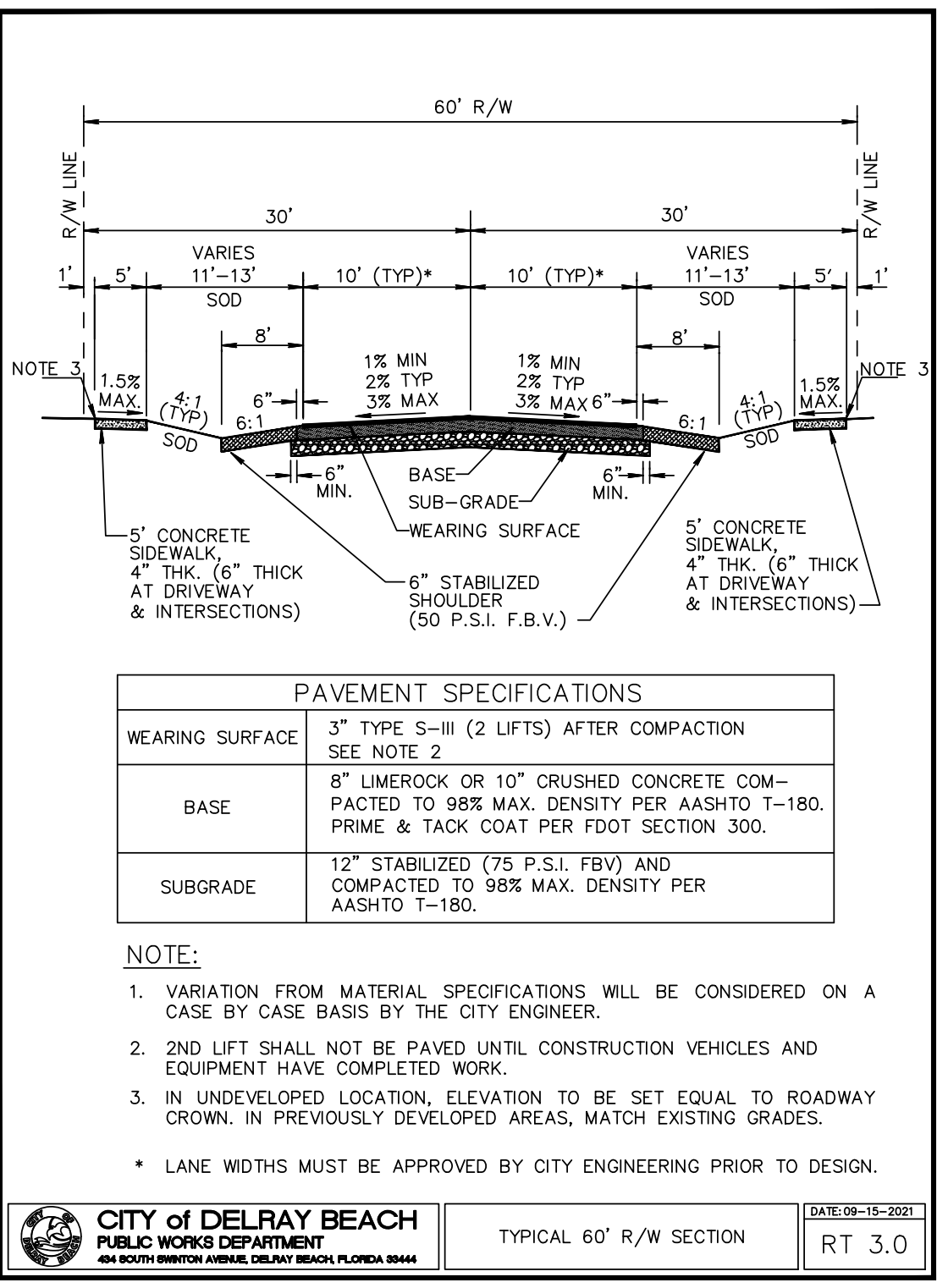
PAVEMENT SPECIFICATIONS

WEARING SURFACE	3" TYPE S-III (2 LIFTS) AFTER COMPACTION SEE NOTE 2
BASE	8" LIMEROCK OR 10" CRUSHED CONCRETE COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180. PRIME & TACK COAT PER FDOT SECTION 300.
SUBGRADE	12" STABILIZED (75 P.S.I. FBV) AND COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180.

- NOTE:**
- VARIATION FROM MATERIAL SPECIFICATIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
 - 2ND LIFT SHALL NOT BE PAVED UNTIL CONSTRUCTION VEHICLES AND EQUIPMENT HAVE COMPLETED WORK.
 - STABILIZE SHOULDER TO 50 P.S.I. F.B.V.
 - IN UNDEVELOPED LOCATION, ELEVATION TO BE SET EQUAL TO ROADWAY CROWN. IN PREVIOUSLY DEVELOPED AREAS, MATCH EXISTING GRADES.
- * LANE WIDTHS MUST BE APPROVED BY CITY ENGINEERING PRIOR TO DESIGN.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
404 SOUTH BRIMCOM AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL 50' R/W SECTION WITH SWALE
DATE: 09-15-2021
RT 2.0



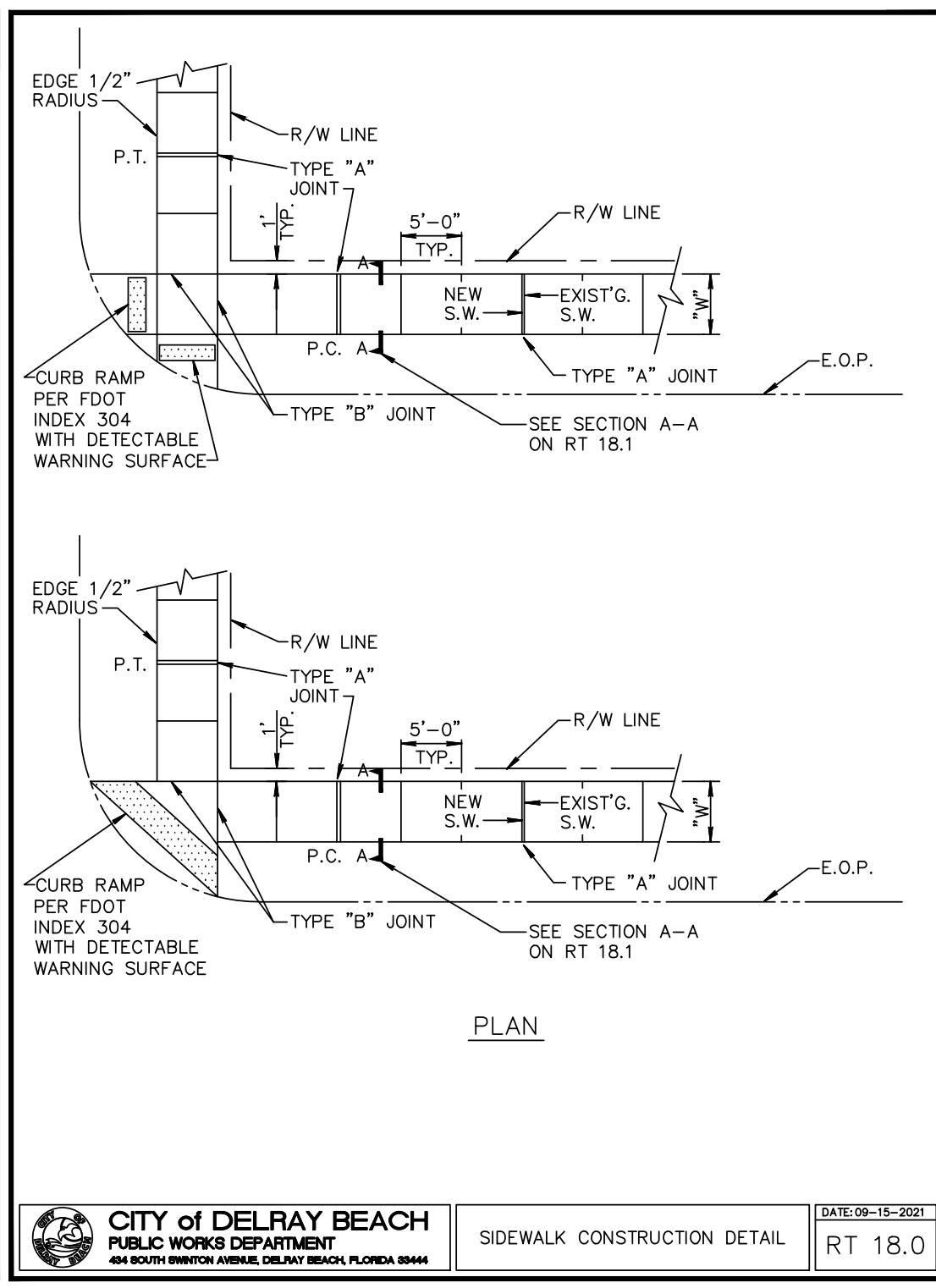
PAVEMENT SPECIFICATIONS

WEARING SURFACE	3" TYPE S-III (2 LIFTS) AFTER COMPACTION SEE NOTE 2
BASE	8" LIMEROCK OR 10" CRUSHED CONCRETE COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180. PRIME & TACK COAT PER FDOT SECTION 300.
SUBGRADE	12" STABILIZED (75 P.S.I. FBV) AND COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180.

- NOTE:**
- VARIATION FROM MATERIAL SPECIFICATIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS BY THE CITY ENGINEER.
 - 2ND LIFT SHALL NOT BE PAVED UNTIL CONSTRUCTION VEHICLES AND EQUIPMENT HAVE COMPLETED WORK.
 - IN UNDEVELOPED LOCATION, ELEVATION TO BE SET EQUAL TO ROADWAY CROWN. IN PREVIOUSLY DEVELOPED AREAS, MATCH EXISTING GRADES.
- * LANE WIDTHS MUST BE APPROVED BY CITY ENGINEERING PRIOR TO DESIGN.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
404 SOUTH BRIMCOM AVENUE, DELRAY BEACH, FLORIDA 33444

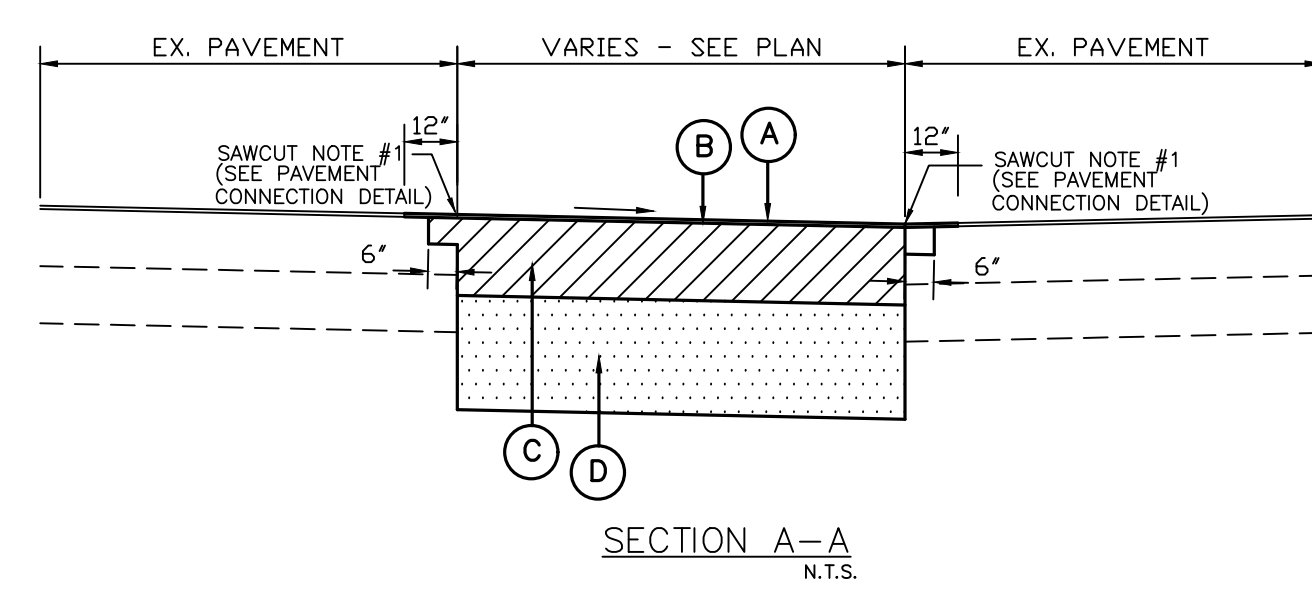
TYPICAL 60' R/W SECTION
DATE: 09-15-2021
RT 3.0



PLAN

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
404 SOUTH BRIMCOM AVENUE, DELRAY BEACH, FLORIDA 33444

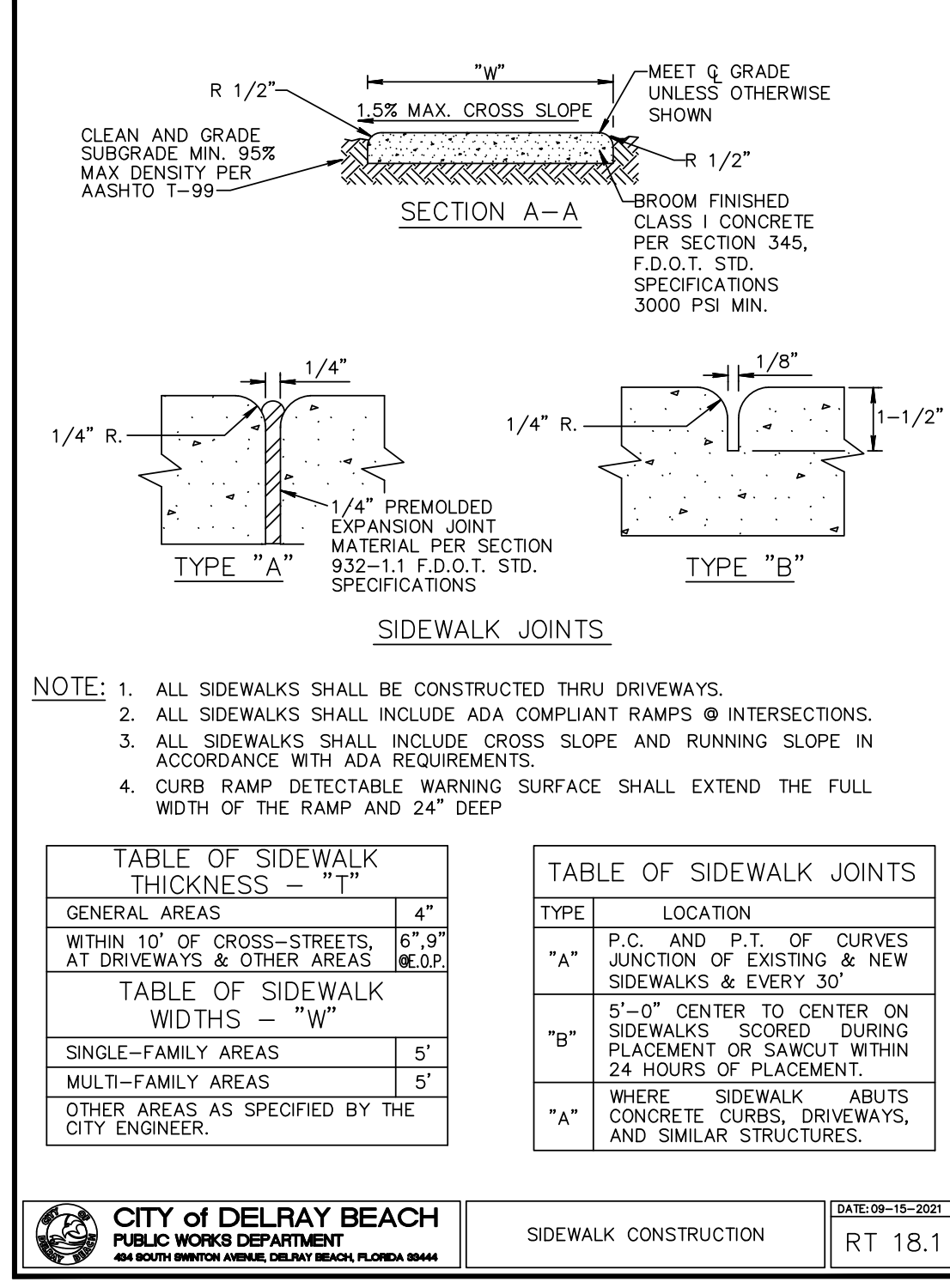
SIDEWALK CONSTRUCTION DETAIL
DATE: 09-15-2021
RT 18.0



- SECTION A-A**
N.T.S.
- (A) 1.5" ASPHALTIC CONCRETE (TYPE S-111)
 - (B) PRIME COAT AND TACK
 - (C) 8" LIMEROCK BASE COURSE, LBR100 COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180 COMPACTED IN TWO LIFTS. MINIMUM 70% CARBONATES.
 - (D) 12" COMPACTED SUBGRADE LBR 40 MIN., COMPACTED TO 100% MAX. DENSITY PER AASHTO T-99-C (COMPACTED IN 4" LIFTS)
- ROADWAY RE-CONSTRUCTION DETAIL**
N.T.S.

NOTES:

- AREA OF PAVEMENT RE-CONSTRUCTION, WHERE APPLICABLE, MUST BE DEMUCKED. NO MATERIAL OF FDOT CLASS A-5, A-7, OR A-8 ALLOWED.
- 12" OF SUB-GRADE SHALL BE COMPACTED WITH ALL ROOT MATERIAL REMOVED. TO 100% MAX DRY DENSITY PER AASHTO T-99C IN 4 LIFTS.
- ROCK BASE COURSE CONSTRUCTION SHALL NOT BE STARTED UNTIL ALL SUB-GRADE CONSTRUCTION IN THE VICINITY HAS BEEN TESTED AND ACCEPTED.
- TACKCOAT SHALL BE USED BETWEEN PAVING COURSES. PRIME COAT SHALL BE USED ON FINISHED LIMEROCK BASE.
- FINAL WEARING COURSE SHALL NOT BE INSTALLED UNTIL:
 - A WALK THROUGH HAS BEEN CONDUCTED TO DETERMINE IF ANY REMAINING WORK IS NEEDED.
 - ALL LANDSCAPE WORK IS COMPLETE.
 - ALL UNDERGROUND UTILITIES ARE IN GOOD CONDITION. FINISHED ROCK SURVEY IS REVIEWED AND ACCEPTED BY ENGINEER.



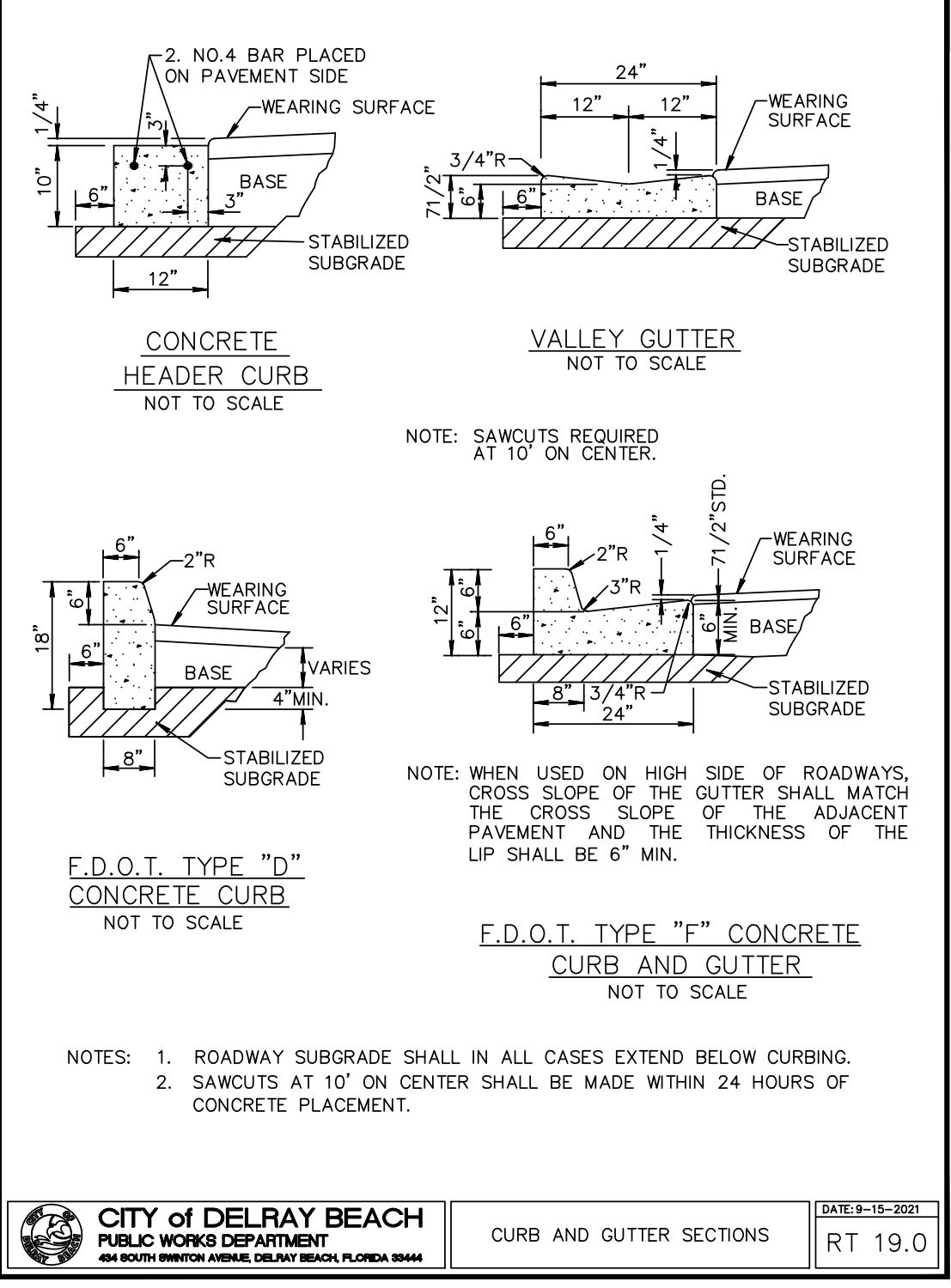
SIDEWALK JOINTS

- NOTE:**
- ALL SIDEWALKS SHALL BE CONSTRUCTED THRU DRIVEWAYS.
 - ALL SIDEWALKS SHALL INCLUDE ADA COMPLIANT RAMP @ INTERSECTIONS.
 - ALL SIDEWALKS SHALL INCLUDE CROSS SLOPE AND RUNNING SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.
 - CURB RAMP DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE RAMP AND 24" DEEP

TABLE OF SIDEWALK THICKNESS - "T"		TABLE OF SIDEWALK JOINTS	
GENERAL AREAS	4"	TYPE	LOCATION
WITHIN 10' OF CROSS-STREETS AT DRIVEWAYS & OTHER AREAS	6" @	"A"	P.C. AND P.T. OF CURVES JUNCTION OF EXISTING & NEW SIDEWALKS & EVERY 30'
TABLE OF SIDEWALK WIDTHS - "W"		"B"	5'-0" CENTER TO CENTER ON SIDEWALKS SCORED DURING PLACEMENT OR SAWCUT WITHIN 24 HOURS OF PLACEMENT.
SINGLE-FAMILY AREAS	5'	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES.	"A"
MULTI-FAMILY AREAS	5'		
OTHER AREAS AS SPECIFIED BY THE CITY ENGINEER.			

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
404 SOUTH BRIMCOM AVENUE, DELRAY BEACH, FLORIDA 33444

SIDEWALK CONSTRUCTION
DATE: 09-15-2021
RT 18.1



CONCRETE HEADER CURB NOT TO SCALE

VALLEY GUTTER NOT TO SCALE

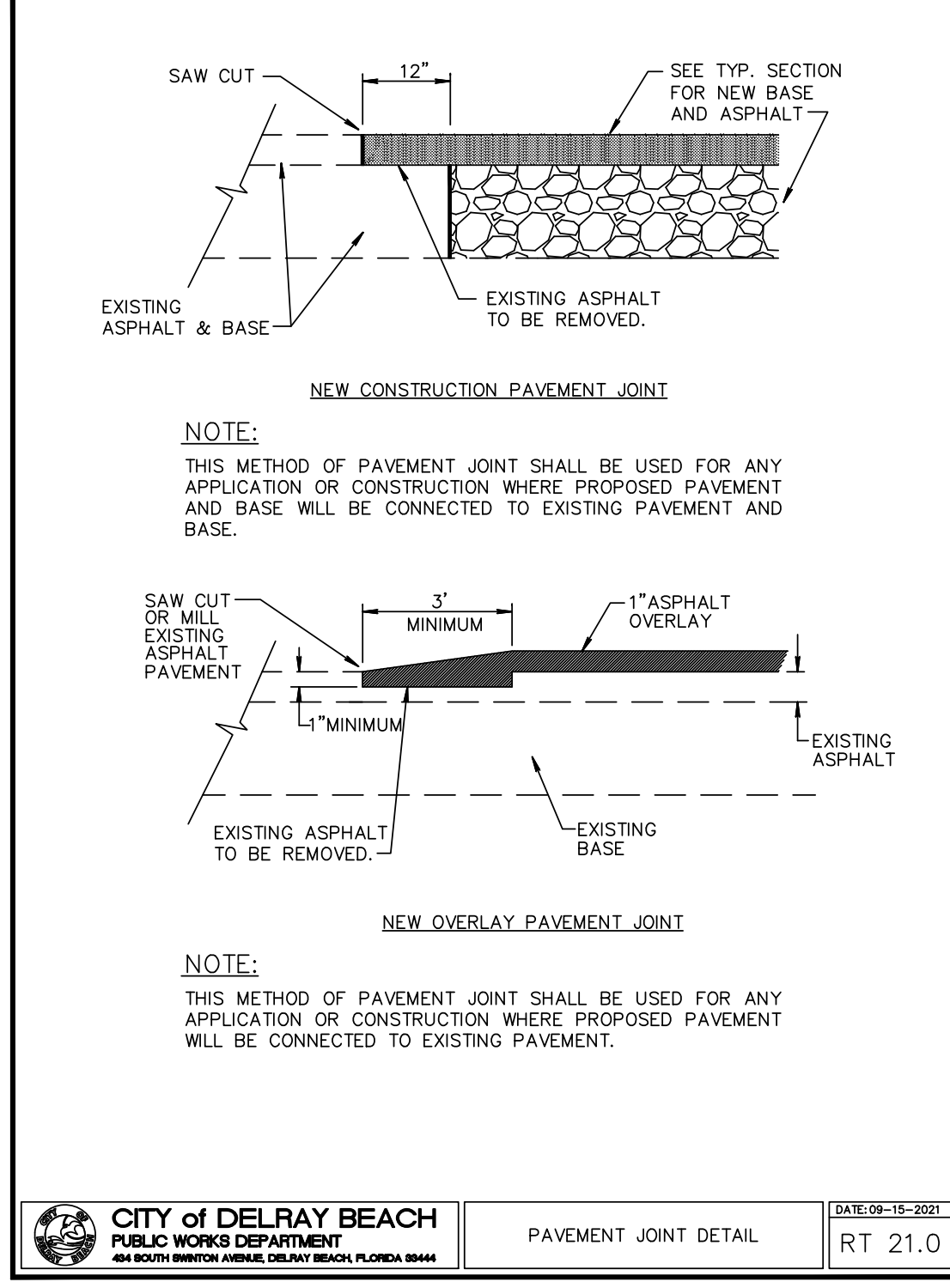
F.D.O.T. TYPE "D" CONCRETE CURB NOT TO SCALE

F.D.O.T. TYPE "F" CONCRETE CURB AND GUTTER NOT TO SCALE

- NOTES:**
- ROADWAY SUBGRADE SHALL IN ALL CASES EXTEND BELOW CURBING.
 - SAWCUTS AT 10' ON CENTER SHALL BE MADE WITHIN 24 HOURS OF CONCRETE PLACEMENT.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
404 SOUTH BRIMCOM AVENUE, DELRAY BEACH, FLORIDA 33444

CURB AND GUTTER SECTIONS
DATE: 09-15-2021
RT 19.0



NEW CONSTRUCTION PAVEMENT JOINT

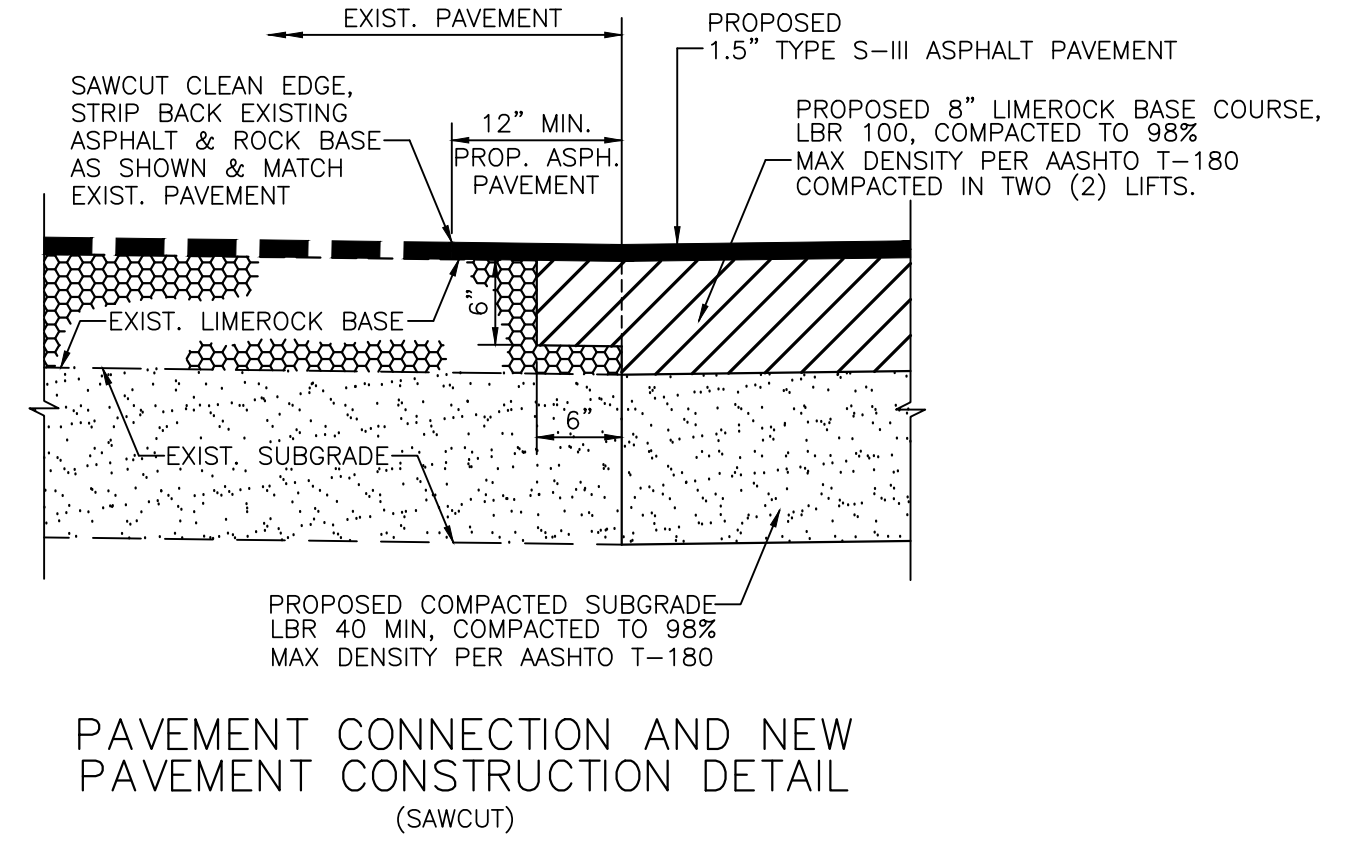
- NOTE:**
THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.

NEW OVERLAY PAVEMENT JOINT

- NOTE:**
THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT WILL BE CONNECTED TO EXISTING PAVEMENT.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
404 SOUTH BRIMCOM AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT JOINT DETAIL
DATE: 09-15-2021
RT 21.0



PAVEMENT CONNECTION AND NEW PAVEMENT CONSTRUCTION DETAIL (SAWCUT)

Designed	J.J.H.
Drawn	E.L.H.
Checked	J.J.H.

NO.	DATE	REVISION	BY
	11-24-20	ISSUED FOR BID	

HALEY ENGINEERING, INC.
CIVIL ENGINEERING SERVICES.
1680 SE 4th Street - Deerfield Beach, Fla. 33441
Phone: (954) 260-6194
Email: johnhaley@comcast.net
F.B.P.E. Authorization No. 9463

RAINBERRY BAY
DELRAY BEACH, FLORIDA

PAVING DETAILS

APPROVED:
DATE: _____
JOHN J. HALEY, P.E.
REGISTERED ENGINEER NO. 40023
STATE OF FLORIDA

SCALE	PROJECT NUMBER	21
NTS	18-2470A	43

Haley Engineering, Inc.
1680 SE 4th Street
Deerfield Beach, FL 33441
954-260-6194 johnjhaley@comcast.net
www.haleyeng.com

April 10, 2024
May 2, 2024 rev'd

Rainberry Bay Request For Waiver

Justification Statement

Rainberry Bay is a single family and multi-family community in Delray Beach with approximately 900 residents. The community was constructed in the late 70's and early 80's. The community is currently undergoing an asphalt overlay project involving over 9 miles of roadway, a typical project for asphalt roadways with a +/-30 year life. All roadways are complete except for the main central roadway that connects all parcels in a circular format called Rainberry Circle. Rainberry Circle has a 60 foot wide right of way in the south half and 50 foot right of way in the north. The 60 foot right of way has 36 feet of roadway pavement with 5 foot sidewalk on the outer side and 8 foot bike path on the inner side of the right of way. Rainberry Circle North has a 50 foot right of way with 24 feet of paved roadway and similar to Rainberry Circle South, 5 foot sidewalk on outside and 8 foot bike path on inner side of the circle. This configuration allows a 6 foot grass swale area (area between sidewalk and roadway) on the outer side and 4 foot swale on the inner side for the 60 foot right of way. For the 50 foot right of way, Rainberry Circle North, the outer swale is 7 feet wide and 5 feet wide on the inner side.

Approximately 16 trees were originally planted in the outer swale area for Rainberry Circle South. This existing swale width averages between 5 to 6 feet in width. Most of these trees are 20 inch to 32 inch diameter Black Olive trees.

These trees have high invasive root systems. Some of the outer edges of these trees exist with less than 12 inches of separation from the paved roadway.

The City of Delray Beach has a Land Development Regulation LDR 4.6.16(H)(6) that indicates "Street trees shall be located between the inside edge of sidewalk and edge of roadway pavement."

Currently our asphalt overlay project for Rainberry Circle is on hold because we feel these trees need to be removed. We feel these trees need to be removed for 3 primary reasons:

1. Recovery Area- The trees violate the AASHTO Green Book standards for required recovery area. This is the distance from edge of travel lane to any hazardous vehicle obstruction such as a tree. If vehicles ever lose control on the roadway, there must be a minimum safe area for the vehicle to be able to re-gain control and re-enter the roadway. For roadways less than 35 mph, this distance is 6 feet, 14 feet for speeds 35 to 45 mph. The Green Book is the Nationally accepted guidebook for highway safety construction.
2. Roadway Damage - The root systems for these trees have caused asphalt deterioration and uplift of asphalt pavement due to the close proximity of the trees to the roadway. Prior to the asphalt overlaying, we have to excavate the roadway in these specific damaged areas. The root material must be removed and the roadway reconstructed with new subgrade, road rock and asphalt.
3. Watermain and Other Utilities Conflict - For a significant portion of this area of swale, an 8 inch watermain exists, often directly under the trees. This is an obvious problem that leads to eventual watermain damage. When these trees are removed, careful attention will be given to the task to avoid damage to the watermain. Other utilities such as AT&T, FP&L, and cable TV exist within this swale area and can pose conflict problems with trees.

Proposed

Once the trees are removed, we will fully comply with the City's tree mitigation requirements. We understand that the new tree locations need to satisfy the City's intent to provide trees in proximity to the street. For this purpose, we propose to install the new trees within a 10 foot area just outside the right of way lines as we show in the landscape plans and proposed roadway sections on sheet 22 of the engineering plans. We have surveyed the existing utilities within these areas with the help of City of Delray Beach Utilities and Sunshine 811 and will take safeguards if needed to protect nearby utilities. Any trees that are planted within 10 feet of a utility will be planted with a root barrier system compliant with the City of Delray Beach requirements. These areas are within common property of the Rainberry Bay community.

The specific areas of mitigation planting will take place on the outer side (south side) of Rainberry Circle South from Station 2+00 to Station 12+85 and the inner circle side of Rainberry Circle North from Station 25+50 to Station 32+70.

Findings LDR 2.4.11(B)

a. Shall not adversely affect the neighboring area;

The proposed condition will enhance the neighboring area in terms of landscaping and safety.

b. Shall not significantly diminish the provision of public facilities;

The proposed tree installations will take great care in protecting the existing utilities and sidewalks in the area. Trees will not be planted within 5 feet of sidewalks. The root barrier system will protect any utility that is within ten feet of

the trees. Also, the removal of trees from the watermain conflicts will greatly improve the quality of the watermain network. Also, the removal of these trees will free up conflicts with the other utilities such as AT&T, FP&L and Cable TV.

c. Shall not create an unsafe situation;

The new tree locations will provide greater safety for motor vehicles by eliminating the roadside recovery hazards and pavement deformations.

d. Does not result in the grant of a special privilege in that same waiver would be granted unless similar circumstances on other property for another applicant or owner

No, Rainberry Bay is not gaining any unfair advantage over other owners or communities by the granting of this waiver. This waiver results in the best interest of the health, welfare, and safety of the general public.