

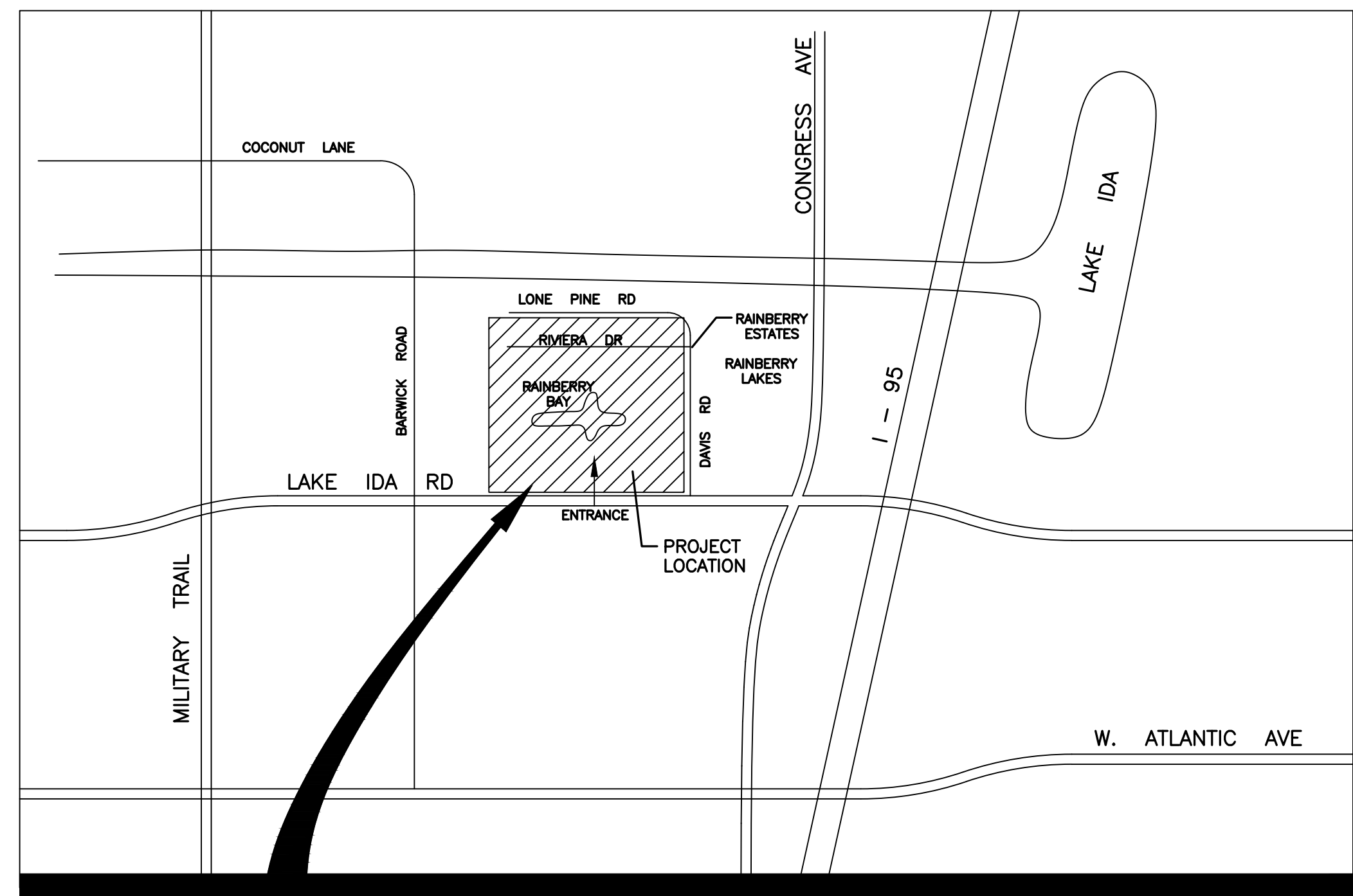
# RAINBERRY BAY DELRAY BEACH, FLORIDA

## RAINBERRY BAY-TREE REPLACEMENT IMPROVEMENT PLANS

### INDEX OF SHEETS

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

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LOCATION SKETCH  
N.T.S.

### RAINBERRY CIRCLE

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SEGMENT 5	11
SEGMENT 6	13
SEGMENT 7	15
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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.

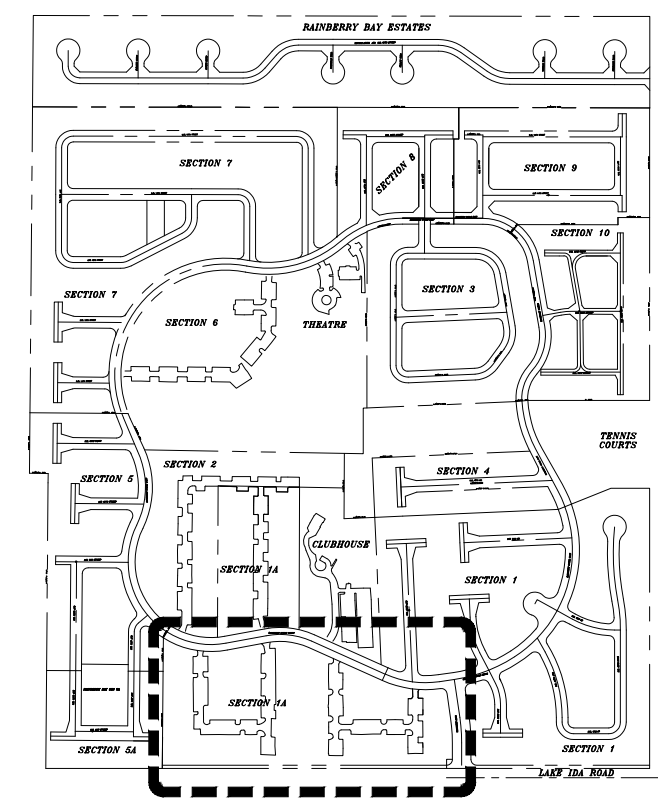
**SAWCUT NOTES:**

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

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

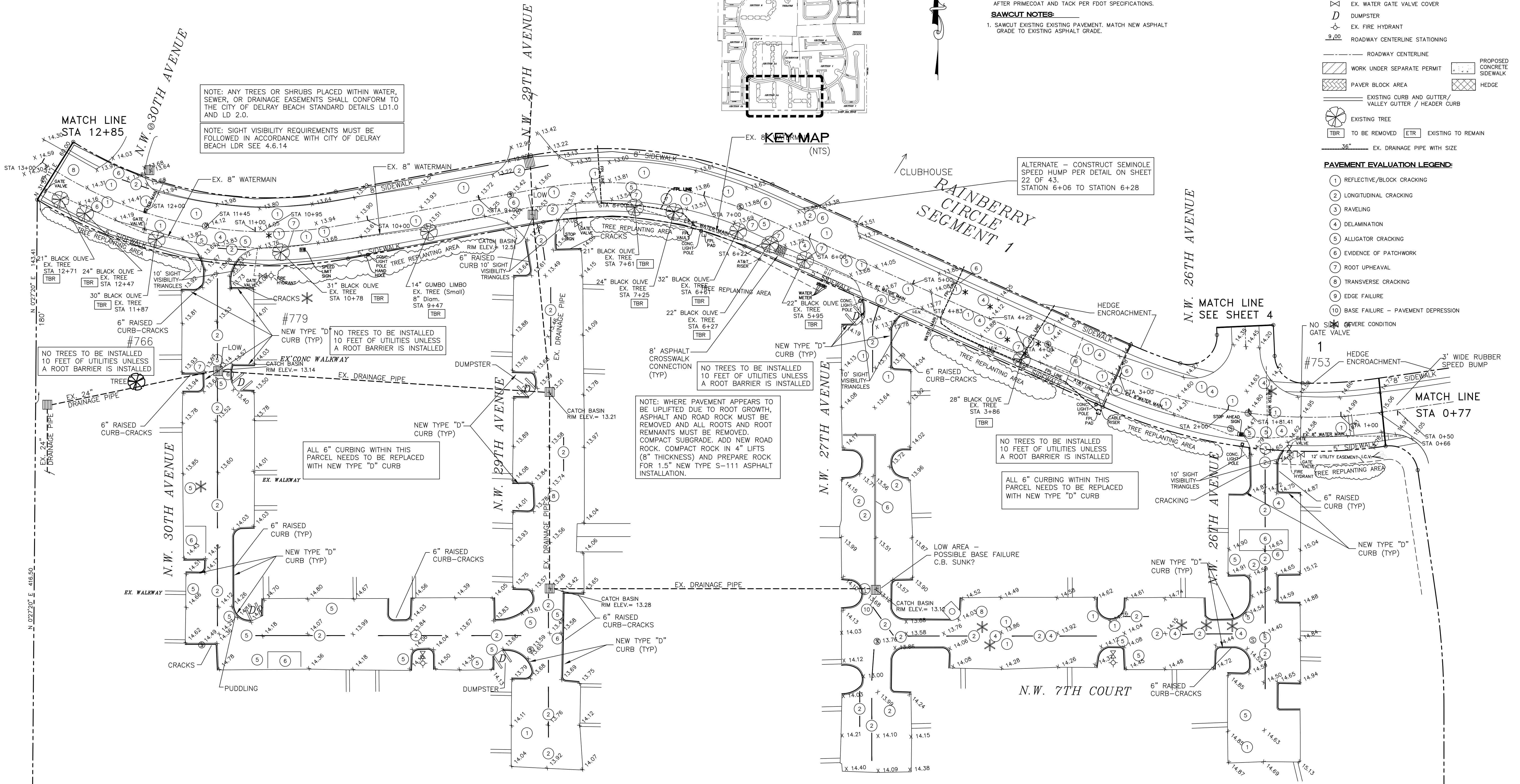
**PAVEMENT EVALUATION LEGEND:**

- 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.

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	

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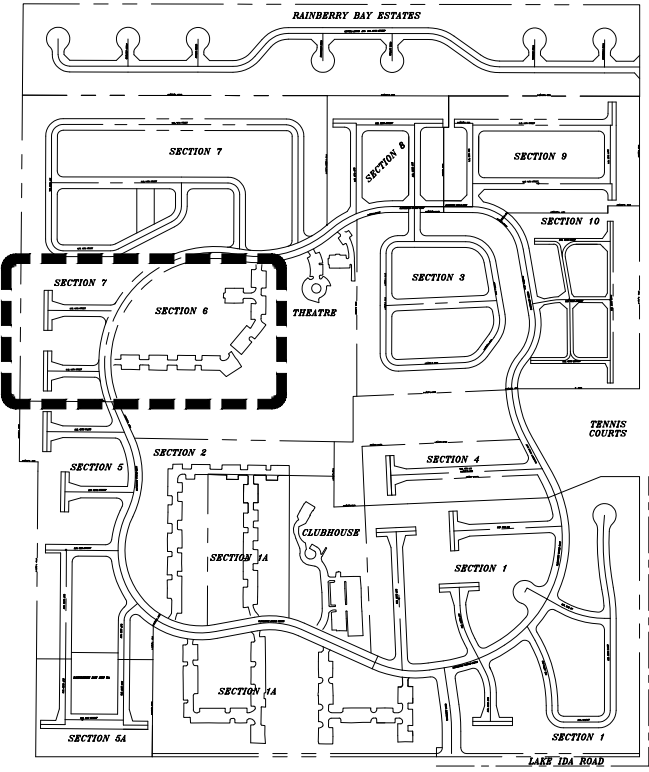
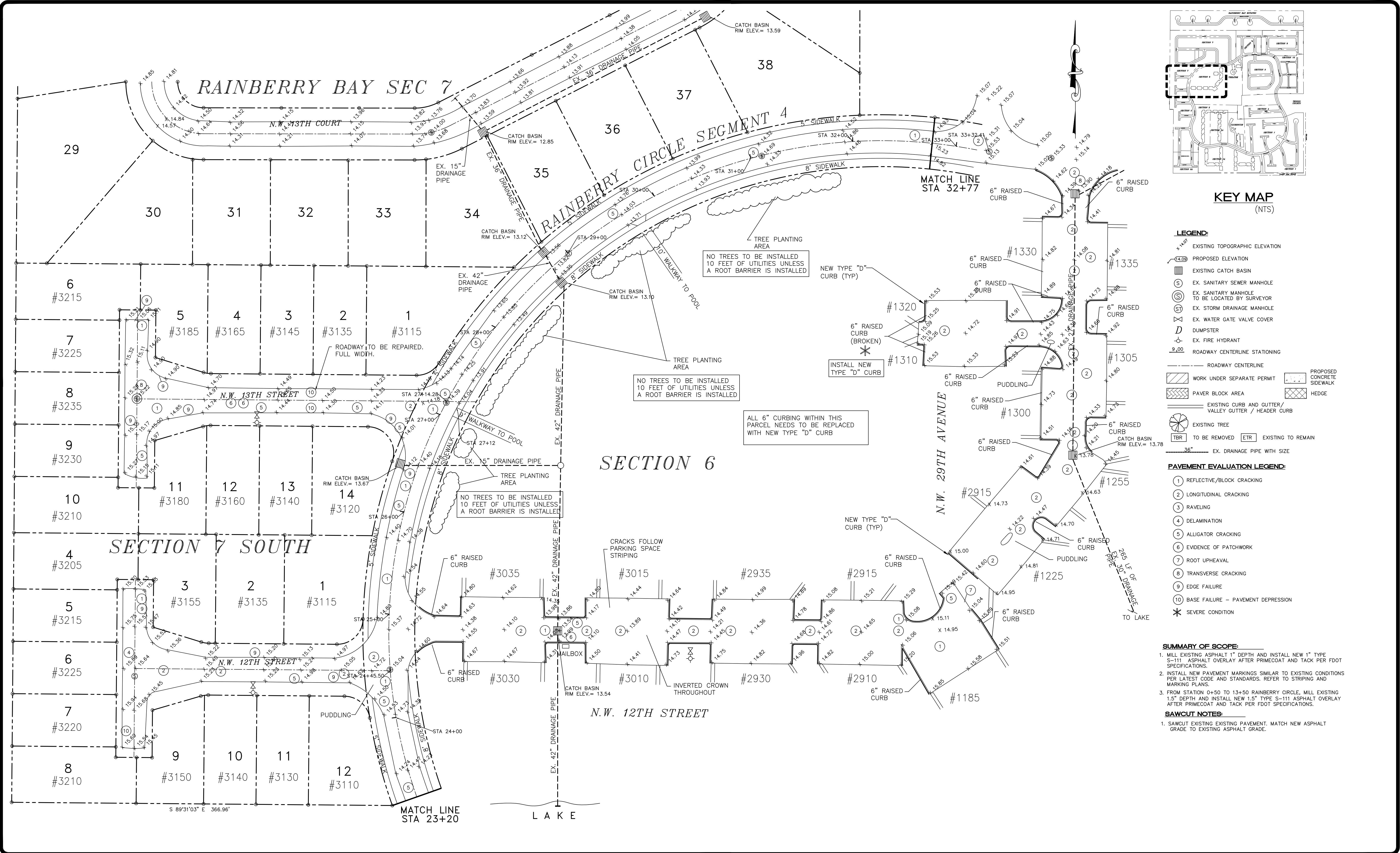
**RAINBERRY BAY SECTION No. 1A DELRAY BEACH, FLORIDA**

**TREE REPLACEMENT ROADWAY IMPROVEMENTS FOR ASPHALT OVERLAY PLAN**

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

SCALE: 1" = 40'  
 PROJECT NUMBER: 18-2470A  
 SHEET: 5A / 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

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

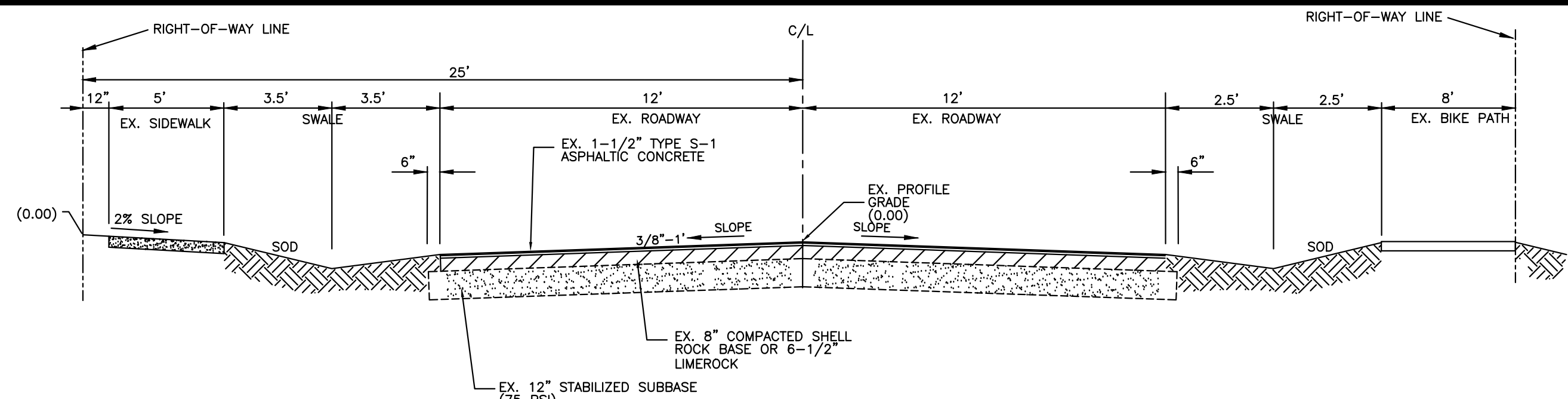
**TREE REPLACEMENT**  
**ROADWAY IMPROVEMENTS**  
**FOR ASPHALT OVERLAY PLAN**

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

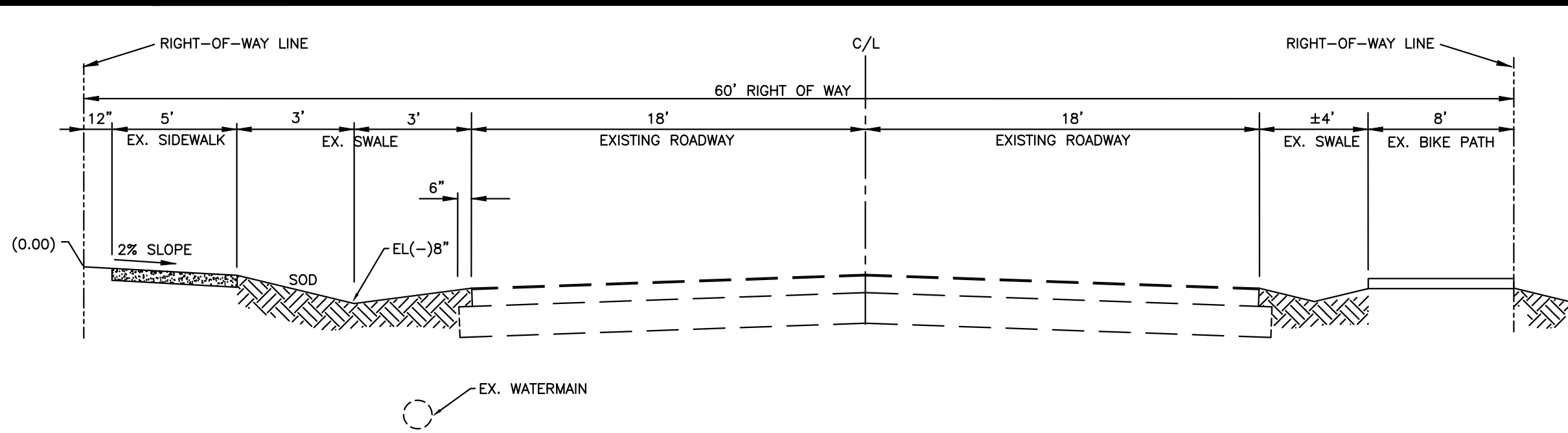
**SCALE**  
1" = 40'

**PROJECT NUMBER**  
18-2470A

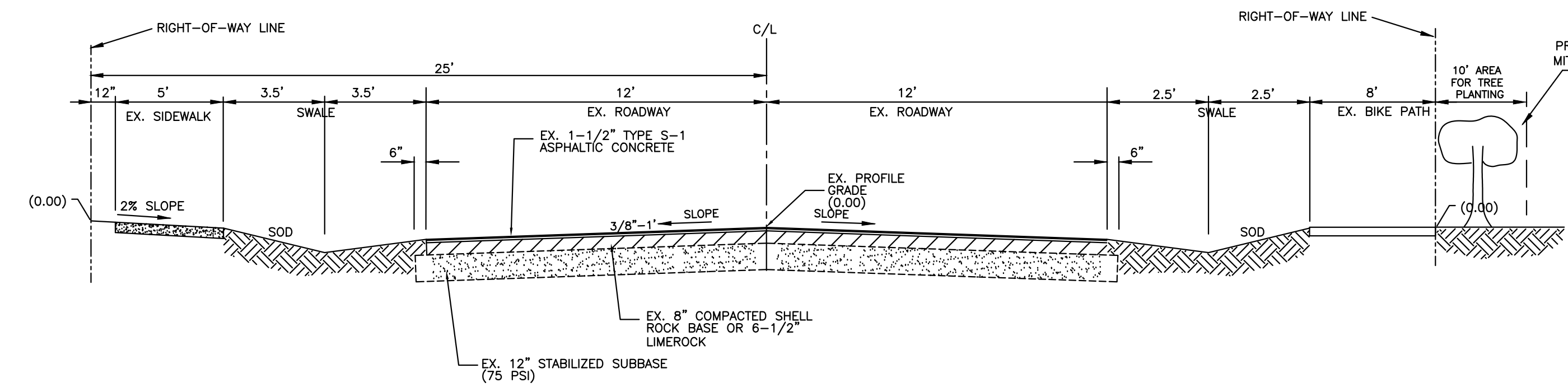
**10A**  
**43**



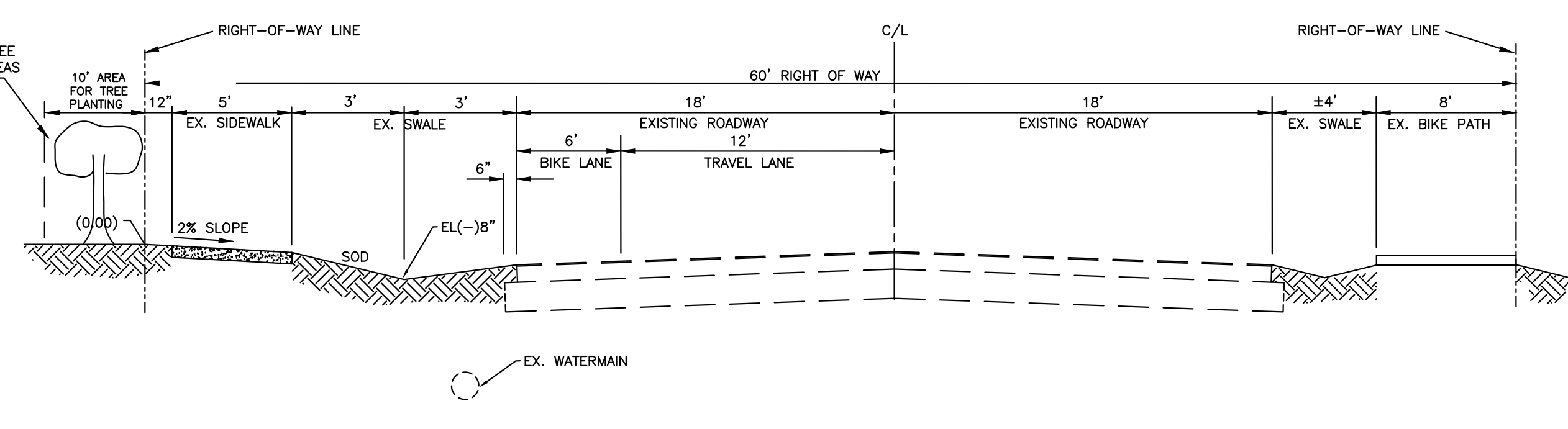
① EXISTING TYPICAL ROAD SECTION FOR RAINBERRY CIRCLE (50' R/W)



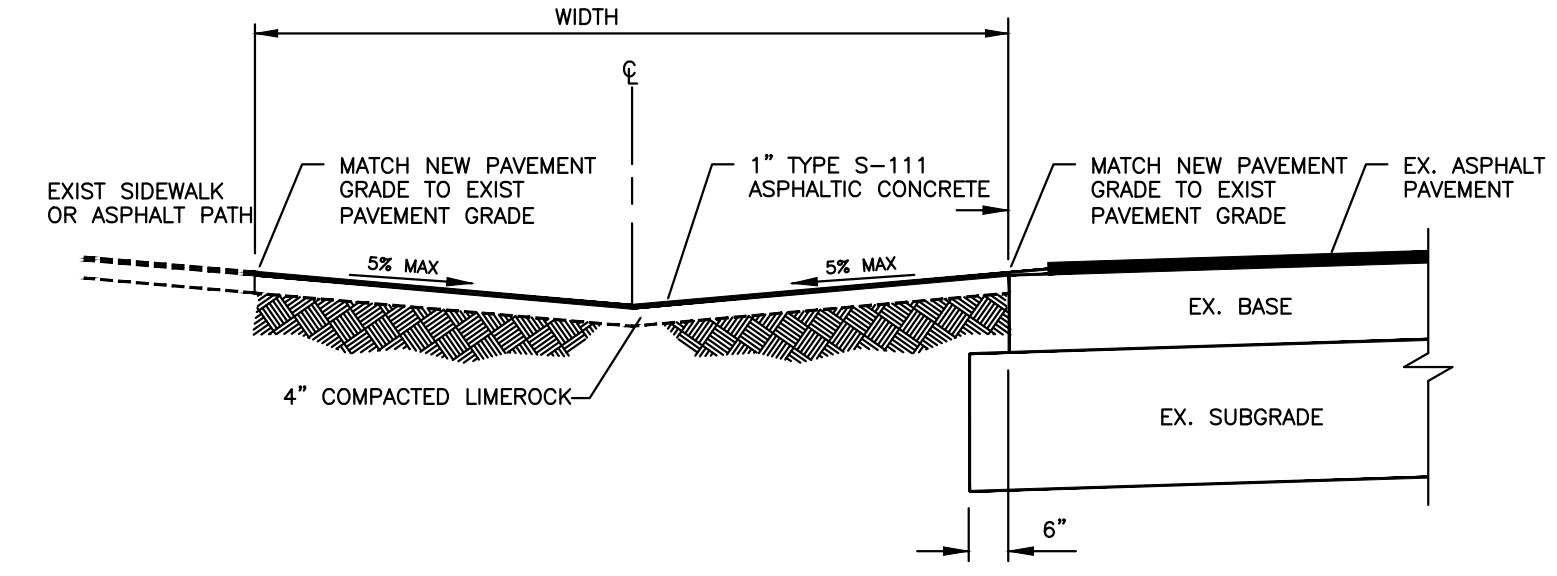
② EXISTING TYPICAL ROAD SECTION FOR RAINBERRY CIRCLE (60' R/W)



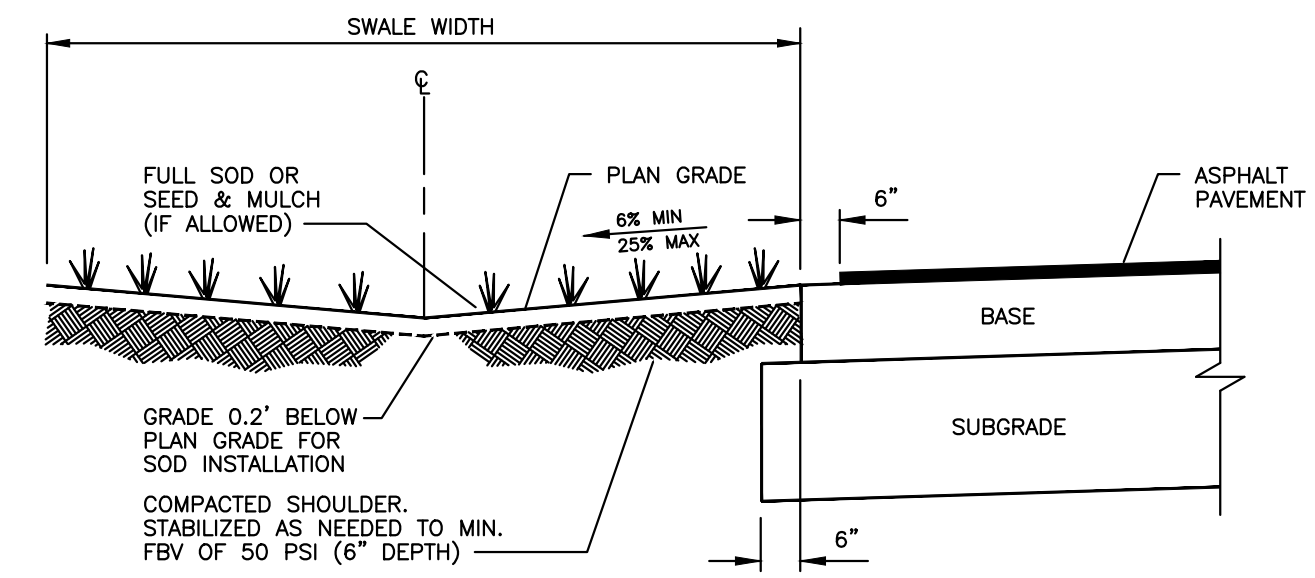
③ PROPOSED OPTIONAL ROAD SECTION FOR RAINBERRY CIRCLE (50' R/W)



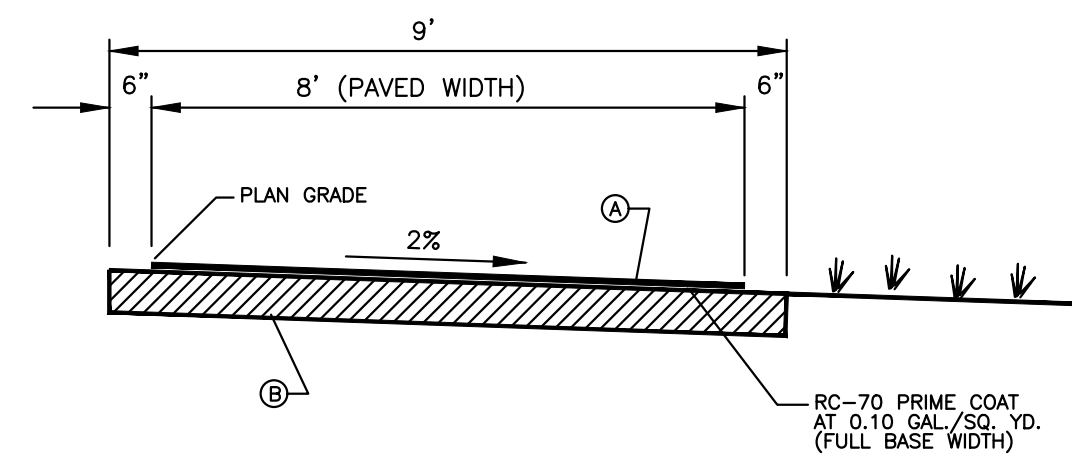
④ PROPOSED OPTIONAL ROAD SECTION FOR RAINBERRY CIRCLE (60' R/W) Station 2+00 to Station 12+85



CROSSWALK CONNECTION DETAIL

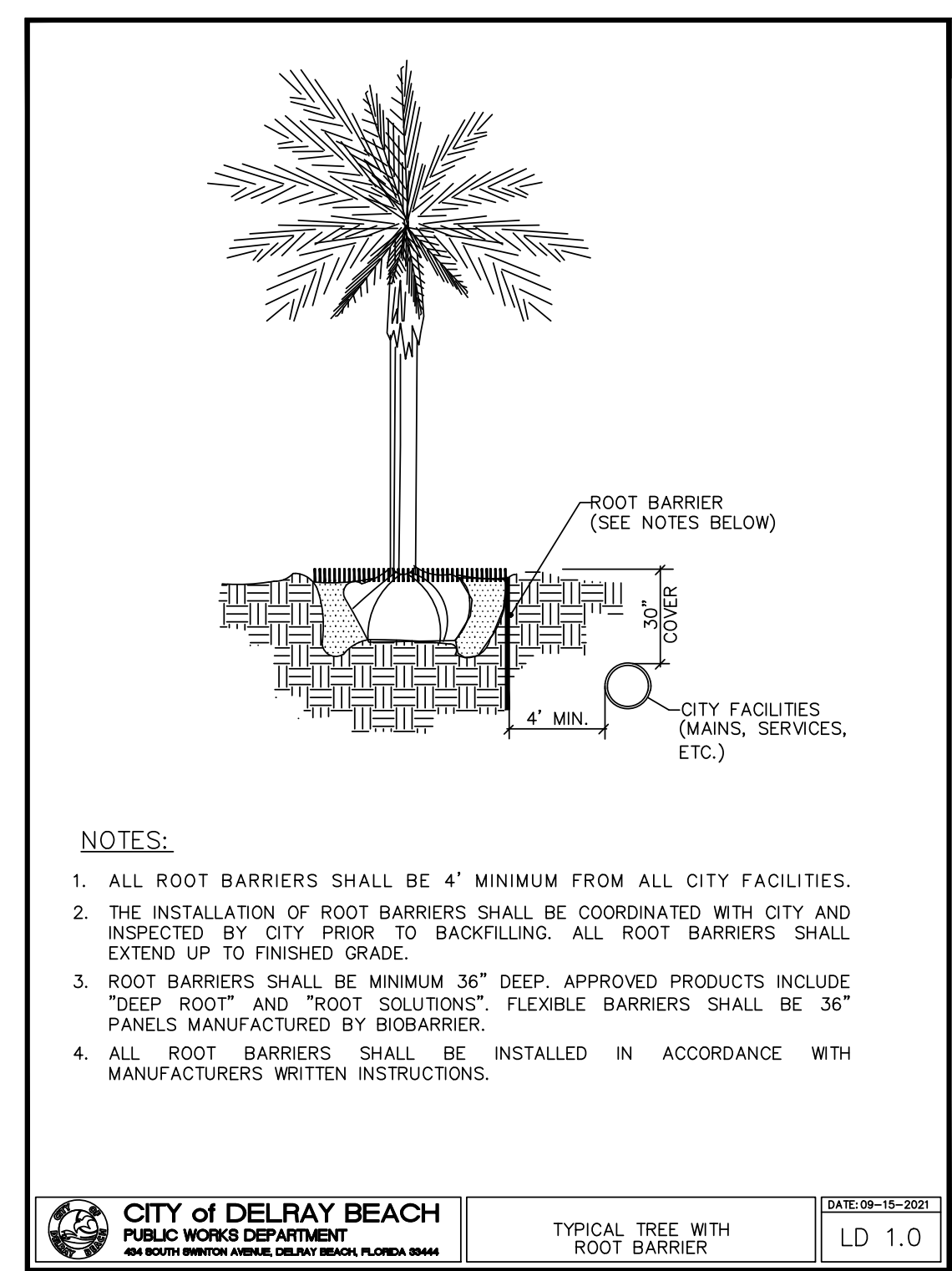


SWALE/SHOULDER AND PAVEMENT EDGE DETAIL



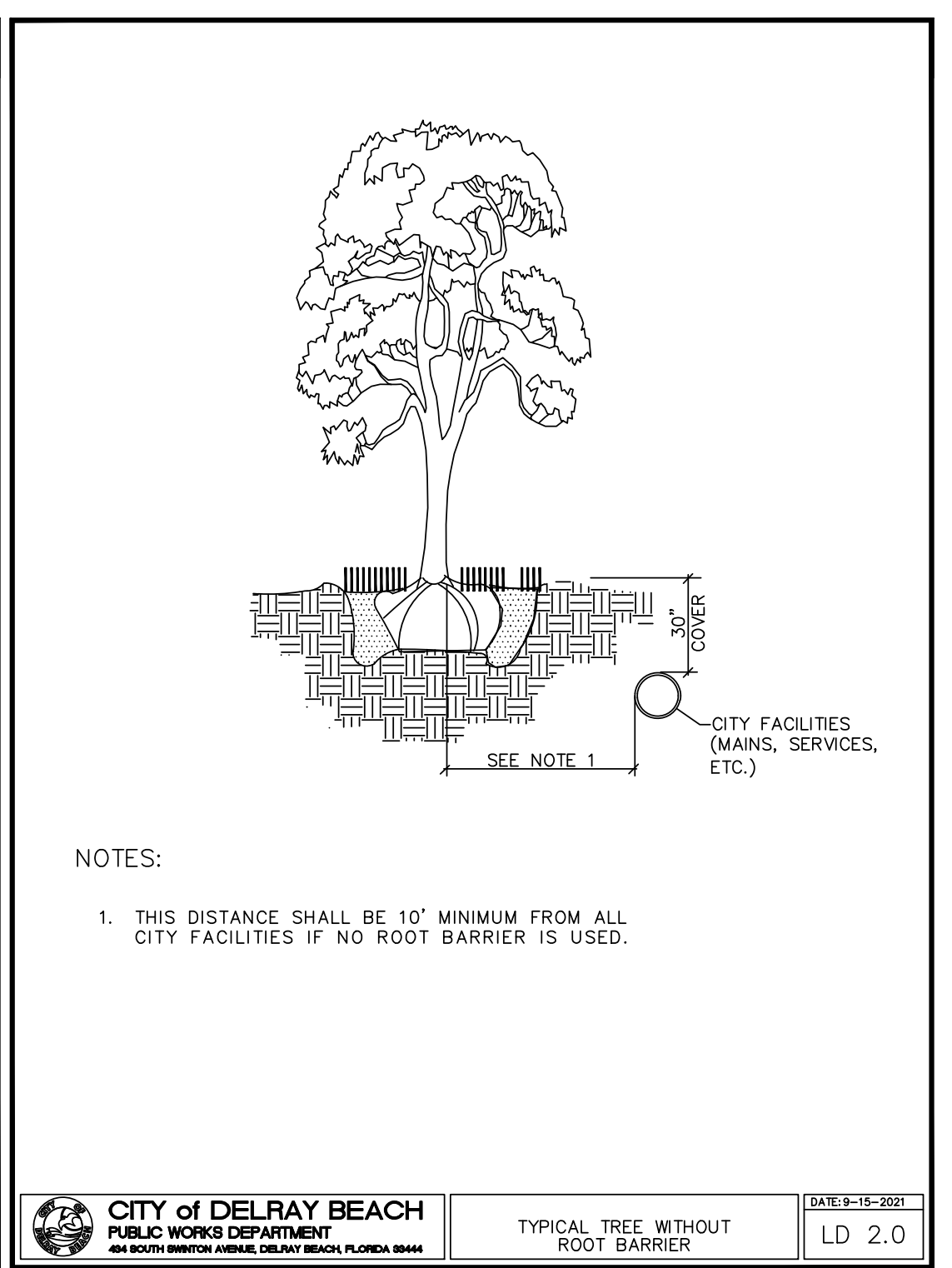
ASPHALT BIKE PATH/WALKWAY

Ⓐ 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.

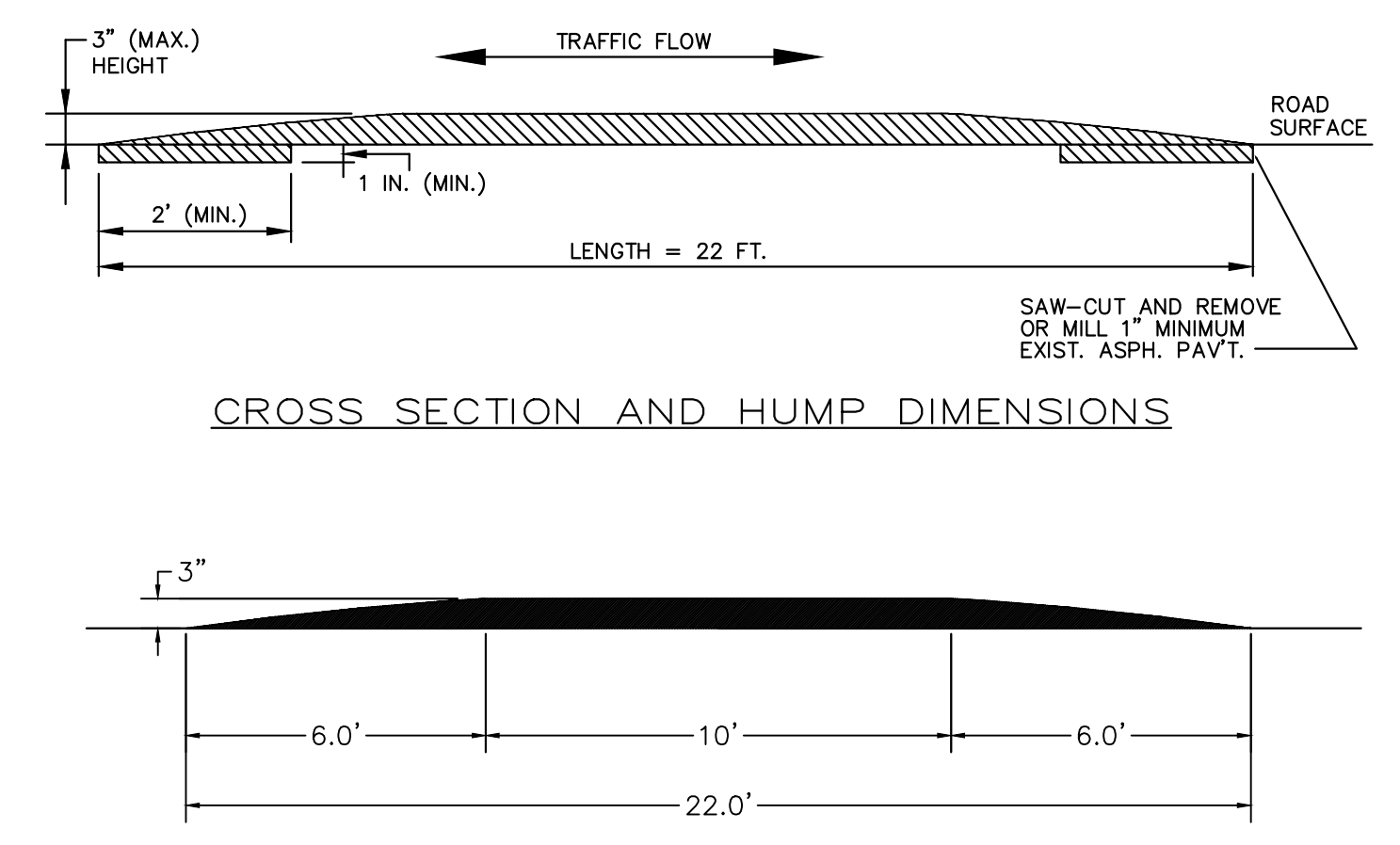
CITY OF DELRAY BEACH PUBLIC WORKS DEPARTMENT  
 400 SOUTH BEACH AVENUE, DELRAY BEACH, FLORIDA 33441  
 DATE: 09-15-2021  
 LD 1.0



- 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	

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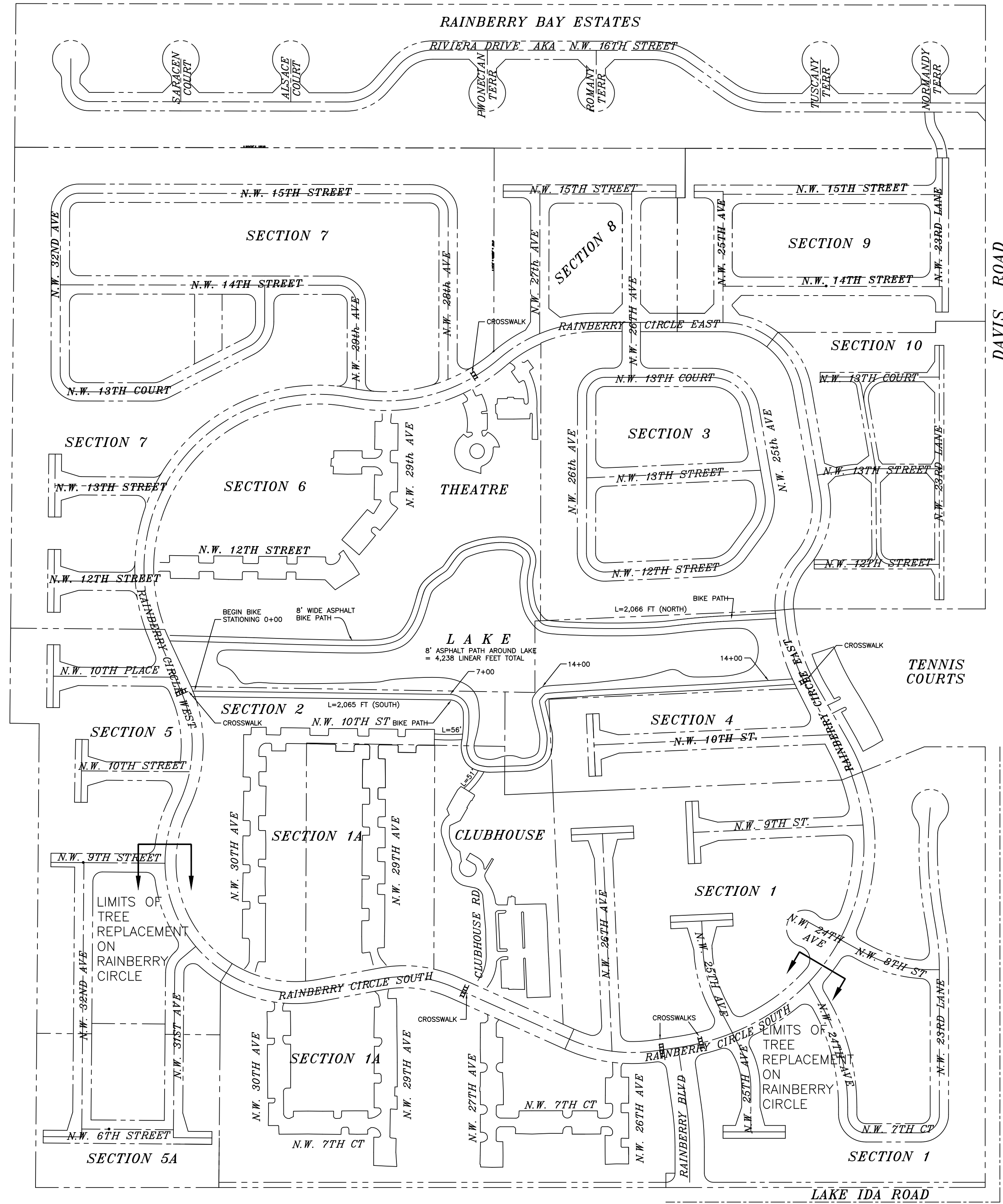
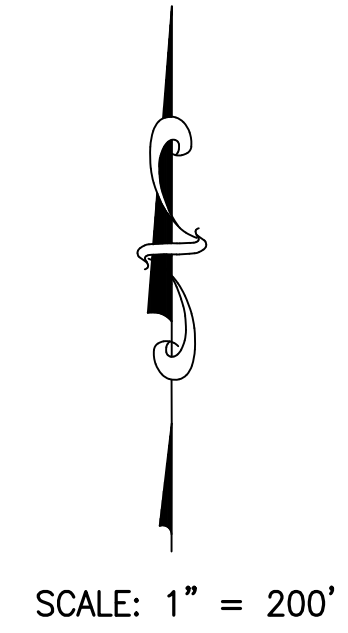
RAINBERRY BAY  
 DELRAY BEACH, FLORIDA

PAVING DETAILS

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

SCALE	PROJECT NUMBER
NTS	18-2470A

22  
 43



- 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.

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

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 CIVIL ENGINEERING SERVICES.  
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**RAINBERRY BAY**  
 DELRAY BEACH, FLORIDA

**OVERALL PLAN**

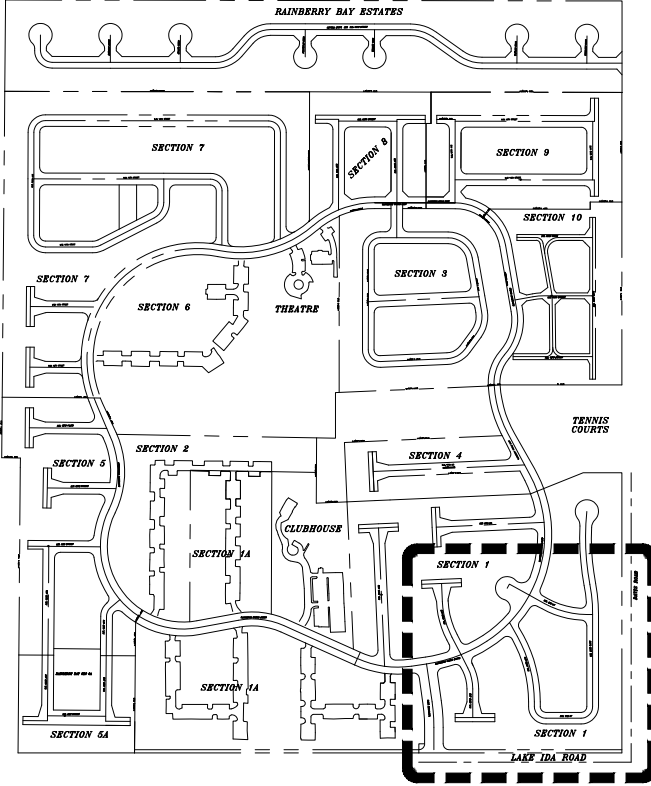
**APPROVED:**  
 \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 JOHN J. HALEY, P.E.  
 REGISTERED ENGINEER NO. 40023  
 STATE OF FLORIDA

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



KEY MAP (NTS)

- 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
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- EXISTING CURB AND GUTTER/ VALLEY GUTTER / HEADER CURB
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- TBR TO BE REMOVED
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- 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
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- 9 EDGE FAILURE
- 10 BASE FAILURE - PAVEMENT DEPRESSION
- \* SEVERE CONDITION

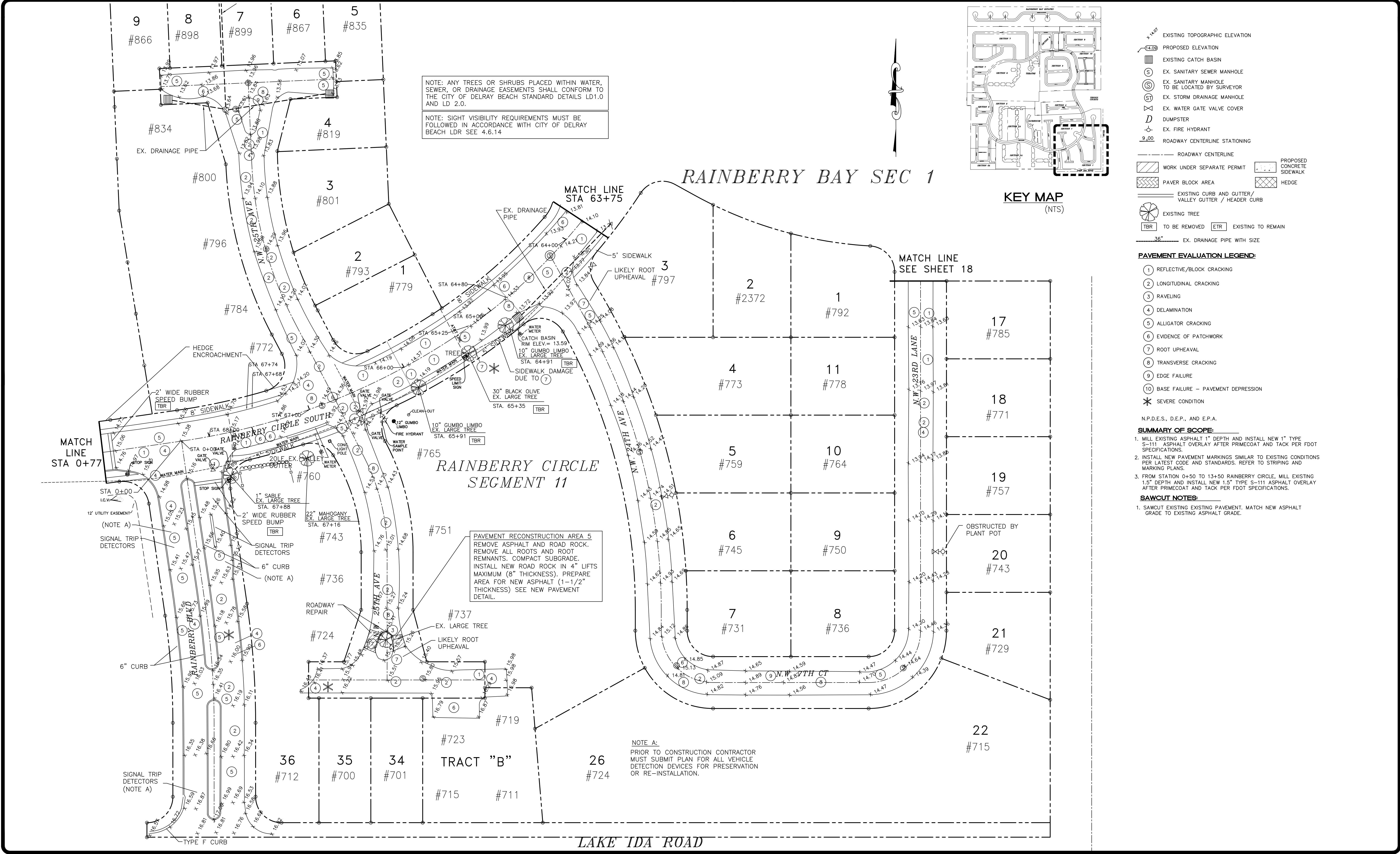
N.P.D.E.S., D.E.P., AND E.P.A.

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	

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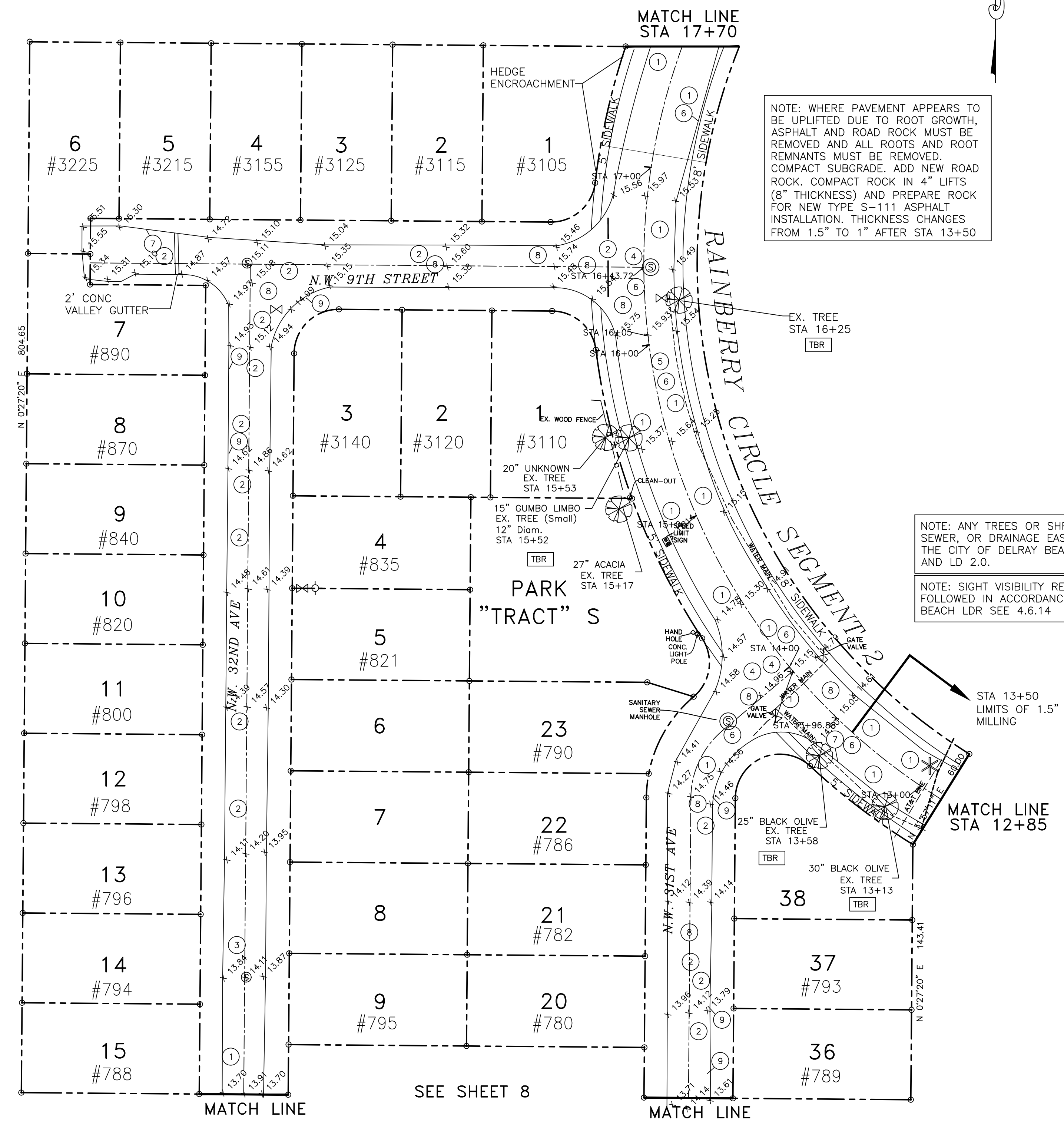
**RAINBERRY BAY SECTION No. 1 SOUTH DELRAY BEACH, FLORIDA**

**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

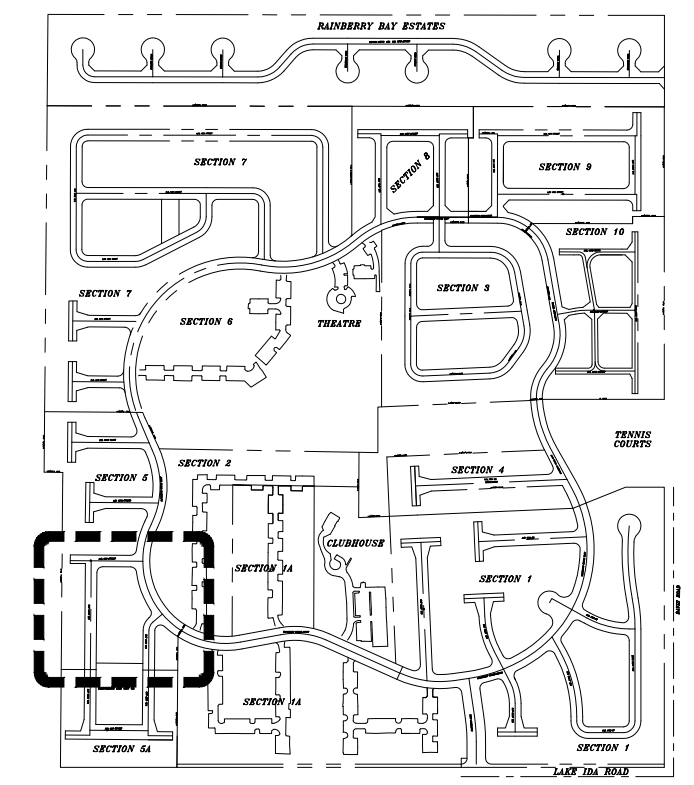
3A  
 43



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
- 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.

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

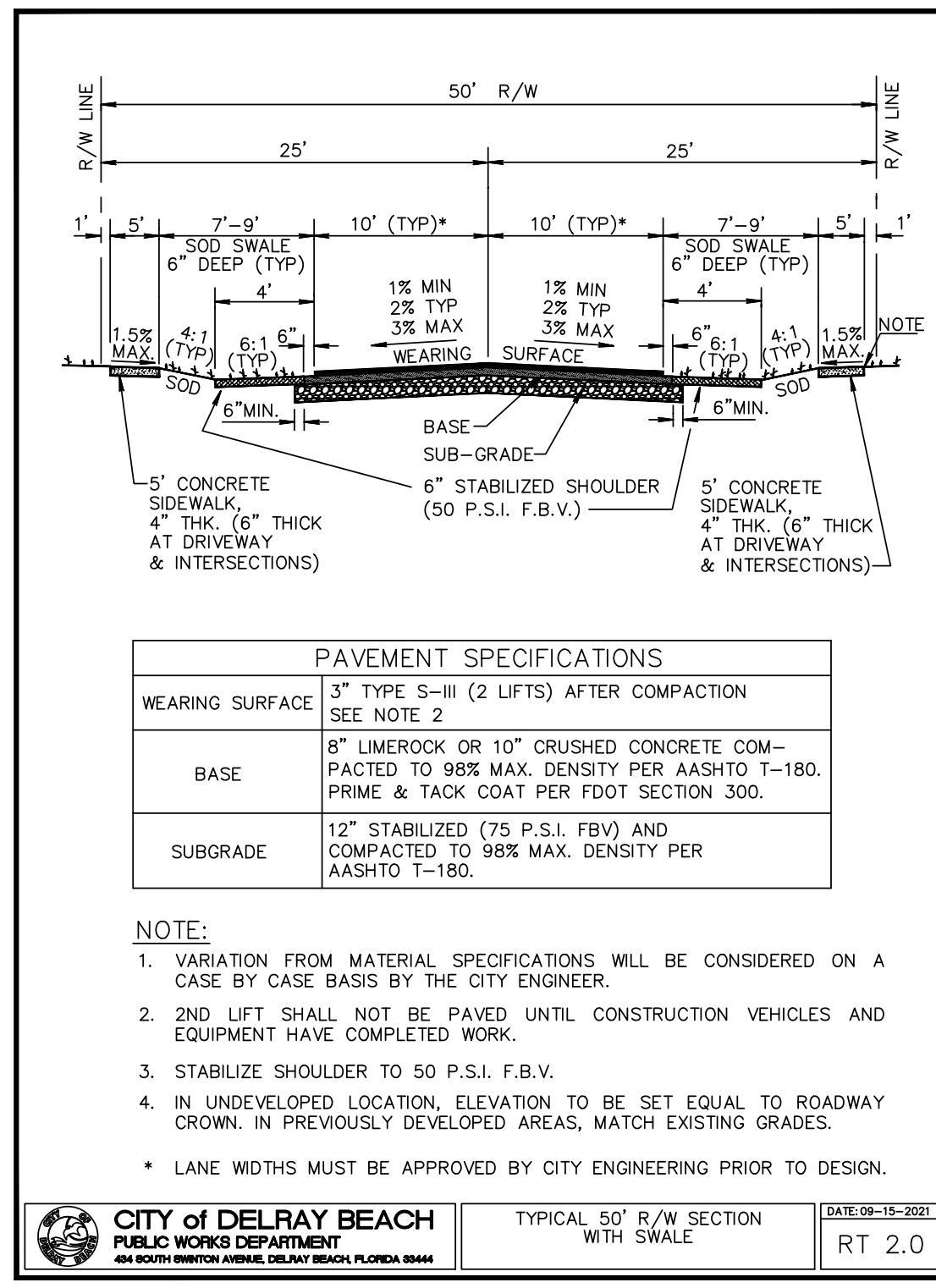
**RAINBERRY BAY**  
 SECTION No. 5 SOUTH  
 DELRAY BEACH, FLORIDA

**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

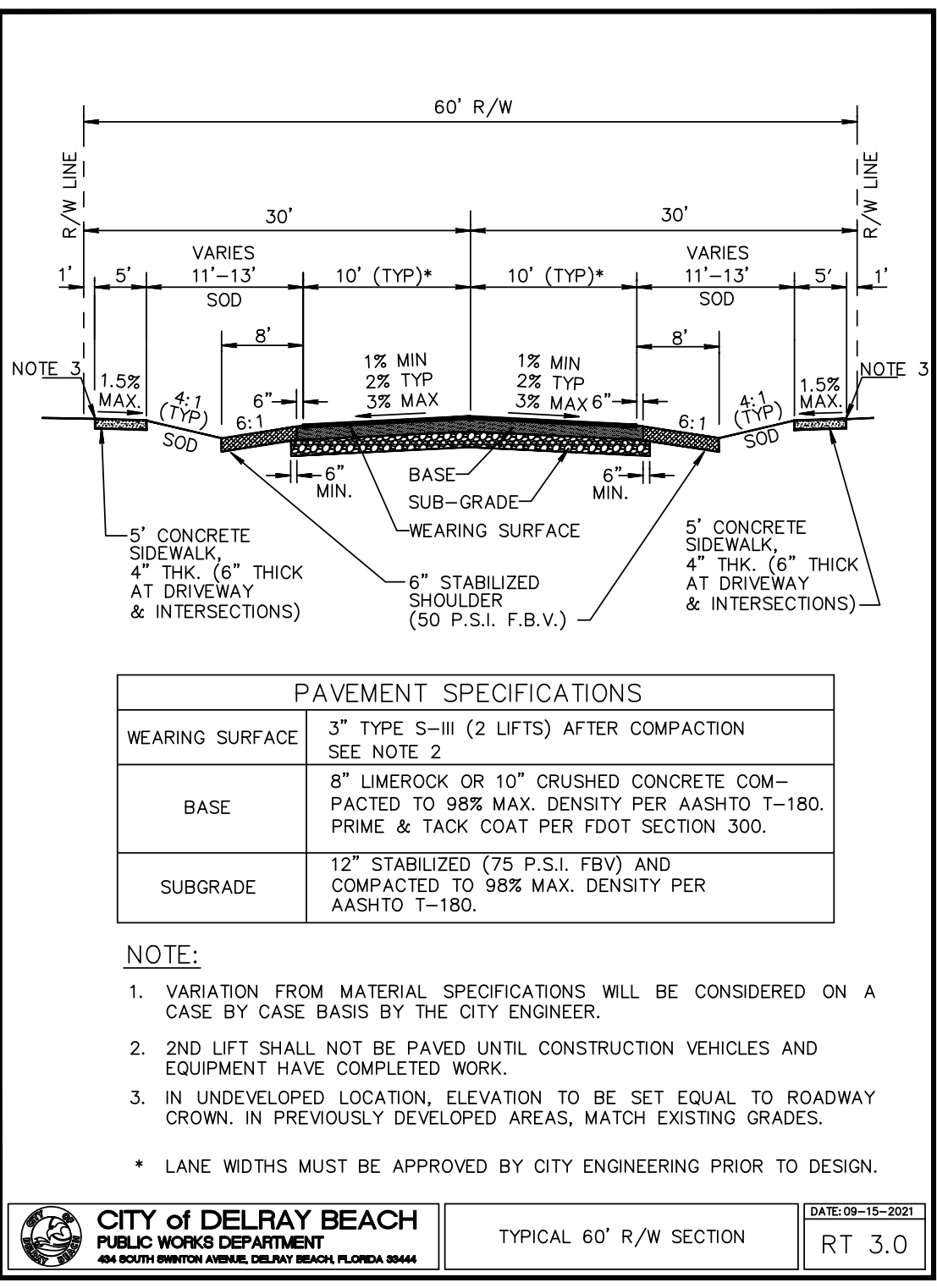


PAVEMENT SPECIFICATIONS	
WEARING SURFACE	3" TYPE S-III (2 LIFTS) AFTER COMPACTION SEE NOTE 2
BASE	8" LIMEROCK OR 10" CRUSHED CONCRETE COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180. PRIME & TACK COAT PER FDOT SECTION 300.
SUBGRADE	12" STABILIZED (75 P.S.I. FBV) AND COMPACTED TO 98% MAX. DENSITY PER AASHTO 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 BRINTON AVENUE, DELRAY BEACH, FLORIDA 33444

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

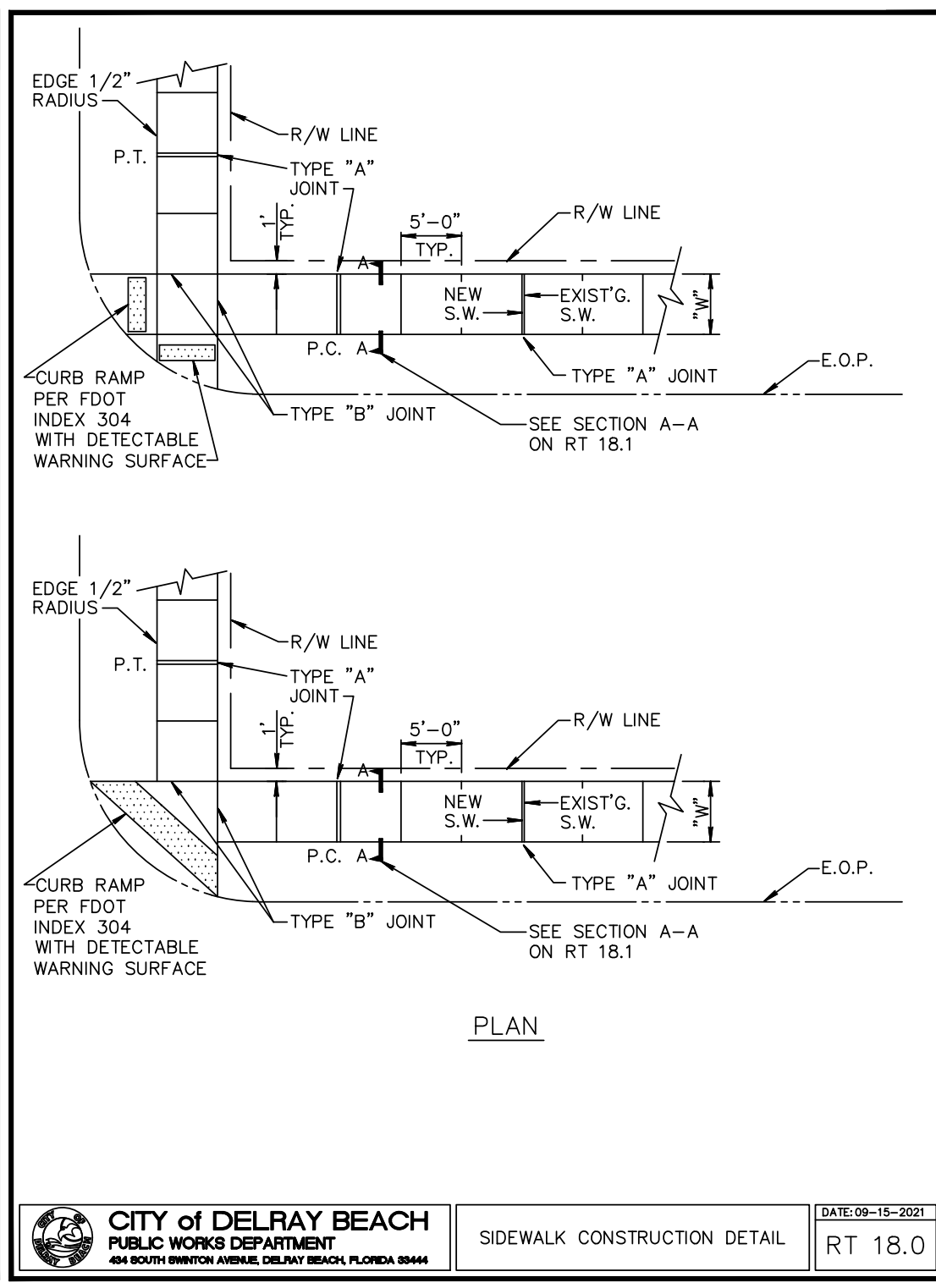


PAVEMENT SPECIFICATIONS	
WEARING SURFACE	3" TYPE S-III (2 LIFTS) AFTER COMPACTION SEE NOTE 2
BASE	8" LIMEROCK OR 10" CRUSHED CONCRETE COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180. PRIME & TACK COAT PER FDOT SECTION 300.
SUBGRADE	12" STABILIZED (75 P.S.I. FBV) AND COMPACTED TO 98% MAX. DENSITY PER AASHTO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

- NOTE:**
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  - 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 BRINTON AVENUE, DELRAY BEACH, FLORIDA 33444

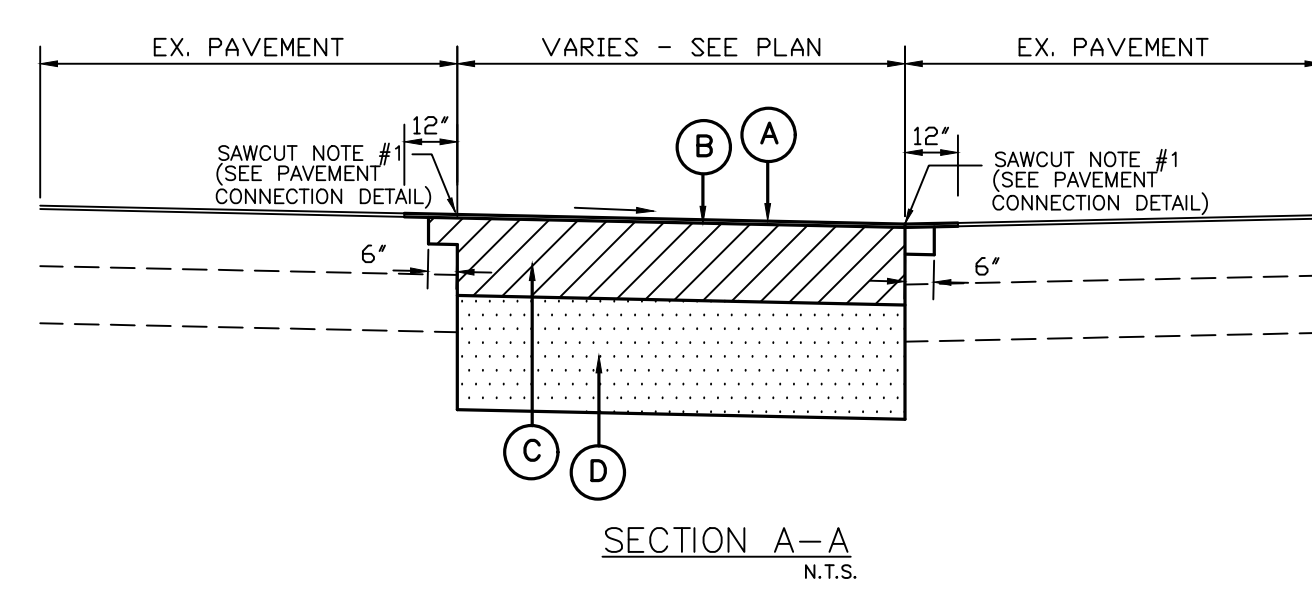
TYPICAL 60' R/W SECTION  
DATE: 09-15-2021  
RT 3.0



PLAN

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

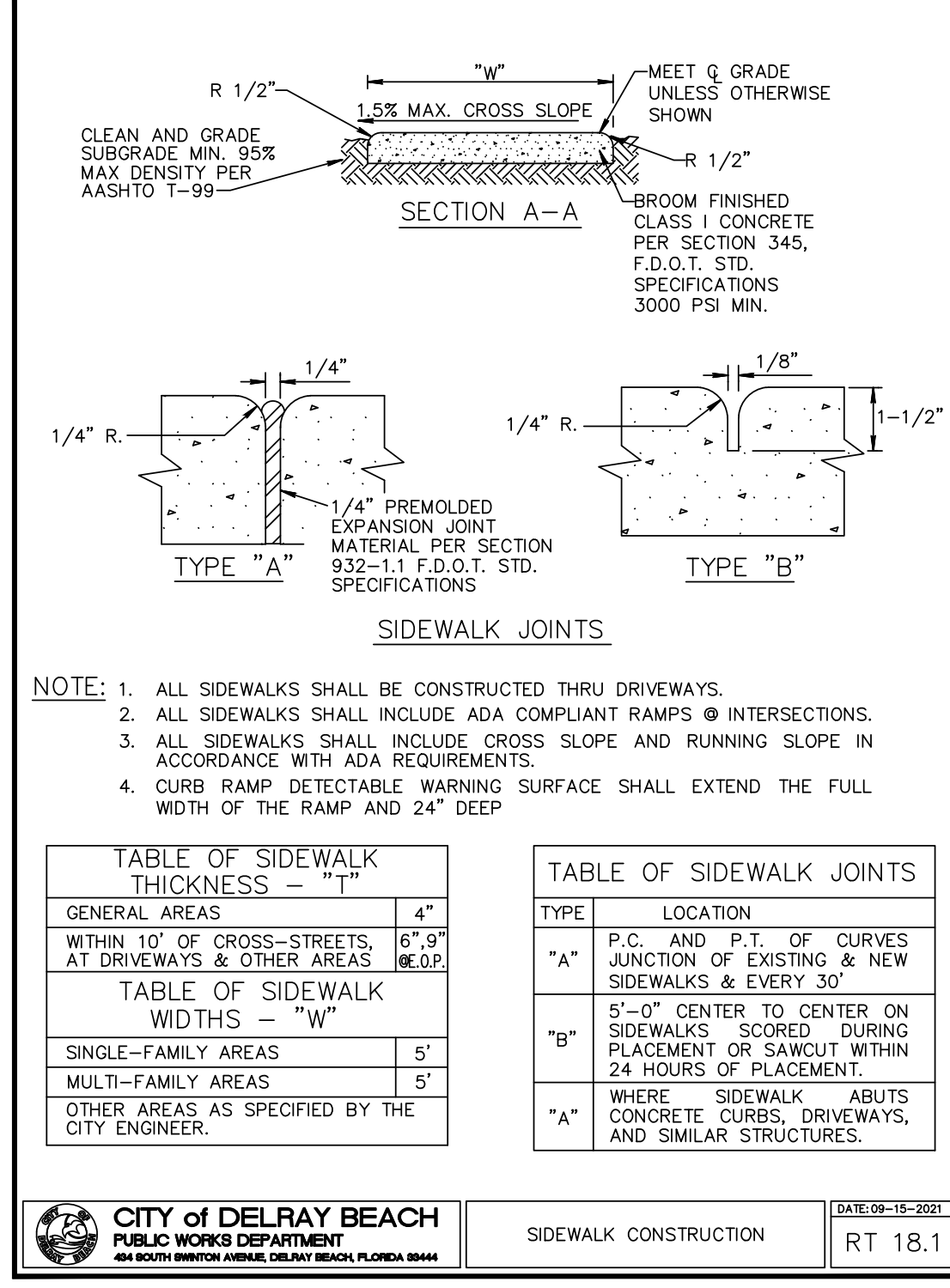
SIDEWALK CONSTRUCTION DETAIL  
DATE: 09-15-2021  
RT 18.0



- 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.



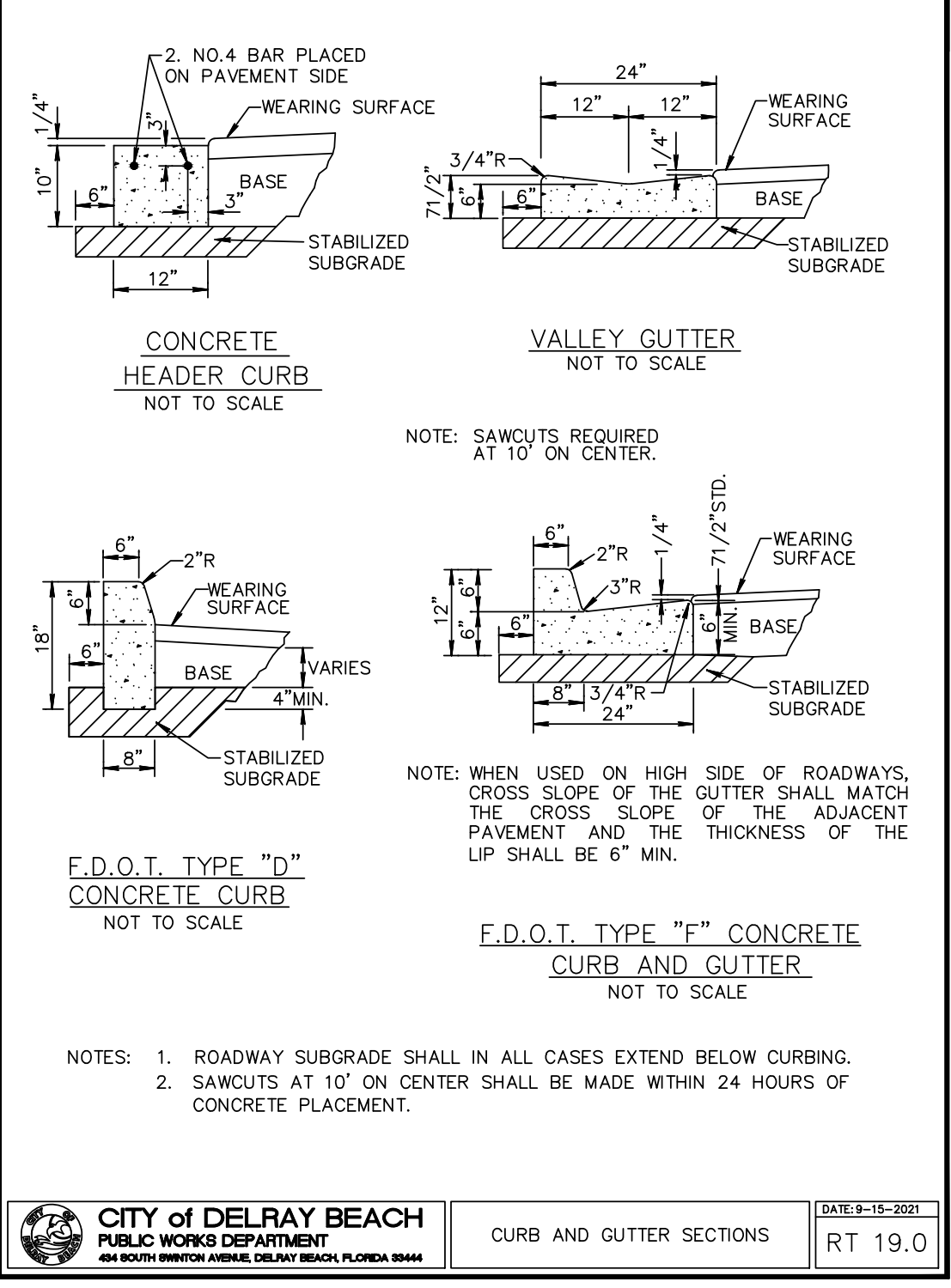
SIDEWALK JOINTS

- 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" @ P.C.	"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 BRINTON 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

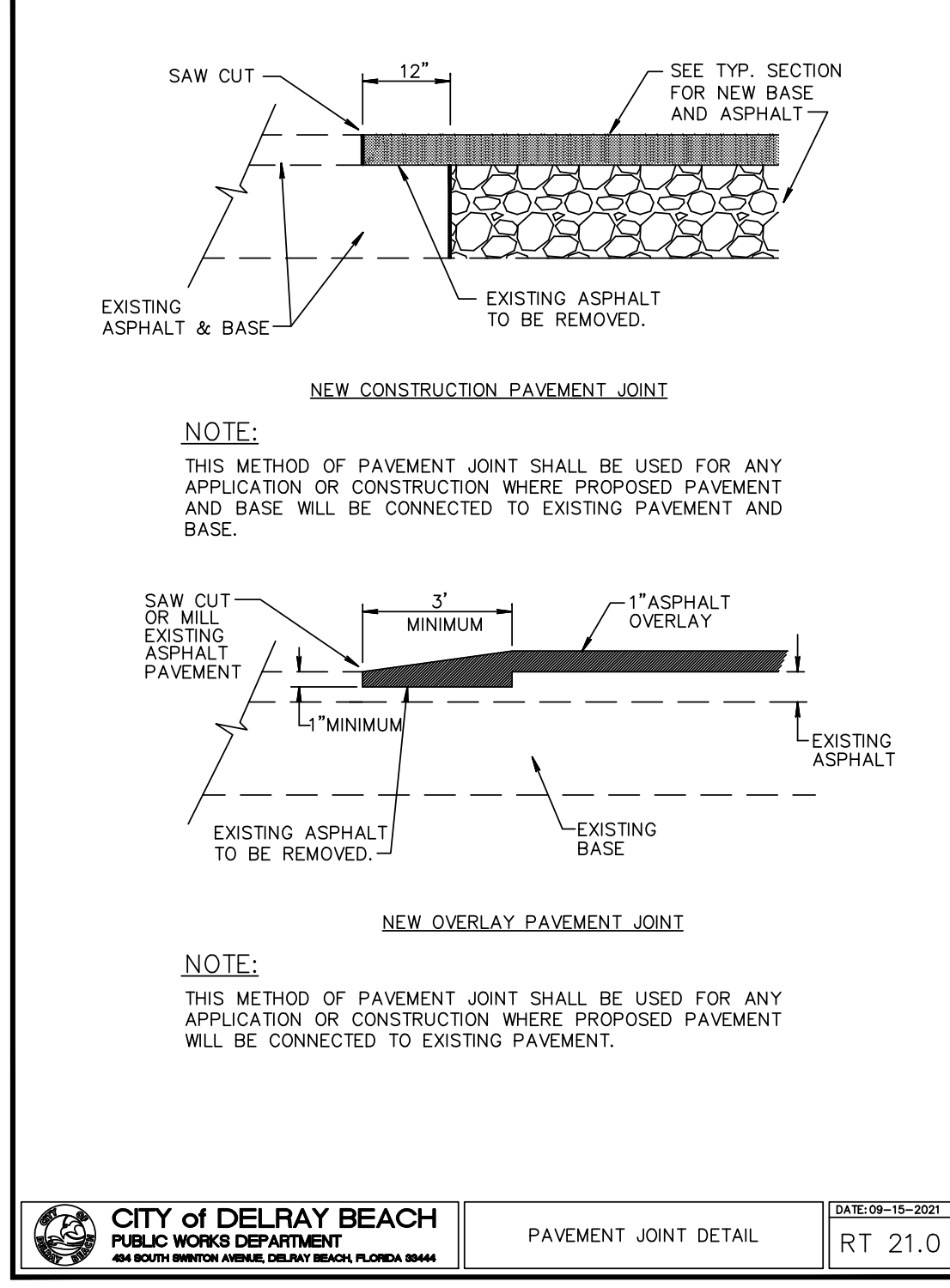
F.D.O.T. TYPE "D" CONCRETE CURB NOT TO SCALE

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 BRINTON AVENUE, DELRAY BEACH, FLORIDA 33444

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



NEW CONSTRUCTION PAVEMENT JOINT

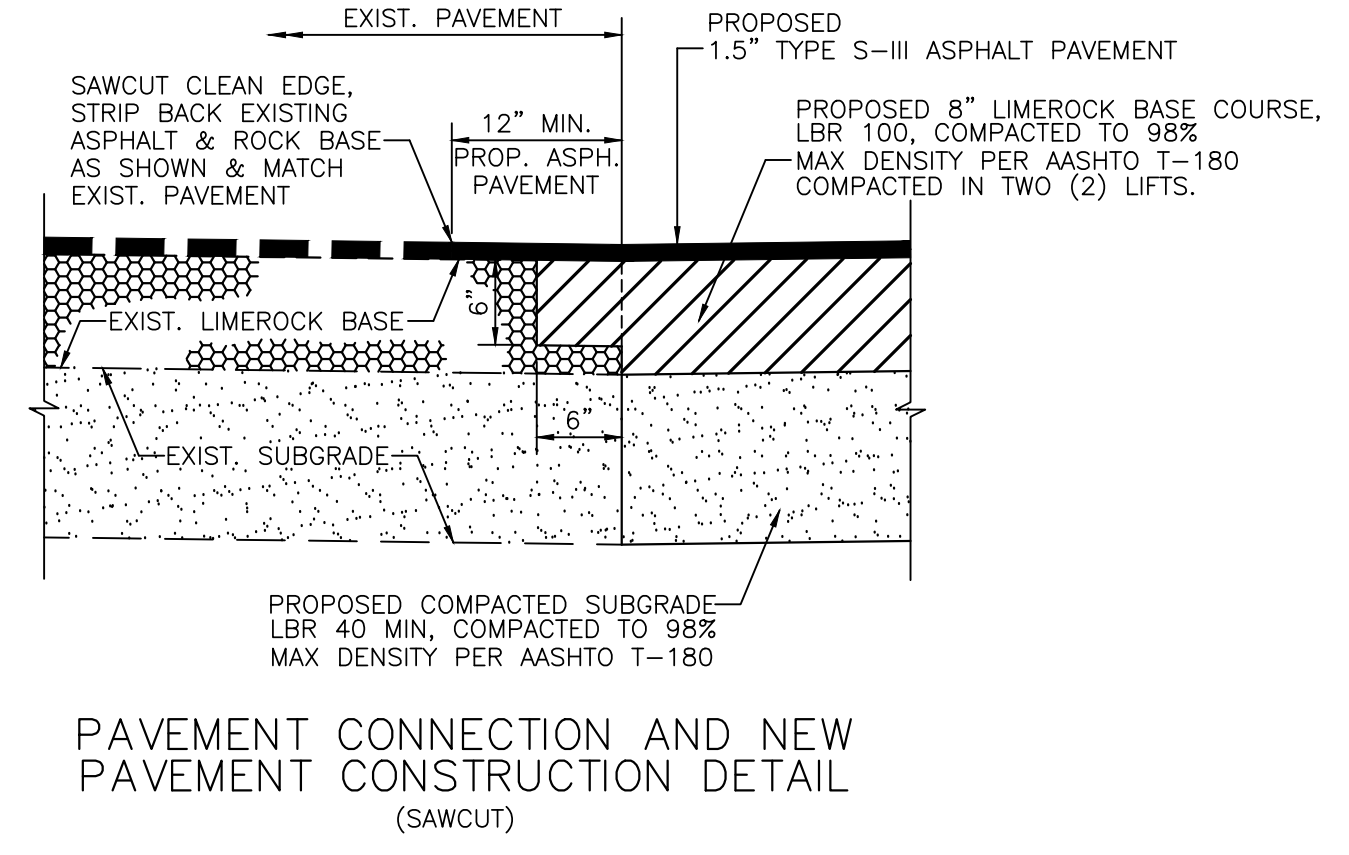
- NOTE:**
- THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.

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 BRINTON 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