

CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD BRG
C1(P)	38.73'	25.00'	88°46'23"	35.31'	N44°05'00"W
C1(M)	39.21'	25.00'	89°51'08"	35.31'	N44°05'00"W
C2(P)	33.26'	25.00'	76°13'33"	30.84'	N38°34'28"E
C2(M)	33.23'	25.00'	76°09'32"	30.84'	N38°34'28"E
C3(P)	144.07'	80.00'	103°10'47"	125.28'	N24°53'51"E
C3(M)	143.91'	80.00'	103°04'09"	125.28'	N24°53'51"E

7.5 FT WIDE DRAINAGE AND UTILITY EASEMENT ALONG THE SIDE AND REAR OF ALL LOTS PLAT BOOK 31, PAGE 7

LEGEND

- INDICATES TRAVEL LANE DIRECTION.
- INSTALL PAVEMENT MARKING PER FDOT INDEX.
- - INDICATES GUY ANCHOR
- P - P - P OVER HEAD LINES
- ⊙ - INDICATES FIRE HYDRANT
- ⊙ - INDICATES POWER OR UTILITY POLE
- ⑤ TOTAL NUMBER OF PARKING SPACES PER TIER
- ⊙ FOOT-CANDLE
- ⊙ R-1 STOP SIGN WITH 24" WIDE WHITE THERMOPLASTIC STOP BAR.
- PROPOSED DRAINAGE FLOW DIRECTION AT FINISH GRADE AS NOTED.
- EL=27.46 EXISTING / NATURAL SPOT ELEVATION. 27.40 FINISH GRADE ELEVATION

TRAFFIC ENGINEERING NOTES:

FOR THIS SITE ALL THE ADA ACCESSIBLE SPACES ARE EXISTING. REPLACE ANY FADED OR MISSING SIGNS, RESTRIPE THE SPACES AS NEEDED TO BE IN COMPLIANCE. ALSO ALL OTHER EXISTING PARKING SPACES AND STOP SIGNS ON SITE. EXISTING SITE IS NOT PART OF THIS PROJECT REVIEW OR REQUIREMENTS

ALL POSTS AND HARDWARE FOR ANY SIGNS INSTALLED ON THE SITE WILL ADHERE TO THE REQUIREMENTS SPELLED OUT IN BREVARD COUNTY EXHIBIT 26

SITE DATA

- Owner of Record: NOSLIW 1 LLC
Mailing Address: 1225 S Orlando Ave, Cocoa Beach, FL 32931
Email: kurtwilson1115@gmail.com Tel 321-961-5638
Agent, Contact for owner, construction manager: Joe Haddow,
Email address: hcim@cfl.rr.com Tel. (321) 631-7063
Mailing Address: PO Box 560870 Rockledge, FL 32956
- Engineer of Record: / Applicant: Frank Plata, P.E., CGC / Plata Engineering, Inc.
Mailing address: PO Box 361003, Melbourne, FL 32936-1003
Tel: (321) 259-7528 / Fax: (321) 256-0305 Email: Manager@PlataEngineering.com
- General Statement: Proposed work is for the addition of a secondary driveway connection to an existing industrial building at 2760 Business Center Blvd, previously approved site plan SP85-03-015 Clouse Industrial building, for secondary / emergency connection for safer truck access. Existing 31,160 sf warehouse and parking remains as existing, driveway on Business Center Blvd, with existing parking and drainage retention system as approved. The proposed secondary driveway will be connected to Corporate Court. Proposed work area is for 7,200 sf pavement and retention to serve existing 13,700 sf stabilized open storage yard. This driveway, project area of alteration = 0.98 acre. * Existing south 1.90 acre warehouse site to remain undisturbed, not a part of this site plan. It remains as existing, approved separate drainage system and all site related items.
- Tax Parcel: 26-37-30-25-*4 Brevard County
Lying in Section 30, Township 26 S, Range 37 E, Tax Account No. 2609896
- Site Address: Existing Building: 2760 Business Center Blvd, Melbourne, FL 32940
All same as existing.
- Gross Site Acreage: Overall 5.51 acres, including 1.90 acre developed area.
Proposed project development area: 0.98 acre.
- Site Zoning: IU (Brevard County): Light Industrial FLU: IND Industrial.
Required Setbacks: Front: 40' Rear: 25' Sides: 15'
Approved existing Phase: 40' 25' 15'
Existing for Overall parcel: 41' 192.22' W 215.34', E. 67.70'
Proposed: N/A No proposed structures with this site plan application.
- Building: Existing 31,160 sf no changes to building or use.
- Utilities Statement: THERE IS NO PROPOSED UTILITY WORK. All existing services, developed site. The City of Melbourne provides the potable water, Existing On-site septic system permit.
- Lot Coverage: Maximum allowed: 50%
Building area: Existing building: 12.98% No proposed additions.
- Building Height Data: Existing Bldg: 21.00' Proposed: No changes.
- Parking Tabulations: All existing. Proposed work is only for additional driveway for safer truck traffic, to avoid T turns. All work on new area, existing development to remain undisturbed. Existing warehouse operation to remain, no construction within existing parking areas.
- Impervious Calculations: Total parcel: 5.51 acres.

	Pavement	Building	Yard pavement	Total SF
Existing Phase 1	25,600	31,160	0.00	56,760
This Phase 2	7,200	0.00	13,700	20,900
Total:	31,800	31,160	13,700	77,660

Impervious: 77,660 sf = 33.58% (for overall parcel)
Green area: 153,643 sf = 66.42%
- Total impervious including this Phase 2 application: 77,660 sf. = 33.58% of parcel. Remaining future development of 3.41 acres, estimated final overall 50% impervious.
- Drainage Statement: Existing master retention serves this parcel for overall attenuation. Required onsite drainage is for 1.50 inch of onsite impervious area. Existing Phase 1 remains with separate onsite stand-alone retention as approved. This work is for new 20,900 sf impervious, with 2,613 cf retention volume required. Proposed retention area capacity, elevation 26.20 ft to elevation 27.00 ft = 9,284 cf = 50% impervious of the 3.41 acres retention area watershed, including future phase.
- Site lighting: No exterior site lighting proposed. Any future lighting shall be submitted to the Planning & Development Department for review, and shall comply with all Brevard County Codes and procedures in place at time of submittal of such lighting proposal.
- Site shall comply with Brevard County Performance Standards as defined in Sections 62-2251 through 62-2272. All signs shall comply per Section 62-3316(H)(4) Brevard County Code.
- Solid Waste pick-up is by EXISTING ON-SITE DUMPSTER, under service provider no changes. This second driveway access will facilitate trash collection truck access without turning.
- Surveyor of Record: Kane Surveying Inc (321) 676-0427 Survey date: 04/19/23
Mailing Address: 505 Distribution Dr, Melbourne, FL 32904 Email: terricarison@bellsouth.net
Site development located in Flood Zone "X", Flood Insurance Rate Map 12009 C0510 H, date 01/29/21
- Landscape Statement: All work is within existing, cleared open yard area, there are no existing trees, no trees removed. Future phase building and parking will provide required landscape, proposed work is for retention area and adjacent to drainage and utility easements, and the green areas of this work will be redeveloped at future phases.
- Contractor is to be responsible to protect and/or replace all survey monumentation within the project limits as existing by a "Licensed Surveyor" in the State of Florida.
- Regardless of private or public dedication, there will be no utility connections, meter boxes or valve boxes in existing or proposed sidewalk areas.
- The uses proposed as part of this site plan do not require a submittal of a Risk Management plan pursuant to U.S. Environmental Protection Agency (EPA) regulations and shall not exceed EPA's RMP threshold quantities of listed substances.

DATE: JANUARY 14, 2024
PLOT: 2321910
PROJECT: 2321910

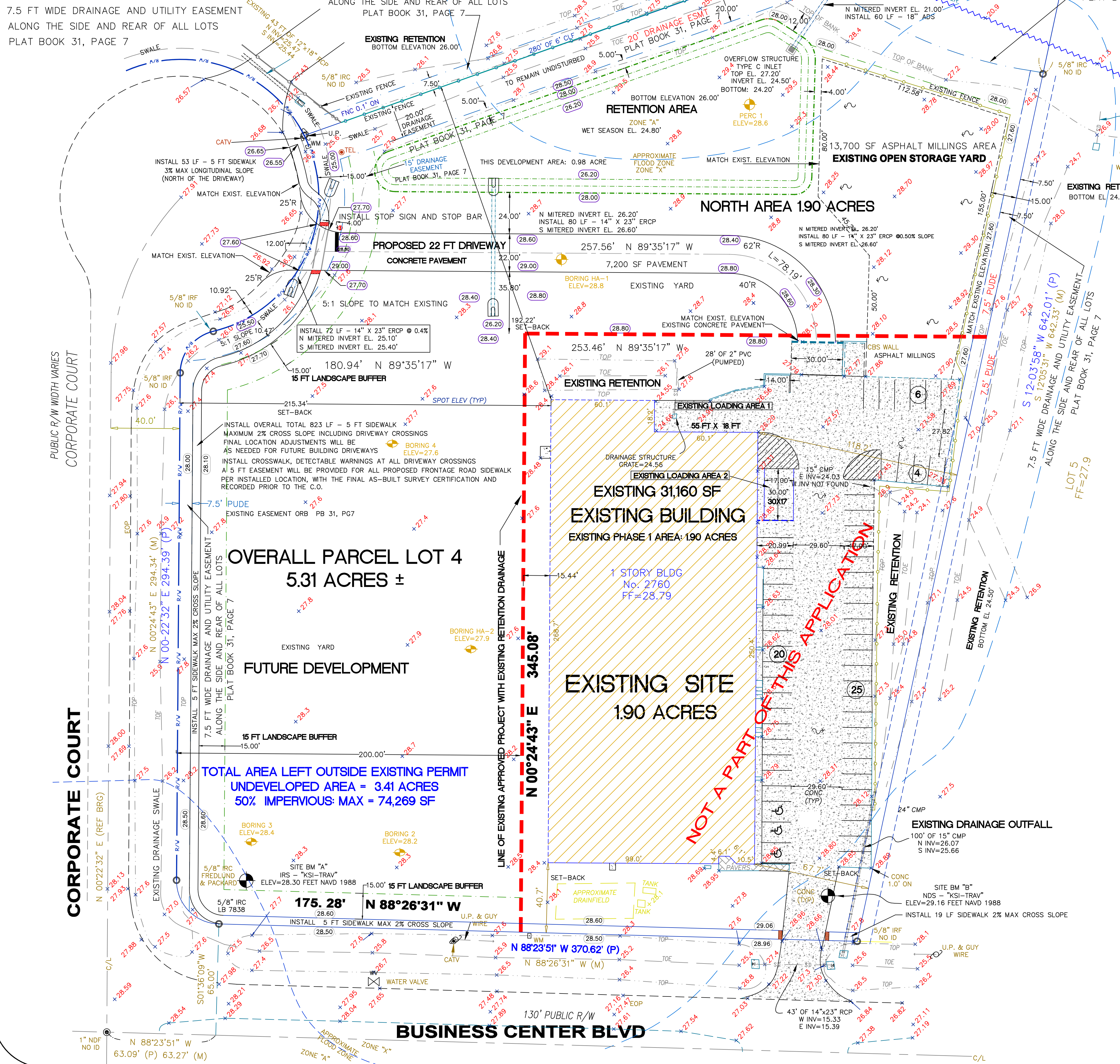
REVISION: 02/23/23 PRELIMINARY LAYOUT
04/23/23 MODIFY PRELIMINARY PER 04/21/23 NEW TOPOGRAPHIC SURVEY
08/07/23 VERIFIED EXISTING SITE ISSUES PER 07/28/23 BREVARD REVIEW COMMENTS

ISSUES FOR PERMIT CONSTRUCTION
FRANK PLATA PE#1152
STATE OF FLORIDA
PROFESSIONAL ENGINEER

2760 BUSINESS CENTER WAREHOUSE DRIVEWAY ADDITION OVERALL SITE
MELBOURNE BREVARD COUNTY

PLATA ENGINEERING, INC
ENGINEERS-PLANNERS-CONSTRUCTION MANAGEMENT
P.O. BOX 361003, MELBOURNE FL 32936
EBO05648 EXCELLENCE IN SERVICE TO FLORIDA SINCE 1990
TELEPHONE (321) 259-7528 FAX (321) 256-0305
EMAIL: MANAGER@PLATAENGINEERING.COM
PLANS PROPERTY OF PLATA ENGINEERING, INC

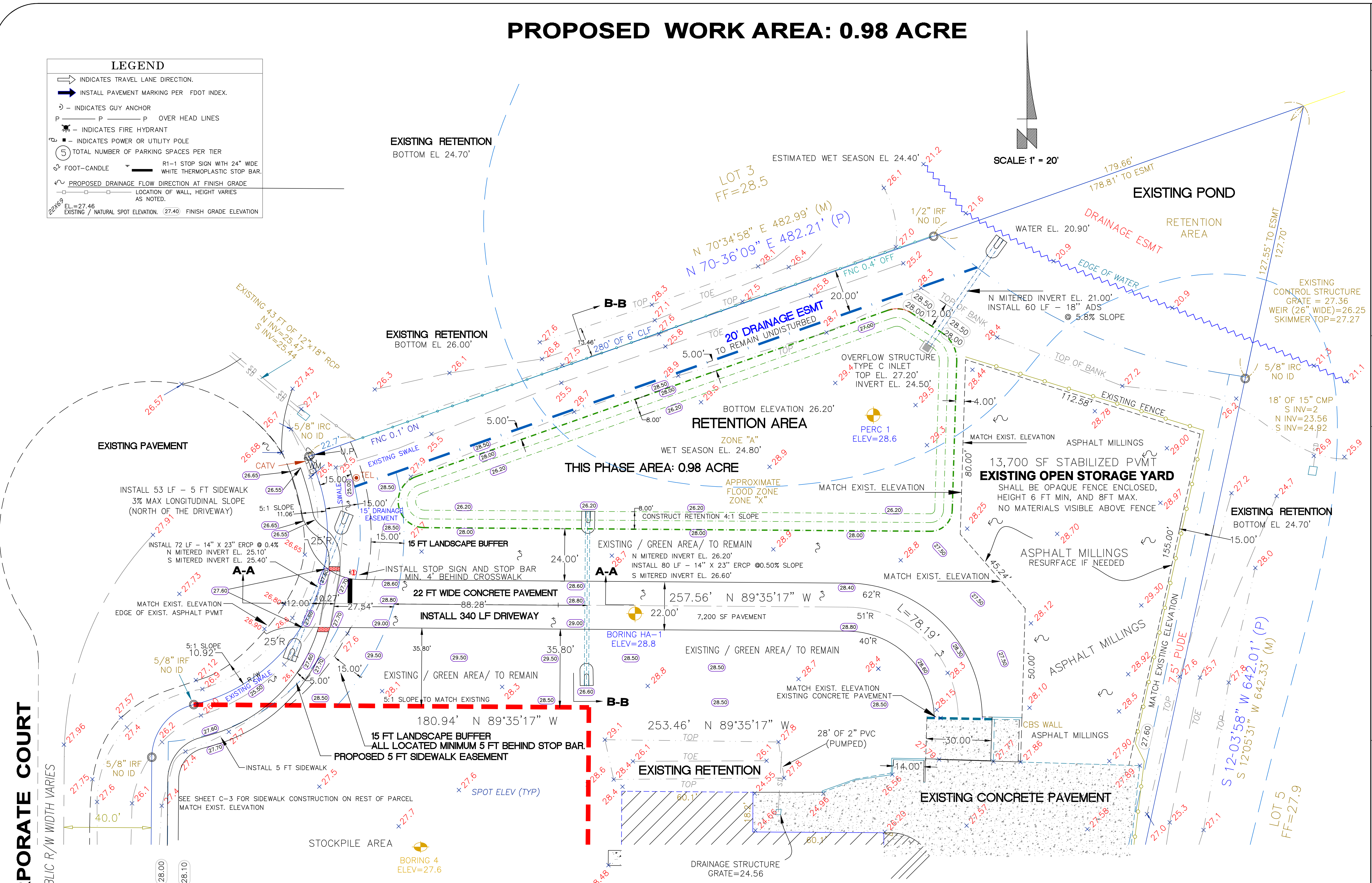
2760 BUSINESS CENTER DRIVEWAY ADDITION PROJECT 2321910
SHEET C3



PROPOSED WORK AREA: 0.98 ACRE

LEGEND	
	INDICATES TRAVEL LANE DIRECTION.
	INSTALL PAVEMENT MARKING PER FDOT INDEX.
	INDICATES GUY ANCHOR
	OVER HEAD LINES
	INDICATES FIRE HYDRANT
	INDICATES POWER OR UTILITY POLE
	TOTAL NUMBER OF PARKING SPACES PER TIER
	FOOT-CANDLE
	R1-1 STOP SIGN WITH 24" WIDE WHITE THERMOPLASTIC STOP BAR.
	PROPOSED DRAINAGE FLOW DIRECTION AT FINISH GRADE
	LOCATION OF WALL, HEIGHT VARIES AS NOTED.
	EL.=27.46 EXISTING / NATURAL SPOT ELEVATION. (27.40) FINISH GRADE ELEVATION

SCALE: 1" = 20'



CORPORATE COURT
PUBLIC R/W WIDTH VARIES

TRAFFIC ENGINEERING NOTES:
SIGNING AND PAVEMENT PARKING NOTES:

INSTALL ALL PER 2023-24 FDOT DESIGN STANDARD INDEX 711-001 PAVEMENT MARKINGS SHEETS 9 OF 13, FOR THE PLACEMENT OF THE STOP BAR AND ANY CROSSWALK INSTALLED ON THE SITE.

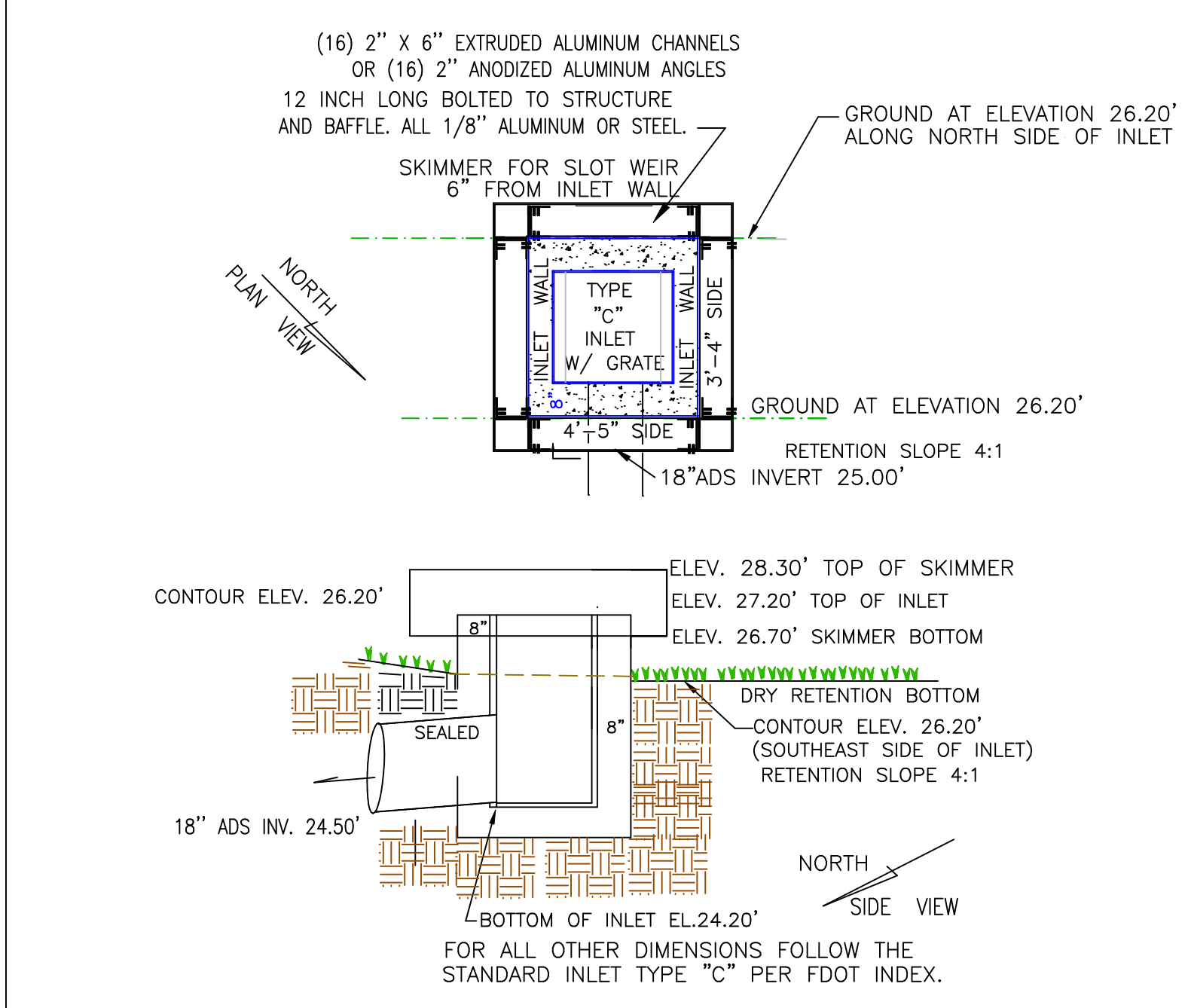
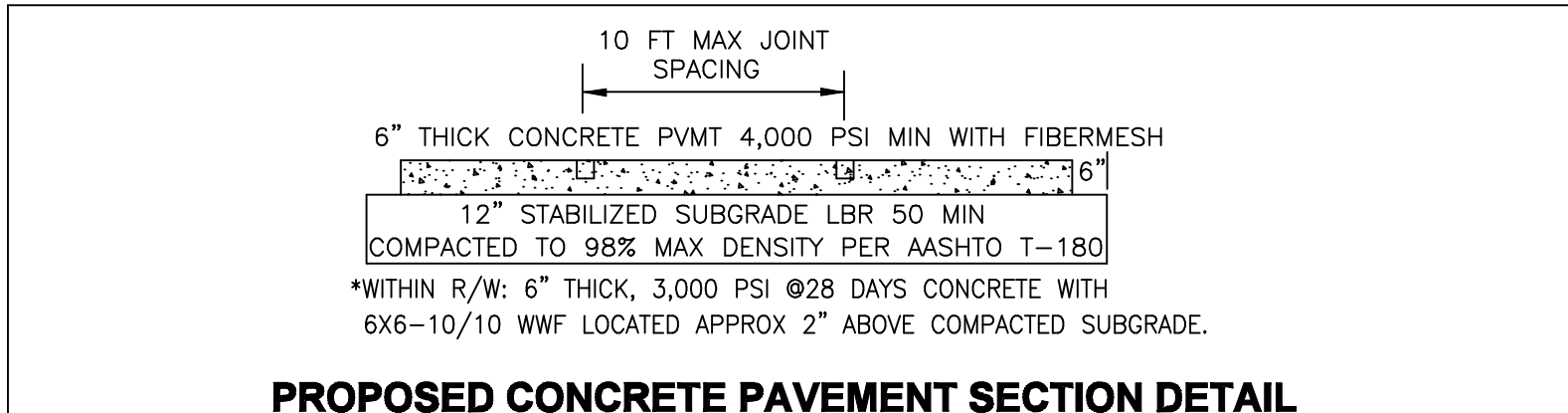
FOR THIS SITE ALL THE A.D.A. ACCESSIBLE SPACES ARE EXISTING. REPLACE ANY FADED OR MISSING SIGNS, RESTRIPE THE SPACES AS NEEDED TO BE IN COMPLIANCE, ALSO ALL OTHER EXISTING PARKING SPACES AND STOP SIGNS ON SITE. EXISTING SITE IS NOT PART OF THIS PROJECT REVIEW OR REQUIREMENTS

ALL POSTS AND HARDWARE FOR ANY SIGNS INSTALLED ON THE SITE WILL ADHERE TO THE REQUIREMENTS SPELLED OUT IN BREVARD COUNTY EXHIBIT 26

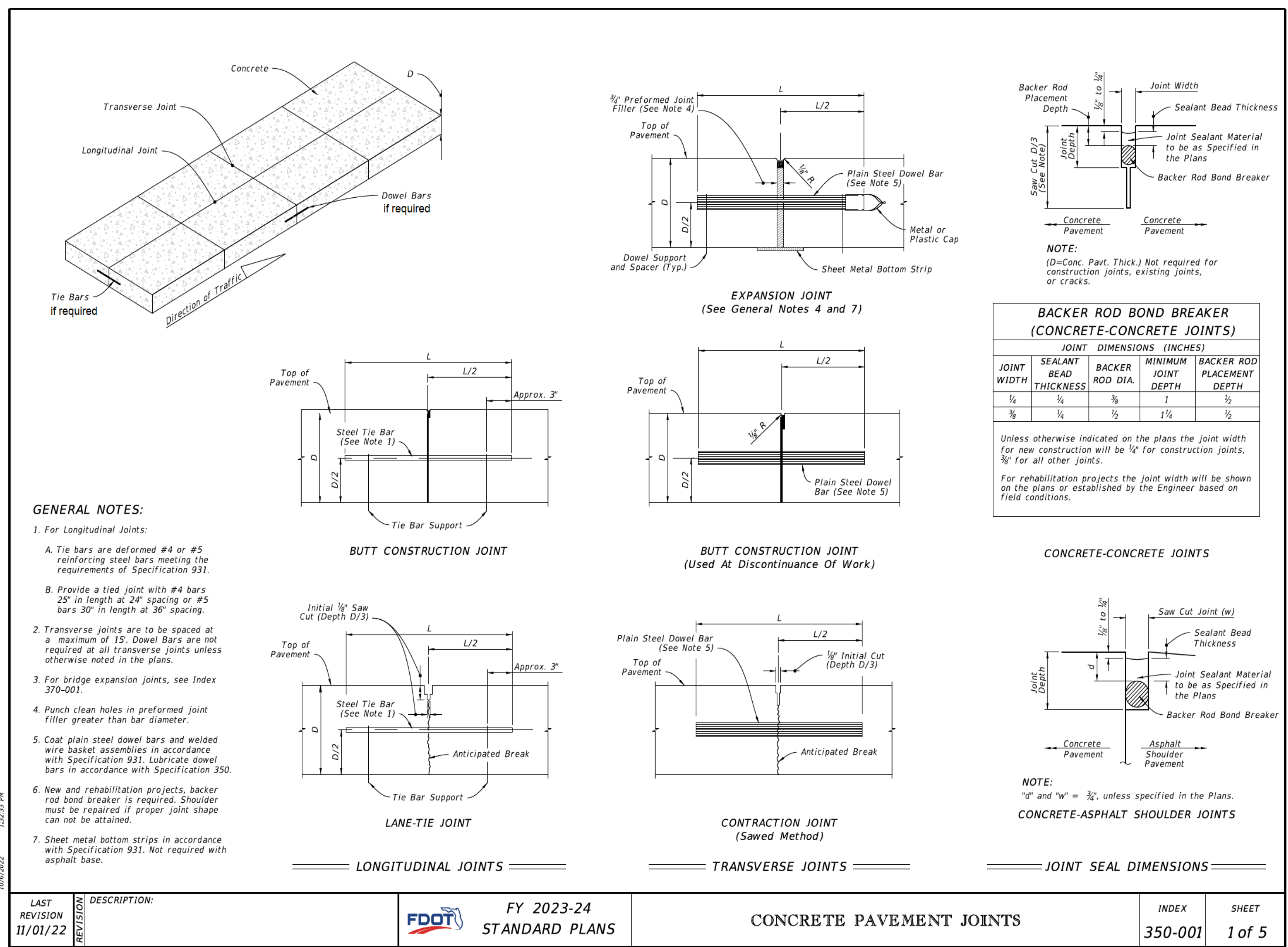
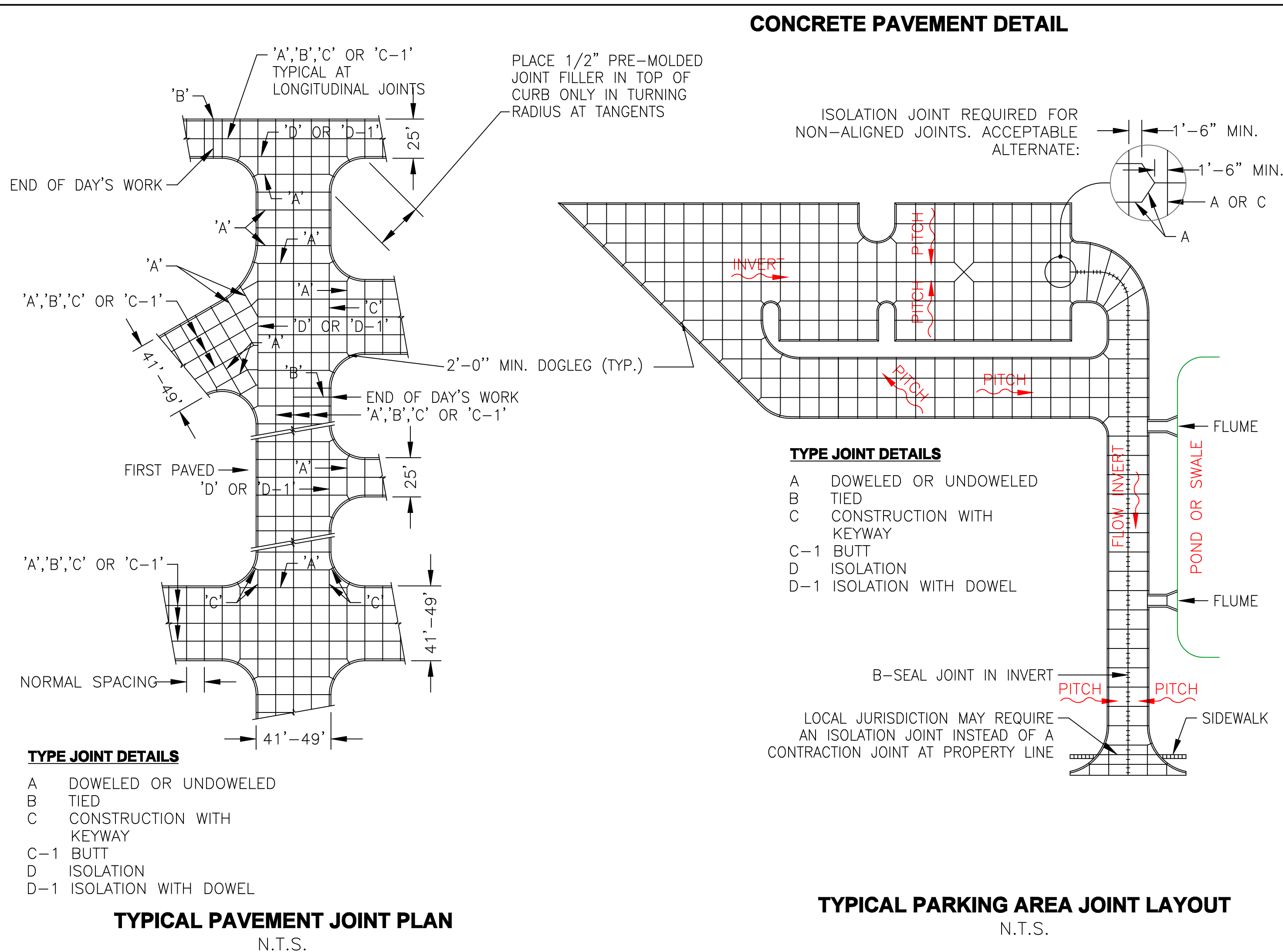
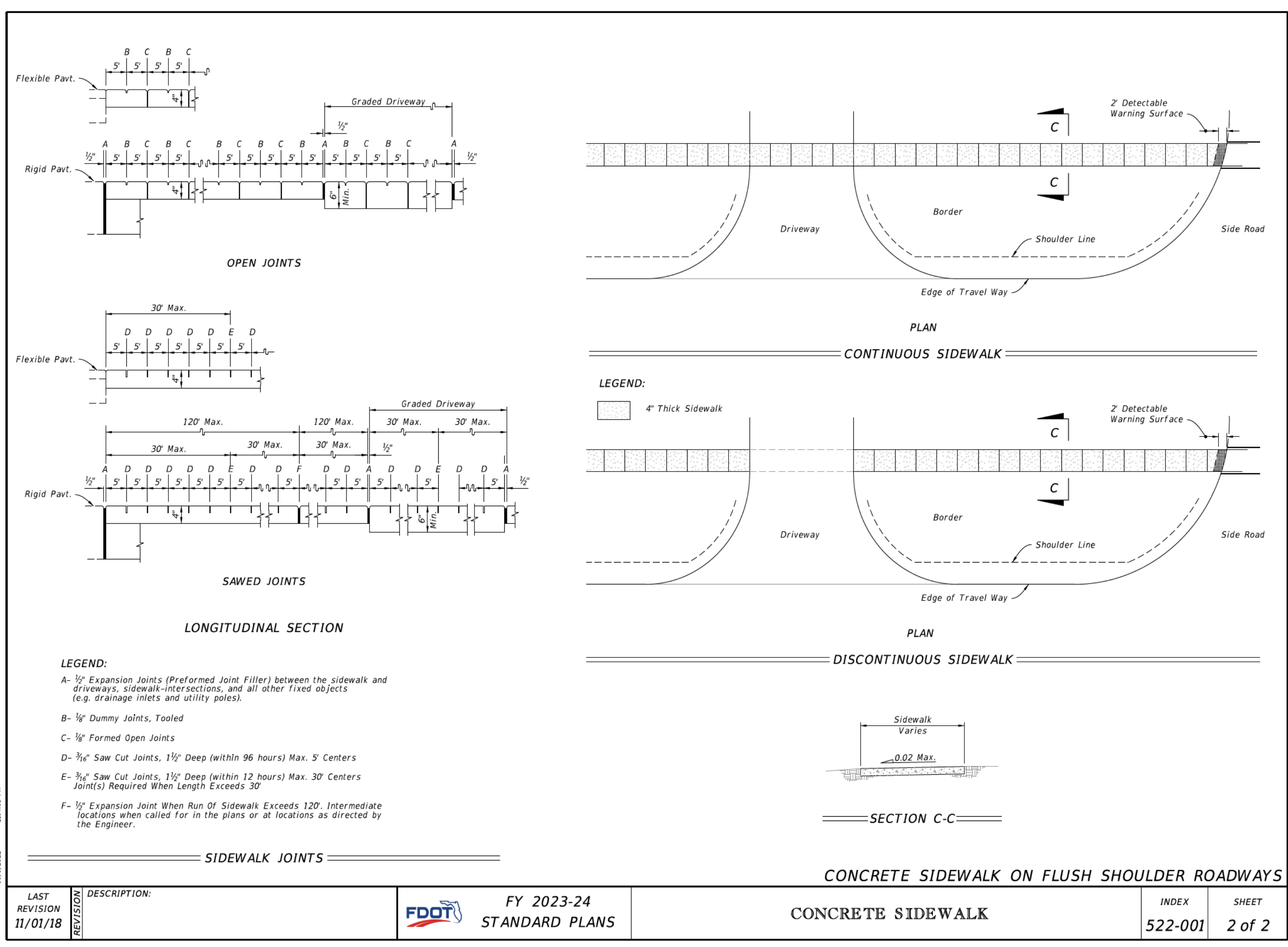
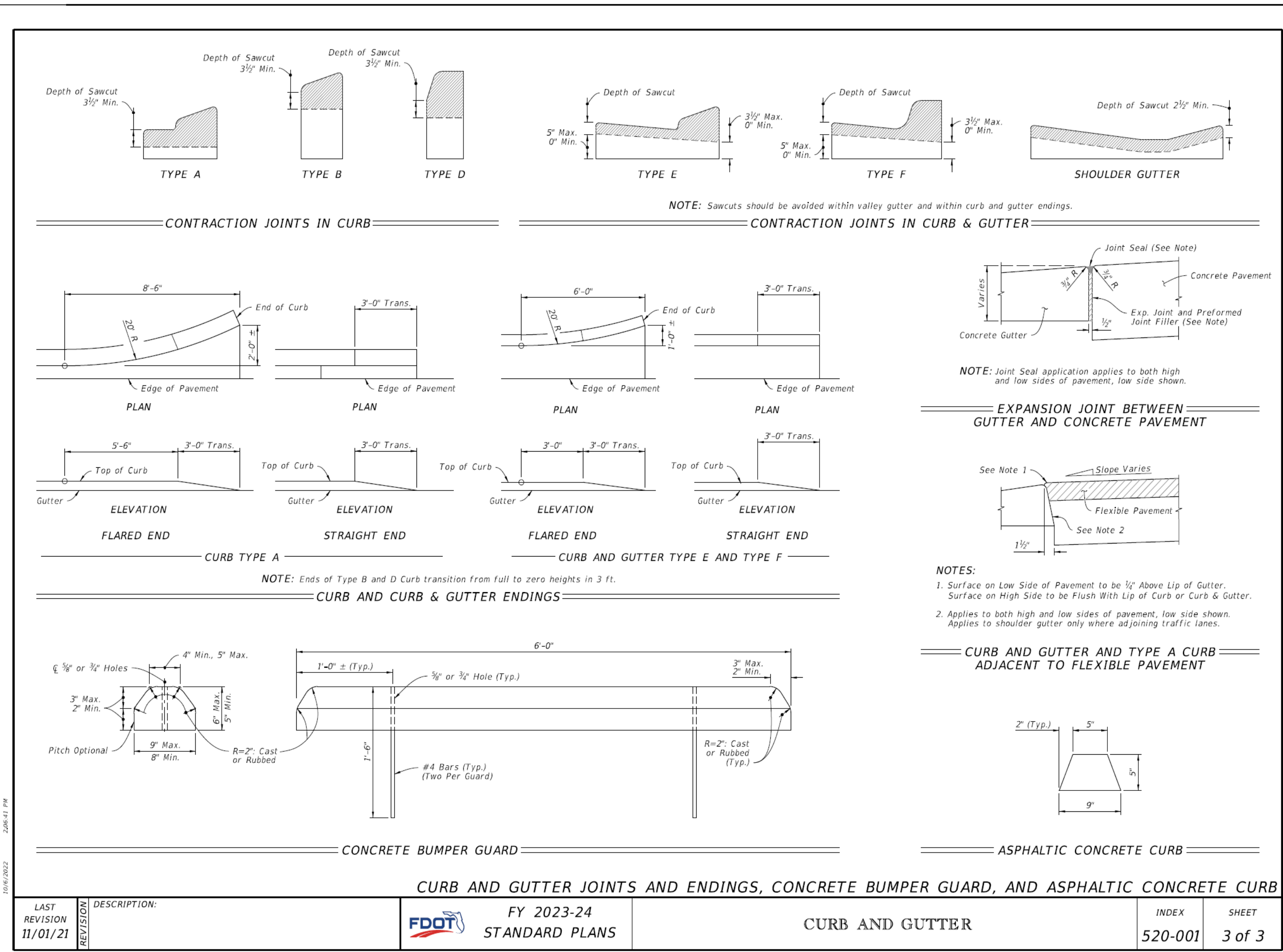
DATE: FEBRUARY 20, 2024	PROJECT: 2321910
REVISION: 02/23/23 PRELIMINARY LAYOUT	ISSUED FOR: PRELIMINARY PERMIT
04/23/23 MODIFY PRELIMINARY PER 04/21/23 NEW TOPOGRAPHIC SURVEY	CONSTRUCTION
ISSUED FOR: PRELIMINARY PERMIT	FRANK PLATA PE#41132
CONSTRUCTION	
2760 BUSINESS CENTER WAREHOUSE DRIVEWAY ADDITION	
PROPOSED SITE PLAN AREA	
MELBOURNE	BREVARD COUNTY
<p>PLATA ENGINEERING, INC. ENGINEERS-PLANNERS-CONSTRUCTION MANAGEMENT P.O. BOX 361003, MELBOURNE FL 32936 EB005634 EXCELLENCE IN SERVICE TO FLORIDA SINCE 1990 TELEPHONE (321) 259-7528 FAX (321) 256-0305 EMAIL: MANAGER@PLATAENGINEERING.COM PLANS PROPERTY OF PLATA ENGINEERING, INC.</p>	
<p>BUSINESS CENTER WAREHOUSE DRIVEWAY ADDITION PROJECT 2321910</p>	
SHEET C4	

GENERAL NOTES:

- UNDERGROUND UTILITY LINES AND/OR IMPROVEMENTS WERE NOT FIELD LOCATED. ALL EXISTING UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR PRIOR TO ANY WORK. CONFLICTS MAY ARISE FROM ACTUAL FIELD LOCATIONS. NOTIFY ENGINEER OF RECORD, IN WRITING, IF FIELD CONDITIONS ARE DIFFERENT, TO ALLOW MODIFICATION OR RELOCATION.
- ELEVATIONS AND BENCHMARKS SHOWN HEREON ARE AS PROVIDED BY SURVEYOR OF RECORD. BREVARD COUNTY REQUIRES NAVD 1988 DATUM, AND MINIMUM 2 BENCHMARKS ON SITE.
- INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES PRIOR TO ANY CLEARING. MARK AND PROTECT ALL EXISTING TREES THAT ARE TO BE PRESERVED BY INSTALLING ALL PROTECTION BARRIERS. SITE MAY HAVE POTENTIAL FOR GOPHER TORTOISES. PLEASE CONTACT FWC AT 352-732-1225 OR FWCConservationsPlanningServices@myfwc.com AS APPLICABLE. FEDERALLY OR STATE PROTECTED SPECIES MAY BE PRESENT. OWNER SHALL OBTAIN ANY NECESSARY PERMITS FROM THE U.S. FISH AND WILDLIFE SERVICE (904-322-2580) AND/OR THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (352-732-1225) AS APPLICABLE.
- CALL 321 633-2016 FOR TREE ROOT PROTECTION INSPECTION PRIOR TO ANY LAND CLEARING, ALTERATION OR COMMENCEMENT OF CONSTRUCTION, INCLUDING GRADING AND FILLING. FAILURE TO SCHEDULE AN INSPECTION OR PROVIDE THE NOTARIZED STATEMENT MAY BE SUBJECT TO STOP WORK ORDER AND OTHER PENALTIES AND REMEDIES PURSUANT TO SECTION 62-4336, BREVARD COUNTY.
- ENGINEER OF RECORD PREPARED THIS DOCUMENT FOR BREVARD COUNTY SITE PLAN PERMIT APPLICATION. ALL BUILDING, STRUCTURAL, NEPDS, PERMITS SHALL BE OBTAINED BY OTHERS.
- TESTING LABORATORY SHOULD BE RETAINED BY OWNER TO VERIFY THE WORK TO BE IN ACCORDANCE WITH PLANS. ALL REQUIRED TESTING COMPLIANCE AND SCHEDULE SHALL BE RESPONSIBILITY OF THE CONTRACTOR.
- UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION SHALL CONFORM TO THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND "ROADWAY AND TRAFFIC DESIGN STANDARDS", LATEST EDITIONS.
- ALL CONCRETE SHALL BE CLASS I, MINIMUM STRENGTH OF 3,000 PSI AT 28 DAYS.
- MATCH EXISTING GRADES, WHERE NEW CONSTRUCTION MEETS EXISTING SIDEWALKS, CURBS, PAVEMENTS, ETC. PROVIDE A NEAT SAW CUT TO PROVIDE SMOOTH EVEN JOINTS.
- ALL FILL SLOPES 5:1 OR STEEPER SHALL BE SODDED. ALL OTHER DISTURBED AREAS TO BE SEEDED & MULCHED. ALL RETENTION AREA BOTTOM TO BE SEEDED AND MULCHED, PRESERVED TO MAINTAIN PERMEABILITY VALUES AS ESTABLISHED FOR RETENTION PERFORMANCE. A PERMEABILITY TEST SHALL BE PERFORMED AT TIME OF PROJECT COMPLETION FOR ALL RETENTION AREAS, AND RESULTS PROVIDED TO ENGINEER OF RECORD.
- BACKFILL FOR ALL PIPE TRENCHES, EXCAVATIONS, FILL ETC., SHALL BE TO 98% OF MAXIMUM DENSITY PER AASHTO T-180 UNDER ROADWAYS, BUILDINGS, FOR OTHER AREAS MINIMUM 95%.
- ALL POTABLE WATER SYSTEM IS EXISTING. NO UTILITY WORK PROPOSED. SEWER SERVICE BY EXISTING ONSITE SEWAGE TREATMENT AND DISPOSAL. THERE IS NO BUILDING OR USE CHANGE, NO SEPTIC SYSTEM IMPACTS PROPOSED. ALL EXISTING SITE DEVELOPMENT, TO REMAIN AS EXISTING, UNDISTURBED.
- DRAINAGE PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III OR AS NOTED.
- CONTRACTOR SHALL FURNISH A MINIMUM OF 5 COPIES OF MANUFACTURER'S CERTIFICATIONS AND SHOP DRAWINGS TO THE ENGINEER FOR ALL MANUFACTURED ITEMS. SUBMITTALS SHALL BEAR THE CONTRACTOR'S REVIEW STAMP AND SIGNATURE TO INDICATE THEIR REVIEW AND ACCEPTANCE.
- CONSTRUCTION SERVICES AND/OR SUPERVISION BY ENGINEER CAN BE PROVIDED IF REQUESTED IN WRITING. OTHERWISE NOT ABLE TO PROVIDE ANY ASSURANCE OR CERTIFICATIONS FOR SITE WORK AS NEEDED FOR CERTIFICATE OF OCCUPANCY.
- ALL ROADWAY PAVEMENT MARKING AND SIGNAGE SHALL BE INSTALLED IN ACCORDANCE WITH MUTCD, FDOT, AND BREVARD COUNTY TRAFFIC ENGINEERING REQUIREMENTS.
- ACCESS ROAD TO SITE SHALL BE MAINTAINED FOR FIRE VEHICLE ACCESS. NFPA 241, 5-4.7 AT ALL TIMES. PERMANENT ACCESS IS AVAILABLE WITHIN EXISTING SITE. NO CONSTRUCTION TRAFFIC ALLOWED WITHIN EXISTING SITE.



OVERFLOW STRUCTURE DETAIL



LAST REVISION	DESCRIPTION:	FY 2023-24 STANDARD PLANS	INDEX	SHEET
11/01/21		CURB AND GUTTER	520-001	3 of 3

LAST REVISION	DESCRIPTION:	FY 2023-24 STANDARD PLANS	INDEX	SHEET
11/01/18		CONCRETE SIDEWALK	522-001	2 of 2

LAST REVISION	DESCRIPTION:	FY 2023-24 STANDARD PLANS	INDEX	SHEET
11/01/22		CONCRETE PAVEMENT JOINTS	350-001	1 of 5

DATE: FEBRUARY 28, 2023
 PLOT: PROJECT 2321910
 SCALE: 1" = 20'
 REVISION: 02/03/23 PRELIMINARY CONCEPTUAL PLAN
 ISSUED FOR: PRELIMINARY PERMITS CONSTRUCTION
 FRANK PLATA REF#1152
2760 BUSINESS CENTER WAREHOUSE DRIVEWAY ADDITION
STANDARD PAVEMENT AND SIDEWALK DETAILS
MELBOURNE COUNTY
BREVARD COUNTY
PLATA ENGINEERING, INC.
 ENGINEERS-PLANNERS-CONSTRUCTION MANAGEMENT
 P.O. BOX 361003, MELBOURNE FL 32936
 ESTABLISHED IN SERVICE TO FLORIDA SINCE 1990
 TELEPHONE (321) 259-7528 FAX (321) 256-0305
 EMAIL: MANAGER@PLATAENGINEERING.COM
 PLANS PROPERTY OF PLATA ENGINEERING, INC.
 BUSINESS CENTER WAREHOUSE DRIVEWAY ADDITION PROJECT 2321910
SHEET C6

BREVARD COUNTY PUBLIC WORKS ENGINEERING STANDARD DEVELOPMENT NOTES

GENERAL

1. ALL CONSTRUCTION SHALL CONFORM TO FDOT DESIGN STANDARDS (LATEST EDITION), FDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION (LATEST EDITION), BREVARD COUNTY UTILITY SERVICES CRITERIA FOR WATER AND SANITARY SEWER SYSTEMS, AND BREVARD COUNTY CODE OF ORDINANCES.
2. ISSUANCE OF CERTIFICATE OF COMPLETION: UPON COMPLETION OF CONSTRUCTION OF THE PROJECT AND PRIOR TO SCHEDULING OF THE FINAL INSPECTION, THE APPLICANT OR THEIR AUTHORIZED REPRESENTATIVE, SHALL PROVIDE THE FOLLOWING DOCUMENTATION TO BREVARD COUNTY PUBLIC WORKS ENGINEERING:
 - a. A CERTIFICATE OF COMPLETION - REQUEST FOR FINAL INSPECTION FORM. THE FORM MUST BE FROM A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA WITH THEIR SEAL AFFIXED. THE FORM CERTIFIES THAT THE IMPROVEMENTS HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS.
 - b. A COMPLETE SET OF TESTING REPORTS FOR ALL TESTS PERFORMED ON THE PROJECT WITHIN THE COUNTY RIGHT-OF-WAY AND/OR FOR ALL SUBDIVISION CONSTRUCTION REGARDLESS OF PUBLIC OR PRIVATE.
 - c. THREE SETS OF AS-BUILT DRAWINGS MEETING THE REQUIREMENTS OF SECTION 61G17, F.A.C., AND SIGNED AND SEALED BY A SURVEYOR LICENSED IN THE STATE OF FLORIDA. AT A MINIMUM, ALL AS-BUILT DRAWINGS MUST INCLUDE:
 - i. ROAD/PAVEMENT ELEVATIONS; ROADWAY CROSS SLOPES; PAVEMENT WIDTH; PAVEMENT SPOT ELEVATIONS NECESSARY TO CONFIRM STORMWATER DRAINAGE PATTERNS AT INTERSECTIONS AND SIDEWALKS; CURB SLOPES;
 - ii. STORMWATER PIPE SIZES AND INVERT ELEVATIONS; LOCATION OF OUTFALL STRUCTURE(S) WITH AS-BUILT ELEVATIONS FOR ALL CONTROL STRUCTURE & SKIMMER ELEVATIONS SHOWN ON THE APPROVED PLANS; TOP OF BANK, GRADE BREAKS, BOTTOM ELEVATIONS FOR ALL STORMWATER PONDS OR BERM AREAS;
 - iii. ANY OTHER ADDITIONAL AS-BUILT DATA THAT IS APPLICABLE TO THE PROJECT TO ENSURE COMPLETION IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS.
 - d. PIPE INSPECTION VIDEO PER FDOT REQUIREMENTS. (IF APPLICABLE PER NOTE 4 OF DRAINAGE NOTES)
 - e. IF A MUNICIPALITY IS ACCEPTING A PUBLIC WATER AND/OR SEWER SYSTEM, THERE MUST BE DOCUMENTATION INDICATING MUNICIPAL ACCEPTANCE OF THE CONSTRUCTION OF THE WATER AND/OR SEWER SYSTEM.
 - f. PUBLIC WORKS ENGINEERING WILL NOT SIGN OFF ON A TEMPORARY CERTIFICATE OF OCCUPANCY (TCO) FROM THE BREVARD COUNTY BUILDING DEPARTMENT UNTIL THE AS-BUILT DRAWINGS AND OTHER DOCUMENTATION LISTED ABOVE HAVE BEEN SUBMITTED AND REVIEWED BY PUBLIC WORKS ENGINEERING.
 - g. PROJECTS CONNECTED TO THE BREVARD COUNTY WATER, SANITARY SEWER, AND/OR RECLAIMED WATER SYSTEMS MUST OBTAIN FINAL APPROVAL FOR THE PROJECT DIRECTLY FROM BREVARD COUNTY UTILITY SERVICES AS OUTLINED IN THE BREVARD COUNTY CRITERIA FOR WATER AND SANITARY SEWERAGE SYSTEMS.
3. UPON APPROVAL OF FINAL INSPECTION, AN ENGINEER'S CERTIFIED COST ESTIMATE WILL BE REQUIRED ALONG WITH A 2-YEAR MAINTENANCE BOND FOR ALL IMPROVEMENTS WITHIN THE COUNTY RIGHT-OF-WAY AS REQUIRED BY CHAPTER 86 OF THE BREVARD COUNTY CODE OF ORDINANCES. THE MAINTENANCE BOND SHALL BE 25% OF THE ENGINEER'S CERTIFIED COST ESTIMATE.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO THE COUNTY INFRASTRUCTURE DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE STRUCTURAL INTEGRITY OF THE ROADWAY ASPHALT, BASE, AND STABILIZED SUB-BASE, SIDEWALKS, STORMWATER DRAINAGE SYSTEM, DRAINAGE STRUCTURES, CURBS, GROUND COVER, WATER SYSTEMS, SANITARY SEWER SYSTEMS, AND RECLAIMED WATER SYSTEMS. ALL REPAIRS SHALL BE COMPLETED IN ACCORDANCE WITH FDOT AND BREVARD COUNTY STANDARDS. ALL REPAIRS SHALL BE COMPLETED PRIOR TO THE FINAL INSPECTION OF THE PROJECT. SIDEWALK PATCHING WILL NOT BE ACCEPTABLE.
5. A VISUAL OR MECHANICAL INTERIOR INSPECTION OF EXISTING CULVERTS WILL BE REQUIRED PRIOR TO THE FINAL INSPECTION.
6. ALL DISTURBED AREAS WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE SODDED. SEED & MULCH IS NOT ACCEPTABLE. SOD SHALL MATCH EXISTING SOD TYPE. BAHIA SOD SHALL BE USED IN AREAS ADJACENT TO VACANT PROPERTY. DISTURBED AREAS OUTSIDE THE CONSTRUCTION LIMITS WILL BE SODDED AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SURVEY MONUMENTATION. ANY SURVEY MONUMENTATION DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY A FLORIDA LICENSED SURVEYOR PRIOR TO ISSUANCE OF A CERTIFICATE OF COMPLETION FOR THE PROJECT.
8. REGARDLESS OF PRIVATE OR PUBLIC DEDICATION, THERE SHALL BE NO UTILITY CONNECTIONS OR METER BOXES WITHIN PROPOSED OR EXISTING SIDEWALKS OR DRIVEWAY AREAS.
9. ALL DIRECTIONAL BORES SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 555, DIRECTIONAL BORES AND THE FDOT UTILITIES ACCOMMODATION MANUAL.
10. ALL DIRECTIONAL BORES MUST EXTEND A MINIMUM OF EIGHT(8) FEET PAST THE EDGE OF PAVEMENT OF ANY ROADWAY OR COMMERCIAL DRIVEWAY. FOR RESIDENTIAL DRIVEWAYS AND SIDEWALKS, THE BORE MUST EXTEND THREE (3) FEET PAST THE EDGE ON EITHER SIDE.
11. THE CONTRACTOR SHALL CONTROL DUST GENERATED BY THIS PROJECT AT ALL TIMES. SHALL PROVIDE STREET SWEEPING AS REQUIRED, AND PREVENT SEDIMENT FROM ENTERING INTO THE EXISTING DRAINAGE SYSTEM AT ALL TIMES.
12. THE CONTRACTOR SHALL NOT EXCEED NOISE LEVELS AS SPECIFIED IN BREVARD COUNTY CODE OF ORDINANCES SECTION 62-2271.
13. ALL STRIPING AND PAVEMENT MARKINGS IN THE COUNTY RIGHT-OF-WAY SHALL BE THERMOPLASTIC AND SHALL NOT BE APPLIED UNTIL A MINIMUM OF 30 DAYS AFTER THE PLACEMENT OF THE FINAL ASPHALT SURFACE. IN THE INTERIM, STRIPING SHALL BE PAINT AND ANY REQUIRED RPM'S INSTALLED PER THE PLANS. DO NOT STRIPE ACROSS MANHOLE LIDS OR DRAINAGE GRATES.
14. REFLECTIVE PAVEMENT MARKINGS (RPM'S) SHALL BE INSTALLED IN ALL LOCATIONS AS REQUIRED BY FDOT DESIGN STANDARD.(LATEST EDITION)
15. ANY PAVEMENT MARKINGS AND RPM'S THAT ARE DESTROYED, DAMAGED, OR DIMINISHED BY CONSTRUCTION ACTIVITIES FOR UP TO 500 FEET IN EITHER DIRECTION BEYOND THE LIMITS OF CONSTRUCTION SHALL BE REPLACED OR REFURBISHED BY THE CONTRACTOR.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE COUNTY RIGHT-OF-WAY FOR THE DURATION OF CONSTRUCTION. AT A MINIMUM, THE CONTRACTOR SHALL MOW THE RIGHT-OF-WAY ON AN AS NEEDED BASIS AND MAINTAIN THE DRAINAGE CONVEYANCE SYSTEM. ADDITIONAL MAINTENANCE MAY BE REQUIRED ON A CASE BY CASE BASIS.

TRAFFIC CONTROL

1. **MOT PLAN REVIEW:** A PROJECT-SPECIFIC MAINTENANCE OF TRAFFIC (MOT) PLAN OR ROADWAY CLOSURE MOT/DETOUR PLAN MUST BE SUBMITTED TO BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) FOR APPROVAL A MINIMUM OF TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION. THE MOT PLAN SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND FDOT STANDARD INDEX 600 SERIES, (LATEST EDITIONS). PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS OR VMS) MAY BE REQUIRED TO SUPPLEMENT THE STANDARD MOT SIGNAGE.
2. **ROAD CLOSURES:** THE CONTRACTOR SHALL NOTIFY BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF THE PROPOSED START DATE OF CONSTRUCTION WITHIN THE RIGHT-OF-WAY. FOR EACH PHASE OF CONSTRUCTION, IF APPLICABLE. CONSTRUCTION SHALL NOT BEGIN UNTIL THE MOT PLAN IS APPROVED AND NOTIFICATIONS HAVE BEEN SENT TO AFFECTED AGENCIES. CERTAIN LOCATIONS MAY REQUIRE WORK IN THE RIGHT-OF-WAY TO BE PERFORMED AT NIGHT ONLY.

3. **LANE CLOSURES:** THE CONTRACTOR SHALL NOTIFY BREVARD COUNTY TRAFFIC OPERATIONS (321-633-2077) A MINIMUM OF ONE (1) WEEK IN ADVANCE OF THE PROPOSED START DATE OF CONSTRUCTION WITHIN THE RIGHT-OF-WAY. CONSTRUCTION SHALL NOT BEGIN UNTIL THE MOT PLAN IS APPROVED AND NOTIFICATIONS HAVE BEEN SENT TO AFFECTED AGENCIES. NO LANE CLOSURES WILL BE PERMITTED DURING PEAK HOUR TRAFFIC VOLUMES.
4. ALL TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF THE MUTCD FOR STREETS AND HIGHWAYS, FDOT STANDARDS (LATEST EDITIONS), AND BREVARD COUNTY LAND DEVELOPMENT EXHIBIT #26.

DRAINAGE - ROADWAYS

1. ALL DRAINAGE SYSTEM CONSTRUCTION SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS AND FDOT DESIGN STANDARDS,(LATEST EDITIONS).
2. ALL RETICULINE STEEL GRATES SHALL BE HOT DIPPED GALVANIZED AND HAVE A TRAFFIC BEARING H-20 LOAD RATING.
3. ALL GRATES UTILIZED WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE TRAFFIC BEARING H-20 LOADING.
4. ALL STORMWATER PIPING WITHIN THE ROAD RIGHT-OF-WAY, REGARDLESS OF PUBLIC OR PRIVATE, OR STORMWATER PIPING THAT CONVEYS STORMWATER UNDER THE ROADWAY BETWEEN STORMWATER TREATMENT PONDS, SHALL BE INSPECTED PER SECTIONS 430-4.8, 430-4.8.1, AND 430-4.8.2 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION,(LATEST EDITION), A COPY OF THE PIPE VIDEO SHALL BE PROVIDED TO THE COUNTY AS PART OF THE SUBMITTAL OF THE CERTIFICATION OF COMPLETION REQUEST FOR FINAL INSPECTION. THE COUNTY SHALL BE NOTIFIED ONE WEEK PRIOR TO THE START OF THE PIPE VIDEO INSPECTION PROCESS.
5. ALL OPEN CUTS SHALL CONFORM TO LAND DEVELOPMENT EXHIBIT #25. FOR ALL OPEN CUTS, THE FLOWABLE FILL AND TEMPORARY ASPHALT SHALL BE INSTALLED WITHIN TWO (2) DAYS OF THE EXCAVATION (UNLESS OTHERWISE APPROVED IN WRITING BY BREVARD COUNTY PUBLIC WORKS ENGINEERING). PERMANENT ASPHALT INCLUDING MILLING AND RESURFACING, IF NEEDED, SHALL BE COMPLETED WITHIN THIRTY (30) DAYS OF EXCAVATION.
6. THE CONTRACTOR SHALL REMOVE THE SHOULDER OF THE ROADWAY TO A POINT WHERE THE BASE MATERIAL OF THE EXISTING ROADWAY MEETS THE MINIMUM THICKNESS OF THE PROPOSED ROADWAY/COMMERCIAL DRIVEWAY CONNECTION.

CONCRETE PAVING AND SIDEWALK

1. ALL DRIVEWAYS SHALL BE CONSTRUCTED PER FDOT INDEX 515 AND/OR BREVARD COUNTY STANDARD EXHIBITS UNLESS OTHERWISE NOTED.
2. ALL CONCRETE SHALL MEET FDOT DESIGN MIX AND SPECIFICATIONS. CURING METHOD SHALL BE IN ACCORDANCE WITH THE FDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION,(LATEST EDITION).
3. ALL SIDEWALKS WITHIN THE COUNTY RIGHT-OF-WAY OR WITHIN A PUBLIC SIDEWALK EASEMENT SHALL BE CONSTRUCTED OF 6-INCH THICK, 3000-PSI CONCRETE WITH FIBER MESH REINFORCEMENT. CONCRETE SIDEWALKS (OR PEDWAYS) AND CONCRETE DRIVEWAY APRONS SHALL BE CONSTRUCTED OVER SOILS COMPACTED TO 98% DENSITY, OF AASHTO T -180. SHOULD EXISTING SOILS BE FOUND UNSUITABLE FOR COMPACTION, ADDITIONAL COMPATIBLE MATERIALS SHALL BE BROUGHT TO THE SITE FOR USE AS SUBGRADE. ALTERNATE METHODS OF COMPACTION MAY BE REQUIRED TO AVOID DAMAGE TO SURROUNDING PROPERTIES.
4. CONSTRUCT SIDEWALK JOINTS PURSUANT TO FDOT INDEX 310 (LATEST EDITION). EXPANSION JOINTS SHALL BE EVERY 50 FEET, AND BETWEEN NEW AND OLD CONCRETE.
5. TWO BY FOUR FORM BOARDS SHALL NOT BE USED FOR SIDEWALK/DRIVEWAY CONSTRUCTION. FORM BOARDS SHALL MATCH PROPOSED CONCRETE THICKNESS. SLIP FORMS SHALL NOT BE USED FOR SIDEWALK CONSTRUCTION. FIXED FORMWORK SHALL BE REQUIRED PER FDOT INDEX 300.
6. THE CONTRACTOR SHALL PROVIDE A 3-FOOT CURB TRANSITION AT ALL CURB TERMINATIONS.
7. ALL SIDEWALK AND ACCESS RAMP CONSTRUCTION SHALL COMPLY WITH THE DEPARTMENT OF JUSTICE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, FDOT DESIGN STANDARDS (LATEST EDITION), AND BREVARD COUNTY DEVELOPMENT REQUIREMENTS.

ASPHALT PAVING AND TESTING

THE FOLLOWING TESTING REQUIREMENTS APPLY TO:

- a. ALL PUBLIC AND PRIVATE SUBDIVISION PROJECTS PERMITTED THROUGH BREVARD COUNTY PLANNING AND DEVELOPMENT;
- b. ALL SITE PLAN PROJECTS PERMITTED THROUGH BREVARD COUNTY PLANNING AND DEVELOPMENT REQUIRING WORK IN THE COUNTY RIGHT-OF-WAY;
- c. ALL PROJECTS PERMITTED THROUGH BREVARD COUNTY PUBLIC WORKS FOR WORK WITHIN THE COUNTY RIGHT-OF-WAY.

SECTIONS WITHIN THE FDOT STANDARD SPECIFICATIONS LIMITING TESTING REQUIREMENTS BASED ON LOT SIZE, SUB-LOT SIZE, TONNAGE, MINIMUM THICKNESS, OR SPREAD RATE WILL NOT APPLY TO THE PROJECTS LISTED ABOVE. AT A MINIMUM, ONE SET OF TESTS WILL BE REQUIRED FOR ALL PAVING PROJECTS LARGER THAN 50 TONS TOTAL AND ADDITIONAL TESTING MAY BE REQUIRED ON A CASE BY CASE EVALUATION OF THE PROJECT. TESTING REQUIREMENTS AT THE ASPHALT PLANT WILL NOT APPLY.

FOR S-TYPE ASPHALT AS SPECIFIED IN THE 2000-2004 FDOT STANDARD SPECIFICATION :

1. THE CONTRACTOR SHALL PROVIDE A DESIGN MIX SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA AND APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 331-4 (2000). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS WILL NOT BE ACCEPTED.
2. THE CONTRACTOR SHALL PROVIDE EXTRACTION/GRADATION TESTS IN ACCORDANCE WITH SECTION 331-4.4.2 (2000).
3. THE CONTRACTOR SHALL PROVIDE MARSHALL STABILITY TESTING IN ACCORDANCE WITH SECTION 331-5.5.1 (2000).
4. PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-13 (2000).
5. THE CONTRACTOR SHALL PROVIDE SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH SECTION 330-13.3 (2000).
6. QUALITY CONTROL CORE BORINGS SHALL BE OBTAINED FOR THICKNESS PER SECTION 330-2.2 ROADWAY, (2004) AND DENSITY PER SECTION 330-11, TABLE 330-3 (2000).
7. ASPHALT TEST RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES WILL NOT BE ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.

FOR SUPERPAVE (SP) ASPHALT AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATION :

1. THE CONTRACTOR SHALL PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 334-2 & 334-3 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
2. THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 334-5. (2010) HOWEVER, THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
3. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL, DENSITY, AND THICKNESS TESTING IN ACCORDANCE WITH SECTIONS 334-3, 334-4, 334-5, AND 334-5.2.3 (2010).
4. ASPHALT TESTING RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES, AS NOTED IN TABLE 334-5, NOTE 2, OF SECTION 334-5 (2010) WILL NOT BE ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.
5. PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
6. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH 330-12 (2010).

FOR FRICTION COURSE FC-5 AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATION :

1. THE CONTRACTOR SHALL PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 337-4 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
2. THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 337-5 & 337-6 (2010). THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
3. PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
4. QUALITY CONTROL CORE BORINGS SHALL BE OBTAINED FOR THICKNESS TESTING USING SECTION 334-5.2.3 (2010).
5. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH SECTION 330-12 (2010).

FOR SUPERPAVE FRICTION COURSES FC-9.5 & FC-12.5 AS SPECIFIED IN THE 2010 FDOT STANDARD SPECIFICATIONS:

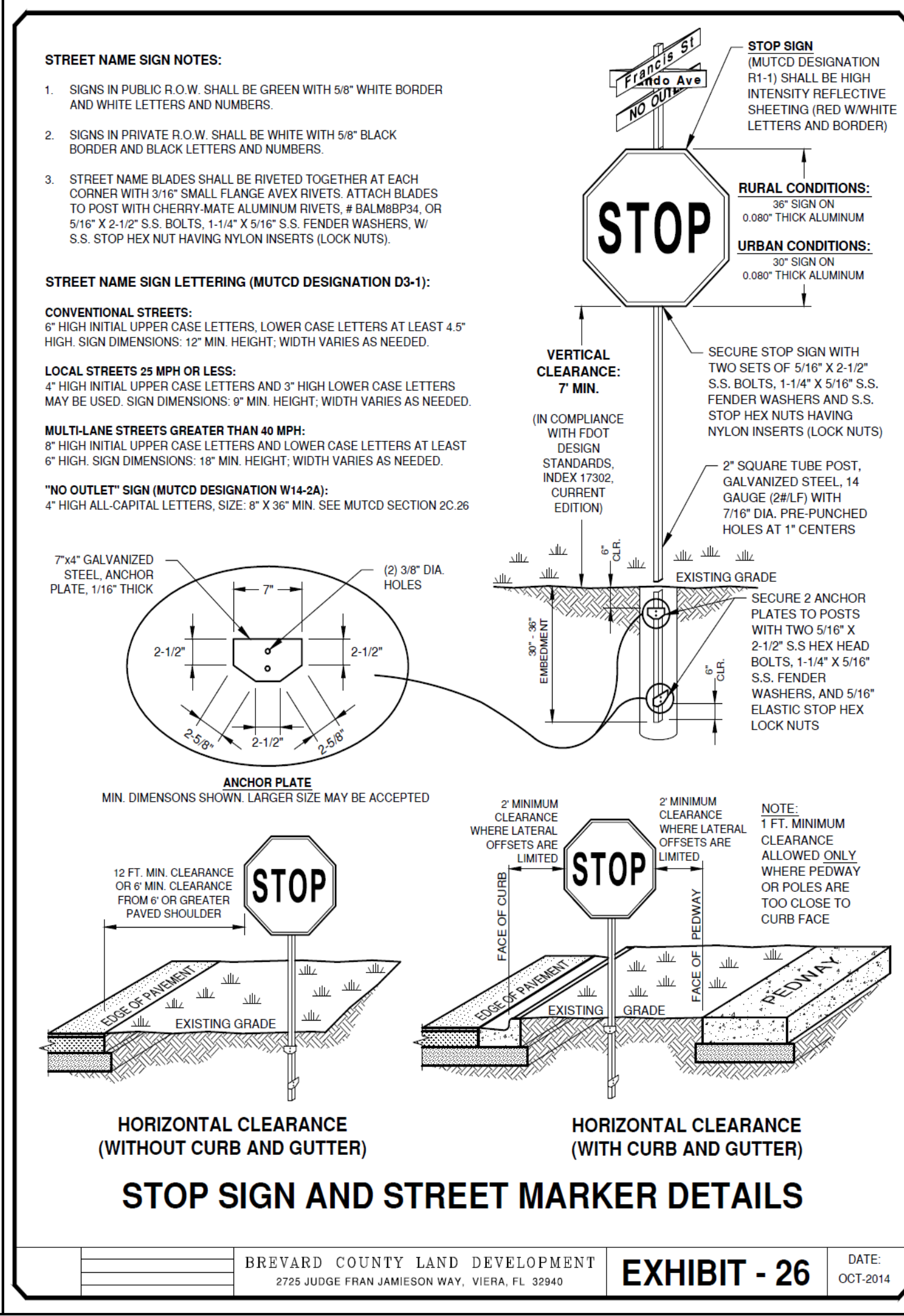
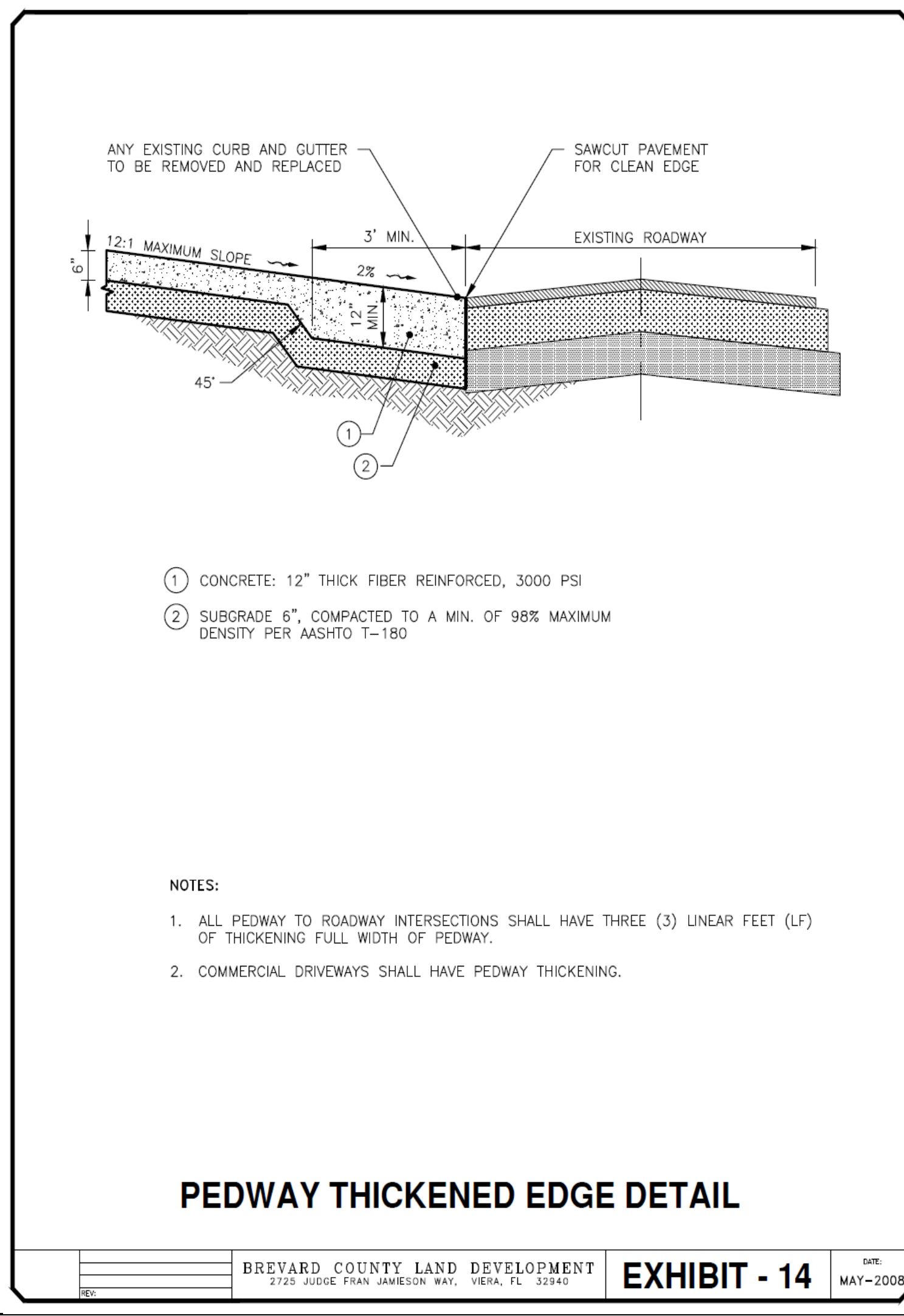
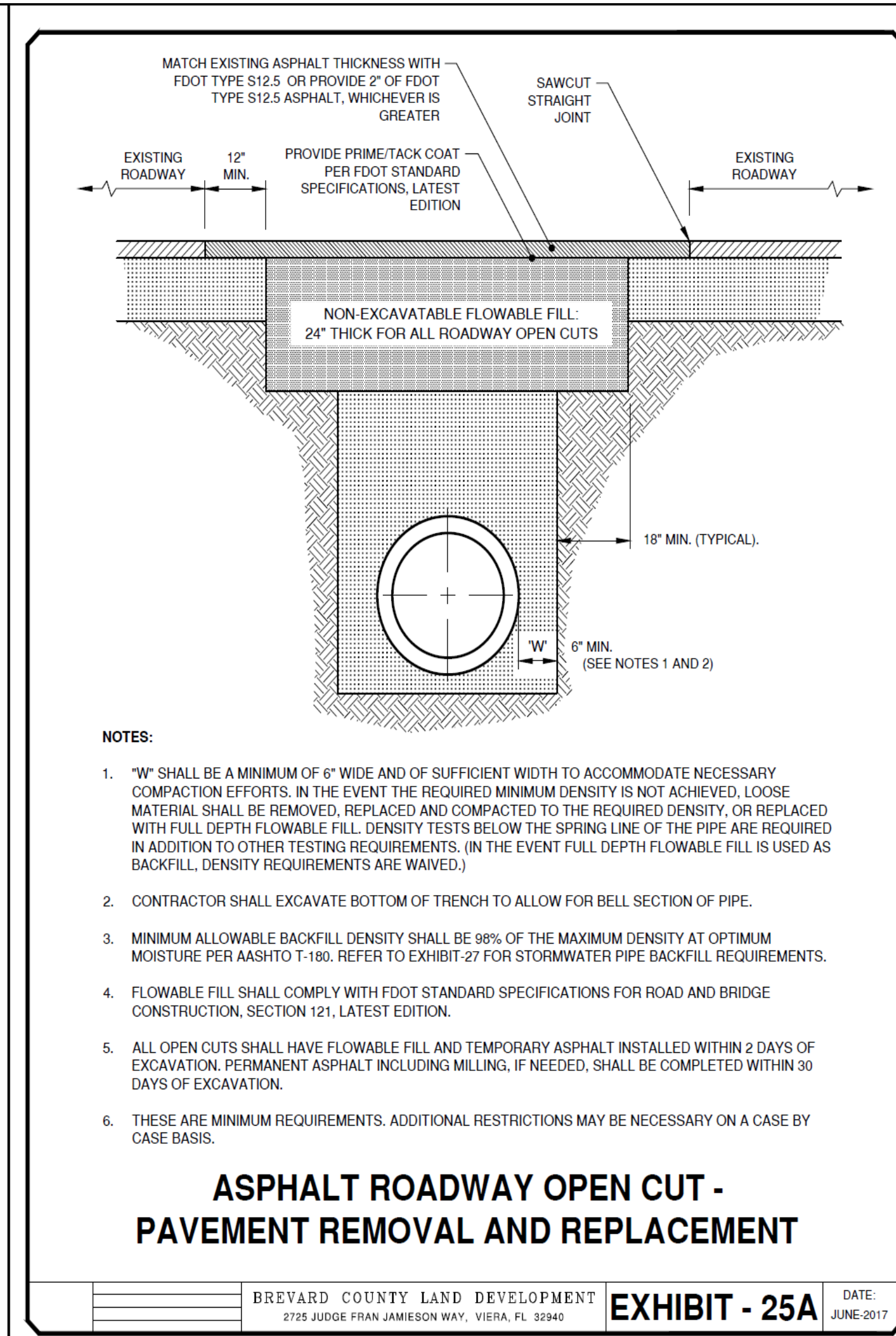
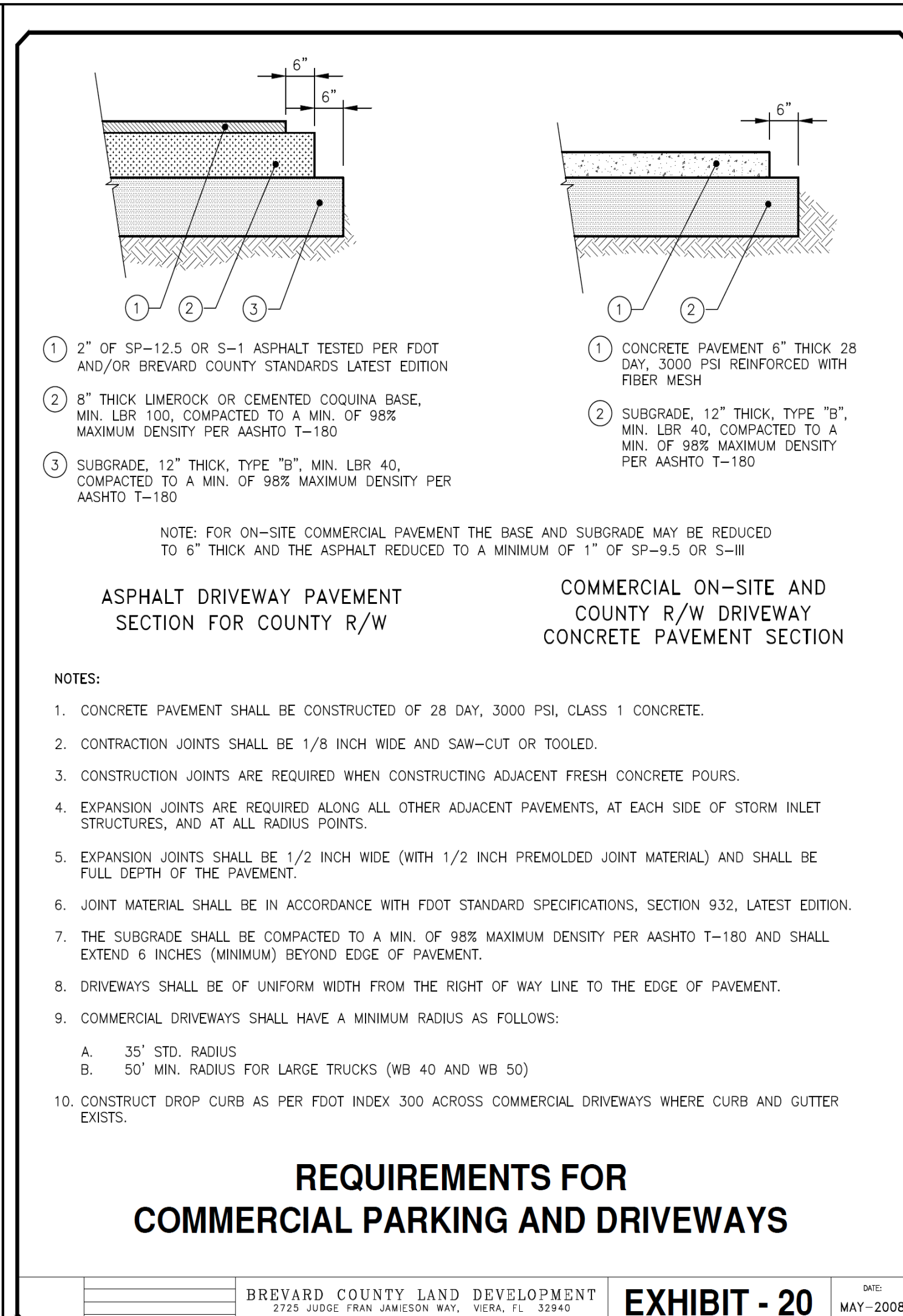
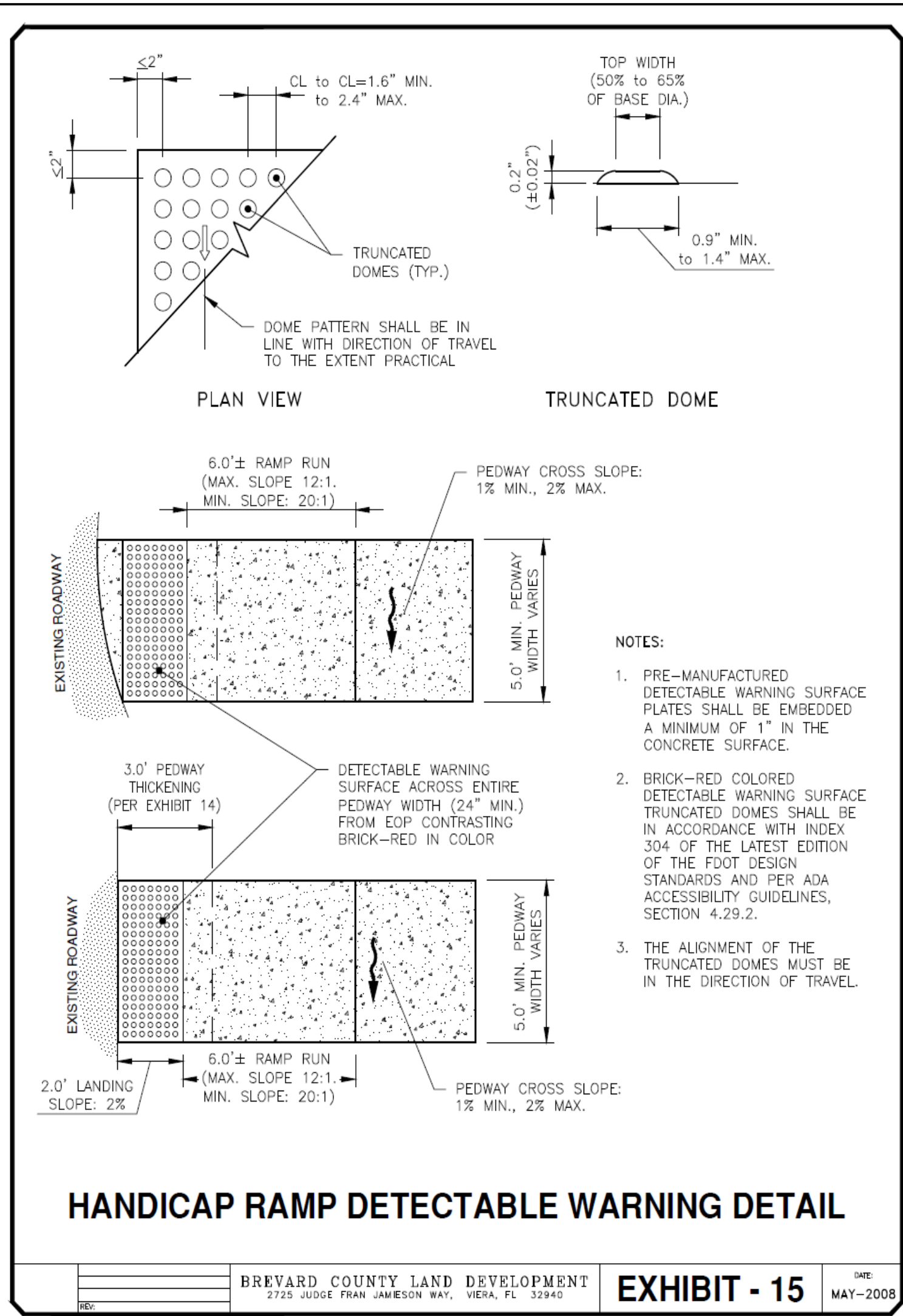
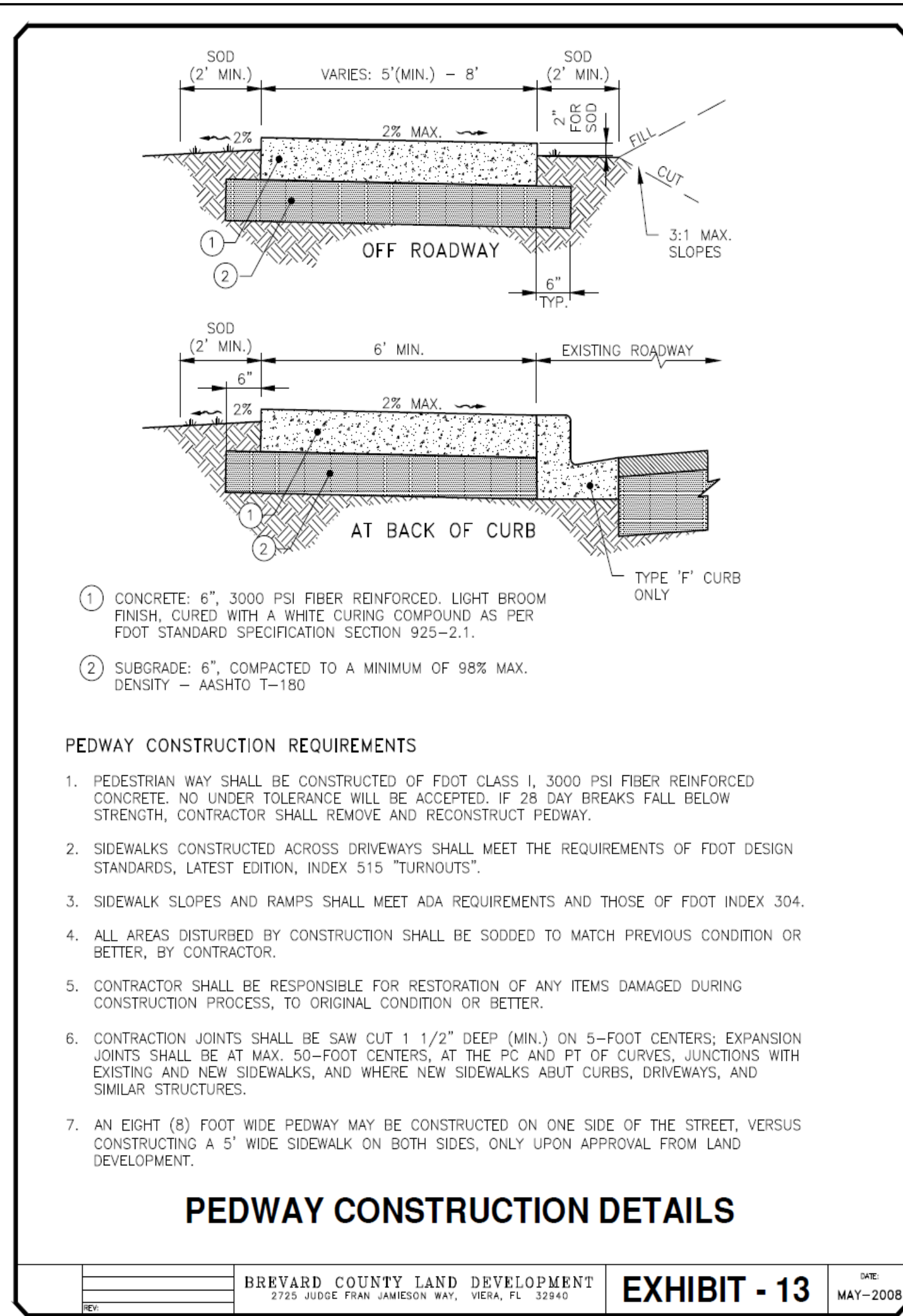
1. THE CONTRACTOR SHALL PROVIDE AN FDOT APPROVED DESIGN MIX, APPROVED BY THE ENGINEER OF RECORD FOR THE PROJECT, TO PUBLIC WORKS ENGINEERING FIVE BUSINESS DAYS PRIOR TO PAVING. THE MIX DESIGN SHALL MEET FDOT MINIMUM REQUIREMENTS AS OUTLINED IN SECTION 337-4 (2010). DESIGN MIXES BY FDOT CERTIFIED MIX DESIGNERS THAT ARE NOT FDOT APPROVED WILL NOT BE ACCEPTED.
2. THE CONTRACTOR SHALL PROVIDE GRADATION AND BINDER CONTENT TESTING IN ACCORDANCE WITH SECTION 337-5 & 337-6 (2010). THE SAMPLE(S) MAY BE TAKEN AT THE PROJECT LOCATION IN LIEU OF AT THE ASPHALT PLANT, AS SPECIFIED. RESULTS MUST BE PROVIDED TO THE COUNTY WITHIN ONE WEEK AFTER THE COMPLETION OF PAVING.
3. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL, DENSITY, AND THICKNESS TESTING IN ACCORDANCE WITH SECTIONS 337-1, 337-3, 337-4, 337-6, 337-8, AND 334-5.2.3 (2010).
4. ASPHALT TESTING RESULTS FOR EACH CORE TAKEN ARE REVIEWED ON AN INDIVIDUAL BASIS FOR THICKNESS AND DENSITY. THICKNESS AND DENSITY AVERAGES, AS NOTED IN TABLE 334-5, NOTE 2, OF SECTION 334-5 (2010) WILL NOT BE ACCEPTED. NO UNDER TOLERANCE FOR THE THICKNESS OF EACH ASPHALT CORE WILL BE ALLOWED.
5. PAVEMENT SURFACE SHALL MEET ALL REQUIREMENTS SPECIFIED IN SECTION 330-12 (2010).
6. THE CONTRACTOR SHALL PROVIDE QUALITY CONTROL SURFACE TOLERANCE TESTING FOR ROADWAYS WITH DESIGN SPEEDS OF 35 MPH OR GREATER IN ACCORDANCE WITH 330-12 (2010).

CONCRETE BOX CULVERT NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH FDOT DESIGN STANDARDS (LATEST EDITION), FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), AND BREVARD COUNTY STANDARDS.
2. PRIOR TO START OF CONSTRUCTION, THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING STRUCTURAL ENGINEERING DRAWINGS (SIGNED & SEALED BY A PROFESSIONAL ENGINEER LICENSED & REGISTERED IN THE STATE OF FLORIDA) FOR ALL COMPONENTS OF THE CONCRETE BOX CULVERTS, INCLUDING WINGWALLS, TOE SLAB & CUTOFF WALLS, AND HEADWALLS. THE DRAWINGS SHALL INCLUDE QUANTITIES TABULATIONS FOR CLASS IV CONCRETE (CUBIC YARDS), AND REINFORCING STEEL (POUNDS). THE DESIGN MUST BE BASED ON FDOT'S LOAD & RESISTANCE FACTOR DESIGN (LRFD) PROGRAM. SEPARATE DRAWINGS ARE REQUIRED FOR ALL WINGWALLS, TOE SLABS & CUTOFF WALLS, AND HEADWALLS, WHICH MUST BE CAST-IN-PLACE PER FDOT SPECIFICATIONS.
3. ALL BOX CULVERT MATERIALS THAT ARE TO BE INSTALLED UNDER ROADWAYS AND/OR DRIVEWAYS ARE TO BE DELIVERED TO SITE (AND PASS INITIAL INSPECTIONS) PRIOR TO START OF DEMOLITION OF EXISTING SYSTEM.
4. CONCRETE (PRECAST OR CAST-IN-PLACE) REQUIREMENTS: CLASS IV (5500 PSI).
5. REINFORCING STEEL REQUIREMENTS: ASTM A615 GRADE 60 DEFORMED BAR UNLESS OTHERWISE NOTED, WITH A MINIMUM CLEARANCE OF 3" (THREE INCHES), UNLESS OTHERWISE SHOWN. EQUAL AREA SUBSTITUTION OF WELDED WIRE (WWW) REINFORCEMENT IS PERMITTED.
6. REFER TO FDOT INDEX 292 FOR PRECAST CONCRETE BOX CULVERT SLAB & WALL THICKNESSES, REINFORCEMENT AREAS, GENERAL NOTES (SHEET 2 OF 14), AND WELDED WIRE REINFORCEMENT BENDING DIAGRAMS (SHEET 14 OF 14).
7. REFER TO FDOT INDEX 289 FOR CONCRETE BOX CULVERT DETAILS RELATED TO LRFD.
8. REFER TO FDOT INDEX 291 FOR SUPPLEMENTAL DETAILS FOR PRECAST CONCRETE BOX CULVERTS.
9. IF REQUIRED, BY-PASS PUMPING AND/OR PIPING SHALL BE APPROVED BY BREVARD COUNTY PUBLIC WORKS PRIOR TO THE START OF CONSTRUCTION.

OCTOBER 2018

PROJECT NAME/DWG DESIGNED/DRAWN BY: JB CHECKED BY: RBS	DATE: _____ REVISION: 1. FOR DISTRIBUTION 10-10-12 2. 3. 4.	BY: _____	PREPARED BY: PUBLIC WORKS DEPARTMENT ENGINEERING PROGRAM BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS 2725 JUDGE FRAN JAMIESON WAY, RM. 204, BLDG. A, VIERA, FL 32940 Ph. (321) 637-5437, Fx. (321) 633-2083	2760 BUSINESS CENTER WAREHOUSE DRIVEWAY ADDITION	DATE: OCTOBER 2012	APPROVED BY: RICHARD B. SZPYRKA, P.E. ENGINEERING PROGRAM MANAGER	BREVARD COUNTY PUBLIC WORKS ENGINEERING STANDARD DEVELOPMENT NOTES	SHEET C-8
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DATE: APRIL 22, 2023
 REVISION: PER 06/25/23 REVIEW COMMENTS. ADDED EXHIBIT 14 - PEDWAY THICKENED EDGE DETAIL
 SCALE: 1" = 20'
 PROJECT: 2321910

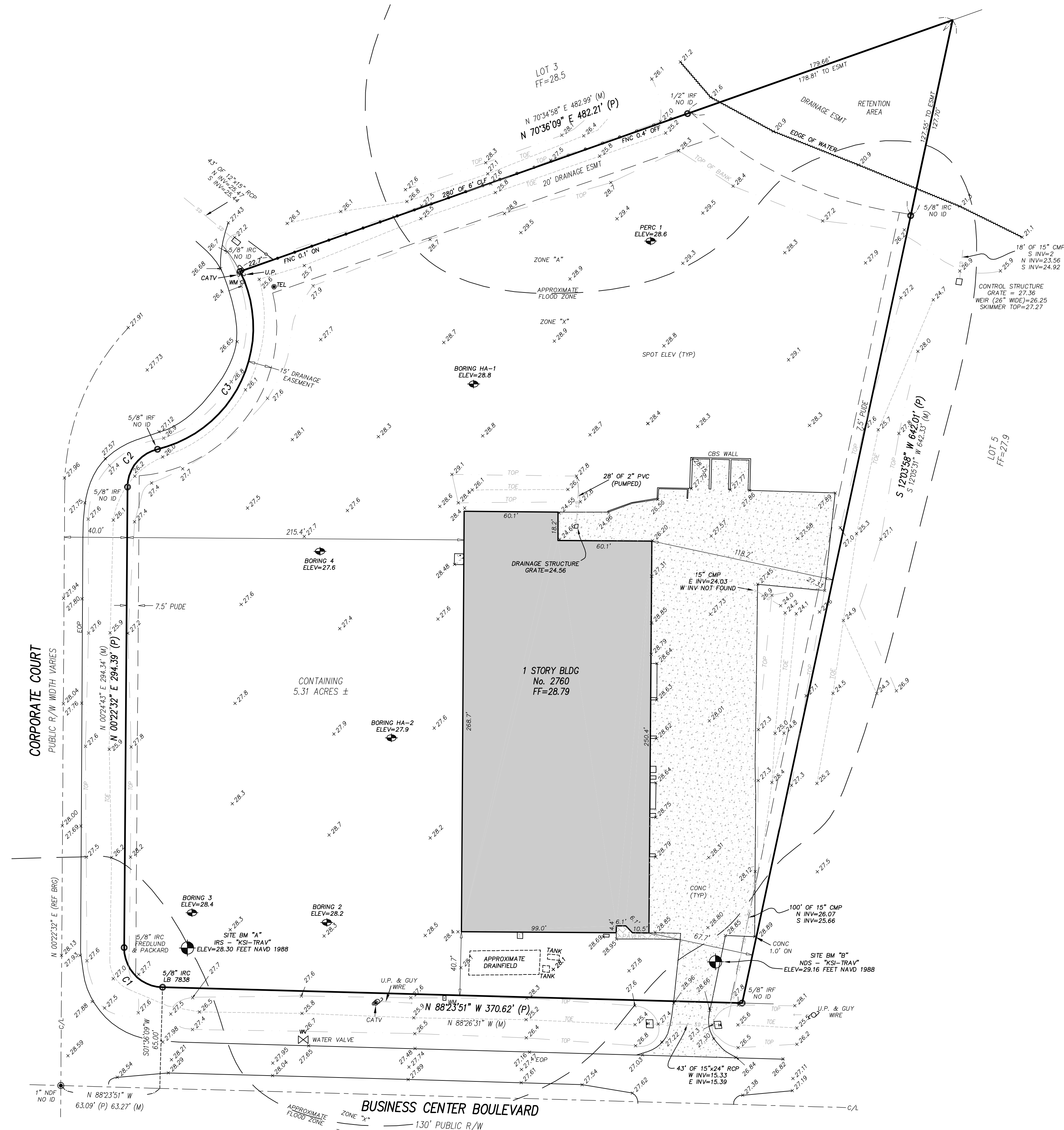
FRANK PLATA PE#41152

2760 BUSINESS CENTER WAREHOUSE DRIVEWAY ADDITION
 STANDARD COUNTY DETAILS
 MELBOURNE MELBOURNE BREVARD COUNTY

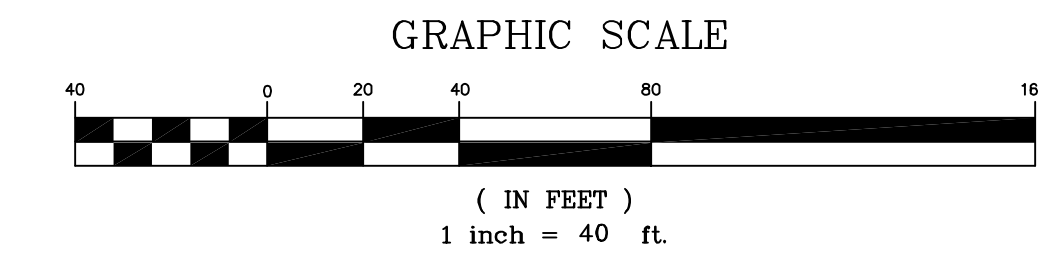
PE PLATA ENGINEERING, INC.
 ENGINEERS-PLANNERS-CONSTRUCTION MANAGEMENT
 EMAIL: MANAGER@PLATAENGINEERING.COM
 MAIL: PO BOX 361003, MELBOURNE, FL 32936-1003
 ESTABLISHED EXCELLENCE IN SERVICE TO FLORIDA SINCE 1990
 TELEPHONE (321) 259-7528 (259-PLAT)
 FACSIMILE (321) 259-7526 (259-PLAN)
 3700 N. HARBOR CITY BLVD., SUITE 2F, MELBOURNE, FL 32935
 PLATA PROPERTY OF PLATA ENGINEERING, INC.

2760 BUSINESS CENTER DRIVEWAY ADDITION PROJECT 2321910
C-9

MAP OF BOUNDARY AND TOPOGRAPHIC SURVEY



CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD BRG
C1(P)	38.73'	25.00'	88°46'23"	35.31'	N44°05'00"W
C1(M)	39.21'	25.00'	89°51'08"	35.31'	N44°05'00"W
C2(P)	33.26'	25.00'	78°13'33"	30.84'	N38°34'28"E
C2(M)	33.27'	25.00'	78°09'30"	30.84'	N38°34'28"E
C3(P)	144.07'	80.00'	103°10'41"	125.28'	N24°53'51"E
C3(M)	143.91'	80.00'	103°10'09"	125.28'	N24°53'51"E



- LEGEND**
- A = ARC
 - A/C = AIR CONDITIONER
 - BFE = BASE FLOOD ELEVATION
 - BLDG = BUILDING
 - BLK = BLOCK
 - BM = BENCHMARK
 - BRC = BEARING
 - (C) = CALCULATED
 - CATV = CABLE TELEVISION
 - CBS = CONCRETE BLOCK STRUCTURE
 - CHD = CHORD
 - C/L = CENTERLINE
 - CLF = CHAIN LINK FENCE
 - CMF = CONCRETE MONUMENT FOUND
 - CMP = CORRUGATED METAL PIPE
 - CONC = CONCRETE
 - COR = CORNER
 - (D) = DEED
 - DB = DEED BOOK
 - DA = DELTA ANGLE
 - ELEC = ELECTRIC
 - ELEV = ELEVATION
 - ENC = ENCROACHMENT
 - EOP = EDGE OF PAVEMENT
 - ESMT = EASEMENT
 - FB = FIELD BOOK
 - FEMA = FEDERAL EMERGENCY MANAGEMENT AGENCY
 - FF = FINISHED FLOOR
 - FNC = FENCE
 - FND = FOUND
 - FP&L = FLORIDA POWER & LIGHT COMPANY
 - ID = IDENTIFICATION
 - IPF = IRON PIPE FOUND
 - IRS = IRON ROD & CAP FOUND
 - IRF = IRON ROD FOUND
 - IRS = 5/8" IRON ROD SET "LB 7838"
 - LB = LICENSED BUSINESS NUMBER
 - LS = (RLS) = (PLS) REGISTERED OR PROFESSIONAL LAND SURVEYOR
 - (M) = MEASURED
 - NDF = NAIL & DISK FOUND
 - NDS = 1 1/4" NAIL & DISK SET "LB 7838"
 - NGVD = NATIONAL GEODETIC VERTICAL DATUM
 - No. = NUMBER
 - O/H = OVERHEAD
 - ORB = ORIGINAL RECORDS BOOK
 - O/S = OFFSET
 - (P) = PLAT
 - PB = PLAT BOOK
 - PC = POINT OF CURVATURE
 - PCC = POINT OF COMPOUND CURVATURE
 - PCP = PERMANENT CONTROL POINT
 - PI = POINT OF INTERSECTION
 - PLS = PROFESSIONAL LAND SURVEYOR
 - POB = POINT OF BEGINNING
 - POC = POINT OF COMMENCEMENT
 - PRC = POINT OF REVERSE CURVATURE
 - PRM = PERMANENT REFERENCE MONUMENT
 - PSM = PROFESSIONAL SURVEYOR AND MAPPER
 - PT = POINT OF TANGENCY
 - PUE = PUBLIC UTILITY & DRAINAGE EASEMENT
 - PUE = PUBLIC UTILITY EASEMENT
 - R = RADIUS
 - REF = REFERENCE
 - RNG = RANGE
 - R/W = RIGHT OF WAY
 - SEC = SECTION
 - SFHA = SPECIAL FLOOD HAZARD AREAS
 - TEL = TELEPHONE RISER
 - TWP = TOWNSHIP
 - TYP = TYPICAL
 - UP = UTILITY POLE
 - WD = WOOD
 - WT-OR = 5/8" IRON ROD SET WITH CAP "WITNESS LB 7838"
 - WM = WATER METER
 - XCF = CROSS CUT FOUND

- NOTES:**
- BEARINGS BASED ON THE C/A BEING N 88°23'51" W AS PER PLAT (SEE SKETCH)
 - ELEVATIONS BASED ON BREVARD COUNTY BENCHMARK 430-06 BEING AT AN ELEVATION OF 30.251 FEET NAVD 1988.
 - FLOOD ZONE "X" & "A", MAP No. 1200900510H COMMUNITY No. 120092, JANUARY 29, 2021. FLOOD ZONE INFORMATION DEPICTED HEREON IS APPROXIMATE. FEMA RETAINS SOLE AUTHORITY REGARDING BOUNDARY AND EXTENT OF SFHA.
 - HORIZONTAL CLOSURE MEETS OR EXCEEDS THE ACCURACY REQUIREMENTS FOR SUBURBAN LAND AS PER FLORIDA STATUTE 51-17-6.003
 - BEARINGS, DISTANCES OR ANGLES SHOWN ARE THE SAME AS PLAT, DEED OR RECORD UNLESS SHOWN OTHERWISE.
 - NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY.
 - THE SURVEYOR HAS NOT LOCATED NOR ATTEMPTED TO LOCATE ANY UNDERGROUND UTILITIES, FOUNDATIONS, OR STRUCTURES OTHER THAN THOSE THAT MAY BE SHOWN HEREON.
 - ONLY BOUNDARY CORNER MONUMENTS AS SHOWN HEREON ARE TO BE USED FOR THE LOCATION AND CONSTRUCTION OF IMPROVEMENTS.
 - UNLESS OTHERWISE INDICATED THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF A TITLE SEARCH OR ATTORNEY'S TITLE OPINION.

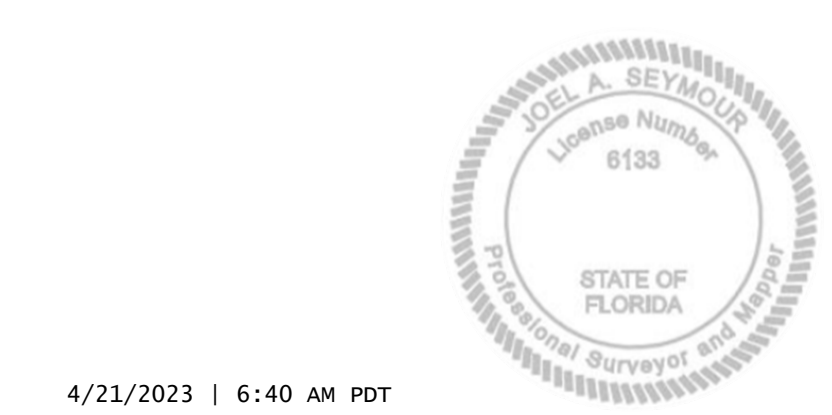
CERTIFIED TO:
KURT WILSON

BOUNDARY AND TOPOGRAPHIC	DATE: 4/19/23	JOB NO. 41861
		WICKHAM/L4

Kane Surveying, Inc.
FLORIDA LICENSED BUSINESS No. LB 7838
505 DISTRIBUTION DRIVE
MELBOURNE, FLORIDA 32904
(321) 676-0427
FAX (321) 984-1448

LEGAL DESCRIPTION:
LOT 4, WICKHAM ROAD BUSINESS CENTER NORTH, PHASE 1, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 31, PAGE 7, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA

SHEET C-10
2760 BUSINESS CENTER WAREHOUSE
DRIVEWAY ADDITION



4/21/2023 | 6:40 AM PDT

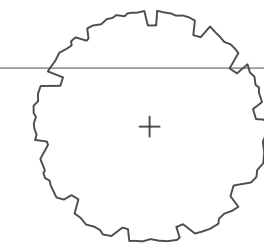
CERTIFICATION:
I HEREBY CERTIFY THAT THE ATTACHED SURVEY WAS DONE UNDER MY DIRECTION AND MEETS THE STANDARDS AND PRACTICE SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 53-17 FLORIDA ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027 FLORIDA STATUTES.

Joel Seymour DATE: 4/21/23
JOEL A. SEYMOUR PROFESSIONAL LAND SURVEYOR AND MAPPER
STATE OF FLORIDA NO. LS 6133

DRAWN BY: JIL SCALE 1 INCH = 40 FEET

Plant Key

TREES



LIVE OAK



LONGLEAF PINE

SHRUBS



Firebush



Beautyberry



Coontie



Rusty Lyonia



Cocoplum

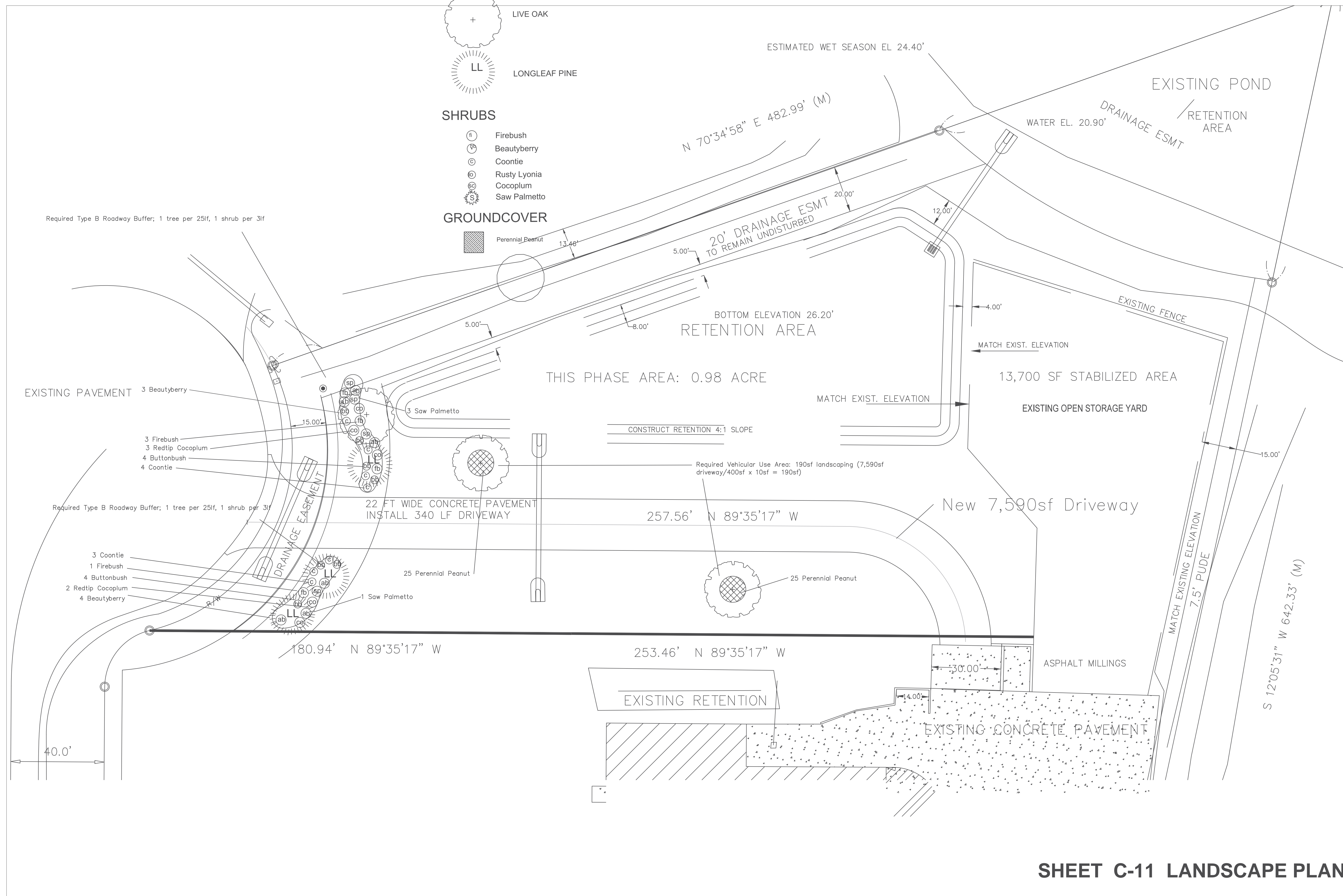


Saw Palmetto

GROUND COVER



Perennial Peanut



Required Type B Roadway Buffer; 1 tree per 25lf, 1 shrub per 3lf

Required Type B Roadway Buffer; 1 tree per 25lf, 1 shrub per 3lf

Required Vehicular Use Area: 190sf landscaping (7,590sf driveway/400sf x 10sf = 190sf)

SHEET C-11 LANDSCAPE PLAN

LP-1 Landscape Plan,
LP-2 Landscape Details,
LP-3 Technical Specs

Sec:	
Twp:	
Rng:	
Design:	K.BURSON
Drawn:	K.BURSON
Checked:	F. PLATA
Revisions:	
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SECTION 02900 - LANDSCAPE WORK

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

DESCRIPTION OF WORK

This Section includes provisions for the following items: Trees, Shrubs, Plants, Ground cover, Lawns, Soil amendments, Initial maintenance of landscape materials.

Related Sections: The following sections contain requirements that relate to this Section. Underground sprinkler system is specified in Division 2 Section, "Underground Irrigation System."

QUALITY ASSURANCE

Subcontract landscape work to a single firm licensed, insured and specializing in landscape installation. A minimum of five years experience or project contracts similar in scope and size is required.

Source Quality Control

General: Ship landscape materials with certificates of inspection required by governing authorities. Comply with regulations applicable to landscape materials.

Do not make substitutions. If specified landscape material is not obtainable, recommendations for substitutions/changes to an approved landscape plant should be made through the landscape architect to the city of Titusville for approval, prior to installation.

Analysis and Standards: Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.

Topsoil: Before delivery of topsoil, furnish Owner with written statement giving location of properties from which topsoil is to be obtained, names and addresses of owners, depth to be stripped and crops grown during past 2 years.

Palms, Trees, Shrubs and Plants: Provide palms, trees, shrubs and plants of quantity, size, genus, species and variety shown and scheduled for landscape work and complying with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock".

Label at least one tree and one shrub of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name.

Inspection: The Owner will inspect palms, trees and shrubs either at place of growth or at site before planting, for compliance with requirements for variety, size and quality. Owner reserves right to further inspect trees and shrubs for size and condition of balls and root systems, insects, injuries and latent defects and to reject unsatisfactory or defective material at any time during progress of work.

SUBMITTALS

General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

Plant and Material Certifications:

Certificates of inspection as required by governmental authorities. Manufacturer's or vendor's certified analysis for soil amendments and fertilizer materials. Label data substantiating that plants, trees, shrubs and planting materials comply with specified requirements.

Maintenance Instructions: Typewritten instructions recommending procedures to be established by Owner for maintenance of landscape work for one full year. Submit prior to expiration of required maintenance period(s).

Soils testing: Complete testing of site soils after earthwork is complete is to be performed by the landscape contractor. A certified lab report is to be provided to the client and to the landscape architect to determine soil amendments and adjustments.

DELIVERY, STORAGE AND HANDLING

Package Materials: Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery, and while stored at the site.

Soil: Time delivery so that sod will be placed within 24 hours after stripping. Protect sod against drying and breaking of rolled strips.

Palms, Trees, Shrubs: Do not prune prior to delivery unless otherwise approved by Architect. Do not bend or bind-tie trees or shrubs in such manner as to damage bark, break branches or destroy natural shape.

Deliver palms, trees, shrubs after preparations for planting have been completed and plant immediately. If planting is delayed more than 6 hours after delivery, set palms, trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.

Do not remove container grown stock from containers until planting time.

JOB CONDITIONS:

Utilities: Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.

Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Architect before planting.

SEQUENCING AND SCHEDULING

Planting Time: Proceed with, and complete landscape work as rapidly as portions of site become available.

Coordination with Lawns: Plant trees and shrubs after final grades are established and prior to planting of lawns, unless otherwise acceptable to Owner. If planting of trees and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.

SPECIAL PROJECT WARRANTY

Warranty lawns through specified lawn maintenance period, and until final acceptance. Warranty for one year. Warranty palms, trees, shrubs through specified maintenance period, and until final acceptance. Warranty for one year.

Remove and replace trees, shrubs, or other plants found to be dead or in unhealthy condition within 30 days after written notification by the owner during warranty period. Replace trees and shrubs which are in doubtful condition at end of warranty period; unless, in opinion of owner, it is advisable to extend warranty period for a full growing season.

Another inspection will be conducted at end of extended warranty period, if any, to determine acceptance or rejection. Only one replacement (per tree, shrub or plant) will be required at end of warranty period, except for losses or replacements due to failure to comply with specified requirements.

Remove and replace trees, shrubs, or other plants found to be dead or in unhealthy condition within 30 days after written notification by the owner during warranty period. Replace trees and shrubs which are in doubtful condition at end of warranty period; unless, in opinion of owner, it is advisable to extend warranty period for a full growing season.

Another inspection will be conducted at end of extended warranty period, if any, to determine acceptance or rejection. Only one replacement (per tree, shrub or plant) will be required at end of warranty period, except for losses or replacements due to failure to comply with specified requirements.

PART 2 - PRODUCTS

TOPSOIL

Provide new topsoil if necessary, which is fertile, friable, natural loam, surface soil, free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 1" in any dimension, and other extraneous or toxic matter harmful to plant growth.

Obtain from naturally drained sources, and shall contain at least (60%) sixty percent organic matter. Acidity shall range from pH 5.5 to pH 6.5 inclusive. Do not deliver or use topsoil in muddy condition.

SOIL AMENDMENTS

The following are minimum specifications for soil amendments if such materials are found to be necessary in the manipulation of soil pH and fertilization.

Lime: Natural dolomitic limestone containing not less than 85% of total carbonates with a minimum of 30% magnesium carbonates, ground so that not less than 90% passes a 10-mesh sieve and not less than 50% passes a 100-mesh sieve.

Sulfur: Ferrous sulfate.

Peat Humus: FS Q-P-166 decomposed peat with no identifiable fibers and with pH range suitable for intended use.

Bonemeal: Commercial, raw, finely ground; 4% nitrogen and 20% phosphoric acid.

Sand: Clean, washed sand, free of toxic materials.

Perlite: Conforming to National Bureau of Standards PS 23.

Vermiculite: Horticultural grade, free of toxic substances.

Sawdust: Rotted sawdust, free of chips, stones, sticks, soil or toxic substances and with 7.5 lbs. nitrogen uniformly mixed into each cubic yard of sawdust.

Manure Compost: Well composted, unenriched stable or cattle manure containing not more than 50% by volume of straw, sawdust, hay or other bedding materials and containing no chemicals or ingredients harmful to plants.

MULCH

Organic mulch free from deleterious materials and suitable for top dressing of trees, shrubs or plants and consisting of the following: Premium Mini Pine Bark Nuggets or Clean Pine Straw.

FERTILIZER

For palms, trees, shrubs and other plant materials provide "Osmocote" Grace Sierra Ag tablets at installation as per manufacturer's specifications. These tablets must be provided for each and every plant in the manufacturer's specified quantities. Set plant material in planting hole, backfill w/ peat halfway up sides of ball then space Ag tablets equally around ball. Do not place tablets at bottom of hole.

PLANT MATERIALS

Quality: Provide palms, trees, shrubs and other plants of size, genus, species and variety shown and scheduled for landscape work and complying with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock"; Florida Grade #1 or better; according to Grades and Standards for Nursery Plants, State of Florida, Department of Agriculture.

Tallahassee, FL, free from plant diseases, insect pests, or their eggs, with healthy well-developed root systems; nursery grown, well-branched densely foliated and well proportioned. Provide trees with no scars and with good crotch character.

GRASS MATERIALS

Sod: Provide strongly rooted sod, not less than 2 years old, free of weeds and machine cut to pad thickness of 3/4", excluding top growth and thatch. Provide only sod capable of vigorous growth and development when planted (viable, not dormant).

Provide sod of uniform pad sizes with maximum 5% deviation in either length or width. Broken pads or pads with uneven ends will not be acceptable. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on upper 10% of pad will be rejected.

Provide the following in areas as specified on plans: St Augustine 'Floratan' sod. Argentine Bahia sod

GROUND COVER

Provide plants established and well-rooted in removable containers or integral peat pots and with not less than the minimum number and length of runners required by ANSI Z60.1 for the pot size shown or listed. No plants shall be loose in containers nor pot-bound.

MISCELLANEOUS LANDSCAPE MATERIALS

Peat Moss: Peat Moss shall be thoroughly pulverized Florida brown, low in content of woody material matter harmful to plant life. Peat Moss shall have a water absorbing capacity of 1100 to 2000 percent by weight.

Water: May be furnished by Owner. Hoses or other methods of transportation from hose bibs furnished by Contractor. Water shall be clean and free from deleterious material, suitable for drinking, and range from 50 degrees to 70 degrees Fahrenheit. No planting shall be done until the irrigation for the plants is operational.

Stakes and Guys: See detail on plan.

PART 3 - EXECUTION

PREPARATION

Prepare soils prior to any planting work. All soils for lawn and planting beds shall be brought to a well-draining and fertile condition prior to planting. Three inch depth of certified composted manure /bark shall be mixed into a depth of 6" throughout the landscape area to be planted in the soils. Gently lift and drop the existing soils with the compost to mix. Layout individual tree and shrub locations and areas for multiple plantings. Stake locations and outline areas and secure owner's acceptance before start of planting work.

Preparation for Planting Lawns: Loosen subgrade of lawn areas to a minimum depth of 4". Remove stones over 1" in any dimension and sticks, roots, rubbish and other extraneous matter. Limit preparation to areas which will be planted promptly after preparation.

Spread manure compost to a minimum depth of 3" to meet lines, grades and elevations shown, after light rolling and natural settlement. Work into top of loosened subgrade. Add specified soil amendments and mix thoroughly into upper 4" of topsoil.

Preparation of Unchanged Grades: Where lawns are to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for lawn planting as follows: Remove high areas and fill in depressions; Do not till soil. Maintain good soil texture.

Prior to preparation of unchanged areas, remove existing grass, vegetation and turf. Dispose of such material outside of Owner's property, do not turn over into soil being prepared for lawns.

Spread manure compost to a minimum depth of 1.5" to meet lines, grades and elevations shown, after light rolling and natural settlement. Work into top of loosened subgrade. Add specified soil amendments and mix thoroughly into upper 4" of topsoil.

Allow for sod thickness in areas to be sodded.

Fine grade lawn areas to a smooth, even surface with loose, uniformly fine texture. Roll, rake and drag lawn areas, remove ridges and fill depressions, as required to meet finish grades. Limit fine grading to areas which can be planted immediately after grading.

Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition. Restore lawn areas to specified condition if eroded or otherwise disturbed after fine grading and prior to planting.

Preparation of Planting Beds: Loosen subgrade of planting bed areas to a minimum depth of 6". Remove stones over 1-1/2" in any dimension, and sticks, roots, rubbish and other extraneous matter. Remove all roots from pre-existing weeds and/or grass. Do not till or overwork soils. Maintain good soil texture. Apply a 4" depth of Manure Compost and lightly mix to 6" depth. In addition, annual beds shall receive also a 3" layer of new perlite/peat moss/manure compost mix, worked in to a 6" depth.

Excavation for Palms, Trees, Shrubs and Groundcover: Excavate pits, beds and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation.

For Palms and Trees make excavations twice as wide as the ball diameter and equal to the ball depth, plus allowance for setting of ball on a layer of compacted backfill. Set trees so that the top of the root ball is 3" above finish grade. Set shrubs so that the top of the root ball is 1" above finish grade (to allow for settling).

Subsoil removed from planting excavations should be mixed with the pre-mixed composted surface soils before being placed back into the planting hole. Fill excavations for Palms, Trees, Shrubs and Groundcover with water and continue to fill as hole is being backfilled.

PLANTING

Planting Palms, Trees, Shrubs and Groundcover: Set palms, trees and shrubs on layer of compacted planting soil mixture, plumb and in center of pit or trench with top of ball 3" or 1" above adjacent finished landscape grades. When set, place additional pre-mixed composted backfill around base and sides of ball, apply fertilizer tablets halfway up and work each layer to settle backfill 50/50 mix and eliminate voids and air pockets. Resist watering until no more is absorbed. Water again after placing final layer of backfill. Backfill shall be watered 12" at a time. Dish top of backfill to allow for water holding. For palms other than Cabbage Palms, mix in 2 cf of cypress mulch into the top 12" of backfill 50/50 mix.

Mulch pits, trenches and planted areas. Provide not less than the following thickness of mulch and work into the top of backfill and finish level with adjacent finish grades: Provide 3" thickness of mulch.

Unless otherwise directed by landscape architect, do not cut tree leaders, and remove only injured or dead branches from flowering trees, if any. Prune shrubs to retain natural character. Remove and replace excessively pruned or misformed stock resulting from improper pruning.

Guy and stake trees immediately after planting, as indicated. Within 2 days of planting, cover all Palm, Tree, Shrub and Groundcover areas with a 3" layer of mulch.

All trees should be planted either completely within or outside planting beds. Any trees outside planting beds should not be planted any closer than 6 feet to the bed line to allow for mowing accessibility. All trees in sod areas shall have a uniform 5' diameter mulch ring. Anything less than a perfectly circular ring centered by the tree will be unacceptable.

SODDING NEW LAWNS

Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to, subgrade or sod. Tamp or roll lightly to ensure contact with subgrade. Work sifted soil into minor cracks between pieces of sod, remove excess to avoid smothering of adjacent grass. Anchor sod on slopes with wood pegs to prevent slippage. Water sod thoroughly with a fine spray immediately after planting.

PLANTING GROUND COVER

Space plants as shown or scheduled. Dig holes large enough to allow for spreading of roots and backfill with pre-mixed composted soils. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover crowns of plants with wet soils. Mulch areas between ground cover plants; place not less than 3" thick.

MAINTENANCE

Begin maintenance immediately after planting. Maintain palms, trees, shrubs and other plants by pruning, cultivating and weeding as required for healthy growth. Restore planting saucers. Tighten and repair stake and guy supports and reset trees and shrubs to proper grades or vertical position as required. Spray as required to keep trees and shrubs free of insects and disease.

Maintain trees, shrubs and other plants until final acceptance but in no case less than following period: 90 days after substantial completion of planting.

Maintain lawns for not less than the period stated below, and for as long as required to establish an acceptable lawn; not less than 4 weeks after substantial completion. Maintain lawns by watering, weeding, mowing, replanting as required to establish a smooth, acceptable lawn, free of eroded or bare areas. (Not applicable) Do not exceed fertilization rates as specified in this document.

CLEANUP AND PROTECTION

During landscape work, keep pavements clean and work area in an orderly condition. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed.

INSPECTION AND ACCEPTANCE

When landscape work is completed, including maintenance, landscape architect will upon request, make an inspection to determine acceptability. Landscape work may be inspected for acceptance in parts agreeable to landscape architect, provided work offered for inspection is complete, including maintenance. When inspected landscape work does not comply with requirements, replace rejected work and continue specified maintenance until reinspected by landscape architect and found to be acceptable.

SECTION 02810 - IRRIGATION PIPING AND ACCESSORIES

PART 1 GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

DESCRIPTION OF WORK:

Extent of landscape irrigation work is shown on drawings and in schedules.

Install underground irrigation system as specified. The work includes but is not limited to:

- 1. Automatic irrigation system including piping, fittings, sprinkler heads, bubblers and accessories, necessary for full and adequate coverage.
2. Valves and fittings.
3. Controllers, control wire and surge protection.
4. Testing.
5. Excavating and backfilling irrigation system.
6. Associated plumbing and all accessories to complete the job.

QUALITY ASSURANCE

Provide only new materials, without flaws or defects and of the highest quality of their specified class and kind.

Furnish warranties in WRITING certifying that the quality and workmanship of all materials and installation furnished are in accordance with these specifications and with the original manufacturer's warranties.

Qualifications of Installers: At least one (1) person, acceptable to all parties involved on the job, should be present at all times during the execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the material manufacturer's recommended methods of installation, and who should direct all work performed in this section.

SCHEDULING

Installation shall be coordinated with all other trades working on site.

SUBMITTALS

Submit manufacturer's operating instructions to Owner at least 3 days prior to Final Completion for all products incorporated into the irrigation system.

Provide written recommended operating instructions and maintenance schedules for the system including application rates and times to apply given depths of application for each zone and which zone covers each area.

Catalog Sheets: Submit catalog sheets or copies thereof prior to commencement of work for items on the list of materials.

Record Irrigation Drawings: Contractor shall furnish Record Drawings of the complete irrigation system in accordance with the General and Special Conditions. Procedure from the Owner full-sized sepias of Contract Drawings. Construction drawings shall be on the construction site at all times while the irrigation system is being installed. Contractor shall make a daily record of all work installed during each day. Actual location of valves and quick couplers and all irrigation and drainage piping shall be shown on the prints by dimensions from easily identified permanent features, such as buildings, curbs, fences, walks or property lines. Drawings shall show approved substitutions, if any, of material including manufacturer's name and catalogue number. The drawings shall be to scale and all dimensions shall be recorded in a neat, orderly and legible way. The record sepa shall be turned over to the Owner at or before the final acceptance of the project.

Testing and Inspection Certifications: Provide all required testing and inspection certifications to the Owner with final application for payment.

GUARANTEE

Contractor shall assume full responsibility for the proper installation of the system and full coverage.

Irrigation system components shall be specified and installed only within the capabilities and limitations stated by the manufacturer, by these standards, and any applicable local codes.

Contractor shall make all necessary, reasonable efforts to handle any warranty claims within 15 days of the receipt of the claim. Contractor shall guarantee the installation workmanship for a period of one year from Final Completion.

PART 2 - PRODUCTS

MATERIALS

PVC Pipe and Fittings: All PVC pipe installed on pressure side of valves shall be ASTM D-2241 Class 200 or ASTM D-1785, Schedule 40. All other PVC pipe shall be ASTM D-2241 Class 200 gasketed bell pressure pipe.

PVC pipe should comply with one of the following standards: ASTM D-1785, ASTM D-2241, or AWWA C-900. SDR-PR pipe shall have a minimum wall thickness as required by SDR-26.

All solvent-weld PVC fittings shall, at minimum, meet the requirements of Schedule 40 as set forth in ASTM D-2464. PVC gasketed fittings shall conform to ASTM D-3139. Gaskets shall conform to ASTM F-477.

PVC flexible pipe should be pressure rated as described in ASTM D-2740 with standard outside diameters compatible with PVC IPS solvent-weld fittings.

Perform all solvent-weld connections in accordance with ASTM D-2855. Valve Boxes: Use American or Ametek VA-10 valve boxes that are constructed to withstand traffic loads common to the area in which they are installed. They should be sized to allow maintenance of the enclosed valves without excavation.

Each valve box should be permanently labeled to identify its contents.

Low Voltage Wiring: All low voltage wire which is directly buried must be UL listed, direct burial wire. Wire not approved for burial must be installed in waterproof conduits. All wire shall be a minimum of 14 gauge. Connections are to be made in a water/tight using devices specifically designed for direct burial. 3M "dry-splice" or approved equal.

Irrigation Controllers: All irrigation controllers shall be UL listed and properly grounded in accordance with manufacturer's recommendations.

The controller housing or enclosure shall protect the controller from the hazards of the environment in which it is installed.

Install per local code and manufacturer's latest printed instructions. Connect remote control valves to controller in clockwise sequence to correspond with station setting beginning with Stations 1,2,3, etc..

Affix controller name (i.e. "Controller A") on inside of controller cabinet door with letters minimum of one (1") inch high. Affix a non-fading copy of irrigation diagram to cabinet door below controller name. Irrigation diagram to be sealed between two sheets of 20 mil (minimum) plastic. Irrigation diagram to be a reduced copy of the as-built drawing and shall clearly indicate station numbers, valve sizes and type of planting (i.e. shrubs, groundcover, or turf) irrigated.

PVC Flex pipe connections shall be Spears Heavy Wall Flexible PVC Pipe or approved equal, average length of each connection is referred to on the drawings. Special flex-cement shall be utilized for making these connections.

Gate Valves shall conform to Federal Specifications WWV 54, Type 1, Class A, with all bronze body, non-rising stem. Extra stock should be provided in addition to the installed system providing the Owner with the following: Two (2) sprinkler heads of each size and type.

Two (2) valve keys for operating valves. Two (2) wrenches for each type of head. Two (2) wrenches for removing and installing each head type.

IRRIGATION PIPING AND ACCESSORIES 02810 - 1

PART 3 - EXECUTION

PRE-INSTALLATION:

Obtain location of existing utilities from municipal and private utilities and from Owner. Obtain all necessary permits. Inspect the site for existing conditions that will affect the irrigation system design or installation, and develop a strategy to minimize disturbance of existing structures and landscape.

Exercise care in digging and other work so as not to damage existing work including underground cables and pipes. Any pavement cut, broken or undermined during installation of the irrigation system shall be fully replaced with identical materials so that there is no visible indication of patching or repaving.

Damaged Utility: Should the contractor damage any utility he/she shall notify the respective utility company and shall bear the full cost accrued by the utility company (labor and material plus damages if applicable) for its repair. Any objectionable materials such as old concrete, bricks, or other debris encountered during the installation operations shall be removed from the site.

INSTALLATION

Field Installation: Flag the location of all sprinklers, valves, controllers, source of water and electrical components in the field prior to installation. Conduct all necessary excavation for the proper installation of pipelines and accessories. After installation, backfill and compact the excavated soil to minimize post-construction settlement in the pipe trench. Dewater, shore and brace as needed to completely install the pipe.

Pipe shall be installed at sufficient depth below ground to protect it from hazards such as vehicular traffic. Depths of cover shall conform to SCS Code 430-DD, Water Conveyance, as follows: Vehicle Traffic Areas: Pipe Size(inches) Depth of Cover(inches)

1/2-2 1/2 24
3-5 24
6 and larger 30
Non-traffic and Non-Cultivated Areas: Pipe Size(inches) Depth of Cover(inches)

1/2-1 1/2 12
2-3 12
4-6 18
6 and larger 24

Make all pipe joints and connections according to manufacturer's recommendations. Pipe sleeves must be used to protect pipes or wires installed under pavement or roadways. Provide separate sleeving for piping and electrical wiring. Use pipe sleeves two pipe sizes larger than the carrier pipe or twice the diameter of the wire bundle to be placed under the paving or roadway, and extending a minimum of 2 feet beyond the paved area or as required by FDOT (if required). Use sleeve pipe with a wall thickness at least equal to the thickness of schedule 40. Jack and bore piping under traffic areas shall be encased in full lengths of conduit to avoid placement of joints under pavement. Proper backfill and compaction procedures should be followed.

All connections between plastic pipe and metal valves or steel pipe shall be made with screw fittings using plastic male adapters and a nonhardening pipe dope applied to male thread. Make-up with light wrench pressure. Steel pipe shall not be screwed into plastic fittings.

All fittings for 6" or 4" PVC mainline shall be HARCO ductile iron fittings. Thrustblocking: All 4" and larger piping is to have thrustblocking at all changes in size or direction. Bends, reducers, plugs, and the opposite side of tee branches all require thrustblocks.

The size of the thrustblock is determined by the working pressure, the size and type of fitting, and the soil conditions at the job site. To calculate the area of contact with the soil, follow these steps: Calculate the total thrust by selecting thrust/100 by size and type of fitting from table 1 and multiplying thrust/100 by system pressure divided by 100.

Divide the total thrust by the bearing capacity of the soil in excavation (from table 2) to determine the area (in square feet) of thrust block required to be in contact with the undisturbed soil.

All trenches that are to be opened during any particular day shall be closed and backfilled the same day or shall be adequately barricaded and marked to ensure protection and safety. Backfill shall be thoroughly compacted and evened off with adjacent soil level. Do all necessary excavations, backfilling and compaction required for complete installation of the system. Compaction shall be made to correct density of the material.

Control Valve Installation: Valve installation shall allow enough clearance for proper operation and maintenance. Automatic control valves installed underground shall be in a valve box.

Sprinkler Installation: On flat landscaped areas, install sprinkler plumb. In areas where they are installed on slopes, sprinklers may be tilted as required to prevent erosion. Install all sprinklers on firmy pipe. Sprinklers should be adjusted to avoid unnecessary discharge on pavements and structures. Adjust sprinklers so they do not water roads.

Provide a minimum separation of 12 inches between sprinklers and pavement. Provide a minimum separation of 12 inches between sprinklers and buildings and other vertical structures. Piping must be thoroughly flushed before installation of sprinkler nozzles.

Low Voltage Wire Installation: Install low voltage wire (30 volts or less) with a minimum depth of cover of 12 inches. Install wire that is not UL listed for direct burial in a water-tight conduit. Use wire connectors that are approved for direct burial. All wire connections must be made with waterproof wire connector- 3M "Dry Splice" or equivalent.

Provide a sufficient length of wire at each connection to allow for thermal expansion/shrinkage. As a minimum, provide a 12 inch diameter loop at all splices and connections. Install all above ground wire runs and wire entries into buildings in electrical conduit. Provide common wires with a different color than the power wires (white shall be used for common wires).

TESTING AND INSPECTIONS: After all welded joints have cured at least 24 hours, flush out lines and hydrostatically test all mainline at a pressure of 100 psi. Pressure shall be maintained on pipe for not less than two hours. Should any leaks be found, the line shall be repaired and the line retested until satisfactory.

Final Inspection: Demonstrate the entire system proving that all valves are properly balanced, that all heads are properly adjusted for radius and arc of coverage, that the system is workable, clean and efficient. The Maintenance Period shall begin at Final Acceptance and shall continue for 90 days.

MAINTENANCE: MAINTENANCE responsibility shall