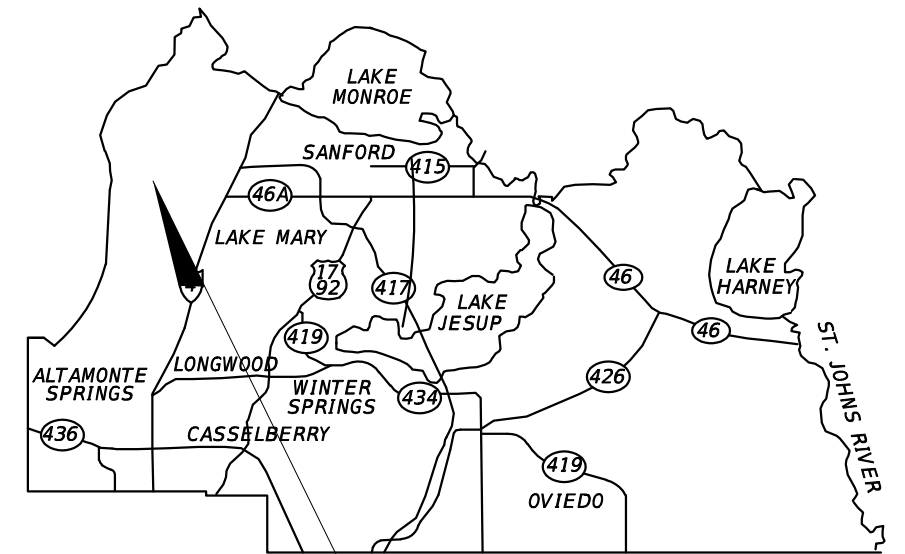


DRAINAGE AND SIDEWALK PLANS

CONTRACT PLANS

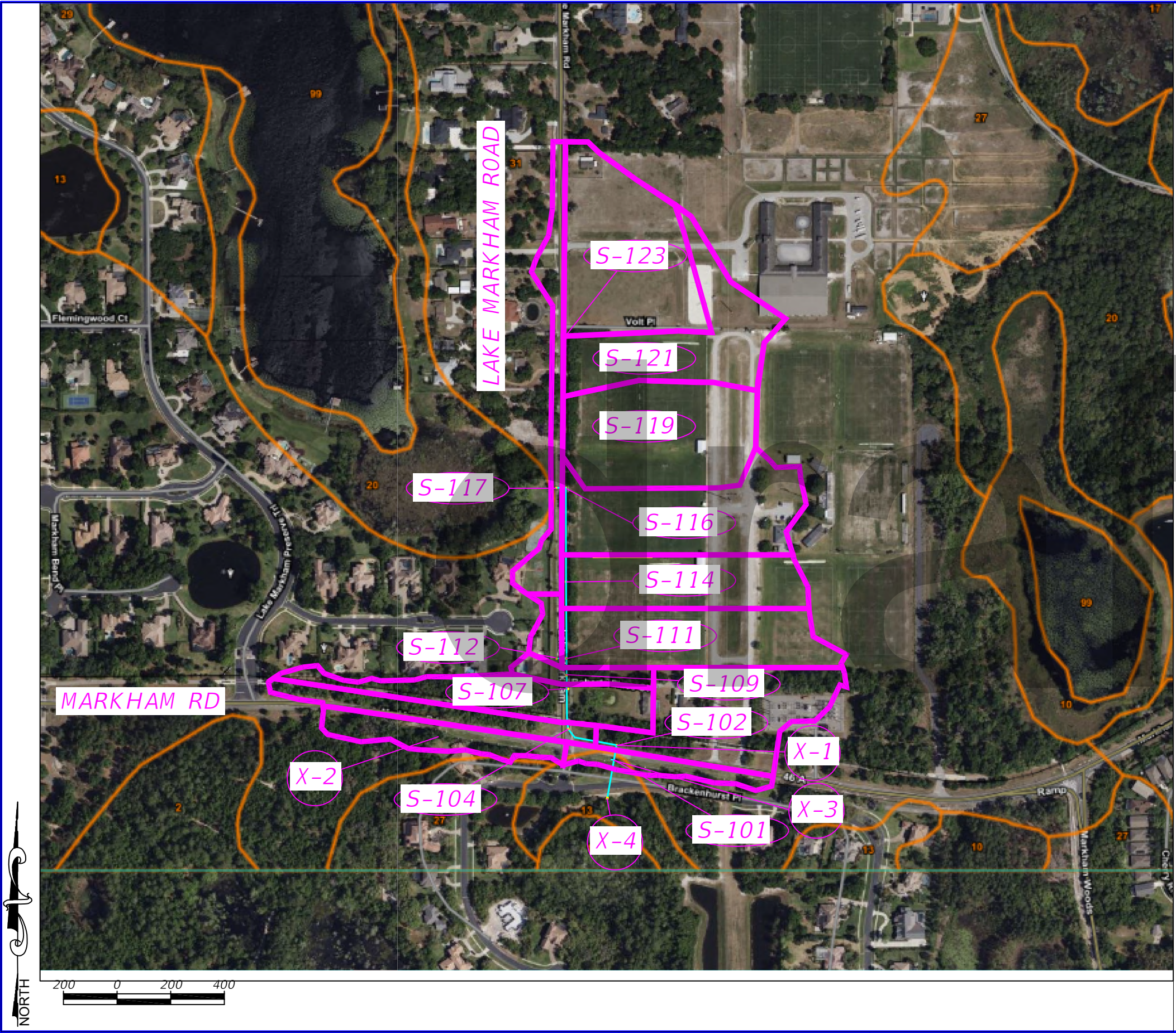


<i>FISCAL YEAR</i>	<i>SHEET NO.</i>
<i>22</i>	<i>1</i>

PAY ITEM NOTES

SUMMARY OF PAY ITEMS			
PAY ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
101-1	MOBILIZATION	LS	
102-1	MAINTENANCE OF TRAFFIC	LS	
102-99	CHANGEABLE VARIABLE MESSAGE SIGN (TEMPORARY)	ED	
104-10-3	SEDIMENT BARRIER	LF	
104-11	FLOATING TURBIDITY BARRIER	LF	
104-18	INLET PROTECTION SYSTEM	EA	
110-1-1	CLEARING AND GRUBBING	LS	
110-4-10	REMOVAL OF EXISTING CONCRETE	SY	
120-1	REGULAR EXCAVATION	CY	
120-6	EMBANKMENT	CY	
160-4	TYPE B STABILIZATION, 8"	SY	
285-704	OPTIONAL BASE COURSE, GROUP 04	SY	
327-70-6	MILLING EXISTING ASPHALT PAVEMENT, 1.5" AVG. DEPTH	SY	
334-1-12	SUPER PAVE ASPHALTIC CONC., TRAFFIC B, 2", PG 76-22	TN	
337-7-81	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC B, FC-12.5, 1.5", PG 76-22	TN	
425-1-521	INLET, DITCH BOTTOM, TYPE C, <10'	EA	
425-1-541	INLET, DITCH BOTTOM, TYPE D, <10'	EA	
425-1-543	INLET, DITCH BOTTOM, TYPE D, J BOTTOM,<10'	EA	
425-1-543A	INLET, DITCH BOTTOM, MODIFIED TYPE D, J BOTTOM,<10'	EA	
425-2-61	MANHOLE, P-8, <10'	EA	
430-175-118	PIPE CULVERT, OPT. MATERIAL (RCP ONLY), ROUND, 18" S/CD	LF	
430-175-124	PIPE CULVERT, OPT. MATERIAL (RCP ONLY), ROUND, 24" S/CD	LF	
430-175-130	PIPE CULVERT, OPT. MATERIAL (RCP ONLY), ROUND, 30" S/CD	LF	
430-982-133	MITERED END SECTION, OPT. MATERIAL (RCP ONLY), ROUND, 30"	LF	
520-2-4	CONCRETE CURB, TYPE D	LF	
522-1	CONCRETE SIDEWALK, 4" THICK	SY	
522-2	CONCRETE DRIVEWAY, 6" THICK	SY	
527-2	DETECTABLE WARNING (PREFORMED THERMOPLASTIC)	SF	
550-10-228	FENCING (TYPE B)(5.1'-6.0' HEIGHT)(RESET EXISTING)	LF	
570-1-2	PERFORMANCE TURF, SOD	SY	
700-1-50	SINGLE POST SIGN, RELOCATE	AS	

- 102-1 INCLUDES ALL ITEMS AND LABOR NECESSARY FOR THE IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN (WITH EXCEPTION OF VARIABLE MESSAGE SIGNS) THE CONTRACTOR SHALL NOTIFY SURROUNDING RESIDENCES AND BUSINESSES OF THE CONSTRUCTION BY FLYER PROVIDED BY SEMINOLE COUNTY.
- 102-1 INCLUDES THE COST OF THE TRAFFIC CONTROL PLAN. THE TRAFFIC CONTROL / MOT PLAN SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THE TRAFFIC CONTROL PLAN SHALL BE APPROVED BY SEMINOLE COUNTY PRIOR TO BEGINNING CONSTRUCTION.
- 102-99 INCLUDES COST FOR 2 PCMS TO BE SET-UP 7 DAYS PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE LOCATION WITH SEMINOLE COUNTY PROJECT MANAGER.
- 104-1 INCLUDES THE COST OF ALL ITEMS, NOT LISTED SEPARATELY, NEEDED FOR EROSION CONTROL. REFER TO GENERAL NOTES SHEET, EROSION CONTROL NOTES AND STORMWATER POLLUTION PREVENTION PLAN.
- 110-1-1 INCLUDES THE COST OF REMOVAL AND DISPOSAL OF ALL OBSTRUCTIONS, SUCH AS ALL VEGETATION, DEBRIS, TRIMMING OF TREES AND SHRUBS, ROOT REMOVAL, EXISTING SIDEWALK, CURB AND GUTTER, WALL, FENCES, DRAIN FIELDS PIPE, PAVEMENT, AND OTHER ITEMS, IN ORDER TO CONSTRUCT THE PROJECT. NO TREES ARE TO BE REMOVED WITHOUT THE APPROVAL FROM THE SEMINOLE COUNTY PROJECT MANAGER. ALSO INCLUDES THE CUTS FOR SAWCUTTING EXISTING PAVEMENT OR CONCRETE REMOVAL.
- 110-1-1 INCLUDES THE COST OF IRRIGATION LINES DAMAGED DURING CONSTRUCTION ARE TO BE CAPPED IMMEDIATELY AND REPORTED TO THE SEMINOLE COUNTY ENGINEER INSPECTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE ALL DAMAGED IRRIGATION COMPONENTS TO THE PRE-CONSTRUCTION CONDITION AT HIS EXPENSE PRIOR TO COMPLETION OF THE PROJECT.
- 110-1-1 INCLUDES THE COST EXISTING PIPE REMOVAL
- 110-4-10 INCLUDES THE COST OF EXISTING CONCRETE SIDEWALK AND CURB REMOVAL
- 120-6 UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE CONSTRUCTION AREAS AND BACK FILLED WITH SUITABLE MATERIALS. UNSUITABLE MATERIALS SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR. THIS PAY ITEM INCLUDES THIS COST.
- 425-1-543A INCLUDES THE COST OF THE TOP OF THE BACK OF SIDEWALK DRAINAGE AND ITS RAILING FOR S-106
- 430-175-130 INCLUDES THE COST OF FURNISHING AND INSTALLING THE CONCRETE JACKETS / COLLARS
- 430-175-XXX INCLUDES THE COST OF ANY DEWATERING, PROVIDING, TEMPORARY DRAINAGE, DIVERSION OF STORMWATER, COFFERDAMS, AND OTHER RELATED ACTIVITES NECESSARY FOR THE CONSTRUCTION OF THE PROJECT.
- 430-175-XXX INCLUDES THE COST OF PAVEMENT RESTORATION
- 522-1 INCLUDES THE COST OF WATER VALVE ADJUSTMENT AND OTHER UTILITY ADJUSTMENTS OR COORDINATION DUE TO SIDEWALK PLACEMENT. INCLUDES THE COST OF CURB RAMPS AND THICKENED EDGE FOR HANDRAIL. NO CURING COMPOUND SHALL BE APPLIED.
- 570-1-2 INCLUDES THE COST AND APPLICATION OF FERTILIZER AND WATER IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. TYPES OF SOD MAY VARY. CONTRACTOR TO MATCH EXISTING SOD.
- 700-1-50 INCLUDES THE COST OF NEW POST IF NECESSARY TO MEET THE STANDARD MOUNTING HEIGHT REQUIREMENTS



DRAINAGE AREA TABLE

DRAINAGE STRUCTURE	CONTRIBUTING DRAINAGE AREA (Ac)
S-123	6.61
S-121	4.81
S-119	6.11
S-117	2.45
S-116	5.54
S-114	4.14
S-112	0.57
S-111	4.94
S-109	0.82
S-107	3.42
S-104	1.98
S-102	5.34
S-101	1.12
X-2	2.00

SEE PLAN, PROFILE, AND
DRAINAGE STRUCTURE SHEETS
FOR PROPOSED STRUCTURE DATA

EXISTING DRAINAGE STRUCTURES

- X-1

Catch Basin
Top Elev. = 48.2'
S. Invert Elev. = 45.3'
- X-2

Catch Basin
Top Elev. = 48.4'
Invert Elev. = 43.1'
- X-3

Catch Basin
Top Elev. = 47.7'
N. Invert Elev. = 45.2'
S. Invert Elev. = 41.9'
W. Invert Elev. = 42.4'
- X-4

Mitered End Section (15")
Invert Elev. = 36.5"

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION




**SEMINOLE COUNTY
ENGINEERING DIVISION**
JEFFREY L. SLOMAN
P.E. No. 56160
100 East 1st. Street
Sanford, FL 32771

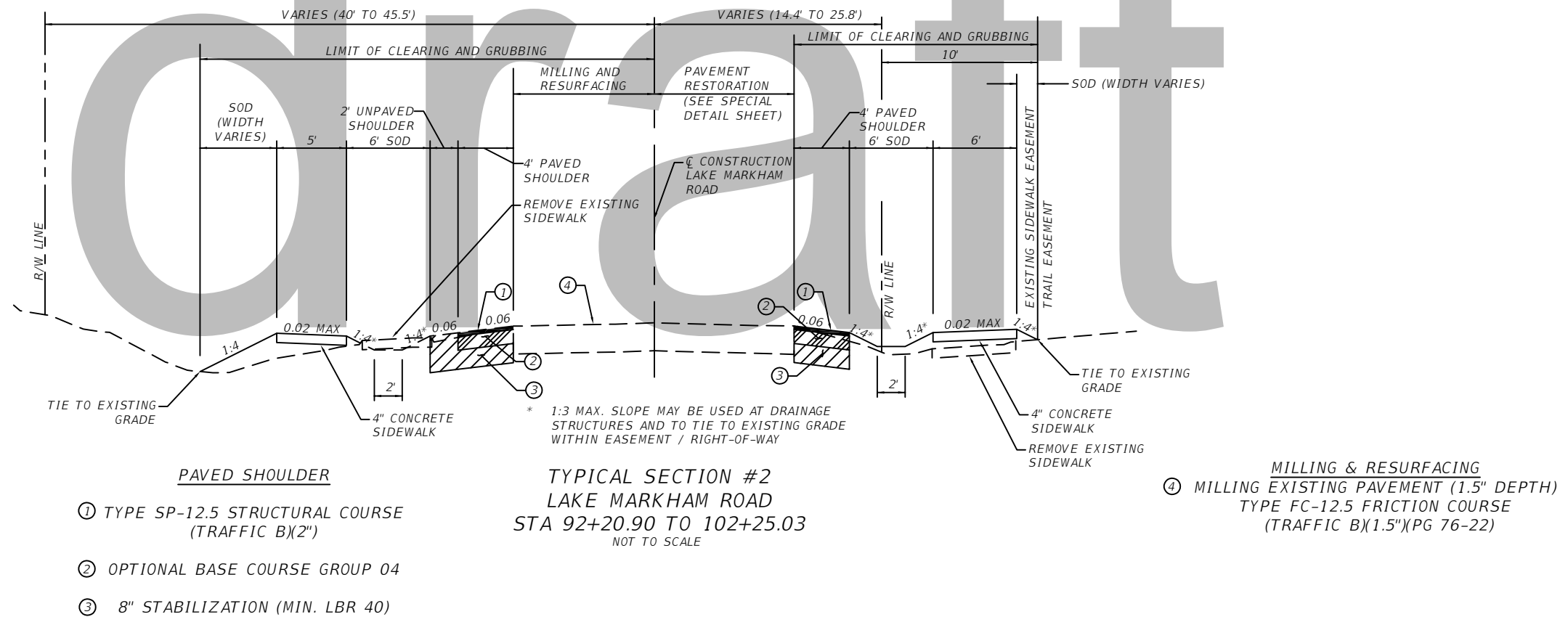
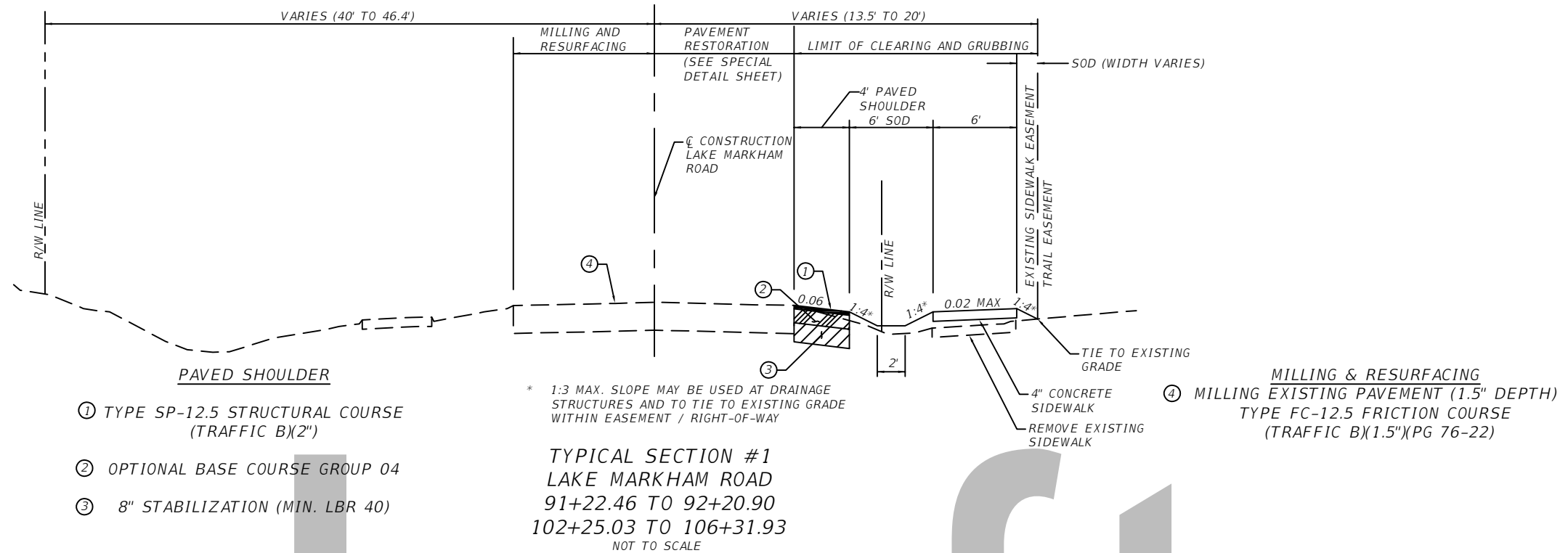
SEMINOLE COUNTY ENGINEERING DIVISION	
ROAD	COUNTY CIP No.
MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084


**PROPOSED CONDITION
DRAINAGE MAP**

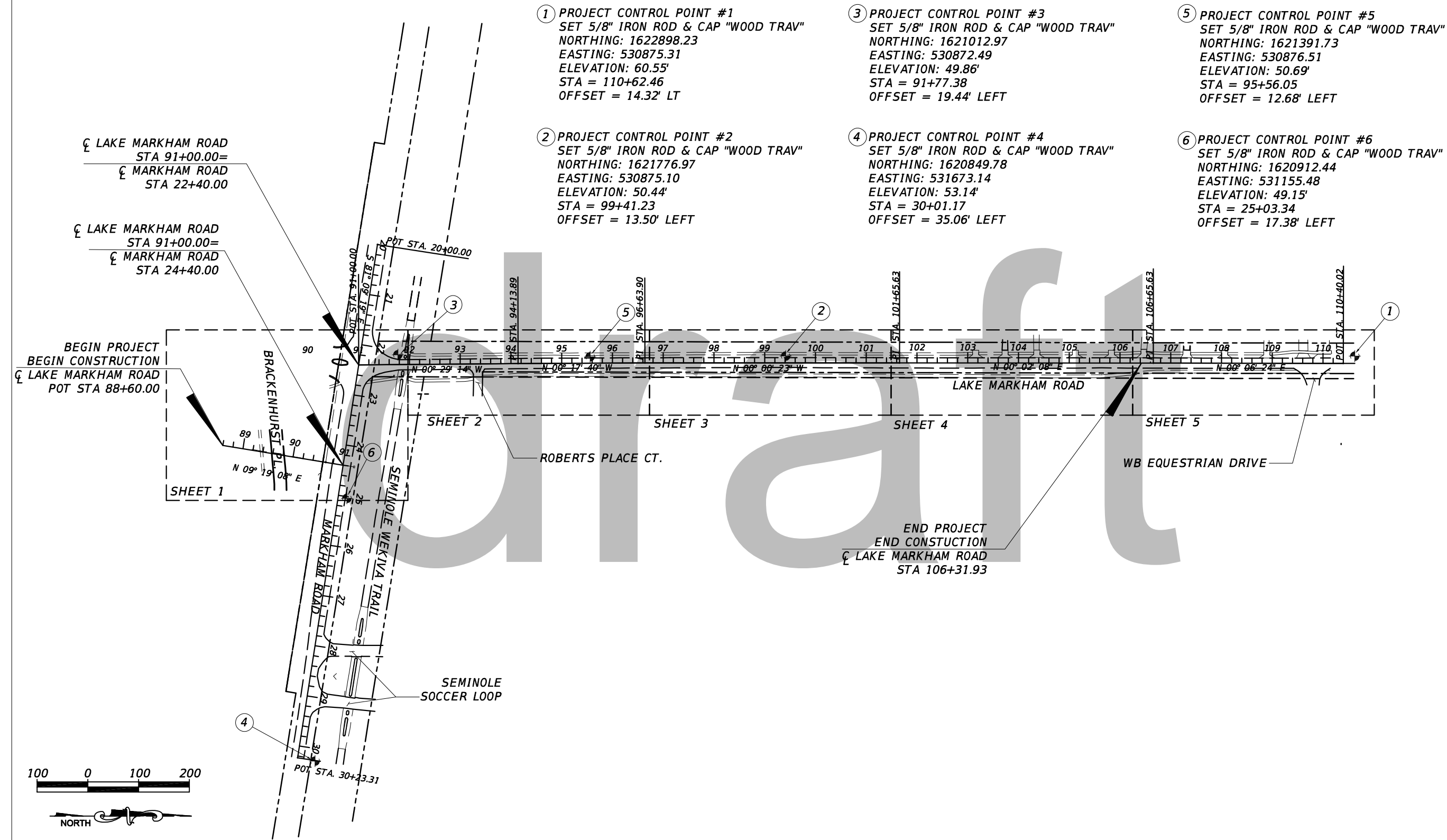
SHEET NO.
3


QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN OPTIONAL MATERIAL (RCP)					DITCH BOTTOM INLETS				MANHOLE	MES (OPTIONAL MATERIAL) RCP ONLY	REMARKS
											C	D	D (J BOT)	MOD D (J BOT)	P-8 (4' DIA.)		
								18"	24"	30"	<10'	<10'	<10'	<10'	<10'	30"	
P F	S-100	89+24.55	CL	MES												1	
P F	S-100A	89+51.72	CL	MH, PIPE	1					25					1		
P F	S-101	90+65.31	CL	INLET, PIPE	1					112		1					
P F	S-102	22+40	LT	INLET, PIPE	1			8		54			1				CONCRETE COLLAR
P F	S-103	22+82.35	LT	MH, PIPE	1					154			1				
P F	S-104	91+50.00	RT	INLET, PIPE	1					37			1				
P F	S-105	91+50.00	RT	MH, PIPE	1					14					1		
P F	S-106	93+00.00	RT	MH, PIPE	1					146					1		
P F	S-107	93+00.00	RT	INLET, PIPE	1				9					1			BACK OF SIDEWALK DRAINAGE
P F	S-108	93+56.95	RT	MH, PIPE	1					54					1		
P F	S-109	93+56.95	RT	INLET, PIPE	1				9			1					
P F	S-110	94+13.34	RT	MH, PIPE	1					53					1		
P F	S-111	94+13.34	RT	INLET, PIPE	1				9			1					
P F	S-112	94+13.34	LT	INLET, PIPE	1			21			1						
P F	S-113	97+00.00	RT	MH, PIPE	1					283					1		
P F	S-114	97+00.00	RT	INLET, PIPE	1				9			1					
P F	S-115	100+50.00	RT	MH, PIPE	1					346					1		
P F	S-116	100+50.00	RT	INLET, PIPE	1				9			1					
P F	S-117	100+50.00	LT	INLET, PIPE	1				21		1						
P F	S-118	101+88.67	RT	MH, PIPE	1					135					1		
P F	S-119	101+88.67	RT	INLET, PIPE	1				9			1					
P F	S-120	104+00.00	RT	MH, PIPE	1					208					1		
P F	S-121	104+00.00	RT	INLET, PIPE	1				9			1					
P F	S-122	106+20.00	RT	MH, PIPE	1					216					1		
P F	S-123	106+20.00	RT	INLET, PIPE	1				9			1					
				SUMMARY				29	93	1,837	2	8	3	1	9	1	
NOTE: MODIFIED TYPE 'D' DBI (J BOTTOM) INCLUDES BACK OF SIDEWALK DRAINAGE																	

REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		SUMMARY OF DRAINAGE STRUCTURES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					4
					ROAD	COUNTY CIP No.		
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		



REVISIONS				<div>SEMINOLE COUNTY ENGINEERING DIVISION</div> <div>  JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771 </div>	SEMINOLE COUNTY ENGINEERING DIVISION		<div>TYPICAL SECTIONS</div>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		
								5



REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PROJECT LAYOUT AND CONTROL	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		6
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		

SEMINOLE COUNTY ENGINEERING DIVISION
 JEFFREY L. SLOMAN
 P.E. No. 56160
 100 East 1st. Street
 Sanford, FL 32771

GENERAL NOTES

1. BENCHMARK ELEVATIONS SHOWN ON THE PLANS ARE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

2. ANY PUBLIC LAND CORNER OR COUNTY MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHOULD NOTIFY THE SEMINOLE COUNTY SURVEYOR, SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT IMMEDIATELY BY PHONE @ (407) 665-5656.

3. SURVEY PREPARED BY WOOD, INC. APRIL, 2022.

4. ONE WEEK PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A "CONSTRUCTION PERMIT" FROM SEMINOLE COUNTY PUBLIC WORKS ENGINEERING DIVISION. CONTACT PERMIT COORDINATOR AT 100 E. FIRST STREET, SANFORD, FLORIDA 32773. TELEPHONE (407) 665-5674. NO FEES REQUIRED.

5. ALL PRIVATE PROPERTY WITHIN THE RIGHT-OF-WAY SHALL BE RELOCATED BY THE PROPERTY OWNER OR IT SHALL BE REMOVED BY THE CONTRACTOR AS NECESSARY TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PLANS.

6. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THE CONSTRUCTION WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER, THAN THE EXISTING PRE- CONSTRUCTION CONDITION, UNLESS SPECIFICALLY EXEMPTED BY THE PLAN. COST TO BE INCIDENTAL TO CONSTRUCTION AND NO EXTRA COMPENSATION TO BE ALLOWED.

7. EXISTING UTILITY LOCATIONS SHOWN IN THE PLANS ARE ONLY APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL EXISTING UNDERGROUND UTILITIES LOCATED IN THE FIELD AND NOTIFY ALL UTILITY OWNERS WHETHER PUBLIC OR PRIVATE, WITH FACILITIES IN THE AREA OF CONSTRUCTION ACTIVITIES FOR POSSIBLE CONFLICTS AND COORDINATE ANY ADJUSTMENT AND/OR RELOCATION AS NECESSARY TO COMPLETE THE PROJECT. ALL NOTIFICATIONS TO BE MADE ONE WEEK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTACT SUNSHINE STATE ONE- CALL 1-800-432-4770.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE CURRENT STATE UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT AND/OR RELATED STATE LAW. THE FOLLOWING INFORMATION IS BEING PROVIDED BY SEMINOLE COUNTY IN AN EFFORT TO ASSIST THE CONTRACTOR BY LISTING UTILITIES THAT MAY PROVIDE SERVICE IN THE APPROXIMATE AREA OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHOULD ASSUME OTHER UTILITIES THAT ARE NOT LISTED BELOW MAY PROVIDE SERVICE IN THE APPROXIMATE AREA OF THE PROPOSED CONSTRUCTION.

UTILITY (CONTACT)

CHARACTER COMMUNICATIONS (MARVIN USRY)

FLORIDA POWER AND LIGHT - SEMINOLE (CHRISTOPHER BUONANNI)

FLORIDA PUBLIC UTILITIES (GAS) (JOHNNY HILL)

COMCAST COMMUNICATIONS / LK CNTY CBLV (SCOTT OSEBOLD)

AT&T DISTRIBUTION (SHAUN PURVIS)

SEMINOLE COUNTY TRAFFIC ENGINEERING (CHARLES WETZEL)

SEMINOLE COUNTY ENVIRONMENTAL SERVICES (PAUL ZIMMERMAN)

PHONE / EMAIL

(407)532-8509 / Marvin.Usryjr@charter.com

(407)328-1911 / Christopher.buonanni@fpl.com

(386)668-9842 / Jhill@chpk.com

(352)315-8527 / scott_osebald@comcast.com

(407)999-2636 / sp761p@att.com

(407)665-5686 / cwetzel@seminolefl.gov

(407)665-2021 / pzimmerman@seminolecountyfl.gov

9. ANY MAILBOX CONFLICTING WITH THE CONSTRUCTION OF THE PROJECT IS TO BE RELOCATED BY THE CONTRACTOR IN ACCORDANCE WITH FDOT STANDARD PLAN 110-200. NEW LOCATIONS TO BE COORDINATED WITH LOCAL POST OFFICE. REPLACEMENTS OF MAILBOXES SHALL HAVE A MINIMUM 3" HIGH NUMBERS REPLACED ON BOTH SIDES OF THE MAILBOX, PER SEMINOLE COUNTY ORDINANCE90.5 (6). PER USPS DO 41.2.4. IF THE MAILBOX IS ON A DIFFERENT STREET FROM THE COSTUMER'S RESIDENCE, THE STREET NAME AND HOUSE NUMBER SHALL BE INSCRIBED ON THE BOX ON BOTH SIDES.

10. ALL DISTURBED AREAS WILL BE RE- SODDED TO MATCH THE EXISTING SOD TYPE, UNLESS OTHERWISE NOTED IN THE PLANS. SOD SHALL BE CERTIFIED "SODA APPLE FREE". SUBCONTRACTOR SHALL REMOVE AND REPLACE ANY AREAS INFESTED FOR A PERIOD OF ONE YEAR FROM THE COMPLETION OF THE PROJECT.

11. SOIL MATERIALS USED FOR FILL OR GRADING ACTIVITIES SHALL BE APPROVED FOR USE BY THE SEMINOLE COUNTY ENGINEERING INSPECTOR PRIOR TO USE.

12. ANY GRASSED AREAS OUTSIDE THE PROJECT LIMITS DISTURBED BY THE CONTRACTOR WILL BE SODDED AT THE CONTRACTOR'S EXPENSE WITHIN 48 HOURS OF NOTIFICATION BY THE SEMINOLE COUNTY PROJECT MANAGER.

13. IRRIGATION LINES DAMAGED DURING CONSTRUCTION ARE TO BE CAPPED IMMEDIATELY AND REPORTED TO THE SEMINOLE COUNTY ENGINEER INSPECTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE THE DAMAGE IRRIGATION COMPONENTS TO PRE- CONSTRUCTION CONDITION AT HIS EXPENSE PRIOR TO COMPLETION OF THE PROJECT.

14. THE CONTRACTOR SHALL REMOVE AND DISPOSE PROPERLY OF ALL CONSTRUCTION DEBRIS PRIOR TO COMPLETION OF THE PROJECT.

15. SHRUBS AND TREES LOCATED IN THE RIGHT-OF-WAY SHALL REMAIN AND BE PROTECTED FROM DAMAGE UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

16. EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN CONSTRUCTION LIMITS TO REMAIN UNLESS OTHERWISE SPECIFIED IN THE PLANS. EXISTING DRAINAGE STRUCTURES AND FACILITIES SHALL BE MAINTAINED AND FULLY FUNCTIONAL DURING CONSTRUCTION.

17. ANY DRAINAGE PROBLEMS, CREATED BY CONSTRUCTION OR EXISTING BEFORE CONSTRUCTION, THAT ARE NOT ALLEVIATED SHALL BE BROUGHT TO THE ATTENTION TO THE SEMINOLE COUNTY ENGINEERING DIVISION PROJECT MANAGER.

18. THE CONTRACTOR SHALL GIVE THE POST MAKER OF THE DELIVERY ROUTE(S) WRITTEN NOTICE OF PROJECT CONSTRUCTION 7 DAYS PRIOR TO THE BEGINNING OF WORK, WITH SATURDAYS, SUNDAYS AND HOLIDAYS EXCLUDED.

19. NO TRENCHES SHALL BE ALLOWED TO REMAIN OPEN OVERNIGHT.

20. NO DISTURBANCE OUTSIDE OF THE PUBLIC RIGHT-OF-WAY IS PERMITTED UNLESS SPECIFICALLY NOTED ON THE PLANS.

21. THE CONTRACTOR IS ENTIRELY RESPONSIBLE AND LIABLE FOR ALL DAMAGE OR INJURY AS A RESULT OF HIS OPERATIONS TO ALL ADJACENT PUBLIC AND PRIVATE PROPERTY, LANDSCAPING, TREES, UTILITIES, STRUCTURES OF ANY KIND AND APPURTENANCES DURING THE PROGRESS OF THE WORK.

22. ALL EXISTING STRUCTURES AND PIPES, PAVEMENT, SIDEWALKS, CURBS, ETC. WITHIN THE LIMITS OF CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE NOTED ON THE DRAWINGS OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY DAMAGE TO THE AFOREMENTIONED ITEMS IN KIND, AT NO ADDITIONAL COST TO THE COUNTY.\

23. IF ENCOUNTERED, UNSUITABLE MATERIALS SHALL BE REMOVED FROM CONSTRUCTION AREAS AND BACK FILLED WITH SUITABLE MATERIALS.
24. THE CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT TO A NEAT EDGE IN ALL AREAS WHERE TYING INTO EXISTING PAVEMENT. IN AREAS WHERE THE TIE-IN IS AT THE R/W LINE (i.e. DRIVEWAYS), THE CONTRACTOR SHALL TAKE EXTRA CARE TO STAY WITHIN THE R/W.

25. CAUTION SHALL BE EXERCISED WHILE RELOCATING EXISTING SIGNS TO PREVENT UNNECESSARY DAMAGE TO SIGNS. IF THE SIGNS ARE DAMAGED BEYOND USE, AS DETERMINED BY THE SEMINOLE COUNTY ENGINEERING INSPECTOR, THE SIGNS SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. ALL SIGNS SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS.

26. THE CONTRACTOR SHALL PERFORM ANY DEWATERING, TEMPORARY DRAINAGE, DIVERSION OF STORMWATER, COFFERDAMS AND OTHER RELATED ACITVITIES NECESSARY TO CONSTRUCT THE PROJECT. (SEE SUMMARY OF PAY ITEMS).
- EROSION CONTROL NOTES
1. THE EROSION CONTROL MEASURES PER FDOT EROSION AND SEDIMENT CONTROL MANUAL ARE THE MINIMUM REQUIRED. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO FIELD CONDITIONS AS DETERMINED BY THE SEMINOLE COUNTY PROJECT MANAGER OR THE REGULATORY AGENCIES.

2. PROVIDE EROSION AND SEDIMENTATION CONTROL MEASURES CONSISTING OF STAKED SILT FENCES AND ADDITIONAL MEASURES AS NECESSARY, UTILIZING INDUSTRY STANDARD BEST MANAGEMENT PRACTICES AND FOLLOWING REQUIREMENTS BELOW, TO AVOID ADVERSE IMPACTS TO JURISDICTIONAL AREAS (WETLANDS, WATER BODIES, AND UPLAND BUFFERS) AND OFF SITE LANDS AND WATER BODIES. MAINTAIN THESE MEASURES DAILY UNTIL CONSTRUCTION ACCEPTANCE BY SEMINOLE COUNTY AND THEN REMOVE AND LEGALLY DISPOSE OF SAID MEASURES.

3. NO DISCHARGE OF CONTAMINANTS INTO ADJACENT WETLANDS, WATER BODIES, OR UPLAND BUFFERS WILL BE PERMITTED AT ANY TIME.

4. DAMAGE WETLANDS AND/OR UPLAND BUFFERS ADJACENT TO CONSTRUCTION AREAS SHALL BE PREVENTED BY DELINEATING THE LIMITS OF CONSTRUCTION, AND INSTALLING SEDIMENT BARRIERS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, THEREBY RETAINING SEDIMENT WITHIN THE CONSTRUCTION AREA. CONTRACTOR WILL BE REQUIRED TO ADEQUATELY MAINTAIN THESE PROTECTION MEASURES AT ALL TIMES.

5. EROSION CONTROL AND DUST CONTROL SHALL BE MAINTAINED WITHIN CONSTRUCTION AREAS BY QUICKLY STABILIZING DISTURBED AREAS TO PREVENT THE RELEASE OF SEDIMENT. THIS SHALL BE ACCOMPLISHED USING GRASS COVER, TURBIDITY FENCES, PERIODIC WATERING, AND OTHER BEST MANAGEMENT PRACTICES WHICH ARE ACCEPTABLE TO THE SEMINOLE COUNTY ENGINEERING INSPECTOR AND REGULATORY AGENCIES.

6. TURBIDITY BARRIERS SHALL BE USED TO PREVENT RELEASE OF SEDIMENT AND/OR TURBID WATER INTO SURROUNDING WATERS. THESE SEDIMENT AND TURBIDITY BARRIERS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

7. ALL EROSION PREVENTION AND CONTROL MEASURES MUST BE INSPECTED AND APPROVED BY THE COUNTY COMPLIANCE PERSONNEL, AS REQUIRED, PRIOR TO ANY CONSTRUCTION ACTIVITIES. REMOVAL OF THESE SAME EROSION CONTROLS AND PREVENTION MEASURES MAY BE DONE ONLY AFTER AUTHORIZATION BY COUNTY PERSONNEL IS OBTAINED.

8. ALL SURFACE WATER DISCHARGE FROM SITE, INCLUDING DEWATERING DISCHARGE, SHALL MEET CURRENT STATE WATER QUALITY STANDARDS PRIOR TO REACHING ANY WATERS OF THE STATE INCLUDING WETLANDS.

9. ALL STORM DRAINAGE INLETS AND PIPES SHALL BE PROTECTED FROM SILT, SAND AND DEBRIS DURING CONSTRUCTION. ANY ACCUMULATION WITHIN THE STORM DRAINAGE PIPE SYSTEM SHALL BE REMOVED WITHOUT PUMPING OR FLUSHING. STORM DRAINAGE SYSTEM SHALL BE CLEANED AND FREE OF DEBRIS PRIOR TO ENGINEER'S INSPECTOR'S ACCEPTANCE.

10. NPDES CONSTRUCTION PERMIT IT IS REQUIRED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR T ACQUIRE THE NPDES PERMIT.
- TEMPORARY TRAFFIC CONTROL NOTES
1. VEHICULAR AND PEDESTRIAN TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH FDOT STANDARD PLAN 102 SERIES, AND THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS A MINIMUM.

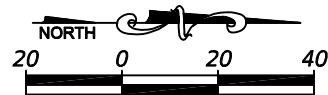
2. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A MAINTENANCE OF TRAFFIC CONTROL PLAN (MOTP) SIGNED AND SEALED BY A STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER TO THE COUNTY FOR REVIEW AND APPROVAL PRIOR TO BEGINNING THE PROJECT. THE CONTRACTOR SHALL OBTAIN AN "MOT PERMIT" FROM SEMINOLE COUNTY TRAFFIC DIVISION. CONTACT MOT COORDINATOR AT (407)665-5699 FOLLOWING THE APPROVAL OF THE CONTRACTOR'S MTOP.

3. LANE CLOSURES SHALL BE PERMITTED ONLY DURING ACTIVE WORK PERIODS AND AS FOLLOWS: LAKE BOULEVARD, FROM 9 A.M. TO 4:00 P.M. TIME MAY BE ADJUSTED BY SEMINOLE COUNTY PROJECT MANAGER OR THE COUNTY TRAFFIC DIVISION. AT LEAST ONE LANE OF TRAFFIC MUST REMAIN OPEN AT ALL TIMES.
- SPECIFICATIONS
1. THE CONTRACTOR SHALL HAVE THE GOVERNING SPECIFICATIONS ON-SITE AT ALL TIMES.

2. ALL SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS CONTAINED HEREIN AND / OR OTHERWISE REQUIRED BY APPLICABLE REGULATORY BODIES. IN THE EVENT OF A CNFLICT IN THE REQUIREMENTS, THE APPLICABLE REQUIREMENT SHALL BE DETERMINED BY THE ENGINEER.

3. APPARENT ERRORS, DISCREPANCIES OR OMISSIONS ON THE DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PROMPTLY. NO EXTRA PAYMENT SHALL BE ALLOWED FOR ANY WORK REQUIRED DUE TO MISUNDERSTANDING OF JOB SITE CONDITIONS AFFECTING THE WORK AS DESCRIBED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL NOT TAKE ADVANTAGE OF ANY APPARENT ERROR OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS, AND THE ENGINEER SHALL BE PERMITTED TO MAKE CORRECTIONS AND INTERPRETATIONS AS MAY BE DEEMED NECESSARY FOR FULFILLMENT OF THE INTENT OF THE CONTRACT DOCUMENTS.

4. THE CONTRACTOR SHALL MAKE THE PROJECT SITE AVAILABLE FOR REVIEW AND INSPECTION TO ALL APPLICABLE REGULATORY AGENCIES, ENGINEERING PERSONNEL AND OWNER REPRESENTATIVES.
- | REVISIONS | | | | <div><div><div>SEMINOLE COUNTY</div><div>ENGINEERING DIVISION</div></div><div>JEFFREY L. SLOMAN
P.E. No. 56160
100 East 1st. Street
Sanford, FL 32771</div></div> | SEMINOLE COUNTY
ENGINEERING DIVISION | | GENERAL NOTES | SHEET
NO. |
|-----------|-------------|------|-------------|--|---|----------------|---------------|--------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | ROAD | | COUNTY CIP No. | | |
| | | | | MARKHAM RD. / LAKE MARKHAM RD.
DRAINAGE IMPROVEMENTS | | 02307084 | 7 | |

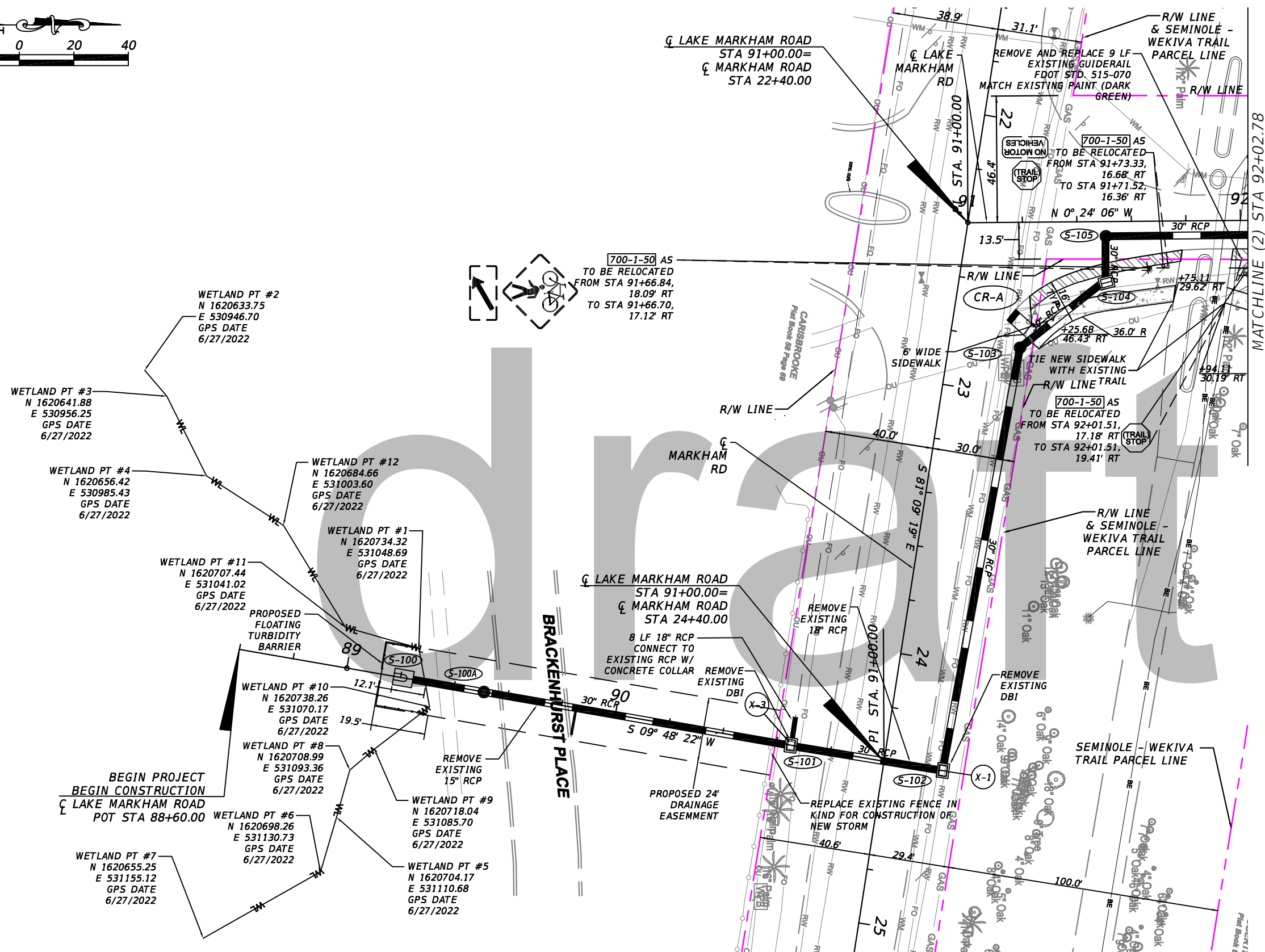



LEGEND

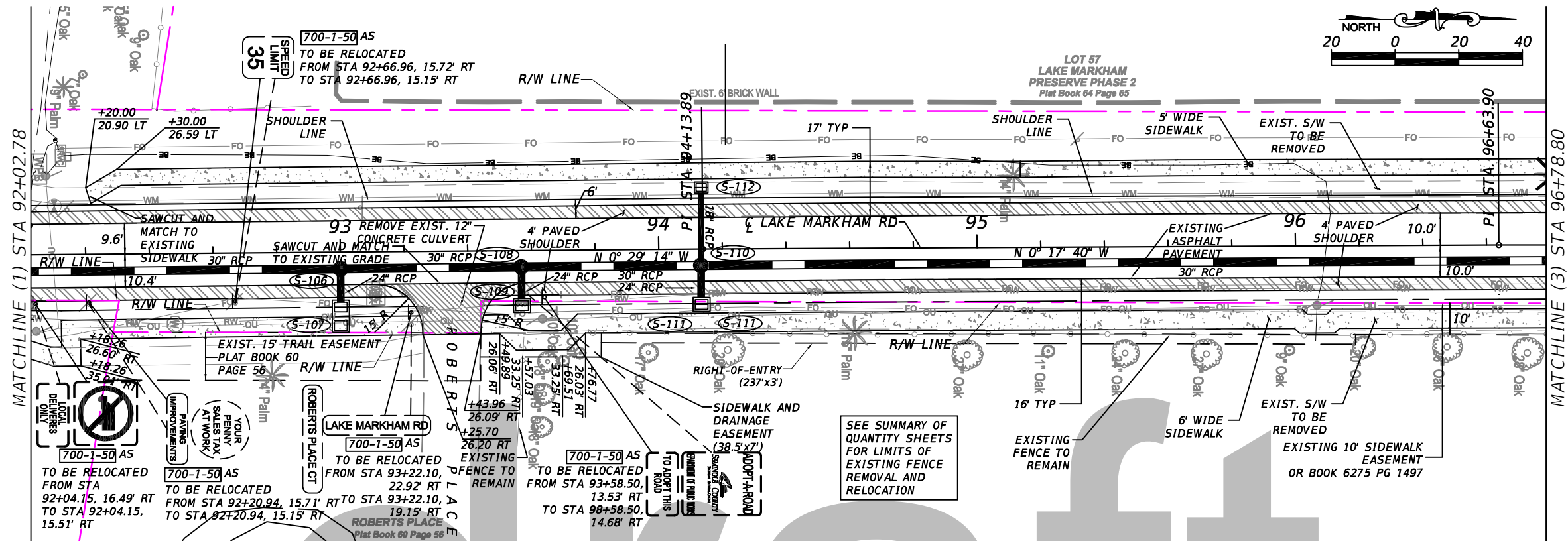
- 4" THICK CONCRETE SIDEWALK
- 6" THICK CONCRETE DRIVEWAY
- PAVED SHOULDER
- DETECTABLE WARNING

NOTE: ALL EXISTING TREES TO REMAIN UNLESS OTHERWISE NOTED

NOTE: SEE 'SPECIAL DETAILS SHEET' FOR TRAIL STOP SIGN DETAILS



REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PLAN VIEW (1)- LAKE MARKHAM ROAD	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		8
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		

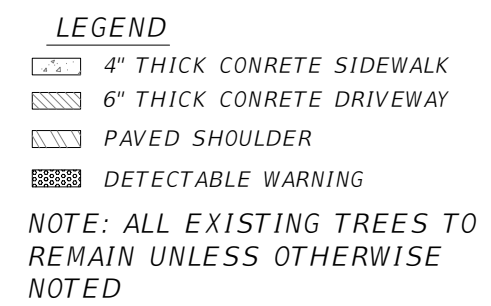



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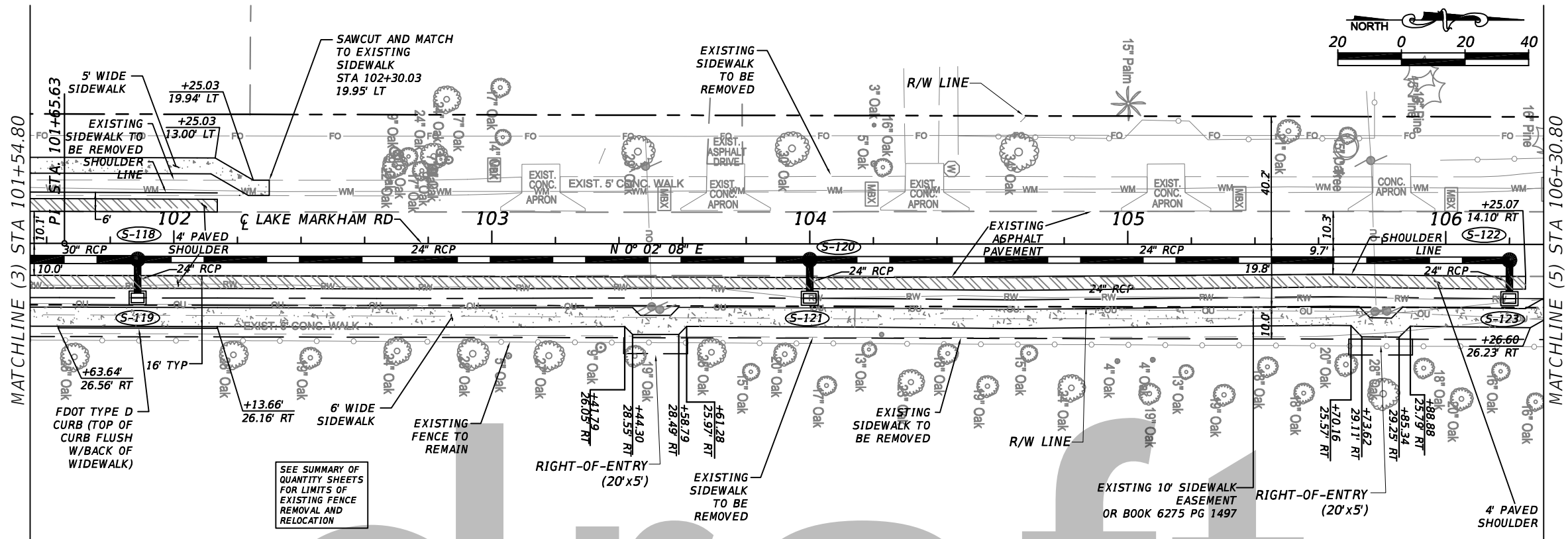
- 4" THICK CONCRETE SIDEWALK
- 6" THICK CONCRETE DRIVEWAY
- PAVED SHOULDER
- DETECTABLE WARNING

NOTE: ALL EXISTING TREES TO REMAIN UNLESS OTHERWISE NOTED

REVISIONS				<div>SEMINOLE COUNTY ENGINEERING DIVISION</div> <div>JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771</div>	SEMINOLE COUNTY ENGINEERING DIVISION		PLAN VIEW (2)- LAKE MARKHAM ROAD	SHEET NO. 9
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		




REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PLAN VIEW (3)- LAKE MARKHAM ROAD	SHEET NO.
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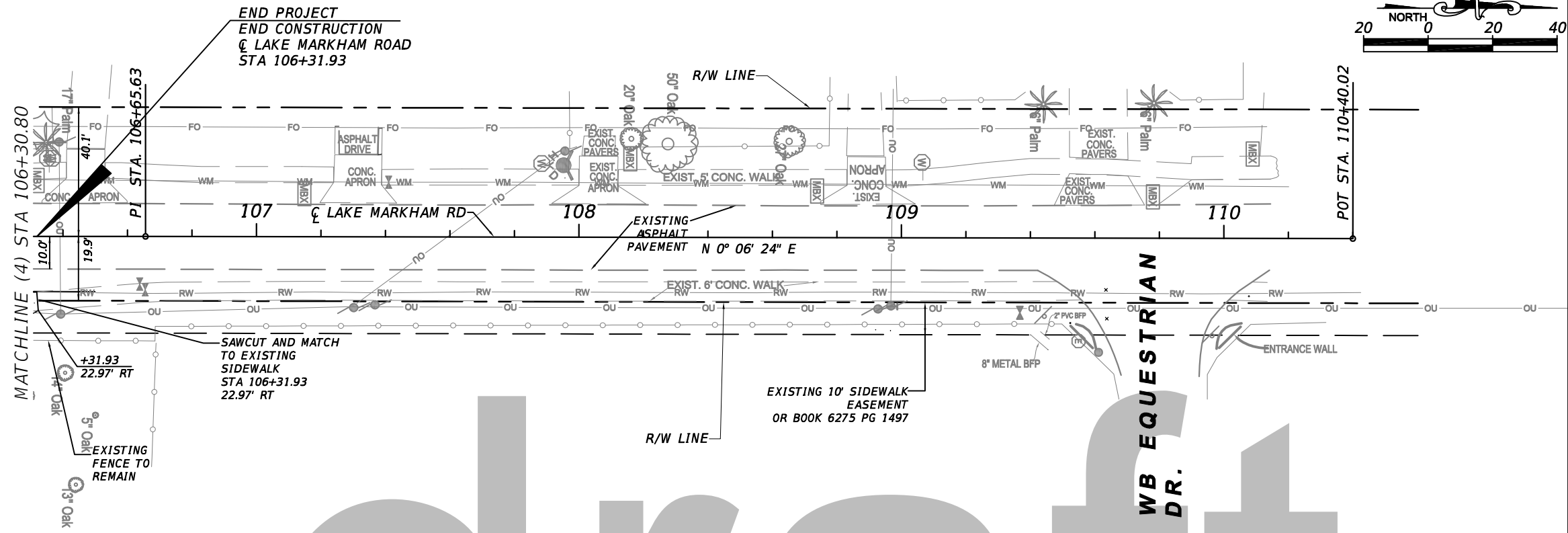


LEGEND


- 4" THICK CONCRETE SIDEWALK
- 6" THICK CONCRETE DRIVEWAY
- PAVED SHOULDER
- DETECTABLE WARNING

NOTE: ALL EXISTING TREES TO REMAIN UNLESS OTHERWISE NOTED

REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PLAN VIEW (4)- LAKE MARKHAM ROAD	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		11
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		




- LEGEND**
- 4" THICK CONCRETE SIDEWALK
 - 6" THICK CONCRETE DRIVEWAY
 - PAVED SHOULDER
 - DETECTABLE WARNING
- NOTE: ALL EXISTING TREES TO REMAIN UNLESS OTHERWISE NOTED


REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PLAN VIEW (5)- LAKE MARKHAM ROAD	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD			COUNTY CIP No. 02307084
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS			
								12

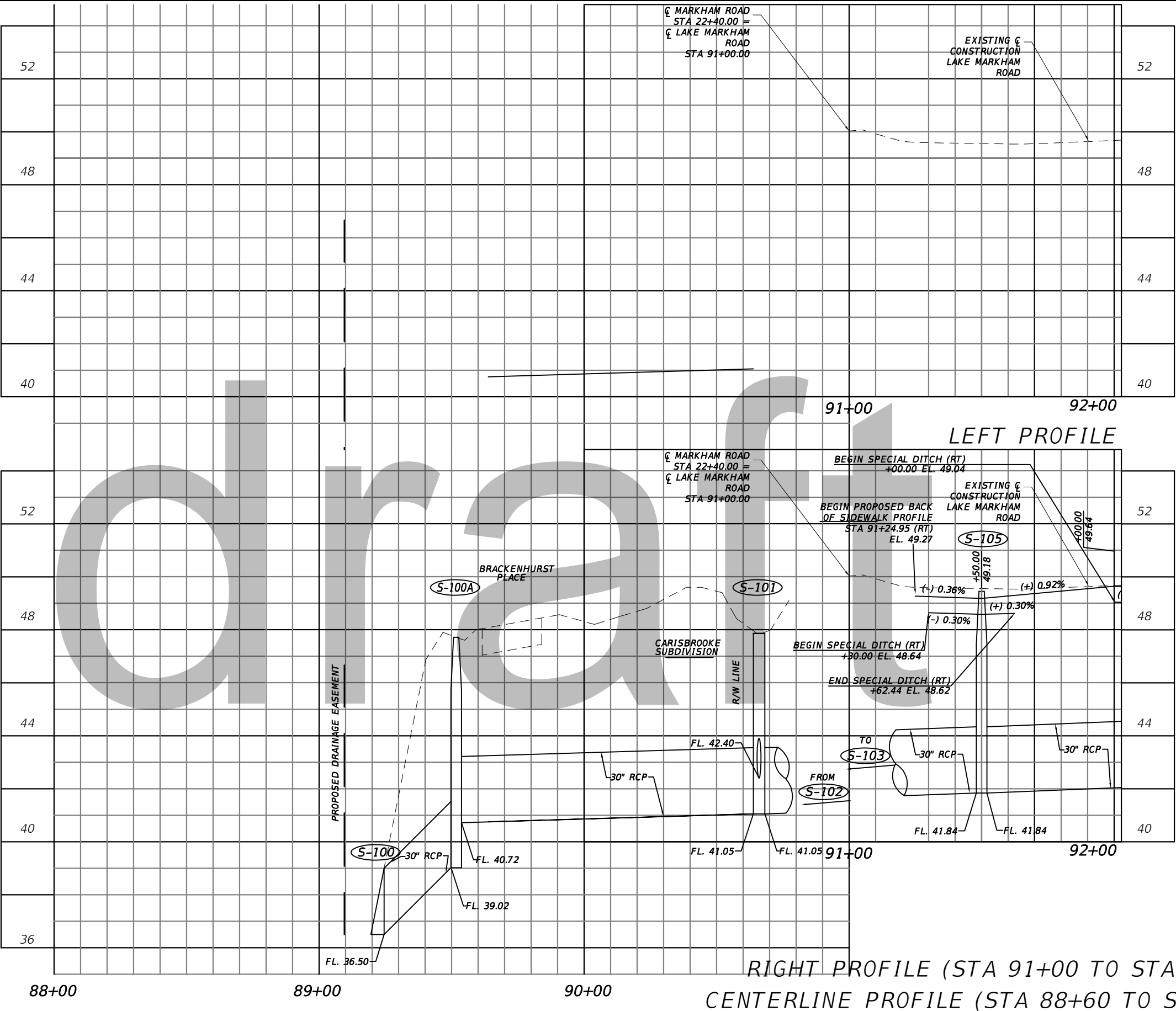
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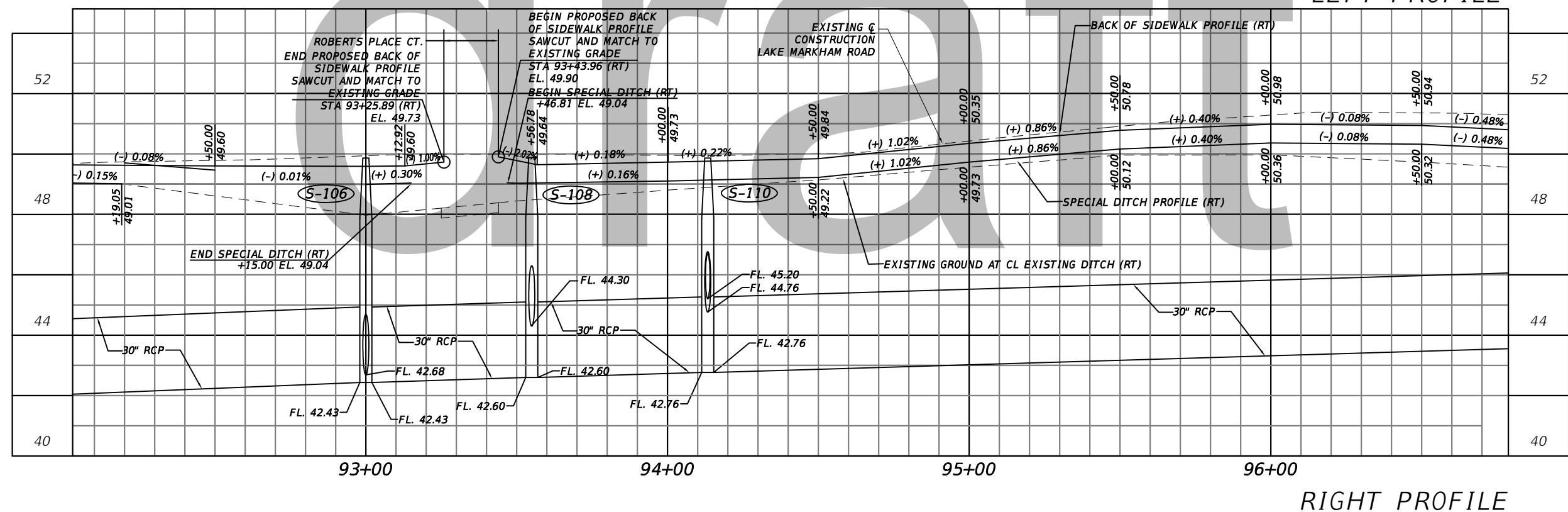
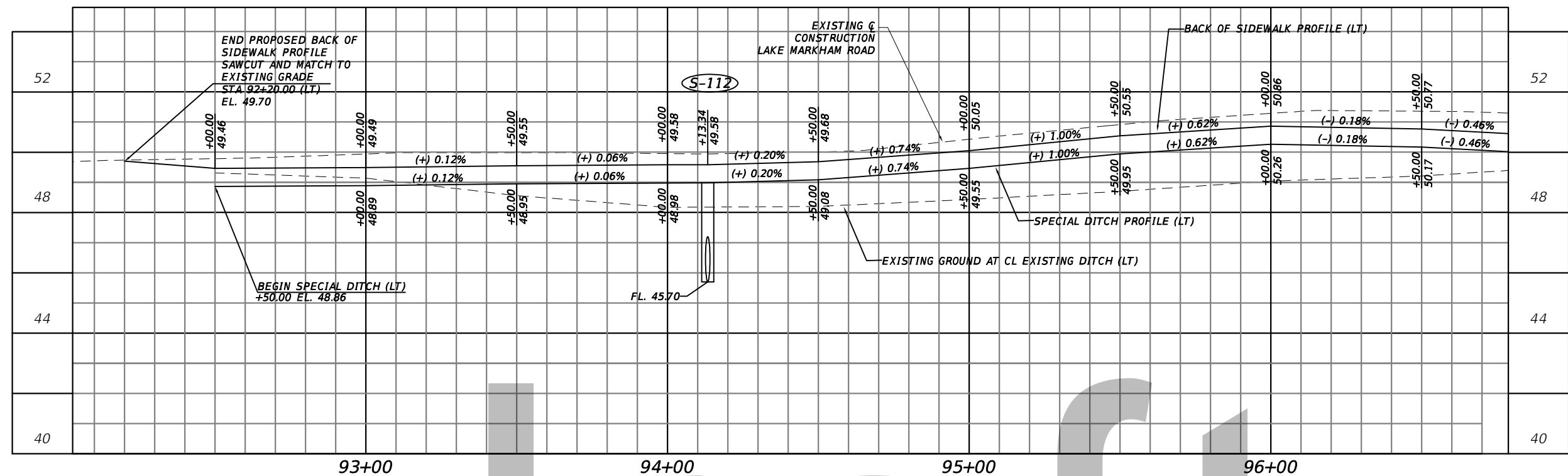
REVISIONS				 <div>SEMINOLE COUNTY ENGINEERING DIVISION</div> <div>JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771</div>	SEMINOLE COUNTY ENGINEERING DIVISION		PLAN VIEW (6)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD			COUNTY CIP No.
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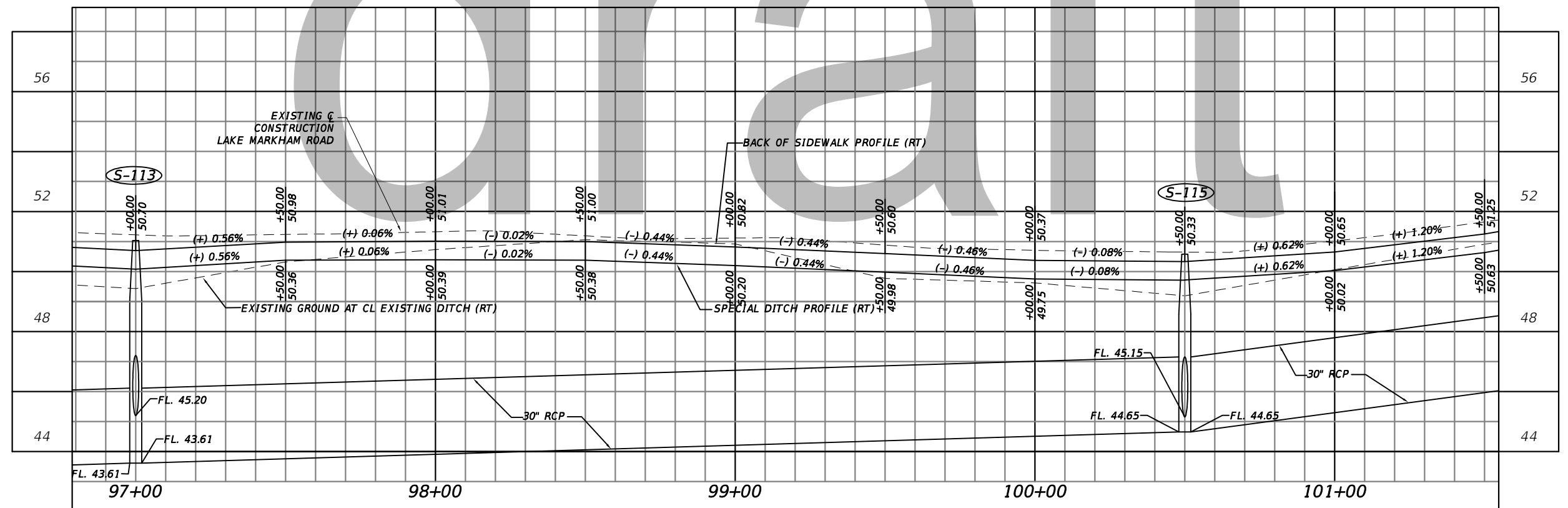
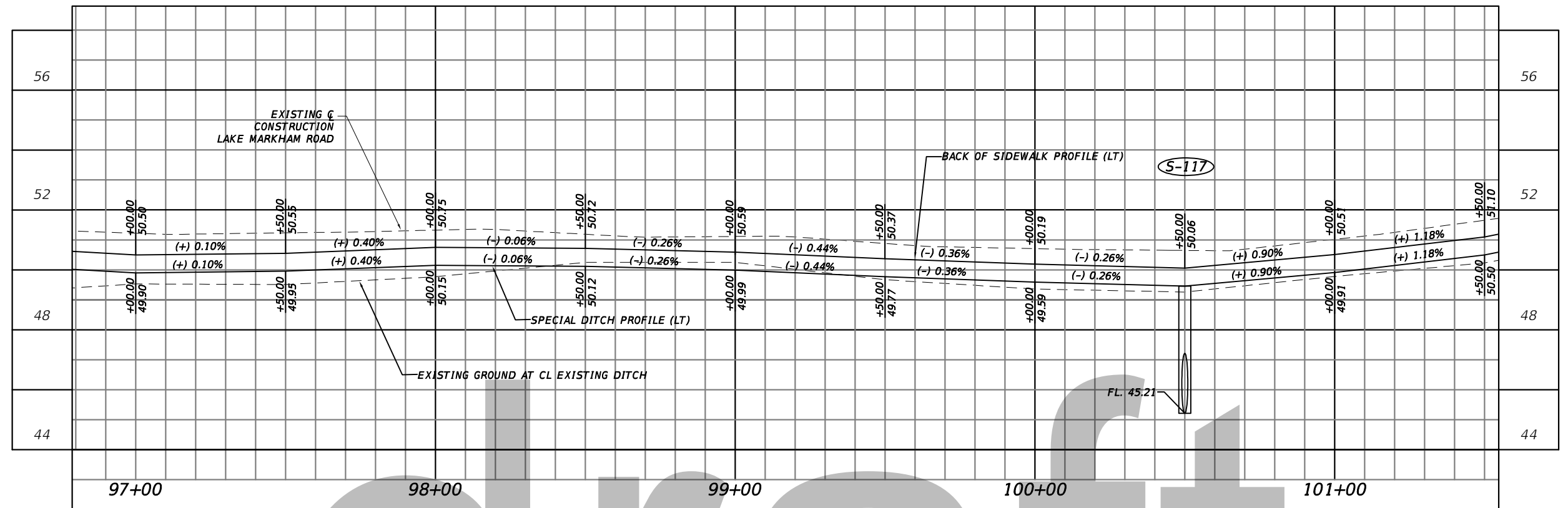
REVISIONS				 SEMINOLE COUNTY TURNING NATURAL CHOICE	SEMINOLE COUNTY ENGINEERING DIVISION		<i>PLAN VIEW (7)</i>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD COUNTY CIP No.			
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS			
					02307084			
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS			14




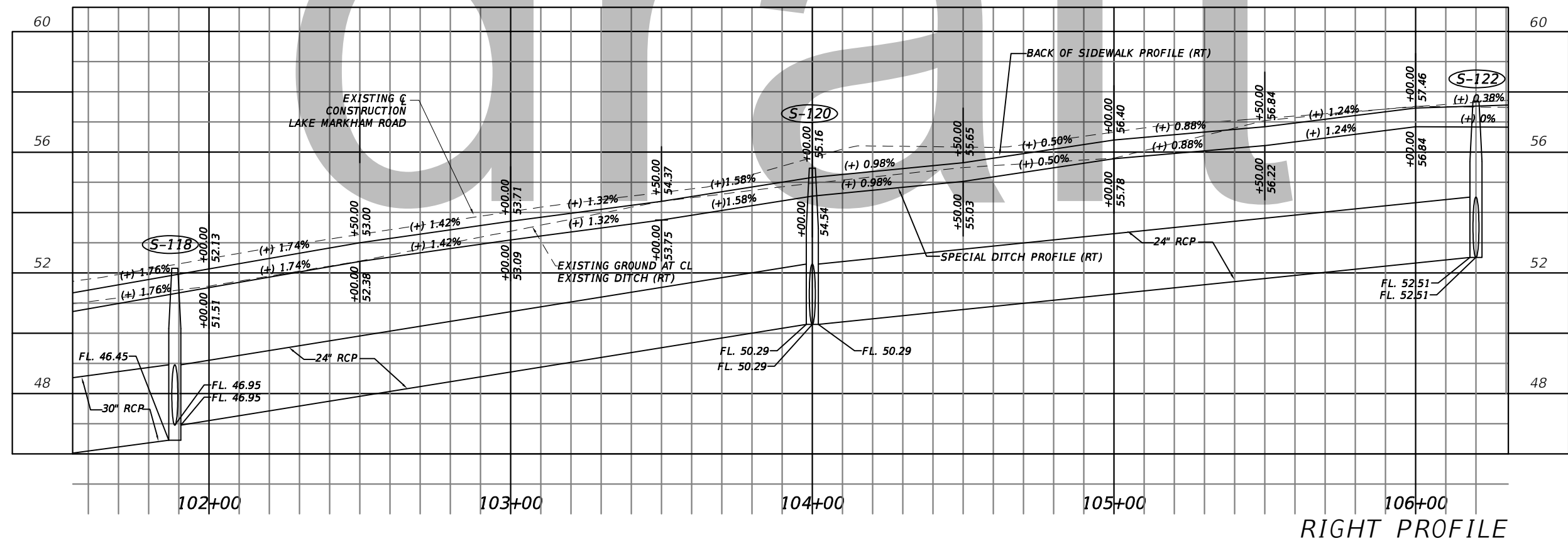
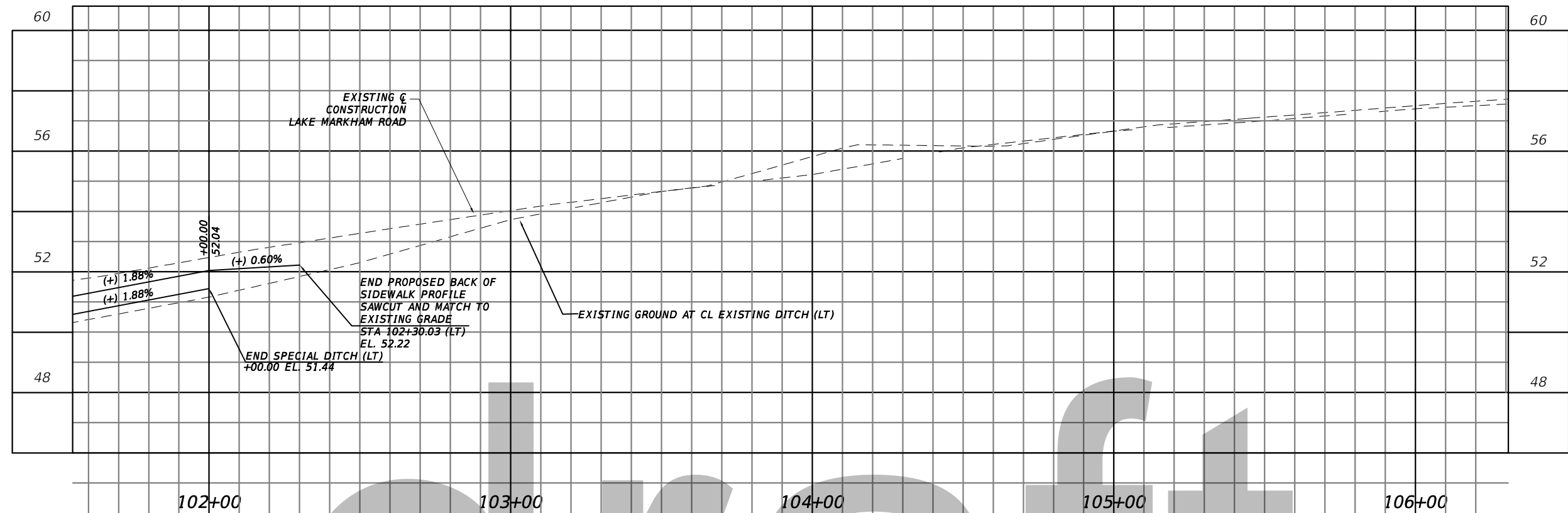
REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PROFILE VIEW (1) - LAKE MARKHAM ROAD	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		15
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		




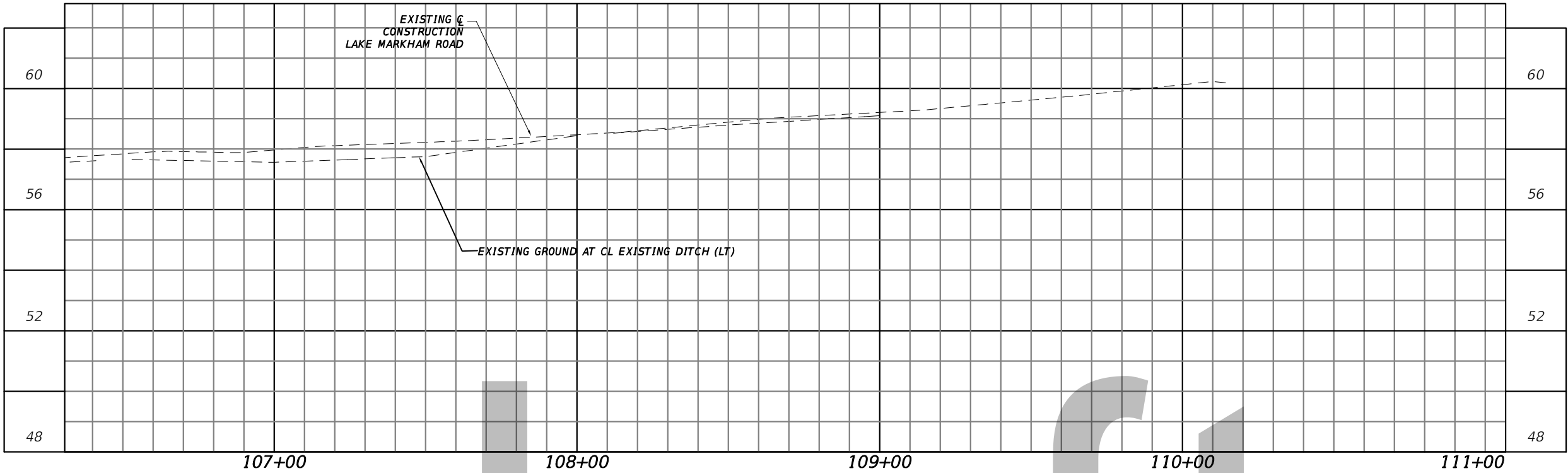
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		16
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		



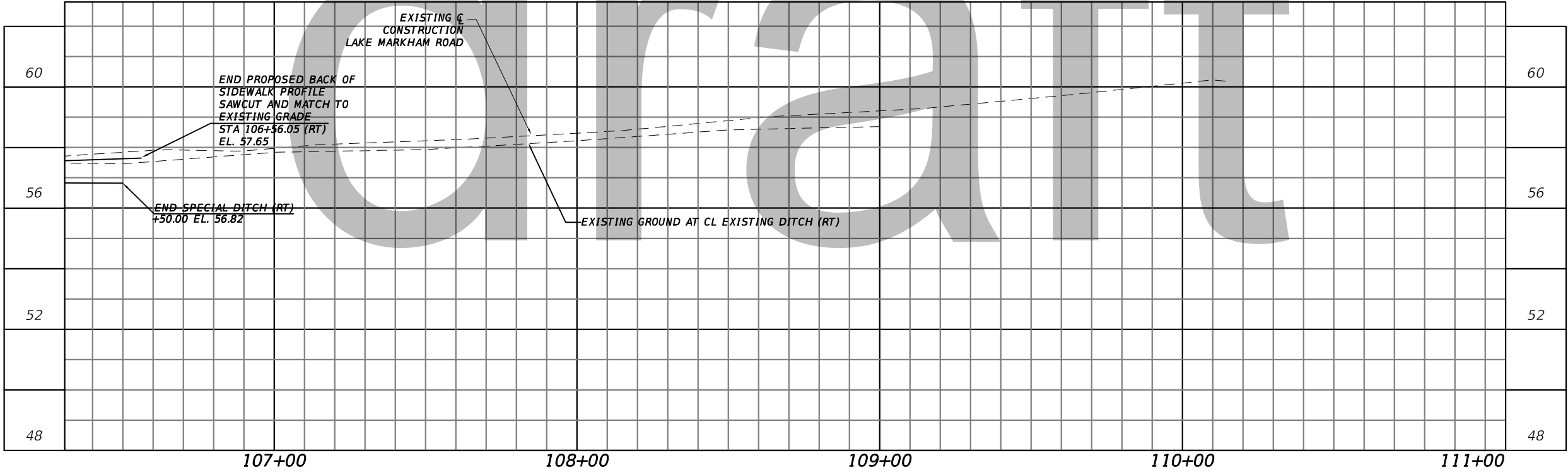
REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PROFILE VIEW (3) - LAKE MARKHAM ROAD	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		17
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		



REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PROFILE VIEW (4) - LAKE MARKHAM ROAD	SHEET NO.
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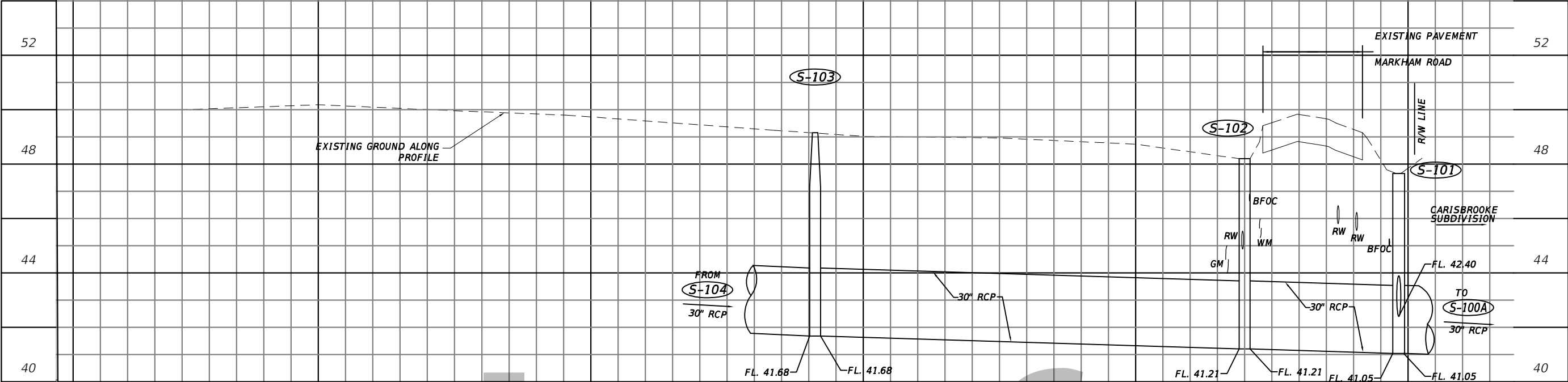


LEFT PROFILE




RIGHT PROFILE

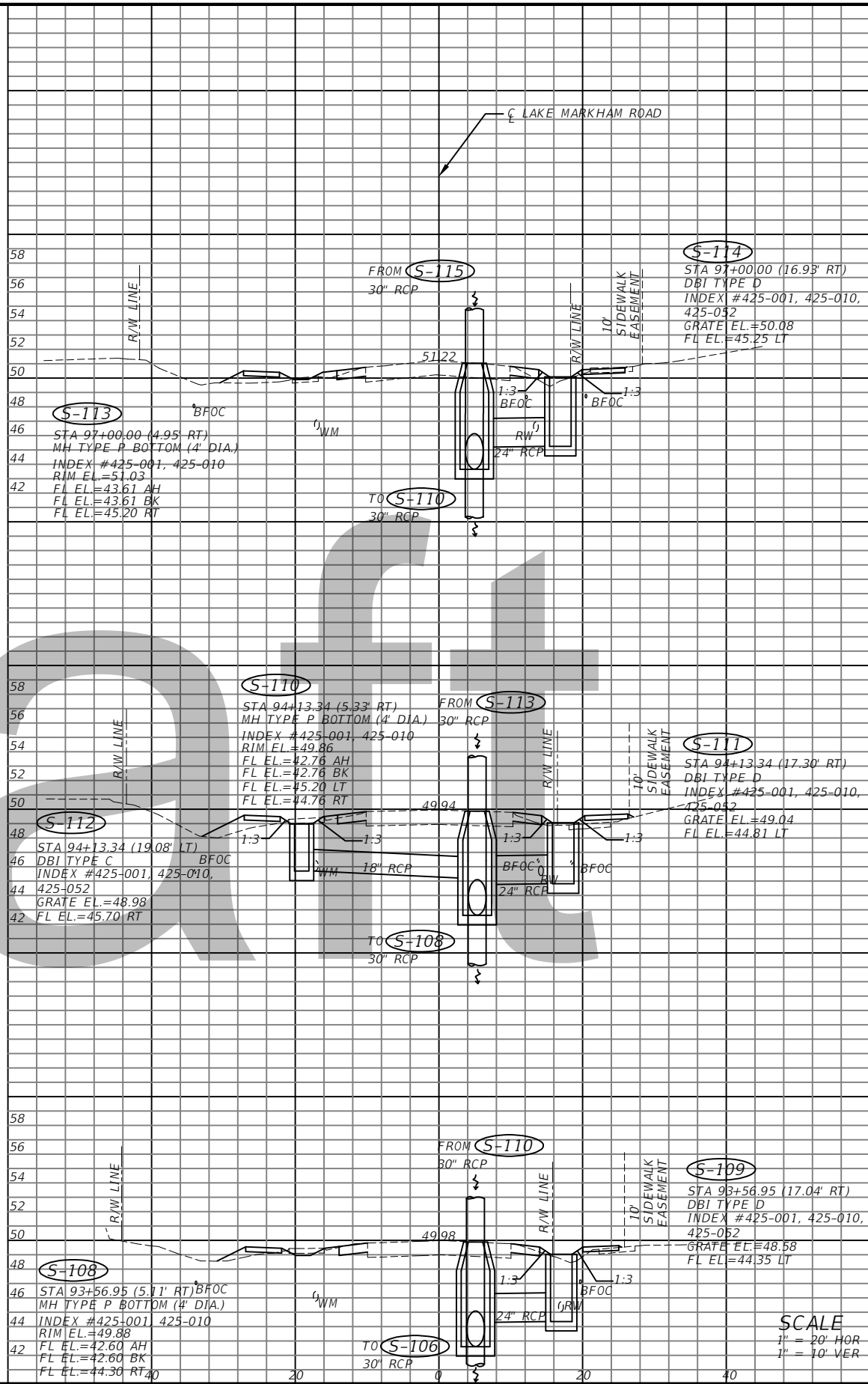
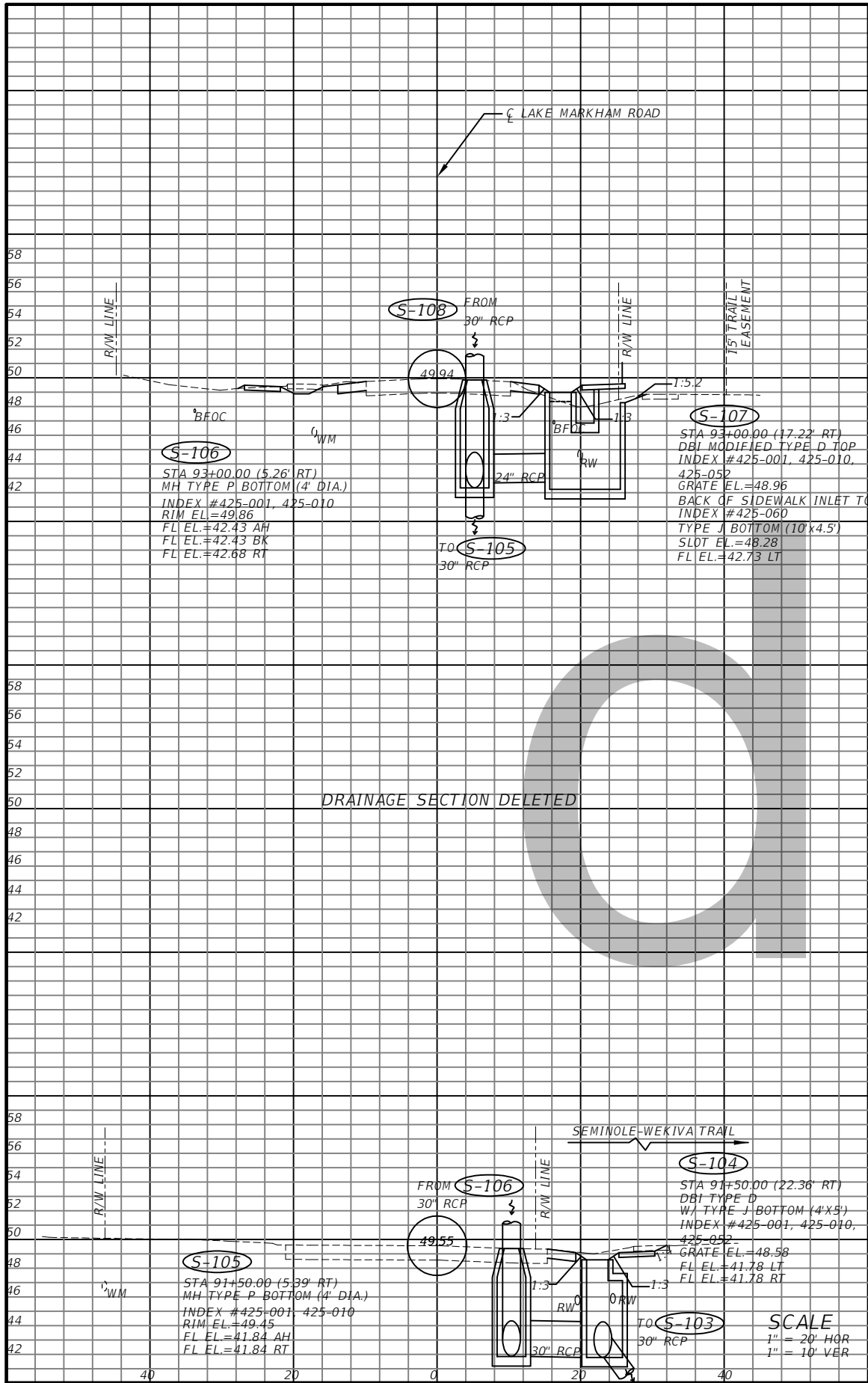
REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		PROFILE VIEW (5) - LAKE MARKHAM ROAD	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD			COUNTY CIP No.
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		19



SPECIAL PROFILE

draft

REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		<i>SPECIAL PROFILE</i>	SHEET NO.	
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD			COUNTY CIP No.	20
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REVISIONS			
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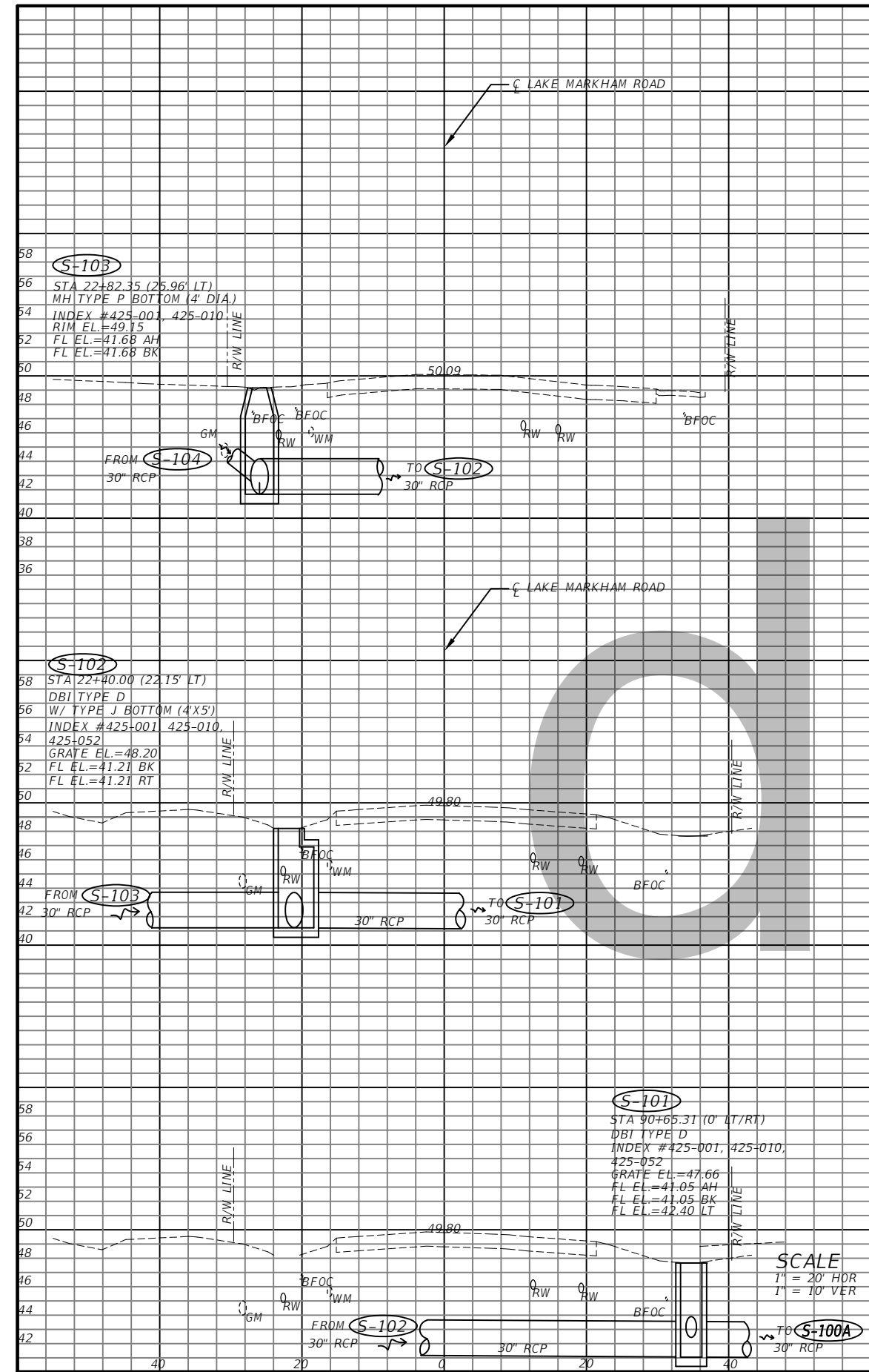
**SEMINOLE COUNTY
ENGINEERING DIVISION**

JEFFREY L. SLOMAN
 P.E. No. 56160
 100 East 1st. Street
 Sanford, FL 32771

SEMINOLE COUNTY ENGINEERING DIVISION	
ROAD	COUNTY CIP No.
MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084

**DRAINAGE STRUCTURE SHEET
LAKE MARKHAM ROAD (1)**

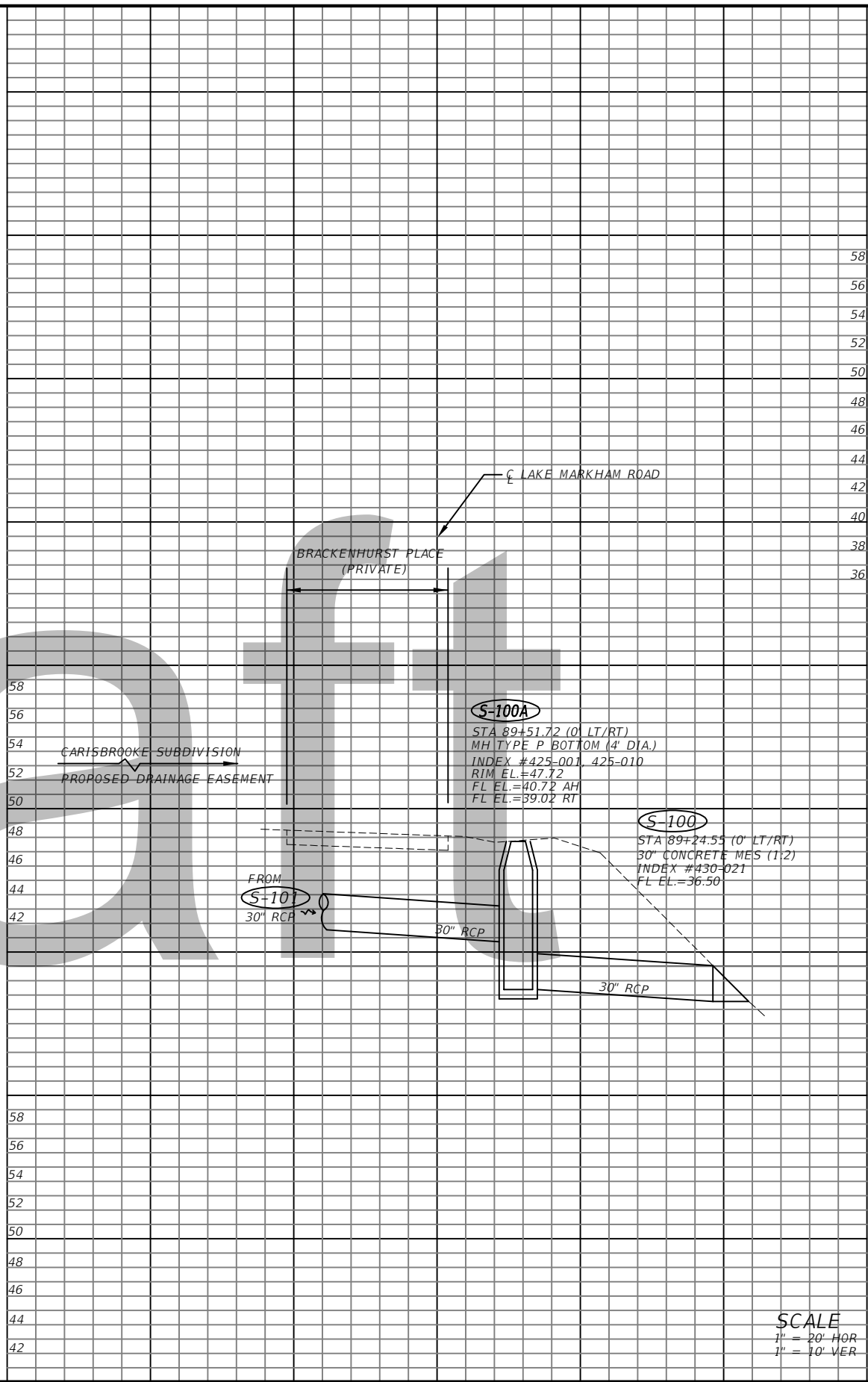
SHEET NO.
21



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

**SEMINOLE COUNTY
ENGINEERING DIVISION**

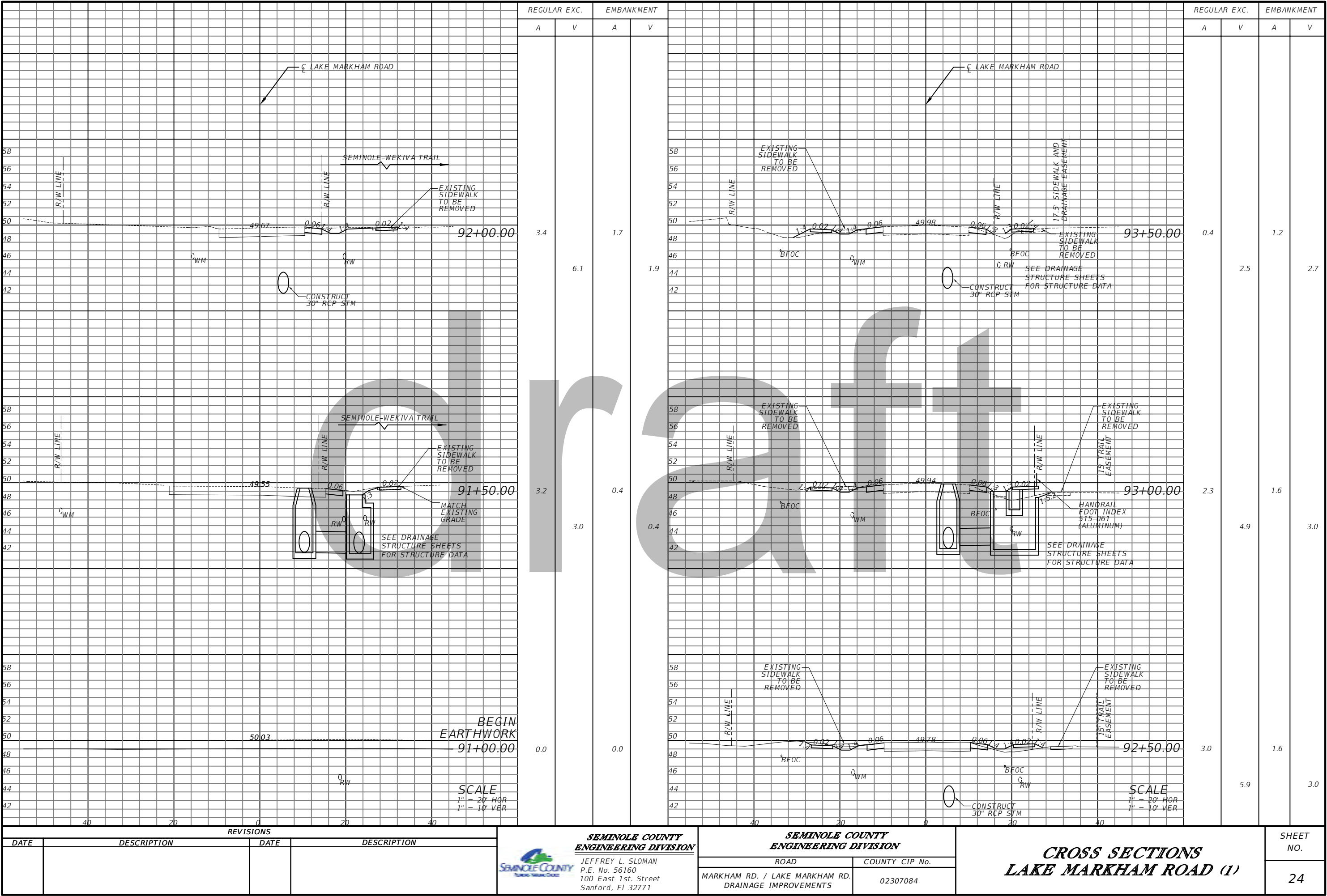
JEFFREY L. SLOMAN
 P.E. No. 56160
 100 East 1st. Street
 Sanford, FL 32771

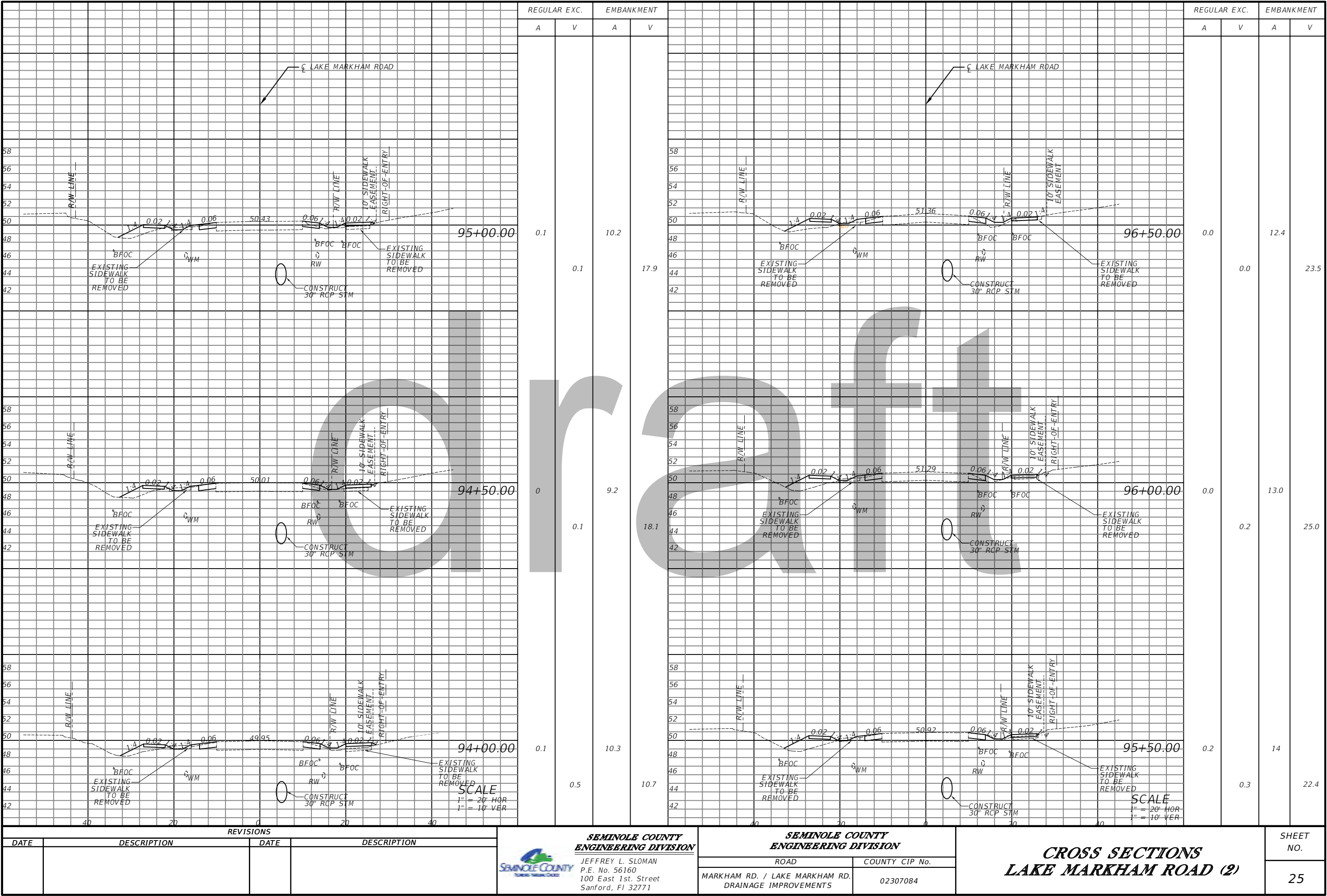


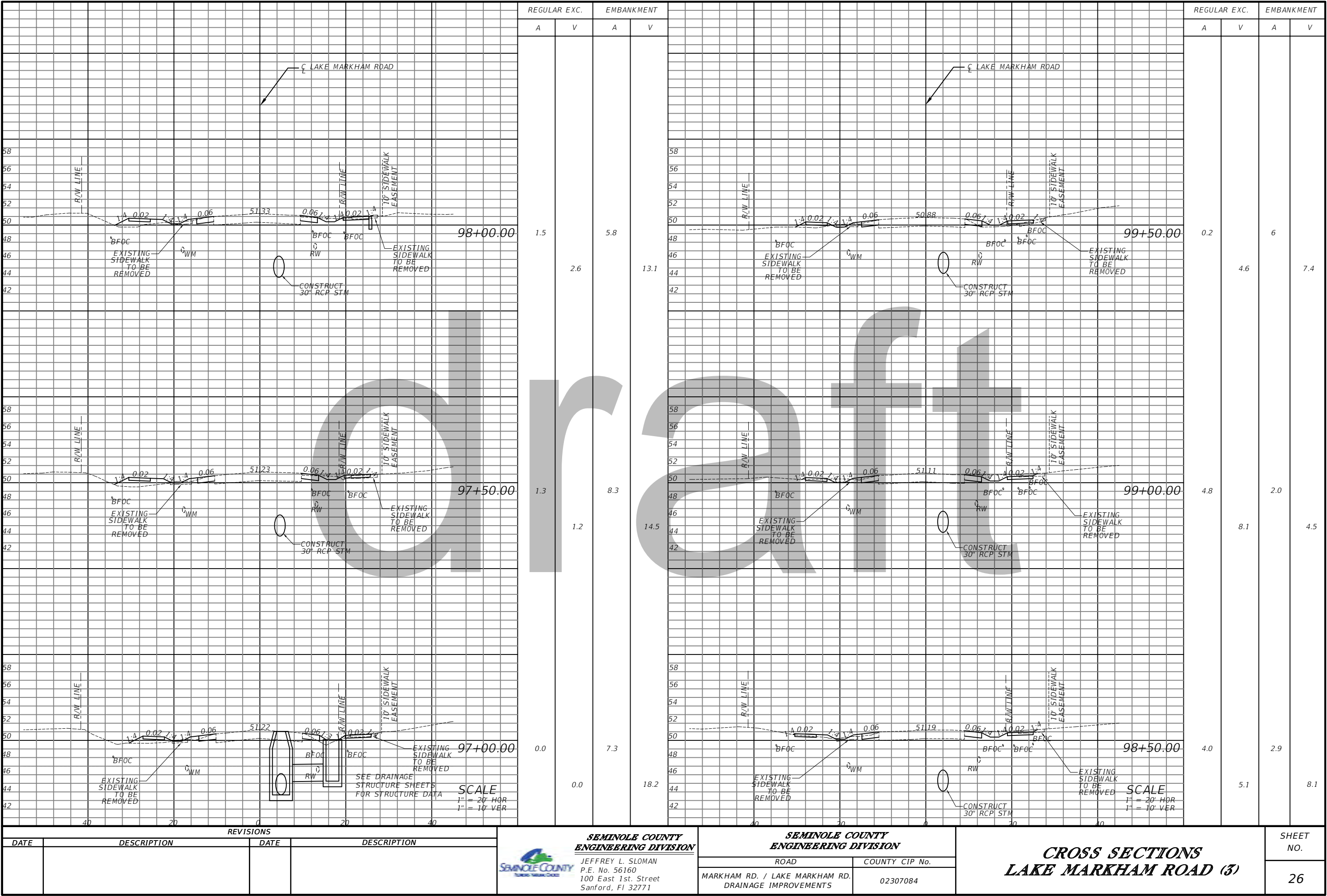
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ROAD	COUNTY CIP No.
MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084

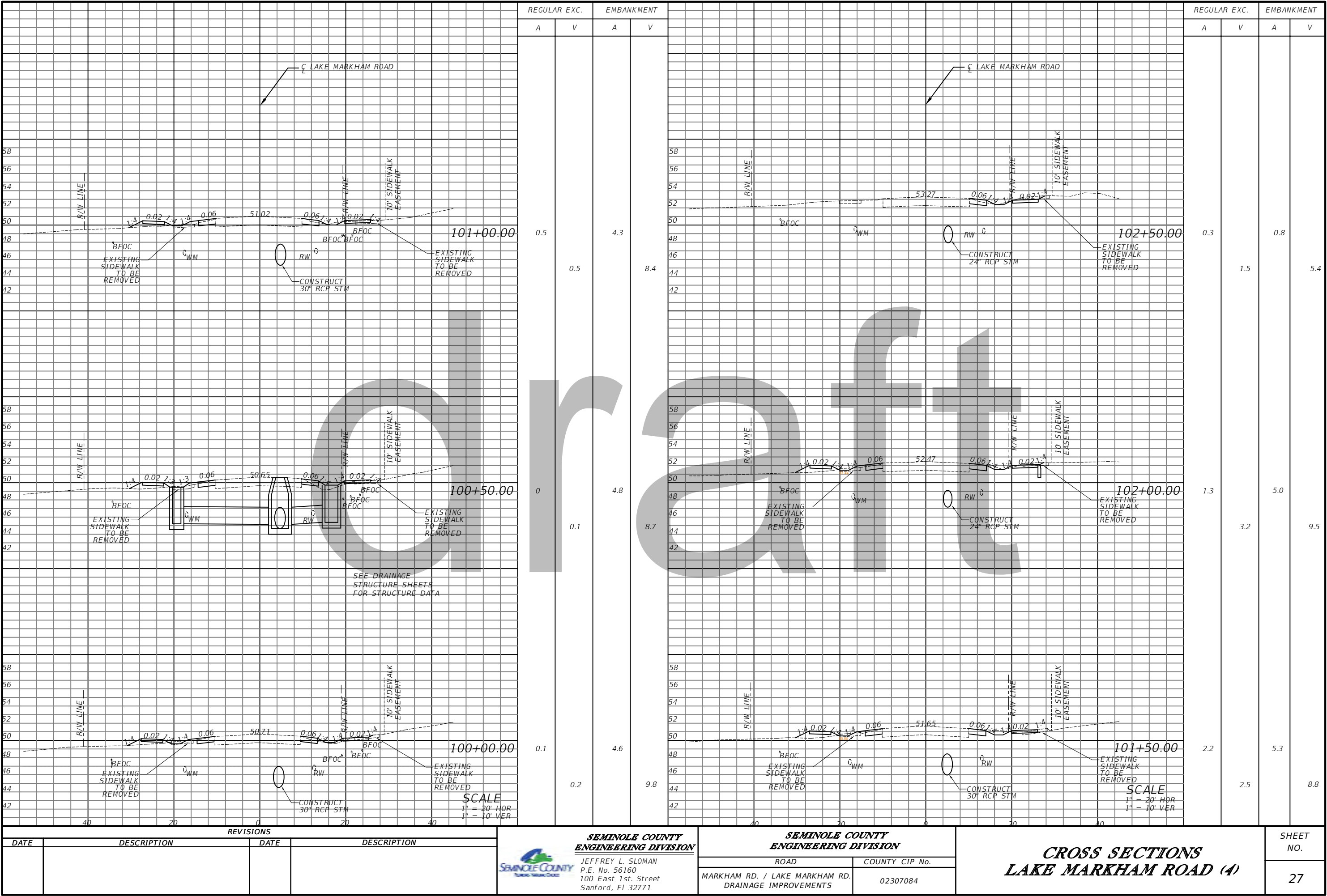
**DRAINAGE STRUCTURE SHEET
MARKHAM ROAD (3)**

SHEET NO.
23









REGULAR EXC.		EMBANKMENT	
A	V	A	V
0.5	0.5	4.3	8.4
0	0.1	4.8	8.7
0.1	0.2	4.6	9.8

REGULAR EXC.		EMBANKMENT	
A	V	A	V
0.3	1.5	0.8	5.4
1.3	3.2	5.0	9.5
2.2	2.5	5.3	8.8

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

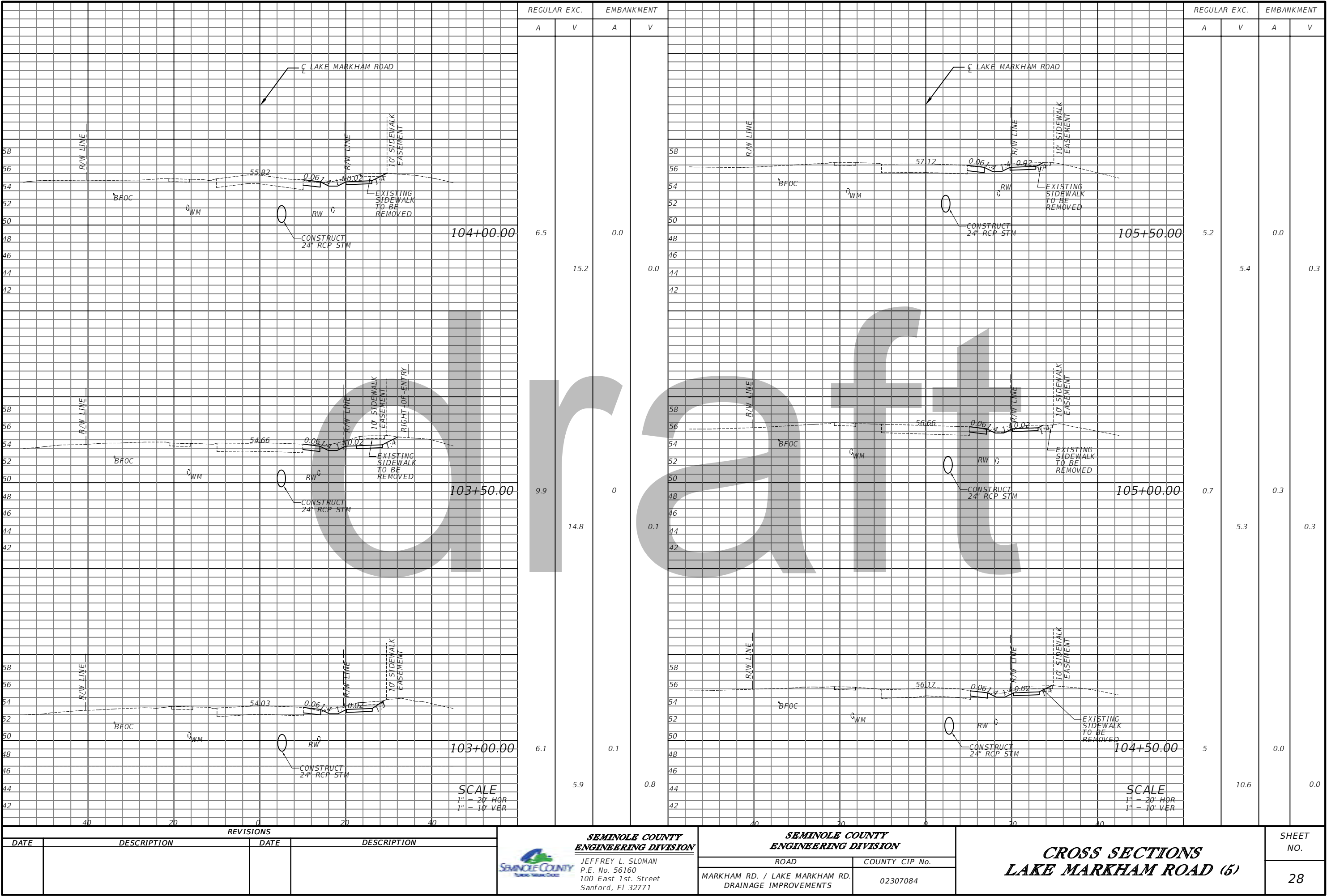


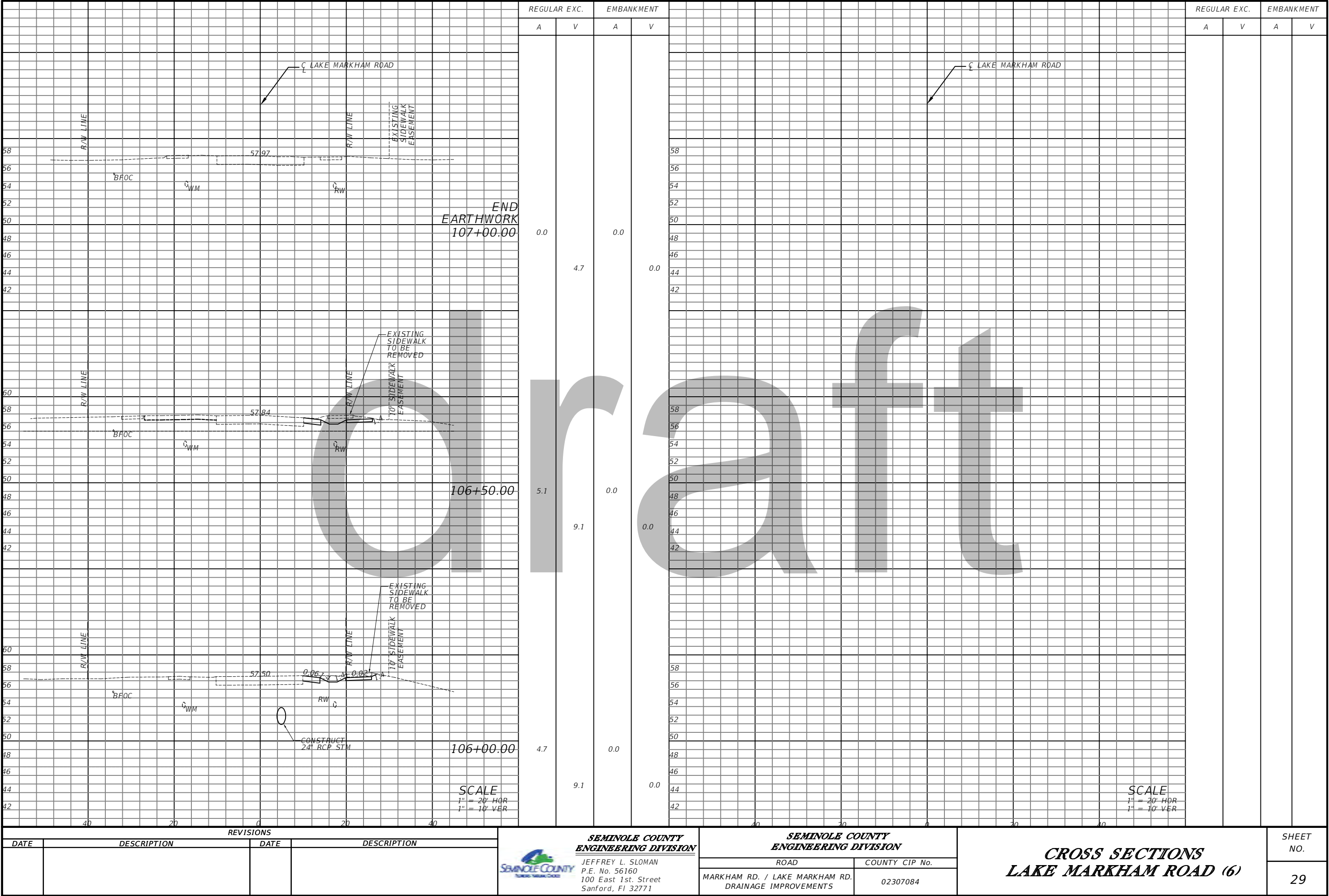
**SEMINOLE COUNTY
ENGINEERING DIVISION**
JEFFREY L. SLOMAN
P.E. No. 56160
100 East 1st. Street
Sanford, FL 32771

SEMINOLE COUNTY ENGINEERING DIVISION	
ROAD	COUNTY CIP No.
MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084

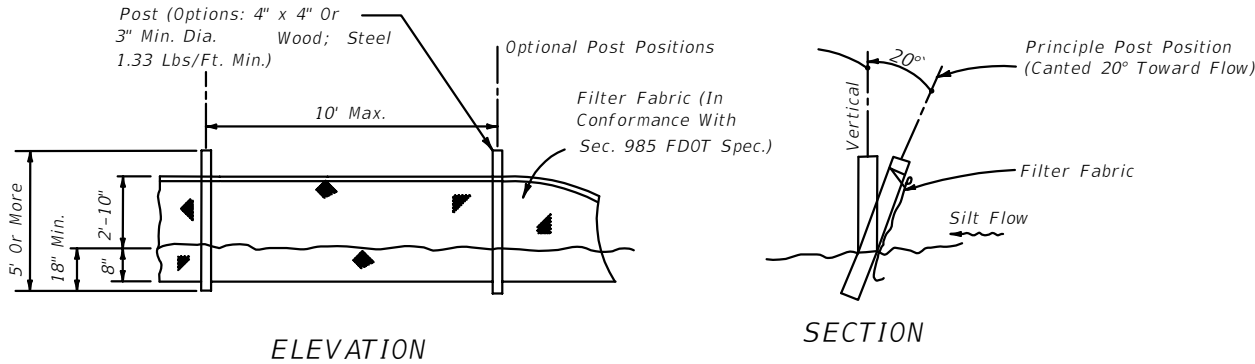
**CROSS SECTIONS
LAKE MARKHAM ROAD (4)**

SHEET NO.
27

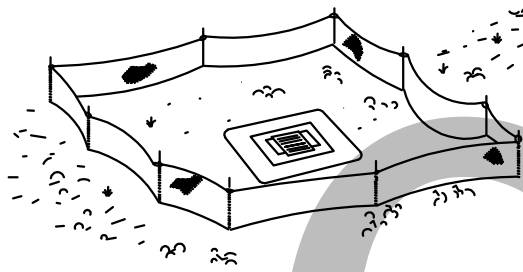




EROSION CONTROL NOTES



TYPE IV SILT FENCE

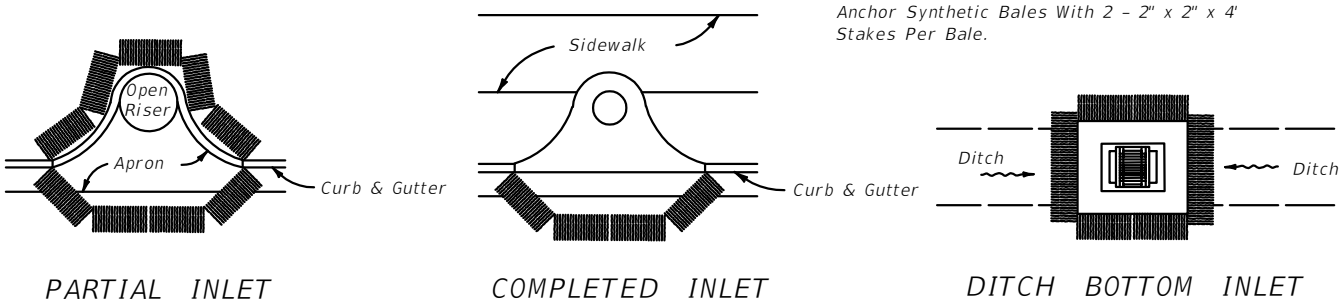
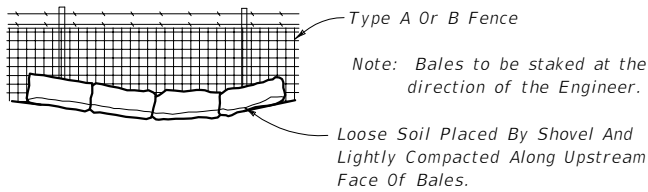


Type IV Silt Fence Protection
Around Ditch Bottom Inlets.

Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

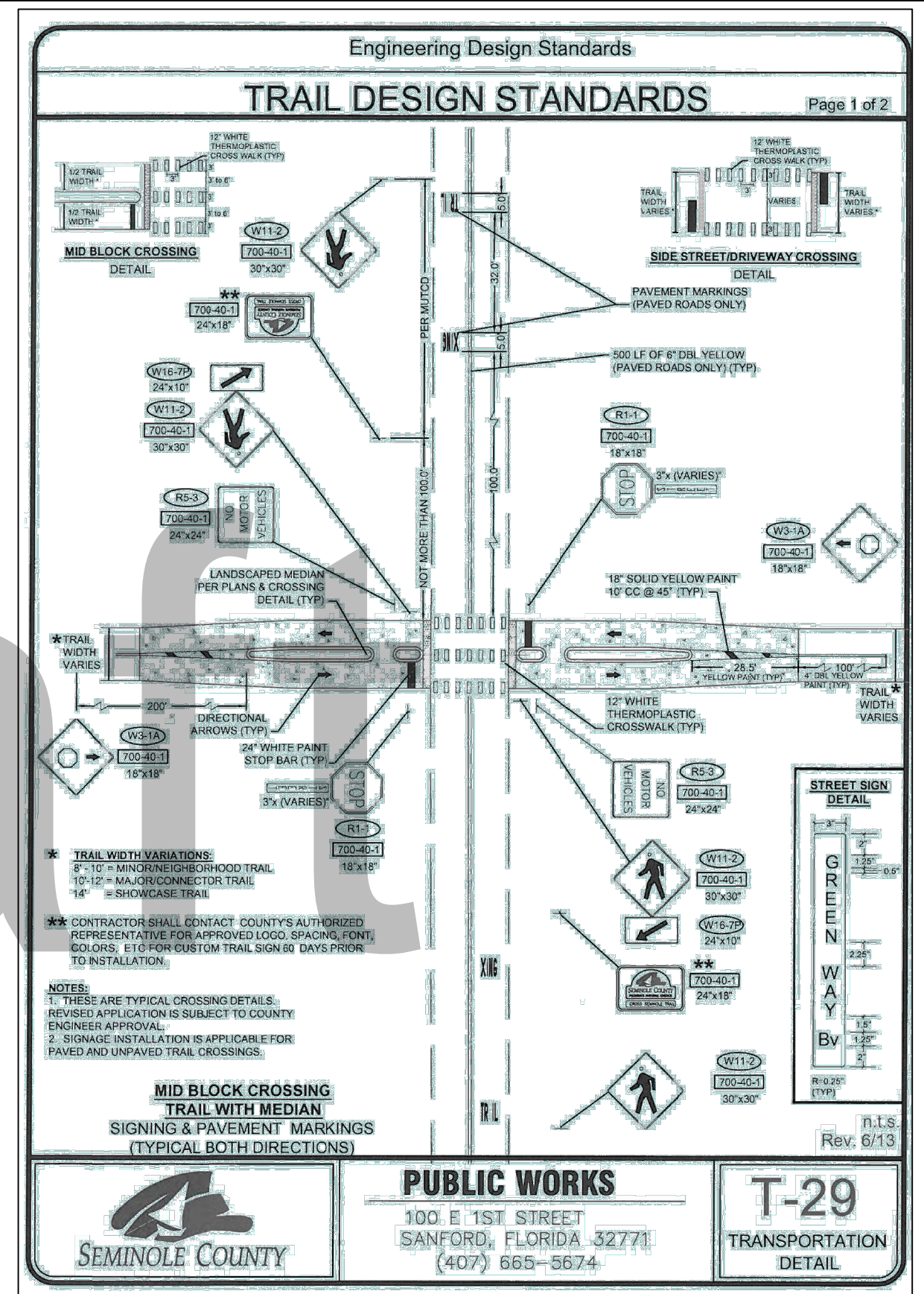
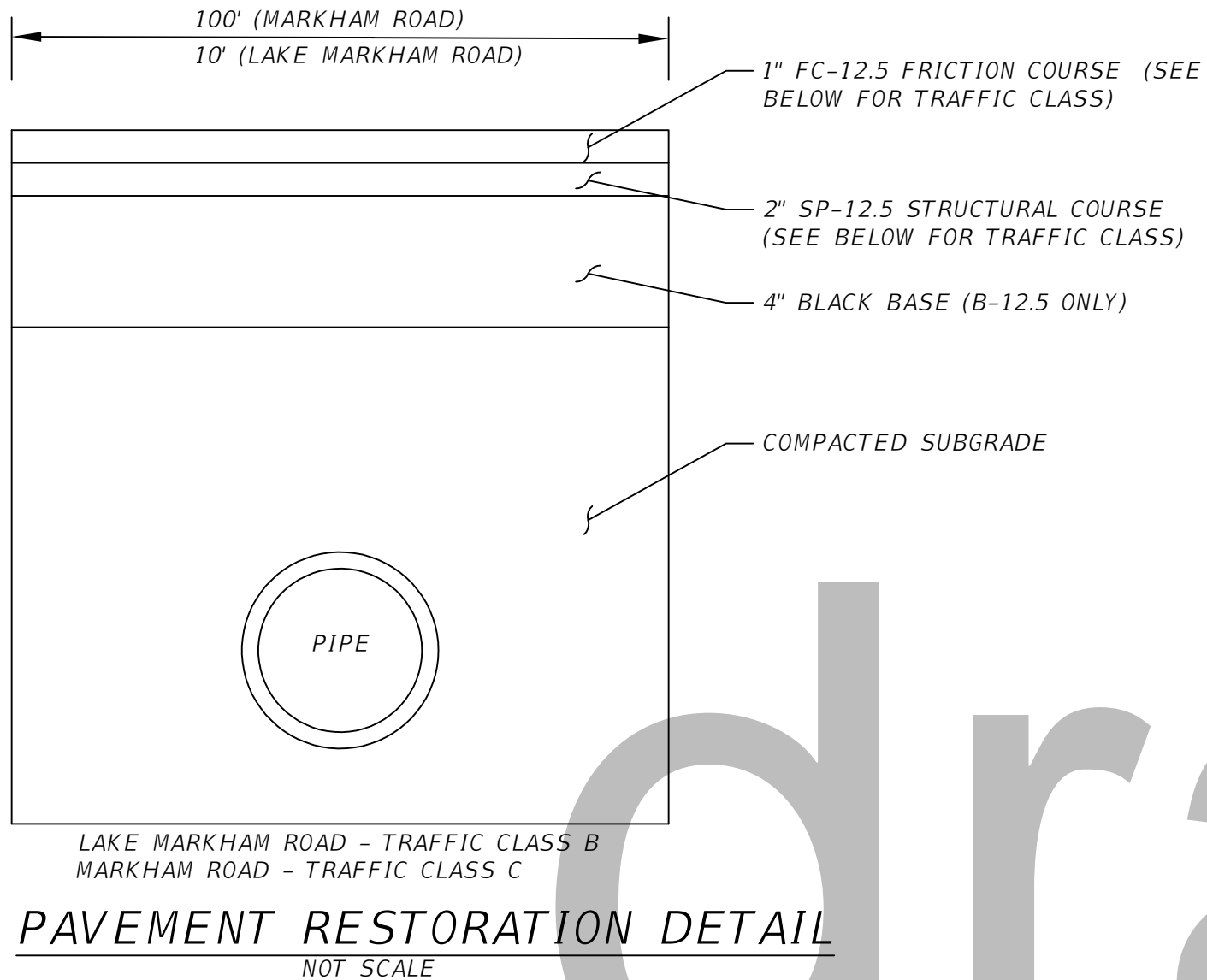
SILT FENCE APPLICATIONS


1. THE CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT TO THE VOLUME AND AMOUNT THAT ARE EXISTING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THIS CONDITION WILL BE SATISFIED FOR THE TOTAL ANTICIPATED CONSTRUCTION PERIOD. PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY AND CAPACITY OF CHECK WEIRS, SEDIMENT BASINS, SLOPE DRAINS, GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGHOUT THE LIFE OF THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE SYNTHETIC BALES, SILT BARRIERS, TEMPORARY GRASSING, ETC. AS REQUIRED TO FULLY COMPLY WITH THE INTENT OF THIS SPECIFICATION.
2. NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.
3. THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL BE CONTROLLED, SO THAT THIS OPERATION WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.
4. INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT LADEN STORMWATER RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET. (SEE NOTE 16).
5. AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT WITHIN THIRTY DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER, DURING THE SEASON IN WHICH IT IS PLANTED. TEMPORARY SEEDING SHALL BE CONTROLLED SO AS TO NOT ALTER OR COMPETE WITH PERMANENT GRASSING. THE RATE OF SEEDING SHALL BE 30 POUNDS PER ACRE.
6. THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
7. IF AFTER 14 DAYS, THE TEMPORARY GRASSES AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED TO ESTABLISH THE DESIRED VEGETATION COVER.
8. ALL FEATURES OF THE PROJECT SHALL BE CONSTRUCTED TO PREVENT EROSION AND SEDIMENT AND SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT.
9. ALL DISTURBED AREAS OUTSIDE THE EXCAVATION AND FILL LIMITS WILL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THEIR CONDITION PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL NEWLY PLANTED GRASSES OR VEGETATION AND RETENTION/DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE COUNTY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND SHALL REPLACE ANY PORTION, WHICH IN THE OPINION OF THE ENGINEER, HAS BECOME DISPLACED DUE TO EROSION OR DUE TO CARELESSNESS OR NEGLIGENCE ON THE PART OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONTROLLING POLLUTION OF THE ENVIRONMENT. MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO CONTROL EROSION AND SEDIMENT RUNOFF FROM THE SITE DURING CONSTRUCTION. SUCH METHODS SHALL BE IN ACCORDANCE WITH THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
13. ABSOLUTELY NO WORK WILL BE ALLOWED WITHIN ANY CONSERVATION AREA, BUFFER AREA, MITIGATION AREA OR DESIGNATED WETLAND AREA UNLESS SO SPECIFICALLY DESCRIBED BY THE PLANS AND GRANTED BY REASON OF PERMIT FROM THE GOVERNMENTAL ENTITY HAVING JURISDICTION OVER SAID AREA.
14. PRIOR TO CLEARING AND GRUBBING, THE LIMITS OF WETLANDS, BUFFERS, AND MITIGATION AREAS SHALL BE CLEARLY MARKED ALONG THE PROPOSED RIGHT OF WAY LINE TO PROTECT THESE AREAS FROM ENCROACHMENT FROM CONSTRUCTION ACTIVITIES.
15. ALL FILL EMBANKMENT AND GRADED AREAS SHALL BE PROTECTED AGAINST EROSION BY METHODS STATED IN "SECTION 104," F.D.O.T. STANDARD SPECIFICATIONS FOR BRIDGE AND ROAD CONSTRUCTION. SIDE SLOPE MAY BE SEEDED AND MULCHED, PROVIDED THAT THE MULCH MATERIAL IS DISC HARROWED AND THE SIDE SLOPES ARE NEITHER GREATER THAN 4:1 NOR PART OF A DRAINAGE CONVEYANCE.
16. EROSION CONTROL AT ALL INLET DRAINAGE STRUCTURES DURING CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH SECTION 104 PREVENTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION.



PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

REVISIONS				<div>SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771</div>	SEMINOLE COUNTY ENGINEERING DIVISION		EROSION CONTROL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		31



REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		SPECIAL DETAILS SHEET	SHEET NO. 32
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		

A. CONSTRUCTION ACTIVITY

PROJECT LIMITS
STA. 91+00.00 TO STA. 106+65.93 BASELINE OF SURVEY OF LAKE MARKHAM ROAD, STA.
22+40.00 TO STA. 24+40.00 BASELINE OF SURVEY OF MARKHAM ROAD IN SECTION 35,
TOWNSHIP 19 SOUTH, RANGE 29 EAST, IN SEMINOLE COUNTY FOR A TOTAL OF 0.33 MILES.

THE OVERALL PROJECT ADDRESSES THE FLOODING THAT OCCURS WITH TYPICAL SUMMER RAIN AT THE MARKHAM ROAD / LAKE MARKHAM ROAD INTERSECTION. THIS EXISTING STORM DRAIN SYSTEM IS UNDERSIZED AND LACKS STORM DRAIN AND STRUCTURES AT LOW SPOTS ALONG LAKE MARKHAM ROAD

C. TOTAL PROJECT AREA: 2.2 ACRES
TOTAL AREA TO BE DISTURBED: 1.4 ACRES

RUNOFF COEFFICIENT FOR: GRASSED AREA ADJACENT TO PAVEMENT, $C = 0.20$
IMPERVIOUS SURFACE, $C = 0.95$
DISTURBED AREAS DURING CONSTRUCTION, $C = 0.40$

(2) DESCRIPTION OF SOIL OR QUALITY OF DISCHARGE:
SOILS WITHIN THE PROJECT AREA ARE DESCRIBED IN GENERAL AS URBAN LAND.
DETAILED DATA IS SUPPLIED IN THE SOIL SURVEY OF SEMINOLE COUNTY,
PREPARED BY THE NATURAL RESOURCE CONSERVATION SERVICE.

E. LOCATIONS OF DRAINAGE AREAS AND POND OUTFALL:
BASIN 1: INCLUDES ENTIRE STORM DRAIN SYSTEM THAT DRAINS INTO EXISTING WETLAND WITHIN CARISBROOKE SUBDIVISION. NO PROPOSED POND.

(2) WETLAND AREA:
NO WETLANDS WILL BE IMPACTED...NEED TO VERIFY BASED ON WOOD!!!!!!!!!!!!

NARRATIVE - SEQUENCE OF SOIL DISTURBING ACTIVITIES AND IMPLEMENTATION OF CONTROLS. CONSTRUCTION ACTIVITIES ON THIS PROJECT CONSIST OF FOUR (4) DISTINCT ELEMENTS.

ALL ITEMS REPRESENTED IN THE FOLLOWING DISCUSSION ARE DETAILED IN THE "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND WILL BE IMPLEMENTED BY THE ENGINEER IN A MANNER APPROPRIATE TO ENVIRONMENTALLY SENSITIVE CONSTRUCTION PRACTICES.

THE CONSTRUCTION PROJECT SCHEDULE WITH EROSION AND SEDIMENT CONTROL INSTALLATION AND MAINTENANCE TIED TO SPECIFIC DATES OR CONSTRUCTION ACTIVITIES. MODIFICATIONS TO THE COUNTY'S SWPPP AND EROSION CONTROL PLANS DUE TO CONTRACTOR'S PROPOSED CONSTRUCTION MEANS, METHODS AND PHASING. THE CONTRACTOR'S EROSION CONTROL PLAN WILL BE UTILIZED AS THE FIRST FORMAL UPDATE TO THE SWPPP.

THE CONTRACTORS ADVISED THAT THE CONTRACT DRAWINGS ONLY INDICATE EROSION, SEDIMENT, AND TURBIDITY CONTROLS AT LOCATIONS DETERMINED IN THE DESIGN PROCESS. HOWEVER, THE CONTRACTOR IS REQUIRED TO UPDATE THE SWPPP TO REFLECT ANY ADDITIONAL CONTROLS NECESSARY TO PREVENT THE POSSIBILITY OF SILTING ANY ADJACENT LOWLAND PARCEL, RECEIVING WATER, OR OTHERWISE VIOLATING STATE AND FEDERAL PERMIT REQUIREMENTS.

2.3 THE CONTRACTOR WILL PROVIDE POLLUTION CONTROL BY IMPLEMENTING DUST CONTROL DURING SEALING OPERATIONS. EXCAVATED MATERIAL WILL NOT BE DEPOSITED IN LOCATIONS WHERE IT COULD BE WASHED AWAY BY HIGH WATER OR STORM WATER RUNOFF, AND STOCKPILES SHALL BE COVERED OR ENCIRCLED WITH SEDIMENT CONTAINMENT DEVICES. ROADWAY SWEEPERS WILL ALSO BE USED IN CONJUNCTION WITH SEALING OPERATIONS. ALL TRUCKS WILL REQUIRE A COVERED BED.

A. EROSION AND SEDIMENT CONTROLS
(1) STABILIZATION PRACTICES
___ TEMPORARY SODDING
___ TEMPORARY GRASSING
X PERMANENT PLANTING OR SODDING
___ TEMPORARY MULCHING
___ ARTIFICIAL COVERING
X BUFFER ZONES
X PRESERVATION OF NATURAL RESOURCES

PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED IMMEDIATELY AFTER FINAL GRADING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY PROTECT A DISTURBED AREA IMMEDIATELY AFTER GRADING OPERATION, TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED. ALL TEMPORARY PROTECTION SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE AND ESTABLISHED.

(2) STRUCTURAL PRACTICES

- ___ SAND BAGGING
- X SILT FENCES
- X HAY BALES / INLET PROTECTION
- ___ ROCK BAGS
- ___ BERMS
- ___ DIVERSION, INTERCEPTOR, OR PERIMETER DITCHES
- ___ PIPE SLOPE DRAINS
- ___ FLUMES
- ___ ROCK BEDDING AT CONSTRUCTION EXIT
- ___ TIMBER BEDDING AT CONSTRUCTION EXIT
- ___ DITCH LINER
- ___ SEDIMENT TRAPS
- ___ SEDIMENT BASINS
- ___ STORM INLET SEDIMENT TRAP
- ___ STORM OUTLET STRUCTURES
- ___ CURBS AND GUTTERS
- ___ STORM SEWERS
- ___ VELOCITY CONTROL DEVICES
- ___ TURBIDITY BARRIER
- ___ RIP RAP
- ___ DITCH BLOCKS

THE DEVICES INDICATED ABOVE WILL BE IMPLEMENTED ACCORDING TO THE MANDATES AND STANDARD PRACTICES. OTHER STRUCTURAL PRACTICES MAY BE IMPLEMENTED AT THE DIRECTION OF THE ENGINEER.

B. OTHER CONTROLS
(1) WASTE DISPOSAL
THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES. ALL FERTILIZER, HYDROCARBON OR OTHER CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER. DETAILED ELEMENTS OF WASTE DISPOSAL CONTROLS ARE TO BE DEVELOPED AS PART OF THE CONTRACTOR'S SWPPP.

OTHER:
DETAILED ELEMENTS OF OFFSITE VEHICLE TRACKING CONTROLS ARE TO BE DEVELOPED AS PART OF THE CONTRACTOR'S EROSION CONTROL PLAN (ECP).


(4) FERTILIZERS AND PESTICIDES
FERTILIZERS: FERTILIZERS WILL BE USED ON THIS PROJECT IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 982, AT THE DISCRETION OF THE CONTRACTOR WITH COORDINATION OF THE ENGINEER. DETAILED ELEMENTS OF FERTILIZER AND PESTICIDE CONTROLS ARE TO BE DEVELOPED AS PART OF THE CONTRACTOR'S ECP.

(5) NON-STORM WATER DISCHARGE, INCLUDING SPILL REPORTING
THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THIS PORTION OF THE SWPPP IN
THE SECTION 104 EROSION CONTROL PLAN. WHEN THE CONTRACTOR ENCOUNTERS A SPILL,
CONSTRUCTION WILL STOP AND WORK WILL NOT RESUME UNTIL DIRECTED BY THE PROJECT
ENGINEER. DISPOSITION OF HAZARDOUS WASTE WILL BE MADE IN ACCORDANCE WITH ANY
REQUIREMENTS AND REGULATIONS OF ANY LOCAL, STATE, OR FEDERAL AGENCY HAVING
JURISDICTION.

D. APPROVED STATE, LOCAL PLANS OR STORM WATER PERMIT(S)
A PERMIT WILL BE REQUIRED FROM THE ST. JOHNS RIVER WATER MANAGEMENT
DISTRICT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND MAINTENANCE OF ALL EROSION CONTROL DEVICES AND PRACTICES THROUGHOUT THE CONSTRUCTION PHASE OF THE PROJECT. REMEDIAL ACTION SHALL BE PERFORMED IMMEDIATELY. MAINTENANCE SHALL BE CONDUCTED IN ACCORDANCE WITH THE "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 104 AND "FDOT EROSION AND SEDIMENT CONTROL MANUAL".

THE CONTRACTOR IS REQUIRED TO INSPECT ALL EROSION CONTROL FEATURES AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAIN EVENT OF 0.5 INCHES OR GREATER. IN ADDITION, MAINTAIN ALL EROSION CONTROL FEATURES AS REQUIRED HEREIN AND AS SPECIFIED IN STATE AND/OR FEDERAL ENVIRONMENTAL REGULATORY PERMITS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE DAILY REVIEW OF THE LOCATION OF SILT FENCES IN AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CHANGED THE NATURAL CONTOUR AND DRAINAGE RUNOFF TO ENSURE THAT SILT FENCES ARE PROPERLY LOCATED FOR EFFECTIVENESS. THE CONTRACTOR WILL USE FDOT FORM 650-040-03 TO REPORT ALL INSPECTION FINDINGS AND CORRECTIVE ACTIONS TAKEN AS A RESULT OF THE INSPECTION. THE CONTRACTOR WILL SIGN EACH INSPECTION REPORT AND SUBMIT IT WEEKLY TO THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD WEEKLY RAINFALL. WHERE SITES HAVE BEEN FINALLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE A MONTH.

REVISIONS				 <i>SEMINOLE COUNTY ENGINEERING DIVISION</i> JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st Street Sanford, FL 32771	<i>SEMINOLE COUNTY ENGINEERING DIVISION</i>		<i>STORMWATER POLLUTION PREVENTION PLAN (SWPPP)</i>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		33
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		

SUMMARY OF CLEARING AND GRUBBING & REMOVAL ITEMS														
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	LENGTH	WIDTH	UNITS	SECONDARY UNITS (IF LUMP SUM)	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.						AREA (AC.)	P	F	P	F		
110-4-1	REMOVAL OF EXISTING CONCRETE	91+12.97 TO 91+75.19	RT				SY		33.4		1,549		6' SIDEWALK	
		91+94.31 TO 93+26.03	RT				SY		85.8				6' SIDEWALK	
		93+43.93 TO 106+31.93	RT				SY		833.6				6' SIDEWALK	
		92+20.23 TO 102+30.03	LT				SY		558.4				5' SIDEWALK	
		93+18.05 TO 93+48.16	RT				SY		37.8				DRIVEWAY	

SUMMARY OF EARTHWORK					
PAY ITEM NO.	PAY ITEM DESCRIPTION	CY		DESIGN NOTES	CONSTRUCTION NOTES
		P	F		
120-1	EXCAVATION, REGULAR	133.4			
120-6	EMBANKMENT (FILL)	246.3		VALUE DOES NOT INCORPORATE ANY SHRINKAGE FACTORS FOR FILL	

550 - 10 - 228

LF

SUMMARY OF FENCING									
LOCATION		SIDE	AREA ID	LENGTH	WIDTH	FENCING (TYPE B) (5.1'-6.0' HEIGHT) (RESET EXISTING)		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.						550-10-228			
						LF			
						P	F		
93+57.34 TO 96+18.73		RT		271.4				TO BE RELOCATED 1' BEHIND BACK OF SIDEWALK	
98+18.62 TO 98+34.97		RT		26.4				TO BE RELOCATED 1' BEHIND BACK OF SIDEWALK	
99+72.23 TO 99+87.23		RT		25.0				TO BE RELOCATED 1' BEHIND BACK OF SIDEWALK	
101+06.74 TO 101+26.74		RT		30.0				TO BE RELOCATED 1' BEHIND BACK OF SIDEWALK	
103+41.52 TO 103+61.52		RT		30.0				TO BE RELOCATED 1' BEHIND BACK OF SIDEWALK	
105+69.51 TO 105+89.51		RT		30.0				TO BE RELOCATED 1' BEHIND BACK OF SIDEWALK	
SUBTOTAL				412.8					
TOTAL				413					


REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st, Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					
					ROAD	COUNTY CIP No.		
				MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		SQ-1	

SUMMARY OF PAVEMENT

[illegible]

SUMMARY OF CURB & GUTTER AND / OR TRAFFIC SEPARATORS

[illegible]

<div> <div> REVISIONS </div> </div>				 <div> SEMINOLE COUNTY ENGINEERING DIVISION </div> <div> JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771 </div>	<div> SEMINOLE COUNTY ENGINEERING DIVISION </div>		<div> TABULATION OF QUANTITIES </div>	<div> SHEET NO. SQ-2 </div>
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		

SUMMARY OF SIDEWALK, DRIVEWAY & DETECTABLE WARNINGS												
LOCATION	SIDE	AREA ID	LENGTH	WIDTH	CONC. SIDEWALK 4"		CONC. DRIVEWAY 6"		DETECTABLE WARNINGS		DESIGN NOTES	CONSTRUCTION REMARKS
					522-1		522-2		527-2			
					SY		SY		SF			
					P	F	P	F	P	F		
91+10.54 TO 91+76.65	RT				49.7						6' SIDEWALK	
91+94.68 TO 93+25.71	RT				86.7						6' SIDEWALK	
93+43.96 TO 106+31.93	RT				884.8						6' SIDEWALK	
92+20.23 TO 102+30.00	LT				584.5						5' SIDEWALK	
SUBTOTAL					1,605.7							
TOTAL					1,606							

SUMMARY OF PERFORMANCE TURF								
LOCATION	SIDE	AREA ID	LENGTH	WIDTH	PERFORMANCE TURF (SOD)		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.					570-1-2			
					SY			
					P	F		
91+24.66 TO 91+77.93	RT				56.1			
91+94.64 TO 93+27.97	RT				131.6			
93+43.98 TO 106+95.23	RT				1327.9			
92+02.90 TO 102+30.03	LT				1156.3			
SUBTOTAL					2,671.9			
TOTAL					2,672			

SUMMARY OF PAVEMENT STRIPING AND SIGNAGE																
PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	SHEET NUMBERS										TOTAL THIS SHEET		GRAND TOTAL	
			8		9		10		11		12					
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
700-1-50	SINGLE POST SIGN RELOCATE	AS	2		5								7		7	

REVISIONS				 SEMINOLE COUNTY ENGINEERING DIVISION JEFFREY L. SLOMAN P.E. No. 56160 100 East 1st. Street Sanford, FL 32771	SEMINOLE COUNTY ENGINEERING DIVISION		TABULATION OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD	COUNTY CIP No.		
					MARKHAM RD. / LAKE MARKHAM RD. DRAINAGE IMPROVEMENTS	02307084		SQ-3

SUMMARY OF EROSION AND SEDIMENT CONTROL DEVICES										
LOCATION	SIDE	AREA ID	STAKE SILT FENCE		INLET PROTECTION SYSTEM		FLOATING TURBIDITY BARRIER		DESIGN NOTES	CONSTRUCTION REMARKS
			104-13-1		104-18		104-11			
			LF		EA		LF			
STA. TO STA.			P	F	P	F	P	F		
91+22.86 to 91+75.31	RT		58.5							
91+94.67 to 106+31.93	RT		1,441.0							
92+01.42 to 102+35.03	LT		1,036.0							
89+79.83 to 90+78.47	LT		98.6							
89+85.33 to 90+78.63	RT		93.4							
22+75.02 to 24+46.33	LT		171.3							
90+65.31	CL				1					
22+40.00	LT				1					
91+50.00	RT				1					
93+00.00	RT				1					
93+56.95	RT				1					
94+13.34	LT				1					
94+13.34	RT				1					
97+00.00	RT				1					
100+50.00	LT				1					
100+50.00	RT				1					
101+88.67	RT				1					
104+00.00	RT				1					
106+20.00	RT				1					
89+12.77 to 89+31.63	CL						50.3			
SUBTOTAL			2,898.8		13		50.3			
TOTAL			2,899		13		50			