

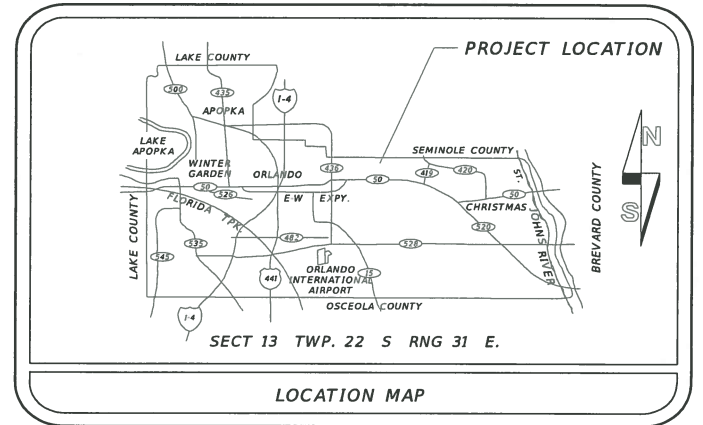


TERESA JACOBS, COUNTY MAYOR

BOARD OF COUNTY COMMISSIONERS

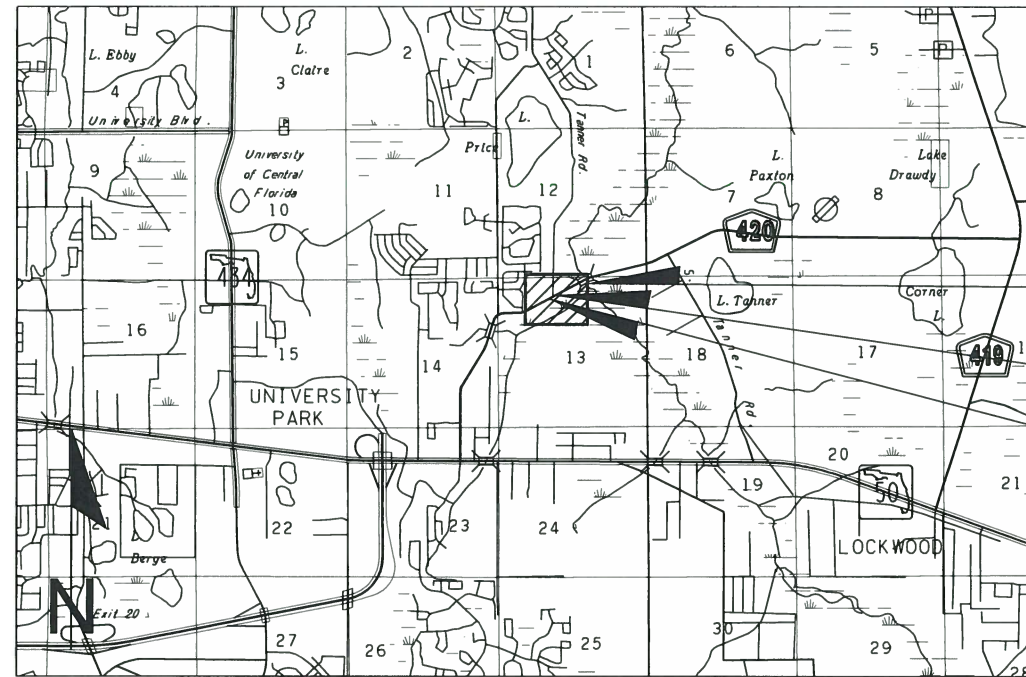
- | | |
|-----------------------|-----------------------|
| S. SCOTT BOYD | DISTRICT 1 |
| BRYAN NELSON | DISTRICT 2 |
| PETE CLARKE | DISTRICT 3 |
| JENNIFER THOMPSON | DISTRICT 4 |
| TED EDWARDS | DISTRICT 5 |
| VICTORIA P. SIPLIN | DISTRICT 6 |
| MARK V. MASSARO, P.E. | PUBLIC WORKS DIRECTOR |

CONSTRUCTION PLANS FOR LAKE PICKETT ROAD AT NORTH TANNER ROAD INTERSECTION IMPROVEMENTS ORANGE COUNTY CIP NO. 2722 DISTRICT NO. 5 ORANGE COUNTY, FLORIDA



T-21-S
T-22-S

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VICINITY MAP
N.T.S.

PROJECT LOCATION
END PROJECT
STA. 110+00
BEGIN PROJECT
STA. 103+00

LEGEND	
EXIST. EDGE OF PAVT. ---	RATE OF SUPERELEVATION
PROPOSED PAVEMENT	TELEPHONE POLE
RIGHT OF WAY LINE	OVERHEAD TELEPHONE
SEWER STORM INLET	BURIED POWER CABLE
SURVEY REFERENCE POINT	TELEPHONE DUCT
POINT OF INTERSECTION	LIGHT POLE
BASE LINE	GAS MAIN
CENTER LINE	SANITARY SEWER
PROPERTY LINE	FIRE HYDRANT
DELTA ANGLE	
APPROXIMATE ROUND	OVERHEAD CABLE TV
CURB	CONCRETE MONUMENT
CURB & GUTTER	IRON ROD
BARBED WIRE FENCE	IRON PIPE
	BUSH
WATER METER	GATE POST
VALVE	TRAFFIC SIGN
WATER MAIN	MAIL BOX
COMBINATION POLE	STORM SEWER, SIZE & TYPE
POWER POLE	CATCH BASIN
GUY WIRE	CLEAN OUT
OVERHEAD POWER	EXIST. MANHOLE
BURIED TELEPHONE CABLE	
TELEPHONE PEDESTAL	
BURIED TV CABLE	
BENCHMARK	CHAIN LINK FENCE
SOIL BORING	FENCE GATE
PALM TREE & SIZE	TREE TYPE & SIZE
SWALE FLOW LINE	O = OAK CA = CAMPHOR
SIGNAL MAST ARM	E = ELM EA = EAR
TRAFFIC SIGNAL CABLE	CE = CEDER P = PINE
	C = CHERRY M = MAPLE

LENGTH OF PROJECT		
	LINEAR FEET	MILES
LAKE PICKETT RD.	700	0.13
NORTH TANNER RD.	103	0.02

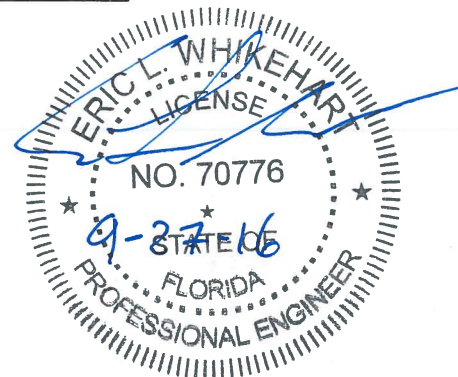
NOTE :

PLANS WERE PREPARED ACCORDING TO AVAILABLE INFORMATION TO ADEQUATELY ADDRESS CONDITIONS AS THEY EXISTED AT THE TIME OF PLANS PREPARATION. NEEDS, CONDITIONS AND OWNERSHIP OF PROPERTIES MAY HAVE CHANGED SINCE PROJECT DESIGN. THE COUNTY'S REPRESENTATIVE WILL ADDRESS CHANGES AND NEEDS WITH THE PROPERTY OWNER OR THEIR REPRESENTATIVES. CONTRACTOR SHALL WORK WITH THE COUNTY'S REPRESENTATIVE IN ADDRESSING AND MEETING NEEDS AND CONDITIONS THAT MAY CHANGE SINCE PLANS PREPARATION.

CERTIFICATION TO PLANS

I HEREBY CERTIFY THAT THE DESIGN FOR THIS PROJECT AND THE ATTACHED CONSTRUCTION PLANS COMPLY WITH THE REQUIREMENTS OF SECTION 336.045 OF THE FLORIDA STATUTES AND ARE IN SUBSTANTIAL CONFORMANCE WITH THE STANDARDS CONTAINED IN THE EDITION OF THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS" IN EFFECT ON THIS DATE AS ADOPTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION PURSUANT TO SUBSECTION 336.045(1) OF THE FLORIDA STATUTES.

DATE: OCTOBER 2015 ENGINEER: ERIC L. WHIKEHART, P.E. PE NO.: 70776



PREPARED BY:
TLP ENGINEERING CONSULTANTS, INC.
11486 CORPORATE BLVD., SUITE 151
ORLANDO, FL. 32817
PHONE: 407-901-5060
CERT. OF AUTH. #27205

UTILITIES ENCOUNTERED	
COMPANY NAME	TELEPHONE NO.
ORANGE COUNTY UTILITIES (OCU)	407-254-9706
COMCAST COMMUNICATIONS	407-849-3611
ORANGE COUNTY TRAFFIC OPS	407-836-7890
DUKE ENERGY - DISTRIBUTION (DE)	407-359-4404
AT&T DISTRIBUTION (AT&T)	407-351-8181

**CONFORMED SUBMITTAL
SEPTEMBER 27, 2016**

ORANGE COUNTY BENCH MARKS USED

SITE BENCHMARK
VERTICAL INFORMATION SHOWN HEREON REFERS TO ORANGE COUNTY VERTICAL CONTROL DATA BENCHMARK, DESIGNATION-5 78 RESET, PID-AK0465, PUBLISHED. ELEVATION=74.61(FEET), DATUM NAVD88.

SITE BENCHMARK
THE HORIZONTAL POSITIONS FOR ALL FEATURES SHOWN ON THE MAP ARE RELATIVE TO NORTH AMERICAN DATUM, NAD 1983, 2011 ADJUSTMENT, STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE. CONTROL POINT(S) USED FOR THIS SURVEY ARE NATIONAL GEODETIC SURVEY, NGS POINTS PID#AK0465 AND PID#AK7138; DISTANCES SHOWN ARE GRID DISTANCES.

GOVERNING STANDARDS AND STANDARD SPECIFICATIONS :
FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM, DATED 2014 AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2014 AS AMENDED BY CONTRACT DOCUMENTS.

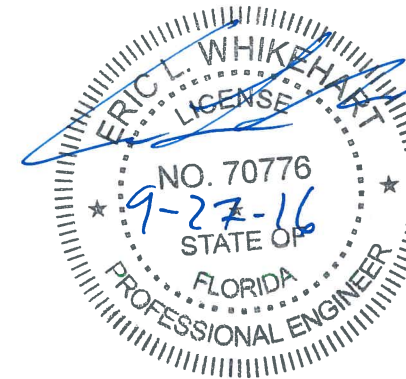
REVISIONS	DATE	BY

DESIGNED BY: ELW DATE: JUNE 2015
CHECKED BY: SWD DATE: JUNE 2015
APPROVED BY: YMM DATE: JUNE 2015

SHEET 1
OF 46

SUMMARY OF PAY ITEMS

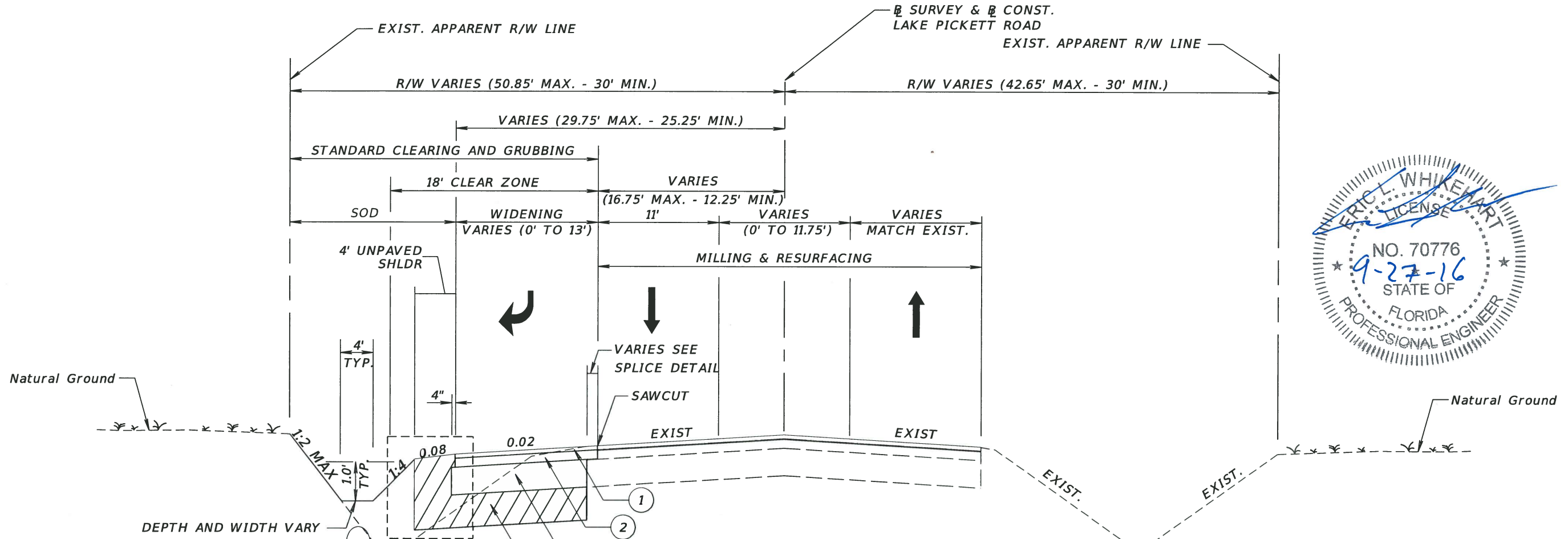
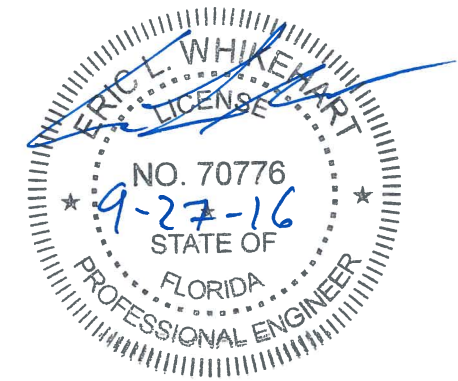
PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	QUANTITY	
			P	F
SUMMARY OF ROADWAY PAY ITEMS				
101-1	MOBILIZATION	LS	1	
102-1	MAINTENANCE OF TRAFFIC	LS	1	
104-14	PREVENTION CONTROL & ABATEMENT CONTROL OF EROSION & WATER POLLUTION	LS	1	
110-1-1	CLEARING AND GRUBBING	LS	1	
120-1	EXCAVATION, EMBANKMENT, AND GRADING	LS	1	
160-4	TYPE B STABILIZATION 12" MIN. LBR 40	SY	963	
270-12	SOIL CEMENT (PRIMED) (300 PSI) (12")	SY	685	
327-70-6	MILLING EXIST. ASPH. PAVT., 1 1/2" AVG DEPTH	SY	2,962	
334-1-12	SUPERPAVE ASPHALTIC CONCRETE (SP-12.5) (TRAFFIC C) (2")	SY	736	
337-7-20	ASPHALTIC CONCRETE FRICTION COURSE (FC-12.5) (TRAFFIC C) (1.5")	SY	3,643	
425-1-551	INLETS, DT BOT, TYPE E, <10'	EA	4	
425-2-41	MANHOLE (TYPE P -7 <10")	EA	1	
425-2-71	MANHOLE (TYPE J -7 <10")	EA	1	
430-175-101	STEEL REINFORCED CONCRETE PIPE CULVERT (CLASS III) (15"SS)	LF	15	
430-175-201	STEEL REINFORCED CONCRETE PIPE CULVERT (CLASS III) (ELLIP. 14"X23" SS)	LF	78	
430-175-230	STEEL REINFORCED CONCRETE PIPE CULVERT (CLASS III) (ELLIP. 24"X38" SS)	LF	389	
430-982-633	STEEL REINFORCED MITERED END SECTION (CONC PIPE ELLIP.) 24"X38" CD	EA	1	
520-1-10	CONCRETE CURB & GUTTER (TYP E)	LF	139	
522-1	CONCRETE SIDEWALK (4" THICK INCLUDING COMPACTION)	SY	42	
522-2	CONCRETE DRIVEWAY (6" THICK INCLUDING COMPACTION)	SY	133	
527-2	DETECTABLE WARNINGS (NEW & EXISTING WALKING SURFACES)	SF	33	
530-3-4	RIPRAP, RUBBLE, F&I, DITCH LINING	TN	4.8	
570-1-2	PERFORMANCE TURF, SOD, BAHIA	SY	1,399	
900-1	AS-BUILTS	LS	1	
900-2	INDEMNIFICATION	LS	1	
SUMMARY OF SIGNING AND PAVEMENT MARKINGS				
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	2	
700-1-50	SINGLE POST SIGN, RELOCATE	AS	2	
706-3	RPM'S (WHITE/RED) & (YELLOW/YELLOW) TOTAL	EA	130	
*	(WHITE/RED)	EA	85	
*	(YELLOW/YELLOW)	EA	45	
710-90	PAINTED PAVEMENT MARKINGS (FINAL SURFACE)	LS	1	
711-11-111	THERMOPLASTIC, STANDARD, WHITE, SOLID (6")	NM	0.483	
711-11-122	THERMOPLASTIC, STANDARD, WHITE, SOLID (8")	LF	162	
711-11-123	THERMOPLASTIC, STANDARD, WHITE, SOLID (12")	LF	125	
711-11-124	THERMOPLASTIC, STANDARD, WHITE, SOLID (18")	LF	109	
711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID (24")	LF	148	
711-11-160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE	EA	1	
711-11-170	THERMOPLASTIC, STANDARD, WHITE, ARROWS	EA	7	
711-11-180	THERMOPLASTIC, STANDARD, WHITE, YIELD LINE	LF	21	
711-11-211	THERMOPLASTIC, STANDARD, YELLOW, SOLID (6")	NM	0.468	
711-11-224	THERMOPLASTIC, STANDARD, YELLOW, SOLID (18")	LF	176	
SUMMARY OF SIGNALIZATION PAY ITEMS				
603-1	SIGNALIZATION(LAKE PICKETT ROAD AT NORTH TANNER ROAD)	LS	1	



PAY ITEM NOTES:

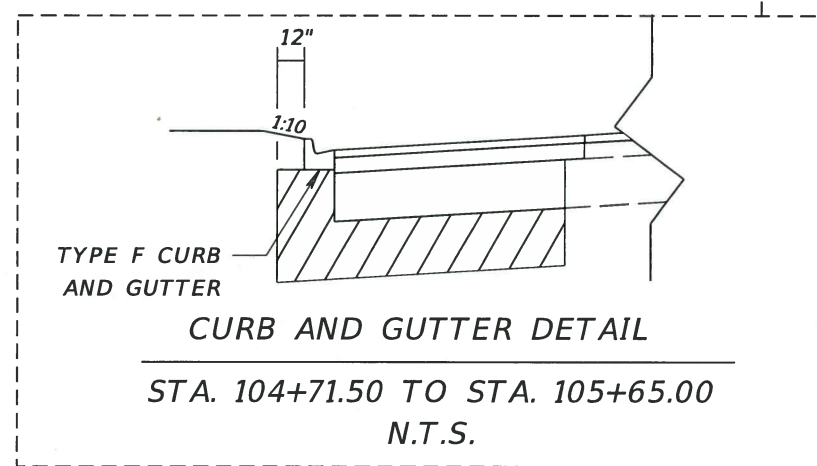
- 102-1 INCLUDES COST OF REPLACEMENT OF EXISTING MAILBOXES.
- 104-14 INCLUDES COST OF ALL ITEMS FOR EROSION CONTROL. THIS INCLUDES, BUT IS NOT LIMITED TO, SEDIMENT BARRIER, INLET PROTECTION DEVICES, TURBIDITY BARRIERS, TEMPORARY GRASSING & DESILTING OF EXISTING DRAINAGE PIPES AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 110-1-1 INCLUDES, BUT IS NOT LIMITED TO, THE COST OF REMOVAL AND DISPOSAL OF CURB, CURB & GUTTER, SIDEWALK, DRIVEWAYS, DRAINAGE STRUCTURES, EXISTING FENCE AND FULL DEPTH ASPHALT AND BASE COURSE. PAY ITEM ALSO ACCOUNTS FOR GROUND SURFACE STRIPPING TO A MINIMUM DEPTH OF ONE FOOT WITHIN ALL PAVEMENT WIDENING AND SOIL GRADING LIMITS.
- 430-175-101 IN ADDITION TO THE COST OF 15" REINFORCED CONCRETE PIPE (RCP), PAY ITEM INCLUDES COST FOR CONSTRUCTION OF CONCRETE COLLARS FOR THE 15" RCP CONNECTING TO STRUCTURE S-103.
- 430-175-201 IN ADDITION TO THE COST OF 14"X23" ELLIPTICAL REINFORCED CONCRETE PIPE (ERCP), PAY ITEM INCLUDES COST FOR CONSTRUCTION OF CONCRETE COLLARS FOR THE DUAL 14"X23" ERCP CONNECTING TO STRUCTURE S-101.

REVISIONS		ORANGE COUNTY GOVERNMENT FLORIDA	TLP ENGINEERING CONSULTANTS, INC. 11486 CORPORATE BLVD., SUITE 151 ORLANDO, FL. 32817 PH. 407-901-5060 ERIC L. WHIKEHART, P.E. 70776 CERT. OF AUTH. #27205	DESIGN PLANS FOR: LAKE PICKETT RD AT N. TANNER RD INTERSECTION IMPROVEMENTS		SUMMARY OF PAY ITEMS & PAY ITEM NOTES	SHEET NO. 5
DATE	DESCRIPTION			PROJECT NAME	PROJECT NO.		
				LAKE PICKETT	CIP-2722		



DEPTH AND WIDTH VARY
SEE CROSS SECTIONS

PROPOSED
24" X 38" ERCP



CURB AND GUTTER DETAIL

STA. 104+71.50 TO STA. 105+65.00
N.T.S.

TRAFFIC DATA

CURRENT YEAR = 2012 AADT = 9,128
 ESTIMATED OPENING YEAR = 2016 AADT = 9,800
 ESTIMATED DESIGN YEAR = 2036 AADT = 13,500
 K = 13.7% D = 86.7% T = 2.1% (24 HOUR)
 DESIGN HOUR T = 1.1 %
 DESIGN SPEED = 45 MPH

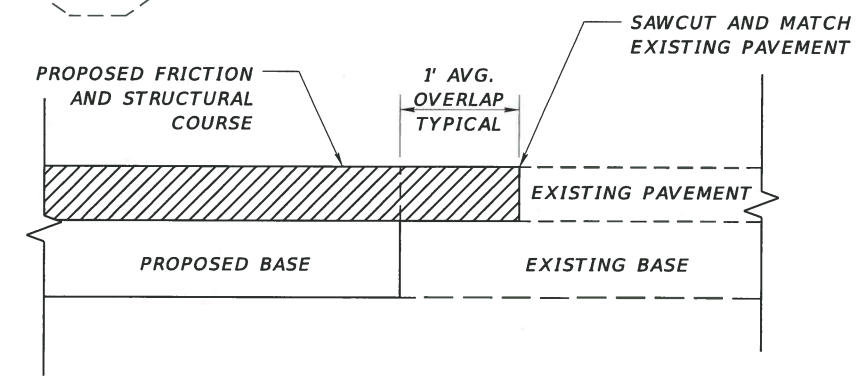
**TYPICAL SECTION
LAKE PICKETT ROAD
STA. 103+00.00 TO STA. 110+00.00
DESIGN SPEED = 45 MPH
N.T.S.**

**WIDENING
STA. 104+71.50 TO STA. 109+65.00**

- ① FRICTION COURSE FC-12.5 (TRAFFIC C) (1 1/2")
- ② TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2")
- ③ 12" SOIL CEMENT PRIMED (300 PSI)
- ④ 12" TYPE "B" STABILIZATION (MIN. LBR 40)

NOTE:

1. ACTUAL WIDTH OF BASE WIDENING MAY VARY DUE TO ACTUAL EXISTING PAVEMENT WIDTH. CONTRACTOR MAY ELECT TO PLACE UNIFORM WIDTH BASE WIDENING STRIP AT NO ADDITIONAL COST TO THE COUNTY.



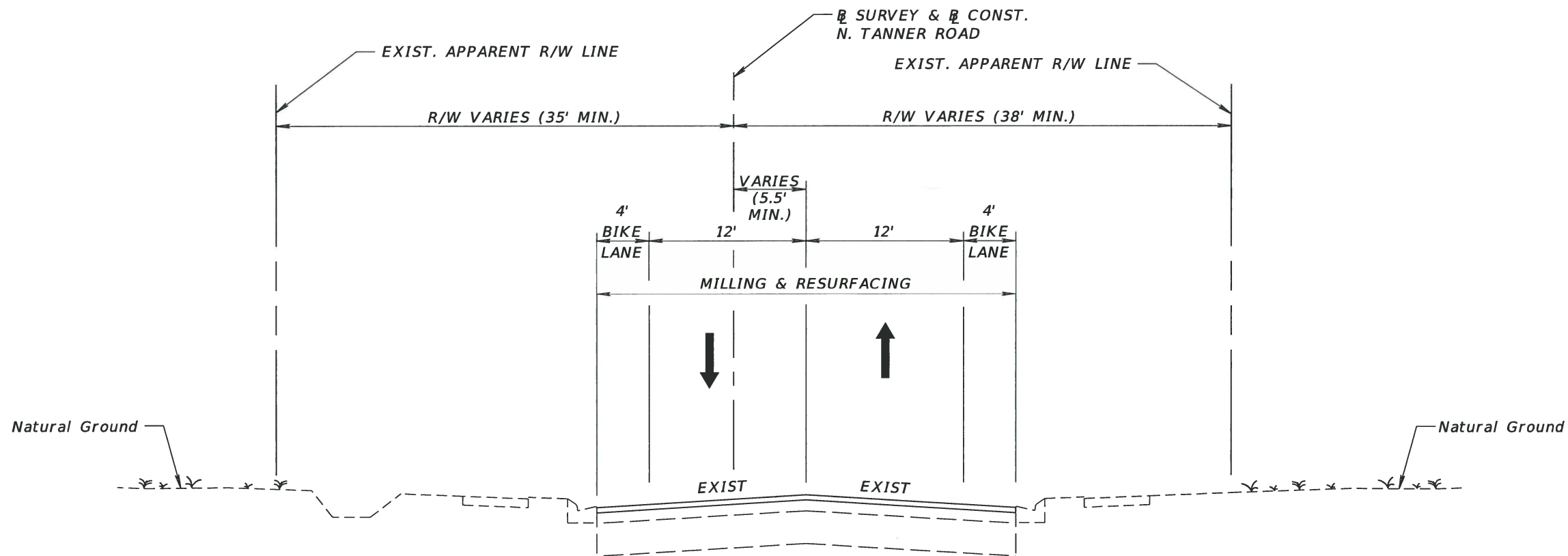
TYPICAL PAVEMENT SPLICE DETAIL

**ALL WIDENING LOCATIONS
N.T.S.**

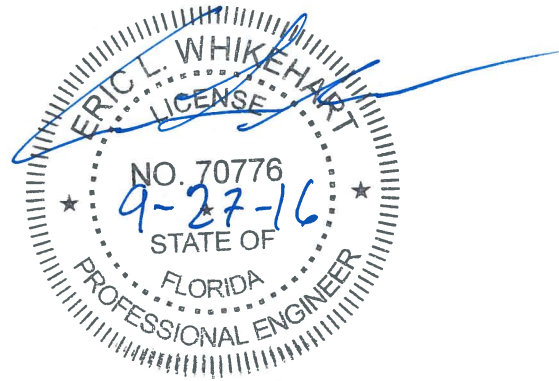
**MILLING
STA. 103+00.00 TO STA. 110+00.00
MILL EXIST. ASPHALT PAVEMENT (1 1/2" DEPTH)**

**RESURFACING
STA. 103+00.00 TO STA. 110+00.00
FRICTION COURSE FC-12.5 (TRAFFIC C) (1 1/2")**

REVISIONS				ORANGE COUNTY GOVERNMENT FLORIDA	DESIGN PLANS FOR: LAKE PICKETT RD AT N. TANNER RD INTERSECTION IMPROVEMENTS	PROJECT NAME	PROJECT NO.	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					
					TLP ENGINEERING CONSULTANTS, INC. 11486 CORPORATE BLVD., SUITE 151 ORLANDO, FL. 32817 PH. 407-901-5060 ERIC L. WHITEHART, P.E. 70776 CERT. OF AUTH. #27205	LAKE PICKETT	CIP-2722	TYPICAL SECTION LAKE PICKETT RD 8



TYPICAL SECTION
N. TANNER ROAD
STA. 201+03.00 TO STA. 202+06.00
DESIGN SPEED = 45 MPH
N.T.S.



TRAFFIC DATA

CURRENT YEAR = 2012 AADT = 10,528
 ESTIMATED OPENING YEAR = 2016 AADT = 11,300
 ESTIMATED DESIGN YEAR = 2036 AADT = 15,500
 K = 10.4% D = 74.7% T = 2.1% (24 HOUR)
 DESIGN HOUR T = 1.1%
 DESIGN SPEED = 45 MPH


MILLING

MILL EXIST. ASPHALT PAVEMENT (1 1/2" DEPTH)

RESURFACING

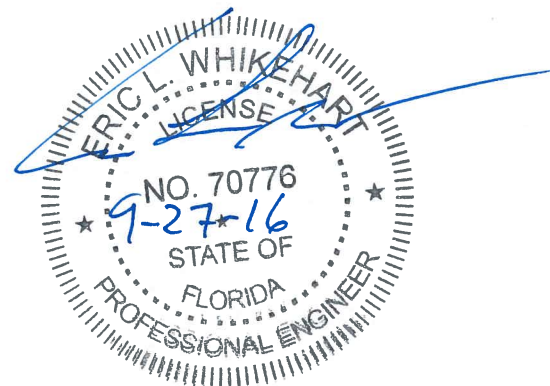
FRICTION COURSE FC-12.5 (TRAFFIC C) (1 1/2")

REVISIONS		DATE		DESCRIPTION	
DATE	DESCRIPTION	DATE	DESCRIPTION		

	TLP ENGINEERING CONSULTANTS, INC. 11486 CORPORATE BLVD., SUITE 151 ORLANDO, FL. 32817 PH. 407-901-5060 ERIC L. WHITEHART, P.E. 70776 CERT. OF AUTH. #27205		DESIGN PLANS FOR: LAKE PICKETT RD AT N. TANNER RD INTERSECTION IMPROVEMENTS		TYPICAL SECTION NORTH TANNER ROAD	SHEET NO. 9
	PROJECT NAME	PROJECT NO.				
	LAKE PICKETT	CIP-2722				

SUMMARY OF PAVEMENT

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION		SIDE	LENGTH	WIDTH	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.	DESCRIPTION					P	F	P	F		
160-4	TYPE B STABILIZATION, 12" (MIN. LBR 40)	104+68.68 TO 105+11.11	CURB RETURN SHAPE	LT	100.0	9.7	SY	107.8				AVERAGE WIDTH	
	TYPE B STABILIZATION, 12" (MIN. LBR 40)	105+11.11 TO 105+65.00	CURB AND GUTTER	LT	53.9	16.0	SY	95.8					
	TYPE B STABILIZATION, 12" (MIN. LBR 40)	105+65.00 TO 109+67.00	UNPAVED SHOULDER	LT	402.0	17.0	SY	759.2			963		
270-12	SOIL CEMENT (300 PSI), 12"	104+68.68 TO 105+11.11	CURB RETURN SHAPE	LT	100.0	6.3	SY	69.6				AVERAGE WIDTH	
	SOIL CEMENT (300 PSI), 12"	105+11.11 TO 105+65.00	CURB AND GUTTER	LT	53.9	12.0	SY	71.9					
	SOIL CEMENT (300 PSI), 12"	105+65.00 TO 109+65.00	UNPAVED SHOULDER	LT	400.0	12.2	SY	543.9			685	AVERAGE WIDTH	
327-70-6	MILLING EXIST. ASPH. PAVT., 1 1/2" AVG DEPTH	103+00.00 TO 105+80.00	INTERSECTION SHAPE	LT/RT	280.0	34.7	SY	1080.1				AVERAGE WIDTH	
	MILLING EXIST. ASPH. PAVT., 1 1/2" AVG DEPTH	105+80.00 TO 110+00.00	PAVEMENT TAPER	LT/RT	420.0	29.0	SY	1353.6				AVERAGE WIDTH	
	MILLING EXIST. ASPH. PAVT., 1 1/2" AVG DEPTH	201+03.00 TO 202+06.00	TANNER INTERSECTION	LT/RT	103.0	46.1	SY	528.0			2962	AVERAGE WIDTH	
334-1-12	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (SP-12.5) (2")	104+67.75 TO 105+11.11	CURB RETURN SHAPE	LT	100.0	7.3	SY	80.6				AVERAGE WIDTH	
	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (SP-12.5) (2")	105+11.11 TO 109+65.00	UNIFORM LANE PAVEMENT	LT	453.9	13.0	SY	655.6			736		
337-7-20	ASPHALTIC CONCRETE FRICTION COURSE (FC-12.5) (1.5")	103+00.00 TO 105+11.11	INTERSECTION SHAPE	LT/RT	211.1	58.4	SY	1370.7				AVERAGE WIDTH	
	ASPHALTIC CONCRETE FRICTION COURSE (FC-12.5) (1.5")	105+11.11 TO 105+65.00	UNIFORM LANE PAVEMENT	LT/RT	53.9	47.3	SY	283.5				AVERAGE WIDTH	
	ASPHALTIC CONCRETE FRICTION COURSE (FC-12.5) (1.5")	105+65.00 TO 109+65.00	PAVEMENT TAPER	LT/RT	400.0	42.6	SY	1893.0				AVERAGE WIDTH	
	ASPHALTIC CONCRETE FRICTION COURSE (FC-12.5) (1.5")	109+65.00 TO 110+00.00	NO WIDENING	LT/RT	35.0	24.6	SY	95.5			3643	AVERAGE WIDTH	



DATE		DESCRIPTION		REVISIONS		DATE		DESCRIPTION		 TLP ENGINEERING CONSULTANTS, INC. 11486 CORPORATE BLVD., SUITE 151 ORLANDO, FL. 32817 PH. 407-901-5060 ERIC L. WHITEHART, P.E. 70776 CERT. OF AUTH. #27205	DESIGN PLANS FOR: LAKE PICKETT RD AT N. TANNER RD INTERSECTION IMPROVEMENTS	SUMMARY OF QUANTITIES (SHEET 3 OF 3)	SHEET NO.
								PROJECT NAME LAKE PICKETT	PROJECT NO. CIP-2722		12		