

March 10, 2015
BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA
Addendum No. 1/IFB Y15-750-CH

INTERNATIONAL DRIVE IMPROVEMENT PROJECT (FROM WESTWOOD BLVD.
SOUTH TO WESTWOOD BLVD. NORTH)

REVISED Bid Opening Date: March 19, 2015 at 2:00 P.M.

1. The Bid Opening Date has changed as follows:

~~Delete: Bid Opening Date: March 12, 2015 at 2:00 P.M.~~

Replace with: **Bid Opening Date: March 19, 2015 at 2:00 P.M.**

2. Note the **REVISION** to the Part D, Schedule of Prices as follows:

~~Delete: The Schedule of Prices issued in the Invitation for Bids, Pages D-4 through D-12 in its entirety.~~

Replace with: **The Revised Schedule of Prices, REVISED Page D-1 through REVISED Page D-12 in Addendum #1.**

FAILURE TO SUBMIT THE REVISED SCHEDULE OF PRICES ATTACHED WITH THIS ADDENDUM WITH YOUR SEALED BID SHALL RESULT IN YOUR BID BEING DEEMED NON-RESPONSIVE.

3. Note the **ADDITION** to Volume II, Part G, Special Provisions as follows:

The Pavement Evaluation Report – International Drive (South Westwood Boulevard to North Westwood Boulevard) Orange County, Florida – NES Project No: R10003“ has been added per Addendum #1.

4. Note the **REVISION** to Volume II, Part H, Technical Provisions as follows:

~~Delete: Technical Provision #603 – Signalization issued in the Invitation for Bids.~~

Replace with: **Technical Provision #603 – Signalization (Revised) in Addendum #1.**

5. Note the **REVISION** to Volume III A, Utilities Technical Specifications as follows:

~~Delete: Section 01025, Measurement and Payment issued in the Invitation for Bids.~~

Replace with: Section 01025, Measurement and Payment, Revised 3/5/2015 included in Addendum #1.

6. Note the **REVISION** to Volume III B, Appendix B, Permits by Owner as follows:

~~Delete: Permits by Owner – Page Appendix B-1 issued in the Invitation for Bids.~~

Replace with: Permits by Owner – Page Appendix B-1 including in Addendum #1.

7. Note the **ADDITION** to Volume III B, Utilities Technical Specifications, Appendix B as follows:

Florida Department of Transportation (FDOT) Utility Permit Attachment A – Permit #2014-H-853-038 (TP-75-UT-072-14) Special Conditions - Permit #2014-H-853-038 (TP-75-UT-072-14) Utility Permit Extension (E-mail)

8. Note the **REVISION** to the Utilities Construction Plan Sheet as follow:

Sheet U-12 has been revised to depict the replacement of Manhole 33700049 (at Station $\pm 46+10$). An excerpt of the modification is provided herein (see attached, partial sheet)

9. The following is the response to a question received from a potential bidder:

1. **Question:** Can optional base be utilized on the project in lieu of the soil cement?

Response: The County only allows soil cement base and/or asphalt black base.

2. **Question:** Who will be responsible for the cost of testing for the project (i.e. density testing, asphalt testing, etc.)? The specifications indicate the County will handle this, but the FDOT specifications place this responsibility on the Contractor. Please clarify.

Response: Refer to Volume II, Part G, Supplemental Conditions / Special Conditions, Article 16.

3. **Question:** Will the County be providing property for Contractor laydown? Where would they be located/parcel numbers?

Response: No.

4. **Question:** Has a location for the engineer's field office been identified?

Response: This is not the County's responsibility; therefore the County will not choose this location.

5. **Question:** Were cores of the existing roadway done? Can the existing asphalt and base thicknesses be provided?

Response: See pavement evaluation report performed by NES included in Addendum #1.

6. **Question:** There is no pay item for 3' wide traffic separator. Where do we include this cost?

Response: 3' traffic separator is quantified under and to be paid for with item 520-70, Traffic Separator (Special).

7. **Question:** There is a bus stop shown to be reconstructed at STA310+60. What exactly is to be done? No details are provided. Is this to be done by others? Where do we include these costs?

Response: Pay item note for 102-1, Maintenance of Traffic, LS, states the following, "...INCLUDES THE COST OF COORDINATING WITH LYNX AND THE COST OF RECONSTRUCTING EXIST. LYNX BUS STOP- INCLUDING SHADE STRUCTURE- AT STA. 310+60 T."

8. **Question:** No adjustment will be made or allowed for either asphalt/bituminous cement or fuel during the project's construction period.

Response: No adjustment for asphalt or fuel.

9. **Question:** No recycled asphalt pavement (RAP) will be allowed in the project's Friction Course Asphaltic Concrete Pavement.

Response: Per TP, no RAP allowed for friction course asphaltic pavement.

10. **Question:** Recycled asphalt pavement (RAP) is limited to 20% in the project's Superpave Asphaltic Concrete Pavement.

Response: Per TP, less than 20% RAP for the superpave asphaltic pavement.

11. **Question:** Can the contractor use full depth reclamation with asphalt emulsion as a binder in lieu of bid item 334-70-100 and 334-70-200? Task Force 38 Report describes only reclaiming the upper RAP portion of the pavement structure and not the base material. A successful FDR project was recently completed on International Drive between Universal Blvd. and West Oak Ridge Rd. although this project used cement as a binder, asphalt emulsion can also be used to meet the design requirements of Task Force Report 38.

Response: No.

- 12: **Question:** Can the contractor use full depth reclamation with cement as a binder in lieu of bid item 334-70-100 and 334-70-200? A successful FDR project was recently completed on International Drive between Universal Blvd. and West Oak Ridge Rd. although this project used cement as a binder.

Response: No.

10. All other terms and conditions of the IFB remain the same.
11. **The Proposer shall acknowledge receipt of this addendum by completing the applicable section in the solicitation or by completion of the acknowledgement information on the addendum. Either form of acknowledgement must be completed and returned not later than the date and time for receipt of the proposal.**

Receipt acknowledged by:

Authorized Signature

Date Signed

Title

Name of Firm

OFFICIAL BID FORM
FOR
INTERNATIONAL DRIVE IMPROVEMENT PROJECT (FROM WESTWOOD BLVD.
SOUTH TO WESTWOOD BLVD. NORTH)

Mail or Hand Deliver
ORIGINAL BID FORM AND THREE (3) COMPLETE COPIES
BY 2:00 PM - ~~March 12, 2015~~ March 19, 2015

To:
BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA
INTERNAL OPERATIONS CENTRE II
PROCUREMENT DIVISION
400 E. SOUTH STREET – 2nd FLOOR
ORLANDO, FLORIDA 32801

Bid Opening:
March 12, 2015, - 2:00 PM

INTERNAL OPERATIONS CENTRE II
PROCUREMENT DIVISION CONFERENCE ROOM, 2nd FLOOR
ORLANDO, FLORIDA

COMPANY NAME	
COMPLETE MAILING ADDRESS	
CITY, COUNTY, STATE, ZIP CODE	
TELEPHONE NUMBER	FAX NUMBER
CONTACT PERSON	E-MAIL ADDRESS
TIN#: _____	

NOTE: COMPANY NAME MUST MATCH LEGAL NAME ASSIGNED TO TIN NUMBER. CURRENT W9 MUST BE SUBMITTED WITH BID/PROPOSAL

PART D

**To the Board of County Commissioners
Orange County, Florida**

The Undersigned, hereinafter called "Bidder", having visited the site of the proposed project and familiarized himself with the local conditions, nature and extent of the work, and having examined carefully the Contract Form, General Conditions, Supplementary Conditions, Plans and Specifications and other Contract Documents, with the Bond requirements herein, proposes to furnish all labor, materials, equipment and other items, facilities and services for the proper execution and completion of: **INTERNATIONAL DRIVE IMPROVEMENT PROJECT (FROM WESTWOOD BLVD. SOUTH TO WESTWOOD BLVD. NORTH)** in full accordance with the drawings and specifications prepared in accordance with the Contract Documents and, if awarded the Contract, to complete the said work within the time limits specified for the following ESTIMATED TOTAL BASE BID.

It is understood that this is a unit price Contract and the resultant Contract will contain estimated quantities, unit prices, extended totals and that the Estimated Total Base Bid is the sum of all pay item totals from the Revised schedule of prices, Revised Page D-3 through Revised D-12.

The Contract resulting from this solicitation is based on estimated quantities. The contractor shall only be paid for materials installed in the work in accordance with the applicable unit prices for the specific work element (line item). No payment shall be made for excess materials delivered to the jobsite and not incorporated into the work. Therefore, it shall be the contractor's responsibility to determine the quantities of materials necessary to perform the project to its completion.

ESTIMATED BASE BID FOR ROADWAY (A): \$ _____

ESTIMATED BASE BID FOR UTILITIES (B): \$ _____

ESTIMATED TOTAL BASE BID (A + B):

_____ DOLLARS
(In Words)

\$ _____

In the event the Contract is awarded to this Bidder, he/she will enter into a formal written agreement with the County in accordance with the accepted bid within ten (10) calendar days after said Contract is submitted to him/her and will furnish to the County a Contract Payment and Performance Bond with good and sufficient sureties, satisfactory to the County, in the amount of 100% of the accepted bid. The Bidder further agrees that in the event of the Bidder's default or breach of any of the agreements of this proposal, the said bid deposit shall be forfeited as liquidated damages.

Failure of the Bidder to provide pricing for all unit priced items and/or the Base Bid and ALL requested additive/deductive bid items, or alternate bids shall be cause for rejection of the bid as non-responsive.

**Y15-750-CH; REVISED SCHEDULE OF PRICES
INTERNATIONAL DRIVE ROADWAY IMPROVEMENTS
(FROM WESTWOOD BLVD. SOUTH TO WESTWOOD BLVD. NORTH)**

A. ROADWAY PAY ITEMS

Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
1	101-1*	MOBILIZATION 10% (See Note at the end of the Schedule of Prices)	LS	1		
2	102-1	MAINTENANCE OF TRAFFIC	LS	1		
3	104-14	PREVENTION, CONTROL & ABATEMENT OF EROSION & WATER POLLUTION	LS	1		
4	110-1-1	CLEARING & GRUBBING	LS	1		
5	120-7	REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL	CY	500		
6	120-9	EXCAVATION, EMBANKMENT & GRADING	LS	1		
7	160-4	TYPE B STABILIZATION (MIN. LBR 40) (12")	SY	44,489		
8	285-707	SOIL CEMENT BASE (PLANT MIX) (PRIMED) (300 PSI) (10")	SY	34,001		
9	327-70-6	MILLING EXISTING ASPHALT PAVEMENT (1 1/2" AVG. DEPTH)	SY	707		
10	327-70-8	MILLING EXISTING ASPHALT PAVEMENT (2 1/2" AVG. DEPTH)	SY	8,215		
11	334-1-13	SUPERPAVE ASPHALTIC CONC. (SP-9.5) (TRAF. LEVEL C) (INCL. TACK COAT) (1")	SY	9,096		
12	334-1-13A	SUPERPAVE ASPHALTIC CONC. (SP-12.5) (TRAF. LEVEL C) (INCL. TACK COAT) (3")	SY	130,567		
13	334-70-100	COLD IN-PLACE RECYCLE (8.5" DEPTH)	SY	99,962		
14	334-70-200	ASPHALT EMULSION	GAL	209,445		
15	337-7-42	ASPHALTIC CONC. FRICTION COURSE (TRAFFIC C) (FC-12.5) (PG 76-22) (1.5")	SY	140,471		
16	425-1-311	INLETS, CURB, TYPE P-1, <10'	EA	49		
17	425-1-321	INLETS, CURB, TYPE P-2, <10'	EA	12		

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Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
18	425-1-411	INLETS, CURB TYPE J-1, <10'	EA	3		
19	425-1-421	INLETS, CURB, TYPE J-2, <10'	EA	2		
20	425-1-711	INLETS, GUTTER, TYPE V, <10'	EA	1		
21	425-2-41	INLETS, P-7, <10'	EA	7		
22	425-2-61	MANHOLES, P-8, <10'	EA	18		
23	425-2-63	MANHOLES, P-8, PARTIAL	EA	7		
24	425-2-91	MANHOLES, J-8, <10'	EA	7		
25	425-2-93	MANHOLES, J-8, PARTIAL	EA	2		
26	430-94-1	DESILTING EXISTING PIPE (0-24")	LF	8,662		
27	430-94-2	DESILTING EXISTING PIPE (25"-36")	LF	7,035		
28	430-94-3	DESILTING EXISTING PIPE (37"-48")	LF	1,907		
29	430-94-4	DESILTING EXISTING PIPE (49"-60")	LF	493		
30	430-94-5	DESILTING EXISTING PIPE (61" >)	LF	897		
31	430-95	DESILTING EXISTING 2-10'x5' BOX CULVERT	LF	324		
32	430-174-118**	PIPE CULV, STEEL REINF. CONC. PIPE, ROUND, 18" (See Note at the end of the Schedule of Prices)	LF	6,024		
33	430-174-124**	PIPE CULV, STEEL REINF. CONC. PIPE, ROUND, 24" (See Note at the end of the Schedule of Prices)	LF	449		
34	430-174-130**	PIPE CULV, STEEL REINF. CONC. PIPE, ROUND, 30" (See Note at the end of the Schedule of Prices)	LF	284		
35	430-174-218**	PIPE CULV, STEEL REINF. CONC. PIPE, ELLIP., 14"x23" (18" EQ.) (See Note at the end of the Schedule of Prices)	LF	59		
36	440-1-20	UNDERDRAIN TYPE II, 6", FDOT INDEX 286	LF	1,257		

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Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
37	440-70	UNDERDRAIN INSPECTION BOX, FDOT INDEX 245	EA	5		
38	440-73-1	UNDERDRAIN OUTLET PIPE, 6", FDOT INDEX 286	LF	35		
39	515-2-201	PEDESTRIAN/ BICYCLE RAILING, STEEL, 42", PICKET RAIL (FDOT INDEX 852)	LF	283		
40	520-1-7	CONCRETE CURB AND GUTTER (TYPE E)	LF	19,355		
41	520-1-10	CONCRETE CURB AND GUTTER (TYPE F)	LF	7,209		
42	520-2-1	CONCRETE CURB (TYPE A)	LF	571		
43	520-2-2	CONCRETE CURB (TYPE B)	LF	70		
44	520-3	CONCRETE VALLEY GUTTER	LF	96		
45	520-5-11	TRAFFIC SEPARATOR TYPE I (4' WIDE)	LF	236		
46	520-5-12	TRAFFIC SEPARATOR TYPE I (6' WIDE)	LF	416		
47	520-70	TRAFFIC SEPARATOR (SPECIAL)	SY	445		
48	522-1	CONCRETE SIDEWALK, 4" THICK	SY	10,039		
49	522-2	CONCRETE SIDEWALK, 6" THICK	SY	408		
50	526-1-1	PAVERS, ARCHITECTURAL, ROADWAY	SY	92		
51	527-1	DETECTABLE WARNINGS ON WALKING SURFACES	EA	19		
52	570-1-2	PERFORMANCE TURF (SOD) (BAHIA OR MATCH EXISTING)	SY	38,000		
53	580-1-1A	SMALL PLANTS - (BHJ) DWARF 'HELEN JOHNSON' BOUGAINVILLEA (3 GAL)	EA	1,719		
54	580-1-1B	SMALL PLANTS - (RIA) COMPACT INDIAN HAWTHORNE (3 GAL)	EA	3,891		
55	580-1-1C	SMALL PLANTS - MULCH, PINE STRAW, 3" DEPTH	SF	19,400		
56	580-1-2A	LARGE PLANTS - (PS) SYLVESTRIS PALM (14' C.T.)	EA	26		

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Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
57	580-1-2B	LARGE PLANTS - (WR) WASHINGTONIA PALM (14' C.T.)	EA	93		
58	580-3-1	LANDSCAPE ESTABLISHMENT AND MAINTENANCE	MO	12		
59	591-1-1	IRRIGATION SLEEVE, 3" DIAMETER (SCH 40)	LF	1,784		
60	591-1-2	IRRIGATION SLEEVE, 6" DIAMETER (SCH 40)	LF	1,784		
61	603-4 <u>603-0</u>	SIGNALIZATION AT THE INTERSECTION OF I-DRIVE & WESTWOOD BLVD. S.	LS	1		
62	603-2 <u>603-1</u>	SIGNALIZATION AT THE INTERSECTION OF I-DRIVE & AVENIDA VISTA	LS	1		
63	603-3 <u>603-2</u>	SIGNALIZATION AT THE INTERSECTION OF I-DRIVE & CENTRAL FL. PKWY.	LS	1		
64	603-4 <u>603-3</u>	SIGNALIZATION AT THE INTERSECTION OF I-DRIVE & AQUATICA DRIVEWAY 1	LS	1		
65	603-5 <u>603-4</u>	SIGNALIZATION AT THE INTERSECTION OF I-DRIVE & AQUATICA DRIVEWAY 2	LS	1		
66	603-6 <u>603-5</u>	SIGNALIZATION AT THE INTERSECTION OF I-DRIVE & SEA HARBOR DR.	LS	1		
67	603-7 <u>603-6</u>	SIGNALIZATION AT THE INTERSECTION OF I-DRIVE & WESTWOOD BLVD. N.	LS	1		
68	700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	AS	40		
69	700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	AS	4		
70	700-20-14	SINGLE POST SIGN, F&I, 21-30 SF	AS	3		
71	700-20-40	SINGLE POST SIGN, RELOCATE	AS	24		
72	700-20-60	SINGLE POST SIGN, REMOVE	AS	41		
73	700-21-11	MULTI- POST SIGN, F&I, 50 SF OR LESS	AS	13		
74	700-21-12	MULTI- POST SIGN, F&I, 50-100 SF	AS	4		

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Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
75	700-21-60	MULTI- POST SIGN, REMOVE	AS	6		
76	700-48-38	SIGN PANELS, OVERLAY, 15 OR LESS	EA	1		
77	700-48-58	SIGN PANEL, REPLACE, 15 OR LESS	EA	46		
78	705-11-1	DELINEATOR, FLEXIBLE TUBULAR	EA	24		
79	706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	2,173		
80	711-11-111	THERMOPLASTIC, STANDARD, WHITE, SOLID, 6"	NM	8.670		
81	711-11-122	THERMOPLASTIC, STANDARD, WHITE, SOLID, 8"	LF	1,461		
82	711-11-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12"	LF	3,812		
83	711-11-124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18"	LF	428		
84	711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24"	LF	3,776		
85	711-11-131	THERMOPLASTIC, STANDARD, WHITE, 10-30 SKIP, 6"	GM	9.130		
86	711-11-151	THERMO., STD, WHITE, DOT/GUIDE/ 6-10 GAP, 6"	LF	2,170		
87	711-11-160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE	EA	5		
88	711-11-170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	187		
89	711-11-180	THERMO., STANDARD, WHITE, YIELD LINE (SMALL)	LF	15		
90	711-11-211	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 6"	NM	5.086		
91	711-11-251	THERMO, STD, YELLOW, DOT/GUIDE/ 6-10 GAP, 6"	LF	848		
92	783-1	SIGNALIZATION- SIGNAL INTERCONNECT	LS	1		
93	900-1	AS-BUILT PLANS	LS	1		

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(FROM WESTWOOD BLVD. SOUTH TO WESTWOOD BLVD. NORTH)

Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
94	900-2	INDEMNIFICATION	LS	1	\$100.00	\$100.00
95	900-3	GROUNDWATER TREATMENT & DISPOSAL	DA	300		

A. ESTIMATED BASE BID FOR ROADWAY: \$ _____
(Reference Numbers 1 through 95)

B. ORANGE COUNTY UTILITIES (OCU) PAY ITEMS

Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
96	OCU-1	Mobilization, Demobilization, Bonds and Permits *** (See Note at the end of the Schedule of Prices)	LS	1		
97	OCU-2	Project Record Drawings **** (See Note at the end of the Schedule of Prices)	LS	1		

Subtotal for General Costs: \$ _____
(Reference Numbers 96 through 97)

98	OCU-3	24" DIP Potable Water Main	LF	1,360		
99	OCU-4	12" DIP Potable Water Main	LF	50		
100	OCU-5	24" Gate Valve with Box (Potable Water)	EA	3		
101	OCU-6	12" Gate Valve with Box (Potable Water)	EA	2		
102	OCU-7	Connection to Existing 24" Pipe (Potable Water)	EA	1		
103	OCU-8	Connection to Existing 12" Pipe (Potable Water)	EA	2		
104	OCU-9	Offset Air Release Valve Assembly (Potable Water)	EA	1		
105	OCU-10	2" Blow-Off Valve Assembly (Potable Water)	EA	1		

Y15-750-CH; REVISED SCHEDULE OF PRICES
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(FROM WESTWOOD BLVD. SOUTH TO WESTWOOD BLVD. NORTH)

Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
106	OCU-11	Utility Conflict Transition (24" Water Main)	EA	10	106	OCU-11
107	OCU-12	Utility Conflict Transition (16" Water Main)	EA	1		
108	OCU-13	Remove Existing Water Main and Appurtenances	LF	720		
109	OCU-14	Abandon Existing Water Main	LF	665		
110	OCU-15	12"x12" Tapping Sleeve and Valve Assembly (Potable Water)	EA	1		
111	OCU-16	24" Line Stop and Restraint (Potable Water)	EA	20		
112	OCU-17	16" Line Stop and Restraint (Potable Water)	EA	2		
113	OCU-18	12" Line Stop and Restraint (Potable Water)	EA	3		
114	OCU-19	Adjustment of Existing Valve Box and Collar (Potable Water)	EA	1		
Subtotal Potable Water Improvements: \$ _____ (Reference Numbers 98 through 114)						
115	OCU-20	24" DIP Reclaimed Water Main	LF	7,950		
116	OCU-21	24" Gate Valve with Box (Reclaimed Water)	EA	9		
117	OCU-22	48" Gate Valve with Box (Reclaimed Water)	EA	4	-----	-----
118	OCU-23	12" Gate Valve with Box (Reclaimed Water)	EA	1		
119	OCU-24	24"x24" Tapping Sleeve and Valve Assembly (Reclaimed Water)	EA	1		
120	OCU-25	18"x18" Tapping Sleeve and Valve Assembly (Reclaimed Water)	EA	1		
121	OCU-26	12"x12" Tapping Sleeve and Valve Assembly (Reclaimed Water)	EA	1		
122	OCU-27	Remove Existing Steel Casing Pipe (Reclaimed Water)	LF	20		
123	OCU-28	Connection to Existing 12" Pipe (Reclaimed Water)	EA	4	-----	-----

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INTERNATIONAL DRIVE ROADWAY IMPROVEMENTS
(FROM WESTWOOD BLVD. SOUTH TO WESTWOOD BLVD. NORTH)

Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
124	OCU-29	Connection to Existing 4" Pipe (Reclaim Water)	EA	1		
125	OCU-30	Remove Existing Reclaimed Water Main and Appurtenances	LF	575		
426	OCU-31	Offset Air Release Valve Assembly (Reclaimed Water)	EA	4	-----	-----
127	OCU-32	Offset Air Release Valve Assembly in Vault (Reclaimed Water)	EA	6		
128	OCU-33	Adjustment of Existing Valve Box and Collar (Reclaimed Water)	EA	1		
129	OCU-34	4" Line Stop and Restraint (Reclaimed Water)	EA	1		
130	OCU-35	12" Line Stop and Restraint (Reclaimed Water)	EA	4	-----	-----
<p>Subtotal for Reclaimed Water Improvements: \$ _____ (Reference Numbers 115 through 130)</p>						
131	OCU-36	12" PVC Force Main	LF	550		
132	OCU-37	12"x12" Tapping Sleeve and Valve Assembly (Force Main)	EA	2		
133	OCU-38	Remove Existing Force Main and Appurtenances	LF	520		
134	OCU-39	12" Line Stop and Restraint (Force Main)	EA	2		
135	OCU-40	Utility Conflict Transition (12" Force Main)	EA	4		
136	OCU-41	Offset Air Release Valve Assembly (Force Main)	EA	4	-----	-----
137	OCU-42	Offset Air Release Valve Assembly in Vault (Force Main)	EA	4		
138	OCU-43	Adjustment of Existing Valve Box and Collar (Force Main) <u>Install 10" PVC Gravity Sanitary Sewer Main</u>	EALF	4 <u>20</u>		
139	OCU-44	Install 12" PVC Gravity Sanitary Sewer Main	LF	210		
139 A	OCU-44A	<u>Install 18" PVC Gravity Sanitary Sewer Main</u>	<u>LF</u>	<u>40</u>		
140	OCU-45	Line Existing 18" Gravity Sanitary Sewer Main	LF	1,370		

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Ref No	Pay Item	Description	Unit	Est. Qty	Unit Price	Total Price
141	OCU-46	Line Existing 15" Gravity Sanitary Sewer Main	LF	3,320		
142	OCU-47	Install New Sanitary Manhole	EA	4 <u>2</u>		
143	OCU-48	Rehab Existing Manhole (w/Protective Interior Lining)	EA	1		
144	OCU-49	Core Drill and Connect to Existing Manhole	EA	1		
145	OCU-50	Remove Existing Sanitary Manhole	EA	1		
146	OCU-51	Abandon Existing Gravity Sanitary Sewer Main	LF	470		
147	OCU-52	Remove Existing Gravity Sanitary Sewer Main	LF	305		
148	OCU-53	Adjust Existing Manhole Ring and Cover (Minor)	EA	16		
149	OCU-54	Adjust Existing Manhole Ring and Cover (Major)	EA	10		
150	OCU-55	Asphalt Pavement Removal and Replacement	SY	2,765		
151	OCU-56	Unsuitable Soil Removal, Disposal and Replacement	CY	200		
152	OCU-57	Utility Maintenance of Traffic (Utility M.O.T.)	LS	1		
153	OCU-58	Remove and Replace Concrete Sidewalk	SY	111		

Subtotal for Wastewater Improvements: \$ _____
(Reference Numbers 131 through 153)

B. ESTIMATED BASE BID FOR UTILITIES (OCU): \$ _____
(Reference Numbers 98 through 153)

SUMMARY

A. ESTIMATED BASE BID FOR ROADWAY: \$ _____
(REFERENCE NUMBERS 1 THROUGH 95)

B. ESTIMATED BASE BID FOR UTILITIES: \$ _____
(REFERENCE NUMBERS 96 THROUGH 153)

Y15-750-CH; REVISED SCHEDULE OF PRICES
INTERNATIONAL DRIVE ROADWAY IMPROVEMENTS
(FROM WESTWOOD BLVD. SOUTH TO WESTWOOD BLVD. NORTH)

TOTAL ESTIMATED BASE BID (A+B): \$ _____
(REFERENCE NUMBERS 1 THROUGH 153)

NOTES

NOTE *	ANY AMOUNT OF MOBILIZATION IN EXCESS OF 10% OF BID ITEMS 2-95 WILL BE PAID UPON COMPLETION OF ALL WORK IN ACCORDANCE WITH TECHNICAL PROVISION 101.
NOTE **	ALL STORM DRAIN PIPES SHALL BE STEEL REINFORCED CONCRETE PIPES.
NOTE ***	ITEM OCU-1 SHALL NOT TO EXCEED 5% OF THE TOTAL OF ITEM NUMBERS OCU-3 THROUGH OCU-58
NOTE ****	ITEM OCU-2 SHALL NOT TO BE LESS THAN 1% OF THE TOTAL OF ITEM NUMBERS OCU-3 THROUGH OCU-58



Nadic Engineering Services, Inc.

**Pavement Evaluation Report
International Drive
(South Westwood Boulevard to
North Westwood Boulevard)
Orange County, Florida
NES Project No: R10003**

Prepared for:

**AVCON, Inc
5555 East Michigan Street, Suite 200
Orlando, Florida 32801**

Prepared by:

**Nadic Engineering Services, Inc.
601 N. Hart Blvd
Orlando, Florida 32818
407-521-4771**

Consultants in: Civil · Environmental · Geotechnical Engineering
Offices in: Orlando · Miami

NES **NADIC ENGINEERING SERVICES, INC.**
Civil, Environmental, and Geotechnical Consultants

July 20, 2010

AVCON, Inc.
5555 East Michigan Street, Suite 200
Orlando, Florida 32801

Attention: Mr. Brian J. Flynn, P.E.
Transportation Manager

Re: Pavement Evaluation Report
International Drive
(South Westwood Boulevard to
North Westwood Boulevard)
Orange County, Florida
NES Project No. R10003

Dear Mr. Flynn:

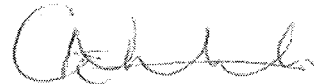
Nadic Engineering Services, Inc. (NES) is pleased to provide this Pavement Evaluation Report for the above referenced project. The purpose of this study was to evaluate the existing pavement conditions at 16 locations along International Drive and Central Florida Parkway for widening of the roadway from four (4) to six (6) lanes. This report presents an analysis of information collected during the above referenced Pavement Survey and Evaluation.

NES appreciates the opportunity to work with you on this project and looks forward to a continued association. Please contact us if you have any questions, or if we may be of further assistance to you as this project proceeds.

Sincerely,
NADIC ENGINEERING SERVICES, INC.



Mohan R. Killada, M.S., P.E.
Project Engineer



Godwin N. Nnadi, Ph.D., P.E.
Principal Engineer
FL Registration No: 50637

GNN: mrk/Roadways, (R10003) I-Drive Pavement Rpt (071510)

NES	Email: nadic@nadicinc.com	
Office:	601 N. Hart Boulevard, Orlando, Florida 32818	15291 NW 60th Avenue, Suite 106 Miami Lakes, Florida 33014
Phone:	(407) 521-4771	(305) 512 0687
Fax:	(407) 521-4772	(305) 512 0897

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- Figure 2: Soils Map
- Figure 3: Core Location Map

APPENDIX B:

- Table 4: Pavement Evaluation and Condition Data Sheet

APPENDIX C:

- Plates 1 to 16: Pavement Core Photographs

1.0 PROJECT LOCATION AND DESCRIPTION

This project consists of pavement survey and evaluation of the existing pavement of I-Drive... approximate length of the improvements is 2.2 miles.

This project is located on International Drive (I-Drive) from South Westwood Boulevard to North Westwood Boulevard. The project consists of pavement survey and evaluation of the existing pavement of I-Drive. The approximate length of the improvements is 2.2 miles.

The project site is located in Sections 7, 12, 13 and 18,

Township 24 South, Range 28 and 29 East in Orange County, Florida. The topographic map is shown in **Figure 1** in **Appendix A**.

The recent coring performed by others within this project limits was very limited and is incorporated in this report.

2.0 SOIL SURVEY

The "Soil Survey of Orange County, Florida" published by the United States Department of Agriculture (USDA), Soil Conservation Service (SCS) was reviewed. Refer to **Figure 2** in **Appendix A** for a reproduction of the SCS map for the project area. Soils found in the project vicinity are listed below.

Soil Unit	Depth (inches)	Soil Description	AASHTO	USDA SHGWT(foot)*
Basinger (3)	0-7	Fine sand	A-3	+2.0-1.0
	7-32	Sand, fine sand	A-3, A-2-4	
	32-47	Sand, fine sand	A-3, A-2-4	
	47-80	Sand, fine sand	A-3, A-2-4	
Sanibel (42)	0-11	Muck	A-8	+1.0-1.0
	11-15	Sand, fine sand, mucky fine sand	A-3	
	15-80	Sand, fine sand	A-3	
Smyrna (44)	0-17	Fine sand	A-3	0-1.0
	17-27	Sand, fine sand, loamy fine sand	A-3, A-2-4	
	27-80	Sand, fine sand	A-3	
Urban land (50)	-	-	-	-

* SHGWT: Seasonal High Groundwater Table.

The above soils are suitable for roadway support. However, the soil survey indicates presence of map unit 42, Sanibel Muck, at the northern end of project limits. This soil is unsuitable for roadway support and should be over excavated and replaced if encountered within the project limits. Soil survey also indicates the seasonal high groundwater table to be within one (1) foot

below the ground surface. Information contained in the SCS Soil Survey is very general and may be outdated due to recent development in the site vicinity. These developments may have modified soil condition or surface/ subsurface drainage.

3.0 PAVEMENT CONDITION SURVEY

This Pavement Study includes existing pavement condition survey and evaluation. The tasks performed consist of the following:

- Visual Inspection of the existing pavement condition
- Pavement coring, including asphalt and base thickness measurement
- Roadway cross slope measurement
- Rut depths measurement

The approximate core locations are shown on **Figure 3** in **Appendix A**. Core locations were not surveyed, but were established by taping distances from existing features shown on aerial photographs obtained by NES. Therefore, the core locations should be considered approximate. Although the core locations are given only approximately, the methods used to locate the core are, in NES's opinion, sufficient to meet the intent of our study. **Figure 3** also shows approximate location of the recent coring performed by others in the area.

Our visual pavement inspection for I-Drive north and south bound lanes started from the South Westwood Blvd to North Westwood Blvd including lanes of Central Florida Parkway just east and west of I-Drive.

Existing pavement condition within the roadway was categorized according to the classification system outlined in the FDOT pavement coring procedures. The "Pavement Evaluation and Condition Data" forms are exhibited on the attached **Table 4** in **Appendix B**.

4.0 ROADWAY SURFACE CONDITION

4.1 I-Drive North Bound Lanes

The condition of the north bound lanes is generally poor to good. The extent of the pavement distress observed was classified as moderate to severe. Class II and III, fatigue, alligator, single and branch type cracks were observed, typically within the wheel path area.

Of the 13 cores taken from this section, five (5) (39%) were cracked. The average crack depth is about 2.1 inches with a maximum depth of about 3.4 inches.

Full depth cracks ranging from 1.5 to 3.4 were observed in cores P-1, P-3, P-5 and C-5. The soil-cement base was cracked in cores P-3, P-9 and P-11. The existing soil-cement base material at core locations P-1, P-5, P-7, C-1 and C-13 was weakly cemented and was easily augured by

hand. Cores C-6 and P-13 encountered 9.3 and 9.6 inches of asphalt with no apparent base material.

The rut depth at all locations in the north bound lanes varied from zero to 0.23 inches. The cross slope varied from 0.1 to 4.6 percent.

The overall pavement condition is rated poor for cores south of Central Florida Parkway and fairly good north of the Central Florida Parkway. Photographs of the cores and pavement conditions are presented in **Plates 1 through 14 in Appendix C.**

4.2 I-Drive South Bound Lanes

The condition of the south bound lanes is generally poor to good. The extent of the pavement distress observed was classified as light to severe. Class I to III, fatigue, alligator, single and branch type cracks were observed, typically within the wheel path area.

Of the 12 cores taken from this section, five (5) (42%) were cracked. The average crack depth is about 2.8 inches with a maximum depth of about 4.0 inches.

Full depth cracks ranging from 1.7 to 4.0 were observed in cores P-2, P-4, P-12 and C-12. The base was cracked in cores P-6, P-8 and P-12. The existing soil-cement base material at core locations P-1, P-5, P-7, C-2, C-8, C-10 and C-12 was weakly cemented and was easily augured by hand. Core P-12 encountered cracked bank-run-shell base material of 10.8 inches thick. Cores C-7 and P-14 encountered 10.5 and 10.6 inches of asphalt with no apparent base material. Low severity single transverse crack was observed at core P-14.

The rut depth at all locations in the south bound lanes varied from zero to 0.2 inches. The cross slope varied from 1.4 to 4.2 percent.

The overall pavement condition is rated good for cores north of Central Florida Parkway and poor south of the Central Florida Parkway. Photographs of the cores and pavement conditions are presented in **Plates 1 through 14 in Appendix C.**

4.3 Central Florida Parkway

The condition of the Central Florida Parkway lanes is generally fair. The extent of the pavement distress observed was classified as moderate. Class I, single and block type cracks were observed, typically within the wheel path area.

Of the four (4) cores taken from this section, two (2) (50%) were cracked. The average crack depth is about 3.8 inches with a maximum depth of about 4.0 inches. The soil-cement base was cracked in both cores P-15 and P-16. The existing soil-cement base material at core locations C-3, and C-4 was weakly cemented and was easily augured by hand.

The rut depth at all locations in the Central Florida Parkway lanes varied from 0.1 to 0.15 inches. The cross slope varied from 0.1 to 4.0 percent.

Photographs of the cores and pavement conditions are presented in **Plates 15** and **16** in **Appendix C**.

5.0 CORING INFORMATION

A total of 29 core samples, including the recent coring by others were obtained from the subject roadways. The data for the individual core samples are included in **Table 4** in **Appendix B**. The following tables show the types of materials, average material thickness, layer thickness ranges, and total average thickness along with a minimum- maximum range for northbound and southbound I-Drive lanes and Central Florida Parkway lanes of this project.

Table 1: I-DRIVE NORTH BOUND LANES

Type of Material (by layer)	Average Thickness (inches)	Thickness Range (inches)
FC-2 (Core P-13)	0.5	0.5
Type S-1	3.5	1.5 – 9.1
Soil Cement	8.5	3.5 – 16.0
Average Pavement Thickness	3.6	1.5 – 9.6

Table 2: I-DRIVE SOUTH BOUND LANES

Type of Material (by layer)	Average Thickness (inches)	Thickness Range (inches)
FC-2 (Core P-14)	0.7	0.7
Type S-1	4.0	1.7 – 9.9
Soil Cement	8.2	7.0 – 9.0
Bank-Run-Shell (Core P-12)	10.8	10.8
Average Pavement Thickness	4.3	1.7 – 10.6

Table 3: CENTRAL FLORIDA PARKWAY LANES

Type of Material (by layer)	Average Thickness (inches)	Thickness Range (inches)
FC-2	-	-
Type S-1	3.5	3.5
Soil Cement	8.1	7.0 – 10.0
Average Pavement Thickness	3.6	3.5 – 4.0

* Baseline is Central Florida Parkway

6.0 CROSS SLOPE AND RUT DEPTH

Cross slope and rut depth measurements were taken at each core location and are summarized as follows:

Lane	Average Rut Depth (in)	Average Cross Slope (%)
I-Drive (North Bound)	0.13	+2.4
I-Drive (South Bound)	0.14	+2.6
Central Florida Parkway	0.1	+2.0

- Average rut depth does not include cores P-9 through P-11, P-13 and C-6 through C-11, since no rut was encountered at these locations.

Rut depth and cross slope information for individual core locations are provided in the "Pavement Evaluation and Condition Data" in **Table 4** in **Appendix B**.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Pavement condition of I-Drive is generally in poor condition between South Westwood Blvd and Central Florida Parkway section and is in good condition between Central Florida Parkway and North Westwood Blvd section. Variations in pavement depths, base type and depth are observed in this study. Pavement core thickness ranged from 1.5 to 10.6 inches with an overall average of 3.9 inches. Soil-cement base thickness ranged from 3.5 to 16 inches. Soil-cement is encountered all along the roadway except at core location P-12, where bank-run-shell base of 10.8 inches thick was encountered and core location P-13, C-6, C-7 and P14 where no base was encountered. The existing soil-cement base material was very weak in 13 of the 25 cores it was encountered in. It was so weak at these locations; a hand auger was used to core the base material. Eight (8) of the remaining 12 solid soil cement base were cracked.

Majority of the cracks observed are in the sections where soil-cement base material was very weak. These cracks are likely due to the weak strength of the soil cement base and are reflected through the asphaltic concrete surfaces. It should be noted that the SHGWT is relatively high and water intrusion into the soil cement can result to soil cement hydration during dry periods, subsequently resulting to the reflected cracks at the surface. To correct this, NES recommends the following options for consideration.

- Full reconstruction may be necessary. An approved tack coat should be applied on a clean (swept) soil cement surface to develop a sufficient bond before asphaltic concrete is applied.
- Milling and resurfacing for the sections that have failed. NES recommends using a reduced structural coefficient when determining the total pavement structural number for the existing base material, where a weakly cemented base material was encountered.

- A geotextile can be placed at the soil-cement / pavement interface to provide separation and stabilization of the pavement aggregates. In addition geotextile provides tensile reinforcement through frictional interaction with the base material, therefore reducing applied stresses on the subgrade and prevent rutting.

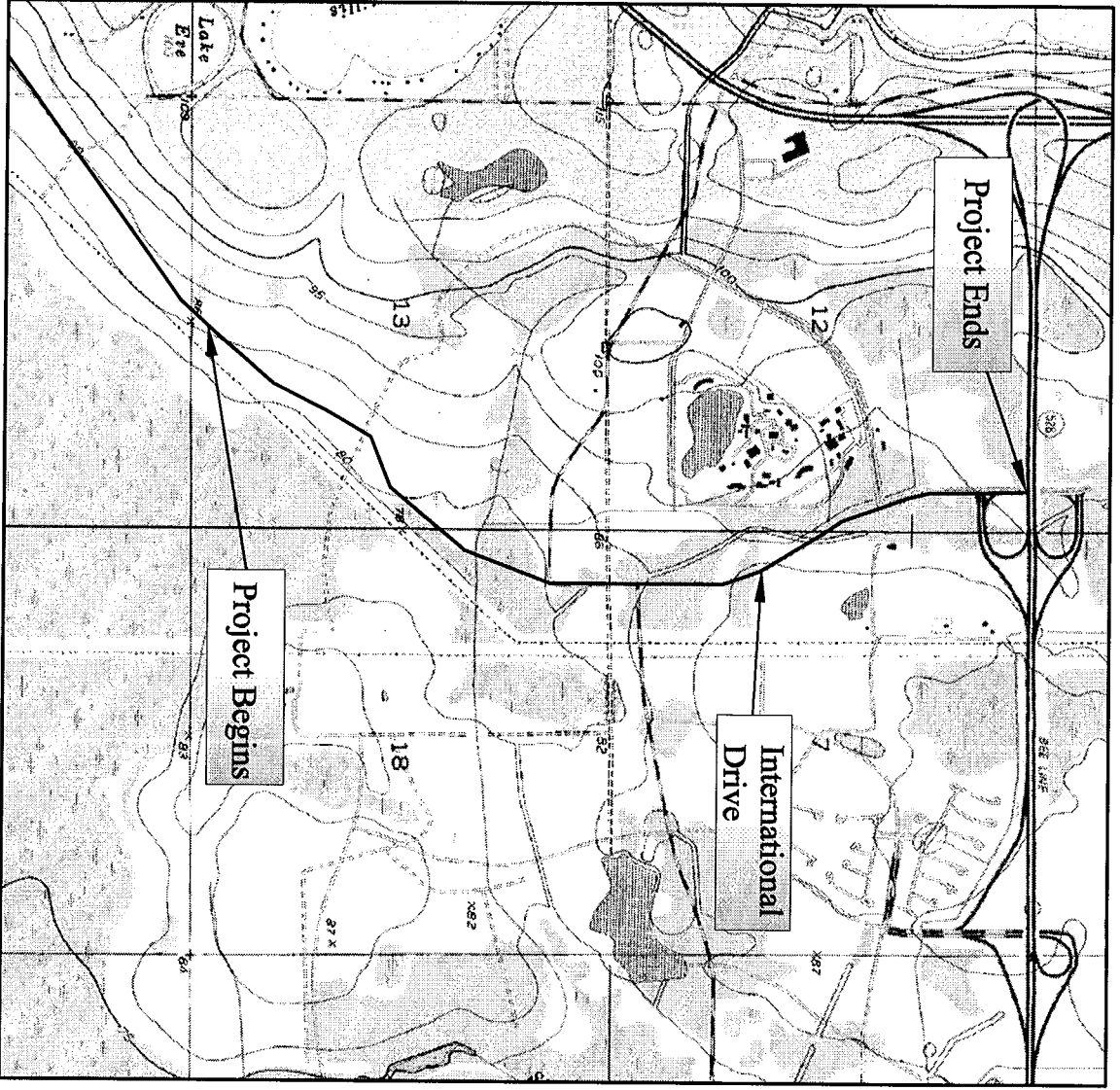
8.0 REPORT LIMITATIONS

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. We are not responsible for the conclusions, opinions or recommendations made by others based on these data.

The scope of the exploration was intended to evaluate pavement conditions within the influence of roadway improvement. The analyses and recommendations submitted in this report are based upon the data obtained from the coring performed at the locations indicated and does not reflect any variations which may occur among these corings. If any variations become evident during the course of this project, a re-evaluation of the recommendations contained in this report will be necessary after we have had the opportunity to observe the characteristics of the conditions encountered. The applicability of the report should be reviewed in the event significant changes occur in the design, nature or location of the proposed developments.

APPENDIX A

- | | |
|-----------------|----------------------------|
| Figure 1 | -Topographic Map |
| Figure 2 | - Soils Map |
| Figure 3 | - Core Location Map |



PROJECT	BORING LOCATION	U.S.G.S. QUADRANGLE MAP	ISSUED	PHOTO REVISION
BEGINS-ENDS	S71219&18 72& 82&8298	LAKE HESSAMINE	1993	1980

Civil
NES
Geotechnical
Environmental
Consulting Engineering

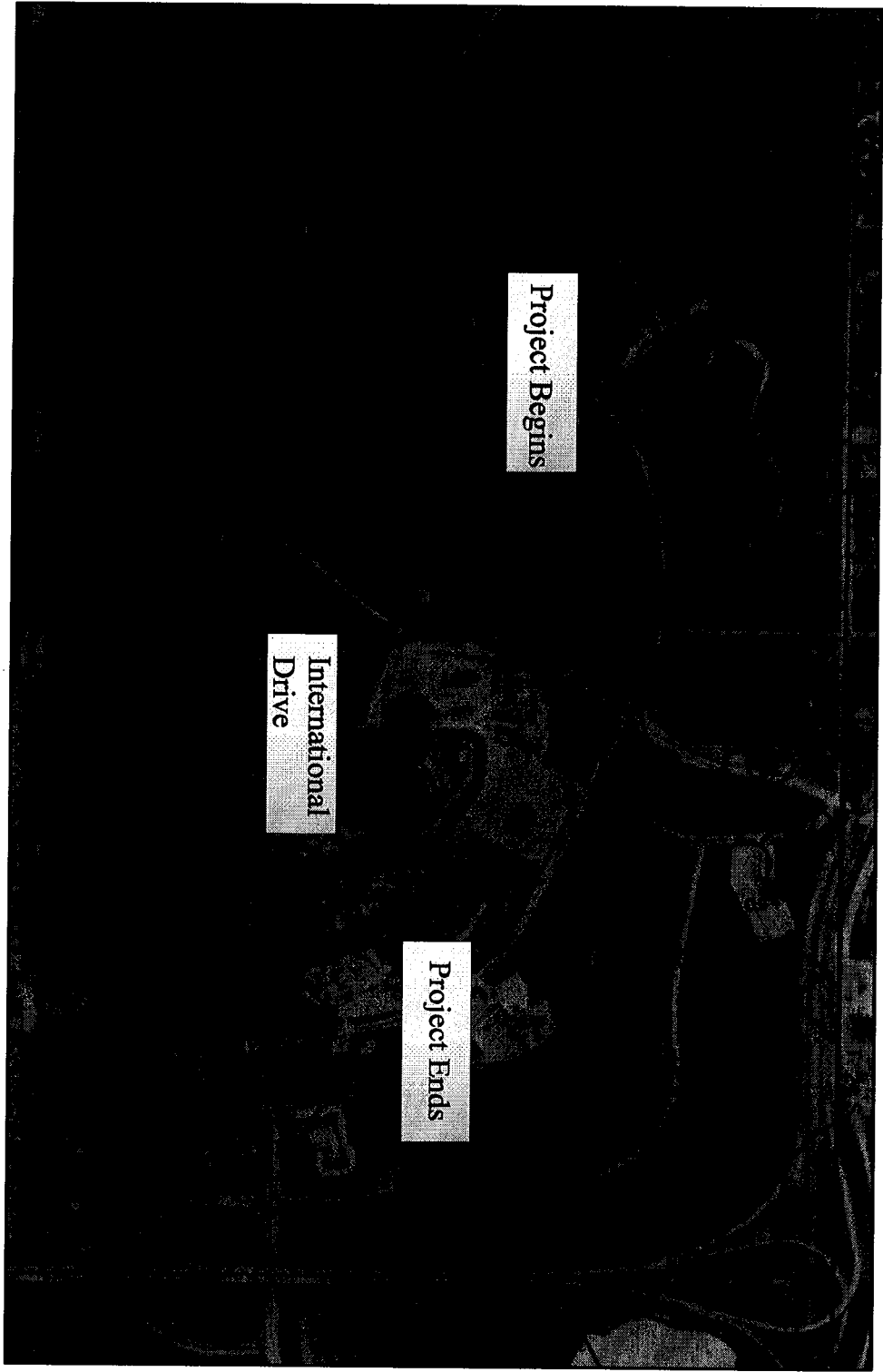
SCALE: NOT TO SCALE
 DATE: 07-14-2010

ORANGE COUNTY
FLORIDA
 ORANGE COUNTY
 PUBLIC WORKS
 FLORIDA

PROJECT NAME:
 TOPOGRAPHIC MAP
 INTERNATIONAL DRIVE
 (S. Westwood Blvd N. Westwood Blvd)


COUNTY	PROJECT NO.	FIGURE 1
ORANGE	-	

NES PROJECT NO.
 R10003

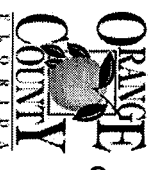


- LEGEND**
- 3 Basinger fine sand
 - 42 Sanibel muck
 - 44 Snyrna fine sand
 - 50 Urban Land

PROJECT	BORING LOCATION	U.S.G.S QUADRANGLE MAP	ISSUED	PHOTO REVISION
BEGINS-ENDS	S7,113&18 17&S 23&E23E	LAKE JESSAMINE	1953	1980

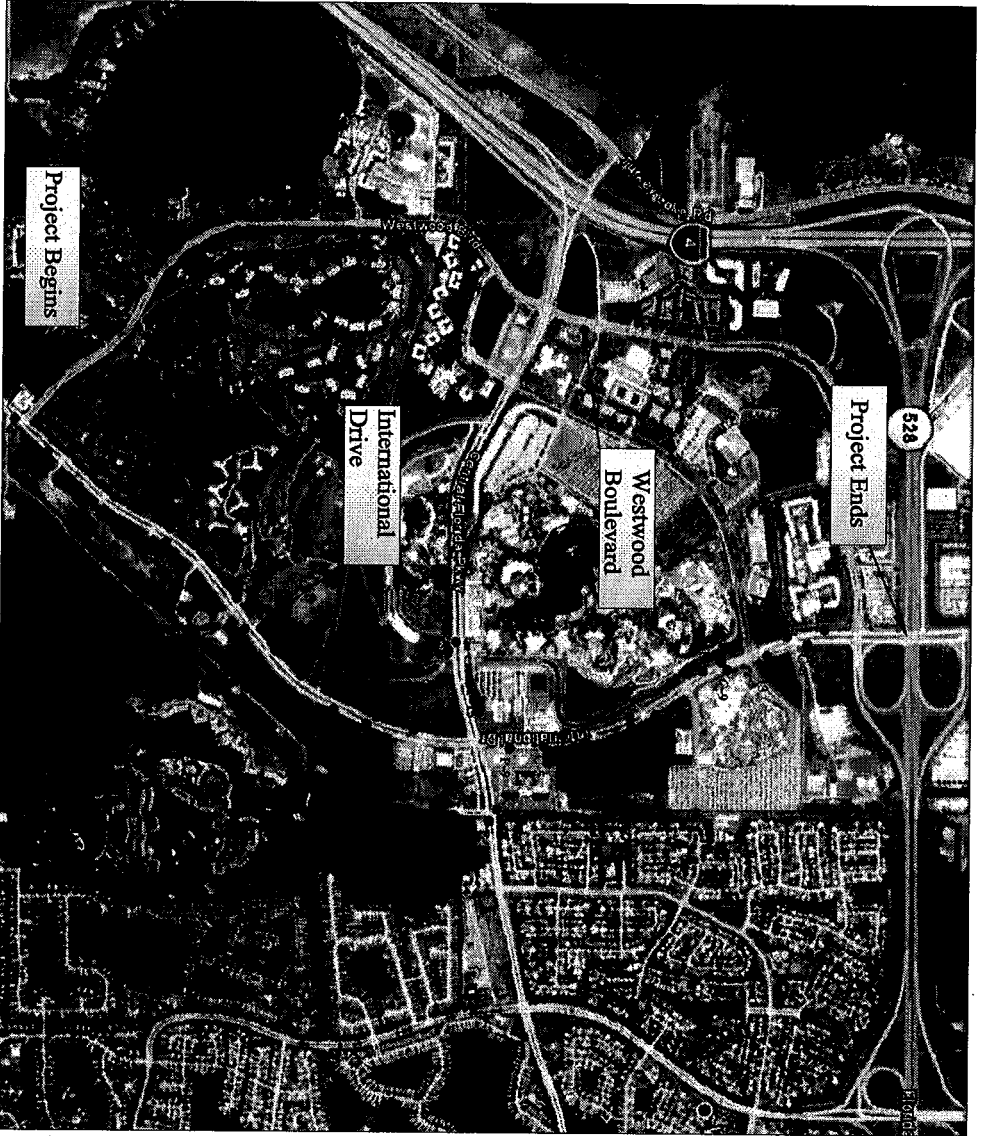

Civil
Geotechnical
Environmental
Consulting Engineering

SCALE: NOT TO SCALE
 DATE: 07-14-2010


ORANGE COUNTY
FLORIDA
 ORANGE COUNTY
 PUBLIC WORKS

PROJECT NAME: SOLIS MAP INTERNATIONAL DRIVE (S. Westwood Blvd N. Westwood Blvd)		PROJECT NO. -	NES PROJECT NO. R10003
COUNTY ORANGE	PROJECT NO. -		






LEGEND

- APPROXIMATE CORING LOCATION (NES)
- APPROXIMATE CORING LOCATION (GEC)

C-1


PROJECT	BORING LOCATION	USGS QUADRANGLE MAP	ISSUED	PHOTOGRAPHED
BEGINS-ENDS	5712, 13&18 73&S R2&D&295	LAKE HESNAHNE	1959	1990



Civil
*Geotechnical
Environmental
Engineering*

SCALE: NTS
DATE: 07-14-2010

DRAWN: MRK
CHECKED: GNN



ORANGE COUNTY
PUBLIC WORKS
FLORIDA

PROJECT NAME: CORR. LOCATION MAP INTERNATIONAL DRIVE (S. Westwood Blvd to N. Westwood Blvd)	
CORRY	PROJECTION NO.
ORANGE	-

NES PROJECT NO.
R1003

FIGURE 3

APPENDIX B

Table 4 – Pavement Evaluation and Condition Data Sheet

TABLE 4

State of Florida Department of Transportation																		
PAVEMENT EVALUATION AND CONDITION DATA SHEET																		
Project No.: R10003		Cored By: NES		Date: 07-08-10		Page No.: 1 of 3												
County: ORANGE		Highway Sect. No. --		From: Westwood Blvd (South)		To: SR 528												
Road Name.: International Drive (I-Drive) (North Bound)		Begin Station: 11+25 (Base Line: I-Drive)		End Station: 122+81 (Base Line: I-Drive)		Length: 2.2 miles												
Core No.	Roadway	Station	Dist From Left Edge of Lane (in.)	Lane	Wheel Path	Pavement Layer (in)			Base			Crack			Pavt. Cond	Rut Depth (in)	Cross Slope (%)	Comments
						FC-2 (in)	TYPE S-1 (in)	Core Length (in)	Type	Thick ness (in)	Depth (in)	Type	Class	Extent				
C-1*	NB	11+25	NA	R2	NA	-	NA	2.9	SC	9.0	*	OGFC	NA	S	P	0.15	4.6	Base was weakly cemented & easily augured by hand
P-1	NB	16+60	152	R1	X	-	1.5	1.5	SC	7.3	FD	A	III	S	P	0.1	3.5	Base was weakly cemented, no recovery
P-3	NB	34+86	44	R2	X	-	3.0	3.0	SC	3.5	FD	BR	II	M	P	0.1	3.5	Base cracked
P-5	NB	48+00	72	R1	-	-	3.4	3.4	SC	7.6	FD	BR	II	M	P	0.1	2.1	Base was weakly cemented, no recovery
P-7	NB	61+87	96	R2	X	-	3.1	3.1	SC	4.9	0.8	A	III	S	P	0.1	3.1	Base was weakly cemented, no recovery
C-13*	NB	67+00	NA	R1	NA	-	NA	2.8	SC	8.0	-	SL	NA	NA	F	0.15	0.3	Base was weakly cemented & easily augured by hand
P-9	NB	83+50	85	R1	X	-	2.1	2.1	SC	9.9	-	-	-	-	G	-	0.1	Base cracked
C-5*	NB	87+50	NA	R2	NA	-	NA	1.8	SC	16.0	FD	A	NA	S	P	0.23	4.0	Base strongly cemented required coring to sample
C-11*	NB	98+00	NA	R1	NA	-	NA	2.5	SC	10.0	-	-	-	-	G	-	1.4	Base strongly cemented required coring to sample
P-11	NB	101+00	98	R2	X	-	2.0	2.0	SC	9.8	-	-	-	-	G	-	2.8	Base cracked
C-9*	NB	110+25	NA	R1	NA	-	NA	2.5	SC	8.0	-	-	-	-	G	-	2.0	Base strongly cemented required coring to sample
P-13	NB	116+00	84	R2	X	0.5	9.1	9.6	-	-	-	-	-	G	-	0.3	No Base	
C-6*	NB	120+50	NA	R1	NA	-	NA	9.3	-	-	-	-	-	G	-	2.8	No Base	

Remarks: A=Alligator BR=Branch Cracking OGFC=Open-Graded FC Stress Cracks SL= Single Longitudinal Crack FD=Full Depth Crack
 L=Light Cracking M=Moderate Cracking S=Severe Cracking G=Good F=Fair P=Poor L1 = Left Inside Lane R1 = Right Inside Lane NA = Information not available
 SC=Soil-Cement * = No cracks in core, however, cracking was observed on the pavement
 C-1* = Cores Performed by GEC

TABLE 4 (Cont.)

State of Florida Department of Transportation																	
PAVEMENT EVALUATION AND CONDITION DATA SHEET																	
Project No.: R10003		Cored By: NES		Date: 07-08-10		Page No.: 2 of 3											
County: ORANGE		Highway Sect. No. --		From: Westwood Blvd (South)		To: SR 528											
Road Name.: International Drive (I-Drive) (South Bound)		Begin Station: 11+25 (Base Line: I-Drive)		End Station: 122+81 (Base Line: I-Drive)		Length: 2.2 miles											
Core No.	Road way	Station	Dist. From Left Edge of Lane (ft.)	Lane	Wheel Path	Pavement Layer (in)			Base Thickness (in)	Crack			Pavt Cond	Rut Depth (in)	Cross Slope (%)	Comments	
						FC-2 (in)	TYPE S-1 (in)	Core Length (in)		Type	Class	Extent					
P-2	SB	26+00	50	L2	X	-	3.4	3.4	8.1	FD	A	III	S	P	0.1	4.2	Base was weakly cemented, no recovery
P-4	SB	44+75	41	L2	X	-	4.0	4.0	7.0	FD	A	III	S	P	0.1	4.2	Base was weakly cemented, no recovery
C-2*	SB	52+25	NA	L2	NA	-	NA	3.0	8.0	*	OGFC	NA	S	P	0.2	3.5	Base was weakly cemented & easily augured by hand
P-6	SB	56+88	36	L1	X	-	3.4	3.4	7.6	0.9	BR	II	M	F	0.1	3.5	Base cracked
C-12*	SB	67+50	NA	L1	NA	-	NA	4.0	9.0	FD	SL	NA	NA	F	0.15	2.1	Base was weakly cemented & easily augured by hand
P-8	SB	71+50	30	L2	X	-	3.4	3.4	8.6	*	SL	II	L	P	0.2	1.9	Base cracked
P-10	SB	90+00	78	L1	-	-	2.2	2.2	9.6	-	-	-	-	G	-	2.8	Base strongly cemented required coring to sample
C-10*	SB	98+00	NA	L1	NA	-	NA	2.5	8.0	-	-	-	-	G	-	2.1	Base was weakly cemented & easily augured by hand
P-12	SB	107+50	72	LLTL	-	-	1.7	1.7	10.8	FD	ST	I	L	F	0.1	2.8	Base cracked
C-8*	SB	110+00	NA	L1	NA	-	NA	2.5	8.0	-	-	-	-	G	-	1.4	Base was weakly cemented & easily augured by hand
C-7*	SB	118+75	NA	L1	NA	-	NA	10.5	-	-	-	-	-	G	-	1.4	No Base
P-14	SB	122+81	86	L1	X	0.7	9.9	10.6	-	*	ST	I	L	F	0.2	1.4	No Base

Remarks: ST=Single Transverse Crack FD=Full Depth Crack

L=Light Cracking G=Good F=Fair L1 = Left Inside Lane R1 = Right Inside Lane NA = Information not available
 SC=Soil-Cement S = Bank-run-shell * = No cracks in core, however, cracking was observed on the pavement
 LLTL= S or W Bound Lefthand Turn Lane
 C-1* = Cores Performed by GEC

TABLE 4 (Cont.)

**State of Florida Department of Transportation
PAVEMENT EVALUATION AND CONDITION DATA SHEET**

Project No.: R10003
 County: ORANGE
 Road Name.: Central Florida Parkway (CFP)
 Cored By: NES
 Highway Sect. No. --
 Date: 07-08-10
 From: --
 Page No.: 3 of 3
 To: --
 Length: 0.41 mil

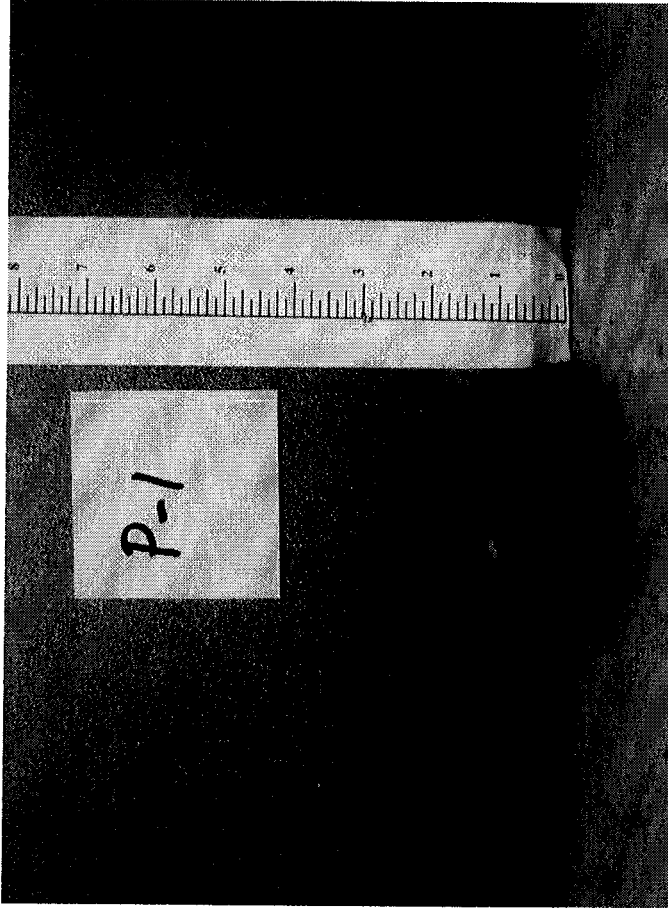
Core No.:	Roadway	Station	Dist. From Left Edge of Lane (ft.)	Lane	Wheel Path	Pavement Layer (in)			Base		Crack			Pavt Cond (in)	Rut Depth (in)	Cross Slope (%)	Comments	
						FC-2	TYPE S-1	Core Length (in)	Type	Thickness (in)	Depth (in)	Type	Class					Extent
C-3*	EB	81+50	NA	R2	NA	-	NA	3.3	SC	7.0	2.4	SL	NA	M	0.15	2.2	Base was weakly cemented & easily augured by hand	
I6	EB	103+16	37	R1	X	-	3.5	3.5	SC	10	FD	SL	I	M	0.1	0.1	Base cracked	
P-15	WB	86+50	93	L1	X	-	3.5	3.5	SC	8.5	*	BL	I	M	0.1	1.8	Base cracked	
C-4*	WB	102+00	NA	L2	NA	-	NA	4.0	SC	7.0	FD	BL	NA	M	0.1	4.0	Base was weakly cemented & easily augured by hand	

Remarks: BL=Block SL=Single Longitudinal Crack FD=Full Depth Crack
 M=Moderate Cracking F=Fair L1 = Left Inside Lane R1 = Right Inside Lane NA = Information not available
 SC=Soil-Cement * = No cracks in core, however, cracking was observed on the pavement
 C-1* = Cores performed by GEC

APPENDIX C

Plates 1 to 16 – Pavement Core Photographs

PLATE 1



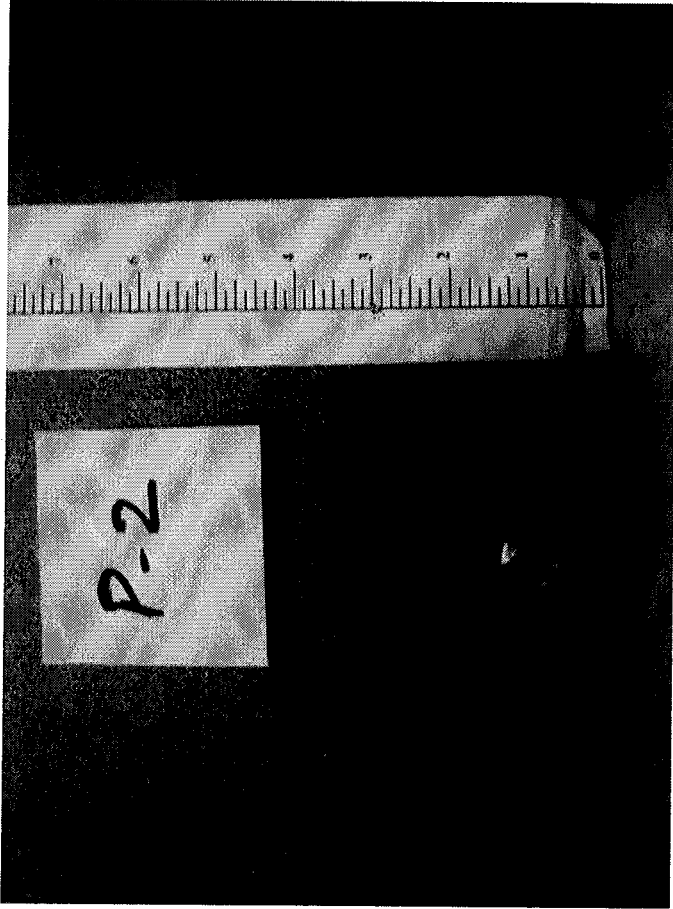
Core No: P-1

Station: 16+60

Location: Northbound Lane, I-Drive

Thickness: 1.5 inches

PLATE 2



Core No: P-2

Station: 26+00

Location: Southbound Lane, I-Drive

Thickness: 3.4 inches

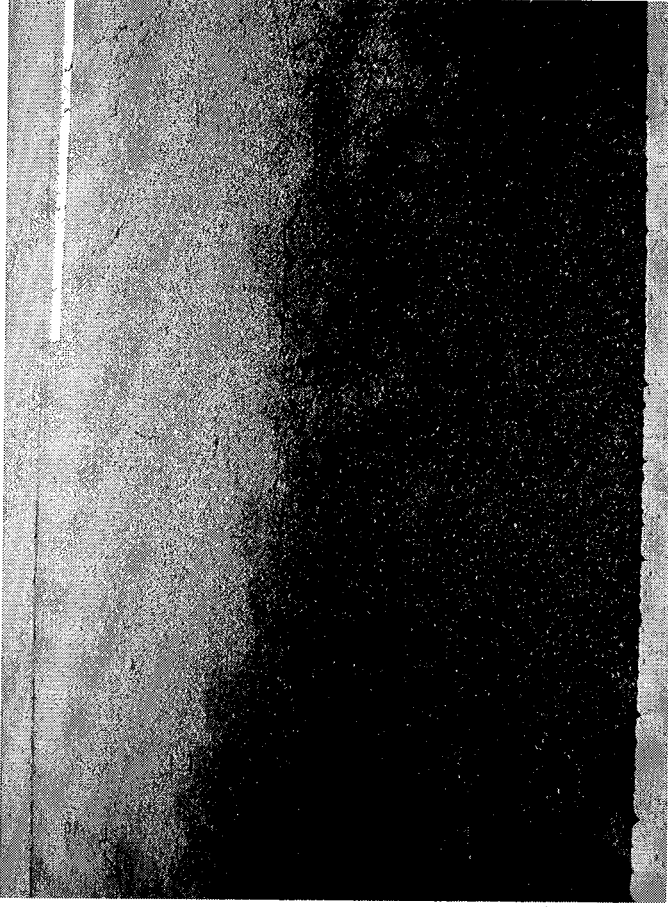
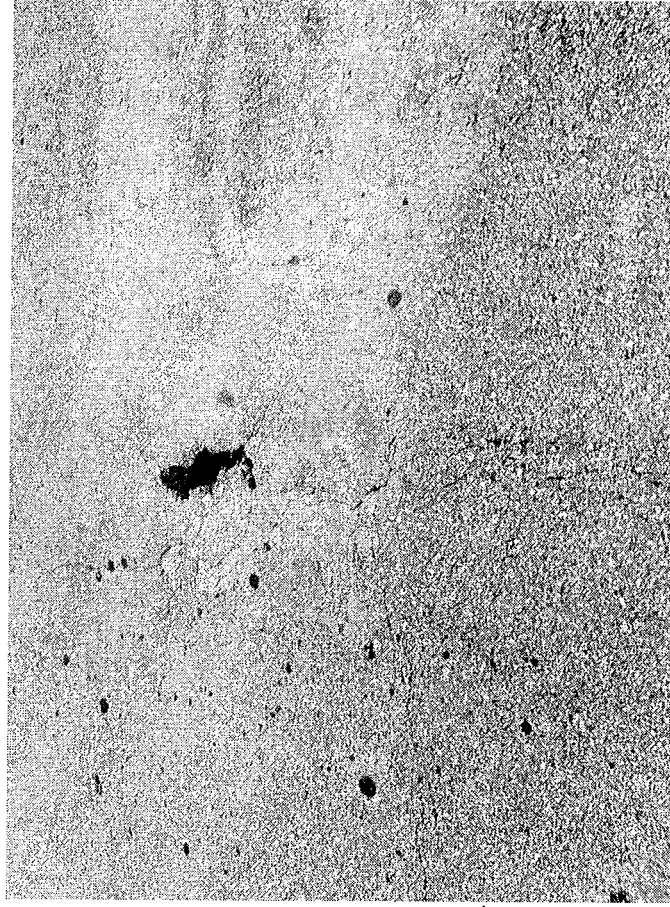
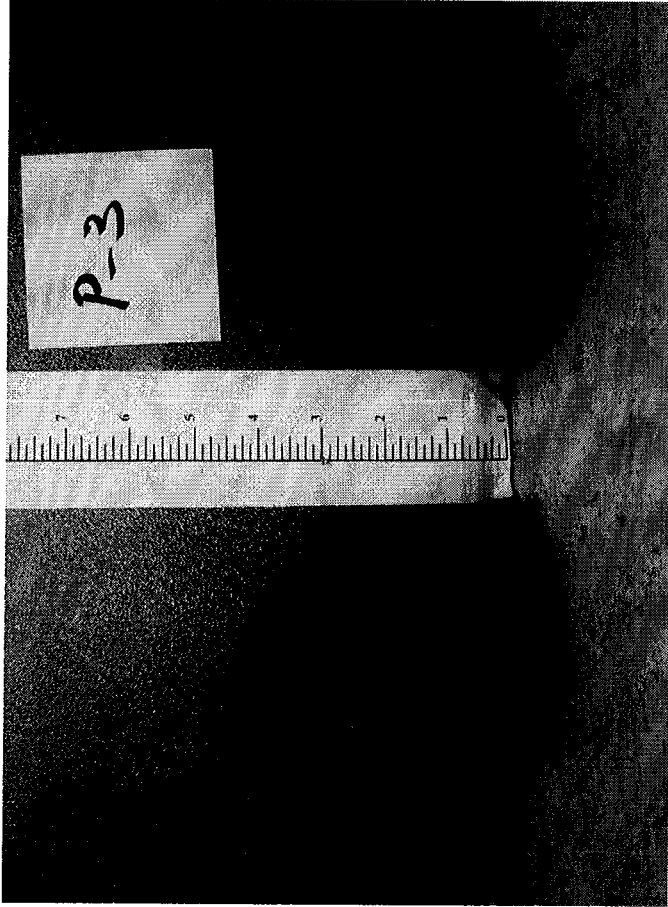


PLATE 3



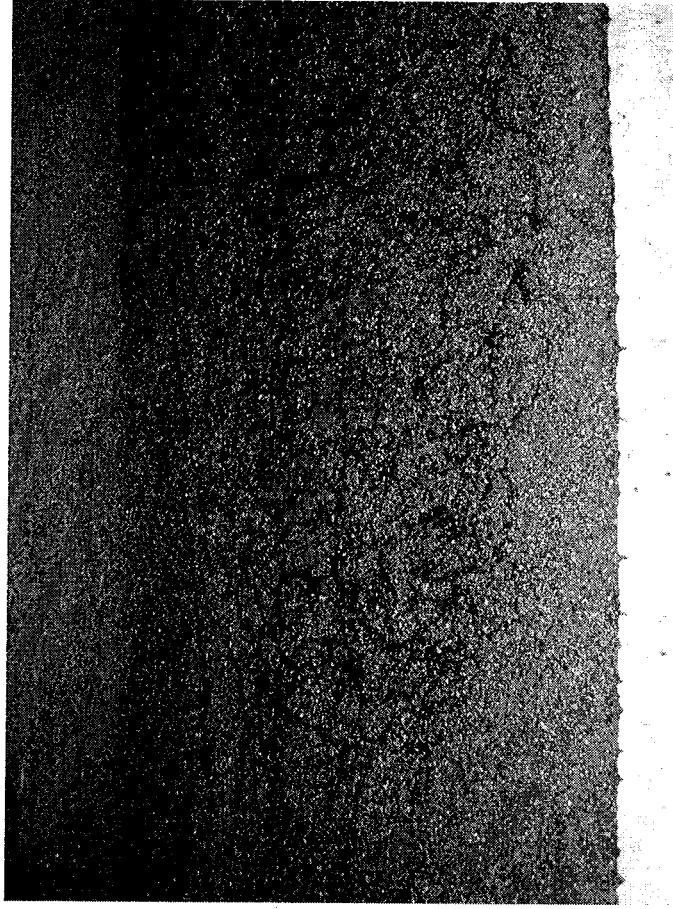
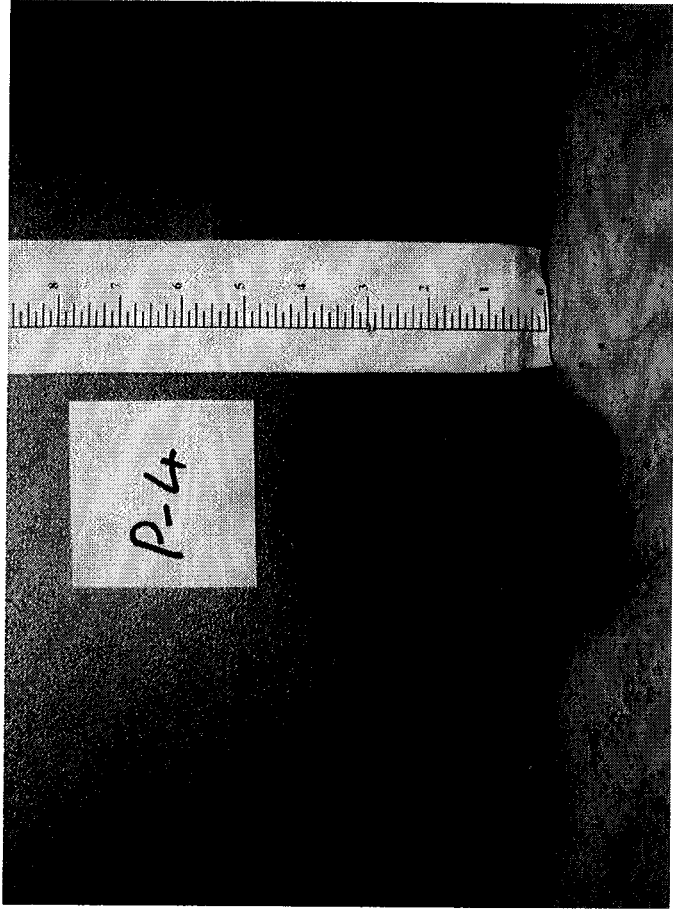
Core No: P-3

Station: 34+86

Location: Northbound Lane, I-Drive

Thickness: 3.0 inches

PLATE 4



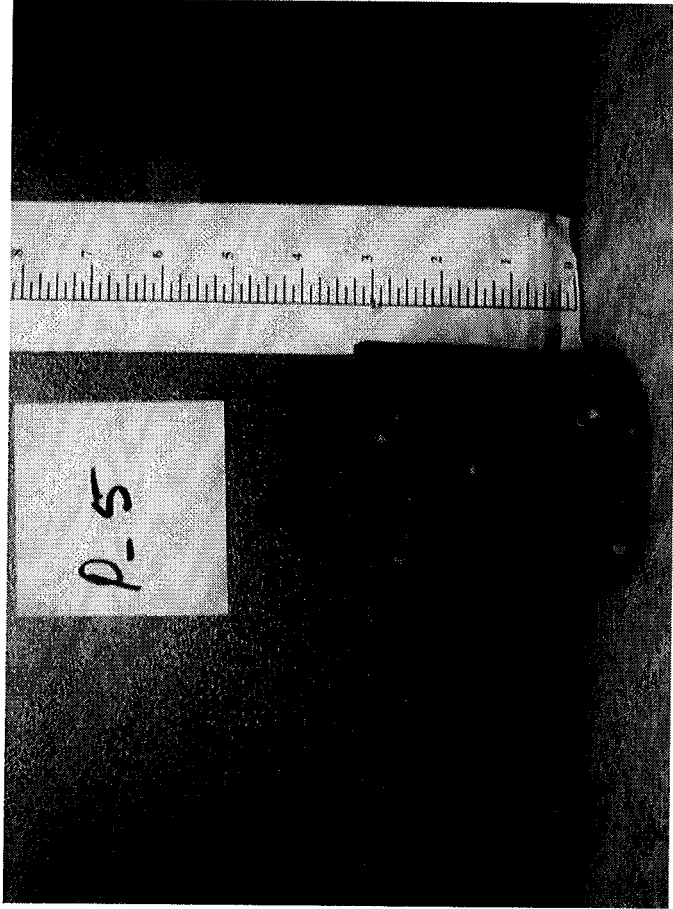
Core No: P-4

Station: 44+75

Location: Southbound Lane, I-Drive

Thickness: 4.0 inches

PLATE 5



Core No: P-5

Station: 48+00

Location: Northbound Lane, I-Drive

Thickness: 3.4 inches

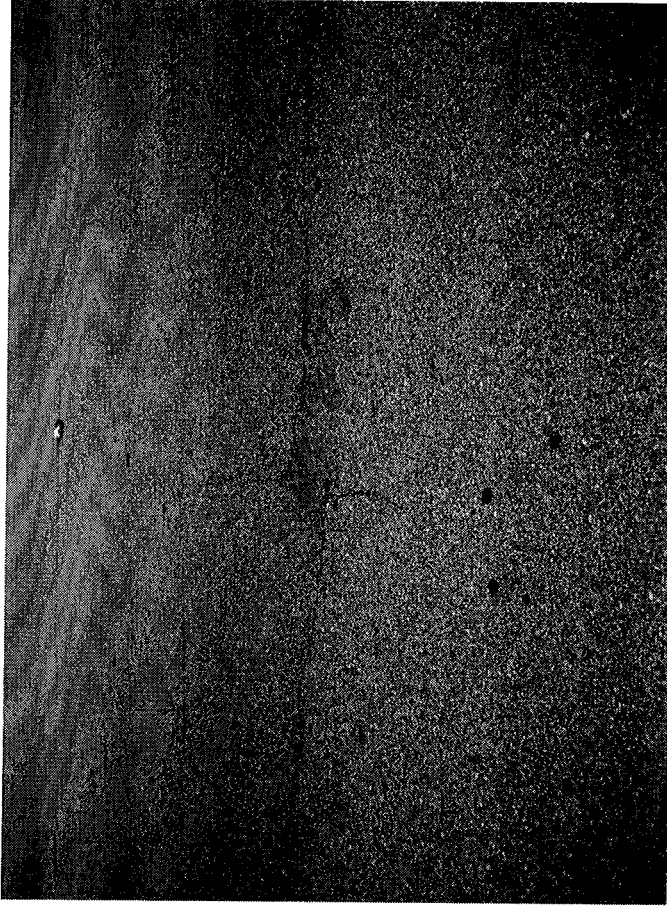
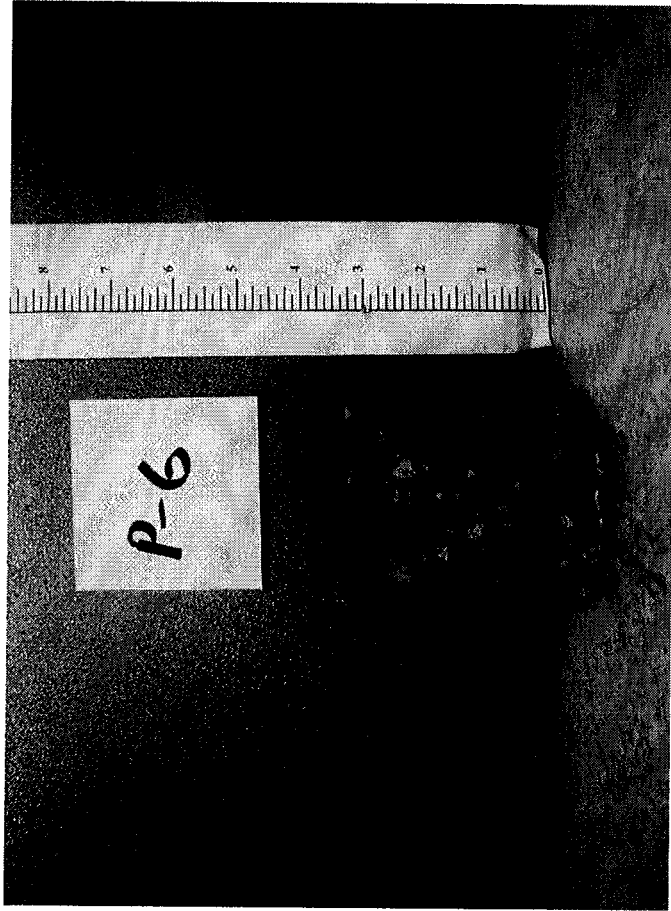


PLATE 6



Core No: P-6

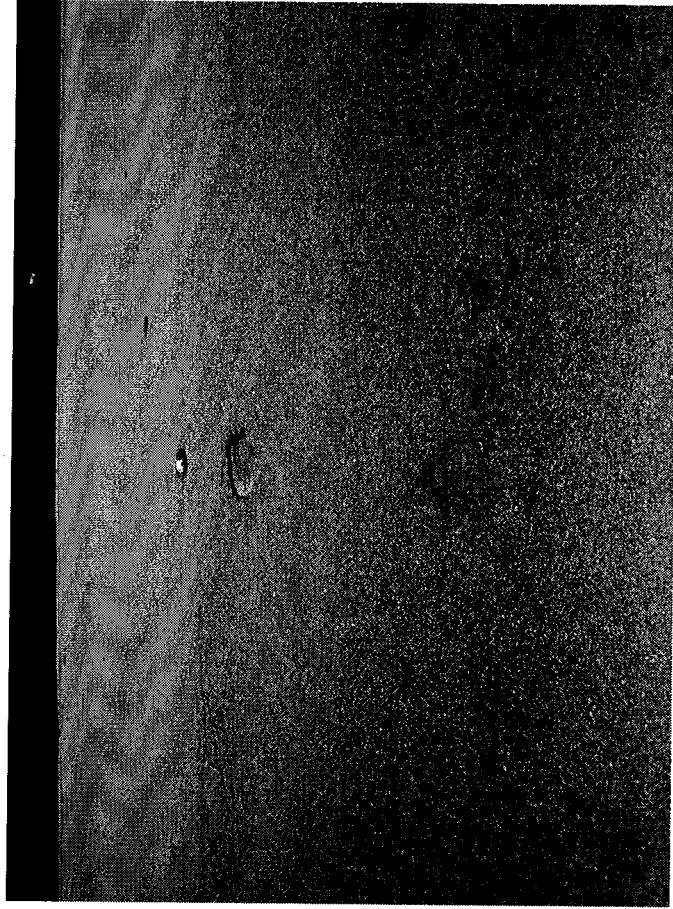
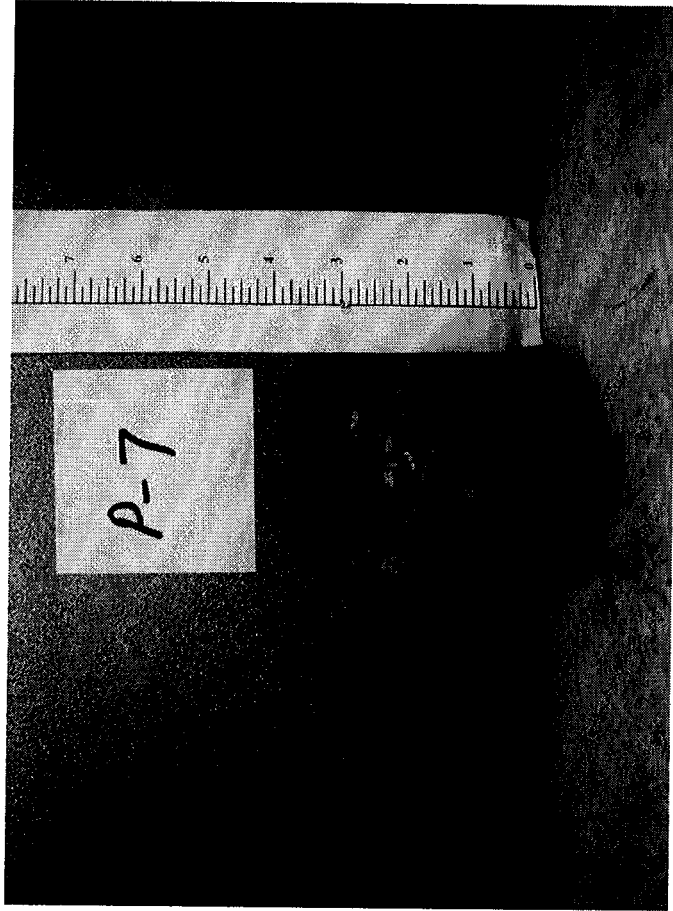
Station: 56+88

Location: Southbound Lane, I-Drive

Thickness: 3.4 inches



PLATE 7



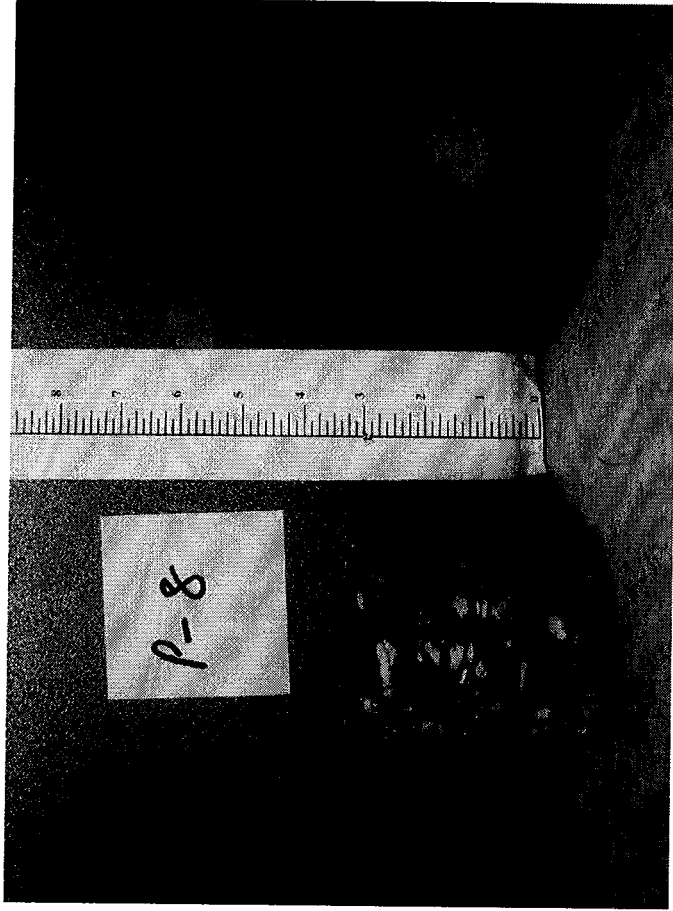
Core No: P-7

Station: 61+87

Location: Northbound Lane, I-Drive

Thickness: 3.1 inches

PLATE 8



Core No: P-8

Station: 71+50

Location: Southbound Lane, I-Drive

Thickness: 3.4 inches

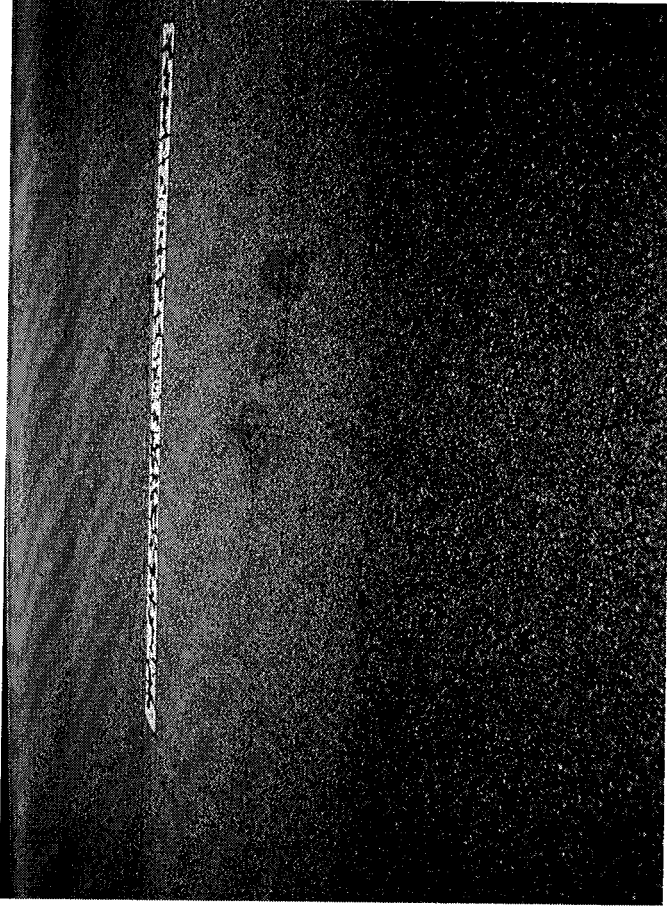
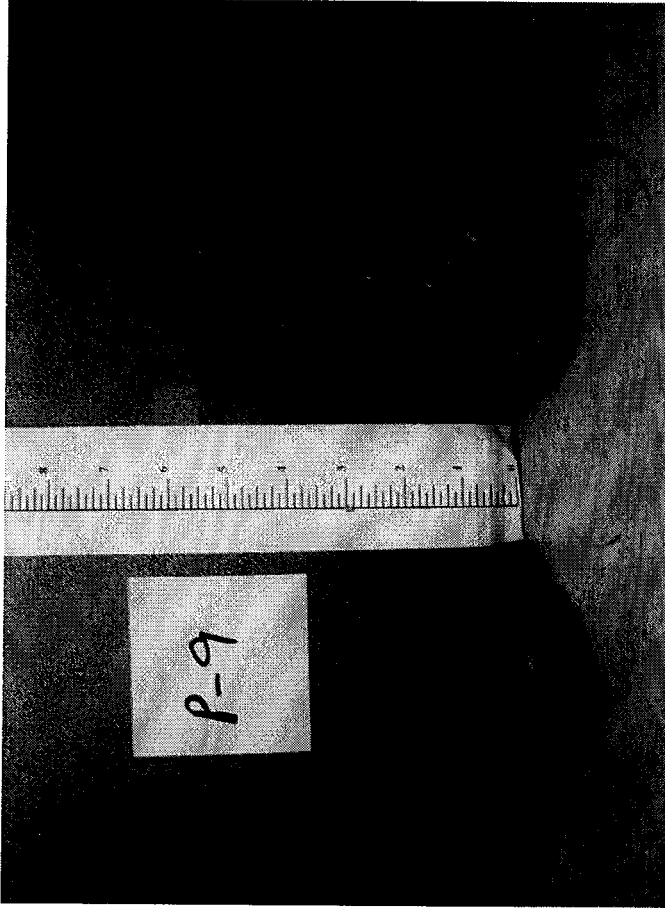


PLATE 9



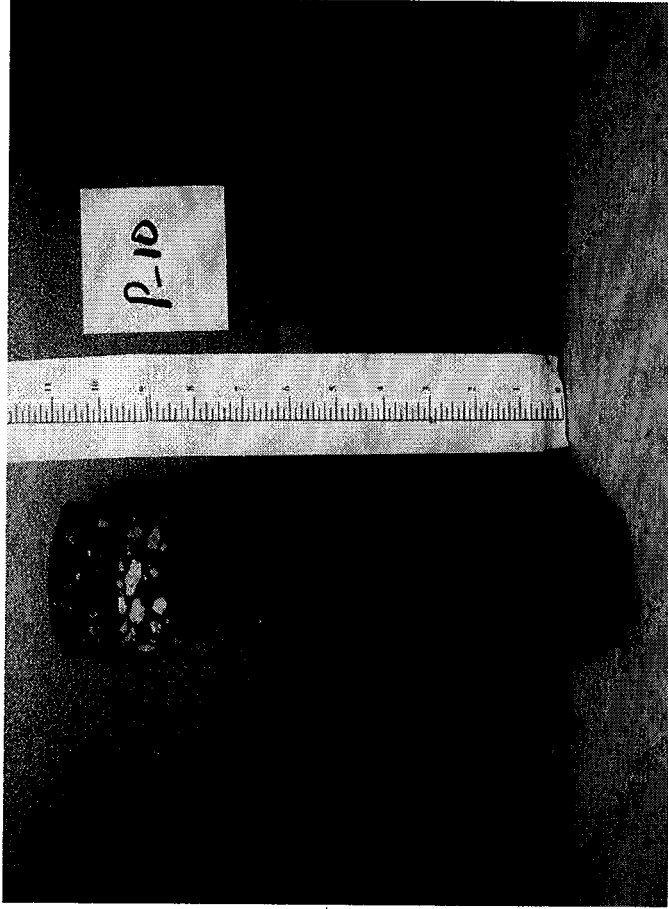
Core No: P-9

Station: 83+50

Location: Northbound Lane, I-Drive

Thickness: 2.1 inches

PLATE 10



Core No: P-10

Station: 90+00

Location: Southbound Lane, I-Drive

Thickness: 2.2 inches

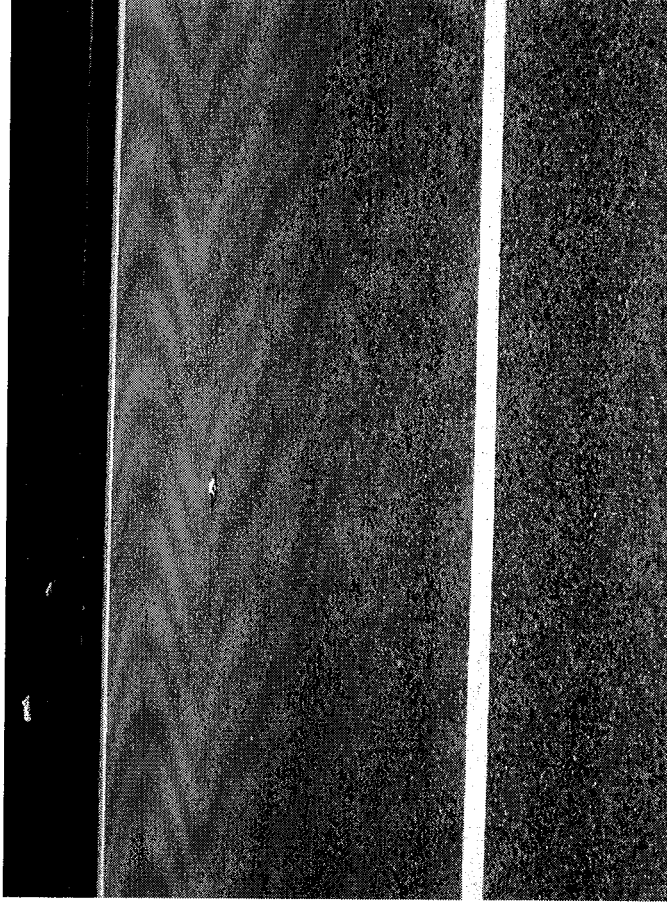
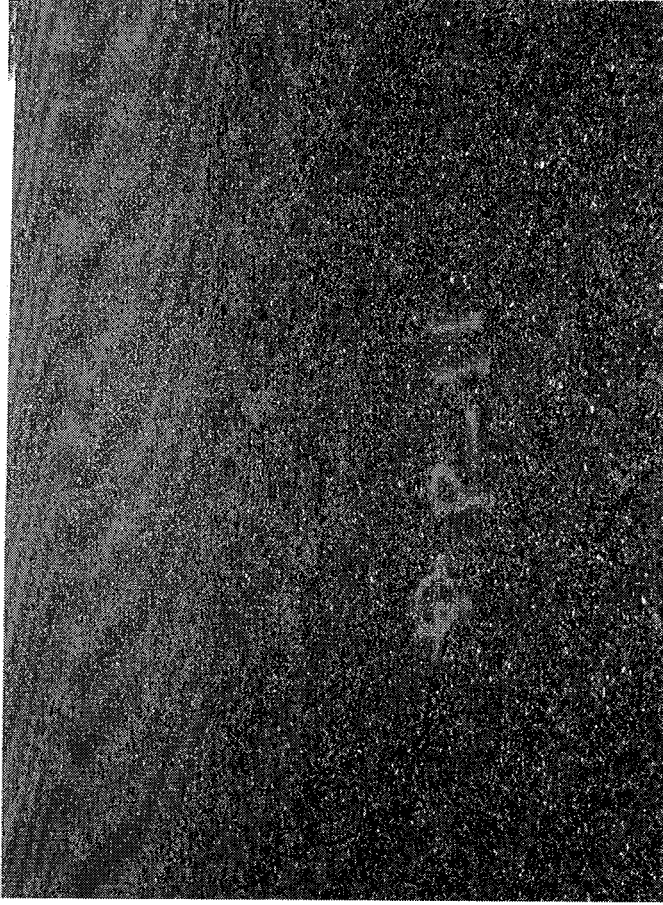
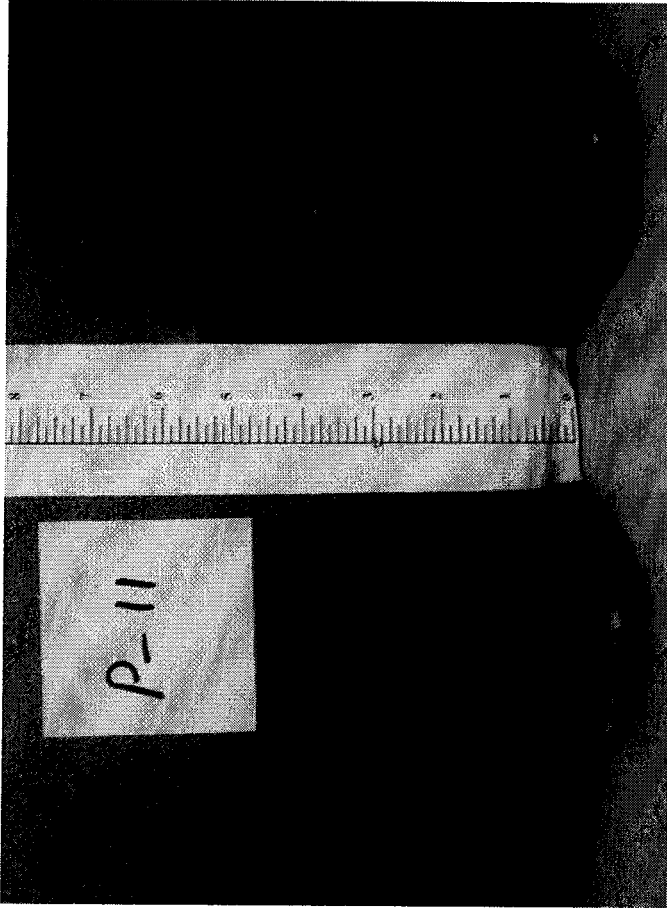


PLATE 11



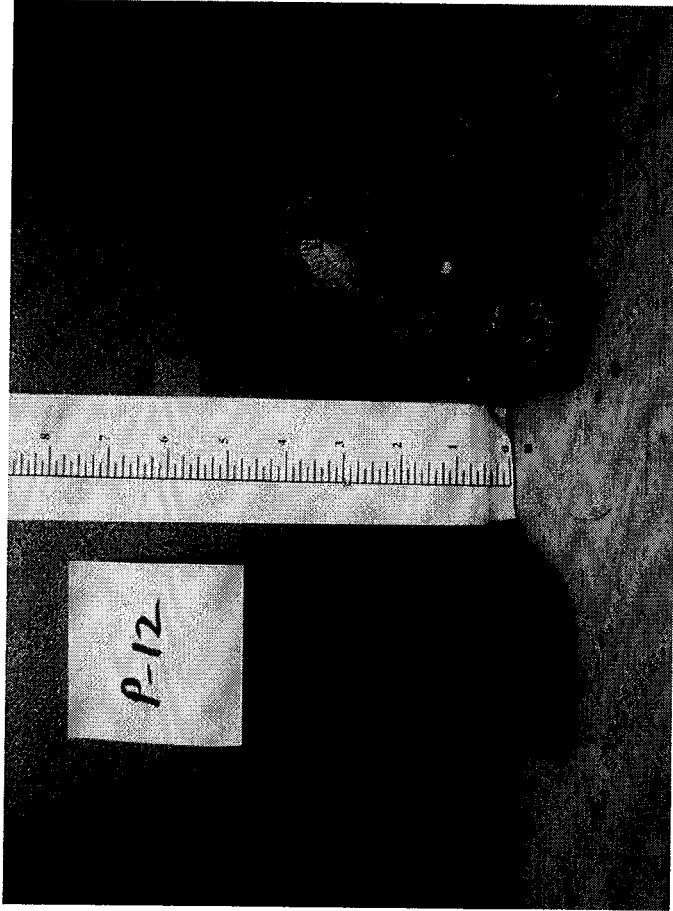
Core No: P-11

Station: 101+00

Location: Northbound Lane, I-Drive

Thickness: 2.0 inches

PLATE 12



Core No: P-12

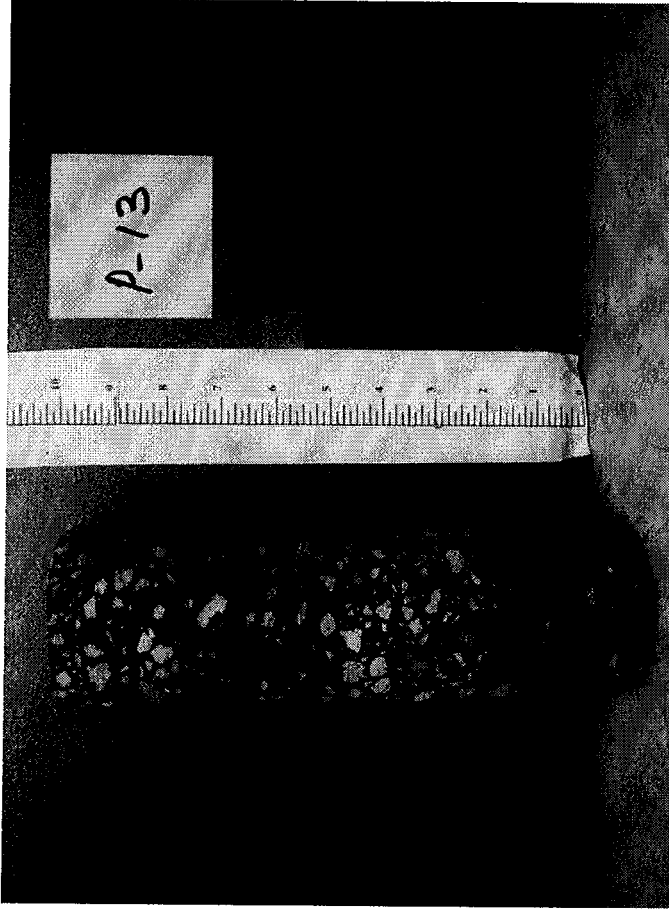
Station: 107+50

Location: Southbound Left Turn Lane, I-Drive

Thickness: 1.7 inches



PLATE 13



Core No: P-13

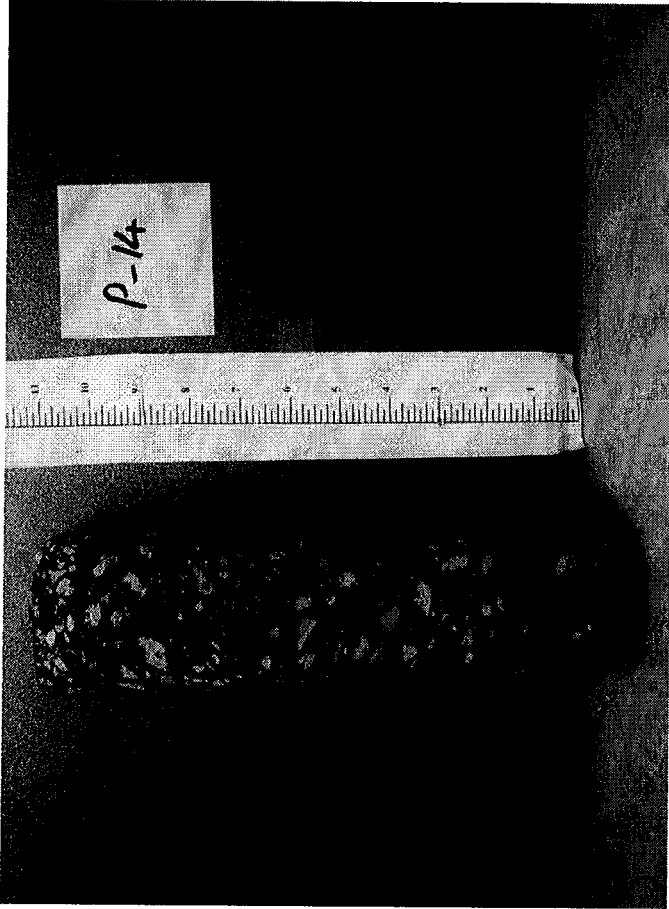
Station: 116+00

Location: Northbound Lane, I-Drive

Thickness: 9.6 inches



PLATE 14



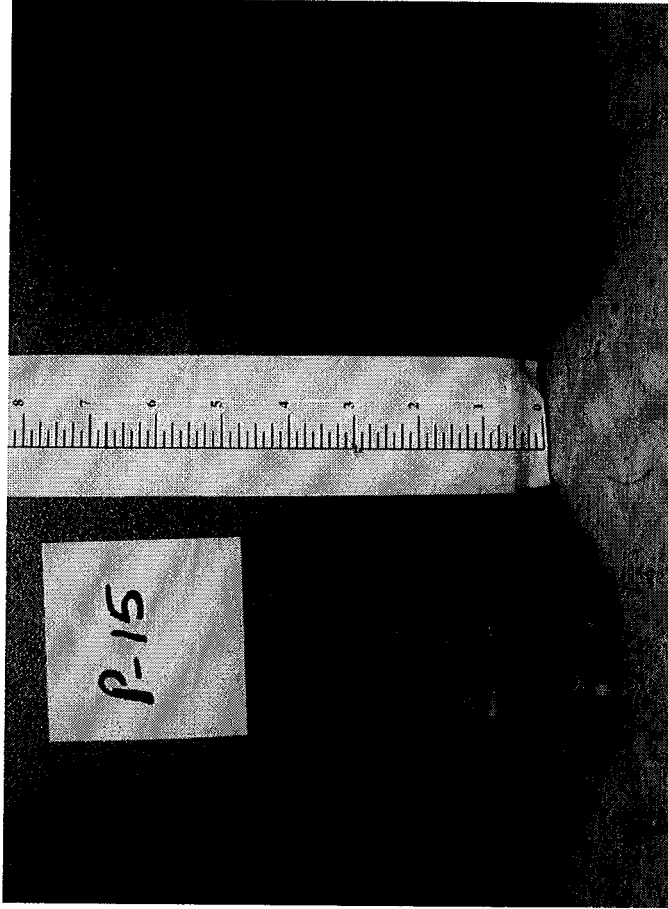
Core No: P-14

Station: 122+81

Location: Southbound Lane, I-Drive

Thickness: 10.6 inches

PLATE 15



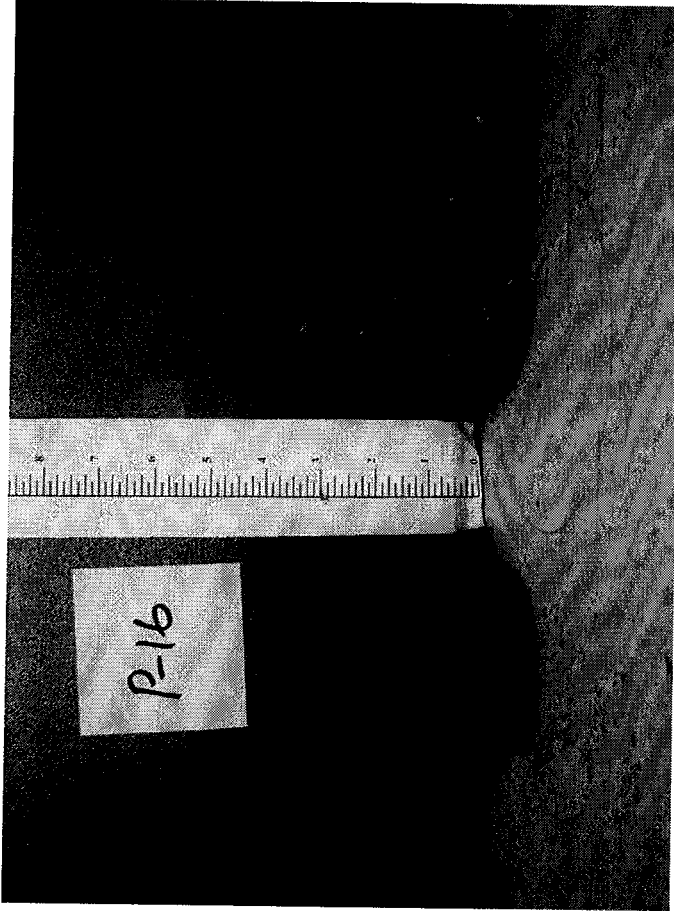
Core No: P-15

Station: 86+50

Location: Westbound Lane, Central Florida Pkwy

Thickness: 3.5 inches

PLATE 16

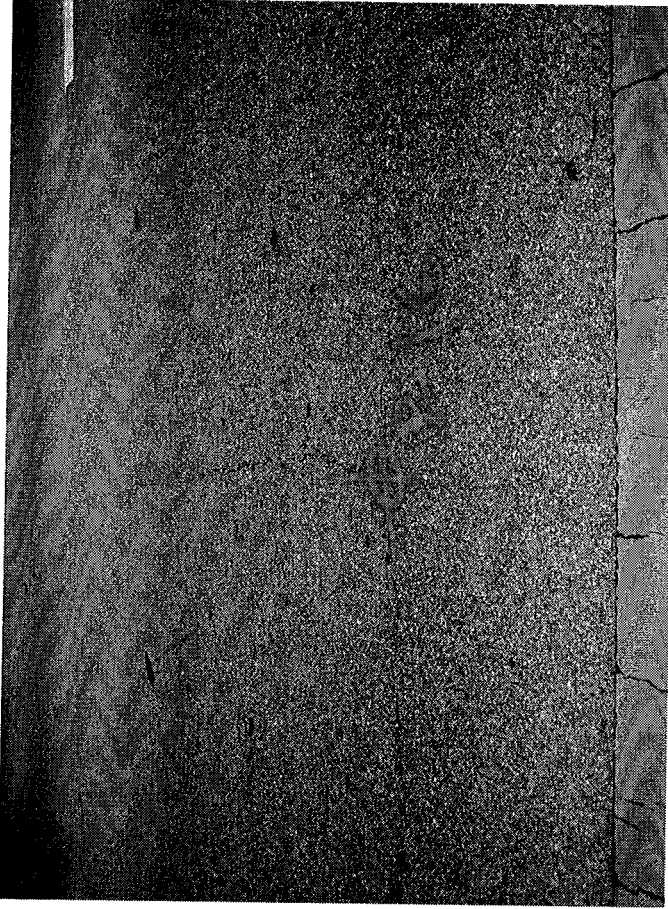


Core No: P-16

Station: 103+16

Location: Eastbound Lane, Central Florida Pkwy

Thickness: 3.5 inches



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SIGNALIZATION

The signalization shown on the plans shall be constructed in accordance with Sections 603, 620, 630, 632, 634, 635, 639,641, 649, 650, 653, 660, 665, 670, 671, 676, 678, 690, 699, 780, 782, 783, 785, and 786 of the Standard Specifications, except where noted on the plans and indicated by the following Technical Provisions. All traffic signal equipment shall be listed on the Florida Department of Transportation's Approved Products List or Qualified Products List.

SHOP DRAWINGS

The Contractor shall provide shop drawings for all signalization equipment and installation. These shop drawings will be reviewed and approved by the Engineer prior to the Contractor placing orders for the signalization equipment and beginning construction.

CONDUIT

Conduit shall be furnished and installed according to Section 630 of the "Standard Specifications", the Special Provisions and the plans. The work may include furnishing and installing conduit aboveground, underground, under pavement, underground jacked, and bridge mounted.

SIGNAL AND INTERCONNECT CABLE

Signal and Interconnect Cable shall conform to the requirements of Section 632 of the "Standard Specifications". Interconnect Cable shall consist of a minimum of 36 and a maximum of 72 strands of fiber optic trunk cable. The actual number and type of fiber optic strands will be as shown on the plans. Drop cable shall be 12 fiber optic strands.

SPAN WIRE ASSEMBLIES

Span wire assemblies shall be furnished and installed according to Section 634 of the "Standard Specifications", the Special Provisions and the plans. The work may include furnishing and installing span wire assemblies in diagonal, box or suspended box configurations, and furnishing and installing fiberglass insulators and messenger wire.

PULL AND JUNCTION BOXES

Pull and Junction Boxes shall conform to the requirements of Section 635 of the "Standard Specifications" and shall be listed on the FDOT's Approved Product List (APL). Pull and Junction Boxes shall be marked in accordance with Section 603.

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Pull Box Installation

Pull Boxes shall be installed in accordance with the Roadway and Traffic Design Standards, Index No. 17721. The Pull Box cover shall be flush with the finished grade or sidewalk. Pull Boxes shall not be installed in roadways, driveways, parking areas, ditches, or public sidewalk curb ramps.

General Requirements

Signal or interconnect cables shall not be pulled through a pull box used for loop termination. Use separate pull boxes for signal and interconnect cables.

Ground all metal covers in accordance with Section 620.

Special pull boxes shall be 24" diameter and shall have cable hangers/racks and be capable of storing slack fiber optic cable while maintaining the minimum bend radius of the cable and house the appropriate fiber splice enclosure equipment.

ELECTRICAL POWER SERVICE

Electrical power service assemblies shall be furnished and installed according to Section 639 of the "Standard Specifications", the Special Provisions and the plans. The work may include furnishing and installing overhead and underground electrical power service, electrical service wire, and electrical service disconnects.

PRESTRESSED CONCRETE POLES

Prestressed concrete poles shall be furnished and installed according to Section 641 of the "Standard Specifications", the Special Provisions and the plans. The work may include guying, furnishing and/or installing concrete strain poles.

WOOD STRAIN POLES

Wood strain poles shall be furnished and installed according to the plans and Special Provisions. Wood strain poles shall be treated with preservative as per Section 955 of the "Standard Specifications". The work may include guying, furnishing and/or installing wood strain poles.

MAST ARM/POLE ASSEMBLIES

Mast arm/pole assemblies and foundations shall be designed and installed according to the Florida Department of Transportation's Standard Mast Arm Assemblies drawings and specifications and the plans.

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Mast arm/pole assemblies shall have a galvanized finish in accordance with ASTM A 123 and ASTM A 153, or have a triglycidyl isocyanurate or urethane polyester powder finish coating equivalent in color to Federal Standard FS 27038 (semi gloss black) over the galvanized surface. The finish powder coating shall be electrostatically applied and cured by heating.

Mast arm/pole assemblies shall include all hardware, anchor bolts and foundations necessary for a complete installation.

VEHICULAR SIGNAL ASSEMBLIES

Vehicular signal assemblies shall conform to Section 650 of the standard specifications, except as modified in this technical provision.

All vehicular signal displays (red, amber, green, ball-type and arrow-type) shall have light emitting diode (LED) lamps. Signal heads and LED lamps must be listed on the Florida Department of Transportation's Approved Products List.

PEDESTRIAN SIGNAL ASSEMBLIES

Pedestrian signal assemblies shall conform to Section 653 of the standard specifications, except as modified in this technical provision.

All displays shall be light emitting diode (LED) type with integrated LED countdown displays showing remaining pedestrian clearance time.

Pedestrian signal assemblies must be listed on the Florida Department of Transportation's Approved Products List.

SIGNAL HEAD AUXILIARIES

Signal head auxiliaries shall be furnished and installed according to the plans, standard specifications and Special Provisions. Aluminum and steel pedestal poles installed as part of a signalized intersection shall have a finish to match the steel strain poles or mast arm/poles.

INDUCTIVE LOOP DETECTORS AND LOOP ASSEMBLIES

Inductive loop detectors and loop assemblies shall be furnished and installed according to Section 660 of the "Standard Specifications", the Special Provisions and the plans.

Each loop assembly shall include loop lead-in cable to connect the loop to the loop detector in the controller cabinet.

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VEHICLE DETECTOR ASSEMBLIES

Vehicle Detector Assemblies shall include furnishing and installing Opticom type traffic signal pre-emption equipment or video detection systems.

The traffic signal pre-emption equipment shall be compatible with the Opticom system used by Orange County Fire Rescue. This item shall include all equipment necessary to provide a complete and functioning traffic signal pre-emption system at an intersection.

Video detection systems shall include video cameras and equipment necessary to provide traffic signal vehicle detection at an intersection. Video detection systems must be listed on the Florida Department of Transportation's Approved Products List. All equipment, including supports and methods for mounting video cameras, must be pre-approved by Orange County Traffic Engineering. Video camera supports installed on mast arms shall have a finish similar to the mast arms.

PEDESTRIAN DETECTOR ASSEMBLIES

Pedestrian detector assemblies shall be furnished and installed according to Section 665 of the "Standard Specifications", the Special Provisions and the plans.

DETECTOR CABINET

Detector cabinets shall be furnished and installed according to the plans and Special Provisions. The cabinets shall meet the requirements of FDOT's Minimum Specifications for Traffic Control Signal Devices.

TRAFFIC CONTROLLER ASSEMBLY

Traffic Controller Assemblies shall conform to the requirements of Section 670 of the Standard Specifications and shall be compatible with Orange County's traffic signal system which utilizes Siemens Eagle EPAC controllers and TS 2 Type 1 or 2 cabinets with MMU and fiber optic module. The controllers shall be Nema compatible and be capable of being programmed with up to 6 pre-emption phase movements.

Two types of Traffic Controller Assemblies shall be provided; a Type 5 base mounted cabinet with a minimum of 14 load bays and 16 detector channels, or a Type 4 pole mounted cabinet with 8 load bays and 8 detector channels.

All Controller Assemblies shall include foundations except pole mounted cabinets.

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SYSTEM AUXILIARIES

Microwave radar vehicular detection unit assemblies shall be used for detection of vehicular traffic and shall be installed as shown on the plans and as directed by the Engineer. The detection unit shall be listed on FDOT's Approved Products List.

Aerial cable storage devices (Sno-Shoe) shall be used to store additional lengths of fiber optic cable along the aerial support wire for later use. They shall be designed to protect the minimum bend radius of the fiber optic cable and shall store a minimum of 100' of excess cable.

Aerial cable tree guards shall be used to protect fiber optic cables from mechanical abrasion caused by tree limbs. They shall be applied around the cable and taped at each end. Tree guards shall be 6' in length and constructed of high impact black polyethylene.

REMOVAL OF EXISTING SIGNAL EQUIPMENT

Removal of existing traffic signal equipment shall be done according to Section 690 of the "Standard Specifications", the Special Provisions and the plans. Equipment which is removed shall be delivered to Orange County's Traffic Operations building at 4200 South John Young Parkway, except for those items shown in the plans or required by the Engineer to be removed and disposed of by the Contractor.

INTERNALLY ILLUMINATED SIGNS

Internally illuminated signs shall be furnished and installed according to Section 699 of the "Standard Specifications", the Special Provisions and the plans. Internally illuminated signs shall be double sided and attached to the traffic signal mast arm (using a two point mounting assembly) or attached to a separate clamp-on sign arm attached to a traffic signal pole. The signs shall be illuminated by white LED lamps.

Signs attached to traffic signal mast arms shall include hardware to mount the signs on the mast arms.

Signs attached to sign arms shall include all hardware required to attach the sign and arm to traffic signal poles. The sign arms shall be designed to support the dead load and wind load of the internally illuminated sign without deflecting, and shall have the same finish as the traffic signal pole to which they are attached.

ITS ELECTRICAL POWER SERVICE

ITS electrical power service assemblies shall be furnished and installed according to Section 639 and Section 780 of the "Standard Specifications", the Special Provisions and the

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plans. The work shall include furnishing and installing overhead and underground electrical power service assemblies for ITS devices.

ITS CCTV CAMERA

The CCTV camera assembly shall include a closed-circuit television (CCTV) color camera enclosed in a domed, environmental housing with an integral motorized lens, a camera positioner, an integral receiver/driver, any and all mounting hardware and power supplies, a local control panel (video interface panel), an image encoding device, a control data transceiver, and the required network communication interface device. The camera assembly shall be capable of individual, or local, camera site control by way of a personal digital assistant (PDA) device or a laptop computer. The camera assembly shall conform to Section 782 of the standard specifications.

The camera assembly shall include, but not be limited to, the following components and features:

- A Color CCTV camera with auto focus zoom lens;
- A positioner with the pan-and-tilt unit (PTU) feature;
- A domed, non-pressurized, watertight, environmental housing;
- Domed mounting hardware shall be adapted for retrofit mounting to existing mast arm support poles or existing signal strain poles;
- Coaxial, power, and data/video cables (composite cable) for power supply, images, and camera controls;
- Transient voltage suppression and protection;
- Network communication device patch cords and/or cables;

The camera assembly shall be permanently mounted by way of a vertical mounting hardware arm that attaches the camera assembly directly to an existing mast arm or strain pole. The mounting arm shall be sealed to prohibit moisture and insects from entering the camera assembly.

The pole location and mounting height for each camera assembly shall be approved by the Engineer. Each mounting location shall be selected based on the desired field of view with the least amount of obstructions, and mounting height requirements for the camera assembly.

Each camera assembly installation shall also include multiple lightning transient voltage protection devices, one ahead of the network electronic device assembly and one behind the network electronic device assembly.

The image from each camera site and the control data being transmitted to the camera assembly from the Orange County TMC central computer shall be transmitted over an Ethernet network. The image shall be encoded in the Moving Picture Experts Group's (MPEG) standard

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MPEG-4 digital format at the camera site and decoded with the Orange County TMC head end equipment.

The camera image sensor shall be a 1/4-inch color interline transfer charge coupled device (CCD) that is capable of digital signal processing (DSP) with a 10-bit analog/digital converter. The sensor shall have a composite video of 1.0 volt peak-to-peak (Vp-p). The image sensor shall include a day (color)/night (monochrome) switchover and iris control, both with manual or automatic control capabilities.

The image sensor shall have a minimum resolution of 480 horizontal and 350 vertical television (TV) lines, as required by the NTSC. The sensor's picture elements shall be 768,000 by 494,000 pixels. The sensor shall have full color video sensitivity at a minimum 0.2 Lux faceplate illumination. At a minimum of 0.02 Lux minimum faceplate illumination, the device shall produce an illuminated and useable black and white image with the infra-red (IR) filter removed.

The image sensor shall have selectable automatic gain control that is peak-average adjustable at a 0- to 30-decibel (dB) range, with a minimum signal-to-noise ratio of 50 dB, weighted at 4.5 megahertz (MHz). The image sensor shall have automatic color balance that references the white areas of the scene through the lens and gamma correction with a 0.45 contrast setting. The image sensor shall have an electronic shutter that is selectable from 1/60 to 1/30,000 of a second in eight steps. The image sensor shall have an operating voltage of 24 volts.

The camera lens shall have a minimum 22x optical zoom and a minimum 10x digital zoom. The device shall have the ability to be automatically or manually focused with a focal length of 0.14 to 3.26 inches. The minimum focusing distance shall be a distance of 4 feet. The lens shall also have a minimum aperture of f/1.6 – 3.6mm to 88mm lens and a 1/4- inch with 10 preset position points.

A dome-type environmental housing enclosure shall have an ambient operating temperature of 40 to 122 degrees Fahrenheit (°F) with 95 percent relative humidity. The dome-type environmental housing enclosure shall have a sustained wind load rating of 120 miles per hour (MPH) with a 30 percent gust factor. The dome-type housing's lower section shall be site-coated with Rain-X or an equivalent product prior to final acceptance. The non-pressurized dome shall be vented with a thermostat-controlled, 24-volt heater and blower for moisture control and shall comply with NEMA 4/IP-66 requirements.

The positioner shall be capable of a 360° continuous pan with a 90° tilt. The device shall have a 100° per second manual pan speed and a 100° per second manual tilt speed. The positioner shall have a minimum preset speed/auto pan of 220° per second and a present position return accuracy of 0.3°, or less than 0.10 percent, with a minimum of 64 presets. The positioner shall have a minimum 8 tours, each with a minimum of 32 presets. The positioner shall have a minimum of 8 programmable blackout zones and have an operating voltage of 24 volts.

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ITS FIBER OPTIC CABLE, FIBER OPTIC SPLICE ENCLOSURE, FIBER OPTIC SPLICE TRAY, FIBER OPTIC PATCH PANEL, FIBER OPTIC PATCH CORD/JUMPER CABLE, MULTI-CONDUCTOR COMMUNICATIONS CABLE

Fiber Optic Cable shall conform to the requirements of Section 783 of the Standard Specifications. The number and type of fibers shall be as specified on the plans.

Fiber optic splice enclosures shall employ a complete fiber management system consisting of splice trays and stress relief system. The enclosures shall conform to Section 783 of the standard specifications and be constructed from galvanized steel and designed to accommodate future expansion and contain modular splice organizers/trays capable of handling splices in a neat and distinguishable fashion. All materials and devices necessary (i.e., sealant or gasket set, strain relief hardware, splice tray support, mounting hardware, etc.) to complete the closure / splice system shall be provided.

The fiber optic splice enclosure shall be mounted to the wall of the special pull box, fiber pull box, or aurally as approved by Orange County and designed to be easily accessible for testing and maintenance. The fiber optic splice enclosure shall be capable of accommodating splice trays, organizers and accept up to a maximum of 36 fusion splices and accommodate a minimum of two (2) cable entries at each end allowing for pass through fibers.

In addition to the above, enclosures for aerial splices shall be equipped with a minimum of two (2) sealable drop ports and provide ultraviolet light protection. The fiber optic splice enclosure shall be moisture-tight (non-filled / no encapsulate), fungus resistant (ASTM 21), re-entable for system expansion and repair, provide cable storage support, place no stress on finished splices within the trays, provide cable strain-relief, allow for individual splice tray access, and require only ordinary tools and no chemicals for installation and maintenance. The enclosure end caps shall be factory-drilled to the proper diameter to accept and seal the fiber optic cable entries without jeopardizing its waterproof characteristics. The enclosure and all cable entries shall utilize a water-blocking technique that permits total immersion in water for a period of seven (7) continuous days without compromise. Water penetration within the compartment containing the splices constitutes a failure and replacement of the enclosure will be at the Contractor's expense.

Fiber optic splice trays shall be used to secure and manage the optical fibers. They shall have internal routing features that prevent the fibers from bending with a radius smaller than its operating design limits.

Fiber optic patch panels shall be used to terminate fiber optic cables in cabinets as shown on the plans and as directed by the Engineer. The fiber optic patch panels shall conform to Section 783 of the standard specifications. The Contractor shall obtain approval from Orange County Traffic Engineering for the specific panel to be used.

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Fiber optic patch cord/jumper cable shall be used to connect fiber optic equipment in cabinets as shown on the plans and as directed by the Engineer.

The fiber optic patch cord/jumper cable shall conform to Section 783 of the standard specifications. The Contractor shall obtain approval from Orange County Traffic Engineering for the specific patch cord/jumper cable to be used.

The patch cord/jumper cables required may include but are not limited to duplex in ST to ST, SC to SC, or SC to LC connectors, with strain relief, 900 um buffering of each fiber after initial 250 um buffering, ceramic ferrels, aramid yarn strength member, and a minimum bend radius of 12 inches.

Single mode patch cord/jumper cables shall have yellow sheathing. Single mode patch cord/jumper cables shall have yellow sheathing. All patch cord/jumper cables shall be 3 meters in length unless specified otherwise.

Multi-conductor communications cable shall be Category 5e, used primarily for communications and incidental low voltage device power.

ITS FIELD CABINET

ITS field cabinets shall provide an environmentally secure enclosure to house ITS field device equipment, subsystems and systems. The cabinets shall be pole or ground mounted.

The ITS field cabinets shall conform to Section 785 of the standard specifications.

ITS VEHICLE DETECTION SYSTEM

Wireless magnetometer vehicle detection systems shall be used for detection of vehicular traffic and shall be installed as shown on the plans and as directed by the Engineer. The detection system shall be listed on FDOT's Approved Products List.

The detection system shall consist of wireless sensors flush mounted with the roadway surface, access point devices that receive, process and relay sensor data, repeaters that relay data between sensors and access points, and contact closure cards that convert the detection signals to contact closure signals in the traffic signal controller.

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METHOD OF MEASUREMENT

Quantities measured for payment under this Section shall be for each complete traffic control signal system installed at an intersection.

BASIS OF PAYMENT

Signalization will be paid for at the contract lump sum prices for each traffic control signal system installed at an intersection, completed and accepted. The cost of the signal communication system between signals shall be included in the contract price for each intersection signalization. Payment shall constitute full compensation for all work described herein and shown in the plans.

Payment shall be made under:

- | | | | |
|-------|---------------------|--|------|
| 603-1 | <u>603-0</u> | SIGNALIZATION AT THE INTERSECTION OF INTERNATIONAL DRIVE & S. WESTWOOD BLVD. | - LS |
| 603-2 | <u>603-1</u> | SIGNALIZATION AT THE INTERSECTION OF INTERNATIONAL DRIVE & AVENIDA VISTA | - LS |
| 603-3 | <u>603-2</u> | SIGNALIZATION AT THE INTERSECTION OF INTERNATIONAL DRIVE & CENTRAL FL. PKWY. | - LS |
| 603-4 | <u>603-3</u> | SIGNALIZATION AT THE INTERSECTION OF INTERNATIONAL DRIVE & AQUATICA DRIVEWAY | - LS |
| 603-5 | <u>603-4</u> | SIGNALIZATION AT THE INTERSECTION OF INTERNATIONAL DRIVE & AQUATICA DRIVEWAY 2 | - LS |
| 603-6 | <u>603-5</u> | SIGNALIZATION AT THE INTERSECTION OF INTERNATIONAL DRIVE & SEA HARBOR DR. | - LS |
| 603-7 | <u>603-6</u> | SIGNALIZATION AT THE INTERSECTION OF INTERNATIONAL DRIVE & N. WESTWOOD BLVD. | - LS |

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. **Unit Price Contracts:** The quantities of work to be done and materials to be furnished under a unit price contract, as given in the Bid Form, are to be considered as approximate only and are to be used solely for the comparison of Bids received and determining an initial Contract Price. The Owner/Engineer does not expressly or by implication represent that the actual quantities involved will correspond exactly herewith; nor shall the Contractor plead misunderstanding or deception because of such estimate or quantities or of the character, location or other conditions pertaining to the Work. Payment to the Contractor will be made only for the actual quantities of work performed or material furnished in accordance with the Drawings and other Contract Documents, and it is understood that the quantities may be increased or diminished as provided in the General Conditions without in any way invalidating any of the unit prices bid.
- B. **Lump Sum Contracts:** The quantities of work to be done and materials to be furnished, including all labor, equipment and incidentals required to complete the Work, are specified in Divisions 1 through 16 of the Contract Specifications and shown in the Contract Drawings. Payment to the Contractor of the lump sum price bid for the Work will be made and shall fully compensate the Contractor for the construction of the Work, completed and ready for continuous operation and use, in the manner contemplated by the Contract Documents.
- C. **Unit Price and Lump Sum Contracts:**
1. All schedules are given for the convenience of the Engineer and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quantity of materials and equipment included in work to be done under this Contract.
 2. Where fittings are noted on the Drawings, such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required.
 3. All contracts shall be subject to 10% minimum retainer as defined in the General Conditions and the Agreement.

1.02 ALLOWANCES

- A. The Contractor shall include in the Total Bid Amount all cash allowances stated hereinafter. Items covered by these allowances shall be supplied for such amounts and by such persons as the Owner/Engineer may direct.

- B. The amount of the allowance shall be adjusted accordingly by Change Order to recognize the actual cost incurred by the Contractor. The Contractor shall submit appropriate documentation to validate the actual cost of the item.
- C. Cash allowances for the purposes of bidding shall be in the following amounts and shall be so reflected in the Bid Form for the designated item.

1.03 SCHEDULE OF VALUES

A. Scope of Work

- 1. Submit to the Engineer a Schedule of Values within twenty (20) days after the Notice to Proceed.
- 2. A Schedule of Values shall be submitted for both lump sum and unit price contracts and the sum of the values in the schedule shall equal the Total Bid amount.
- 3. The Schedule of Values shall establish the actual value of the component parts of the Work and, unless objected to by the Engineer, shall be used as the basis for the Contractor's Applications for Payment.

B. Form and Content

- 1. Type the schedule on the Engineer's 8-1/2 x 11-inch standard form. Contractor's standard forms and computer printout will be considered for approval by the Engineer upon Contractor's request.
- 2. The values listed shall be the installed values of the component parts of the Work, including material, labor, overhead and profit, and all other costs associated with the installed value of each item.

C. Unit Price Contracts: For unit price contracts, the Bid Schedule shall be used as the basis for the Schedule of Values. The Contractor shall resubmit the Bid Schedule in the format described herein, and may, at his option, divide the items in the Bid Schedule into sub-items to provide a more detailed basis of payment.

D. Lump Sum Contracts: For lump sum contracts, the cost of the Work shall be separated into major items and sub-items as outlined below:

- 1. General Requirements (Division 1 Specification Sections)
 - a. Mobilization, Demobilization, Bonds and Permits
 - b. Shop Drawing Preparation /Submittal
 - c. Field Engineering and Exploratory Excavation

- d. Record Drawing Preparation
 - e. All other costs associated with Division 1 of the Specifications
2. Site Work: The cost of the site work, with the exception of earthwork for structures and underground piping, shall be separated by task, with estimated quantities where applicable.
 3. Structures: The cost of each structure shall be given separately, and each structure, at a minimum, shall be further separated into the following sub-items: earthwork, concrete forming, concrete reinforcement, concrete, equipment, piping and appurtenances (to a point 5 feet outside of the structure), miscellaneous metals, electrical work (to a point 5 feet outside of the structure) and finishes.
 4. Yard Piping: The cost of yard piping shall be separated by pipe size and type, valves and appurtenances. The Contractor's estimated quantities and unit prices shall be included for each sub-item.
 5. Electrical Work: The cost of electrical work outside of the structures shall be separated, at a minimum, into the following sub-items: Conduit, wire, duct bank, pull boxes, and yard lighting.
- E. The Owner reserves the right to delete any item included in the Schedule of Values and decrease the Contract Price by the scheduled amount for the item deleted.

1.04 APPLICATIONS FOR PAYMENT

- A. Applications for Payment shall be submitted by the Contractor to the R.P.R. in accordance with the schedule established by the General Conditions and Agreement between the Owner and the Contractor.
- B. Format:
1. Submit applications typed on forms provided by the Owner. The Contractor shall prepare itemized continuation sheets using the accepted Schedule of Values and attach them to the Application. Each item shall have an assigned dollar value for the current pay period, and a cumulative value for the project to date. Change Orders executed prior to the date of submission shall be listed at the end of the continuation sheets and shall be totaled separately.
 2. The following items shall be included with each copy of the application for payment:
 - a. Progress Schedule
 - b. Stored Material Log
 - c. Partial Release of Liens (for payment for stored material) and Sub Contractors

- d. Consent of Surety
 - e. Invoices for Stored Material
 - f. Up to date as-built drawings, red lines and coordinates.
3. The Contractor shall certify, for each current pay request, that all previous payments received from the Owner, under his Contract, have been applied by the Contractor to discharge in full all obligations of the Contractor in connection with Work covered by prior applications for payment, and all materials and equipment incorporated into the Work are free and clear of all liens, claims, security interest and encumbrances. Contractor shall attach to each application for payment like affidavits by all Subcontractors and Suppliers. Contractor shall also attach a "Consent of Surety" to each application for payment. Additionally, a "Partial Release of Lien" from each subcontractor and supplier shall be attached to each application for payment.
4. Submit seven (7) copies of each application to the R.P.R. Each copy shall include original signatures. The R.P.R. shall review the application and verify quantities of installed work and stored materials. Upon his approval, he shall submit the application to the Owner for payment.
- C. Work not installed in accordance with the requirements of the Contract Documents or materials not conforming to the Contract Documents will not be approved by the R.P.R. or Owner for payment.
- D. The Application for Final Payment shall be prepared in accordance with Article 1.14 of the General Requirements - Contract Closeout.

1.05 MEASUREMENT AND PAYMENT

A. Methods of Payment

1. Unit Price Contracts/Items: Payment will be made for actual quantities of work properly installed as approved by the Owner/Engineer unless otherwise indicated herein.
2. Lump Sum Contracts/Items: Payment will be made for each individual item on a percentage of completion basis as estimated by the Contractor and approved by the Owner/Engineer. Quantities provided in the Schedule of Values are for estimating the completion status for progress payments. Adjustments to costs provided in the accepted Schedule of Values may be made only by Change Order.

B. Methods of Measurement

1. Units of measurement shall be defined in general terms as follows:
 - a. Linear Feet (LF)

- b. Square Feet (SF)
- c. Square Yards (SY)
- d. Cubic Yards (CY)
- e. Each (EA)
- f. Sacks (SK)
- g. Lump Sum (LS)

2. Unit Price Contracts/Items:

- a. Linear Feet (LF) shall be measured along the horizontal length of the centerline of the installed material, unless otherwise specified. Pipe shall be measured along the length of the completed pipeline, regardless of the type of joint required, without deduction for the length of valves or fittings. Pipe included within the limits of lump sum items will not be measured.
- b. Square Feet (SF), Square Yards (SY), Cubic Yards (CY), Each (EA) and Sacks (SK) shall be measured as the amount of the unit of measure installed within the limits specified and shown in the Specifications and Drawings. Slope angles and elevations shall be measured using land surveying equipment. Contractor shall provide supporting documentation (i.e. drawings, truck tickets, invoices, etc.) to verify actual installed quantities.
- c. No measurement is required for Lump Sum (LS) items.

2. Lump Sum Contracts/Items:

- a. The Measurement of Work for lump sum contracts and/or items shall be based on the information provided in the Contract Documents, and compiled through the Contractor's own field verifications, investigations and testing prior to Bidding.

C. The following describes the specific work and methods of measurement for the items listed in the Bid Schedule. Measurement and payment for each Bid Item shall include all labor, materials and equipment required to perform the work included for that respective item to provide a complete and operable installation whether specifically described, mentioned or implied.

Item OCU-1 Mobilization, Demobilization, Bonds and Permits

- a. Measurement: Measurement of various items for mobilization, demobilization, bonds and permits will not be made for payment and all items shall be included in the lump sum price. This lump sum price shall not exceed 5% of the summation of total bid prices for all OCU items except OCU-1 and OCU-2.
- b. Payment: Payment of 75% of the applicable lump sum price for the item shall be full compensation for the preparatory work and operations in mobilizing for beginning Work on the project including, but not limited to, multiple operations necessary for the movement of personnel, equipment, project signs, supplies and incidentals to the project site, maintenance of traffic and for the establishment of field offices, storage sheds, safety equipment and first aid supplies, sanitary and other facilities, as required by these Specifications, and State and local laws and regulations; and any other preconstruction expense necessary for the start of the Work; the cost of bonds, permits and fees; construction schedules; shop drawings; temporary facilities; lay down/storage area; construction aids; erosion control; work associated with the contractor support during Owner/Engineer reviews and inspection; re-inspections; and any re-work resulting from same. Payment of the remaining 25% of the applicable lump sum price for the item shall be full compensation for finalization of this project including demobilization of personnel, equipment, supplies, and incidentals from the project site; project record documents; contract close-out documents; removal of field offices and storage; final site restoration; and clean-up. The Contractor shall submit invoices substantiating the cost of mobilization with each pay request.

Item OCU-2 Project Record Drawings

- a. Measurement: Measurement for Record Drawings will not be made for payment and all items shall be included in the lump sum price. This lump sum price shall be no less than 1% of the summation of total bid prices for all OCU items except OCU-1 and OCU-2. The record drawings must be accepted by the County. This may entail several iterations of review and comments.
- b. Payment: Payment of the lump sum price, once the record drawings are completed, reviewed and accepted, shall be full compensation for furnishing all labor, materials, equipment and services necessary to provide the specified record drawings as stated in Section 01720 of this project manual. This item shall include all areas of work encompassed by this project.

Item OCU-3 24" DIP Potable Water Main
Item OCU-4 12" DIP Potable Water Main

- a. Measurement: The quantity for payment shall be the actual number of linear feet of potable water main pipe of each size and type satisfactorily furnished and installed, as measured along the length of the centerline of the completed pipeline, regardless of the type joint required, without deduction for the length of valves and fittings.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and constructing the pipeline's complete installation including; clearing and grubbing, excavation, tree removal; dewatering; utility support and protection, grading, sheeting, shoring and bracing, dewatering, backfill, fill grading and compaction over pipe to provide cover and bring to proposed grade, erosion and pollution control, flushing, cleaning, pressure testing, disinfection, landscape & sodding restoration and cleanup. This item also includes all necessary fittings, reducers, bends, tees, wyes, caps, plugs, restraining devices, locator plates, locate wire, polyethylene encasement where required and all other items incidental to the construction of the water main. All costs to furnish and install such items shall be included in the various pipe sizes. Minimum inside diameter pipe size is to be as shown on the plans.

Item OCU-5
Item OCU-6

24" Gate Valve with Box (Potable Water)
12" Gate Valve with Box (Potable Water)

- a. Measurement: The quantity for payment shall be the actual number of each size and type valve satisfactorily furnished, installed, and incorporated into the piping system, complete with valve boxes, covers, and concrete collars.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the valve complete with valve box, cover, valve box extension, operating nut extension, valve wrench, restraining devices, test station box, concrete collar, identification disk (where applicable), bedding material, setting top of valve box to finished grade, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, flushing, testing, disinfection, and complete restoration including but not limited to, sodding, sidewalks, curb and gutter, and pavement.

Item OCU-7
Item OCU-8

Connection to existing 24" Pipe (Potable Water)
Connection to existing 12" Pipe (Potable Water)

- a. Measurement: The quantity for payment shall be the actual number of connections satisfactorily installed and incorporated into the water main system, complete with fittings. This item will not include connection to existing pipes when such connection is incorporated into another item (i.e.: Conflict Transition, Tapping Sleeve and Valve, caps, plugs or apparatus for grouting and/or abandonment)

- b. **Payment:** Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and complete installation including clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, flushing, cleaning, testing, restoration and cleanup. This item also includes all necessary fittings, reducers, bends, tees, wyes, caps, plugs, restraining devices, locator plates, locate wire, polyethylene encasement where required, removal and replacement/resetting of existing obstructions, and all other items incidental to the connection to the new water main. This work will include coordination with County personnel for temporary valve closures as required for the connections.

Item OCU-9

Offset Air Release Valve Assembly (Potable Water)

- a. **Measurement:** The quantity for payment shall be the actual number of air release valve assemblies of the type specified, satisfactorily furnished and installed for the potable water system.
- b. **Payment:** Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the air release valve assembly complete, as shown on the Drawings, including but not limited to tapping saddle, corp stop, piping/tubing, fittings, nipples, 2" gate valve with valve box, concrete collar, #57 stone, 2" air release valve, color coded thermoplastic enclosure, concrete pad, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, testing, temporary restoration, cleanup, and all other items incidental to the installation of the air release valve assembly.

Item OCU-10

2" Blow-Off Valve Assembly (Potable Water)

- a. **Measurement:** The quantity for payment will be the actual number of each size and type valves satisfactorily furnished and installed, complete with meter boxes, covers, fittings, piping and cap
- b. **Payment:** Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, equipment and installing the valve complete with required restraint, valve box, cover, 2" piping and fittings, test station, cap, identification disk (where applicable) and complete restoration including but not limited to, sodding, sidewalks, curb and gutter and pavement sections.

Item OCU-11
Item OCU-12

Utility Conflict Transition (24" Water Main)
Utility Conflict Transition (16" Water Main)

- a. Measurement: The quantity for payment will be the actual number of conflict transitions satisfactorily furnished and installed regardless of the depth or configuration required to transition around the proposed conflict.
- b. Payment: Payment of the applicable lump sum price shall be full compensation for furnishing all labor, materials and equipment required to install the required concrete thrust collars or mechanical restraint (each side of conflict), install the line stops (each side of conflict), cut and remove existing pipe, install new restrained DI pipe and fittings, connect each end to the existing main, as shown on the drawings. Payment shall include all excavation, backfilling and compaction, dewatering, sheeting and shoring, pipe materials and installation, locate wire, test taps, filling, testing and disinfection for a complete and satisfactory conflict transition. If an air release valve assembly is required to purge potential trapped air, this will be paid for under a separate line item.

Item OCU-13

Remove Existing Water Main and Appurtenances

- a. Measurement: The quantity for payment shall be the actual number of linear feet of pipe satisfactorily removed, complete with caps or plugs on segments to remain in service.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and fittings necessary to disconnect the force from facilities to remain in service, plugging existing lines servicing acquired properties, removal of the water main complete including but not limited to excavation, removal and disposal of all pipe, fittings and appurtenances, backfill, compaction, dewatering, and temporary and final restoration of disturbed areas.

Item OCU-14

Abandon Existing Water Main

- a. Measurement: Measurement for this item will be the actual number of linear feet of water main satisfactorily filled with grout.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, equipment and fittings, caps or plugs necessary to grout the existing water main including clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control and cleanup.

Items OCU-15

12" Tapping Sleeve and Valve Assembly (Potable Water)

- a. Measurement: The quantity for payment will be the actual number of wet taps satisfactorily furnished and installed complete with tapping sleeve, tapping valve and appurtenances.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing each tapping connection assembly including mechanical joint tapping sleeve, resilient seat tapping gate valve with valve box, restraining devices, tapping coupon retrieval and appurtenances. Payment shall also be full compensation for clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, protection of existing utilities, flushing, testing, temporary restoration and cleanup.

Item OCU-16 24" Line Stop and Restraint (Water Main)
 Item OCU-17 16" Line Stop and Restraint (Water Main)
 Item OCU-18 12" Line Stop and Restraint (Water Main)

- a. Measurement: The quantity for payment shall be the actual number of line stops satisfactorily furnished and installed, and the restraint of the existing water main as may be required for connecting the existing water main with the proposed water mains. This item will not include line stops that are incorporated into another item (i.e.: Conflict Transition)
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the line stop, restraining the existing water mains, setting top of line stop to finished grade, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, flushing, testing, disinfection, and complete restoration including but not limited to, sodding, sidewalks, curb and gutter, and pavement.

Item OCU-19 Adjustment of Existing Valve Box and Collar (Water Main)

- a. Measurement: The quantity for payment will be the actual number of valve boxes satisfactorily adjusted to the proposed finish grade. Any modification, reduction, expansion or relocation of the existing valve box shall be included in the unit price, regardless of the length of riser necessary to make such adjustment, at the direction of the OCU RPR. This item only applies to existing valves requiring adjustment.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment, and adjusting the existing valve box, providing the required concrete valve box collar (with the 2" locator wire access tube) and identification marker.

Item OCU-20 24" DIP Reclaimed Water Main

- a. Measurement: The quantity for payment shall be the actual number of linear feet of reclaimed water main pipe of each size and type satisfactori-

ly furnished and installed, as measured along the length of the centerline of the completed pipeline, regardless of the type joint required, without deduction for the length of valves and fittings.

- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and constructing the pipeline's complete installation including; clearing and grubbing, excavation, tree removal; dewatering; utility support and protection, grading, sheeting, shoring and bracing, dewatering, backfill, fill grading and compaction over pipe to provide cover and bring to proposed grade, erosion and pollution control, flushing, cleaning, pressure testing, disinfection, landscape & sodding restoration and cleanup. This item also includes all necessary fittings, reducers, bends, tees, wyes, caps, plugs, restraining devices, locator plates, locate wire, polyethylene encasement where required and all other items incidental to the construction of the reclaimed water main. All costs to furnish and install such items shall be included in the various pipe sizes. Minimum inside diameter pipe size is to be as shown on the plans.

Item OCU-21	24" Gate Valve with Box (Reclaimed Water)
Item OCU-22	18" Gate Valve with Box (Reclaimed Water)
Item OCU-23	12" Gate Valve with Box (Reclaimed Water)

- a. Measurement: The quantity for payment shall be the actual number of each size and type valve satisfactorily furnished, installed, and incorporated into the piping system, complete with valve boxes, covers, and concrete collars.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the valve complete with valve box, cover, valve box extension, operating nut extension, valve wrench, restraining devices, test station box, concrete collar, identification disk (where applicable), bedding material, setting top of valve box to finished grade, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, flushing, testing, disinfection, and complete restoration including but not limited to, sodding, sidewalks, curb and gutter, and pavement.

Item OCU-24	24"x 24" Tapping Sleeve and Valve Assembly (Reclaimed Water)
Item OCU-25	18"x18" Tapping Sleeve and Valve Assembly (Reclaimed Water)
Item OCU-26	12"x12" Tapping Sleeve and Valve Assembly (Reclaimed Water)

- b. Measurement: The quantity for payment will be the actual number of wet taps satisfactorily furnished and installed complete with tapping sleeve, tapping valve and appurtenances.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing each

tapping connection assembly including mechanical joint tapping sleeve, resilient seat tapping gate valve, restraining devices, tapping coupon retrieval and appurtenances. Payment shall also be full compensation for the valve box, cover, valve box extension, operating nut extension, valve wrench, restraining devices, test station box, concrete collar, identification disk (where applicable), bedding material, setting top of valve box to finished grade, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, protection of existing utilities, flushing, testing, temporary restoration and cleanup.

Item OCU-27

Remove Existing Steel Casing (Reclaimed Water)

- a. Measurement: The quantity for payment shall be the actual number of linear feet of steel casing pipe satisfactorily removed, in order to wet tap the existing 18" DIP carrier pipe within. Removal shall be accomplished without damage to the existing carrier pipe.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and fittings necessary to cut and remove a section of the steel casing pipe and plug each end to remain. Work shall include but not be limited to excavation, removal and disposal of steel casing pipe, plug each end to remain, backfill, compaction, dewatering, and temporary and final restoration of disturbed areas including concrete curbing.

~~Item OCU-28~~

~~Connection to Existing 12" Pipe (Reclaimed Water)~~

Item OCU-29

Connection to Existing 4" Pipe (Reclaimed Water)

- a. Measurement: The quantity for payment shall be the actual number of connections satisfactorily installed and incorporated into the reclaimed water main system, complete with fittings. This item will not include connection to existing pipes when such connection is incorporated into another item (i.e.: Conflict Transition, Tapping Sleeve and Valve, caps, plugs or apparatus for grouting and/or abandonment)
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and complete installation including clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, flushing, cleaning, testing, restoration and cleanup. This item also includes all necessary fittings, reducers, bends, tees, wyes, caps, plugs, restraining devices, locator plates, locate wire, polyethylene encasement where required, removal and replacement/resetting of existing obstructions, and all other items incidental to the connection of the service lines to the new reclaimed water main. This work will include coordination with County personnel for temporary valve closure as required for the connections.

Item OCU-30 Remove Existing Reclaimed Water Main and Appurtenances

- a. Measurement: The quantity for payment shall be the actual number of linear feet of pipe satisfactorily removed, complete with caps or plugs on segments to remain in service.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and fittings necessary to disconnect the force from facilities to remain in service, plugging existing lines servicing acquired properties, removal of the reclaimed water main complete including but not limited to excavation, removal and disposal of all pipe, fittings and appurtenances, backfill, compaction, dewatering, and temporary and final restoration of disturbed areas.

~~Item OCU 31 Offset Air Release Valve Assembly (Reclaimed Water)~~

- ~~a. Measurement: The quantity for payment shall be the actual number of air release valve assemblies of the type specified, satisfactorily furnished and installed for reclaimed water service.~~
- ~~b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the air release valve assembly complete, as shown on the Drawings, including but not limited to tapping saddle, corp stop, piping/tubing, fittings, nipples, 2" gate valve with valve box, concrete collar, #57 stone, 2" air release valve, color coded thermoplastic enclosure, concrete pad, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, testing, temporary restoration, cleanup, and all other items incidental to the installation of the air release valve assembly.~~

Item OCU-32 Offset Air Release Valve Assembly in Vault (Reclaimed Water)

- a. Measurement: The quantity for payment shall be the actual number of air release valve assemblies of the type specified, satisfactorily furnished and installed for the reclaimed water main system.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the air release valve assembly complete, as shown on the Drawings, including but not limited to tapping saddle, corp stop, piping/tubing, fittings, nipples, 2" gate valve with valve box, concrete collar, #57 stone, 2" air release valve, precast concrete vault, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, testing, temporary restoration, cleanup, and all other items incidental to the installation of the air release valve assembly.

Item OCU-33 Adjustment of Existing Valve Box and Collar (Reclaimed Water)

- a. Measurement: The quantity for payment will be the actual number of valve boxes satisfactorily adjusted to the proposed finish grade. Any modification, reduction, expansion or relocation of the existing valve box shall be included in the unit price, regardless of the length of riser necessary to make such adjustment, at the direction of the OCU RPR. This item only applies to existing valves requiring adjustment.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment, and adjusting the existing valve box, providing the required concrete valve box collar (with the 2" locator wire access tube) and identification marker.

Item OCU-34 4" Line Stop and Restraint (Reclaimed Water Main)

~~Item OCU-35 12" Line Stop and Restraint (Reclaimed Water Main)~~

- a. Measurement: The quantity for payment shall be the actual number of line stops satisfactorily furnished and installed, and the actual restraint of the existing reclaimed water main as may be required for connecting the existing reclaimed water main with the proposed force mains. This item will not include line stops that are incorporated into another item (i.e.: Conflict Transition)
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the line stop, restraining the existing reclaim water mains, setting top of line stop to finished grade, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, flushing, testing, disinfection, and complete restoration including but not limited to, sodding, sidewalks, curb and gutter, and pavement

Item OCU-36 12" PVC Force Main

- a. Measurement: The quantity for payment shall be the actual number of linear feet of force main pipe of each size and type satisfactorily furnished and installed, as measured along the length of the centerline of the completed pipeline, regardless of the type joint required, without deduction for the length of valves and fittings.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and constructing the pipeline's complete installation including; clearing and grubbing, excavation, tree removal; dewatering; utility support and protection, grading, sheeting, shoring and bracing, dewatering, backfill, fill grading and compaction over pipe to provide cover and bring to proposed grade, erosion and pollution control, flushing, cleaning, pressure testing, landscape & sodding restoration and cleanup. This item also includes all

necessary fittings, reducers, bends, tees, wyes, caps, plugs, restraining devices, locator plates, locate wire, polyethylene encasement where required and all other items incidental to the construction of the force main. All costs to furnish and install such items shall be included in the various pipe sizes. Minimum inside diameter pipe size is to be as shown on the plans.

Items OCU-37 12"x 12" Tapping Sleeve and Valve Assembly (Force Main)

- a. Measurement: The quantity for payment will be the actual number of wet taps satisfactorily furnished and installed complete with tapping sleeve, tapping valve and appurtenances.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing each tapping connection assembly including mechanical joint tapping sleeve, resilient seat tapping gate valve installed on its side, mechanical joint plug valve with valve box, restraining devices, tapping coupon retrieval and appurtenances. Payment shall also be full compensation for the valve box, cover, valve box extension, operating nut extension, valve wrench, restraining devices, test station box, concrete collar, identification disk (where applicable), bedding material, setting top of valve box to finished grade, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, protection of existing utilities, flushing, testing, temporary restoration and cleanup.

Item OCU-38 Remove Existing Force Main and Appurtenances

- a. Measurement: The quantity for payment shall be the actual number of linear feet of pipe satisfactorily removed, complete with caps or plugs on segments to remain in service.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and fittings necessary to disconnect the force main from facilities to remain in service, plugging existing lines, draining and disposal of the contents, removal of the force main, fittings and appurtenances, complete including but not limited to excavation, removal and disposal of all pipe, fittings and appurtenances, backfill, compaction, dewatering, and temporary and final restoration of disturbed areas.

Item OCU-39 12" Line Stop and Restraint (Force Main)

- a. Measurement: The quantity for payment shall be the actual number of line stops and restraint (mechanical or concrete thrust collars) to restrain the existing force main to remain, satisfactorily furnished and installed. This item will not include line stops that are incorporated into another item (i.e.: Conflict Transition)

- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment including but not limited to clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, installing concrete thrust collars, installation and removal of the line stop assembly, clearing and backfill, compaction, grading, temporary erosion control, and complete restoration of disturbed areas.

Item OCU-40 Utility Conflict Transition (12" Force Main)

- a. Measurement: The quantity for payment will be the actual number of conflict transitions satisfactorily furnished and installed regardless of the depth or configuration required to transition around the proposed conflict.
- b. Payment: Payment of the applicable lump sum price shall be full compensation for furnishing all labor, materials and equipment required to install the required concrete thrust collars or mechanical restraint (each side of conflict), install the line stops (each side of conflict), cut and remove existing pipe, install new restrained PVC pipe and DI fittings, connect each end to the existing main, as shown on the drawings. Payment shall include all excavation, backfilling and compaction, dewatering, sheeting and shoring, pipe materials and installation, locate wire, test taps, filling, and testing for a complete and satisfactory conflict transition. If an air release valve assembly is required to purge potential trapped air, this will be paid for under a separate line item.

~~Item OCU-41 Offset Air Release Valve Assembly (Force Main)~~

- ~~a. Measurement: The quantity for payment shall be the actual number of air release valve assemblies of the type specified, satisfactorily furnished and installed for the force main system.~~
- ~~b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the air release valve assembly complete, as shown on the Drawings, including but not limited to tapping saddle, corp stop, piping/tubing, fittings, nipples, 2" gate valve with valve box, concrete collar, #57 stone, 2" air release valve, color coded thermoplastic enclosure, concrete pad, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, testing, temporary restoration, cleanup, and all other items incidental to the installation of the air release valve assembly.~~

Item OCU-42 Offset Air Release Valve Assembly in Vault (Force Main)

- a. Measurement: The quantity for payment shall be the actual number of air release valve assemblies of the type specified, satisfactorily furnished and installed for the force main system.

- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment and installing the air release valve assembly complete, as shown on the Drawings, including but not limited to tapping saddle, corp stop, piping/tubing, fittings, nipples, 2" gate valve with valve box, concrete collar, #57 stone, 2" air release valve, precast concrete vault, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, testing, temporary restoration, cleanup, and all other items incidental to the installation of the air release valve assembly.

~~Item OCU 43 — Adjustment of Existing Valve Box and Collar (Force Main)~~

- ~~a. Measurement: The quantity for payment will be the actual number of valve boxes satisfactorily adjusted to the proposed finish grade. Any modification, reduction, expansion or relocation of the existing valve box shall be included in the unit price, regardless of the length of riser necessary to make such adjustment, at the direction of the OCU RPR. This item only applies to existing valves requiring adjustment.~~
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment, and adjusting the existing valve box, providing the required concrete valve box collar (with the 2" locator wire access tube) and identification marker.

Item OUC-43
Item OCU-44
Item OCU-44A

Install 10" PVC Gravity Sanitary Sewer Main
Install 12" PVC Gravity Sanitary Sewer Main
Install 18" PVC Gravity Sanitary Sewer Main

- a. Measurement: Measurement for this item will be the actual number of linear feet of each size of gravity sanitary sewer main line satisfactorily furnished and installed including removal and disposal of the existing pipe within the trench limits and installation of the new PVC gravity sewer pipe at the depth and slopes as shown on the drawings.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment, providing a complete gravity sanitary sewer main line replacement including clearing and grubbing, removal of existing asphalt and base courses, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, connection to existing or proposed manholes, **connection to existing gravity mains including any couplings/fittings required**, flushing, CCTV inspection, testing and cleanup.

Item OCU-45
 Item OCU-46

Line Existing 18-inch Gravity Sanitary Sewer Main
 Line Existing 15-inch Gravity Sanitary Sewer Main

- a. Measurement: The quantity for payment shall be the actual number of linear feet of each size of gravity sewer main satisfactorily lined by CIPP method. Measurement shall be based on the horizontal projection of the

centerline of the permanently installed liner between manholes, measured to the nearest foot from inside wall of the manhole to the inside wall of the other manhole and not including the manhole chamber.

- b. **Payment:** Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment to line the gravity sewer main by cured-in-place pipe (CIPP) method including but not limited to all necessary or required cleaning and preparation of the existing sewer; blocking, plugging and bypass of incoming flows; removal, transportation and disposal of material generated by preparation; CCTV inspection (pre and post); furnishing, installing and curing CIPP pipe liner; testing; reestablishment of existing services (if necessary); cleanup; and all labor, materials, and equipment required to provide a complete and acceptable liner installation.

Item OCU-47 Install New Sanitary Manhole

- a. **Measurement:** Measurement for this item will be the actual number of sanitary manholes satisfactorily furnished and installed including removal and disposal of the existing structure and installation of the new sanitary manhole (cast with the waterproofing admixture). A drop structure shall be installed as required.
- b. **Payment:** Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment, providing a complete sanitary manhole replacement including clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, connection to existing or proposed pipes, vacuum testing, flushing and cleanup.

Item OCU-48 Rehab Existing Manhole (w/Protective Interior Lining)

- a. **Measurement:** Measurement for this item will be the actual number of sanitary manholes satisfactorily rehabilitated based on the depth of pipe or structure being rehabilitated.
- b. **Payment:** Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment, for the rehabilitation of existing sanitary manholes including but not limited to all necessary or required cleaning and preparation of the existing manhole interior surface; blocking, plugging and bypass of incoming flows (if required); removal, transportation and disposal of material generated by preparation; removal and replacement of benching (if required); patching, plugging and preparation of interior walls and corbel; furnish and install interior protective lining; re-establish connections to existing and/or proposed piping; vacuum testing; flushing and cleanup.

Item OCU-49 Core Drill and Connect to Existing Manhole

- a. Measurement: The quantity for payment shall be the actual number of Existing Manholes satisfactorily cored drilled and connected to, in accordance with all local, state and federal requirements.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment to core drill the existing sanitary manhole (upper and lower holes), install rubber boots, assemble drop structure and connect the proposed gravity sanitary sewer main. The connection shall include but not be limited to installing any necessary plugs, caps or fittings for by-pass pumping, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, protection of existing utilities, restoration, cleanup and all other items incidental to the core drilling, drop structure and connection to the sanitary manhole. This item shall also include patching/repairing the existing interior and exterior surfaces of the existing manhole.

Item OCU-50 Remove Existing Sanitary Manhole

- a. Measurement: The quantity for payment shall be the actual number of Sanitary Manholes satisfactorily removed and disposed of, in accordance with all local, state and federal requirements.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment to completely remove and dispose of all existing Sanitary Manhole. The removal shall include but not be limited to installing any necessary plugs, caps or fittings on the pipes to be abandoned or to remain, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, protection of existing utilities, restoration, cleanup and all other items incidental to the removal of the sanitary manhole.

Item OCU-51 Abandon Existing Gravity Sanitary Sewer Main

- a. Measurement: Measurement for this item will be the actual number of linear feet of gravity sewer pipe abandoned and satisfactorily filled with grout.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, equipment and fittings, caps or plugs necessary to grout the existing gravity sewer main and laterals including clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control and cleanup.

Item OCU-52 Remove Existing Gravity Sanitary Sewer Main

- a. Measurement: The quantity for payment shall be the actual number linear feet of gravity sewer pipe satisfactorily removed and disposed of, in accordance with all local, state and federal requirements.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment to completely remove and dispose of all existing wastewater gravity sewer pipe. The removal shall include but not be limited to installing any necessary plugs, caps or fittings, clearing and grubbing, excavation, sheeting, shoring and bracing, dewatering, backfill, compaction, grading, temporary erosion control, protection of existing utilities, restoration, cleanup and all other items incidental to the removal of gravity sewer pipe.

Item OUC-53
Item OUC-54

Adjust Existing Manhole Ring and Cover (Minor)
Adjust Existing Manhole Ring and Cover (Major)

- a. Measurement: The quantity for payment will be the actual number of manhole rings and covers satisfactorily adjusted to the proposed finish grade. Modification, reduction, expansion or relocation of the manhole ring and cover accomplished through removal and replacement of the brick (limited to 4 courses) or HDPE adjustment ring (limited to 10") chimney shall be considered MINOR and where the concrete manhole barrel or corbel section must be modified or replaced (due to chimney height limitations) and the entire chimney section must be replaced, this shall be considered MAJOR. All work to make the required adjust to the proposed finished grade shall be included in the respective unit price.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment, for adjusting the manhole rings and covers to the proposed finish grade.

Item OCU-55

Asphalt Pavement Removal and Replacement

- a. Measurement: The quantity for payment shall be the actual number of square yards of asphalt roadway satisfactorily removed and replaced and/or repaired including subgrade stabilization, base course and asphaltic concrete surface course.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment for saw cutting and removal of the existing surface and base courses and installing and compacting the replacement asphalt roadway.

Item OCU-56

Unsuitable Soil Removal, Disposal and Replacement

- a. Measurement: The quantity for payment shall be the actual number of cubic yards of unsuitable soil satisfactorily removed and the corresponding amount of acceptable fill furnished and satisfactorily placed as established on Section 02032.

- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials and equipment for removing and properly disposing of all unsuitable soils encountered during construction as dictated by OCU RPR and replacing with clean granular soils as defined and recommended in the geotechnical report in Appendix A.

Item OCU-57 Utility Maintenance of Traffic (Utility M.O.T.)

- a. Measurement: Measurement for the Lump Sum item to include all labor, materials and equipment necessary for the construction of the utility work as required by the Maintenance of Traffic Technical Provision (Part H, TP 102) of this construction contract.
- c. Payment: Payment of the lump sum item price shall be full compensation for furnishing all labor, materials and equipment necessary to provide safe and effective maintenance of traffic of vehicular and pedestrian traffic including but not limited to preparation and submittal of a complete traffic control plan, temporary lanes, walks or drainage facilities, flagmen, signs, barricades, lights and other protective devices necessary for the construction of the utility work. This item will be paid based on the percentage of the total value of the work performed to date, proportional to the original contract amount for the respective line item. In the event the contractor will utilize a common MOT for the Utility and Roadway work, this pay item shall be the Utility's MOT share.

Item OCU-58 Removal and Replacement of Concrete Sidewalk

- a. Measurement: Measurement for this item will be the actual number of square yards of concrete sidewalk satisfactorily removed and replaced including subgrade stabilization, wire reinforcement (where applicable) and concrete.
- b. Payment: Payment of the applicable unit price shall be full compensation for furnishing all labor, materials, and equipment for saw cutting and removal of the existing sidewalk and installing the replacement concrete sidewalk.

END OF SECTION

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Appendix B

Permits Obtained by Owner

- **Florida Department of Environmental Protection (FDEP)**
 - Florida Department of Environmental Protection – Notification/Application for Constructing a Domestic Wastewater Collection/Transmission System
 - Florida Department of Environmental Protection – Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs

- **Florida Department of Transportation (FDOT)**
 - **Utility Permit**
 - **Utility Permit Extension (e-mail)**

Per Section 01001 – Article 1.05 (C), the Contractor shall strictly adhere to the specific requirements of the governmental unit(s) or agency(ies) having jurisdiction over the Work. Whenever there is a difference in the requirements of a jurisdictional body and these Specifications, the more stringent shall apply.

UTILITY PERMIT

TP-75-UT-072-14

On-site # 429365

PERMIT NO.: 2014-H-853-38		SECTION NO.: 75471118		STATE ROAD 528		COUNTY Orange	
FDOT construction is proposed or underway.				<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
Is this work related to an approved Utility Work Schedule?				<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
PERMITTEE:		Orange County Utilities Engineering Division					
ADDRESS:		9150 Curry Ford Road			TELEPHONE NUMBER: (407) 254 - 9900		
CITY/STATE/ZIP:		Orlando, Florida 32825					
The above PERMITTEE requests permission from the State of Florida Department of Transportation, hereinafter called the FDOT, to construct, operate and maintain the following: 24" water main and connections to existing water mains within the SR 528 access ramp right-of-way from the intersection of International Drive and North Westwood Blvd, and extending approx. 500 feet south along International Drive.							
FROM: Intersection of Int'l Dr. and Westwood Blvd. North MP 0.9				TO: Approx. 500 feet south along Int'l Drive MP 0.9			
Submitted for the PERMITTEE by: Name and Company (Typed or Printed Legibly)		Contact Information Address/Telephone/E-Mail (if applicable)		Signature		Date	
R. Kent Veech, PE. Senior Associate Woolpert		5323 Millenia Lakes Boulevard, Suite 220, Orlando, FL 32839 /Phone: 407.591.5094 e-mail: Kent.Veech@Woolpert.com				7/16/2014	

- The Permittee declares that prior to filing this application, the location of all existing utilities that it owns or has an interest in, both aerial and underground, are accurately shown on the plans and a letter of notification was mailed on See Below to the following utilities known to be involved or potentially impacted in the area of the proposed installation:
This project is being constructed in conjunction with the roadway improvements and the other utility owners have been involved in utility coordination meetings throughout the project design.
- The local Maintenance or Resident Engineer, hereafter referred to as the FDOT Engineer, shall be notified a minimum of forty eight (48) hours in advance prior to starting work and again immediately upon completion of work. The FDOT's Engineer is Dan Ekback located at PO Box 9828 Ft. Lauderdale, FL 33310, Telephone Number 954-934-1205. The Permittee's employee responsible for MOT is By Contractor. Telephone Number _____ (This name may be provided at the time of the forty eight (48) hour advance-notice prior to starting work).
- All work, materials, and equipment shall be subject to inspection and approval by the FDOT Engineer.
- All plans and installations shall conform to the requirements of the FDOT's UAM in effect as of the date this permit is approved by FDOT, and shall be made a part of this permit. This provision shall not limit the authority of the FDOT under Paragraph 8 of this Permit.
- This Permittee shall commence actual construction in good faith within 180 days after issuance of permit, and shall be completed within 180 days after the permitted work has begun. If the beginning date is more than sixty (60) days from the date of permit approval, the Permittee must review the permit with the FDOT Engineer to make sure no changes have occurred to the Transportation Facility that would affect the permitted construction.
- The construction and maintenance of such utility shall not interfere with the property and rights of a prior Permittee.
- It is expressly stipulated that this permit is a license for permissive use only and that the placing of utilities upon public property pursuant to this permit shall not operate to create or vest any property right in said holder, except as provided in executed subordination and Railroad Utility Agreements.
- Pursuant to Section 337.403, Florida Statutes, any utility placed upon, under, over, or along any public road or publicly owned rail corridor that is found by FDOT to be unreasonably interfering in any way with the convenient, safe, or continuous use, or maintenance, improvement, extension, or expansion, of such public road or publicly owned rail corridor shall, upon thirty (30) days written notice to the utility or its agent by FDOT, be removed or relocated by such utility at its own expense except as provided in Section 337.403(1), Florida Statutes, and except for reimbursement rights set forth in previously executed subordination and Railroad Utility Agreements, and shall apply to all successors and assigns for the permitted facility.
- It is agreed that in the event the relocation of said utilities are scheduled to be done simultaneously with the FDOT's construction work, the Permittee will coordinate with the FDOT before proceeding and shall cooperate with the FDOT's contractor to arrange the sequence of work so as not to delay the work of the FDOT's contractor, defend any legal claims of the FDOT's contractor due to delays caused by the Permittee's failure to comply with the approved schedule, and shall comply with all provisions of the law and the FDOT's current UAM. The Permittee shall not be responsible for delay beyond its control.
- In the case of non-compliance with the FDOT's requirements in effect as of the date this permit is approved, this permit is void and the facility will have to be brought into compliance or removed from the R/W at no cost to the FDOT, except for reimbursement rights set forth in previously executed subordination and Railroad Utility Agreements. This provision shall not limit the authority of the FDOT under Paragraph 8 of this Permit.
- It is understood and agreed that the rights and privileges herein set out are granted only to the extent of the State's right, title and interest in the land to be entered upon and used by the Permittee, and the Permittee will, at all times, and to the extent permitted by law, assume all risk of and indemnify, defend, and save harmless the State of Florida and the FDOT from and against any and all loss, damage, cost or expense arising in any manner on account of the exercise or attempted exercises by said Permittee of the aforesaid rights and privileges.
- During construction, all safety regulations of the FDOT shall be observed and the Permittee must take measures, including placing and the display of safety devices that may be necessary in order to safely conduct the public through the project area in accordance with the Federal MUTCD, as amended by the UAM.
- Should the Permittee be desirous of keeping its utilities in place and out of service, the Permittee, by execution of this permit acknowledges its present and continuing ownership of its utilities located between N/A and N/A within the FDOT's R/W as set forth above. Whenever the Permittee removes its facilities, it shall be at the Permittee's sole cost and expense. The Permittee, at its sole expense, shall promptly remove said out of service utilities whenever the FDOT determines said removal is in the public interest.
- In the event contaminated soil is encountered by the Permittee or anyone within the permitted construction limits, the Permittee shall immediately cease work and notify the FDOT. The FDOT shall notify the Permittee of any suspension or revocation of the permit to allow contamination assessment and remediation. Said suspension or revocation shall remain in effect until otherwise notified by FDOT.
- For any excavation, construction, maintenance, or support activities performed by or on behalf of the FDOT, within its R/W, the Permittee may be required by

UTILITY PERMIT

- the FDOT or its agents to perform the following activities with respect to a Permittee's facilities: physically expose or direct exposure of underground facilities, provide any necessary support to facilities and/or cover, de-energize or alter aerial facilities as deemed necessary for protection and safety.
16. Pursuant to Section 337.401(2), Florida Statutes, the permit shall require the permit holder to be responsible for damage resulting from the issuance of the permit. The FDOT may initiate injunctive proceedings as provided in s.120.69 to enforce provisions of this subsection or any rule or order issued or entered into pursuant thereto.
 17. Pursuant to Section 337.402, Florida Statutes, when any public road or publicly owned rail corridor is damaged or impaired in any way because of the installation, inspection, or repair of a utility located on such road or publicly owned rail corridor, the owner of the utility shall, at his or her own expense, restore the road or publicly owned rail corridor to its original condition before such damage. If the owner fails to make such restoration, the authority is authorized to do so and charge the cost thereof against the owner under the provisions of s.337.404.
 18. The Permittee shall comply with all provisions of Chapter 556, Florida Statutes, Underground Facilities Damage Prevention and Safety Act.
 19. Special FDOT instructions: _____

Recommended for Approval: *D.J. Eck*

SEE ATTACHMENT A **Permit Not Valid Without Attachments**

Dan Ekback, P.E. 8-4-2014
Florida's Turnpike Enterprise
Permits Engineer

It is understood and agreed that commencement by the Permittee is acknowledgment and acceptance of the binding nature of all the above listed permit conditions and special instructions.

20. By receipt of this permit, the Permittee acknowledges responsibility to comply with Section 119.07, Florida Statutes.
21. By the below signature, the Permittee hereby represents that no change to the FDOT's standard Utility Permit form, as incorporated by reference into Rule 14-46.001, for this Utility Permit has been made which has not been previously called to the attention of the FDOT (and signified to by checking the appropriate box below) by a separate attached written document showing all changes and the written and dated approval of the FDOT Engineer. Are there attachments reflecting change/s to the standard form? NO YES If Yes, _____ pages are attached.

PERMITTEE	Jose Hernandez, P.E. Chief Engineer - Orange County Utilities Engineering Division	SIGNATURE	<i>[Signature]</i>	DATE:	7/22/2014	
	Name & Title of Authorized Permittee or Agent (Typed or Printed Legibly)					
APPROVED BY:	Debbie M. Meyer, P.E. Eng. of Maintenance Operations Florida's Turnpike Enterprise	<i>[Signature]</i>			ISSUE DATE:	08/04/14
	Maintenance Engineer or Designee					

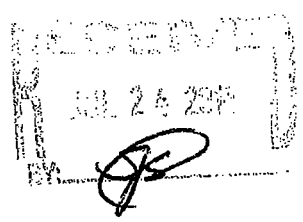
UTILITY PERMIT FINAL INSPECTION CERTIFICATION

DATE:	
DATE WORK STARTED:	
DATE WORK COMPLETED:	
INSPECTED BY:	
(Permittee or Agent)	
CHANGE APPROVED BY:	DATE:
District Maintenance Engineer or Designee	

I the undersigned Permittee do hereby CERTIFY that the utility construction approved by the above numbered permit was inspected and installed in accordance with the approved plans made a part of this permit and in accordance with the FDOT's current UAM. All plan changes have been approved by the FDOT's Engineer and are attached to this permit. I also certify that the work area has been left in as good or better condition than when the work was begun.

PERMITTEE:	SIGNATURE:	DATE:
Name & Title of Authorized Permittee or Agent (Typed or Printed Legibly)		

CC: District Permit Office
Permittee



ATTACHMENT "A"

Permit #2014-H-853-038 (TP-75-UT-072-14)

Project Description: SR-528, MP 0.9

On Behalf of Orange County Utilities Woolpert proposes to install a 24" potable water transmission main as part of the Orange County Public Works International Drive roadway improvements project. The proposed 24" water main will enter the Turnpike's L.A.R/W crossing Northbound I Drive and continuing North in the median, at the intersection of Westwood Blvd and I Drive.

The following apply:

1. **The Applicant shall be responsible to make sure the Contractor abides by all FDOT Standard Specifications and Design Standards.**
2. **The Applicant shall be contacted by the Florida's Turnpike Enterprise contact person Bernard Mills or his designee within five (5) working days from the date of the permit approval to schedule a pre-work meeting.** At the pre-work meeting, the permit and attachment conditions will be discussed, and the Applicant shall provide emergency contact names and numbers and a schedule for the proposed work.

**This permit is good for 180 days starting with the approval date. We are asking that the applicant submit an E-mail requesting an extension, 10 days prior to the expiration date, if they want to keep the permit valid and open past the expiration date. If an E-mail is not received or an extension is not granted, the permit will be closed and a new permit submittal will be required to continue work. The extension will be up to the discretion of the Permits Engineer, Dan Ekback, P.E.
E-mail: Daniel.ekback@dot.state.fl.us**

CC : Robert Wierz, Kyle Bianchi, Matt Lewis, Ademola Adelekan, Pam Nagot, File

Special Conditions

Permit #2014-H-853-038 (TP-75-UT-072-14)

The following apply:

1. As per Florida Statutes, FDOT is not required to be a Member of Sunshine 811. **Therefore, Turnpike Utilities will NOT be located by calling Sunshine 811.** The contractor is responsible for avoiding these Utilities. Any subsurface work that is within the Florida's Turnpike Right of Way and within 48 inch proximity, the requestor needs to obtain a valid permit from the Roadway Permits Department. With an approved permit, the permittee is required to designate, locate and protect the Florida's Turnpike facilities and will be responsible for any damage caused to the Turnpike ITS system. Contractors working on Construction or Roadway Maintenance contracts need to contact their Project Manager. All buried fiber optic and electric cable must be identified using a level "A" utility locate. Any directional bore must have a **48 inch minimum separation** from all fiber optic and electric cable. All work within the 48 inch proximity of ITS assets needs a 48 hour written notice to Ralf Sena Turnpike Enterprise Infrastructure Analyst. **Request via email only to Rafael.sena@dot.state.fl.us**
2. The Traffic Control Plan shall be in accordance with the current edition of the *F.D.O.T. Roadway and Traffic Design Standards*, Index Series 600 through 670, and the *M.U.T.C.D.* as minimum criteria. Certified personnel representing the Applicant must supervise any Maintenance of Traffic setup.
3. The Applicant shall not be allowed to leave any vehicles, equipment or materials within the Turnpike clear zone during non-work periods. The overnight storage of any vehicles, equipment or materials within the Turnpike right-of-way shall be prohibited without prior approval by the Turnpike Permits Office.
4. While work is in progress, all vehicles shall be parked as far off the roadway as possible. All vehicles must be clearly marked with a company name and/or logo, and be equipped with working amber strobe lights. In addition, all workers shall wear ANSI approved apparel (safety vests) while on Turnpike property.
5. The Applicant's attention is directed to the fact that the Applicant will be required to pay tolls, as applicable to the general public.
6. The Applicant shall be responsible for maintaining trench safety in accordance with OSHA and State of Florida regulations.
7. Protection of Existing Work. Areas where fencing, signing, lighting, guardrail, paving, grassing and/or sodding have been completed by others shall be given

maximum protection while work under this permit is in progress. Any damaged work shall be completely restored to original or better condition at the expense of the Applicant. Any conflicts with existing work shall be brought to the immediate attention of the Turnpike Enterprise Permits Office.

8. The Applicant shall be responsible for the protection of all Turnpike facilities and structures within the area of this work, including, but not limited to existing drainage structures, concrete ditch protection, signs, delineators and fencing. Any damage to Turnpike facilities or structures shall be reported to the Permits office within 24 hours and repaired or replaced to the satisfaction of the Turnpike, and in compliance with current F.D.O.T. standards and specifications.
9. The Applicant shall restore any area of the Turnpike right-of-way disturbed by this work. This shall include, but not be limited to the grading of areas to original grade and placement of sod in all areas disturbed by this work. All work shall be in accordance with *Standard Specifications for Road and Bridge Construction*, as well as the *FDOT Design Standards*.
10. The Applicant shall be required to obtain necessary permits from all other agencies having jurisdiction in the areas of this permitted work.
11. In case of extreme traffic or weather conditions, the Applicant may be required to remove their operation from the roadway and/or right-of-way, at the discretion of the Engineer or the Florida Highway Patrol, Troop "K", who has jurisdiction on this roadway.
12. The Applicant agrees to coordinate its work at all times so as not to
 - (a) Delay, interfere with, or cause increased costs to the Department's construction or maintenance contractor that may be working in the area,
 - (b) Take any action that might be the basis for a claim for delay, interference, or increased costs by the contractor.In the event that the Applicant or its agents or employees receive any information, either express or implied, and either directly from the contractor or otherwise, which indicates delay, interference, or increased costs have been or might be caused as a result of the Applicant's work, the Applicant shall immediately cease all work and shall immediately notify the Permits Office of the circumstances so an investigation can be made and steps can be taken to avoid any delay, interference, or increased costs. The Applicant agrees to be responsible and pay for all damages that are caused by the Applicant's breach of the provisions of this Permit or by the Applicant's negligence.
13. The Applicant shall notify the Turnpike Permits Representative within two weeks of completion of this work. **At that time, a final inspection will be scheduled prior to final acceptance of the work, with participation from the Turnpike, the Applicant, and the Contractor.**

14. The Applicant shall submit the "Utility Permit Final Inspection Report", found on the back of the Utility Permit authorizing this work, to the Turnpike Permits Office within 30 days from acceptance of the work by the Turnpike.
15. Commencement of this work by the Applicant shall act as acknowledgment and acceptance of the terms and conditions of this Permit and Special Conditions.

CC: Robert Wierz, Kyle Bianchi, Matt Lewis, Ademola Adelekan, Pam Nagot, File

Veech, Kent

From: Shinabery, Stephanie <Stephanie.Shinabery@dot.state.fl.us>
Sent: Monday, January 26, 2015 9:11 AM
To: Veech, Kent
Cc: Ekback, Daniel; Dobbins, Gordon; Kyle Bianchi; Lewis, Matt; Cerrato Engineering (cerrato.eng@verizon.net); Christina.Crosby@ocfl.net; Nagot, Pamela; christina.crosby@ocfl.net; Jose Hernandez PE (jose.hernandez2@ocfl.net)
Subject: RE: Utility Permit (OUC Beachline & I Drive):TP-75-UT-072-14/2014-H-853-38 (OMS # 429365)
Attachments: 75ut072-14 Appdattasc.pdf; Utility Example Close out.pdf

Good Morning Kent,

Please consider this correspondence as your permit extension. Your new expiration date is **8/04/15**, this is to include restoration as well as having as built & bore logs available (if applicable). The same conditions apply to the extension as they did to the original permit. Please make sure vehicles on site have updated information. Please remember to keep in contact with your Inspector (Kyle Bianchi) he will be the one that has the pre-work meeting with you before you can start working.

I will be out of office Friday.

Thank you,
Stephanie Shinabery
Roadway Staff-Jacobs, Traffic Engineering & Maintenance General Consultants to Florida's Turnpike
954-934-1219 office
(USPS- Regular mail only)
P.O. Box 9828
Ft. Lauderdale, FL 33310
(UPS, Fed Ex- Only)
Florida's Turnpike Enterprise
Turnpike Operations Center
Turnpike Mile Post 65
Pompano Beach, FL 33069
stephanie.shinabery@dot.state.fl.us

Check out our website at:

<http://www.floridasturnpike.com/business.cfm>

PLEASE NOTE THAT FLORIDA HAS A BROAD PUBLIC RECORDS LAW, AND THAT ALL CORRESPONDENCE TO ME VIA E-MAIL MAY BE SUBJECT TO DISCLOSURE

From: Veech, Kent [mailto:Kent.Veech@Woolpert.com]

Sent: Friday, January 23, 2015 10:08 AM

To: Shinabery, Stephanie

Cc: Ekback, Daniel; Dobbins, Gordon; Kyle Bianchi; Lewis, Matt; Cerrato Engineering (cerrato.eng@verizon.net); Christina.Crosby@ocfl.net; Nagot, Pamela; christina.crosby@ocfl.net; Jose Hernandez PE (jose.hernandez2@ocfl.net)

Subject: RE: Utility Permit (OUC Beachline & I Drive):TP-75-UT-072-14/2014-H-853-38 (OMS # 429365) Set to Expire 2/4/15

Stephanie,

We cordially request that the above subject utility permit be extended 180 days. We will make sure that Bernard Mills, or his designee, will be notified 5 days prior to beginning any work, to schedule the pre-work meeting. Thank you for this opportunity to extend.

Sincerely,

R. Kent Veech, PE
Senior Associate

Woolpert

One Purlieu Place, Suite 122 | Winter Park, FL 32792

Direct: 407.591.5094 | Office: 407.381.2192 | Fax: 407.384.1185 | Cell: 407.467.0718

kent.veech@woolpert.com | www.woolpert.com

Please consider the environment before printing this email.

From: Shinabery, Stephanie [<mailto:Stephanie.Shinabery@dot.state.fl.us>]

Sent: Thursday, January 22, 2015 11:32 AM

To: Veech, Kent

Cc: Ekback, Daniel; Dobbins, Gordon; Kyle Bianchi; Lewis, Matt; Cerrato Engineering (cerrato.eng@verizon.net); Nagot, Pamela; christina.crosby@ocfl.net

Subject: Utility Permit (OUC Beachline & I Drive):TP-75-UT-072-14/2014-H-853-38 (OMS # 429365) Set to Expire 2/4/15

Good Morning Kent,

Please remember that OSP is **time-sensitive**, if your permit doesn't get extended OSP automatically expires the permit. At that point neither you (Applicant) or I (FTE Permits Dept.) will be able to have access to it any longer. Please request the extension ASAP (by email), therefore I can adjust accordingly. I can't help you if there is no communication.

I will be out of office Friday.

Thank you,

Stephanie Shinabery
Roadway Staff- Jacobs
954-934-1219 office

stephanie.shinabery@dot.state.fl.us

Traffic Engineering & Maintenance General Consultant to Florida's Turnpike

(USPS- Regular mail only)

P.O. Box 9828

Ft. Lauderdale, FL 33310

(UPS, Fed Ex-or Courier)

Turnpike Operations Center

Turnpike Mile Post 65

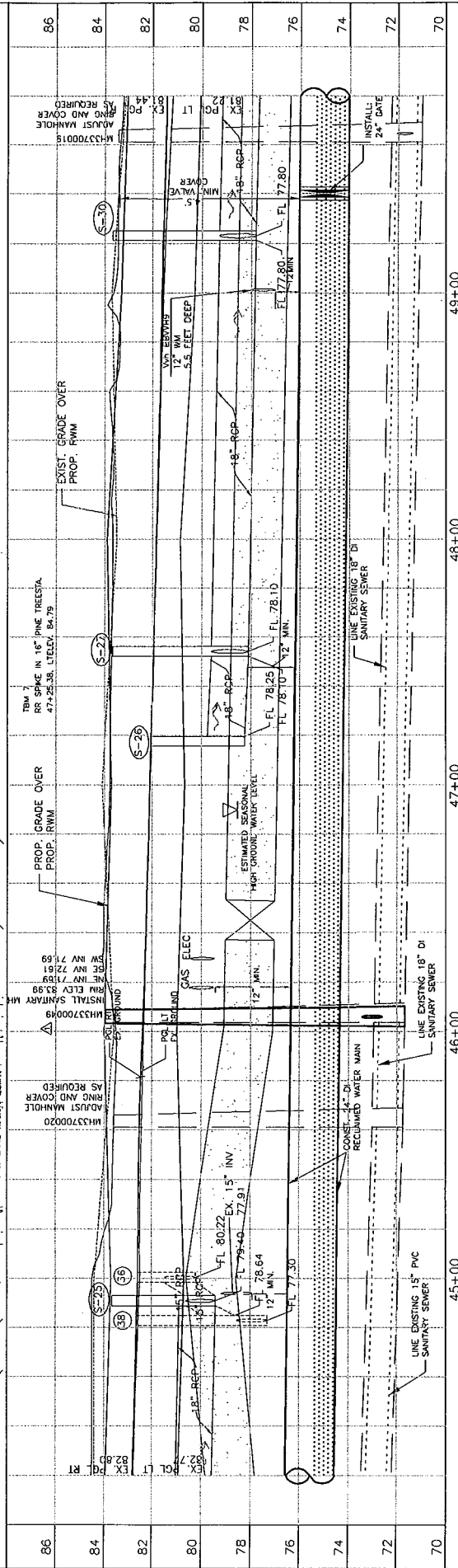
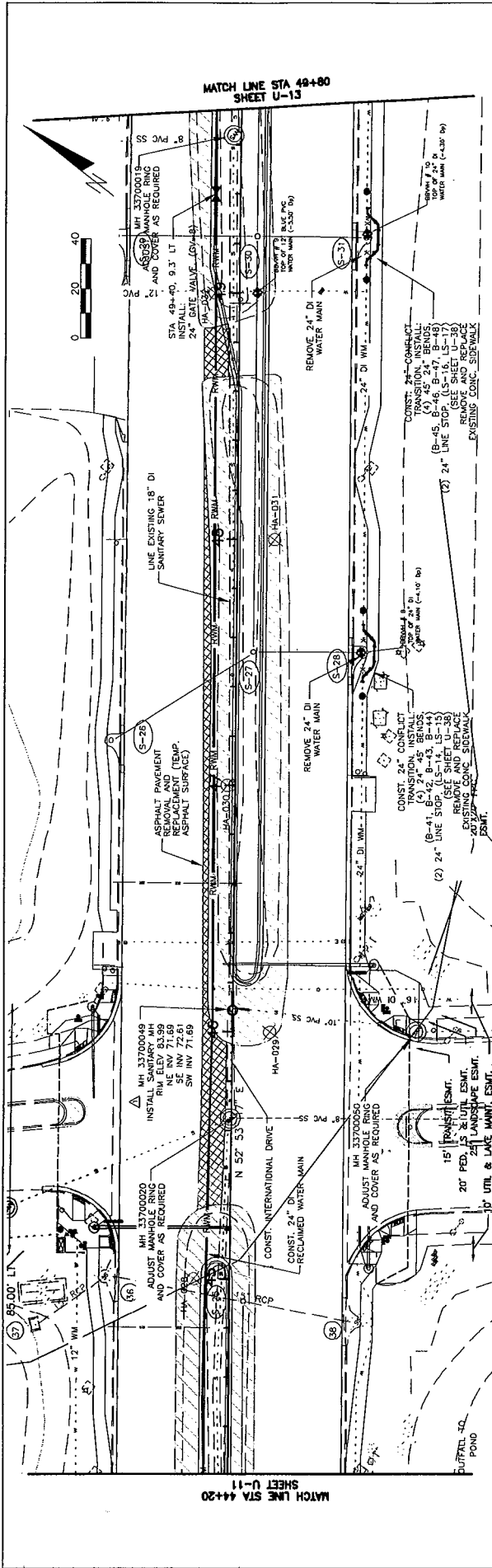
Pompano Beach, FL 33069

(Note: It will show up as undeliverable in the address check systems. This is the correct address.)

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<http://www.floridasturnpike.com/business.cfm>

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86	84	82	80	78	76	74	72	70
<p>APPROVED: [Signature] DATE: 06/20/2014</p> <p>REVISIONS: [Table with columns: NO., DATE, REVISION]</p> <p>PROJECT NO: 7003</p> <p>SHEET NO: U-12</p> <p>OF: 40</p>								

PLAN AND PROFILE
 INTERNATIONAL DRIVE
 STA 44+20 TO STA 49+80

INTERNATIONAL DRIVE UTILITY IMPROVEMENTS
 (FROM WESTWOOD BLVD. SOUTH TO WESTWOOD BLVD. NORTH)

ORANGE COUNTY, FLORIDA

WOOLPERT
 DESIGN / SPECIALTY INFRASTRUCTURE

DATE: 06/20/2014
 SCALE: AS SHOWN