

May 15, 2019
BOARD OF COUNTY COMMISSIONERS
ORANGE COUNTY, FLORIDA

Y19-751-CH/Addendum #4

**CONNECTOR ROAD FROM HILTON DRIVEWAY TO APOPKA VINELAND ROAD
INTERSECTION IMPROVEMENTS**

Bid Opening Date: May 30, 2019

This addendum is hereby incorporated into the bid documents of the project referenced above. The following items are clarifications, corrections, additions, deletions and/or revisions to and shall take precedence over the original documents. Underlining indicates additions, deletions are indicated by ~~strikethrough~~.

A. The Bid Opening Date shall remain as follows:

May 30, 2019 at 2:00 P.M.

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

~~**Delete:** The Schedule of Prices issued in Addendum #1, Pages REVISED D-3 through REVISED D-9 in its entirety.~~

Replace with: The Revised Schedule of Prices, Page REVISED D-3 through Page REVISED D-9 attached in Addendum #4.

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

C. Note the REVISION to the Roadway Construction Plans as follows:

~~**Delete:** Roadway Construction Plan Sheets 1, 13,15, 18, 58-65, and 83-89 issued with the Invitation for Bids.~~

Replace with: Roadway Construction Plan Sheets 1, 13, 15, 18, 58-65, and 83-89, dated Revision 04/30/19 issued with Addendum #4.

D. Note the REVISION to the Utilities Construction Plans as follows:

~~**Delete:** Utilities Summary of Pay Items Sheet, Page U-4 issued with the Invitation for Bids.~~

Replace with: Utilities Summary of Pay Items Sheet, Page U-4 issued with Addendum #4.

E. The following are responses to requests for information received:

1. **Question:** Which bedding detail is to be used for this project (Type A or Type B) as shown on Construction Plans for Palm Parkway to Apopka-VIneland Connector Road.

Response: Type A bedding shall be used per plan sheet #42, Pond 2A Retention/Detention Ponds. Refer to Liner to Pipe Connection detail.

2. **Question:** Will the Underdrain stone be required to be a granite stone?

Response: Per plan sheet #11A, Miscellaneous Details, the Modified Type II Underdrain shall be constructed in accordance with the FY 2017-18 FDOT Design Standards (Index No. 286). This index contains the requirement for the coarse aggregate.

3. **Question:** General Note 18 states “ It is the responsibility of the contractor to inquire of the engineer if additional information is available” in reference to subsurface conditions and “to make his own determination as to all subsurface conditions”. The bid form quantifies and requests a unit cost for subsoil excavation therefore it is our opinion that any and all subsoil excavation will be paid for on a unit cost basis. Is this correct?

Response: Per TP 120 – Excavation, Embankment and Grading, Pay Item Note 120-4 on plan sheet #13, Summary of Pay Items, Subsoil Excavation shall be paid for at the contract price per cubic yard reviewed and approved by the County.

4. **Question:** General Note 19 states “ Install a 4” muck blanket or topsoil treatment on all permanent grass areas at no additional cost.” Can this material be from the subsoil excavation?

Response: Yes, if the excavated subsoil meets the parameters for muck.

5. **Question:** Will burning of clearing material be allowed on site?

Response: FDOT Spec states the following: “110-9.2 Burning Debris: Where burning of such materials is permitted, perform all such burning in accordance with the applicable laws, ordinances, and regulations. Perform all burning at locations where trees and shrubs adjacent to the cleared area will not be harmed.”

Burning on-site would require permit from Orange County Fire Department and/or the Forestry Department. Orange County Public Works and Orange County Utilities do not control whether those agencies will issue permits (typically based on draught index / wind conditions).

6. **Question:** Is Soil Cement Base the only acceptable base material allowed? Can an alternative material be specified for the widening section on Apopka_Vineland Road. Trying to widen small widths with soil cement is very difficult.

Response: Only soil cement base shall be allowed by the County.

7. **Question:** Construction Plans for Palm Parkway to Apopka_Vineland Connector Rd Sheet U-21 references Stabilized Roadway restoration, please provide a detail for this (ie. Thickness? Stabilizer Material?) and what are the limits for the reconstruction.

Response: The detail for the stabilization of the Granby utility easement area can be found on Sheet 28 – “Granby Easement Section A – A”

8. **Question:** Sodding restoration quantity provided for bid item #110, is significantly lower than what we calculated based on the limits of easement. Please review.

Response: The sodding requirements easement area has been reviewed. Based upon the review, the revised quantity for sodding for this area will be 2,844 SY. Please see the revised sheet U-4 for the updated quantities and the revised bid schedule.

9. **Question:** Structures S-406A and S-124 are both >10', bid form only calls for 1 EA please review accordingly.

Response: Agree, the bid item 425-1-412, INLET (CURB TYPE J-1) (>10') quantity should be 2 EA. The 425-1-411, INLET (CURB TYPE J-1) (<10') should be 11 EA. Plans and schedule of prices have been revised accordingly. The updated schedule of prices is attached in this Addendum. The updated plans are located at the following FTP site:

ftp://ftp.ocfl.net/divisions/Public_Works/pub/Engineering%20Design/CONNECTOR%20RD_BID%20SET%203-14-2019-%20DO%20NOT%20DELETE/

10. **Question:** Will the county Direct Purchase material for this project? If so, what materials will be ODP?

Response: Engineer's estimate appears to be over \$10M, therefore it appears likely that the County will opt to utilize Direct Purchase. If utilized, the materials typically included from the Public Works bid are precast storm structures and reinforced concrete pipe. OCU does not anticipate doing any Direct Purchase at this time.

11. **Question:** Embankment Quantity includes 20% Contingency according to pay item notes on Sheet 13 of the Roadway construction plans. However, this is a LUMP SUM pay item. How will payment for the LS be handled? If no contingency is used will contractor only be paid 80% of Bid Lump Sum? How will the County determine when to use the contingency of 20% Embankment?

Response: TP 120-Excavation, Embankment and Grading states the following for subsoil excavation: "Payment shall also include the provision, placement, shaping, and compaction of suitable backfill material to replace the removed unsuitable material up to the original grade line or to the bottom of the proposed roadway base material, whichever is lower." Therefore, bid item 120-4 Muck Removal (A-8 Soil) includes the required embankment (suitable backfill material) to replace the removed unsuitable material. The embankment quantity has been revised accordingly and the 20% embankment contingency has been removed. The plans have been revised accordingly and are attached and included in the FTP link below.

[ftp://ftp.ocfl.net/divisions/Public Works/pub/Engineering%20Design/CONNECTOR%20RD BID%20SET%203-14-2019-%20DO%20NOT%20DELETE/](ftp://ftp.ocfl.net/divisions/Public%20Works/pub/Engineering%20Design/CONNECTOR%20RD%20SET%203-14-2019-%20DO%20NOT%20DELETE/)

12. **Question:** Pay item #3 (104-14) Water Pollution, there is no information provided in the bid documents to assess what if any contaminated groundwater may be encountered during dewatering operations. Will the County provide more information or details as to what will be required and for how long will monitoring/disposal/treatment be needed specific to this projects location. Can a separate and quantifiable Pay Item be added for treatment of said contaminates if encountered?

Response: Phase I Environmental Site Assessment Reports prepared by Native Geoscience for the site are included in the bid documents, special provisions by FTP. The FTP link is included below.

[ftp://ftp.ocfl.net/divisions/Public Works/pub/Engineering/Connector%20Rd%20\(DO%20NOT%20ERASE\)/](ftp://ftp.ocfl.net/divisions/Public%20Works/pub/Engineering/Connector%20Rd%20(DO%20NOT%20ERASE)/)

13. **Question:** Plans for Force Main and Reclaimed Water Main Improvements (JPA) were not found on the County's website, please provide a set of plans.

Response: The FTP site provided below includes the S&S plans for the Force Main and Reclaimed Water Main Plans for Hilton Driveway to Apopka-Vineland Connector Road prepared by Kimley-Horn. The original cover sheet showing the approved extension is also included at the FTP link below.

[ftp://ftp.ocfl.net/divisions/Public Works/pub/Engineering%20Design/CONNECTOR%20RD BID%20SET%203-14-2019-%20DO%20NOT%20DELETE/](ftp://ftp.ocfl.net/divisions/Public%20Works/pub/Engineering%20Design/CONNECTOR%20RD%20SET%203-14-2019-%20DO%20NOT%20DELETE/)

14. **Question:** Will Buy American be required for utility material on the project?

Response: No.

15. **Question:** We are unable to locate plans referenced in the Utility Adjustment Plans - Utility Plans Permit #11-U-167. Please provide plans for bid items 77-97.

Response: The FTP site provided below includes the S&S plans for the Force Main and Reclaimed Water Main Plans for Hilton Driveway to Apopka-Vineland Connector Road prepared by Kimley-Horn. The original cover sheet showing the approved extension is also included at the FTP link below.

ftp://ftp.ocfl.net/divisions/Public_Works/pub/Engineering%20Design/CONNECTOR%20RD_BID%20SET%203-14-2019-%20DO%20NOT%20DELETE/

16. **Question:** I was wondering if CAD files are available for the above referenced project. If so, how may the contractor get access them?

Response: CAD files are located at the following FTP site under the CAD FILE Directory:

ftp://ftp.ocfl.net/divisions/Public_Works/pub/Engineering%20Design/CONNECTOR%20RD_BID%20SET%203-14-2019-%20DO%20NOT%20DELETE/

17. **Question:** The schedule of values (570-1) indicate 74,062 s/y of Performance Turf for the Connector Road Project. Please advise if this value is for hydroseeding or sod.

Response: This item number is for sod.

18. **Question:** Please clarify the 74,062 s/y of performance turf on the schedule of values. Is the performance turf sod or hydroseeding?

Response: This item number is for sod.

19. **Question:** Can the county provide access through the locked gate at Fenton Street to view the interior of the project area?

Response: The locked Fenton Street Gate is outside the limits of our roadway project. The project site is over grown and cannot be accessed by car. You can access the site walking anywhere along S. Apopka Vineland Road or through the Parc Soleil Hilton Grand Vacation Club entrance off Palm Parkway.

20. What is the allowable RAP percentage allowed in the SP 9.5C?

Response: Maximum of 30% by weight of total aggregate as shown in TP 334.

21. What is the allowable RAP percentage allowed in the SP 12.5C?

Response: Maximum of 30% by weight of total aggregate as shown in TP 334.

22. What is the allowable RAP percentage allowed in the FC-9.5?

Response: Maximum of 20% by weight of total aggregate as shown in TP 337.

23. Does the SP 12.5C or the SP 9.5C have PG 76-22 in it?

Response: No. SP mixes require PG 67-22 or PG 58-22. 76-22 is only for FC mix as shown in TP 334 and 337.

- F. All other terms and conditions of the IFB remain the same.
- G. The Bidder 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 bid.

Receipt acknowledged by:

Authorized Signature

Date Signed

Title

Name of Firm

**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: **CONNECTOR ROAD FROM HILTON DRIVEWAY TO APOPKA VINELAND ROAD INTERSECTION IMPROVEMENTS** 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 schedule of prices, Page REVISED D-3 through REVISED D-9.

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 TOTAL BASE BID:

_____ 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.

**Y19-751-CH; REVISED SCHEDULE OF PRICES
CONNECTOR ROAD - HILTON DRIVEWAY TO APOPKA-VINELAND
MULTI-LANE DIVIDED URBAN CONSTRUCTION
ORANGE COUNTY**

ROADWAY ITEMS						
No.	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
A. ROADWAY ITEMS						
1	101-1	MOBILIZATION	LS	1		
2	102-1	MAINTENANCE OF TRAFFIC	LS	1		
3	104-14	PREVENTION, CONTROL, & ABATEMENT OF EROSION AND WATER POLLUTION	LS	1		
4	110-1-1	CLEARING AND GRUBBING	LS	1		
5	120-4	MUCK REMOVAL (A-8 SOIL)	CY	34022		
6	120-9	EXCAVATION, EMBANKMENT AND GRADING	LS	1		
7	160-4	TYPE B STABILIZATION (12") (MIN. LBR 40)	SY	49098		
8	270-12	SOIL CEMENT BASE, (PRIMED) (12") (MIN. 300 PSI)	SY	41681		
9	327-70-12	MILLING EXISTING ASPHALT PAVEMENT (1 1/4" AVG. DEPTH)	SY	15207		
10	334-1-13	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (SP-9.5) (OVERBUILD)	TN	187.9		
11	334-2-35	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (3 1/2") (SP-12.5)	SY	38558		
12	334-2-40	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (4") (SP-12.5)	SY	3117		
13	337-7-82	ASPHALT CONCRETE FRICTION COURSE (1 1/4") (FC-9.5) (TRAFFIC C) (INCLUDING TACK COAT)	SY	54084		
14	425-1-311	INLET (CURB TYPE P-1) (<10')	EA	42		
15	425-1-321	INLET (CURB TYPE P-2) (<10')	EA	12		
16	425-1-411	INLET (CURB TYPE J-1) (<10')	EA	11		
17	425-1-412	INLET (CURB TYPE J-1) (>10')	EA	2		
18	425-1-421	INLET (CURB TYPE J-2) (<10')	EA	4		
19	425-1-422	INLET (CURB TYPE J-2) (>10')	EA	1		

20	425-1-521	INLET (DITCH BOTTOM, TYPE C) (<10')	EA	1		
21	425-1-551	INLET (DITCH BOTTOM, TYPE E) (<10')	EA	1		
22	425-1-559	INLET (DITCH BOTTOM, TYPE E MOD) (<10')	EA	2		
23	425-2-61	MANHOLE (P-8) (<10')	EA	10		
24	425-2-63	MANHOLE (P-8) (PARTIAL)	EA	2		
25	425-2-91	MANHOLE (J-8) (<10')	EA	4		
26	425-2-92	MANHOLE (J-8) (>10')	EA	1		
27	430-14-118	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (18")	LF	2663		
28	430-14-124	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (24")	LF	1495		
29	430-14-130	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (30")	LF	1611		
30	430-14-136	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (36")	LF	494		
31	430-14-142	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (42")	LF	523		
32	430-14-148	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (48")	LF	167		
33	430-14-224	STEEL REINFORCED CONCRETE PIPE CULVERT (ELLIPTICAL) (19" X 30")	LF	58		
34	430-14-230	STEEL REINFORCED CONCRETE PIPE CULVERT (ELLIPTICAL) (24" X 38")	LF	61		
35	430-98-125	MITERED END SECTION (ROUND) (18")	EA	2		
36	430-98-129	MITERED END SECTION (ROUND) (24")	EA	1		
37	430-98-141	MITERED END SECTION (ROUND) (48")	EA	1		
38	440-1-2	UNDERDRAINS, TYPE II	LF	1098		
39	440-70	UNDERDRAIN INSPECTION BOX	EA	15		
40	514-72	LINER, IMPERMEABLE (40 MIL HDPE)	SY	20145		
41	520-1-7	CONCRETE CURB AND GUTTER (TYPE E)	LF	668		
42	520-1-10	CONCRETE CURB AND GUTTER (TYPE F)	LF	20689		
43	520-5-11	CONCRETE TRAFFIC SEPARATOR, TYPE I (4' WIDE)	LF	626		
44	520-5-12	CONCRETE TRAFFIC SEPARATOR, TYPE I (6' WIDE)	LF	286		

45	522-1	CONCRETE SIDEWALK (4" THICK)	SY	3290		
46	522-2	CONCRETE SIDEWALK (6" THICK)	SY	137		
47	524-1-4	CONCRETE DITCH PAVEMENT, NON REINFORCED, 6"	SY	9		
48	530-3-4	RIPRAP - RUBBLE, F&I, DITCH LINING	TN	24.5		
49	570-1	PERFORMANCE TURF (BAHIA), MATCH EXISTING	SY	74062		
50	900-1	AS-BUILT PLANS	LS	1		
51	900-2	INDEMNIFICATION	LS	1	\$100.00	\$100.00

TOTAL ESTIMATED BASE BID FOR ROADWAY: \$ _____
Reference Numbers 1 through 51

B. SIGNING & PAVEMENT MARKING ITEMS

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
52	700-20-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	34		
53	700-20-12	SINGLE POST SIGN, F&I GROUND MOUNT, 12 TO 20 SF	AS	1		
54	700-20-60	SINGLE POST SIGN, REMOVE.	AS	3		
55	700-21-12	MULTI-POST SIGN, F&I GROUND MOUNT, 12-20 SF	AS	2		
56	700-21-14	MULTI-POST SIGN, F&I GROUND MOUNT, 31-50 SF	AS	2		
57	700-3-101	SIGN PANEL, FURNISH & INSTALL GROUND MOUNT, UP TO 12 SF	EA	1		
58	705-11-1A	DELINEATOR, TUBULAR FLEXIBLE (YELLOW/GREEN)	EA	9		
	705-11-1B	DELINEATOR, TUBULAR FLEXIBLE (WHITE)	EA	1		
59	706-3A	RETRO-REFLECTIVE PAVEMENT MARKERS (WHITE/RED)	EA	650		
	706-3B	RETRO-REFLECTIVE PAVEMENT MARKERS (YELLOW/YELLOW)	EA	40		
60	710-11-190	PAINTED PAVEMENT MARKINGS, STANDARD (WHITE) (ISLAND NOSE)	SF	3		
61	710-11-290	PAINTED PAVEMENT MARKINGS, STANDARD (YELLOW) (ISLAND NOSE)	SF	29		
62	711-11-111	SOLID TRAFFIC STRIPE, THERMO (6") (WHITE)	NM	3.567		
63	711-11-122	SOLID TRAFFIC STRIPE, THERMO (8") (WHITE)	LF	676		

64	711-11-123	SOLID TRAFFIC STRIPE, THERMO (12") (WHITE)	LF	1203		
65	711-11-124	SOLID TRAFFIC STRIPE, THERMO (18") (WHITE)	LF	20		
66	711-11-125	SOLID TRAFFIC STRIPE, THERMO (24") (WHITE)	LF	1207		
67	711-11-131	SKIP TRAFFIC STRIPE, THERMO (10-30) (6" WHITE)	GM	2.222		
68	711-11-151A	DOTTED/ GUIDELINE/ GAP EXTENSION, THERMO (2-4) (6" WHITE)	LF	114		
	711-11-151B	DOTTED/ GUIDELINE/ GAP EXTENSION, THERMO (6-10) (6" WHITE)	LF	312		
69	711-11-160A	PAVEMENT MESSAGE THERMO (ONLY)	EA	11		
	711-11-160B	PAVEMENT MESSAGE THERMO (BIKE W/ ARROW)	EA	18		
70	711-11-170	DIRECTIONAL ARROWS, THERMO (LEFT AND RIGHT TURN)	EA	76		
71	711-11-211	SOLID TRAFFIC STRIPE, THERMO (6") (YELLOW)	NM	2.260		
72	711-11-222	SOLID TRAFFIC STRIPE, THERMO (8") (YELLOW)	LF	528		
73	711-11-224	SOLID TRAFFIC STRIPE, THERMO (18") (YELLOW)	LF	176		
74	711-11-231	SKIP TRAFFIC STRIPE, THERMO (10-30) (6" YELLOW)	GM	0.019		
75	711-11-251	DOTTED/ GUIDELINE/ GAP EXTENSION, THERMO (6-10) (6" YELLOW)	LF	396		

TOTAL ESTIMATED BASE BID FOR SIGNING & PAVEMENT MARKING: \$ _____
Reference Numbers 52 through 75

C. SIGNALIZATION ITEM

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
76	603-1	SIGNALIZATION - INTERSECTION - APOPKA-VINELAND ROAD	LS	1		

TOTAL ESTIMATED BASE BID FOR SIGNALIZATION: \$ _____
Reference Number 76 Only

D. FORCE MAIN AND RECLAIMED WATER MAIN ITEMS

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
77	1	MOBILIZATION, DEMOBILIZATION & BONDS	LS	1		
78	2	INDEMNIFICATION	LS	1		

79	3	PRECONSTRUCTION VIDEO	LS	1		
80	4	UTILITY SYSTEM RECORD DRAWINGS	LS	1		
RECLAIMED WATER MAIN						
81	5	FURNISH & INSTALL 8" PVC RECLAIMED WATER MAIN	LF	381		
82	6	FURNISH & INSTALL 8" GATE VALVES AND BOX W/ RESTRAINTS	EA	4		
83	7	FURNISH & INSTALL 16" DIP RECLAIMED WATER MAIN	LF	4070		
84	8	FURNISH & INSTALL 16" HDPE RECLAIMED WATER MAIN, DIRECTIONAL BORE	LF	307		
85	9	FURNISH & INSTALL 16" GATE VALVES AND BOX W/ RESTRAINTS	EA	6		
86	10	FURNISH & INSTALL 20" DIP RECLAIMED WATER MAIN	LF	771		
87	11	FURNISH & INSTALL 16" BLOW OFF VALVE	EA	1		
88	12	FURNISH & INSTALL 16" AIR RELEASE VALVE	EA	2		
FORCE MAIN						
89	13	FURNISH & INSTALL 6" PVC FORCE MAIN	LF	668		
90	14	FURNISH & INSTALL 6" PLUG VALVE	EA	3		
91	15	FURNISH & INSTALL 8" PVC FORCE MAIN	LF	1,954		
92	16	FURNISH & INSTALL 8" PLUG VALVE	EA	5		
93	17	FURNISH & INSTALL 12" PVC FORCE MAIN	LF	1,273		
94	18	FURNISH & INSTALL 12" PLUG VALVE	EA	1		
95	19	FURNISH & INSTALL 16" PVC FORCE MAIN	LF	368		
96	20	FURNISH & INSTALL 6" AIR/VACUUM RELEASE VALVE	EA	1		
97	21	FURNISH & INSTALL 8" AIR/VACUUM RELEASE VALVE	EA	1		
TOTAL ESTIMATED BASE BID FOR FORCE MAIN AND RECLAIMED WATER MAIN: \$ Reference Numbers 77 through 97						

SUMMARY

TOTAL ESTIMATED BASE BID (ROADWAY):

\$ _____
Reference Numbers 1 through 51

TOTAL ESTIMATED BASE BID (SIGNING & PAVEMENT MARKINGS):

\$ _____
Reference Numbers 52 through 75

TOTAL ESTIMATED BASE BID (SIGNALIZATION):

\$ _____
Reference Number 76

TOTAL ESTIMATED BASE BID (FORCE MAIN AND RECLAIMED WATER MAIN)

\$ _____
Reference Numbers 77 through 97

TOTAL ESTIMATED BASE BID (ORANGE COUNTY UTILITIES WATER MAIN, FORCE MAIN & RECLAIMED WATER)

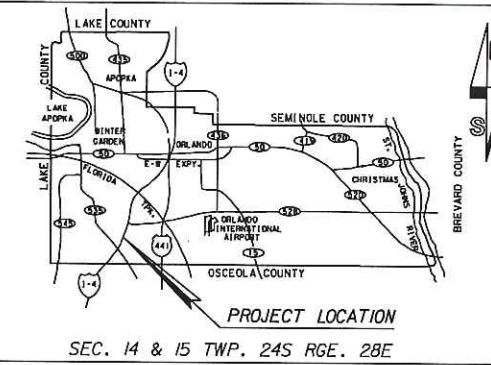
\$ _____
Reference Numbers 98 through 117

TOTAL ESTIMATED BASE BID: \$ _____
Reference Numbers 1 through 117

CONSTRUCTION PLANS FOR HILTON DRIVEWAY TO APOPKA-VINELAND CONNECTOR ROAD

COMPONENTS OF CONTRACT PLANS SET
ROADWAY PLANS
SIGNING AND PAVEMENT MARKING PLANS
SIGNALIZATION PLANS
FORCE MAIN AND RECLAIMED WATER MAIN PLANS

PROJECT NO. : 5091
DISTRICT NO: 1
ORANGE COUNTY, FLORIDA



INDEX OF SHEETS

SHEET	DESCRIPTION
1	COVER SHEET
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7 - 9	DRAINAGE DETAILS
10 - 11	TYPICAL SECTION
11A	MISCELLANEOUS DETAILS
12	SUPERELEVATION DETAIL
13 - 14	SUMMARY OF PAY ITEMS
15	SUMMARY OF QUANTITIES
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SOURCE OF BENCHMARK DATUM

L-1295-033
FOUND 3 1/2" ALUMINUM ORANGE COUNTY CONTROL DISC
ON THE S.E. CORNER OF C.R.535 & FENTON AVE.,
PUBLISHED ELEVATION 128.180 (NGVD 29)

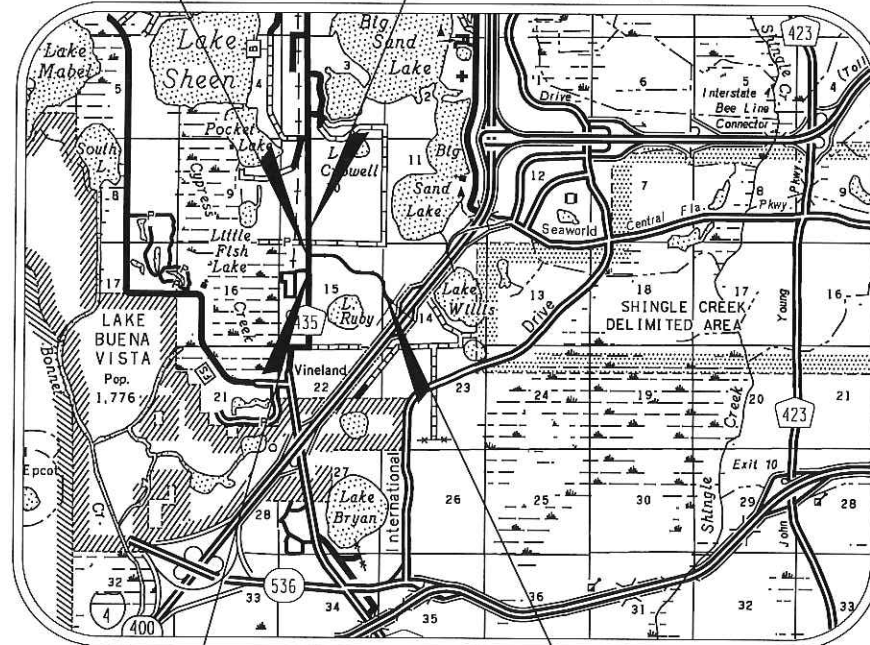
GIS 146 RESET
A FOUND CONCRETE MONUMENT WITH DISC STAMPED
"GIS 146 RESET", IT IS AT THE NORTH END OF THE
MEDIAN LOCATED AT THE INTERSECTION OF COUNTY
ROAD 435 AND LAKE STREET, PUBLISHED ELEVATION
107.02 (NGVD 29)

THIS PROJECT IS TO BE CONSTRUCTED
USING NGVD 29 DATUM

PROJECT LENGTH:	FEET	MILES
ROADWAY:	6,886.78	1.304
BRIDGES:	0.00	0.00
TOTAL LENGTH:	6,886.78	1.304

BEGIN PROJECT
BEGIN CONSTRUCTION
STA. 474+69.52
@ CONST. CONNECTOR ROAD

END CONSTRUCTION
STA. 123+16.30
@ SURVEY
APOPKA-VINELAND RD.



FINAL
SUBMITTAL
SEPTEMBER 2018

GOVERNING STANDARDS
AND SPECIFICATIONS :
FLORIDA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS FOR DESIGN, CONSTRUCTION,
MAINTENANCE AND UTILITY OPERATIONS
ON THE STATE HIGHWAY SYSTEM, DATED 2017
AND
STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION, DATED 2017
AS AMENDED BY CONTRACT DOCUMENTS.

REVISIONS	DATE	BY
REVISION 1 - SHEETS 1,3,15,18,58-65,83-89	04/30/19	HTC

JERRY DEMINGS, COUNTY MAYOR

BOARD OF COUNTY
COMMISSIONERS

BETSY VANDERLEY	DISTRICT 1
CHRISTINE MOORE	DISTRICT 2
MAYRA URIBE	DISTRICT 3
MARIBEL GOMEZ CORDERO	DISTRICT 4
EMILY BONILLA	DISTRICT 5
VICTORIA P. SIPLIN	DISTRICT 6
MARK V. MASSARO, P.E.	PUBLIC WORKS DIRECTOR

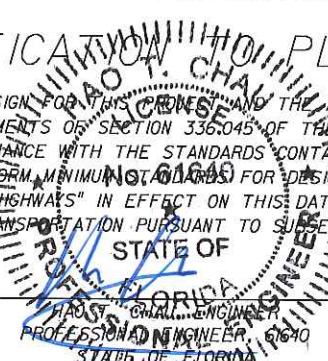
BEGIN CONSTRUCTION
STA. 104+00.00
@ SURVEY
APOPKA-VINELAND RD.

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

CERTIFICATION OF PLANS

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

DATE: APR 30 2019 ENGINEER: [Signature]



UTILITIES ENCOUNTERED

SEWER & ORANGE COUNTY UTILITIES	407-254-9865
WATER ORLANDO UTILITIES COMMISSION	407-236-9651
ORANGE COUNTY PUBLIC WORKS	407-836-7804
POWER: DUKE ENERGY (TRANSMISSION)	DEFTRANSMISSIONGOV@DUKE-ENERGY.COM
DUKE ENERGY (DISTRIBUTION)	DEFDISTRIBUTIONGOV@DUKE-ENERGY.COM
GAS: TECO PEOPLES GAS	407-420-2678
FLORIDA GAS TRANSMISSION	407-838-7171
TV: BRIGHT HOUSE NETWORKS	407-532-8511
COMCAST COMMUNICATIONS	407-849-3611
PHONE: SUMMIT BROADBAND	727-235-4362
AT&T FLORIDA	407-351-8180
CENTURY LINK	407-814-5383
SMART CITY TELECOM	407-828-6648
VERIZON BUSINESS	813-740-1231
SUNSHINE STATE ONE CALL OF FLORIDA, INC.	CALL 48 HRS BEFORE YOU DIG 1-800-432-4770

PREPARED BY:

Kimley»Horn

Kimley-Horn and Associates, Inc.
CONSULTING ENGINEERS AND PLANNERS
3660 MAGUIRE BLVD., SUITE 200
ORLANDO, FLORIDA 32803
(407) 898-1511
CORPORATE REGISTRATION NO. CA 00000696

DESIGNED BY: HTC	DATE: 11/07/16
CHECKED BY: LFB	DATE: XX/XX/XX
APPROVED BY: HTC	DATE: XX/XX/XX

SHEET 1
OF 147

SUMMARY OF PAY ITEMS - ROADWAY

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	
			PLAN	FINAL
101-1	MOBILIZATION	LS	1	
102-1	MAINTENANCE OF TRAFFIC	LS	1	
104-14	PREVENTION, CONTROL, & ABATEMENT OF EROSION AND WATER POLLUTION	LS	1	
110-1-1	CLEARING AND GRUBBING	LS	1	
120-4	MUCK REMOVAL (A-8 SOIL)	CY	34022	
120-9	EXCAVATION, EMBANKMENT AND GRADING	LS	1	
160-4	TYPE B STABILIZATION (12") (MIN. LBR 40)	SY	49098	
270-12	SOIL CEMENT BASE, (PRIMED) (12") (300 PSI)	SY	41681	
327-70-12	MILLING EXISTING ASPHALT PAVEMENT (1 1/4" AVG. DEPTH)	SY	15207	
334-1-13	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (SP-9.5) (OVERBUILD)	TN	187.9	
334-2-35	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (3 1/2") (SP-12.5)	SY	38558	
334-2-40	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C) (4") (SP-12.5)	SY	3117	
337-7-82	ASPH. CONC. FRICTION COURSE (1 1/4") (FC-9.5) (TRAFFIC C) (INCL. TACK COAT)	SY	54084	
425-1-311	INLET (CURB TYPE P-1) (<10')	EA	42	
425-1-321	INLET (CURB TYPE P-2) (<10')	EA	12	
425-1-411	INLET (CURB TYPE J-1) (<10')	EA	11	1
425-1-412	INLET (CURB TYPE J-1) (>10')	EA	2	
425-1-421	INLET (CURB TYPE J-2) (<10')	EA	4	
425-1-422	INLET (CURB TYPE J-2) (>10')	EA	1	
425-1-521	INLET (DITCH BOTTOM, TYPE C) (<10')	EA	1	
425-1-551	INLET (DITCH BOTTOM, TYPE E) (<10')	EA	1	
425-1-559	INLET (DITCH BOTTOM, TYPE E MOD) (<10')	EA	2	
425-2-61	MANHOLE (P-8) (<10')	EA	10	
425-2-63	MANHOLE (P-8) (PARTIAL)	EA	2	
425-2-91	MANHOLE (J-8) (<10')	EA	4	
425-2-92	MANHOLE (J-8) (>10')	EA	1	
430-14-118	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (18")	LF	2663	
430-14-124	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (24")	LF	1495	
430-14-130	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (30")	LF	1611	
430-14-136	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (36")	LF	494	
430-14-142	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (42")	LF	523	
430-14-148	STEEL REINFORCED CONCRETE PIPE CULVERT (ROUND) (48")	LF	167	
430-14-224	STEEL REINFORCED CONCRETE PIPE CULVERT (ELLIPTICAL) (19"X30")	LF	58	
430-14-230	STEEL REINFORCED CONCRETE PIPE CULVERT (ELLIPTICAL) (24"X38")	LF	61	
430-98-125	MITERED END SECTION (ROUND) (18")	EA	2	
430-98-129	MITERED END SECTION (ROUND) (24")	EA	1	
430-98-141	MITERED END SECTION (ROUND) (48")	EA	1	
440-1-2	UNDERDRAINS, TYPE II	LF	1098	
440-70	UNDERDRAIN INSPECTION BOX	EA	15	
514-72	LINER, IMPERMEABLE (40 MIL HDPE)	SY	20145	
520-1-7	CONCRETE CURB AND GUTTER (TYPE E)	LF	668	
520-1-10	CONCRETE CURB AND GUTTER (TYPE F)	LF	20689	
520-5-11	CONCRETE TRAFFIC SEPARATOR, TYPE I (4' WIDE)	LF	626	
520-5-12	CONCRETE TRAFFIC SEPARATOR, TYPE I (6' WIDE)	LF	286	
522-1	CONCRETE SIDEWALK (4" THICK)	SY	3290	
522-2	CONCRETE SIDEWALK (6" THICK)	SY	137	
524-1-4	CONCRETE DITCH PAVEMENT, NON REINFORCED, 6"	SY	9	
530-3-4	RIPRAP - RUBBLE, F&I, DITCH LINING	TN	24.5	
570-1	PERFORMANCE TURF (BAHIA), MATCH EXISTING	SY	74062	
900-1	AS-BUILT PLANS	LS	1	
900-2	INDEMNIFICATION	LS	1	

SUMMARY OF PAY ITEMS - SIGNING AND PAVEMENT MARKINGS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	
			PLAN	FINAL
700-20-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	34	
700-20-12	SINGLE POST SIGN, F&I GROUND MOUNT, 12 TO 20 SF	AS	1	
700-20-60	SINGLE POST SIGN, REMOVE	AS	3	
700-21-12	MULTI-POST SIGN, F&I GROUND MOUNT, 12-20 SF	AS	2	
700-21-14	MULTI-POST SIGN, F&I GROUND MOUNT, 31-50 SF	AS	2	
700-3-101	SIGN PANEL, FURNISH & INSTALL GROUND MOUNT, UP TO 12 SF	EA	1	
705-11-1A	DELINEATOR, TUBULAR FLEXIBLE (YELLOW/GREEN)	EA	9	
705-11-1B	DELINEATOR, TUBULAR FLEXIBLE (WHITE)	EA	1	
706-3A	RETRO-REFLECTIVE PAVEMENT MARKERS (WHITE/RED)	EA	650	
706-3B	RETRO-REFLECTIVE PAVEMENT MARKERS (YELLOW/YELLOW)	EA	40	
710-11-190	PAINTED PAVEMENT MARKINGS, STANDARD (WHITE) (ISLAND NOSE)	SF	3	
710-11-290	PAINTED PAVEMENT MARKINGS, STANDARD (YELLOW) (ISLAND NOSE)	SF	29	
711-11-111	SOLID TRAFFIC STRIPE, THERMO (6") (WHITE)	NM	3,567	
711-11-122	SOLID TRAFFIC STRIPE, THERMO (8") (WHITE)	LF	676	
711-11-123	SOLID TRAFFIC STRIPE, THERMO (12") (WHITE)	LF	1,203	
711-11-124	SOLID TRAFFIC STRIPE, THERMO (18") (WHITE)	LF	20	
711-11-125	SOLID TRAFFIC STRIPE, THERMO (24") (WHITE)	LF	1,207	
711-11-131	SKIP TRAFFIC STRIPE, THERMO (10-30) (6" WHITE)	GM	2,222	
711-11-151A	DOTTED/GUIDELINE/GAP EXTENSION, THERMO (2-4) (6" WHITE)	LF	114	
711-11-151B	DOTTED/GUIDELINE/GAP EXTENSION, THERMO (6-10) (6" WHITE)	LF	312	
711-11-160A	PAVEMENT MESSAGE THERMO (ONLY)	EA	11	
711-11-160B	PAVEMENT MESSAGE THERMO (BIKE W/ARROW)	EA	18	
711-11-170	DIRECTIONAL ARROWS, THERMO (LEFT AND RIGHT TURN)	EA	76	
711-11-211	SOLID TRAFFIC STRIPE, THERMO (6") (YELLOW)	NM	2,260	
711-11-222	SOLID TRAFFIC STRIPE, THERMO (8") (YELLOW)	LF	528	
711-11-224	SOLID TRAFFIC STRIPE, THERMO (18") (YELLOW)	LF	176	
711-11-231	SKIP TRAFFIC STRIPE, THERMO (10-30) (6" YELLOW)	GM	0,019	
711-11-251	DOTTED/GUIDELINE/GAP EXTENSION, THERMO (6-10) (6" YELLOW)	LF	396	

PAY ITEM NOTES:

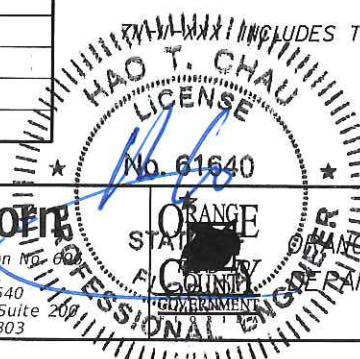
102-1 INCLUDES THE COST OF ALL LABOR AND MATERIALS NEEDED TO FURNISH, INSTALL, MAINTAIN AND REMOVE TRAFFIC CONTROL DEVICES, BARRIERS, SIGNS AND PAVEMENT MARKINGS PER THE TRAFFIC CONTROL PLANS AND THE DESIGN STANDARDS, INDEX 600 SERIES.

120-4 REMOVAL OF UNSUITABLE MATERIAL: THE CONTRACTOR SHALL PROVIDE ORANGE COUNTY HIGHWAY CONSTRUCTION WITH A SIGNED AND SEALED SURVEY, PREPARED BY A REGISTERED FLORIDA SURVEYOR, INCLUDING ELEVATIONS AND CROSS SECTIONS OF THE AREA WHERE UNSUITABLE SOILS ARE FOUND. THE ELEVATIONS SHALL BE PROVIDED EVERY 25 FEET AND SHALL BE REPRESENTATIVE OF THE CONDITIONS. THE PURPOSE OF THE SURVEY, WITH CROSS SECTIONS, IS TO VERIFY THE QUANTITY OF THE UNSUITABLE SOILS REMOVED.

MUCK REMOVAL QUANTITY INCLUDES A 20% CONTINGENCY WHICH SHALL ONLY BE USED IF DIRECTED BY THE COUNTY IN WRITING.

514-72 INCLUDES THE COST OF 36" EXCAVATION BELOW POND BOTTOM ELEVATION, 36" CLEAN BACKFILL ABOVE 40 MIL HDPE GEOMEMBRANE POND LINER, AND PIPE TO LINER BATTEN ATTACHMENT.

INCLUDES THE COST OF TEMPORARY PAINT PAVEMENT MARKINGS INSTALLED DURING THE ASPHALT CURE PERIOD.



APR 30 2019

Kimley-Horn
 Certificate of Authorization No. 600
 Hao T. Chau, P.E.
 P.E. License No. 61640
 3660 Maguire Boulevard, Suite 200
 Orlando, Florida 32803

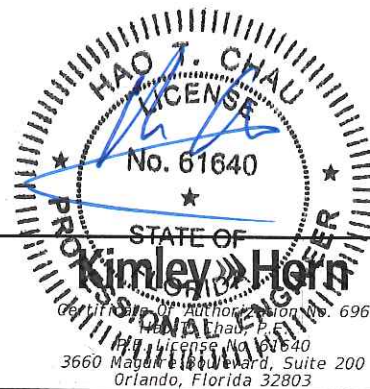
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19	1	REVISED PAY ITEM 425-1-411 & 425-1-412 QUANTITIES, REMOVED PAY ITEM NOTE 120-9			

SHEET NO. 13
SUMMARY OF PAY ITEMS

SUMMARY OF SIDE DRAIN & MITERED END SECTIONS													
LOCATION						PIPE LENGTH - LF			MES - EA			DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.	SIDE	BACK		AHEAD		ROUND			ROUND				
		OFFSET	FE	OFFSET	FE	15"	18"	24"	15"	18"	24"		
494+90 TO 495+70	LT	74.00	124.21	74.00	124.17		73.0			2			
SUB-TOTAL:							73.0			2			
TOTAL:							73			2			

SUMMARY OF PERFORMANCE TURF (BAHIA)				
LOCATION	SIDE	P	F	FIELD BOOK
STATION TO STATION		SY	SY	REFERENCE
CONNECTOR ROAD		49791		
APOPKA-VINELAND ROAD		5696		
PONDS		18575		
TOTAL		74062		

SUMMARY OF EARTHWORK				
DESCRIPTION	PLAN			
	EXEC.	FILL	SUBSOIL EXEC.	SAND FILL
	CY	CY	CY	CY
CONNECTOR ROAD	10935	43225	28352	
20% CONTINGENCY			5670	
APOPKA-VINELAND	3661	247		
POND 1A	9354	356		
POND 2A	22035	2168		
TOTAL	45985	45996	34022	



APR 30 2019

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITY			

ORANGE COUNTY GOVERNMENT
 DEPARTMENT OF PUBLIC WORKS

SUMMARY OF QUANTITIES

SHEET NO.

15

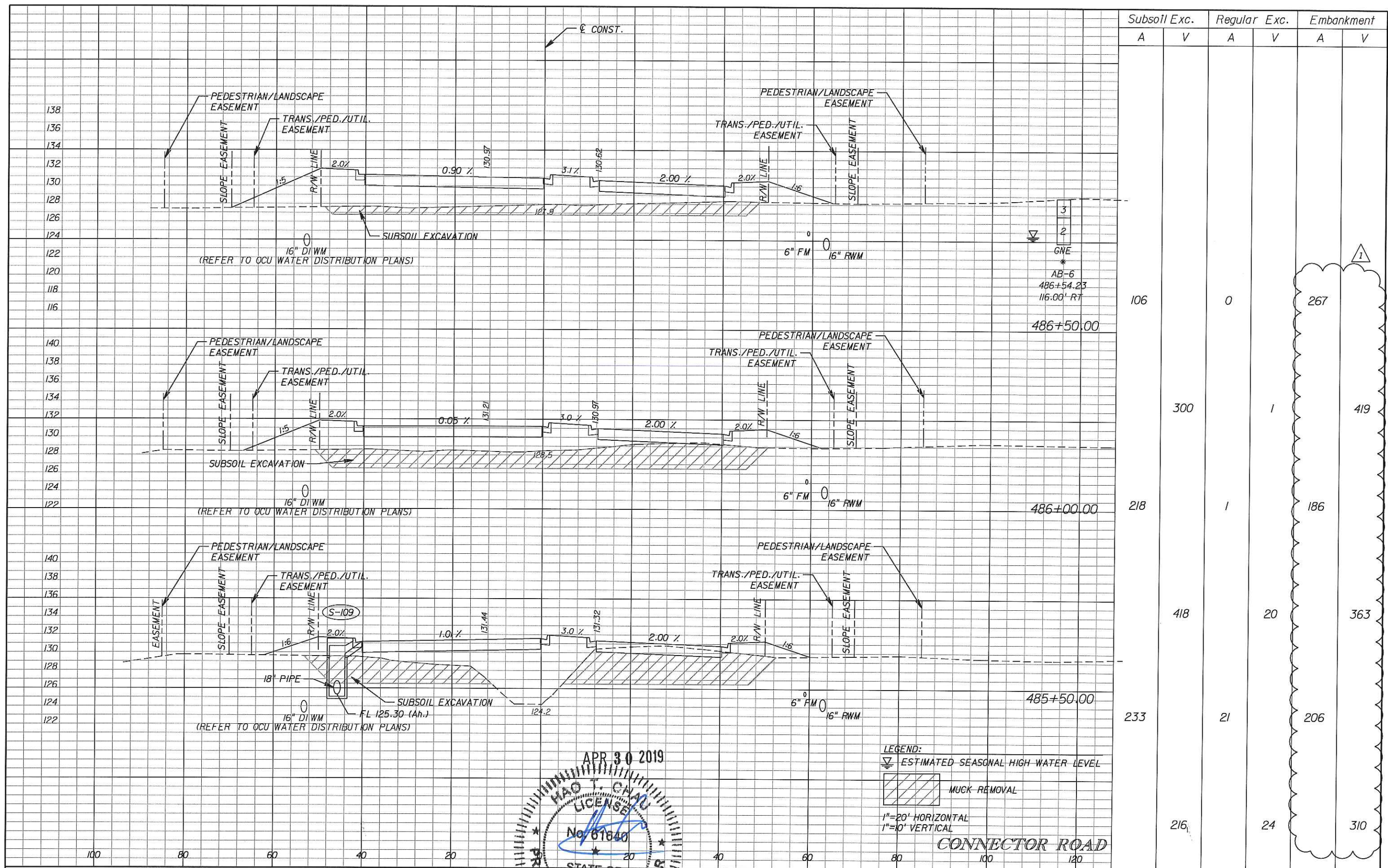
Table with columns: QUANTITY, STR. NO., STATION, SIDE, DESCRIPTION, BARRELS, STORM DRAIN (RCP: 18", 24", 30", 36", 42", 48", 19"X30", 24"X38"), CURB INLETS (P-1, P-2, J-1, J-1, J-2, J-2), MANHOLE (P-8, P-8, J-8, J-8), DITCH BOTTOM INLET (TYPE C, D, E, E MOD), MITERED END SECTION (1:4, 1:5), REMARKS. Includes a handwritten note 'APR 30 2019' and a circular professional engineer seal for Jonathan Allen Martin.

SHEET TOTALS table with columns: PLAN QUANTITY, FINAL QUANTITY, and various quantity values across columns.

REVISIONS table with columns: DATE, BY, DESCRIPTION, DATE, BY, DESCRIPTION. Includes revision 1: REVISED S-406A.

Professional Engineer Seal for Jonathan Allen Martin, No. 54055, State of Florida. Includes text: ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS, SUMMARY OF DRAINAGE STRUCTURES, SHEET NO. 18, and a date stamp APR 30 2019.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

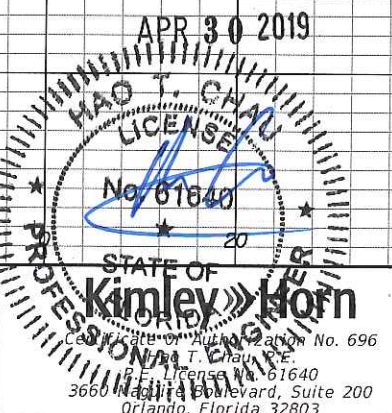


Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
106		0		267	
218	300	1	1	186	419
233	418	21	20	206	363
	216		24		310

LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

CONNECTOR ROAD

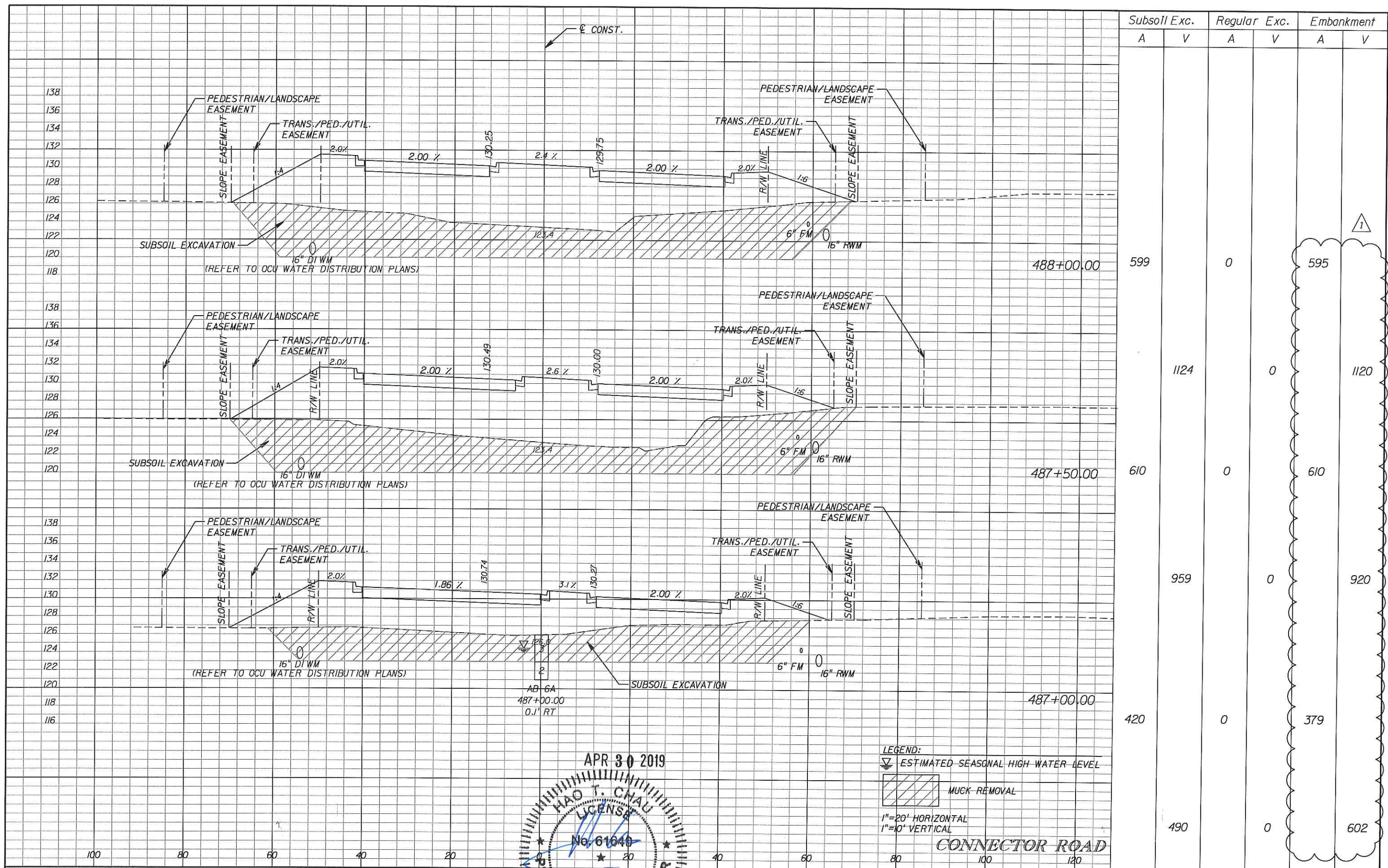
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			



ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

CROSS SECTIONS

SHEET NO.
 58



Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
599		0		595	
	1124	0			1120
610		0		610	
	959	0			920
420		0		379	
	490	0			602

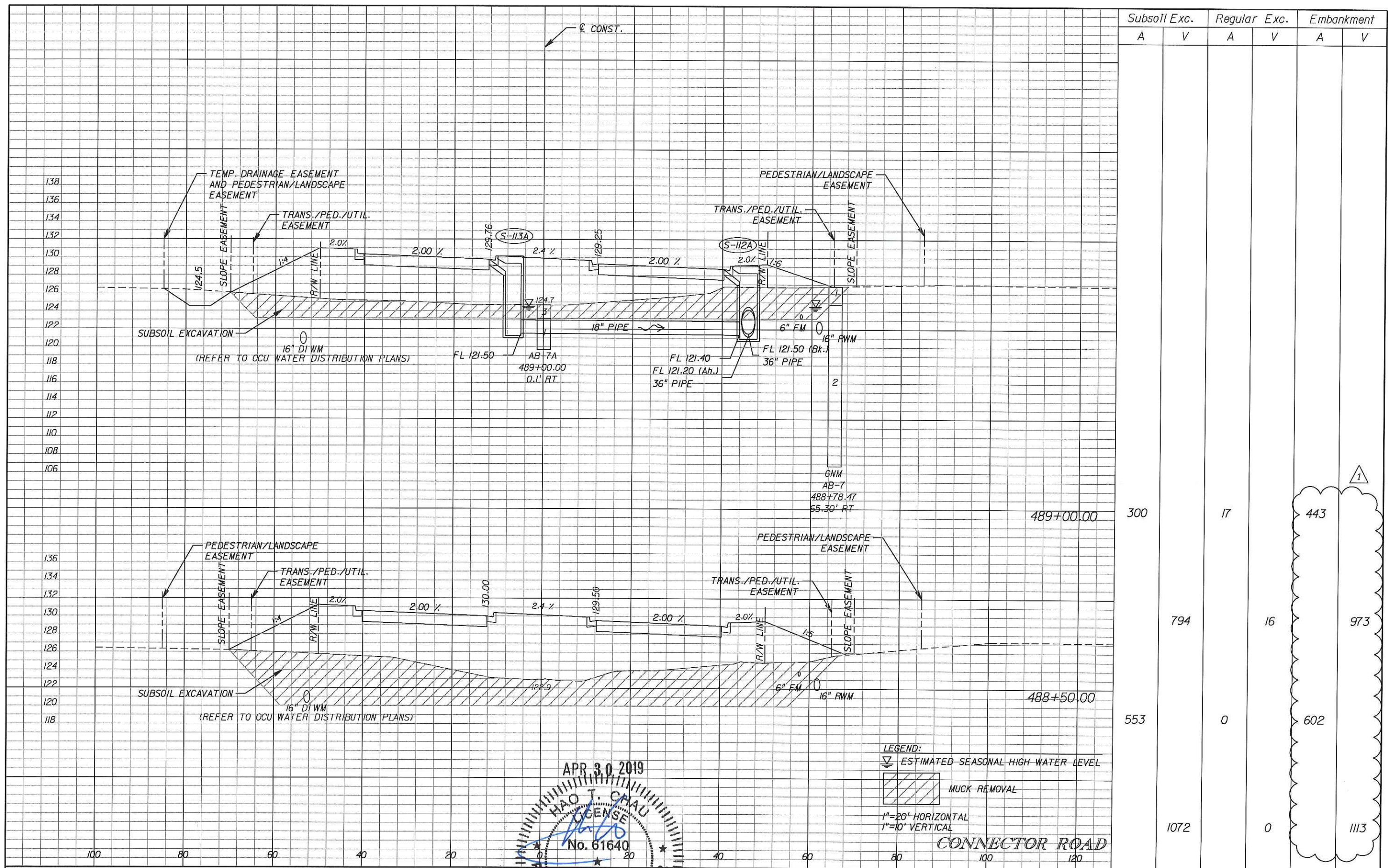
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			

APR 30 2019
 HAO T. CHAU
 LICENSE
 No. 61649
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

CROSS SECTIONS

SHEET NO.
 59



Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
				443	1
300		17		973	
	794		16	602	
553		0		1113	
	1072		0		

LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

CONNECTOR ROAD

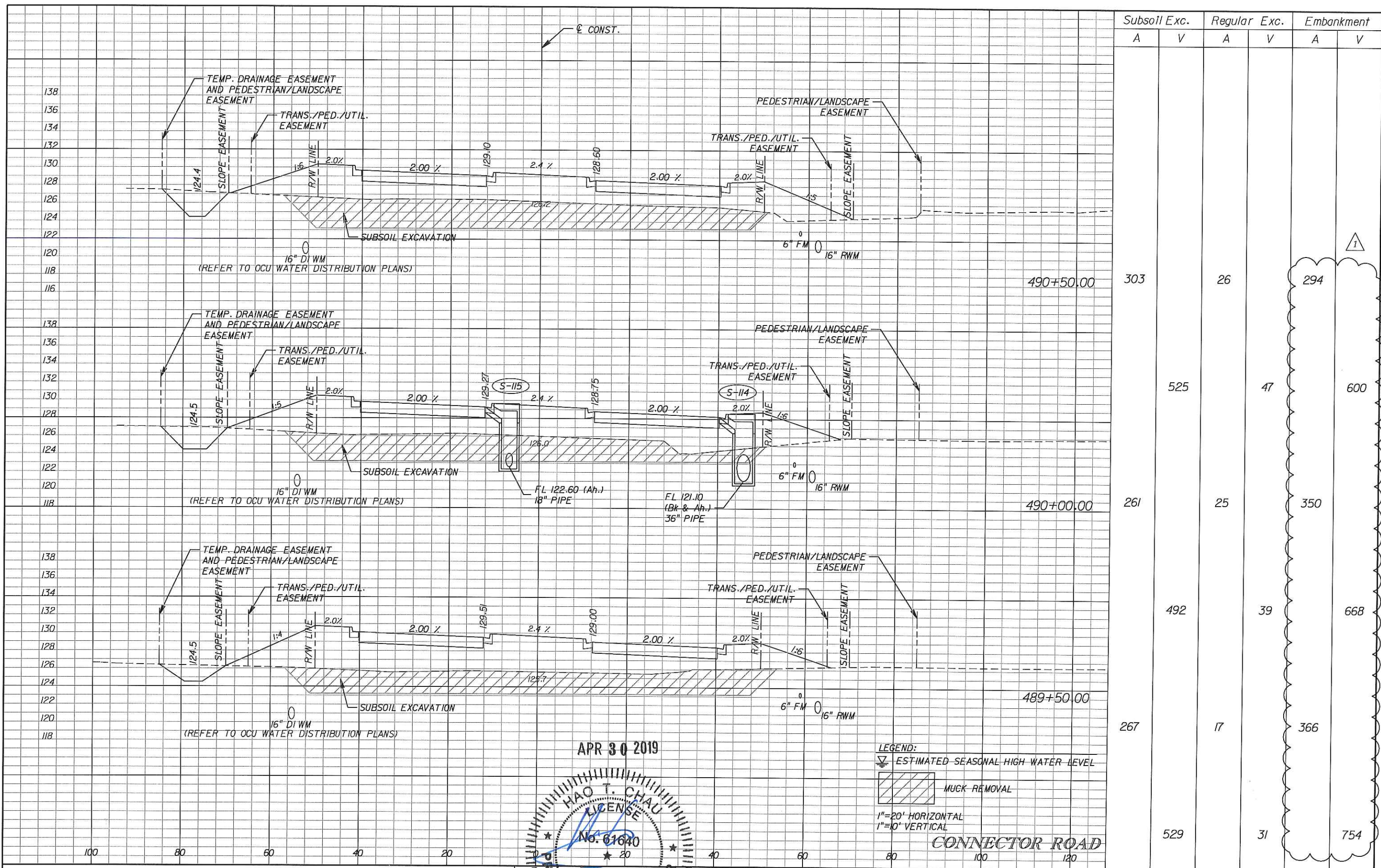
APR 30 2019
 HAO J. CHAU
 LICENSE
 No. 61640
 Kimley-Horn
 PROFESSIONAL ENGINEER
 Florida License No. 696
 1460 Magnolia Boulevard, Suite 200
 Orlando, Florida 32803

ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

CROSS SECTIONS

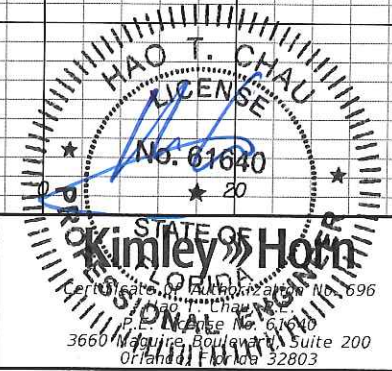
SHEET NO.
 60

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19	HAO J. CHAU	REVISED EMBANKMENT QUANTITIES			



Station	Subsoil Exc.		Regular Exc.		Embankment	
	A	V	A	V	A	V
490+50.00	303		26		294	1
490+00.00	261	525	25	47	350	600
489+50.00	267	492	17	39	366	668
CONNECTOR ROAD	529		31		754	

APR 30 2019



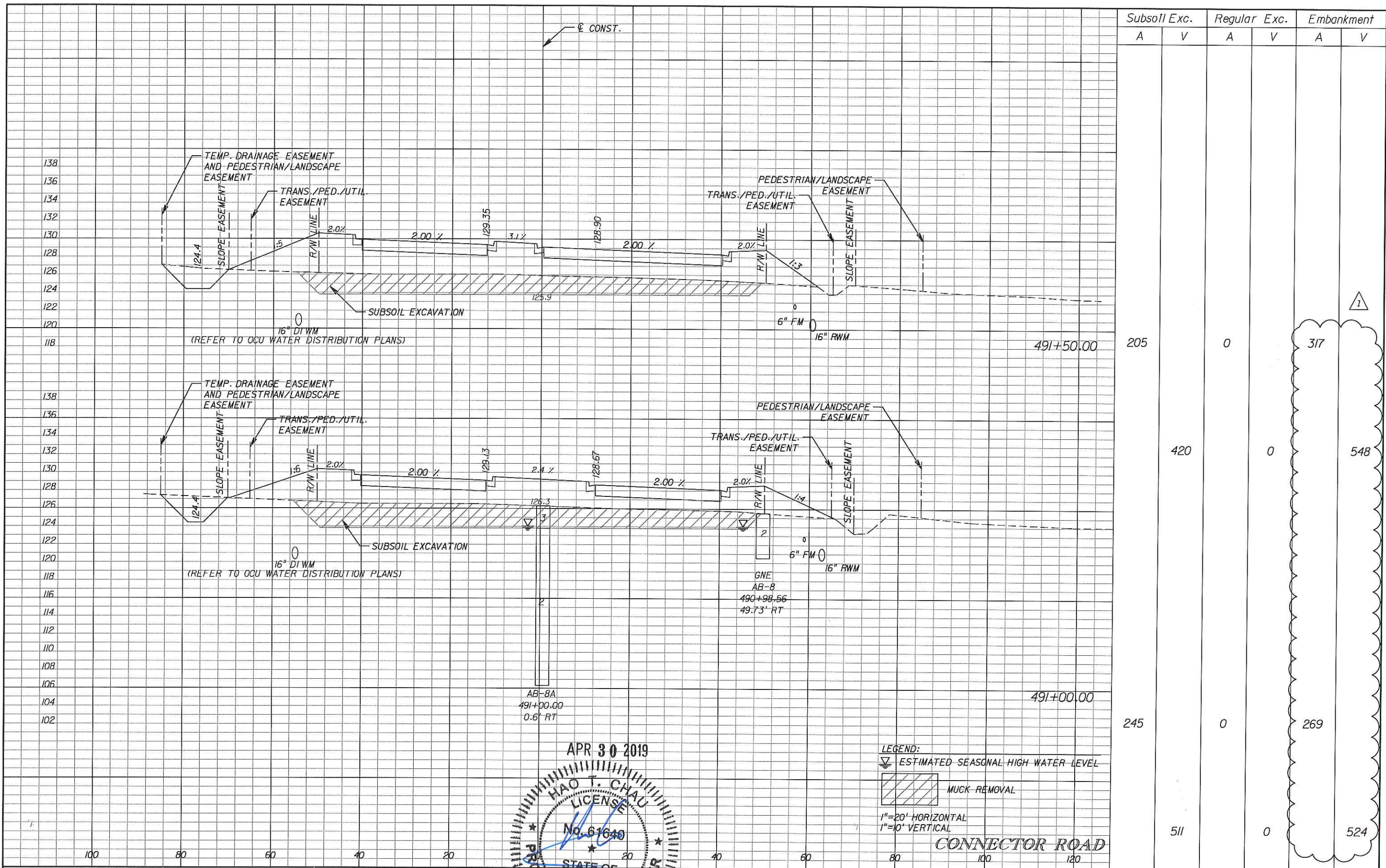
LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1" = 20' HORIZONTAL
 1" = 10' VERTICAL

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			

ORANGE COUNTY GOVERNMENT
 DEPARTMENT OF PUBLIC WORKS

CROSS SECTIONS

SHEET NO.
61



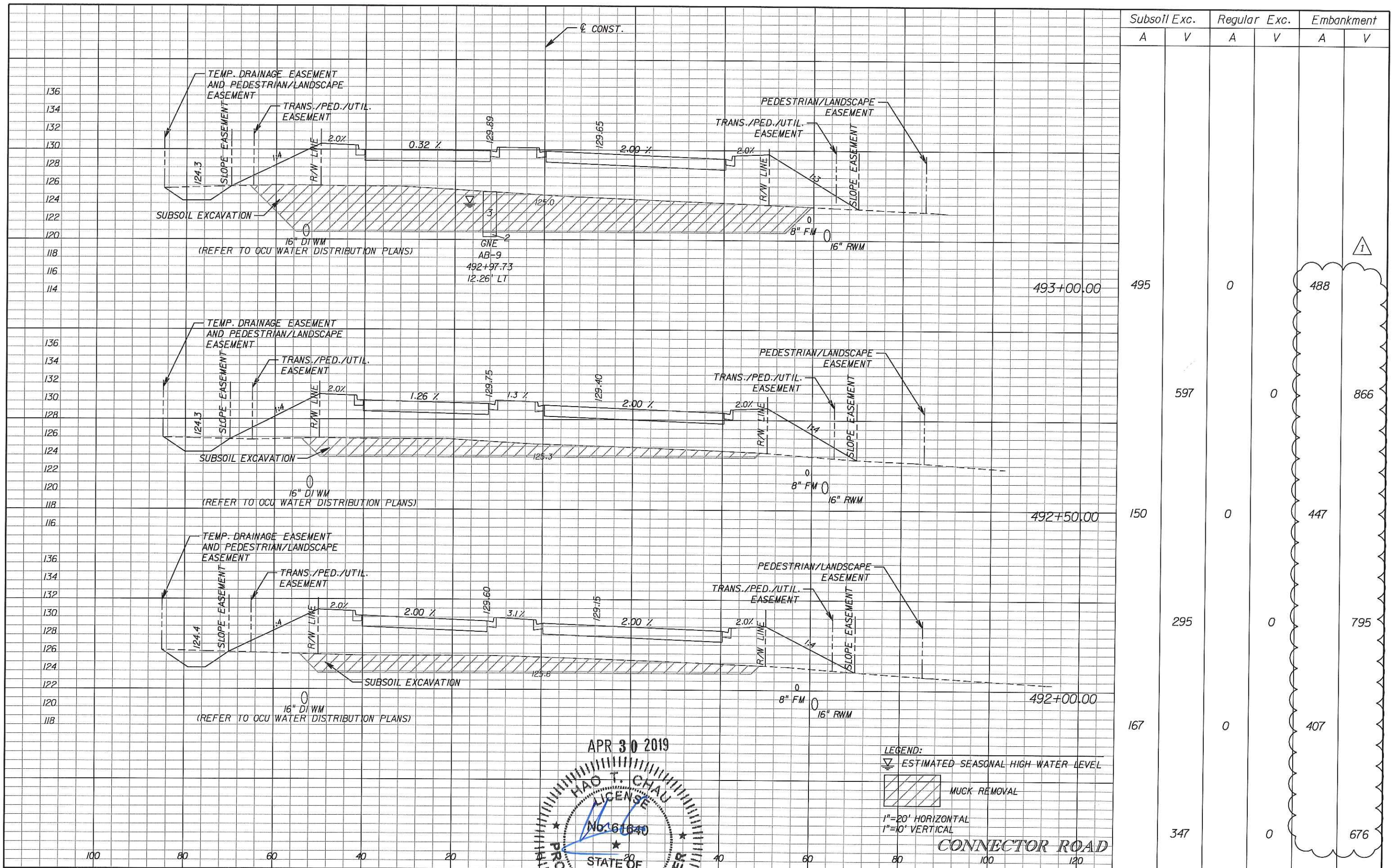
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			

APR 30 2019
 HAO T. CHAU
 LICENSE
 No. 61640
 PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 Kimley-Horn
 CONSULTANTS AND ENGINEERS
 No. 61640
 3660 Magnolia Boulevard, Suite 200
 Orlando, Florida 32803

ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

CROSS SECTIONS

SHEET NO.
 62



Station	Subsoil Exc.		Regular Exc.		Embankment	
	A	V	A	V	A	V
493+00.00	495		0		488	
492+50.00	150	597	0		447	866
492+00.00	167	295	0		407	795
	347		0		676	

APR 30 2019
 HAO T. CHAU
 LICENSE
 No. 161640
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

CONNECTOR ROAD

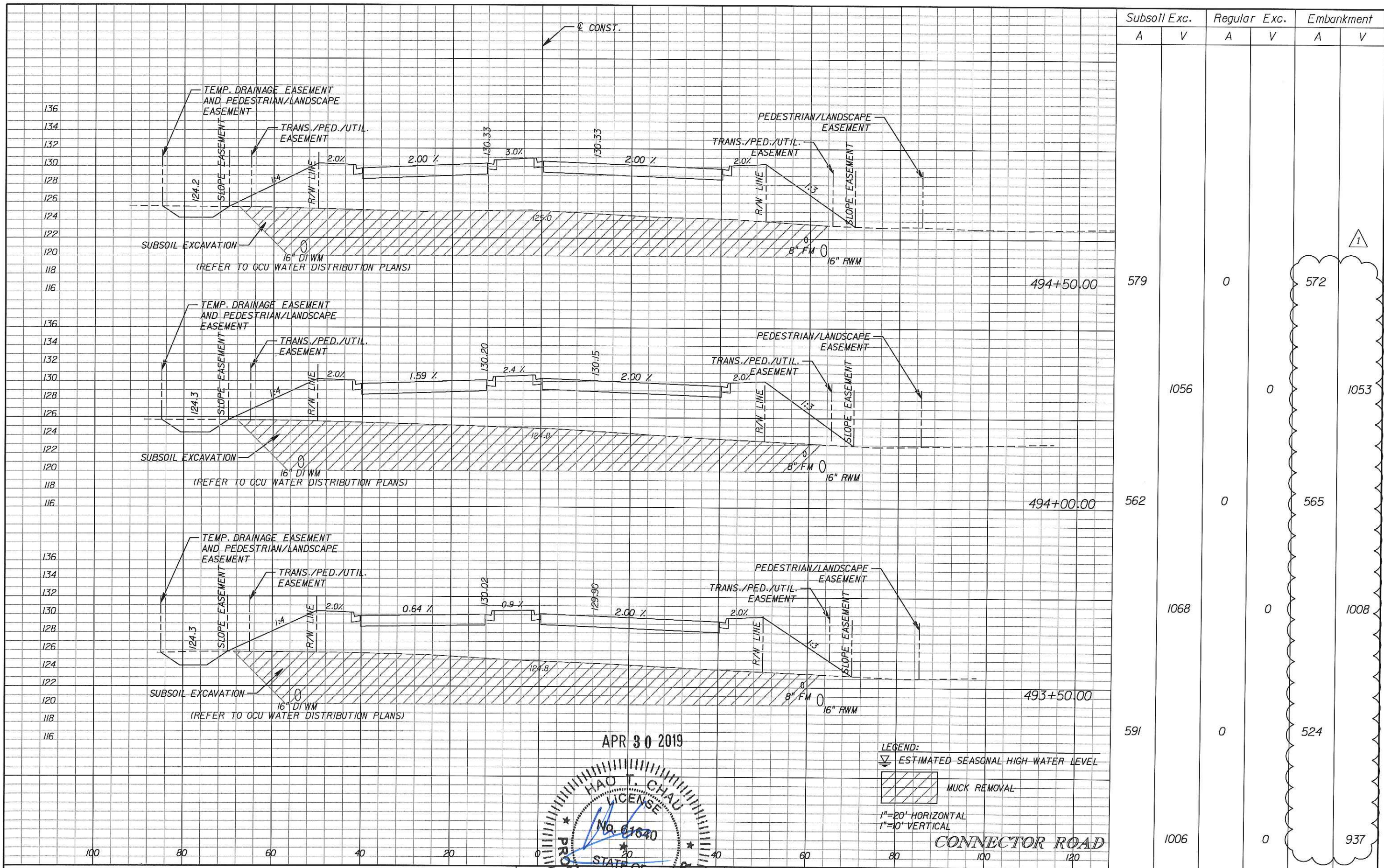
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			

Kimley-Horn
 Certification No. 696
 P.E. Hoang T. Chau
 3660 Maguire Boulevard, Suite 200
 Orlando, Florida 32803

ORANGE COUNTY
 DEPARTMENT OF PUBLIC WORKS

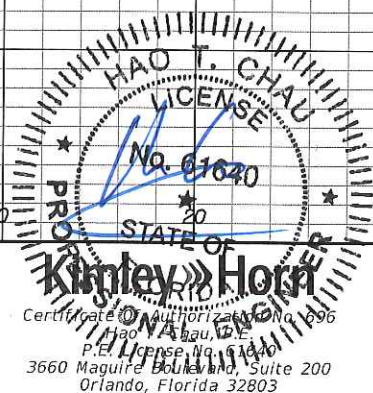
CROSS SECTIONS

SHEET NO.
 63



Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
				572	
				1053	
				565	
				1008	
				524	
				937	

APR 30 2019



LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

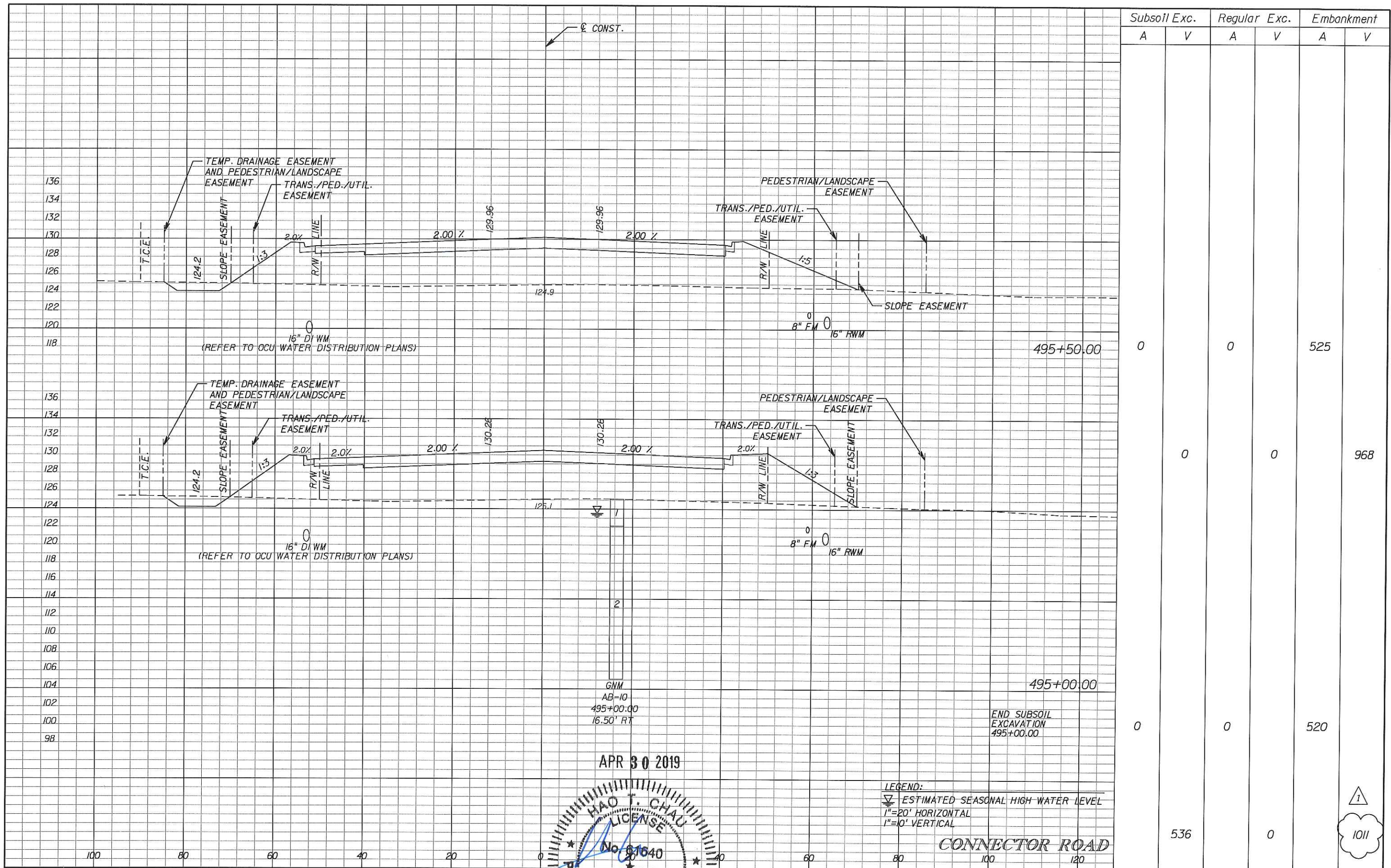
CONNECTOR ROAD

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			

ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

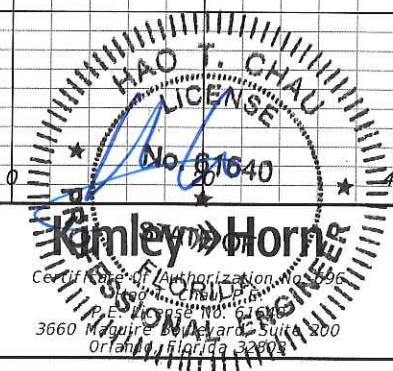
CROSS SECTIONS

SHEET NO.
 64



Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
0	0	0	0	525	
0	0	0	0	968	
0	0	0	0	520	
536		0			

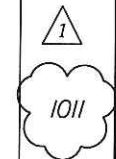
APR 30 2019



ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

LEGEND:
 ▽ ESTIMATED SEASONAL HIGH WATER LEVEL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

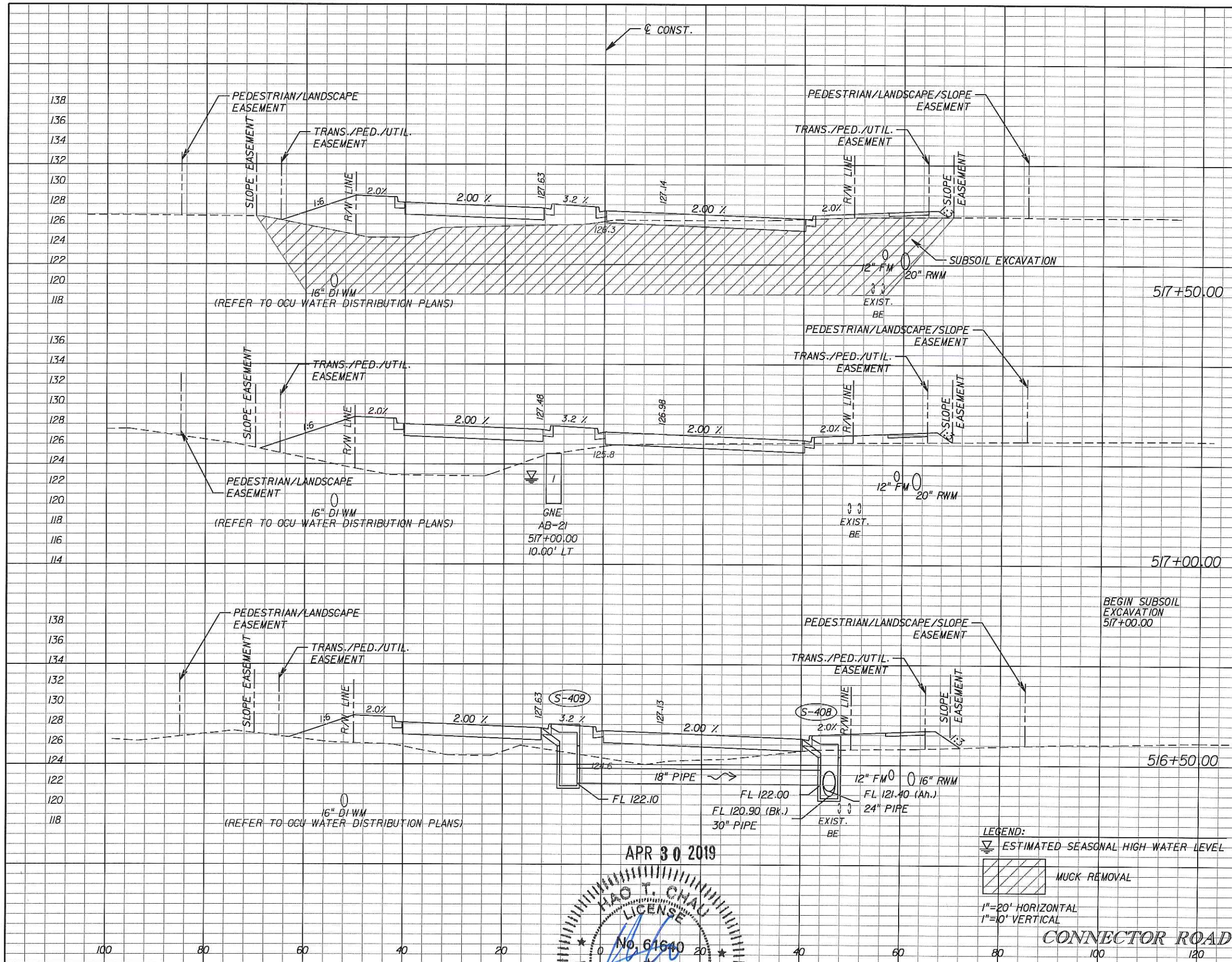
CONNECTOR ROAD



DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			

CROSS SECTIONS

SHEET NO.
65



Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
873		28		134	
	821		44		359
0		19		249	
	0		18		442
0		0		223	
	0		0		415

APR 30 2019
 HAO T. CHAU
 LICENSE
 No. 61640
 PROFESSIONAL ENGINEER
 Kimley-Horn

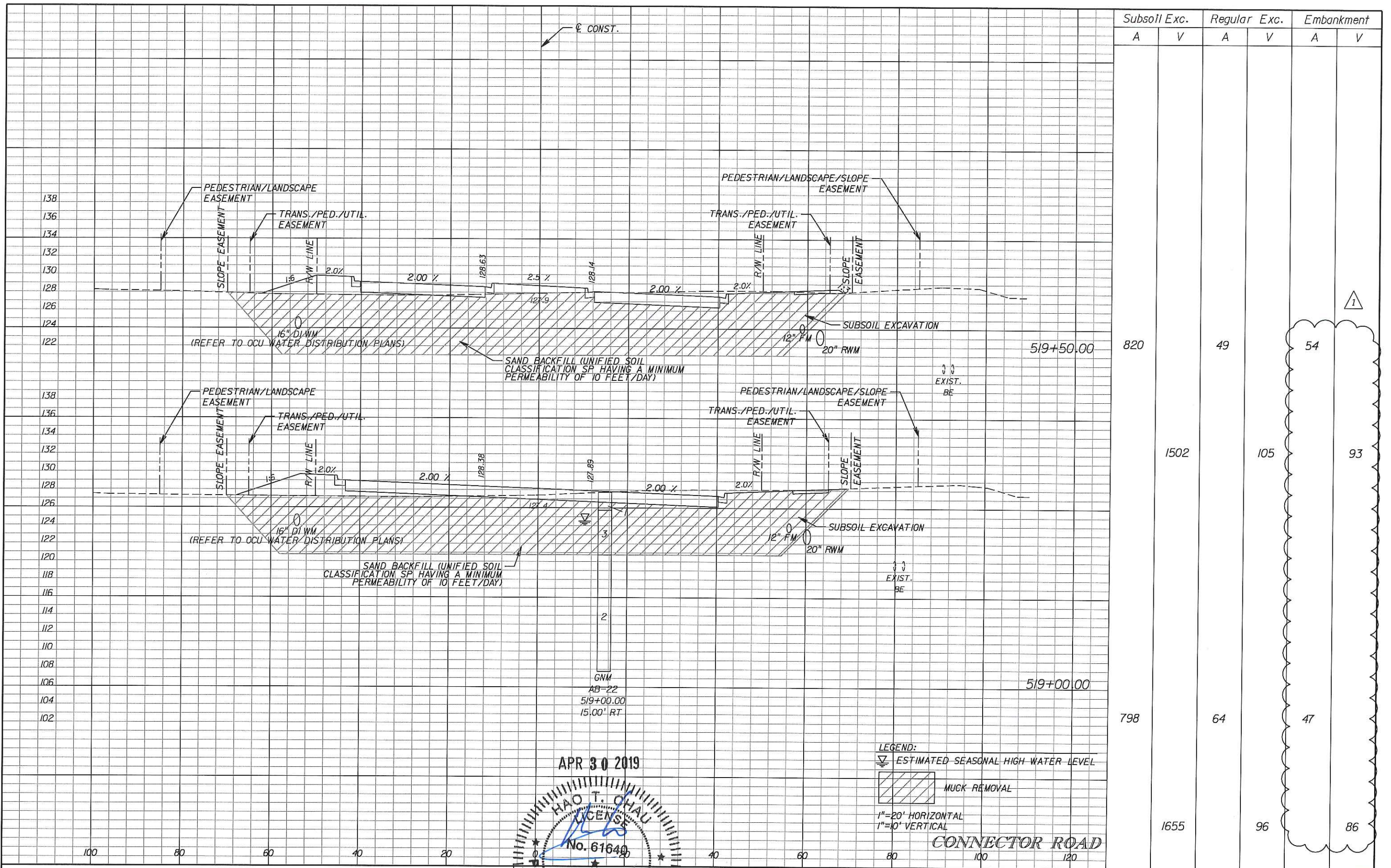
LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19	1	REVISED EMBANKMENT QUANTITIES			

ORANGE COUNTY
 DEPARTMENT OF PUBLIC WORKS

CROSS SECTIONS

SHEET NO.
 83



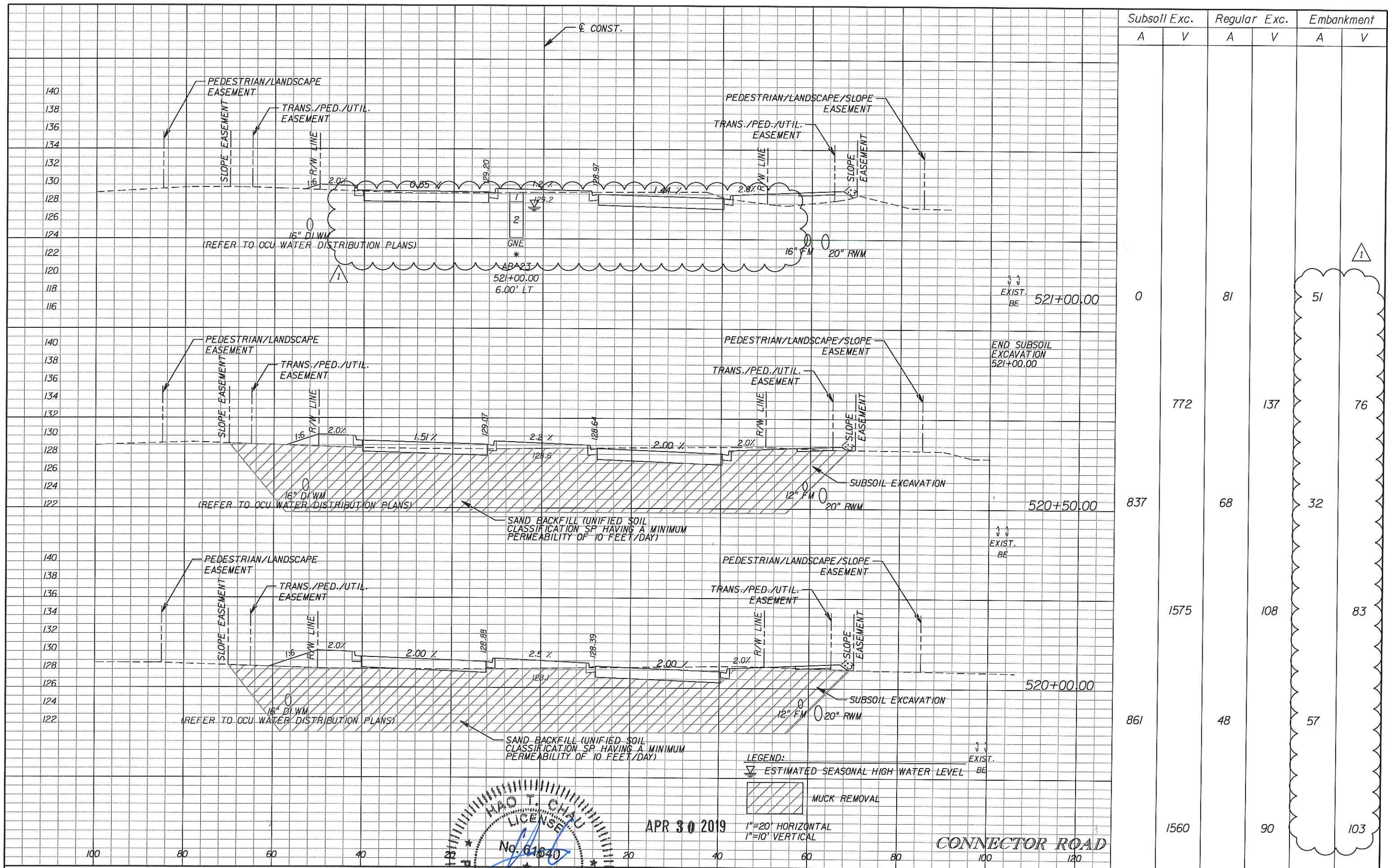
APR 30 2019
HAO T. CHAU
 LICENSE
 No. 61640
Kimley-Horn
 PROFESSIONAL ENGINEER
 Florida
 696
 Suite 200
 32803

LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			

CROSS SECTIONS

SHEET NO. 85



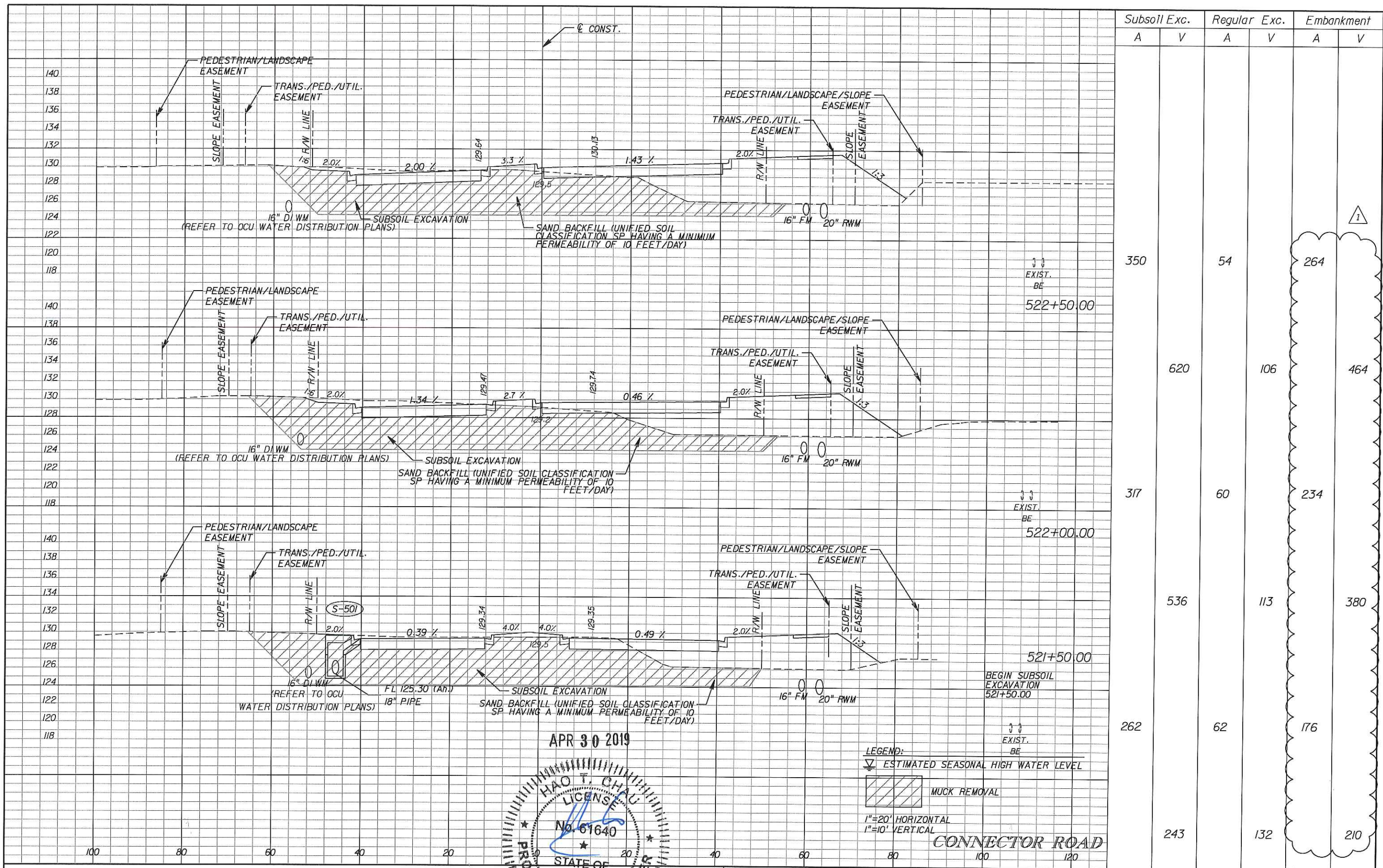
Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
0		81		51	
772		137		76	
837		68		32	
1575		108		83	
861		48		57	
1560		90		103	

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19	1	REVISED EMBANKMENT QUANTITIES & REMOVED SUBSOIL EXCAVATION AT STA. 521+00			

HAO T. CHAU
 LICENSE
 No. 61640
PROFESSIONAL ENGINEER
 STATE OF FLORIDA
Kingley Horn
 CERTIFICATE OF AUTHORIZATION No. 696
 HAO T. CHAU, P.E.
 License No. 61640
 1060 McGuire Boulevard, Suite 200
 Orlando, Florida 32803

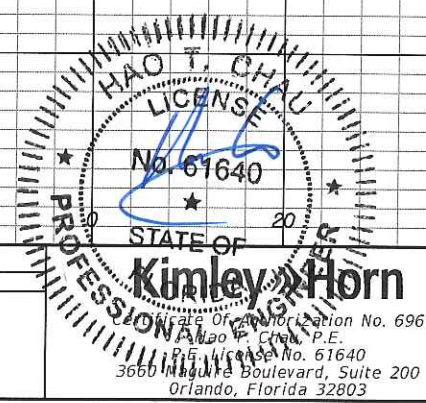
ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY
 DEPARTMENT OF PUBLIC WORKS

CROSS SECTIONS
 SHEET NO. 86



Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
350		54		264	
620		106		464	
317		60		234	
536		113		380	
262		62		176	
243		132		210	

APR 30 2019



LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

CONNECTOR ROAD

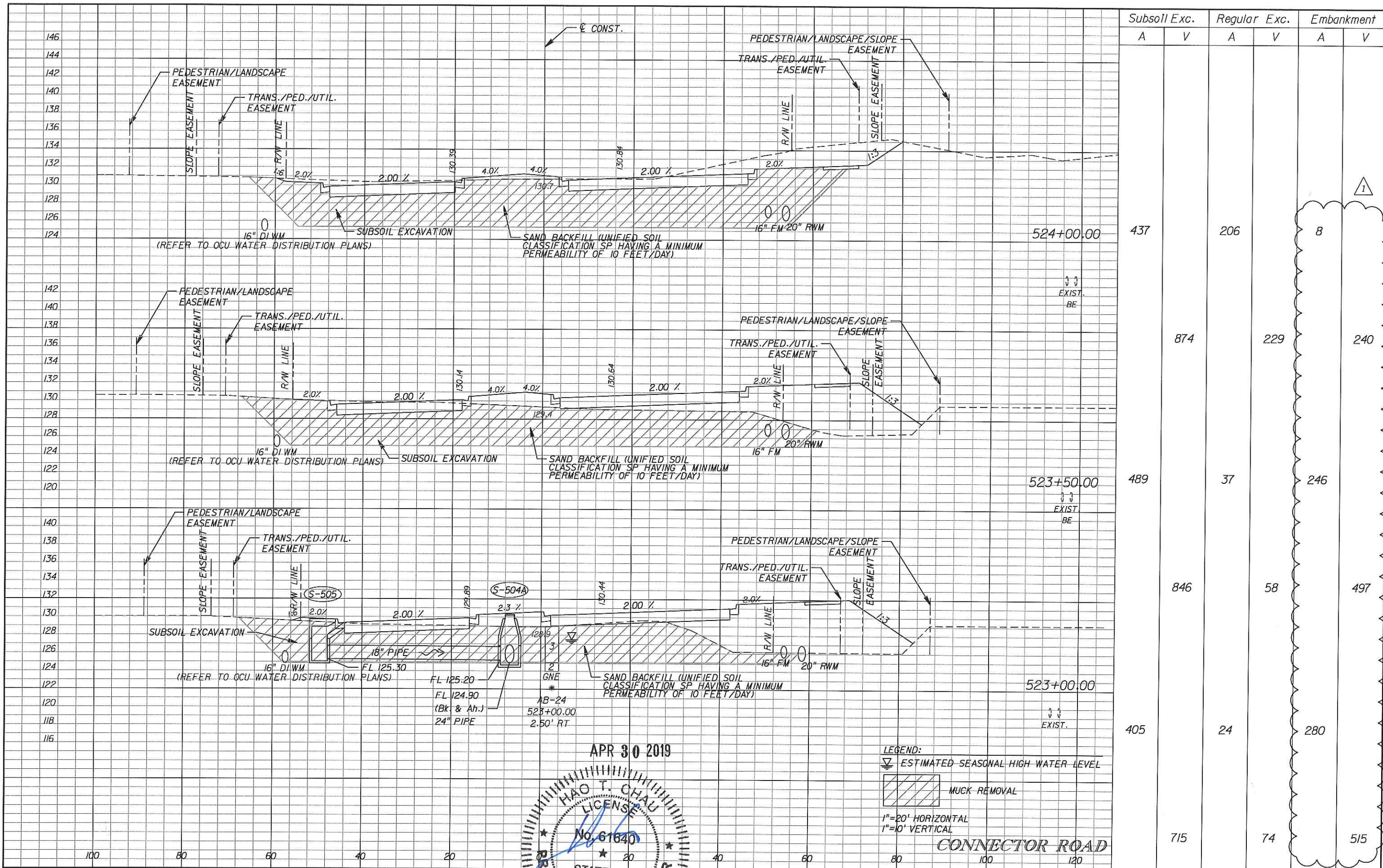
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19		1 REVISED EMBANKMENT QUANTITIES			

Kimley-Horn
 State of Florida Professional Engineer License No. 696
 Hao T. Chau, P.E.
 P.E. License No. 61640
 3650 Magnolia Boulevard, Suite 200
 Orlando, Florida 32803

ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

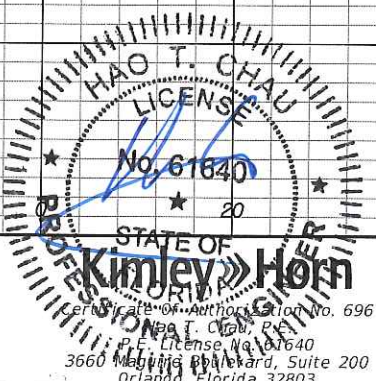
CROSS SECTIONS

SHEET NO.
87



Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V
437		206		8	
874		229		240	
489		37		246	
846		58		497	
405		24		280	
715		74		515	

APR 30 2019



LEGEND:
 ESTIMATED SEASONAL HIGH WATER LEVEL
 MUCK REMOVAL
 1"=20' HORIZONTAL
 1"=10' VERTICAL

CONNECTOR ROAD

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19	1	REVISED EMBANKMENT QUANTITIES			

ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

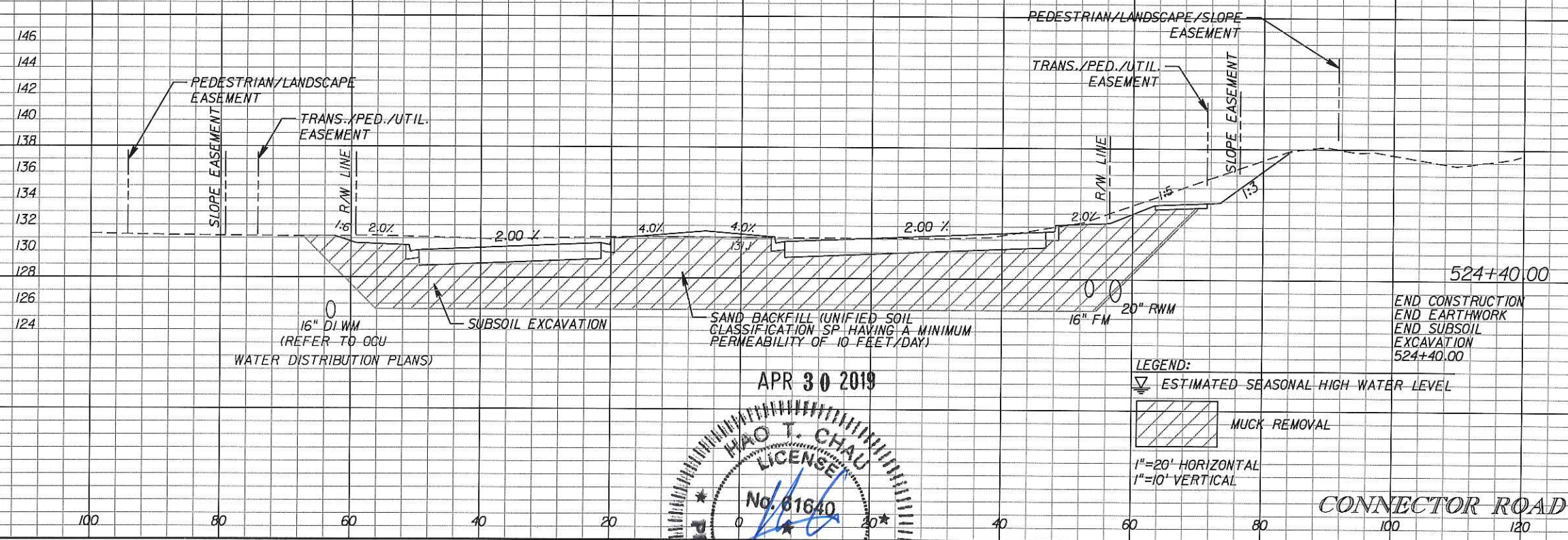
CROSS SECTIONS

SHEET NO.
 88

Subsoil Exc.		Regular Exc.		Embankment	
A	V	A	V	A	V

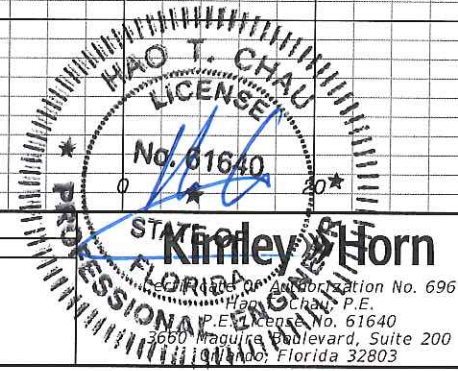
DESCRIPTION	CY	
	P	F
SUB-SOIL EXCAVATION	28352	
20% CONTINGENCY	5670	
REGULAR EXCAVATION	10935	
EMBANKMENT	43225	

REFER TO RUBY LAKE E-PROJECT FOR ADDITIONAL INFORMATION.



432	147	5	1
644	261	9	

APR 30 2019



ORANGE COUNTY GOVERNMENT
 ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
04/30/19	1	REVISED EMBANKMENT QUANTITIES			

CROSS SECTIONS

SHEET NO.
89

Drawing name: J:\028522\Civil\DWG\BID SET FEB 2019\Apopka-Vineland-028522-Cover Sheet-Notes-Const Details.dwg May 02, 2019

ITEM NO.	DESCRIPTION	UNIT	QTY TOTAL	QUANTITY PER SHEET																				
				Connector Road										Apopka-Vineland Road					Granby St. & Fenton St.					
				Sheet 5	Sheet 6	Sheet 7	Sheet 8	Sheet 9	Sheet 10	Sheet 11	Sheet 12	Sheet 13	Sheet 14	Sheet 15	Sheet 16	Sheet 17	Sheet 18	Sheet 19	Sheet 20	Sheet 21	Sheet 22	Sheet 23		
1	Mobilization, Demobilization, Bonds, and Permits (not to exceed 5% of the total of all bid items except bid items under section 10.1 General)	LS	1																					
2	Indemnification	LS	1																					
3	Preconstruction Audio-Video Documentation	LS	1																					
4	Project Record Drawings	LS	1																					
5	Maintenance of Traffic	LS	1																					
6	Erosion and Sediment Control	LS	1																					
Water Main																								
7	Furnish & Install 16" DI Potable Water Main w/fittings & RJs	LF	7694	349	551	468	573	550	525	563	594	580	170	199				440	560	560	560	452		
8	Furnish & Install 16" Gate Valve	EA	10			1		1	3		1	1						1		1		1		
9	Furnish & Install 16" Tapping Sleeve & Valve	EA	5	1										4										
10	Furnish & Install 16" Line Stop & Cap	EA	4											4										
11	Furnish & Install Fire Hydrant Assemblies	EA	14	1	1	1	1	1	1	2	1	1	1					1		1		1		
12	Connection to Existing Water Main	EA	2										1									1		
13	Remove and Dispose of Existing Main	LF	150											150										
14	Sodding	SY	2844																922	1244	678			
15	Stabilized Drive	SY	2958																		750	1242	966	
Force Main																								
16	Furnish & Install 12" PVC Force Main w/fittings & RJs	LF	26																				26	
17	Temporary Bypass System	EA	1																				1	
18	Remove and Dispose of Existing Main	LF	26																				26	
Reclaimed Water Main																								
19	Furnish & Install 16" DI Reclaimed Water Main w/fittings & RJs	LF	27																				27	
20	Temporary Bypass System	EA	1																				1	
21	Remove and Dispose of Existing Main	LF	27																				27	

REVISIONS		NAMES	DATE
DATE	BY	DESCRIPTION	

DRAWN BY:	GNP	2/19
CHECKED BY:	PH	2/19
DESIGNED BY:	PH	2/19
CHECKED BY:	DEM	2/19
APPROVED BY:	DAVID E. MAHLER	



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ORANGE COUNTY UTILITIES		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	ORANGE	

Plan Prepared By:
CPH, Inc.
 1117 E. Robinson St. - Orlando, FL 32801
 Ph: 407.425.0452

Licenses:
 Eng. C.O.A. No. 3215
 Survey L.B. No. 7143
 Arch. Lic. No. AA2600926
 Lndscp. Lic. No. LC0000298

SHEET TITLE:	SUMMARY OF PAY ITEMS	
	PROJECT TITLE:	SHEET NO.
	PALM PARKWAY TO APOPKA-VINELAND	U-4
	CONNECTOR ROAD	

BID SUBMITTAL

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.