

ADDENDUM # 1
CITY OF DELTONA
BID # PW 13-05
January 30, 2013

NORMANDY SECTION B ROAD WIDENING/UTILITY RELOCATE

Until further notice:

- Questions regarding this bid shall be addressed **in writing** to:

-

Kate Krauss

Purchasing Manager

Email: kkrauss@deltonafl.gov

Fax: 386-878-8571

- Questions will not be accepted over the phone.
-
- Bidders are asked to acknowledge receipt of this addendum by signing below and returning the signed addendum with their bid submittal. Failure to do so may subject the bidder to disqualification.

Vendor Acknowledgement of Receipt of Addendum:

Signature

Return a signed copy of this addendum with your bid

ADDENDUM # 2

CITY OF DELTONA

BID # PW 13-05

February 5, 2013

NORMANDY SECTION B ROAD WIDENING/UTILITY RELOCATE

This addendum is to delete the current bid forms, pages 3-6 of Section 00300, and replace them with the bid forms that are attached to this addendum. The new bid form is also being uploaded to Demandstar in Excel format for your convenience in completing it. Use only these bid forms when submitting your bid. All other pages still apply.

Failure to use the revised bid forms shall deem your bid non-responsive.

ALL OTHER SPECIFICATIONS AND CONDITIONS REMAIN UNCHANGED

RECEIPT OF THIS ADDENDUM IS HEREBY ACKNOWLEDGED

NAME OF BUSINESS

BY: _____
SIGNATURE/DATE

NAME & TITLE, TYPED OR PRINTED

MAILING ADDRESS

CITY, STATE, ZIP CODE

City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. IIB # PW 13-05

<i>Pay Item</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total Cost</i>
101-1	Mobilization	LS	1		
102-1	Maintenance of Traffic	LS	1		
102-3	Commercial Material for Driveway Maintenance	CY	500		
104-100	Erosion Control Measures	LS	1		
110-1-1	Clearing & Grubbing	AC	9		
110-7-1	Mailbox, F&I, Single	EA	23		
120-1	Regular Excavation	CY	16,000		
120-6	Embankment	CY	1,500		
160-4	Stabilization, Type B	SY	17,000		
285-70-9	Optional Base Group 9	SY	12,050		
334-1-12	Type SP Structural Course (Traffic Level B)	TN	1,326		
334-7-30	Friction Course (FC-9.5) (Rubber)	TN	663		
400-1-2	Conc. Class I, Endwalls	CY	9		
400-1-11	Conc. Class I, Retaining Walls	CY	0		
425-1-311	Inlets(Curb)(Type P-1)(<10')	EA	22		
425-1-321	Inlets(Curb)(Type P-2)(<10')	EA	5		
425-1-521	Inlets(DT Bot)(Type C)(<10')	EA	1		
425-1-551	Inlets(DT Bot)(Type E (Special Design)	EA	2		
425-2-41	Manholes (P-7)(<10')	EA	1		
430-171-118	Pipe Culv (Opt Matl)(Round)(18"SS)	LF	1,143		
430-171-124	Pipe Culv (Opt Matl)(Round)(24"SS)	LF	1,125		
430-171-130	Pipe Culv (Opt Matl)(Round)(30"SS)	LF	567		
430-171-142	Pipe Culv (Opt Matl)(Round)(30"SS	LF	77		
430-982-125	Mitered End Section, Optional Round, 18" CD	EA	3		
430-982-133	Mitered End Section, Optional Round, 30" CD	EA	1		
520-1-10	Curb & Gutter Conc - Type F	LF	5,690		
522-1	Sidewalk Concrete, 4" Thick	SY	2,731		
522-2	Sidewalk Concrete, 6" Thick	SY	1,072		
524-1-29	Concrete Ditch Pavt, Reinforced 4"	SY	127		
530-3-3	Riprap, Rubble and Filter Fabric	TN	20		
570-1-2	Performance Turf Sodding	SY	18,850		
630-1-12	Conduit (F&I)(Underground)	LF	20		
630-1-14	Conduit (F&I)(Underground-Jacketed)	LF	140		
632-7-1	Cable (Signal)(F&I)	PI	1		
634-4-113	Span Wire Assembly (F&I)(Two Wire)(Box)	PI	1		
635-1-11	Pull and Junction Boxes (F&I) (Pull Box)	EA	2		
641-2-16	Prestressed Concrete Strain Pole (F&I) (Type P-VI)	EA	2		

**City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05**

<i>Pay Item</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total Cost</i>
650-51-313	Traffic Signal (F&I) (3-Section)(1-Way)(Polycarbonate/LED)	AS	8		
653-191	Signal Pedestrian (F&I) (LED Countdown)(1- Way)	AS	4		
653-192	Signal Pedestrian (F&I) (LED Countdown)(2- Way)	AS	1		
659-101	Signal Head Auxuillaries (F&I)(Backplates 3 Section)	EA	5		
659-106	Signal Head Auxuillaries (F&I)(Tunnel Visor)	EA	20		
660-1-103	Loop Detector, Inductive (F&I)(Type 3, 1CH, SS, S)	EA	4		
660-1-104	Loop Detector, Inductive (F&I)(Type 4, 1CH, SS, S)	EA	1		
660-2-106	Loop Assembly (F&I)(Type F)	AS	5		
665-13	Detector, Pedestrian (F&I)(Detector w/ Sign)	EA	4		
670-5-410	Traffic Control Assembly (Modify)(NEMA)	AS	1		
690-10	Traffic Signal Head Assembly, Remove	EA	8		
690-20	Pedestrian Signal Assembly, Remove	EA	4		
690-34-1	Complete Pole removal (Deep) Direct Burial)	EA	2		
690-80	Span Wire Assembly (Remove)	EA	1		
690-90	Remove Cabling and Conduit	PI	1		
690-100	Signal Equipment, Miscellaneous, Remove	PI	1		
699-1-1	Internally Illuminated Sign (F&I)(Street Name)	EA	4		
700-20-11	Sign, Single Post (< 12 SF)	AS	8		
700-20-40	Sign, Existing (Relocate) (Single Post)	AS	3		
700-20-60	Sign, Existing (Remove) (Single Post)	AS	10		
700-46-21	Sign, Existing (Relocate) (Single Post)	AS	14		
700-48-48	Sign Panel (Relocate)(15 or less SF)	EA	6		
706-3	Retro-Reflective Pavement Marker	EA	291		
711-11-111	Thermoplastic, Standard, White, Solid, 6"	NM	1,139		
711-11-123	Thermoplastic, Standard, White, Solid, 12"	LF	463		
711-11-125	Thermoplastic, Standard, White, Solid, 24"	LF	532		
711-11-151	Thermoplastic, Standard, DOT Guide, 6"	LF	530		
711-11-160	Thermoplastic, Standard, White, Message	EA	15		
711-11-170	Thermoplastic, Standard, White, Arrow	EA	43		
711-11-211	Thermoplastic, Standard, Yellow, Solid, 6"	NM	1,190		
711-11-224	Thermoplastic, Standard, Yellow, Solid, 18"	LF	105		
711-11-231	Thermoplastic, Standard, Yellow, Skip, 6"	GM	0.770		
711-11-251	Thermoplastic, Standard, Yellow, DOT/Guide, 6"	LF	985		
999-25	Initial Contingency	LS	0		
SUBTOTAL ROADWAY BASE BID					\$

City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05

<i>Item No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Cost</i>	<i>Total Cost</i>
1	Mobilization/Demobilization	1	LS		
2	General Requirements, Bonds and Insurance	1	LS		
3	Locate Utilities in Advance of Construction	1	LS		
4	Survey Layout and As-Builts	1	LS		
5	Furnish and install 4-inch DIP water main (restrained joint)	80	LF		
6	Furnish and install 6-inch PVC water main (restrained joint)	710	LF		
7	Furnish and install 6-inch PVC water main (push)	115	LF		
8	Furnish and install 6-inch DIP water main (restrained joint)	200	LF		
9	Furnish and install 8-inch PVC water main (restrained joint)	30	LF		
10	Furnish and install 8-inch PVC water main (push)	0	LF		
11	Furnish and install 12-inch DIP water main (restrained joint)	120	LF		
12	Furnish and install 16-inch PVC water main (restrained joint)	2340	LF		
13	Furnish and install 16-inch PVC water main (push)	1030	LF		
14	Furnish and install 16-inch DIP water main (restrained joint)	185	LF		
15	Abandon and grout fill existing water main	4920	LF		
16	Removal and disposal existing water main	2100	LF		
17	4-inch 45 Degree Bend	4	EA		
18	6-inch 45 Degree Bend	16	EA		
19	6-inch 22.5 Degree Bend	2	EA		
20	6-inch 11.25 Degree Bend	3	EA		
21	8-inch 45 Degree Bend	2	EA		
22	12-inch 45 Degree Bend	4	EA		
23	16-inch 11.25 Degree Bend	7	EA		
24	16-inch 22.5 Degree Bend	1	EA		
25	16-inch 45 Degree Bend	34	EA		
26	6-inch Tee	1	EA		
27	16 x 4-inch Tee	1	EA		
28	16 x 6-inch Tee	4	EA		
29	16 x 8-inch Tee	1	EA		
30	16 x 12-inch Cross	1	EA		
31	6 x 4-inch Reducer	2	EA		
32	16 x 12-inch Reducer	1	EA		
33	4-inch Gate Valve	1	EA		
34	6-inch Gate Valve	5	EA		
35	8-inch Gate Valve	1	EA		
36	12-inch Gate Valve	3	EA		
37	16-inch Gate Valve	4	EA		
38	Air Release Valve	6	EA		

City of Deltona
 Normandy Boulevard (Section B)
 Saxon Boulevard To Fort Smith Blvd
 Bid No. ITB # PW 13-05

Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
39	Fire Hydrant	11	EA		
40	1-inch Single Service - Short	13	EA		
41	1-inch Single Service - Long	5	EA		
42	1-inch Double Service - Short	5	EA		
43	1-inch Double Service - Long	14	EA		
44	4-inch Direct Connect & Fitting Assembly – Potable	4	EA		
45	6-inch Direct Connect & Fitting Assembly – Potable	2	EA		
46	8-inch Direct Connect & Fitting Assembly – Potable	1	EA		
47	12-inch Direct Connect & Fitting Assembly – Potable	3	EA		
48	Testing and Laboratory Services (Allowance)	1	LS		
SUBTOTAL UTILITY BASE BID					\$

SUBTOTAL UTILITY BASE BID:

 (IN WORDS)

\$ _____
 (IN FIGURES)

SUBTOTAL ROADWAY BASE BID:

 (IN WORDS)

\$ _____
 (IN FIGURES)

TOTAL ROADWAY & UTILITY BASE BID:

 (IN WORDS)

\$ _____
 (IN FIGURES)

ADDENDUM # 3
CITY OF DELTONA
BID # PW 13-05
February 12, 2013

NORMANDY SECTION B ROAD WIDENING/UTILITY RELOCATE

This addendum is change the bid due date to Thursday, February 28, 2013 at 2:00 p.m. at the Water Dept. located at 255 Enterprise Road, Deltona, Florida 32725.

ALL OTHER SPECIFICATIONS AND CONDITIONS REMAIN UNCHANGED.

RECEIPT OF THIS ADDENDUM IS HEREBY ACKNOWLEDGED

NAME OF BUSINESS

BY: _____
SIGNATURE/DATE

NAME & TITLE, TYPED OR PRINTED

MAILING ADDRESS

CITY, STATE, ZIP CODE

**ADDENDUM # 4
CITY OF DELTONA
BID # PW 13-05
February 18, 2013**

NORMANDY SECTION B ROAD WIDENING/UTILITY RELOCATE

**This addendum includes the following:
Questions / Responses, Revised Bid Item Description,
Amended Section 00020 and Tetra Tech Water Main Improvement Plans.**

Questions / Responses:

Question: What is the engineers estimate for this job?

Response: \$1,854,458 Roadway and Utilities

Question: What is the job duration?

Response: 270 days

Question: What are the liquidated damages?

Response: \$1,000 per day

Question: Is the contractor required to provide testing and who pays for the testing?

Response: Testing by CEI, contractor responsible for retesting costs

Question: Are there any permit fees that the contractor is responsible for?

Response: No

Question: Is the contractor required to provide any temporary facilities? (Office)

Response: No

Question: Is the contractor required to submit a MOT plan?

Response: No, the plans currently show the MOT plan. The contractor will be required to submit requests/ notifications and exhibits for any proposed lane or road closures and be responsible for providing a revised MOT plan if he intends to deviate from the current plans.

Bid Form should read:

Pay Item: 430-171-142 Pipe Culv (Opt Matl) (Elliptical) (42"SS) LF 77

A copy of the revised Bid Form is included with this addendum.

Section 00020:

Section 00020-1 contains the Amended Bid Due Date, Description of Work and Purchasing Agent information.

A copy of Section 00020-1 is included with the addendum.

**ADDENDUM # 4
CITY OF DELTONA
BID # PW 13-05
February 18, 2013**

NORMANDY SECTION B ROAD WIDENING/UTILITY RELOCATE

Tetra Tech Plans:

The Tetra Tech Water Main Improvement Plans are for bid preparation purposes.

**ALL OTHER SPECIFICATIONS AND CONDITIONS REMAIN UNCHANGED
RECEIPT OF THIS ADDENDUM IS HEREBY ACKNOWLEDGED**

NAME OF BUSINESS

BY SIGNATURE / DATE

NAME & TITLE, TYPED OR PRINTED

MAILING ADDRESS

CITY, STATE, ZIP CODE

Section 00020

Announcement and Bid Documents
For
THE CITY OF DELTONA
PUBLIC WORKS DIVISION

ITB # PW 13-05
Normandy Boulevard (Sec. B)
Saxon Boulevard to Fort Smith Blvd

NOTICE IS HEREBY GIVEN: That sealed bids will be received by the City of Deltona, Public Works Division, at 255 Enterprise Road, Deltona, Florida 32725; until Thursday, February 28, 2013 at 2:00 p.m.

Any bids received after the above time will not be accepted under any circumstances. Bids will not be accepted at any other location within the City except for the address above. Bids will not be accepted at City Hall. Any uncertainty regarding the time a bid is received will be resolved against the Bidder.

Bid opening will be promptly at 2:00 p.m. on Thursday, February 28, 2013 at the Deltona Water Administration 2nd floor Conference Room, 255 Enterprise Road, Deltona, Florida 32725, at which time all bids received will be publicly opened and read aloud.

MANDATORY PRE-BID CONFERENCE: A pre-bid conference will be held at the City of Deltona Water Department located at 255 Enterprise Road, Deltona, Florida 32725, 2nd floor training room on Monday, February 11, 2013 at 10:00 a.m. Representatives of the City will be present to discuss the Project. Bidders must attend the conference for your bid to be considered. City will transmit to all prospective Bidders of record such Addenda as City considers necessary in response to questions arising at the conference. Oral statements made by the City may not be relied upon and will not be binding or legally effective.

DESCRIPTION OF WORK: All work for the Project shall be constructed in accordance with the Drawings and Specifications prepared by Bowyer-Singleton & Associates, Inc. and Tetra-Tech the proposed improvements will be awarded and constructed, if award is made, under one Contract. Bids shall be submitted for furnishing, delivering and installing all materials, equipment and services, including labor, for the Work, which generally involves:

- Reconstruct approx. 0.60 miles of 2 lane rural section roadway on Normandy Blvd. to a 3 lane urban section with bike lanes.
- Construct 2 drainage retention ponds.
- Construct approx. 2,912' of 18" to 42" storm drainage pipe and approx. 31 storm drainage structures.
- Construct approx. 3,555 linear feet of 16-inch water main, approx. 120 linear feet of 12-inch water main, approx. 30 linear feet of 8-inch water main, approx. 1,025 linear feet of 6-inch water main and approx. 80 linear feet of 4-inch water main, approx. 37 services, approx. 10 tie-ins to existing mains, and various valves, fittings, fire hydrants and appurtenances.
- Grouting and abandonment or removal of existing water main.
- Striping, signage, pavement markings, temp. traffic control devices and signalization.

To obtain a copy of the Bidding Documents, requestors shall contact in writing:

Kate Krauss
Purchasing Agent for the City of Deltona, Public Works Division
255 Enterprise Road, Deltona, Florida 32725
Email at kkrauss@deltonafl.gov
Phone number: 386-878-8571

Vendors who receive the bidding documents from the Purchasing Agent directly, shall be added as a planholder on Demandstar and shall receive all corresponding documents through the Demandstar website.

Bids shall be prepared from complete Bidding Documents. Addendum will be sent via DemandStar to all holders of complete solicitation Bidding Documents up to forty eight (48) hours before bid time. Brief addendums may be issued between forty eight (48) hours and twenty-four (24) hours before bid time by facsimile to all holders of complete Bidding Documents.

The City reserves the right to reject any or all proposals, to waive informalities in the proposals and to re-advertise for proposals. The City also reserves the right to separately accept or reject any item or items of a proposal and to award and/or negotiate a contract in the best interest of the City.

All questions are to be directed, IN WRITING, to Kate Krauss at kkrauss@deltonafl.gov or faxed to (386) 878-8971 seven calendar days prior to due date in order to issue an addenda.

CONTACT:

All prospective proposers are hereby instructed not to contact any member of the City of Deltona Commission, City Manager, City of Deltona Staff members or Engineers contracted by the City for this project, other than the noted contact person OR a member of the Purchasing staff regarding this Item to Bid or their response at any time during the Bid process. Any such contact shall be cause for rejection of your submittal.

- Questions regarding this bid are to be addressed **in writing** to:
Kate Krauss
Public Works Purchasing Agent
255 Enterprise Road
Deltona, FL 32725
E-Mail Address: kkrauss@deltonafl.gov
Or Fax: (386) 878-8971

END OF SECTION

City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05

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634-4-113	Span Wire Assembly (F&I)(Two Wire)(Box)	PI	1		
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641-2-16	Prestressed Concrete Strain Pole (F&I) (Type P-VI)	EA	2		

**City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05**

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659-101	Signal Head Auxuillaries (F&I)(Backplates 3 Section)	EA	5		
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660-1-103	Loop Detector, Inductive (F&I)(Type 3, 1CH, SS, S)	EA	4		
660-1-104	Loop Detector, Inductive (F&I)(Type 4, 1CH, SS, S)	EA	1		
660-2-106	Loop Assembly (F&I)(Type F)	AS	5		
665-13	Detector, Pedestrian (F&I)(Detector w/ Sign)	EA	4		
670-5-410	Traffic Control Assembly (Modify)(NEMA)	AS	1		
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690-90	Remove Cabling and Conduit	PI	1		
690-100	Signal Equipment, Miscellaneous, Remove	PI	1		
699-1-1	Internally Illuminated Sign (F&I)(Street Name)	EA	4		
700-20-11	Sign, Single Post (< 12 SF)	AS	8		
700-20-40	Sign, Existing (Relocate) (Single Post)	AS	3		
700-20-60	Sign, Existing (Remove) (Single Post)	AS	10		
700-46-21	Sign, Existing (Relocate) (Single Post)	AS	14		
700-48-48	Sign Panel (Relocate)(15 or less SF)	EA	6		
706-3	Retro-Reflective Pavement Marker	EA	291		
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711-11-123	Thermoplastic, Standard, White, Solid, 12"	LF	463		
711-11-125	Thermoplastic, Standard, White, Solid, 24"	LF	532		
711-11-151	Thermoplastic, Standard, DOT Guide, 6"	LF	530		
711-11-160	Thermoplastic, Standard, White, Message	EA	15		
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711-11-211	Thermoplastic, Standard, Yellow, Solid, 6"	NM	1,190		
711-11-224	Thermoplastic, Standard, Yellow, Solid, 18"	LF	105		
711-11-231	Thermoplastic, Standard, Yellow, Skip, 6"	GM	0.770		
711-11-251	Thermoplastic, Standard, Yellow, DOT/Guide, 6"	LF	985		
SUBTOTAL ROADWAY BASE BID					\$

City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05

<i>Item No.</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total Cost</i>
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3	Locate Utilities in Advance of Construction	LS	1		
4	Survey Layout and As-Builts	LS	1		
5	Furnish and install 4-inch DIP water main (restrained joint)	LF	80		
6	Furnish and install 6-inch PVC water main (restrained joint)	LF	710		
7	Furnish and install 6-inch PVC water main (push)	LF	115		
8	Furnish and install 6-inch DIP water main (restrained joint)	LF	200		
9	Furnish and install 8-inch PVC water main (restrained joint)	LF	30		
10	Furnish and install 8-inch PVC water main (push)	LF	0		
11	Furnish and install 12-inch DIP water main (restrained joint)	LF	120		
12	Furnish and install 16-inch PVC water main (restrained joint)	LF	2340		
13	Furnish and install 16-inch PVC water main (push)	LF	1030		
14	Furnish and install 16-inch DIP water main (restrained joint)	LF	185		
15	Abandon and grout fill existing water main	LF	4920		
16	Removal and disposal existing water main	LF	2100		
17	4-inch 45 Degree Bend	EA	4		
18	6-inch 45 Degree Bend	EA	16		
19	6-inch 22.5 Degree Bend	EA	2		
20	6-inch 11.25 Degree Bend	EA	3		
21	8-inch 45 Degree Bend	EA	2		
22	12-inch 45 Degree Bend	EA	4		
23	16-inch 11.25 Degree Bend	EA	7		
24	16-inch 22.5 Degree Bend	EA	1		
25	16-inch 45 Degree Bend	EA	34		
26	6-inch Tee	EA	1		
27	16 x 4-inch Tee	EA	1		
28	16 x 6-inch Tee	EA	4		
29	16 x 8-inch Tee	EA	1		
30	16 x 12-inch Cross	EA	1		
31	6 x 4-inch Reducer	EA	2		
32	16 x 12-inch Reducer	EA	1		
33	4-inch Gate Valve	EA	1		
34	6-inch Gate Valve	EA	5		
35	8-inch Gate Valve	EA	1		
36	12-inch Gate Valve	EA	3		
37	16-inch Gate Valve	EA	4		
38	Air Release Valve	EA	6		

**City of Deltona
 Normandy Boulevard (Section B)
 Saxon Boulevard To Fort Smith Blvd
 Bid No. ITB # PW 13-05**

<i>Item No.</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total Cost</i>
39	Fire Hydrant	EA	11		
40	1-inch Single Service - Short	EA	13		
41	1-inch Single Service - Long	EA	5		
42	1-inch Double Service - Short	EA	5		
43	1-inch Double Service - Long	EA	14		
44	4-inch Direct Connect & Fitting Assembly – Potable	EA	4		
45	6-inch Direct Connect & Fitting Assembly – Potable	EA	2		
46	8-inch Direct Connect & Fitting Assembly – Potable	EA	1		
47	12-inch Direct Connect & Fitting Assembly – Potable	EA	3		
48	Testing and Laboratory Services (Allowance)	LS	1		
SUBTOTAL UTILITY BASE BID				\$	

SUBTOTAL ROADWAY BASE BID:

(IN WORDS)

\$ _____

(IN FIGURES)

SUBTOTAL UTILITY BASE BID:

(IN WORDS)

\$ _____

(IN FIGURES)

TOTAL ROADWAY & UTILITY BASE BID:

(IN WORDS)

\$ _____

(IN FIGURES)

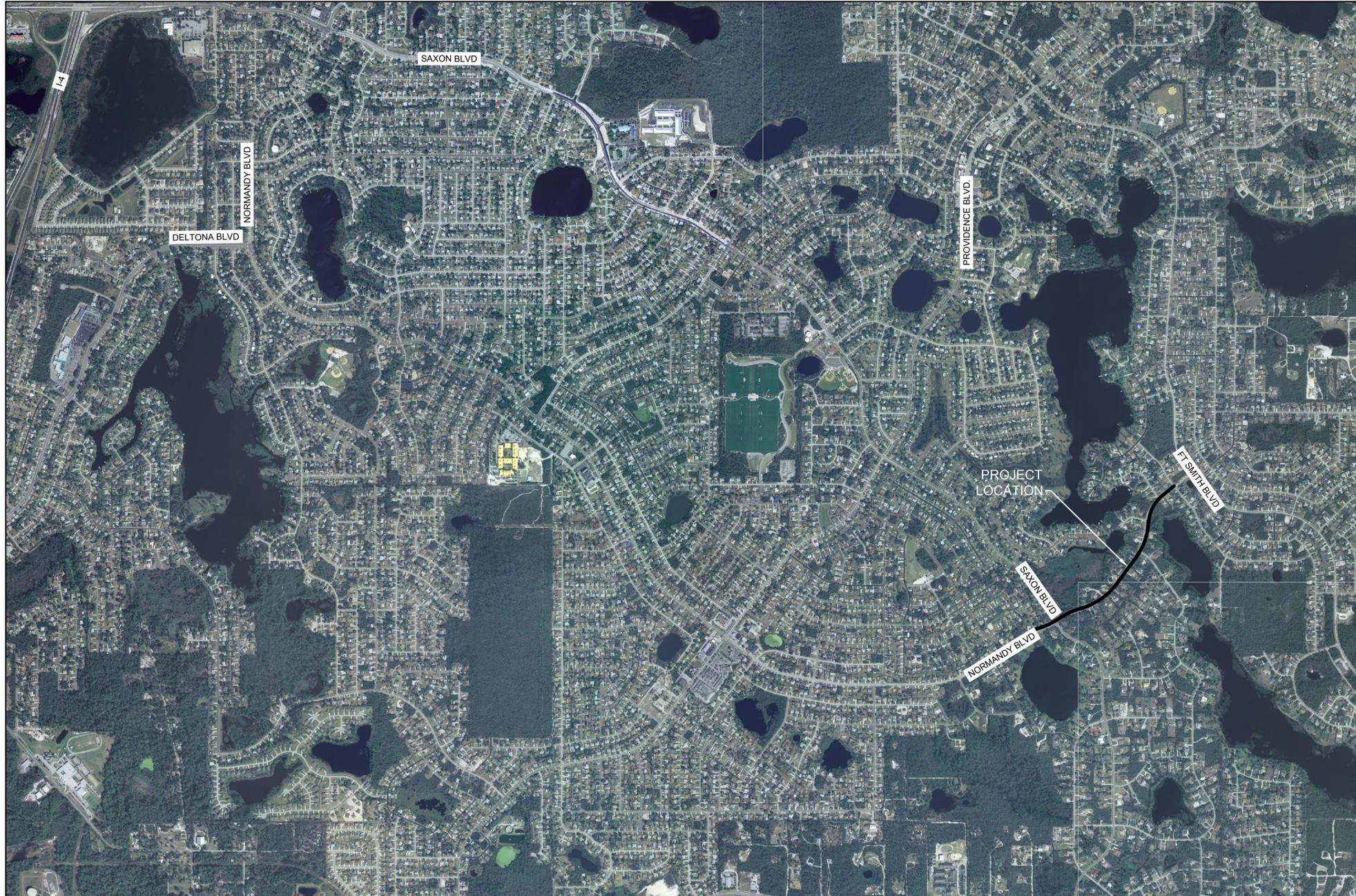
CITY OF DELTONA WATER MAIN IMPROVEMENTS NORMANDY BOULEVARD PART B

201 EAST PINE STREET, SUITE 1000
ORLANDO, FLORIDA 32801
PHONE: (407) 839-3955 FAX: (407) 839-3790



TETRA TECH

www.tetrattech.com



PROJECT LOCATION:

DELTONA, FLORIDA

Tt PROJECT No.:
200-08534-13001

CLIENT INFORMATION:

CITY OF DELTONA
255 ENTERPRISE ROAD
DELTONA, FLORIDA 32725

CLIENT PROJECT No.:

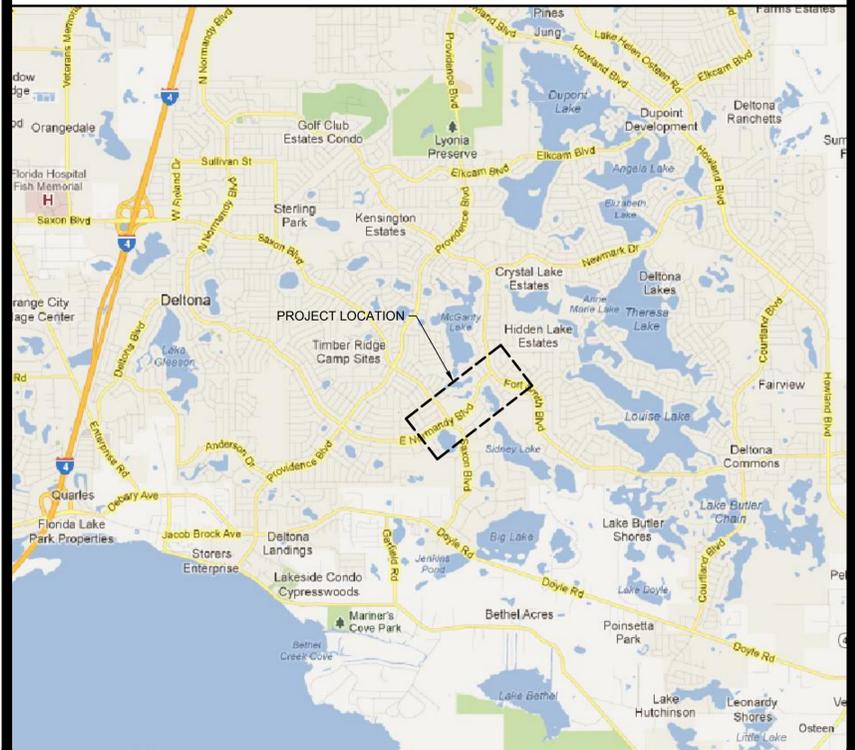
PROJECT DESCRIPTION / NOTES:

WATER MAIN REPLACEMENT ALONG:
NORMANDY BOULEVARD, STARTS 400 FT SOUTHWEST OF SAXON
BLVD AND ENDS 400 FEET SOUTHWEST OF FORT SMITH BOULEVARD

ISSUED:

BID SET

VICINITY MAP:



FOR CITY OF DELTONA

MAYOR JOHN C. MASIARCZYK, SR.	COMMISSIONERS	
VICE MAYOR ZENaida DENIZAC DISTRICT 1	WEBSTER BARNABY DISTRICT 2	FRED LOWRY DISTRICT 5
CITY MANAGER FAITH G. MILLER	HEIDI HERZBERG DISTRICT 3	CHRIS NABICHT DISTRICT 6
	NANCY SCHLEICHER DISTRICT 4	

Michael B. Saxton, P.E.
P.E. No. 71506, FL
201 East Pine Street, Suite 1000
Orlando, Florida 32801
Engineering Business No. 2429

DATE _____

GENERAL NOTES

1. ALL PIPING SHALL HAVE 3'-0" MINIMUM COVER.
2. ALL EXISTING PAVING, STABILIZED EARTH, DRIVEWAYS, CURBS, SIDEWALKS, FENCES, GRASSED AREAS, LANDSCAPING, CULVERTS, FRENCH DRAINS, ETC. DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION. RESTORATION OF GRASSED AREAS SHALL BE DONE BY SODDING. SEED-AND-MULCH IS NOT ACCEPTABLE.
3. FITTINGS MAY BE USED FOR PIPE ALIGNMENT CHANGES RATHER THAN DEFLECTING AT THE CONTRACTOR'S OPTION AND WITH NO ADDITIONAL COMPENSATION.
4. THE CONTRACTOR SHALL NOT PLACE ANY FILL MATERIAL WITHIN WETTED DITCH OR WETLAND AREAS. SILTATION FENCES SHALL BE INSTALLED BY THE CONTRACTOR BETWEEN WORK AND SUCH AREAS. SEE SHEET C503 DETAIL 3.
5. PRIOR TO BID PREPARATION, THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE OVERALL SITE CONDITIONS AND PERFORM ADDITIONAL INVESTIGATIONS AS DETERMINED NECESSARY TO UNDERSTAND THE LIMIT AND DEPTH OF EXPECTED ORGANIC SILT PEAT AREAS, ADEQUACY OF EXISTING MATERIALS TO USE AS FILL, DEWATERING REQUIREMENTS, CLEAN FILL REQUIRED FROM OFFSITE, AND MATERIALS TO BE DISPOSED OF OFFSITE, ALL OF WHICH WILL AFFECT HIS PRICING. ANY DELAY, INCONVENIENCE, OR EXPENSE CAUSED TO THE CONTRACTOR DUE TO INADEQUATE INVESTIGATION OF EXISTING CONDITIONS SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION WILL BE ALLOWED. THE MATERIALS ANTICIPATED TO BE ENCOUNTERED DURING CONSTRUCTION MAY REQUIRE DRYING PRIOR TO USE AS BACKFILL, AND THE CONTRACTOR MAY HAVE TO BRING IN MATERIALS, AT NO EXTRA COST, FROM OFFSITE TO MEET THE REQUIREMENTS FOR COMPACTION AND PROPER FILL.
6. ALL CULVERTS AND EXISTING FACILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH MATERIAL TO MATCH EXISTING.
7. ALL DRAINAGE AREAS THAT ARE CROSSED BY PIPELINES SHALL BE LEFT OPEN AT ALL TIMES EXCEPT FOR SHORT PERIODS AS MAY BE NECESSARY DURING ACTUAL CONSTRUCTION HOURS.
8. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A REGISTERED FLORIDA PROFESSIONAL LAND SURVEYOR FOR LAYOUT OF ALL WORK, FOR RESTORING ALL MONUMENTS AND PROPERTY CORNERS DISTURBED DURING CONSTRUCTION AND FOR PREPARATION OF PROJECT AS-BUILT DRAWINGS AND FOR PREPARATION OF PROJECT AS-BUILT DRAWINGS. PROOF OF REGISTRATION SHALL BE SUBMITTED TO ENGINEER.
9. THE COORDINATES AND ELEVATIONS SHOWN HEREIN ARE BASED ON INFORMATION PROVIDED BY BOYER SINGLETON & ASSOCIATES LOCATED IN THE DRAWINGS SET NAMED "NORMANDY BLVD, SAXON BLVD, TO FORT SMITH BLVD." BID PLANS DATED DECEMBER 2012. BENCH MARKS ARE SHOWN ON SHEETS C-102, C-106 AND C-108.
10. THE CONTRACTOR SHALL LOCATE ALL PIPELINES AT PROPOSED TIE-IN LOCATIONS TO VERIFY ACTUAL LOCATION, SIZE, ELEVATION, AND MATERIAL PRIOR TO ORDERING NEW MATERIALS.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE HORIZONTAL & VERTICAL LOCATION OF ANY EXISTING UTILITIES OR PIPELINES PRIOR TO CONSTRUCTION. DEPTH DEPICTED IN PROFILE VIEW ARE ASSUMED TO BE 3 FEET.
12. HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS AND WASTEWATER FORCE MAINS.
 - A) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER.
 - B) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN AND RECLAIMED WATER MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
 - C) AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN STORM SEWERS AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-TYPE SANITARY SEWERS AND WASTEWATER FORCE MAINS.
13. A MINIMUM OF ONE TRAFFIC LANE SHALL BE MAINTAINED AT ALL TIMES DURING INSTALLATION OF PIPELINE ROADWAY CROSSINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC DURING THE WORK AND FOR COORDINATION WITH THE OWNER, AS NECESSARY.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING OTHER UTILITY COMPANIES AND ARRANGING TO HAVE UTILITY POLES HELD OR RELOCATED IF DETERMINED NECESSARY FOR CONSTRUCTION. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS WHETHER OR NOT HOLDING UTILITY POLES IS DEPICTED IN THE PROJECT DRAWINGS.
15. FLORIDA LAW (F.S. 553.851) REQUIRES THAT PERSONS MAKING EXCAVATIONS IN PUBLIC AND PRIVATE STREETS, ALLEYS, RIGHT-OF-WAYS OR UTILITY EASEMENTS MUST FIRST OBTAIN INFORMATION ON LOCATION OF UNDERGROUND GAS PIPELINES.
16. LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES EXPOSED DURING CONSTRUCTION SHALL BE ACCURATELY RECORDED ON THE CONSTRUCTION DRAWINGS. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY CONFLICTS WITH PROPOSED CONSTRUCTION. THE ENGINEER AND/OR OWNER MAY WITHHOLD PROGRESS PAYMENTS IF AS-BUILT DRAWINGS ARE NOT MAINTAINED DURING CONSTRUCTION AND KEPT UP TO DATE WITH NEW AND EXISTING UTILITIES ACCURATELY RECORDED.
17. CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES (EXISTING AND PROPOSED) TO VERIFY FINAL LOCATIONS, DEPTHS, QUANTITIES AND SIZE OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.
18. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND SURVEYS BUT IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WITH PROJECT CONSTRUCTION. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS AND FEES ASSOCIATED WITH UTILITY RELOCATION AND/OR DAMAGE INCURRED DURING CONSTRUCTION WHETHER OR NOT THE UTILITY IS DEPICTED IN THE PROJECT DRAWINGS. CONTRACTOR WILL NOT BE COMPENSATED FOR ANY COSTS ASSOCIATED WITH LOST PRODUCTION DUE TO EXISTING UTILITIES WHETHER OR NOT THE UTILITY IS DEPICTED IN THE PROJECT DRAWINGS.
19. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PROPOSED FIRE HYDRANTS WITH THE CITY OF DELTONA.
20. ALL EXISTING WATER SERVICES WILL BE REMOVED, REPLACED, AND RECONNECTED TO EXISTING CUSTOMERS WATER SERVICES WITH NEW SERVICES INCLUDING METERS AND METER BOXES TO FINISHED GRADE. SERVICE METERS SHALL BE NEPTUNE T-10; METER BOXES SHALL BE NDS-PRO SERIES, DOUBLE-D1500, SINGLE-D1200, MODEL 125B000 OR MODEL 121BC000. EXISTING METERS LOCATED WITHIN SIDEWALKS OR DRIVEWAYS SHALL BE RELOCATED OUT OF SIDEWALKS AND DRIVEWAYS. EXISTING METER BOXES SHALL BE REMOVED AND CONCRETE SHALL BE REPAIRED. (REPLACE 4'X4' SIDEWALK MINIMUM).
21. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION, QUANTITY AND TYPE (LONG OR SHORT & SINGLE OR DOUBLE) OF ALL EXISTING AND PROPOSED WATER SERVICES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL MEET WITH THE CITY TO DETERMINE QUANTITIES OF ALL EXISTING AND PROPOSED WATER SERVICES.
22. IF FIELD CONDITIONS REQUIRE, THE LOCATION OF PROPOSED MAINS CAN BE ADJUSTED WITHIN THE RIGHT OF WAY WITH THE APPROVAL OF THE ENGINEER AND OWNER. THE DISTANCE FROM THE OUTSIDE EDGE OF THE MAIN AND THE RIGHT OF WAY SHALL BE GREATER THAN OR EQUAL TO 4 FEET.
23. IF FIELD CONDITIONS PERMIT, CONTRACTOR SHALL DEFLECT THE PROPOSED MAINS ABOVE CROSS PIPE CONFLICTS, i.e. STORM DRAINS AND SEWER LATERALS, INSTEAD OF BELOW, UNLESS AN INTERMEDIATE HIGH POINT IS CREATED.
24. EACH BACTERIOLOGICAL SAMPLE POINT SHALL BE EQUIPPED WITH A CORPORATION STOP, DISCHARGE PIPE, AND ABOVE-GRADE VALVE. FOLLOWING PASSAGE OF BACTERIOLOGICAL TESTING, THE CONTRACTOR SHALL REMOVE THE CORPORATION STOP AND PLUG THE CONNECTION.
25. CONTRACTOR WATER MAIN CLEARANCE PACKAGES SHALL CONTAIN AS-BUILT DRAWINGS SIGNED AND SEALED BY A LICENSED SURVEYOR, PASSING BACTERIOLOGICAL TEST REPORTS, AND PRESSURE TEST FORMS SIGNED BY THE CITY PROJECT INSPECTOR. SUBMITTALS SHALL INCLUDE FOUR (4) HARD COPY SETS INCLUDING THE ORIGINAL PASSING BACTERIOLOGICAL SAMPLE REPORTS AND ONE (1) CD CONTAINING ELECTRONIC FILES OF AS-BUILT DRAWINGS IN AUTOCAD FORMAT. AS-BUILT DRAWINGS SHALL DEPICT THE INFORMATION REQUIRED IN THE CONTRACT DOCUMENTS ALONG WITH THE LOCATIONS OF THE BACTERIOLOGICAL SAMPLES LABELED TO CORRESPOND TO THE BACTERIOLOGICAL SAMPLE REPORTS. FAILURE OF THE CONTRACTOR TO PROVIDE THE REQUIRED INFORMATION OR SUBMISSION OF POOR QUALITY AS-BUILT DRAWINGS WILL COUNT AS AN APPLICATION REVIEW. POOR QUALITY AS-BUILT DRAWINGS WILL BE RETURNED WITH COMMENTS ONE (1) TIME AND SUBSEQUENT REVIEWS OF POOR QUALITY AS-BUILT DRAWINGS SUBMITTED BY THE CONTRACTOR WILL BE COUNTED AS ONE (1) APPLICATION REVIEW PER INSTANCE AND THE CITY AND ENGINEER WILL DEDUCT REVIEW, HANDLING, AND DIRECT COSTS FROM THE CONTRACTOR'S PROGRESS PAYMENT APPLICATIONS AND/OR PROJECT RETAINAGE. THE PROJECT MANUAL AND/OR THE DRAWINGS WILL SPECIFY THE CONTRACTOR'S RESPONSIBILITIES AND ESTIMATED COSTS. PARTIAL SUBMITTALS WILL NOT BE REVIEWED. PARTIAL CLEARANCES SHALL BE FOR A STREET IN ITS ENTIRETY INCLUDING BRANCHING STREETS AT MINIMUM UNLESS APPROVED IN WRITING BY THE ENGINEER PRIOR TO SUBMITTAL.
26. CONTRACTOR SHALL COORDINATE LIMITS OF REMOVAL AND REPLACEMENT OF ASPHALT AND CONCRETE WITH CITY OF DELTONA AND THE ENGINEER.
27. CONTRACTOR WILL BE REQUIRED TO INSTALL AIR RELEASE VALVES OR FIRE HYDRANTS AT NO ADDITIONAL COST TO THE OWNER AT ALL HIGH POINTS CREATED BY THE CONTRACTORS INSTALLATION AS DETERMINED BY THE ENGINEER AND THE CITY OF DELTONA.
28. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION, QUANTITY AND TYPE OF ALL EXISTING SEWER LATERALS/SERVICES AND RELOCATE THEM AS NECESSARY TO ACCOMMODATE THE PROPOSED PROJECT. RELOCATION OF SEWER LATERALS/SERVICES 12" BELOW THE PROPOSED WATER MAIN IS PREFERRED.
29. CONTRACTOR SHALL RESTRAIN ALL EXISTING UTILITIES AS NEEDED IN ACCORDANCE WITH DETAIL 2 DRAWING C501.
30. ALL PROPOSED PIPE AND FITTINGS SHALL BE MECHANICAL JOINT UNLESS OTHERWISE NOTED.
31. RESTRAINED JOINTS FOR PVC PIPE SHALL BE MANUFACTURED RESTRAINED JOINTS.
32. ASBESTOS CEMENT (AC), DUCTILE IRON, AND PVC WATERMAIN IN CONFLICT WITH PROPOSED DRAINAGE IMPROVEMENTS (STRUCTURES, PIPES, ETC) SHALL BE REMOVED IN ACCORDANCE WITH SPECIFICATIONS 01100, 02050 AND 02080.

DRAWING INDEX

SHEET LIST TABLE	
Sheet Number	Sheet Title
--	COVER
G002	GENERAL NOTES AND DRAWING INDEX
G003	LEGEND AND ABBREVIATIONS
G004	KEYPLAN
C101	PLAN AND PROFILE - STATION 9+00 TO 14+00
C102	PLAN AND PROFILE - STATION 14+00 TO 18+00
C103	PLAN AND PROFILE - STATION 18+00 TO 22+50
C104	PLAN AND PROFILE - STATION 22+50 TO 27+00
C105	PLAN AND PROFILE - STATION 27+00 TO 31+50
C106	PLAN AND PROFILE - STATION 31+50 TO 36+00
C107	PLAN AND PROFILE - STATION 36+00 TO 40+00
C108	PLAN AND PROFILE - STATION 40+00 TO 44+00
C109	PACO CT. & ECHO CT. WATER MAIN
C501	DETAILS
C502	DETAILS
C503	DETAILS
C504	DETAILS

PIPING MATERIAL SCHEDULE											
MARK	SERVICE	BURIED PIPE			BURIED FITTINGS		BELOW ROADWAY PIPE		BELOW ROADWAY FITTINGS		
		MATERIAL	CLASS	LINING	MATERIAL	LINING	MATERIAL	CLASS	LINING	MATERIAL	LINING
WM	POTABLE WATER	PVC	DR-18	N/A	DI	CEMENT	DI	250	CEMENT	DI	CEMENT

NOTES:

1. ALL PIPE LINING, INCLUDING ANY MATERIAL WHICH COMES INTO CONTACT WITH POTABLE WATER SHALL BE NSF (STANDARD 61) APPROVED FOR USE WITH POTABLE WATER.
2. BELOW GROUND PIPE SHALL BE "BLUE", COLOR OR STRIPES AS SPECIFIED IN SECTION 9905 FOR THE POTABLE WATER MAINS.
3. DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE TWENTY-FIVE (25) FEET ON EACH SIDE OF ANY PERPENDICULAR CROSSING OF METALLIC GAS MAINS OR ANY OTHER CATHODICALLY PROTECTED PIPELINE AND FOR LOCATIONS PARALLEL TO AND WITHIN TEN FEET OF METALLIC GAS MAINS OR OTHER CATHODICALLY PROTECTED PIPE AND THROUGH THE AREA OF INFLUENCE OF CATHODIC PROTECTION ANODE BED.
4. PIPE CLASS SHALL MEET SPECIFICATION 15050.

48 HOURS BEFORE DIGGING

CALL
TOLL FREE
1-800-432-4770
SUNSHINE STATE ONE CALL CENTER

TETRA TECH



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DATE

MARK	DATE	DESCRIPTION	BY

CITY OF DELTONA
 NORMANDY BOULEVARD
**GENERAL NOTES
AND DRAWING INDEX**

Project No.: 200-08534-13001
 Designed By: MBS
 Drawn By: PD
 Checked By: MAD

G002

LIST OF STANDARD ABBREVIATIONS

A AAP ALARM ANNUNCIATOR PANEL AARV AUTOMATIC AIR RELEASE VALVE AAV AUTOMATIC AIR VENT AB ANCHOR BOLT ABAN ABANDON(ED) ABRSV ABRASIVE ABS ACRYLONITRILE BUTADIENE STYRENE ABV ABOVE AC ALTERNATING CURRENT ACCOMP ASPHALT-COATED CORRUGATED METAL PIPE ACP ASBESTOS CEMENT PIPE ADDM ADDENDUM ADH ADHESIVE AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AFS ABOVE FINISHED SLAB AHD AHEAD AL ALUMINUM ALT ALTERNATE AMP AMPERE AMT AMOUNT APRX APPROXIMATE(LY) ARCH ARCHITECTURAL ARV AIR RELEASE VALVE AS ALUM SOLUTION ASPH ASPHALT ASSY ASSEMBLY AVE AVENUE A/C AIR CONDITIONING A/VV AIR/VACUUM AIR VALVE	B BAF BAFFLE BCV BALL CHECK VALVE BF BLIND FLANGE BFV BUTTERFLY VALVE BHP BRAKE HORSEPOWER BI BLACK IRON BITUM BITUMINOUS OR BITUMASTIC BASELINE BLDG BUILDING BLK BLOCK BM BENCH MARK BOC BACK OF CURB BOT BOTTOM BP BASE PLATE BRG BEARING BSP BLACK STEEL PIPE BV BALL VALVE BW BOTH WAYS BWW BACKWASH WATER	C CAP CAPACITY CA COMPRESSED AIR CAV COMBINATION AIR VALVE CB CATCH BASIN CCC CHLORINE CONTACT CHAMBER CE CHLORINATED EFFLUENT CFM CUBIC FEET PER MINUTE CFS CUBIC FEET PER SECOND CV CHECK VALVE CI CAST IRON CIP CAST IRON PIPE CISP CAST IRON SOIL PIPE CJ CONSTRUCTION JOINT CKT CIRCUIT CL CENTER LINE CL2 CHLORINE GAS CLF CHAIN LINK FENCE CLR CLEAR OR CLEARANCE CLVT CULVERT CMP CORRUGATED METAL PIPE CMPA CORRUGATED METAL PIPE ARCH CMU CONCRETE MASONRY UNIT COND CONDUIT CNR CORNER CO CLEAN OUT CO2 CARBON DIOXIDE COAG COAGULANT COL COLUMN COM COMMON CONC CONCRETE CONN CONNECTION CONSTR CONSTRUCTION(ION) CONT CONTINUOUS CONTR CONTRACT(OR) COORD COORDINATE CO COMPANY CP CONCRETE PIPE CPA CONCRETE PIPE ARCH CPLG COUPLING CPVC CHLORINATED POLYVINYL CHLORIDE CR CONCENTRIC REDUCER CS CHLORINE SOLUTION CSG CASING CTV CABLE TELEVISION CY CUBIC YARD CYL CYLINDER C&G CURB AND GUTTER CC CENTER TO CENTER	D DAT DATUM DBL DOUBLE DC DIRECT CURRENT DEMO DEMOLITION DEPT DEPARTMENT DESC DESCRIPTION DET DETAIL DF DIESEL FUEL DI DUCTILE IRON DIA DIAMETER DIFF DIFFUSER DIM DIMENSION DIP DUCTILE IRON PIPE DISCH DISCHARGE DIR DIRECTION DMH DROP MANHOLE DN DOWN DR DRAIN DV DIAPHRAGM VALVE DRIVEWA DRIVEWAY DWG DRAWING	E E EACH ECC ECCENTRIC EF EACH FACE EFF EFFLUENT E/L EASEMENT LINE EL ELEVATION ELAST ELASTOMERIC ELEC ELECTRICAL EMER EMERGENCY EMC ENCASE(MENT) ENGR ENGINEER EP EDGE OF PAVEMENT EPDM ETHYLENE PROPYLENE DIENE MONOMER EPRF EXPLOSION PROOF EQUIPMENT ER ECCENTRIC REDUCER ESTM EASEMENT EST ESTIMATE(D) EW EACH WAY EXC EXCAVATE EXP EXPANSION EXST EXISTING EXST GR EXISTING GRADE EXT EXTERIOR EXTN EXTENSION	F FAB FABRICATE(D) FCA FLANGED COUPLING ADAPTER FB FLAT BAR FCV FLOW-CONTROL VALVE FD FLOOR DRAIN FDN FOUNDATION FE FILTERED EFFLUENT FHY FIRE HYDRANT FIG FIGURE FIN FINISHED FIN FLR FINISH FLOOR FIN GR FINISH GRADE FL FLUORIDE FLG FLANGE(D) FLW FLOW LINE FLTR FILTER FM FORCE MAIN FPM FEET PER MINUTE FPS FEET PER SECOND FRP FIBERGLASS REINFORCED PLASTIC FT FOOT OR FEET FUT FUTURE FV FOOT VALVE FW FINISHED WATER FWP FACTORY WIRE PANEL FIF FACE TO FACE	G GA GAUGE GAL GALLON(S) GALV GALVANIZED GALVZ GALVANIZED IRON PIPE GIP GROOVE JOINT GND GROUND GPD GALLONS PER DAY GPH GALLONS PER HOUR GPM GALLONS PER MINUTE GPS GALLONS PER SECOND GR GRADE GRTG GRATING GS GALVANIZED STEEL GSP GALVANIZED STEEL PIPE GSR GROUND STORAGE RESERVOIR GST GROUND STORAGE TANK GT GROUT GV GAS VALVE	H HB HOSE BIBB HD HEAVY-DUTY HDPE HIGH-DENSITY POLYETHYLENE HDR HYDRAULIC HFA HYDROFLUOSILICIC ACID HGR HANGER HGT HEIGHT HNDRL HAND RAIL HOA HAND-OFF-AUTO HORIZ HORIZONTAL HP HORSEPOWER HPA HIGH PRESSURE AIR HR HOUR HVAC HEATING, VENTILATION, AND AIR CONDITIONING HWL HIGH WATER LEVEL HWY HIGHWAY HZ HERTZ	I ID INSIDE DIAMETER IN INCH(ES) INCHV INCH VALVE INF INFLUENT INT INTERSECTION INTR INTERIOR INV INVERT IP IRON PIPE IPS INTERNATIONAL PIPE STANDARD IR INTERNAL RECYCLE IW IRRIGATION WATER	J JB JOINT BOX JT JOINT	K K KIP (1,000 LB) KPL KICK PLATE KV KILOVOLT KVA KILOWATT-AMPERE KW KILOWATT KWH KILOWATT-HOUR	L L LEFT LAB LABORATORY LAM LAMINATE OR LAMINATION LATL LATERAL	M M METER MAINT MAINTAIN OR MAINTENANCE MANUAL(LY) MAS MASONRY MATL MATERIAL MAX MAXIMUM MCC MOTOR CONTROL CENTER ME MITERED END MECH MECHANICAL MEG MATCH EXISTING GRADE MFR MANUFACTURER(R) MG MILLION GALLONS MGD MILLION GALLONS PER DAY MH MANHOLE MI MILE(S) MIN MINIMUM, MINUTE(S) MISC MISCELLANEOUS MJ MECHANICAL JOINT ML MIXED LIQUOR MO MASONRY OPENING MON MONUMENT MPH MILES PER HOUR MPT MALE PIPE THREAD MS MOTOR STARTER MSP MOTOR STARTER PANEL MTD MOUNTED MV MOTORIZED VALVE MW MANWAY MWW MEAN WATER LEVEL MWP MAXIMUM WORKING PRESSURE	N N NORTH NaOCI SODIUM HYPOCHLORITE NE NORTH EAST NIC NOT IN CONTRACT NO NUMBER NOM NOMINAL NPT NATIONAL PIPE THREAD NPT NATIONAL PIPE TAPER (THREAD) NPW NON-POTABLE WATER NRS NON-RISING SYSTEM NTS NOT TO SCALE NW NORTHWEST N/A NOT APPLICABLE	O O2 OXYGEN OC ON CENTER OD OUTSIDE DIAMETER ODP OPEN DRIP PROOF ODV OUTSIDE FACE OH OVER HEAD OHV OVER HEAD WIRE OPP OPPOSITE OPT OPTIONAL OR OFFICIAL RECORDS OSY OUTSIDE SCREW AND YOKE O&M OPERATION AND MAINTENANCE	P PA PROCESS AIR PC POINT OF CURVE PCM PERMANENT CONTROL MONUMENT PE PLAIN END PG PRESSURE GAGE PI POINT OF INTERSECTION PL PLATE PL PROPERTY LINE PNV PINCH VALVE POB POINT OF BEGINNING POJ PUSH-OFF JOINT POL POLYMER PP POWER POLE PPD POUNDS PER DAY PPM PARTS PER MILLION PREFAB PREFABRICATED PRESS PRESSURE PRV PRESSURE REDUCING VALVE PRW PROCESS WATER PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PSIA POUNDS PER SQUARE INCH ABSOLUTE PSIG POUNDS PER SQUARE INCH GAGE	R RAD RADIUS RAS RETURN ACTIVATED SLUDGE RC REINFORCED CONCRETE RCB REINFORCED CONCRETE BOX RCP REINFORCED CONCRETE PIPE RCPA ARCH	R RD ROAD RDCR REDUCER REBAR REINFORCING STEEL REF REFERENCE REIN REINFORCING(ING)(MENT) REM REMOVE(ABLE) REQ'D REQUIRED RF RAISED FACE RJ RESTRAINED JOINT RM ROOM RPPB REDUCED PRESSURE BACKFLOW PREVENTER	S S SOUTH SA SAMPLE LINE SAN SANITARY SCHED SCHEDULE SD STORM DRAIN SE SOUTHEAST SECT SECTION SEFF SECONDARY EFFLUENT SF SQUARE FOOT OR FEET SHT SHEET(ED)(ING) SIG SIGNAL SIM SIMILAR SL SLUDGE SLV SLEEVE SM SHEET METAL SOLN SOLUTION SP SOIL PIPE, SPACE(ING) SPEC SPECIFICATION SPT SUPPORT SQ SQUARE SS SANITARY SEWER SSE SUBSTANDARD EFFLUENT SST STAINLESS STEEL ST STREET STA STATION STD STANDARD STK STAKE STL STEEL STR STRAIGHT STRUCT STRUCTURAL SURFACE SV SOLENOID VALVE SWC SERVICE WATER SW SOUTHWEST SWD SIDEWATER DEPTH SWSH SURFACE WASH SYM SYMBOL SYMM SYMMETRICAL SW SIDEWALK	T TAN TANGENT TB TOP OF BEAM TBM TEMPORARY BENCH MARK TB-xx TEST BORING-xx (e.g. TB-1) TD TRENCH DRAIN TDH TOTAL DYNAMIC HEAD TE TOTALLY ENCLOSED TEFC TOTALLY ENCLOSED FAN COOLED TELEPHONE TEL TELEPHONE TENV TOTALLY ENCLOSED NON-VENTILATED THD THREADED THK THICK(NESS) TLM TELEMETRY TOB TOP OF BANK TOC TOP OF CURB TOS TOE OF SLOPE TOT TOTAL TP TELEPHONE POLE TS THICKENED SLUDGE TV TELEVISION TYP TYPICAL T&B TOP AND BOTTOM	U UD UNDERDRAIN UG UNDERGROUND ULT ULTIMATE UN UNION UN UNLESS OTHERWISE NOTED UGE UNDERGROUND ELECTRIC UTC UNDERGROUND TELEPHONE CABLE UTIL UTILITY	V V VOLT(S) VAC VACUUM VAR VARIES VC VERTICAL CURVE VCP VITRIFIED CLAY PIPE VEL VELOCITY VERT VERTICAL VFD VARIABLE FREQUENCY DRIVE VOL VOLUME	W W WATT WAS WASTE ACTIVATED SLUDGE WCO WALL CLEAN OUT WF WIDE FLANGE WH WALL HYDRANT WL WATER LINE WM WATER MAIN WP WATER PROOF(ING), WORKING POINT WPR WORKING PRESSURE WS WATER SURFACE WSP WELDED STEEL PIPE WT WEIGHT WTP WATER TREATMENT PLANT WW WASH WATER WWF WELDED WIRE FABRIC WWM WELDED WIRE MESH WWTP WASTEWATER TREATMENT PLANT W/ WITH W/O WITHOUT	X XFER TRANSFER	Y YD YARD(S) YH YARD HYDRANT YR YEAR(S) YR
--	--	---	--	--	---	--	--	---	--------------------------------------	--	--	--	--	---	---	---	--	---	---	---	--	--	---------------------------	--

PIPING LEGEND

FITTING/ APPURTENANCE	FLANGED				MECHANICAL JOINT				GROOVE JOINT				SOLVENT WELD			
	SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE	
	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
BEND																
TEE																
WYE																
REDUCER																
CAP/ BLIND FLANGE					N/A	N/A	N/A	N/A								
PLUG	N/A	N/A	N/A	N/A					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BUTTERFLY VALVE																
BALL VALVE					N/A	N/A	N/A	N/A								
CHECK VALVE					N/A	N/A	N/A	N/A								
GATE VALVE																
PLUG VALVE																
AUTOMATIC CONTROL VALVE					N/A	N/A	N/A	N/A								
PINCH VALVE					N/A	N/A	N/A	N/A								

CIVIL LEGEND

BASILINE		STA XX
PROPERTY LINE		R/W
RIGHT OF WAY		E
EASEMENT LINE		
BENCH MARK		EL
CONTROL ELEVATION		XX EL
MONUMENT		
EXISTING SPOT ELEVATION		EL
FINISH SPOT ELEVATION		EL
EXISTING CONTOUR		
FINISH CONTOUR		
JURISDICTIONAL WETLAND		
BOUNDARY LINE		
EMBANKMENT		
SURFACE DRAINAGE		
FENCE		
TEMPORARY CONSTRUCTION EASEMENT		TCE
TOP OF BANK		TOB
EDGE OF WATER		EOW
SILT FENCING		
MISCELLANEOUS UTILITY		
BURIED TELEPHONE		B T
BURIED FIBER OPTIC		B F O
OVERHEAD ELECTRIC		O E

a. WM = WATER MAIN
 b. FM = FORCE MAIN
 c. SS = SANITARY SEWER
 d. SD = STORM DRAIN
 e. GAS = NATURAL GAS
 f. CTV = CABLE TELEVISION
 g. UEC = UNDERGROUND ELECTRIC CABLE OR CONDUIT
 h. UED = UNDERGROUND ELECTRIC DUCT
 i. UTC = UNDERGROUND TELEPHONE CABLE OR CONDUIT
 j. UTD = UNDERGROUND TELEPHONE DUCT
 k. FOC = FIBER OPTIC CABLE
 l. UGT = UNDERGROUND TELEPHONE
 m. TYP = TELEPHONE MANHOLE
 n. MW = MONITOR WELL
 o. WM = WATER METER
 p. WV = WATER VALVE
 q. GV = GAS VALVE
 r. TSCB = TRAFFIC SIGNAL CONTROL BOX
 s. XFER = TRANSFER
 t. YD = YARD(S)
 u. YH = YARD HYDRANT
 v. YR = YEAR(S) YR

REFERENCE SYMBOLS

 DENOTES SECTION LETTER IDENTIFICATION DENOTES DRAWING NO WHERE SECTION IS LOCATED SECTION REFERENCE	 DENOTES DETAIL NUMBER IDENTIFICATION DENOTES DRAWING NO WHERE DETAIL IS LOCATED DETAIL REFERENCE
 DENOTES SECTION LETTER IDENTIFICATION DENOTES DRAWING NO WHERE SECTION IS LOCATED SECTION TITLE	 DENOTES DETAIL NUMBER IDENTIFICATION DENOTES DRAWING NO WHERE DETAIL IS LOCATED DETAIL TITLE

HATCHING LEGEND

	ASPHALT OR CONCRETE SURFACE (SIDEWALK OR ROADWAY)		PRECAST CONCRETE
	ROADWAY/SIDEWALK OPEN CUT RESURFACE		GROUT
	SODDED OR SEEDDED AND MULCHED AREA		CONCRETE UNIT MASONRY
	EARTH		STEEL
	EXISTING PIPES, STRUCTURES, EQUIPMENT TO BE REMOVED		ALUMINUM
	CAST-IN-PLACE CONCRETE		GRATING
	DELINEATED WETLAND		

MECHANICAL/DRAFTING LEGEND

	VISIBLE LINE		PROPOSED
	HIDDEN LINE		
	CENTER LINE		
	LONG BREAK LINE		
	SHORT BREAK LINE		
	DIMENSION LINES AND LEADERS		
	PHANTOM LINE		

TETRA TECH
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Michael B. Skarzon, P.E.
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 Orlando, Florida 32801
 Engineering Business No. 2429

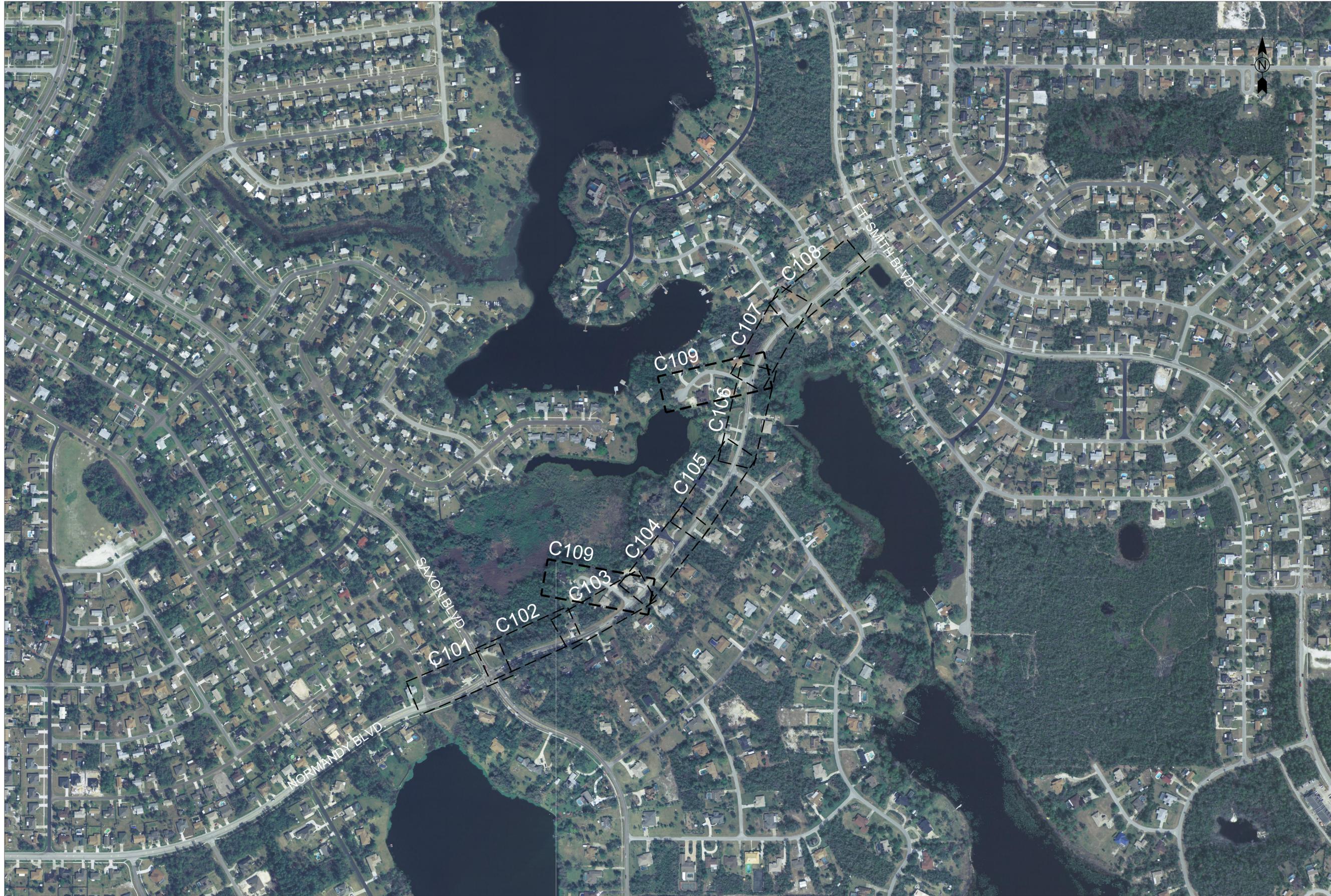
BY	DATE	DESCRIPTION

CITY OF DELTONA
 NORMANDY BOULEVARD
LEGEND AND ABBREVIATIONS

Project No.: 200-08534-13001
 Designed By: MBS
 Drawn By: PD
 Checked By: MAD

G003
 Bar Measures 1 inch

19/2013 9:17:02 AM - P:\MER08534\200-08534-13001\CAD\SHEETFILES\COVER & G004 KEYPLAN.DWG - LOPEZ, HERNAN



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MARK	DATE	DESCRIPTION	BY

CITY OF DELTONA
 NORMANDY BOULEVARD
 KEYPLAN

Project No.: 200-08534-13001
 Designed By: MBS
 Drawn By: PD
 Checked By: MAD

G004
 Bar Measures 1 inch

CITY OF DELTONA WATER MAIN IMPROVEMENTS NORMANDY BOULEVARD PART B

201 EAST PINE STREET, SUITE 1000
ORLANDO, FLORIDA 32801
PHONE: (407) 839-3955 FAX: (407) 839-3790



TETRA TECH

www.tetrattech.com

PROJECT LOCATION:

DELTONA, FLORIDA

Tt PROJECT No.:
200-08534-13001

CLIENT INFORMATION:

CITY OF DELTONA
255 ENTERPRISE ROAD
DELTONA, FLORIDA 32725

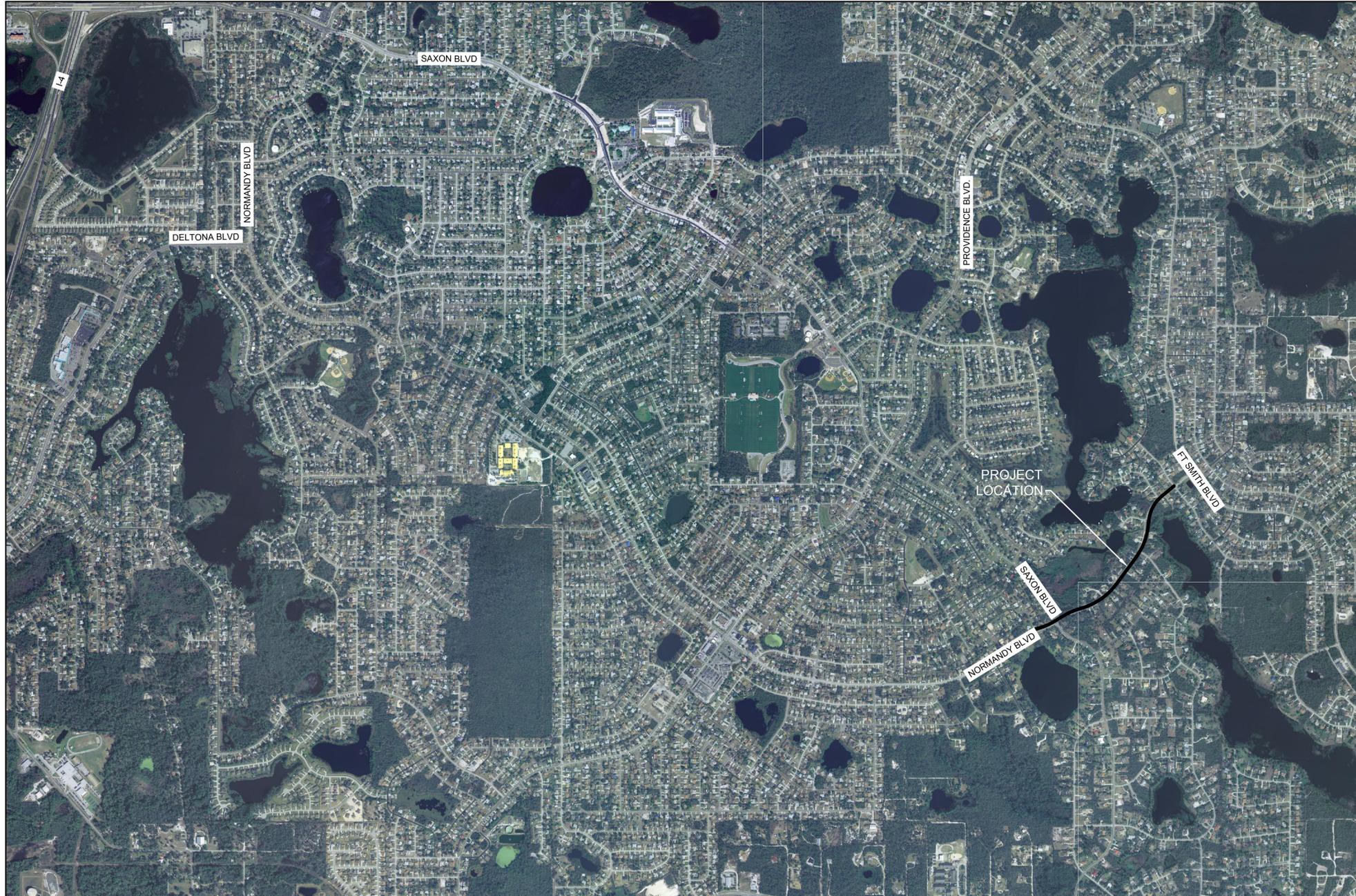
CLIENT PROJECT No.:

PROJECT DESCRIPTION / NOTES:

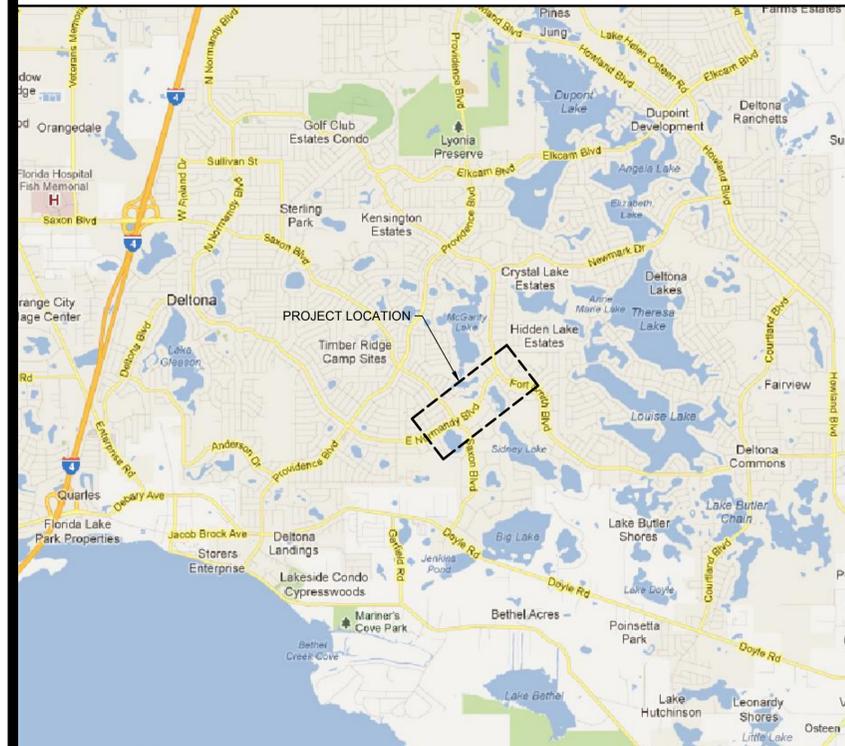
WATER MAIN REPLACEMENT ALONG:
NORMANDY BOULEVARD, STARTS 400 FT SW OF SAXON BLVD
AND ENDS 400 FEET SW OF FORT SMITH BOULEVARD

ISSUED:

BID SET



VICINITY MAP:



FOR CITY OF DELTONA

MAYOR JOHN C. MASIARCZYK, SR.	COMMISSIONERS	
VICE MAYOR ZENaida DENIZAC DISTRICT 1	WEBSTER BARNABY DISTRICT 2	FRED LOWRY DISTRICT 5
CITY MANAGER FAITH G. MILLER	HEIDI HERZBERG DISTRICT 3	CHRIS NABICHT DISTRICT 6
	NANCY SCHLEICHER DISTRICT 4	

Michael B. Saxton, P.E.
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Orlando, Florida 32801
Engineering Business No. 2429

DATE _____

**ADDENDUM # 5
CITY OF DELTONA
BID # PW 13-05
February 27, 2013**

NORMANDY BOULEVARD – SECTION “B” ROADWAY IMPROVEMENTS

This addendum is to announce the extension of the bid due date of this solicitation.

The bid due date has been changed. The bid due date is now Monday, March 4, 2013 at 2:00 p.m. This is to allow for an additional addendum to be posted identifying additional changes to the scope of work. It is anticipated that addendum # 6 will be posted within the next 24 hours.

All prospective bidders are hereby instructed not to contact the Engineer of Record or any member of the City of Deltona Commission, City Manager, or City of Deltona Staff members other than the noted contact person regarding this Invitation to Bid or their bid proposal at any time during the solicitation or award process. Any such contact shall be cause for rejection of your bid proposal.

All inquiries are to be directed to the Purchasing Agent for the Public Works Division at the City of Deltona. Contact for this solicitation is: Brian Boehs, Purchasing Agent. Email address is bboehs@deltonafl.gov. Phone is 386-878-8955.

ALL OTHER SPECIFICATIONS AND CONDITIONS REMAIN UNCHANGED.

RECEIPT OF THIS ADDENDUM IS HEREBY ACKNOWLEDGED

NAME OF BUSINESS

BY: _____
SIGNATURE/DATE

NAME & TITLE, TYPED OR PRINTED

MAILING ADDRESS

CITY, STATE, ZIP CODE

**ADDENDUM #6
CITY OF DELTONA
BID #PW 13-05
February 27, 2013**

NORMANDY SECTION B ROAD WIDENING/UTILITY RELOCATE

**This addendum includes the following:
Questions / Responses, Clarifications and Revised Drawings.**

Questions / Responses:

- Question: Will the storm pipe require a video inspection per FDOT?
Response: Yes, a video inspection of the storm drainage system will be required.
- Question: Will this inspection require laser profiling of installed pipe?
Response: No, laser profiling of the storm drainage system is not required.
- Question: In Utility Bid Item No. 48, Testing and Laboratory Services (Allowance), is this allowance to be determined by the City? If so, what amount?
Response: The measurement and payment for Testing and Laboratory Services, bid item 48, is explained under measurement and payment item 14 of the Tetra Tech Technical Specifications Section 01025. The testing allowance is listed under Tetra Tech Technical Specifications Section 01410 as \$5,000.00 for density testing related to the water main installation.

Clarifications:

1. The contractor shall be responsible for obtaining a NPDES Stormwater Permit.

Operators of construction activities must obtain coverage under an NPDES stormwater permit and implement appropriate pollution prevention techniques to minimize erosion and sedimentation and properly manage stormwater. The majority of construction activities requiring an NPDES stormwater permit will likely qualify for an NPDES permit for construction. A generic permit is a general permit issued by DEP under the authority of [Section 403.0885, Florida Statutes \(F.S.\)](#), which is the provision authorizing the State to implement the NPDES program.

CGP Requirements:

- A **CGP Notice of Intent (NOI) | Word** (DEP Form 62-621.300(4)(b)) must be submitted online using [Interactive Notice of Intent \(iNOI\)](#) or by paper copy to the [NPDES Stormwater Notices Center](#) to obtain permit coverage.
- A **stormwater pollution prevention plan (SWPPP)** must be developed and implemented to be in compliance with the permit.

<http://www.dep.state.fl.us/water/stormwater/npdes/construction3.htm>

2. "Water main specifications have been provided as part of the original bid package. The Water Main Improvements Normandy Boulevard Part B Construction Plans completed by Tetra Tech have been provided in Addendum #4. The Tetra Tech plans and specifications are part of the contract documents. Please note: there is additional water main work on side streets beyond the limits of the roadway project. The water main shown in the Normandy Boulevard Part B roadway plans is for clarity and coordination with the roadway work only."

**ADDENDUM #6
CITY OF DELTONA
BID #PW 13-05
February 27, 2013**

NORMANDY SECTION B ROAD WIDENING/UTILITY RELOCATE

Revised Drawings: Tetra Tech Plans

Tetra Tech Drawing G002 –
Please insert the following notes:

General Notes for Work Conducted within Volusia County R/W:

1. Driving and/or Staging of construction vehicles is not permitted on any sidewalks in the Right-Of-Way. Any damage to sidewalks will be repaired and/or replaced in like kind by the Contractor.
2. Any road, lane or sidewalk closure requires review and approval in advance and a seven (7) day minimum notice to Volusia County Traffic Operations (386-239-6535).
3. All existing sidewalks within County Rights of Way shall remain open or provision of a temporary walkway shall be provided in accordance with version 2010 of Florida Department of Transportation Standard Index #660 *“Mid Block Closure with Temporary Walkway”* unless otherwise approved by the County Traffic Engineer. Please Note that Index #660 must be shown on the use permit plans.
4. No trench or excavation shall be left open or unattached overnight, unless the excavations within the clear zone of the roadway meet the drop off criteria of the 2010 Florida Department of Transportation Design Standards (Index 600) *“Of Properly Barricaded and Secured Excavations”*, including all equipment and materials.
5. All disturbed areas within the County Right of Way shall be sodded. Seed and Mulch is not acceptable.

Tetra Tech Drawing C503 –
Detail 1 and Detail 2 have been revised.

**ALL OTHER SPECIFICATIONS AND CONDITIONS REMAIN UNCHANGED
RECEIPT OF THIS ADDENDUM IS HEREBY ACKNOWLEDGED**

NAME OF BUSINESS

BY SIGNATURE / DATE

NAME & TITLE, TYPED OR PRINTED

MAILING ADDRESS

CITY, STATE, ZIP CODE

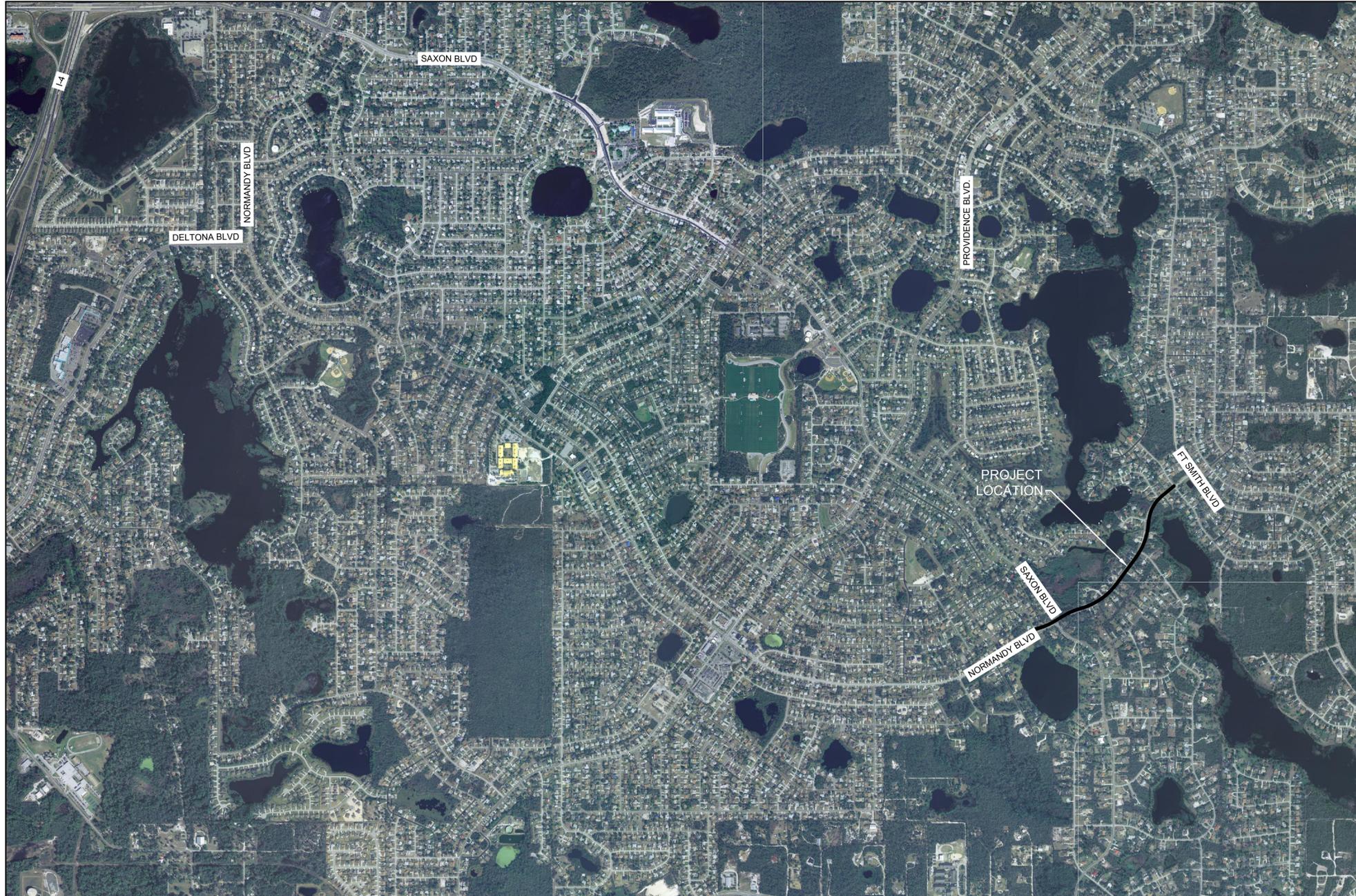
CITY OF DELTONA WATER MAIN IMPROVEMENTS NORMANDY BOULEVARD PART B

201 EAST PINE STREET, SUITE 1000
ORLANDO, FLORIDA 32801
PHONE: (407) 839-3955 FAX: (407) 839-3790



TETRA TECH

www.tetrattech.com



PROJECT LOCATION:

DELTONA, FLORIDA

CLIENT INFORMATION:

CITY OF DELTONA
255 ENTERPRISE ROAD
DELTONA, FLORIDA 32725

Tt PROJECT No.:
200-08534-13001

CLIENT PROJECT No.:

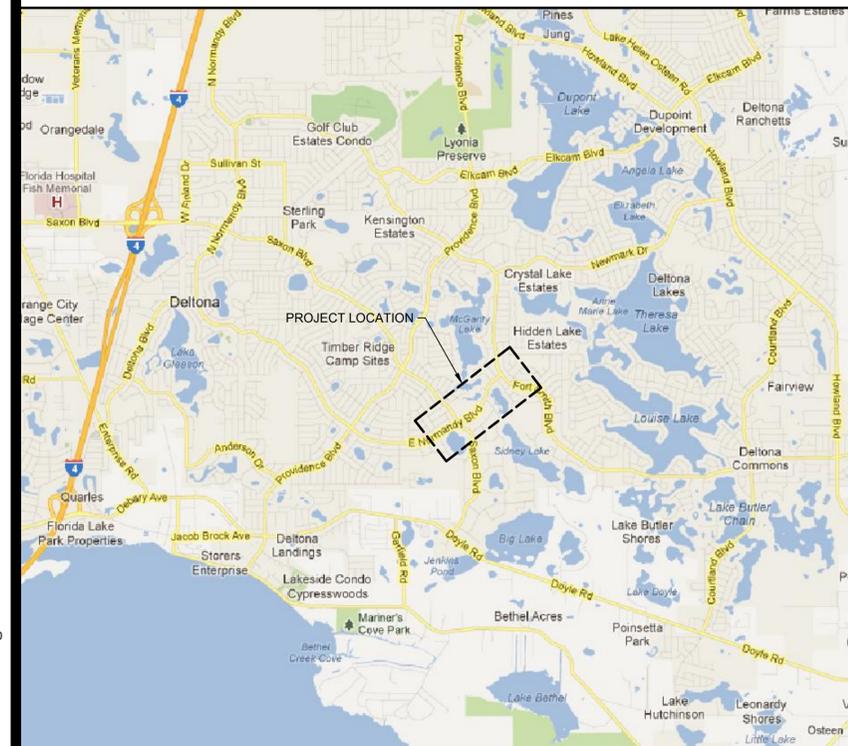
PROJECT DESCRIPTION / NOTES:

WATER MAIN REPLACEMENT ALONG:
NORMANDY BOULEVARD, STARTS 400 FT SOUTHWEST OF SAXON BLVD AND ENDS 400 FEET SOUTHWEST OF FORT SMITH BOULEVARD

ISSUED:

BID SET

VICINITY MAP:



FOR CITY OF DELTONA

MAYOR JOHN C. MASIARCZYK, SR.	COMMISSIONERS	
VICE MAYOR ZENaida DENIZAC DISTRICT 1	WEBSTER BARNABY DISTRICT 2	FRED LOWRY DISTRICT 5
CITY MANAGER FAITH G. MILLER	HEIDI HERZBERG DISTRICT 3	CHRIS NABICHT DISTRICT 6
	NANCY SCHLEICHER DISTRICT 4	

Michael B. Saxton, P.E.
P.E. No. 71506, FL

201 East Pine Street, Suite 1000
Orlando, Florida 32801
Engineering Business No. 2429

DATE _____

GENERAL NOTES

- ALL PIPING SHALL HAVE 3'-0" MINIMUM COVER.
- ALL EXISTING PAVING, STABILIZED EARTH, DRIVEWAYS, CURBS, SIDEWALKS, FENCES, GRASSED AREAS, LANDSCAPING, CULVERTS, FRENCH DRAINS, ETC. DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION. RESTORATION OF GRASSED AREAS SHALL BE DONE BY SODDING. SEED-AND-MULCH IS NOT ACCEPTABLE.
- FITTINGS MAY BE USED FOR PIPE ALIGNMENT CHANGES RATHER THAN DEFLECTING AT THE CONTRACTOR'S OPTION AND WITH NO ADDITIONAL COMPENSATION.
- THE CONTRACTOR SHALL NOT PLACE ANY FILL MATERIAL WITHIN WETTED DITCH OR WETLAND AREAS. SILTATION FENCES SHALL BE INSTALLED BY THE CONTRACTOR BETWEEN WORK AND SUCH AREAS. SEE SHEET C503 DETAIL 3.
- PRIOR TO BID PREPARATION, THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE OVERALL SITE CONDITIONS AND PERFORM ADDITIONAL INVESTIGATIONS AS DETERMINED NECESSARY TO UNDERSTAND THE LIMIT AND DEPTH OF EXPECTED ORGANIC SILT PEAT AREAS, ADEQUACY OF EXISTING MATERIALS TO USE AS FILL, DEWATERING REQUIREMENTS, CLEAN FILL REQUIRED FROM OFFSITE, AND MATERIALS TO BE DISPOSED OF OFFSITE, ALL OF WHICH WILL AFFECT HIS PRICING. ANY DELAY, INCONVENIENCE, OR EXPENSE CAUSED TO THE CONTRACTOR DUE TO INADEQUATE INVESTIGATION OF EXISTING CONDITIONS SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION WILL BE ALLOWED. THE MATERIALS ANTICIPATED TO BE ENCOUNTERED DURING CONSTRUCTION MAY REQUIRE DRYING PRIOR TO USE AS BACKFILL, AND THE CONTRACTOR MAY HAVE TO BRING IN MATERIALS, AT NO EXTRA COST, FROM OFFSITE TO MEET THE REQUIREMENTS FOR COMPACTION AND PROPER FILL.
- ALL CULVERTS AND EXISTING FACILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH MATERIAL TO MATCH EXISTING.
- ALL DRAINAGE AREAS THAT ARE CROSSED BY PIPELINES SHALL BE LEFT OPEN AT ALL TIMES EXCEPT FOR SHORT PERIODS AS MAY BE NECESSARY DURING ACTUAL CONSTRUCTION HOURS.
- THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A REGISTERED FLORIDA PROFESSIONAL LAND SURVEYOR FOR LAYOUT OF ALL WORK, FOR RESTORING ALL MONUMENTS AND PROPERTY CORNERS DISTURBED DURING CONSTRUCTION AND FOR PREPARATION OF PROJECT AS-BUILT DRAWINGS AND FOR PREPARATION OF PROJECT AS-BUILT DRAWINGS. PROOF OF REGISTRATION SHALL BE SUBMITTED TO ENGINEER.
- THE COORDINATES AND ELEVATIONS SHOWN HEREIN ARE BASED ON INFORMATION PROVIDED BY BOYER SINGLETON & ASSOCIATES LOCATED IN THE DRAWINGS SET NAMED "NORMANDY BLVD, SAXON BLVD, TO FORT SMITH BLVD." BID PLANS DATED DECEMBER 2012. BENCH MARKS ARE SHOWN ON SHEETS C-102, C-106 AND C-108.
- THE CONTRACTOR SHALL LOCATE ALL PIPELINES AT PROPOSED TIE-IN LOCATIONS TO VERIFY ACTUAL LOCATION, SIZE, ELEVATION, AND MATERIAL PRIOR TO ORDERING NEW MATERIALS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE HORIZONTAL & VERTICAL LOCATION OF ANY EXISTING UTILITIES OR PIPELINES PRIOR TO CONSTRUCTION. DEPTH DEPICTED IN PROFILE VIEW ARE ASSUMED TO BE 3 FEET.
- HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS AND WASTEWATER FORCE MAINS.
 - NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER.
 - NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN AND RECLAIMED WATER MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
- VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS AND WASTEWATER FORCE MAINS.
 - NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER OR STORM SEWER SHALL BE A MINIMUM OF ONE FULL LENGTH OF PIPE (20') BE CENTERED AT THE CROSSING AND LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
 - NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED WASTEWATER OR STORMWATER FORCE MAIN SHALL BE A MINIMUM OF ONE FULL LENGTH OF PIPE (20') BE CENTERED AT THE CROSSING AND LAID TO THE OUTSIDE OF THE WATER MAIN AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
 - AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN STORM SEWERS AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-TYPE SANITARY SEWERS AND WASTEWATER FORCE MAINS.
- A MINIMUM OF ONE TRAFFIC LANE SHALL BE MAINTAINED AT ALL TIMES DURING INSTALLATION OF PIPELINE ROADWAY CROSSINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC DURING THE WORK AND FOR COORDINATION WITH THE OWNER, AS NECESSARY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING OTHER UTILITY COMPANIES AND ARRANGING TO HAVE UTILITY POLES HELD OR RELOCATED IF DETERMINED NECESSARY FOR CONSTRUCTION. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS WHETHER OR NOT HOLDING UTILITY POLES IS DEPICTED IN THE PROJECT DRAWINGS.
- FLORIDA LAW (F.S. 553.851) REQUIRES THAT PERSONS MAKING EXCAVATIONS IN PUBLIC AND PRIVATE STREETS, ALLEYS, RIGHT-OF-WAYS OR UTILITY EASEMENTS MUST FIRST OBTAIN INFORMATION ON LOCATION OF UNDERGROUND GAS PIPELINES.
- LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES EXPOSED DURING CONSTRUCTION SHALL BE ACCURATELY RECORDED ON THE CONSTRUCTION DRAWINGS. THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY CONFLICTS WITH PROPOSED CONSTRUCTION. THE ENGINEER AND/OR OWNER MAY WITHHOLD PROGRESS PAYMENTS IF AS-BUILT DRAWINGS ARE NOT MAINTAINED DURING CONSTRUCTION AND KEPT UP TO DATE WITH NEW AND EXISTING UTILITIES ACCURATELY RECORDED.
- CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES (EXISTING AND PROPOSED) TO VERIFY FINAL LOCATIONS, DEPTHS, QUANTITIES AND SIZE OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.
- THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS BASED ON AVAILABLE RECORDS AND SURVEYS BUT IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO AND IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WITH PROJECT CONSTRUCTION. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS AND FEES ASSOCIATED WITH UTILITY RELOCATION AND/OR DAMAGE INCURRED DURING CONSTRUCTION WHETHER OR NOT THE UTILITY IS DEPICTED IN THE PROJECT DRAWINGS. CONTRACTOR WILL NOT BE COMPENSATED FOR ANY COSTS ASSOCIATED WITH LOST PRODUCTION DUE TO EXISTING UTILITIES WHETHER OR NOT THE UTILITY IS DEPICTED IN THE PROJECT DRAWINGS.
- THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PROPOSED FIRE HYDRANTS WITH THE CITY OF DELTONA.
- ALL EXISTING WATER SERVICES WILL BE REMOVED, REPLACED, AND RECONNECTED TO EXISTING CUSTOMERS WATER SERVICES WITH NEW SERVICES INCLUDING METERS AND METER BOXES TO FINISHED GRADE. SERVICE METERS SHALL BE NEPTUNE T-10. METER BOXES SHALL BE NDS-PRO SERIES, DOUBLE-D1500, SINGLE-D1200, MODEL 125B000 OR MODEL 121BC000. EXISTING METERS LOCATED WITHIN SIDEWALKS OR DRIVEWAYS SHALL BE RELOCATED OUT OF SIDEWALKS AND DRIVEWAYS. EXISTING METER BOXES SHALL BE REMOVED AND CONCRETE SHALL BE REPAIRED. (REPLACE 4'X4' SIDEWALK MINIMUM).
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION, QUANTITY AND TYPE (LONG OR SHORT & SINGLE OR DOUBLE) OF ALL EXISTING AND PROPOSED WATER SERVICES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL MEET WITH THE CITY TO DETERMINE QUANTITIES OF ALL EXISTING AND PROPOSED WATER SERVICES.
- IF FIELD CONDITIONS REQUIRE, THE LOCATION OF PROPOSED MAINS CAN BE ADJUSTED WITHIN THE RIGHT OF WAY WITH THE APPROVAL OF THE ENGINEER AND OWNER. THE DISTANCE FROM THE OUTSIDE EDGE OF THE MAIN AND THE RIGHT OF WAY SHALL BE GREATER THAN OR EQUAL TO 4 FEET.
- IF FIELD CONDITIONS PERMIT, CONTRACTOR SHALL DEFLECT THE PROPOSED MAINS ABOVE CROSS PIPE CONFLICTS, i.e. STORM DRAINS AND SEWER LATERALS, INSTEAD OF BELOW, UNLESS AN INTERMEDIATE HIGH POINT IS CREATED.
- EACH BACTERIOLOGICAL SAMPLE POINT SHALL BE EQUIPPED WITH A CORPORATION STOP, DISCHARGE PIPE, AND ABOVE-GRADE VALVE. FOLLOWING PASSAGE OF BACTERIOLOGICAL TESTING, THE CONTRACTOR SHALL REMOVE THE CORPORATION STOP AND PLUG THE CONNECTION.
- CONTRACTOR WATER MAIN CLEARANCE PACKAGES SHALL CONTAIN AS-BUILT DRAWINGS SIGNED AND SEALED BY A LICENSED SURVEYOR, PASSING BACTERIOLOGICAL TEST REPORTS, AND PRESSURE TEST FORMS SIGNED BY THE CITY PROJECT INSPECTOR. SUBMITTALS SHALL INCLUDE FOUR (4) HARD COPY SETS INCLUDING THE ORIGINAL PASSING BACTERIOLOGICAL SAMPLE REPORTS AND ONE (1) CD CONTAINING ELECTRONIC FILES OF AS-BUILT DRAWINGS IN AUTOCAD FORMAT. AS-BUILT DRAWINGS SHALL DEPICT THE INFORMATION REQUIRED IN THE CONTRACT DOCUMENTS ALONG WITH THE LOCATIONS OF THE BACTERIOLOGICAL SAMPLES LABELED TO CORRESPOND TO THE BACTERIOLOGICAL SAMPLE REPORTS. FAILURE OF THE CONTRACTOR TO PROVIDE THE REQUIRED INFORMATION OR SUBMISSION OF POOR QUALITY AS-BUILT DRAWINGS WILL COUNT AS AN APPLICATION REVIEW. POOR QUALITY AS-BUILT DRAWINGS WILL BE RETURNED WITH COMMENTS ONE (1) TIME AND SUBSEQUENT REVIEWS OF POOR QUALITY AS-BUILT DRAWINGS SUBMITTED BY THE CONTRACTOR WILL BE COUNTED AS ONE (1) APPLICATION REVIEW PER INSTANCE AND THE CITY AND ENGINEER WILL DEDUCT REVIEW, HANDLING, AND DIRECT COSTS FROM THE CONTRACTOR'S PROGRESS PAYMENT APPLICATIONS AND/OR PROJECT RETAINAGE. THE PROJECT MANUAL AND/OR THE DRAWINGS WILL SPECIFY THE CONTRACTOR'S RESPONSIBILITIES AND ESTIMATED COSTS. PARTIAL SUBMITTALS WILL NOT BE REVIEWED. PARTIAL CLEARANCES SHALL BE FOR A STREET IN ITS ENTIRETY INCLUDING BRANCHING STREETS AT MINIMUM UNLESS APPROVED IN WRITING BY THE ENGINEER PRIOR TO SUBMITTAL.
- CONTRACTOR SHALL COORDINATE LIMITS OF REMOVAL AND REPLACEMENT OF ASPHALT AND CONCRETE WITH CITY OF DELTONA AND THE ENGINEER.
- CONTRACTOR WILL BE REQUIRED TO INSTALL AIR RELEASE VALVES OR FIRE HYDRANTS AT NO ADDITIONAL COST TO THE OWNER AT ALL HIGH POINTS CREATED BY THE CONTRACTORS INSTALLATION AS DETERMINED BY THE ENGINEER AND THE CITY OF DELTONA.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION, QUANTITY AND TYPE OF ALL EXISTING SEWER LATERALS/SERVICES AND RELOCATE THEM AS NECESSARY TO ACCOMMODATE THE PROPOSED PROJECT. RELOCATION OF SEWER LATERALS/SERVICES 12" BELOW THE PROPOSED WATER MAIN IS PREFERRED.
- CONTRACTOR SHALL RESTRAIN ALL EXISTING UTILITIES AS NEEDED IN ACCORDANCE WITH DETAIL 2 DRAWING C501.
- ALL PROPOSED PIPE AND FITTINGS SHALL BE MECHANICAL JOINT UNLESS OTHERWISE NOTED.
- RESTRAINED JOINTS FOR PVC PIPE SHALL BE MANUFACTURED RESTRAINED JOINTS.
- ASBESTOS CEMENT (AC), DUCTILE IRON, AND PVC WATERMAIN IN CONFLICT WITH PROPOSED DRAINAGE IMPROVEMENTS (STRUCTURES, PIPES, ETC) SHALL BE REMOVED IN ACCORDANCE WITH SPECIFICATIONS 01100, 02050 AND 02080.

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PIPING MATERIAL SCHEDULE											
MARK	SERVICE	BURIED PIPE			BURIED FITTINGS		BELOW ROADWAY PIPE		BELOW ROADWAY FITTINGS		
		MATERIAL	CLASS	LINING	MATERIAL	LINING	MATERIAL	CLASS	LINING	MATERIAL	LINING
WM	POTABLE WATER	PVC	DR-18	N/A	DI	CEMENT	DI	250	CEMENT	DI	CEMENT

- NOTES:
- ALL PIPE LINING, INCLUDING ANY MATERIAL WHICH COMES INTO CONTACT WITH POTABLE WATER SHALL BE NSF (STANDARD 61) APPROVED FOR USE WITH POTABLE WATER.
 - BELOW GROUND PIPE SHALL BE "BLUE", COLOR OR STRIPES AS SPECIFIED IN SECTION 9905 FOR THE POTABLE WATER MAINS.
 - DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE TWENTY-FIVE (25) FEET ON EACH SIDE OF ANY PERPENDICULAR CROSSING OF METALLIC GAS MAINS OR ANY OTHER CATHODICALLY PROTECTED PIPELINE AND FOR LOCATIONS PARALLEL TO AND WITHIN TEN FEET OF METALLIC GAS MAINS OR OTHER CATHODICALLY PROTECTED PIPE AND THROUGH THE AREA OF INFLUENCE OF CATHODIC PROTECTION ANODE BED.
 - PIPE CLASS SHALL MEET SPECIFICATION 15050.

48 HOURS BEFORE DIGGING

CALL
TOLL FREE
1-800-432-4770
SUNSHINE STATE ONE CALL CENTER



Michael B. Saxton, P.E.
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201 East Pine Street, Suite 1000
Orlando, Florida 32801
Engineering Business No. 2429

DATE

MARK	DATE	DESCRIPTION	BY

CITY OF DELTONA
NORMANDY BOULEVARD
**GENERAL NOTES
AND DRAWING INDEX**

Project No.: 200-08534-13001
Designed By: MBS
Drawn By: PD
Checked By: MAD

G002

LIST OF STANDARD ABBREVIATIONS

A AAP ALARM ANNUNCIATOR PANEL AARV AUTOMATIC AIR RELEASE VALVE AAV AUTOMATIC AIR VENT AB ANCHOR BOLT ABAN ABANDON(ED) ABRSV ABRASIVE ABS ACRYLONITRILE BUTADIENE STYRENE ABV ABOVE AC ALTERNATING CURRENT ACCPM ASPHALT-COATED CORRUGATED METAL PIPE ACP ASBESTOS CEMENT PIPE ADDM ADDENDUM ADH ADHESIVE AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE AFS ABOVE FINISHED SLAB AHD AHEAD AL ALUMINUM ALT ALTERNATE AMP AMPERE AMT AMOUNT APRX APPROXIMATE(LY) ARCH ARCHITECTURAL ARV AIR RELEASE VALVE AS ALUM SOLUTION ASPH ASPHALT ASSY ASSEMBLY AVE AVENUE A/C AIR CONDITIONING A/VV AIR/VACUUM AIR VALVE	B BAF BAFFLE BCV BALL CHECK VALVE BF BLIND FLANGE BFV BUTTERFLY VALVE BHP BRAKE HORSEPOWER BI BLACK IRON BITUM BITUMINOUS OR BITUMASTIC BASELINE BLDG BUILDING BLK BLOCK BM BENCH MARK BOC BACK OF CURB BOT BOTTOM BP BASE PLATE BRG BEARING BSP BLACK STEEL PIPE BV BALL VALVE BW BOTH WAYS BWW BACKWASH WATER	C CAP CAPACITY CA COMPRESSED AIR CAV COMBINATION AIR VALVE CB CATCH BASIN CCC CHLORINE CONTACT CHAMBER CE CHLORINATED EFFLUENT CFM CUBIC FEET PER MINUTE CFS CUBIC FEET PER SECOND CV CHECK VALVE CI CAST IRON CIP CAST IRON PIPE CISP CAST IRON SOIL PIPE CJ CONSTRUCTION JOINT CKT CIRCUIT CL CENTER LINE CL2 CHLORINE GAS CLF CHAIN LINK FENCE CLR CLEAR OR CLEARANCE CLVT CULVERT CMP CORRUGATED METAL PIPE CMPA CORRUGATED METAL PIPE ARCH CMU CONCRETE MASONRY UNIT CND CONDUIT CNR CORNER CO CLEAN OUT CO2 CARBON DIOXIDE COAG COAGULANT COL COLUMN COM COMMON CONC CONCRETE CONN CONNECTION CONSTR CONSTRUCTION(ION) CONT CONTINUOUS CONTR CONTRACT(OR) COORD COORDINATE CO COMPANY CP CONCRETE PIPE CPA CONCRETE PIPE ARCH CPLG COUPLING CPVC CHLORINATED POLYVINYL CHLORIDE CR CONCENTRIC REDUCER CS CHLORINE SOLUTION CSG CASING CTV CABLE TELEVISION CY CUBIC YARD CYL CYLINDER C&G CURB AND GUTTER CC CENTER TO CENTER	D DAT DATUM DBL DOUBLE DC DIRECT CURRENT DEMO DEMOLITION DEPT DEPARTMENT DESC DESCRIPTION DET DETAIL DF DIESEL FUEL DI DUCTILE IRON PIPE DIA DIAMETER DIFF DIFFUSER DIM DIMENSION DIP DUCTILE IRON PIPE DISCH DISCHARGE DIR DIRECTION DMH DROP MANHOLE DN DOWN DR DRAIN DV DIAPHRAGM VALVE DRIVEWA DRIVEWAY DWG DRAWING	E E EACH ECC ECCENTRIC EF EACH FACE EFF EFFLUENT E/L EASEMENT LINE EL ELEVATION ELAST ELASTOMERIC ELEC ELECTRICAL EMER EMERGENCY ENCASE(MENT) ENGR ENGINEER EP EDGE OF PAVEMENT EPDM ETHYLENE PROPYLENE DIENE MONOMER EPRF EXPLOSION PROOF EQUIPMENT ER ECCENTRIC REDUCER ESTM ESTIMATE EST ESTIMATE(D) EW EACH WAY EXC EXCAVATE EXP EXPANSION EXST EXISTING EXST GR EXISTING GRADE EXT EXTERIOR EXTN EXTENSION	F F FABRICATE(D) FCA FLANGED COUPLING ADAPTER FB FLAT BAR FCV FLOW-CONTROL VALVE FD FLOOR DRAIN FDN FOUNDATION FE FILTERED EFFLUENT FHY FIRE HYDRANT FIG FIGURE FIN FINISHED FIN FLR FINISH FLOOR FIN GR FINISH GRADE FL FLUORIDE FLG FLANGE(D) FL FLOW LINE FLTR FILTER FM FORCE MAIN FPM FEET PER MINUTE FPS FEET PER SECOND FRP FIBERGLASS REINFORCED PLASTIC FT FOOT OR FEET FUT FUTURE FV FOOT VALVE FW FINISHED WATER FWP FACTORY WIRE PANEL FIF FACE TO FACE	G GA GAUGE GAL GALLON(S) GALV GALVANIZED GALVZ GALVANIZED IRON PIPE GIP GROOVE JOINT GND GROUND GPD GALLONS PER DAY GPH GALLONS PER HOUR GPM GALLONS PER MINUTE GPS GALLONS PER SECOND GR GRADE GRTG GRATING GS GALVANIZED STEEL GSP GALVANIZED STEEL PIPE GSR GROUND STORAGE RESERVOIR GST GROUND STORAGE TANK GT GROUT GV GAS VALVE	H HB HOSE BIBB HD HEAVY-DUTY HDPE HIGH-DENSITY POLYETHYLENE HDR HYDRAULIC HFA HYDROFLUOSILICIC ACID HGR HANGER HGT HEIGHT HNDRL HAND RAIL HOA HAND-OFF-AUTO HORIZ HORIZONTAL HP HORSEPOWER HPA HIGH PRESSURE AIR HR HOUR HVAC HEATING, VENTILATION, AND AIR CONDITIONING HWL HIGH WATER LEVEL HWY HIGHWAY HZ HERTZ	I ID INSIDE DIAMETER IN INCH(ES) INCH(ES) INF INFLUENT INT INTERSECTION INTR INTERIOR INV INVERT IP IRON PIPE IPS INTERNATIONAL PIPE STANDARD IR INTERNAL RECYCLE IW IRRIGATION WATER	J JB JOINT BOX JT JOINT	K K KIP (1,000 LB) KPL KICK PLATE KV KILOVOLT KVA KILOVOLT-AMPERE KW KILOWATT KWH KILOWATT-HOUR	L L LEFT LAB LABORATORY LAM LAMINATE OR LAMINATION LATL LATERAL	M M METER MAINT MAINTAIN OR MAINTENANCE MANUAL(LY) MAS MASONRY MATL MATERIAL MAX MAXIMUM MCC MOTOR CONTROL CENTER ME MITERED END MECH MECHANICAL MEG MATCH EXISTING GRADE MFR MANUFACTURER(R) MG MILLION GALLONS MGD MILLION GALLONS PER DAY MH MANHOLE MI MILE(S) MIN MINIMUM, MINUTE(S) MISC MISCELLANEOUS MJ MECHANICAL JOINT ML MIXED LIQUOR MO MASONRY OPENING MON MONUMENT MPH MILES PER HOUR MPT MALE PIPE THREAD MS MOTOR STARTER MSP MOTOR STARTER PANEL MTD MOUNTED MV MOTORIZED VALVE MW MANWAY MWW MEAN WATER LEVEL MWP MAXIMUM WORKING PRESSURE	N N NORTH NaOCI SODIUM HYPOCHLORITE NE NORTH EAST NIC NOT IN CONTRACT NO NUMBER NOM NOMINAL NPT NATIONAL PIPE THREAD NPT NATIONAL PIPE TAPER (THREAD) NPW NON-POTABLE WATER NRS NON-RISING SYSTEM NTS NOT TO SCALE NW NORTHWEST N/A NOT APPLICABLE	O O2 OXYGEN OC ON CENTER OD OUTSIDE DIAMETER ODP OPEN DRIP PROOF ODV OUTSIDE FACE OH OVER HEAD OHV OVER HEAD WIRE OPP OPPOSITE OPT OPTIONAL OR OFFICIAL RECORDS OSY OUTSIDE SCREW AND YOKE O&M OPERATION AND MAINTENANCE	P PA PROCESS AIR PC POINT OF CURVE PCM PERMANENT CONTROL MONUMENT PE PLAIN END PG PRESSURE GAGE PI POINT OF INTERSECTION PL PLATE PL PROPERTY LINE PNV PINCH VALVE POB POINT OF BEGINNING POJ PUSH-OFF JOINT POL POLYMER PP POWER POLE PPD POUNDS PER DAY PPM PARTS PER MILLION PREFAB PREFABRICATED PRESS PRESSURE PRV PRESSURE REDUCING VALVE PRW PROCESS WATER PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PSIA POUNDS PER SQUARE INCH ABSOLUTE PSIG POUNDS PER SQUARE INCH GAGE	R RAD RADIUS RAS RETURN ACTIVATED SLUDGE RC REINFORCED CONCRETE RCB REINFORCED CONCRETE BOX RCP REINFORCED CONCRETE PIPE RCPA ARCH	R RD ROAD RDCR REDUCER REBAR REINFORCING STEEL REF REFERENCE REIN REINFORCING(ING)(MENT) REM REMOVE(ABLE) REQ'D REQUIRED RF RAISED FACE RJ RESTRAINED JOINT RM ROOM RPPB REDUCED PRESSURE BACKFLOW PREVENTER	S S SOUTH SA SAMPLE LINE SAN SANITARY SCHED SCHEDULE SD STORM DRAIN SE SOUTHEAST SECT SECTION SEFF SECONDARY EFFLUENT SF SQUARE FOOT OR FEET SHT SHEET(ED)(ING) SIG SIGNAL SIM SIMILAR SL SLUDGE SLV SLEEVE SM SHEET METAL SOLN SOLUTION SP SOIL PIPE, SPACE(ING) SPEC SPECIFICATION SPT SUPPORT SQ SQUARE SS SANITARY SEWER SSE SUBSTANDARD EFFLUENT SST STAINLESS STEEL ST STREET STA STATION STD STANDARD STK STAKE STL STEEL STR STRAIGHT STRUCT STRUCTURAL SURF SURFACE SV SOLENOID VALVE SVCE SERVICE WATER SW SOUTHWEST SWD SIDEWATER DEPTH SWSH SURFACE WASH SYM SYMBOL SYMM SYMMETRICAL SW SIDEWALK	T TAN TANGENT TB TOP OF BEAM TBM TEMPORARY BENCH MARK TB-xx TEST BORING-xx (e.g. TB-1) TD TRENCH DRAIN TDH TOTAL DYNAMIC HEAD TE TOTALLY ENCLOSED TEFC TOTALLY ENCLOSED FAN COOLED TELEPHONE TEL TELEPHONE TENV TOTALLY ENCLOSED NON-VENTILATED THD THREADED THK THICK(NESS) TLM TELEMETRY TOB TOP OF BANK TOC TOP OF CURB TOS TOE OF SLOPE TOT TOTAL TP TELEPHONE POLE TS THICKENED SLUDGE TV TELEVISION TYP TYPICAL T&B TOP AND BOTTOM	U UD UNDERDRAIN UG UNDERGROUND ULT ULTIMATE UN UNION UN UNLESS OTHERWISE NOTED UGE UNDERGROUND ELECTRIC UTC UNDERGROUND TELEPHONE CABLE UTIL UTILITY	V V VOLT(S) VAC VACUUM VAR VARIES VC VERTICAL CURVE VCP VITRIFIED CLAY PIPE VEL VELOCITY VERT VERTICAL VFD VARIABLE FREQUENCY DRIVE VOL VOLUME	W W WATT WAS WASTE ACTIVATED SLUDGE WCO WALL CLEAN OUT WF WIDE FLANGE WH WALL HYDRANT WL WATER LINE WM WATER MAIN WP WATER PROOF(ING), WORKING POINT WPR WORKING PRESSURE WS WATER SURFACE WSP WELDED STEEL PIPE WT WEIGHT WTP WATER TREATMENT PLANT WW WASH WATER WWF WELDED WIRE FABRIC WWM WELDED WIRE MESH WWTW WASTEWATER TREATMENT PLANT W/ WITH W/O WITHOUT	X XFER TRANSFER	Y YD YARD(S) YH YARD HYDRANT YR YEAR(S) YR
---	--	--	---	--	--	--	--	---	--------------------------------------	--	--	--	--	---	---	---	--	--	---	---	--	--	---------------------------	--

PIPING LEGEND

FITTING/ APPURTENANCE	FLANGED				MECHANICAL JOINT				GROOVE JOINT				SOLVENT WELD			
	SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE	
	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
BEND																
TEE																
WYE																
REDUCER																
CAP/ BLIND FLANGE					N/A	N/A	N/A	N/A								
PLUG	N/A	N/A	N/A	N/A					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BUTTERFLY VALVE																
BALL VALVE					N/A	N/A	N/A	N/A								
CHECK VALVE					N/A	N/A	N/A	N/A								
GATE VALVE																
PLUG VALVE																
AUTOMATIC CONTROL VALVE					N/A	N/A	N/A	N/A								
PINCH VALVE					N/A	N/A	N/A	N/A								

CIVIL LEGEND

BASLINE		STA XX
PROPERTY LINE		R/W
RIGHT OF WAY		E
EASEMENT LINE		
BENCH MARK		EL
CONTROL ELEVATION		XX EL
MONUMENT		
EXISTING SPOT ELEVATION		EL
FINISH SPOT ELEVATION		EL
EXISTING CONTOUR		
FINISH CONTOUR		
JURISDICTIONAL WETLAND		
BOUNDARY LINE		
EMBANKMENT		
SURFACE DRAINAGE		
FENCE		
TEMPORARY CONSTRUCTION EASEMENT		TCE
TOP OF BANK		TOB
EDGE OF WATER		EOW
SILT FENCING		
MISCELLANEOUS UTILITY		
BURIED TELEPHONE		B T
BURIED FIBER OPTIC		B F O
OVERHEAD ELECTRIC		O E

a. WM = WATER MAIN
 b. FM = FORCE MAIN
 c. SS = SANITARY SEWER
 d. SD = STORM DRAIN
 e. GAS = NATURAL GAS
 f. CTV = CABLE TELEVISION
 g. UEC = UNDERGROUND ELECTRIC CABLE OR CONDUIT
 h. UED = UNDERGROUND ELECTRIC DUCT
 i. UTC = UNDERGROUND TELEPHONE CABLE OR CONDUIT
 j. UTD = UNDERGROUND TELEPHONE DUCT
 k. FOC = FIBER OPTIC CABLE
 l. UGT = UNDERGROUND TELEPHONE

TYPICAL TREE SYMBOLS:
 ○ DEODOROUS
 * EVERGREEN
 * PALM
 * CITRUS
 * OAK
 ○ TELEPHONE MANHOLE
 ○ MONITOR WELL
 ○ WATER METER
 ○ WATER VALVE
 ○ GAS VALVE
 ○ TRAFFIC SIGNAL CONTROL BOX

REFERENCE SYMBOLS

 DENOTES SECTION LETTER IDENTIFICATION DENOTES DRAWING NO WHERE SECTION IS LOCATED SECTION REFERENCE	 DENOTES DETAIL NUMBER IDENTIFICATION DENOTES DRAWING NO WHERE DETAIL IS LOCATED DETAIL REFERENCE
 DENOTES SECTION LETTER IDENTIFICATION SCALE: DENOTES DRAWING NO WHERE SECTION IS LOCATED SECTION TITLE	 DENOTES DETAIL NUMBER IDENTIFICATION SCALE: DENOTES DRAWING NO WHERE DETAIL IS LOCATED DETAIL TITLE

HATCHING LEGEND

	ASPHALT OR CONCRETE SURFACE (SIDEWALK OR ROADWAY)		PRECAST CONCRETE
	ROADWAY/SIDEWALK OPEN CUT RESURFACE		GROUT
	SODDED OR SEEDED AND MULCHED AREA		CONCRETE UNIT MASONRY
	EARTH		STEEL
	EXISTING PIPES, STRUCTURES, EQUIPMENT TO BE REMOVED		ALUMINUM
	CAST-IN-PLACE CONCRETE		GRATING
	DELINEATED WETLAND		

MECHANICAL/DRAFTING LEGEND

	VISIBLE LINE		PROPOSED
	HIDDEN LINE		
	CENTER LINE		
	LONG BREAK LINE		
	SHORT BREAK LINE		
	DIMENSION LINES AND LEADERS		
	PHANTOM LINE		

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 Engineering Business No. 2429

BY	DATE	DESCRIPTION

CITY OF DELTONA
 NORMANDY BOULEVARD

LEGEND AND ABBREVIATIONS

Project No.: 200-08534-13001
 Designed By: MBS
 Drawn By: PD
 Checked By: MAD

G003
 Bar Measures 1 inch

**PROJECT MANUAL
CITY OF DELTONA**

**ROADWAY IMPROVEMENTS
NORMANDY BOULEVARD– SECTION “B”**

**SAXON BOULEVARD
TO
FORT SMITH BOULEVARD**

BID NO.: ITB # PW 13-05

Prepared for:

**CITY OF DELTONA
2345 PROVIDENCE BOULEVARD
DELTONA, FLORIDA 32725**

Prepared by:

**BOWYER-SINGLETON & ASSOCIATES, INC.
520 SOUTH MAGNOLIA AVENUE
ORLANDO, FLORIDA 32801**

January 2013

BSA Project No. CD1-J9

**City of Deltona
Roadway Improvements
Normandy Boulevard – Section “B”
Saxon Boulevard to Fort Smith Boulevard**

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**City of Deltona
Roadway Improvements
Normandy Boulevard – Section “B”
Saxon Boulevard to Fort Smith Boulevard**

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**City of Deltona
Roadway Improvements
Normandy Boulevard – Section “B”
Saxon Boulevard to Fort Smith Boulevard**

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Technical Specifications

City of Deltona
Normandy Boulevard - Section “B”
Utility Relocation and Improvements
Bid No. ITB # PW 13-05

Prepared by

Tetra Tech
201 E. Pine Street, Suite 1000
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**City of Deltona
Roadway Improvements
Normandy Boulevard – Section “B”
Saxon Boulevard to Fort Smith Boulevard**

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34	Stormwater Pollution Prevention Plan
34A	Erosion Control Plan
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Signing & Pavement Marking Plans – Bowyer-Singleton & Associates, Inc.

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S-2	General Notes
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Signalization Plans – Bowyer-Singleton & Associates, Inc.

T-1	Key Sheet
T-2	General and Pay Item Notes
T-3	Signalization Plan Sheets
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Water Main Construction Plans – Tetra Tech, Inc.

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Section 00020

Announcement and Bid Documents
For
THE CITY OF DELTONA
PUBLIC WORKS DIVISION

ITB # PW 13-05
Normandy Boulevard (Sec. B)
Saxon Boulevard to Fort Smith Blvd

NOTICE IS HEREBY GIVEN: That sealed bids will be received by the City of Deltona, Public Works Division, at 255 Enterprise Road, Deltona, Florida 32725; until Tuesday, February 26, 2013 at 2:00 p.m.

Any bids received after the above time will not be accepted under any circumstances. Bids will not be accepted at any other location within the City except for the address above. Bids will not be accepted at City Hall. Any uncertainty regarding the time a bid is received will be resolved against the Bidder.

Bid opening will be promptly at 2:00 p.m. on Tuesday, February 26, 2013 at the Deltona Water Administration 2nd floor Conference Room, 255 Enterprise Road, Deltona, Florida 32725, at which time all bids received will be publicly opened and read aloud.

MANDATORY PRE-BID CONFERENCE: A pre-bid conference will be held at the City of Deltona Water Department located at 255 Enterprise Road, Deltona, Florida 32725, 2nd floor training room on Monday, February 11, 2013 at 10:00 a.m. Representatives of the City will be present to discuss the Project. Bidders must attend the conference for your bid to be considered. City will transmit to all prospective Bidders of record such Addenda as City considers necessary in response to questions arising at the conference. Oral statements made by the City may not be relied upon and will not be binding or legally effective.

DESCRIPTION OF WORK: All work for the Project shall be constructed in accordance with the Drawings and Specifications prepared by Bowyer-Singleton & Associates, Inc. and the proposed improvements will be awarded and constructed, if award is made, under one Contract. Bids shall be submitted for furnishing, delivering and installing all materials, equipment and services, including labor, for the Work, which generally involves:

- Reconstruct approx. 0.60 miles of 2 lane rural section roadway on Normandy Blvd. to a 3 lane urban section with bike lanes.
- Construct 2 drainage retention ponds.
- Construct approx. 2,912' of 18" to 30" storm drainage pipe and approx. 35 storm drainage structures.
- Construct approx. 2,000 linear feet of 8-inch PVC gravity sanitary sewer main, approx. 262 linear feet of 10-inch PVC gravity sanitary sewer main, approx. 13 sanitary sewer manholes, approx. 52 laterals and approx. 3 tie-ins to existing mains or manholes.
- Construct approx. 3,555 linear feet of 16-inch PVC/DIP water main, approx. 120 linear feet of 12-inch PVC/DIP water main, approx. 30 linear feet of 8-inch PVC/DIP water main, approx. 1,025 linear feet of 6-inch PVC/DIP water main and approx. 80 linear feet of 4-inch PVC/DIP water main, approx. 338 services, approx. 10 tie-ins to existing mains, and various valves, fittings, fire hydrants and appurtenances.
- Demolition, clearing and grubbing of existing concrete, asphalt and vegetation and restoration of concrete, asphalt, and sodding along water main routes outside the limits of the roadway reconstruction.
- Grouting and abandonment or removal of existing water main.
- Striping, signage, pavement markings, temp. traffic control devices and signalization.

To obtain a copy of the Bidding Documents, requestors shall contact in writing:

Tom Cinefro
Purchasing Agent for the City of Deltona, Public Works Division
255 Enterprise Road, Deltona, Florida 32725
Email at tcinefro@deltonafl.gov
Phone number: 386-878-8955

Vendors who receive the bidding documents from the Purchasing Agent directly, shall be added as a planholder on Demandstar and shall receive all corresponding documents through the Demandstar website.

Bids shall be prepared from complete Bidding Documents. Addendum will be sent via DemandStar to all holders of complete solicitation Bidding Documents up to forty eight (48) hours before bid time. Brief addendums may be issued between forty eight (48) hours and twenty-four (24) hours before bid time by facsimile to all holders of complete Bidding Documents.

The City reserves the right to reject any or all proposals, to waive informalities in the proposals and to re-advertise for proposals. The City also reserves the right to separately accept or reject any item or items of a proposal and to award and/or negotiate a contract in the best interest of the City.

All questions are to be directed, IN WRITING, to ~~Brian Boehs~~ at tcinefro@deltonafl.gov or faxed to (386) 878-8971 seven calendar days prior to due date in order to issue an addenda.

CONTACT:

All prospective proposers are hereby instructed not to contact any member of the City of Deltona Commission, City Manager, City of Deltona Staff members or Engineers contracted by the City for this project, other than the noted contact person OR a member of the Purchasing staff regarding this Item to Bid or their response at any time during the Bid process. Any such contact shall be cause for rejection of your submittal.

- Questions regarding this bid are to be addressed **in writing** to:
Tom Cinefro
Public Works Purchasing Agent
255 Enterprise Road
Deltona, FL 32725
E-Mail Address: tcinefro@deltonafl.gov
Or Fax: (386) 878-8971

END OF SECTION

SECTION 00100

GENERAL TERMS, CONDITIONS, INFORMATION AND INSTRUCTIONS TO BIDDERS

TABLE OF CONTENTS

<u>Article</u>	<u>Title</u>
1	- Defined Terms
2	- Contact
3	- Copies of Bidding Documents
4	- Delays
5	- Qualifications of Bidders
6	- Examination of Bidding Documents and Site
7	- Addenda and Interpretations
8	- Bid Security
9	- Contract Time
10	- Liquidated Damages and Indemnity
11	- Substitute Material and Equipment
12	- Subcontractors, etc.
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15	- Modification and Withdrawal of Bids
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19	- Certificates, Discounts, Mistakes
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23	- Additional Terms and Conditions
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25	- Bonds and Insurance
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28	- Taxes and Fees
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33	- Protests
34	- Conflict of Interest
35	- Legal Requirements
36	- Drug-Free Workplace
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- 47 - Invoicing and Payment
- 48 - Posting of Bid Award
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- 50 - Assignment
- 51 - Facilities
- 52 - Bid Preparation Costs
- 53 - Additional Terms and Conditions

SECTION 00300
BID RESPONSE FORM
BID NO. ITB # PW 13-05
Normandy Boulevard (Sec. B)
Saxon Blvd to Fort Smith Blvd

DATE SUBMITTED: _____

PROJECT IDENTIFICATION: **City of Deltona**
ITB # PW 13-05
Normandy Blvd (Sec. B), Saxon Blvd to Fort Smith Blvd

NAME OF BIDDER: _____

BUSINESS ADDRESS: _____

TELEPHONE NUMBER: _____

CONTRACTOR'S FLORIDA LICENSE NO.: _____

THIS BID IS SUBMITTED TO: **City of Deltona**
Public Works Division
255 Enterprise Road
Deltona, Florida 32725

1. In accordance with the foregoing terms, conditions and specifications, the undersigned bidder, having become familiarized with the conditions affecting the cost of the work and with all requirements of the proposed Bid Documents, and duly issued Addenda to said documents, as acknowledged herein, proposes to furnish and perform all things required in labor, material, necessary tools, expendable equipment, and all services necessary to perform and complete in a workmanlike manner all work required by said documents and Addenda.
2. Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders. This Bid will remain subject to acceptance for ninety (90) days after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within ten (10) days after the date of Owner's Notice of Award.
3. In submitting this bid, Bidder makes all representations required by the Instructions to Bidders and further warrants and represents that:

a. Bidder has examined and carefully studied the Bidding Documents and the following Addendum receipt of which is hereby acknowledged:

No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____

b. Bidder is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Bid Documents, and Addendum.

- c. All Bid items shall include all materials, equipment, labor, permit fees, taxes, tests, miscellaneous costs of all types, overhead and profit for the item to be complete, in place, and ready for operation in the manner contemplated by the Bid Documents and addendum.
 - d. Bidder declares their bid submittal is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.
4. Bidder submits the following unit prices to perform all the work as required by the Bid documents and Specifications for the **City of Deltona, Normandy Blvd (Sec. B), Saxon Blvd to Fort Smith Blvd.**

All bid items shall include all materials, equipment, labor, permit fees, taxes, tests, miscellaneous costs of all types, overhead and profit for the item to be complete, in place and ready for operation in the manner contemplated by the Bid documents and addendum.

City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05

<i>Pay Item</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total Cost</i>
101-1	Mobilization	LS	1		
102-1	Maintenance of Traffic	LS	1		
102-3	Commercial Material for Driveway Maintenance	CY	500		
104-100	Erosion Control Measures	LS	1		
110-1-1	Clearing & Grubbing	AC	9		
110-7-1	Mailbox, F&I, Single	EA	23		
120-1	Regular Excavation	CY	16,000		
120-6	Embankment	CY	1,500		
160-4	Stabilization, Type B	SY	17,000		
285-70-9	Optional Base Group 9	SY	12,050		
334-1-12	Type SP Structural Course (Traffic Level B)	TN	1,326		
334-7-30	Friction Course (FC-9.5) (Rubber)	TN	663		
400-1-2	Conc. Class I, Endwalls	CY	9		
400-1-11	Conc. Class I, Retaining Walls	CY	0		
425-1-311	Inlets(Curb)(Type P-1)(<10')	EA	22		
425-1-321	Inlets(Curb)(Type P-2)(<10')	EA	5		
425-1-521	Inlets(DT Bot)(Type C)(<10')	EA	1		
425-1-551	Inlets(DT Bot)(Type E (Special Design)	EA	2		
425-2-41	Manholes (P-7)(<10')	EA	1		
430-171-118	Pipe Culv (Opt Matl)(Round)(18"SS)	LF	1,143		
430-171-124	Pipe Culv (Opt Matl)(Round)(24"SS)	LF	1,125		
430-171-130	Pipe Culv (Opt Matl)(Round)(30"SS)	LF	567		
430-171-142	Pipe Culv (Opt Matl)(Round)(30"SS	LF	77		
430-982-125	Mitered End Section, Optional Round, 18" CD	EA	3		
430-982-133	Mitered End Section, Optional Round, 30" CD	EA	1		
520-1-10	Curb & Gutter Conc - Type F	LF	5,690		
522-1	Sidewalk Concrete, 4" Thick	SY	2,731		
522-2	Sidewalk Concrete, 6" Thick	SY	1,072		
524-1-29	Concrete Ditch Pavt, Reinforced 4"	SY	127		
530-3-3	Riprap, Rubble and Filter Fabric	TN	20		
570-1-2	Performance Turf Sodding	SY	18,850		
630-1-12	Conduit (F&I)(Underground)	LF	20		
630-1-14	Conduit (F&I)(Underground-Jacketed)	LF	140		
632-7-1	Cable (Signal)(F&I)	PI	1		
634-4-113	Span Wire Assembly (F&I)(Two Wire)(Box)	PI	1		
635-1-11	Pull and Junction Boxes (F&I) (Pull Box)	EA	2		
641-2-16	Prestressed Concrete Strain Pole (F&I) (Type P-VI)	EA	2		

**City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05**

<i>Pay Item</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total Cost</i>
650-51-313	Traffic Signal (F&I) (3-Section)(1-Way)(Polycarbonate/LED)	AS	8		
653-191	Signal Pedestrian (F&I) (LED Countdown)(1- Way)	AS	4		
653-192	Signal Pedestrian (F&I) (LED Countdown)(2- Way)	AS	1		
659-101	Signal Head Auxuillaries (F&I)(Backplates 3 Section)	EA	5		
659-106	Signal Head Auxuillaries (F&I)(Tunnel Visor)	EA	20		
660-1-103	Loop Detector, Inductive (F&I)(Type 3, 1CH, SS, S)	EA	4		
660-1-104	Loop Detector, Inductive (F&I)(Type 4, 1CH, SS, S)	EA	1		
660-2-106	Loop Assembly (F&I)(Type F)	AS	5		
665-13	Detector, Pedestrian (F&I)(Detector w/ Sign)	EA	4		
670-5-410	Traffic Control Assembly (Modify)(NEMA)	AS	1		
690-10	Traffic Signal Head Assembly, Remove	EA	8		
690-20	Pedestrian Signal Assembly, Remove	EA	4		
690-34-1	Complete Pole removal (Deep) Direct Burial	EA	2		
690-80	Span Wire Assembly (Remove)	EA	1		
690-90	Remove Cabling and Conduit	PI	1		
690-100	Signal Equipment, Miscellaneous, Remove	PI	1		
699-1-1	Internally Illuminated Sign (F&I)(Street Name)	EA	4		
700-20-11	Sign, Single Post (< 12 SF)	AS	8		
700-20-40	Sign, Existing (Relocate) (Single Post)	AS	3		
700-20-60	Sign, Existing (Remove) (Single Post)	AS	10		
700-46-21	Sign, Existing (Relocate) (Single Post)	AS	14		
700-48-48	Sign Panel (Relocate)(15 or less SF)	EA	6		
706-3	Retro-Reflective Pavement Marker	EA	291		
711-11-111	Thermoplastic, Standard, White, Solid, 6"	NM	1,139		
711-11-123	Thermoplastic, Standard, White, Solid, 12"	LF	463		
711-11-125	Thermoplastic, Standard, White, Solid, 24"	LF	532		
711-11-151	Thermoplastic, Standard, DOT Guide, 6"	LF	530		
711-11-160	Thermoplastic, Standard, White, Message	EA	15		
711-11-170	Thermoplastic, Standard, White, Arrow	EA	43		
711-11-211	Thermoplastic, Standard, Yellow, Solid, 6"	NM	1,190		
711-11-224	Thermoplastic, Standard, Yellow, Solid, 18"	LF	105		
711-11-231	Thermoplastic, Standard, Yellow, Skip, 6"	GM	0.770		
711-11-251	Thermoplastic, Standard, Yellow, DOT/Guide, 6"	LF	985		
999-25	Initial Contingency	LS	0		
SUBTOTAL ROADWAY BASE BID					\$

**City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05**

Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization/Demobilization	1	LS	\$20,000.00	\$20,000.00
2	General Requirements, Bonds and Insurance (3%)	1	LS	\$8,500.00	\$8,500.00
3	Locate Utilities in Advance of Construction	1	LS	\$3,000.00	\$3,000.00
4	Survey Layout and As-Builts	1	LS	\$6,000.00	\$6,000.00
5	Furnish and install 4-inch DIP water main (restrained joint)	80	LF	\$25.00	\$2,000.00
6	Furnish and install 6-inch PVC water main (restrained joint)	710	LF	\$20.00	\$14,200.00
7	Furnish and install 6-inch PVC water main (push)	115	LF	\$18.00	\$2,070.00
8	Furnish and install 6-inch DIP water main (restrained joint)	200	LF	\$35.00	\$7,000.00
9	Furnish and install 8-inch PVC water main (restrained joint)	30	LF	\$40.00	\$1,200.00
10	Furnish and install 8-inch PVC water main (push)	0	LF	\$20.00	\$0.00
11	Furnish and install 12-inch DIP water main (restrained joint)	120	LF	\$65.00	\$7,800.00
12	Furnish and install 16-inch PVC water main (restrained joint)	2340	LF	\$56.00	\$131,040.00
13	Furnish and install 16-inch PVC water main (push)	1030	LF	\$45.00	\$46,350.00
14	Furnish and install 16-inch DIP water main (restrained joint)	185	LF	\$80.00	\$14,800.00
15	Abandon and grout fill existing water main	4920	LF	\$4.00	\$19,680.00
16	Removal and disposal existing water main	2100	LF	\$15.00	\$31,500.00
17	4-inch Cap	4	EA	\$100.00	\$400.00
18	6-inch Cap	2	EA	\$150.00	\$300.00
19	8-inch Cap	1	EA	\$200.00	\$200.00
20	12-inch Cap	2	EA	\$300.00	\$600.00
21	16-inch Cap	1	EA	\$350.00	\$350.00
22	4-inch 45 Degree Bend	4	EA	\$140.00	\$560.00
23	6-inch 45 Degree Bend	16	EA	\$170.00	\$2,720.00
24	6-inch 22.5 Degree Bend	2	EA	\$130.00	\$260.00
25	6-inch 11.25 Degree Bend	3	EA	\$120.00	\$360.00
26	8-inch 45 Degree Bend	2	EA	\$200.00	\$400.00
27	12-inch 45 Degree Bend	4	EA	\$400.00	\$1,600.00
28	16-inch 11.25 Degree Bend	7	EA	\$850.00	\$5,950.00
29	16-inch 22.5 Degree Bend	1	EA	\$850.00	\$850.00
30	16-inch 45 Degree Bend	34	EA	\$850.00	\$28,900.00
31	6-inch Tee	1	EA	\$225.00	\$225.00
32	16 x 4-inch Tee	1	EA	\$750.00	\$750.00
33	16 x 6-inch Tee	4	EA	\$850.00	\$3,400.00
34	16 x 8-inch Tee	1	EA	\$900.00	\$900.00
35	16 x 12-inch Cross	1	EA	\$1,800.00	\$1,800.00
36	6 x 4-inch Reducer	2	EA	\$125.00	\$250.00
37	16 x 12-inch Reducer	1	EA	\$450.00	\$450.00
38	4-inch Gate Valve	1	EA	\$700.00	\$700.00
39	6-inch Gate Valve	5	EA	\$800.00	\$4,000.00

**City of Deltona
Normandy Boulevard (Section B)
Saxon Boulevard To Fort Smith Blvd
Bid No. ITB # PW 13-05**

Item No.	Description	Quantity	Unit	Unit Cost	Total Cost
40	8-inch Gate Valve	1	EA	\$1,200.00	\$1,200.00
41	12-inch Gate Valve	3	EA	\$2,000.00	\$6,000.00
42	16-inch Gate Valve	4	EA	\$4,000.00	\$16,000.00
43	Air Release Valve	6	EA	\$4,000.00	\$24,000.00
44	Fire Hydrant	11	EA	\$3,500.00	\$38,500.00
45	1-inch Single Service - Short	13	EA	\$500.00	\$6,500.00
46	1-inch Single Service - Long	5	EA	\$550.00	\$2,750.00
47	1-inch Double Service - Short	5	EA	\$700.00	\$3,500.00
48	1-inch Double Service - Long	14	EA	\$750.00	\$10,500.00
49	4-inch Direct Connect & Fitting Assembly – Potable	4	EA	\$2,000.00	\$8,000.00
50	6-inch Direct Connect & Fitting Assembly – Potable	2	EA	\$3,000.00	\$6,000.00
51	8-inch Direct Connect & Fitting Assembly – Potable	1	EA	\$4,500.00	\$4,500.00
52	12-inch Direct Connect & Fitting Assembly – Potable	3	EA	\$6,500.00	\$19,500.00
53	Bacterial Sample Location	8	EA	\$350.00	\$2,800.00
54	Remove and Replace Concrete Sidewalk		SY	\$10.00	\$0.00
55	Remove and Replace Concrete Driveway	167	SY	\$35.00	\$5,833.33
56	Remove and Replace Concrete Roadway		SY	\$35.00	\$0.00
57	Testing and Laboratory Services (Allowance)	1	LS	\$5,000.00	\$5,000.00
SUBTOTAL UTILITY BASE BID				\$531,648.33	

SUBTOTAL UTILITY BASE BID:

FIVE HUNDRED THIRTY-ONE THOUSAND SIX HUNDRED FORTY-EIGHT DOLLARS AND THIRTY-THREE CENTS
(IN WORDS)

\$531,648.33
(IN FIGURES)

SUBTOTAL ROADWAY BASE BID:

(IN WORDS)

\$ _____
(IN FIGURES)

TOTAL ROADWAY & UTILITY BASE BID:

(IN WORDS)

\$ _____
(IN FIGURES)

1. The following documents are attached to and made a condition of this Bid:
 1. Bid Response Forms (Bidding Documents, entire Section 00300).
 2. Bidders Contact and Information Form (Section 00301).
 3. References (Section 00301-A).
 4. Questionnaire Form (Section00301-B)
 5. Sub-Contractors and Affiliates Form (Section 00301-C)
 6. Bid Bond or security (surety bond or cashier's check). (Section 00410).
 7. Power of Attorney (for surety bond only).
 8. Corporate Resolution (any corporate employee other than president or vice-president, Section 00420).
 9. Sworn Statement Pursuant to Section 287.133(3)(a), Florida Statutes on Public Entity Crimes (Section 00470)
 10. Non-collusion Affidavit (Section 00480).
 11. Trench Safety Affidavit (Section 00490).

END OF SECTION

SECTION 00301
BIDDERS CONTACT AND INFORMATION FORM

Bidder (Company) Name:	F. E. I. N. or SS Number:
Mailing Address:	Street Address:
City, State, Zip:	City, State, Zip:
Type of Entity: <i>(Circle one)</i> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Corporation Partnership Proprietorship </div> <div style="margin-left: 100px; margin-top: 5px;"> Joint Venture </div>	<i>I hereby certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies or equipment, and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the Bidder.</i> <div style="text-align: center; margin-top: 20px;"> X _____ Authorized Signature (Manual) </div>
Incorporated in the State of: _____ Year: _____	Typed or Printed Name:
Telephone Number: ()	Title:
Fax Number: ()	
Email contact info:	

This Form Must Be Completed and Returned with your Submittal

SECTION 00301-A

References

***References who are located in foreign countries are not acceptable.
The Reference Form Must Be Completed and Returned with your Submittal.***

1. Project Name: _____
Project Value: _____
Project Description: _____
Project Owner: _____
Project Owner's contact info: _____
Project Location: _____
Project Start and End Dates: _____

2. Project Name: _____
Project Value: _____
Project Description: _____
Project Owner: _____
Project Owner's contact info: _____
Project Location: _____
Project Start and End Dates: _____

3. Project Name: _____
Project Value: _____
Project Description: _____
Project Owner: _____
Project Owner's contact info: _____
Project Location: _____
Project Start and End Dates: _____

4. Project Name: _____
Project Value: _____
Project Description: _____
Project Owner: _____
Project Owner's contact info: _____
Project Location: _____
Project Start and End Dates: _____

5. **Project Name:** _____
Project Value: _____
Project Description: _____
Project Owner: _____
Project Owner's contact info: _____
Project Location: _____
Project Start and End Dates: _____

6. **Project Name:** _____
Project Value: _____
Project Description: _____
Project Owner: _____
Project Owner's contact info: _____
Project Location: _____
Project Start and End Dates: _____

7. **Project Name:** _____
Project Value: _____
Project Description: _____
Project Owner: _____
Project Owner's contact info: _____
Project Location: _____
Project Start and End Dates: _____

8. **Project Name:** _____
Project Value: _____
Project Description: _____
Project Owner: _____
Project Owner's contact info: _____
Project Location: _____
Project Start and End Dates: _____

SECTION 00301-B
QUESTIONNAIRE FORM

DATE: _____

PROJECT IDENTIFICATION **CITY OF DELTONA
ROADWAY IMPROVEMENTS
NORMANDY BOULEVARD – SECTION “B”**

NAME OF BIDDER: _____

BUSINESS ADDRESS: _____

TELEPHONE NO.: _____

CONTRACTOR’S FLORIDA LICENSE NO.: _____

The undersigned warrants the truth and accuracy of all statements and answers herein contained. Include additional sheets if necessary.

1. How many years has your organization been in business as a General Contractor?

2. List similar roadway projects that you have undertaken in the most recent three year period. Identify the Owner and a Contact Person:

<u>Project</u>	<u>Municipality / Owner</u>	<u>Contact Name/Number</u>
----------------	-----------------------------	----------------------------

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Have you ever failed to complete work awarded to you? If so, where and why?

4. Name three (3) municipalities for which you have performed similar roadway projects and to which you refer:

5. Have you personally inspected the site of the proposed Work? Describe any anticipated problems with the site and your proposed solutions.

6. Will you Subcontract any part of this Work? If so, describe which portion(s).

7. What equipment do you own that is available for the Work?

8. What equipment will you purchase for the Work?

9. What equipment will you rent for the Work?

10. The following is given as a summary of the Financial Statement of the undersigned: (List Assets and Liabilities and use insert sheet if necessary.)

11. State the true and exact, correct, and complete name under which you do business.

Bidder is: _____

END OF SECTION

SECTION 00301-C
Sub Contractors and Affiliates Form

The following are a list of Sub Contractors or Affiliates that will be utilized in this project. Use additional sheets if necessary.

FIRM NAME	TRADE	TELEPHONE AND FAX NUMBER
		()
		()
		()
		()
		()
		()
		()
		()
		()
		()

In the event our firm is awarded this bid, the City of Deltona will be notified of any changes made to this Sub Contractors list before and during any and all work performed during this project.

The Sub-Contractor listing Form Must Be Completed and Returned with your Submittal.

SECTION 00301-D

DRUG-FREE WORK PLACE FORM

The undersigned Bidder in accordance with Florida Statute 287.087, hereby certifies that

_____ does:

(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are proposed a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

X

Bidder's Signature

Date

This Form Must Be Completed and Returned with your Submittal, if applicable

SECTION 00301-E

HOLD HARMLESS AND INDEMNITY AGREEMENT

_____, agrees through the signing of this document by an authorized party or agent that it shall defend, indemnify and hold harmless the City of Deltona, and its agents, employees, and public officials from and against all suits, losses, claims, demands, judgments of every name and description arising out of or incidental to the performance of this contract or work performed thereunder, whether or not due to or caused by the negligence of the City of Deltona, its agents, employees, and public officials excluding only the sole negligence of the City of Deltona, its agents, employees, and Public Officials.

This provision shall also pertain to any claims brought against the City of Deltona, its agents, employees, and public officials by an employee of the named Contractor, any Sub-contractor, or anyone directly or indirectly employed by any of them.

The Contractor's obligation to indemnify the City of Deltona, its agents, employees and public officials under this provision shall be limited to \$1,000,000 per occurrence which the parties agree bears a reasonable commercial relationship to the contract.

The Contractor agrees to accept, and acknowledges as adequate remunerations, the consideration of \$10, which is part of the agreed bid price, the promises contained herein, and other good and valuable consideration, the receipt of which is hereby acknowledged, for agreement to enter into this Hold Harmless and Indemnity Agreement.

CONTRACTOR

DATE

This Form Must Be Completed and Returned with your Submittal.

SECTION 00301-F

Statement of No Bid

Bid No.: ITB # PW 13-05 Normandy Blvd (Sec B) Saxon Blvd. to Fort Smith Blvd

If your company does not intend to bid on this Procurement, please complete and return this form prior to the date shown for receipt of bids to: PUBLIS WORKS DIVISION, CITY OF DELTONA, Purchasing Agent, 255 Enterprise Road, Deltona, FL 32725.

We, the undersigned, have declined to bid on the above referenced Invitation to Bid for the following reason(s):

- Specifications are too "restrictive." (Please explain below)
- Unable to meet specifications
- Specifications were unclear. (Please explain below)
- Insufficient time to respond
- We do not offer this type of product or equivalent
- Our production schedule would not permit us to perform
- Unable to meet bond requirements
- Other (please explain below)

REMARKS:

Company Name

Telephone

X

Signature

Fax

Title

Typed or Printed Name

Address City State Zip

SECTION 00410

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ as Principal, and _____ as Surety, are hereby held and firmly bound unto the City of Deltona, Florida as Owner in the penal sum of, (five percent 5%) of the Contract Bid) _____ for the payment of which, well and truly to be made, we hereby and severally bind ourselves, successors and assigns to pay Owner upon default of Bidder the penal sum set forth on the face of this Bond. Signed, this _____ day of _____, 20__.

The condition of the above obligation is such that whereas the Principal has submitted to City of Deltona, Florida a certain Bid, attached hereto and hereby made a part hereof, to enter into a contract in writing, for Roadway Improvements.

NOW THEREFORE,

1. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents and Contract Documents.
2. This obligation shall be null and void if:
 - 2.1 Owner accepts Bidder's bid and Bidder delivers within the time required by the Bidding Documents (or an extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents and Contract Documents, or
 - 2.2 All bids are rejected by Owner, or
 - 2.3 Owner fails to issue a notice of award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).
3. Payment under this Bond will be due and payable upon default of Bidder and within thirty (30) calendar days after receipt of Bidder and Surety of written notice of default from Owner which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

4. Surety waives notice of any and all defenses based on or arising out of any time extension to issue notice of award agreed to in writing by Owner and Bidder, providing that the time for issuing notice of award including extensions shall not in the aggregate exceed one hundred twenty (120) days from Bid Due without Surety's written consent.
5. No suite or action shall be commenced under this Bond prior to thirty (30) calendar days after the notice of default required in paragraph 3 above is received by Bidder and Surety, and in no case later than one year after Bid Due Date.
6. Any suite or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
7. Notice required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the part concerned.
8. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.
9. This bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of the Bond conflicts with any applicable provision of any applicable statute, then the provision of said statute shall govern and the remainder of the Bond that is not in conflict therewith shall continue in full force and effect.
10. The term "bid" as used herein includes a bid, offer or proposal as applicable.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal (Print Full Name):

Surety (Print Full Name):

_____(Seal)
Surety's Name and Corporate Seal

By: _____(LS)

By: _____
Signature (attach power of attorney)

Title: _____

Title: _____

Attest: _____
Signature and Title

Attest: _____
Signature and Title

(Date)

IMPORTANT – Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Florida. See Article 5 of the General Conditions as amended by Supplementary Conditions.

END OF SECTION

SECTION 00420

CORPORATE RESOLUTION

I, _____, Secretary of _____, a corporation organized and existing under the laws of the state of _____, hereby certify that at a meeting of the Board of Directors of the Corporation duly called and held on _____, 20__ at which a quorum was present and acting throughout, the following resolutions were adopted and are now in full force and effect:

RESOLVED that the following individuals of this corporation are authorized to execute on behalf of this corporation a Bid and Agreement to _____ for the construction of Roadway improvements on Fort Smith Boulevard (Section 2).

I further certify that the names of the officers of this corporation and any other persons authorized to act under this resolution and their official signatures are as follows:

NAME	OFFICE	OFFICIAL SIGNATURE
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

IN WITNESS THEREOF, I have hereunto subscribed my name as Secretary and affixed the seal of the corporation this _____ day of _____, 20 __.

END OF SECTION

SECTION 00470

SWORN STATEMENT UNDER SECTION 287.133(3)(A), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

This sworn statement is submitted to the City of Deltona by _____
(Individual's name and title)

For

(Name of entity submitting sworn statement)

Whose business address is

And (if applicable) its Federal Employer Identification Number (FEIN) is _____
(if the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement)

1. I understand that a "public entity crime" as defined in Section 287.133(1)(g), Florida Statutes, means a violation of any State or Federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or a of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
1. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crimes, with or without an adjudication of guilt, in any Federal or State trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.
2. I understand that an "affiliate" as defined in Section 287.133(1)(a), Florida Statutes, means:

A predecessor or successor of a person convicted of a public entity crime: or an entity under the control of any natural person who is active in the management of the entity and how has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one (1) person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding thirty-six (36) months shall be considered an affiliate.
3. I understand that a "person" as defined in Section 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders employees, members, and agents who are active in management of an entity.

4. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (You must indicate which statement applies.)

_____ Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agent who is active in management of the entity, nor the affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members or agent who are active in management of the entity, or an affiliate of the entity, has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members or agents who are active in management of the entity, or an affiliate of the entity, has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before an Administrative Law Jury of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Administrative Law Jury determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (You must attach a copy of the final order).

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CITY OF DELTONA IS FOR THE CITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31, OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE CITY PRIOR TO ENTERING IN TO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

SIGNATURE

DATE

State of _____
County of _____

Personally appeared before me, the undersigned authority, _____ (name of individual signing) who, after first being sworn by me, affixed his/her signature in the space provided above on the ____ day of _____, 20 ____.

NOTARY PUBLIC

My commission expires:

This Form Must Be Completed and Returned with your Submittal

SECTION 00480
NON COLLUSION AFFIDAVIT FORM

STATE OF FLORIDA

COUNTY OF VOLUSIA

_____, being first duly sworn deposes and says that:

1. He (it) is the _____, of _____, the Bidder that has submitted the attached Bid;
2. He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affidavit, have in any way, colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted; or to refrain from bidding in connection with such Contract; or have in any manner, directly or indirectly, sought by agreement or collusion, or communication, or conference with any Bidder, firm, or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit, or cost elements of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Contract;
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any other of its agents, representatives, owners, employees or parties in interest, including this affidavit.

By _____

Sworn and subscribed to before me this ____ day of _____, 20____, in the State of _____, County of _____.

_____ Notary Public

My Commission expires:

This Form Must Be Completed and Returned with your Submittal

SECTION 00490

TRENCH SAFETY AFFIDAVIT

Trench excavations on this Project are expected to be in excess of 5 feet deep. The Occupational Safety and Health Administration excavation safety standards, 29 CFR 1926.650 Subpart P Trench Safety Standards will be in effect during the period of construction of the Project.

Bidder acknowledges that included in the Bid Price are costs for complying with the Florida Trench Safety Act (90-096, Laws of Florida) effective October 1, 1990, and hereby gives assurance that, if awarded the Contract, the Contractor or Subcontractor performing trench excavation work on the Project will comply with the applicable trench safety standards. The Bidder further identified the costs as follows:

**CITY OF DELTONA
ROADWAY IMPROVEMENTS
NORMANDY BOULEVARD – SECTION B**

<u>Trench Safety Item (description)</u>	<u>Unit Cost</u>
_____	_____

(Cost in Words)

Total: \$ _____

FAILURE TO COMPLETE THE ABOVE SHALL RESULT IN THE BID BEING DECLARED NON-RESPONSIVE.

COMPANY NAME: _____

DATE: _____

BY: _____

END OF SECTION

Section 00500

SAMPLE ONLY (FOR INFORMATION PURPOSES ONLY)

AGREEMENT BETWEEN CITY OF DELTONA AND {CONTRACTOR} PER ITB # PW 13-05

THIS AGREEMENT is made and entered into this ____ day of _____, 201_ by and between the CITY OF DELTONA, a municipality of the State of Florida, whose address is 2345 Providence Boulevard, Deltona, Florida 32725, hereinafter called the "City" and {NAME OF COMPANY}, duly authorized to conduct business in the State of Florida, whose principal address is {ADDRESS}, hereinafter called the "Contractor".

WHEREAS, the City desires to obtain services related to NORMANDY BOULEVARD- SECTION B per ITB No. PW 13-05. The work generally involves all work as described in the ITB documents, specifications, drawings and any addendum issued for this project.

WHEREAS, the City requested and received expressions of interest from several companies to provide these services; and

WHEREAS, Contractor is competent and qualified to furnish said services to the City and desires to provide its services for this project,

WHEREAS, the Commission of the City of Deltona has approved award of this agreement on {DATE}.

NOW, THEREFORE, IN CONSIDERATION of the mutual terms, understandings, conditions, premises, covenants and payment hereinafter set forth, and intending to be legally bound, the parties hereby agree as follows:

Article 1. Recitals

The foregoing recitals are true and correct and incorporated herein by reference.

Article 2. Scope of Services

2.1 Pursuant to the terms and conditions set forth in this Agreement, City hereby engages Contractor to perform services related to NORMANDY BOULEVARD – SECTION B per ITB No. PW 13-05, attached hereto and incorporated herein by reference, and Contractor's Proposal dated {DATE}.

2.2 The services, as described in ITB No. PW- 13-05, to be rendered by the Contractor, shall commence upon issuance of a Notice to Proceed and be completed as needed by the City.

2.3 The services to be rendered by the Contractor shall include all labor, materials, equipment and incidentals necessary to perform all work indicated and specified in the ITB documents.

2.4 Contractor has familiarized itself with the nature and extent of the contract documents, work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or furnishing of the work.

2.5 Contractor has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all examinations, investigations, explorations, tests, reports and studies which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the work as Contractor considers necessary for the performance or furnishing of the work at the contract price, within the contract time and in accordance with the other terms and conditions of the contract documents and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.

2.6 Contractor acknowledges that nothing herein shall be deemed to preclude the City from retaining the services of other persons or entities undertaking the same or similar services as those undertaken by the Contractor or from independently developing or acquiring materials or programs that are similar to or competitive with, the services provided under this Agreement.

2.7 Contractor shall be responsible for obtaining all required federal, state or local permits required to complete the scope of work under this agreement.

2.8 Contractor shall be responsible for the quality of work performed. Contractor shall, without additional compensation, correct or revise any errors or deficiencies in his services.

2.9 Contractor agrees to provide a one year maintenance period to correct any defective work that may be found within the one year period from the time of completion.

Article 3. Payment

3.1 The City agrees to compensate Contractor for work performed, completed and accepted by the City's representative for services provided for this project at a total cost not to exceed the amounts submitted by the Contractor within ITB # PW 13-05. Fees for any additional work needed will be agreed upon in writing prior to any service being completed.

3.2 Invoices shall be submitted in duplicate to the City of Deltona, Accounts Payable, 2345 Providence Blvd., Deltona, FL 32725. Each invoice shall contain the purchase order number and a detailed description of services and fees.

3.3 The City shall make payment on all invoices in accordance with the Florida Prompt Payment Act, sections 218.70 through 218.79, Florida Statutes.

3.4 The City shall make all payments on the basis of the work completed and accepted by the City.

3.5 The Contractor shall not be entitled to payment for any other expenses, fees, or other costs it may incur at any time and in any connection with its performance hereunder. The Contractor hereby agrees that the total cost is inclusive of all overhead and administrative expenses.

3.6 In the event a specific project is to be funded by state or federal monies, the Contractor hereby agrees to comply with all requirements of the state or federal government applicable to the use of the monies, including receiving no payment until all required forms are completed, submitted, and approved by the City.

Article 4. Special Terms and Conditions

4.1 Qualifications. Firms or individuals shall be registered with the State of Florida and have obtained at least the minimum thresholds of education and professional experience required by Florida Statutes to perform the services contained herein.

4.2 Termination. This Agreement may be terminated by the City upon thirty (30) days advance written notice to the Contractor; but if any work is in progress but not completed as of the date of termination, then this Agreement may be extended upon written approval of the City until said work is completed by the Contractor and accepted by the City.

- A. Upon notification to the Contractor of termination by the City, Contractor will immediately discontinue all services affected unless the notice directs otherwise.
- B. Termination for Convenience. In the event this Agreement is terminated or cancelled upon the request and for the convenience of City, City shall reimburse Contractor for actual work satisfactorily completed.
- C. Termination for Cause. If the termination of this Agreement is due to the failure of the Contractor to fulfill his contractual obligations, City shall reimburse Contractor for actual work satisfactorily completed, and City may take over the work and prosecute the same to completion by Agreement or otherwise.
- D. In the event of termination of this Agreement, all work, reports, and other work product produced by Contractor in connection with the Agreement shall be returned to the City and become and remain the property of the City.

4.3 Assignment. This Agreement may not be assigned or transferred in any manner by Contractor and any such assignment is expressly prohibited. Any attempt to assign this Agreement shall render this Agreement null and void.

4.4 Insurance and Bond. The City of Deltona will purchase Builders' Risk Insurance. Contractor shall provide and maintain, during the entire term of this Agreement, without cost to the City, insurance in the following types and limits with a company or companies authorized to do business in the State of Florida and rated "Class A" or better by A. M. Best or some other form of assurance approved by the City's Risk Manager.

Contractor shall not commence work under the Agreement until City has received an acceptable certificate or certificates of insurance evidencing the required insurance, which is as follows:

- (A) General Liability insurance on forms no more restrictive than the latest edition of the Commercial General Liability policy (CG 00 01 or CG 00 02) of the Insurance Services Office or equivalent without restrictive endorsements, with the following minimum limits and coverage:

General Liability	
Each Occurrence/General Aggregate	\$1,000,000
Products-Completed Operations	\$1,000,000
Premises Operation	\$1,000,000
Personal & Adv. Injury	\$1,000,000
Professional Liability	\$1,000,000
Blanket Contractual Liability	\$1,000,000
Fire Damage	\$50,000

- (B) Automobile liability insurance, including owned, non-owned and hired autos with the following minimum limits and coverage:

Combined Single Limit	\$1,000,000
Or	
Bodily Injury (per person)	\$1,000,000
Bodily Injury (per accident)	\$1,000,000
Property Damage	\$100,000

- (C) Workers' compensation insurance in accordance with Florida Statute, Chapter 440, and/or any other applicable law requiring workers' compensation (Federal, maritime, etc).

Additional Requirements:

(1) **City of Deltona, a municipality of the State of Florida**, shall be named as an additional insured on the General liability policy.

(2) Certificates of insurance shall provide for a minimum of thirty (30) days prior written notice to the City of any material change or cancellation of the required insurance, with ten (10) day written notice of cancellation due to non-payment of premium.

(3) Certificates of insurance shall identify the Bid number, contract, project, etc. in the Description of Operations section of the Certificate.

(4) Contractor shall be responsible for subcontractors and their insurance.

(5) The Certificate holder section of each policy shall state: City OF DELTONA, A MUNICIPALITY OF THE STATE OF FLORIDA, 2345 PROVIDENCE BOULEVARD, DELTONA, FLORIDA 32725.

(6) Contractor shall be solely responsible for all deductibles and self-insurance retention on Contractor Liability Insurance policies. All of the policies of insurance so required to be purchased and maintained shall contain a provision or endorsement that the coverage afforded shall not be canceled, materially changed or renewal refused without thirty (30) calendar days written notice, or without ten (10) days written notice of cancellation due to non-payment of premium, being given to City by certified mail.

4.5 Indemnity. Contractor shall indemnify and hold City and its agents, officers, commission, or employees harmless for any damages resulting from failure of Contractor to take out and maintain the above insurance. Additionally, Contractor agrees to indemnify, and hold the City, and its officers, commission, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional and attorney fees, court costs, other expenses and liabilities to the extent resulting from the negligent act, error or omission of Contractor, its agents, employees or representative, in the performance of Contractor's duties set forth in this Agreement.

4.6 Independent Contractor. Contractor agrees that it shall be acting as an independent contractor and shall not be considered or deemed to be an agent, employee, joint venturer, or partner of City. Contractor shall have no authority to contract for or bind City in any manner and shall not represent itself as an agent of City or as otherwise authorized to act for or on behalf of City.

4.7 Ownership of Deliverables.

(a) Title to all work product produced by Contractor pursuant to this Agreement shall be and remain the sole and exclusive property of City when produced. Contractor shall deliver all such original work product to City upon completion thereof unless it is necessary for Contractor, in City's sole discretion to retain possession for a longer period of time.

(b) The documents, reports, and similar materials provided or created by Contractor are public records and Contractor shall abide by applicable requirements of Florida law. Contractor shall notify the City within 24 hours of receiving the request to release the information concerning the subject project to a member of the media and/or to the public. The City's notification shall to the extent possible provide the name, date, time and type of information requested to be released prior to the Contractor's release or disclosure of information to the media or to the public.

4.8 Return of Materials. Upon the request of the City, but in any event upon termination of this Agreement, Contractor shall surrender to the City all memoranda, notes, records, and other documents or materials pertaining to the services hereunder, that were furnished to the Contractor by the City pursuant to this Agreement. Contractor may keep copies of all work products for its records.

4.9 **NO CLAIM FOR DAMAGES OR ANY CLAIM OTHER THAN FOR AN EXTENSION OF TIME SHALL BE MADE OR ASSERTED AGAINST THE CITY BY REASON OF ANY DELAYS.** No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the work from any cause whatsoever, shall relieve the Contractor of his duty to perform or give rise to any right to damages or additional compensation from the City. The Contractor expressly acknowledges and agrees that the Contractor

shall receive no damages for delay. The Contractor's sole remedy, if any, against the City shall be the right to seek an extension to the contract time.

4.10 Retaining Other Contractors by City. Nothing herein shall be deemed to preclude the City from retaining the services of other persons or entities undertaking the same or similar services as those undertaken by the Contractor or from independently developing or acquiring materials or programs that are similar to or competitive with, the services provided under this Agreement.

4.11 Accuracy. The Contractor is responsible for the professional quality, technical accuracy, timely completion and coordination of all the services furnished hereunder. The Contractor shall, without additional compensation, correct or revise any errors, omissions or other deficiencies in its services.

4.12 Codes and Regulations. All work completed under this Agreement shall at all times comply with all applicable federal, state and local statutes, codes, regulations and ordinances.

4.13 Public Entity Crimes. A person or affiliate who has been placed on the convicted vendor list following a conviction of a public entity crime may not be awarded or perform work as a contractor, supplier, subcontractor, or engineer under a contract with any public entity in excess of the threshold amount provided in Florida Statutes, section 287.017 for Category Two for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

4.14 Prohibition against Contingent Fees. Contractor warrants that they have not employed or retained any company or person, other than a bona fide employee working solely for the Contractor to solicit or secure this Agreement and that they have not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, gift or other consideration contingent upon or resulting from the award or making of this Agreement.

Article 5. General Conditions

5.1 This Agreement is made under, and in all respects shall be interpreted, construed, enforced, and governed by and in accordance with, the laws of the State of Florida. Venue for any legal action resulting from this Agreement shall lie solely in Volusia County, Florida.

5.2 No modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith. The City may make changes in the services at any time by giving written notice to Contractor. If such changes increase (additional services) or decrease (eliminate any amount of work) in the scope of work, City and Contractor shall modify this agreement through issuance of a change order. All change orders shall be authorized in writing by City prior to commencing or reducing any term of this agreement.

5.3 Neither the City's review, approval or acceptance of, nor payment for, any of the services required shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement and the Contractor shall be and remain liable to the City in accordance with

applicable law for all damages to the City caused by the Contractor's performance of any of the services furnished under this Agreement.

5.4 In the event Contractor, during the course of the work under this Agreement, requires the services of any Sub-Contractor or other professional associates in connection with service covered by this Agreement, Contractor must secure the prior written approval of the City. If Sub-Contractors or other professional associates are required in connection with the services covered by this Agreement, Contractor shall remain fully and solely responsible for the services of and monies owed to Sub-Contractors or other professional associates.

5.5 It is recognized that questions in the day-to-day conduct of performance pursuant to this Agreement will arise. The City, upon request by Contractor, shall designate in writing and shall advise Contractor in writing of one (1) or more City employees to whom all communications pertaining to the day-to-day conduct of the Agreement shall be addressed. The designated representative shall have the authority to transmit instructions, receive information and interpret and define the City's policy and decisions pertinent to the work covered by this Agreement.

5.6 No claim for services furnished by the Contractor not specifically provided for herein shall hold the City liable or be honored by the City.

5.7 The Contractor agrees that it will not engage in any action that would create a conflict of interest in the performance of its obligations pursuant to this Agreement with the City or which would violate or cause others to violate the provisions of Part III, Chapter 112, Florida Statutes, relating to ethics in government.

5.8 The Contractor hereby certifies that no officer, agent or employee of the City has any material interest (as defined in Section 112.312(15), Florida Statutes, as over 5%) either directly or indirectly, in the business of the Contractor to be conducted here, and that no such person shall have any such interest at any time during the term of this Agreement.

5.9 The captions utilized in this Agreement are for the purposes of identification only and do not control or affect the meaning or construction of any of the provisions hereof.

5.10 This Agreement shall be binding upon and shall inure to the benefit of each of the parties and of their respective successors and permitted assigns. Nothing in this Agreement is intended or shall be deemed to confer any rights or benefits upon any entity or person other than the parties hereto or to make or render any such other entity or person a third-party beneficiary of this Agreement.

5.11 This Agreement may not be amended, released, discharged, rescinded or abandoned, except by a written instrument duly executed by each of the parties hereto.

5.12 The failure of any party hereto at any time to enforce any of the provisions of this Agreement will in no way constitute or be construed as a waiver of such provision or of any other provision hereof, nor in any way affect the validity of, or the right thereafter to enforce, each and every provision of this Agreement.

5.13 During the term of this Agreement Contractor assures City that it is in compliance with Title VII of the 1964 Civil Rights Act, as amended, and the Florida Civil Rights Act of 1992, in that Contractor does not on the

grounds of race, color, national origin, religion, sex, age, disability or marital status, discriminated in any form or manner against Contractor employees or applicants for employment. Contractor understands and agrees that this Agreement is conditioned upon the veracity of this statement of assurance.

Article 6. Severability and Notice

6.1 The invalidity or unenforceability of any particular provision of this Agreement shall not affect the other provisions hereof, and this Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted.

6.2 Wherever provision is made in this Agreement for the giving, service or delivery of any notice, statement or other instrument, such notice shall be in writing and shall be deemed to have been duly given, served and delivered, if delivered by hand or mailed by United States registered or certified mail or sent by facsimile, addressed as follows:

If to Contractor:
{NAME}
{TITLE}
{COMPANY NAME}
{ADDRESS}
{CITY, STATE, ZIP}

If to City:
Public Works Utilities Director
City of Deltona
2345 Providence Blvd.
Deltona, Florida 32725

Each party hereto may change its mailing address by giving to the other party hereto, by hand delivery, United States registered or certified mail notice of election to change such address.

Article 7. Scope of Agreement

7.1 This Agreement is intended by the parties hereto to be the final expression of their Agreement, and it constitutes the full and entire understanding between the parties with respect to the subject hereof, notwithstanding any representations, statements, or agreements to the contrary heretofore made.

7.2 This Agreement consists of the following:

- This Agreement
- Notice of Award and Notice to Proceed
- ITB Documents
- Addendum, if any
- Contractor's Response to ITB

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement for the purposes stated herein.

ATTEST:

CONTRACTOR:

Secretary

President

(CORPORATE SEAL)

Date

SAMPLE
CITY OF DELTONA

ATTEST:

JOYCE KENT
City Clerk

ONLY

FAITH G. MILLER
City Manager

Date

Approved as to Form and Legality:

GARY J. COONEY
City Attorney

SECTION 00650

CERTIFICATE OF INSURANCE

A. INSURANCE REQUIREMENTS

1. Contractor shall purchase and maintain such comprehensive general liability and other insurance as required by the General Conditions and modified by the Supplementary Conditions. Should any of the required insurance policies be canceled before the expiration date thereof, the insuring company shall provide written notice to each insured 30 days prior to cancellation.

B. CERTIFICATE OF INSURANCE FORM

1. The Certificate of Insurance submitted to the Owner and Engineer shall be on the Insurance Company's form with a format similar to the popular ACORD Corporation form.
2. The Owner, Engineer and Engineer's Subconsultants as provided in Section 0800: Supplementary Conditions, shall be shown as additional insureds.
3. The Owner's project name and project number shall be shown on the Certificate.
4. Six (6) Certificates shall be submitted along with the executed Contract Agreement and Performance and Payment Bonds.

END OF SECTION

SECTION 00700

**GENERAL CONDITIONS
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ARTICLE 1 - DEFINITIONS/INTERPRETATIONS

1.1 Definitions

Whenever used in the Contract Documents, the following terms shall have the meanings indicated, which shall be applicable to both the singular and plural thereof.

Addenda - Written or graphic instruments issued prior to the date for opening Bids which modify or interpret the Contract Documents by additions, deletions, corrections or clarifications.

Acceptance, Final Acceptance - The formal action by CITY accepting the Work as being complete after certification by ENGINEER of final completion.

Agreement - The written agreement between CITY and CONTRACTOR covering the Work to be performed; other Contract Documents are incorporated in or referenced in the Agreement and made a part thereof as provided therein.

Apparent Low Bidder - The Bidder submitting the lowest Bid at the Bid Opening without correction of numerical discrepancies or determination of responsiveness and responsibility.

Application for Payment - The form furnished in the Contract Documents which is to be used by CONTRACTOR in requesting progress or Final Payments and which shall contain an affidavit of CONTRACTOR that Progress Payments theretofore received from CITY on account of the Work have been applied by CONTRACTOR to discharge in full all of CONTRACTOR's obligations stated in prior Applications for Payment. The application includes such supporting documentation as required by the Contract Documents.

Bid - The offer or proposal of a Bidder submitted in the prescribed manner on the prescribed forms to perform the Work in accordance with the Contract Documents.

Bidder - The individual, partnership, corporation, joint venture, or other legal entity or combination thereof submitting a Bid for the Work directly to CITY through an authorized representative.

Bid Security - The security designated in the Instructions to Bidders.

Bonds - Instruments of security furnished by CONTRACTOR and his surety in accordance with the Contract Documents.

Change Order - A written instrument issued on or after the Effective Date of the Agreement, which when duly executed by CITY amends the Contract Documents to provide for changes in the Work or in the provisions of the Contract Documents, or changes in Contract Price or Contract Time, or any combination thereof.

Change Request - A written instrument which when signed by CITY is a directive authorizing a change in the Work or in the provisions of the Contract Documents, or an adjustment in Contract Price or Contract Time, or any combination thereof. Even when signed by CITY, a Change Request is not an instrument that amends the Contract Documents; however, it may be converted to a Change Order. An unsigned Change Request may be used by CITY and CONTRACTOR to negotiate changes in the Work or in the provisions of the Contract Documents, or adjustments in Contract Price or Contract Time, or any combination thereof CITY; the OWNER.

Construction Manager - The authorized representative of CITY who is assigned to the Project.

Contract Documents - Those documents named in Article 8 of the Agreement.

Contract Price - The total compensation, subject to authorized adjustments, payable by CITY to CONTRACTOR under the Contract Documents as stated in the Agreement.

Contract Time - The period of time allotted in the Contract Documents, subject to authorized adjustments, for Substantial Completion of the Work, or specified part thereof.

CONTRACTOR - The individual, partnership, corporation, joint venture, or other legal entity or combination thereof who has entered into the Agreement with CITY for the performance of the Work. The term "CONTRACTOR" means CONTRACTOR or its authorized representative.

Cost and Pricing Data - Refers to all data available to or relied upon by CONTRACTOR in negotiating, pricing or costing Work covered by a Change Order or a Change Request, or involved in a proposal or claim. Sample Cost and Pricing Data include proposal or claim estimates, CONTRACTOR's Bid estimate, estimating guides, CONTRACTOR's computations and projections, and the assumptions made by CONTRACTOR in pricing or figuring increases or decreases in Contract Price or Contract Time.

Date of Commencement of the Contract Time - The date given by the Notice to Proceed when the Contract Time commences to run.

Day - A calendar day of 24 hours lasting from midnight one day to midnight the next day.

Defective - An adjective which when modifying the word Work refers to work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Final Payment (unless responsibility for the protection thereof has been assumed by CITY).

DESIGN ENGINEER - The person, firm, or corporation who is named as such in the Agreement who designed the Project and has the rights and authority as assigned to him in the Contract Documents. The term "DESIGN ENGINEER" means DESIGN ENGINEER or its authorized representative.

Drawings, Plans - The Drawings, Plans or reproduction thereof, which show scope, character, location, dimensions, and other details of the Work to be performed and which are included in the Contract Documents.

Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed by the last of the two parties to sign.

ENGINEER - The individual, partnership, corporation, joint venture, or any combination thereof, named as ENGINEER in the Agreement who will have the rights and authority assigned to ENGINEER in the Contract Documents. The term "ENGINEER" means the ENGINEER or its authorized representative.

Federal Contract Provisions - Federal Regulatory Agency or statutory requirements applicable to the Work and included in the Contract Documents under this heading.

Field Order - A written instrument issued by ENGINEER to CONTRACTOR which orders minor variations in the Work, as opposed to a change in the Work, and which does not involve an adjustment in Contract Price or Contract Time.

Field Representative - Person who is assigned to the site or any part thereof by CITY.

General Requirements - Sections of Division 1 of the Specifications.

Holidays - Days designated by CITY as legal holidays.

Laws and Regulations; Laws or Regulations - Laws, Rules, Regulations, Ordinances, and/or court or administrative Orders of the federal, state and local governments.

Low Bidder - The lowest responsive, responsible Bidder.

Notice of Award - The written notice of the acceptance of the Bid from CITY to Low Bidder.

Notice to Proceed - The written notice issued by CITY to CONTRACTOR authorizing it to proceed with the Work and establishing the Date of Commencement of the Contract Time.

OWNER - Refer to definition of CITY.

Payment Bond - The security furnished by CONTRACTOR and its surety as a guarantee that CONTRACTOR will pay in full all Bills and accounts, from claimants as defined in Florida Statutes Chapter 713, or as amended, for material, labor, services and supplies used directly or indirectly in the prosecution of the Work; the covered amount of the Payment Bond is separate and distinct from the covered amount of the Performance Bond.

Performance Bond - The security furnished by CONTRACTOR and its surety as a guarantee that CONTRACTOR will perform all of its contractual obligations in accordance with the terms of the Contract Documents; the covered amount of the Performance Bond is separate and distinct from the covered amount of the Payment Bond.

Progress Schedule - All documentation related to the planning and scheduling of the Work as described in these General Conditions and the General Requirements.

Project - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Request for Information - CONTRACTOR's inquiries for information as submitted on the Request for Information form included in the Contract Documents.

Shop Drawings - All Drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work, specifically indicating how CONTRACTOR will comply with the Contract Documents.

Specifications - Those portions of the Contract Documents consisting of written or graphic technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

Sub-Agreement - A contract or purchase order awarding a part of the Work under the Contract Documents to a Subcontractor, Supplier or other person or entity.

Subcontractor - An individual, partnership, corporation, joint venture, or other combination thereof having a Sub-agreement with CONTRACTOR for (a) the performance of labor in connection with part of the Work at the site; or (b) for both performing labor in connection with part of the Work at the site and furnishing items of materials or equipment for incorporation into the Work. Subcontractor also means an individual, partnership, corporation, joint venture, or other combination thereof who has a Sub-agreement with another Subcontractor to perform any of the Work at the site.

Substantial Completion - That date when (a) the Work (or a specified part thereof) is complete in accordance with the Contract Documents, with the exception of the minor items identified during the inspection described in these General Conditions, and (b) the Work can be utilized for the purposes for which it is intended, as may be evidenced by successful completion of all specified pre-operational start-up and demonstration tests. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof.

Supplementary Conditions - The part of the Contract Documents which amends or supplements these General Conditions or other portions of the Contract Documents as stated therein and is designated as such.

Supplier - A manufacturer, fabricator, supplier, distributor, materialman or vendor.

CITY - CITY OF DELTONA

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unit Price Work - Work to be paid on the basis of unit prices. The term contingent Unit Price Work refers to Unit Price Work which is foreseeable but not certain to materialize during the performance of the Work.

Warranty Period - The period of time within which CONTRACTOR shall promptly, without cost to CITY and in accordance with CITY's written instructions, either correct defective Work or, if it has been rejected by CITY, remove it from the site and replace it with non-defective Work.

Work - Any and all obligations, duties, responsibilities, labor, materials, equipment, temporary facilities, utilities, and incidentals and the furnishing thereof necessary to complete the construction assigned to, or undertaken by CONTRACTOR pursuant to the Contract Documents. Also, the completed construction or parts thereof required to be provided under the Contract Documents, including all materials, equipment, and supplies incorporated or to be incorporated in the construction.

1.2 Interpretations

- 1.2.1. Any reference to an Article or paragraph in these General Conditions without identification of the particular Section shall mean a reference to these General Conditions.
- 1.2.2. Each Article in these General Conditions is composed of sub-articles, numbered as this sub-article 1.2 is numbered; parts, numbered as this part 1.2.1 is numbered; and sub-parts - all of which are generally referred to as "paragraphs". A reference to a sub-article means a reference to the entire sub-article, or to a part, or a sub-part, or any combination of them, depending on the intent of the reference.
- 1.2.3. Often, the Contract Documents omit the modifying word "all" and "any", and the articles "the" and "an". However, omitting modifiers or articles from, or inserting any of them into, a statement shall not in any way affect the meaning or interpretation of either statement.

ARTICLE 2 - PRELIMINARY MATTERS

2.1 Copies of Documents

CITY shall furnish to CONTRACTOR five copies of the Contract Documents free of charge. CONTRACTOR will reimburse the Design Engineer for the preparation of additional copies.

2.2 Commencement of the Contract Time; Notice to Proceed

- 2.2.1. The Contract Time will commence to run on the day indicated in the Notice to Proceed. The Notice to Proceed may indicate a Date of Commencement of the Contract Time any time within thirty days after the Effective Date of the Agreement.

- 2.2.2. CONTRACTOR shall start to perform the Work on the Date of Commencement of the Contract Time. No Work shall be done at the site prior to the date on which the corresponding Contract Time commences to run unless otherwise authorized in writing by CITY.

2.3 Before Starting Construction

- 2.3.1. Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error or discrepancy which CONTRACTOR or any of his Subcontractors or Suppliers may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any work affected thereby; provided, however, CONTRACTOR shall not be liable to CITY or ENGINEER for failure to report any conflict, error or discrepancy unless CONTRACTOR or any of his Subcontractors or suppliers had actual knowledge thereof or should reasonably have known thereof.
- 2.3.2. Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for review a preliminary Progress Schedule indicating the starting and completion dates of the various stages of the Work, a proposed schedule of Shop Drawing submissions, a proposed schedule of values of the Work on the form provided by ENGINEER, and a listing of manpower and cash flow projections through the Contract Time.
- 2.3.3. The schedule of values shall include quantities and prices of items aggregating the Contract Price, and shall subdivide the Work into component parts in sufficient detail to serve as the basis for Applications for Payment during construction. CONTRACTOR shall confirm in writing at the time of submission, that an appropriate amount of direct costs, supplemental costs, administrative expenses, contingencies and profit have been allocated to each item of Work.
- 2.3.4. If the Bid Form contains a bid item price for mobilization, the Schedule of Values shall distribute these costs such that no more than 50% of the bid item amount shall be paid as mobilization in the first Application for Payment and at least 10% of the bid item amount shall be paid in the last Application for Payment as demobilization with the remainder paid in equal installments over the Contract Time. In no event shall the Contractor be entitled to receive in its first Application for Payment an amount in excess of five (5) percent of the original Contract Price for mobilization.
- 2.3.5. CITY or ENGINEER will review and return the schedules submitted in accordance with this Article and CONTRACTOR, if required, shall revise, adjust or modify and resubmit acceptable schedules within the time periods required, and if none are required, at least ten (10) days before submission of the first Application for Payment.

2.4 Preconstruction Conference

- 2.4.1. Prior to commencement of Work at the site, a conference will be held for review of the schedules, to establish procedures for handling Shop Drawings and other submittals and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work. CONTRACTOR shall attend such conference and shall require any or all of its Subcontractors and Suppliers, as CITY directs, to attend the conference.
- 2.4.2. Unless otherwise stated at the Preconstruction Conference or a Project Meeting, the Construction Manager as assigned in writing by the CITY will be the single authorized

representative assigned the duty of, and authorized to, transmit or receive communications between CONTRACTOR and ENGINEER for the remaining term of the Agreement.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT and REUSE.

3.1 Applicable Law; Intent

- 3.1.1. The Contract Documents comprise the entire agreement between CITY and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be governed by the law of the place of the Project.
- 3.1.2. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental entity whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of CITY, CONTRACTOR, DESIGN ENGINEER or ENGINEER, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it assign to CITY or ENGINEER, or any of their consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Article 8 or 9.

3.2 Priority of the Contract Documents

- 3.2.1. If, during the performance of the Work, CONTRACTOR, or any of his Subcontractors or Suppliers, finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to ENGINEER in writing at once, and before proceeding with the Work affected thereby, shall obtain a written interpretation or clarification from ENGINEER. However, CONTRACTOR shall not be liable to CITY or ENGINEER for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR or any of his Subcontractors or Suppliers had actual knowledge thereof or should reasonably have known thereof. ENGINEER will promptly investigate the matter and respond to CONTRACTOR with an interpretation or clarification.

After CONTRACTOR's discovery of such a conflict, error or discrepancy, or after the date when CONTRACTOR should have reasonably known thereof, until the interpretation or clarification is obtained from ENGINEER, any Work done by CONTRACTOR which is directly or indirectly affected by same, will be at CONTRACTOR's own risk and CONTRACTOR shall bear all costs and delay arising therefrom.

- 3.2.2. In resolving such conflicts, errors or discrepancies, the Contract Documents shall be given preference in the following order: Change Orders, Executed Change Requests, Field Orders, Agreement, Notice to Proceed, Notice of Award, Addenda, Federal Contract Provisions, Supplementary Conditions, Instructions to Bidders, General Conditions, General Requirements, Divisions 2 through 16 of the Specifications and

Drawings, Invitation for Bid, CONTRACTORS's Bid, Bonds, Insurance Certificate(s) and Endorsement(s), and Affidavits.

- 3.2.3. If the issue of priority pertains to Divisions 2 through 16 of the Specifications and the Drawings, figured dimensions shall govern over scaled dimensions, but Work not dimensioned shall be as directed, and Work not particularly shown, identified, sized, or located shall be the same as similar parts that are shown or specified. Further, detail Drawings shall govern over general drawings, larger scale drawings take precedence over smaller scale drawings, Change Order or Change Request Drawings govern over Contract Drawings, and Contract Drawings govern over standard or Shop Drawings. In all cases where notes, specifications, sketches, diagrams, details or schedules in the Specifications or in the Drawings, or between the Specifications and the Drawings, conflict, the higher cost requirement shall be furnished by CONTRACTOR, unless otherwise directed by ENGINEER.
- 3.2.4. If the issue of priority is due to a conflict or discrepancy between provisions of the Contract Documents and any referenced standard specification, manual, or code of any technical society, organization or association, the provisions of the Contract Documents will take precedence if they are more stringent or presumptively cause a higher level of performance. If there is any conflict or discrepancy between standard specifications, manuals, or codes of any technical society, organization or association, or between Laws or Regulations, the provision with the higher cost requirement shall be binding on CONTRACTOR, unless otherwise directed by ENGINEER.
- 3.2.5. In accordance with the intent of the Contract Documents, CONTRACTOR recognizes and accepts that compliance with the priority order specified shall not justify an increase in Contract Price or extension in Contract Time.

3.3 Use of Forms Provided

Unless CITY provides to the contrary, only those forms (Change Request Form, Change Order Form, Notice of Award, Notice to Proceed, Application for Payment, Insurance Certificates and Endorsements, Bonds, Bid Form, etc.) provided in the Contract Documents shall be used and no modifications or substitutions shall be allowed.

3.4 Re-use of Documents

Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization (other than CITY) shall acquire any title to or have ownership rights of any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of DESIGN ENGINEER; and they shall not be reused on extensions of the Project or any other project nor shall they be generally published without written consent of CITY.

ARTICLE 4 - AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

4.1 Availability of Lands

- 4.1.1. CITY shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements, and those other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by CITY, unless otherwise provided in the Contract Documents. Any additional lands, rights-of-way and easements not furnished by CITY that CONTRACTOR deems necessary, including but not limited to requirements for temporary construction facilities, access and egress, or for storage, shall be obtained by CONTRACTOR at no increase in Contract Price or

extension in Contract Time, and CONTRACTOR shall confine his operations to those areas furnished or obtained at its expense.

- 4.1.2. CONTRACTOR shall obtain permits and written approvals (and submit copies to CITY before utilization of those areas) from the appropriate governmental entity or property owner(s), for use of lands not furnished by CITY; and for all lands which include borrow pits, waste and disposal areas, such permits and approvals shall specify their treatment during and at completion of construction.
- 4.1.3. Access to municipal structures, hydrants, valves, manholes, fire alarms, etc., shall not be obstructed by CONTRACTOR. CONTRACTOR is to make no connections to or operate valves on water mains or otherwise interfere with the operation of the water system, without first giving written notice to and securing written approval from the appropriate governmental entity.

4.2 Physical Conditions (Including Underground Facilities)

- 4.2.1. The Contract Documents may identify reports of explorations and tests of subsurface conditions at the site, and those drawings of physical conditions in or relating to existing surface and subsurface structures or Underground Facilities owned by CITY which are at or contiguous to the site, that have been utilized by DESIGN ENGINEER in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data in those reports or drawings, but not upon nontechnical data, interpretations or opinions, or for their completeness for CONTRACTOR's purposes. Except as indicated in the preceding sentence and in Paragraphs 4.4 and 4.5, CONTRACTOR shall have full responsibility for physical conditions, and Underground Facilities owned by CITY, shown or indicated in the Contract Documents.
- 4.2.2. The information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based on information and data furnished to CITY or DESIGN ENGINEER by the owners of such Underground Facilities or by others. CITY, ENGINEER and DESIGN ENGINEER shall not be responsible for the accuracy or completeness of any such information or data, and, CONTRACTOR shall have full responsibility for reviewing and checking all such information and data.
- 4.2.3. Unless it prejudices Work already excavated and uncovered, CONTRACTOR shall schedule layout, excavation and uncovering of Work or Underground Facilities a sufficient time in advance to allow ENGINEER's review, and the possible amending or supplementing of the Contract Documents.

4.3 Differing Physical Conditions (including Underground Facilities)

CONTRACTOR shall immediately, after becoming aware thereof, and before the conditions are disturbed (except in a case of an emergency), notify ENGINEER in writing of any subsurface or latent physical conditions, or Underground Facilities, encountered at or contiguous to the site which differ materially from those indicated in the Contract Documents; Underground Facilities not shown or indicated in the Contract Documents encountered at or contiguous to the site; unknown physical conditions encountered or uncovered at or contiguous to the site, of an unusual nature, differing materially from those ordinarily encountered at or contiguous to the site which differ materially from those indicated in the Contract Documents; unknown physical conditions encountered or uncovered at or contiguous to the site, of an unusual nature, differing materially from those ordinarily encountered and not generally recognized as inherent in Work of the character provided for in the Contract Documents.

4.4 Resolution of a Report of Differing Physical Conditions

- 4.4.1. Promptly after receipt of notice from CONTRACTOR, ENGINEER will review the pertinent conditions, determine the necessity of obtaining additional explorations or tests, and advise CITY in writing of his findings and conclusions. Until such time when CONTRACTOR resumes the affected Work (and at all times thereafter), CONTRACTOR shall be responsible for the safety and protection of the affected Work.
- 4.4.2. If CITY, with the advice of ENGINEER, concludes that the conditions do materially differ, and that the Contract Documents need to be amended, CITY shall, without invalidating the Agreement and without notice to any surety, by duly executed Change Order or Change Request, order the necessary changes in the Work, as long as CITY has not exercised its rights to terminate the Agreement.

Upon receipt of that order, CONTRACTOR shall promptly proceed or continue with the Work involved pursuant to the conditions stated in the order.

- 4.4.3. If CITY, with the advice of ENGINEER, concludes that the Contract Documents need to be supplemented only, appropriate minor deviations in the Work shall be authorized by a Change Request duly executed by CITY or a Field Order issued by ENGINEER. CITY's determination that the Contract Documents do not need to be amended shall be final and binding on CONTRACTOR unless CONTRACTOR delivers to CITY written notice of a claim within seven (7) days of receipt of notification of that decision.
- 4.4.4. If any change in the Work required due to differing physical conditions causes an increase or decrease in CONTRACTOR's cost of or the time required for the performance of all or part of the Work, CITY shall make an adjustment in Contract Price or Contract Time, subject to the provisions of this Article, and Articles 10 and 11.
- 4.4.5. If the Contract Documents necessitate amending to order changes in the Work due to Underground Facilities, whether they be shown or indicated or newly discovered, CITY shall authorize the required changes in the Work, including any necessary adjustments in Contract Price, by Change Order or Change Request. If those Underground Facilities cause or will cause delays in the performance or extend completion of all or part of the Work, CONTRACTOR shall absorb all related delay, extension or acceleration costs, however caused; except that, if CITY and CONTRACTOR believe that the delays require a change in Contract Time, CITY shall authorize the necessary change in Contract Time. However, an extension in Contract Time, when and if so granted shall be CONTRACTOR's sole and exclusive remedy with respect to CITY for any delay, disruption, interference, extension or hindrance and associated costs, however caused, resulting from variance in the location or configuration of Underground Facilities shown or indicated, or from newly discovered Underground Facilities.
- 4.4.6. No proposal by CONTRACTOR for an adjustment under this Article, nor claim by CONTRACTOR for an adjustment on account of differing physical conditions, shall be allowed unless CONTRACTOR has given the written notice required in paragraph 4.3.

4.5 Special Requirements for Underground Facilities

CONTRACTOR shall have full responsibility: a) for locating any and all Underground Facilities shown or indicated as to depth and alignment in advance of excavation; b) for identifying the owner of any newly discovered Underground Facility and promptly notifying that owner and ENGINEER of that discovery; c) for shoring, blocking, and protecting Underground Facilities shown, indicated or discovered; d) for coordination of the Work with the owners of all Underground Facilities shown, indicated or discovered; e) for repairing any damage done to the satisfaction of those owners, to the extent that the damage was due to CONTRACTOR's failure to

adhere to the requirements of this paragraph or paragraph 4.2.2., or to the fault or negligence of CONTRACTOR; and f) for the safety and protection of any affected Work, and for repairing any damage done to the Work. Except as otherwise provided in paragraphs 4.4.5. and 4.4.6., all costs involved and time required to perform these responsibilities shall be considered as having been included in the Contract Price and in the CONTRACTOR's schedule for the performance of the Work within the Contract Times, even if the Contract Documents need amending to authorize minor deviations or changes in the Work due to those Underground Facilities.

4.6 Reference Points

- 4.6.1. CITY shall provide the engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of ENGINEER. CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.
- 4.6.2. CONTRACTOR shall promptly, after becoming aware thereof and before performing any affected Work (except in a case of an emergency), notify CITY in writing of any reference points which in CONTRACTOR's judgment need correction to enable CONTRACTOR to proceed with the proper performance of the Work.
- 4.6.3. In resolving a report of differing reference points, CONTRACTOR shall adhere to the procedures, assume the duties and responsibilities, and accept the conditions outlined in paragraph 4.4 in all respects.

ARTICLE 5 - BONDS AND INSURANCE

5.1 Performance, Payment and Other Bonds

- 5.1.1. CONTRACTOR shall furnish a Performance Bond and a Payment Bond, each with good and sufficient surety, and each in an amount at least equal to the Contract Price. These Bonds shall be recorded with the clerk of the circuit court of the county where the Project is located no later than the Date of Commencement of the Contract Time. These Bonds shall remain in effect at least until one (1) year after the date when Final Payment becomes due, except as otherwise provided by Laws or Regulations, or the other provisions of the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. The Performance Bond requirement in the Contract Documents shall inure solely to CITY and its successors or assigns, as obligee, and no other person shall have any right of action based thereon.
- 5.1.2. All Bonds shall be in accordance with statutory bond provisions in Florida Statutes and all other applicable Laws and Regulations and be in the form prescribed by the Contract Documents. All Bonds shall be executed by such sureties as are licensed to conduct business in the state of Florida and, except as otherwise provided by Laws and Regulations, are named in the current list of Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of its authority to act.
- 5.1.3. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its license to do business in the state of Florida is terminated or it ceases to

meet the requirements of the Contract Documents, CONTRACTOR shall within five (5) days thereafter substitute another Bond and surety, both of which shall be in accordance with the Contract Documents and acceptable to CITY.

- 5.1.4. In addition to the other bonding requirements, the surety(ies) named on the Performance Bond and Payment Bond submitted by Low Bidder pursuant to the Contract Documents shall be subject to the approval of CITY. If CITY has a reasonable objection to the proposed Surety, CITY may request Low Bidder to submit an acceptable substitute without an increase in the Bid price. If Low Bidder declines or is unable to make any such acceptable substitution, CITY may, at its sole option, rescind the Notice of Award, and any award of the Contract to Low Bidder will be of no effect. The refusal or inability to make any such substitution may not constitute grounds for sacrificing its Bid Security.

5.2 Contractor's Insurance - General

- 5.2.1. The types of insurance CONTRACTOR shall purchase and maintain are Worker's Compensation and Employer's Liability Insurance, Liability Insurance, and Property Insurance, which shall include the specific coverages set forth in this Article, as supplemented in the Supplementary Conditions, and be written for no less than the limits of liability coverage provided in the Supplementary Conditions.
- 5.2.2. CONTRACTOR shall not commence or continue to perform any work unless it, at its own expense, has in full force and effect all required insurance, and until all insurance Certificates and Endorsements have been filed evidencing the specific insurance coverage required, nor shall any payment for Work performed become due and payable until such Certificates and Endorsements have been filed. The CONTRACTOR shall not permit any Subcontractor, Supplier or other person or organization to perform work on the Project unless the Worker's Compensation Insurance requirements have been complied with by such Subcontractor, Supplier or other person or organization.
- 5.2.3. Worker's Compensation and Employer's Liability Insurance shall be maintained in effect for the full Warranty Period, even as extended. Property Insurance shall continue and shall not terminate until CITY makes Final Acceptance and Payment for the Work, except as otherwise provided in the General Conditions. Should any coverage approach expiration during the period in which it is to remain in full force and effect, it shall be renewed prior to its expiration.
- 5.2.4. Insurance coverage shall be placed with satisfactory carriers licensed to do business in the State of Florida and countersigned by a resident agent. Insurers shall have at least an "A" Best's Rating and a Class XI or better financial category in accordance with the most current A. M. Best Company ratings.
- 5.2.5. At the time indicated in the Instructions to Bidders, as evidence of specified insurance coverage, CONTRACTOR shall provide certificates of insurance evidencing the specific policies issued, the limits of coverage afforded, and the specific endorsements provided, all in accordance with the requirements of the forms prescribed in the Contract Documents, and if none are included, as required by CITY. No alteration or substitution of said insurance certificate forms will be allowed, unless approved by CITY in writing.
- 5.2.6. If so requested in writing by CITY, CONTRACTOR shall deliver one (1) copy to CITY of each insurance policy purchased by CONTRACTOR pursuant to this Article within thirty (30) days of the request.
- 5.2.7. All the policies of insurance so required of CONTRACTOR in the Contract Documents shall be endorsed to include as additional insurers: CITY, DESIGN ENGINEER, ENGINEER, their consultants, any subsidiaries or affiliates, and each of their directors, officers, employees, representatives, agents or volunteers. In addition, all the policies of

Property Insurance required of CONTRACTOR in the Contract Documents shall be endorsed to include Subcontractors as additional insurers. The insurance afforded to these additional insurers shall be primary insurance. If the additional insurers have other insurance which might be applicable to any loss, the amount of insurance provided under CONTRACTOR's policies of insurance shall not be reduced or prorated by the existence of the other insurance.

- 5.2.8. All the policies of insurance so required of CONTRACTOR in this Article shall be endorsed to expand coverage as required in this Article, as supplemented in the Supplementary Conditions.
- 5.2.9. Deductible/self-insured retention amounts shall be subject to approval by CITY, and shall be reduced or eliminated upon written request from CITY. The insurer's cost of defense including attorney's fees (and attorney's fees on appeal) shall not be included within the policy coverage but shall remain the responsibility of insurer.
- 5.2.10 Nothing contained in these insurance requirements is to be construed as limiting the liability of CONTRACTOR or CONTRACTOR's insurance carriers. It is to be understood that CITY, ENGINEER and DESIGN ENGINEER do not in any way represent that the insurance (or the limits of insurance) specified in this Article (or in the Supplementary Conditions) is sufficient or adequate to protect CONTRACTOR's interests or liabilities, but are merely minimums.
- 5.2.11 Umbrella Liability Insurance shall not be more restrictive than the underlying insurance policy coverages.
- 5.2.12 All the policies of insurance (or the certificates or other evidence thereof) required to be purchased and maintained by CONTRACTOR in accordance with the Contract Documents will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least thirty days' prior written notice has been given to CITY and ENGINEER by certified mail.

5.3 Insurance

CITY shall have the option of self-insuring or purchasing and maintaining its own insurance. If CONTRACTOR fails to obtain or renew insurance or fails to maintain insurance in a form required by the Contract Documents, or if any insurance company CONTRACTOR has procured insurance from declares bankruptcy, is declared bankrupt, or if the Insurer loses its "A" policyholder's rating or if its financial size category rating falls below Class XI in the most current A. M. Best's rating, CITY may procure insurance at CONTRACTOR's expense in the coverage amounts required by the Contract Documents and shall be entitled to deduct CITY'S resultant costs from the Contract Price by issuing a Change Order. In lieu of procuring insurance at CONTRACTOR's expense, CITY has the option to stop or suspend the Work or terminate CONTRACTOR's services as provided in Article 15. CITY's actions under this paragraph shall not entitle CONTRACTOR to an increase in Contract Price or an extension of Contract Time.

5.4 Worker's Compensation Insurance and Employer's Liability Insurance

CONTRACTOR shall obtain full Worker's Compensation Insurance coverage for no less than the statutory limits and Employer's Liability Insurance coverage in limits not less than the amounts set forth in the Supplementary Conditions, for all persons whom it employs or may employ in carrying out the Work under the Agreement. This insurance shall be in strict accordance with the requirements of the most current and applicable state Worker's Compensation laws.

5.5 Liability Insurance

- 5.5.1. CONTRACTOR shall purchase and maintain the liability insurance described herein to provide protection from claims arising out of or resulting from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether such performance is by CONTRACTOR, by any Subcontractor or Supplier, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.
- 5.5.2. The liability insurance shall include liability insurance applicable to CONTRACTOR's obligations under Articles 6 and 7. CONTRACTOR agrees to pay on behalf of CITY, and to provide and pay a legal defense for, all such claims applicable to CONTRACTOR's obligations under the indemnification provisions in said Articles. CONTRACTOR accepts as adequate compensation for the contractual liability insurance the amount contained in the Contract Documents.
- 5.5.3. The liability insurance coverage shall include as a minimum each of the following types of insurance:
- A. General Liability
 - (1) Comprehensive Form.
 - (2) Premises-Operations.
 - (3) Explosion and Collapse Hazard.
 - (4) Underground Hazard.
 - (5) Products/Completed Operations Hazard.
 - (6) Contractual Insurance.
 - (7) Broad Form Property Damage Including Completed Operations.
 - (8) Independent Contractors.
 - (9) Personal Injury [with Employment Exclusion deleted.]
 - B. Automobile Liability
 - (1) Comprehensive Form Including Loading and Unloading.
 - (2) Owned.
 - (3) Hired.
 - (4) Non-Owned.

5.6 Property Insurance

- 5.6.1. CONTRACTOR shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss and damage including, without duplication of coverage, lightning, windstorm, rain, hurricane, hail, explosions, riot, sinkholes, flood, theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in the Supplementary Conditions, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals).

If not covered under the "all risk" insurance or otherwise provided in the Supplementary Conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment. The property insurance required in this paragraph may have a deductible clause, but said deductible shall not exceed \$25,000.00 or the limit set forth, if any, in the Supplementary Conditions.

- 5.6.2. In the event of loss covered by Property Insurance, the proceeds of a claim shall be paid to CITY, which shall apportion the proceeds between CITY and CONTRACTOR as their interests may appear.
- 5.6.3. Where applicable, CONTRACTOR shall purchase and maintain adequate flood insurance for Work in designated flood hazard areas as defined by P.L. 93-234 (Flood Disaster Protection Act).
- 5.6.4. CONTRACTOR shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations.
- 5.6.5. The risk of loss within the deductible amount if any, in the Property Insurance purchased and maintained pursuant to this Article will be borne by CONTRACTOR.

5.7 Waiver of Rights

- 5.7.1. CITY and CONTRACTOR waive all rights against each other for all losses and damages caused by any of the perils covered by the policies of insurance provided in response to paragraph 5.6 and any other property insurance applicable to the Work, and also waive all such rights against the Subcontractors, ENGINEER, DESIGN ENGINEER, CITY's, ENGINEER's and DESIGN ENGINEER's consultants and all other parties named as insurers in such policies for losses and damages so caused. Each Sub-agreement between CONTRACTOR and a Subcontractor will contain similar waiver provisions by the Subcontractor in favor of CITY, CONTRACTOR, ENGINEER, DESIGN ENGINEER, CITY's, ENGINEER's and DESIGN ENGINEER's consultants and all other parties named as insurers. None of the above waivers shall extend to the rights that any of the insured parties may have to proceeds of insurance held by CITY, CONTRACTOR, or otherwise payable under any policy so issued.
- 5.7.2. CITY and CONTRACTOR intend that any policies provided in response to paragraph 5.6 shall protect all of the parties insured and provide primary coverage for all losses and damages caused by the perils covered thereby. Accordingly, all such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any of the parties named as insurers or additional insurers, and if the insurers require separate waiver forms to be signed by ENGINEER, DESIGN ENGINEER, or CITY's, ENGINEER's, or DESIGN ENGINEER's consultants CITY will obtain the same, and if such waiver forms are required by any Subcontractor, CONTRACTOR will obtain the same.

5.8 Owner May Object to Insurance

- 5.8.1. Neither CITY's review of the coverage afforded by or the provisions of the policies of insurance purchased and maintained by CONTRACTOR in accordance with this Article, nor CITY's decisions to raise or not to raise any objections about either or both, shall in any way relieve or decrease the liability of CONTRACTOR. If CITY elects to raise an objection to the coverage afforded by or the other provisions of the insurance furnished, CONTRACTOR shall promptly provide to CITY such additional information as CITY may reasonably request, and CONTRACTOR shall remedy any deficiencies in the policies of insurance at once.
- 5.8.2. CITY's authority to object to insurance shall not in any way whatsoever give rise to any duty on the part of CITY to exercise this authority for the benefit of CONTRACTOR or any other party.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 Supervision and Superintendence

- 6.1.1. CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for all means, methods, techniques, sequences and procedures of construction, for providing adequate safety precautions, for coordinating all portions of the Work under the Contract Documents, and for enforcement of order and cooperation among CONTRACTOR's employees and all Subcontractors and Suppliers and others having a Sub-agreement for a part of the Work. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.
- 6.1.2. CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to ENGINEER except under extraordinary circumstances. CITY may, at its sole discretion, require replacement of the superintendent, in which case CONTRACTOR shall submit an acceptable replacement at no increase in Contract Price nor extension in Contract Time. The superintendent shall be CONTRACTOR's representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR. Whenever the superintendent is not present on any particular part of the Work where the ENGINEER may desire to inform the CONTRACTOR relative to interpretation of the plans and specifications or regarding disapproval or rejection of materials or work performed, the ENGINEER may so inform the foreman or other workers in charge of the particular part of the work in reference to which the information is given. Information so given shall be as binding as if given to the superintendent.
- 6.1.3. The superintendent and similar authorized representatives of any Subcontractor, Supplier or other person or organization shall attend all meetings pertaining to the Work, as requested by CITY or ENGINEER.

6.2 Personnel and Working Hours

- 6.2.1. CONTRACTOR shall at all times maintain good discipline and order at the site.
- 6.2.2. CONTRACTOR shall provide competent, qualified personnel to survey and lay out the work (in accordance with any additional provisions included in the General Requirements) and perform construction as required by the Contract Documents. CONTRACTOR is fully responsible to provide a sufficient number of skilled workers and supervisory personnel to perform the Work and insure that the Work is completed within the Contract Time. Failure to fully man the Project with supervisory personnel and skilled workers shall be cause for termination of CONTRACTOR.
- 6.2.3. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Supplementary Conditions, all Work at the site shall be performed during normal working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any Holiday without CITY's written consent given after prior written notice to ENGINEER. Normal working hours shall be defined as the CONTRACTOR's normal eight hour working period occurring between the hours beginning at 7:00 a.m. and ending at 6:00 p.m., exclusive of Saturdays, Sundays, or Holidays. Work during other than normal working hours may be scheduled by CONTRACTOR if he first obtains written permission from CITY.

The CITY observes the following holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Day after Thanksgiving, Christmas Eve and Christmas Day. Holidays falling on Saturday will be observed Friday, holidays falling on Sunday will be observed Monday.

- 6.2.4. CITY shall be entitled to deduct from the Contract Price, by issuing a Change Order, CITY's extra costs incurred in connection with CONTRACTOR's performance of WORK during hours other than normal working hours. Such costs may include, but shall not be limited to, ENGINEER'S charges to CITY while acting as CITY's representative (including charges outside of normal working hours for Construction Manager and Field Representatives) , CITY's costs incurred in the performance of CITY's responsibilities as set forth in the Contract Documents, and other related costs.

6.3 Apprentices

CONTRACTOR's utilization of apprentices shall conform to the provisions of Florida Statutes Chapter 446.

6.4 CONTRACTOR's Responsibilities for Furnishing

Unless otherwise specified in the Contract Documents, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, ventilation, cooling, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.5 Items of Material or Equipment

- 6.5.1. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment.

All materials and equipment shall be handled, stored, applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to ENGINEER, or any of CITY's or ENGINEER's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Article 8 or Article 9.

- 6.5.2. Manufacturers' or Suppliers' warranties for all materials, products and equipment to be furnished by CONTRACTOR and to be incorporated into the completed Work shall be furnished to CITY through CONTRACTOR.

- 6.5.3. CONTRACTOR shall obtain from Suppliers of all materials, products and equipment, complete information as to any special condition or restriction to be applied in the use of these items. Should the manner or method of installation, specified performance or test results as set forth in the Specifications be contrary to the manufacturer's recommendations for use of the product, CONTRACTOR shall notify ENGINEER in writing of such conflict as soon as reasonably possible, but no later than the time of Shop Drawing submittal including those products. Failure to provide such written notice before proceeding with the Work affected thereby shall be certification by CONTRACTOR that the Specification requirements will be met by the materials, products and equipment, and that the cost and time required to perform or complete the Work affected thereby have

been included in the Contract Price and in the schedule for the performance of the Work within the Contract Time.

- 6.5.4. Data submitted on all equipment shall include complete operation and maintenance instructions (including preventive maintenance and operating requirement data) and parts lists in sufficient detail to facilitate ordering replacements. Such submittals shall conform to any additional requirements provided in the General Requirements.

6.6 Wood Products

Except as may be otherwise provided by Laws or Regulations, pursuant to Florida Statutes Chapter 225, lumber, timber and other forest products specified in the Contract Documents shall be produced and manufactured in Florida whenever such products are available, provided that price, fitness and quality are equal to other available products. This requirement does not apply where plywood is specified for monolithic concrete forms.

6.7 Equivalent Materials and Equipment

- 6.7.1. Whenever materials or equipment are specified or described in the Drawings or Specifications by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by ENGINEER if (a) the proposed substitution was listed on the substitution list provided on the bid form; and b) sufficient information is submitted by CONTRACTOR to allow ENGINEER to determine that the material or equipment proposed is equivalent to that named. If the proposed substitution was not listed on the bid form, CONTRACTOR shall request in writing that CITY waive this requirement. CITY reserves the right to either maintain or waive this requirement. If CITY elects not to waive this requirement, CONTRACTOR shall take immediate action to provide the materials and equipment specified.
- 6.7.2. Requests for review of substitute items of material and equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment CONTRACTOR shall, within adequate time to allow a proper review without impacting the schedule, make written application to ENGINEER for acceptance thereof, certifying that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as that specified. The application shall state whether or not acceptance of the substitute for use in the Work will require a change in the Drawings or Specifications to adapt the design to the substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service shall be indicated. The application shall also contain an itemized estimate of all increases or decreases in (1) the cost of, or the time required to perform any part of the Work, and the corresponding adjustments in Contract Price and Contract Time, resulting directly or indirectly from evaluation and acceptance of the proposed substitute, including, but not as a way of limitation, costs and delays associated with redesign, or claims of other contractors affected by the resulting substitute; and (2) increases or decreases in operating, maintenance, repair, replacement or spare part costs, all of which will be considered by ENGINEER in evaluating the proposed substitute. ENGINEER may require CONTRACTOR to furnish, at CONTRACTOR's expense, additional data about the proposed substitute.

- 6.7.3. ENGINEER shall be the sole judge of acceptability, and no substitute shall be ordered or installed without ENGINEER's prior written acceptance. However, CITY reserves the right to reject any proposed substitute which would result in an increase in Contract Price or Contract Time, and CITY may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute. If approval is given, CONTRACTOR shall not be excused from producing Work in conformity with Contract requirements.
- 6.7.4. ENGINEER will record time required by ENGINEER, DESIGN ENGINEER and their consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Drawings or Specifications occasioned thereby. Whether or not ENGINEER accepts a proposed substitute, CITY shall be entitled to deduct from the Contract Price, by issuing a Change Order, CITY's costs including the charges of ENGINEER, DESIGN ENGINEER and their consultants for evaluating any proposed substitute.
- 6.7.5. The net difference in cost between the substitute item and that specified shall benefit CITY and CONTRACTOR in equal proportions if the substitution was listed on the Bid Form. If the substitution was not listed in the Bid Form, all of the savings will go to CITY. If ENGINEER estimates that the deduction proposed by CONTRACTOR does not, in its opinion, reflect the sharing of costs in the portions described above, this shall be adequate justification to reject the proposed substitution.
- 6.7.6. CONTRACTOR assumes sole responsibility for verifying that the proposed substitute items are in accordance with the requirements of the Contract Documents, and that the dimensions, arrangement, design and construction details, and all other features of substitute items are suitable for their intended purpose.
- 6.7.7. In the event that a substitute item differs materially from the specified item of material or equipment, and said difference was not expressly identified in CONTRACTOR's request for the substitution, or the incorporation of the substitute into the Work results in a change(s) to the Work or in the function or general design of the Project, ENGINEER will have authority to require the removal and replacement of said substitute.

6.8 Concerning Subcontractors, Suppliers and Others

- 6.8.1. CONTRACTOR shall not award Work to Subcontractors in excess of 50 percent of the Contract Price without prior written approval of CITY. CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including but not limited to those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom CITY or ENGINEER may have reasonable objection. A Subcontractor, Supplier or other person or organization identified in writing to CITY and ENGINEER by CONTRACTOR prior to the Notice of Award and not objected to in writing by CITY or ENGINEER prior to the Notice of Award will be deemed acceptable to CITY or ENGINEER. Acceptance of any Subcontractor, Supplier or other person or organization by CITY or ENGINEER shall not constitute a waiver of any right of CITY or ENGINEER to reject defective Work by CONTRACTOR or any Subcontractor, Supplier or any other person or organization. If CITY or ENGINEER after due investigation has reasonable objection to any Subcontractor, Supplier or other person or organization proposed by CONTRACTOR after the Notice of Award, CONTRACTOR shall submit an acceptable substitute. Such Subcontractor, Supplier person or organization shall neither commence nor continue Work after CITY or ENGINEER objects to said entity. In the event that any such reasonable objection and acceptable substitute will cause additional expense or extend performance of the Work, or part thereof, beyond the Contract Time for the Work, or part thereof, CONTRACTOR may make a request for an adjustment in Contract Price or Contract Time. However, any changes in Contract Price made under this paragraph

shall exclude any adjustments for any increases in CONTRACTOR's costs in connection with an increase in Contract Time resulting from the reasonable objection and acceptable substitute submitted pursuant to this paragraph. In any such case, the extension in Contract Time so granted, if any, shall be CONTRACTOR's sole and exclusive remedy for delay, disruption, interference, hindrance and costs thereto. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization against whom CONTRACTOR has reasonable objection.

- 6.8.2. CONTRACTOR shall give prompt written notice to CITY with copy to ENGINEER as to the identity and qualifications (in accordance with Article 10 of the Instructions to Bidders) of any Subcontractor, Supplier or other person or organization to whom CONTRACTOR intends to award Work that was not previously identified in accordance with the Instructions to Bidders, and of CONTRACTOR's intent to remove or replace a Subcontractor, Supplier or other person.
- 6.8.3. CONTRACTOR shall be fully responsible for all acts and omissions of his Subcontractors and Suppliers and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that CONTRACTOR is responsible for the acts and omissions of persons directly employed by CONTRACTOR. Nothing in the Contract Documents shall create any contractual relationship between CITY or ENGINEER and any Subcontractor or Supplier or other person or organization having a Sub-agreement with CONTRACTOR, nor shall it create any obligation on the part of CITY or ENGINEER to pay or to see to the payment due any Subcontractor, Supplier or other person or organization, except as may otherwise be required by law.

CITY or ENGINEER may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific Work done. No Subcontractor, Supplier or other person or organization shall be a third party beneficiary of this Contract.

- 6.8.4. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade. The divisions of the Specifications are complementary, and anything mentioned or shown in a division of the Specifications or in a specific trade Drawing shall be of like effect as if shown in all divisions of the Specifications and in all Drawings. In addition to other requirements in the Contract Documents, Shop Drawings of a specific trade shall be compared to and coordinated with those from other trades by CONTRACTOR before submission to ENGINEER.
- 6.8.5. All Work performed for CONTRACTOR by a Subcontractor, Supplier or other person or organization will be pursuant to an appropriate Sub-agreement between CONTRACTOR and the Subcontractor, Supplier or other person or organization which specifically binds the Subcontractor, Supplier or other person or organization to the applicable terms and conditions of the Contract Documents for the benefit of CITY.
- 6.8.6. If requested in writing by CITY, CONTRACTOR shall deliver to CITY a copy of each Sub-agreement with a Subcontractor, Supplier or other person or organization performing a part of the Work within seven (7) days of CITY's request.

6.9 Patent Fees and Royalties

CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular

invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work, and its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, it shall remain the responsibility of CONTRACTOR to assume all costs incident to the use in the performance of the Work or the incorporation in the Work of said invention, design, process, product or device.

Whenever CONTRACTOR is required or desires to use any design, device, material or process covered by letters, patent, trademark or copyright, the right for such use shall be provided for by suitable legal agreements with the patentee or owner, and a copy of this Agreement shall be filed with ENGINEER. However, whether or not such agreement is made or filed as noted, CONTRACTOR and CONTRACTOR's surety in all cases shall indemnify and hold harmless and defend CITY and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including but no limited to charges of engineers, architects, other professionals and attorneys' fees and attorneys' fees on appeal and all costs of defense or appeal) arising out of any infringement of letters, trademark, patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

6.10 Permits

Unless otherwise provided in the Contract Documents, CONTRACTOR shall obtain and pay for all construction permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids. CONTRACTOR shall pay all charges of utility service companies for utilities service to accomplish the Work. If CONTRACTOR fails to obtain or renew any permit or license required by this paragraph, CITY has the option of stopping or suspending the work or terminating the CONTRACTOR's services or procuring any permit or license directly. CITY shall be entitled to deduct CITY's resultant costs from the Contract Price by issuing a Change Order. CONTRACTOR shall meet all requirements of all permits and licenses.

6.11 Laws and Regulations

6.11.1 CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the Work. If CONTRACTOR observes that the Contract Documents are at variance therewith, CONTRACTOR shall give ENGINEER prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Change Order (subject to the provisions of Articles 3, 10, and 11). If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations and without such notice to ENGINEER, CONTRACTOR shall bear all costs arising therefrom. CONTRACTOR shall indemnify and hold harmless CITY for all claims, fines, damages, losses and expenses (including but not limited to charges of engineers, architects, other professionals and attorneys' fees and attorneys' fees on appeal and all costs of defense or appeal) arising out of CONTRACTOR's failure to comply with the terms of this paragraph.

6.11.2 CONTRACTOR shall pay all sales, consumer, use and other taxes required to be paid by it in accordance with the Laws and Regulations of the place of the Project.

6.12 Use of Premises

6.12.1 CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by Laws and Regulations, rights-of-way, permits and easements or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other

materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such property, or to the owner or occupant thereof or of any other property, caused or alleged to have been caused by or incident to the execution of this Work. CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify, defend and hold CITY and ENGINEER harmless from and against all claims, damages, losses and expenses (including but not limited to charges of engineers, architects and other professionals, and attorneys' fees and attorneys' fees on appeal and all costs of defense or appeal) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against CITY, DESIGN ENGINEER or ENGINEER to the extent based on a claim arising out of CONTRACTOR's performance of the Work.

- 6.12.2 Notwithstanding the designation of Contract limits or the indication of temporary fences or barricades, the provisions of the Contract Documents governing certain phases or portions of the Work, such as trenching and landscaping, may require that certain operations be carried out beyond such limits. Those operations, if required beyond such designated limits, shall be scheduled in such a manner as to cause or occasion a minimum of inconvenience or disturbance to or interference with the normal operation of CITY abutters and the public. CONTRACTOR shall obtain CITY's prior approval and all necessary approvals from others, governmental entities and utility companies for such operations, and prosecute such operations expeditiously and restore the affected property to its original condition immediately upon completion of such operations, unless otherwise specified in the Contract Documents. All those areas on which temporary driveways or walks are routed shall be restored to their original condition, immediately when normal routing can be reinstated, unless otherwise specified in the Contract Documents. Pumping, draining and control of surface and groundwater shall be carried out so as to avoid endangering the Work or any adjacent facility or property, or interrupting, restricting or otherwise infringing or interfering with the use thereof.
- 6.12.3 Except as specifically arranged with the owners of adjacent premises, CONTRACTOR shall avoid any encroachment on adjacent premises. It is specifically agreed that CONTRACTOR shall repair and make good any damage to adjacent premises or improvements thereon caused by its operation, including any damage or loss to the tenant of such adjoining premises or to the owners thereof, whether to buildings, stocks of merchandise, trade fixtures, or otherwise.
- 6.12.4 During the progress of the Work, and as directed by the CITY or its representatives, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by CITY. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.
- 6.12.5 CONTRACTOR shall not load or permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.13 Record Documents

Contractor shall maintain in a safe place at the site, one (1) record copy of all drawings, specifications, addenda, change orders, change requests, correspondence, field test records, contractor's daily reports and construction photographs, and written interpretations and clarifications in good order, and annotated to show all changes made during construction. These

record documents, together with all approved samples and shop drawings will be available to ENGINEER for reference.

The record drawings shall be marked up as the work progresses to reflect current conditions and shall become the "as-built" plans. The revisions are to be indicated in a neat, well-organized manner and are to include the elevation and plan location of any utilities, structures, etc., encountered or installed. A "record" survey book will be kept and shall include the following items:

1. The location and elevation of all existing utilities, structures, etc. encountered.
2. The finished product location and elevation of all utilities and structures installed, including, but not limited to, fire hydrants, catch basin and manhole lids and inverts, and valve boxes.

All record notes shall be kept in book(s) designated "record" and no other survey notes will be kept in such books.

Contractor will be required to review with ENGINEER the status of the as-built plans and the "record" survey notes in connection with ENGINEER'S evaluation of an application for payment.

Failure to maintain record documents current shall be just cause to recommend withholding of payments for work performed.

Upon completion of the work, ENGINEER shall deliver to the Contractor a reproducible set of updated contract plans. CONTRACTOR will transfer all his as-built information to these reproducible's and deliver the resultant as-built set of plans, together with the record survey book to ENGINEER for CITY.

6.14 Safety and Protection

6.14.1 CONTRACTOR shall be solely and completely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons (including but not limited to the general public) who may be affected thereby; all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site; and other property at the site, adjacent thereto, or utilized by CONTRACTOR including but not limited to trees, shrubs, lawns, walks, pavements, roadways, structures, Underground Facilities and utilities not designated for removal, relocation or replacement in the course of construction regardless of whether or not such other property is indicated in the Contract Documents. CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until such time as ENGINEER issues a notice to CITY and CONTRACTOR that the Work is acceptable.

6.14.2 All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR at his sole cost, except damage or loss solely attributable to the fault of the Drawings or Specifications or the acts or omissions of CITY or ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable.

6.14.3 CONTRACTOR shall comply with all applicable Laws and Regulations of any governmental entity having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss including, but not limited to, OSHA (Public Law 91-596) and the Contract Work Hours and Safety Standards Act (Public Law 91-54); and shall erect and maintain all necessary safeguards for such safety and protection.

CONTRACTOR shall designate a responsible member of his organization at the site whose duties shall be preventing accidents and insuring compliance with all applicable safety regulations. This person shall be CONTRACTOR's superintendent unless otherwise designated in writing by CONTRACTOR to CITY.

- 6.14.4 When the performance of the Work requires the use of shoring, sheet piling and other special construction related to excavation, and when required by Laws or Regulations, CONTRACTOR shall cause the design of said shoring, sheet piling and other special construction to be performed by a registered professional engineer licensed in the State of Florida. CONTRACTOR shall submit, as a Shop Drawing, a certification by the registered engineer, stating that it has complied with this requirement. CONTRACTOR shall meet all requirements of such designs prepared by a registered engineer. In addition to any requirements imposed by law, CONTRACTOR shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site of the Work which are in any way affected by the excavations or other operations connected with the performance of the Work.
- 6.14.5 CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. Whenever any notice is required to be given by CITY or CONTRACTOR to any adjacent or adjoining landowner or other party before commencement of any Work, such notice shall be given by CONTRACTOR.
- 6.14.6 CONTRACTOR shall take reasonable care during construction to avoid damage to vegetation. Ornamental shrubbery and tree branches shall be temporarily tied back, where appropriate, to minimize damage. Trees which receive damage to branches shall be trimmed of those branches to improve the appearance of the tree. Tree trunks receiving damage from equipment shall be treated with a tree dressing.
- 6.14.7 At all times CONTRACTOR shall, and shall cause his Subcontractors and Suppliers to, carefully protect its and their Work, materials, equipment, and supplies against damage or injury from the weather. If in the opinion of ENGINEER any of the above has been damaged or injured by reason of failure on the part of CONTRACTOR, any Subcontractor or Supplier to perform according to the requirements of this provision, said Work, materials, equipment and supplies shall be removed and replaced at the expense of CONTRACTOR.

6.15 Emergencies

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from ENGINEER or CITY, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give CITY prompt written notice if CONTRACTOR believes that any significant changes in the Work have resulted because of the action taken in response to an emergency. If CITY determines that changes are required, CITY shall authorize the changes by Change Order or Change Request. If the emergency was not due to the fault or negligence of CONTRACTOR, or any Subcontractor or Supplier or anyone for whose acts any of them may be liable and the changes cause an increase or decrease in CONTRACTOR's cost or the time required to perform any part of the Work, CITY shall make an adjustment in Contract Price or Contract Time, as provided in Articles 10 & 11.

6.16 Shop Drawings and Samples

- 6.16.1 After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, CONTRACTOR shall submit to

DESIGN ENGINEER for review and approval in accordance with the accepted schedule of Shop Drawing submissions, five (5) copies for use by CITY, DESIGN ENGINEER and ENGINEER plus additional copies as required by CONTRACTOR (unless otherwise specified in the Contract Documents) of all Shop Drawings, which shall have been checked by and stamped with the approval of CONTRACTOR and identified as DESIGN ENGINEER and ENGINEER may require. CONTRACTOR shall submit a copy of the transmittal letter providing drawing numbers and titles for each item included in a Shop Drawing submittal to ENGINEER at the same time each submittal is made to DESIGN ENGINEER.

- 6.16.2 CONTRACTOR shall also submit to ENGINEER for review and approval, with such promptness as to cause no delay in the Work, all samples required by the Contract Documents. All samples shall have been checked by and stamped with the approval of CONTRACTOR, identified clearly as to material, manufacturer, any pertinent data such as catalog numbers and the use for which it is intended.
- 6.16.3 CONTRACTOR's stamp of approval on any Shop Drawing or sample shall specifically indicate in writing, or if not indicated in writing, shall constitute a representation that CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, specified performance criteria, and similar data or assumes full responsibility for doing so, and that CONTRACTOR has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents.
- 6.16.4 At the time of each submission, CONTRACTOR shall in writing call ENGINEER's attention to any deviations that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted of each such variation.
- 6.16.5 DESIGN ENGINEER will review Shop Drawings and samples and return CONTRACTOR's submittals stamped with the following notation, as appropriate:

NO EXCEPTION TAKEN	[]
FURNISH AS CORRECTED	[]
REVISE AND RESUBMIT	[]
REJECTED	[]

Corrections or comments made on the shop drawings during this review do not relieve CONTRACTOR from compliance with requirements of the drawings and specifications. This check is only for review of the general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for: Confirming; and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his or her work with that of all other trades and performing all work in a safe and satisfactory manner."

DESIGN ENGINEER's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to the accuracy of other matters that may be contained in the submittals, including but not limited to such matters as dimensions, quantities, performance of equipment and systems designed by CONTRACTOR, engineering design furnished by CONTRACTOR, CONTRACTOR's means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence, or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto, the correctness of which shall remain the sole responsibility of CONTRACTOR. The review and approval of

a separate item as such will not indicate approval of the assembly in which the item functions.

CONTRACTOR shall make any corrections required by the DESIGN ENGINEER and shall return the required number of corrected copies of Shop Drawings and resubmit new samples for review. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by DESIGN ENGINEER on previous submittals.

- 6.16.6 DESIGN ENGINEER's review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called DESIGN ENGINEER's attention to each such variation at the time of submission and DESIGN ENGINEER has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by DESIGN ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.16.3.
- 6.16.7 Where a Shop Drawing or sample is required by the Specifications, no related Work shall be commenced until the submittal has been returned by DESIGN ENGINEER and noted "No Exception Taken" or "Furnish As Corrected".
- 6.16.8 All costs incurred in connection with DESIGN ENGINEER's or ENGINEER's review and return of a particular Shop Drawing or sample submission after DESIGN ENGINEER's second time review shall be borne by CONTRACTOR, including DESIGN ENGINEER's charges to CITY under the terms of their agreements with CITY. CITY shall be entitled to deduct these costs from the Contract Price by issuing a Change Order.
- 6.16.9 In reviewing Shop Drawings or samples, DESIGN ENGINEER shall be allowed (thirty) 30 days from the date DESIGN ENGINEER receives the submittal or re-submittal from CONTRACTOR to return the submittal in accordance with this Article, unless otherwise provided in the Contract Documents. DESIGN ENGINEER's review and return of a Shop Drawing or sample within the time allowed shall not justify an increase in Contract Price or an extension in Contract Time. Any delay in connection with CONTRACTOR's submittal and any resubmittal of a particular Shop Drawing or sample shall represent delays under the control of CONTRACTOR and shall not justify an increase in Contract Price or an extension in Contract Time.

6.17 Continuing the Work

CONTRACTOR shall carry on the Work and maintain the Progress Schedule during all disputes or disagreements with CITY. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as CONTRACTOR and CITY may otherwise agree in writing. Suspension of the Work by CONTRACTOR during any dispute or disagreement with CITY shall entitle CITY to terminate the CONTRACT for cause, except as otherwise provided in Article 15.

6.18 Indemnity

- 6.18.1 To the fullest extent permitted by law, CONTRACTOR shall indemnify, hold harmless and defend (provide and pay for legal defense) CITY, DESIGN ENGINEER, ENGINEER and their consultants, and each of their directors, officers, agents, and employees from and against all claims, damages, losses, expenses, and other costs, including costs of defense and attorneys' fees, and cost and attorney's fees on appeal, arising in any manner out of, or resulting from, or in connection with the performance of the Work, both on and off the job site, provided that any of the foregoing (1) is attributable to personal injury, bodily injury, sickness, disease or death, or to injury to or destruction of tangible

property (other than the Work itself), including the loss of use resulting therefrom, and (2) is caused in whole or in part by any act or omission of CONTRACTOR, any Subcontractor, any Supplier, anyone directly or indirectly employed by any of them or anyone for whose acts or omissions any of them may be liable, regardless of whether or not caused in part by any act or omission of a party indemnified hereunder.

- 6.18.2 In any and all claims against the indemnified parties by any employee of CONTRACTOR, any Subcontractor, any Supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under paragraphs 6.18.1 and 6.18.4 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable, by or for CONTRACTOR, or any Subcontractor, or any supplier, or other person under workers' compensation acts, disability benefit acts, or other employee acts.
- 6.18.3 The obligations of CONTRACTOR under paragraphs 6.18.1 and 6.18.4 shall not extend to the liability of DESIGN ENGINEER, ENGINEER and their consultants, and each of their directors, officers, employees, and agents arising out of, or resulting from, or in connection with the preparation or approval of maps, Drawings, opinions, reports, surveys, designs or specifications, providing that the foregoing were the sole and exclusive cause of the loss, damage, or injury.
- 6.18.4 CONTRACTOR shall also indemnify and hold harmless and defend (provide and pay for legal defense) CITY and ENGINEER and their consultants, and each of their directors, officers, employees, and agents from and against all losses, expenses, damages (including damages to the work itself), attorneys' fees, and other costs (including costs and attorney's fees on appeal), which any of them may incur with respect to the failure, neglect, or refusal of CONTRACTOR to faithfully perform the Work and/or the CONTRACTOR's obligations under the Agreement. Such costs, expenses, and damages shall include all costs including attorneys' fees and costs and attorneys' fees and costs on appeal incurred by the indemnified parties in any lawsuit to which they are a party.
- 6.18.5 At CITY's sole option and utilizing attorneys agreeable to CITY, CONTRACTOR shall defend all suits or claims as set out in this paragraph 6.18.
- 6.18.6 In the event that CITY incurs costs contrary to this indemnification agreement, CITY shall be entitled to deduct these costs from the Contract Price by issuing a Change Order.

6.19 Progress of the Work

- 6.19.1 If ENGINEER determines that CONTRACTOR is failing to maintain progress of the Work in accordance with the Progress Schedules and the General Requirements, CONTRACTOR shall take steps as may be necessary to improve his progress, and ENGINEER may require him to increase his work force, or hours, or days of work, or the amount of construction plant or all of them, and to submit to ENGINEER for approval such supplementary schedule or schedules as may be deemed necessary to demonstrate the manner in which the requisite progress will be regained and maintained, all without additional cost to CITY.
- 6.19.2 Failure of CONTRACTOR to comply with the requirements of ENGINEER under this Article shall be grounds for determination by ENGINEER that CONTRACTOR is not prosecuting the Work with such diligence as will insure completion within the time specified. ENGINEER will then so inform CITY. CITY may thereupon suspend the Work or terminate CONTRACTOR's services should CONTRACTOR fail to comply with the above paragraph.

6.20 Project Meetings

6.20.1 The CONTRACTOR along with appropriate subcontractors shall attend Project Meetings requested by ENGINEER or CITY for the purpose of discussing and resolving matters concerning the various elements of the Work. Representatives attending such meetings shall have the authority to bind their respective entities to any decisions made. CONTRACTOR shall prepare minutes of the meeting and distribute copies of such minutes within five (5) calendar days to each participant for review and approval.

Participants shall review the above mentioned minutes and, if a discrepancy is found notify the other participants in writing within one week of receipt of the minutes. If CONTRACTOR and/or his subcontractors fail to attend a meeting, CITY shall be entitled to deduct the costs of CITY, COUNTY, ENGINEER, and DESIGN ENGINEER representatives attending the meeting from the CONTRACT PRICE by issuing a Change Order.

6.20.2 CONTRACTOR shall submit for the Project Meeting a summary bar chart of the work activities anticipated for the following fourteen days. This schedule will be used by the ENGINEER for the planning of testing and inspection and shall be an item of discussion at the Project Meeting.

6.21 CONTRACTOR Not Agent of CITY

CONTRACTOR shall perform all Work under this Agreement as an Independent Contractor and shall not be considered an agent of CITY, nor shall CONTRACTOR's Subcontractors or Suppliers or employees be considered agents of CITY. CONTRACTOR and not CITY shall be solely responsible to any and all Subcontractors and Suppliers and all those employed by them for their costs, expenses, fees and profits, if any, in performing the Work.

6.22 Inspection and Audit

6.22.1 CITY shall have access to the Work and the right to audit all of CONTRACTOR's books, ledgers, records, correspondence, instructions, drawings, receipts, vouchers, memoranda, and other documents pertinent to all Cost and Pricing Data used by Contractor in the determination of CONTRACTOR'S Bid for the Work, in pricing, negotiating or costing Work covered by a Change Order, Change Request or claim, or otherwise relating to the Work, and CONTRACTOR shall preserve and make available at CONTRACTOR's office at all reasonable times all such records for a period of five (5) years after Final Payment.

6.22.2 In the event of termination, the records relating to the Work, or part thereof, affected by such termination shall be made available for five (5) years after the termination. Records pertaining to claims, to litigation or the settlement of claims arising under or relating to the performance of the Work shall be made available until disposition of such appeals, litigation, or claims.

6.22.3 CONTRACTOR shall insert a provision containing all the requirements of paragraph 6.22, including this paragraph 6.22.3, in all Sub-agreements between CONTRACTOR and Subcontractors or Suppliers or other persons, altering the paragraph only as necessary to identify properly the contracting parties.

6.23 Truth-In-Negotiation

6.23.1 CONTRACTOR warrants that all bid line items are true, complete and accurate and include all costs, overhead, profit and all other amounts associated with such items and may be relied upon by CITY when making additions or deductions to the Contract Price.

CONTRACTOR further warrants that all Cost and Pricing Data provided to ENGINEER and CITY during the term of the Agreement shall be complete, accurate and current when provided. Should there be any changes in the Cost and Pricing Data previously submitted, the CONTRACTOR shall notify and provide the new information to ENGINEER and CITY immediately. CITY shall be entitled to issue an appropriate Change Order to adjust the Contract Price and Contract Time on account of corrections to inaccurate or incomplete information provided by CONTRACTOR.

6.23.2 Despite any provisions in the Contract Documents to the contrary, any amounts paid by CITY to CONTRACTOR in excess of what it is entitled under the Contract Documents shall be reimbursed by CONTRACTOR to CITY. The making of Final Payment to Contractor shall not be a waiver of City's right to reimbursement from Contractor nor shall it discharge Contractor's obligation to refund the overpayment. The terms of paragraph 6.23 shall survive the City's making Final Payment.

6.23.3 CONTRACTOR shall insert a provision containing all the requirements of paragraph 6.23, including this paragraph 6.23.3, in all Sub-agreements between CONTRACTOR and Subcontractors or Suppliers or other persons, altering the paragraph only as necessary to identify properly the contracting parties.

6.24 Correspondence

All CONTRACTOR's correspondence shall have identification numbers assigned by CONTRACTOR. The identification numbers shall be sequential and assigned chronologically such that each CONTRACTOR's submission can be individually identified by reference to the assigned identification number. The numbering system must be approved by ENGINEER. Any correspondence not so identified may not be accepted by ENGINEER.

6.25 Protection of Historical Properties

6.25.1 CONTRACTOR shall comply with Florida's Archives and Historical Act (Florida Statutes Chapter 267) and the regulations of the local historic preservation board as applicable and protect against the potential loss or destruction of significant historical or archaeological data, sites, and properties in connection with the Work.

6.25.2 CONTRACTOR shall be responsible for reporting immediately to the governmental entity or agency with jurisdiction any archaeological features which are encountered or unearthed during the performance of the Work, and for protecting same to the satisfaction of such governmental entity or agency. CONTRACTOR shall absorb all related delay, extension or acceleration costs, however caused, except that if CITY and CONTRACTOR believe the delays require an extension in Contract Time, CITY shall authorize the necessary change in Contract Time only.

6.26 Responsibility for Connecting to Existing Services and Utilities

At all points where the Work constructed by CONTRACTOR connects to existing utilities and services, the actual Work of making the necessary connection to the existing service or utility shall be arranged for by CONTRACTOR at no expense to CITY (unless specifically indicated otherwise).

Services and utilities included within (but not limited to) this responsibility are roads, ditches, electrical, sewer, mechanical utilities, water, reuse, fencing, etc. Connections shall be made at a time that will result in the least possible interference with existing services.

6.27 Additional Provisions

- 6.27.1 CONTRACTOR shall be responsible for all cutting of masonry and other materials, and all fitting, drilling or patching which may be necessary to complete the Work or to make its several parts fit together properly, whether or not such Work is expressly specified in the Contract Documents.
- 6.27.2 CONTRACTOR shall be responsible for preparing and delivering to ENGINEER, on a daily basis, reports recording labor and equipment available and utilized, and materials and equipment received each day, on a form acceptable to ENGINEER. If CONTRACTOR fails to submit reports daily, ENGINEER may withhold approval of any Application for Payment until such time as CONTRACTOR submits the required information. CONTRACTOR shall make available any such records as requested by ENGINEER to verify that the reports are accurate.
- 6.27.3 CONTRACTOR shall submit to ENGINEER at the beginning of each work shift, a list of specific items requiring final inspection, monitoring, or witnessing by ENGINEER.

ARTICLE 7 - WORK BY OTHERS

7.1 Related Work At Site

- 7.1.1 CITY may perform other work at the site by CITY's own forces, provide for or allow other work to be performed by other owners, or let other direct contracts for other work. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work.
- 7.1.2 CONTRACTOR shall afford each owner and contractor (or CITY, if CITY is performing the additional work with CITY's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make it integrate properly with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The Contractor is not entitled to exclusive use of the site.
- 7.1.3 If any part of CONTRACTOR's Work depends for proper execution or results upon the work of CITY or any such other contractor or owner, CONTRACTOR shall inspect and promptly report to ENGINEER in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR's failure to so report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR's Work except for latent or nonapparent defects and deficiencies in the other work. Wherever Work to be performed by CONTRACTOR is dependent upon the work of any separate contractor, CONTRACTOR shall: (1) coordinate his Work with the dependent work; (2) provide necessary dependent data and requirements; (3) supply and/or install items to be built into dependent work of others; (4) make provisions for dependent work; (5) check and verify dependent dimensions of previously placed work; (6) notify ENGINEER of previously placed dependent work or dependent dimensions which are unsatisfactory or will prevent a satisfactory installation of any such Work; and (7) not proceed with any such Work until any unsatisfactory dependent conditions have been corrected. Installation of Work by CONTRACTOR or by a Subcontractor in any given area shall constitute acceptance by CONTRACTOR or by such Subcontractor of all previously placed dependent work, subject to the exceptions previously noted.

- 7.1.4 If CITY contracts with others for the performance of other work at the site, the person or organization with the authority and responsibility for coordination of the activities among the various prime contractors may be identified in the Supplementary Conditions, and the specific matters to be covered by such authority and responsibility may be itemized, and the extent of such authority and responsibilities may be provided, in the Supplementary Conditions. Unless otherwise provided in the Supplementary Conditions, coordination with other prime contractors will be the responsibility of each prime contractor and neither CITY nor ENGINEER shall have any authority or responsibility in respect of such coordination.

7.2 Mutual Duties and Responsibilities

- 7.2.1. Should CONTRACTOR cause damage to the work or property of any separate contractor or owner performing work at or contiguous to the site, or should any claim arising out of CONTRACTOR's performance of Work at or contiguous to the site be made by any separate contractor or utility owner against CONTRACTOR, CITY, ENGINEER, or DESIGN ENGINEER, CONTRACTOR shall promptly attempt to settle with such separate contractor or utility owner by agreement, or to otherwise resolve the dispute at equity or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, hold harmless, defend and indemnify CITY, ENGINEER, DESIGN ENGINEER, and their consultants, directors, officers, agents, and employees from and against all claims, damages, losses, costs and expenses (including attorney's fees and attorney's fees on appeal) arising directly, indirectly or consequentially out of any action, legal or equitable, or resulting from damage to the Work of others caused by CONTRACTOR's performance of the Work.
- 7.2.2. Should any separate contractor or owner cause damage to the Work or property of CONTRACTOR, or should the performance of work by any separate contractor or owner at or contiguous to the site give rise to any other claim by CONTRACTOR, CONTRACTOR shall promptly attempt to settle with such separate contractor or owner by agreement, or to otherwise resolve the dispute at equity or at law. CONTRACTOR shall not institute any action, legal or equitable, against CITY, ENGINEER, DESIGN ENGINEER, or their consultants directors, officers, agents, and employees or permit any action against them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability or recover damages from CITY, ENGINEER, DESIGN ENGINEER or their consultants, directors, officers, agents, or employees on account of these.
- 7.2.3. In the event that CITY incurs costs contrary to the provisions of this paragraph, CITY will be entitled to deduct these costs from the Contract Price by using a Change Order.

7.3 Extensions in Contract Time

- 7.3.1. If CONTRACTOR is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor or entity performing work at the site noted in the Contract Documents, CONTRACTOR may request an extension in Contract Time; if CITY believes that the delay requires an adjustment in Contract Time, CITY shall authorize the necessary extension of Contract Time. However, an extension in Contract Time(s), if so granted, shall be CONTRACTOR's sole and exclusive remedy with respect to CITY, ENGINEER, and DESIGN ENGINEER, and their consultants, agents and employees for any delay, disruption, interference, extension, acceleration or hindrance and associated costs, however caused, resulting from delays caused by others performing other work at the site.

7.4 Contract Time Coordination

- 7.4.1. CONTRACTOR shall give prompt written notice to CITY, ENGINEER and any other affected contractor(s) whenever CONTRACTOR anticipates a conflict in Contract Time(s) related to or simultaneous with associated contract time (s) in the work of others. Within seven (7) days thereafter, CONTRACTOR shall be required to deliver to ENGINEER proposed actions to either (a) prevent an adverse effect on the Progress Schedule of the other contractors arising from delays to the Work, or (b) prevent or overcome an adverse effect on the Progress Schedule for the Work arising from delays from another contract.
- 7.4.2. When Work is performed out of sequence and ahead of interfacing work, CONTRACTOR shall be responsible for taking reasonable steps to minimize damage or loss to the Work which may be caused by others during the performance of their work, including (but not limited to) furnishing written notice to ENGINEER and to the other contractors that Work has been performed out of sequence and ahead of interfacing work.
- 7.4.3. When work by others is performed out of sequence and ahead of interfacing Work, the said work shall be considered as if it had been shown on the Contract Documents. CONTRACTOR shall be responsible for protecting said work and shall replace, repair or otherwise settle with others any and all damage caused as a result of the performance of work out of sequence unless CONTRACTOR had no actual knowledge thereof or could not reasonably have known thereof.

ARTICLE 8 - CITY'S RESPONSIBILITIES

8.1 General

- 8.1.1. CITY shall generally issue all communications to CONTRACTOR through the Construction Manager.
- 8.1.2. In case of termination of the employment of ENGINEER, CITY shall appoint an engineer whose status under the Contract Documents shall be that of the former ENGINEER.
- 8.1.3. CITY shall furnish the data required of CITY under the Contract Documents promptly and shall make payments to CONTRACTOR promptly after they are due as provided in Article 14.
- 8.1.4. CITY's duties in respect of providing lands and easements and engineering surveys to establish reference points, and identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by DESIGN ENGINEER in preparing the Drawings and Specifications are set forth in Article 4.
- 8.1.5. CITY will issue unilaterally or negotiate, at its discretion, Change Orders and Change Requests as provided in Article 10.
- 8.1.6. CITY's responsibility in respect of certain inspections, tests and approvals is set forth in Article 13.
- 8.1.7. CITY may allow its consultants, agents, attorneys, employees, and others access to the site. CONTRACTOR shall cooperate with CITY in allowing such access.

ARTICLE 9 - ENGINEER'S AND DESIGN ENGINEER'S STATUS DURING CONSTRUCTION

9.1 CITY'S Representative

ENGINEER will be CITY's representative during the construction of the Work. The duties and responsibilities and the limitations of authority of ENGINEER as CITY's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of CITY and ENGINEER.

9.2 Visits to Site

9.2.1. DESIGN ENGINEER may make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents.

9.2.2. ENGINEER will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents.

9.3 Project Representation

CITY may furnish a Construction Manager and/or Field Representative(s) to represent the CITY and observe the performance of the Work.

9.4 Duties, Responsibilities and Limitations of Authority of Construction Manager:

9.4.1. Construction Manager or Field Representative will act as directed by the CITY and will confer with ENGINEER regarding his activities. Construction Manager, if assigned, will perform the duties and responsibilities described herein with the assistance of Field Representative(s). ENGINEER shall generally issue all communications to CONTRACTOR through Construction Manager, including but not limited to communications directed to CONTRACTOR, from CITY through ENGINEER. CONTRACTOR shall generally issue all communications to CITY, DESIGN ENGINEER and ENGINEER through Construction Manager or Field Representative.

9.4.2. Construction Manager will: provide instructions to Field Representative(s) on procedures to be followed and schedule inspections of the Work; review daily inspection reports prepared by Field Representative(s); prepare draft Field Orders, Change Requests or Change Orders as required and review them with Field Representative(s), Design Engineer, ENGINEER or CITY, as applicable.

9.4.3. Construction Manager or Field Representative will attend meetings with CONTRACTOR, such as the Preconstruction Conference, Project Meetings and any other Project related meetings and review and circulate copies of minutes thereof.

9.4.4. Construction Manager will serve as DESIGN ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent, to assist in understanding the intent of the Contract Documents, and will serve as CITY's liaison with CONTRACTOR when CONTRACTOR's operations affect CITY's on-site operations, and when additional information is required from CITY for proper execution of the Work.

9.4.5. Construction Manager will advise CONTRACTOR, through or with the assistance of Field Representative(s), of the commencement of any Work requiring a Shop Drawing or sample, when it is observed that a submittal has not been reviewed by DESIGN ENGINEER.

- 9.4.6. Construction Manager will conduct on-site observations of the Work in progress and receive Field Representative(s)'s observation comments and non-conformance reports, to determine if the Work is proceeding in accordance with the Contract Documents.
- 9.4.7. Construction Manager will notify CONTRACTOR of disapproval or rejection of Work whenever Construction Manager or ENGINEER believe that any Work is defective, and will notify CONTRACTOR whether defective Work is to be corrected, or replaced.
- 9.4.8. Construction Manager will notify CONTRACTOR of any Work that is to be uncovered for observation, testing inspection or approval.
- 9.4.9. Construction Manager will accompany, through or with the assistance of Field Representative(s), visiting inspectors representing governmental or other agencies having jurisdiction over the Project, and record the results of the inspections and report to ENGINEER.
- 9.4.10 Construction Manager will transmit to CONTRACTOR clarifications and interpretations as issued by ENGINEER.
- 9.4.11 Construction Manager will consider and evaluate CONTRACTOR's proposed variations and the changes in the Work or the Contract Documents and report such proposals and evaluations to ENGINEER. Construction Manager will communicate decisions on such proposals to CONTRACTOR as issued by ENGINEER or CITY.
- 9.4.12 Construction Manager will report promptly to ENGINEER and CITY upon gaining knowledge of the occurrence of any accident at the site.
- 9.4.13 Construction Manager will prepare reports of the progress of the Work and of CONTRACTOR's compliance with the Progress Schedule.
- 9.4.14 Construction Manager will consult as appropriate with ENGINEER in advance of scheduled major tests, inspections or the commencement of important phases of the Work.
- 9.4.15 Construction Manager will review and evaluate CONTRACTOR's Application for Payment and advise ENGINEER accordingly.
- 9.4.16 Construction Manager will review and evaluate CONTRACTOR's notice that CONTRACTOR considers the Work (or part thereof) substantially complete and advise ENGINEER accordingly.
- 9.4.17 Construction Manager will observe whether all items on lists of items to be completed prior to Final Payment have been completed and make recommendations to ENGINEER concerning Acceptance.
- 9.4.18 During the course of the Work, the Construction Manager will verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and deliver this material to ENGINEER.
- 9.4.19 Construction Manager will not: (1) authorize any variation or change in the Work or in the Contract Documents or approve any equivalent material or equipment; (2) exceed the limitations of Construction Manager's authority as set forth in this document; (3) undertake any of the responsibilities of CONTRACTOR, Subcontractors or CONTRACTOR's superintendent, or expedite the Work; (4) inspect, advise on or issue

directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents; (5) inspect, advise on or issue directions as to safety precautions and programs in connection with the Work; (6) certify Substantial Completion of the Work; or (7) participate in specialized field or laboratory tests.

9.5 Duties, Responsibilities and Limitations of Authority of Field Representative(s)

- 9.5.1. As requested by Construction Manager, Field Representative(s) will assist in obtaining from CITY additional details or information, when required at the job site for proper execution of the Work.
- 9.5.2. Field Representative(s) will advise Construction Manager and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample submission if he observes that a submittal(s) has not been reviewed by DESIGN ENGINEER.
- 9.5.3. Field Representative(s) will conduct on-site observations of the Work in progress to assist Construction Manager in determining if the Work is proceeding in accordance with the Contract Documents and that completed Work will substantially conform to the Contract Documents.
- 9.5.4. Field Representative(s) will notify CONTRACTOR and report to Construction Manager for review and possible disapproval or rejection by ENGINEER or Construction Manager whenever he believes that any Work is defective.
- 9.5.5. Field Representative(s) will notify CONTRACTOR and report to Construction Manager for determination of necessary action by ENGINEER or Construction Manager when he believes Work should be uncovered for observation, testing, inspection or approval.
- 9.5.6. Field Representative(s) will verify that tests, equipment and systems start-ups and operating and maintenance instructions are conducted as required by the Contract Documents and in the presence of the required personnel and that CONTRACTOR maintains adequate records thereof; observe, record and report to Construction Manager appropriate details relative to the test procedures and start-ups.
- 9.5.7. Field Representative(s) will report to Construction Manager when clarifications and interpretations of the Contract Documents are needed or requested.
- 9.5.8. Field Representative(s) will keep a diary recording hours on the job site, weather conditions, data relative to questions of extras or deductions, lists of visiting officials and representatives of Suppliers, daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures. Field Representative(s) will summarize such information on the daily inspection report and submit copies to Construction Manager.
- 9.5.9. Field Representative(s) will assist Construction Manager with record keeping as directed by Construction Manager.
- 9.5.10. Field Representative(s) will report immediately to CITY, ENGINEER and Construction Manager upon gaining knowledge of the occurrence of any accident.
- 9.5.11. Field Representative(s) will assist Construction Manager with the review and evaluation of CONTRACTOR's Application for Payment, noting particularly their relation to the schedule of values, Work completed, and materials and equipment delivered at the site but not incorporated in the Work.

9.5.12 Field Representative(s) will prepare draft lists of items to be completed or corrected (punch lists) as directed by Construction Manager.

9.5.13 Field Representative(s) will not: (1) authorize any variation or change in the Work or in the Contract Documents or approve any equivalent material or equipment; (2) exceed the limitations of Field Representative(s)'s authority as set forth in this document; (3) undertake any of the responsibilities of CONTRACTOR, Subcontractors or CONTRACTOR's superintendent, or expedite the Work; (4) inspect, advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents; (5) inspect, advise on or issue directions as to safety precautions and programs in connection with the Work; (6) certify Substantial Completion of the Work; or (7) participate in specialized field or laboratory tests.

9.6 Clarifications and Interpretations

ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

9.7 Authorized Variations in Work

ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents and required to produce the intended result. These may be accomplished by a Field Order and will be binding on CONTRACTOR who shall perform the Work involved promptly.

9.8 Rejecting Defective Work

ENGINEER will have authority to disapprove or reject Work at any time during the construction of the Work, which ENGINEER believes to be defective. ENGINEER will also have authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed. When CONTRACTOR has been notified by ENGINEER of disapproval or rejection of defective Work, CONTRACTOR shall take immediate action to correct or replace same.

9.9 Determinations of Quantities and Classifications of Unit Price Work

Field Representative or Construction Manager will determine the actual quantities of each classification of Unit Price Work. Field Representative or Construction Manager will review with CONTRACTOR, Field Representative or Construction Manager's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Field Representative or Construction Manager's written decisions thereon will be final and binding upon CONTRACTOR, unless, with seven (7) days after the date of any such decision, CONTRACTOR delivers to CITY written notice of a claim.

9.10 Decisions on Disputes

DESIGN ENGINEER will be the initial interpreter of the requirements of the Contract Documents, and in such capacity will render initial determinations in respect of the acceptability of the Work thereunder. Unless otherwise provided in the Contract Documents, notices, proposals or other matter relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work will be referred initially to DESIGN ENGINEER in writing with a request for a formal decision in accordance with this paragraph, which DESIGN ENGINEER will render within a reasonable time. DESIGN

ENGINEER's written determination thereon shall be final and binding on CONTRACTOR unless CONTRACTOR delivers to CITY written notice of a claim within seven (7) days of receipt of such decision.

9.11 Limitations on ENGINEER's and DESIGN ENGINEER's Responsibilities

9.11.1 Neither ENGINEER's or DESIGN ENGINEER's authority to act under this Article or elsewhere in the Contract Documents nor any decision or determination made by ENGINEER or DESIGN ENGINEER in good faith to exercise or not to exercise such authority shall give rise to any duty or responsibility of ENGINEER or DESIGN ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

9.11.2 Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe requirement, direction, review or judgment of ENGINEER or DESIGN ENGINEER as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise).

The use of any such term or adjective shall not be effective to assign to ENGINEER or DESIGN ENGINEER any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of this Article.

9.11.3 ENGINEER and DESIGN ENGINEER will not be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and ENGINEER and DESIGN ENGINEER will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

9.11.4 ENGINEER and DESIGN ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 10 - CHANGES IN THE WORK

10.1 Changes in the Work

10.1.1 Without invalidating the Agreement and without notice to any surety, CITY may, at any time, by duly executed Change Order or Change Request, order changes within the scope of the Agreement consisting of additions, deletions or other revisions in the Work. Upon receipt of that order, CONTRACTOR shall promptly proceed or continue with the Work involved (based on the conditions stated and other applicable conditions in the Contract Documents). If a change under this Article causes an increase or decrease in the Contract Price or any extension or shortening of the Contract Time, CITY will make an adjustment as provided in Article 11.

10.1.2 CITY or ENGINEER may present to CONTRACTOR an unsigned proposed Change Request requesting that CONTRACTOR submit a proposal for an adjustment in Contract Price or Contract Time for a proposed change in the Work. CONTRACTOR shall submit a proposed adjustment with all supporting data in accordance with Article 11 and the directions given in the Change Request within 14 days of receipt. Said proposed adjustment shall include an itemized estimate of all costs and time for the performance that will result directly or indirectly from the changes described. Estimates shall be

prepared in accordance with the requirements of Article 11 and in sufficient detail and with documentation such that ENGINEER can (1) analyze all material, labor, equipment, subcontract, overhead costs and fees, and any other costs covering all aspects of the Work involved in the change, whether such was added, deleted, changed, or impacted; (2) determine that the proposal reflects all impacts on the Contract of the proposed change; and (3) establish that all Contract provisions have been complied with. Any amount proposed for Subcontractors or Suppliers shall be similarly supported.

- 10.1.3 CITY or ENGINEER may give instructions which may result in changes in the Work not involving an adjustment in the Contract Price or the Contract Time when such changes are necessary or expedient to the satisfactory performance and completion of the Work. These instructions shall be binding on CONTRACTOR.

Any instruction, direction, interpretation, or determination from CITY, ENGINEER or any other source which causes a change shall be treated as a change under this Article provided that CONTRACTOR gives ENGINEER written notice stating the date, circumstances, specific order, and that CONTRACTOR regards the instruction as a change.

Such written notification shall be given to ENGINEER within 7 days after receipt and before CONTRACTOR acts on said instruction, direction, interpretation, or determination. No claim, change or notice by CONTRACTOR will be allowed if asserted after work has commenced on, or if notice is not provided within the stated time limit provided after receipt of, the instruction, direction, interpretation, or determination from CITY, ENGINEER, or any other source.

- 10.1.4 In making changes under this Article, CITY may give consideration to a notice, proposal or claim from CONTRACTOR, provided the notice, proposal or claim is presented in accordance with the requirements of this Article and Article 11. CONTRACTOR shall provide CITY or ENGINEER any additional or supplemental information requested for purposes of evaluation of CONTRACTOR's submittal, but such requests by the CITY or ENGINEER will not constitute acceptance of the notice, proposal or claim.

- 10.1.5 ENGINEER will evaluate a change notice, proposal or claim from CONTRACTOR, and CITY will review with CONTRACTOR the results of the evaluation before rendering a determination. If CITY, with the advice of ENGINEER, concurs that a change in the Work has occurred or been ordered, CONTRACTOR will be directed to submit a proposal for an adjustment in accordance with paragraph 10.1.2. If CITY concludes that a change has not occurred or been ordered, CITY's determination shall be final and binding on CONTRACTOR unless CONTRACTOR delivers to CITY written notice of a claim within 7 days from receipt of such decision.

- 10.1.6 If notice of any change affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it shall be CONTRACTOR's responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. CONTRACTOR shall furnish proof of such adjustment to CITY if requested.

10.2 Change Orders and Change Requests

- 10.2.1 Contract Price or Contract Time shall be changed only by Change Order. The basis for a subsequent change in Contract Price or Contract Time may also be authorized by Change Request duly executed by the CITY.

- 10.2.2 A Change Order duly executed by CITY and CONTRACTOR provides for an all inclusive settlement for all changes and direct, supplemental, indirect, consequential and

cumulative costs and delays, and CONTRACTOR's signature represents a waiver of any and all rights to file a claim on account of that instrument.

- 10.2.3 CITY and CONTRACTOR shall execute Change Orders covering changes in the Work (including any necessary adjustments in Contract Price or Contract Time) which are ordered or agreed to by the parties, changes in Contract Price or Contract Time which are agreed to in total or in part, or previously executed Change Requests with reasonable promptness. Adjustments to Contract Price resulting from changed work shall only be included in Applications for Payment after a Change Order has been duly executed.
- 10.2.4 When duly executed by CITY, CITY may use Change Requests to order changes in the Work, provide the basis for a subsequent adjustment in Contract Price or Contract Time, or authorize deviations in the Work. Amounts for work directed by a Change Request shall not be included in Applications for Payment until that Change Request has been incorporated into a Change Order.
- 10.2.5 A Change Order, or Change Request, duly executed by CITY, but not executed by CONTRACTOR, or executed by CONTRACTOR with a notice of reservation of rights to claim additional adjustments, shall become final and binding on CONTRACTOR, without consideration of the reservation of rights, unless CONTRACTOR delivers to CITY written notice of a claim within 7 days after receipt of that instrument.
- 10.2.6 An unsigned Change Request may be used by CITY and CONTRACTOR to negotiate changes in the Work, or in Contract Price or Contract Time. A Change Request will be the instrument used by CITY to direct Work on a cost of the Work basis as described in Article 11.

A Change Order will be issued to incorporate the instruction to proceed with a change on a cost of the Work basis into the Contract Documents after the actual cost of the work has been determined.

10.3 Waivers

- 10.3.1 No proposal or claim by CONTRACTOR for an adjustment under this Article shall be allowed for any costs or delay incurred more than 7 days before CONTRACTOR gives written notice as required.
- 10.3.2 No proposal or claim by CONTRACTOR for an adjustment under this Article shall be allowed if made after the date of Final Payment.
- 10.3.3 Additional Work performed without authorization of a Change Order or properly executed Change Request will not entitle CONTRACTOR to an increase in Contract Price or an extension of Contract Time, except in the case of an emergency as provided in Article 6.
- 10.3.4 CONTRACTOR acknowledges that there may be changes during the course of the Work and acknowledges that the probable effect of changes has been accounted for in the development of the Contract Price and Progress Schedule. Whenever CONTRACTOR makes a proposal or claim under Article 11 such proposal or claim shall include the total amount of adjustment in Contract Price and Contract Time to which the CONTRACTOR believes it is entitled. Except as CITY and CONTRACTOR may otherwise agree in writing, CONTRACTOR shall be deemed to have waived (1) any adjustment to which it might otherwise be entitled under Article 11 where such proposal or claim fails to request such adjustments, (2) any increase in the amount of adjustment additional to that requested in the proposal or claim, and (3) any claim for reimbursement of impact allegedly resulting from the cumulative effect of the number, nature, or extent of any changes.

ARTICLE 11-CHANGES IN CONTRACT PRICE OR CONTRACT TIME

11.1 Changes in Contract Price or Contract Time

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for all duties, responsibilities, and obligations required to perform the Work. All duties, responsibilities, and obligations assigned or undertaken by CONTRACTOR shall be at its expense without change in the Contract Price or Contract Time except as set out below.

11.2 Proposals or Claims Substantiating Adjustments

11.2.1 Supporting data for any proposal or claim by the CONTRACTOR shall include at a minimum a complete and detailed breakdown of the proposed price and a detailed explanation of any time impact for the change. Said proposed price shall be based on the lowest reasonable cost consistent with sound construction practice. Such breakdown shall include itemizations by trade of all labor with man hours and hourly rates, equipment with hours of use and rates, and material by item with costs, all in sufficient detail to evaluate the cost of the individual components of the Work, including copies of purchase orders, invoices and subcontract change orders.

11.2.2 CONTRACTOR proposals or claims shall state in writing, and provide evidence that the amounts included cover all direct, supplemental, indirect, consequential, and cumulative costs and delays, as applicable, and that those costs and delays would be or were necessarily incurred, despite CONTRACTOR's reasonable, prudent and diligent efforts to mitigate them.

11.2.3 CONTRACTOR proposals and claim supporting data shall become due within 14 days of receipt of the unsigned Change Request or receipt by CITY of written notice of claim (unless ENGINEER allows an additional period), and shall remain firm for a period of not less than 60 days from receipt by ENGINEER of the proposal or supporting data. Any delay in the submittal of a proposal or claim will not justify or constitute basis for an increase in Contract Price or Contract Time. Proposals or claims shall be submitted on forms acceptable to CITY.

11.2.4 Failure of CONTRACTOR to comply with the time requirements for written notice or for submittal of supporting data shall be considered a waiver by CONTRACTOR of any claim for an addition to the Contract Price or an adjustment to the Contract Time and CONTRACTOR agrees that no additional compensation or time adjustments are due if the provisions of Article 10 and this Article are not complied with.

11.2.5 Where the change in Contract Price arises from changes in the schedule of all or part of the Work, or where a change in Contract Time is sought, the proposal shall be based on a detailed analysis of the Progress Schedule, and shall cover all applicable elements affecting the Work involved, including, but not limited to, labor crews, craft levels, equipment utilization, work during other than normal working hours, productivity and production rates, shop drawing preparation, submittal and review, material and equipment delivery, and testing and start-up times.

11.2.6 Proposals or claims shall cover all aspects of the Work involved, whether relating to deleted, added, revised, or impacted items of Work. Amounts for Subcontractors or Suppliers at any tier shall be equally supported.

11.2.7 No proposal or claim for an adjustment in Contract Price or Contract Time shall be valid unless submitted in accordance with Article 10 and this Article.

11.3 Methods for Determining Adjustments in Contract Price

- 11.3.1 The methods to be used to determine an adjustment in Contract Price necessitated by changes ordered or negotiated pursuant to these General Conditions, or Work covered by a proposal or a claim, collectively to be referred to as the "Work involved," are limited to the following:
- 11.3.2 Contract Unit Prices: Where the Work involved is covered or is of the same character as Unit Price Work, by application of those unit prices to the quantities of the items involved (subject to the provisions covering Unit Price Work). No additional allowances or charges shall be added to these unit prices.
- 11.3.3 Negotiated Unit Prices: Where the Work involved is not covered by unit prices contained in the Contract Documents, unit prices may be negotiated on the basis of costs calculated in accordance with this Article.
- 11.3.4 Negotiated Lump Sum: By mutual acceptance of a lump sum price negotiated on the basis of CONTRACTOR's itemized estimate of the anticipated Cost of the Work involved, determined as specified in this Article.
- 11.3.5 Cost of the Work: Where CITY and CONTRACTOR cannot agree on any of the methods described in paragraphs 11.3.2, 11.3.3, or 11.3.4, CITY may direct CONTRACTOR to proceed with the Work involved on the basis of actual costs in accordance with this Article. When the cost of the Work basis is directed by CITY, CITY shall prescribe the required procedures for accounting of the allowed costs. These procedures shall include daily accounting of the material and equipment used and labor employed. Failure to submit this information for acknowledgment by the ENGINEER within one day after any part of the Work is performed shall result in any discrepancy between ENGINEER's records and CONTRACTOR's records being resolved in favor of the ENGINEER's records.
- 11.3.6 Estimated Adjustment: Where CITY and CONTRACTOR cannot agree on any of the methods described in paragraphs 11.3.2, 11.3.3, or 11.3.4, and the CITY does not wish to proceed on a Cost of the Work basis as described in paragraph 11.3.5, CITY with the advice of ENGINEER shall determine a reasonable adjustment of the Contract Price for the Work involved on the basis as described in Article 10 and this Article. The adjustment in Contract Price and Contract Time will be issued by Change Request, incorporated into the Contract Documents by Change Order and CONTRACTOR shall be paid on that basis. CITY's determination shall be final and binding unless CONTRACTOR delivers to CITY written notice of a claim within seven (7) days of receipt of such determination.
- 11.3.7 Where the Work involved is not covered by any of the preceding methods, and when payment is to be determined by a court of competent jurisdiction, it is agreed that the cost of the WORK method shall be the appropriate method for determining the cost of the Work involved. Payroll, equipment, material and other costs will only be allowable when determined from daily time sheets which expressly correlate to the Work involved, were prepared while work was in progress, clearly list actual units and usage, and were submitted to ENGINEER as the work was performed.
- 11.3.8 Anticipated or actual costs computed for the Work involved means the sum of all incremental costs which would be, or actually were, necessarily incurred by CONTRACTOR in the proper performance of the Work. Those costs shall be in amounts no higher than those prevailing in the locality of the Project or as allowed elsewhere in these Contract Documents, and shall include only the appropriate items for labor, material, equipment, and supplemental costs specified below.

11.4 Determining Cost Adjustments to Changes in Contract Price

11.4.1 CONTRACTOR shall provide to ENGINEER, if requested, proof of any burdens, including insurance costs, added to base wages to determine payroll costs described in this Article.

11.4.2 Changes in the Contract Price made on the basis of the methods described in paragraph 11.3 shall be based upon the following:

11.4.2.1 Payroll costs for craft labor in the direct employ of CONTRACTOR assigned to the site and engaged in furnishing and incorporating materials or equipment in the Work involved. Payroll costs shall include wages plus the necessary labor burdens, which may include social security, unemployment, workers compensation, health and retirement benefits, vacation and Holiday pay, and other payments pursuant to union agreements but shall exclude profit sharing, bonuses, and similar remunerations. Labor charges shall be allowed only for hourly labor directly involved in the Work. Such personnel may include working foreman at the site. The cost of all salaried employees shall be considered as a part of allowances allowed in this Article. Labor rates shall be as actually paid based on certified payroll records or in accordance with general rates for various pay categories established by union agreements or by mutual agreement between CITY and CONTRACTOR prior to the commencement of the Work. The expenses of performing Work outside of normal working hours, on weekends or Holidays, shall be included in the above to the extent authorized by CITY as set out in the Contract Documents.

11.4.2.2 Payments by CONTRACTOR to Suppliers for all material and equipment in the Work involved, including transportation and storage costs, and necessary Suppliers field services. All cash deposits shall accrue to CITY, if CITY advances funds to CONTRACTOR with which to make payments. All trade discounts, rebates and refunds and all returns from sale of surplus items shall accrue to CITY and CONTRACTOR shall make provisions so that they may be obtained.

When required by CITY, CONTRACTOR shall obtain competitive bids from Suppliers in order to achieve a reasonable price. When determining material and equipment costs, actual invoices segregating items associated with Work involved shall be the record upon which actual costs shall be based.

11.4.2.3 Payments by CONTRACTOR to Subcontractors for Work involved performed by Subcontractors. When required by CITY, CONTRACTOR shall obtain competitive detailed bids from Subcontractors in order to achieve a reasonable price.

When determining Subcontractor costs at any tier, the Subcontractor's Cost shall be determined in the same manner as CONTRACTOR's costs. All Subcontracts shall be subject to the provisions of this Article insofar as applicable.

11.4.2.4 Costs of field supplies consumed in the performance of the Work involved, and purchase costs of small tools used or consumed in the performance of the Work involved (and purchase cost less market value if used but not consumed) which are individually valued at less than \$1,000.00. Consumables shall include such items as rags, nails, fasteners, weld rod, gases, lubricants, paper, grout, stakes, power and fuel for tools and equipment, chains, cables, hoses, water, and similar items normally used in the course of the Work. Costs of field supplies will be

paid as a percentage of direct labor cost in an amount that shall not exceed the allowance shown in this Article.

- 11.4.2.5 Equipment costs required solely in connection with the Work involved reflecting rented or leased or owned equipment cost for individual construction equipment or machinery whose replacement value is in excess of \$1,000.00. Transportation, loading and unloading, installation, dismantling and removal costs shall be included only if such equipment is or was transported to the site solely to perform the Work involved. All equipment costs shall cease when the equipment is no longer necessary to perform the Work involved. Payroll costs for craft labor operating the equipment shall be as in paragraph 11.4. Equipment costs shall be computed using the same accounting and estimating rules regardless of whether related to added or deleted items of Work.
- 11.4.2.5.1 Rented or owned equipment at the site, and not in actual use, shall be paid at the rates for rented equipment, or on the basis of fifty percent (50%) of the rates for owned equipment, respectively, as specified below. In no event shall the idle time claimed in a day exceed the established normal working hours. Payments for idle equipment shall come due only as long as the equipment was idled solely by actions of CITY, and provided that the idle period exceeds that normally experienced for such equipment.
- 11.4.2.5.2 Except as provided below, for equipment rented or leased, CONTRACTOR shall be entitled to amounts based on negotiated rental or lease rates, but in no event shall the amounts allowed exceed an hourly rate based on the monthly rates, listed in the most current and most appropriate Rental Rate Blue Book (Blue Book) published by Dataquest, Inc. for the area where the Project is located (presently 3 volumes, relating to equipment of various ages) divided by 176 hours per month. Rates for equipment not included in the Blue Book shall be interpolated or extrapolated from the information contained therein. In addition to the rental or leasing rate, operating costs shall not exceed the estimated hourly operation rate in the Blue Book. For multiple shift Work, the allowable equipment rate for second or third shifts shall not exceed fifty percent (50%) of the adjusted base rate.
- 11.4.2.5.3 For equipment rented or leased from lessor firms associated with or owned by CONTRACTOR, CONTRACTOR shall be entitled to reimbursement as though the equipment was owned equipment, as specified below.
- 11.4.2.5.4 For equipment owned by CONTRACTOR, CONTRACTOR shall be entitled to costs based on billings established by his normal accounting practices, but in no event shall those costs exceed the maximum allowable costs for rented or leased equipment.
- 11.4.2.6 Costs of special consultants who are not employees in the direct employ of CONTRACTOR or any of the Subcontractors or Suppliers, or special Subcontractors; provided that those costs are or were authorized by CITY prior to proceeding with the Work involved, and only if their activities are not covered by costs included under paragraph 11.4, or are not excluded by paragraph 11.9.
- 11.4.2.7 Sales, consumer, or similar taxes related to the Work involved, and for which CONTRACTOR is liable, royalty payments, and fees for permits and licenses, any of them related solely to the Work involved.

- 11.4.2.8 Deposits to be lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly to be employed by any of them or for whose acts any of them may be liable, related solely to the Work involved.
- 11.4.2.9 Increased costs of premiums for Bonds and Insurance resulting solely because of the Work involved.

11.5 Costs Covered by CONTRACTOR's Allowances

- 11.5.1 Except as otherwise specifically provided in paragraph 11.9, the cost of the Work involved shall not include any of the following costs, all of which are considered to be covered by CONTRACTOR's Allowances:
 - 11.5.2 Payroll costs and other compensation of personnel employed by CONTRACTOR whether at the site or in CONTRACTOR's principal or a branch office for management or administration of the Work, including, but not limited to, (a) CONTRACTOR's officers, executives, principals, general managers, project managers, construction managers, estimators, schedulers, detailers, claims consultants, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, and (b) resident superintendents, nonworking foremen, field engineers and architects, safety personnel, timekeepers, and clerks.
 - 11.5.3 Expenses of CONTRACTOR's principal, branch and site offices except as authorized in writing by CITY prior to proceeding with the Work involved.
 - 11.5.4 Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work involved and charges for delinquent payments.
 - 11.5.5 Costs due to the fault or negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to deposits to be lost, costs to correct defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.
 - 11.5.6 Market value of small tools used but not consumed which remain in the property of CONTRACTOR.
 - 11.5.7 Costs associated with the preparation of Change Orders or Change Requests (whether or not ultimately authorized by CITY), or the preparation or filing of claims.
 - 11.5.8 Expenses of CONTRACTOR associated with anticipated lost profits or lost revenues, lost income or earnings, lost interest on earnings or unpaid retainage.
 - 11.5.9 Costs derived from the computation of a "home office overhead" rate by application of the Eichleay, Allegheny, Burden Fluctuation, or other similar methods.
 - 11.5.10 Costs of special consultants or attorneys, whether or not in the direct employ of CONTRACTOR, employed for services specifically related to the resolution of a claim, dispute, or other matter relating to the acceptability of the Work.
 - 11.5.11 Over administrative expense or contingent costs of any kind, and the costs of any item not specifically and expressly included in Article 11.

11.6 CONTRACTOR Allowances for Changes to the Work

CONTRACTOR's allowances, which includes costs not directly chargeable under this Article, expenses itemized in paragraph 11.5, and profit shall not exceed the following percentages of the various portions of the Work involved. No other allowances in addition to these will be allowed.

Cost Element	Allowance for Additions	Allowances for Deductions
CONTRACTOR and Subcontractor labor per 11.4.2.1. exclusive of the premium portion of craft labor	15%	(15)%
CONTRACTOR and Subcontractor equipment and materials per 11.4.2.2.	15%	(15)%
Subcontractor costs resulting from direct Sub-agreement with CONTRACTOR per 11.4.2.3.	5%	(5)%
Allowance for small tools and consumables per 11.4.2.4. (percentage of direct labor)	2%	(2)%
CONTRACTOR and Subcontractor owned or rented equipment per 11.4.2.5.	15%	(15)%
CONTRACTOR and Subcontractor supplemental costs per 11.4.2.9. premium portion of craft labor costs; and other authorized costs.	0%	(0)%

11.7 Unit Price Work

11.7.1 Where the Contract Documents provide for Unit Price Work, the Contract Price stated in the Agreement will include for all Unit Price Work an amount equal to the sum of the unit prices for each item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover all costs, including supplemental and administrative costs, and profit. The estimated quantities of Unit Price Work indicated in the Agreement are given solely for the purpose of comparison of bids and determining the Contract Price for the Work as awarded.

11.7.2 CONTRACTOR shall promptly, after becoming aware of, and before proceeding with any significant quantities of affected Work, notify CITY in writing of any additional or reduced quantities for an item of Unit Price Work which will require a twenty percent (20%) or higher adjustment in the as-awarded quantity for that item or an increase in Contract Price greater than 5%.

11.7.3 CITY reserves the right to notify CONTRACTOR in writing of any variation in quantities meeting the criteria established in this paragraph.

- 11.7.4 Prior to Final Payment, or before the total amount paid exceeds the established Contract Price, an appropriate Change Order will be issued on the recommendation of ENGINEER, to adjust the estimated quantities for Unit Price Work and to correspondingly adjust the Contract Price.
- 11.7.5 If CITY determines that the additional or reduced quantities for an item of Unit Price Work justify an adjustment in the unit price, CITY shall authorize such an adjustment. No adjustment shall be provided under this paragraph unless the variation between actual and estimated quantities for all Unit Price Work result in an increase or decrease in Contract Price by more than ten percent (10%). If CITY determines that the unit prices established in the Agreement are valid even for the additional or lower quantities, that decision shall be final and binding on CONTRACTOR unless CONTRACTOR delivers to CITY written notice of a claim within 7 days from receipt of such decision.
- 11.7.6 In re-evaluating unit prices contained in the Contract Documents, CONTRACTOR and CITY shall take into account increases or decreases in CONTRACTOR's supplemental and administrative costs for the performance of the Work solely as a result of the variation in quantities, as opposed to as a result of CONTRACTOR's fault or negligence, or bid estimate errors.

11.8 Cash Allowances

It is understood that when cash allowances are named in the Contract Documents CONTRACTOR has included in the Contract Price all allowances so named. CONTRACTOR shall cause the Work so covered to be within the limit of the allowances set forth in the Contract Documents. Upon Final Payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. CONTRACTOR agrees that the original Contract Price includes such sums as the CONTRACTOR deems proper for costs and profit on account of cash allowances. No demand for additional cost or profit in connection therewith will be valid.

11.9 Criteria for Determining Adjustments in Contract Time

- 11.9.1 The criteria to be used to determine an adjustment in Contract Time necessitated by changes ordered or negotiated pursuant to these General Conditions, or Work covered by a proposal or a claim, are limited to the following:
- 11.9.2 An extension in Contract Time will not be granted unless CONTRACTOR can demonstrate through an analysis of the Progress Schedule that the increases in the time to perform or complete the Work, or specified part of the Work, beyond the corresponding Contract Time(s) arise from unforeseeable causes beyond the control and without the fault or negligence of both CONTRACTOR and his Subcontractors, Suppliers or other persons or organizations, and that such causes in fact lead to performance or completion of the Work, or specified part in question, beyond the corresponding Contract Time. An adjustment in Contract Time will be based solely upon net increases in the time required for the performance or completion of parts of the Work controlling achievement of the corresponding Contract Time(s) at the time that the incident which causes the change occurs. However, even if the time required for the performance or completion of controlling parts of the Work is extended, an extension in Contract Time will not be granted until performance or completion of the controlling Work necessarily extends beyond the Contract Time in question despite CONTRACTOR's reasonable and diligent actions to guard against those effects.

Examples of unforeseeable causes include: (1) acts of God or of the public enemy; (2) acts of CITY or ENGINEER in its sovereign or contractual capacity; (3) acts of the Government or another Public Entity in its sovereign capacity; (4) acts of another contractor in the performance of a contract with the CITY or COUNTY, if not identified in

the Contract; (5) fires, floods, epidemics, quarantine restrictions; (6) sink holes, archaeological finds; (7) strikes, freight embargoes; (8) unfavorable weather defined in 11.11; (9) a case of differing physical conditions; (10) a case of existing Underground Facilities owned by others.

11.9.3 Notwithstanding any provisions in the Contract Documents to the contrary, an extension of Contract Time shall be the sole remedy of CONTRACTOR for any delay of any kind. The only exception, under which an adjustment in Contract Price shall be allowed, shall be if the delay has been caused solely by acts constituting intentional interference by CITY or ENGINEER with CONTRACTOR's performance of the Work and such acts continue after CONTRACTOR's notice to ENGINEER of such interference. Intentional interference is an act or omission by the CITY or ENGINEER by which the CITY or ENGINEER intentionally, willfully, or knowingly delays job progress. The CITY's exercise of any of its rights under Article 10 and this Article regardless of the extent or number of the changes, or the CITY's exercise of its remedies of stopping the Work or requiring correction or re-execution of any defective work shall not under any circumstances be construed as intentional interference with the CONTRACTOR's performance of the Work. No adjustment in Contract Price under this paragraph shall be provided for any reason if: (1) performance would have been so extended by any one other cause, including fault or negligence of CONTRACTOR, or his Subcontractors, Suppliers, or other persons or organizations or; (2) an adjustment is provided or excluded under any other provision of the Contract Documents or; (3) delays merely prevent CONTRACTOR's achievement of completion of the Work, or part in question, ahead of the corresponding Contract Time(s), including any authorized adjustments.

11.9.4 An adjustment in Contract Price, to complement an extension in Contract Time, on account of delays meeting the requirement for an adjustment in Contract Price under paragraph 11.9.3 shall be determined as follows subject to all applicable requirements of paragraph 11.9. Amounts shall only be allowed to the extent they were increased or decreased on account of such delays, and shall include only the appropriate amounts for CONTRACTOR and Subcontractors: labor, material and equipment costs, construction equipment costs, supplemental costs, and in accordance with paragraph 11.4, payroll costs, and travel and subsistence expenses, for the superintendent and other personnel classifications agreed by CITY, which shall not include any of the personnel listed in paragraph 11.9.2 (a), in the direct employ of CONTRACTOR and Subcontractors at the site; rental/lease costs of site office and temporary facilities, and costs of utilities, telephone service and sanitary facilities expended to maintain such facilities, and an allowance of 15% of the total of these costs for any other costs not directly chargeable (including overhead expense) and profit.

11.10 Waivers

CONTRACTOR's recovery (1) of acceleration costs incurred as an alternative to an extension in Contract Time on account of delays not meeting the requirements for extensions in Contract Time or an adjustment in Contract Price; (2) of escalation costs for any part of the Work; (3) of delay costs, except as otherwise specifically provided in this Article, shall be excluded.

11.11 Unfavorable Weather

The Contractor shall become familiar with and prepare for the normal weather conditions existing in Osceola County, Florida. Normal weather conditions are expected to impact the Work in numerous ways including but not limited to delays during and after periods of rainfall, temporary flooding and ponding, wet ground, high winds and debris. The Contractor acknowledges that its Bid Proposal and subsequent schedule anticipates and includes as a minimum the normally anticipated number of unfavorable weather days historically anticipated in Osceola County for the

period of time covered by this Agreement. The consequences and impact of such unfavorable weather conditions are neither excusable nor compensable.

The Contractor acknowledges that the following conditions must all exist before unfavorable weather conditions may be found to exist:

- (1) Unfavorable weather conditions actually existed at the Project Site for one or more work days in excess of the number of work days historically anticipated.

ARTICLE 12 - SCHEDULES

12.1 Progress and Submittal Schedules

12.1.1 Types of Schedules

12.1.1.1 CONTRACTOR shall prepare and submit to ENGINEER for review, a Progress Schedule in accordance with Section 01310.

12.1.1.2 CONTRACTOR shall prepare and submit to ENGINEER for review, a schedule of Shop Drawing and sample submissions. This schedule shall consist of a list of the submittals to be made over the course of the project; anticipated and actual dates of submittal and return for both initial and resubmissions; and the anticipated dates of submittal approval so as not to delay the Project. The schedule shall allow for review and processing time by DESIGN ENGINEER and ENGINEER.

12.1.1.3 CONTRACTOR shall prepare and submit to ENGINEER for review with the Project Schedule, manpower charts and cash flow projections contemplated or required by the schedule in a form acceptable to ENGINEER. Updated plan and actual expended manpower charts and cash flow projections shall be submitted with each monthly or interim schedule submission when requested by ENGINEER.

12.1.2. Submittal

12.1.2.1 CONTRACTOR shall enter on the Progress Schedules the actual progress on a monthly basis, or at such intervals as requested by ENGINEER, and shall deliver to ENGINEER five (5) copies of the schedule documentation.

12.1.2.2 Progress Schedules are to be submitted with each Application for Payment. An Application for Payment shall not be paid until the schedule submittal and any requested corrections or clarifications have been accepted by ENGINEER for inclusion into the Application for Payment. If additional updated schedules are requested by ENGINEER they are to be provided within seven days of the date of request, but do not constitute permission to submit additional Applications for Payment.

12.1.3. Review

12.1.3.1 ENGINEER shall review schedule submittals. If, in the opinion of ENGINEER, the schedule (1) does not accurately reflect CONTRACTOR's actual progress or work plan or, (2) is unreasonable or cannot be used to effectively evaluate CONTRACTOR's progress or, (3) is not in compliance with this Article and other appropriate sections of the Contract, it will be returned to CONTRACTOR for corrections or clarification.

CONTRACTOR shall make the necessary corrections and resubmit or shall respond in detail to ENGINEER's comments and request that the submittal be accepted without modification. Failure by CONTRACTOR to provide corrections or clarifications to schedule submittals as directed by ENGINEER shall constitute reason to withhold approval of any Application for Payment.

12.1.3.2 ENGINEER's review of schedule submittals shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has, in writing, called CITY's attention to each such variation at the time of submission and CITY has given written approval of each such variation; nor shall any approval by CITY or ENGINEER relieve CONTRACTOR from responsibility for compliance with any provision of the Contract Document.

12.1.4. Time of Performance

The Contract Time establishes the period and duration in which CITY expects the Work to be performed. Any schedule which shows completion ahead of the Contract Time shall include additional supporting data to explain the basis of the shorter time for performance. ENGINEER shall review the supporting data, and make recommendations to CITY as to the acceptability of the shorter schedule. CITY may (1) notify CONTRACTOR that the Contract Time is being adjusted by Change Order to reflect the shorter schedule duration or (2) elect not to adjust the present Contract Time and allow the use by all parties of the increased schedule flexibility that the shorter schedule represents. In any case CITY shall not be responsible for any costs, actual or anticipated, resulting from any delay to CONTRACTOR that prevents completion of any part or all of the Work unless it prevents completion by the Contract Time(s); nor shall the CITY be obligated to incur any additional costs for administration or inspection of accelerated Work.

12.1.5. Changes

It is understood that revisions in the schedule are inherent in the nature of construction. This may require that changes be made in the schedule to reflect the dynamic nature of the design and the Work.

Actions by CITY, CONTRACTOR, ENGINEER or DESIGN ENGINEER that may affect the progress of any part or all of the Work shall make use of the flexibility in the Progress Schedule, often expressed as schedule float or slack time, and that which may result from changes in the sequencing of individual work items, to limit the impact of such actions. The concept of shared schedule flexibility shall not be limited by the inclusion of restraints, logic or imposed dates into the schedule that cannot be reasonably justified.

Excessive use of schedule flexibility by any party is contrary to this sharing concept and may be cause for denial of a request for an extension in Contract Time or, in the case of excessive use by the CITY, ENGINEER or DESIGN ENGINEER, may be cause for an extension in Contract Time if so allowed by Article 11.

12.1.6. As-Built Schedule

After Substantial Completion, but prior to Final Payment, CONTRACTOR shall submit an as-built schedule. The schedule shall reflect (1) all as-built critical paths, (2) all contract activities, including all added activities, with their actual start and finish dates, (3) the actual number of separate work days during which work was performed on each activity, and (4) the actual number of man-days that were required to complete each activity.

ARTICLE 13 - WARRANTY AND GUARANTEE, TESTS AND INSPECTIONS, CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 Warranty and Guarantee

CONTRACTOR warrants and guarantees that all Work will be in accordance with the Contract Documents and will not be defective. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article. The obligations of CONTRACTOR under this paragraph shall be in addition to and not in limitation of any obligation imposed upon him by special guarantees required by the Contract Documents or otherwise prescribed by Laws or Regulations.

13.2 Access to Work

CITY, ENGINEER, DESIGN ENGINEER, their representatives, testing agencies and governmental entities with jurisdiction shall be permitted access to the Work for their observation, inspection and testing. CONTRACTOR shall provide proper and safe conditions for such access.

13.3 Tests and Inspections

13.3.1 CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals. Inspections, tests or observations by ENGINEER, DESIGN ENGINEER, CITY or their agents may be performed at their discretion to provide information to the CITY on the progress of the Work. However, such information is not intended to fulfill the CONTRACTOR's obligations in accordance with the Contract Documents.

13.3.2 If any law, ordinance, rule, regulation, code or order of any public body, government entity or court having jurisdiction requires any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefor, pay all related costs, schedule related activities at appropriate times, and furnish ENGINEER the required certificates of inspection, testing or approval. CONTRACTOR shall also be responsible for and shall pay all costs, in connection with any inspection or testing required in connection with CITY's or ENGINEER's acceptance of a proposed manufacturer, fabricator, supplier or distributor of materials or equipment proposed to be incorporated in the Work, or of material or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation of the Work. All inspections, tests or approvals shall be performed by persons or organizations acceptable to CITY and ENGINEER.

13.3.3 The CONTRACTOR shall perform sufficient testing and inspection of the Work to support the Warranty and Guaranty requirements.

13.3.4 Neither observations by ENGINEER or CITY nor inspections, tests or approvals by others shall relieve CONTRACTOR from his obligations to perform the Work in accordance with the Contract Documents.

13.3.5 If any testing, inspection or approval under this paragraph reveal defective Work, CONTRACTOR shall not be allowed to receive any associated costs and CITY shall be entitled to deduct from the Contract Price, by issuing a Change Order, CITY's costs arising out of the defective Work, including costs of repeated procedures, compensation for ENGINEER's and DESIGN ENGINEER's services and other related costs.

13.4 Uncovering Work

13.4.1 If any Work that is to be inspected, tested or approved is covered without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation. Such uncovering shall be at CONTRACTOR's expense and will exclude the right to an increase in the Contract Price or Contract Time unless CONTRACTOR has given ENGINEER timely written notice of CONTRACTOR's intention to cover such Work and ENGINEER has not acted with reasonable promptness in response to such notice.

13.4.2 If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose or otherwise make available for observation, inspection or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, CONTRACTOR shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, any additional expenses experienced by the CITY due to delays to others performing additional work, other contractual obligations, and attorneys' fees and CITY shall be entitled to issue an appropriate deductive Change Order. CONTRACTOR shall further bear the responsibility for maintaining the schedule and will not be allowed an increase in Contract Price or Contract Time due to the uncovering. If, however, such Work is not found to be defective, and paragraph 13.4.1 is not applicable, CONTRACTOR shall be allowed an increase in the Contract Price or the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction if it makes a claim therefor as provided in Article 10.

13.5 Correction or Removal of Defective Work

CONTRACTOR shall promptly, without cost to CITY and as specified by ENGINEER, either correct any defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by ENGINEER, remove it from the site and replace it with conforming Work. The CONTRACTOR shall bear the cost of repairing or replacing all Work and property of the CITY or others destroyed or damaged or in any way impacted by such correction or removal.

13.6 Acceptance of Defective Work

If, instead of requiring correction or removal and replacement of defective Work, CITY prefers to accept it, CITY may do so. In such case, if acceptance occurs prior to Final Payment, CITY shall be entitled to issue a Change Order incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price. If the acceptance occurs after such Final Payment, an appropriate amount shall be paid by CONTRACTOR to CITY.

13.7 CITY May Correct defective Work

If CONTRACTOR fails within a reasonable time after written notice of ENGINEER to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with this Article, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents (including any requirements of the Progress Schedule), CITY may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising its rights under this paragraph CITY shall proceed with reasonable promptness. To the extent necessary to complete corrective and remedial action, CITY may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which CITY has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow CITY, CITY's representatives, agents and employees such access to the site as may be necessary to enable CITY to exercise its rights

under this paragraph. All direct and indirect costs of CITY in exercising such rights shall be charged against CONTRACTOR in an amount documented by CITY, and CITY will be entitled to issue a Change Order incorporating the necessary revisions in the Contract Documents and a reduction in the Contract Price.

Such direct and indirect costs shall include, in particular but without limitation, all corrective or replacement costs, compensation for additional professional services required and all costs of repair and replacement of property of others destroyed, impacted or damaged by correction, removal or replacement of CONTRACTOR's defective Work. CONTRACTOR shall not be allowed an increase in the Contract Price or the Contract Time because of any delay in the performance of the Work attributable to the exercise by CITY of CITY's rights hereunder.

13.8 Warranty Period

13.8.1 The Warranty Period shall commence on the date of Substantial Completion of the entire Work, or a later date if so specified in the Contract Documents , and extend until expiration period may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee or specific provision of the Contract Documents.

13.8.2 If within the designated Warranty Period, the Work, or any part of the Work, is discovered to be defective, CONTRACTOR shall promptly, without an adjustment in Contract Price and in accordance with CITY's or ENGINEER's written instructions, either correct that defective Work, or if it has been rejected by CITY or ENGINEER, remove it from the site and replace it with non-defective Work. If circumstances warrant it, including, but not limited to, in an emergency, CITY may have the defective Work corrected or the rejected Work removed and replaced. In that event, CONTRACTOR shall not be allowed to recover any associated costs, and he shall reimburse CITY for all direct, indirect and consequential costs of CITY, or CITY shall be entitled to issue a Change Order to incorporate an appropriate decrease in Contract Price if prior to Final Payment. CITY shall reserve and retain all of its rights and remedies at law and equity against CONTRACTOR and its Surety for damages and for corrections of any and all latent defects.

13.9 Extended Warranties and Guarantees

13.9.1 CITY may at its sole discretion advance or defer the date of commencement of the Warranty Period, in which case CONTRACTOR shall maintain the warranties and guarantees in full force and effect until the revised date for commencement of the Warranty Period. If such advancement or deferral in the date for commencement of the Warranty Period causes an increase or decrease in the cost of the warranties and guarantees provided by CONTRACTOR, CITY shall make an adjustment in Contract Price or Contract Time, as provided in Articles 10 and 11.

13.9.2 In circumstances where CITY undertakes Partial Utilization of a portion of the Work which was specifically identified in the Contract Documents, CONTRACTOR shall maintain the warranties and guarantees in full force and effect during the period between the applicable commencement of Partial Utilization date, and the date of commencement of the Warranty Period, and for such warranties and guarantees CONTRACTOR shall receive no adjustment in Contract Price.

13.9.3 In special circumstances where CONTRACTOR fails to complete the Work, or a separable portion of the Work within the corresponding Contract Time, including any authorized adjustments, and CITY undertakes Partial Utilization, CONTRACTOR shall maintain the warranties and guarantees in full force and effect during the period between the applicable commencement of Partial Utilization date, and the date of commencement

of the Warranty Period, and for such warranties and guarantees CONTRACTOR shall receive no adjustment in Contract Price.

13.10 Special Maintenance Requirements

In special circumstances where the Work, or a designated part, reaches Substantial Completion, but as provided in the Contract Documents, is not placed in continuous service until the commencement of the Warranty Period, CONTRACTOR shall maintain the Work, or designated part, in good order and in proper working condition, provide suitable drainage, and take all other actions as are necessary for its protection during the period between the applicable Substantial Completion date and the date of commencement of the Warranty Period, and for such maintenance CONTRACTOR shall receive no adjustment in Contract Price. In the event that Work suffers loss or damage, however caused, CONTRACTOR shall rebuild, repair, restore, and make good without an increase in Contract Price all losses or damages to any portion of any Work and shall without an increase in Contract Price provide suitable drainage and erect such temporary structures and take all other actions as are necessary for its protection. Suspension of Work or the granting of an extension in Contract Time for any cause shall not relieve CONTRACTOR of his responsibility for the Work, or designated part, as specified in this paragraph.

13.11 Extended Warranty Period Due to Defective Work

Any defective Work that is either corrected or rejected and replaced will be warranted and guaranteed for a period of one (1) year from the date of such correction or removal and replacement, even if it had previously been corrected or replaced, in accordance with the provisions of this Article 13. If within such extended Warranty Period, that Work is once again found to be defective, CITY shall be entitled to all of CITY's rights and remedies under this Article.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 Schedules

At least ten days prior to submitting the first Application for Payment, CONTRACTOR shall (except as otherwise specified in the General Requirements) submit to ENGINEER acceptable Progress and Shop Drawing Submittal Schedules, acceptable manpower and cash flow projections, and a final schedule of values of the Work. These schedules shall be satisfactory in type, form and substance to ENGINEER. ENGINEER may require the schedule of values to be adjusted if in its opinion the breakdown does not accurately reflect the true distribution of the Contract Price. Upon written approval of the schedule of values by ENGINEER, it shall be incorporated into a form of Application for Payment acceptable to CITY. After the first Application for Payment, Contractor shall submit a revised, updated Progress Schedule, satisfactory in type, form and substance to the ENGINEER with each subsequent Application for Payment. The Contractor will not be entitled to receive a Progress Payment until the revised Progress Schedule is approved by the ENGINEER.

14.2 Application for Payment

CONTRACTOR shall submit to ENGINEER not later than the first working day of each month an Application for Payment completed and signed by CONTRACTOR covering the Work completed during the previous month and accompanied by such supporting documentation as is required by the Contract Documents and also as ENGINEER may reasonably require. On each Application for Payment, CONTRACTOR shall (1) list the name and address of each of its Subcontractors and Suppliers who have performed Work or provided supplies or material during the time period of Work reflected by the Application and (2) submit certified payroll sheets for his own forces and all Subcontractors for the month preceding this application. After the first Application for Payment, CONTRACTOR shall include an affidavit stating that all previous progress payments received on

account of the Work have been applied (1) to discharge CONTRACTOR's obligations and (2) to pay in full (less retainage) all amounts owed to its Subcontractors and Suppliers reflected in prior Applications for Payment. CONTRACTOR shall on the Application for Payment form note and explain when it has not discharged its obligations or paid in full (less retainage) all amounts owed as stated above. Neither CITY or ENGINEER is under any duty or obligation whatsoever to any Subcontractor, Supplier, laborer or any other party to ensure that payments due and owing by CONTRACTOR to any of them are or will be made.

14.3 Materials on Site

14.3.1 CITY may, at its sole option, pay an amount equal to ninety percent (90%) of the value of materials and equipment not incorporated into the Work but delivered and suitably stored, less in each case the aggregate of payments previously made. In no event shall payments for materials and equipment stored on site exceed ninety percent (90%) of the value of the related cost for the specific item of work shown in the schedule of values regardless of the stated value of the material or equipment. CITY may, at its sole option, pay an amount equal to ninety percent (90%) of the value of materials and equipment not incorporated into the Work and stored off site if stored in a manner acceptable to CITY, as stated above for on-site stored materials. When payment to CONTRACTOR is made for stored material and equipment, CONTRACTOR shall submit invoices marked paid by the Supplier with the Application for Payment following payment to CONTRACTOR documenting that CONTRACTOR has paid for said materials and equipment or the previously paid amount shall be deducted from remaining payments or retainage for stored materials and equipment not so properly documented.

14.3.2 If payment is requested on the basis of materials and equipment not incorporated into the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall be accompanied by such data, satisfactory to CITY, as will establish CITY's title to the material and equipment and protect CITY's interest therein, including applicable insurance. In no event shall the quantity of material and equipment submitted for payment be in excess of the actual final installed quantity. CITY may deduct from the final Application for Payment amounts paid CONTRACTOR for material and equipment not finally installed in the Work.

14.4 CONTRACTOR's Warranty of Title

The CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to CITY at the time of payment free and clear of all liens, claims, security interests and encumbrances (hereafter referred to as "Liens").

14.5 Review and Payment

14.5.1 ENGINEER will, within twenty days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to CITY, or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

CITY shall, within twenty days of presentation to it of the Application for Payment by ENGINEER, giving consideration to ENGINEER's recommendation, but not being bound thereby, pay CONTRACTOR the amount to which he is entitled.

14.5.2 ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to CITY, based on on-site observations of the Work in progress and on ENGINEER's review of the Application for Payment and the

accompanying data and schedules, that the Work has progressed to the point indicated; that to the best of ENGINEER's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning Project prior to or upon Substantial Completion; to the results of any subsequent tests called for in the Contract Documents; or to any qualifications stated in the recommendation) and that CONTRACTOR is entitled to payment of the amount recommended. However, by recommending any such payment, ENGINEER will not thereby be deemed to have represented that any examination has been made to ascertain how or for what purpose CONTRACTOR has used the monies paid or to be paid to CONTRACTOR on account of the Contract Price, or that title to any Work, materials or equipment has passed to CITY free and clear of any lien.

- 14.5.3 ENGINEER may refuse to recommend the whole or any part of any payment if, in its opinion, it would be incorrect to make such representations to CITY. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended to such extent as may be necessary in ENGINEER's opinion to protect CITY from loss or anticipated loss because: (1) the Work is defective, or completed Work has been damaged requiring correction or replacement or, (2) written claims have been made against CITY or Liens have been filed in connection with the Work or, (3) the Contract Price has been reduced because of Change Order or, (4) CITY has been required to correct defective Work or complete the Work or, (5) of CONTRACTOR's unsatisfactory prosecution of the Work in accordance with the Contract Documents or, (6) of CONTRACTOR's failure to make payment to Subcontractors, Suppliers or for labor, or (7) of CONTRACTOR's failure to provide acceptable schedule submittals for inclusion into the Application for Payment or, (8) of CONTRACTOR's failure to properly maintain and submit with Application for Payment Record Documents.

14.6 Retainage

- 14.6.1 The value of each Application for Payment shall be equal to the total value of the work performed to date, less an amount retained, and less payments previously made and amounts withheld in accordance with this Article.
- 14.6.2 Payments will be made in an amount equal to ninety percent (90%) of the Work completed. Upon Substantial Completion of all of the Work, CITY may, at its sole option, pay an amount sufficient to increase total payments to CONTRACTOR to ninety-five percent (95%) of the value of the completed work.

14.7 Overpayment

Any overpayment by CITY to CONTRACTOR shall be promptly repaid to CITY upon demand.

14.8 Final Application for Payment

- 14.8.1 After CONTRACTOR has completed all corrections to the satisfaction of CITY and ENGINEER as verified by Final Inspection and delivered all maintenance and operating instructions, schedules, guarantees, warranties, Bonds, certificates of inspection, marked-up record documents and other documents, all as required by the Contract Documents and acceptable to CITY, and after ENGINEER has indicated that Work is acceptable, CONTRACTOR may make application for Final Payment following the procedure for Applications for Payment.
- 14.8.2 The final Application for Payment shall be accompanied by all documentation Called for in the Contract Documents and such other data and schedules as ENGINEER may reasonably require, together with complete and legally effective releases or waiver

(satisfactory to CITY) of all Liens and claims arising out of or filed in connection with the Work. In lieu thereof and as approved by CITY, CONTRACTOR may furnish receipts or releases in full with an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien or claim could be filed, and that all payrolls, material and equipment bills and other indebtedness in connection with the Work for which CITY might in any way be responsible, have been paid or otherwise satisfied. CITY shall require consent of the Surety to Final Payment.

14.9 Final Payment and Acceptance

14.9.1 If, on the basis of ENGINEER's observations of the Work during construction and Final Inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation all as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR has fulfilled all of its obligations under the Contract Documents, ENGINEER will, within twenty days after receipt of the final Application for Payment, indicate in writing its recommendation of payment and present the Application to CITY for payment. Thereupon ENGINEER will give written notice to CITY and CONTRACTOR that the Work is acceptable.

Otherwise, ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend Final Payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, CITY shall, within twenty days after receipt from ENGINEER, pay CONTRACTOR the amount due giving consideration to the recommendations of ENGINEER, but not being bound thereby.

14.9.2 After receipt of the ENGINEER's written notice that the Work is acceptable and prior to Final Payment, CONTRACTOR shall submit an affidavit, in a form acceptable to CITY, certifying that the Bonds and insurances required under Article 5 are in effect and will not be allowed to expire for the required period of time.

14.10 Waiver of Claims

14.10.1 The making and acceptance of Final Payment shall constitute:

14.10.2 A waiver of all claims by CITY against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection, from fraud or gross negligence amounting to fraud, or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein or the terms of any Bonds; however, it shall not constitute a waiver by CITY of any rights in respect of CONTRACTOR's continuing obligations under the Contract Documents; and

14.10.3 A waiver of all claims by CONTRACTOR against CITY, ENGINEER, and DESIGN ENGINEER other than those enumerated in the Final Application for Payment.

14.11 CITY's Obligations

14.11.1 In no event shall any interest be due and payable to CONTRACTOR on any of the sums retained by CITY pursuant to any of the terms or provisions of any of the Contract Documents.

14.11.2 Any provision to the contrary notwithstanding, CITY shall not be obligated to make any payment to CONTRACTOR and may withhold partial payments if any one or more of the following conditions exists: (1) CITY has reason to believe CONTRACTOR is in default of any of its obligations or otherwise is in default under any of the Contract

Documents; (2) Any part of such payment is attributable to Work which is defective, provided, however, payment shall be made for Work which is performed in accordance with the Contract Documents and is not defective; (3) CONTRACTOR has failed to make payments promptly to Subcontractors and Suppliers or for labor and material for which CITY has made payment to CONTRACTOR; (4) If CITY, in its good faith judgment, determines that the portion of the Contract Price remaining unpaid will not be sufficient to complete the Work in accordance with the Contract Documents; (5) CONTRACTOR has failed to maintain progress of the Work in accordance with the Progress Schedule or CONTRACTOR has failed to meet an interim completion date or the Substantial or Final Completion Date.

14.12 Partial Utilization

14.12.1 Use by CITY of completed portions of the Work may be accomplished at the option of CITY prior to Substantial Completion of all the Work subject to the following:

4.12.1.1 CITY at any time may request CONTRACTOR in writing to permit CITY to use any part of the Work which CITY believes to be substantially complete and which may be so used without significant interference with construction of the other parts of the Work. If CONTRACTOR agrees, CONTRACTOR shall certify to CITY that said part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify CITY and ENGINEER in writing when CONTRACTOR considers that a portion of the Work which has been identified in the Contract Documents as eligible for Partial Utilization is substantially complete. Within a reasonable time thereafter, CITY, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, ENGINEER will execute and deliver to CITY and CONTRACTOR a certificate to that effect, fixing the date of Substantial Completion as to that part of the Work, and attaching a list of minor items as to that part of the Work to be completed or corrected before Final Payment.

14.12.1.2 Prior to issuing a certificate of Substantial Completion as to part of the Work, ENGINEER will deliver to CITY and CONTRACTOR a written recommendation as to the division of responsibilities pending Final Payment between CITY and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance and the Warranty Period for that part of the Work. CITY shall have the right to exclude CONTRACTOR from any part of the Work which ENGINEER has so certified to be substantially complete, but CITY shall allow CONTRACTOR reasonable access to complete or correct items described above.

14.12.1.3 In lieu of the issuance of a certificate of Substantial Completion as to part of the Work, CITY may take over operation of a facility constituting part of the Work whether or not it is substantially complete if such facility is functionally and separately useable; provided that prior to any such takeover, CITY and CONTRACTOR have agreed in writing as to the division of responsibilities between CITY and CONTRACTOR for security, operations, safety, maintenance, Warranty Period, utilities and insurance with respect to such facility. During such utilization and prior to

Substantial Completion of that portion of the Work, CITY shall allow CONTRACTOR reasonable access to complete or correct items and to complete other related Work.

14.13 Substantial Completion

14.13.1 When CONTRACTOR considers the entire Work to have progressed to the point where it is substantially complete, CONTRACTOR shall, in writing to ENGINEER, certify that the entire Work is substantially complete, submit to ENGINEER all operation and maintenance manuals and instructions and spare parts required by the Contract Documents, and request that ENGINEER issue a Certificate of Substantial Completion. Within a reasonable time thereafter, CITY, CONTRACTOR and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. CONTRACTOR shall then accomplish the requisite Work and then recertify that the entire Work is substantially complete. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to CONTRACTOR and CITY a Certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a list of items (which should be minor in scope and nature) to be completed or corrected before Final Payment. CONTRACTOR shall continue to be responsible for maintaining the Work until the date of certification of Substantial Completion, or longer if so required by the Contract Documents.

14.13.2 CITY shall have the right to exclude CONTRACTOR from the Work, or specified part, after the date of Substantial Completion, but CITY shall allow CONTRACTOR reasonable access to complete or correct items on the list attached to the Certificate of Substantial Completion.

14.14 Final Inspection

Upon written notice from CONTRACTOR that the minor items described in the list attached to the Certificate of Substantial Completion have been completed, ENGINEER will make an inspection with CITY and CONTRACTOR and will notify CONTRACTOR in writing of the results of this inspection as to the items of the Work that appear to be incomplete, non-conforming or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies, and notify ENGINEER upon completion. The Final Inspection by ENGINEER with CITY and CONTRACTOR will verify completion of all items.

14.15 CONTRACTOR's Continuing Obligation

CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or Final Payment by ENGINEER, nor the issuance of a Certificate of Substantial Completion, nor any payment by CITY to CONTRACTOR nor any Partial Utilization by CITY nor any act of acceptance by CITY nor any failure to do so, nor any review and approval of the Shop Drawings or samples, nor any review of a Progress Schedule, nor the issuance of a notice of acceptability by ENGINEER, nor any correction of defective Work by CITY will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents except as provided in a waiver of claims at the time of making and acceptance of Final Payment.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.1 CITY May Stop the Work

If the Work is defective and the CONTRACTOR has been notified by ENGINEER or CITY, or if CONTRACTOR fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, or if CONTRACTOR fails to supply sufficient supervisory personnel or skilled workmen or suitable materials or equipment, or if CONTRACTOR fails to obtain, maintain or renew insurance in conformance with the Contract Documents in a form acceptable to CITY, or if any insurance company CONTRACTOR has obtained insurance from declares bankruptcy or is declared bankrupt, or if CONTRACTOR fails to prosecute the Work without endangering persons or property, CITY may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated. CITY's order to stop the Work may be communicated through ENGINEER or by CITY. This right of CITY to stop the Work shall not give rise to any duty on the part of CITY or ENGINEER to exercise this right for the benefit of CONTRACTOR or any other party. CONTRACTOR shall bear all direct, indirect, and consequential costs of such order to stop the Work (including but not limited to fees and charges of engineers, attorneys and other professionals, any additional expenses incurred by CITY due to delays to others performing work under a separate contract with CITY, and other obligations), and CONTRACTOR shall further bear the responsibility for maintaining the Progress Schedule and shall not be entitled to any extension of Contract Time or increase in the Contract Price. CITY shall be entitled to deduct any expenses so incurred from the Contract Price by issuing a Change Order.

15.2 Suspension for Convenience

15.2.1 Without invalidating the Agreement, and without notice to any surety, CITY may, at any time, order CONTRACTOR in writing to stop, delay or interrupt Work for such a period of time as CITY may deem appropriate. Upon receipt of that order, CONTRACTOR shall immediately proceed in accordance with any specific provisions or instructions, protect and maintain the Work, and make reasonable and diligent efforts to mitigate costs associated with the suspension order.

15.2.2 If any suspension of Work under this paragraph causes an increase or decrease in CONTRACTOR's cost or the time required to perform or complete any part of the Work, CITY shall make a change in Contract Price or Contract Time, as provided in Article 10 and 11; except that no change in Contract Price or Contract Time will be made for any suspension of Work to the extent that performance would have been suspended anyhow by causes not meeting the criteria in Article 11, or for which an adjustment is provided or excluded under any other provision of the Contract Documents.

15.3 Termination for Cause

15.3.1 CITY may upon the occurrence of any one or more of the following events terminate the services of CONTRACTOR:

15.3.1.1 If a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR's creditors;

15.3.1.2 If CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

- 15.3.1.3 If CONTRACTOR fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers, sufficient supervisory personnel, or suitable materials or equipment or failure to adhere to the Progress Schedules);
 - 15.3.1.4 If CONTRACTOR discontinues prosecution of the Work or any portion thereof;
 - 15.3.1.5 If CONTRACTOR allows any final judgment against it to remain unsatisfied for a period of ten days;
 - 15.3.1.6 If CONTRACTOR disregards laws, policies, court orders, or administrative directives, etc. of any governmental body, agency or court having jurisdiction;
 - 15.3.1.7 If CONTRACTOR disregards the authority of ENGINEER;
 - 15.3.1.8 If CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents; or
 - 15.3.1.9 If CONTRACTOR fails to promptly pay Subcontractors, Suppliers, Materialmen, Laborers, etc.
- 15.3.2 As it is recognized that if CONTRACTOR is adjudged bankrupt or makes a general assignment for the benefit of creditors or if a receiver is appointed on account of its insolvency, such could impair or frustrate CONTRACTOR's performance of the Work, therefore it is agreed that upon occurrence of any such event, CITY shall be entitled to request CONTRACTOR or its successor to provide adequate assurance of future performance in accordance with the terms and conditions of the Contract Documents.

Failure to provide said adequate assurance within seven (7) days of the delivery of the request shall entitle CITY to terminate CONTRACTOR. In all events pending receipt of adequate assurance of performance and actual performance in accordance herewith, CITY shall be entitled to proceed with the Work with its own forces or with their contractors on a time and material or other appropriate basis the cost of which will be back charged against CONTRACTOR. CITY shall be entitled to deduct these costs from the Contract Price by issuing a Change Order.

- 15.3.3 CITY may, after giving CONTRACTOR and surety seven (7) days written notice, and to the extent permitted by laws and regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which CITY has paid CONTRACTOR but which are stored elsewhere, and finish the Work as CITY may deem expedient. CONTRACTOR shall assign all of its interest in any or all Sub-Agreements to CITY upon CITY's request. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs including costs for appellate proceedings) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to CITY. If CONTRACTOR leaves the site at any time during the seven day period, CITY shall have the right to secure the site to protect the property from damage and to insure the health and safety of the public.

- 15.3.4 Notwithstanding the above notice period, in the event of an emergency, the CITY may take over the site and perform any or all of the activities set out above immediately. CITY shall provide notice of such takeover within 24 hours after its occurrence.
- 15.3.5 Where CONTRACTOR's services have been terminated by CITY, the termination shall not affect any rights of CITY against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment due CONTRACTOR by CITY will not release CONTRACTOR from liability.
- 15.3.6 CITY may, at its sole discretion, permit CONTRACTOR to continue to perform work when CONTRACTOR is in default, however caused. Such a decision by CITY shall in no way operate as a waiver on the part of CITY of any of its rights under the Contract Documents.

15.4 Termination for Convenience

- 15.4.1 CITY may, without prejudice to any other right or remedy, terminate this Contract in whole or in part at any time for its convenience by giving CONTRACTOR and surety seven (7) days written notice. CITY shall have the right, in that event, to take over any or all of CONTRACTOR's materials, (whether stored on or off site) supplies, equipment, Sub-Agreements or other obligations to complete the Work and CONTRACTOR shall assign them to CITY upon CITY's request. CONTRACTOR shall proceed to complete any part of the Work, as directed by CITY, and shall settle all its claims and obligations under the Agreement.
- 15.4.2 In any such termination for the convenience of CITY, CONTRACTOR shall be paid for Work completed in accordance with the Contract Documents prior to receipt of the notice of termination, and for reasonable termination settlement costs relating to commitments which had become firm prior to the termination; however, payment to CONTRACTOR will exclude any and all anticipated supplemental costs, administrative expenses overhead and profit on uncompleted Work. CONTRACTOR shall justify its claims as requested by CITY with thorough, accurate records and data.
- 15.4.3 If, after notice of Termination for Cause of CONTRACTOR, it is determined that CONTRACTOR was not in default, the termination shall be deemed to have been for the convenience of CITY. In such event CONTRACTOR may recover from CITY payment in accordance with paragraph 15.4.2.

15.5 CONTRACTOR May Stop Work or Terminate

If, through no act or fault of CONTRACTOR, or a Subcontractor or their agents or employees or any other person for whose acts they may be responsible, the Work is suspended for a period of more than ninety (90) days by CITY or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within forty-five (45) days after it is submitted, or CITY fails for forty-five (45) days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven (7) days written notice to CITY and ENGINEER, terminate the Agreement and recover from CITY payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if ENGINEER has failed to act on an Application for Payment or CITY has failed to make any payment as aforesaid, CONTRACTOR may upon seven (7) days' notice to CITY and ENGINEER stop the Work until payment of all amounts then due. Except as specifically provided in this paragraph, these provisions shall not relieve CONTRACTOR of the obligation under Article 6 to carry on the Work in accordance with the Progress Schedule and without delay during disputes and disagreements with the CITY.

ARTICLE 16 - VALUE ENGINEERING INCENTIVE

- 16.1 This provision applies to any CONTRACTOR developed, prepared, and submitted Value Engineering Change Proposal (VECP). The following definitions shall apply to this article:
- 16.1.1 "CONTRACTOR's development and implementation costs" means those costs incurred in a VECP before CITY acceptance and those costs CONTRACTOR incurs specifically to make the changes required by CITY acceptance of a VECP.
 - 16.1.2 "CITY costs" means those costs that result directly from evaluating and implementing the VECP and any net increases in the cost of testing, operations, maintenance, repair, replacement, spare parts, and support. They include ENGINEER's and DESIGN ENGINEER's charges to CITY in connection with evaluating and implementing the VECP and the cost of any consultant retained by CITY, ENGINEER or DESIGN ENGINEER to assist in the evaluation of the VECP. However, they do not include the normal administrative costs of processing the VECP.
 - 16.1.3 "Contract savings" means the estimated reduction in CONTRACTOR's cost of performance resulting from acceptance of the VECP, minus CONTRACTOR's development and implementation costs (including Subcontractors' development and implementation costs).
 - 16.1.4 "Value Engineering Change Proposal (VECP)" means a proposal that: (1) requires a change to the Contract Documents to implement, and (2) results in reducing the Contract Price or estimated cost without impairing in any way necessary functions or characteristics of the Project, provided that it does not involve a change in deliverable end-item quantities only.
- 16.2 As a minimum, CONTRACTOR shall include the following information in each VECP in sufficient detail to allow CITY a meaningful evaluation:
- 16.2.1 A description of the difference between the existing requirement in the Contract Documents and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are proposed to be altered, and the effect of the change on the end items performance.
 - 16.2.2 A list of all changes to the Contract Document that must be made if the VECP is accepted, including any suggested specification revisions (and also including any additional items such as new permits, regulatory entity approvals, etc.).
 - 16.2.3 An itemized estimate of Contract savings, which shall contain at a minimum, separate, detailed cost estimates for both the requirement of the existing Contract Documents and the VECP, CONTRACTOR'S development and implementation costs, and any license fees or royalty payments to be made. CONTRACTOR's cost estimate for the VECP shall also include, but not be limited to, costs of any delays that may be associated with implementing the VECP and cost and claims of other contractors affected by the VECP. CONTRACTOR shall also provide a description and itemized estimate of costs CITY may incur in implementing the VECP, such as those defined above.
 - 16.2.4 A statement of the time by which a Change Request or Change Order accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the Contract Time(s) or Progress Schedule.

16.2.5 Identification of any previous submissions of the VECP.

- 16.3 CONTRACTOR shall submit VECP's to ENGINEER. ENGINEER shall notify CONTRACTOR of the status of the VECP within 45 days after ENGINEER receives it. If additional time is required, as determined by ENGINEER, CONTRACTOR shall be notified within the 45 day period and provided the reason for the delay and the expected date of CITY's decision. VECP's shall be processed expeditiously; however, CITY shall not be liable for any delay in acting upon a VECP. If additional information is required, ENGINEER shall inform CONTRACTOR, who shall expeditiously provide the required information, and failing to comply with said request shall waive the benefits under this Article.
- 16.4 If the VECP is not accepted by CITY, ENGINEER shall provide CONTRACTOR written notification of rejection. CONTRACTOR may withdraw, in whole or in part, any VECP not accepted by CITY within the period specified in the VECP. ENGINEER may require that CONTRACTOR provide written notification before undertaking significant expenditures for VECP effort. Nothing contained herein to the contrary, CITY is under no obligation to accept all or part of any VECP, and CITY may at its discretion reject a VECP in whole or in part for any reason. CONTRACTOR shall be responsible for CONTRACTOR's development and implementation costs and CITY costs incurred in connection with a rejected VECP. CITY will be entitled to an appropriate decrease in Contract Price for CITY costs incurred in connection with a rejected VECP.
- 16.5 Any VECP may be accepted in whole or in part by a Change Order citing this clause. CITY may accept the VECP, even though an agreement on price reduction has not been reached, by a Change Request ordering CONTRACTOR to proceed with the change. Until such Change Request is issued, CONTRACTOR shall perform in accordance with the existing Contract Documents. CITY's decision to accept all or part of any VECP shall not be contestable by CONTRACTOR..
- 16.6 The CONTRACTOR's share of savings will be fifty percent (50%) of Contract savings.
- 16.7 Payment of any amount due CONTRACTOR for use of a VECP shall be authorized by a Change Order which (1) accepts the VECP, (2) reduces the Contract Price or estimated cost by the amount of Contract savings, and (3) provides CONTRACTOR'S share of savings by adding the amount calculated in 16.6 to the Contract Price as reduced in clause (2) herein.
- 16.8 CONTRACTOR shall include value engineering clauses in any Sub-Agreement of \$50,000 or more and may include them in Sub-Agreements of lesser value. To compute any adjustment in the Contract Price, CONTRACTOR's VECP development and implementation costs shall include any Subcontractor's development and implementation costs that clearly result from the VECP, but shall exclude any value engineering incentive payments to Subcontractors. CONTRACTOR may choose any arrangement for Subcontractor value engineering incentive payments, provided that these payments are not made from CITY's share of the savings resulting from the VECP.
- 16.9 CONTRACTOR may restrict CITY's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering Incentive clause of Contract _____, shall not be disclosed outside the CITY by CITY, ENGINEER or DESIGN ENGINEER, except as otherwise required by law, or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a VECP submitted under the clause. This restriction does not limit the CITY's right to use information contained in these data if it has been obtained or

is otherwise available from the CONTRACTOR or from another source without limitations."

If a VECP is accepted, CONTRACTOR hereby grants CITY unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, CITY shall have the rights specified in the Change Order implementing the VECP and shall appropriately mark the data.

ARTICLE 17 - MISCELLANEOUS

17.1 Giving Notice

17.1.1 Whenever any provision of the Contract Documents requires the giving of written notice it shall be deemed to have been validly given as of the time of actual delivery if delivered in person; or if it is delivered by registered mail, delivery service, or telegram, charges prepaid, at the actual time of delivery at the last business address known to the giver of the notice.

17.1.2 Written notice to be delivered to CITY or ENGINEER or to any of its representatives by CONTRACTOR shall be delivered at the office stated in the Agreement, unless otherwise specified in writing to CONTRACTOR. Written notice to CONTRACTOR by CITY or ENGINEER shall be delivered to the individual or member of the firm or to an officer of the corporation for whom it is intended at the office stated in the Agreement, or such other office or individual designated by CONTRACTOR in writing to CITY.

17.2 Notice to Other Agencies

CONTRACTOR shall notify all public and private entities or agencies in accordance with any and all ordinances, laws, agreements, licenses, and any other directions of construction activity, disruption of access or services. CITY or ENGINEER shall not be responsible for any such notification.

17.3 Computation of Time

When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a Holiday, such day shall be omitted from the computation.

17.4 Claims for Injury or Damage to Person or Property

Should CITY or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time from the first observance of such injury or damage. This provision shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

17.5 No Conflict with Laws or Regulations

17.5.1 The duties, obligations, criteria or procedure imposed by these General Conditions and the rights and remedies made available are in addition to, and are not to be construed in any way as a limitation of any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, except that in the event that a specific part or detailed requirement of a provision, criterion or procedure in these General Conditions and a specific part or detailed requirement of a provision, criterion or procedure imposed or available by Laws or Regulations are in conflict the specific part or

detailed requirement of Laws and Regulations shall govern. All other specific parts or detailed requirements in the provisions, criteria or procedures of the applicable Laws or Regulations and these General Conditions not in conflict shall remain in full force and effect and be read with the controlling specific part or detailed requirement.

17.5.2 The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

17.5.3 Each and every provision of law and clause required by law to be inserted in the Contract Documents shall be deemed to be inserted therein and the Contract shall be read and enforced as though it were included therein.

17.6 Partial Invalidity

If any provision of this contract is held by a court of competent jurisdiction to be invalid or unenforceable, such invalidity or un-enforceability shall not affect the other parts of this Contract if the rights and obligations of the parties contained herein are not materially prejudiced and if the intentions of the parties can continue to be effectuated. To that end, this contract is declared severable.

17.7 No Waiver of Rights, Duties

17.7.1 Except as otherwise specifically provided in the Contract Documents, no action or failure to act by the CITY, ENGINEER, CITY's Representative(s), or CONTRACTOR shall constitute a waiver of any right or duty afforded any of them under the Contract Documents, nor shall any such action or failure to act constitute an approval of or acquiescence of any breach thereunder.

17.7.2 All representations, indemnities, warranties and guarantees required by the Contract Documents, including the Warranty Period shall survive Final Payment and termination or completion of this Agreement.

17.8 Advertising

No advertising shall be permitted upon any part of the site or structures located on the site. News or press releases pertaining to the services, work product(s), or performance of CONTRACTOR under this Agreement or the Project to which it relates shall be at the sole discretion of CITY.

17.9 Venue

The location of any litigation arising between the parties shall only be in the courts of Volusia County, Florida.

17.10 Recovery of Damages

In no event shall CONTRACTOR be entitled to recover from CITY any indirect, incidental, or consequential damages in any proceeding arising out of or relating to this Agreement or breach thereof.

END OF SECTION

SECTION 00800

SUPPLEMENTAL CONDITIONS

These Special Conditions are specific to this project and are in addition to the General Conditions.

- SP-1 References to “Specifications”, and “Standard Specifications” in the Contract Documents refer to The Florida Department of Transportation Standard Specifications for Road and Bridge Construction”.
- SP-2 The roadway improvements to be constructed under this contract fall under the jurisdiction of the City of Deltona and these improvements, including drainage and sidewalks, shall be built in compliance with the Technical Specifications and the “Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction”, as well as the “FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System” (Standard Index).

The Contractor will be responsible to obtain applicable right-of-way utilization, utility, dewatering or other required permits, and to pay the costs associated with those permits. The Contractor shall be responsible to coordinate his activities with the respective agencies as required.

- SP-3 The Contractor shall be solely responsible for compliance with all applicable regulations issued by the Florida Department of Environmental Protection (FDEP), the St. Johns River Water Management District (SJRWMD), and the U.S. Environmental Protection Agency (EPA) (NPDES permit) for this project.
- SP-4 The Contractor shall prepare a stormwater pollution plan per Federal guidelines, submit said plan to the SJRWMD, and submit a Notice of Intent (NOI) to obtain an NPDES permit (copies to be submitted to the Owner). **SEE CONSTRUCTION PLAN SHEET 34.** Compliance with the requirements of the plan and the permit (including inspections of the erosion control facilities) shall be the sole responsibility of the Contractor (with copies of erosion reports sent to owner). Silt fences, as a minimum,

shall be utilized to control erosion. The contractor shall be responsible for the proper maintenance of the erosion control features during construction. The contractor shall be responsible for the removal of the silt fences and temporary erosion control features after erodable surfaces are stabilized. A COPY OF THE CONTRACTOR'S STORMWATER POLLUTION PREVENTION PLAN AND INSPECTION REPORTS SHALL BE SUBMITTED WITH THE CONTRACTOR'S INITIAL APPLICATION FOR PAYMENT. NO FUNDS SHALL BE RELEASED UNLESS THESE DOCUMENTS ARE SUBMITTED.

- SP-5 No plants for preparation of construction material (i.e. asphalt, soil cement mills, etc.) shall be allowed on-site.
- SP-6 The Contractor hereby acknowledges the Trench Safety Act of Florida (90-96), and has included the cost of compliance in his bid.
- SP-7 Control staking (roadway centerlines and a benchmark) will be provided. All other staking shall be provided by the Contractor.
- SP-8 Geotechnical testing (not retesting) shall be provided by the City of Deltona. Any retesting will be billed to the Contractor.
- SP-9 Soil cement preparation may not utilize existing soil at this site.
- SP-10 Geotechnical information is shown in the construction plans on sheet 41, "Roadway Soil Survey". The complete report is available for review at the offices of Bowyer-Singleton & Associates, Inc. The Contractor shall make his own field inspection of the site to supplement this information.
- SP-11 Only minimal tracking of construction dirt onto adjacent streets will be allowed. The Contractor shall keep a mechanical broom on-site.
- SP-12 Any unsuitable soils on-site shall be disposed of in locations determined by the Owner.
- SP-13 Any hydrocarbon (i.e., fuel, oil, et cetera) tanks stored on-site must be approved by the Owner. Adequate liners to contain any and all tank spills

and rainwater shall be approved prior to use. The Contractor shall clean up any such spills in accordance with state requirements.

SP-14 Substantial completion as defined by Article 14.13 of the General Conditions, is hereby further defined. The Work will be considered substantially complete when:

1. The ponds and storm drainage systems have been constructed per plan, and the following related tests / inspections / clearances have been completed and approved:
 - a. Storm drainage systems:
 - i. Backfill density tests
 - ii. Lamping and video inspection.
 - iii. As-Built inverts and Top elevations provided.
 - b. Ponds:
 - i. As-Built outfall structure elevations and dimensions.
 - ii. Pond slope As-Built elevations provided.
2. The roadway, including pavement, curb, sidewalks, walls and appurtenances have been constructed per plan, and the following tests / inspections / clearances have been completed and approved:
 - a. Pavement & Curb:
 - i. Subgrade density tests.
 - ii. Base compaction depth & tests.
 - iii. Asphalt density tests and cores.
 - iv. Concrete compression tests (cylinders), where applicable.
 - b. Sidewalks:
 - i. Subgrade density tests.
 - c. Other:
 - i. Sod and/or seed mulch placed – disturbed areas restored.
 - ii. Striping, signage and signalization items have been constructed per plan.

SP-15 All disturbed areas shall be seeded and mulched, by the site contractor at his expense, per DOT specifications. This shall include all material storage

areas, vehicular parking and travel areas and other areas disturbed throughout the course of construction.

SP-16 The Contractor shall schedule and coordinate with Bellsouth Telecommunications, Inc., Florida Power & Light, Florida Public Utilities, Progress-Energy, Deltona Water, Century Link, AT&T, and Bright House Cable Network. Any areas disturbed by the utility contractors shall be reseeded, by the site contractor at his expense, upon their completion. It is the responsibility of the Contractor to notify the utility companies to install their sleeves prior to curb installation. Ref: Instructions to Bidders, Section 00100, Article 6.7.

SP-17 N/A

SP-18 Sod shall match existing sod type. Sod at pond slopes and median areas to be Bahia.

SP-19 The Contractor shall take adequate precautions to prevent siltation from entering the lake system. A final chemical treatment may be required at the Contractors expense should he cause unacceptable levels of turbidity to occur.

SP-20 All design slopes of 5:1 or steeper shall be sodded with bahia, or to match existing sod type.

SP-21 N/A

SP-22 The contractor shall be responsible for fine grading of the right of way and other areas disturbed during the execution of his work.

SP-23 The cost for Pre-Construction Audio-Video (Section 01390) shall be included in item 101-1a Mobilization on the Bid Response Form (Section 00300). Contractor shall include sufficient coverage beyond the proposed limits of construction to protect City & contractor from claims relating to pre-existing conditions. Video coverage shall include homes near pond tracts, driveways and landscaping.

SP-24 Instructions to Bidder, Section 00100, Article 6.2.2 is amended as follows:
Reference to Supplementary Conditions Paragraph SC-4.2.1 is deleted.

SP-25 Time is of the essence, timely completion of project improvements is imperative. Engineer's estimated time of construction is 270 days.

SP-26 Payment for removal of existing storm drainage pipe and structures, sidewalk and retaining walls as shown on plans will be included under Clearing & Grubbing.

SP-27 Bid Item 102-1, "Maintenance of Traffic" to include temporary pavement as shown on Plan Sheet 35.

SP-28 There is an anticipated surplus of excavated material on the project. Contractor shall coordinate with the City of Deltona to arrange for a stockpile locations. Contractor shall be responsible for all cost associated with the excavation, hauling, stockpiling and providing required erosion / pollution abatement measures. In the event that the City of Deltona can not provide sufficient land to stockpile all the surplus material, the excess material shall become the property of the contractor and the contractor shall be responsible for the handling and disposal of the material.

SP-29 The contractor is encouraged to coordinate with property owners to eliminate retaining walls and handrails.

SP-30 Within Twenty-one (21) calendar days after receiving the Notice to Proceed, the CONTRACTOR shall establish in the field the proposed roadway centerline, right-of-way and construction easements using wooden 1" X 4'X 4'0" stakes at a maximum spacing of 100 feet_ Stations shall be marked on each stake and shall be of sufficient size and clarity that they can be easily read by the unaided eye at a 150 feet distance. Right-of-way and construction easement staking shall be maintained by the CONTRACTOR throughout construction. No invoice for payment will be processed until the right-of-way has been staked to the satisfaction of the ENGINEER. Payment is included in the price for bid item number 101-1 "Mobilization". CONTRACTOR shall pay all expenses in connection with this work.

END OF SECTION

SECTION 00841

NOTICE OF AWARD FORM

Contractor Date: _____

RE:

Notice to Proceed on Project: **CITY OF DELTONA
ROADWAY IMPROVEMENTS
NORMANDY BOULEVARD – SECTION “B”**

You are notified that your bid dated _____, 20__ for the above Contract has been considered and the OWNER expects to award you a contract for:

(Indicate total Work, Alternates or Sections of Work Awarded)

The Contract Price of your contract is _____ Dollars (\$_____).

Six (6) copies of the following proposed Contract Documents (except Project Manual and Drawings) accompany this Notice of Award:

- Agreement Between Owner and Contractor
- Performance Bond
- Payment Bond
- Notice of Award

You must comply with the following conditions precedent to the award of the Contract within ten (10) days of the Notice of Award, that is by _____, 20__.

1. You must deliver to the OWNER six (6) fully executed counterparts of the Agreement.
2. You must deliver with the executed Agreement six (6) completed original documents with original signatures on the Payment and Performance Bond in the form specified in the Bidding Documents.

3. You must provide in writing the correct name and address of the surety which is providing the Payment and Performance Bonds and the correct name and address of the surety's resident agent for service of process in Florida.
4. You must deliver with the executed Agreement six (6) completed, with original signatures, Certificates and Endorsements of Insurance in the form specified in the Bidding Documents.

Failure to comply with these conditions within the time specified will entitle the OWNER to consider you Bid abandoned, to annul this Notice of Award, and to declare your Bid Security forfeited.

Within ten (10) days after you comply with these conditions, the OWNER will return to you one (1) fully signed counterpart of the Agreement with the Contract Documents attached.

OWNER: CITY OF DELTONA

ACCEPTANCE OF AWARD:

Utility Director

(Contractor)

(Authorized Signature)

(Address)

(Title)

(Authorized Signature
Acknowledge of Receipt of Notice)

Acct. No.: _____

(Title)

(Date)

Copy to:
Bowyer-Singleton & Associates, Inc.
520 South Magnolia Avenue
Orlando, FL 32801
Attn: Kevin E. Knudsen, P.E.

END OF SECTION

SECTION 00842

NOTICE TO PROCEED FORM

Contractor

Date: _____

RE:

Notice to Proceed on Project: **CITY OF DELTONA
ROADWAY IMPROVEMENTS
NORMANDY BOULEVARD – SECTION “B”**

You are notified that the Contract Time under the above contract will commence to run on _____, 20___. On that date you are to start performing the work and other obligations under the Contract Documents. Based on the Contract Time stated in the Agreement, we calculate that the first set of dates for Substantial Completion and Final Completion are _____, 20___ and _____, 20___, respectively.

Enclosed is one (1) set of Drawings and one (1) bound copy of the Project Manual containing:

1. Bid Forms (Bidding Documents, entire Section 00300).
2. Bidders Contract & Information Form (Section 301).
3. Subcontractor Listing (Section 0301-A-3).
4. Bid Bond or security (surety bond or cashier’s check). (Section 00410).
5. Power of Attorney (for surety bond only).
6. Corporate Resolution (any corporate employee other than president or vice-president, Section 00420).
7. Sworn Statement Pursuant to Section 287.133(3)(a), Florida Statutes on Public Entity Crimes (Section 00470).
8. Non-Collusion Affidavit Form (Section 00480).
9. Trench Safety Affidavit (Section 00490).

OWNER:

(Authorized Signature)

(Title)

BY:

(Contractor)

(Address)

(Authorized Signature
Acknowledge of Receipt of Notice)

(Title)

(Date)

END OF SECTION

SECTION 00843

CHANGE ORDER FORM

Project: CITY OF DELTONA
ROADWAY IMPROVEMENTS
NORMANDY BOULEVARD – SECTION “B”

CHANGE ORDER NO. _____

DATE OF ISSUANCE: _____

CONTRACTOR: _____

EFFECTIVE DATE: _____

ENGINEER: Bowyer-Singleton & Assoc., Inc.

OWNER'S CONTRACT NO.: _____

The following Changes are hereby made to the Contract Documents:

<p>CHANGE IN CONTRACT PRICE:</p> <p>Original Contract Price:</p> <p>\$ _____</p>	<p>CHANGE IN CONTRACT TIMES:</p> <p>Original Contract Times (Days or Dates):</p> <p>Substantial Completion: _____</p> <p>Ready for Final Payment: _____</p>
<p>Net changes from previous Change Orders No. ____ to No. ____</p> <p>\$ _____</p>	<p>Net changes from previous Change Orders No. ____ to No. ____</p> <p>_____ (Days)</p>
<p>Contract Price prior to Change Order</p> <p>\$ _____</p>	<p>Contract Times prior to this Change Order</p> <p>Substantial Completion: _____</p> <p>Ready for Final Payment: _____</p>
<p>Net Increase (decrease) of this Change Order</p> <p>\$ _____</p>	<p>Net increase (decrease) of this Change Order</p> <p>_____ (Days)</p>
<p>Contract Price with all approved Change Orders</p> <p>\$ _____</p>	<p>Contract Times with all approved Change Orders</p> <p>Substantial Completion: _____</p> <p>Ready for Final Payment: _____ (Days or Dates)</p>

CHANGES ORDERED:

I. GENERAL: This change order is necessary to cover changes in the work to be performed under this Contract. The General Conditions, Supplementary Conditions, Specifications and all parts of the Project Manual listed in Article 1, Definitions, of the General Conditions apply to and govern all work under this change order.

Change Order No. _____

II. REQUIRED CHANGES:

III. JUSTIFICATION:

IV. PAYMENT:

V. APPROVAL AND CHANGE AUTHORIZATION:

Acknowledgements:

The aforementioned change, and work affected thereby, is subject to all provisions of the original contract not specifically changed by this Change Order, and,

It is expressly understood and agreed that the approval of the Change Order shall have no effect on the original contract other than matters expressly provided herein.

Change Order Requested by: _____

Change(s) Ordered by: _____

RECOMMENDED BY:

ACCEPTED BY:

(Engineer)

(Contractor)

By: _____
(Authorized Signature and Date)

By: _____
(Authorized Signature and Date)

(Title)

(Title)

APPROVED BY:

(Owner)

By: _____
(Authorized Signature and Date)

END OF SECTION

SECTION 00844

APPLICATION AND CERTIFICATION FOR PAYMENT FORM

Application No. _____ Progress _____ Final _____

Engineer's Project No.: _____

Project: **CITY OF DELTONA
ROADWAY IMPROVEMENTS
NORMANDY BOULEVARD – SECTION "B"**

Contractor: _____ Contract Date: _____

Contract for: _____

Application Date: _____ For Period Ending: _____

Change Order Summary			
Change Orders approved in Previous months by OWNER		ADDITIONS	DEDUCTIONS
TOTAL			
Approved this month			
Number	Date Approved		
TOTALS			
Net Change by Change Orders			

- | | |
|--|----------|
| 1. ORIGINAL CONTRACT SUM | \$ _____ |
| 2. Net Change by Change Order | \$ _____ |
| 3. CONTRACT SUM TO DATE (Line 1 and 2) | \$ _____ |
| 4. TOTAL COMPLETED AND STORED TO DATE | \$ _____ |
| 5. RETAINAGE: (Column I & N, Forms 00845 and 00846) | |
| a. _____% of Completed Work | \$ _____ |
| b. _____% of Stored Material | \$ _____ |
| 6. TOTAL EARNED LESS RETAINAGE
(Line 4 less Line 5 Total) | \$ _____ |
| 7. LESS PREVIOUS CERTIFICATES FOR PAYMENT
(Line 6 from prior Certificate) | \$ _____ |
| 8. AMOUNT DUE THIS APPLICATION | \$ _____ |
| 9. BALANCE TO FINISH, PLUS RETAINAGE
(Line 3 less Line 6) | \$ _____ |

Contractor's Certification:

The undersigned Contractor hereby swears under penalty of perjury that (1) all previous progress payments received from the Owner on account of Work performed under the contract referred to above have been applied by the undersigned to discharge in full all obligations of the undersigned incurred in connection with Work covered by prior Applications for Payment numbered 1 through ___ inclusive; and (2) all materials and equipment incorporated in said Project or otherwise listed in or covered by this Application for Payment are free and clear of all liens, claims, security interest and encumbrances; (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not defective as term is defined in the Contract Documents.

Dated _____, 20__.

(Contractor)

By: _____
(Name)

(Title)

COUNTY OF _____

STATE OF _____

Before me on this _____ day of _____, 20__, personally appears _____, known to me, who being duly sworn, deposes and says that (s)he is the _____ of the Contractor above mentioned; that (s)he executed the above Application for Payment and statement on behalf of said Contractor; and that all of the statements contained therein are true, correct and complete.

Notary Public
My Commission Expires _____

Engineer's Recommendation

Payment of the above AMOUNT DUE THIS APPLICATION is recommended.

Dyer, Riddle, Mills & Precourt, Inc. (DRMP)

By: _____
(Authorized Signature)

Date: _____

Owner's Approval

By: _____
(Authorized Signature)

Date: _____

Account Number: _____

END OF SECTION

SECTION 00847

SHOP DRAWING SUBMITTAL FORM

Owner: City of Deltona
2345 Providence Boulevard
Deltona, FL 32725

Specification No.: _____
 Project: Normandy Boulevard – Sect. B
Roadway Improvements

Contractor: _____

Bowyer-Singleton Project Number: _____	FOR BOWYER-SINGLETON USE ONLY: DATE RECEIVED _____ DATE RETURNED _____
---	---

Owner's Project Number: _____

Contractor's Submittal Number: _____

Contractor's Project Number: _____

Resubmittal Yes ____ No ____

ITEM NO.	RESUBMITTAL NO.	NO. OF COPIES	VENDOR	DESCRIPTION	ENGINEER'S ACTION
ACTION CODE (As defined in the General Conditions) A APPROVED AN APPROVED AS NOTED AR AMEND AND RESUBMIT R REJECTED Submitted by _____ <i>Contractor</i> Date _____					
ENGINEER'S COMMENTS:					

Distribution
 Contractor _____ Copies
 Owner _____ Copies
 Bowyer-Singleton _____ Copies

Discipline Review:

 Reviewed By _____ Date _____

Discipline Review:

 Reviewed By _____ Date _____

 Project Manager _____ Date _____

SECTION 00848

CERTIFICATE OF SUBSTANTIAL COMPLETION

OWNER'S Project No.: _____ ENGINEER'S Project No.: _____

CITY OF DELTONA

ROADWAY IMPROVEMENTS

NORMANDY BOULEVARD – SECTION "B"

CONTRACTOR _____

Contract Date: _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof.

To _____
Owner

And To _____
Contractor

The Work to which this Certificate applies as been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

Date of Substantial Completion

Certificate of Substantial Completion
Page 1 of 3

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item therein does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. When this Certificate applies to a specified part of the Work the items in the tentative list shall be completed or corrected by CONTRACTOR within _____ days of the above date of Substantial Completion.

The date of Substantial Completion is the date upon which all guarantees and warranties begin, except as follows:

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities and insurance shall be as follows:

RESPONSIBILITIES:

OWNER: _____

CONTRACTOR: _____

The following documents are attached to and made a part of this Certificate:

-
-
-

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of CONTRACTOR'S obligation to complete the Work in accordance with the Contract Documents.

Executed by ENGINEER on _____, 20__.

(Engineer)

By: _____

The CONTRACTOR accepts this Certificate of Substantial Completion on:
_____, 20__.

(Contractor)

By: _____

Certificate of Substantial Completion
Page 3 of 3

END OF SECTION

SECTION 00849

CONTRACTOR'S FINAL RELEASE OF LIEN

Before me the undersigned authority in said County and State, appeared _____ who, being first duly sworn, deposes and says that he is _____ of _____, a company and/or corporation authorized to do business under the laws of Florida, which is the Contractor on the Contract described as: _____ dated the _____ day of _____, 20____, that the said deponent is duly authorized to make this affidavit by resolution of the Board of Directors of said company and/or corporation; that deponent knows of his own knowledge that said Contract has been complied with in every particular by said Contractor and that all parts of the work have been approved by the Owner's Engineers; that there are no bills remaining unpaid for labor, material, or otherwise, in connection with said Contract and Work, and that there are no suits pending against the undersigned as Contractor or anyone in connection with the work done and materials furnished or otherwise under said Contract. Deponent further says that the final estimate which has been submitted to the Owner simultaneously with the making of the affidavit constitutes all claims and demands against the Owner on account of said Contract or otherwise, and the acceptance of the sum specified in said final estimate will operate as a full and final release and discharge of the Owner from any further claims, demands or compensation by Contractor under the above Contract. Deponent further agrees that all guarantees under this Contract shall be in full force from the date of this release as spelled out in the Contract Documents.

Sworn to and subscribed to before me this _____ day of , 20____.

Notary Public

My Commission Expires _____

We, the _____ having heretofore executed a Performance Bond for the above-mentioned Contractor covered Project and Section as described above in the sum of _____ Dollars (\$_____), hereby agree that the Owner may make full payment of the final estimate, including the retained percentage, to said Contractor.

It is fully understood that the granting of the right to the Owner to make payment for the final estimate to said Contractor and/or his assigns, shall in no way relieve the surety company of its obligations under its bond, as set forth in the Specifications, Contract and Bond pertaining to the above Project.

IN WITNESS WHEREOF, The _____ has caused this instrument to be executed on its behalf by its _____ and/or its duly authorized attorney in fact, and its corporate seal to be hereunto affixed, all of this _ day of _____, A.D., 20__.

Surety Company

Attorney in Fact

(Power of Attorney must be attached if executed by Attorney in Fact)

STATE OF FLORIDA

COUNTY OF _____

Before me the undersigned authority, personally appeared to me well known as the person described in and who executed the foregoing instrument in the name of _____ and/or _____ purpose therein expressed and that he had due and legal authority to execute the same on behalf of said _____, a corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal at _____ this _____ day of _____, 20__.

Notary Public

END OF SECTION

SECTION 00850

FIELD ORDER

FIELD ORDER NO. _____

[]	OWNER:	_____	No. of Copies	____
[]	ENGINEER:	_____	No. of Copies	____
[]	ARCHITECT :	_____	No. of Copies	____
[]	CONTRACTOR:	_____	No. of Copies	____
[]	FIELD:	_____	No. of Copies	____
[]	OTHER:	_____	No. of Copies	____

PROJECT DATA:

CONTRACT DATA:

Name: Roadway Improvements
 Location: Normandy Blvd, Section B
 Owner: City of Deltona
 Other: _____

Number: _____
 Date: _____
 Drawing No.: _____
 Spec. Section: _____

To: (Contractor)

You are hereby directed to execute promptly this Field Order which interprets the Contract Documents or orders minor changes in the Work without change in Contract Sum or Contract Time.

If you consider that a change in Contract Sum or Contract Time is required, please submit your itemized proposal to the Engineer immediately and before proceeding with this Work. If your proposal is found to be satisfactory and in proper order, this Field Order will in that event be superseded by a Change Order.

Description (of interpretation or change): _____

Attachments (listing of attached documents that support description):

1. Contractor Request for Information No. : _____
2. _____
3. _____
4. _____
5. _____

Bowyer-Singleton & Associates, Inc.

Project No. _____

By: _____

Date: _____

END OF SECTION

SECTION 00851

CONTRACTOR REQUEST FOR INFORMATION

CONTRACTOR REQUEST FOR INFORMATION NO. _____

[]	OWNER:	_____	No. of Copies	___
[]	ENGINEER:	_____	No. of Copies	___
[]	ARCHITECT:	_____	No. of Copies	___
[]	CONTRACTOR:	_____	No. of Copies	___
[]	FIELD:	_____	No. of Copies	___
[]	OTHER:	_____	No. of Copies	___

PROJECT DATA:

CONTRACT DATA:

Name: Roadway Improvements
 Location: Normandy Blvd, Section B
 Owner: City of Deltona
 Other: _____

Number: _____
 Date: _____
 Drawing No.: _____
 Spec. Section: _____

QUESTION:

BY: _____

DATE: _____

REPLY:

BY: _____

DATE: _____

END OF SECTION

**DELTONA WATER
255 ENTERPRISE RD.
DELTONA, FL 32725
PHONE (386) 575-2060
FAX (386)574-0163**

PRESSURE TEST VERIFICATION SHEET

PROJECT NAME: _____

Date of Test: _____

Start Time: _____

End Time: _____

Gauge No.: _____

Gauge No.: _____

Starting Pressure: _____

Starting Pressure: _____

Ending Pressure: _____

Ending Pressure: _____

Gauge No.: _____

Gauge No.: _____

Starting Pressure: _____

Starting Pressure: _____

Ending Pressure: _____

Ending Pressure: _____

Number of Joints in Section to be tested: _____

Nominal Diameter of Pipe to be tested: _____

Total Water Lost in Test (Gallons): _____

Length of Pipe in Section: _____

SYSTEM TEST:

PASSED: _____

FAILED: _____

Contractor: _____ Project Engineer: _____

Representative: _____ Representative: _____

Signature: _____ Signature: _____

Witness #1: _____ Signature: _____

Witness #2: _____ Signature: _____

In order for system to pass pressure test: system must maintain a minimum pressure of 150 psi for no less than 2 hours.



DELTONA WATER

PRESSURE TEST DATA SHEET

(To Be Completed By Field Operations Personnel)

Property Address: _____

Commercial Property: Yes No
Please circle

Project Name: _____

Legal Description: _____

Single Family Residence: Yes No
Please circle

Legal Description:
Lot _____ Block _____ Unit _____ Subdivision _____

Field Test Operations Data

Pressure Initially Raised to (psig): _____

Time Allowed for Pressure to Stabilize (min): _____

Start Test Pressure (psig): _____

Elapsed Time (min:sec): _____

Pass Fail
Please circle

If a section fails, the following items should be completed:

Identify sections (s) that failed: _____

Leak (was) (was not) located. Method used: _____
Please circle

Description of leakage found: _____

Description of corrective action taken: _____

Re-Inspection Required: Yes No
Please circle

Date: _____

Inspected By: _____
Signature Deltona Water Operation Personnel

SECTION 00861

WORK DIRECTIVE FORM

WORK DIRECTIVE NO. _____

- OWNER: _____ No. of Copies ____
- ENGINEER: _____ No. of Copies ____
- ARCHITECT: _____ No. of Copies ____
- CONTRACTOR: _____ No. of Copies ____
- FIELD: _____ No. of Copies ____
- OTHER: _____ No. of Copies ____

PROJECT DATA:

CONTRACT DATA:

Name: Roadway Improvements
 Location: Normandy Blvd, Section B
 Owner: City of Deltona
 Other: _____

Number: _____
 Date: _____
 Drawing No.: _____
 Spec. Section: _____

To: (Contractor): _____

You directed to proceed promptly with the following change(s):

Description:

Purpose of Work Directive Change:

If a claim is made that the above change(s) have affected Contract Price or Contract Time, any claim for a Change Order based thereon will involve one of the following methods of determining the effect of the change(s).

Method of determining change
In Contract Price:

Method of determining change
in Contract Time:

- Time and materials
- Unit prices
- Cost plus fixed fee
- Other: _____

- Contractor's records
- Engineer's records
- Other _____

Estimated increase (decrease) in Contract Price.
Contract \$ _____
If the change involves an increase, the
Estimated amount is not to be exceeded
without further authorization.
increase, the

Estimated increase (decrease) in
Times.
Substantial Completion __days;
Ready for final payment __days.
If the change involves an

estimated times are not to be
exceeded without further
authorization.

RECOMMENDED:

AUTHORIZED:

BY: _____
Engineer

By: _____
City of Deltona

Attachments (Listing of attached documents that support description):

1. Contractor Request for Information (RFI) No. _____
2. Request for Proposal for Proposed Change (RFP) No. _____
3. _____
4. _____
5. _____

END OF SECTION

SECTION 00863

CHANGE PROPOSAL SUMMARY FORM

CHANGE PROPOSAL SUMMARY NO. _____

[] OWNER: _____ No. of Copies ____
 [] ENGINEER: _____ No. of Copies ____
 [] ARCHITECT: _____ No. of Copies ____
 [] CONTRACTOR: _____ No. of Copies ____
 [] FIELD: _____ No. of Copies ____
 [] OTHER: _____ No. of Copies ____

PROJECT DATA:

CONTRACT DATA:

Name: Roadway Improvements
 Location: Normandy Blvd, Section B
 Owner: City of Deltona
 Other: _____

Number: _____
 Date: _____
 Drawing No.: _____
 Spec. Section: _____

REFERENCE: Work Directive No. _____ RFP No. ____
 Field Order No. _____ Other _____

DESCRIPTION: _____

PRICING INFORMATION:

1.	DIRECT LABOR	Skill/Trade	Manhours	Rate	Cost
1.A	Production Labor	_____	_____	_____	_____
1.B	Supervision	_____	_____	_____	_____
	[] Foreman				
	[] Superintendent				
1.C	Field Engineering	_____	_____	_____	_____
1.D	Expenses	_____	_____	_____	_____
					Subtotal (1) _____

2. MATERIALS & EQUIPMENT

Description	Quantity	Unit Price	Cost
2.A Incorporated in Work			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
2.B Consumed in Performance			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
2.D Direct Costs			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
2.E Bonds, Insurance			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	Subtotal (2)	_____

3. TOTAL LABOR, MATERIALS & EQUIPMENT

_____	+	_____	=	_____	Total
Subtotal (1)		Subtotal (2)			

END OF SECTION

Change Order Type: (Deletion) (Addition) (Revision)

Constraints of Change: _____

Initiated by: _____

Proposal must be received by: ___ (7 days from date below)

Attachments (listing of attached documents that support description)

1. Contractor Request for Information (RFI) No. _____
2. _____
3. _____
4. _____
5. _____

Engineer: _____ Project No. _____

Issued by: _____ Date: _____

END OF SECTION

SECTION 01000

PROJECT REQUIREMENTS

1.01 DESCRIPTION

- A. **Scope of Work:** The Work to be done consists of the furnishing of all labor, materials, and equipment, and the performance of all Work shown in the project plans and specifications. A summary of the Work is presented in Section 01010: Summary of Project.
- B. **Work Included:**
1. The Contractor shall furnish all labor, superintendence, materials, plant power, light, heat, fuel, water, tools, appliances, equipment, supplies, and means of construction necessary for proper performance and completion of the Work. The Contractor shall obtain and pay for all necessary local building permits. The Contractor shall perform and complete the Work in the manner best calculated to promote rapid construction consistent with safety of life and property and to the satisfaction of the Engineer, and in strict accordance with the Contract Documents. The Contractor shall clean up the Work and maintain it during and after construction, until accepted, and shall do all Work and pay all costs incidental thereto. He shall repair or restore all structures and property that may be damaged or disturbed during performance of the Work.
 2. The cost of incidental work described in these Project Requirements, for which there are no specific Contract Items, shall be considered as part of the general cost of doing the Work and shall be included in the prices for the various Contract Items. No additional payment will be made therefore.
 3. The Contractor shall provide and maintain such modern tools and equipment as may be necessary, in the opinion of the Engineer, to perform in a satisfactory and acceptable manner all the Work required by this Contract. Only equipment of established reputation and proven efficiency shall be used. The Contractor shall be solely responsible for the adequacy of his workmanship, materials, and equipment, prior approval of the Engineer notwithstanding.
- C. **Public Utility Installations and Structures:**
1. Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, vaults, manholes, and all other appurtenances and facilities pertaining thereto whether owned or controlled by the Owner, other governmental bodies, or privately owned by individuals, firms, or corporations,

used to serve the public with transportation, traffic control, gas, electricity, telephone, sewerage, drainage, water, or other public or private property which may be affected by the Work shall be deemed included hereunder.

2. The Contract Documents contain data relative to existing public utility installations and structures above and below the ground surface. These data are not guaranteed as to their completeness or accuracy and it is the responsibility of the Contractor to make his own investigations to inform himself fully of the character, condition, and extent of all such installations and structures as may be encountered and as may affect the construction operations.
3. The Contractor shall protect all public utility installations and structures from damage during the Work. Access across any buried public utility installation or structure shall be made to avoid any damage to these facilities. All required protective devices and construction shall be provided by the Contractor at his expense. All existing public utilities damaged by the Contractor shall be repaired by the Contractor, at his expense. No separate payment shall be made for such protection or repairs to public utility installations or structures.
4. Public utility installations or structures owned or controlled by the Owner or other governmental body which are shown on the Drawings to be removed, relocated, replaced, or rebuilt by the Contractor shall be considered as a part of the general cost of doing the Work and shall be included in the prices bid for the various Contract Items. No separate payment shall be made therefore.
5. Where public utility installations or structures owned or controlled by the Owner or other governmental body are encountered during the course of the Work, and are not indicated on the Drawings or in the Specifications, and when, in the opinion of the Engineer, removal, relocation, replacement, or rebuilding is necessary to complete the Work under this Contract, such Work shall be accomplished by the utility having jurisdiction, or such Work may be ordered, in writing by the Engineer, for the Contractor to accomplish. If such work is accomplished by the utility having jurisdiction it will be carried out expeditiously, and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement, or rebuilding as required. If such work is accomplished by the Contractor, it will be paid for as extra work as provided in the Agreement.
6. The Contractor shall, at all times in performance of the Work, employ acceptable methods and exercise reasonable care and skill so as to avoid unnecessary delay, injury, damage, or destruction of public utility installations and structures; and shall, at all times in the

performance of the Work, avoid unnecessary interference with, or interruption of, public utility services, and shall cooperate fully with the owners thereof to that end.

7. The Contractor shall give written notice to Owner and other governmental utility departments and other owners of public utilities of the location of his proposed construction operations, at least 48-hours in advance of breaking ground in any area or on any unit of the Work.
8. The maintenance, repair, removal, relocation, or rebuilding of public utility installations and structures, when accomplished by the Contractor as herein provided, shall be done by methods approved by the owners of such utilities.

1.02 DRAWINGS AND PROJECT MANUAL

- A. Drawings: When obtaining data and information from the Drawings, figures shall be used in preference to scaled dimensions, and large-scale drawings in preference to small-scale drawings.
- B. Supplementary Drawings:
 1. When, in the opinion of the Engineer, it becomes necessary to explain more fully the Work to be done or to illustrate the Work further or to show any changes which may be required, drawings known as Supplementary Drawings, with specifications pertaining thereto, will be prepared by the Engineer, and the Contractor will be furnished one (1) complete set of reproducible mylar sepias (24 inches by 36 inches) and one (1) reproducible copy of the specifications.
 2. The Supplementary Drawings shall be binding upon the Contractor with the same force as the Contract Drawings. Where such Supplementary Drawings require either less or more than the estimated quantities of Work, credit to the Owner or compensation therefore to the Contractor shall be subject to the terms of the Agreement.
- C. Contractor to Check Drawings and Data:
 1. The Contractor shall verify all dimensions, quantities, and details shown on the Drawings, Supplementary Drawings, schedules, Specifications, or other data received from the Engineer, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or correct errors, conflicts, or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction, or improper operation resulting therefrom, nor from rectifying such conditions at his own expense. He will not be allowed to take advantage of any errors or omissions, as full instructions will be furnished by the Engineer,

should such errors or omissions be discovered.

2. 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 quality of materials and equipment included in work to be done under the Contract.
- D. Specifications: The Technical Specifications consist of three (3) parts: General, Products, and Execution. The General part of a Specification contains General Requirements which govern the Work. The Products and Execution parts modify and supplement the General Requirements by detailed requirements for the Work and shall always govern whenever there appears to be a conflict.
- E. Intent:
1. All Work called for in the Specifications applicable to this Contract, but not shown on the Drawings in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Drawings or in the Specifications, but involved in carrying out their intent or in the complete and proper execution of the Work, is required and shall be performed by the Contractor as though it were specifically delineated or described.
 2. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, the interpretation of these Specifications shall be made upon that basis.

1.03 MATERIALS AND EQUIPMENT

- A. Manufacturer:
1. All transactions with the manufacturers or subcontractors shall be through the Contractor, unless the Contractor shall request and at the Engineer's option, that the manufacturer or subcontractor deal directly with the Engineer. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.
 2. Any two (2) or more pieces of material or equipment of the same kind, type, or classification, and being used for identical types of service, shall be made by the same manufacturer.

B. Delivery:

1. The Contractor shall deliver materials in ample quantities to ensure the most speedy and uninterrupted progress of the Work so as to complete the Work within the allotted time.
2. The Contractor shall also coordinate deliveries in order to avoid delay in, or impediment of, the progress of the work of any related Contractor.

C. Tools and Accessories:

1. The Contractor shall, unless otherwise stated in the Contract Documents, furnish with each type, kind, or size of equipment, one (1) complete set of suitably marked high grade special tools and appliances which may be needed to adjust, operate, maintain, or repair the equipment. Such tools and appliances shall be furnished in approved painted steel cases, properly labeled and equipped with good grade cylinder locks and duplicate keys.
2. Spare parts shall be furnished as specified herein and as recommended by the manufacturer necessary for the operation of the equipment, not including materials required for routine maintenance.
3. Each piece of equipment shall be provided with a substantial nameplate, securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, serial number, weight, and principal rate data.

D. Service of Manufacturer's Engineer:

1. The Contract Prices for equipment shall include the cost of furnishing a competent and experienced engineer or superintendent who shall represent the manufacturer and shall assist the Contractor, when required, to install, adjust, test, and place in operation, the equipment in conformity with the Contract Documents.
2. After the equipment is placed in permanent operation by the Owner, such engineer or superintendent shall make all adjustments and tests required by the Engineer to prove that such equipment is in proper and satisfactory operating condition, and shall instruct such personnel as may be designated by the Owner in the proper operation and maintenance of such equipment.

1.04 INSPECTION AND TESTING

A. General:

1. For tests specified to be made by the Contractor, the testing personnel shall make the necessary inspections and tests, and the reports thereof shall be in such form as will facilitate checking to determine compliance with the Contract Documents. Five (5) copies of the reports shall be submitted, and authoritative certification thereof must be furnished to the Engineer as a prerequisite for the acceptance of any material or equipment.
2. If, in the making of any test of any material or equipment, it is ascertained by the Engineer that the material or equipment does not comply with the Contract Documents, the Contractor will be notified thereof, and he will be directed to refrain from delivering said material or equipment, or to remove it promptly from the site or from the Work and replace it with acceptable material, without cost to the Owner.
3. Tests of electrical and mechanical equipment and appliances shall be conducted in accordance with the recognized test codes of the ANSI, ASME, or the IEEE, except as may otherwise be stated herein.
4. The Contractor shall be fully responsible for the proper operation of equipment during testing and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the Owner formally takes over the operation thereof.

B. Costs:

1. All inspection and testing of materials furnished under this Contract will be provided by the Contractor, unless otherwise expressly specified.
2. The cost of shop and field tests of equipment and of certain other tests specifically called for in the Contract Documents shall be borne by the Contractor, and such costs shall be deemed to be included in the Contract Price.
3. Materials and equipment submitted by the Contractor as the equivalent to those specifically named in the Contract may be tested by the Owner for compliance. The Contractor shall reimburse the Owner for the expenditures incurred in making such tests of materials and equipment which are rejected for non-compliance.

C. Certificate of Manufacture:

1. Contractor shall furnish to Engineer authoritative evidence in the form of a certificate of manufacture that the materials to be used in the Work have been manufactured and tested in conformity with the Contract Documents.
2. These certificates shall be notarized and shall include copies of the results of physical tests and chemical analyses, where necessary, that have been made directly on the product or on similar products of the manufacturer.

D. Shop Tests:

1. Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function, or special requirements are specified shall be tested in the shop of the maker in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents.
2. Five (5) copies of the manufacturer's actual test data and interpreted results thereof, accompanied by a certificate of authenticity sworn to by a responsible official of the manufacturing company and/or independent laboratory, shall be submitted to the Engineer for approval.
3. The cost of shop tests and of furnishing manufacturer's preliminary and shop test data of operating equipment shall be borne by the Contractor.

E. Start-up Tests:

1. As soon as conditions permit, the Contractor shall furnish all labor, materials, and instruments and shall make start-up tests of equipment.
2. If the start-up tests disclose any equipment furnished under this Contract which does not comply with the requirements of the Contract Documents, the Contractor shall, prior to demonstration tests, make all changes, adjustments, and replacements required. The furnishing Contractor shall assist in the start-up tests as applicable.

F. Demonstration Tests:

1. Prior to Contractor's request for a Substantial Completion inspection, all equipment and piping installed under this Contract shall be subjected to demonstration tests as specified or required to prove compliance with the Contract Documents.
2. The Contractor shall furnish labor, fuel, energy, water, and all other materials, equipment, and instruments necessary for all demonstration tests, at no additional cost to the Owner. Contractor

shall assist in the demonstration tests as applicable.

1.05 LINES AND GRADES

A. Grade:

1. All work under this Contract shall be constructed in accordance with the lines and grades shown on the Drawings, or as given by the Engineer. The full responsibility for keeping alignment and grade shall rest upon the Contractor.
2. The Engineer will establish bench marks and baseline controlling points. Reference marks for lines and grades as the Work progresses will be located by the Contractor to cause as little inconvenience to the prosecution of the Work as possible. The Contractor shall so place excavation and other materials as to cause no inconvenience in the use of the reference marks provided. He shall remove any obstructions placed by him contrary to this provision.

B. Surveys:

1. The Contractor shall furnish and maintain, at his own expense, stakes and other such materials.
2. The Contractor shall check such reference marks by such means as he may deem necessary and, before using them, shall call the Engineer's attention to any inaccuracies.
3. The Contractor shall, at his own expense, establish all working or construction lines and grades as required from the reference marks set by the Engineer, and shall be solely responsible for the accuracy thereof. He shall, however, be subject to the check and review by the Engineer.

C. Safeguarding Marks:

1. The Contractor shall safeguard all points, stakes, grade marks, monuments, and bench marks made or established on the Work, bear the cost of re-establishing them if disturbed, and bear the entire expense of rectifying work improperly installed due to not maintaining or protecting or to removing without authorization such established points, stakes, and marks.
2. The Contractor shall safeguard all existing and known property corners, monuments, and marks adjacent to but not related to the Work and shall bear the cost of re-establishing them if disturbed or destroyed.

END OF SECTION

SECTION 01010

SUMMARY OF WORK

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. This Contract comprises the construction of the City of Deltona Roadway Improvements on Normandy Boulevard (Section B) as illustrated on the Drawings and specified herein. The work consists of furnishing all labor, equipment and materials for the construction of the facilities consisting of, but not limited to, the following:

- Reconstruct approximately 0.60 miles of two-lane rural section roadway on Normandy Boulevard to three-lane urban section.
- Construct 2 drainage retention ponds.
- Construct approximately 2,912' of 18" to 42" storm drainage pipe and approximately 35 drainage structures.
- Construct approximately 4,810' of 4" to 16" water main.
- Striping, signage, signalization and temporary traffic control devices.

B. Construction Plans:

1. Roadway Plans – Bowyer-Singleton & Associates, Inc.

- 1 Key Sheet
- 2 Drainage Map
- 3 Typical Sections
- 4 Project Layout
- 5 General Notes
- 6-12 Roadway Plan & Profile Sheets
- 13 Driveway Details
- 14 Drainage Structures
- 15 Drainage Details
- 16-17 Pond Details
- 18 Soil Survey
- 19-33 Roadway Cross Sections
- 34 Stormwater Pollution Prevention Plan
- 34A Erosion Control Plan
- 35 Traffic Control Plan
- 36-42 Utility Adjustments

2. Signing & Pavement Marking Plans – Bowyer-Singleton & Associates

- S-1 Key Sheet
- S-2 General Notes
- S-3 to S-9 Signing & Pavement Marking Plan Sheets

3. Signalization Plans – Bowyer-Singleton & Associates, Inc.

T-1	Key Sheet
T-2	General and Pay Item Notes
T-3	Signalization Plan Sheets
T-4	Internally Illuminated Sign Details
T-5	Strain Pole Schedule
T-6	Utility Plan Sheet

4. Water Main Construction Plans – Tetra Tech, Inc.
 - G-002 General Notes and Drawing Index
 - G-003 Legend and Abbreviations
 - G-004 Key Map
 - C-101 to C-108 Plan & Profiles
 - C-501 to C-504 Details

C. Project Manual / Construction Specifications

1. Project Manual
 - Division 0 – Bidding and Contract Requirements
 - Division 1 – General Requirements
 - Division 2 – Sitework
 - City of Deltona Water Construction Specifications
2. City of Deltona Specifications for Water Main Construction
3. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction
4. FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System (Standard Index)

1.02 PROJECT SEQUENCE

- A. The Contractor shall establish his work sequence based on the use of crews to facilitate completion of construction and testing within the specified Contract Time.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

1.01 GENERAL

- A. The Contractor shall receive and accept the compensation provided in the Proposal and the Contract as full payment for furnishing all materials, labor, tools and equipment, for performing all operations necessary to complete the work under the Contract, and also in full payment for all loss or damages arising from the nature of the Work, or from any discrepancy between the actual quantities of work and quantities herein estimated by the Engineer, or from the action of the elements or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the final acceptance by the Owner.
- B. The prices stated in the Proposal include all costs and expenses for taxes, labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the Work as shown on the Drawings and specified herein. The basis of payment for an item at the unit price shown in the Proposal shall be in accordance with the description of that item in this Section.
- C. The Contractor's attention is again called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the Contractor think that the cost for any item of work has not been established by the Bid Form or Payment Items, he shall include the cost for that work in some other applicable bid item, so that his proposal for the Project does reflect his total price for completing the Work in its entirety.

1.02 MEASUREMENT

- A. The quantities for payment under this Contract shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the Owner, in accordance with the applicable method of measurement therefore contained herein.

1.03 PAYMENT ITEMS

- A. The following will clarify the work included for bid items in the Pay Items Sheet:
 - 1. Measurements for various items covered under Mobilization, such as General Requirements, Bonds and Permits will not be made for payment, and all items shall be included in the Contract Lump Sum price. Payment

for Mobilization shall include all insurance requirement costs, the cost of all bonds, permits and all administrative costs associated with acquiring and maintaining the necessary coverage as described in the Contract Documents. This item will be paid upon each payment request made by the Contractor. The Contractor shall attach with the pay request invoices to substantiate that the Contractor has obtained appropriate insurance and bonds.

2. In consideration of the Contractor's Indemnity Agreement as set out in the Contract Documents, the Owner specifically agrees to give the Contractor \$1,000 and other good and valuable consideration, receipt of which is acknowledged upon signing of the Agreement.
3. Measurement and Payment for items 102-1 (Maintenance of Traffic) through 771-11 (Pavement Markings) is itemized in Division 02 of the Project Manual.

END OF SECTION

SECTION 01027

APPLICATIONS FOR PAYMENT

1.01 DESCRIPTION

- A. Scope of Work: Submit Applications for Payment to the Engineer in accordance with schedule established by Conditions of the Contract and Agreement between Owner and Contractor. Contractor shall use the Application and Certificate for Payment Form included in Section 00844 as the official pay request form.
- B. Related Requirements Described Elsewhere:
 - 1. Agreement: Section 00500.
 - 2. Progress Payments, Retainages, and Final Payment: General Conditions: Section 00700 as amended by the Supplementary Conditions: Section 00800.
 - 3. Construction Progress Schedules: Section 01310.
 - 4. Schedule of Values: Section 01370.
 - 5. Color Audio-Video Pre-Construction Record: Section 01390.
 - 6. Contract Closeout: Section 01700.
 - 7. Project Record Documents: Section 01720.

1.02 FORMAT REQUIRED

- A. Submit applications typed on the form provided in Division 0, Section 00844: Application and Certificate for Payment Form, with itemized data typed on 8-1/2 inch x 11 inch or white paper continuation sheets.
- B. Provide itemized data on continuation sheets of format, schedules, line items, and values specified on the Application and Certificate for Payment Form. The Contractor shall use the item descriptions and contract values included in schedule of values, approved and accepted by the Engineer as a basis for preparation of the Application for Payment Form.

1.03 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

- A. Application Form:
 - 1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.

2. Fill in percent complete for each activity and dollar values to agree with respective percents.
3. Execute certification with signature of a responsible officer of Contractor.

B. Continuation Sheets:

1. Fill in total list of all scheduled component items of the Work, with item number and scheduled dollar value for each item.
2. Fill in dollar value in each column for each scheduled line item when Work has been performed or products stored. Round off values to nearest dollar, or as specified for Schedule of Values.
3. List each Change Order executed prior to date of submission, at the end of the continuation sheets. List by Change Order Number, and description, as for an original component item of the Work.
4. To receive approval for payment on component material stored on site, submit copies of the original invoices with the Application and Certificate for Payment.
5. As provided for in the Application and Certificate for Payment Form, the Contractor shall certify, for each current pay request, that all previous progress payments received from the Owner, under this 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 and Certificate for Payment like affidavits by all Subcontractors.

1.04 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. Contractor shall submit suitable information, with a cover letter identifying:
1. Project.
 2. Application number and date.
 3. Detailed list of enclosures.
 4. For stored products:
 - a. Item number and identification as shown on application.
 - b. Description of specific material.

- B. Submit one (1) copy of data and cover letter for each copy of application.
- C. The Contractor is to maintain an updated set of drawings to be used as record drawings in accordance with Section 01720: Project Record Documents. As a prerequisite for monthly progress payments, the Contractor is to exhibit the updated record drawings for review by the Owner and the Engineer.
- D. Each monthly application for payment shall incorporate the corresponding "monthly progress status report" and updated construction schedule, prepared in accordance with the requirements of Section 01310: Construction Progress Schedules.
- E. As a prerequisite for payment, Contractor shall submit a duly executed letter from surety consenting to payment due and progress to date.
- F. Provide pre-construction video in accordance with Section 01390: Color Audio-Video Pre-Construction Record.

1.05 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in application form as specified for progress payments. Provide information as required by the General Conditions and Section 01700: Contract Closeout.
- B. Furnish evidence of completed operations and insurance in accordance with the General Conditions.
- C. Provide Contractor's Final Release of Lien (Section 00849) and other close-out submittals as required by the General Conditions.

1.06 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment to the Engineer between the first (1st) and the tenth (10th) day after the end of each calendar month for which payment is requested as stipulated in the Agreement. Review the percents complete with the Engineer and resolve any conflicts or discrepancies.
- B. Number of copies for each Application for Payment: Five (5) copies plus additional copies for Contractor's needs.
- C. When the Engineer finds the Application and Certificate for Payment Form is properly completed and correct, he will execute the Certificate for Payment and transmit the forms to the Owner, with a copy to the Contractor.

END OF SECTION

SECTION 01041

PROJECT COORDINATION

1.01 PIPE LOCATIONS

- A. Storm drain lines shall be located substantially as indicated on the Drawings, but the Engineer reserves the right to make such modifications in locations as may be found desirable to avoid interference or for other reasons.

1.02 OPEN EXCAVATIONS

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights, and other means to prevent accidents to persons, and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by workmen.

1.03 TEST PITS

- A. Test pits for the purpose of locating underground pipelines in advance of the construction shall be excavated and backfilled by the Contractor. Test pits shall be backfilled immediately after their purpose has been satisfied and maintained in a manner satisfactory to the Engineer. The costs for such test pits shall be borne by the Contractor.

1.04 CARE AND PROTECTION OF PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the Work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Engineer.

1.05 COOPERATION WITHIN THIS CONTRACT

- A. Deltona Water: The Contractor shall, prior to interrupting a utility service (water or sewer) for the purpose of making cut-ins to the existing lines or for any other purposes, contact the resident and make arrangements for the interruption which will be satisfactory to the resident. Contractor will also notify Deltona Water Department of any service interruptions.

- B. Electric, Phone and Cable TV services: The Contractor shall, prior to interrupting a utility service for any reason, contact the resident and make arrangements for the interruption which will be satisfactory to the resident. Contractor will coordinate with Bellsouth Telecommunications, Inc., Florida Power & Light, Florida Public Utilities, Progress-Energy, Deltona Water, Century Link, AT&T, and Bright House Cable Network for any necessary service interruptions.

1.06 COOPERATION WITH OTHER CONTRACTS

- A. This Contract may require a portion of the work to be connected to work done under other contracts or work performed by the Owner. It will be necessary for the Contractor to plan his work and cooperate with other Contractors or Owner insofar as possible to prevent any interference and delay.

END OF SECTION

SECTION 01050

FIELD ENGINEERING

1.01 DESCRIPTION

- A. Scope of Work: Provide and pay for field engineering service for Project.
1. Survey work required in execution of Work.
 2. Civil, structural, or other professional engineering services specified or required to execute Contractor's construction methods.
 3. The method of field staking for the construction of the Work shall be at the option of the Contractor. The Owner has provided the engineering survey necessary to establish reference points which in his judgement are necessary to enable the Contractor to proceed with his work.
 4. The accuracy of any method of staking shall be the responsibility of the Contractor. All engineering for vertical and horizontal control shall be the responsibility of the Contractor.
 5. The Contractor shall be held responsible for the preservation of all stakes and marks. If any stakes or marks are carelessly or willfully disturbed by the Contractor, the Contractor shall not proceed with any work until he has established such points, marks, lines, and elevations as may be necessary for the prosecution of the Work.
 6. The Contractor shall retain the services of a registered land surveyor licensed in the State of Florida to identify existing control points and maintain a survey during construction.
- B. Related Requirements Described Elsewhere:
1. Conditions of the Contract.
 2. Summary of Project: Section 01010.
 3. Project Record Documents: Section 01720.

1.02 QUALIFICATIONS OF SURVEYOR OR ENGINEER

- A. Qualified engineer or registered land surveyor, acceptable to the Owner and the Engineer.
- B. Registered professional engineer of the discipline required for the specific service on the Project, currently licensed in the State of Florida.

1.03 SURVEY REFERENCE POINTS

- A. Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.
 - 1. Make no changes or relocations without prior written notice to the Engineer.
 - 2. Report to the Engineer when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
 - 3. Require surveyor to replace Project control points which may be lost or destroyed at no additional cost to the Owner. Establish replacement based on original survey control.

1.04 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of two (2) permanent bench marks on site, referenced to data established by survey control points.
 - 1. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out, by instrumentation and similar appropriate means:
 - 1. Site improvements:
 - a. Stakes for grading, fill, and topsoil replacement.
 - b. Utility slopes and invert elevations.
 - 2. Batter boards for structure.
 - 3. Building foundation, column locations, and floor levels.
 - 4. Controlling lines and levels required for mechanical and electrical trades.
- C. From time to time, verify layouts by same methods.

1.05 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.
- B. At the end of the project, submit a certified site survey at 1 inch equals 20

feet scale on reproducible tracing sheets 24 inches by 36 inches, indicating the new building corners and location of all new structures.

- C. At the end of the project, submit a certified survey at the same scale as the Engineer's line drawings indicating elevations and stationing at 100-foot pipe increments and at all valve and fitting locations.

1.06 SUBMITTALS

- A. Submit name and address of surveyor and professional engineer to the Engineer.
- B. On request of the Engineer, submit documentation to verify accuracy of field engineering work.
- C. Submit certificate signed by a registered engineer or surveyor certifying that elevations and locations of improvements are in conformance with the Contract Documents, or if not in conformance, certify as to variances from the Contract Documents.
- D. Submit drawings showing locations of all structures constructed. This drawing shall be included with the Project Record Documents.

END OF SECTION

SECTION 01065

PERMITS AND FEES

1.01 DESCRIPTION

A. Scope of Work:

1. The Contractor shall obtain and pay for federal, state and local permits and licenses related to his work, including but not limited to Volusia County Right-of-Way Use Permit, as provided for in the General and Supplementary Conditions except as otherwise provided herein.

1.02 PERMITS BY OWNER

- A. The Owner, prior to the advertisement of the Project, has applied for or obtained permits listed in Table 01065-A.

TABLE 01065-A
PERMITS OBTAINED BY OWNER

Construction Permit	Permit No.	Issue Date
FDEP General Permit for Construction of an Extension to a Public Drinking Water Distribution System	N/A	N/A
City of Deltona Right-of-Way Permit		
SJRWMD ERP Permit		
SJRWMD NPDES Permit and NOI		

- B. The Owner will waive the required fee for issuance of the City of Deltona building permit. This does not relieve the Contractor from any other obligations required by the City of Deltona for obtaining the building permit and any other permits required by the Contractor for this project, except as otherwise provided herein.

END OF SECTION

SECTION 01070

ABBREVIATIONS AND SYMBOLS

1.01 STANDARDS AND ABBREVIATIONS

- A. Referenced Standards: Any reference to published specifications or standards of any organization or association shall comply with the requirements of the specification or standard which is current on the date of Advertisement for Bids. In case of a conflict between the referenced specifications or standards, the one having the more stringent requirements shall govern.

In case of conflict between the referenced specifications or standards and the Contract Documents, the Contract Documents shall govern.

- B. Abbreviations:

AA	Aluminum Association
AAA	American Arbitration Association
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers Association
AASHO	The American Association of State Highway Officials
ABA	American Bar Association
ABMA	American Boiler Manufacturers Association
ABPA	Acoustical and Board Products Association
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AEIC	Association of Edison Illuminating Companies
AFBMA	Anti-Friction Bearing Manufacturers Association
AGA	American Gas Association
AGC	Associated General Contractors of America
AGMA	American Gear Manufacturers Association
AHA	American Hardboard Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AIA	American Insurance Association
AIEE	American Institute of Electrical Engineers (Now IEEE)
AIMA	Acoustical and Insulating Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Condition Association
ANSI	American National Standard Institute
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association

ARI	American Refrigeration Institute
ASA	American Standards Association (Now ANSI)
ASAHC	American Society of Architectural Hardware Consultants
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSCBC	American Standard Safety Code for Building Construction
ASSHTO	American Association of State Highway Transportation Officials
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers Association
AWPB	American Wood Preservers Bureau
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Institute of America (formerly SCPI)
CDA	Copper Development Association
CFS	Cubic Feet Per Second
CMAA	Crane Manufacturers Association of America
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard
DHI	Door and Hardware Institute
DIPRA	Ductile Iron Pipe Research Association
DOT Spec	Standard Specification for Road and Bridge Construction Florida Department of Transportation, 1982
E/A	Engineer and/or Architect
EDA	Economic Development Association
EI	Edison Electric Institute
EPA	Environmental Protection Agency
FCI	Fluid Control Institute
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
Fed Spec	Federal Specification
FPS	Feet Per Second
FS	Federal Standards
GPM	Gallons Per Minute
HMI	Hoist Manufacturers Institute
HP	Horsepower
HSBII	Hartford Steam Boiler Inspection and Insurance Co.
ID	Inside Diameter
IEEE	Institute of Electrical and Electronic Engineers
IFI	Industrial Fasteners Institute
IPCEA	Insulated Power Cable Engineers Association
IPS	Iron Pipe Size
MGD	Million Gallons Per Day

MHI	Materials Handling Institute
MMA	Monorail Manufacturers Association
NBFU	National Board of Fire Underwriters
NBHA	National Builders' Hardware Association
NBS	National Bureau of Standards
NCSA	National Crushed Stone Association
NCSPA	National Corrugated Steel Pipe Association
NEC	National Electrical Code
NECA	National Electrical Contractors' Association
NEMA	National Electrical Manufacturers' Association
NFPA	National Fire Protection Association
NLA	National Lime Association
NPC	National Plumbing Code
NPT	National Pipe Threads
NSC	National Safety Council
NSF	National Sanitation Foundation
OD	Outside Diameter
OSHA	U.S. Department of Labor, Occupational Safety and Health Act
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PS	United States Products Standards
PSI	Pounds per Square Inch
PSIA	Pounds per Square Inch Absolute
PSIG	Pounds per Square Inch Gauge
RAS	Return Activated Sludge
RPM	Revolutions Per Minute
SAE	Society of Automotive Engineers
SDI	Steel Decks Institute
SJI	Steel Joists Institute
SJRWMD	St. Johns River Water Management District
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SSI	Scaffolding and Shoring Institute
SSPC	Steel Structures Painting Council
SSPC	Structural Steel Painting Council
STA	Station (100 feet)
TDH	Total Dynamic Head
TH	Total Head
UBC	Uniform Building Code
UL	Underwriter's Laboratories, Inc.
USASI	United States of America Standards Institute
WAS	Waste Activated Sludge

C. Additional abbreviations and symbols are shown on the Drawings.

END OF SECTION

SECTION 01200

PROJECT MEETINGS

1.01 DESCRIPTION

A. Scope of Work:

1. The Contractor shall cooperate and coordinate with the Engineer to schedule and administer the pre-construction meeting, periodic progress meetings, and specifically called meetings throughout the progress of the Work. The Contractor shall:
 - a. Prepare agenda for meetings.
 - b. Make physical arrangements for meetings.
 - c. Preside at meetings.
 - d. Take and distribute meeting minutes.
2. Representatives of Contractor, subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
3. The Owner shall attend meetings to ascertain that the Work is expedited consistent with Contract Documents and construction schedules.
4. The Contractor shall record the pre-construction meeting and each progress meeting in its entirety, and shall provide the Engineer with a regular cassette copy of such recording, having good quality and clarity, and a typed transcript of the minutes of each meeting. A copy of the minutes of each progress meeting shall be available five business days after the meeting.

B. Related Requirements Described Elsewhere:

1. Construction Progress Schedules: Section 01310.
2. Shop Drawings, Working Drawings, and Samples: Section 01340.
3. Project Record Documents: Section 01720.

1.02 PRE-CONSTRUCTION MEETING

- ##### A.
- Engineer will schedule a pre construction meeting no later than five (5) business days after date of Notice to Proceed. The meeting shall be

scheduled at the convenience of all parties.

B. Location: A local site, convenient for all parties, designated by the Engineer.

C. Attendance:

1. Owner's representative.
2. Engineer and his professional consultants.
3. Contractor and his superintendent.
4. Major subcontractors.
5. Representatives of major suppliers and manufacturers as appropriate.
6. Governmental representatives as appropriate.
7. Others as requested by the Contractor, Owner, and Engineer.

D. The Engineer shall preside at the pre-construction meeting. The Contractor shall provide for keeping minutes and distribution of minutes to the Owner, Engineer and others. The purpose of the pre-construction meeting is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established.

E. The suggested agenda for the pre-construction meeting would include the following:

1. Distribution and discussion of:
 - a. List of major subcontractors and suppliers.
 - b. Projected schedules.
 - c. Schedule of Values.
2. Critical work sequencing: Relationships and coordination with other contracts and/or work.
3. Major equipment deliveries and priorities.
4. Project coordination: Designation and responsible personnel.
5. Procedures and processing of:

- a. Field decisions.
 - b. Proposal requests.
 - c. Request for Information.
 - d. Submittals.
 - e. Change Orders.
 - f. Applications for Payment.
6. Submittal of Shop Drawings, project data and samples.
 7. Adequacy of distribution of Contract Documents.
 8. Procedures for maintaining Record Documents
 9. Use of premises:
 - a. Office, work, and storage areas.
 - b. Owner's requirements.
 - c. Access and traffic control.
 10. Construction facilities, controls, and construction aids.
 11. Temporary utilities.
 12. Safety and first aid procedures.
 13. Check of required Bond and Insurance certifications.
 14. Completion time for contract and liquidated damages.
 15. Request for extension of Contract Time.
 16. Procedures for periodic monthly (or whatever interval is deemed appropriate or necessary, however, a minimum of monthly meetings will be required) progress meetings, for all involved.
 17. Security procedures.
 18. Procedures for making partial payments.
 19. Guarantees on completed work.
 20. Equipment to be used.

21. Project layout and staking of work.
22. Project inspection.
23. Labor requirements.
24. Laboratory testing of material requirements.
25. Provisions for material stored on site and monthly inventory of materials stored.
26. Requirements of other organizations such as utilities, railroads, highway departments, building departments.
27. Rights-of-way and easements.
28. Housekeeping procedures.
29. Liquidated damages.
30. Posting of signs and installation of Project Sign.
31. Pay request submittal dates.
32. Equal opportunity requirements.

1.03 PROGRESS MEETINGS

- A. The Engineer shall schedule regular periodic meetings. The progress meetings will be held a minimum of once every thirty (30) days and at other times as required by the progress of the Work. The first meeting shall be held within thirty (30) days after the pre-construction meeting or thirty (30) days or less after the date of Notice to Proceed.
- B. Hold called meetings as required by progress of the Work.
- C. Location of the meetings: A local site convenient for all parties.
- D. Attendance:
 1. Engineer and his professional Subconsultants as needed.
 2. Contractor and his Superintendent.
 3. Owner's representatives.
 4. Subcontractors (active on the site, as appropriate to the agenda).

5. Others as appropriate to the agenda (suppliers, manufacturers, other subcontractors, etc.).
- E. The Contractor shall preside at the meetings and provide for keeping minutes and distribution of the minutes to the Owner, Engineer, and others. The purpose of the meetings will be to review the progress of the Work.
- F. The suggested agenda for the progress meetings will include but not be limited to the following:
1. Review approval of minutes of previous meeting.
 2. Review of Work progress since previous meeting and Work scheduled (3-week look ahead schedule).
 3. Field observations, problems, conflicts.
 4. Problems which impede construction schedule.
 5. Review of off-site fabrication, delivery schedules.
 6. Corrective measures and procedures to regain projected schedule.
 7. Status of approved Construction Schedule and revisions to the Construction Schedule as appropriate.
 8. Progress schedule during succeeding work period.
 9. Coordination of schedules.
 10. Review status of submittals and submittal schedule, expedite as required.
 11. Maintenance of quality standards.
 12. Pending changes and substitutions.
 13. Shop drawing problems.
 14. Review proposed changes for:
 - a. Effect on Construction Schedule and on completion date.
 - b. Effect on other contracts of the Project.
 15. Critical/long lead items.
 16. Other business.

- G. The Contractor is to attend progress meetings and is to study previous meeting minutes and current agenda items, and be prepared to discuss pertinent topics and provide specific information including but not limited to:
1. Status of all submittals and what specifically is being done to expedite them.
 2. Status of all activities behind schedule and what specifically will be done to regain the schedule.
 3. Status of all material deliveries, latest contact with equipment manufacturer, and specific actions taken to expedite materials.
 4. Status of open deficiencies and what is being done to correct the same.
- H. The Contractor is to provide a current submittal log at each progress meeting in accordance with Section 01340: Shop Drawings, Working Drawings, and Samples.

END OF SECTION

SECTION 01310

CONSTRUCTION PROGRESS SCHEDULES

1.01 DESCRIPTION

A. Scope of Work:

1. Promptly after award of the Contract, prepare and submit to the Engineer estimated construction progress schedules demonstrating complete fulfillment of all Contract requirements utilizing a Critical Path Method (hereinafter referred to as CPM) in planning, coordinating, and performing the Work under this Contract (including all activities of subcontractors, equipment vendors, and suppliers). The principles and definition of CPM terms used herein shall be as set forth in the Associated General Contractors of America (AGC) publication, Construction Planning & Scheduling Manual, Copyright 1984, but the provisions of this Specification shall govern the planning, coordinating, and performance of the Work.
2. Submit revised progress schedules on a monthly basis. No partial payments shall be approved until there is an approved construction progress schedule on hand.

B. Related Requirements Described Elsewhere:

1. Conditions of the Contract.
2. Summary of Project: Section 01010.
3. Project Meetings: Section 01200.
4. Applications for Payment: Section 01027
5. Shop Drawings, Working Drawings, and Samples: Section 01340.
6. Schedule of Values: Section 01370.

1.02 QUALIFICATIONS

- A. A statement of computerized CPM capability shall be submitted in writing prior to the award of the Contract and shall verify that either Contractor's organization has in-house capability to use the CPM technique or that Contractor will employ a CPM consultant who is so qualified.
- B. In-house capability shall be verified by description of construction projects to which Contractor or Contractor's consultant has successfully applied

computerized CPM and shall include at least two (2) projects valued at least half the expected value of this project.

1.03 FORM OF SCHEDULES

- A. Prepare schedules in the form of a horizontal bar chart.
 - 1. Provide a separate horizontal bar for each trade or operation within each structure or item.
 - 2. Horizontal time scale:
 - a. Show starting and completion dates for each activity in terms of the number of days after Notice to Proceed. All completion dates shown shall be within the period specified for contract completion.
 - b. Identify the first work day of each month.
 - 3. Scale and Spacing: Sufficient to allow space for notations and future revisions.
 - 4. Maximum Sheet Size: 24 inches by 36 inches.
- B. Format of Listings: The chronological order of the start of each item of work for each structure.
- C. Identification of Listings: By major specification section numbers as applicable and by structure.
- D. Construction Progress Schedules shall be computer generated using software equal to Primavera Project Planner for Windows by Primavera Systems, Inc., Bala Cynwyd, P.A., or approved equal.

1.04 CONTENT OF SCHEDULES

- A. Construction Progress Schedule:
 - 1. Show the complete sequence of construction by activity and by structure.
 - 2. Show the dates for the beginning and completion of each major element of construction in no more than a two (2) week increment scale. Specifically list, but do not limit to:
 - a. Shop Drawing Schedule.
 - b. Maintenance of Traffic.

- c. Clearing & Earthwork.
 - d. Site utilities / relocation.
 - e. Storm Drainage work
 - f. Curb, Sidewalks, Walls.
 - g. Subgrade, base, pavement.
 - h. Signalization.
 - i. Signage, striping.
 - j. Grassing.
 - k. Project completion / closeout / testing.
3. Show projected percentage of completion for each item, as of the first day of each month.
 4. Show projected dollar cash flow requirements for each month of construction and for each activity as indicated by the approved Schedule of Values.
- B. Submittals for construction progress schedules shall be in accordance with Section 01340: Shop Drawings, Work Drawings, and Samples. Indicate on the schedule the following:
1. The dates for Contractor's submittals.
 2. The dates submittals will be required for Owner-furnished products, if applicable.
 3. The dates approved submittals will be required from the Engineer.
- C. A typewritten list of all long lead items (equipment, materials, etc.).
- D. To the extent that the progress schedule or any revised progress schedule shows anything not jointly agreed upon or fails to show anything jointly agreed upon, it shall not be deemed to have been approved by the Engineer. Failure to include any element of work required for the performance of this Contract shall not excuse the Contractor from completing all work required within any applicable completion date, notwithstanding the Engineer's approval of the progress schedule.
- E. Scheduling Constraints: The work within Owner's property must be completed within the maximum number of days start to finish, as indicated in the Contract. Additionally, work must proceed on a continuous basis,

without stoppages, except for nights and weekends. There shall be no lapses between phases of construction.

1.05 PROGRESS REVISIONS

- A. Indicate progress of each activity to date of submission.
- B. Show changes occurring since previous submission of schedule:
 - 1. Major changes in scope.
 - 2. Activities modified since previous submission.
 - 3. Revised projections of progress and completion.
 - 4. Other identifiable changes.
- C. Provide a narrative report as needed to define:
 - 1. Problem areas, anticipated delays, and the impact on the schedule.
 - 2. Corrective action recommended, and its effect.
 - 3. The effect of changes on schedules of other prime contractors.
- D. If the Work falls behind the critical path schedule by two (2) weeks or more, the Contractor shall prepare a recovery schedule.

1.06 SUBMISSIONS

- A. Submittal Requirements.
 - 1. Logic network and/or time-phased bar chart, computer generated.
 - 2. Computerized network analysis:
 - a. Sort by early start
 - b. Sort by float
 - c. Sort by predecessor/successor
 - 3. Narrative description of the logic and reasoning of the schedule.

- B. Time of Submittals.

Within ten (10) working days after Notice to Proceed, Contractor shall submit a network diagram describing the activities to be accomplished in the project and their dependency relationships, (predecessor/successor)

as well as a tabulated schedule as herein defined. The total length of time indicated on the initial CPM schedule shall equal the exact number of days in the Contract Time as defined in Section 00500: Agreement. The schedule produced and submitted shall also indicate calendar dates, including project starting and completion dates, based on the Contract Commencement and completion dates indicated in the Notice to Proceed. The Engineer will complete the review of the complete schedule within fifteen (15) working days after receipt. During the review process, the Engineer may meet with a representative of Contractor to review the proposed plan and schedule to discuss any clarifications that may be necessary.

- C. Within ten (10) working days after the conclusion of the Engineer's review period, Contractor shall revise the network diagram as required and resubmit the network diagram and a tabulated schedule produced therefrom. The revised network diagram and tabulated schedule shall be reviewed and accepted or rejected by the Engineer within fifteen (15) working days after receipt. The network diagram and tabulated schedule, when accepted by the Engineer, shall constitute the project work schedule unless a revised schedule is required due to substantial changes in the Work, a change in Contract Time or a recovery schedule is required and requested.
- D. Acceptance. The finalized schedule will be acceptable to the Engineer when, in the opinion of the Engineer, it demonstrates an orderly progression of the Work to completion in accordance with the Contract Documents. Such acceptance will neither impose on the Engineer responsibility for the progress or scheduling of the Work nor relieve Contractor from full responsibility therefore. The finalized schedule of shop drawing submittals will be acceptable to the Engineer when, in the opinion of the Engineer, it demonstrates a workable arrangement for processing the submittals in accordance with the requirements. The finalized Schedule of Values (lump sum price breakdown), as applicable, will be acceptable to the Engineer as to form and content when, in the opinion of the Engineer, it demonstrates a substantial basis for equitably distributing the Contract Price. When the network diagram and tabulated schedule have been accepted, the Contractor shall submit to the Engineer six (6) copies of the time-scaled network diagram, six (6) copies of a computerized tabulated schedule in which the activities have been sequenced by numbers, six (6) copies of a computerized tabulated schedule in which the activities have been sequenced by early starting date, and six (6) copies of a computerized, tabulated schedule in which activities have been sequenced by total float, and six (6) copies sorted by predecessor/successor.
- E. Revised Work Schedules. Contractor, if requested by the Engineer, shall provide a revised work schedule if, at any time, the Engineer considers the completion date to be in jeopardy because of "activities behind schedule." The revised work schedule shall include a new diagram and tabulated

schedule conforming to the requirements of Paragraph 1.09 herein, designed to show how Contractor intends to accomplish the Work to meet the completion date. The form and method employed by Contractor shall be the same as for the original work schedule. No payment will be made if activities fall more than two (2) weeks behind schedule and a revised work schedule is not furnished.

- F. Schedule Revisions. The Engineer may require Contractor to modify any portions of the work schedule that become infeasible because of "activities behind schedule" or for any other valid reason. An activity that cannot be completed by its original latest completion date shall be deemed to be behind schedule. No change may be made to the sequence, duration, or relationships of any activity without approval of the Engineer.

1.07 DISTRIBUTION

- A. Distribute copies of the reviewed schedules to:
 - 1. Engineer.
 - 2. Jobsite file.
 - 3. Subcontractors.
 - 4. Other concerned parties.
 - 5. Owner (two copies).
- B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

1.08 CHANGE ORDERS

- A. Upon approval of a change order, the approved changes shall be reflected in the next scheduled revision or update submittal of the construction progress schedule by the Contractor.

1.09 CPM STANDARDS

- A. CPM, as required by this Section, shall be interpreted to be generally as outlined in the Associated General Contractor's (AGC) publication, Construction Planning & Scheduling Manual, Copyright 1984.
- B. Work schedules shall include a graphic network and computerized, tabulated schedules as described below. To be acceptable the schedule must demonstrate the following:
 - 1. A logical succession of work from start to finish.

2. Definition of each activity. Activities shall be identified by major specification section numbers, as applicable, and by major structure.
 3. A logical flow of work crews/equipment (crews are to be defined by manpower category and man-hours; equipment by type and hours).
 4. Show all work activities and interfaces including submittals as well as major material and equipment deliveries.
- C. Networks.
1. The CPM network, or diagram, shall be in the form of a time-scaled diagram of the customary activity-on-type and may be divided into a number of separate pages with suitable notation relating the interface points among the pages. Notation on each activity line shall include a brief work description and a duration, as described in Paragraph 1.09, D. herein.
 2. All construction activities and procurement shall be indicated in a time-scaled format, and a calendar shall be shown on all sheets along the entire sheet length. Each activity arrow shall be plotted so the beginning and completion dates of said activity can be determined graphically by comparison with the calendar scale. All activities shall be shown using the symbols that clearly distinguish between critical path activities, non-critical path activities, and float for each non-critical activity. All non-critical path activities shall show estimated performance time and float time in scaled form.
- D. The duration indicated for each activity shall be in calendar days and shall represent the single best time considering the scope of the work and resources planned for the activity including time for inclement weather. Except for certain non-labor activities, such as curing concrete or delivering materials, activity durations shall not exceed fourteen (14) days nor be less than one (1) day unless otherwise accepted by the Engineer.
- E. Tabulated Schedules. The initial schedule shall include the following minimum data for each activity.
1. Activity Beginning and Ending Numbers (i-j numbers) (single activity numbers may be used).
 2. Duration.
 3. Activity Description.
 4. Early Start Date (Calendar Dated).
 5. Late Start Date (Calendar Dated).

6. Early Finish Date (Calendar Dated).
 7. Late Finish Date (Calendar Dated).
 8. Identified Critical Path.
 9. Total Float (Note: No activity may show more than 20 days float).
 10. Cost of Activity.
 11. Equipment Hours, by type; Man-Power Hours, by crew or trade.
- F. Project Information. Each tabulation shall be prefaced with the following summary data.
1. Project Name.
 2. Contractor.
 3. Type of Tabulation (Initial or Updated).
 4. Project Duration.
 5. Project Scheduled Completion Date.
 6. Effective or Starting Date of the Schedule.
 7. New Project Completion Date and Project Status (if an updated or revised schedule).
 8. Actual Start Date and Actual Finish Date (for all updated schedules.)

1.10 SCHEDULE MONITORING

- A. At not less than monthly intervals or when specifically requested by Engineer, Contractor shall submit to the Engineer a computer printout of an updated schedule for those activities that remain to be completed. Typically, the updated schedule will be submitted with the application for payment as specified below.
- B. The updated schedule shall be submitted in the form, sequence, and number of copies requested for the initial schedule.

1.11 PROGRESS MEETINGS

For the monthly progress meeting, Contractor shall submit a revised CPM schedule and a three-week look-ahead schedule, showing all activities

completed, in progress, uncompleted, or scheduled to be worked during the weeks. The three weeks include the current week plus the next two weeks. All activities shall be from the approved CPM and must be as shown on the CPM unless behind or ahead of schedule. One copy of the revised CPM schedule shall be submitted with each copy of that month's application for payment, six (6) copies minimum.

END OF SECTION

SECTION 01340

SHOP DRAWINGS, WORKING DRAWINGS, AND SAMPLES

1.01 DESCRIPTION

A. Scope of Work:

1. The Contractor shall submit to the Engineer for review and approval, such Shop Drawings, Test Reports, and Product Data on materials and equipment (hereinafter in this Section called Data), and material samples (hereinafter in this Section called Samples) as are required for the proper control of work, including but not limited to those Shop Drawings, Data, and Samples for materials and equipment specified elsewhere in the Specifications and in the Drawings.
2. Within fourteen (14) calendar days after the Notice to Proceed, the Contractor shall submit to the Engineer a complete list of preliminary Data on items for which Shop Drawings are to be submitted. Included in this list shall be the names of all proposed manufacturers furnishing specified items. Review of this list by the Engineer shall in no way expressed or implied relieve the Contractor from submitting complete Shop Drawings and providing materials, equipment, etc., fully in accordance with the Contract Documents. This procedure is required in order to expedite final review of Shop Drawings.
3. The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the Owner and the Engineer. This log should include the following items:
 - a. Submittal description and number assigned.
 - b. Date to Engineer.
 - c. Date returned to Contractor (from Engineer).
 - d. Status of submittal (Approved, Approved as Noted, Amend and Resubmit, and Rejected).
 - e. Date of resubmittal and return (as applicable).
 - f. Date material release (for fabrication).
 - g. Projected date of fabrication.

- h. Projected date of delivery to site.
 - i. Status of O&M manuals submittal.
 - j. Specification Section.
 - k. Drawings sheet number.
- B. Related Requirements Described Elsewhere:
- 1. General Conditions: Section 00700.
 - 2. Shop Drawing Submittal Form: Section 00847.
 - 3. Construction Progress Schedules: Section 01310.
 - 4. Material and Equipment: Section 01600.
 - 5. Project Record Documents: Section 01720.

1.02 CONTRACTOR'S RESPONSIBILITY

- A. It is the responsibility of the Contractor to check all drawings, data and samples prepared before submitting them to the Engineer for review. Each and every copy of the Drawings and data shall bear the Contractor's stamp showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents. If the Contractor takes exception to the specifications, the Contractor shall note the exception in the letter of transmittal to the Engineer.
- B. Determine and verify:
- 1. Field measurements.
 - 2. Field construction criteria
 - 3. Catalog numbers and similar data.
 - 4. Conformance with Specifications.
- C. The Contractor shall furnish the Engineer a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning and ending of manufacture, testing, and installation of materials, supplies, and equipment. This schedule shall indicate those that are critical to the progress schedule.

- D. The Contractor shall not begin any of the work covered by a Shop Drawing, Data, or a Sample returned for correction until a revision or correction thereof has been reviewed and returned to him, by the Engineer, with approval.
- E. The Contractor shall submit to the Engineer all drawings and schedules sufficiently in advance of construction requirements to provide no less than thirty (30) calendar days for checking and appropriate action from the time the Engineer receives them.
- F. All submittals shall be accompanied with a transmittal letter prepared in duplicate containing the following information:
 - 1. Date.
 - 2. Project Title and Number.
 - 3. Contractor's name and address.
 - 4. The number of each Shop Drawings, Project Data, and Sample submitted.
 - 5. Notification of Deviations from Contract Documents.
 - a. The Contractor shall indicate in **bold type** at the top of the cover sheet of submittal of shop drawing if there is a deviation from the Drawings, Specifications, or referenced specifications or codes.
 - b. The Contractor shall also list any deviations from the Drawings, Specifications, or referenced specifications or codes and identify in green ink prominently on the applicable Shop Drawings.
 - 6. Submittal Log Number conforming to Specification Section Number.
- G. The Contractor shall submit seven (7) copies of descriptive or product data information and Shop Drawings to the Engineer plus the number of copies which the Contractor requires returned. All blueprint Shop Drawings shall be submitted with one (1) set of mylar reproducibles and the same number of prints as Shop Drawings, plus the number of copies which the Contractor requires returned. The Engineer will review the blueprints and return to the Contractor the set of marked-up mylar reproducibles with appropriate review comments.
- H. The Contractor shall be responsible for and bear all costs of damages which may result from the ordering of any material or from proceeding with any part of Work prior to the completion of the review by the Engineer of

the necessary Shop Drawings.

- I. The Contractor shall be fully responsible for observing the need for and making any changes in the arrangement of piping, connections, wiring, manner of installation, etc., which may be required by the materials/equipment he proposes to supply both as pertains to his own work and any work affected under other parts, headings, or divisions of the Drawings and Specifications.
- J. The Contractor shall not use Shop Drawings as a means of proposing alternate items to demonstrate compliance with the Drawings and Specifications.
- K. Each submittal will bear a stamp indicating that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal as illustrated below.

(OWNER'S NAME) (PROJECT NAME) (PROJECT NUMBER)
SHOP DRAWING NO.:
SPECIFICATION SECTION: DRAWING NO. _____
WITH RESPECT TO THIS SHOP DRAWING OR SAMPLE, I HAVE DETERMINED AND VERIFIED ALL QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS, AND SIMILAR DATA WITH RESPECT THERETO AND REVIEWED OR COORDINATED THIS SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.
NO VARIATION FROM CONTRACT DOCUMENTS
VARIATION FROM CONTRACT DOCUMENTS AS SHOWN
(CONTRACTOR'S NAME) (CONTRACTOR'S ADDRESS)
BY: _____ DATE: _____
AUTHORIZED SIGNATURE

- L. Drawings and schedules shall be checked and coordinated with the work of all trades and sub-contractors involved, before they are submitted for review by the Engineer and shall bear the Contractor's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the Contractor for resubmission.

1.03 ENGINEER'S REVIEW OF SHOP DRAWINGS

- A. The Engineer's review of Shop Drawings, Data, and Samples as submitted by the Contractor will be to determine if the items(s) generally

conforms to the information in the Contract Documents and is compatible with the design concept. The Engineer's review and exceptions, if any, will not constitute an approval of dimensions, connections, quantities, and details of the material, equipment, device, or item shown.

- B. The review of drawings and schedules will be general, and shall not be construed:
 - 1. As permitting any departure from the Contract Documents.
 - 2. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials.
 - 3. As approving departures from details furnished by the Engineer, except as otherwise provided herein.
- C. If the drawings or schedules as submitted describe variations and show a departure from the Contract Documents which the Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or contract time, the Engineer may return the reviewed drawings without noting an exception.
- D. "Approved As Noted" - Contractor shall incorporate Engineer's comments into the submittal before release to manufacturer. The Contractor shall send a letter to the Engineer acknowledging the comments and their incorporation into the Shop Drawing.
- E. "Amend And Resubmit" - Contractor shall resubmit the Shop Drawing to the Engineer. The resubmittal shall incorporate the Engineer's comments highlighted on the Shop Drawing.
- F. "Rejected" - Contractor shall correct, revise and resubmit Shop Drawing for review by Engineer.
- G. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the Engineer on previous submissions. The Contractor shall make any corrections required by the Engineer.
- H. If the Contractor considers any correction indicated on the drawings to constitute a change to the Drawings or Specifications, the Contractor shall give written notice thereof to the Engineer.
- I. When the Shop Drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

J. No partial submittals will be reviewed. Submittals not deemed complete will be stamped "Rejected" and returned to the Contractor for resubmittal. Unless otherwise specifically permitted by the Engineer, make all submittals in groups containing all associated items for:

1. Systems.
2. Processes.
3. As indicated in specific Specifications Sections.

All drawings, schematics, manufacturer's product Data, certifications, and other Shop Drawing submittals required by a system specification shall be submitted at one time as a package to facilitate interface review.

K. Only the Engineer shall utilize the color "red" in marking Shop Drawing submittals.

L. Shop drawing and submittal data shall be reviewed by the Engineer for each original submittal and first resubmittal; thereafter review time for subsequent resubmittals shall be charged to the Contractor and the Contractor shall reimburse the Owner for services rendered by the Engineer as specified in the Supplementary Conditions.

1.04 SHOP DRAWINGS

A. When used in the Contract Documents, the term "Shop Drawing" shall be considered to mean Contractor's plans for materials and equipment which become an integral part of the Project. Shop Drawings shall be complete and detailed and shall consist of fabrication, erection, setting and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Catalogs cuts, catalogs, pamphlets, descriptive literature, and performance and test data shall be considered only as supportive information to required Shop Drawings as defined above. As used herein, the term "manufactured" applies to standard units usually mass-produced; and "fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements.

B. Manufacturer's catalog sheets, brochures, diagrams, illustrations, and other standard descriptive data shall be clearly marked to identify pertinent materials, products, or models. Delete information which is not applicable to the Work by striking or cross-hatching.

C. Each Shop Drawing shall be submitted with an 8-1/2" by 11" cover sheet which shall include a title block for the submittal. Each Shop Drawing cover sheet shall have a blank area 3-1/2 inches high by 4-1/2 inches wide, located adjacent to the title block. The title block/cover sheet shall display the following:

1. Project Title and Number.
 2. Name of project building or structure.
 3. Number and title of the Shop Drawing.
 4. Date of Shop Drawing or revision.
 5. Name of Contractor and subcontractor submitting drawing.
 6. Supplier/manufacturer.
 7. Separate detailer when pertinent.
 8. Specification title and Section number.
 9. Applicable Drawing number.
- D. Data on materials and equipment shall include, without limitation, materials and equipment lists, catalog data sheets, catalog cuts, performance curves, diagrams, verification of conformance with applicable standards or codes, materials of construction, and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish, and all other pertinent Data.
- E. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name, and address, and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.
- F. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility for executing the Work in accordance with the Contract, even though such drawings have been reviewed.
- G. All manufacturers or equipment suppliers who propose to furnish equipment or products shall submit an installation list to the Engineer along with the required shop drawings. The installation list shall include at least five (5) installations where identical equipment has been installed and has been in operation for a period of at least two (2) years unless specified otherwise in the Specification Section applicable.

1.05 WORKING DRAWINGS

- A. When used in the Contract Documents, the term "Working Drawings" shall

be considered to mean the Contractor's plan for temporary structures such as temporary bulkheads, support of open cut excavation, support of utilities, ground water control systems, forming and false work for underpinning, and for such other work as may be required for construction but does not become an integral part of the Project.

- B. Copies of working drawings as noted in paragraph 1.05 A. above, shall be submitted to the Engineer where required by the Contract Documents or requested by the Engineer, and shall be submitted at least thirty (30) calendar days (unless otherwise specified by the Engineer) in advance of their being required for the Work.
- C. Working Drawings shall be signed by a registered Professional Engineer, currently licensed to practice in the State of Florida, and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such work, working drawings must have been reviewed without specific exceptions by the Engineer, which review will be for general conformance and will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks to new or existing work are assumed by the Contractor; the Owner and Engineer shall have no responsibility therefore.

1.06 SAMPLES

- A. The Contractor shall furnish, for the approval of the Engineer, samples required by the Contract Documents or requested by the Engineer. Samples shall be delivered to the Engineer as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in the Work until approved by the Engineer.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of the product, with integrally related parts and attachment devices.
 - 2. Full range of color, texture, and pattern.
 - 3. A minimum of three (3) samples of each item shall be submitted.
- C. Each sample shall have a label indicating:
 - 1. Name of Project.
 - 2. Name of Contractor and subcontractor.
 - 3. Material or equipment represented.

4. Place of origin.
5. Name of producer/supplier and brand (if any).
6. Location in Project.
7. Submittal and specification numbers.

(Samples of finished materials shall have additional marking that will identify them under the finished schedules.)

- D. The Contractor shall prepare a transmittal letter and a description sheet for each shipment of samples. The description sheet shall contain the information required in Paragraphs 1.06B and C above. He shall enclose a copy of the letter and description sheet with the shipment and send a copy of the letter and description sheet to the Engineer. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify any Contract requirements.
- E. Approved samples not destroyed in testing shall be sent to the Engineer or stored at the site of the Work. Approved Samples of the hardware in good condition will be marked for identification and may be used in the Work. Materials and equipment incorporated in the Work shall match the approved Samples. Samples which failed testing or were not approved will be returned to the Contractor at his expense, if so requested at time of submission.

END OF SECTION

SECTION 01370

SCHEDULE OF VALUES

1.01 DESCRIPTION

A. Scope of Work:

1. Submit to the Engineer a Schedule of Values allocated to the various lump sum portions of the Work, at the Pre-Construction Meeting, and as otherwise specified or requested to be submitted earlier as evidence of the Apparent Low Bidder's qualifications.
2. Upon request of the Engineer support the values with data which will substantiate their correctness. The data shall include, but not be limited to quantity of materials, all sub-elements of the activity, and their units of measure.
3. The Schedule of Values shall establish the actual value for each activity of the Work to be completed taken from the approved Critical Path Method (CPM) Construction Schedule, and shall be used as the basis for the Contractor's Applications for Payment.

B. Related Requirements Described Elsewhere:

1. Conditions of the Construction Contract.

1.02 FORM AND CONTENT OF SCHEDULE OF VALUES

A. Type schedule on 8-1/2 inch x 11 inch white paper. Contractor's standard forms and computer printouts may be considered for approval by the Engineer upon Contractor's request. Identify schedule with:

1. Title of project and location.
2. Owner and purchase order number.
3. Engineer and project number.
4. Name and address of Contractor.
5. Contract designation.
6. Date of submission.

B. Schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing item prices for progress payments during construction.

- C. Identify each line item with the number and the title of the respective section of the Specifications.
- D. For each major item of the Work, list sub-values of major products or operations under the major item.
- E. For the various portions of the Work:
 - 1. The amount for each item shall reflect a total installed cost including a directly proportional amount of the Contractor's overhead and profit.
 - 2. For items on which progress payments will be requested for stored materials, break down the value into:
 - a. The cost of the materials, delivered and unloaded, with taxes paid. Paid invoices are required for materials. Payment for materials shall be limited to the invoiced amount only.
 - b. The total installed value.
- F. Round off figures to nearest dollar amount.
- G. The sum of the costs of all items listed in the schedule shall equal the total Contract Price.
- H. For each item which has an installed value of more than \$15,000, provide a breakdown of costs to list major products or operations under each item.
- I. The form of the Schedule of Values shall parallel the form presented in Table 01370-1. As a minimum, the Contractor shall provide a contract value for all of the items listed in Table 01370-1. The Contractor may add additional items for convenience of pay request approvals.

1.03 SUBSCHEDULE OF UNIT MATERIAL VALUES

- A. Submit a separate schedule of unit prices for materials to be stored on site and for those materials incorporated into the Work for which progress payments will be requested.
- B. Format shall parallel that shown in Section 00846: Materials Stored On Site Form and Section 00845: Schedule of Values Form.
- C. The unit values for the materials shall be broken down into:
 - 1. Cost of the material, delivered and unloaded at the site, with taxes paid.

2. Copies of paid invoices for component material shall be included with the payment request in which the material first appears.
- D. Only materials unique to the project may be billed when stored on site. Materials of standard use such as conduit, wire, small-diameter pipe, steel, etc., shall not be accepted for payment.
- E. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values.

1.04 REVIEW AND RESUBMITTAL

- A. After review by Engineer, revise and resubmit Schedule of Values and Schedule of Unit Material Values as required.
- B. Resubmit revised schedules in same manner.

END OF SECTION

SECTION 01390

COLOR AUDIO-VIDEO PRE-CONSTRUCTION RECORD

1.01 DESCRIPTION

- A. Scope of Work: Prior to commencing work, the Contractor shall have a continuous color audio-video tape recording taken along the entire length of the Project and at all proposed construction sites within the Project area to serve as a record of pre-construction conditions.

1.02 APPROVAL

- A. No construction shall begin prior to review and approval of the tape covering the construction area by the Owner and Engineer. The Engineer shall have the authority to reject all or any portion of a video tape not conforming to Specifications and order that it be redone at no additional charge.
- B. The Contract shall reschedule unacceptable coverage within five (5) days after being notified. The Engineer shall designate those areas, if any, to be omitted from or added to the audio-video coverage.
- C. Tape recordings shall not be made more than ninety (90) days prior to construction in any area. All tapes and written records shall become property of the Owner.

1.03 PROFESSIONAL ELECTROGRAPHERS

- A. The Contractor shall engage the services of a professional electrographer. The color audio-video tapes shall be prepared by a responsible commercial firm known to be skilled and regularly engaged in the business of pre-construction color audio-video tape documentation.
- B. The electrographer shall furnish to the Engineer a list of all equipment to be used for the audio-video taping, i.e., manufacturer's name, model number, specifications and other pertinent information.
- C. Additional information to be furnished by the electrographer is the names and addresses of two (2) references that the electrographer has performed color audio-video taping for on projects of a similar nature, one (1) within the last twelve (12) months.

2.01 AUDIO-VIDEO TAPES

- A. Audio-video tapes shall be new. Reprocessed tapes will not be acceptable. The tapes shall be one-half inch high energy, extended still

frame capable, video cassette, Scotch Camera EXG grade or equal.

3.01 EQUIPMENT

- A. All equipment, accessories, materials and labor to perform this service shall be furnished by the Contractor.
- B. The total audio-video system shall reproduce bright, sharp, clear picture with accurate colors and shall be free from distortion, tearing, rolls or any other form of imperfection. The audio portion of the recording shall reproduce the commentary of the camera operator with proper volume, clarity, and be free from distortion and interruptions.
- C. When conventional wheeled vehicles are used, the distance from the camera lens to the ground shall not be more than ten (10) feet. In some instances, audio-video tape coverage may be required in areas not accessible by conventional wheeled vehicles. Such coverage shall be obtained by walking or special conveyance provided by the Engineer.
- D. The color video camera used in the recording system shall have a horizontal resolution of 350 lines at center, a luminance signal to noise ratio of 45 dB and a minimum illumination requirement of one (1) foot candle.

3.02 RECORDED INFORMATION – AUDIO

- A. Each tape shall begin with the current date, project name and municipality and be followed by the general location, i.e., viewing side and direction of progress. The audio track shall consist of an original live recording. The recording shall contain the narrative commentary of the electrographer, recorded simultaneously with his fixed elevation video record of the zone of influence of construction.
- B. The Owner and Engineer reserve the right to supplement the audio portion of the taping as deemed necessary. A representative of the Owner or Engineer shall be selected to provide such narrative.

3.03 RECORDED INFORMATION – VIDEO

- A. All video recordings shall, by electronic means, display on the screen the time of day, the month, day and year of the recording. This time and date information must be continuously and simultaneously generated with the actual recording.
- B. Each video tape shall have a log of that video tape's contents. The log shall describe the various segments of coverage contained on that video tape in terms of the names of streets or easements, coverage beginning and end, directions of coverage, video unit counter numbers, engineering stationing numbers and the date.

3.04 LIGHTING

- A. All taping shall be done during time of good visibility. No taping shall be done during precipitation, mist or fog. The recording shall be done only when sufficient sunlight is present to properly illuminate the subjects of recording and to produce bright, sharp video recordings of those subjects.

3.05 SPEED OF TRAVEL

- A. The rate of speed in the general direction of travel of the vehicle used during taping shall not exceed 44 feet per minute. Panning, zoom-in and zoom-out rates shall be sufficiently controlled to maintain a clear view of the object.

3.06 AREA OF COVERAGE

- A. Tape coverage shall include all surface features located within the zone of influence of construction supported by appropriate audio coverage. Such coverage shall include, but not be limited to, existing driveways, pavements, equipment, concrete pads, and structures within the area covered.

END OF SECTION

SECTION 01410

TESTING AND TESTING LABORATORY SERVICES

1.01 DESCRIPTION

A. Scope of Work:

1. The City will employ and pay for services of an Independent Testing Laboratory to perform testing specifically indicated in the Contract Documents or specified in the Specifications and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents. Additional charges for re-testing or waiting will be billed to the Contractor.
2. Contractor shall cooperate with the laboratory to facilitate the execution of its required services.
3. The Contractor shall provide Engineer with all test results herein within five (5) days of receipt.

B. Related Requirements Described Elsewhere:

1. Conditions of the Contract.
2. Respective section of the Specifications: Certification of products.
3. Each Specification section listed: Laboratory tests required, and standards for testing.
4. Testing laboratory inspection, sampling and testing is required for, but not limited to the following:
 - a. Excavating, Backfilling and Compacting: Section 02 120

C. The following schedule defines the responsibilities of various tests.

<u>Test</u>	<u>Notes</u>	<u>Paid for By</u>
Soil Compaction	Pipe Work: every 300 ft. at each lift of compaction minimum. Beneath Structures: each 500 SF each lift of compaction minimum.	Contractor*
Concrete Sampling	Concrete Cylinder Breaks for Walls, Curb and Sidewalk.	Contractor*
Base Inspection		Contractor*
Asphalt Paving	Asphalt Cores	Contractor*
Asphalt Plant	Quality Assurance	Contractor*

Contractor* pays for re-tests only.

1.02 LABORATORY DUTIES: LIMITATIONS OF AUTHORITY

- A. Cooperate with Engineer and Contractor; provide qualified personnel promptly on notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
 - 1. Comply with specific standards; ASTM, other recognized authorities, and as specified.
 - 2. Determine and report on compliance with requirements of Contract Documents.
- C. Promptly notify the Engineer and Contractor of material or operations which do not meet the specifications.
- D. Promptly submit five (5) copies of reports of inspections and tests to the Engineer including:
 - 1. Date issued.
 - 2. Project title and Engineer's job number.
 - 3. Testing Laboratory name and address.
 - 4. Name and signature of inspector.

5. Date of inspection or sampling.
 6. Record of temperature and weather.
 7. Date of test.
 8. Identification of product and Specification section.
 9. Location in project.
 10. Type of inspection or test.
 11. Compliance or non-compliance with Contract Documents.
- E. Perform additional services as required by Owner.
- F. Laboratory is not authorized to:
1. Release, revoke, alter, or expand on requirements of Contract Documents.
 2. Approve or reject any portion of work.
 3. Perform any duties of the Contractor.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel. Provide access to Work and manufacturer's operations.
- B. Secure and deliver to the laboratory adequate representational samples of materials proposed to be use and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other materials mixes which require control by the testing laboratory.
- D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacturer or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The Engineer may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of providing statements and certificates shall be a subsidiary obligation of the Contractor, and no extra charge to the Owner shall be allowed on account of such testing and certification.

- E. Furnish incidental labor and facilities:
 - 1. To provide access to Work to be tested.
 - 2. To obtain and handle samples as the Project site or at the source of the product to be tested.
 - 3. To facilitate inspections and tests.
 - 4. For storage and curing of test samples.
- F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.01 CONSTRUCTION UTILITIES

- A. The Contractor shall arrange with the power and telephone companies, if necessary, to obtain temporary electrical service for construction purposes.
- B. The Contractor shall pay all power and telephone company installation and use charges for the telephone service and electrical energy utilized for temporary power and light.
- C. The Contractor shall make his own arrangements at his own expense for obtaining the water supply and sanitary facilities necessary for construction purposes, and he shall acquire and pay for all water consumed during construction.

1.02 TEMPORARY BUILDINGS

- A. The Contractor shall not build or move onto the site temporary buildings or other structures for storing (tools or machinery and supplies).

1.03 CLEAN-UP

- A. Upon completion of the work, all excess material and rubbish shall be removed from the job site, and any off-site locations used, and disposed of in a lawful manner and in accordance with the Contract Documents. The surrounding construction area, easements, and any other affected grounds shall be left in a condition as good or better than existed prior to construction. Any remedial actions, measures or reconstruction of damaged properties shall be accomplished at the Contractor's expense.

1.04 USE OF PREMISES

- A. The Contractor shall confine his apparatus, the storage of materials and the operations of his workers to the limits defined by laws, ordinances, permits, or directions of the ENGINEER and shall not unduly encumber the premises with his materials.
- B. The Contractor shall enforce the instructions of the ENGINEER regarding signs, advertisements, fire, and safety.

1.05 SOIL EROSION

- A. The Contractor shall take all required and necessary actions as outlined in Section 01568, to minimize siltation and soil erosion during construction.

1.06 ACCESS ROADS

- A. Streets, roads, and drives used by the Contractor for access to and from the site of the work shall be protected from damage. Any such damage done shall be repaired and left in good condition at the end of the

construction period. Upon completion of construction, access areas and temporary easements shall be restored to the pre-construction condition at no additional cost to the OWNER.

1.07 MAINTENANCE DURING CONSTRUCTION

- A. The Contractor shall maintain, at his expense, the work during construction and until final acceptance of all work under the contract.
- B. In the event the Contractor fails to remedy any unsatisfactory situation within twenty-four (24) hours after receipt of written notice from the ENGINEER describing the unsatisfactory conditions, the OWNER may immediately proceed with adequate forces and equipment to maintain the project, and the entire cost of this maintenance will be deducted from the monies otherwise due the Contractor under the Contract.
- C. As an alternative to the above specified maintenance, the cost of all of the items that are not properly maintained may be deducted at the Contract Prices from the current partial payment request even if such items have been paid for in previous estimates.

1.08 SANITARY FACILITIES

- A. The Contractor shall provide and maintain temporary sanitary accommodations for the use of his employees, the ENGINEER, and those of his subcontractors as may be necessary to comply with health requirements and regulations and as directed by the ENGINEER. No nuisance will be permitted from these accommodations.

1.09 POTABLE WATER FACILITIES

- A. The Contractor shall provide and maintain temporary potable water accommodations for the use of his employees, the ENGINEER, and those of his subcontractors as may be necessary to comply with health requirements and regulations and as directed by the ENGINEER. No nuisance will be permitted from these accommodations.

END OF SECTION

SECTION 01505

MOBILIZATION

1.01 DEFINITION AND SCOPE

- A. Mobilization shall include the costs of obtaining all permits, insurance and bonds, moving onto the site of all plant and equipment; furnishing and erecting plants, temporary buildings, and other construction facilities; all as required for the proper performance and completion of the Work. Mobilization shall include, but not be limited to, the following principal items.
1. Move onto the site all Contractor's plant and equipment required for first month operations.
 2. Install temporary construction power, wiring, and lighting facilities.
 3. Establish fire protection plan and safety program.
 4. Secure construction water supply.
 5. Arrange for and erect Contractor's work and storage yard and employee's parking facilities.
 6. Submit all required insurance certificates and bonds.
 7. Obtain all required permits.
 8. Post all OSHA, EPA, Department of Labor, and all other required notices.
 9. Have Contractor's superintendent at the job site full time.
 10. Submit a detailed construction CPM schedule acceptable to the Engineer as specified.
 11. Submit a Schedule of Values of the Work.
 12. Submit a schedule of submittals.

1.02 DEMOBILIZATION

- A. Demobilization is the timely and proper removal of all contractor-owned material, equipment or plant, from the job site and the proper restoration or completion of work necessary to bring the site into full compliance with the contract documents.

1.03 PAYMENT FOR MOBILIZATION/DEMOBILIZATION

- A. The Contractor's attention is directed to the condition that payment for mobilization or any part thereof, shall not exceed five percent (5%) of the total Contract Price.

END OF SECTION

SECTION 01568

TEMPORARY EROSION AND SEDIMENTATION CONTROL

1.01 DESCRIPTION

A. Scope of Work:

1. The Work specified in this Section consists of designing, providing, maintaining and removing temporary erosion and sedimentation controls as required by Rules and Regulations and Permit conditions.
2. Temporary erosion controls include, but are not limited to, grassing, mulching, setting, watering and reseeding on-site surfaces and soil and borrow area surfaces and providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the Owner.
3. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Owner.
4. Contractor is responsible for providing effective temporary erosion and sediment control measures during construction or until final controls become effective.

B. Related Work Described Elsewhere:

1. Excavating, Backfilling, and Compacting: Section 02 120
2. Seeding and Sodding: Sections 02 570 and 02 575

2.01 EROSION CONTROL

- A. Sodding is specified in Section 02 575.
- B. Netting shall be fabricated of material acceptable to the Owner.

2.02 SEDIMENTATION CONTROL

- A. Bales shall be clean, seed-free cereal hay type.
- B. Netting shall be fabricated of material acceptable to the Owner.
- C. Filter stone shall be crushed stone which conforms to Florida Department

of Transportation (FDOT) specifications.

- D. Concrete block shall be hollow, non-load bearing type.
- E. Concrete shall be exterior grade not less than 1-inch thick.

3.01 EROSION CONTROL

- A. Minimum procedures for grassing are:
 - 1. Scarify slopes to a depth of not less than 6 inches and remove large clods, rock, stumps, roots larger than 1/2 inch in diameter and debris.
 - 2. Sow seed within 24 hours after the ground is scarified with either mechanical seed drills or rotary hand seeders.
 - 3. Apply mulch loosely and to a thickness of between 3/4 inch and 1-1/2 inches.
 - 4. Apply netting over mulched areas on sloped surfaces.
 - 5. Roll and water seeded areas in a manner which will encourage sprouting of seeds and growing of grass. Reseed areas which exhibit unsatisfactory growth. Backfill and seed eroded areas.

3.02 SEDIMENTATION CONTROL

- A. Install and maintain silt dams, traps, barriers, and appurtenances as shown on the approved descriptions and working drawings. Hay bales which deteriorate and filter stone which is dislodged shall be replaced.

3.03 PERFORMANCE

- A. Should any of the temporary erosion and sediment control measures employed by the Contractor fail to produce results which comply with the requirements of the State of Florida, the Owner or Engineer, the Contractor shall immediately take whatever steps are necessary to correct the deficiency at his own expense.

END OF SECTION

SECTION 01600

MATERIAL AND EQUIPMENT

1.01 DESCRIPTION

- A. Scope of Work: Material and equipment incorporated into the Work:
1. Manufactured and fabricated products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges, to be interchangeable.
 - c. Two (2) or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
 2. Do not use material or equipment for any purpose other than that for which it is designed or specified.

1.02 MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including five copies of the Engineer.
1. Maintain one (1) set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accord with such instructions and in conformity with specified requirements.
1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further instructions.
 2. Do not proceed with work without clear instructions.

- C. Perform work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.03 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with progress schedules, coordinate to avoid conflict with work and conditions at the site.
 - 1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
 - 2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that products are properly protected and undamaged.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

1.04 STORAGE AND PROTECTION

- A. The Contractor shall furnish a covered, weather-protected storage structure providing a clean, dry, noncorrosive environment for all mechanical equipment, valves, architectural items, electrical and instrumentation equipment, and special equipment to be incorporated into this Project. Storage or equipment shall be in strict accordance with the "instructions for storage" of each equipment supplier and manufacturer including connection of heaters, placing of storage lubricants in equipment, etc. Corroded, damaged or deteriorated equipment and parts shall be replaced before acceptance of the project. Equipment and materials not properly stored will not be included in a payment estimate.
- B. Store products in accord with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weather-tight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 - 3. Store fabricated products above the ground, on blocking or skids, prevent soiling or staining. Cover products which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.
 - 4. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

- C. All materials and equipment to be incorporated in the work shall be handled and stored by the Contractor before, during and after shipment in a manner to prevent warping, twisting, bending, breaking, chipping, rusting, and any injury, theft or damage of any kind whatsoever to the material or equipment.
- D. Cement, sand and lime shall be stored under a roof and off the ground and shall be kept completely dry at all times. All structural and miscellaneous steel, and reinforcing steel shall be stored off the ground or otherwise to prevent accumulations of dirt or grease, and in a position to prevent accumulations of standing water and to minimize rusting.
- E. All materials, which, in the opinion of the Engineer, have become so damaged as to be unfit for the use intended or specified shall be promptly removed from the site of the work, and the Contractor shall receive no compensation for the damaged material or its removal.
- F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.
- G. Protection After Installation: Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove covering when no longer needed.
- H. The Contractor shall be responsible for all material, equipment and supplies sold and delivered to the Owner under this Contract until final inspection of the work and acceptance thereof by the Owner. In the event any such material, equipment and supplies are lost, stolen, damaged or destroyed prior to final inspection and acceptance, the Contractor shall replace same without additional cost to the Owner.
- I. Should the Contractor fail to take proper action on storage and handling of equipment supplied under this Contract within seven (7) days after written notice to do so has been given, the Owner retains the right to correct all deficiencies noted in previously transmitted written notice and deduct the cost associated with these corrections from the Contractor's Contract. These costs may be comprised of expenditures for labor, equipment usage, administrative, clerical, engineering and any other costs associated with making the necessary corrections.

1.05 STORAGE AND HANDLING OF EQUIPMENT ON SITE

- A. Because of the long period allowed for construction, special attention shall be given to the storage and handling of equipment on site. As a minimum, the procedure outlined below shall be followed:
 - 1. Materials shall not be shipped until approved by the Engineer. The

intent of this requirement is to avoid unnecessary delivery of unapproved materials and to reduce on-site storage time prior to installation and/or operation. Under no circumstances shall major equipment or finish products be delivered to the site more than one month prior to installation without written authorization from the Engineer. Materials shipped to the site, or temporarily stored off-site in approved locations, shall be stored in accordance with Paragraph 1.04, herein.

2. All equipment having moving parts such as gears, electric motors, etc. and/or instruments shall be stored in a temperature and humidity controlled building approved by the Engineer, until such time as the equipment is to be installed.
3. All equipment shall be stored fully lubricated with oil, grease, etc. unless otherwise instructed by the manufacturer.
4. Manufacturer's storage instructions shall be carefully studied by the Contractor and reviewed with the Engineer by him. These instructions shall be carefully followed and a written record of this kept by the Contractor.
5. Moving parts shall be rotated a minimum of once weekly to insure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, the Contractor shall start the equipment, at least half the load, once weekly for an adequate period of time to insure that the equipment does not deteriorate from lack of use.
6. Lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. Mechanical equipment to be used in the work, if stored for longer than ninety (90) days, shall have the bearings cleaned, flushed and lubricated prior to testing and startup, at no extra cost to the Owner.
7. Prior to acceptance of the equipment, the Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guarantee the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at the Contractor's expense.

1.06 SPARE PARTS

- A. Spare parts for certain equipment provided under Division 15: Mechanical have been specified in the pertinent sections of the Specifications. The Contractor shall collect and store all spare parts so required in an area to be designated by the Engineer. In addition, the Contractor shall furnish to the Engineer an inventory listing all spare parts, the equipment they are associated with, the name and address of the supplier, and the delivered cost of each item. Copies of actual invoices for each item shall be furnished with the inventory to substantiate the delivered cost.

1.07 GREASE, OIL AND FUEL

- A. All grease, oil and fuel required for testing of equipment shall be furnished with the respective equipment. The Owner shall be furnished with a year's supply of required lubricants including grease and oil of the type recommended by the manufacturer with each item of equipment supplied.
- B. The Contractor shall be responsible for changing the oil in all drives and intermediate drives of each mechanical equipment after initial break-in of the equipment, which in no event shall be any longer than three (3) weeks of operation.

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

1.01 DESCRIPTION

- A. Scope of Work: Comply with requirements stated in Conditions of the Contract and in the Specifications for administrative procedures in closing out the Work.
- B. Related Requirements Described Elsewhere:
 - 1. Conditions of the Contract. Fiscal provisions, legal submittals and additional administrative requirements.
 - 2. Project Record Documents: Section 01720.
 - 3. Warranties and Bonds: Section 01740.
 - 4. The respective sections of the Specifications: Closeout Submittals Required of Trades.

1.02 SUBSTANTIAL COMPLETION

- A. When Contractor considers the Work as substantially complete, the Contractor shall submit to the Engineer:
 - 1. A written notice that the Work, or designated portion thereof, is substantially complete.
 - 2. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, the Engineer will make an inspection to determine the status of completion.
- C. Should the Engineer determine that the Work is not substantially complete:
 - 1. The Engineer will promptly notify the Contractor in writing, giving the reasons therefor.
 - 2. The Contractor shall remedy the deficiencies in the Work and send a second written notice of substantial completion to the Engineer.
 - 3. The Engineer will re-inspect the Work.
- D. When the Engineer finds that the Work is substantially complete, the Engineer will:

1. Prepare a tentative Certificate of Substantial Completion on the form provided herein, with a tentative list of items to be completed or corrected before final payment.
2. After consideration of any objections made by the Engineer, as provided in Conditions of the Contract, and when the Engineer considers the Work substantially complete, the Engineer will execute and deliver to the Contractor a Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected.

1.03 FINAL INSPECTION

- A. When Contractor considers the Work is complete, he shall submit written certification that:
 1. The Contract Documents have been reviewed.
 2. The Work has been inspected for compliance with the Contract Documents.
 3. The Work has been completed in accordance with the Contract Documents.
 4. The equipment and systems have been tested in the presence of the Owner's representative and are operational.
 5. The Work is completed and ready for final inspection.
- B. The Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should the Engineer consider that the Work is incomplete or defective:
 1. The Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.
 2. The Contractor shall take immediate steps to remedy the stated deficiencies and send a second written certification to the Engineer that the Work is complete.
 3. The Engineer will re-inspect the Work.

1.04 REINSPECTION FEES

- A. Should the Engineer perform re-inspections due to failure of the Work to comply with the claims of the status of completion made by the Contractor:
 1. Owner will deduct the cost of such re-inspections from the final

payment to the Contractor.

1.05 CONTRACTOR'S CLOSEOUT SUBMITTALS TO THE OWNER

- A. Project Record Documents: To requirements of Section 01720.
- B. Warranties and Bonds: To requirements of Section 01740.
- C. Evidence of Payment and Release of Liens: To requirements of General and Supplementary Conditions.
- D. Certificate of Insurance for Products and Completed Operations.

1.06 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to the Owner.
- B. The final statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Price.
 - 2. Additions and deductions resulting from:
 - a. Change Orders
 - b. Allowances
 - c. Unit prices
 - d. Deductions for uncorrected work
 - e. Penalties and bonuses
 - f. Deductions for liquidated damages
 - g. Deductions for re-inspection payments
 - h. Other adjustments
 - 3. Total Contract Price, as adjusted.
 - 4. Previous payments.
 - 5. Amount remaining due.
- C. The Engineer will prepare a final Change Order reflecting approved adjustments to the Contract Price which were not made by previous Change Orders.

1.07 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall submit the final Application and Certification for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.
- B. When the Engineer has approved the final Application and Certification for Payment, the Contractor shall execute the Final Releases of Lien prior to the Contractor receiving the final payment.

END OF SECTION

SECTION 01710

CLEANING

1.01 DESCRIPTION

- A. Scope of Work: Execute cleaning, during progress of the Work and at completion of the Work.

1.02 DISPOSAL REQUIREMENTS

- A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

3.01 DURING CONSTRUCTION

- A. Execute daily cleaning to keep the Work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations or personal activities.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site periodically, or as directed by the Owner, and dispose of at legal disposal areas away from the site.

3.02 DUST CONTROL

- A. The Contractor shall employ construction techniques that minimize the production and distribution of dust.
- B. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- C. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

3.03 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas, to verify that the entire Work is clean.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

1.01 DESCRIPTION

- A. Scope of Work: Maintain at the site for the Owner one (1) record copy of:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications of the Contract.
 - 5. Engineer's Field Orders or written instructions.
 - 6. Approved Shop Drawings, Working Drawings and Samples.
 - 7. Field Test records.
 - 8. Color Audio-Video Pre-Construction Record: Section 01390.
- B. Related Requirements Described Elsewhere:
 - 1. Field Engineering: Section 01050.
 - 2. Shop Drawings, Working Drawings and Samples: Section 01340.
 - 3. Color Audio-Video Pre-Construction Record: Section 01390.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI format with section numbers as provided herein.
- C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.

- D. Make documents and samples available at all times for inspection by the Engineer or the Owner.
- E. As a prerequisite for monthly Progress payments, the Contractor is to exhibit the currently updated "Record Documents" for review by the Engineer and Owner. Payment may be withheld if record documents are not satisfactorily maintained.

1.03 MARKING DEVICES

- A. Provide felt tip marking pens for recording information in the color code designated by the Engineer.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" with a rubber stamp having one (1) inch high letters.
- B. Record information concurrently with construction progress.
 - 1. Do not conceal any work until required information is recorded.
- C. Drawings: Legibly and clearly mark, to scale, each drawing to record actual construction:
 - 1. Depths of various elements of foundation in relation to finish first floor datum.
 - 2. All underground piping with elevations and dimensions. Changes to piping location. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Actual installed pipe material, class, etc.
 - 3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 4. Field changes of dimension and detail.
 - 5. Changes made by Field Order or by Change Order.
 - 6. Details not on original Contract Drawings.
 - 7. Equipment and piping relocations.
 - 8. Major architectural and structural changes including relocation of doors, windows, etc.
 - 9. Architectural schedule changes according to Contractor's records

and shop drawings.

- D. Specifications and Addenda: Legibly mark each section to record:
 - 1. Manufacturer, trade name, catalog number of Supplier of each product and item of equipment actually installed.
 - 2. Changes made by Field Order or by Change Order.
- E. Shop Drawings (after final review and approval): Provide six (6) sets of record shop drawings within the Operation and Maintenance Manual, for each process equipment, piping, electrical system and instrumentation system (see Section 01730).

1.05 SUBMITTAL

- A. At Contract closeout, deliver Record Documents to the Engineer for the Owner.
- B. Accompany submittal with transmittal letter in duplicate, containing:
 - 1. Date.
 - 2. Project title and number.
 - 3. Contractor's name and address.
 - 4. Title and number of each Record Document.
 - 5. Signature of Contractor or his authorized representative.

END OF SECTION

SECTION 01740

WARRANTIES AND BONDS

1.01 DESCRIPTION

A. Scope of Work:

1. Compile specified warranties and bonds, as in Article 5 and 13 of Section 00700: General Conditions and as specified in these Specifications.

B. Related Work Described Elsewhere:

1. General Conditions: Section 00700.
2. Contract Closeout: Section 01700.

1.02 SUBMITTAL REQUIREMENTS

A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.

B. Number of original signed copies required: Two (2) each.

C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.

1. Product of work item.
2. Firm, with name of principal, address and telephone number.
3. Scope.
4. Date of beginning of warranty, bond or service and maintenance contract.
5. Duration of warranty, bond or service maintenance contract.
6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity or warranty or bond.
7. Contractor, name of responsible principal, address and telephone number.

1.03 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8-1/2 inches by 11 inches, punch sheets for standard three (3) ring binder.
 - a. Fold larger sheets to fit into binders.
 - 2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:
 - a. Title of Project.
 - b. Name of Contractor.
- C. Binders: Commercial quality, three (3) D-ring type binders with durable and cleanable white plastic covers and maximum D-ring width of two (2) inches. Binders shall be presentation type with clear vinyl covers on front, back, and spine. Binders shall include two sheet lifters and two horizontal inside pockets.

1.04 WARRANTY SUBMITTALS REQUIREMENTS

- A. For all major pieces of equipment, submit a warranty from the equipment manufacturer. The manufacturer's warranty period shall be concurrent with the Contractor's for one (1) year, unless otherwise specified, commencing at the time of final acceptance by the Owner.
- B. The Contractor shall be responsible for obtaining certificates for equipment warranty for all major equipment specified under Division 15: Mechanical and which has at least a 1 hp motor or which lists for more than \$1,000. The Engineer reserves the right to request warranties for equipment not classified as major. The Contractor shall still warrant equipment not considered to be "major" in the Contractor's one-year warranty period even though certificates of warranty may not be required.
- C. In the event that the equipment manufacturer or supplier is unwilling to provide a one (1) year warranty commencing at the start of the Correction Period, the Contractor shall obtain from the manufacturer a two (2) year warranty commencing at the time of equipment delivery to the job site. This two (2) year warranty from the manufacturer shall not relieve the Contractor of the one (1) year warranty, starting at the time of Owner's acceptance of the equipment.
- D. The Owner shall incur no labor or equipment cost during the guarantee

period.

- E. Guarantee shall cover all necessary labor, equipment, materials, and replacement parts resulting from faulty or inadequate equipment design, improper assembly or erection, defective workmanship and materials, leakage, breakage or other failure of all equipment and components furnished by the manufacturer or the Contractor.

END OF SECTION

SECTION 01800

MISCELLANEOUS WORK AND CLEANUP

1.01 DESCRIPTION

A. Scope of Work:

1. This Section includes operations which cannot be specified in detail as separate items but can be sufficiently described as to the kind and extent to work involved. The Contractor shall furnish all labor, materials, equipment and incidentals to complete the work under this Section.
2. The work of this Section includes, but is not limited to, the following:
 - a. Restoring of fences.
 - b. Cleaning up.
 - c. Incidental work.

2.01 MATERIALS

- ##### A. Materials required for this Section shall be of the same quality as materials that are to be restored. Where possible, the Contractor shall reuse existing materials that are removed and then replaced.

3.01 RESTORING OF FENCES

- ##### A. The Contractor shall remove, store and replace existing fences during construction. Only the sections directed by the Engineer shall be removed. If any section of fence is damaged due to the Contractor's negligence, it shall be replaced with fencing equal to or better than that damaged, and the work shall be satisfactory to the Engineer.

3.02 CLEAN UP

- ##### A. The Contractor shall remove all construction material, buildings, equipment and other debris remaining on the job as the result of construction operations and shall render the site of the work in a neat and orderly condition. All suitable excess excavated material shall remain on site.

3.03 INCIDENTAL WORK

- ##### A. Do all incidental work not otherwise specified, but obviously necessary for the proper completion of the contract as specified and as shown on the Drawings.

END OF SECTION

SECTION 00100

INSTRUCTIONS TO BIDDERS

ARTICLE 1 - DEFINED TERMS

- 1.1 Terms used in these Instructions to Bidders which are defined in the General Conditions have the meanings assigned to them in the General Conditions, as supplemented. The term "Apparent Low Bidder" means the Bidder submitting the lowest Bid at the Bid opening without correction of numerical discrepancies or determination of responsiveness and responsibility. The term "Successful Bidder" means the Bidder to whom City awards or expects to award the Contract. Bidding Documents consist of the Project Manual and Drawings, both as may be modified by Addenda.

ARTICLE 2 – CONTACT

- 2.1 All prospective bidders are hereby instructed not to contact any member of the City of Deltona Commissioners, City Manager, City of Deltona Staff members or Engineers contracted by the City for this project, other than the noted contact person regarding this Invitation to Bid at any time during the bid process. Any such contact shall be cause for rejection of your bid.

ARTICLE 3 - COPIES OF BIDDING DOCUMENTS

- 3.1 Bidding Documents shall be obtained by contacting Purchasing Agent for the City of Deltona, Public Works Division at 386-878-8955 or email at tcinefro@deltonafl.gov
- 3.2 Complete sets of full size Bidding Documents shall be used in preparing Bids; neither City nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 3.3 City and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

ARTICLE 4 – DELAYS

- 4.1 The City, at its sole discretion, may delay the scheduled due dates indicated above if it is to the advantage of the City to do so. The City will notify bidders of all changes in scheduled due dates by written addendum.

ARTICLE 5 - QUALIFICATIONS OF BIDDERS

- 5.1 Each Bid must contain Bidder's license number to do business in the State of Florida.

- 5.2 To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit, within seven (7) calendar days after Bid opening, information including, but not limited to, the qualifications submittals set forth in Article 24 of these Instructions to Bidders, evidence of authority to conduct business in the jurisdiction where the Project is located. Submittals requested pursuant to this paragraph shall be referred to as the Qualifications Submittals and are in addition to those required elsewhere.
- 5.3 Bidders will be evaluated with respect to having successfully completed projects of a similar size, nature and time frame.

ARTICLE 6 - EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- 6.1 It is the responsibility of each Bidder before submitting a Bid:
 - 6.1.1 To obtain a set of Bidding Documents and register as a document holder with the Purchasing Agent for the City of Deltona, Public Works Division.
 - 6.1.2 To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents (including "technical data" referred to below);
 - 6.1.3 To visit the site to become familiar with and satisfy Bidder as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work;
 - 6.1.4 To consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;
 - 6.1.5 To study and carefully correlate Bidder's knowledge and observations with the Contract Documents and such other related data; and
 - 6.1.6 To promptly notify the City of all conflicts, errors, ambiguities or discrepancies which Bidder has discovered in or between the Contract Documents and such other related documents.
- 6.2 Reference is made to the Supplementary Conditions for identification of:
 - 6.2.1 Those reports of explorations and tests of subsurface conditions at or contiguous to the site which have been utilized by Engineer in preparation of the Contract Documents. Bidder may rely upon the general accuracy of the "technical data" contained in such reports but not upon other data, interpretation, opinions or information contained in such reports or otherwise relating to the subsurface conditions at the site, nor upon the completeness thereof for the purposes of bidding or construction.
 - 6.2.2 Those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the site that have been utilized by Engineer in preparation of

the Contract Documents. Bidder may rely upon the general accuracy of the "technical data" contained in such drawings but not upon other data, interpretations, opinions or information shown or indicated in such drawings or otherwise relating to such structures, nor upon the completeness thereof for the purposes of bidding or construction.

Copies of such reports and drawings will be made available by City to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.2 of the General Conditions has been identified and established in Paragraph SC-4.2.1 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion drawn from any "technical data" or any such data, interpretations, opinions or information.

- 6.3 Information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information and data furnished to the Engineer by the City, and City and Engineer do not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- 6.4 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Contract Documents due to differing or unanticipated conditions appear in Paragraphs 4.2 and 4.3 of the General Conditions.
- 6.5 Before submitting a Bid each Bidder will be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise, which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 6.6 On request, City will provide each Bidder access to the site to conduct such examinations, investigations, explorations, tests and studies as each Bidder deems necessary for submission of a Bid. Bidder must fill all holes and clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests and studies.
- 6.7 Reference is made to the Supplementary Conditions for the identification of the general nature of work that is to be performed at the site by City or others (such as utilities and other prime contractors) that relates to the work for which a Bid is to be submitted. On request, City will provide to each Bidder for examination

access to or copies of Contract Documents (other than portions thereof related to price) for such work.

- 6.8 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and applying the specific means, methods, techniques, sequences or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities and discrepancies that Bidder has discovered in the Contract Documents and the written resolutions thereof by Engineer is acceptable to Bidder, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 7 - ADDENDA AND INTERPRETATIONS

- 7.1 All Bidders shall carefully examine the Bid Documents. Bidders shall promptly notify the City in writing prior to the opening of Bids of any ambiguity, inconsistency, or error which they may discover upon examination of the Bidding Documents or the site. Failure to do so, on the part of the Bidder, will constitute an acceptance by the Bidder of any subsequent decision,.
- 7.2 All questions about the meaning or intent of the Bidding Documents shall be submitted to Brian Boehs, Purchasing Agent for the City of Deltona, in writing to email address; tcinefro@deltonafl.gov or via facsimile to (386) 878-8971 and must be received seven (7) calendar days prior to the bid due date. Replies considered necessary will be issued through Addenda on DemandStar. A facsimile will be sent to all parties recorded by Purchasing Agent as having received complete sets of Bidding Documents up to forty eight (48) hours before bid time, notifying bidders that an addenda is available for download. Brief addenda may be issued between forty eight (48) hours and twenty-four (24) hours before bid time by facsimile to all parties recorded by Purchasing Agent as having received complete sets of Bidding Documents only. Questions received less than seven (7) calendar days prior to the date for opening of Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect and may not be relied upon by Bidders in submitting their bids. Failure of any Bidder to receive any such addendum or interpretation shall not relieve such Bidder from its terms and requirements. Receipt of all addenda shall be acknowledged by the Bidders by signing and enclosing said addenda or addendum acknowledgement with their bid.
- 7.3 The City will record its responses to inquiries, any supplemental instructions, and/or necessary revisions to Bid Documents, in the form of a written addendum. Should revisions to the Bid Documents become necessary, the City will post a written addendum to the DemandStar website which will go out to all Bidders who received a bid package through DemandStar. All addenda are posted to the DemandStar website and current planholders are notified that an addendum has

been issued. Bidders who obtain Bid Documents from other sources must officially register with the City's Purchasing Agent in order to be placed on the DemandStar website as a bid holder in order to receive any forthcoming addenda or other official communications. Failure to register as a prospective Bidder may cause your bid to be rejected as non-responsive if you have failed to submit a bid without an addendum acknowledgment for the most current addendum. It is the vendor's responsibility to check the DemandStar website at www.demandstar.com in order to be sure latest addendum and any prior addendum have been received.

ARTICLE 8 - BID SECURITY

- 8.1 Bid Security will be submitted and shall be made payable to City, in an amount of not less than five percent (5%) of the Bidder's Contract Price and in the form of a certified or cashier's check or a Bid Bond issued by a Surety meeting the requirements of Article 5 of the General Conditions as amended by the Supplementary Conditions. The Bid Bond shall be issued by a company having a registered agent in the State of Florida. Personal checks are not acceptable.
- 8.2 The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required payment and performance bonds, whereupon the Bid Security will be returned. If the Successful Bidder fails to furnish the qualifications submittals or fails to execute and deliver the Agreement and furnish the required Bonds within ten (10) days of the Notice of Award, City may annul the Notice of Award and the Bid Security of that Bidder will be forfeited. The Bid Security of any Bidder whom City believes to have a reasonable chance of receiving the award may be retained by City until the ninety-first (91) day after the Bid opening. Bid Security of other Bidders will be returned approximately seven (7) days after the Bid opening.

ARTICLE 9 - CONTRACT TIME

- 9.1 The number of consecutive calendar days within which, or the date by which, the Work is to be completed (the Contract Time) is set forth in the Supplemental Conditions.

ARTICLE 10 - LIQUIDATED DAMAGES AND INDEMNITY

- 10.1 Provisions for liquidated damages and incentive payments (if any) are set forth in the General Conditions.
- 10.2 All Bidders must state in the Bid Form the amount of consideration required by the Bidder in return for the Bidder's promise of indemnity contained in Paragraph 6.18 of the General Conditions and 725.06 of Florida Statutes. The amount to be stated shall be no less than \$1,000.
- 10.3 The Bidder, without exemption, shall indemnify and save harmless, the City, its employees and/or any of its Commissioners from liability of any nature or kind, including cost and expenses for or on account of any copyrighted, patented, or

unpatented invention, process, or item manufactured by the Bidder. Further, if such a claim is made, or is pending, the Bidder may, at its option and expense, procure for the City the right to use, replace or modify the item to render it non-infringing. If none of the alternatives are reasonably available, the City agrees to return the article on request to the Bidder and receive reimbursement. If the Bidder used any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood, without exception, that the bid prices shall include all royalties or cost arising from the use of such design, device, or materials in any way involved in the work.

ARTICLE 11 - SUBSTITUTE MATERIAL AND EQUIPMENT

- 11.1 The Contract, if awarded, will be awarded on the basis of material and equipment illustrated and described on the Drawings or specified in the Specifications. Substitutions or "or equal" items will **not** be considered when determining the Apparent Low Bidder. The Bidder shall base his Bid on providing one of the listed manufacturers. Whenever it is indicated in the Drawings or specified in the Specifications that a substitution or "or equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will **not** be considered by Engineer until after the "Effective Date of the Agreement" and only for such items identified on the Bid Form at the time of bid. The procedure for submittal of any such application by Contractor and consideration by Engineer is set forth in the General Conditions, as may be supplemented in Division 1, General Requirements. If a substitution list is provided as part of the prescribed Bid Form, Bidders must identify proposed substitute materials and equipment at time of Bid submission. These substitute materials and equipment shall be evaluated after "Effective Date of the Agreement." Only the proposed substitutions or "or equal" items listed on the Substitution List will be evaluated by the Engineer in accordance with the General Conditions. The cost of changes in related work, additional drawings which may be required to illustrate or define the substitute equipment and its relationship to the other parts or portions of the Work shall be paid by the Contractor. No change will be made in the amount of time in which to complete the Work or in the liquidated damages. If the proposed substituted material or equipment is found to be unacceptable to the Engineer as an "or equal" item, then the material or equipment named in the Specifications or the Bid Form (circled item) shall be furnished by the Contractor. If Bidder fails to circle one of the listed manufacturer's then the manufacturer identified as "A" shall be furnished.

ARTICLE 12 - SUBCONTRACTORS, ETC.

- 12.1 Bidder shall submit with the bid, all Sub Contractors and Affiliates utilized (form attached) for this project, including those who are to furnish the principal items of material and equipment as indicated in the principal items of material and equipment as indicated in Questionnaire. This list shall include the name and address of the Subcontractor, person or organization, a description of the services, materials or equipment to be supplied, estimated time required for preparation and submittal of shop drawings, and estimated lead times required

for the fabrication of any long lead items and concurrence thereof. Such list shall be accompanied by a statement of experience with pertinent information as to similar projects and other evidence of qualification for each such Subcontractor, person or organization. If City or Engineer has a reasonable objection to any proposed Subcontractor, other person or organization, either may, before the Notice or Award, request the Apparent Low Bidder to submit an acceptable substitute without an increase in Bid price. If Apparent Low Bidder declines to make any such substitution, the City may elect not to award the Contract to such Bidder. A Bidder's declining to make any such substitution will not constitute grounds for sacrificing his Bid Security. Failure to provide this information with the bid may result in bid being declared non-responsive.

- 12.2 Procedures for approval of other Subcontractors after execution of the Agreement are described in the General and Supplementary Conditions.

ARTICLE 13 - BID FORM

- 13.1 The Bid Form is Section 00300 of the Contract Documents.
- 13.2 Bid form must contain a manual signature, in ink, of an authorized representative, who has the legal ability to bind the Bidder in contractual obligations in the space provided on the Bid Response Form. Failure to properly sign the Bid shall invalidate same, and it shall not be considered for award. Bid must be typed or legibly printed in ink. Use of erasable ink is not permitted. All corrections made by Bidder to any part of the bid document must be initialed in ink. The original bid conditions and specifications cannot be changed or altered in any way. Altered bids will not be considered. Clarification of bids submitted shall be in letter form, signed by bidders and attached to the bid. Bidder shall complete the "Corporate Authority", "Joint Venture", "Sole Proprietorship", or "Partnership" portion of the Bidder Information Sheet, whichever part applies, and include with their bid submittal.
- 13.3 Bids by corporations must be executed in the corporate name by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature. If requested, the person signing a Bid for a corporation or partnership must produce evidence satisfactory to the City of the person's authority to bind the corporation or partnership. If the Bidder is a corporation, and if the Bid is executed by someone other than the president or vice president of the corporation, attach to the Bid a certified copy of corporate resolutions of the board of directors of the corporation authorizing the person to execute the Bid on behalf of the corporation.
- 13.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

- 13.5 Bids submitted by firms under "joint venture" arrangements or other multi-party agreements must submit a power of attorney delegating authority to one principal with authority to negotiate and execute any/all contract documents resulting from negotiations/award of this Invitation to Bid.
- 13.6 All names and titles must be typed or printed in black ink below the signature.
- 13.7 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).
- 13.8 The address in which communication regarding the Bid are to be directed must be shown.
- 13.9 The business name of bidder shall be clearly typed, printed or stamped at the top of each page of the Bid Form.
- 13.10 If not submitting a bid, respond by returning only the Statement of No Bid, and give the reason in the space provided. Failure to respond three (3) times in succession without justification may be cause for removal of the Bidders name from the mailing list.
- 13.11 A Bidder must have at the time of bid opening, a company in operation, (if applicable) or be a fully authorized agent or representative of the product bid, and capable of producing or providing the items bid, and follow-up parts and service, including any warranty services as applicable, and so provide such certification upon request.
- 13.12 The City reserves the right to inspect the Bidder's facilities at any reasonable time, during normal working hours, to determine that Bidder has a bona fide place of business, and is a responsible Bidder.

ARTICLE 14 - SUBMISSION OF BIDS

- 14.1 Bids shall be submitted before the time and at the place indicated in the Announcement and Bid Documents, and shall be submitted in an opaque sealed envelope. The envelope shall be marked on the exterior "**BID NORMANDY BOULEVARD SECTION "B", BID NO. ITB # PW 13-05**" with the name, address and Florida Contractor's License Number of the Bidder and accompanied by the Bid Security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "**SEALED BID ENVELOPE ENCLOSED**" on the face thereof. The City will in no way be responsible for delays caused by the United States Postal Service or for delays caused by any other occurrence or delivery service. Mailed bids shall be sent to the attention of Brian Boehs, Purchasing Agent for the City of Deltona.
- 14.2 Each Bid must contain one (1) original and two (2) copies of the following documents in completed form:

1. Bid Response Forms (Bidding Documents, entire Section 00300).
 2. Bidders Contact and Information Form (Section 00301).
 3. References (Section 00301-A).
 4. Questionnaire Form (Section 00301-B)
 5. Sub-Contractors and Affiliates Form (Section 00301-C)
 6. Bid Bond or security (surety bond or cashier's check). (Section 00410).
 7. Power of Attorney (for surety bond only).
 8. Corporate Resolution (any corporate employee other than president or vice-president, Section 00420).
 9. Sworn Statement Pursuant to Section 287.133(3)(a), Florida Statutes on Public Entity Crimes (Section 00470)
 10. Non-collusion Affidavit (Section 00480).
 11. Trench Safety Affidavit (Section 00490).
- 14.3 More than one (1) Bid received for the same work from an individual, firm or partnership, a Corporation or Association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one (1) Bid for the same work will cause the rejection of all such Bids in which the Bidder is interested. If there are reasonable grounds for believing that collusion exists among the Bidders, the Bids of participants in such collusion will not be considered. Bids in which the prices obviously are unbalanced will be subject to rejection.
- 14.4 Neither the City nor its representatives shall be liable for any expenses incurred in connection with preparation of a response to this Invitation to Bid. Bidders should prepare their bids simply and economically, providing all information and prices as required.

ARTICLE 15 - MODIFICATIONS AND WITHDRAWAL OF BIDS

- 15.1 Bids may only be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the deadline for submitting Bids. A request for withdrawal or a modification must be in writing and signed by a person duly authorized to do so; and, in case signed by a deputy or subordinate, the principals proper written authority to such deputy or subordinate must accompany the request for withdrawal or modifications. Withdrawal of a Bid will not prejudice the rights of a Bidder to submit a new Bid prior to the Bid Date and Time. After expiration of the period for receiving Bids, no Bid may be withdrawn, modified, or explained.
- 15.2 If within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed written notice with City and within forty-eight (48) hours thereafter demonstrates to the reasonable satisfaction of the City that: a) there has been a material and substantial mistake in the preparation of the Bid; b) the mistake is of such great consequence that to enforce the Contract would be unconscionable; and c) the mistake occurred notwithstanding the exercise of reasonable care in the preparation of the Bid; the Bidder may withdraw its Bid, and the Bid Security

will be returned provided that the City is not seriously prejudiced, except for the loss of its bargain.

ARTICLE 16 – ACCEPTANCE/REJECTION

- 16.1 The City reserves the right to accept or reject any or all bids and to make the award to that Bidder, who in the opinion of the City will be in the best interest of and/or the most advantageous to the City. The City also reserves the right to reject the bid of any vendor who has previously failed in the proper performance of an award or to deliver on time contracts of a similar nature or who, in the City's opinion, is not in a position to perform properly under this award. The City reserves the right to inspect all facilities of bidders in order to make a determination as to the foregoing. The City reserves the right to waive any irregularities, informalities, and technicalities in offers received, and may, at its discretion, request a re-bid, or abandon the project/procurement in its entirety.

ARTICLE 17 - OPENING OF BIDS

- 17.1 Shall be public, at the above address, on the date and at the time specified above. The bid time shall be scrupulously observed. Under no circumstances shall bids delivered after the time specified be considered; such bids will be returned unopened. The City will not be responsible for late deliveries or delayed mail. The time/date stamp clock located in the Public Works Division serves as the official authority to determine lateness of any bid. It is the Bidders sole responsibility to assure that his/her bid is complete and delivered at the proper time and place of the bid opening. Bids which for any reason are not so delivered will not be considered. Offers by facsimile, telegram or telephone are not acceptable. A bid may NOT be altered by the Bidder after opening of the bids. Bid tabulations will be furnished upon written request which includes a self-addressed, stamped envelope.

Persons with disabilities needing assistance to participate in the Public Bid Opening should contact the Tom Cinefro at least 48 hours in advance of the meeting at 386-878-8955.

ARTICLE 18 - BIDS TO REMAIN OPEN

- 18.1 All Bids shall remain open for delivery by the City of the Notice of Award for ninety (90) calendar days after the day of the Bid opening, but City may, at its sole discretion, release any Bid and return the Bid Security prior to that date.
- 18.2 Extensions of time when Bids shall remain open beyond the ninety (90) day period may be made only by mutual agreement between City, the Apparent Low Bidder, and the surety, if any, for the Apparent Low Bidder.

ARTICLE 19 – CERTIFICATES, DISCOUNTS, MISTAKES

- 19.1 The City reserves the right to require proof that the bidder is an established business and is abiding by the Ordinances, Regulations, and Laws of their

Community and the State of Florida such as but not limited to: Occupational Licenses, Business Licenses, Florida Sales Tax Registration, Federal Employee Identification Number.

ARTICLE 20 – DISCOUNTS

- 20.1 Cash discounts for prompt payment shall not be considered in determining the lowest net cost for bid evaluation purposes.

ARTICLE 21 – MISTAKES

- 21.1 Bidders are expected to examine the terms and conditions, specifications, delivery schedule, bid prices, extensions and all instructions pertaining to supplies and services. FAILURE TO DO SO WILL BE AT BIDDER'S RISK. In the event of extension error(s), the unit price will prevail and the Bidder's total offer will be corrected accordingly. Written amounts shall take precedence over numerical amounts. In the event of addition errors(s), the unit price, and extension thereof, will prevail and the Bidder's total offer will be corrected accordingly. Bids having erasures or corrections must be initialed in ink by the Bidder.

ARTICLE 22 - AWARD OF CONTRACT

- 22.1 City reserves the right to reject any and all Bids, to waive any and all informalities and reserve the right to disregard all non-conforming, non-responsive or conditional Bids. Bids may be considered irregular and subject to rejection if in the opinion of the City, they show serious omission, unauthorized alternations of form, unauthorized alternate Bids, incomplete or unbalanced unit prices, or irregularities of any kind. The City may reject, as non-responsive, any or all Bids where Bidders fail to acknowledge receipt of addenda as prescribed. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Errors in the multiplication of unit prices by the number of units will be resolved in favor of the correct product.
- 22.2 If the Contract is to be awarded, it will be awarded to the most responsive, responsible, and lowest Bidder. Substitutions or "or equal" items listed in Section 00300 - Schedule of Manufacturers/Suppliers will not be considered when determining the lowest responsive bidder.
- 22.3 The City in its sole discretion, reserves the right to reject any and all bids and to waive any informality concerning Bids whenever such rejection or waiver is in the best interest of the City. The ability of a Bidder to obtain a performance and payment bond shall not be regarded as the sole test of such Bidder's competency or responsibility. Nothing contained herein shall place a duty upon

the City to reject Bids or award the contract based upon anything other than its sole discretion as described herein.

- 22.4 City may consider the qualifications and experience of Bidders and other persons and organizations (including those who are to furnish the principal items of materials or equipment) proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided in Article 12 of these Instructions to Bidders.
- 22.5 City may conduct such investigations and require supplemental information as he deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the Work in accordance with the Contract Documents to the City's satisfaction within the prescribed time. City reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to City's satisfaction.
- 22.6 One (1) Contract for the Work will be awarded, if award is made, to the lowest responsible, responsive Bidder. The Apparent Low Bidder who is awarded the Contract will be required to perform the Work as a Prime Contractor. No assignment of the Contract will be allowed without written permission of the City.
- 22.7 The Apparent Low Bidder shall submit, upon request of the City, documentation evidencing its capability to perform classes of work contemplated, and the necessary plant and sufficient capital to execute the work properly within the time specified. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may be considered by the City.
- 22.8 Recommendation for award will be posted for review by interested parties on DemandStar. Failure to file a protest to Purchasing within the time prescribed in the City's Purchasing Manual, shall constitute a waiver of proceedings.
- 22.9 If the Contract is to be awarded, the City will give the Apparent Low Bidder a Notice of Award within ninety (90) days after the date of the bid opening subject to the conditions in Article 22 of these Instructions to Bidders.
- 22.10 As the best interest of the City may require, the right is reserved to make award(s) by individual item, group of items, "All or None", or a combination thereof; with one or more suppliers; to reject any or all bids, or waive any minor irregularity or technicality in bids received, award or eliminate an portion of the bid, and may, at its sole discretion, request a re-bid, or abandon the project in its entirety. Bidders are cautioned to make no assumption until the City has entered into a contract or issued a purchase order.
- 22.11 Upon award recommendation or ten (10) days after opening, whichever is earlier, bids become "public records" and shall be subject to public disclosure consistent with Chapter 119.07(3)(o), Florida Statutes. Bidders must invoke the exemptions to disclosure provided by law in the response to the Bid, and must identify the data or other materials to be protected, and must state the reasons why such

exclusion from public disclosure is necessary. Bids may be reviewed at Public Works Division, 255 Enterprise Road, Deltona, FL 32725.

ARTICLE 23 – ADDITIONAL TERMS AND CONDITIONS

- 23.1 Unless expressly accepted by the City, the following conditions shall apply: No additional terms and conditions included with the bid response shall be considered. Any and all such additional terms and conditions shall have no force and effect, and are inapplicable to this bid if submitted either purposely through intent or design, or inadvertently appearing separately in transmittal letters, specifications, literature, price lists or warranties. It is understood and agreed that the general and/or any special conditions in these Bid Documents are the only conditions applicable to this bid and the Bidder's authorized signature on the Bid Response Form attests to this. Exceptions to the terms and conditions will not be accepted.

ARTICLE 24 - QUALIFICATIONS SUBMITTALS

- 24.1 It is the intention of the City to award this contract to a Bidder competent to perform and complete the Work in a satisfactory manner. Accordingly, City will require the Apparent Low Bidder to submit, within seven (7) days after bid opening, information including, but not limited to, the following, 1) evidence of Bidder's certification and license to perform the Work and services; 2) experience with references; 3) financial statement; 4) subcontractor listing; 5) Preliminary Progress Schedule; and 6) Preliminary Schedule of Values all as set forth below, to allow City to conduct qualifications investigations.
- 24.2 The experience and financial statement shall provide data additional to that information provided in the Bid Form pertaining to Contractor's financial resources, adequacy of plant and equipment, manpower, organization, and prior experience with references and a list of all previous or on-going construction contracts over the last five (5) years. Said information shall be certified by a Certified Public Accountant, and shall be submitted on the Associated General Contractors of America Form "Standard Questionnaires and Financial Statement for Bidders," available from AGC, 1975 "E" Street, NW Washington, DC 20006. The City at its discretion may require any or all of the above listed information from any other Bidder.
- 24.3 The Preliminary Progress Schedule shall consist of three (3) copies of a diagram and a narrative in accordance with appropriate formats set forth in Section 01310; Progress Schedules, incorporated by reference herein. Activities in the diagram shall show the order in which the Apparent Low Bidder proposes to perform the Work within the constraints and sequencing conditions set forth in the specifications and shall indicate starting and completion dates for key milestones and work pertaining to each Division of the Specifications within each major structure or geographical area of work. Activities shall further identify significant submittals/approvals, major equipment deliveries, equipment testing, City's responsibilities, and those of affected utilities and other similarity involved third parties.

- 24.4 The Preliminary Schedule of Values shall match the Bid Items in Section 00300 Bid Response Form.
- 24.5 The Apparent Low Bidder and his surety, if any, hereby agree that any delays within Bidder's control in the delivery of these Qualifications Submittals will require a written request by Bidder for an extension of the time during which the Bid shall remain open for the City's acceptance. Should City agree to such extension, Bidder will be required to comply with this Submittal Requirement within five (5) additional calendar days. At the City's option, failure by the Apparent Low Bidder to deliver these Qualifications Submittals within the extended period will void evaluation of the Bid and will constitute proof that the Apparent Bidder has abandoned his Bid; his Bid Security shall be declared forfeited to the City as liquidated damages, and the Work shall be awarded to another Bidder.
- 24.6 If upon receipt and evaluation of the submittals the Apparent Low Bidder does not pass the evaluations to City's satisfaction, City reserves the right to reject the Bid.

ARTICLE 25 - BONDS AND INSURANCE

- 25.1 The General Conditions as amended by the Supplementary Conditions sets forth City's requirements as to Bonds and Insurance. When the Successful Bidder delivers the executed Agreement to City, it shall be accompanied by the required Bonds, Insurance Certificates and Endorsements.

ARTICLE 26 -SIGNING OF AGREEMENT

- 26.1 The contents of this Bid and all provisions of the successful bid deemed pertinent by the City may be incorporated into a contract and become legally binding. A separate contract document, other than the purchase order, may not be issued. Any and all legal action necessary to enforce a contract or purchase order will be interpreted according to the laws of Florida. The venue shall be County of Volusia, Florida.
- 26.2 When City gives a Notice of Award to the Apparent Low Bidder, it will be accompanied by at least two (2) unsigned counterparts of the Agreement and all other Contract Documents. Within the (10) days of receipt thereafter, Apparent Low Bidder shall sign and deliver at least two (2) counterparts of the Agreement to the City together with the documents required in Article 14 above. Within ten (10) days of receipt of the properly executed and completed submittals, City will deliver a fully signed counterpart to Bidder.
- 26.3 Failure by a Successful Bidder, to whom the Contract is awarded, to execute the Agreement or to furnish the required Bonds or insurance certificates and endorsements shall be just cause for the annulment of the award and the forfeiture of the Bid Security.

- 26.4 A Successful Bidder who is awarded the Contract and fails to execute the Agreement or furnish the required Bonds or insurance certificates and endorsements within the period specified in Article 22 above, shall be liable to the City for all damages resulting therefrom including reasonable engineer's and attorney's fees and costs, and engineer's and attorney's fees and costs on appeal. The Bid Security forfeited shall not be a limitation thereon.

ARTICLE 27 - AVAILABILITY OF LANDS FOR WORK

- 27.1 The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by City unless otherwise provided in the Contract Documents.

ARTICLE 28 - TAXES AND FEES

- 28.1 The City is exempt from Federal Excise and State Sales Taxes on direct purchases of tangible personal property. The City's exemption numbers are on the face of the purchase order. If requested, the Purchasing Agent will provide an exemption certificate to the awarded Bidder. Vendors/contractors doing business with the City shall **not** be exempted from paying sales tax to their suppliers for materials to fulfill contractual obligations with the City nor shall any Vendor/Contractor be authorized to use the City's Tax Exemption Number in securing such materials.
- 28.2 The Contractor shall pay all applicable sales, consumer, use and other similar taxes required by law. The Contractor is responsible for reviewing the pertinent State statutes involving the sales tax and complying with all requirements.

ARTICLE 29 - RELATED WORK UNDER SEPARATE CONTRACTS

- 29.1 The Bidder's attention is directed to the fact that the Work to be done under this contract is part of an overall system. The success of the Project is dependent upon the completion of the Work under this contract and the work to be done by others.

ARTICLE 30 - ORGANIZATION OF DRAWINGS AND PROJECT MANUAL

- 30.1 Drawings and Project Manual for the Work are incorporated as follows:

The Project Manual has been organized and bound into one (1) volume as follows:

Division 0 - Bidding and Contract Requirements

Division 1 - General Requirements
Division 2 - Sitework
Roadway Plans – Bowyer-Singleton & Associates, Inc.
Utility Plans - Tetra Tech

ARTICLE 31 - REQUIRED DISCLOSURE

- 31.1 With its Bid submission, Bidder shall disclose all material facts pertaining to any felony conviction or any pending felony charges in the last three (3) years in this State or any other state of the United States against (i) Bidder, (ii) any business entity related to or affiliated with Bidder, or (iii) any present or former executive employee, officer, director, stockholder, partner or owner of Bidder or of any such related or affiliated entity. This disclosure shall not apply to any person or entity which is only a stockholder, which person or entity owns 20 percent (20%) or less of the outstanding share of a Bidder whose stock is publicly owned and traded.
- 31.2 At its sole discretion, the City may reject any Bidder it finds to lack, or whose present or former executive employees, officers, directors, stockholders, partners or owners are found by the City to lack honesty, integrity, or moral responsibility. The discretion of the City may be exercised based on the disclosure required herein, the City's own investigation, public records, or any other reliable sources of information. The City may also reject any Bidder failing to make the disclosure required herein. By submitting a Bid, Bidder recognizes and accepts that the City may reject the Bid based upon the exercise of its sole discretion and Bidder waives any claim it might have for damages or other relief resulting from the rejection of its Bid based on these grounds.

ARTICLE 32 - COMPLIANCE WITH OCCUPATION SAFETY AND HEALTH ACT (O.S.H.A.)

- 32.1 Bidder certifies that all material, equipment, etc., contained in his/her bid meets all applicable O.S.H.A. requirements. Bidder further certifies that, if he/she is the successful Bidder, and the material, equipment, etc., delivered is subsequently found to be defective in any applicable O.S.H.A. requirement in effect on the date of delivery, all costs necessary to comply with the requirements shall be borne by the Bidder. The Bidders signature upon the Bid Response Form (Section 00300) is considered Certification of Conformance to such requirements.

ARTICLE 33 - PROTESTS

- 33.1 Any Bidder who disputes the bid selection or contract award recommendation shall file such protest according to the bid protest procedures. These procedures are available upon request from the City.

ARTICLE 34 – CONFLICT OF INTEREST

- 34.1 All Bidders must disclose with their bid the name of any officer, director, or agent who is also an employee of the City. All Bidders must disclose the name of any

City employee who owns, directly or indirectly, an interest of five percent (5%) or more in the Bidder's firm or any of its branches.

ARTICLE 35 – LEGAL REQUIREMENTS

- 35.1 Bidders are required to comply with all provisions of Federal, State, City and local laws and ordinances, rules and regulations, that are applicable to the items being bid. Lack of knowledge by the Bidder shall in no way be a cause for relief from responsibility, or constitute a cognizable defense against the legal effect thereof.

ARTICLE 36 – DRUG-FREE WORKPLACE

- 36.1 Preference shall be given to business with Drug-Free Work Place (DFW) programs. Whenever two or more bids which are equal with respect to price, quality, and service are received by the City for the procurement of commodities or contractual services, a bid received from a business that completes the attached DFW form certifying that it is a DFW shall be given preference in the award process.

ARTICLE 37 – EEO STATEMENT

- 37.1 The City is committed to assuring equal opportunity in the award of contracts, and, therefore complies with all laws prohibiting discrimination on the basis of race, color, religion, national origin, age or sex.

ARTICLE 38 – GOVERNMENTAL RESTRICTIONS

- 38.1 In the event that any governmental restrictions are imposed which would necessitate alteration of the material quality, workmanship or performance of the items offered on this bid prior to their delivery, it shall be the responsibility of the Bidder to notify Purchasing at once, indicating in his/her letter the specific regulation which required an alteration, including any price adjustments occasioned thereby. The City reserves the right to accept such alteration or to cancel the contract or purchase order at no further expense to the City.

ARTICLE 39 – ADVERTISING

- 39.1 In submitting a bid, Bidder agrees not to use the results therefrom as a part of any commercial advertising, without the express written approval, by the appropriate level of authority within the City.

ARTICLE 40 – ASSIGNMENT

- 40.1 Any purchase order or contract issued pursuant to this Invitation to Bid and the monies which may become due hereunder are not assignable except with the prior written approval of the City, through the Finance Department.

ARTICLE 41 – ADJUSTMENTS / CHANGES / DEVIATIONS

- 41.1 No adjustments, changes or deviations shall be accepted on any item unless conditions or specifications of a bid expressly so provide. Any other adjustments, changes or deviations shall require prior written approval, and shall be binding **ONLY** if issued by the City's Finance Department. The Bidder shall bear sole responsibility for any and all costs of claims arising from any adjustments, changes or deviations not properly executed as required herein

ARTICLE 42 – PURCHASING AGREEMENTS WITH OTHER GOVERNMENT AGENCIES

- 42.1 All Bidders submitting a response to this Invitation to Bid agree that such response also constitutes a bid to all governmental agencies, under the same conditions, for the same contract price, and for the same effective period as the bid, should the Bidder feel it is in their best interest to do so. Each governmental agency shall be responsible for its own purchases and each shall be liable only for materials and/or services ordered and received by it, and no agency assumes any liability by virtue of this bid. This agreement in no way restricts or interferes with the right of any governmental agency to rebid any or all items.

ARTICLE 43 – CERTIFICATES, LICENSES, REGISTRATIONS

- 43.1 Proof of Vendor's State of Florida, Department of Business Regulation Certification shall be provided with their bid submittal. The work shall be performed under a Florida Contractor's License and shall not be awarded unless proof of valid license(s) is provided. The City reserves the right to require proof that the bidder is an established business and is abiding by the Ordinances, Regulations, and Laws of their Community and the State of Florida such as but not limited to: Occupational Licenses, Business Licenses, Florida Sales Tax Registration, and Federal Employee Identification Number.

ARTICLE 44 – REFERENCES

- 44.1 Bidder shall submit with the bid, eight (8) references (form attached) for projects of similar scope. Failure to provide this information with the bid may result in bid being declared non-responsive.

ARTICLE 45 – SUBMITTALS

- 45.1 All submittals are REQUIRED and shall be submitted with the bid package at the time of the bid opening to be considered a responsive bidder. Faxed or Electronically submitted Bids shall not be accepted. Bidding companies shall submit four (4) COMPLETE SETS (one [1] original, two [2] copies and one [1] electronic copy [CD] of their submittal. The CD shall be an exact duplicate of the hard copies and should be one complete file (PDF preferred) not a series of files. These documents constitute the complete set of terms and conditions, specification requirements, and bid forms. All bid sheets and attachments must be executed and submitted in a sealed envelope. Bids not submitted on the

enclosed Bid Form shall be rejected. SUBMITTAL OF A BID IN RESPONSE TO THIS INVITATION TO BID CONSTITUTES AN OFFER BY THE BIDDER. Bids which do not comply with these requirements may be rejected at the option of the City.

ARTICLE 46 – UNUSUAL CIRCUMSTANCES

- 46.1 If during a contract term where costs to the City are to remain firm or adjustments are restricted by a percentage or CPI cap, unusual circumstances that could not have been foreseen by either party to the contract occur, and those circumstances significantly affect the Seller's cost in providing the required items or services, then the Seller may request adjustments to the costs to the City to reflect the changed circumstances. The circumstances must be beyond the control of the Seller, and the requested adjustments must be fully documented. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the City will reserve the following options:
- 46.2 The contract can be canceled by the City upon giving thirty (30) days written notice to the Seller with no penalty to the City or Seller. The Seller shall fill all City requirements submitted to the Seller until the termination date contained in the notice.
- 46.3 The City requires the Seller to continue to provide the items and services at the firm fixed (non-adjusted) cost until the termination of the contract term then in effect.
- 46.4 If the City, in its interest and in its sole opinion, determines that the Seller in a capricious manner attempted to use this section of the contract to relieve themselves of a legitimate obligation under the contract, and no unusual circumstances had occurred, the City reserves the right to take any and all action under law or equity. Such action shall include, but not be limited to, declaring the Seller in default and disqualifying him for receiving any business from the City for a state period of time.
- 46.5 If the City does agree to adjusted costs, these adjusted costs shall not be invoiced to the City until the Seller receives notice in writing signed by a person authorized to bind the City in such matters.

ARTICLE 47 - INVOICING AND PAYMENT

- 47.1 Payment for any and all invoice(s) that may arise as a result of a contract or purchase order issued pursuant to this bid specification shall minimally meet the following conditions to be considered as a valid payment request:
- 47.2 A timely submission of a properly certified invoice(s), in strict accordance with the price(s) and delivery elements as stipulated in the contract or purchase order document, and be submitted to the Finance Department at the address as stipulated on the Purchase Order.
- 47.3 All invoices submitted shall consist of an original and one (1) copy; clearly reference the subject contract or purchase order number; provide a sufficient salient description to identify goods or service for which payment is requested; contain date of delivery; original or legible copy of signed delivery receipt including both manual signature and printed name of a designated City employee or authorized Agent; be clearly marked as invoice.
- 47.4 The invoice shall contain the Bidder's Federal Employer Identification Number (F.E.I.N.).
- 47.5 The City's terms are "Net 30 Days" after acceptance of goods or services and receipt of an acceptable invoice as described herein. Any discounts must be offered on the Bid Response Form.

ARTICLE 48 - POSTING OF BID AWARD

- 48.1 Recommendation for award will be posted for review by interested parties on DemandStar. Failure to file a protest with the Purchasing Department within the time prescribed in the CITY's Purchasing Manual, shall constitute a waiver of proceedings.
- 48.2 Recommendation for award will be posted for review by interested parties on DemandStar. Failure to file a protest with the Purchasing Department within the time prescribed in the CITY's Purchasing Manual, shall constitute a waiver of proceedings.

ARTICLE 49 – PERMITS, LICENSES AND FEES

- 49.1 Any permits, licenses, or fees required will be paid for by the Contractor and the responsibility of the Contractor, no separate or additional payment will be made. Adherence to all applicable code regulations (Federal, State, City, City) are the responsibility of the Contractor.

ARTICLE 50 – ASSIGNMENT

50.1 Any purchase order or contract issued pursuant to this Invitation to Bid and the monies which may become due hereunder are not assignable except with the prior written approval of the City, through the Finance Department.

ARTICLE 51 – FACILITIES

51.1 The City reserves the right to inspect the Bidder's facilities at any reasonable time, during normal working hours, to determine that Bidder has a bona fide place of business, and is a responsible Bidder.

ARTICLE 52 - BID PREPARATION COSTS

52.1 Neither the CITY nor its representatives shall be liable for any expenses incurred in connection with preparation of a response to this Invitation to Bid. Bidders should prepare their bids simply and economically, providing all information and prices as required.

ARTICLE 53 – ADDITIONAL TERMS AND CONDITIONS

53.1 Unless expressly accepted by the City, the following conditions shall apply: No additional terms and conditions included with the bid response shall be considered. Any and all such additional terms and conditions shall have no force and effect, and are inapplicable to this bid if submitted either purposely through intent or design, or inadvertently appearing separately in transmittal letters, specifications, literature, price lists or warranties. It is understood and agreed that the general and/or any special conditions in these Bid Documents are the only conditions applicable to this bid and the Bidder's authorized signature on the Bid Response Form attests to this. Exceptions to the terms and conditions will not be accepted.

END OF SECTION

02-101

MOBILIZATION

Mobilization shall include all items detailed in Article 101 of the “Florida Department of Transportation Standard Specifications for Road and Bridge Construction”, the Supplemental Conditions and on the plans, except as directed by the Engineer.

Basis of Payment

The work and incidental costs covered under Mobilization will be paid for at the contract lump sum price and will be paid in partial payments in accordance with Article 101-2.2. Mobilization will be limited to 10% of the Roadway Construction Subtotal Bid. Roadway Construction Subtotal Bid is defined as the total of all line items, exclusive of any alternatives or options, and exclusive of the Mobilization line item. Any remaining amount will be paid upon completion of all work on the project.

GENERAL REQUIREMENTS, BONDS, PERMITS

- General Requirements
- Bid Bonds
- Performance Bonds
- Permits

INDEMNIFICATION

The Contractor shall indemnify, defend, and hold harmless the CITY and all its officers, agents, and employees, from all claims, losses, damages, costs, charges, or expenses arising out of any acts, action, neglect, or omission by the Contractor during the performance of the Contract, whether direct or indirect, and whether to any person or property to which the CITY or said parties may be subject, except that neither the Contractor nor any of its subcontractors are liable under this Section for damages arising out of the injury or damage to persons or property directly caused or resulting from the sole negligence of the CITY or any of its officers, agents, or employees.

Payment shall be made under:

Item No. 101-1	Mobilization	Lump Sum
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02-102

MAINTENANCE OF TRAFFIC

All Maintenance of Traffic work shall conform to the requirements of Section 102 of the "Standard Specifications", the plans, and/or as herein modified, except as directed by the Engineer.

The road shall be kept open to local traffic on a paved surface during construction. The Contractor will not be permitted to isolate residences or places of business. Access shall be provided to all residences and all places of business whenever construction interferes with the existing means of access. Prior to the end of the workday, any drop-off occurring as a result of construction shall be treated using the optional shoulder treatment shown on FDOT Standard Index 600.

The Contractor shall furnish, erect and maintain all necessary traffic control devices, including flagmen and pilot cars, in accordance with the "Design Standards" dated 2006 Index 600 Series and the "Manual of Uniform Traffic Control Devices for Streets and Highways" published by the U.S. Department of Transportation, Federal Highway Administration. The Contractor shall provide and maintain in a safe condition temporary approaches, crossings, and intersections with trails, roads, streets, business parking lots, residences and garages. The Contractor shall take all necessary precautions for the protection of the work and the safety of the public in accordance with Section 102.

Contractor shall maintain access to all side streets and driveways within the work zone at all times.

Work shall take place during daytime hours only – 8:30 AM to 4:30 PM Monday through Friday.

The contractor shall utilize applicable FDOT Index 600 Series for all work.

The Contractor shall present his Maintenance of Traffic Plan to the Engineer at the preconstruction conference as required by Article 01200,102-E.10.

Basis of Payment

All materials, work and incidental costs related to Maintenance of Traffic will be paid for at the contract lump sum price. All material, labor and equipment necessary for the construction and maintenance of temporary driving lanes, side streets, and driveway connections as may be directed by the Engineer shall be included in the contract price.

Payment will be made under:

Item No. 102-1	Maintenance of Traffic	Lump Sum
Item No. 102-3	Commercial Material for Driveway Maintenance	Per Cubic Yard

02-104

EROSION CONTROL

Erosion Control shall include all items detailed in Article 104 of the “Standard Specifications”, the Special Provisions and on the plans, except as directed by the Engineer.

Basis of Payment

All materials, work and incidental costs related to Erosion Control will be paid for at the Contract Unit Price.

Payment shall be made under:

Item No. 104-10	Synthetic Bales	Per Lineal Foot
Item No. 104-11	Floating Turbidity Barrier	Per Lineal Foot
Item No. 104-12	Staked Turbidity Barrier	Per Lineal Foot
Item No. 104-13	Silt Fence Staked (Type III)	Per Lineal Foot
Item No. 104-16	Rock Bags	Per Each

02-104

EROSION CONTROL

Erosion Control shall include all items detailed in Article 104 of the “Standard Specifications”, the Special Provisions and on the plans, except as directed by the Engineer.

Basis of Payment

All materials, work and incidental costs related to Erosion Control will be paid for at the Contract Unit Price.

Payment shall be made under:

Item No. 104-10	Synthetic Bales	Per Lineal Foot
Item No. 104-11	Floating Turbidity Barrier	Per Lineal Foot
Item No. 104-12	Staked Turbidity Barrier	Per Lineal Foot
Item No. 104-13	Silt Fence Staked (Type III)	Per Lineal Foot
Item No. 104-16	Rock Bags	Per Each

02-110

CLEARING AND GRUBBING

All clearing and grubbing shall be performed in accordance with the requirements of Section 110 of the "Standard Specifications", except as directed by the Engineer.

BASIS OF PAYMENT

All work and incidental costs required to perform clearing and grubbing as herein specified will be paid for at the contract unit prices.

Payment shall be made under:

Item No. 110-1-1	Clearing and Grubbing	Acre
Item No. 110-7-1	Mailbox, F&I, Single	Each

02-120

EXCAVATION, EMBANKMENT AND GRADING

All excavation, embankment and grading work shall conform to the requirements of Section 120 of the "Standard Specifications" and the provisions of this section, except as directed by the Engineer.

Basis of Payment

Excavation, Embankment and Grading will be paid for at the contract unit price.

Payment shall constitute full compensation for all work described herein and in the Special Provisions and shall include grading of shoulders, graded road connections, slopes, compaction, final dressing, subsoil excavation and replacement material, and all work required for completing the project that is not paid for under the other pay items. Also included are removal and off-site disposal or on-site utilization of all materials, structures, abandoned utilities and obstructions as directed by the Engineer.

Payment shall be made under:

Item No. 120-1	Regular Excavation	Lump Sum
Item No. 120-6	Embankment	Lump Sum

STABILIZED SUBGRADE

All work shall be performed in accordance with the requirements of Section 160 of the "Standard Specifications" and shall be constructed to the limits, thickness, and specified limerock bearing ratio as shown on the plans, except as directed by the Engineer.

Method of Measurement

Quantities of stabilized subgrade measured for payment under this Section shall be the actual area in square yards of satisfactorily installed stabilized subgrade.

Basis of Payment

Stabilized subgrade will be paid for at the contract unit price per square yard installed and accepted and shall include the cost of furnishing and hauling additional stabilizing materials required, and all mixing, shaping and compacting of the stabilized area. The increased thickness of the Type B stabilization under curb and gutter sections shall be considered incidental and included in the contract unit price.

Payment shall be made under:

Item No. 160-4 Type B Stabilization (12") (Min LBR 40) Per Square Yard

02-331

TYPE S ASPHALT CONCRETE

Work specified in this Section consists of applying of Type S Asphalt Surface Course properly laid upon a prepared base. The plant, operations and methods and equipment shall conform to Section 220; general construction requirements shall be as specified in Section 230; and, materials and compositions shall conform to Section 231 of the "Standard Specifications", except as directed by the Engineer.

Minimum stability of S Asphaltic concrete shall be 1,500 pounds as determined by the Marshall Stability Test.

The following shall be added to Article 330-9.2.2, Thickness of Layers:

"Type S Asphaltic Concrete Structural Course greater than 2 inches thick shall be constructed in 2 layers. The tack coat to be applied between the layers shall be included in the cost of the asphalt.

Article 331-4.3, Job Mix Formula, shall be amended to read:

"The Job Mix Design shall be submitted to and approved by the Engineer prior to constructing the Asphaltic Concrete Pavement."

Method of Measurement

Quantities measured for payment under this Section shall be the actual area in square yards of asphaltic concrete installed within the limits of the contract.

Basis of Payment

Type S Asphaltic Concrete will be paid for at the contract unit price per square yard completed and accepted. No additional payment will be made for thickness greater than indicated on the plans nor for pavement of unauthorized areas.

Payment shall constitute full compensation for all labor, equipment, and materials, including bituminous material (plant mix), and all other incidental costs necessary to complete the work as specified.

Payment shall be made under:

Item No. 331-72-20 Type S Asphaltic Concrete (2"), (Traffic Level B)	
(including tack coat)	Per
Square Yard	

02-425

INLETS, MANHOLES, AND JUNCTION BOXES

Construction of Inlets, Manholes and Junction Boxes shall conform to the requirements of Section 425 of the "Standard Specifications" and applicable FDOT Design Standards and Details contained in the plans, except as directed by the Engineer.

Method of Measurement

The quantities measured for payment under this Section shall be the number of inlets, manholes, junction boxes, yard drains, special end walls, and shallow ditch drains satisfactorily completed and accepted, including drainage structure under drains where required.

Basis of Payment

Structures included in this Section will be paid for at the contract unit price each, completed and accepted. Payments shall constitute full compensation for furnishing all materials and completing all work described herein or shown on the plans, including all excavation; dewatering; subsoil excavation and replacement material; backfilling and compacting around structures; disposal of surplus material; and furnishing and placing of all concrete; reinforcing steel; gratings; frames; covers, and any other necessary fittings as shown in the plans, required for acceptable construction, or as directed by the Engineer. Where required, drainage structure underdrains shall be included in the unit price for inlets and manholes. If pre-cast structures are used, any alteration of pipe grades up to one (1) foot to clear utilities shall be made and connections to structures made at no additional cost to the City or utility.

Payment shall be made under:

Item No. 425-1-311	Inlet (Curb)(Type P-1)(<10')	Per Each
Item No. 425-1-321	Inlet (Curb)(Type P-2)(<10')	Per Each
Item No. 425-1-521	Inlet (DT Bot)(Type C)(<10')	Per Each
Item No. 425-1-551	Inlet (DT Bot)(Type E)(Special Design)	Per Each
Item No. 425-2-41	Manhole (Type P-7)(<10')	Per Each

02-430

PIPE CULVERTS AND STORM SEWERS

Constructing pipe culverts and storm sewers shall conform to the requirements of Section 430 of the "Standard Specifications," except as directed by the Engineer. All pipes shall be steel reinforced. Lifting holes in reinforced concrete pipe are prohibited.

Proposed storm sewer pipe to be connected to existing structures shall have openings cut into the existing structure without permanently damaging the structure. The openings shall be grouted watertight after pipe installation, and the structure shall be restored as approved by the Engineer.

The cost of connections to existing structures shall be included in the price bid for the pipe.

All culverts and storm sewer pipes shall be inspected and approved by the Engineer prior to final paving.

Concrete Pipe Joints

Each joint in the concrete pipe culverts and storm sewers shall be wrapped on the exterior of the pipe with a band of filter fabric. The band shall be 3 feet wide centered on the joint and shall be lapped a minimum of 2 feet. The plastic filter fabric shall meet the requirements of Section 985 of the "Standard Specifications." These costs shall be included in the per linear foot price for the pipe.

Method of Measurement

Quantities measured for payment under this Section shall be the length in linear feet of pipe culvert and storm sewer measured in place, completed and accepted. Measurements shall be from inside face of structure wall to inside face of structure wall.

Basis of Payment

Pipe Culverts and Storm Sewers will be paid for at the contract unit price, completed and accepted. The unit price shall include the integral risers, connection of proposed pipes to existing structures and replacement of pavement and base course removed for pipe trenching. Payments shall be full compensation for all work and materials described herein, including excavation (in whatever material is encountered), dewatering, removing unsuitable material and replacing with select bedding material, backfilling, compacting around the piping, furnishing and laying the pipe culverts, disposing of surplus materials, and other works as may be required for an acceptable installation.

Payment shall be made under:

Item No. 430-175-118	Pipe Culv (Opt Matl)(Round)(18" SS)	Per LF
Item No. 430-175-124	Pipe Culv (Opt Matl)(Round)(24" SS)	Per LF
Item No. 430-175-130	Pipe Culv (Opt Matl)(Round)(30" SS)	Per LF
Item No. 430-175-118	Pipe Culv (Opt Matl)(Elliptical)(42" SS)	Per LF
Item No. 430-982-125	Mitered End Section, Optional Round, 18" CD	Per EA
Item No. 430-982-133	Mitered End Section, Optional Round, 30" CD	Per EA

02-515

PIPE HANDRAIL

Construction of the aluminum pipe handrail construction shall conform to the requirements of FDOT “Standard Specifications”, FDOT Index 860, and this Technical Provision, except as directed by the Engineer.

Method of Measurement

Quantities measured for payment under this Section shall be the linear feet of 42” Pedestrian/Bicycle Picket Railing measured in place along the length of the top rail.

Basis of Payment

Pipe Handrail will be paid for at the contract unit price linear foot completed and accepted. Payment shall be made under:

Item No. 515-2-301 Pedestrian/Bicycle Railing, 42” Picket Railing Per Foot

02-520

CONCRETE GUTTER, CURB ELEMENTS, AND TRAFFIC SEPARATOR

Construction of concrete curb and gutter, concrete traffic separator, and concrete valley gutter shall conform to the requirements of Section 520 of the "Standard Specifications," except as directed by the Engineer

Foundation

Foundation material upon which the concrete is placed by slip forming shall be compacted as specified and shall be moist at the time of placement. For poured in place concrete, the foundation material shall meet the specified densities and shall be thoroughly wetted but free of standing water just prior to placing concrete.

Contraction Joints

For machine placed items, contraction joints shall be sawed to a minimum depth of 1 1/2 inches. Sawing shall begin as soon as the concrete has hardened to the degree that excessive raveling will not occur. Sawing shall progress in the same direction and sequence as the concrete placement. Every third joint shall be sawed first, then saw intermediate joints.

For concrete placed before noon, all joints shall be sawed the same day of placement. For concrete placed after noon, all third joints shall be sawed the day of placement; all other joints prior to noon the following day.

Curing

Concrete shall be cured as provided in Section 520-8, except as modified herein. Curing material shall be applied to the concrete surfaces after finishing as soon as the concrete has hardened sufficiently to prevent marring the surface or within one hour after finishing is completed, whichever occurs first. Applying curing materials shall not be held up due to other activities on the project. Contractor shall schedule and provide manpower necessary to conform to these requirements.

If the Contractor chooses to use membrane curing compound, it shall be Type 2, white-pigmented, meeting AASHTO M 180 requirements. Curing compound shall be thoroughly agitated before pouring from original container and periodically agitated **during application** to prevent settlement of pigment.

Spraying equipment, including spray tip and nozzle, shall be as recommended by manufacturers' printed literature, or an acceptable equal. Suggested equivalent spraying equipment are:

Pump Sprayer: Model No. 1949, Chapin Mfg., (800) 444-3140

Drum Pump Sprayer: 12 Volt DC # 6061, Chapin Mfg.

Equipment shall be maintained and nozzles replaced as required to provide consistent uniform spray pattern.

02-520

A uniform coating meeting the manufacturer's recommended minimum application rate shall be applied. Areas appearing to have insufficient curing compound, as determined solely by the Engineer, shall be re-coated immediately to provide required uniform coverage.

Storage containers greater than five gallon capacity may be utilized only with prior approval by the Engineer. Contractor shall submit the manufacturer's descriptive literature describing the placement, storage and mixing requirements for storage containers exceeding five gallons. Contractor shall provide and utilize mechanical mixers for all containers larger than five gallons. The mixers shall be equivalent to the manufacture's requirements. Contractor shall conform to all storage, mixing and application requirements.

Repairs

Where replacement is necessary, complete sections between contraction joints shall be removed and replaced. New Joints between initially installed contraction joints are not acceptable.

Method of Measurement

Quantities to be measured for payment shall be the actual length in feet of items covered by this Section completed and accepted.

Basis of Payment

Items covered by this Section will be paid for at the contract unit price. Payment shall constitute full compensation for all work described herein, including all labor, equipment, materials and incidentals necessary to complete each item of work.

Payment shall be made under:

Item No. 520-1-10	Concrete Curb & Gutter, Type F	Per Linear Foot
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CONCRETE SIDEWALKS, 4 INCHES AND 6 INCHES THICKNESS

Construction of 4-inch and 6-inch thick concrete sidewalk shall conform to the requirements of Section 522 of the "Standard Specifications", except as directed by the Engineer.

Foundation

Foundation material shall meet the specified densities and shall be thoroughly wetted but free of standing water just prior to placing concrete.

Contraction Joints

Contraction joints shall be sawed. All joints shall be straight lines oriented at 90 degrees to the edge of sidewalk, radially if in a curve, or as directed otherwise. **Minimum depth** of joints shall be **1 1/2 inches** or **1/4** the nominal thickness of concrete placed, whichever is greater.

Joint installation shall proceed in the same direction and sequence as the concrete placement. Sawing shall begin as soon as the concrete has hardened to the degree that excessive raveling will not occur. Every third transverse joint and all longitudinal joint shall be installed within 8 hours after finishing. Remaining transverse joints, shall be installed by noon the following day.

Construction Joints

Construction joints shall be constructed at the end of all pours and at other locations where the concrete placement operations are stopped for as long as 30 minutes. They shall be placed at least 10 feet from any other transverse construction joint or end of pavement section.

Metal keyways shall be installed at all construction joints in sidewalks 6-inches and greater in thickness. Concrete thickness shall be increased by 2-inches for a minimum distance of 6-inches either side of construction joints.

Curing

Concrete shall be cured as provided in Section 520-8, except as modified herein. Curing material shall be applied to the concrete surfaces after finishing **as soon as the concrete has hardened sufficiently to prevent marring the surface or within one hour after finishing is completed, whichever occurs first**. Applying curing materials shall not be held up due to other activities on the project. Contractor shall schedule and provide manpower necessary to conform to these requirements.

If Contractor chooses to use membrane-curing compound, it shall be Type 2, white-pigmented, meeting AASHTO M 180 requirements. Curing compound shall be thoroughly agitated before pouring from original container and periodically agitated during application to prevent settlement of pigment.

02-522

Spraying equipment, including spray tip and nozzle, shall be as recommended by manufacturers' printed literature, or an acceptable equal. Suggested equivalent spraying equipment are :

- Pump Sprayer: Model No. 1949, Chapin Mfg., (8900) 444-3140
- Drum Pump Sprayer: 12 Volt DC # 6061, Chapin Mfg.

Equipment shall be maintained and nozzles replaced as required to provide consistent uniform spray pattern.

A uniform coating meeting the manufacturer's recommended minimum application rate shall be applied. Areas appearing to have insufficient curing compound, as determined solely by the County, shall be re-coated immediately to provide required uniform coverage.

Storage containers greater than five gallon capacity may be utilized only with prior approval by the Engineer. Contractor shall submit the manufacturer's descriptive literature describing the placement, storage and mixing requirements for storage exceeding five gallons. Contractor shall provide and utilize mechanical mixers for all containers larger than five gallons. The mixers shall be equivalent to or exceed the manufacture's requirements. Contractor shall conform to all storage, mixing and application requirements.

Replacement

Where 6-inch concrete has to be replaced due to cracks, it shall be replaced with a uniform thickness of 8-inch concrete covering no less than 40 square feet and extending to existing sawed contraction joints. Replacement concrete shall extend at least 3-inches beneath existing concrete at a minimum thickness of 3-inches.

Method of Measurement

Quantities measured for payment under this Section shall be the actual area in square yards of concrete constructed in place.

Basis of Payment

Concrete Sidewalk will be paid for at the contract unit prices, completed and accepted. Payment shall constitute full compensation for all work described herein, and shall include all labor, equipment, materials, grading, compaction, and all incidentals necessary to complete the work to the lines, grades, and thicknesses indicated on the plans.

Subgrade preparation and additional concrete required for thickened slabs as indicated on the plans or as directed by the Engineer shall be included in the contract unit price for 6 inch concrete sidewalk (driveway).

Payment shall be made under:

- Item No. 522-1 Concrete Sidewalk, 4" Thick (including compaction) Per Square Yard
- Item No. 522-2 Concrete Sidewalk, 6" Thick (including compaction) Per Square Yard

02-524

CONCRETE DITCH AND SLOPE PAVEMENT

Work specified in this Section consists of the construction of concrete pavement in the flow change of drainage ditches and on slopes in accordance with the notes and details shown in the plans, which shall conform to the requirements of Section 524 of the "Standard Specifications", except as directed by the Engineer.

Materials

Provide concrete in accordance with Section 347, performed expansion joint material in accordance with Section 932 and filter fabric in accordance with Section 985.

Method of Measurement

The quantities to be paid for under this Section shall be the square yard of concrete ditch and slope pavement completed and accepted. No deduction shall be made for any areas occupied by manholes, inlets, or other drainage structures or by public utility appurtenances within the pavement area.

Payments shall constitute full compensation for furnishing all materials and completing all work described herein or shown on the plans, and any other necessary fittings as shown in the plans for acceptable construction, or as directed by the Engineer.

Basis of Payment

Payment shall be made under:

Item No. 524-1-29 Concrete Ditch Pavement (Reinforced) (4") Per Square Yard

02-530

RIPRAP

Work specified in this Section consists of the construction of Sand-Cement or rubble Rip-Rap slope protection, which shall conform to the requirements of Section 530 of the "Standard Specifications", except as directed by the Engineer.

Materials

Portland Cement shall be from an approved source. Fine aggregate shall be per requirements of Section 902-3.3. Provide sacks made of jute, cotton, or scrim reinforced paper capable of holding the sand-cement mixture without leakage. Provide sacks of uniform size and dimension, in order to provide uniformity of lines in the completed work.

Method of Measurement

The quantities to be paid for under this Section shall be the cubic yard volume of Rip-Rap completed and accepted. No deduction shall be made for any areas occupied by manholes, inlets, or other drainage structures or by public utility appurtenances within the pavement area.

Payments shall constitute full compensation for furnishing all materials and completing all work described herein or shown on the plans, and any other necessary fittings as shown in the plans for acceptable construction, or as directed by the Engineer.

Basis of Payment

Payment shall be made under:

Item No. 530-1	Rip-Rap, Sand-Cement	Per Cubic Yard
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02-570

PERFORMANCE TURF

Establishing a growing, healthy turf over all areas called for on the plans by furnishing and installing seed, sod, fertilizer, water, and maintaining the turf areas shall be in accordance with Section 570 of the "Standard Specifications", except as directed by the Engineer.

In established areas, replacement sod shall be of the same type as the existing sod, unless otherwise approved by the Engineer.

Sod at pond slopes and median areas to be Bahia sod. Sod at back of sidewalks to be Bahia or match existing sod.

The Contractor shall mow sodded areas twice monthly, or as required by the Engineer, until final acceptance of the work.

METHOD OF MEASUREMENT

Quantities measured for payment under this Section shall be the area in square yards of satisfactorily installed sodding.

BASIS OF PAYMENT

Sodding will be paid for at the contract unit price per square yard, completed and accepted. Payment shall constitute full compensation for all work described herein, including the cost of ground preparation, fertilizing, furnishing and installing sod, mowing and complete maintenance of the sodded area until final completion.

Payment shall be made under:

Item No. 570-1-2	Sodding (includes fertilizer and water for sod) (Bahia or match to existing) -	Per Square Yard
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02-603

TRAFFIC CONTROL DEVICES

The signalization shown on the plans shall be constructed with equipment and materials which shall conform to Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Section 603 through Section 699, except where noted on the plans and indicated by the following Technical Specifications. The contractor shall furnish certifications from the City of Deltona accepting all the equipment and materials.

Traffic Controllers

The required traffic controllers shall be furnished and installed by the Contractor. The 60 day burn-in required in Section 611 is deleted for the controllers.

The Contractor shall furnish, install and remove temporary controllers and signals for temporary traffic controls during the construction period. Payment will be included in Mobilization.

Signal Heads

All signal heads shall be cast aluminum with 12" glass lenses, backplates and tunnel visors as noted on the plans.

Shop Drawings

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

Method of Measurement

Quantities measured for payment under this Section shall be for each complete signalization unit installed.

Basis of Payment

Signalization will be paid for at the lump sum prices for each unit completed and accepted. The cost of the interconnect shall be included in the contract price for signalization. Payment shall constitute full compensation for all work described herein and shown in the plans.

02-700

TRAFFIC CONTROL SIGNING

The furnishing and installing of all Traffic Control Signing as shown on the plans shall conform to the requirements of Section 700 of the "Standard Specifications", except as amended herein. All traffic control signs shall be of the type specified and installed at the locations shown on the plans.

The materials and methods shall comply with Sections 700-3 through 700-6 of the "Standard Specifications" and shall be accepted by the City of Deltona prior to fabrication.

Method of Measurement

Article 700-10 of the "Standard Specifications" is deleted and the following is added:

“The quantities measured for payment under this Section shall be the number of Traffic Control Highway Signs furnished and installed as shown on the plans, satisfactorily completed and accepted.”

Basis of Payment

Price and payment shall be full compensation for furnishing and installation of all materials necessary to complete the signs in accordance with the details shown in the plans; including sign panels complete with sheeting, painting, and message; sign posts and supports, footings, excavation, etc; for the lighted signs, all costs of the electrical installation for lighting, up to the point of connection by others; and all other work specified in this Section, including all incidentals necessary for the complete item.

Payment shall be made under:

Item No. 700-1	Signage, Complete	Per Lump Sum
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Division 02**TECHNICAL SPECIFICATIONS****02-603**

Payment shall be made under:

Item No.	Description	Unit
630-1-12	Conduit (F&I) (Underground)	LF
630-1-14	Conduit (F&I) (Underground-Jacketed)	LF
632-7-1	Cable (Signal) (F&I)	PI
634-4-13	Span Wire Assembly (F&I) (Two Wire) (Box)	PI
635-1-11	Pull and Junction Boxes (F&I) (Pull Box)	EA
641-2-16	Prestressed Concrete Strain Pole (F&I) (Type P-VI)	EA
650-51-313	Traffic Signal (F&I) (3-Section) (1- Way) (Polycarbonate/LED)	AS
653-191	Signal Pedestrian (F&I) (LED Countdown) (1- Way)	AS
653-192	Signal Pedestrian (F&I) (LED Countdown) (2- Way)	AS
659-101	Signal Head Auxuillaries (F&I) (Backplates 3 Section)	EA
659-106	Signal Head Auxuillaries (F&I) (Tunnel Visor)	EA
606-1-103	Loop Detector, Inductive (F&I) (Type 3, 1CH, SS, S))	EA
606-1-104	Loop Detector, Inductive (F&I) (Type 4, 1CH, SS, S)	EA
660-2-106	Loop Assembly (F&I) (Type F)	AS
665-13	Detector, Pedestrian (F&I) (Detector w/ Sign)	EA
670-5-410	Traffic Control Assembly (Modify) (NEMA)	AS
690-10	Traffic Signal Head Assembly, Remove	EA
690-20	Pedestrian Signal Assembly, Remove	EA
690-34-1	Complete Pole Removal (Deep Direct Burial)	EA
690-80	Span Wire Assembly (Remove)	EA
690-90	Remove Cabling and Conduit	PI
690-100	Signal Equipment, Miscellaneous, Remove	PI
699-1-1	Internally Illuminated Sign (F&I) (Street Name)	EA

RAISED RETRO-REFLECTIVE PAVEMENT MARKERS AND BITUMINOUS ADHESIVE

The furnishing and installing of all reflective pavement markers as shown on the plans shall conform to the requirements of Section 706 of the "Standard Specifications", except as amended herein. All reflective markers shall be Class B markers and the type shall be as shown on the plans.

Method of Measurement

Article 706-5 of the "Standard Specifications" is deleted and the following is added: The quantity to be paid for under this Section shall be per each quantity which shall include all labor and material for the furnishing and installing of all reflective pavement markers as shown on the plans.

Basis of Payment

Section 706-6 of the "Standard Specifications" is deleted and the following is added: The quantity for the furnishing and installing of the reflective pavement markers shall be paid for at the contract unit price per each.

Payment shall be made under:

Item No. 706-3 Retro-Reflective Pavement Markers EA

02-711

THERMOPLASTIC TRAFFIC STRIPES AND MARKINGS

The placing of thermoplastic traffic stripes and markings as shown on the plans shall conform to the requirements of Section 711 of the "Standard Specifications", except as amended herein.

Materials

All thermoplastic pavement marking material shall be alkyd based. The use of hydrocarbon base material shall not be allowed. Contact City of Deltona for approval of materials prior to installing pavement marking.

Method of Measurement

The quantities to be paid for under this Section shall be length measured in feet of thermoplastic Traffic Stripe or the per each quantity of directional arrows as measured and accepted by the Engineer. The payment shall include all labor and material for the placing of all pavement, marking as shown on the plans, including removal of existing temporary pavement markings.

Basis of Payment

The quantity for the placing of the traffic stripes and marking, and removal of temporary pavement markings, shall be paid for per Lump Sum.

Payment shall be made under:

Item No. 711-11	Thermoplastic Stripes and Markings	Per Lump Sum
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