

**Lee County Board of County Commissioners
Agenda Item Summary**

Blue Sheet No. 20060695-UTL

1. Action Requested/Purpose:

1) Authorize the Chairwoman, on behalf of the BOCC, to approve Change Order No. 1 to the Pinewoods Water Treatment Plant Expansion, Contract No. 2974 with Harn R/O Systems for the changes in construction scope, including design fees, as they relate to project infrastructure, increasing the Guaranteed Maximum Price (GMP) by \$1,244,426.00, changing the total contract amount to \$9,742,530.00; and, 2) Approve budget transfer from the Water Connection Fees Reserve for \$1,300,000 and amend FY05/06-09/10 CIP accordingly.

2. What Action Accomplishes:

Keeping the per million gallon price well below market standard, Change Order No. 1: (1) Provides finished-design (based on system demands) high-service pumps, transfer pumps, and associated piping and valving. (2) Provides R/O building based on finished-design criteria and exceeding minimum wind load requirements, for an emergency gathering location for essential staff. (3) Provides building code compliant Sodium Hypochlorite shelter with retaining wall. (4) Provides the increased yard piping scope, not originally included in the GMP. (5) Accounts for unforeseen cost escalations.

3. Management Recommendation:

Approval.

4. Departmental Category: 10

CIOF

5. Meeting Date:

6-20-2006

6. Agenda:

- Consent
- Administrative
- Appeals
- Public
- Walk-On

7. Requirement/Purpose (specify)

- Statute
 - Ordinance
 - Admin. Code
 - Other
- Approval

8. Request Initiated:

Commissioner _____
 Department Public Works
 Division Utilities
 By: Sergio I. Velez, P.E., Acting Director

9. Background:

The original quantities for this design build contract were based on a limited design, as is typical of this type of contract. The design-builder may then expedite construction, as was and still is very necessary for this plant expansion due to the extraordinary growth in Lee County. In-between the time of the proposal and present day, the design has changed, based on the system and a full analysis of the existing plant. The attached additional background information and justification has been compiled by the design-builder, their sub-contractors and suppliers, and Lee County Utilities staff. Funds will be available in Account No. 20715548712.506540.

10. Review for Scheduling

Department Director	Purchasing or Contracts	Human Res.	Other	County Attorney	Budget Services				County Manager / P.W. Director
					Analyst	Risk	Grants	Mgr.	
<u>J. Lavender</u> Date: <u>6/6/06</u>	<u>C. Logan</u> Date: <u>6/6/06</u>	N/A Date:	<u>B. Dearborn</u> Date: <u>6/6</u>	<u>S. Covert</u> Date: <u>6/6</u>	<u>6/3/06</u>	<u>6/8/06</u>	<u>6/8/06</u>	<u>6/8/06</u>	<u>J. Lavender</u> Date: <u>6/6/06</u>

11. Commission Action:

- Approved
- Deferred
- Denied
- Other

RECEIVED BY
 COUNTY ADMIN: [Signature]
6/7/06 10:20
 COUNTY ADMIN
 FORWARDED TO: [Signature]
6/8/06
4pm

Rec. by CoAtty
 Date: 6/7/06
 Time: 8:45 AM
 Forwarded To: [Signature]

**MEMORANDUM
FROM
PUBLIC WORKS
UTILITIES**

DATE: JUNE 8, 2006

To: MOLLY SCHWEERS
PUBLIC RESOURCES

FROM: SUE GULLEDGE
ADM SPEC 475-8181



SUBJECT: DOCS TO CATCH-UP WITH B/S 20060695-UTL

Attached please find the executed four originals of "Change Order No. 1 for Harn R/O Systems" that need to "catch-up" with Blue Sheet No. 20060695-UTL that is to be scheduled for June 20th.

Please remove the unexecuted copy in the package and replace it with the attached, which will require signatures.

Thank you for your assistance. Please call if you have any questions.

/sdg

Attachments

cc: File

**LEE COUNTY CONSTRUCTION CONTRACT
CHANGE ORDER**

No.: 1

(A Change Order requires approval by the Department Director for expenditures under \$50,000, approval by the County Manger for expenditures between \$50,000.01 and \$100,000, or approval by the Board of County Commissioners for expenditures over \$100,000).

CONTRACT/PROJECT NAME: Pinewoods WTP Expansion
 CONTRACTOR: Ham R/O Systems, Inc. PROJECT NO.: 7173
 CONTRACT NO.: 2974 BID NO.: _____
 CHANGE REQUESTED BY: Ham R/O Systems, Inc. DATE OF REQUEST: 5-8-2006

Upon the completion and execution of this Change Order by both parties to the Contract the Contractor is authorized to and shall proceed to make the following changes in the Contract Documents:
(If you need space other than what has been provided, please attach additional sheets.)

Description: See attached list of changes
 Purpose of Change Order: Design changes, owner or engineer directed
 Attachments: (List documents supporting change) Bid Item list and justification

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIME:
Original Contract Price <u>\$8,498,104.00</u>	Original Contract Time <u>554</u> Calendar Days
Previous Change Order No. <u>0</u> to No. <u>0</u> <u>\$0</u>	Net Change from previous Change Orders <u>0</u> Calendar Days
Contract Price prior to this Change Order <u>\$8,498,104.00</u>	Contract Time prior to this Change Order <u>554</u> Calendar Days
Net Increase (Decrease) of this Change Order <u>\$1,244,426.00</u>	Net Increase (Decrease) of this Change Order <u>470</u> Calendar Days
Contract Price will all approved Change Orders <u>\$9,742,530.00</u>	Contract Time with all approved Change Orders <u>1024</u> Calendar Days

It is understood and agreed that the acceptance of this modification by the CONTRACTOR constitutes an accord and satisfaction, and represents payment in full (both time and money) for all costs arising out of, or incidental to, the above mentioned change.

<p>RECOMMENDED:</p> <p>By: <u>[Signature]</u> <u>6/7/06</u> Consultant (if applicable) Date</p> <p>By: <u>[Signature]</u> <u>6/7/06</u> Department Director Date</p> <p>By: <u>[Signature]</u> <u>6/7/06</u> Contracts Management Date</p> <p>APPROVED: _____ County Attorney's Office Date</p>	<p>ACCEPTED</p> <p>By: <u>[Signature]</u> Contractor</p> <p>Date Accepted: <u>6-1-06</u></p> <p>(CORPORATE SEAL)</p>	<p>COUNTY APPROVAL:</p> <p>By: _____ Department Director (Under \$50,000)</p> <p>Date Approved: _____</p> <p>By: _____ County Administration (Under \$100,000)</p> <p>Date Approved: _____</p> <p>By: _____ Chairwoman Board of County Commissioners (Over \$100,000)</p> <p>Date Approved: _____</p>
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RECOMMENDED:
 By: [Signature] 6/7/06
 Consultant (if applicable) Date
 By: [Signature] 6-7-06
 Department Director Date
 By: [Signature] 6/7/06
 Contracts Management

ACCEPTED
 By: [Signature]
 Contractor
 Date Accepted: 6-1-06
 (CORPORATE SEAL)

COUNTY APPROVAL:
 By: _____
 Department Director (Under \$50,000)
 Date Approved: _____
 By: _____
 County Administration (Under \$100,000)
 Date Approved: _____
 By: _____
 Chairwoman
 Board of County Commissioners
 (Over \$100,000)
 Date Approved: _____

APPROVED:

 County Attorney's Office Date

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 Department Director Date
 By: [Signature] 6/7/06
 Contracts Management Date

ACCEPTED
 By: [Signature]
 Contractor
 Date Accepted: 6-7-06
 (CORPORATE SEAL)

COUNTY APPROVAL:
 By: _____
 Department Director (Under \$50,000)
 Date Approved: _____
 By: _____
 County Administration (Under \$100,000)
 Date Approved: _____
 By: _____
 Chairwoman
 Board of County Commissioners
 (Over \$100,000)
 Date Approved: _____

APPROVED:

 County Attorney's Office Date

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CHANGE ORDER**

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RECOMMENDED:
 By: [Signature] 6/8/06
 Consultant (if applicable) Date
 By: [Signature] 6-7-06
 Department Director Date
 By: [Signature] 6/7/06
 Contracts Management Date

ACCEPTED
 By: [Signature]
 Contractor
 Date Accepted: 6-1-06
 (CORPORATE SEAL)

COUNTY APPROVAL:
 By: _____
 Department Director (Under \$50,000)
 Date Approved: _____
 By: _____
 County Administration (Under \$100,000)
 Date Approved: _____
 By: _____
 Chairwoman
 Board of County Commissioners
 (Over \$100,000)
 Date Approved: _____

APPROVED:

 County Attorney's Office Date

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Blue Sheet No. 20060695-UTL

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Keeping the per million gallon price well below market standard, Change Order No. 1: (1) Provides finished-design (based on system demands) high-service pumps, transfer pumps, and associated piping and valving. (2) Provides R/O building based on finished-design criteria and exceeding minimum wind load requirements, for an emergency gathering location for essential staff. (3) Provides building code compliant Sodium Hypochlorite shelter with retaining wall. (4) Provides the increased yard piping scope, not originally included in the GMP. (5) Accounts for unforeseen cost escalations.

3. Management Recommendation:

Approval.

4. Departmental Category: 10 - Utilities

5. Meeting Date:

6. Agenda:

7. Requirement/Purpose (specify)

8. Request Initiated:

Consent
 Administrative
 Appeals
 Public
 Walk-On

Statute
 Ordinance
 Admin. Code
 Other
 Approval

Commissioner
 Department Public Works
 Division Utilities
 By: *Sergio I. Velez*
Sergio I. Velez, P.E., Acting Director

9. Background:

The original quantities for this design build contract were based on a limited design, as is typical of this type of contract. The design-builder may then expedite construction, as was and still is very necessary for this plant expansion due to the extraordinary growth in Lee County. In-between the time of the proposal and present day, the design has changed, based on the system and a full analysis of the existing plant. The attached additional background information and justification has been compiled by the design-builder, their sub-contractors and suppliers, and Lee County Utilities staff. Funds will be available in Account No. 20715548712.506540.

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Department Director	Purchasing or Contracts	Human Res.	Other	County Attorney	Budget Services				County Manager / P.W. Director
					Analyst	Risk	Grants	Mgr.	
<i>J. Lavender</i> Date: 6-6-06	<i>C. Logan</i> Date: 6/6/06	N/A Date:	<i>B. Dearborn</i> Date: 6/6	S. Covert Date:					<i>J. Lavender</i> Date: 6-6-06

11. Commission Action:

Approved
 Deferred
 Denied
 Other

COPY

LEE COUNTY CONSTRUCTION CONTRACT CHANGE ORDER

(A Change Order requires approval by the Department Manager for expenditures between \$50,000.01 and expenditures over \$100,000).

No.: 1
County
for

CONTRACT/PROJECT NAME: Pinewood
CONTRACTOR: Harn R/O Systems, Inc.
CONTRACT NO.: 2974
CHANGE REQUESTED BY: Harn R/O Sy

Upon the completion and execution of this Change Order, the Contractor is authorized to and shall proceed to make the changes described herein.
(If you need space other than what has been provided, please attach additional sheets.)

Description: See attached list of change
Purpose of Change Order: Design char
Attachments: (List documents supporting this change)

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**PLEASE NOTE THE
ORIGINAL
DOCUMENT WILL BE
FORTHCOMING TO
PUBLIC RESOURCES
ASAP, TO CATCH UP
WITH THE BLUE
SHEET (B/S 20060695)**

**SUE GULLEDGE
UTILITIES
479-8181**

6
Contractor is

Net Increase (Decrease) of this Change Order
470 Calendar Days
Contract Time with all approved Change Orders
994 Calendar Days

It is understood and agreed that the acceptance of this modification by the CONTRACTOR constitutes an accord and satisfaction, and represents payment in full (both time and money) for all costs arising out of, or incidental to, the above mentioned change.

RECOMMENDED:
By: _____ Date _____
Consultant (if applicable)
By: _____ Date _____
Department Director
Contracts Management

ACCEPTED
By: _____
Contractor
Date Accepted: _____
(CORPORATE SEAL)

COUNTY APPROVAL:
By: _____
Department Director (Under \$50,000)
Date Approved: _____
By: _____
County Administration (Under \$100,000)
Date Approved: _____
By: _____
Chairwoman
Board of County Commissioners
(Over \$100,000)
Date Approved: _____

APPROVED:
County Attorney's Office Date

REQUEST FOR TRANSFER OF FUNDS

FUND NAME: LCU Capital Improvements DATE: 06/06/06 BATCH NO. _____

FISCAL YEAR: 05/06 FUND #: 43712
48730 DOC TYPE: YB LEDGER TYPE: BA

TO: Lee County Utilities CIP Budget
(DIVISION NAME) (PROGRAM NAME)

NOTE: PLEASE LIST THE ACCOUNT NUMBER BELOW IN THE FOLLOWING ORDER:
FUND #-DEPT/DIV #-PROGRAM #-OBJECT CODE #-SUBFUND #-PROJECT#-COST CENTER #.
(EXAMPLE: BB5120100100.503450)

ACCOUNT NUMBER	OBJECT NAME	DEBIT
20715548712.506540	Pinewoods WTP Deep Injection Well	1,300,000

TOTAL TO: \$ 1,300,000

FROM: Lee County Utilities CIP Budget
(DIVISION NAME) (PROGRAM NAME)

ACCOUNT NUMBER	OBJECT NAME	CREDIT
GC5890148712.509910	Reserve for Contingencies	1,300,000

TOTAL FROM: \$ 1,300,000

EXPLANATION:

6/7/06
DIVISION DIRECTOR SIGNATURE DATE

6-8-06
DEPARTMENT DIRECTOR SIGNATURE DATE

DBS: APPROVAL DENIAL

6-8-06
OPERATIONS ANALYST SIGNATURE DATE

APPROVAL DENIAL

BUDGET OPERATIONS MANAGER SIGNATURE DATE

CO. ADMIN.: APPROVAL DENIAL

CO. ADMIN. SIGNATURE DATE

BCC APPROVAL DATE _____

BCC CHAIRMAN SIGNATURE

BA NO. _____ AUTH CODE _____ TRANS DATE _____

COPY

LEE COUNTY CONSTRUCTION CONTRACT
CHANGE ORDER

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County
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CONTRACTOR: Harn R/O Systems, Inc.
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Attachments: (List documents supporting

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RECOMMENDED:

ACCEPTED

COUNTY APPROVAL:

By: _____
Consultant (if applicable) Date

By: _____
Contractor

By: _____
Department Director (Under \$50,000)

By: _____
Department Director Date

Date Accepted: _____

Date Approved: _____

Contracts Management

(CORPORATE SEAL)

By: _____
County Administration (Under \$100,000)

APPROVED:

County Attorney's Office Date

Date Approved: _____

By: _____
Chairwoman
Board of County Commissioners
(Over \$100,000)

Date Approved: _____

**PROJECT: LEE COUNTY PINEWOODS
CONTRACT DATE: 12/27/2004**

OWNER: LEE COUNTY UTILITY DEPT.
1500 Monroe Street
Fort Myers, FL 33901
CONTACT: Kim P. Hoskins, PE

CONTRACTOR: HARN R/O SYSTEMS, INC.
205 Seaboard Ave
Venice, FL 34285
CONTACT: JULIA NEMETH-HARN, PE

ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	CHANGE ORDER #1	REVISED CONTRACT		WORK COMPLETED TO DATE
				AMOUNT	AMOUNT	
	NF Plant Retrofit					
A.	Mobilization/Demobilization	\$ 15,000.00		\$15,000.00	\$	15,000.00
B.	General Conditions	\$ 20,000.00		\$20,000.00	\$	20,000.00
C.	Engineering & Permitting	\$ 30,000.00		\$30,000.00	\$	30,000.00
D.	R/O Modifications	\$ 395,678.00		\$395,678.00	\$	395,678.00
E.	Installation & Start-up	\$ 25,000.00		\$25,000.00	\$	25,000.00
	R/O Plant			\$0.00		
F.	General Conditions	\$ 420,000.00		\$420,000.00	\$	264,600.00
G.	Engineering & Permitting	\$ 870,000.00	\$ 25,000.00	\$895,000.00	\$	809,100.00
H.	Mobilization/Demobilization	\$ 225,000.00		\$225,000.00	\$	180,000.00
I.	R/O Building	\$ 1,166,000.00	\$ 264,234.00	\$1,430,234.00	\$	641,300.00
J.	R/O Equipment & Chemical Mods.	\$ 2,074,649.00	\$ (28,000.00)	\$2,046,649.00	\$	373,436.00
K.	HSP/HF Storage & Feed Building	\$ 280,000.00	\$ 81,186.00	\$361,186.00	\$	-
L.	High Service Pumps & Piping	\$ 125,000.00	\$ 9,800.00	\$134,800.00	\$	-
M.	Transfer Pump Clearwell	\$ 180,000.00		\$180,000.00	\$	-
N.	Transfer Pumps & Piping	\$ 106,000.00	\$ 51,089.00	\$157,089.00	\$	-
O.	Degasifiers & Scrubbers	\$ 430,000.00		\$430,000.00	\$	-
P.	Sodium Hypochlorite System	\$ 86,000.00	\$ 71,665.00	\$157,665.00	\$	-
Q.	Yard Piping	\$ 130,000.00	\$ 702,022.00	\$832,022.00	\$	2,600.00
R.	Control System	\$ 185,000.00		\$185,000.00	\$	-
S.	Start-up and Testing	\$ 125,000.00		\$125,000.00	\$	-
T.	1 MG Ground Storage Tank	\$ 625,000.00		\$625,000.00	\$	612,500.00
U.	1500 KW Emergency Generator	\$ 580,105.00		\$580,105.00	\$	-
V.	Delete Sand Separators	\$ -	\$ (112,756.00)	-\$112,756.00		-
W.	Cost Escalations	\$ -	\$ 180,186.00	\$180,186.00		-
X.	Cont. Trans. For Service Painting	\$ 230,000.00		\$230,000.00	\$	230,000.00
Y.	Pending Cont. Trans. CT Basin	\$ 62,633.00		\$62,633.00		-
Z.	Remaining Contingency	\$ 112,039.00		\$112,039.00	\$	-
	TOTAL CONTRACT	\$ 8,498,104.00	\$ 1,244,426.00	\$9,742,530.00	\$	3,599,214.00

**Lee County Utilities
Pinewoods Water Treatment Plant Expansion
Design-Builder: Harn R/O Systems, Inc.**

Change Order #1: Itemized with Associated Costs and Justification

G.	Engineering & Permitting	\$25,000.00	Increases scope for high service pump sizing, affecting hydraulic, structural and electrical design.
I.	R/O Building	\$264,234.00	Increases size by 920 square feet, increases wind load design, insulates roof and wall sections, accounts for cost escalation of materials.
J.	R/O Equipment & Chemical Modifications	\$(28,000.00)	No need for caustic bulk tank.
K.	HSP/HF Storage & Feed Building	\$81,186.00	Moves high service pumps to outside, foundation/slab will accommodate engineered roof structure in future if necessary, accounts for cost escalation of materials.
L.	High Service Pumps & Piping	\$9,800.00	System requires design change: increases pump and motor size.
N.	Transfer Pumps & Piping	\$51,089.00	System requires design change: increases pump and motor size, increases pipe size.
P.	Sodium Hypochlorite System	\$71,665.00	Increases structure size by 180 square feet, increases from "pole barn" to engineered structure with retaining wall.
Q.	Yard Piping	\$702,022.00	Pipe to and from storage tank, including valving, slabs, injection assembly, meter assembly, was not originally included. Based on market pipe prices and original estimate, oversight is legitimate omission due to early stage of plans (less than 10%) for this design build project.
V.	Delete Sand Separators	\$(112,756.00)	Not necessary, based on raw water quality. Will leave stub-out if needed in future.
W.	Cost Escalations	\$180,186.00	Original quotes and current quotes provides justification.

Total: \$1,244,426.00

Lee County Pinewoods Water Treatment Plant Contract #2974

Harn R/O Systems

May 22, 2006

Cost Breakdown/Comparison

Based on proposed final pricing

Existing Pinewoods NF Plant Retrofit Project

(1.8)

Capacity increased from 2.1 MGD to 2.3 MGD

Operation and Maintenance Savings Realized from System Improvements:

- Eliminated iron sequestrant – estimated annual savings \$14,000 per year
- Reduced energy consumption – estimated annual savings \$70,000 per year
- Reduced maintenance, cleaning frequency, increased membrane life – estimated annual savings \$30,000 or more per year

NF Plant Cost -- \$485,678

New Pinewoods 3.0 MGD Reverse Osmosis Plant

Engineering and Permitting \$895,000
(\$0.30/gallon, and less than 10% of the total contract value)

R/O Process Equipment, Controls and Building \$3,661,889
(\$1.22/gallon)

Other Treatment Components \$4,469,963
includes degasifiers, scrubber, clearwell, transfer pumps, finished water storage, and high service pumping – all designed for total plant capacity of 5.3 MGD (\$0.84/gallon)

R/O Plant Cost -- \$9,026,852

Concentrate Tank Painting -- \$230,000 (not originally part of scope)

**Total Project Cost, including proposed Change Order – \$9,742,530
(\$1.84/gallon)**

Industry Standard ranges from \$3.00 to \$6.00/gallon

**Table 4-3 Middle Floridan Aquifer RO Capital Cost Estimates
(3.0 MGD, 85% Recovery, with acid)**

1	LS	\$2,160,000	\$2,160,000
1	LS	\$470,000	\$470,000
1	LS	\$100,000	\$100,000
5400	SF	\$200	\$1,080,000
2.3	MGD	\$790,000	\$1,817,000 = \$1.26/gal
1	LS	\$200,000	\$200,000
1	LS	\$50,000	\$50,000
1	LS	\$120,000	\$120,000
1	LS	\$130,000	\$130,000
1	LS	\$165,000	\$165,000
1	LS	\$130,000	\$130,000
1	LS	\$280,000	\$280,000
1	LS	\$200,000	\$200,000
1	LS	\$180,000	\$180,000
1	LS	\$255,000	\$255,000
1	LS	\$650,000	\$650,000
1	LS	\$195,000	\$195,000
1	LS	\$700,000	\$700,000
1	LS	\$640,000	\$640,000
			\$9,540,000
			\$1,440,000
			\$10,980,000
			\$2,196,000
			\$13,176,000

Compared to
Pinewoods

104/SF
\$ 0.74/gal

\$ 895,000

\$ 4.40/gal

(a) Three Middle Floridan Wells (one redundant). Able to be powered by portable generators.

Membrane technology expanding the potential for new water supply development

December 1998

U.S. Water News Online

MIAMI – The crisis in drinking water supplies has never been the lack of availability of water – it has been the lack of potable water that could be economically treated to meet drinking water standards. Up until recent history, drinkable water sources have been plentiful enough to meet the demands that the public has placed on them. Now, however, with population trends having shifted to the South, Southwest and West, the demand for drinking water has begun to exceed the potable water supplies.

By analogy, the existing drinking water sources have been the fruit at the bottom of the tree - easy pickings. That bottom hanging fruit has now been picked clean, and communities are going to have to work harder to pick the fruit from the top of the tree, i.e. turning non-potable water into alternative drinking water sources.

To illustrate the problem, one can look to the water woes of Martin County, Florida, on the southeast coast of Florida. Historically, the water utilities within Martin County have drawn their fresh water supply from an aquifer just below ground level. This water was fresh enough to require mere chlorination before consumption by the public. As the population of Martin County has grown, however, this surficial aquifer has reached its withdrawal capacity. Without an economically viable alternative water supply, growth in Martin County would grind to a halt.

To solve their problem of finding an alternative water supply, utilities in Martin County and communities across the nation have turned to membrane technologies – filtering out impurities in water by forcing water under pressure through fine membranes which act as filters to produce fresh drinking water. In Martin County alone, one membrane plant has already been built and one is in the permitting stage with completion due in less than three years.

Membrane technology for drinking water production is not new. It has been around since the 1960's. What is new today is a drastic reduction in the costs to construct and operate membrane water treatment facilities. This revolution in cost reduction for membrane systems has opened alternative sources of drinking water to communities throughout the nation that until now had no practical role to play in the drinking water mix.

A quick primer for the membrane uninitiated. Membranes are constructed so that water molecules readily pass through the membrane while larger impure molecules will not. These larger molecules are what have kept alternative sources of drinking water inaccessible. Prime among these larger molecules which make water undrinkable are salt, calcium, phosphorus, nitrate, and radium. Membranes can now be constructed to remove virtually all dissolved solids and impurities from water or to remove specific impurities that render a water source undrinkable. This versatility allows almost any source of water to be used as an alternative drinking water source.

In Martin County, the main impurity at issue was salt. Right below the freshwater surface aquifer in Martin County is a deep aquifer with high concentrations of salt. This salty aquifer would provide enough water for expansion of Martin County, if it could be cost-effectively mined.

The present level of membrane technology effectively removed the technical feasibility barrier from using alternative water sources for drinking water. All that was left were the economic considerations --

initial capital costs to construct the facility, and continuing operating and maintenance costs for the facility once constructed.

As to the first consideration, membrane capital costs have been almost halved in the last ten years. Ten years ago, membranes may have lasted only about 3 years before requiring replacement. Now, their life expectancy is at least 5 years, and probably will last 7 to 8 years. As experience in operations has been gained and advances in technology have been introduced, the scope and cost of the equipment needed to efficiently treat water has dropped fast.

Recent membrane facilities constructed in the United States have been built at a price of \$3.00 per gallon for plant sizes ranging from 2 to 10 million gallons per day (mgd). This cost varies depending on the location of the source of water, the level of effort to bring the water to the treatment facilities, and the cost of disposing of the brine water created as a by-product of the membrane process. This provides a basic benchmark to compare membrane facilities with conventional treatment facilities which cost roughly \$2.25 per gallon in the same locales.

On the operating side, the largest component of cost in operating membrane facilities has been and remains the cost of energy necessary to drive the water through the membranes. Here again, significant reduction in overall energy requirements have been achieved in the last ten years. As an example, the town of Jupiter, Florida operates a membrane treatment facility using brackish water withdrawn from an underground aquifer. When its plant was designed in 1986, it operated at a pressure of 305 psi. The town recently completed an expansion of this facility with the latest membrane technology and operates now at a reduced pressure of only 230 psi to produce the same volume of water. This represents a 24 percent reduction in energy consumption. The facility will also utilize other energy recovery technologies to reduce energy consumption another 12 percent. The operating costs for this new facility equates to \$0.85 per thousand gallons of treated water.

A second significant operating cost component is associated with personnel required to staff these facilities. Membrane processes have been demonstrated to be well suited to automation. It is now possible to operate very large facilities with personnel present only on a part-time basis. Advances in automation have made membrane personnel costs lower on a relative scale than other traditional treatment technologies.

With these reductions in capital and operating costs, membrane technology has brought previously unattainable potable water sources into economic play. In essence, every water source can now be analyzed as economical options in the effort to meet the rising demands for drinking water, as membrane technologies have at least brought cost levels low enough for consideration.

The costs of membrane treatment facilities still rise above the existing cost of providing drinking water for most communities, which will likely necessitate a certain amount of education of utility customers as to the benefits to existing customers for increased costs to be incurred for the benefit of new customer growth. Of help in this education process is the generally superior quality of water produced by membrane facilities over conventional treatment. Blending new membrane-treated water with existing conventionally-treated water will raise the overall quality of drinking water for existing customers. Adding membrane facilities to existing conventional facilities may also forestall even more expensive replacements of existing facilities as new federal drinking water standards make existing treatment facilities non-compliant.

At the cost levels presently experienced with membrane treatment technologies and the potential benefits to drinking water quality that spring from such technology advances, alternative water sources

can be utilized while maintaining reasonable water rates.

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Or

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Editor@uswaternews.com

PINEWOODS WTP RO EXPANSION
RO Process Building
Cost Breakdown

This Estimate =			M & S			Contr Fee	
\$345,914.80	QTY	Unit	Labor & Equipment	Subcontracts & Rentals	Unit Price	OH & P 10%	Total
Item							
Concrete							
Concrete Slab & Foundation	1.00	LS	40,000.00	274,468.00	314,468.00	345,914.80	345,914.80
Subtotal Concrete Slab & Foundation							345,914.80
Deduct:							
Original Budget for Foundation	153	CY					99,500.00
Original Budget for Pipe Trench Walls	63	CY					51,900.00
Total Deduct							151,400.00
Total Increase Concrete Slab & Foundation							194,514.80
Increase for 150 mph Wind Load & 1.15 Importance Factor							40,000.00
Total Increase RO Process Building	02/14/06						234,514.80
Decrease Footers to 150 mph wind load							-8,476.77
Extend trench to east side of bldg							2,770.33
Total Increase RO Process Building	04/04/06						228,808.37

PROPOSAL

Allen Concrete and Masonry, Inc.
 6301 Shirley Street Naples, FL 34109
 Phone (239) 566-1661 Fax (239) 566-8515
 E-mail: Info@Allenconcrete.com

Submitted To: MITCHELL & STARK	Fax: (239) 566-7865	Date: 12/21/2005	
Street: 6001 Shirley Street	Job Name: PINEWOODS WTP EXPANSION - RO BUILDING		
City, State, Zip: Naples, FL 34109	Job Loc: Estero, FL		
Architect: Harn R/O Systems	Plan Date: 3S-1 thru 3S-5		

LABOR AND MATERIALS

LABOR ONLY

MATERIALS ONLY

LABOR AND MATERIALS

- | | |
|---|---|
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Foundations <input checked="" type="checkbox"/> Slab-on-Grade <input type="checkbox"/> CMU Stemwall <input checked="" type="checkbox"/> CMU Wall <input type="checkbox"/> Tie Beams <input type="checkbox"/> Structural Beams <input type="checkbox"/> Columns <input checked="" type="checkbox"/> Shearwalls / C.I.P. walls <input type="checkbox"/> Elevated Slab <input type="checkbox"/> Elevated Slab Topping <input type="checkbox"/> Stairs <input type="checkbox"/> Stair Topping <input type="checkbox"/> Tilt Wall Panels <input type="checkbox"/> Sidewalks | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Slab-on-Grade Vapor Barrier <input type="checkbox"/> 6" x 6" - W1.4 / W1.4 (10/10) WWM <input type="checkbox"/> 6" x 6" - W2.1 / W2.1 (8/8) WWM <input type="checkbox"/> 6" x 6" - W2.9 / W2.9 (6/6) WWM <input type="checkbox"/> Saw Cut Control Joints <input checked="" type="checkbox"/> Reinforcement (Black) <input type="checkbox"/> Reinforcement (Epoxy) <input checked="" type="checkbox"/> Concrete Pumping <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
|---|---|

Quote No. 05-E196

NOTES:

THE FOLLOWING ITEMS ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR OR OTHERS, AND ARE EXCLUDED FROM OUR PROPOSAL, U.N.O.

Engineered building corner pins; Grade to +/- 1"; Excavation and backfill; De-rocking and de-watering; Power and testing; Soil treatment; Colored or stained concrete; Curing, sealing and hardeners; All site work; Supplying of all misc. metals (embeds, anchor bolts, steel lintels, truss straps, inserts, flashing, etc.); Installation of j-bolts, steel lintels and flashing; Masonry fill cell insulation; Insulated CMU; Striking of block; Setting and filling of hollow metal frames; Joint caulking; Welding; Casting beds.

MATERIAL SPECIFICATIONS

Concrete Mix Type: $f_c=4000$ psi (maximum)
 Visqueen Type: 6 mil polyethylene
 Reinforcement: ASTM A-615 Grade 60

PRICE: \$ 274,468.00

WE PROPOSE hereby to furnish material and labor - complete in accordance with the above specifications for:
Two hundred seventy-four thousand, Four hundred sixty-eight dollars.

All material is guaranteed to be as specified. All work to be completed in a workman like manner according to standard practices. Any alterations or deviations from the above specification involving extra cost will be executed only upon written orders and will become an extra charge over and above estimate. This proposal includes and pertains to only that which is identified in it or an associated Exhibit. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, wind damage and other necessary insurance. Our workers are fully covered by Workmans Compensation.


Authorized Signature:

Christopher L Allen

Note: This proposal may be withdrawn by us if not accepted within 30 days.

Acceptance Of Proposal

Signature:



Pinewoods WTP R/O Expansion, Contract #2974

Harn R/O Systems Summary of Revised Costs

Response to Kim Hoskins' Email 3-30-07

April 18, 2006

From Part 1 from Documentation Provided to Lee County 3/14/06

1. High Service Pumps – Increase in Sizing
 - Proposal for Design Effort Cost is attached
 - Pump Quotes provided previously
 - Breakdown and Butler proposal for HSP structure is attached
2. Transfer Pumps – Increase in Size and Cost
 - Pump Quotes provided previously
 - Breakdown for Piping and Valving Cost Increase is attached
3. R/O Building and Slab
 - Breakdown and Butler proposal are attached
4. Sodium Hypochlorite Structure
 - Breakdown and Butler proposal are attached
5. Transfer Pumps – Add VFD's
 - Proposals for Design Effort from Carollo and Wilson Structural are attached
 - Breakdown for Electrical Equipment, Labor and Materials is attached
6. Material and Equipment Costs
 - Additional information is difficult to assemble as the project was originally priced over two years ago with no design to base quotes on, budget estimates were prepared based on our experience, not anticipating unprecedented price increases. We will continue to try to work with County staff to provide information that is available or explain increases. Please bear in mind that Harn priced this project with conservatism in mind and has attempted to absorb as many cost increases as possible. The increases listed in the change order request are the most severe and un-foreseeable we have experienced.
7. Caustic Bulk Tank Deduct
 - Quote for tank was previously supplied, no quote was available for heat tracing, it was budgeted at \$11,000; the remainder of the deduct was the budget for bulk tank piping, fittings, and instruments.
8. Sand Separators Deduct
 - Quote for Sand Separators is attached, the remainder of the deduct was the budget for the piping, fittings, valving and slab.

**TASK ORDER NO. 3
SCOPE OF SERVICES**

PINEWOODS WATER TREATMENT PLANT REVERSE OSMOSIS EXPANSION

This Task Order describes the engineering Scope of Services for completion of the Pinewoods Water Treatment Plant (WTP) Reverse Osmosis (RO) Expansion for Lee County (OWNER), as referenced in the Agreement between Ham R/O Systems, Inc. (PRIME CONTRACTOR) and Carollo Engineers, P.C. (ENGINEER) dated ___th day of _____, 2005.

Services provided under this Task Order include basic engineering evaluation and design efforts by ENGINEER as technical support to PRIME CONTRACTOR and _____ (GENERAL CONTRACTOR) in a design/build (D/B) project delivery of the Pinewoods WTP RO Expansion.

BACKGROUND

Due to increases in potable water demands in the Pinewoods service area and limited fresh water resources, Lee County Utilities (County) wishes to expand their existing nanofiltration (NF) membrane water treatment plant that has been operating since 1990. The Pinewoods WTP was originally designed and built by a developer to treat water from the Surficial and Sandstone Aquifers. The County purchased the Pinewoods WTP in July 1998 and took over plant operation of the plant in July 2003. The current permitted plant capacity is 2.1 mgd.

The County previously requested a proposal from Ham R/O Systems to modify the existing Pinewoods WTP NF equipment. The proposed modifications will increase the production capacity to 2.3 mgd. While there is room for additional NF equipment, additional Surficial and Sandstone well capacity is not available. Therefore, additional capacity must be provided by another supply, the Hawthorne Aquifer. Therefore, this project also involves the addition of a new 3-MGD RO treatment plant to treat the Hawthorne Aquifer supply.

PURPOSE

The purpose of this task order is to authorize payment for additional scope items and costs related to the following:

- Task 1 - CT Basin Redesign
- Task 2 - High Service Pump Station Redesign

ENGINEERING SERVICES

TASK 1 - CT Basin Redesign

The original design was based upon the use of pumps operating in a lead/lag configuration. At the County's request, Contractor has been directed to provide VFDs on the transfer pump station, which would also allow the CT basin volume to be reduced. ENGINEER shall provide services to redesign the electrical motor controls and CT basin structure to accommodate the revised transfer pumping and CT basin concept.

The cost for these services is \$16,267.

TASK 2 - HIGH SERVICE PUMP STATION

The Contractor's design/build proposal provided for four 200-HP high service pumps located in the existing high service pump building (which was to be expanded). During the design process, the Owner requested that the high service pump station capacity be expanded to produce a larger peak hour flow rate, which resulted in redesign of the original proposal. Additionally, the Owner requested that the pump station be located outside under a sun shade structure (in lieu of expanding the existing high service pump building). The design was completed in July 2005 and in March 2006, the Owner has requested (to reduce project costs) that the sun shade structure be eliminated. ENGINEER shall provide structural (foundation system) design services related to the design of a stand-alone pump station.

The cost for these services is \$25,000.

TIME OF COMPLETION

These services have already been provided. No payment has been requested to date. Authorization of this Task Order will authorize ENGINEER to bill the PRIME CONTRACTOR.

PAYMENT

The method of payment for this Contract is lump sum. Total compensation for the services performed shall be the sum of \$41,267 plus approved adjustments. PRIME CONTRACTOR shall pay the ENGINEER in installments based upon monthly progress reports and invoices submitted by ENGINEER for services incurred.

EFFECTIVE DATE

This Task Order No. 3 is effective as of the ____th day of _____, 2005.

IN WITNESS THEROF, duly authorized representatives of the PRIME CONTRACTOR and of the ENGINEER have executed this Task Order No. 3 evidencing its issuance by PRIME CONTRACTOR and acceptance by ENGINEER.

CAROLLO ENGINEERS, P.C.
A Professional Corporation

PRIME CONTRACTOR
Harn R/O Systems, Inc.

By _____
Partner

By _____

By _____
Partner



COMMERCIAL & INDUSTRIAL CONSTRUCTION
CG CA15477

August 12, 2005

Mitchell & Stark Construction Co., Inc.
6001 Shirley Street
Naples, Florida 34109

Attention: Mr. John Losch

Re: Lee County - Pinewood R.O. WTP Expansion

Gentlemen:

We are very pleased to submit the following proposal to furnish building materials for the following Butler pre-engineered buildings and accessories:

1) MAIN R.O. BUILDING:

- a) 70' wide X 96' long X 18' height Clearspan building with a 3"/12" roof slope. Building to be designed per the FBC2001 Code with a 150 mph wind design, importance factor of 1.15 and exposure factor "C".
- b) CMR-24 Standing Seam roof system with 3/4" Thermax rigid insulation. Roof material is 24 gauge steel with Butler-Cote 500 FP paint finish (Hunter Green exterior). Liner panel to be ALZN or white.
- c) Thermawall Fineline wall panel system (2" thick) with 20+ year exterior paint finish (Country Wheat paint finish).
- d) Both 96' sidewalls shall have a four (4) foot roof overhang with "Moduleze" flat pan soffit panels. Skirt/fascia to be 26 ga. Butler II panels with Hunter Green paint finish.
- e) Gutters, down spouts and gable trims (Hunter Green paint finish).
- f) Three (3) - 3' X 7' X 1-3/4" flush type hollow metal doors with mortise locksets and closers.
- g) One (1) - 6'-4" X 7'-0" double, flush type hollow metal door with closers and bolt/rod hardware. Doors are rated for a 140 mph wind load.

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Mitchell & Stark Construction Co., Inc.

August 12, 2005

- h) Galvanized framed openings for one (1) - 14' X 14' and three (3) - 10' X 12' overhead doors (doors by others).
- i) Secondary purlin/girt structurals to be galvanized steel with acrylic coating.

The total lump sum price for the above materials only, F. O. B. Lee County is:

ONE HUNDRED SEVENTY NINE THOUSAND SEVEN HUNDRED DOLLARS
(\$179,700.00)

Additional accessories (roof curbs, wall louvers, etc.) to be quoted upon receipt of size/design criteria.

Full payment due within twenty five (25) days of building delivery to job site. No retainage to be withheld on materials.

II) CHEMICAL STORAGE BUILDING - 24'W X 30'L X 14'H and
PUMP STATION BUILDING - 25'W X 60'L X 14'-9"H

- a) Clearspan buildings with a 3"/12" roof slope. Buildings to be designed per the FBC2001 Code with a 120 mph wind design, importance factor of 1.00 and exposure factor "C".
- b) MR-24 Standing Seam roof system with 3" fiberglass insulation. Roof material is 24 gauge steel with Butler-Cote 500 FP paint finish (Hunter Green color).
- c) Both sidewalls for each building shall have a four (4) foot roof overhang with open soffits.
- d) Gutters, down spouts and gable trims (Hunter Green).
- e) All frames to be open, intermediate type. All walls to be open with necessary cross rod, wind bracing. Columns for pump station only building shall be recessed 9" below finished floor.
- f) Secondary purlin/girt structurals to be galvanized steel with acrylic coating.

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Mitchell & Stark Construction Co., Inc.
August 12, 2005

The total lump sum price for the above materials **only**, F. O. B. Lee County is:

- (I) Chemical Storage Building - Lump Sum Price - \$ 21,600.00
- (II) Pump Station Building - Lump Sum Price - \$ 34,500.00

Additional accessories (roof curbs, wall louvers, etc.) to be quoted upon receipt of size/design criteria.

Full payment due within twenty five (25) days of building delivery to job site. No retainage shall be withheld on materials.

ALTERNATE NUMBER I - Furnish labor and equipment to erect the following Butler pre-engineered building components:

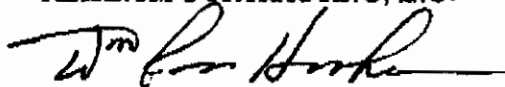
- 1) 70' X 96' X 18' R.O. building - add lump sum price of \$36,000.00
- 2) 24' X 30' X 14' Chemical storage building - add lump sum price of \$8,800.00
- 3) 25' x 60' x 14'-8" Pump station building - add lump sum price of \$14,300.00

TERMS OF PAYMENT - Erection labor only - Periodic monthly draws submitted at the end of each month shall be paid on or about the tenth (10th) of the following month. Ten percent (10%) retainage shall be withheld and paid upon completion.

If you have any questions, please advise.

Sincerely,

PLATINUM CONTRACTING, INC.



W. Ross Hooker
President

Accepted by: 

Date: 11/29/05

PINEWOODS WTP RO EXPANSION
Lee County Utilities
High Service Pump Building Cost Breakdown
Mitchell & Stark for Harn R/O
4/17/2006

Item	QTY	Unit	Material Cost	Forms Cost	Labor & Equipment, Misc.	Subcontracts & Rentals	Unit Price	Unit Price w/ Sub. Fee	Total
Concrete									
24 X 24 Exterior Grade Beams	27.30	CY	106.00	50.00	125.00	425.00	706.00	811.90	22,163.52
8 Inch Slab	41.27	CY	106.00	50.00	125.00	425.00	706.00	811.90	33,508.27
4 Inch Housekeeping Slabs	0.78	CY	106.00	50.00	125.00	425.00	706.00	811.90	631.48
Subtotal Concrete	69.35	CY							56,303.26
Resteel									
24 X 24 Exterior Grade Beams	3,237.64	Lbs	0.64		0.20	0.60	1.44	1.65	5,346.65
6 Inch Slab	4,407.76	Lbs	0.64		0.20	0.60	1.44	1.65	7,278.98
4 Inch Housekeeping Slabs	47.64	Lbs	0.64		0.20	0.60	1.44	1.65	78.67
Subtotal Resteel	7,693.04	Lbs							12,704.29
Total Concrete Slab & Foundation									69,007.55
Butler Metal Building									
Purchase Building	1	LS	34,500.00		2,070.00		36,570.00	42,065.50	42,065.50
Building Erection	1	LS	0.00		5,000.00	14,300.00	19,300.00	22,195.00	22,195.00
Subtotal Steel Building									64,250.50
Total HSPS									133,258.05
Amount listed in Change Order Documentation is slab cost (\$69,007.55/0.85 GC O&P = \$81,185)									

PINEWOODS WTP RO EXPANSION
Lee County Utilities
Transfer Pump Discharge Piping Increase from 8" to 10"
Mitchell & Stark for Harn R/O
4/18/2006

Activity	Qty	Unit	Materials	Labor	Unit Price	Sub Total	15% Sub-Cont. Fee	Total
16" FW Transfer Line								
Original Transfer Pump Discharge Piping Estimate, 8"								
8" C900 CPVC FW	80	LF	12.72	50.00	62.72	5,017.60	752.64	5,770.24
8" Ftgs	9	Ea	530.00	250.00	780.00	7,020.00	1,053.00	8,073.00
Wall Brackets	8	Ea	530.00	250.00	780.00	6,240.00	936.00	7,176.00
8" BFV	4	Ea	530.00	500.00	1,030.00	4,120.00	618.00	4,738.00
8" CV	4	Ea	1,060.00	500.00	1,560.00	6,240.00	936.00	7,176.00
								32,933.24
Current Transfer Pump Discharge Piping Estimate, 10"								
10" C900 FW	80	LF	15.90	50.00	65.90	5,272.00	790.80	6,062.80
10" Ftgs	20	Ea	530.00	250.00	780.00	15,600.00	2,340.00	17,940.00
Wall Brackets for 10"	8	Ea	742.00	500.00	1,242.00	9,936.00	1,490.40	11,426.40
10" EC CI BFV	4	Ea	750.00	500.00	1,250.00	5,000.00	750.00	5,750.00
10" SS CV	4	Ea	2,800.00	500.00	3,300.00	13,200.00	1,980.00	15,180.00
								56,359.20
Difference, increase in cost								23,425.96
Corrected Amount for Change Order Documentation is cost (\$23,425.96/0.85 GC O&P = \$27,560)								

PINEWOODS WTP RO EXPANSION
Lee County Utilities
R/O Building Cost Breakdown
Mitchell & Stark for Ham R/O
4/17/2006

Item	QTY	Unit	Material Cost	Forms Cost	Labor & Equipment, Misc.	Subcontracts & Rentals	Unit Price	Unit Price w/ Sub. Fee	Total
Concrete									
7 X 7 X 2 Footings	18.15	CY	106.00	50.00	125.00	425.00	706.00	811.90	14,734.48
7 X 7 X 3 Footings	5.44	CY	106.00	50.00	125.00	425.00	706.00	811.90	4,420.34
24 X 24 Exterior Grade Beams	50.72	CY	106.00	50.00	125.00	425.00	706.00	811.90	41,181.37
12 X 32 Interior Grade Beams	2.81	CY	106.00	50.00	125.00	425.00	706.00	811.90	2,285.35
12 X 24 Interior Grade Beams	3.01	CY	106.00	50.00	125.00	425.00	706.00	811.90	2,443.22
12 X 16 Interior Grade Beams	2.48	CY	106.00	50.00	125.00	425.00	706.00	811.90	2,012.21
12 X 18 Interior Trench Beams	1.33	CY	106.00	50.00	125.00	1,000.00	1,281.00	1,473.15	1,964.20
Trench Walls	31.51	CY	106.00	50.00	125.00	1,000.00	1,281.00	1,473.15	46,424.15
MCC Pit Walls	1.69	CY	106.00	50.00	125.00	1,000.00	1,281.00	1,473.15	2,485.62
12 Inch Slab	54.67	CY	106.00	50.00	125.00	425.00	706.00	811.90	44,388.63
8 Inch Slab	33.95	CY	106.00	50.00	125.00	425.00	706.00	811.90	27,567.10
6 Inch Slab	85.32	CY	106.00	50.00	125.00	425.00	706.00	811.90	69,273.27
4 Inch Housekeeping Slabs	5.42	CY	106.00	50.00	125.00	425.00	706.00	811.90	4,397.79
Pump Cans	7.12	CY	106.00	50.00	125.00	800.00	1,081.00	1,243.15	8,852.04
Subtotal Concrete	303.64								272,429.98
Masonry Grout									
Masonry Grout	12.08	CY	106.00		100.00	300.00	506.00	581.90	7,027.02
Exterior Wall CMU	1,207.51	Ea	1.38		1.00	2.00	4.38	5.03	6,079.48
Interior Wall CMU	459.77	Ea	1.38		1.00	2.00	4.38	5.03	2,314.82
Subtotal Masonry & Grout									15,421.32
Resteeel									
7 X 7 X 2 Footings	917.05	Lbs	0.64		0.20	0.60	1.44	1.65	1,514.41
7 X 7 X 3 Footings	183.41	Lbs	0.64		0.20	0.60	1.44	1.65	302.88
24 X 24 Exterior Grade Beams	6,015.77	Lbs	0.64		0.20	0.60	1.44	1.65	9,934.44
12 X 32 Interior Grade Beams	369.54	Lbs	0.64		0.20	0.60	1.44	1.65	610.26
12 X 24 Interior Grade Beams	257.12	Lbs	0.64		0.20	0.60	1.44	1.65	424.61
12 X 16 Interior Grade Beams	273.24	Lbs	0.64		0.20	0.60	1.44	1.65	451.23
12 X 18 Interior Trench Beams	229.69	Lbs	0.64		0.20	0.60	1.44	1.65	379.31
Trench Walls	4,808.27	Lbs	0.64		0.20	0.60	1.44	1.65	7,940.38
MCC Pit Walls	74.14	Lbs	0.64		0.20	0.60	1.44	1.65	122.44
12 Inch Slab	3,892.87	Lbs	0.64		0.20	0.60	1.44	1.65	6,428.69
8 Inch Slab	3,730.49	Lbs	0.64		0.20	0.60	1.44	1.65	6,160.54
6 Inch Slab	12,150.45	Lbs	0.64		0.20	0.60	1.44	1.65	20,065.25
4 Inch Housekeeping Slabs	248.83	Lbs	0.64		0.20	0.60	1.44	1.65	410.91
Pump Cans	1,136.80	Lbs	0.64		0.20	0.60	1.44	1.65	1,877.31
Subtotal Concrete Resteeel	34,287.68	Lbs							56,822.68
Masonry									
Exterior Wall CMU	1,698.37	Lbs	0.64		0.20	0.60	1.44	1.65	2,804.69
Interior Wall CMU	646.67	Lbs	0.64		0.20	0.60	1.44	1.65	1,067.91
Subtotal Masonry & Grout Resteeel									3,872.60
Subtotal Concrete Slab & Foundation									348,348.68
Deduct:									
Original Budget for Foundation	153	CY	106.00	50.00	125.00	425.00	706.00	811.90	99,500.00
Original Budget for Pipe Trench Walls	63	CY	106.00	50.00	125.00	425.00	706.00	811.90	51,900.00
Total Deduct									151,400.00
Total Increase Concrete Slab & Foundation									196,948.68
Increase for 150 mph Wind Load & 1.15 Importance Factor - Building Cost									40,000.00
Increase for additional 920 sf									6,000.00
Total Increase RO Process Building									242,948.68
Amount listed in 2/7/06 Change Order Documentation is building cost (\$242,950/0.9 GC O&P = \$269,940)									
Amount listed in 3/14/06 Change Order Documentation is previous price minus reduction in slab cost from downgrading pressure rating from 173 mph to 150 mph (\$269,940-\$5706=\$264,234)									

INCLUDES RESTEEL

OK BUILDING

PINEWOODS WTP RO EXPANSION
Lee County Utilities
Sodium Hypochlorite Building Cost Breakdown
Mitchell & Stark for Harn R/O

4/17/2006

Item	QTY	Unit	Material Cost	Forms Cost	Labor & Equipment, Misc.	Subcontracts & Rentals	Unit Price	Unit Price w/ Sub. Fee	Total
Concrete									
24 X 24 Exterior Grade Beams	16.50	CY	106.00	50.00	125.00	425.00	706.00	811.90	13,396.35
Perimeter Walls	5.99	CY	106.00	50.00	125.00	1,100.00	1,381.00	1,588.15	9,515.62
Sump Pit Walls	0.79	CY	106.00	50.00	125.00	550.00	831.00	955.65	755.04
8 Inch Slab	17.94	CY	106.00	50.00	125.00	425.00	706.00	811.90	14,569.09
6 Inch Housekeeping Slabs	3.28	CY	106.00	50.00	125.00	425.00	706.00	811.90	2,659.91
Subtotal Concrete	44.50								40,896.02
Resteel									
24 X 24 Exterior Grade Beams	1,956.94	Lbs	0.64		0.20	0.60	1.44	1.65	3,231.69
Perimeter Walls	957.03	Lbs	0.64		0.20	0.60	1.44	1.65	1,580.44
Sump Pit Walls	74.14	Lbs	0.64		0.20	0.60	1.44	1.65	122.44
8 Inch Slab	1,898.75	Lbs	0.64		0.20	0.60	1.44	1.65	3,135.60
6 Inch Housekeeping Slabs	150.50	Lbs	0.64		0.20	0.60	1.44	1.65	248.53
Subtotal Resteel	5,037.36	Lbs							8,318.70
Total Concrete Slab & Foundation									49,214.72
Butler Metal Building									
Purchase Building	1	LS	21,600.00		1,296.00		22,896.00	26,330.40	26,330.40
Building Erection	1	LS	0.00		5,000.00	8,800.00	13,800.00	15,870.00	15,870.00
Subtotal Steel Building									42,200.40
Total Chemical Storage Building									91,415.12
Original Budget									30,500.00
Increase in Cost for Chemical Storage Building									60,915.12
Amount listed in Change Order Documentation is building cost Increase (\$60,915.12/0.85 GC O&P = \$71,665)									



Wilson Structural Consultants, Inc

6731 Professional Parkway West • Suite 100 • Sarasota, FL 34240

(941) 907-4789 • Fax (941) 907-0576

April 18, 2006

Mr. Jim Harn
Harn R/O Systems Inc.,
205 Seaboard Ave.
Venice, FL 34285

**RE: LEE COUNTY R/O WTP EXPANSION
CT BASIN STRUCTURAL DESIGN**

Dear Jim:

We would be pleased to provide structural engineering services for the above referenced project and submit the following proposal for your consideration.

The scope of work is to do a redesign for the Pinewoods WTP CT Basin as shown on the original design previously drawings by Corollo. The redesign will facilitate the use of variable speed drives on the pumps. The structure is anticipated to be poured concrete base slab, walls and roof slab.

Our scope of services will be to provide the design for all load bearing components of the structure. We will provide structural drawings in AutoCAD format to be submitted for permit. After the completion of the working drawings we will be available to answer questions during bidding and construction. We will review shop drawings relative to the structural portion of the work for general compliance with the intent of the structural design and perform inspections on an hourly basis.

The fees for our services as described above will be as follows:

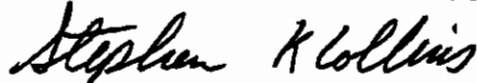
- Contract Documents (through permit).....\$ 10,500.00
- Contract Administration (after permit) Shop Drawing review & RFI's.....hourly

WILSON STRUCTURAL CONSULTANTS INC.

We are very interested in working with you on this project. Please contact me if you have any questions regarding this proposal.

Sincerely

WILSON STRUCTURAL CONSULTANTS, INC



Stephen K. Collins

The terms and conditions of this proposal including the attached General Conditions are accepted:
BY..... DATE.....

**PLEASE SIGN AND RETURN THE ACCEPTED PROPOSAL COPY
AND INITIAL & RETURN THE GENERAL CONDITIONS**

PINEWOODS WTP RO EXPANSION
Lee County Utilities
Transfer Pump VFD Cost Breakdown
Mitchell & Stark for Harn R/O
4/17/2006

Engineering Labor								
Carollo Engineers	\$16,267.00		see attached proposal/invoice					
Wilson Structural	\$10,500.00		see attached proposal/invoice					
Total Engineering Labor	\$26,767.00							
	QTY	Unit	Material	Labor &	Subctr.	Unit	Unit	Total
Item			Cost	Equipment,	& Rentals	Price	Price w/	
				Misc.			Sub. Fee	
Transfer Pump VFD's	4.00	EA	4,991.46	0.00	0.00	19,965.84	22,960.72	22,960.72
Labor Breakdown								
Foreman	20.00	HRS	38.75	775.00		775.00	891.25	891.25
Journeymen	60.00	HRS	33.50	2,010.00		2,010.00	2,311.50	2,311.50
Apprentice	20.00	HRS	26.00	520.00		520.00	598.00	598.00
Programming - level control, PID loops, screens and setpoint interface	30.00	HRS	75.00	2,250.00		2,250.00	2,587.50	2,587.50
Subtotal								6,388.25
Supervisory Staff (Eng & Office) Labor	20.00	HRS	40.00	800.00		800.00	920.00	920.00
Direct Job Expenses								
Tools Expendable	1	LS	190.00		190.00	190.00	218.50	218.50
Total Transfer Pump VFD Cost								30,487.47
Amount listed in Change Order Documentation is cost (\$30,488/0.85 GC O&P = \$35,866)								

2010/R/O

2450 GPM TOTAL

2 IN SERVICE

The George S. Edwards Co
154 Airpark Industrial Road
Alabaster, AL 35007
Tel 205-620-3000 FAX 205-620-3030
e-mail: ronbrasher@gsedwards.net

3-7 PSI AP

IHB-0810 - 1100 GPM
-0500 500 GPM

June 18, 2004 REVISION 1

Kurt Beyer
Harn RO Systems

Tel: (941) 488-9671 Fax: (941) 488-9400

Re: Stainless (316) JPL and JPX for Harn RO in Venice, FL

<u>Item</u>	<u>Qty</u>	<u>Trade Price ea. (US\$)</u>
JPL-0450-V/FL/S6	1	\$12,580.00 net each
*Flow rate of 450-825 gpm		
*316SS		
*inlet/outlet of 6" flanged with 2" purge		
*includes petcocks and pressure gauges for the inlet/outlet		
*vertical or 90 degree profile		
JPX-0450-V/FL/S6	1	\$14,140.00 net each

same as above but with the accessible body design.

Lead Time: 10-12 weeks ARO

Purging valves for above units:

Lakos P/N APP-20-120V 2" automatic pneumatic pinch valve system w/pure gum rubber sleeve and remote timer \$ 1465.00 each

Lakos P/N 108105 2" pneumatic pinch valve only \$ 835.00 each

Lakos P/N 106480 spare pure gum rubber liner \$ 527.00 each

Lead time: 4 weeks ARO

- This quote is valid for 10 days. (Due to increasing cost of raw materials, please use as budgetary pricing and call to verify pricing if order is not placed within the 10-day time frame.)

Prices quoted are Ex-Works Factory, Fresno, CA, USA.

Hoskins, Kim P.

From: Hoskins, Kim P.
Sent: Thursday, March 30, 2006 4:40 PM
To: 'Julie Nemeth'
Cc: Velez, Sergio I.
Subject: Pinewoods Change Order Documentation

Julie,

Thank you for the back-up for the Change Order request. I've been looking through it and have the following questions:

Part 1.

High Service Pumps - (a) Please provide engineering invoice for design effort. (b) It appears pump increase is cost + 15%. (c) Please provide evidence of cost of open building.

Transfer Pumps - (a) It appears pump increase is cost + 16.7% (b) Please provide back up for increase in pipe, fittings, etc.

R/O Building and Slab – Please provide evidence of cost of building, slab.

Sodium Hypochlorite Structure – Please provide evidence of cost of building, slab.

VFD – Please provide engineering invoice for design effort. Provide backup for services and materials to switch from soft start to VFD.

Material Escalations – The R/O feed pumps increase is cost + 9%. The R/O cartridge filter increase is cost + 15%. Please provide scrubber quote. It appears De Loach is not supplying the scrubber as originally planned (per their quote). The cleaning system increase is at cost. Provide explanation or more information on valve differences, as I fall \$11,059 short of the apparent additional cost. Provide further explanation of the instrumentation back-up (I'm having difficulty comparing apples to apples). Please provide back-up for fiberglass, PVC pipe and valves, stainless steel pipe and valves, chemical feed equipment and chemical piping.

Part 2

Caustic Bulk Tank – Please provide more back-up for deduct amount

Sand Separators – Please provide quote.

Part 3

In general, the most difficulty with this part is that piping to get water to and from a proposed storage tank was not included in the price of a water treatment plant expansion? In our position, it would be difficult and highly unlikely to justify a change order for this, as it seems so big of an oversight. We can understand pipe increase do to a design change, but a tank would not serve its purpose without pipe.

Thanks,

Kim P. Hoskins, PE
Senior Engineer
Lee County Utilities
Phone - (239) 479-8571
Fax - (239) 479-8176
khoskins@leegov.com

4/19/2006

PINEWOODS WTP RO EXPANSION, CONTRACT #2974

Harn R/O Summary of Revised Costs

JEN

2/7/2006

Updated 3/14/06

Part 1. Original Scope of Supply from Proposal – Additional Costs

	Proposal Basis	Current	Additional Cost
High Service Pump Increase in Sizing (1)			
Design Effort-process hydraulics, structural, electrical	Mod. Exist. Bldg.	Mod. Exist. Bldg. & Add New Struct.	\$25,000 ✓
Increase in Pump and Motor Size <i>Copy of quotes attached</i>	Four, 200 HP	Three, 250 HP	\$9,800
Move HSP's outside-sitework, foundation, structure, lighting	no structure	1800 sf, 130 mph Engineered open building	\$456,774
<i>Delete Structure and Keep Slab As Designed</i>			\$81,186
Total			\$115,986

Cost + 15%

Cost + 15%

	Proposal Basis	Current	Additional Cost
Transfer Pump Increase in Size and Cost (2)			
Increase in Pump and Motor Size	Four, 25 HP	Four, 30 HP	\$23,529
Increase in Piping and Valving <i>Copy of quotes attached</i>	10" piping, fittings, check and isolation valves – four pumps	14" piping, fittings, supports, check and isolation valves – four pumps	\$35,294 27,500
Total			\$58,824 51,089

Cost + 16.7%

Cost + 15%

	Proposal Basis	Current	Additional Cost
R/O Building and Slab Increase in Size, Design and Wind Load	5800 sf, 130 mph standard construction	6720 sf, 172.5 mph, upgraded/insulated roof and wall sections	\$269,940
<i>Deduction in footers, \$5,706</i>			\$264,234

Cost + 10%

	Proposal Basis	Current	Additional Cost
Increase Sodium Hypochlorite Structure	500 sf Pole Barn on Slab	680 sf Engineered 130 mph Butler structure with retaining wall	\$71,665

Cost + 15%

Proposal Basis Current - proposed Additional Cost

Add Variable Frequency Drives to Transfer Pumps (qty. 4)	Soft starters	Variable frequency drives	
<p>Provide engineering services to review design of CT basin for incorporation of VFD's on transfer pumps. Provide structural design services for modifying original basin design to efficiently utilize VFD's and maintain consistent CT basin levels and chemical injections. Provide new architectural and structural drawings.</p>			<p>10,500 - 16,267 - \$26,767</p>
<p>Provide electrical services and materials to include the supply of four Square D VFD's designed in new MCC section, with line reactors, output filters, surge arrestors. Provide wire and conduit from MCC room to existing control system, program PID loops in existing PLC to operate VFD's based on basin level, provide graphic display on HMI computer. Provide VFD start-up services.</p>		<p>\$ 4800 diff in drive \$</p>	<p>\$35,866</p>
Total			<p>\$62,353</p>

Proposed Wilson Struss
Proposed Carullo

CONTINGENCY
TRANSFER
NET IN
C.O.

Proposal Basis Current - proposed Additional Cost

Material and Equipment Cost Escalations from Proposal	Pricing prepared January-March 2004 (4)	Current pricing autumn 2005 Final plans rec'd July 2005	
See Quotes Attached			
Sand Separators - Delete		increase	\$13,900
R/O feed pumps		increase	\$39,850
Cartridge filters		increase	\$6,000
Degasifier/scrubber		increase	\$38,950
Pressure Vessels		increase	\$7,550
Fiberglass		increase	\$12,000
PVC pipe and valves		increase	\$3,600
Stainless steel pipe and valves		increase	\$12,450
Instrumentation		increase	\$5,800
Chemical feed equipment		increase	\$18,000
R/O cleaning system		increase	\$5,061
Chemical piping, in plant and double-contained in yard		increase	\$21,200
Misc. Valves (R/O process, degasifiers, permeate and concentrate lines)		increase	\$17,275
Total			\$180,186
Original Proposal Line Item, \$6,402,649 – this increase is 3% of original line item			

~15% + cost

-direct

Part 1. Additional Costs – Total

\$753,247

Note 1: Increase in High Service Pump capacity, Owner-directed process modification

Note 2: Increasing transfer pumps; D/B engineer-directed process upgrade

Note 3: D/B team is currently recommending VFD's for the Transfer Pumps for the following reasons: improves post-treatment chemical control and stability and therefore improves finished water quality, reduces size of clearwell back to size originally bid, reduces power consumption

Note 4: 9 month delay from preparing pricing in January-March 2004, providing proposal in April 2004, modifying proposal to add ground storage tank and providing final, accepted proposal July 2004 – contract approved December 7, 2004 and Notice to Proceed provided December 24, 2004, also 2 1/2 month delay in receiving DOH construction permit, final design documents provided July 2005

Part 2. Changes in Scope of Supply from Proposal – Potential Deducts

	Proposal Basis	Current - proposed	Deduct
Eliminated need for New Caustic Bulk Tank	7200 gallon bulk tank	No bulk tank	\$28,000

	Proposal Basis	Current	Deduct
Consider Deleting Sand Separators - Leave Provision for Future			
Delete sand separators and valves and piping	3 sand separators	leave piping stub-outs for addition if needed	\$112,756

	Proposal Basis	Current	Deduct
Consider Deleting HSP Structure			
Delete HSP Structure	HSP go in existing building	Moved HSP's outside when size was increased	\$64,250
<i>Deduct incorporated in Part 1</i>			
Total			\$0

Part 2. Deducts – Total

\$140,756

Difference Between Additional Costs and Potential Deducts (Part 1. minus Part 2.)=	\$612,491
Original Contingency, 5%=	\$404,672
Additional amount required based on original contingency=	\$207,819
Current Cont. after transfer of \$230,000 for conc. tank coating per Owner's direction=	\$174,672
Additional amount required based on current contingency=	<u>\$437,819</u>
(approximately 5% current contract)	

Part 3. Yard Piping related to WTP/New Crom Tank not Included in July 2004 proposal

	Proposal Basis	Current - proposed	Additional Cost
Yard Piping Associated with New 1 MG Finished Water Ground Storage Tank			
<i>Item 1.</i> 16" Finished Water Transfer Line to Tank, incl. above-ground inject/meter assembly <i>See Attached Breakdown</i>	Not Included	500 LF piping, fittings, valves, restraints, slab	\$218,187
<i>Item 2.</i> 12" Equalization Line between new tank and old tank <i>Eliminate</i>	Not Included	130 LF piping, fittings, valves, restraints	\$58,851 \$0
<i>Item 3.</i> 18" from new Tank, increasing to 24" and tying in old Tank, including injection assembly <i>Revised per Attached Breakdown, Deleting Injection Assembly</i>	Not Included	200 LF piping, fittings, valves, restraints, slab	\$163,766 \$113,276
<i>Item 4.</i> 18" to 24" from Tank to HSP suction, Piping and Valving, including metering assembly <i>Revised per Attached Breakdown, Reducing tie-in piping to 16"</i>	Tie into exist. 8" w/ 12" all above-ground	Buried & above-grade 24" piping, fittings, valving, supports, slab	\$392,416 \$370,559
<i>Revised Total</i>			\$702,022

(50,490)

(21,851)

	Proposal Basis	Current - proposed	Additional Cost
Miscellaneous Yard Piping			
additional piping resulting from relocating Sand Separators from original location due to electrical easement conflict (extension of flush/drain piping and turbidity sample and air tubing/piping) <i>Eliminate, reduce Sand Sep. deduct amount</i>	sand separators adjacent to RO building	relocated out by clearwell	\$12,227 \$0
10" Well Flush Line <i>Eliminate</i>	Not Included	fittings, etc.	\$54,180 \$0
Total			\$0

Part 3. Yard Piping related to WTP not included in July 2004 prop., Total **\$702,022**
(Approximately 8% of Total Current Contract)

PINWOODS WTP RO EXPANSION

Lee County Utilities

Piping Cost Breakdown

Mitchell & Stark for Harn R/O

3/14/2006

Part 3. Item 1. 16" Finished Water Transfer Line to Tank Including Injector/Meter Assembly								
Activity	Qty	Unit	Materials	Labor	Unit Price	Sub Total	15% Sub-Cont. Fee	Total
16" FW Transfer Line								
6" C900 CPVC FW	20	LF	12.72	50.00	62.72	1,254.40	188.16	1,442.56
8" C900 CPVC FW	80	LF	12.72	50.00	62.72	5,017.60	752.64	5,770.24
8" Ftgs	9	Ea	530.00	250.00	780.00	7,020.00	1,053.00	8,073.00
Wall Brackets	8	Ea	530.00	250.00	780.00	6,240.00	936.00	7,176.00
8" BFV	4	Ea	530.00	500.00	1,030.00	4,120.00	618.00	4,738.00
8" CV	4	Ea	1,060.00	500.00	1,560.00	6,240.00	936.00	7,176.00
ARV	4	Ea	1,060.00	1,500.00	2,560.00	10,240.00	1,536.00	11,776.00
16" C900 FW	112	LF	31.80	50.00	81.80	9,161.60	1,374.24	10,535.84
16" DI Ftgs	5	Ea	1,060.00	500.00	1,560.00	7,800.00	1,170.00	8,970.00
16" Bell Restrainers	22	Ea	227.95	250.00	477.95	10,514.97	1,577.24	12,092.21
16" DI Ftgs	11	Ea	1,060.00	500.00	1,560.00	17,160.00	2,574.00	19,734.00
Pipe Stands	7	Ea	285.00	250.00	515.00	3,605.00	540.75	4,145.75
16" DI Pipe	40	LF	159.00	50.00	209.00	8,360.00	1,254.00	9,614.00
Injectors, instruments, mixer	1	LS	11,632.00	1,500.00	13,132.00	13,132.00	1,969.80	15,101.80
								126,345.40
16" FW Transfer Line								
16" DI FW	275	LF	31.80	50.00	81.80	22,458.19	3,368.73	25,826.92
16" DI Ftgs	7	Ea	1,060.00	500.00	1,560.00	10,920.00	1,638.00	12,558.00
16" Bell Restrainers	13	Ea	233.20	250.00	483.20	6,281.60	942.24	7,223.84
16" BFV	1	Ea	2,118.94	1,500.00	3,618.94	3,618.94	542.84	4,161.78
Tie in to 14" FW	1	Ea	1,060.00	1,500.00	2,560.00	2,560.00	384.00	2,944.00
								52,714.54
Injector Assembly Slab	1	Ea	4,815.00	750.00	5,565.00	5,565.00	834.75	6,399.75
Subcontractor Sub-Total								
								185,459.69
15% Gen. Contractor Overhead and Profit								
								32,728.18
Total w/ Contract. Overhead and Profit								
								218,187.87

PINEWOODS WTP RO EXPANSION
Lee County Utilities
Piping Cost Breakdown
Mitchell & Stark for Harn R/O
3/14/2006

Part 3. Item 3. 18" From New Tank Increasing to 24" -- Deleting Injection Assembly								
Activity	Qty	Unit	Materials	Labor	Unit Price	Sub Total	15% Sub-Cont. Fee	Total
18" FW Transfer Line								
18" C900 FW	145	LF	37.07	50.00	87.07	12,624.89	1,893.73	14,518.62
18" DI Ftgs	5	Ea	1,590.00	500.00	2,090.00	10,450.00	1,567.50	12,017.50
18" Bell Restrainers	7	Ea	275.60	300.00	575.60	4,029.20	604.38	4,633.58
18" GV	1	Ea	7,950.00	3,000.00	10,950.00	10,950.00	1,642.50	12,592.50
Tie in to 18" FW	1	Ea	4,240.00	5,000.00	9,240.00	9,240.00	1,386.00	10,626.00
								54,388.20
24" FW Transfer Line								
24" C900 FW	74	LF	55.12	50.00	105.12	7,778.88	1,166.83	8,945.71
24" DI Ftgs	1	Ea	1,590.00	500.00	2,090.00	2,090.00	313.50	2,403.50
24" Bell Restrainers	4	Ea	275.60	300.00	575.60	2,302.40	345.36	2,647.76
								13,996.97
Revised 24" SH Inj Point								
24" C900 FW	26	LF	55.12	50.00	105.12	2,733.12	409.97	3,143.09
24" DI Ftgs	2	Ea	1,590.00	500.00	2,090.00	4,180.00	627.00	4,807.00
24" Bell Restrainers	4	Ea	275.60	300.00	575.60	2,302.40	345.36	2,647.76
4" DI Ftgs	4	Ea	132.50	400.00	532.50	2,130.00	319.50	2,449.50
4" DIP	6	LF	42.40	50.00	92.40	554.40	83.16	637.56
Injector/Diffusor/Tubing	1	LS	3,750.00	350.00	4,100.00	4,100.00	615.00	4,715.00
								18,399.91
Subcontractor Sub-Total								86,785.08
Engineering Fee - Re-design injection/diffusor								9,500.00
15% Gen. Contractor Overhead and Profit								16,991.49
Total w/ Contract. Overhead and Profit								113,276.57

PINEWOODS WTP RO EXPANSION

Lee County Utilities

Piping Cost Breakdown

Mitchell & Stark for Harn R/O

3/14/2006

Part 3. Item 4. 18" From New Tank increasing to 24" Deleting Injection Assembly								
HSP Suction/Discharge Piping, Above-ground								
Activity	Qty	Unit	Materials	Labor	Unit Price	Sub Total	15% Sub-Cont. Fee	Total
24" DIP	70	LF	55.12	50.00	105.12	7,358.40	1,103.76	8,462.16
24" Bell Restrainers	7	Ea	275.60	300.00	575.60	4,029.20	604.38	4,633.58
24x14 MJ Tee w/DIML	2	Ea	3,105.80	930.00	4,035.80	8,071.60	1,210.74	9,282.34
20x14 MJ Tee w/DIML	1	Ea	2,014.00	810.00	2,824.00	2,824.00	423.60	3,247.60
24x20 MJ Reducer w/DIML	1	Ea	1,696.00	660.00	2,356.00	2,356.00	353.40	2,709.40
20x14 MJ Reducer w/DIML	1	Ea	1,484.00	510.00	1,994.00	1,994.00	299.10	2,293.10
24x14 MJ Reducer w/DIML	1	Ea	1,802.00	570.00	2,372.00	2,372.00	355.80	2,727.80
24x14 MJ Wye w/DIML	3	Ea	5,406.00	1,240.00	6,646.00	19,938.00	2,990.70	22,928.70
20" DIP	30	LF	53.00	50.00	103.00	3,090.00	463.50	3,553.50
20" Bell Restrainers	6	Ea	254.40	300.00	554.40	3,326.40	498.96	3,825.36
14" DIP	28	LF	23.32	50.00	73.32	2,052.96	307.94	2,360.90
14" Bell Restrainers	6	Ea	222.60	300.00	522.60	3,135.60	470.34	3,605.94
14" MJ 90 w/DIML	1	Ea	678.40	420.00	1,098.40	1,098.40	164.76	1,263.16
14" MJ 45 w/DIML	1	Ea	572.40	420.00	992.40	992.40	148.86	1,141.26
14" FL 45	4	Ea	572.40	420.00	992.40	3,969.60	595.44	4,565.04
14"x 4" Fx PE DIP	1	Ea	477.00	420.00	897.00	897.00	134.55	1,031.55
14"x 6" Fx PE DIP	4	Ea	530.00	420.00	950.00	3,800.00	570.00	4,370.00
20" Wall Sleeve	4	Ea	424.00	300.00	724.00	2,896.00	434.40	3,330.40
14" Link Seal	4	Ea	424.00	300.00	724.00	2,896.00	434.40	3,330.40
14" FL 90	4	Ea	742.00	420.00	1,162.00	4,648.00	697.20	5,345.20
14" FL Lugged Wafer BFV w/HW	4	Ea	1,961.00	420.00	2,381.00	9,524.00	1,428.60	10,952.60
14"x 1" Fx PE DIP	3	Ea	424.00	420.00	844.00	2,532.00	379.80	2,911.80
14" Dresser Coupling	3	Ea	371.00	420.00	791.00	2,373.00	355.95	2,728.95
14"x 6" Fx F DIP w/ 1/4" Tap	3	Ea	795.00	420.00	1,215.00	3,645.00	546.75	4,191.75
14"x 8" FL Ecc Red	3	Ea	954.00	330.00	1,284.00	3,852.00	577.80	4,429.80
14"x 6" FL Conc Red	3	Ea	763.20	300.00	1,063.20	3,189.60	478.44	3,668.04
14"x 4" Fx F DIP w/ 1/4" Tap	3	Ea	742.00	420.00	1,162.00	3,486.00	522.90	4,008.90
14" FL CV	3	Ea	2,332.00	420.00	2,752.00	8,256.00	1,238.40	9,494.40
14" FL 90 w/2" Tap Boss	0	Ea	848.00	420.00	1,268.00	0.00	0.00	0.00
2" ARV	4	Ea	2,120.00	1,000.00	3,120.00	12,480.00	1,872.00	14,352.00
14" FL BF Valve w/HW	4	Ea	1,908.00	420.00	2,328.00	9,312.00	1,396.80	10,708.80
14" BF	2	Ea	212.00	210.00	422.00	844.00	126.60	970.60
14" Pipe Stands	10	Ea	424.00	500.00	924.00	9,240.00	1,386.00	10,626.00
24" FL Acc Sets	8	Ea	445.20	400.00	845.20	6,761.60	1,014.24	7,775.84
14" FL Acc Sets	44	Ea	127.20	100.00	227.20	9,996.80	1,499.52	11,496.32
8" FL Acc Sets	3	Ea	31.80	25.00	56.80	170.40	25.56	195.96
6" FL Acc Sets	3	Ea	29.68	24.00	53.68	161.04	24.16	185.20
								192,704.35

HSPS Disch Flow Meter Piping, Above-ground, Reduce piping from flow meter connecting to mains to 16"								
Activity	Qty	Unit	Materials	Labor	Unit Price	Sub Total	15% Sub-Cont. Fee	Total
16 24" DIP	24	LF	31.80	50.00	81.80	1,963.20	294.48	2,257.68
16 24" MJ 90 w/DIML	4	Ea	1,060.00	720.00	1,780.00	7,120.00	1,068.00	8,188.00
16 24x14 MJ Reducer w/DIML	1	Ea	1,060.00	570.00	1,630.00	1,630.00	244.50	1,874.50
24x16 MJ Reducer w/DIML	0	Ea	1,590.00	600.00	2,190.00	0.00	0.00	0.00
24"x 8" Fx PE DIP	1	Ea	1,484.00	720.00	2,204.00	2,204.00	330.60	2,534.60
16"x 8" Fx PE DIP	1	Ea	742.00	720.00	1,462.00	1,462.00	219.30	1,681.30
24" FL Tee w/2" Tap	1	Ea	3,922.00	1,080.00	5,002.00	5,002.00	750.30	5,752.30
16 24" FL Tee	2	Ea	1,590.00	1,080.00	2,670.00	5,340.00	801.00	6,141.00
16 24" BF w/2" Tap	2	Ea	424.00	400.00	824.00	1,648.00	247.20	1,895.20
2" ARV	3	Ea	2,120.00	1,000.00	3,120.00	9,360.00	1,404.00	10,764.00
16 24" BFV	2	Ea	2,120.00	720.00	2,840.00	5,680.00	852.00	6,532.00
16 24" FL Wye	1	Ea	2,756.00	1,440.00	4,196.00	4,196.00	629.40	4,825.40
16 24"x 26" Fx F DIP	1	Ea	636.00	720.00	1,356.00	1,356.00	203.40	1,559.40
16 24"x 10" Fx F DIP	1	Ea	530.00	720.00	1,250.00	1,250.00	187.50	1,437.50
24"x 16" FL Conc Red	1	Ea	2,226.00	600.00	2,826.00	2,826.00	423.90	3,249.90
16"x 4" Fx F DIP	1	Ea	795.00	480.00	1,275.00	1,275.00	191.25	1,466.25
16"x 10" Fx Gr DIP	1	Ea	424.00	480.00	904.00	904.00	135.60	1,039.60
16"x 5" Fx Gr DIP	1	Ea	742.00	480.00	1,222.00	1,222.00	183.30	1,405.30
16" Gr Coupling	1	Ea	424.00	480.00	904.00	904.00	135.60	1,039.60
24"x 14" FL Conc Red	1	Ea	2,226.00	570.00	2,796.00	2,796.00	419.40	3,215.40
14"x 10" FL Conc Red	1	Ea	742.00	420.00	1,162.00	1,162.00	174.30	1,336.30
10" FL BF Valve w/HW	1	Ea	1,060.00	300.00	1,360.00	1,360.00	204.00	1,564.00
10"x 26" Fx Gr DIP	1	Ea	265.00	300.00	565.00	565.00	84.75	649.75
10"x 10" Fx Gr DIP	1	Ea	212.00	300.00	512.00	512.00	76.80	588.80
10" Gr Coupling	1	Ea	127.20	300.00	427.20	427.20	64.08	491.28
10" FL Acc Sets	4	Ea	65.72	62.00	127.72	510.88	76.63	587.51
14" FL Acc Sets	2	Ea	106.00	100.00	206.00	412.00	61.80	473.80
16" FL Acc Sets	6	Ea	137.80	130.00	267.80	1,606.80	241.02	1,847.82
24" FL Acc Sets	14	Ea	424.00	400.00	824.00	11,536.00	1,730.40	13,266.40
24" Pipe Stands	6	Ea	424.00	400.00	824.00	4,944.00	741.60	5,685.60
10" Pipe Stands	1	Ea	381.60	360.00	741.60	741.60	111.24	852.84
Tie in to 14" & 16" Distr Syst Piping	2	Ea	5,300.00	7,000.00	12,300.00	24,600.00	3,690.00	28,290.00
								122,493.03
Flow Meter Assembly Slab	1	Ea	5,500.00	950.00	6,450.00	6,450.00	967.50	7,417.50
Pressure gages/transmitters/tubing	1	LS	4,250.00	350.00	4,600.00	4,600.00	690.00	5,290.00
Set Pumps	4	Ea		12,000.00	12,000.00	48,000.00	5,770.43	53,770.43
Deduct Original HSP Piping Estimate	1	LS						-66,700.00
Subcontractor Sub-Total								314,975.32
15% Gen. Contractor Overhead and Profit								55,583.88
Total w/ Contract. Overhead and Profit								370,559.20

(239) 479-8181

Mrs. Julia E. Nemeth, P.E.
Harn R/O Systems, INC.
205 Seaboard Ave.
Venice, FL 34292

HELD MEETING TO
DISCUSS FOLLOWING

SUBJECT: Pinewoods WTP RO Expansion- Contract 2974

Dear Julie:

I had an opportunity to review the request for change order submitted to me during the meeting held on February 7, 2006. I would like to take this opportunity to discuss and comment on the request in order to clarify some of the issues. My comments are as follows:

Part1 Original Scope of supply from proposal – Additional Costs

High Service Pump Increase in size

- Design effort..... \$25,000
- Increase in pump and motor size.....\$9,800
- Move HSP's Outside.....\$156,774

**No objection to
Need copy of price quotes for both
Remove roof structure that will result in significant structural savings**

Transfer Pump Increase in size and cost

- Please provide cost breakdown to justify additional cost. Appears to be higher than expected for pump size.

R/O Building and Slab Increase in Size,

Design and Wind Load.....\$269,940

Need further discussion, please see e-mail to Tom Seacord dated 2/14/05

150 VS 170 MPH WIND LOAD

Increase sodium Hypochlorite Structure..... No objection

Add VFD to Transfer Pumps.....\$62,353.00

Need copy of quotes (Normally, the prices for ^{VFD}soft-starts are between \$4,000 to \$5,000.)

**Material and Equipment cost Escalation.....See attached copy with comments.
Quotes and justification should be provided. Appears to be in the high side.**

Part 2. Changes in Scope of Supply from proposal – Potential Deduct

Eliminate the need for Caustic Bulk Tank.....	\$28,000	approved, provide quote
Delete Sand Separators.....	\$112,756	approved
Delete HSP Structure.....	\$64,250	approved, provide quote

Part 3. Yard piping associated with new mg storage tank

16" Finished Water Transfer Line to Tank.....\$218,187 The piping should have been part of the work since a tank always require some type of connection. Please provide detailed cost for all components. (\$436/lf)

12' Equalization line between tanks.....\$58,851 not required, eliminate

18" from new tank, increasing to 24".....\$163,766 the piping should have been part of the work since a tank always require some type of connection. Replace injection assembly as discussed. Please provide detailed cost for all components. (\$818/lf)

18" to 24" from tank to HSP suction.....\$392,416 the piping should have been part of the original work. Please provide detailed cost for all components.

Miscellaneous Yard Piping

Additional piping resulting from relocation of sand separator.... \$12,227 Need to discuss further, since sand separator was eliminated.

10" well flush line.....\$54,180 County staff will install.

Cordially,

LEE COUNTY UTILITIES

S. Ivan Velez, P.E.
Deputy Director

cc:

PINEWOODS WTP RO EXPANSION, CONTRACT #2974

Ham R/O Summary of Revised Costs
 JEN
 2/7/2008

Part 1. Original Scope of Supply from Proposal – Additional Costs

	Proposal Basis	Current	Additional Cost
High Service Pump Increase in Sizing (1)			
Design Effort-process hydraulics, structural, electrical	Mod. Exist. Bldg.	Mod. Exist. Bldg. & Add New Struct.	\$25,000
Increase in Pump and Motor Size	Four, 200 HP	Three, 250 HP	\$9,800
Move HSP's outside-sitework, foundation, structure, lighting	no structure	1800 sf, 130 mph Engineered open building	\$156,774
Total			\$191,574

Quote
 Slab
 no structure

	Proposal Basis	Current	Additional Cost
Transfer Pump Increase in Size and Cost (2)			
Increase in Pump and Motor Size	Four, 25 HP	Four, 30 HP	\$23,529
Increase in Piping and Valving	10" piping, fittings, check and isolation valves -- four pumps	14" piping, fittings, supports, check and isolation valves -- four pumps	\$35,294
Total			\$58,824

Quote
 "

	Proposal Basis	Current	Additional Cost
R/O Building and Slab Increase in Size, Design and Wind Load	5800 sf, 130 mph standard construction	6720 sf, 172.5 mph, upgraded/insulated roof and wall sections	\$269,940

Contract structural
 3 Corallo
 Trident
 \$

	Proposal Basis	Current	Additional Cost
Increase Sodium Hypochlorite Structure	500 sf Pole Barn on Slab	680 sf Engineered 130 mph Butler structure with retaining wall	\$71,665

	Proposal Basis	Current - proposed	Additional Cost
Add Variable Frequency Drives to Transfer Pumps (3)	Soft starters	Variable frequency drives	\$62,353

	Proposal Basis	Current - proposed	Additional Cost
Material and Equipment Cost Escalations from Proposal	Pricing prepared January-March 2004 (4)	Current pricing autumn 2005 Final plans rec'd July 2005	
Sand Separators		increase	\$13,900
R/O feed pumps		increase	\$39,850
Cartridge filters		increase	\$2,200
Degasifier/scrubber		increase	\$28,300
Pressure Vessels		increase	\$7,550
Fiberglass		increase	\$12,000
PVC pipe and valves		increase	\$3,600
Stainless steel pipe and valves		increase	\$12,450
Instrumentation		increase	\$5,800
Chemical feed equipment		increase	\$22,800
R/O cleaning system		increase	\$2,400
Chemical piping, in plant and double-contained in yard		increase	\$21,200
Misc. Valves (R/O process, degasifiers, permeate and concentrate lines)		increase	\$17,275
Total			\$189,325
<i>Original Proposal Line Item, \$6,402,649 – this increase is 3% of original line item</i>			

Part 1. Additional Costs – Total

\$843,680

Note 1: Increase in High Service Pump capacity, Owner-directed process modification

Note 2: Increasing transfer pumps; D/B engineer-directed process upgrade

Note 3: D/B team is currently recommending VFD's for the Transfer Pumps for the following reasons: improves post-treatment chemical control and stability and therefore improves finished water quality, reduces size of clearwell back to size originally bid, reduces power consumption

Note 4: 9 month delay from preparing pricing in January-March 2004, providing proposal in April 2004, modifying proposal to add ground storage tank and providing final, accepted proposal July 2004 – contract approved December 7, 2004 and Notice to Proceed provided December 24, 2004, also 2 1/2 month delay in receiving DOH construction permit, final design documents provided July 2005

Part 2. Changes In Scope of Supply from Proposal -- Potential Deducts

	Proposal Basis	Current - proposed	Deduct
Eliminated need for New Caustic Bulk Tank	7200 gallon bulk tank	No bulk tank	\$28,000

	Proposal Basis	Current	Deduct
Consider Deleting Sand Separators - Leave Provision for Future			
Delete sand separators and valves and piping	3 sand separators	leave piping stub-outs for addition if needed	\$112,756
Total			\$112,756

	Proposal Basis	Current	Deduct
Consider Deleting HSP Structure			
Delete HSP Structure	HSP go in existing building	Moved HSP's outside when size was increased	\$64,250
Total			\$64,250

Part 2. Potential Deducts -- Total

\$205,006

Difference Between Additional Costs and Potential Deducts (Part 1. minus Part 2.)=	\$638,674
Original Contingency, 5%=	\$404,672
Additional amount required based on original contingency=	\$234,002
Current Cont. after transfer of \$230,000 for conc. tank coating per Owner's direction=	\$174,672
Additional amount required based on current contingency=	<u>\$464,002</u>
	(approximately 5% current contract)

Part 3. Yard Piping related to WTP/New Crom Tank not included in July 2004 proposal

	Proposal Basis	Current - proposed	Additional Cost
Yard Piping Associated with New 1 MG Finished Water Ground Storage Tank			
16" Finished Water Transfer Line to Tank, incl. above-ground inject/meter assembly	Not Included	500 LF piping, fittings, valves, restraints, slab	\$218,187
12" Equalization Line between new tank and old tank	Not Included	130 LF piping, fittings, valves, restraints	\$58,851
18" from new Tank, increasing to 24" and tying in old Tank, including injection assembly	Not Included	200 LF piping, fittings, valves, restraints, slab	\$163,766
18" to 24" from Tank to HSP suction, Piping and Valving, including metering assembly	Tie into exist. 8" w/ 12" all above-ground	Buried & above-grade 24" piping, fittings, valving, supports, slab	\$392,416
Total			\$833,220

Breakdown
Delete
diffuser tap line corp. stop
16" instead 24"

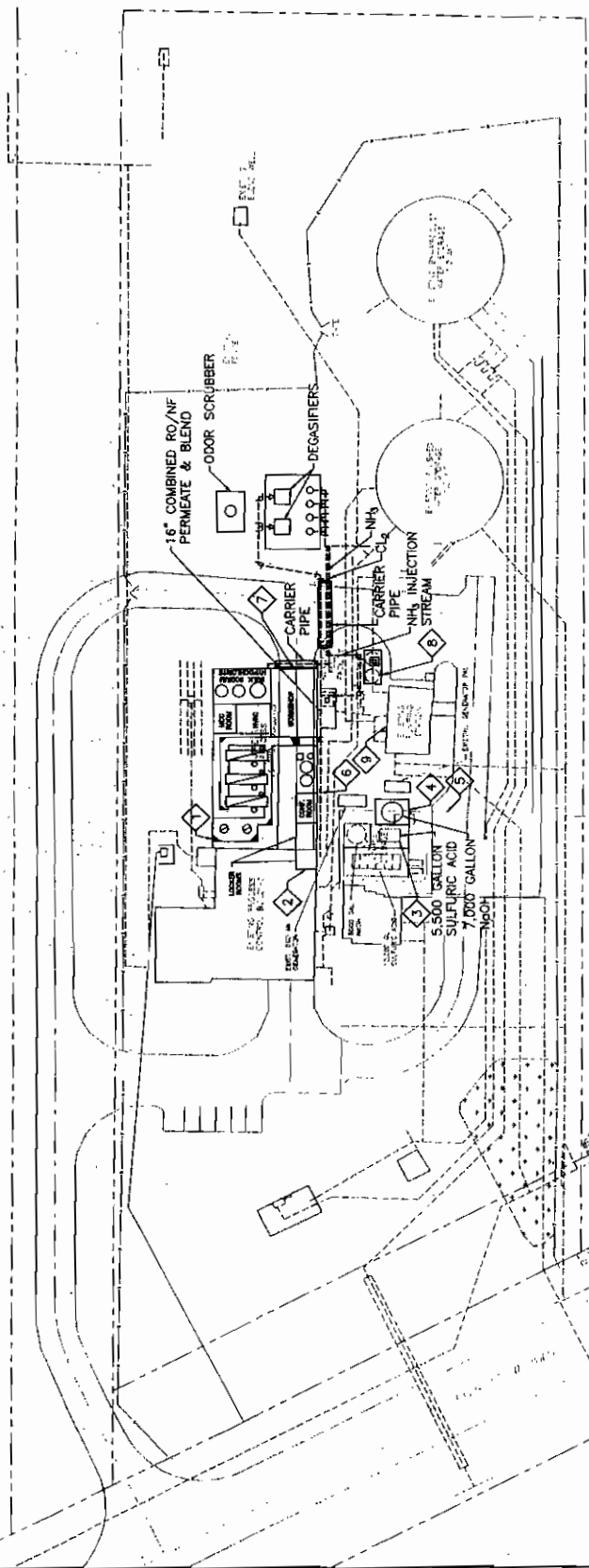
	Proposal Basis	Current - proposed	Additional Cost
Miscellaneous Yard Piping			
additional piping resulting from relocating Sand Separators from original location due to electrical easement conflict (extension of flush/drain piping and turbidity sample and air tubing/piping)	sand separators adjacent to RO building	relocated out by clearwell	\$12,227
10" Well Flush Line	Not Included	500 LF piping, fittings, etc.	\$54,180
Total			\$66,407

Move to Main Contract

Part 3. Yard Piping related to WTP not included in July 2004 prop., Total \$899,627

(Approximately 10% of Total Current Contract)

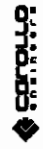
SCALE: 1" = 60'



KEY NOTES:

- 1 PIPE TRENCH, 5' DEEP; INSTALL FRP GRATING TO LEVEL SURFACE.
- 2 CONVERT EXISTING SHOP SPACE INTO LOCKER ROOM
- 3 REPLACE EXISTING ELEVATED BULK SCALE INHIBITOR TANK W/ 5,500 GALLON SULFURIC ACID TANK
- 4 INSTALL NEW 7,000 GALLON CAUSTIC SODA TANK & CONTAINMENT
- 5 REMOVE BURIED PIPE, RELOCATE AS PER KEY NOTE 6.
- 6 RELOCATE NF PERMEATE LINE TO TIE IN W/ NEW RO PERMEATE AND HAWTHORNE BLEND LINE & TRANSFER TO NEW DEGASIFIERS.
- 7 INSTALL 16'x16' ROLL-UP DOOR
- 8 RELOCATE 2, 1,000 GALLON BULK SODIUM HYPOCHLORITE TANKS TO CLIMATE CONTROLLED STORAGE ROOM IN NEW BUILDING. INSTALL RELOCATED AMMONIATORS TO EXISTING HYPOCHLORITE CONCRETE PAD.
- 9 REPLACE EXISTING 8" HSP DISCHARGE PIPE FROM PUMPS UPGRADED TO 12DHP WITH 10" TO ABOVE GROUND FLANGE OUTSIDE OF BUILDING. ALL BELOW GROUND PIPE NOTIFICATIONS WILL BE REPLACED/UPGRADED BY OTHERS.

From April 2004 Proposal
Figure 1
PINWOODS WTP RO EXPANSION
LEE COUNTY UTILITIES



H:\Client\Pinewoods WTP\201-501537\DWG\Pinewoods_RFA_piping 4--26-04 10:36am stamped XREFS: PINWOODS_sifw_piping WPCOUT; PINWOODS-SITE PLAN-PROPOSED IMPROVEMENTS.dwg

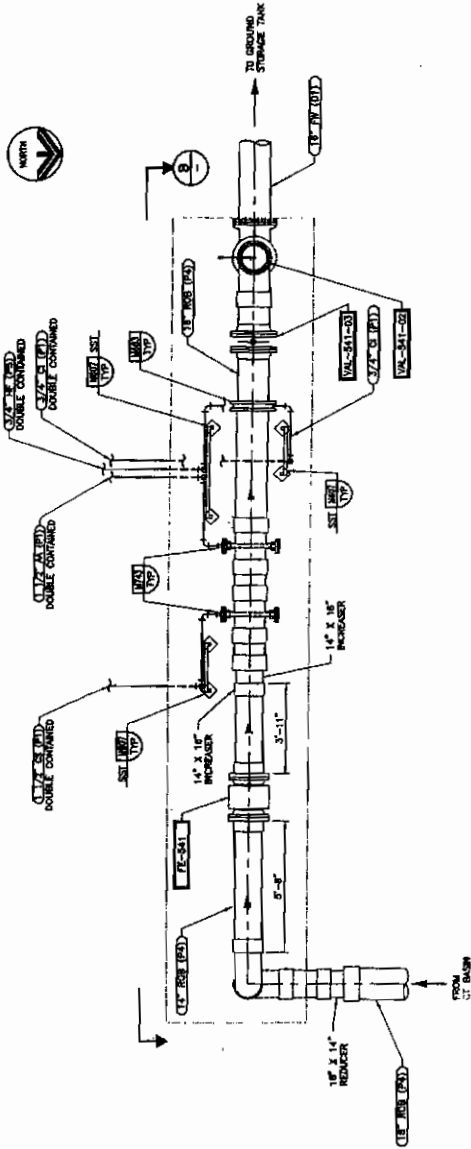
H:\Client\Pinewoods WTP\201-501537\DWG\Pinewoods_RFA_piping.dwg, 4/26/2004 10:16:19 AM, POWER PLAC, INUSE DESIGN

NOTES:

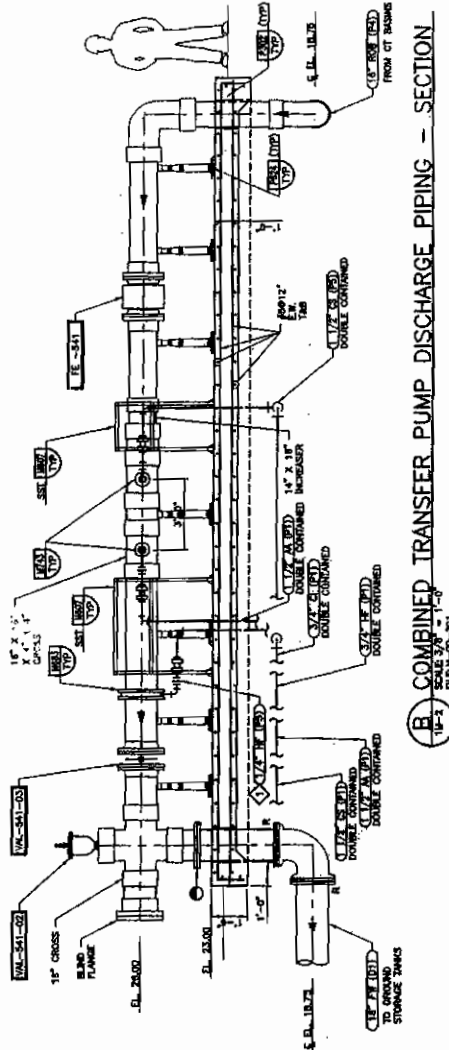
1. REFER TO GENERAL NOTES FOR ALL INFORMATION AND REQUIREMENTS SEE DRAWING.
2. FOR CONTRACTOR'S USE: PROVIDE AND INSTALL ALL FITTINGS, ADAPTERS AND CONNECTIONS FOR INSTALLATION OF INSTRUMENTATION.
3. SOME PIPING AND APPURTENANCES NOT SHOWN FOR CLARITY. SEE DETAIL DRAWINGS FOR PIPING AND APPURTENANCES IN THIS AREA.
4. ALL EXPOSED CHROMIUM PIPING SHALL BE DOUBLE COATED.
5. ALL BURNED PIPE TO HAVE MINIMUM OF 3" OF COVER.
6. 100-YEAR STORM EVENT ELEVATION ZONE.

KEY NOTES:

- ◆ IF INJECTION POINT TO BE LOCATED ON BOTTOM SIDE OF BURNED PIPE



A COMBINED TRANSFER PUMP DISCHARGE PIPING - PLAN
SCALE 3/8\"/>



B COMBINED TRANSFER PUMP DISCHARGE PIPING - SECTION
SCALE 3/8\"/>

JOB NO. 7077A.00		DRAWING NO. C-YP-01	
LEE COUNTY UTILITIES PINEWOODS WTP EXPANSION VARIOUS PIPING COMBINED TRANSFER PUMP DISCHARGE PIPING			
 LEE COUNTY SOUTH WEST FLORIDA			
 CAROLLO ENGINEERS			
THESE DRAWINGS ARE COPIES, UNSEALED AND UNSEALED ONLY.			
DESIGNED BY	DATE	APPROVED BY	DATE
DRAWN BY		CHECKED BY	
CHECKED BY		DATE	
DATE		BY	

