



CITY OF LODI

PUBLIC WORKS DEPARTMENT

COUNCIL COMMUNICATION

TO: City Council
FROM: City Manager
MEETING DATE: May 18, 1988
AGENDA TITLE: Authorize City Manager and City Clerk to Execute Design Engineering Agreement for White Slough Water Pollution Control Facility Expansion

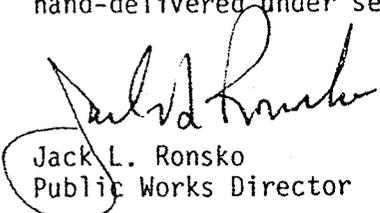
RECOMMENDED ACTION: That the City Council authorize the City Manager and City Clerk to execute the Design Engineering Agreement (Work Order No. 2 of Master Agreement) between the City of Lodi and the engineering firm of Black and Veatch.

BACKGROUND INFORMATION: In February 1987, the City Council approved the Master Agreement, together with the Preliminary Engineering Agreement (Work Order No. 1), between the City and the firm of Black and Veatch. The work under the Preliminary Engineering Agreement is essentially complete.

The work under the Design Engineering Agreement includes the preparation of the plans, specifications, estimate, and obtaining necessary approvals from other regulatory agencies.

The total estimated cost under the Design Engineering Agreement, Work Order No. 2, is \$628,150.00. It is estimated that the work under this agreement will take approximately 300 calendar days,

The City Attorney is now reviewing the agreement and it will be hand-delivered under separate cover.


Jack L. Ronsko
Public Works Director

JLR/ma

cc: Water/Wastewater Superintendent
City Attorney
Black and Veatch

APPROVED:


THOMAS A. PETERSON, City Manager

FILE NO.

CWSWPCF7/TXTW.02M

May 11, 1988

MEMORANDUM, City of Lodi, Public Works Department

TO: City Manager and City Council

FROM: Public Works Director

DATE: May 16, 1988

SUBJECT: Transmittal of Agreement for Agenda Item E-7, "Authorize City Manager and City Clerk to Execute Design Engineering Agreement for White Slough Water Pollution Control Facility Expansion"

Attached for inclusion in your Council packet is a copy of the proposed Design Engineering Agreement between Black and Veatch and the City of Lodi.

This agreement, together with the Master Agreement, has been reviewed by the City Attorney.



Jack L. Ronsko
Public Works Director

JLR/ma

Attachment

cc: City Clerk ✓
City Attorney
Water/Wastewater Superintendent
Black and Veatch

ATTACHMENT TO ENGINEERING AGREEMENT

BETWEEN
CITY OF LODI
AND

BLACK & VEATCH
DATED _____, 1988

WORK ORDER NO. 2
DESIGN ENGINEERING

Note:
Two minor changes
will be made to this
Agreement Draft:
1. Mailing addresses of
both parties to be
shown
2. How Fixed Fee (Profit)
is calculated
15% x Indirect + Direct Expenses
John Tomlin

PURPOSE

The purpose of Work Order No. 2 is to authorize design engineering for the preparation of construction drawings and specifications for the project as described in the Design Memorandum, Capacity Expansion Improvements, White Slough Water Pollution Control Facility, prepared by Black & Veatch in January 1988 for the City of Lodi.

Scope of Work

Plans and specifications will be prepared for the following facilities and improvements as described in the attached design memorandum:

1. Preliminary treatment modifications:
 - o Rebuild comminutors.
 - o New grit pumps and washer, cyclone, and grit loading facilities.
2. influent pumping, piping, valves, equipment modifications, and pump controls.
3. Two new primary clarifiers and associated pumping equipment, and pump room modifications (i.e., structural, pump controls, flowmeter, emergency exit).

4. New aeration basin, modifications to existing basins and RAS lines, blowers, air piping and Slower controls, establishment of additional feed points.
5. Two new secondary clarifiers with a return and waste sludge pumping station, pump controls, and flowmetering equipment.
6. Conversion of existing secondary clarifiers to chlorine contact basins.
7. New waste activated sludge thickening facilities or modification of existing DAF unit. To be decided after further review by City staff and Black & Veatch.
8. A new egg-shaped anaerobic digester and upgrade of existing digesters and inclusion of two (2) new gas recirculation systems.
9. New cogeneration equipment.
10. New effluent return system.
11. Sludge lagoon modifications.
12. Correction of irrigation system deficiencies.
13. Control building modifications, i.e. instrumentation and PC for data storage and/or control.
14. Tank and groundwater dewatering facilities.

The preliminary sheet list is found on Attachment 1 to this work order.

In addition, professional engineering services provided by Whitley, Burchett and Associates, Inc., as described in Attachment No. 2, will be provided.

Time for Completion

From the date of authorization to proceed, time to complete the design engineering phase *is* 300 calendar days.

Compensation and Payment

Compensation shall be based as provided for in Section II of the Agreement, with **the** exception that indirect expenses shall equal 1.3 times the direct labor cost. The cost for the work is \$549,513 and the fixed fee is \$78,637 with a total price of \$628,150. An additional \$50,000 is provided for alternate projects, special studies, or increased scope items (**Work Element No. 6**). This fund *is* to be used only as mutually agreed by the Public Works Director and the project manager. A separate monthly accounting of any use of this fund will be provided to the City.

Details of the cost estimate are summarized in Attachment No. 3 to this work order.

Effective Date

This work order shall be authorized on the last date executed by the **parties** signing below.

BLACK & VEATCH, ENGINEERS-ARCHITECTS

Date _____

By _____

Title _____

Attested By:
CITY OF LODI

Date _____

By _____

Title Thomas A. Peterson
City Manager

- DRAFT -

Approved as to form:

Bob McNatt
Title City Attorney

Attest:

Alice M. Reimche
Title City Clerk

CITY OF LODI
ATTACHMENT NO. 1 TO WORK ORDER NO. 2
PRELIMINARY SHEET LIST

LODI, CALIFORNIA, WHITE SLOUGH WATER POLLUTION CONTROL FACILITY EXPANSION

GENERAL SHEETS

- 0 Cover Sheet
- G1 Sheet List
- G2 Hydraulic Profile
- G3 Abbreviations
- G4 **Legend**
- G5 Design Criteria, Equipment Piping and Valve Codes
- G6 General Layout 1" = 50'
- G7 Liquid Schematic
- G8 Solids Schematic
- G9 Yard Piping 1" = 20' (east)
- G10 Yard Piping 1" = 20' (central)
- G11 Yard Piping 1" = 20' (west)
- G12 Yard Piping Details
- G13 Yard Piping Details
- G14 Effluent Control Box
- G15 Effluent Return Facilities - Plans and Sections
- G16 Grading and **Paving** (east)
- G17 Grading and Paving (central)
- G18 Grading and **Paving** (west)
- G19 Grading and **Paving Details**
- G20 Grading and **Paving Details**

STRUCTURAL

- S1 Primary Sedimentation Basins - Bottom Plan
- S2 Primary Sedimentation Basins - Top Plan
- s3 Primary Sedimentation Basins - Sections and Details

STRUCTURAL (Continued)

- s4 Primary Sedimentation Basins - Sections and Details
- S5 Aeration Basin - Top and Bottom Plan
- S6 Aeration Basin - Section and Details
- S7 Splitter Box
- S8 Secondary Clarifier Complex - Plan
- S9 Secondary Clarifier Complex - Sections and Details
- S10 Secondary Sludge Pumping Station - Plans
- S11 Secondary Sludge Pumping Stations - Sections and Details
- s12 Existing Secondary Sedimentation Tanks - Plan Removals
- S13 Existing Secondary Sedimentation Tanks - Sections Removals
- S14 Existing Secondary Sedimentation Tanks - Modifications
- S15 Sludge Thickening Facilities - Plan
- S16 Sludge Thickening Facilities - Sections and Details
- S17 Sludge Thickening Facilities - Sections and Details
- S18 Anaerobic Digester - Plan
- S19 Anaerobic Digester - Sections and Details
- S20 Cogeneration Facilities - Plan, Sections, and Details
- S21 Control Building Modifications - Plan, Sections, and Details
- S22 Miscellaneous Structural Details
- S23 Standard Concrete Sheet

ARCHITECTURAL

- A1 Control Building Modifications - Plans
- A2 Control Building Modifications - Sections and Details
- A3 Control Building Modifications - Door/Window/Finish Schedule

MECHANICAL

- M1 Headworks-Operating Floor - Plan
- M2 Headworks - Sections and Details
- M3 Sludge Dewatering Building - Plans, Sections, and Details
- M4 Primary Sedimentation Basins - Plan
- M5 Primary Pump Room - Plan
- M6 Primary Sedimentation Basin and Pump Room - Sections and Details
- M7 Control Building - Blower Room Plan

MECHANICAL (Continued)

- M8 Control Building - Blower Room Sections and Details
- M9 Aeration Basin - Top Plan
- M10 Aeration Basin - Gallery Plan
- M11 Aeration Basin - Sections and Details
- M12 Secondary Clarifier Complex - Plan
- M13 Secondary Clarifier Complex - Sections and Details
- M14 Secondary Sludge Pumping Station - Plans
- M15 Secondary Sludge Pumping Station - Sections and Details
- M16 Secondary Sludge Pumping Station - Details
- M17 Chlorine Contact Tanks - Plan
- M18 Chlorine Contact Tanks - Sections and Details
- M19 Chlorine Feed Room/Chlorine Feed Schematic
- M20 Sludge Thickening Facilities - Plan, Sections, and Details
- M21 Sludge Thickening Facilities - Polymer Feed Schematic
- M22 Existing Anaerobic Digesters - Floor Plans
- M23 Existing Anaerobic Digesters - Sections and Details
- M24 Existing Anaerobic Digesters - Digester Plans
- M25 Existing Anaerobic Digesters - Sections and Details
- M26 New Anaerobic Digester - Piping Plan
- M27 New Anaerobic Digester - Sections and Details
- M28 Cogeneration Facilities - Piping Plans
- M29 Cogeneration Facilities - Sections and Details
- M30 Cogeneration Facilities - Heat Loop Schematic/Digester Gas Schematic
- M31 Control Building Modifications - Plumbing/HVAC
- M32 Standard Details
- M33 Standard Details

ELECTRICAL

- E1 Legend and Abbreviations
- E2 Site Plan
- E3 Site Plan
- E4 Site Plan
- E5 Duct Bank Sections
- E6 Manholes and Handholes

ELECTRICAL (Continued)

- E7 Power Distribution One-line
- E8 Headworks MCC-B One-line
- E9 Sludge Dewatering MCC-G One-line
- E10 Control Building MCC-A One-line
- E11 Digester Control Building MCC-F One-line
- E12 Effluent Pumping MCC-H/Chlorine Room MCC-D One-Lines
- E13 Secondary Sludge Pump Station One-line
- E14 Gravity Belt Thickener One-line
- E15 Miscellaneous One-line
- E16 PLC System Ladder Diagram
- E17 PLC System Ladder Diagram
- E18 Schematics
- E19 Schematics
- E20 Schematics
- E22 PLC System One-lines
- E23 PLC I/O Schedules
- E24 Instrument P&ID Legend
- E25 P&ID
- E25 P&ID
- E27 P&ID
- E28 P&ID
- E29 Instrumentation Device Schedule
- E30 Instrumentation
- E31 Instrumentation
- E32 Headworks - Power Wiring and Lighting
- E33 Sludge Dewatering Building - Power Wiring and Lighting
- E34 Primary Sedimentation - Power Wiring and Lighting
- E35 Control Building - Power Wiring and Lighting
- E36 Aeration Basin - Power Wiring and Lighting
- E37 Digester Control Building - Power Wiring and Lighting
- E38 Miscellaneous Power Wiring and Lighting
- E39 Lighting Fixtures, Panels, and Schedules



WHITLEY, BURCHETT
and Associates, Inc.

City of Lodi
Attachment No. 2 to
Work Order No. 2

May 4, 1988

Black and Veatch
3470 Buskirk Avenue
Pleasant Hill, California 94523

Attention: Mr. Ken Jones

Subject: City of Lodi White Slough WPCP Expansion Project
Amended Proposal for Professional Engineering Services

Dear Mr. Jones:

I am pleased to submit this amended proposal to furnish professional engineering services on the White Slough Water Pollution Control Plant expansion project. The scope of work for this proposal reflects comments regarding my original proposal by the City of Lodi and our discussions regarding the appropriate arrangements between Black And Veatch and Whitley, Burchett and Associates.

The purpose of my involvement would be to oversee the development of the project design and to represent the city's interests in matters with outside agencies, contractors and Black and Veatch. General responsibilities would include project review and quality control, and serving as a special consultant to the city and Black and Veatch on an as needed basis.

To maintain a clear line of responsibility for the overall design of the project between the City of Lodi and Black and Veatch, my position on the design team would be as a special consultant and member of the Quality Control Committee.

During the detailed design phase of the project, the scope of services would include the following:

1. Attend regular meetings of the design team.
2. Review drawing check prints and draft specifications monthly,
3. Participate as member of Quality Control Committee in the normal B&V quality control process.
4. Review project correspondence,
5. Attend meetings with the city and outside agencies, as required by the city.
6. Other tasks, as required by the city or Black and Veatch.

The scope of services during the construction phase would include the following:

1. Attend regular monthly construction meetings with the contractor.

Mr. Ken Jones
May 4, 1988
Page 2

2. Monthly visit to construction site.
3. Review construction correspondence.
4. Assist city in deliberations regarding contract change orders.
5. Assist city in resolving disputes.
6. Other tasks, as required by the city or **Black and Veatch**.

An estimate of the budget for the detailed design phase of the project is attached as Exhibit A. This budget is based on 9-1/2 months to prepare the bid documents as indicated in the project schedule dated February 4, 1988. Budgets for the optional work are allowances; actual budgets would be determined on a case-by-case basis.

Please review this proposal and let me know if it is satisfactory. I am looking forward to working with you and the city on this important project.

Very truly yours,

WHITLEY, BURCHETT and ASSOCIATES, Inc.



Max E. Eurchett, P.E.

EXHIBIT A

City of Lodi White Slough WPCP Expansion Project
Professional Engineering Services - Max E. Burchett
Amended Budget Estimate - Detailed Design Phase

1. Attend regular meetings of design team
1 meeting/week, 1 hour/meeting, 9.5 months = 41 hours
 2. Review drawing check prints and draft specifications
3 hours/month, 9.5 months = 28.5 hours
 3. Quality Control Committee (50% & 90%)
2 reviews, 24 hours/review = 48 hours
 4. Review project correspondence
1 hour/week, 9.5 months = 41 hours
 5. Attend meetings with city and outside agencies
Assume 2 meeting/month,
4 hours/meeting, 9.5 months = 76 hours
 6. Other tasks, as required
Assume 80 hours (allowance) = 80 hours
- Total 314.5
say 320 hours
- 320 hrs/9.5 mo
= 33+ hrs/mo

| | | |
|----------------|---------------------|-----------------|
| Budget - Labor | 320 hours @ \$94 | = \$30,080 |
| Mileage | 2400 miles @ \$0.25 | = 600 |
| Telephone | 9 months @ \$25 | = 225 |
| Postage | | 15 |
| | | <u>\$30,920</u> |

- DRAFT -

CITY OF LODI
ATTACHMENT NO. 3 TO WORK ORDER NO. 2
COST SUMMARY

| <u>Description</u> | <u>Direct Labor</u> \$ | <u>Indirect* Expenses</u> \$ | <u>Direct Expenses</u> \$ | <u>Subtotal</u> \$ | <u>Fixed Fee</u> \$ | <u>Total cost</u> \$ |
|---|-------------------------------|-------------------------------------|----------------------------------|-----------------------|----------------------------|-----------------------------|
| General & Mechanical Sheets Work Element No. 1 | 101,193 | 131,551 | 4,000 | 236,744 | 35,510 | 272,254 |
| Structural & Archi- tectural Sheets Work Element No. 2 | 36,181 | 47,035 | 2,000 | 85,216 | 12,784 | 98,000 |
| Electrical Sheets Work Element No. 3 | 62,676 | 81,479 | 2,000 | 145,155 | 21,925 | 168,080 |
| Whitley, Burchett & Associates, Inc. Work Element No. 4 | -- | -- | 30,920 | 30,920 | 1,546** | 32,466 |
| Geotechnical Services Work Element No. 5 | -- | -- | 7,000 | 7,000 | 350** | 7,350 |
| Supplemental Work Work Element No. 6 | <u>18,469</u> | <u>24,009</u> | <u>1,000</u> | <u>43,478</u> | <u>6,522</u> | <u>50,000</u> |
| Tot31 | 218,519 | 284,073 | 40,920 | 549,513 | 78,637 | 628,150 |

*1.3 times direct labor.

**Five percent fee on subconsultants to cover cost of additional accounting.