

**YUOK TRIBE PLANNING
AND COMMUNITY DEVELOPMENT**



**REQUEST FOR BIDS
CONSTRUCTION OF
COMMUNITY WATER SYSTEM
IMPROVEMENTS**

**Weitchpec Electrical
IHS Project CA 09-M24**

PROJECT MANUAL

WEITCHPEC ELECTRICAL
INDIAN HEALTH SERVICE PROJECT CA 09-M24

TABLE OF CONTENTS

- A. DIVISION 0 - BIDDING REQUIREMENTS
- B. DIVISION 0 - CONTRACTING REQUIREMENTS
- C. DIVISION 1 - GENERAL REQUIREMENTS
- D. DIVISIONS 2-16 –TECHNICAL SPECIFICATIONS
- E. EXHIBITS

BIDDING AND CONTRACT DOCUMENTS – DIVISIONS 0-1

TABLE OF CONTENTS

DIVISION 0 – BIDDING AND CONTRACTING REQUIREMENTS

BIDDING REQUIREMENTS

- 010 Request For Bids & Bidder Information
- 040 Bid Form - Unit Price
- 044 Contractor Questionnaire
- 045 Non-Collusive Affidavit
- 046 Indian Enterprise Qualification Statement

CONTRACTING REQUIREMENTS

- 050 Contract Agreement
- 055 Notice to Proceed
- 00625 Certification of Substantial Completion
- 063 Contractors Application For Payment
- 00710 General Conditions
 - Attachment No. 1 Yurok Tribe Tribal Employment Rights Policy
- 091 Change Order

DIVISION 1 - GENERAL REQUIREMENTS

- 110 Summary
- 01270 Measurement and Payment
- 130 Submittal Procedures
- 01700 Execution Requirements
- 01720 Staking and Construction Surveying

TECHNICAL SPECIFICATIONS – DIVISIONS 2-16

TABLE OF CONTENTS

DIVISION 2 - SITE CONSTRUCTION

- 02000 Mobilization and Demobilization
- 02200 Excavation, Trenching and Backfilling

DIVISION 15 – MECHANICAL AND ELECTRICAL

- 15420 Water Treatment Improvements

EXHIBITS

- EXHIBIT I Water Treatment Monitoring Equipment Technical Information and Installation
Photographs and Diagrams
- EXHIBIT II Electrical and Controls Wiring Schematic and Installation and Programming Instructions
(Water Treatment Monitoring Equipment)
- EXHIBIT III Project Details

END OF SECTION

DOCUMENT 010 REQUEST FOR BIDS

YUROK TRIBE PLANNING AND COMMUNITY DEVELOPMENT

Community Water System Improvements
Weitchpec Electrical
IHS Project CA 09-M24

I. INTRODUCTION

The Yurok Tribe Planning and Community Development Department is circulating this Request for Bids to solicit **Construction BIDS** for the **Weitchpec Electrical, IHS Project CA 09-M24**. Bidder must have a current California Contractors License appropriate for the nature of work to be performed. Bidders (Licensed and Bonded in accordance with current California State Contractor's Law) shall have a Class C10 License. Any Contractor claiming Indian Preference shall complete and submit, with the bid, the form entitled "Statement of Qualifications, Alaska Native or Indian Owned Enterprise" (included in the bidding package).

Davis Bacon Wage Rates shall apply. The Contractor can locate the current version of the Department of Labor's WH-347 form and instructions for its completion at the following web address: <http://www.dol.gov/whd/forms/wh347instr.htm>

The Community Water System Improvements will be located on the Yurok Indian Reservation at the Community of Weitchpec, CA. The Community Water System Improvements must be completed in a manner compliant with all applicable Federal laws, Tribal laws and Humboldt County building codes.

The bids for this work that are under \$100,000 will not be required to provide bid security or Performance and Payment bonds. If the Bid is over \$100,000, then a Bid Bond, Performance Bond, and Payment Bond will be required.

The successful bidder, in conjunction with the Tribe's Attorney, will develop a statement regarding sovereignty and dispute resolution that is acceptable to the bidder, the bidder's bonding agent and the tribe. If no mutually agreeable statement can be crafted the tribe will return the bidder's bid security and reserves the right to negotiate with the next lowest bidder.

The range of bids for this work is estimated to be between \$13,000 to \$20,500.

Contract time is specified in the Bid form.

II. PROJECT PROFILE

The Yurok Tribe has been awarded funding from the Indian Health Service (IHS). This funding will be used by the Yurok Tribe to install electrical wiring and connections to integrate water quality monitoring instruments into an existing water monitoring and data transmission system.

III. AREA PROFILE

The site location for the contract is located on Lake Prairie Road approximately 3 miles to the northeast of the Weitchpec Tribal Administration Building. The Weitchpec Tribal Administration Building is located approximately 12 miles to the north of Hoopa, CA and directly adjacent to California State Hwy 96.

IV. SCOPE OF WORK

i. Standard and Guidelines

- a. Uniform Building Code (UBC), latest edition
- b. Humboldt County Building Codes, latest edition
- c. National Electric Code, latest edition
- d. National Plumbing Code (NPXC), latest edition
- e. State of California Energy Codes, latest edition
- f. Federal Americans with Disabilities Act of 1990, Accessibility Guidelines for Building and Facilities (ADA) with multi-use functions.
- g. National Fire Code (NFC), latest edition
- h. Uniform Mechanical Code (UMC), latest edition
- i. Other applicable building codes and regulations
- j. State Water Resources Control Board Underground Storage Tank Regulations, Title 23, California Code of Regulations, Chapter 16, latest edition
- k. Yurok Tribe Tribal Employment Rights Ordinance (TERO).

ii. Construction Phase

- a. The Contractor shall obtain a TERO permit.
- b. The Contractor will be responsible for attending a Preconstruction Meeting with the Yurok Tribe, the Engineer, and any Sub-Contractor as the Contractor deems necessary. At the preconstruction meeting, the Contractor will be responsible for presenting all construction time tables, schedules and approval processes. The meeting must also cover the project's method of communication, conflict resolution and discussion of the projects major obstacles or potential problems. All consultants, contractors and subcontractors shall be apprised of the Tribes TERO Ordinance and the TERO permitting process.
- c. The Contractor shall be responsible for preparation of a construction schedule and payment schedule for the entire project from start to finish.
- d. The Contractor shall schedule at least one monthly meeting with the Yurok Tribe's authorized representatives and any subcontractors or vendors necessary to complete the project in a timely manner. Additional informal meetings may be called if necessary to gather input and resolve issues that may arise during construction of the work.
- e. The Contractor shall be responsible for the submission of Submittals for all materials used in the project.
- f. Approved change orders must be submitted with monthly Request for Payments.

iii. BID REQUIRMENTS

- a. The bid shall include the name of the firm submitting the bid, its mailing address/telephone number, Contractor license number and type, and the name of the individual to contact if further information is desired.
- b. The prospective contractor shall designate, by name, the project manager to be employed. The selected contractor shall not cause the substitution of the project manager without prior approval by the Yurok Tribe Planning and Community Development Department.
- c. The prospective contractor shall provide names, addresses, and telephone numbers for at least three clients for whom the prospective contractor has performed work similar to that proposed in this request. A brief abstract shall be provided for the reference projects.
- d. Provide a listing of all Native American projects and all similar construction projects within the past 2 years, including a list of references (with phone numbers and addresses)

Weitchpec Electrical

California Area Indian Health Service

for each project.

- e. Provide a plan for maximum utilization of American Indian Workers. Include a Narrative of TERO compliance experience on previous projects.
- f. If subcontractors are to be used, the prospective contractor must submit a description of each person or company, and the work to be done by each subcontractor.
- g. The prospective contractor shall describe the qualifications of all subcontractors to be used on the project.
- h. The prospective contractor shall prepare a detailed budget (see Bid Schedule) for the work to be performed. The budget shall use line items to distinguish cost.
- i. The prospective contractor shall disclose any and all relationships with clients, entities, agencies, or individuals bearing interests within the scope of the project, or who may benefit in any manner from the products of the project.
- j. The bid shall be transmitted with a cover letter that must be signed by an official authorized to bind the bidder contractually and shall contain a statement to the effect that the bid is a firm offer for a 60-day period. The letter accompanying the technical bid shall also provide the following: name, title, address, and telephone number of submitter.

V. BID REVIEW

Each bid will be reviewed to determine if it meets the bid packet requirements. Failure to meet the requirements for the Request for Bids may be cause for rejection of the bid.

The Yurok Tribe Planning and Community Development Department may reject any bid if it is conditional, incomplete, or contains irregularities. The Yurok Tribe may waive an immaterial deviation in a bid. Waiver of an immaterial deviation shall in no way modify the Request for Bids documents or excuse the bidder from full compliance with the contract requirements if the bidder is awarded the contract.

VI. INDIAN PREFERENCE

Indian preference in Contract Award and equal employment opportunities shall apply. All BIDDERS requesting Indian preference shall submit their request for Indian preference along with their bid. Qualified, responsible and responsive Indian bidders, who submit bids that are within 5% of the lowest bid, shall be given the opportunity to lower their bid to below the lowest bid amount and become the lowest bidder.

VII. BID EVALUATION CRITERIA

- 1. The award will be made to the lowest responsive, responsible BIDDER with due consideration for Indian Preference.
- 2. Bidder's qualification will be evaluated to determine:
 - a. The Bidder's qualification and reputation in general.
 - b. Valid California Contractor's License in Good Standing
 - c. Qualifications of staff.
 - d. The Bidder's experience in the type of work that the project requires.
 - e. Related experience of the proposed project manager and project team.
 - f. Past performance on related assignments.
 - g. Information obtained from references.
 - h. Other investigations, as deemed necessary, to determine the ability of the BIDDER to perform the work.
- 3. Indian Preference for the bidders who submit the required verification with their BID.

IIX. CONTRACT AWARD

A contract will be negotiated with the lowest responsive, responsible BIDDER with due consideration for Indian Preference. The Yurok Tribe Planning and Community Development Department will award a contract at the Yurok Tribe office in Klamath, CA.

If a contract cannot be negotiated with the firm submitting the lowest responsive, responsible bid, then staff shall commence negotiation with the firm submitting the second most responsive, responsible BID.

IX. BID SUBMITTALS AND CONDITONS

The following documents constitute a complete bid and **are required** to be submitted to form a responsive bid:

- a) Cover Letter-Refer to Section IV (iii)(j) of this document
- b) Bid Form
- c) Contractor's Questionnaire
- d) Non-Collusive Affidavit
- e) Statement of Qualifications for Indian Preference (If Claimed)

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. A conditional or qualified BID will not be accepted.

Indian preference in Contract Award and equal employment opportunities shall apply. All BIDDERS requesting Indian Preference shall submit their request for Indian preference to the Yurok TERO Office for approval.

A TERO tax of 3% of the total gross amount of the contract shall be applicable in accordance with the TERO provisions of the Yurok Tribe.

Contact Don Barnes, (707) 482-1350, Extension 1388, for questions on the Yurok TERO policy.

Property Rights

Bids received within the prescribed deadline become the property of the Yurok Tribe Planning and Community Development Department and all rights to the contents therein become those of the Yurok Tribe Planning and Community Development Department.

FUNDING

Funding for this project is provided through the Indian Health Service.

NON-COMMITMENT OF THE YUROK TRIBE PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

This Request for Bid does not commit the Yurok Tribe to award a contract, to pay any costs incurred in the preparation of a bid to this request, or to procure or contract for services or supplies. The Yurok Tribe reserves the right to accept or reject any or all bids received as a result of this request, to negotiate with any qualified firm, or to modify or cancel in part or its entirety the Request for Bids if it is in the best interest of the Yurok Tribe to do so.

Yurok Tribe, Water System Improvements

CA 09-M24

Weitchpec Electrical

California Area Indian Health Service

TERO

The Yurok Tribe's Tribal Employment Rights Ordinance (TERO) shall apply. A copy of this ordinance can be received by contacting the Indian Health Service-Arcata Field Office at 707-822-1688 or contacting the Yurok Tribe's TERO Officer listed below. Any questions regarding the TERO ordinance should be forwarded to the Yurok Tribe's TERO officer:

Don Barnes, TERO Officer
Yurok Tribe
P.O. Box 1027
190 Klamath Blvd.
Klamath, CA 95548

QUESTIONS

Questions regarding this Request for Bids will be received by telephone or in writing. Written questions should include the individual's name, the name of the firm, address, and telephone number.

Questions may be directed to:

Cynthia Bones, Yurok Tribe Planner
Yurok Tribe Planning Department
190 Klamath Boulevard
Klamath, CA 95548
Phone # (707) 482-1350

DOCUMENT 040

BID FORM

Bid of _____

(hereinafter called "BIDDER"), organized and existing under the laws of the State of California, doing business as _____ (a corporation, a partnership, an individual, etc.) to the Yurok Tribe (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the completion of the Community Water System Improvements, Weitchpec Electrical, IHS Project CA 09-M24 which includes installation of electrical wiring and connections, electrical conduit, equipment boxes other miscellaneous work as shown on the plans and specified herein in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated in the BID SCHEDULE.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID each party hereto certifies as to his organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE to PROCEED and to fully complete the PROJECT within forty five (45) consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages, the sum of \$411.00 for each consecutive calendar day thereafter as provided in Section 29, Liquidated Damages, of the General Conditions.

BIDDER acknowledges of receipt of the following ADDENDUM(s):

NUMBER	DATE

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the unit prices or lump sum stated in the Bid Schedule.

BID SCHEDULE

PROJECT DESCRIPTION

This is a construction contract for completion of the specified work in the contract documents.

BASE BID

	Item Description	Quantity	Unit	Unit Price	Item Value
A	Electrical Controls Connection	1	LS	\$	\$
Total Bid					\$

Respectfully Submitted:

Signature

Address

Title

Date

License No.

Expiration Date

END OF DOCUMENT

CONTRACTOR QUESTIONNAIRE

NAME _____

D.B.A. _____

STREET ADDRESS _____

CITY _____ TELEPHONE _____

STATE LICENSE NO. _____ TYPE _____

BANK REFERENCES: _____

CONTRACTOR MUST HAVE PRIOR DOCUMENTED EXPERIENCE IN ELECTRICAL WIRING OF WATER SYSTEM CONTROLS. LIST THREE MOST RECENT JOBS INVOLVING WATER SYSTEM CONTROLS WIRING BY NAME AND ADDRESS. PLEASE PROVIDE TELEPHONE NUMBER AND POINT OF CONTACT:

HOW LONG IN BUSINESS? _____ HOW MANY EMPLOYEES? _____

ARE YOU AN EQUAL OPPORTUNITY EMPLOYER? _____

ARE YOU ELIGIBLE TO PERFORM FEDERAL GOVERNMENT WORK? _____

NAME AND ADDRESS OF INSURANCE CARRIER: _____

Conflict of Interest: Are you or any member of your family related to (1) any employee of the Owner or member of the governing board of the Owner?

No _____; Yes _____. (2) If yes, please explain relationship:

Signature of License Holder

Signature of Company Representative
(if different)

Date _____

Date _____

DOCUMENT 045
NON-COLLUSIVE AFFIDAVITS
FORM OF NON-COLLUSIVE AFFIDAVIT

AFFIDAVIT

State of _____

County of _____

_____, being first duly sworn, deposes and says:

That he is, _____ the party making the foregoing proposal for bid,

that such proposal or bid is genuine and not collusive or sham; that said bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding, and has not, in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or of any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person interested in the proposed contract, and that all statements in said proposal for bid are true.

Project No. CA 09-M24

Location Weitchpec, CA

Signature

Name and Title

Date

(Signature should be notarized.)

DOCUMENT 046

INDIAN ENTERPRISE QUALIFICATION STATEMENT

NOTE: Submit completed questionnaire to the Yurok Tribe Planning Department within the time frame specified. Use additional sheets to complete answer if needed.

The Undersigned certifies under oath the truth and correctness of all answers to questions made hereinafter:

1. Applicant wishes to qualify as:

An "Economic Enterprise" as defined in Section 3(e) of the Indian Financing Act of 1974 (P.L. 93-262); that is "any Indian-Owned...commercial, industrial or business activity established or organized for the purpose of profit: Provided, that such Indian Ownership shall constitute not less than 51 percent of the enterprise:

--or--

A "Tribal Organization" as defined in Section 4(c) of the Indian Self-Determination and Education Assistance Act (P.L. 93-638); that is: "the recognized governing body of any Indian Tribe; any legally established organization of Indians which is controlled, sanctioned or chartered by such governing body or which is democratically elected by the adult members of the Indian community to be served by such organization and which includes the maximum participation of Indians in all phases of its activities: Provided, that in any case where a contract is let or grant made to an organization to perform services benefiting more than one Indian Tribe, the approval of each such Indian Tribe shall be a prerequisite to the letting or making of such contract or grant..."

2. Name of Enterprise or Organization: _____

Address: _____

Telephone No.: _____

3. Check One:

Corporation

Joint Venture

Partnership

Other:

___ Sole Proprietorship

4. Answer the following:

If a Corporation:

a. Date of Incorporation: _____

b. State of Incorporation: _____

c. Give the names and addresses of the officers of this Corporation and establish whether they are Indian (I) or Non-Indian (NI).

<u>Name and Social Security No.</u>	<u>I or NI</u>	<u>Title</u>	<u>Address</u>	<u>% of Stock Ownership</u>
_____	___	<u>President</u>	_____	_____
_____	___	<u>Vice-President</u>	_____	_____
_____	___	<u>Secretary or Clerk</u>	_____	_____
_____	___	<u>Treasurer</u>	_____	_____
_____	___	_____	_____	_____
_____	___	_____	_____	_____
_____	___	_____	_____	_____
_____	___	_____	_____	_____

d. Complete the following information on all stockholders who are not listed in c. above, owning 0% or more of the stock. Establish whether they are Indian (I) or Non-Indian (NI).

<u>Name and Social Security No.</u>	<u>I or NI</u>	<u>Address</u>	<u>% of Stock Ownership</u>
_____	___	_____	_____
_____	___	_____	_____

If a Sole Proprietorship or Partnership:

a. Date of Organization: _____

b. Give the following information on the individual or partners and establish whether they are Indian (I) or Non-Indian (NI).

<u>Name and Social Security No.</u>	<u>I or NI</u>	<u>Address</u>	<u>% of Stock Ownership</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

If a Joint Venture:

a. Date of Joint Venture Agreement: _____

b. Attach the information for each member of the joint venture prepared in the appropriate format given above.

5. Give the name, address, and telephone number of the principal spokesperson of your organization: _____

6. Has any officer or partner of your organization listed in #4 been an officer or partner of another organization that failed in the last ten years to complete a contract? _____

If yes, state circumstances:

17. Trade References (include addresses and phone numbers):

18. Bank and credit references (including addresses and phone numbers):

19. Indicate the core crew employees in your work force, their job titles, and whether they are Indian or Non-Indian. Core crew is defined as an individual who is either a current bonafide employee or who is not a current employee but who is regularly employed in a supervisory or other key skilled position when work is available.

b. Over the past three years, what has been the average number of employees:

20. Attach certification by a tribe or other evidence of enrollment in a federally recognized tribe for each officer, partner or individual designated as an Indian in #4.

21. Attach a certified copy of the charter, article of incorporation, by-laws, partnership agreement, joint venture agreement and/or other pertinent organizational documentation.

22. Explain in narrative form the stock ownership, structure, management, control, financing, and salary or profit sharing arrangements of the enterprise, if not covered in answers to specific questions heretofore. Attach copies of all shareholder agreements, including voting

trust, employment contracts, agreements between owners and enterprise. Include information on salaries, fees, profit sharing, material purchases, and equipment lease or purchase arrangements.

Evidence relating to structure, management, control, and financing should be specifically included. Also, list the specific management responsibilities of each principal, sole proprietor, partner, or party to a joint venture (as appropriate) listed in response to #4.

- 23. Attach evidence that the enterprise (or an individual in it) is appropriately licensed for the type of work that is to be performed. Include Federal ID Number.
- 24. Attach a brief resume of the education, technical training, business, employment, design and/or work experience for each officer, partner or sole proprietor listed in #4. Include references.

NOTES:

I. Omission of any information may be cause for this statement not receiving timely and complete consideration.

II. The persons signing below certify that all information in this INDIAN ENTERPRISE QUALIFICATION STATEMENT, including exhibits and attachments, is true and correct.

III. Print and type name below all signatures.

If applicant is Sole Proprietor, Sign Below:

Name	Date
------	------

If applicant is in a Partnership or Joint Venture, all Partners must sign below:

Name	Date
------	------

Name	Date
------	------

If applicant is a corporation, affix corporate seal

Corporate Seal

By: _____

President's Signature	Date
-----------------------	------



CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT IS BETWEEN

Yurok Tribe PO Box 1027 190 Klamath Boulevard Klamath, California 95548 707-482-1350	AND	[contractor name] [contractor business name] [contractor address] [(xxx) xxx-xxxx]
--	-----	---

FOR THE YUROK TRIBE

Department:

Contact Person:

Phone Number:

Brief Description of Contract:

Contract Provisions At-a-Glance	
Contract Amount: _____	Contract Time Frame: _____
Department Code: _____	Project Code: _____
Account Code: _____	

Department Review (please submit to departments in order listed):	
Department Director: _____	Date: _____
1) COMPLIANCE: _____	Date: _____
2) TERO: _____	Date: _____
3) LEGAL: _____	Date: _____
4) FISCAL: _____	Date: _____
5) EXECUTIVE: _____	Date: _____



INDEPENDENT CONTRACTOR AGREEMENT

This Agreement, entered into as of the date of last signature ("Effective Date"), is between **YUROK TRIBE** and **[Insert Contractor Name]** ("Contractor") (collectively, "the Parties").

The Parties agree as follows:

1. **Project Covered.** Yurok Tribe hereby engages Contractor to provide _____ ("the Project"). *[Please fill in the blank with a brief description of the services to be provided. Requests for proposals, the proposal for services, the bid documents, or other documents specifying the services to be provided should be attached to the agreement. If appropriate, include the following sentence: Services will be provided as detailed in the Project request for proposals and Contractor's proposal for services, which are attached and incorporated into this Agreement.]*

2. **Taxpayer Identification Number.** Prior to commencing the Project, Contractor shall provide Yurok Tribe with a duly executed IRS Form W-9 and obtain an Employer Identification Number (EIN) from the IRS and an EDD registration number.

3. **No Training or Instructions.** Yurok Tribe enters into this Agreement based on Contractor's demonstrated ability to perform the type of services that it believes, and that Contractor has represented, are needed to accomplish the Project. Consequently, Yurok Tribe does not contemplate providing Contractor with any training or instructions with respect to the Project.

4. **Intent of Independent Contractor Relationship.**

(a) The Parties intend that the relationship created by this Agreement shall be that of service recipient and independent contractor.

(b) For all purposes, including but not limited to the Federal Insurance Contributions Act ("FICA"), the Social Security Act, the Federal Unemployment Tax Act ("FUTA"), income tax withholding requirements, California Personal Income Tax Withholding ("PIT"), California Unemployment taxes ("UI"), California Disability Insurance ("SDI"), and all other federal, state and local laws, rules and regulations, Contractor (and all Contractor's respective employees, if any) shall be treated as an



independent contractor and not as an employee with respect to Yurok Tribe.

5. **No Benefits.** None of the benefits that are provided by the Yurok Tribe to its employees shall be available to Contractor (or Contractor's employees, if any, which for purposes of this paragraph shall be included in the term "Contractor"). Contractor's exclusion from benefit programs maintained by Yurok Tribe is a material term of the terms of compensation negotiated by the Parties, and is not premised on Contractor's status as a non-employee with respect to Yurok Tribe. To the extent that Contractor may become eligible for any benefit programs maintained by Yurok Tribe (regardless of the timing of or reason for eligibility), Contractor hereby waives all rights to participate in these programs. Contractor's waiver is not conditioned on any representation or assumption concerning Contractor's status under the common law test. Contractor agrees that, consistent with his independent contractor status, Contractor will not apply for any government-sponsored benefits that are intended to apply to employees, including, but not limited to, unemployment benefits.

6. **Tax Reporting and Filing.** Contractor acknowledges and agrees that Contractor shall be responsible (as a self-employed individual) for filing all tax returns, tax declarations, and tax schedules, and for the payment of all taxes required, when due, with respect to all compensation earned by Contractor under this Agreement. Yurok Tribe will not withhold any employment taxes from compensation it pays Contractor. Rather, Yurok Tribe will report the amount it pays Contractor on IRS Forms 1099, to the extent required to do so under applicable Internal Revenue Code provisions and state or local law.

7. **Compensation.** Contractor's compensation for the Project shall not exceed \$_____, payable upon completion of the Project. Contractor shall be solely responsible for all costs incurred in connection with the accomplishment of the Project. Upon receiving each invoice for this contract, the Yurok Tribe Fiscal Department shall have thirty (30) working days to process payment. *[Generally, this section should include a provision indicating a maximum, do not exceed amount and state how compensation shall be paid, such as upon completion or monthly invoices. The maximum, total contract amount stated should include any TERO fee. It should also state whether travel expenses are included in the stated contract amount and if not, the maximum allowable travel amount. If appropriate to the contract, this section may also include the following sentence: Project costs shall not exceed the amount identified in this*



section unless agreed to in advance in writing by the Director of the [Insert contracting department name].]

8. **Liability Insurance.** [Generally, \$1,000,000 is an appropriate liability insurance amount. If the contracting department is unsure of what, if any, insurance is required, contact the Office of the Tribal Attorney and/or the Fiscal Department for help determining an appropriate amount.] Liability insurance in the amount of \$1,000,000 is required to be obtained by the Contractor no less than five (5) days prior to commencement of this project. A certificate of insurance naming the Yurok Tribe as additionally insured shall be filed with the Yurok Tribe at the same time. The Tribe will assume no liability based upon negligence or intentional acts of the Contractor and should such negligence or intentional acts occur, Contractor agrees to assume full liability and indemnify and hold Yurok Tribe harmless for all such actions.

9. **Equipment and Tools.** Contractor shall provide and be responsible for maintaining any equipment and tools that Contractor uses, or determines is necessary, to accomplish the Project.

10. **Manner, Time, and Location.** [Fill in specifics, attach an addendum such as a scope of work, or write in "Not applicable."]

11. **Right to Engage Assistants.** Contractor shall have the right to engage others to assist in the accomplishment of the Project. Contractor shall be solely responsible for paying all compensation owed to any assistants engaged and for paying, and/or withholding and remitting to the appropriate government agency, any applicable employment taxes that might be owed with respect to this compensation. Contractor also shall indemnify and hold Yurok Tribe harmless against any and all liabilities attributable to the obligations imposed on Contractor under this Paragraph 11. The Parties acknowledge that Contractor shall retain the exclusive right to determine which workers Contractor shall engage for these purposes. Contractor agrees to provide proof of Workers' Compensation insurance coverage for all assistants he engages.

12. **Tribal Employment Rights Ordinance (TERO).** Contractor acknowledges that Contractor has had the opportunity to read the Yurok Tribe TERO Ordinance, is fully aware of the legal effects of the TERO Ordinance on this agreement, and agrees to comply with the TERO Ordinance, including payment of all applicable TERO fees. **The TERO fee of _____ will be automatically deducted upon receipt of any invoice.** [Fill in the TERO fee percentage. The TERO



Ordinance calls for a one-time fee of 3% of the total contract for construction contracts or ½ of 1% (.5%) for all other contracts. Education, cultural, child care, fiscal, and TERO contracts are exempt from the TERO fee. If the contracting department is unsure of what the appropriate TERO fee percentage or amount should be, contact the TERO Office.]

13. Performing Services for Others. Yurok Tribe agrees that Contractor may perform services for others, so long as the performance of these services does not interfere with the completion of the Project.

14. Status Reports. *[If status reports are required or desired, fill-in here. Otherwise attach an addendum, scope of work, or write in "Not applicable."]*

15. Confidentiality. Contractor agrees that it obtains only the right to use any data and information provided by the Yurok Tribe, its agents, or its representatives or developed by Contractor for the sole purpose of completing the Project. Contractor agrees that no right, title, or interest in or to any copyrights, trademarks, or other proprietary rights relating to the data or information is transferred or licensed from the Yurok Tribe to Contractor. This Agreement does not grant Contractor the right to reveal, discuss, or transfer any data to third parties, other than as provided in this Agreement. Contractor understands and agrees that, despite any wording to the contrary in this Agreement, it shall not transfer cultural data to third parties without written authorization from the Yurok Tribe. The provisions of this section will survive the expiration or termination of this Agreement.

16. Ownership of Information and Documents. Any and all data, information, discussions, memoranda, presentations and documents developed or prepared by Contractor for the Project shall be held in strict confidence and shall not be used by Contractor for any other work unless approved by the Yurok Tribe in writing prior to any disclosure of such information. The Yurok Tribe may require all such information to be marked with the legend "Property of the Yurok Tribe - Confidential - Do Not Disclose." Immediately upon expiration, suspension, or termination of this agreement, Contractor agrees to provide the Yurok Tribe all such data, documents, and other information, whether generated by Contractor or received by Contractor from the Yurok Tribe, that is in Contractor's possession or under its control. This shall not preclude disclosure of information pursuant to judicial or administrative processes of the Yurok Tribal Court or other court



with competent jurisdiction. The provisions of this section will survive the expiration or termination of this Agreement.

17. **Term; Completion Date.** Contractor agrees to complete the Project by no later than _____, 20___. Failure to complete the Project by _____, 20__ shall subject Contractor to a financial obligation of \$150 per day. This Agreement shall expire upon completion of the Project unless otherwise terminated pursuant to the terms of this Agreement.

18. **Termination For Cause.** In the case of a material breach of this Agreement by one Party, the other Party shall have the right to terminate this Agreement with no advance notice if, after providing the breaching Party with notice of the breach, the breaching Party fails to cure the breach within ten (10) days after receipt of the notice of breach. In such case, the Yurok Tribe may complete the Project by whatever method the Yurok Tribe deems expedient.

19. **Termination by the Yurok Tribe for Convenience.** The Yurok Tribe reserves the right to terminate the Agreement at any time upon determination of the Tribal Council that it is in the best interest of the Yurok Tribe. The Yurok Tribe shall provide Contractor notice specifying the date of termination. All finished or unfinished work and materials previously paid for shall, at the option of the Yurok Tribe, become the Yurok Tribe's property. Contractor shall be paid for all costs incurred for work provided up to the date of termination.

20. **Sovereign Immunity.** Nothing in this agreement shall be deemed or construed to be a waiver of the sovereign immunity of the Yurok Tribe or Yurok Tribal officials or employees acting within their official or individual capacities.

21. **Drug and Alcohol Policy.** Contractor and all employees or subcontractors of Contractor working on Tribal property are subject to the Yurok Tribe's Drug and Alcohol Free Workplace Policy.

22. **Indemnification.** Contractor indemnifies and holds harmless Yurok Tribe from and against any and all liabilities, losses, damages, claims or causes of action, and any connected expenses (including reasonable attorneys' fees) that are caused, directly or indirectly, by or as a result of the performance by Contractor or its employees or agents of the Project. The Yurok Tribe indemnifies Contractor for any and all claims resulting from the



Yurok Tribe's use of data, documents, or other information prepared by the Contractor for the Project for purposes beyond those of this Agreement.

23. **Performance Bond.** The Tribe reserves the right to require that a bond satisfactory to the Approving officer in an amount equal to the value of this contract be delivered before a notice to proceed is issued.

24. **Notices.** Any notice under this Agreement must be in writing and shall be effective upon delivery by hand or three (3) business days after deposit in the United States mail, postage prepaid, certified or registered, and addressed to Yurok Tribe or to Contractor at the corresponding address below. Contractor shall be obligated to notify Yurok Tribe in writing of any change in his address. Notice of change of address shall be effective only when done in accordance with this Paragraph.

Yurok Tribe's Notice Address:

[tribal contact person]
[tribal department]
Yurok Tribe
PO Box 1027
190 Klamath Boulevard
Klamath, California 95548
(707) 482-1350

Contractor's Notice Address:

[contractor name]
[contractor business name]
[contractor address]
[(xxx) xxx-xxxx]

25. **Integration.** This Agreement is intended to be the final, complete, and exclusive statement of the terms of Contractor's engagement by Yurok Tribe. This Agreement supersedes all other prior and contemporaneous agreements and statements, whether written or oral, express or implied, pertaining in any manner to the engagement of Contractor, and it may not be contradicted by evidence of any prior or contemporaneous statements or agreements. To the extent that the practices, policies, or procedures of Yurok Tribe, now or in the future, apply to Contractor and are



inconsistent with the terms of this Agreement, the provisions of this Agreement shall control.

26. **Amendments; Waivers.** This Agreement may not be amended except by an instrument in writing, signed by each of the Parties. Failure to exercise any right under this Agreement shall not constitute a waiver of such right.

27. **Assignment; Successors and Assigns.** Neither Yurok Tribe nor Contractor shall assign any rights or obligations under this Agreement.

28. **Severability.** If a court or arbitrator holds any provision of this Agreement to be invalid, unenforceable, or void, the remainder of this Agreement shall remain in full force and effect, however, nothing in this section shall be construed to waive the Yurok Tribe's sovereign immunity.

29. **Account Number.** Payment for services rendered by Contractor shall be made from account number **[Insert project number]**.

30. **Dispute Resolution.** In the event of any dispute between the Parties, Contractor will not stop work but will continue to diligently complete the Project in the manner directed by the Yurok Tribe. The Parties agree that any and all actions which may arise from or out of this dispute that cannot be amicably resolved shall be adjudicated in Yurok Tribal Court. This Agreement shall be governed by and construed in accordance with the law of the Yurok Tribe.

31. **Interpretation.** This Agreement shall be construed as a whole, according to its fair meaning, and not in favor of or against any Party. By way of example and not in limitation, this Agreement shall not be construed in favor of the Party receiving a benefit nor against the Party responsible for any particular language in this Agreement. Captions are used for reference purposes only and should be ignored in the interpretation of the Agreement.

32. **Contractor Acknowledgment.** Contractor acknowledges that Contractor has read and understands this agreement and has had the opportunity to consult legal counsel in regard to this Agreement. Contractor further acknowledges that Contractor has entered into it freely and voluntarily and based on Contractor's own judgment and not on any representations or promises other than those contained in this Agreement and further agrees to submit to the



jurisdiction of the Yurok Tribal Court for all actions arising out of this Agreement.

The Parties have duly executed this Agreement as of the date of last signature.

[INSERT NAME OF CONTRACTOR]

_____ Date: _____
[Authorized signer name]
[Authorized signer's position with Contractor]

YUROK TRIBE

_____ Date: _____
[Department manager name]
[Tribal Department]

_____ Date: _____
Thomas O'Rourke, Sr., Chair
Yurok Tribe

Brief Description of Contract:

[Copy and paste brief description from page 1 here]



NOTICE TO PROCEED



To: _____

Date: _____

Project: **Weitchpec Electrical, CA 09-M24**

You are hereby notified to commence WORK in accordance with the Agreement dated _____, on or before _____, and you are to complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all WORK is therefore _____.

Prior to commencing work, you shall obtain Certificates of Insurance acceptable to the OWNER and place them on file with the OWNER. In addition, you shall provide a TERO compliance plan and obtain a TERO permit as required in the attached TERO policy.

Within ten (10) days of this notice, you shall provide a Construction Progress Schedule to the Owner through the Contract Manager for approval.

Owner: Yurok Tribe

By: _____

Title: _____

Date: _____

Certificate of Substantial Completion

Project: WEITCHPEC WATER SYSTEM IMPROVEMENTS	Owner: YUROK TRIBE	Owner's Contract No.:
Contract: WEITCHPEC ELECTRICAL		Date of Contract:
Contractor:		Engineer's Project No.: CA 09-M24

This [tentative] [definitive] Certificate of Substantial Completion applies to:

All Work under the Contract Documents:

The following specified portions:

_____ Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [revised tentative] [definitive] list of items to be completed or corrected, is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

Amended Responsibilities

Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

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

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

Executed by Engineer

Date

Accepted by Contractor

Date

Accepted by Owner

Date

DOCUMENT 00710-S
GENERAL CONDITIONS

1.1 SUMMARY

- A. Document Includes:
1. Before starting construction.
 2. Order of preference.
 3. Reference standards and reporting discrepancies.
 4. Supplementing contract documents.
 5. Availability of land.
 6. Differing subsurface or physical conditions.
 7. Underground facilities.
 8. Not shown or indicated.
 9. Reference points.
 10. Bonds.
 11. Contractor's insurance.
 12. Contractor's responsibilities.
 13. Subcontractors, suppliers, and others.
 14. Laws and regulations.
 15. Use of site.
 16. Safety and protection.
 17. Contractor's general warranty.
 18. Indemnification.
 19. Change Orders.
 20. Visits to site.
 21. Decisions on requirements of contract documents and acceptability of work.
 22. Cost of the work.
 23. Progress payments.
 24. Substantial completion.
 25. Final inspection.
 26. Final payment.
 27. Suspension of work and termination.
 28. Liquidated damages.
 29. Claims.
 30. Dispute resolution.
 31. Federal and other requirements.

1.2 BEFORE STARTING CONSTRUCTION

- A. Within 5 days after the effective date of the Agreement, Contractor shall submit to Engineer for timely review a preliminary Progress Schedule.

1.3 ORDER OF PRECEDENCE

- A. In the event of an inconsistency between provisions of this contract, the inconsistency shall be resolved by giving precedence in the following order:
 - 1. Bid Form
 - 2. Written bidding instructions.
 - 3. Supplemental Conditions.
 - 4. Standard General Provisions.
 - 5. Submittals.
 - 6. Technical Specifications.
 - 7. Drawings.

1.4 REFERENCE STANDARDS AND REPORTING DISCREPANCIES

- A. The Contractor should give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as specified in the Contract Documents.
- B. If the Contractor observes that the Contract Documents are at variation with any laws, ordinances, rules or regulations, the Contractor should promptly notify the Owner or Engineer in writing and any necessary changes shall be adjusted through the use of contract change orders.

1.5 SUPPLEMENTING CONTRACT DOCUMENTS

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by a Change Order.

1.6 AVAILABILITY OF LAND

- A. The Owner shall provide the land upon which the work under this contract is to be done, and will, so far as is convenient, permit the Contractor to use as much of the land as is required for the erection of temporary construction facilities and storage of materials, together with the right of access to same, but beyond this, the Contractor shall provide at the Contractor's cost and expense any additional land required.

1.7 DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS

- A. If Contractor believes that any subsurface or physical condition at or contiguous to the site that is uncovered or revealed either differs materially from that shown or indicated in the Contract Documents or is of an unusual nature, and differs materially from conditions ordinarily encountered in the work, then the Contractor shall, before further disturbing the subsurface or physical conditions or performing any work, promptly notify the Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any work until receipt of written order to do so.
- B. After receipt of written notice, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

- C. The contract price or the contract times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the work. Contractor shall not be entitled to any adjustment in the contract price or contract times if: Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner by the submission of a Bid or becoming bound under a negotiated contract; or the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or Contractor failed to give the written notice.

1.8 UNDERGROUND FACILITIES

- A. The information and data shown or indicated in the Contract Documents with respect to existing underground facilities at or contiguous to the site is based on information and data furnished to Owner or Engineer by the owners of such underground facilities, including Owner, or by others.
- B. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data.
- C. The cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - 1. Reviewing and checking all such information and data,
 - 2. Locating all Underground Facilities shown or indicated in the Contract Documents,
 - 3. Coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
 - 4. The safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

1.9 NOT SHOWN OR INDICATED

- A. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith, identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

1.10 REFERENCE POINTS

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

1.11 BONDS

- A. Work that is under \$100,000 does not require Bid security or Performance and Payment bonds. If the Work is over \$100,000, Contractor shall:
 - 1. Furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due. Contractor shall also furnish such other bonds as are required by the Contract Documents.
 - 2. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act. The Department of the Treasury's listing of certified companies is located at: http://www.fms.treas.gov/c570/c570_a-z.html
 - 3. Contractors required to furnish a bond has an option to furnish a certified or cashier's check, bank draft, U.S. Post Office money order or currency, in the amount equal to the penal sum of the bond, instead of furnishing surety or sureties on the bonds. Those furnishing checks, drafts, or money orders shall draw them to the order of the Owner.

1.12 CONTRACTOR'S INSURANCE

- A. Certificates of Insurance: Contractor shall deliver to Owner, copies of certificates of insurance, which Contractor is required to purchase and maintain.
- B. Contractor's Liability Insurance: Contractor shall purchase and maintain such liability and other insurance as is appropriate for the work being performed and as will provide protection from claims which may arise out of or result from Contractor's performance of the work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or

indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.

- C. Workers' Compensation, in accordance with state or Territorial Workers' Compensation laws.
- D. Commercial General Liability with a combined single limit for bodily injury and property damage of not less than \$1,000,000.00 per occurrence to protect the Contractor and each subcontractor against claims for bodily injury or death and damage to the property of others. This shall cover the use of all equipment, hoists, and vehicles on the site(s) not covered by Automobile Liability. If the Contractor has a "claims-made" policy, then the following additional requirements apply: the policy must provide a "retroactive date" which must be on or before the execution date of the Contract; and the extended reporting period may not be less than five years following the completion date of the Contract.
- E. Automobile Liability on owned and non-owned motor vehicles used on the site(s) or in connection therewith for a combined single limit for bodily injury and property damage of not less than \$1,000,000.00 per occurrence.
- F. All insurance shall be carried with companies which are financially responsible and admitted to do business in the State in which the project is located. If any such insurance is due to expire during the construction period, the Contractor (including subcontractors, as applicable) shall not permit the coverage to lapse and shall furnish evidence of coverage to the Contracting Officer. All certificates of insurance, as evidence of coverage, shall provide that no coverage may be canceled or non-renewed by the insurance company until at least 30 days prior written notice has been given to the Contracting Officer.

1.13 CONTRACTOR'S RESPONSIBILITIES

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

1.14 SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- A. The Contractor agrees not to sublet or assign this work without the written consent of the Owner.
- B. The Contractor shall have full responsibility under these conditions, general conditions, plans and specifications for any subcontracts which the Contractor may let.

1.15 LAWS AND REGULATIONS

- A. The Contractor agrees to comply with all laws, rules and regulations that apply to related work.
- B. The Contract shall be governed by any applicable Federal law and the law of the State of California.

1.16 USES OF SITE

- A. Upon completion or termination of the work, the Contractor shall remove from the vicinity of the work all equipment and all temporary structures, waste materials and rubbish resulting from its operations, leaving the premises in a neat and presentable condition. In the event of failure to do so, the same may be done by the Owner at the expense of the Contractor.

1.17 SAFETY AND PROTECTION

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to: all persons on the site or who may be affected by the work; all the work and materials and equipment to be incorporated therein, whether in storage on or off the site; and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.
- C. In emergencies affecting the safety or protection of persons or the work or property at the site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice of such emergency situations.

1.18 CONTRACTOR'S GENERAL WARRANTY

- A. The Contractor guarantees all material and equipment furnished and all work performed for a period of 1 year from the date of substantial completion of the contract. The Contractor guarantees that the facility is free from defects due to faulty materials or workmanship and the Contractor shall make the necessary corrections to correct these defects.
- B. The Contractor shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date of Substantial Completion. The Contractor warrants and guarantees for a period of one (1) year from the date of Substantial Completion of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defect including the repairs of the damage of other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect throughout the guarantee period.

1.19 INDEMNIFICATION

- A. The Contractor shall indemnify and hold harmless the Owner and the Owner's agents and employees, from and against all losses and all claims, demands, payments, suits, actions, recoveries, and judgments of every nature, and description brought or recovered against them by reasons of any act or omission of the said Contractor, its agents, or employees, in the execution of the work or in guarding the same.

1.20 CHANGE ORDERS

- A. It is fully understood and agreed that none of the requirements of this contract shall be considered as waived unless changes are made in writing and then only by the persons executing this contract on behalf of the Owner.
- B. Without invalidating the Contract and without notice to any surety, Owner may at any time or from time to time, order additions, deletions, or revisions in the work by a Change Order. Upon receipt of any such document, Contractor shall promptly proceed with the work involved which will be performed under the applicable conditions of the Contract Documents.
- C. The contract price and contract times may only be changed by a Change Order.
- D. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering changes in the work and changes in the contract price or contract times which are agreed to by the parties.

1.21 VISITS TO SITE

- A. The actual performance of work and superintendence shall be performed by the Contractor but the Owner and Engineer shall, at all times, have access to the premises for the purpose of observing or inspecting the work performed by the Contractor.

1.22 DECISIONS ON REQUIREMENTS OF CONTRACT DOCUMENTS AND ACCEPTABILITY OF WORK

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the work.
- B. Engineer will have authority to reject work which Engineer believes to be defective, or that Engineer believes will not produce a completed project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed project as a functioning whole as indicated by the Contract Documents.
- C. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the work in accordance with the Contract Documents.

1.23 COST OF THE WORK

- A. The Contractor shall furnish and pay the cost, including sales tax and all other applicable taxes and fees, including Tribal fees, of all the necessary materials and shall furnish and pay for all the superintendence, labor, tools, equipment and transportation and perform all the work required for the construction of all items listed and itemized under the bid schedule of the Bidder's Proposal in strict accordance with the plans, specifications, and requirements, and general conditions which are attached hereto and made a part hereof, and any amendments thereto and such supplemental plans and specifications which may hereafter be approved.
- B. Owner or Contractor may make a claim for an adjustment in the contract price if the Bid price of a particular item of unit price work amounts to more than 5 percent of the contract price and the variation in the quantity of that particular item of unit price work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement.

1.24 PROGRESS PAYMENTS TO CONTRACTOR AND COMPLETION

- A. Progress or partial payments for the work completed will be made at intervals of not more often than once a month. The value of work in place shall be as estimated by the contractor and approved by the Engineer and Owner. If required by the Owner or Engineer, the Contractor shall submit evidence showing that previous partial payments were properly applied and that the current payment will be properly applied for such

items as labor, materials, and equipment. Upon completion of the whole contract and acceptance of the work as required hereunder, by the Owner and the Engineer, and compliance by the Contractor with all terms and conditions of this contract, the amount due the Contractor will be paid.

- B. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
- D. Thirty days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the reductions for retainage) become due, and when due will be paid by Owner to Contractor with due diligence.

1.25 SUBSTANTIAL COMPLETION

- A. When Contractor considers the entire work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make a pre-final inspection of the work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons.
- C. If Engineer considers the work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment.

1.26 FINAL INSPECTION

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner, Agency, and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

1.27 FINAL PAYMENT

- A. Final Payment shall be made to the Contractor when the work is completed and accepted by the Owner and the Engineer. The total amount of the payment shall be the amount of the contract plus the value of all changes as reflected in approved contract change orders

minus the amount of any previous partial payments. The entire balance found to be due the Contractor but except such sums as may be lawfully retained by the Owner, shall be paid to the Contractor. Such payment shall be conditioned, however, upon the submission by the Contractor of evidence satisfactory to the Owner that all claims for labor, material, and any other outstanding indebtedness in connection with this Contract have been paid.

- B. Thirty days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (less any sum Owner is entitled to liquidated damages) become due, and when due will be paid by Owner to Contractor with due diligence.

1.28 SUSPENSION OF WORK AND TERMINATION

- A. In the event the Owner is dissatisfied with the slow progress or incompetence in the performance of the work in accordance with the schedule for completion of the various aspects of construction, the Owner shall give the Contractor written notice in which the Owner shall specify in detail the cause of dissatisfaction. Should the Contractor fail or refuse to remedy the matters complained of within five days after the written notice is received by the Contractor, the Owner shall have the right to terminate the contract and in such event the Owner shall be entitled to collect and/or withhold from the Contractor any expenses to complete the work.

1.29 LIQUIDATED DAMAGES

- A. The Owner will withhold the amount specified in the Agreement as liquidated damages from the amount payable to the Contractor for each calendar day that the Contractor is in default after the time of completion stipulated in these Contract Documents.

1.30 CLAIMS

- A. The Contractor agrees to pay all claims for labor, materials, services and supplies and agrees to allow no such charge to be fixed on the property of the Owner.

1.31 DISPUTE RESOLUTION

- A. All questions or controversies which may arise between the Contractor and the Owner, under or in reference to this contract, should be resolved, to the fullest extent possible at a meeting between the Contractor, the Owner, and the Engineer. The agreements reached at such meetings shall be carefully documented and become final and binding on all parties concerned. However, should the Owner and Contractor be unable to agree, the Owner and Contractor may proceed with the following:
 - 1. Request mediation of any Claim by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the effective date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association; or

2. Board of three arbitrators shall be chosen. One shall be chosen by the Contractor, one shall be chosen by the Owner, and the third shall be selected through mutual agreement by the first two. Should either party neglect or fail to select an arbitrator within ten days, the arbitrator selected by the other party shall have power to decide the dispute in the same manner as though a board of three arbitrators had been selected; or
3. Files suit in a court of competent jurisdiction. Prior to filing suit, a party to the Contract must have attempted in good faith to resolve the dispute by exercise of one or more of the other remedies set forth above.

1.32 FEDERAL AND OTHER REQUIREMENT

- A. This Contract is expected to be funded in part with funds provided by the Indian Health Service (IHS) and Environmental Protection Agency (EPA). Neither Agency, nor any of its departments, entities, or employees is a party to this Contract. At no time during the Contract will the Owner represent the IHS and EPA nor will the IHS and EPA represent the Owner in contract administrative matters.
- B. The IHS shall act as a technical consultant to the Owner. The IHS and its representatives cannot act as an agent or represent the Owner and, as such, IHS is not responsible for construction, means, methods or the contractor's safety program. Any IHS recommendations regarding the administrative and technical aspects of the work, acceptability of materials furnished, and work performed will be made to the Contract Manager. The IHS will make visits to the site to make oversight inspections and to insure that the federal government's interest is being protected.
- C. For all negotiated contracts and negotiated modifications (except those of \$10,000 or less), Owner, Agency, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor, which are pertinent to the Contract, for the purpose of making audits, examinations, excerpts and transcriptions. Contractor shall maintain all required records for three years after final payment is made and all other pending matters are closed.
- D. Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States"). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.
- E. If this Contract exceeds \$10,000, Contractor shall comply with Executive Order 11246, "Equal Employment Opportunity," as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR Part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

1. Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.
 2. Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.
- F. The Contractor agrees to give preference in employment opportunities under this contract to the greatest extent feasible to Indians who can perform required work, regardless of age (subject to existing laws and regulations), sex, religion, or tribal affiliation. To the maximum extent feasible and consistent with the efficient performance of this contract, the Contractor further agrees to give preference to the greatest extent feasible in employment and training opportunities under this contract to Indians who are not fully qualified to perform regardless of age (subject to existing laws and regulations), sex, religion, or tribal affiliation.
- G. The Contractor agrees to give preference to Indian Organizations and Indian-owners economic enterprises in the awarding of any subcontracts to the greatest extent feasible and consistent with the efficient performance of this contract. The Contractor shall maintain statistical records as are necessary to indicate compliance with this paragraph.
1. In connection with the Indian employment preference requirements of this clause, the Contractor shall provide opportunities for on-the-job training incident to such employment that will increase the vocational effectiveness of an Indian employee.
 2. If the Contractor is unable to fill its employment and training opportunities after giving full consideration to Indians as required by this clause, those needs may be satisfied by selection of persons other than Indian in accordance with applicable fair employment practices.

3. If no Indian organizations or Indian-owned economic enterprises are available under reasonable terms and conditions, including price, for awarding of subcontracts in connection with the work performed under this contract, the Contractor agrees to comply with the provisions of this contract by applying fair, competitive contracting practices.
4. As used in this clause:
 - A. "Indian" means a person who is a member of an Indian Tribe or qualifies as a California Indian according to federal law. If the Contractor has reason to doubt that a person seeking employment preference is an Indian, the Contractor shall grant the preference but shall require the individual to provide evidence within 30-days from start of employment.
 - B. "Indian Tribe" means an Indian Tribe, pueblo, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688; 43 U.S.C. 16311) which is recognized as eligible for the special programs and services provided by the United States to Indian because of their status as Indians.
 - C. "Indian Organization" means the governing body of any Indian Tribe or entity established or recognized by such governing body in accordance with the Indian Financing Act of 1974 (88 Stat. 77; 25 U.S.C. 1451); and,
 - D. "Indian-owned Economic Enterprise" means any Indian-owned commercial, industrial, or business activity established or organized for the purpose of profit, provided that such Indian ownership shall constitute not less than 51 percent of the enterprise, and that ownership shall encompass active operation and control of the enterprise.
- H. When constructing a project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental constraints:
 1. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.
 2. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, i.e., alluvial soils on NRCS Soil Survey Maps.
 3. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the

notification process and further directions issued by Agency after consultation with the Tribal Historic Preservation Officer (THPO).

4. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.

END OF DOCUMENT

YUOK TRIBE

TRIBAL EMPLOYMENT RIGHTS OFFICE

190 Klamath Blvd., P.O. Box 1027 Klamath, California 95548 (707) 482-1350 (707) 482-1377 Fax



Jobs in the private employment sector are an important resource on the Yurok Reservation, thus the Yurok Tribe is committed to securing such jobs for its Tribal members and local Indians as they become available. Furthermore, the Tribe helps drive the local economy and asks employers to use local goods and services when developing a project, with first preference given to qualified Indian-owned businesses and entrepreneurs.

Contractor Obligations:

As a contractor/subcontractor conducting business within the Yurok Tribe's Ancestral Territory, or with the Yurok Indian Housing Authority (YIHA), your specific obligations under the Tribal Employment Rights Ordinance (TERO), TERO Permit and Indian Preference Plan include the following:

1. Provide TERO with a precise listing of positions you will use on this project from the superintendent on down, and the number of each craft. Contractors/employees shall be required to hire and maintain as many local Tribal Members as apply for and are qualified for each craft or skill. The order of hiring shall be according to the Tribe's Hiring Preference Policy as follows:
 - Tier 1: Qualified Yurok Tribal Members
 - Tier 2: Spouses of Yurok Tribal Members
 - Tier 3: Other Indians of Federally recognized Tribes
 - Other qualified persons
2. Identification of Core/Key Employees. A Core/Key employee is an employee of a covered employer in a managerial or project supervisory position, or who performs an essential job function as identified on a case by case basis by TERO and prior to issuance of a TERO Permit.
3. The contracting and subcontracting preference shall be manifested through giving bidding preference to Indian-owned businesses. Indian Preference Applications and Certification are obtained through the TERO Office.
4. Inform TERO of all signatory trade unions to be involved in the project. TERO obligations have priority over union obligations by a contractor signatory to any trade unions. However, TERO will consider Indian workers of the trade unions in order for contractors to meet their hiring goals.
5. Notify TERO of all job vacancies. All available Indian applicants shall be considered first before any non-Indians are considered for employment and training. If no qualified Indians are available, TERO will provide a consent form to waive this obligation.

6. Employees referred by the TERO office will have preference in retention of employment from the beginning to the end of the project. Inform TERO of any lay-offs.
7. Before any TERO referral is terminated from the project you must inform TERO immediately to allow for informal counseling.
8. Allow on-site inspections by TERO representatives.
9. Provide copies of certified payroll reports to the TERO office upon request.
10. No work on the scheduled project will begin until all applicable agreements are signed and a TERO Permit has been issued. Failure to sign the required agreements shall serve as just cause for the contractor/subcontractor to be subject to sanction(s) as prescribed in the TERO Ordinance.
11. Any employer, contractor, subcontractor, or union who violates the TERO Ordinance or the rules, regulations, or orders promulgated by the TERO Officer or Council will be subject to penalties for such violations, including the maximum monetary civil penalty permitted under the Indian Civil Rights Act of 1968, 25 U.S.C. § 1302. Every day during which a violation exists shall be deemed a separate occurrence. (See the Yurok Tribe TERO Ordinance, Chapter 8, for Enforcement & Sanctions.)

Certification of Service:

I, _____, respectfully submit as evidence by my signature that I understand my obligations of Indian Preference hiring as a contractor conducting business on the Yurok Reservation or with the Yurok Indian Housing Authority. I attest to the fact that the TERO representative whose signature is found below did in fact explain these specific obligations and allowed for an opportunity to represent questions, comment or discussion on these requirements related to this agreement.

Company/Contract Representative	Position	Date
---------------------------------	----------	------

Company Name

TERO Representative	Position	Date
---------------------	----------	------

Labor Force Projection - Section A: Project Information

PROJECT:			
EMPLOYER/SUPPLIER:			
MAILING ADDRESS:	CITY	STATE:	ZIP:
E-MAIL:	PHONE:	FAX:	CELL:
CONTACT PERSON:		PHONE:	
SCOPE OF WORK:			
START DATE:		COMPLETION DATE:	
AMOUNT OF CONTRACT:		TERO FEE: 3% of Total Project Cost	

TERO Fee:

With respect to each project/contract or subcontract of \$5,000.00 or more, operating within the exterior boundaries of the Yurok Indian Reservation or with the Yurok Indian Housing Authority, the contractor shall pay a onetime fee of 3% of the total project/contract costs (i.e. equipment, labor, materials and operations), and any increase of the contract/project or subcontract amount prior to commencing work. If the covered employer initially enters into a contract/project or subcontract of less than \$5,000.00, but subsequently increases costs, as a result in the total contract/project or subcontract amount of \$5,000.00 or more, the fee shall apply to the total amount including increases.

Checks are to be made payable to: YUOK TRIBE TERO.

Job Qualifications, Personnel Requirements & Cultural Traditions Requirement:

An employer may not use any job qualification criteria or personnel requirements which serve as barriers to the employment of Native Americans which are not required by business necessity. Any education &/or certification(s) required of TERO members for employment must also be provided for all employees of the covered employers within the same classification. The TERO Officer will review the job duties and may require the employer to eliminate the personnel requirements at issue. Employers shall also make reasonable accommodation to the tribal holidays and cultural traditions of Native workers.

Labor Force Projection - Section B: Work Force

Core/Key Employees:

Name	Position	Wage	Hire Date	Native: Y/N

Tribal Member Hiring:

The TERO representative shall establish and administer a Tribal hiring opportunity to assist employers in placing preferred employees in job positions. An employer may recruit and hire workers from whatever sources are available to them to achieve the same preference hiring goals, but is subject to inform the TERO representative. The employer may not employ a non-local Indian until the employer has given the TERO office 72 hours to locate and refer a qualified local Indian.

Positions needed for Project	# of Positions	Wage	Start Date/End Date

Contracting & Subcontracting:

The preference requirements contained in the TERO Ordinance shall be binding on all contractors and subcontractors, regardless of tier, and shall be deemed a part of all resulting subcontract specifications. The covered employer shall have the initial and primary responsibility for ensuring that all contractors and subcontractors comply with these requirements. TERO Certified Indian Firms that are qualified and come within 5% of the low bid, will be provided negotiated preference.

All Subcontractors must submit an Indian Preference Plan to be negotiated with TERO.

Labor Force Projection - Section C: Compliance

I declare that all the answers and statements are true, correct and complete to the best of my knowledge. I understand that untruthful or misleading answers are cause for denial of my application and may follow under the Yurok Tribe TERO Ordinance, Chapter 8:

Enforcement and Sanctions - A covered employer who violates this ordinance shall be subject to sanctions for such violations. Such sanctions shall be remedial in nature and shall be designed and intended to compel compliance, prevent future violation, or compensate injured parties and shall include, but not be limited to:

- Denial of right to commence or continue business or contracts inside the Yurok Indian Reservation, with a Tribal entity, or involving Tribal funds;
- Suspension of all operations inside the Reservation;
- Debarment or prohibition from engaging in commerce or contracts on Yurok lands;
- Payment of back pay and damages to compensate any injured party;
- An order to stop work until the provisions of the TERO ordinance are satisfied;
- An order to summarily remove employees hired in violation of the TERO Ordinance;
- An order requiring employment, promotion and training of Indians injured by the violation;
- An order mandating changes in procedures and policies necessary to eliminate or correct the violation;
- An order making any other provisions deemed by the Tribal Council and Tribal Court to alleviate, eliminate or compensate for any violation; and
- Imposition of monetary civil penalties for each violation. Each day during which a violation exists shall constitute a separate violation.

Signature

Print Name

Title

Date

**Please submit application to: Yurok Tribe TERO P.O. Box 1027 Klamath, CA. 95548 or
dbarnes@yuroktribe.nsn.us**

Yurok Tribe Planning & Community Development

CHANGE ORDER

ORDER NUMBER: _____

DATE: _____

AGREEMENT DATE: _____

NAME OF PROJECT: **Weitchpec Electrical**

OWNER: **Yurok Tribe**

CONTRACTOR: _____

PROJECT NUMBER: **CA 09-M24**

The following changes are hereby made to the CONTRACT DOCUMENTS:

Justification:

CHANGE TO CONTRACT PRICE:

Original CONTRACT PRICE: _____

Current CONTRACT PRICE
(Includes previous CHANGE ORDER(s)): _____

Amount of this CHANGE ORDER (increase) (decrease): _____

The new CONTRACT PRICE including this CHANGE ORDER is: _____

Change to CONTRACT TIME: The CONTRACT TIME will be (increased)
(decreased) by _____ calendar days. The date for completion of all work will be
_____.

Prepared by Engineer: _____

Reviewed by Owner: _____

Accepted by Contractor: _____



DOCUMENT 110

SUMMARY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contract description.
- B. Work sequence.
- C. Specifications Conventions

1.2 CONTRACT DESCRIPTION

- A. Work of the Project includes the installation of electrical and signal wiring and connections at the Weitchpec water treatment and storage facility to form a functional water treatment monitoring system. The Contractor shall wire in a tank level transmitter, water temperature sensor and chlorine analyzer to an existing water treatment monitoring and data transmission system, see Exhibit II. Upon completion of the system four water quality parameters will be monitored; tank level, water temperature in the tank, chlorine residual post tank and turbidity. Currently, only turbidity is monitored. The Yurok Public Utility District (YPUD) shall supply the Contractor with all of the monitoring equipment to be installed. Contractor shall be responsible for providing conduit, wiring and connections, plumbing fixtures and hardware and weather proof equipment enclosures.
- B. Perform Work of Contract under unit fixed price contract with Owner in accordance with Conditions of Contract.

1.3 WORK SEQUENCE

- A. Construct Work in one stage during construction period. Coordinate construction schedule and operations with Project Engineer.

1.4 SPECIFICATION CONVENTIONS

- A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words “shall be” are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUMMARY

- A. Work covered by this section includes method of measurement and basis of payment for all divisions included.
- B. All measurements and payments will be based on completed and accepted work performed in strict accordance with the drawings and specifications.
- C. Respective prices and payment shall constitute full compensation for all work completed including incidentals.
- D. No separate payment shall be made for mobilization and demobilization of equipment.
- E. The price for the completed item of work shall include all applicable State, Federal, County, Tribal and local sales or other taxes and fees.

PART 2 PRODUCTS

2.1 GENERAL

- A. Payment shall be full compensation to complete the work items in good faith, including incidental work.
- B. Payment shall be full compensation for the following:
 - 1. labor
 - 2. materials
 - 3. equipment
 - 4. tools
 - 5. testing equipment
 - 6. incidentals
 - 7. General Requirements in Division 01.
 - a. submittals
 - b. record drawings
 - c. temporary facilities and controls
- C. All work not defined as a bid item and required by the contract documents are considered a subsidiary item of the contract; and no separate payment shall be provided.

2.2 BID SCHEDULE ITEMS

- A. Water System Controls:
 - 1. Measurement: By the Lump Sum.

2. Note: Chlorine Analyzer, Tank Level Transmitter and Water Temperature Sensor to be provided to Contractor by the Yurok Public Utility District for installation.
Note: Approximately 175 LF of 1.5 in conduit will be trenched as part of this contract. Another 350 LF is already installed. Wiring will be pulled through 525 LF of total conduit.
3. Basis for Payment: Includes, but is not limited to installing and/or furnishing a pedestal mounted equipment box for the chlorine analyzer, concrete pad, chlorine sampling tap, tubing, conduit, pipe and fittings and subsurface waste discharge from chlorine analyzer; tank level transmitter and water temperature sensor piping and fittings; conduit, electrical and control wiring and electrical pull boxes to connect existing electrical and control equipment to the chlorine analyzer, tank level transmitter and water temperature sensor; all excavation, backfilling and compaction associated with the work of this section; equipment and electrical testing and start-up and all other miscellaneous work as shown on the plans and specified herein.

PART 3 EXECUTION

Not Used.

END OF SECTION

DOCUMENT 130

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Product data.
- D. Shop drawings.
- E. Manufacturer's instructions.
- F. Project Record Documents
- G. Submittal Review Form.

1.2 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Engineer accepted form.
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- C. Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite Project, and deliver to Engineer at business address. Coordinate submission of related items.
- F. For each submittal for review, allow 10 working days excluding delivery time to and from Contractor.
- G. Identify variations from Contract Documents and product or system limitations, which may be detrimental to successful performance of completed Work.
- H. If the item description for a material submittal is not the exact brand or model specified by the Owner, then 3 copies of the manufacturer's descriptive literature, catalog cut-sheets, etc. must be included with the submittal. For design submittals

requiring design calculations, shop drawings, wiring and control diagrams, etc., 3 copies of each must also be included with this submittal. If item is exact brand or model as specified, list brand or model and "as specified".

- I. Allow space on submittals for Contractor and Engineer review stamps.
- J. When revised for resubmission, identify changes made since previous submission.
- K. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

1.3 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedules within 10 days after date of Notice to Proceed. After review, resubmit required revised data within 10 days.
- B. When required by Engineer, submit revised Progress Schedules with each Application for Payment.
- C. Indicate estimated percentage of completion for each item of Work at each submission.
- D. Revisions To Schedules:
 - 1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
 - 2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
 - 3. Prepare narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including effect of changes on schedules of separate contractors.

1.4 PRODUCT DATA

- A. Product Data: Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Submit number of copies Contractor requires, plus two copies Engineer will retain.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.5 SHOP DRAWINGS

- A. Shop Drawings: Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.6 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.7 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, Product Data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original Contract drawings.

- G. Submit documents to Project Engineer with claim for final Application for Payment.

SUBMITTAL REVIEW FORM [CA 09-M24-WEITCHPEC ELECTRICAL]

Received by Proj. Engr.	_____	_____	Submittal No.	_____
	Date	Initial	Contract Name	_____
			Contract No.	_____
Return to Contractor	_____	_____	Contractor	_____
	Date	Initial	Project No.	_____

ITEM NO.	DESCRIPTION* (Indicate Type, Model No., Manufacturer, etc.)	ACTION BY OWNER
----------	--	-----------------

PRE-CONSTRUCTION SUBMITTALS

1. Progress Schedule (01340) _____
2. Electricians Certification (15420) _____

MATERIAL SUBMITTALS REQUIRED

3. Utility Box-Chlorine Analyzer (15420) _____
4. Flow Controller (15420) _____
5. Electrical Pull Box (15420) _____
6. Electrical Conduit and Wiring (15420) _____
7. Piping and Fittings (15420) _____

POST CONSTRUCTION SUBMITTALS

8. Project Record Documents (130) _____
9. Warranty Information (01700) _____
10. Electrical Test Data (15420) _____

Submitted by: _____
 Contractor's Signature Date

IHS Review: _____
 Project Engineer's Signature Date

SECTION 01700

EXECUTION REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Final Inspection.
- D. Protecting installed construction.
- E. Manual for materials and finishes.
- F. Spare parts and maintenance products.
- G. Product warranties and product bonds.

1.2 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Project Engineer's review.
- B. Provide submittals to Project Engineer required by authorities having jurisdiction.
- C. Provide all post construction submittals noted in Document 130 - Submittal Procedures.
- D. Submit Final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.3 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean interior and exterior glass, surfaces exposed to view, remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces.
- C. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.
- D. Clean debris from roofs, gutters, downspouts, and drainage systems.

- E. Clean site; sweep paved areas, rake clean landscaped surfaces.
- F. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.4 FINAL INSPECTION

- A. Notify Project Engineer and Owner fifteen (15) days prior to the desired final inspection date.
- B. Verify each piece of equipment or system has been checked for conditions which may cause damage.
- C. Verify wiring and support components for equipment are complete and tested.
- D. Verify that items noted in the pre-final inspection have been addressed and remedied.
- E. Submit a written report that equipment or system has been properly installed and is functioning correctly.

1.5 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products when necessary. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic from landscaped areas.

1.6 MANUAL FOR MATERIALS AND FINISHES

- A. Submit three sets of manufacturer recommended maintenance and care instructions for the bolted steel water storage tank.
- B. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom manufactured products.
- C. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- D. Moisture Protection and Weather Exposed Products: Include product data listing, applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.
- E. Additional Requirements: As specified in individual product specification sections.

1.7 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.
- B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

1.8 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
- C. Verify documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. All related submittals from technical specifications sections shall be incorporated into these submittals.
- F. Submit prior to final Application for Payment.
- G. Time Of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 - 2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01720

STAKING AND CONSTRUCTION SURVEYING

PART 1 GENERAL

1.1 SUMMARY

- A. This section outlines the staking and surveying work related to provide reference points in the field. The section clarifies Project Engineer and Contractor responsibilities.

1.2 RELATED SECTIONS

- A. Section 15420 – Water Treatment Improvements.

1.3 WORK PERFORMED BY THE ENGINEER

- A. Owner shall provide engineering surveys to establish control points for construction which in the Project Engineer's judgment are necessary to enable Contractor to proceed with the Work.
- B. Owner shall provide reference staking which in the Project Engineer's judgment is necessary to enable Contractor to proceed with the Work.

1.4 CONTRACTOR'S RESPONSIBILITY

- A. Notify the Project Engineer at least seven (7) calendar days in advance of the times and places that construction control points and reference staking will be needed.
- B. Provide supplementary staking, grade staking, offsets, temporary bench marks, and control points as necessary to complete the work in accordance with the plans and specifications.
- C. Request clarification from the Project Engineer regarding apparent conflicts before proceeding with installation of facilities.
- D. Preserve all reference staking placed by the Project Engineer, until such time as the construction is completed or at such time as the Project Engineer deems acceptable for removal. Reference stakes needing replacement due to Contractor error or negligence to secure the site outside of construction hours must be replaced by one of the following means:
 - 1. A professional land surveyor or engineer hired by the Contractor, or
 - 2. The Indian Health Service engineering staff, at a rate of \$900 per day (which covers salaries, vehicle costs, lodging and per diem), credited to the contract.
- E. All permanent survey points / markers and bench marks not directly in the line of work shall be preserved and permanent survey markers disturbed or destroyed, shall be replaced, at the cost of the Contractor, by a hired Professional Land Surveyor registered in the State of California. Evidence of reestablishment by a Professional Land Surveyor shall be provided to the Project Engineer.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 02000

MOBILIZATION AND DEMOBILIZATION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Preparation
- B. Mobilization
- C. Demobilization

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 PREPARATION

- A. Make arrangements to contact Cynthia Bones of the Yurok Tribe Planning and Community Development Department at (707) 482-1350 (Office) 7 days in advance prior to mobilizing to job site location to coordinate a materials/equipment yard and secure all necessary permits prior to performing work.
- B. Notify Project Engineer, Indian Health Service at (707) 822-1688 7 days in advance prior to mobilization to job site location.

3.2 MOBILIZATION

- A. Move materials, equipment and laborers, as necessary to job site location with minimal disturbance.

3.3 DEMOBILIZATION

- A. Remove all materials, equipment, laborers, solid waste and debris created by construction activities from job site location.
- B. Maintain minimal disturbance to site upon departure.

END OF SECTION

SECTION 02200

EXCAVATING, TRENCHING AND BACKFILLING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. This Section includes regulatory requirements, protection, imported pipe embedment, imported structure embedment, trenching, excavation, backfilling and compaction.

1.2 REFERENCES

- A. ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.5 Kg) Rammer and 12 inch (300 mm) Drop.
- B. ASTM D1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.
- C. ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb (4.5 Kg) Rammer and 18 inch (450 mm) Drop.
- D. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- E. ASTM D3017 - Test Methods for Moisture Content of Soil and Soil-Aggregate Mixtures.
- F. ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates.
- G. State of California, Department of Transportation, Latest Edition of the Standard Specifications.

1.3 REGULATORY AND PERMIT REQUIREMENTS

- A. Any excavation, trenching, and backfilling requirements set forth by a construction and/or encroachment permit issued to the Contractor by state, county, or tribal entity have precedence over any references herein made by the Owner.
- B. The Contractor shall comply with OSHA Safety Requirements.

1.4 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.
- B. Structure: Water Storage Tank, Water Treatment Buildings, etc.
- C. Solid Rock: Large continuous masses of igneous, metamorphic, or sedimentary rock, which in the opinion of the Project Engineer cannot be excavated without drilling and blasting. Soil that is capable of being excavated with rippers is not considered solid rock.

- D. Loose Rock: Boulders and other detached stones, with a minimum volume of 1 cubic yard.

1.5 FIELD MEASUREMENTS

- A. Verify that survey benchmarks, control points, and intended elevations are as shown on drawings.

1.6 PROTECTION

- A. Barricade open excavations.
- B. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- C. Provide safe conditions for workers and passers-by.

PART 2 PRODUCTS

2.1 CALTRANS CLASS 2 AGGREGATE BASE (1-1/2 INCH)

- A.

Sieve Size	Percent Passing by weight
2 inch	100
1-1/2 inch	87 to 100
1 inch	---
3/4 inch	45 to 90
No. 4	20 to 50
No. 30	6 to 29
No. 200	0 to 12

- B. All other requirements noted in Caltrans Standard Specifications.

2.2 IMPORTED PIPE EMBEDMENT

- A. Use crushed stone or gravel that is free of shale, clay, friable material, and debris. Grade in accordance with ASTM C136, within the following limits:

Sieve Size	Percent Passing
1 inch	100
3/4 inch	90 to 100
3/8 inch	20 to 55
No. 4	0 to 10

No. 8	0 to 5
-------	--------

PART 3 EXECUTION

3.1 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Protect plant life, lawns, rock outcropping, and other features remaining as a portion of final landscaping.
- C. Protect benchmarks, existing structures, fences, and paving from excavating equipment and vehicular traffic. Any disturbances of this nature shall be restored at the expense of the Contractor.
- D. Maintain and protect above and below grade utilities or structures which are to remain. All utilities that are damaged by construction activity shall be repaired at no cost to the Owner. All utilities that obstruct construction activity shall be removed at the expense of the Contractor.

3.2 EXCAVATION

- A. Use open cut method on all excavation unless otherwise shown on the drawings, required by permit, or approved in writing by the Project Engineer.
- B. Stockpile excavated material in designated area on site, and remove excess material from site.
- C. Grade top perimeter of excavation to prevent surface water from entering.

3.3 CLASSIFICATION OF EXCAVATION

- A. All excavation with equipment commonly used in the industry is classified as common excavation (except for drilling and blasting).
- B. All material drilled and blasted for removal is classified as rock excavation. Inform the Project Engineer prior to rock excavation to determine pay measurement.

3.4 TRENCH EXCAVATION

- A. Cut trenches sufficiently wide to enable installation and inspection. Remove water or materials that interfere with work.
- B. Maintain trench sides as vertical as possible--between 12 inches and 24 inches wider than the outside diameter of the pipe barrel--below pipe level.
- C. Excavate trench width above the pipe as wide as necessary for shoring, sheeting, and

installation.

- D. Center trench excavation on pipe alignment for a minimum clearance of 6 inches on each side of the pipe.
- E. Hand trim for bell and spigot pipe joints. Remove loose matter.
- F. Restore over-excavated areas. If the trench bottom is over-excavated below the intended grade, fill over-excavation with imported pipe embedment and compact to density equivalent to the in situ material.
- G. Remove lumped subsoil, boulders, and rock up to $\frac{1}{2}$ yd³ (measured by volume).
- H. Excavate for additional trench depth when soil prevents adequate pipe support. Refill addition with imported pipe embedment. Remove large rock, boulders, and large stones to provide 3 inches of soil cushion on all sides of the pipe and pipe accessories.
- I. Length of trench that may be left open at any one time is 100 yards. Do not leave trench open over night.
- J. Stockpile excavated material in designated area on site, and remove excess material from site.

3.5 BACKFILLING

- A. Use care to prevent disturbance or damage to utilities or structures in excavation.
- B. Maintain optimum moisture content to attain proper compaction.
- C. Remove surplus fill materials from site.
- D. Leave fill material stockpile areas free of excess fill materials.

3.6 TRENCH BACKFILLING

- A. Use excavated soil as embedment unless Project Engineer determines it unsuitable. Unsuitable material is defined as incapable of being compacted to specified density with optimum moisture content, solid or loose rock, lump material larger than 1 inch, organic matter, or debris.
- B. Use excavated soil as final backfill unless Project Engineer determines it unsuitable. Unsuitable final backfill material is solid or loose rock larger than 6 inches or lumps larger than 3 inches. Do not use organic matter or debris.
- C. Backfill pipe embedment material in uniform layers on all sides of the pipe in lifts not to exceed 6 inches.
- D. Use the following methods when placing final backfill material unless otherwise required by permits or authority.

<u>Compact</u>	<u>Not to Exceed (In loose measure)</u>
Roadways	6 inches thick
Rights-of-way and outside roadway	12 inches thick
Unimproved surfaces	24 inches thick

3.7 COMPACTION

- A. Compact in lifts to the satisfaction of the Inspector and/or Project Engineer.
- B. A vibratory plate compactor or similar equipment shall accomplish compaction.

3.8 PROTECTION OF FINISHED WORK

- A. If vehicular traffic has altered finished work, reshape and re-compact fill.

END OF SECTION

SECTION 15420

WATER TREATMENT IMPROVEMENTS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Installation of tank level transmitter, water temperature sensor and chlorine analyzer.
2. Connection into existing water treatment monitoring and data transmission equipment, existing equipment was installed in 2011.

1.2 CODES AND STANDARDS

A. Work installed or material used must comply with latest rules of the following codes:

1. California Code of Regulations (CCR) TITLE 24, PART 3, Basic Electrical Regulations, High and Low-Voltage Electrical Regulations.
2. Public Utilities Commission, State of California; Construction of Underground Electric Supply and Communication Systems, General Order #128.
3. California Code of Regulations (CCR) TITLE 8, CHAPTER 4, SUBCHAPTER 5 Electrical Safety Orders.
4. NFPA, National Electrical Code (NEC).

B. Work installed or material used must be in conformance with the recommendations of the applicable portions of the following standards:

1. IEEE, Institute of Electrical and Electronic Project Engineers
2. NEMA, National Electrical Manufacturers Association
3. ICEA, Insulated Cable Project Engineers Association
4. UL, Underwriters' Laboratories, Inc.
5. ANSI, American National Standards Institute
6. NETA, International Electrical Testing Association
7. ASTM, American Society for Testing and Materials
8. Serving Utility Standards

1.3 QUALITY ASSURANCE

A. Codes and Standards: All materials and workmanship shall conform to the latest National Electric Code (NEC) Standards. All materials shall bear the label of, or be listed by, the Underwriter's Laboratory, Inc., (U.L.).

B. California Licensed Electricians shall perform and certify all work.

1.4 SUBMITTALS

A. Document 130-Submittal Procedures.

- B. The approval of the Contractor's submittals shall not relieve the Contractor of the responsibility for any error or of any obligation for accuracy of dimensions and details, for agreement and conformity with the contract drawings and specifications or responsibility to fulfill the contract as prescribed. Nor shall such approval be considered as approval of any deviation or conflict unless the Project Engineer has been expressly advised of the same. The Contractor shall expressly ask for a deviation or resolution of an apparent conflict by separate correspondence.
- C. Equipment Box for Chlorine Analyzer.
- D. Flow Controller.
- E. Concrete Utility Pull Boxes.
- F. Electrical and signal wiring.
- G. Conduit.
- H. California Electrician's License.
- I. Electrical Test Data.

PART 2 PRODUCTS

2.1 CHLORINE ANALYZER

- A. The Yurok Public Utility District (YPUD) to provide the instrument for installation. Contractor responsible for installation per manufacturer's installation manual.
- B. The instrument is manufactured by HACH and is model number CLF10 sc.
 - 1. Dimensions: 19" H x 19.5" W x 5.95" D.
 - 2. Wiring: Digital Extension Cable, HACH Part No. 5796200, connecting the chlorine analyzer to the HACH sc 200 controller located inside the chlorine building.
- C. Flow Controller
 - 1. King 7430 Series 2-32-G-042 Model
 - a. 150 MM scale, Float Material-Option 3, Fitting Material-Option 2, O-ring Material-Option 3, Scale-Option 4, Valve Option-Option 4 and Alarm Switch-Option 0.
- D. Utility Box for Analyzer and Flow Controller: American Products Mini-Fort Enclosures Model No. 16RU or approved equal.
 - 1. Dimensions: 32" H x 24" W x 18" D.
 - 2. NEMA 4.
 - 3. Include hardware for mounting the box in the manner as noted in Exhibit III of the project manual.
- E. Liquid sampling tubing shall be 1/2".

- F. Utility Box for Chlorine Sampling Tap: Kraloy or approved equal.

2.2 TANK LEVEL TRANSMITTER

- A. YPUD to provide the instrument for installation. Contractor responsible for installation per manufacturer's installation manual.
- B. The instrument is manufactured by Turck Inc. and is Model No. PT 100 psig-13-LI3-H1131.
- C. See Exhibits I, II and III of this project manual for product information, installation schematics, wiring diagrams and construction details.
- D. Connect equipment into the aboveground outlet line directly adjacent to the water storage tank. Connect instrument into the 6" outlet pipe via a 3/4" (M x M) NPT brass corporation stop manufactured by Ford or approved equal. Plumb assembly to fit the 1/4" (M) NPT instrument in accordance with manufacturer's instructions. Ensure a watertight fitting of the corporation stop into the outlet pipe and the instrument into the equipment tap. House equipment inside of a weatherproof equipment enclosure. See Exhibit I for a detailed schematic and photo of the installation.
- E. Equipment Box: Kraloy or approved equal.
 - 1. Dimensions: 6" H x 6" W x 6" D.
 - 2. NEMA 4.

2.3 WATER TEMPERATURE SENSOR

- A. Request YPUD to provide the instrument for installation. Contractor responsible for installation per manufacturer's installation manual.
- B. The instrument is manufactured by Chromalox and is Model No. PR-11.
- C. See Exhibits I, II and III for product information and installation instructions/details.
- D. Connect equipment into the aboveground outlet line directly adjacent to the water storage tank via a 3/4" (M) NPT fitting. Plumb in accordance with manufacturer's instructions and to accommodate equipment provided by YPUD.
- E. Run signal wire from instrument to equipment box housing tank level transmitter. Run signal wiring from both instruments to the treatment building as noted in Exhibit III.

2.4 WIRING AND WIRING METHODS

- A. Wiring Methods:
 - 1. Wiring between or outside enclosures will be in conduit or wireway.
- B. Signal Wire:
 - 1. Chromalox Temperature Sensor: 3-wire, 16 gauge, twisted, shielded and covered in polyvinyl.
 - 2. HACH SC 200 Controller (Chlorine Analyzer & Turbidity Analyzer) to Data Logger: 2-wire, 24-28 gauge, twisted, shielded and covered in polyvinyl.

3. Turck Tank Level Transmitter: See Exhibit II. Turck RKC 4.4T-*/S875/S653, 4 pin M12 molded end.
 - a. Contact Kyle Hall at 763-553-7376 or kyle.hall@turck.com for part ordering information and technical questions.
- C. Electrical Wire:
 1. All conductors and cable shall conform to UL, Federal Specifications J-C-30, or ICEA as applicable. Provide new cable manufactured within one year of installation.
 2. Wire in conduit shall be suitable for wet or dry locations and have thermo-plastic insulation rated for 600 volts and minimum 167°F in wet locations (THHN-THWN, XHHW, etc.).
 3. Ampacity of the wires shall be determined in accordance with NEC Article 310 (Conductors for General Wiring). The 140°F column shall be used unless the terminals on both ends of the wire are marked for a higher temperature, in which case the higher temperature column may be used.
 4. Insulation, unless otherwise indicated or required, shall be colored as follows:
 - a. Ungrounded (hot) conductor(s) will be black.
 - b. Neutral will be white or neutral gray.
 - c. Ground will be green.
- D. Splices:
 1. Splices are not allowed in the new pull boxes.
 2. Other splices are allowed only in junction boxes, wire ways, or conduit fittings such as KILLARK "O" series.
 3. Splices may be made with wire nuts, split bolt connectors or terminal blocks. Crimped butt splices may be used on stranded wire.

2.5 CONDUIT AND WIREWAYS

- A. Size: 1.5-inch conduit.
- B. Rigid Polyvinyl Chloride (PVC) conduit: PVC conduit shall be manufactured in accordance with UL 651. PVC conduit shall be Schedule 40 or Schedule 80 high impact polyvinyl chloride, UL listed for direct burial. Fittings used with PVC conduit shall be PVC solvent weld type. PVC conduit shall be used only for underground runs.
- C. Conduit exposed to direct sunlight shall be metal conforming to NEC Article 348 or NEC Article 346.
- D. Transition between metallic and buried non-metallic conduit shall be at the finish ground line using threaded plastic adapters.
- E. For outdoor applications all channels, fittings, clamps and accessories shall be stainless steel. Support channels shall conform to the requirements of ASTM A570.
- F. Flexible Conduit:
 1. May be used where installation conditions warrant its use.

2. Shall have an outer liquid tight non-metallic, sunlight resistant flexible covering conforming to NEC Article 351.
 3. Connectors will incorporate a threaded metal insert, sealing ring and compression nut equal to Ideal VAP-OIL-TITE 75 series only. Other connector types are not acceptable.
 4. Flexible conduit runs will be limited to six feet or less.
- G. Rigid conduit will be fastened to the enclosure using conduit hubs such as MYERS SCRU-TITE.

2.6 UTILITY PULL BOX

- A. Christy B1017 Box rated for H20 Loading or approved equal.
- B. Gasketed weatherproof covers and #316 stainless steel hardware.
- C. Pullboxes shall consist of reinforced concrete sides and bottom. The covers shall be held down by stainless steel bolts, washer and nuts. Each cover shall contain a lifting device and be able to be removed by one person. In traffic areas, the covers shall be rated for H20 traffic.

PART 3 EXECUTION

3.1 PREPARATION

- A. Verify compatibility of fittings and equipment.
- B. Verify equipment compatibility with proposed equipment locations.
- C. Notify the Project Engineer of any conflicts between manufacturer's instructions and contract documents.

3.2 EQUIPMENT INSTALLATION

- A. Install in accordance with manufacturer's installation instructions, project technical specifications and noted exhibits.
- B. Install in accordance with NEC and state and local codes.
- C. Interconnections between equipment shall be made per manufacturer's wiring diagrams. All wiring shall be clearly labeled and external connections in control panel and remote cabinet brought out to terminal blocks.
- D. Refer to electrical/control diagram and wiring summary presented as Exhibit II for connecting newly installed equipment into existing equipment.
 1. Existing Equipment: Turbidity Analyzer, GOES satellite data transmission equipment, data logging equipment and solar power generation equipment.

2. New Equipment to Connect: Chlorine analyzer, tank level transmitter and water temperature sensor.

3.3 WIRE AND CABLE INSTALLATION

- A. Conduit shall be thoroughly cleaned of all foreign material just prior to pulling the wire or cable.
- B. Conductor Protection: Conductors will be protected at conduit ends, nipples or connections by plastic insulating bushings or insulated throats unless the fitting provides equivalent protection.
- C. Keep all conductors within the allowable tension limits during installation. Lubricants for wire pulling, if used, shall be approved for the insulation and raceway material. Observe cable manufacturers and industry standard cable bending radius recommendations.
- D. Provide suitable installation equipment to prevent cutting or abrasion of conductors during pulling of wire.
- E. All cable in a single conduit shall be pulled in together.

3.4 CONDUIT AND WIREWAYS

- A. General Installation:
 1. Wireways and exposed conduit will be run parallel to floors and walls.
 2. Conduit bends will be constant radius without wrinkles, made with an appropriate sized bending tool.
 3. The total of the bends in a conduit run between junction boxes or pulling elbows shall be less than 360 degrees.
- B. Conduit Support:
 1. Metallic conduit will be supported at least every 10 feet and within 3 feet of an outlet box, junction box, cabinet or fitting.
 2. Non-metallic conduit will be supported at least every three feet for one inch and smaller and every five feet for conduit larger than one inch.
 3. Support will be one or two hole straps manufactured for the type and size conduit to be supported. Straps will be fastened to masonry with expansion anchors.
- C. Conduit Cutting:
 1. Conduit shall be saw cut.
 2. The cut ends of the conduit shall be reamed or filed to remove sharp edges and burrs.
 3. Water pipe or nipples will not be used unless the cut ends are reamed or filed to remove all burrs or sharp edges.

3.5 GROUNDING

- A. Ground entire electrical system as required by the utility, NEC Article 250 (Grounding) or herein.

- B. As a minimum, the system will be grounded to a copper plated steel electrode (ground rod) at least 5/8 inch in diameter installed vertically so that at least 8 feet is in contact with the soil.
- C. Connect the electrode to the system using a UL approved bronze ground clamp and copper wire sized in accordance with NEC Article 250-95. Note: No part of the system ground shall be within six feet of any lightning rod system.
- D. All grounding electrodes and other grounding devices or systems including the utility company ground shall be bonded (connected) together.
- E. The bonding wire size shall be as required for grounding as required by NEC Article 250-95.
- F. All non-current carrying metal parts including enclosures, boxes, component frames and conduit will be grounded by metallic connections or bonding straps.

3.6 ELECTRICAL TESTING

- A. The Contractor shall furnish all labor, material, instruments and tools to make all connections for testing of the electrical and instrumental installation. All equipment shall be demonstrated as operating properly prior to the acceptance of the work. All protective devices shall be operative during testing of equipment. The tests shall be made under the supervision of the Owner's Representative. All deficiencies or unsatisfactory conditions as determined by the Owners Representative or Inspecting Authorities shall be corrected by the Contractor in a satisfactory manner at the Contractor's own expense.
- B. After visual inspection of joints and connections and the application of tape and other insulating materials, all sections of the entire wiring system shall be thoroughly tested for shorts and grounds. A log of results for each circuit shall be kept by the Contractor and presented to the Owner's Representative as part of the post-construction submittals; See Document 130-Submittal Procedures.
- C. Equipment shall be tested by operating all electrical motors, relays, controls, switches, heaters, etc. sufficiently to demonstrate proper installation and electrical connections. Control and emergency conditions shall be artificially simulated where necessary for complete system or subsystem.
- D. Insulation resistance measurements of each circuit shall be made with loads connected and contactors, if any, blocked closed to give complete circuits. Insulation resistance of complete circuit breaker load terminals shall be tested with the breaker open. If there is any uncertainty regarding these testing requirements, the Contractor shall complete the testing as required by and in conformance with the NEC. A log of complete results shall be prepared by the Contractor and presented to the Owner's Representative. Values of resistance shall be 10 megohms or greater.

3.7 PLUMBING TESTING

- A. Test the plumbing on the chlorine sample tap for watertight integrity.
- B. Locate and repair any defects then retest.

END OF SECTION

EXHIBIT I

TURCK

Pressure Instrumentation

PT Pressure Transmitters Scaled in PSI

- Pre-scaled Ranges - No Adjustment Needed
- Output: 4-20 mA or 0-10 V
- IP67
- Robust Ceramic Measuring Element



Performance

Accuracy	≤0.5% of full scale Total of linearity, hysteresis and repeatability
Zero Shift	<±0.015% of measuring range / °C
Span Shift	<±0.015% of measuring range / °C

Environmental Data

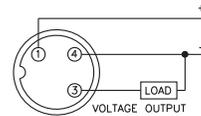
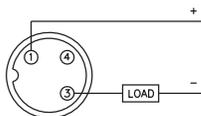
Ambient Temperature	-40°C to 85°C
Medium Temperature	-40°C to +150°C (-40°F to +302°F)
Enclosure Rating	IP 67
Housing Material	Stainless Steel 1.430 (AISI 303) / PBT
Shock Resistance	75 G, 11 ms per IEC 68-2-27
Vibration Resistance	20 G, 15 mm per IEC 68-2-6
Wetted Parts	303 Stainless Steel (connection), AL ₂ O ₃ Ceramic (measuring cell), Viton (seal)

Electrical Data

Current Consumption	≤20 mA
Dynamic Response	<2 ms
Short-Circuit Protection	Yes
Reverse Polarity Protection	Yes
Mating Cordset	RK 4T-*/S618 (* Length in meters)

Output	4-20 mA Loop Powered.	0-10 V
Voltage	8-33 VDC.	11.4-33 VDC
Load	≤ $\frac{\text{supply voltage}}{0.02 \text{ A}}$ = Ohm >10 k Ω/ <100 nF	

Wiring Diagrams



Pressure Transmitter Part Number Key

Part Number Keys are to assist in IDENTIFICATION ONLY. Consult factory for catalog items not identified.

Pressure Transmitter (scaled in psi)



Style

PT = Pressure Transmitter

Electrical Connection

H1131 = 3-pin, M12 *eurofast*®

Pressure Range

- 30HG = -30 to 0 in. Hg (vacuum)
- 15psig = 0 to 15 psig
- 30psig = 0 to 30 psig
- 60psig = 0 to 60 psig
- 100psig = 0 to 100 psig
- 150psig = 0 to 150 psig
- 200psig = 0 to 200 psig
- 300psig = 0 to 300 psig
- 500psig = 0 to 500 psig
- 750psig = 0 to 750 psig
- 1000psig = 0 to 1000 psig
- 2000psig = 0 to 2000 psig
- 3000psig = 0 to 3000 psig
- 5000psig = 0 to 5000 psig
- 7500psig = 0 to 7500 psig

Output Circuitry

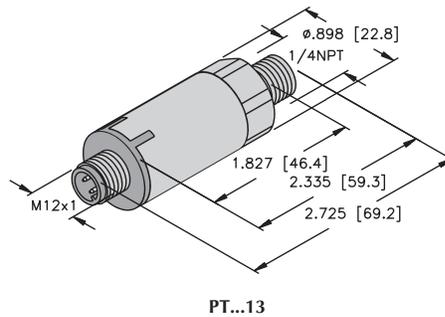
LI3 = 8-33 VDC / 4-20 mA Loop Powered
LU2 = 11.4-33 VDC / 0-10 V

Fluid Connection

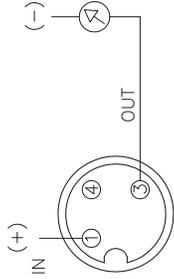
13 = 1/4 Male NPT

PRESSURE

Dimensional Drawings



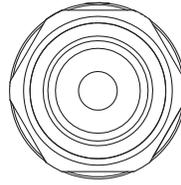
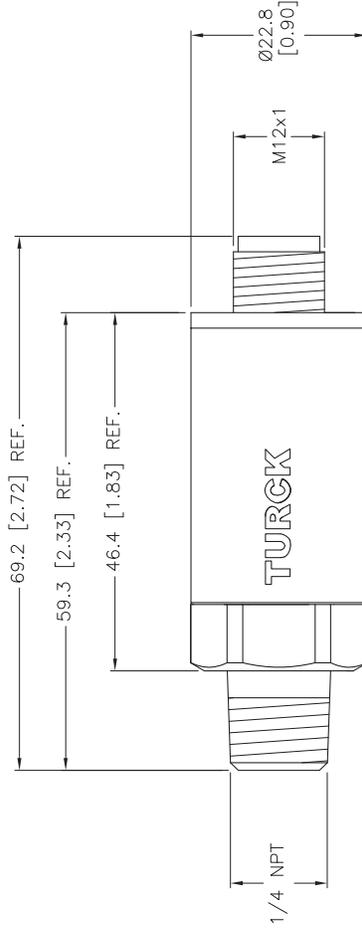
WIRING DIAGRAM



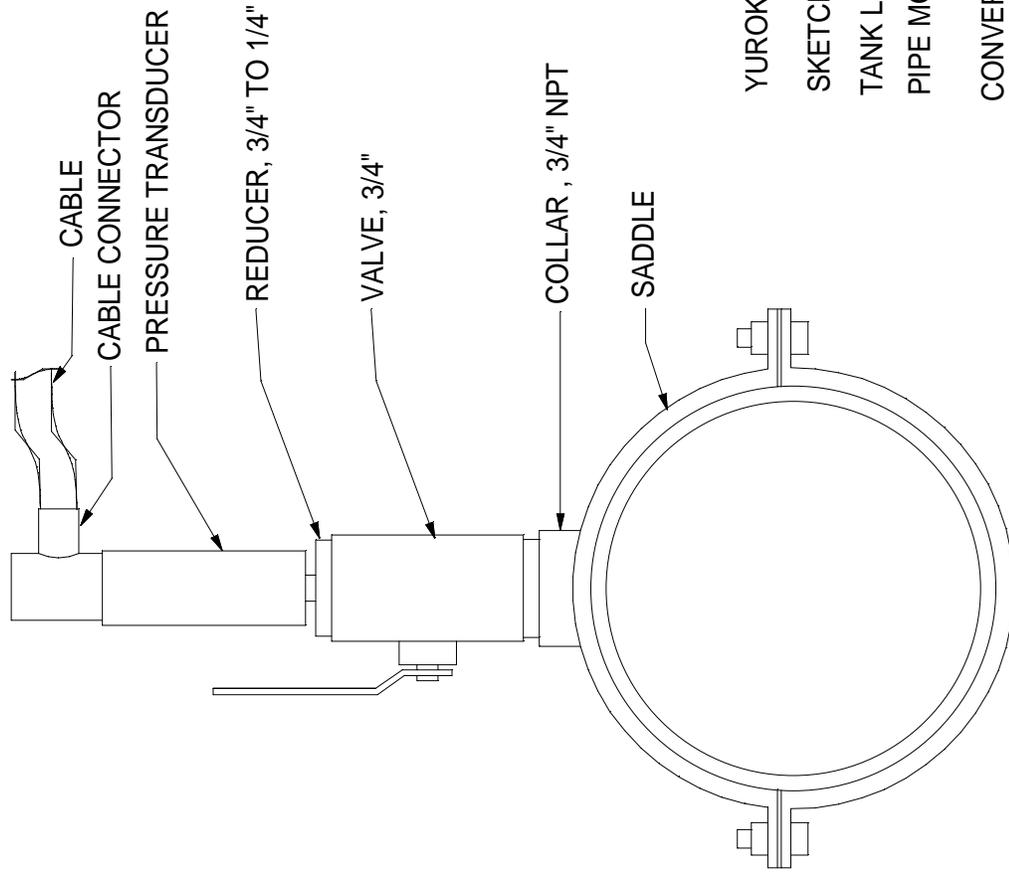
2-WIRE (4-20mA)

SPECIFICATIONS

OPERATING RANGE	0-15 Psig
PERMISSIBLE OVERPRESSURE	45 Psig
ACCURACY	±0.5% FULL SCALE
MEDIUM TEMPERATURE	-40°C to +150°C (-40°F to +302°F)
OPERATING VOLTAGE	8-33 VDC
OUTPUT	4-20 mA
CURRENT CONSUMPTION	≤ 20 mA
DYNAMIC RESPONSE	< 2 ms
SHORT CIRCUIT PROTECTION	YES
REVERSE POLARITY PROTECTION	YES
DEGREE OF PROTECTION	IP 67
HOUSING MATERIAL	SST 1.4305 (AISI 303)
ELECTRICAL CONNECTION	M12x1
FLUID CONNECTION	1/4 NPT
SHOCK RESISTANCE	75G, 11 ms per IEC 68-2-27
VIBRATION RESISTANCE	20G, 15 mm per IEC 68-2-6
DIAPHRAGM MATERIAL	Al ₂ O ₃ CERAMIC
O-RING MATERIAL	VITON



RELATED DOCUMENTS 1. 2. 3. 4.	3RD ANGLE PROJECTION 	THIS DRAWING IS PROPERTY OF TURCK INC. USE OF THIS DOCUMENT WITHOUT WRITTEN PERMISSION IS PROHIBITED.		TURCK inc High Technology Sensors and Automation Controls 3000 CAMPUS DRIVE MINNEAPOLIS, MN 55441 1-800-544-7769 (763) 553-7300 (763) 553-0708 fax turck.com	
		MATERIAL SEE NOTES FINISH SEE NOTES	DRFT DSGN UNIT OF MEASUREMENT MILLIMETER [INCH]	RDS RT DATE 06/28/04 SCALE 1 = 1.0	DESCRIPTION PT15PSIG-13-LI3-H1131
SEE NOTES		ALL DIMENSIONS DISPLAYED ON THIS DRAWING ARE FOR REFERENCE ONLY CONTACT TURCK FOR MORE INFORMATION		DO NOT SCALE THIS DRAWING FILE: H6831456	
RDS 05/07/07 BY	17868 ECO NO.	SHEET 1 OF 1			



YUROK TELEMETERING

SKETCH

TANK LEVEL TRANSMITTER

PIPE MOUNTING

CONVERSE CONSTRUCTION, INC.

PR

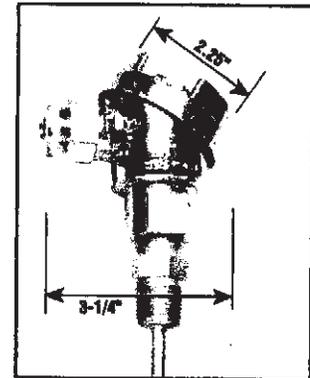
RTD Probes with Connection Head

- Precision 100 Ohm Platinum RTD Element
 - Rugged Design Offers Variety of Protection Heads with 1/2" NPT Mounting Threads
 - 304 SS Sheath
 - Spring Loaded Styles Available
 - Available with PFA Teflon® Coating
 - 6, 9, 12, 18 and 24" Lengths
-
- PR-12 — Cast Iron Protection Head with Internal Terminal Block
 - PR-14 — Miniature Aluminum Head, Screw Cover and Chain Design with Internal Terminal Block
 - PR-18 — Aluminum Head, Convenient Snap-Lock Design with Internal Terminal Block
 - PR-19 — Subminiature Aluminum Head with Internal Terminal Block

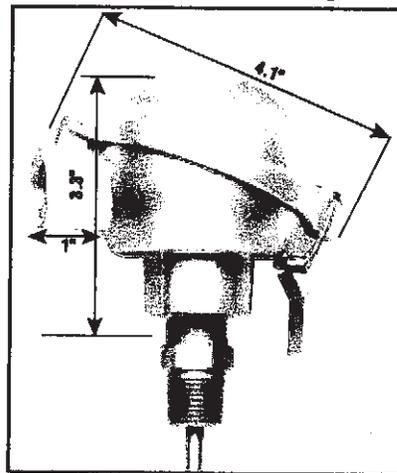
PR-12— Cast Iron



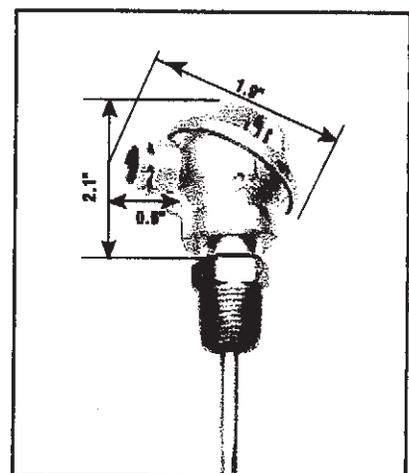
PR-14 — Aluminum w/Screw Cover & Chain



PR-18 — Aluminum w/Snap-Lock



PR-19 — Subminiature Aluminum



Stock PR-11s with Compatible Compression Fittings (SSLK)

Model	PCN	1/8 NPT Compression Fitting	PCN	1/4 NPT Compression Fitting	PCN
PR-11-2-100-1/4-6C	308013	SSLK-14-18-TEFLON/C	308750	SSLK-14-14-TEFLON/C	308769
PR-11-2-100-1/4-12C	308021	SSLK-14-18-TEFLON/C	308750	SSLK-14-14-TEFLON/C	308769
PR-11-2-100-1/4-18C	308030	SSLK-14-18-TEFLON/C	308750	SSLK-14-14-TEFLON/C	308769

* For details on SSLK Compression Fitting, see separate catalog sheet.

Stock PR-18 with Compatible Thermowells (260S, 260L)

Model	PCN	Thermowell Patch	PCN	Thermowell Adapter	PCN
PR-18-2-100-1/4-6-E/C	308056	3/4-260S-U4 1/2-304SS/C	308662	1/2-260S-U4 1/2-304SS/C	NS
		3/4-260S-U4 1/2-316SS/C	308697	1/2-260S-U4 1/2-316SS/C	NS
PR-18-2-100-1/4-12-E/C	308064	3/4-260S-U10 1/2-304SS/C	308670	1/2-260S-U10 1/2-304SS/C	327361
		3/4-260S-U10 1/2-316SS/C	308700	1/2-260S-U10 1/2-316SS/C	327370
PR-18-2-100-1/4-18-E/C	308072	3/4-260S-U13 1/2-304SS/C	NS	1/2-260S-U13 1/2-304SS/C	NS
		3/4-260S-U16 1/2-316SS/C	NS	1/2-260S-U13 1/2-316SS/C	NS
NBS-2-100-1/4-4-E-HNSL/C*	308080	3/4-260S-U2 1/2-304SS/C	308654	1/2-260S-U2 1/2-304SS/C	NS
		3/4-260S-U2 1/2-316SS/C	308689	1/2-260S-U2 1/2-316SS/C	NS

*HNSL designates Spring Loaded probe

PR RTD Probes with Connection Head (cont'd.)

Ordering Information

CODE	Assembly Type
PR-11	304SS Steel Transition with 36 inch Leadwire
PR-12	Cast Iron Connection Head with Screw Top
PR-14	Aluminum Connection Head with Screw Top and Chain
PR-18	Aluminum Connection Head with Snap Lock
PR-19	Subminiature Aluminated Connection Head with Screw Top

CODE	RTD Type
2-100	3-Wire, 100 OHM, Platinum RTD

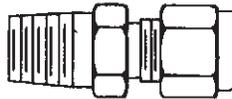
CODE	O.D. Sheath Dimensions
116	1/16 Inch
18	1/8 Inch
316	3/16 Inch
14	1/4 Inch

CODE	Probe Length
** -E/C	** Is Number of inches, Minimum 2" length

PR-11	-2-100	-18	-9-E/C	Typical Model Number

Compression Fittings

- Ferrule Design for Positive Pressure Seal
- Fits Probe Diameters from 1/16" to 1/2"
- Heavy Duty Brass or Stainless Steel Construction



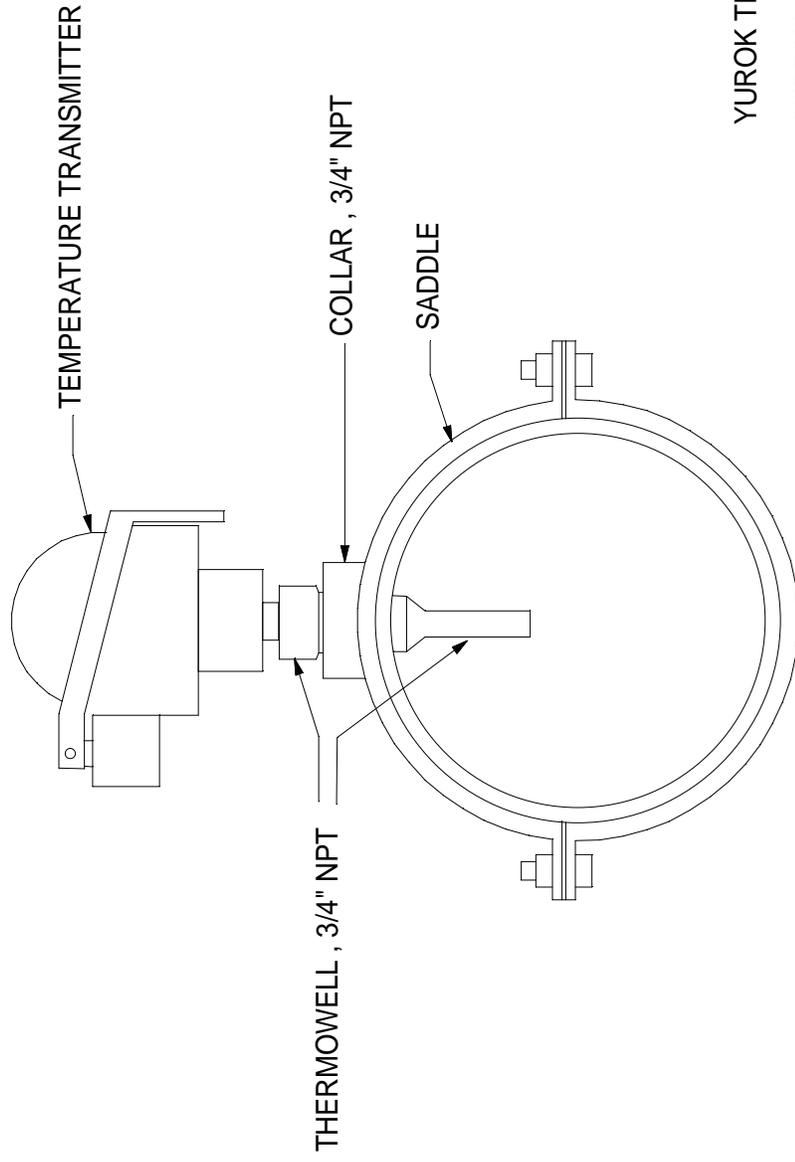
In Stock:

Model	PCN
SSLK-18-18-TEFLON/C	308718
SSLK-18-14-TEFLON/C	308726
SSLK-316-18-TEFLON/C	308734
SSLK-316-14-TEFLON/C	308742
SSLK-14-18-TEFLON/C	308750
SSLK-14-14-TEFLON/C	308769
SSLK-18-18/C	277405

Ordering Information — Compression Fittings¹

Probe OD	L.P.T. Thread	316SS
1/16"	1/16"	SSLK-116-116/C
1/16"	1/8"	SSLK-116-18/C
1/8"	1/8"	SSLK-18-18/C
1/8"	1/4"	SSLK-18-14/C
3/16"	1/8"	SSLK-316-18/C
3/16"	1/4"	SSLK-316-14/C
1/4"	1/8"	SSLK-14-18/C
1/4"	1/4"	SSLK-14-14/C
5/16"	1/4"	SSLK-516-14/C
3/8"	1/4"	SSLK-38-14/C
3/8"	3/8"	SSLK-38-38/C
3/8"	1/2"	SSLK-38-12/C
1/2"	1/2"	SSLK-12-12/C

¹ Fittings have metal ferrules and are non-readjustable. Adjustable Teflon models are available and in stock.



YUROK TELEMETERING

SKETCH

TEMPERATURE TRANSMITTER

PIPE MOUNTING

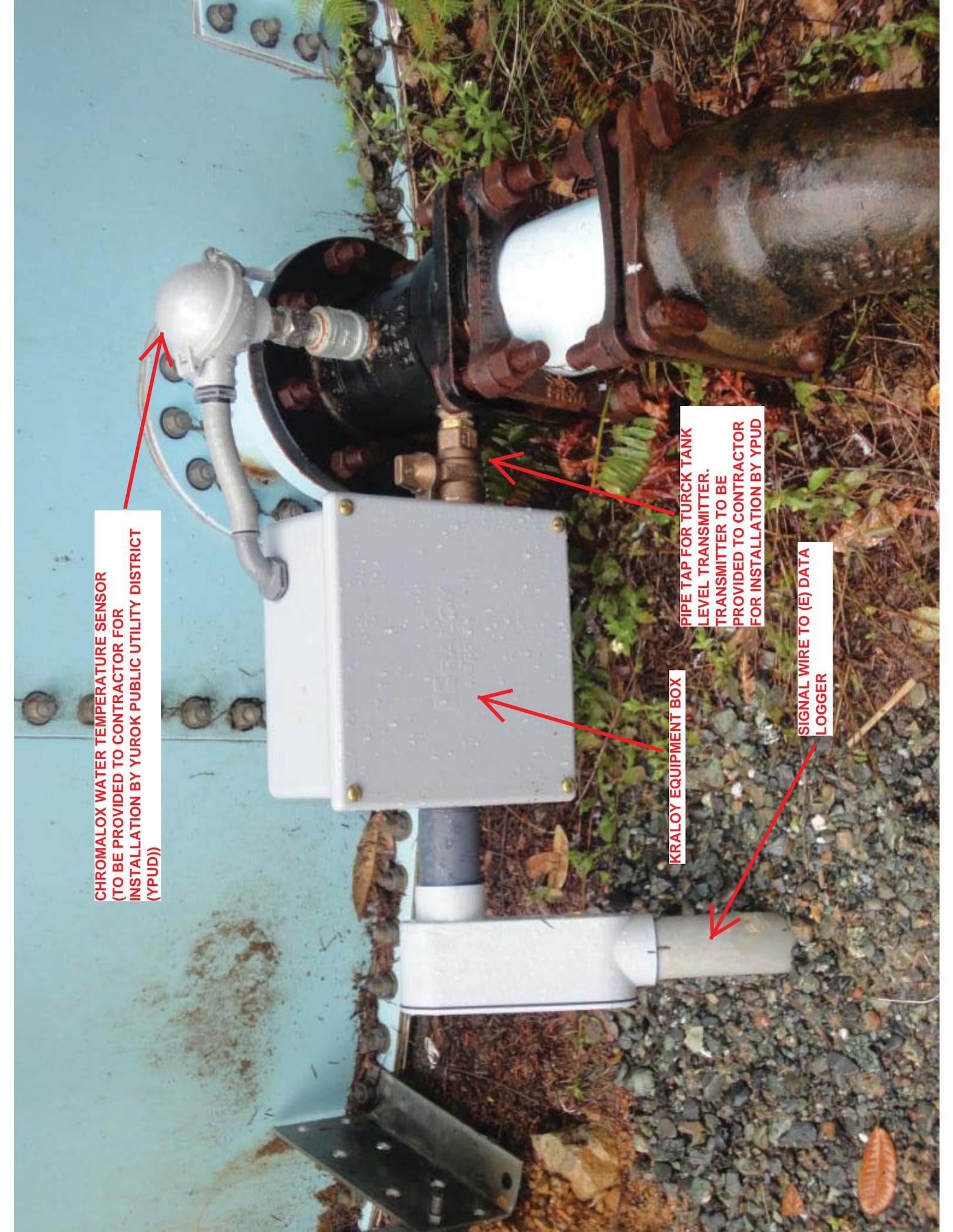
CONVERSE CONSTRUCTION, INC.

CHROMALOX WATER TEMPERATURE SENSOR
(TO BE PROVIDED TO CONTRACTOR FOR
INSTALLATION BY YUROC PUBLIC UTILITY DISTRICT
(YPUD))

PIPE TAP FOR TURCK TANK
LEVEL TRANSMITTER.
TRANSMITTER TO BE
PROVIDED TO CONTRACTOR
FOR INSTALLATION BY YPUD

KRALOY EQUIPMENT BOX

SIGNAL WIRE TO (E) DATA
LOGGER



CLF10 sc and CLT10 sc Free and Total Reagentless Chlorine Analyzers

**EPA
COMPLIANT**

Free/Total Chlorine

Overview

With over 60 years of industry leadership, Hach provides you with the best products and application knowledge for chlorine monitoring. Our portfolio includes the CLF10 sc and CLT10 sc reagentless chlorine analyzers and the market-leading CL17 chlorine analyzer, as well as Hach laboratory colorimeters, spectrophotometers and chemistries. Let Hach guide you to the best disinfection solution.

Features and Benefits

Exclusive Self Diagnostics

The CLF10 sc and CLT10 sc analyzers leverage Hach's exclusive self diagnostics to alert users whether the process has changed or the instrument needs servicing. Diagnostic features include the Cal Watch algorithm for warning of pH and chlorine calibration deviation and a non-contacting flow sensor for notification of insufficient sample flow.

No Reagent Replacement, No Waste Stream

Chlorine measurement with an amperometric analyzer, such as the CLF10 sc or CLT10 sc, does not require reagents, eliminating the need for routine reagent replacement and waste stream management.

Real-Time Process Control

The CLF10 sc and CLT10 sc analyzers allow for real-time control of disinfection processes by providing continuous readings that indicate when treatment conditions have changed.

Compatible with Hach's "Plug and Play" Digital Controllers

The CLF10 sc and CLT10 sc analyzers can be used with any Hach sc digital controller. Whether you're measuring turbidity or chlorine, you only need to learn one controller for all your water analysis measurement points. Hach sc controllers, have no complicated wiring or setup procedures. Just plug in any Hach digital sensor and it's ready to use without software configuration.

EPA Compliant According to Method 334.0

In accordance with EPA Method 334.0, the CLF10 sc and CLT10 sc analyzers can be used for reporting chlorine residual measurements. Additionally, Hach has created a suite of laboratory products and methods to help with startup and quality control procedures required in Method 334.0. (See page 4 for a partial listing of accessories.)



From the leaders in disinfection monitoring, the right instrument for reagentless chlorine analysis.

Applications

The CLF10 sc and CLT10 sc analyzers are best suited for static applications where sample pH, flow, temperature and chlorine concentration are stable. Hach recommends these analyzers for trending in dynamic applications where these parameters vary. Be sure to consult a Hach application expert to match the best instrument to your application.

Drinking Water— The CLF10 sc and CLT10 sc analyzers can be used in applications where waste stream management is a challenge, such as residual chlorine monitoring in ground water systems and the distribution system. Additionally, these analyzers can be used for process control in at-the-plant applications where real-time continuous results are beneficial.

Power Plants— The CLF10 sc and CLT10 sc analyzers can be used for the control of disinfection processes in boiler operations and cooling systems.

General Industrial— The CLF10 sc and CLT10 sc analyzers can be used to monitor chlorine residual to prevent biological build-up in applications serving various industrial processes (feed water), HVAC operations (cooling water), or in food and beverage applications.

Wastewater— The total chlorine analyzer, CLT10 sc, can be used to monitor chlorine residual and control chlorination processes in wastewater treatment. For this application, Hach recommends using the acidification/cleaning kit to ensure continuous operation.

DW

WW

PW

IW

DW = drinking water WW = wastewater municipal PW = pure water / power
IW = industrial water E = environmental C = collections FB = food and beverage



Be Right™

Specifications*

Chlorine Sensor

Measurement Range

0 to 10 ppm

Lower Limit of Detection (LOD)

30 ppb (0.03 ppm) or lower

Limit of Quantitation (LOQ)

90 ppb (0.09 ppm) or lower

Resolution

0.001 ppm (1 ppb)

Accuracy

Free Chlorine:

- $\pm 3\%$ of the reference test** (DPD) at constant pH less than 7.2 (± 0.2 pH unit)
- $\pm 10\%$ of the reference test** (DPD) at stable pH less than 8.5 (± 0.5 pH unit from the pH at calibration)

Total Chlorine:

- $\pm 10\%$ of the reference test** (DPD) at stable pH less than 8.5 (± 0.5 pH unit from the pH at calibration)
- $\pm 20\%$ of the reference test** (DPD) at stable pH greater than 8.5

Repeatability

30 ppb or 3%, whichever is greater

Response Time

Free Chlorine: 140 seconds or less for 90% change (T90) at a stable temperature and pH

Total Chlorine: 100 seconds or less for 90% change (T90) at a stable temperature and pH

Sampling Time

Continuous

Interferences

Free Chlorine: Monochloramine, chlorine dioxide, ozone, and chalk deposits

Total Chlorine: Chlorine dioxide, ozone, and chalk deposits

Pressure Limit

0.5 bar, no pressure impulses and/or vibrations

Sample Flow Rate

30 to 50 L/hour (7.9 to 13.2 gal/hour),
Optimal is 40 L/hour (10.5 gal/hour)

Sample pH

4-9

Sample Temperature (compensated for fluctuations)

5 to 45°C (41 to 113°F)

Temperature Compensation

Internal temperature sensor

Storage Temperature

Sensor: 0 to 50°C (32 to 122°F) dry, without electrolyte

Electrolyte: 15 to 25°C (59 to 77°F)

Power Requirements

12 Vdc, 30 mA maximum (supplied by controller)

Dimensions (sensor only)

195 mm (7.68 in.)/25 mm (0.98 in.) (length/diameter)

Cable Length

1 m (between gateways and sc-controller)

Cable Connection

5 pin, M12 connector

Measurement Method

Reagentless, electrochemical, three-electrode amperometric system

Calibration Methods

1-point or 2-point (zero and slope) calibration

Material

Corrosion-resistant materials, fully-submersible (stainless steel, PVC, silicon rubber and polycarbonate)

Warranty

1-year warranty on the electrode body, includes the electronics

Panel (including SS Panel, Gateway, Chlorine Sensor Flow Cell, pH Sensor Flow Cell)

Operating Temperature

0 to 45°C (32 to 113°F)

Storage Temperature (panel only)

-20 to 60°C (-4 to 149°F)

Power Requirements

12 Vdc $\pm 10\%$, at 100 mA maximum (supplied by sc controller)

Mounting

Flat, vertical surface

Connections

Sample Line: 1/4-inch OD

Drain Line (pH Flow Cell Outlet): 1/2-inch ID

Panel Dimensions

Length 482.6mm (19 in.) x Width 495.3mm (19.5 in.) x Depth 151.2mm (5.95 in.) (with panel-mounted components)

Weight

Approximately 5.5 kg (12 lbs)
(panel and empty panel-mounted components only)

Controller Platform

sc controller models

Complete Analyzer (Panel + Sensor)

Waterproof Rating

Current rating for Sc100/1000/200 controllers, gateway, and sensors – IP65 (NEMA 4X)

Certification

CE / ETL, EMC

Shipping Weight

Approximately 9.1 kg (20 lbs)

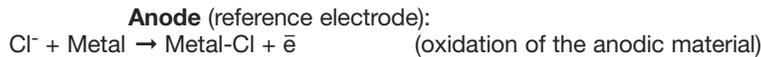
**Reference measurement must be conducted at the analyzer sampling point.

Principle of Operation

Amperometry is an electrochemical technique that measures the change in current resulting from chemical reactions taking place on the electrodes. The generated current is proportional to the analyte concentration. A typical amperometric sensor consists of two dissimilar electrodes—an anode and a cathode (i.e. silver/platinum or copper/gold, respectively).

Typically, the electrodes are covered with a membrane cap containing electrolyte, providing for better selectivity of the analysis. Additionally, a small constant electrical voltage is applied across the electrodes.

Below is a general schematic of the reduction-oxidation reaction taking place in a simple 2-electrode amperometric system:



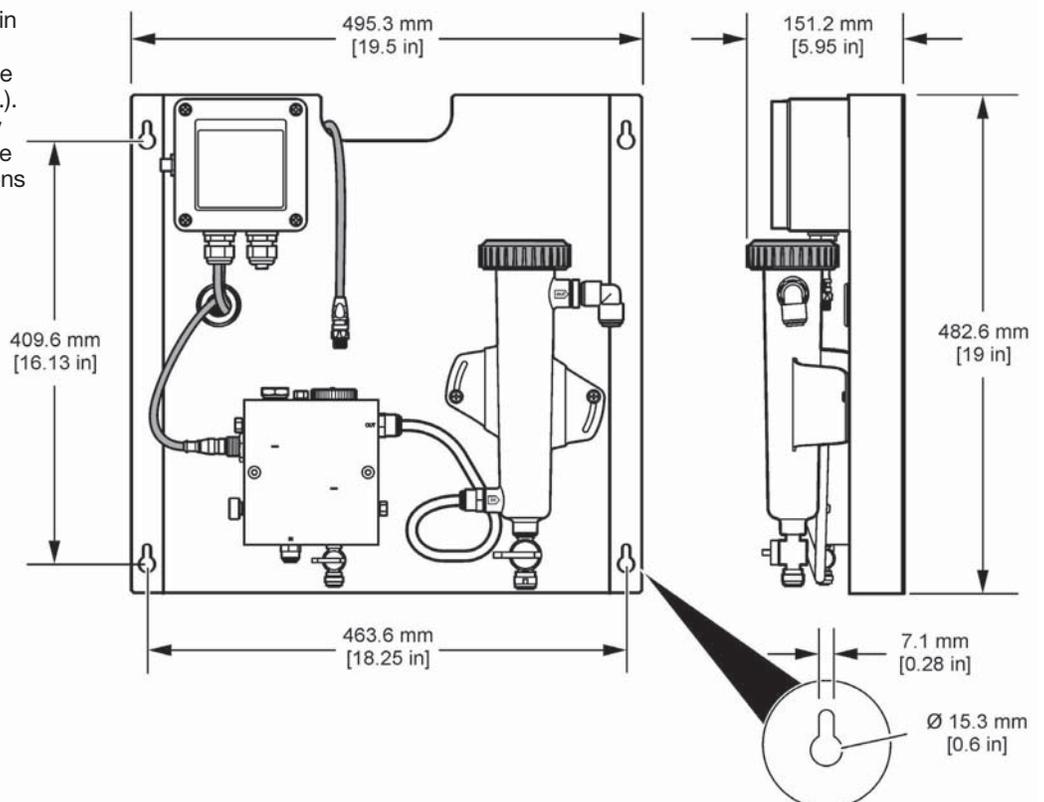
In a three-electrode amperometric system, such as used in the CLF10 sc and CLT10 sc, the anode is essentially split into two parts—a reference and an auxiliary (or counter) electrode. These systems are always supported by special electrical circuit directing the voltage between all electrodes. The three-electrode design generally makes the measurements more stable and provides longer life for the working and reference electrodes.

Engineering Specifications

- The analyzer shall come with a rugged corrosion resistant mounting panel bearing pre-mounted equipment to provide easy installation.
- The instrument shall be a continuous-reading analyzer that utilizes amperometric technology with a three-electrode sensor design.
- The measurement range shall be 0 to 10 ppm of (free or total) chlorine in relation to a standard reference method.
- The response time (T90) shall be 140 seconds or less.
- The low Limit of Detection (LOD) shall be 0.03 ppm or lower.
- The Practical Limit of Quantitation (PLOQ) shall be 90 ppb or lower
- The instrument shall be equipped with a flow-through cell containing a non-contacting flow sensor.
- The instrument shall provide both visual and electronic notification of insufficient sample flow.
- The instrument shall provide chlorine residual measurements within sample pH range of 4 to 9 and temperature range of 5 to 45 degrees Celsius or 41 to 113 degrees Fahrenheit.
- The sensor shall internally compensate for the sample temperature and pH fluctuations.
- The analyzer shall provide monitoring for pH and/or chlorine measurement deviations using Hach Calibration Watch algorithm.
- The analyzer shall provide reagent-free operation without the need for sample conditioning in clean water applications.
- The instrument shall be connected to a controller from the Hach sc controller family.
- The analyzer shall be compatible with the optional Hach cleaning system.
- The instrument shall be the CLF10 sc or CLT10 sc analyzer manufactured by Hach Company.

Dimensions

The analyzer should be installed in an accessible location. It can be mounted on a flat, vertical surface (such as a wall, panel, stand, etc.). It should allow for access for any checking or maintenance. Sample flow should meet the specifications on previous page.



Ordering Information

CLF10 sc Free Chlorine Sensor with sc200 Controller and SS Panel

2980900	CLF10sc, sc200 Single Input, pH
2981000	CLF10sc, sc200 Single Input, Combo pH
2981100	CLF10sc, sc200 Single Input, Grab Sample
2982200	CLF10sc, sc200 Dual Input Combo pH
2982100	CLF10sc, sc200 Dual Input, pH
2982300	CLF10sc, sc200 Dual Input, Grab Sample
2981200	CLF10sc, sc200 Single Input, pH, Metric
2981300	CLF10sc, sc200 Single Input, Combo pH, Metric
2981400	CLF10sc, sc200 Single Input, Grab Sample, Metric
2982400	CLF10sc, sc200 Dual Input, pH, Metric
2982500	CLF10sc, sc200 Dual Input, Combo pH, Metric
2982600	CLF10sc, sc200 Dual Input, Grab Sample, Metric
2987500	CLF10sc, sc200 Single Input, pH, 24 Vdc, Metric
2987600	CLF10sc, sc200 Single Input, Combo pH, 24 Vdc, Metric
2987700	CLF10sc, sc200 Single Input, Grab Sample, 24 Vdc, Metric

CLT10 sc Total Chlorine Sensor with sc200 Controller and SS Panel

2981500	CLT10sc, sc200 Single Input, pH
2981600	CLT10sc, sc200 Single Input, Combo pH
2981700	CLT10sc, sc200 Single Input, Grab Sample
2982700	CLT10sc, sc200 Dual Input, pH
2982800	CLT10sc, sc200 Dual Input, Combo pH
2982900	CLT10sc, sc200 Dual Input, Grab Sample
2981800	CLT10sc, sc200 Single Input, pH, Metric
2981900	CLT10sc, sc200 Single Input, Combo pH, Metric
2982000	CLT10sc, sc200 Single Input, Grab Sample, Metric
2983000	CLT10sc, sc200 Dual Input, pH, Metric
2983100	CLT10sc, sc200 Dual Input, Combo pH, Metric
2983200	CLT10sc, sc200 Dual Input, Grab Sample, Metric
2987400	CLT10sc, sc200 Single Input, pH, 24 Vdc, Metric
2987800	CLT10sc, sc200 Single Input, Combo pH, 24 Vdc, Metric
2987900	CLT10sc, sc200 Single Input, Grab Sample, 24 Vdc, Metric

Note: See LIT #2665 for more information about the combinations possible with the sc200.

CLT10 sc Total Chlorine Analyzer Panel Only

LXV45B.99.13022	w/ pH Differential Sensor
LXV45B.99.12022	w/ pH Combination Sensor
LXV45B.99.11022	Grab Sample Only

Metric sizing available for all configurations.

Accessories

LZY051	Acidification/Cleaning Kit
9159900	Sample Conditioning Kit
9181500	pH Differential Analog pH Sensor, Rytton
9181600	Combination Analog pH Sensor, Rytton

Replacement Parts

9150400	Sensor, Free Chlorine
9150300	Sensor, Total Chlorine
9160200	Membrane Replacement Kit, Free Chlorine Sensor
9180900	Membrane Replacement Kit, Total Chlorine Sensor
9160600	Electrolyte, Free Chlorine Sensor 100 mL
9181400	Electrolyte, Total Chlorine Sensor 100 mL

Lab Products for Method 334.0

5870062	Pocket Colorimeter II System, Chlorine MR/HR
1426810	Chlorine Standard Solution, 10-mL Voluette® Ampule, 50–75 mg/L 16/pkg
2980500	DPD Chlorine-MR Spec✓ Secondary Standards Kit

For more information on this method, please visit: www.hach.com/method334

Lit. No. 2679 Rev 1

J10 Printed in U.S.A.

©Hach Company, 2010. All rights reserved.

In the interest of improving and updating its equipment, Hach Company reserves the right to alter specifications to equipment at any time.

At Hach, it's about learning from our customers and providing the right answers. It's more than ensuring the quality of water—it's about ensuring the quality of life. When it comes to the things that touch our lives...

Keep it pure.

Make it simple.

Be right.

For current price information, technical support, and ordering assistance, contact the Hach office or distributor serving your area.

In the United States, contact:

HACH COMPANY World Headquarters
P.O. Box 389
Loveland, Colorado 80539-0389
U.S.A.
Telephone: 800-227-4224
Fax: 970-669-2932
E-mail: orders@hach.com
www.hach.com

U.S. exporters and customers in Canada, Latin America, sub-Saharan Africa, Asia, and Australia/New Zealand, contact:

HACH COMPANY World Headquarters
P.O. Box 389
Loveland, Colorado 80539-0389
U.S.A.
Telephone: 970-669-3050
Fax: 970-461-3939
E-mail: intl@hach.com
www.hach.com

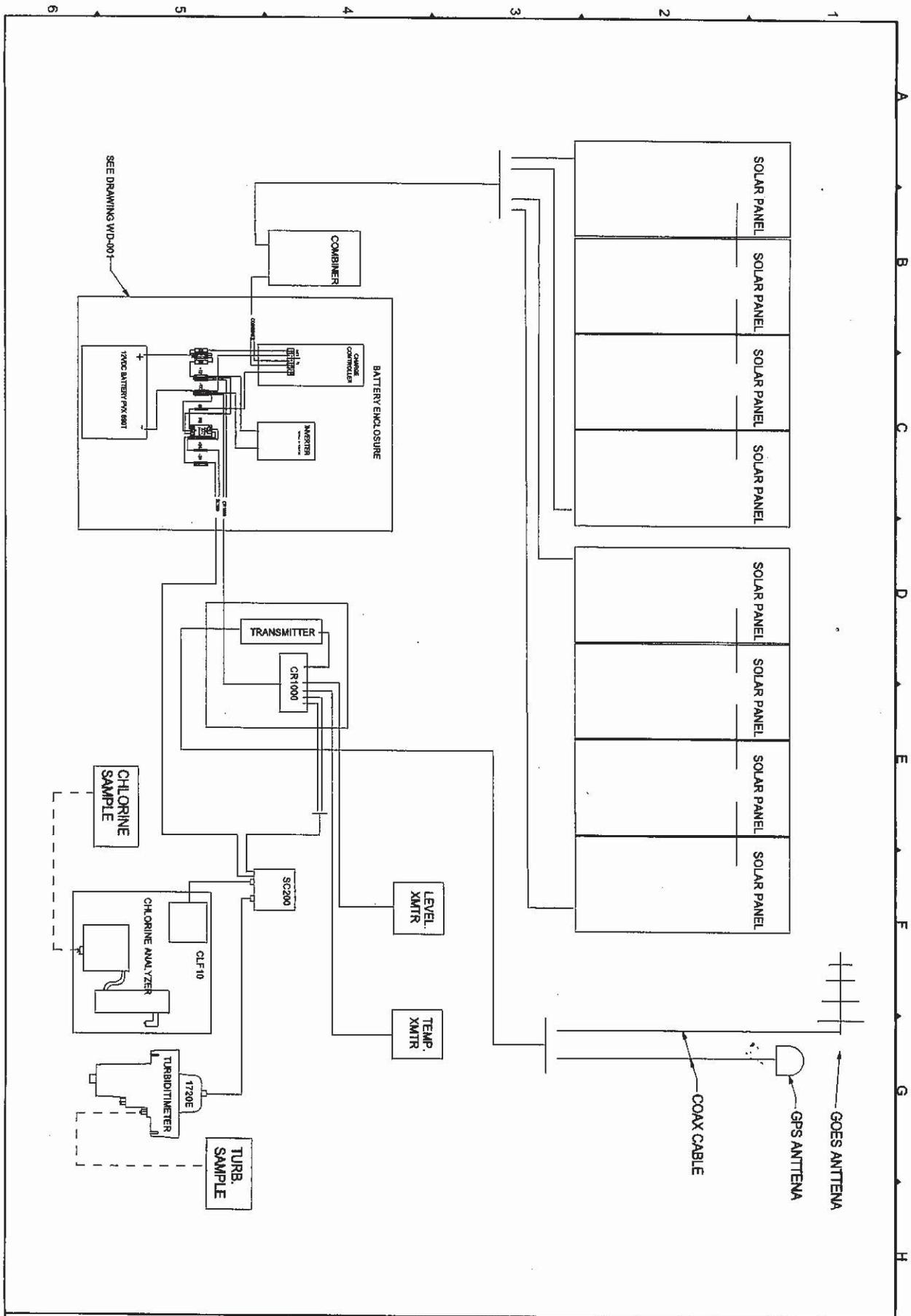
In Europe, the Middle East, and Mediterranean Africa, contact:

HACH LANGE GmbH
Willstätterstraße 11
D-40549 Düsseldorf
GERMANY
Tel: +49 (0) 211 5288-0
Fax: +49 (0) 211 5288-143
E-mail: info@hach-lange.de
www.hach-lange.com



Be Right™

EXHIBIT II

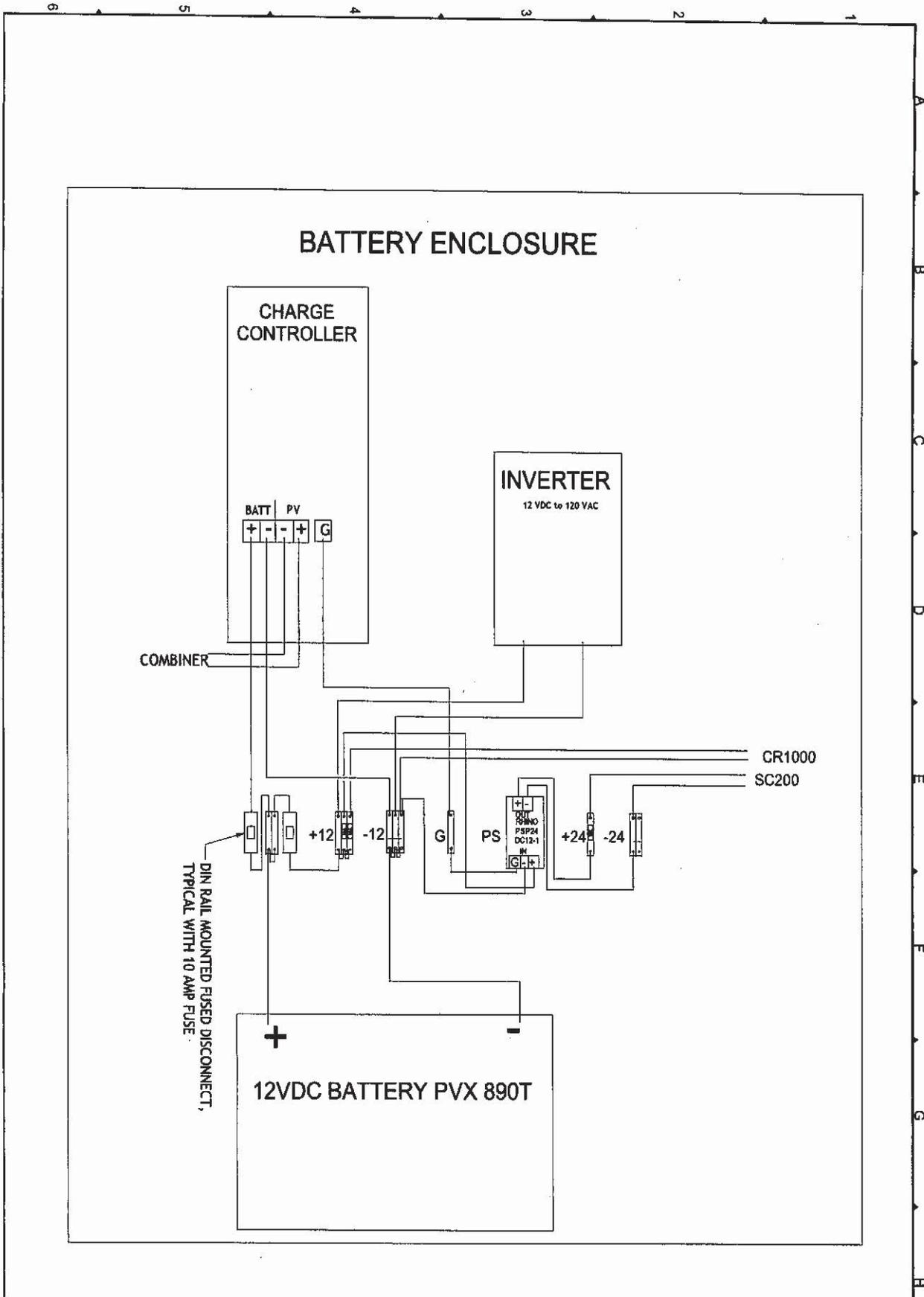


SEE DRAWING WTD-001

YUOK WATER SYSTEM IMPROVEMENT, K&PEL, WAUTEC, WEITCHPEC		
WATER TREATMENT MONITORING EQUIPMENT		
DRAWING NUMBER	REV	PROJECT
ID-001	1	1063



DRG: LLH	DRW BY: LLH	APPROVED BY: LLH
SCALE: NTS	REL. DATE: 3/17/11	REVISION: 3/17/11
CONVERSE CONSTRUCTION, INC. P.O. BOX 484778 REDDING, CA (530)223-4290	REVISION: 4/29/11	REVISION: 4/29/11
	REVISION:	REVISION:



YUROK WATER SYSTEM IMPROVEMENT, KaPEL, WAUTEC, WEITCHPEC			DRW. LLH	DRW. BY LLH	APPROVED BY LLH
WATER TREATMENT MONITORING EQUIPMENT			SCALE NTS	REL. DATE 3/17/11	REVISED 3/17/11
DRAWING NUMBER	REV	PROJECT	CONVERSE CONSTRUCTION, INC. P.O. BOX 484776 REDDING, CA (530)223-4290		
WD-001	1	1063	REVISED 4/29/11	REVISED 4/28/11	REVISED

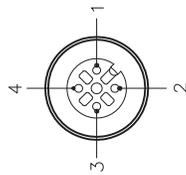


Yurok Up River Water Monitoring System

Sensor Wiring Into the CR1000 Dataloggers

Sensor	Datalogger	
RTD Temperature	Diff. Ch 1 w/ 4WPB	
	1H Open	
	1L Red From Sensor & Jumper to 2H	
	VX1 Black Wire From 4WPB	
	2H Jumper to 1L	
	2L Black From Sensor	
	G Shield	
	Water Level	Diff. Ch 3 w/CURS100
	3H White From Sensor	
3L Jumper to G		
G Jumper to 3L		
12V Black From Sensor		
4H Not Used		
4L Not Used		
G Not Used		
Chlorine	Diff. Ch 5 w/CURS100	
	5H White From Sensor	
	5L Jumper to G	
	G Jumper to 5L	
	G Black & Shield From Sensor	
Turbidity	Diff. Ch 6 w/CURS100	
	6H White From Sensor	
	6L Jumper to G	
	G Jumper to 6L	
	G Black & Shield From Sensor	
	Diff. Chs 7 & 8 Not Used	

FEMALE END VIEW

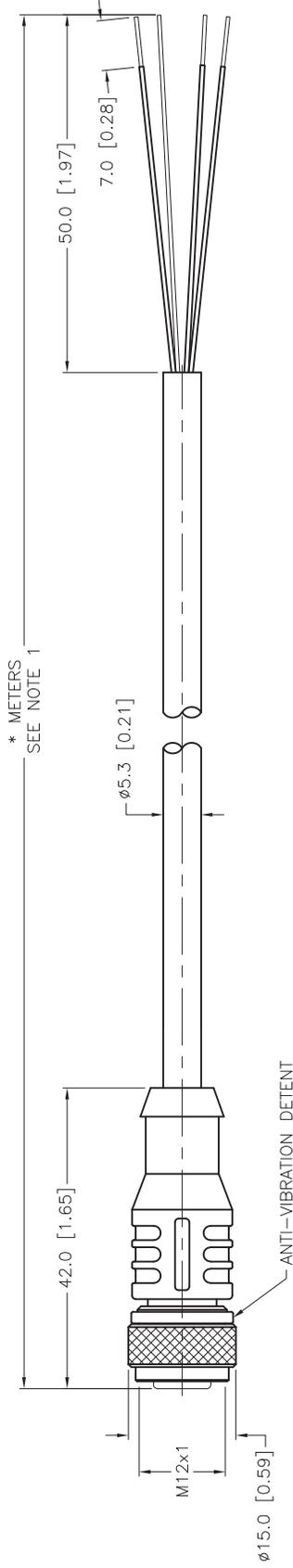


- 1 = BROWN
- 2 = DRAIN
- 3 = BLUE
- 4 = BLACK



SPECIFICATIONS

CONTACT CARRIER MATERIAL	NYLON OR TPU
MOLDED HEAD MATERIAL/COLOR	TPU/YELLOW
CONTACT MATERIAL/PLATING	BRASS/GOLD
COUPLING NUT MATERIAL/PLATING	BRASS/NICKEL
RATED CURRENT [A]	4.0 A
RATED VOLTAGE [V]	250 V
OUTER CABLE JACKET MATERIAL/COLOR	PVC/GRAY
CONDUCTOR INSULATION MATERIAL	PVC
NUMBER OF CONDUCTORS [AWG]	3x20 AWG
DRAIN/SHIELD	22 AWG DRAIN/ALUMINUM-POLYESTER FOIL
TEMPERATURE RANGE	-40°C to +105°C (-40°F to +221°F)
PROTECTION CLASS	NEMA 1,3,4,6P AND IEC IP68, IP69K



* METERS
SEE NOTE 1

CABLE LENGTH	TOLERANCE
ALL LENGTHS	+ 4% (OR 50mm) OF LENGTH - 0% (OR 0mm) OF LENGTH WHICHEVER IS GREATER
STRIP LENGTH	TOLERANCE
0-7mm	±0.5mm
8-29mm	±1.0mm
30-49mm	±2.0mm
50-69mm	±3.0mm
70-100mm	±4.0mm
OVER 100mm	±5.0mm

- NOTES:
- "*" INDICATES CABLE LENGTH IN METERS. CONTACT TURCK TO ORDER SPECIFIC LENGTHS.
 - "/S875" DESIGNATES STANDARD CORSET WITHOUT ID FLAG ON CABLE. BUT PACKED IN STANDARD LABELED BAG.
 - "/S653" DESIGNATES CABLE WITH ALUMINIZED POLYESTER SHIELD AND DRAIN WIRE. DRAIN IS CONNECTED TO A PIN.

RELATED DOCUMENTS 1. 2. 3. 4.		THIS DRAWING IS CONFIDENTIAL AND THE PROPERTY OF TURCK INC. USE OF THIS DOCUMENT WITHOUT WRITTEN PERMISSION IS PROHIBITED.		3000 CAMPUS DRIVE MINNEAPOLIS, MN 55441 1-800-544-7769 (763) 553-7300 (763) 553-0708 fax turck.com	
MATERIAL	SEE SPECIFICATIONS	DRFT	RWC	DATE	05/14/07
FINISH	SEE SPECIFICATIONS	APVD		SCALE	1 = 1.0
ALL DIMENSIONS DISPLAYED ON THIS DRAWING ARE FOR REFERENCE ONLY		UNIT OF MEASUREMENT MILLIMETER [INCH]		DESCRIPTION RKC 4.4T-*/S875/S653	
SEE SPECIFICATIONS		CONTACT TURCK FOR MORE INFORMATION		IDENTIFICATION NO.	
KMY 03/19/12		BY		DATE	
37163		ECO NO.		SHEET 1 OF 1	

SOURCE DRAWING - FOR REFERENCE ONLY

EXHIBIT III

The following details apply to this project:

- Sheet C8, Detail 4
- Sheet C8, Detail 5
- Sheet C8, Detail 6
- Sheet C9, Detail 7

