Umatilla Morrow Radio & Data District

Radio Site Development: Ukiah, OR

Request for Proposals (RFP) #2022-01

Issue Date: November 10, 2022

Closing Time and Date: See Section 2

Single Point of Contact (SPC): Brett Mueller, Administrator

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UMATILLA MORROW RADIO & DATA DISTRICT
NOTICE OF REQUEST FOR PROPOSALS

NOTICE IS HEREBY GIVEN that proposals for Radio Site Development for the site at Ukiah will be received by the Umatilla Morrow Radio & Data District (herein referred to as "the District" or "UMRDD"). **Proposals will be accepted ONLY at the address on the title page of this document and only until the time and date listed in the Schedule of Section 2 of this document.**

The District is issuing this RFP pursuant to its authority under OAR 125-246-0100 through 0900 the Oregon Public Contracting Code (ORS chapters 279A, 279B, and 279C) and ORS 403.525 (3, 4, 5 and 13). The District will be the contracting agency.

The District is using the Competitive Sealed Proposals method, pursuant to ORS 279B.060 and OAR 125-247-0260. The District may use a combination of the methods for Competitive Sealed Proposals, including optional procedures: a) Competitive Range; b) Discussions and Revised Proposals; c) Revised Rounds of Negotiations; d) Negotiations; e) Best and Final Offers; and f) Multistep Sealed Proposals.

The District is not responsible for misdelivered proposals, and the Vendor is strictly liable for its chosen method of delivery. It is the Vendor's sole responsibility to make sure that proposals arrive at the proper location. Any proposal which does not actually arrive at the address identified on the title page to this document and by the RFP due date and time, as expressed in Section 2, will be rejected as non-responsive, even if properly addressed or delivered to another location of the District.

NOTE: There will be a mandatory site visit for all Vendors interested in participating in this RFP. All interested Vendors will gather at Boardman Fire Station 81, 300 SW Wilson Lane, Boardman, OR 97818 on the date and time identified in Section 2. They will then travel to the work site locations with representatives of the District. Proposals from Vendors who do not participate in the site walk will not be accepted.

1. INTRODUCTION

1.1 UMRDD Overview

The Umatilla Morrow Radio & Data District (herein referred to as "the District" or "UMRDD") is located in northeastern Oregon and comprises the counties of Umatilla and Morrow, excluding the land located within the City of Milton-Freewater limits. UMRDD provides public safety communications support to 42 local, state, tribal, and federal agencies and departments that operate within the District's boundaries as well as local school districts and Union Pacific Railroad law enforcement.

1.2 Project Goals

This will be a competitive negotiation process. Qualified individuals, firms, Vendors or entities (hereinafter "Vendor" or "Vendors"), that meet the requirements set forth in this Request for Proposals (hereinafter "RFP") and can provide the services requested are encouraged to participate. The term "Vendor" is used as follows in this RFP: i) prior to award and contract of one company/firm to perform the work described in this RFP, any company/firm that engages in the proposal process is referred to as a Vendor and ii) once a company/firm is awarded and contracted to perform the work described in this RFP, they and they alone are referred to as the Vendor.

Through this RFP, the District is soliciting proposals for the services and equipment necessary to develop a new radio site for expansion of its public safety radio system that serves public safety and public service organizations operating in Umatilla and Morrow Counties, Oregon.

The integrator of that system has been contracted to provide, install, optimize, and make operation the radio-system equipment at the radio site to be referred to as "Ukiah" that is at the following location:

- Coordinates: 45° 08' 12" N 118° 55' 57.5" W
- Address: 102A W Despain St., Ukiah, OR

This location is privately held land, leased by its owner to the District.

This RFP is for the equipment and services required to prepare and develop the Ukiah radio site for the installation of the radio-system equipment. The following is a summary of the work involved in developing this radio site – details are included in subsequent sections

- Development of site drawings and completion of all services as required to successfully obtain all permits and land-use approvals for all work as described below

- Removal of an existing 40' monopole tower from its current location at the Boardman Fire Department site in Boardman, Oregon
    - This work is to include removal and disposal of the existing District-owned, inoperative microwave radio equipment and associated antennas that are installed at the Boardman Fire Department site
- Transportation of that 40' monopole tower to the site at Ukiah and installation of it there
    - This work is to include all materials and services to install a concrete tower foundation, install the tower, and install an ice bridge between the tower and Shelter
- Transportation of an existing 8'x8' telecommunications shelter from its current location at the Umatilla County Sheriff's Office in Pendleton, Oregon to the site at Ukiah and installation of it there
- Services and materials to safely install a four- sided, six-foot (height) chain link fence topped with three strands of barbed wire and equipped with a 16', two-section gate (facing Despain Street) around the radio station site
- Services to safely install
    - a concrete pad for District-provided outdoor generator to include underground conduit to the shelter – NOTE: It is expected that delivery of the generator will occur after completion of the scope of work described in this document
    - a utility-company-provided propane fuel tank at the site
- Preparation of the site as required to install the tower and shelter as described above to include removal of existing materials, grading the site, placement of landscaping fabric over all graded areas of the site, and placement of four inches of 5/8 minus gravel over the landscape fabric inside the fence (see below) and from the fence, through the fence gate, and to Despain Street
- Installation of site grounding in compliance with L3Harris grounding standards to the following site structures:
    - 40' monopole tower
    - 8'x8' radio site shelter
    - Standby generator pad
    - Liquid propane tank
    - Site fence including gate

1.3 Evaluation Criteria

Proposals will be evaluated and an award will be made to the responsive, responsible Vendor who complies with the requirements and scores the highest total on the evaluation criteria as weighted below:

2. Experience with Similar Projects / References: 20 Points
3. Compliance to Requirements: 35 points
4. Work Completion Schedule: 20 points
5. Cost: 25 Points

Vendors who submit the highest-ranked proposals may be invited to an interview. The number of Vendors invited to an interview may vary depending upon the number of proposals submitted. The District reserves the right to make a selection after review of the proposals without oral interviews; therefore, proposals should be submitted initially on the most favorable terms that the Vendor might propose.

1.4 General Instructions

This RFP includes a description of the scope of services, proposal requirements, and instructions for submitting your proposal. Failure to follow these instructions may result in rejection of your proposal.

Direct all inquiries regarding this RFP in writing to the Single Point of Contact (SPC) identified on the cover page of this RFP.

Do not contact other individuals on the District or in the Departments served by the UMRDD in regard to this RFP. Doing so may disqualify the Vendor from further participation. Information provided by anyone other than the SPC may be invalid and proposals which are submitted in accordance with such information may be declared non-responsive.

No oral interpretations shall be made to any proposer as to the meaning of any of the proposal documents. Every request for an interpretation shall be made in writing. Responses to such requests will be made by written addendum to this RFP, sent to all prospective proposers.

Failure of any proposer to receive any such addendum or interpretation shall not relieve the proposer from its obligation under its proposal as submitted.

If it becomes necessary to revise any part of this RFP, a written addendum will be issued. Any amendment to this RFP is valid only if it is in writing and issued by the SPC. No oral interpretations or answers shall bind the District unless confirmed by the District in writing.

All addenda for this RFP will be distributed via the District's website at www.umrdd.org. It is the Vendor's sole responsibility to monitor this website for possible addenda to this RFP. Failure of a Vendor to retrieve addenda from this site shall not relieve him/her of the requirements contained therein. Additionally, failure of Vendor to return a signed addendum, when required, may be cause for rejection of his/her proposal.

1.5 Nondiscrimination

The successful proposer agrees that in performing the work called for by this proposal and in securing and supplying materials, proposer will not discriminate against any person on the basis of race, color, religion, creed, political ideas, sex, age, marital status, physical or mental handicap, national origin, or ancestry unless the reasonable demands of employment are such that they cannot be met by a person with a particular physical or mental handicap.

1.6 Payment Terms

Vendor shall invoice the District the following percentages of their total cost upon completion of the following project milestones:

- Contract Execution: 30% of total costs
- Completion of scope of work and conditional approval by District, with allowance for development of punch-list with the District: 50%
- Completion of project punch-list items and final approval of site development work by the District: 20%

Vendor's invoice shall identify the milestone completed and the date of its completion. Vendor shall submit invoices to the SPC identified on the cover page of this RFP. The District will pay proper invoices within 30 days of submission.

2. Schedule

The following is the schedule for this RFP. Any change in the scheduled dates for events prior to and including the "Proposals Due" event will be advertised in the form of an addendum to this RFP. The schedule for the events of the evaluation, award, and contracting processes are approximate and may be adjusted without notice.

Event	Date	Time
RFP Release to UMRDD.org	Nov 10, 2022	n/a
MANDATORY Site Walks (Boardman FD, UCSO, and Ukiah) *	Nov 17, 2022 *	Starting at Boardman FD (see Section 3.3 for address) at 8:30am Pacific Time *
Questions / Clarifications Due	Nov 21, 2022	5:00pm Pacific Time
Answers to Question / Clarifications posted to UMRDD.org	Nov 28, 2022	5:00pm Pacific Time
Proposals Due	Dec 19, 2022	3:30pm Pacific Time
UMRDD Evaluation Periods (approximate)	Jan 6, 2023	3:30pm Pacific Time
Interviews (optional, approximate)	Jan 13, 2023	n/a
Intent To Award (approximate)	Jan 20, 2023	n/a
Contract Negotiations Complete, Start of Work **	Feb 3, 2023 **	n/a **

* *In case of inclement weather forecast, mandatory site walks may be rescheduled. Proposers are cautioned to check UMRDD.org or contact the District's SPC for most up to date schedule prior to travel.*

** *Work shall commence, weather permitting, per provisions outlined in Section 3.6.2.*

3. Scope of Work

The scope of work for the contract is as follows:

3.1 Current Site Conditions

The current conditions of the site at Ukiah are shown in the following image[1]:

The area of the site (for installation of the tower, shelter, etc.) is designated by the red "pin" icon. To its north is an electrical substation, to its east a fire station, and to its west a water reservoir tank.

3.2 Permitting and Land Use Approvals

Vendor shall be responsible for the development of site drawings and for completion of all services as required to successfully obtain all permits and land-use approvals for all work described in this RFP. Vendor shall also be responsible for obtaining all permits and land-use approvals for all work described in this RFP including submitting applications and ongoing interfacing with permitting/approval entities until such permits/approvals are received. Vendor shall not submit applications for permits or land use approval until prior written approval of the applications and plans is approved by the District's SPC.

[1] Source: https://goo.gl/maps/YPx4L69j8XF21J3Z6

The District shall be responsible for payment of any fees associated with obtaining permits and/or land use approval.

3.3 Work to Be Completed at Boardman Fire Department

From the site at the Boardman Fire Rescue District Station 81 (the "Boardman Fire Department" site, Coordinates: 45° 49′ 41″ N 119° 42′ 23″ W, Address: 300 SW Wilson Lane, Boardman, OR 97818), the Vendor shall disassemble and remove the monopole tower, currently installed microwave antenna and waveguide, any other currently attached radio antennas and cables, ice bridge and supports between the monopole tower and the Boardman Fire Department station. Vendor may retain and reuse portions of the ice bridge that is removed from the Boardman Fire Department for installation at Ukiah.

The Vendor shall remove the microwave antennas, waveguide and peripheral equipment and transport to the Vendor's storage facility for future resale or responsible disposal at the Vendor's discretion. Removal of waveguide shall include that which is both in the exterior and interior of the building. Vendor shall salvage any rectangular flanged waveguide connectors and store them for future resale or responsible disposal at the Vendor's discretion.

Vendor shall also remove and dispose of one 19″ rack of microwave radio equipment that is inside of the Boardman Fire Department.

The Vendor shall transport the tower to the Ukiah site for installation there as described below. The tower is constructed in two 20′ sections and it may be disassembled into those sections for transport so long as it is reassembled per manufacturer specifications during installation at Ukiah. It is expected that the Vendor shall schedule the removal and transport of the tower directly from Boardman FD to Ukiah. Should the Vendor need to temporarily store the tower at a facility of their choosing, the costs of such storage shall be included in their total project cost.

Upon removal of the monopole, Vendor shall leave the concrete footing as it is (including leaving in place any protruding bolts or other hardware or materials). Upon removal of the ice bridge and supports, Vendor shall remove any/all poles and below-ground concrete or other materials and shall fill-in any holes left by their removal.

A picture of the 40’ monopole as it is currently installed at the Boardman Fire Department is included below:

3.4 Work to Be Completed at Umatilla County Sheriff’s Office

From the site at the Umatilla County Sheriff’s Office (the “UCSO” site, Coordinates: 45° 40’ 26” N, 118° 50’ 40”W, Address: 4700 NW Pioneer Place, Pendleton, OR, 97801), the

Vendor shall remove the 8'x8' (x10' height) pre-fabricated concrete Shelter ("shelter") from the secure outdoor storage area directly east of the UCSO Jail facility and transport it to the Ukiah radio station site.
It is expected that the Vendor shall schedule the removal and transport of the shelter directly from UCSO to Ukiah. Should the Vendor need to temporarily store the shelter at a facility of their choosing, the costs of such storage shall be included in their total project cost.

3.5 Work to Be Completed at Ukiah Site

A conceptual/schematic drawing of the layout of the items to be installed at Ukiah is included in Exhibit A. It is to be used as a preliminary guide but final placement of items will be per agreement with the District.

3.5.1 Site Preparation and Soil Testing

The Vendor shall prepare the site as required to install the tower and shelter as described below. This shall include grading the site as necessary to install the concrete tower foundation, tower, and ice bridge between them. This shall also include removal of existing materials at the site which includes planting boxes and one concrete slab.

Vendor shall perform a soil test of the soil at the locations of the foundations for the tower, shelter, generator, and tank. Designs of the foundations for these items shall be based on the results of these soil tests.

3.5.2 40' Monopole Tower Installation

The Vendor shall install the concrete tower foundation, tower, and ice bridge between the tower and Shelter. Vendor may reuse portions of the ice bridges that were removed from the Boardman Fire Department and the UCSO facility to construct the ice bridge at Ukiah. A copy of the engineering drawings that accompanied the original installation of this monopole are included as Exhibit B.

3.5.3 8'x8' Shelter Installation

Vendor shall install a concrete shelter pad and step for the shelter. Vendor shall place and attach the shelter to the pad and connect commercial power from an on-site meter to the shelter via underground conduit.

3.5.4 Standby Generator Preparation

Vendor shall install the concrete standby generator pad and install underground conduit to the shelter. Conduit shall be sufficient to carry power and low-voltage cables. The standby generator is expected to be a Cummins C20N6, 20kW, 60Hz, Standby, Natural Gas/Propane Genset, 1800rpm engine generator. It shall be delivered and installed after the scope of work of this RFP is completed. The transfer switch is expected to be a

Cummins OTECB, OTEC Transfer Switch-Electronic Control: 225A switch and shall be mounted externally to the shelter in a NEMA enclosure.

3.5.5 Liquid Propane Tank Installation

Vendor shall install the concrete liquid propane tank pad and attach a liquid propane tank to the pad. The liquid propane tank will be provided by another party. Vendor shall assume the tank to have a capacity of 500 gal. Vendor shall install underground conduit for the liquid propane tank's supply line to the generator. The underground conduit shall also be capable carrying low-voltage cables. Vendor shall assume the tank will be provided and filled by the local utility provider.

3.5.6 Site Fence Installation

Vendor shall install a four-sided, 6-foot steel chain link fence with three strands of barbed wire attached to the top of the fence with brackets that angle to the area outside of the fence. The fence will include a 16-foot, two section gate that is to on the side of the fence that faces Despain Street. The total perimeter of the fence, and of the site itself, will be determined prior to the permitting process but Vendors may assume it will not be larger than 28' by 35'.

3.5.7 Landscape Fabric and Site Gravel Installation

Vendor shall cover area of site with landscaping fabric and shall install four inches of 5/8 minus gravel over the landscape fabric inside the fence and to the road on the side of the fence that borders the road. See Section 3.5.6 for information about the expected area of the site.

3.5.8 Site Grounding Installation

Vendor shall install grounding in compliance with the L3Harris Corporation's Site Grounding and Lightning Protection Guidelines (Document # AE/LZT 123 4618/1, Rev. D or later revision) to the following site structures:

- 40' monopole tower
- 8'x8' radio site shelter
- Standby generator pad
- Liquid propane tank
- Site fence including gate

The shelter to be transported from UCSO to Ukiah is equipped with a Master Ground Bus bar and connection to external ground shall be made to that bar. Vendors shall assume that no grounding capabilities or materials exist at the Ukiah site.

It will be Vendor's responsibility to be aware of the requirements of the L3Harris Corporation's Site Grounding and Lightning Protection Guidelines and to deliver all equipment and services required to comply with them. The District shall not be liable for any costs associated with Vendor's compliance to those requirements.

3.6 SITE WORKMANSHIP REQUIREMENTS

The Vendor shall complete all work according to the requirements of this Section.

3.6.1 Damages

Vendor shall be responsible for all damage to any property within the confines of District's property, UCSO's property, or Boardman's Property, or the property of the site owner of Ukiah as a result of an act or omission of the Vendor, its employees and/or its subcontractors. This includes, but is not limited, to equipment shelters, shelter grounds, shelter fencing, radio towers, radio and microwave equipment, power supplies and outlets, generators, transfer switches, fire suppression systems and alarm monitoring equipment. The District will repair/replace or contract for repair/replacement services to return to original condition and all costs will be borne by the Vendor.

3.6.2 Work Hours and Site Access

Vendors shall be aware that while the Ukiah site is in a residential area, roads leading to it may be restricted during winter months (typically November 01 through March 31) and excavation and concrete work may also be difficult during this time period. Vendor shall account for these facts in their project cost and schedule.

Unless otherwise allowed by the District's SPC via expressed written permission, work at all work sites shall occur only between the hours of 7:30am and 5:00pm, Pacific Time, on weekdays that are not District holidays. Parking will be made available at each work site.

Vendor shall follow the UMRDD site security and access procedures as they now exist or may be amended from time to time. The Vendor shall provide personal information including, but not limited to, personal mobile phone number and a unique employee identifying number such as last four digits of employee Social Security number for each employee working on the tasks covered by this RFP.

The Vendor shall not show, give tours, or invite third parties to view or visit the work sites included in this RFP or inspect any other UMRDD sites or equipment without the express written permission of the UMRDD SPC.

Vendor shall coordinate all site work in advance with the District SPC or their expressed designee. Vendor shall provide at least 24 hours advanced notice of work at any site and shall proceed with such work only after receiving approval from the District SPC.

3.6.3 Site Soil & Grounds Requirements

3.6.3.1 Vendor shall provide, install and maintain all necessary sedimentation control and erosion prevention per the approved permits and land use approvals.

3.6.3.2 Vendor shall install, for future use, pull strings in all conduits provided and installed.

3.6.3.3 Vendor shall provide and install appropriate termination at each end of all conduits.

3.6.3.4 High water levels may be encountered. Based on their pre-bid site walk observation of the site, Vendor shall include sufficient time in its proposed construction schedule to accommodate dewatering that may be required. Should high water levels be encountered during construction, Vendor shall consult with UMRDD SPC to agree on a construction plan for dewatering the site. The dewatering plan and compensation, if applicable, will be implemented by a change order.

3.6.3.5 Based upon compaction test results, if native soils are deemed unsuitable for structural compaction requirements, Vendor shall provide all required structural fill in order to meet the project requirements.

3.6.3.6 In the event that Vendor does not find the excavated materials suitable for grading of the project. Vendor may seek written approval from the District SPC to use imported fill.

3.6.3.7 Vendor shall use all efforts to make the best use of the native earth materials to accomplish excavation, backfilling and grading of the site. Vendor shall take care to schedule and execute the excavation, backfill and grading Work in a manner that manages the moisture content of otherwise-suitable native earth material to be optimum for compaction, including protecting and preserving excavated soil for future use. Vendor shall not use imported fill unless Vendor clearly demonstrates that native fill material is not suitable for use and Vendor has gained written authorization from the District SPC to use imported fill.

3.6.3.8 Failure by the Vendor to appropriately schedule and execute the Work and to protect, preserve, and properly handle earth materials suitable for fill shall not constitute sufficient grounds for the District to add imported fill into the Work through a change order.

3.6.3.9 Vendor shall not burn debris and slashes on site. Vendor shall not leave on site any debris and slash material removed during construction. Vendor shall dispose of removed material at an approved and suitable location.

3.6.3.10 Vendor shall ensure site compound is free of vegetation upon site completion.

3.6.3.11 Vendor shall provide all necessary materials, equipment, and labor required to repair any damage to the road that occurs as a result of construction activities, snow removal for site access, equipment transport, or materials delivery for the site.

3.6.3.12 Vendor shall inspect, and document with photos, all installed equipment and structures for damages and quality immediately upon final construction/installation or assembly and include all such photos in the Vendors weekly construction progress report.

3.6.3.13 Trench backfill and fill areas below foundations and structural areas require the fill to be tested in 6" lifts. Vendor shall coordinate with the Owner's inspector for these tests. If test are not performed the Vendor shall excavate and refill the area with the tester on site at the Vendor's expense.

3.6.3.14 Vendor shall excavate the tower foundation per the approved permits and land use approvals and dispose of all spoils at an approved disposal location.

3.6.3.15 Vendor shall provide and construct a new geo-fabric and rock compound per the approved permits and land use approvals and requirements described above.

3.6.3.16 Vendor shall restore all areas disturbed by construction activities described in this RFP, including structural, fill, rock and geo-fabric as needed the compound from the existing access road to/through the compound per the approved permits and land use approvals.

3.6.3.17 Vendor shall provide a minimum of 10 days notification to the District SPC prior to commencing ground disturbance.

3.6.4 Foundations And Equipment Support Requirements

3.6.4.1 Vendor shall provide and construct foundations as depicted on approved permits and land use applications.

3.6.4.2 Vendor shall cure foundations to the following strengths before use or equipment or structure installation.

- 3.6.4.2.1 Shelter Foundations – 100% of design strength
- 3.6.4.2.2 Tower Foundations – 80% of design strength
- 3.6.4.2.3 Propane Tank Foundations – 100% of design strength or a full 7-day cure
- 3.6.4.2.4 All other concrete under 2500 psi– 100% of design strength or a full 7-day cure
- 3.6.4.2.5 All other concrete over 2500 psi – 100% of design strength.

3.6.4.3 The Vendor shall conduct a break test on cured concrete, and shall report results of such test.

3.6.5 Tower, Ice Bridge, And Steel Installation Requirements

3.6.5.1 All exterior hardware must be galvanized or stainless steel per Spec. Manual requirements.

3.6.5.2 All Vendor supplied steel parts must be hot dipped galvanized.

3.6.5.3 All required field modifications to steel must be properly treated with cold galvanizing compound.

3.6.5.4 All exterior zip ties must be stainless steel. Protruding ends of all interior nylon zip ties must be flush cut. All interior zip ties must be black UV resistant nylon.

3.6.5.5 All exposed uni-strut and all-thread ends must be covered with appropriately sized rubber caps.

3.6.5.6 Vendor shall notify the District SPC 48 hours in advance of beginning construction of the tower and 24 hours in advance of completing construction of the tower to full height.

3.6.5.7 The completion of the installation of the tower and ice bridge shall require an inspection and approval by the District SPC. Vendor shall request this inspection through the District SPC at least one week in advance of desired inspection date.

3.6.5.8 Vendor shall ensure that all fasteners in the tower and ice bridge are properly installed and tightened.

3.6.6 Completion of Work Requirements

Final installation configuration shall be documented via as-built diagrams containing photographs and as-built diagrams.

Vendor shall remove all packing material and all excess construction materials upon completion of work at any location. When work occurs within any indoor facility, Vendor shall vacuum or sweep floors and shall leave a clean and orderly work area.

The outdoor areas of any site shall be clear of all scrap material, packing and packaging material, etc., so as to be clean and orderly.

Unless prior approval is received from the District SPC, Vendor shall pack and remove all tools from all work spaces at the completion of a workday. The District shall not be responsible for the loss or theft of any of Vendor's tools from any work site.

Failure to comply with these requirements will result in the District contracting a separate party to have the inside and/or outside cleanup work performed, and the cost of the cleanup will be deducted from the amount paid to the Vendor.

3.7 Services and Documentation Required For Project Management & Tracking

Vendor shall assign, identify, and maintain a Project Manager to coordinate the activities of Vendor's staff and subcontractors and to manage and control the project's performance, budget, schedule, and quality

At the end of each week in which work occurred, the Vendor shall provide to the District SPC a written summary of all work completed that week. An email shall suffice so long as it contains sufficient narrative and/or photographs to convey the work that was completed.

By the Friday prior to the week in which any work is expected to be completed, Vendor shall provide to the District SPC a written summary of all work scheduled for completion in the coming week. An email shall suffice so long as it contains sufficient narrative and/or photographs to convey the work that is scheduled.

3.8 Materials to be Supplied by The District and Third Parties

The District shall pay for any fees associated with obtaining permits and/or land use approvals.

The District will supply the 40' monopole tower currently located at the Boardman Fire Department site as well as the 8'x8'shelter currently located at the UCSO site.

After completion of the scope of work of this RFP, the District shall provide the generator and transfer switch. Likewise at a later day, the local utility provider shall fill the propane fuel tank.

Vendor shall be required to provide all other tools, service, personnel, and materials required to complete the work described in this RFP.

Installation of the radio equipment in the shelter and on the tower shall be covered under a separate contract and is not part of the scope of work of this RFP.

4. EXPERIENCE, LICENSES/CERTIFICATIONS, & INSURANCE

4.1 Required Experience & Licensure/Certifications

Vendor shall have at least three years of current experience in radio site deployment/installation work within the States of Oregon or Washington working on government and commercial radio site facilities operating licensed radio facilities.

Vendor shall have at least three years of current experience in tower and/or antenna maintenance and/or radio installation work within the States of Oregon or Washington working on government and commercial radio station facilities operating licensed microwave radio facilities.

In order to demonstrate they have the required experience, Vendors shall submit, as part of their proposal, a list of at least three (3) references from their current client listing that may be contacted by UMRDD as to the proposer's job performance on projects pertaining to communication site work with at least one of the references relating to work done within the State of Oregon. References should be for work completed after January 1, 2018. Vendors shall provide names, titles, organizations, telephone numbers, email and postal addresses for those references.

Vendor shall possess at the time of bid submittal and maintain throughout the work period a valid State of Oregon construction contractor's license. Vendors shall provide the District with a copy of their license upon District's request.

Vendor shall ensure that all employees are familiar with the hazards associated with exposure to radio-frequency (RF) radiation and the precautions that must be taken when working in a "controlled" RF environment as described in FCC Rules, Part 1, section 1.310, as the same exists or may be amended from time to time.

Vendor shall ensure that all of the work done shall be done by qualified and experienced personnel that are regular full-time employees of the Vendor or the Vendor's subcontractor. Use of part time or temporary employees, summer hires, helpers, trainees, or apprentices to perform on-site work is prohibited.

Vendor and all employees working on site shall comply with all applicable health and safety regulations including, but not limited to, rules and regulations of the District, the federal Occupational Safety and Health Administration (OSHA) and the State of Oregon Department of Labor and Industrial Relations.

Vendor and all employees shall comply at all times with standards regarding work activities on, in, and around towers and in areas of radio transmission facility including,

but not limited to, OSHA General Industry Standard 29 CFR 1910.268 sub-sections (g)(1), (n)(8), and (p).

4.2 Required Insurance

Vendor shall maintain insurance acceptable to the District in full force and effect throughout the term of this contract. The policy or policies of insurance maintained by the Vendor shall provide the following limit(s) and coverage(s):

Coverage Limits

Commercial General Liability
Minimum bodily injury and broad form (occurrence form) property damage combined single limits of liability of $1,000,000 combined single limit per occurrence for bodily injury and property damage, and $2,000,000 in the aggregate

Workers Compensation:
Minimum coverage of:
Statutory: $250,000 each accident
Liability: $100,000 disease per each employee
$500,000 disease policy limit

Automobile Insurance:
Minimum coverage of $1,000,000 per accident

Additional Insured Clauses

Each insurance policy required by this contract shall contain the following clause:

For Commercial General Liability coverage, "The Umatilla Morrow Radio & Data District is added as an additional insured as respects to operations performed for the Umatilla Morrow Radio & Data District. It is agreed that any insurance maintained by the Umatilla Morrow Radio & Data District will apply in excess of, and not contribute with, insurance provided by this policy."

The Vendor shall maintain the minimum insurance required in full compliance with the Oregon Insurance Code throughout the entire term of the contract, including extensions. The policy or policies of insurance maintained by the Vendor shall provide the limits and coverages specified herein.

The Vendor shall deposit with the District on or before the effective date of the contract, certificate(s) of insurance necessary to satisfy the District that the insurance provisions of this solicitation and the contract have been complied with and to keep such insurance in effect and the certificate(s) therefor on deposit with the District during the entire term of

the contract. Upon request by the District, Vendor shall furnish a copy of the policy or policies.

Failure of the Vendor to provide and keep in force such insurance shall be regarded as material default under the contract, entitling the District to exercise any or all of the remedies provided in the contract for a default of the Vendor.

The procuring of such required policy or policies of insurance shall not be construed to limit Vendor's liability or to fulfill the indemnification provisions and requirements of the contract. Notwithstanding said policy or policies of insurance, the Vendor shall be obliged for the full and total amount of any damage, injury, or loss caused by negligence or neglect connected with the contract.

5. PROPOSAL REQUIREMENTS

5.1 General Requirements

Proposals should follow the format and reference the sections listed in the Proposal Content and Format included in Section 5.7, below. Proposals must address all RFP requirements.

On or before the "Proposals Due" date and time listed in Section 2, each interested Vendor shall submit one original paper copy of the Proposal bearing the signature of the Vendor's authorized representative, three (3) printed paper copies, and one electronic media (such as thumb drive or CD) containing a full electronic version of Proposal, to the SPC at the address listed on the cover page of this RFP. Proposals shall not contain extensive artwork, unusual printing or other materials not essential to the utility and clarity of the Proposal.

Both written and electronic versions of the Proposal shall be hand-delivered or mailed in a single sealed envelope, package, or box, with the Vendor's name and the RFP number clearly visible on the outside of the package.

Proposals will be accepted, prior to the "Proposal Due" date and time, during the District's regular business hours, Monday – Friday from 8:00 am to 5:00 pm Pacific Time, except during District holidays and other times when the District is closed.
It is sole responsibility of the proposer to submit their Proposal before the closing hour and date. Late proposals will not be considered and will be returned unopened to the sender.

All proposals must be valid for a period of 180 days after opening.

5.2 Opening of Proposals

Proposals will be publicly opened in the District office, reviewed, and recorded immediately following the submission deadline. Proposals received will not be available for inspection until after the evaluation process has been completed and the Notice of Intent to Award is issued in accordance with OAR 125-247-0630. However, District will record and make available the identity of all Vendors after Opening.

5.3. Public Records

All Proposals are a public record and are subject to public inspection or disclosure after District issues the Notice of the Intent to Award.

IF VENDOR BELIEVES THAT ANY INFORMATION INCLUDED IN ITS PROPOSAL IS EXEMPT FROM DISCLOSURE PURSUANT TO OREGON PUBLIC RECORDS LAW AND VENDOR FAILS TO IDENTIFY THE INFORMATION IN THE PROPOSAL THAT VENDOR CLAIMS IS EXEMPT FROM DISCLOSURE UNDER STATE LAW, VENDOR HAS WAIVED ANY FUTURE CLAIM OF NON-DISCLOSURE OF THAT INFORMATION.

5.4. Authorized Representative

A representative authorized to bind Vendor shall sign the Proposal. Failure of the authorized representative to sign the Proposal may subject the Proposal to rejection by District.

5.5. Proposal Rejection

District may reject a Proposal for any of the following reasons:

- Vendor fails to substantially comply with all prescribed RFP procedures and requirements, including but not limited to the requirement that Vendor's authorized representative sign the Proposal in ink.
- Vendor fails to meet the responsibility requirements of ORS 279B.110.
- Vendor makes any contact regarding this RFP with District representatives such as District employees or officials other than the SPC or those the SPC authorizes, or inappropriate contact with the SPC.
- Vendor attempts to inappropriately influence a member of the Evaluation Committee.
- Proposal is conditioned on District's acceptance of any other terms and conditions or rights to negotiate any alternative terms and conditions that are not reasonably related to those expressly authorized for negotiation in the RFP or Addenda.

5.6. Solicitation Protests

5.6.1. Protests to RFP

Any Proposer may submit a written protest of anything contained in this RFP, including but not limited to, the RFP process, Specifications, Scope of Work, and the included Terms. This is Vendor's only opportunity to protest the provisions and terms of the RFP, except that Vendor may protest Addenda which will be made a part of this RFP as set forth in the Addendum.

5.6.2. Protests to Addenda

Any Proposer may submit a written protest of anything contained in the respective Addendum. Protests to Addenda, if issued, shall be submitted by the date/time specified in the respective Addendum, or within three (3) days of the issuance of the Addendum if no date is specified, or they will not be considered. Protests of matters not added or modified by the respective Addendum will not be considered.

5.6.3. Protests Shall

- Be delivered to the SPC via email or hard copy
- Reference the RFP number
- Identify prospective Vendor's name and contact information
- Be sent by an authorized representative
- State the reason for the protest, including:
    - The grounds that demonstrate how the procurement process is contrary to law, unnecessarily restrictive, legally flawed, or improperly specifies a brand name; and
    - Evidence or documentation that supports the grounds on which the protest is based
- State the proposed changes to the RFP provisions or other relief sought

Protests to the RFP shall be received by the due date and time identified in the Schedule.

Protests to Addenda shall be received by the due date identified in the respective Addendum.

5.6.4. Protest Response

District will respond in a timely manner to all protests submitted by the due date and time listed in the Schedule. Protests that are not received in time or do not include the required information may not be considered.

5.7. Proposal Contents and Format

5.7.1 Cover Letter and Introduction

Vendors shall provide a cover letter, signed by an individual authorized to commit the company's resources to this project. Vendors may also include a brief background of the company and its business.

5.7.2 Response to Terms and Conditions

Vendors shall indicate its agreement to the specified terms and conditions.

5.7.3 Response to Statement of Work

Vendors shall describe how they will meet the requirements provided in Section 3 of this RFP. Vendors shall provide a schedule that shows their expected time to complete the activities described in Section 3 of this RFP (a GANTT-chart is the preferred format). Additional information or clarification of responses to the specifications shall be included in this section as notes.

5.7.4 Prior Experience / References

Vendors shall provide information for least three (3) references as required by Section 4.1, above.

5.7.5 Price Proposal

Vendors shall provide one amount for the total project cost and shall also provide individual/separate breakouts for the for labor, materials, and services. Pricing of all proposals must be valid for a period of 180 days after opening.

5.7.6 Responses to Additional Requirements

Vendors shall provide responses to the requirements of Section 5.8, Additional Requirements.

5.8 Additional Requirements

5.8.1 Each proposal must contain a statement as to whether the proposer is a resident Vendor as defined by ORS 279A.120.

5.8.2 All proposals must be accompanied by a bid bond on a surety company authorized to do business in the State of Oregon in the amount of 5 percent of the total bid price, payable to Umatilla Morrow Radio & Data District, conditioned upon the successful Vendor entering into a contract with the District for the proposed equipment and services. A certified or cashier's check or letter of credit issued by an insured institution as defined in ORS 706.008, in the same amount may also be submitted. In case of failure or refusal of the successful Vendor to enter into a contract, the bond or security submitted with the bid may be forfeited as liquidated damages because of such failure or default.

5.8.3 Upon award of the contract, the Vendor will be required to post, at its expense, a performance bond and a payment bond, as required by ORS 279C.380. The bonds shall be filed with the District, through the contact named in this document, no later than 10 days after the contract is awarded and must be for the amount of the contract. The bond shall be executed by a surety company authorized to do business in the State of Oregon. Umatilla Morrow Radio & Data District shall be payee.

5.8.4 No proposal shall be received or considered unless the proposer is licensed with the Construction Vendors Board and the proposer cannot be on the list established by the Construction Vendors Board for those Vendors, or the subcontractors, not to be considered qualified to hold or to participate in a public contract for a public improvement.

5.8.5 No bid will be received or considered unless the bid contains a statement by the proposer as a part of its proposal that the proposer will comply with the provisions of the applicable prevailing wage rate and law.

5.8.6 This project is subject to Oregon state prevailing wage rates. Vendor covenants and agrees to comply with the provisions of ORS 279C.830, including the payment of the applicable prevailing rate wage and the posting of a public works bond pursuant to ORS 279C.836. The Vendor shall pay the existing rate of wage which may be paid to workers in each trade or occupation required for such public work employed in the performance of the contract either by the Vendor or their subcontractors or other person or doing or contracting to do the whole or any part of the contemplated by the contract, and such workers shall be paid not less than the specified minimum hourly rate of wage as set forth in the "Prevailing Wage Rates." The prevailing wages in effect at the time of the advertisement and issuance of this request for proposals are attached.

5.8.7 The work under this RFP will take place in the counties of Umatilla and Morrow in Oregon, BOLI Region 12, and is subject to the "PREVAILING WAGE RATES for Public Works Contracts in Oregon" (currently dated July 1, 2022) as updated/amended through the Effective Date of the contract. Current BOLI wage rates are available on line at: https://www.oregon.gov/boli/employers/Pages/prevailing-wage-rates.aspx

Exhibit A

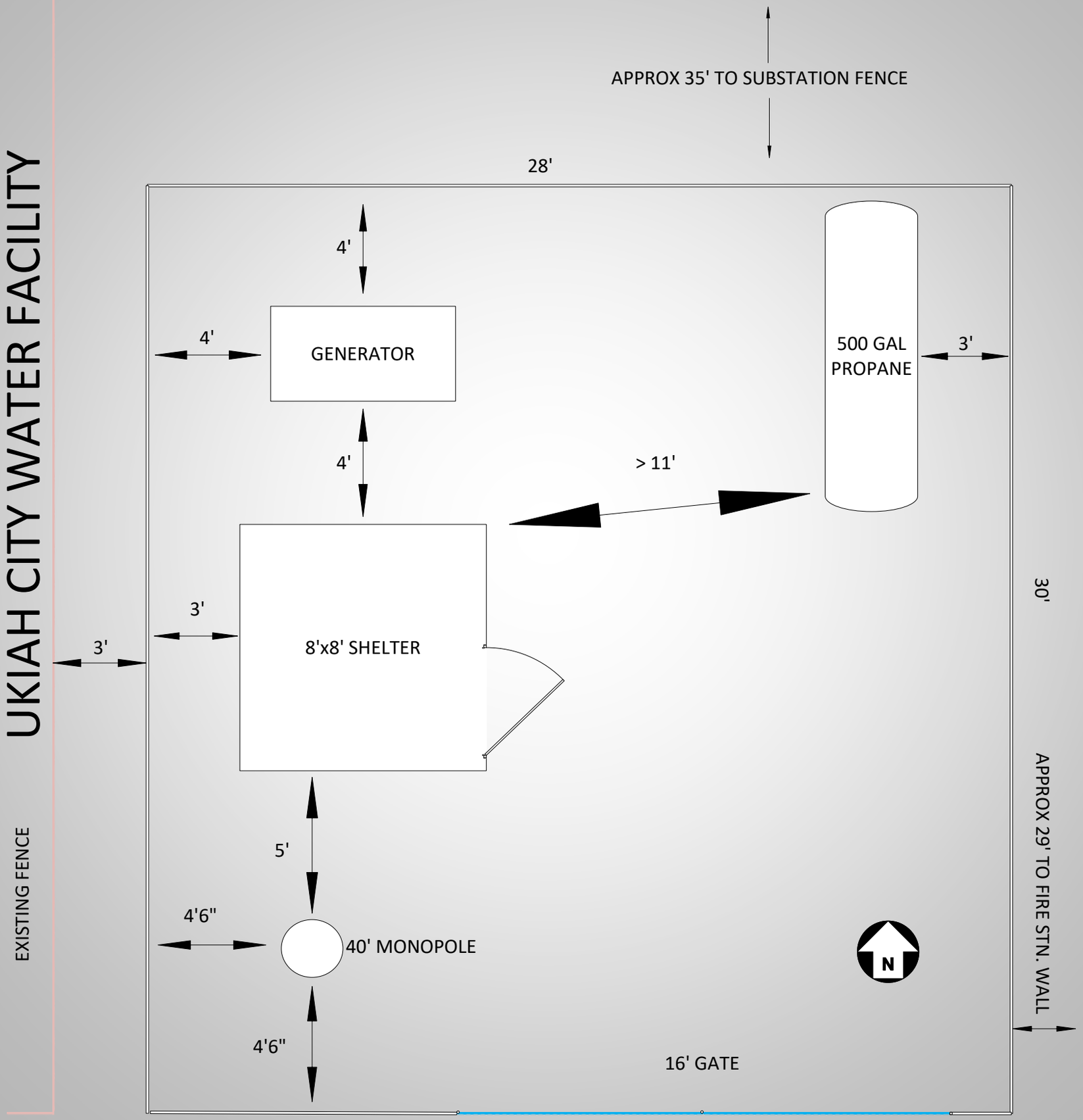
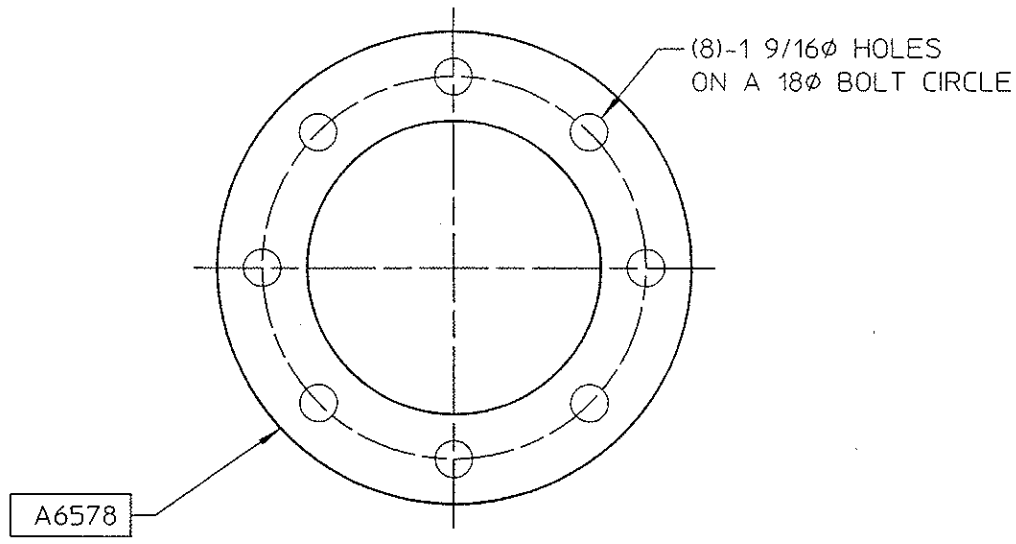
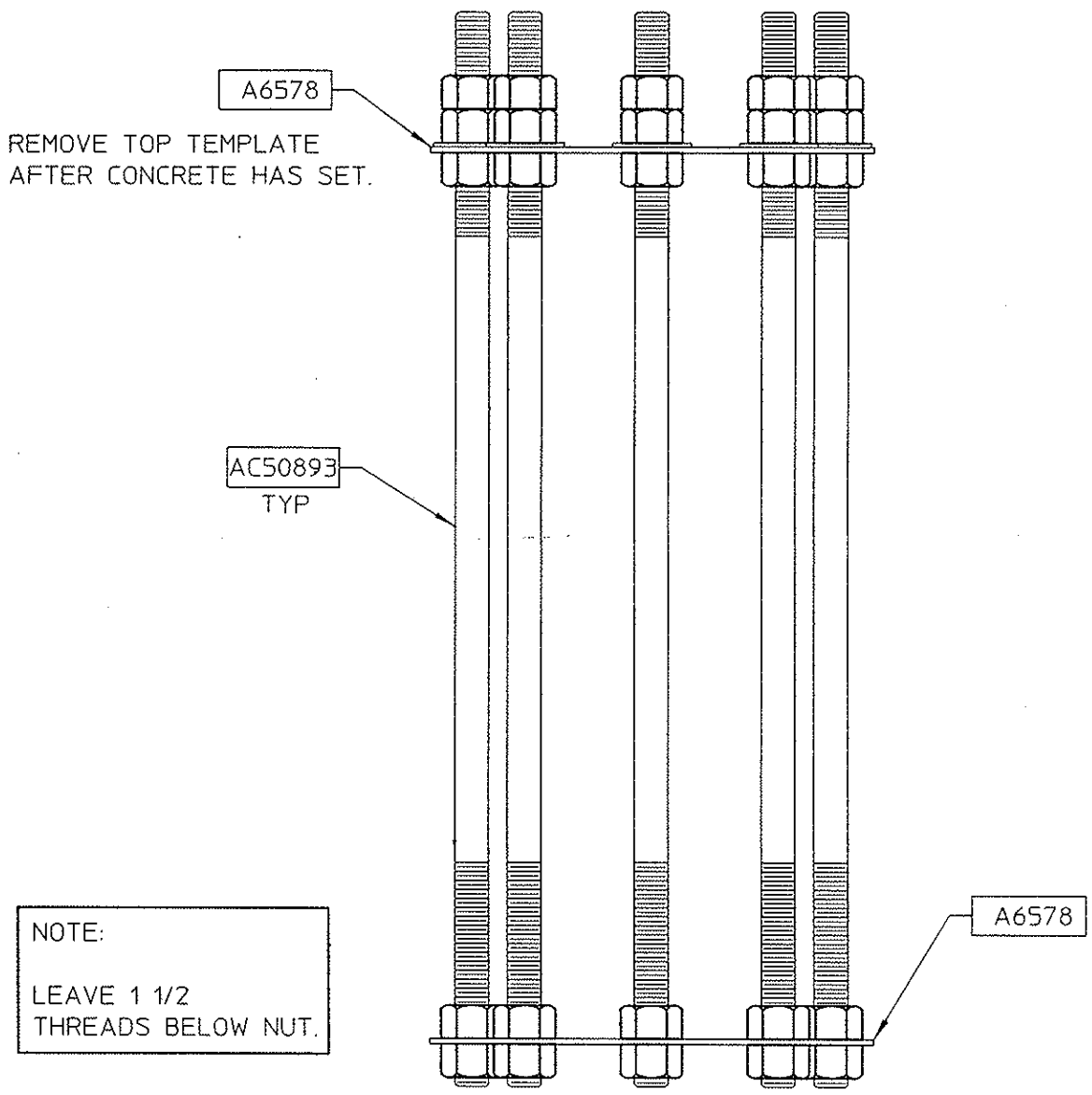

UKIAH CITY WATER FACILITY
APPROX 35' TO SUBSTATION FENCE
28'
4'
4'
GENERATOR
500 GAL
PROPANE
3'
4'
> 11'
3'
3'
8'x8' SHELTER
30'
5'
4'6"
40' MONOPOLE
N
APPROX 29' TO FIRE STN. WALL
4'6"
16' GATE
EXISTING FENCE

Exhibit B

PARTS LIST		
MARK	DESCRIPTION	QTY
AC50893	ANCHOR BOLT KIT	8
A6578	TEMPLATE	2





NOTE:

LEAVE 1 1/2
THREADS BELOW NUT.

ANCHOR BOLT ASSEMBLY

ASSEMBLY NO. 31-91162 - MONOPOLE

ASSEMBLY NO. 104213

DWG. NO. B-104213

SHEET 1 OF 1

1 1/2"ø X 48" ANCHOR BOLT ASSEMBLY

valmont MICROFLECT
3575 25TH STREET SE, SALEM, OR 97302
MAIN: (503)363-9267 FAX: (503)316-2040

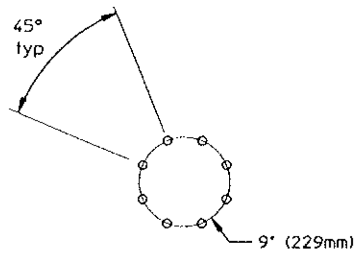
BY	JM
CK	SM
DATE	20APR99
S.O.	

REGISTERED PROFESSIONAL ENGINEER
JEFFREY E. GRASSMAN
No. 63982
Exp 7/30/03
STATE OF CALIFORNIA

REV	DESCRIPTION	DATE	BY/CK

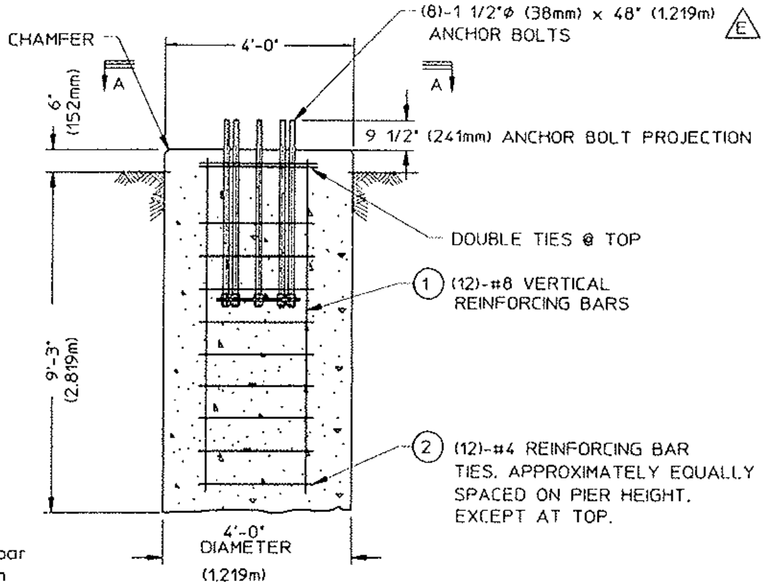
REVISIONS

NOV 0 1 2002



ANCHOR BOLT DETAIL

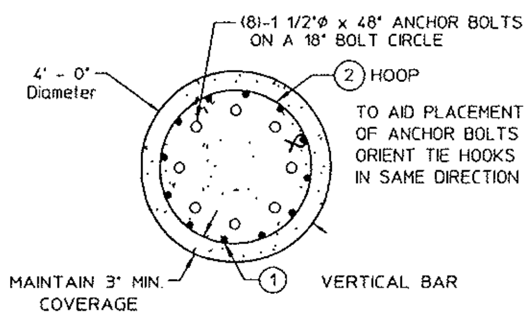
NO SCALE



* NOTE:
Adjust vertical rebar lengths to maintain 3" (76mm) concrete cover. See lap splice chart.

PIER SECTION

NTS



SECTION A-A

NTS

FOUNDATION NOTES:

1. THIS MONOPOLE FOOTING DESIGN IS BASED ON THE EIA "NORMAL SOIL" VALUE OF 400 PSF/FT FOR LATERAL SUPPORT IF THIS DESIGN IS USED, IT IS THE CUSTOMER'S RESPONSIBILITY TO VERIFY ACTUAL SOIL MEETS OR EXCEEDS THESE VALUES
2. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE STRENGTH OF 3000 PSI (20.7 MPa) @ 28 DAYS AND SHALL CONFORM TO THE ACI STANDARD BUILDING CODE FOR REINFORCED CONCRETE. ACI 318, THE LATEST EDITION
3. (C) ALL REINFORCING SHALL BE INTERMEDIATE GRADE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 (60,000 PSI (414 MPa) MIN. YIELD) AND SHALLBE PROVIDED BY THE FOUNDATION CONTRACTOR.
4. POUR CONCRETE AGAINST UNDISTURBED SOIL AND FORM PORTION ABOVE GROUND ONLY.
5. THE TOP OF THE PIER MUST BE LEVEL AND TROWELED SMOOTH
6. ANCHOR BOLTS TO BE ASTM F1554 GR 55
7. UNDERGROUND UTILITIES SHOULD BE LOCATED PRIOR TO EXCAVATION.
8. DESIGN BASED ON THE FOLLOWING LOADS: MAXIMUM OVERTURNING MOMENT AT BASE = 77.9 FT-KIPS (106 kN-m) ACUMULATIVE SHEAR AT BASE = 4.00 KIPS (17.8 kN) TOTAL WEIGHT = 2.33 KIPS (10.4 kN)
9. ESTIMATED CONCRETE VOLUME = 4.5 CU. YARDS (3.441 m)3
10. DRY PACKING PROCEDURES: MIX 2 PARTS SAND, ONE PART CEMENT, AND ADD JUST ENOUGH WATER TO ALLOW MOLDING A SHAPE BY HAND. RESTRICT THE WATER CONTENT TO A MINIMUM (THIS MINIMIZES THE POSSIBILITY OF SHRINKAGE WHEN THE MORTER, DRY-MIXED FOR MAXIMUM DENSITY AND STRENGTH, IS PACKED IN PLACE.) THE PACKING SHALL BE DONE BY HAND, RAMMING WITH BARS OR CAULKING TOOLS, OR A COMBINATION THEREOF

Rebar Lap Splice

Rebar Size (DIA. mm)	Rebar Grade	Specified Concrete Strength	Overlap (inches) Vert	Bottom Horiz	Top Horiz
#3 (9.5mm)	60	3000psi (20.7 MPa)	15 (381mm)	15 (381mm)	21 (533mm)
#4 (12.7mm)	60	3000psi (20.7 MPa)	20 (508mm)	20 (508mm)	29 (737mm)
#5 (15.9mm)	60	3000psi (20.7 MPa)	26 (660mm)	26 (660mm)	36 (914mm)
#6 (19.1mm)	60	3000psi (20.7 MPa)	33 (838mm)	33 (838mm)	46 (1.168m)
#7 (22.2mm)	60	3000psi (20.7 MPa)	45 (1.143m)	45 (1.143m)	62 (1.575m)
#8 (25.4mm)	60	3000psi (20.7 MPa)	59 (1.499m)	59 (1.499m)	82 (2.083m)
#9 (28.6mm)	60	3000psi (20.7 MPa)	74 (1.880m)	74 (1.880m)	104(2.642m)
#10 (31.8mm)	60	3000psi (20.7 MPa)	95 (2.413m)	95 (2.413m)	132(3.353m)
#11 (34.9mm)	60	3000psi (20.7 MPa)	116(2.946m)	116(2.946m)	163(4.140m)

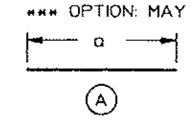
Splicing is an alternative to specified material listed in rebar schedule.

REINFORCEMENT STEEL SCHEDULE

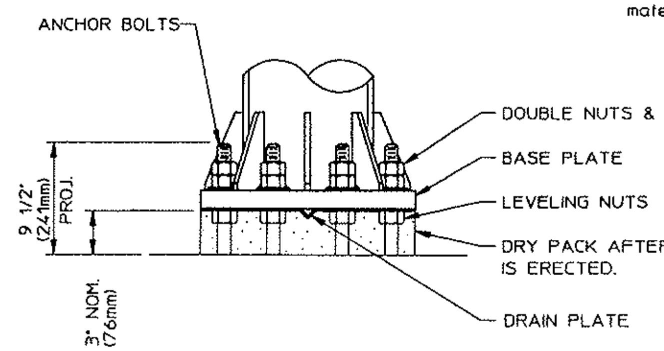
	Sym	Type	Rebar Size	Rebar Spacing	Dimensions a	b	c	d	(10db)	Weight (lbs)	Qty
	1	A	#8	———	9'-3" (2.819m)	———	———	———	———	296 (135kg)	12
***	2	F	#4	EQUAL	3'-6" (1.067m)	———	———	2" (51mm)	5" (127mm)	96 (44kg)	12

TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION = 392# (179kg)

*** OPTION: MAY USE #4 SPIRAL @ 12" WITH 1 1/2 EXTRA TURN TOP & BOTTOM.



ANCHOR BOLT
PRODUCT NUMBER 31-91162



DRAIN PLATE INSTALLATION

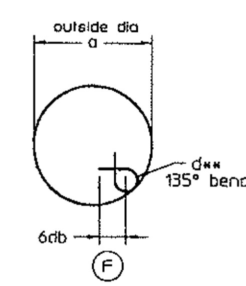
EXTREME CARE SHOULD BE TAKEN TO ASSURE THAT ALL LEVELING NUTS ARE LEVEL WITH RESPECT TO EACH OTHER PRIOR TO ERECTION OF THE TOWER

Grade 60 Rebar

Ref. LB2826

Size (mm)	ASK #	lb/ft (kg/m)	10db	d*	d**
#3 (9.5mm)	11-97203	0.38 (0.566)	———	2 1/4" (57.15mm)	1 1/2" (38mm)
#4 (12.7mm)	11-97204	0.67 (0.997)	5" (127mm)	3" (76mm)	2" (51mm)
#5 (15.9mm)	11-97205	1.04 (1.548)	———	3 3/4" (95mm)	2 1/2" (64mm)
#6 (19.1mm)	11-97200	1.50 (2.232)	———	4 1/2" (114mm)	4 1/2" (114mm)
#7 (22.2mm)	11-97207	2.04 (3.036)	———	5 1/4" (133mm)	5 1/4" (133mm)
#8 (25.4mm)	11-97208	2.67 (3.973)	———	6" (152mm)	6" (152mm)
#9 (28.7mm)	11-97209	3.40 (5.060)	———	9 1/2" (241mm)	———
#10 (32.3mm)	11-97210	4.30 (6.400)	———	10 3/4" (273mm)	———
#11 (35.8mm)	11-97211	5.31 (7.902)	———	12" (305mm)	———

* Refers to ACI standard hook detail chart
** Refers to ACI stirrup hook detail chart



DRILLED PIER FOUNDATION
MP20 (6.096m), MP30 (9.144m) &
MP40 (12.192m) MONOPOLES

VALMONT MICROFLECT
3575 25TH STREET SE, SALEM, OR 97302
MAIN: (503)363-9267 FAX: (503)316-2040

BY SJ	CK MB	C-75066	
DATE	7NOV89		
S.O.		SHEET: 1 OF 1	

REGISTERED PROFESSIONAL ENGINEER JEFFREY E. GRASSMAN No. 63980 STATE OF CALIFORNIA

MONOPOLE WEIGHT = 2700 LBS

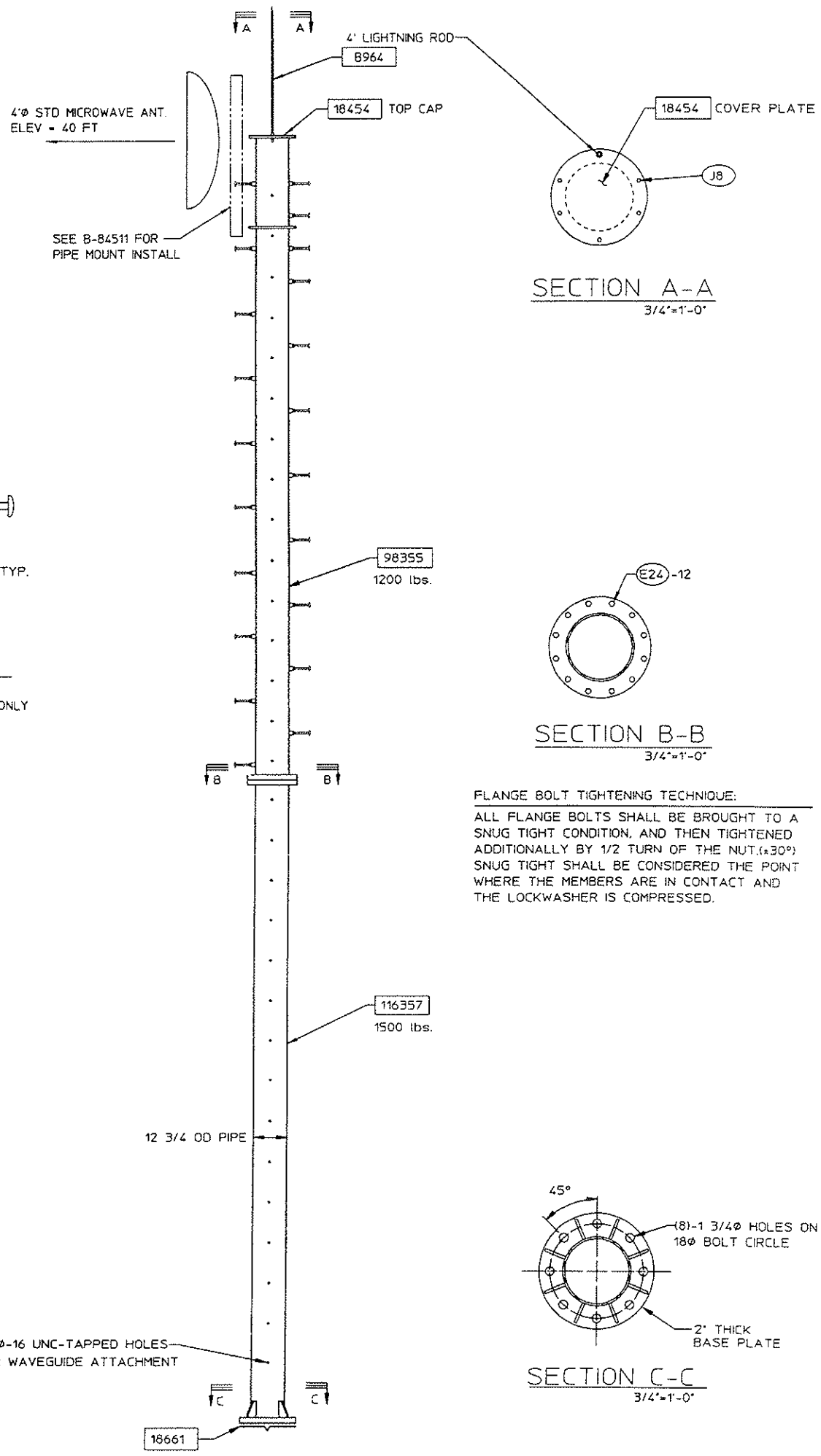
PARTS LIST

MARK	DESCRIPTION	QTY
116357	MP40 BASE WELD	1
98355	MP40 TOP WELD	1
18454	COVER PLATE	1
18661	DRAIN PLATE	1

HARDWARE LIST

SYM	QTY	DESCRIPTION
J8	4	5/8ø x 2 G5 BLT ASS'Y
S8	21	5/8ø STEPBOLT ASS'Y
E24	12	1"ø x 6 A325 ASS'Y

ACCESSORIES:
31-91162 ANCHOR BOLT ASSEMBLY
31-92084 PIPE MOUNT (4 1/2"OD X 5')
31-B964 LIGHTNING ROD (5/8"ø X 4')
31-82222 WAVEGUIDE BRIDGE (12" X 20')
31-81385 SAFETY CLIMB HARNESS



STEP BOLT INSTALLATION

STEPBOLTS ARE PROVIDED
FOR THE UPPER 20' SECTION ONLY

SECTION A-A

3/4"=1'-0"

SECTION B-B

3/4"=1'-0"

FLANGE BOLT TIGHTENING TECHNIQUE:

ALL FLANGE BOLTS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION, AND THEN TIGHTENED ADDITIONALLY BY 1/2 TURN OF THE NUT.(±30°) SNUG TIGHT SHALL BE CONSIDERED THE POINT WHERE THE MEMBERS ARE IN CONTACT AND THE LOCKWASHER IS COMPRESSED.

REFERENCE DRAWINGS:

MONOPOLE FOUNDATION.....C-75066
SLAB FOUNDATION OPTION.....D-76652
ANCHOR BOLT ASS'Y.....B-104213
PIPE MOUNT ERECTION.....B-84511
WAVEGUIDE BRIDGE INSTALL.....B-102714

SECTION C-C

3/4"=1'-0"

MONOPOLE ELEVATION

3/8"=1'-0"

REGISTERED PROFESSIONAL ENGINEER
JEFFREY E. GRASSMAN
No. 62982
Exp 12/30
CIVIL
STATE OF CALIFORNIA
NOV 0 1 2002

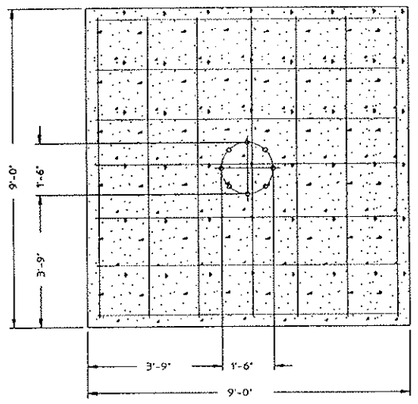
REV	DESCRIPTION	DATE	BY/CK

S.O. 16038-02 | SHT. 1 OF 1 | C-116356

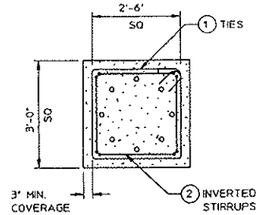
DATE 24OCT02 | BY RM | CK RS

valmont MICROFLECT
3575 25TH STREET SE, SALEM, OR 97302
PHONE (503)363-9267 FAX (503)376-2040

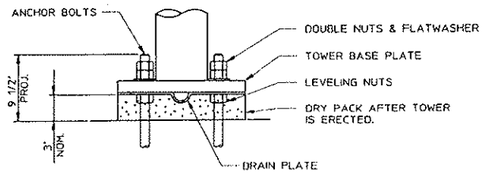
40 FT MONOPOLE INSTALLATION
ADCOMM ENGINEERING
SITE: BOARDMAN FIRE STATION



SECTION A-A



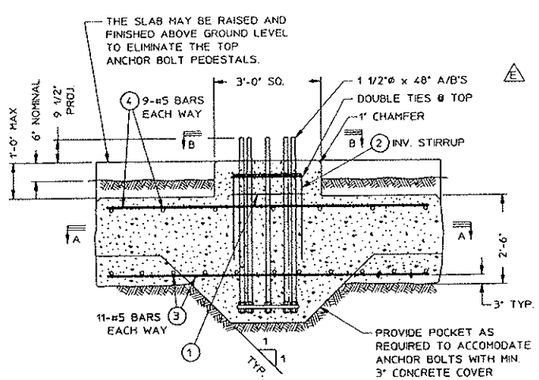
SECTION B-B
NO SCALE



DRAIN PLATE INSTALLATION

N.T.S.

EXTREME CARE SHOULD BE TAKEN TO ASSURE THAT ALL LEVELING NUTS ARE LEVEL WITH RESPECT TO EACH OTHER PRIOR TO ERECTION OF THE TOWER



ELEVATION
ALTERNATE FOOTING

GENERAL NOTES:

1. Prior to excavation, check the area for underground facilities.
2. All reinforcing shall be intermediate grade deformed bars conforming to ASTM A615 Grade 60 (60,000 psi min. yield) and shall be provided by the foundation contractor.
3. All concrete shall have a minimum ultimate compressive strength of 3,000 psi @ 28 days. The requirement for the concrete shall be as given in the ACI "Building Code Requirements for Reinforced Concrete", ACI 318, the latest edition.
4. Concrete shall be placed against undisturbed soil to the depth indicated on the foundation drawing. The portion above grade shall be formed. If an area is excavated beyond the limits shown, this volume shall be filled with concrete or formed. After the forms are removed, the excess excavation shall be replaced and compacted.
5. Trowel top of foundation smooth.
6. Concrete is assumed to weigh 150 pcf.
7. Dry Packing Procedures: Mix 2 parts sand, one part cement, and add just enough water to allow molding a shape by hand. Restrict the water content to a minimum . (This minimizes the possibility of shrinkage when the mortar, dry-mixed for maximun density and strength, is packed in place.) The packing shall be done by hand, ramming with bars or caulking tools, or a combination thereof.
8. Estimated concrete volume = 8.0 cu. yards.
9. Design based on the following loads:

   Overturning Moment = 77.9 k-ft. (Overturning Safety Factor = 1.60)

   Total Shear = 4.00 kips Max. Toe Bearing Pressure = 1400 psf

   Total Weight = 2.33 kips

10. This foundation design is based on EIA "Normal" soil, which assumes a net allowable bearing pressure of 4000 psf. If this design is used it is the customer's responsibility to verify actual soil meets or exceeds these values.

Grade 60 Rebar

Ref. LB2026

Size	ASK #	Wt/ft	10db	d*	d**
#3	11-97203	0.38	------	2 1/4"	1 1/2"
#4	11-97204	0.67	5"	3"	2"
#5	11-97205	1.04	------	3 3/4"	2 1/2"
#6	11-97200	1.50	------	4 1/2"	4 1/2"
#7	11-97207	2.04	------	5 1/4"	5 1/4"
#8	11-97208	2.67	------	6"	6"
#9	11-97209	3.40	------	9 1/2"	------
#10	11-97210	4.30	------	10 3/4"	------
#11	11-97211	5.31	------	12"	------

* Refers to ACI standard hook detail chart
** Refers to ACI stirrup hook detail chart

Rebar Lap Splice

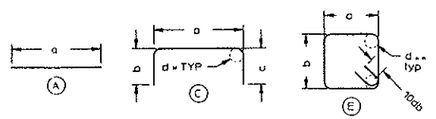
(Uncoated rebar, normal wt. concrete) ACI 318-95

Rebar Size	Rebar Grade	Specified Concrete Strength	Overlap (inches) Vert	Bottom Horiz	Top Horiz
#3	60	3000 psi	22	22	28
#4	60	3000 psi	29	29	37
#5	60	3000 psi	36	36	47
#6	60	3000 psi	43	43	56
#7	60	3000 psi	63	63	81
#8	60	3000 psi	72	72	93
#9	60	3000 psi	81	81	105
#10	60	3000 psi	91	91	118
#11	60	3000 psi	101	101	131

Splicing is an alternative to specified material listed in rebar schedule.

REINFORCEMENT STEEL SCHEDULE

	Sym	Type	Rebar Size	Rebar Spacing	Dimensions A	B	C	d	(10db)	Weight (lbs)	Qty
	1	E	#4	EQUAL	2'-6"	2'-6"	———	2"	5"	22#	3
	2	C	#5	———	2'-3 1/2"	2'-7"	2'-7"	4 1/2"	———	31#	4
BOTTOM STEEL	3	A	#5	10 1/4"	8'-6"	———	———	———	———	194#	22
TOP STEEL	4	A	#5	12 3/4"	8'-6"	———	———	———	———	160#	18
TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION =										407#	



REGISTERED PROFESSIONAL ENGINEER
JEFFREY E. GRAESSLIN
No. 63942
Exp 6/30/02
STATE OF CALIFORNIA
NOV 0 2002

REV	DESCRIPTION	DATE	BY/CK
1	REVISED REACTIONS, REBAR	6JAN02	JG/AJ
2	ADDED NUTS TO ELEVATION VIEW	22APR99	CD/GS
3	UPDATED 1995 ACI SPLICE TABLE TRANSLATED TO MET	22MAY96	TK/DH
4	ADDED DRAWING NOTE #10	18MAY94	BH/TK
E	ANCHOR BOLTS WERE 60"	8AUG93	JM/DB
D	CHANGED GRDH "C" SIZE TO "D"	27OCT92	GS/DB
C	REVISED REBAR CALLOUT	30JAN92	PS/AH
B	REVISED PER NEW ANALYSIS	22NOV91	TK/AS
A	RELEASED ITEM 1	19JAN90	MS/DB

SLAB FOUNDATION
MP20, MP30, AND MP40
MONOPOLES

MICROFLECT
3575 25TH STREET S.E.
SALEM,OR 97302
(503)363-9267 TWX 510-599-0107

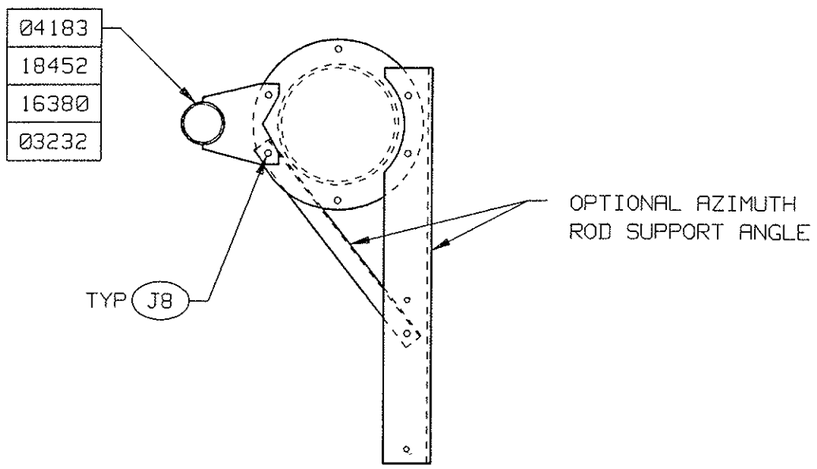
BY MG	CK DB	D-76652	
DATE 28JUN90			
S.O.		SHEET: 1 OF 1	

PARTS LIST

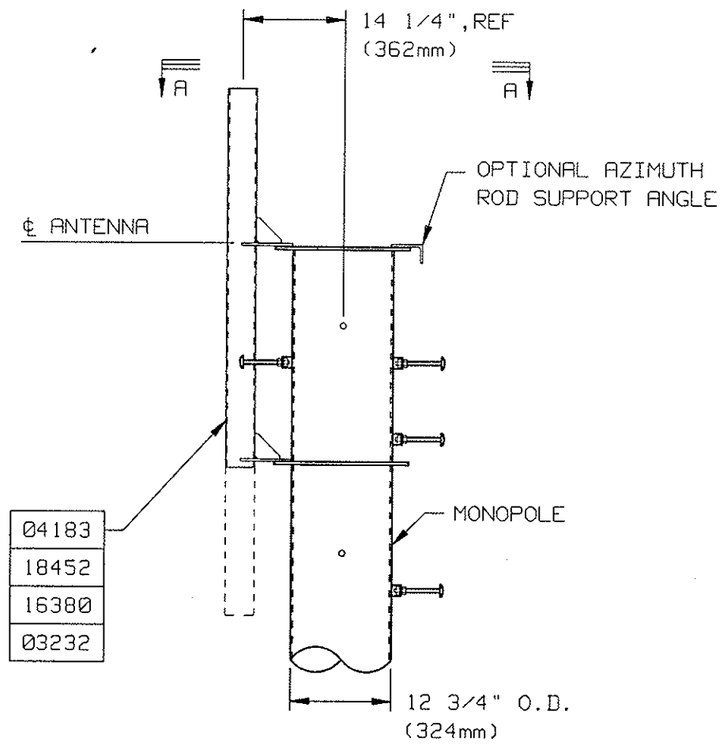
MARK	REQ'D	
04183	1	4 1/2 OD x 100" (114mm O.D. x 2.540m)
18452	1	4 1/2 OD x 60" (114mm O.D. x 1.524m)
16380	1	2 7/8 OD x 60" (73mm O.D. x 1.524m)
03232	1	2 3/8 OD x 60" (60mm O.D. x 1.524m)

HARDWARE LIST

SYM.	REQ'D	DESCRIPTION
J8	4	5/8 ø x 2 G5 ASS'Y



PLAN VIEW
SECTION A-A
SCALE: 3/4" = 1'-0"



ELEVATION

NOTES:

THE ANTENNA CENTERLINE IS AT THE TOP OF THE MONOPOLE AND THE ANTENNA MOUNT CAN BE INSTALLED IN 22 1/2° INCREMENTS AROUND THE POLE PROVIDING 360° MOUNTING CAPABILITIES

PRODUCT #31-92083 - 4 1/2 O.D. x 100" (114mm O.D. x 2.540m)
PRODUCT #31-92084 - 4 1/2 O.D. x 60" (114mm O.D. x 1.524m)
PRODUCT #31-92085 - 2 7/8 O.D. x 60" (73mm O.D. x 1.524m)
PRODUCT #31-92086 - 2 3/8 O.D. x 60" (60mm x 1.524m)

REVISIONS

REV	DESCRIPTION	DATE	BY/CK
A	ADDED METRIC DIMENSIONS	11APR94	DP/RS

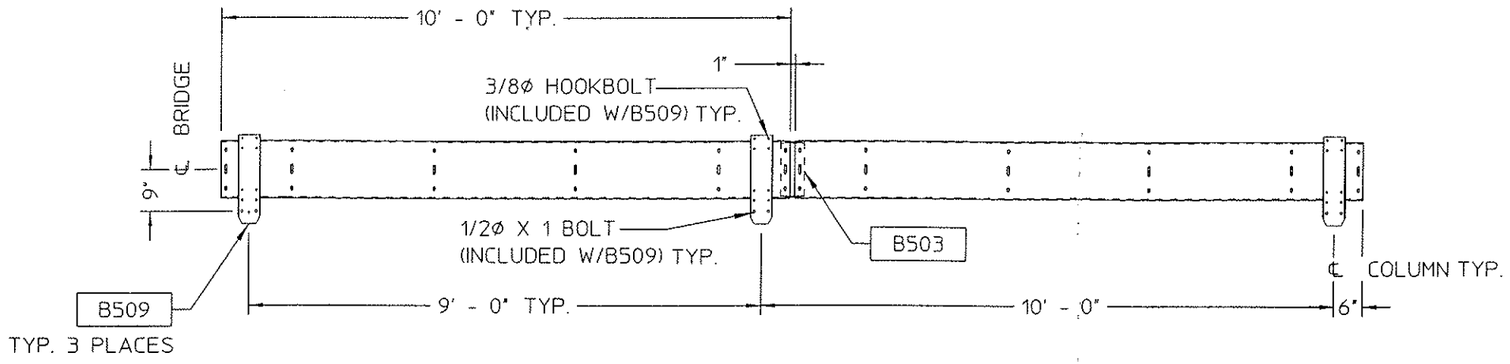
REGISTERED PROFESSIONAL ENGINEER
JEFFREY E. GRASSMAN
No. 63982
Exp 9/30/06
STATE OF CALIFORNIA
NOV 0 1 2002

STANDARD PIPE MOUNTS
FOR STANDARD 12 3/4 (324mm) OD
MONOPOLES

BY gls
CK SJ
DATE 24MAR93
S.O.

MICROFLECT
3575 25TH STREET S.E.
SALEM, OR 97302
(503)363-9267 TWX 510-599-0107

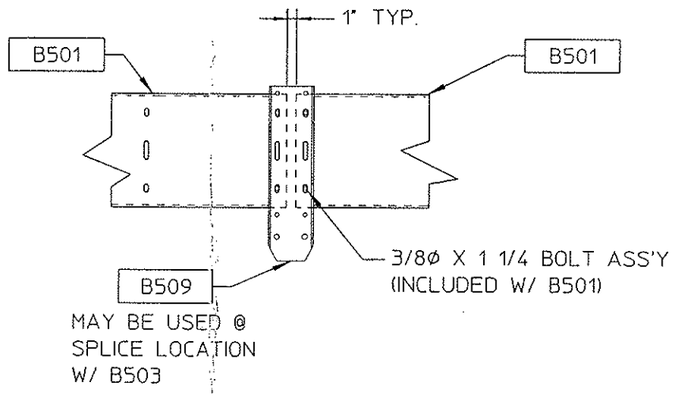
SHEET OF
DWG. NO. B-84511



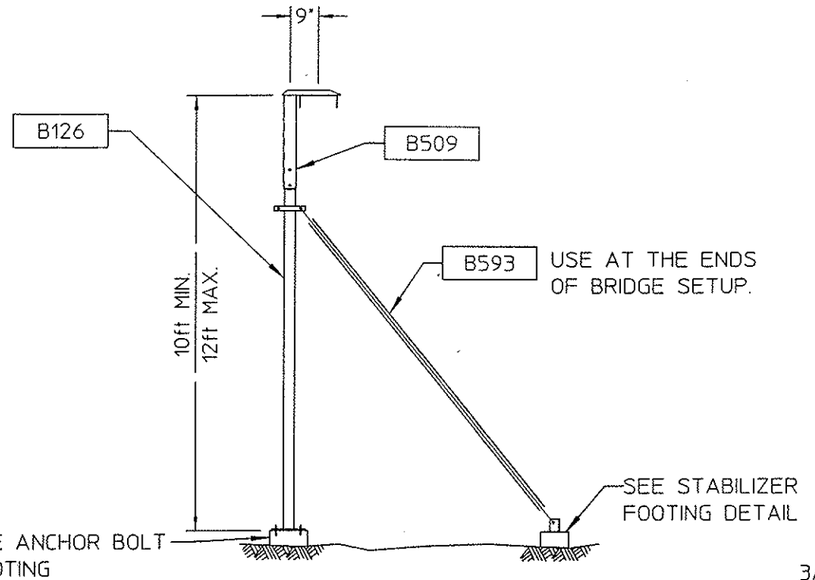
PLAN VIEW

3/4" = 1'-0"

PARTS LIST	
MARK	REQ'D
B126	3
B501	2
B509	3
B503	1
B593	2

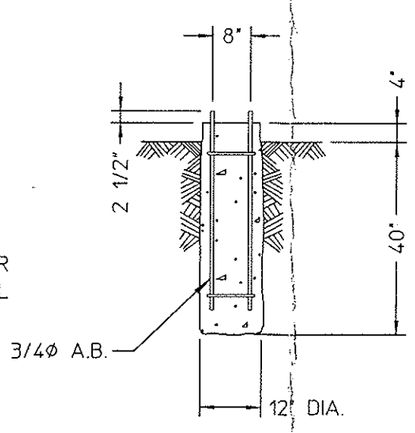


OPTIONAL SPLICE DETAIL

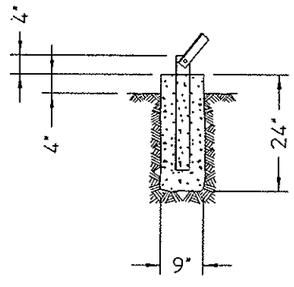


PIPE COLUMN AND STABILIZER INSTALLATION DETAIL

FOR USE ON SINGLE CHANNEL BRIDGES



ANCHOR BOLT FOOTING



STABILIZER FOOTING

REVISIONS			
REV	DESCRIPTION	DATE	BY/CK

REGISTERED PROFESSIONAL ENGINEER
JEFFREY E. GRASSMAN
No. 63982
Exp 9/30/06
CIVIL
STATE OF CALIFORNIA

NOV 0 1 2002

12" x 20'-0" WAVEGUIDE BRIDGE KIT
ANCHOR BOLT INSTALLATION
PRODUCT #31-B2222

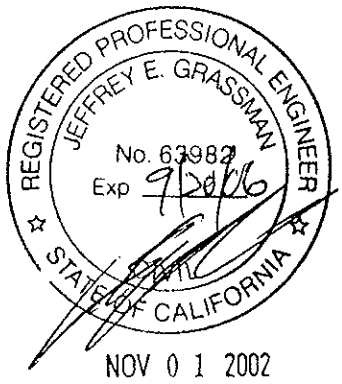
BY	PM
CK	GS
DATE	10NOV98
S.O.	

VALMONT MICROFLECT
3575 25TH STREET SE, SALEM, OR 97302
MAIN: (503)363-9267 FAX: (503)316-2040

SHEET 1 OF 1

DWG. NO. B-102714

valmont
MICROFLECT



NOV 0 1 2002

Communication Division, Valmont Industries, Inc. 3575 25th Street SE Salem, Oregon 97302-1123 USA
800-547-2151 Fax 503-363-4613 www.valmont.com

SUMMARY STRESS ANALYSIS

DATE:	22-Oct-02			**VERSION:**	2.01
TOWER MODEL:	Custom MP40				
CUSTOMER:	Adcomm Engineering				
SITE:	Boardman Fire Station				
S.O.#:	16038-02	**BY:**	JG	**CK:**	MF

MATERIALS & CODES:

STRUCTURAL STEEL: ASTM A36 & A572 GR.50, all pipe ASTM A53 GR.B (Min. Fy=46 ksi)
ERECTION BOLTS: ASTM A325X & SAE GR.5
ANCHOR BOLTS: ASTM F 1554 GR.55, Class 2A, including supplementary requirement S1.
STEEL: AISC 9TH EDITION
CONCRETE: ACI 318-95
INDUSTRY: EIA\TIA-222-F

DESIGN CRITERIA:

WIND: 90 mph
ICE: 1/2" Radial
SOIL: EIA "Normal"

DESIGN ANTENNA LOADING:

1) 4' Diam. Standard Antenna at 40' Centerline

LOAD CASES:

1. 100% Wind and 1/2" ice

NOTES:

1. The maximum twist/sway at 50 mph wind loading is .28 degrees -- OK
2. All allowable stresses have been increased by 1/3 per EIA/TIA-222-F, Section 3.1.1.1.

Name =	16038-02
File Location =	c:\Monopole\

Adcomm Engineering @ Boardman Fire Station

Specification	EIA-F
Wind Speed (MPH)	90
Base Elevation (ft.)	0
Ground Mounted (Y or N)	Y
Pole Height (ft.)	40
Increment Length (in.)	12
Ice Thickness (in.)	0.5
Ice Density (PCF)	-56

POLE SECTION DATA N DATA

Young's Modulus, E =	29000000	psi
Shear Modulus, Es =	12000000	psi
Steel Density =	-490	PCF

Sta	To	Dia	Wall	Area	Inert	Polar	Wind	Weight
ft	ft	in	in	in^2	in^4	in^4	psf	lb/ft
0	40	12.75	X 0.375	14.58	279.34	558.67	0	57.7

POLE LOADING DATA

Sta	Thru	Area/Ft	Moment	Weight	Torque	W	
ft	ft	SqFt/Ft	ft-lb	lb	in-lb	lb/ft	
	40	21	0	400	0	0	— 4 ϕ STD

SUPPORT CONDITIONS

Fixed at Base of Pole.

ANALYSIS OUTPUT

Ht	Def	Sway	Curv.	Shear	Moment	Mc/I	Axial	P/A	Twist	Wind Pressure
ft	in	deg		kips	K-ft	ksi	kips	ksi	deg	PSF
0	0	0	0		50.65	13.87	-2.71	-0.186	0	35.04
				-1.72						
40	5.232	0.9041	0		0	0	-0.43	-0.029	0	37.02
				0						

PIPE COMBINED STRESSES:

Section 1: 14.056 ksi < .66*46*(4/3) = 40.5 ksi Allowable -- OK

SWAY:

The maximum Sway at 50 mph and at the top of the monopole is .28 degrees.

Reactions:

Conservatively design anchorage and foundation for worst case reactions from all standard MP monopoles.

(Reference Engineering Journal/AISC, 2nd Quarter, 1983, p.58)

Maximum Moment (kip-ft) =	77.9
Maximum Shear (kips) =	4
Maximum Axial (kips) =	2.33
Stress Increase Factor =	1.333

Anchor Bolts:

Number of bolts =	8	Fy (ksi) =	55
Bolt Diameter (in.) =	1.50	Bolt Tensile Area (in^2) =	1.410
Bolt Circle (in.) =	18.00		

Maximum Tensile Force (kips) = Moment/((# Bolts/2)*(Bolt Circle/2)) = 26.0

Maximim Shear Force (kips) = 0.500

ft (ksi) = (Tensile Force + (1.85*Shear Force))/(Bolt Tensile Area)

ft (ksi) = 19.1

Ft (ksi) = 0.55*Fy*Stress Increase Factor

Ft (ksi) = 40.3 > 19.1 -- OK

USE 8-1.500 Dia. ASTM F 1554 Grade 55 Anchor Bolts on a 18.00 Dia. B.C.

Base Plate:

For base plate bending resulting from the tensile load in one anchor bolt, consider the plate to be simply supported along AC and BD and free at ends AB and CD. Further simplify to a rectangle with the dimensions shown.

Base Plate Diameter (in.) = 22.5

Max Moment = 26.0 x 7 / 4 = 45.5 in-kips

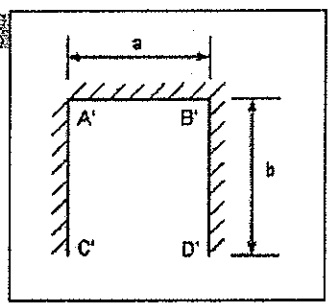
For plate thicknes t, s = (1/6) (3.25) t^2

Fb = 4/3 (0.75)(36) = 36 ksi

t min = 1.530

t = 2.000

Where:	a (in.)=	7
	b (in.)=	3.25



USE 2.00 in. x 22.500 Dia. A36 BASE PLATE

GUSSET PLATE AND WELDS:

Tension per Gusset (kips) = T =	26.000	c (in.) =	1.00
Weld thickness on gusset (in.) = wtgus =	0.250	d (in.) =	1.00
Weld thickness on base (in.) = wtbas =	0.313	k (in.) =	3.750
Thickness of gusset (in.) = t gus =	0.500	L (in.) =	8.250
Weld Fy (ksi) = Wfy =	70	m (in.) =	0.750

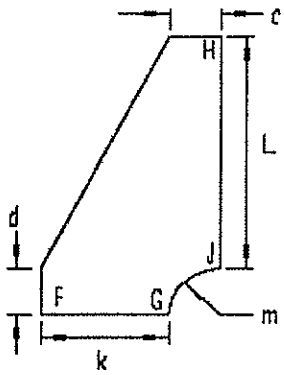
Weld Stress Along 'FG':
=T/(2*.707*wtbas*k) = 15.7 ksi < 28.0 ksi allowable -- OK

Plate Tensile stress along 'FG':
=T/(t gus*k) = 13.9 ksi < 28.8 ksi allowable -- OK

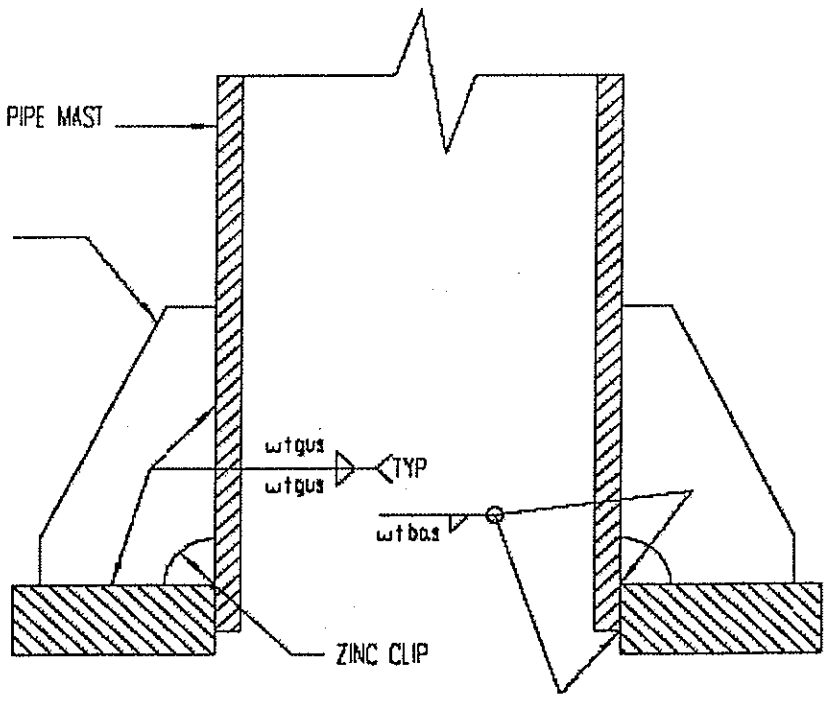
Moment along 'HJ':
=T*((k/2)+m) = MomHJ = 68.3 in-kips

Shear Stress in weld along 'HJ':
=(((6*MomHJ/(2*0.707*wtgus*(L^2)))^2)+((T/(2*0.707*wtgus*L))^2))^(1/2)= 19.2 ksi
= 19.2 ksi < 28.0 ksi allowable -- OK

Plate Tensile stress along 'HJ':
=6*MomHJ/(t gus*(l^2)) = 12.0 ksi < 28.8 ksi allowable -- OK



TYPICAL GUSSET PLATE



MONOPOLE BASE DETAILS

Drilled Pier Foundation Design

INPUTS==========

M=	77.90	Overturning Moment (kip-ft.)
V=	4.00	Lateral Shear (kips)
H=	0.50	Cap Height (ft.)
S=	4.00	Cap Diameter (ft.)
B=	4.00	Footing Diameter (ft.)
D=	9.25	Footing Depth (ft.)
q=	400	Allow. Lateral Pressure (PSF/ft.)
F=	1.33	Stress Increase Factor
Cov=	3.00	Cover (in.)

Reference USBR DS-10-7 Figure 3, Para. 2.5B:

==========

C = M/V + H =	19.98	ft.	
b = (2*V*D + 4*V*C)/(2*V + S_2*D*B) =	2.90	ft.	
a = D - b =	6.35	ft.	
S_1 = (a^2)*S_2/(4*D*b) =	1.30	ksf	
S_2 = 12*V*C/((D^2)*B) + 6*V/(D*B) =	3.45	ksf	
S_1_allow = q*(a/2) =	1.27	ksf	Say OK
S_2_allow = q*D =	3.70	ksf	OK

By approximating the equation for the footing pressure curve,
the maximum shear and maximum moment in the pier can be found.

A_1 = 2/3*a/2*S_1*B =	10.96	kips
A_2 = A_1 - V =	6.96	kips
n(x^2) = y[2nd order curve] ==> n(a/2)^2 = S_1*B solving for "n" gives:	0.51	
A_2 = (S_1*B)*x - (1/3)*n*(x^2)*x = 6.96 kips solving for "x" gives:	1.44	ft.
Max. Shear = 2*A_1 - V =	17.93	kips
Max. Moment = M + V*(a/2-x+H) - V*(a/2-x)/3 =	84.51	ft-kips

Foundation Reinforcement: vertical bars spaced equally inside hoops

INPUTS==========

N=	12	Number of Vertical Bars	.5% of Ag = 9.04778684
#=	8	Rebar Number (size)	

=== Bending (Neglect Concrete Strength)

A = Area of One Bar =		0.79	in.^2
S = I/c where;		91.95	in.^3
I = sum(A*d'^2)/2 =		1884.96	in.^4
d' = distance between neutral axis & the centroid of each vertical bar =		20.00	in.
c = distance to extreme fiber =		20.50	in.
M_ult = 1.7*M =		1724.10	in-kips
fb_ult = M_ult/S =		18.75	ksi OK
Fb_allow =	0.9*Fy*stress increase factor =	72.0	

Use 12 - #8 Vertical Bars, 9.25 ft. long
equally spaced, inside 42 in. hoops.

=== Shear

V_ult = 1.7*V =		30.48	kips OK
V_allow =	0.85*2*sqrt(f'c)*bw*d =	196.7	kips

No Shear Reinforcement Required
Nominally provide #4 hoops, 42 in. diameter @ 12 in. spacing.

Appr. Concrete Volume = 4.54 CY

Vertical Bars:

Use - 12 # 8 bars, Length = 9.25 feet, weight = 296 lbs.

Horizontal Bars:

Use - 12 # 4 ties, 3.50 ft. Dia., weight = 96 lbs.

Anchor Bolt Projection:

Use an anchor bolt projection of 9.125 in. rounded up to the nearest 0.5 in.

SLAB Date: #N/A

Project: MP20, MP30, MP40 Run by: #N/A

legs	1		1 for monopoles, 3 or 4 for tower legs
otm_t	78	k-ft	total tower overturning moment
sh_t	4.00	k	total tower shear
sh_l	4.00	k	max. leg shear
wt	2.33	k	total tower weight
f_w	1.50	ft	tower face width at base.
b	9.00	**ft**	**slab width (rigid square slab only)**
t	30.00	**in**	**slab thickness**
net_p_a	1.00	ksf	allowable net soil bearing pressure
s_f	1.33		allowable stress increase factor (rebar)
c_h	12.00	in	cap height above slab
c_s	36.00	in	cap size
d_f	0	ft.	depth from final grade to bottom of footing
d_fl	0.00	in	depth of fill over slab
dens_c	0.150	kcf	density of concrete
dens_s	0.100	kcf	density of soil
dens_fl	0.000	kcf	density of fill over slab
f_c	3,000	psi	concrete compres. strength
f_y	60,000	psi	rebar yield strength
u	2.50		soil factor of safety: qult/qall

Output Summary (see complete calculations below):

s_r	1.60		**OK (overturning F.S. OK) ref. ACI 336.2R-88**
net_p	1.40	**ksf**	**OK (net soil bearing pressure is OK)**
vol_c	7.83	cu.yd.	Total volume of concrete.
slab two-way shear:			(punching shear ok)
slab beam shear:			(beam shear ok)

Slab Reinforcement (ASTM A615 Gr.60):

	Size	Quan. (E/W)	Len. (ft)	Spc. (in)	Total (lbs)	
Top Bar	#4	14	8.5	7.85	159	<---OK
Options	#5	9	8.5	12.75	160	<---OK
	#6	7	8.5	17.00	179	<---OK
As>=2.70	#7	5	8.5	25.50	174	
	#8	4	8.5	34.00	182	
	#9	3	8.5	51.00	173	
Bot.Bar	#4	16	8.5	6.80	182	<---OK
Options	#5	11	8.5	10.20	195	<---OK
	#6	8	8.5	14.57	204	<---OK
As>=3.13	#7	6	8.5	20.40	208	
	#8	4	8.5	34.00	182	
	#9	4	8.5	34.00	231	

Top of slab may also be raised above ground, thereby eliminating caps.