

## **REQUEST FOR PROPOSALS**

*FOR THE*

### **BUTANO CREEK STREAMFLOW IMPROVEMENT PROJECTS PESCADERO-BUTANO WATERSHED**

*Sponsored by the*  
**SAN MATEO RESOURCE CONSERVATION DISTRICT**

Distributed  
November 19, 2020

# **Request for Proposals Butano Creek Streamflow Improvement Projects**

## **TABLE OF CONTENTS**

### **Request for Proposals**

**Exhibit A:** Task List Detail

**Exhibit B:** Additional Project Information

**Exhibit C:** Example Cost Proposal Form

**Exhibit D:** Contract Template

**Exhibit E:** San Mateo County RCD and Funder Insurance Requirements

**Exhibit F:** Certificate of Compliance

**Exhibit G:** Billing Instructions for Engineers

**Exhibit H:** Example Designs

### **Published by the authority of:**

San Mateo County RCD Board of Directors  
80 Stone Pine Road, Suite 100  
Half Moon Bay, CA 94019  
(650) 712-7765

# REQUEST FOR PROPOSALS

## **Project Summary**

The San Mateo Resource Conservation District (RCD) is searching for an experienced team of engineers and technical experts to develop complete designs for four water storage reservoirs and associated water distribution systems in the Butano Watershed. This work will allow agricultural water users to dramatically reduce or eliminate stream pumping rates during low flow periods, ensure water security for farming operations and protect stream flows for salmonids by addressing low streamflow in Butano Creek.

## **Contracting Entity**

The RCD is the contracting entity and project manager. The RCD helps people protect, conserve, and restore natural resources through information, education, and technical assistance programs. The work of the RCD is accomplished through strong voluntary partnerships with landowners and managers, technical advisors, area jurisdictions, government agencies, advocates, and others.

RCDs were established by the state of California to be locally governed special districts that act as focal points for local conservation efforts, using very diverse means to conserve natural resources on public and private lands. Established in 1939, San Mateo County's RCD was the first such district in California. For more information about the RCD, visit [www.sanmateorcd.org](http://www.sanmateorcd.org).

## **Budget and Funding**

Funding for this Project is provided to the RCD by the Wildlife Conservation Board (WCB) through Proposition 1.

## **Background**

The Water for Farms, Fish and People Program is an essential component of an overall water stewardship program at the RCD to provide water supply and drought resiliency benefits for domestic and agricultural water users and aquatic organisms in San Mateo County. Program Partners include, Trout Unlimited, USDA Natural Resources Conservation Service, San Mateo County, landowners, farmers, and ranchers. This ambitious initiative enhances watershed protection, agricultural water supply reliability, drinking water treatment and distribution, and ecosystem and fisheries restoration by: helping farmers conserve, strategically manage, and store water; fixing leaks and broken pipes in drinking water supply systems; improving water pumping, delivery and storage facilities; and coordinating water users to balance demands on limited resources.

The goal of the Butano Creek Streamflow Improvement Projects (Project) is to plan, design, and permit water storage and irrigation efficiency upgrades at four locations that would result in increased instream flow and enhanced wildlife habitat within Butano Creek.

## **Key Tasks & Deliverables**

**Key tasks and deliverables are broken down by task for prospective proposers in Exhibit A. The list below is a summary of the tasks and deliverables expected by the RCD for this Project.**

- Attending on-site meetings and project correspondence
- Field work (data collection)
- Assessment of water distribution systems and existing infrastructure
- Topographic data collection
- Geotechnical investigation
- Incorporate existing data from ground water monitoring into design considerations
- Conceptual designs, 65% designs, and 100% stamped designs and technical specifications for water distribution system and reservoirs (each iteration will allow for review from project partners)
- Cost estimates based on 65% and 100% designs for water distribution system and reservoirs
- Basis of design reports documenting design process behind 100% designs for water distribution system and reservoirs
- Support for RCD staff on permitting and grant applications.

### **Location**

#### Location 1: Fifth Crow Farm Back 40

This property is located within the Pescadero-Butano watershed approximately 2.5 miles southeast of the town of Pescadero, and 25 miles south of Half Moon Bay, California.

#### Location 2: Fifth Crow Farm Backfield

This property is located within the Pescadero-Butano watershed approximately 1.75 miles southeast of the town of Pescadero, and 25 miles south of Half Moon Bay, California.

#### Location 3: Richeson Property Fifth Crow Farm

This property is located within the Pescadero-Butano watershed approximately 2.25 miles southeast of the town of Pescadero, and 25 miles south of Half Moon Bay, California.

#### Location 4: Giannini Property

This property is located within the Pescadero-Butano watershed approximately 2 miles southeast of the town of Pescadero, and 25 miles south of Half Moon Bay, California.

#### [Location map](#)

### **Property Ownership and Tenant Farmer**

#### Location 1: Fifth Crow Farm Back 40

This property is owned by Peninsula Open Space Trust (Post) and farmed by Fifth Crow Farms.

#### Location 2: Fifth Crow Farm Backfield

This property is owned by Post and farmed by Fifth Crow Farms.

#### Location 3: Richeson Property Fifth Crow Farm

This property is owned by Gene Richeson and farmed by Fifth Crow Farms.

#### Location 4: Giannini Property

This property is owned by Rita Giannini and farmed by Joe Muzzi.

### **Pre-Proposal Meeting**

A pre-proposal site visit will be held at the project sites on **Tuesday, December 8, 2020 from 10:00 am to 12:30 pm**. Attendance at the pre-proposal meeting is mandatory for all prospective proposers. If planning to attend, confirm with Andrew Hall by email to [andrew@sanmateorcd.org](mailto:andrew@sanmateorcd.org). Meeting location will be in Pescadero at the parking lot across from the gas station ([click for directions from Half Moon Bay](#)). Once all parties have arrived, the RCD will lead prospective bidders to the project locations.

### **Submission Requirements**

Submission packages must be thoughtful, clear, and well-organized and include the following components:

1. Cover letter expressing interest and obligating lead consultant to fulfill key roles
2. Description of project approach and understanding of project goals
3. Cost Proposal: Scope of work divided into key tasks as outlined in Exhibit A with task leads and deliverables identified
4. Personnel qualifications and areas of expertise
5. Rate sheets for project staff. If rates differ based on what task they are performing (i.e. field work vs. desk work) then please provide them
6. Descriptions of 2-4 comparable projects and references with contact information
7. Subcontractor Information

**Applicants must submit one electronic copy** of the package to the RCD via email or other digital means to **Andrew Hall** at [andrew@sanmateorcd.org](mailto:andrew@sanmateorcd.org) no later than **5 PM on January 6, 2021**. Any proposal that is not submitted or submitted without all the required information will be considered incomplete and not accepted.

### **Selection Process and Timeline**

Once the requested information is received from individual consultants and design teams, the RCD, project partners, and landowners will assess which consultants have the most appropriate expertise and cost efficiencies for the project. The scoring rubric will be released at the pre-proposal meeting for review by interested parties. The preferred design team will be **chosen by January 25, 2021**. We expect to complete and executed contracting for the project within three weeks from this date and assume a **start date of February 15, 2021**.

### **Evaluation of Proposals**

The RCD will accept the proposal which is of the greatest advantage to the project and the RCD. RCD has the right to reject any and all proposals. RCD is not required to accept the low proposal.

### **Prevailing Wage Laws**

This project is considered a public work or public improvement and is therefore subject to prevailing wages pursuant to Part 7 of Division 2 of the California Labor Code (commencing with Section 1720.)

### **Registration Pursuant to Labor Code Section 1725.5**

All contractors and subcontractors who will perform any portion of the work must be currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5.

Proposals submitted by contractors, or including subcontractors, who are not registered will be rejected.

**Sensitive Areas**

The project site is an environmentally sensitive area. The selected design/engineering firm shall take all precautions and measures necessary to protect the environmental integrity of the site, including but not limited to the protection of all plants, animals, and aquatic life.

**Contract and Payment**

This project will be billed as time and materials with a Not to Exceed amount, which TBD engineering firm may not exceed. Invoices shall be submitted to the RCD for work completed no less than quarterly, and no more than monthly.

**Proposal Process, Work Schedule, and Key Details**

Date of announcement	11/19/2020
RSVP Proposal Site Visit	12/7/2020
Pre-Proposal Site Visit	12/8/2020 @ 10 AM (Directions <a href="#">link</a> )
Deadline for proposal submissions	1/6/2020 @ 5 PM Proposals should be sent to: <a href="mailto:andrew@sanmateoRCD.org">andrew@sanmateoRCD.org</a>
Notification of Award	1/25/2021
Contract Date	By 2/15/ 2021
Work Commence Date with the following - Contractor shall coordinate commencement with RCD - No work shall begin until authorized by RCD	By 2/15/2021
Work Completion Date	March 31, 2022

## **Exhibit A**

### **Task List Detail**

This detailed task list is meant to give prospective proposers a detailed framework of what the RCD expects for this Project and give the RCD the ability to compare proposals from different firms. Submission requirement # 2 (Description of project approach and understanding of project goals) provides an opportunity for interested parties to elaborate on the proposal framework outlined below and suggest modifications to the task list.

#### **Task 1 - Project Management and Administration**

Task 1 covers time spent performing project management and administration duties, including correspondence, coordination, and documentation. Effective project management and administration are critical to ensuring work is performed on schedule, on budget, and to the highest quality, using all available information provided by the RCD and its partners or collected in the field. Scope and budget will provide for:

- attending on-site meetings including an initial kickoff meeting
- project correspondence
- administrative duties
- project documentation

Deliverables:

- Invoices (may be submitted quarterly and no more than monthly)
- Notes that monument points of agreement, issues to be resolved and next steps developed from each field meeting

#### **Task 2 – Topographic Mapping**

Firm will survey the project sites and prepare a topographic map of the area with one-foot contours. The limits of the mapping will be sufficient to include the anticipated limits of disturbance, or footprint of each reservoir, and associated irrigation improvements. Mapping will be conducted sufficiently beyond the anticipated reservoir footprint to ensure adequate drainage, access and maintenance needs are met. Mapping will include utilities visible above ground, roads, improvements, and trees over 6” diameter at breast height (dbh). The map will be included as an “existing conditions” sheet in the designs for each reservoir and used as the basis for designs. Scope and budget will provide for:

- Survey crew to perform all needed topographic data collection
- Post processing and map creation
- Review with RCD to ensure baseline maps reflect all needed information

Deliverables:

- Topographic data collection (to be made available to the RCD in .cad, .shp, and .pdf format)
- Existing conditions map of each reservoir location that includes associated existing irrigation infrastructure, utilities, buildings, roads, farm fields, etc. (.shp & pdf)

#### **Task 3 – Water System Assessment Report**

Firm will create a water distribution systems assessment report that catalogues all existing infrastructure at each reservoir location and recommends how systems can be improved,

anticipated water savings, and provides recommendations for upgrading systems. This document will be used as a baseline for improving irrigation supply and distribution infrastructure for each reservoir location. Scope and budget will provide for:

- Working with RCD, NRCS, landowners and tenant farmers to collect all data needed to outline existing irrigation systems.
- Field time to document existing infrastructure
- Creation of a water system assessment report for each reservoir location (including review from RCD and project partners)

Deliverables:

- Four water system assessment reports. One for each reservoir location.

#### **Task 4 –Geotechnical Analysis and Ground Water Monitoring**

Firm will conduct a geotechnical analysis that includes the typical elements of a geotechnical investigation. The firm will be responsible for gathering all geotechnical data needed for planning, design and construction of each reservoir location. The firm will also review groundwater monitoring results, to be collected over winter 2020/21 by the RCD at project locations. The firm will provide recommendations on how groundwater at each site will be addressed in the design and function of each reservoir.

Scope and budget will provide for:

- Review of ground water monitoring results provided by RCD and incorporation of results into design consideration.
- Geotechnical report for proposed pond locations

#### **Task 5 – Conceptual Designs (reservoirs and irrigation)**

Firm will develop concept level designs, including site plan, cross sections, and detail elements of the proposed reservoirs and associated irrigation infrastructure. The reservoirs geometry will be determined by physical constraints of the landscape and the objectives of the RCD, as outlined in the kickoff meeting and project description (to be drafted by the RCD). Reservoirs should be designed with a cut fill balance in mind where at all feasible. Site plan will include elevation change and distance from the diversion point at the pump in the creek to the reservoir, the layout of all proposed irrigation system upgrades and associate electrical upgrades with a list of likely components to be used. Additionally, calculations will be done to ensure water pressure needs for the system can be met with variable pumping rates from approximately 70gpm to 220gpm. Scope and budget will provide for:

- Concept level designs for four reservoir locations with associated irrigation infrastructure.
- Review by RCD and Project partners

Deliverables:

- Concept design plan sets (.pdf)

#### **Task 6 – 65% Designs and Cost Estimate (reservoirs and irrigation)**

The 65% designs will be prepared based on the conceptual design and will reflect comments received from the RCD and project partners. The drawings will be sufficiently accurate and complete to determine project layout, impacts, opportunities, constraints, and material



quantities. The drawings will provide a basis for permit applications. Information to be provided on the Drawings will include:

- Site topography and grading plan, identifying ground disturbance and vegetation removal;
- Site overview;
- Typical details, cross sections and profiles;
- Location of relevant structures, infrastructure, and natural resources.
- Limits of disturbance, including temporary access, staging areas, and re-use sites for materials.
- Material treatments recommended by the geotechnical engineer, including over-excavation, compaction, keyways, and liners.

An Engineer's construction cost estimate will be provided, with assumptions defined.

TBD engineering firm scope and budget will provide for:

- 65% level designs for four reservoir locations with associated irrigation infrastructure.
- 65% design level cost estimates
- Review by RCD and Project partners

Deliverables

- 65% Design drawings (.pdf)
- cost estimate (.pdf)

#### **Task 7 – 100% Designs and Cost Estimate (reservoirs and irrigation)**

The 100% designs will reflect comments received from the RCD, reviewing agencies, and project partners on the 65% submittal. The drawings will be sufficiently accurate and complete for competitive bidding. An Engineer's construction cost estimate will be provided, with pay items correlated to the Technical Specifications and Bid Form which will be provided by the selected firm. Final technical specifications will be provided as will a Basis of Design Report, Grading Plan, and Erosion and Revegetation Plan. Scope and budget will provide for:

- Stamped, 100% level designs for four reservoir locations with associated irrigation infrastructure with the following minimum sheets:
  - Site Overview with existing conditions, parcel boundaries, infrastructure, natural resources of note, etc.;
  - Grading Plan;
  - Irrigation Upgrade plan with applicable information on pipes, pumps, electrical, mechanical, and other essential components;
  - Access Plan with stockpile, sediment re-use, staging and roads clearly documented;
  - Erosion and Revegetation Plan; and
  - Subsurface Water Control Plan, if necessary
- 100% design level cost estimates – both traditional estimates and grant-ready estimates that incorporate contingency into implementation tasks
- Technical specifications document
- Basis of design report
- Bid form
- Review by RCD and Project partners

#### Deliverables

- 100% Design drawings (.cad .shp, and .pdf)
- Cost estimate (.pdf)
- Technical specifications document
- Basis of design report
- Bid form

#### **Task 8 – Permit Support (time and materials as directed)**

Selected firm will be available to provide additional permit-related support services, at the request of the RCD. Such services typically include participation in permit-related meetings or conference calls, preparation of written responses to agency comments, or preparation and submittal of calculations or figures required to support permit applications. These services will be performed on a time and materials basis, at the request of the RCD.

**Exhibit B**  
**Additional Project Information**  
**Butano Creek Streamflow Improvement Projects**

**Location 1: Fifth Crow Farm Back 40**

Farming operations at the Back 40 includes approximately 35 acres of row-crop agriculture. Estimated water demand during low flow months (July - October) is approximately 27 acre-feet (af). Fifth Crow Farm uses a five horse power (hp) pump to divert water from Butano Creek at a rate of 100 gallons per minute (gpm) during low flow months (August- October) and diverts at a rate of 300 gpm with a larger 20 hp pump when stream flows are at higher levels (April - June/July).

In 2017 - 2018, the NRCS and RCD worked with Fifth Crow Farm to upgrade their irrigation infrastructure by installing a series of 5,000-gallon water tanks that act as a regulating system, reducing diversion rates and allowing for the staggering of diversion times to avoid peak diversion hours. New pipelines, risers, sprinkler pipe, sprinkler heads, pumps, variable frequency drives (vfds), and flow meters were also installed to improve irrigation efficiency. These upgrades were meant as a first step toward reducing water demands on Butano Creek and are part of a larger effort to eliminate diversions for the Back 40 fields during low flow summer months.

For this project component, the RCD and TBD engineering firm will design and permit a 10 - 20 af reservoir that will allow the farmer to forbear completely during the months of August to October. Water use during these three months is 6.1 af, 5.5 af, and 7.6 AFaf respectively. The RCD will also work with Fifth Crow Farm to lower diversion rates from Butano Creek during late spring and early summer months (April/May - July 31<sup>st</sup>) from 300 gpm to 70 gpm, with complete cessation of diversions in the late summer and early fall (August – October 31<sup>st</sup>) depending on the size of the reservoir. During the months of August-October, these improvements will reduce water demand on Butano Creek by 10 - 20 af depending on reservoir size. Additionally, diversion rates will be reduced by 0.51 cfs (April/May - July 31<sup>st</sup>) and 0.22 cfs (August 1<sup>st</sup> - October 31<sup>st</sup>).

Project elements:

- 10-20 af reservoir
- Water supply to reservoir and distribution to irrigation infrastructure
- Any additional irrigation upgrades that could increase water use efficiencies

**Location 2: POST (Fifth Crow Farm Dias Flats)**

Farming operations at Dias Flats includes approximately 10 acres of traditional agricultural production. Estimated water demand during low flow months (July - October) on the Dias Flat field is approximately 12.8 af. Fifth Crow Farm will use a 5 hp pump to divert water from Butano Creek at a rate of 70 gpm during low flow months (August - October) and divert at a rate of 300 gpm with a larger 20 hp pump when stream flows are at higher levels (April - June/July).

For this project component, the RCD and TBD engineering firm will create designs to restore and expand an existing 3 af reservoir that has filled in with sediment and vegetation,

allowing the farmer to forbear completely during the months of August - October. Water use during August, September, and October is 3.6 af, 3 af, and 2.5 af, respectively. This refurbished and expanded 5 - 10 af reservoir will be used from April - July as a regulating system lowering diversion rates from Butano Creek, from 300 gpm to 70 gpm (April/May - July 31<sup>st</sup>), with complete cessation of diversions from August 1<sup>st</sup> - October 31<sup>st</sup>. These improvements will reduce water demand on Butano Creek by 5 - 10 AF depending on reservoir size. Additionally, diversion rates will be reduced by 0.51 cfs (April/May - July 31<sup>st</sup>) and 0.22 cfs (August 1<sup>st</sup> - October 31<sup>st</sup>).

Project elements:

- 3 af or larger reservoir
- Water supply to reservoir and distribution to irrigation infrastructure
- Any additional irrigation upgrades that could increase water use efficiencies

**Location 3: Richeson Property (Fifth Crow Farm)**

Farming operations at the Richeson Property includes approximately 35 acres of row-crop agriculture. Estimated water demand during low flow months (July - October) on the Richeson Property fields is approximately 27 af. At this location, Fifth Crow Farm uses a 12 hp pump to divert water from Butano Creek at a rate of 180 gpm during the crop growing season.

In 2013 Fifth Crow Farm worked with the NRCS and RCD to upgrade their irrigation system at the Richeson Property by installing a series of 5,000-gallon water tanks that act as a regulating system. This system reduces diversion rates and allows Fifth Crow Farm to stagger diversion times to avoid peak diversion hours. The NRCS and Fifth Crow Farm also installed new pipelines, risers, sprinkler pipe, sprinkler heads, flow meters, and a vfd to improve irrigation efficiency. These upgrades were meant as a first step toward reducing water demands on Butano Creek and are part of a larger effort by the RCD and NRCS to eliminate diversions for the Richeson Property fields during low flow summer months.

For this project component, the RCD and TBD engineering firm will design and permit a 25 - 30 af reservoir that will allow the farmer to forbear completely during the months of July - October. Water use during these months is 7.6 af in July, 7.6 af in August, 6.1 af during September, and 5.5 AF during October. The implementation of this project component will lower diversion rates from Butano Creek from 180 gpm to 70 gpm during late spring and early summer months (April/May - June 30<sup>th</sup>), with complete cessation of diversions in the late summer and early fall (August 1<sup>st</sup> - October 31<sup>st</sup>) depending on the size of the reservoir. These improvements will reduce water demand on Butano Creek by 27 af during August - October. Additionally, diversion rates will be reduced by 0.25 cfs (April/May - June 30<sup>th</sup>) and 0.4 cfs (August 1<sup>st</sup> - October 31<sup>st</sup>).

The RCD and NRCS have worked with the landowner, Gene Richeson, over the past 3 years to identify potential sites for a reservoir on the property. As part of this project component the TBD engineering firm will conduct ground water monitoring and geotechnical investigations to determine which of the potential sites are best suited for a reservoir.

Project elements:

- 25-30 af reservoir

- Water supply to reservoir and distribution to irrigation infrastructure
- Any additional irrigation upgrades that could increase water use efficiencies

**Location 4: Giannini Property (Joe Muzzi)**

Farming operations at the Giannini Property includes approximately 30 acres of row-crop agricultural farmland and 45 acres of rangeland. Estimated water demand during low flow months (July - October) on the Giannini Property is approximately 3 af, however ag production is expected to increase, and water demands will double or triple once the ag operations increase. Joe Muzzi uses a 20 hp pump to divert water from Butano Creek at a rate of 350 gpm during the crop growing season.

For this project component, the RCD and TBD engineering firm will create designs and permit the repair of an existing, but currently unusable, 10 af reservoir that has poor water quality and has filled in with sediment and vegetation. The repaired reservoir will allow the farmer to reduce diversion rates from Butano Creek and will act as a regulating system. From April - October the regulating reservoir will lower diversion rates from 350 gpm to 70 gpm reducing withdrawals from Butano Creek by 0.62 cfs.

In addition to the regulating reservoir, the RCD and TBD engineering firm will work with the farmer to conduct an irrigation audit, implement irrigation infrastructure and efficiency upgrades, and develop a water management plan, which will provide schedules for the time and rate of diversions to reduce impacts to instream flows associated with pumping during low flow periods, and will address overwatering by helping to identify water use for specific crop types. Lastly, to guarantee the long-term viability of the project, the RCD will require a 20-year commitment from the landowner to maintain the infrastructure once implementation has occurred.

Project elements:

- 10 af reservoir
- Water supply to reservoir and distribution to irrigation infrastructure
- Any additional irrigation upgrades that could increase water use efficiencies

**EXHIBIT C**  
**Cost Proposal**  
**Butano Creek Streamflow Improvement Projects**

To: Board of Directors, San Mateo Resource Conservation District

We, the undersigned, having familiarized ourselves with this RFP packet, and hereby propose to provide and furnish all labor, materials, utilities, transportation, and equipment of all types and kinds and to complete the Project

We, the undersigned, agree to perform all of the above work to its completion and to the satisfaction of the RCD for the rates for said work as indicated below.

We, the undersigned, understand that the contract is a lump sum with a not to exceed amount. The Contractor cannot be paid over the sum not to exceed without a change order from the RCD. The RCD will not be responsible for any loss of anticipated profits due to reductions in the size of the contract.

**1. COST PROPOSAL (Example form: consultants may use alternative cost proposal formats, but must retain task elements and provide total costs for each)**

Task #	Description	Staff and Hourly Rate	Cost
1	Project Management and Administration		
2	Topographic Mapping		
3	Water System Assessment Report		
4	Geotechnical Analysis and Ground Water Monitoring		
5	Conceptual Designs (reservoirs and irrigation)		
6	65% Designs and Cost Estimate (reservoirs and irrigation)		
7	100% Designs and Cost Estimate (reservoirs and irrigation)		
8	Permit Support (time and materials as directed)		
Total Proposal Cost			

***Total Proposal (in numbers):***

---

***Total Proposal (in words):***

---

**2. CERTIFICATION**

I hereby certify that:

- A. All of the statements herein made by me are made on behalf of [company name]  
\_\_\_\_\_
- B. I have thoroughly examined all documents, contract documents and all other items bound herein;
- C. I have carefully prepared this Cost Proposal form and have checked the same in detail before submitting this proposal;
- D. I have full authority to make such statements and to submit this cost proposal form on the Company's behalf; and
- E. The statements herein are true and correct.

Signature \_\_\_\_\_ Date \_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**3. SUBCONTRACTORS**

List subcontractors you are planning to use on this project, if any. Provide company name and California contractor/engineering license number and classification. Any subcontractors not listed here and added at a later date, will need to be approved in writing by the RCD.

Name of Subcontractor: \_\_\_\_\_

License #: \_\_\_\_\_ Classification: \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

License #: \_\_\_\_\_ Classification: \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

License #: \_\_\_\_\_ Classification: \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

License #: \_\_\_\_\_ Classification: \_\_\_\_\_

Name of Subcontractor: \_\_\_\_\_

License #: \_\_\_\_\_ Classification: \_\_\_\_\_



**4. REFERENCES**

List projects and contact information for use as reference or attach reference documentation.

**PROJECT NAME** \_\_\_\_\_

Brief description of project:

Date(s) constructed:

Reference (name & phone) \_\_\_\_\_

**PROJECT NAME** \_\_\_\_\_

Brief description of project:

Date constructed:

Reference (name & phone) \_\_\_\_\_

**PROJECT NAME** \_\_\_\_\_

Brief description of project

Date constructed:

Reference (name & phone) \_\_\_\_\_

**Exhibit D**  
**Sample Contract**  
**Butano Creek Streamflow Improvement Projects**

**SAN MATEO COUNTY RESOURCE CONSERVATION DISTRICT**  
**PROFESSIONAL SERVICES AGREEMENT WITH**  
**NAME OF CONTRACTOR**

THIS AGREEMENT ("Agreement"), made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2017 is by and between the **SAN MATEO COUNTY RESOURCE CONSERVATION DISTRICT**, a political subdivision of the State of California, hereinafter referred to as "RCD," and **CONTRACTOR NAME**, hereinafter referred to as "**CONTRACTOR.**"

**WITNESSETH:**

**WHEREAS,** (text here introducing need for project and background); and

**WHEREAS,** RCD desires to use the professional services of CONTRACTOR; and

**WHEREAS,** CONTRACTOR has the professional and administrative ability to implement such services; and

**WHEREAS,** RCD and CONTRACTOR desire to set forth in writing the obligations and responsibilities of each party relating to the services;

**NOW, THEREFORE,** in consideration of the promises and mutual benefits which will accrue to the parties hereto in carrying out the terms of this Agreement, the parties agree as follows:

**1. Scope of Services**

- a. CONTRACTOR will, in accordance with the terms of this Agreement, perform the services set forth in Exhibit A, **Title of Project**, hereinafter referred to as "**PROJECT**", which is attached hereto and incorporated herein by reference.
- b. This Agreement is limited both in scope and duration, as herein specified.

**2. Term of Agreement.** Subject to compliance with all applicable terms and conditions, the term of this Agreement shall commence on \_\_\_\_\_ and terminate on \_\_\_\_\_.

**3. Performance Responsibilities.** Contractor shall complete the herein described services by no later than \_\_\_\_\_ unless a later date is agreed upon by the parties in writing. Time is and shall be of the essence in the performance of the specified services by CONTRACTOR.

**4. Compensation.**

- a. In consideration of the services provided by CONTRACTOR in accordance with all applicable terms, conditions and specifications set forth in this Agreement and in Exhibit A, RCD agrees to pay CONTRACTOR an amount not to exceed **amount as text, (\$xx,xxx.xx)** for the successful and timely completion of the specified services. In no event shall RCD's

- total fiscal obligation under this Agreement exceed (write out amount (\$numerical amount). In the event that RCD makes any advance payments, CONTRACTOR agrees to refund any amounts in excess of the amount owed by RCD at the time of contract termination or expiration. CONTRACTOR is not entitled to payment for work not performed as required by this Agreement.
- b. In the event that the funding on which the above described contract services relies is materially reduced or made unavailable, despite the parties' understandings and expectations that no such shortage of funding will occur, RCD may terminate this Agreement or a portion of the services referenced in the Attachments and Exhibits based upon the unavailability of funds by providing written notice to Contractor as soon as is reasonably possible after County learns of said unavailability of outside funding.
5. **Billing and Payment Procedure.** CONTRACTOR will submit requests for payment along with documentation acceptable to the RCD **no more frequently than monthly and no less frequently than quarterly.** RCD will issue payment to CONTRACTOR **(within 30 days of an acceptable request for payment and documentation) or (within 30 days of payment to the RCD by the project funder).**
6. **Cooperation.** RCD and CONTRACTOR agree to cooperate to the greatest extent possible to complete the PROJECT. CONTRACTOR will notify RCD in writing of any new developments, information, issues or concerns that are reasonably expected to negatively impact the PROJECT and/or its completion as soon as practicable.
7. **Assignment.** This Agreement is not assignable by CONTRACTOR in whole or in part without the authorized written consent of RCD,
8. **Conflict of Interest.** The CONTRACTOR shall comply with all applicable State laws and rules pertaining to conflicts of interest, including but not limited to, Government Code Section 1090 and Public Contract Code 10410 and 10411.
9. **Applicable Laws.** All work performed on behalf of the RCD, as set forth in this Agreement shall be performed in accordance with all applicable state and federal laws, regulations, policies, procedures, and standards, and any failure to do so shall constitute a material breach of the Agreement by CONTRACTOR, which may be waived by RCD at its sole discretion subject to cure or mitigation of the violation.
10. **Wages.** All work implemented by the RCD, a public agency, is considered a public work or public improvement project. As public projects, they are subject to prevailing wage and other requirements included in California Labor Code §1720 -1861. CONTRACTOR, and any subcontractor working under CONTRACTOR, shall pay not less than the specified prevailing rates of wages to all workers employed in the execution of the Contract. Prevailing wage determinations can be found at Department of Industrial Relations website.
11. **No Benefit to Arise For Local Employees.** Except as provided by State law, no member, officer, or employee of RCD or its designees or agents, and no public official who exercises authority over or has responsibilities with respect to the Project during their tenure or for one (1) year thereafter, shall have any interest, direct or indirect, in any agreement or sub-

agreement or the proceeds thereof, for work to be performed in connection with the services performed under this Agreement.

- 12. Independent Contractor Status.** The CONTRACTOR, and the officers, the agents and employees of the CONTRACTOR, in the performance of the Agreement, shall act in an independent capacity and not as officers, employees or agents of the RCD. Nothing in this Agreement is intended nor shall be construed to create an employer-employee relationship, and neither CONTRACTOR nor its employees acquire any of the rights, privileges, powers or advantages of RCD employees.
- 13. Standard of Professionalism.** CONTRACTOR shall conduct all work under this Agreement consistent with professional standards for the industry and type of work being performed hereunder.
- 14. Ownership of Materials.** Except as otherwise expressly stated in Exhibit A, all materials and work products, including data collected for the Work produced as a result of this Agreement are the property of the RCD. Any final products distributed or produced will acknowledge the CONTRACTOR, RCD, and other Funding Agencies as reasonably requested by the RCD. The RCD shall be entitled to use and publish the work product and deliverables under this Agreement.
- 15. Indemnification.** To the fullest extent permitted by applicable law, CONTRACTOR agrees to defend, at CONTRACTOR's expense and with counsel acceptable to RCD, indemnify, and save and hold harmless RCD and all of its officers, directors, employees and agents, from and against any and all claims, suits, losses, causes of action, damages, liabilities, and expenses of any kind whatsoever arising out of the performance or nonperformance of the CONTRACTOR's work, including without limitation, all expenses of litigation and/or arbitration, court costs, and attorneys' fees, arising on account of or in connection with injuries to or the death of any person whomsoever, or any and all damages to property, regardless of possession or ownership, which injuries, death or damages arise from, or are in any manner connected with, the work performed by or for the CONTRACTOR under this Agreement, or are caused in whole or part by reason of the acts or omissions or presence of the person or property of the CONTRACTOR or any of its employees, agents, representatives and or suppliers.
- 16. Insurance.** CONTRACTOR shall obtain and maintain for the duration of this Agreement, comprehensive general liability insurance and/or other insurance necessary to protect the parties hereto, and shall provide RCD with evidence thereof prior to commencement of any work under this Agreement. CONTRACTOR shall have RCD named as an additional insured on its insurance policy, which shall have minimum coverage limits as specified on Exhibit B hereto, incorporated herein by reference. CONTRACTOR's above described insurance shall serve as the primary insurance coverage for any claim arising from or relating to the services to be performed hereunder.

#### **17. Nondiscrimination and Other Requirements**

- a. General Nondiscrimination:** CONTRACTOR will not discriminate in employment practices or in the delivery of services on the grounds of race, color, national origin, ancestry, age,

disability (physical or mental), sex, sexual orientation, gender identity, marital or domestic partner status, religion, political beliefs or affiliation, familial or parental status (including pregnancy), medical condition (cancer-related), military service, or genetic information.

**b. Equal Employment Opportunity:** CONTRACTOR shall ensure equal employment opportunity based on objective standards of recruitment, classification, selection, promotion, compensation, performance evaluation, and management relations for all employees under this Agreement.

**c. Discrimination Against Individuals with Disabilities:** The nondiscrimination requirements of 41 C.F.R. 60-741.5(a) are incorporated into this Agreement as if fully set forth here, and CONTRACTOR and any subcontractor(s) shall abide by the requirements of 41 C.F.R. 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.

**d. History of Discrimination:** CONTRACTOR certifies that no finding of discrimination has been issued in the past 365 days against CONTRACTOR by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other investigative entity. If any finding(s) of discrimination have been issued against CONTRACTOR within the past 365 days by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or other governmental investigative entity, CONTRACTOR shall provide the RCD with a written explanation of the outcome(s) or remedy for the discrimination prior to execution of this Agreement. Failure to comply with this Section shall constitute a material breach of this Agreement and subjects the Agreement to immediate termination at the sole option of the RCD.

**18. Notices.** Any notice required to be given pursuant to the terms and provisions of this Agreement shall be in writing and shall be sent first-class mail. Notice shall be deemed to be effective two (2) days after mailing to the following addresses:

**To RCD:** Kellyx Nelson, Executive Director  
San Mateo Resource Conservation District  
80 Stone Pine Rd, Suite 100  
Half Moon Bay, CA 94019

**To CONTRACTOR:** Name, title  
Organization/Agency  
Address 1  
Address 2

**19. Amendments and Integration.** This Agreement supersedes all previous agreements or understandings, and constitutes the entire understanding between the parties with respect to the above referenced services, terms of compensation, and otherwise. This Agreement shall not be amended, except in a writing that is executed by authorized representatives of both parties.

**20. Termination.** This Agreement may be terminated for any of the following reasons:

- a. If CONTRACTOR fails to perform the services hereunder agreed to the satisfaction of RCD, or otherwise fails to fulfill its obligations under this Agreement, immediately upon written notice from RCD; and
- b. RCD may terminate this Agreement or a portion of the services referenced in the Attachments and Exhibits based upon the unavailability of funds by providing written notice to Contractor as soon as is reasonably possible after County learns of said unavailability of funding.

**IN WITNESS WHEREFORE**, the parties agree to the foregoing terms and conditions and hereby enter into this Agreement.

Date: \_\_\_\_\_ By: \_\_\_\_\_  
**Name, Title**  
**Organization/Agency Name**

Date: \_\_\_\_\_ By: \_\_\_\_\_  
**Kellyx Nelson, Executive Director**  
**San Mateo Resource Conservation District**

**Exhibit E**  
**Insurance Requirements**  
**Butano Creek Streamflow Improvement Projects**

CONTRACTOR shall procure and maintain for the duration of this Agreement insurance against claims and injuries to persons or damages to property which may arise from or in connection with the work hereunder by CONTRACTOR, its agents, representatives, employees or subcontractors. The cost of such insurance shall be the sole responsibility of CONTRACTOR.

1. Minimum Scope of Coverage and Limits of Insurance:
  - a. Comprehensive General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage.
  - b. Automobile Liability: \$500,000 combined single limit per accident for bodily injury and property damage.
  - c. Worker's Compensation: Limits as set forth in the Labor Code of the State of California.
  
2. Contractors Liability Insurance Policy shall contain the following clauses:
  - a. San Mateo Resource Conservation District (RCD), Peninsula Open Space Trust, Rita Giannini, and Gene Richeson are added as an additional insured as respects operation of the named insured formed under contract with RCD.
  - b. It is agreed that any insurance maintained by RCD shall apply in excess of, and not contribute with, insurance provided by this policy.
  - c. The insurer agrees to waive all rights of subrogation against RCD, its officers and employees for losses arising from work performed by CONTRACTOR for RCD.
  
3. Each insurance policy required herein shall be endorsed to state that coverage shall not be cancelled, limited, or non-renewed except after thirty (30) days written notice has been given to RCD. Certificates of insurance evidencing the coverage required by the clauses set forth above shall be filed with RCD within 10 working days to the effective date of this Agreement.

**Exhibit F**  
**Certificate of Insurance**  
**Butano Creek Streamflow Improvement Projects**

**TO:** SAN MATEO RESOURCE CONSERVATION DISTRICT

**PROJECT:** Butano Creek Streamflow Improvement Project

This is to certify that all requirements for insurance of subcontractors as specified have been met.

\_\_\_\_\_  
[Contractor]

\_\_\_\_\_  
By

\_\_\_\_\_  
Dated

Please return this completed form with your Certificates of Insurance within 7 days of notice of award.



**Exhibit G**  
**Billing Instructions for Contractors**  
**Butano Creek Streamflow Improvement Projects**

**Process and timing**

Invoices will be reviewed by the RCD staff before submittal to grant funders. Invoices will be paid upon receipt of funds from the grantor, a process that may take up to 120 days from the time of submittal to the grantor by the District.

**Format**

**Task:** If your contract or work order shows that you will be performing more than one task specified in the budget, please break down the charges on your invoice by task.

**Description:** Provide a thorough but concise description of all work included on the invoice. Include a breakdown of equipment and labor rates, hours and dates worked, materials, subcontractors and other costs.

**Please submit your invoice to:**

[andrew@sanmateoRCD.org](mailto:andrew@sanmateoRCD.org) (Preferred)

or

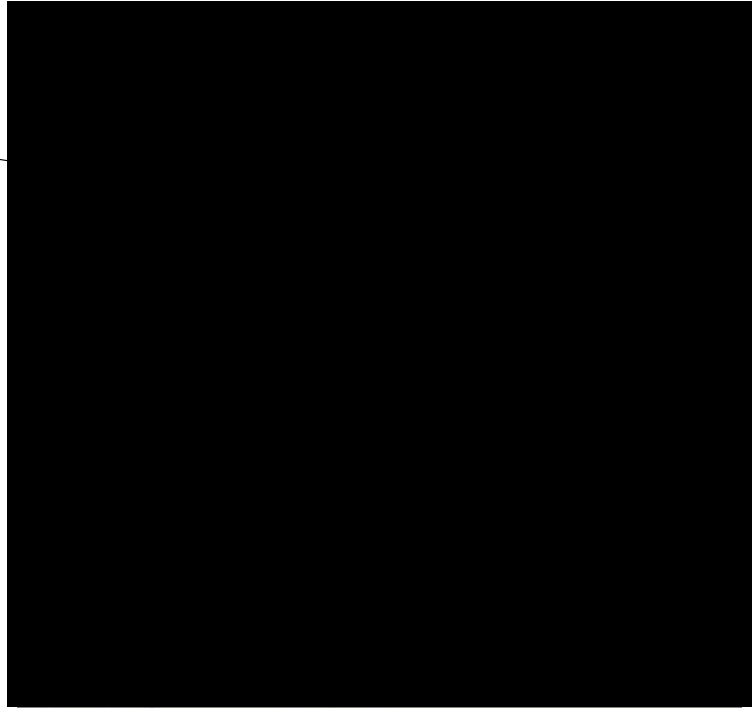
Andrew Hall  
San Mateo Resource Conservation District  
80 Stone Pine Road, Suite 100  
Half Moon Bay, CA 94019

***Exhibit H***  
***Example Designs***  
***Butano Creek Streamflow Improvement Projects***

# [REDACTED] POND

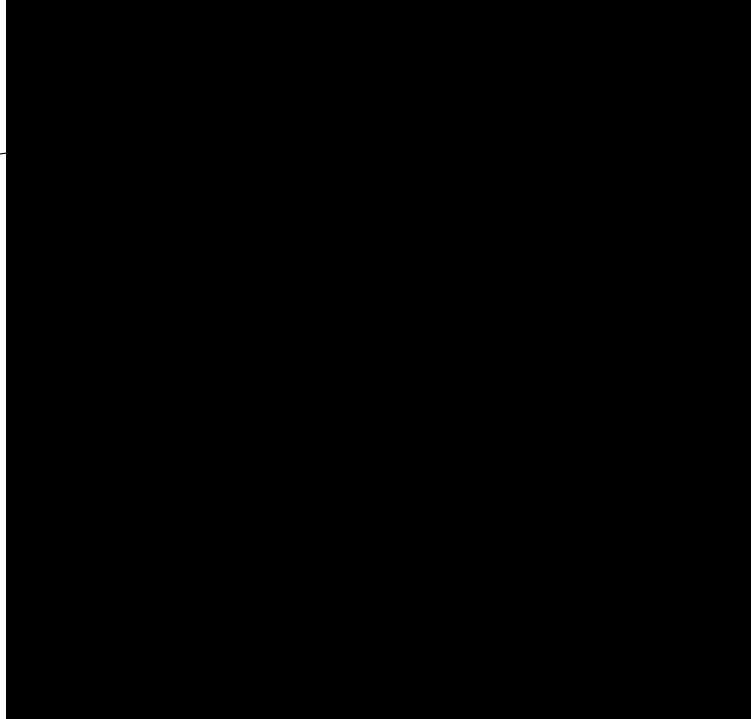
## 100% DESIGN SUBMITTAL

PROJECT  
LOCATION



VICINITY MAP  
N.T.S. (GOOGLE)

PROJECT  
LOCATION



REGIONAL MAP  
N.T.S. (GOOGLE)

**GENERAL NOTES**

1. PREPARED AT THE REQUEST OF:  
SAN MATEO COUNTY RCD  
ATTN: JOE ISSEL  
625 MIRAMONTES STREET, SUITE 103  
HALF MOON BAY, CALIFORNIA 94019
2. TOPOGRAPHIC MAPPING WAS PERFORMED BY:  
[REDACTED]
3. ELEVATION DATUM: GPS TIES TO NAVD88 USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
4. BASIS OF BEARINGS: GPS TIES TO NAD83 CALIFORNIA STATE PLANE, ZONE 3 USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
5. CONTOUR INTERVAL IS ONE FOOT FOR GROUND BASED SURVEY AND TWO FEET FOR LIDAR SURVEY. ELEVATIONS AND DISTANCES SHOWN ARE IN DECIMAL FEET.
6. THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES ARE NOT SHOWN HEREON.
7. IF DISCREPANCIES ARE DISCOVERED BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
8. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE 2010 EDITION OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS, ISSUED BY THE DEPARTMENT OF TRANSPORTATION (HEREAFTER REFERRED TO AS "STANDARD SPECIFICATIONS").
9. THESE DESIGNS ARE INCOMPLETE WITHOUT THE FINAL STAMPED TECHNICAL SPECIFICATIONS PREPARED BY [REDACTED] INC. REFER TO SPECIFICATIONS FOR DETAILS NOT SHOWN HEREON.

**ABBREVIATIONS**

AVG.	AVERAGE
CC	CONCRETE
CY	CUBIC YARDS
DIA.	DIAMETER
E	EXISTING
EG	EXISTING GROUND
ELEV.	ELEVATION
DI	DRAINAGE INLET
FG	FINISHED GRADE
FT	FEET
INV	INVERT
N	NEW
NIC	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
RC	RELATIVE COMPACTION
RSP	ROCK SLOPE PROTECTION
SPK	SPIKE
SQ.FT.	SQUARE FOOT
T	TREE
T.B.D.	TO BE DETERMINED
TYP	TYPICAL
UNK	UNKNOWN
WSE	WATER SURFACE ELEVATION
YR	YEAR

**PROJECT DESCRIPTION**

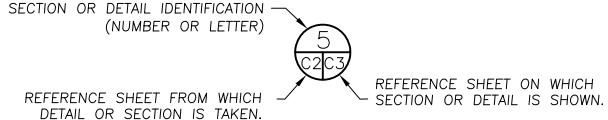
THESE DRAWINGS PROVIDE 100% DESIGN LEVEL DETAILS FOR THE CONSTRUCTION OF A 15.4 ACRE-FOOT POND AT [REDACTED] IN SAN MATEO COUNTY, CALIFORNIA.

WORK SHALL CONSIST OF EXCAVATION, EMBANKMENT CONSTRUCTION, AND INSTALLATION OF DRAINAGE IMPROVEMENTS AND EROSION CONTROL MEASURES.

**SHEET INDEX**

C1	COVER
C2	SITE PLAN
C3	SECTIONS AND CULVERT PROFILE
C4	DETAILS
C5	NOTES

**SECTION AND DETAIL CONVENTION**

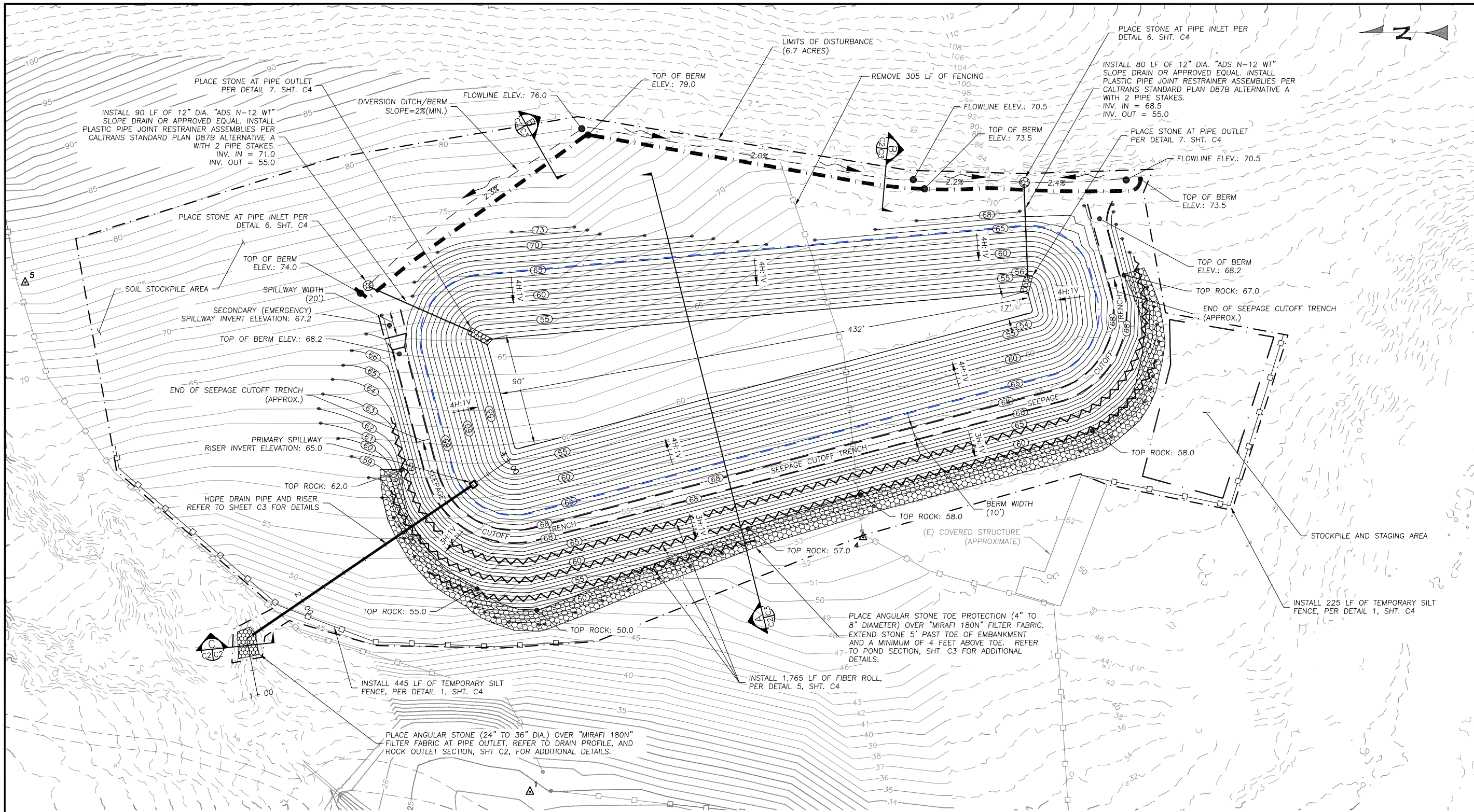


PREPARED AT THE REQUEST OF:  
SAN MATEO COUNTY RCD

COVER

POND  
100% DESIGN  
SUBMITTAL

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS  
0" = 1"



**SITE PLAN**  
SCALE: 1" = 40'

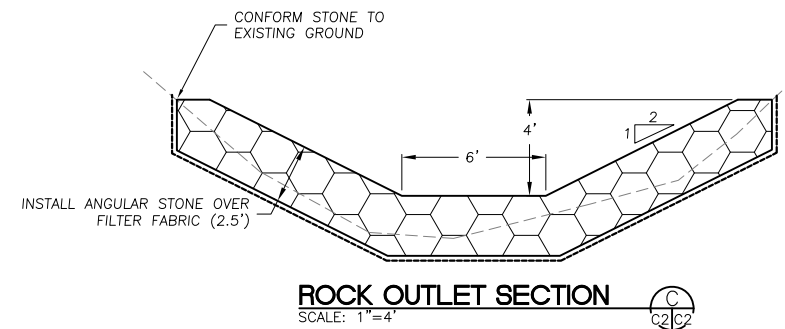
**LEGEND**

	EXISTING CONTOURS (GROUND BASED SURVEY)
	EXISTING CONTOURS (LIDAR SURVEY)
	PROPOSED CONTOURS
	EXISTING FLOW LINE
	SURVEY CONTROL POINT
	EXISTING FENCE
	FIBER ROLL
	SILT FENCE

**SEEDING NOTES**

STABILIZE DISTURBED AREAS (EXCLUDING POND BASE) WITH THE SEED MIX LISTED IN TABLE 1. FOLLOWING SEED APPLICATION, RAKE SURFACES LIGHTLY, AND COVER WITH 2 INCHES OF STRAW MULCH.

TABLE 1. SEED MIX	
SEED TYPE	SEED APPLICATION RATE
HORDEUM VULGARE (CEREAL ANNUAL BARLEY)	250 LB/ACRE (6.2 LBS/1,000 SQ.FT.)
FESTUCA RUBRA (RED FESQUE)	18 LB/ACRE (0.5 LBS/1,000 SQ.FT.)

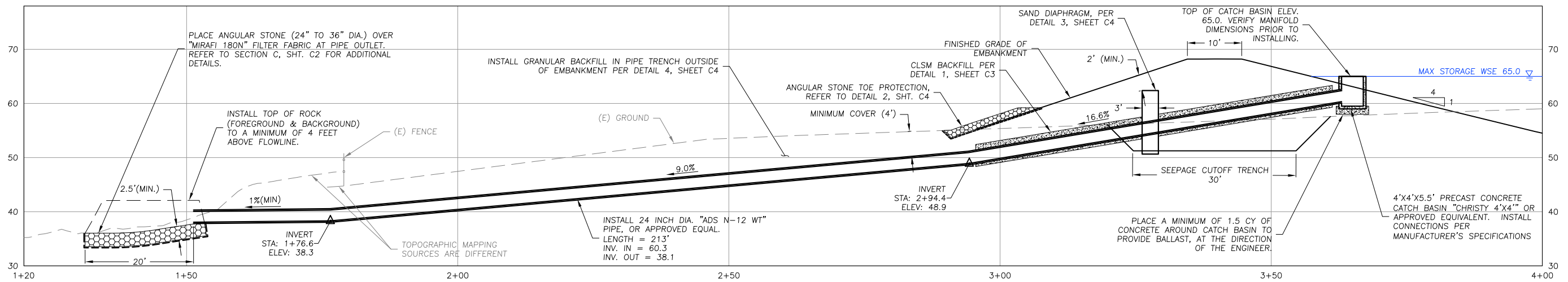


PREPARED AT THE REQUEST OF:  
**SAN MATEO COUNTY RCD**

**SITE PLAN**

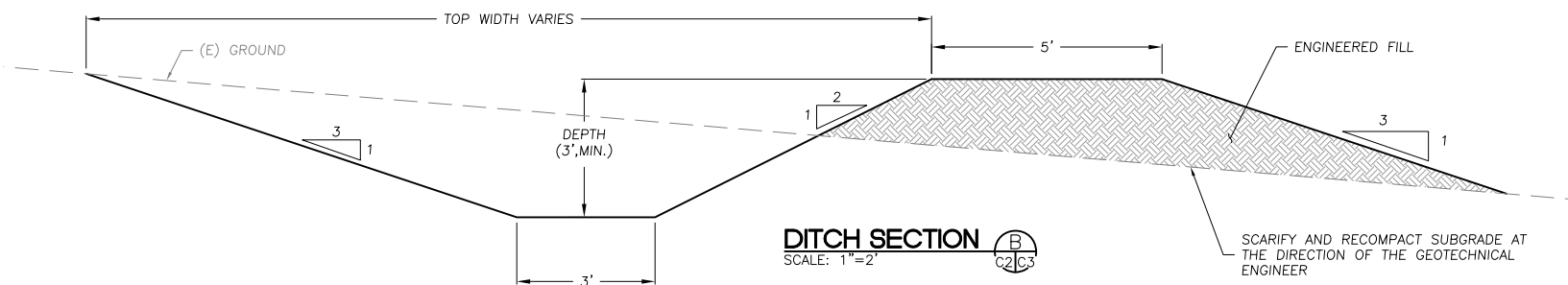
**POND**  
100% DESIGN  
SUBMITTAL

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS



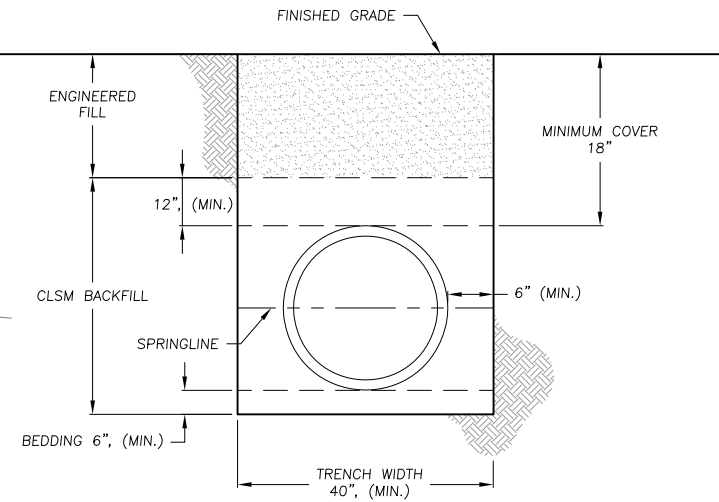
**DRAIN PIPE PROFILE**

SCALE: 1"=10'



**DITCH SECTION**

SCALE: 1"=2'

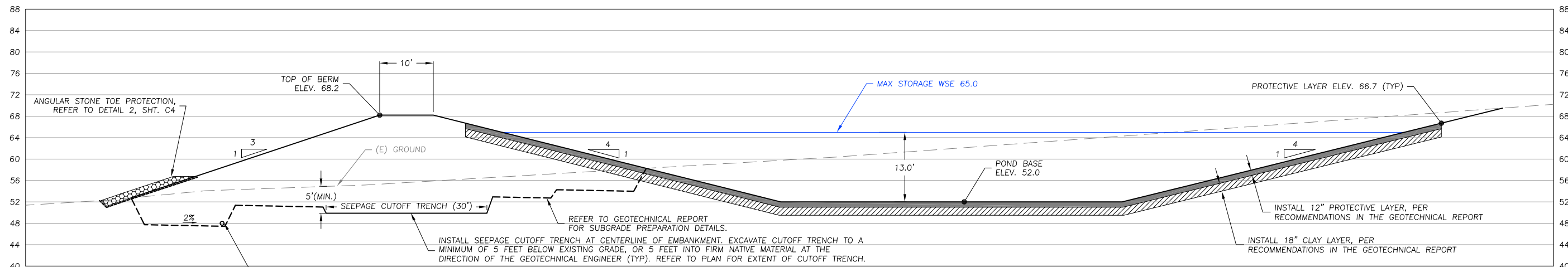


**PIPE TRENCH (CLSM BACKFILL)**

SCALE: 1"=2'

**PIPE INSTALLATION**

1. CONSTRUCT EMBANKMENT PRIOR TO PLACING PIPE.
2. INSTALL ALL PIPE SYSTEMS IN ACCORDANCE WITH PROVISIONS IN SECTION 64, "PLASTIC PIPE" AND SECTION 61 "CULVERT AND DRAINAGE PIPE JOINTS" OF THE STATE STANDARD SPECIFICATIONS.
3. INSTALL CONTROLLED LOW-STRENGTH MATERIAL (CLSM) BACKFILL PER SECTION 19-302F OF THE STATE STANDARD SPECIFICATIONS. SUBMIT CLSM MIX DESIGN FOR REVIEW AND WRITTEN APPROVAL BY THE ENGINEER PRIOR TO PLACEMENT. ENSURE THAT PIPE IS SECURED DOWN TO AVOID FLOATATION WHEN POURING CLSM.
4. REFER TO TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT FOR BACKFILL DETAILS



**POND SECTION**

SCALE: 1"=10'

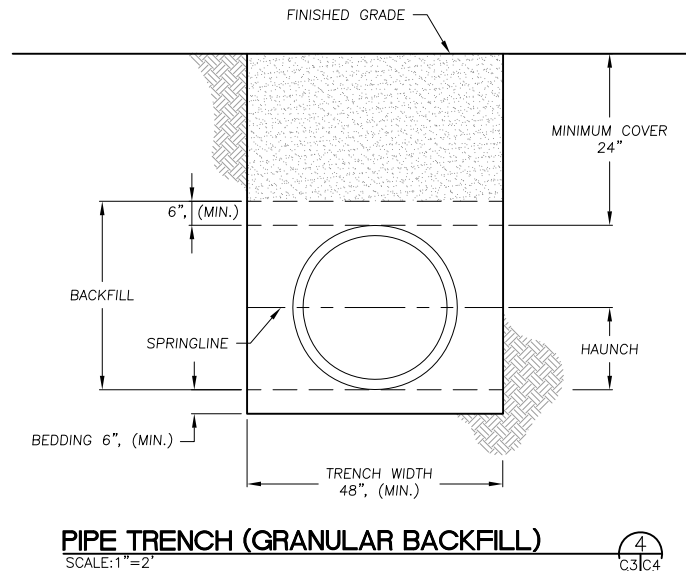
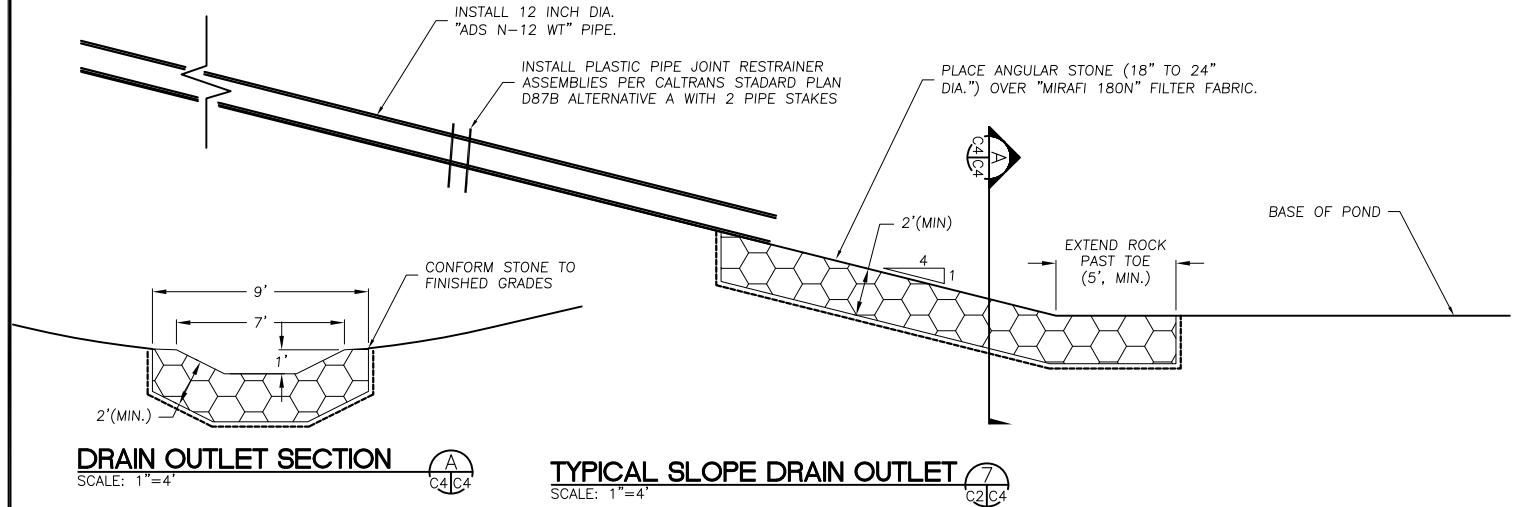
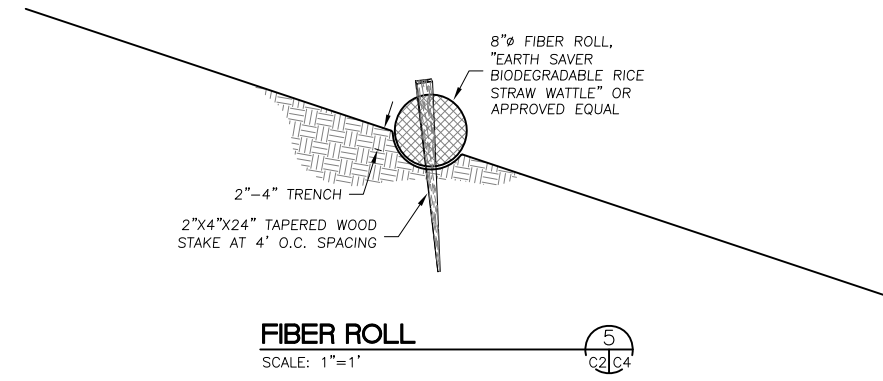
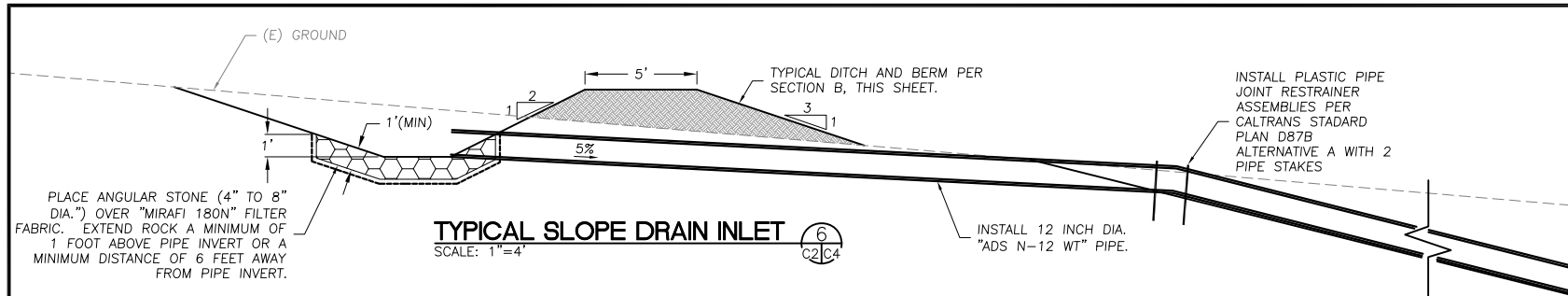
PREPARED AT THE REQUEST OF:  
SAN MATEO COUNTY RCD

SECTIONS AND  
CULVERT  
PROFILE

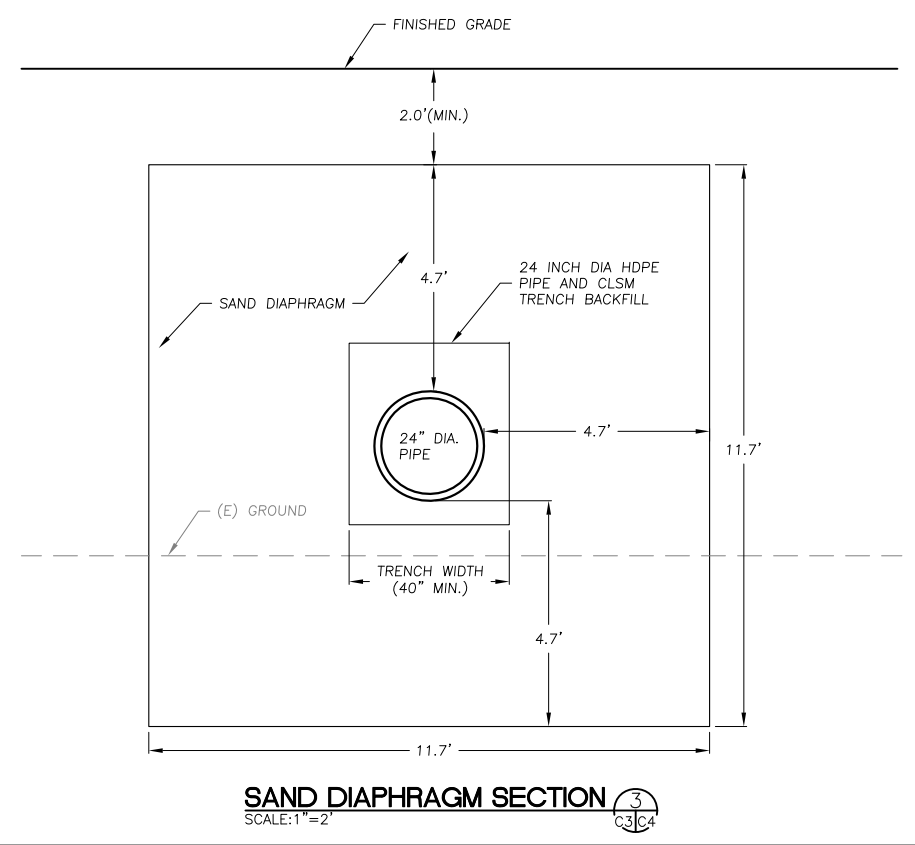
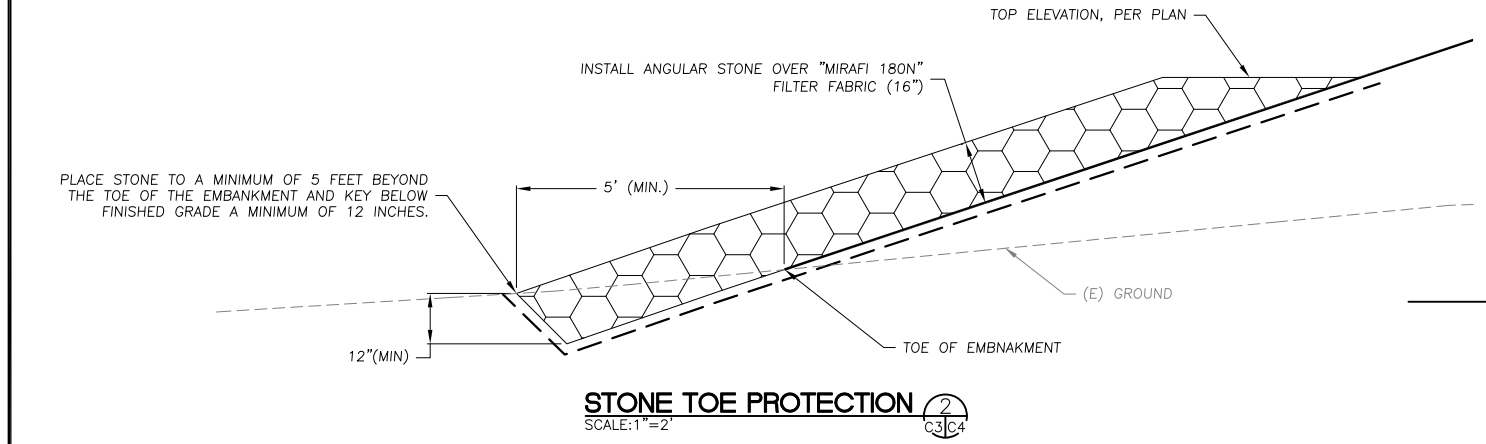
POND  
100% DESIGN  
SUBMITTAL

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS





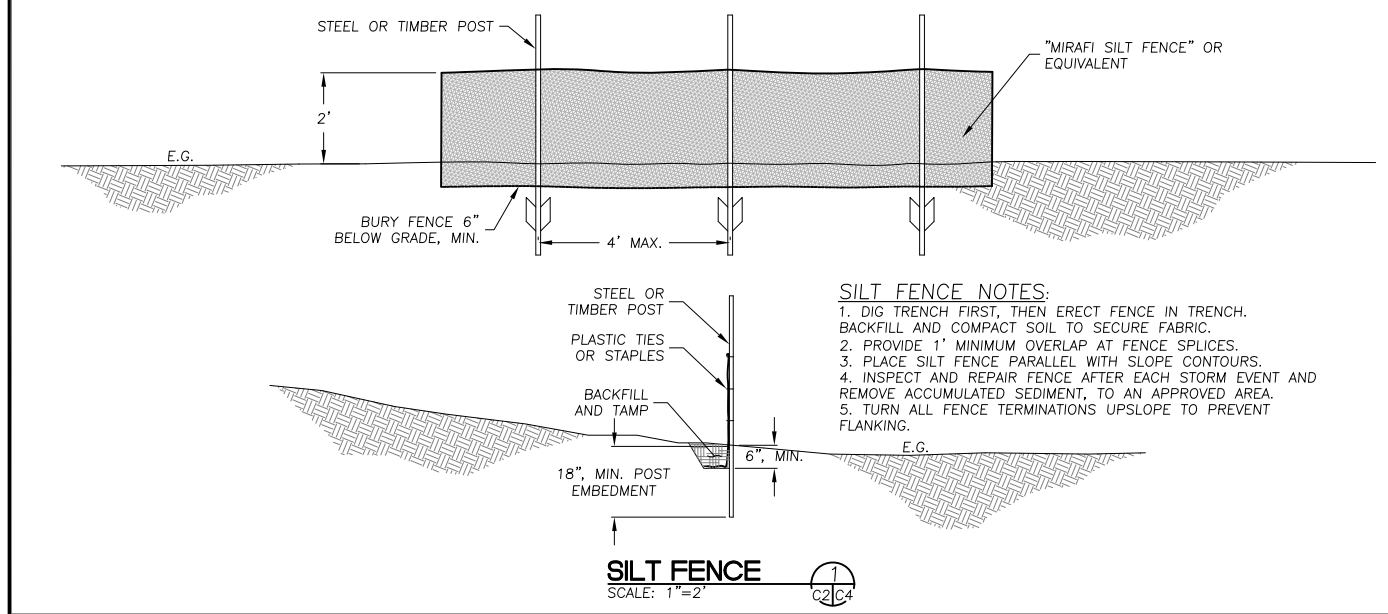
- PIPE INSTALLATION**
1. CONSTRUCT EMBANKMENT PRIOR TO PLACING PIPE.
  2. INSTALL ALL PIPE SYSTEMS IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
  3. **FOUNDATION:** WHERE THE TRENCH BOTTOM IS UNSTABLE, OVER-EXCAVATE TO THE DEPTH SPECIFIED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED. AS AN ALTERNATIVE, AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED WITH A GEOTEXTILE MATERIAL.
  4. **BEDDING:** SUITABLE MATERIAL SHALL BE CLASS I, II, OR III, PER ASTM D2321. PROVIDE DOCUMENTATION OF MATERIAL SPECIFICATION TO ENGINEER.
  5. **BACKFILL:** CLASS I, II, OR III, PER ASTM D2321, IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. IF CRUSHED ROCK IS USED SURROUND WITH A NON-WOVEN FILTER FABRIC SUCH AS "MIRAFI 180N" OR APPROVED EQUAL. PROVIDE DOCUMENTATION OF MATERIAL SPECIFICATION TO THE ENGINEER. INSTALL AS SPECIFIED IN THE "ADS, INC." DRAINAGE HANDBOOK, LATEST EDITION.



- SAND DIAPHRAGM NOTES**
- CONSTRUCT SAND DIAPHRAGM PER THE PIPE PROFILE, SHT. C3 AND REQUIREMENTS LISTED IN THE GEOTECHNICAL REPORT DATED FEBRUARY 2, 2018.
1. REFER TO TABLE 1 FOR THE SAND DIAPHRAGM GRADATION. GRADATION IS EQUIVALENT TO THE ASTM C 33 GRADATION FOR FINE AGGREGATE.
  2. INSTALL SAND DIAPHRAGM WITH A MINIMUM DRY DENSITY OF THE COMPACTED SAND EQUAL TO 95 PERCENT OF THE DRY DENSITY OBTAINED BY COMPACTING A SINGLE SPECIMEN OF SAND USING THE ENERGY AND METHODS DESCRIBED IN ASTM D698A.

**TABEL 1: ASTM C 33 GRADATION**

SIEVE SIZE	% BY WEIGHT PASSING SIEVES
3/8"	100
NO. 4	95-100
NO. 8	80-100
NO. 16	50-85
NO. 30	25-60
NO. 50	10-30
NO.100	2-10



PREPARED AT THE REQUEST OF:  
**SAN MATEO COUNTY RCD**

**DETAILS**

**POND**  
**100% DESIGN**  
**SUBMITTAL**

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS  
0" = 1"

**C4** OF **5**

## GENERAL NOTES

- PREPARED AT THE REQUEST OF:  
SAN MATEO COUNTY RESOURCE CONSERVATION DISTRICT  
ATTN: JOE ISSEL  
625 MIRAMONTES STREET, SUITE 103  
HALF MOON BAY, CALIFORNIA 94019  
TELEPHONE: (650) 712-7765
- NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER OR A DESIGNATED REPRESENTATIVE SHALL OBSERVE THE CONSTRUCTION PROCESS, AS NECESSARY TO ENSURE PROPER INSTALLATION PROCEDURES.
- EXISTING UNDERGROUND UTILITY LOCATIONS:
  - CALL UNDERGROUND SERVICE ALERT (1-800-642-2444) TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO COMMENCING CONSTRUCTION.
  - PRIOR TO BEGINNING WORK, CONTACT ALL UTILITIES COMPANIES WITH REGARD TO WORKING OVER, UNDER, OR AROUND EXISTING FACILITIES AND TO OBTAIN INFORMATION REGARDING RESTRICTIONS THAT ARE REQUIRED TO PREVENT DAMAGE TO THE FACILITIES.
  - EXISTING UTILITY LOCATIONS SHOWN ARE COMPILED FROM INFORMATION SUPPLIED BY THE APPROPRIATE UTILITY AGENCIES AND FROM FIELD MEASUREMENTS TO ABOVE GROUND FEATURES READILY VISIBLE AT THE TIME OF SURVEY. LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND DEPTH OF UNDERGROUND UTILITIES.
  - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
  - PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION, DISCOVER OR VERIFY THE ACTUAL DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES AND POTHOLE THOSE AREAS WHERE POTENTIAL CONFLICTS ARE LIKELY OR DATA IS OTHERWISE INCOMPLETE.
  - TAKE APPROPRIATE MEASURES TO PROTECT EXISTING UTILITIES DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF REPAIR/REPLACEMENT OF ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
  - UPON LEARNING OF THE EXISTENCE AND/OR LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY BY TELEPHONE AND IN WRITING.
  - UTILITY RELOCATIONS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT FACILITIES WILL BE PERFORMED BY THE UTILITY COMPANY, UNLESS OTHERWISE NOTED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
- ALL TESTS, INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS, SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE REQUIRED TESTS AND INSPECTIONS ARE PERFORMED.
- PROJECT SCHEDULE: PRIOR TO COMMENCEMENT OF WORK, SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL A DETAILED CONSTRUCTION SCHEDULE. DO NOT BEGIN ANY CONSTRUCTION WORK UNTIL THE PROJECT SCHEDULE AND WORK PLAN IS APPROVED BY THE ENGINEER. ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL. PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, PERMITTING, INSTALLATION, AND MAINTENANCE OF ANY AND ALL TRAFFIC CONTROL MEASURES DEEMED NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION. ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
- CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTION LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. NEITHER THE PROFESSIONAL ACTIVITIES OF CONSULTANT NOR THE PRESENCE OF CONSULTANT OR HIS OR HER EMPLOYEES OR SUB-CONSULTANTS AT A CONSTRUCTION SITE SHALL RELIEVE THE CONTRACTOR AND ITS SUBCONTRACTORS OF THEIR RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND APPLICABLE HEALTH OR SAFETY REQUIREMENTS OF ANY REGULATORY AGENCY OR OF STATE LAW.
- MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL AS-BUILT DEVIATIONS FROM THE CONSTRUCTION AS SHOWN ON THESE DRAWINGS AND SPECIFICATIONS, FOR THE PURPOSE OF PROVIDING THE ENGINEER OF RECORD WITH A BASIS FOR THE PREPARATION OF RECORD DRAWINGS.
- MAINTAIN THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. STORE ALL MATERIALS WITHIN APPROVED STAGING AREAS.
- PROVIDE, AT CONTRACTOR'S SOLE EXPENSE, ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLY WITH ALL APPLICABLE PERMIT CONDITIONS AND REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF ALL SURVEY MONUMENTS OR PROPERTY CORNERS. DISTURBED MONUMENTS SHALL BE RESTORED BACK TO THEIR ORIGINAL LOCATION AND SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
- ALL STANDARD STREET MONUMENTS, LOT CORNER PIPES, AND OTHER PERMANENT MONUMENTS DISTURBED DURING THE PROCESS OF CONSTRUCTION SHALL BE REPLACED AND A RECORD OF SURVEY OR CORNER RECORD PER SECTION 8771 OF THE PROFESSIONAL LAND SURVEYORS ACT FILED BEFORE ACCEPTANCE OF THE IMPROVEMENTS BY THE COUNTY. COPIES OF ANY RECORD OF SURVEY OR CORNER RECORDS SHALL BE SUBMITTED TO THE COUNTY.
- CONTRACTOR IS REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- THE CONTRACTOR SHALL CONFORM TO THE RULES AND REGULATIONS OF THE CONSTRUCTION SAFETY ORDERS OF THE CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH PERTAINING TO EXCAVATION AND TRENCHES THE CALIFORNIA CODE OF REGULATIONS TITLE 8, SUBCHAPTER 4 CONSTRUCTION SAFETY ORDERS, ARTICLE 6 EXCAVATION.
- CULTURAL RESOURCES: IN THE EVENT THAT HUMAN REMAINS AND/OR CULTURAL MATERIALS ARE FOUND, ALL PROJECT-RELATED CONSTRUCTION SHALL CEASE WITHIN A 100-FOOT RADIUS. THE CONTRACTOR SHALL, PURSUANT TO SECTION 7050.5 OF THE HEALTH AND SAFETY CODE, AND SECTION 5097.94 OF THE PUBLIC RESOURCES CODE OF THE STATE OF CALIFORNIA, NOTIFY THE SAN MATEO COUNTY CORONER IMMEDIATELY.

## EARTHWORK NOTES

- ALL GRADING SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT, AND WITH THE APPLICABLE REQUIREMENTS OF THE SAN MATEO COUNTY GRADING ORDINANCE. REFER TO GEOTECHNICAL INVESTIGATION REPORT BY:



PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL BE FAMILIAR WITH THE GEOTECHNICAL INVESTIGATION. IN THE EVENT OF DISCREPANCY BETWEEN THE REPORT AND THE NOTES HEREIN, THE REPORT SHALL PREVAIL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND MAKE HIS OWN INTERPRETATIONS WITH REGARD TO MATERIALS, METHODS AND EQUIPMENT NECESSARY TO PERFORM THE WORK REQUIRED FOR THIS PROJECT.

- GRADING SUMMARY:

TOTAL CUT VOLUME =	19,451 CY
TOTAL FILL VOLUME =	16,129 CY
NET (CUT) =	3,322 CY

THE ABOVE QUANTITIES ARE APPROXIMATE IN-PLACE VOLUMES CALCULATED AS THE DIFFERENCE BETWEEN EXISTING GROUND AND THE PROPOSED FINISH GRADE, PREPARED FOR PERMITTING PURPOSES ONLY. EXISTING GROUND IS DEFINED BY THE TOPOGRAPHIC CONTOURS AND/OR SPOT ELEVATIONS ON THE PLAN. PROPOSED FINISH GRADE IS DEFINED AS THE DESIGN SURFACE ELEVATION OF WORK TO BE CONSTRUCTED. THE QUANTITIES HAVE NOT BEEN FACTORED TO INCLUDE ALLOWANCES FOR BULKING, CLEARING AND GRUBBING, SUBSIDENCE, SHRINKAGE, OVER EXCAVATION, AND RECOMPACTON, UNDERGROUND UTILITY AND SUBSTRUCTURE SPOILS AND CONSTRUCTION METHODS.

THE CONTRACTOR SHALL PERFORM AN INDEPENDENT EARTHWORK ESTIMATE FOR THE PURPOSE OF PREPARING BID PRICES FOR EARTHWORK. THE BID PRICE SHALL INCLUDE COSTS FOR ANY NECESSARY IMPORT AND PLACEMENT OF EARTH MATERIALS OR THE EXPORT AND PROPER DISPOSAL OF EXCESS OR UNSUITABLE EARTH MATERIALS.

- PRIOR TO COMMENCING WORK, PROTECT ALL SENSITIVE AREAS TO REMAIN UNDISTURBED WITH TEMPORARY FENCING, AS SHOWN ON THE DRAWINGS, AS SPECIFIED, OR AS DIRECTED BY THE ENGINEER.
- DO NOT DISTURB AREAS OUTSIDE OF THE DESIGNATED LIMITS OF DISTURBANCE, UNLESS AUTHORIZED IN WRITING BY THE ENGINEER. THE COST OF ALL ADDITIONAL WORK ASSOCIATED WITH RESTORATION AND REVEGETATION OF DISTURBED AREAS OUTSIDE THE DESIGNATED LIMITS OF DISTURBANCE, AS SHOWN ON THE DRAWINGS, SHALL BE BORN SOLELY BY THE CONTRACTOR.
- REMOVE ALL EXCESS SOILS TO AN APPROVED DUMP SITE OR DISPOSE OF ON SITE AT A LOCATION TO BE APPROVED BY THE ENGINEER, IN A MANNER THAT WILL NOT CAUSE EROSION.
- CLEARING AND GRUBBING, SUBGRADE PREPARATION AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 19 OF THE STANDARD SPECIFICATIONS, THESE DRAWINGS, AND THE TECHNICAL SPECIFICATIONS.
- PRIOR TO STARTING WORK ON THE PROJECT, SUBMIT FOR ACCEPTANCE BY THE ENGINEER A HAZARDOUS MATERIALS CONTROLS AND SPILL PREVENTION PLAN. INCLUDE PROVISIONS FOR PREVENTING HAZARDOUS MATERIALS FROM CONTAMINATING SOIL OR ENTERING WATER COURSES, AND ESTABLISH A SPILL PREVENTION AND COUNTERMEASURE PLAN.
- UNSUITABLE SOIL OR MATERIALS, NOT TO BE INCLUDED IN THE WORK INCLUDE:
  - ORGANIC MATERIALS SUCH AS PEAT, MULCH, ORGANIC SILT OR SOD.
  - SOILS CONTAINING EXPANSIVE CLAYS.
  - MATERIAL CONTAINING EXCESSIVE MOISTURE.
  - POORLY GRADED COURSE MATERIAL, PARTICLE SIZE IN EXCESS OF 6 INCHES.
  - MATERIAL WHICH WILL NOT ACHIEVE SPECIFIED DENSITY OR BEARING.
- FINE GRADING ELEVATIONS, CONFORMS, AND SLOPES NOT CLEARLY SHOWN ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD TO DIRECT DRAINAGE TO PROTECTED DRAINAGE CONTROL STRUCTURES OR NATURAL WATERWAYS IN A MANNER THAT SUPPORTS THE INTENT OF THE DESIGN. ALL FINAL GRADING SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- THE TOP 6" OF SUBGRADE UNDER ALL PAVED SURFACES SUBJECT TO VEHICULAR USE SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION, IN ACCORDANCE WITH ASTM-D1557. ALL OTHER FILL TO BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DENSITY AS DETERMINED BY ASTM-D1557 AND SO CERTIFIED BY TESTS AND REPORTS FROM THE CIVIL ENGINEER IN CHARGE OF THE GRADING CERTIFICATION.
- SPREAD FILL MATERIAL IN LIFTS OF APPROXIMATELY 8 INCHES, MOISTENED OR DRIED TO NEAR OPTIMUM MOISTURE CONTENT AND RECOMPACTED. THE MATERIALS FOR ENGINEERED FILL SHALL BE APPROVED BY A REGISTERED CIVIL ENGINEER. ANY IMPORTED MATERIALS MUST BE APPROVED BEFORE BEING BROUGHT TO THE SITE. THE MATERIALS USED SHALL BE FREE OF ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS.
- ALL CONTACT SURFACES BETWEEN ORIGINAL GROUND AND RECOMPACTED FILL SHALL BE EITHER HORIZONTAL OR VERTICAL. ALL ORGANIC MATERIAL SHALL BE REMOVED AND THE REMAINING SURFACE SCARIFIED TO A DEPTH OF AT LEAST 12 INCHES, UNLESS DEEPER EXCAVATION IS REQUIRED BY THE ENGINEER.

## ACCESS AND STAGING AREA NOTES

- USE ONLY THE APPROVED ACCESS POINTS, AS SHOWN ON THE DRAWINGS. STOCKPILE MATERIALS WITHIN AN EXISTING FLAT AND PREVIOUSLY DISTURBED AREA.
- THE ACCESS PLAN SHOWN ON THE DRAWINGS IS SCHEMATIC. SUBMIT A SITE ACCESS PLAN FOR APPROVAL BY THE ENGINEER, PRIOR TO MOBILIZATION.
- CONTAIN THE DOWNSLOPE PERIMETER OF STAGING OR STOCKPILE AREAS WITH SILT FENCE.
- STORE, MAINTAIN AND REFUEL ALL EQUIPMENT AND MATERIALS IN A DESIGNATED PORTION OF THE STAGING AREA.

## EROSION CONTROL NOTES

- THE EROSION CONTROL PLAN SHOWN IS INTENDED FOR THE SUMMER CONSTRUCTION SEASON (APRIL 15TH TO OCTOBER 15TH). IF THE DRAINAGE FEATURES SHOWN ON THESE DRAWINGS ARE NOT COMPLETED AND DISTURBED AREAS STABILIZED BY OCTOBER 1ST, CONSULT THE ENGINEER FOR ADDITIONAL RAINY SEASON EROSION CONTROL MEASURES.
- COMPLY WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN, TO BE PREPARED AND IMPLEMENTED BY THE CONTRACTOR IN COMPLIANCE WITH THE REQUIREMENTS OF THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES, WATER QUALITY ORDER NO. 2009-0009-DWQ, GENERAL PERMIT NO. CAS000002, ADOPTED SEPTEMBER 2, 2009, (HEREAFTER CONSTRUCTION GENERAL PERMIT (CGP)).
- DO NOT BEGIN SITE DISTURBING ACTIVITIES UNTIL THE SWPPP HAS BEEN APPROVED BY THE COUNTY OF SAN MATEO, UPLOADED TO SMARTS AND A WASTE DISCHARGE IDENTIFICATION (WDID) NUMBER RECEIVED.
- IMPLEMENT SWPPP MEASURES AS THE FIRST ORDER OF BUSINESS UPON SITE MOBILIZATION.
- PRIOR TO COMMENCING WORK, PROTECT AREAS TO REMAIN UNDISTURBED WITH ESA FENCING, AS SHOWN ON THE DRAWINGS. ADDITIONAL FENCING MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
- BETWEEN OCTOBER 15 AND APRIL 15, PROTECT EXPOSED SOIL FROM EROSION AT ALL TIMES. DURING CONSTRUCTION, SUCH PROTECTION MAY CONSIST OF MULCHING AND/OR PLANTING OF NATIVE VEGETATION OF ADEQUATE DENSITY. BEFORE COMPLETION OF THE PROJECT, STABILIZE ALL EXPOSED SOIL ON DISTURBED SLOPES AGAINST EROSION.
- MAINTAIN A STANDBY CREW FOR EMERGENCY WORK AT ALL TIMES DURING THE RAINY SEASON (OCTOBER 15 THROUGH APRIL 15). STOCKPILE NECESSARY MATERIALS AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES.
- CONSTRUCT TEMPORARY EROSION CONTROL MEASURES AS SHOWN ON THIS PLAN, SWPPP, AND/OR AS DIRECTED BY THE ENGINEER TO CONTROL DRAINAGE WHICH HAS BEEN AFFECTED BY GRADING AND/OR TRENCHING OPERATIONS.
- INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE PONDING AND EROSION.
- CONSTRUCT AND MAINTAIN EROSION CONTROL MEASURES TO PREVENT THE DISCHARGE OF EARTHEN MATERIALS FROM DISTURBED AREAS UNDER CONSTRUCTION AND FROM COMPLETED CONSTRUCTION AREAS.
- INSTALL ALL PROTECTIVE DEVICES AT THE END OF EACH WORK DAY WHEN THE FIVE-DAY RAIN PROBABILITY EQUALS OR EXCEEDS 50 PERCENT AS DETERMINED FROM THE NATIONAL WEATHER SERVICE FORECAST OFFICE: WWW.SRH.NOAA.GOV.
- AFTER EACH RAINSTORM, REMOVE ALL SILT AND DEBRIS FROM BEHIND SEDIMENTATION DEVICES.
- THE EROSION CONTROL DEVICES ON THIS PLAN ARE A SCHEMATIC REPRESENTATION OF WHAT MAY BE REQUIRED. EROSION CONTROL DEVICES MAY BE RELOCATED, DELETED, OR ADDITIONAL ITEMS MAY BE REQUIRED DEPENDING ON THE ACTUAL SOIL CONDITIONS ENCOUNTERED, AT THE DISCRETION OF THE ENGINEER.
- MAINTAIN ALL EROSION CONTROL DEVICES AND MODIFY THEM AS SITE PROGRESS DICTATES.
- MONITOR THE EROSION CONTROL DEVICES DURING STORMS AND MODIFY THEM IN ORDER TO PREVENT PROGRESS OF ANY ONGOING EROSION.
- CLEAN DAILY ANY EROSION OR DEBRIS SPILLING ONTO A PUBLIC STREET.
- CONTACT THE ENGINEER IN THE EVENT THAT THE EROSION CONTROL PLAN AS DESIGNED REQUIRES ANY SUBSTANTIAL REVISIONS.
- BE FAMILIAR WITH THE CONDITIONS OF APPROVAL OF ALL REQUIRED PROJECT PERMITS AND IMPLEMENT ALL REQUIRED BMP'S PRIOR TO COMMENCING SITE DISTURBING ACTIVITIES.

## DUST CONTROL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS DUST CONTROL, THROUGHOUT THE CONSTRUCTION, IN ACCORDANCE WITH THE PERMIT CONDITIONS OF APPROVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REGULAR CLEANING OF ALL MUD, DIRT, DEBRIS, ETC., FROM ANY AND ALL ADJACENT ROADS AND SIDEWALKS, AT LEAST ONCE EVERY 24 HOURS WHEN OPERATIONS ARE OCCURRING.
- ALL DISTURBED AREAS, INCLUDING UNPAVED ACCESS ROADS OR STORAGE PILES, NOT BEING ACTIVELY UTILIZED FOR CONSTRUCTION PURPOSES, SHALL BE EFFECTIVELY STABILIZED OF DUST EMISSIONS USING WATER, CHEMICAL STABILIZER/SUPPRESSANT, OR VEGETATIVE GROUND COVER.
- ALL GROUND-DISTURBING ACTIVITIES (E.G., CLEARING, GRUBBING, SCRAPING, AND EXCAVATION) SHALL BE EFFECTIVELY CONTROLLED OF FUGITIVE DUST EMISSIONS UTILIZING APPLICATION OF WATER OR BY PRE-SOAKING.
- ALL MATERIALS TRANSPORTED OFFSITE SHALL BE COVERED OR EFFECTIVELY WETTED TO LIMIT DUST EMISSIONS.
- FOLLOWING THE ADDITION OF MATERIALS TO, OR THE REMOVAL OF MATERIALS FROM, THE SURFACES OF OUTDOOR STORAGE PILES, SAID PILES SHALL BE EFFECTIVELY STABILIZED OF FUGITIVE DUST EMISSIONS UTILIZING SUFFICIENT WATER OR CHEMICAL STABILIZER/SUPPRESSANT.
- ONSITE VEHICLE SPEED ON UNPAVED SURFACES SHALL BE LIMITED TO 15 MPH.
- DISTURBED AREAS SHALL BE SEEDED PRIOR TO OCTOBER 15TH OR EARLIER AS REQUIRED BY THE APPLICABLE PERMIT CONDITIONS.

PREPARED AT THE REQUEST OF:  
SAN MATEO COUNTY RCD

NOTES

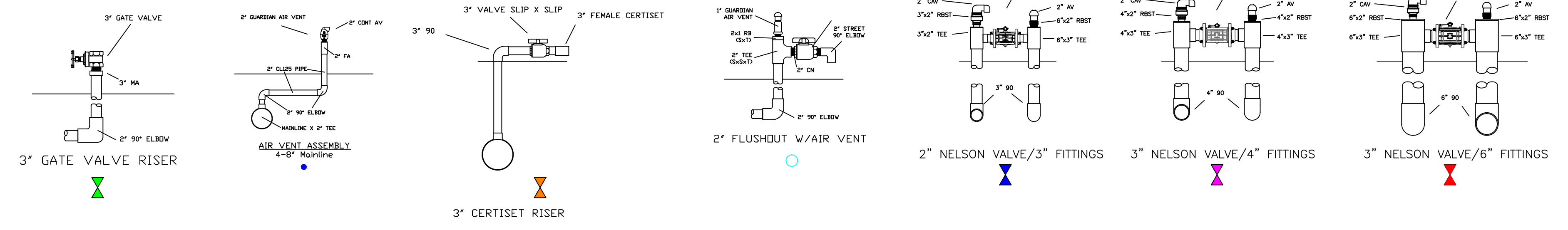
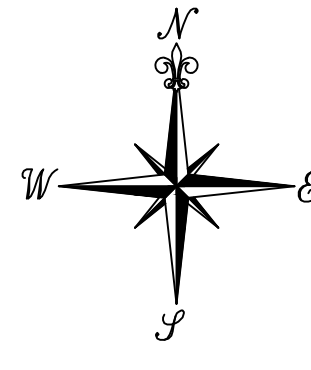
POND  
100% DESIGN  
SUBMITTAL

BAR IS ONE INCH ON  
ORIGINAL DRAWING.  
ADJUST SCALES FOR  
REDUCED PLOTS

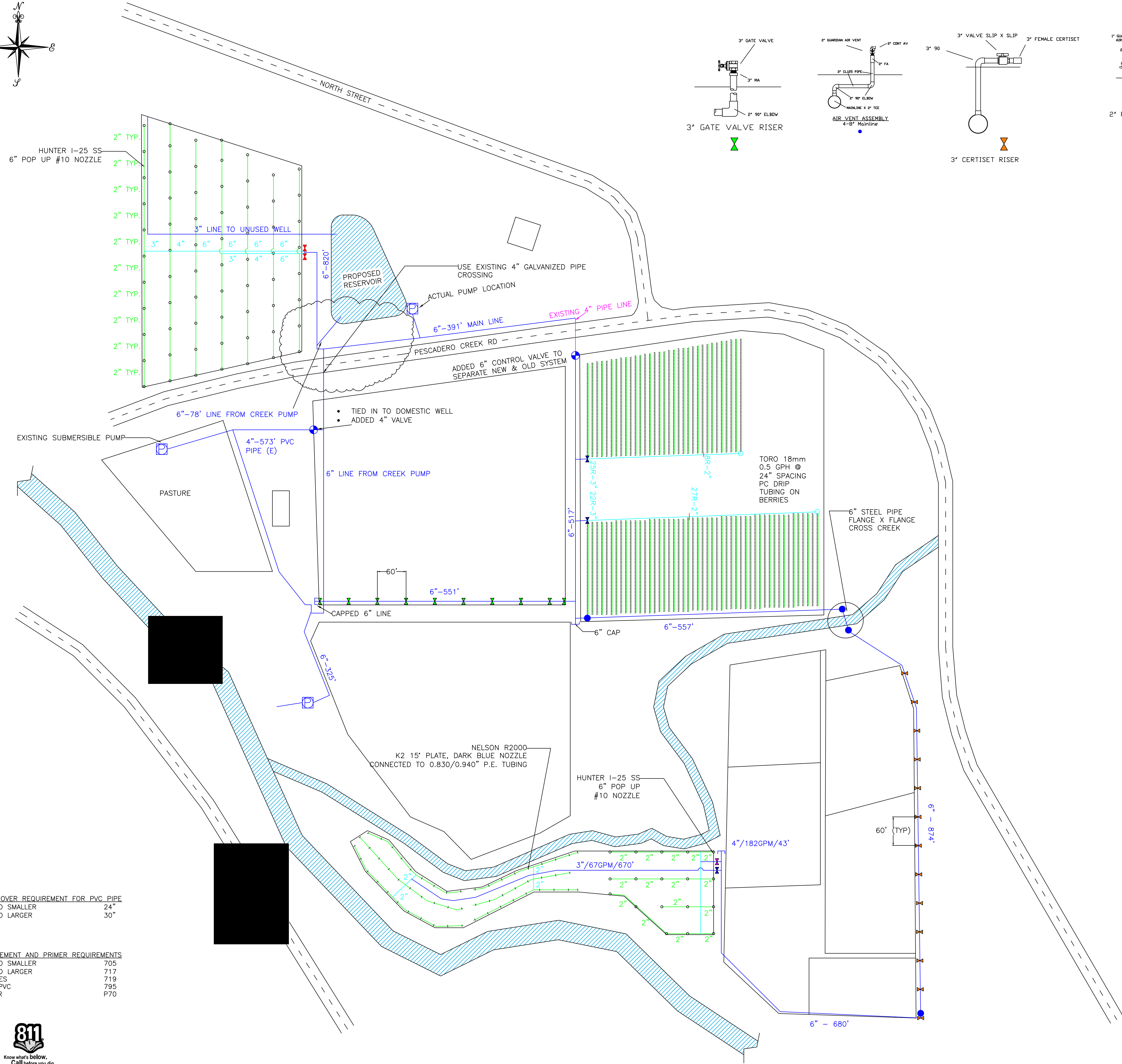
0 1" 1"

C5

5  
OF  
5



- LEGEND**
- LATERAL (SIZE AND MAT'L AS NOTED)
  - 6" CL100 IPS PVC PIPE
  - PVC SUBMAIN (SIZE AS NOTED)
  - PUMP
  - FILTER STATION
  - ISOLATION VALVE
  - MAINLINE AIR VENT
  - 3" NELSON 1000 SERIES P.R. VALVE (6")
  - 2" NELSON 1000 SERIES P.R. VALVE (3")
  - 3" NELSON 1000 SERIES P.R. VALVE (4")
  - 3" GATE VALVE
  - 3" BALL VALVE



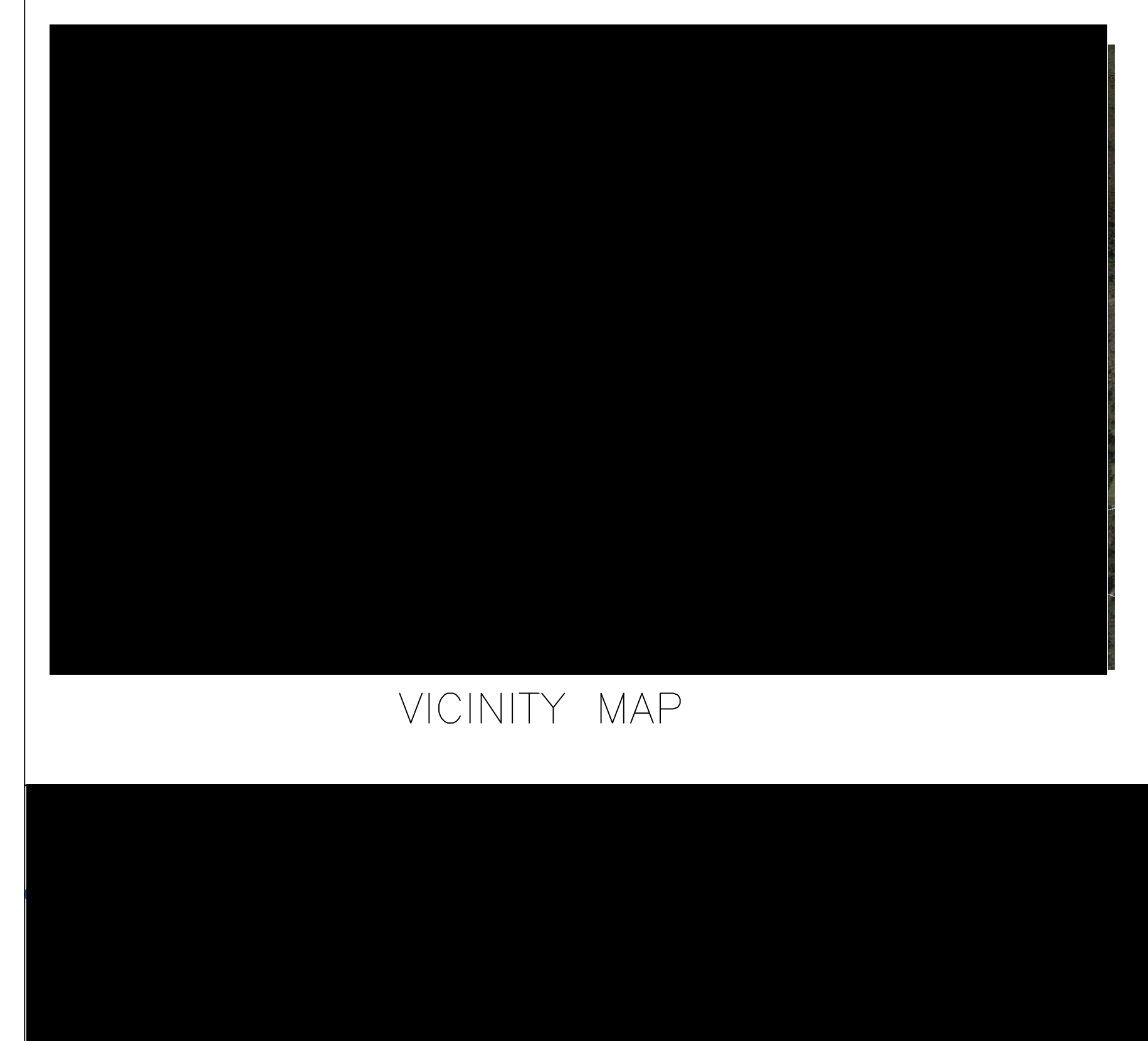
**MIN. COVER REQUIREMENT FOR PVC PIPE**

4" AND SMALLER	24"
5" AND LARGER	30"

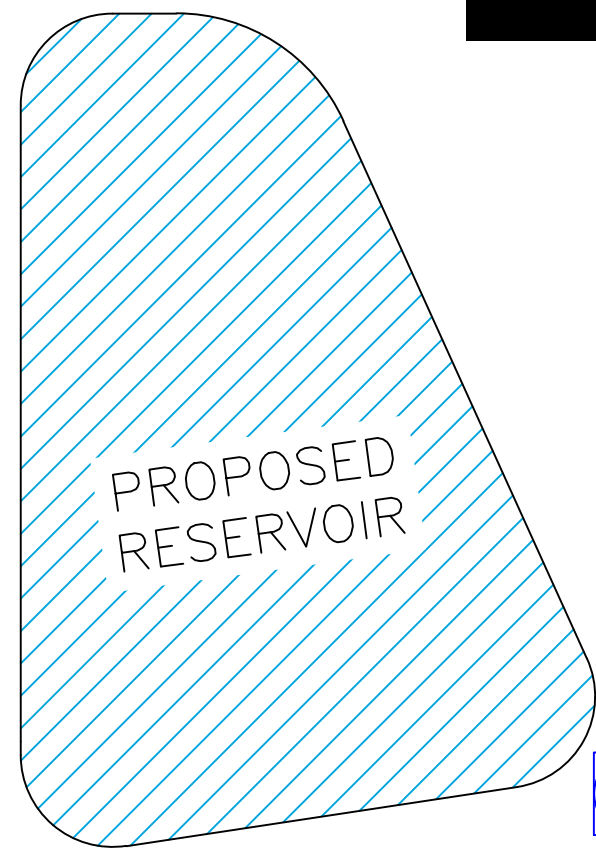
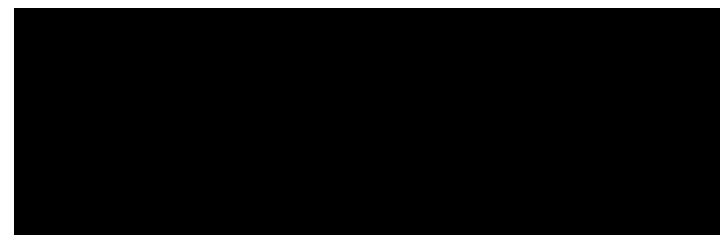
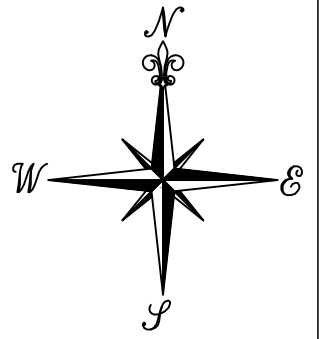
**PVC CEMENT AND PRIMER REQUIREMENTS**

3" AND SMALLER	705
4" AND LARGER	717
SADDLES	719
FLEX PVC	795
PRIMER	P70





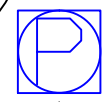
AERIAL VICINITY MAP



PROPOSED  
RESERVOIR

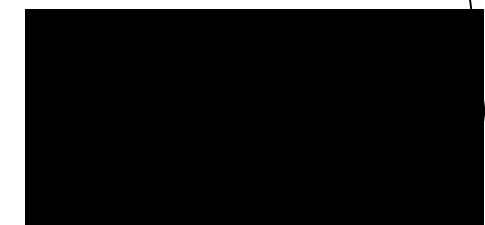
PROPOSED LOCATION FOR  
NEW AG ELECTRICAL SERVICE

30 HP 480/277V, 4-WIRE,  
3 $\phi$



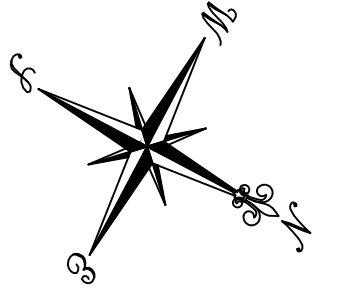
~210'

~60'



Know what's below.  
Call before you dig.  
811 / 800-227-2600





3" BERMAD  
RESERVOIR FILL  
VALVE W/  
BI-LEVEL FLOAT

6" MAINLINE TO FIELD

10'  
LEAVE OPEN  
FOR ACCESS

\*10" PVC 90 FACING UP  
\*TOP OF 90 INLET TO MATCH  
GRADE OF RESERVOIR FLOOR

FILTER STATION:  
LAKOS 32" SAND MEDIA FILTERS  
SEAMETRICS AG3000 FLOWMETER

30 HP CORNELL 3RB  
CENTRIFUGAL PUMP

4'X4'X12' CONCRETE SUMP  
(CONSTRUCTION W/ 4' X 4' X 4'  
PRECAST CONCRETE BOXES, 6" TH.  
MIN)

TOP OF SUMP TO MEET OR EXCEED  
RESERVOIR BERM HEIGHT

BOTTOM OF SUMP TO EXCEED  
RESERVOIR DEPTH BY 3' (MIN)

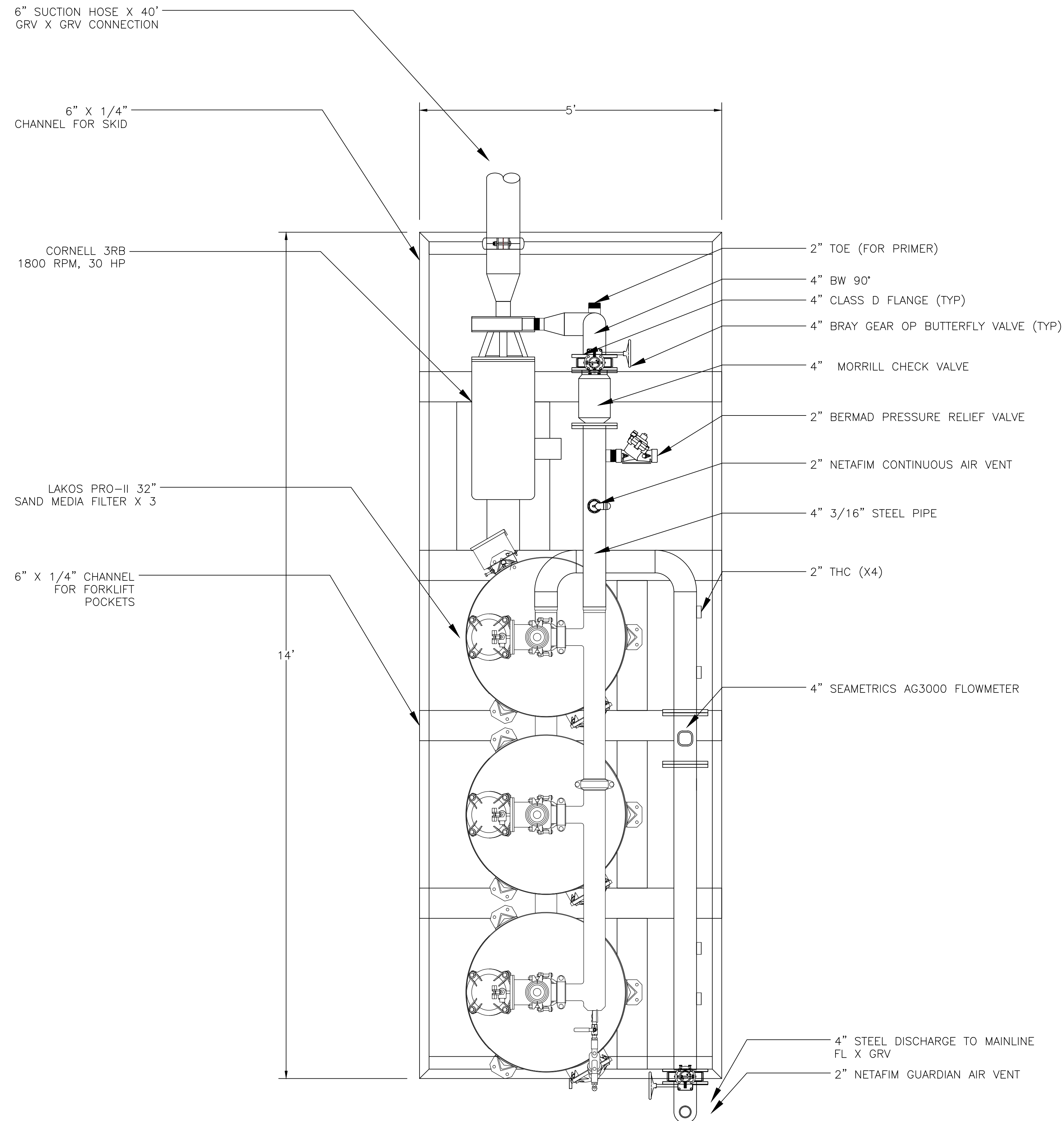
**NOTES:**

- PLAN VIEW FOR THE PROPOSED RESERVOIR PUMP AND FILTER STATION.
- CORNELL 3RB, 12.31" TRIM, STD. SEAL. 30 HP, 1800RPM MOTOR
- PUMP CAPABLE OF (WITH USE OF VFD)
  - 400 GPM @ 160 TDH (SPRINKLERS)
  - 200 GPM @ 120 TDH (DRIP)

8  
99  
1000

WSE

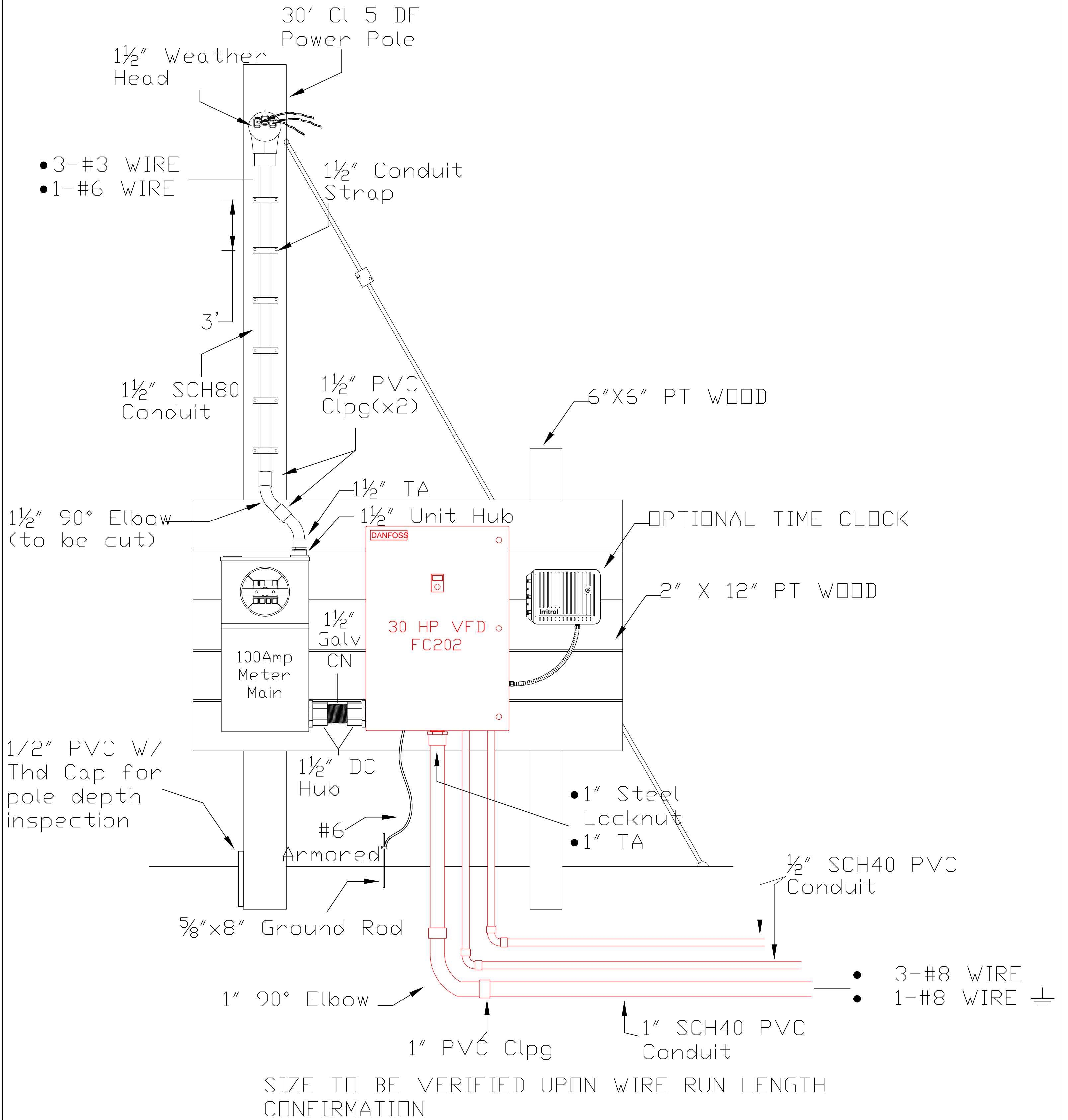


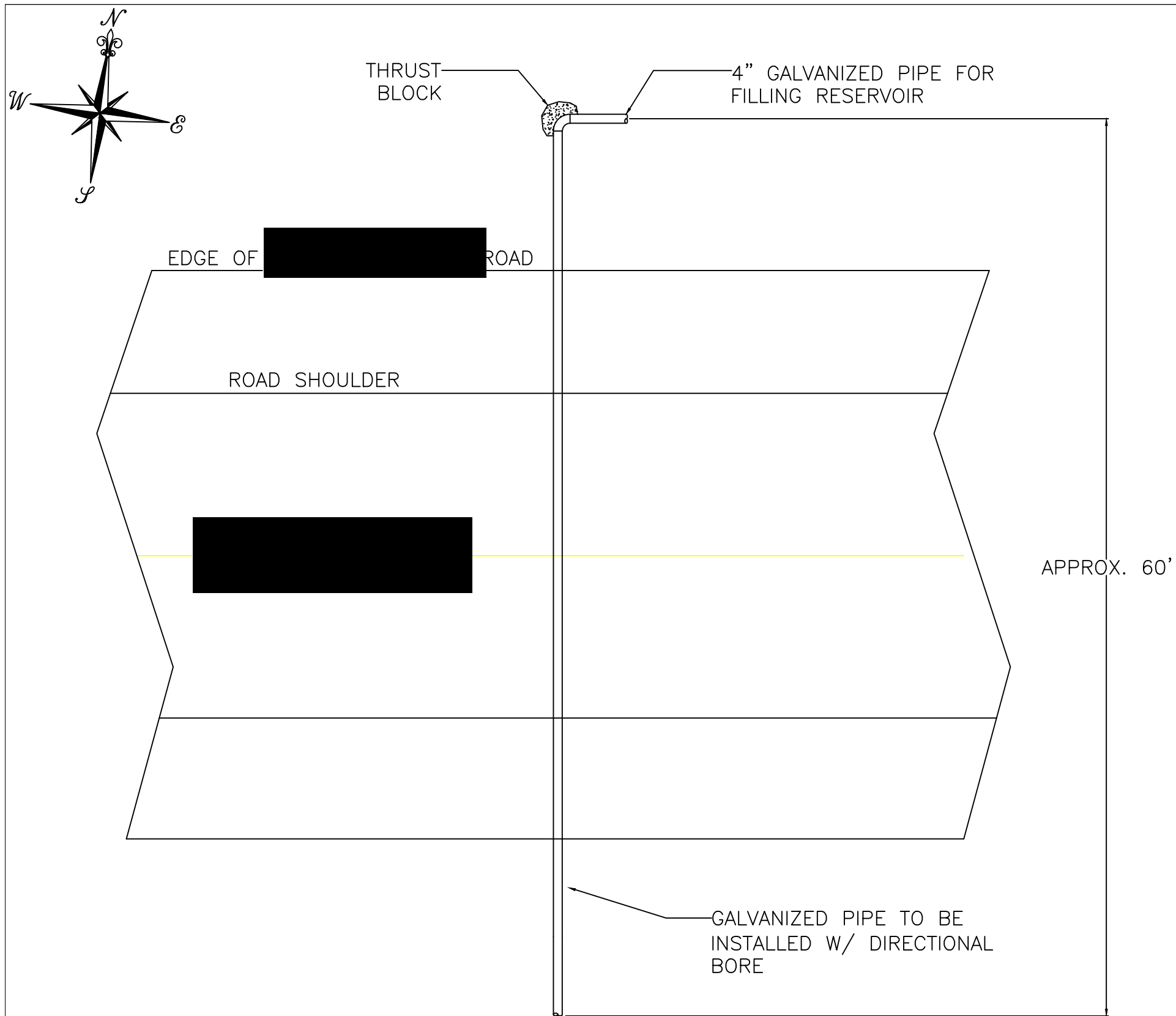


**NOTES:**

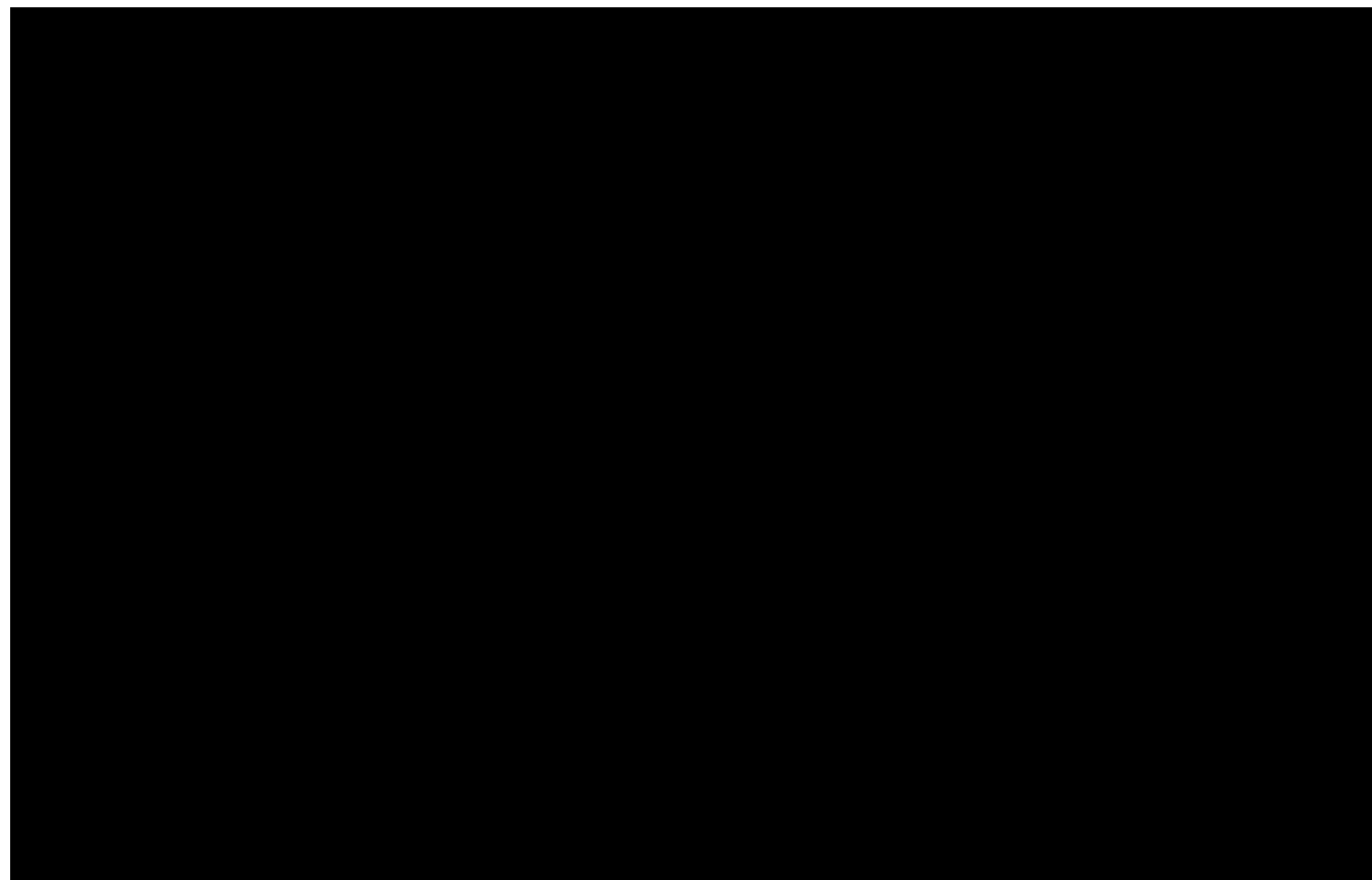
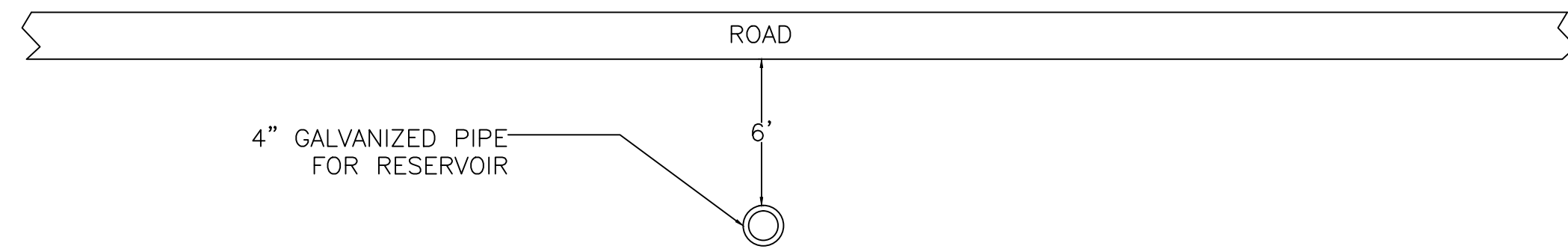
- PLAN VIEW FOR THE PROPOSED PORTABLE PUMP AND FILTER STATION.
- CORNELL 2.5YH, 8.94" TRIM, STD. SEAL. 7.5 HP, 1800RPM MOTOR
- PUMP CAPABLE OF (WITH USE OF VFD)
  - 250 GPM @ 70 TDH (QUICK RESERVOIR FILL)
  - 70 GPM @ 50 TDH (SLOW RESERVOIR FILL)
- SKID FRAME IS CONSTRUCTED W/ 6" 1/4" WALL CHANNEL
- SKID TO HAVE 6" POCKETS FOR FORKLIFT FORKS , AS SHOWN

480V-100Amp-30HP

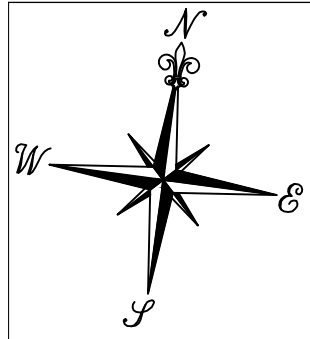




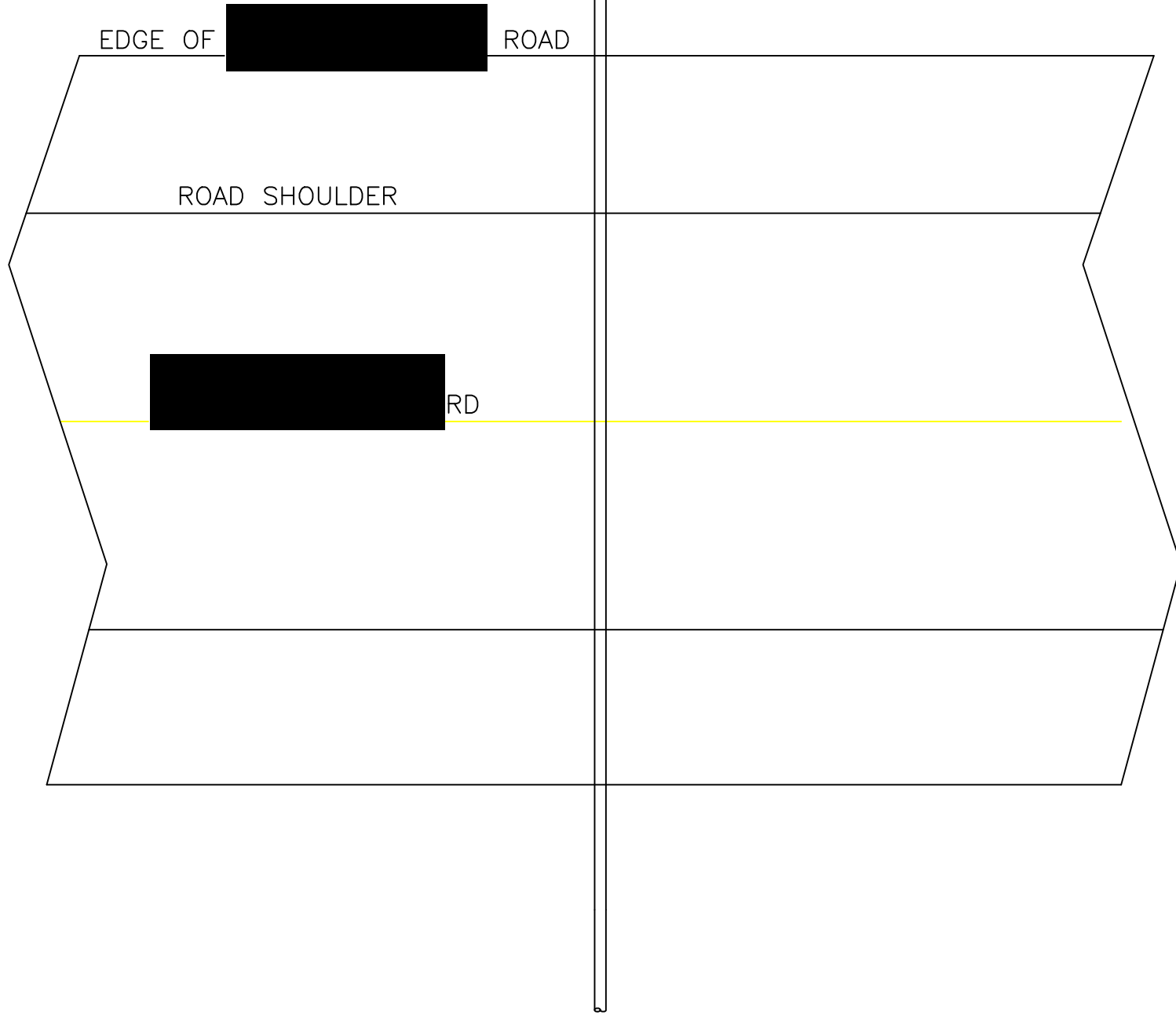
PROFILE VIEW



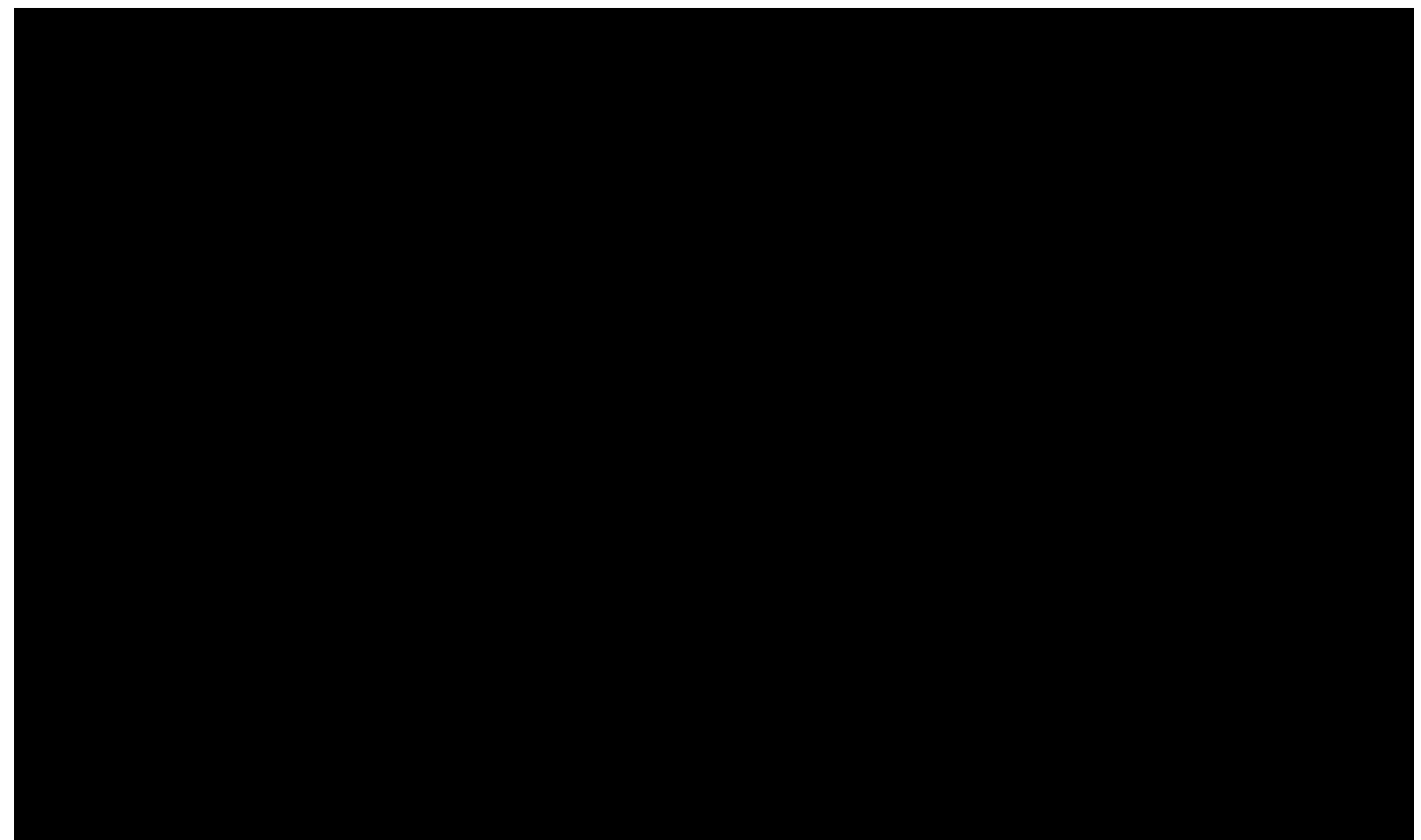
Know what's below.  
Call before you dig.  
811 / 800-227-2600



THRUST BLOCK  
4" PVC PIPE FOR IRRIGATION SYSTEM



### PROFILE VIEW



Know what's below.  
Call before you dig.  
811 / 800-227-2600