

# AMENDMENT #1

January 13, 2022

Invitation for Bids (IFB) Number  
PCCD-22-PCW21Rehab-01, 12/9/2021

Issued by  
Plum Creek Conservation District  
Lockhart, Texas

***The above numbered IFB hereby is amended as set forth below. The hour and date specified for receipt of offers is changed to 10:00 a.m., Wednesday, January 26, 2022***

## PURPOSE OF AMENDMENT

1. To transmit pen-and-ink changes to the IFB drawings and specifications and revised drawing sheets, and to provide meeting minutes (including Questions and Answers) and an attendance list for the 1/6/22 Pre-bid Conference/Site Showing.
2. To remind bidders that oral explanations or instructions given before the award of the contract will not be binding. See PART I, Subpart B, Instructions to Bidders, Section 6.

Offerors ***must acknowledge receipt of this Amendment no later than*** the hour and date specified in the IFB (see IFB Amendment #1 for change in this date/time) for receipt of sealed bids by one of the following methods:

- (1) Make appropriate notations on Exhibit A, Offer form (PART I, Subpart C, page GP-8).
- (2) Complete and return form below. Form must be mailed or hand-carried to the address designated for receipt of bids, and be made to the attention of Daniel Meyer, Contracting Officer, clearly noting "Acknowledgment of Receipt of Amendment No. 1, IFB No. PCCD-22-PCW21Rehab-01" on the envelope. Fax, electronic, or telegraphic acknowledgments of receipt are not allowed.

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## ACKNOWLEDGMENT OF RECEIPT

**Amendment No. 1 (1-13-2022)**  
**IFB PCCD-22-PCW21Rehab-01 (Site 21 Rehabilitation)**

Bidder's Signature: \_\_\_\_\_

Bidder's Name: \_\_\_\_\_

Bidder's Title: \_\_\_\_\_

Date Signed: \_\_\_\_\_

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

## **PEN-AND-INK CHANGES**

### **PART I – SUBPART A (Notice to Bidders)**

The **Bid Opening DATE** stated in this notice hereby is changed to be held: **Wednesday, January 26, 2022, at 10:00 a.m** (location is unchanged).

### **PART I – SUBPART B (Instructions to Bidders)**

#### **Instruction #6, Explanation to Bidders / Inquiries**

The date to submit written inquiries on the bid documents to the Contracting Officer is changed from noon on January 12, 2022 to **noon on Tuesday, January 18, 2022.**

### **PART III – SUPPLEMENTAL CONDITIONS**

#### **Article 1 – Types and Limits of Insurance**

ADD the following to Article 1(f):

“The property landowner, 130 Environmental Park LLC, shall be listed as an additional named insured on the prime Contractor’s Certificate(s) of Liability Insurance.”

### **PART IV – CONSTRUCTION & MATERIAL SPECIFICATIONS**

#### **CSpec-5, Pollution Control**

ADD the following to Section 8.b. Bid Item 5, Silt Fence:

- (4) In Section 3, sediment filters, silt fence material shall meet the requirements of ASTM D6461 and Material Specification 592.

#### **CSpec-7, Construction Survey**

ADD the following to Section 9.a., Bid Item 9, Construction Surveys:

- (5) In Section 3, Quality of Work, electronic models created for the purpose of aiding the Contractor in stakeout and/or quantity computations, as well as field layout and staking, shall be prepared and/or performed by a Professional Engineer (P.E.) or Registered Public Land Surveyor (RPLS) licensed in the State of Texas.

#### **CSpec-8, Mobilization and Demobilization**

DELETE current Section 4.a.(2)(a), and REPLACE it with the following:

- (a) Primary access to the work area shall be from the two existing ranch road entrances off of FM 1185 as shown on the drawings. Road base or rock meeting the material requirements shown on the drawings and approved by the Contracting Officer shall be placed on access roads (one is currently unpaved and one is partially paved). The access roads to the campsites and work areas shall be a minimum of 14 feet wide, and shall be constructed and maintained in a smooth, rut-free condition throughout the contract period. The Contractor shall be required to install any improvements (including temporary gates) required for site access. Culverts shall be installed at crossings of low areas where significant concentrations of runoff water accumulate and causes ponding of water, except within jurisdictional Waters of the United States (WOTUS) and wetlands. The Contractor is responsible for any traffic control, permits, and/or entrance requirements specified by TxDOT necessary for construction and operation of the access road improvements. Any fencing removed to allow construction access shall be restored to equal or better than pre-construction conditions during demobilization.

**CSpec-27, Diversions and Waterways**

ADD the following to Section 7.a.(4), Bid Item 17, Diversions:

“The measurement for payment shall take place at the centerline of the effective height of the diversion.”

**CSpec-28, Lime Treated Earthfill**

ADD the following to Section 12.b. Bid Item 21, Furnishing and Handling Lime (Material Types F & G):

- (8) The depth of topsoil to remove and replace for the lime mixing area shall be a minimum of 12 inches.

Section 12.b.(6), 1<sup>st</sup> line. DELETE “soil stockpile areas” and INSERT “designated lime mixing areas shown on the drawings.”

**CSpec-45, Plastic Pipe**

Section 14, 1<sup>st</sup> paragraph, 1<sup>st</sup> line. Change “pressure class 150” TO READ “pressure class **165**”.

**CSpec-61, Rock Riprap**

Section 8.a. Change Bid Item 30 TO READ Bid Item **29**.

**CSpec-71, Water Control Gates**

Section 8.a.(2), line 2. Change “MHS-2” TO READ “MHS-**1**”.

**CSpec-92, Field Fence**

ADD the following to Section 11.a., Bid Item 34, Fence, Barbed Wire:

- (4) No additional compensation will be made for additional bracing or special anchorage required as a result of the final layout staked by the Engineer.

**CSpec-94, Contractor Quality Control**

Section 10.a.(8)(n) Metal Fabrication, line 1. Change “periodic inspection” TO READ “**full time** inspection”.

**CSpec-95, Geotextile**

Section 7.a.(4), line 1. Change “Table 592-1” TO READ “Table 592-**2**”.

**CSpec-446, Grouted Anchor Bars**

Section 8.1.b., line 2. Change “Reinforced Concrete” TO READ “**Concrete**”.

**PART V – DRAWING NO. TX-EN-0754**

**Replacement Sheets:**

**DISCARD** these sheets (sealed 8/4/21) and **INSERT** the attached nine revised sheets:  
**Sheets 2, 4, 5, 7, 9, 11, 37, 73, 83**

Balloons/clouds have been utilized to show changes made on each of these drawing sheets.

**Drawing TX-EN-0754 Pen-and-Ink Changes**

**Sheet 28.**

Note 3. DELETE “CLASS 30-20, TYPE MLS-2” and INSERT “**CLASS 55-20, TYPE MHS-1**”

Note 4. CHANGE “NON-RISING STEM” TO READ “**RISING STEM**”.

## **DESIGNATIONS / ITEMS STAKED**

### **ITEMS DESIGNATED VERBALLY/MARKED AT SITE SHOWING**

NOTE attached revised Drawing Sheet 5 (sealed 1/13/22) which has moved locations of some items that were on the original drawing. Items that were designated at the time of the site showing:

- Two Access Roads as shown on revised Drawing Sheet 5. Note changes on rev. Sheet 5.
- Two Stabilized Construction Entrances (SCE); one proposed and one alternate.
- Construction Campsite. As shown on revised Drawing Sheet 5 (now designates campsite and alternate campsite locations).
- Stockpile Area and Alternates. Note Alternate Stockpile Area on east end of structure was relocated to the west side of the partially-paved access road.
- Borrow Area 1 and Borrow Area 2 as shown on Drawing Sheet 5.
- Waste Area location as shown on Drawing Sheet 5.
- Buried material locations (will be designated by Engineer during construction)
- Existing brush pile within the limits of Borrow Area #2 (may not have to be removed).
- Barbed wire fence near sheds downstream of the embankment to be removed (fence was not shown on the drawings).
- Actual Limits of Clearing and Grubbing are designated as:
  - Upstream and downstream along toe of embankment (approx.. Sta. 27+00 to Sta. 39+00)
  - Brush and any debris on upstream and downstream slope of embankment.
  - Alternate Stockpile Area west of embankment (if needed).
  - Existing outlet channel.
  - RCC spillway outlet channel.
  - Borrow Area #1 and #2 and their access routes (as needed)
- Actual limits of fences required to be removed as shown on the drawings are approximate. The Engineer and/or Inspector shall designate during construction.

Items that were marked at the time of the site showing:

- New Principal spillway pipe location (pink flagging)
- New RCC Spillway location (pink flagging)
- Barbed Wire fence to remain on site (pink flagging)

## **QUESTIONS AND ANSWERS 1/6/22**

**Q:** Is it possible to work longer hours when working on the RCC?

**A:** The Contracting Officer may consider it depending on circumstances at the time this work is performed. Please still bid the work for up to 11-hour workdays 6 days per week, not to exceed 60 hours per week.

**Q:** Do we still have to bluetop everything if we are using heavy equipment with GPS?

**A:** Yes



**Q:** The existing paved road is approximately 10-12 feet wide. Will we still have to make it 14 feet wide?

**A:** Yes.

**Q:** Can we build an alternate access road alongside the existing paved road?

**A:** Yes and it shall meet the requirements of the construction specifications and drawings.

**Q:** Our firm calculated that we would need approximately 41,000 CY for our cofferdam. Is there enough borrow material on site for that quantity?

**A:** We anticipate that there will be a surplus volume of available on-site borrow as compared to required fill volume shown on the contract documents (potentially on order of 20,000 to 40,000 CY). However, the Contractor should be prepared to locate additional off-site borrow sources as needed to complete construction of the cofferdam. The surplus borrow material is anticipated to come primarily from the lower zone of Borrow Area 2 and deeper zones of required excavation at the downstream toe for the RCC stilling basin, and classifies predominantly as fat clay (CH). The Contractor's Engineer is responsible for specifying the required soil properties for the cofferdam fill. The Contractor is responsible for verifying that the available material in each borrow source meets the material specifications for the cofferdam fill and each fill type specified in the contract documents. Contractor-proposed alternative borrow sources for each material type are subject to review and approval by the Engineer (CS 23, Section 10, paragraph 1).

**Q:** Are we allowed to batch RCC on-site?

**A:** Yes, see IFB Amendment #1 revised Drawing Sheet 2.

**Q:** Where is the designated area for the batch plant?

**A:** See Sheet 5 (IFB Amendment #1 revision) of the plan drawings.

**Q:** Are we going to have two areas for lime-mixing, or just one?

**A:** See Sheet 5 (IFB Amendment #1 revision) which shows two optional areas.

**Q:** Q. Are there any power providers nearby?

**A:** The landowner stated the electricity provider nearby is Bluebonnet Electric.

**Q:** How deep is the reservoir water currently?

**A:** Approximately 5 feet below the principal spillway crest.

**Q:** Will the sheds south of the embankment be removed?

**A:** Yes, the landowner sent written email confirmation to PCCD that they will remove the two metal sheds prior to commencement of rehab work.

**Q:** Are there any trees within the work limits that we will need to protect?

**A:** Yes, the landowner will mark them prior to work commencement.

**Q:** The landowner stated that they will have their own construction project happening concurrently with our project (construction of pavilion near east end of structure). Will they also utilize the existing paved road for site access?

**A:** Yes.

**Q:** It appears there is an error in the estimated quantity of Bid Item 23 (Concrete, Pipe Cradle) in the Bid Schedule.

**A:** Yes, there is an error. **A corrected Bid Schedule Sheet 2 of 3 (page GP-11 of 21 in IFB) will be published/available via IFB Amendment #2** shortly after Amendment #1 is published.

**Q:** Can the Hydraulic Models generated in SITES be provided to the bidders?

**A:** Yes, these will be posted online at the PCCD website when IFB Amd. #1 is published under the heading ENGINEERING DOCUMENTS (for informational purposes) Website: <https://pccd.org> (**Job Bids tab**) You will need SITES program to open the files – information can be found at [SITES \(usda.gov\)](https://usda.gov)

**Q:** Do you have a TxDOT contact person for approving the Traffic Control Plan required in CSpec-9?

**A:** Yes. Ryan Grantham, Lockhart, 512-398-2412

**Q:** Fence Removal/Disposal, CSpec-3, Structure Removal.

**A:** It appears that Environmental Park 130 LLC, landfill owner, might have off-site disposal area available for fencing that requires removal and off-site disposal.

**Q:** Is it possible to move the bid opening date forward?

**A:** Yes, as shown on this Amendment #1, the Bid Opening has been changed to **10:00 AM on Wednesday, January 26, 2022.**

**Q:** What are the available water resources?

**A:** PCCD indicated that it is the responsibility of the Contractor to acquire water sources and obtain any required permits (see Part II, Article 19). Landowner representative, Environmental Park 130 LLC, mentioned several nearby water sources that they have used in the past: 1) Polonia Water Supply Corporation – there is a ½ inch line running from FM 1185 to an area just east of the outer auxiliary spillway dike, 2) TCEQ water withdrawal permit for reservoir water, 3) City of Lockhart Utilities, and 4) Creedmoor-Maha Water Supply Corporation.

#### **Additional Questions/Answers Received After 1/6/22**

**Q:** Per the plans (Sheet 18 and 38), riprap bedding is required at the downstream sections of both the impact basin and the RCC spillway. These locations combine to approximately 266 CY of material. Is the bid item supposed to be priced by the CY and not the TN? Please confirm your quantity and adjust the bid schedule accordingly?

**A:** The Bid Schedule estimated quantity of 270 is correct. The **Unit** should say Cu. Yd. and this will be corrected in IFB Amendment #2 (a new Bid Schedule Sheet 2 of 3 will be attached to the amendment).

**Q:** Per the plans (Sheet 29), an unreinforced concrete cradle is required under the 42" Principal Spillway. The bid item quantity is 8.04 CY, however my calculations give approximately 80 CY of material required. Please confirm your quantity and adjust the bid schedule accordingly?

**A:** A revised Bid Schedule Sheet 2 of 3 will be distributed in IFB Amendment #2 to correct this typographic error. The correct estimated quantity is 84.0 Cu. Yd.

**Q:** Bid Item 11, Removal of Water requires a coffer dam engineered to a minimum level of the 100-year storm event. Can you please provide the hydraulic information for such event?

**A:** See Answer in first section of Q&As above.

**Q:** Where can the batch plant for the RCC set on site?

**A:** See revised Sheet 5 of the drawings sealed 1/13/22 being distributed via IFB Amendment #1.

**Q:** Are the Under Drain details correct as to how the materials should be? (Typically, you have Coarse Filter on the outside and Fine Filter on the inside) Detail 1/38 on Sheet 53 shows the layout with fine filter on the outside and Course filter on the inside and no geotextile to help keep the fines out.

**A:** Detail 1/38 on Sheet 53 is correct as shown. The fine filter gradation has been designed to be filter-compatible with the clayey subgrade and earthfill materials. The gradations of the fine and coarse filters have been designed to be filter-compatible as well. Lastly, the coarse filter gradation is designed to be filter-compatible with the selected pipe slot size.

- Q:** How do you pay for embankment borrow materials if there is not enough in the specified borrow areas?
- A:** If another borrow area can be found onsite within approved limits of disturbance and has suitable materials, we would add that borrow area to the contract. If onsite material can't be found, Contractor would need to import off-site material. Either way, the contract would be modified if this were to occur during construction.
- Q:** Per the spec in the borrow areas it states that we need to maintain a 5:1 safety slope in our cuts. Will a 3:1 be allowed as that is a lot of additional set back that you can't go outside of borrow limits?
- A:** This requirement will not be changed and remains as specified.
- Q:** How will you handle over run and under runs on any bid items? Spec States that the Contractor is on the Hook for 25% over and under if there is a delta over that then there will be a change order Please confirm this Page 37 of Spec?
- A:** Part II, General Conditions, Article 28, Quantity Variations, specifies Contractor will be paid the unit bid price for quantities 25% over and 25% under the estimated quantity listed in the Bid Schedule and there will be no adjustment to performance time. If the quantity is more than 25% UNDER the estimated quantity, the entire actual quantity performed would need to be repriced and performance time change considered. That would be done via a contract modification to make an equitable adjustment to unit price and performance time. For quantities OVER 25% of the estimated quantity, the quantity exceeding 125% would be subject to an equitable unit price amount and performance time change. Also, a total re-estimated quantity would be calculated for purpose of any future quantity variations for that work item.
- Q:** Water Connections for the temp irrigation system, where can these connections be made?
- A:** See IFB Amendment #1 (Questions/Answers) for possible sources mentioned by landfill owner at the site showing.
- Q:** The SW3P plan has more silt fence than what is in the bid item, how will this be changed as we will need a batch plant site added and If we recall correctly you are removing some areas from use? Will you be changing the quantity in the bid form?
- A:** We anticipate adjustment will be needed for some of the quantities for silt fence (Bid Item 5), revegetation (Bid Item 6), topsoiling (Bid Item 18), excavation associated with topsoiling (Bid Item 12), and possibly barbed wire fence (Bid Item 34). Any changes to the Bid Schedule quantities will be distributed in IFB Amendment #2.

## **1/6/2022 SITE SHOWING / PRE-BID CONFERENCE MINUTES**

Note: Some items contained in the IFB were pointed out and are not included in these meeting minutes for purpose of brevity. However, this Amendment No. 1 contains information necessary for bidders to submit bids and all information where the lack thereof would be prejudicial to uninformed bidders.

### **WELCOME / INTRODUCTIONS**

The Contracting Local Organization for this project is Plum Creek Conservation District (PCCD), Lockhart, TX. The Contracting Officer (CO) for this project will be Daniel Meyer (PCCD Executive Manager) and the Alternate CO will be Alan Burklund (PCCD Staff Member). USDA-NRCS will provide a full time Inspector (Joshua Holden) and a Project Engineer (Brannon Sledge). Jean Ann Maynard will serve as contracting consultant to the PCCD for the project. Project plans and specifications were prepared and sealed by AECOM. The project is receiving funds from the USDA-Natural Resources Conservation Service, TX State Soil and Water Conservation Board and PCCD. The meeting sign-in sheet listing all attendees is posted at the PCCD website <https://pccd.org> (Job Bids tab).

The conference commenced at 9:30 a.m., and Daniel Meyer welcomed attendees, made introductions, and provided a brief history of the project. Questions and Answers from the conference and site visit are included in this Amendment #1.

## **ADMINISTRATIVE PRESENTATION**

This material was presented by Jean Ann Maynard. Administrative matters not contained in the IFB along with items in the IFB that were emphasized are as follows:

### **General Information**

Sign-In Sheet. Be sure you listed complete information on how to contact you—be sure to include your EMAIL address.

The IFB was published on 12/9/21. Printed copies of the bid documents are not being distributed. If you want a copy of the Invitation for Bids (IFB) package, any future amendments to it, and the Plan Holder Registration Form, you must download the files from the PCCD website as stated in the Bid Notice. Also, there is a supply of blank registration forms here today if you would like register as a planholder and have not done so yet.

Amendment No. 1 will be issued after this Site Showing. It will include today's meeting minutes, all of the questions/answers, an attendance list, and any changes that will be made to the original bid package. All registered planholders will be advised by email when it is available online. In order to receive notification, you must submit a Plan Holder Registration Form. **Very important to register.** No hard copies of any Amendments will be mailed or emailed – you will need to download them from the PCCD website.

Reminder: You must submit your acknowledgment of receipt of EACH Amendment (either on the Amendment cover sheet form or on bid form, Offer, Exhibit A). Failure to acknowledge receipt of an amendment may result in rejection of a sealed bid.

Performance Time (PT). The PT of 573 calendar days was computed to include 20 calendar days move-in time. PT is based on working the maximum allowed workweek of 60 hours per week. It also includes non-workdays for Sundays and holidays (including Thanksgiving and Winter Breaks). Additional days will be added for eligible weather delays and any change orders that warrant more time, as needed. PT begins the day after receipt of Notice to Proceed.

Sealed Bids are DUE (and will be publicly opened).

- (a) ~~4:00 AM, Wednesday, January 19~~ **changed to Wed., January 26, 2022 – 10:00 AM**
- (b) Must hand carry or mail. No Fax or Telegraphic bids are allowed.
- (c) NOTE: Deliver or mail bid **to the PCCD** office (Attn: Daniel Meyer).

Engineer's Cost Estimate. This will NOT be disclosed until after bids have been opened.

Estimated Price Range: *between \$5,000,000 and \$10,000,000*

IFB/Contract Terms & Conditions. As a local contract, various requirements from Texas codes and statutes govern the basic contract. However, due to Federal funding, there are also some Federal clauses and requirements that aren't normally found in a local contract.

### **Instructions to Bidders (PART I – General Provisions, Subpart B)**

Encouraged to ***carefully read.***

Section 2 – Conditions Affecting the Work. To view site (other than today) you need to make an appointment with Daniel Meyer at PCCD office and he or an authorized person must escort you to the site. Note that no digging or taking of core samples will be allowed.

Section 3 – Bid Must Contain (Original + 1 copy) ***SEE Part I, Subpart C, Bid Forms***

Exhibit A - Offer. Sign in ink (must have legal Authority to contractually bind the company).

Exhibit B – Bid Schedule. Offer must be valid for minimum of **45 days**

Exhibit C. References.

Exhibit D – Bid Bond

Bid Guarantee: 5% of TOTAL bid price.

Certified or cashier's check (from responsible TX bank). --- OR ---

Bid bond. (1) Must use Exhibit D form (original + 1 copy). (2) Must meet all Bid Bond Requirements for surety as stated in Section 8. READ THIS CAREFULLY. NOTE surety must be U.S. Treasury listed.

Exhibit E – Bidder Certifications. (1) Three sections you need to “circle” appropriate answer and write in surety information on one. (2) Certain non-Texas resident bidders must provide a Certificate of Authority from TX Secretary of State to transact business in Texas. (3) There are some new certifications due to State funding (Sections J, K, and L).

Section 4 – Preparation of Bid. IFB documents and Plan Holder Registration Form must be obtained using the PCCD website as outlined in the Public Bid Notice. Printed copies of the IFB package are not available. The official printed hard copy shall take precedence over an electronic media copy. This official file hard copy may be viewed at the PCCD office.

Submit offer in DUPLICATE (original + 1 copy of all documents).

Bidders are entitled to EXCLUDE exempted taxes in bid price. Contractor will be performing a contract for an exempt organization. The PCCD will issue an Affidavit to the Contractor. Contractor must issue a Tax Exempt Certificate to each supplier. Contractor is responsible to know and follow all Texas Codes regarding this. [Details in Part II, General Conditions, Article 29]

Bid Schedule (Exhibit B). One award will be made for the Total Bid Items. Failure to price each item in the Bid Schedule is a basis to reject bid.

Section 6 – Explanation to Bidders / Inquiries. NO verbal explanations or instructions given before award of the contract will be binding. ALL questions regarding the meaning or interpretation of any bid document must be submitted IN WRITING to Daniel Meyer (via Email or Fax is allowed). The deadline to submit written questions is ~~noon on January 12~~ **changed to noon on January 18**. If the answer requires interpretation of a bid document, it will be given in writing to all planholders via an Amendment to the IFB. Please send all inquiries through Daniel Meyer and do not contact Engineer Brannon Sledge directly.

Section 8 – Bid Bond Requirements. All bids require a bid guarantee in the amount of not less than 5% of Total Bid Price. Bonds must be on the form provided in the bid package.

Section 11 and 12 – Qualification/Disqualification of Bidders. Carefully note these requirements. In order to be awarded the contract, the low bid must meet two requirements. First, bid documents are reviewed to determine if the bid is “responsive”—meets essential elements of the IFB requirements. Then, the “responsibility” of the bidder is determined. Technical and financial references are carefully checked to ensure bidder is qualified, etc. These clauses list what will be considered in determining the “responsibility” of the bidder.

Section 20 – Records. This lists documents available at the PCCD office for viewing by interested parties. There is a large set of drawings along with a printed copy if the IFB package, a copy of the 1962 as-built plans, 3 Soil Mechanics Reports, and 3 Geologic Investigation Reports. All of these documents also are available to view/download at the PCCD website.

### **Anticipated Schedule / Contracting Procedure (subject to change as needed)**

*NOTE: Per change in Bid Opening DATE, all estimated dates below will likely be pushed forward 1 week.*

Bid Opening (~~January 19~~ **January 26**): Publicly open sealed bids. Declare apparent low bidder and meet with their representative.

Issue Notice of Award. Anticipated about February 17. PCCD needs a few weeks to secure additional Federal funding when the final contract price is known. PCCD Board will meet on February 15 to review all bids and agree to award to lowest responsive, responsible bidder. Upon award you will have 5 workdays to submit your 1<sup>st</sup> post-award documents [See Part III – Supplemental Conditions, Article 4 for a LIST]. You are encouraged to review these now and be prepared to submit on time (or your bid security could be forfeited and the PCCD would move on to 2<sup>nd</sup> low bid).

2<sup>nd</sup> Post-award Documents. These will be requested at same time as Notice of Award and will be due about March 8 (such as construction schedule, safety plan, etc.).

The Preconstruction Conference will be held about March 17. If everything is in order, the Notice to Proceed will be issued a week or two after that (about March 21 or 28).

### **General Conditions (PART II)**

Exceeding Time in Contract [Article 5]. If you do not complete work within performance time and it is deemed in best interest of PCCD to allow Contractor to complete work (vs. terminate for default), PCCD will assess actual damages. NO liquidated damages clause.

Actual damages will not be assessed for lost revenue and/or taxes. Actual damages will be based upon the additional costs incurred by the Contracting Local Organization (CLO), the Texas State Soil and Water Conservation Board, and USDA-Natural Resources Conservation Service Engineer/Inspector resulting from the Contractor not completing the work within the allowable performance period. These costs include but are not limited to personnel costs (Inspector, Project Engineer, Contracting Officer and related personnel), travel costs (lodging, per diem, mileage, etc.), additional supplies, etc. Your bonding company can contact PCCD if it has additional questions about this clause.

The clause also allows for an extension of performance time (without terminating the Contractor's right to proceed or charging Contractor with actual damages) if a delay in completion of the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Note that TIME only is allowed (no costs are allowed) for an excusable delay.

This clause also has a segment entitled "Delays Due to COVID-19". PCCD shall follow guidelines of OSHA, CDC, and TX Department of State Health Services in determining if/when work would need to be suspended and resumed.

Payments / Invoicing Requirements [Article 7]. Progress payments will be made monthly. Per Texas Water Code, PCCD shall retain 10 percent of progress payments for the first 50% of the work until final completion and acceptance of the work without any interest due to the Contractor. Please note that the payment due date for PCCD is within 45 days of receipt of "proper" invoice. They will strive to pay sooner if possible.

Per paragraph (h), Contractor and Subcontractors must follow TX Government Code 2251 rules for paying others for goods, services, etc. related to performing the work.

Superintendence [Article 10]. Must have a full-time superintendent acceptable to CO **at all times**. You will be asked to propose an Alternate superintendent for approval so that you have a backup in place to serve in the absence of the regular superintendent.

Permits and Responsibilities [Article 11] and Other Contracts [Article 13]. The Contractor is responsible to determine all Federal, State, and municipal laws, codes and regulations that apply to this project and comply with them. Also, Contractor is required to obtain all necessary licenses and permits at own expense. The Contractor is responsible for all materials delivered and work performed until completion and acceptance of the entire construction work. *NOTE, however, that PCCD is responsible to obtain a TxDOT temporary/permanent entrance permit if one is required (per CSpec-5). Any other permits required to perform the work are Contractor's responsibility.*

Real Property Rights [Article 16]. PCCD has acquired all landrights to perform the work and the Construction Work Limits are shown on the drawings.

Contractor shall obtain owner's advance written approval if he/she plans to enter, remove, or otherwise make use of adjacent property, roads, utility lines, fences, and other improvements not included within the real property rights provided by the Contracting Local Organization. A copy of the written approval must be submitted to the Contracting Officer. Any associated costs are Contractor's responsibility. Any changes to items already designated in the contract (e.g., site entrance, campsite, etc.) must be approved by the Contracting Officer at his sole discretion.

Water [Article 19]. Contractor is responsible to provide and maintain at own expense an adequate supply of water needed to perform the work. Contractor must locate and arrange for adequate water source(s)

and obtain any required permits to take/use water. A copy of those permits will need to be submitted to the Contracting Local Organization.

Workweek - Construction Schedule [Article 20]. Requires written schedule prior to commencement of work (CO must approve). Maximum Work Week: Monday – Saturday (up to 11 hours per day) not to exceed 60 hours per week. Work may be performed during daylight hours only.

Holidays: Project will be shut down (and days are included in the performance time) for dates shown in this clause. If performance time is extended beyond 573 calendar days, this article states additional holidays/breaks when no work may be performed, and those days will be added to the performance time by contract modification.

Subcontractors [Article 21]. All require CO written approval (prior to signing a subcontract).

Surveys [Article 22], Shop Drawings [Article 30], and Layout of Work [Article 35]. Some general information. Brannon Sledge will discuss contract requirements more thoroughly in his technical presentation.

Suspension of Work [Article 23]. Contractor is eligible to recover damages for any unreasonable delays as specified in this clause. Includes additional performance time and damage costs (excluding profit).

Weather [Article 26]. PT in the IFB does not include any adverse weather delays. PT will be extended if warranted by weather or its effects. Allows TIME only (not costs or damages).

Quantity Variations [Article 28]. 25% clause for estimated quantities in bid schedule. Variations within 25% are paid at the bid price and there is no adjustment in performance time. If variation exceeds 25% (over or under), the contract price/time is equitably adjusted for the quantity that exceeds 25% (over or under). [This differs from Article 3 regarding "Changes". If any new work is added to the contract (or any work is deleted), this is not a Quantity Variation and Contractor is entitled to an equitable adjustment in the contract price and performance time.]

Accident Prevention and Safety [Article 41]. Includes Supplement to OSHA regulations with many requirements. Brannon Sledge will cover later. VERY important – will monitor and enforce safety.

### **Supplemental Conditions (PART III)**

Insurance Requirements [Articles 1-3]. Read carefully. Due 5 workdays after receipt of Notice of Award. If approved subcontractors are not covered on prime contractor's insurance policies, subcontractor must provide insurance certificates through prime contractor to CLO with same types/levels of coverage. NOTE that most policies require PCCD to be listed as additional named insured and all policies must include a waiver of subrogation.

Post-Award Information [Article 4]. Lists items you must submit within 5 workdays after receipt of Notice of Award. Be prepared to do this!

Performance of Work [Article 5]. The prime contractor must perform at least 20% of work with own forces.

Commencement, Prosecution, and Completion of Work [Article 6]. Note that you must commence "work" within 20 calendar days of date you receive written Notice to Proceed. Move-in does not qualify as "work".

Wage Rates [Article 8]. Because construction, must pay prevailing wage rates for laborers and mechanics. Rates in PART VI. Weekly certified payrolls are not required.

Ethics / Conflicts of Interest [Article 9]. Per State requirements, Contractor will be required to complete online Form 1295, Certificate of Interested Parties.

Performance/Payment Bonds [Article 13]. Gives specific requirements. (a) Bonds are due 5 workdays from date receive Notice of Award. (b) Penal sum: 100% of contract award price.

Special Federal Requirements [Articles 14 - 19]. EEO, affirmative action, debarment & suspension, lobbying, clean air and water. Article 17A is a State certification.



Subcontractor Certification (TPDES) [Article 20]. Subcontractors who perform work that may impact pollution control measures must sign a certification form (see Appendix A of Construction Specification 5).

## **TECHNICAL PRESENTATION**

This material was presented by Brannon Sledge (Project Engineer). Technical matters not contained in the IFB and additional items emphasized are as follows:

### **PART II – GENERAL CONDITIONS**

#### **ARTICLE 41 – ACCIDENT PREVENTION AND SAFETY**

ACCIDENT PREVENTION AND SAFETY, SUPPLEMENT TO OSHA PART 1926 AND 1910 Construction Industry Standards and Interpretations

The Contractor shall comply with applicable OSHA safety regulations 1926. The Contracting Officer will notify the Contractor of any noncompliance with these requirements. If the Contractor refuses to comply with these requirements, all or part of the work may be suspended until corrective action is taken.

The Inspector and Project Engineer will have delegated authority to suspend work for any noncompliance with safety requirements that poses a serious or imminent danger to the health or safety of the public and/or personnel of the Contractor, NRCS, or local Sponsors.

The Supplement to OSHA 1926 and 1910 emphasizes several specific safety items which must be understood by the Contractor prior to bidding this job. Among these items are the requirements for:

1. Written plan for accident prevention and safety (CO must approve prior to beginning work).
2. First aid certificates
3. First aid facilities
4. Safety Meetings, weekly “tool box” and monthly
5. Dust control
6. Rollover protective structures
7. Backup alarms
8. Restroom Facilities
9. Hard Hat Sign must meet supplement requirements.

Hard hats shall be worn on the job site at all times and equipment shall be outfitted with working backup alarms, seat belts, and approved roll-over protective structures.

All equipment shall be inspected by the NRCS Construction Inspector prior to use on the project. Equipment shall be inspected at the job site.

#### **ARTICLE 18 – MATERIAL TO BE FURNISHED BY THE CONTRACTOR**

Certificates and test data shall be submitted to show compliance of materials and construction specified in the contract requirements. Materials or equipment for which samples, certifications or test data are required shall not be used in the work until approved in writing by the GR.

**Materials which require material certifications are:** Vegetation materials, Fine and Coarse Drainfill, Concrete Mix ingredients and admixtures, curing compound, sealing compounds for joints, joint filler, Roller Compacted Concrete ingredients, Steel reinforcement, Reinforced Concrete Pressure Pipe, PVC plastic pipe, Ductile-Iron Pipe, Slide Gate and its appurtenances, Rodent Guards, Metal, Galvanizing, Grout Mix design, all Fencing materials, Lime, Geotextile, and Rock Riprap.



## **CONSTRUCTION SPECIFICATIONS**

There are two types of specifications in this contract: (1) Construction Specifications and (2) Material Specifications. The construction specifications are composed of two parts. The first part is called the closed specification and is the standard NRCS construction specification that begins with the SCOPE and ends with MEASUREMENT AND PAYMENT or PAYMENT. The second part is called the open specification and consists of the ITEMS OF WORK AND CONSTRUCTION DETAILS that are written specifically for this job.

Special emphasis items are covered below.

### **CLEARING AND GRUBBING 2**

**Bid Item 1, Clearing and Grubbing.** The Contractor shall remove and dispose of all vegetation within the work limits required for the implementation of the works of improvement as shown on the drawings. This includes the disposal of existing brush piles and downed debris required for construction. Removed vegetation shall be chipped and used as mulch, buried onsite, or disposed of at an offsite location and shall conform to all state and local regulations. All areas shall be dressed by blading, dragging or floating upon completion.

### **STRUCTURE REMOVAL 3**

**Bid Item 2, Structure Removal, Existing Fences.** The Contractor shall be responsible for removing and disposing all designated fences as shown on the construction drawings. In section 2, Method 1 shall apply, which requires to Contractor to mark each structure or structure part with stakes, flags, paint, or other suitable methods. In Section 3, Method 2 shall apply, which requires the Contractor to remove fence to the bottom of the footing and/or post. The limits of fences to be removed on the drawings are approximate, and some additional fence may exist within the construction area that are not designated. Salvaging of existing fence is not permitted.

**Bid Item 3, Structure Removal, Existing Principal Spillway.** The Contractor shall be responsible for removing and disposing of the existing principal spillway inlet, designated conduit sections, and concrete cradle as shown on the drawings. This includes all metal work. The existing principal spillway conduit shall be used for dewatering and shall remain open until the new principal spillway system (inlet, conduit, impact basin, and outlet channel) installation and the dam is reconstructed to full design cross-section over the conduit.

### **POLLUTION CONTROL 5**

**General.** A SWPPP is required for this site (copy included in contract). A SWPPP (SWP3) has been prepared and shall be amended by Contractor to include a detailed work sequence outline which defines and delineates the Contractor's construction operation and major earthwork starting and ending times. A copy of the approved SWP3, as amended, and the permit will be maintained at the construction site by the Contractor. All applicable TCEQ rules and regulations concerning the TPDES and the SWP3 shall be followed. Contractor is required to submit a NOI at least 5 business days before work commences and a NOT when the contract is complete. The on-site inspector and the Contractor shall perform periodic inspections of the sediment control practices. Written reports shall be prepared and filed on site with the SWP3 and the Engineer and Contractor will sign them when remedial corrective action is needed.

**Bid Item 4, Pollution Control.** Includes work required to accomplish the requirements of Section 1, including all works required to implement the SWP3, install and maintain the rock sediment filter, stabilized construction entrance, and maintenance of the sediment filters. Two stabilized construction entrances shall be installed as shown on the drawings. In Section 7, Measurement and Payment, Method 3 shall apply. See IFB Amendment #1 for changed location of east stabilized construction entrance.

**Bid Item 5, Silt Fence.** This item consists of the Contractor furnishing and installing the sediment fence to the lengths and locations as shown on the drawings and otherwise needed to control sediment from leaving the construction site. In Section 3, sediment filters shall be limited to geotextile sediment filters. Silt fence material shall meet the requirements of ASTM D6461 and Material Specification 592 (see correction made in IFB Amendment #1). Installation of the sediment filters shall be as shown on the drawings.

#### **SEEDING SPRIGGING AND MULCHING 6**

**Bid Item 6, Vegetation, Sprigging.** Contractor required to prepare seedbed, furnish and apply sprigs, straw mulch, tackifier (or crimp) and fertilizer in all areas topsoil is designated to be placed except below the lowest ungated outlet (elevation 498.8 on the upstream side of dam). The application rate of the fertilizer per acre shall be 30 pounds of nitrogen (N), 40 pounds of phosphorus (P) and zero (0) pounds of potassium (K). Prior to planting grasses, fertilizer shall be applied and worked into the soil by disking with a weighted tandem disk to a depth of approximately 4 inches.

A good quality straw Mulch of coastal bermudagrass or native bluestem mix, is required on all areas sprigged. Straw mulch application rate is 2.5 tons per acre. The straw mulch shall be stabilized by a nonasphaltic tackifier and shall be applied at a rate of 40 pounds per acre, or by mechanical crimper as described in Section 5 of CS 6. All OSHA safety requirements shall be met when working on any slopes steeper than 3:1.

**Bid Item 7, Irrigation System.** Item of work consists of furnishing and installing a temporary solid set sprinkler irrigation system. The system shall be adequate to apply the volume of water and meet the application requirements. A proposed plan for the irrigation system and application shall be furnished to the Contracting Officer by the Contractor 30 days before installing the system. An in-line, propeller type water meter with volumetric calibration shall be installed so that all water applied for irrigation of seeded grasses under the contract will be metered.

**Bid Item 8, Irrigation Water.** Item of work consists of applying irrigation water to the areas sprigged. It shall include the cost of water and labor. The contractor shall be responsible for the water source. All areas will be irrigated with an irrigation sprinkler system at the rates listed in Section 7.c.(2). The irrigation system shall produce a reasonable uniform distribution of the required application over the irrigated area without excessive runoff or erosion.

#### **CONSTRUCTION SURVEYS 7**

**Bid Item 9, Construction Surveys.** The surveys that are required to be conducted by the Contractor are specified in Section 5 (Method 2). Note the Contractor is responsible for the layout of all the work. Also the Contractor is responsible for checking (blue topping) all work as work progresses. The Contractor shall also submit for approval in writing the name, qualifications and experience of the surveyor personnel for approval prior to commencement of work to the Contracting Officer. Requirement for RPLS or P.E. for some surveying duties will be added in IFB Amendment #1.

In Section 7, Records, all survey data shall be recorded in a standard hard-bound engineering survey field book and follow industry standards. Electronically generated survey data and computations shall be bound, page numbered, and cross referenced in a bound field notebook. Survey records shall be available at all times during construction to the Engineer. Documentation and supporting data for progress payments shall be submitted with each invoice. All original survey records and documentation shall be submitted to the Engineer for final payment and acceptance.

Per 9.a.(2), benchmarks set or established by the CLO include: coordinates shown on the drawings. These are marked by iron pins and/or monuments.

Per 9.a.(3) Initial and final cross sections for determinations of final quantities will be performed by the CLO.

## MOBILIZATION AND DEMOBILIZATION 8

**Bid Item 10, Mobilization & Demobilization.** Primary access to the work area shall be from the two existing ranch road entrances off of FM 1185 as shown on the drawings. Road base or rock meeting the material requirements shown on the drawings and approved by the Contracting Officer shall be placed. The access road to the camp site and work area shall be a minimum of 14 feet wide, and shall be constructed and maintained in a smooth, rut-free condition throughout the contract period. The contractor shall be required to install any improvements (including temporary gates) required for site access. Culverts shall be installed at crossings of low areas where significant concentrations of runoff water accumulate and causes ponding of water. Work includes Demobilization, and some of these items are described. Any fencing removed to allow construction access shall be restored to equal or better than pre-construction conditions. The Contractor shall furnish a Field Office facility for the CLO and Government, and shall meet the requirements in Section 4.a.(b)-(g). See IFB Amendment #1 for changes to Section 4.a.(2)(a).

Section 3 PAYMENT it states, "Payment will be made as the work proceeds, after presentation of paid invoices .... by the Contractor showing specific mobilization and demobilization costs and supporting evidence of the charges of suppliers, subcontractors, and others." You may be asked to provide proof of the total direct cost. You will have to submit paid invoices for the purchase of bonds and mobilization supplies in order to be reimbursed for these items prior to the final payment. Payment for work in this item shall be made in BID ITEM 10: Mobilization and Demobilization, including all work for and Traffic Control which is subsidiary to this bid item.

## TRAFFIC CONTROL 9

Subsidiary Item: Mobilization and demobilization. This item of work requires the contractor to establish and maintain traffic control at access points to the work. In Section 4, the Contractor shall furnish a written plan to show proposed method of signing, barricading for traffic control, use of flaggers, etc. to be approved by the NRCS Engineer and the appropriate government authority. See IFB Amendment #1 Questions/Answer section for TxDOT contact person/phone number.

## REMOVAL OF WATER 11

**Bid Item 11, Removal of Water.** This item of work requires the contractor to submit two written plans for diverting the surface water and dewatering the construction site and shall also include controlling water from entering the new principal spillway until the dam is reconstructed to the full design cross-section over the conduit. A coffer dam shall be required to prevent transport of sediment from the reservoir and to protect the new principal spillway and RCC chute structure from reservoir water. This plan must be sealed by a Texas licensed Professional Engineer and is required before beginning construction. Excavation for the installation of the RCC chute, concrete outlet structure and rock riprap lined outlet shall be kept free of water during placement of RCC, concrete, rock, and/or backfilling.

## EXCAVATION 21

There is no guarantee that materials obtained from the specified excavations may be used directly in the specified fills. Stockpiling of excavated materials to be used in the specific zones of the fill shall be required (to insure their availability). The disposal of excavated material shall include transporting, depositing, and spreading the materials on the designated fill or waste areas. Additional compensation for disposal of excavated materials and dressing the surface of the waste area will not be made.

**Bid Item 12, Excavation, Common.** This item shall consist of all required excavations for the reconstruction of the embankment (including all wet excavation along the upstream slope and inlet channel), for the new principal spillway riser, 42-inch I.D. principal spillway pipe, principal spillway impact basin, for the RCC spillway, the rock riprap lined outlet, auxiliary spillway outlet, and outlet channels as shown on the drawings. The measurement and payment method in Section 9 is Method 3. The neat lines

and grades shown on the drawings shall be considered the true surface of the completed excavation unless otherwise approved by the Engineer. Suitable materials from excavation shall be stockpiled in the designated stockpile area shown on the drawings.

Excavation, Common, Foundation Stripping - Subsidiary Item: Excavation, Common. This item shall consist of removing all weeds, grass, roots, and soils containing vegetative or organic material from the ground surface prior to placing earthfill.

Excavation, Common, Borrow - Subsidiary Item: Earthfill, On-site Borrow (Material Types C, D, and E) and Lime-Treated Earthfill (Material Types F and G). This item shall consist of all excavation from within the borrow areas required to complete the specified earthfills as designated on the drawings. All excavated slopes shall be maintained and no steeper than 5:1.

Excavation, Common, Drainfill, Fine Filter - Subsidiary Item: Drainfill, Fine Filter. This item shall consist of all excavations required for the installation of the drainage systems as shown on the drawings, including the toe drain trench excavation.

Excavation, Common, Drainfill, Coarse Filter - Subsidiary Item: Drainfill, Coarse Filter. This item shall consist of all excavations required for the installation of the drainage systems as shown on the drawings.

Excavation, Common, Concrete Structures - Subsidiary Item: Concrete, Structural, and Concrete, Pipe Cradle. This item shall consist of all excavations required for the installation of the principal spillway system, including the principal spillway outlet structure.

Excavation, Common, Flexbase - Subsidiary Item: Flexbase. This item shall consist of all excavations required for the installation of flexbase as shown on the drawings.

Excavation, Common, Rock Riprap and Riprap Bedding - Subsidiary Item: Rock Riprap and Riprap Bedding. This item shall consist of all excavations required for the installation of the rock riprap and riprap bedding as shown on the drawings.

Excavation, Common, Structure Removal - Subsidiary Item: Structure Removal, Existing Principal Spillway. This item shall consist of all excavations required for the removal of the principal spillway inlet riser and portions of the existing principal spillway conduit designated for removal.

### EARTHFILL 23

The required fill material types and placement locations, material properties specifications, and compaction criteria are shown on the drawings. A description of the intended material borrow source locations are provided, but the Contractor is responsible for verifying the materials in each borrow meets the material specifications.

Placement moisture shall be optimum upward to +4% as determine from the above test. In Section 4 Placement, fill shall not be placed until the required excavation and foundation preparation have been completed and blue-topped by the Contractor, and the foundation has been inspected, and approved by the Engineer. Fill shall be placed in horizontal layers, not to exceed a maximum of 9 inch thickness. The minimum disk blade size shall be 34" in diameter.

**Bid Item 13, Earthfill, On-site Borrow (Material Types C, D, and E).** This item shall consist of all earthfill and backfill required to reconstruct the embankment, the berms for the RCC Spillway outlet channel, backfill for the existing principal spillway plunge pool and downstream channel to be abandoned, and other backfill areas located away from the dam as shown on the drawings. In Section 6 Compaction, Class A compaction is required, in-place dry density of materials being placed shall not be less than what's specified on the drawings.

If available onsite sources of untreated earthfill meeting the specifications for Material Type C become depleted, the contract will be modified to utilize material Type H (lime treated earthfill) as needed to construct the exterior zone of embankment.

**Bid Item 14, Earthfill, Imported Borrow (Material Types A and B).** This item shall consist of all earthfill and backfill required to reconstruct the embankment adjacent to the RCC Spillway and under the RCC Spillway as shown on the drawings. This item includes all costs required to verify that the material meets the specifications and supplying material to the project site. No additional compensation will be made for transporting material to the site. In Section 6 Compaction, Class A compaction is required, in-place dry density of materials being placed shall not be less than what's specified on the drawings.

#### **DRAINFILL 24**

The drainfill shall meet the requirements of Material Specification 521. The percentage of drainfill materials finer than the No. 200 U.S. Standard Sieve Size shall not be more than 3 percent, when tested in accordance with ASTM C-117.

In Section 5, Control of Moisture, fine drainfill shall be in wet or near saturated condition when placed. No control of moisture is required for coarse drainfill.

In Section 6, Compaction, Class A compaction is required for fine graded drainfill and coarse graded drainfill under the RCC Spillway. The compacted dry density shall be a minimum of 98 percent of the maximum dry density obtained during tests performed in accordance with procedures contained in ASTM D698. The ASTM D698 procedure shall be modified to consist of a 1-point test performed on a representative sample of oven-dried drainfill.

Class III compaction is required for coarse drainfill placed in the toe drain and strip drains and outlet for the principal spillway filter diaphragm.

**Bid Item 15, Drainfill, Fine Filter.** This item includes furnishing and installing the fine graded drainfill and required for the principal spillway filter diaphragm, impact basin and filter, filter blanket, the foundation toe drain, and the filter diaphragm for the decommissioned existing principal spillway conduit as shown on the drawings.

**Bid Item 16, Drainfill, Coarse Filter.** This item includes furnishing and installing the coarse graded drainfill and required for the RCC spillway underdrain, impact basin drain and filter, and the foundation toe drain.

**Bid Item 17, Flexbase.** This item includes furnishing and installing the Flexbase material required beneath the Principal Spillway inlet and Impact Basin foundations as shown on the drawings. Flexbase shall be Type A, Grade 1-2 as per TxDOT Item 247, Table 1. Flexbase shall be placed in maximum loose lift thickness of 9 inches. Compaction shall be a minimum of 100% of the maximum dry density, and moisture shall be optimum +/-2%.

**Bid Item 30, Riprap Bedding.** This item includes furnishing and installing the bedding material required beneath the rock riprap as shown on the drawings. Bedding gradation requirements are shown on the drawings.

#### **TOPSOILING 26**

The Contractor is responsible for performing a Soil Sample Analysis according to the County Agriculture Extension Services criteria. Recommendations from the analysis shall be incorporated into revegetation activities for areas to receive topsoil.

**Bid Item 18, Topsoiling.** This item requires the Contractor to salvage topsoil from required excavations, stripping operations, and from the borrow area to be placed and spread on the earthfill and exposed cut

slopes as designated on the drawings and in the specs. Topsoil shall be stockpiled in the designated stockpile area. Topsoil shall be processed by pulverizing and shall have the moisture content adjusted to optimum to facilitate uniform spreading to the specified thickness.

#### DIVERSIONS AND WATERWAYS 27

**Bid Item 19, Diversions.** This item requires the contractor to construct the stub diversions as specified on the drawings. Locations shown on the drawings are approximate, and final locations shall be designated by the Engineer. Stub diversions shall have a 13 ft minimum base width, 3:1 side slopes, and an 18 inch minimum height. ***Payment shall be determined to the nearest linear foot by measurement along the centerline of the effective height of the diversion*** (see Amendment #1 pen-and-ink change).

#### LIME TREATED EARTHFILL 28

***The design lime application rate and curing time shall achieve the results as specified in Section 12. The required pre-construction and ongoing quality control testing methods and frequency for lime treated earthfill shall be as specified in Section 12.***

The Contractor shall submit to the Engineer the initial test results and a detailed lime treatment Work Plan describing the methods and procedures, and shall specify at a minimum the lime type, lime treated application rate, required curing time, number of lime applications, mixing procedures and materials handling, and any special procedures to prevent sulfate-induced heave. The Work Plan shall be signed and sealed by a Professional Engineer licensed in Texas.

***Quicklime shall be required when the soluble sulfate concentration is less than or equal to 3,000 ppm. Hydrated Lime shall be required if the soluble sulfate concentration exceeds 3,000 ppm.***

In Section 6, Lime application, none of the methods shall apply for use of quicklime. If hydrated lime is used, Method 1 shall apply. In Section 7, Mixing, the mixing shall be accomplished by using disk and high speed rotary mixers. A minimum of two cycles of mixing and watering shall be accomplished. Water content at completion of mixing shall not be less than optimum. In addition to mixing and placing requirements in sections 7 and 8, compaction, processing, and moisture content shall be performed in accordance with the requirements of Section 5 of Construction Specification 23. In Section 9, Compaction, Class A compaction in section 6 of Construction Specification 23 shall apply, and the in-place dry density shall be as shown on the drawings and obtained during tests performed in accordance with the procedures contained in ASTM D698, Method A or B. Immediately before placement, the subgrade shall be scarified and watered to create a water content suitable for the bonding of the lime treated material. The minimum disk size shall be 34" in diameter. No separate payment will be made for water applied to the foundation and for preparing the lime-treated earthfill.

**Bid Item 20, Lime-Treated Earthfill (Material Types F and G).** This item shall consist of mixing and placing lime-treated earthfill beneath and adjacent to the RCC spillway to the lines, grades, and locations as shown on the drawings. See IFB Amendment #1 for pen-and-ink change.

**Bid Item 21, Furnishing and Handling Lime (Material Types F and G).** The Contractor shall use quicklime at 4% or hydrated lime at 5% relative to the dry unit weight of treated soil and shall be adjusted as necessary. Adjustments to the amount of lime being used may be required. The payment for furnishing and handling lime shall be paid to the nearest ton by actual weight. Delivery tickets with the tons delivered shall be furnished to the Construction Inspector prior to unloading the lime during approved scheduled work hours only. Lime application will only be allowed in the lime mixing areas.

In Section 10, allow the mixture to cure/mellow for at least 7 days or longer if required based on testing results to reduce the soluble sulfate concentration to 3,000 ppm or less prior to placement as lime-treated earthfill.

### CONCRETE FOR MAJOR STRUCTURES 31

**Bid Item 22, Concrete Structural.** This item includes furnishing and placing all concrete required for the construction of the concrete principal spillway inlet and outlet structure, and the auxiliary spillway concrete baffle blocks, stilling basin end sill, and upstream and downstream cut off walls as shown on the construction drawings. In Section 3, Concrete Mix Design, Method 1 shall apply and all concrete shall equal or exceed Class 4000. Concrete installed shall be made with Type II or V cement. Class 2 Coarse aggregate shall be size no. 7, 57, 67, or 467. Slump range for all concrete shall be 4 inches +/- 1 inch. In Section 13, Construction Joints, Method 1 shall apply. Joint fillers shall be according to ASTM D994 and ASTM D1752. Cement-based coating materials shall be in powder form and shall be applied in conformance with the manufacturer's recommendations, and shall present a uniform appearance that's free of check marks, blisters, cracking and other evidence of non-uniformity and/or imperfections.

**Bid Item 23, Concrete, Pipe Cradle.** This item includes furnishing and placing all concrete required for the principal spillway conduit cradle as shown on the drawings.

**Establishment of Permanent Reference Markers** – Subsidiary Item: Construction Surveys. This will consist of all work and materials required for the establishment of permanent reference markers (except the benchmark cap) as shown on the drawings. Note the PRM installation requirements.

### STEEL REINFORCEMENT 34

**Bid Item 24, Reinforcing Steel.** Item consists of furnishing and placing all steel reinforcement required for the construction of all reinforced concrete works. It is the responsibility of the Contractor to insure that the reinforcement is held in place and not displaced during the placement of the concrete. Steel reinforcement shall conform to the requirements of Material Specification 539. Reinforcing steel shall be minimum Grade 60.

### ROLLER COMPACTED CONCRETE 36

The minimum compressive strength in the mix design shall be 3000 psi at 28 days, and the moisture and compaction requirements are as specified in Section 13. Curing shall meet the requirements as specified in Section 16. The Contractor shall provide a written plan for constructing the specified vertical surfaces to the Engineer for approval at least 60 days prior to the start of construction of vertical RCC surfaces.

**Bid Item 25, Roller Compacted Concrete.** This item includes furnishing and placing all RCC required for the construction of the RCC auxiliary spillway as shown on the drawings. The Contractor shall provide a plan layout of the mixing plant as detailed in Section 22.a.(2). The RCC shall be constructed in 12 inch lifts after compaction. Cranes and heavy equipment shall not be allowed on the RCC after placement.

**Bid Item 26, Cementitious Material.** This item includes furnishing and handling the cement and pozzolan required for the production of RCC required for the auxiliary spillway.

### REINFORCED CONCRETE PRESSURE PIPE CONDUITS 41

**Bid Item 27, Concrete Pressure Pipe, C-301, 42-Inch I.D..** This item consists of furnishing and installing the 42" I.D. conduit for the new principal spillway as shown on the drawings. The pipe section lengths are 10 feet, and lengths other than these shall not be used unless approved by the Engineer.

Each section of pipe shall be supported at a minimum of (2) locations along its length, with the supports being no further than 2 feet at the end of the section. Supports shall be support blocks or opposing wedges as shown on the drawings.

#### PLASTIC PIPE 45

**Bid Item 28, Plastic Pipe, PVC, 6" I.D.** This item includes furnishing and installing the 6-inch diameter slotted pipe and non-perforated PVC pipes, the 6-inch diameter ductile iron pipes and all appurtenances necessary to complete the work as shown on the drawings for the RCC, foundation trench drain, and the filter diaphragm. The PVC plastic pipe shall be AWWA C900, pressure class **165** pipe (see IFB Amendment #1 for this pen-and-ink change); ASTM D1785, Schedule 80 pipe; or ASTM D2241, SDR 17 pipe.

#### DUCTILE-IRON PIPE 53

Subsidiary Item, Ductile-Iron Pipe – Plastic Pipe, PVC, 6-Inch I.D. This item consists of furnishing and installing one, 20 feet of 6" I.D. ductile-iron pipe as the termination section for the foundation toe drain outfall line as shown on the drawings.

#### ROCK RIPRAP 61

**Bid Item 29, Rock Riprap.** This item includes furnishing and placing rock riprap to construct the upstream wave berm, rock lined outlet channel, rock lined RCC auxiliary spillway outlet channel, the rock scour apron upstream of the RCC, and the rock scour pads on the sides of the RCC as shown on the drawings. Rock Riprap Gradation requirements are shown on the drawings. The Contractor shall provide written notice of proposed source of rock before delivery and shall provide a certified test results or other evidence satisfactory to the Engineer from the rock quarry. Note the testing requirements in Material Specification 523, Rock Type 1. The riprap may be equipment placed but shall not be allowed on the rock during or after placement. Statement-of-delivery ticket showing weight to the nearest 0.1 ton is required and shall be furnished to the Inspector at the time of delivery. Delivery of rock is allowed only during regularly scheduled work hours. IFB Amendment #1 made a pen-and-ink correction to bid item # shown in the original specification on page 61-4.

#### WATER CONTROL GATES 71

**Bid Item 31, Water Control Slide Gate, 12" x 12".** This item includes furnishing and installing the 12"x12" slide gate, and all associated appurtenances for the principal spillway inlet. The gate shall conform to the requirements for Material Specification 571, Type MHS-1 (see IFB Amendment #1 pen-and-ink change), and shall be Class 55-20, Square Opening. Appurtenances shall meet the requirements listed in Section 8.a.(3)-(11).

#### METAL FABRICATION AND INSTALLATION 81

**Bid Item 32, Metal Fabrications.** This item consists of furnishing, fabricating, galvanizing, and installing the metal works for the trash rack, the manhole frame and cover for the principal spillway inlet, the metal frames and cleanout covers for the foundation toe drain and RCC drainage system, the metal reservoir staff gauge, and rodent guards as shown on the drawings. All metal, with the exception of the manhole frame and cover and any stainless steel hardware, shall be galvanized after fabrication. Shop drawings are required to be submitted for review and approval by the Contracting Officer or Engineer.

Fence Stiles – Subsidiary Item: Fence, Barbed Wire. This item includes furnishing, fabricating, galvanizing, and installing the fence stile.

Chain Link Fence Post Base Plates – Subsidiary Item: Fence, Chain Link. This item includes furnishing, fabricating, galvanizing, and installing the chain link fence post base plates as shown on the drawings.

#### CHAIN LINK FENCE 91

**Bid Item 33, Fence, Chain Link.** This item consists of furnishing all materials and labor required for installation of the chain link safety fence on top of the impact basin and auxiliary spillway sidewalls as



shown on the drawings. In Section 2, all fence components shall be galvanized only and not PVC coated. Materials or components damaged prior to project completion shall be replaced at no cost to the owner. All chain link fence materials shall meet the requirements listed in Section 6.a.(4)-(9).

#### FIELD FENCE 92

**Bid Item 34, Fence, Barbed Wire.** This item consists of furnishing all materials required and constructing fences of the type designated on the drawings, including the barbed wire fence for the principal spillway impact basin. This bid item includes 6 gates as shown on the drawings. Locations shown on the drawing are approximate, and final location of the fences shall be as staked by the Engineer. No additional compensation will be made for additional bracing or special anchorage required as a result of the final layout staked by the Engineer (see IFB Amendment #1 pen-and-ink change).

#### CONTRACTOR QUALITY CONTROL 94

**Bid Item 35, Contractor Quality Control.** This item consists of furnishing all equipment, tools, materials, and labor to perform all work as defined in the specifications. In Sections 3 and 4, Method 2 shall be used. This requires the quality control activities to be performed by competent personnel who are separate and apart from the line supervision and who report directly to management. Also, offsite testing laboratories shall be certified or inspected by a nationally recognized entity. Names of quality control personnel and their duties, qualifications, certifications, and authorities are required and shall be submitted to the CO for approval. A written plan (quality control system) must be submitted to the CO for approval within **10 calendar days after notice of award.**

Daily QC reports are required to be submitted to the NRCS Inspector by the end of each workday or the start of the following workday. Any testing done by the CLO is for the sole benefit of the CLO. It is the Contractor's responsibility to perform tests to prove and ensure that all work performed meets the contract requirements. All tests shall be conducted in accordance with the appropriate ASTM method and with equipment that meets the requirements of the specified ASTM test method. Contractor's scheduling of construction activities may require more than one on-site quality control inspector (note the degree of quality control specified). **All work that requires full-time/continuous quality control inspection are listed in Section 10.a.(8). In Section 10.a.(8)(n), metal fabrication shall consist of full time inspection** (see pen-and-ink change in IFB Amendment #1).

#### GEOTEXTILE 95

**Bid Item 36, Geotextile.** This item consists of furnishing and placing geotextile under the rock riprap located along the upstream wave berm, rock lined principal spillway outlet channel, rock lined auxiliary spillway outlet channel, and the rock scour apron upstream of the auxiliary spillway as shown on the drawings. In Section 5, Method 2 shall apply. The geotextile shall be Non-Woven Class I as defined in Material Specification 592, Table 592-2. The geotextile shall have the properties indicated in Table 592-2 (see correction in IFB Amendment #1) of Material Specification 592 as defined in Section 7.a.(4).

#### CONDUIT ABANDONMENT 99

**Bid Item 37, Conduit Abandonment.** This item includes filling the existing principal spillway conduit designated to be abandoned with the job mix as specified in Section 5. In Section 8, maximum grout pressure shall not exceed 4 psi.

#### GEOTECHNICAL INSTRUMENTATION AND MONITORING 401

**Bid Item 38, Geotechnical Instrumentation.** This item includes furnishing and installing, maintaining, and monitoring geotechnical instrumentation as designated on the drawings. See Section 4 for all pertinent submittals. See Section 5 for instrumentation firm and personnel requirements. See Tables 401 (1-5) for monitoring details and locations.

### GROUTED ANCHOR BARS 446

Subsidiary Item, Grouted Anchor Bars – Concrete Structural and Reinforcing Steel (see pen-and-ink correction in IFB Amendment #1). This item includes furnishing, drilling, installing, and grouting anchor bars at the locations shown on the Drawings or otherwise approved by the Engineer to secure the concrete baffle blocks and end sill to the RCC stilling basin.

### Site Visit

Items designated at the site visit included: Construction entrance, access routes, construction campsite area and stockpile areas, borrow areas, embankment, lime mixing areas, waste area, fences to be removed, new principal spillway pipe location, and approximate RCC Spillway location.

STOP #1: Alternate Stockpile Area east of the embankment

STOP #2: Top of Embankment at the Existing Principal Spillway

### Drawings

Drawing TX-EN-0754, Sheets 1 thru 83 were reviewed.

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### ATTACHMENTS:

***Revised Drawings (sealed 1/13/2022) Sheets 2, 4, 5, 7, 9, 11, 37, 73, 83. DISCARD these sheets sealed 8/4/21 and REPLACE with the attached revised sheets.***

### DISTRIBUTION:

To be posted on PCCD website along with copy of attendance sign-in sheet. All registered plan holders and 1/6/22 site showing attendees will be advised via email (or otherwise) when Amendment #1 is available for downloading from **[www.pccd.org/](http://www.pccd.org/)** (**Job Bids tab**)

“Internal” personnel, via email

FILECODE: IFB Tab 4A (Site Showing)

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GENERAL NOTES:

12. NO ON-SITE BATCH PLANT WILL BE PERMITTED FOR PRODUCING STRUCTURAL CONCRETE. AN ON-SITE BATCH PLANT FOR PRODUCING RCC IS REQUIRED PER CONSTRUCTION SPECIFICATION 36. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND OBTAINING ALL NECESSARY PERMITS RELATED TO ESTABLISHING AN ON-SITE BATCH PLANT.

1/13/22
- THE GENERAL NOTES AND TYPICAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS, INCLUDING LOCATION AND DIMENSIONS OF ALL EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY OWNER'S RESIDENT REPRESENTATIVE IF THERE IS A CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH WORK.
  - CONTOURS WERE OBTAINED FROM SURVEYS PERFORMED IN NOVEMBER 2019. CONTRACTOR SHALL MAKE SITE SURVEYS AS NECESSARY FOR CONSTRUCTION AND IN ACCORDANCE WITH CONSTRUCTION SPECIFICATION 7, CONSTRUCTION SURVEYS.
  - THE LIMITS OF CONSTRUCTION ARE SET 2 FEET INSIDE PERMANENT AND TEMPORARY EASEMENTS UNLESS OTHERWISE SHOWN. CONTRACTOR SHALL STAY WITHIN THE LIMITS OF CONSTRUCTION AND NOT VENTURE OFF THE ACCESS ROADS EXCEPT FOR DIRECT ACCESS TO THE WORK AREAS. CONTRACTOR SHALL CLEARLY MARK THE LIMITS OF CONSTRUCTION WITH SILT FENCE.
  - COMPLY AND CONDUCT WORK IN ACCORDANCE WITH OWNER'S SECURITY REGULATIONS AND REQUIREMENTS. PROVIDE SITE SECURITY AS NECESSARY TO PROTECT AGAINST VANDALISM AND LOSS BY THEFT.
  - CONTRACTOR SHALL MANAGE AND PROTECT THE WORK FROM FLOOD FLOWS, STREAM FLOWS, SURFACE WATER RUNOFF, GROUNDWATER OR ANY OTHER WATER ENCOUNTERED DURING THE PROGRESS OF THE WORK IN ACCORDANCE WITH CONSTRUCTION SPECIFICATION 11, REMOVAL OF WATER.
  - NOTIFY OWNER OF ANY SIGNS TO BE TEMPORARILY REMOVED. ALL EXISTING SIGNS TEMPORARILY REMOVED, IF ANY, SHALL BE STORED ON SITE BY THE CONTRACTOR AND SHALL BE REINSTALLED BY THE CONTRACTOR AT THE END OF CONSTRUCTION IN THEIR ORIGINAL CONDITION.
  - THE AREA AROUND OVERHEAD ELECTRICAL TOWERS SHALL BE PROTECTED. PROTECTION SHALL BE PROVIDED TO ANY TOWER, POLE OR GUY STRUCTURE WHEN TRAFFIC OR CONSTRUCTION ACTIVITY IS WITHIN 50 FEET OF THE STRUCTURE.
  - WORK UNDER THIS CONTRACT IS AUTHORIZED UNDER THE TERMS AND CONDITIONS OF THE U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT 3, MAINTENANCE. SEE THE SWPPP FOR DETAILS.
  - CONTRACTOR SHALL FOLLOW REQUIREMENTS OF SWPPP.
  - CONSTRUCT THE STAGING AREAS AND VEHICLE MAINTENANCE AREAS IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.
  - NO CONSTRUCTION FILL OR MATERIALS SHALL BE PLACED OR STORED IN AREAS NOT SPECIFICALLY DESIGNATED FOR THAT PURPOSE.
  - PROVIDE PROTECTED STORAGE FOR PAINTS, CHEMICALS, SOLVENTS, AND OTHER POTENTIALLY HAZARDOUS MATERIALS.
  - HANDLING, STORAGE, AND DISPOSAL OF ALL WASTE MATERIAL SHALL CONFORM TO THE SWPPP.
  - PREVENT POLLUTION OF SURFACE WATER AND GROUNDWATER WITH PETROLEUM PRODUCTS OR OTHER HAZARDOUS OR REGULATED SUBSTANCES. TAKE SPECIAL MEASURES TO PREVENT CHEMICALS, FUELS, OILS, GREASES, HERBICIDES, AND INSECTICIDES FROM ENTERING DRAINAGE WAYS. DO NOT ALLOW WATER USED IN ON-SITE MATERIAL PROCESSING AND CLEANUP, AND OTHER CONTAMINATED WATER, TO ENTER A DRAINAGE WAY, STREAM, OR RIVER.
  - PROMPTLY REPAIR EQUIPMENT LEAKING OIL/HYDRAULIC FLUID/ETC. IMMEDIATELY REMOVE AND REPLACE, AS NECESSARY, ALL SOILS ON WHICH SUCH LEAKAGE OCCURRED. PREVENT THE SPREAD OF LEAKED FLUIDS OR FLUID CONTAMINATED MATERIALS FROM THE ORIGINAL LEAK AREA. BE RESPONSIBLE FOR THE PROPER HANDLING AND DISPOSAL OF ALL SUCH CONTAMINATED MATERIALS.
  - PROVIDE SECONDARY CONTAINMENT AROUND ANY FUEL AND CHEMICAL STORAGE AREAS TO ENSURE THAT SPILLS FROM ANY SUCH AREAS DO NOT DISCHARGE FROM THE SECONDARY CONTAINMENT AREA. THE SECONDARY CONTAINMENT CAPACITY SHALL BE ADEQUATE TO CONTAIN THE CAPACITY OF THE LARGEST TANK/CONTAINER PLUS SUFFICIENT FREEBOARD TO CONTAIN PRECIPITATION.
  - PRECAUTIONS SHALL BE TAKEN DURING EQUIPMENT FUELING AND CHEMICAL TRANSFER OPERATIONS IN ORDER TO PREVENT SPILLS FROM OCCURRING AND TO MINIMIZE THE IMPACT OF ANY SPILL THAT DOES OCCUR. ALL FUEL AND CHEMICAL TRANSFERS SHALL BE CONTINUOUSLY MONITORED. MAINTAIN APPROPRIATE EQUIPMENT ON-SITE FOR RESPONDING TO ANY OIL OR HAZARDOUS SUBSTANCE SPILL. ADDITIONALLY, THERE SHALL BE AN ON-SITE PROHIBITION AGAINST THE TOPPING OFF OF TANKS AND EQUIPMENT.
  - REMOVE ALL FORM WORK FOLLOWING CONSTRUCTION.
  - EXISTING ROADS, ACCESS DRIVES, UTILITIES AND PROPERTY WITHIN THE LIMITS OF CONSTRUCTION DAMAGED BY CONTRACTOR AND ALL DISTURBED AREAS SHALL BE REPAIRED BY CONTRACTOR TO SAME OR BETTER CONDITION PRIOR TO END OF CONSTRUCTION.
  - DATUM INFORMATION:

HORIZONTAL DATUM IS TEXAS STATE PLANE, NAD83, SOUTH CENTRAL ZONE, 4204, US SURVEY FEET

VERTICAL DATUM IS NAVD 88. ALL ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL (MSL).

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4	EXISTING SITE PLAN
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DESIGNED BY: LIT

DRAWN BY: MDE

CHECKED BY: TEA

FILE NAME: Plum 21 - Sht 02.dwg

DATE CHECKED: 1/12/2022

GENERAL NOTES AND INDEX OF DRAWINGS

FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION  
PLUM CREEK WATERSHED  
IN  
CALDWELL COUNTY, TEXAS

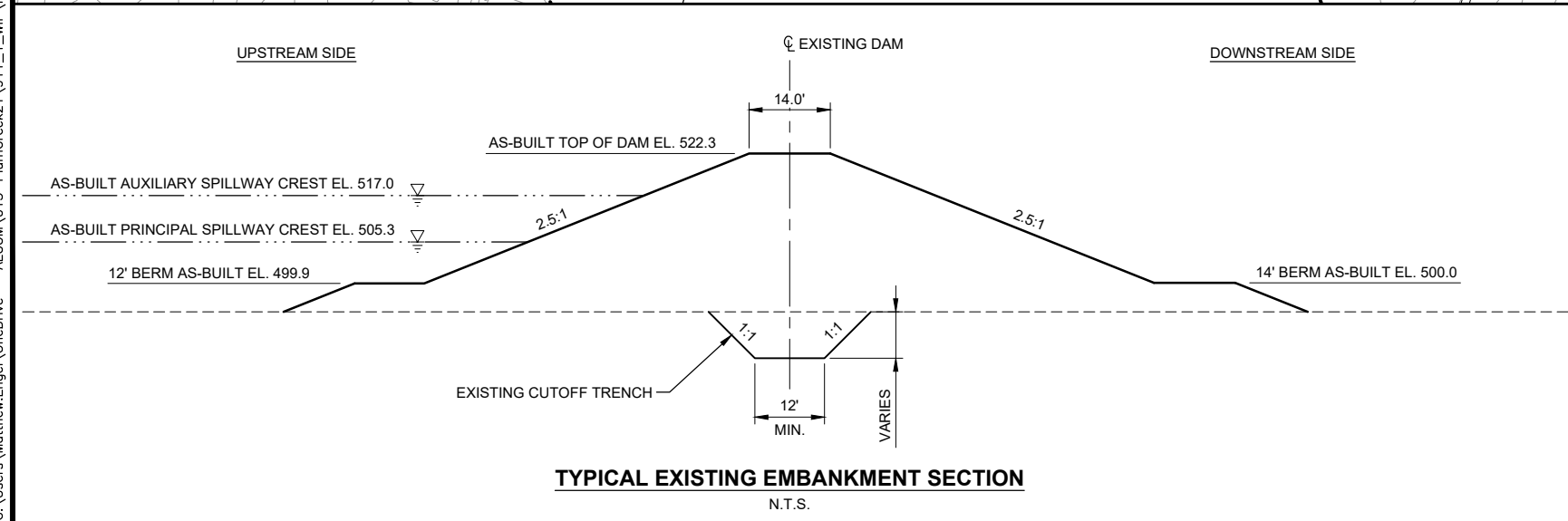
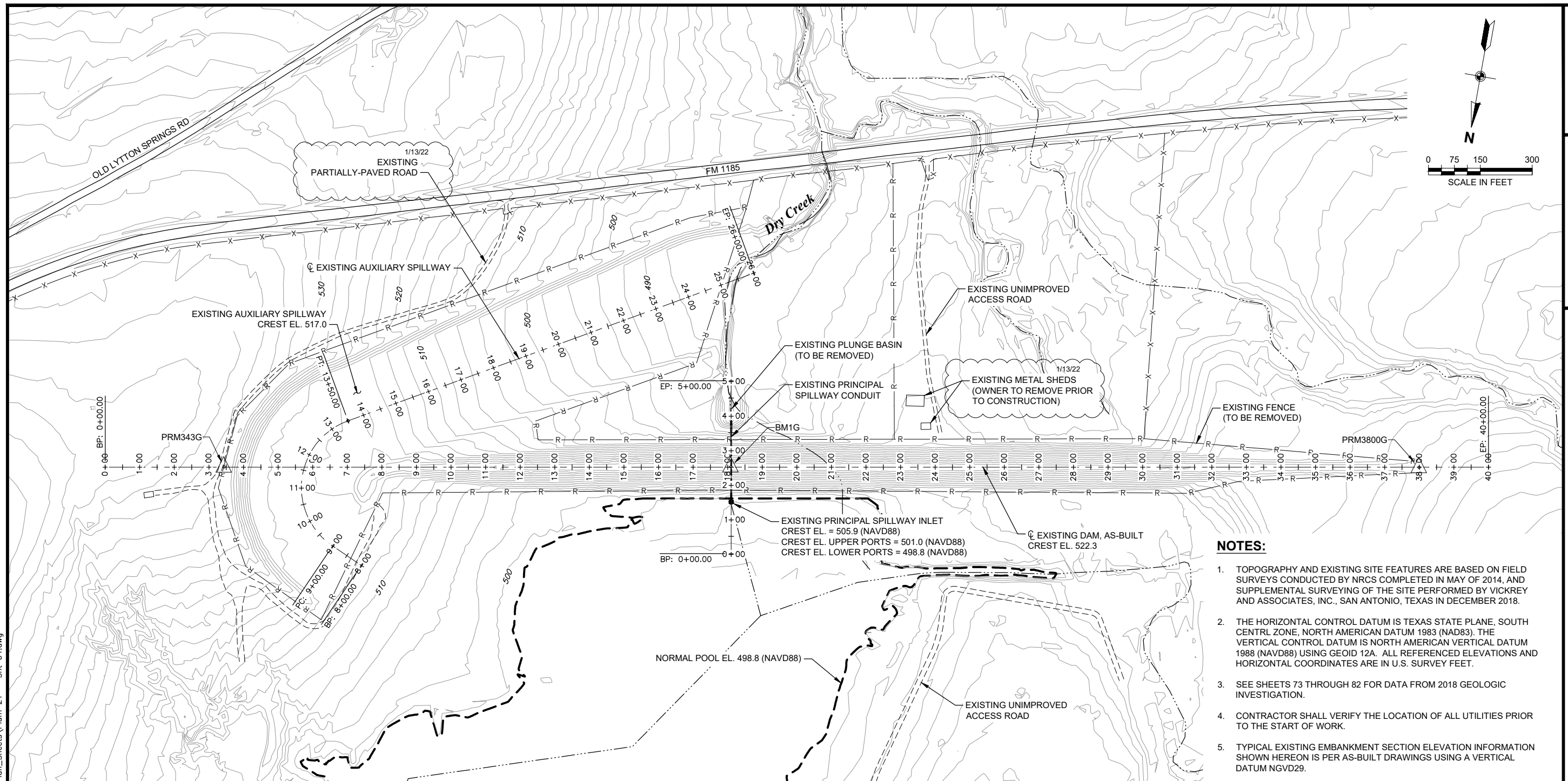


DRAWING NO.  
TX-EN-0754

SHEET NO.  
2

OF  
83

REVISIONS		
DATE	APPROVED	TITLE
1/13/22	LRF	IFB AMD. #1




BENCHMARKS				
BM ID	NORTHING	EASTING	ELEVATION	DESCRIPTION
PRM343G	13,898,301.57	2,396,084.04	534.539	PERMANENT REFERENCE MARKER STA. 3+43
BM1G	13,898,047.34	2,394,640.91	525.635	5/8" IRON ROD ON TOP OF DAM (APPROX. STA. 18+10)
PRM3800G	13,897,704.85	2,392,680.38	522.873	PERMANENT REFERENCE MARKER STA. 38+00

REVISIONS		
DATE	APPROVED	TITLE
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DATE CHECKED: \_\_\_\_\_ 1/12/2022



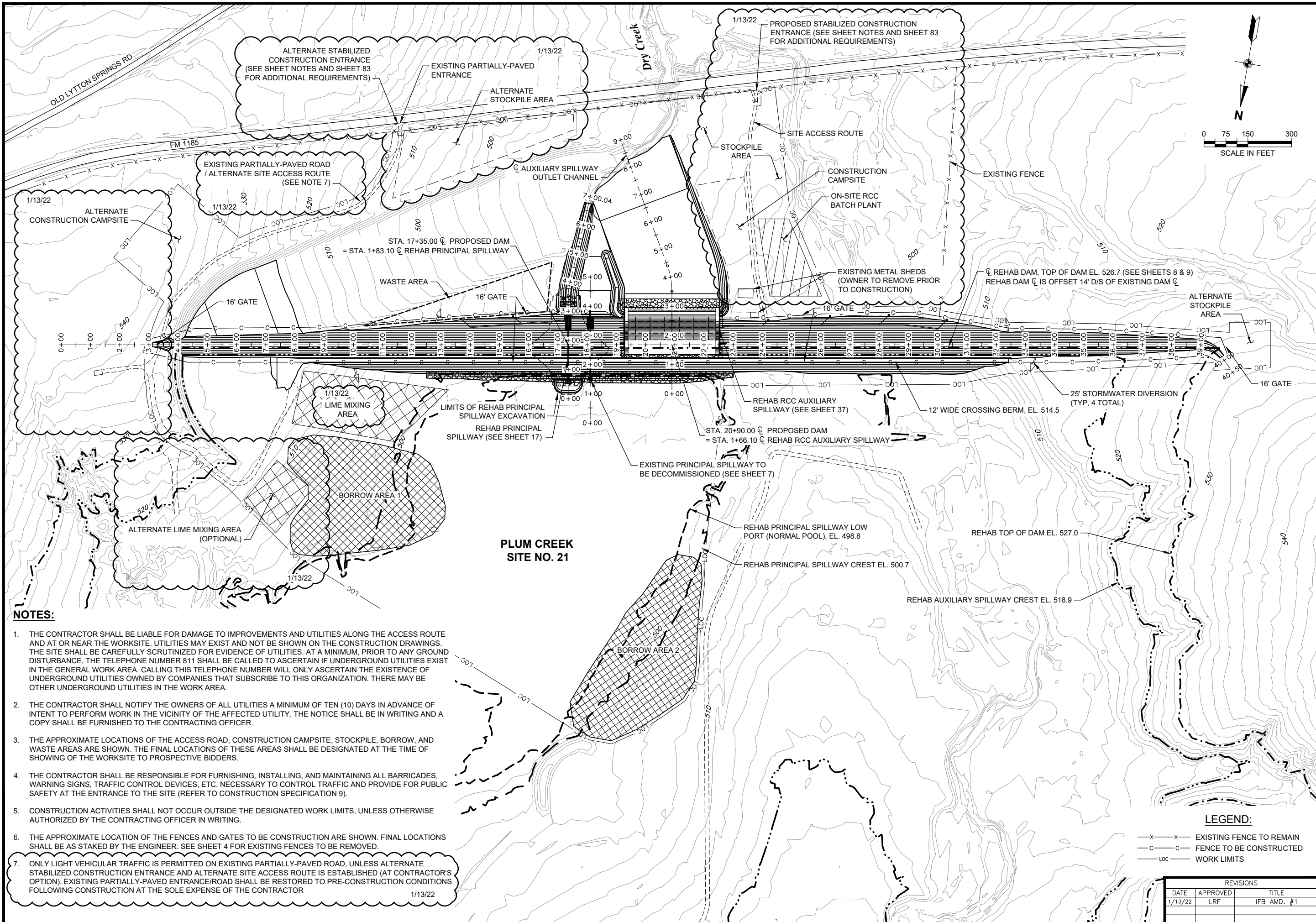
# EXISTING SITE PLAN


FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION  
 PLUM CREEK WATERSHED  
 IN  
 CALDWELL COUNTY, TEXAS

 <p>United States Department of Agriculture</p>	<p>Natural Resources Conservation Service</p>
<p>DRAWING NO. TX-EN-0754</p>	<p>SHEET NO. 4</p>
<p>OF 83</p>	




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CHECKED BY: TEA  
FILE NAME: Plum 21 - Sht 05.dwg  
DATE CHECKED: 1/12/2022

GENERAL PLAN OF MODIFICATIONS  
FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION  
PLUM CREEK WATERSHED  
IN  
CALDWELL COUNTY, TEXAS



United States  
Department of  
Agriculture

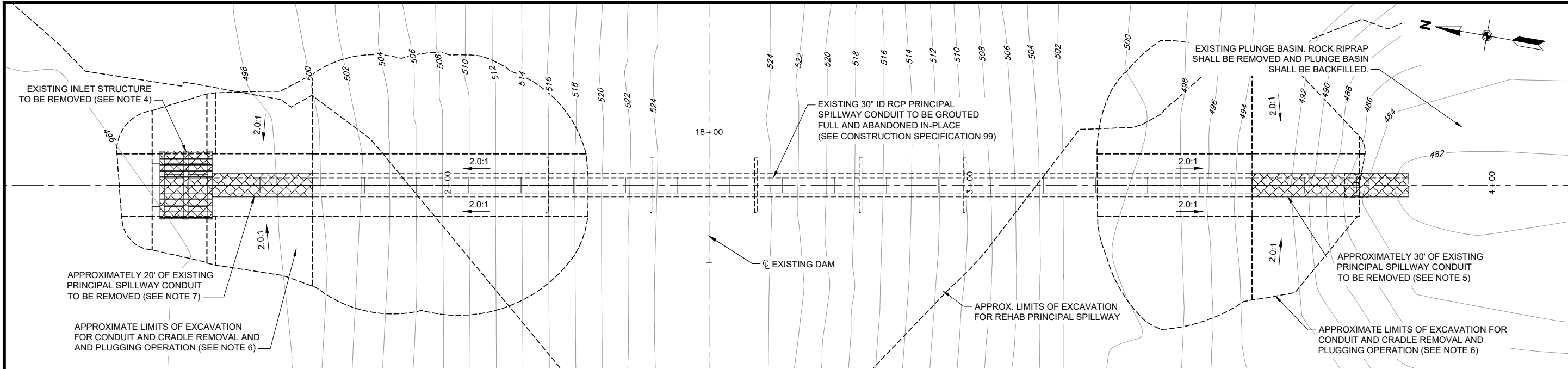
Natural Resources  
Conservation Service

DRAWING NO.  
TX-EN-0754

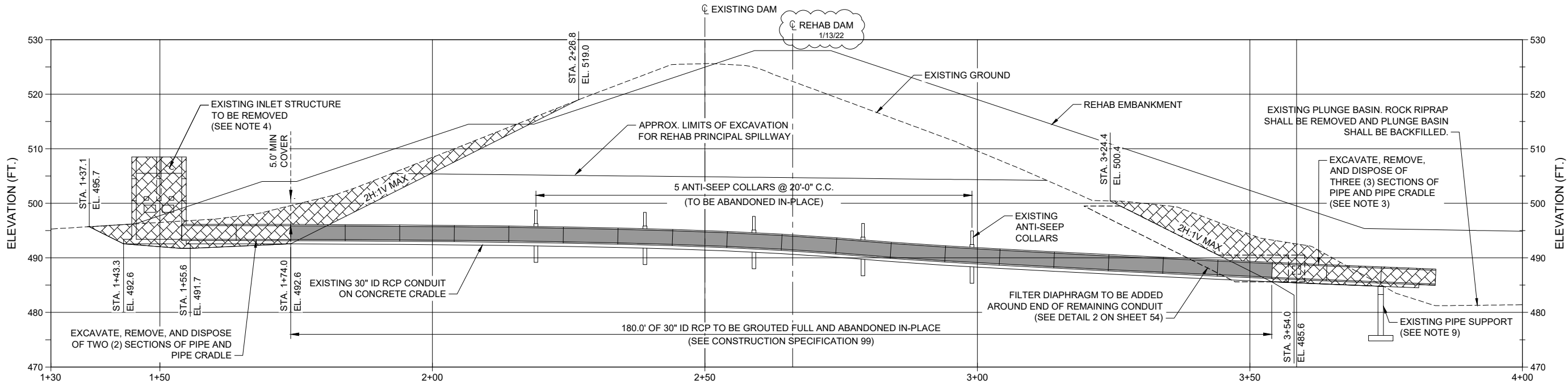
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83

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PLAN - EXISTING PRINCIPAL SPILLWAY DECOMMISSIONING

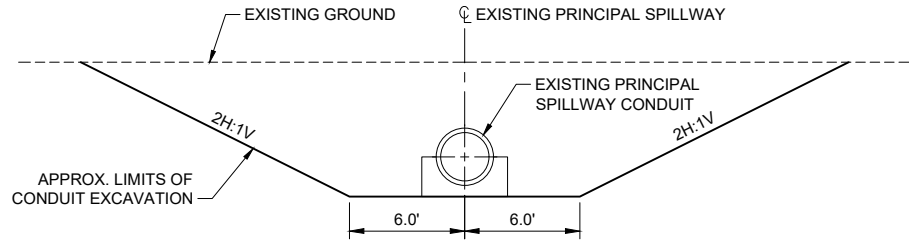


PROFILE - EXISTING PRINCIPAL SPILLWAY DECOMMISSIONING



NOTES:

- EXISTING CONDUIT MAY BE USED TO DEWATER THE RESERVOIR / SITE DURING CONSTRUCTION. SEE CONSTRUCTION SPECIFICATION 11.
- DRAWINGS OF EXISTING STRUCTURES WERE DEVELOPED FROM THE AS-BUILT DRAWINGS. AS A RESULT, THE DIMENSIONS OF EXISTING FACILITIES ARE APPROXIMATE. ACTUAL DIMENSIONS COULD VARY FROM DIMENSIONS AND THICKNESS SHOWN. CONTRACTOR SHALL FIELD VERIFY ACTUAL DIMENSIONS PRIOR TO THE START OF WORK. A COPY OF THE AS-BUILT DRAWINGS ARE AVAILABLE FROM THE CONTRACTING OFFICER.
- REINFORCEMENT AND EMBEDDED METALWORK NOT SHOWN. HOWEVER, AS-BUILT DRAWINGS INDICATE THAT ALL CONCRETE EXCEPT THE PIPE CRADLE IS REINFORCED. HOWEVER, THE AS-BUILT DRAWINGS ALSO INDICATE THAT THE LAST 17' OF PIPE CRADLE (DOWNSTREAM END) IS ALSO REINFORCED.
- REMOVE AND DISPOSE OF EXISTING INLET STRUCTURE, INCLUDING TRASH RACK, METAL GRADING, SLIDE GATE, AND ALL ASSOCIATED APPURTENANCES IN ACCORDANCE WITH THE REQUIREMENTS OF CONSTRUCTION SPECIFICATION 3.
- EXCAVATION FOR REMOVAL OF THE EXISTING PRINCIPAL SPILLWAY INLET STRUCTURE SHALL BE COORDINATED WITH CONSTRUCTION OF NEW STRUCTURES.
- THE LIMITS OF EXCAVATION SHOWN ARE APPROXIMATE. ALL EXCAVATION CUT SLOPES SHOWN ARE 2H:1V OR FLATTER AS DETERMINED BY CONTRACTOR. FINAL EXCAVATION LIMITS SHALL BE APPROVED BY THE ENGINEER.
- REMOVE AND DISPOSE OF EXISTING RCP CONDUIT AND CONCRETE CRADLE IN ACCORDANCE WITH CONSTRUCTION SPECIFICATION 3. THE BOTTOM OF THE EXISTING CONCRETE CRADLE SHALL BE THE LOWER LIMIT OF EXCAVATION ALONG THE LENGTH OF THE CONDUIT AT THE AREAS OF CONDUIT REMOVAL.
- GROUT EXISTING RCP FOLLOWING REMOVAL OF EXISTING INLET STRUCTURE AND REMOVAL OF SPECIFIED PORTIONS OF EXISTING RCP. GROUT RCP FROM DOWNSTREAM END OF RCP TO REMAIN IN-PLACE. SEE CONSTRUCTION SPECIFICATION 3 AND CONSTRUCTION SPECIFICATION 99 FOR REQUIREMENTS REGARDING REMOVAL OF EXISTING INLET STRUCTURE AND GROUTING OF EXISTING PRINCIPAL SPILLWAY CONDUIT RESPECTIVELY.
- EXISTING PIPE SUPPORT SHALL BE REMOVED TO THE EXTENT NECESSARY FOR THE CONTRACTOR TO PERFORM THE NECESSARY EARTHWORK




1

TYPICAL PRINCIPAL SPILLWAY EXCAVATION LIMITS

SCALE: NTS

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1/13/22	LRF	IFB AMD. #1



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DATE CHECKED: 1/12/2022

EXISTING PRINCIPAL SPILLWAY DECOMMISSIONING

FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION

PLUM CREEK WATERSHED

IN

CALDWELL COUNTY, TEXAS

United States  
Department of  
Agriculture

**USDA**

Natural Resources  
Conservation Service

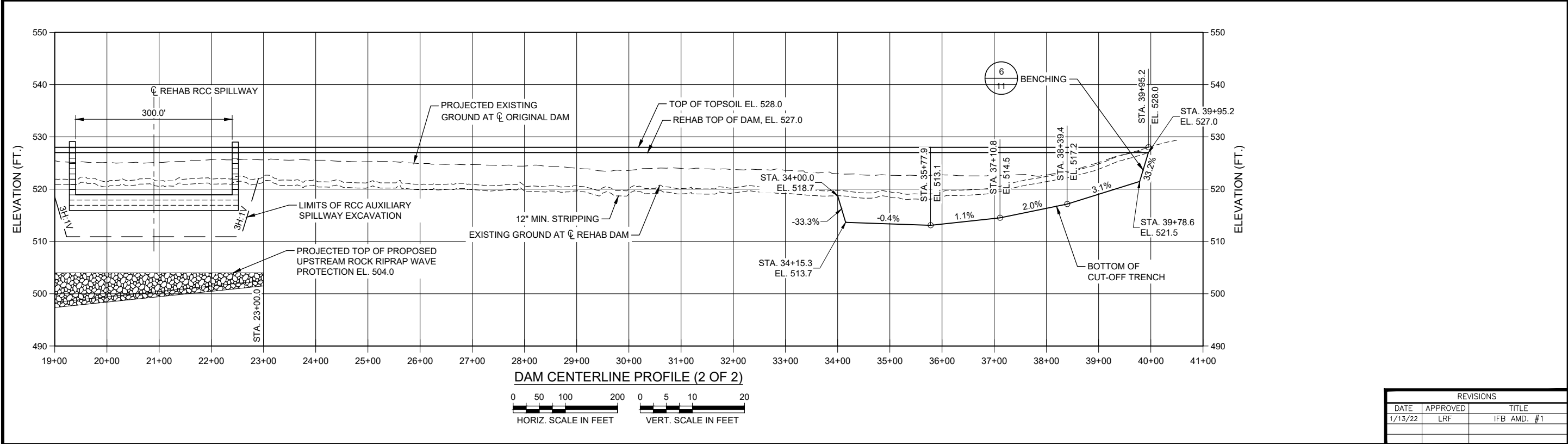
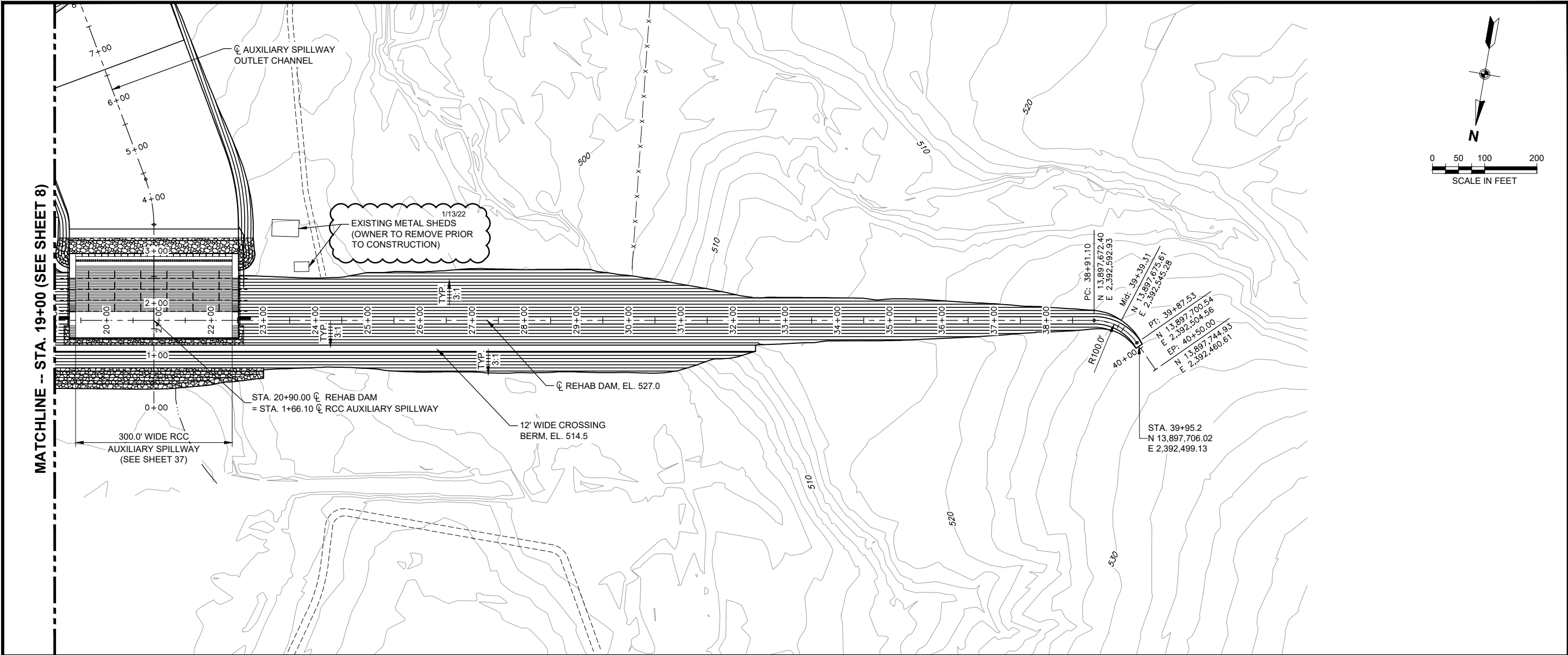
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DATE CHECKED: 1/12/2022

**EMBANKMENT PLAN & PROFILE (2 OF 2)**

FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION  
PLUM CREEK WATERSHED  
IN  
CALDWELL COUNTY, TEXAS



United States  
Department of  
Agriculture

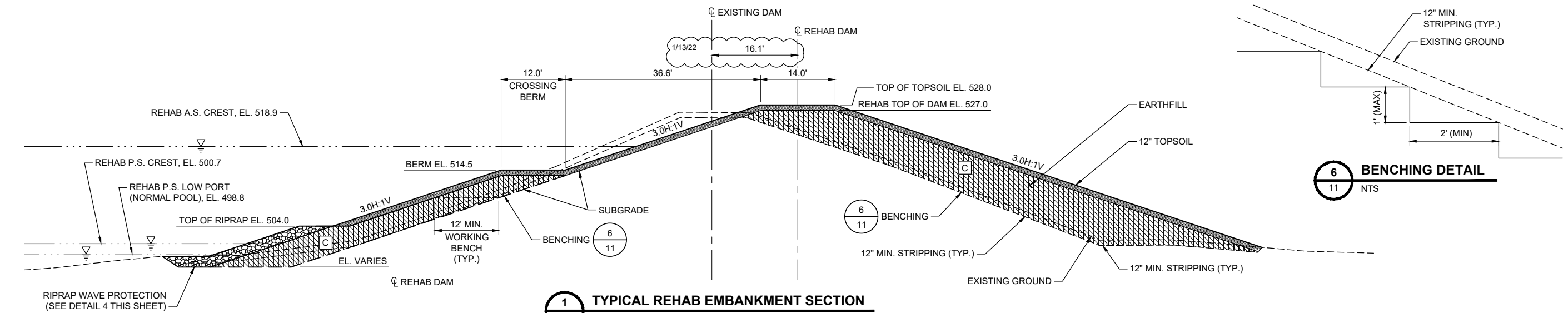
Natural Resources  
Conservation Service

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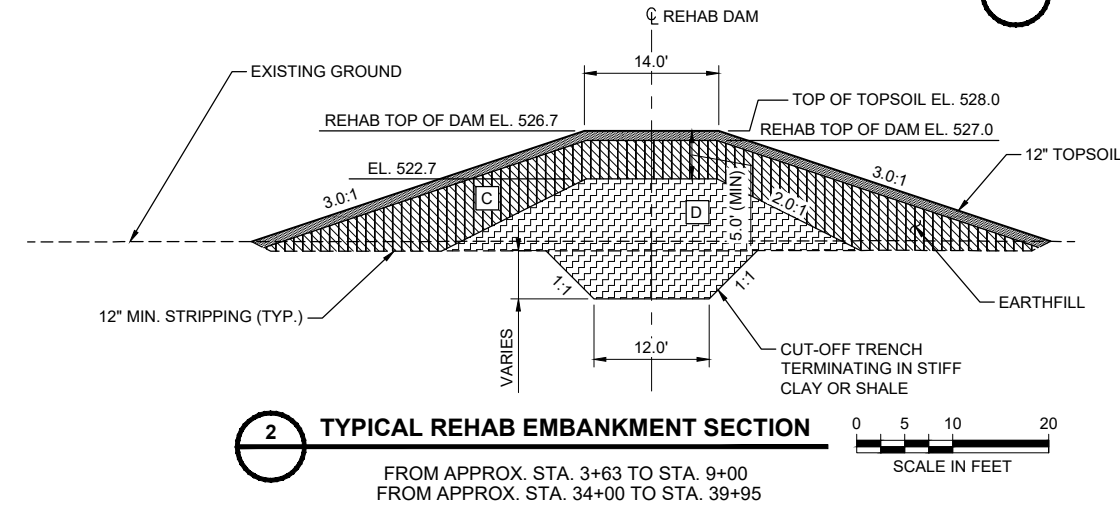
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OF  
83

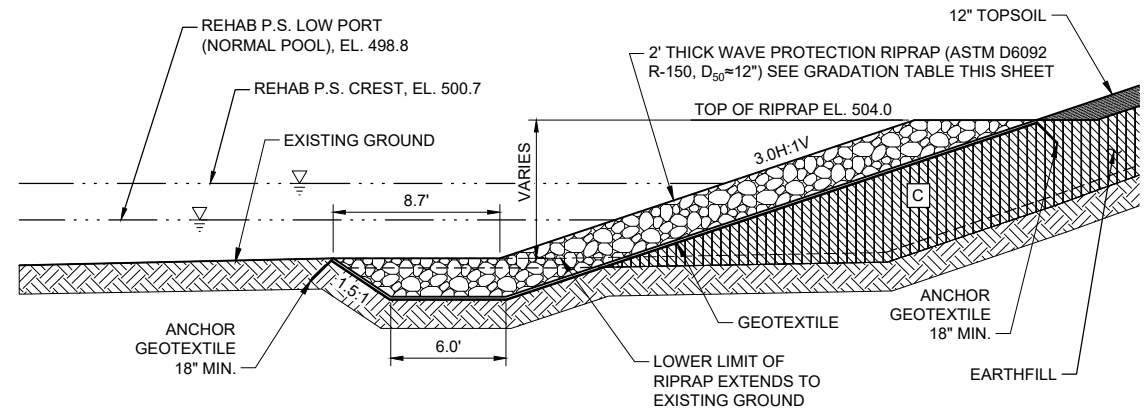
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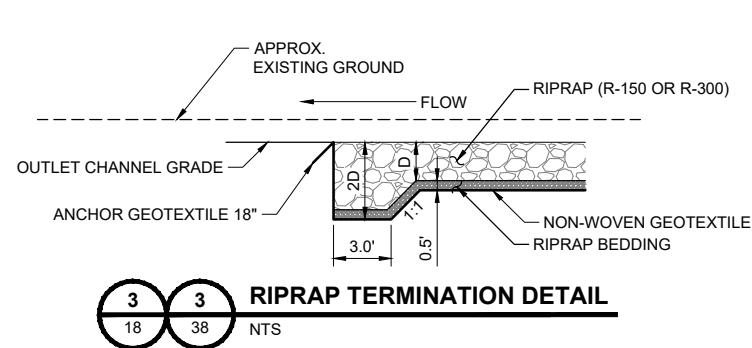
1 TYPICAL REHAB EMBANKMENT SECTION  
FROM APPROX. STA. 9+00 TO STA. 34+00  
SCALE IN FEET



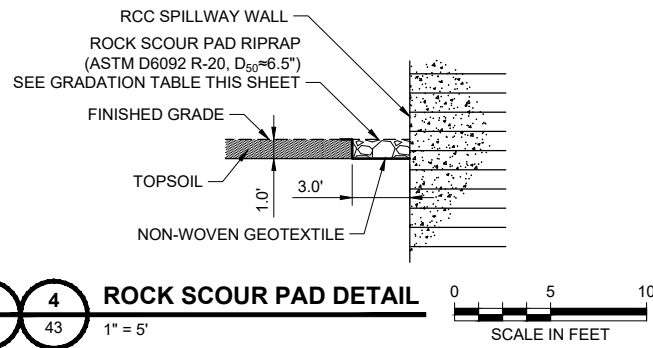
2 TYPICAL REHAB EMBANKMENT SECTION  
FROM APPROX. STA. 3+63 TO STA. 9+00  
FROM APPROX. STA. 34+00 TO STA. 39+95  
SCALE IN FEET



5 RIPRAP WAVE PROTECTION (STA. 12+50 TO STA. 23+00)  
SCALE: 1" = 5'  
SCALE IN FEET



3 RIPRAP TERMINATION DETAIL  
18 38 NTS



4 ROCK SCOUR PAD DETAIL  
## 43 1" = 5'  
SCALE IN FEET

#### RIPRAP NOTES:

- ROCK RIPRAP FOR THE WAVE BERM SHALL MEET THE GRADATION REQUIREMENTS OF ASTM D6092 FOR R-150 ROCK RIPRAP AS SHOWN IN THE TABLE ON THIS SHEET.
- ALL ROCK RIPRAP SHALL COMPLY WITH CONSTRUCTION SPECIFICATION 61, AND MATERIAL SPECIFICATION 523.
- SPALLS AND ROCK DUST THAT PASS A 3" SIEVE SHALL CONSIST OF LESS THAN 5 PERCENT BY WEIGHT.
- ROCK PLACED AGAINST CONCRETE WORKS SHALL BE PLACED CAREFULLY TO AVOID DAMAGE.

ASTM D6092 R-300 RIPRAP GRADATION		
SIZE (POUNDS)	% LIGHTER	
700	100	
300	50 - 100	
150	15 - 50	
45	0 - 15	

ASTM D6092 R-150 RIPRAP GRADATION		
SIZE (POUNDS)	% LIGHTER	
300	100	
150	50 - 100	
60	15 - 50	
20	0 - 15	

ASTM D6092 R-20 RIPRAP GRADATION		
SIZE (POUNDS)	% LIGHTER	
45	100	
20	50 - 100	
10	15 - 50	
2	0 - 15	

RIPRAP BEDDING FOR R-150 RIPRAP (C-33 No. 2)		
PARTICLE SIZE (INCHES)	% SMALLER	
3	100	
2.5	90 - 100	
2	35 - 70	
1.5	0 - 15	
0.75	0 - 5	

RIPRAP BEDDING FOR R-300 RIPRAP (C-33 No. 1)		
PARTICLE SIZE (INCHES)	% SMALLER	
4	100	
3.5	90 - 100	
2.5	25 - 60	
1.5	0 - 15	
0.75	0 - 5	

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TYPICAL EMBANKMENT SECTIONS AND NOTES  
FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION  
PLUM CREEK WATERSHED  
IN CALDWELL COUNTY, TEXAS

United States  
Department of  
Agriculture  
USDA  
Natural Resources  
Conservation Service

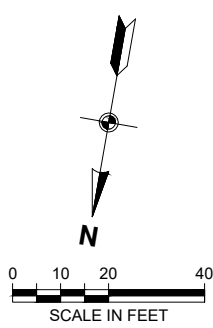
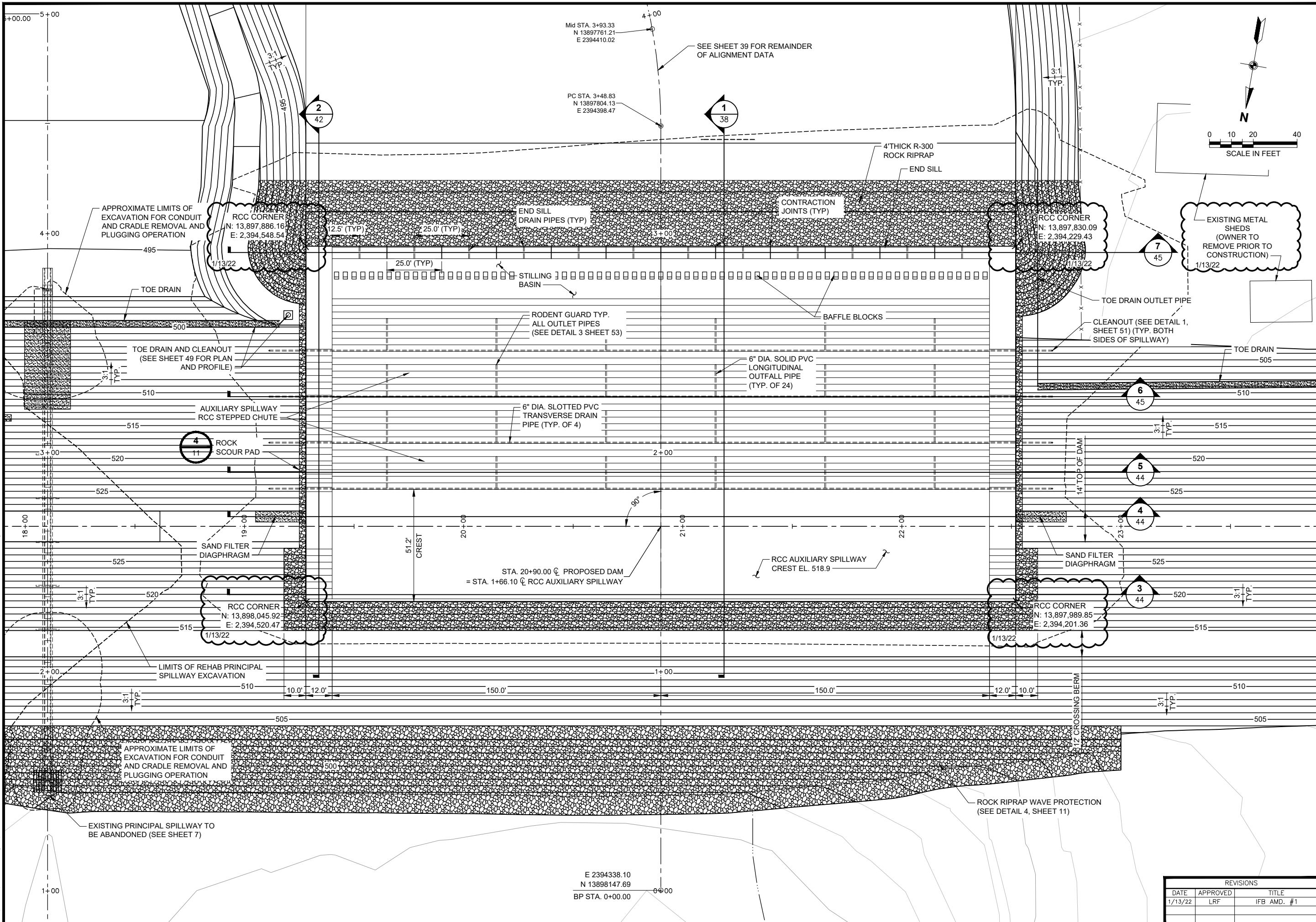
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AUXILIARY SPILLWAY PLAN  
FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION  
PLUM CREEK WATERSHED  
IN  
CALDWELL COUNTY, TEXAS

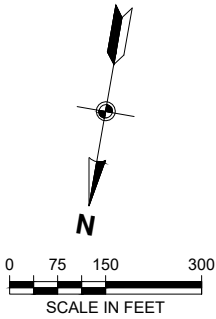
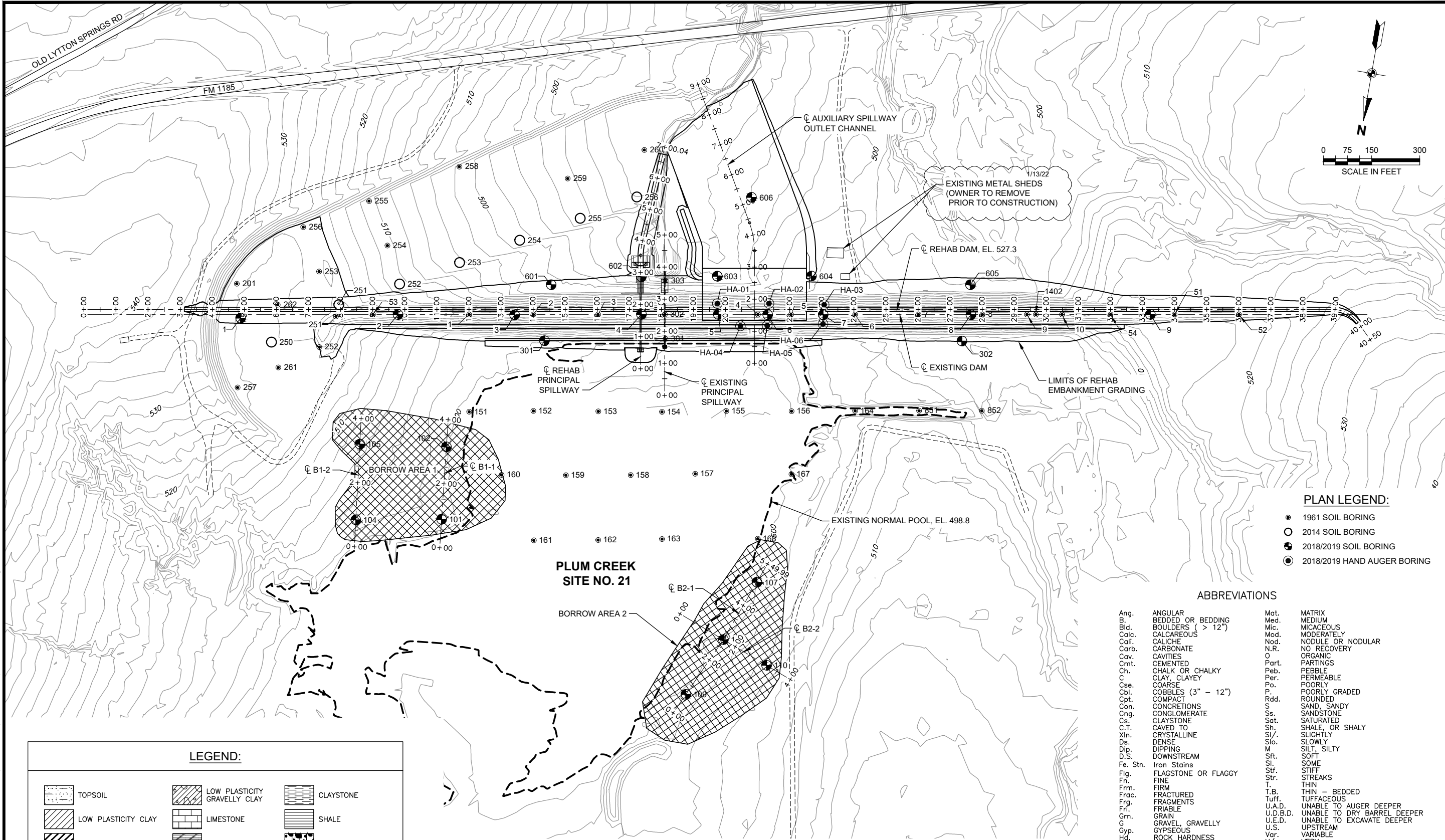
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- PLAN LEGEND:**
- 1961 SOIL BORING
  - 2014 SOIL BORING
  - 2018/2019 SOIL BORING
  - 2018/2019 HAND AUGER BORING

**ABBREVIATIONS**

- |          |                     |          |                             |
|----------|---------------------|----------|-----------------------------|
| Ang.     | ANGULAR             | Mat.     | MATRIX                      |
| B.       | BEDDED OR BEDDING   | Med.     | MEDIUM                      |
| Bld.     | BOULDERS (> 12")    | Mic.     | MICACEOUS                   |
| Calc.    | CALCAREOUS          | Mod.     | MODERATELY                  |
| Col.     | COLLUSION           | Nod.     | NODULE OR NODULAR           |
| Carb.    | CARBONATE           | N.R.     | NO RECOVERY                 |
| Cav.     | CAVITIES            | O        | ORGANIC                     |
| Cmt.     | CEMENTED            | Part.    | PARTINGS                    |
| Ch.      | CHALK OR CHALKY     | Peb.     | PEBBLE                      |
| C        | CLAY, CLAYEY        | Per.     | PERMEABLE                   |
| Cse.     | COARSE              | Po.      | POORLY                      |
| Cbl.     | COBBLES (3" - 12")  | P        | POORLY GRADED               |
| Cpt.     | COMPACT             | Rdd.     | ROUNDED                     |
| Con.     | CONCRECTIONS        | S        | SAND, SANDY                 |
| Cng.     | CONGLOMERATE        | Ss.      | SANDSTONE                   |
| Cs.      | CLAYSTONE           | Sat.     | SATURATED                   |
| C.T.     | CAVED TO            | Sh.      | SHALE, OR SHALY             |
| Xln.     | CRYSTALLINE         | Sl.      | SILT, SILTY                 |
| De.      | DENSE               | Stf.     | SOME                        |
| Dip.     | DIPPING             | Str.     | STIFF                       |
| D.S.     | DOWNSTREAM          | T        | STREAKS                     |
| Fe. Stn. | Iron Stains         | T.B.     | THIN - BEDDED               |
| Fig.     | FLAGSTONE OR FLAGGY | Tuff.    | TUFFACEOUS                  |
| Fn.      | FINE                | U.A.D.   | UNABLE TO AUGER DEEPER      |
| Frm.     | FIRM                | U.D.B.D. | UNABLE TO DRY BARREL DEEPER |
| Frac.    | FRACTURED           | U.E.D.   | UNABLE TO EXCAVATE DEEPER   |
| Frg.     | FRAGMENTS           | Var.     | VARIABLE                    |
| Frl.     | FRIBLE              | V.       | VERY                        |
| Grr.     | GRAIN               | Vug.     | VUGULAR                     |
| G        | GRAVEL, GRAVELLY    | Wtr.     | WATER LEVEL AS ENCOUNTERED  |
| Gyp.     | GYPSEOUS            | W        | WELL GRADED                 |
| Hd.      | ROCK HARDNESS       | W.       | WEATHERED                   |
| H.       | HIGHLY              | Wd.      | (DATE) STATIC WATER LEVEL   |
| Int.     | INTERBEDDED         |          |                             |
| Lam.     | LAMINATED           |          |                             |
| Lay.     | LAYER OR LAYERS     |          |                             |
| Len.     | LENS OR LENSES      |          |                             |
| Lig.     | LIGNITE             |          |                             |
| Ls.      | LIMESTONE           |          |                             |
| Lse.     | LOOSE               |          |                             |
| Mas.     | MARL OR MARLY       |          |                             |
|          | MASSIVE             |          |                             |

- NOTES:**
1. THE SOIL CLASSIFICATIONS SHOWN ON THIS SHEET ARE FIELD CLASSIFICATIONS. THEY MAY NOT IN ALL CASES AGREE WITH THE CLASSIFICATIONS MADE BY THE SOIL MECHANICS LABORATORY. REFER TO THE LABORATORY REPORT FOR FURTHER INFORMATION. A COPY IS AVAILABLE ONLINE AT [WWW.PCCD.ORG](http://WWW.PCCD.ORG) JOBS BID TAB ALONG WITH SITE 21 REHABILITATION BID DOCUMENTS.
  2. ADDITIONAL SOIL MECHANICS AND FOUNDATION INVESTIGATION DATA WILL BE AVAILABLE ONLINE AT [WWW.PCCD.ORG](http://WWW.PCCD.ORG) JOBS BID TAB ALONG WITH SITE 21 REHABILITATION BID DOCUMENTS.

LEGEND:		
	TOPSOIL	
	LOW PLASTICITY CLAY	
	HIGH PLASTICITY CLAY	
	LOW PLASTICITY SANDY CLAY	
	CLAYEY SAND	
N = SPT BLOWS PER 6" INCREMENT (N-VALUE, BPF)		
P = POCKET PENETROMETER (TSF)		
RC = CORE RECOVERY (%) - RQD (%)		
LL = LIQUID LIMIT		
PI = PLASTICITY INDEX		
N200 = FINES CONTENT		
U = UNCONFINED COMPRESSIVE STRENGTH		
	WATER LEVEL AT TIME DRILLING, OR AS SHOWN	
	WATER LEVEL AT END OF DRILLING, OR AS SHOWN	
	WATER LEVEL AFTER 24 HOURS, OR AS SHOWN	

TEST HOLE NUMBERING SYSTEM					
	COMBINATION RIG	POWER AUGER	HAND BORINGS	TRENCH OR PIT EXCAVATIONS	NATURAL OUTCROPS, STREAMBANKS, AND GULLIES
CENTERLINE OF DAM	1-49	51-99	1001-1099	2001-2099	3001-3099
BORROW AREA	101-149	151-199	1101-1199	2101-2199	3101-3199
EMERGENCY SPILLWAY	201-249	251-299	1201-1299	2201-2299	3201-3299
PRINCIPAL SPILLWAY	301-349	351-399	1301-1399	2301-2399	3301-3399
STREAM CHANNELS	401-449	451-499	1401-1499	2401-2499	3401-3499
EXPLORATORY BORINGS	501-549	551-599	1501-1599		
FOUNDATION DRAIN	601-649	651-699	1601-1699	2601-2699	3601-3699
MISCELLANEOUS	701-749	751-799	1701-1799	2701-2799	3701-3799

CLASSIFICATION	RANGE OF GRAIN SIZE U.S. standard sieve size
BOULDERS	ABOVE 12"
COBBLES	12" TO 3"
GRAVEL Course Fine	3" to No. 4 3" to 3/4" 3/4" to No. 4
SAND Coarse Medium Fine	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200
SILT & CLAY	Below No. 200

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PLAN OF GEOLOGIC INVESTIGATIONS  
FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION  
PLUM CREEK WATERSHED  
IN  
CALDWELL COUNTY, TEXAS

United States  
Department of  
Agriculture

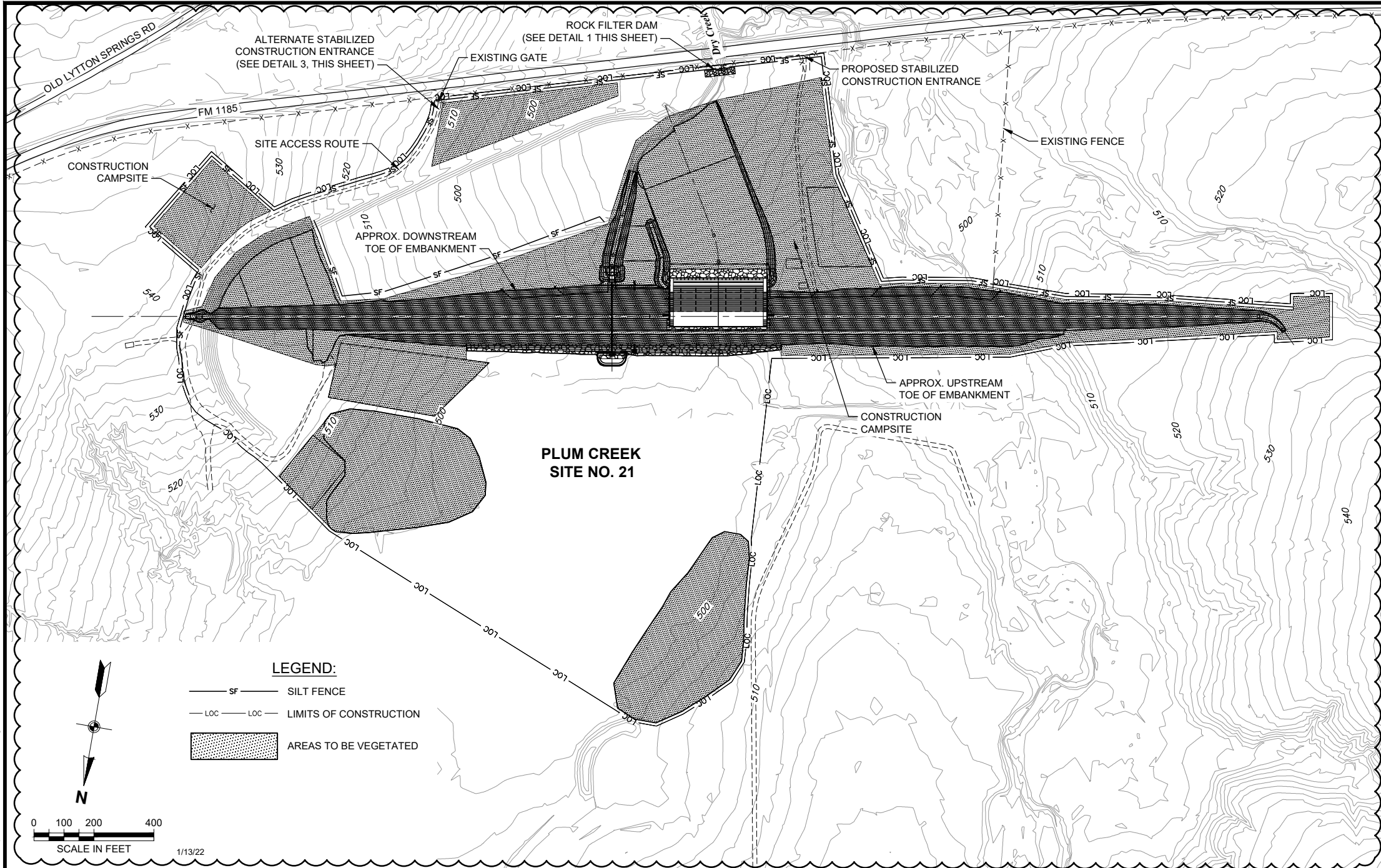
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**LEGEND:**

- SF — SILT FENCE  
LOC — LOC — LIMITS OF CONSTRUCTION  
Areas to be Vegetated

**GENERAL NOTES:**

- CONTRACTOR SHALL ADD LOCATION(S) OF SEDIMENT FENCE TO PLAN AS REQUIRED. APPROXIMATELY 6,273 FEET OF SEDIMENT FENCE IS CURRENTLY SHOWN.
- CONTRACTOR SHALL INDICATE ON THE PLAN ALL PRODUCT SPECIFIC STORAGE AREAS AS DESCRIBED IN THE SWP3.  
  
THESE AREAS SHALL INCLUDE, BUT ARE NOT LIMITED TO:  
— EQUIPMENT STORAGE  
— FUEL STORAGE  
— HAZARDOUS MATERIAL STORAGE  
— CONCRETE WASHOUT PITS
- A DRAWING SHOWING THE LOCATIONS OF THE DRAINAGE WORKS AND ALL POLLUTION CONTROL MEASURES SHALL BE KEPT IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN.
- IN ADDITION TO THE EMBANKMENT AND OUTLET CHANNEL EARTHWORK AREAS, DISTURBED AREAS WITHIN THE CAMPSITE, STOCKPILE, AND ACCESS ROAD AREAS SHALL HAVE PERMANENT VEGETATION ESTABLISHED.

**STABILIZED CONSTRUCTION ENTRANCE:**

- A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCES WITH CONSTRUCTION SPECIFICATION 8 AND 9 AND TxDOT SPECIFICATION 506. SEE DETAIL 3 THIS SHEET.

- THE STABILIZED CONSTRUCTION ENTRANCE SHALL CONSIST OF A MINIMUM OF 8" THICKNESS OF CRUSHED ROCK PREDOMINANTLY 4" TO 8" IN SIZE. THE AGGREGATES SHALL BE CLEAN, HARD, DURABLE, AND FREE FROM ADHERENT COATINGS SUCH AS SALT, ALKALI, DIRT, CLAY, LOAM, SHALE, SOFT OR FLAKY MATERIALS, AND ORGANIC OR INJURIOUS MATTER. PROVIDE A LAYER OF GEOTEXTILE BENEATH THE CRUSHED ROCK.

- ACTUAL SIZES, DIMENSIONS, QUANTITIES, ALIGNMENT AND EXTENTS SHALL BE AS DETERMINED IN THE FIELD BY THE ENGINEER. 1/13/22

**SEDIMENT FILTER:**

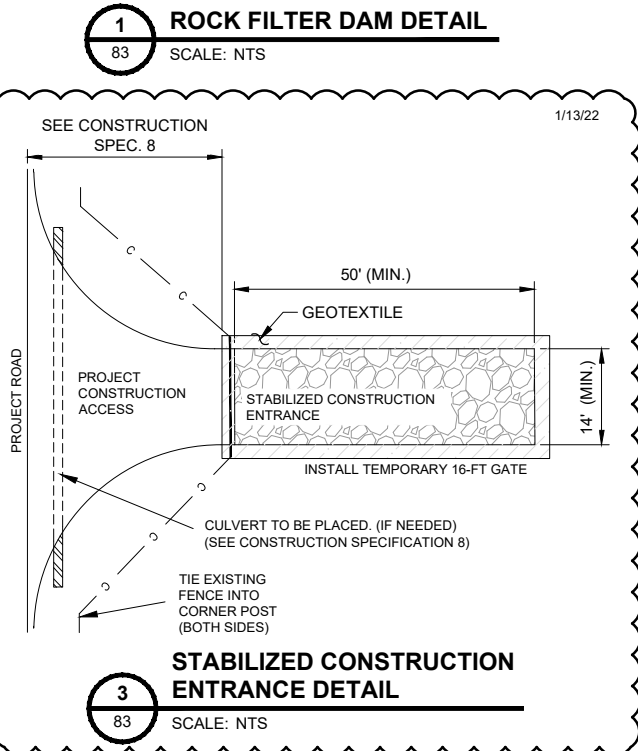
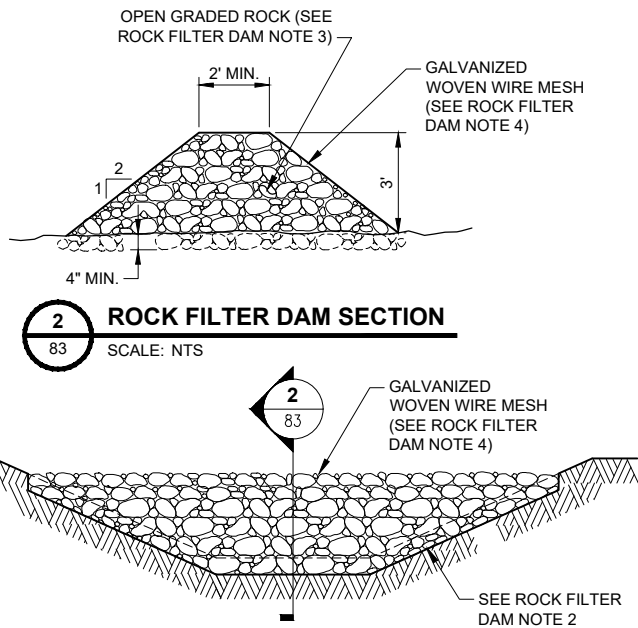
- SEDIMENT FILTER SHALL BE FABRIC (GEOTEXTILE) SILT FENCES AS DETAILED IN FIGURE 1 OF ASTM D 6462-19, STANDARD PRACTICE FOR SILT FENCE INSTALLATION AND MAINTENANCE.
- SEDIMENT FILTER SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS.  
(A) ALONG THE DOWNSTREAM BOUNDARY OF ANY AREA WHICH IS STRIPPED OF EXISTING VEGETATION AND/OR SURFACE MATERIAL DURING ANY PHASE OF CONSTRUCTION ACTIVITY.  
(B) ALONG THE DOWNSTREAM BOUNDARY OF ANY SOIL MATERIAL WHICH IS STOCKPILED DURING ANY PHASE OF CONSTRUCTION ACTIVITY FOR MORE THAN 14 DAYS.  
(C) OTHER AREAS WHICH ARE DETERMINED BY THE CONTRACTING OFFICER TO BE POTENTIAL SILT SOURCES.
- SEDIMENT FILTER SHALL NOT BE USED WHERE CONCENTRATED FLOWS WHICH

EXCESS ONE CFS ARE EXPECTED, OR WHERE DRAINAGE AREA EXCESS TWO ACRES.

- THE HEIGHT OF SILT FENCES SHALL NOT EXCEED 48 INCHES (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE).
- SPLICES IN THE FILTER FABRIC ARE NOT RECOMMENDED. WHEN JOINTS ARE UNAVOIDABLE, FABRIC SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH LAP.
- POST SHALL BE SPACED A MAXIMUM OF 6 FEET APART AT THE FENCE LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES).
- THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED BY USING EXTRA STRENGTH FILTER FABRIC AND POST SPACED AT 4 FEET. IN THIS CASE, THE FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POST.

**MAINTENANCE:**

- SEDIMENT FILTER SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SILT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE SEDIMENT FILTER.
- SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE



PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED PROMPTLY UNLESS INSPECTION REPORTS INDICATE THAT THE REPLACEMENT IS UNNECESSARY.

**ROCK FILTER DAM:**

- FINAL LOCATION OF THE FILTER DAM SHALL BE AS DIRECTED BY THE ENGINEER.
- FILTER DAMS SHOULD BE EMBEDDED A MINIMUM OF 4" INTO EXISTING GROUND.
- USE ONLY OPEN GRADED ROCK THE SAME SIZE AS THE ROCK USED FOR THE STABILIZED CONSTRUCTION ENTRANCE.
- ROCK FILTER DAM SHALL BE SECURED WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1" DIAMETER HEXAGONAL OPENINGS. THE AGGREGATE SHALL BE PLACED ON THE MESH TO THE HEIGHT & SLOPES SPECIFIED. THE MESH SHALL BE FOLDED AT THE UPSTREAM SIDE OVER THE AGGREGATE AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS. FOR IN STREAM USE, THE MESH SHOULD BE SECURED OR STAKED TO THE STREAM BED PRIOR TO AGGREGATE PLACEMENT.
- THE GUIDELINES SHOWN HEREON MAY BE MODIFIED BY THE ENGINEER.
- WHEN THE SITE IS COMPLETELY STABILIZED, THE DAM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

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STORM WATER POLLUTION PREVENTION PLAN

FLOODWATER RETARDING STRUCTURE SITE NO. 21 REHABILITATION  
PLUM CREEK WATERSHED  
IN  
CALDWELL COUNTY, TEXAS

United States  
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DRAWING NO.  
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