

ATTACHMENT B

**HUFF'S CORNER LEVEE MAINTENANCE PROJECT
TECHNICAL PROVISIONS**

PROJECT MANUAL

Volume III: Technical Provisions

Huff's Corner Levee Maintenance Project



County of Yolo
Department of Community Services

June 17, 2024*

**Updated Per Addendum #1*

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1. GENERAL

1.1 Scope of Work

The Contractor will be required to perform the site preparation, transportation, excavation, placement, moisture conditioning and control, and compaction of fill and on-site material to the lines, grades, and dimensions shown on the drawings or established by the District Engineer in the field. It is anticipated that the proposed work can be accomplished by conventional earth-moving equipment. During the course of work, it may be necessary for the Project Engineer to adjust the lines, grades, and dimensions from those shown on the drawings.

1.2 Underground Utilities

The Contractor is responsible to locate all underground utilities within the project site and any internal haul routes and shall take necessary precautions to avoid damaging the buried utilities during construction. The Contractor shall be responsible for contacting Underground Services Alert and the property owners to determine the exact location and depth of buried utilities. The approximate location of a buried PG&E gas line running through the levee and passing beneath the channel is shown on the Plans for awareness. Relocation of PG&E facilities and infrastructure shall be completed by PG&E and is outside the contract scope.

1.3 Property Damage

In the event damage occurs to any property or to any part of the work being performed due to excavation operations, material hauling, or negligence of the Contractor, the Contractor will be held responsible for damages.

1.4 Permits

The Contractor is responsible to obtain all grading permits, as well as any encroachment permits for any work within the public right-of-way.

The Project Engineer shall provide the Contractor with permits from California Department of Fish and Wildlife (CDFW), Central Valley Flood Protection Board (CVFPB), United States Army Corps of Engineers (USACE), and the Central Valley Regional Water Quality Control Board (CVRWQCB) prior to the start of construction.

All conditions from the project permits shall be satisfied.

1.5 Project Property Upkeep

1.5.1 Leaks and Spills

Motorized equipment and vehicles shall be checked and maintained regularly to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat. Onsite storage, maintenance and/or refueling of vehicles or equipment shall be restricted to designated areas

located far enough away from drainage courses to prevent any spills from contaminating aquatic or riparian habitat, either directly or via stormwater runoff. If equipment maintenance or refueling must occur near sensitive habitat, a secondary containment structure shall be used. Drip pans or absorbent materials shall be placed under vehicles and equipment when not in use.

Stationary equipment such as motors, pumps, generators, and welders shall be positioned over drip pans and/or other secondary containment structures. The Contractor shall ensure that secondary containment is sufficient to handle any potential spill or leak.

Spills resulting from hauling operations shall be removed immediately by the Contractor at no additional cost to the Project. All ditches shall be kept clean and free from obstructions. Any deviation from this practice shall have prior approval from the Project Engineer.

1.5.2 Vehicle Parking

Vehicles may enter and exit the work area as necessary for project activities, but may not be parked overnight within ten (10) feet of the drip line of any trees; nor shall vehicles be parked where mechanical fluid leaks may potentially pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, or other sensitive habitat.

1.5.3 Building Material Storage

Project building material and/or construction equipment shall not be placed where materials could pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat, or where they may cover aquatic or riparian vegetation.

1.5.4 Equipment Maintenance and Fueling

No equipment maintenance or fueling shall be done where petroleum products or other pollutants from the equipment may pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, or other sensitive habitat.

1.5.5 Staging and Storage Areas

Staging and storage areas for equipment, materials, fuels, lubricants, and solvents shall be located more than 150 feet from waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat, unless otherwise approved by CDFW in writing. All equipment and fuel stored on site shall be properly contained and protected from rain.

1.5.6 Completion of Work

The Contractor, upon completion of work, shall restore all Project access, private haul and levee roads used during the project to a condition equal to or better than the condition that existed prior to the commencement of work.

1.6 Project Meetings

Project meetings will be held as often as is deemed necessary by Yolo County or the Project Engineer. Representatives of the Contractor shall attend. The purpose of the meetings will be to discuss compliance with the Contract plans and specifications, progress, coordination, submittals, project safety, and job-related problems and changes.

1.7 OSHA Regulations

It is the responsibility of the Contractor to perform all work in accordance with applicable OSHA regulations. The Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this Project, including the safety of all persons property; that this requirement shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify and hold the Project and the Engineer harmless from any and all liability, real or alleged, in connected with the performance for work.

1.8 Mitigation Measures

The Contractor shall coordinate with the County to ensure implementation of all Mitigation Measures shown below. These Mitigation Measures are included in the CEQA Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program. Where the Mitigation Measures listed below differ from the CEQA Mitigation Native Declaration, the table below takes precedence.

Table 1: Mitigation Measures

Number	Title	Mitigation Measure Description
BIO-1	Species Impacts	Yolo County shall implement the relevant provisions of the Yolo HCP/NCCP and its incorporation of the Cache Creek Resources Management Plan (Section 6.5.8.1.1) to mitigate impacts on Covered Species, including valley elderberry longhorn beetle, Swainson's hawk, and white-tailed kite. The Project is exempt from HCP/NCCP land cover fees and from the compensatory mitigation described in AMM12 of the HCP/NCCP (Minimize Take and Adverse Effects on Habitat of Valley Elderberry Longhorn Beetle),but will benefit from the ongoing implementation of the Cache Creek Management Plan (CCRMP), which is designed to protect and enhance habitat for these, and other, special-status species. AMMs that address disturbances to covered species, such as AMM 16, will apply to the Project.
BIO-2	Swainson's Hawk and White-Tailed Kite Habitat Impacts	Yolo County shall implement Yolo HCP/NCCP AMM16 (Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite).

BIO-3	Preconstruction Surveys	Concurrent with implementation of AMM16, Yolo County will conduct preconstruction surveys for northern harrier within the Project area and implement similar avoidance protocols or coordination with CDFW in the event active nests are found.
BIO-4	Riparian or Covered Species Habitat Impacts	Yolo County shall implement relevant provisions of the Yolo HCP/NCCP to avoid and minimize potential impacts to covered species and other wildlife, including AMMs 3, 4, 5, 6, 7, 8, and 18. To address mitigation for impacts on riparian habitat and other sensitive natural communities that may provide habitat for covered species, the Yolo HCP/NCCP incorporates the Cache Creek Resources Management Plan (Section 6.5.8.1.1). The Project is exempt from HCP/NCCP land cover fees and from the compensatory mitigation described in AMM12 of the HCP/NCCP (Minimize Take and Adverse Effects on Habitat of Valley Elderberry Longhorn Beetle), but will benefit from the ongoing implementation of the CCRMP, which is designed to protect and enhance riparian habitat and other sensitive natural communities, and provide habitat for covered species, including valley elderberry longhorn beetle.
BIO-5	Federally Protected Wetlands	Yolo County shall implement Yolo HCP/NCCP AMM10 (Avoid and Minimize Effects on Wetlands and Waters), which states the following: “Project proponents will comply with stormwater management plans that regulate development as part of compliance with regulations under National Pollutant Discharge Elimination System (NPDES) permit requirements. Covered activities that result in any fill of waters or wetlands will also comply with requirements under Section 404 of the Clean Water Act, State Water Resources Control Board (State Board), Regional Board, and Fish and Game Code Section 1602 regulations. Other than requirements for resource protection buffers, minimizing project footprint, and species-specific measures for wetland-dependent covered species, the Yolo HCP/NCCP does not include specific best management practices for protecting wetlands and waters because they may conflict with measures required by the U.S. Army Corps of Engineers, State Board, Regional Board, and CDFW.”
BIO-6	Work Area	Yolo County shall implement Yolo HCP/NCCP AMM3 (Confine and Delineate Work Area), which states the following: “Where natural communities and covered species habitat are present, workers will confine land clearing to the minimum area necessary to facilitate construction activities. Workers will restrict movement of heavy equipment to and from the project site to established roadways to minimize natural community and covered species habitat disturbance. The project proponent will clearly identify boundaries of work areas using temporary fencing or equivalent and will identify areas designated as environmentally sensitive. All construction vehicles, other equipment, and personnel will avoid these designated areas.”
BIO-7	Trench and Hole Impacts	Yolo County shall implement Yolo HCP/NCP AMM4 (Cover Trenches and Holes during Construction and Maintenance), which states the following: “To prevent injury and mortality of giant garter snake, western pond turtle, and California tiger salamander, workers will cover open trenches and holes associated with implementation of covered activities that affect habitat for these species or design the trenches and holes with escape ramps that can be used during non-working hours. The construction contractor will inspect open trenches and holes prior to filling and contact

		a qualified biologist to remove or release any trapped wildlife found in the trenches or holes.”
BIO-8	Dust Control	Yolo County shall implement Yolo HCP/NCCP AMM5 (Control Fugitive Dust), which states the following: “Workers will minimize the spread of dust from work sites to natural communities or covered species habitats on adjacent lands.”
BIO-9	Worker Training	Yolo County shall implement Yolo HCP/NCCP AMM6 (Conduct Worker Training).
BIO-10	Nighttime Lighting	Yolo County shall implement Yolo HCP/NCCP AMM7 (Control Nighttime Lighting of Project Construction Sites), which states the following: “Workers will direct all lights for nighttime lighting of project construction sites into the project construction area and minimize the lighting of natural habitat areas adjacent to the project construction area.”
BIO-11	Construction Staging and Temporary Work Areas	Yolo County shall implement Yolo HCP/NCCP AMM8 (Avoid and Minimize Effects of Construction Staging Areas and Temporary Work Area), which states the following: “Project proponents should locate construction staging and other temporary work areas for covered activities in areas that will ultimately be a part of the permanent project development footprint. If construction staging and other temporary work areas must be located outside of permanent project footprints, they will be located either in areas that do not support habitat for covered species, or are easily restored to prior or improved ecological functions (e.g., grassland and agricultural land). Construction staging and other temporary work areas located outside of project footprints will be sited in areas that avoid adverse effects on the following. <ul style="list-style-type: none"> • Serpentine, valley oak woodland, alkali prairie, vernal pool complex, valley foothill riparian, and fresh emergent wetland land cover types. • Occupied western burrowing owl burrows. • Nest sites for covered bird species and all raptors, including noncovered raptors, during the breeding season. Project proponents will follow specific AMMs for sensitive natural communities and covered species in temporary staging and work areas. For establishment of temporary work areas outside of the project footprint, project proponents will conduct surveys to determine if any of the biological resources listed above are present. Within 1 year following removal of land cover, project proponents will restore temporary work and staging areas to a condition equal to or greater than the covered species habitat function of the affected habitat. Restoration of vegetation in temporary work and staging areas will use clean, native seed mixes approved by the Conservancy that are free of noxious plant species seeds.”
CUL-1	Contractor Awareness Training	The County shall retain a qualified professional archaeologist to disseminate a contractor awareness training program to all construction supervisors prior to the start of construction. The program will provide

		<p>information about requirements for tribal monitoring (see TCR-1) and archaeological monitoring (see CUL-2), notification procedures when potential archaeological or tribal material is discovered (as specified in CUL-3), procedures for communication between construction personnel and monitoring personnel, and information about other treatment or issues that may arise if cultural resources (including human remains) are discovered during Project construction. Subsequent training of construction personnel will be provided as needed by the tribal monitor.</p>
CUL-2	Archaeological Monitoring	<p>All vegetation removal, soil excavation, and activity that has the potential to disturb more than six inches of original ground should be monitored by a qualified professional archaeologist working under the direction of a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards for archaeology.</p> <p>The monitor must be given a minimum of 48 hours' notice of the opportunity to be present during these activities, to observe work activities, and to assist in ensuring that any archaeological resources, if present, are addressed in accordance with applicable law upon discovery. The monitor must be given a reasonable opportunity to inspect soil and other material as work proceeds to assist in determining if resources are present. If potential resources are discovered, a reasonable work pause or redirection of work by the contractor may be requested until the procedures in CUL-3 are implemented. Monitoring will not occur for equipment set-up or tear-down that does not disturb the ground surface more than six inches in depth; hydroseeding; paving; placement of imported fill/gravel/rock; restoration; or backfilling of previously excavated areas that were already monitored.</p>
CUL-3	Post-Review Discoveries	<p>If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for pre-contact and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:</p> <ul style="list-style-type: none"> • If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required. • If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, they shall immediately notify the USACE and County. The agencies shall consult on a finding of eligibility, and implement appropriate treatment measures, if the find is determined to be an Historical Resource under CEQA or a historic property under Section 106 NHPA. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not an Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction. • If the find includes human remains, or remains that are potentially human, the Contractor shall ensure reasonable

		<p>protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Yolo County Coroner (as per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no- work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.</p>
TCR-1	Tribal Monitoring	<p>All vegetation removal, soil excavation, and any activity that has the potential to disturb more than six inches of original ground should be monitored by a qualified tribal monitor representing a consulting tribe. The monitor must be given a minimum of 48 hours' notice of the opportunity to be present during these activities and to coordinate closely with the archaeological monitor, to observe work activities, and assist in ensuring that sensitive tribal resources are not impacted. The monitor must be given a reasonable opportunity to inspect soil and other material as work proceeds to assist in determining if resources significant to the tribes are present. If potential tribal resources are discovered, a reasonable work pause or redirection of work by the contractor may be requested. If the tribe cannot recommend a monitor or if the tribal monitor does not report at the scheduled time, then all work will continue as long as the specified notice was provided. Tribal monitoring will not occur for equipment set-up or tear-down that does not disturb the ground surface more than six inches in depth; hydroseeding; paving; placement of imported fill/gravel/rock; restoration; or backfilling of previously excavated areas that were already monitored. Excavated sediment from the river channel will not be subjected to screening; however, any observed cultural materials will be collected and treated in accordance with the unanticipated discovery measures in CUL-3.</p>

1.9 Completion of Work

The limit for substantial completion of work should take no longer than 100 calendar days, and shall be no later than October 31, 2024. Substantial completion of work is considered to be construction of all project features including placement of hydroseed. Full completion of all project construction, including general operations and maintenance and demobilization, should take no longer than an additional 30 days and, shall be completed no later than November 30, 2024.

2. SUBMITTALS

The Contractor shall furnish submittals to the Project Engineer detailing materials proposed for use in the levee maintenance project which will include but not be limited to import levee embankment fill, Class II aggregate base, levee gates, roadway fencing or similar barrier, and hydroseed mix. Submittals shall include the source and qualities of each construction material sufficient to determine that the construction materials specified herein are satisfied.

Contractor shall record and submit copies of all load tags to the Project Engineer for all materials delivered to the site.

3. LINES AND GRADES

3.1 Survey Control

The Project Engineer will furnish the following survey points for the project site: Horizontal Control Point(s). The Contractor shall establish all other lines and grades.

All ground surfaces shall be finished to uniform grades and slopes as per the drawings and in such a manner as to drain properly and be free from depressions, which may cause areas of standing water. Conforms shall form a smooth, pond-free, transition between existing and new roadway. All scars resulting from construction operations shall be repaired, with the ground surface graded to blend with adjacent contours of finished or existing ground. Compaction of such repaired areas shall be in accordance with these Specifications.

3.2 Tolerances

All slope surfaces shall be graded to a tolerance of one-tenths (0.10) foot above or below the elevation and/or grades shown on the drawings. Slopes shall be in accordance with the lines and grades shown on the drawings.

4. EARTHWORK

4.1 General

The work performed under this section shall consist of furnishing all labor, materials, tools, transportation, supplies, equipment, appurtenances, fuel and power, unless specifically excepted, necessary or required to perform the work. These include but are not limited to: site preparation, excavation, soil stockpiling, fill placement, backfill, compaction, post-grading surface preparation for seeding and planting, disposal or excavated materials, and vegetation/tree/stump removal, as shown on the drawings and described in the Specifications.

4.2 Work Sequence

The general sequence of work shall be as follows:

1. Preparing haul routes.
2. Site Preparation to include clearing, grubbing, stripping fill areas, and vegetation removal including trees and stumps within the project area.
3. Excavating areas of cut and prepare surface for fill levee placement.
4. Removal and disposal of in-situ materials including roadway surfacing shall be taken to applicable county landfill facilities. Disposal of in-situ levee fill or similar materials at Yolo County Landfill facilities are exempt from tipping fees, but may require pile maintenance at the landfill.
5. Compaction and preparation of subgrade to receive fill including levee embankment fill, and levee crown surfacing (Aggregate Base).
6. Placement of fill including levee embankment fill, and aggregate base.
7. Placing fill for associated appurtenant features including, levee ramps. Work shall include regrading of Caltrans roadway embankment slopes adjacent to Interstate 5.
8. Respreading of stockpiled strippings along/over levee slopes.
9. Seeding and planting.
10. Site Cleanup & Restoration.

4.3 Clearing, Grubbing, and Stripping

4.3.1 General

Clearing, grubbing, and stripping shall be performed in advance of any excavation or fill placement within the project site. Under no circumstances shall cleared, grubbed, stripped materials, or fill materials be disposed of by dumping into adjacent waterways.

4.3.2 Clearing & Tree Removal

All brush, vegetation, rubbish, debris, and foreign material shall be removed within the limits of the project work area. A reasonable effort shall be made not to disturb vegetation outside the work area along with trees that have been identified to remain. Vegetation to be removed within the clearing limits shall consist of all stumps, grass, weeds, brush, and vines, and buried logs. Tree removal will include off-haul and disposal at applicable facilities.

4.3.3 Stripping and Grubbing

Vegetation to be removed within the clearing limits shall consist of all stumps, grass, weeds, brush, and vines, and buried logs. Stripping shall consist of the removal of vegetation and dense root mass within the topsoil as required unless noted per plan. Grubbing includes removing roots ½-inch or more in diameter to a minimum depth of 1.5 feet below existing ground surface.

The Contractor shall stockpile and respread strippings along/over the levee slopes to support vegetative growth.

4.3.4 Removal and Disposal of Cleared Material

The cleared material shall be stockpiled on the crown of the levee, outside of the work area, as designated on the plans or as directed by the District or the Project Engineer. All cleared, grubbed, and stripped materials must be handled or disposed of in accordance with existing Federal, State and County regulations governing such activities. Any permits and air quality requirements are the Contractor's responsibility. Grubbed and cleared material shall be completely removed and disposed at appropriate landfill facilities. Disposal of clean fill at the Yolo County Central Landfill will be free of charge, however, the Landfill requires the material to be neatly stockpiled. Organic materials and/or debris will be subject to the Landfill tipping fees. Stockpiles may require additional labor and equipment to manage the disposal area(s). Contractor is to coordinate directly with the Landfill for specific requirements.

4.4 Earthwork and Excavations

Project features, including but not limited to the levee embankment, roadways, ramps, and driveways, shall be constructed to meet the grades exhibited in the Design Plan Sheets. Design grades shall be attained to within +/- 0.1 ft. To the extent practicable, blend, cut and fill slopes into existing topography.

Shape, trim, and finish cut slopes to conform with lines, grades, and cross-sections shown, with proper allowance and preparatory work for hydroseeding or equivalent ground vegetative cover where shown.

4.5 Stockpiling Excavated Material

Contractor shall consider complete removal, off-haul, and disposal of in-situ levee fill. Following contract award, the County and/or Project Engineer may consider salvage (re-use) of in-situ levee embankment fill. Salvage and re-use of in-situ material will be subject to index testing and compaction requirements consistent with levee import fill and detailed in a to-be-proposed soil testing plan with the intent to confirm soil compatibility. Re-use of in-situ levee embankment material is subject to approval by the County and/or Project Engineer.

Confine stockpiles to areas within the project construction limits per plan. Do not obstruct roads or streets.

Do not stockpile excavated material adjacent to channelized features and other excavations, unless excavation side slopes and excavation support systems are designed, constructed, and maintained for stockpile loads.

Do not stockpile excavated materials near or over existing facilities, adjacent property, or completed work, as weight of stockpiled material could induce settlement.

4.6 Disposal of Soil

Disposal of excavated materials shall be hauled offsite to landfill locations as approved by Yolo County. The Contractor shall obtain permissions and applicable permits necessary to dispose of excavated materials. Note disposal of in-situ levee fill and associated project generated materials at the Yolo County Central Landfill (located at 44090 County Road 28H, Woodland, CA 95776) are exempt from tipping fees, but may require pile maintenance. Contractor shall contact Jeff Kieffer, Principal Chief Engineer, at (530) 666-8855 for stockpile requirements at the Landfill.

4.7 Fill and Backfill

Fill material shall be free from roots and other organic matter, ashes, cinders, trash, debris, and other deleterious materials. Material containing more than 10 percent gravel or cobble particles is unacceptable unless otherwise approved by the Project Engineer.

Keep placement surfaces free of water, debris, and foreign material during placement and compaction of fill and backfill materials.

Place and spread fill and backfill materials in horizontal lifts of uniform thickness, in a manner that avoids segregation, and compact each lift to specified densities prior to placing succeeding lifts. Slope lifts only where necessary to conform to final grades or as necessary to keep placement surfaces drained of water.

Final lines and grades will be constructed to a tolerance of 0.1 foot unless dimensions or grades are shown or specified otherwise.

Grade to establish and maintain slopes and drainage as shown. Reverse slopes are not permitted.

Backfill with earth fill to lines and grades shown. Place in lifts of 6 -inch maximum thickness and compact each lift to minimum 97 percent relative compaction as determined in accordance with ASTM D-698 (Standard Proctor) or as approved by the Project Engineer.

Unless otherwise shown, place earth fill as follows:

- Maximum 6-inch-thick lifts.

- Place and compact fill across full width of embankment.

- Levee embankment fill shall be compacted to minimum 97 percent relative compaction as determined in accordance with ASTM D-698 (Standard Proctor), or as approved by the Project Engineer. Aggregate base/surfacing shall be compacted to 100 percent relative compaction as determined in accordance with ASTM D-698, or as approved by the Project Engineer.

The Contractor shall stockpile and respread stripped material along/over the levee slopes to promote vegetative growth.

5. TEMPORARY EROSION CONTROL AND IMPLEMENTATION

5.1 General Requirements

The Contractor shall be responsible for obtaining an approved Storm Water Pollution Prevention Plan (SWPPP) and maintaining compliance throughout the entirety of the project.

The Contractor shall implement the SWPPP prior to the start of soil-disturbing activity and be responsible for all monitoring and implementation of measures to prevent erosion for the duration of the project. The Contractor shall furnish a qualified SWPPP practitioner and make them responsible for the day-to-day implementation of the SWPPP. The Contractor shall also be responsible for keeping the SWPPP updated by a qualified SWPPP Developer.

6. MATERIALS

6.1 General

The Contractor shall furnish all equipment, material, parts, supplies, and tools necessary for the performance of the work in this contract unless otherwise specified. Materials and supplies procured by the Contractor shall meet the specifications, standards listed in these contract documents. The Project Engineer may at any time take and test samples of materials to be used in the work performed under this contract. The Contractor shall assist the Project Engineer as necessary to obtain the samples and at no additional cost to the Yolo County.

6.2 Temporary Erosion Control

The Contractor shall not use temporary or permanent erosion control devices containing plastic netting, including photo- or bio-degradable plastic netting. These items are commonly found in straw wattles (fiber rolls) and erosion control blankets.

All fiber rolls, straw wattles, and/or hay bales utilized within and adjacent to the project site shall be free of non-native plant materials. Products with plastic monofilament or cross joints in the netting that are bound/stitched (such as found in straw wattles/fiber rolls and some erosion control blankets), which may cause entrapment of wildlife, shall not be allowed.

Silt fences shall consist of 100% biodegradable woven fabric and wooden or steel posts three (3) feet high minimum (does not include embedment). The contractor shall be responsible for furnishing the silt fence materials.

Coir/straw wattles shall consist of 100% biodegradable straw or coir and have a 10-inch minimum diameter. Manufacturer: North American Green Sediment STOP, or approved equivalent. The contractor shall be responsible for furnishing the coir/straw wattle materials.

6.3 Product Delivery, Handling, and Storage

Products shall be delivered to the designated Contractor's staging area. Materials storage and stockpiling will occur on the project site within the construction limits, or as directed by the Project Engineer. The Contractor shall schedule a joint inspection of products with the Project Engineer.

Products shall be stored in unopened manufacturer's standard containers bearing original labels showing quantity, analysis, and name of manufacturer and protected from weather or other conditions that would damage or impair the effectiveness of the product.

The Contractor shall furnish all equipment, material, parts, supplies, and tools necessary for the performance of the work in this contract unless otherwise specified.

Seed material shall be stored in airtight containers in a cool, dry place safe from fire, humidity, and predation by rodents and insects.

7. COMPACTION REQUIREMENTS

7.1 Relative Compaction

Compaction shall be performed using compacting rollers, pneumatic or vibratory rollers or other suitable equipment as specified herein. Compaction and re-compaction requirements for both native and imported fill shall be as follows:

1. Minimum for levee toe, slope and levee embankment fill: 97 percent of the maximum density.
2. Minimum for levee crown subgrade (upper 6 inches of levee crown fill) and aggregate base: 100 percent ASTM D-698 shall be used to determine the reference value for optimum moisture content and relative compaction.
3. One (1) In-Place Density Test for every 600 cubic yards of complete fill and at least one (1) Test for each lift of fill placed.

7.2 Moisture Content

All fill materials shall be compacted with a moisture content within the limits of 3 percentage (3%) points above optimum to 1 percentage (1%) point below optimum moisture content as determined by ASTM D-698. The moisture content of existing soil or fill shall be maintained by sprinkling or other approved means, until covered by a lift of fill, or aggregate base.

Material may require moisture conditioning (increase or decrease the moisture content) prior to placement and compaction. The Contractor shall disk, aerate, or add water and work soil to achieve the recommended moisture content. The cost to moisture condition (either decrease or increase the moisture content) shall be included in the unit cost for project fill materials.

8. FIELD QUALITY CONTROL AND MATERIALS TESTING

General construction shall be performed under the observation and testing of the District and the Project Engineer to assist in determining if the work conforms to these Specifications. The observation and testing will be as frequent as the District, or the Project Engineer considers necessary. The Contractor shall cooperate with the District and the Project Engineer in all aspects of the observation and testing. The Contractor shall remove surface material and render such assistance as necessary to facilitate sampling and testing. The Contractor shall take such precautions as necessary to protect the District and the Project Engineer from injury due to the Contractor's operations during the observation and testing operations.

The District and the Project Engineer shall be notified at least 24 hours prior to required observation and testing. Any materials placed or improvements constructed in the absence of the Project Engineer's approval to proceed shall be presumed to be defective, and at the discretion of the Project Engineer, shall be removed and replaced at no cost to the Project.

Field, laboratory observation, and testing shall be the responsibility and expense of the Contractor. The Contractor shall submit a laboratory and field-testing plan for review and approval of the Project Engineer. When observation and testing are required as a result of initially failing test results, improper moisture content, inadequate compaction, unsuitable material, or for other causes necessitating re-observation and retesting, the re-observation and retesting shall be at the expense of the Contractor.

9. EQUIPMENT USE

9.1 Weight of Equipment

Equipment to be used on levee crown roads outside the limits of work shall be limited to a maximum gross loaded axle weight of 16,000 pounds.

9.2 Equipment Speed

The maximum operating speed of all equipment used on the property shall be a maximum of 15 mph. Speed limit signs shall be furnished and installed in compliance with Caltrans and Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) standards for temporary traffic control devices or elements.

10. CLASS II AGGREGATE BASE (AB)

Aggregate base (AB) material must be obtained from a supplier which produces the material from crushing of larger rocks. A sample of material must be presented to the District Engineer for approval prior to importing. If the material does not contain larger pieces which are angular in shape, it will not be approved. The AB shall generally comply with the Caltrans specifications for 3/4-inch Class II AB. Recycled or salvaged aggregate base will also be accepted, provided the material complies with these specifications.

Any recycled materials, including pulverized concrete, recycled concrete or salvaged aggregates, must contain no more than 5 percent asphalt concrete or other bituminous materials, by volume, and is subject to the approval of the District Engineer. Any material that is considered unacceptable by the District Engineer must be removed at the Contractor's expense.

11. IMPORT EMBANKMENT FILL (TYPE 1)

Fill shall be a soil or soil/rock mixture free of deleterious and organic matter and contain no rocks or hard fragments larger than 3 inches in maximum dimension. Fill material shall have at least 20 percent fines passing the No. 200 sieve, and 100 percent passing the 3-inch sieve. Fill should have a liquid limit less than or equal to 45 and a plasticity index less between 8 and 25.

The loading, hauling, and placement and compaction of the fill material shall be the responsibility of the Contractor. A sample of material must be presented to the Geotechnical Engineer for approval prior to importing. If the material does not meet the specification, it will not be approved for use.

The Contractor shall be responsible for full compliance with all regulatory requirements for reuse of the dredge spoils for the project including without limitation those waste discharge requirements for reuse of dredged sediments imposed by California Regional Water Quality Control Board(s).

The Contractor shall be responsible for all costs of meeting such requirements and shall indemnify District against any such costs including reasonable costs of consultants and attorneys.

Said requirements for reuse shall not require testing of water or soil at or near the project work areas. Contractor shall be responsible for ascertaining all such requirements in advance of submitting its bid.

12. TREE REMOVAL

The Contractor shall remove all trees and stumps within the backfill limits per plan. The contractor shall dispose of removed trees and/or stumps at applicable Yolo County Landfill facilities.

13. FENCING

13.1 Barbed Wire Fencing

Contractor shall remove existing barbed wire fence and replace with Caltrans Standard Plan A86A per plan.

13.2 FHWA & Caltrans Fencing

Contractor shall install a FHWA and/or Caltrans approved fence per plan adjacent to Interstate 5. Proposed fence design and type shall be presented to the District Engineer for review and approval. Fence material may include chain link, barbed wire, or wire mesh.

14. ACCESS AND HAUL ROADS

The Contractor may use any of the designated access roads, haul roads, and perimeter levee roads as shown on the construction drawings. Other haul roads may be used subject to the approval of the District or the Project Engineer. The Contractor shall keep the haul and levee roads well-watered and graded during construction. In areas where excessive dust, caused by construction operations, is a nuisance to property, the Contractor shall implement dust control per Mitigation Measure BIO-8.

As a finish operation, the Contractor shall blade and grade the haul and levee roads to their pre-project condition, subject to approval by the Project Engineer. Any fill material used to maintain the haul and levee roads shall be subject to approval by the District or the Project Engineer. On a daily basis, the Contractor shall coordinate with the District or the Project Engineer as to the location and estimated quantity of fill material or aggregate base to be placed on haul and perimeter levee roads. The District or the Project Engineer shall approve the location and amounts of fill material. Any fill material placed without approval is subject to rejection. Payment for fill material used for haul and levee road maintenance will be made at the contract unit price per ton for Class 2 AB or the material used, whichever is less.

15. HYDROSEED

15.1 Description of Work

All erosion control measures shall be constructed in accordance with ABAG manual of Standards for Erosion and Sediment control. The new levee embankment shall be seeded and covered with straw and tackifier to the limits shown on the Drawings.

15.2 Seed

The Contractor shall provide submittal of the seed mix for review and approval by the District Engineer to verify source/vendor of the seed mix and that the seed mix conforms to the specification. The following seed mix shall be used as specified:

Table 2: Seed Mix

Botanical Name	Common Name	Percent (%) of Bulk Seed Mix	Bulk Seed Rate per Acre
Leymus triticoides	Creeping wildrye	50%	30-40 lbs/ac
Artemisia douglasiana	Mugwort	25%	
Grindelia camporum	Gumplant	25%	

15.3 Straw

Straw shall be placed at a rate of 2 tons per acre for levee erosion control.

15.4 Tackifier

Tackifier shall be one of the following and shall be evenly dispersed when suspended in water when agitated: M-Binder, or Ecotak-SAT. Tackifier shall be applied at 100 pounds per acre.

15.5 Site Restoration

All areas and access points exposed or disturbed during project activities shall be restored using conditions as set forth in Section 14. Seeded areas shall be covered with broadcast straw and/or seeded erosion control blankets.

16. CLEANUP

16.1 General

Throughout all phases of construction, including suspension of work, and until final acceptance of the project, the Contractor shall keep the premises occupied by them in a clean and orderly condition, disposing of refuse in a manner satisfactory to the District and the Project Engineer and in accordance with existing governmental regulations.

16.2 Detailed Requirements

Excess or unsuitable earth or backfill material, or other waste material shall be removed from the jobsite and disposed of by the Contractor at no additional cost to the Project, unless otherwise directed by Yolo County or the Project Engineer. Spills resulting from hauling operations along or across existing waterways, streets, roads, ramps, or ferry decks shall be removed immediately by the Contractor.

All gutters and roadside ditches shall be clean and free from any obstructions. Any deviation from this practice shall have the prior approval of the Project Engineer. Any areas of the landside levee slope and existing levee road that are disturbed shall be restored to at least the condition that existed prior to construction or better at no additional cost to the Project.

16.2.1 Final Cleanup of Premises and Work Site

As a final condition of acceptance of the work, the Contractor shall carefully cleanup the work and the premises, remove all temporary structures built by them or for them, remove all surplus construction materials, debris, and rubbish of all kinds from the grounds, which they have occupied, and leave them in a neat condition. The entire project shall be left in a condition that will present a pleasing appearance as viewed in general and in a manner satisfactory to the Project Engineer.

16.3 Completion

The Contractor, upon completion of all work, shall restore the areas surrounding the work sites and project sites to a condition as good as or better than existed prior to the commencement of work.

16.4 Payment

Full compensation for all costs incurred and the work covered in this section shall be considered as included in the unit price according to the Bid Item "Mobilization/Demobilization" as set forth in the Contractor's bid, and no additional or separate compensation will be allowed, therefore.

17. MEASUREMENT

17.1 Import and Export of Materials: Fill, Soil Export Hauling, and Caltrans Class II Aggregate Base

17.1.1 General

All excavated material (degrade) and levee import fill will be measured for payment in cubic yards (cy) of material placed and accepted in the completed work.

Aggregate base material will be measured for payment by the number of tons (2,000 pounds) of imported material placed and accepted in the completed work. Tonnage will be determined by either displacement measurement or scale weight measurement. Contractor shall provide copies of all truck tags to the District Engineer for measurement of imported AB.

17.1.2 Scale Weight Measurement

Scales used for measurement shall be public scales. Weighing shall be at the point nearest the work at which a public scale is available. Scales shall be standard truck scales of the beam type and shall be equipped with the type registering beam which imprints the weight on the ticket and an "over and under" indicator and be capable of accommodating the entire vehicle. All trucks delivering material must have a certified weight tag.

17.1.3 Weigh Bills and Delivery Tickets

Copies of certified weigh bills or delivery tickets shall be submitted to the Project or its designated representative at the time of delivery. The Contractor shall furnish the Project or its designated representative, scale tickets for each load of material weighed; these tickets shall include tare weight; identification mark of each vehicle weighed; and date, time, and location of loading. Tickets shall be furnished at the point and time individual loads arrive at the work site. A master log of all vehicle loadings shall be furnished for each day of loading operations. The master log of each day's loading operation will be delivered to the site on the following day.

18. PAYMENT

18.1 Mobilization/Demobilization

The contract lump sum price paid for mobilization shall not exceed five percent (5%) of the total bid and shall include obtaining all bonds, permits, and licenses and full compensation for furnishing labor, materials, tools, equipment, and incidentals, and for doing all work involved in mobilization as specified herein. Payment for mobilization will be prorated as follows:

- When the Monthly Progress Payment Request of the amount earned, not including the amount earned for mobilization, is five percent (5%) or more of the original contract amount, fifty percent (50%) of the contract item price for mobilization will be paid for mobilization.
- When the Monthly Progress Payment Request of the amount earned, not including the amount earned for mobilization, is twenty-five percent (25%) or more of the original contract amount, seventy-five percent (75%) of the contract item price for mobilization will be paid for mobilization.
- When the Monthly Progress Payment Request of the amount earned, not including the amount earned for mobilization, is fifty percent (50%) or more of the original contract amount, eighty-five percent (85%) of the contract item price for mobilization will be paid for mobilization.
- The remaining fifteen percent (15%) or amount due for mobilization will be paid for after completion of all contract work; removal from the site of all plant and equipment; final cleanup of the project; and acceptance therein.
- Payment for Mobilization and Demobilization will be paid at the lump sum contract unit price. Payment shall constitute full compensation for contractor mobilization/demobilization of necessary equipment to support construction activities associated with in-channel stabilization actions, as specified in the specifications and plans.

18.2 SWPPP Compliance

Payment for SWPPP Compliance, measured as specified, will be made at the contract unit lump sum price for "SWPPP Compliance," which shall include all costs preparation, implementation of the SWPPP, and during construction activities by qualified practitioner.

18.3 Clearing, Grubbing, and Tree/Stump Removal

Payment for clearing, grubbing, and tree/stump removal will be paid for at the contract unit price per acre. Payment shall constitute full compensation for excavation, ripping, scarifying, loading,

hauling, disposing, and removal of existing stumps and trees within the project area unless otherwise noted per plan and all other incidental expenses to clear, grub, and prepare areas to complete the work in these specifications.

18.4 Existing Levee Degrade

Payment for existing levee degrade, measured as specified, will be made at the contract unit lump sum price for "Existing Levee Degrade," which price shall include all cost of removing, excavating, disposing, and/or off-hauling as specified herein. Yolo County has confirmed that the Contractor disposal shall be exempt from disposal fees at applicable Yolo County Central Landfill located at 44090 County Road 28H, Woodland, CA 95776.

18.5 Disposal Site Maintenance

Payment for disposal site maintenance, measured as specified, will be made at the contract unit lump sum price for "Disposal Site Maintenance," which price shall include stockpile maintenance as required by the Principal Chief Engineer, or his designee, at the Yolo County Central Landfill, or for stockpile costs at alternative locations as coordinated by Contractor.

18.6 Import Embankment Fill (Type 1)

Payment for embankment fill, measured as specified, will be made at the contract unit price per cubic yard of placed material for "Import Embankment Fill (Type 1)," which price shall include all cost of subgrade preparation, placing the fill material, and compaction as specified herein.

18.7 Class II Aggregate Base (AB)

Payment for Class II Aggregate Base (AB), measured as specified, will be made at the contract unit price per ton for "Class II Aggregate Base (AB)," which price shall include all cost of subgrade preparation, placing the material, and compaction as specified herein.

18.8 Caltrans Standard A86 Fencing

Payment for Caltrans A86 fencing, measured as specified, will be made at the contract unit price per linear foot for "Fencing" which shall include all cost of the material purchase, transportation, delivery, and installation as specified herein.

18.9 Hydroseeding

Payment for hydroseeding will be made at the contract unit price per acre for "Hydroseeding," which shall include all costs of the material purchases, transportation, delivery, and labor as specified herein.

18.10 Compaction Testing

Payment for compaction testing will be made at the contract lump sum unit price for "Compaction Testing," which shall include all costs for labor, equipment usage fees, data collection, lab testing, and preparation of summary reports as specified herein.

*****END OF TECHNICAL PROVISIONS*****