

WOLF BAY RAILROAD RESTORATION PROJECT

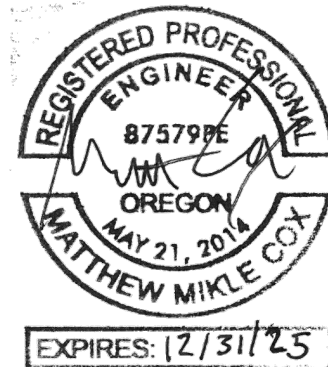
CLATSOP COUNTY, OREGON

SVENSEN, OREGON

CONSTRUCTION SPECIFICATIONS

SPECIAL PROVISIONS

MARCH 2023



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SPECIAL PROVISIONS

INTRODUCTION TO THE SPECIAL PROVISIONS

The work on this project shall be governed by the Genesee and Wyoming Standard Specification and public project manual. Per Section 100, 1.4.1, the requirements of the American Railway Engineering and Maintenance of Way Association Manual for Railway Engineering (AREMA Manual) are incorporated into the general conditions by reference.

Additionally, work on this project shall be accomplished in accordance with the Standard Specifications of the Oregon Department of Transportation (ODOT) (2021). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. Where conflicts between standard or amended standard specifications and special provisions arise, the more stringent specification shall govern.

If any portion of these reference conditions are in conflict with each other, the documents that govern shall adhere to the following order precedence:

- 1) Genesee and Wyoming Standard Construction Specification
- 2) AREMA Manual
- 3) Standard Specifications of the Oregon Department of Transportation (2021), and these special provisions.

PART 00100 – GENERAL CONDITIONS

DESCRIPTION OF WORK

This contract provides for the enhancement of tidal marsh ecosystem function, rearing habitat for ESA listed juvenile salmonids, and hydrologic connectivity at the Wolf Bay Railroad Restoration Site. Project elements include two breaches through the railroad levee, two bridges within the breaches, fish passage barrier reduction, channel excavation and topographic complexity for vegetative diversity, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications. The project is located near Columbia River mile 20 within the Columbia River Estuary in Clatsop County, Oregon.

SECTION 00110.20 - DEFINITIONS

This Section is supplemented with the following:

All references in the Standard Specifications to the terms “State”, “Department of Transportation”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Contracting Agency” or “Contracting Agency Representative (CAR)” or “Owner”, which refers to the Columbia River Estuary Study Taskforce, hereafter “CREST”.

All references to “State Materials Laboratory” shall be revised to read “Contracting Agency designated location”.

The venue of all causes of action arising from the advertisement, award, execution, and performance of the contract shall be in the Clatsop County Circuit Court

Additive

A supplemental unit of work or group of bid items, identified separately in the proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate

One of two or more units of work or groups of bid items, identified separately in the proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

Contract Documents

See definition for “Contract”. Solicitation Documents, Change Orders, Force Work Account Work orders, pay documents, Material Certifications, project work schedules, final estimate, orders or authorizations obtained by the contractor or Agency applicable to the Project, approved plans, permits, as well as all documents incorporated by reference therein.

Contract Time

The period of time established by the terms and conditions of the contract within which the work must be physically completed.

Dates

Contract Execution Date

The date the Contracting Agency officially binds the agency to the contract.

Notice to Proceed Date

The date stated in the Notice to Proceed on which the contract time begins.

Substantial Completion Date

The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, and only minor incidental work, replacement of temporary substitute facilities, or correction or repair remains for the physical completion of the total contract.

Physical Completion Date

The day all of the work is physically completed on the project. All documentation required by the contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date

The day all the work specified in the contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date

The date on which the Contracting Agency accepts the work as complete.

Notice of Award

The written notice from the Contracting Agency to the successful bidder signifying the Contracting Agency's acceptance of the bid.

Notice to Proceed

The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the work and establishing the date on which the contract time begins.

SECTION 00120 – BID REQUIREMENTS AND PROCEDURES

00120.05 REQUESTS FOR SOLICITATION DOCUMENTS

Amend this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed will be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17") and Contract Provisions	1	Furnished automatically upon award.

Additional copies of the plans and Contract Provisions may be purchased by the Contractor by payment of the cost stated in the Call for Bids.

SECTION 00160 – SOURCE OF MATERIALS

00160.20 PREFERENCES FOR MATERIALS

Supplement SECTION 00160.20 (a) – Buy America, with the following:

All construction materials shall be subject to the Buy America, Build America Act (sections 70901-52 of the Infrastructure Investment and Jobs Act, Pub. L. 117-58)

SECTION 00170 – LEGAL RELATIONS AND RESPONSIBILITIES

00170.02 PERMITS, LICENCES AND TAXES

Amend this section as follows:

The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. All contacts with the permitting agency concerning the below-listed permit(s) shall be through the Contracting Agency. The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable bid items for the work involved.

Name of document	Permitting Agency	Permit Status
Joint Permit Application (JPA)	Joint – State of Oregon (OR) & United States Army Corps of Engineers (USACE), Portland District	Pending
Dept. of the Army Section 404 Permit	USACE, Portland District	(See JPA – above)

1200C Stormwater Discharge Permit	OR Department of Environmental Quality (DEQ)	Pending
401 Water Quality Certification	OR DEQ	Pending
Fill-Removal Permit	OR DSL	Received
Development/Grading Permit	Clatsop County	Received
Conditional Use Permit	Clatsop County	Received
Floodplain Development Permit	Clatsop County	Received
Section 106 Permit	OR State Historical Preservation Office	Received

SECTION 00180 – PROSECUTION AND PROGRESS

This section is supplemented with the following:

Project must be physically completed within In-Water Work Window with planting to occur after.

The contractor shall provide submittals for items including but not limited to:

Submittal	Schedule / Milestone
<ul style="list-style-type: none">• Construction Schedule	1 week before Pre-construction meeting
<ul style="list-style-type: none">• Erosion & Sediment Control Plan (ESCP)	1 week before Pre-construction meeting
<ul style="list-style-type: none">• Spill Prevention Plan	1 week before Pre-construction meeting
<ul style="list-style-type: none">• All submittals required by Genesee and Wyoming Public Project Manual or Standard Specifications.	As required.
Product Data/Samples/Certificates for:	
<ul style="list-style-type: none">• Silt Fencing (supported)	3 weeks prior to installation
<ul style="list-style-type: none">• Straw Wattles	3 weeks prior to installation
<ul style="list-style-type: none">• Subgrade Geotextile	3 weeks prior to installation
<ul style="list-style-type: none">• Riparian and Wetland Plantings and Seeding	3 weeks prior to installation
<ul style="list-style-type: none">• All Data/Samples/Certificates required by Genesee and Wyoming Public Project Manual or Standard Specifications.	As required.

PART 00200 – TEMPORARY FEATURES AND APPURTENANCES

SECTION 00210 – MOBILIZATION

Supplement SECTION 00210.00 – Scope with the following:

This item shall include utility location, dust control, traffic control and Demobilization (including site cleanup, fence repair and excess materials hauling).

Replace SECTION 00210.90 – PAYMENT with the following:

Payment of Mobilization will be made at the contract lump sum price in the Construction Contract.

SECTION 00253 – TEMPORARY WORK ACCESS AND CONTAINMENT

Supplement SECTION 00253.00 - SCOPE with the following:

This item shall include all necessary temporary access improvements, including geotextile fabric, crushed rock fill, timbers, logs, mats and low ground pressure equipment necessary for the completion of the work.

Supplement SECTION 00253.10 – MATERIAL REQUIREMENTS with the following:

Fill for temporary access over rails and along edge of abutment shall be as specified in the Drawings. Any substitutions shall be approved by the project Owner or Owner’s representative.

Geotextile Fabric shall meet physical property value specifications described for “Subgrade Geotextile” described in 02320.20 - Table 02320-4. Geotextile fabric shall be placed along all portions of the rail line used for access, in order to protect ballast material from fouling per the G&W public project manual.

Timbers are used for temporary access shall be cut in the dimensions described in the drawings. Any substitutions shall be approved by the project Owner or Owner’s representative.

Supplement SECTION 00253.40 – GENERAL with the following:

The Contractor is advised that shallow groundwater and wet soils may be encountered throughout the work area. Adjust access as necessary to avoid wet and sensitive areas as directed by the Owner.

Temporary access fill, timbers and geotextile fabric shall be installed in locations shown on the Drawings.

Replace SECTION 0253.90 – PAYMENT with the following:

Payment for Temporary Work Access and Containment will be made at the contract lump sum price in the Construction Contract.

SECTION 00280 – EROSION AND SEDIMENT CONTROL

Supplement SECTION 00280.05 – EROSION AND SEDIMENT CONTROL PLAN ON NON-AGENCY CONTROLLED LANDS with the following:

Contractor shall submit an ESCP a minimum of one week before the pre-construction conference for review and approval. ESCP shall include product information for all ESC methods that will be used on site.

Contractor shall keep a copy of the Erosion and Sediment Control Plan on site for reference during construction.

Supplement SECTION 00280.14 – EROSION PREVENTION MATERIALS with the following:

Straw Wattles shall meet the standards detailed for Type 2 Sediment Barriers -00280.15(a). Tubular netting shall be made from biodegradable fiber.

Turbidity Curtain shall be Type II or stronger.

Supplement SECTION 00280.40 – INSTALLATION with the following:

1) Straw Wattles

- A. Straw Wattles shall be installed according to the guidelines shown on the Drawings.
- B. Straw Wattles shall be erected and maintained to the satisfaction of the Owner until a vegetative ground cover has been established. Replacement of the straw wattles, if required by the Engineer, will be at the Contractor's expense.
- C. Inspect Straw Wattles at least once every 7 days and the next business day after each runoff producing rainfall event. Make required repairs immediately.

2) Turbidity Curtain

- A. Turbidity Curtains shall be installed according to the sequencing and guidelines shown on the Drawings.
- B. Turbidity Curtains shall be erected and maintained to the satisfaction of the Owner. Adjustment and re-anchoring of the turbidity curtain, if required by Owner, will be at the Contractor's expense. Replacement of the turbidity curtain, if required by the Owner, will be at the Contractor's expense.
- C. Inspect Turbidity Curtains daily, during ebb tide. Make required repairs immediately.

Supplement SECTION 00280.46 – SEDIMENT CONTROLS with the following:

All construction equipment must be clean of all debris (organic material, soil, vegetation, seeds, petroleum-based products, etc.) prior to entering project site and upon departing project site. Acceptable cleaning methods include spraying the equipment with clean water.

Project Access, Staging and Storage Areas

- 1) Access corridor and potential staging and storage areas are shown on the Drawings, and will be reviewed in the field by the Contractor. The Contractor shall be responsible for any repairs, replacement or payment required to return any vegetation, structures, grading or other facilities disturbed in the course of this project by the Contractor, his employees or subcontractors, to the same condition as existed before the project was started. Such repairs, replacement or payment shall be at the Contractor's expense.
- 2) Rail Line Access – Contractor shall avoid damage to rails, railroad ties, the railroad embankment, existing bridges, and all other features associated with the existing rail line or within the rail line corridor (when utilizing the rail corridor for access). The Contractor shall be responsible for any repairs, replacement or payment required to return the rail line or facilities damaged in the course of this project by the Contractor, his employees or subcontractors, to the same condition as existed before the project was started, as approved by the rail line owner. Such repairs, replacement or payment shall be at the Contractor's expense.

Access and Haul Routes

- 1) The Contractor is required to determine and observe any restrictions placed on travel over public roads.
- 2) The Contractor shall be responsible for any repairs, replacement or payment required to return public roads or facilities damaged in the course of this project by the Contractor, his employees or subcontractors, to the same condition as existed before the project was started. Such repairs, replacement or payment shall be at the Contractor's expense.
- 3) The Contractor shall be responsible for limiting spillage of spoils and other impacts from passage of haul vehicles and other operations to comply with road use requirements and to ensure a safe operating environment.
- 4) Access over tidal marsh zones is required and shall be accomplished by the use of mats composed of biodegradable materials, logs, low ground pressure equipment, or approved equal.
- 5) Contractor shall take steps to minimize tracking over graded areas once completed to the extent possible, and must coordinate planned access and haul routes with the Owner.
- 6) Contractor shall decommission all access and haul routes prior to completion of Work.

Supplement SECTION 00280.60 – GENERAL with the following:

The provisions shown on the approved Erosion and Sediment Control Plan shall be in place prior to any ground disturbing activity on the site unless directed otherwise by Owner.

The Contractor shall perform erosion control for the duration of the Contract. The Contractor may use the measures described below and shown in the Drawings, or alternative measures of their own design to ensure satisfactory performance and that the erosion control requirements of all applicable permits are met. The Contractor shall perform erosion control in accordance with the approved Erosion and Pollution Prevention Plan or otherwise approved by the Owner.

Supplement SECTION 00280.70 – REMOVAL with the following:

Following the conclusion of project construction and upon approval of the Owner, the erosion control facilities and materials, excluding straw wattles protecting sensitive areas, shall be removed, and the areas impacted by these operations shall be restored to their original condition. Materials used in fish

exclusion and erosion control activity shall become property of the Contractor and removed from the site at his or her sole expense at completion of earthwork.

Upon completion of work, leave area in a clean, natural looking condition.

Replace SECTION 00280.80 – MEASUREMENT with the following:

No measurement will be made for this pay item.

Replace SECTION 00280.90 – PAYMENT with the following:

Payment for Erosion and Sediment Control will be made at the contract lump sum price in the Construction Contract.

PART 00300 – ROADWORK

SECTION 00310 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Supplement SECTION 00310.00 – SCOPE with the following:

This work item includes the removal, hauling and legal off-site disposal of debris found during the excavation of the railroad levee and channel and removal of the rails. Concrete, metal, bituminous treated materials and other non-natural debris shall be disposed of off-site.

Supplement SECTION 00310.80 – MEASUREMENT with the following:

The quantity will be tons. Weigh tickets shall be presented to the Engineer for each load on the day the material is transported from the site.

Supplement SECTION 00310.90 – PAYMENT with the following:

Payment for Removal of Structure and Obstructions will be paid for at the Contract unit price per ton.

SECTION 00320 – CLEARING AND GRUBBING

Supplement SECTION 00320.01 – Areas of Work with the following:

Owner to approve nature and extent of clearing prior to commencement of clearing activity. No clearing shall occur outside the excavation or topographic complexity area shown on the Drawings without Owner approval.

Supplement SECTION 00320.40 – CLEARING OPERATIONS (b) Preserving and Trimming Vegetation with the following:

Site protection shall include the following:

- 1) Protect existing trees and other vegetation located on the site.
- 2) Woody vegetation located in zones specified for fill placement shall be left in place, as practical.
- 3) Do not smother trees by stockpiling construction materials or excavated materials within drip line, as practical.
- 4) Limit foot traffic and avoid vehicular traffic or parking of vehicles within drip line of existing trees.
- 5) Provide temporary protection as required.
- 6) Repair or replace trees greater than 6" DBH not marked for removal and vegetation damaged by construction operations. Remove trees which cannot be repaired and restored to full growth status. Replace with new trees of minimum 1.5-to-2.5-inch caliper at breast height.

Replace SECTION 00320.42 – OWNERSHIP AND DISPOSAL OF MATTER with the following:

All non-useable cleared debris shall be stockpiled for disposal off-site by the Contractor in a legal manner, or burning on-site.

Replace SECTION 00320.80 – MEASUREMENT with the following:

No measurement will be made for this pay item

Replace SECTION 00320.90 – PAYMENT with the following:

Payment for Clearing and Grubbing shall be incidental to the earthwork pay item.

SECTION 00330 – EARTHWORK

Supplement SECTION 00330.00 – SCOPE with the following:

This item includes labor, equipment and materials associated with movement of earth and rock within the project site. This includes levee and channel excavation, temporary access fill and removal, and topographic complexity zone.

Supplement SECTION 00330.01 – LINES, GRADES AND CROSS SECTIONS with the following:

Final grades shall match existing grades for this project as indicated on Drawings. Extent of each Levee breach shall match those indicated on the Drawings.

Slope Grading

When completed, the average plane of the slopes shall conform to the slopes indicated on the Drawings, and no point on the completed slopes shall vary from the designated plane by more than 0.5 feet measured at right angles to the slope.

Channel Grading

When completed, channel grades shall conform to the grades indicated on the Drawings. The grading tolerance for the channel bed is plus or minus (+/-) 0.2 feet difference from planned finish grades.

Supplement SECTION 00330.40 – GENERAL (b) PRESERVATION OF EXISTING SURFACES with the following:

Perform all earthwork in strict compliance with the Erosion and Sediment Control Plan approved by the Owner. See Section 00280 Erosion and Sediment Control.

Protect existing surface and subsurface features on-site and adjacent to site as follows:

- 1) Protect and maintain bench marks, monuments or other established reference points and property corners. If disturbed or destroyed, replace at own expense to full satisfaction of Owner.
- 2) In locations with very soft soils, log mats may be required for access.
- 3) Verify location of utilities. Omission or inclusion of utility items does not constitute non-existence or definite location. Secure and examine local utility records for location data.
 - A. Take necessary precautions to protect existing utilities from damage due to any construction activity.
 - B. Repair damages to utility items at Contractor's expense.
 - C. In case of damage, notify Owner at once so required protective measures may be taken.
- 4) Maintain free of damage, existing sidewalks, structures, and pavement. Any item known or unknown or not properly located that is inadvertently damaged shall be repaired to original condition. All repairs to be made and paid for by Contractor.
- 5) Provide full access to public and private premises, fire hydrants, street crossings, sidewalks and other points as designated by Owner to prevent serious interruption of travel.
- 6) Maintain stockpiles and excavations in such a manner to prevent inconvenience or damage to structures on-site or on adjoining property.

Supplement SECTION 0330.40 – GENERAL (c) AVOIDANCE AND CORRECTION OF DETRIMENTAL OPERATIONS with the following:

Excavation performed above the waterline shall proceed such that excavation spoils are carried away from the water, or otherwise collected and contained before being allowed to contact surface waters. Earthwork shall be planned to facilitate work based on a Mean Higher Water (MWH) of elevation 8.20 feet NAVD88. Existing ground within the tidal zone is expected to have high moisture content and have limited bearing capacity from varying water levels. Contractor is responsible for confirming tide elevations throughout the contract term and coordinating work efforts to accommodate changing water levels.

Material excavated from levees shall be placed in the designated stockpile area on the Drawings. The material shall be graded in the manner described on the Drawings, or as otherwise directed by the Owner.

Supplement SECTION 00330.41 – EXCAVATIONS (a) GENERAL with the following:

Excavation and Grading: Perform as required by the Drawings. Drawings may indicate existing grade, subgrade and finished grade required for construction of project. Stake units and structures and establish their elevations. Perform other layout work required.

Sorting of excavated materials: All materials excavated from within the Genesee and Wyoming railroad right of way shall be relocated within the right of way, in the locations described in the Drawings. Material excavated from outside of the Genesee and Wyoming railroad right of way shall be relocated outside of the right of way, in the locations described in the Drawings.

Owner grants approval to begin excavations following inspection of erosion control measures.

Protection of finish grade: During construction, shape and drain embankment and excavations. Protect graded areas against action of elements prior to acceptance of work. Reestablish grade where settlement or erosion occurs.

Non-native material may be encountered during construction in the levee, such as pilings, riprap, or concrete. If non-native material and obstructions are encountered during excavation, notify the Owner. Material may be removed according to the following, and upon Owner's approval:

- 1) Riprap encountered may be reused in the riprap protection area if it conforms to specified size class.
- 2) Riprap that does not conform to the size specification shall be hauled off site for disposal at the contractor's expense.
- 3) Pilings encountered shall be legally removed to meet state and federal permit requirements. Pilings shall be hauled off site for disposal at the contractor's expense.
- 4) Other non-native material (including concrete, asphalt, metal or other debris) shall be hauled off site for disposal.

Carefully remove items to be salvaged and maintain unless otherwise directed by the Owner. Excavated native materials shall be placed in fill areas indicated on Drawings.

No extra compensation will be made to Contractor for excavation beyond the grades shown on the drawings without prior approval by the Owner.

The contractor shall anticipate and expect minor adjustments to the grading boundaries to avoid existing vegetation as directed by the project Owner. These adjustments shall be considered incidental to the Earthwork pay item.

Supplement SECTION 00330.42 – EMBANKMENTS, FILLS AND BACKFILLS with the following:

Construct fills as required by the Contract Drawings:

- 1) Construct embankments and fills at locations and to lines and grades indicated. Completed fill shall correspond to shape of typical cross section or contour indicated regardless of method used to show shape, size, and extent of line and grade of completed work.
- 2) Fills shall be contained when adjacent to sensitive areas, in locations identified by project Owner. Turbidity curtain and straw wattles utilized in these locations, installed per the Drawings, shall be used to prevent excavated material from entering the tidal marsh in the interior of the site.
- 3) The contractor shall anticipate and expect slight variations to the shape and cross section of fill areas to blend with existing topography and avoid sensitive vegetation, as directed by the project Owner. These adjustments shall be considered incidental to the Earthwork pay item.
- 4) Slash and small woody debris generated on site shall be incorporated into topographic complexity mound fill or into proposed channel banks, per the project owner.

Supplement SECTION 00330.80 – MEASUREMENT with the following:

No measurement for this pay item will be made.

This bid item includes labor, equipment and materials associated with movement of earth and rock within the project site. 1165 cubic yards of material will be excavated and placed on site as fill as per the Drawings. The quantity estimated is an in-place quantity and is not factored for expansion of excavated material or compaction of placed material. Material and payment shall not be based on weight tickets or truck measure without prior written approval.

Supplement SECTION 00330.90 – PAYMENT with the following:

Payment for Earthwork will be made at the contract lump sum price in the Construction Contract.

SECTION 00390 – RIPRAP PROTECTION

Supplement SECTION 00390.00 – SCOPE with the following:

This item includes the labor, equipment, and materials associated with the riprap abutment protection within the bridge opening areas shown on the Drawings.

Supplement SECTION 00390.11 – RIPRAP REQUIREMENTS with the following:

Refer to the Drawings for installation and gradation requirements.

Supplement SECTION 00390.80 – MEASUREMENT with the following:

Riprap will be measured on a volume basis in-place. 280 cubic yards are necessary to meet the lines and grades shown on the drawings.

Supplement SECTION 00390.90 – PAYMENT with the following:

Payment for Riprap Protection will be paid at the contract lump sum price in the Construction Contract.

PART 01000 – RIGHT OF WAY DEVELOPMENT AND CONTROL

SECTION 01030 – SEEDING

Supplement SECTION 01030.13 – SEED with the following:

All disturbed areas and exposed soil above 8.20 feet (NAVD88) shall be seeded with native seed based on the elevation and planting zone described in the Drawings. Seed shall be applied to disturbed areas within 24 hours of completing earthwork, prior to demobilization from a work area. Seeds shall be certified “Weed Free,” indicating there are no noxious or nuisance weeds in the seed.

Seed shall be purchased by a local nursery and shall be applied evenly throughout the planting areas per Drawings and direction from Owner.

Supplement SECTION 01030.41 – AREA PREPARATION with the following:

Access roads and other compacted surfaces shall be scarified with excavator bucket teeth to a depth of 6 inches prior to seeding. Temporary access route and other areas disturbed during construction will be rehabilitated to similar or better than pre-work conditions. Areas where construction traffic accessed shall be scarified at least 6 inches deep prior to seeding.

Supplement SECTION 01030.48 – APPLICATION with the following:

Seed shall be applied in a manner such that seeds are situated beneath a layer of soil. Approved methods include:

- 1) Mechanical or hand broadcasting of seed at the specified quantity per acre, followed by cultivation with a spring tine harrow or equivalent to work seeds into the soil surface. Seeding of all fills shall occur as per Plans as soon as possible after the grading work has been completed.

Seeding of all fills shall occur as per Drawings as soon as possible after the grading work has been completed.

Supplement SECTION 01030.80 – MEASUREMENT with the following:

No measurement will be made for this pay item.

Supplement SECTION 0130.90 – PAYMENT with the following:

Payment for Seeding will be made at the Contract lump sum price.

SECTION 01040 – PLANTING

Supplement SECTION 01040.00 – SCOPE with the following:

Planting areas depicted on the Drawings are subject to change based on finished grade.

Supplement SECTION 01040.03 – GENERAL with the following:

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

- 1) AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) ANSI Z60.1 (1996) Nursery Stock
- 2) L.H. BAILEY HORTORIUM (LHBH) LHBH (1976) Hortus Third
- 3) U.S. DEPARTMENT OF AGRICULTURE (USDA) DOA SSIR 42 (1996) Soil Survey Investigation Report No. 42, Soil Survey Laboratory Methods Manual, Version 3.0

Supplement SECTION 01040.04 – COORDINATION with the following:

Notify Owner at least seven (7) working days prior to installation of plant material.

The Owner or designee will inspect plant materials at the project site and approve them. Tag plant materials for size and quality.

Layout - Stake out approved plant material locations on the project site before digging plant pits or beds. Owner or designee will check staking and may adjust plant material locations to meet field conditions.

Supplement SECTION 01040.10 – MATERIALS - GENERAL with the following:

- 1) Pre-Construction Submittals
 - A. State Landscape Contractor's License
 - B. Time Restrictions and Planting Conditions
 - C. Indicate anticipated dates and locations for each type of planting
- 2) Product Data
 - A. Local Species Materials - Submit documentation on nursery letterhead indicating species and source of all nursery stock, bare root plants, seed mix and live cuttings.

Supplement SECTION 01040.12 – PRODUCT DELIVERY, STORAGE AND HANDLING with the following:

- 1) Branched Plant Delivery
Deliver with branches tied and exposed branches covered with material which allows air circulation. Prevent damage to branches, trunks, root systems, and root balls and desiccation of leaves.

2) Plant Labels

Deliver plants with durable waterproof labels in weather-resistant ink. Provide labels stating the correct botanical and common plant name and variety as applicable and size as specified in the list of required plants. Labels shall be legible for a minimum of 21 days after delivery to the planting site.

3) Storage

Plant Storage and Protection: Do not store plants for more than 5 days on-site prior to installation. Store and protect plants not planted on the day of arrival at the site as follows:

- A. Shade and protect plants in outside storage areas from the wind and direct sunlight until planted.
- B. Heel-in bare root plants.
- C. Keep plants in a moist condition until planted by watering with a spray.
- D. Do not store plant material directly on concrete or bituminous surfaces.

4) Handling

Do not drop or dump plants from vehicles. Avoid damaging plants being moved from nursery or storage area to planting site. Handle plants carefully to avoid damaging or breaking the earth ball or root structure. Remove damaged plants from the site.

5) Time Limitation

The time limitation from delivery to installing plant material shall be a maximum of 5 days.

Supplement SECTION 01040.19 - PLANTS with the following:

1) Regulations and Varieties

Furnish nursery stock in accordance with ANSI Z60.1, except as otherwise specified or indicated. Each plant or group of planting shall have a "key" number indicated on the nursery certifications of the plant schedule. Furnish plants grown under climatic conditions similar to those in the locality of the project or sourced as local species materials. Plants of the same specified size shall be of uniform size and character of growth. All plants shall comply with all Federal and State Laws requiring inspection for plant diseases and infestation. Substitutions are not allowed without prior approval by the Owner.

The plant list shall be installed in quantities and locations as stated on the Drawings.

2) Shape and Condition

Well-branched, well-formed, sound, vigorous, healthy planting stock free from disease, sunscald, windburn, abrasion, and harmful insects or insect eggs and having a healthy, normal, and undamaged root system.

- A. Deciduous Trees and Shrubs: Symmetrically developed with straight boles or stems, and free from objectionable disfigurements.
- B. Evergreen Trees and Shrubs: Well developed symmetrical tops with typical spread of branches for each particular species or variety.
- C. Willow live stake and cottonwood poles shall not be dried out, split, or in a decomposed condition.

3) Plant Size

Minimum sizes measured after pruning and with branches in normal position, shall conform to measurements indicated, based on the average width or height of the plant for the species as specified in ANSI Z60.1. Plants larger in size than specified may be provided with approval of the Owner. When larger plants are provided, increase the ball of earth or spread of roots in accordance with ANSI Z60.1.

Supplement SECTION 01040.49 - GENERAL PLANTING with the following:

Planting is expected to occur prior to or at the beginning of the first growing season after construction. Do not plant when ground is frozen, snow covered, or when air temperature exceeds 90 degrees Fahrenheit.

- 1) All plants shall be guaranteed for one year beginning on the date of inspection by the Owner to commence the plant establishment period, against defects including death and unsatisfactory growth, except for defects resulting from weather conditions unusual for the warranty period.
- 2) Plant material replacement:
 - A. Replace, in accordance with the Drawings and specifications, all plants that are dead or have lost 20 percent or more of their branches, as determined by the Owner and designee, are in an unhealthy or unsightly condition, and have lost their natural shape due to dead branches, or other causes due to the Contractor's negligence. The cost of such replacements is at the Contractor's expense. All replacement plants shall be guaranteed for one (1) year after installation, unless otherwise specified.
 - B. Remove and immediately replace all plants, as determined by the Owner, to be unsatisfactory during the initial planting installation.

Supplement SECTION 01040.50 - SPECIAL PLANTING REQUIREMENTS with the following:

1) General

Circling and kinked roots should be straightened or severed. Bare root plants should be installed so that their root system is evenly distributed in the planting hole. The bottom of the trunk flare shall be at or above the finished grade. Tamp down soil firmly around plant to remove any air pockets. Backfill shall not be compacted to a density that inhibits root growth.

2) Willow Live Staking

Each live stake shall have a minimum of 2 buds exposed above finished grade. Buds shall point upward, reflecting the natural orientation for growth. At least 75-80% of the cutting's length should be planted in the ground. Soil shall be firmly pressed around cutting to reduce moisture loss

The basal ends of the stakes must be marked clearly in some manner so workers can easily determine which end to plant. The rooting end of all live stakes shall be cut at a 45-degree angle. Stakes shall be planted before rooting occurs. Live stakes shall be collected and installed between September 15 and March 31. Cuttings must be kept covered and moist during transport and storage before planting.

Supplement SECTION 01040.56 - CLEAN UP with the following:

Areas that have been damaged from the planting operation shall be restored to original condition at the Contractor's expense.

Excess and waste material shall be removed from the installed area and shall be disposed offsite at an approved landfill, recycling center, or composting center. Adjacent paved areas shall be cleared.

Supplement SECTION 01040.79 - FINAL INSPECTION with the following:

Final inspection will be made upon written request from the Contractor at least 10 days prior to the last day of the one-year warranty period. Final acceptance will be based upon a minimum 90% survival of all potted or bare root stock and satisfactory cover of cuttings.

When work is found to not meet design intent and specifications, maintenance period will be extended at no additional cost to Owner until work has been completed, inspected and accepted by Owner.

Supplement SECTION 01040.80 - MEASUREMENT with the following:

Re-vegetation plantings will be measured per plant installed.

Replace SECTION 01040.90 - PAYMENT with the following:

Payment for Planting will be made at the Contract per plant price.