90% DRAFT SPECIAL TECHNICAL PROVISIONS

FOR

KAHLE WATER QUALITY BASIN IMPLEMENTATION

NEVADA TAHOE CONSERVATION DISTRICT

DOUGLAS COUNTY, NEVADA

FOR USE WITH:

Standard Specifications, as referred to in these Special Technical Provisions, are the Standard Specifications for Public Works Construction – Douglas County "Orange Book," current edition. These Special Technical Provisions are supplemental to the Standard Specifications.

PREPARED BY:

Nevada Tahoe Conservation District
400 Dorla Court
Box 915
Zephyr Cove, NV 89448

Meghan Kelly, P.E.
NV P.E. #: CE 020851

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SECTION 100 – GENERAL

101.01 Description
The work described herein shall conform to the Contract Documents, Project Plans, Standard Specifications, these Special Technical Provisions, and Project Permits. Standard Specifications, as referred to in these Special Technical Provisions, are the Standard Specifications for Public Works Construction – Douglas County "Orange Book," current edition. These Special Technical Provisions are supplemental to the Standard Specifications.

In case of conflict between the Standard Specifications and these Special Technical Provisions, the Special Technical Provisions shall govern, take precedence over, and be used in lieu of such conflicting portions.

SECTION 102 – CONTRACTOR QUALIFICATIONS

102.01 Description
In addition to any bidder qualifications noted elsewhere in the Contract Documents, Project Plans, Standard Specifications, and these Special Technical Provisions, each bidder shall attach sufficient documentation to the bid forms to clearly demonstrate his/her ability to meet the minimum experience qualifications stated in this section. The following items shall be included in the bid submittal:

1. Project descriptions of similar projects to the Kahle Water Quality Basin Implementation Project including:
    a. Location of projects
    b. Dates project was initiated and completed by the Contractor
    c. Description of size of restoration and any road crossings
    d. Total contract costs
    e. Client/agency contact in responsible charge (owner of the work)
2. Other references demonstrating Contractor qualifications on similar projects. These references shall only include regulatory, funding and/or local agency representatives or licensed Professional Engineers working on similar projects within the Lake Tahoe Basin.
3. Contractor's license number, classification, & status.

The above items shall clearly demonstrate the Contractor's qualifications to perform the work associated with the Kahle Water Quality Basin Implementation Project and past similar experience on other projects. The experience to be demonstrated above is required to meet the following minimum requirements:

A. The Contractor and his/her designated Foreman is required to have successfully performed a minimum of one (1) project, within the past five (5) years, which included work components of a similar scope and nature as to that which is indicated herein consisting of minimum project total costs of $750,000 and contract times exceeding 20 days.
B. The Contractor and his/her designated Foreman is required to have successfully performed and completed up to one (1) project, within the past five (5) years, which involved working within the Lake Tahoe basin.
C. All landscape and revegetation work required as part of this project shall be performed by a licensed Landscape Contractor (C-10 in Nevada). The licensed Landscape Contractor is required

to have successfully performed and completed a minimum of one (1) project, within the past five (5) years, which included landscape and revegetation work components of a similar scope and nature as to that which is indicated herein.

Failure of the Contractor to submit the information required or to demonstrate experience as required in this section shall warrant the Contractor's bid submittal incomplete. The determination of whether the Contractor meets the qualifications is at the sole discretion of the Nevada Tahoe Conservation District.

102.02 Measurement and Payment
There will be no compensation for providing required bid documents and support materials for a complete bid package for this project. Incomplete bid packages or bid packages received after the submittal deadline will not be considered.

SECTION 110 – ORDER OF WORK

110.01 Description
The construction of this project shall conform to the Contract Documents, Plans, Standard Specifications, and these Special Technical Provisions. Prior to commencing work, the Contractor shall submit to the Engineer a sequence and schedule of work for review and acceptance in accordance with the Standard Specifications and these Special Technical Provisions. The schedule shall include all work necessary for a full and complete project as shown on the 100% Design Plans and described in these Special Technical Provisions.

The project requires coordination with several different public entities (Douglas County, the US Forest Service, the Nevada Department of Transportation, the Nevada Tahoe Conservation District, Nevada Division of Environmental Protection (NDEP), and the Tahoe Regional Planning Agency). The Nevada Tahoe Conservation District will assist the contractor in coordinating with all entities public and private. The Contractor shall be solely responsible for coordinating with all contractors working in the area whether listed in these Special Technical Provisions or not.

The order of work shall be as follows:

1. Verification of all underground utilities within the project area.
2. Installation of Temporary Traffic Control Measures.
3. Construction of all temporary erosion control measures as shown on the project plans and as approved by the Engineer and Tahoe Regional Planning Agency (TRPA).
4. Construction of the basin as shown on the project plans and as described in these Special Technical Provisions.
5. Construction of the storm drain conveyance as shown on the project plans and as described in these Special Technical Provisions.
6. Restoration of entire project site:
    a. Restoration/revegetation of all disturbed areas.
    b. Road sweeping.
    c. Restoration of staging and access.
    d. Removal of temporary BMPs with approval of Engineer.
7. Pre-Final site walk with the Engineer, Contractor, Douglas County, US Forest Service, NDOT, and TRPA.
8. Development of project punchlist (by Engineer).

9. Completion of punchlist items.
10. Final site walk with Engineer and Contractor.

The Contractor may submit a revised order of work to the Engineer for review and approval. In the event the Engineer does not accept the Contractor's proposed order of work, the above order of work shall hold for the contract.

The Contractor will be responsible for meeting all the requirements of all the regulations and requirements set forth by TRPA, Douglas County, NDEP, USFS, NDOT, and all other permitting and funding agencies. In the event fines are levied by any of these agencies, the Contractor shall be solely responsible for all costs associated with these fines. In the event the project receives a stop work order by any entity, the Contractor will not be granted any additional working days. The working days during which no work is performed will be counted as contract working days, even though the Contractor is unable to work due to the stop work order.

The Contractor shall submit a construction schedule in accordance with the provisions of this section, these Special Technical Provisions and the Standard Specifications for review and approval by the Engineer.

110.02 Measurement and Payment
Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for all work associated with all work involved in provisions of this section, complete in place as shown on the Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer, shall be considered as included in prices paid for the various contract items of work involved; no additional compensation will be allowed.

SECTION 120 – PROJECT PERMITS

120.01 Description
This project is located within Douglas County, Nevada and the Lake Tahoe Basin, which is regulated by Douglas County, the Tahoe Regional Planning Agency (TRPA), and the Nevada Division of Environmental Protection (NDEP). Additionally the project is being funded by the US Forest Service (USFS) and occurs on portions of USFS land and requires the issuance of a USFS Special Use Permit (SUP).

The contractor will be responsible for all permit requirements upon receipt of the permits for the project and no additional compensation shall be allowed for. The project permit(s) will have specific requirements covering work to be performed under this contract. The Contractor shall meet the permit(s) requirements for grading season restrictions, stormwater discharges, Best Management Practices (BMPs), selection of staging and storage areas, dewatering practices, revegetation and restoration requirements, and all other agency approval conditions. The Contractor shall note that the project is located near sensitive lands (TRPA Stream Environment Zone and US Army Corp of Engineers Wetlands) and thus special care is required during construction.

In addition to TRPA and NDEP stormwater discharge and temporary erosion control and BMP requirements, the Contractor shall be responsible for complying with all Douglas County and US Forest Service permits and other agency requirements and responsibilities as provided in the project permit(s), Contract Documents, Plans, Standard Specifications, these Special Technical Provisions, and the SWPPP.

The Contractor is required to procure a site improvement permit from Douglas County prior to initiating any work on the site.

The Contractor shall maintain a copy of all permit(s) at the construction site and shall make the permit(s) available to operating personnel during construction activities; also upon request these permit(s) must be made available for public inspection.

The Contractor shall maintain a set of stamped plans and special provisions at the construction site and shall make them available to operating personnel during construction activities; also upon request, plans and special provisions must be made available for public inspection.

It shall be the Contractor's responsibility to completely inform him or herself of the conditions of all Project Permit(s) and conduct construction operations accordingly. Any requested change to an agency's permit conditions of approval, proposed by the Contractor, shall be submitted to the Engineer for transmittal to TRPA, NDEP, USFS or other pertinent agency for their approval. The Contractor shall also be responsible for adhering to the requirements of the TRPA Code of Ordinances relating to this project. Should conflicts arise between the Standard Specifications and the TRPA Code of Ordinances, the TRPA Code of Ordinances shall supersede the Standard Specifications.

The **Contractor is responsible for coordinating the pre-grading meeting with TRPA** to allow for review of the project site and determination of the adequacy of temporary erosion control measures and BMPs deployed by the Contractor. The Contractor shall coordinate the meeting so that the Contractor, Engineer, TRPA, USFS, Douglas County, and NTCD staff are present. The Contractor shall follow the requests of the reviewing environmental agencies as necessary to bring the construction site temporary erosion control devices and BMPs into compliance with the permit(s) requirements, regulations, and other provisions of these Special Technical Provisions, and the SWPPP. The Contractor shall maintain all temporary erosion control devices and BMPs until all work is complete and the project site is stabilized per acceptance of the Engineer and all relevant agencies in review of the project site at the "Final Walk Through". The Contractor can remove temporary erosion control devices and BMPs only upon approval by the Engineer, TRPA, and USFS to do such. Attention is directed to the revegetation requirements found elsewhere in these Special Technical Provisions.

The Contractor shall comply with all noxious weed requirements per the United States Forest Service (USFS) and other regulatory agencies. These requirements include but are not limited to the following:

- All tools, equipment and vehicles used for project implementation are required to be weed-free.
- All tools, equipment and vehicles will be cleaned of all attached mud, dirt, and plant parts. This will be done at a vehicle washing station or steam cleaning facility (power or high pressure cleaning) before the equipment and vehicles enter the project area, and before vehicles enter the Lake Tahoe Basin (if they originate from outside the Basin).
- All soil, fill, gravel, rock, mulch, seed, organic matter or other imported materials are required to be weed-free. Use onsite soils, gravel, rock, or organic matter when possible. Otherwise, obtain materials from pits, quarries, nurseries, and other sources that are certified or have been determined to be weed-free by the noxious weed coordinator of the USFS Lake Tahoe Basin Management Unit.
- Minimize the amount of ground and vegetation disturbance in the construction areas. Reestablish vegetation on all disturbed bare ground to minimize weed establishment and infestation.

- Use weed-free mulches, and seed sources. Salvage topsoil from project area for use in onsite revegetation, unless contaminated with noxious weeds. All activates that require seeding or planting must utilize locally collected native seed sources when possible. Plant and seed material should be collected from or near the project area, from within the same watershed, and at a similar elevation when possible. Persistent non-native such as Phleum pretense (cultivated timothy), Dactylis glomerata (orchard grass), or Lolium spp. (ryegrass) will not be used. This requirement is consistent with the USFS Region 5 policy that directs the use of native plant material for revegetation and restoration for maintaining "the overall national goal of conserving the biodiversity, health, productivity, and sustainable use of forest, rangeland, and aquatic ecosystems." Seed mixes should be accepted by the Revegetation Specialist.
- Staging areas for equipment, materials, or crews shall not be sited in weed infested areas.

The project is located adjacent to a sensitive land capability class area (1b SEZ) as classified by the TRPA. Therefore the Contractor will be required to use extreme caution in all activities associated with the project. The Contractor will be required to meet all of the requirements shown on the Plans, as described in the Project Permit(s), these Special Technical Provisions and as stated in the SWPPP. Refueling of equipment shall only be allowed on paved areas and not within the active project work area.

The Contractor is further required to only use "low impact equipment" for this project. No equipment having a ground pressure that will disturb and/or compact the ground (generally ground pressures less than 25 psi) will be allowed off of paved areas, or designated temporary truck haul routes under any circumstance. All equipment on the project site, (off paved areas or designated truck haul routes), shall meet this low pressure requirement. TRPA prefers the use of "rubber track" equipment as low impact equipment and the Contractor is encouraged to use "rubber track" equipment in sensitive land capability areas. The Contractor shall provide detailed information, (manufacture's data brochure, or other product specific materials), to the Engineer for review and acceptance prior to any equipment being mobilized to the project site and placed in the work.

The Contractor shall meet all of the requirements of the SWPPP, and the project permit(s) as issued by the permitting agencies, and any provisions for rights-of-entries issued by land owners. The Contractor will be responsible for adhering to all requirements of the permit(s), and no additional compensation will be allowed for. The following project permits may be found as appendices to the Contract Documents:

- Tahoe Regional Planning Agency
- US Forest Service – Special Use Permit
- Nevada Department of Environmental Protection – *Stormwater General Permit*
- Douglas County – *Site Improvement Permit*

120.02 Measurement and Payment

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for all work associated with performing all the work involved in provisions of this section, complete in place as shown on the Project Plans, as specified in the Contract Documents, Project Permits(s), Standard Specifications, these Special Technical Provisions, the SWPPP, and as directed by the Engineer, shall be considered as included in prices paid for the various contract items of work involved; and no additional compensation will be allowed for.

SECTION 125 – STORM WATER POLLUTION PREVENTION COMPLIANCE

125.01 Description

The Contractor shall implement the requirements for erosion control due to storm water and construction related runoff from construction sites as established under Nevada Revised Statutes (NRS) and Nevada Administrative Code (NAC) 445A. It shall be the Contractor's responsibility to provide day-to-day operational control of activities and the implementation of Best Management Practices (BMPs) that are necessary to control and reduce the pollution of Waters of the US from stormwater discharges and other pollutants and runoff associated with construction activities, and to ensure compliance with the requirements of National Pollutant Discharge Elimination System (NPDES) permit coverage. Work shall include, but is not limited to:

- Complete and submit a Notice of Intent (NOI) including any permit and filing fees
- Develop and Implement a Storm Water Pollution Prevention Plan (SWPPP)
- Furnishing all materials
- Implementing all practices and installing, constructing and maintaining all BMPs and temporary and/or permanent control measures for the duration of the project
- Submit a Notice of Termination (NOT) upon completion of the project

For coverage under the NDEP stormwater general permit, an NOI must be submitted no later than fourteen (14) days prior to the start of construction. The Contractor shall complete the NOI form and electronically file it with NDEP on-line at the following website: https://genpermits.ndep.nv.gov/ After filing the NOI electronically the applicant must print, sign and submit the confirmation page, including any permit and filing fees, to NDEP by mail to the following address:

Stormwater Coordinator
Bureau of Water Pollution Control
Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701
Phone: (775) 687-4670

In accordance with NAC 445A.269, NDEP may require a general stormwater permit holder to apply for and obtain an individual permit.

125.02 Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) shall include, but is not limited to:

- Project Description
- Stormwater Controls
- Material Storage Areas
- Stabilization Practices
- Erosion and Sediment Controls
- Structural Practices
- Spill Contingency Plan
- Post Construction Stormwater Management
- Non-Storm Water Discharge Maintenance
- Maintenance and Inspection Requirements

- Dewatering and Diversion Requirements
- Watering/Dust Control Requirements
- Sampling and Analysis Plan

The SWPPP will describe and ensure the implementation of practices that will assure compliance with the terms and conditions of all of the project permits in accordance with good Engineering practices and cost effective approaches as outlined in Regional BMP Manuals, TRPA handbook, Nevada Contractors Field Guide for Construction Site BMPs and other related documents.

A draft SWPPP is provided in the appendix of the Contract Documents. This draft plan will provide the Contractor with a basis for the requirements of the project SWPPP. **The Contractor, within ten (10) days after the effective date of the executed Contract, shall acknowledge and certify the project SWPPP.** Any requested revisions to the draft SWPPP (i.e. amendments) shall be submitted to the Engineer for review and acceptance, including applicable permitting agencies prior to any modifications being implemented by the Contractor. Such requested modifications shall be noted in red on the original plan (or other suitable format that is clear). Subcontractors shall also sign (i.e. certify) the SWPPP and must comply with the requirements of all of the project permits under the supervision of the Contractor. Attention is directed to Section 160, "Temporary Erosion Control Measures and BMPs," of these Special Technical Provisions and the applicable Project Plan sheets for Temporary Erosion Control and Dewatering and Diversion operations.

A copy of the Contractor's NOI, SWPPP, and applicable inspection and maintenance records shall be provided to the Engineer at least seven (7) calendar days prior to start of construction and shall be posted at the construction site with other project records; upon request these records, NOI, and SWPPP must also be made available for public inspection.

125.03 Measurement and Payment

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for all work associated with performing all the work involved in provisions of this section, complete in place as shown on the Project Plans, as specified in the Contract Documents, Project Permit(s), Standard Specifications, these Special Technical Provisions, the SWPPP, and as directed by the Engineer, shall be considered as included in prices paid for the various contract items of work involved; and no additional compensation will be allowed for.

SECTION 130 – WEED MANAGEMENT

130.01 General

This item shall consist of removing noxious and invasive weeds from active construction areas prior to construction and/or avoiding areas of weed infestations.

130.02 Site-Specific Methods

The following noxious (*Carduus nutans*) and invasive weeds have been located on site and shall be treated as specified below:

Scientific Name	Common Name	Treatment
Bromus tectorum	Cheatgrass	For small populations (25 ft^2 or less), mow tops with a weed eater before plants set seed. Remove individual stems and dispose of offsite. For larger stands submit a plan to be reviewed and accepted by the RS.
Carduus nutans (Noxious)	Musk thistle	For rosettes, remove plants by digging out the rosette and tap root. Otherwise remove flowering heads before seed set and dispose of offsite.
Desurainia pinnata	Tansy mustard	Mow plants from top to bottom with a sickle bar mower. Leave resultant organic matter in place. Do not allow plants to flower or set seed.
Sysimbrium altissimum	Tumble mustard	Mow plants from top to bottom with a sickle bar mower. Leave resultant organic matter in place. Do not allow plants to flower or set seed.
Verbascum thapsus	Mullein	For rosettes, remove plants by digging out the rosette and tap root. Remove stalks prior to flowering and seed set. Dispose of material offsite.

Additional noxious or invasive species not specifically identified in these Special Provisions shall be identified in the pre-bid walkthrough by the Revegetation Specialist (RS) who must also be a Certified Professional Sediment and Erosion Control (CPESC).

130.03 Measurement and Payment

Weed Management, as described above shall be considered one bid item and shall be measured on a lump sum basis, completed and accepted by the Engineer as conforming to all the requirements in the complete work. Full compensation for furnishing labor, materials, tools, equipment, and incidentals for all work involved in provisions of this section, complete in place as shown on the Project Plans and as specified in the Contract Documents, Project Permits(s), Standard Specifications, and these Special Technical Provisions and as directed by the Engineer, shall be considered as included in prices paid for the various contract items of work involved; no additional compensation will be allowed.

SECTION 135 – MOBILIZATION & DEMOBILIZATION

135.01 Mobilization

This item shall consist of mobilization of the Contractor's forces which shall include obtaining all bonds, insurance, and permits; purchasing, transportation, setup, staging and storage of equipment and materials; establishing a field office at the project site; plus furnishing all labor, materials, tools, equipment, and incidentals required for performance and completion of the work as shown on the Project Plans, and specified in the Contract Documents, Project Permit(s), Standard Specifications, these

Special Technical Provisions, the SWPPP, and as directed by the Engineer. Mobilization shall also include but not be limited to the following items:

• Provide on-site sanitary facilities;
• Post all Occupational Safety and Health Administration (OSHA) required notices;
• Post all prevailing wage requirements;
• Prepare and transmit all submittals as noted on the Plans, and as specified in the Contract Documents, Standard Specifications, and these Special Technical Provisions;
• Wash and clean all tools and equipment prior bringing on site, as specified in the Project Permits, Contract Documents, Standard Specifications, these Special Technical Provisions, and as required by TRPA.

135.02 Project Sign
Mobilization shall include construction and erection of one project sign. The project sign shall be constructed in accordance with details provided within the Project Plans, and located as directed by the Engineer. The project sign shall be constructed within ten (10) working days after notice to proceed. Maintenance of the project sign is the Contractor's responsibility until the sign is removed by the Contractor at the end of the construction contract. For this project, one (1) project sign will be erected.

135.03 Demobilization
Demobilization shall consist of the removal of all materials, equipment, signage, temporary pollution control materials, trash, debris, and all other items imported to or generated on-site as a result of the work completed by the Contractor and his/her operations. Furthermore, demobilization shall include cleaning the existing drainage inlets, sediment caps, pipes, and culverts within the project boundary. Furthermore, demobilization shall include repairing all pavements, walkways, infrastructure, signage, landscape, trails, or other public or private facilities damaged by construction activities to their pre-construction conditions using comparable materials as accepted and directed by the Engineer. All disturbed areas shall be returned, as nearly as possible, to the lines and grades which existed prior to construction except where modified as part of the work so designated on the Plans. Attention is directed to Section 335, “Cleanup,” of the Standard Specifications.

At the conclusion of work, final acceptance of the Project improvements must be in the form of a written “Notice of Completion.”

135.04 Record Drawings
The Contractor shall keep accurate records on a set of project black line prints (22 inches x 34 inches) of all additions and deletions to the work and of all changes in location, elevation, and character of the work not otherwise shown or noted on the Project Plans. NTCD will furnish up to six (6) sets of full size black line prints for use at no cost to the Contractor.

Record drawings plans shall be provided to the Engineer for acceptance within one (1) calendar month after project completion as defined by the Engineer. Release of retention monies will not occur prior to submittal and acceptance of the final record drawings, which shall be a comprehensive set of Record Drawings detailing all aspects of the Project. Two (2) sets of full sized (22x34) hard copy record drawings shall be provided with changes to the original Contract work shown in red color, including revision clouds. All redline changes and details to be shown on the record drawings shall include, but not be limited to, difference in quantities of the original plans vs. actual installation (as appropriate), modifications to the location and elevations of public utility and storm drainage facilities, any utility

relocations, any signage or traffic control devices, and any other modifications, additions or adjustments to any other facilities not shown or as modified on the Project Plans.

Record drawings plans shall be signed and dated by the Contractor or the sub-contractor that actually constructed the facility. In addition, company names of the Contractor and sub-contractors shall be added to the Title Sheet of the record drawings. Should the Contractor not provide this information to the Engineer in the time specified in this section, or to the acceptance of the Engineer (record drawings do not note all changes to the project) the Engineer will not accept the record drawings, retention shall not be released on the project, the record plans will be returned to the Contractor and the Contractor shall resubmit the record drawings to meet the requirements of this section to the acceptance of the Engineer.

135.05 Measurement and Payment

Mobilization and Demobilization, as described above shall be considered one bid item. Project Sign, as described above shall be considered as included with Mobilization and Demobilization and no additional compensation shall be allowed for. Record Drawings, as described above shall be considered as included with Mobilization and Demobilization and no additional compensation shall be allowed for. Mobilization and Demobilization shall be measured on a lump sum basis, completed and accepted by the Engineer as conforming to all the requirements in the complete work.

The contract price paid for Mobilization and Demobilization shall include full compensation for mobilizing the Contractor's forces which shall include but not be limited to: bonds, insurance, permits, record drawings, purchasing, transporting equipment, setup, temporary power source and installation, project signs, establishment of a field office, sanitation facilities, and furnishing all labor, materials, tools, equipment, and incidentals required for performance and completion of the work; including full compensation for operations required to demobilize the Contractor's forces which shall include but not be limited to: the removal of all equipment, materials, debris, project signs, field office, sanitation facilities, temporary BMPs, tree protection fencing, and project clean-up; for the contract lump sum price bid, as shown on the Plans, in accordance with the Contract Documents, Standard Specifications, these Special Technical Provisions, SWPPP, project permit(s), and to the satisfaction of the Engineer.

Partial payments paid for Mobilization and Demobilization shall be made as follows:

- When 5% of the total original contract amount is earned from other bid items, 50% of the amount bid for mobilization/demobilization will be paid.
- When 10% of the total original contract amount is earned from other bid items, 100% of the amount bid for mobilization will be paid.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 140 – STAGING AND STORAGE

140.01 Staging and Storage Areas

The staging and storage areas as identified on the Project Plans are allowed for use by the Contractor in accordance with the Contract Documents, Project Permit(s), SWPPP, Standard Specifications, and these

Special Technical Provisions. These staging/storage areas are controlled by public entities and shall be maintained at all times in a clean and safe environment. The Contractor's use of the designated staging/storage areas shall be limited to and/or controlled by the time allowances and other restrictions as noted on the Project Plans, Project Permits, rights of entry, and elsewhere in these Special Technical Provisions.

If the Contractor wishes to make use of additional areas, for staging/storage activities, not identified on the Plans, it will be the Contractor's sole responsibility to secure use of these areas with agreements with the individual property owners; and file a copy of said authorization with the Engineer. The Contractor shall further be responsible for establishing all necessary and required temporary erosion control protections and updating the Project SWPPP. The Contractor will be responsible for bearing all costs with securing these areas, and all efforts associated with the approvals, setup, maintenance, decommissioning and restoration, with no additional compensation allowed for.

The Contractor shall be responsible for appropriate security and safety measures at all staging/storage areas to protect property and the public.

Set-up, use, and restoration of all staging/storage areas requires the Contractor to protect all existing facilities, equipment, vegetation, utilities (above and below ground/grade) and surface features (such as, but not limited to, fences, posts, signs, boulders, landscaping, slopes, etc.) in place. Should the Contractor's operations damage any of these items the Contractor shall replace, in kind, the damaged or destroyed item. The damage or destruction of any item will be determined by the Engineer during the course of construction or at the final punchlist development. In the event the Contractor needs to relocate any item (boulder, fence, etc.) the Contractor shall replace the item to its original location. If the relocated item is damaged, as determined by the Engineer, the Contractor will be required to replace the damaged item with an in-kind replacement. No additional compensation will be allowed for any relocation, or replacement of damaged items, this will be at the sole cost to the Contractor.

The Contractor shall not proceed with any construction until truck haul routes and temporary haul roads have been identified and accepted to the satisfaction of the Engineer, NTCD, and TRPA. **The Contractor shall submit four (4) copies of a proposed truck haul route plan, along with the proposed project construction schedule and traffic control plan, to the Engineer for review and acceptance at least seven (7) calendar days prior to the scheduled Pre-Construction Meeting.** Any days lost due to the lack of an accepted truck haul plan will be charged against the Contractor's allowable work days. The Contractor's truck haul route plan shall include, but not be limited to, the following:

- Proposed construction zone;
- Proposed storage areas;
- Location of flaggers (to control truck access, where applicable);
- Construction phasing (including phasing of intersection construction and detours, if any); and,
- Proposed truck route (including the location of other construction projects which impact, or may be impacted by, the proposed haul route.)

All staging/storage areas shall comply with the SWPPP and TRPA's requirements for BMPs while storing or stockpiling materials. The Contractor shall be responsible for locating staging/storage areas and will need to install all temporary erosion controls and BMPs and maintain them at all times during construction and until project closeout. The limits of the staging/storage areas shall be reviewed and accepted by the Engineer, NTCD, Douglas County, and TRPA prior to use. All necessary temporary BMPs

shall be installed at the staging/storage areas prior to the TRPA Pre-Grade Meeting and will be inspected during said meeting to ensure proper installation and controls are in place.

At the completion of the work or when no longer required for use, all construction staging/storage areas shall be cleared of all equipment, tools, materials, trash, debris, etc to produce a clean area and returned, as nearly as possible, to the lines and grades which existed prior to construction.

The restored staging/storage areas, if areas exist as an unpaved condition, shall be treated with the final Revegetation Treatment Type as shown on the Plans (if any areas for Staging/Storage are used and not shown on the Revegetation Plans, the Contractor shall treat the area as directed by the Engineer) and as described in these Special Technical Provisions. For storage and staging areas in paved areas, the areas shall be swept clean and returned to the existing condition, prior to use. The Engineer will inspect the paved areas, and if damage has occurred, whether by fault of the contractor's operations or not, the contractor will be required to make remedial action, including complete pavement restoration. No additional compensation shall be allowed for any remedial restoration work of paved areas, including complete replacement of the pavement areas.

140.02 Measurement and Payment

Staging and Storage shall be measured on a lump sum basis, accepted by the Engineer as conforming to all the requirements in the complete work. The contract price paid for Staging and Storage shall include set-up of all staging and storage areas and installation of any applicable temporary erosion control measures and BMPs (except where otherwise paid for) and furnishing all labor, materials, tools, equipment, and incidentals required for performance and completion of the work; including full compensation for operations required to remove and dispose of all materials, clean-up, and restore the site to its pre-construction condition, and re-pave and stripe the parking area as shown on Plans; for the contract lump sum price bid, as shown on the Plans, in accordance with the Contract Documents, Standard Specifications, these Special Technical Provisions, SWPPP, Project Permit(s), and to the satisfaction of the Engineer.

The schedule for payment for Staging and Storage shall be in direct proportion to the percentage of work completed; i.e. if 20% of the project is completed, the Contractor may request payment for 20% of the lump sum total of the bid item for Staging and Storage. Measurement of the percentage of work completed shall be based on the percentage of work billed by the Contractor based on the total dollar amount of the contract bid price. Increases in the total contract price for any reason do not justify an increase in the lump sum price paid for any of the Staging, Storage and Access bid items. The Engineer reserves the right to adjust the partial payment amounts of these said bid items based on any adjustments made to other pay items on the payment request by the Engineer.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 145 – SUBMITTALS

145.01 General

Where required by the Contract Documents, project permit(s), Project Plans, SWPPP, Standard Specifications, elsewhere in these Special Technical Provisions, and/or as indicted herein, the Contractor shall provide submittals, and furnish shop drawings and material certifications to the Engineer for

review and acceptance. The required number of submittals, shop drawings and certificates shall be delivered within the specified time frames, including a transmittal letter in conformance with the Contract Documents, Standard Specifications, and these Special Technical Provisions. The transmittal letter at a minimum shall include the following information:

A. Submittal number and item description
B. Scheduled date of submittal
C. Specification section/item number
D. Supplier and/or manufacturer, plus contact information
E. Contractor or sub-contractor name and point of contact information

The number of copies to be submitted will be according to the following, unless specified elsewhere:

Construction Schedule, Traffic Control Plan, and Truck Haul Routes – 4 copies
Submittals & Shop Drawings – 4 copies
Certifications – 3 copies (conforming certifications will not be retuned)

145.02 Submittals Required

The following items require a submittal, shop drawing, and/or material certification for review and acceptance by the Engineer (this list may not be complete; it is the Contractors responsibility to review and be knowledgeable with all portions of the project permits, SWPPP, Plans, Contract Documents, Standard Specifications, and these Special Technical Provisions for any additional requirements):

- Construction Schedule
- Traffic Control Plan, and Truck Haul Routes
- SWPPP authorization, revisions, and dewatering plans
- NDEP NOI and NOT
- Equipment list for all equipment to be used, including the following minimum information:
    - Manufacturer and Model
    - Ground pressure rating (in psi)
    - Certification for washing/steam cleaning, including date
- Filter fence, sediment coir logs, and other BMP materials
- Construction limit fence
- Engineered fabrics
- Aggregates used in the work
- Origin and properties of cobble, boulders, and gravel used in the work
- Aggregate base (AB), imported fill, engineered fill, imported topsoil, and bedding materials
- Material testing reports and other data necessary to provide the Engineer with established laboratory values for optimum moisture and maximum dry density, for use of any native soils, imported soils and aggregates requiring density testing
- Storm drain pipe, valves, and fittings
- Shop drawings and installation specifications for structures, including the outlet structure, cutoff walls, and manholes
- Concrete mix design(s), admixtures, and curing agents
- Testing and QA/QC certifications for any precast concrete structures
- Asphalt mix design and other bituminous materials used in the work
- Utility boxes, manholes, grates, and other miscellaneous iron/steel products used in the work
- Loose aggregate samples as specified in Section 200 “Gravel, Cobble, Rock, Boulder & Other
- Aggregates”

- Revegetation items as specified in Section 260 “Revegetation”
- Record Drawings

145.03 Measurement and Payment
Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for all work associated with performing all the work involved in provisions of this section, complete in place as shown on the Project Plans, as specified in the Contract Documents, Project Permit(s), Standard Specifications, these Special Technical Provisions, the SWPPP, and as directed by the Engineer, shall be considered as included in prices paid for the various contract items of work involved; and no additional compensation will be allowed for.

SECTION 150 – TRAFFIC CONTROL

150.01 Traffic Control Plan
Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to complete and maintain all traffic control provisions in accordance with the Plans, Contract Documents, Standard Specifications and these Special Technical Provisions, and as directed by the Engineer during the life of the Contract. All traffic control devices and plans shall conform to the latest editions of the Manual on Uniform Traffic Control Devices (MUTCD).

The Contractor shall submit four (4) copies of a proposed traffic control plan, along with the proposed project construction schedule and truck haul route plan, to the Engineer for review and comments at least seven (5) calendar days prior to the scheduled Pre-Construction Meeting.

- The Contractor's traffic control plans shall include, but not be limited to, the following:
- Designated construction site Traffic Control Supervisor (TCS) name and contact information
- Proposed construction zone and existing speed limits
- All construction signing
- Location of flaggers
- Types and location of traffic control devices
- Construction phasing (including phasing of intersection construction and detours, if any)
- Lane crossovers between construction phases
- Special events scheduling
- Detours
- 8 5"x 11" individual access plans for multi-access properties
- Accommodations for pedestrians and bicycles
- Intersection Control Strategy

The Engineer and NTCD personnel will provide written comments and/or corrections to the Traffic Control Plans. If necessary, the Contractor and Engineer will meet to consider the comments and/or corrections to the plan prior to the preconstruction conference to resolve any issue relative to the traffic control plans. Upon resolution of all issues or acceptance of the traffic control plans as submitted, the Engineer shall accept the plans in writing.

Acceptance by the Engineer of the submitted traffic control plans shall in no way relieve the Contractor of the responsibility for safety requirements. Acceptance of the traffic control plans by the Engineer indicates that the plans generally appear to conform to the contract requirements. Such acceptance

shall in no way be construed as confirmation of the technical accuracy or adequacy of the contents of the plans and shall not relieve the Contractor of the obligation to institute traffic control measures in full compliance with contract requirements, and which function safely and correctly, and are in conformance with applicable statutes, ordinances, and regulations.

Immediately after set up of new or modified traffic control plans, the Contractor shall have the TCS inspect the controls installed in the field to determine if all required controls have been installed and are operating as intended. The TCS shall submit to the Engineer a written inspection report on the traffic controls conformance with the accepted traffic control plans and contract requirements. If the TCS determines that the traffic controls are not in conformance with the accepted traffic control plans, contract requirements, or determines that the traffic controls are not functioning as intended, the report shall address such deficiencies and make recommendations for changes.

If at any time it is determined that traffic controls have been modified or are not functioning as intended, the Engineer's representative may request Douglas County to evaluate the traffic controls installed by the Contractor. Additionally, if during construction, revisions to the accepted plans are necessary for safety or accommodation to traffic, the Engineer may require such revisions.

Any request by the Contractor to change the traffic control plans shall be submitted in writing at least five (5) working days prior to implementation. Such requests must be accepted in writing by the Engineer prior to implementation. Traffic control plans shall be maintained and must be current with the applicable phase of the work.

150.02 Traffic Control Notification

Upon acceptance of the traffic control plans, and at least 2 working days prior to beginning construction, the Contractor shall notify and submit a copy of the accepted traffic control plans to the Engineer, refuse collection agencies, and appropriate police and fire departments, REMSA, and any other emergency service as directed by the Engineer.

150.03 Traffic Control General Requirements

The Contractor shall designate a construction site TCS who shall be responsible for initializing, installing and maintaining all traffic control devices as shown on the traffic control plans, as specified in the MUTCD, applicable Project Plan sheets, and these Special Technical Provisions. The construction TCS shall be under the direct supervision of the construction site Superintendent. The construction TCS shall be available to be contacted by the Engineer's representative 24 hours a day, 7 days a week for the life of this contract, and shall be available to be present on the work site within sixty (60) minutes after notification by the Engineer's representative.

The Contractor shall submit the designated construction TCS's name, ATSSA certification number, and qualifications for the Engineer's acceptance at the preconstruction conference. The construction TCS shall:

- Understand the contract requirements
- Understand the MUTCD requirements
- During a work day, make at least 2 inspections of the condition and position of all traffic control devices in use each day
- Correct all traffic control deficiencies
- Report all corrective actions to maintain and protect traffic through the project

- Review work areas, equipment operation and storage, and material and handling and storage relative to traffic safety
- Furnish weekly written certification to the Engineer that inspections and reviews were conducted and that traffic control devices met or exceeded the contract requirements. Weekly certification shall include daily records of traffic control activities and reviews.

The Contractor shall not proceed with any construction until traffic control plans and the construction TCS have been accepted and the proper traffic control has been provided to the satisfaction of the Engineer. Any days lost due to improper traffic control or lack of a designated construction TCS, will be charged against the Contractor's allowable working days.

The Contractor shall maintain public traffic throughout the project in accordance with the accepted traffic control plan and perform work in a manner that assures the safety and convinces of the public and protect the people and property adjacent to the project site. During the course of construction, the Contractor shall be prepared to provide access through the construction zone for police, fire or emergency vehicles as necessary to reach their destination with a minimum delay.

Unless otherwise accepted by the Engineer, the Contractor shall maintain two-way traffic on all roads in and around the project area at all times for the duration of the project. The Contractor shall make special considerations for local access to and from properties adjacent to the construction zone. All efforts shall be made to minimize the inconveniences to the local residents and business owners. All driveways shall be opened and accessible at the end of a shift.

Traffic control devices shall be removed as soon as they no longer apply to the current construction activities, including daily operations.

150.04 Existing Signs

If existing traffic control device regulatory signage (i.e. stop, yield, speed limit, etc) is removed or damaged due to the Contractor's operations, the Contractor shall notify the appropriate jurisdiction maintenance department and immediately install temporary signs of the same designation as close as possible to the original location.

All existing traffic control devices removed to facilitate construction of the project improvements, shall be salvaged and replaced to its original condition as part of the work. Any materials that are damaged or lost shall be replaced in like kind. All traffic control devices require acceptance of the Engineer.

150.05 Measurement and Payment

"Traffic Control" shall be measured on a lump sum basis, completed and accepted by the Engineer as conforming to all the requirements in the complete work.

The contract price paid for "Traffic Control" shall include full compensation for preparation and submittal of a traffic control plan, and for furnishing all labor, materials, tools, equipments, and incidentals to perform all the work involved in provisions of this section, including but not limited to temporary construction signs and traffic control devices, flagging, flasher units, barricades, lights, electrical power, resetting of traffic signs and delineators, and all incidentals and materials necessary to provide these items for the duration of construction.

The schedule for payment for "Traffic Control" shall be in direct proportion to the percentage of work completed; i.e. if 20% of the project is completed, the Contractor may request payment for 20% of the lump sum total of the bid item for traffic control. Measurement of the percentage of work completed per each phase shall be based on the percentage of work billed by the Contractor based on the total dollar amount of the contract bid price. Increases in the total contract price for any reason do not justify an increase in the lump sum price paid for any of the traffic control bid items. The Engineer reserves the right to adjust the partial payment amounts of these said bid items based on any adjustments made to other pay items on the payment request by the Engineer.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 155 – CONSTRUCTION STAKING

155.01 Description
Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to complete construction staking in accordance with the Standard Plans and Specifications and these Special Technical Provisions.

NTCD shall furnish one set of stakes and/or marks to establish lines and grades required for the completion of the work as shown on the Plans and as specified in the Standard Specifications and these Special Technical Provisions. The Contractor is responsible for notifying the Engineer at least seven (7) days in advance of when staking is needed. The Contractor will be responsible for any and all additional construction staking necessary for the full and complete construction of the Project. The Contractor shall be solely responsible for maintenance and protection of the survey stakes or marks. Contractor's construction staking will be verified by the Engineer, at the Engineer's discretion.

NTCD shall furnish labor and surveying equipment necessary for staking the Project including the following:

- Control points,
- Limits of grading and grade breaks,
- Stormwater infrastructure locations and offsets,
- Basin berm alignment and offsets,
- Rock dissipator location and offsets,
- Ditch fill extents, and
- Pipe alignment.

The contractor shall provide any survey in excess of the aforementioned items.

All stakes and survey markers will be conspicuously marked with flagging tape or paint. The Contractor shall inform personnel and any subcontractors of the importance of the preservation of all survey markers. The Contractor shall be responsible for protecting and maintaining all stakes from destruction. In the event that one or more of the stakes are damaged or destroyed, the Contractor will replace the stakes at the expense of the Contractor.

The Contractor's surveyor will be provided with the northing, easting, and elevation of the control points existing in the field as shown on the Project Plans. Additionally, the Contractor's surveyor will be provided with an electronic copy (ASCI Format) of the control points depicted on the Project Plans to develop the construction staking as stated in these Special Technical Provisions.

If the Contractor's surveyor wishes to develop a different work plan it shall be the Contractor's responsibility to develop such a work plan and present to the Project Engineer for approval.

155.02 Measurement and Payment
Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for all work associated with all work involved in provisions of this section, complete in place as shown on the Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer, should be incidental to the other construction items; no additional compensation will be allowed.

SECTION 160 – TEMPORARY EROSION CONTROL

160.01 General
This work shall consist of temporary erosion control measures, devices, and BMPs that may be shown on the Project Plans, and as specified in the Contract Documents, Project Permit(s), Standard Specifications, these Special Technical Provisions the Project SWPPP, or as directed by the Engineer during the life of the contract. Temporary erosion control measures will also be required at staging/storage areas utilized during project construction. Said work is intended to provide prevention, control, and abatement of water and air pollution within the limits of the project and to minimize damage to the work, adjacent properties and Lake Tahoe, streams, or other bodies of water.

Attention is directed to Section 125.02, "Storm Water Pollution Prevention Plan," of these Special Technical Provisions. As part of the SWPPP certification and submittal process, **the Contractor shall submit two (2) copies of any proposed revisions to the applicable Project Plan sheets for Temporary Erosion Control and the Dewatering and/or Diversion operations**. No work shall be started until the SWPPP, applicable plan sheets, schedules and methods of operation for temporary pollution control are reviewed and accepted by the Engineer, NTCD, TRPA, and NDEP. The Contractor is reminded that the project is located within the Lake Tahoe Basin and all pollution control measures and clean-up procedures must satisfy the requirements of TRPA, NDEP and the permit(s) issued for the project. During the course of project construction, the Contractor shall cooperate with the Engineer, TRPA, NDEP and other regulatory officials and take immediate action as directed to protect water bodies and sensitive areas, and provide for erosion or other pollution control.

Installation and maintenance of temporary erosion control measures, devices and BMPs shall conform to the requirements as stated within this section, the SWPPP, and the Nevada Contractors Field Guide for Construction Site BMPs (hard copies are available for purchase from the Truckee Meadows Watershed Committee 775-334-3314, or a free electronic copy "pdf" is available for download from the NDEP website http://ndep.nv.gov/bwqp/bmp05.htm).

As Directed Placement
Due to the nature of the project and expected field direction from the Engineer, NTCD, and permitting agencies, the Contractor shall make provisions to furnish all labor, tools, materials, and equipment as necessary to furnish and place additional temporary erosion control devices in the work (i.e. beyond or

in addition to what is designated on the Project Plans or in the Project SWPPP) as directed by the Engineer, in conformance with the Contract Documents, Project Permits, SWPPP, Standard Specifications, and these Special Technical Provisions. Installation, maintenance, removal, and disposal of any additional as directed temporary erosion control device shall be considered as included in the applicable "as directed" bid item unit price, and no additional compensation will be allowed. The installation and location of any as directed temporary erosion control device shall only occur as determined and marked in the field by the Engineer.

The intent of the as directed temporary erosion control device bid items, is to provide the Engineer and Contractor with a means and allowance for additional temporary erosion control devices to be incorporated in the work where modifications to the construction sequence, changing field conditions, temporary stockpiles, and other potential minor unknowns can be adequately addressed in order to maintain compliance with the SWPPP and Project permits.

The Contractor will not be compensated for the installation of any additional "as directed" temporary erosion control devices without prior direction and acceptance of the Engineer.

Temporary Soil Stabilization

The Contractor shall install temporary soil stabilization materials for water pollution control in all disturbed work areas that are considered inactive (i.e. excess of 14 days) or before forecast storm events. Should any temporary erosion control of this nature be required elsewhere as directed by the Engineer and/or regulatory agencies, the Contractor shall install within 48 hours of notification. Where applicable and upon acceptance of the Engineer, the Contractor shall furnish and apply/install temporary mulch, temporary hydraulic mulch, temporary erosion control blankets, or temporary covers in conformance with the Standard Specifications and these Special Provisions. Materials and construction methods shall comply with the Standard Specifications and these Special Provisions.
The Contractor shall maintain a temporary cover on all stockpiles at all times. Whenever a temporary cover is removed to perform other work, the temporary cover shall be replaced and secured within one (1) hour of stopping work.

Compensation for the requirements of this section, not otherwise provided for in a specified bid item, shall be considered included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

160.02 Gravel Construction Entrance/Exit

Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of this temporary erosion control measure as required by the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, SWPPP, Project Permit(s), and TRPA Best Management Practices.

Work under this item shall consist of clearing and grubbing, excavation, furnishing and placing reinforcement mat, furnishing and placing rock at each entrance/exit access road, maintenance (i.e. removal of large quantities of captured sediment, and/or placement of additional rock during course of construction), removal, disposal of excess materials, and restoration of disturbed area.

Fabric to be used for the reinforcement mat shall be manufactured from polyester, nylon, or polypropylene material, or any combination thereof. Fabric shall be manufactured from virgin, or recycled or a combination of virgin and recycled, polymer materials. No virgin or recycled materials shall

contain biodegradable filler materials that can degrade the physical or chemical characteristics of the finished fabric. The fabric shall be a non-woven, needle-punched fabric. The fabric shall be permeable, not act as a wicking agent, and shall conform to the following:

Test	**Test Method**	**Requirement**
Weight, grams per square meter	D 3776	135 min.
Grab Tensile Strength, Newton, (25 millimeter grip, in each direction)	D 4623	0.40 min.
Elongation at Break, percent	D 4632	30 min.
Toughness, kilonewtons (percent elongation x grab tensile strength)		26 min.
Permittivity, 1/sec.	D 4491	0.5 min.
Ultraviolet Resistance, percent strength retention	D 4355	70 min.

Rocks shall be angular to sub-angular in shape and shall conform to the material quality requirements in Section 200.07, Riprap, of the Standard Specifications for resistance to wear, absorption, apparent specific gravity, and durability. Rocks used for the gravel construction entrance/exit shall conform to the following sizes:

Square Screen Size	Percent Passing
6 inches	100
3 inches	0-20

Each gravel construction entrance/exit shall be of adequate size to prevent the tracking of sediment and materials onto any paved public right-of-way. At a minimum the size of each gravel construction entrance/exit shall be as shown on the Project Plans.

While the gravel construction entrance/exit is in use, pavement shall be cleaned and sediment removed at least once a day and as often as necessary when directed by the Engineer. Soil and sediment or other extraneous material tracked onto existing pavement shall not be allowed to enter any existing or proposed drainage facilities.

In the event the Contractor's operations are causing excessive tracking of materials the Engineer may direct the Contractor to replace the gravel construction entrance/exit, expand the size (area – length and/or width) of the gravel construction entrance/exit, and/or expand the depth of the gravel construction entrance/exit. In the event this is required, the Contractor will not be entitled to any additional payment.

When no longer required as shown on the Project Plans or as determined by the Engineer, each gravel construction entrance/exit shall become the property of the Contractor and be removed and disposed of in conformance with the Contract Documents, Standard Specifications, Project SWPPP, and these Special Technical Provisions. Under no circumstance shall any of the materials used for gravel construction entrance/exit be re-used on the project. All areas disturbed by the placement and use of each gravel construction entrance/exit shall be graded and restored to its pre-existing condition, including any provisions for revegetation found elsewhere in these Special Technical Provisions.

Gravel construction entrance/exit is considered a temporary erosion control measure or BMP. A fine of $100 per day will be levied against the Contractor for each day the Contractor delays in responding to the Engineer's request to install new temporary erosion control devices and/or maintain existing

temporary erosion control devices, in addition to any other fines levied by any other regulatory agency with no additional compensation allowed for.

160.03 Construction Limit Fence. Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of this BMP as required by the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, SWPPP, Project Permit(s), and TRPA Best Management Practices.

The Contractor shall perform all construction activities that are outside the road right-of-way within the construction limits (and/or grading limits) as shown on the Project Plans and staked by the Contractor's surveyor, and as delineated with construction limit fence installed by the Contractor. Where directed by the Engineer and/or shown on the plans, construction limit fence shall be placed around individual trees or groups of trees that are to remain, in accordance with the Tree Protection and Construction Limit Fence depicted on the project plans.

The area within which the Contractor will be allowed to conduct his/her construction operations will be the area within the limits of the construction limit fencing and/or grading limits as shown on the Project Plans. Where located within the immediate vicinity of any trees (or dripline), the width of the work area will be reduced in order to protect the trees. The Contractor shall review each such location to determine what equipment can be used to install the improvements at these locations or if hand work will be necessary. The costs associated with working within these reduced widths shall be included in the unit price bid for the applicable item of work with no additional compensation therefore.

Contractor's attention is directed to the applicable bid item descriptions in these Special Technical Provisions regarding the type of equipment that can be used in construction on sensitive land areas. Where tree protection fencing cannot be placed at the dripline of the tree, as determined by the Engineer in coordination with TRPA, wood batten (as shown on the Project Plans) with bottom set approximately 3 feet above ground surface shall be strapped to the tree trunk (space between wood batten shall be no more than 6"). The unit price bid for construction limit and tree protection fence shall also apply to this condition (i.e. linear foot measurement of tree circumference where wood batten is attached). Construction limit and tree protection fencing shall be inspected daily and repaired, secured, and/or replaced as necessary to maintain and preserve its intended purpose. All construction limit and tree protection fencing shall remain in place during any construction activities unless directed by the Engineer. Tree protection and construction limit fencing is considered a temporary erosion control measure or BMP.

A fine of $100 per day will be levied against the Contractor for each day the Contractor delays in responding to the Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices, in addition to any other fines levied by any other regulatory agency with no additional compensation allowed for.

160.04 Filter Fence. Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of this temporary erosion control measure as required by the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, SWPPP, Project Permit(s), and TRPA Best Management Practices.

Filter (silt) fence shall be manufactured from polyester or polypropylene material. The fabric shall be woven and shall conform to the following:

Test	Test Method	Requirement
Grab Tensile Strength, Newton, (25 millimeter grip, in each direction)	4623	400 min.
Elongation at Break, percent	4632	20 min.
Apparent Opening Size, Micrometers (um)	D 4751	850 min.
Coefficient of Permeability, cm/sec.	D 4491	0.01 min.
Ultraviolet Resistance, percent strength retention	D 4355	90 min.

- Filter fence fabric shall be handled and placed in accordance with the manufacturer's recommendations. The fabric shall be aligned and placed in a wrinkle-free manner.
- When joints are necessary, filter fence fabric shall be spliced together only at a support post, with a minimum twelve (12) inches overlap and securely sealed or stitched. See manufacturer's recommendations. Should the filter fence fabric be damaged, the torn or punctured section shall be repaired by placing a piece of fabric that is large enough to cover the damaged area and to meet the overlap requirement.
- Posts shall be spaced a maximum of ten (10) feet apart at the barrier location or as recommended by the manufacturer if less than ten (10) feet and driven securely into the ground (minimum of 1 foot). The posts and fence shall be angled ten (10) degrees off vertical up-slope for stability.
- A trench shall be excavated approximately four (4) inches wide and six (6) inches deep along the line of posts and upslope from the barrier in accordance with manufacturer's recommendations.
- A wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings. The wire mesh shall extend into the trench a minimum of two (2) inches and shall not extend more than three (3) feet above the original ground surface.
- The filter fence fabric shall be installed on the upslope side of the wire mesh fence and shall be stapled, wired, or tied to the wire fence and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than three (3) feet above the original ground surface.
- Filter fence fabric shall not be stapled to existing trees.
- The trench shall be backfilled and the soil compacted over the filter fence fabric.
- For installations on slopes less than 20%, slope lengths of 200 feet or less and around drainage inlets, the Contractor has the option to use fiber rolls in lieu of filter fence.
- Should the filter fence fabric decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

Filter fence shall remain in place for the complete duration of the project (all Phases of work) as necessary to conform to the Project Permit(s) and SWPPP. All filter fence shall be routinely inspected and maintained at all times and on a continual basis for the duration of the Project, and is expected to be in good condition at the time the Notice of Completion is issued. Repair and or replacement of any damaged filter fence, upon discovery or as directed by the Engineer, shall be considered as included in the prices paid for this bid item of work, and no additional compensation will be allowed. At the conclusion of the project or as directed by the Engineer, TRPA and NDEP, all filter fence shall become the property of the Contractor and be completely removed from the project site and disposed of in conformance with the Contract Documents, Standard Specifications, and these Special Technical Provisions.

Sediment log (fiber roll) shall not be used in place of filter fence without prior acceptance and written consent of the Engineer. Filter fencing is considered a temporary erosion control measure or BMP. A fine of $100 per day will be levied against the Contractor for each day the Contractor delays in responding to the Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices, in addition to any other fines levied by any other regulatory agency with no additional compensation allowed for.

160.05 Sediment Log (Coir Log). Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of this temporary erosion control measure as required by the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, Project Permit(s), and TRPA Best Management Practices. **The Contractor shall submit a material specification for the sediment log, for acceptance of the Engineer, prior to placement in the work.**

Sediment logs shall be provided in standard lengths of 10 or 20 feet long per the size diameter as shown on the Plans, and shall be prefabricated fiber roll logs or wattles filled with a rice straw, wood excelsior fiber, coconut fiber or other similar filler material, and covered with a biodegradable jute, sisal, or coir fiber netting or open weave containment fabric secured tightly at each end. The use of plastic/photodegradable netting shall not be allowed. All materials shall be certified weed free.

Sediment logs with a diameter of 8 to 10 inches shall have a density of at least 1.1 lb/ft, and sediment logs with a diameter of 12-inches shall have a density of at least 3 lb/ft. Its basic purpose is to provide a flexible, lightweight, porous sediment control device demonstrating the ability to conform to terrain details, dissipate water velocity, and capture loose sediment. All fiber rolls shall be properly staked in place, except where its use is intended to be short term (daily operations) or reposition of the fiber roll will occur on a regular basis (i.e. active construction areas, trenching operations and windrows, temporary or active stockpiles, active areas for soil processing/screening operations, spill containment devices, etc.) as determined by the Engineer. In such instances where a fiber roll is not staked, it shall be weighted or secured in place using a sufficient number of gravel bags to control the flow of storm water and capture sediment.

The Contractor shall furnish, install, maintain, and remove when no longer required, all sediment logs per the Manufacturer's directions, as shown on the Project Plans and as directed by the Engineer (where applicable to each Phase of the work), including but not limited to the following general requirements:

- Prior to fiber roll installation; the Contractor shall excavate a concave trench along the contour line, three (3) inches to five (5) inches deep. Soil excavated from the trench shall be placed on the uphill or flow side of the roll to prevent water from undercutting the roll.
- The Contractor shall place the fiber roll in the trench and stake on both sides of the fiber roll within eight (8) inches of each end and then at a maximum spacing of four (4) feet, using one (1) by two (2) inch stakes.
- When more than one fiber roll is placed in a row or check dam, the fiber rolls shall be overlapped in a horizontal configuration to provide a tight joint.

Sediment log shall remain in place, where directed by the Engineer, for the complete duration of the project (all Phases of work) as necessary to conform to the Project Permit(s) and SWPPP. All sediment logs shall be routinely inspected and maintained at all times and on a continual basis for the duration of the Project. Repair and or replacement of any damaged sediment log, upon discovery or as directed by

the Engineer, shall be considered as included in the prices paid for this bid item of work, and no additional compensation will be allowed. At the conclusion of the revegetation "maintenance and bonding period" or where accepted to occur at an earlier date as directed by the Engineer, TRPA and NDEP, all sediment log shall become the property of the Contractor and be completely removed from the project site and disposed of in conformance with the Contract Documents, Standard Specifications, and these Special Technical Provisions.

Any sediment logs required or used in the work on a short term basis that are not permanently staked in place or are anticipated to be moved on a daily or routine basis (such as areas immediately adjacent to trench excavations, temporary stockpiles, active areas for soil processing/screening operations, spill containment devices, etc.) shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

Sediment logs are considered a temporary erosion control measure or BMP. A fine of $100 per day will be levied against the Contractor for each day the Contractor delays in responding to the Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices, in addition to any other fines levied by any other regulatory agency with no additional compensation allowed for.

160.06 Drainage Inlet Protection. Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of this temporary erosion control measure as required by the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, Project Permit(s), and TRPA Best Management Practices.

The gravel bag material for drainage inlet protection should be woven polypropylene, polyethylene or polyamide geotextile fabric, with a minimum unit weight of 4 oz/sq/yd, Mullen burst strength exceeding 300 psi (ASTM D3786), and ultraviolet stability exceeding 70% (ASTM D4355). The gravel bag fill material should be 3/8 to 3/4 inch open graded, non-cohesive, porous gravel, and washed clean and free from clay, organic matter and other deleterious materials.

Gravel bags shall remain in place, where directed by the Engineer, as necessary to conform to the Project Permit(s) and SWPPP. All gravel bags shall be routinely inspected and maintained at all times and on a continual basis for the duration of the Project. Repair and or replacement of any damaged gravel bag, upon discovery or as directed by the Engineer, shall be considered as included in the prices paid for the applicable bid item of work, and no additional compensation will be allowed. At the conclusion of the project or where accepted to occur at an earlier date as directed by the Engineer, TRPA and NDEP, all gravel bags shall become the property of the Contractor and be completely removed from the project site and disposed of in conformance with the Contract Documents, Standard Specifications, and these Special Technical Provisions.

Drainage inlet protection considered a temporary erosion control measure or BMP. A fine of $100 per day will be levied against the Contractor for each day the Contractor delays in responding to the Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices, in addition to any other fines levied by any other regulatory agency with no additional compensation allowed for.

160.07 Temporary Concrete Washout Facility. Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to construct, maintain and later remove when no longer

required, including all waste materials, a temporary concrete washout facility in accordance with the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, Project Permit(s), Project SWPPP and TRPA Best Management Practices.

When a temporary concrete washout facility is no longer required for the work, as determined by the Engineer, all materials including the hardened concrete and liquid residue are considered the property of the Contractor and shall be removed and disposed of in conformance with the provisions found elsewhere in these Special Technical Provisions, and the Standard Specifications.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary concrete washout facility shall be backfilled and repaired in conformance with the provisions found elsewhere in these Special Technical Provisions, and the Standard Specifications. Details for an alternative temporary concrete washout facility shall be submitted to the Engineer for acceptance at least seven (7) days prior to installation.

Materials

A. Plastic Liner
   Plastic liner shall be single ply, new polyethylene sheeting, a minimum of ½ inch thick, and shall be free of holes, punctures, tears, or other defects that compromise the impermeability of the material. Plastic liner shall not have seams or overlapping joints.
B. Permeable Material
   Permeable material shall be as specified in Section 200.03.05, “Class D Backfill” of the Standard Specifications.
C. Sediment Log
   Sediment Log shall be as specified in Section 160 of these Special Technical Provisions.
D. Gravel Bags
   Gravel bags shall as specified in Section 160 of these Special Technical Provisions.
E. Stakes
   Stakes shall be wood or metal. Wood stakes shall be untreated fir, redwood, cedar, or pine; shall be cut from sound timber; and shall be straight and free from loose or unsound knots and other defects which would render them unfit for the purpose intended. Wood stakes shall be minimum one (1) inch x two (2) inches in size. Metal stakes may be used as an alternative and shall be a minimum 1/2 inch in diameter. Stakes shall be a minimum four (4) feet in length. The tops of the metal stakes shall be bent at a 90-degree angle or capped with an orange or red plastic safety cap that fits snugly to the metal stake. The Contractor shall submit a sample of the metal stake and plastic cap, if used, for the Engineer's acceptance prior to installation.

Installation

The temporary concrete washout facility shall be installed as shown in the Plans and as follows:

A. The temporary concrete washout facility shall be installed prior to beginning placement of concrete and located a minimum of 50 (fifty) feet away from storm drain inlets, open drainage facilities, and water courses unless determined infeasible by the Engineer. The facility shall be located away from construction traffic or direct access to the staging and storage area.
B. The temporary concrete washout facility shall be constructed in sufficient size to contain liquid and concrete waste generated by washout operations for concrete wastes. The facility shall be constructed to contain liquid and concrete waste without seepage, spillage, or overflow.

C. The depressed area or pit shall be covered with a plastic liner in order to protect the underlying soils from contamination.
D. The plastic liner may be held in place using sediment logs, gravel bags, or berms constructed from compacted native materials.

Maintenance
The temporary concrete washout facility shall be maintained to provide adequate holding capacity with a minimum freeboard of twelve (12) inches. Maintaining the temporary concrete washout facility shall include removing and disposing of hardened concrete and returning the facilities to a functional condition. Hardened concrete materials shall be removed and disposed of in conformance with the provisions found elsewhere in these Special Technical Provisions, and the Standard Specifications. Holes, rips, and voids in the plastic liner shall be patched and repaired by taping, or the plastic liner shall be replaced. Plastic liner shall be replaced when patches or repairs compromise the impermeability of the material as determined by the Engineer.

The temporary concrete washout facility shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary concrete washout facility resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

160.08 Watering/Dust Control
Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to provide construction water for the control of dust generated by the Contractors activities as required by the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, Project Permit(s), Project SWPPP and TRPA Best Management Practices.

The Contractor shall be responsible for dust control throughout all phases of construction. All federal, state, regional and local ordinances regarding dust control shall be complied with. The responsibility of obtaining the regulations and requirements and full compliance with such ordinances is solely that of the Contractor.

No chemical additives shall be permitted for any watering/dust controls operations.

If the Contractor desires to use water from fire hydrant(s) during construction, permission for the use of hydrant(s) shall be obtained from the proper agency (Kingsbury General Improvement District, KGID). The Contractor shall use said hydrant(s) in accordance with any rules, regulations, and procedures as established by the agency.

160.09 Sweeping
Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to sweep all paved areas within the project site, and streets adjacent to the project site, and dispose of the swept materials in accordance with the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, Project Permit(s), Project SWPPP and TRPA Best Management Practices. Tracking of sediment onto public streets shall be minimized by a combination of road sweeping and use of gravel construction entrance/exit areas designated on the Plans during soil hauling operations, during equipment transporting from one work area to another, and as necessary to keep the streets and other paved areas clear of soil and debris. Tracking control applies to streets within the project area as well streets adjacent to the project area that have the potential to be impacted by tracking from the Contractor’s operations.

The Contractor shall provide sweeping equipment that conforms to the following minimum requirements: **The sweeper, provided by the Contractor, shall be a chassis-mounted vehicle capable of vacuuming the roadways such that the swept material is placed into a hopper, from which the swept material can be removed and disposed of. Broom sweepers that are attachments to other equipment are not acceptable sweepers.**

Affected streets shall be swept a minimum of two times daily (e.g. mid-afternoon and at the end of the day) during soil hauling operations, during equipment transporting from one work area to another, and as necessary to keep the streets clear of soil and debris. The swept material shall be disposed of in accordance with the standard specifications, project permits and these Special Technical Provisions.

Sweeping is considered a temporary erosion control measure or BMP. A fine of $100 per day will be levied against the Contractor for each day the Contractor delays in responding to the Engineer's request to install new temporary erosion control devices and/or maintain existing temporary erosion control devices, in addition to any other fines levied by any other regulatory agency with no additional compensation allowed for.

160.10 Maintenance

The Contractor shall maintain all temporary erosion control measures, devices, and/or BMPs placed in the work, for the duration of the project. Maintenance includes all Manufacture's recommendations, and includes but is not limited to the following:

- Damage to any temporary erosion control devices and/or BMPs during the course of the project shall be repaired by the Contractor immediately upon discovery and at his expense.
- Temporary erosion control devices and/or BMPs shall be inspected routinely and immediately after each rainfall event and at least daily during prolonged rainfall events. Any required repairs shall be made immediately.
- Construction limit and tree protection fencing shall be inspected daily and repaired, secured, and/or replaced as necessary to maintain and preserve its intended purpose.
- All signage as required for the project shall be routinely inspected and repaired or replaced upon discovery of damage, vandalism, and/or missing parts.
- Should the filter fence fabric decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.
- Should a sediment log decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the sediment log shall be replaced promptly.
- Any single or group of gravel bag(s) shall be replaced when the bag material is ruptured or when the yarn has failed, allowing the bag contents to spill out.
- Any stakes and/or rope used to secure a sediment log in place shall be routinely inspected and repaired as necessary if found to be loose or ineffective.
- Sediment deposits and other debris shall be removed when they reach approximately one-half the height of the sediment barrier (or as recommended by the Manufacture) and disposed of in a manner acceptable to the Engineer, NDEP, TRPA, and in conformance with the SWPPP.
- Any sediment deposits remaining in place after the temporary erosion control measure and/or BMPs is no longer required shall be removed and disposed of in a manner acceptable to the Engineer, NDEP, TRPA, and in conformance with the SWPPP.

160.11 Measurement and Payment. Temporary BMPs including filter fence, construction limit fence, drainage inlet protection, coir logs, gravel construction entrances, dust control, concrete washout, and

sweeping shall be measured as a lump sum bid price for "Temporary Erosion Control." Payment for Temporary BMPs shall be made at the contract lump sum bid price which shall be deemed full compensation for all labor, materials, equipment and incidentals necessary to complete and maintain the work as specified and making any required modifications due to field conditions.

"Additional Fiber Rolls As Directed by Engineer" shall be measured as per linear foot. Payment for installing additional fiber rolls as directed by engineer shall be made at the contract per linear foot price which shall be deemed full compensation for all labor, materials, equipment and incidentals necessary to complete and maintain the work as specified and making any required modifications due to field conditions.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 165 – DEWATERING AND/OR DIVERSION

165.01 General

Work under this item shall consist of furnishing all labor, tools, equipment, and materials as necessary to dewater, divert and/or bypass any groundwater or surface waters and to maintain a reasonably dry excavation or general work area for the proper installation, construction, curing, grow-in, maintenance, and completion of any improvements, including revegetation/restoration activities, for a complete job in place as shown on the Project Plans, described in the Special Technical Provisions, the Project SWPPP and Standard Specifications, or as directed by the Engineer.

Dewatering and/or Diversion operations as stated herein, or as directed by the Engineer, are required to be performed at any time and on a continual basis, for the duration of the project and any ensuing maintenance period, as necessary to install, construct, complete and maintain all project improvements.

In general, the Contractor should expect/anticipate that groundwater may be encountered at any time the existing ground is disturbed within the project area, as a majority of the project site is located in an area adjacent to a Stream Environment Zone. Additional, groundwater investigations have shown a seasonally high groundwater depth of 6-9" below the surface at the location of the proposed basin.

The Contractors attention is directed to the "Dewatering and Diversion Plan." All dewatering and/or diversion operations and activities shall be in complete compliance with the Project Plans, Project Permits, SWPPP, the Standard Specifications, these Special Technical Provisions, and other applicable regulatory agency requirements.

The Contractor shall be responsible for the final design, installation, operation, maintenance and removal of any dewatering and/or diversion systems as required for completion of the contract work. The Project Plan sheets and Dewatering and Diversion Plan as provided as part of the Contract Documents provide a basis for, show, and describe dewatering scenarios and minimum requirements. **The Contractor shall submit their own detailed Dewatering and Diversion Plan (including all necessary diagrams/ exhibits) to the Engineer for review and acceptance (by the Engineer, NTCD, TRPA, USFS, and NDEP) prior to commencement of any construction activities that may require dewatering and/or diversion operations.** The proposed Dewatering and Diversion Plan shall be prepared by a licensed Engineer in the state of Nevada, or qualified licensed Contractor (at discretion of the Engineer) that

specializes in dewatering, filtration, pumping, and liquid handling operations. Information required to be submitted shall included but is not limited to the following:

- Any Sub-Contractor information and proof of experience
- Qualified operator of the system and equipment
- Access routes, pads, spill containment devices, and locations for equipment
- Sources for power supply and pump operation
- Dewatering/diversion system design performance measures for volume and pumping rates
- Pump equipment description, performance measures and manufacture's data sheets
- Intake and discharge locations, methods, and materials
- Disposal methods and any proposed treatment practices
- Provisions to provide back-up equipment and/or stage on-site
- Emergency plan to accommodate high flow flood events
- Other requirements as stated in the SWPPP

If the Contractor plans to conduct any dewatering and/or diversion operations, he/she shall contact the Engineer for authorization, prior to starting the work at a given location. In the event the Contractor initiates dewatering and/or diversion operations without prior authorization of the Engineer, no payment for that work will be made.

165.02 Dewatering and/or Diversion for Conveyance Construction
Dewatering and/or diversion operations as necessary for, including but not limited to, the construction of the proposed conveyance pipe and manholes shall be as shown on the accepted Contractor's Dewatering and Diversion Plan, and in conformance with the Project Plans, SWPPP and these Special Technical Provisions. Discharge of all captured and/or diverted waters shall be in conformance with the SWPPP and all project permit regulations.

The excavation and general work area shall be sufficiently dry to allow for the proper construction and inspection of the conveyance and manholes as shown on the Project Plans and described in these Special Technical Provisions. The location and depth of sumps and/or well points for pumping of ground water or surface water is at the discretion of the Contractor, but shall be reviewed and accepted by the Engineer prior to initiating the work involved. The dewatering operations shall also be sufficient to produce a stable sub-grade within the excavation or general work area as necessary for access of equipment and personnel to complete the work.

In the event there is a storm event which increases the flow to the site, the Contractor shall make provisions for and have equipment (i.e. pumps, piping, gravel bags, plastic sheeting, temporary dams, etc.) on standby; to provide adequate protection of the work area, avoid flooding and inundation of the excavation, prevent erosion and discharge of sediment or other pollutants, and divert the increase in flows to stabilized downstream areas, away from any active work site(s).

165.03 Dewatering and/or Diversion for Basin Construction
Dewatering and/or diversion operations as necessary for, including but not limited to, the construction of the proposed basin and associated structures, as well as the removal and/or abandonment of the existing structures (described elsewhere in these Special Technical Provisions), shall be as shown on the accepted Contractor's Dewatering and Diversion Plan, and in conformance with the Project Plans,

SWPPP and these Special Technical Provisions. Discharge of all captured and/or diverted waters shall be in conformance with the SWPPP and all project permit regulations.

The general work area shall be sufficiently dry to allow for the proper construction and inspection of the proposed basin and associated structures, as well as the removal and/or abandonment of the existing structures, for a complete job in place as shown on the Project Plans and described in these Special Technical Provisions. The location and depth of sumps and/ or well points for pumping of ground water or surface water is at the discretion of the Contractor, but shall be reviewed and accepted by the Engineer prior to initiating the work involved. The dewatering operations shall also be sufficient to produce a stable sub-grade within the excavation(s) or general work area as necessary for access of equipment and personnel to complete the work.

The Dewatering and Diversion operations shall adequately protect the work area(s) from stormwater flows, and prevent erosion and discharge of sediment or pollutants. In the event there is a storm event which increases the flow beyond what can be handled by the Contractor's established operations, the Contractor shall make provisions for and have equipment (i.e. pumps, piping, gravel bags, plastic sheeting, temporary dams, etc.) on standby to either provide additional pumping capacity to handle the additional flow, or provide for a complete gravity flow by-pass system. In addition the Contractor shall make all provisions to provide adequate protection of the active work area(s), avoid flooding and inundation of excavation(s), divert runoff to stabilized downstream areas away from any active work site(s), and reduce and/or prevent erosion and discharge of sediment or other pollutants.

165.04 Dirt Bag Device. Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary to install, maintain, remove, and dispose of this temporary erosion control measure as required by the Project Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, Project Permit(s), and TRPA Best Management Practices. **The Contractor shall submit a material specification for the 'Dirtbag' device, for acceptance of the Engineer, prior to placement in the work.**

Use of any 'Dirtbag' or other similar sediment control filter bag device used in coordination with pumping of sediment laden waters for discharge shall be as shown on the Project Plans and details and conform to the provisions of the Project Permits and SWPPP. The 'Dirtbag' shall be a commercially manufactured nonwoven geotextile fabric bag (polypropylene or equivalent) intended for such use, with a minimum grab tensile strength of 200 psi in any principal direction (ASTM D4632), and permittivity of 0.05 sec (ASTM D4491). For project area soils (source of sediment in waters) with more than 15% by weight passing a No. 200 sieve the fabric shall have an apparent opening size between 50 and 140, and for project area soils (source of sediment in waters) with less than 15% by weight passing a No. 200 sieve the fabric shall have an apparent opening size between 20 and 50. The geotextile fabric material shall contain ultraviolet ray inhibitors and stabilizers to provide an expected usable life comparable to the anticipated construction period; ultraviolet stability shall exceed 70% after 500 hours of exposure (ASTM D4355). The 'Dirtbag' device shall have a fill spout large enough to accommodate a pump four (4) inch discharge hose and attachment straps to secure the hose in place. The Dirtbag' device shall be sized to accommodate the applicable flow rates and prohibit release of the target effluent. Location of any 'Dirtbag' device requires acceptance of the Engineer, equipment access for removal and off-site disposal, and the area shall be stable to prevent erosion. Placement of drain rock, fabric, or other suitable substance to create a stable discharge site is the responsibility of the Contractor. Any 'Dirtbag' device shall be fitted with straps strong enough for lifting and the device removed from the Project site and properly disposed of; **cutting open the device and leaving the captured sediment/fines in place is**

prohibited. Removal and off-site disposal may be facilitated by placing the 'Dirtbag' device on pallets, crates, trailer, or some other small mobile device to dismiss the need for lifting the 'Dirtbag' device by straps.

165.05 Measurement and Payment

The "Dewatering/Diversion" bid item shall be measured on a lump sum basis, completed and accepted by the Engineer as conforming to all the requirements in the complete work. Payment for "Dewatering/ Diversion" shall be made at the lump sum price bid, with no additional compensation therefore. The "Dewatering/Diversion" bid item shall be paid in full if any dewatering operations are required and performed as part of the project work, as directed and accepted by the Engineer. No additional compensation will be allowed for if excess ground water or higher than expected creek flows are encountered and dewatering operations beyond what was anticipated by the Contractor is required for proper construction of the project improvements. All dewatering necessary for the proper installation, construction, and maintenance of the project improvements, including revegetation/restoration activities shall be included in this bid item(s). Any dewatering and diversion operations performed during the revegetation "maintenance period" (i.e. after completion and acceptance of all project improvements) shall be considered as included in the "Dewatering/Diversion" bid item.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 170 – CLEARING AND GRUBBING AND TREE REMOVAL

170.01 Description

This section covers the construction methods involved in all clearing and grubbing, and tree removal operations as shown on the Project Plans, described in the Standard Specifications, these Special Technical Provisions, SWPPP and/or as directed by the Engineer. Work under this item shall consist of furnishing all labor, tools, equipment, and materials as necessary to perform operations, including but not limited to, clearing and grubbing, topsoil salvage, tree removal, stump removal, and disposal of waste and other miscellaneous debris in accordance with the Project Plans, Project Permits, SWPPP, Standard Specifications, these Special Technical Provisions, and as directed by the Engineer.

170.02 Clearing and Grubbing

Clearing and grubbing shall consist of removing all objectionable and unacceptable natural or artificial materials from within the construction area project limits, and disposal of said material off the job site, in order to construct the project in a proper manner, in accordance with the Project Plans, Project Permits, SWPPP, Standard Specifications, these Special Technical Provisions, as directed by the Engineer, and other applicable Local, Regional, State, and Federal requirements. This work includes but is not limited to any earthen material, organic growth, willow and alder clumps, trees and stumps (less than 14-inches diameter at breast height – DBH will be measured at 4.5-ft above the existing ground surface on uphill side of tree), man-made deposits, industrial waste, sludge or landfill, and other materials as designated by the Engineer. Existing structures, to be preserved, shall be protected and restored upon completion of the work.

Clearing and grubbing shall extend to the outer limits of excavation and fill slope lines, except where slopes are to be rounded in which case the areas shall extend to the outside limits of slope rounding. Within the limits of clearing, all stumps and roots 1-1/2 inches in diameter or larger, buried logs, and all

other objectionable material shall be removed up to three (3) feet below the existing ground surface or subgrade, whichever is deeper. All existing vegetation, outside the areas to be cleared and grubbed, shall be protected from injury or damage resulting from the Contractor's operations. For typical protection of trees and other vegetation, see the Project Plans and SWPPP.

No live trees or downed logs or wood (equal to or greater than 14-inches diameter) shall be removed from the project site that are not identified and marked by the Engineer. In the event the Contractor removes any live trees or downed logs or wood (equal to or greater than 14-inches diameter) not marked by the Engineer, the Contractor shall be solely responsible for any and all fines and/or penalties levied to the Contractor, Engineer, NTCD, NDSL, or applicable property owners in association with the removal.

For the purposes of this Project, willow, alder, and aspen, unless the aspen is shown on the plans are marked for removal, shall not be considered singular trees as part of the tree removal bid item work. Any willow, alder, or aspen material shall be removed and disposed of within the project limits/areas of disturbance (clearing and grubbing limits as shown on the Project Plans), unless specifically directed to be protected in place of as part of the work. Any removal and disposal of existing willow/alder vegetation shall be considered as part of the clearing and grubbing efforts, and no additional compensation shall be allowed for.

Existing signs, fences and other facilities within the construction limits shall be removed, salvaged, and/or reinstalled as shown on the Project Plans and as directed by the Engineer. If existing traffic control signs are removed (i.e. stop, yield signs) the Contractor shall install temporary signs of the same designation as close as possible to the original position, immediately upon completion of the clearing and grubbing work. Upon completion of the project these temporary signs shall be replaced with permanent signs of the same type and condition as prior to the Contractor's operations on the project site.

Topsoil and Organic Materials

During clearing and grubbing, the Contractor shall salvage and stockpile topsoil for reuse in the project area in accordance with Section 260, "Revegetation," of these Special Technical Provisions. Topsoil shall not be stockpiled for a period greater than two (2) weeks or greater than three (3) feet in height unless accepted by the Revegetation Specialist (RS) and Engineer. Topsoil shall be re-applied within the project area in accordance with Section 260, "Revegetation," of these Special Technical Provisions.
All suitable organic materials removed during the clearing and grubbing operation including, but not limited to, pine needles, leaves, duff, trees smaller than six (6) inches DBH, stumps, and suitable roots shall be stockpiled and used for revegetation/restoration treatments. The Contractor shall make allowances for chipping larger organic materials such as trees, suitable roots, branches, and stumps so that these materials can be used for project revegetation/restoration efforts.

The Contractor shall not stockpile any vegetation or other debris generated as a result of the clearing and grubbing or tree removal operations that is not suitable for use in revegetation efforts. All unsuitable vegetation or other debris shall be removed from the job site by the end of each working day.

170.03 Tree Removal

Work under these bid items shall consist of furnishing all labor, tools, equipment and materials necessary for the removal of trees equal to or larger than 14-inches in diameter, measured at an elevation of 4.5-feet above the prevailing existing ground surface on uphill side of tree (a.k.a diameter at

breast height - DBH). Trees equal to or larger than 14-inches DBH to be removed are schematically shown on the Project Plans and will be conspicuously marked in the field by the Engineer and TRPA forester (**no tree shall be removed unless marked in the field**). Tree removal shall include the removal of associated stumps and roots necessary for a complete removal of the tree and its appurtenances, and backfilling the remaining hole with native material, as directed by the Engineer.

The quantity (contract value) of trees to be removed, as shown on the Project Plans, may be more or less than the contract amount, as determined by the Engineer. Final quantities may fluctuate based on field conditions and actual construction staking, layout, and grading limits at the time of construction. All trees necessary for removal, as determined by the Engineer and TRPA staff forester, will be identified and conspicuously marked in the field for removal.

Prior to timber removal operations all associated temporary erosion control measures and BMPs, and traffic control must be in place, in accordance with the SWPPP, Project Permit(s), Standard Specifications and these Special Technical Provisions.

Trees shall be felled to minimize disturbance to surrounding facilities, structures, vegetation and traffic flow on roadways. The Contractor shall make all efforts to minimize any damage to trees and/or root systems that are to remain in place. The Contractor shall be liable for damage to utility service lines, fences or other structures.

The Contractor shall set aside specific materials (trees, stumps, slash, etc.) onsite for use and placement in the work and/or revegetation treatments. All such materials, and quantities, will be clearly identified and marked by the Engineer and Revegetation Specialist prior to the start of clearing and grubbing, and tree removal operations. Any applicable trees marked for this application will be included for payment as part of the tree removal bid item(s). Contractor is responsible for complete site cleanup, including slash disposal. No slash may be stored or burned on site. All wood products must be removed from the site prior to resale.

No trees (equal to or greater than 14-inches diameter) shall be removed from the project site that are not identified and marked by the Engineer. In the event the Contractor removes any trees (equal to or greater than 6-inches diameter) not marked by the Engineer, the Contractor shall be solely responsible for any and all fines and/or penalties levied to the Contractor, Engineer, NTCD, NDSL, or applicable property owners in association with the removal.

170.04 Stump Removal

Work under this item shall be considered part of the clearing and grubbing work and shall consist of furnishing all labor, tools, equipment and materials necessary for the removal and disposal of stumps depicted on the project plans, or as directed by the Engineer. Stump removal as described herein will only consist of stumps to be removed that are not directly associated with the removal of a tree (as defined herein - tree removal bid items and prices include the cost of removing the associated stump).

Trees and stumps designated for removal shall be removed to at least three (3) feet below finished grade. Ground trees and stumps intended for use as wood chip mulch shall conform to the requirements of these Special Technical Provisions. Trees and stumps not suited as wood chip mulch or for use in project improvements shall be removed and appropriately disposed of outside the project limits. The Engineer and Revegetation Specialist will determine which trees and stumps are suited for use as wood chip mulch and for use in project improvements. The Contractor shall schedule an inspection of stumps

and trees with the Engineer, at least 10 days prior to the Contractor scheduling wood chipping operations, for a determination of what can be used as mulch.

Compensation for the removal of trees and stumps less than six (6) inch diameter and stumps greater than six (6) inch diameter, as necessary for construction of the various items of work as staked by the Engineer, shall be included in the clearing and grubbing bid item and no additional compensation shall be made therefore.

170.05 Work Outside of Stated Limits
The Contractor shall not, and no payment will be made to the Contractor, for clearing and grubbing outside the stated limits as shown on the Project Plans, or as described in these Special Technical Provisions, unless such work is authorized by the Engineer.

170.06 Existing Signs
Existing signs, snow markers and the like within the construction limits, which interfere with the work, shall be removed, salvaged and reinstalled as directed by the Engineer. If existing traffic control regulatory signs are removed (i.e. stop, yield signs, etc.) the Contractor shall install temporary signs of the same designation as close as possible to the original position immediately. Existing mailboxes within the construction limits, which interfere with the work, shall be removed, salvaged and reinstalled as close to the original position as possible after construction in the area is completed. Mail service shall not be interrupted at any time due to construction activities. Any materials that are damaged or lost shall be replaced in like kind of equal or better quality.

170.07 Protection of Plants
Trees and plants that are not to be removed shall be fully protected from injury by the Contractor at his/her expense. Trees shall be removed in such a manner as not to injure standing trees, plants, and improvements which are to be preserved. The Contractor shall remove tree branches under the direction of the Engineer and Revegetation Specialist, in such a manner that the tree will present a balanced appearance.

Scars resulting from the removal of branches shall be treated with a heavy coat of a tree sealant accepted by the Engineer and Revegetation Specialist. Construction limit fence shall be installed around all trees to be protected near excavation limits at the dripline of the tree as shown on the Project Plans. If large roots of protected trees are encountered during excavation activities, work shall cease in this area and the Engineer shall be notified. Work shall commence as directed by the Engineer, Revegetation Specialist, and TRPA.

170.08 Removal and Disposal of Materials
All materials scheduled or specified for removal and disposal shall be removed and hauled from the site at the Contractor's expense, unless otherwise specified, and disposed of outside of the Lake Tahoe Basin in accordance with TRPA ordinances and NAC 444.8565. The construction area shall be left with a neat and finished appearance.

170.09 Measurement and Payment
"Clearing and Grubbing" (including trees under 14-inch DBH) shall be measured on a lump sum basis, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The lump sum price for "Clearing and Grubbing" (including trees under 14-inch DBH) shall include furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in

the clearing and grubbing of the project site as shown on the plans and as specified in the Project Plans, Contract Documents, Project Permits, SWPPP, Standard Specifications, these Special Technical Provisions, and as directed by the Engineer including the removal and disposal of all the resulting materials from the Tahoe Basin.

"Tree Removal" shall be measured on a per each basis, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The unit price for "Tree Removal" shall include furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in removing each tree and associated stump and chipping and as specified in the Project Plans, Contract Documents, Project Permits, Standard Specifications, these Special Technical Provisions, and as directed by the Engineer, including the removal and disposal of all the materials not to be used in the project from the Tahoe Basin. Trees not shown or labeled for removal on the project plans shall be considered part of the "Clearing and Grubbing" bid item.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 175 – REMOVAL OF EXISTING IMPROVEMENTS

175.01 General. Work under this section shall conform to the project permits, Plans, Contract Documents, Standard Specifications, these Special Technical Provisions, SWPPP and TRPA Best Management Practices. The Contractor's attention is directed to Section 301, "Removal of Existing Improvements", of the Standard Specifications.

Work under this section shall consist of the removal and disposal of existing improvements and facilities, which interfere with construction or as required to properly construct the project, as shown on the Project Plans, described in the Standard Specifications, these Special Provisions, and as directed by the Engineer. Any materials removed, including excavated earthen material, in conformance with this section shall become the property of the Contractor and shall be removed and disposed of by the Contractor in accordance with all federal, state, and local ordinances and permit conditions. All materials scheduled or specified for removal shall be removed from the project area and disposed of outside of the Lake Tahoe basin in accordance with TRPA ordinances and NAC 444.8565.

Where any pipes, fittings, valves, drainage inlets, frames and covers, or other devices are removed from any manhole, structure, junction box, joint, valve, fitting, valve, etc. and the remaining facility is to be protected in place; all repairs, seals, plugs, caps, and other modifications as necessary to make the structure or device sound and complete shall be constructed by the Contractor as shown on the Project Plans, and in conformance with the Standard Specifications and these Special Provisions, or as directed by the Engineer. All repairs, plugs, caps and other modifications as noted above shall be considered as included in the prices paid for each associated bid item of work, not otherwise provided for, and no additional compensation shall be allowed for.

175.02 Remove Asphalt/Concrete Pavements and Structures
Work under this section shall include removal of asphalt concrete pavement and other concrete surface improvements as required to properly construct the project, as shown on the Project Plans, described in the Standard Specifications, these Special Technical Provisions, and/or as directed by the Engineer. This includes removal and disposal of any and all asphalt/concrete structural section associated with the

removal of any existing facility or installation of all proposed improvements shown on the Project Plans including curb and gutter, sidewalk, parking lot asphalt, associated landscaping, and any other miscellaneous structures. Where no joint exists in the pavement on the line at which pavement is to be removed, a straight, neat cut with a power driven saw shall be made along the line to a minimum depth of 6-inches before removing pavement. If saw cut pavement is damaged prior to paving, it shall be the Contractor's responsibility to re-cut any damaged, broken, or uneven portion prior to paving at his own expense. Under no circumstance shall the Contractor be allowed to "jack-hammer" the existing pavement instead of cutting with a power driven saw.

Any materials removed in conformance with this provision shall become the property of the Contractor and shall be removed and disposed of by the Contractor in conformance with the Standard Specifications and these Special Technical Provisions. AC pavement removed from the work area may NOT be ground up and re-used as base material for roadway reconstruction.

Sawcutting of all roadways required for the proper construction of the Project in accordance with the Project Plans, these Special Technical Provisions, the Project SWPPP, the Project permits and as directed by the engineer shall be included in costs of various other items of work and no additional compensation shall be allowed for.

175.03 Remove Storm Drainage Structures

Work under this section shall include the complete removal and disposal of storm drain pipe, manholes, stand pipes, and associated appurtenances and all incidental work including the backfill, compaction, and restoration of the disturbed area as shown on the Project Plans, described in the Standard Specifications, these Special Technical Provisions, and/or as directed by the Engineer. Any areas where storm drainage structures are removed shall be backfilled, graded, and restored to match the surrounding area, unless otherwise noted on the plans, or directed by the Engineer. The resulting waste materials and debris shall become the property of the Contractor and disposed of by the Contractor in conformance with the Standard Specifications, Project Permits, the SWPPP, and these Special Technical Provisions. Under no circumstances shall any segment of storm drainage pipe designated for removal be abandoned in place, unless otherwise noted on the plans and/or acceptance of the Engineer.

175.04 Remove Existing Fences

Work under this section shall include removal of existing fences as required to properly construct the project, as shown on the Project Plans, described in the Standard Specifications, these Special Technical Provisions, and/or as directed by the Engineer. This includes removal and disposal of any and all fencing including buck and pole and associated fasteners. Any materials removed in conformance with this provision shall become the property of the Contractor and shall be removed and disposed of by the Contractor in conformance with the Standard Specifications and these Special Technical Provisions.

175.05 Backfill and Compaction

All disturbed areas where pipe, structures, surface pavements, and other miscellaneous improvements are removed, shall be restored in like kind to match the pre-existing lines and grades and surrounding adjacent area, unless otherwise noted on the Plans, or as directed by the Engineer. The Contractor is required to backfill and compact excavated trenches to sub-grade using accepted native material and/or local borrow or imported borrow as determined by the Engineer if import is required; replace the sidewalk, landscaping, and other surface improvements as applicable; and/or replace the topsoil and pre-existing landscape features or revegetate the disturbed area. **Any native, local borrow, or imported borrow soils used for backfill shall be accepted by the Engineer prior to placement**.

Trenches, holes, depressions and pits caused by the removal of existing improvements shall be backfilled with materials equal to or better in quality and to the same thicknesses as the surrounding materials, and in conformance with Section 304, "Unclassified Fill", of the Standard Specifications. **No broken concrete, asphalt concrete, or other debris shall be left in excavated trenches or be included as part of the backfill.** All backfill materials at a minimum shall not exceed optimum moisture content, and be free of stones or lumps exceeding 3 inches in greatest dimension, organic matter, or other unsatisfactory material that may restrict compaction requirements. In surfaced areas (i.e. pavement, concrete) that are otherwise to remain undisturbed, the structural section shall be replaced with materials equal to or better in quality and to the same thicknesses as the surrounding materials.

Fill to be placed beneath concrete slabs and all other components subject to structural loading shall conform to the requirements of Section 200.01.09 "Structural Fill" of the Standard Specifications. If a new structure is specified to replace the old structure, unsuitable materials shall be removed as directed by the Engineer. Unless otherwise specified, remaining material and fill material shall be compacted to ninety percent (90%) in ditch and slope areas, and brought up to the bottom grade of aggregate structural section of the new structure, unless otherwise specified on the Project Plans (compaction requirements on the Project Plans shall govern).

Restoration of an area and/or replacement of all other surface improvements in conformance with this section shall be considered as included in the prices paid for each associated bid item removed, except components of the work for which payment is made under separate contract items, and no additional compensation shall be allowed for.

175.06 Measurement and Payment

Full compensation for saw cutting, removal, and disposal of existing asphalt/concrete and associated backfills in conformance with this section and other sections of the Standard Specifications, and these Special Technical Provisions is included in the prices paid for various Contract items of work involved, and no additional compensation will be allowed.

"Remove Existing Improvements" shall be measured on a lump sum basis, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The lump sum price for "Remove Existing Improvements" shall include furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in the removal and disposal of the existing asphalt, fencing, storm drain pipe, manholes, including associated surface improvements (asphalt concrete, aggregate base), as shown on the project Plans and as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer, and no additional compensation shall be allowed for. This work also includes the removal and disposal of all the resulting materials from the Tahoe Basin; and any backfill and compaction of the remnant trench, including aggregate base, for a complete restoration of the area as shown on the Plans, described elsewhere in these Special Technical Provisions, and/or as directed by the Engineer.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 180 – EXISTING UTILITIES AND UNDERGROUND FACILITIES

180.01 General

The Contractor shall inform him or herself of the exact location of all conduits, ducts, cables, pipe systems, or other above ground and/or underground facilities and shall protect all utilities encountered in the process of construction. The Contractor shall contact Underground Service Alert (USA) at least 48 hours prior to any construction activity. Any damages to above or underground facilities shall be immediately repaired by the Contractor at his own expense, except for damage to utilities, in which case the Contractor shall immediately notify the proper Utility Company. Unless cleared by the Utility Company, the Contractor shall be responsible for reimbursing said Utility Company for any and all work required to repair or replace damaged utility facilities with no additional compensation allowed for.

The Contractor shall not begin excavation work within the immediate vicinity of any know sanitary sewer force main or potable water main prior to contacting TDSD (sewer) and Douglas County (water) at least ten(10) working days in advance. Additionally, the Contractor shall not limit access to the existing TDSD pump station at the Foothill Outfall without notifying TDSD 10 days in advance.

180.02 Potholing of Existing Utilities

The Contractor shall be responsible for verifying the location of all existing underground facilities within the project area, which may have potential to conflict with the location of proposed improvements, as shown on the Project Plans and as indicated by USA markings. Actual field conditions and locations can vary considerably from those shown on the Project Plans; therefore the Engineer and/or Owner cannot, and does not, assume responsibility for the existence or location of any underground structures such as, but not limited to, pipelines, laterals, conduits, valves, meters, vaults, manholes, junction boxes, and other components of a typical utility, drainage, or irrigation system. The Contractor shall be responsible for contacting all utilities, agencies and/or public and private owners to verify such information prior to and during construction of any of the proposed improvements.

The Contractor shall notify the Engineer in advance of all potholing activities. Any delays that may result from failure of the Contractor to locate and/or pothole a potential utility conflict shall be at the Contractor's expense. Any costs incurred due to relocations, shutoff, startup, or any other costs related to utility relocations due to the construction of the project, not otherwise provided for in a specific Contract item, shall be the responsibility of the Contractor.

All potholing, as identified in the paragraph above, shall be performed by the Contractor and considered as included in prices paid for the various Contract items of work involved and no additional compensation will be allowed for.

If any existing utilities that are not shown by USA or on the Plans as indicated to be relocated by others are found to be in conflict with the proposed location of the improvements shown on the Plans, the Contractor shall contact the Engineer. The Engineer will either provide the Contractor with new grades/elevations to eliminate such conflicts or shall contact the utility agency to arrange for relocation of the conflicting utility. The Contractor shall coordinate all necessary activities with the utility agency in order to complete or facilitate the subject relocation(s). Such work shall be considered change order work.

180.03 Protect In Place Existing Facilities and Utilities
All utilities that are not to be relocated or removed shall be protected in place from injury or damage. The existing power poles may need to be braced prior to trenching for the proposed storm drain pipe. Any damage to underground facilities shall be immediately repaired by the Contractor at his own expense, except for damage to utilities, in which case the Contractor shall immediately notify the proper utility purveyor. Unless cleared by the utility purveyor, the Contractor shall be responsible for reimbursing said utility for any and all work required to repair or replace damaged facilities.

180.04 Measurement and Payment
"Protect Existing Utilities" shall be measured on a lump sum basis, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The lump sum price for "Protect Existing Utilities" shall include furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in the protection of the existing utilities shown and not shown on the project Plans and as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer, and no additional compensation shall be allowed for.

SECTION 190 – AC PAVEMENT

190.01 Description
Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary for the complete construction of an asphalt concrete structural pavement .Paving may also be necessary to repair any damages to the staging areas. This work shall include excavation, subgrade preparation, and aggregate base course as shown on the Project Plans and in accordance with the Contract Documents, Standard Specifications, Special Technical Provisions, Project Permits, or as directed by the Engineer.

Aggregate base shall be produced from commercial quality aggregates and be Type 2, Class B conforming to section 200of the Standard Specifications. Existing asphalt concrete (AC) pavement may be crushed or pulverized and mixed with virgin aggregate or used solely as aggregate base, provided the resulting processed material complies with the requirements of the Standard Specifications where accepted and as directed by the Engineer comply with the requirements of the Standard Specifications for recycled asphalt concrete base. The Contractor is responsible to perform and furnish all material testing as necessary to ensure compliance with the provisions in the Standard Specifications and these Special Technical Provisions.

The construction including placement, spreading, and compaction of one or more courses of aggregate base on a prepared sub-grade shall be in accordance with Section 200, "Aggregate for Base Courses" of the Standard Specifications.

Asphalt concrete shall be Type 3 (4% Marshal Voids) and shall conform to the provisions of the applicable sections of the Standard Specifications and these Special Technical Provisions. Asphalt concrete shall be placed to the lines, dimensions, and grades shown on the Plans or as directed by the Engineer. Asphalt concrete shall be produced from commercial quality asphalt and aggregates at a central mixing plant and conform to the following requirements:

A. Asphalt binder (cement) shall be performance graded PG 64-22 conforming to section 201 "Bituminous Materials", of the Standard Specifications.
B. Aggregate shall be Type 3 conforming to Section 201, of the Standard Specifications.

C. A mix design shall be completed and submitted by the Contractor prior to incorporation in the work.

The Contractor shall make all provisions to saw cut the edges of existing asphalt to expose the full depth of the section and form a clean edge at any transverse joint, for the freshly laid mixture. As directed by the Engineer in the field, a twelve inch (12") "T" cap key-in joint shall be created at all transverse joints with existing asphalt structural sections.

A tack coat of liquid asphalt shall be applied in accordance with the provisions in Section 316, "Tack Coat" of the Standard Specifications, to all contact surfaces of existing pavement, curbing, manholes, and other surfaces as designated by the Engineer prior to any asphalt concrete pavement being placed against them.

190.02 Measurement and Payment
AC Pavement shall be measure on a per square foot basis. Full compensation for furnishing all labor, material, equipment, and incidentals necessary to construct the AC Pavement, including, but not limited to, aggregate base, grading, placement, and incidentals is included the unit price bid for AC Pavement and no additional compensation will be allowed.

SECTION 195 – TRENCH EXCAVATION AND BACKFILL

195.01 General
Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary for all excavation, trenching, bedding, and backfilling for all the contract work items involved or delineated as trench work as shown on the Project Plans, and as described in the Standard Specifications and these Special Technical Provisions. All excavations shall be made true to the lines and grades as shown on the Project Plans, staked by the Contractor, and verified by the Engineer, and shall be so constructed as to avoid removing or loosening any material outside the required slopes and grading limits. Attention is directed to Section 305, "Trench Excavation and Backfill", of the Standard Specifications.

All excavation, bedding, fill, structural backfill, materials, and compaction associated with the work shall be in accordance with the Project Plans, Contract Documents, Project Permit(s), Standard Specifications, these Special Technical Provisions, SWPPP, and as directed by the Engineer.

Trench excavations shall include the removal and disposal of all water and unsuitable materials of any nature which interfere with completion of the construction work. Removal of ground water to a level below the pipe or structure subgrade shall be accomplished as necessary. Attention is directed to Section 165, "Dewatering and/or Diversion" of these Special Technical Provisions.

The Contractor shall follow the applicable rules, orders and regulations of the United States Department of Labor Occupational Safety and Health Administration (OSHA - 29 CFR, Part 1926, Subpart P, Excavations) for sloping the sides of excavations, using shoring and bracing, and for using other safety features. When sides of excavations are sloped for safety considerations the Contractor shall provide, for informational purposes, one copy of the design that demonstrates conformity with OSHA regulations to the Engineer. Where support systems, shield systems, or other protective systems are to be used, the Contractor shall submit to the Engineer, design calculations along with detailed drawings that demonstrate conformity with OSHA regulations. Such drawings shall be stamped with a seal and signed by an Engineer who is registered as a Civil Engineer in the State of Nevada.

The Contractor is advised of the possibility of encountering large boulders, rock, and other similar materials while excavating. There shall be no additional compensation or payment made to the Contractor for encountering or excavating such materials.

195.02 Measurement and Payment
Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for all work associated with performing all the work involved in provisions of this section, complete in place as shown on the Project Plans, as specified in the Contract Documents, Project Permits(s), Standard Specifications, these Special Technical Provisions, the SWPPP, and as directed by the Engineer, shall be considered as included in prices paid for the various contract items of work involved; and no additional compensation will be allowed for. There shall be no additional compensation for protective systems required by the OSHA regulations.

SECTION 200 – GRAVEL, COBBLE, ROCK, BOULDER & OTHER AGGREGATES

200.01 General. Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to furnish and place gravel, cobble, rock, boulder, sand aggregate, and other aggregates in the work, including but not limited to, channel bed and bank material, in stream structures, boulder sills, rock slope protection, aggregate base courses, bituminous courses, bedding and backfill, mortar and grout, Portland cement, and general rip-rap as indicated on the Project Plans, described in these Special Technical Provisions, and directed by the Engineer, in conformance with the Contract Documents, Project Permits, Standard Specifications, and these Special Technical Provisions.

The limits of loose aggregate and aggregate base course placement as indicated on the Project Plans are approximate, and the exact limits of placement shall be determined in the field by the Engineer. All aggregates used in the work for aggregate base courses, bituminous courses, bedding and backfill, mortar and grout, Portland cement, and general rip-rap shall be in strict conformance with the Standard Specifications, and other applicable provisions found elsewhere in these Special Technical Provisions.

All gravel, rock, and other loose aggregate used in the work at the outfalls, including imported and reused rock, shall be thoroughly washed off site or in a location approved by the engineer so that each material runs clear when water is applied. All stone, aggregate materials, and soils imported to the site shall be from a certified "Weed Free" source approved by the Nevada Department of Agriculture and/or TRPA.

All loading, transport, temporary stockpiling, on-site hauling, excavation, preparation of sub-grade, placement, embedment, backfill, compaction, clean-up, and off-haul and disposal of excess materials needed to install all gravel, cobble, rock, boulder, sand aggregate, and other aggregates where incorporated in the work shall be considered as included in the applicable bid item unit price, and no additional compensation will be allowed.

All aggregate materials generated on-site and meeting the quality requirements as stated in Section 200, "Gravel, Cobble, Rock, Boulder & Other Aggregates" of these Special Technical Provisions may be incorporated in the work upon acceptance of the Engineer prior to placement; any such material that is rejected for placement in the work shall be removed and disposed of in conformance with the provisions found elsewhere in these Special Technical Provisions, and the Standard Specifications. Use of

said aggregate material in the work shall be considered as included in prices paid for the various contract items of work involved; and no additional compensation will be allowed for.

200.02 Submittals

The Contractor shall submit certificate(s) and other material testing data as necessary to validate the source of the chinking, gravel, cobble, rock, boulder, sand aggregate, and other aggregate materials and its conformance with the Standard Specifications and these Special Technical Provisions. Include all applicable test results for specific gravity, resistance to degradation, absorption, durability index, and soundness (as described elsewhere in these Special Technical Provisions). Samples of loose stone aggregates shall be submitted to the Engineer a minimum of ten (10) working days prior to large-scale delivery to the project site or placement in the work, for review and acceptance of color and material.

All aggregate materials generated on site shall be reviewed and accepted by the Engineer, prior to placement in the work. Visual evaluation of the source, samples, suitable certificates and material testing data sheets, and service records may be used to determine the acceptability of any aggregate materials imported or generated on-site. The Engineer reserves to the right to reject said materials.

200.03 Quality Requirements for Loose Stone Aggregates.

The Contractor shall use stone (i.e. gravel, cobble, rock, boulder, etc.) that is sound and durable against disintegration under conditions to be met in handling and placing, and is hard and tenacious and otherwise of a suitable quality to ensure permanency in the specified kind of work. All applicable stone materials shall meet the requirements stated herein and conform to the following test requirements.

	Requirement	Test Method
Apparent specific gravity, minimum	2.5	ASTM C-127-59
Abrasion, maximum percent	45	ASTM C-535-65
Freeze-thaw loss, maximum percent	10	AASHTO 103
After 12 cycles		Procedure A

Stone shall be of such shape to form a stable protection structure for the required section or feature. Flat or elongated shapes will not be accepted unless the thickness of the individual pieces is at least 1/3 of the length. Stones shall be sound, durable, hard, resistant to abrasion and free from laminations, weak cleavage planes, and the undesirable effects of weathering. It shall be of such character that it will not readily disintegrate from the action of air, water, or the typical conditions experienced during handling and placing. All aggregate material shall be clean and free from deleterious impurities, including alkali, earth, clay, refuse, and adherent coatings.

Gravel, cobble, rock, and boulder identified for use in the proposed creek channel, in stream structures, and other areas subject to or where it is expected to be exposed to hydraulic conditions (water flow) shall be smooth and rounded in shape, as is typical of river run cobblestone, fieldstone, or that from a former stream deposited source. Angular rock, quarried, split rock, crushed rock or shot rock shall not be used (except where specified or allowed as shown on the Plans). In addition the aforementioned stone materials shall be of a native nature to the Tahoe Basin (i.e. of similar color and texture to that generally found within the Tahoe Basin and in particular the project area Stateline, NV and vicinity). All creek channel toe boulders and other specified boulders used for the in stream structures that are located within and immediately adjacent to the proposed creek channel shall be smooth and rounded in shape as noted above and of a natural earth tone color/hue that blends with the surrounding

environment (or generally described as “round and brown”). Attention is directed to the submittal requirements as noted in this section.

In addition to the requirements of Section 200.07 of the Standard Specifications, riprap stone shall be of such shape to form a stable protection structure for the required section. Stones shall be sound, durable, hard, resistant to abrasion and free from laminations, weak cleavage planes, and the undesirable effects of weathering. It shall be of such character that it will not disintegrate from the action of air, water, or the conditions experienced during handling and placing. Stone shall additionally be of native nature to the Tahoe Basin, of similar color and texture to that found within the Tahoe Basin and in particular the project area, and samples shall be provided to the Engineer for review and approval for use, prior to placement of any stone. All material shall be clean and free from deleterious impurities, including alkali, earth, clay, refuse, and adherent coatings. Visual evaluation of the source, suitable tests and service records may be used to determine the acceptability of the stone. Routine control of gradation will be by visual inspection.

200.04 Placement
Hand and/or mechanical adjustments/placement of the stone materials are expected in order to meet the requirements stated herein. All stone products shall be placed to follow the lines and grades shown on the Project Plans. Prevent the contamination of stone features during excavation, placement, and/or backfill. All stone features shall be blended with adjacent rock areas and grades, by tapering margins, mixing rock color, and keying into and around existing bedrock, rock, soils, and vegetation. Exact elevations and horizontal locations of the stone materials and features as shown on the Project Plans may be slightly adjusted in the field by the Engineer, with no additional compensation allowed for.

200.05 Measurement and Payment
Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for the materials in this section, complete in place as shown on the Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer, should be incidental to the other construction items; no additional compensation will be allowed.

SECTION 205 – BASIN EARTHWORK

205.01 General
Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary for basin excavation, berm construction, local borrow native soils, import, structural fill, salvage topsoil, imported topsoil, amended fill, rough grading, compaction, finish grading, loading, transport, onsite hauling, off-site hauling, temporary stockpile, off-site stockpile, processing/conditioning, screening, placement, and disposal/salvage of unsuitable or surplus materials, for all the contract work items involved or delineated as excavation, earthwork, or grading as shown on the Project Plans, and as described in the Standard Specifications and these Special Technical Provisions. All excavations, fill, earthwork, and associated grading shall be made true to the lines and grades as shown on the Project Plans, staked by the Contractor, and verified by the Engineer, and shall be so constructed as to avoid removing or loosening any material outside the required slopes and grading limits. Excavation and fill for the any storm drain pipes is not considered a part of “Basin Earthwork” and is covered in Section 220 “Storm Drain Structures.” Attention is directed to Section 303, “Unclassified Excavation” and Section 304, “Unclassified Fill,” of the Standard Specifications.

All finished areas with cut and/or fill slopes shall be graded as indicated on the Project Plans, staked in the field, and directed by the Engineer. The Contractor shall employ excavation and/or placement methods that does not disturb or damage other work. Areas that are shown to not have any excavation or grading shall be protected and remain undisturbed to protect the existing soil profile and vegetation cover. The surface - top four to six inches (4”-6”) of on-site soils (topsoil) - shall be segregated from the underlying soils and salvaged, stockpiled, disposed of, or reused as designated elsewhere in these Special Technical Provisions as directed by the Engineer. These organic rich surface soils shall not be used in, or blended to incorporate with, the native fill, engineered fill, structural fill or other designated fill material. The Contractors attention is directed to Sections 170.02, “Clearing and Grubbing” and 260, “Revegetation,” of these Special Technical Provisions.

Cobbles and boulders will likely be encountered during grading and should not be incorporated within the berm or other fill areas. If these oversize particles conform to the description of materials as described in Section 200 of these Special Technical Provisions, they should be set aside for other applications on the project site as accepted and allowed per direction of the Engineer.

205.02 Miscellaneous and Temporary Grading and Excavation
Work under this item shall consist of providing all labor, tools, materials, and equipment necessary to perform minor excavation, temporary excavation and finish grading as directed by the Engineer. Miscellaneous and temporary excavation and grading includes excavation, grading, fill, compaction, and disposal of excess materials as necessary to construct the project improvements, maintain prevailing grades, and create minor drainage swales to ensure correct flow paths and positive drainage is maintained within the finished project site. In addition, miscellaneous grading and excavation shall include finish/contour grading within the project area to create natural shapes that transition smoothly to adjacent features, grades and slopes and generally provide for a natural appearance, in accordance with the Project Plans, Standard Specifications, these Special Technical Provisions, and as directed by the Engineer. All such miscellaneous excavation and grading, including detailed finish grading as directed by the Engineer in the field to produce a natural finish, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

205.03 Local Borrow (Native Fill)
Selected material and other local borrow native earthen material encountered and/or generated on-site in excavation within the project limits may be used as backfill where shown on the Plans, as specified in the Special Technical Provisions, the Standard Specifications, or as directed by the Engineer.

All fill materials used in the work shall be in conformance with the Standard Specifications, these Special Technical Specifications, and at a minimum shall not exceed optimum moisture content, and be free of stones or lumps exceeding 3 inches in greatest dimension, organic matter, or other unsatisfactory material that may restrict compaction requirements. **Any native, local borrow, or imported borrow soils used for backfill shall be accepted by the Engineer prior to placement**. Any screening operations and processing of soils as required for conformance with this section shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

The Contractor shall perform and/or submit all material testing reports and other data as necessary to provide the Engineer with established laboratory values for optimum moisture and maximum dry density, for any local borrow native fill requiring density testing. Materials Testing shall be per Standard Specifications.

205.04 Import
Importing of earthwork fill material, if necessary or required to meet the grades and elevations shown on the plans, shall be considered included in the Contractor's bid for the various items of work involved and no additional compensation will be made therefore. Should such imported material be required, the Contractor shall notify the Engineer of the borrow site location at least 72 hours in advance, and provide an adequate sample size (~ 1 cubic foot) so the Engineer can verify the suitability of the material. All imported materials shall be proposed by the Contractor in writing in accordance with the submittal requirements of these Special Provisions and the Standard Specifications.

The Contractor shall perform and/or submit all material testing reports and other data as necessary to provide the Engineer with established laboratory values for optimum moisture and maximum dry density, for any imported material requiring density testing.

205.05 Basin Berm
Backfill, grading, and compaction of the proposed berm shall produce a finished grade surface to the lines and grades as shown on the Project Plans, and all work shall be in conformance with the applicable sections of these Special Technical Provisions, and as directed by the Engineer. Placement of topsoil and associated finish grading, and revegetation treatments shall be as specified elsewhere in these Special Technical Provisions, or as directed by the Engineer.

Earthen materials used for native fill and import fill shall be in conformance with the requirements stated herein. Placement, layering, compaction, and locations of the fill materials to create a distinct soil profile to produce a finished grade surface shall be as shown on the Project Plans, described herein, and as directed by the Engineer.

Site Preparation
All debris, pavement, and concrete shall be removed from the berm site. A stripping depth of 0.2 to 0.3 feet is anticipated. Trees and associated roots greater than one-half inch in diameter shall be removed, where necessary, to a minimum depth of 12 inches below finished grade or in the footprint of the berm. Recycled materials shall not be used within the earthen berm fills. The Contractor shall exercise care during grading to locate and identify any existing buried improvements that require removal and replacement. Aggregate base or bedding sand encountered during the removal of improvements may be sufficiently blended with the native silty sands and stockpiled for re-use provided it meets the requirements for berm fill. The Contractor shall have fill materials, including those generated on site, sampled, tested, and approved by the Geotechnical Engineer prior to placement and compaction.

Grading and Filling
Once the debris and vegetation are removed from areas to receive berm fill, the existing subgrade shall be scarified to a depth of 12” minimum, moisture content within 3 percent of optimum, and compacted to at least 88 percent relative compaction (ASTM D1557). Any soft or wet zones shall be stabilized by methods such as excavation or dewatering prior to final grading. Berm fill materials shall not be placed on surfaces that are muddy, frozen, or contain frost or ice.

With the exception of asphalt, debris, and vegetation, the soils removed from beneath the parking lot are generally suitable as berm fill materials. All materials used for the berm fill shall be approved by the Geotechnical Engineer prior to placement. Contractor shall take due care to protect the resulting native material stockpiles from being compromised with coarse particles such as cobbles or asphalt. Oversized

particles (greater than 4" diameter) shall be removed from berm fill material or import fill will be required. Berm fill shall meet the following requirements:

Berm Fill Requirements	
Sieve Size	**Percent Passing (by dry weight)**
4"	100
¾"	70-100
No. 40	15-80
No. 200	5-40
Liquid Limit	40 max.
Plasticity Index	10 max.

Berm fill shall be placed in a maximum of 12 inch loose lifts and densified to at least 92 percent relative compaction except (ASTM D1557). Berm fill shall have a moisture content within 3 percent of optimum. Higher moisture contents may be acceptable if the soil lift is stable, required compaction is attained, and approval is given by Geotechnical Engineer. Field density testing shall be performed on each lift of fill.

A Geotechnical Engineer, employed by NTCD, will be on site to identify native fill suitable for berm construction and perform compaction testing. The Contractor shall inform NTCD at least 48 hours in advance if the Geotechnical Engineer is needed on site. The Contractor shall perform and submit material testing reports and other data as necessary to validate the source and makeup of import fill selected for placement in the work, and to provide the Engineer with established laboratory values for optimum moisture and maximum dry density, for any fill material requiring density testing. Any proposed import fill that deviates from the criteria stated herein, shall have written acceptance from the Engineer and geotechnical engineer prior to import or placement in the work.

The Contractor is hereby advised that some of the on-site soils may be saturated and will require drying prior to placement in order to achieve the specified degree of compaction.

205.06 Topsoil Placement

Placement of topsoil (salvage, import, or amended fill) to the required thickness, including any associated finish grading and compaction, shall produce a finished surface to the lines and grades as shown on the Project Plans, and all work shall be in conformance with the applicable sections of these Special Technical Provisions. The topsoil (salvage, import, or amended fill) shall be placed to blend with the adjacent project improvements and floodplain areas to create a generally smooth, natural appearance (including minor variations) as directed by the Engineer; and to create a stable area to receive all proposed revegetation treatments as specified elsewhere in these Special Technical Provisions.

Following completion of excavations, fills, grading, compaction, placement of aggregates, and construction of all proposed improvements as shown on the Project Plans as required prior to placement of any topsoil (salvage, import, or amended fill), the Contractor shall schedule for a site inspection by the Engineer (minimum of 4 working days notice required) in order to inspect the subject work area for conformance with the contract documents, plans, and specifications. **Placement of topsoil shall not commence until the Engineer have inspected and accepted the subject work area**. In addition the base soils will be inspected (using a soil probe or penetrometer) for any areas of excessive

compaction. Upon discovery the Engineer will mark all areas/items required for corrective measures, and mark the limits of areas where soils shall be loosened/decompacted in order to commence placement of topsoil (salvage, import, or amended fill) and subsequent installation of the revegetation treatments in accordance with the applicable provisions of Section 260, "Revegetation" of these Special Technical Provisions.

Salvaged topsoil shall only be generated from the project site (within the limits of grading) as specified in Sections 195 "Clearing and Grubbing" and 260 "Revegetation" of these Special Technical Provisions.

Earthen materials used for imported topsoil shall be imported to the project site and/or produced on-site, and all construction and materials shall be in conformance with the Plans and applicable portions of these Special Technical Provisions and Standard Specifications. Attention is directed to Section 260 "Revegetation" of these Special Technical Provisions for specific material requirements for the imported topsoil and amended fill.

205.07 Unsuitable Soils, Surplus Earthen Material, and Stockpiles
Unsuitable soils, surplus soils, and other excess earthen materials shall be removed and disposed of in accordance with all local, state, and federal regulations from the project site as a part of this item of work. No unsuitable or surplus material may be disposed of within the rights-of-way or project limits. The Contractor shall make all arrangements for disposal of the materials at off-site locations (including disposal outside of Tahoe basin) and at the Contractor's expense.

All surplus materials generated from the project site during construction operations, including but not limited to, clearing and grubbing, topsoil salvage, storm drain excavation, and basin grading, shall be off-hauled and salvaged/disposed of outside the project limits and Tahoe basin (unless a specific off-site area is authorized for use by the Engineer and applicable regulatory agencies). Any shortage of material caused by premature disposal of the surplus or salvaged materials, by the Contractor, shall be replaced by him/her and no additional compensation will be allowed for such replacement.

205.08 Measurement and Payment. Basin Earthwork shall be measured on a lump sum basin, complete in place and accepted by the Engineer as conforming to all the requirements in the complete work. The contractor shall bid based on the cut and fill quantities provided on the Project Plans. If the contractor disputes the quantities provided on the plans, the contractor shall pay for and provide a survey, at his/her own expense and prepare the necessary figures and calculations to support the claim. Excess quantities will be paid for as a percent increase based on the original lump sum bid. Any associated contour grading and other general earthwork movement as required to complete the work shall be considered as included in the lump sum price.

The lump sum price paid for "Basin Earthwork" shall include furnishing all labor, materials, tools, equipment, and incidentals and for doing all the earthwork involved, including but not limited to, excavation, loading, transport, onsite hauling, local borrow, import, screening, conditioning, backfill, rough grading, scarifying, compacting, finish grading, disposal of unsuitable or surplus materials, and otherwise manipulating the existing ground surface and soils, and placing additional local borrow or import soils as required for the grading and construction of the designated basin and berm for a complete job in place to the lines and grades as shown on the Project Plans, and specified in the Contract Documents, Project Permits, Standard Specifications, these Special Technical Provisions, and as directed by the Engineer, and no additional compensation will be allowed.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 210 – DECOMMISSION EXISTING DRAINAGE CHANNEL

210.01 General
Work under this item shall consist of furnishing all labor, tools, equipment, and materials necessary for decommissioning the existing drainage ditch to the extents shown on the Plans including, but not limited to, protection of the existing vegetation, vegetation removal where indicated, backfill, earthwork, excavation, and compaction as necessary.

Backfill, grading, and compaction of the proposed berm shall produce a finished grade surface that matches the grades of the adjacent meadow, and all work shall be in conformance with the applicable sections of these Special Technical Provisions, and as directed by the Engineer.

Earthen materials used for native fill and import fill shall be in conformance with the requirements stated herein. Placement, layering, compaction, and locations of the fill materials to create a distinct soil profile to produce a finished grade surface shall be as shown on the Project Plans, described herein, and as directed by the Engineer.

210.02 Site Preparation
Work shall occur when the ditch is free of surface water. Existing vegetation shall be protected in place. Sod shall be removed from the top of the ditch berm and stockpiled in a suitable location (Section 265 of these Special Provisions). With approval from the Engineer, woody vegetation may be trimmed to allow access to place fill within the ditch. In the areas receiving ditch plugs, a 10 foot swath of vegetation shall be removed. Associated roots shall be removed to a minimum depth of 12 inches below finished grade in the footprint of the "ditch plug." Recycled materials shall not be used within the ditch fill.

210.03 Grading and Filling of Ditch with Preserved Vegetation
The berm adjacent to the ditch shall be removed and pushed into the ditch. Fill produced from construction of the basin shall be placed around the existing vegetation in 12" lifts and tamped with a bucket or other compaction method.

210.03 Grading and Filling of Ditch Plugs
Once the debris and vegetation are removed from areas to receive fill, the existing subgrade shall be scarified to a depth of 12" minimum, moisture content within 3 percent of optimum, and compacted to at least 88 percent relative compaction (ASTM D1557). Any soft or wet zones shall be stabilized by methods such as excavation or dewatering prior to final grading. Ditch plug fill materials shall not be placed on surfaces that are muddy, frozen, or contain frost or ice.

Ditch plug shall be placed in a maximum of 12 inch loose lifts and densified to at least 92 percent relative compaction except (ASTM D1557). Berm fill shall have a moisture content within 3 percent of optimum. Higher moisture contents may be acceptable if the soil lift is stable, required compaction is attained, and approval is given by Geotechnical Engineer. Field density testing shall be performed on each lift of fill.

210.04 Measurement and Payment. "Decommission Existing Drainage Channel" shall be measured on a lump sum basis, complete in place and accepted by the Engineer as conforming to all the requirements in the complete work. The contractor shall bid based on the cut and fill quantities provided on the Project Plans. If the contractor disputes the quantities provided on the plans, the contractor shall pay for and provide a survey, at his/her own expense and prepare the necessary figures and calculations to support the claim. Excess quantities will be paid for as a percent increase based on the original lump sum bid. Any associated contour grading and other general earthwork movement as required to complete the work shall be considered as included in the lump sum price.

The lump sum price paid for "Decommission Existing Drainage Channel" shall include furnishing all labor, materials, tools, equipment, and incidentals and for doing all the earthwork involved, including but not limited to, excavation, loading, transport, onsite hauling, local borrow, import, screening, conditioning, backfill, rough grading, scarifying, compacting, finish grading, disposal of unsuitable or surplus materials, and otherwise manipulating the existing ground surface and soils, and placing additional local borrow or import soils as required for the grading and construction of the designated basin and berm for a complete job in place to the lines and grades as shown on the Project Plans, and specified in the Contract Documents, Project Permits, Standard Specifications, these Special Technical Provisions, and as directed by the Engineer, and no additional compensation will be allowed.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 215 – CONCRETE CUTOFF WALL

215.01 General
Work covered under this specification consists of furnishing all of the labor, materials, tools, and equipment necessary for the construction and installation of a concrete cutoff wall in accordance with the Contract Documents, NDOT Standard Plans and Specifications, and these Special Technical Provisions, and in conformity with the lines, grades, dimensions, and general design parameters as shown on the Project Plans, and as established and directed by the Engineer.

215.02 Mix Design
A mix design shall be performed and submitted to the Engineer in accordance with Subsections 337.01 "Mix Design" and 337.10 – "General Structural Use Portland Cement Concrete" to determine the composition of the mixture. Unless otherwise specified, Portland Cement for concrete shall be Type II, low alkali. All concrete mixes shall meet the requirements of Section 337.10.01.01, Portland Cement Concrete Exposed to Freeze-Thaw Cycles of the Standard Specifications. No concrete shall be placed without approval by the Engineer of a mix design.

215.03 Measurement and Payment
"Concrete Cutoff Wall" shall be measured on a per each basis, complete in place and accepted by the Engineer as conforming to all the requirements in the complete work. Mortar, grout, finishing, all equipment, labor, and materials shall be included in the unit price established for concrete structures and masonry construction.

This unit price shall include full compensation for excavation, removal of excavated material, concrete, rebar, frame work, associated hardware, backfill, drain rock, pipe connection, and furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in installing the headwalls as shown on the plans, as specified in the Special Provisions, and as directed by the NTCD.

SECTION 220 – STORM DRAIN AND BASIN STRUCTURES

220.01 General
Work covered under this specification consists of furnishing all of the labor, materials, tools, and equipment necessary for the construction and installation of storm drain and basin structures including manholes, basin outlet structure, and all appurtenances in accordance with the Contract Documents, NDOT Standard Specifications, and these Special Technical Provisions, and in conformity with the lines, grades, dimensions, and general design parameters as shown on the Project Plans, and as established and directed by the Engineer.

220.02 Manholes
Work under this item shall consist of installation of Douglas County Type 2 Eccentric manholes as shown on the project plans. Pipe connections and pipe invert elevations shall be confirmed with Engineer prior to installation. Manholes shall conform to section 204 of the Standard Specifications. A minimum difference of 0.1‘shall be provided between the inlet and outlet pipe invert elevations in a manhole or drop inlet. A minimum of six inches separation between pipe penetrations in manholes shall be provided. Manholes should be installed to be water tight using “Conseal” or equivalent at each joint and to ensure a proper seating of each riser component. Joints shall also be wrapped with joint wrap, MH-860 or equivalent. Pipe connections shall use A-lok 490 gasket or equivalent.

220.03 Existing Vault Connection
Work under this item shall consist of connection of the proposed storm drain pipe to the existing vault as shown on the project plans. Pipe connections and pipe invert elevations shall be confirmed with Engineer prior to installation. Connections shall be water-tight and utilize the materials specified per plan and in section 235 of these Special Provisions and in the Standard Plans. Plastic pipe connections shall use A-lok 490 gasket or equivalent. A minimum difference of 0.1‘shall be provided between the inlet and outlet pipe invert elevations in the vault. A minimum of six inches separation between pipe penetrations in the vault shall be provided.

220.04 Basin Outlet Structure
Work under this item shall consist of furnishing all labor, tools, equipment, and materials, and incidentals necessary for construction of the basin outlet as shown on the plans. Basin Outlet material shall be constructed in conformance with Sections 204 “Manholes and Catch Basins” and 311 “Concrete Structure and Masonry Construction” of the Standard Specifications. **The Contractor shall submit shop drawings and material data sheets showing dimensions, materials, reinforcement, penetrations, frame and grate, etc of the proposed basin outlet structure components.**

The complete finished basin outlet structure including grate, hardware, and drainage components shall be constructed in a water-tight fashion meeting ASTM C890 and C913 specifications, and conformance with these Special Provisions and the Standard Specifications. The basin outlet structures shall consist of a single unit (i.e. monolithic without joints or seams) precast concrete drain inlet structure modified as necessary to receive the grate assembly (including hinges, lock, and other hardware) and drainage components (including PVC pipe and fittings, elliptical pipe, etc). Each basin outlet structure shall be installed to meet the lines, grades, and elevations as shown on the Project Plans and applicable details. Backfill materials shall be in conformance with section 200 "Aggregates for Base Courses" of the Standard Specifications.

All completed steel components, hardware, and exposed surfaces shall be colored to minimize the structures' appearance. The galvanized steel grate and associated hardware for the basin outlet structure shall be stained with "Natina Steel" or approved equal to achieve a color of "Federal color RAL 6012" as described on the website http://www.ralcolor.com. to blend with surrounding features and/or as directed by the Engineer) in accordance with the Project Plans, Standard Plans, Standard Specifications, these Special Provisions, and as directed by the Engineer. The stain must consist of a clear soluble solution of soft buffered organic acids that accelerates the oxidization process without compromising the protective qualities of the galvanized surfacing. No pigment based colorants should be added to achieve the desired color. The stain must react with the galvanized surface over a period of 5-10 days to produce a dark brown color with a matte finish. The stain must be resistant to fading in the sun. Prior to application, the Contractor shall submit a color same to the Engineer for review and acceptance. The painting/coloring of any portion of the basin outlet structure shall be included in the cost of the basin outlet structure and no additional compensation will be allowed for.

220.05 Manual Pond Drain Valve

Work under this item shall consist of furnishing all labor, tools, equipment, and materials, and incidentals necessary for construction of a manual pond drain valve as shown on the plans. Valve material shall be constructed in conformance with Section 307.11.03 "Gate Valves." Valve box shall be constructed in conformance with section 307.11.06 "Valve Boxes" of the Standard Specifications.

220.06 Measurement and Payment

"Manhole" construction shall be measured and compensated for the unit price established per each structure, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "Manhole" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved in constructing the inlet, complete in place, including any excavation, bedding, structural backfill, pipe connections, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

"Basin Outlet Structure" construction shall be measured and compensated for the unit price established per each structure, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "Basin Outlet Structure" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved in constructing the "Basin Outlet Structure," complete in place, including any excavation, bedding, structural backfill, concrete, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the

Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

"Existing Vault Connection" shall be measured and compensated for the lump sum price established, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract lump sum price paid for "Existing Vault Connection" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved in constructing the inlet, complete in place, including any excavation, bedding, structural backfill, pipe connections, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

"Manual Pond Drain Valve" shall be measured and compensated for the unit price established per each structure, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "Manual Pond Drain Valve" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved in constructing the inlet, complete in place, including any excavation, bedding, structural backfill, pipe connections, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

This unit prices shall include full compensation for excavation, removal of excavated material, concrete, rebar, frame work, associated hardware, backfill, drain rock, pipe connection, and furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in installing the all stormdrain structures as shown on the plans, as specified in the Special Provisions, and as directed by the NTCD.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

SECTION 225 – CONCRETE CURB

225.01 General
Concrete curb is to be constructed on in accordance with the plans, these special provisions and in conformance with the Standard Specifications. Attention is directed to section 312 "Concrete Curbs, Gutters, Walks, Driveways, and Alley Returns" of the Standard Specifications.

225.02 Type 2 Median Curb
Where removed, median curb shall be replaced in kind to match the existing curb. Curb should be removed and replaced at existing joints if possible. Contractor shall make transitions from existing to new curb uniform.

225.03 Type 1 PCC Curb
Where removed, Type 1 PCC Curb shall be replaced in kind to match the existing curb. Curb should be removed and replaced at existing joints if possible. Contractor shall make transitions from existing to new curb uniform.

225.04 Measurement and Payment
"Median Curb" shall be measured on the unit price established per linear foot, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "Median Curb" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved installing vertical curb, complete in place, including any excavation, bedding, structural backfill, concrete, roadway paving, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

"Type 1 PCC Curb" shall be measured on the unit price established per linear foot, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "Type 1 PCC Curb" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved installing vertical curb, complete in place, including any excavation, bedding, structural backfill, concrete, roadway paving, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

SECTION 235 – PIPE

235.01 General
Work covered under this specification consists of furnishing all of the labor, materials, tools, and equipment necessary for the installation of storm drain pipe including the pipes in and out of the basin outlet, storm conveyance drain pipe, and all pipe connections in accordance with the Contract Documents, Standard Specifications, and these Special Technical Provisions, and in conformity with the lines, grades, dimensions, and general design parameters as shown on the Project Plans, and as established and directed by the Engineer.

235.02 Reinforced Concrete Pipe (RCP)
36" Equivalent Elliptical Pipe
Reinforced Concrete Elliptical Pipe used in the outlet structure shall have a 29" rise by a 45" span and a round equivalent of 36" pipe. Pipe material shall conform to section 202.10 and be constructed in conformance with section 306 "Storm Drain, Culverts, and Sanitary Sewer Construction" of the Standard Specifications.

42" RCP
Reinforced Concrete Pipe used for stormwater conveyance shall have an interior diameter of 42 inches. Pipe material shall conform to section 202.10 and be constructed in conformance with section 306 "Storm Drain, Culverts, and Sanitary Sewer Construction" of the Standard Specifications.

235.03 Plastic Pipe

Work under this item shall consist of furnishing all labor, tools, equipment, and materials, and incidentals necessary for installation of the plastic storm drain pipe as shown on the plans. This includes the bedding and backfill.

36" HDPE Pipe
36" High Density Polyethylene Pipe (HDPE) specified for storm drain use shall be double walled Type S corrugated with a smooth interior. Pipe shall be joined using a bell & spigot joint meeting ASTM F2648. The joint shall be watertight according to the requirements of ASTM D3212. Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly. HDPE at a minimum shall meet the requirements of Section 203 of the Standard Specifications inclusive.

6" PVC Pipe
6" PVC pipe specified for the manually operated pond drain shall meet the requirements of Section 203.20 of the Standard Specifications inclusive.

235.04 Water Stops
Work under this item shall consist of furnishing all labor, tools, equipment, and materials, and incidentals necessary for the installation of water stops along the pipe line as shown on the Project Plans.

235.05 Measurement and Payment
"36" Equivalent Elliptical Pipe" shall be measured on the unit price established per linear foot, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "36" Equivalent Elliptical Pipe" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved installing 36" equivalent elliptical pipe, complete in place, including any excavation, bedding, structural backfill, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

"42" RCP" shall be measured on the unit price established per linear foot, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "42" RCP" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved installing 42" RCP, complete in place, including any excavation, bedding, structural backfill, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

"36" HDPE Pipe" shall be measured on the unit price established per linear foot, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "36" HDPE Pipe" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved installing 36" HDPE Pipe, complete in place, including any excavation, bedding, structural backfill, connection to drainage structures, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as

shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

"6" PVC Pipe" shall be measured on the unit price established per linear foot, completed and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "6" PVC Pipe" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved installing 6" PVC Pipe, complete in place, including any excavation, bedding, structural backfill, connection to drainage structures, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

"Water stops" shall be measured on the unit price established per each installed complete in place and accepted by the Engineer as conforming to all the requirements in the complete work. The contract unit price paid for "Water Stops" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for performing all the work involved installing a water stop, complete in place, including any excavation, bedding, structural backfill, connection to drainage structures, off-haul and disposal of excess materials and waste debris, and performance of conformance testing as shown on the Project Plans, as specified in the Standard Specifications, these Special Technical Provisions, and as directed by the Engineer; and no additional compensation will be allowed.

SECTION 240 – CONCRETE BLOCK FOREBAY

240.01 Description
Work shall consist of furnishing all material, labor, services and related items to complete the installation of concrete block forebay. Work includes installing the materials in conformity with the lines, grades, design, and dimensions shown in the Project Plans.

240.02 Materials
Obtain one color, type and variety of interlocking and overlapping articulating concrete block revetment system from a single lot manufactured by a single source. Color shall be buff tan in nature and is to be approved by the Engineer prior to submitting an order. Materials shall be available and be consistent in quality, appearance and physical properties without delaying progress of work. Protect all materials from damage due to jobsite conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work. Tapered, Overlapping Articulating Concrete Block Revetment System shall be manufactured with fiber reinforced concrete and not be capable of having one block protrude against direction of flow relative to another block.

Property	Unit	Value
Specific Weight	lbs./cu. ft.	130 – 150
Compressive strength	psi	4000
Maximum Absorption	lbs./cu. ft.	10
Nominal Dimensions	Inches (l x w x h)	21.5 x 21.5 x 6
Net Coverage per Block	sq. ft.	3.21
Total Block Weight	lbs.	176
Unit Block Weight	lbs./sq. ft.	54.8

Open Area (nominal)	Percent	21.5
Fiber Reinforcement Cast in Block	lbs./cu.yd	2.5
Allowable Unit Protrusion	Inches / block	0
Minimum Vertical Interlock	Inches / block	.5

The base aggregate for forebay access shall conform to Section 200 “Aggregates for Base. ” Filter fabric shall be a nonwoven geocomposite Tenax Tendrain 750 or equivalent.

240.03 Installation

Prior to commencing the work of this section, verify the accuracy of layout and grading. Verify that all sub-grades and base and/ or drainage course aggregate conditions are as specified. Notify the Engineer of any discrepancies and coordinate the correction of those discrepancies with other trades as necessary. Protect partially completed installation against damage from run-on or other construction traffic when work is in progress.

Stable and compacted subgrade soil shall be prepared to the lines, grades and cross sections shown on the contract drawings. Termination trenches and transitions between slopes, embankment crests, benches, berms and toes shall be compacted, shaped and uniformly graded to facilitate the development of intimate contact between the articulated block system and the underlying grade. Termination between the concrete block revetment system and a concrete slab, wall or similar structure, shall be secured in a manner which prevents soil migration.

The subgrade soil conditions shall meet or exceed the required material properties described elsewhere in the document prior to placement of the system. Soils not meeting the requirements shall be removed and replaced with acceptable material. Unsatisfactory soils, soils having excessive in-place moisture content and soils containing clods, roots, sod, brush, or other organic materials shall be removed, backfilled with approved material and compacted. It is recommended that the subgrade be uniformly compacted to a minimum of 90 percent of Standard Proctor density (ASTM D 698) or as directed by the engineer of record. Should the subgrade surface for any reason become rough corrugated uneven textured or traffic marked prior to concrete block revetment installation, such unsatisfactory portion shall be scarified, reworked, re-compacted or replaced as directed by the Engineer. Excavation of the subgrade above the water line shall not be more than 2 inches (50 mm) below the grade indicated on the contract drawings. Where such areas are below the allowable grades, they shall be brought to grade by placing and compacting approved material in layers not exceeding 6 inches (150 mm) thick. Where such areas are above the allowable grades, they shall be brought to grade by removing material or reworking existing material and compacting. The subgrade shall be raked, screeded, or rolled by hand or machine to achieve a smooth compacted surface that is free of loose material.

Care shall be exercised so as not to excavate below the grades shown on the contract drawings, unless directed by the Engineer to remove unsatisfactory materials. Any excessive excavation shall be filled with approved backfill material and compacted.

The areas to receive the concrete block revetment system shall be graded to establish a smooth surface and ensure that intimate contact is achieved between the subgrade surface and the geotextile, and between the geotextile or drainage layer and the bottom surface of the concrete block.

Immediately prior to placing the geotextile and concrete block revetment system, the prepared subgrade shall be inspected. The geotextile shall be placed directly on the prepared area, in intimate contact with the subgrade and free of folds or wrinkles. The geotextile shall be placed in such a manner that placement of the overlying materials will not excessively stretch or tear the geotextile. After geotextile placement, the work area shall not be disturbed so as to result in a loss of intimate contact between the concrete block, the geotextile, and the subgrade. The geotextile shall not be left exposed longer than the manufacturer's recommendation to minimize potential damage due to ultraviolet radiation.

The geotextile shall be placed so that upstream strips overlap downstream strips and so that upslope strips overlap down slope strips. Overlaps shall be in the direction of flow wherever possible. The longitudinal and transverse joints shall be overlapped at least 2 feet. The geotextile shall extend beyond the top, toe and side termination points of the revetment. If necessary to expedite construction and to maintain the recommended overlaps anchoring pins, "U" – staples or weights shall be used.

The concrete block revetment shall be placed on the geotextile / drainage layer in such a manner as to produce a surface that achieves intimate contact with the geotextile.

Placement of the concrete block revetment system whether done with a grappling device multiple units at a time or individual units placed by hand shall be performed to ensure that the individual blocks have intimate contact and are vertically interlocked. In areas of curvature or grade change, alignment of an individual block with adjacent blocks shall be oriented such that intimate contact between the block, gravel, geotextile, and subgrade is maintained and block to block interconnection is achieved. Some block cutting and/or reinforced poured concrete of irregular transition sections may be required.

Care shall be taken during block installation so as to avoid damage to the geotextile or subgrade during the installation process. Preferably, where the geotextile is laid on the ground prior to the concrete block installation, the concrete block placement shall begin at the downstream section and proceed upstream. On sloped sections where practical, placement shall begin at the toe of the slope and proceed up-slope. Vertical overlap shall be maintained and no protrusions allowed against the direction of flow. Where required by the specifications, joining of structures and adjacent blocks can be accomplished after the blocks have been set in place.

The open area of the articulating concrete block system is to be backfilled with suitable soil for revegetation. Backfilling with soil within the cells of the system shall be completed as soon as practicable after the revetment has been installed. For topsoil, overfill by 1 inch to account for backfill material consolidation.

Concrete edges shall to be constructed on in accordance with the plans, these special provisions and in conformance with the Standard Specifications. Attention is directed to section 312 "Concrete Curbs, Gutters, Walks, Driveways, and Alley Returns" of the Standard Specifications.

240.04 Measurement and Payment

"Concrete Block Forebay" shall be measured on a per square foot basis including concrete block access path and concrete edges. Full compensation for furnishing all labor, material, equipment, and incidentals necessary to construct the concrete block forebay, including, but not limited to, aggregate base, geotextile, drainage layer, grading, placement, topsoil, and incidentals shall be included the unit price bid for "Concrete Block Forebay" and no additional compensation will be allowed.

SECTION 245 – GATE RELOCATION

245.01 General
Access Gate Relocation consists of removing the existing access gate as indicated on the plans, restoring the location to natural conditions, and reinstalling the access gate in the location indicated on the plans. Exact location for the access gate installation shall be marked in the field by the Engineer prior to installation. The Contractor shall provide a written request for the location a minimum of 5 days prior to installation.

245.02 Measurement and Payment
"Gate Relocation" shall be measured per each on the number of units, complete in place and accepted by the Engineer as conforming to all the requirements in the complete work. Full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in removing and reinstalling the access gate, complete in place, including, site restoration, transport, excavation, installation, backfill, compaction, disposal of materials, and any other appurtenances, as shown on the Project Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer shall be at the contract unit price per each access gate constructed and accepted by the Engineer under the bid item for "Gate Relocation" and no additional compensation will be allowed.

SECTION 250 – ROCK SPILLWAY

250.01 General. Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary construct the rock spillway and outlet dissipator as indicated on the Project Plans, described in these Special Technical Provisions, and directed by the Engineer, in conformance with the Contract Documents, Standard Specifications, and these Special Technical Provisions. The limits of rock placement as indicated on the Project Plans are approximate, and the exact limits of placement shall be determined in the field by the Engineer. All rock used shall be in strict conformance with the Standard Specifications, and other applicable provisions found elsewhere in these Special Technical Provisions. Attention is directed to section 200.07 "RIP RAP" of the Standard Specifications. Rock size shall be angular and conform to Class 550 rip rap as defined in the Standard Specifications unless otherwise called out on in the plans.

250.02 Execution.
All Rip Rap, including imported and reused rock, shall be thoroughly washed outside of the confines of the proposed basin in a location approved by the engineer so that each material runs clear when water is applied. Rip Rap shall be placed to the lines, grades and depths shown on the Project Plans, or as directed by the Engineer. Place rock so as to minimize the number of voids. Rock shall be placed in lifts with a thickness not exceeding the D100 of the specified stone. Each lift shall be backfilled to half its depth with "Backfill Material", prior to placement of the subsequent lift. Backfill shall be placed in a manner that does not interfere with direct rock to rock contact of successive lifts. Backfill shall be

placed to match the finished surface of the Riprap and water-jetted to fill all voids, as directed by the Engineer.

Final placement of all rock will not be allowed to be "dumped", the rock shall be placed as directed by the Engineer for a natural appearance, which will require hand placement of rock. The Contractor shall take all necessary measures to protect any underlayment, fabric, or blanket from damage (if such material is damaged the product shall be repaired per the manufactures recommendations, and as directed by the Engineer). All rock is to be placed to minimize the potential for movement when flow is induced into the feature and this will be accomplished by interlocking the angular nature of the rock with itself. Local surface irregularities of the rock rip-rap shall not vary from the planned slopes by more than four inches (4-in) measured at right angles to the slope.

250.03 Measurement and Payment.
"Rock Spillway" will be paid for at the contract price per square foot, which price will be payment in full for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the riprap placement, including rock removal, relocation, staging, backfill, excavation, subgrade preparation, processing work, and rock placement as shown on the plans and as specified in these Special Technical Provisions, and as directed by the Engineer.

SECTION 255 – WILLOW WATTLES

255.01 General. Work under this item shall consist of furnishing all labor, tools, materials, and equipment necessary to install the willow wattles as indicated on the Project Plans, described in these Special Technical Provisions, and directed by the Engineer, in conformance with the Contract Documents, Standard Specifications, and these Special Technical Provisions. The limits of willow wattle placement as indicated on the Project Plans are approximate, and the exact limits of placement shall be determined in the field by the Engineer.

250.02 Execution.
Locations for willow cuttings shall be specified by Engineer and preferable come from willows that are to be relocated per Section 260. All willow cuttings shall consist of living woody plant cuttings capable of rooting in moist soils and usually assembled into bundles called wattles or fascines; generally ¼ - 1 inch diameter and 3-4 feet in length. Stakes shall be living woody plant cuttings capable of quickly rooting in moist soils; generally ½ - 2 inches in diameter and 1-3 feet long and large enough to be tamped-in as stakes. Wattles shall be bundles of cuttings bound together into sausage-like structures capable of rooting in moist soils; generally wattles are at least 3-4 feet long. Wattles shall be placed in trenches per detail and secured with live stakes.

250.03 Measurement and Payment.
"Willow Wattles" will be paid for at the contract price per linear foot, which price will be payment in full for furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the willow wattle placement, including excavation, subgrade preparation, collection and cutting of willow, and placement and staking as shown on the plans and as specified in these Special Technical Provisions, and as directed by the Engineer.

SECTION 260 – REVEGETATION

260.01 General

Work shall be conducted and/or overseen by a licensed Landscape Contractor (C-10) in the State of Nevada and will be inspected by the Engineer, in conjunction with a RS. The Contractor shall perform all revegetation work as specified herein and in accordance with the provisions of these Special Technical Provisions, the Project Plans, and the Standard Specifications. The revegetation work shall consist of all site preparation associated with the revegetation treatments, and shall include sod and organic matter salvage, storage and placement; willow and Woods rose salvage, storage and replanting; seedbed preparation; seeding; mulching; design, installation and management of the irrigation system; one year of maintenance; and record keeping.

Areas to receive revegetation treatments shall include all areas disturbed during construction and all areas indicated on the plans and as directed by the Engineer and/or the RS.

The Contractor is further required to only use "low impact equipment" for this project. No equipment having a ground pressure that will disturb and/or compact the ground (generally ground pressures less than 25 psi) will be allowed off of paved areas or designated temporary truck haul routes under any circumstances. All equipment on the project site, (off paved areas or designated truck haul routes), shall meet this low-pressure requirement.

All revegetated areas shall be maintained for one year following completion of work to ensure proper establishment of vegetation. Supplemental treatments may be required if revegetation efforts are unsatisfactory following completion of work as determined by the Engineer. The cost of this bonding shall be included in the Revegetation bid item. Warranty 100 % survival of all salvaged and transplanted sod, willows, and roses.

The Contractor shall notify the Engineer and RS no less than ten (10) working days in advance of revegetation work and shall not begin work until prepared revegetation treatment areas have been accepted by the Engineer and RS. The Contractor shall request that treatment types and boundaries are located by the Engineer and/or RS prior to progressing with the work.

No substitutions or alterations to these Special Technical Provisions shall be accepted without the prior written approval of the Engineer and the RS. No further disturbance of any treatment area shall be allowed once revegetation has been initiated.

260.02 Soil Disturbance

Soil disturbance shall be minimized and limited to those areas that require treatment. All existing vegetation within the project limits not designated for removal shall be protected. Delineate project boundaries with fencing per the requirements in Construction Limit Fencing and in these Special Technical Provisions. Traffic outside of project area is prohibited. Any existing or previously installed vegetation damaged shall be replaced by the Contractor. Areas to receive revegetation treatments shall include all areas disturbed during construction, as indicated on the Project Plans and as directed by the Engineer and/or the RS.

260.03 Revegetation Treatment Types

Treatment Type 1 (TT1): Basin Bottom and Sides

Salvage sod and organic matter, store, and replant. Top dress bare areas, including temporary access road, with Seed Mix 1. rake seed to incorporate. Cover with salvaged mowings. Irrigate to establish sod and seeded areas.

Treatment Type 2 (TT3): Basin Screening

Salvage, store, and re-plant willows and Woods rose as show on the plans and as directed by the RS. Top dress bare areas with Seed Mix 1. Rake seed to incorporate. Irrigate to establish willows and Woods rose.

Treatment Type 3 (TT3): Pipeline ROW

Decompact soils to a maximum of 85%. Apply Seed Mix 2, incorporate. Apply wood chip mulch to achieve 85% cover.

260.04 Submittals

Within thirty (30) calendar days following the Notice to Proceed for the contract, the Contractor shall submit to the Engineer statements proving that order for seed has been received and accepted by the supplier(s). The statement(s) shall include product specifications and quantity to be delivered and the estimated date(s) of delivery. Additionally, the Contractor shall submit plans, labels or material samples for the following items:

- Revegetation schedule and order of work
- Seed mixes
- Wood chip mulch
- Irrigation system design and schedule
- Sod salvage equipment, harvest, and storage plan
- Willows and Woods rose salvage equipment and storage plan

Proposed substitutions must be submitted in writing for approval by the Engineer.

260.05 Materials

Seed

All seed shall conform to all laws and regulations pertaining to the sale and shipment of seed required by the Nevada Department of Agriculture and the Federal Seed Act. Test all seed within twelve (12) months prior to application date. Seed tags must reflect the most recent test date. Submit original seed tests by lot number to the RS a minimum of thirty (30) calendar days prior to application for approval. Following approval by the RS, seed may be mixed and delivered to the site.

All seed shall be delivered to the project site in sealed bags with proper labeling. Weed seed shall not exceed 0.15% of the pure live seed (PLS) specified and shall not include any seed of cheatgrass (*Bromus tectorum*) or sweet clovers (*Melilotus officinalis, M. alba*). Crop seed shall not exceed 0.25%. The State may reject any seed that includes other un-desirable weedy species.

The Contractor shall notify the State at least 72 hours in advance of any seeding.

The State will remove seed labels from the seed bags at the time of seeding to verify all species, lot numbers, and origins in the mix and application rate in accordance with these Special Provisions.

Seed tags shall show the following information

1) Scientific name
2) Common name
3) Lot number
4) Percent purity
5) Percent germination, including hard and dormant seed
6) Percent weed seed
7) Percent crop seed
8) Origin

Seed Mix 1 (Basin)		
Species (Scientific Name)	Species (Common Name)	PLS LBS per Acre
Deschampsia cespitosa	Tufted hairgrass	0.50
Carex praegracilis	Slender sedge	0.50
Elymus glaucus	Blue Wildrye 'Stanislaus'	3.00
Hordeum brachyantherum[1]	Meadow barley	2.00
Juncus balticus	Baltic rush	0.10
Leymus triticoides	Creeping wildrye	3.00
Lupinus polyphyllus	Tahoe lupine	1.00
Penstemon rydbergii	Rydberg's penstemon	0.25
Poa pratensis[2]	Kentucky bluegrass	1.00
Potentilla gracilis	Slender cinquefoil	0.50
Total		**11.85**

[1] Sources above 6,000 ft. in elevation
[2] Local collections only

Seed Mix 2 (Pipeline ROW)		
Species (Scientific Name)	Species (Common Name)	PLS LBS per Acre
Bromus carinatus	California Sierra Brome	4.00
Elymus elymoides	Squirreltail	2.00
Elymus trachycaulus	Slender wheatgrass 'Revenue', or 'Pryor'	4.00
Poa secunda	Sandberg bluegrass 'Sherman'	1.00
Total		**11.00**

Salvaged Wetland Sod and Organic Matter

Prior to sod salvage, mow all herbaceous vegetation for re-use as mulch on site. Harvest from the footprint of the basin as shown on the plans and as staked in the field. Do not stockpile more than 30 calendar days.

Use a low weight bearing equipment ASV-POSI TRACK SKID STEER with a front-end bucket to salvage and transport sod and minimize damage to native vegetation remaining in place along temporary maintenance access road.

Salvaged sod shall consist of cohesive, contiguous material of sedges *(Carex spp*.) and Baltic rush (*Juncus balticus*), and other wetland and mesic meadow species, as shown on the plans and as staked in the field by the RS. Remove in as large a unit as practicable, resulting in clean, vertical edges. Sod shall be scalped from the original ground surface to a depth of no less than eight (8) inches, as measured from the root crown. Do not stack. If stored, sod shall be placed with roots down and edges snugly adjoining adjacent sections in a shaded facility for a maximum time of one month; minimize storage and handling. Maintain as a viable growth media and do not let material dry out during handling and storage. Re-plant concurrent with basin construction to the greatest extent possible and as directed by the RS.

Salvage from areas 1-4, as noted on the plans, and as follows:

Area	Sod (sq. ft)
1	6,118
2	852
3	728
4	8,602
Total	16,300

Material that cannot be moved in a contiguous manner shall be salvaged, stockpiled, and re-applied as organic matter on the berm as directed by the RS.

Stockpile as shown on Plan Sheet R-1.

Salvaged Willows and Roses

Salvage small, medium, and large native willows clumps and Woods rose as shown on the plans, and as staked in the field, and as follows:

Salvage material as needed from areas 1-5, as shown on the plans, and as follows:

Area	Willows (sq. ft.)	Woods rose (sq. ft.)
1	3,049	726
2	6,476	165
3	3,442	
4	2,778	
5	1,287	
Total	17,032	891

Remove and re-plant willows and Woods rose concurrent with construction as much as practicable.

Prior to removal, prune willows and Woods roses so that branches include two to three nodes, but do not exceed six (6) inches in length. Cuts shall be clean, leave no frayed bark, and be made ½ inch above the node.

Carefully remove plants by excavating around the root zone with a backhoe bucket, or other approved equipment. As much of the root ball as feasible shall be removed intact. Prune damaged roots. Burlap may be used to wrap and protect the root zone during transport. Store in pre-excavated, pre-watered trenches and maintain well-watered and healthy until move to the permanent planting sites.

Wood Chip Mulch

Mulch shall be wood chips or tub grindings.

Wood chip particle size shall be between ½ inch and two (2) inches in length and not less than ½ inch in width and 0.125 inches in thickness, with at least 95% conforming to specified sizes. Wood chips shall be free of rock fines, soil, and other extraneous material. The wood chips shall be stored unprotected outside for at least 6 months, so as to have been subjected to weather and precipitation. A sample of

the aged wood chips shall be submitted to the RS thirty (30) calendar days prior to expected use for written approval.

Alternatively, tub-ground wood chips (tub grindings) may be used if aged wood chips are unavailable. Tub grindings are those wood materials that are produced by a hammer mill-type tub grinder and are of uneven consistency. Tub grindings shall be at least six months old prior to use in the project area. Tub grindings aged at least one season are preferred. Tub grindings shall be derived from clean, disease-free trees or tree stumps.

Neither wood chips nor tub grindings shall contain more than five percent pine needles or other non-wood material.

Temporary Irrigation System

An irrigation connection plan (Point of Connection) must be submitted to and approved by KGID or Douglas County prior to beginning irrigation work. Alternate irrigation methods proposed by the Contractor shall be submitted to the Engineer for review and acceptance prior to commencement of irrigation activities.

A suitable timer/controller device shall be part of the temporary irrigation system in order to program an irrigation schedule and apply water to the revegetation treatments areas as specified herein.

The temporary irrigation system shall consist of above-ground piping that is flexible, highly burst resistant and suitable for use in a pressure piping system (Certa-Lok Yelomine ™ or accepted equal), and the piping shall be capable of connecting to full circle heads (low precipitation rate, < 2.5 gallons per minute [gpm]) each with a radius of 20 feet stream rotor or equivalent spray heads capable of delivering water to the areas where the applicable revegetation treatments are applied as shown on the Plans. Previously used piping and spray heads may be used in the project work as long as the materials are in good working condition and meet the standards noted herein. Above-ground irrigation shall be constructed in a manner that the reach of sprinklers shall overlap thirty (30) percent in order to cover the entire surface of the revegetated area. The Contractor shall be responsible to provide for any underground crossings and pipe sleeves as may be necessary to avoid surface conflicts with roads, trails, and other public use areas. Restoration of any paved/concrete surface shall be considered included with this item of work, and no additional compensation will be allowed. No irrigation application or overspray to concrete or asphalt surfaces will be allowed.

The Contractor is further responsible for the connection to an existing system, disconnection of the existing system, usage metering, and the necessary repairs to the existing system to assure a properly functioning system during and after the Contractor's irrigation period. The Contractor is responsible for all costs associated with connecting to the system (including paperwork and permitting), water usage, disconnection from the system, and system repairs.

260.06 Installation of Treatments

The Contractor shall notify the Engineer and RS no less than ten (10) working days in advance of revegetation work and shall not begin the work until prepared treatment areas have been approved. The Engineer or RS shall verify labeling of seed upon delivery to the site and prior to application.

Seed Bed Preparation

All soils in the project area, and those in areas outside the project area that were disturbed by the Contractor, shall be loosened as needed to a depth of 6 inches unless otherwise specified on the plans or directed by the Engineer and/or RS. Soils shall be loosened with hand tools, an agricultural disc, rippers, or other equipment approved by the Engineer and RS. Final surfaces shall be left rough. No wheeled or other mechanical equipment shall be permitted to travel on the prepared seedbed.

Seeding

Seed with Seed Mix 1 or Mix 2 where shown on the plans and as field verified.

Seed Mix 1 shall be uniformly broadcast over sod and organic matter with hand-held seeders and raked to incorporate to a depth of ¼ inch to ½ inch.

Uniformly broadcast Seed Mix 2 over prepared seed beds at specified rates. Incorporate seed by raking or harrowing to a depth of ¼ inch to ½ inch. Seed shall not be left uncovered more than 24 hours. Seeding shall not occur under conditions that would allow the seed to become windborne (winds greater than 5 mph).

Mulching

Wood chip mulch shall be evenly applied to a depth of approximately one (1) inch, to achieve 85% cover over the pipeline ROW.

Re-planting Salvaged Sod and Organic Matter

The RS shall approve the planting locations. The contractor shall schedule the planting ten (10) working days in advance of the proposed planting time.

Over-excavate areas for installation as needed so that all material, including crowns of sod, are at finish grade, approximately eight inches below the final plan grade as staked in the field. Plant into moist soil such that edges snugly adjoining adjacent sections. Chink with native topsoil so that the edges of the sod are well covered. Final elevation of sod crowns shall match the plan elevation.

Install sod in a staggered pattern perpendicular to the flow line, so that seams alternate, as directed by the RS.

Thoroughly water sod. Sod shall be maintained in a moist, healthy condition as directed by the CPESC until established according to the one-year warranty period.

Spread organic matter on pre-wetted surfaces to a depth of approximately six (6) inches and rake smooth to match sod and finish grade. Roll or compact with hand tools.

Irrigate all material immediately following placement.

Planting Salvaged Willows and Woods Rose

Plant where shown on the plans on the north side of the basin and as field verified by the RS.

Planting holes may not be prepared more than eight (8) hours prior to plant removal from storage site. Holes shall be excavated twelve (12) inches below the root zone and twelve (12) inches wider on both sides of the root mass. Loosen soils in the bottom and along the sides of the hole and place the plant in the hole. Backfill with the excavated moist soil so that the root ball is two to four (2 - 4) inches below existing grade. Tamp soil and thoroughly water immediately following planting.

Temporary Irrigation

Temporary irrigation shall be performed such that water is applied evenly throughout Treatment Type 1, shall penetrate to at least six (6) inches below the ground surface within twelve (12) hours of irrigation, and allows the surface soil to dry out while maintaining adequate moisture levels at depth. Temporary irrigation must be provided to for salvaged sod, willows, and Woods rose during storage unless otherwise directed by the RS. Exact irrigation scheduling for all areas shall depend on air and soil temperatures and will require adjusting during the course of the project. Irrigation schedules shall be as submitted to the Engineer and RS for acceptance to ensure proper timing, frequency and duration. Above-ground irrigation shall take place early in the morning or late in the evening whenever possible in order to minimize water loss due to high air temperatures and wind. A suitable timer/controller device shall be part of the temporary irrigation system in order to program an irrigation schedule an apply water to the revegetation treatments areas as specified herein.

All costs associated with connecting to the system (including paperwork and permitting), water usage, disconnection from the system, and system repairs shall be included in the unit price for irrigation. An irrigation connection plan must be submitted to and approved by KGID prior to beginning irrigation work.

260.07 Maintenance and Revegetation Maintenance Bond

A Maintenance Bond (14 month) shall be supplied by the Contractor prior to acceptance of the revegetation and irrigation work, by the Contractor (at the completion of the construction of the project and acceptance of the entire project by the Engineer). The Maintenance Bond shall be in the amount of $100,000 or the lump sum bid value of the revegetation bid item, whichever value is greater, for a length of one year from the date of final acceptance.

The one-year maintenance period shall start when the overall project has been accepted, in full, by the Engineer in writing (completion of construction of the project – final payment). The Owner and Engineer will not accept portions of the revegetation or irrigation work nor will it “stagger” the start of the one-year maintenance period. If at any time it is deemed that proper maintenance is not being performed, the countdown for the maintenance period shall be stopped and not resumed until the project is brought up to the specifications and proper maintenance is resumed, thus increasing the “calendar” duration time of the maintenance period. All costs with re-issuance of the bond as a result of this extension will be borne by the Contractor and no additional compensation will be allowed for.

Work under this item shall consist of maintaining all revegetation areas (and revegetation types) and irrigation systems for one year following completion of construction and acceptance of the Project (acceptance of the entire project, and closeout of the construction contract, NOT upon completion of any specific revegetation component) so that there is no evidence of erosion, such as rills or sheet erosion, or failure to the irrigation system. During the maintenance period, all revegetated areas shall be kept free from noxious and invasive weeds at all times. Revegetation maintenance shall further include the following:

- Maintain irrigation system as needed, and
- Insure establishment of revegetation

260.08 Performance Standard and Acceptance

The Contractor shall guarantee revegetation in accordance with these Special Technical Provisions. Revegetated areas will be inspected by the Engineer at completion of installation and accepted subject to compliance with specified materials and installation requirements.

Following one full growing seasons after treatment, the Contractor must achieve 85% mulch coverage over the pipeline ROW. Cover assessment shall be assessed by the point-intercept method. If specified coverage is not achieved, the Contractor may be required to re-plant re-seed, and/or re-mulch.

Warranty 100% survival of all transplanted material. The Engineer, upon the Contractor's request, will make final inspection and acceptance at the conclusion of the maintenance period. The Contractor will provide the Engineer notification at least ten (10) working days before the requested inspection date.

Security shall remain in effect until maintenance and survival guarantee criteria have been met as defined herein and accepted in writing by the Engineer. The acceptance for releasing the security will occur following the end of the growing season if the success criteria is met. This guarantee period constitutes the warranty period strictly associated with the revegetation work described herein.

Acceptance of other work and/or filing of a Notice of Completion shall not constitute acceptance, waiver and/or modification of the revegetation, revegetation maintenance, and survival guarantee portion of the project.

260.09 Revegetation Warning Signs

This work shall consist of furnishing and installing revegetation warning signs in locations shown on the plans and as directed by the Engineer. Attach sign to post at top and bottom (min 2 inch clear) using 5/16 inch diameter hex head bolt with flat washers, fiber washer, nut and jam nut. Bolt heads shall not obscure any lettering. Bolts shall not extend more than two (2) inches from back of post. Fastening hardware must be commercial quality and steel components hot-dip galvanized after fabrication. The backs of all signs installed shall be painted with a color of midnight green of black green. Sign lettering shall be black on a white background. The Contractor shall submit a diagram/drawing of the sign layout and wording to the Engineer for review and acceptance prior to manufacturing the signs.

260.10 Measurement and payment

"Revegetation Treatment Type 1", "Revegetation Treatment Type 2", and "Revegetation Treatment Type 3" shall be measured on a square foot basis parallel to the surface from the outside dimensions of the facility, complete in palce and accepted by the Engineer as conforming to all the requirements in the complete work. Full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved for the installation and maintenance of the revegetation treatment types, complete in place, including but not limited to submittals, material salvage and storage, mowing, salvaged sod, seed bed preparation, salvaged topsoil, seed mix, wood chips, mulch, stakes, and any other appurtenances, as shown on the Project Plans, specified in these Special Provisions and the Standard Specifications, and as directed by the Engineer and Revegetation Specialist shall be at the contract unit price paid per each square foot of revegetation treatment installed, maintained, and

accepted by the Engineer under the bid items “Revegetation Treatment Type 1”, “Revegetation Treatment Type 2”, and “Revegetation Treatment Type 3.”

“Revegetation Warning Sign”shall be measured per each on the number of structures, complete in place and accepted by the Engineer as conforming to all the requirements in the complete work. Full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to complete construction, installation, and maintenance of the revegetation warning signs including, but not limited to posts, sign, painting, hardware, excavation, backfill, and disposal of materials as shown on the Project Plans, specified in the Special Provisions and Standard Specifications, and as directed by the Engineer shall be considered as included in the contract unit price per each for “Revegetation Warning Sign” and no additional compensation will be allowed therefore.

“Irrigation” shall be measured on a lump sum basis, complete in place and accepted by the Engineer as conforming to all the requirements in the complete work. Full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to provide for temporary watering for revegetation, complete in place, including but not limited to submittals, water, service connections, meters, backflow devices, valves, controllers, piping, spray heads, hardware, crossings and pipe sleeves, installation, operation, maintenance, winterization, excavation, backfill, disposal of materials, and any other appurtenances, as shown on the Project Plans, as specified in these Special Provisions, the Standard Specifications, Project Permits, and as directed by the Engineer and RS shall be at the contract unit price paid to provide for temporary watering for revegetation as accepted by the Engineer under the bid item for “Irrigation” and no additional compensation will be allowed.

Full compensation for conforming to the provisions of this Section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved, and no additional compensation will be allowed.

Appendix A: Stormwater Pollution Prevention Plan