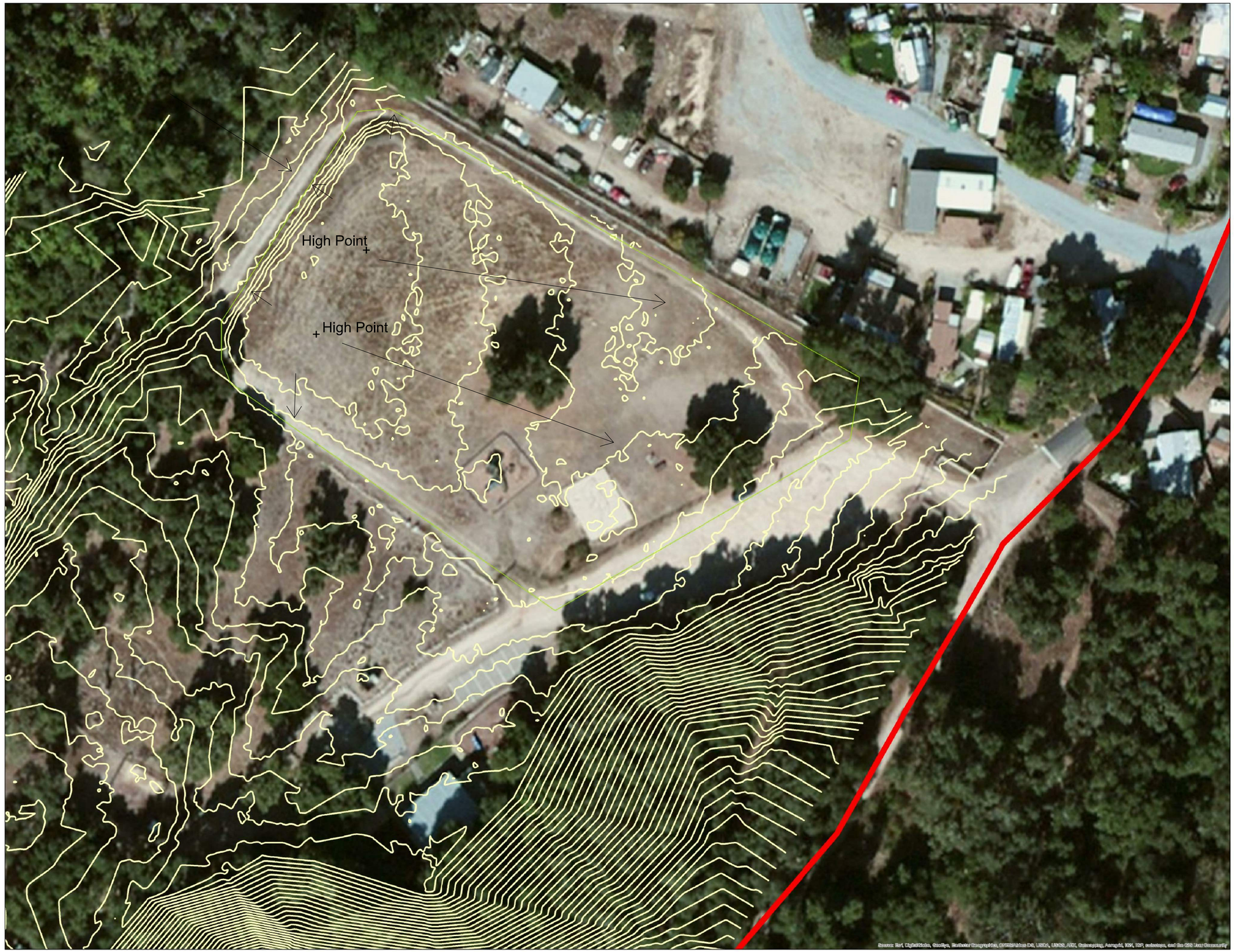

Legend

1FT_Contours

Roads

Direction of Slope

Feet

0 30 60 120

N

W E

S

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NOT FOR CONSTRUCTION

PROJECT:

Cachagua Multi-Sports Field

Cachagua Community Park

Cachagua, California

ISSUANCE:

REVISION:

PROJECT NO: 17.073
DATE: September 20, 2017
SCALE: Shown
DRAWN | CHECKED: SE/MB

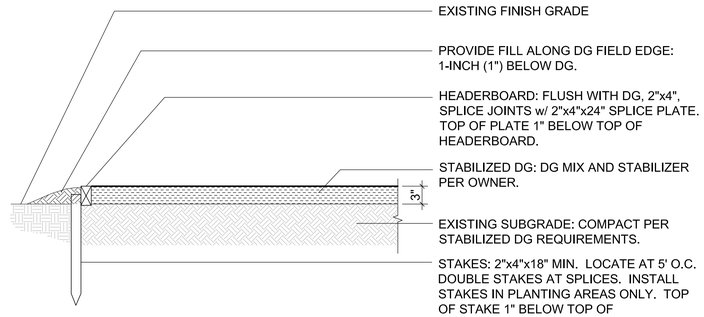
SHEET:

EXISTING CONDITION PLAN

SHEET NO:

L-1.1

F:\PRODUCTION\Projects\2017\17.073\CAD\17073_01-ExCond.dwg 9/3/2015



1 Stabilized DG Surfacing
NTS

LEGEND

- Stabilized DG Surfacing: See 1/ -
- New Chainlink Fence: 48" high, vinyl coated.
- Existing contours
- Proposed contours

REFERENCE NOTES

1. New Pedestrian/Vehicle Gate
2. Existing Softball Backstop to Remain
3. New headerboard, typical. See

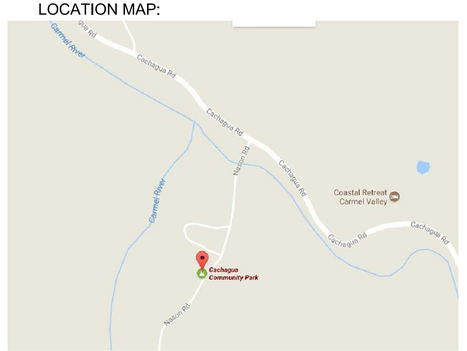
SCOPE OF WORK

Installation of a new DG sports field at an existing park. Work includes minimal grading along the edges to maintain a smooth transition, and a 48" high perimeter chainlink fence.

GENERAL NOTES

Grading Work:
Cut: 184 cy
Fill: 160 cy

LOCATION MAP:



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SHEET:

LAYOUT AND GRADING PLAN

SHEET NO:

L-2.1

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SECTION 311100 - SITE CLEARING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to the work of this Section.

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for Site Clearing work as shown on the Drawings and as specified in this Section. The work includes but is not limited to:
1. Clearing and Grubbing.
2. Protection of existing trees and landscaping to remain.

B. Related work includes but is not limited to:
1. Earthwork and Grading

1.03 DEFINITIONS

A. Root zone: The root zone diameter of a tree is determined to be that area located out a distance 15 times the trunk diameter in all directions or the drip line, whichever is greater, unless otherwise noted on the Drawings.

B. Topsoil: See Specification Section Earthwork and Grading.

1.04 REVIEWS

A. Prior to any site clearing work, prepare protection measures for review by the Owners Representative.

B. Prior to proceeding with any tree removal or pruning, notify the Owners Representative 24 hours in advance for a review.

1.05 EXISTING TREE PROTECTION

A. Tree Protection Guidelines
1. Clearly mark all trees required to be fenced with a spot of paint or other temporary method. The marking is required to notify City Inspectors that the subject tree or tree(s) are to be fenced at all times during construction.
2. All cut, fill and/or foundations will be located a minimum of 3.0 times the diameter of the tree away from the outside edge of the trunk of all trees scheduled for preservation. However, the minimum distance permitted will be 6'-0" away from the outside edge of the trunk for all trees of a trunk diameter less than 2'-0". The diameter of a tree is to be measured at 4'-6" above the surrounding grade (diameter at breast height, (DBH). Where Drawings conflict with this, immediately contact the Owners Representative for direction.
3. Temporarily fence around all trees scheduled for preservation during construction. Install fencing prior to starting work. Generally, locate fencing at the edge of the root zone. At no time shall the fencing be located closer than 3'-0" away from the approved foundation, retaining wall, or grade cut, whichever provides the greater distance from the tree trunk. Fencing is to consist of chain link or plastic link fence as directed by the local agency or Owners Representative if no local requirement. Fencing is to be rigidly supported and maintained during all construction periods at a minimum height of 4'-0" above the grade.
3. Maintain fenced areas in a natural condition and not compacted. Do not use fenced areas for material stockpile, storage or vehicle parking. Dumping of materials, chemicals, or garbage is prohibited within the fenced area.
4. Remove fencing only after approval by Owners Representative, Inspector, or City Arborist / Forester.

PART 2 - PRODUCTS

A. Not Applicable.

PART 3 - EXECUTION

3.01 SITE CLEARING

A. General
1. Clear and grub only areas as necessary to construct improvements shown on the Drawings.
2. Use only hand methods for grubbing inside the drip line of trees indicated to be left standing, unless otherwise approved by the Owners Representative. This includes trees that may be outside and adjacent to the Limit of Work.

B. Clearing and Grubbing
1. Remove vegetation, improvements, and obstructions protruding through the ground surface and/or interfering with installation of new construction. Removal includes stumps and roots.
2. Carefully and cleanly cut roots and branches of trees indicated to be left standing, where such roots and branches obstruct new construction.
3. Remove all organic matter in unpaved areas to be replanted, to a sufficient depth to remove such material. The depth of removal will vary with the type and density of vegetation across the project site and with the time of year.

C. Stripping
1. Remove all vegetation and grass before stripping topsoil.
2. Strip topsoil from all unpaved areas to be improved with paving or structures, to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
3. Remove all vegetation matter from collected topsoil and stockpile topsoil for re-use unless otherwise instructed by the Owners Representative. Do not use stockpiled topsoil as structural fill.

D. Utility and Drainlines
1. Shall be located outside the root zone of all trees scheduled for preservation. In cases where alternative routes are not available, utility conduit, pipe, wire and drain lines shall be tunneled under major roots. Major roots are determined to be those that exceed two (2) inches in diameter. In no case shall utility lines be permitted within six (6) feet of the trunk. Immediately contact the Owners Representative if the Drawings conflict with this.
2. All approved construction work within the root zone of trees scheduled for preservation shall observe the following minimum tree protection:
3. Hand trench at point or line of grade cuts closest to the trunk to expose major roots 2" in diameter or larger. In cases where rock or unusually dense soil prevents hand trenching, mechanical equipment may be approved by the Owners Representative, provided that work inside the drip-line is closely supervised to prevent tearing or other damage to major roots.

3.02 PRUNING

A. All tree pruning and tree damage repair shall be performed by a qualified tree service firm. Verify all pruning with Owners Representative prior to start of pruning work.

3.04 CLEAN-UP

A. Disposal: Remove waste materials and unsuitable and excess material from the Owner's property and dispose of legally as directed by the Owners Representative.

END OF SECTION

SECTION 312213 - EARTHWORK AND GRADING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to the work of this Section.

1.02 DESCRIPTION OF WORK

A. Extent: Furnish all labor, material, equipment, tools, and incidentals necessary for Earthwork and Grading as shown on the Drawings and as specified in this Section. The work includes but is not limited to:
1. Rough grading and excavations
2. Providing, processing, placement, and compaction of any fill materials necessary to meet the designed lines and grades.

B. Related work includes but is not limited to:
1. Site Clearing

1.03 STANDARDS AND DEFINITIONS

A. Unless otherwise shown or specified, all materials and methods shall conform to the appropriate current sections of the State of California Department of Transportation Standard Specifications (DTSS) as they reasonably apply to this work, except for measurement and payment requirements.

B. Applicable ASTM International Standards (latest revisions) as they apply to this work and related test methods, including:
1. D1557 Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort

C. Relative compaction: is defined as the in-place dry density of the compacted soil divided by the laboratory compacted maximum dry density determined in accordance with ASTM D1557, expressed as a percentage.

D. Finish Grade: is defined as the finished top surface of the soil after all grading and soil preparation activities, and prior to installation of mulch.

1.04 QUALITY ASSURANCE

A. No combination of high and low tolerances that compromise pavement cross-section shall be permitted. Final grades after compaction and/or excavation shall conform to the grades shown on the Drawings, with a maximum tolerance of 0.10 foot for non-paved areas and 0.05 foot for paved areas, plus or minus.

C. Seasonal Limits: Do not place, spread, or roll fill material during unfavorable weather conditions. When work is interrupted by heavy rains, do not resume fill operations until field density tests indicate the moisture content and density of fill meet the specified requirements and approved by the Owners Representative.

D. Unusual Conditions: In the event that any unusual soil conditions are encountered during grading operations, notify the Owners Representative immediately. Excavate and dispose of unsuitable material encountered below the natural grade as directed by the Owners Representative and paid for as Extra Work. Unsuitable material is defined in DTSS Section 19 Earthwork Clause 1.01B.

1.05 REVIEWS

A. Notify the Owners Representative at each stage of the operation indicated below and allow such reasonable time to observe excavation and trenching, and for testing and inspection as the Owners Representative may require. Do not proceed with any portion of the work until authorization has been received from the Owners Representative.
1. Site Preparation Review - Prior to any earthwork and grading.
2. Preliminary Review-I - After all rough grading is complete and sub-grade is prepared.
3. Each review shall be conducted only after all items pertaining to that review as noted above and in related Sections have been completed.

1.06 SPILLAGE AND DUST CONTROL

A. Spillage: Prevent spillage when hauling on or adjacent to any public street or highway. In the event that such occurs, remove all spillage and sweep, wash, or otherwise clean such streets or highways as required by local City and County authorities and/or the State of California, and in compliance with applicable Best Management Practices (BMPs).

B. Dust: Take all precautions needed to prevent a dust nuisance to adjacent public and private properties and to prevent erosion and transportation of soil to downstream of adjacent properties due to their work under this contract. Correct or repair any damage caused in this manner at no additional cost to the Owner.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Fill Material: Selected on-site excavated/sub-soil material is considered suitable fill material for embankment construction, subject to prior approval by the Owners Representative.

B. Inorganic on-site fill and sub-soil may be used as structural fill to achieve final grades, provided the fill contains no debris and is free of rocks or clods greater than 6-inches in maximum dimension, and no more than 15 percent by weight of rocks larger than 3-Inches. Submit samples of any proposed imported fill to the Owners Representative for appropriate testing and approval no less than (5) five working days prior to the anticipated job site delivery. Fill material shall meet the following requirements:
1. Have a sand equivalent greater than 20%
2. Have not more than 15% passing the 200 sieve.
3. Have an R-Value of not less than 50.

C. Sand: for bedding and backfill for underground utilities including irrigation mainline and 1-inch water service line shall conform to the sieve analysis below:

Sieve Size:	Percent Passing
#30 (600 um)	at least 75%
#100 (150 um)	less than or equal to 5%

D. Topsoil: the top layer of existing soil in planting areas, containing minerals and organic materials including humus. Depth of topsoil shall be taken to be 4-6 inches deep or as determined by the Owners Representative at the time of construction after clearing and grubbing. See Specification Section Site Clearing.
1. Topsoil is a [ ] type.
2. At turf areas topsoil starts below the grass root zone.
3. At planting areas other than turf, topsoil starts below the mulch and organic matter layer.
4. Soil underneath paving and aggregate base areas shall not be considered as top soil.

E. Sub-soil: the remaining existing soil on the site after clearing & grubbing, after topsoil has been removed, and after all rocks over one cubic inch and all foreign debris and organic material have been removed.

PART 3 - EXECUTION

3.01 GENERAL

A. Keep all excavations (including, pits, trenches, footings, etc.) entirely free from water. Protect excavations from rain or water from any source during construction. Use suitable pumping equipment or other means as required by the conditions. Continue pumping as necessary until the completion of the project. When operations are interrupted by unfavorable weather conditions, prepare areas by grading and compaction to avoid ponding and prevent surface drainage over fill slopes, in order to avoid erosion. Grading operations for erosion control shall be as approved by the Owners Representative. Once excavation and grading commence, do not allow surface drainage to flow onto adjacent properties.

B. Provide satisfactory pollution and dust abatement and control measures continuously during the course of the work.

C. Utilize reclaimed water, or dust palliatives, in compliance with the City's Water Conservation Ordinance.

3.02 TOPSOIL STOCKPILE & PROTECTION

A. Stripping: Strip the topsoil on the site after clearing and grubbing and stockpile it for future use in this project. Install topsoil in planting and turf areas as per finish grading directions in the Specification Section Soil Preparation. Stripping depth shall be as specified herein.

3.03 SITE PREPARATION, EXCAVATION & GRADING

A. Depressions, voids, or unsuitable material encountered shall be excavated to expose firm soil as directed by the Owners Representative. Backfill and compaction to design grade shall be approved by the Owners Representative. When earthwork or trenching conditions are determined by the Owners Representative to be unsuitable material, perform the work as defined in DTSS Section 19-2.02 Unsuitable Material.

B. Excavation work shall include sloping and rounding tops and ends of excavations.

3.04 FILL PLACEMENT AND COMPACTION

A. Place the fill in maximum 6-inch lifts (compacted layers) and compact the fill by mechanical means only. Fill shall be conditioned, at time of compaction, to 1% to 3% above the optimum moisture content of the soil.
1. For non-porous paving, compact each lift to minimum 95% relative compaction.
2. For porous paving, compact each lift to 90% relative compaction.
3. Carry out and document field density tests to ensure proper compaction.
4. The placement and spreading of fill materials and its processing and compaction of fill materials by flooding, ponding, or jetting shall not be permitted without the prior approval of the Owners Representative.

3.05 SUB-GRADE PREPARATION

A. A minimum of 8-inches of the in-place sub-grade soil shall be scarified, moisture conditioned to 1%-3% above optimum value, and compacted to a relative compaction of at least 95% under all paving including decomposed granite, concrete slabs-on-grade, asphalt concrete pavements, and foundations/footings. This depth of densified soils is in addition to additional fill material required to bring the sub-grade to grade.

B. Compact a minimum of 6-inch of sub-grade soil in all planting areas to maximum 85% relative compaction.

C. All soft or wet sub-grade soil encountered during earthwork and grading should be stabilized prior to placement of fill and further construction. This may involve scarifying and air-drying of the soil, or excavation and replacement of the wet soil with dry soil. Obtain prior approval of proposed method of stabilization from the Owners Representative.

3.06 TOPSOIL PLACEMENT

A. See Specification Section Soil Preparation for topsoil installation.

3.07 FINISH GRADING

Finish grade all areas, including those indicated to be planted on the Drawings, and remove all rocks and clods over one cubic inch. Grade all areas smoothly and uniformly. Repair all erosion damage during the construction period.

B. Unless otherwise shown on the Drawings, all soil finish grades shall be one-inch (1") below finish surface of walks, pavements, and curbs.

3.08 UTILITY TRENCHES

A. General: Trenching for underground piping, electrical conduits, etc. shall be done by the trade installing the pipe or conduit.
1. See Specification Section Site Clearing for trenching within tree protection areas.

B. Excavation: Excavate trenches to the depth required for laying pipe or conduit plus required allowance for bedding material under the pipe. Over excavated areas shall be brought back to proper grade with compacted bedding material.
1. Excavate trenches wide enough to provide adequate working space to align and lay pipe or to construct the utility trench, make up and inspect joints, and allow placing and compaction of bedding material.
2. The maximum trench width at the top of the pipe shall not exceed the pipe outside diameter plus 12- inches on each side of the pipe.

C. Bedding and Backfill: Bedding shall extend upwards from the bottom of the trench to the extent shown on the Drawings.
1. Bedding for underground utilities including irrigation and solid drain lines shall consist of sub-soil or sand as defined herein.
2. In planting areas, sand bedding may be jetted or ponded into place and shall be compacted to equal that of the adjacent prepared sub-grade as specified herein. Mechanical compaction may be necessary to achieve this required density. If the bedding is jetted or ponded, the operation should be closely supervised and provisions should be made for the removal of excess water.
3. Maintain near surface soils as uniform as possible with existing upper stratum soils when backfilling in planting areas.
4. Compact backfill to equal that of the adjacent prepared sub-grade as specified herein.

3.09 EXCESS SOIL DISPOSAL

A. All soil material shall be utilized on site.

END OF SECTION

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ISSUANCE:

REVISION:

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SHEET:

SPECIFICATIONS

SHEET NO:

L-3.1