

# BEAUTIFICATION AND ENHANCEMENT FOR GEORGIA STATE ROUTE 73 / US HIGHWAY 301

## BULLOCH COUNTY GEORGIA

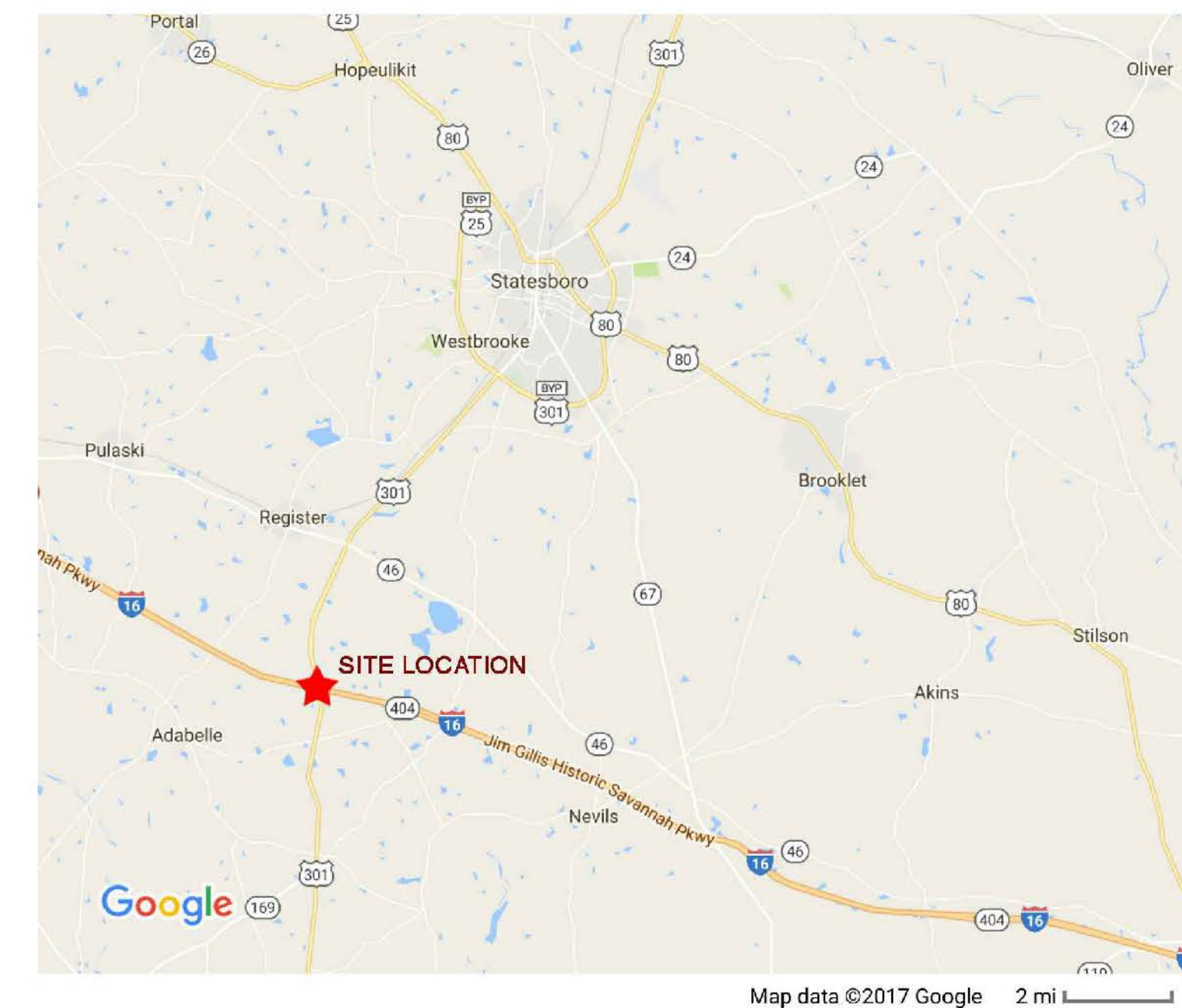
Owner:  
**BULLOCH COUNTY  
GA  
PARKS AND  
RECREATION PARK**

Drawn by:  
**MOONEY**  
*design studio*  
Landscape Architecture | Planning  
1190 N. Highland Ave. NE  
Atlanta, Ga 31106 #8822  
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BEAUTIFICATION  
AND  
ENHANCEMENT  
CONCEPTUAL  
PLANS FOR  
GEORGIA STATE  
ROUTE 73 / US  
HIGHWAY 301

### INDEX OF DRAWING:

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VICINITY MAP N.T.S.



REVISIONS

COVER SHEET

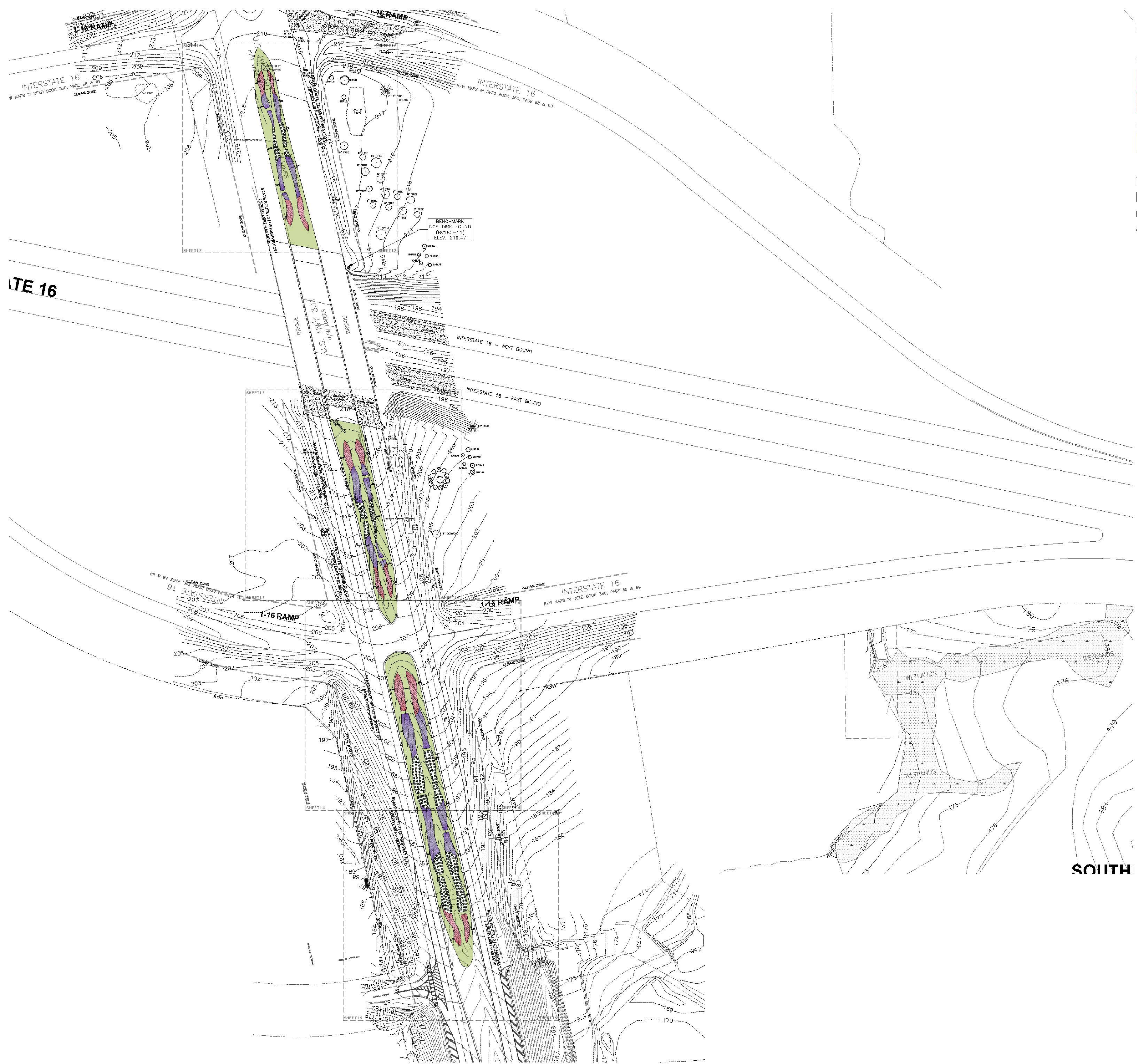
SCALE:

SHEET:

**L0**

DATE: 09.02.2020

MUNICIPALITY: BULLOCH COUNTY



**PLANT SCHEDULE**

SHEUBS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING	NATIVE	PERCENTAGE OF NATIVES	HEIGHT
(Green circle)	314	Ilex vomitoria Nana / Dwarf Yaupon	3 gal	42" o.c.	Y	80.5%	24-30 inches
SHEUB AREAS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING			
(Purple square)	287	Loropetalum chinense 'Purple Pixie' / Purple Pixie Loropetalum	3 gal	12' o.c.			
(Red square)	214	Rosa x 'Coral Drift' / Coral Drift Rose	3 gal	12' o.c.			
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT.	SPACING			
(Yellow square)	48,940 sf	Cynodon dactylon Tifway 414 / Tifway 414 Bermuda Grass	sod	12' o.c.			

NOTE: Super-Rolls of Sod to be laid perpendicular to roadway in large areas. Staple sod at edges of rolls 2' o.c. Slabs of sod may be used adjacent to roadway or where width is not appropriate for rolls.

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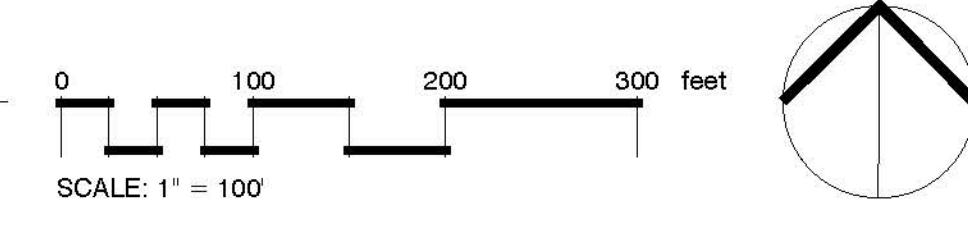
**REVISIONS**


**OVERALL**  
**LANDSCAPE**  
**PLAN**

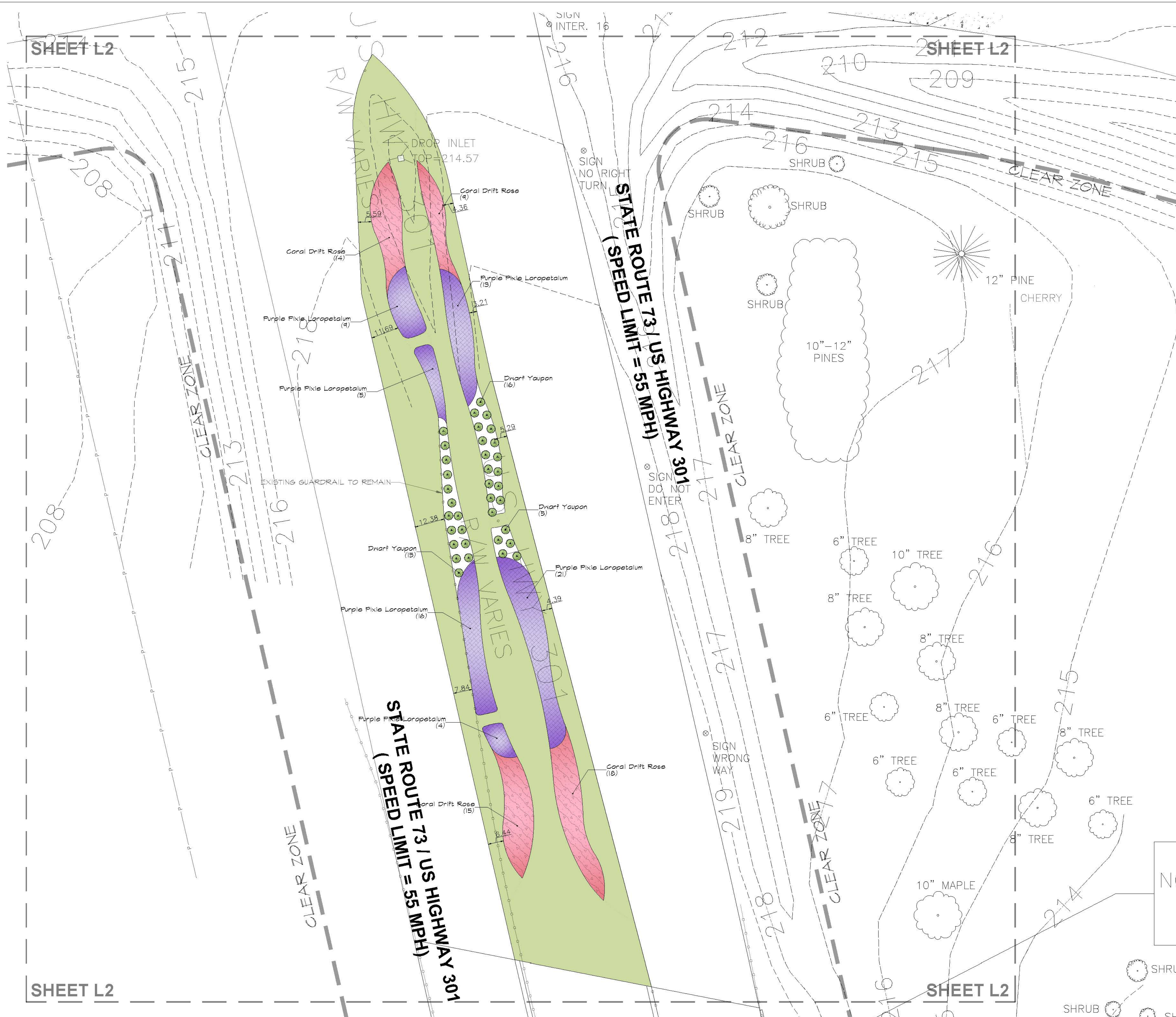
**SCALE:**

**SHEET:**  
**L1**  
**DATE:** 09.02.2020

OVERALL LANDSCAPE PLAN  
 1"=100'-0"



MUNICIPALITY: BULLOCH COUNTY



**PLANT SCHEDULE**

SHRUBS	COMMON NAME
	Dwarf Yaupon
SHRUB AREAS	COMMON NAME
	Purple Pixie Loropetalum
	Coral Drift Rose
GROUND COVERS	COMMON NAME
	Tifway 419 Bermuda Grass

NOTE: Super-Rolls of Sod to be laid perpendicular to roadway in large areas. Staple sod at edges of rolls 2' o.c. Slabs of sod may be used adjacent to roadway or where width is not appropriate for rolls.

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**BEAUTIFICATION AND ENHANCEMENT CONCEPTUAL PLANS FOR GEORGIA STATE ROUTE 73 / US HIGHWAY 301**



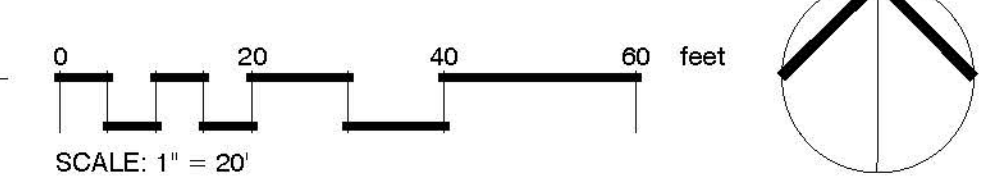
REVISIONS

ENLARGEMENT LANDSCAPE PLAN

SCALE:

SHEET:  
**L2**  
 DATE: 09.02.2020

ENLARGEMENT LANDSCAPE PLAN  
 1"=20'-0"



NOTE: 1407 LF OF FRONTAGE IN SCOPE.

MUNICIPALITY: BULLOCH COUNTY

SHEET L3

SHEET L3

PLANT SCHEDULE	
SHRUBS	COMMON NAME
	Dwarf Yaupon
SHRUB AREAS	COMMON NAME
	Purple Pixie Loropetalum
	Coral Drift Rose
GROUND COVERS	COMMON NAME
	Tifway 419 Bermuda Grass

NOTE: Super-Rolls of Sod to be laid perpendicular to roadway in large areas. Staple sod at edges of rolls 2' o.c. Slabs of sod may be used adjacent to roadway or where width is not appropriate for rolls.

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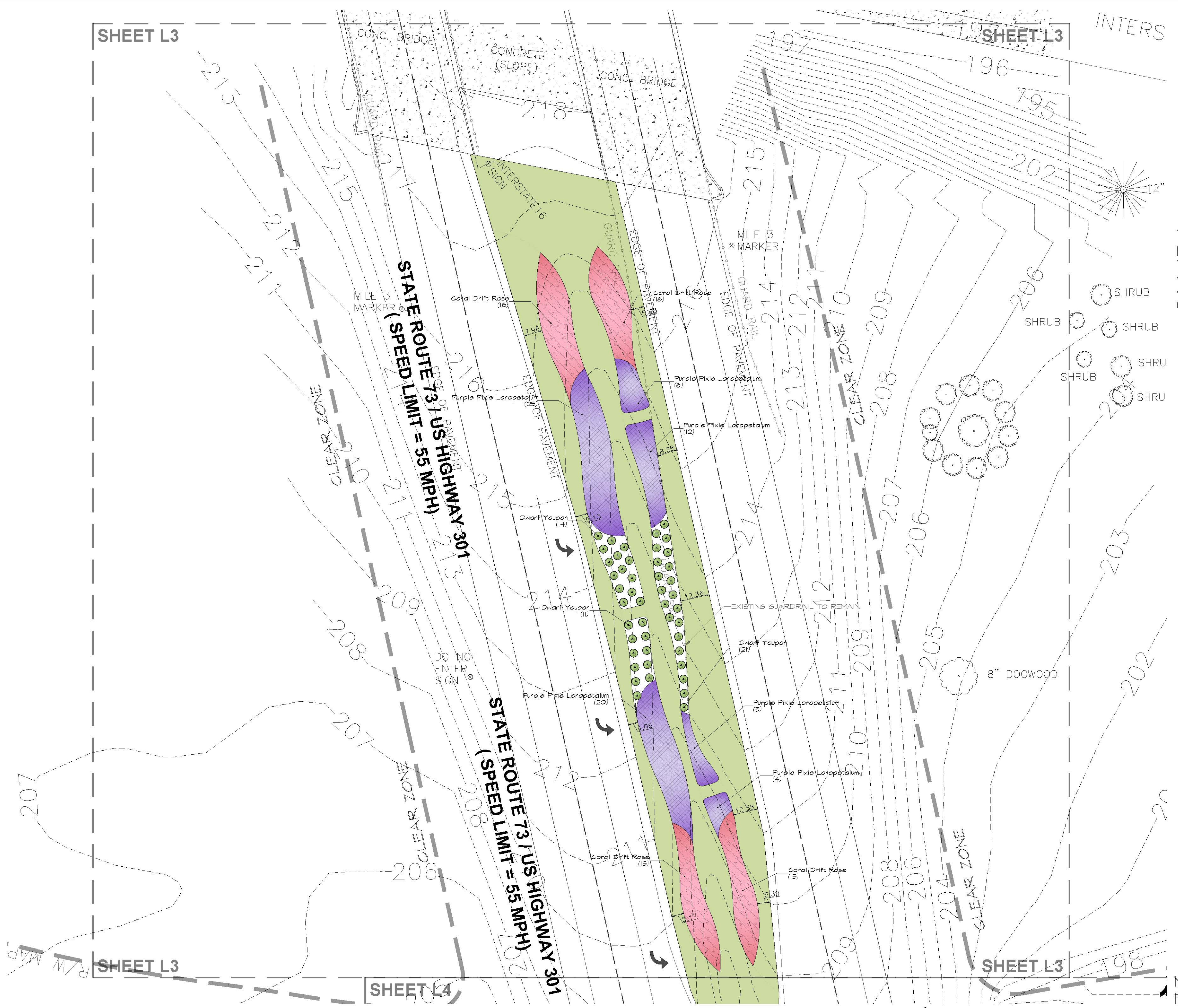


REVISIONS

ENLARGEMENT  
LANDSCAPE  
PLAN

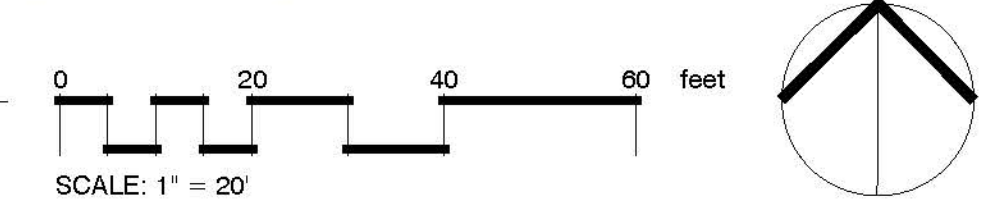
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SHEET:  
**L3**  
DATE: 09.02.2020

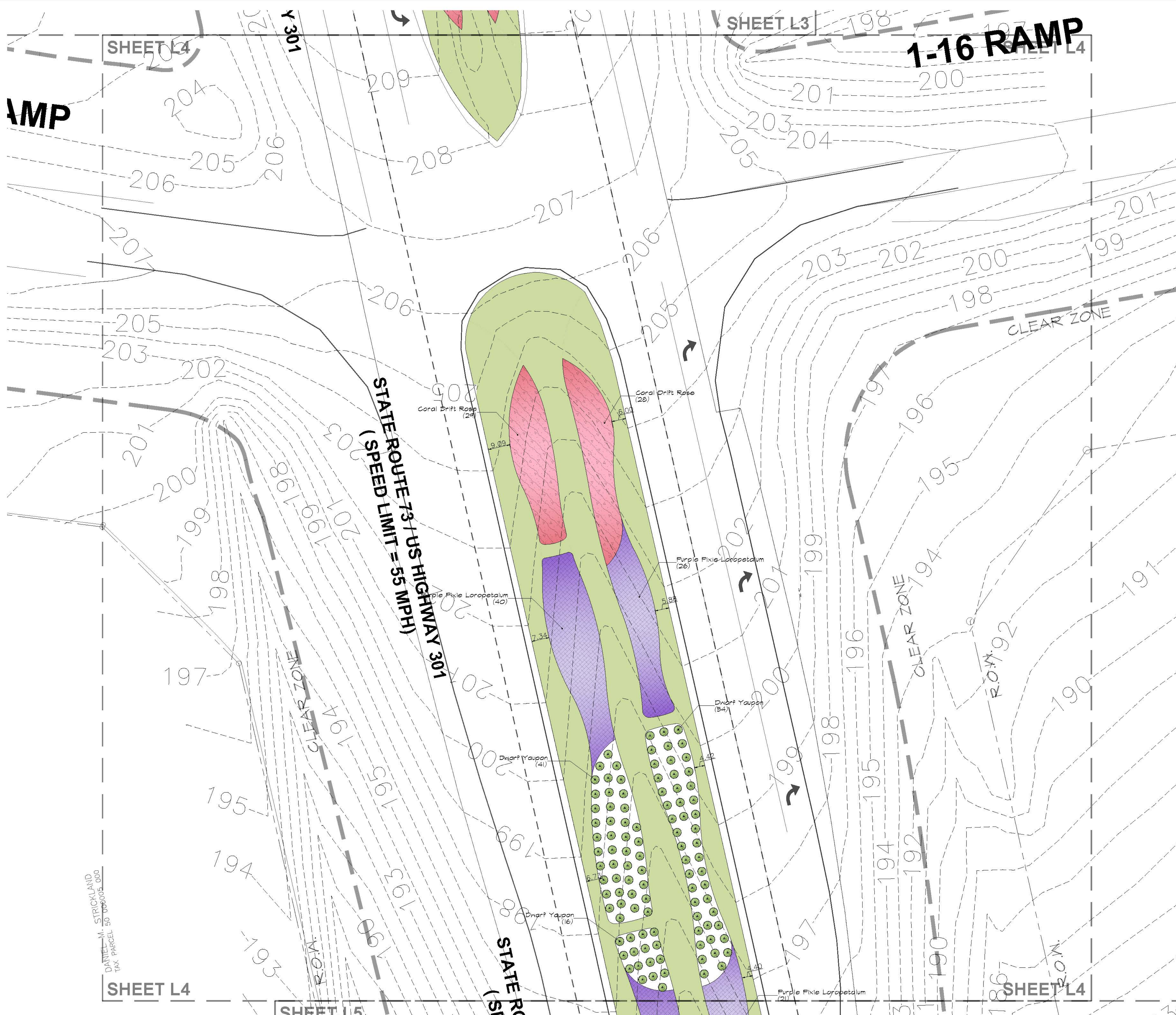


NOTE: 1407 LF OF FRONTAGE IN SCOPE.

ENLARGEMENT LANDSCAPE PLAN  
1"=20'-0"



MUNICIPALITY: BULLOCH COUNTY



PLANT SCHEDULE 2020-08-21 08:58

SHRUBS	COMMON NAME
	Dwarf Yaupon
SHRUB AREAS	COMMON NAME
	Purple Pixie Loropetalum
	Coral Drift Rose
GROUND COVERS	COMMON NAME
	Tifnay 419 Bermuda Grass

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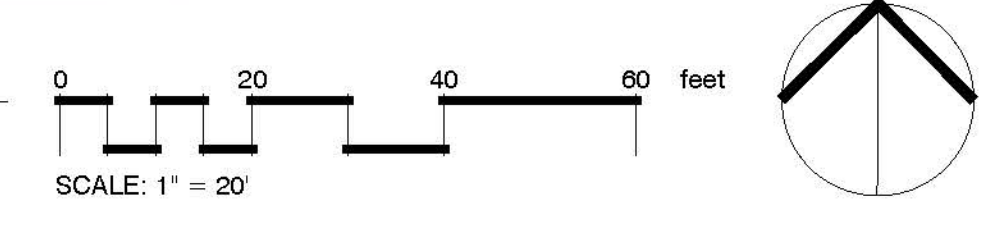
REVISIONS

ENLARGEMENT LANDSCAPE PLAN

SCALE:

SHEET:  
**L4**  
 DATE: 09.02.2020

ENLARGEMENT LANDSCAPE PLAN  
 1"=20'-0"

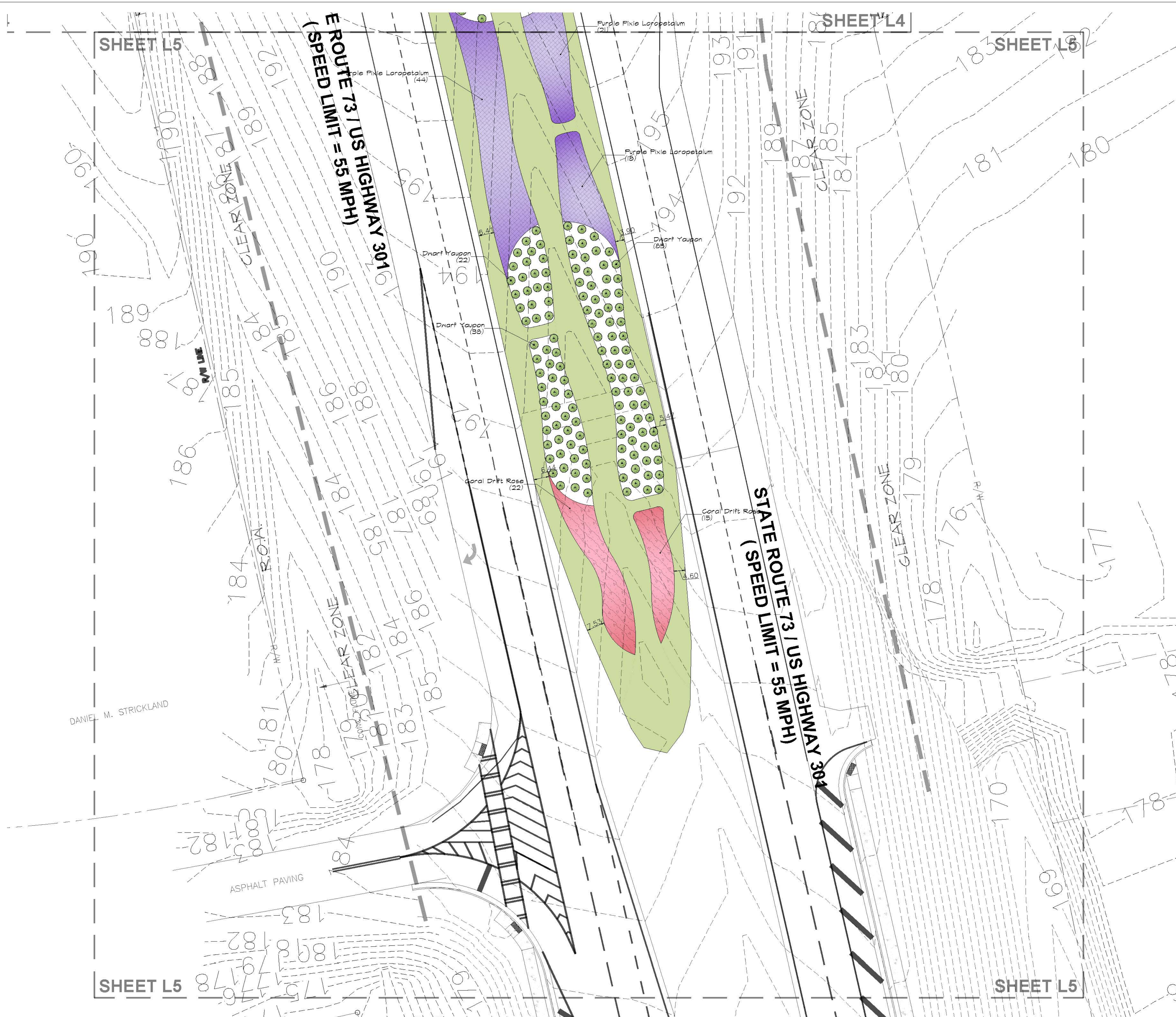


**1-16 RAMP**

**STATE ROUTE 73 / US HIGHWAY 301**  
 (SPEED LIMIT = 55 MPH)

NOTE: 1407 LF OF FRONTAGE IN SCOPE.

MUNICIPALITY: BULLOCH COUNTY



PLANT SCHEDULE

SHRUBS	COMMON NAME
	Dwarf Yaupon
SHRUB AREAS	COMMON NAME
	Purple Pixie Loropetalum
	Coral Drift Rose
GROUND COVERS	COMMON NAME
	Tifway 419 Bermuda Grass

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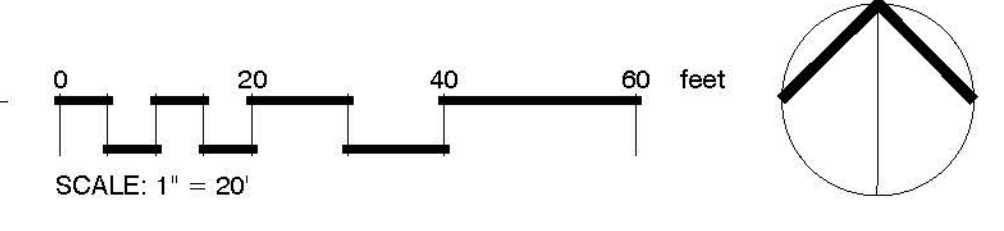
REVISIONS

ENLARGEMENT  
 LANDSCAPE  
 PLAN

SCALE:

SHEET:  
**L5**  
 DATE: 09.02.2020





ENLARGEMENT LANDSCAPE PLAN  
 1"=20'-0"



NOTE: 1407 LF OF FRONTAGE IN SCOPE.

MUNICIPALITY: BULLOCH COUNTY

**PLANT SCHEDULE**

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING	NATIVE	PERCENTAGE OF NATIVES	HEIGHT
	314	Ilex vomitoria 'Nana' / Dwarf Yaupon	3 gal	42" o.c.	Y	38.5%	24-30 inches
SHRUB AREAS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING			
	287	Loropetalum chinense 'Purple Pixie' / Purple Pixie Loropetalum	3 gal	72" o.c.			12-24 inches
	214	Rosa x 'Coral Drift' / Coral Drift Rose	3 gal	72" o.c.			18-24 inches
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING			
	43,393 sf	Cynodon dactylon 'Tifway 419' / Tifway 419 Bermuda Grass	sod	12" o.c.			

REQUIRED PERCENTAGE OF NATIVE PLANT :30%  
 TOTAL PERCENTAGE OF NATIVE PLANTS :38.2%  
 \*\*REQUIREMENT MET

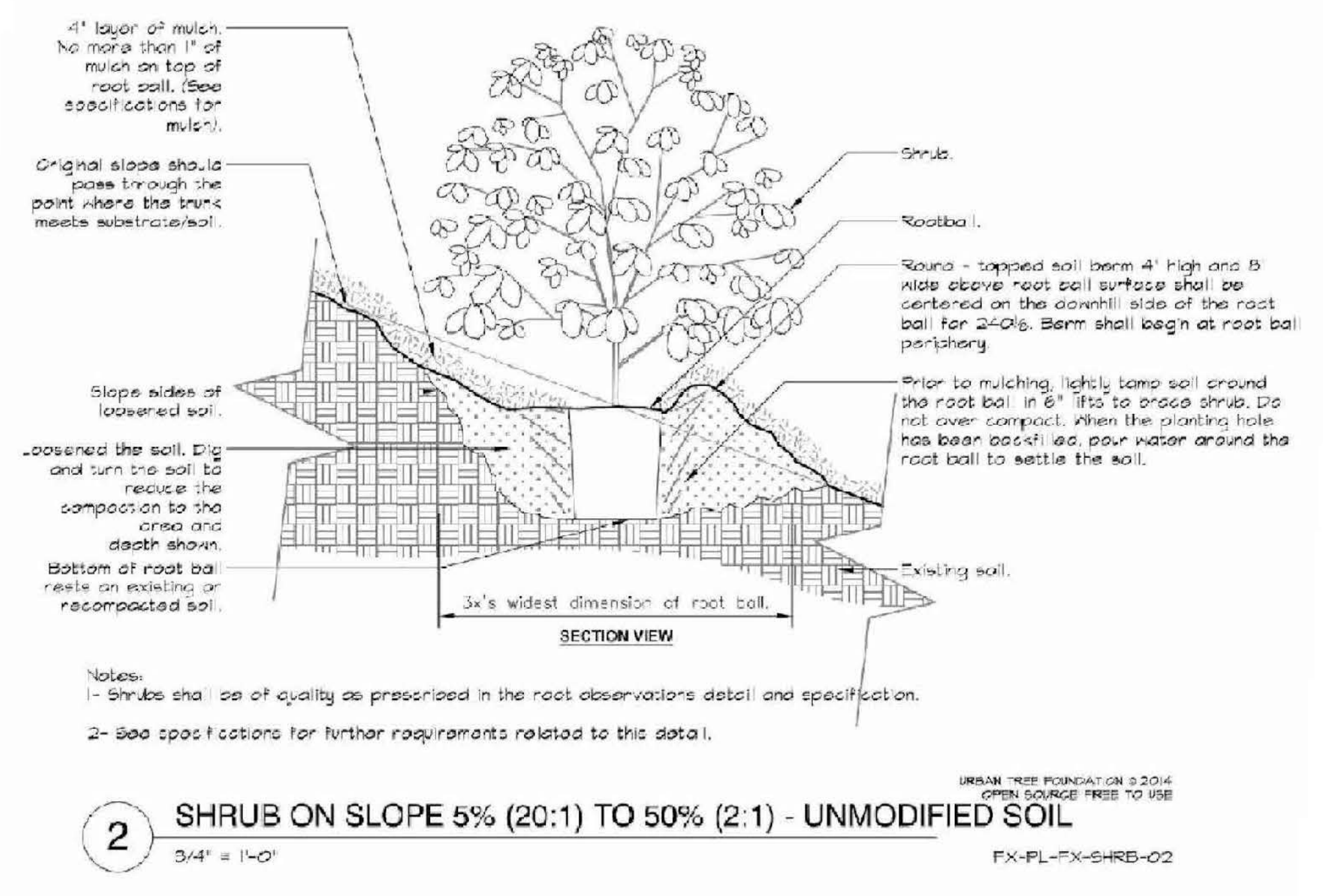
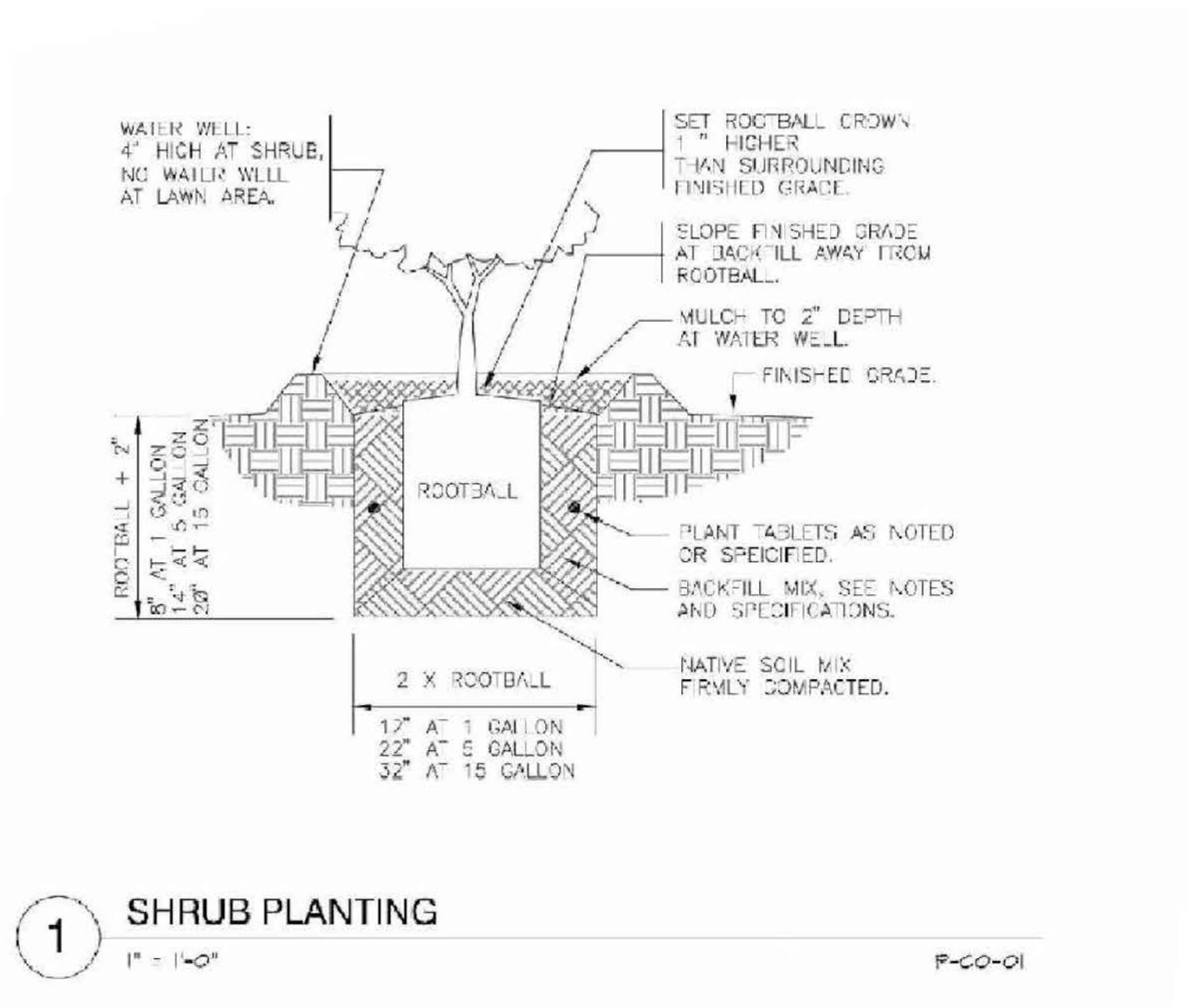
\*\*NOTE: Preference given to plant material sourced from nurseries verified by the 'Georgia Grown' program. Additional information can be found at <https://www.georgiagrown.com/find/horticulture/nursery>

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REVISIONS

PLANT SCHEDULE AND DETAILS

SCALE:

SHEET:

**L6**

DATE: 09.02.2020

MUNICIPALITY: BULLOCH COUNTY

1. A GDOT district representative must be made aware 48 hours in advance of all intentions to access the rights of way for any proposed enhancement, cutting, or moving activity as well as any limited access fence replacement in writing or by email.

2. This project shall conform to the Standard Specifications Construction of Transportation Systems including but not limited to the following specifications:

**PLANTING NOTES:**

Plant Specifications Furnish plants according to the plant name and Specifications included on the plan sheets.

A. Plant Specification  
1. Plant Names- Ensure that the botanical and common names of plants specified conform to the most current edition of Standardized Plant Names, as adopted by the American Joint Committee on Horticultural Nomenclature.

2. Plants should be clearly labeled at the nursery. Labels should remain on the plants until inspected by the engineer.

B. Grades Ensure that plants meet the grade requirements of the most current American Nursery and Landscape Association ANSI Z60.1 and any other requirements. Caliper used for establishing plant grades or trunk sizes is measured according to the American Nursery and Landscape Association ANSI Z60.1. Plant trees with straight stems and symmetrical branches according to their natural growth. Trees with broken or damaged terminal or main stems will be rejected. There shall be a single dominant leader to the top of the all large canopy shade trees. There can be a double leader in the top 10% of the tree height. Trees should be rooting into the root ball so that soil or media remains intact and trunk and root ball move as one when lifted, but not root bound. The trunk should bend when gently pushed and should not be loose so it pivots at or below the soil line. There shall be no roots greater than 1/10 diameter of the trunk circling more than one-third the way around in the top half of the root ball. Roots larger than this may be cut provided they are smaller than one-third the trunk diameter. The leaf-bearing crown should be full and uniform. Leaves should show no evidence of chlorosis, necrosis, disease or insect infestation. B. Bare root seedlings Use nursery-grown bare root seedlings which are a minimum of three (3) feet (1 meter) in height above the ground with a 1/4 inch (6.35mm) caliper, and a minimum primary root length of five inches (5) unless specified differently on the plan drawings. Use approved substitute plants, as designated by the Engineer, equal in value to specified plants. Request substitutions at least 30 calendar days before the end of the planting season in the area. Wet swale bare root Juncus effusus shall be fresh divisions with a full, dense root base. C. Nursery Plants Unless otherwise specified, use plants stock-grown in a licensed nursery under intensive care and cultivation for at least one year. The largest branches of shade trees should be spaced at least 6 inches apart. The branch system shall be normally developed and free of disease, injurious insects, disfiguring knots, sun-scald, injuries, bark abrasions, dead or dry wood, broken terminal growth, or other disfigurements. Stems should show no evidence of die-back. Ensure that proper certificates of inspection and a complete list of the nursery growers accompany nursery grown plants. See Subsection 843.2.03. D. Approval and Selection of Materials and Work Select materials and execute operations required under the Specifications and drawings with the approval of the Engineer. Remove rejected materials from the site promptly.

A. Bare root seedlings Use nursery-grown bare root seedlings which are a minimum of three (3) feet (1 meter) in height above the ground with a 1/4 inch (6.35mm) caliper, and a minimum primary root length of five inches (5) unless specified differently on the plan drawings. Use approved substitute plants, as designated by the Engineer, equal in value to specified plants. Request substitutions at least 30 calendar days before the end of the planting season in the area. Wet swale bare root Juncus effusus shall be fresh divisions with a full, dense root base.

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**PREPARATION NOTES:**

A. Inspect Plant Material before Digging The Engineer will inspect trees or plants from the bidder's source for acceptability and conformity to specification requirements for approval by the Engineer. When rejecting the trees or plants, the Engineer reserves the right to pursue and examine other sources of plants to find acceptable specimens. This change will not constitute an increase in cost to the State.

B. Clear the area, grub/clar and grade the planting area before planting or beginning to prepare the plant bed, unless noted differently on the plans. See Section 201. C. Prepare Plant Bed Prepare for planting as follows:

1. Planting Limits Stake planting limits according to Plan details and the Engineer. Have the Engineer approve the method of plant identification before planting. For median plantings, keep any woody plant a minimum of 3 feet (1m) from the edge of the plant bed to avoid vegetative growth into the roadway.

For stream buffers identified as @Stream Buffer<sup>A</sup> or @Wet Swales<sup>A</sup> on plans, the plant species shall be planted in a random, intermixed manner throughout the entire planting area. At the edges of the planting zone, keep new plants a minimum of 3 feet (2.4m) from existing trees or permanent structures.

2. Applications of Soil Additives  
A. Apply fertilizer and lime to the plant bed according to the soil test report.

B. Spread an organic soil additive, (See Subsection 843.2.04), evenly throughout the designated area to at least 2 in (50 mm) deep. Thoroughly dig it into the soil to at least 6 in (150 mm) deep using a rotary hoe type tiller or other equipment that evenly mixes the soil, lime, fertilizer, and organic soil additive.

C. Till the area until the surface is smooth and free of weeds, roots, rocks, and other debris, to the satisfaction of the Engineer.

D. If the planting area lies within a multitrophic native planting area, stream buffer, wetland, wet swale, or marsh the addition of fertilizer or lime is prohibited.

**PRUNING NOTES:**

1. Prune plants on the site before planting and after initial inspection by the Engineer as needed for the health of the plant. Never prune severely to get plants to meet Specifications.

a. Follow ANSI A300 Part 1 standards and use approved tools designed for pruning.

b. Lopping, topping, or shearing trees or shrubs is not permitted.

c. Prune back damaged, scarred, frayed, split, and skinned branches, limbs, and roots to live wood nearest to the next sound, outside lateral bud, branch, limb, or root.

d. Leave the terminal leaders or buds in trees intact.

e. Prune roots, when necessary, as directed by the Engineer.

f. Prune Grape Myrtles to maintain natural form only. Severely cutting back or stump pruning grape myrtles is not permitted. Remove sucker growth from Grape Myrtles.

g. Damaged, scarred, frayed, split and skinned branches, limbs and roots shall be pruned back to live wood nearest to the next viable outside lateral bud, branch, limb or root.

**WATERING NOTES:**

1. Apply water in a manner to prevent erosion. Water plants deeply and thoroughly at the time of planting. Water after applying fertilizer called for in Subsection 702.3.05.H and as necessary to maintain enough moisture to promote plant growth. Use water reservoir bags if specified in plans or details.

a. Apply enough water to wet the soil to a depth slightly below the roots. Direct the water to the ground around the plant, not the tops.

b. Do not allow plant foliage to dry out or plants to defoliate from lack of water. Remove plants in such condition from the site immediately. Apply supplemental watering to maintain vigorous growth and to keep plants moist and as directed by the Engineer.

c. Apply water once per week throughout the planting season in which the plants are installed. Follow Subsection 702.3.01.B and 702.3.01.C for shrub and tree watering requirements throughout the life of the project.

**QUALITY ACCEPTANCE NOTES:**

Preserve the plants in a healthy growing condition and keep plants moist, particularly during drought conditions (no rain for any two week period). The acceptability of the plant material planted and maintained as specified will be determined at the end of an establishment period. The plant establishment period is the period from the last planting specified in Subsection 702.3.05.B until the following October.

1. Plant all plants in one planting season unless otherwise approved by Engineer.

A. First Establishment Period At the end of the first planting season, the first establishment period begins. The Department will make the first semi-final inspection 30 days before the end of the first establishment period. Replace dead, dying, diseased, unsatisfactory, and missing plants, by January 20 of the next (second) planting season. For stream buffer areas, all replacement plants shall be tagged with 1/8 inch (457.2 mm) lengths of brightly-colored survey tape. Tree guards shall be placed around all replacement saplings. All costs for replanting, tagging and tree guards for replacement trees shall be included in the contract price bid for the original planting.

B. Second Establishment Period At the end of the second planting season, the second plant establishment period begins. The Department will make the second semi-final inspection 30 days before the end of the second establishment period. Again, replace dead, dying, diseased, unsatisfactory, and missing plants, by January 20 of the next (third) planting season. For stream buffer areas, all replacement plants shall be tagged with 1/8 inch (457.2 mm) lengths of brightly-colored survey tape. Tree guards shall be placed around all replacement saplings. All costs for replanting, tagging and tree guards for replacement trees shall be included in the contract price bid for the original planting.

C. Final Inspection The Department will make the final inspection of the plants during May, following any needed replacements during the previous planting season. Assume responsibility for the plants until the Final Acceptance of the Project or a portion of the Project.

**CONSTRUCTION NOTES:**

a. Seasonal Limitations for Planting For geographic seasonal limitations, refer to the Planting Zones Map found in Subsection 700.3.05. Plant in Zones 1 and 2 between October 15 and March 15. Plant in Zones 3 and 4 between November 1 and January 1. B. Planting Operations Plant using the method called for on the details and plan sheets. Before beginning planting of each area, have available the necessary materials including prepared plant topsoil (see Subsection 843.2.07), water, stakes, and mulch. Plants shall be installed as straight/upright as possible. Any plants found to be leaning or broken will not be accepted or paid for by the engineer. When seasonal limitations and weather conditions permit, continuously water, mulch, guy, provide tree guards, and stake as indicated on the plans and details until completing the last operation. After completing planting, provide a method for retaining water adjacent to the plant according to the details shown on the Plans or as directed by the Engineer. Protect marsh restoration areas from vehicles and machinery. Typical protective barriers are not to be used in tidal areas. Stakes that remain secure and are taller than the highest tide, flagged with highly visible flagging tape, are required to mark the area to be protected and off-limits for vehicles and machinery.

1. Planting By the Pit Method a. Placing Bare-Rooted Plants Plant bare-rooted plants delivered to the pit area. Protect roots from drying out until placing them in the pit. 1. Center plants in pits and spread roots as they originally grew. 2. Cover and prepare the topsoil according to details shown on the Plans. b. Placing Balled and Burlapped Plants Immediately plant these plants after they are delivered to the pit site.

1. The pit diameter shall be a minimum of 3 times the diameter of the rootball. Center the ball in the prepared pit, leaving the top of the ball 1 in (25 mm) above the top of the ground for settlement.

2. Cut away and remove the top 1/3 of burlap from the rootball. Cut all ropes and twine, pull the nails, and drop the remaining burlap to the bottom of the hole. Cut away and remove all wire from the root ball.

3. Partially fill the pit with prepared plant topsoil and compact the soil enough to hold the ball firmly. Add mycorrhizal inoculant to plant topsoil if specified in plans.

c. Placing Container-Grown Plants When the container is delivered to the pit site, split the container from top to bottom and carefully remove the plant.

1. The pit diameter shall be a minimum of 3 times the diameter of the rootball. Spread into the hole any major roots growing around the container or prune them to remove any circular growth.

2. Place the ball in the center of the prepared pit, leaving the top of the ball 1 in (25 mm) above the top of the ground for settlement.

3. Partially fill the pit with prepared plant topsoil and compact the soil enough to hold the ball firmly. Add mycorrhizal inoculant to plant topsoil if specified in plans.

d. Completing Pit Plantings After placing pit plantings, water plants thoroughly the same day regardless of weather or soil moisture conditions.

1. After the water has soaked in, add prepared plant topsoil and compact firmly up to 2 in (50mm) below the adjacent ground.

2. Stop compacting when the compacted prepared topsoil is 2 in (50 mm) below the adjacent ground.

3. Fill the remainder of each pit with loose, prepared plant topsoil according to the details shown on the Plans.

4. Prepare the loose topsoil to retain water adjacent to the plant according to the Plans or as directed by the Engineer.

E. Live Stake Plantings  
1. Plant live willow stakes at four (4) ft (1.2m) intervals or as indicated on the drawings with the buds facing upward.

2. Eighty (80) percent of the stake shall be installed below ground, leaving twenty (20) percent extending above ground.

3. Stakes shall be placed deep enough to reach the water table during the dry season at an angle perpendicular to the slope.

4. Pack soil firmly around the hole after installation.

5. Install live willow (Salix spp.) stakes only in the dormant season, according to the planting details and landscape plan notes.

6. Replace any live stakes that split during installation.

2. Planting using a Dibble, Hoedad, or Reinforced Planting Shovel for Wet Swale and Bare Root Seedlings. Planting shall only be done when there is adequate moisture in the ground and when the ground is not frozen. Provide proper root positioning and contact with the soil, and eliminate all air pockets around roots. Roots of seedlings shall not be pinched or bent in a sideways or upturned direction. Each tree, division, or seedling shall be inserted into the hole such that the root collar of the tree will be at ground level after backfilling is complete. Allowance for burying the root collar below ground level shall not exceed onehalf inch in depth. In no case shall planting result in the root collar remaining above ground level. The soil backfilled around the root system shall be compacted sufficiently to support the plant. Mow or use a string trimmer to a height of 1 in (25 mm) in the area designated for restoration. Do not trim wet swales or retention basins where standing water is present. Grass the area designated for restoration with a native restoration or riparian seed mix and apply wheat straw mulch to the area before planting seedlings. Plant within 48 hours after mowing or string trimming the site. B. Restoration and enhancement of tidal marsh areas are subject to possible wave energy, requiring the use of a plant anchor for each plant. See planting plan sheets and details for plant anchor and anchoring descriptions.

**LANDSCAPE MULCHING NOTES:**

1. For Pit Plantings  
Follow these requirements when mulching for pit plantings:

a. Where the distance between plants is 8 ft (2.4 m) or less, spread mulch throughout and 3 ft (900 mm) beyond the outermost plants. Where plants are more than 8 ft (2.4 m) apart, apply mulch in a circular fashion around each plant, forming a ring 3 ft (1.5 m) in the outside diameter.

b. If plant pits are greater than 3 ft (1.5 m) in diameter, ensure that the mulch extends out to cover the berm as shown in the planting details on the Plans.

c. Apply mulch within 3 days of planting at least 4 in (100 mm) in depth to obtain a compacted depth of at least 3 in (75 mm).

d. Compaction occurs naturally. Check compaction at least two months after spreading and exposing the mulch to the elements.

e. If the compacted depth is less than 3 in (75 mm), apply additional mulch to deficient areas within 1 month following notification.

f. Apply mulch to a uniform depth and remove lumps for a neat appearance. Tuck mulch neatly against all paving edges, drainage structures, and where planting beds meet grassed areas.

g. Leave a 1 in (25 mm) to 2 in (50 mm) ring of non-mulched area directly around all tree trunks.

h. Do not mulch with Cypress Mulch. 2. For Plantings using a Dibble, Hoedad, or Reinforced Shovel Apply landscape mulch according to Subsection 702.3.05.C.1 with the following exceptions:

a. Apply mulch before planting.

b. Use only wheat straw mulch in restoration areas.

c. Ensure that the mulch coverage is open enough to allow seed germination to take place and dense enough to conserve moisture in the seed bed.

3. For Native Multitrophic or Stream Buffer Restoration Planting Areas, wheat straw shall be the only types of mulch used.

4. Do not use mulch in a tidal marsh area. Do not mulch wet swale or retention ponds where standing water is present.

d. Wrapping Do not wrap the trunks of tree unless specified in the plans. When wrapping is specified, tightly wrap the trunks of deciduous trees over 1.25 in (32 mm) in caliper. Wrap in strip burlap or waterproof crepe tree wrapping paper or other approved materials.

1. Tie the wrapping material securely with binder twine spaced every 12 in (300 mm) for the full length of the wrapping. Wrap immediately after planting.

e. Staking and Guying  
1. Do not use staking and guying unless specified in the plans or details.

2. Perimeter Staking  
3. Place perimeter stakes 2 in x 2 in x 36 in (50 mm x 50 mm x 900 mm). Stake the perimeter of indicated regenerated areas within specified planting dates according to the Plans or as directed by the Engineer. Keep staking for tidal marsh areas secured with supports taller than the highest tide with highly visible flagging tape to mark the area as off-limits for vehicles and machinery.

4. Vines, Shrubs, and Miscellaneous Plant Staking  
5. Use stakes to identify isolated vines, shrubs, and miscellaneous plants outside of solid mulched beds according to Plan details.

6. Tree Staking and Guying  
7. Stake trees using a system that will prevent trees from leaning or tilting and keep the root ball stable until the roots become anchored. The system should allow the top some movement and flexibility without damaging the tree.

MEASUREMENT NOTES:  
A. Plants Plants of the name and size specified are measured for payment according to the number planted that are still living and viable and in an acceptable condition at the time of Final Acceptance. A viable plant must have a minimum of 75 percent of the leaf-bearing crown with healthy foliage.

B. Fertilizer Spring application fertilizer applied to planted and regenerated areas will be the actual number of pounds (kilograms) placed and accepted. Fertilizer, lime, and plant topsoil used in prepared plant topsoil or plant bed preparation are not measured for separate payment. For stream buffer and marsh areas, the addition of fertilizer or lime is prohibited.

C. Perimeter Stakes Perimeter stakes is not measured for payment unless such item is shown as a separate Pay Item in the Proposal.

D. Clearing and Grubbing Clearing and grubbing is not measured for payment unless the item is shown as a separate Pay Item in the Proposal.

E. Landscape Mulch The quantity of landscape mulch and top-dressing measured for payment will be the actual number of square yards (meters) completed as specified and accepted. The presence of weeds or other growth, or foreign material, will be cause for rejection.

702.4.01 Limits General Provisions 101 through 150.

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702.4.01 Limits General Provisions 101 through 150.

**SILT FENCE INSTALLATIONS WITH J HOOKS AND SPURS NOTES**

Silt fence should never be run continuously. The silt fence should turn back into the fill or slope to create small pockets that trap silt and force stormwater to flow through the silt fence. This technique is called using J hooks (or spurs). The J hooks shall be utilized on all silt fences that are located around the perimeter of the project and along the toe of embankments or slopes. The J hooks shall be spaced in accordance with GDOT Construction Detail D-24C. The maximum J-hook spacing is reached when the top of the J hook is at the same elevation as the bottom of the immediately upgradient J hook. J Hooks shall be paid for as silt fence items per linear foot. All costs and other incidental items are included in cost of installing and maintaining the silt fence.

Owner:

**BULLOCH COUNTY  
GA  
PARKS AND  
RECREATION PARK**

Drawn by:

**MOONEY**  
*design studio*  
Landscape Architecture/Planning

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**BEAUTIFICATION  
AND  
ENHANCEMENT  
CONCEPTUAL  
PLANS FOR  
GEORGIA STATE  
ROUTE 73 / US  
HIGHWAY 301**



REVISIONS

NOTES

SCALE:

SHEET:

**L7**

DATE: 09.02.2020



**CONTRACTOR WARRANTY AND MAINTENANCE NOTES:**

Project maintenance includes, but is not limited to, watering, cultivating, weeding, pruning, repairing, adjusting guys and stakes, and performing other work as ordered by the Engineer until final acceptance. Promptly remove from the Project area dead plants or those that no longer conform to the requirements of Subsection TO2.2.A.2. Mow the entire right-of-way within the limits of the Project up to a maximum of four times per calendar year. Do not mow native restoration areas, wet swales, or riparian mitigation sites.

A. Leaning Trees Straighten leaning trees as directed by the Engineer. Follow Staking and Guying requirements for replacements or repairs as per Subsection TO2.3.05.E.

**B. Shrub Maintenance**

1. Pruning Prune dead or diseased limbs to provide for plant health and appearance as directed by the Engineer.
2. Landscape Mulching Continuously maintain shrub and tree beds with a clean, freshly mulched appearance using the mulch originally specified. See Subsection TO2.3.05.C. Do not mulch shrub and tree beds within riparian mitigation sites.
- a. Apply a 2 in (50 mm) loose layer of specified mulch (top-dressing) on top of all areas, including tree pits, initially mulched, at the following times: 1. In August, during the first plant establishment period.
2. In April, during the second plant establishment period.
3. In August, during the second plant establishment period.
4. In April, prior to the final inspection.
5. Applying Fertilizer See Subsection TO2.3.05.H.
4. Applying Pesticides

- a. Inspect all planted or seeded vegetation for insects, grubs, mites, diseases, etc., once every two weeks. Apply insecticides, fungicides, and herbicides according to the manufacturer's recommendations to effectively control or eradicate the problem.
- b. Perform all pesticide applications under the direct supervision of a trained licensed commercial pesticide operator whose license includes subcategory 27 - Right of Way Pest Control. Carry the pesticide license/certification on the work site during applications. Carry all labeling associated with the chemical being applied at the work site.
- c. Submit all product information data sheets and EPA approval numbers on all pesticides proposed to be used prior to application for approval.
- d. Notify the Engineer a minimum of 48 hours prior to any and all pesticide applications.
- e. Add a blue dye to all spray applications unless approved otherwise by the Engineer.
- f. Monitor the weather and spray under proper weather conditions. Spraying shall not occur when the weather is greater than 10 miles per hour.
- g. Wear the proper safety attire. Wear long sleeve shirts, long pants, gloves, and safety glasses. Wear or use any additional protective safety attire or gear as recommended by the product's manufacturer.
- h. Repair any damage that is a result of mishandling or misuse of materials, at no expense to the Department, to the satisfaction of the Engineer.
- i. For stream buffer and marsh restoration areas, pesticides are not to be used unless approved by the Department Ecology Manager.

5. Edging
  - a. Edge all shrub pits, shrub beds, and tree pits once a month throughout the life of the project such that the vee-cut edging detail specified on the plans is maintained. Prevent grass and weeds from growing over or into the shrub beds and tree pits.
  - b. Use equipment specifically designed for edging. Line trimming equipment shall not be used.
  6. Watering a. Check all planted material once a week throughout the contract for dryness by removing the mulch from their base and sampling the soil approximately 4 in (100mm) deep. Water if the soil is not moist.
  - b. Water all planted material if a drought (no rain for two weeks) occurs. Provide the water required to meet the watering requirements.
  - c. Water each plant thoroughly until the ground is saturated to a depth slightly below the root ball. Apply water in a manner to prevent erosion.
  7. Weed Control Perform weed control throughout the project, a minimum of once every two weeks, in all areas within the project limits to maintain tree pits, shrub beds, sidewalks, curb and gutter, walkways, ditch paving, concrete medians, and other pavement weed free. Meet the following conditions:
    - a. Perform weed control to prevent weeds from becoming established, setting seed, or from becoming visible in the planting beds.
    - b. Completely remove all undesirable plants (weeds) by hand pulling. Removal of weeds may be accomplished using herbicides if approved by the Engineer. However, the use of herbicides is prohibited in stream buffer areas unless approved by the Department Ecology Manager.
    - c. Apply an approved pre-emergent herbicide twice each year, once in the spring and once in the fall, throughout the contract. The use of pre-emergent herbicides is prohibited in stream buffer areas. Apply pre-emergent to all shrub beds and tree pits. Notify the Engineer 48 hours prior to spraying. Use a blue dye in all applications unless approved otherwise by the Engineer.
    - d. Eradicate all invasive exotic pest plants found within the project limits throughout the life of the project, including stream buffer and marsh areas. Volunteer, non-invasive plant material within stream buffer restoration areas is acceptable.
    - e. Dispose off site on a daily basis all weed, exotic plants, clippings, litter, and debris generated.
    8. Policing Remove debris such as paper, broken limbs, bottles, cans, etc., a minimum of the first and third week of each month from all areas within the project limits while maintaining the site.
    9. Mitigation Areas Pruning, mulching, edging, and applying spring fertilizer are not required within wet swales, native restoration areas, stream buffers and regenerated forest areas.

NOTE: ONE YEAR WARRANTY  
Contractor to provide one year warranty on all plant materials.

**TREE MAINTENANCE NOTES:**

1. Watering See Subsection TO2.3.07.B.6
  2. Landscape Mulch See Subsection TO2.3.07.B.2
  3. Fertilizer See Subsection TO2.3.05.H.
  4. Abnormal Conditions Periodically (once every two weeks) observe trees and shrubs for abnormal conditions such as insects, borers, web worms, red spiders, etc., and immediately treat.
  5. Sucker Growth Remove sucker growth once a month. Sucker growth is the shoots that sprout out around the base of the tree trunk.
  6. Pruning and Deadwood Remove deadwood at least two times a year. Prune dead branches, plant cuts, and wounds or scars with tree paint only when specified in the Plans. Do not top Grape Myrtles. See Subsection TO2.3.05.F.
  7. Pesticide Control
- NOTE: Apply pesticides as necessary to control harmful insects and diseases. Follow the manufacturer's instructions. See Subsection TO2.3.07.B.4. NOTE: Use chemicals according to Federal, State and county directives on environmental control that carry an EPA approval number.
8. Weed Control See Subsection TO2.3.07.B
  9. Staking and Guying Remove all support guy wires, strapping and stakes from plants which have gone through one complete growing season.

**PAYMENT NOTES:**

- A. Plants Plants measured for payment will be paid for as follows:
  1. After planting satisfactorily, the Department will pay 50 percent of the Contract Unit Price bid per each on the next estimate.
  2. Until Final Acceptance, perform all required maintenance according to Subsection TO2.3.07 when necessary or as ordered by the Engineer. If the Contractor fails to properly maintain the landscaping, daily charges shall be assessed against any money due or that may become due the Contractor in accordance with the schedule of deductions shown in Subsection 108.08, but not less than \$150 per calendar day, and will continue until project maintenance is approved by the Engineer. The charges are in addition to those specified for delay or failure in completing the Work within the specified time.
  3. After the first semi-final inspection, the Department will pay 15 percent of the contract Unit Price bid per each of the live, viable plants.
  4. After the second semi-final inspection, the Department will pay 15 percent of the Contract Unit Price bid per each of the live, viable plants.
  5. At Final Acceptance, the Department will pay the remaining 20 percent less the Full Contract Unit Price bid per each plant not accepted. Payments are full compensation for furnishing, planting, replanting as required, pruning, staking, guying, soil conditioning, and preparing plant beds, including applying additives, digging plant pits, preparing plant topsoil and mulch, disposing of waste material, and maintaining the plants during the plant-establishment period.
- B. Fertilizer All grades of fertilizer applied in the spring, measured as specified above, are paid for at the Contract Price per pound (kilogram) or per ton (megagram), whichever is indicated in the Proposal. Payment is full compensation for furnishing and applying and for watering regenerated areas. For native restoration, stream buffer and marsh restoration areas, the addition of fertilizer or lime is prohibited.
- C. Perimeter Stakes Perimeter stakes will not be measured for payment. The cost will be included in the overall contract price.
- D. Landscape Mulch Landscape mulch measured for payment will be paid for as follows:
  1. After mulching satisfactorily, the Department will pay 40% of the Contract Unit Price bid per square yard (meter).
  2. After satisfactorily completing mulch (topdressing) in August of the first plant establishment period, the Department will pay 15% of the Contract Unit Price bid per square yard (meter).
  3. After satisfactorily completing mulch (topdressing) in April of the second plant establishment period, the Department will pay 15% of the Contract Unit Price bid per square yard (meter).
  4. After satisfactorily completing mulch (topdressing) in August of the second plant establishment period, the Department will pay 15% of the Contract Unit Price bid per square yard (meter).
  5. After satisfactorily completing mulch (topdressing) in April of the final planting season, (a month before the Final Inspection), the Department will pay 15% of the Contract Unit Price bid per square yard (meter). Such payment shall be full compensation for furnishing, installing, topdressing, and maintaining mulch as required.
  6. Do not mulch marsh restoration areas.
  7. Do not apply additional applications of mulch after the initial application in stream buffer restoration areas.

**PLANT TOPSOIL NOTES:**

- A. Plant Topsoil Materials Use plant topsoil that meets the requirements of Subsection 893.2.01.
- B. Sources of Material Except as modified in this Section, furnish plant topsoil material according to Section 106.
  1. Plant Topsoil Obtained from the Work The requirements of Subsection 104.06, Right in and Use of Material Found on the Work are in effect for plant topsoil obtained from the Work.
    - a. Obtain the quantity of plant topsoil called for on the Plans.
    - b. Use plant topsoil material present on the Project as long as the topsoil meets the Specifications applying to the item.
    - c. Excavate for topsoil only within the construction limits of the Project. Obtain topsoil from embankment areas, excavation areas, or borrow excavation pits.
    - d. When obtaining plant topsoil from borrow excavation pits or the roadway, cross section the excavated areas a second time before beginning regular excavation.
  2. Plant Topsoil Furnished by the Contractor When insufficient material is obtainable from the Work, obtain additional topsoil offsite. The Contract Price will include the costs necessary to locate, purchase, and deliver the required amount of acceptable material to the Work.
 

For the purpose of measurement, the Contractor may haul plant topsoil in any type of vehicle, provided the vehicle when loaded to capacity and traveling over public roads and streets meets the provisions of Subsection 107.14, Load Restrictions. When using pans or scrapers, the capacity will be the manufacturer's rated capacity.

**SEEDING NOTES:**

- Except as otherwise specified in this Specification, all seeding shall conform to Section TOO of GDOT manual
- A. Ground Preparation Prepare the ground by plowing under any temporary grass areas and preparing the soil as follows:
    1. Slopes 3:1 or Flatter On slopes 3:1 or flatter, plow shoulders and embankment slopes to between 4 in and 6 in (100 mm and 150 mm) deep. Plow front and back slopes in cuts to no less than 6 in (150 mm) deep. After plowing, thoroughly disk the area until pulverized to the plowed depth.
    2. Slopes Steeper Than 3:1 Serrate slopes steeper than 3:1 according to Plan details when required. On embankment slopes and cut slopes not requiring serration (sufficient as determined by the Engineer), prepare the ground to develop an adequate seed bed using any of the following methods as directed by the Engineer: Plow to a depth whatever depth is practicable. Use a spiked chain. Walk with a cleated track dozer. Scarify. Disking cut slopes and fill slopes is not required.
    3. All Slopes a. Obstructions Remove boulders, stumps, large roots, large clods, and other objects that interfere with grassing or may slide into the ditch. b. Topsoil Spread topsoil stockpiled during grading evenly over cut and fill slopes after preparing the ground. Push topsoil from the top over serrated slopes. Do not operate equipment on the face of completed serrated cuts.

- B. Seeding Prepare seed and sow as follows:
  1. Inoculation of Seed Inoculate each kind of leguminous seed separately with the appropriate commercial culture according to the manufacturer's instructions for the culture. When hydroseeding, double the inoculation rate. Protect inoculated seed from the sun and plant it the same day it is inoculated.
  2. Sowing Weather permitting, sow seed within 24 hours after preparing the seed bed and applying the fertilizer and lime. Sow seed uniformly at the rates specified in the seeding tables. Use approved mechanical seed drills, rotary hand seeders, hydroseeding equipment, or other equipment to uniformly apply the seed. Do not distribute by hand. To distribute the seeds evenly sow seed types separately, except for similarly sized and weighted seeds. They may be mixed and sown together. Do not sow during windy weather, when the prepared surface is crusted, or when the ground is frozen, wet, or otherwise non-tillable.

<b>Common Bermuda Grass (Hulled)</b>	<i>Cynodon dactylon</i>	<b>Required Permanent Grass</b>	<b>10 (11)</b>		
<b>Common Bermuda Grass (Unhulled)</b>			<b>10 (11)</b>	<b>2,3,4</b>	<b>April 1 – October 15</b>

**702.2 Materials**

Ensure that materials meet the requirements of the following Specifications:

<b>Material</b>	<b>Section</b>
Water	700.2 B
Agricultural Lime	882.2.01
Fertilizers	891.2.01
Plant Topsoil	893.2.01
Landscape Mulch	893.2.02
Vines, Shrubs, Trees, and Miscellaneous Plants	893.2.03
Tree Paint	893.2.06
Prepared Plant Topsoil	893.2.07
Stakes	893.2.08
Organic Soil Additives	893.2.09

**Owner:**

**BULLOCH COUNTY  
GA  
PARKS AND  
RECREATION PARK**

**Drawn by:**



Landscape Architecture/Planning  
1190 N. Highland Ave. NE  
Atlanta, Ga 31106 #8822  
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**BEAUTIFICATION  
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PLANS FOR  
GEORGIA STATE  
ROUTE 73 / US  
HIGHWAY 301**



**REVISIONS**

**NOTES**

**SCALE:**

**SHEET:**

**L8**

**DATE:** 09.02.2020