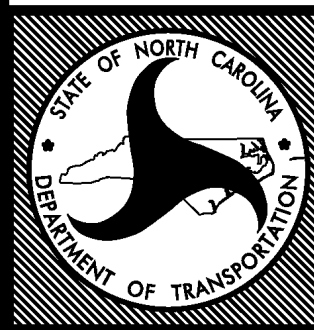


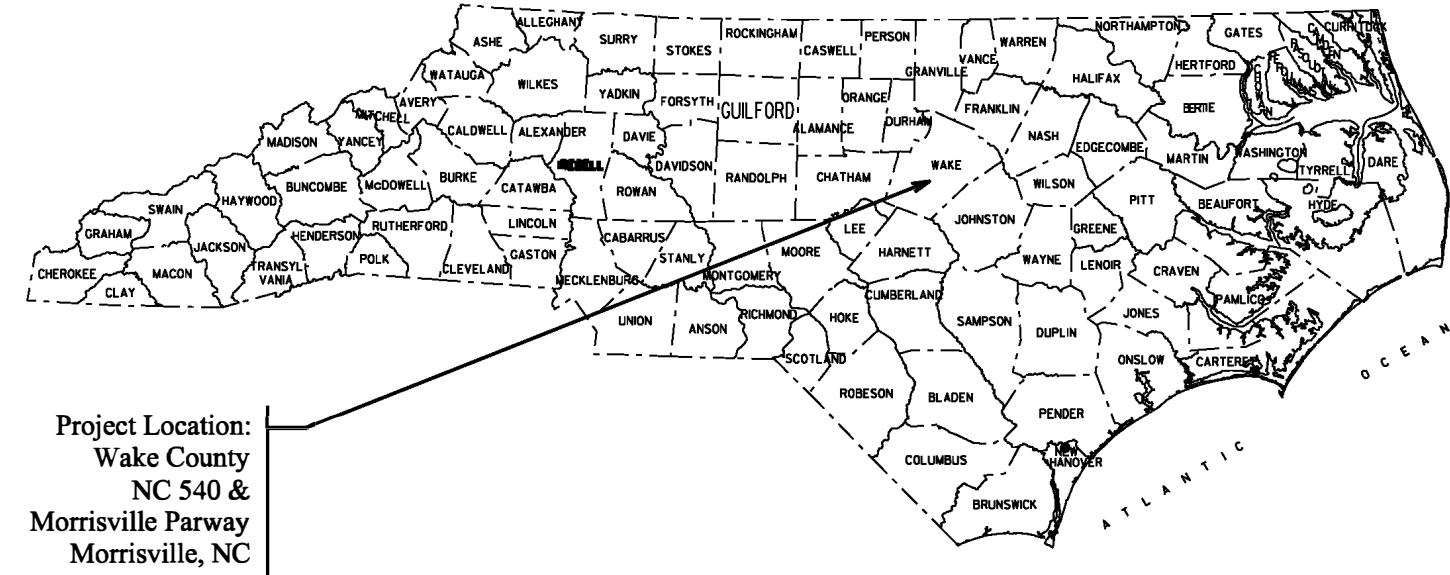
Triangle Expressway Enhancements & Aesthetics  
Wake County  
Morrisville Parkway, North Carolina



PROJECT: U-5315A/U-5315B  
45429.5.TA1

# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

## PROPOSED ROADSIDE ENVIRONMENTAL LANDSCAPE DESIGN & AESTHETICS PROJECT



Project Location:  
Wake County  
NC 540 &  
Morrisville Parkway  
Morrisville, NC

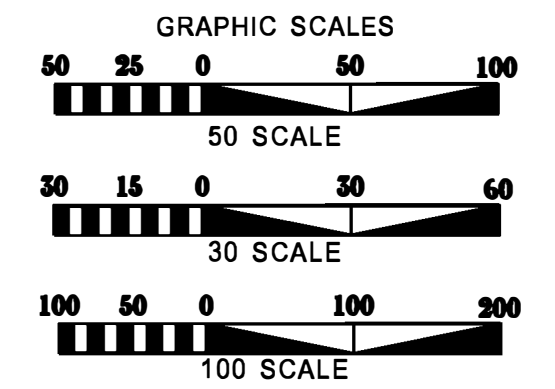
### CONVENTIONAL SYMBOLS

County Line	---
City or Town Line	---
Exist. Right of Way Line Marker	---△---
Prop. Right of Way Line Marker (By Others)	---▲---
Prop Right of Way Line Marker (By Contract)	---◆---
Exist. Control of Access Line	---⊕---
Prop. Control of Access Line	---⊕---
Property Line	---E---
Easement Line	---E---
Slope Stake Line	---S---
Exist. Fence	---+---
Prop. Woven Wire Fence	---+---
Prop. Chain Link Fence	---+---
Exist. Road	---=---
Prop. Road	---=---
Guardrail	---+---
Survey Line	---+---
Denotes Line Equality	---+---
Bridge	---+---
Culvert	---+---
Railroad	---+---
Woods	---+---
Exist. Telephone Pole	---+---
Prop. Telephone Pole	---+---
Tower Pole and Line	---+---
Exist. Power Pole	---+---
Prop. Power Pole	---+---
Sanitary Sewer Line	---+---
Water Line	---+---
Gas Line	---+---
Picnic Shelter	---+---
Regeneration	---+---
Reforestation	---+---
Large Deciduous Tree	---+---
Evergreen Tree	---+---
Small or Flowering Tree	---+---
Shrubs	---+---
Planting Bed	---+---

### Summary of Quantities

QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME	FURNISH	
Small Flowering Trees (LARGE)						
100	EA	CCL	<i>Cercis canadensis</i>	Redbud	2-2 1/2" CAL., 8-10', B&B, 1.2.3 Specimen-Matching	As Shown
57	EA	CVL	<i>Chionanthus virginicus</i>	Fringetree	2-2 1/2" CAL., 8-10', B&B, 1.2.3 Specimen-Matching	As Shown
Evergreen Trees (LARGE)						
15	EA	CJL	<i>Cryptomeria japonica</i> 'Yoshino'	Yoshino Cryptomeria	6-8', B&B, Specimen 3.1.2.4	As Shown
23	EA	CAL	<i>Cupressus arizonica</i> 'Carolina Sapphire'	Carolina Sapphire Cypress	6-8', B&B, Specimen 3.1.2.4	As Shown
48	EA	JVL	<i>Juniperus virginiana</i>	Eastern Red Cedar	6-8', B&B, Specimen 3.1.2.4	As Shown
27	EA	MGL	<i>Magnolia grandiflora</i> 'D.D. Blancher'	D.D. Blancher Magnolia	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
101	EA	PTL	<i>Pinus taeda</i>	Loblolly Pine	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
Deciduous Trees (LARGE)						
12	EA	ABL	<i>Acer rubrum</i> 'Autumn Blaze'	Autumn Blaze Red Maple	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
8	EA	ARL	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
7	EA	NSL	<i>Nyssa sylvatica</i> 'Wildfire'	Black Gum	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
17	EA	QAL	<i>Quercus alba</i>	White Oak	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
15	EA	QCL	<i>Quercus coccinea</i>	Scarlet Oak	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
11	EA	QSL	<i>Quercus shumardii</i>	Shumard Oak	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
15	EA	TDL	<i>Taxodium distichum</i>	Bald Cypress	2-2 1/2" Cal., 12-14', B&B, Specimen	As Shown
Shrubs / Native Grass and Perennial Varieties						
2759	EA	HB	<i>Hemerocallis</i> 'Buttered Popcorn'	Buttered Popcorn Daylily	Single Fan Rhizome	2' O.C.
1100	EA	HR	<i>Hemerocallis</i> 'Happy Returns'	Happy Returns Daylily	Single Fan Rhizome	2' O.C.
1180	EA	IC	<i>Iris</i> 'Caesars's Brother'	Caesars's Brother Bearded Iris	Single Fan Rhizome	24" O.C.
7549	EA	ND	<i>Narcissus</i> 'Dutch Master'	Dutch Master Daffodil	DN II	24" O.C.
2855	EA	PV	<i>Panicum virgatum</i> 'Cloud Nine	Cloud Nine Switchgrass	#1 Cont.	5' O.C.
740	EA	RF	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan	QT.	2' O.C.
Descriptions						
12	EA	SP	Establishment			
2020	CY	1670	Mulch for Planting			
15,500	SY	1670	Post-Emergence Herbicidal Treatment for Plant Beds			
15,500	SY	1660	Pre-Emergence Plant Bed Herbicide Treatment			
11	ACRE	SP	Supplemental Seeding & Repairing			
100	M/G	1670	Water for Planting			
50	M/G	1670	Water for Sod			
10	CYCLES	SP	Specialty Mowing			
1845	SY	SP	Sod			
1	LS	SP	Landscape Grading			
5	ACRE	1651	Selective Undergrowth Removal			
200	CY	SP	To soil			
1.0	LS		Traffic Control			

T.I.P. #	FEDERAL PROJECT W.B.S. #	SHEET #	SHEET # TOTAL
U-5315 MOPAR	45429.5.TA1	L1A	12
FED. PROJ. #	DESCRIPTION	DIVISION	
00000.000.000	TRIANGLE EXPRESSWAY	5	



Designed By: Jeff Lackey 4/2020

### REVISIONS

DATE	DESCRIPTION
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### INDEX OF (L) SHEETS:

- L1A - TITLE SHEET
- L1B - PLANTING DETAILS
- L1C - ROADSIDE DETAILS
- L1D - SHEET LAYOUT PLAN / SYMBOLOGY

(WEST WAKE EXPRESSWAY TOLL)

- L1 - LANDSCAPE PLANTING PLAN
- L1-L - LAYOUT PLAN

SHEET LAYOUT PLANS - (MORRISVILLE PARKWAY)

- L2 - LANDSCAPE SHEET PLAN
- L3 - LANDSCAPE PLANTING PLAN
- L3-L - LAYOUT PLAN
- L4 - LANDSCAPE PLANTING PLAN
- L4-L - LAYOUT PLAN
- L5 - LANDSCAPE PLANTING PLAN

STATE OF  
**NORTH CAROLINA**  
DEPARTMENT OF TRANSPORTATION

LOCATION: Morrisville Parkway & NC 540 Triangle Expressway

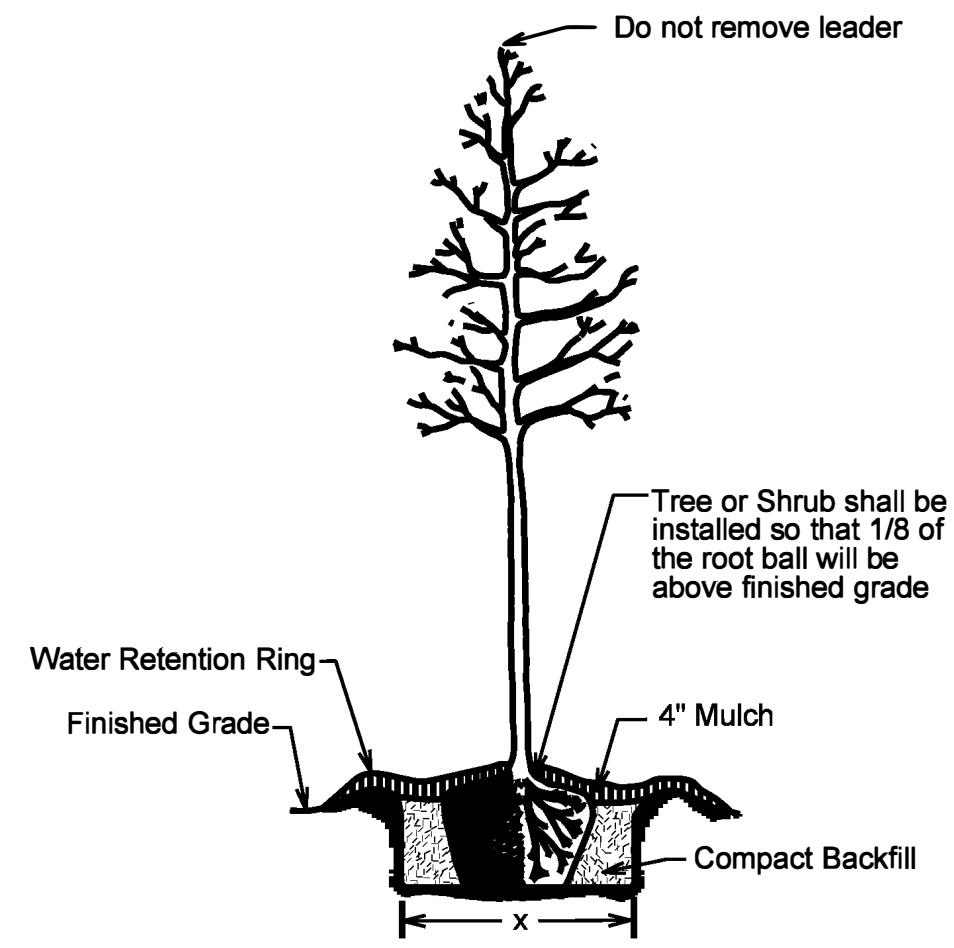
TYPE of WORK: LANDMARK Corridor Enhancement Design & Development

COUNTY: WAKE COUNTY

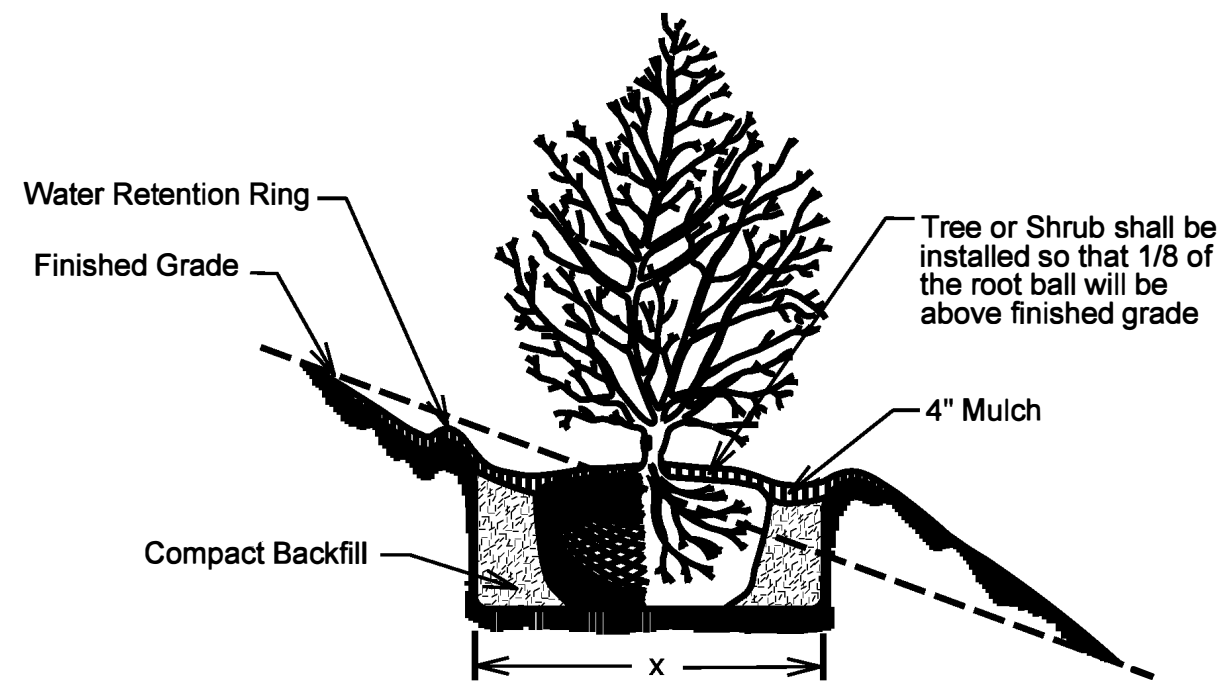
### 2018 STANDARD SPECIFICATIONS

PREPARED IN THE OFFICE OF:  
NCDOT- ROADSIDE ENVIRONMENTAL UNIT  
DESIGN & DEVELOPMENT SECTION  
1557 MAIL SERVICE CENTER  
RALEIGH NC 27699 919-707-2920

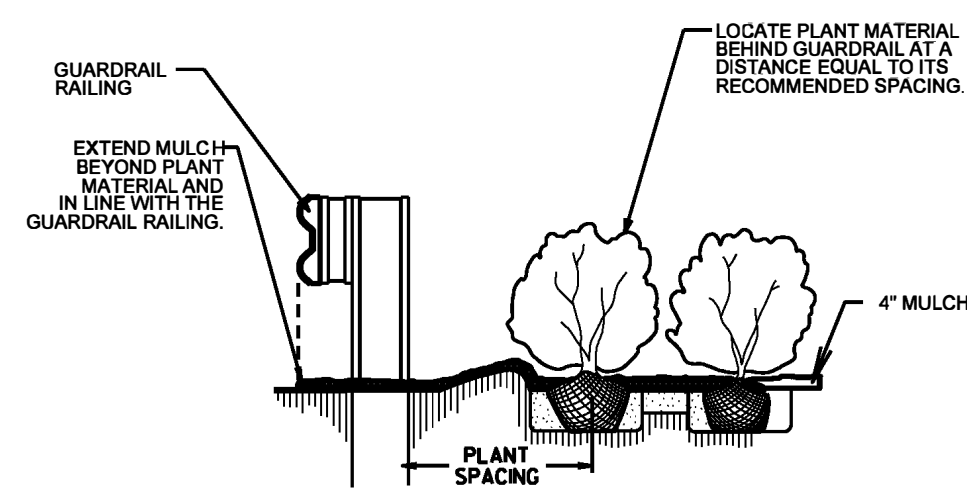
07/09/97



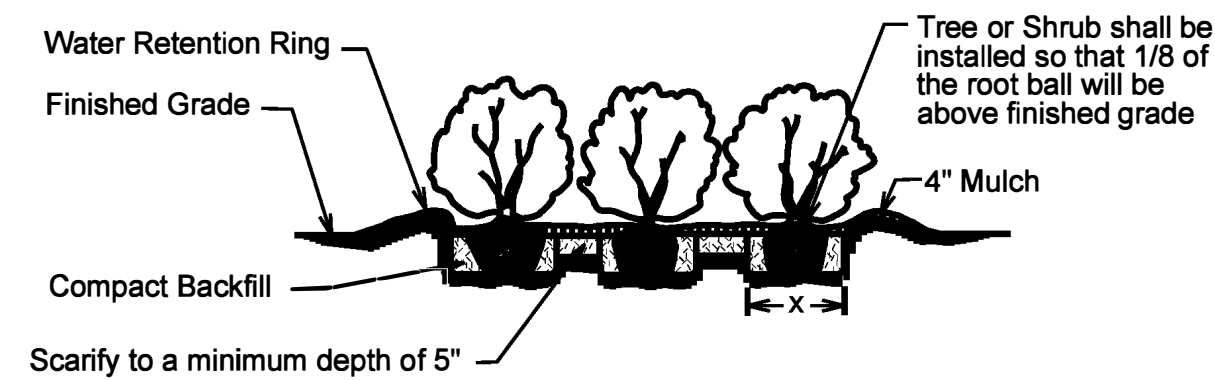
**TREE OR SHRUB PLANTING DETAIL**  
(LEVEL GROUND)



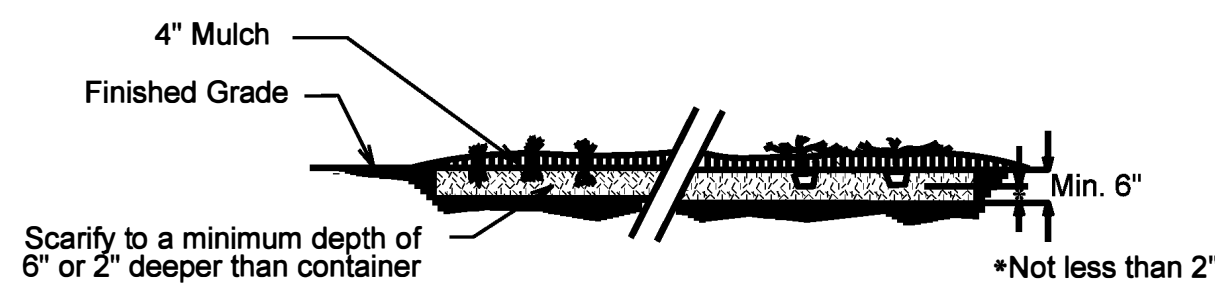
**TREE OR SHRUB PLANTING DETAIL**  
(SLOPING GROUND)



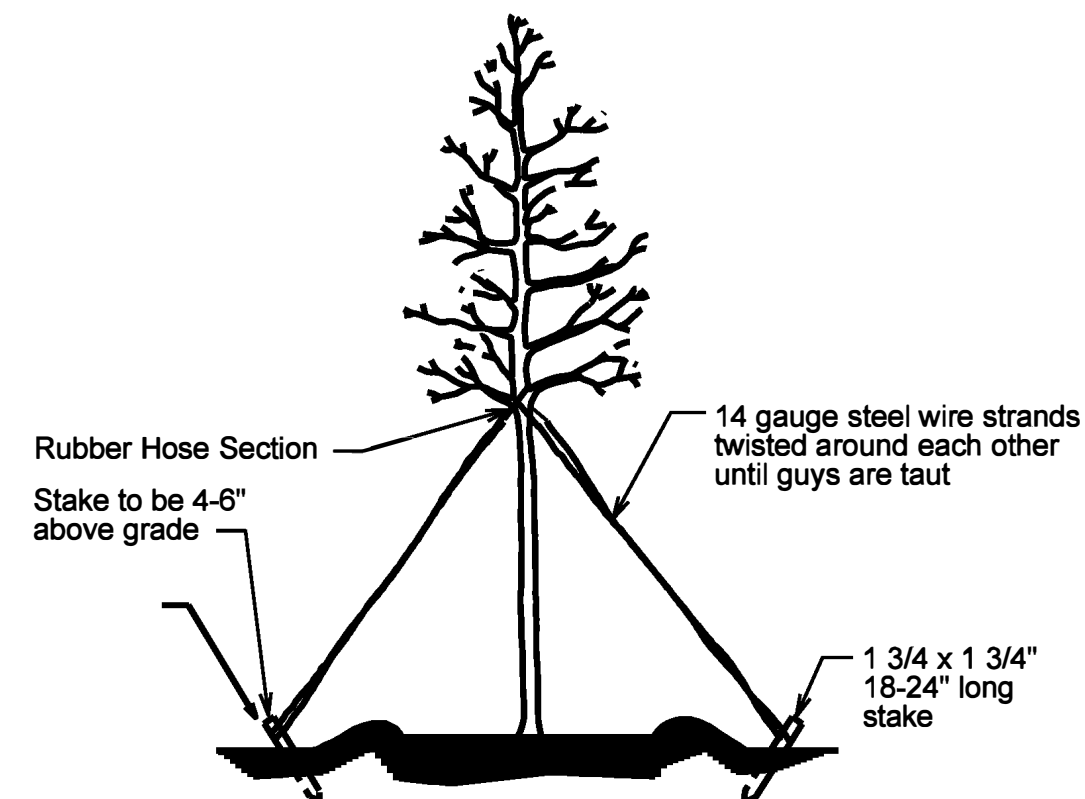
**GUARDRAIL MULCHING DETAIL**  
\* Detail to be used when approved by the Engineer.



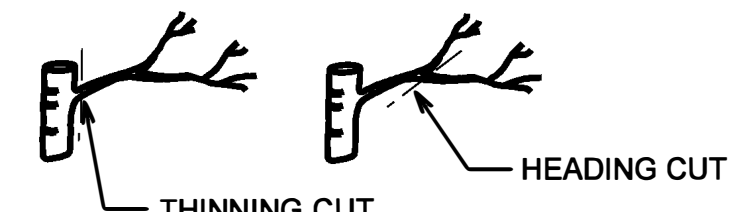
**Shrub Bed Planting Detail**



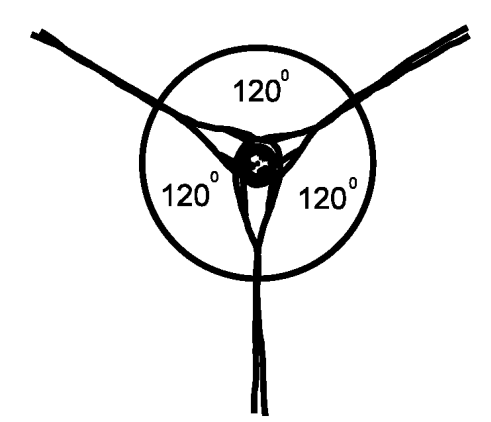
**Groundcover Planting Detail**  
\*Plants may be planted before or after mulching operation



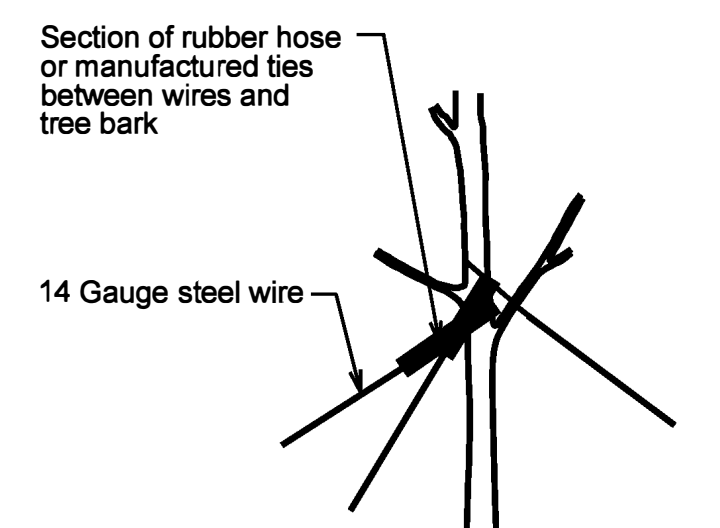
**TREE GUYING DETAIL**  
(FOR TREES 10' OR LARGER)  
\* Utilize guying detail only if requested by the Engineer.



**PRUNING CUTS**



**GUY SPACING DETAIL**

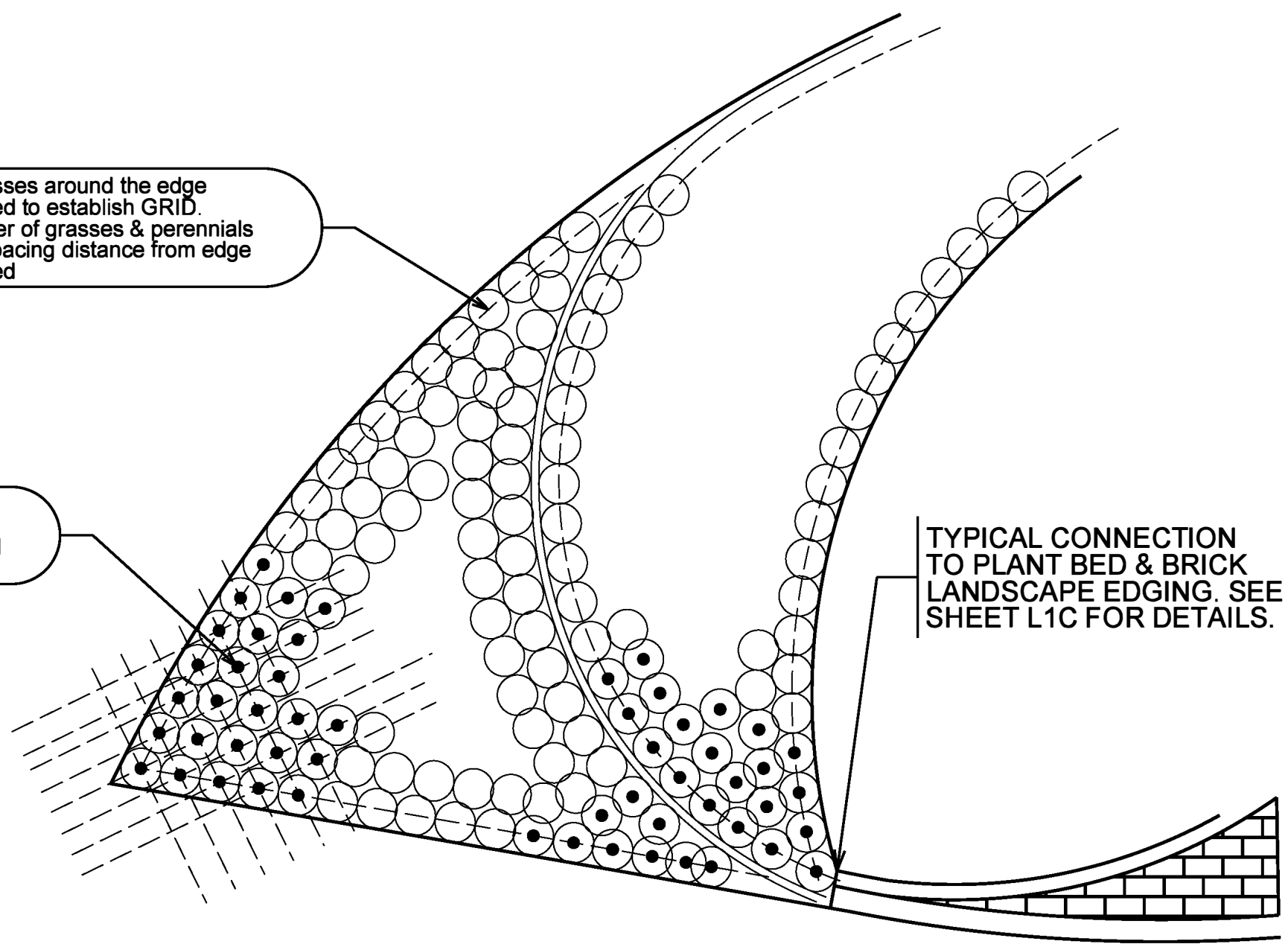


**GUY TYING DETAIL**

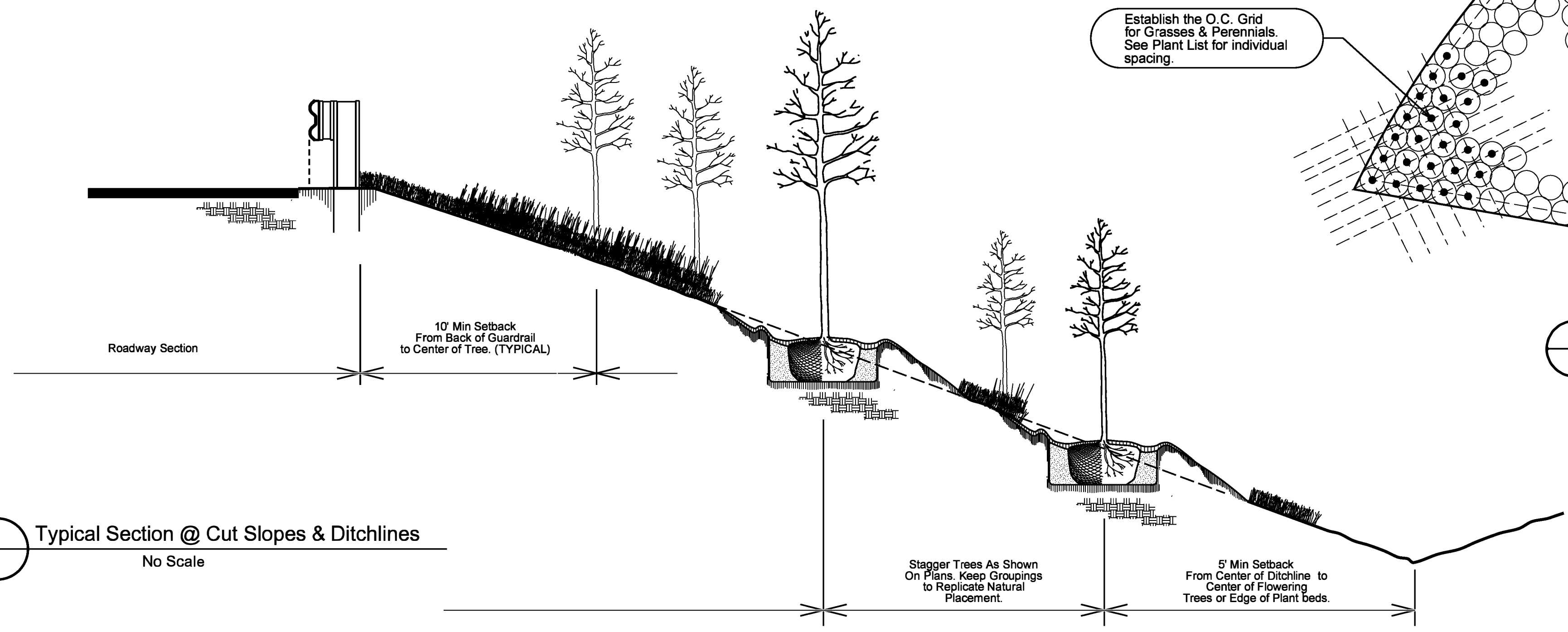
Align Grasses around the edge of plant bed to establish GRID. Start center of grasses & perennials half the spacing distance from edge of plant bed

Establish the O.C. Grid for Grasses & Perennials. See Plant List for individual spacing.

TYPICAL CONNECTION TO PLANT BED & BRICK LANDSCAPE EDGING. SEE SHEET L1C FOR DETAILS.

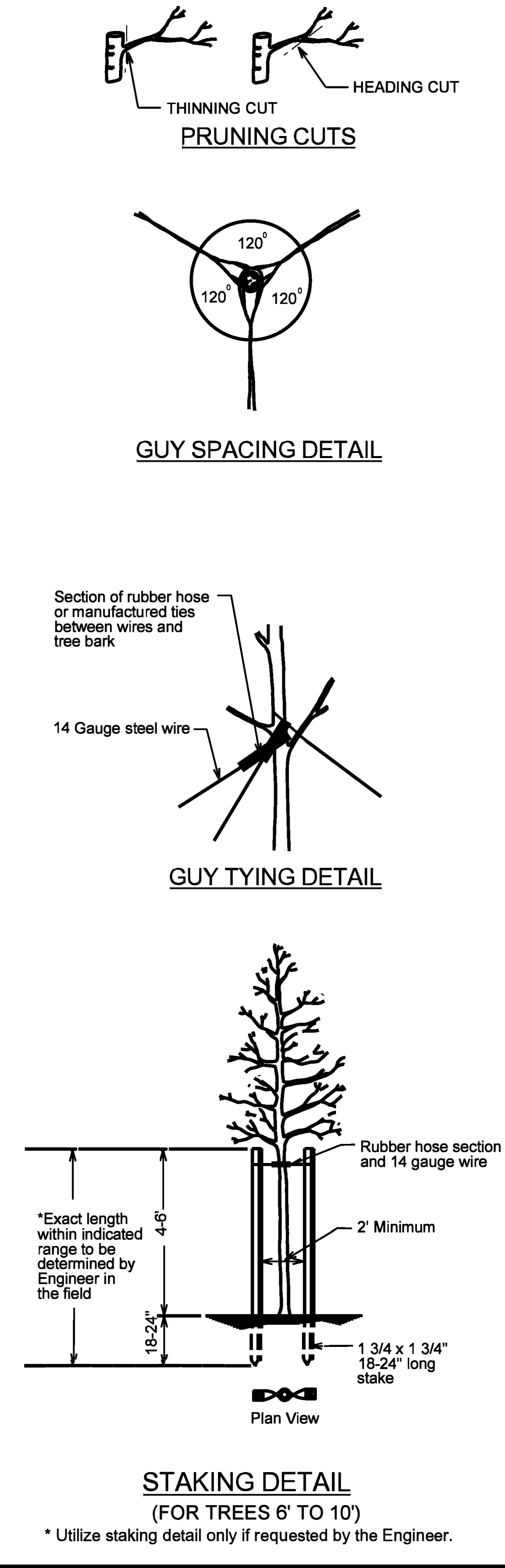


**Typical Plan View @ Layout for Native Grass & Perennial Plantings**  
No Scale



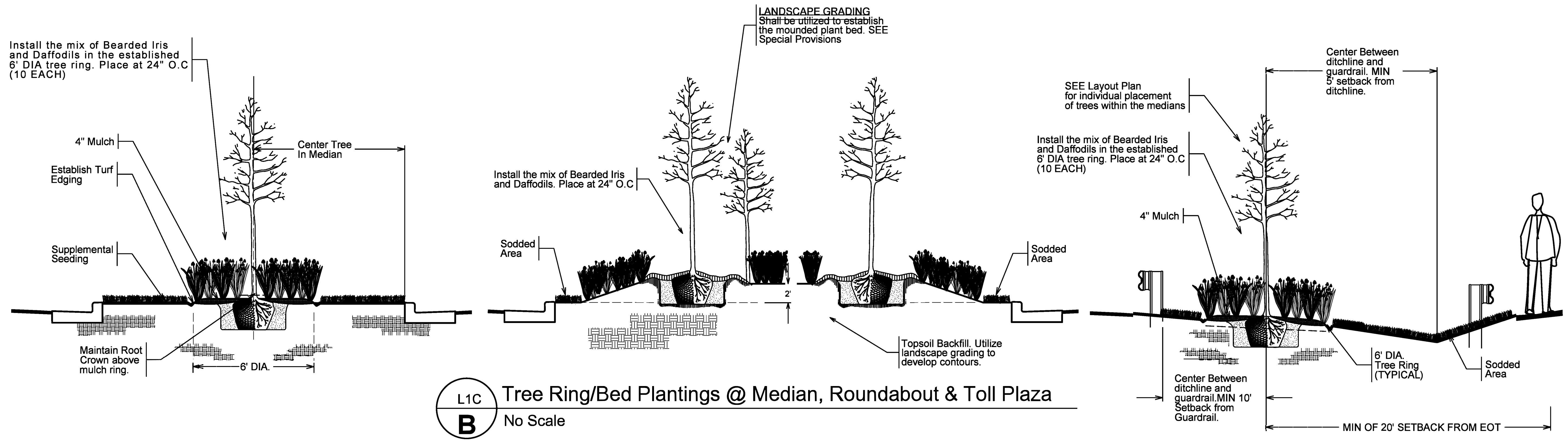
**Typical Section @ Cut Slopes & Ditchlines**  
No Scale

**NOTES:**  
 SCHEDULE FOR PLANT HOLE SIZE:  
 CONTAINER OR ROOT BALL SIZE  
 X = 2 TIMES THE DIAMETER OF THE CONTAINER OR THE ROOT BALL DIAMETER  
 FERTILIZER SHALL BE APPLIED AT TIME OF PLANTING. FERTILIZER SHALL BE A SLOW RELEASE PELLET OR TABLET. FORMULATION SHALL BE APPROVED BY ENGINEER IN THE FIELD.  
 RATES SHALL BE PER MANUFACTURERS RECOMMENDATIONS AND APPROVED BY THE ENGINEER IN THE FIELD. THOROUGHLY MIX WITH TOPSOIL, BACKFILL OR SCARIFIED SOIL.  
 REMOVE BURLAP FROM TOP OF BALL BEFORE BACKFILLING AROUND BALL IS COMPLETE  
 SEE STANDARD SPECIFICATIONS FOR PLANT BED HERBICIDE TREATMENT  
 When mulched bed is adjacent to guard rail run mulch to front edge of guard rail - see detail

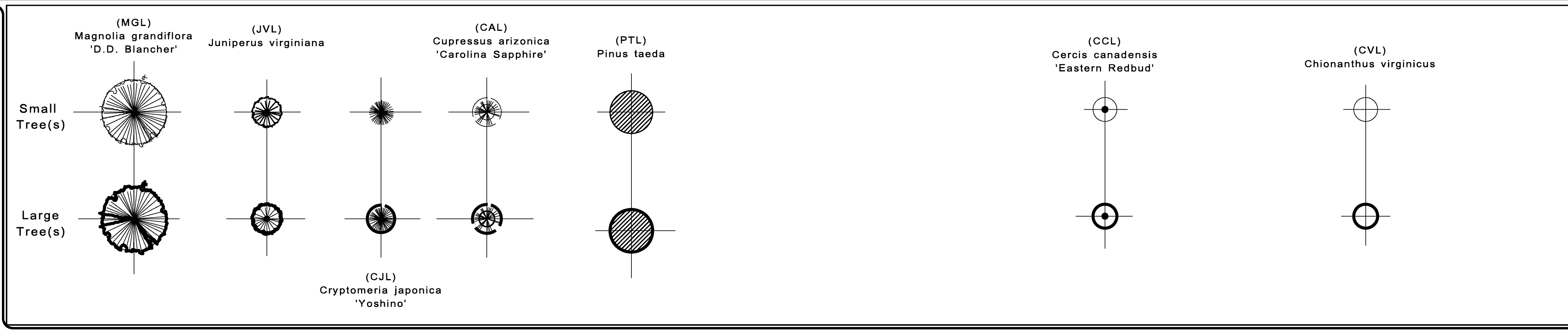


**STAKING DETAIL**  
(FOR TREES 6' TO 10')  
\* Utilize staking detail only if requested by the Engineer.



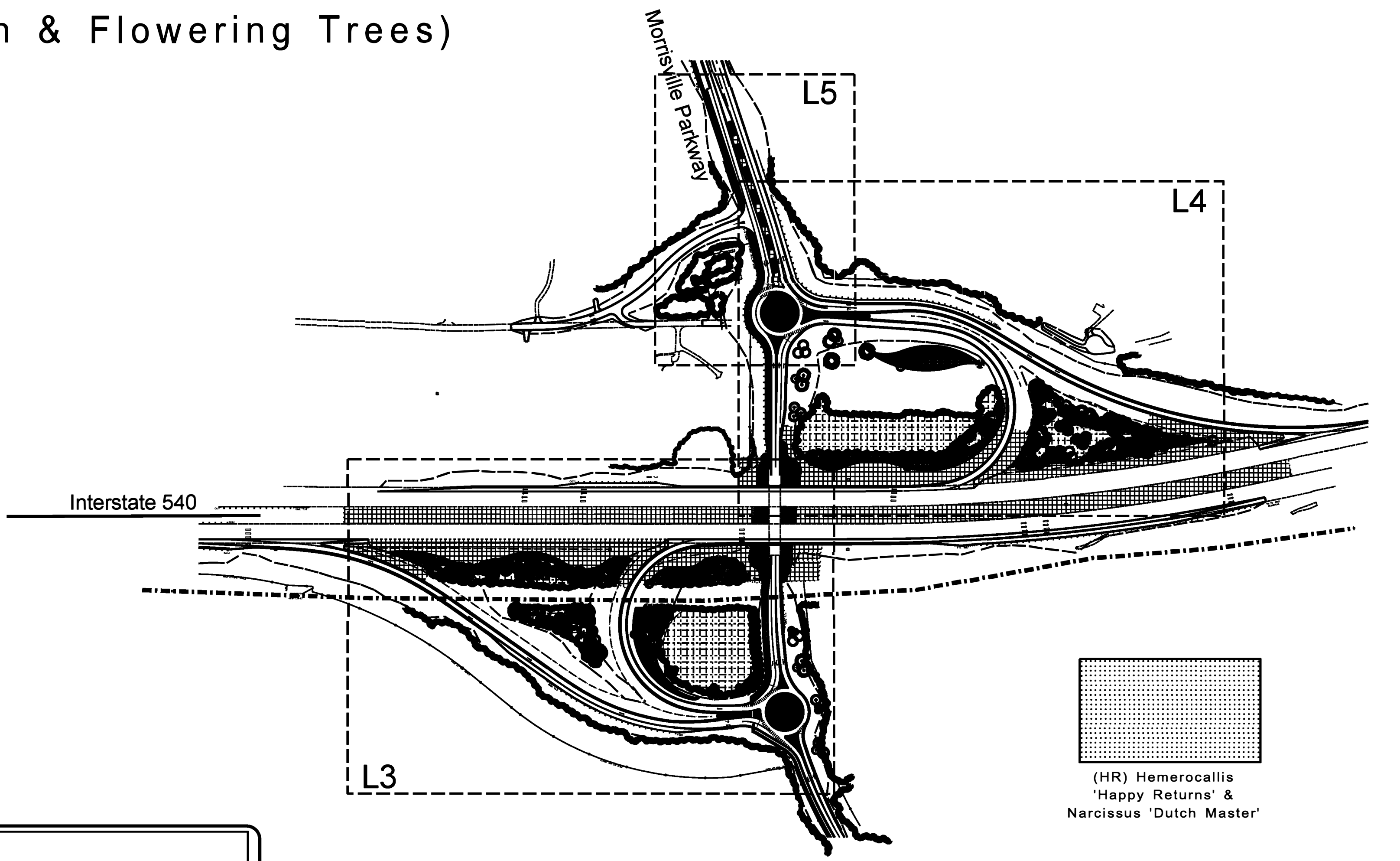
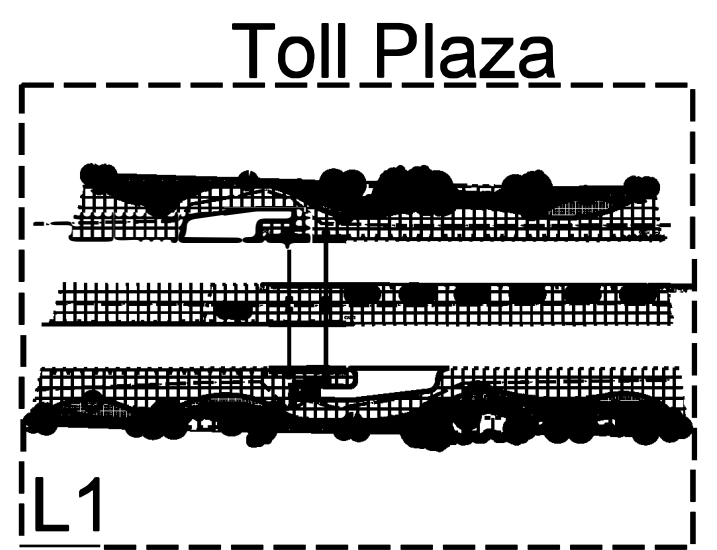


\*\*\*\*\*  
SYSTEMS  
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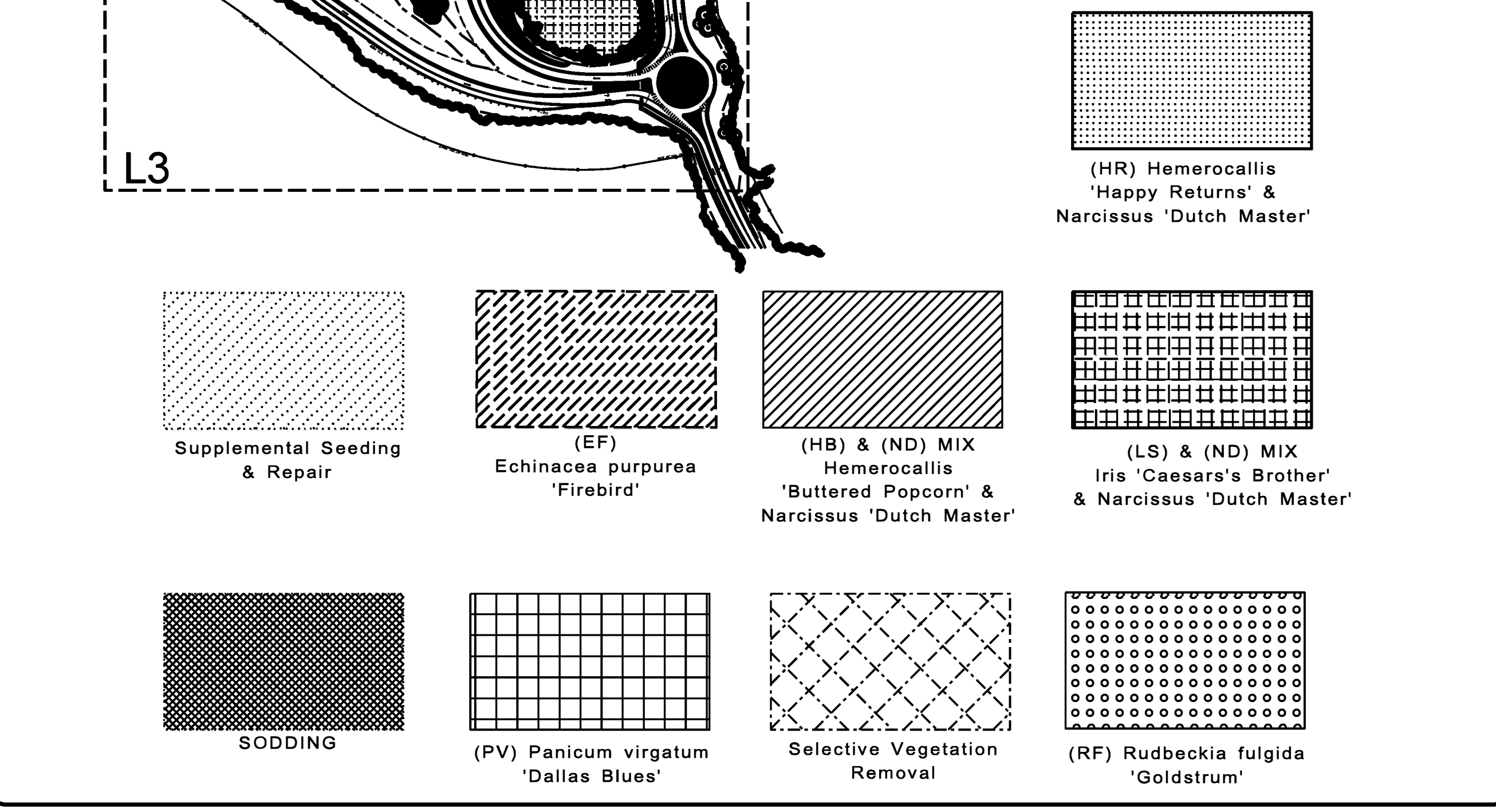
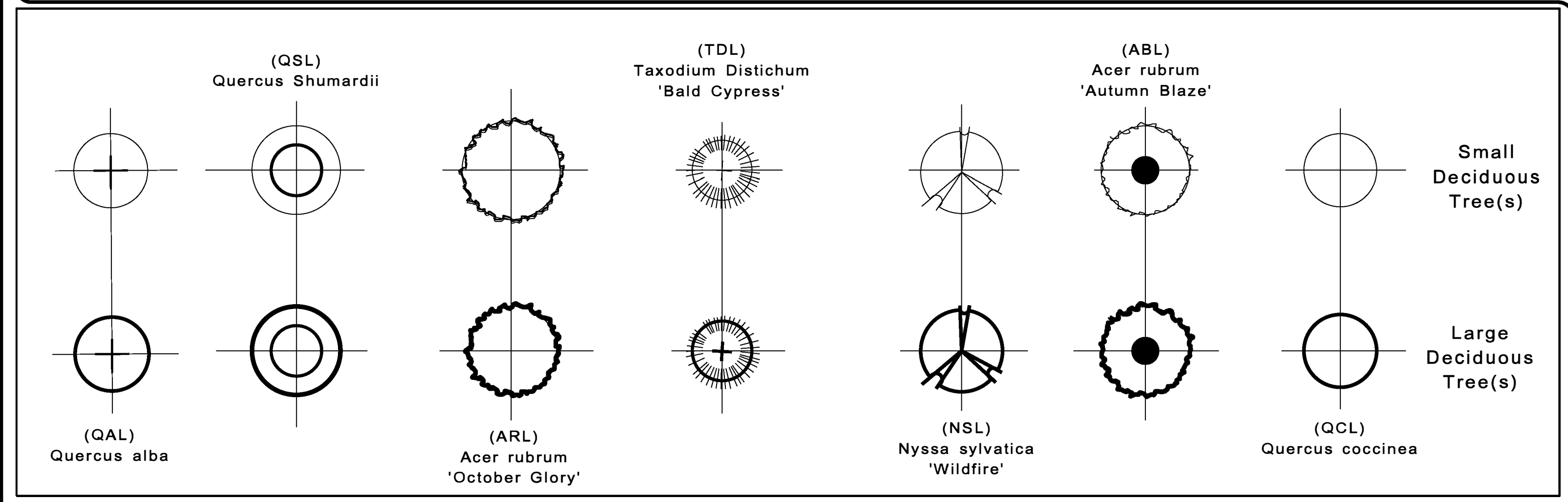


**PLANT SYMBOLOGY (Evergreen & Flowering Trees)**

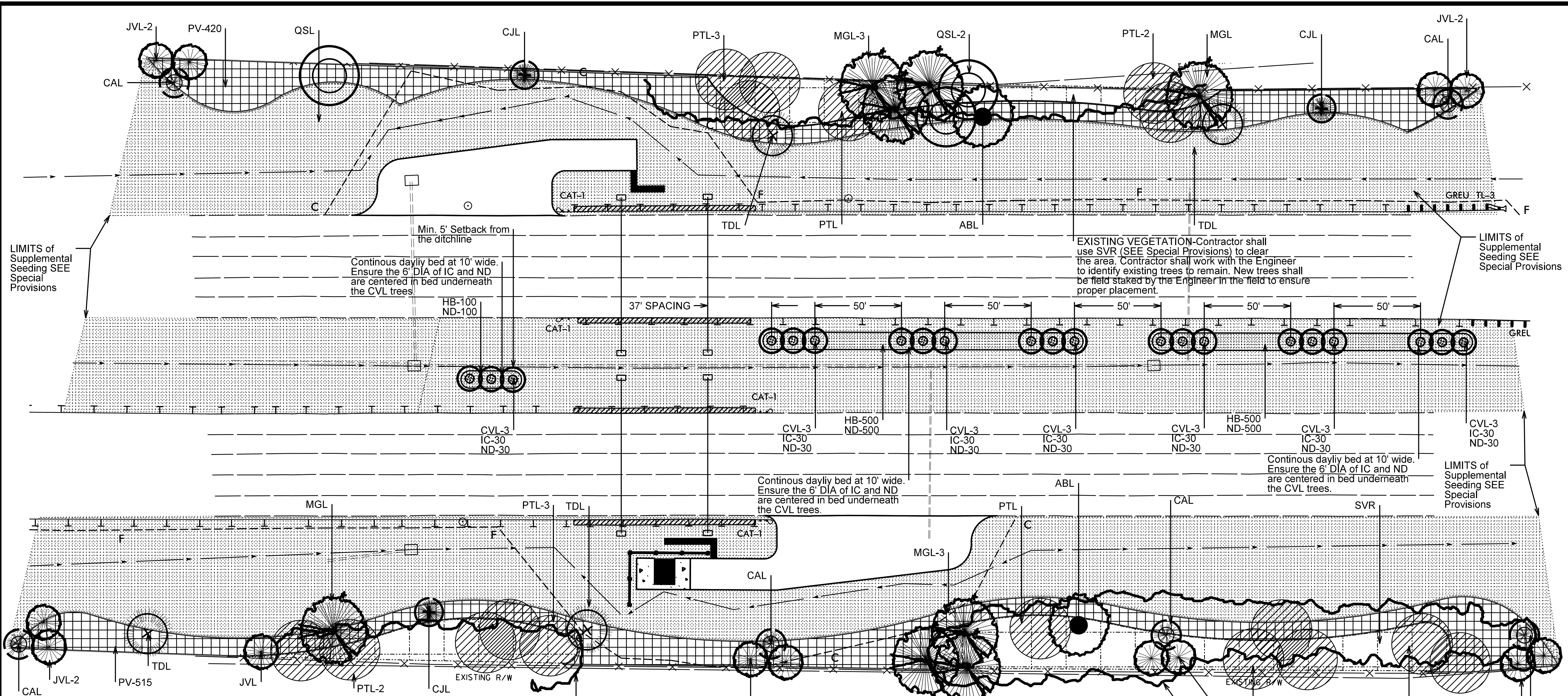
- Notes:
- Contractor Shall Consult with Engineers Prior to any field adjustments. Follow plans as close as possible. Bed layouts should be adjusted to incorporate existing traffic signage, utilities, where necessary, and any sight distance issues that may develop -especially at the roundabouts. Ensure caution is maintained during stakeout to maintain clear site lines. Details may be adjusted to accommodate site. Spacing may be decreased to fit material at specified locations. Consult with Architect to ensure proper development.
  - Contractor shall utilize all NCDOT Standard Specifications for all line items listed. These shall be utilized in conjunction with the Special Provisions. Consult with Engineer in the field to maintain accuracy.
  - Mowing and seeding and mulching shall take place along all sodded, repair and supplemental seeding as labeled along existing ROW-SEE PLANS. Note-the seeding and mulching special provisions outline mowing height and other important information. Those areas where trees are to be incorporated shall be mowed out initially and maintained as directed by the NCDOT Specs. Consult with Architect & Engineer in the field. All Native Grass, Perennials Plantings shall be installed as a continuous mulched bed and shall be treated with Post- Emergence treatment. The individual trees shall be treated with Post Emergence and mulched individually as shown on the plans. Maintain labeled diameter mulch rings.
  - Trees to be field staked by the REU ENGINEER. Consult with Engineer for more detailed information to ensure the plants are located according to NCDOT Standard Specifications and are in no conflict with existing utilities.
  - SVR (Selective Vegetation Removal) shall be utilized in those areas identified on the plans.



**PLANT SYMBOLOGY (Deciduous Trees)**

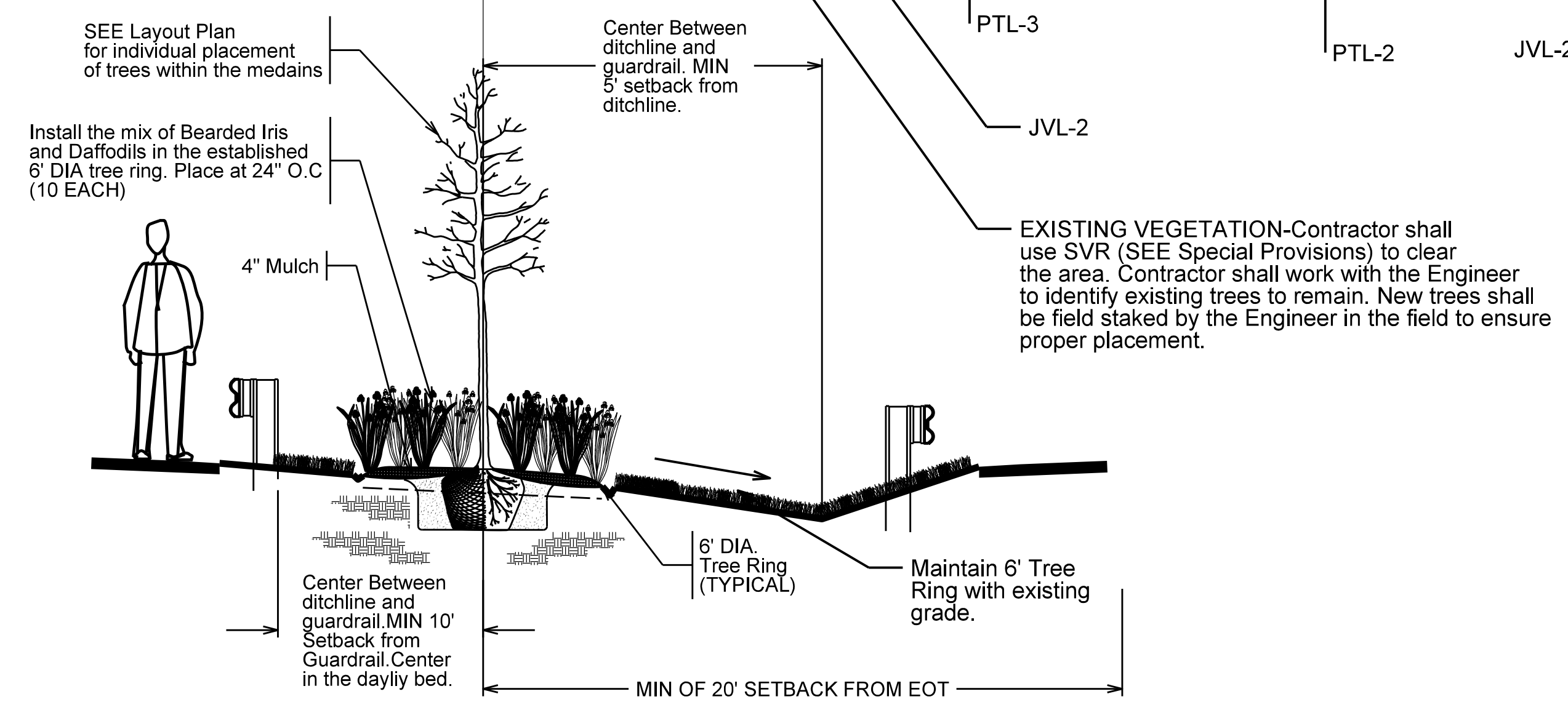


07/09/97



QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME
<b>Small Flowering Trees (LARGE)</b>				
21	EA	CCL	<i>Cercis canadensis</i>	Redbud
	EA	CVL	<i>Chionathus virginicus</i>	Fringetree
<b>Evergreen Trees (LARGE)</b>				
3	EA	CJL	<i>Cryptomeria japonica</i> 'Yoshino'	Yoshino Cryptomeria
6	EA	CAL	<i>Cupressus arizonica</i> 'Carolina Sapphire'	Carolina Sapphire Cypress
13	EA	JVL	<i>Juniperus virginiana</i>	Eastern Red Cedar
8	EA	MGL	<i>Magnolia grandiflora</i> 'D.D. Blancher'	D.D. Blancher Magnolia
17	EA	PTL	<i>Pinus taeda</i>	Loblolly Pine
<b>Deciduous Trees (LARGE)</b>				
2	EA	ABL	<i>Acer rubrum</i> 'Autumn Blaze'	Autumn Blaze Red Maple
	EA	ARL	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple
	EA	NSL	<i>Nyssa sylvatica</i> 'Wildfire'	Black Gum
	EA	QAL	<i>Quercus alba</i>	White Oak
	EA	OCL	<i>Quercus coccinea</i>	Scarlet Oak
3	EA	QSL	<i>Quercus shumardii</i>	Shumard Oak
4	EA	TDL	<i>Taxodium distichum</i>	Bald Cypress
<b>Shrubs / Native Grass and Perennial Varieties</b>				
1100	EA	HB	<i>Hemerocallis</i> 'Buttered Popcorn'	Buttered Popcorn Daylily
	EA	HR	<i>Hemerocallis</i> 'Happy Returns'	Happy Returns Daylily
210	EA	IC	<i>Iris</i> 'Caesar's Brother'	Caesar's Brother Bearded Iris
1310	EA	ND	<i>Narcissus</i> 'Dutch Master'	Dutch Master Daffodil
935	EA	PV	<i>Panicum virgatum</i> 'Cloud Nine'	Cloud Nine Switchgrass
	EA	RF	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan
	EA	EF	<i>Echinacea purpurea</i> 'Firebird'	Firebird Purple Coneflower
0.30	ACRE	1651	Selective Undergrowth Removal	

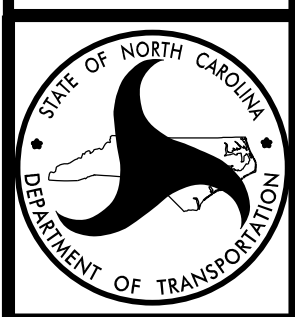
EXISTING VEGETATION-Contractor shall use SVR (SEE Special Provisions) to clear the area. Contractor shall work with the Engineer to identify existing trees to remain. New trees shall be field staked by the Engineer in the field to ensure proper placement.



Tree Ring Plantings @ Toll Plaza



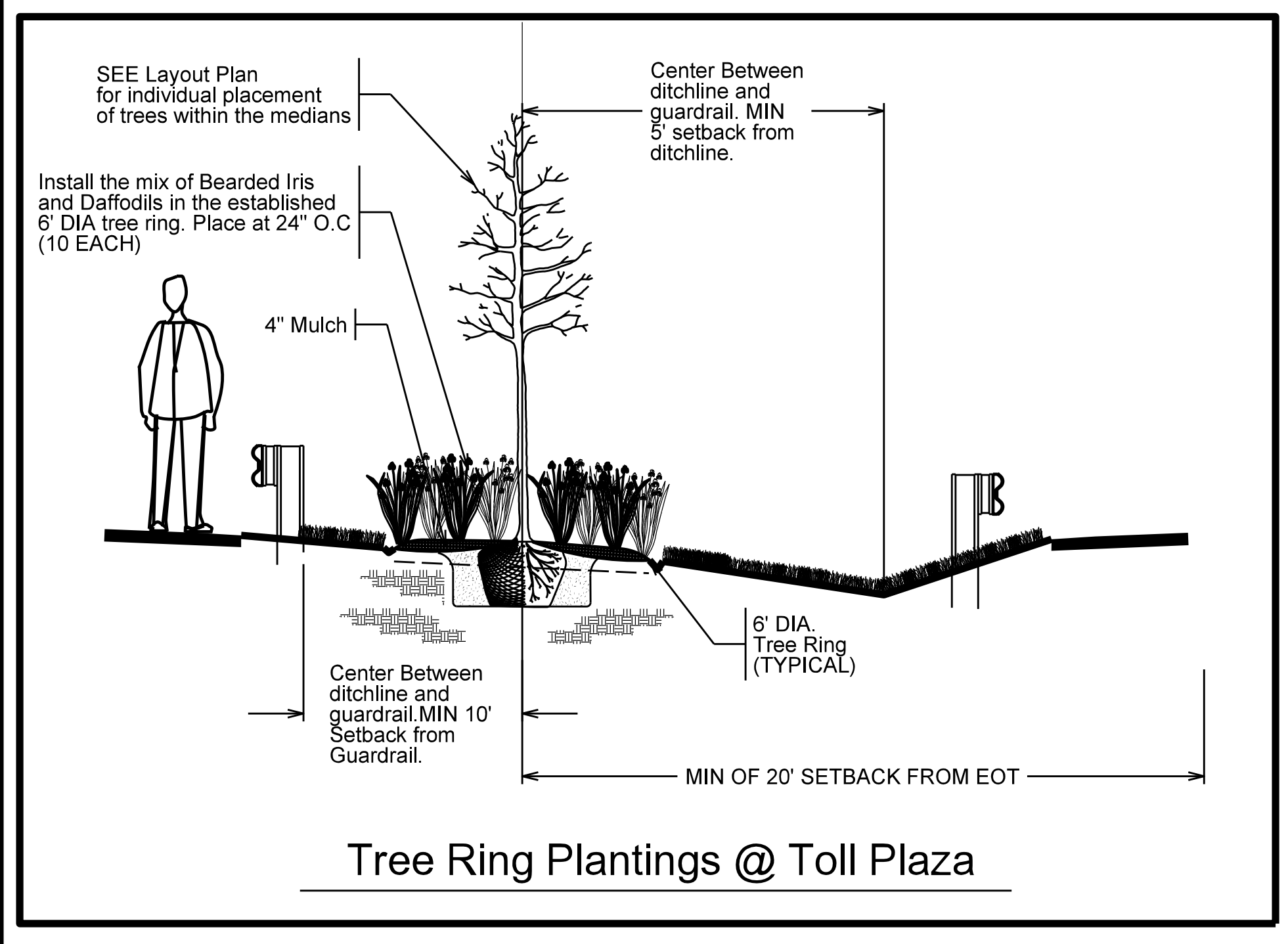
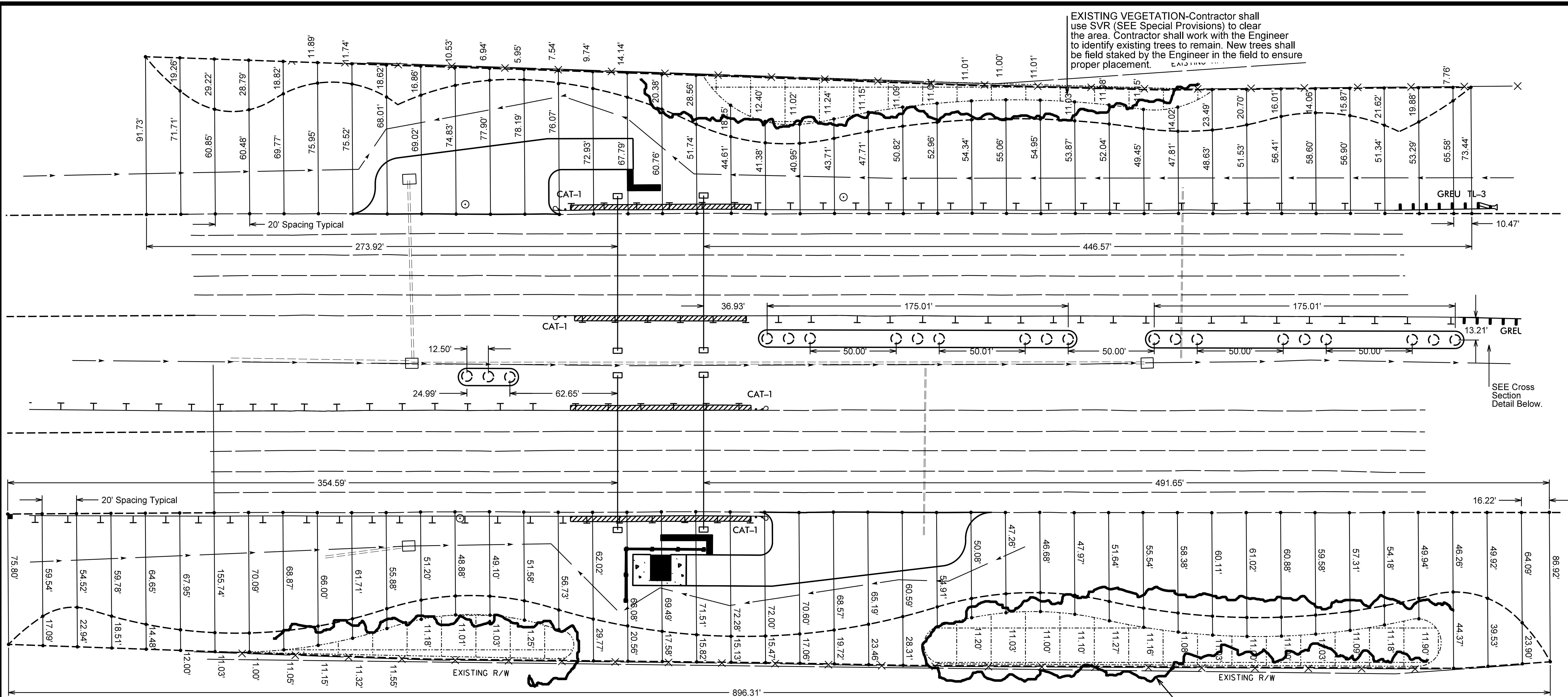
Triangle Expressway Enhancements & Aesthetics  
Wake County  
Morrisville Parkway & NC 540, North Carolina



N.C. Department of Transportation  
Roadside Environmental Unit - Aesthetic Engineering Section  
Landscape Planting Plan

07/09/97

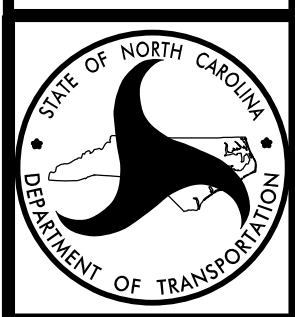
SHEET NO.  
L1-L  
PROJECT REF. NO.  
U-5315 MOPAR TRI



EXISTING VEGETATION-Contractor shall use SVR (SEE Special Provisions) to clear the area. Contractor shall work with the Engineer to identify existing trees to remain. New trees shall be field staked by the Engineer in the field to ensure proper placement.

SEE Cross Section Detail Below.

Triangle Expressway Enhancements & Aesthetics  
Wake County  
Morrisville Parkway & NC 540, North Carolina

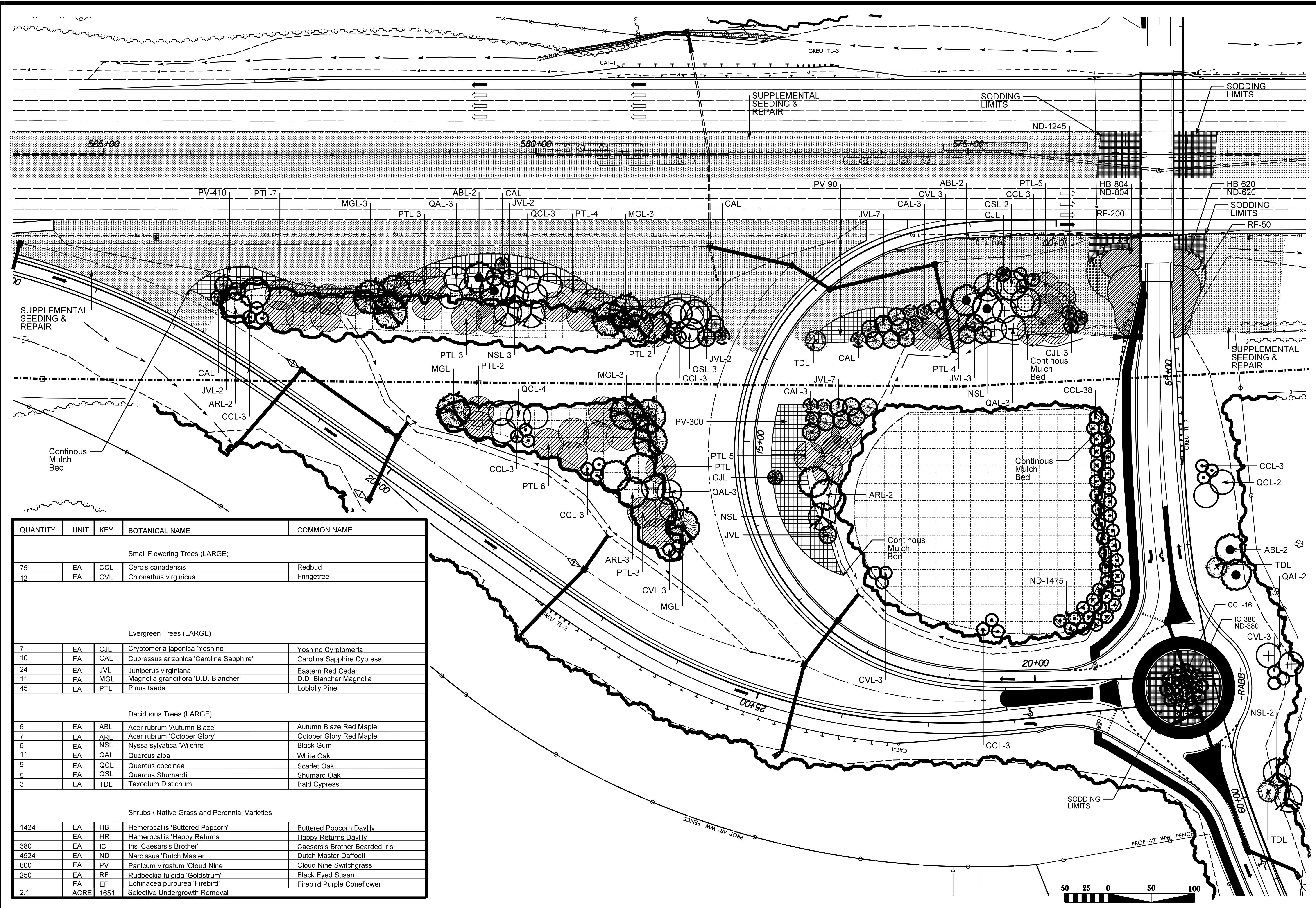


N.C. Department of Transportation  
Roadside Environmental Unit - Aesthetic Engineering Section  
Landscape Layout Plan



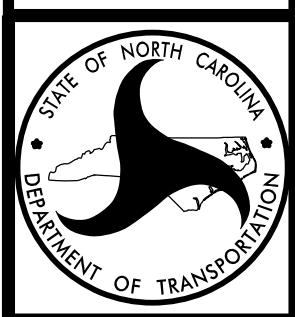
L1-L

07/09/97



QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME
<b>Small Flowering Trees (LARGE)</b>				
75	EA	CCL	<i>Cercis canadensis</i>	Redbud
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<b>Evergreen Trees (LARGE)</b>				
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24	EA	JVL	<i>Juniperus virginiana</i>	Eastern Red Cedar
11	EA	MGL	<i>Magnolia grandiflora</i> 'D.D. Blancher'	D.D. Blancher Magnolia
45	EA	PTL	<i>Pinus taeda</i>	Loblolly Pine
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5	EA	QSL	<i>Quercus shumardii</i>	Shumard Oak
3	EA	TDL	<i>Taxodium distichum</i>	Bald Cypress
<b>Shrubs / Native Grass and Perennial Varieties</b>				
1424	EA	HB	<i>Hemerocallis</i> 'Buttered Popcorn'	Buttered Popcorn Daylily
	EA	HR	<i>Hemerocallis</i> 'Happy Returns'	Happy Returns Daylily
380	EA	IC	<i>Iris</i> 'Caesars's Brother'	Caesars's Brother Bearded Iris
4524	EA	ND	<i>Narcissus</i> 'Dutch Master'	Dutch Master Daffodil
800	EA	PV	<i>Panicum virgatum</i> 'Cloud Nine'	Cloud Nine Switchgrass
250	EA	RF	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan
	EA	EF	<i>Echinacea purpurea</i> 'Firebird'	Firebird Purple Coneflower
2.1	ACRE	1651	Selective Undergrowth Removal	

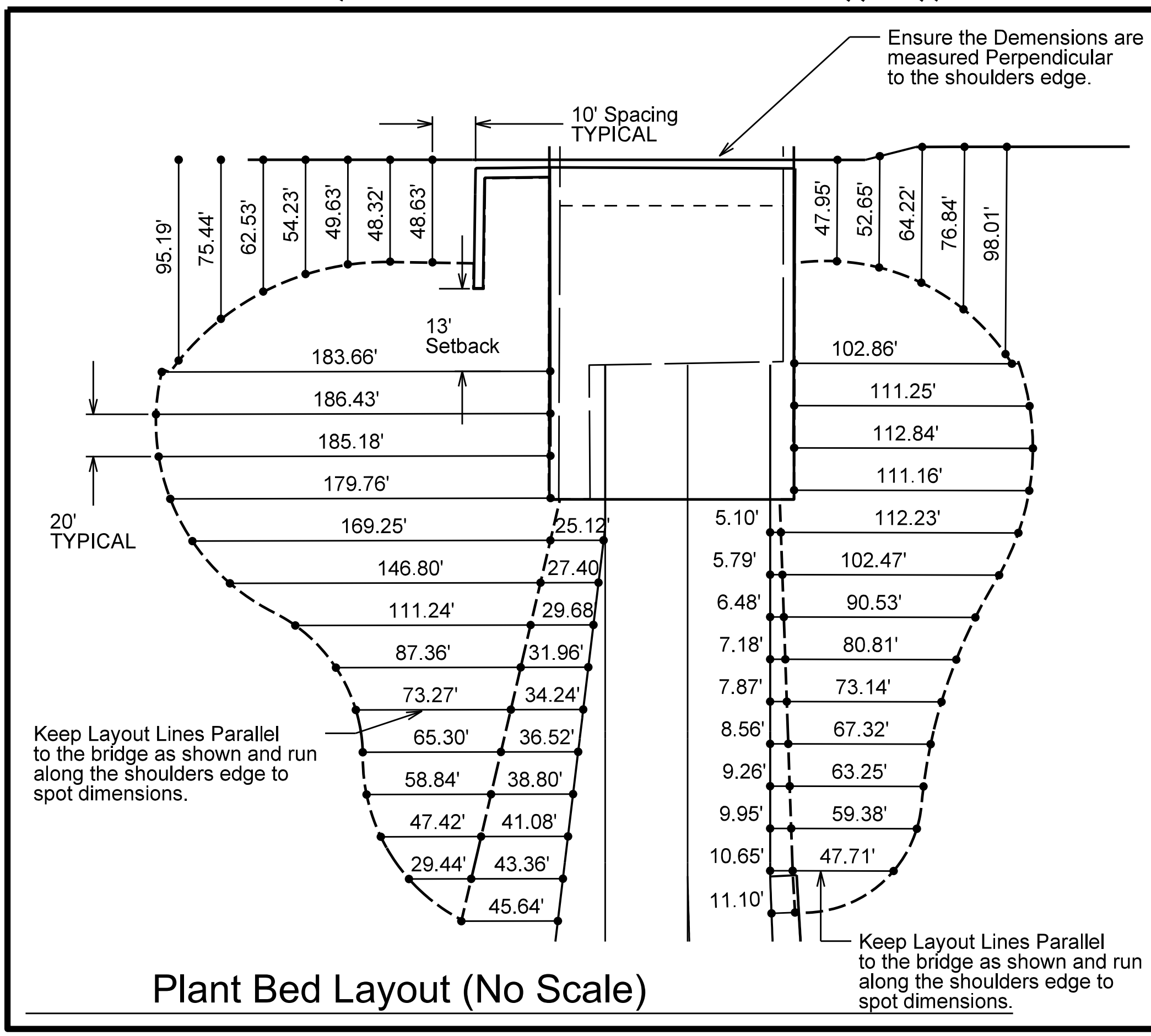
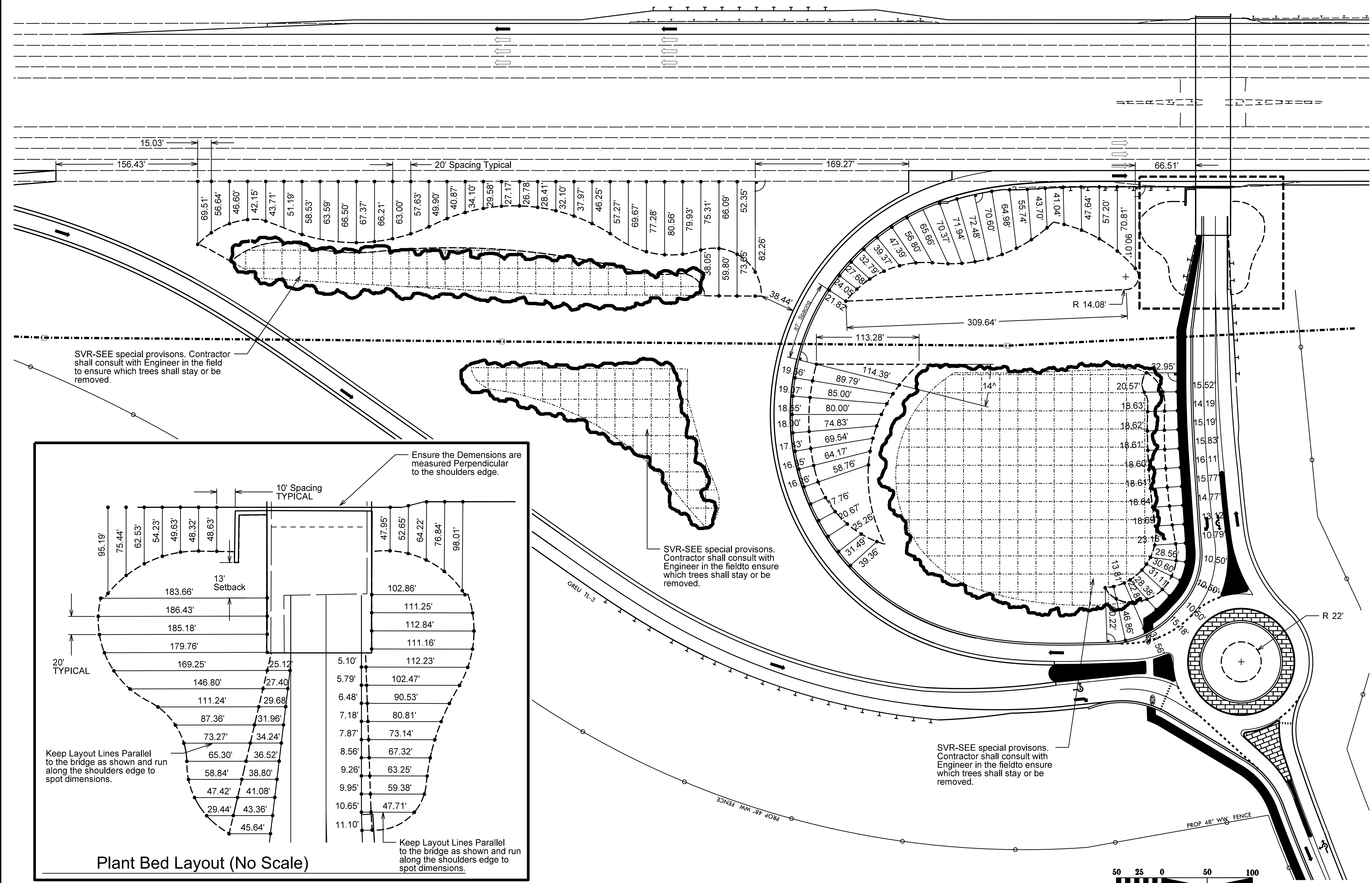
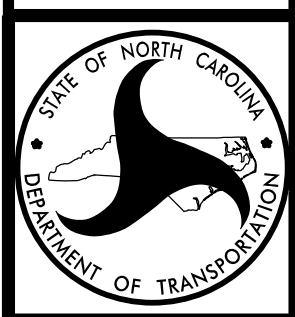
Triangle Expressway Enhancements & Aesthetics  
Wake County  
Morrisville Parkway & NC 540, North Carolina



N.C. Department of Transportation  
Roadside Environmental Unit - Aesthetic Engineering Section  
Landscape Planting Plan

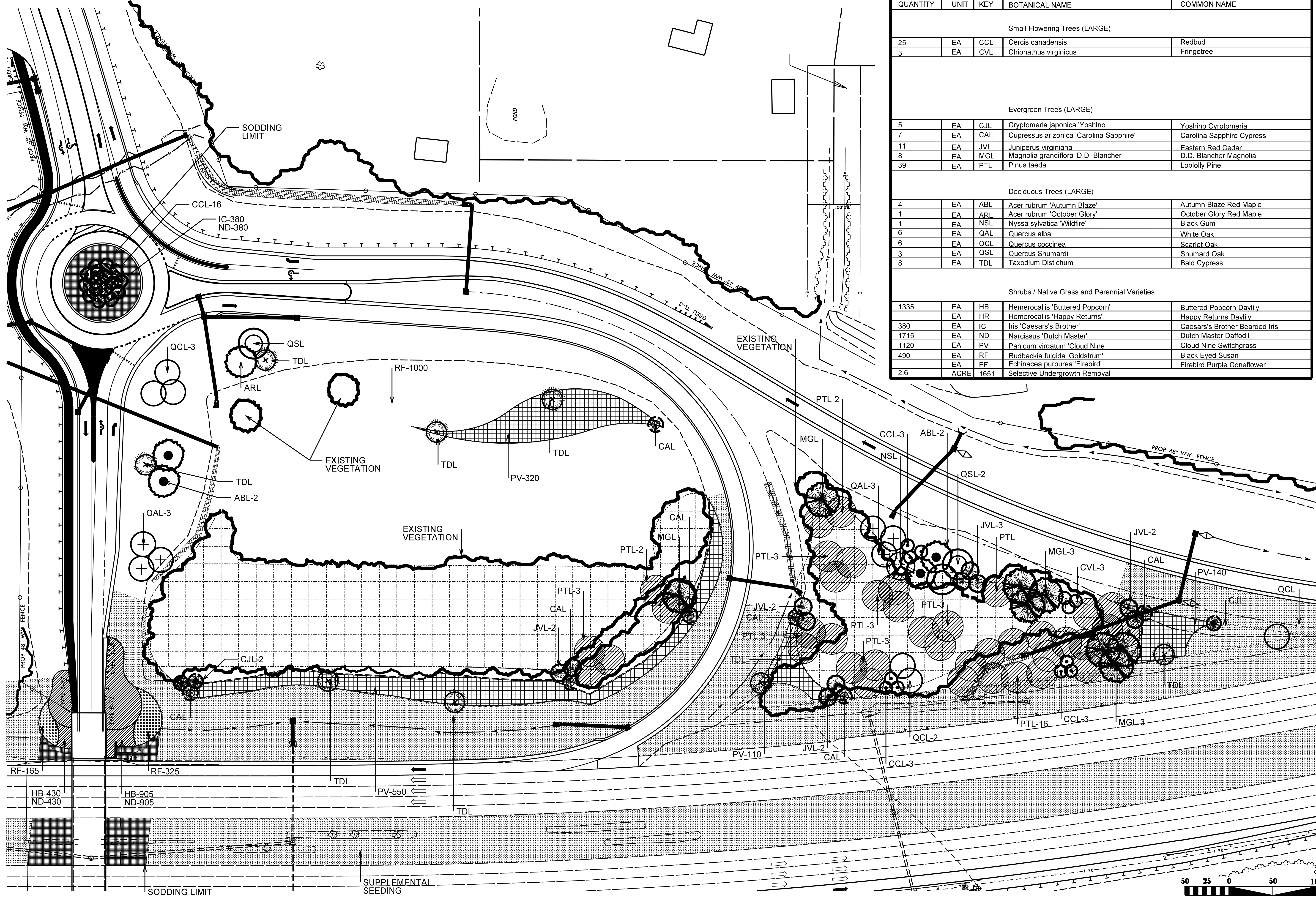


07/09/97





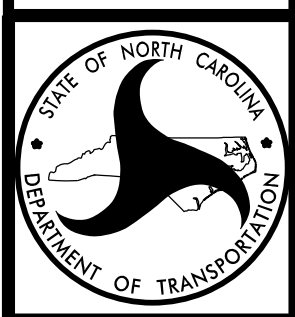
07/09/97



QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME
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Evergreen Trees (LARGE)				
5	EA	CJL	<i>Cryptomeria japonica</i> 'Yoshino'	Yoshino Cryptomeria
7	EA	CAL	<i>Cupressus arizonica</i> 'Carolina Sapphire'	Carolina Sapphire Cypress
11	EA	JVL	<i>Juniperus virginiana</i>	Eastern Red Cedar
8	EA	MGL	<i>Magnolia grandiflora</i> 'D.D. Blancher'	D.D. Blancher Magnolia
39	EA	PTL	<i>Pinus taeda</i>	Loblolly Pine
Deciduous Trees (LARGE)				
4	EA	ABL	<i>Acer rubrum</i> 'Autumn Blaze'	Autumn Blaze Red Maple
1	EA	ARL	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple
1	EA	NSL	<i>Nyssa sylvatica</i> 'Wildfire'	Black Gum
6	EA	QAL	<i>Quercus alba</i>	White Oak
6	EA	QCL	<i>Quercus coccinea</i>	Scarlet Oak
3	EA	QSL	<i>Quercus shumardii</i>	Shumard Oak
8	EA	TDL	<i>Taxodium distichum</i>	Bald Cypress
Shrubs / Native Grass and Perennial Varieties				
1335	EA	HB	<i>Hemerocallis</i> 'Buttered Popcorn'	Buttered Popcorn Daylily
	EA	HR	<i>Hemerocallis</i> 'Happy Returns'	Happy Returns Daylily
380	EA	IC	<i>Iris</i> 'Caesars's Brother'	Caesars's Brother Bearded Iris
1715	EA	ND	<i>Narcissus</i> 'Dutch Master'	Dutch Master Daffodil
1120	EA	PV	<i>Panicum virgatum</i> 'Cloud Nine'	Cloud Nine Switchgrass
490	EA	RF	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan
	EA	EF	<i>Echinacea purpurea</i> 'Firebird'	Firebird Purple Coneflower
2.6	ACRE	1651	Selective Undergrowth Removal	

SHEET NO.  
L4  
PROJECT REF. NO.  
U-5315 MOPAR TRI

Triangle Expressway Enhancements & Aesthetics  
Wake County  
Morrisville Parkway & NC 540, North Carolina

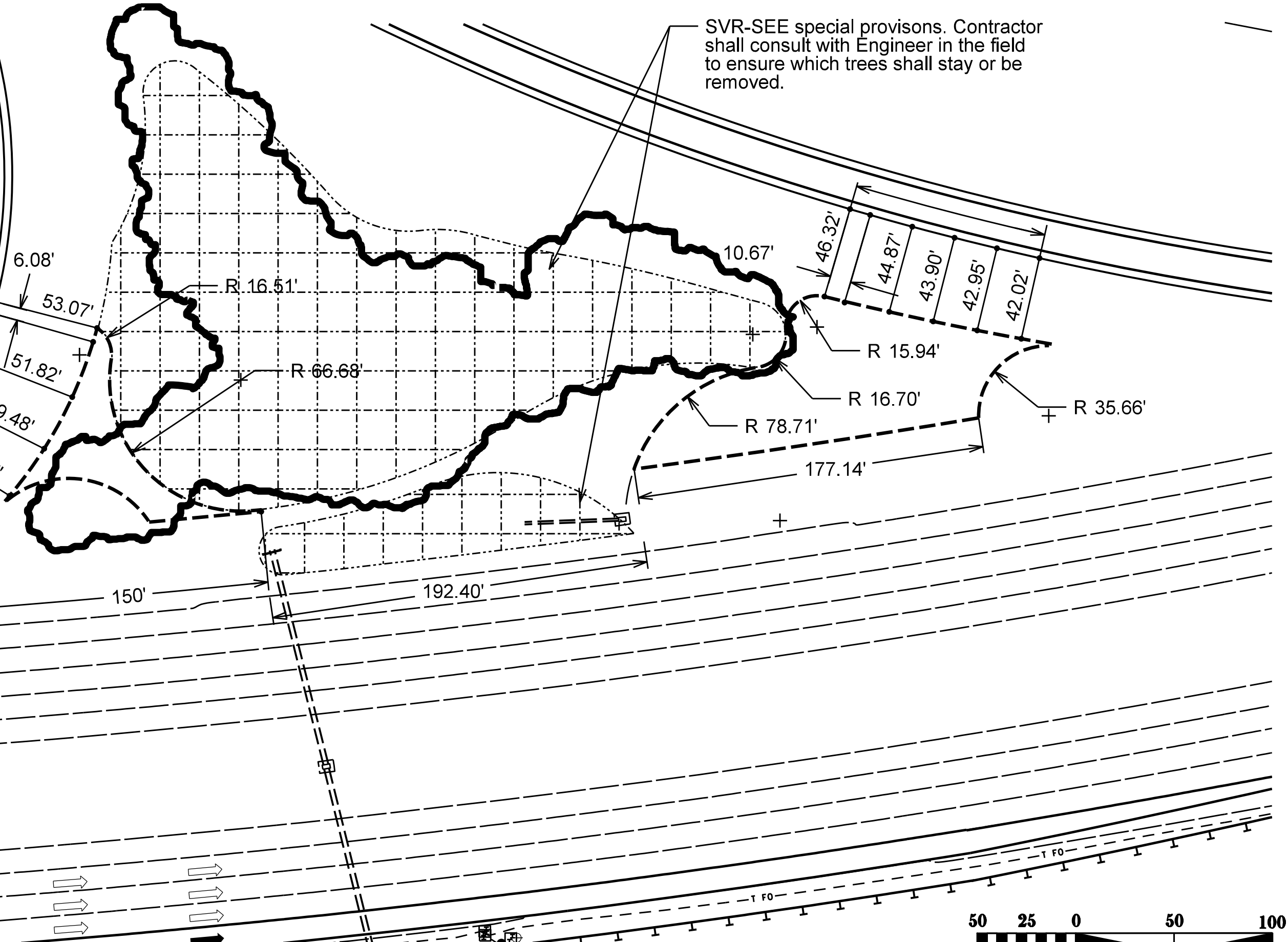
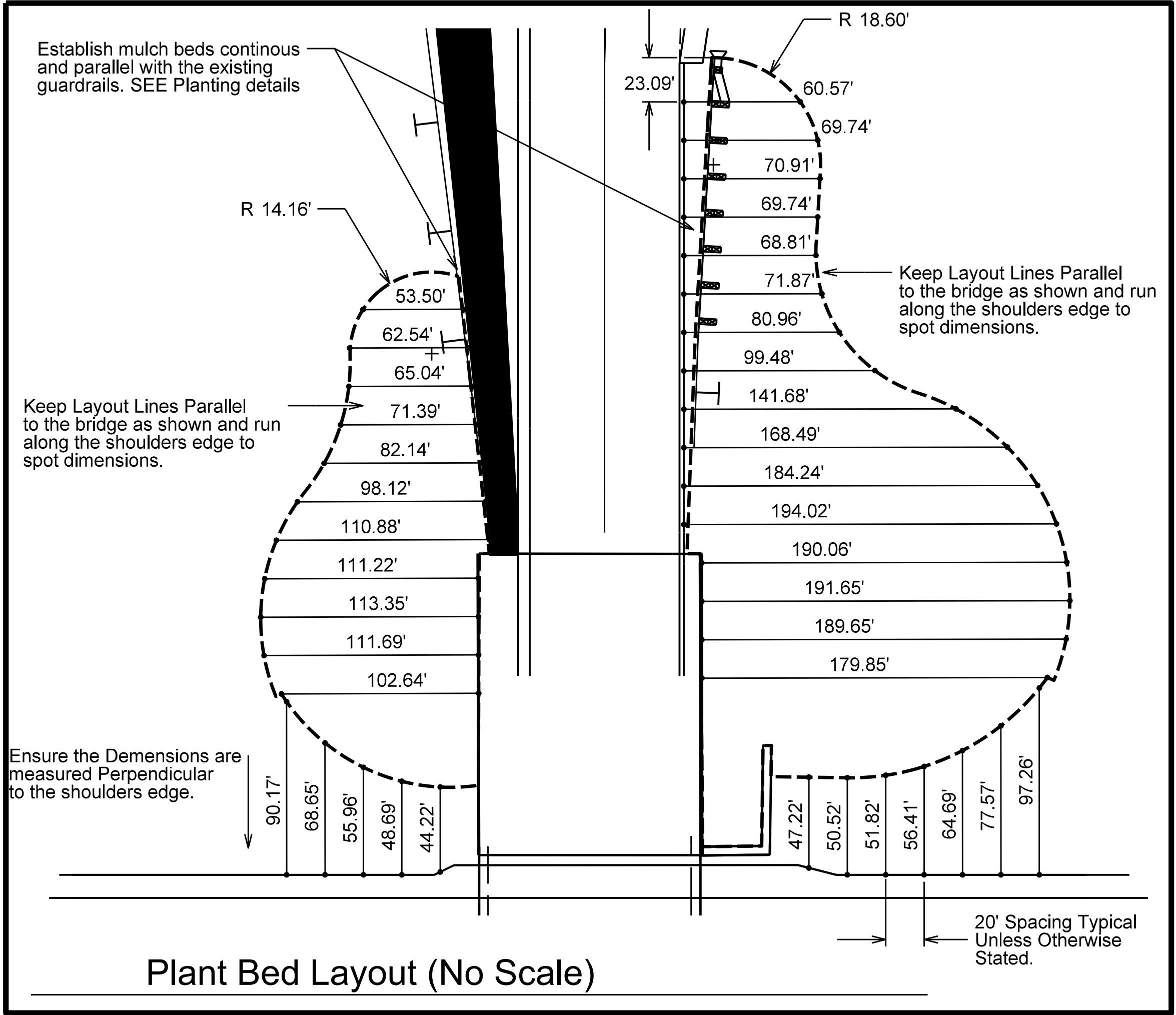
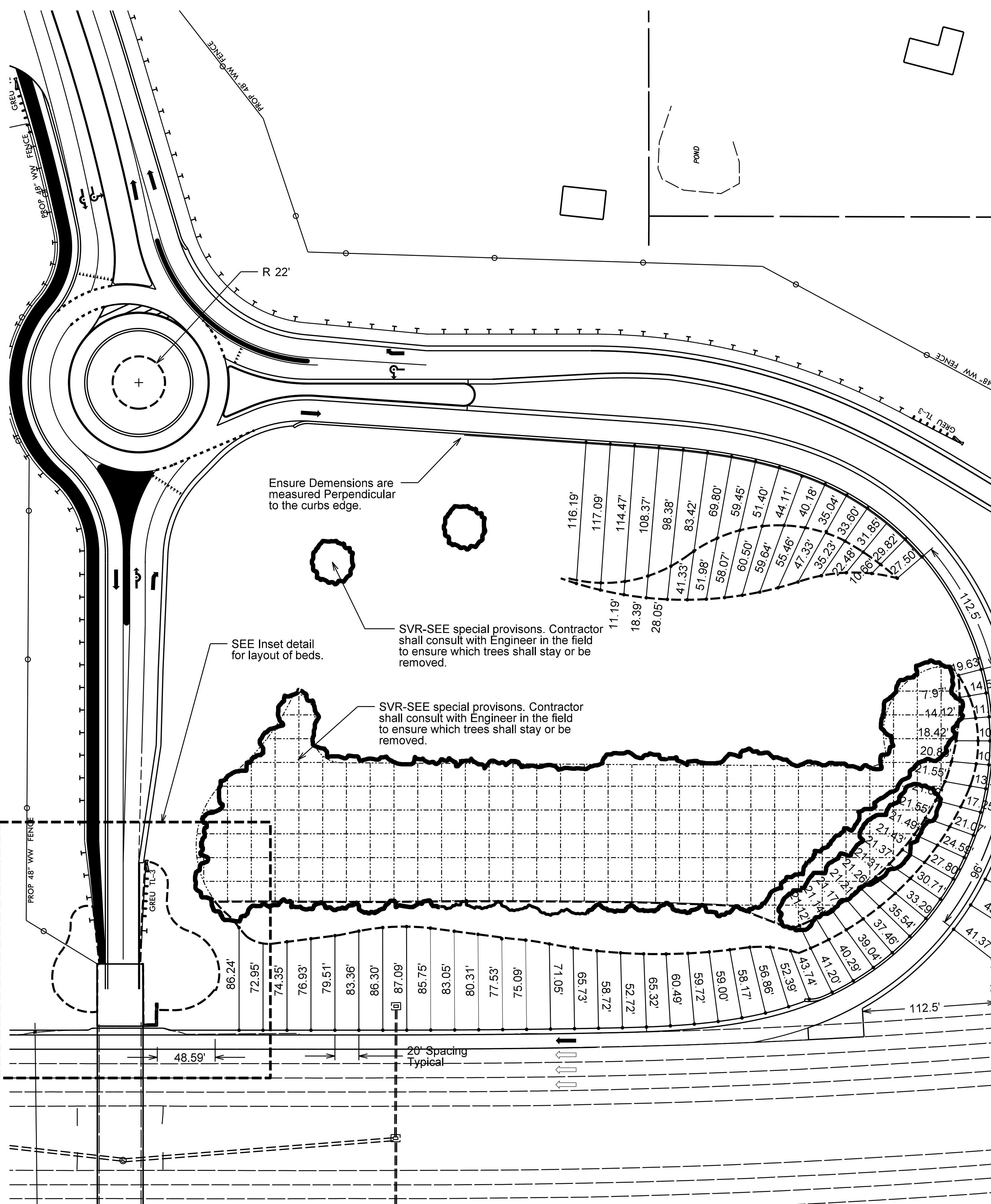


N.C. Department of Transportation  
Roadside Environmental Unit - Aesthetic Engineering Section  
Landscape Planting Plan

L4

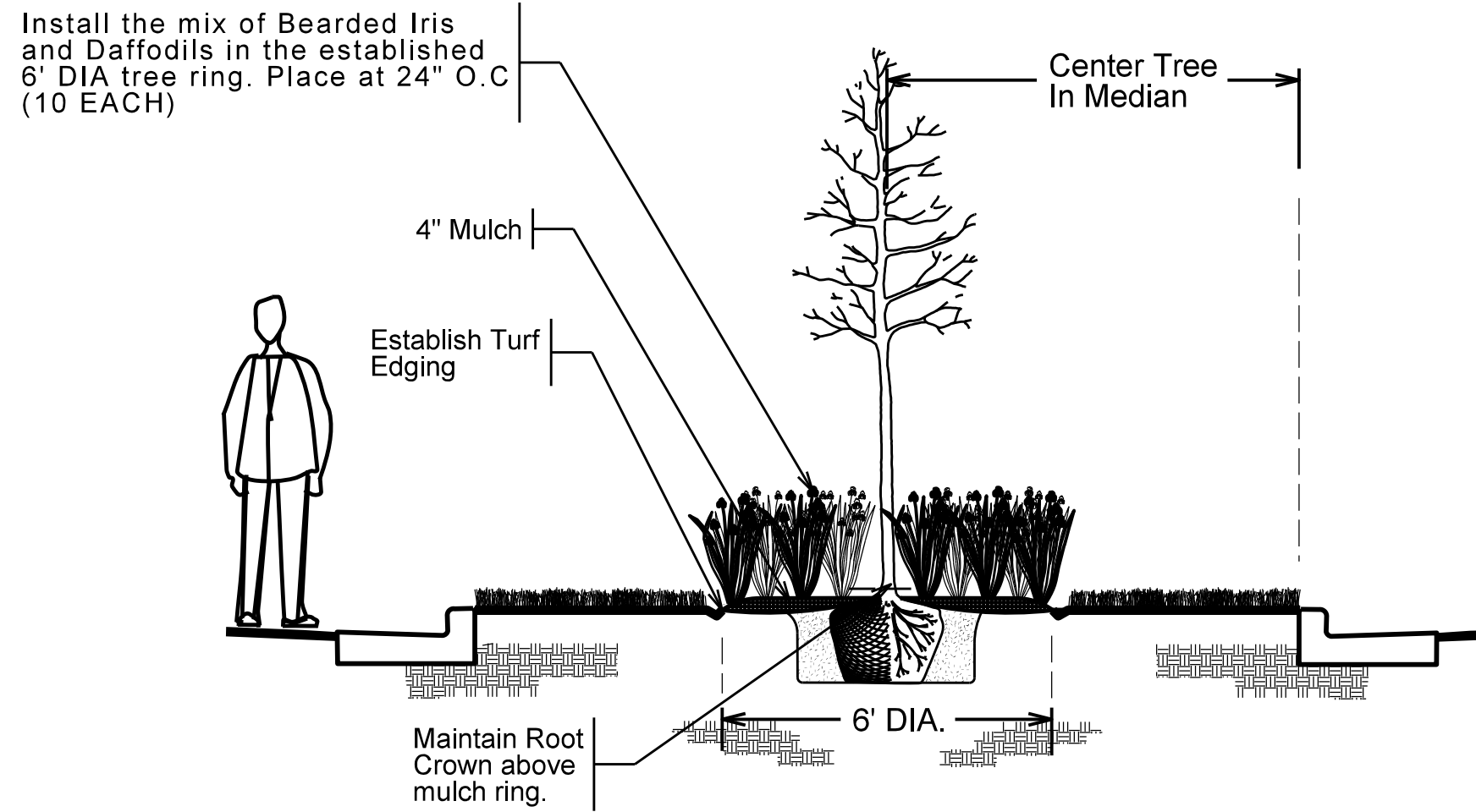


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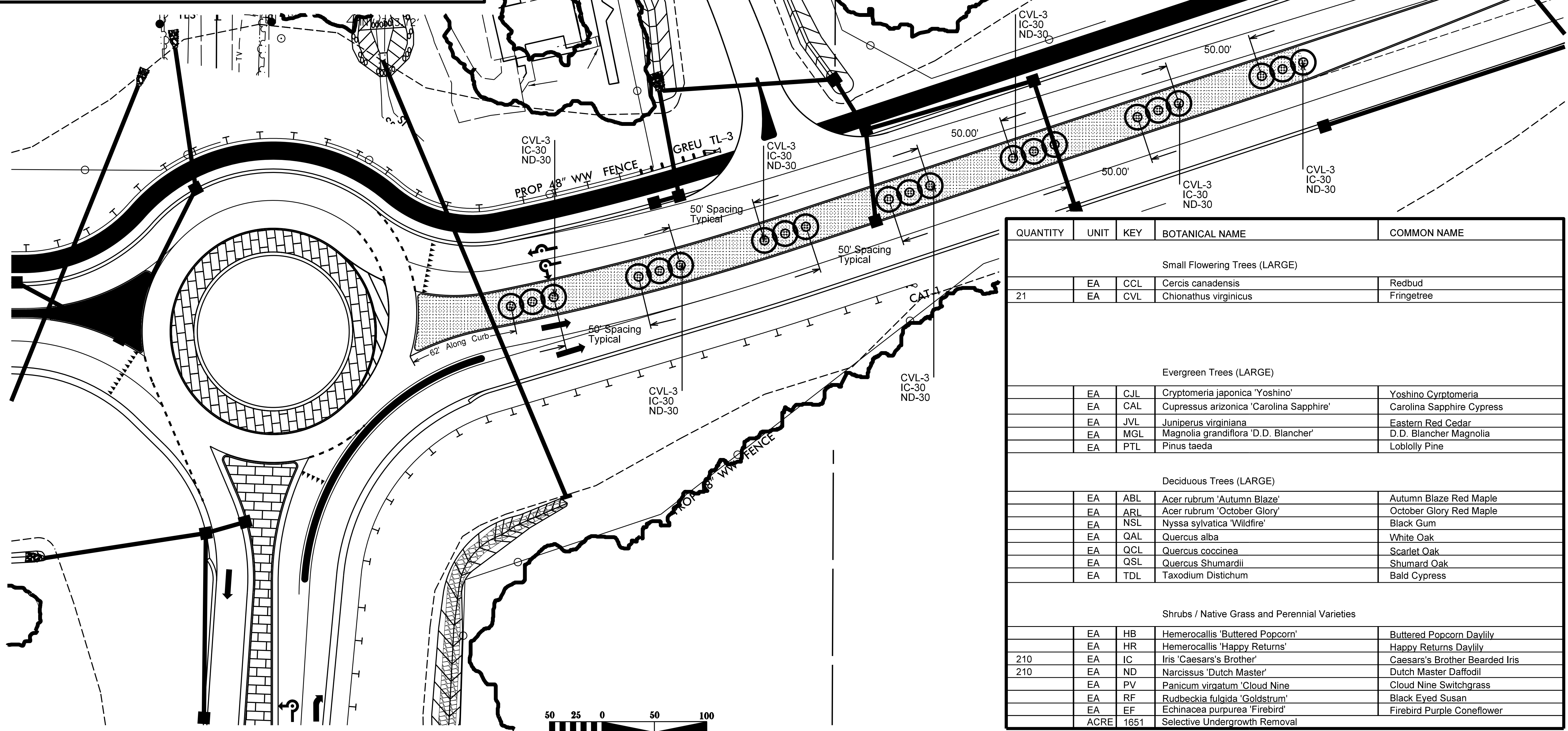
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Tree Ring Plantings @ Median & Toll Plaza

No Scale



QUANTITY	UNIT	KEY	BOTANICAL NAME	COMMON NAME
Small Flowering Trees (LARGE)				
21	EA	CCL	<i>Cercis canadensis</i>	Redbud
	EA	CVL	<i>Chionathus virginicus</i>	Fringetree
Evergreen Trees (LARGE)				
	EA	CJL	<i>Cryptomeria japonica</i> 'Yoshino'	Yoshino Cryptomeria
	EA	CAL	<i>Cupressus arizonica</i> 'Carolina Sapphire'	Carolina Sapphire Cypress
	EA	JVL	<i>Juniperus virginiana</i>	Eastern Red Cedar
	EA	MGL	<i>Magnolia grandiflora</i> 'D.D. Blancher'	D.D. Blancher Magnolia
	EA	PTL	<i>Pinus taeda</i>	Loblolly Pine
Deciduous Trees (LARGE)				
	EA	ABL	<i>Acer rubrum</i> 'Autumn Blaze'	Autumn Blaze Red Maple
	EA	ARL	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple
	EA	NSL	<i>Nyssa sylvatica</i> 'Wildfire'	Black Gum
	EA	QAL	<i>Quercus alba</i>	White Oak
	EA	QCL	<i>Quercus coccinea</i>	Scarlet Oak
	EA	QSL	<i>Quercus shumardii</i>	Shumard Oak
	EA	TDL	<i>Taxodium distichum</i>	Bald Cypress
Shrubs / Native Grass and Perennial Varieties				
	EA	HB	<i>Hemerocallis</i> 'Buttered Popcorn'	Buttered Popcorn Daylily
	EA	HR	<i>Hemerocallis</i> 'Happy Returns'	Happy Returns Daylily
210	EA	IC	<i>Iris</i> 'Caesars's Brother'	Caesars's Brother Bearded Iris
210	EA	ND	<i>Narcissus</i> 'Dutch Master'	Dutch Master Daffodil
	EA	PV	<i>Panicum virgatum</i> 'Cloud Nine'	Cloud Nine Switchgrass
	EA	RF	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan
	EA	EF	<i>Echinacea purpurea</i> 'Firebird'	Firebird Purple Coneflower
	ACRE	1651	Selective Undergrowth Removal	

