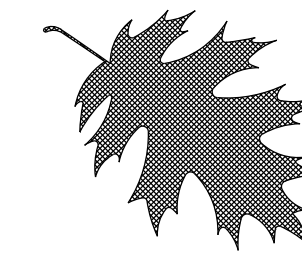
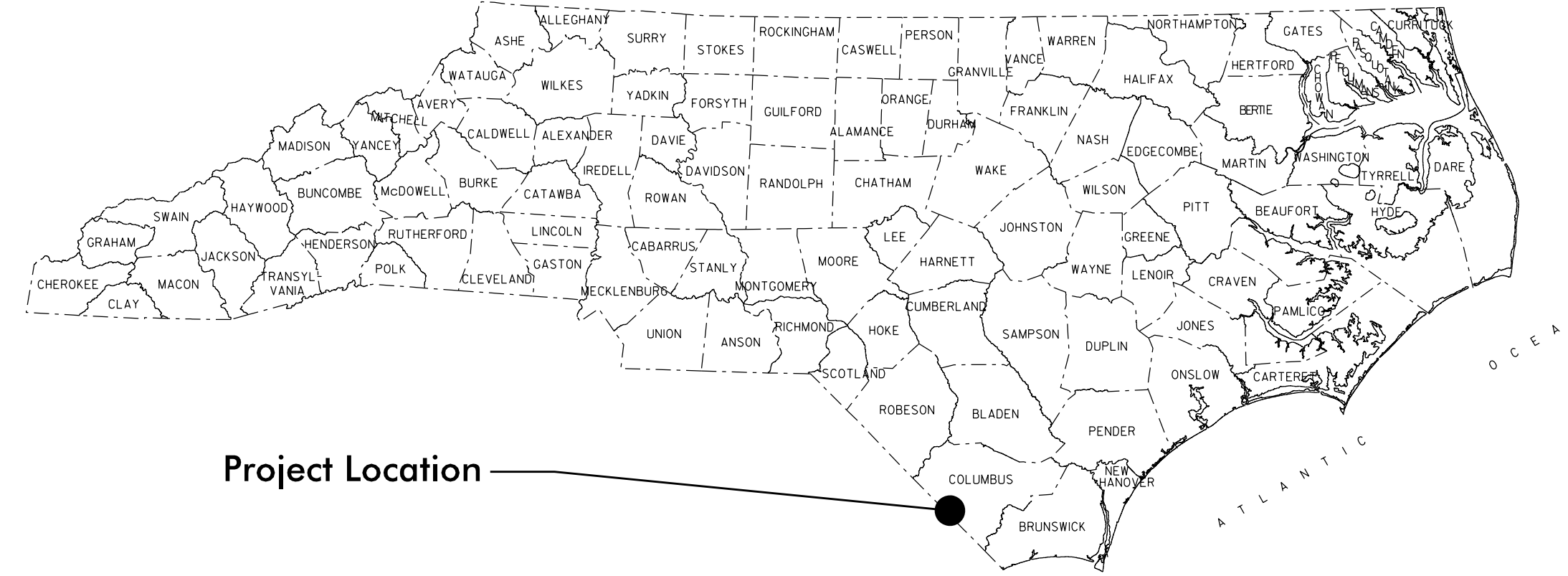
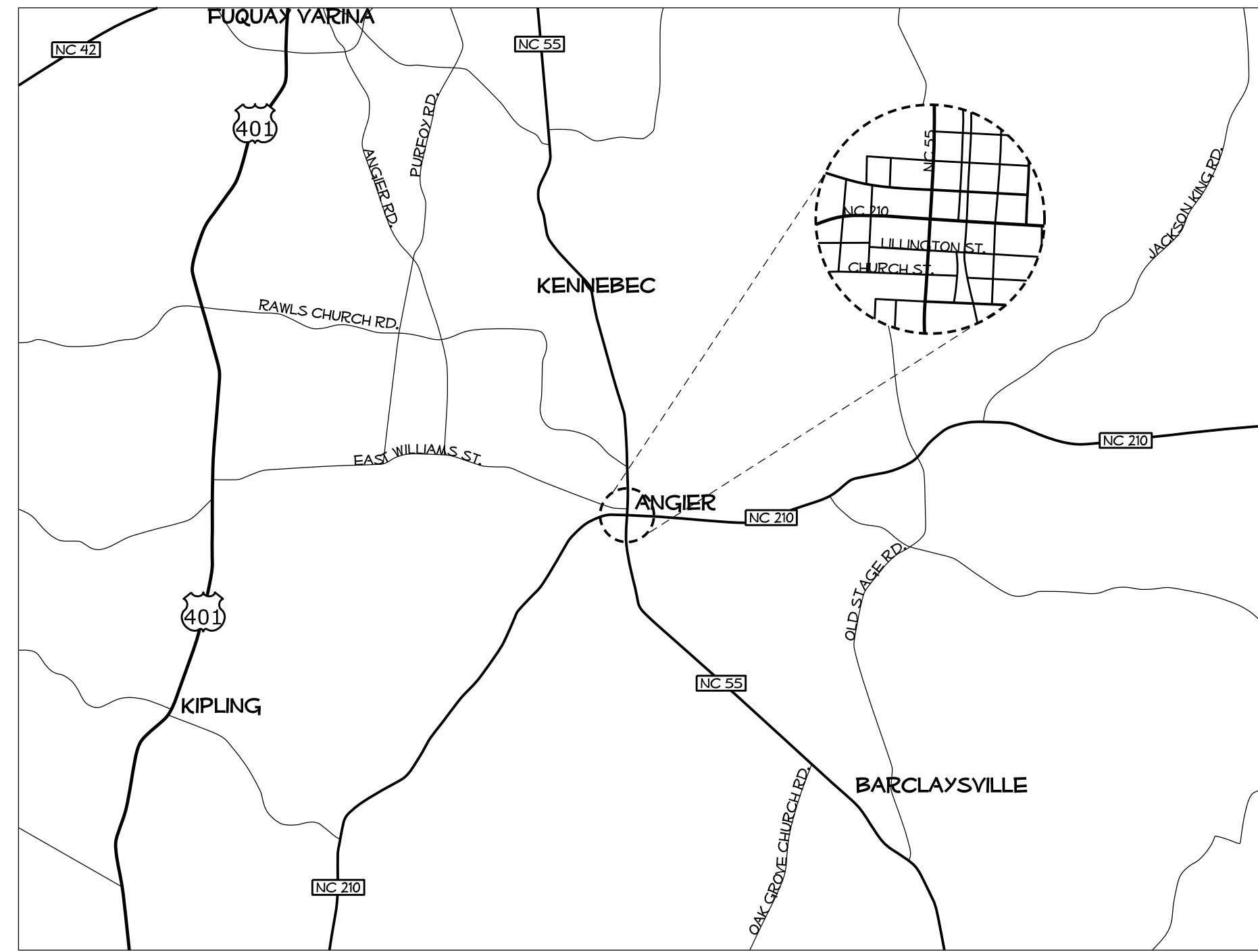


HIGHWAY LANDSCAPE DEVELOPMENT PROJECT



T.I.P. #	STATE PROJECT W.B.S. #	SHEET #	SHEET # TOTAL
-----	46305.1.4	L1	11
FED. PROJ. #	DESCRIPTION		DIVISION
-	Enhancement		6



Project Location

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	-----
Easement Line	-----
Slope Stake Line	-----
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	-----

Summary of Quantities 1 year establishment

DES	SEC	QTY	UNIT	KEY	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	FURNISH	A.S.N.S.	REMARKS
Shrubs & Grasses											
L	1670	43	ea	BC	<i>Berberis thunbergii</i> var. <i>atropurpurea</i> 'Crimson Pygmy'	Crimson Pygmy Dwarf Japanese Baeberry	12-18"		#3 Cont.	2.2.2	3' O.C.
L	1670	31	ea	CH	<i>Chamaecyparis pisifera</i> 'Golden Mop'	Gold Mop Threadleaf False Cypress	18-24"		#3 Cont.	3.2.3	4' O.C.
L	1670	66	ea	IS	<i>Ilex crenata</i> 'Soft Touch'	Soft Touch Holly	18-24"		#3 Cont.	4.2.2	3' O.C.
L	1670	70	ea	LP	<i>Loropetalum chinense</i> 'Purple Pixie'	Purple Pixie Chinese Fringe Flower	6-12"		#3 Cont.	4.2.3	4' O.C.
L	1670	101	ea	MC	<i>Muhlenbergia capillaris</i>	Pink Muhly Grass	18-24"		#3 Cont.	12.4	3' O.C.
L	1670	77	ea	SG	<i>Spiraea japonica</i> 'Goldmound'	Goldmound Spirea	18-24"		#3 Cont.	2.2.2	4' O.C.
L	1670	52	SY	EO	<i>Eremochloa ophiuroides</i> (+10%)	Centipede Grass	n/a		n/a		As Shown
Annuals											
L	1670	177	ea	CC	<i>Catharanthus roseus</i> 'Cora™ White'	Cora™ White Vinca			Flat of 18; (1801)		12" O.C.
L	1670	232	ea	CD	<i>Celosia plumosa</i> 'Fresh Look Gold'	Fresh Look Gold Cockscomb			Flat of 18; (1801)		10" O.C.
L	1670	31	ea	VP	<i>Viola x wittrockiana</i> 'Penny Orchid Frost'	Penny Orchid Frost Pansy			Flat of 18; (1801)		8" O.C.
L	1670	17	ea	VU	<i>Viola x wittrockiana</i> 'Ultima Radiance Pink'	Ultima Radiance Pink Pansy			Flat of 18; (1801)		8" O.C.
Other											
L	1670	152	sayd		Plant Bed Renovation						
L	1670	72	cuyd		Mulch	Triple Shredded Brown Dyed Hardwood Mulch					Depth of 4"
L	1670	12	m/s		Water for Planting						
L	1670	693	sayd		Pre emergence Herbicidal Treatment						
L	1670	693	sayd		Post emergence Herbicidal Treatment						
L	1670	130	LF		Stone Vener Retaining Wall						
L	1670	56	LF		Stone Retaining Wall						
L	1670	1	LS		Irrigation						
L	1670	12.5	cuyd		Top Soil						

INDEX OF L SHEETS:

- L 1.0 - Title Sheet
- L 2.0 - Planting Details
- L 3.0 - Demolition Plan
- L 4.0 - Planting Plan Quad 1
- L 5.0 - Planting Plan Quad 2
- L 6.0 - Planting Plan Quad 3
- L 7.0 - Planting Plan Quad 4
- L 8.0 - Irrigation Plan

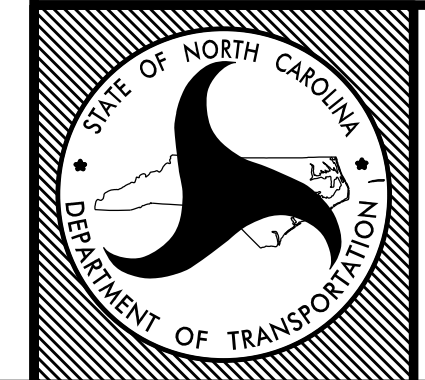
PREPARED BY: KC DATE: 03/2016

REVISIONS

DATE	DESCRIPTION

2014 American Standard for Nursery Stock
 2012 NCDOT STANDARD SPECIFICATIONS
 PREPARED IN THE OFFICE OF:
 NCDOT- ROADSIDE ENVIRONMENTAL UNIT
 LANDSCAPE DESIGN & DEVELOPMENT SECTION
 1557 MAIL SERVICE CENTER
 RALEIGH NC 27699 919-707-2920

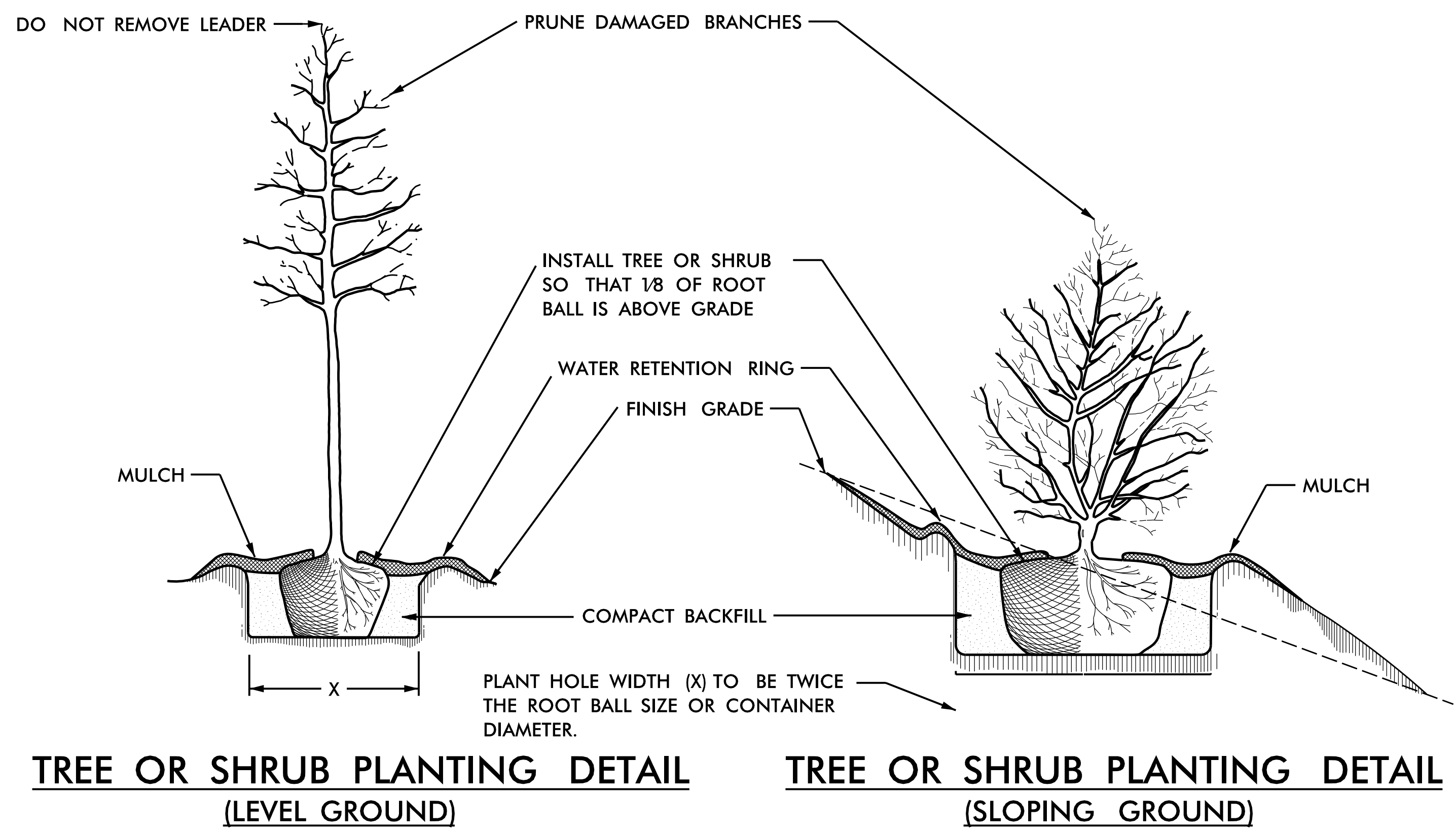
Angier NC 210 & NC 55



STATE OF
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

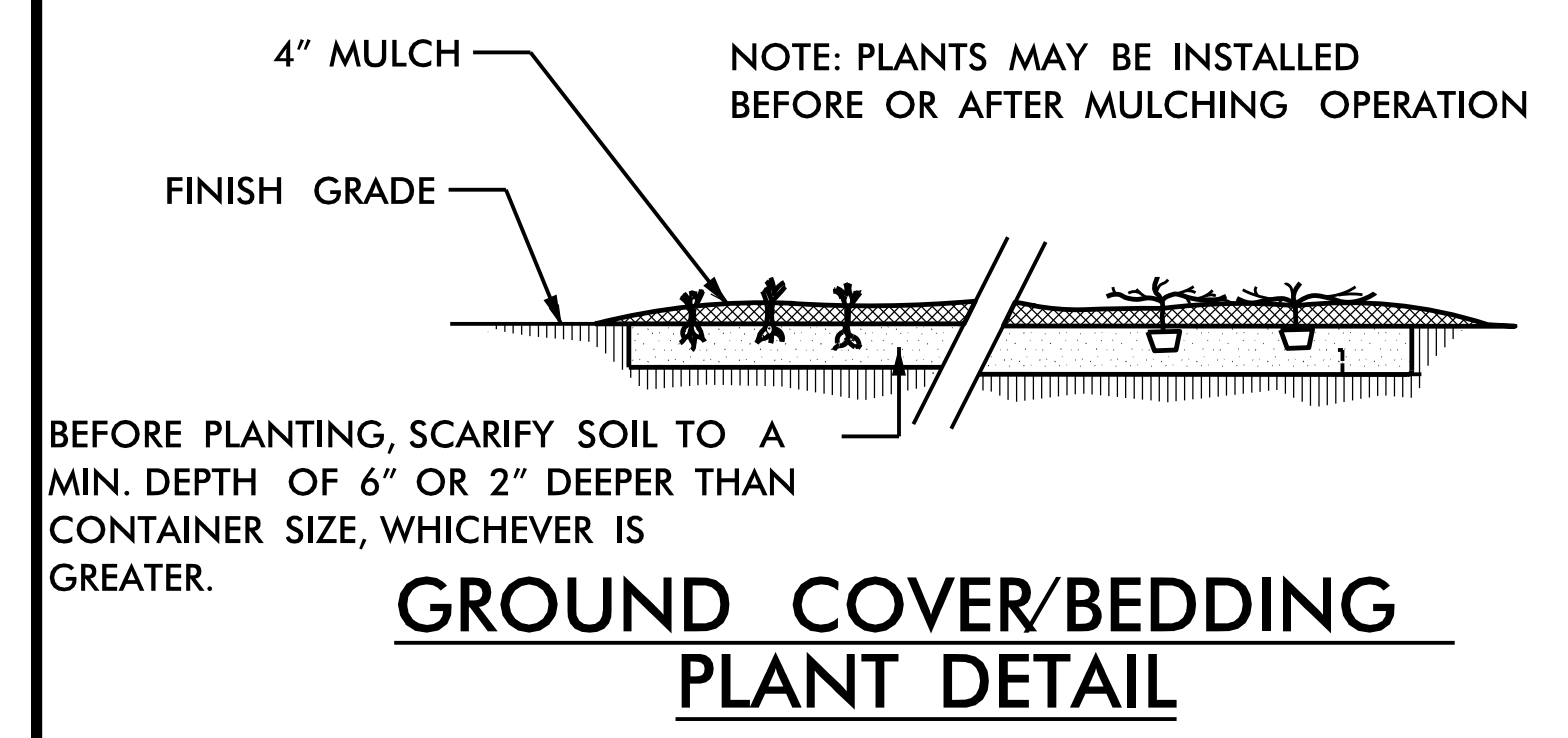
LOCATION: Angier NC 210 & NC 55
 TYPE of WORK: Enhancement
 COUNTY: Harnett County

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$SYSSERNAME\$\$\$\$\$

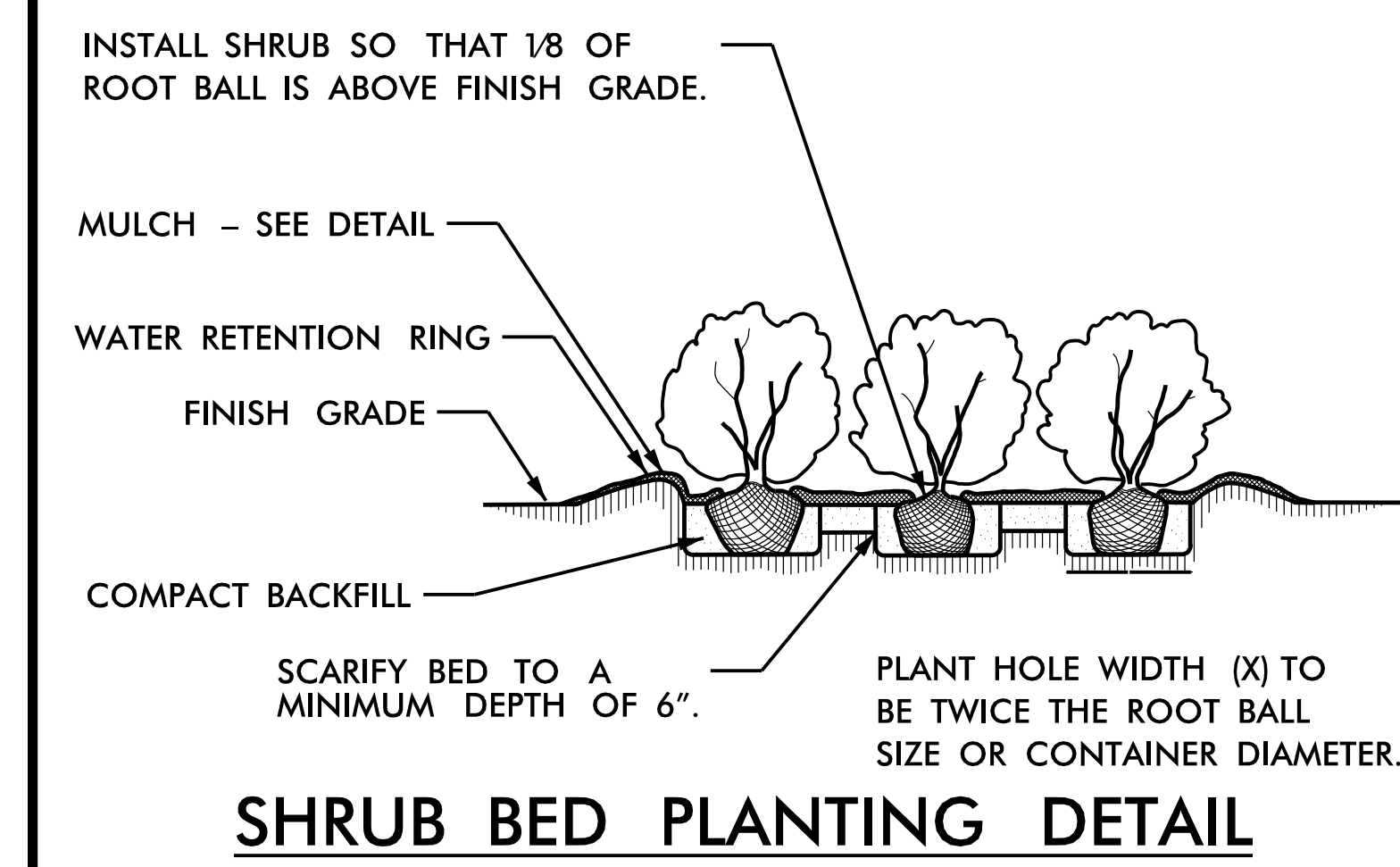


TREE OR SHRUB PLANTING DETAIL
(LEVEL GROUND)

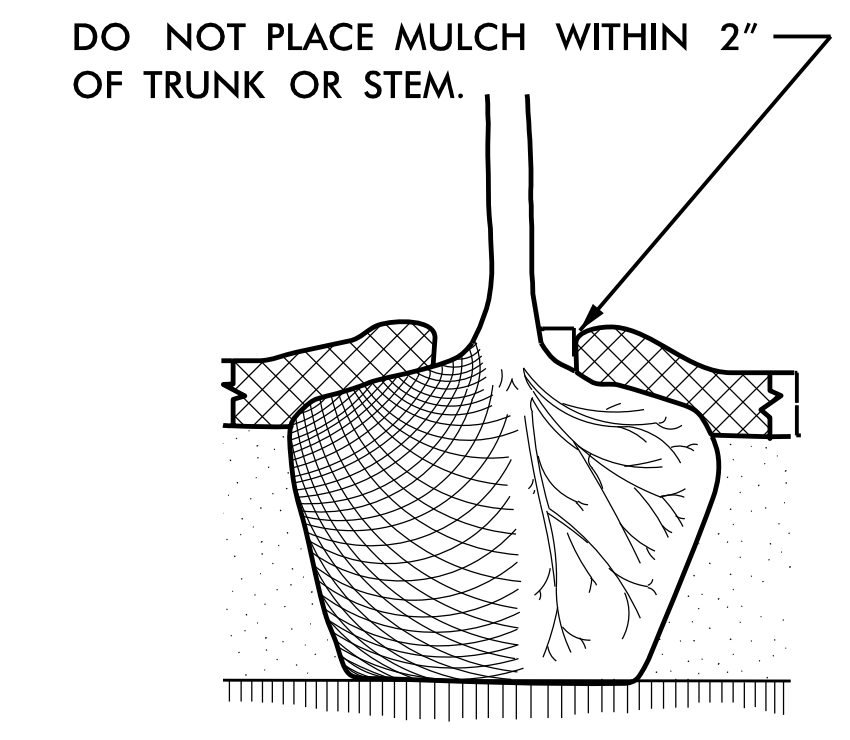
TREE OR SHRUB PLANTING DETAIL
(SLOPING GROUND)



GROUND COVER/BEDDING PLANT DETAIL

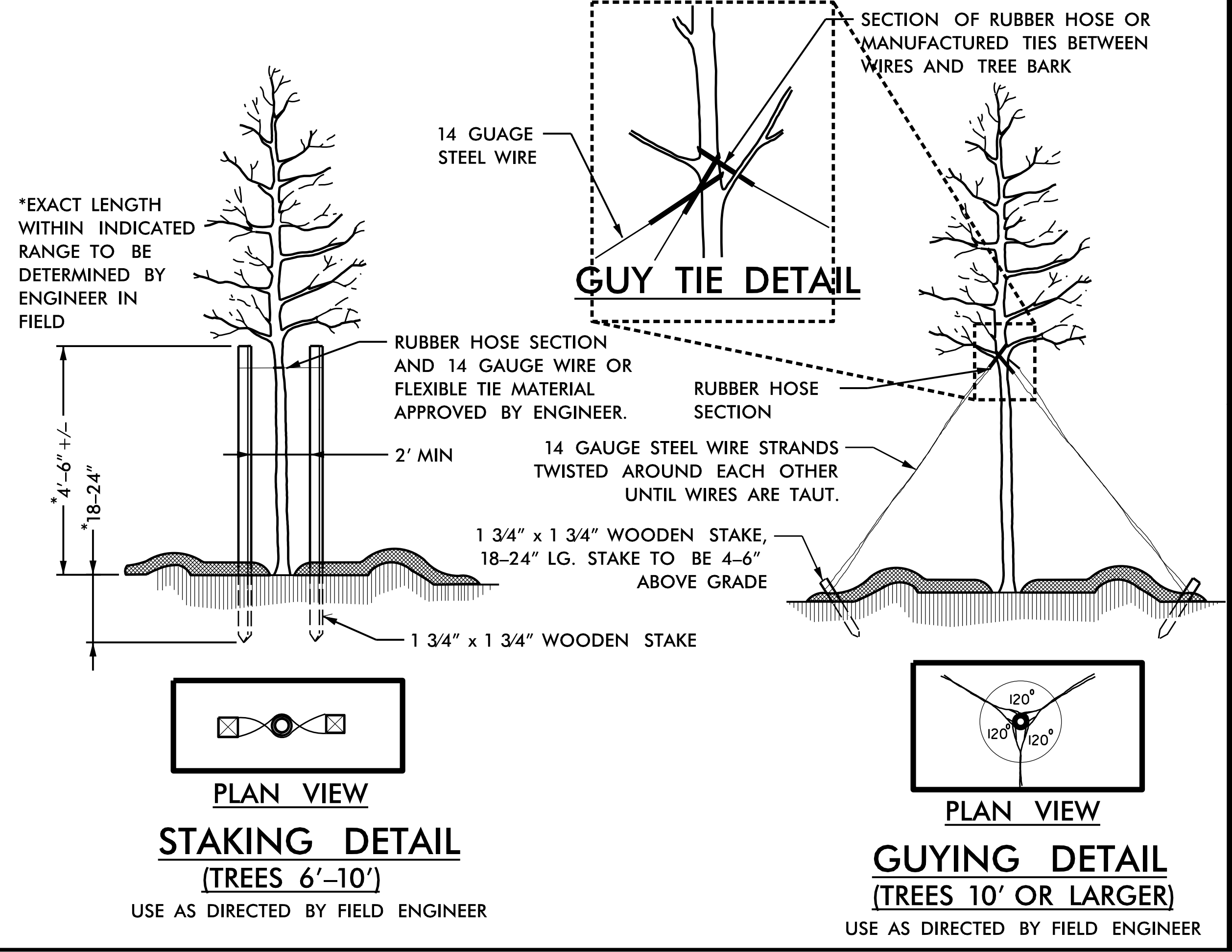


SHRUB BED PLANTING DETAIL



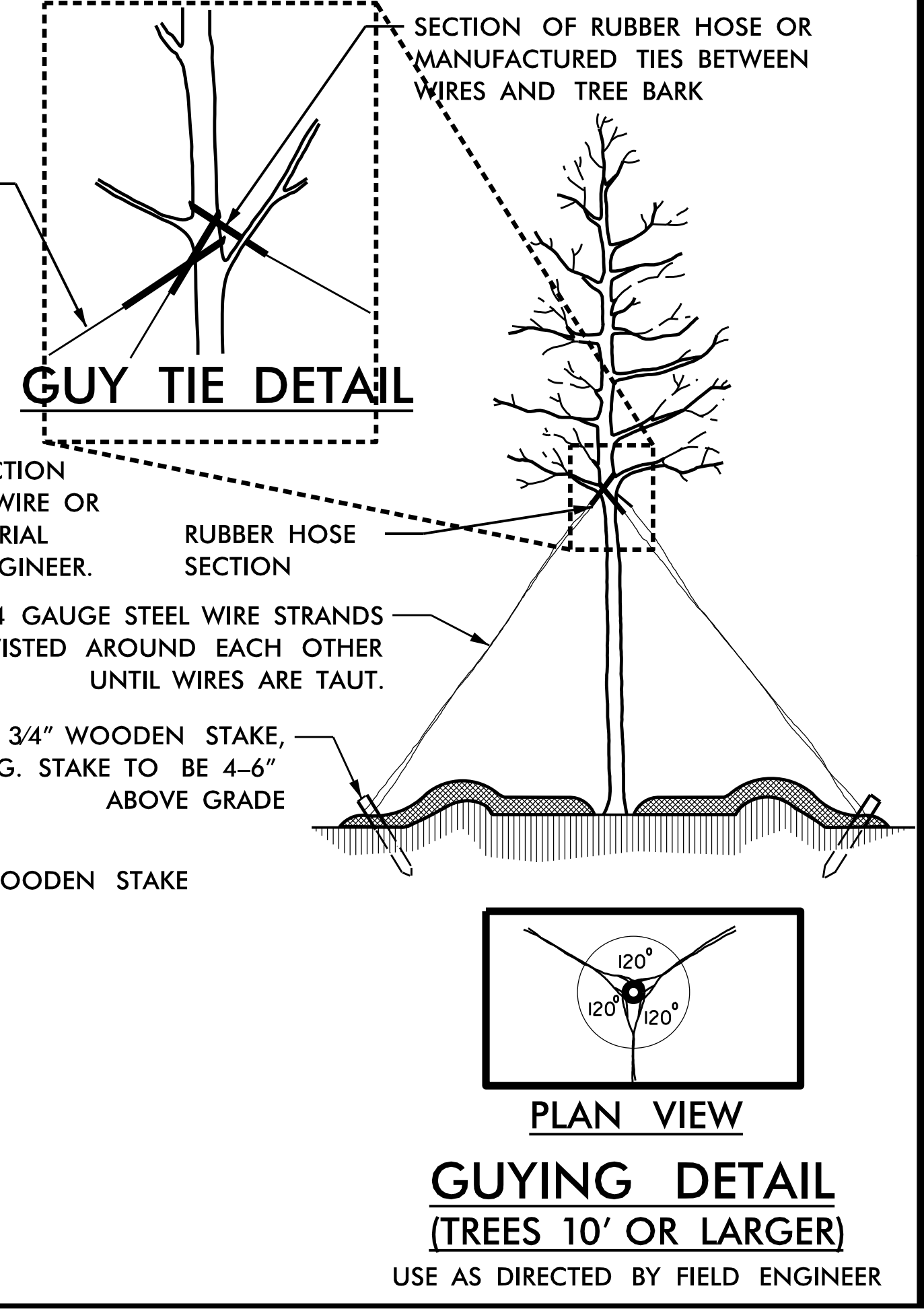
MULCH DETAIL

- NOTES:**
- SCHEDULE FOR PLANT HOLE SIZE: PLANT HOLE WIDTH (X) TO BE TWICE THE ROOT BALL SIZE OR CONTAINER DIAMETER.
 - SEE STANDARD SPECIFICATIONS FOR PLANT BED FUMIGATION AND HERBICIDAL TREATMENT.
 - APPLY FERTILIZER AT PLANTING TIME IN THE FORM OF A SLOW RELEASE PELLET OR TABLET. APPLY AT RATE RECOMMENDED BY MANUFACTURER. BOTH RATE AND FORMULATION MUST BE APPROVED BY FIELD ENGINEER PRIOR TO APPLICATION.
 - REMOVE WIRE BASKET AND FOLD BURLAP BACK FROM TOP OF ROOT BALL BEFORE BACKFILLING IS COMPLETE.
 - ALL PRUNING TO FOLLOW STANDARD ARBORICULTURAL PRACTICES AS SPECIFIED BY INTERNATIONAL SOCIETY OF ARBORICULTURE.
 - DO NOT ATTEMPT TO STRAIGHTEN A TREE THAT HAS BEEN PLANTED AT AN ANGLE WITH THE USE OF STAKING OR GUYING. DIG TREE AND REPLANT TO UPRIGHT POSITION.



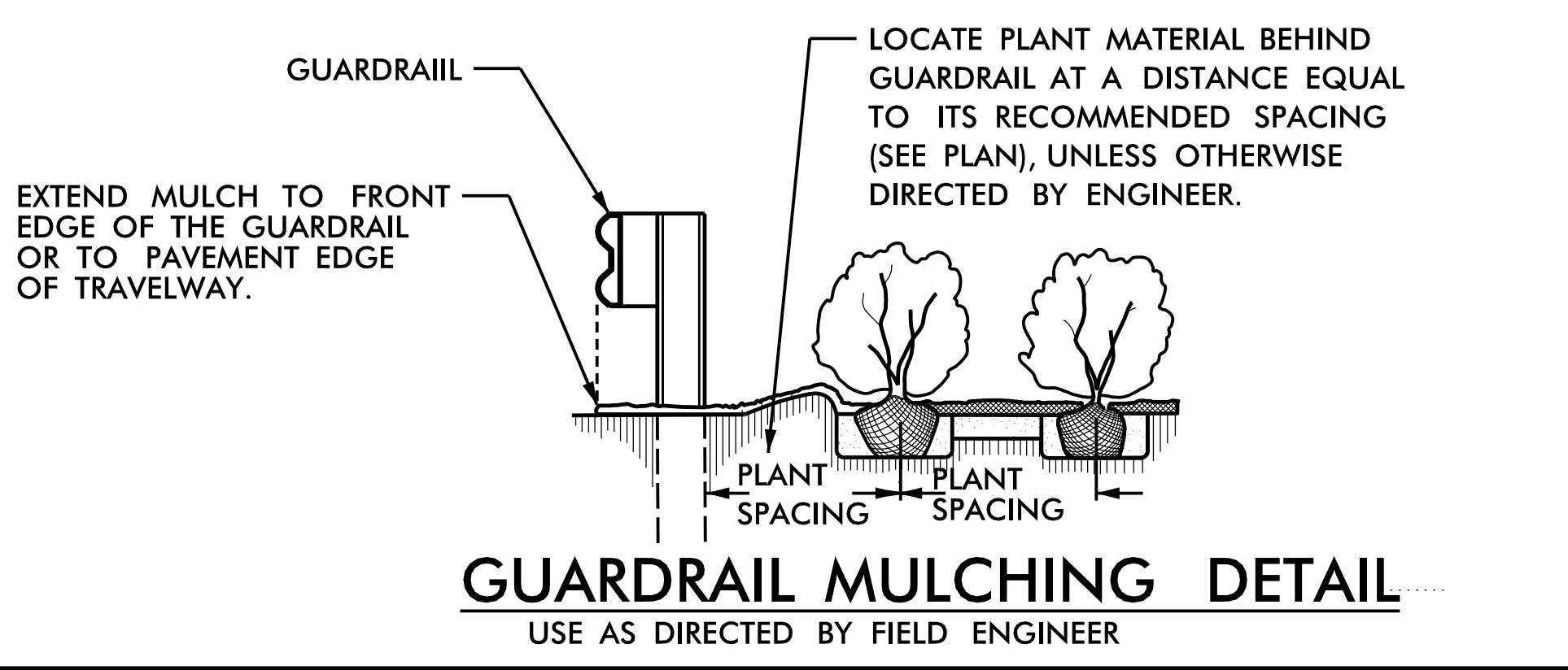
PLAN VIEW
STAKING DETAIL
(TREES 6'-10')

USE AS DIRECTED BY FIELD ENGINEER

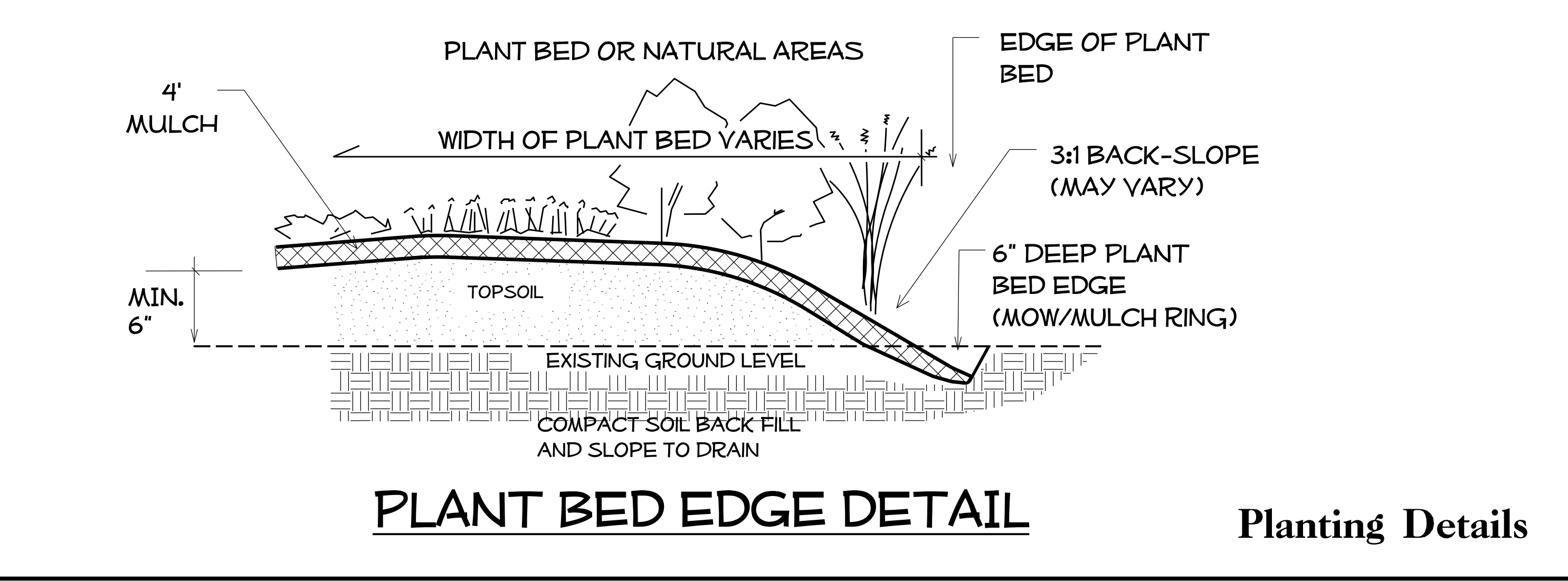


PLAN VIEW
GUYING DETAIL
(TREES 10' OR LARGER)

USE AS DIRECTED BY FIELD ENGINEER



GUARDRAIL MULCHING DETAIL
USE AS DIRECTED BY FIELD ENGINEER



PLANT BED EDGE DETAIL

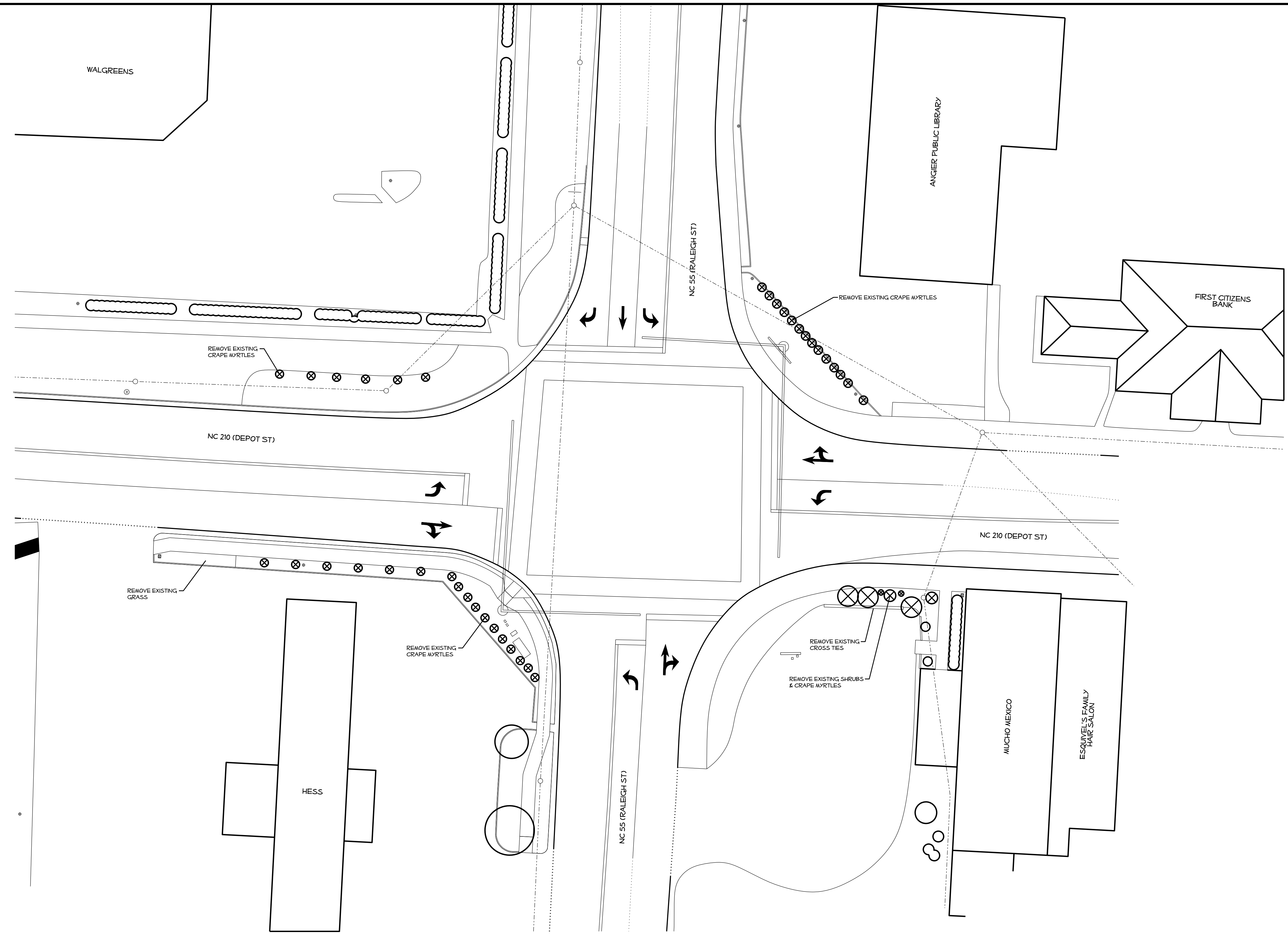
Planting Details

North Carolina Department of Transportation
 Roadside Environmental Unit
 Landscape Design & Development Section

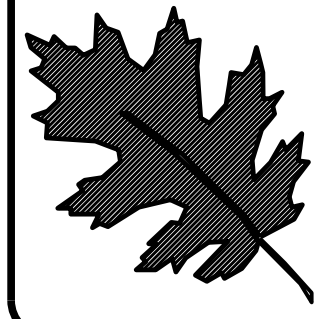
PROJECT TITLE:
Angier NC 210 & NC 55
 Harnett County

Plans Drawn By:
Kyle Cooper
 Scale:
AS NOTED
 Date:
03 / 18 / 16
 Sheet Description

WBS #
 46305.1.4
 Sheet #
 1-2



SYSTEMS
DESIGN
SERVICES



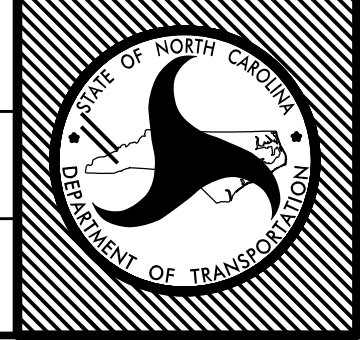
NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
PH: 919-707-2935 FAX: 919-715-2554
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

ANGIER NC 210 & NC 55
HARNETT COUNTY
WBS #: 46305.1.4

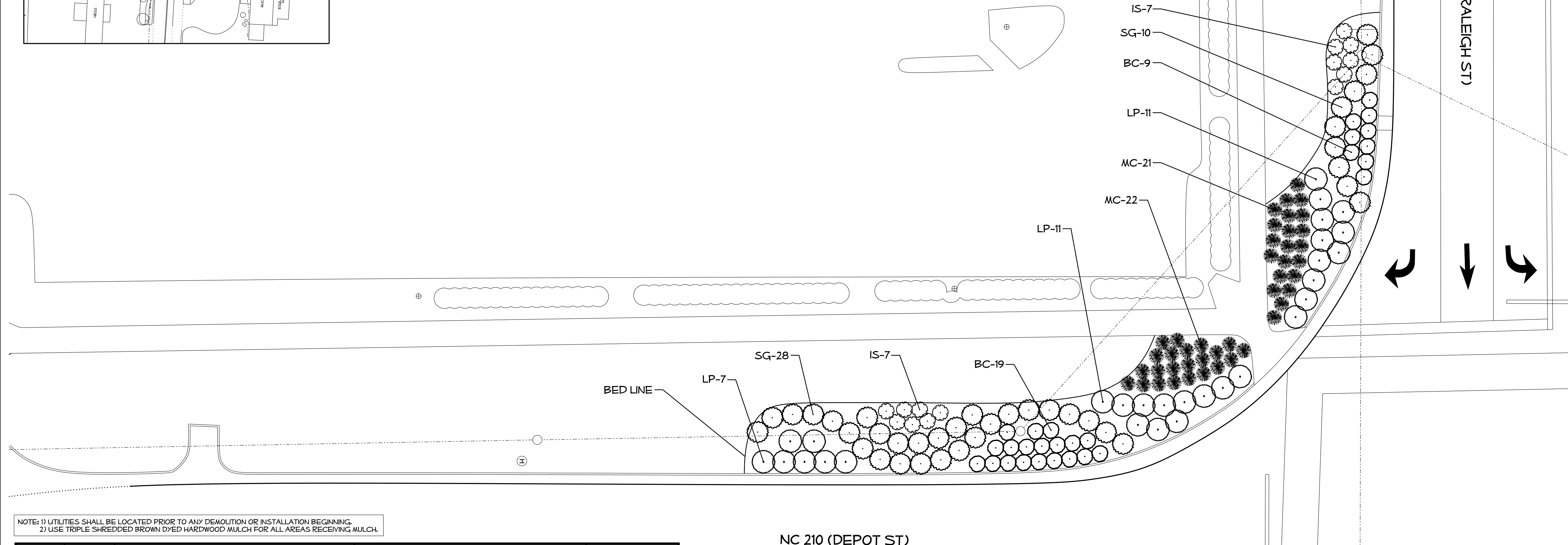
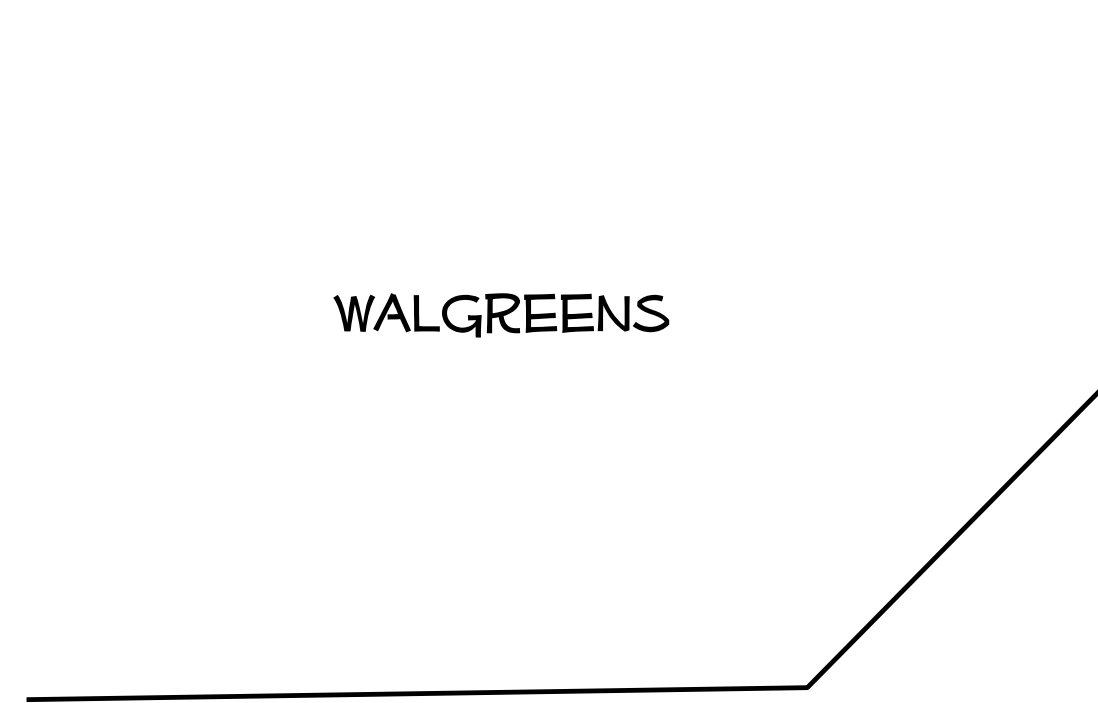
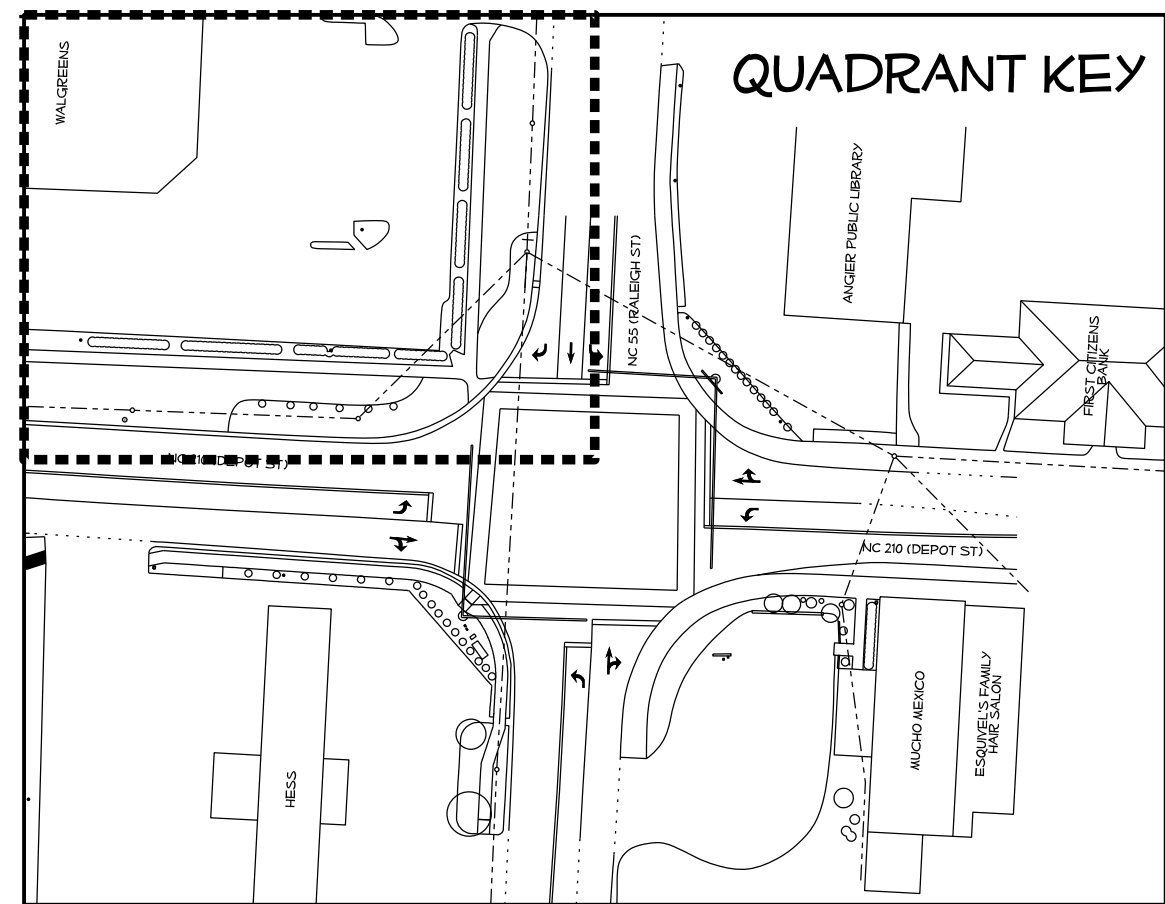
REV. DESIGNER
Kyle Cooper

PREL. DESIGN DATE:	FEB 2016
CHECKED BY & DATE:	
FINAL DESIGN DATE:	MARCH 18, 2016

DEMOLITION PLAN
LANDSCAPE PLAN SHEET



T.I.P. #	----
WBS #	46305.1.4
FED I.D. #	
SHEET NO:	L-3
TOTAL SHEET NO:	11

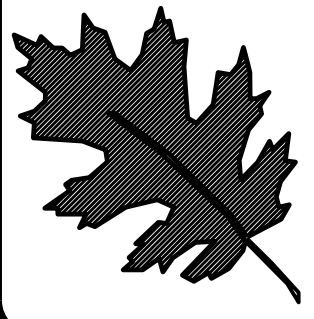


NOTE: 1) UTILITIES SHALL BE LOCATED PRIOR TO ANY DEMOLITION OR INSTALLATION BEGINNING.
 2) USE TRIPLE SHREDDED BROWN DYED HARDWOOD MULCH FOR ALL AREAS RECEIVING MULCH.

QTY	KEY	BOTANICAL NAME	COMMON NAME	SPACING
28	BC	<i>BERBERIS THUNBERGII</i> 'CRIMSON PYGMY'	CRIMSON PYGMY DWARF JAPANESE BAEBERRY	3' O.C.
14	IS	<i>ILEX CRENATA</i> 'SOFT TOUCH'	SOFT TOUCH HOLLY	3' O.C.
29	LP	<i>LOROPETALUM CHINENSE</i> 'PEACK' P.P.#18,441	PURPLE PIXIE® FRINGE FLOWER	4' O.C.
43	MC	<i>MUHLENBERGIA CAPILLARIS</i>	PINK MUHLY GRASS	3' O.C.
38	SG	<i>SPIRAEA JAPONICA</i> 'GOLDMOUND'	GOLDMOUND SPIREA	4' O.C.



SYSTEMS
 DESIGN
 SERVICES



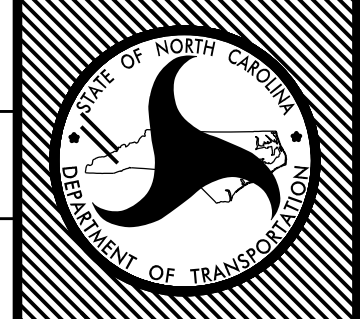
NCDOT - ROADSIDE ENVIRONMENTAL UNIT
 LANDSCAPE DESIGN & DEVELOPMENT
 1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
 PH: 919-707-2935 FAX: 919-715-2554
[HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/](http://www.ncdot.org/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/)

ANGIER NC 210 & NC 55
 HARNETT COUNTY
 WBS #: 46305.1.4

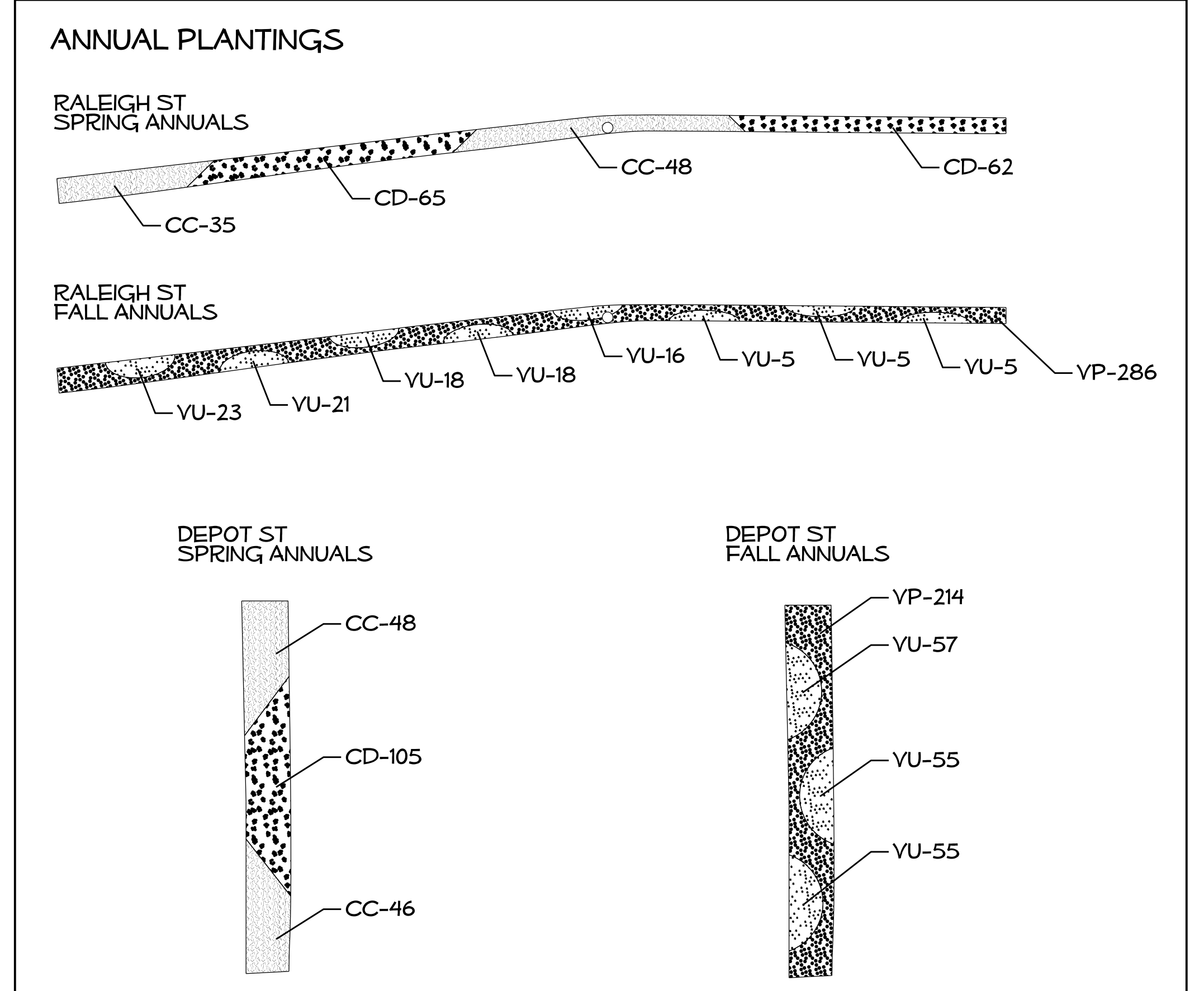
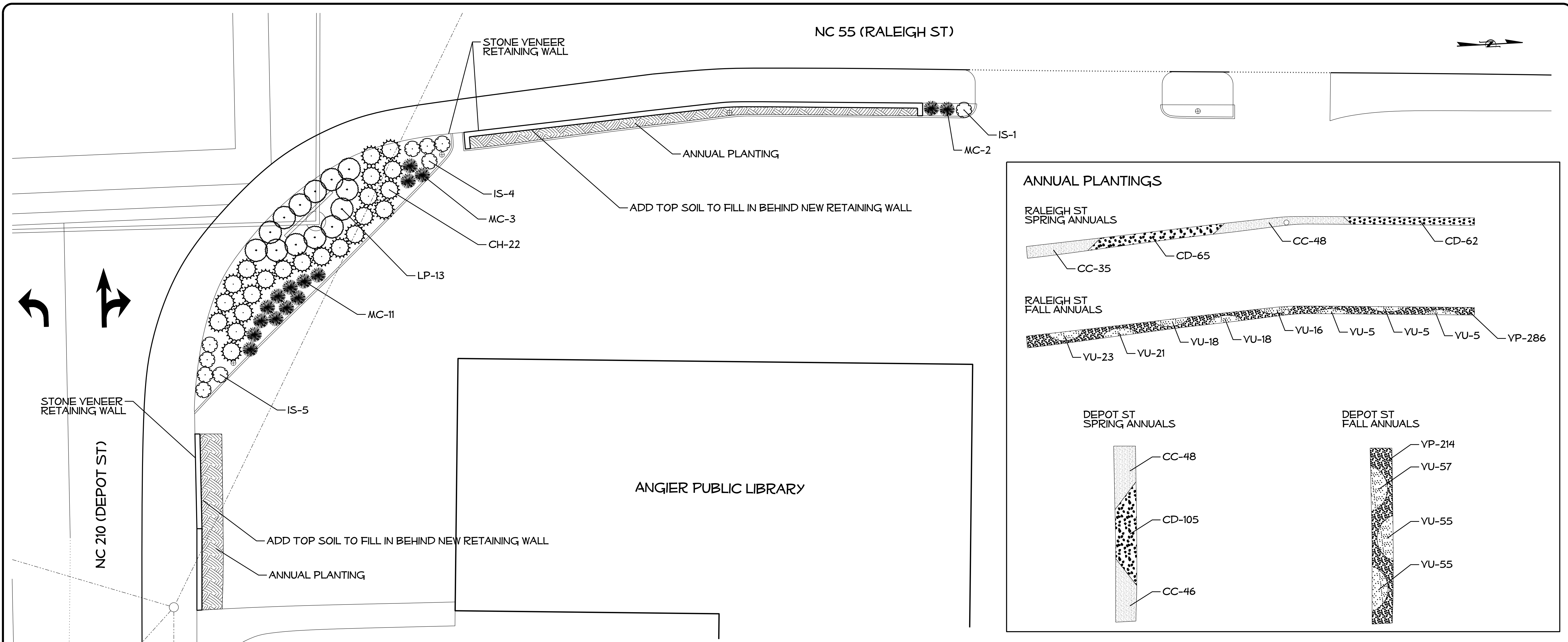
REV. DESIGNER
 Kyle Cooper

PREL. DESIGN DATE:	FEB 2016
CHECKED BY & DATE:	
FINAL DESIGN DATE:	MARCH 18, 2016

PLANTING PLAN
QUADRANT 1
LANDSCAPE PLAN SHEET

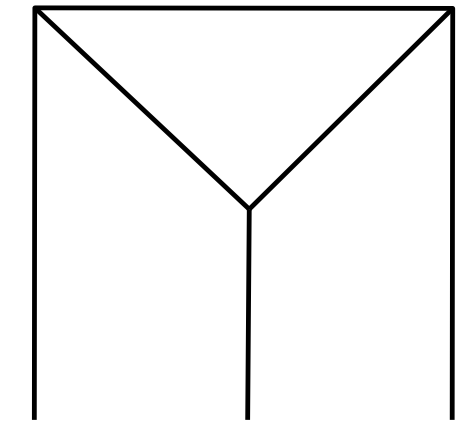
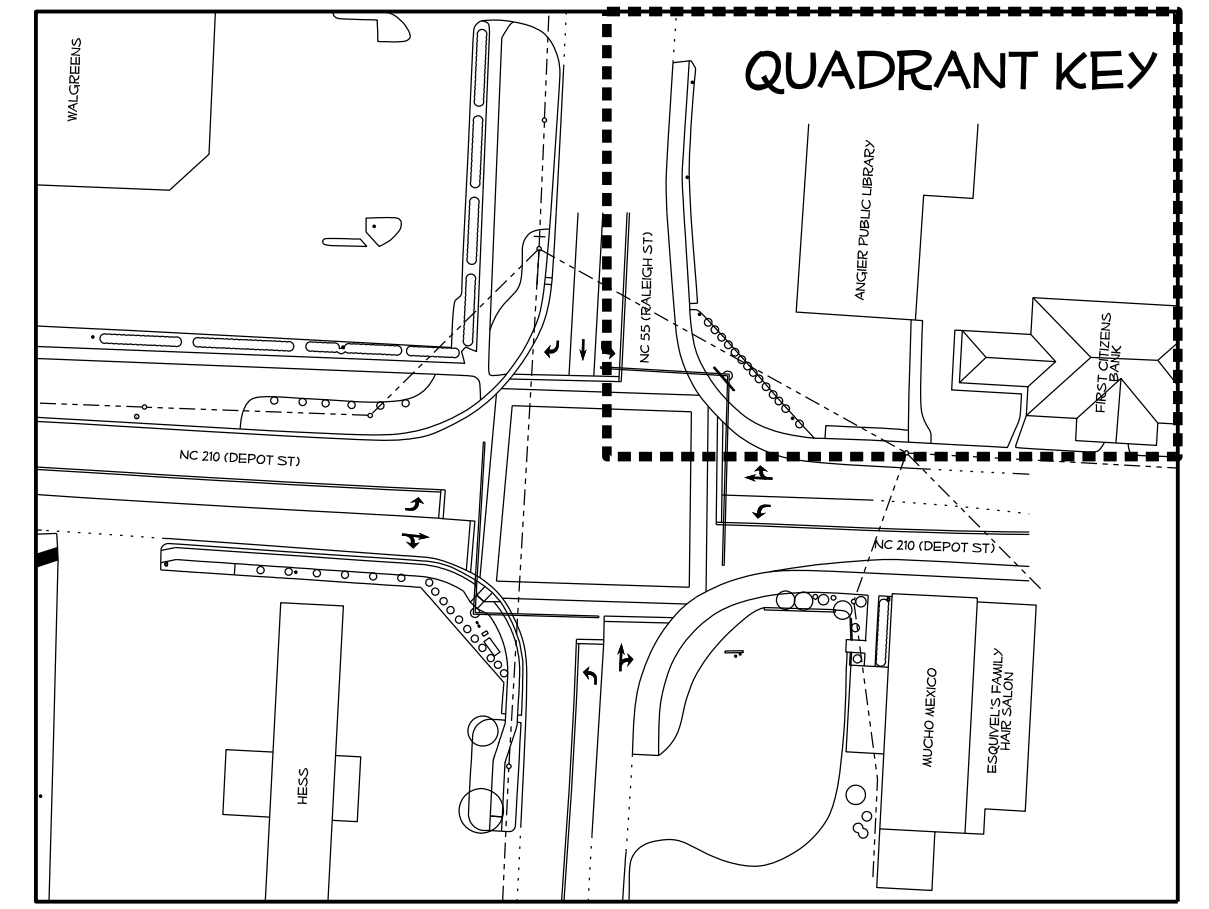


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WBS #	46305.1.4
FED I.D. #	
SHEET NO:	L-4
TOTAL SHEET NO:	11

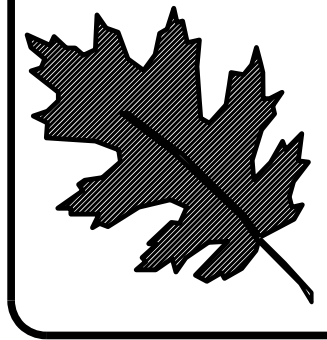


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QTY	KEY	BOTANICAL NAME	COMMON NAME	SPACING
22	CH	<i>CHAMAECYPARIS PISIFERA 'GOLDEN MOUND'</i>	GOLD MOP THREADLEAF FALSE CYPRESS	4' O.C.
10	IS	<i>ILEX CRENATA 'SOFT TOUCH'</i>	SOFT TOUCH HOLLY	3' O.C.
13	LP	<i>LOROPETALUM CHINENSE 'PEACK' P.P.#18,441</i>	PURPLE PIXIE® FRINGE FLOWER	4' O.C.
16	MC	<i>MUHLENBERGIA CAPILLARIS</i>	PINK MUHLY GRASS	3' O.C.
177	CC	<i>CATHARANTHUS ROSEUS 'CORAL™ WHITE'</i>	CORAL™ WHITE VINCA	12" O.C.
232	CD	<i>CELOSIA PLUMOSA 'FRESH LOOK GOLD'</i>	FRESH LOOK GOLD COCKSCOMB	10" O.C.
500	YU	<i>VIOLA X WITTROCKIANA 'ULTIMA RADIANCE PINK'</i>	ULTIMA RADIANCE PINK PANSY	8" O.C.
278	VP	<i>VIOLA X WITTROCKIANA 'PENNY ORCHID FROST'</i>	PENNY ORCHID FROST PANSY	8" O.C.



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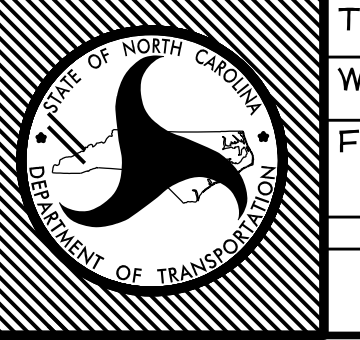
NCDOT - ROADSIDE ENVIRONMENTAL UNIT
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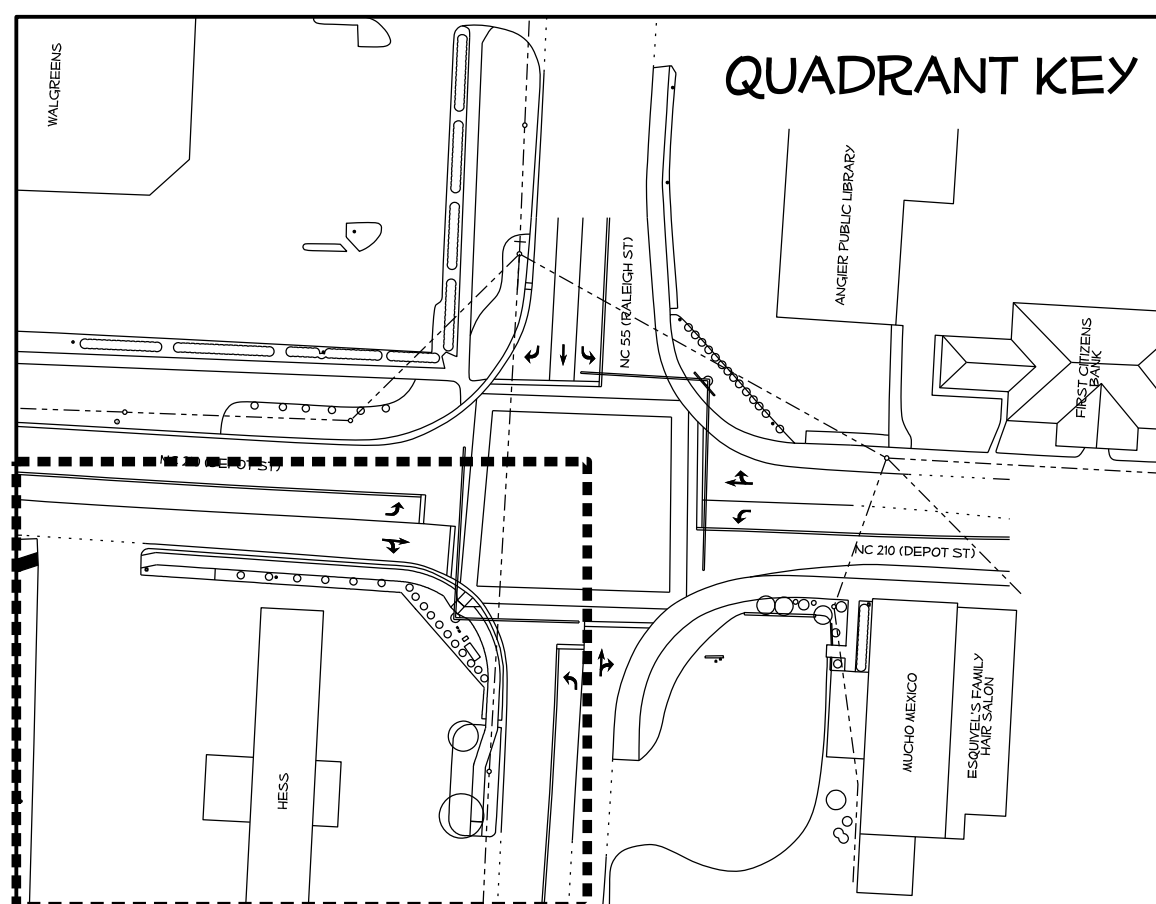
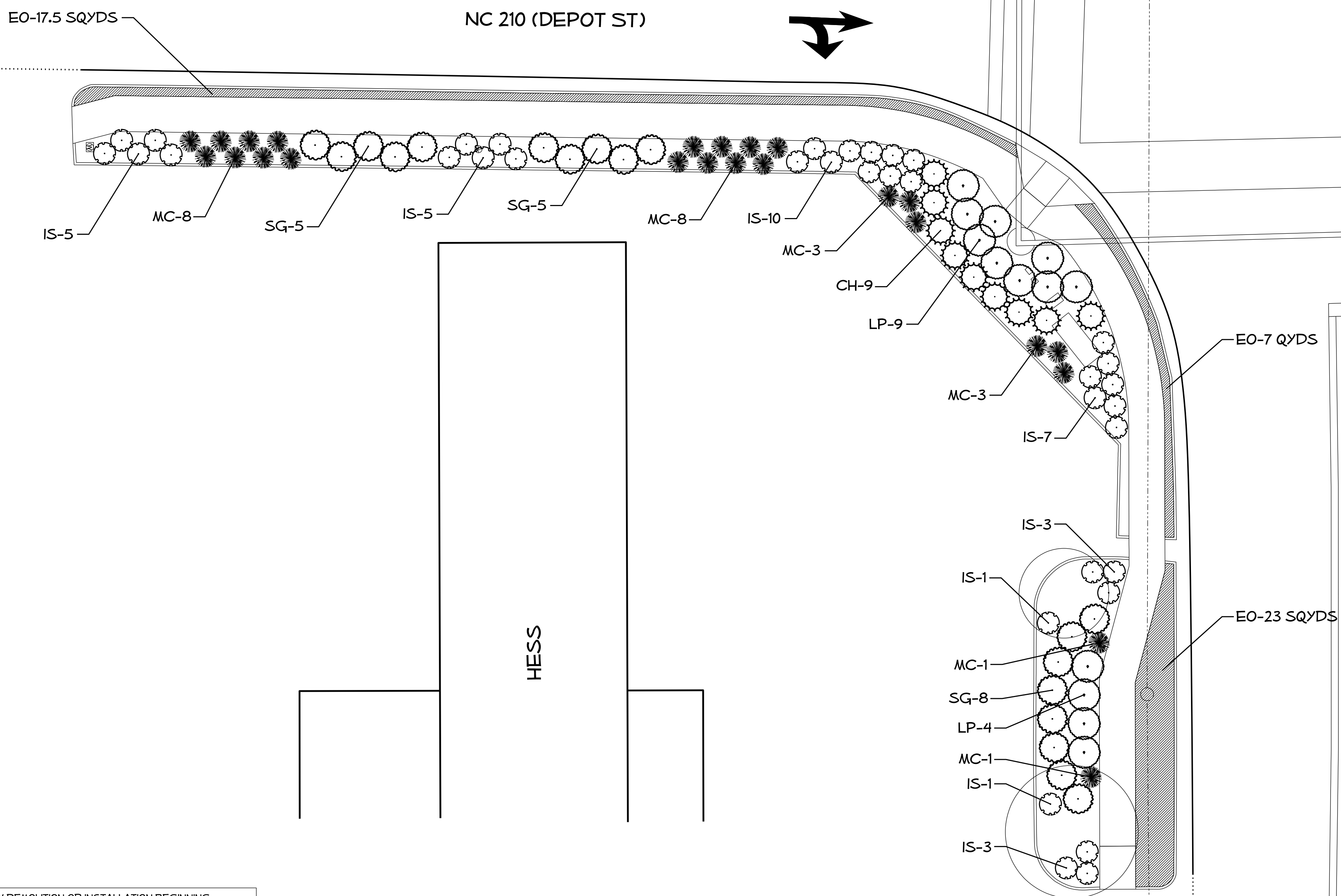
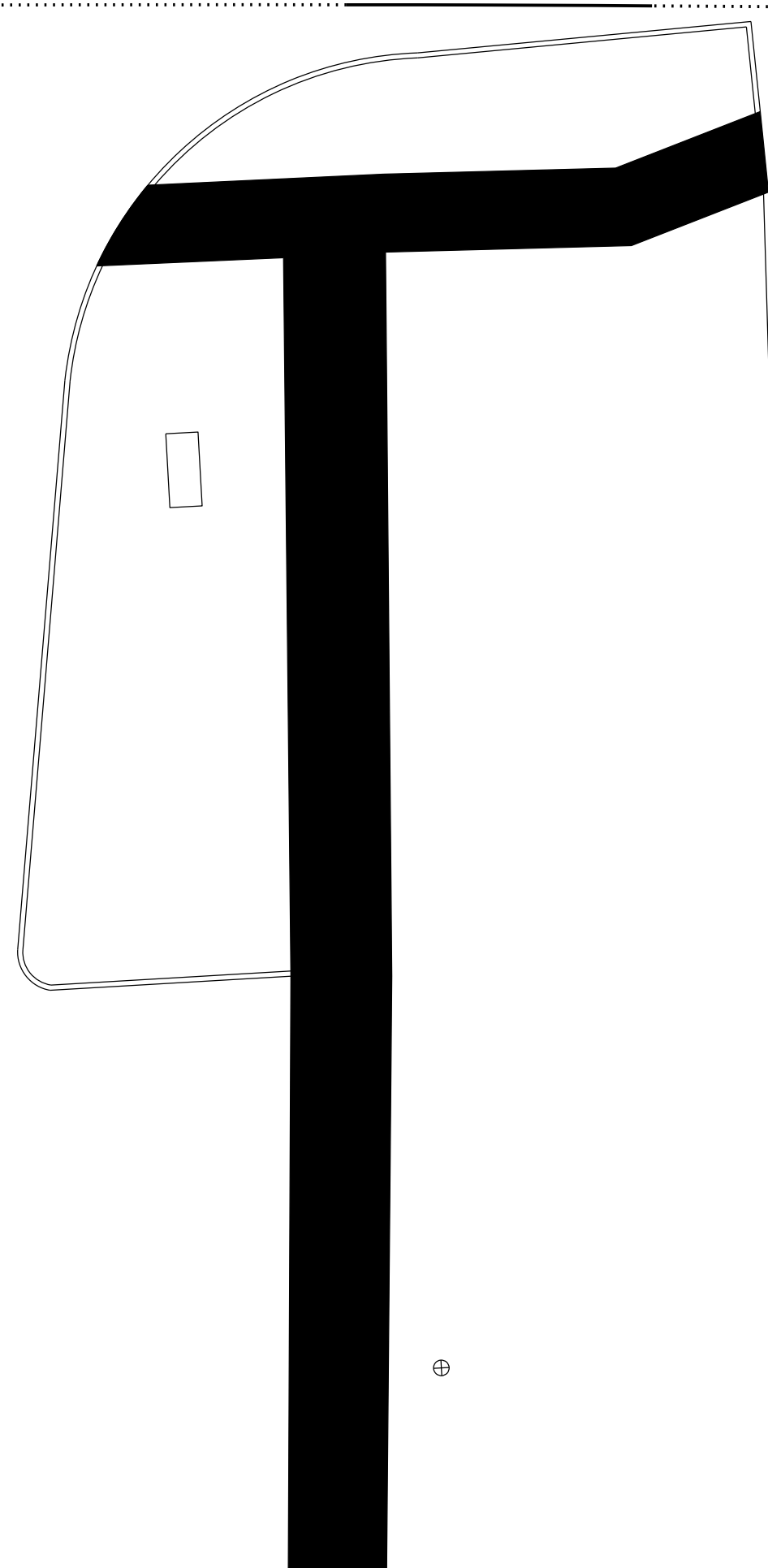
REV. DESIGNER
 Kyle Cooper

SHEET DESCRIPTION:
 PREL. DESIGN DATE: FEB 2016
 CHECKED BY & DATE:
 FINAL DESIGN DATE: MARCH 18, 2016

PLANTING PLAN
 QUADRANT 2
 LANDSCAPE PLAN SHEET



T.I.P. # - - - -
 WBS # 46305.1.4
 FED I.D. #
 SHEET NO: TOTAL SHEET NO:
 L-5 11

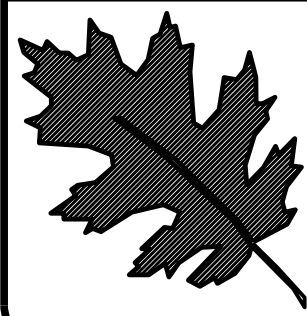


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QTY	KEY	BOTANICAL NAME	COMMON NAME	SPACING
9	CH	<i>CHAMAECYPARIS PISIFERA 'GOLDEN MOUND'</i>	GOLD MOP THREADLEAF FALSE CYPRESS	4' O.C.
35	IS	<i>ILEX CRENATA 'SOFT TOUCH'</i>	SOFT TOUCH HOLLY	3' O.C.
13	LP	<i>LOROPETALUM CHINENSE 'PEACK' P.P.#18,441</i>	PURPLE PIXIE® FRINGE FLOWER	4' O.C.
24	MC	<i>MUHLENBERGIA CAPILLARIS</i>	PINK MUHLY GRASS	3' O.C.
18	SG	<i>SPIRAEA JAPONICA 'GOLDMOUND'</i>	GOLDMOUND SPIREA	4' O.C.
47.5 SY	EO	<i>EREMOCHLOA OPHIUROIDES (+10%)</i>	CENTPEDE GRASS	N/A



SYSTEMS
 DESIGN
 &
 DEVELOPMENT



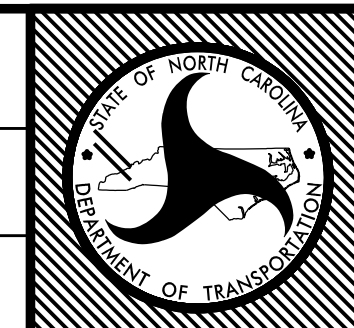
NCDOT - ROADSIDE ENVIRONMENTAL UNIT
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ANGIER NC 210 & NC 55
 HARNETT COUNTY
 WBS #: 46305.1.4

REV. DESIGNER
 Kyle Cooper

SHEET DESCRIPTION:
 PREL. DESIGN DATE: FEB 2016
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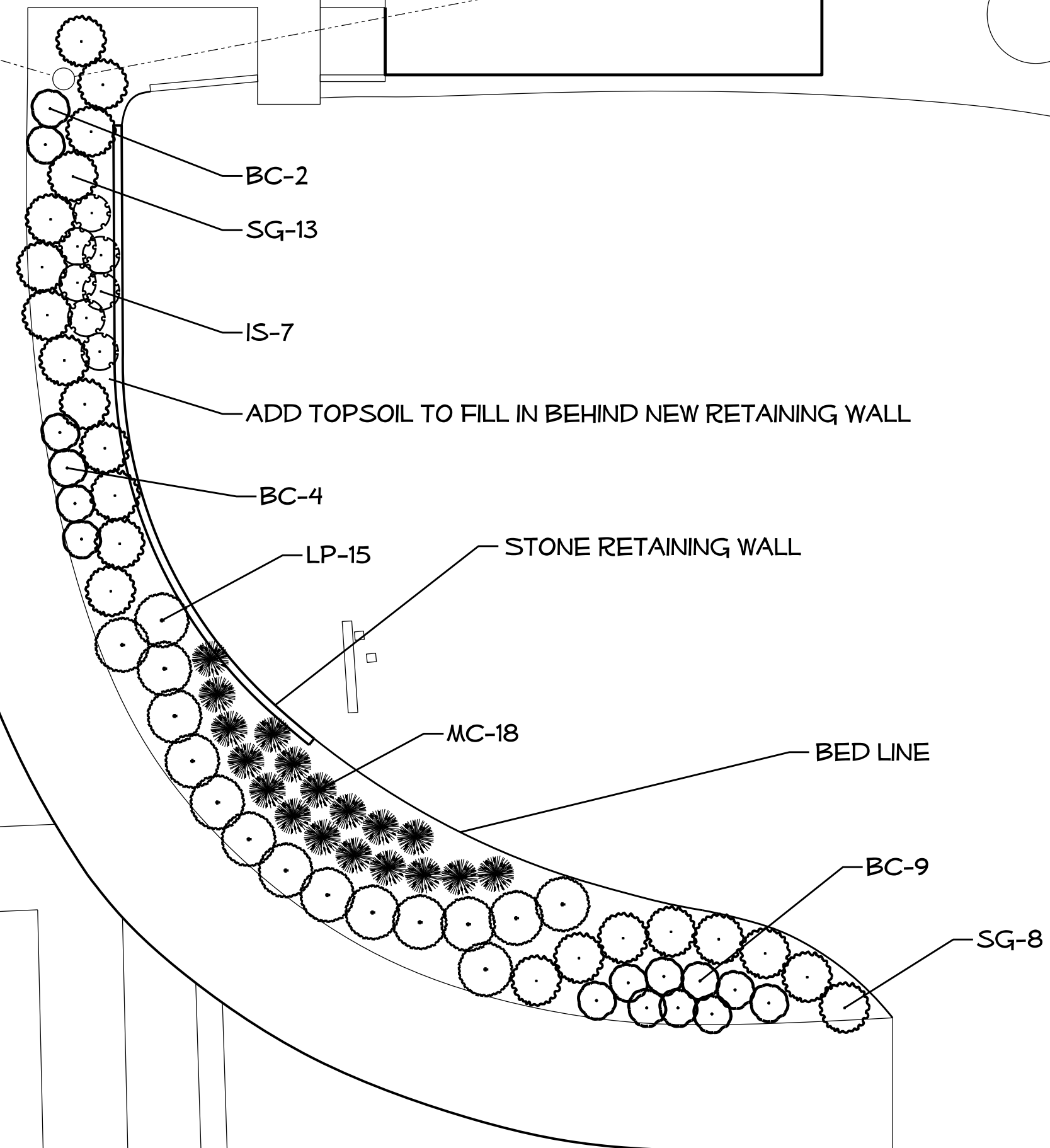
PLANTING PLAN
 QUADRANT 3
 LANDSCAPE PLAN SHEET



T.I.P. # - - - - -
 WBS # 46305.1.4
 FED I.D. #
 SHEET NO: L-6 TOTAL SHEET NO: 11

NC 210 (DEPOT ST)

MUCHO MEXICO



BC-2

SG-13

IS-7

ADD TOPSOIL TO FILL IN BEHIND NEW RETAINING WALL

BC-4

LP-15

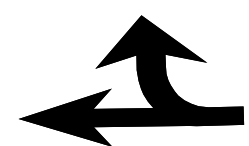
STONE RETAINING WALL

MC-18

BED LINE

BC-9

SG-8



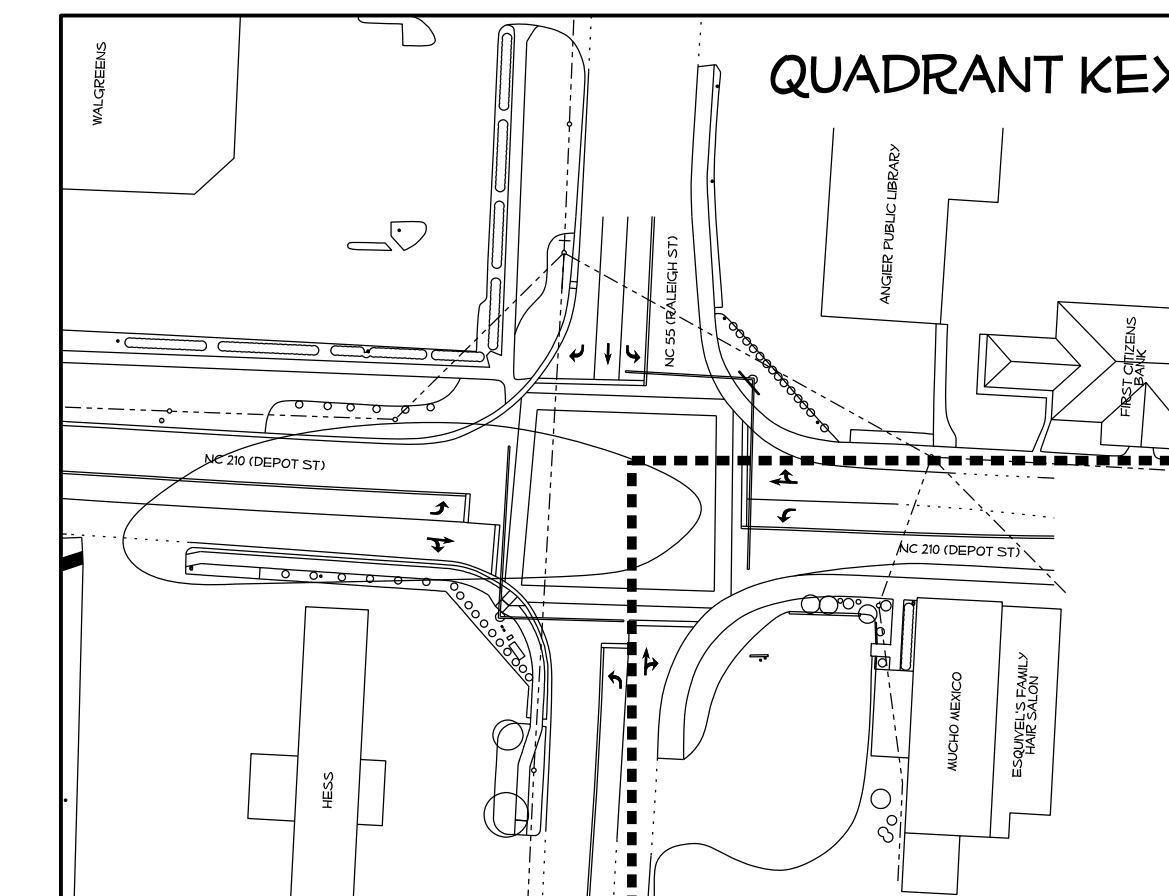
NC 55 (RALEIGH ST)



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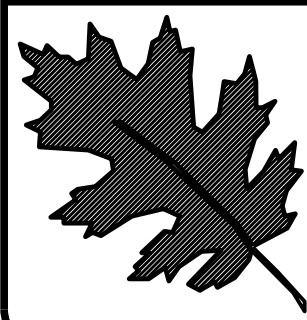
QTY	KEY	BOTANICAL NAME	COMMON NAME	SPACING
15	BC	<i>BERBERIS THUNBERGII 'CRIMSON PYGMY'</i>	CRIMSON PYGMY DWARF JAPANESE BAEBERRY	3' O.C.
7	IS	<i>ILEX CRENATA 'SOFT TOUCH'</i>	SOFT TOUCH HOLLY	3' O.C.
15	LP	<i>LOROPETALUM CHINENSE 'PEACK' P.P.#18,441</i>	PURPLE PIXIE® FRINGE FLOWER	4' O.C.
18	MC	<i>MUHLENBERGIA CAPILLARIS</i>	PINK MUHLY GRASS	3' O.C.
21	SG	<i>SPIRAEA JAPONICA 'GOLDMOUND'</i>	GOLDMOUND SPIREA	4' O.C.

ELLINGTON STUDIOS



QUADRANT KEY

G:\NS*****



NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
1557 MAIL SERVICE CENTER RALEIGH NC 27699-1557
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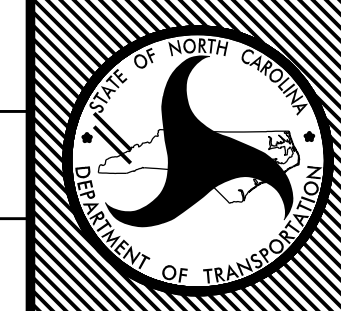
ANGIER NC 210 & NC 55
HARNETT COUNTY
WBS #: 46305.1.4

REV. DESIGNER

Kyle Cooper

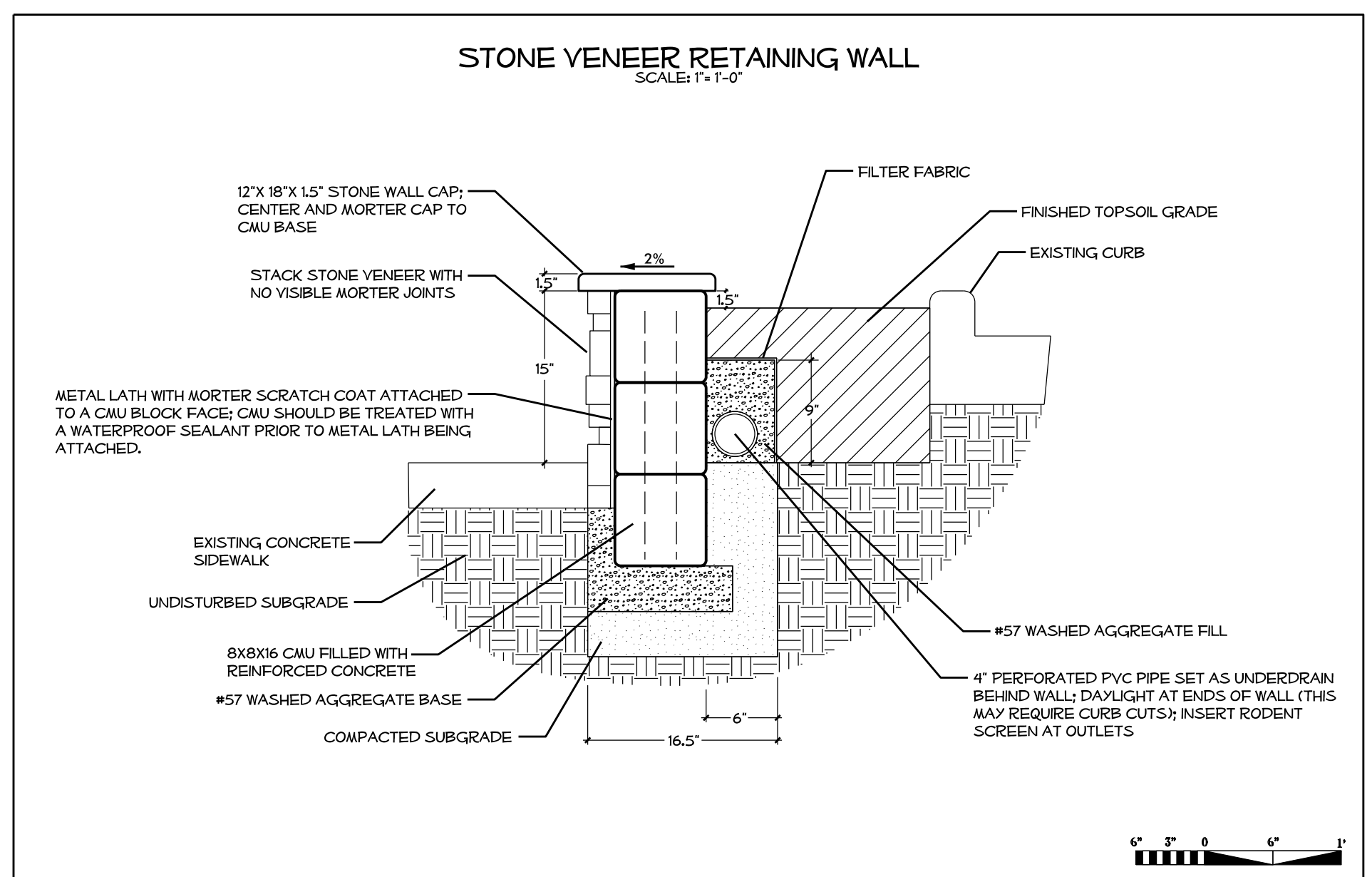
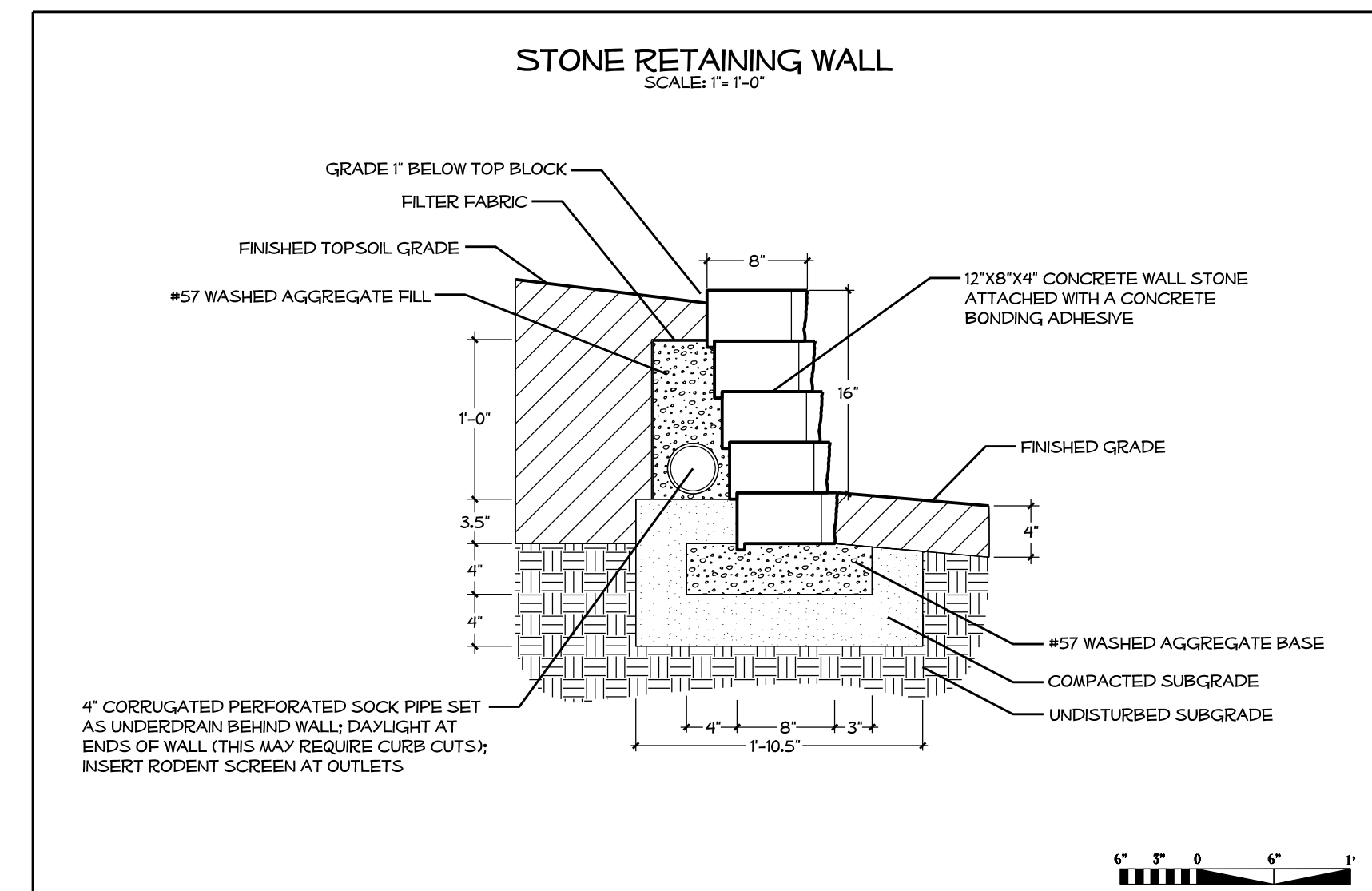
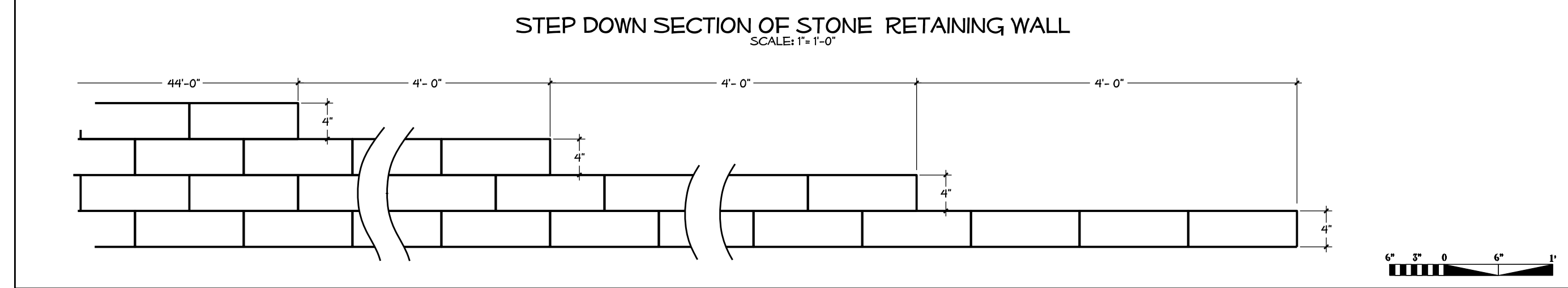
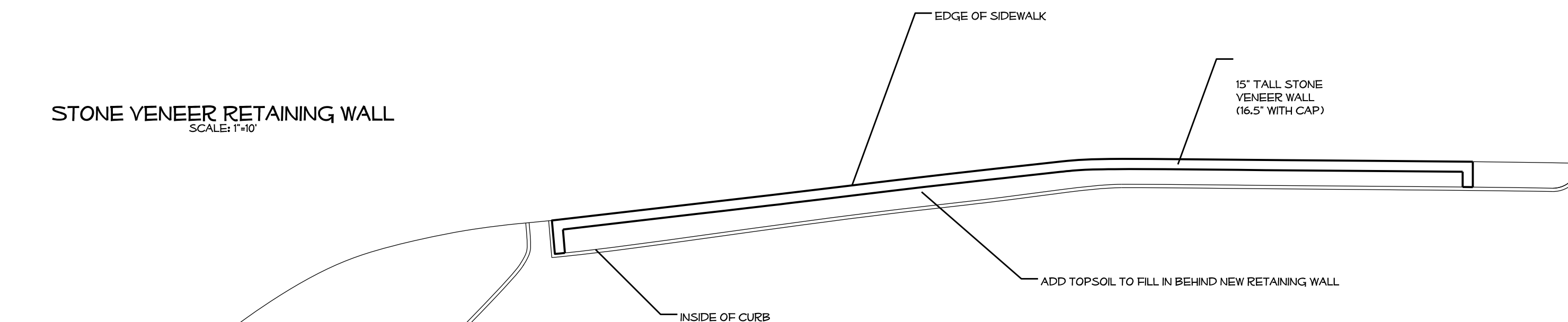
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PLANTING PLAN
QUADRANT 4
LANDSCAPE PLAN SHEET

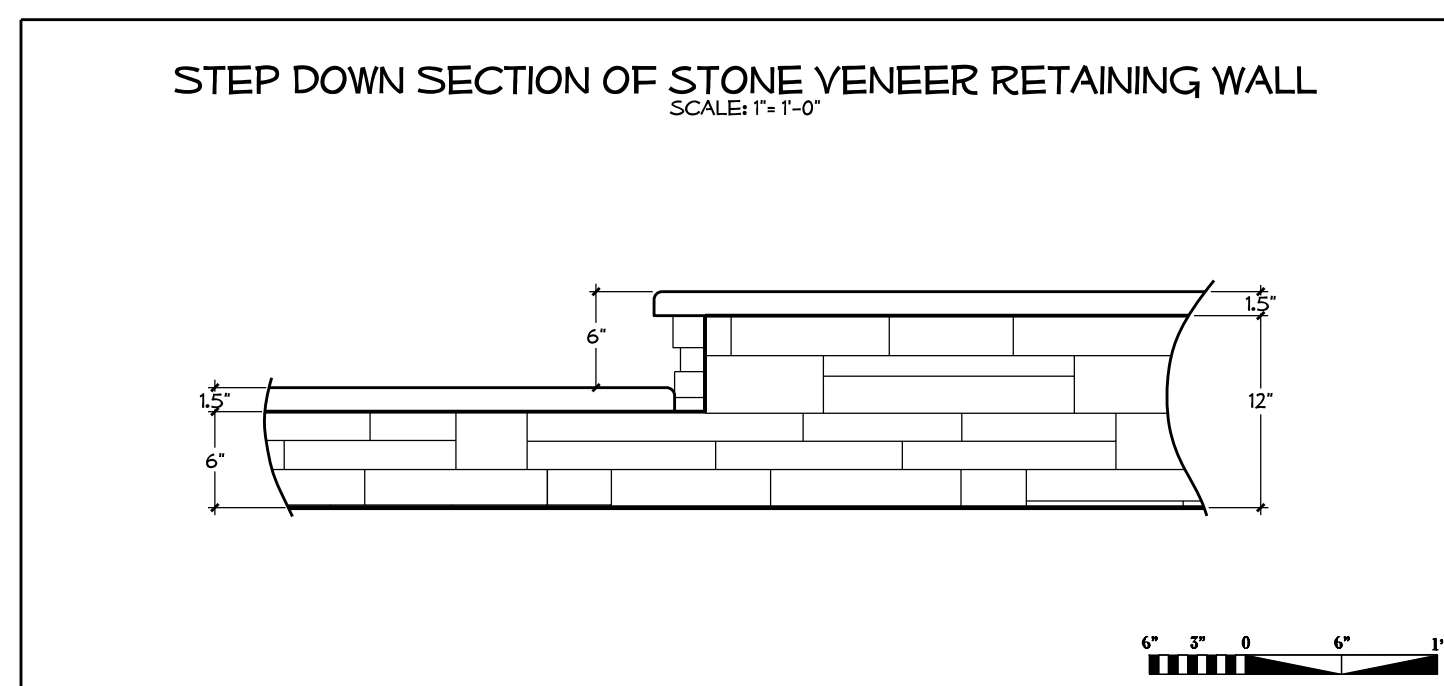
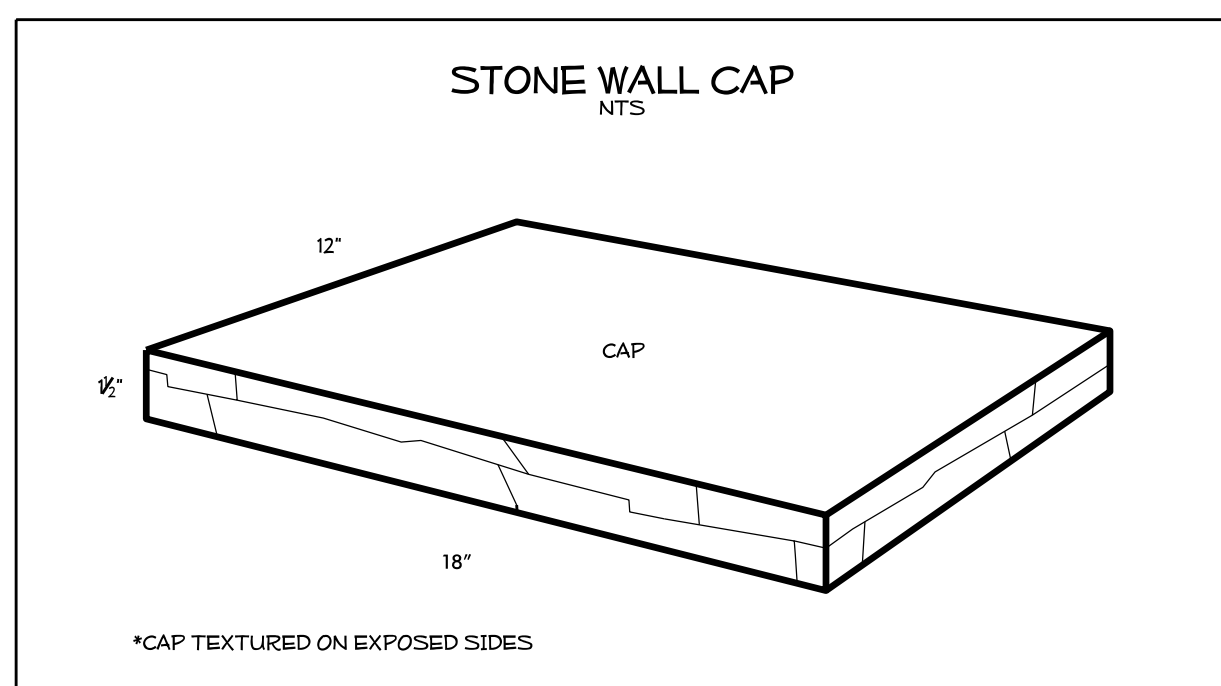
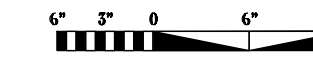
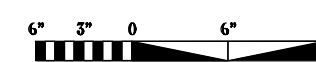
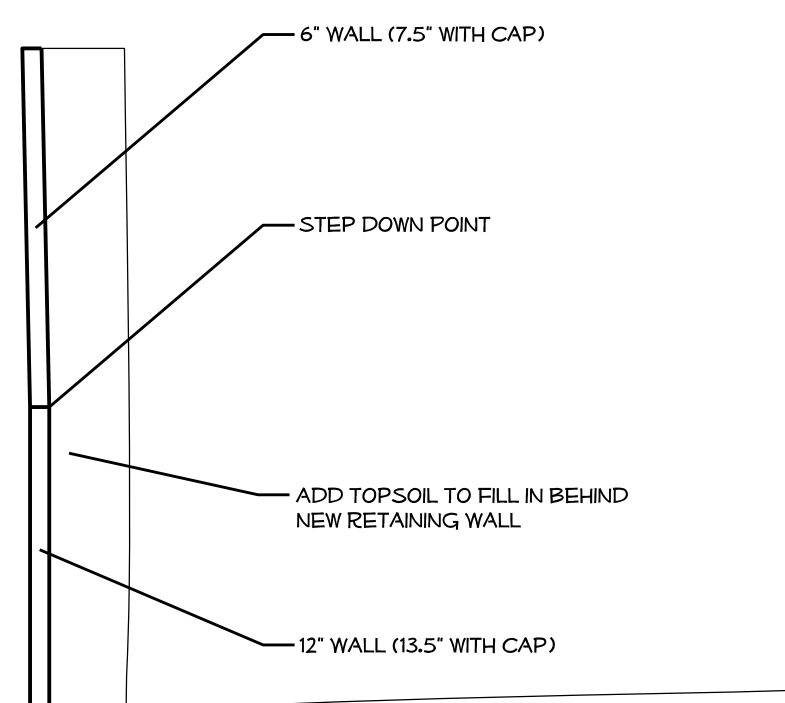
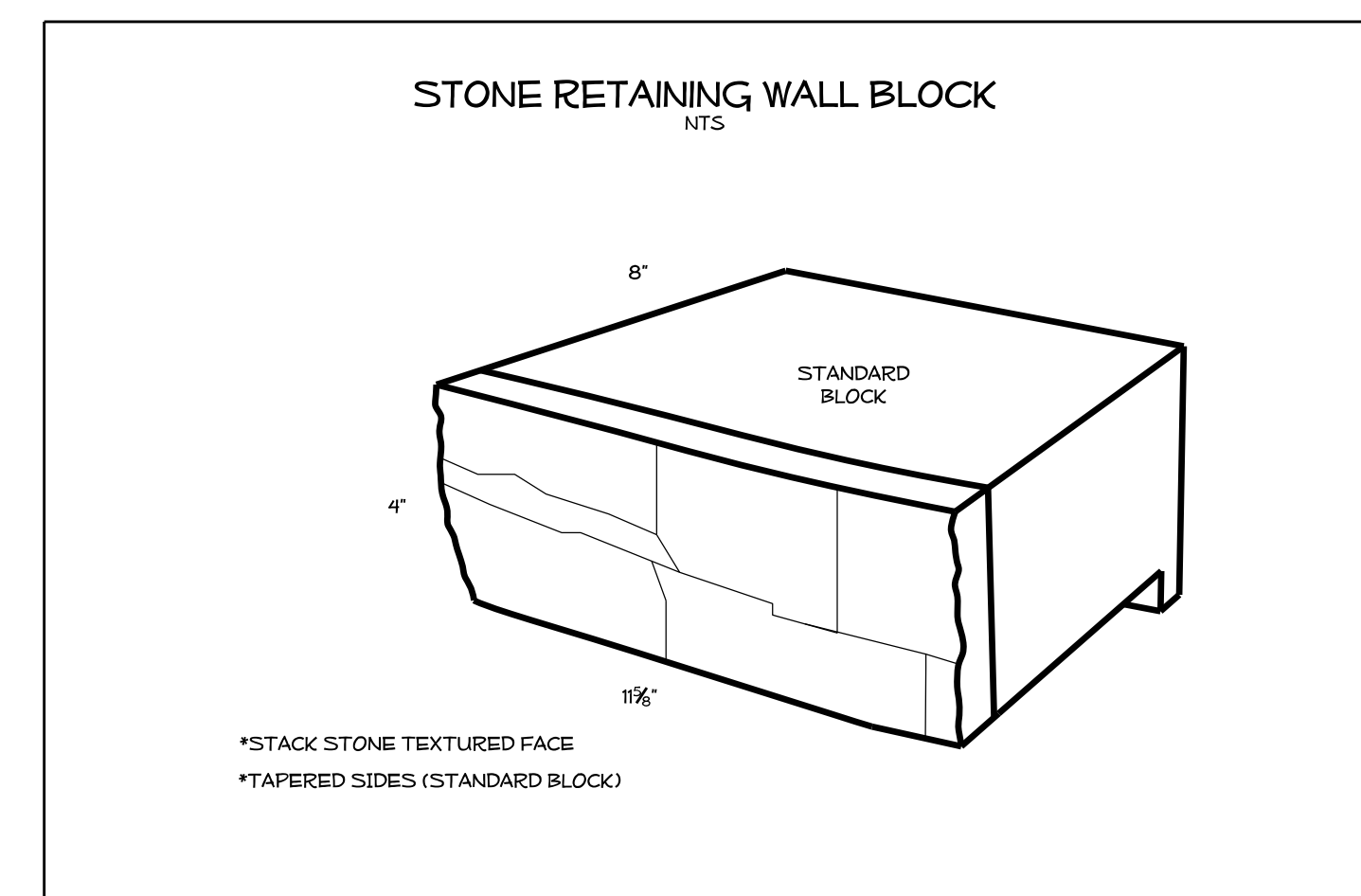
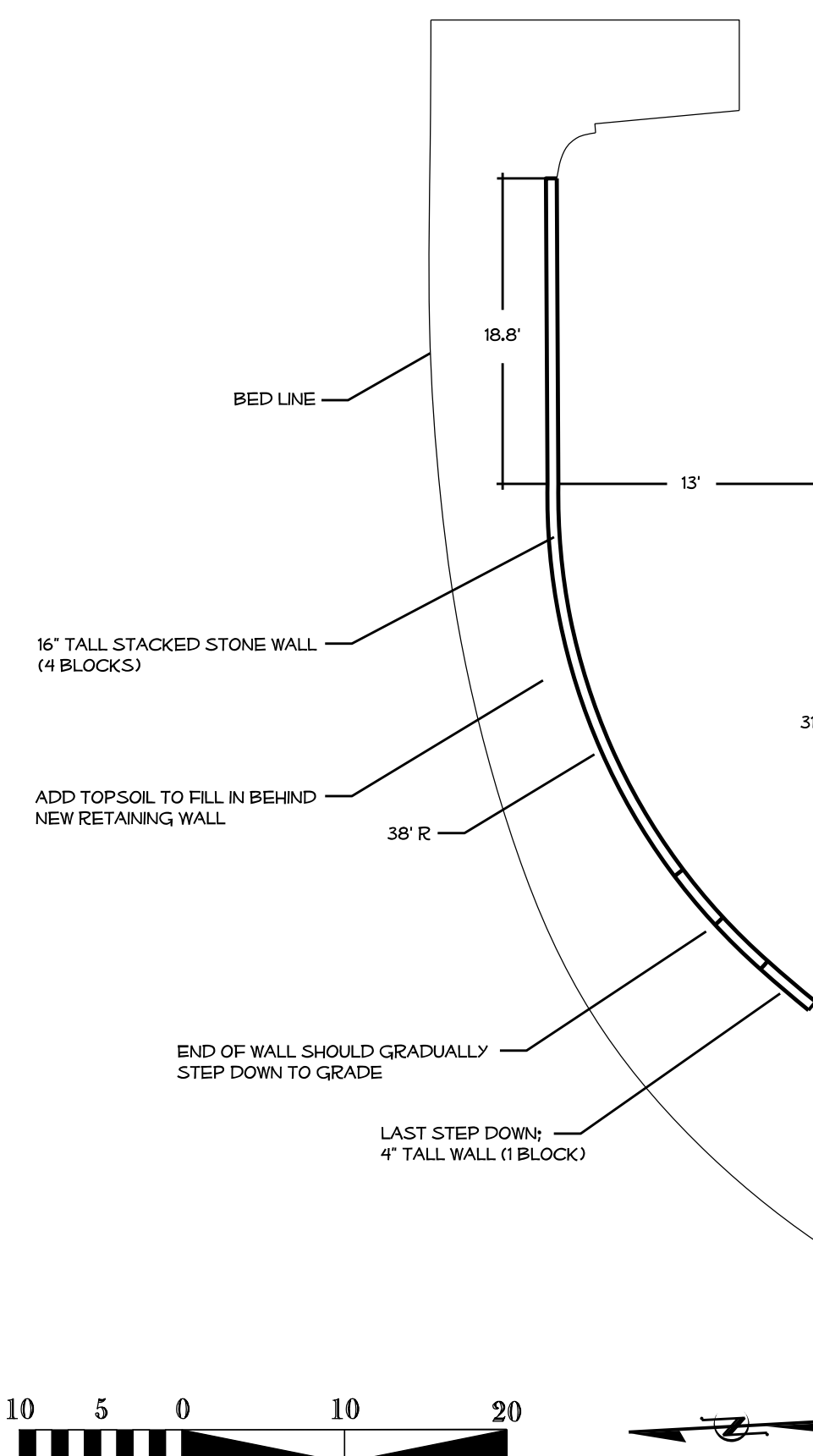


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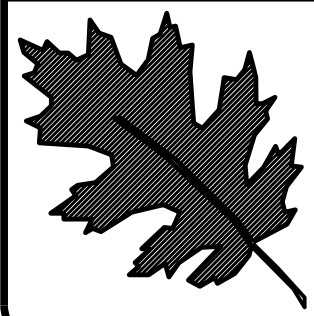
STONE VENEER RETAINING WALL
SCALE: 1" = 10'



STONE RETAINING WALL
SCALE: 1" = 10'



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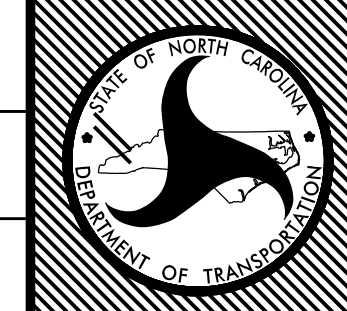
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LANDSCAPE DESIGN & DEVELOPMENT
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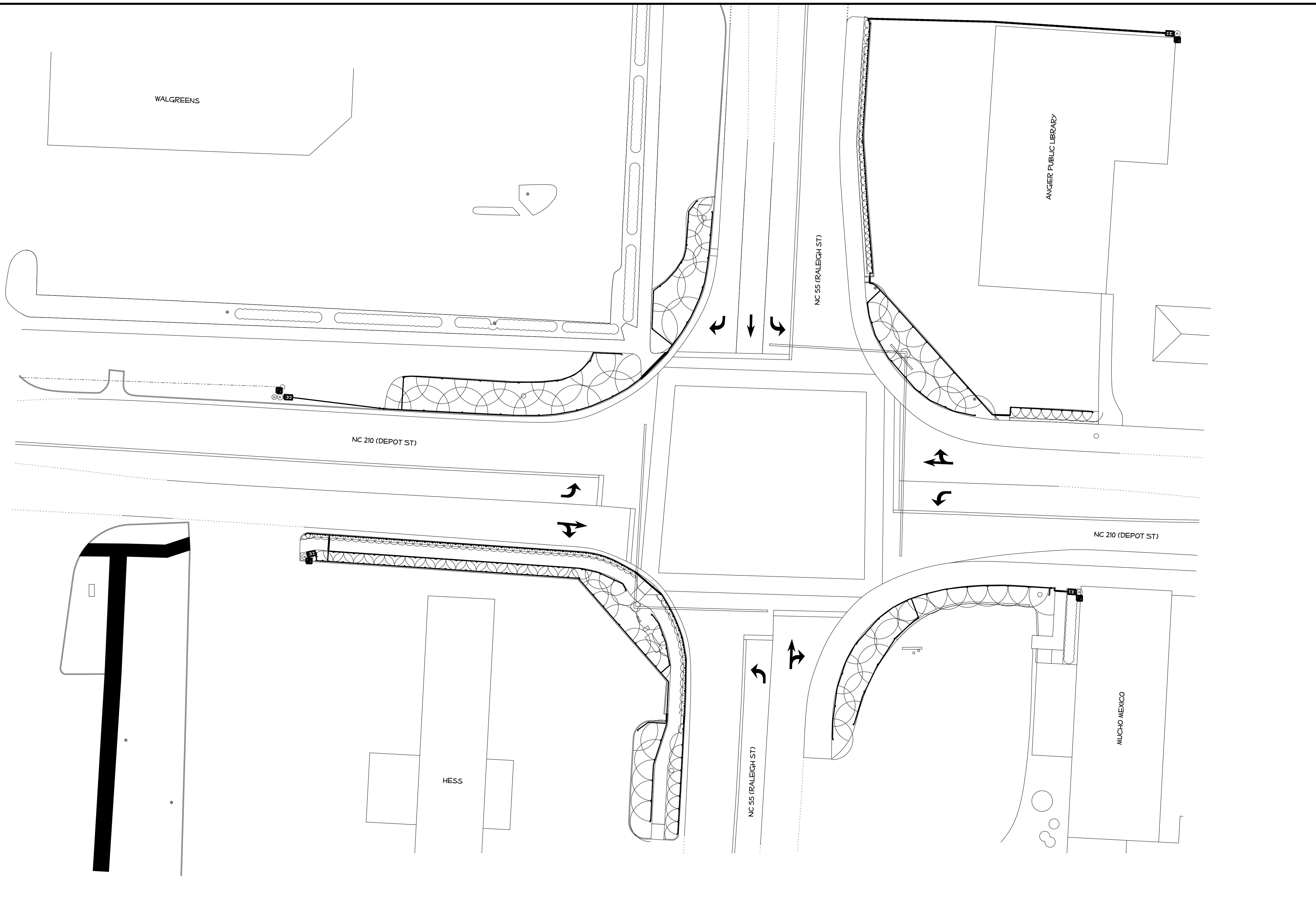
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STONE WALLS' DETAILS
QUADRANT 4
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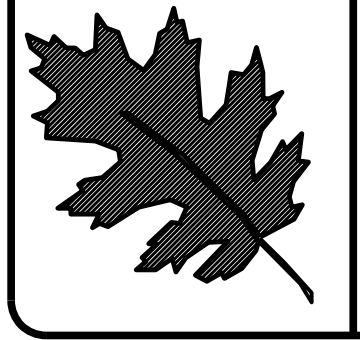


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KEY	
	4" PVC SLEEVE
	1/2" LATERAL LINE
	BATTERY CONTROLLER
	BACKFLOW
	3/4" MAIN LINE
	WATER METER
	IRRIGATION POP-UP HEAD LOCATION
	SPRAY RADIUS
	VALVE

 SYSTEMS
 DESIGN
 &
 CONSTRUCTION
 SERVICES



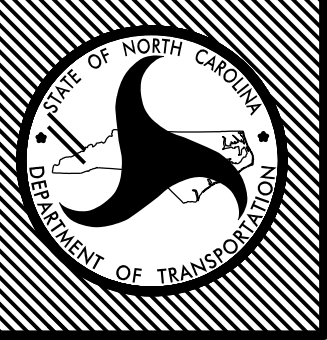
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IRRIGATION PLAN
 LANDSCAPE PLAN SHEET



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IRRIGATION NOTES & LEGEND

*IRRIGATION CONTRACTOR MUST BE LICENSED BY THE BOARD UNDER CHAPTER (2008-177, S.1; 2013-383, S.3)

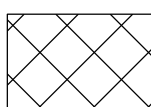
*ALL MATERIALS MAY BE OF COMPARABLE MANUFACTURE AND PERFORMANCE TO BRAND NAMED

PIPE

MINIMUM DEPTH OF COVER OVER LATERAL PIPING TO BE 12" LATERAL PIPING SIZING SCHEDULE SUMMATION OF GALLONAGE DEMAND ON THE PARTICULAR BRANCHES OF PIPE WITHIN A CONTROL SECTION SHALL BE DETERMINED BY USING THE GPM FOR A NOZZLE BASED ON A 50 PSI BASE OF HEAD PRESSURE AND FULL RADIUS AT THAT PRESSURE AS REPORTED IN THE TORO 2010 IRRIGATION PRODUCTS CATALOG. PIPE SIZES FOR THE LATERALS SHALL BE AS FOLLOWS:
 - ZERO TO FIFTEEN GPM ACCUMULATED FLOW USE 3/4" PR 200 PVC PIPE
 - GREATER THAN FIFTEEN UP TO THIRTY-FIVE GPM USE 3/4" PVC PIPE
 - FRICTION LOSS ALLOWANCES FOR THIS PROJECT HAVE BEEN DETERMINED USING THE ABOVE FLOW RANGES AND DEMANDS.

- PR 200 MAIN LINE PIPING.
- SIZE OF PIPE TO BE 1-1/2" IN MINIMUM
- DEPTH OF COVER MAINLINE PIPING TO BE 18"
- PIPING SHALL BE PR 200 SOLVENT WELD PVC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTING UNLESS OTHERWISE NOTED.
- ALL PIPING RUNS SHALL BE "SNAKED" IN THE TRENCH DURING INSTALLATION TO PREVENT EXCESSIVE STRAIN DUE TO THERMAL EXPANSION OR CONTRACTION.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGING PLANTINGS (INCLUDING ROOTS) DURING INSTALLATION OF THE IRRIGATION SYSTEM AND SHALL COORDINATE HIS EFFORTS WITH THE LANDSCAPE CONTRACTOR SO AS TO OPTIMIZE THE EFFICIENCY AND THE AESTHETIC QUALITY OF THE INSTALLATION.

DRIP IRRIGATION



- DRIP IRRIGATION IS TO BE TORO NETAFIM TECHLINE "P.E. TUBING (OR COMPARABLE MANUFACTURE AND PERFORMANCE), 18" EMITTER SPACING INTERVALS AT 1 GPM EMITTERS INLINE. APPROVED INLINE EMITTER DRIPLINE /TECHLINE TO BE INSTALLED UNDER MULCH IN LANDSCAPE AREAS AS SHOWN ON THE IRRIGATION PLAN.
 - LOCATION OF DRIP VALVE ASSEMBLY WHICH INCLUDES 250 SERIES REMOTE CONTROL VALVE WITH FLOW CONTROL FEATURE, INLINE EMITTER DRIPLINE /TECHLINE 200 MESH FILTER #DF150-140, AND INLINE EMITTER DRIPLINE /TECHLINE PRESSURE REGULATOR #PVR15045. FLOW CONTROL VALVES SHALL BE AS NOTED ON BOXES WITH LIDS MOUNTED AT GRADE LEVEL.
 - MIN. 2 EMITTERS PER SHRUB AND 3 EMITTERS PER TREE.

VALVES:

- MAY BE OF COMPARABLE MANUFACTURE AND PERFORMANCE TO BRAND NAMED

LOCATION OF ELECTRIC 24 V.A.C. REMOTE CONTROL VALVE WITH FLOW CONTROL FEATURE (MODEL #TPVF100DC SOLENOIDS.)

- ALL IN-LINE REMOTE CONTROL VALVES SHALL BE INSTALLED IN CARSON VALVE BOXES WITH LIDS MOUNTED AT GRADE LEVEL. SINGLE VALVES MAY BE INSTALLED IN A CARSON MODEL #910-1 VALVE BOX WITH COVER, WHILE MULTIPLE VALVES (UP TO, TWO 3/4" VALVES OR ONE, 1-1/2") SHALL BE INSTALLED IN CARSON MODEL #1419-1 BOX WITH #1419-2 COVER.

BACKFLOW PREVENTION -

- REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY WHICH SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR. THE BACKFLOW SHALL BE 3/4" IN SIZE. THE BACKFLOW ASSEMBLY SHALL BE INSTALLED DOWNSTREAM OF THE IRRIGATION METER. THE UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL LOCAL AND STATE CODE REQUIREMENTS AND SHALL HAVE AN APPROVED COVER.

WATER SUPPLY/METER

- THE METER SHALL BE THE OWNER'S RESPONSIBILITY.
 - THE METER IS 3/4" IN SIZE. SINCE THE WATER SUPPLY FOR THE SYSTEM SHALL BE POTABLE WATER, THE CONTRACTOR WILL BE REQUIRED TO INSTALL BACKFLOW PREVENTION DEVICE WHICH WILL BE LOCATED DOWNSTREAM OF THE IRRIGATION METER

- THIS IRRIGATION SYSTEM SHALL BE CAPABLE OF DELIVERING 33 GPM MINIMUM WITH ONE CONTROL STATION OPERATING AT A TIME AT THE AVAILABLE PSI AT THE BASE OF THE HEAD FOR OPTIMUM PERFORMANCE OF THE IRRIGATION SYSTEM.

CONTROLLER W/ BATTERY POWERED TIMER:

- MAY BE OF COMPARABLE MANUFACTURE AND PERFORMANCE TO BRAND NAMED

THE CONTROLLER SHALL BE CUSTOM COMMAND (DDCWP-6-9V SERIES) SOLID STATE UNIT. THE CONTROLLER SHALL INCORPORATE 24 V.A.C. APPROXIMATE LOCATION APPROVED BY THE NCDOT ENGINEER.

- BATTERY OPERATED CONTROLLER IS TO BE PLACED IN CARSON VALVE BOXES MODEL #910-1 VALVE WITH #910-2 COVER.
 - ALL 120 VAC WIRING SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE ELECTRICAL CODE REQUIREMENTS.
 - THE CONTRACTOR SHALL INSTALL A WIRED RAIN SENSOR (COMPATIBLE MAKE/MODEL AS THE CONTROLLER).

SLEEVING

SLEEVES SHALL BE 3" PVC FOR 24 VAC WIRING PER ELECTRICAL CODE. THE IRRIGATION CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR TO INSURE PROPER INSTALLATION OF BOTH THE IRRIGATION SYSTEM WITH THE LANDSCAPE AND HARDSCAPE.

24 VAC CONTROL WIRING

ALL 24 V.A.C. CONTROL WIRING SHALL BE SINGLE STRAND COPPER WIRE WITH POLYETHYLENE PE DIRECT BURIAL INSULATION RATED FOR 300 V.A.C. VALVE "COMMON" WIRES SHALL HAVE WHITE INSULATION WHILE VALVE "HOT" WIRES SHALL HAVE INSULATION RED IN COLOR. THE "COMMON" WIRES SHALL BE #14 AWG. "HOT" WIRES SHALL BE #14 AWG. VALVE WIRING SHALL FOLLOW MAINLINE PIPING WHERE FEASIBLE AND SHALL BE LAID IN A COMMON TRENCHLINE WITH THE MAINLINE PIPING AND IN THE BOTTOM OF THE TRENCH. WIRING SHALL BE "BUNDLED" AND TAPED AT INTERVALS OF APPROXIMATELY TEN FEET. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.
 - WIRE SPLICES SHALL BE KEPT TO AN ABSOLUTE MINIMUM. WHERE MAJOR CONCENTRATIONS OF SPLICES ARE NECESSARY SAID SPLICES SHALL BE PLACED IN A APPROVED VALVE BOX, WITH #910-2 COVER INSTALLED AT GRADE LEVEL. SPLICES AT VALVE LOCATIONS SHALL BE MADE INSIDE OF THE VALVE BOX. ALL SPICE LOCATIONS SHALL BE NOTED ON THE AS BUILT PLAN.
 - WIRE RUNS SHALL BE INSTALLED WITH ENOUGH SLACK AND / OR OCCASIONAL EXPANSION LOOPS TO PREVENT EXCESSIVE STRAIN DUE TO THERMAL CONTRACTION.
 - ALL WIRE SPLICES SHALL BE MADE USING UL APPROVED DIRECT BURIAL CONNECTORS AND WATERPROOFING MATERIALS. ALL ELECTRICAL WORK SHALL BE INSTALLED ACCORDING TO CODE.

HEADS:

-MAY BE OF COMPARABLE MANUFACTURE AND PERFORMANCE TO BRAND NAME.

-HUNTER SERIES PRO-SPRAY POP-UPS WITH 12" POP-UP SPRAY HEAD FITTED WITH PRO ADJUSTABLE NOZZLES 4A, 6A, 8A, 10A, AND SHORT RADIUS SERIES NOZZLES 2H & 2Q .
 - ALL HEADS WITH A 12" POP-UP STROKE, IF INSTALLED WITH LESS THAN 1/2 OF THE SPRINKLER BODY EXPOSED ABOVE GRADE, SHALL BE INSTALLED ON POLYETHYLENE FLEX SWING JOINTS POLY PIPE FITTED WITH 3/8" INSERT BY 1/2" M.P.T. AND/OR 3/8" INSERT BY 3/4" M.P.T.) ELBOWS. IF GREATER THAN 1/2 OF

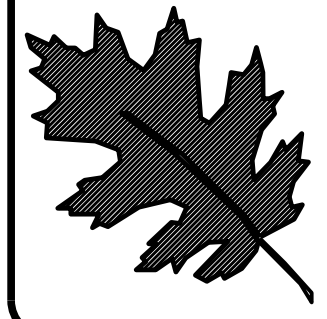
HEADS: CONT.

THE SPRINKLER BODY IS EXPOSED, THEN THE 12" POP-UP HEAD SHALL BE MOUNTED ON A SCHEDULE 40 PVC PIPE RISER AS DESCRIBED BELOW IN RELATION TO MOUNTING SHRUB HEAD MODELS. INSTALL ALL HEADS LOCATED IN SHRUB BEDS ON 12" RISERS SO THAT PLANTS ARE WATERED CORRECTLY. IN MOUNTING 12" POP-UP HEADS ON SHRUB TYPE RISERS, CARE SHALL BE TAKEN TO INSTALL THE HEAD IN SUCH A MANNER THAT SURROUNDING PLANT MATERIAL (PLANNED OR EXISTING) WILL HIDE THE BODY OF THE SPRINKLER.
 - ALL POP-UP IRRIGATION HEADS DESIGNED ADJACENT TO CURBS OR PAVEMENT SHALL BE INSTALLED WITH A CLEARANCE OF 1 1/2" FROM THE EDGES OF ALL PAVED AREAS TO PROVIDE FOR EDGING AND MAINTENANCE OPERATIONS. HEADS INSTALLED ON SHRUB RISERS OR WITH THE TOP OF THE HEAD MORE THAN 1 1/2" ABOVE THE GRADE SHALL BE INSTALLED WITH A MINIMUM 6" CLEARANCE FROM PAVED AREAS.
 - ALL THREADED PIPE CONNECTIONS SHALL BE ASSEMBLED USING TEFLON THREAD SEALING TAPE.

GENERAL NOTES

- PLACES VALVES (BOXES) IN PLANT BEDS WHERE-EVER POSSIBLE.
- CONTRACTOR IS TO MINIMIZE DISTURBANCE IN SOD AREA (CUT AND REPLACE SOD).
- PLACE PRESSURE REDUCING VALVE IN DISCREET LOCATION.
- THE IRRIGATION SYSTEM IS DISPLAYED SCHEMATIC IN NATURE. THE IRRIGATION CONTRACTOR MAY BE REQUIRED TO MAKE MINOR ADJUSTMENTS IN THE FIELD. THESE MINOR ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER BUT SHALL BE MADE ONLY AFTER NOTIFICATION IS MADE TO OWNER (NCDOT).
- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE SO THAT HE IS AWARE OF ANYSPECIAL CONDITIONS WHICH EXIST THAT MAY AFFECT HIS BID PROPOSAL AND SHALL HEREAFTER BE RESPONSIBLE FOR ALL COST INCURRED BY HIMSELF IN RELATION TO THE INSTALLATION.
- ALL IRRIGATION PRODUCTS ARE TO BE TORO, HUNTER, RAINBIRD OR COMPARABLE BRAND (AS APPROVED BY THE ENGINEER).
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING 'AS BUILT' PLANS TO THE OWNER (NCDOT) AT THE TIME OF PROJECT APPROVAL. THE PLANS SHALL BE CLEAR, CONCISE, AND SHOW ALL ELEMENTS OF THE IRRIGATION SYSTEM, THE LOCATION OF ALL EQUIPMENT, IRRIGATION LINES, NUMBERED ZONES, CONTROLLER(S), HEADS AND VALVES.

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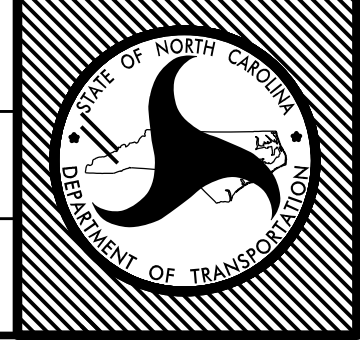
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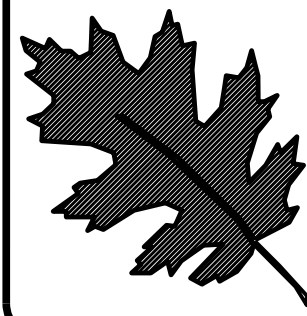
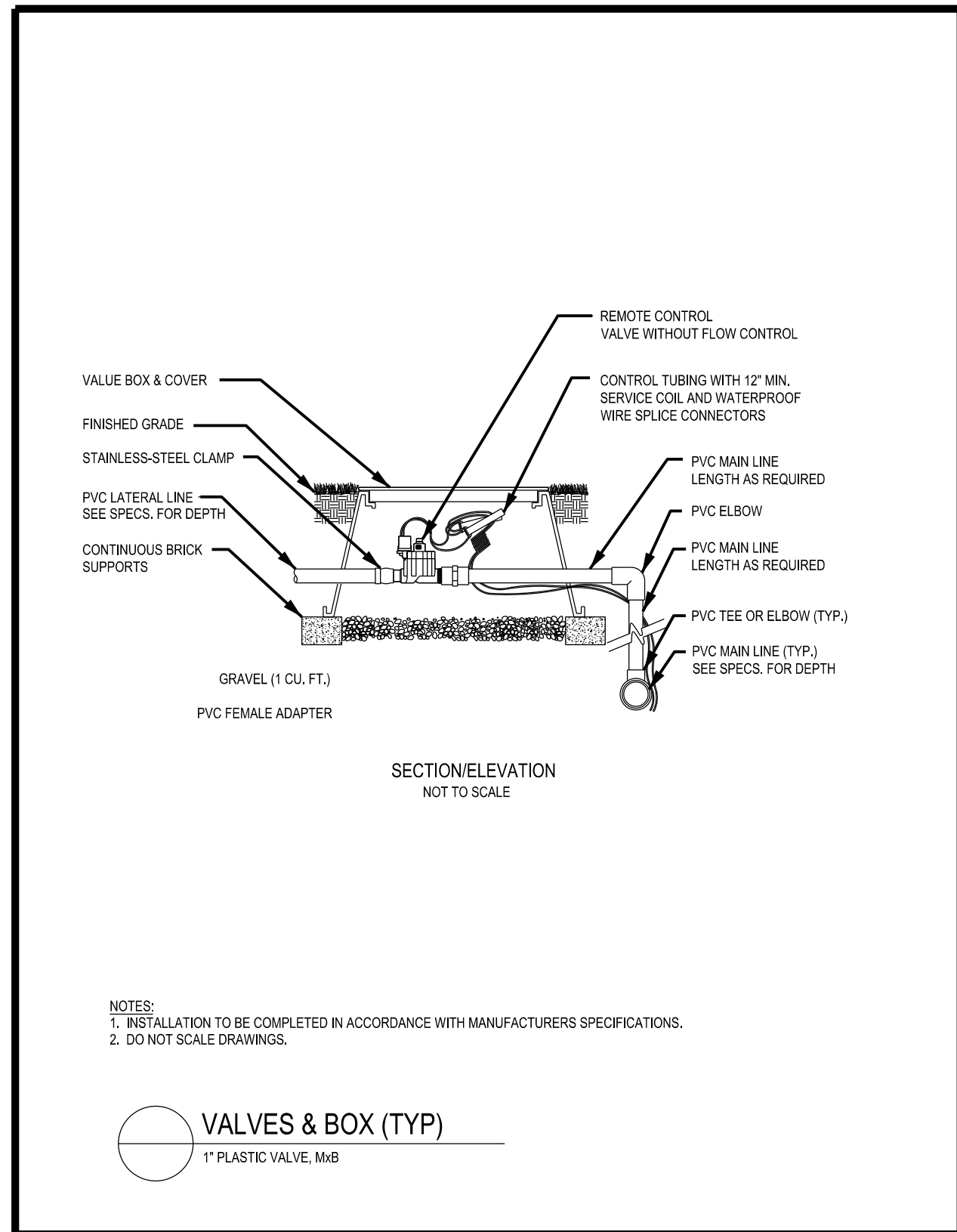
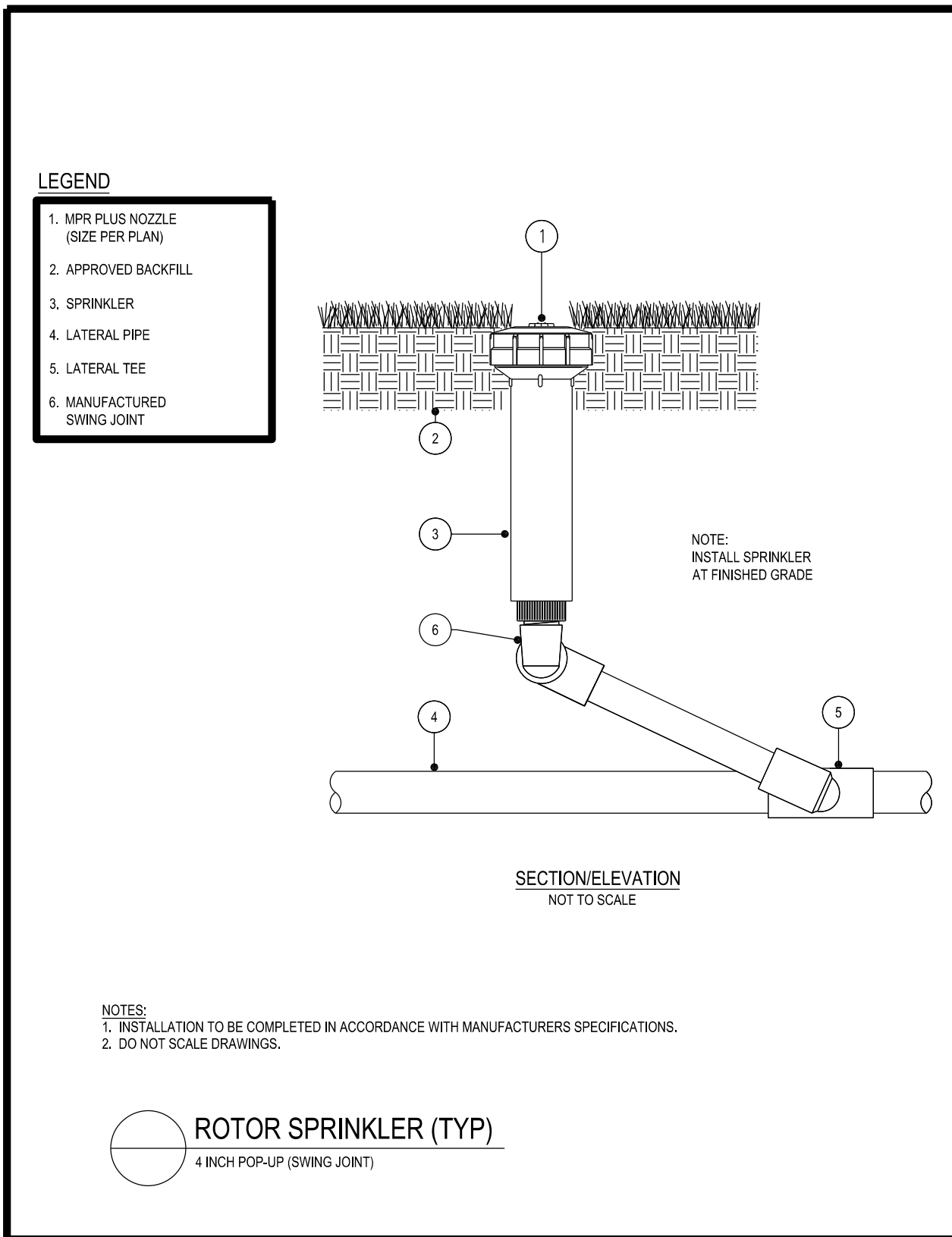
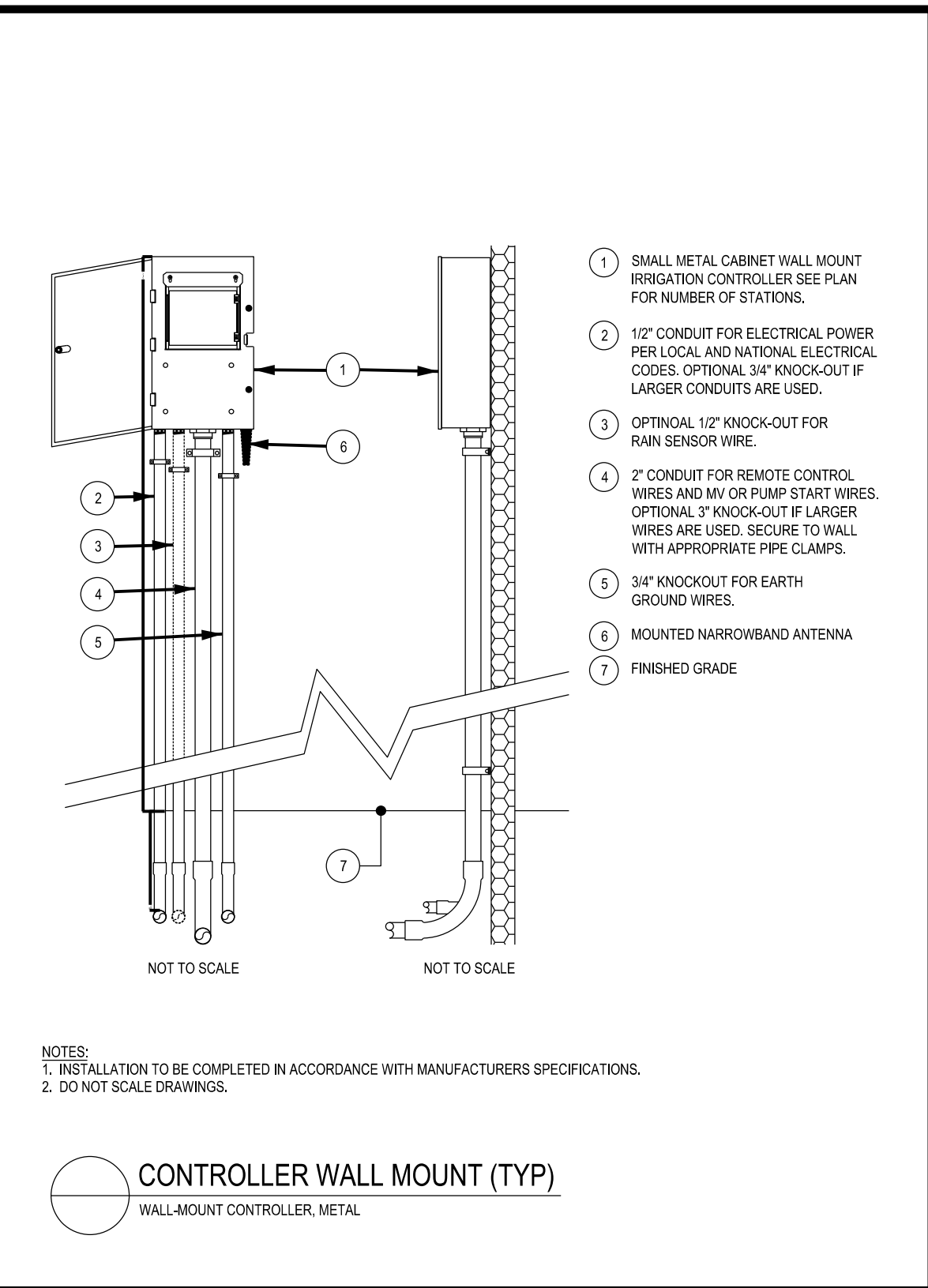
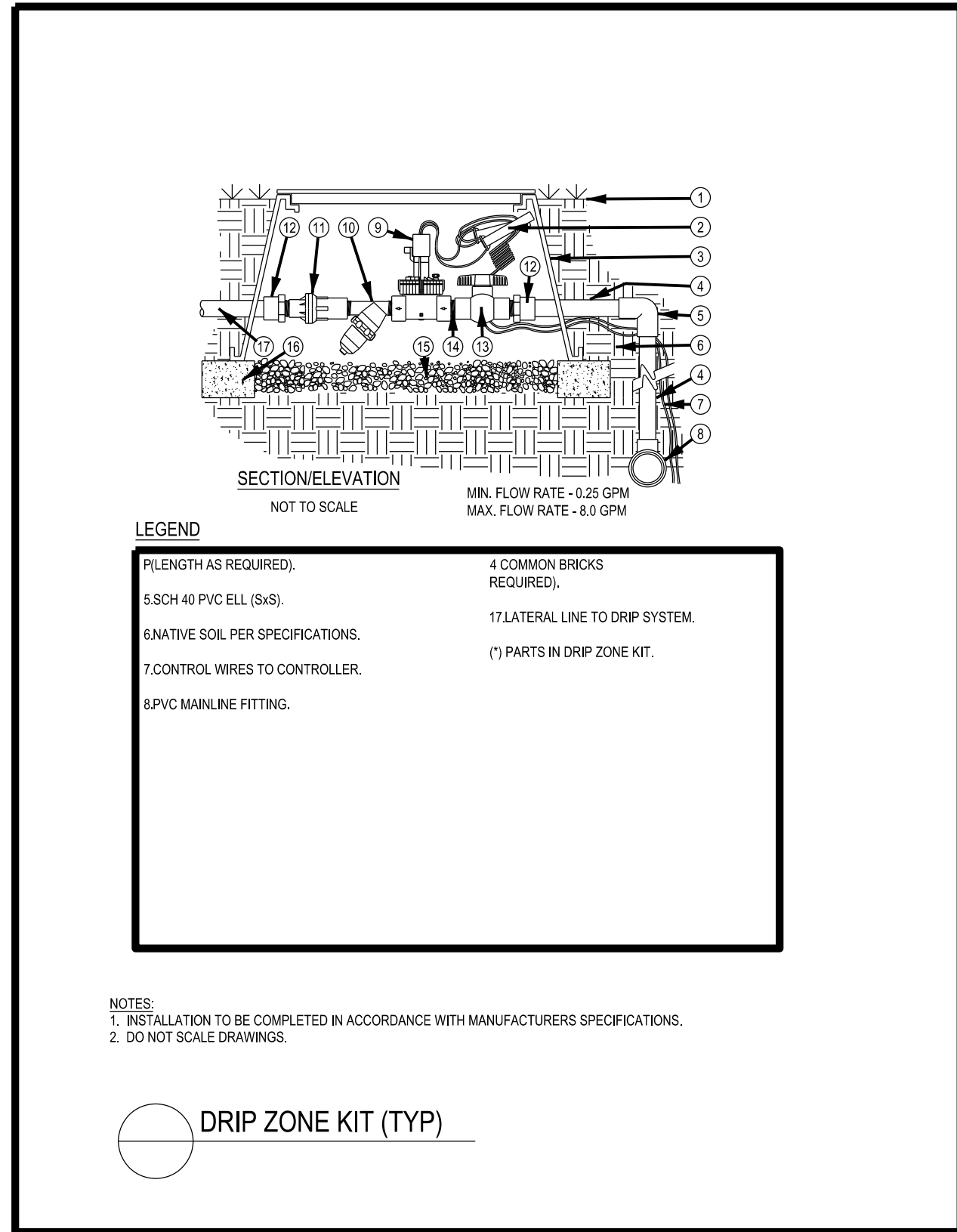
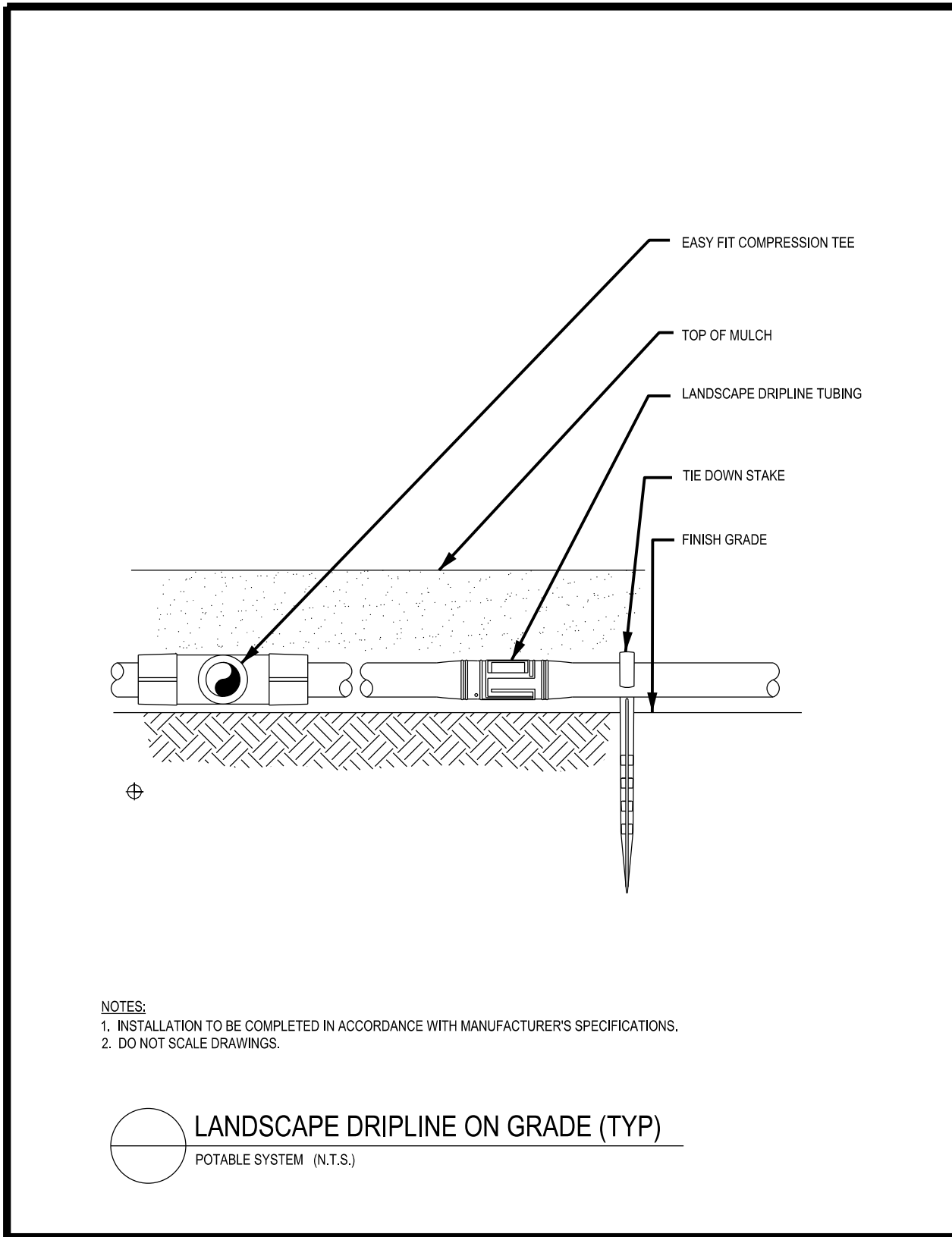
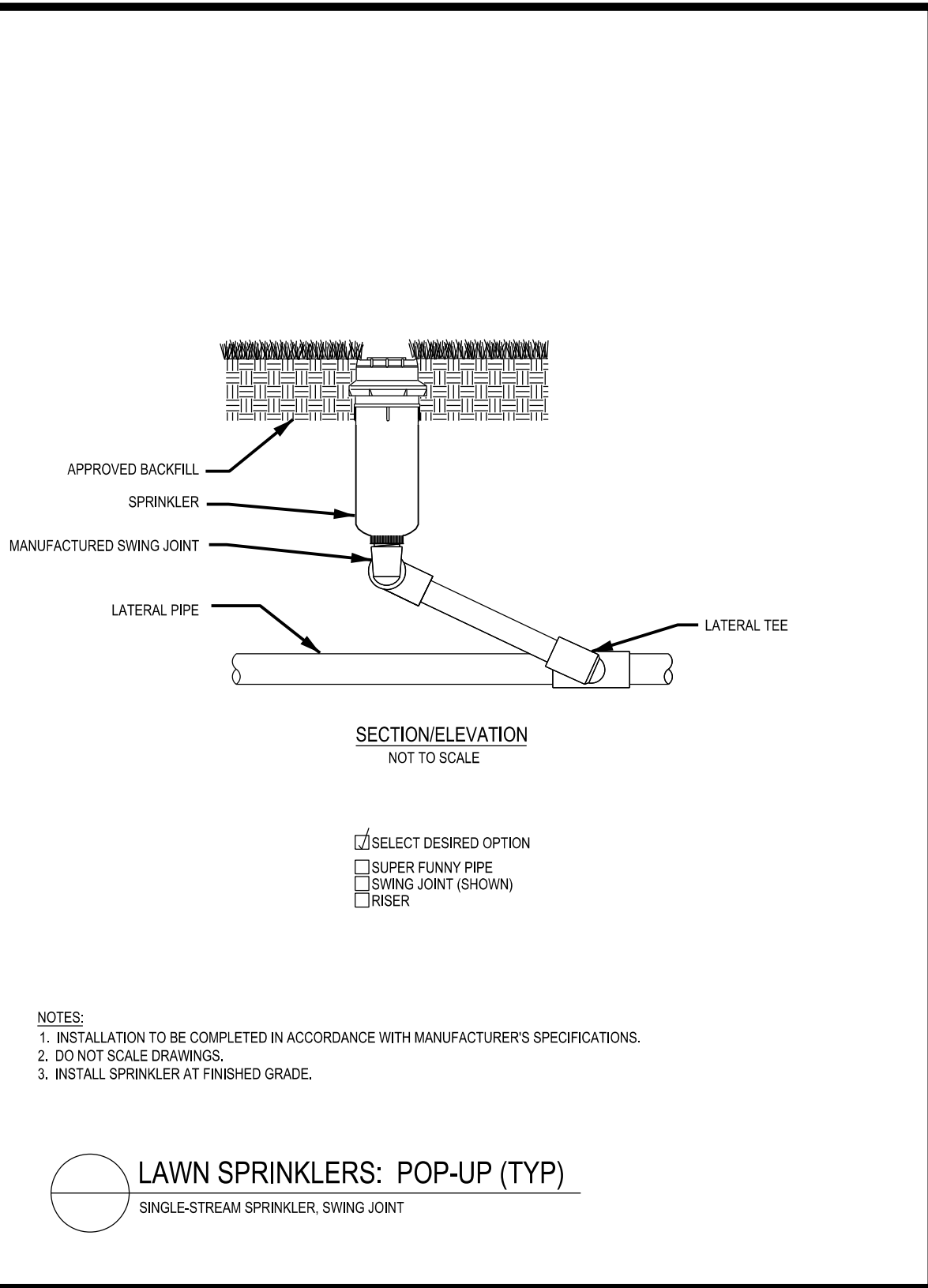
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IRRIGATION SPECS
SPECS. SHEET



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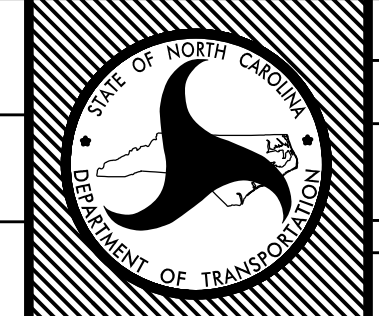
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IRRIGATION DEATILS
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