

501 SOUTH GREENSBORO STREET DEVELOPMENT OFFSITE ROADWAY IMPROVEMENTS PROJECT  
CARRBORO, ORANGE COUNTY, NORTH CAROLINA



## PROJECT LOCATION MAP

**CV-01**

GENERAL NOTES

STATEMENT OF WORK:

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A MODERN ROUNDABOUT INTERSECTION ON SOUTH GREENSBORO STREET AT ITS INTERSECTION WITH OLD PITTSBORO ROAD AND RAND ROAD. SPECIFIC IMPROVEMENTS ARE DETAILED HEREIN.

GENERAL:

CONTRACTOR IS TO SCHEDULE AND COORDINATE WORK BY OTHERS. CONTRACTOR SHALL VISIT THE SITE TO INFORM AND SATISFY HIMSELF OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCY BETWEEN THE SITE AND THOSE CONDITIONS REPRESENTED ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE ENGINEER IMMEDIATELY.

THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED FROM THE APPROPRIATE AUTHORITIES BEFORE BEGINNING WORK ON THE PROJECT.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NCDOT STD. NO. 848.04 USING RADII NOTED ON PLANS.

UTILITIES:

THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE AT 1-800-632-4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.

THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION. DAMAGED ITEMS SHALL BE REPAIRED TO AT LEAST THE QUALITY OF WORKMANSHIP FOUND IN THE ORIGINAL ITEM.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS. CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COORDINATION.

SUBSURFACE:

NO SUBSURFACE INVESTIGATIONS OR PLANS ARE AVAILABLE FOR THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

PAVEMENT MARKINGS:

ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH NCDOT STANDARDS. PAVEMENT MARKINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL HAVE THE PAVEMENT MARKINGS PRE-MARKED, INSPECTED, AND APPROVED BY NCDOT PERSONNEL PRIOR TO THE PLACEMENT OF FINAL PAVEMENT MARKINGS.

SIGNING:

ALL TRAFFIC SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGN POST INSTALLATION SHALL BE IN ACCORDANCE WITH NCDOT STANDARDS.

SIGN HOLES ARE TO BE CORED TO SUBGRADE AND FILLED WITH SAND.

EROSION CONTROL:

DISTURBED AREA = ###.## AC

ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE EROSION CONTROL PLAN (ECP) AND THE STATE OF NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE ECP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR NAMUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT AS WELL AS LIMITED TO THE AREAS OF DISTURBANCE.

CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETATINED AND PROPERLY TREATED OR DISPOSED.

SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOATATION BOOMS SHALL BE MAINTAINED ONSITE OR READILY AVAILABLE WITHIN A SPILL KIT TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OF TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR JURISDICTIONAL WATERS.

ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE EROSION CONTROL PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURING IN THESE AREAS.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OF MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. WASH WATER MUST BE DISPOSED OF PROPERLY.

ALL MATERIALS SPILLED, DROPPED WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.

CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM THE EROSION CONTROL BASINS AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

DUE TO THE GARDE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, DIVERSION DITCHES, ETC.) TO PREVENT EROSION.

ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY.

THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NCDENR EROSION AND SEDIMENT CONTROL REGULATIONS.

ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NCDENR EROSION AND SEDIMENT CONTROL REGULATIONS, U.S. DEPARTMENT OF AGRICULTURE, AND U.S. SOIL CONSERVATION SERVICE REGULATIONS.

THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.

APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.

STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NCDENR.

PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 15 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.

SEDIMENT BASINS, PERIMETER DIKES, SEIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

STABILIZATION MEASURES SHALL BE APPLIED TO STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

LIMITS OF GRADING SHOWN ON THE PLAN ARE MAXIMUM LIMITS FOR EROSION CONTROL PURPOSES ONLY.

ANY GRADING BEYOND THE DISTURBED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE NORTH CAROLINA EROSION CONTROL ORDINANCE, AND IS SUBJECT TO A FINE.

GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE NORTH CAROLINA EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

SLOPES SHALL BE GRADED NO STEEPER THAT 2:1, UNLESS OTHERWISE SPECIFIED.

ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.

IF NECESSARY, SLOPES THAT EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.

STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN FOURTEEN (14) DAYS.

ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE-HALF (1/2) INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED, AS NECESSARY.

PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.

ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.

TEMPORARY DEVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR EVERT SEDIMENT - LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS. TEMPORARY SEDIMENT BASIN MUST BE MAINTAINED PRIOR TO TRANSITIONING TO PERMANENT DRY OR WET BASINS.

ANY STOCKPILING OF SOIL ON PAVED SURFACES SHALL HAVE SAND AND/OR ROCK SCREENINGS UNDERNEATH AREA.

ANY AREAS USED FOR STAGING OR STOCKPILING OUTSIDE OF PERMITTED LIMITS WILL REQUIRE A SEPARATE EROSION CONTROL PLAN.

INLET PROTECTION IS REQUIRED FOR ALL PHASES OF THE PROJECT.

INLET PROTECTION IS REQUIRED FOR ALL INLETS LOCATED IN THE WORKING AREA.

OUTLET PROTECTION IS REQUIRED FOR ALL OUTLETS LOCATED IN THE WORKING AREA.

ADDITIONAL CONSTRUCTION ENTRANCES MAY BE REQUIRED BASED ON FIELD CONDITIONS.

ADDITIONAL SILT FENCING AND EROSION CONTROL MEASURES MAY BE REQUIRED BASED ON FIELD CONDITIONS.

ANY OFFSITE BORROW MATERIAL REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN.

MAINTENANCE:

ALL MEASURES STATED ON THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.

SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.

THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAIANED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED AND DISPOSED OF PROPERLY FROM SEDIMENT BASINS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

CONTRACTOR SHALL MAINTAIN AN EROSION CONTROL INSPECTION AND MAINTENANCE LOG ON SITE IN COMPLIANCE WITH NCDENR REQUIREMENTS.

SEQUENCE

PHASE ONE

1. OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM NCDENR.
2. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH THE EROSION CONTROL INSPECTOR TO DISCUSS EROSION CONTROL MEASURES.
3. INSTALL EROSION CONTROL MEASURES.
4. CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, INSPECTOR ISSUES THE GRADING PERMIT AND CLEARING AND GRUBBING MAY BEGIN.
5. CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
6. CONTRACTOR SHALL MEET WITH THE EROSION CONTROL INSPECTOR PRIOR TO COMMENCING WITH PHASE TWO OF EROSION CONTROL MEASURES.

PHASE TWO

1. OBTAIN PHASE ONE EROSION CONTROL APPROVAL.
2. CONSTRUCTION PHASING TO FOLLOW TRAFFIC CONTROL PLAN.
3. CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
4. STABILIZE SLOPES AS AREAS ARE BROUGHT TO FINISHED GRADE.

SEEDING AND MULCHING NOTES:

SEEDBED PREPARATION:

CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.

RIP THE ENTIRE AREA TO 6 INCHES DEPTH.

REMOVE ALL LOOSE, ROCK, ROOTS AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLE SMOOTH AND UNIFORM.

APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW\*).

CONTINUE TILLAGE UNTIL A WELL PULVERIZED, FIRM REASONABLE UNIFORM SEEDBED IS PREPARED, 4 TO 6 INCHES DEEP.

SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEEDING. SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER.

MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.

INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF THE STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.

CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

TABLE 6.10a TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING	
SEEDING MIXTURE	
SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120
ANNUAL LESPEDEZA (KOBE IN	50
PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	
OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.	
SEEDING DATES	
MOUNTAINS:	ABOVE 2500 FT: FEB. 15-MAY 15 BELOW 2500 FT: FEB. 1-MAY 1
PIEDMONT:	JAN. 1-MAY 1
COASTAL PLAIN:	DEC. 1-APR.15
SOIL AMENDMENTS	
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.	
MULCH	
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.	
MAINTENANCE	
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.	

THE ABOVE TABLE WAS TAKEN FROM THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

NOT FOR  
CONSTRUCTION

PRELIMINARY

DAVENPORT



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PROJECT:	13-414	REVISIONS		NO.	DATE	DESCRIPTION		DESIGNED BY:	MSC	DRAWN BY:	MSC	CHECKED BY:	JGT	SCALE:	AS NOTED
		DESCRIPTION													

CLIENT: WOODHILL NC, LLC  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT: 501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE: GENERAL NOTES

SHEET NO.  
GN-01



GENERAL NOTES (CONTINUED)

TABLE 6.10b TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER	
SEEDING MIXTURE	
SPECIES	RATE (LB/ACRE)
GERMAN MILLET	40
IN THE PEIDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.	
SEEDING DATES	
MOUNTAINS:	MAY 15-AUG. 15
PIEDMONT:	MAY 1-AUG. 15
COASTAL PLAIN:	APR. 15-AUG. 15
SOIL AMENDMENTS	
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.	
MULCH	
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.	
MAINTENANCE	
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.	

THE ABOVE TABLE WAS TAKEN FROM THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

TABLE 6.10c TEMPORARY SEEDING RECOMMENDATIONS FOR FALL	
SEEING MIXTURE	
SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120
SEEDING DATES	
MOUNTAINS:	AUG. 15-DEC. 15
PIEDMONT:	AUG.15-DEC. 30
COASTAL PLAIN:	AUG. 15-DEC. 30
SOIL AMENDMENTS	
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1000 LB/ACRE 10-10-10 FERTILIZER.	
MULCH	
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.	
MAINTENANCE	
REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.	

THE ABOVE TABLE WAS TAKEN FROM THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

**TRAFFIC CONTROL:**  
TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH NCDOT STANDARDS AND THE TRAFFIC CONTROL PLANS INCLUDED HEREIN.

**SURVEY:**  
SURVEY WAS PROVIDED BY FREEHOLD LAND SURVEYS, INC. THE CONTRACTOR IS TO COORDINATE WITH THE SURVEYOR PRIOR TO GEOMETRIC LAYOUT.

**SAWCUTS:**  
THE CONTRACTOR SHALL SAWCUT EXISTING ASPHALT AND/OR CONCRETE SURFACES PRIOR TO REMOVAL UNLESS DIRECTED BY THE ENGINEER. SAWCUT WIDTH SHALL BE 1 FOOT MINIMUM FROM THE EXISITING OR PROPOSED EDGE OF ASPHALT PAVEMENT.

**QUALITY ASSURANCE:**  
SATISFYING QUALITY ASSURANCE PERMIT REQUIREMENTS IS NECESSARY PRIOR TO NCDOT ACCEPTING PROJECT IMPROVEMENTS WITHIN NCDOT R/W AND SUBSEQUENTLY RELEASING THE PERMIT AND PERFORMANCE BOND.  
THE OWNER IS RESPONSIBLE FOR RETAINING THE APPROPRIATE PROFESSIONALS FOR ANY QUALITY ASSURANCE CERTIFICATIONS REQUIRED UNDER THE PERMIT. THESE MAY INCLUDE CERTIFICATION MEMORANDA, COMPLETION OF QMS (MV1 & MV2) FORMS, CERTAIN INSPECTION AND TESTING REPORTS, AS WELL AS SUPPORTING DOCUMENTATION AND CALCULATIONS.  
VERIFICATIONS INCLUDE, BUT ARE NOT LIMITED TO, SUB-GRADE, PAVEMENT STRUCTURE, DRAINAGE, AND TRAFFIC CONTROL ITEMS.  
CONTRACTOR SHALL ENSURE THE OWNER IS AWARE OF AND HAS PROPERLY ADDRESSED THESE PERMIT REQUIREMENTS.  
CONTRACTOR SHALL PROVIDE ADVANCED NOTIFICATION TO THE RESPECTIVE PROFESSIONALS RESPONSIBLE FOR CONSTRUCTION QUALITY ASSURANCE.

STANDARDS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N. C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

200.02	METHOD OF CLEARING - METHOD II
300.01	METHOD OF PIPE INSTALLATION
310.02	PARALLEL PIPE END SECTION
840.01	BRICK CATCH BASIN
840.02	CONCRETE CATCH BASIN
840.03	FRAME, GRATES, AND HOOD
840.32	BRICK JUNCTION BOX
846.01	CONCRETE CURB, GUTTER AND CURB & GUTTER
848.01	CONCRETE SIDEWALK
848.02	DRIVEWAY TURNOUT
848.04	STREET TURNOUT
848.05	CURB RAMP - PROPOSED CURB AND GUTTER
848.06	CURB RAMP - EXISTING CURB AND GUTTER
852.01	CONCRETE ISLANDS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS - MOUNTING HEIGHT & LATERAL CLEARANCE
1110.02	PORTABLE WORK ZONE SIGNS - MOUNTING HEIGHT & LATERAL CLEARANCE
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	EXIT AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAINTED ISLANDS
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION
1605.01	TEMPORARY SILT FENCE
1607.01	GRAVEL CONSTRUCTION ENTRANCE
1632.03	ROCK INLET SEDIMENT TRAP TYPE 'C'
1633.02	TEMPORARY ROCK SILT CHECK TYPE 'B'

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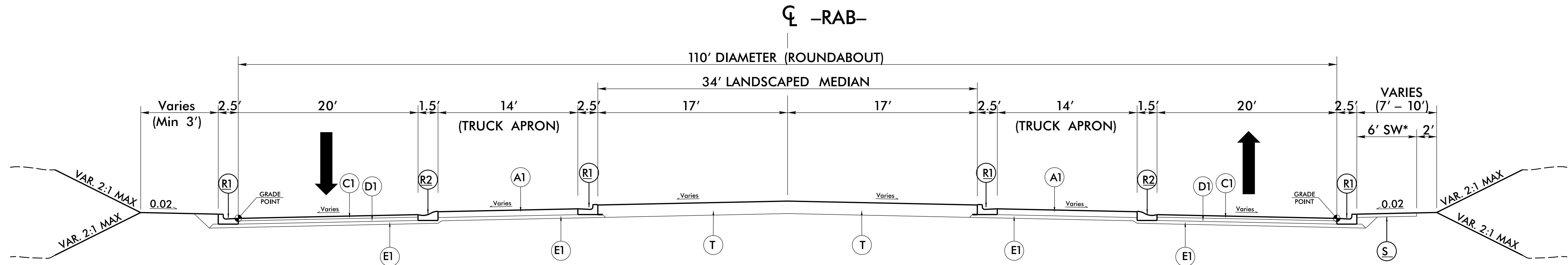
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	NO.	DATE
REVISIONS	DESCRIPTION	
	NO.	DATE
DESIGNED BY:	MSC	
	NO.	DATE
DRAWN BY:	MSC	
	NO.	DATE
CHECKED BY:	JGT	
	NO.	DATE
SCALE:	AS NOTED	
	NO.	DATE

CLIENT:  
**WOODHILL NC, LLC**  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT:  
**501 SOUTH GREENSBORO  
STREET DEVELOPMENT**

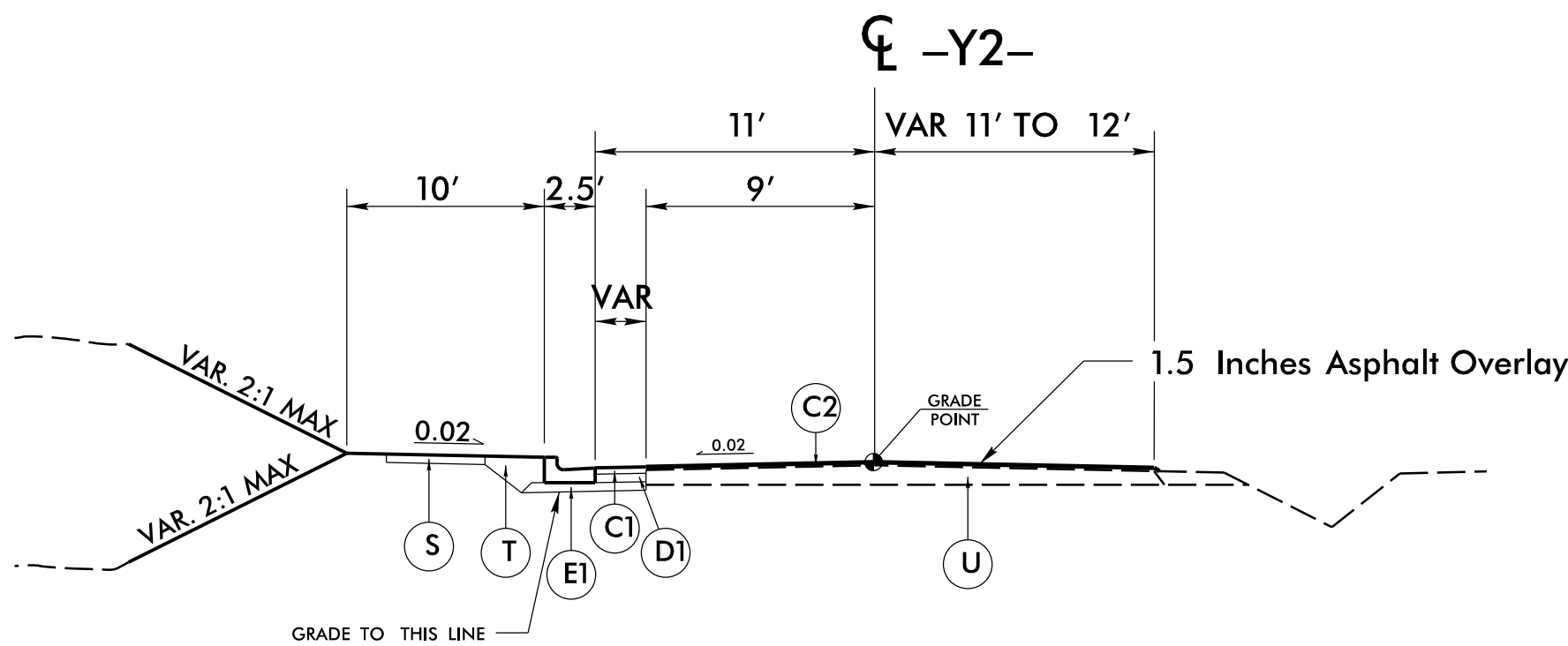
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SHEET NO.  
**GN-02**



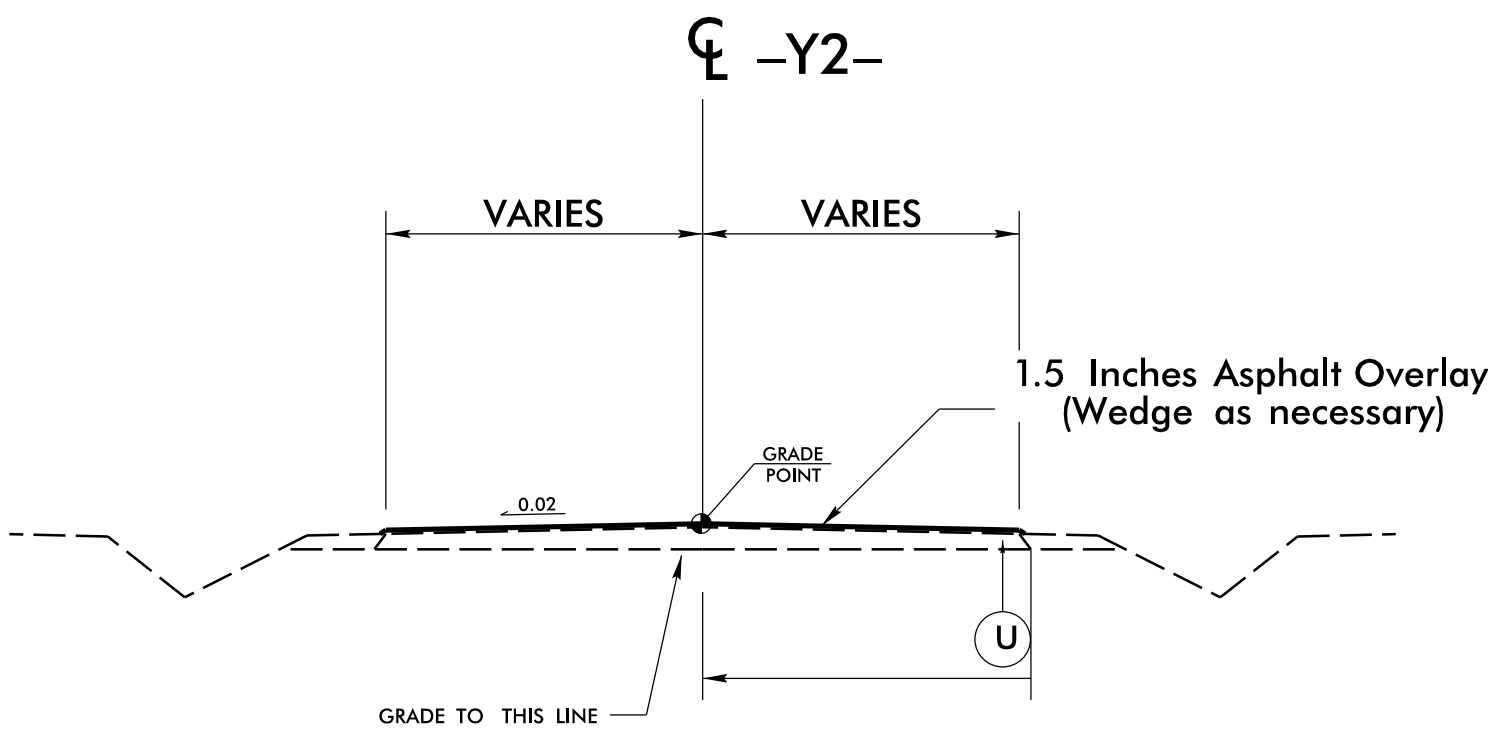
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\* - 5' SIDEWALK, WHEN NOT  
LOCATED AT BACK OF CURB



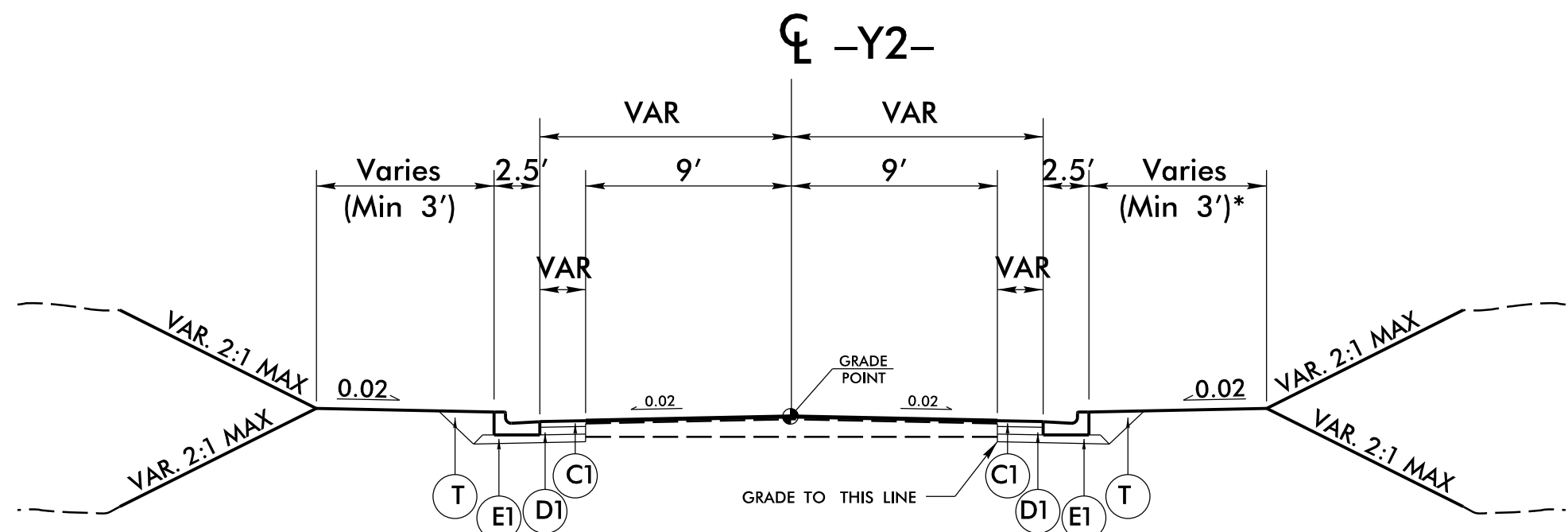
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-Y3- STA 24+72 TO STA 25+41



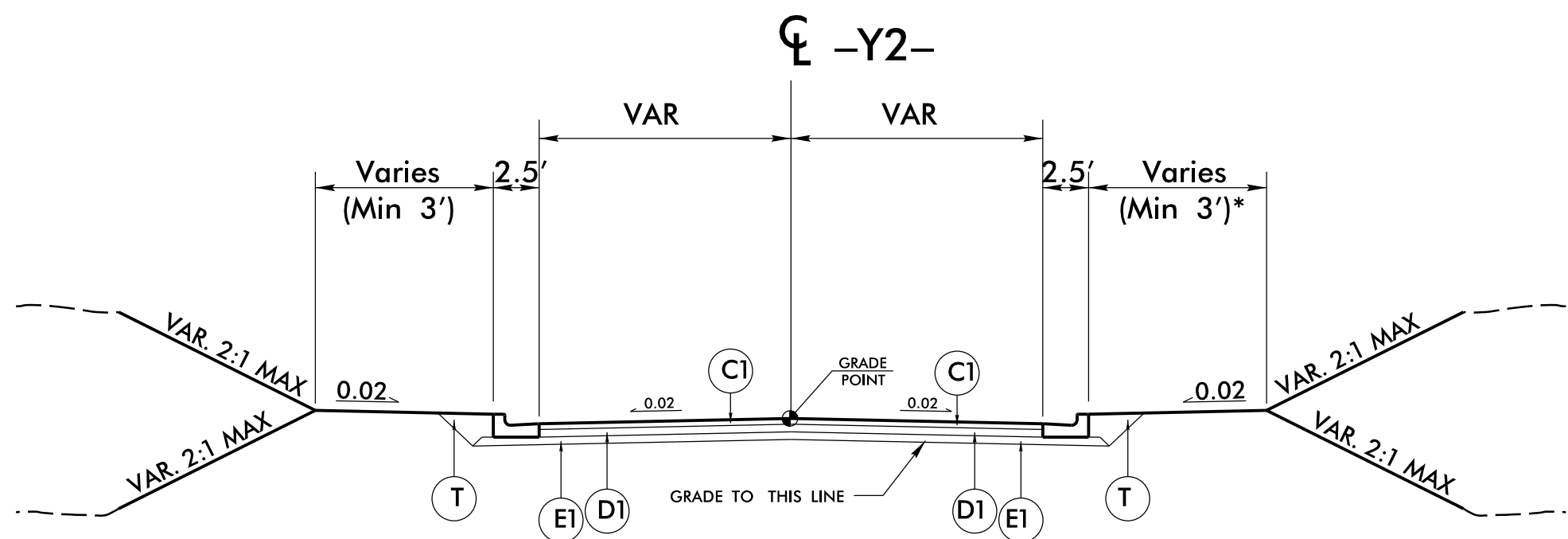
TYPICAL SECTION NO. 3

-Y1- STA 15+62.50 TO STA 16+70  
-Y4- 29+40 TO STA 29+85



TYPICAL SECTION NO. 4

-Y1- STA 15+00 TO STA 15+62.50  
-Y2- STA 20+00 TO STA 22+00  
-Y3- STA 25+41 TO STA 26+25  
-Y4- STA 29+85 TO STA 31+00



TYPICAL SECTION NO. 5

-Y1- STA 15+00 TO STA 15+62.50  
-Y2- STA 20+00 TO STA 22+00  
-Y3- STA 25+41 TO STA 26+25  
-Y4- STA 29+85 TO STA 31+00

\* 10' BERM WHEN SIDEWALK IS PRESENT  
(SEE PLANS & XSECTS FOR SIDEWALK LOCATIONS)

PAVEMENT SCHEDULE	
A1	7" PORTLAND CEMENT CONCRETE PAVEMENT
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. TO BE PLACED IN TWO LIFTS 1.5" DEPTH EACH.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE (OVERLAY), TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
R1	2'-6" CURB AND GUTTER
R2	1'-6" CURB AND GUTTER
S_	CONCRETE SIDEWALK (MIN. 4" THICKNESS)
T_	EARTH MATERIAL.
U_	EXISTING PAVEMENT.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

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REVISIONS		PROJECT: 13-414	
NO.	DATE	DESCRIPTION	DATE: 01/09/15
		DESCRIPTION	DESIGNED BY: MSC
			DRAWN BY: MSC
			CHECKED BY: JGT
			SCALE: AS NOTED

CLIENT:  
WOODHILL NC, LLC  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT:  
501 SOUTH GREENSBORO  
STREET DEVELOPMENT

TITLE:  
TYPICAL SECTIONS

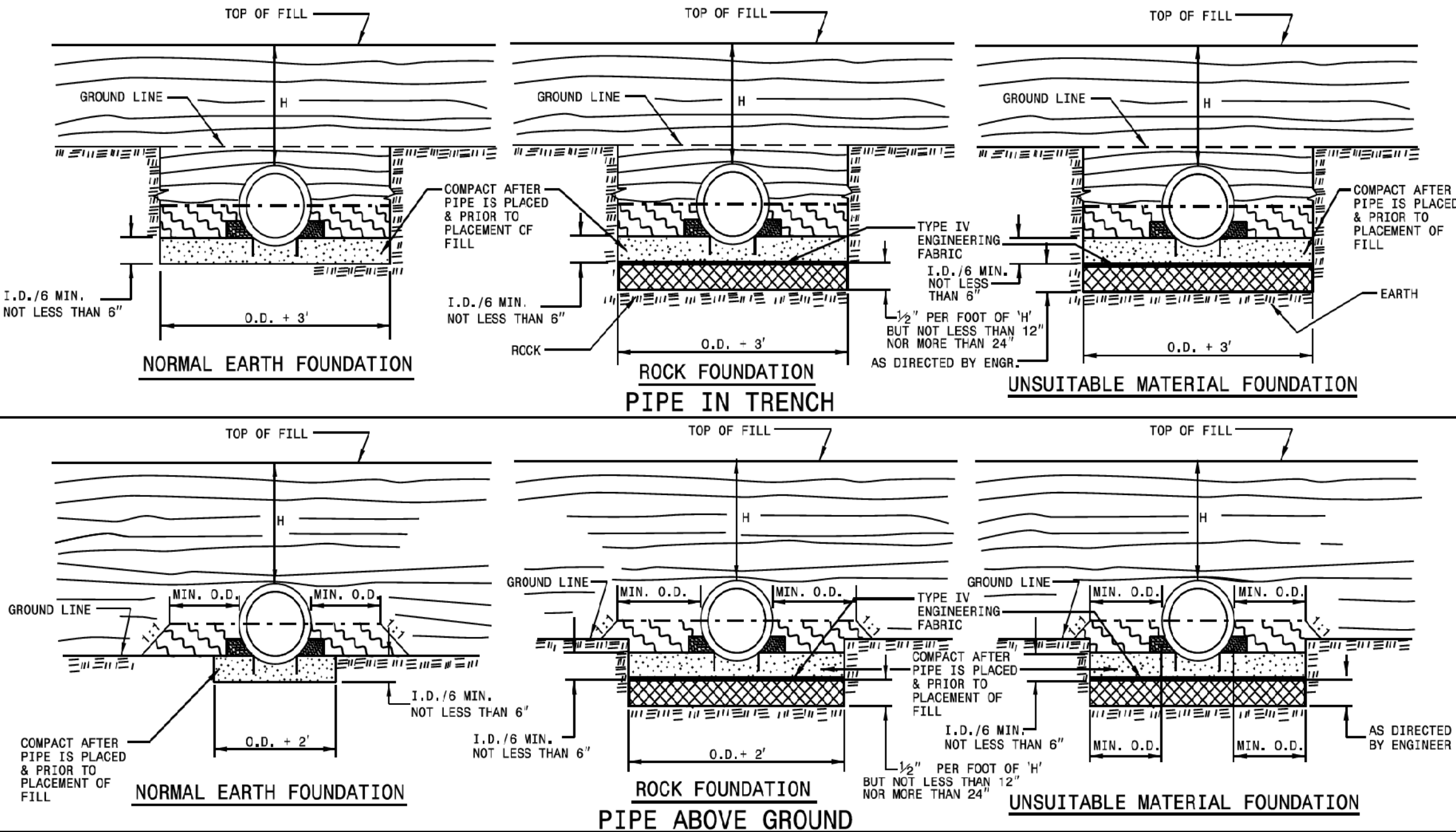
SHEET NO.  
TS-01



STATE OF  
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DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
METHOD OF PIPE INSTALLATION  
RIGID PIPE

SHEET 2 OF 3  
300.01



GENERAL NOTES:  
I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.  
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.  
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

--- SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTON.

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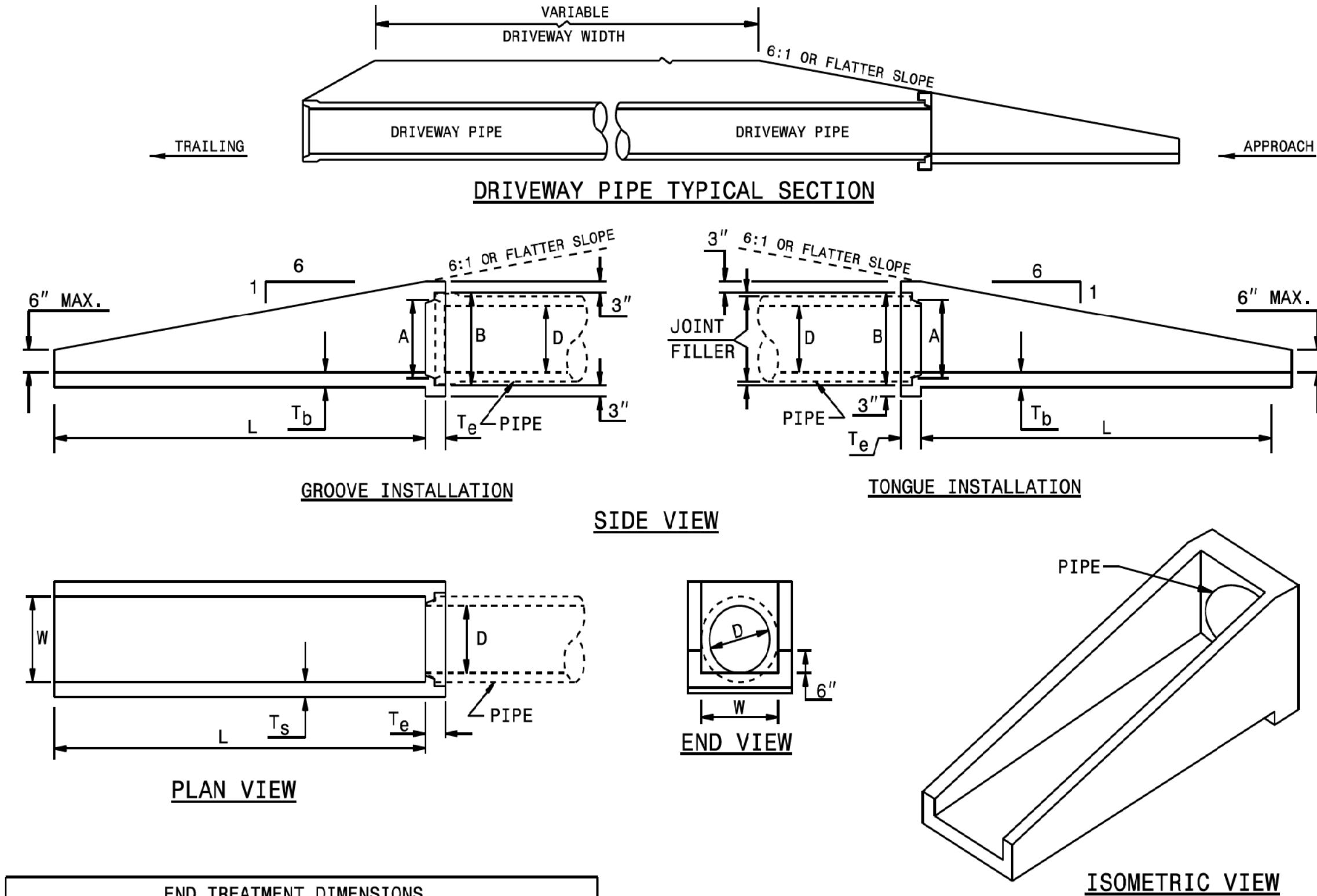
ENGLISH STANDARD DRAWING FOR  
METHOD OF PIPE INSTALLATION  
RIGID PIPE

SHEET 2 OF 3  
300.01

STATE OF  
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RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
PARALLEL PIPE END SECTION  
PRECAST CONCRETE SECTION FOR 15" TO 24" PIPE

SHEET 1 OF 1  
310.02



END TREATMENT DIMENSIONS							
D	L	W	T <sub>s</sub>	T <sub>b</sub>	T <sub>e</sub>	A	B
15"	7'-6"	19"	4"	4"	6"	17 3/4"	20 7/8"
18"	9'-0"	23"	4"	4"	6"	21 1/4"	25"
24"	12'-6"	30"	4"	4"	6"	27 3/8"	32"

NOTES:  
1. CONSTRUCT PIPE END SECTION USING #4 REBAR SPACED 9" EACH WAY AND MEET ALL REQUIREMENTS OF STD. SPEC. 310.  
2. CHAMFER ALL EXPOSED CORNERS 3/4".

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ENGLISH STANDARD DRAWING FOR  
PARALLEL PIPE END SECTION  
PRECAST CONCRETE SECTION FOR 15" TO 24" PIPE

SHEET 1 OF 1  
310.02

## FLEXIBLE PIPE

Round Corrugated Steel Pipe 2 2/3 x 1/2 corrugation **							
Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet)					
		(Ga)	16	14	12	10	8
12	12	16	204	256			
15	12	18	204	256			
18	12	18	135	169	239		
21	12	18	115	145	204		
24	12	18	100	126	178		
30	12	18	79	100	142		
36	12	18	65	83	117	152	
42	12	18	55	70	100	130	160
48	12	18	48	61	87	113	139
54	12	18		54	77	100	123
60	12	18			69	90	111
66	12	18				81	100
72	12	18				74	91
78	12	18					81
84	12	18					69

Round Corrugated Aluminum Pipe 2 2/3 x 1/2 corrugation **							
Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet)					
		(Ga)	16	14	12	10	8
12	12	16	123	155	218	281	344
15	12	18	98	123	174	224	275
18	12	18	81	102	144	187	228
21	12	18	69	87	123	160	195
24	12	18	60	76	108	139	171
27	12	18		67	95	123	151
30	12	18		60	85	111	136
36	12	18		50	71	92	113
42	12	18			60	78	96
48	12	18			52	68	84
54	12	18			46	50	74
60	12	18				50	62
66	12	18					51
72	12	18					41

\*\* FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

CSP - AASHTO M36  
CAAP - AASHTO M196  
HDPE - AASHTO M294  
PVC - ASTM F949 or AASHTO M304

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS  
1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

HDPE - \* (Minimum fill) 2' for pipe diameters  $\geq 12"$  and  $\leq 60"$   
\* (Maximum fill) 20' for pipe diameters  $\leq 24"$   
17' for pipe diameters  $\geq 30"$  and  $\leq 60"$

PVC - \* (Minimum fill) 2' for pipe diameters  $\geq 12"$  and  $\leq 36"$   
\* (Maximum fill) 30' for pipe diameters  $\geq 12"$  and  $\leq 36"$

\* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

## RIGID PIPE

RCP - \* (Minimum fill) 1' for Class IV & CLASS V  
2' for Class III & Class II

\* (Maximum fill) 10' - Class II pipe  
20' - Class III pipe  
30' - Class IV pipe  
40' - Class V pipe

(For fills > 40' & < 80' use LRFD Direct Design Method)

\* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS  
1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

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REVISIONS		PROJECT:	13-414
NO.	DATE	DESCRIPTION	
		DESIGNED BY:	MSC
		DRAWN BY:	MSC
		CHECKED BY:	JGT
		SCALE:	AS NOTED

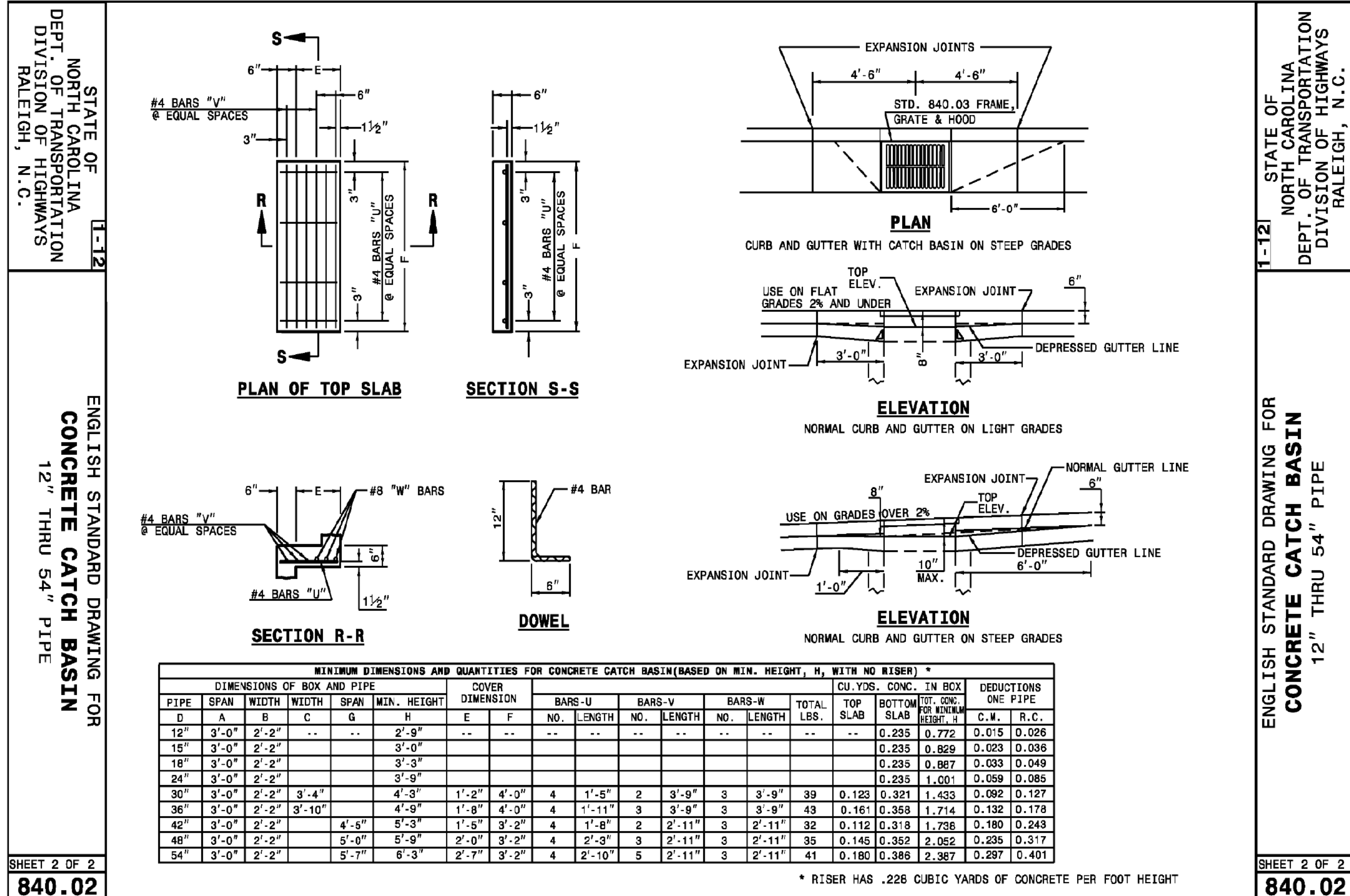
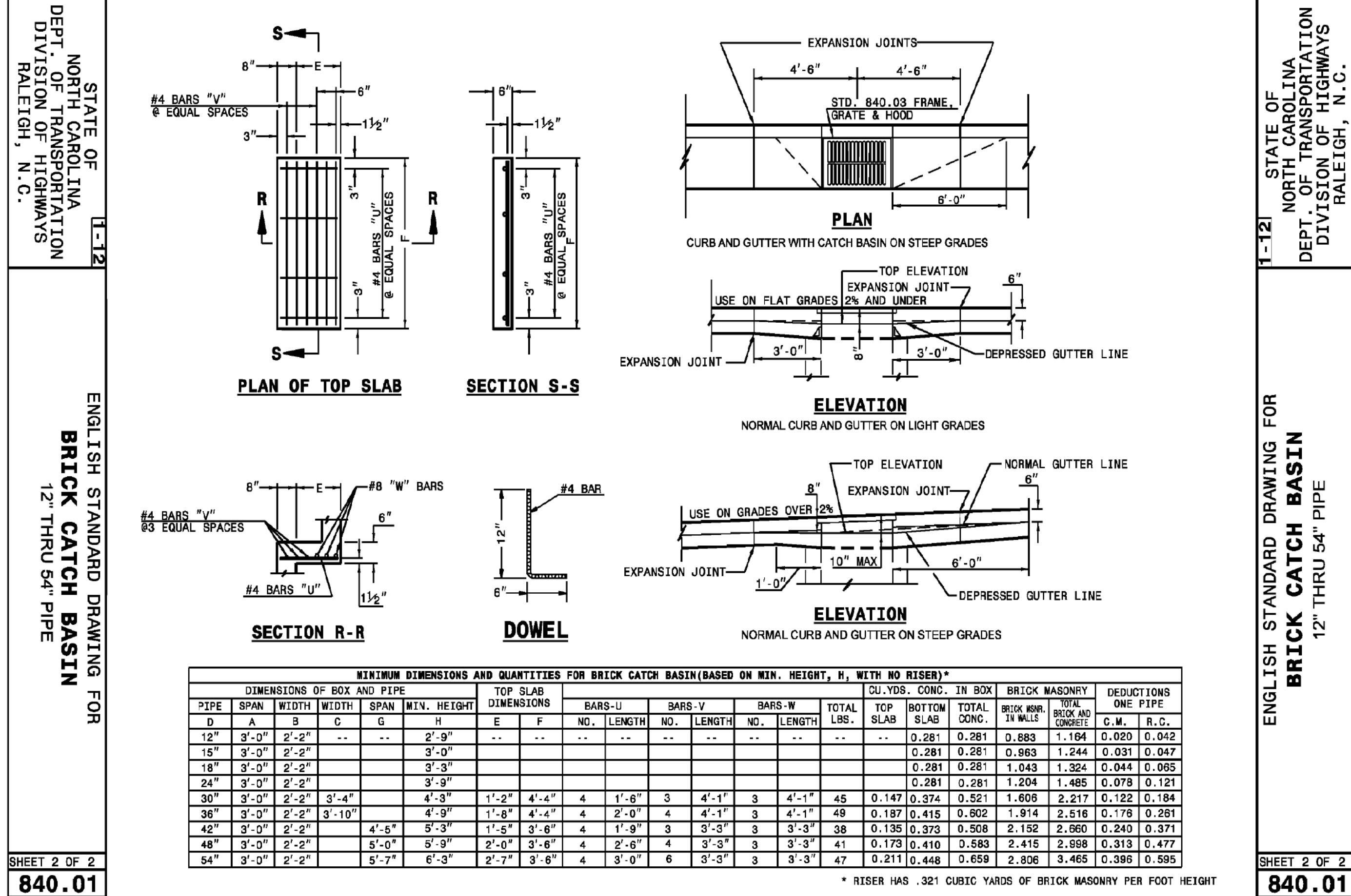
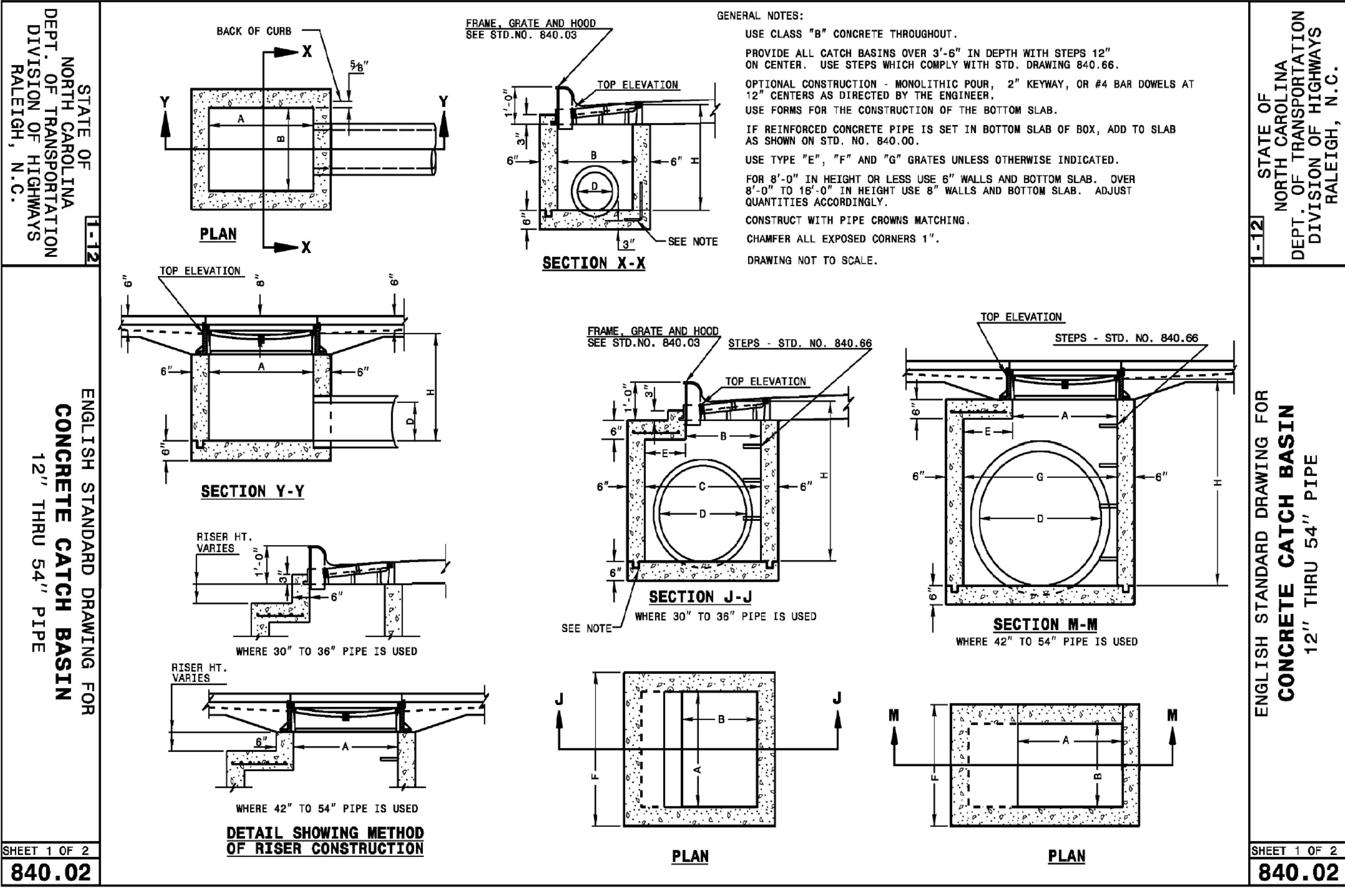
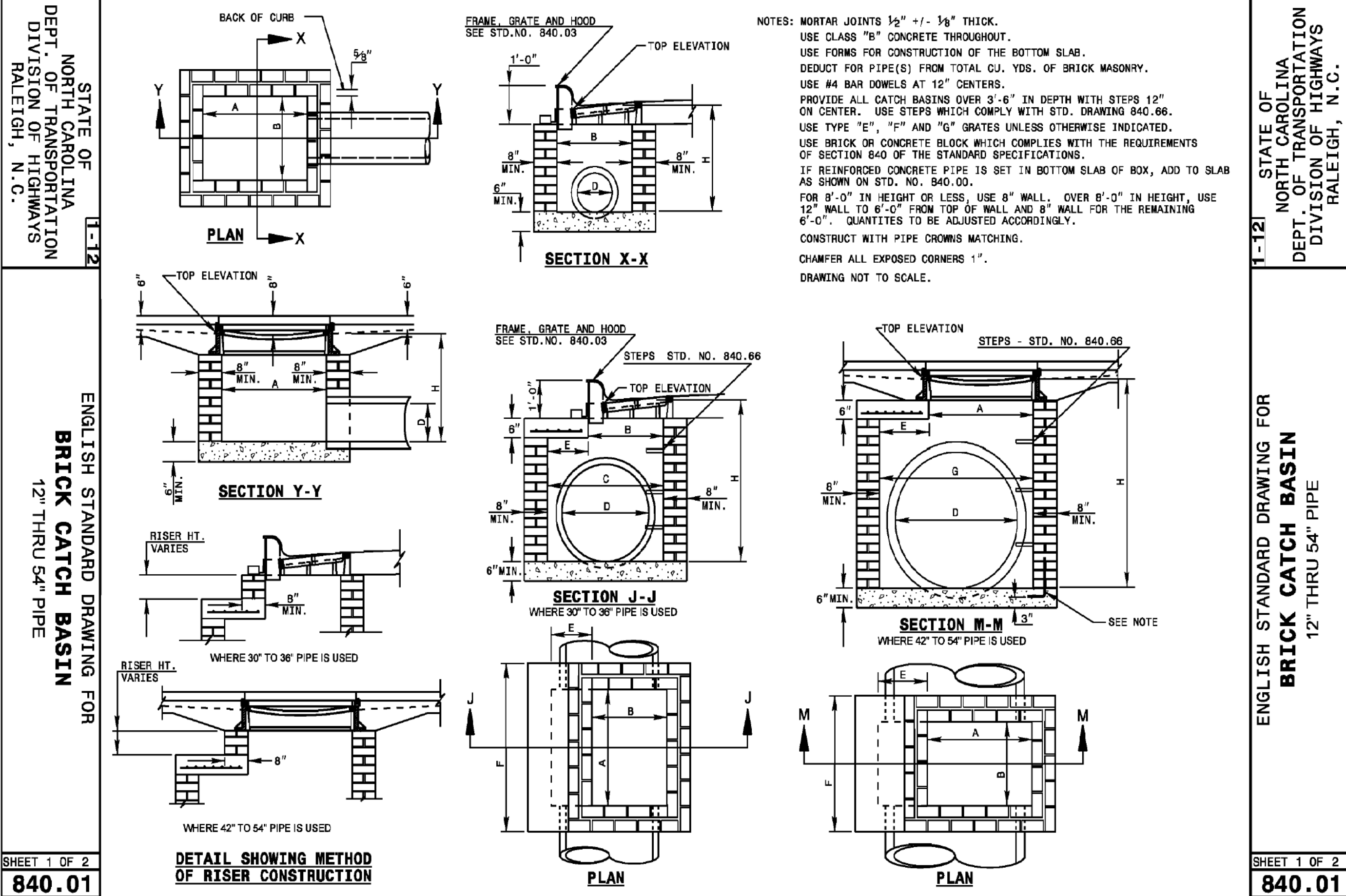
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501 SOUTH GREENSBORO  
STREET DEVELOPMENT

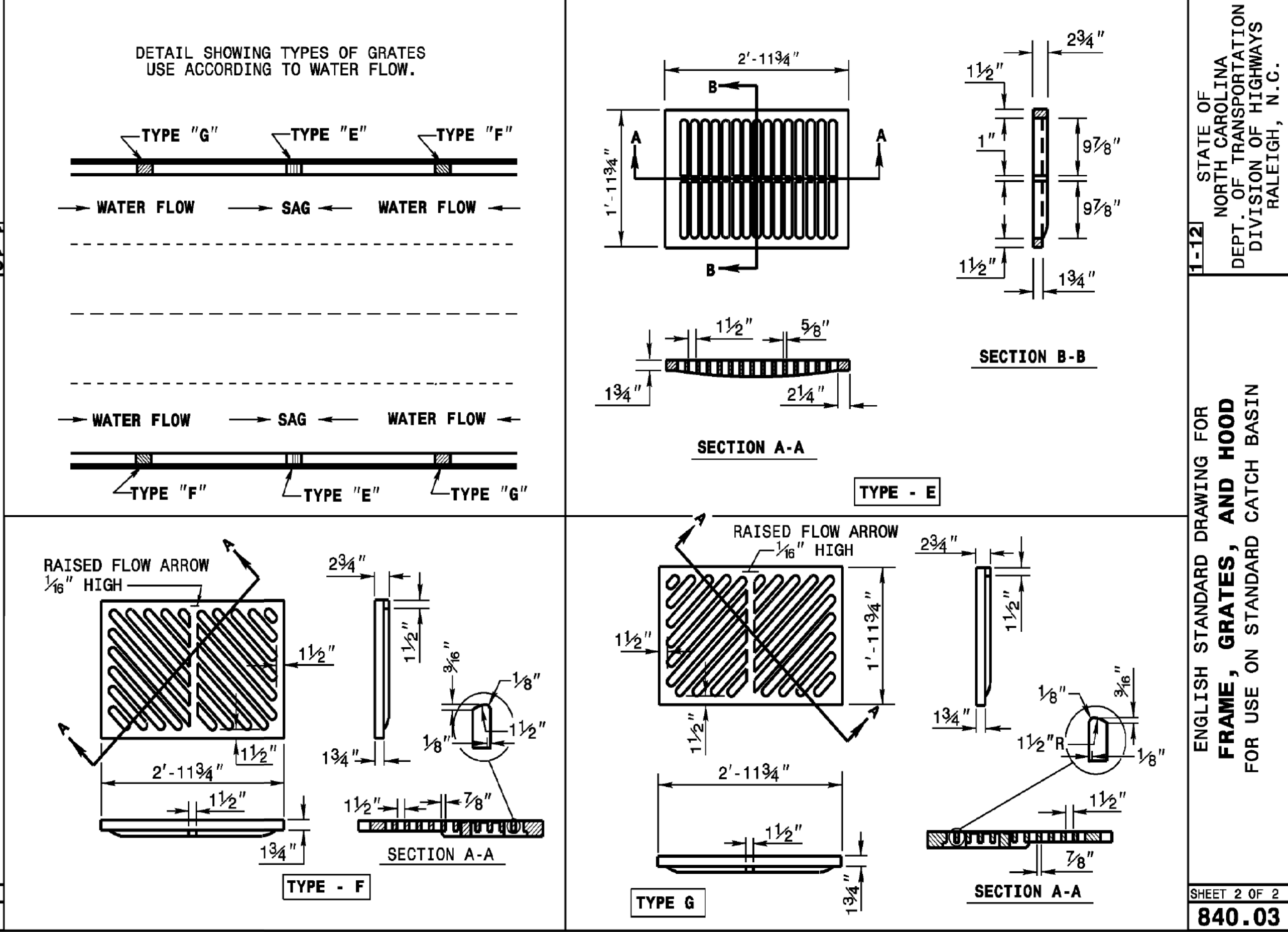
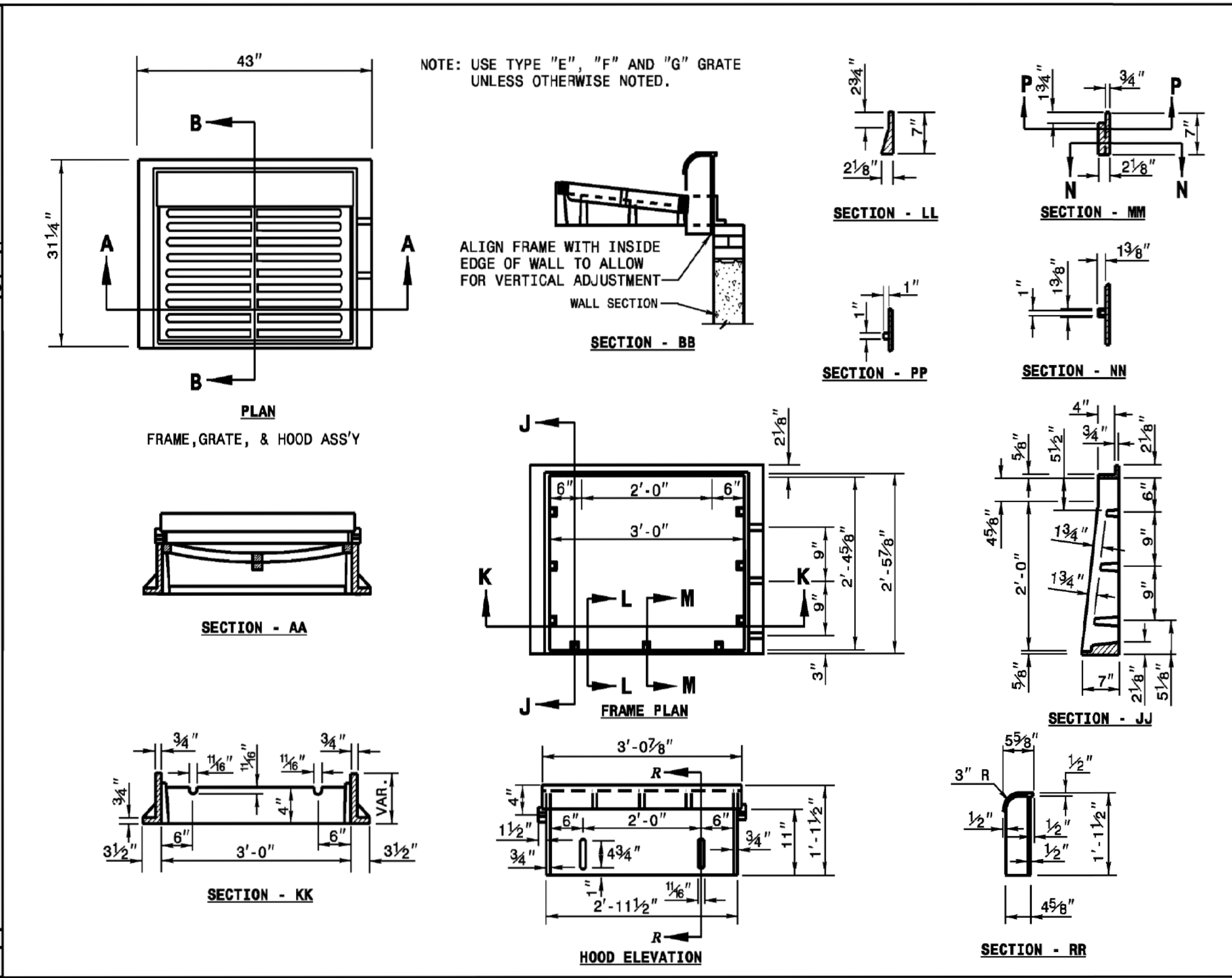
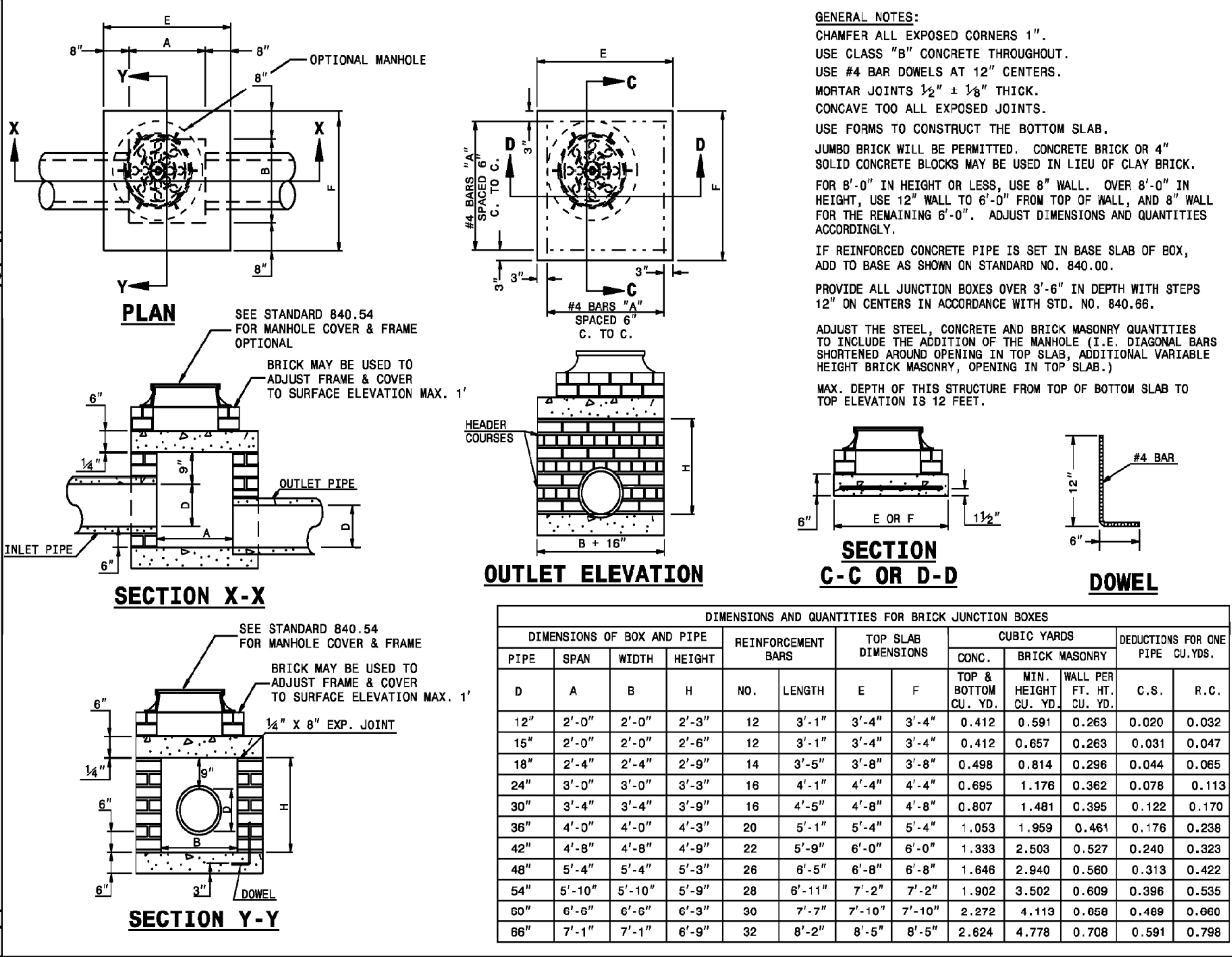
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SHEET NO.

DT-01

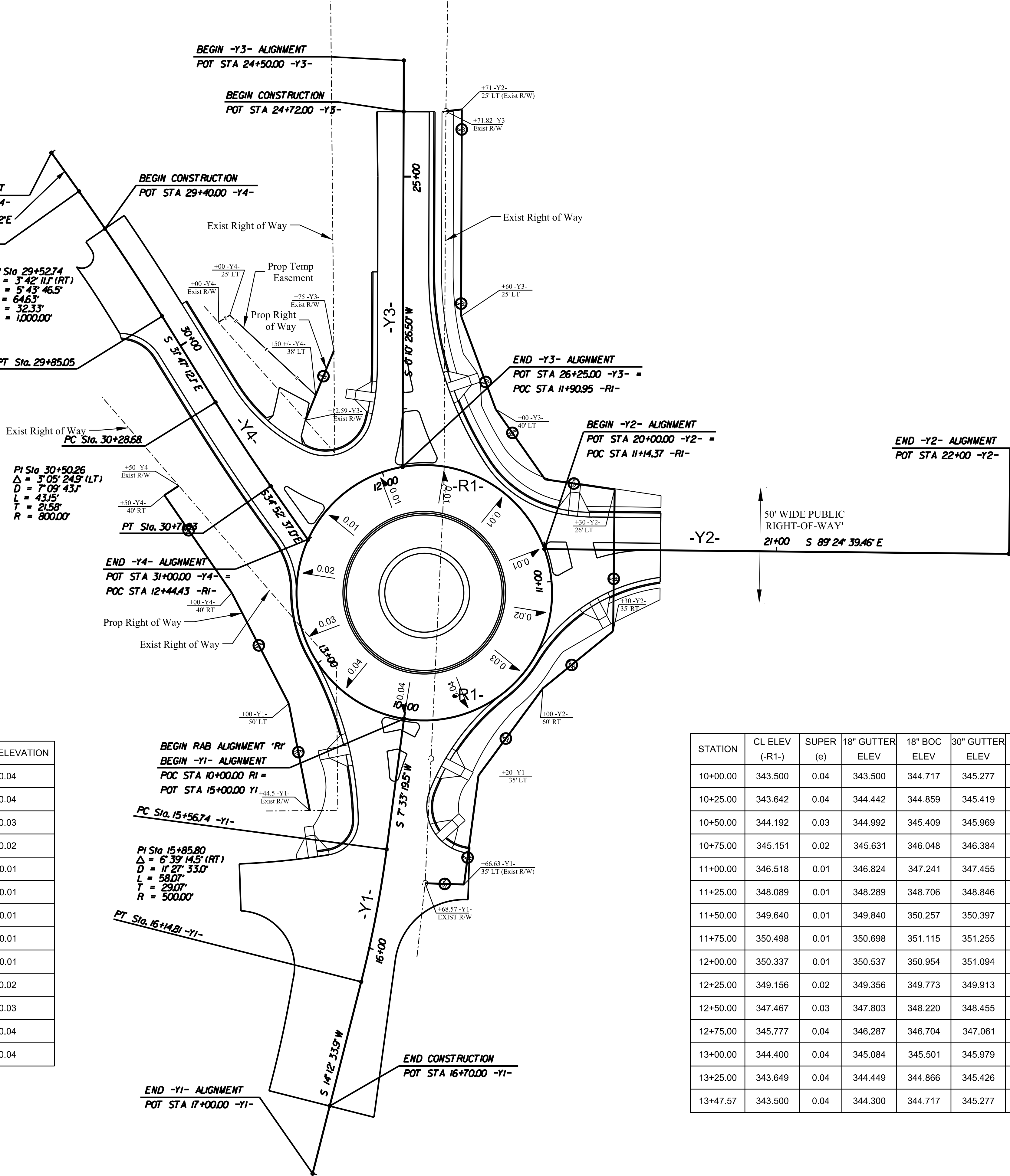




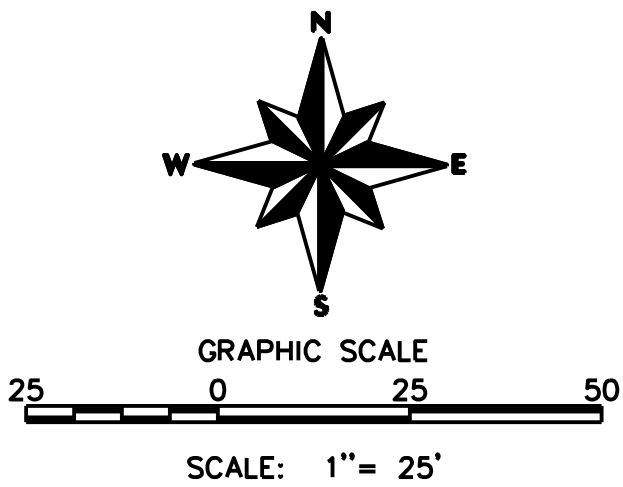




STATION	SUPERELEVATION
10+00.00	0.04
10+28.80	0.04
10+57.60	0.03
10+86.40	0.02
11+15.20	0.01
11+44.00	0.01
11+72.80	0.01
12+01.60	0.01
12+30.40	0.01
12+59.20	0.02
12+88.00	0.03
13+16.80	0.04
13+45.57	0.04



STATION	CL ELEV (-R1-)	SUPER (e)	18" GUTTER ELEV	18" BOC ELEV	30" GUTTER ELEV	30" BOC ELEV
10+00.00	343.500	0.04	343.500	344.717	345.277	345.693
10+25.00	343.642	0.04	344.442	344.859	345.419	345.835
10+50.00	344.192	0.03	344.992	345.409	345.969	346.385
10+75.00	345.151	0.02	345.631	346.048	346.384	346.800
11+00.00	346.518	0.01	346.824	347.241	347.455	347.872
11+25.00	348.089	0.01	348.289	348.706	348.846	349.262
11+50.00	349.640	0.01	349.840	350.257	350.397	350.813
11+75.00	350.498	0.01	350.698	351.115	351.255	351.671
12+00.00	350.337	0.01	350.537	350.954	351.094	351.510
12+25.00	349.156	0.02	349.356	349.773	349.913	350.329
12+50.00	347.467	0.03	347.803	348.220	348.455	348.872
12+75.00	345.777	0.04	346.287	346.704	347.061	347.477
13+00.00	344.400	0.04	345.084	345.501	345.979	346.396
13+25.00	343.649	0.04	344.449	344.866	345.426	345.842
13+47.57	343.500	0.04	344.300	344.717	345.277	345.693



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PROJECT: 13-414

DATE: 01/09/15

DESIGNED BY: MSC

DRAWN BY: MSC

CHECKED BY: JGT

SCALE: AS NOTED

REVISIONS

NO.	DATE	DESCRIPTION

CLIENT:

WOODHILL NC, LLC  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT:

501 SOUTH GREENSBORO STREET DEVELOPMENT

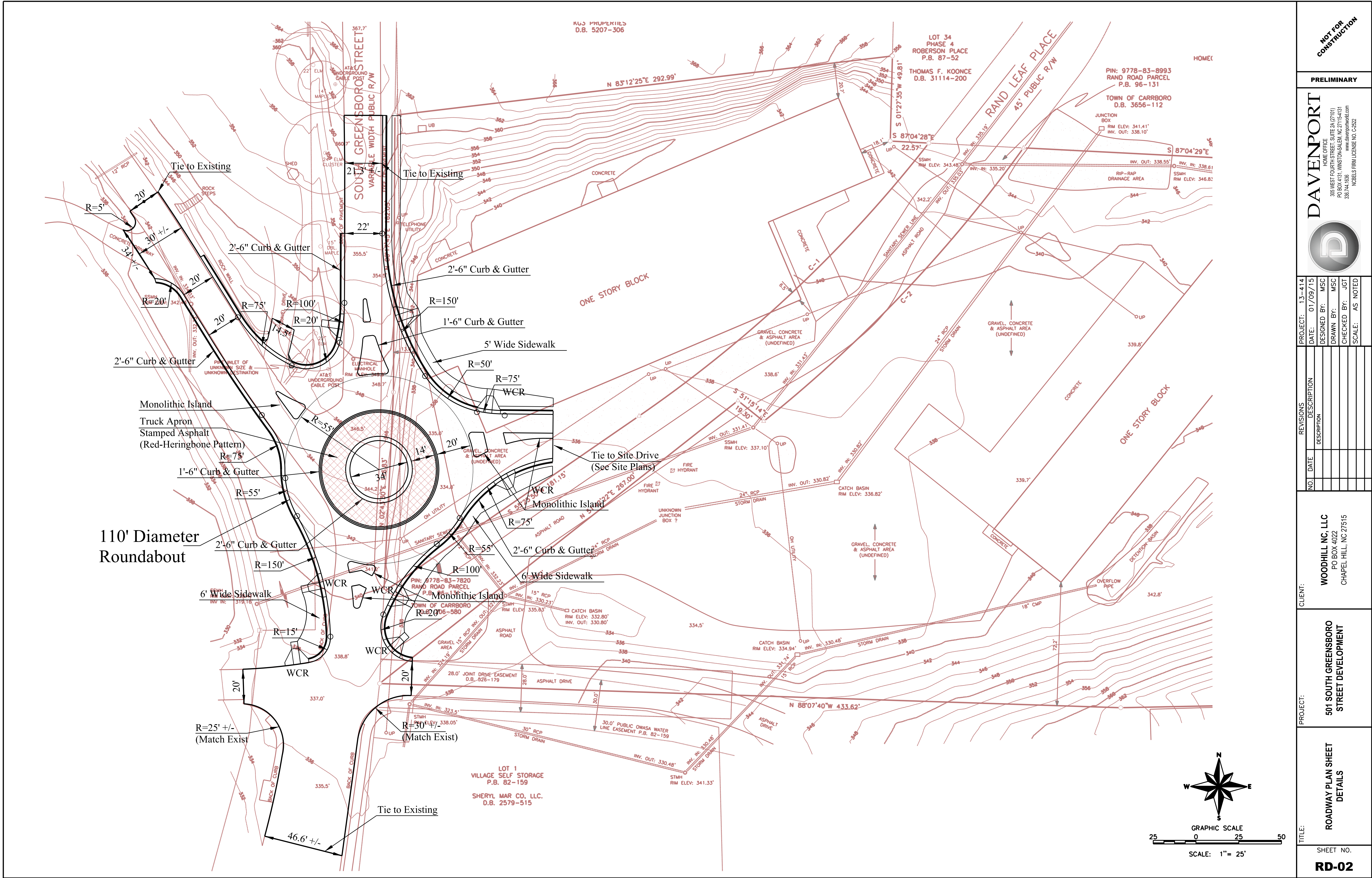
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ROADWAY PLAN SHEET  
ALIGNMENT

SHEET NO.

RD-01





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DESIGNED BY: MSC  
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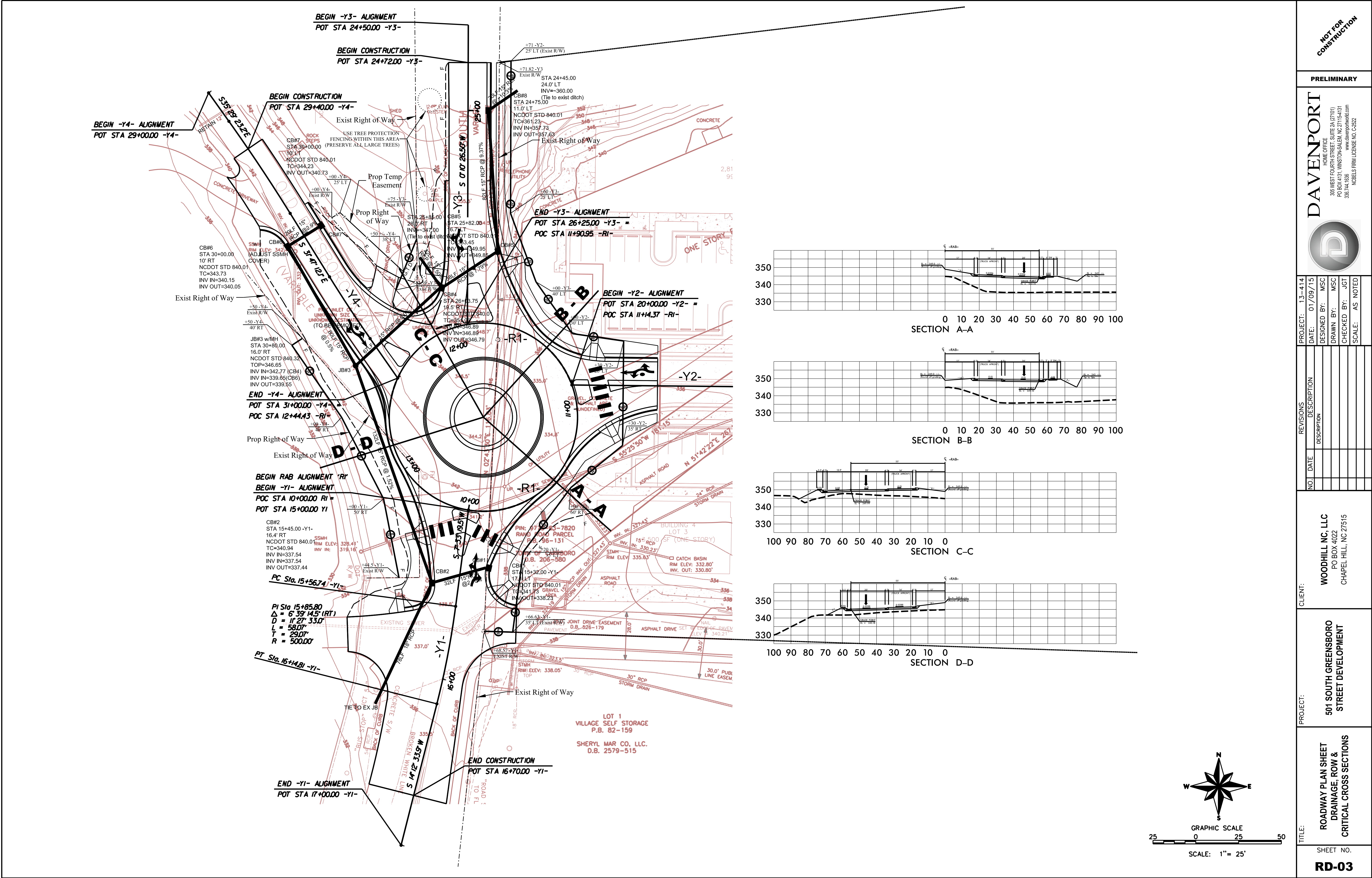
WOODHILL NC, LLC  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT:  
501 SOUTH GREENSBORO  
STREET DEVELOPMENT

TITLE:  
ROADWAY PLAN SHEET  
DETAILS

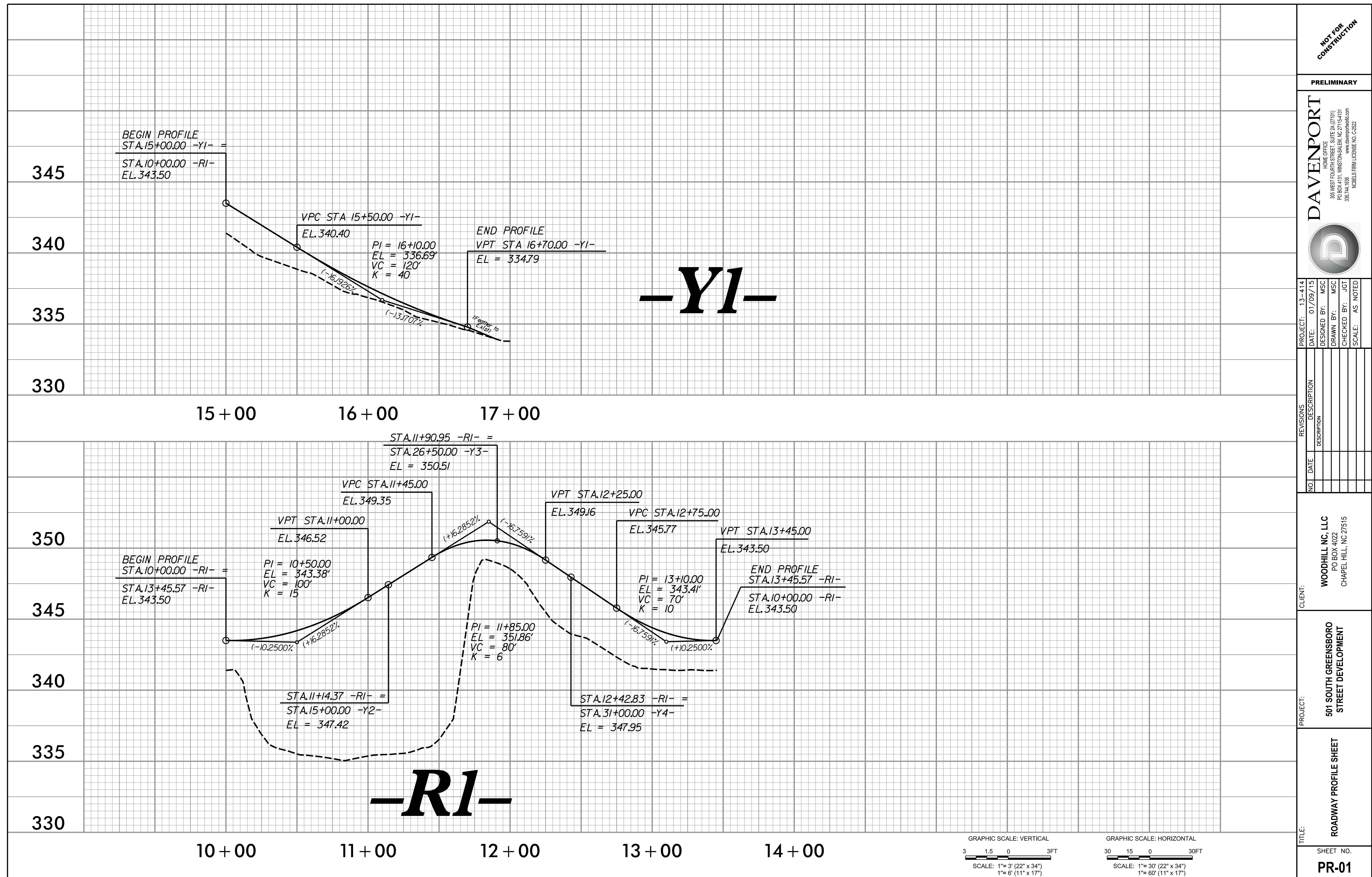
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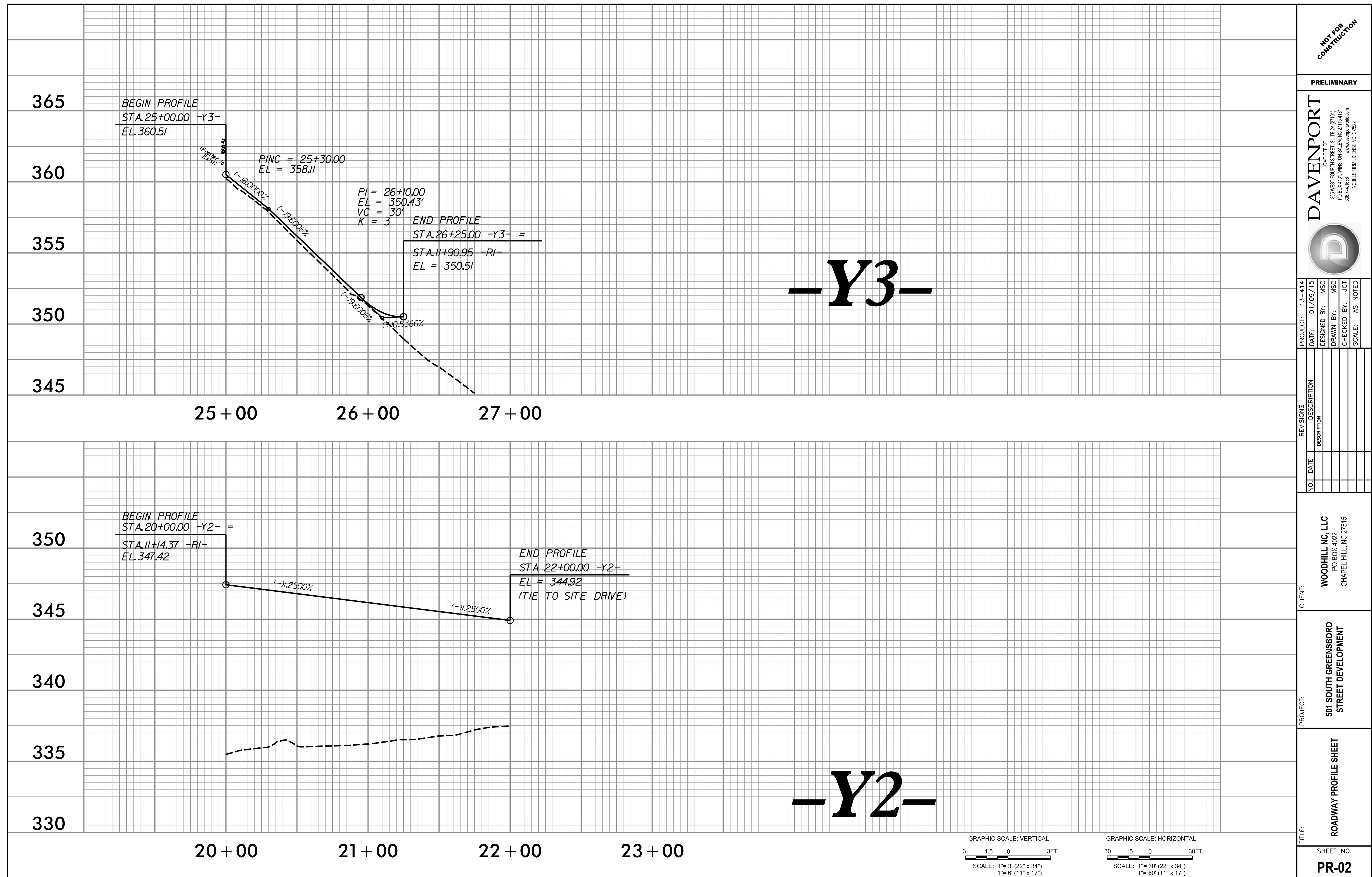




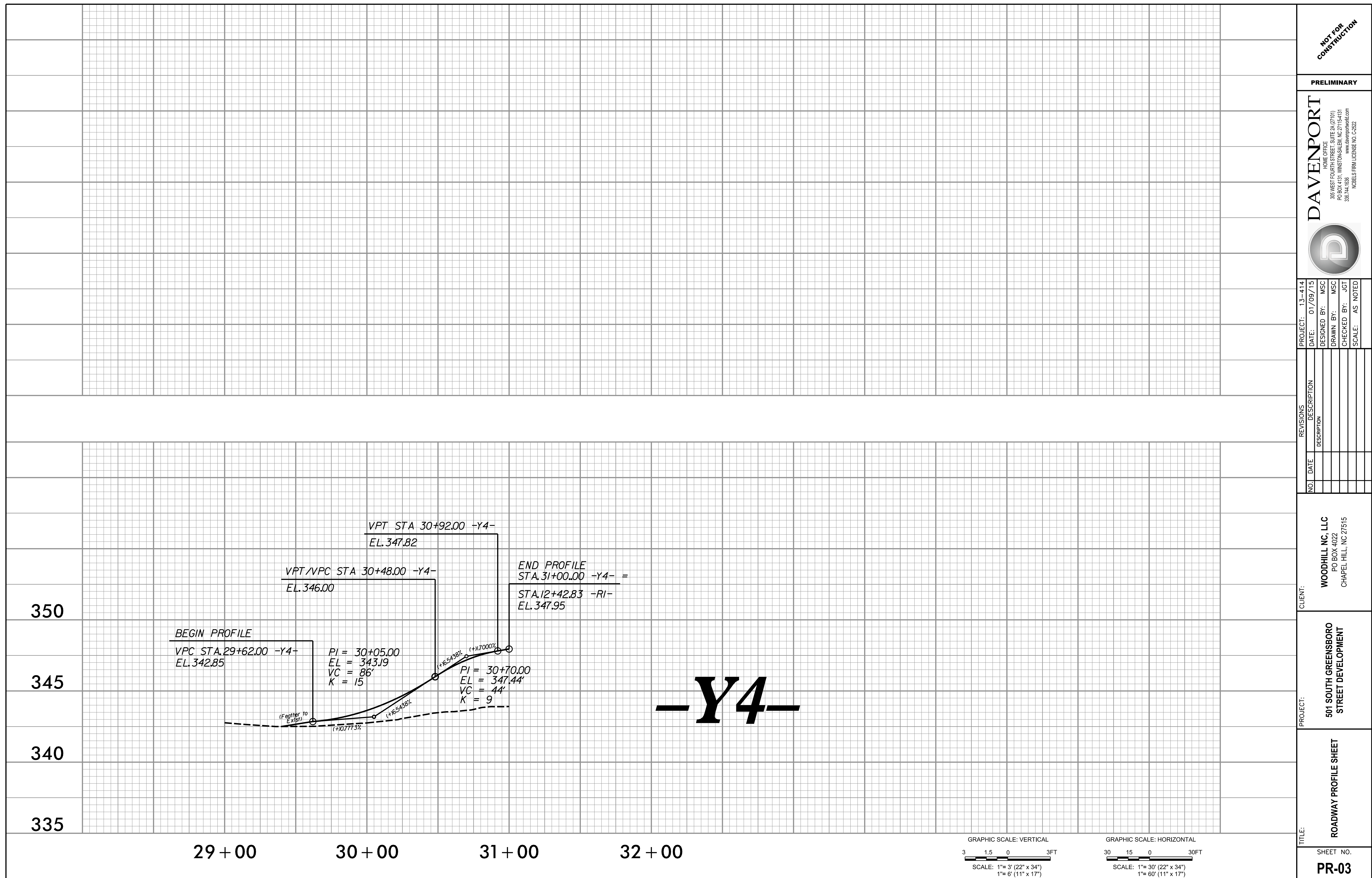


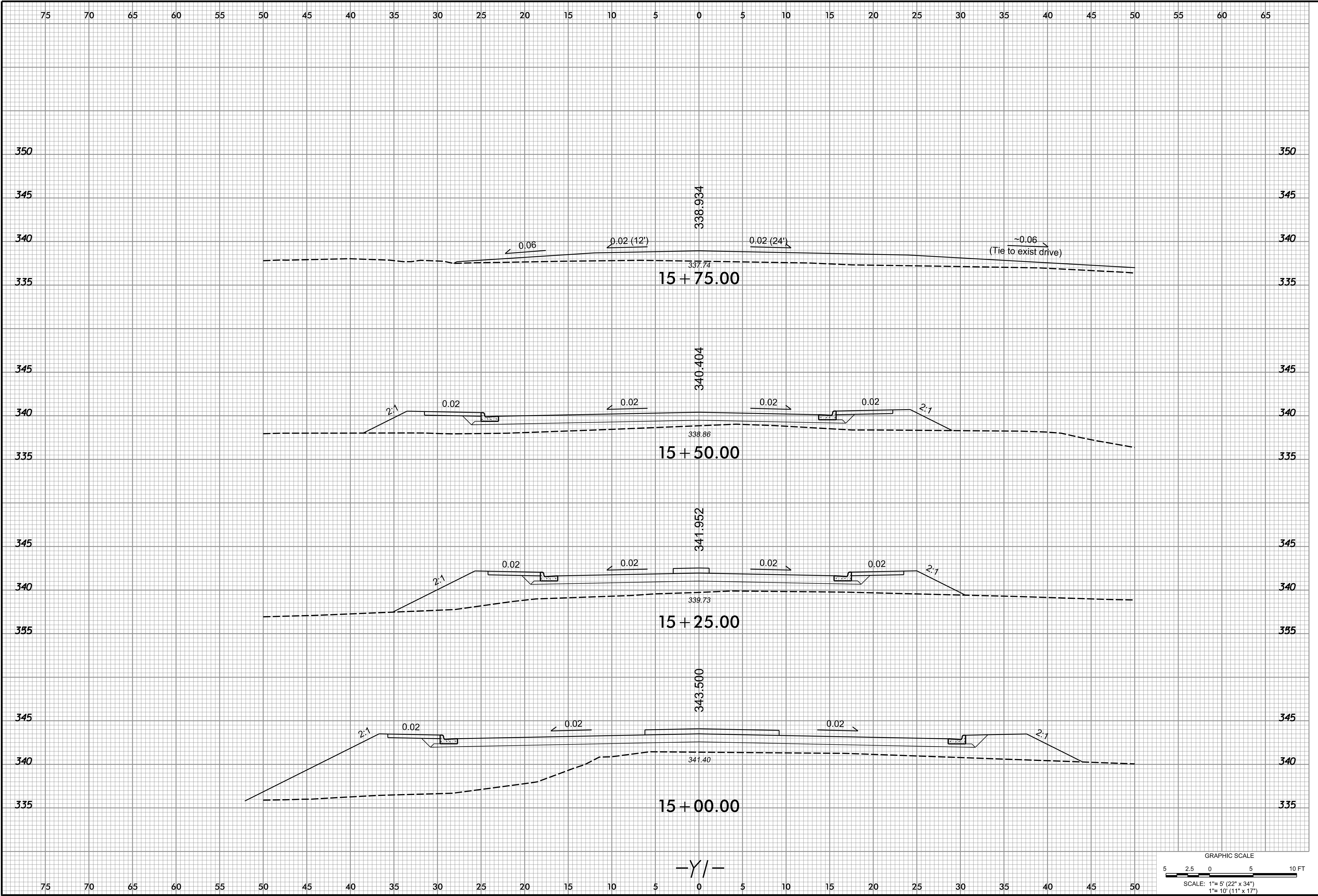












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PROJECT:	13-411
DATE:	12-30-13
DESIGNED BY:	MSC
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CHECKED BY:	DRC
SCALE:	AS NOTED

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PROJECT:

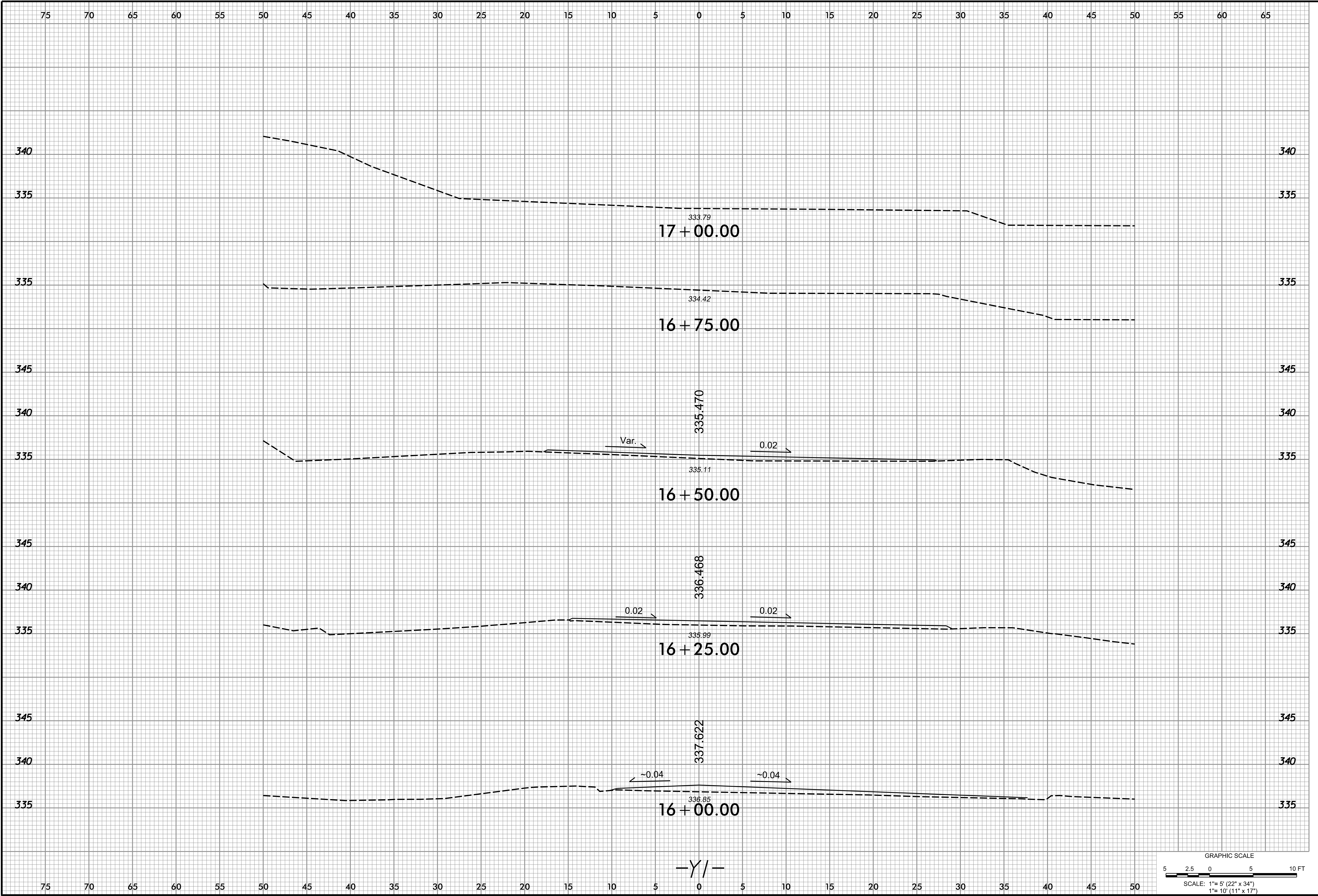
501 SOUTH GREENSBORO  
STREET DEVELOPMENT

TITLE:

ROADWAY CROSS  
SECTION SHEET  
-Y1-

SHEET NO.

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PROJECT: 13-411

DATE: 12-30-13

DESIGNED BY: MSC

DRAWN BY: MSC

CHECKED BY: DRC

SCALE: AS NOTED

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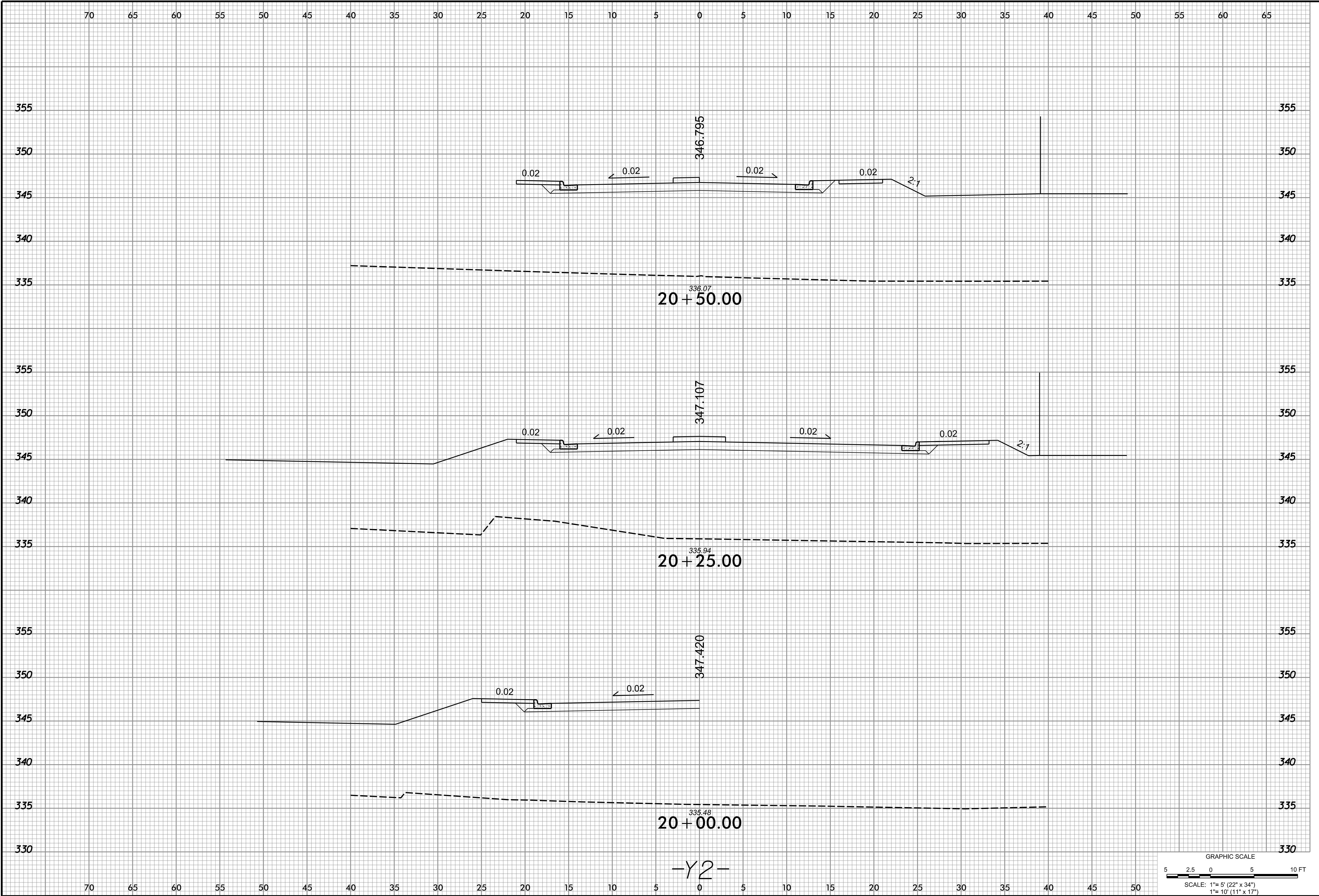
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ROADWAY CROSS  
SECTION SHEET  
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**XS-02**





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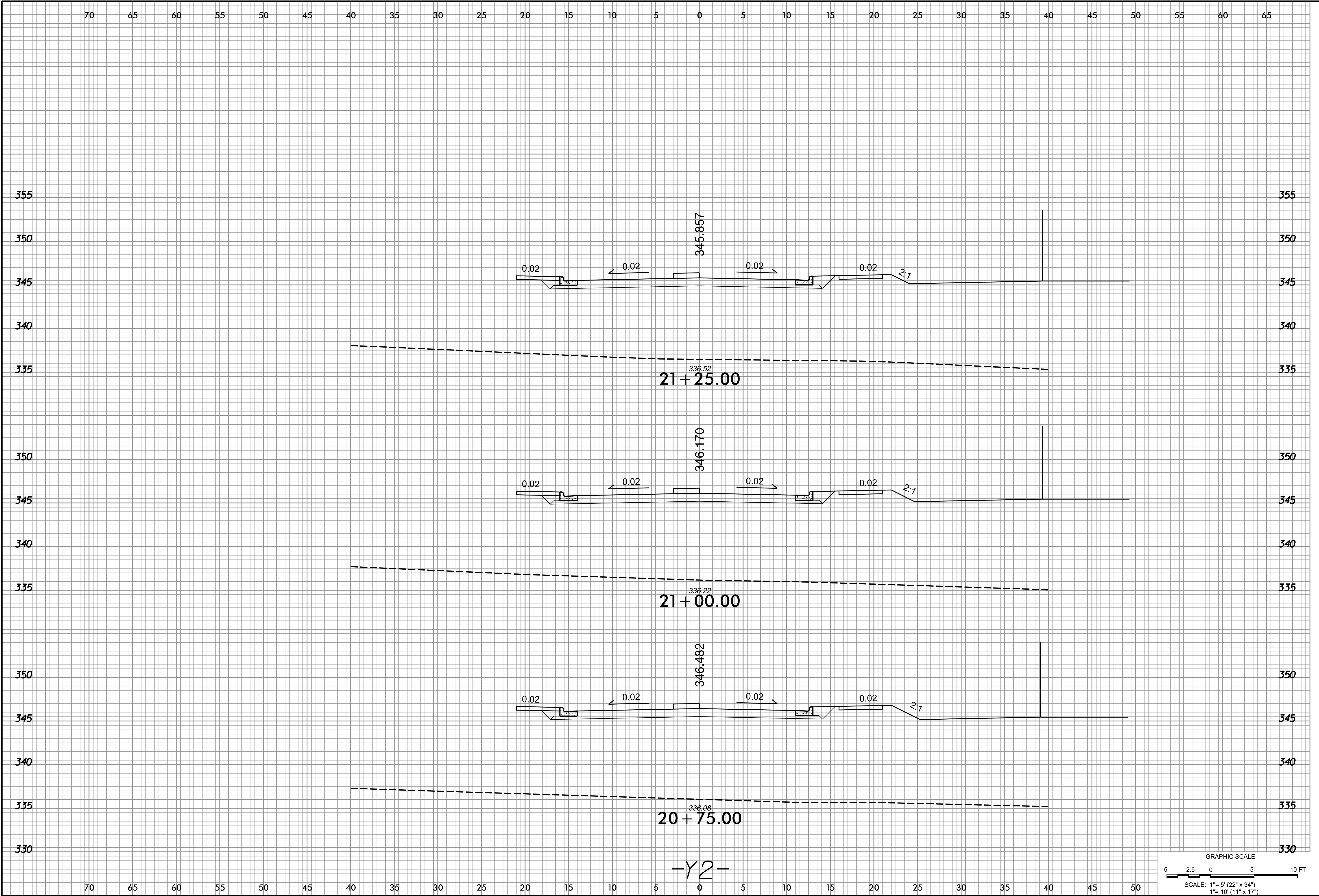
501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE:

ROADWAY CROSS SECTION SHEET  
-Y2-

SHEET NO.

XS-03



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NCBELS FIRM LICENSE NO. C-3522

PROJECT:	13-411
DATE:	12-30-13
DESIGNED BY:	MSC
DRAWN BY:	MSC
CHECKED BY:	DRC
SCALE:	AS NOTED

NO.	DATE	DESCRIPTION

CLIENT:

WOODHILL NC, LLC  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT:

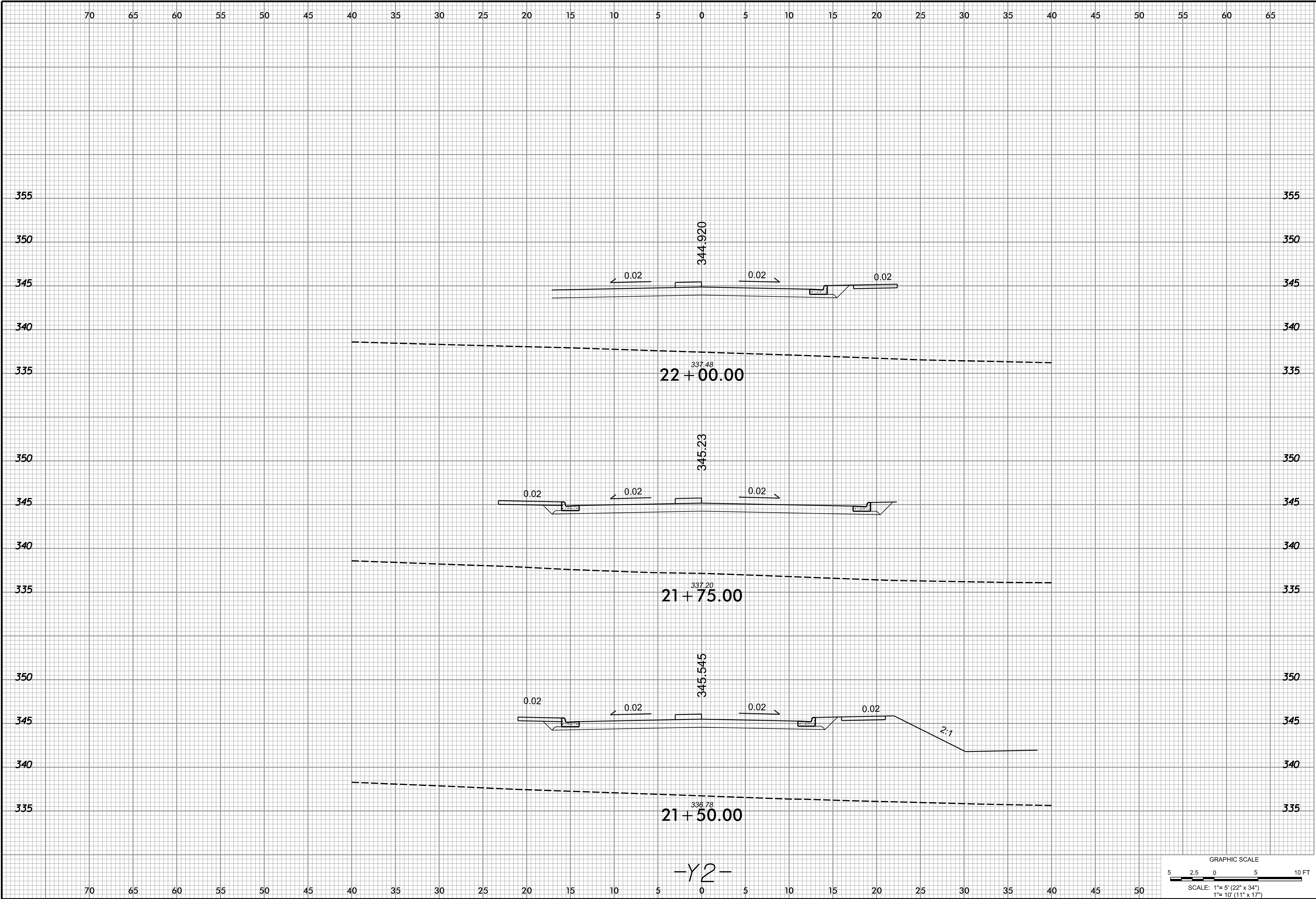
501 SOUTH GREENSBORO  
STREET DEVELOPMENT

TITLE:

ROADWAY CROSS  
SECTION SHEET  
-Y2-

SHEET NO.

XS-04



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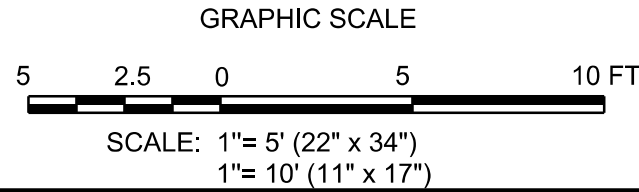
501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE:

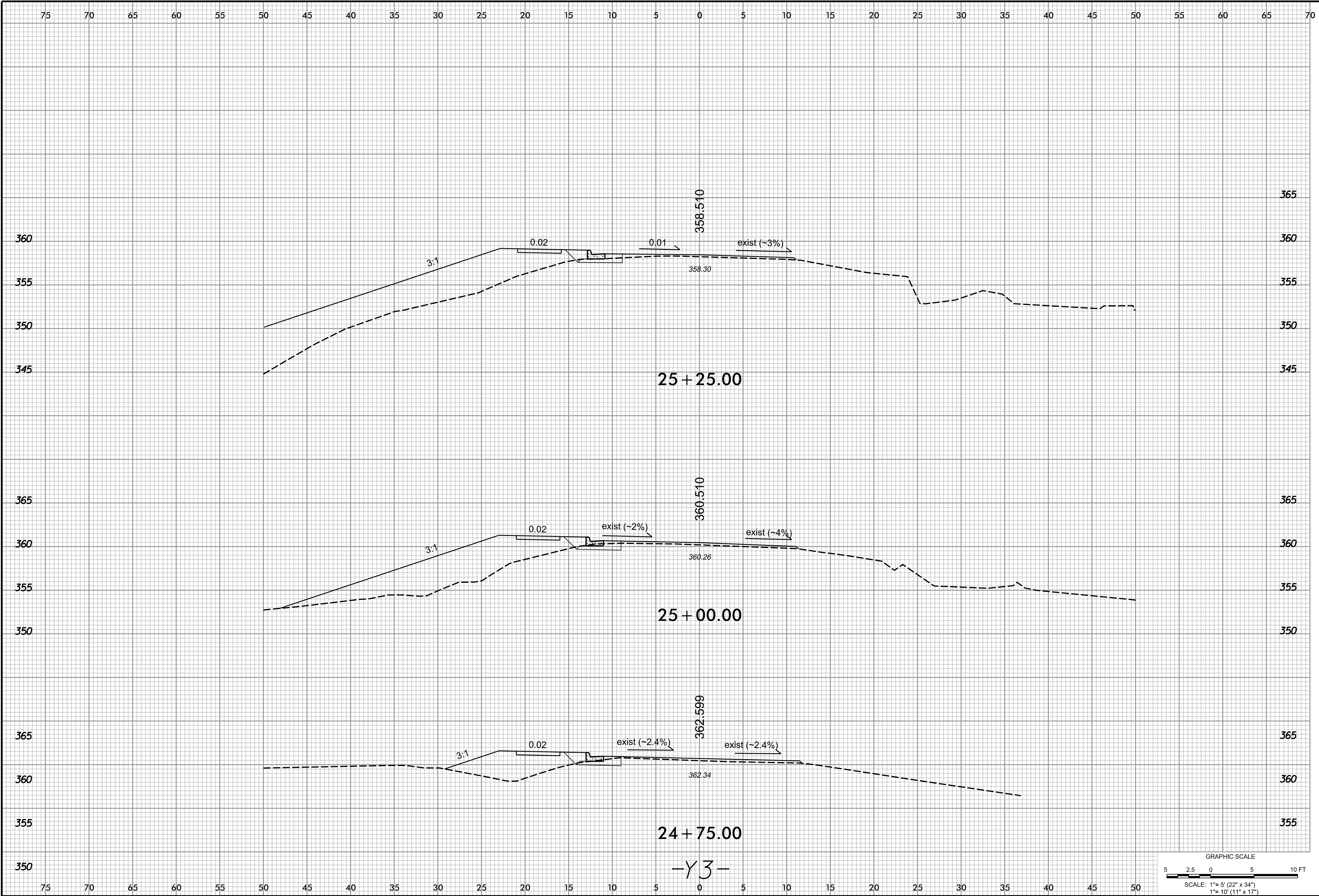
ROADWAY CROSS SECTION SHEET  
-Y2-

SHEET NO.

**XS-05**







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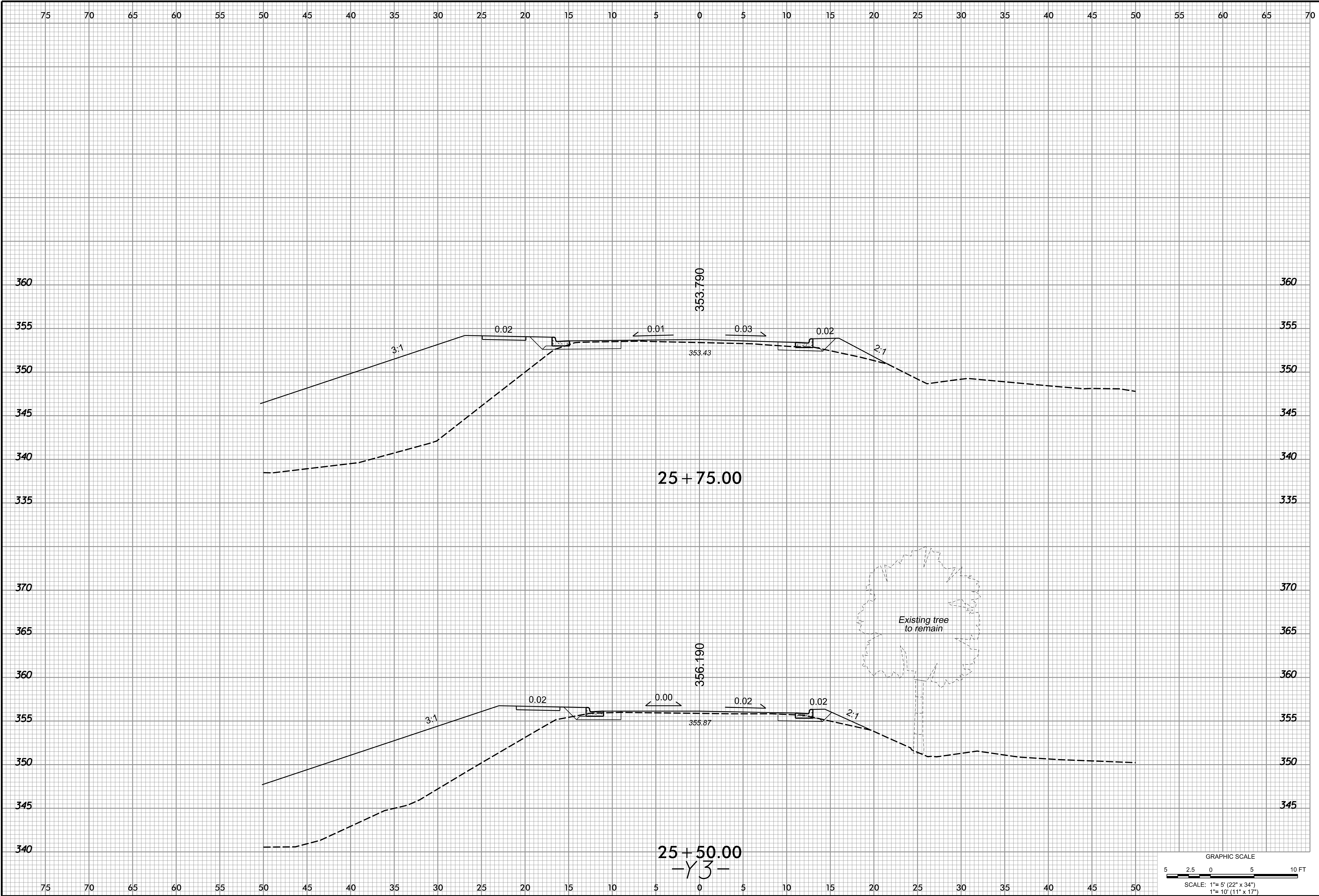
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NO.	DATE	REVISIONS DESCRIPTION

CLIENT:	WOODHILL NC, LLC PO BOX 4022 CHAPEL HILL, NC 27515
PROJECT:	501 SOUTH GREENSBORO STREET DEVELOPMENT
TITLE:	ROADWAY CROSS SECTION SHEET -Y3-
SHEET NO.	XS-06



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SCALE: 1"= 5' (22" x 34")

1"= 10' (11" x 17")

PROJECT:

13-411

DATE:

12-30-13

DESIGNED BY:

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AS NOTED

REVISIONS

NO.

DATE

DESCRIPTION

CLIENT:

WOODHILL NC, LLC

PO BOX 4022

CHAPEL HILL, NC 27515

PROJECT:

501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE:

ROADWAY CROSS SECTION SHEET

-Y3-

SHEET NO.

XS-07

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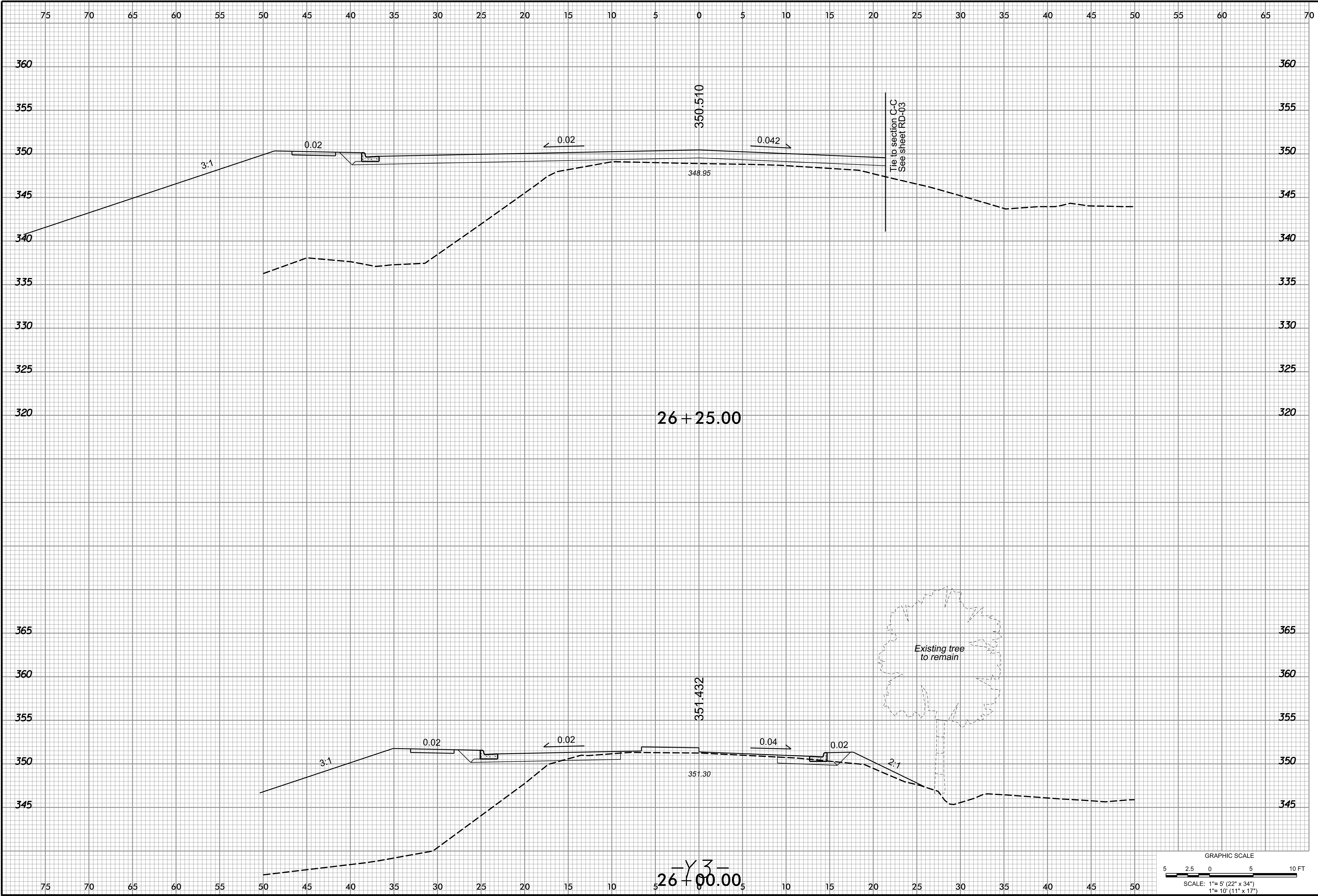
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CLIENT:

WOODHILL NC, LLC

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CHAPEL HILL, NC 27515

PROJECT:

501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE:

ROADWAY CROSS SECTION SHEET

-Y3-

SHEET NO.

XS-08

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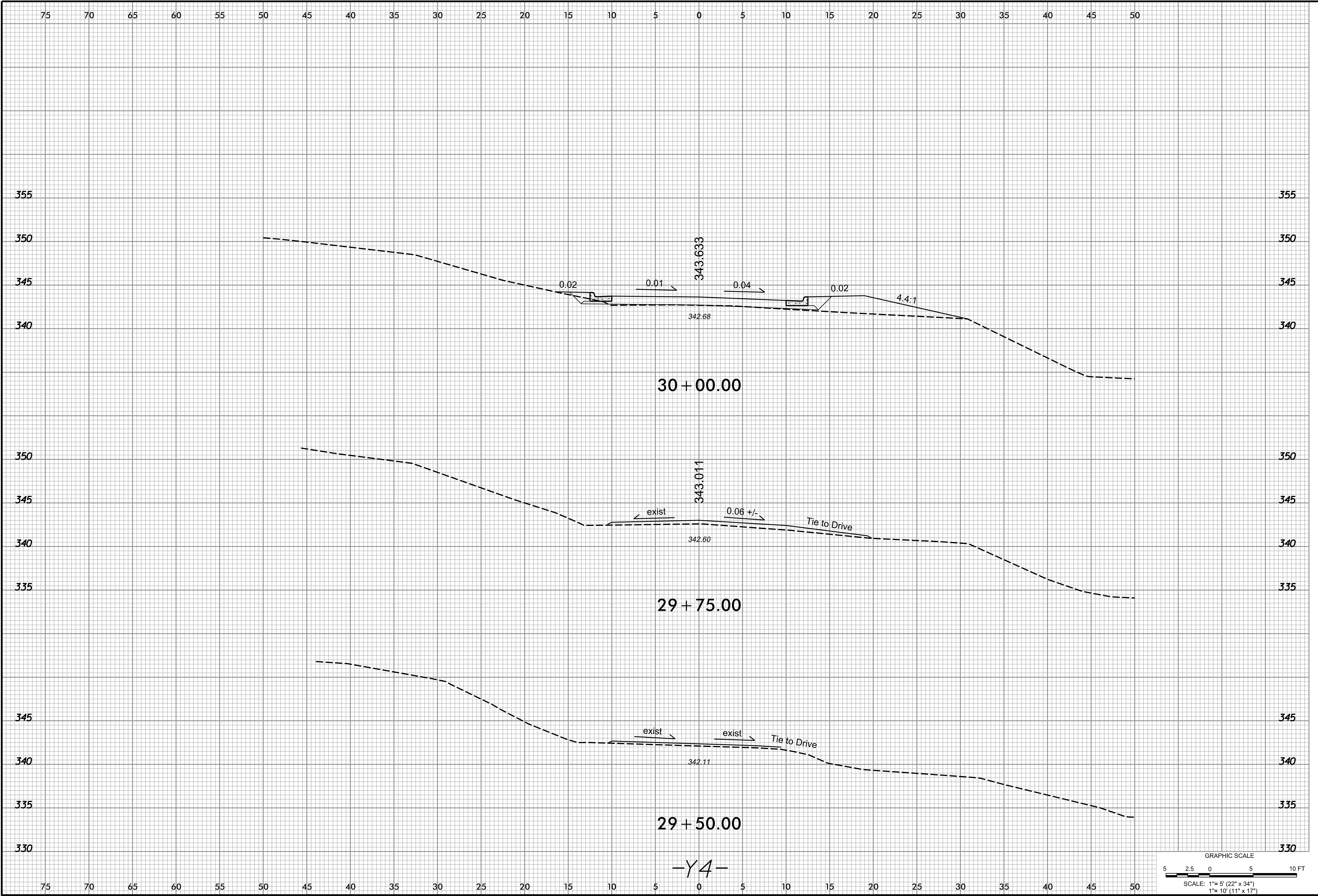
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GRAPHIC SCALE

5 2.5 0 5 10 FT

SCALE: 1"= 5' (22" x 34")

1"= 10' (11" x 17")



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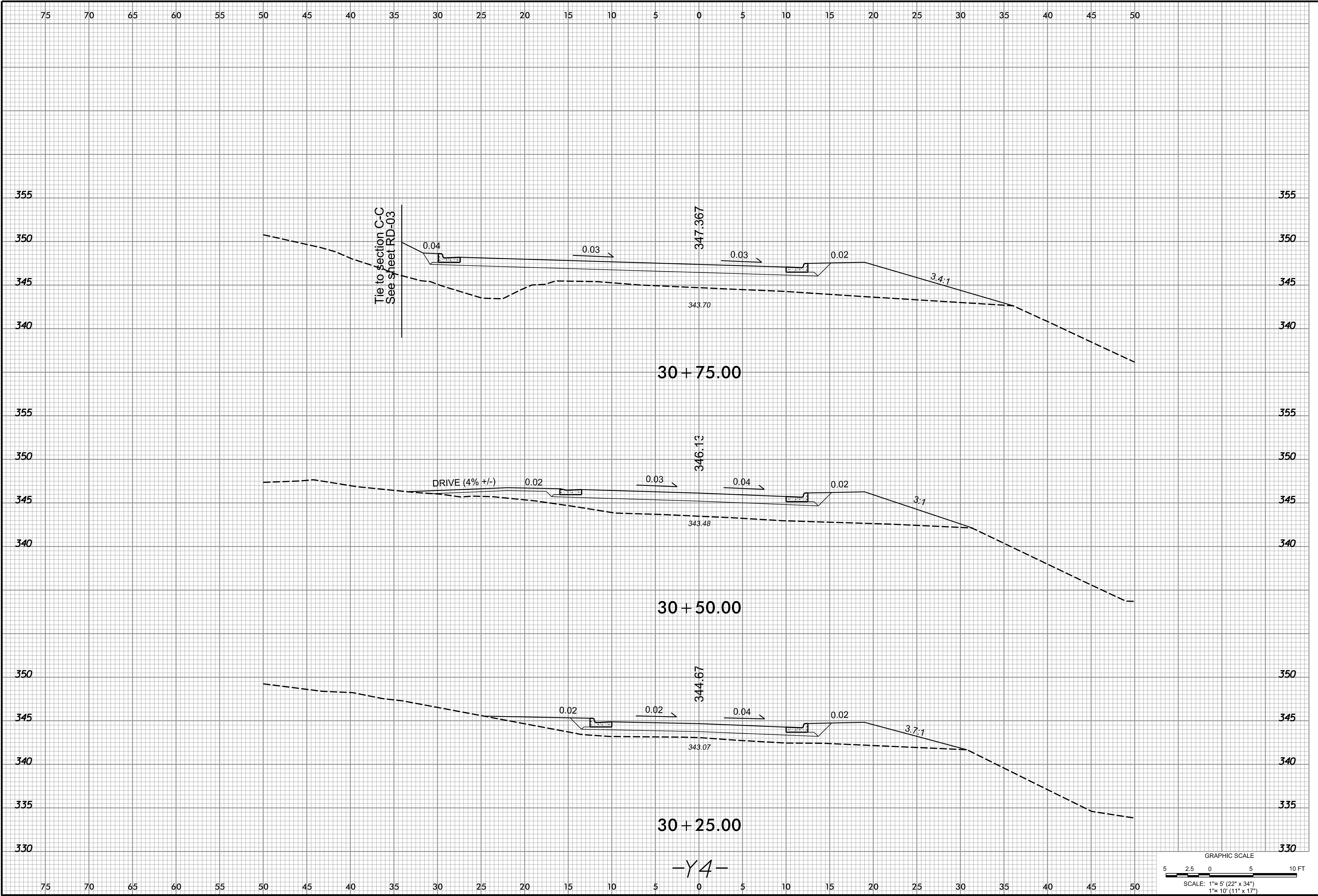
501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE:

ROADWAY CROSS SECTION SHEET  
-Y4-

SHEET NO.

XS-09



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CLIENT:

WOODHILL NC, LLC  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT:

501 SOUTH GREENSBORO  
STREET DEVELOPMENT

TITLE:

ROADWAY CROSS  
SECTION SHEET  
-Y4-

SHEET NO.

XS-10





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CLIENT:

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PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT:

501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE:

ROADWAY CROSS SECTION SHEET  
-Y4-

SHEET NO.

XS-11

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESired OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER OR NCDOT.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER OR NCDOT.

PROJECT NOTES

A. DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

B. NO LANE CLOSURES ARE PERMITTED ON S GREENSBORO STREET DURING THE AM (7-9) OR PM (5-7) PEAK PERIODS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C. REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.

D. WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

E. WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

F. WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITH THE CLOSED TRAVEL LANE.

G. DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

H. BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THE EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER.

I. DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING, UNEVEN LANES, SIGNS (W8-11) 350 FEET IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

SIGNING

J. INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

K. ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

L. INSTALL BLACK ON ORANGE, DIP, SIGNS (W8-2) AND/OR, BUMP, SIGNS (W8-1) 100 ft IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

M. INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

N. PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS:

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45-50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC PATTERN ALTERATIONS

O. NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

TRAFFIC CONTROL DEVICES

P. SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

Q. PLACE TYPE III BARRICADES, WITH, ROAD CLOSED, SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

R. PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS, CONES OR SKINNY DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

S. ONLY UNIFORMED POLICE OFFICERS SHALL DIRECT TRAFFIC THROUGH SIGNALIZED INTERSECTIONS. THE TRAFFIC SIGNAL MAY BE PUT INTO FLASHING OPERATION OR MAY REMAIN IN NORMAL OPERATION AT THE DISCRETION OF THE OFFICER.

OFFICERS SHALL BE PROPERLY ATTIRED AND SHALL DIRECT TRAFFIC WITH HAND MOTIONS. FLASHLIGHTS WITH RED CONES SHOULD BE USED AT NIGHT. OFFICERS MAY ALSO USE A WHISTLE TO SIGNAL WHEN THEY ARE CHANGING THE DIRECTION OT THE RIGHT OF WAY.

PAVEMENT MARKING AND MARKERS

T. INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL ROADS	THERMOPLASTIC	NONE

U. INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL	PAINT	NONE

V. PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

W. TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

X. REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

TEMPORARY/FINAL SIGNS

Y. NOTIFY THE ENGINEER TWO (2) MONTHS BEFORE A TRAFFIC SIGNAL INSTALLATION BY OTHERS IS REQUIRED.

MISCELLANEOUS

Z. IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAYS TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION, AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE, LOOSE GRAVEL, SIGNS (W8-7) AND BLACK ON ORANGE, PAVEMENT ENDS, SIGNS (W8-3) AND RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

PHASING NOTES

PHASE 1 (SEE SHEET TC-02 FOR DETAIL)

- USING TEMPORARY FLAGGER CONTROL, CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF S GREENSBORO STREET SOUTH OF OLD PITTSBORO ROAD.
- CLOSE RAND ROAD AT S GREENSBORO STREET AND AT PURPLE LEAF PLACE.
- CLOSE SHOULDER ON NORTHBOUND S GREENSBORO STREET.
- SHIFT NORTHBOUND TRAFFIC ON S GREENSBORO STREET APPROACHING RAND ROAD WEST AND INSTALL RIGHT LANE MUST TURN RIGHT SIGNING FOR EXSITING OUTSIDE LANE DROP.
- SHIFT SOUTHBOUND TRAFFIC ON S GREENSBORO STREET LEAVING OLD PITTSBORO ROAD WEST INTO EXISTING OUTSIDE TRAVEL LANE.
- CONSTRUCT ASPHALT PAVEMENT, CURB & GUTTER, SIDEWALK, ETC. ON EAST SIDE OF INTERSECTION UP TO WITHIN 5' OF THE EDGE OF THE EXISITNG TRAVEL WAY. CONSTRUCT ONLY THE INSIDE CIRCULATING ISLAND CURB AND GUTTER AND TEMPORARY ASPHALT PAVEMENT WITHIN TRUCK APRON.
- USING TEMPORARY FLAGGER CONTROL, CONSTRUCT TIE IN WITH EXISITNG PAVEMENT.

PHASE 2 (SEE SHEETS TC-03 FOR DETAIL)

- CLOSE RAND ROAD AT S GREENSBORO STREET AND AT PURPLE LEAF PLACE.
- CLOSE OLD PITTSBORO ROAD AT S GREENSBORO STREET.
- CLOSE SHOULDER ON SOUTHBOUND S GREENSBORO STREET.
- INSTALL TEMPORARY CENTERLINE MARKINGS THROUGH THE EAST SIDE OF THE ROUNDABOUT.
- CONSTRUCT ASPHALT PAVEMENT, CURB & GUTTER, SIDEWALK, ETC. ON THE WEST SIDE OF THE INTERSECTION.

PHASE 3 (SEE SHEETS TC-04 FOR DETAIL)

- CLOSE RAND ROAD AT S GREENSBORO STREET AND AT PURPLE LEAF PLACE.
- CONSTRUCT REMAINDER OF THE CIRCULATING ISLAND.

PHASE 4 (SEE SHEETS TC-04 FOR DETAIL)

- USING TEMPORARY FLAGGER CONTROL AS NECESSARY, CONSTRUCT THE SPLITTER ISLANDS ON S GREENSBORO STREET.

NOT FOR CONSTRUCTION

PRELIMINARY

DAVENPORT

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NCEELS FIRM LICENSE NO. C-5622



PROJECT: 13-414

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CHECKED BY: JGT

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REVISIONS

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CLIENT:

WOODHILL NC, LLC

PO BOX 4022

CHAPEL HILL, NC 27515

PROJECT:

501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE:

TRAFFIC CONTROL PLANS

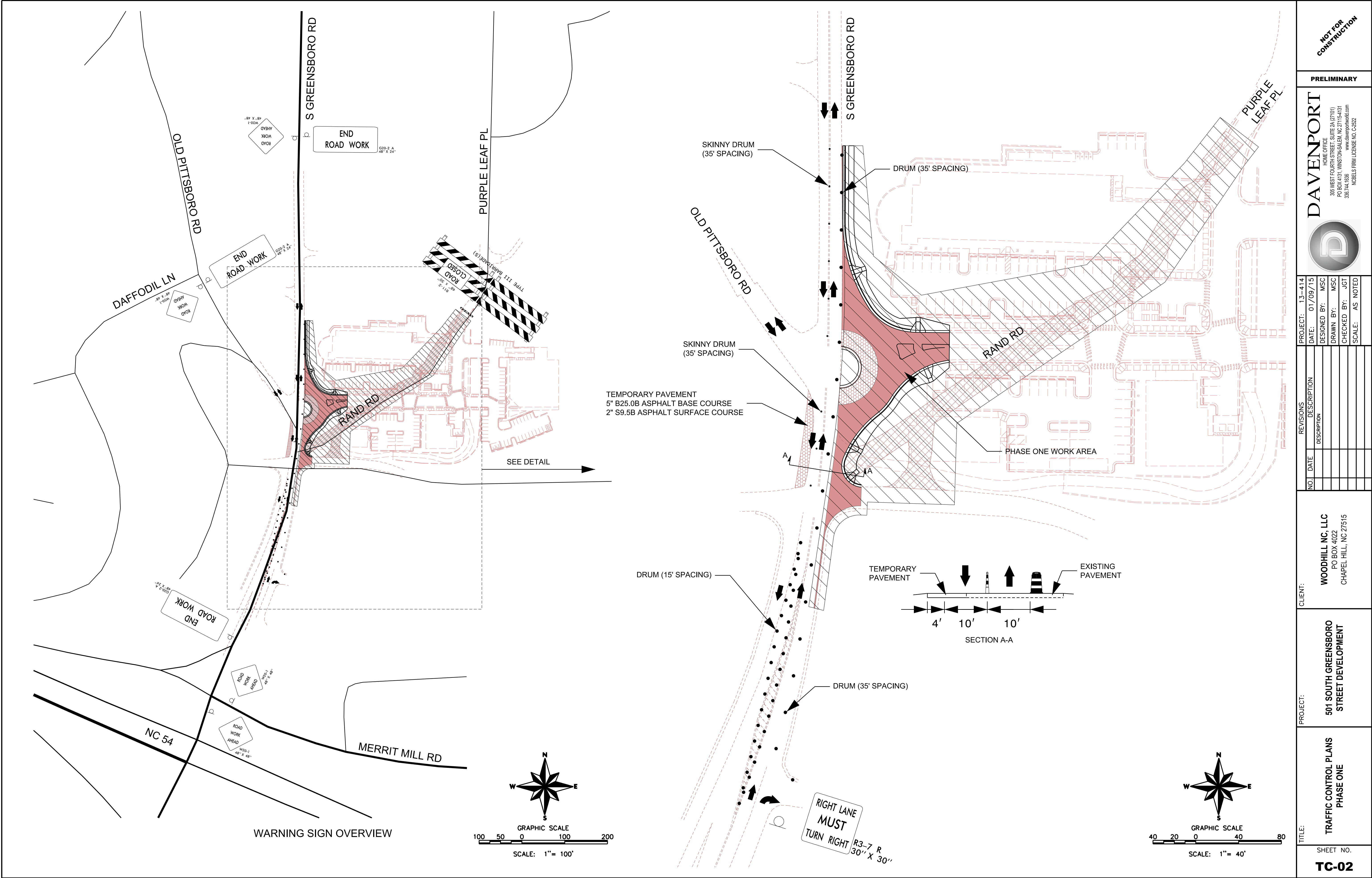
GENERAL NOTES

SHEET NO.

TC-01

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PROJECT: 13-414  
DATE: 01/09/15  
DESIGNED BY: MSC  
DRAWN BY: MSC  
CHECKED BY: JGT  
SCALE: AS NOTED

NO.	DATE	REVISIONS DESCRIPTION

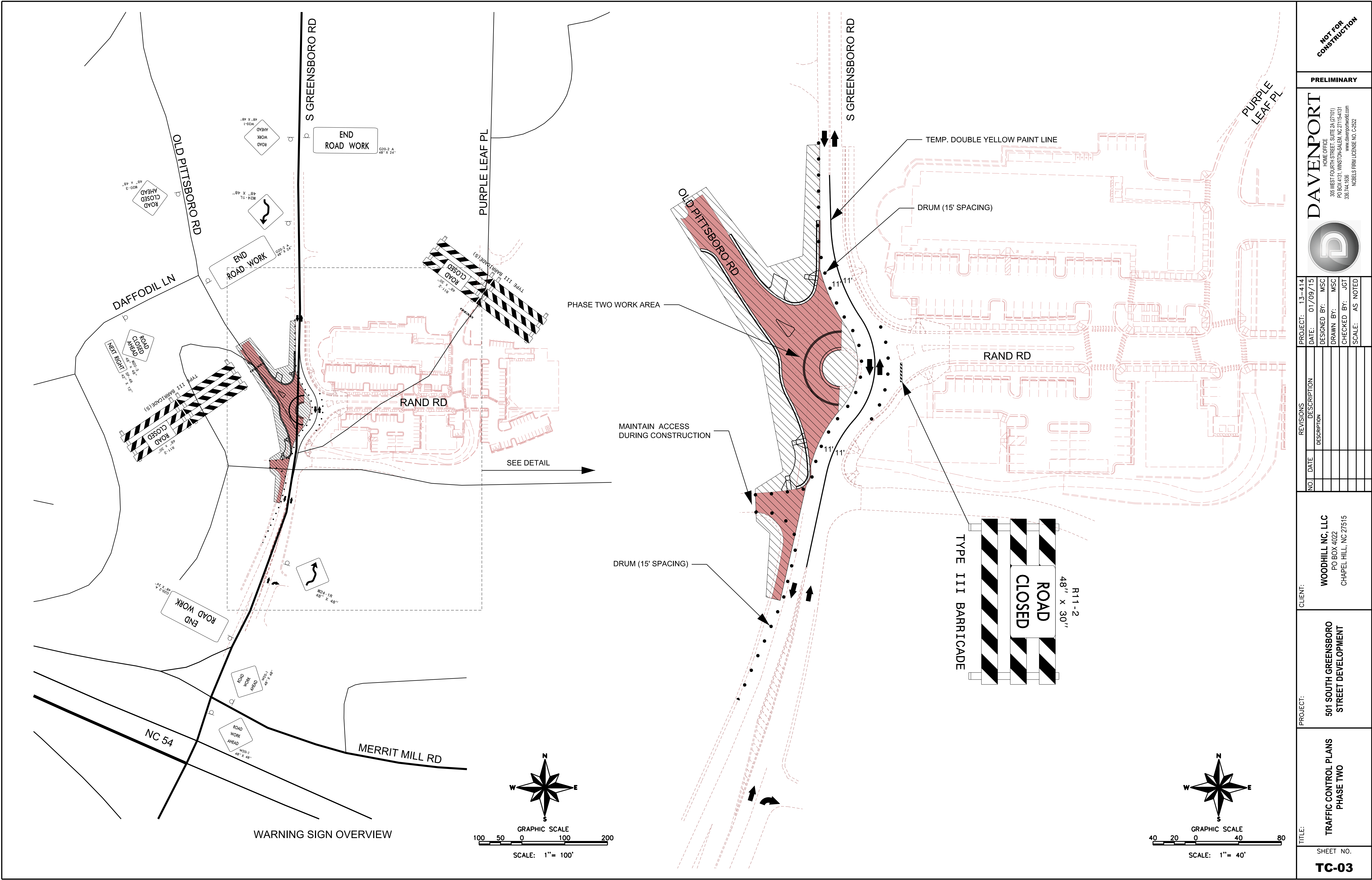
CLIENT: WOODHILL NC, LLC  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT: 501 SOUTH GREENSBORO  
STREET DEVELOPMENT

TITLE: TRAFFIC CONTROL PLANS  
PHASE ONE

SHEET NO.  
TC-02





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CLIENT:

WOODHILL NC, LLC  
PO BOX 4022  
CHAPEL HILL, NC 27515

PROJECT:

501 SOUTH GREENSBORO STREET DEVELOPMENT

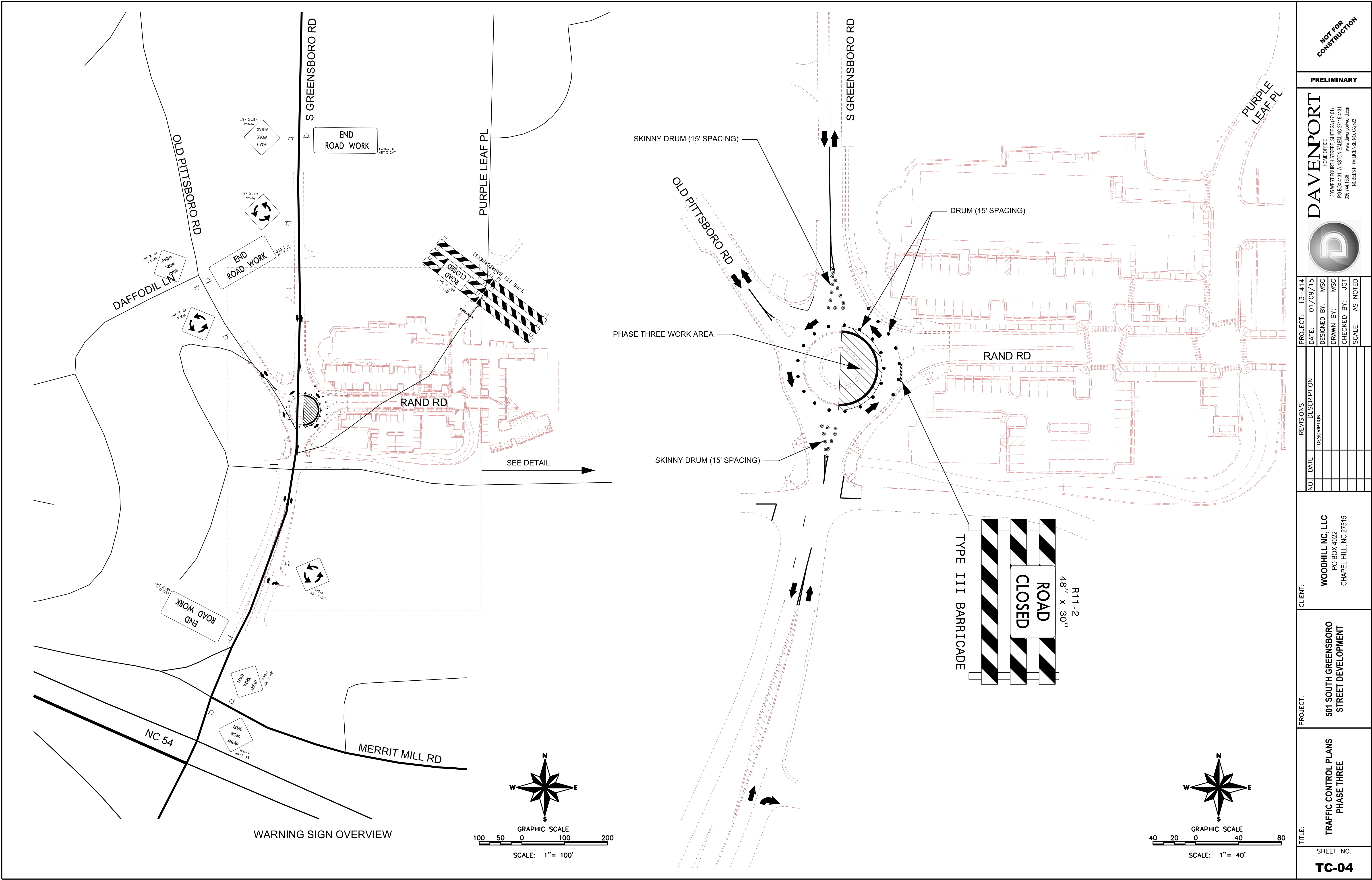
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TRAFFIC CONTROL PLANS  
PHASE TWO

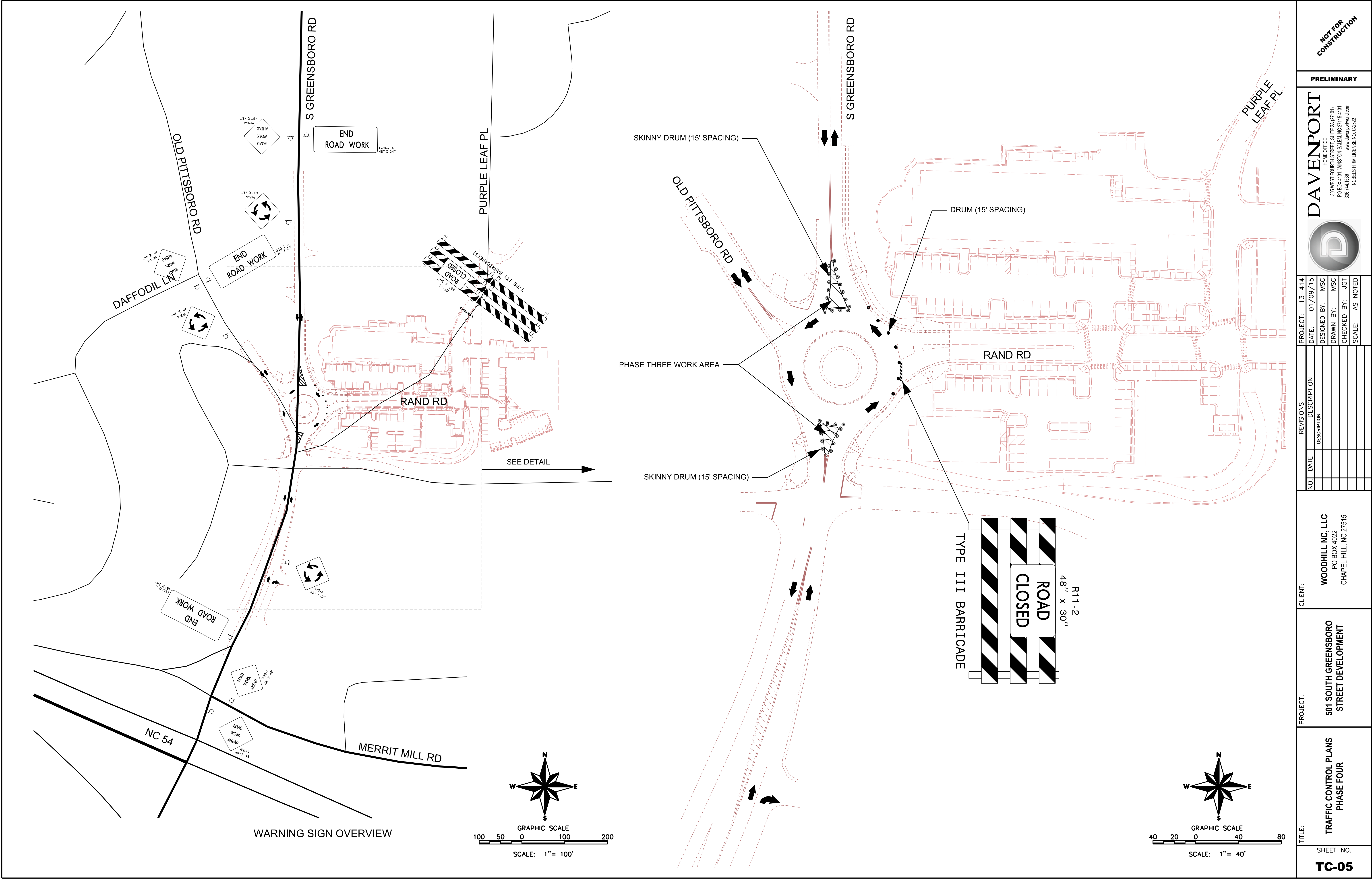
SHEET NO.

TC-03

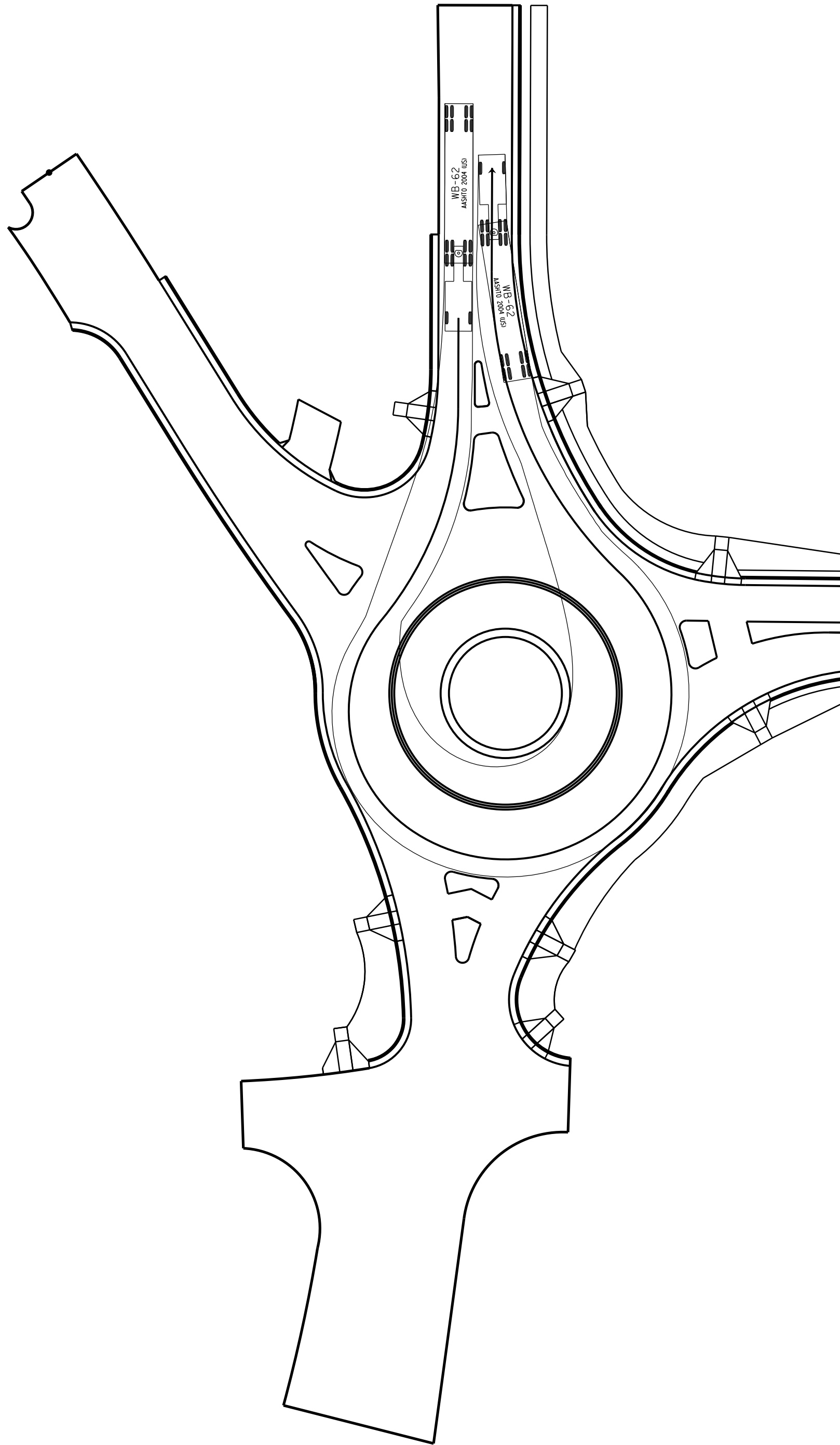
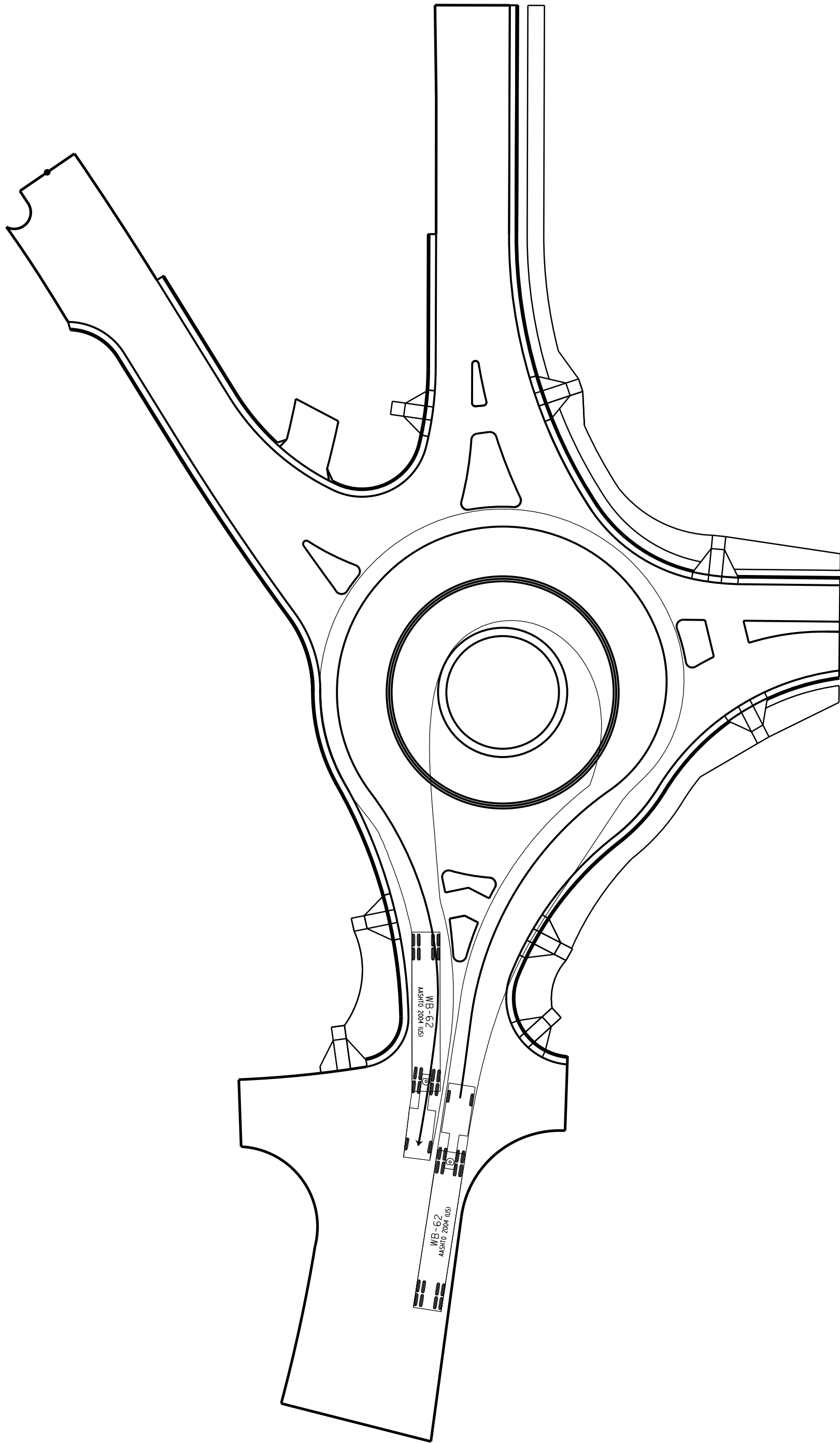
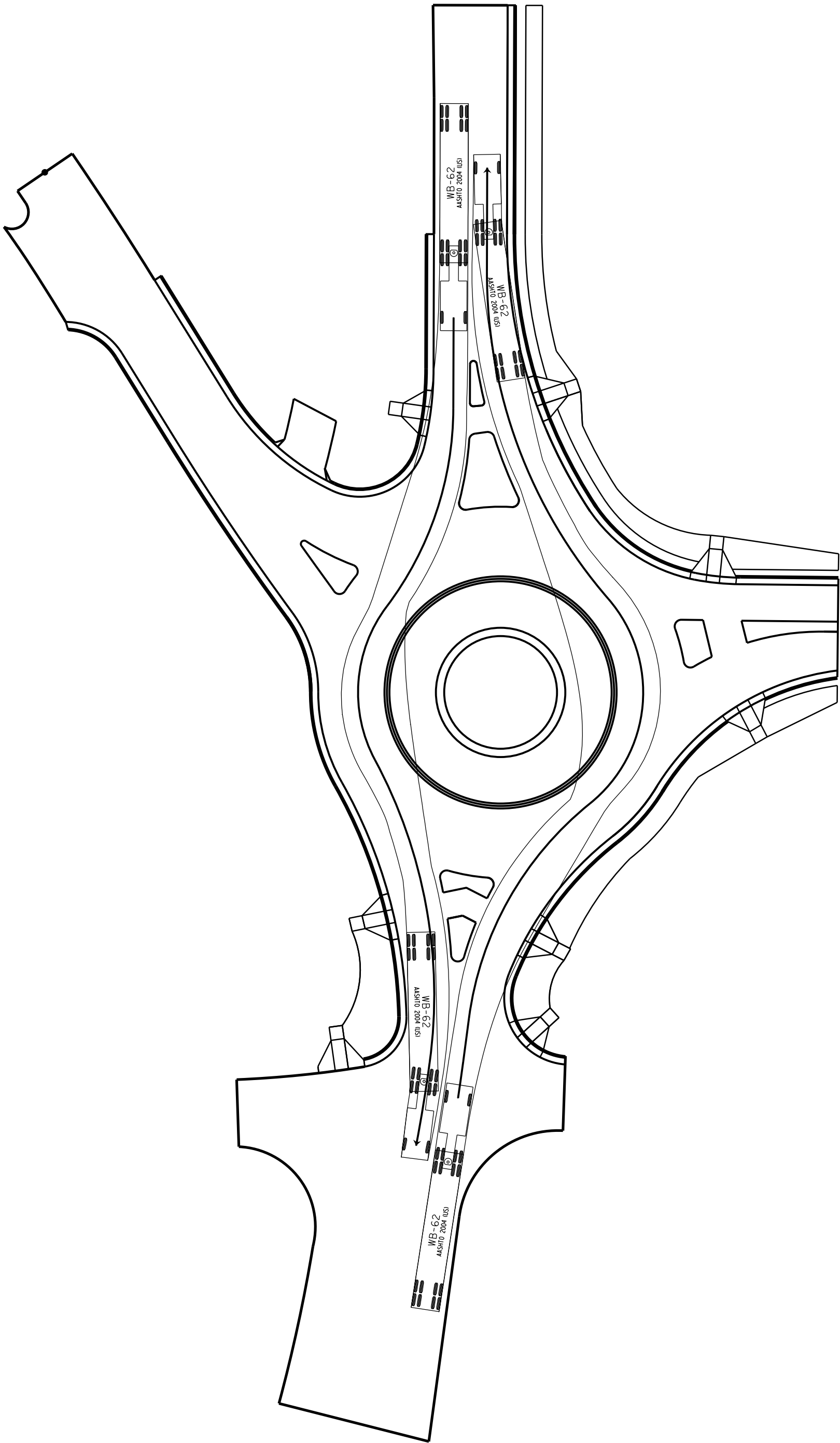
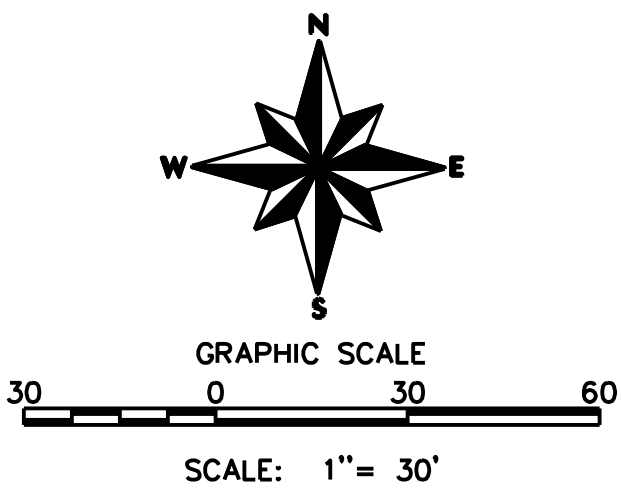












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CHAPEL HILL, NC 27515

PROJECT:

501 SOUTH GREENSBORO STREET DEVELOPMENT

TITLE:

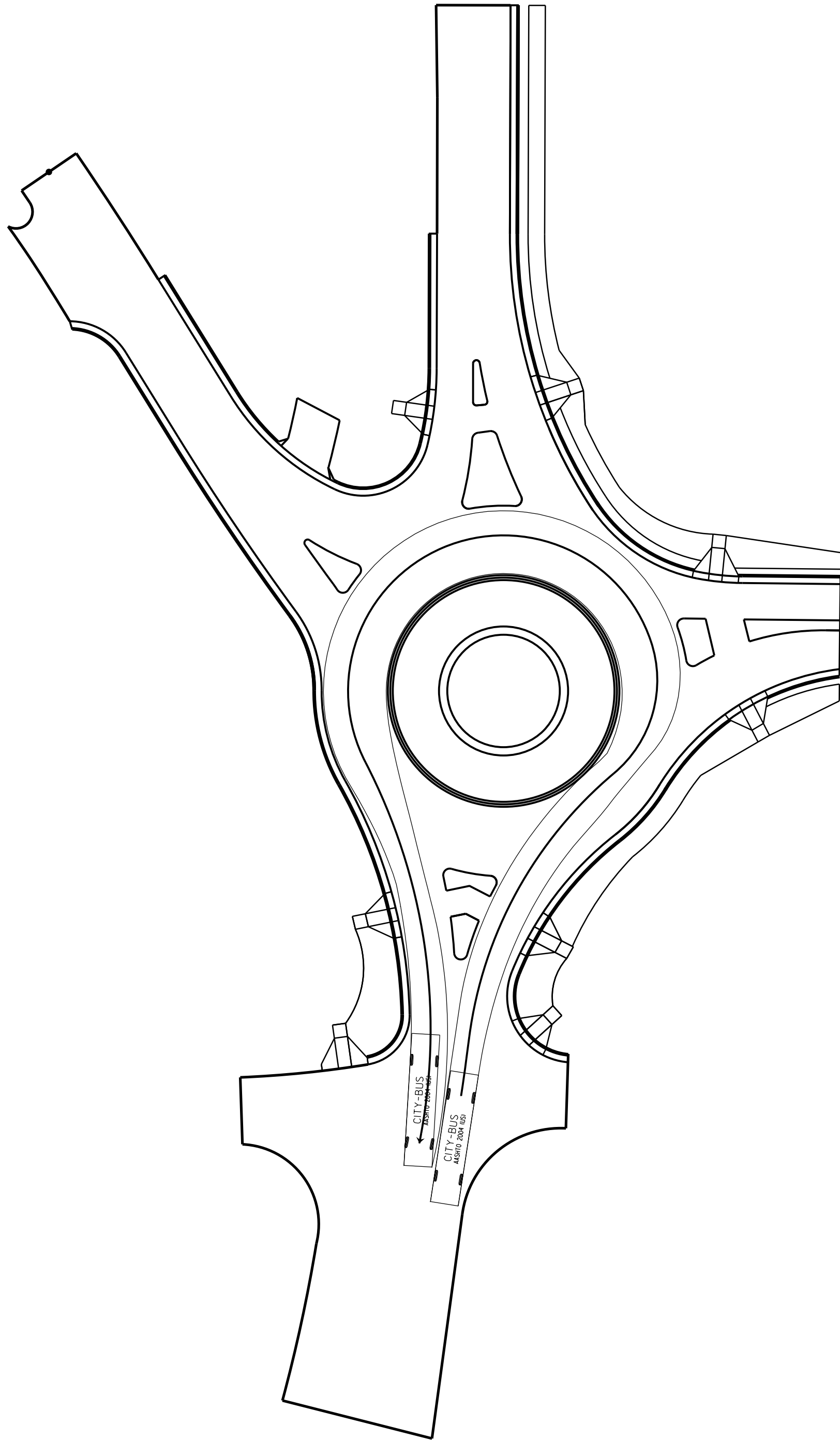
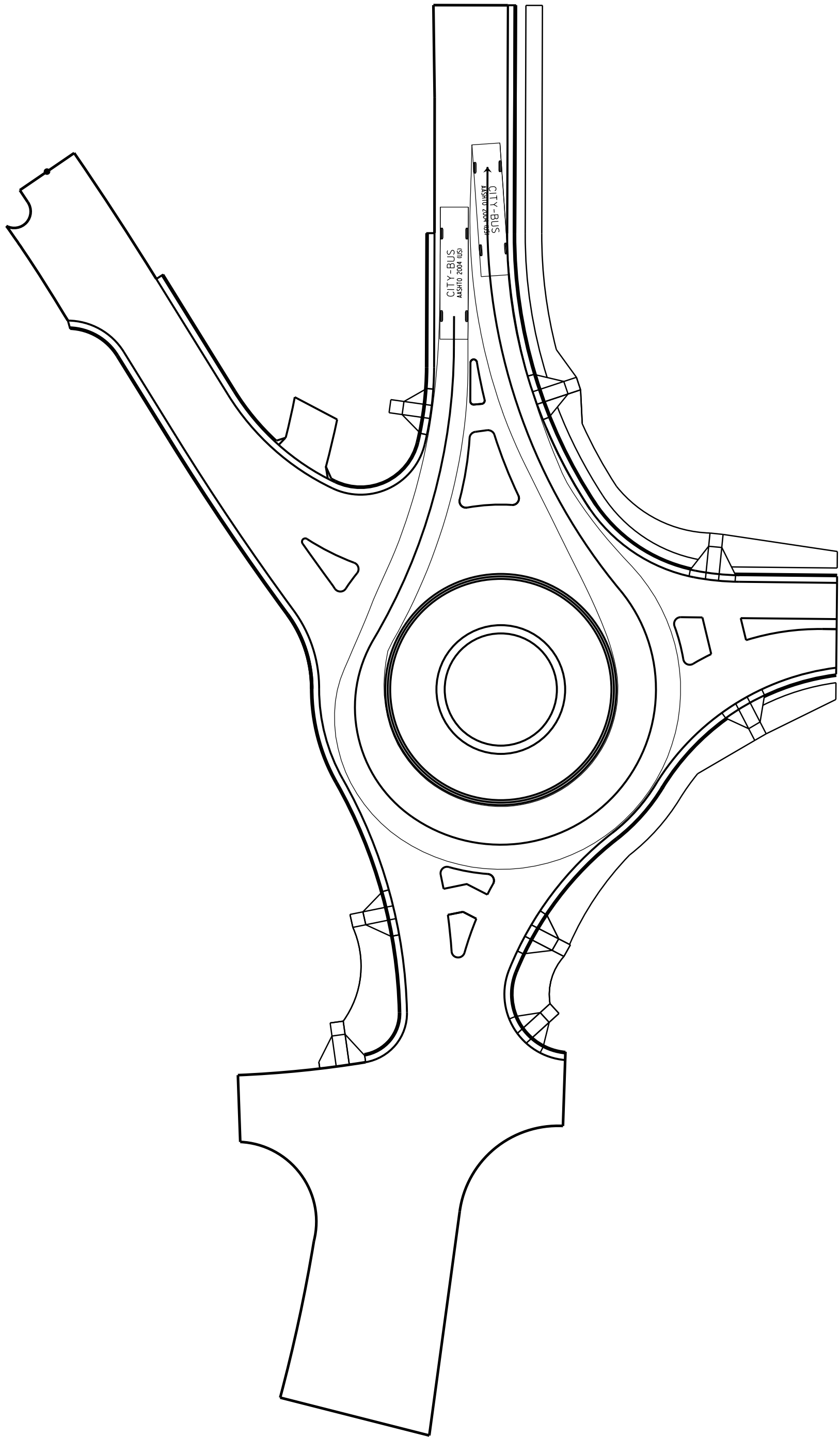
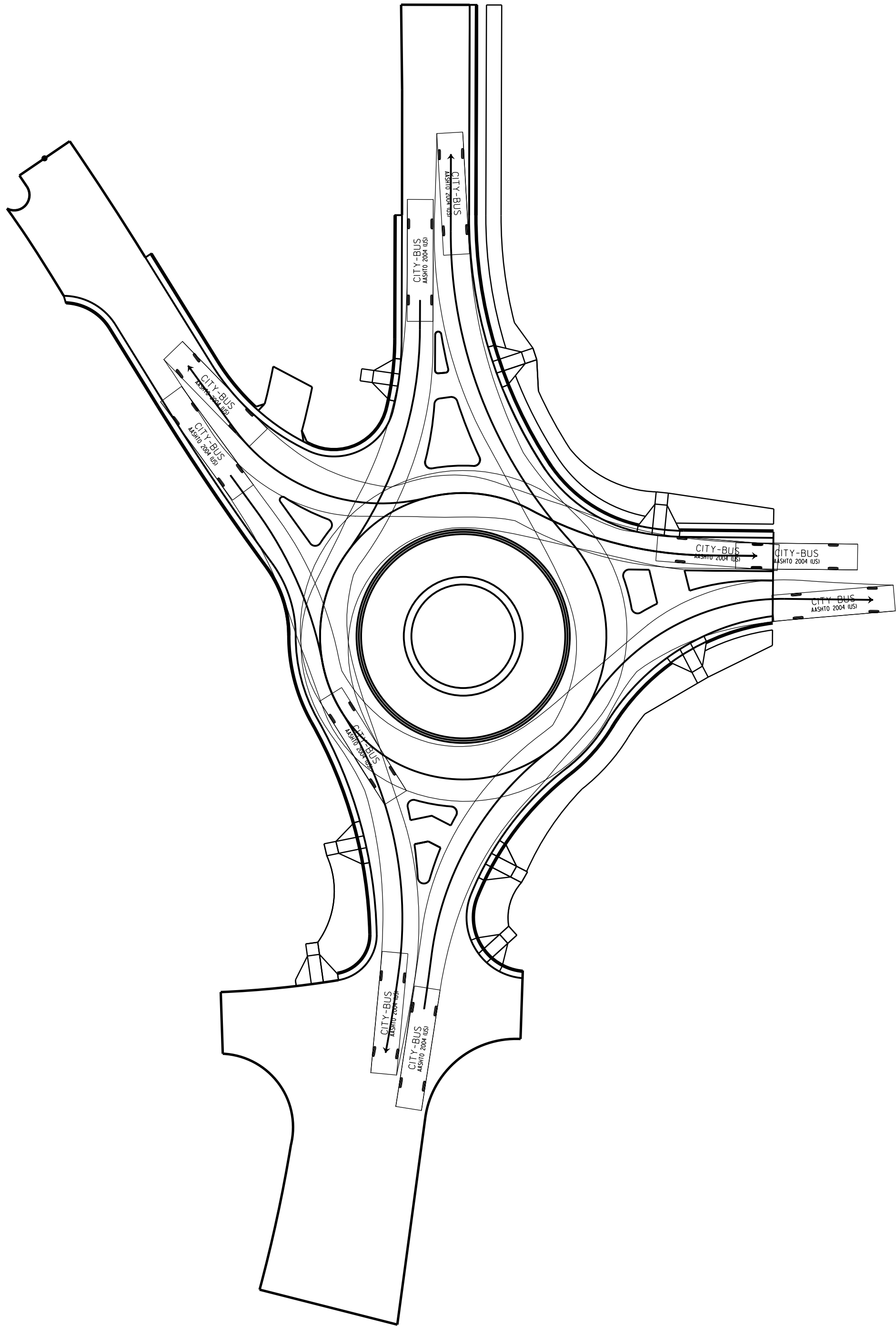
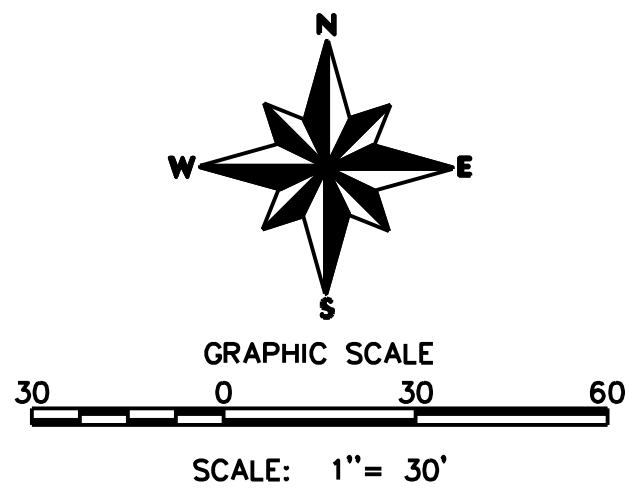
TURNING MOVEMENTS

WB-62

SHEET NO.

AT-01

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