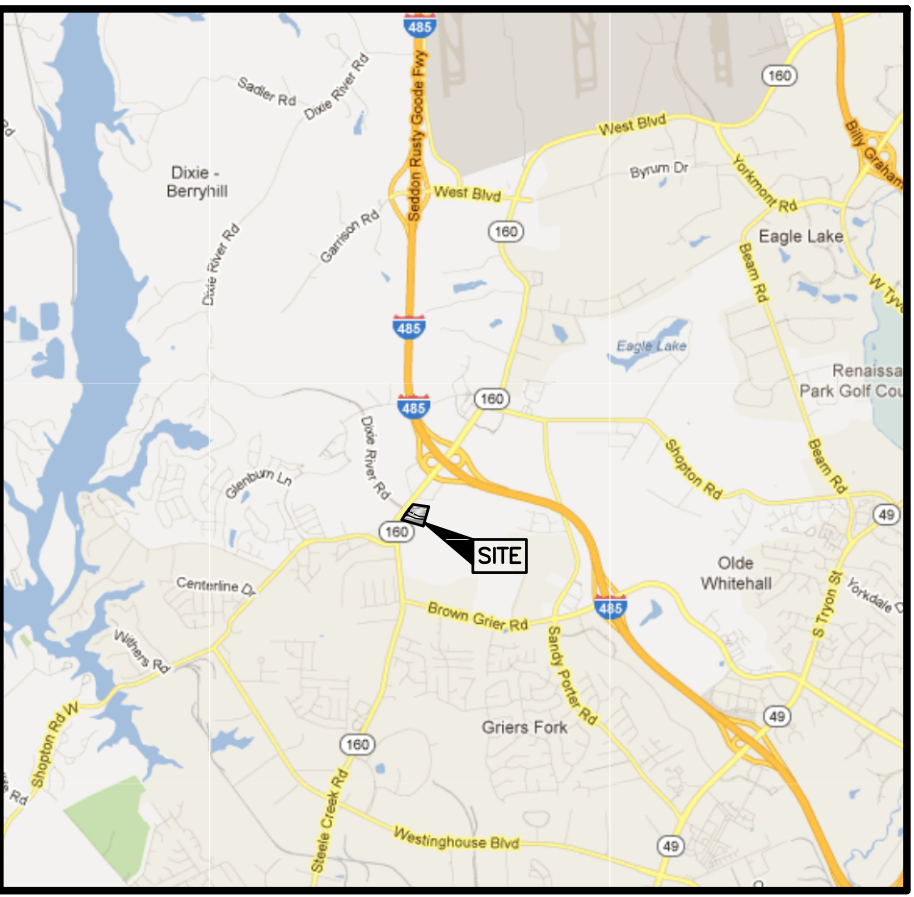


CITY OF CHARLOTTE, MECKLENBURG COUNTY, NORTH CAROLINA  
ROADWAY PLANS  
FOR  
DIXIE RIVER ROAD EXTENSION  
PHASES 1 AND 2  
2013

APPROVED FOR  
CONSTRUCTION  
CHARLOTTE-MECKLENBURG PLANNING DEPARTMENT  
BY: Joshua Weaver 7/17/2013



LOCATION MAP  
No Scale

DEVELOPER/OWNER

SBG Properties, Inc.  
8206-1200 Providence Road, #327  
Charlotte, NC 28277  
Tel: (704) 295-4377  
Fax: (704) 295-4378

DEVELOPMENT DATA

Site Acreage:  
Existing Total: 5.45± Acres (237,430 SF)  
Proposed:  
Lot A = 1.40± Acres(61,027 SF)  
Lot B = 1.17± Acres(51,002 SF)  
Lot C = 0.79± Acres(34,641 SF)  
Lot D = 1.09± Acres(47,408 SF)  
Right of Way = 1.00± Acres(43,352 SF)  
Total = 5.45± Acres(237,430 SF)

Tax Parcel Nos.: 201-09-104  
201-09-114  
Existing Zoning: NS  
Zoning Petition: 2012-059

Note:  
These plans shall be in strict conformance with the City of Charlotte and NCDOT standards and specifications.

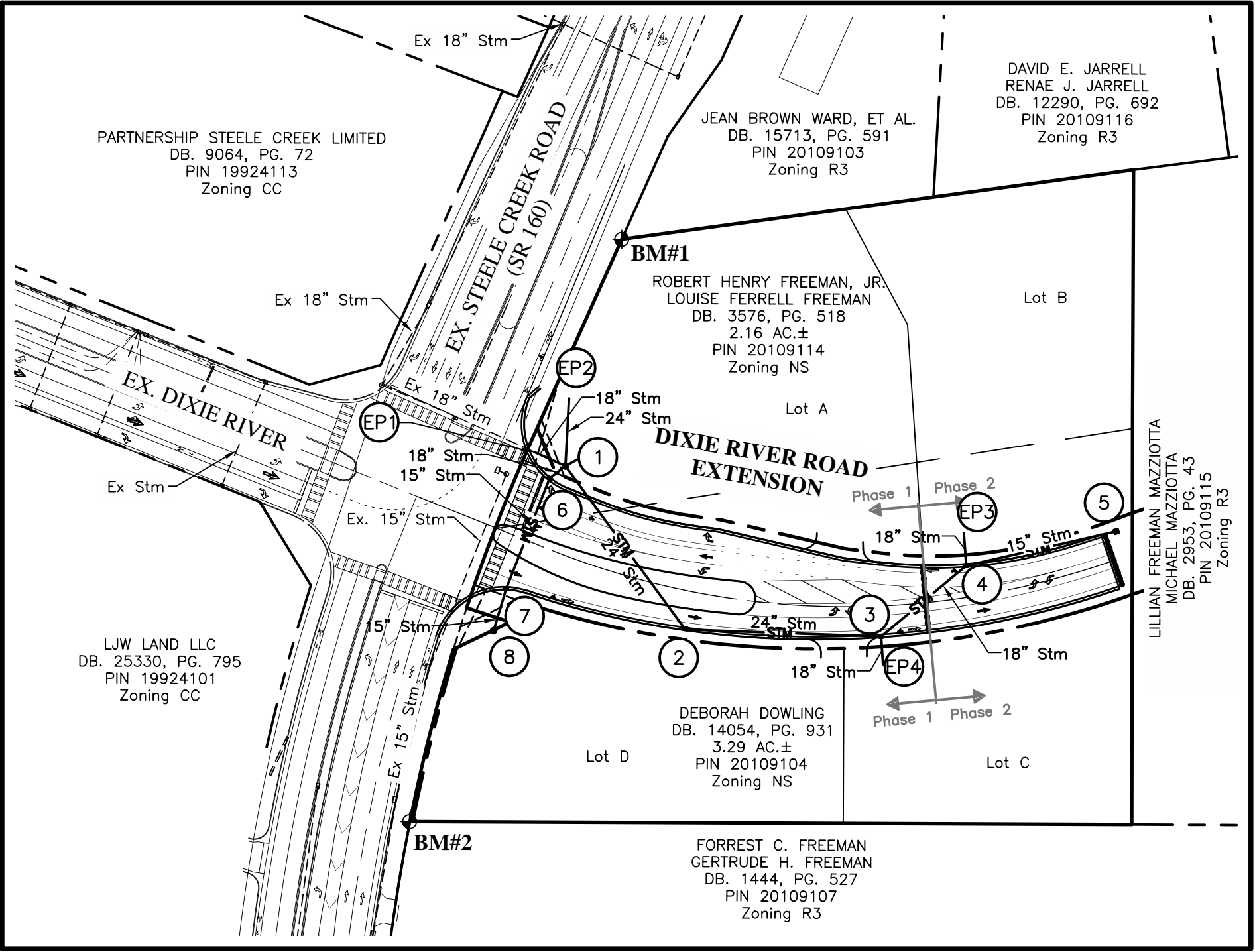
Survey Note:  
Existing information on these plans was provided by a survey prepared by EMHT dated 01/30/2012.

PCCO SUMMARY

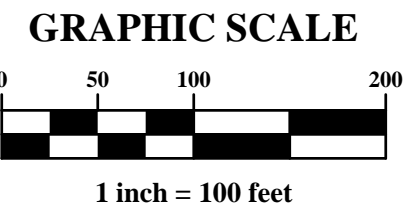
Original Parcel ID Number(s):	201-09-104, 201-09-114
Development Type:	Commercial
Subject to PCCO? Y/N	Yes
If NO, why?	
Watershed:	Central Catawba
Disturbed Area (ac):	4.69
Site Area (ac):	5.45
Total on-site Drainage Area (ac):	5.45
Existing Built-upon-area (SF):	15,830 SF
Existing BUA to be removed (SF):	15,830 SF
Existing BUA to remain (SF):	0 SF
Proposed New BUA (SF):	36,155
Proposed % BUA:	15.23%
Density (High / Low)	Low
Total Post-Project BUA for site:	36,155 SF
Development or Redevelopment?	Development
Natural Area Required (ac):	N/A
Natural Area Provided (ac):	N/A
Total stream buffer protected on-site (ac):	N/A
Transit Station Area? Y/N	N
Distressed Business District? Y/N	N
Mitigation Type (if applicable)	N/A
Natural Area mitigation? Y/N	N/A
Buffer Mitigation? Y/N	N/A
Total Phosphorous Mitigation? Y/N	N/A

SHEET INDEX

Sheet #	Sheet Title
1	Title Sheet
2	General Notes & Typical Sections
3	Existing Conditions & Demolition Plan
4	Site Plan
5	Plan & Profile
6	Plan & Profile
7	Pavement Details
8	Pavement Details
9	Signage & Striping Plan
10	Intersection Turning Movements
11	Erosion & Sediment Control Plan - Phase I
12	Erosion & Sediment Control Plan - Phase II & Overall Grading
13	Landscape Plan
14	Pre-Tributary & Post Tributary Areas
15	Maintenance of Traffic Plan - Phase 1
16	Maintenance of Traffic Plan - Phase 2 & 3
17	Details
18	Details
19	Details
20	Details
21	Details
22	Intersection Sight Distance



INDEX MAP  
Scale: 1" = 100'



SDRC-2012-00037



SWM / DETENTION  
CITY ENGINEERING

N/A

DRAINAGE PLAN  
CITY ENGINEERING

APPROVED  
By Jordan Miller (jbmiller@charlottenc.gov) at 2:05 pm, Jul 17, 2013

EROSION CONTROL  
FOR A PRE-CONSTRUCTION MEETING  
48 HRS. PRIOR TO ANY LAND  
DISTURBING ACTIVITY, CONTACT:

APPROVED  
Jay Wilson at 704-517-1152

TREE ORDINANCE  
URBAN FORESTRY

APPROVED  
as noted  
for Kelly Robertson

CDOT  
CHARLOTTE DEPT. OF TRANSPORTATION

APPROVED  
for Dennis Rorie



North Carolina One-Call Center, Inc.

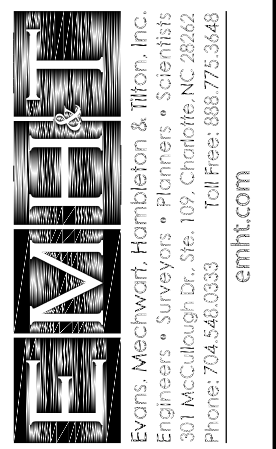
Call 1-800-632-4949 before you dig: It's the law!

By law, everyone MUST contact the North Carolina One-Call Center, 1-800-632-4949, at least 48 hours but no more than 10 working days (excluding weekends and legal holidays) before beginning ANY digging project.

MARK	DATE	DESCRIPTION
1	5/6/13	Revision per NCDOT, CDOT, OMD, and CLUS
2	5/16/13	Revision per NCDOT & CDOT

SBG PROPERTIES, INC.

CITY OF CHARLOTTE, MECKLENBURG COUNTY, NORTH CAROLINA  
ROADWAY PLANS  
FOR  
DIXIE RIVER ROAD EXTENSION  
Phases 1 and 2  
TITLE SHEET

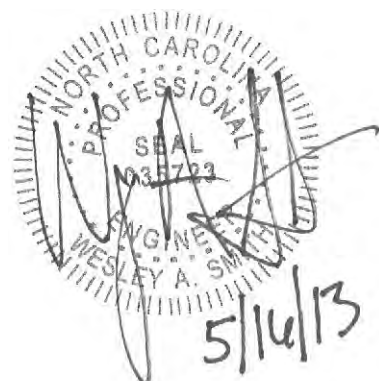


DATE  
MAY 16, 2013

SCALE  
As Noted

JOB NO.  
2011-1544

SHEET  
1/22





I:\2011\1544\Draw\trial engineering\04\Sheets\Site plan\General Notes & Typical Sections.dwg Last Saved By: clowimore, 5/16/2013 8:48 AM Last Printed By: Lowimore, Caleb, 8/20/2012 4:57 PM (No Xrefs)

## I. STREETS

### A. GENERAL NOTES

- ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES UNLESS OTHERWISE SPECIFIED IN THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.
- ALL ASPHALT CUTS SHALL BE MADE WITH A SAW WHEN PREPARING STREET SURFACES FOR PATCHING OR WIDENING STRIPS.
- PAPER JOINTS SHALL BE USED TO SEAL THE ENDS OF AN ASPHALT POUR SO THAT FUTURE EXTENSIONS CAN BE MADE WITHOUT CAUSING ROUGH JOINTS.
- WHEN PLACING ASPHALT AGAINST EXISTING SURFACES, A STRAIGHT EDGE SHALL BE USED TO PREVENT 'HUMPING' AT THAT LOCATION.
- STONE SHALL BE PRIMED IF PAVING IS NOT COMPLETE WITHIN SEVEN (7) DAYS FOLLOWING STONE BASE APPROVAL.
- SURFACES SHALL BE TACKED WHEN ASPHALT IS BEING PLACED OVER EXISTING ASPHALT STREETS OR ADJOINING CONCRETE, STORM DRAIN AND SANITARY SEWER STRUCTURES.
- IN ROLLING AND HILLY TERRAINS, SWEEPING OF THE STONE BASE AND/OR APPLICATION OF A TACK COAT MAY BE REQUIRED NEAR INTERSECTIONS. THESE REQUIREMENTS WILL BE ESTABLISHED BY THE CITY INSPECTOR BASED ON FIELD CONDITIONS.
- ALL CONCRETE USED FOR STREETS, CURB AND GUTTER, SIDEWALKS AND DRAINAGE STRUCTURES, ETC. SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3600 PSI AT 28 DAYS. THIS REQUIREMENT SHALL BE PROVIDED REGARDLESS OF ANY LESSER COMPRESSIVE STRENGTH SPECIFIED IN THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. THE CONTRACTOR SHALL PREPARE CONCRETE TEST CYLINDERS IN ACCORDANCE WITH SECTION 1000 OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES AT THE DIRECTION OF THE PROJECT INSPECTOR. ALL EQUIPMENT AND CYLINDER MOLDS SHALL BE FURNISHED BY THE CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT THE CYLINDERS UNTIL SUCH TIME AS THEY ARE TRANSPORTED FOR TESTING. TESTING FOR PROJECTS SHALL BE PERFORMED BY AN INDEPENDENT TESTING LAB. AT NO COST TO THE CITY, THE CONTRACTOR SHALL PROVIDE EQUIPMENT AND PERFORM TESTS ON CONCRETE FOR A MAXIMUM SLUMP AND AIR CONTENT AS DEFINED IN SECTION 1000 OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. THESE TESTS SHALL BE PERFORMED AT A FREQUENCY ESTABLISHED BY THE INSPECTOR. MATERIALS FAILING TO MEET SPECIFICATIONS SHALL BE REMOVED BY THE CONTRACTOR.
- ALL CONCRETE SHALL BE CURED WITH 100% RESIN BASE, WHITE PIGMENTED CURING COMPOUND WHICH MEETS ASTM SPECIFICATIONS C-309, TYPE 1, APPLIED AT A UNIFORM RATE AT ONE (1) GALLON TO 400 SQUARE FEET WITHIN 24 HOURS OF PLACEMENT OF THE CONCRETE.
- ALL CURB AND GUTTER SHALL BE BACKFILLED WITH SOIL APPROVED BY THE INSPECTOR WITHIN 48 HOURS AFTER CONSTRUCTION TO PREVENT EROSION.
- ALL BACKFILL SHALL BE NON-PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATIVE MATTER, WASTE, CONSTRUCTION MATERIAL OR OTHER OBJECTIONABLE MATERIAL. SAID MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND THE MATERIAL SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR PROOF ROLLING.
- MATERIALS DEEMED BY THE INSPECTOR AS UNSUITABLE FOR BACKFILL PURPOSES SHALL BE REMOVED AND REPLACED WITH SELECT BACKFILL MATERIAL.
- ALL TRENCHES IN THE STREET RIGHT-OF-WAY SHALL BE BACKFILLED WITH SUITABLE MATERIAL IMMEDIATELY AFTER THE PIPE IS LAID. THE FILL AROUND ALL PIPE SHALL BE PLACED IN LAYERS NOT TO EXCEED SIX (6) INCHES AND EACH LAYER SHALL BE COMPACTED THOROUGHLY.
- UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UN-BACKFILLED TRENCHES AFTER THE PIPE HAS BEEN PLACED.
- COMPACTION REQUIREMENTS SHALL BE ATTAINED BY THE USE OF MECHANICAL COMPACTION METHODS. EACH SIX-INCH (6") LAYER OF BACKFILL SHALL BE PLACED LOOSE AND THOROUGHLY COMPACTED INTO PLACE.
- STRAIGHT FORMS SHALL NOT BE USED FOR FORMING CURB AND GUTTER IN CURVES.
- ALL EXCESS CONCRETE ON THE FRONT EDGE (UP) OF GUTTER SHALL BE REMOVED WHEN CURB AND GUTTER IS POURED WITH A MACHINE.
- ALL SUBGRADE SHALL BE COMPACTED TO 100% OF THE MAXIMUM DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST TO A DEPTH OF EIGHT INCHES (8"), AND A DENSITY OF 95% STANDARD PROCTOR FOR DEPTHS GREATER THAN EIGHT INCHES (8"). ALL TESTS SHALL BE PERFORMED BY DEVELOPER AT NO COST TO THE CITY.
- A CANVAS COVER OR OTHER SUITABLE COVER SHALL BE REQUIRED FOR TRANSPORTING PLANT MIX ASPHALT DURING COOL WEATHER WHEN THE FOLLOWING CONDITIONS ARE PRESENT:

AIR TEMPERATURE IS BELOW 60 DEGREES F.

LENGTH OF HAUL FROM PLANT TO JOB IS GREATER THAN FIVE (5) MILES.

OTHER OCCASIONS AT THE INSPECTOR'S DISCRETION WHEN A COMBINATION OF FACTORS INDICATES THAT MATERIAL SHOULD BE COVERED IN ORDER TO ASSURE PROPER PLACEMENT TEMPERATURE.

- CONCRETE OR ASPHALT SHALL NOT BE PLACED UNTIL THE AIR TEMPERATURE MEASURED AT THE LOCATION OF THE PAVING OPERATION IS AT 35 DEGREES F AND RISING BY 10:00 A.M. CONCRETE OR PAVING OPERATIONS SHOULD BE SUSPENDED WHEN THE AIR TEMPERATURE IS 40 DEGREES F AND DESCENDING. THE CONTRACTOR SHALL PROTECT FRESHLY PLACED CONCRETE OR ASPHALT IN ACCORDANCE WITH SECTIONS 420 (CONCRETE STRUCTURES), 600 (ASPHALT BASES AND PAVEMENTS), AND 700 (CONCRETE PAVEMENTS AND SHOULDERS) OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES WHEN THE AIR TEMPERATURE IS AT OR BELOW 35 DEGREES F AND THE CONCRETE HAS NOT OBTAINED AN AGE OF 72 HOURS.
- THE CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES WHEN WORKING WITHIN EXISTING STREETS UNLESS SHOWN HEREOF. THE CONTRACTOR SHALL PLACE AND MAINTAIN SIGNS, DANGER LIGHTS, AND BARRICADES AND FURNISH WATCHMEN OR FLAGMEN TO DIRECT TRAFFIC IN ACCORDANCE WITH THE LATEST EDITION WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH). WORK IN THE RIGHT-OF-WAY OF STATE SYSTEM STREETS MAY REQUIRE ADDITIONAL TRAFFIC CONTROL PROVISIONS.
- THE CONTRACTOR SHALL DO THAT WHICH IS NECESSARY TO CONTROL EROSION AND TO PREVENT SEDIMENTATION DAMAGE TO ALL ADJACENT PROPERTIES AND STREAMS IN ACCORDANCE WITH THE APPROPRIATE CITY OF CHARLOTTE EROSION AND SEDIMENTATION CONTROL ORDINANCE.

### B. GRADING

- PROPOSED STREET RIGHTS-OF-WAY SHALL BE GRADED TO THEIR FULL WIDTH FOR DITCH TYPE STREETS AND A MINIMUM OF EIGHT FEET (8') BEHIND THE CURB FOR CURB AND GUTTER SECTIONS.
- FILL EMBANKMENTS SHALL BE FORMED OF SUITABLE MATERIAL PLACED IN SUCCESSIVE LAYERS NOT TO EXCEED MORE THAN SIX INCHES (6") IN DEPTH FOR THE FULL WIDTH OF THE CROSS-SECTION, INCLUDING THE WIDTH OF THE SLOPE AREA. NO STUMPS, TREES, BRUSH, RUBBISH OR OTHER UNSUITABLE MATERIALS OR SUBSTANCES SHALL BE PLACED IN THE EMBANKMENT. EACH SUCCESSIVE SIX-INCH (6") LAYER SHALL BE THOROUGHLY COMPACTED BY THE SHEEPSFOOT TAMING ROLLER, 10-TON POWER ROLLER, PNEUMATIC-TIRED ROLLER, OR OTHER METHODS APPROVED BY THE CITY ENGINEER. EMBANKMENTS OVER AND AROUND ALL PIPE CULVERTS SHALL BE OF SELECT MATERIAL, PLACED AND THOROUGHLY TAMPED AND COMPACTED AS DIRECTED BY THE CITY ENGINEER OR HIS REPRESENTATIVE.
- 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.

### C. ROADWAY BASE

- ALL ROADWAYS SHALL BE CONSTRUCTED WITH A BASE COURSE AS DESCRIBED ON THE APPROPRIATE CHARLOTTE LAND DEVELOPMENT STANDARD DETAIL DRAWING.
- THE MATERIAL FOR STONE BASE COURSE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1010, AGGREGATE FOR NON-ASPHALT FLEXIBLE TYPE BASE, AND SECTION 520, AGGREGATE BASE COURSE OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.

- THE STONE BASE SHALL BE COMPACTED TO 100% OF THE MAXIMUM DENSITY OBTAINABLE WITH THE MODIFIED PROCTOR TEST (AASHTO-T180) BY ROLLING WITH RING OR TAMPING ROLLER OR WITH A PNEUMATIC TIRED ROLLER WITH A MINIMUM WEIGHT OF TEN (10) TONS. WHEN COMPLETED, THE BASE COURSE SHALL BE SMOOTH, HARD, DENSE, UNYIELDING AND WELL BONDED.
- A BITUMINOUS CONCRETE BASE COURSE, AS SPECIFIED ON THE STANDARD DETAIL DRAWING, MAY BE SUBSTITUTED IN LIEU OF A STONE BASE COURSE.
- FOR ANY SECTION OF EXISTING ROAD DESIGNATED FOR FULL DEPTH PAVEMENT REPLACEMENT, CONTRACTOR SHALL REMOVE EXISTING ROADWAY AREA, EMBANKMENT PLACED TO REACH DESIGNED SUBGRADE SHALL BE PLACED AND COMPACTED AND PROOF ROLLED IN ACCORDANCE WITH NCDOT APPLICABLE STANDARDS.

### D. ROADWAY INTERMEDIATE AND SURFACE COURSE

- ALL PUBLIC ROADWAYS SHALL BE CONSTRUCTED WITH AN INTERMEDIATE AND SURFACE COURSE AS DESCRIBED ON THE APPROPRIATE CITY OF CHARLOTTE LAND DEVELOPMENT STANDARD DETAIL DRAWING.
- PLANT MIXED ASPHALT SHALL CONFORM IN ALL RESPECTS TO SECTION 610 OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- THE FINAL ONE-INCH (1") LIFT OF ASPHALT SURFACE COURSE FOR RESIDENTIAL SUBURBAN STREETS SHALL BE WITHHELD UNTIL A MINIMUM OF (75%) SEVENTY-FIVE PERCENT OF THE DEVELOPMENT IS OCCUPIED (OCCUPIED MEANS A CERTIFICATE OF OCCUPANCY HAS BEEN ISSUED) AT LEAST ONE (1) YEAR HAS LAPSED FROM THE APPLICATION OF THE INTERMEDIATE COURSE LAYER (ALL DOCUMENTATION TO BE PROVIDED BY THE DEVELOPER AND APPROVED BY THE CITY INSPECTOR). ALL KNOWN BASE FAILURES SHALL BE REPAIRED PRIOR TO APPLICATION OF THE FINAL ONE-INCH (1") LIFT OF ASPHALT SURFACE COURSE.
- THE CITY INSPECTOR SHALL BE GIVEN A TWENTY-FOUR (24) HOUR NOTIFICATION TO INSPECT THE INTERMEDIATE COURSE DEFICIENCIES. ALL DEFICIENCY REPAIRS ARE TO BE MONITORED BY A CITY INSPECTOR AND ACCEPTED PRIOR TO APPLICATION OF FINAL LAYER.
- CITY INSPECTORS SHALL BE NOTIFIED PRIOR TO USING RECYCLED PLANT MIXES.
- FAILURE TO MEET THE ABOVE REQUIREMENTS MAY RESULT IN THE DELAY OR PREVENTION OF STREET ACCEPTANCE BY THE CITY OF CHARLOTTE OR NCDOT.

### E. SIDEWALKS AND DRIVEWAYS

- SIDEWALKS SHALL BE CONSTRUCTED OF NOT LESS THAN 3600 PSI CONCRETE AND SHALL BE FOUR INCHES (4") THICK, CONSTRUCTED ON AN ADEQUATELY GRADED BASE, EXCEPT WHERE A SIDEWALK CROSSES A DRIVEWAY IT SHALL BE SIX INCHES (6") THICK. SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST. THE SURFACE OF THE SIDEWALK SHALL BE STEEL TROWELED AND LIGHT BROOM FINISHED AND CURED WITH AN ACCEPTABLE CURING COMPOUND. TOOLS SHALL BE PROVIDED AT INTERVALS OF NOT LESS THAN FIVE FEET (5') AND EXPANSION JOINTS AT INTERVALS OF NOT MORE THAN FORTY-FIVE FEET (45'). THE SIDEWALK SHALL HAVE A LATERAL SLOPE OF ONE-QUARTER INCH (1/4") PER FOOT.
- PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO 1/4 INCH PER FOOT (MIN.) UP TO 1 1/4 INCH PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPRACTICAL. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.
- SIDEWALK WIDTHS SHALL BE A MINIMUM OF FOUR FEET (4') UNLESS OTHERWISE SPECIFIED. A 5' x 5' SIDEWALK IS REQUIRED AT LEAST EVERY 200' AS REQUIRED BY ADA FOR A PASSING ZONE, UNLESS OTHERWISE PROVIDED BY RESIDENTIAL DRIVEWAYS, INTERSECTING SIDEWALK, ETC.
- APPROVAL OF SIDEWALK CONSTRUCTION PLANS MUST BE OBTAINED AS PART OF THE PLAN REVIEW PROCESS. EXCEPT IN UNUSUAL CIRCUMSTANCES, SIDEWALK MUST BE LOCATED A MINIMUM OF FOUR FEET (4') FROM THE BACK OF THE CURB OR AT THE BACK OF THE RIGHT-OF-WAY. A RECORDED PUBLIC SIDEWALK EASEMENT IS REQUIRED FOR ALL SIDEWALK LOCATED OUTSIDE PUBLIC RIGHT-OF-WAY; THE WIDTH SHALL BE EQUAL TO THE DISTANCE FROM THE RIGHT-OF-WAY LINE TO THE BACK OF THE SIDEWALK PLUS TWO FEET (2') OR TO THE FACE OF BUILDING, WHICHEVER IS LESS. THE SIDEWALK EASEMENT MUST BE RECORDED WITH THE MECKLENBURG COUNTY REGISTER OF DEEDS PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE CORRESPONDING BUILDING(S).
- ACCESSIBLE RAMPS ARE REQUIRED WHERE SIDEWALKS INTERSECT CURBING AT ANY STREET INTERSECTION AND AT TYPE III DRIVEWAY CONNECTIONS.

## II. STORM DRAINAGE

### A. GENERAL NOTES

- ALL WORK AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE NCDOT STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED IN THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL. ALL CONCRETE USED FOR DRAINAGE STRUCTURES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3600 PSI AT 28 DAYS. THIS REQUIREMENT SHALL BE PROVIDED REGARDLESS OF ANY LESSER COMPRESSIVE STRENGTH SPECIFIED IN THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- REINFORCED CONCRETE PIPE MAY BE USED IN ALL STORM DRAIN APPLICATIONS. HIGH DENSITY POLYETHYLENE PIPE (HDPE) MAY BE SUBSTITUTED FOR PIPE DIAMETERS OF 48 INCHES OR LESS. CULVERTS 60 INCHES IN DIAMETER OR GREATER MAY BE CORRUGATED ALUMINIZED METAL PIPE (CAMP) OR ALUMINUM WITH A MINIMUM 14 GAUGE METAL.
- ALL PIPE SHALL BE LAID WITH THE BELL OR GROOVE UPGRADE AND THE JOINT ENTIRELY INTERLOCKING.
- THE MINIMUM COVER FOR ALL PIPES IS TWO FEET (2') MEASURED FROM THE FINAL SURFACE. SPECIAL APPLICATIONS FOR LESS THAN TWO FEET (2') OF COVER WILL BE REVIEWED AND APPROVED BY THE CITY ENGINEER INDIVIDUALLY. THE MAXIMUM COVER FOR STORM DRAINAGE PIPES SHALL AT A MINIMUM COMPLY WITH THE REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION HIGHWAY DESIGN BRANCH ROADWAY DESIGN MANUAL, PART I, SECTION 5, AND 'DRAINAGE DESIGN'. STORM PIPE DESIGN THAT EXCEEDS THESE CRITERIA MAY BE APPROVED AT THE DISCRETION OF THE CITY ENGINEER.
- ALL PIPES IN STORM DRAIN STRUCTURES SHALL BE FLUSH WITH THE INSIDE WALL.
- ALL STORM DRAIN STRUCTURES OVER THREE FEET AND SIX INCHES (3'-6") IN HEIGHT MUST HAVE STEPS IN ACCORDANCE WITH STANDARD DETAILS SET FORTH IN THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.
- THE INTERIOR SURFACES OF ALL STORM DRAINAGE STRUCTURES SHALL BE POINTED UP AND SMOOTHED TO AN ACCEPTABLE STANDARD USING MORTAR MIXED TO MANUFACTURER'S SPECIFICATIONS.
- ALL FRAMES, GRATES, RINGS, COVERS, ETC., MUST CONFORM TO THE STANDARDS SET FORTH IN THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.
- ALL GRADED CREEK BANKS AND SLOPES SHALL BE AT A MAXIMUM OF TWO FEET (2') HORIZONTAL TO ONE FOOT (1") VERTICAL (2:1) AND NOT TO EXCEED 10' WITHOUT TERRACING OR THE SLOPES SHALL BE DESIGNED BY A PROFESSIONAL GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY ENGINEER ON A CASE BY CASE BASIS.

### B. HIGH DENSITY POLYETHYLENE PIPE (HDPE)

- THE PRODUCT USED SHALL BE CORRUGATED EXTERIOR/SMOOTH INTERIOR PIPE (TYPE 5), CONFORMING TO THE REQUIREMENTS OF AASHTO SPECIFICATION M294 (LATEST EDITION) FOR CORRUGATED POLYETHYLENE PIPE.
- BELL AND SPIGOT JOINTS SHALL BE REQUIRED ON ALL PIPES INSIDE THE RIGHT-OF-WAY. BELLS SHALL COVER AT LEAST TWO (2) FULL CORRUGATIONS ON EACH SECTION OF PIPE. THE BELL AND SPIGOT JOINT SHALL HAVE AN "O" RING RUBBER GASKET MEETING ASTM F477 WITH THE GASKET FACTORY INSTALLED, PLACED ON THE SPIGOT END OF THE PIPE. PIPE JOINTS SHALL MEET ALL REQUIREMENTS OF AASHTO M294.
- ALL HDPE PIPE INSTALLED MUST BE INSPECTED AND APPROVED BY THE CITY'S INSPECTOR PRIOR TO ANY BACKFILL BEING PLACED. THE CITY INSPECTOR MUST BE PRESENT DURING THE BACKFILLING OPERATION AS WELL.
- BACKFILL MATERIAL USED TO INSTALL HDPE PIPE WITHIN THE STREET RIGHT-OF-WAY SHALL BE SELECT MATERIAL, CLASS II-IV, AS DEFINED BY SECTION 1016-3 OF THE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. UPON SUBMITTAL OF WRITTEN CERTIFICATION OF MATERIAL SUITABILITY BY A LICENSED GEOTECHNICAL ENGINEER, NOT CLASS I SELECTED MATERIAL MAY BE USED. ALL BACKFILL MATERIAL SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO PLACEMENT OF THE MATERIAL WITHIN THE STREET RIGHT-OF-WAY.

- THE MINIMUM LENGTH OF HDPE PIPE PERMITTED FOR USE SHALL BE FOUR FEET (4'). HDPE FLARED END SECTIONS ARE NOT ALLOWED.
- ALL HDPE PIPE INSTALLED SHALL BE THIRD PARTY CERTIFIED AND SHALL BEAR THE PLASTIC PIPE INSTITUTE' S (PPI) CERTIFICATE STICKER.

### C. REINFORCED CONCRETE

- ALL CONCRETE SHALL BE AT LEAST 3600 PSI. PRIOR APPROVAL SHALL BE OBTAINED IN ORDER TO USE PRE-CAST STORM DRAINAGE STRUCTURES IN ANY STREET RIGHT-OF-WAY.
- CONCRETE PIPE USED WITHIN THE STREET RIGHT-OF-WAY SHALL BE A MINIMUM OF CLASS III REINFORCED CONCRETE PIPE, WITH A MINIMUM DIAMETER OF FIFTEEN INCHES (15") (EIGHTEEN INCHES (18") MINIMUM ON CROSS DRAIN CULVERTS WITHIN THE ETJ). INSTALLATION OF CLASS IV OR HIGHER CONCRETE PIPE SHALL BE IDENTIFIED ON THE AS-BUILT PLAN AND THE CITY INSPECTOR SHALL BE GIVEN DOCUMENTATION AND NOTIFICATION OF THIS INFORMATION PRIOR TO CONSTRUCTION.
- CONCRETE MORTAR JOINTS SHALL BE USED FOR JOINING ALL CONCRETE PIPES. THE PIPE SHALL BE CLEAN AND MOIST WHEN MORTAR IS APPLIED. THE LOWER PORTIONS OF THE BELL OR GROOVE SHALL BE FILLED WITH MORTAR SUFFICIENT TO BRING THE INNER SURFACE FLUSH AND EVEN WHEN THE NEXT JOINT IS PLACED. THE REMAINDER OF THE JOINT SHALL THEN BE FILLED WITH MORTAR AND A BEAD OR RING OF MORTAR FORMED AROUND THE OUTSIDE OF THE JOINT. THE APPLICATION OF MORTAR MAY BE DELAYED UNTIL FILL IS COMPLETED WHEN THE PIPE IS LARGER THAN THIRTY INCHES (30').
- PREFORMED JOINT SEALER, WHICH CONFORMS TO AASHTO SPECIFICATION M-198 FOR TYPE B FLEXIBLE PLASTIC GASKETS, MAY BE USED IN LIEU OF THE MORTAR JOINING METHOD.

### D. INSTALLATION OF REINFORCED CONCRETE AND CORRUGATED METAL PIPE

- ALL BACKFILL SHALL BE NON-PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATIVE MATTER, WASTE, CONSTRUCTION MATERIAL OR OTHER OBJECTIONABLE MATERIAL. SAID MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR PROOF ROLLING.
- MATERIALS DEEMED BY THE ENGINEER AS UNSUITABLE FOR BACKFILL PURPOSES SHALL BE REMOVED AND REPLACED WITH SELECT BACKFILL MATERIAL.
- BACKFILLING OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER THE PIPE IS LAID. THE FILL AROUND THE PIPE SHALL BE PLACED IN LAYERS NOT TO EXCEED EIGHT INCHES (8"). EACH LAYER SHALL BE THOROUGHLY COMPACTED TO 95% OF THE MAXIMUM DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST (A DENSITY OF 100% STANDARD PROCTOR IS REQUIRED FOR THE TOP EIGHT INCHES (8')).
- COMPACTION REQUIREMENTS SHALL BE ATTAINED BY THE USE OF MECHANICAL COMPACTION METHODS. EACH LAYER OF BACKFILL SHALL BE PLACED LOOSE AND THOROUGHLY COMPACTED IN PLACE.
- UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UN-BACKFILLED TRENCHES AFTER THE PIPE HAS BEEN PLACED.

### E. STANDARDS FOR DESIGN

- ALL STORM DRAINAGE DESIGN SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS AS PROVIDED IN THE CHARLOTTE-MECKLENBURG STORM WATER DESIGN MANUAL, NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR ROADS AND STRUCTURES, CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL, OR THE MORE RESTRICTIVE OF ANY STANDARDS THAT CONFLICT.
- ADEQUATE STORM DRAINAGE SHALL BE PROVIDED THROUGHOUT THE DEVELOPMENT BY MEANS OF STORM DRAINAGE PIPES OR PROPERLY GRADED CHANNELS. ALL PIPES SHALL BE OF ADEQUATE SIZE AND CAPACITY, AS APPROVED BY THE CITY ENGINEER, TO CARRY ALL STORM WATER IN ITS DRAINAGE AREA.
- IN ACCORDANCE WITH SECTION 12.603 OF THE CITY ZONING ORDINANCE, THE CITY ENGINEER SHALL REVIEW THE DRAINAGE PLAN FOR COMPLIANCE WITH THE STANDARDS CONTAINED IN THE CURRENT EDITION OF THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL AND THE CHARLOTTE-MECKLENBURG STORM WATER DESIGN MANUAL AND ALL OTHER RELEVANT AND APPROPRIATE STANDARDS ESTABLISHED BY THE CITY ENGINEERING DEPARTMENT.
- SUB-SURFACE DRAINAGE SHALL BE PROVIDED WHERE THE GROUND WATER LEVEL IS LIKELY TO BE NEAR THE SURFACE. IN CAPILLARY SOILS, THE WATER LEVEL SHOULD BE FOUR TO SIX FEET (4'-6') BELOW THE SURFACE TO PREVENT THE RISE OF MOISTURE INTO THE SUBGRADE. SUBDRAINS SHALL BE USED TO LOWER GROUND WATER IN LOW AREAS IN THE STREET.
- THE NCDOT STANDARD DRAWINGS HAVE BEEN ACCEPTED AS APPROVED STANDARDS TO BE SPECIFIED FOR LAND DEVELOPMENT PROJECTS IN THE CITY OF CHARLOTTE AND CITY OF CHARLOTTE ETJ. SEE STANDARD #20.00A, B, AND C OF THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL FOR A TABLE LISTING THE STANDARDS ACCEPTED. THESE STANDARD DRAWINGS SHALL BE REFERENCED BY NCDOT NUMBER OR SHOWN ON ALL PLANS SUBMITTED TO THE CITY OF CHARLOTTE FOR APPROVAL.

## III. PLAN REQUIREMENTS

### A. GENERAL NOTES

- ALL EROSION CONTROL MEASURES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL, STATE OF NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, OR THE MORE RESTRICTIVE OF ANY STANDARDS THAT CONFLICT.
- ALL STORM DRAINAGE DESIGN SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS AS PROVIDED IN THE CHARLOTTE-MECKLENBURG STORM WATER DESIGN MANUAL, CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL, OR THE MORE RESTRICTIVE OF ANY STANDARDS THAT CONFLICT.
- IN AREAS WHERE THE FLOODWAY REGULATIONS ARE APPLICABLE, THE FUTURE CONDITIONS FLOOD FRINGE LINE, FEMA FLOOD FRINGE LINE, COMMUNITY ENCROACHMENT LINE, AND FEMA ENCROACHMENT LINE SHALL BE SHOWN ON THE PRELIMINARY PLAN AND THE FINAL PLAN. AN APPLICATION FOR A FLOODLANDS DEVELOPMENT PERMIT SHALL BE SUBMITTED TO MECKLENBURG COUNTY ENGINEERING IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE CITY/COUNTY FLOODWAY REGULATIONS.
- ALL STANDARD DETAIL NUMBERS FOR ANY STRUCTURES OR SPECIFICS USED WITHIN THE PLANS ARE IN REFERENCE TO THE MOST CURRENT COPY OF THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.
- THE CONTRACTOR MUST OBTAIN THE APPROPRIATE PERMIT FOR CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY. CALL LINDA POISSANT AT (704) 336-2562 TO OBTAIN THE PERMIT TO WORK WITHIN THE PUBLIC RIGHT-OF-WAY AND TO LEASE ANY PUBLIC RIGHT-OF-WAY FOR MORE THAN 30 DAYS.
- PRIOR TO ANY RIGHT-OF-WAY TREES BEING REMOVED, CONTRACTOR MUST ACQUIRE A TREE REMOVAL PERMIT. CONTACT LEWIS HATFIELD WITH LANDSCAPE MANAGEMENT AT 704-336-4265 FOR ISSUANCE OF A PERMIT.

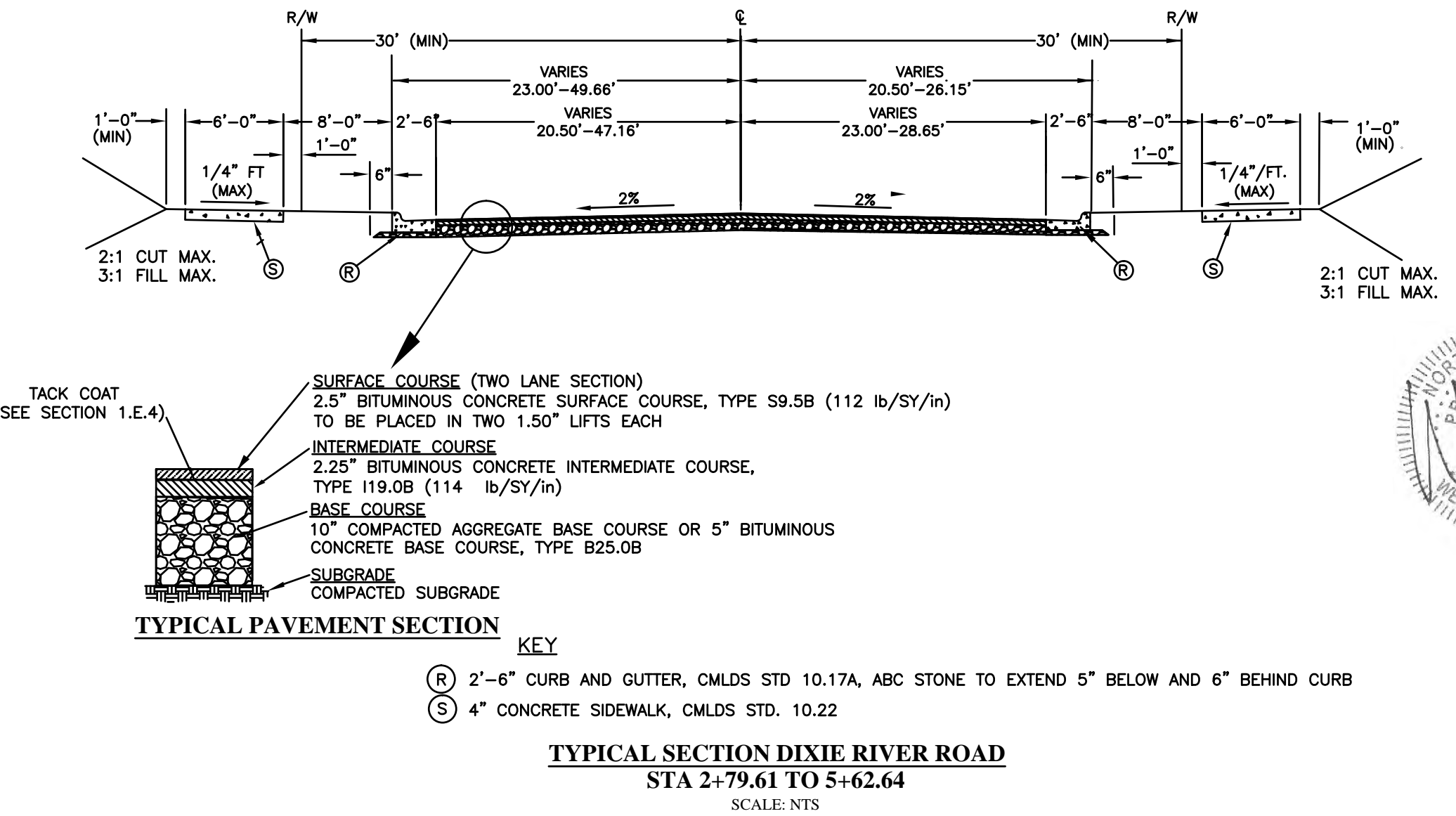
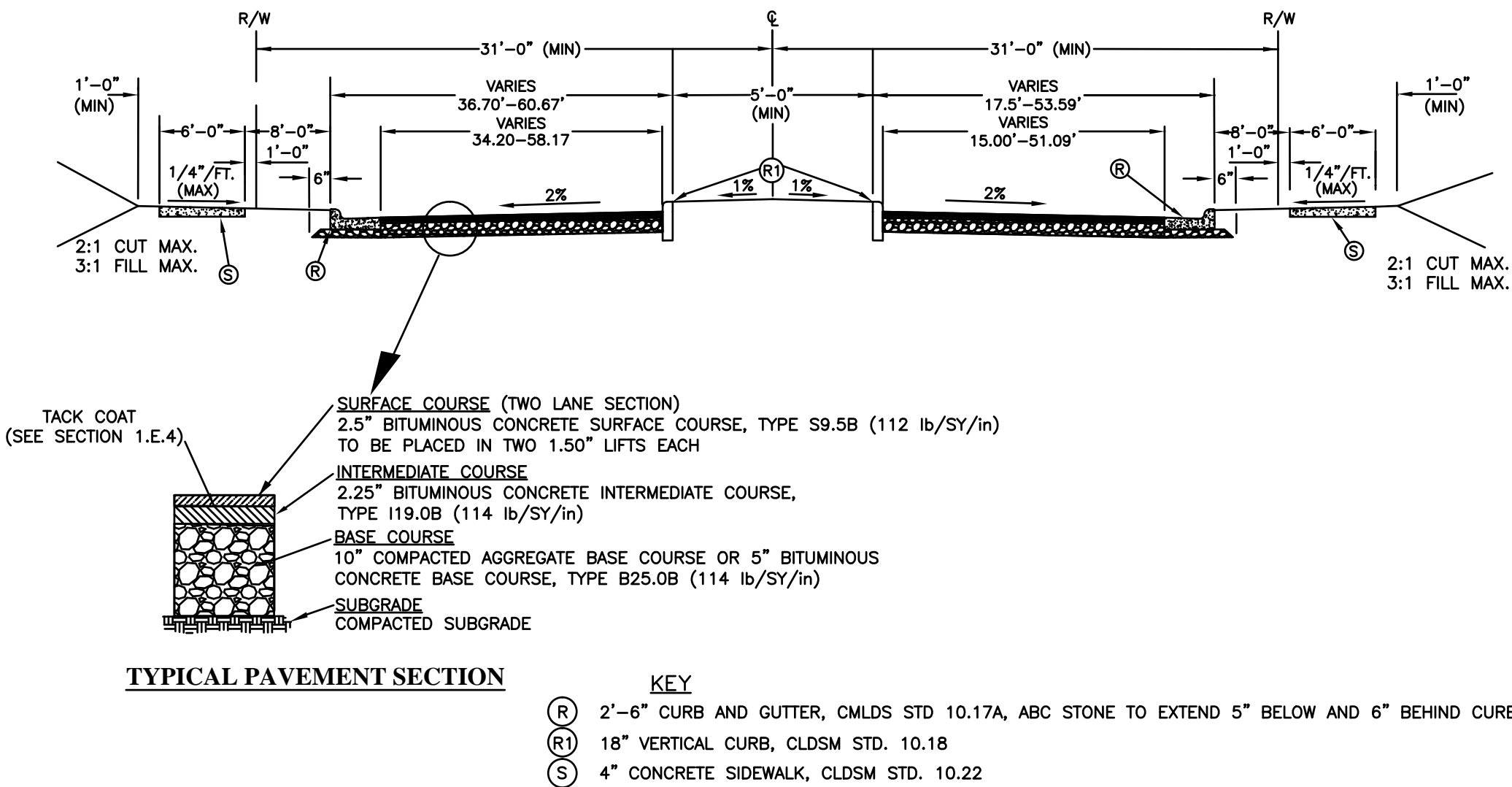
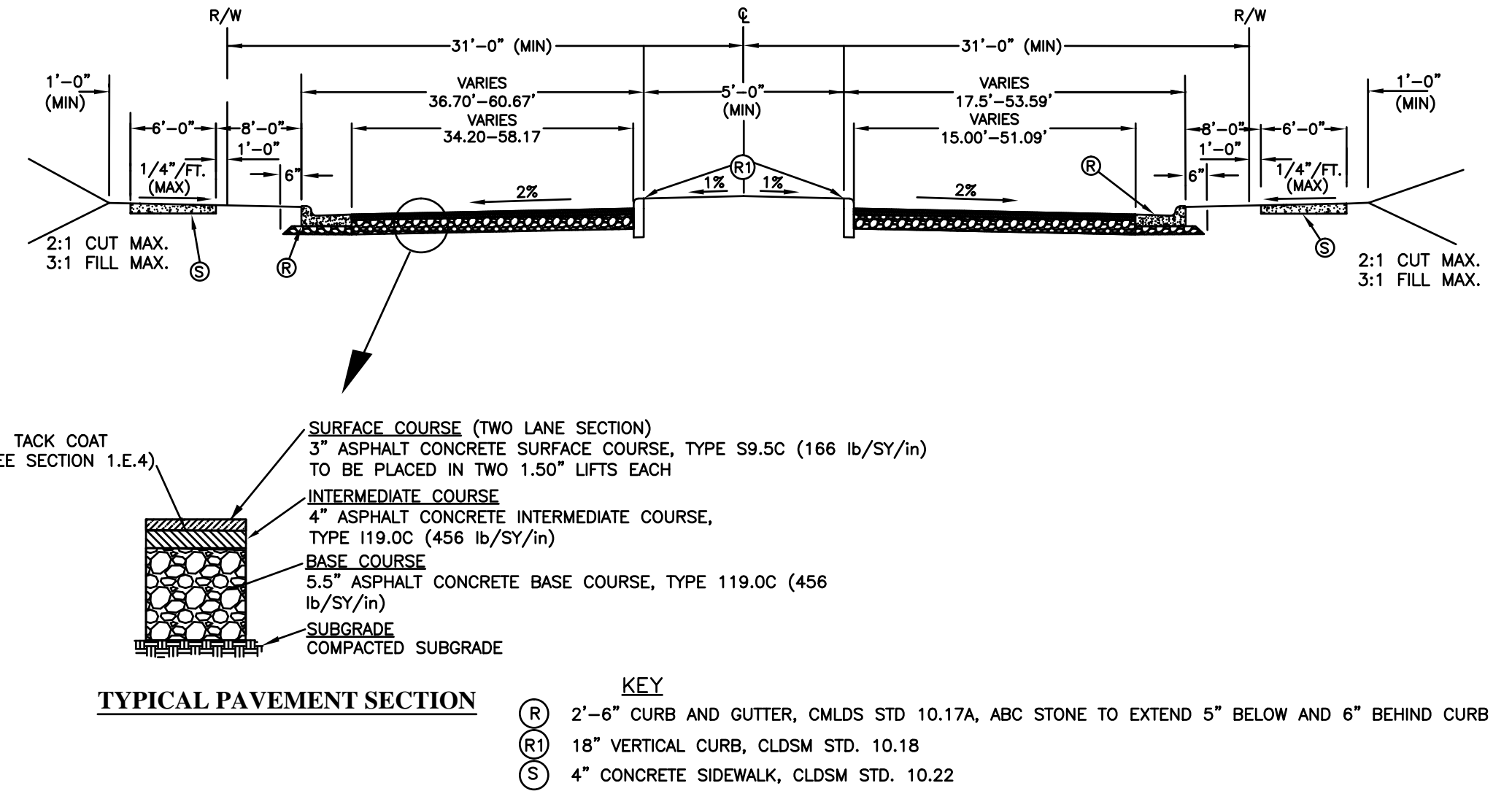
### IV. GENERAL UTILITY NOTES

- CONTRACTOR TO VERIFY LOCATION AND SIZE OF ANY UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CALL 1-800-632-4949 48 HOURS PRIOR TO COMMENCEMENT OF WORK FOR UTILITY LOCATING SERVICES.
- FOR WATER VALVES, WATER SERVICE BOXES AND GAS SERVICE BOXES TO BE ADJUSTED IN GRADE, CONTRACTOR SHALL RAISE OR LOWER EXISTING VALVE BOX AND TO MATCH THE NEW FINISHED GRADE IN THE FIELD. VALVE STEM EXTENSIONS MAY BE REQUIRED IF OPERATING NUT IS MORE THAN 36" BELOW FINISH GRADE. COST TO BE INCLUDED IN THE PRICE BID FOR THE PROJECT IMPROVEMENTS.
- WHERE EXISTING ROADWAY GRADES ARE BEING SIGNIFICANTLY CHANGED, CONTRACTOR SHALL COORDINATE WITH UTILITY OWNERS TO ASCERTAIN WHETHER POLES CAN REMAIN AT CURRENT GRADE AND LOCATION. IF SO, CONTRACTOR SHALL PROVIDE FOR POLES TO BE HELD AND/OR REINFORCED IN PLACE DURING GRADING OPERATIONS WHERE

SIGNIFICANT GRADE CHANGES OCCUR AROUND POLES. IF GRADE CHANGES ARE NOT ACCEPTABLE TO UTILITY OWNERS, POLES MAY HAVE TO BE RELOCATED BY UTILITY COMPANY PRIOR TO GRADING OPERATIONS IN THOSE AREAS.

## V. REFERENCES

- NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, JANUARY 1, 1995 OR MOST RECENT EDITION, STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES.
- CITY OF CHARLOTTE DEPARTMENT OF TRANSPORTATION, JUNE 1995 OR MOST RECENT EDITION, WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH).



REVISIONS		DESCRIPTION	DATE
1	2/6/13	Revision per NCDOT, CDOT, OMD, and CLDS	
2	5/16/13	Revision per NCDOT & CDOT	

SBG PROPERTIES, INC.

CITY OF CHARLOTTE, MECKLENBURG COUNTY, NORTH CAROLINA

FOR

ROADWAY PLANS

DIXIE RIVER ROAD EXTENSION

Phases 1 and 2

GENERAL NOTES & TYPICAL SECTIONS



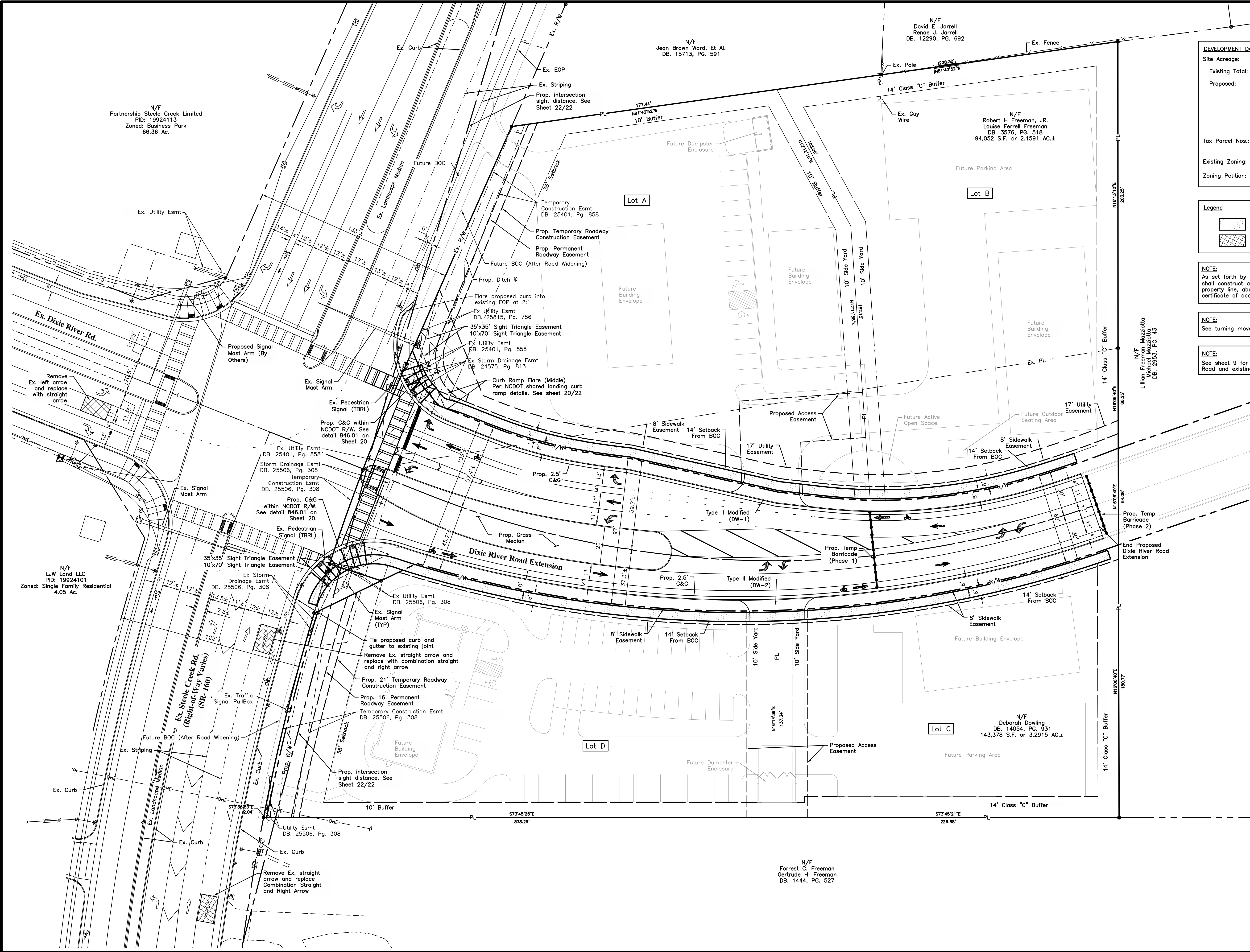
DATE	May 16, 2013
SCALE	None
JOB NO.	2011-1544
SHEET	2/22







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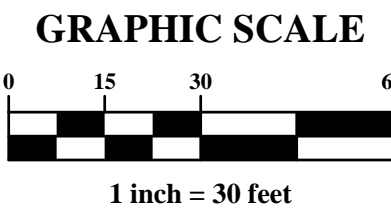
DEVELOPMENT DATA	
Site Acreage:	
Existing Total:	5.45± Acres (237,430 SF)
Proposed:	Lot A = 1.40± Acres (61,027 SF) Lot B = 1.17± Acres (51,002 SF) Lot C = 0.79± Acres (34,641 SF) Lot D = 1.09± Acres (47,408 SF) Right of Way = 1.00± Acres (43,352 SF) Total = 5.45± Acres (237,430 SF)
Tax Parcel Nos.:	201-09-104 201-09-114
Existing Zoning:	NS
Zoning Petition:	2012-059

Legend	
	Proposed 6' Sidewalk
	Proposed 12" Mill and Overlay

**NOTE:**  
As set forth by the approved rezoning, petition 2012-059, the developer shall construct and/or plat the proposed right of way to the eastern property line, abutting the parcel 201-091-15, prior to issuance of final certificate of occupancy for any uses allowed on lots A-D.

**NOTE:**  
See turning movement plan on sheet 10/22

**NOTE:**  
See sheet 9 for additional 12" mill and overlay along existing Dixie River Road and existing Steele Creek Road.



REVISIONS	
MARK	DATE
1	5/6/13
2	5/16/13

SBG PROPERTIES, INC.

CITY OF CHARLOTTE, MECKLENBURG COUNTY, NORTH CAROLINA  
FOR  
ROADWAY PLANS  
DIXIE RIVER ROAD EXTENSION  
PHASES 1 AND 2  
SITE PLAN

**EVANS**  
EVANS MECHWART HAMILTON & TILTON, INC.  
301 McCullough Dr., Ste. 100, Charlotte, NC 28222  
Phone: 704.446.0333 Toll Free: 888.775.3446  
emh.com

DATE  
May 16, 2013

SCALE  
1" = 30'

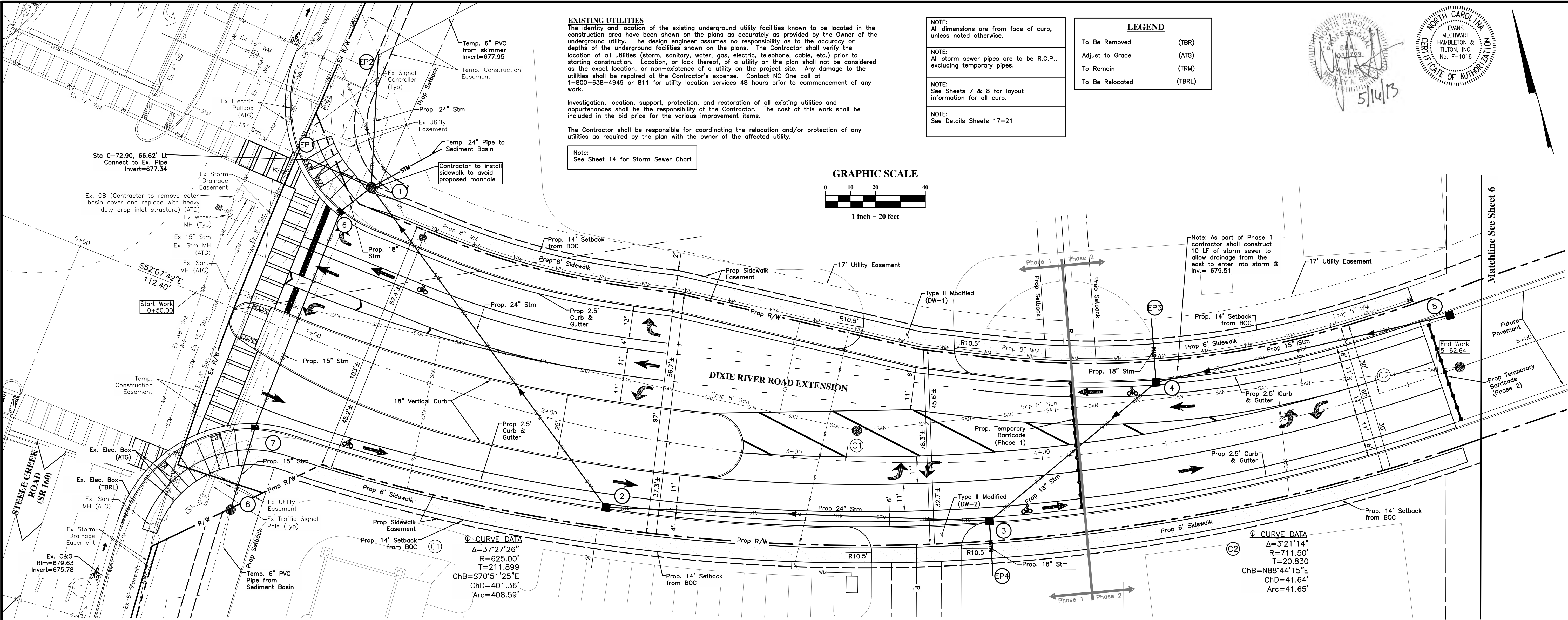
JOB NO.  
2011-1544

SHEET  
4/22

Professional Engineer Seal: EVANS MECHWART HAMILTON & TILTON, INC. No. F-1016, dated 5/14/13.



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2 Kres: 20111544-05-BEER-F.W. 20111544-05-BEER-F.W.



#### EXISTING UTILITIES

The identity and location of the existing underground utility facilities known to be located in the construction area have been shown on the plans as accurately as provided by the Owner of the underground utility. The design engineer assumes no responsibility as to the accuracy or depths of the underground facilities shown on the plans. The Contractor shall verify the location of all utilities (storm, sanitary, water, gas, electric, telephone, cable, etc.) prior to starting construction. Location, or lack thereof, of a utility on the plan shall not be considered as the exact location, or non-existence of a utility on the project site. Any damage to the utilities shall be repaired at the Contractor's expense. Contact NC One call at 1-800-638-4949 or 811 for utility location services 48 hours prior to commencement of any work.

Investigation, location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor. The cost of this work shall be included in the bid price for the various improvement items.

The Contractor shall be responsible for coordinating the relocation and/or protection of any utilities as required by the plan with the owner of the affected utility.

Note:  
See Sheet 14 for Storm Sewer Chart

NOTE:  
All dimensions are from face of curb, unless noted otherwise.

NOTE:  
All storm sewer pipes are to be R.C.P., excluding temporary pipes.

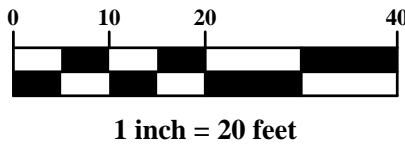
NOTE:  
See Sheets 7 & 8 for layout information for all curb.

NOTE:  
See Details Sheets 17-21

#### LEGEND

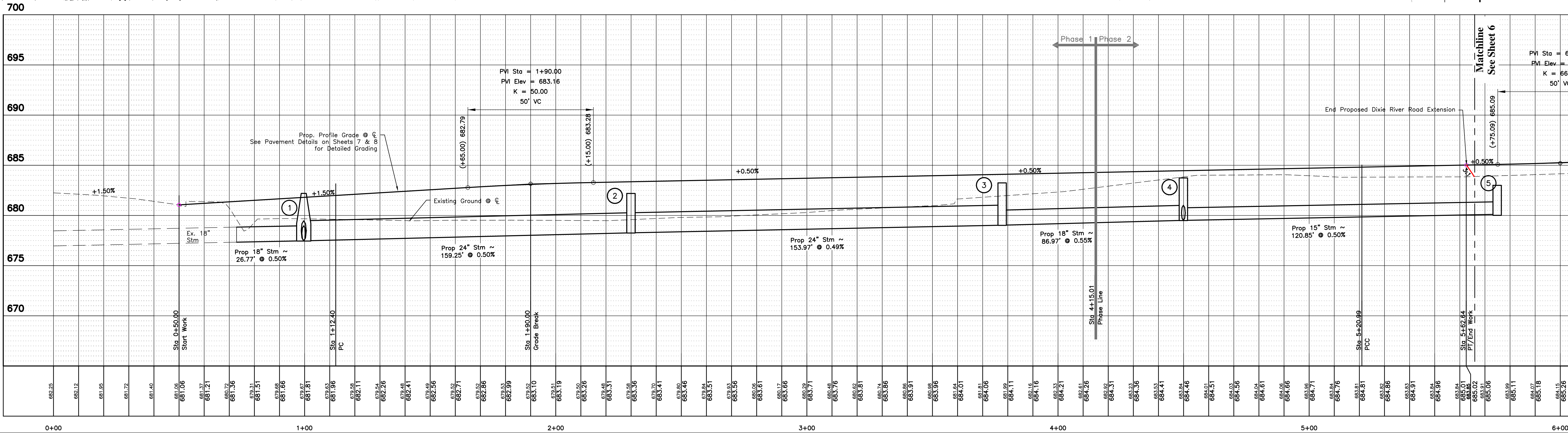
To Be Removed	(TBR)
Adjust to Grade	(ATG)
To Remain	(TRM)
To Be Relocated	(TBRL)

#### GRAPHIC SCALE



⊙ CURVE DATA  
Δ=37°27'26"  
R=625.00'  
T=211.899  
ChB=S70°51'25"E  
ChD=401.36'  
Arc=408.59'

⊙ CURVE DATA  
Δ=3°21'14"  
R=711.50'  
T=20.830  
ChB=N88°44'15"E  
ChD=41.64'  
Arc=41.65'

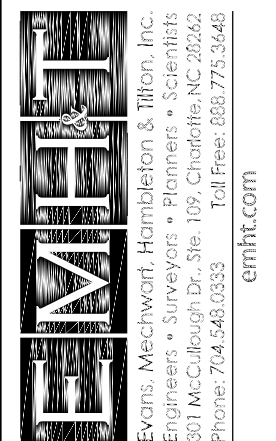


#### REVISIONS

MARK	DATE	DESCRIPTION
1	5/6/13	Revision per NCDOT, CDOT, OMD, and CLUS
2	5/16/13	Revision per NCDOT & CDOT

SBG PROPERTIES, INC.

CITY OF CHARLOTTE, MECKLENBURG COUNTY, NORTH CAROLINA  
FOR  
ROADWAY PLANS  
DIXIE RIVER ROAD EXTENSION  
Phases 1 and 2  
PLAN & PROFILE



DATE  
May 16, 2013

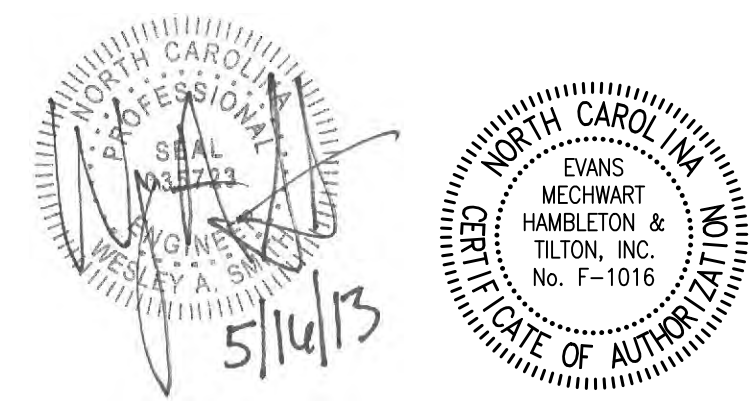
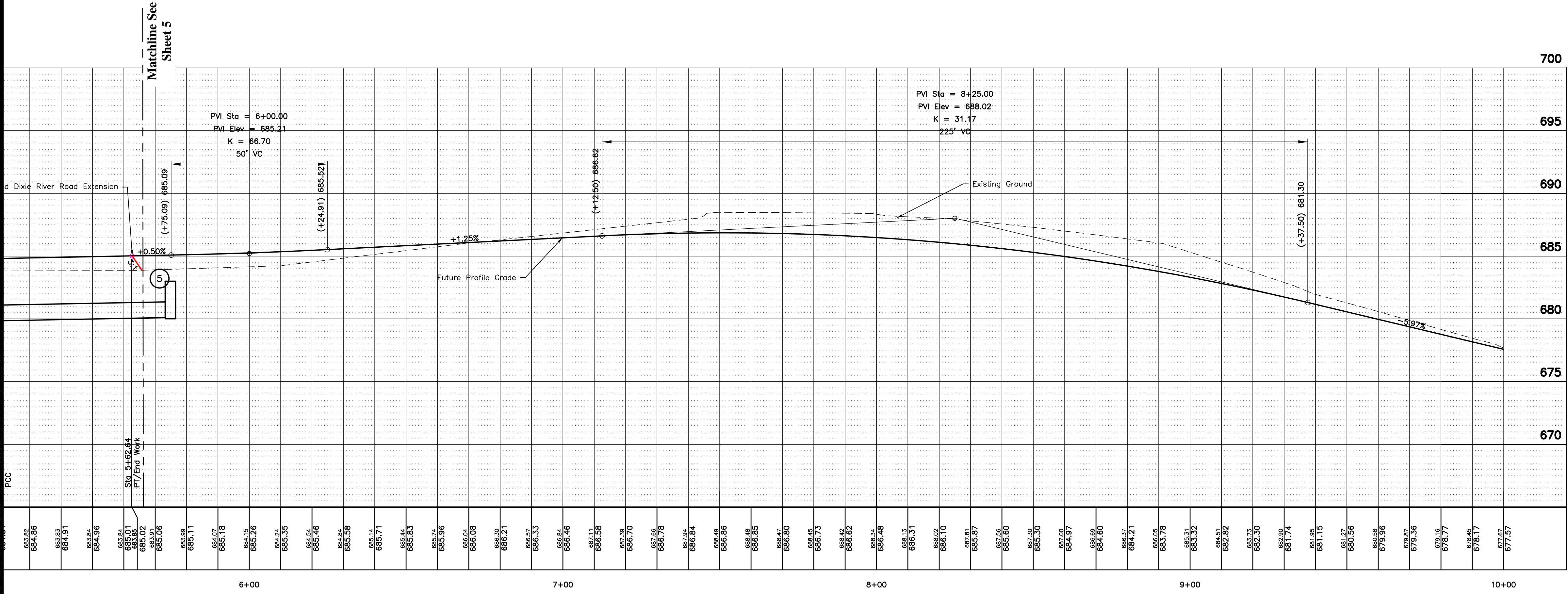
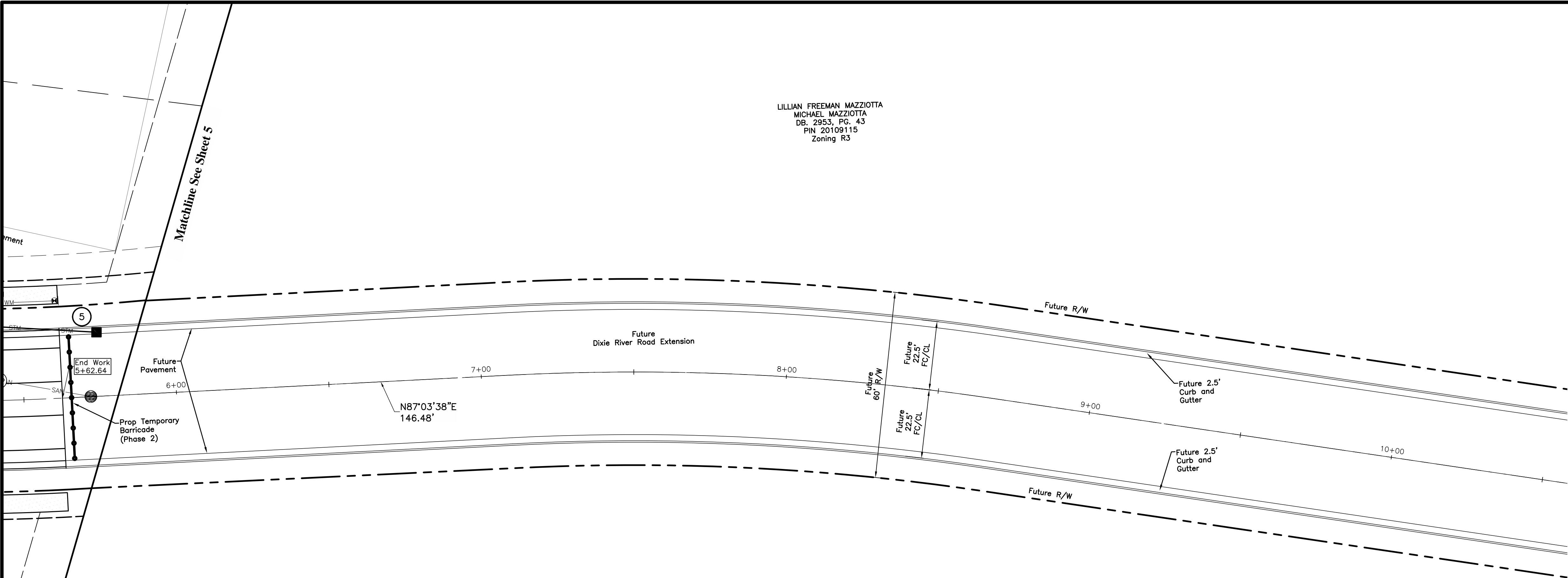
SCALE  
Horiz: 1" = 20'  
Vert: 1" = 5'

JOB NO.  
2011-1544

SHEET  
5/22



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REVISIONS		
MARK	DATE	DESCRIPTION
1	5/6/13	Revision per NCDOT, CDDT, OMD, and CLUS
2	5/16/13	Revision per NCDOT & CDDT

SBG PROPERTIES, INC.

CITY OF CHARLOTTE, MECKLENBURG COUNTY, NORTH CAROLINA  
FOR  
ROADWAY PLANS  
**DIXIE RIVER ROAD EXTENSION**  
Future Roadway Extension  
6 Plan & Profile



DATE  
May 16, 2013

SCALE  
Horiz: 1" = 20'  
Vert: 1" = 5'

JOB NO.  
2011-1544

SHEET  
6/22

