

# CITY OF GREENVILLE

## SAFE ROUTES TO SCHOOLS

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### MEMORIAL DRIVE, NORRIS ST., SKINNER ST. AND EAST FIFTH ST. SIDEWALK EXTENSION

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DATE	COMMENTS
5/17/16	ISSUED FOR PERMIT REVIEW - NOT FOR CONSTRUCTION
11/27/17	REVISED PER CITY AND NCDOT COMMENTS
11/16/17	REVISED PER CITY AND NCDOT COMMENTS
05/09/18	REVISED PER COMMENTS - PROFILE DRIVEWAYS

REVISIONS:



**COVER SHEET**

**SAFE ROUTES TO SCHOOLS**

City of Greenville, Pitt County, North Carolina



NC License P-1109

**ARK CONSULTING GROUP, P.L.L.C.**  
ENGINEERS & PLANNERS

2755-B Charles Blvd  
Greenville, NC 27858  
(252) 558-0888  
www.arkconsultinggroup.com

REV. 3/2/18

Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15009  
 Drawing Number: D-1045

**C-1**

Date: 05-11-2016

City of Greenville, North Carolina, 27858, 252-558-0888, www.cityofgreenville.com, 05/11/2016, 11:48am

### Grading Notes:

- ALL AREAS WITHIN LIMITS OF DISTURBANCE SHALL BE CLEARED AND GRUBBED.
- CONTRACTOR SHALL REMOVE EXISTING VEGETATION AND IMPROVEMENTS WITHIN LIMITS OF DISTURBANCE UNLESS NOTED OTHERWISE.
- TREES OUTSIDE OF CONSTRUCTION LIMITS OR TREES NOT INDICATED TO BE REMOVED SHALL BE PROTECTED.
- THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR GETS WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
- ALL DEMOLITION WASTE AND DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- TOP SOIL SHALL BE STRIPPED FROM ALL CUT AND FILL AREAS, STOCKPILED AND REDISTRIBUTED OVER GRADED AREAS. PROVIDE EROSION AND SEDIMENTATION CONTROLS AROUND STOCKPILES DURING CONSTRUCTION.
- PRIOR TO SEEDING, TILL SOIL TO A DEPTH OF 4" MINIMUM.
- REMOVE ALL ROCKS LARGER THAN 1" MEASURED IN LARGEST DIRECTION.
- GRADE ALL AREAS TO MAINTAIN POSITIVE SLOPE.
- ALL GRADED AREAS TO RECEIVE SEED OR SOD, TOP SOIL, STRAW AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- SIDEWALKS SHALL BE CONSTRUCTED OF 4" THICK CONCRETE MEETING THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. SIDEWALKS THROUGH DRIVEWAY CROSSINGS SHALL BE 6" THICK HIGH EARLY STRENGTH CONCRETE MEETING THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. ALL SIDEWALKS SHALL HAVE TOOLED CONTROL JOINTS NOT EXCEEDING 5' SPACING IN ANY DIRECTION.
- ALL SIDEWALK AND PAVEMENT SUB-GRADES SHALL BE COMPACTED AND TESTED TO MEET OR EXCEED THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- ALL SIDEWALK AND PAVEMENT SUB-GRADE COMPACTIONS SHALL BE INTERMEDIATELY TESTED AND APPROVED BY THE GEOTECHNICAL ENGINEER. ALL SUB-GRADES SHALL BE THOROUGHLY PROOF-ROLLED TO IDENTIFY SMALL LOCALIZED AREAS OF UNSUITABLE SOILS. ALL UNSUITABLE SOILS SHALL BE UNDERCUT, REPLACED WITH STRUCTURAL FILL, AND COMPACTED AS DESCRIBED ABOVE.

### Demolition Notes:

- CONTRACTOR SHALL CONTACT NORTH CAROLINA ONE-CALL CENTER (NC 811) BY DIALING 811 AT LEAST 72 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY OR DIGGING AND HAVE ALL UNDERGROUND UTILITIES LOCATED PRIOR TO EXCAVATING OR TRENCHING.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL AND STATE PERMITS REQUIRED FOR DEMOLITION WORK.
- THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND/OR ENGINEER FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
- EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE AND DO NOT INCLUDE MECHANICAL, ELECTRICAL AND MISCELLANEOUS STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THE DEMOLITION WORK FOR THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- ALL DEMOLITION WASTE AND DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR GETS WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
- ASBESTOS OR HAZARDOUS MATERIALS, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.
- CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS, AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL, AND OSHA REGULATIONS WHEN OPERATING DEMOLITION EQUIPMENT AROUND UTILITIES.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH THE NCDOT STANDARDS, AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH THE LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT, AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
- CONTRACTOR SHALL PROTECT AT ALL TIMES ADJACENT STRUCTURES AND ITEMS FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL REMOVE EXISTING VEGETATION AND IMPROVEMENTS WITHIN LIMITS OF DISTURBANCE UNLESS NOTED OTHERWISE.
- TREES OUTSIDE OF CONSTRUCTION LIMITS OR TREES NOT INDICATED TO BE REMOVED SHALL BE PROTECTED.
- THE CONTRACTOR SHALL AT ALL TIMES KEEP THE SITE FREE AND CLEAR OF DEBRIS CREATED BY HIM AND SHALL RECOVER AND CAPTURE DEBRIS TO PREVENT MIGRATION INTO WETLANDS OR WATER COURSES.

### Erosion Control Provisions

- NO PERSON MAY INITIATE A LAND DISTURBING ACTIVITY BEFORE NOTIFYING THE CITY OF GREENVILLE ENGINEERING DEPARTMENT OF THE DATE THAT THE LAND DISTURBING ACTIVITY WILL BEGIN.
- LAND DISTURBING ACTIVITY BEYOND THAT REQUIRED TO INSTALL APPROPRIATE EROSION CONTROL MAY NOT PROCEED UNTIL EROSION CONTROL MEASURES ARE INSPECTED AND APPROVED BY THE CITY.
- SCHEDULING OF A PRE-CONSTRUCTION CONFERENCE WITH THE EROSION CONTROL INSPECTOR IS REQUIRED PRIOR TO INITIATING LAND DISTURBING ACTIVITIES. FOR INSPECTION CALL (252) 329-4467. 24 HOUR NOTICE IS REQUIRED.
- INSTALL ROCK INLET SEDIMENT TRAPS AROUND ALL CATCH BASINS, DROP INLETS, AND YARD INLETS.
- SEED OR OTHERWISE PROVIDE GROUND COVER DEVICES OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION FOR ALL EXPOSED SLOPES WITHIN 7 DAYS OF COMPLETION OF ANY PHASE OF GRADING ON PERIMETER AREAS AND SLOPES STEEPER THAN 3:1. ALL OTHER AREAS SHALL BE STABILIZED WITHIN 14 DAYS.
- CONTRACTOR SHALL INSPECT AND MAINTAIN AS NEEDED ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER EACH MAJOR STORM EVENT. FAILURE TO KEEP ALL EROSION CONTROL DEVICES IN PROPER WORKING ORDER MAY RESULT IN A STOP WORK ORDER OR CIVIL PENALTIES UP TO \$5000.00 PER DAY OF VIOLATION.
- THE CITY ENGINEER RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES SHOULD THE PLAN OR ITS IMPLEMENTATION PROVE TO BE INADEQUATE.
- ACCEPTANCE AND APPROVAL OF THIS PLAN IS CONDITIONED UPON YOUR COMPLIANCE WITH FEDERAL AND STATE WATER QUALITY LAWS, REGULATION AND RULES. IN ADDITION LOCAL CITY AND COUNTY ORDINANCES OR RULES MAY ALSO APPLY TO THIS LAND DISTURBING ACTIVITY. APPROVAL BY THE CITY DOES NOT SUPERSEDE ANY OTHER PERMIT OR APPROVAL.
- PLEASE BE ADVISED OF THE RULES TO PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE AND TAR RIVER BASINS. THESE RULES ARE ENFORCED BY THE DIVISION OF WATER RESOURCES (DWR). DIRECT ANY QUESTIONS ABOUT THE APPLICABILITY OF THESE RULES TO YOUR PROJECT TO THE REGIONAL WATER QUALITY SUPERVISOR, WASHINGTON REGIONAL OFFICE AT (252) 946-6481.

### Disturbed Areas:

Memorial Drive  
11,330 S.F.

Skinner and Norris Street  
10,678 S.F.

East 5th Street  
17,440 S.F.

### Permanent Seeding Schedule:

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SEED BED PREPARATION	
LIME	- 2 TONS PER ACRE
FERTILIZER (10-20-20)	- 500 POUNDS PER ACRE

SEEDING MIXTURE:	
(JANUARY 1 - MARCH 31)	
COMMON BERMUDA GRASS (UNHULLED)	- 20 POUNDS PER ACRE
RYE (GRAIN)	- 25 POUNDS PER ACRE

(APRIL 1 - JULY 31)	
COMMON BERMUDAGRASS (HULLED)	- 15 POUNDS PER ACRE
WEEPING LOVEGRASS	- 5 POUNDS PER ACRE
CENTPEDE	- 8 POUNDS PER ACRE

(AUGUST 1 - DECEMBER 31)	
COMMON BERMUDA GRASS (UNHULLED)	- 20 POUNDS PER CARE
TALL FESCUE	- 60 POUNDS PER ACRE
RYE (GRAIN)	- 25 POUNDS PER ACRE

SEED BED PROTECTION:	
STRAW MULCH	- 2 TONS PER ACRE (VISUAL)
ASPHALT TACK	- 0.03 GALLONS PER SQUARE YARD

### Utility Notes:

- CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH UTILITY PROVIDERS FOR THE RELOCATION / ABANDONMENT OF EXISTING UTILITIES AND INSTALLATION OF NEW UTILITY SERVICES AS WELL AS FEES ASSOCIATED WITH SUCH WORK.

### Utility Providers:

STORM DRAINAGE:	ELECTRIC UTILITIES:
City of Greenville Contact: Scott Godefroy, PE Phone: (252) 329-4525	Greenville Utilities Commission Contact: Chris Corey Phone: (252) 551-1586
WATER & SANITARY SEWER:	TELEPHONE:
Greenville Utilities Commission Contact: Cliff Cahoon, PE Phone: (252) 551-3386	CenturyLink Contact: Pam Isles Phone: (252) 355-4544
GAS:	CABLE TV:
Greenville Utilities Commission Contact: Cheryl Barrett Phone: (252) 551-1596	SuddenLink Contact: Nathan Barnhill Phone: (252) 792-9182
PUBLIC STREETS:	PUBLIC STREETS:
City of Greenville Contact: Scott Godefroy, PE Phone: (252) 329-4525	NC Department of Transportation Contact: Gene Pittman Phone: (252) 329-4525

### General Notes:

- CONTACT NORTH CAROLINA ONE-CALL CENTER, INC. (NC ONE-CALL) AT 811 TO HAVE ALL UNDERGROUND UTILITIES LOCATED PRIOR TO EXCAVATING OR TRENCHING.
- ALL REQUIRED IMPROVEMENTS SHALL CONFORM TO THE CITY OF GREENVILLE MANUAL OF STANDARD DESIGNS AND DETAILS (MSDD) AND THE GREENVILLE UTILITIES MANUAL FOR THE DESIGN AND CONSTRUCTION OF WATER AND WASTEWATER SYSTEM EXTENSIONS.
- CONTRACTOR SHALL NOTIFY PUBLIC WORKS, STREET MAINTENANCE DIVISION 48 HOURS PRIOR TO MAKING CONNECTIONS TO EXISTING STORM DRAINS LOCATED WITHIN PUBLIC STORM DRAINAGE EASEMENTS OR RIGHT-OF-WAY.
- PAVEMENT SECTIONS ARE AS INDICATED ON PLAN SHEET C-10.
- CONTRACTOR SHALL STOCKPILE TOPSOIL FOR USE IN LANDSCAPE AREAS.
- STORMWATER MANAGEMENT FOR THIS PROJECT IS NOT REQUIRED
- THIS PROJECT DISTURBS LESS THAN 1 ACRE EROSION CONTROL PLAN APPROVAL IS NOT REQUIRED.
- ALL DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
- PROJECT SHALL MEET ALL RELATED ACCESSIBILITY CODE REQUIREMENTS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.

### REFERENCES

Memorial Drive  
M.B. 3, P. 283  
M.B. 3, P. 135  
M.B. 37, P. 41  
M.B. 41, P. 199

Norris and Skinner Street  
M.B. 3, P. 318  
M.B. 2, P. 111  
M.B. 11, P. 145

### LEGEND

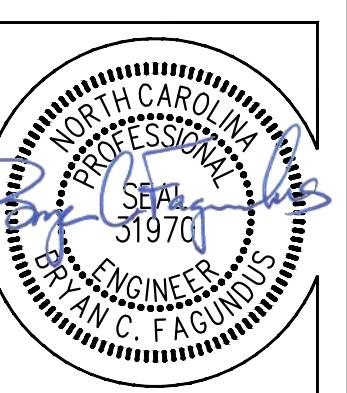
EXISTING	PROPOSED	EXISTING	PROPOSED
□ NO POINT SET		—X— FENCE LINE	
○ EXISTING IRON PIPE		—W— WATER LINE	
◊ EXISTING IRON BAR		—G— GAS LINE	
◁ EXISTING CONCRETE MONUMENT		—S— SEWER LINE	
MB □ MAIL BOX	■	—U— OVERHEAD UTILITY LINE	
SD □ SIGN		—C— TELECOMMUNICATION LINE	
WM □ WATER METER		—D— STORM DRAIN LINE	
WV ⊙ WATER VALVE		—T— TOP OF CURB OR CONCRETE	
GM □ GAS METER		⊙ MANHOLE	
GV ⊙ GAS VALVE		— — — — — RIGHT OF WAY	
⊙ EXISTING TREE		— — — — — TRUNCATED DOMES	
⊙ EXISTING SHRUB		— — — — — LIMITS OF DISTURBANCE	
—53.22— EXISTING SPOT ELEVATION		— — — — — TEMPORARY CONSTRUCTION EASEMENT	
— — — — — CURB RAMP	CR	— — — — — DEMO / TO BE REMOVED	
		— — — — — DEMO / TO BE REMOVED	
		— — — — — PROPOSED CONCRETE	
		— — — — — PROPOSED ASPHALT	

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REVISIONS:



**GENERAL NOTES**  
**Safe Routes To Schools**  
 City of Greenville, Pitt County, North Carolina



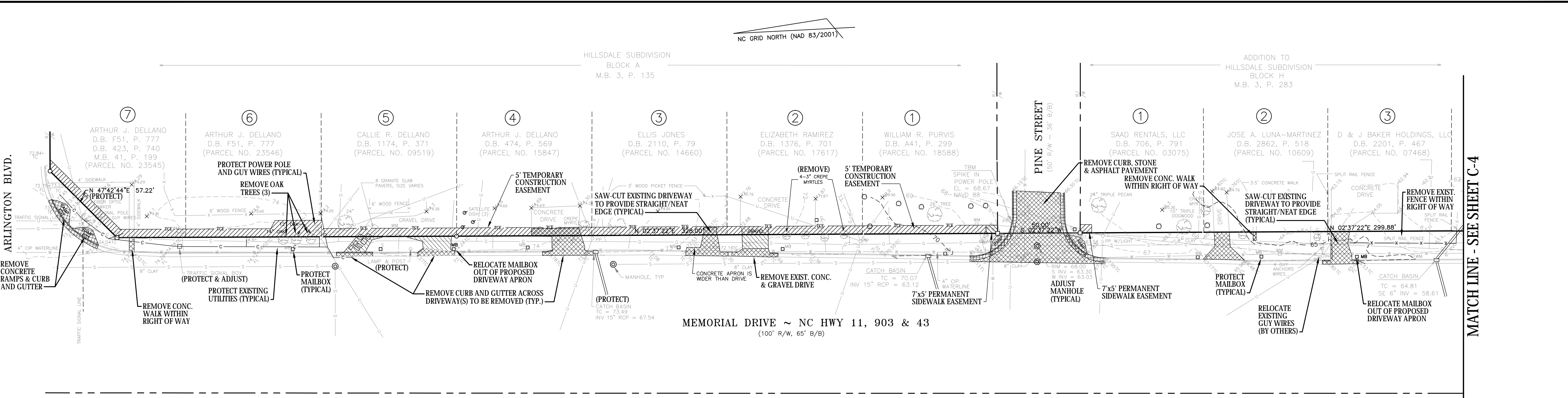
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Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15009  
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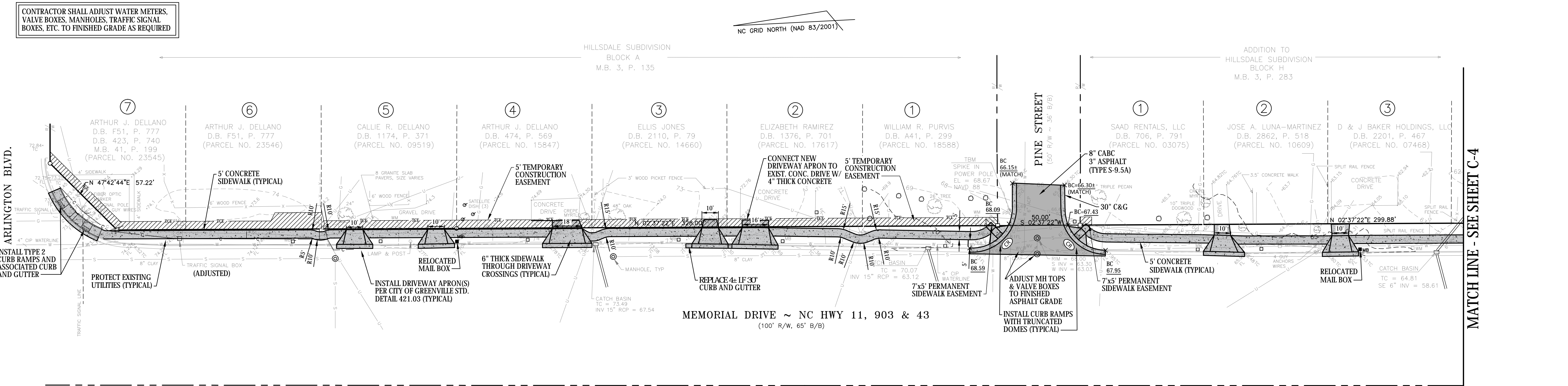
**C-2**

Date: 05-11-2016

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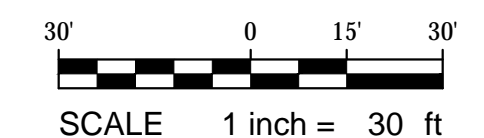
**EXISTING CONDITIONS / DEMOLITION PLAN**  
SCALE: 1"=30'



**SITE PLAN**  
SCALE: 1"=30'

**LEGEND**

EXISTING	PROPOSED	EXISTING	PROPOSED
□ NO POINT SET	□	-x- FENCE LINE	-x- FENCE LINE
○ EXISTING IRON PIPE	○	-w- WATER LINE	-w- WATER LINE
○ EXISTING IRON BAR	○	-g- GAS LINE	-g- GAS LINE
○ EXISTING CONCRETE MONUMENT	○	-s- SEWER LINE	-s- SEWER LINE
MB MAIL BOX	MB	-u- OVERHEAD UTILITY LINE	-u- OVERHEAD UTILITY LINE
○ SIGN	○	-c- TELECOMMUNICATION LINE	-c- TELECOMMUNICATION LINE
WM WATER METER	WM	-d- STORM DRAIN LINE	-d- STORM DRAIN LINE
WV WATER VALVE	WV	-TC- TOP OF CURB OR CONCRETE MANHOLE	-TC- TOP OF CURB OR CONCRETE MANHOLE
GM GAS METER	GM	○ RIGHT OF WAY	○ RIGHT OF WAY
GV GAS VALVE	GV	--- TRUNCATED DOMES	--- TRUNCATED DOMES
○ EXISTING TREE	○	--- LIMITS OF DISTURBANCE	--- LIMITS OF DISTURBANCE
○ EXISTING SHRUB	○	--- TEMPORARY CONSTRUCTION EASEMENT	--- TEMPORARY CONSTRUCTION EASEMENT
-53.22 EXISTING SPOT ELEVATION	-53.22	DEM / TO BE REMOVED	DEM / TO BE REMOVED
CR CURB RAMP	CR	DEM / TO BE REMOVED	DEM / TO BE REMOVED
		PROPOSED CONCRETE	PROPOSED CONCRETE
		PROPOSED ASPHALT	PROPOSED ASPHALT



**COMMENTS**

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11/26/17 REVISED PER CITY AND NC DOT COMMENTS  
5/09/18 REVISED PER COMMENTS - PROFILE DRIVEWAYS

**REVISIONS:**

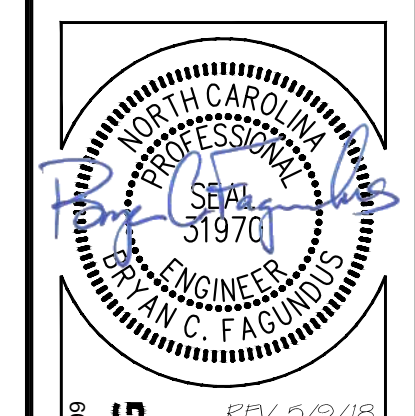


**DEMOLITION and SITE PLAN**

**Safe Routes To Schools**

**Memorial Drive**

City of Greenville, Pitt County, North Carolina



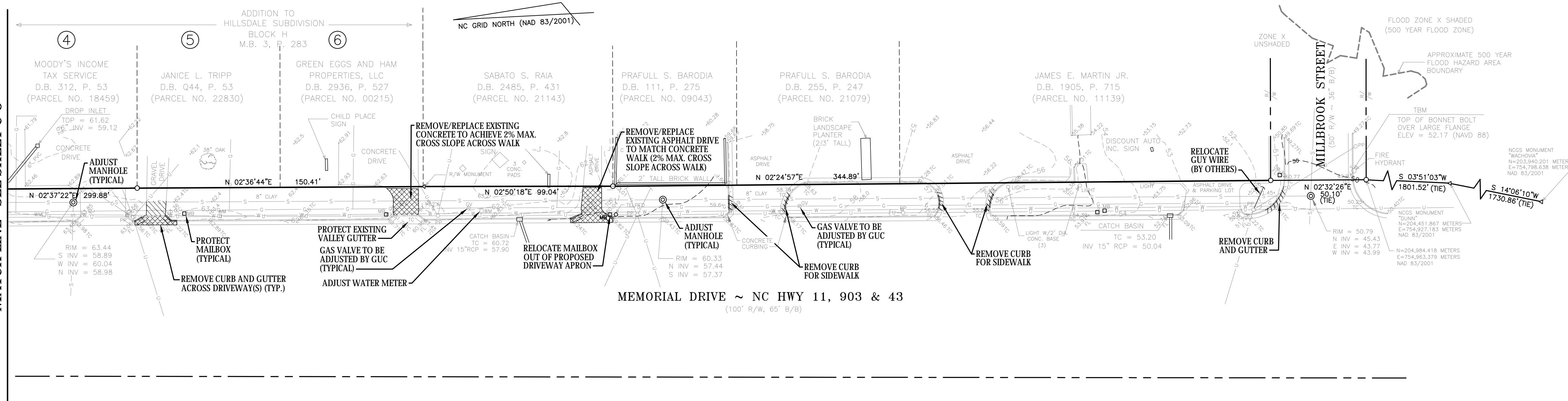
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Project Manager: BCF  
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**C-3**

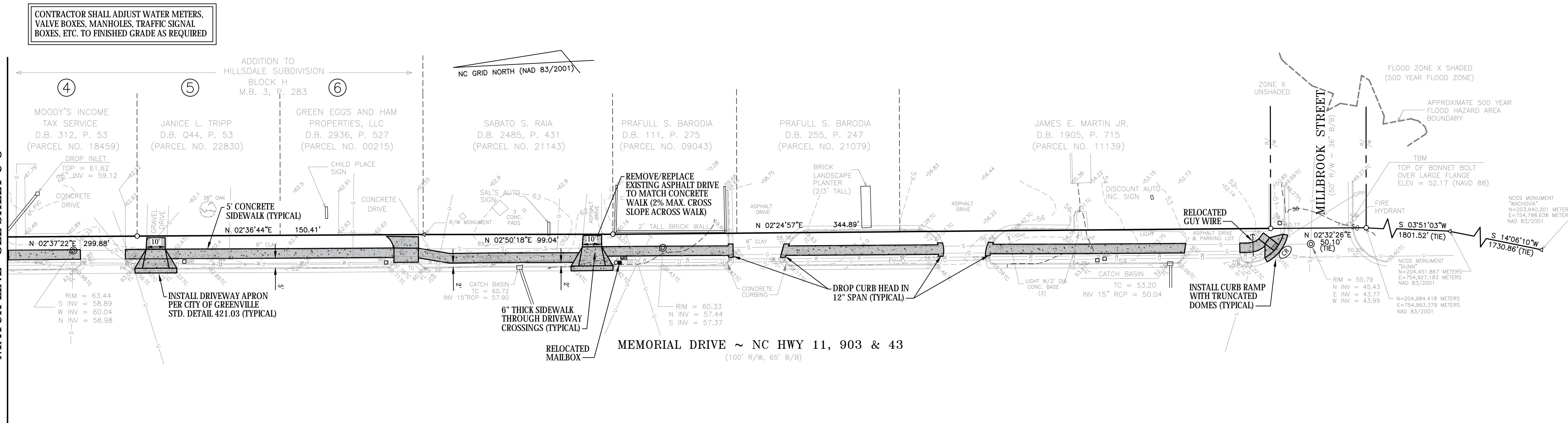
Date: 05-11-2016

MATCH LINE - SEE SHEET C-3



EXISTING CONDITIONS / DEMOLITION PLAN  
SCALE: 1"=30'

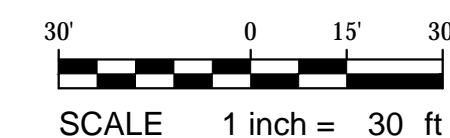
MATCH LINE - SEE SHEET C-3



SITE PLAN  
SCALE: 1"=30'

LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED
○ NO POINT SET	○ EXISTING IRON PIPE	—X— FENCE LINE	—W— WATER LINE
○ EXISTING IRON BAR	—G— GAS LINE	—S— SEWER LINE	—U— OVERHEAD UTILITY LINE
□ EXISTING CONCRETE MONUMENT	□ MAIL BOX	—C— TELECOMMUNICATION LINE	—D— STORM DRAIN LINE
MB □ MAIL BOX	□ SIGN	TC TOP OF CURB OR CONCRETE	⊙ MANHOLE
WM □ WATER METER	WM □ WATER VALVE	— RIGHT OF WAY	— TRUNCATED DOMES
GM □ GAS METER	GV □ GAS VALVE	— LIMITS OF DISTURBANCE	— TEMPORARY CONSTRUCTION EASEMENT
○ EXISTING TREE	○ EXISTING SHRUB	— DEMO / TO BE REMOVED	— DEMO / TO BE REMOVED
53.22 EXISTING SPOT ELEVATION	CR CURB RAMP	— PROPOSED CONCRETE	— PROPOSED ASPHALT

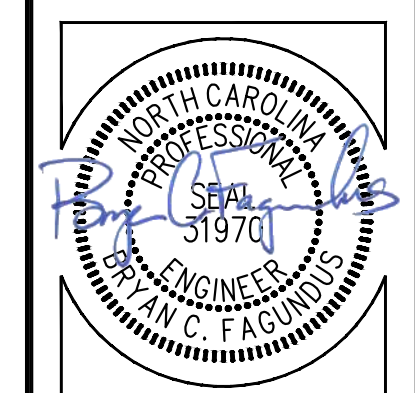


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REVISIONS:



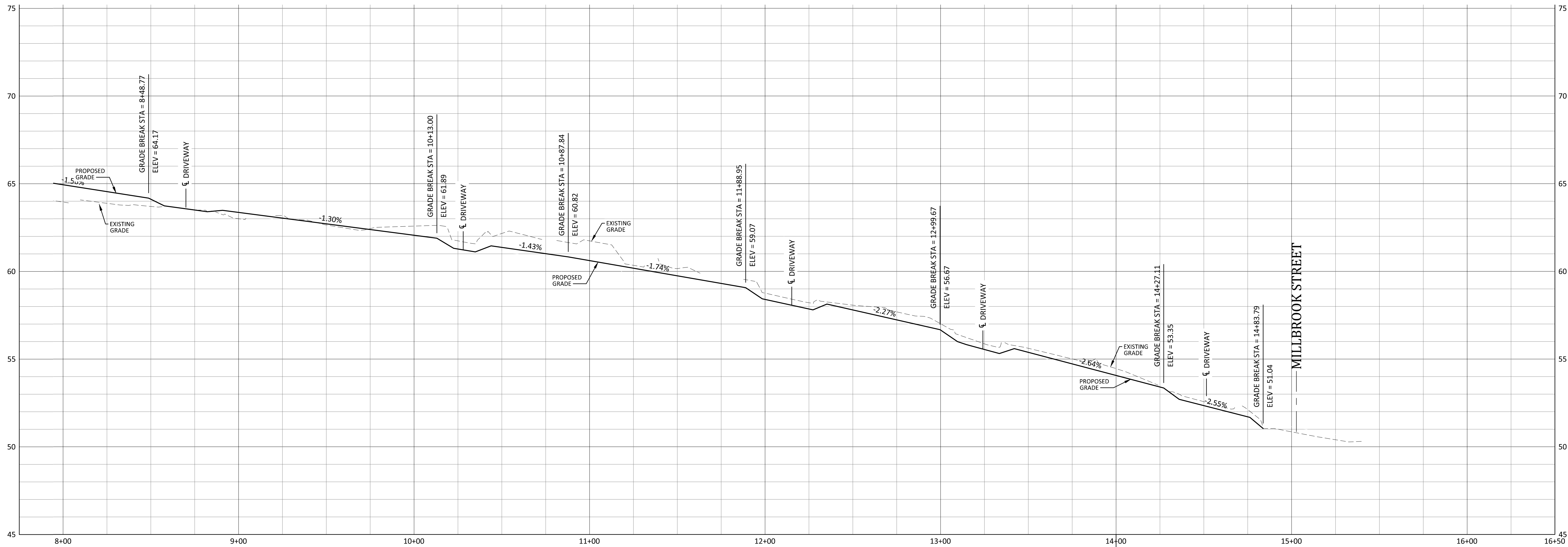
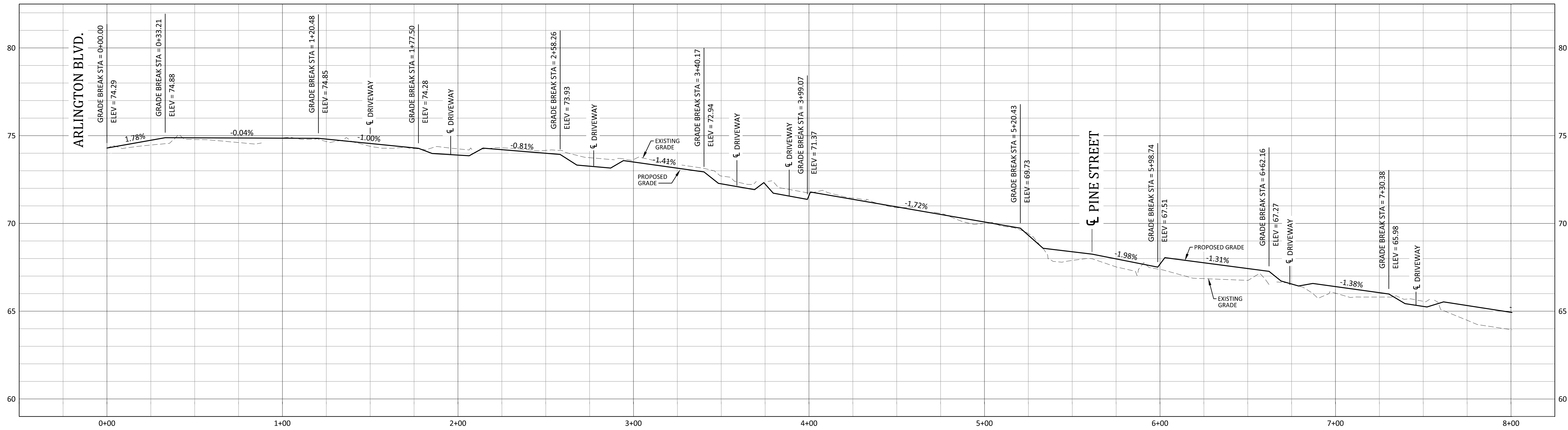
DEMOLITION and SITE PLAN  
**Safe Routes To Schools**  
Memorial Drive  
City of Greenville, Pitt County, North Carolina



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Project Manager: BCF  
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**C-4**  
Date: 05-11-2016



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**PROFILE**

# Safe Routes To Schools

## Memorial Drive

City of Greenville, Pitt County, North Carolina

NC License P-109

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ENGINEERS & PLANNERS

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REV. 5/27/18

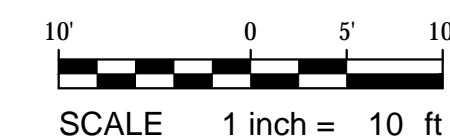
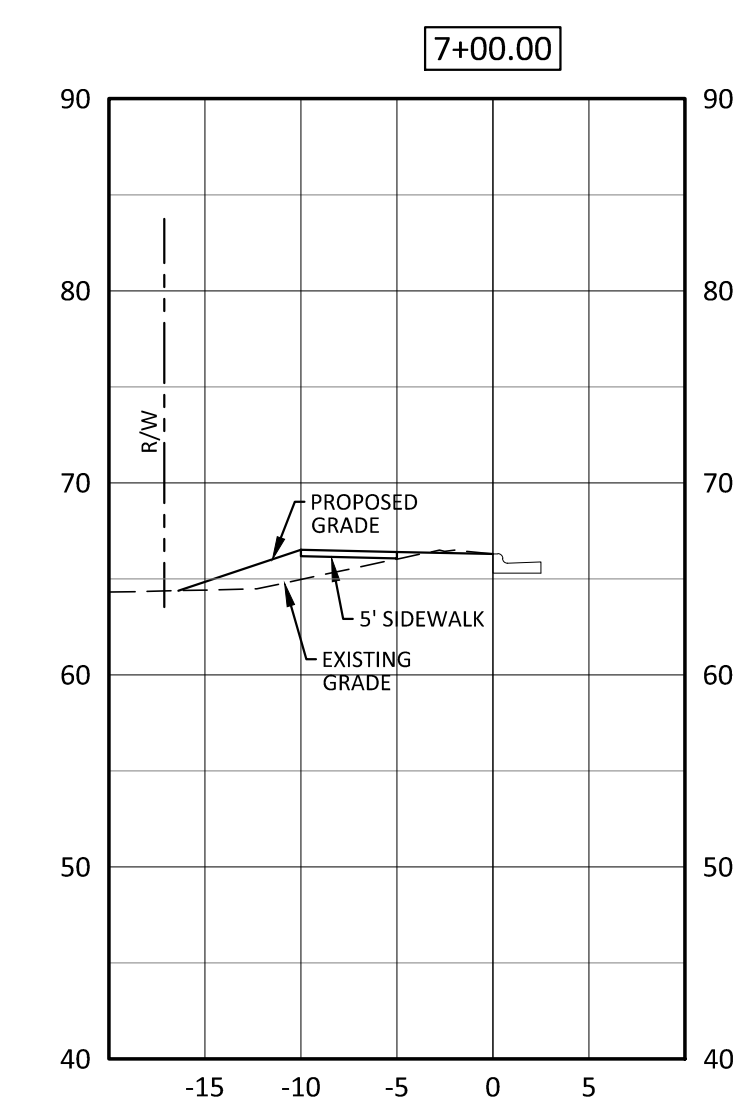
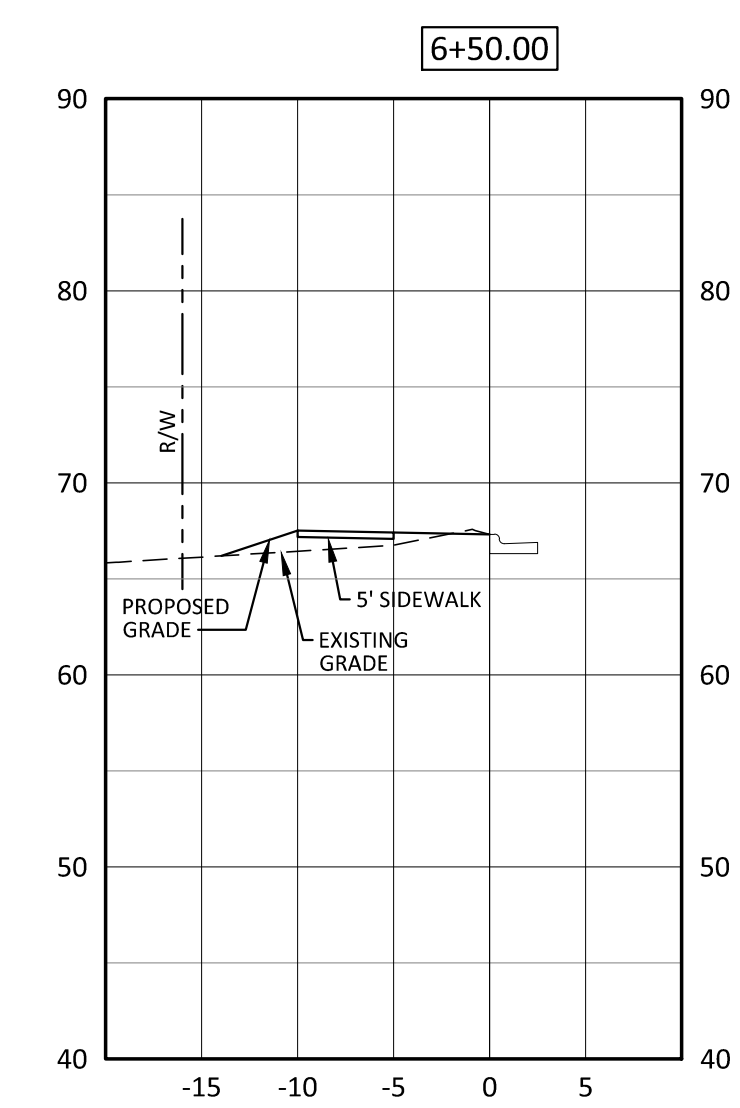
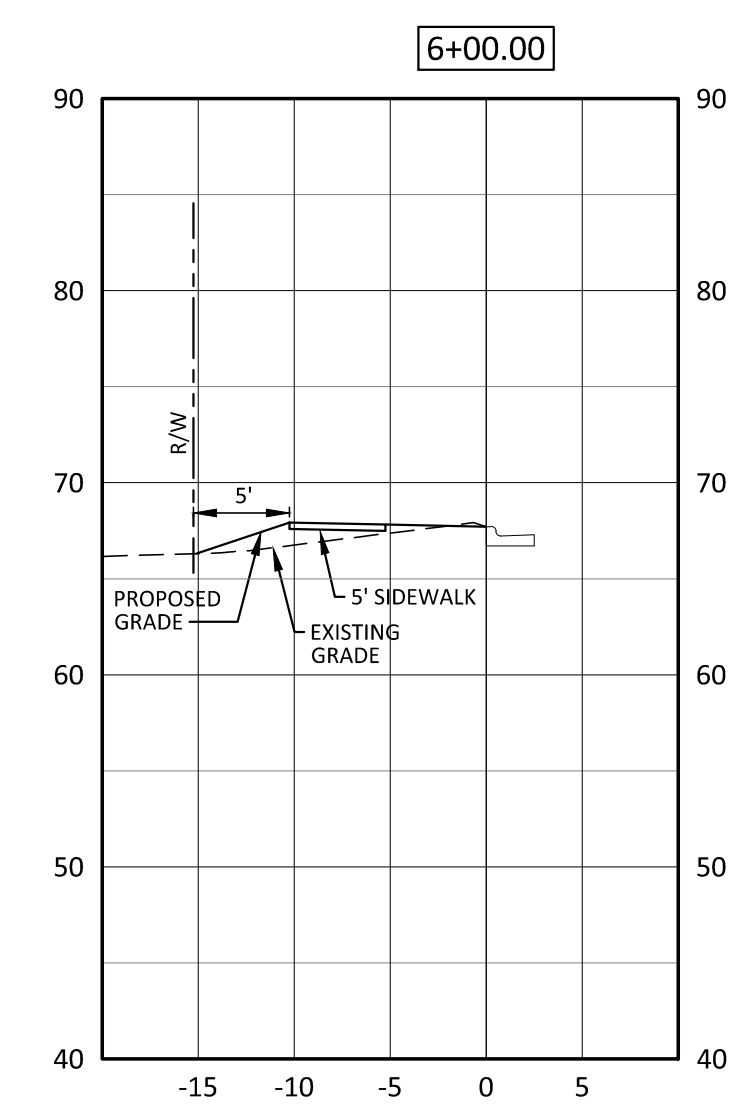
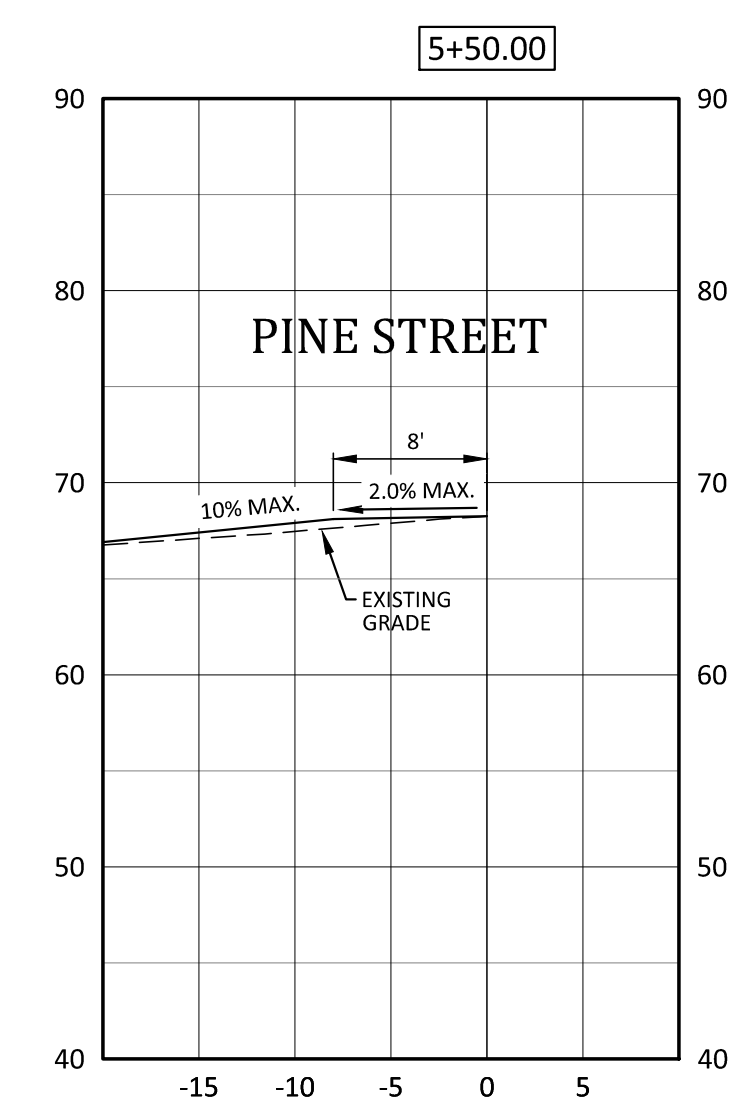
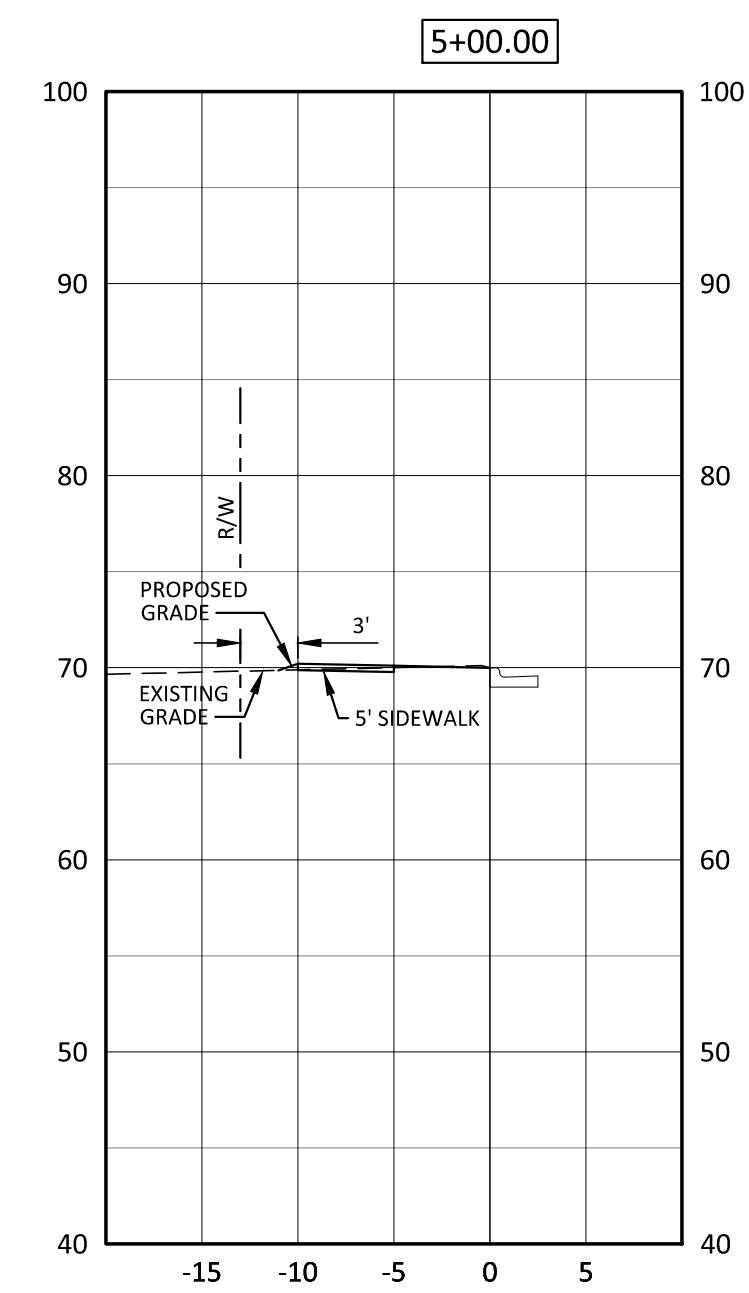
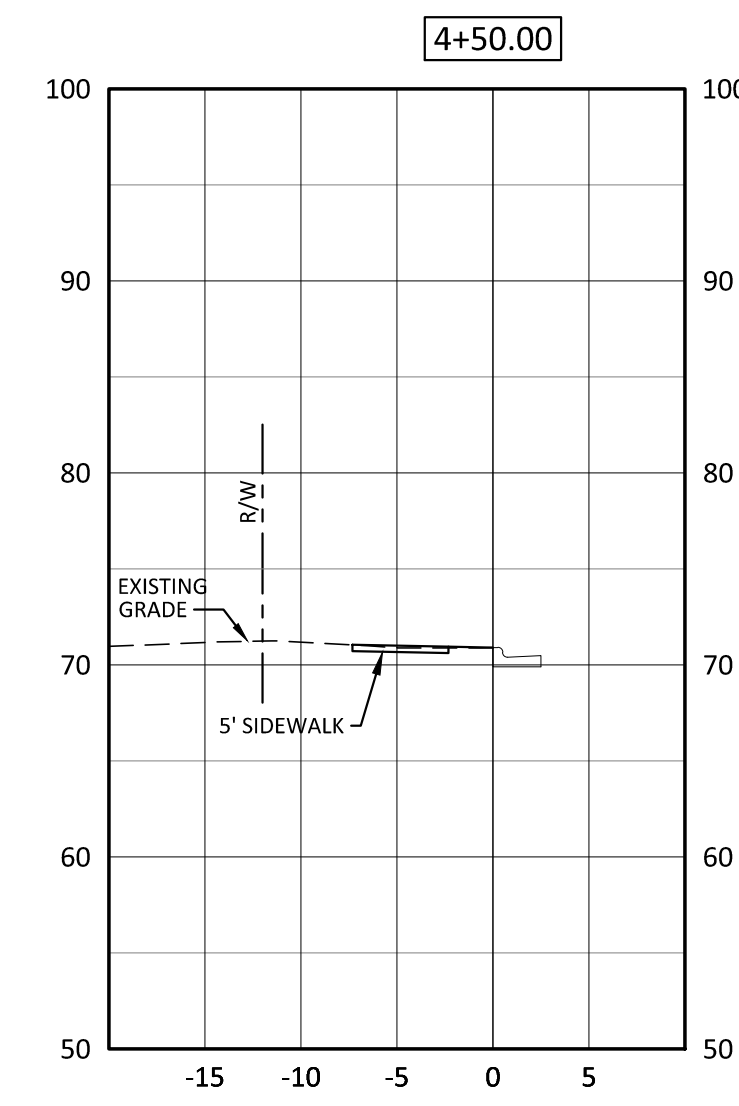
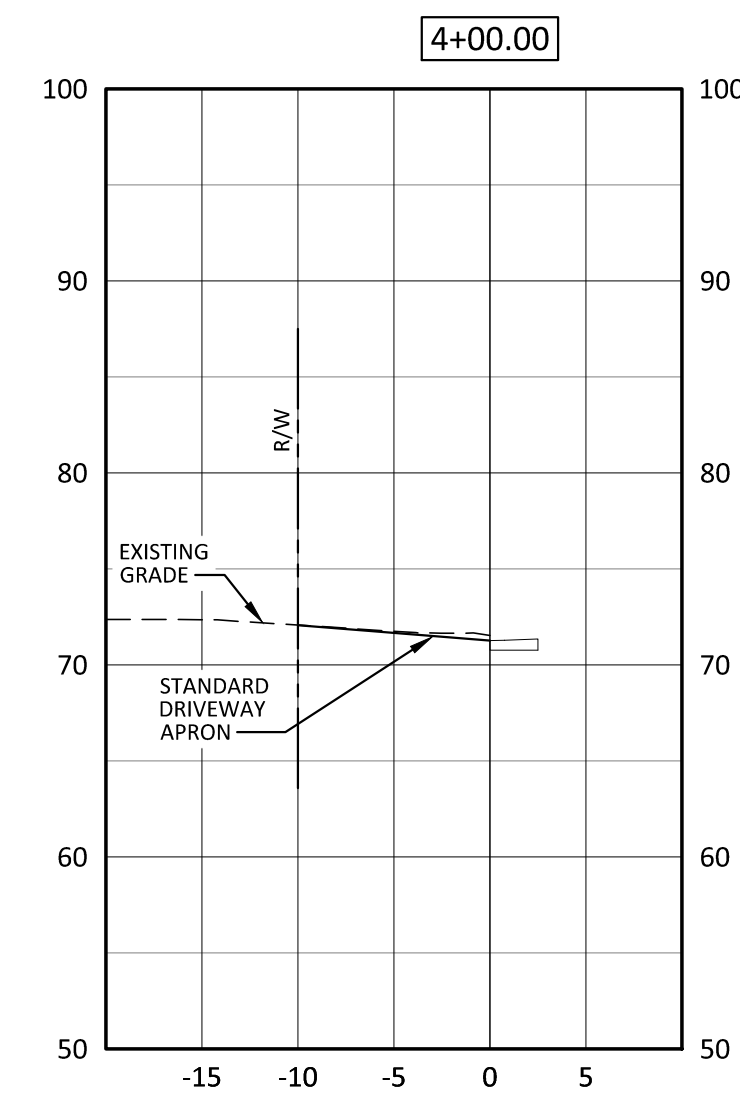
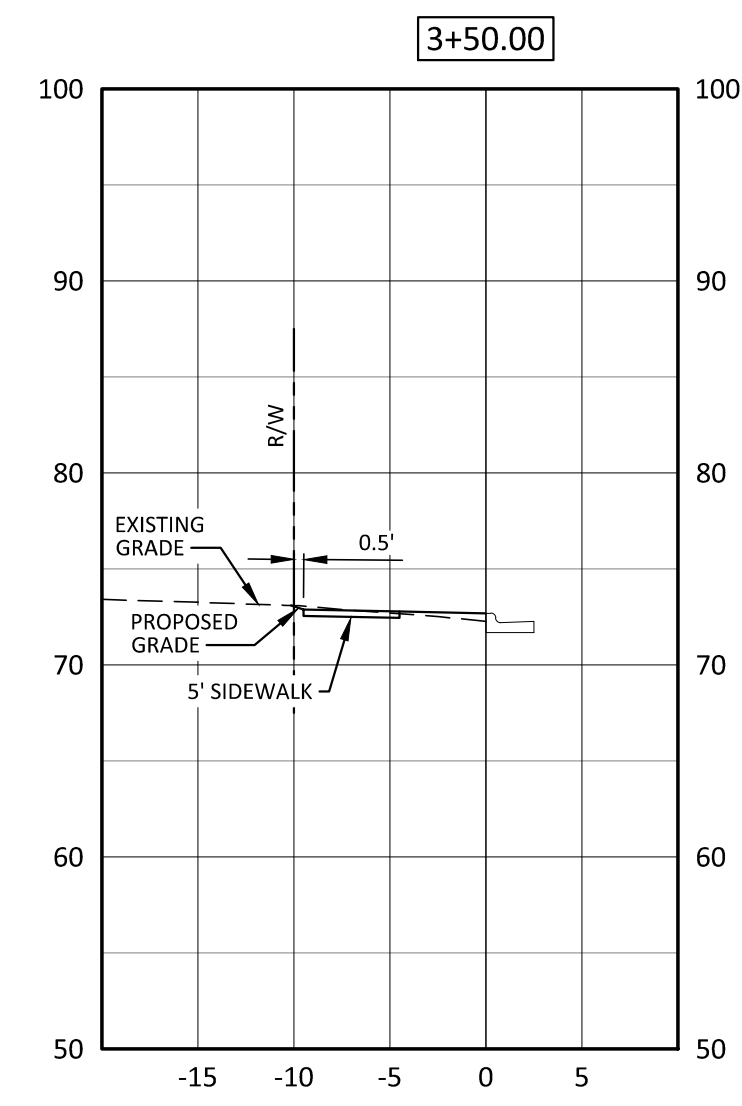
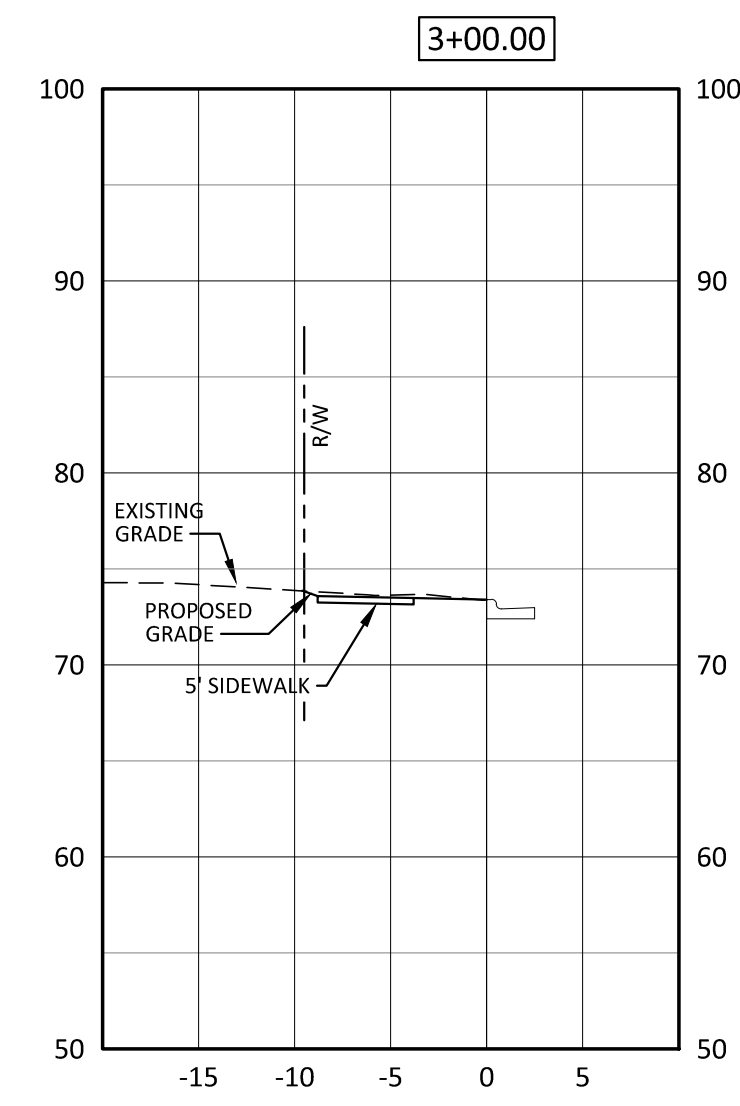
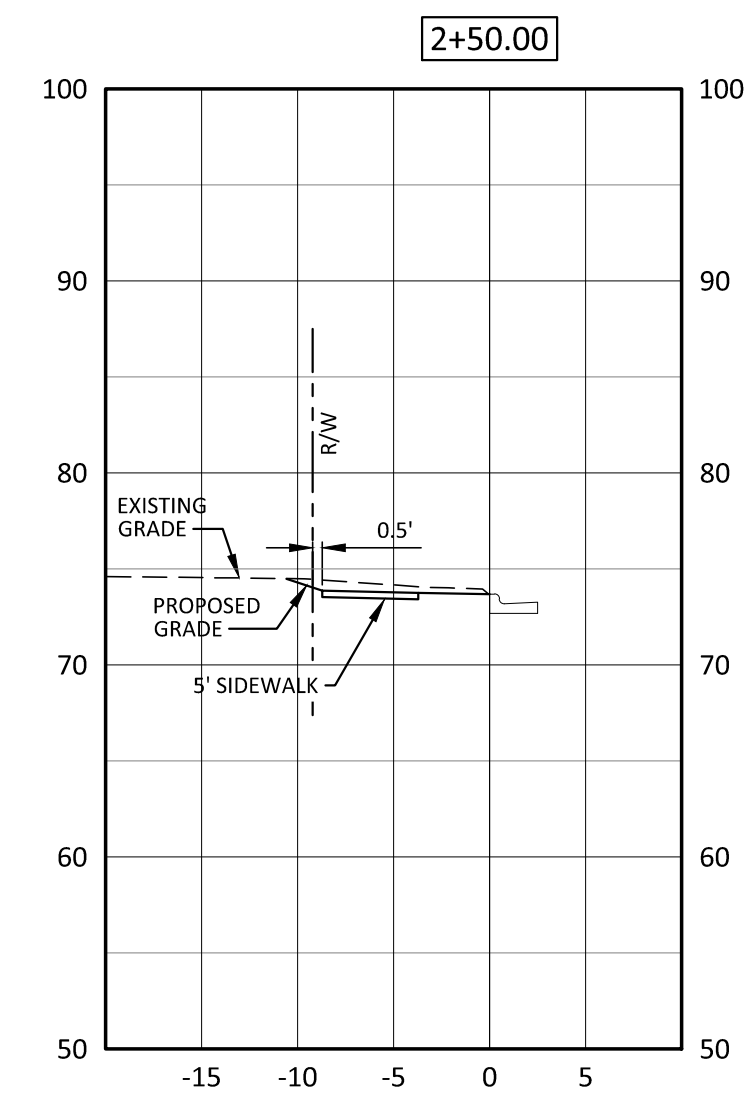
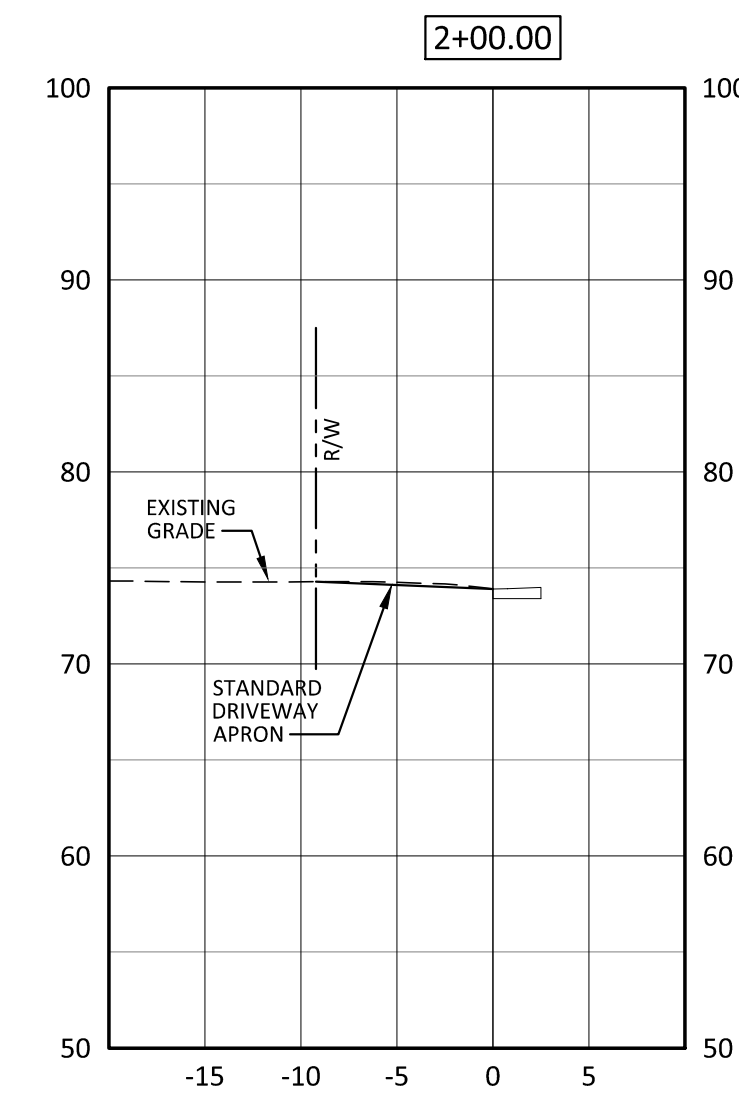
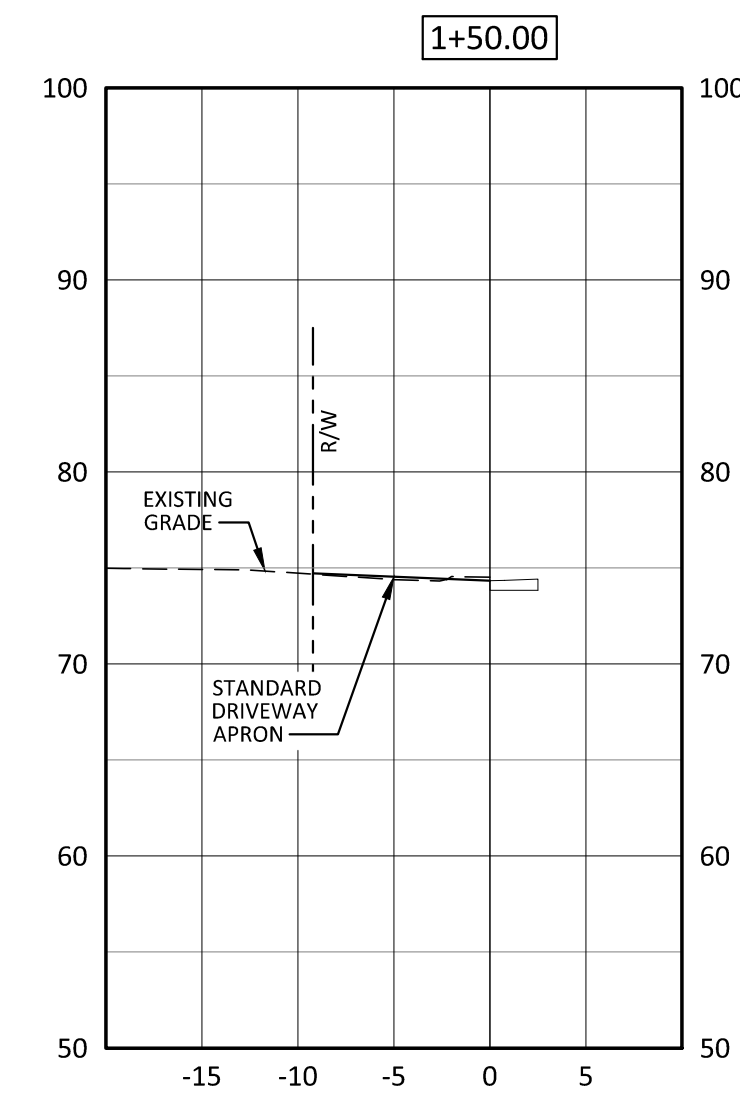
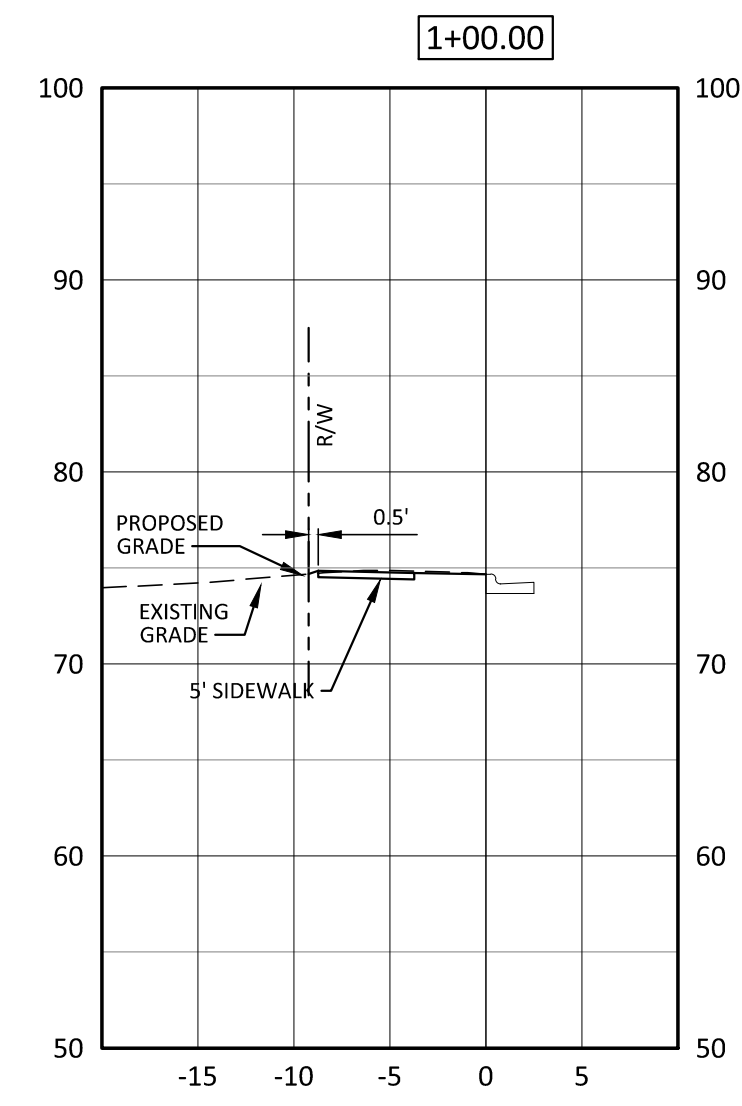
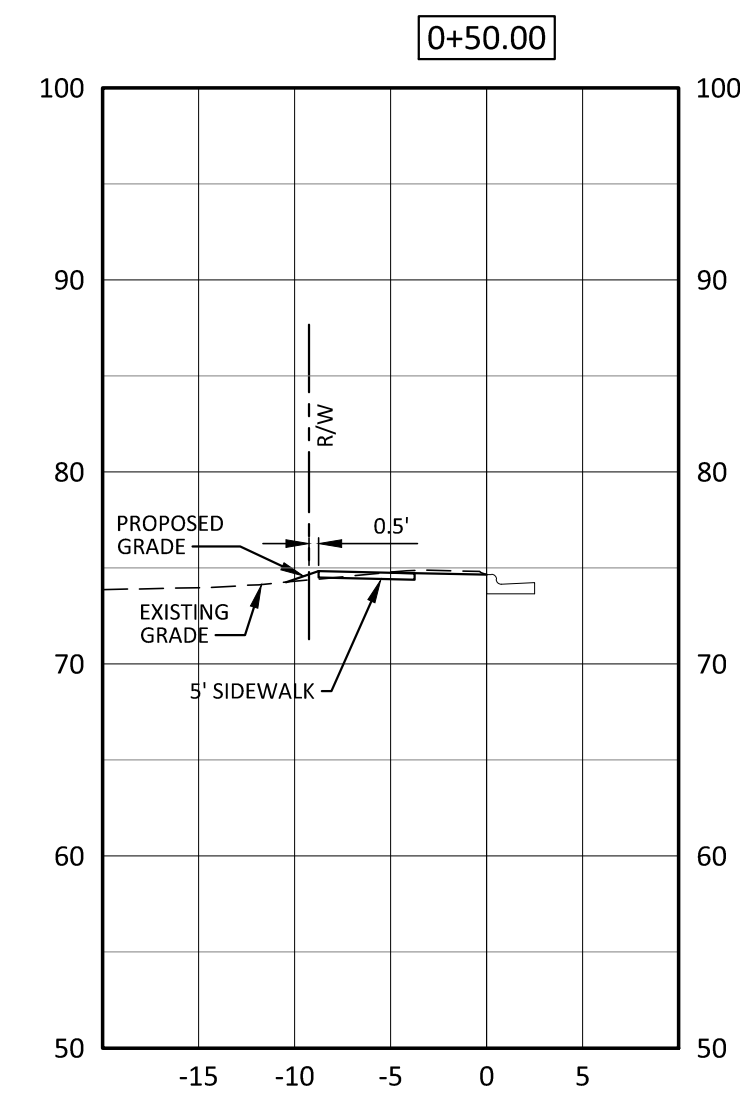
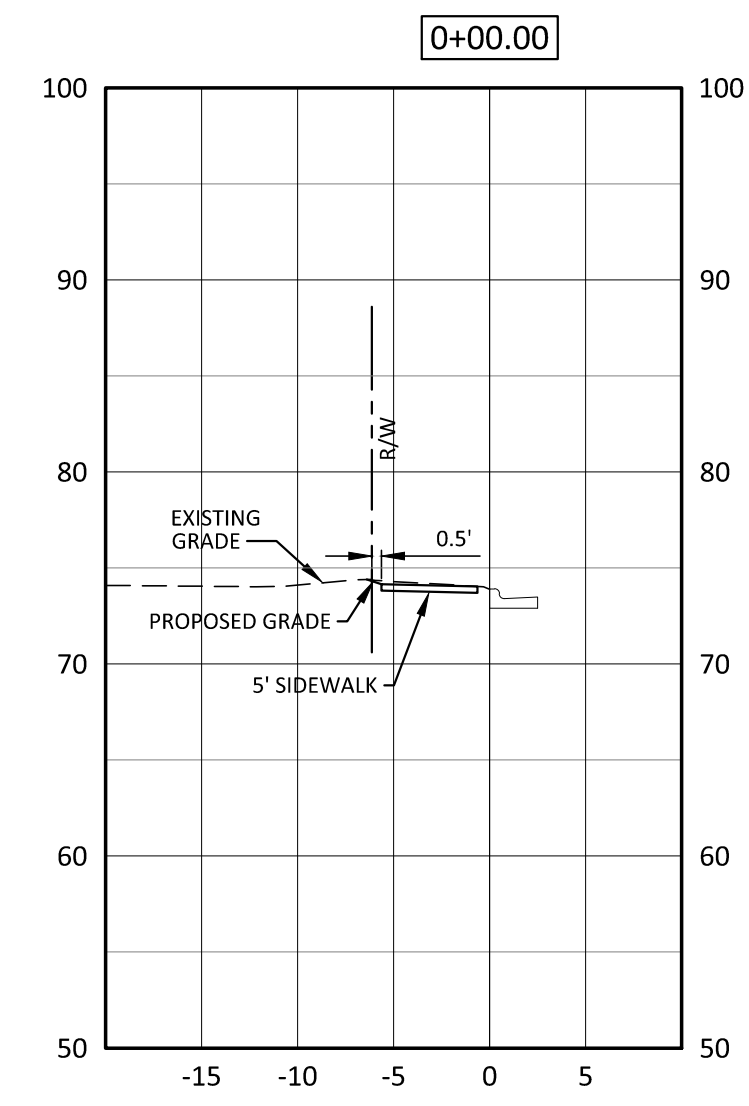
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Drawn By: EW  
Checked By: STA  
Project Number: 15009  
Drawing Number: D-1045

**C-4A**

Date: 05-11-2016

SCALE:  
HORIZONTAL: 1"=30'  
VERTICAL: 1"=3'

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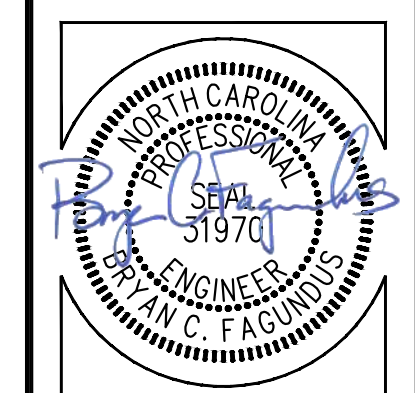


DATE	COMMENTS
5/17/16	ISSUED FOR PERMIT REVIEW - NOT FOR CONSTRUCTION
11/27/17	REVISED PER CITY AND NCDOT COMMENTS
11/16/17	REVISED PER CITY AND NCDOT COMMENTS
05/09/18	REVISED PER COMMENTS - PROFILE DRIVEWAYS

REVISIONS:



**MEMORIAL DRIVE - CROSS SECTIONS**  
**Safe Routes To Schools**  
**Memorial Drive**  
 City of Greenville, Pitt County, North Carolina

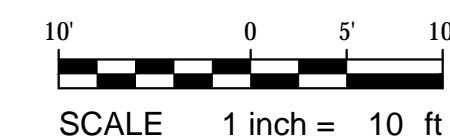
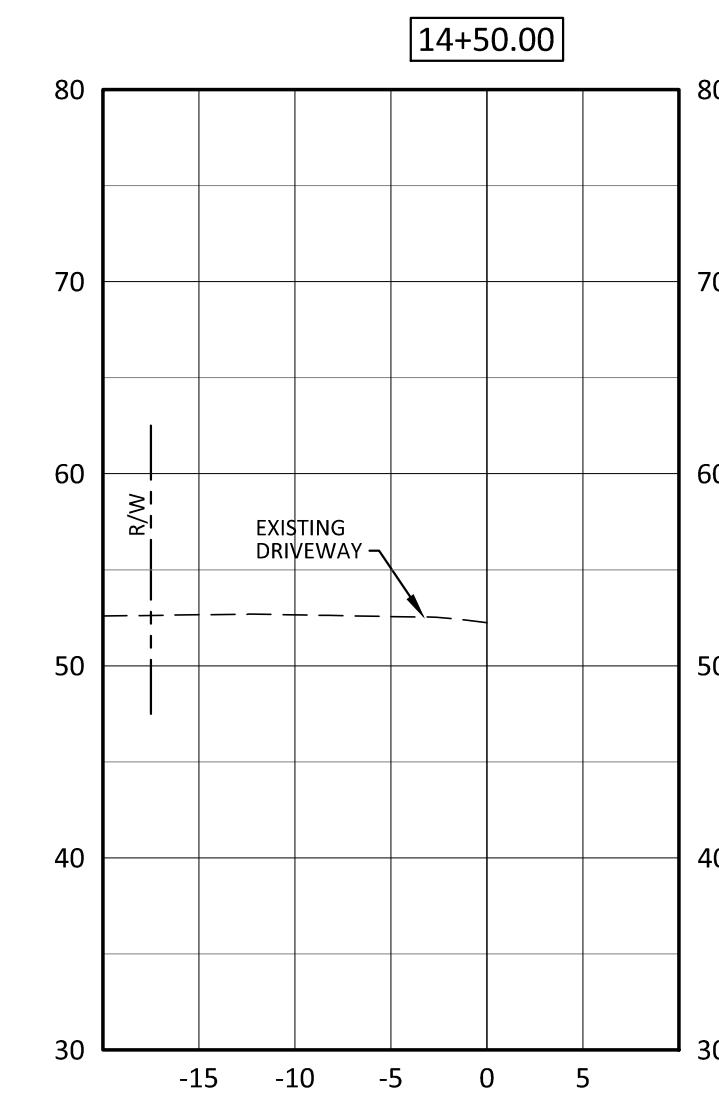
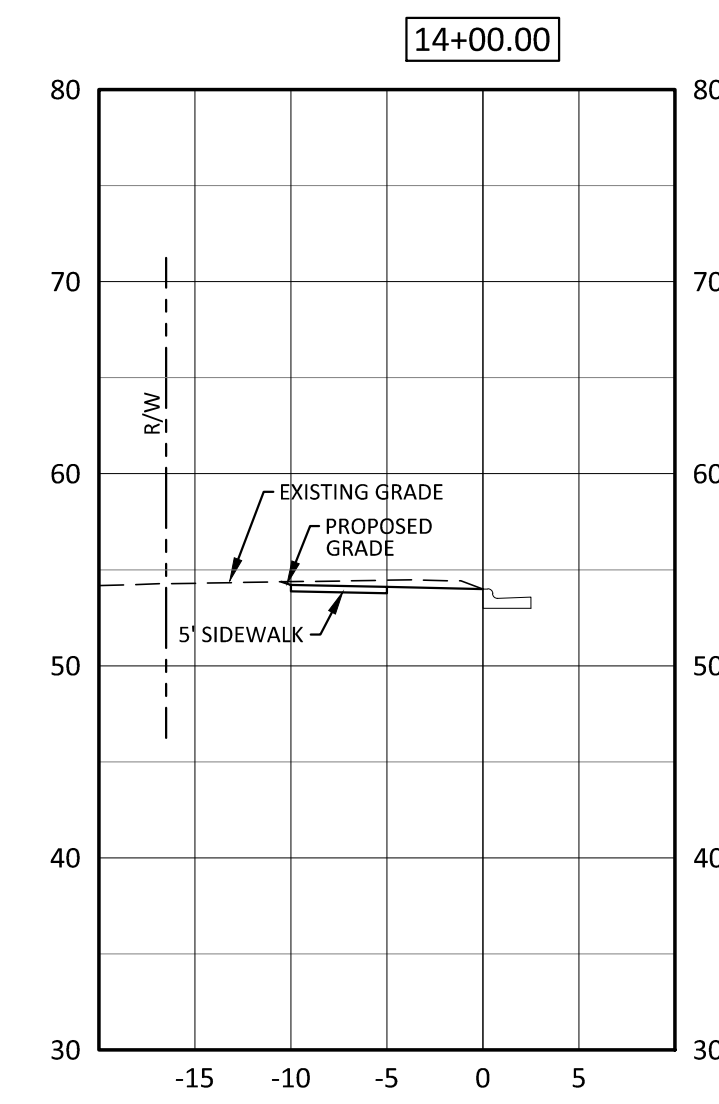
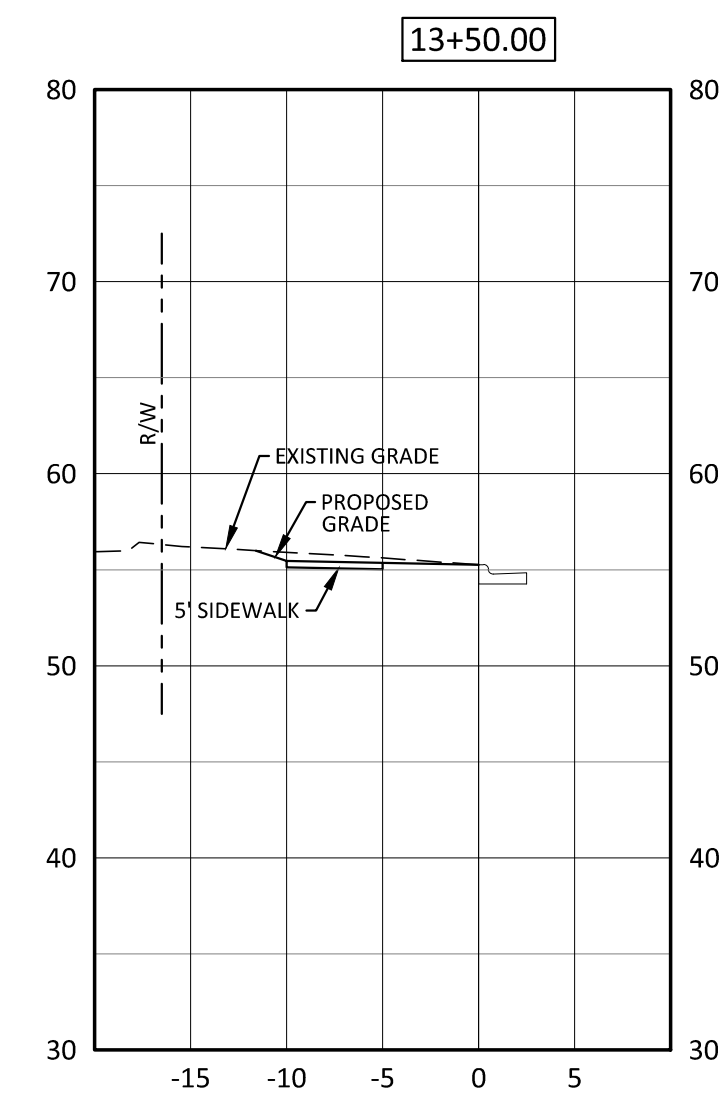
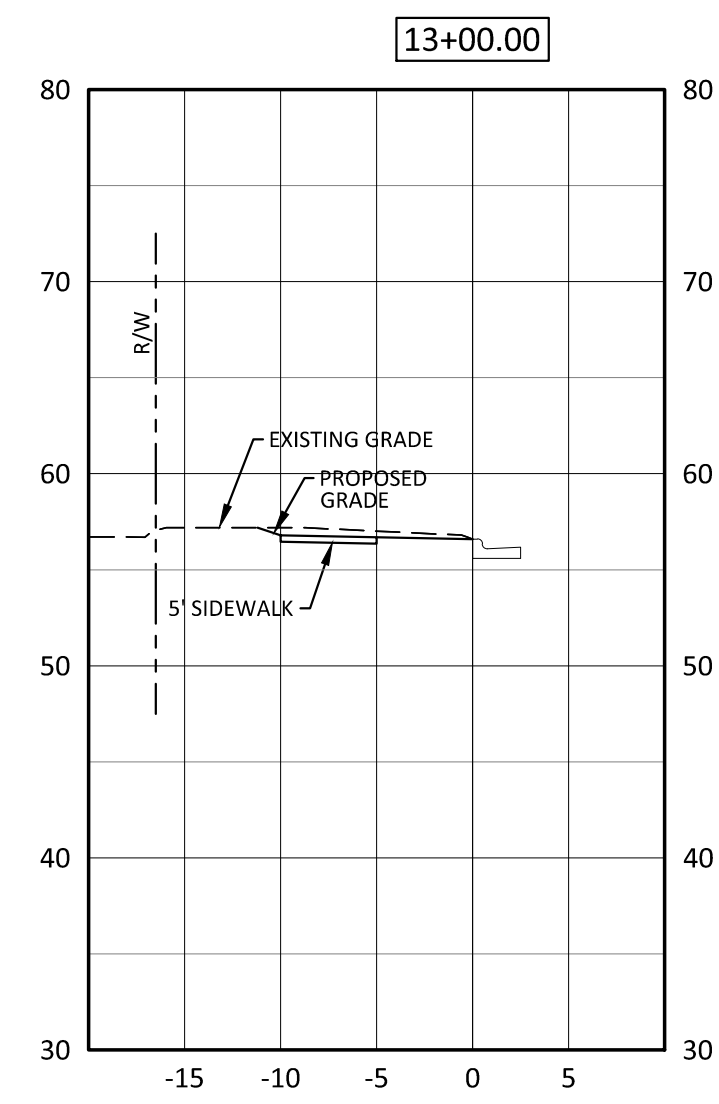
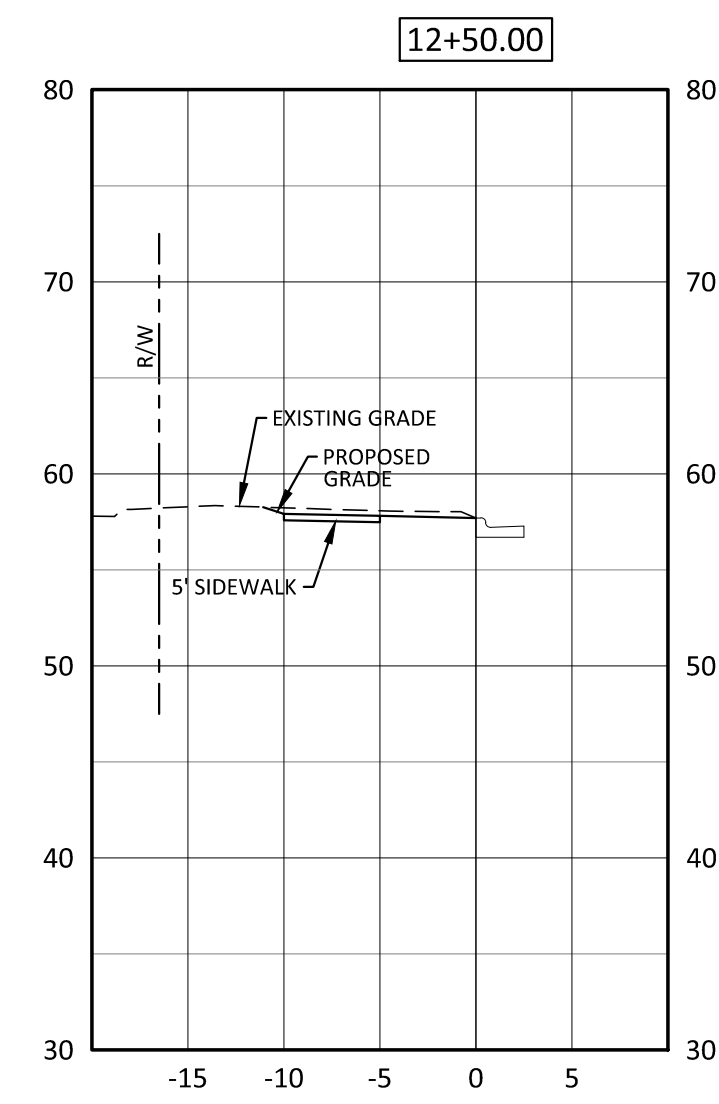
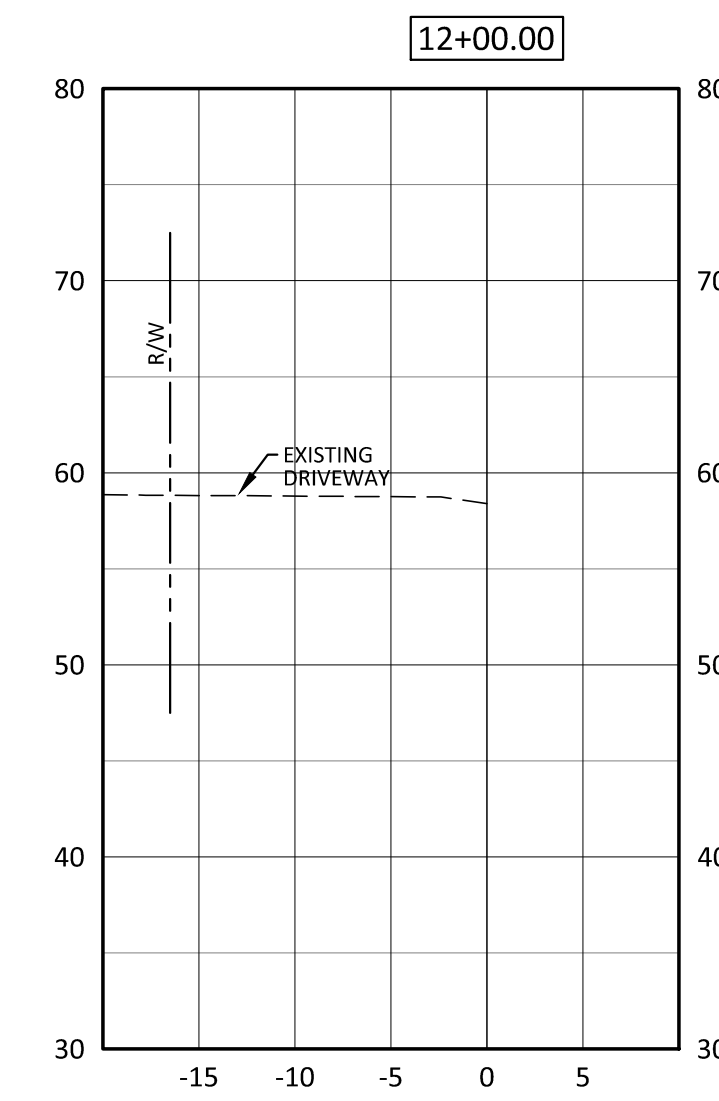
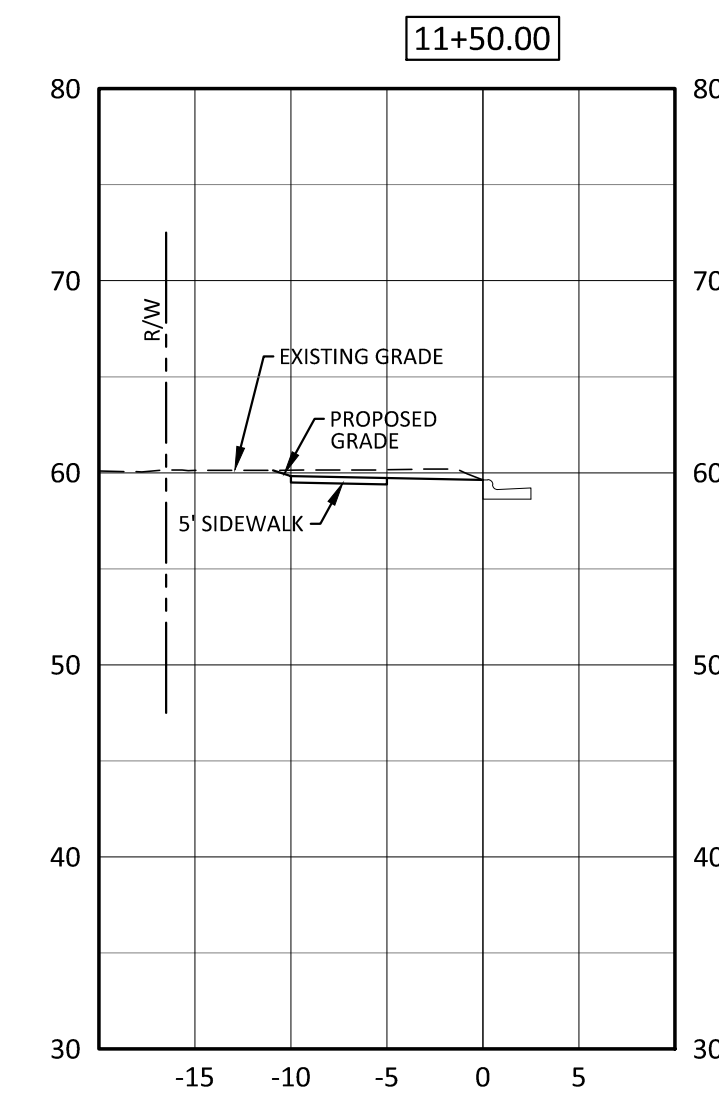
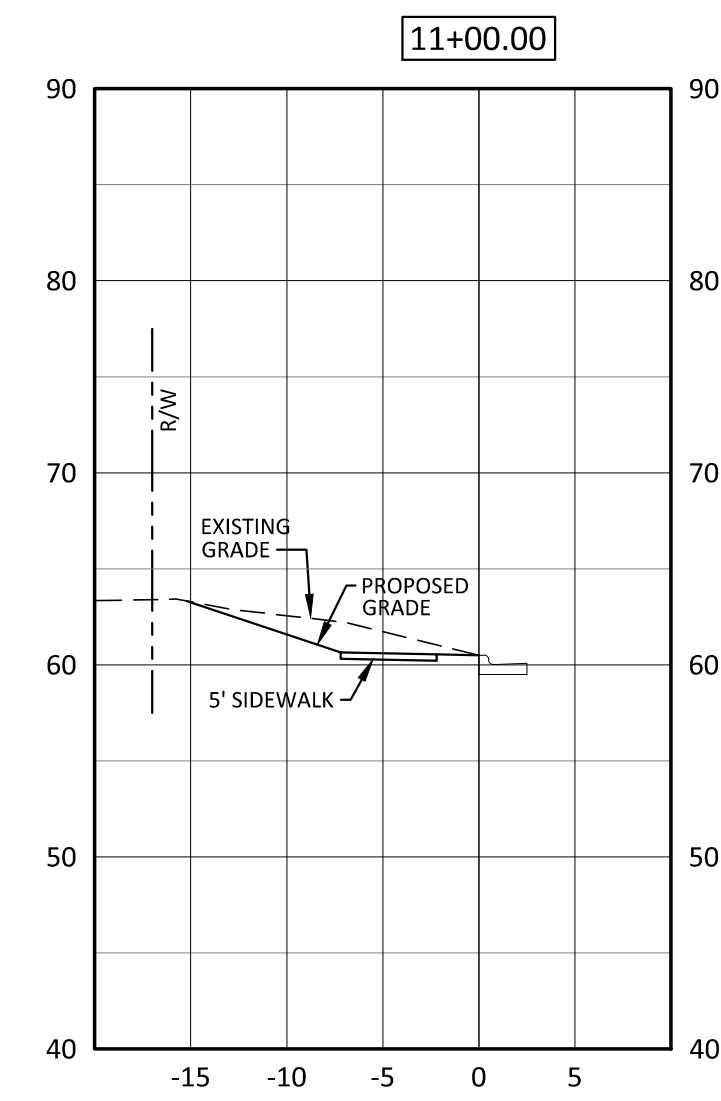
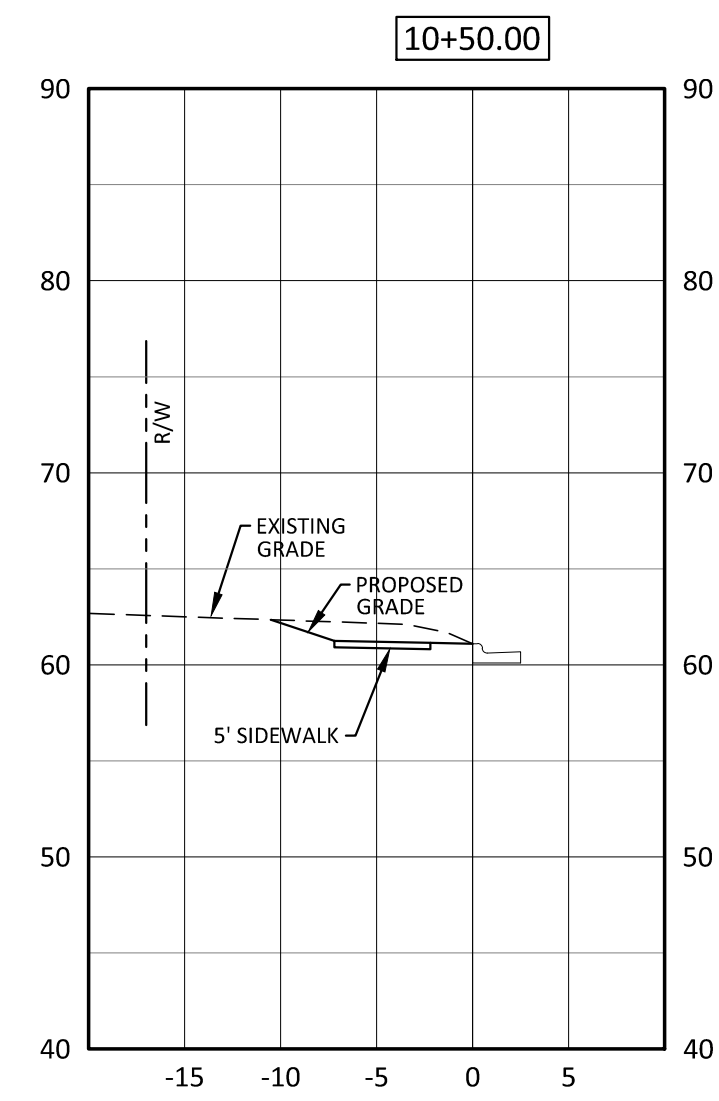
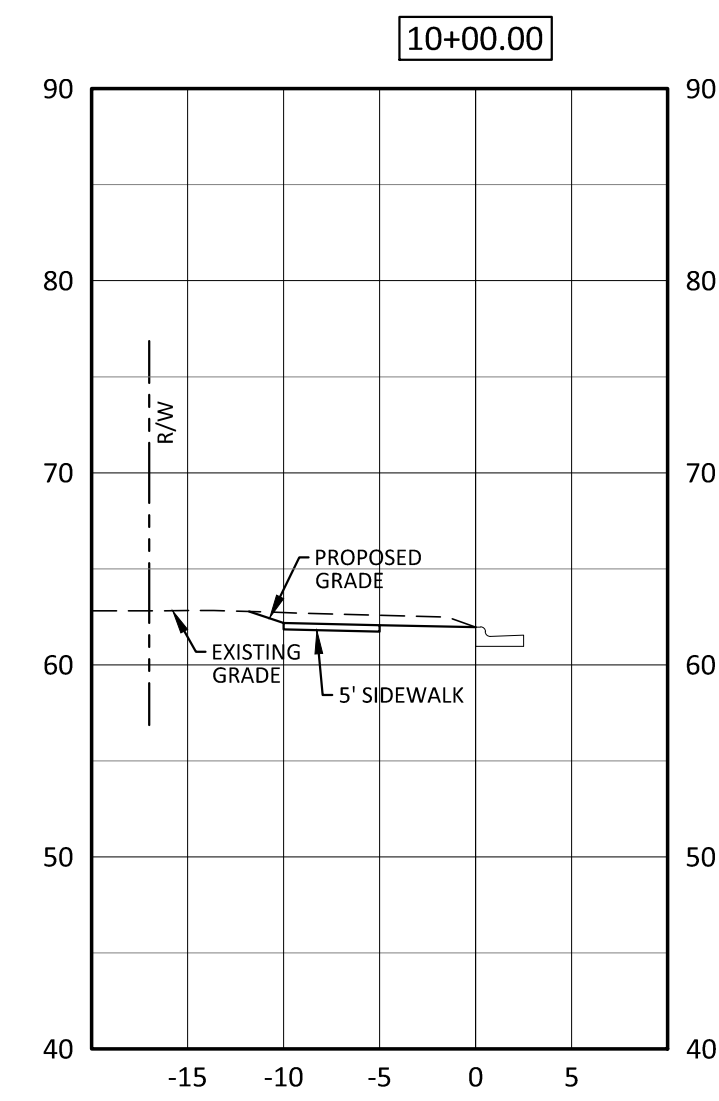
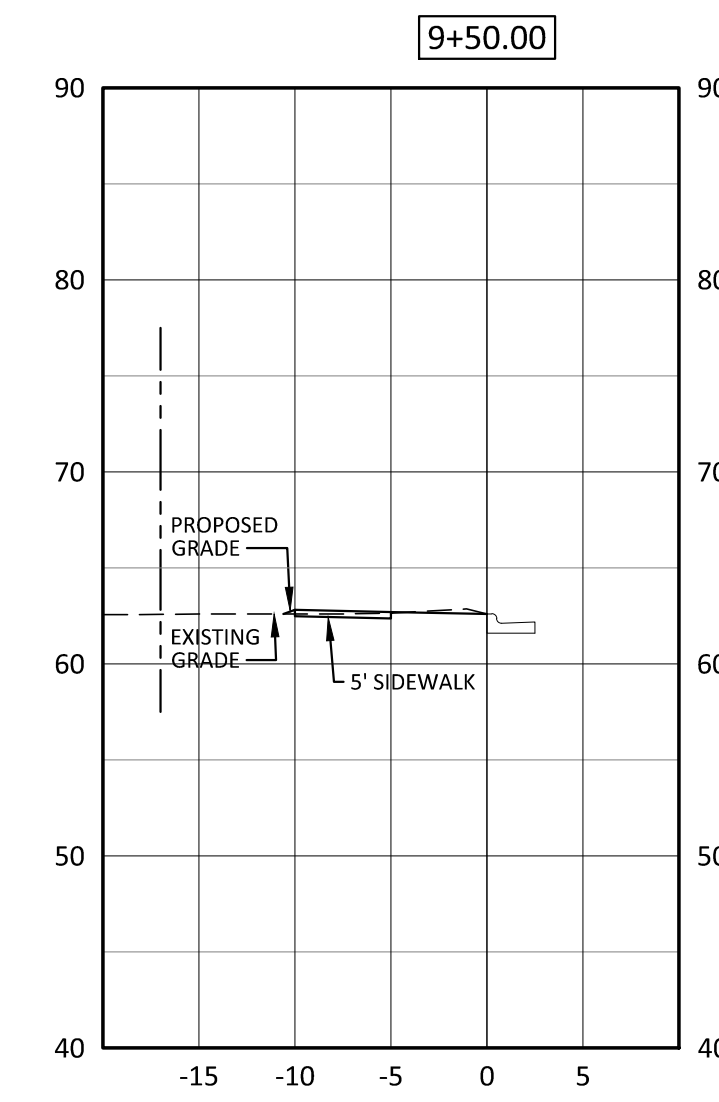
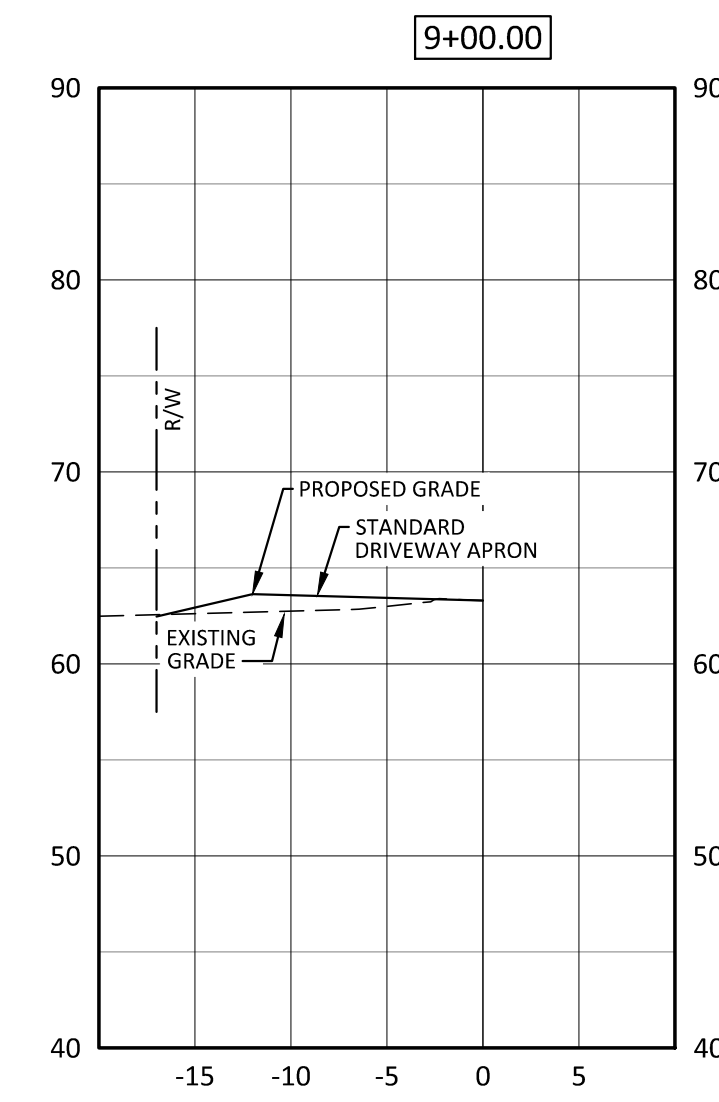
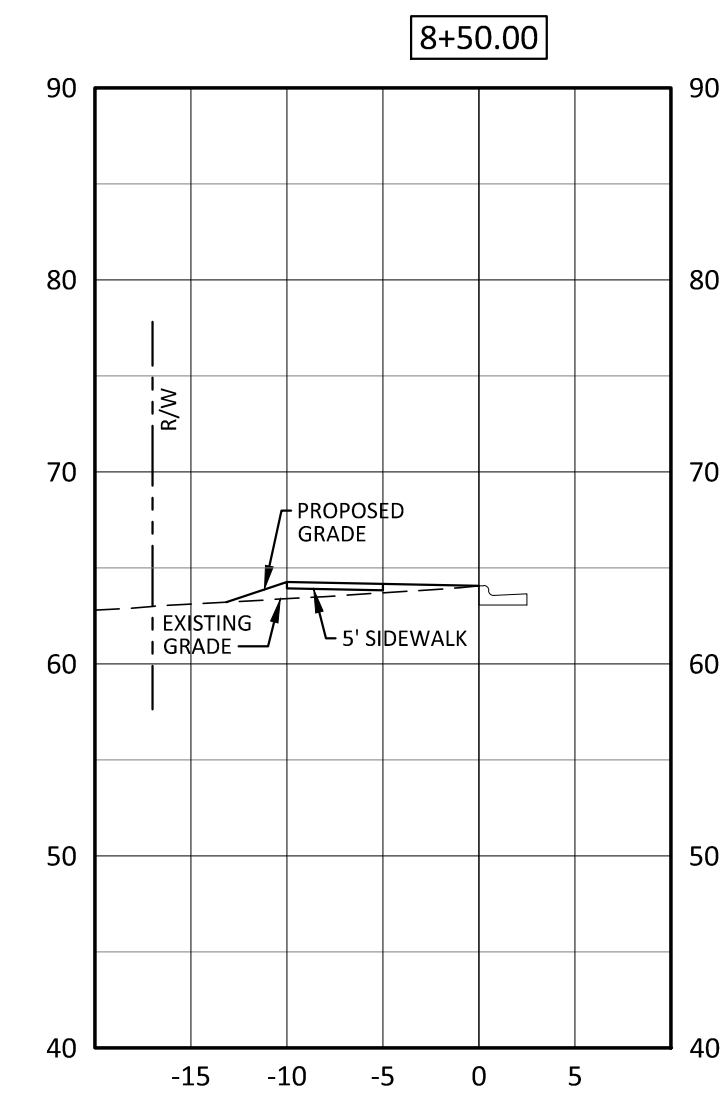
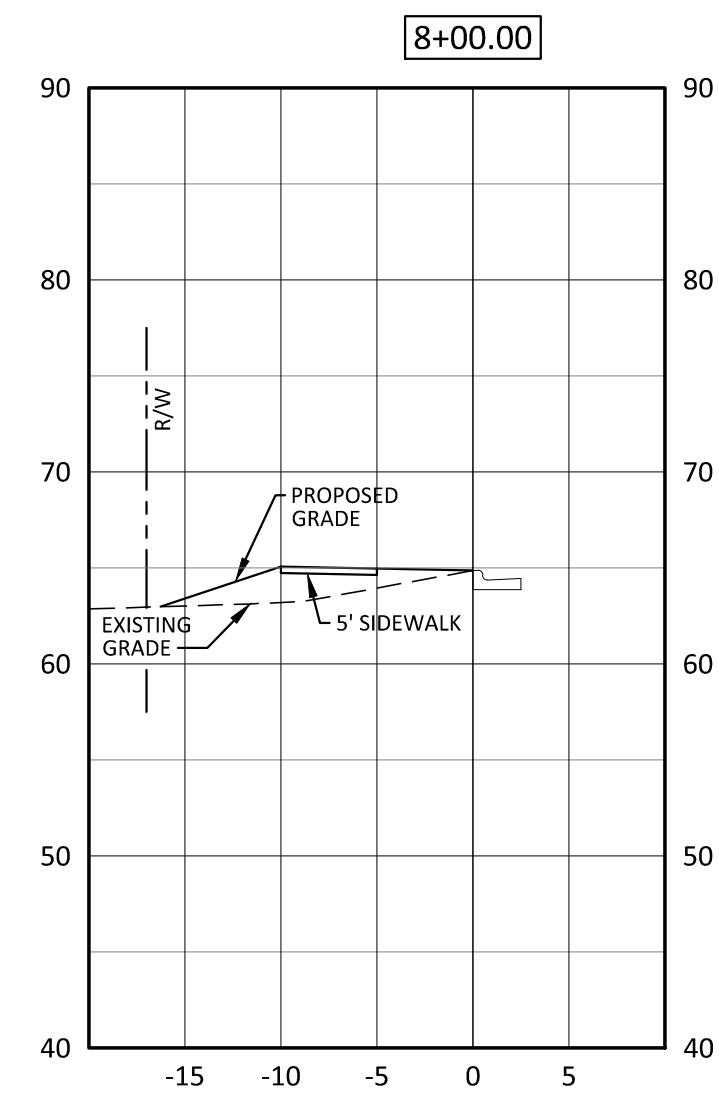
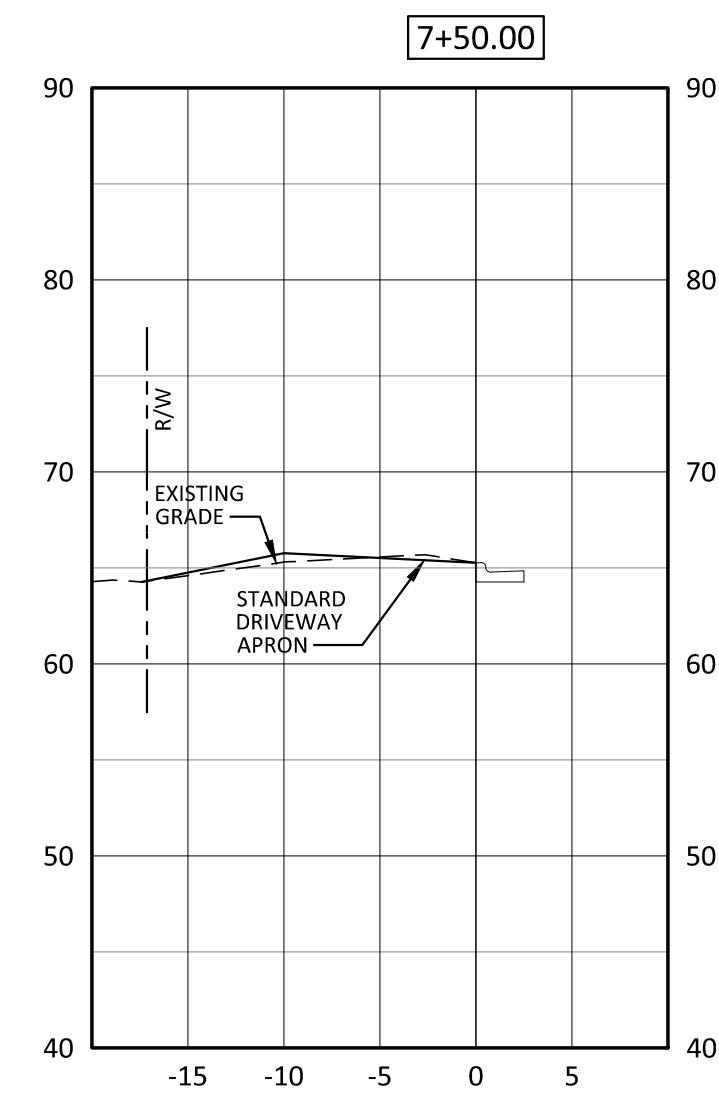


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Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15009  
 Drawing Number: D-1045

**C-4B**

Date: 05-11-2016

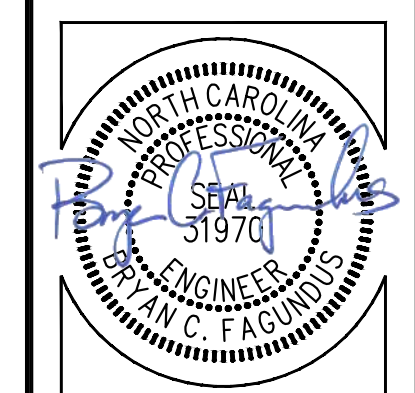


DATE	COMMENTS
5/17/16	ISSUED FOR PERMIT REVIEW - NOT FOR CONSTRUCTION
11/27/17	REVISED PER CITY AND NCOTD COMMENTS
11/16/17	REVISED PER CITY AND NCOTD COMMENTS
05/09/18	REVISED PER COMMENTS - PROFILE DRIVEWAYS

REVISIONS:



**MEMORIAL DRIVE - CROSS SECTIONS**  
**Safe Routes To Schools**  
**Memorial Drive**  
 City of Greenville, Pitt County, North Carolina

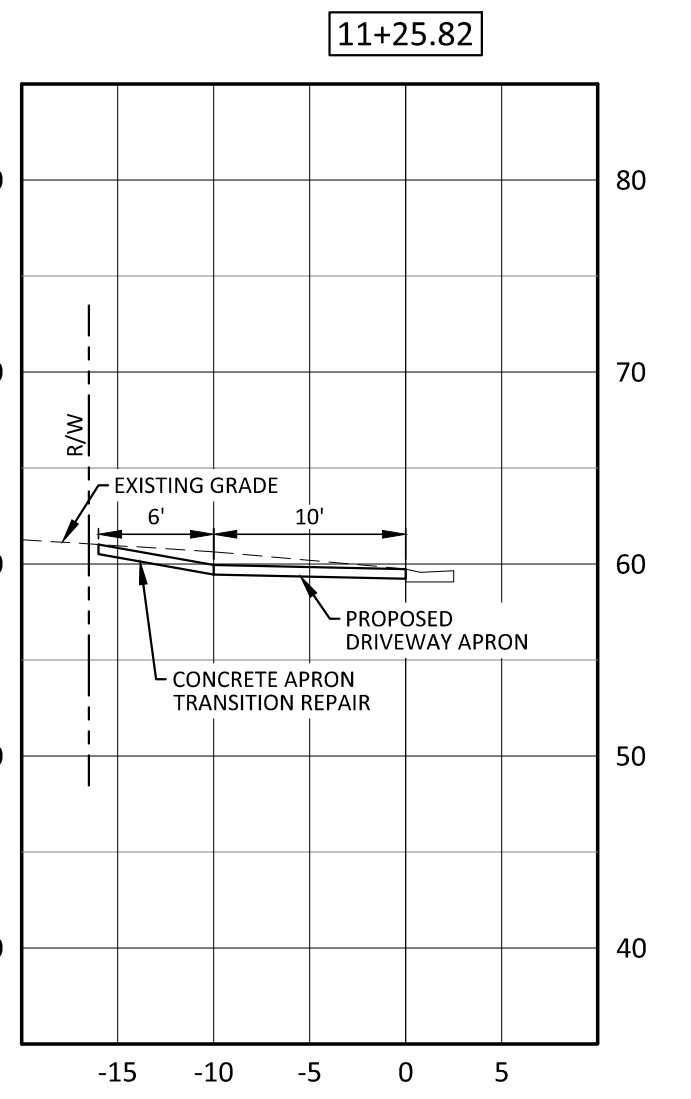
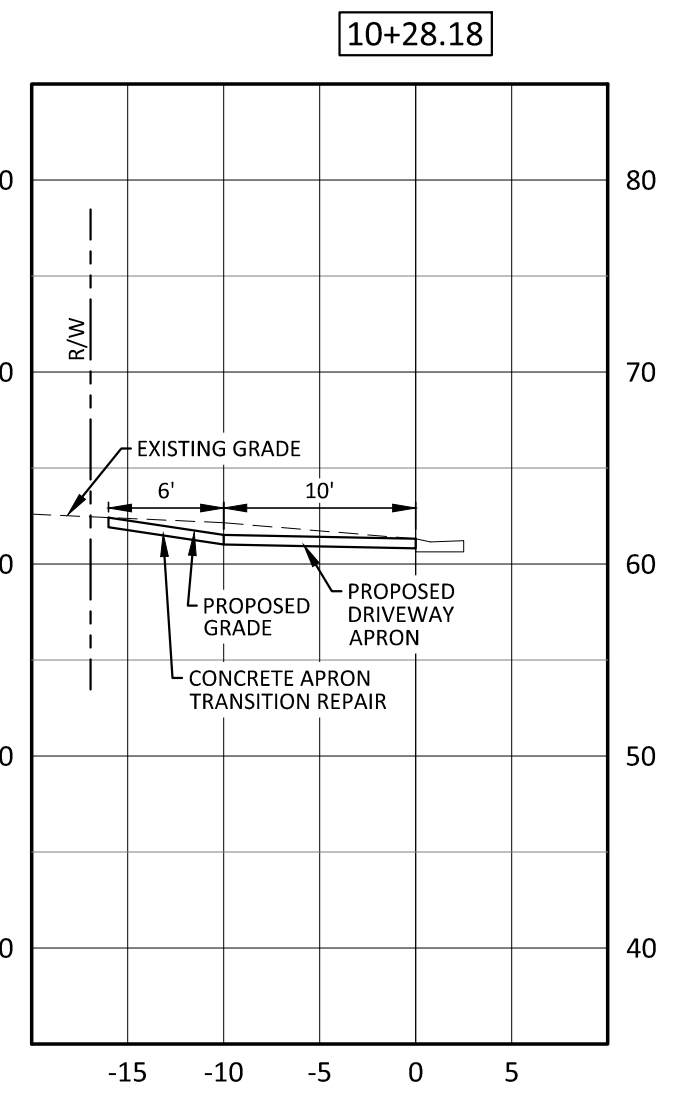
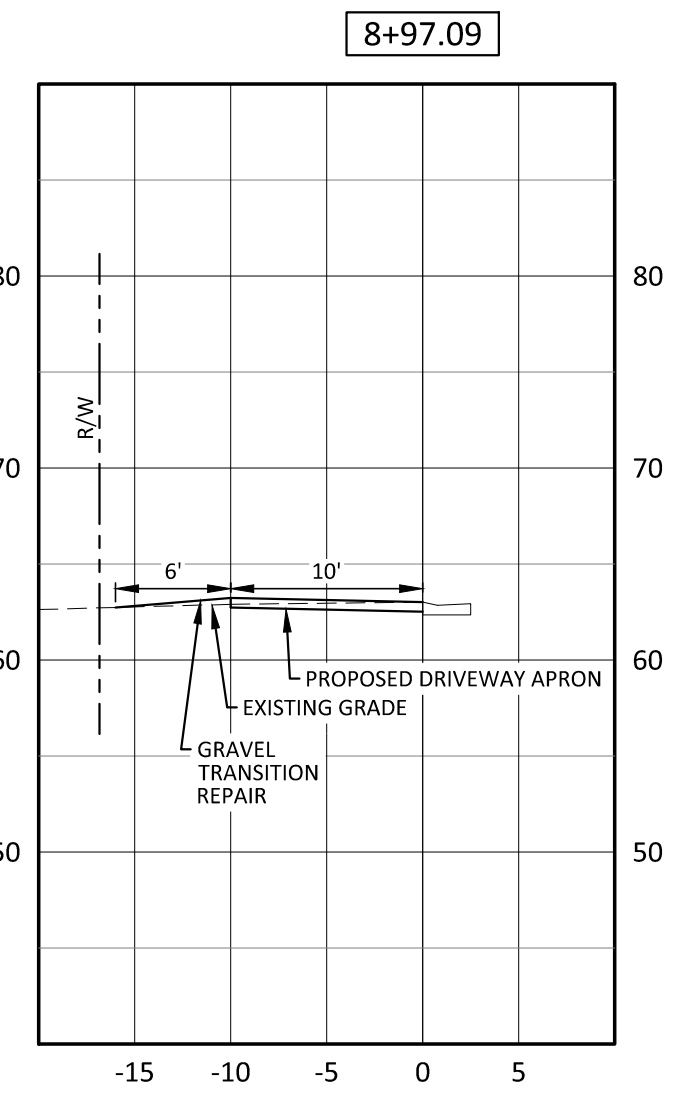
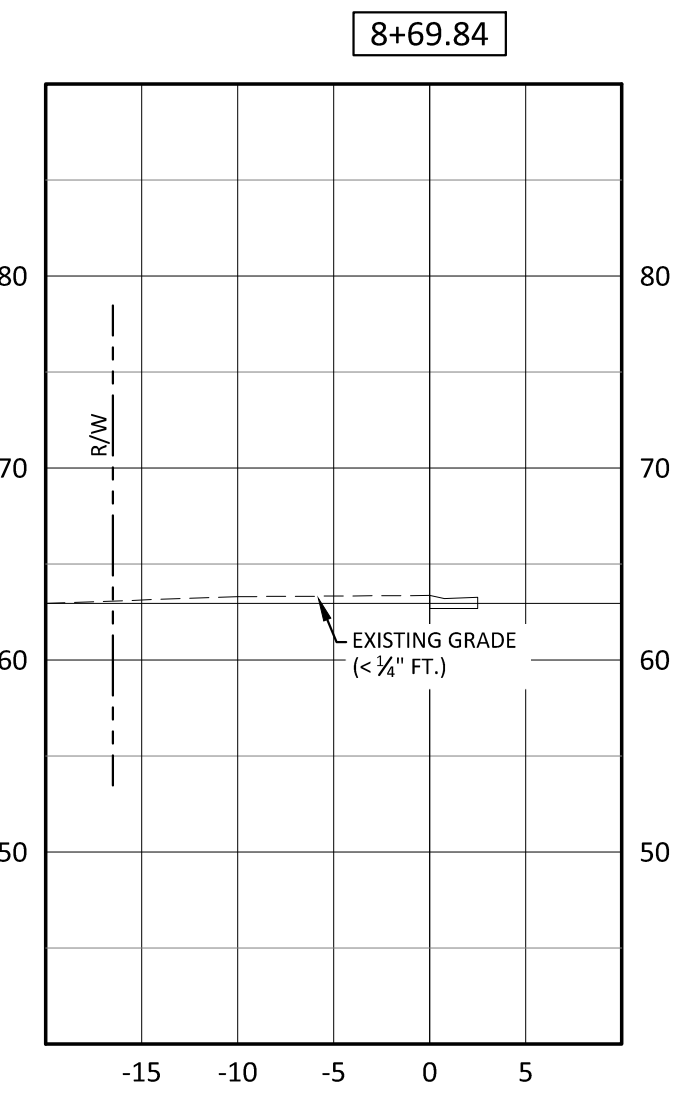
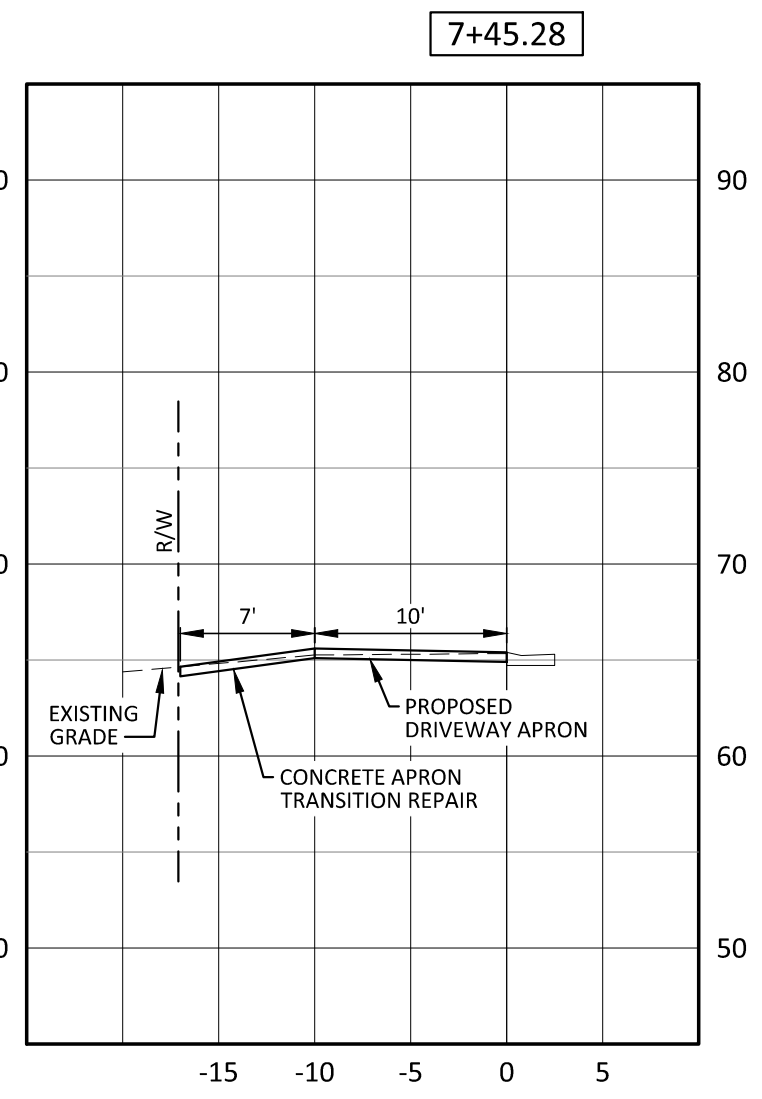
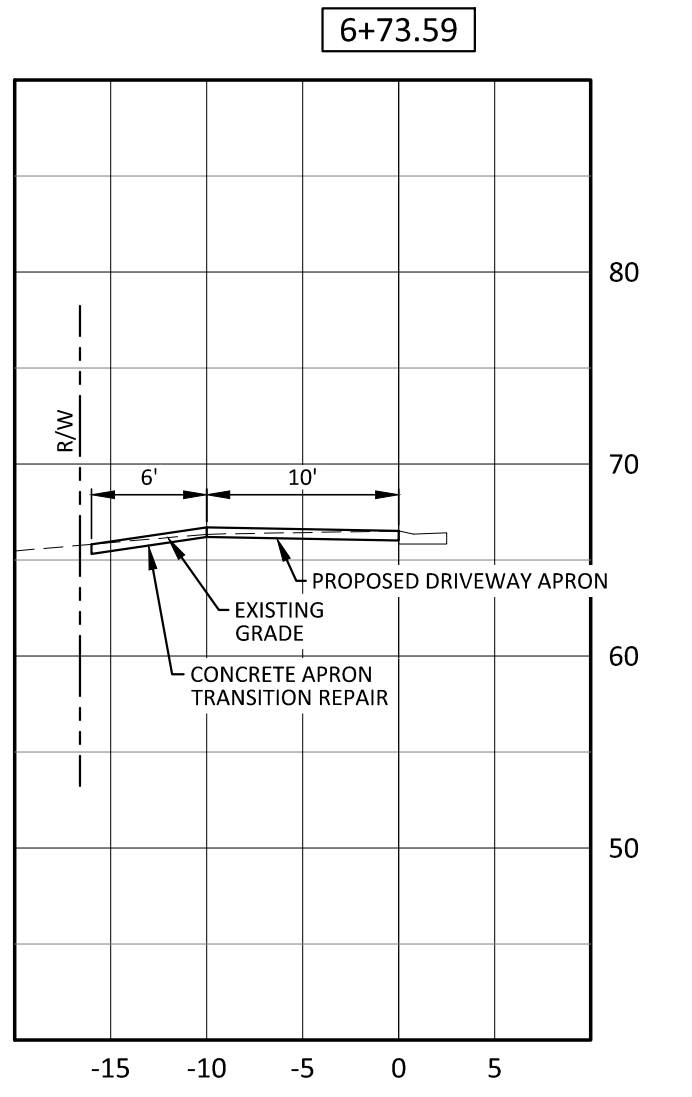
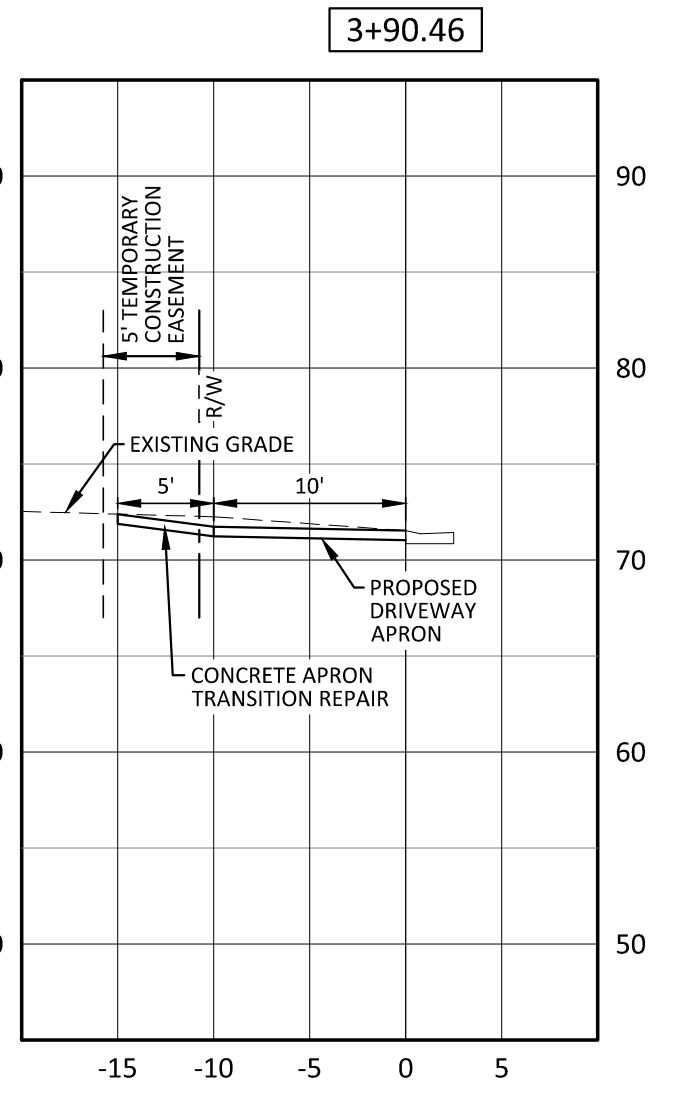
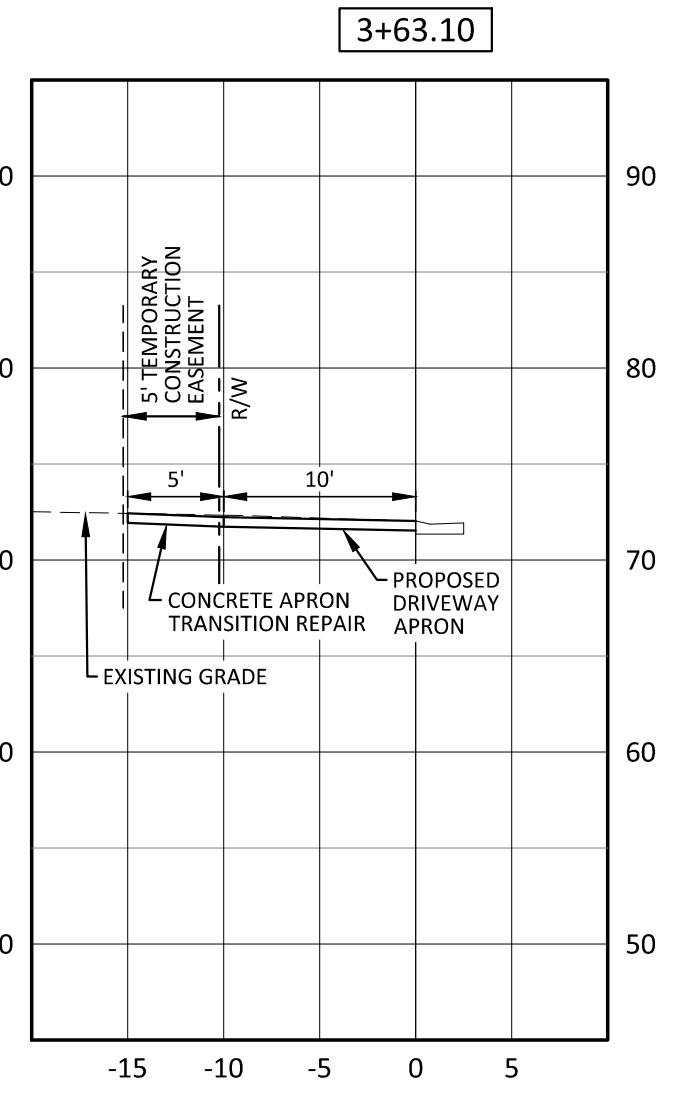
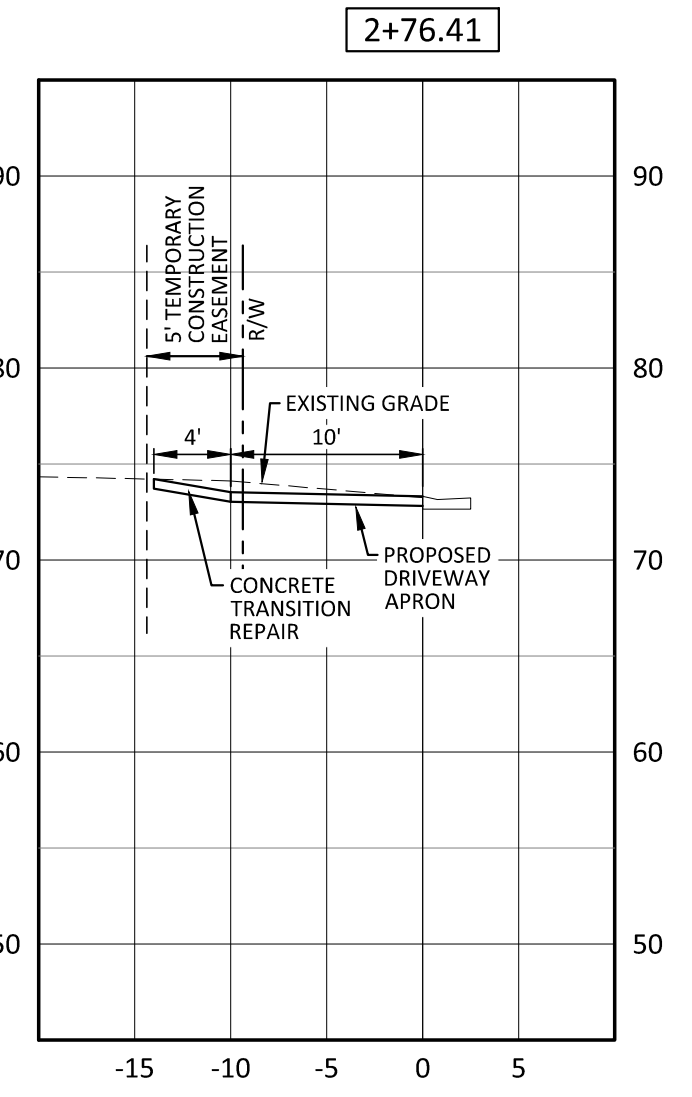
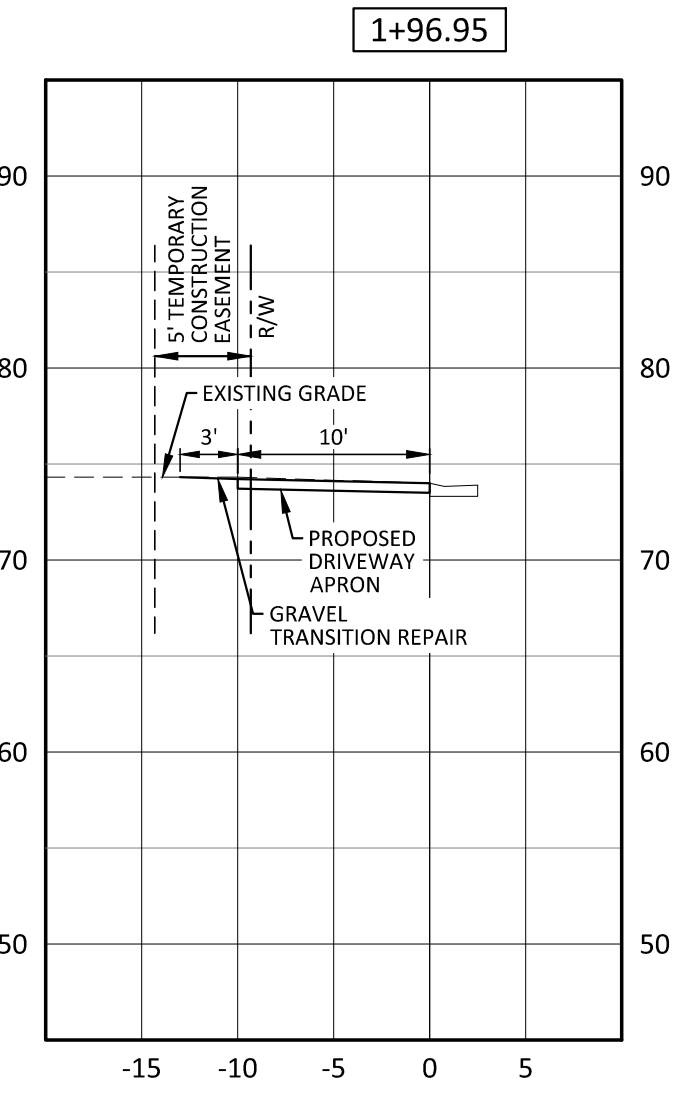
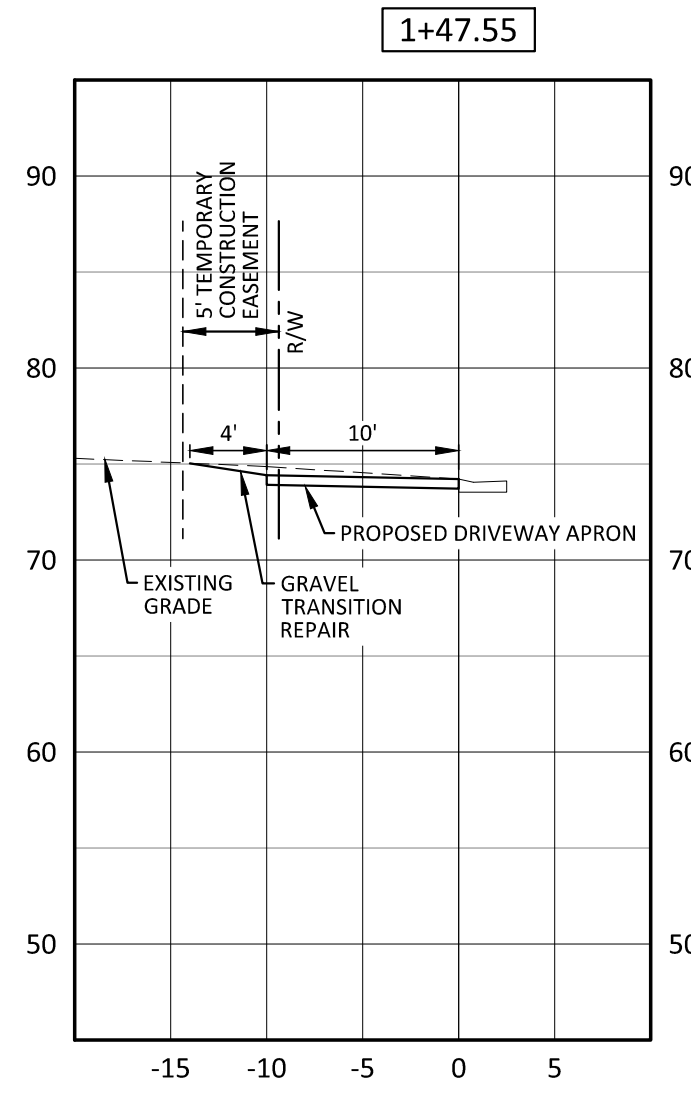


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Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15009  
 Drawing Number: D-1045

**C-4C**  
 Date: 05-11-2016

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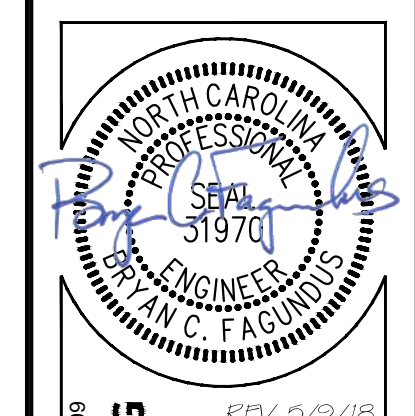


DATE	COMMENTS
5/17/16	ISSUED FOR PERMIT REVIEW - NOT FOR CONSTRUCTION
11/27/17	REVISED PER CITY AND NC DOT COMMENTS
11/16/17	REVISED PER CITY AND NC DOT COMMENTS
05/09/18	REVISED PER COMMENTS - PROFILE DRIVEWAYS

REVISIONS:



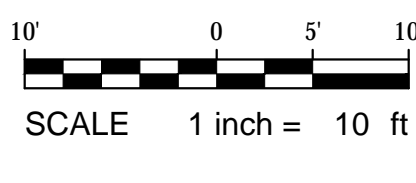
**MEMORIAL DRIVE - DRIVEWAY CROSS SECTIONS**  
**Safe Routes To Schools**  
**Memorial Drive**  
 City of Greenville, Pitt County, North Carolina



NC License P-1109  
**ARK CONSULTING GROUP, PLLC**  
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 Greenville, NC 27838  
 (252) 558-0888  
 www.arkconsultinggroup.com

Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15009  
 Drawing Number: D-1045

**C-4D**  
 Date: 05-11-2016

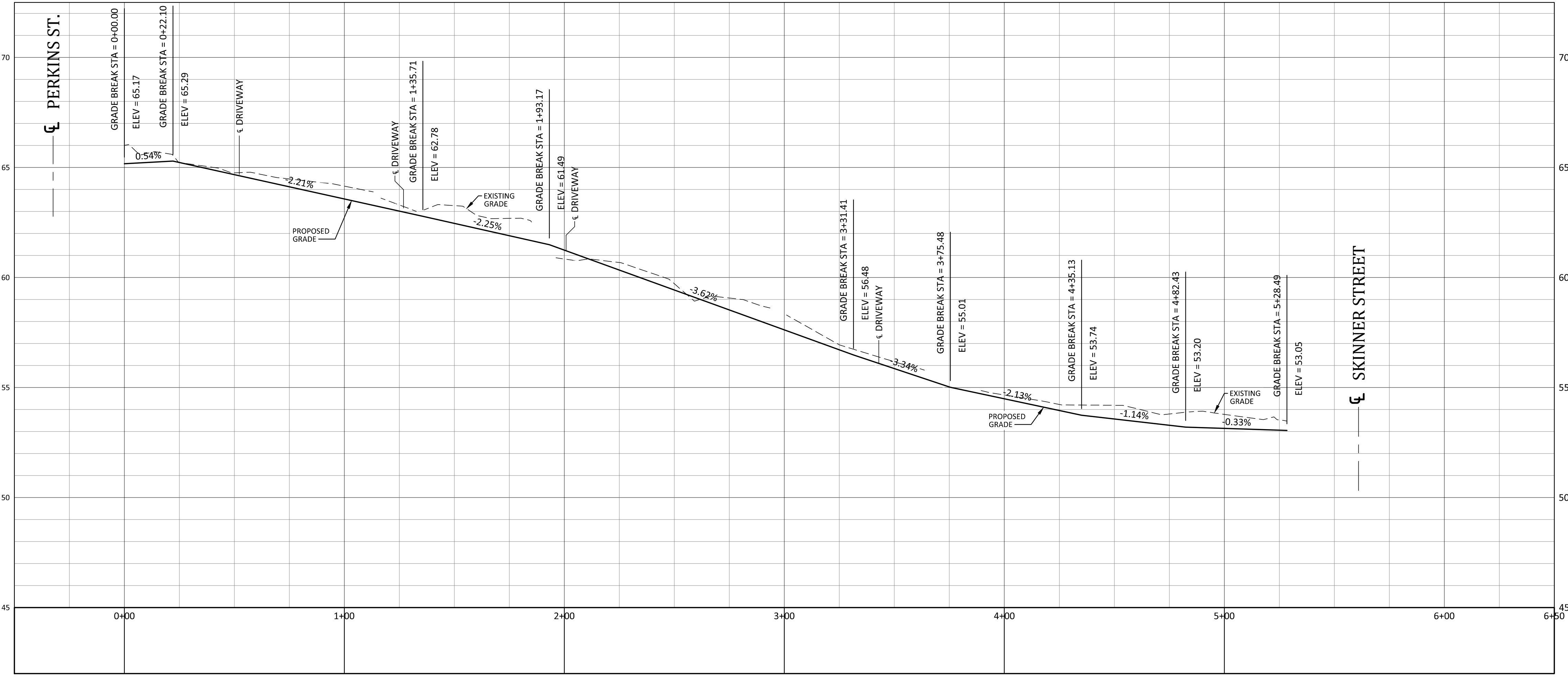


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NORRIS STREET

DATE	COMMENTS
5/17/16	ISSUED FOR PERMIT REVIEW - NOT FOR CONSTRUCTION
1/27/17	REVISED PER CITY AND NCDDOT COMMENTS
1/27/17	REVISED PER CITY AND NCDDOT COMMENTS
5/9/18	REVISED PER COMMENTS - PROFILE DRAWINGS

REVISIONS:



**NORRIS STREET - PROFILE**  
**Safe Routes to Schools**  
 Norris Street and Skinner Street  
 City of Greenville, Pitt County, North Carolina



NC License P-1109  
**ARK CONSULTING GROUP, LLC**  
 ENGINEERS & PLANNERS  
 2755-B Charles Blvd  
 Greenville, NC 27858  
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 www.arkconsultinggroup.com

Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15009  
 Drawing Number: D-1045

**C-6A**

SCALE:  
 HORIZONTAL: 1"=30'  
 VERTICAL: 1"=3'

Date: 05-11-2016

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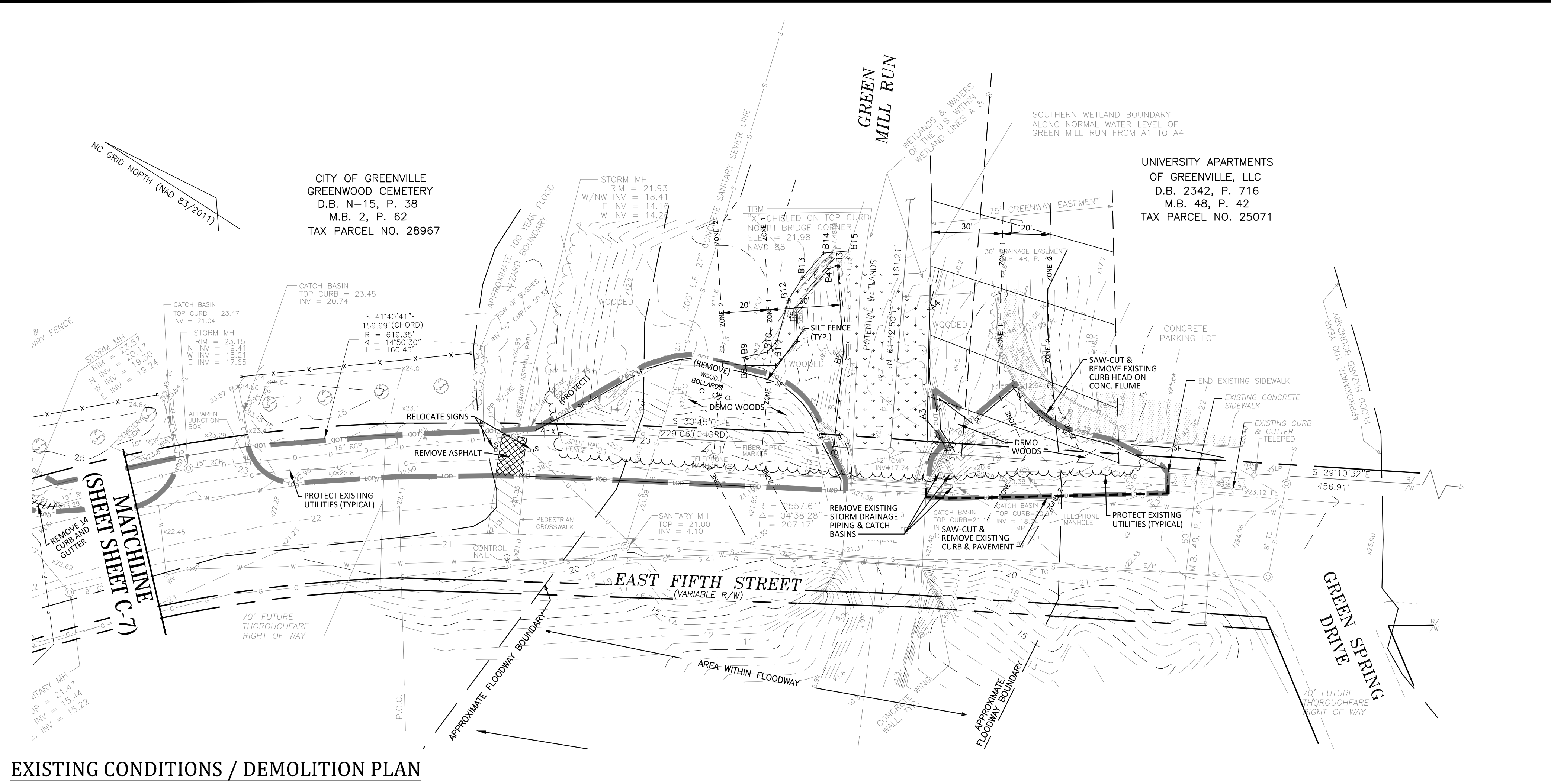




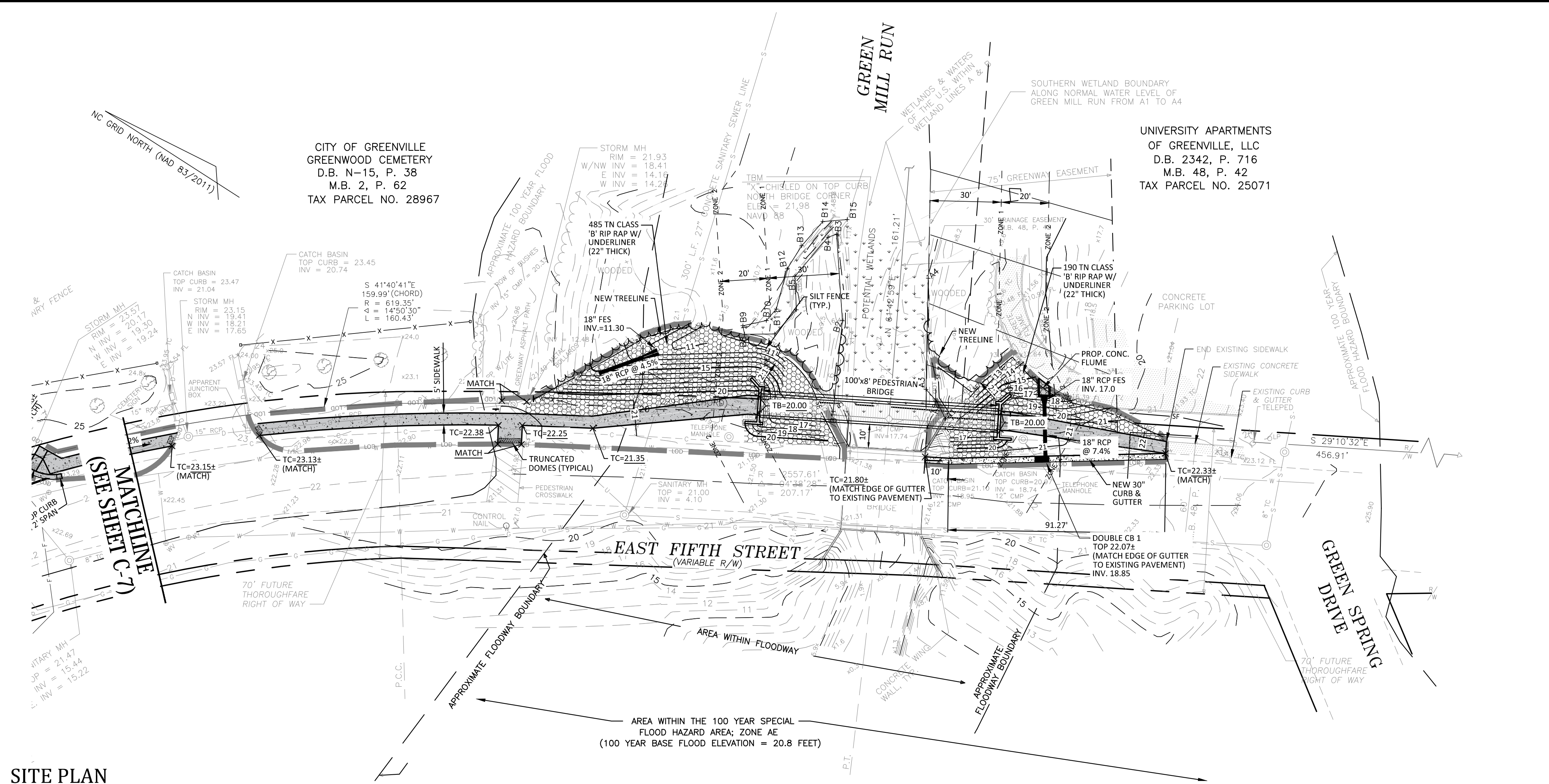








EXISTING CONDITIONS / DEMOLITION PLAN



SITE PLAN

**Demolition Notes:**

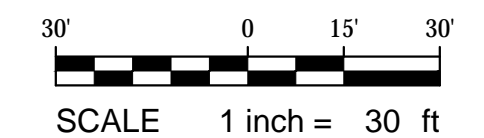
- CONTRACTOR SHALL CONTACT NORTH CAROLINA ONE-CALL CENTER (NC 811) BY DIALING 811 OR 1-800-632-4949 AT LEAST 48 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY OR DIGGING AND HAVE ALL UNDERGROUND UTILITIES LOCATED PRIOR TO EXCAVATING OR TRENCHING.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL AND STATE PERMITS REQUIRED FOR DEMOLITION WORK.
- THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND/OR ENGINEER FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
- EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE AND DO NOT INCLUDE MECHANICAL, ELECTRICAL AND MISCELLANEOUS STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THE DEMOLITION WORK FOR THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- ALL DEMOLITION WASTE AND DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR GETS WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
- ASBESTOS OR HAZARDOUS MATERIALS, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED.
- CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS, AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL, AND OSHA REGULATIONS WHEN OPERATING DEMOLITION EQUIPMENT AROUND UTILITIES.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH THE NCDOT STANDARDS, AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATION WITH THE LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT, AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
- CONTRACTOR SHALL PROTECT AT ALL TIMES ADJACENT STRUCTURES AND ITEMS FROM DAMAGE DUE TO DEMOLITION OR CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL REMOVE EXISTING VEGETATION AND IMPROVEMENTS WITHIN LIMITS OF DISTURBANCE UNLESS NOTED OTHERWISE.
- TREES OUTSIDE OF CONSTRUCTION LIMITS OR TREES NOT INDICATED TO BE REMOVED SHALL BE PROTECTED.

**Grading Notes:**

- ALL AREAS WITHIN LIMITS OF DISTURBANCE SHALL BE CLEARED AND GRUBBED.
- CONTRACTOR SHALL REMOVE EXISTING VEGETATION AND IMPROVEMENTS WITHIN LIMITS OF DISTURBANCE UNLESS NOTED OTHERWISE.
- TREES OUTSIDE OF CONSTRUCTION LIMITS OR TREES NOT INDICATED TO BE REMOVED SHALL BE PROTECTED.
- THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR GETS WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
- ALL DEMOLITION WASTE AND DEBRIS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
- TOP SOIL SHALL BE STRIPPED FROM ALL CUT AND FILL AREAS, STOCKPILED AND REDISTRIBUTED OVER GRADED AREAS. PROVIDE EROSION AND SEDIMENTATION CONTROLS AROUND STOCKPILES DURING CONSTRUCTION.
- TILL SOIL TO A DEPTH OF 4" MINIMUM.
- REMOVE ALL ROCKS LARGER THAN 1" MEASURED IN LARGEST DIRECTION.
- GRADE ALL AREAS TO MAINTAIN POSITIVE SLOPE.
- ALL GRADED AREAS TO RECEIVE SEED OR SOD, TOP SOIL, STRAW AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- SIDEWALKS SHALL BE CONSTRUCTED OF 4" THICK 3,000 PSI CONCRETE. SIDEWALKS THROUGH DRIVEWAY CROSSINGS SHALL BE 6" THICK 3,000 PSI CONCRETE. ALL SIDEWALKS SHALL HAVE TOOLED CONTROL JOINTS NOT EXCEEDING 5' SPACING IN ANY DIRECTION.
- ALL BUILDING, SIDEWALK, AND PAVEMENT SUB-GRADES SHALL BE COMPACTED TO 100% OF ASTM D698 TO A DEPTH OF 24" AND TO 95% OF ASTM D698 BELOW 24" DEPTHS. ALL OTHER NON-STRUCTURAL AREAS SHALL BE COMPACTED TO 90% OF ASTM D698.
- ALL BUILDING, SIDEWALK, AND PAVEMENT SUB-GRADE COMPACTIONS SHALL BE INTERMEDIATELY TESTED AND APPROVED BY THE GEOTECHNICAL ENGINEER. ALL SUB-GRADES SHALL BE THOROUGHLY PROOF-ROLLED TO IDENTIFY SMALL LOCALIZED AREAS OF UNSUITABLE SOILS. ALL UNSUITABLE SOILS SHALL BE UNDERCUT, REPLACED WITH STRUCTURAL FILL, AND COMPACTED AS DESCRIBED ABOVE.

**LEGEND**

EXISTING	PROPOSED
○ EXISTING IRON PIPE	○ EXISTING IRON PIPE
□ NO POINT SET	□ NO POINT SET
△ CONCRETE MONUMENT	△ CONCRETE MONUMENT
w/w WATER VALVE	w/w WATER VALVE
w/m WATER METER	w/m WATER METER
g/g GAS VALVE	g/g GAS VALVE
g/m GAS METER	g/m GAS METER
— OVERHEAD UTILITY	— OVERHEAD UTILITY
— POWER POLE	— POWER POLE
○ EXISTING MANHOLE	○ EXISTING MANHOLE
○ EXISTING TREE	○ EXISTING TREE
○ EXISTING SMALL TREE	○ EXISTING SMALL TREE
○ DROP INLET	○ DROP INLET
— FENCE LINE	— FENCE LINE
— SEWER LINE	— SEWER LINE
— TELECOMMUNICATION LINE	— TELECOMMUNICATION LINE
— FORCE MAIN	— FORCE MAIN
— STORM DRAIN PIPE	— STORM DRAIN PIPE
— EXISTING CONTOURS	— EXISTING CONTOURS
+ 2.54 SPOT ELEVATIONS	+ 2.54 SPOT ELEVATIONS
SP SIGN	SP SIGN
~~~~~ TREELINE (APPROXIMATE LOCATION)	~~~~~ TREELINE (APPROXIMATE LOCATION)
— POTENTIAL WETLANDS	— POTENTIAL WETLANDS
/// DEMO // TO BE REMOVED	/// DEMO // TO BE REMOVED
— LIMITS OF DISTURBANCE	— LIMITS OF DISTURBANCE
— BACK OF CURB	× 22.00
— TOP OF CONCRETE	× 22.42
— TOP OF BRIDGE DECK	× 22.42
— TRUNCATED DOMES	— TRUNCATED DOMES
— CONCRETE	— CONCRETE
— ASPHALT	— ASPHALT
— TURF REINFORCEMENT MAT (TRM)	— TURF REINFORCEMENT MAT (TRM)
— RIP RAP	— RIP RAP



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05/09/18	REVISED PER COMMENTS - PROFILE DRAWINGS

**REVISIONS:**



**SITE PLAN**  
**Safe Routes to Schools**  
**East Fifth Street**  
 City of Greenville, Pitt County, North Carolina

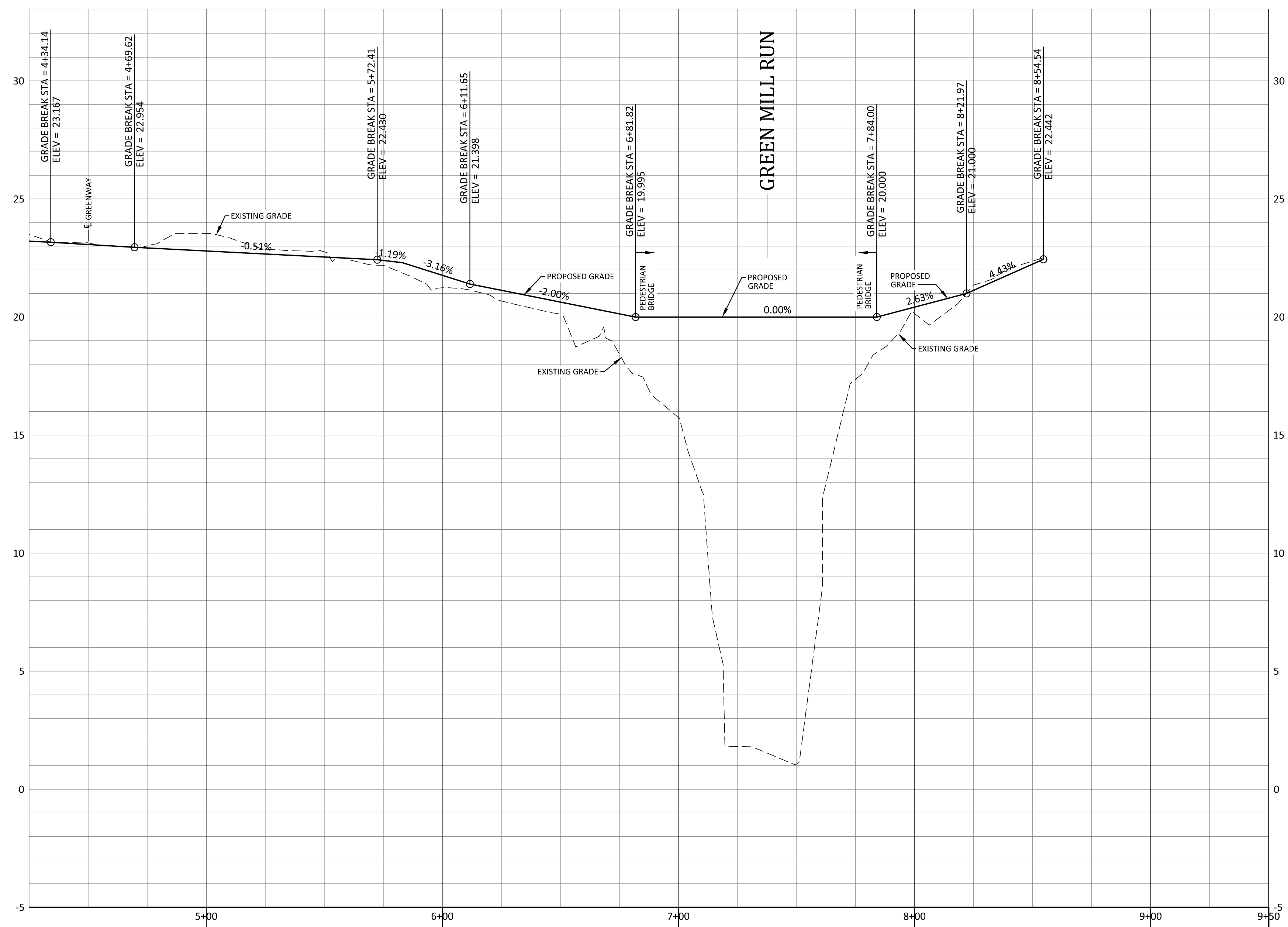
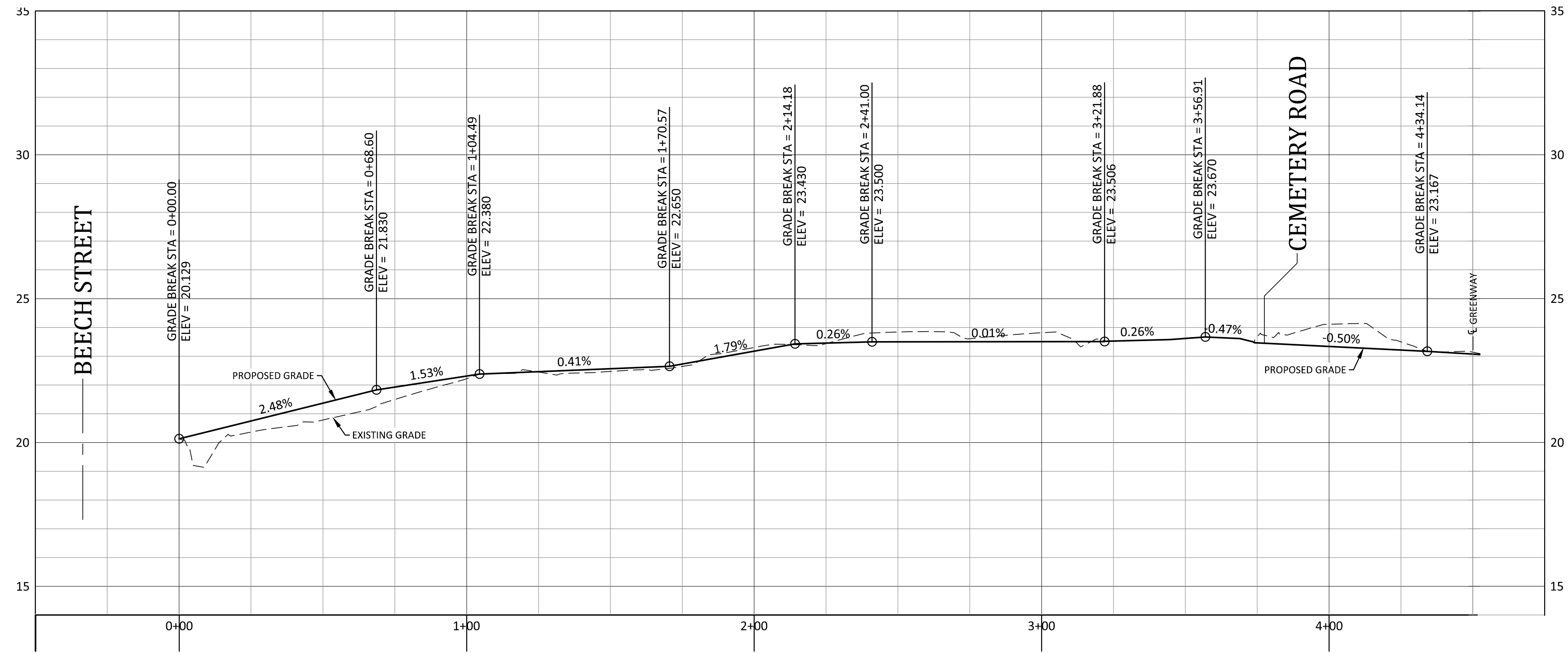


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 www.arkconsultinggroup.com

Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15008  
 Drawing Number: D-1045

**C-8**  
 Date: 05-11-2016

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SCALE:  
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VERTICAL: 1"=3'

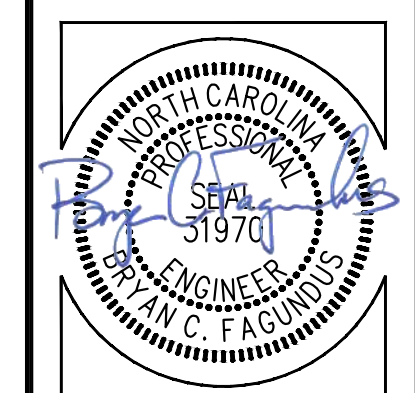
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5/17/16	ISSUED FOR PERMIT REVIEW - NOT FOR CONSTRUCTION
1/27/17	REVISED FOR CITY AND NC DOT COMMENTS
5/9/18	REVISED FOR COMMENTS - PROFILE DRAWINGS

REVISIONS:



**FIFTH STREET - CROSS SECTIONS**

**Safe Routes to Schools  
East Fifth Street**  
City of Greenville, Pitt County, North Carolina



**ARK CONSULTING GROUP, PLLC**  
ENGINEERS & PLANNERS  
2755-B Charles Blvd  
Greenville, NC 27858  
(252) 558-0888  
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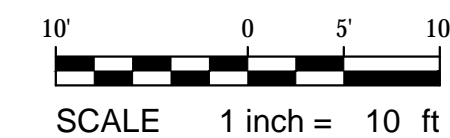
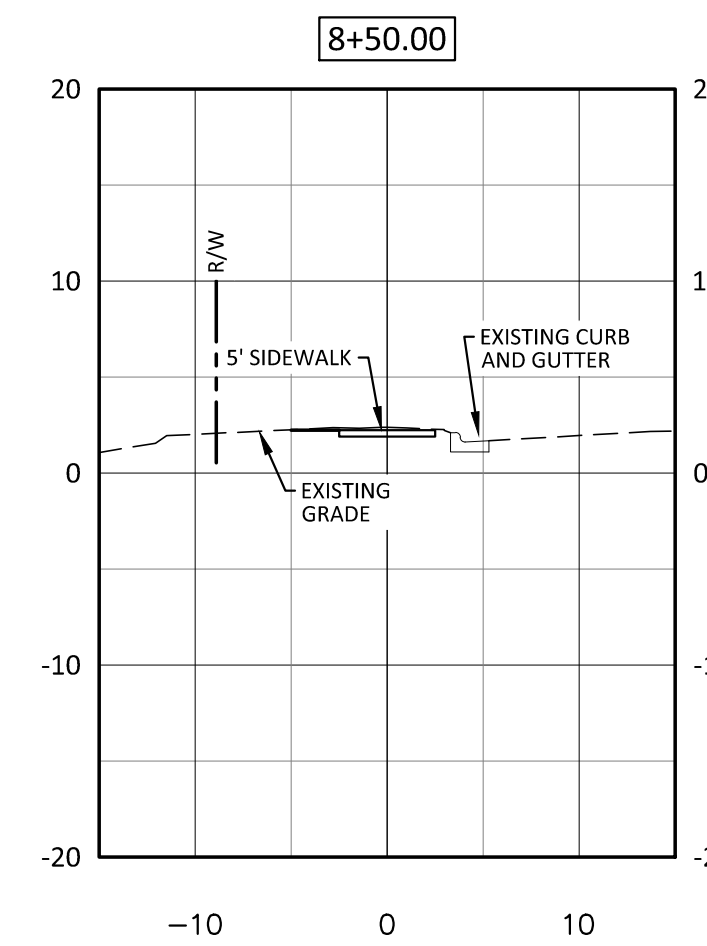
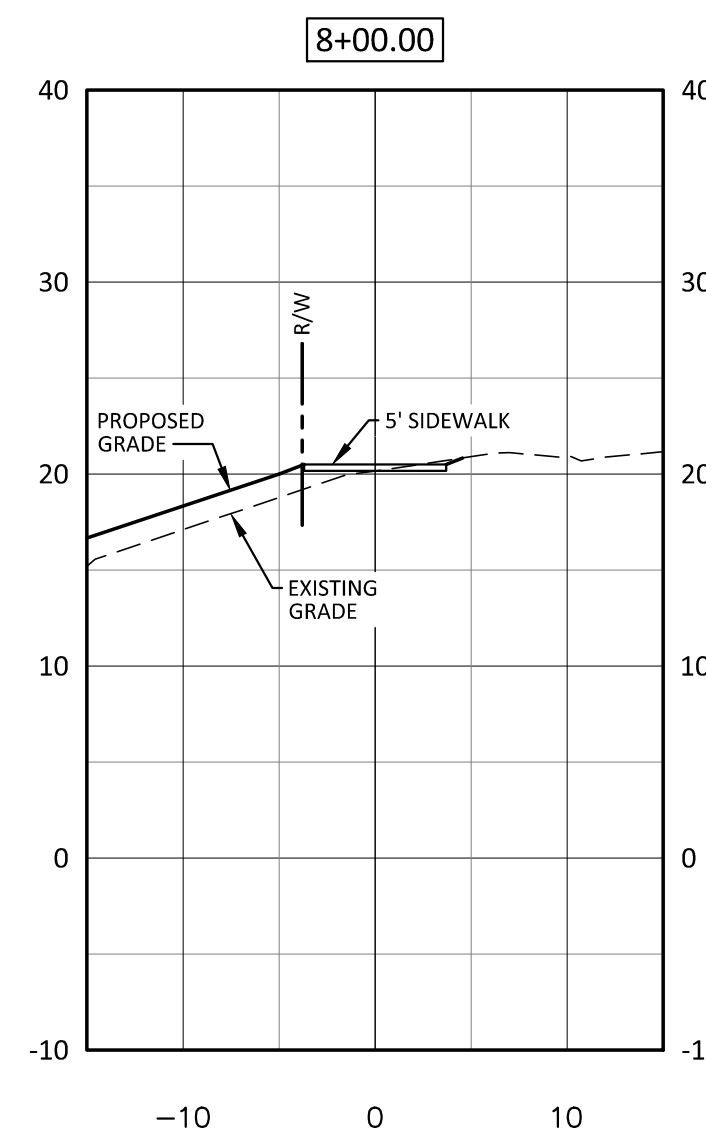
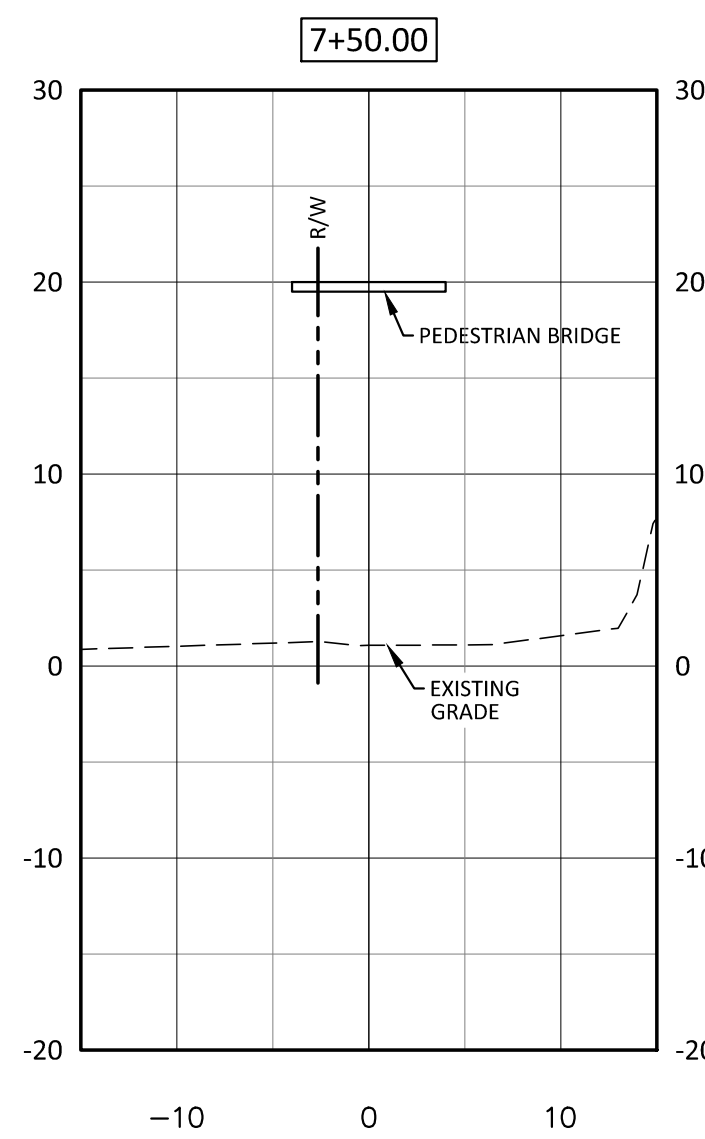
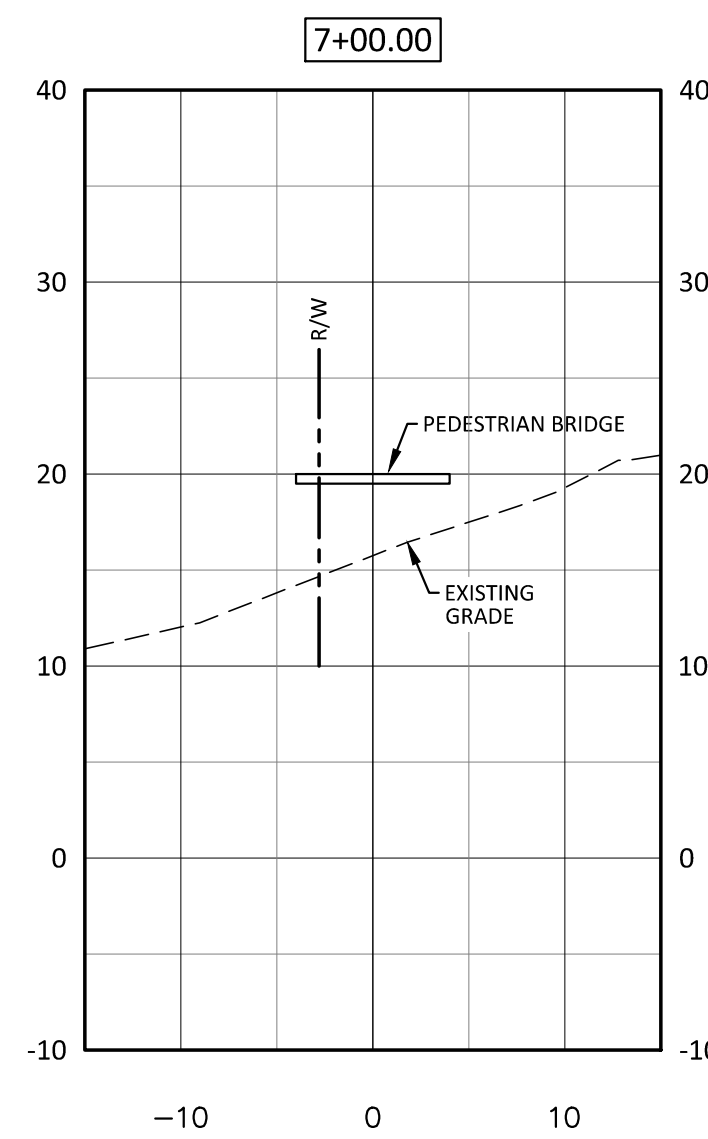
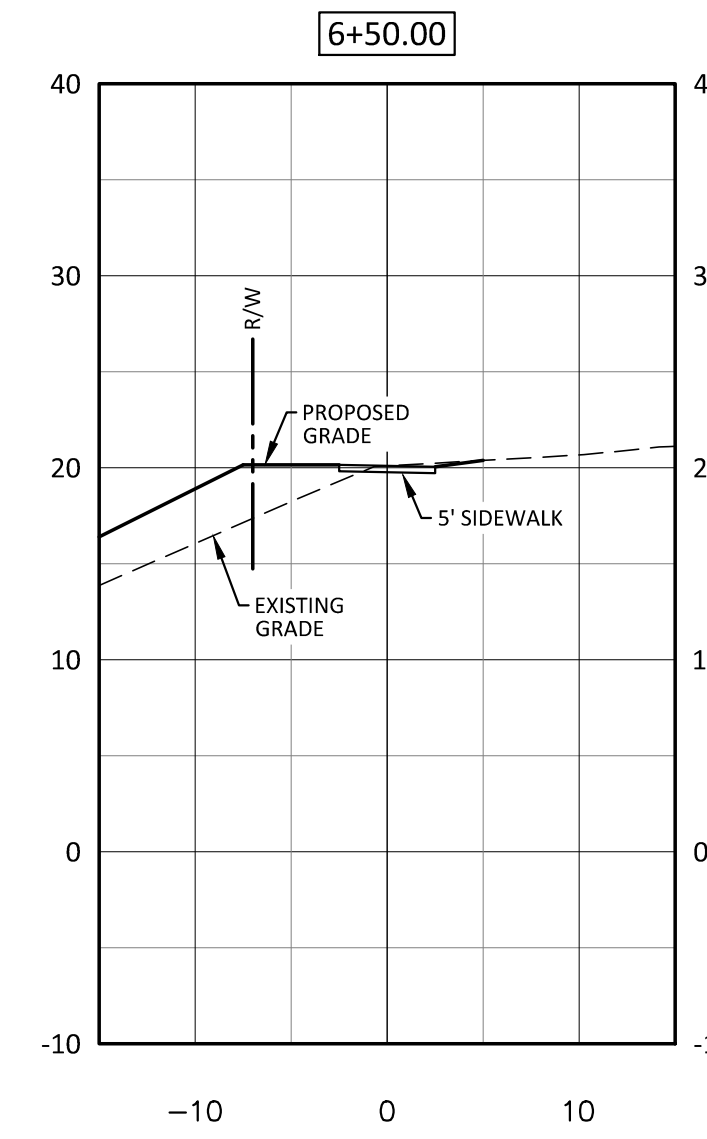
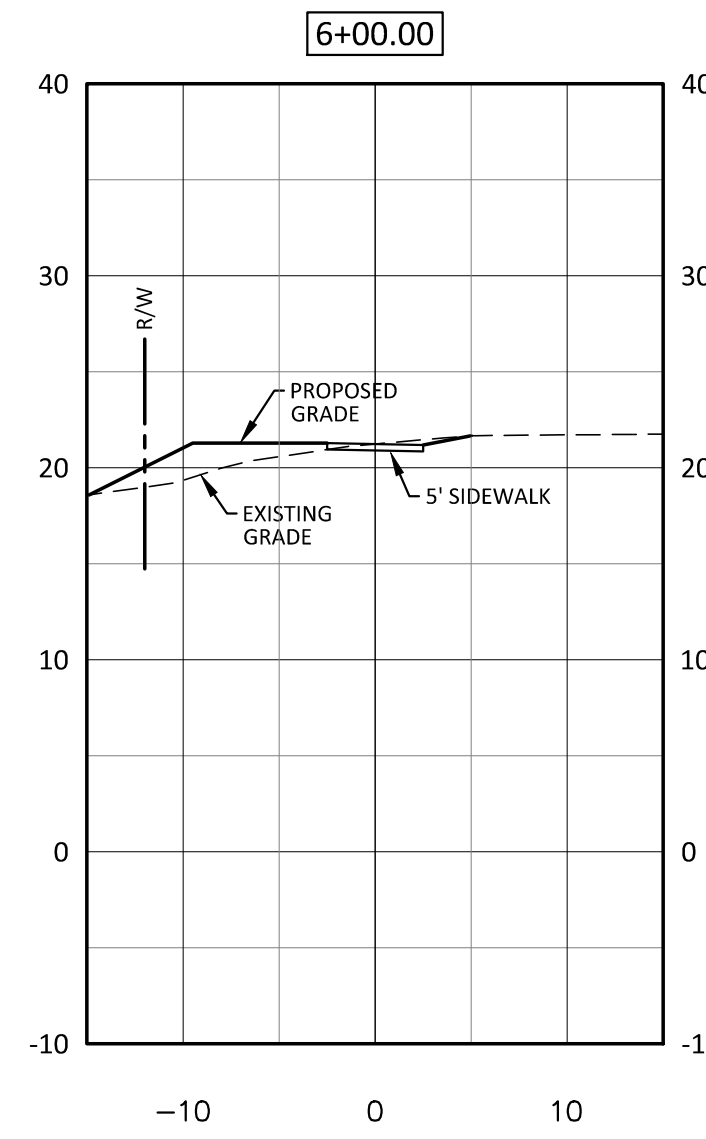
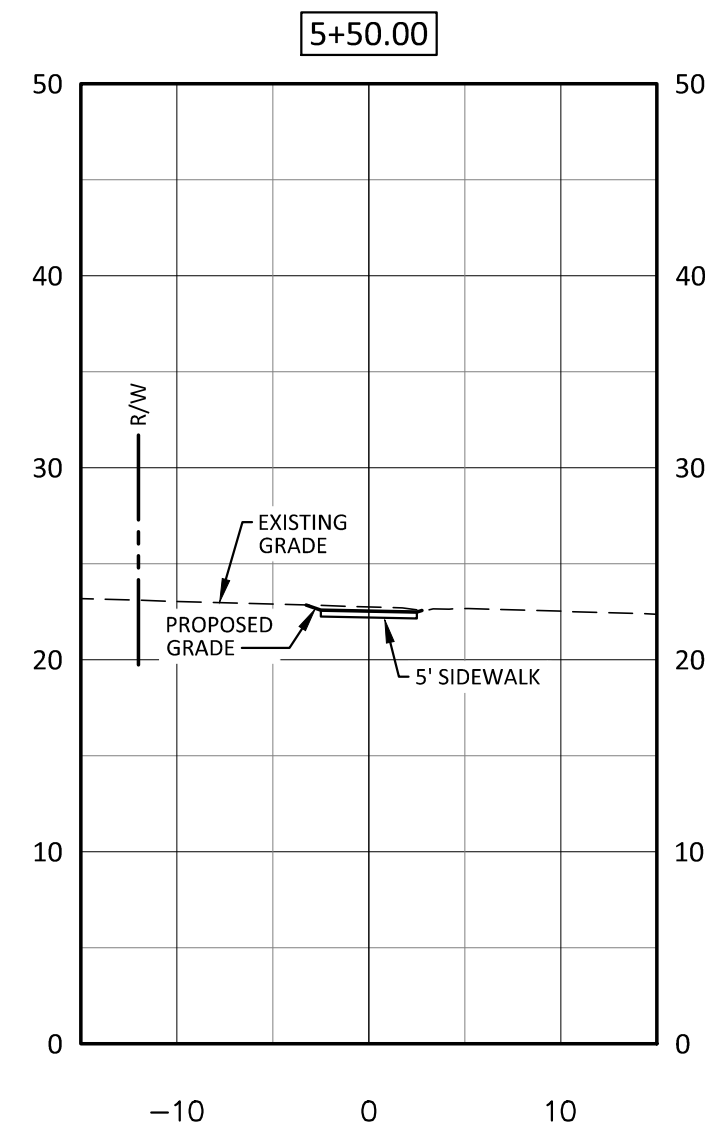
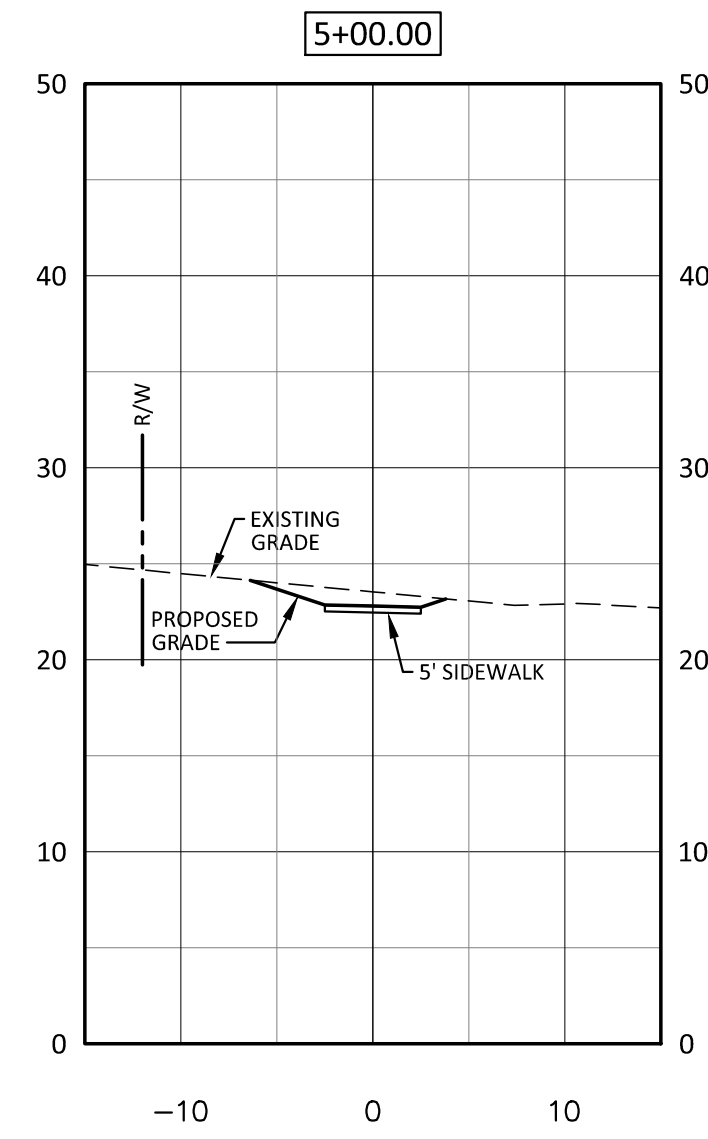
REV. 5/9/18

Project Manager:	BCF
Drawn By:	EW
Checked By:	STA
Project Number:	15008
Drawing Number:	D-1045

**C-8A**  
Date: 05-11-2016

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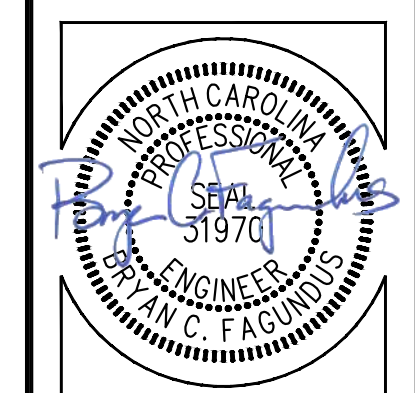


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REVISIONS:



**FIFTH STREET - CROSS SECTIONS**  
**Safe Routes to Schools**  
**East Fifth Street**  
 City of Greenville, Pitt County, North Carolina



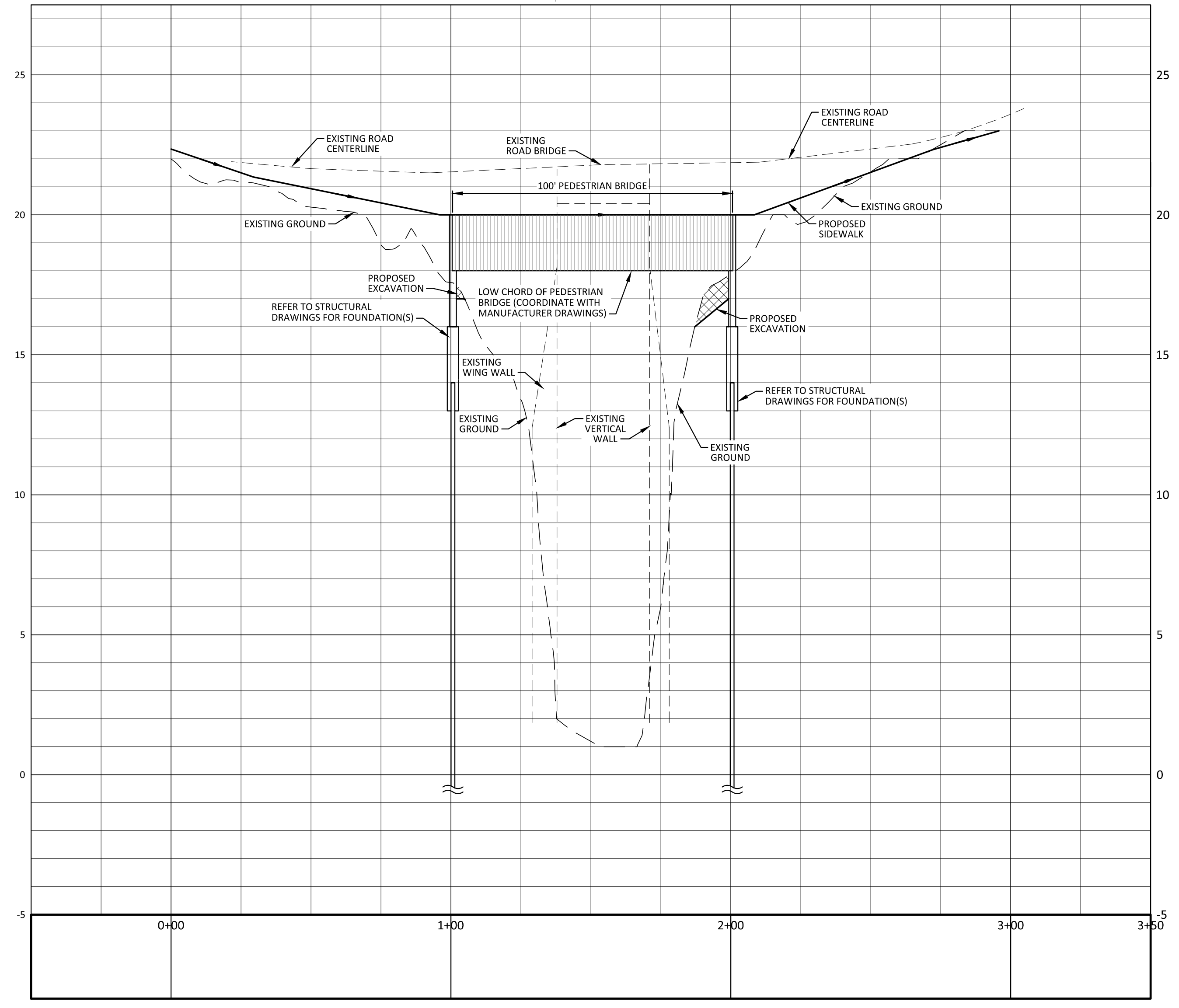
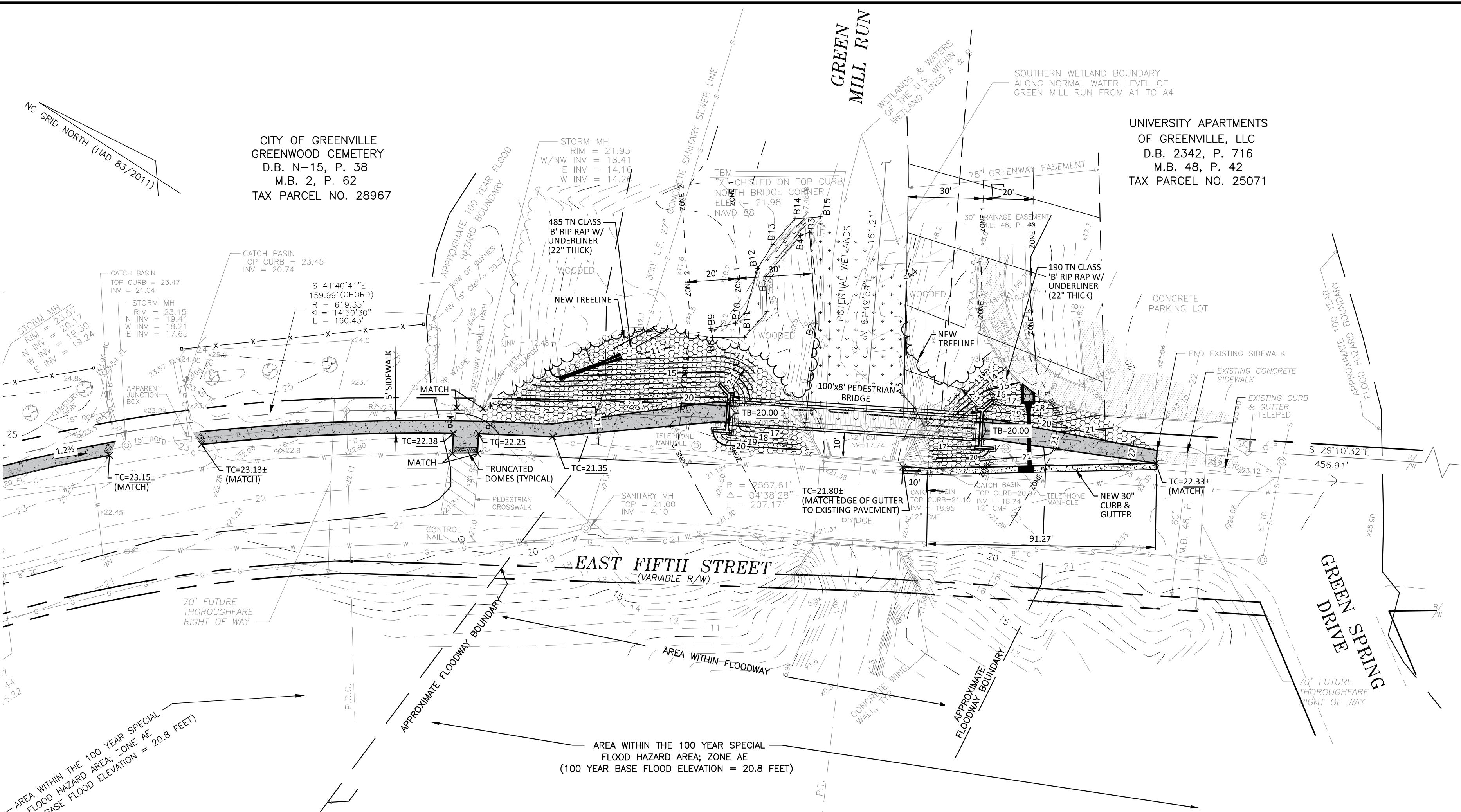
NC License P-1109  
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 ENGINEERS & PLANNERS  
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 Greenville, NC 27858  
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Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15008  
 Drawing Number: D-1045

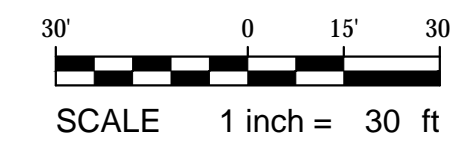
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Date: 05-11-2016

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LEGEND	
EXISTING	PROPOSED



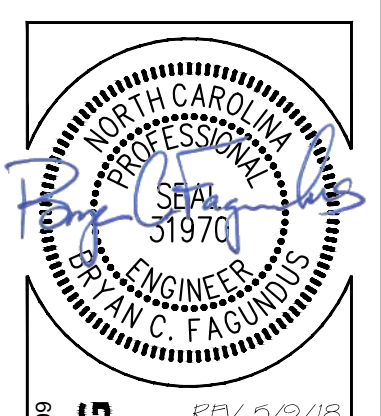
DATE	COMMENTS
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**PEDESTRIAN BRIDGE - PLAN AND CROSS SECTION**

**Safe Routes to Schools**  
**East Fifth Street**

City of Greenville, Pitt County, North Carolina



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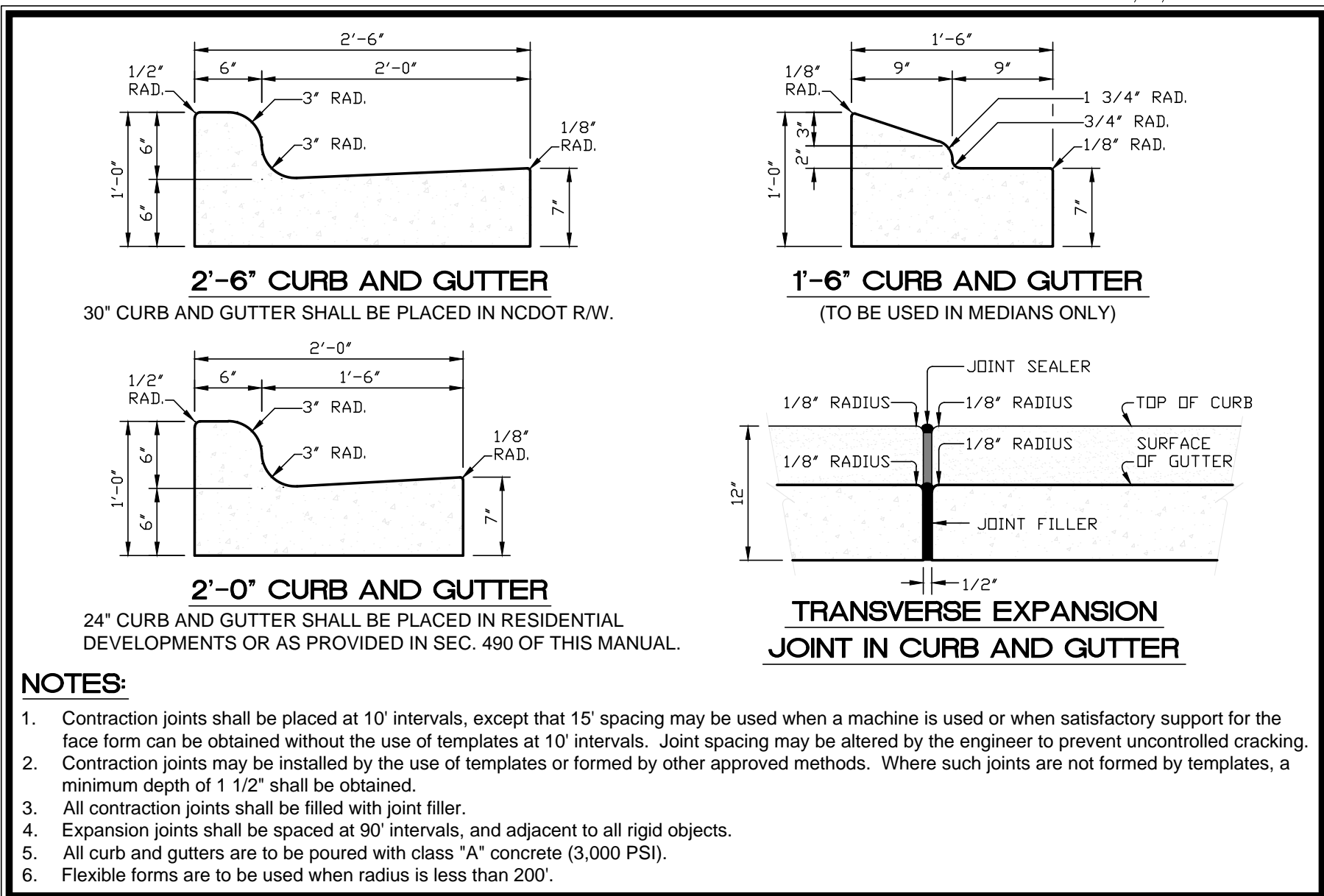
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REV. 5/27/16

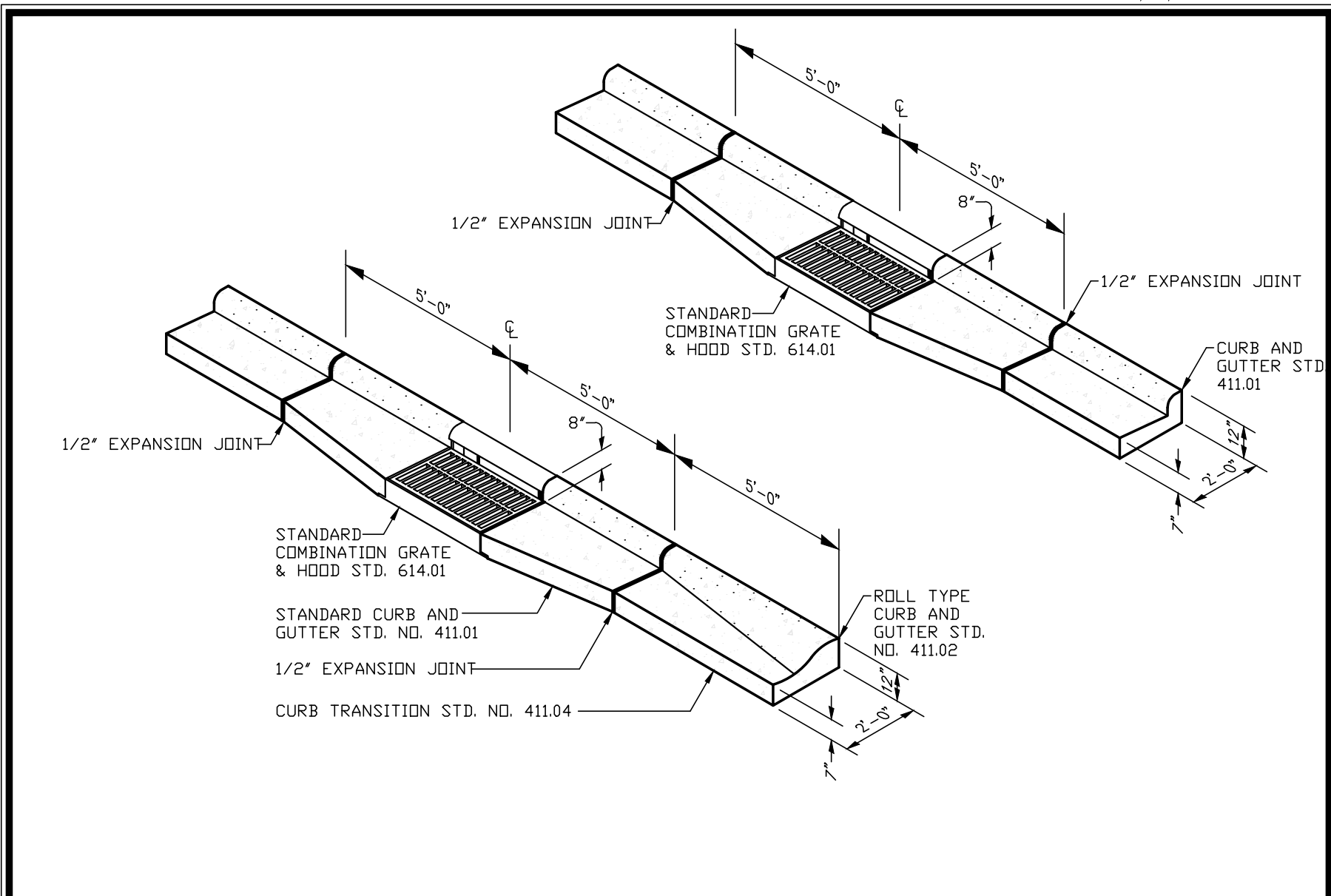
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Drawn By:	EW
Checked By:	STA
Project Number:	15008
Drawing Number:	D-1045

**C-9**

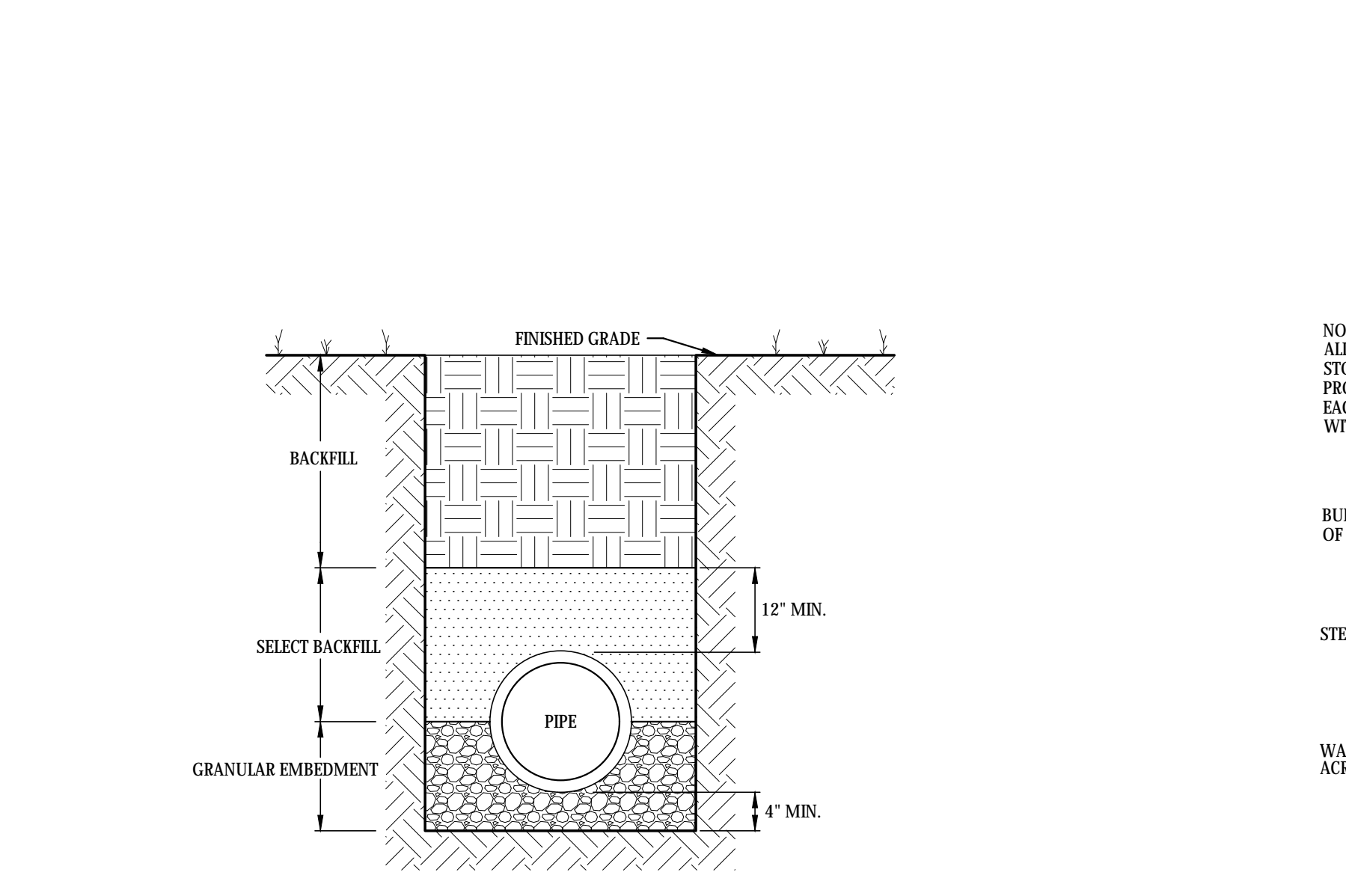
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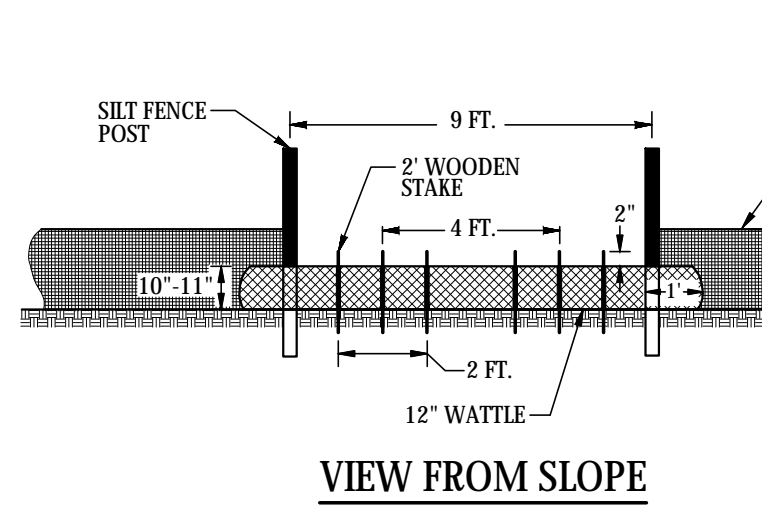
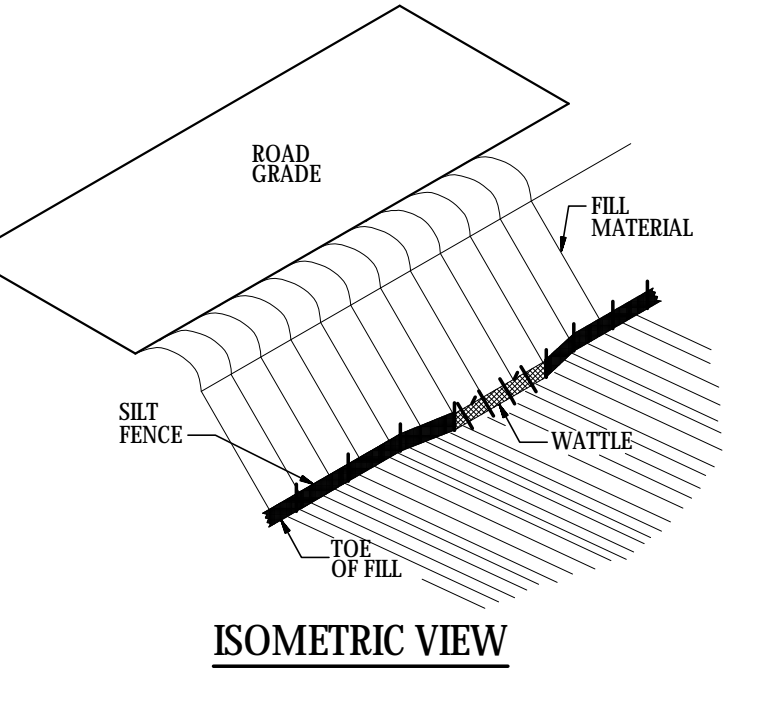
PUBLIC WORKS DEPARTMENT 1000 Beatty Street Greenville, North Carolina 27834		<b>CITY OF GREENVILLE, N.C.</b> USE WITH THE CITY OF GREENVILLE, N.C. STANDARD SPECIFICATIONS ONLY		www.greenvillenc.gov	No.	Date	Description
<b>STANDARD CURB &amp; GUTTER</b>		Scale:	Sheet #:	Detail #:	1	5/16/11	APPROVAL
		not to scale	1 of 1	411.01			



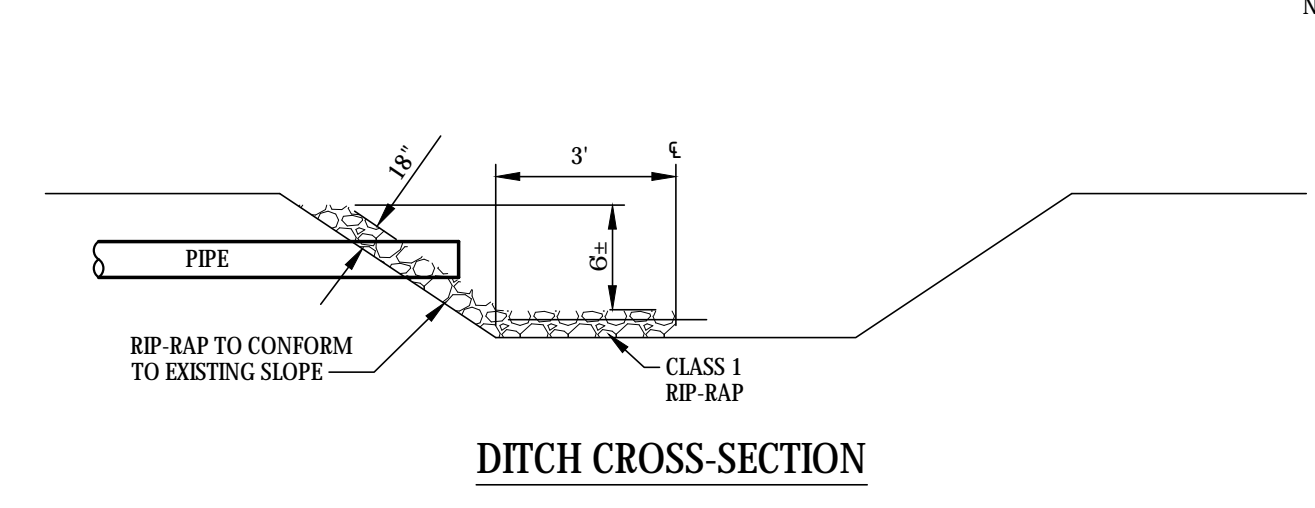
PUBLIC WORKS DEPARTMENT 1000 Beatty Street Greenville, North Carolina 27834		<b>CITY OF GREENVILLE, N.C.</b> USE WITH THE CITY OF GREENVILLE, N.C. STANDARD SPECIFICATIONS ONLY		www.greenvillenc.gov	No.	Date	Description
<b>STANDARD CATCH BASIN FRAME 2'-0" IN CURB AND GUTTER</b>		Scale:	Sheet #:	Detail #:	1	5/16/11	APPROVAL
		not to scale	1 of 1	411.03			



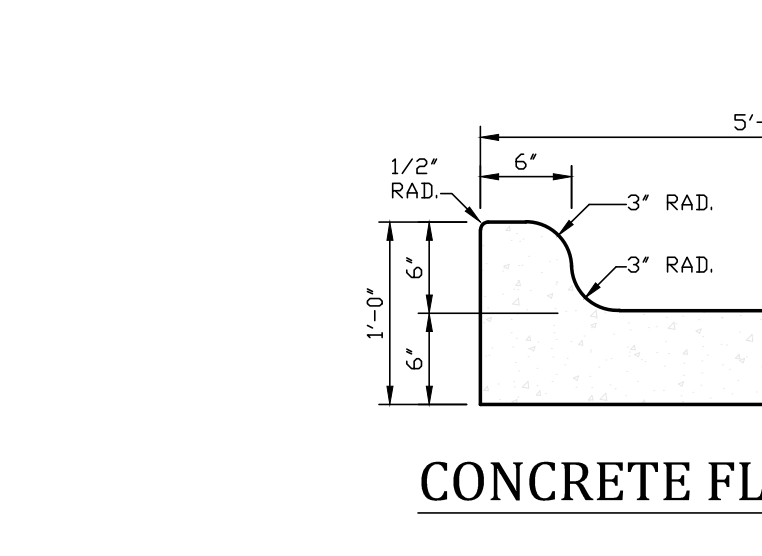
**TRENCH SECTION DETAIL FOR THE INSTALLATION OF CORRUGATED METAL STORM DRAIN PIPING**  
(NOT TO SCALE)



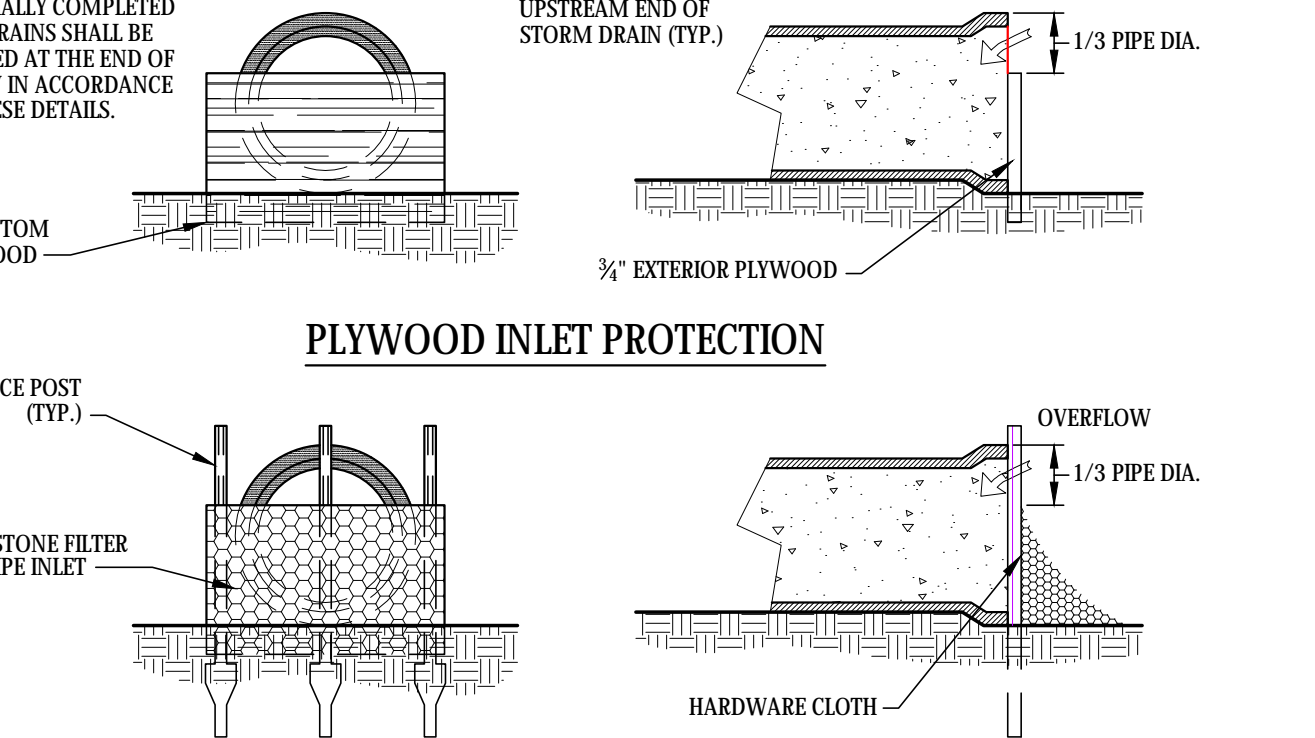
**SILT FENCE WATTLE BREAK DETAIL**  
(NOT TO SCALE)



**DITCH CROSS-SECTION**  
**DITCH LONGITUDINAL SECTION**  
**RIP-RAP DETAIL**  
(NOT TO SCALE)

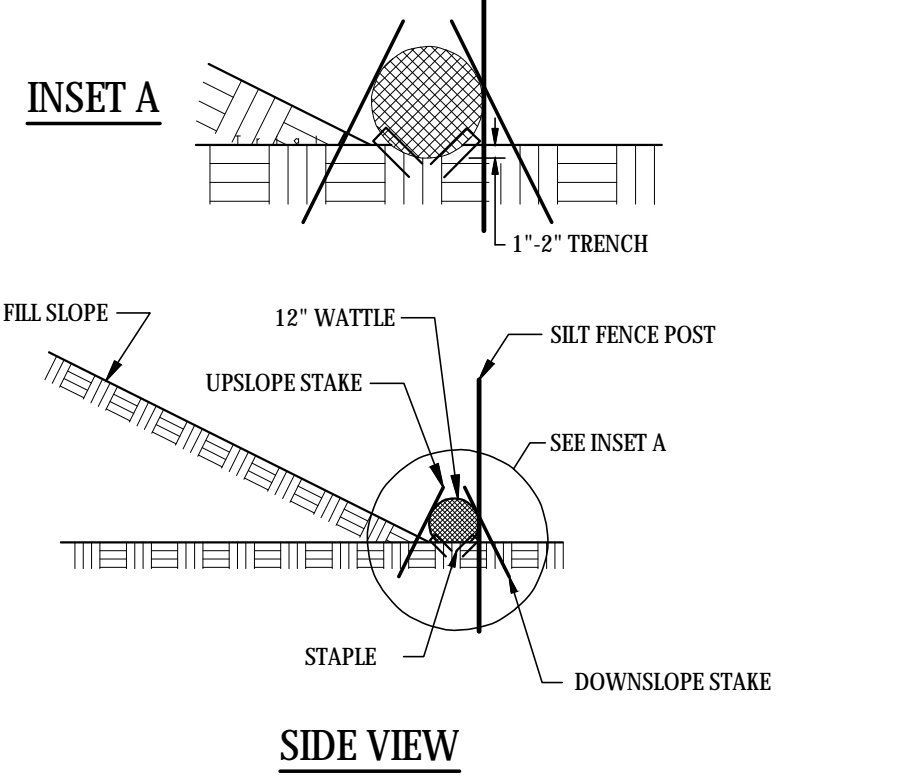


**CONCRETE FLUME DETAIL**  
(NOT TO SCALE)

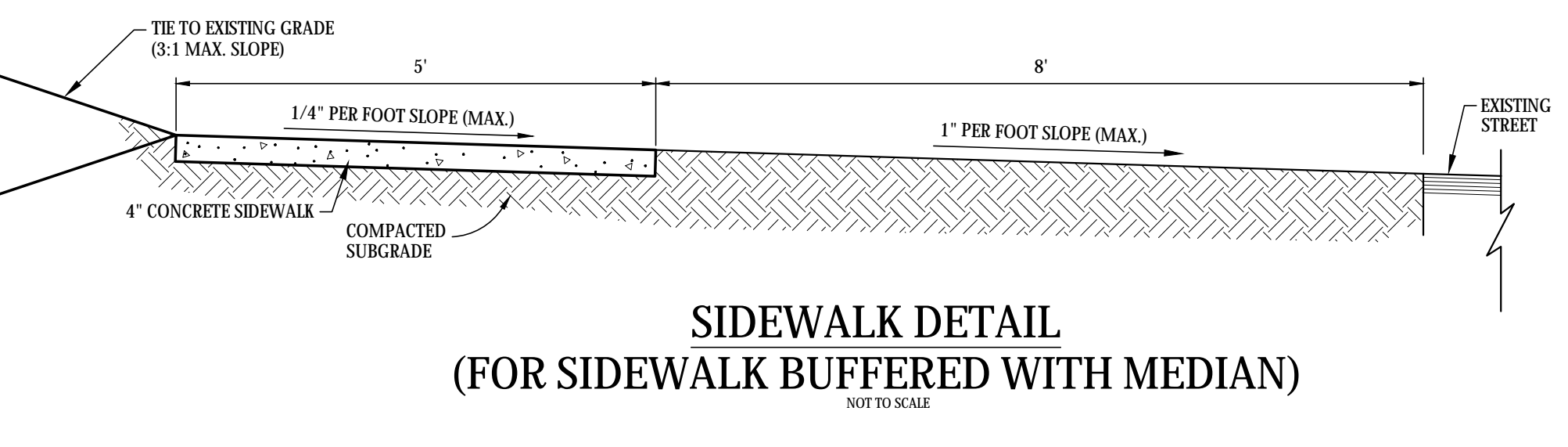


**PLYWOOD INLET PROTECTION**  
**STONE FILTER INLET PROTECTION**  
**PIPE INLET PROTECTION (PLYWOOD AND STONE)**  
(NOT TO SCALE)

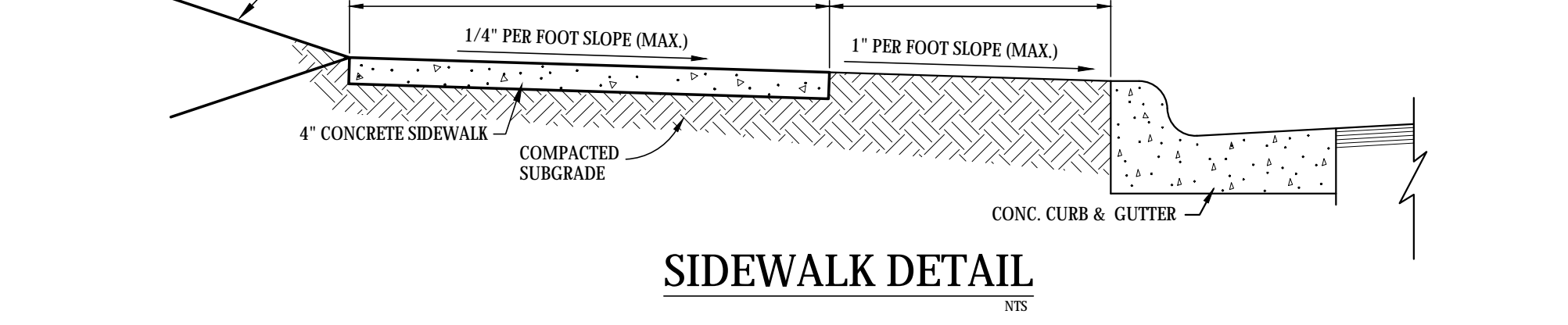
NOTES:  
 USE MINIMUM 12 IN. DIAMETER EXCESIOR WATTLE AND LENGTH OF 10 FT.  
 EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.  
 DO NOT PLACE WATTLE ON TOE OF SLOPE.  
 USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.  
 INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.  
 PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.  
 INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.  
 WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.  
 INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.



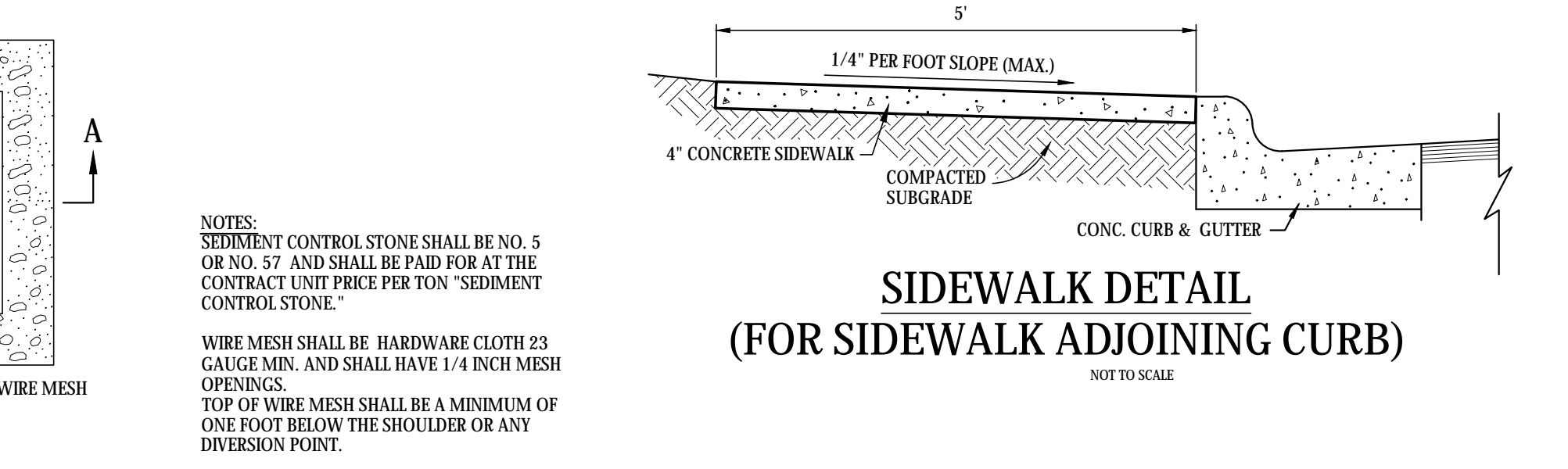
**INSET A**  
**SIDE VIEW**



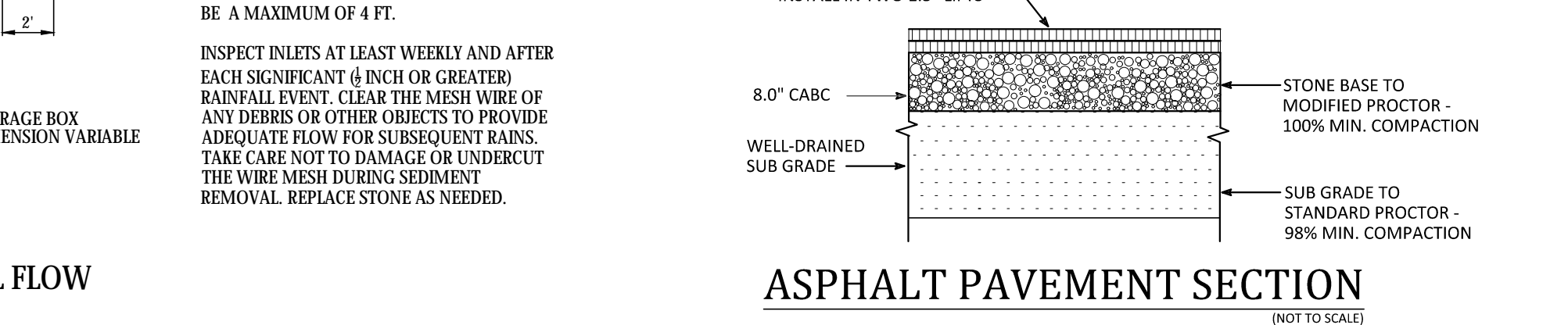
**SIDEWALK DETAIL (FOR SIDEWALK BUFFERED WITH MEDIAN)**  
(NOT TO SCALE)



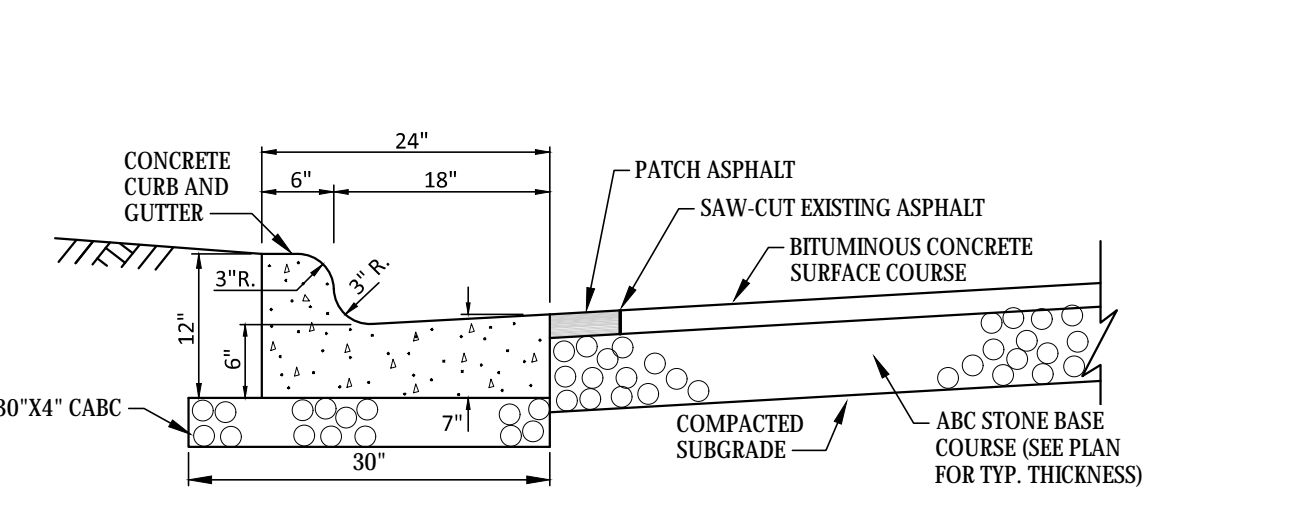
**SIDEWALK DETAIL**  
(NOT TO SCALE)



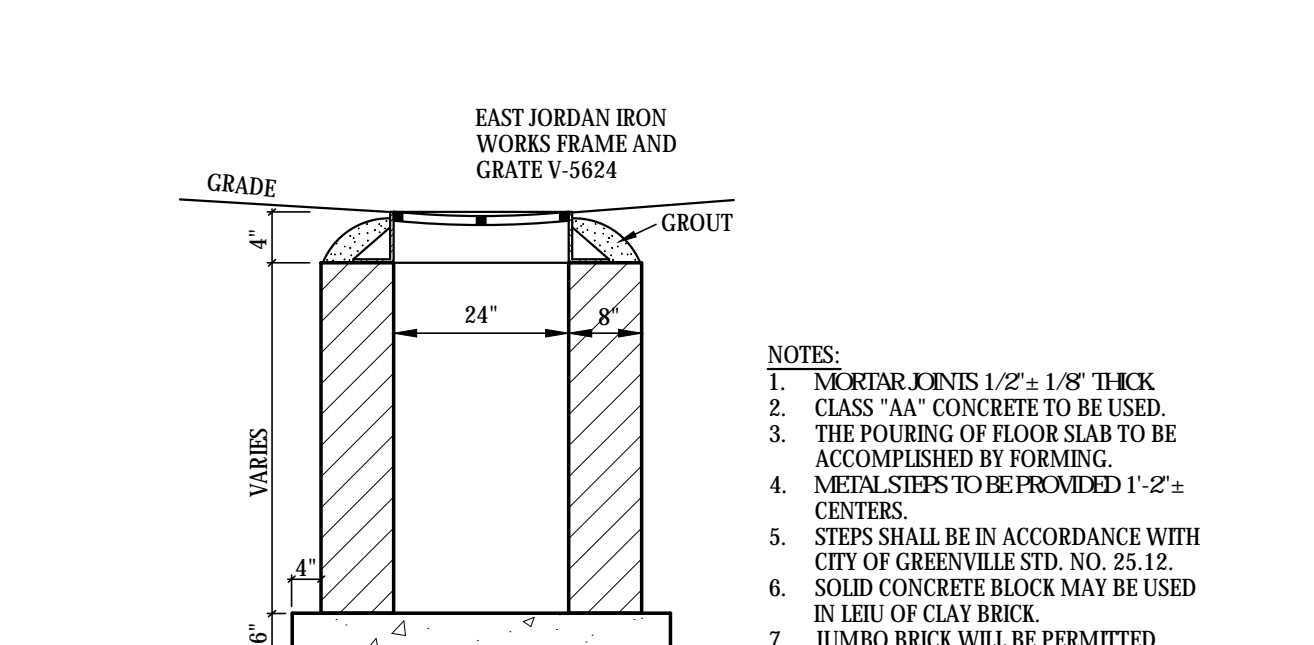
**SIDEWALK DETAIL (FOR SIDEWALK ADJOINING CURB)**  
(NOT TO SCALE)



**ASPHALT PAVEMENT SECTION**  
(NOT TO SCALE)



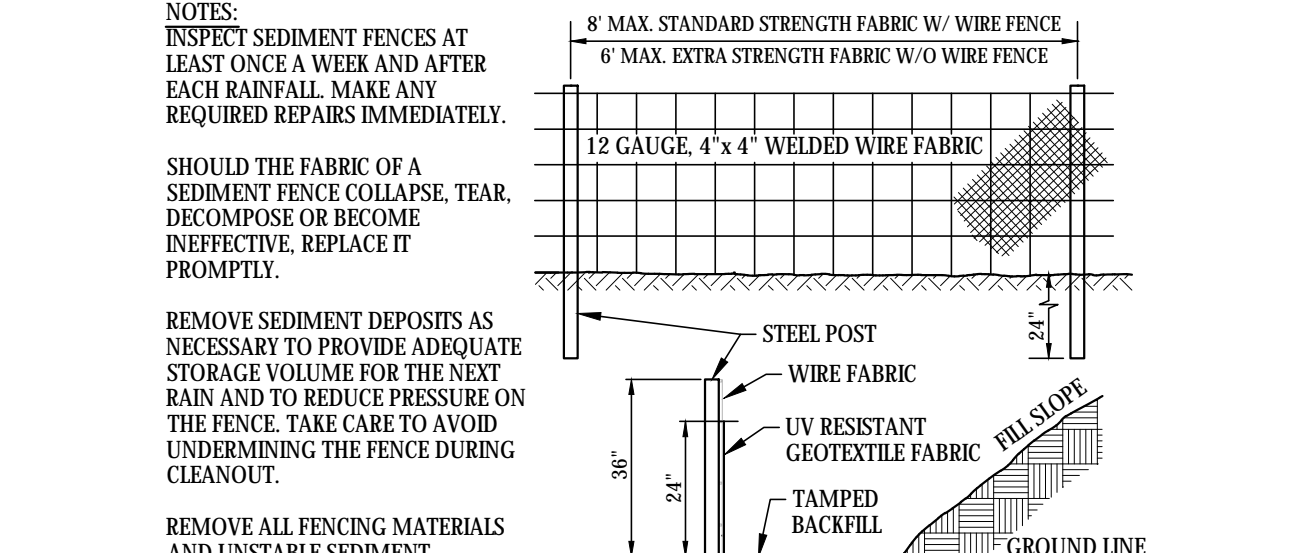
**ROCK INLET SEDIMENT TRAP**  
(NOT TO SCALE)



**CURB AND GUTTER WITH PAVEMENT PATCH DETAIL**  
(NOT TO SCALE)



**YARD INLET**  
(NOT TO SCALE)



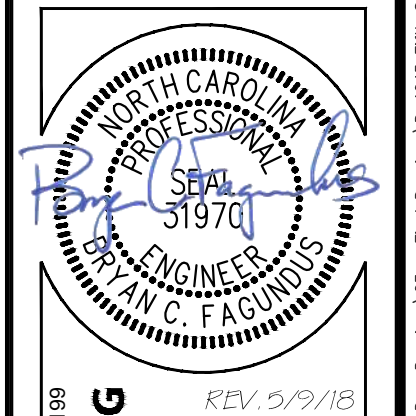
**TEMPORARY SILT FENCE**  
(NOT TO SCALE)

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05/09/18	REVISED PER COMMENTS - PROFILE DRAWINGS

REVISIONS:



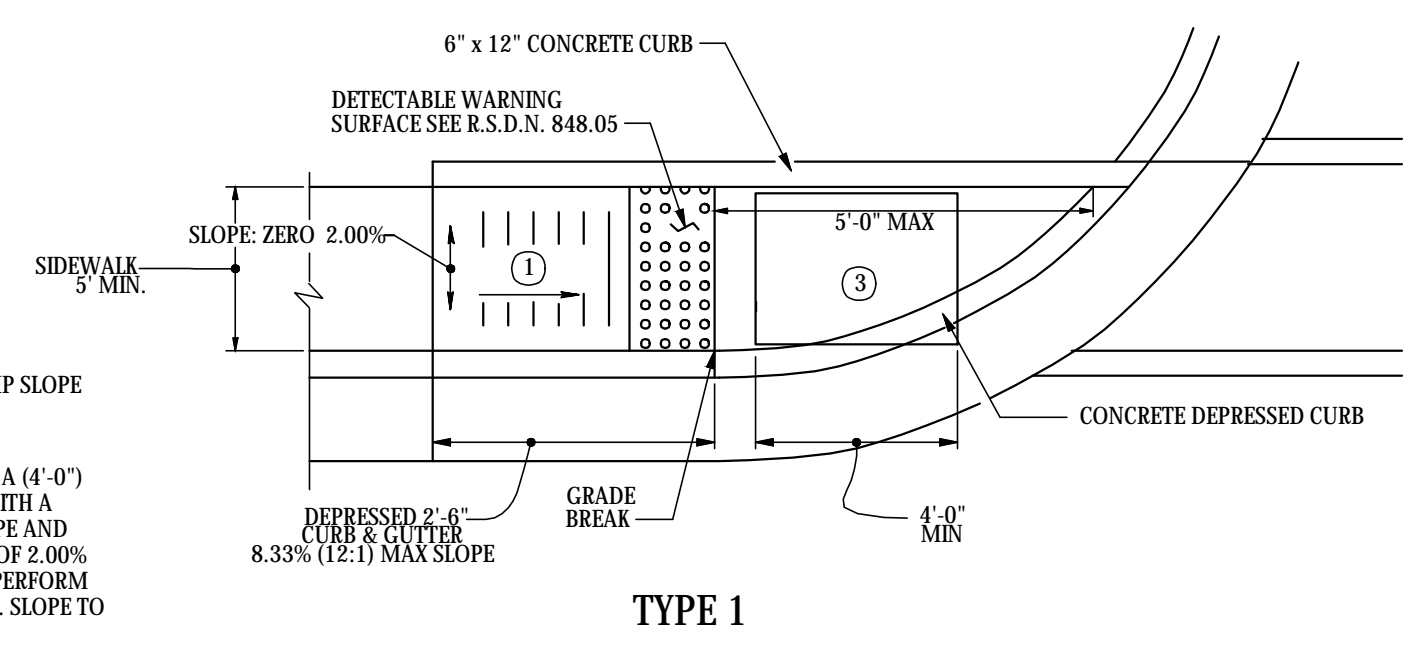
**Safe Routes to Schools**  
 City of Greenville, Pitt County, North Carolina



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Project Manager: BCF  
 Drawn By: EW  
 Checked By: STA  
 Project Number: 15008  
 Drawing Number: D-1045

**C-10**



- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

**CURB RAMPS - Directional Ramps**  
(NOT TO SCALE)

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

**NOTES:**

- Construct the walking surface of the detectable domes with slip resistance and a 70% contrasting color to the sidewalk.
- Crosswalk widths and configuration vary but must conform to traffic design standards.
- Provide curb ramps at locations as shown on the plans or as directed by the engineer. Locate curb ramps as directed by the engineer where existing light poles, fire hydrants, drop inlets, etc. affect placement. Where two ramps are installed place not less than 2 feet of full height curb between the ramps. Place dual ramps as near perpendicular to the travel lane being crossed as possible.
- Do not exceed 0.08 ft./ft. (12:1) slope on the curb ramp in relationship to the grade of the street.
- Construct curb ramps a minimum of 48" wide (4'-0"); Greater for dual ramps.
- Use class "B" concrete with a sidewalk finish in order to obtain a rough non-skid type surface.
- Place a 1/2" expansion joint where the concrete curb ramp joins the curb.
- Place the inside pedestrian crosswalk lines no closer in the intersection than would be established by bisecting the intersection radii, with an allowance of a 4'x4' maneuvering space (2003 ICC/ANSI a117 Commentary, Fig. C406.6 & 406.10) in the vehicular travel way when one ramp is installed.
- Coordinate the curb cut and the pedestrian crosswalk lines so the floor of the curb ramp will fall within the pedestrian crosswalk lines. Place diagonal ramps with flared sides so 24" of the full height curb falls within the crosswalk markings on each side of the flares.
- Construct the pedestrian crosswalk a minimum width of 6 feet. A crosswalk width of 10 feet or greater is required for all thoroughfares.
- Use stop lines, normally perpendicular to the lane lines, where it is important to indicate the point behind which vehicles are required to stop in compliance with a traffic signal, stop sign or other legal requirement. An unusual approach skew may require the placement of the stop line to be parallel to the intersecting roadway.
- Place all pavement markings in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration and the North Carolina Supplement to the MUTCD.
- Other detectable warning materials may be considered from that shown, but require City Engineer's written approval prior to installation.

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<b>STANDARD CROSSWALK &amp; CURB RAMP NOTES</b>			Scale not to scale	Sheet # 1 of 2	Draw # 413.01

**NOTES:**

- For all roads with radius 25' or less. Only one curb ramp is required. Curb ramps to be placed as per traffic design standards to ensure pedestrians enter & exit without entering travel lanes.
- Terminate parking a minimum of 20 feet back of pedestrian walk.
- A 4'x4' maneuvering space is required at the bottom of the curb ramp and must be within the crosswalk.
- Drop curb width (4'-0" min.) x 4' long landing required at top of curb ramp
- North Carolina General Statute 136-44.14 requires that all street curbs being constructed or reconstructed for maintenance procedures, traffic operations, repairs, correction of utilities or altered for any reason after September 1, 1973 shall provide curb ramps for the physically disabled at all intersections where both curb and gutter and sidewalks are provided and at other points of pedestrian flow. In addition, section 228 of the 1973 Federal Aid Highway Safety Act requires provision of curb ramps on any curb construction after July 1, 1976 whether a sidewalk is proposed initially or is planned for a future date. The Americans with Disability Act (ADA) of 1990 extends to individuals with disabilities. Comprehensive civil rights protections similar to those provided to persons on the basis of race, sex, national origin and religion under the Civil Rights Act of 1964. These curb ramps have been designed to comply with the current ADA standards.
- Construct all ramp surfaces to comply with sections R301 and R303.3.3 of the revised ADA guidelines.
- Construct all ramps and sidewalks with a 2% cross slope.

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<b>STANDARD CROSSWALK &amp; CURB RAMP NOTES</b>			Scale not to scale	Sheet # 2 of 2	Draw # 413.01

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11/27/17 REVISED PER CITY AND NCDOT COMMENTS

11/16/17 REVISED PER CITY AND NCDOT COMMENTS

05/09/18 REVISED PER COMMENTS - PROFILE DRAWINGS

**REVISIONS:**

**Greenville**  
NORTH CAROLINA

**DETAIL SHOWING TYPICAL LOCATION OF DUAL CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS**

**DETAIL SHOWING TYPICAL LOCATION OF SINGLE CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS**

**DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS**

PROPOSED CURB RAMP

PROPOSED OR FUTURE SIDEWALK

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<b>STANDARD DETAIL CURB RAMP PLACEMENT</b>			Scale not to scale	Sheet # 1 of 1	Draw # 413.02

**ISOMETRIC VIEW**

**SECTION B-B**

**SECTION A-A**

**STANDARD DETAIL CURB RAMP**

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<b>STANDARD DETAIL CURB RAMP</b>			Scale not to scale	Sheet # 2 of 2	Draw # 413.03

**DETECTABLE WARNING DOMES**

W	A	W + A +	X	B
5' 0.0"	5.8'	5.8'	5.0"	*
6' 0.0"	6.8'	6.8'	6.0"	**
7' 0.0"	7.8'	7.3'	6.5"	**
8' 0.0"	8.8'	7.3'	6.5"	**
5' 1.5"	7.3'	7.5'	5.2'	
5' 2.0"	7.8'	7.8'	5.0'	
5' 2.5"	8.3'	8.1'	4.8'	
5' 3.0"	8.8'	8.3'	4.4'	
5' 3.5"	9.3'	8.3'	4.1'	
5' 4.0"	9.8'	8.6'	3.8'	
5' 4.5"	10.3'	8.7'	3.4'	
5' 5.0"	10.8'	8.9'	3.1'	

**DETECTABLE WARNING DOMES**

B = X(A+9')

B = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.

\* BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.

\*\* BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04.

\*\*\* THICKNESS MAY VARY FOR APPROVED EQUAL PRECAST MATERIAL.

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<b>STANDARD CURB RAMP</b>			Scale not to scale	Sheet # 2 of 2	Draw # 413.03

**Safe Routes to Schools**

City of Greenville, Pitt County, North Carolina

**DETAILS**

**TYPE 2**

**TYPE 3**

**TYPE 2A**

**CURB RAMPS**  
Parallel Ramps

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 1 OF 3 FOR ALL RAMP NOTES

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<b>STANDARD DETAIL CURB RAMP PLACEMENT</b>			Scale not to scale	Sheet # 1 of 1	Draw # 413.02

**NOTES:**

- CONSTRUCT THE WALKING SURFACE WITH SLIP RESISTANCE AND A CONTRASTING COLOR TO THE SIDEWALK.
- CROSSWALK WIDTHS AND CONFIGURATION VARY BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS.
- NORTH CAROLINA GENERAL STATUTE 136-44.14 REQUIRES THAT ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY DISABLED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER POINTS OF PEDESTRIAN FLOW. IN ADDITION, SECTION 228 OF THE 1973 FEDERAL AID HIGHWAY SAFETY ACT REQUIRES PROVISION OF CURB RAMPS ON ANY CURB CONSTRUCTION AFTER JULY 1, 1976 WHETHER A SIDEWALK IS PROPOSED INITIALLY OR IS PLANNED FOR A FUTURE DATE. THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990 EXTENDS TO INDIVIDUALS WITH DISABILITIES. COMPREHENSIVE CIVIL RIGHTS PROTECTIONS SIMILAR TO THOSE PROVIDED TO PERSONS ON THE BASIS OF RACE, SEX, NATIONAL ORIGIN AND RELIGION UNDER THE CIVIL RIGHTS ACT OF 1964. THESE CURB RAMPS HAVE BEEN DESIGNED TO COMPLY WITH TITLE III OF THE ADA BECOMING EFFECTIVE JANUARY 26, 1992. THE ADA REQUIREMENTS FOR DETECTABLE WARNING MATERIALS ARE SUSPENDED EFFECTIVE MAY 12, 1994.
- PROVIDE WHEELCHAIR RAMPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. LOCATE WHEELCHAIR RAMPS AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. WHERE TWO RAMPS ARE INSTALLED PLACE NOT LESS THAN 2 FEET OF FULL HEIGHT CURB BETWEEN THE RAMPS. PLACE DUAL RAMPS AS NEAR PERPENDICULAR TO THE TRAVEL LANE BEING CROSSED AS POSSIBLE.
- PAY FOR ALL VARIABLE DEPTH CURBS USED FOR CONSTRUCTION OF WHEELCHAIR RAMPS AS CONCRETE WHEELCHAIR RAMPS. (50 YDS.)
- PAY FOR ALL DEPRESSED CURBS AT WHEELCHAIR RAMPS AS THE TYPE CURB AND GUTTER USED ADJACENT TO DEPRESSED CURBS. (LN. FT.)
- SUCH PRICES AND PAYMENTS IS CONSIDERED FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THE WORK.
- DO NOT EXCEED 0.08 (12:1) SLOPE ON THE WHEELCHAIR RAMP IN RELATIONSHIP TO THE GRADE OF THE STREET.
- CONSTRUCT WHEELCHAIR RAMPS 40" (3'-4") OR GREATER FOR DUAL RAMPS AND 60" (5'-0") OR GREATER FOR DIAGONAL RAMPS.
- USE CLASS "B" CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.
- PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STD. DWG. 848.01.
- PLACE THE INSIDE PEDESTRIAN CROSSWALK LINES NO CLOSER IN THE INTERSECTION BY BISECTING THE INTERSECTION RADI, WITH ALLOWANCE OF A 4' CLEAR ZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED. (SEE NOTE 17)
- COORDINATE THE CURB CUT AND THE PEDESTRIAN CROSSWALK LINES SO THE FLOOR OF THE WHEELCHAIR RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES. PLACE DIAGONAL RAMPS WITH FLARED SIDES SO 24" OF FULL HEIGHT CURB FALLS WITHIN THE CROSSWALK MARKINGS ON EACH SIDE OF THE FLARES.
- CONSTRUCT THE PEDESTRIAN CROSSWALK A MINIMUM OF 6 FEET. A CROSSWALK WIDTH OF 10 FEET OR GREATER IS DESIRABLE.
- USE STOP LINES, NORMALLY PERPENDICULAR TO THE LANE LINES, WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT. AN UNUSUAL APPROACH SKEN MAY REQUIRE THE PLACEMENT OF THE STOP LINE TO BE PARALLEL TO THE INTERSECTING ROADWAY.
- TERMINATE PARKING A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
- PLACE ALL PAVEMENT MARKINGS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION AND THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD.

PUBLIC WORKS DEPARTMENT 1500 Beatty Street Greenville, North Carolina 27834	<b>CITY OF GREENVILLE, N.C.</b> USE WITH THE CITY OF GREENVILLE, N.C. STANDARD SPECIFICATIONS ONLY	www.greenvillenc.gov	No. 1	Date 9/16/11	Description APPROVAL
<b>STANDARD DETAIL CURB RAMP</b>			Scale not to scale	Sheet # 2 of 2	Draw # 413.03

**HI-VISIBILITY CROSSWALK**

**STANDARD CROSSWALK**

**ENGLISH STANDARD DRAWING FOR PAVEMENT MARKINGS PEDESTRIAN CROSSWALKS**

**ENGLISH STANDARD DRAWING FOR WHEELCHAIR RAMP CURB CUT**

**LEGEND**

**Project Manager:** BCF  
**Drawn By:** EW  
**Checked By:** STA  
**Project Number:** 15008  
**Drawing Number:** D-1045

**ARK CONSULTING GROUP, P.L.L.C.**  
2755-B Charles Blvd  
Greenville, NC 27858  
(252) 558-0888  
www.arkconsultinggroup.com

**C-11**

Date: 05-11-2016

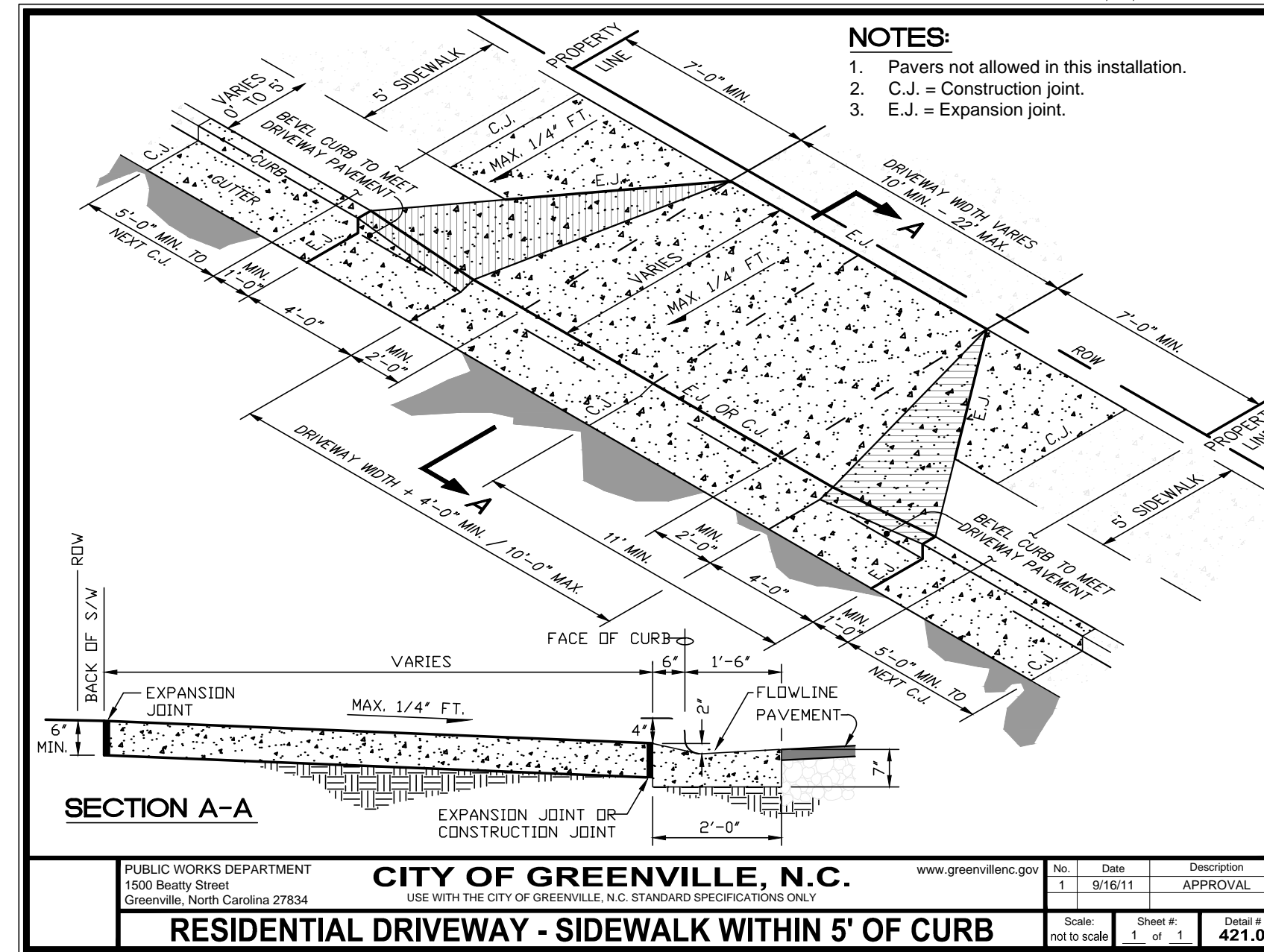
CATCH BASIN & JUNCTION BOX STANDARD NOTES

- 1. Mortar Joints 1/2" ± 1/8" thick. Concave tool all exposed mortar joints.
2. Class "A" concrete to be used. Chamfer all exposed corners 1".
3. The pouring of floor slab to be accomplished by forming.
4. All catch basins over 3'-6" in depth shall be provided with steps 1' on centers. Steps shall be in accordance with std. detail No. 615.01.
5. Concrete brick may be used in lieu of clay brick. Jumbo brick will be permitted.
6. Engineered pre-cast boxes are permitted with the City Engineer's approval.
7. For 8'-0" in height or less use 8" wall. Over 8'-0" in height use 12" wall to 6'-0" from top of wall, and 8" wall for the remaining 6'-0". Adjust quantities accordingly.
8. Leave weep holes as directed by the engineer.
9. Construct with pipe crowns matching.
10. All drawings not to scale.

MANHOLE STANDARD NOTES

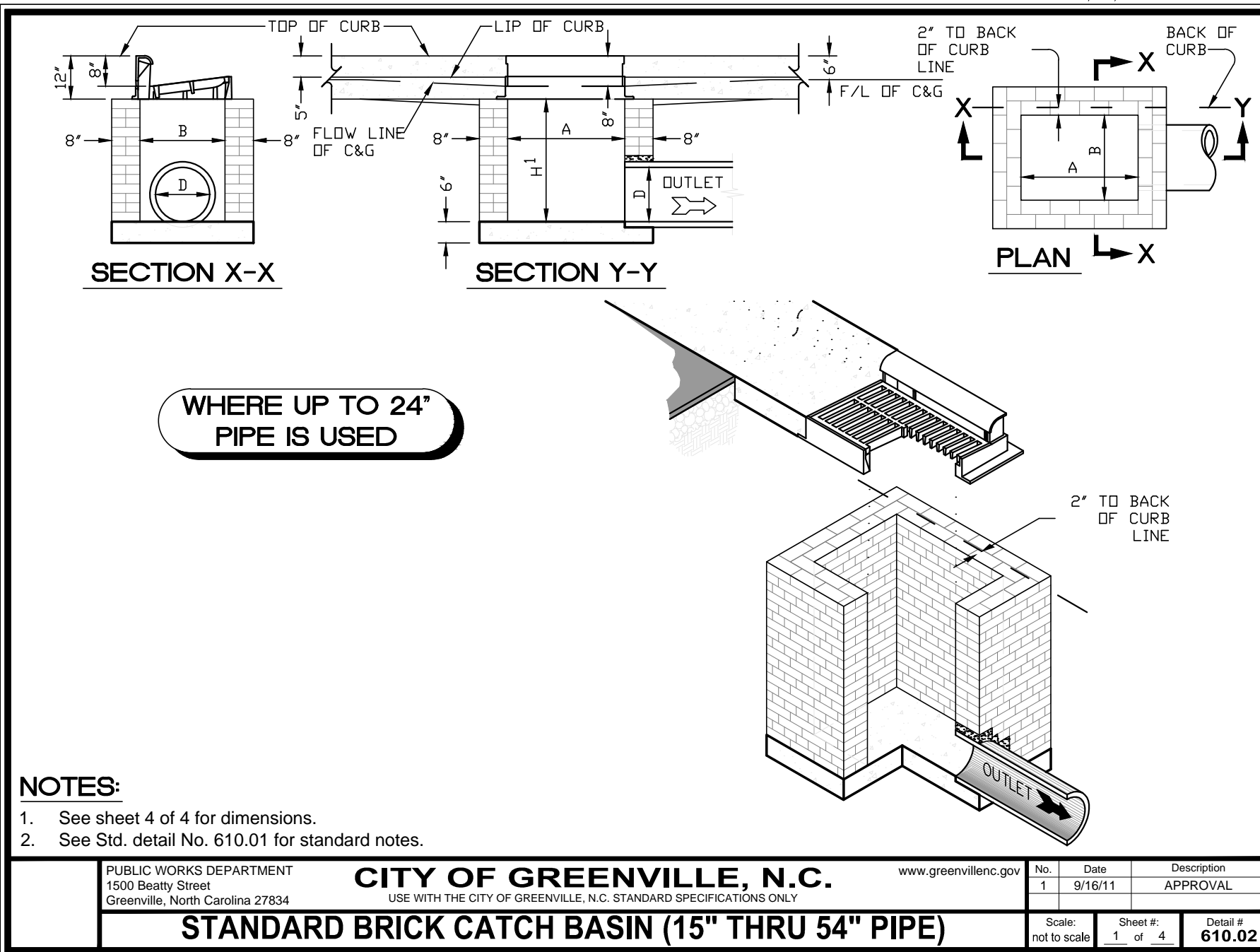
- 1. Mortar Joints 1/2" ± 1/8" thick. Concave tool all exposed mortar joints.
2. Class "A" concrete to be used. Chamfer all exposed corners 1".
3. Forms to be used for the construction of the base.
4. Where the manhole top is exposed to road traffic, the top of the manhole is to be flush with the ground. At other locations it should be a minimum of 9' above the ground.
4. Manholes over 3'-6" in depth shall be provided with steps 1' on centers. Steps shall be in accordance with Std. detail No. 615.01.
5. Over 36" pipe design requires City Engineer's approval.
6. For manholes over 12 ft. vertical wall depth, brick masonry wall thickness shall be 12"
7. For manholes with a vertical wall depth less than 12 ft., brick masonry wall thickness shall be 8".
8. All drawings not to scale.

CITY OF GREENVILLE, N.C. PUBLIC WORKS DEPARTMENT 1500 Beatty Street Greenville, North Carolina 27834. STANDARD CATCH BASIN AND MANHOLE NOTES. Scale: not to scale. Sheet # 1 of 1. Detail # 610.01



- NOTES:
1. Pavers not allowed in this installation.
2. C.J. = Construction joint.
3. E.J. = Expansion joint.

CITY OF GREENVILLE, N.C. PUBLIC WORKS DEPARTMENT 1500 Beatty Street Greenville, North Carolina 27834. RESIDENTIAL DRIVEWAY - SIDEWALK WITHIN 5' OF CURB. Scale: not to scale. Sheet # 1 of 1. Detail # 421.03

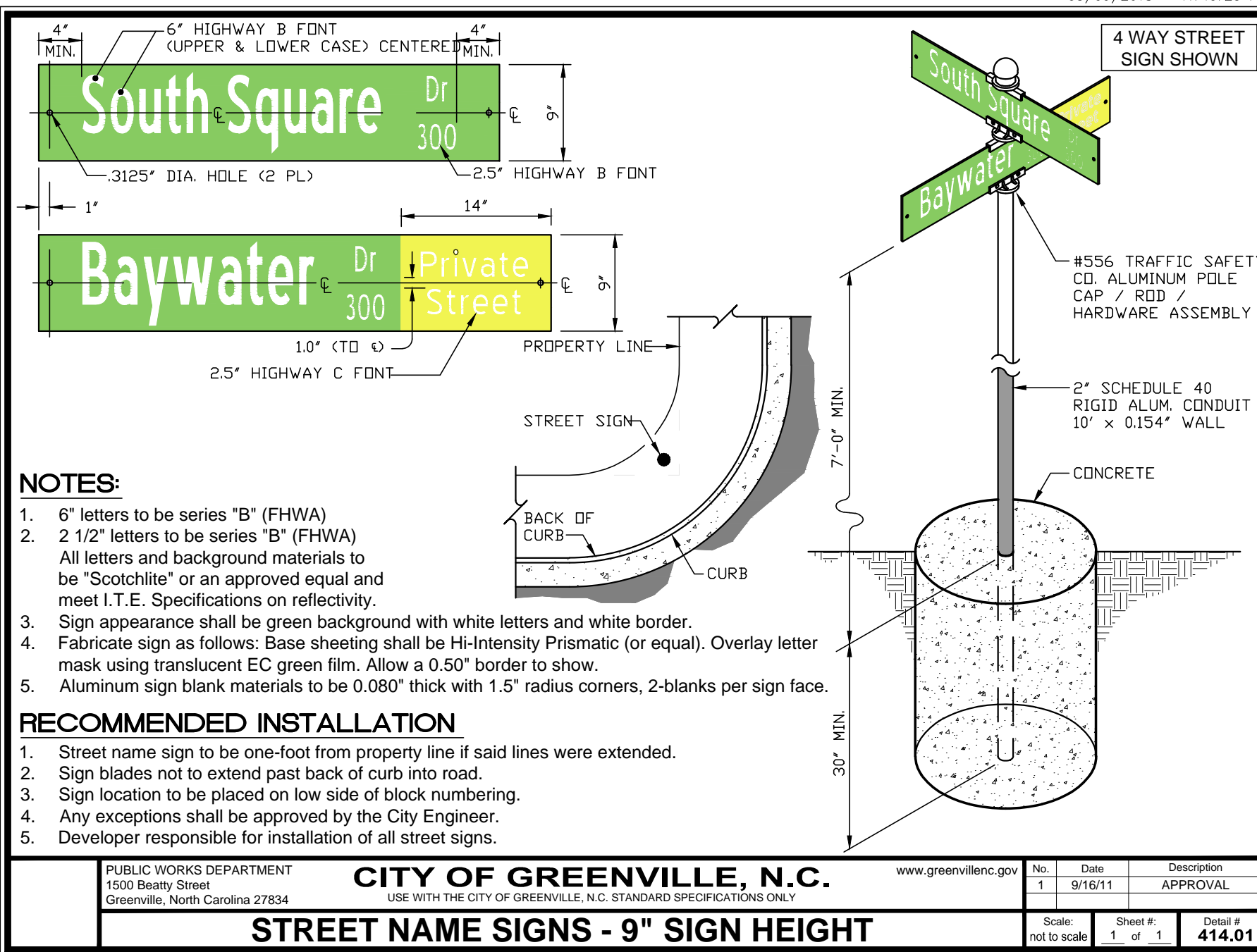


- NOTES:
1. See sheet 4 of 4 for dimensions.
2. See Std. detail No. 610.01 for standard notes.

CITY OF GREENVILLE, N.C. PUBLIC WORKS DEPARTMENT 1500 Beatty Street Greenville, North Carolina 27834. STANDARD BRICK CATCH BASIN (15" THRU 54" PIPE). Scale: not to scale. Sheet # 4 of 4. Detail # 610.02

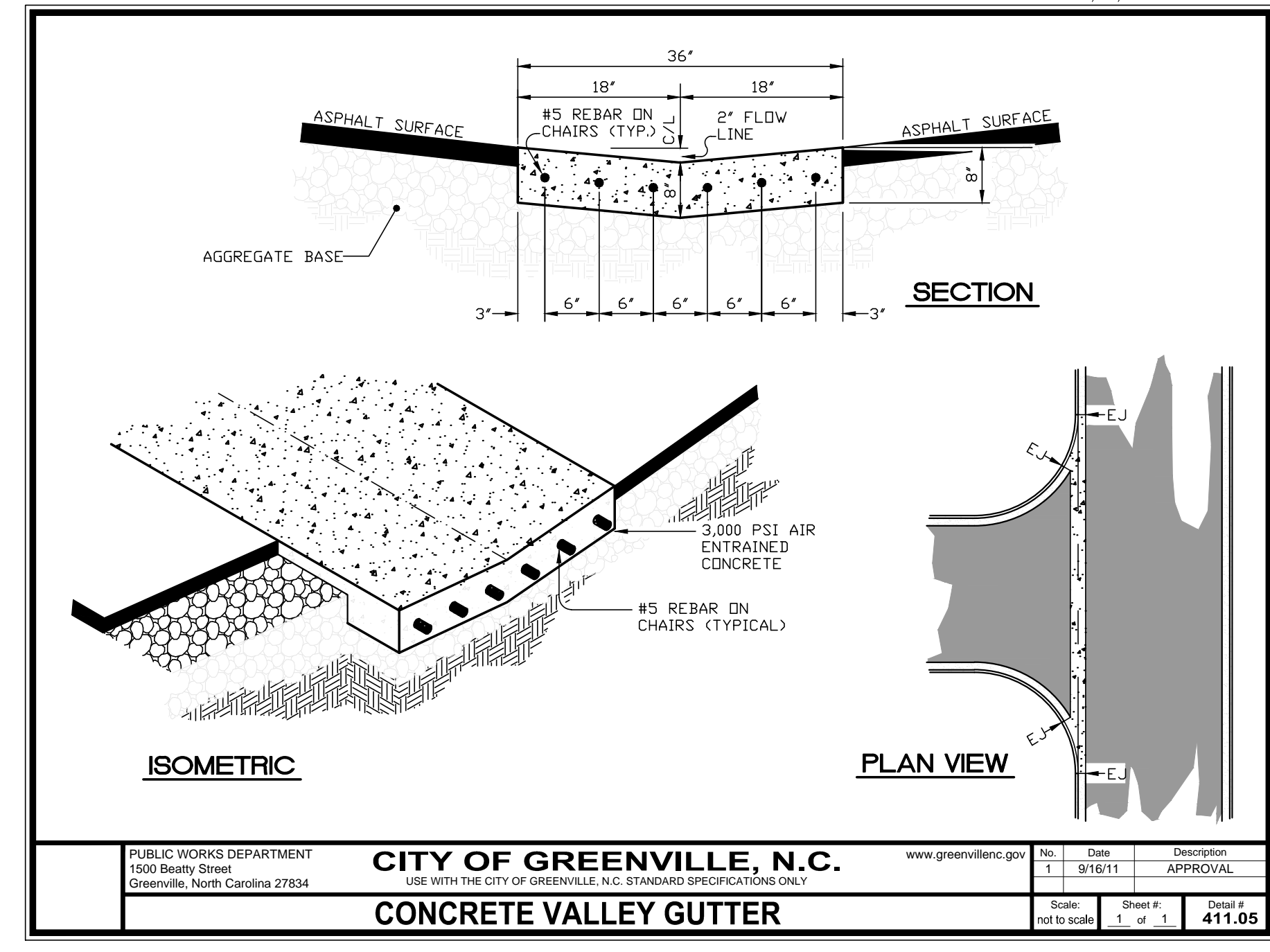
Table: DIMENSIONS AND QUANTITIES FOR BRICK CATCH BASIN. Columns include Pipe Dimensions (D, A, B, C, G, Min. H, Max. H), Cover Dimensions (E, F), Reinforcement (Bars-U, Bars-V, Bars-W, Total), Cubic Yards of Concrete in Box (Top Slab, Floor, Total), and Brick Masonry (H1, CU Yds, Per Ft. of Height). Below the table are PLAN, ELEVATION, and SECTION views of the catch basin.

CITY OF GREENVILLE, N.C. PUBLIC WORKS DEPARTMENT 1500 Beatty Street Greenville, North Carolina 27834. STANDARD BRICK CATCH BASIN (15" THRU 54" PIPE). Scale: not to scale. Sheet # 4 of 4. Detail # 610.02



- NOTES:
1. 6" letters to be series "B" (FHWA)
2. 2 1/2" letters to be series "B" (FHWA)
3. All letters and background materials to be "Scotch-lite" or an approved equal and meet I.T.E. Specifications on reflectivity.
4. Sign appearance shall be green background with white letters and white border.
5. Fabricate sign as follows: Base sheeting shall be HI-Intensity Prismatic (or equal). Overlay letter mask using translucent EC green film. Allow a 0.50" border to show.
6. Aluminum sign blank materials to be 0.080" thick with 1.5" radius corners, 2-blanks per sign face.
RECOMMENDED INSTALLATION
1. Street name sign to be one-foot from property line if said lines were extended.
2. Sign blades not to extend past back of curb into road.
3. Sign location to be placed on low side of block numbering.
4. Any exceptions shall be approved by the City Engineer.
5. Developer responsible for installation of all street signs.

CITY OF GREENVILLE, N.C. PUBLIC WORKS DEPARTMENT 1500 Beatty Street Greenville, North Carolina 27834. STREET NAME SIGNS - 9" SIGN HEIGHT. Scale: not to scale. Sheet # 1 of 1. Detail # 414.01



CITY OF GREENVILLE, N.C. PUBLIC WORKS DEPARTMENT 1500 Beatty Street Greenville, North Carolina 27834. CONCRETE VALLEY GUTTER. Scale: not to scale. Sheet # 1 of 1. Detail # 411.05

Table with 2 columns: DATE, COMMENTS. Rows show dates 5/17/16, 1/27/17, 11/16/17, 05/09/18 and corresponding comments regarding permit review and revisions.

REVISIONS:



Safe Routes to Schools
City of Greenville, Pitt County, North Carolina

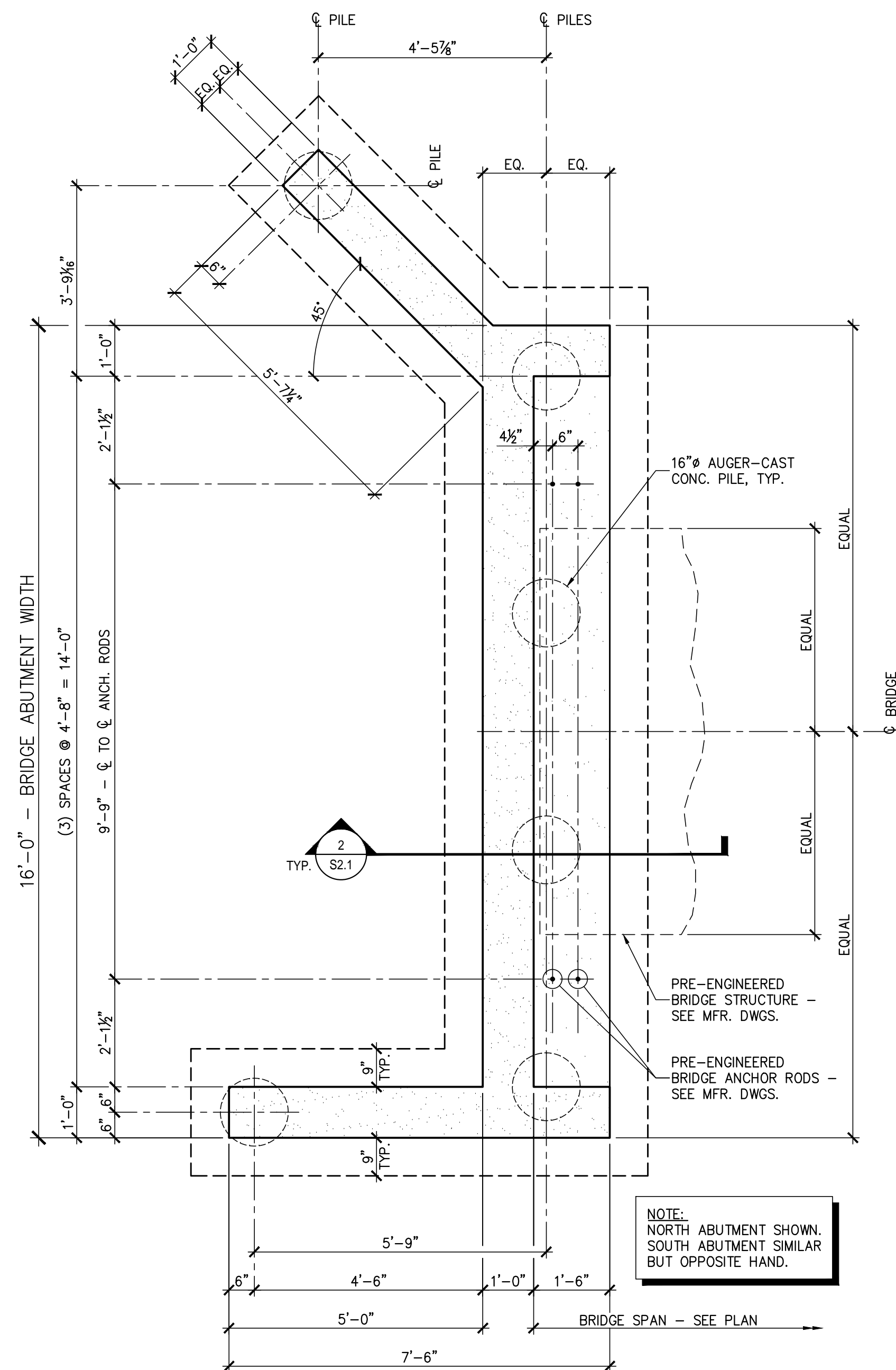
ARK CONSULTING GROUP, P.L.L.C. logo and contact information. Project Manager: BCF, Drawn By: EW, Checked By: STA, Project Number: 15008, Drawing Number: D-1045. Date: 05-11-2016







X:\2015\2015206 Ark Consulting - City of Greenville 5th St Pedestrian Bridge\Structural Drawings\2015206PLAN.dwg, S2.1, 2/18/2016 12:20:27 PM, Mike, DWG To PDF.pc3, ARCH full bleed D (24.00 x 36.00 inches), 1:1

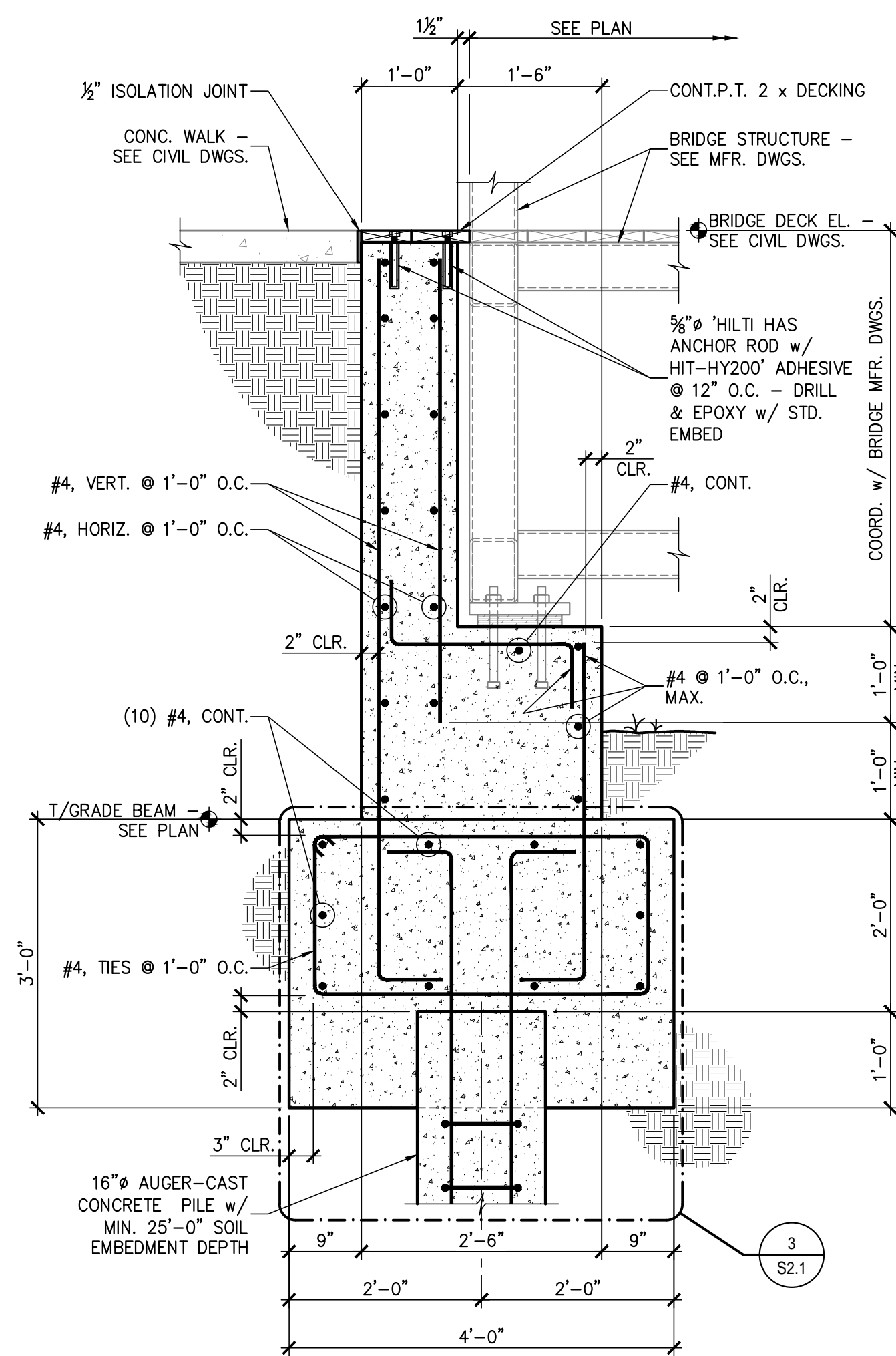


**1 PLAN DETAIL - TYP. ABUTMENT**  
S2.1 1/2" = 1'-0"

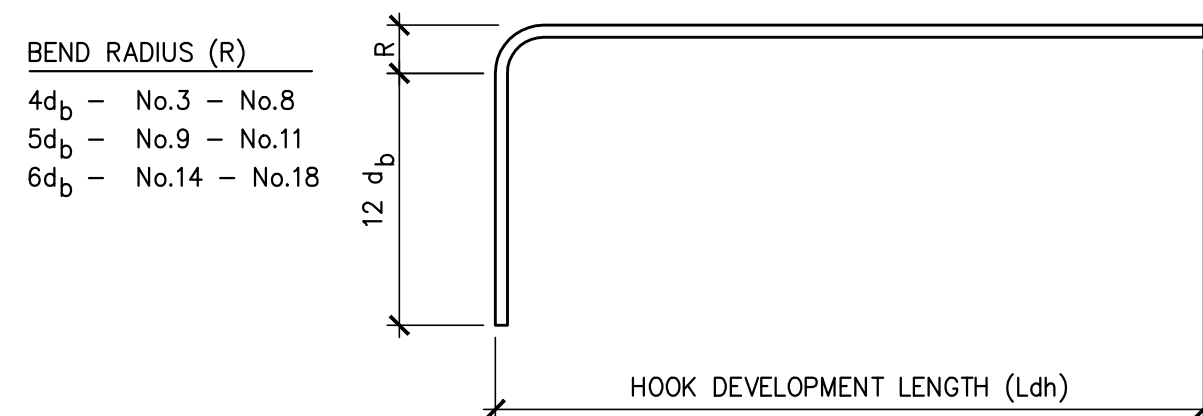
CONCRETE MATERIALS SCHEDULE		
LOCATION	MINIMUM COMPRESSIVE STRENGTH (AT 28 DAYS)	REMARKS
FOUNDATIONS	3000 PSI	-
AUGER-CAST PILES	4000 PSI	-
-	-	-

EXPOSED CONCRETE FINISH SCHEDULE		
AREA	FINISH	COMMENTS
ALL EXTERIOR WALLS, CURBS, UNLESS OTHERWISE NOTED	SMOOTH FORM	-
-	-	-

NOTE:  
NORTH ABUTMENT SHOWN.  
SOUTH ABUTMENT SIMILAR  
BUT OPPOSITE HAND.

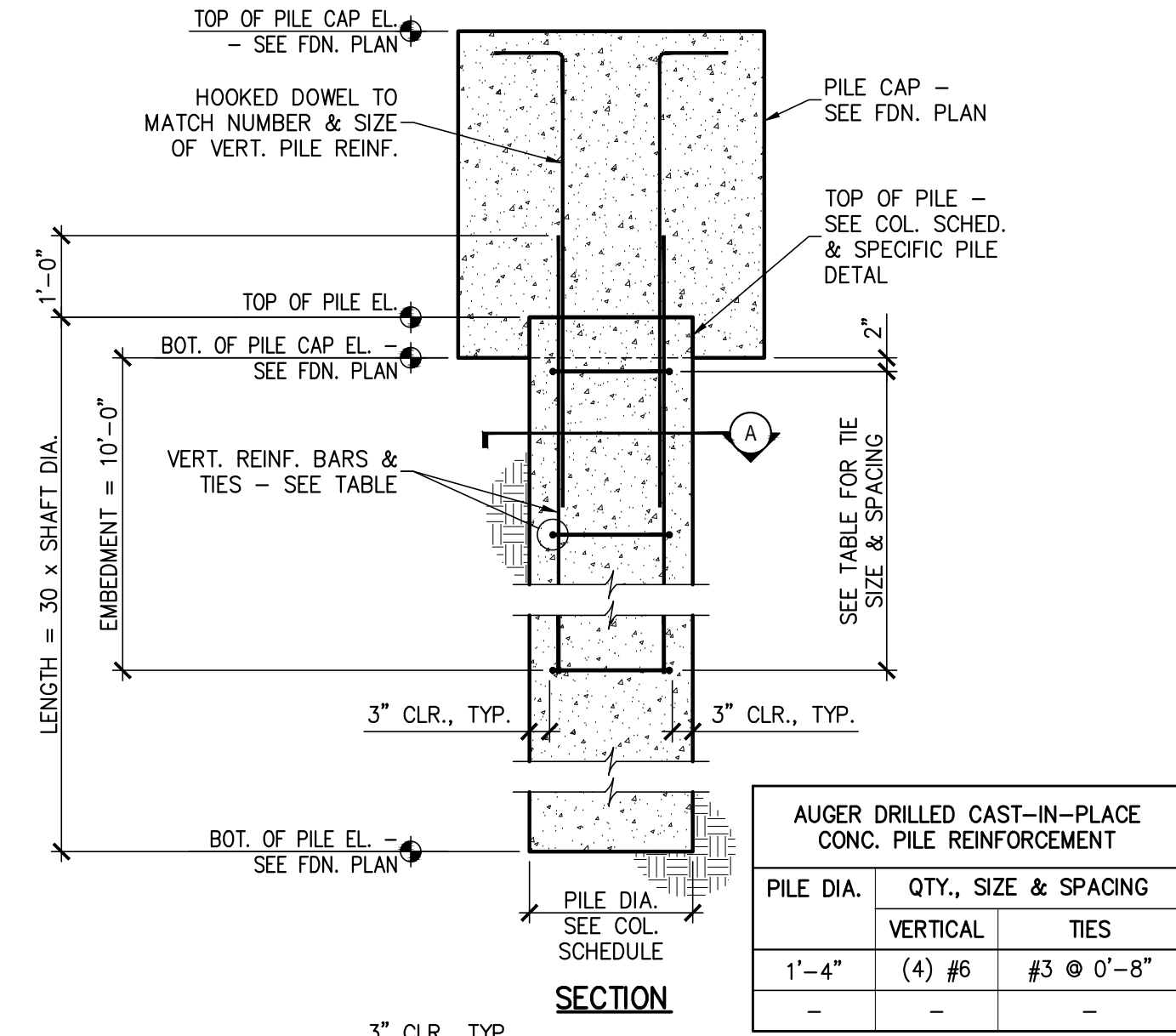


**2 SECTION THRU ABUTMENT**  
S2.1 3/4" = 1'-0"



STANDARD HOOKS IN TENSION (PER ACI 318-02)			
BAR SIZE	HOOK DEVELOPMENT LENGTH Ldh (INCHES)		f'c
	3000 psi	4000 psi	
#3	9	7	
#4	11	10	
#5	14	12	
#6	17	15	
#7	19	17	
#8	22	19	
#9	25	22	
#10	28	24	
#11	31	27	

BAR SIZE	LAP LENGTH (in.)	
	f'a = 3000 psi	f'c = 4000 psi
#4	29	25
#5	36	31
#6	43	37
#7	63	54
#8	72	61
#9	80	69
#10	89	76



**SECTION - TYP. AUGER-DRILLED CAST-IN-PLACE CONC. PILE**  
S2.1 N.T.S.

PILE DIA.	QTY., SIZE & SPACING	
	VERTICAL	TIES
1'-4"	(4) #6	#3 @ 0'-8"
-	-	-

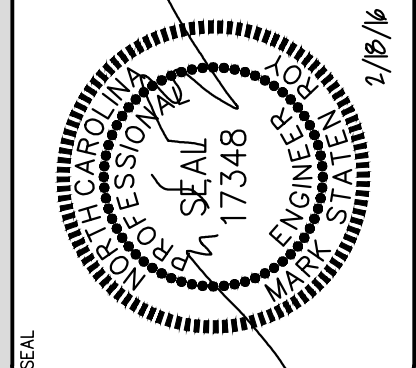
**STRUCTURAL DESIGN CRITERIA:**

- DESIGN LOADS:**
  - SEE BRIDGE DRAWINGS FOR DESIGN LOADS. ASSUMED LOADS ARE AS FOLLOWS:  
BRIDGE DEAD LOAD 58,000 LBS. (TOTAL WEIGHT)  
BRIDGE LIVE LOAD 100 PSF UNIFORM LIVE LOAD
- FOUNDATION DESIGN CRITERIA:**
  - MINIMUM FOOTING BEARING DEPTH BELOW GRADE IS 12 INCHES.
  - FOUNDATION DESIGN IS BASED ON DATA SHOWN IN GEOTECHNICAL REPORT BY TERRACON, DATED 2-9-2016 PROJ.# 72155061.
  - CONTRACTOR SHALL FIELD VERIFY THE SOIL BEARING CAPACITY PRIOR TO START OF CONSTRUCTION.

**GENERAL STRUCTURAL NOTES:**

- GENERAL NOTES:**
  - METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
  - COORDINATE THESE DRAWINGS WITH THE CIVIL AND BRIDGE DRAWINGS.
  - VERIFY BRIDGE LOCATION AND ORIENTATION WITH CIVIL DRAWINGS.
  - CONTRACTOR SHALL VERIFY ALL EXISTING CONSTRUCTION DIMENSIONS WHICH IMPACT NEW CONSTRUCTION PRIOR TO FABRICATING ANY REBAR, STEEL, ETC.
  - DO NOT CUT, NOTCH, OR OTHERWISE MODIFY ANY STRUCTURAL MEMBERS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS WITHOUT APPROVAL OF THE ARCHITECT OR ENGINEER.
  - CUTTING OF STEEL MEMBERS AND INSTALLATION OF HOLES IN STEEL MEMBERS SHALL BE DONE BY CUTTING OR DRILLING. DO NOT USE TORCHES FOR CUTTING UNLESS APPROVED BY THE ARCHITECT OR ENGINEER. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND INSTALLATION OF ALL SHORING REQUIRED TO SUPPORT NEW AND EXISTING STRUCTURAL ELEMENTS.
- AUGER CAST-IN-PLACE CONCRETE PILES:**
  - ALL PILES SHALL BE 16" DIAMETER WITH A MINIMUM TIP ELEVATION OF 25'-0" BELOW EXISTING GRADE, UNLESS OTHERWISE NOTED.
  - PILES SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS STATED IN THE GEOTECHNICAL REPORT PREPARED BY TERRACON, INC.
  - THE OWNER SHALL PROVIDE A GEOTECHNICAL CONSULTANT TO MONITOR INSTALLATION OF ACIP PILES.
  - THE FOLLOWING PILE CAPACITIES HAVE BEEN USED FOR DESIGN:  
COMPRESSION CAPACITY 45.00 TONS  
UPLIFT CAPACITY 2.00 TONS  
LATERAL CAPACITY 4.60 TONS
  - AUGER CAST-IN-PLACE (ACIP) PILE DESIGN (INCLUDING, SIZE, DEPTH, AND LAYOUT) SHALL BE PROVIDED BY THE ACIP PILE CONTRACTOR.
  - ACIP CONTRACTOR SHALL VERIFY FOUNDATION SOIL BEARING CAPACITY USED FOR FOUNDATION DESIGN. SEE 'FOUNDATION DESIGN' SECTION OF 'STRUCTURAL DESIGN CRITERIA' FOR ADDITIONAL INFORMATION.
  - ACIP PILE DESIGN CALCULATIONS AND DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. CALCULATIONS AND DRAWINGS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER CERTIFIED TO PRACTICE IN THE PROJECT'S JURISDICTION.
  - AFTER COMPLETION OF ACIP PILE INSTALLATION, THE PRIME CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE WORK INCLUDING, BUT NOT LIMITED TO, PROPER SITE DRAINAGE TO PREVENT PONDING OF WATER ABOVE PIER ELEMENTS, AND APPROPRIATE CONTROL OF UTILITY EXCAVATION ACTIVITIES, TO PREVENT DAMAGE TO INSTALLED PIER ELEMENTS.
- FOUNDATION:**
  - ALL FOOTINGS SHALL BE ON UNDISTURBED SOIL OR 98% COMPACTED FILL PER ASTM D698.
  - NO FOOTINGS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE OR LOOSE MATERIAL.
  - EXCAVATIONS FOR FOOTINGS SHALL HAVE THE SIDES AND BOTTOMS TEMPORARILY LINED WITH 6 MIL POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HRS OF THE EXCAVATION OF THE FOOTING.
  - ADVERSE FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION SUCH AS SOFT SOILS, ORGANIC MATTER, ETC., SHALL BE REPORTED TO THE ENGINEER BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
  - IF UNDERMINING OF FOOTINGS OCCURS, FILL VOIDS WITH LEAN CONCRETE MIX. DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL.
- CONCRETE:**
  - ALL PLACED CONCRETE, SHALL HAVE NORMAL WEIGHT COARSE AGGREGATES, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) AT 28 DAYS AS SHOWN ON THE CONCRETE MATERIALS SCHEDULE.
  - GROUT FOR BASE PLATES SHALL BE NON-METALLIC, NON-SHRINKABLE GROUT, AND SHALL HAVE A MINIMUM SPECIFIED STRENGTH, AT 28 DAYS, OF 5000 PSI.
  - NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.
  - CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 3/4" x 45 DEGREE CHAMFER, UNLESS OTHERWISE NOTED.
  - HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCING SHALL BE CONTINUOUS, AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE.
  - ALL DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  - ALL REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60.
  - DETAIL AND FABRICATE REINFORCING STEEL IN ACCORDANCE WITH THE ACI DETAILING MANUAL.
  - IN-PLACE REINFORCING STEEL, SHALL BE REVIEWED BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
  - AT CORNERS AND INTERSECTIONS, PROVIDE BARS OF THE SAME NUMBER AND SIZE AS THE LONGITUDINAL BARS IN THE FOOTING.

**RPA ENGINEERING, P.A.**  
Structural Engineering Solutions  
Engineering License Certificate No. C-2734  
102 Regency Blvd.  
Suite A1  
Greenville, NC 27834  
Phone : 252-321-6027  
Fax : 252-355-2179



**ARK CONSULTING GROUP, PLLC / CITY OF GREENVILLE PEDESTRIAN BRIDGE GREENVILLE, NC**

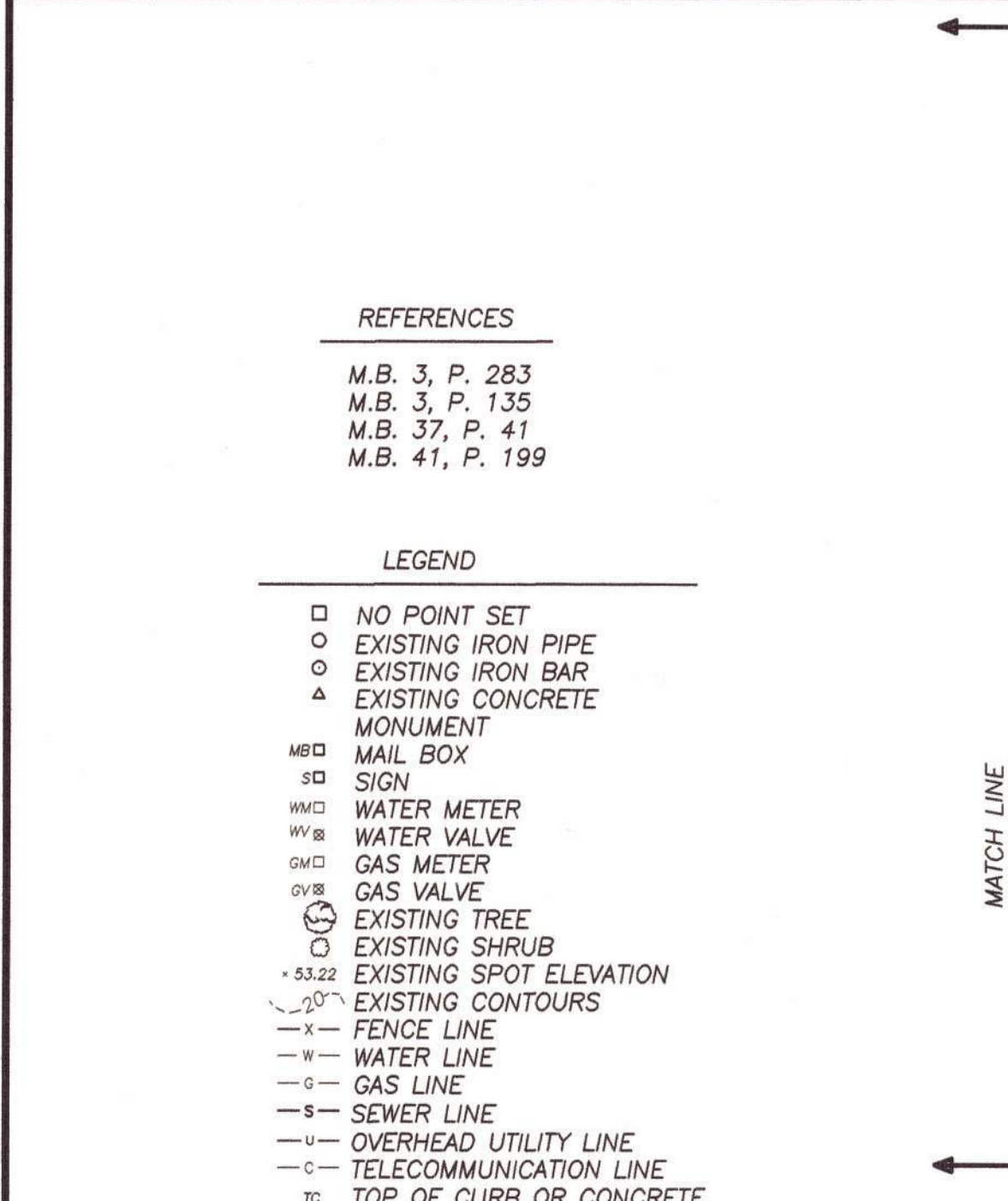
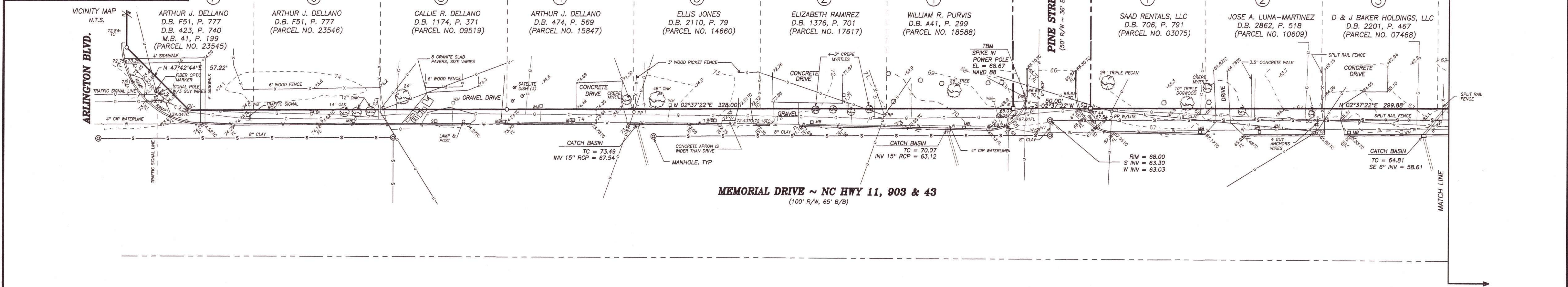
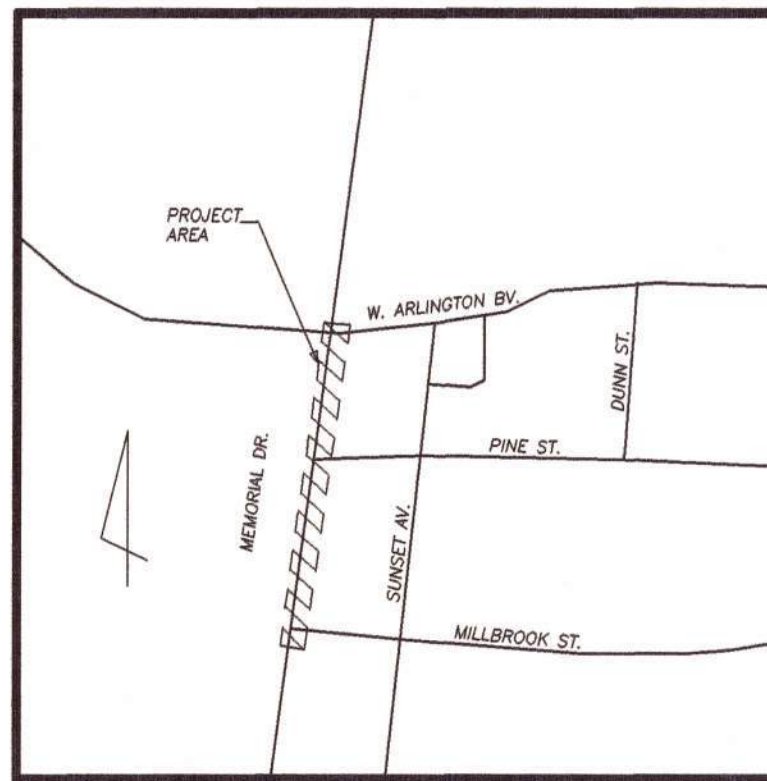
DRAWING TITLE  
**ABUTMENT PLAN DETAIL, SECTION & NOTES**

PROJ. NO.  
**2015206**

DATE  
**2-18-2016**

DRAWN BY: MBM  
CHECKED BY: MSR  
APPROVED BY: MSR

SHEET NO.  
**S2.1**



- REFERENCES**
- M.B. 3, P. 283
  - M.B. 3, P. 135
  - M.B. 37, P. 41
  - M.B. 41, P. 199

- LEGEND**
- NO POINT SET
  - EXISTING IRON PIPE
  - △ EXISTING IRON BAR
  - ▲ EXISTING CONCRETE MONUMENT
  - MBD MAIL BOX
  - SD SIGN
  - WM WATER METER
  - WV WATER VALVE
  - GM GAS METER
  - GV GAS VALVE
  - EXISTING TREE
  - EXISTING SHRUB
  - 53.22 EXISTING SPOT ELEVATION
  - EXISTING CONTOURS
  - x- FENCE LINE
  - w- WATER LINE
  - g- GAS LINE
  - s- SEWER LINE
  - u- OVERHEAD UTILITY LINE
  - c- TELECOMMUNICATION LINE
  - TC TOP OF CURB OR CONCRETE
  - ⊙ MANHOLE

**NOTES**

- THIS IS A TOPOGRAPHIC SURVEY OF THE AREA EAST OF AND ADJACENT TO THE EAST CURBING OF MEMORIAL BETWEEN ARLINGTON BLVD. & MILLBROOK ST.
- ELEVATIONS SHOWN ARE IN FEET (NAVD 88) AND WERE TRANSFERRED TO THE SITE FROM RM 35 AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP 370191 0010B, DATED 4-30-1989; ELEV. = 47.08 FEET (NAVD 88) AS CONVERTED FROM NAVD 29 UTILIZING THE NATIONAL GEODETIC SURVEY VERTCON PROGRAM
- AS PER FEMA FLOOD INSURANCE RATE MAP 3720467700K, DATED JULY 7, 2014; THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA
- THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON IS BASED IN PART ON UTILITY MARKINGS BY SOME UTILITY PROVIDERS, IN PART ON ABOVE GROUND APPURTENANCES AND IN PART ON INFORMATION OBTAINED FROM SOME UTILITY PROVIDERS; NO GUARANTEE IS MADE AS TO THEIR EXACT LOCATION; OTHER UTILITIES MAY EXIST THAT ARE NOT SHOWN HEREON
- ALL DISTANCES SHOWN AER HORIZONTAL FIELD DISTANCES, NO GRID FACTOR APPLIED; THE COMBINED NC GRID FACTOR USED FOR GRID COORDINATE CALCULATIONS IS 0.99989174.

I, STEPHEN N. SPRULL, CERTIFY THAT THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THIS GROUND SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL (2 SIGMA) TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS; THAT THE HORIZONTAL ACCURACY IS 1:14,276, THAT THE VERTICAL ACCURACY MEETS THE REQUIREMENTS OF A CLASS A VERTICAL SURVEY AND THAT THE ORIGINAL DATA WAS OBTAINED ON APRIL 22, 2015; THAT THE SURVEY WAS COMPLETED ON APRIL 30, 2015 AND ALL COORDINATES ARE BASED ON NC GRID NORTH (NAD83/2001)

*Stephen N. Sprull* 5-19-15  
STEPHEN N. SPRULL L-2723

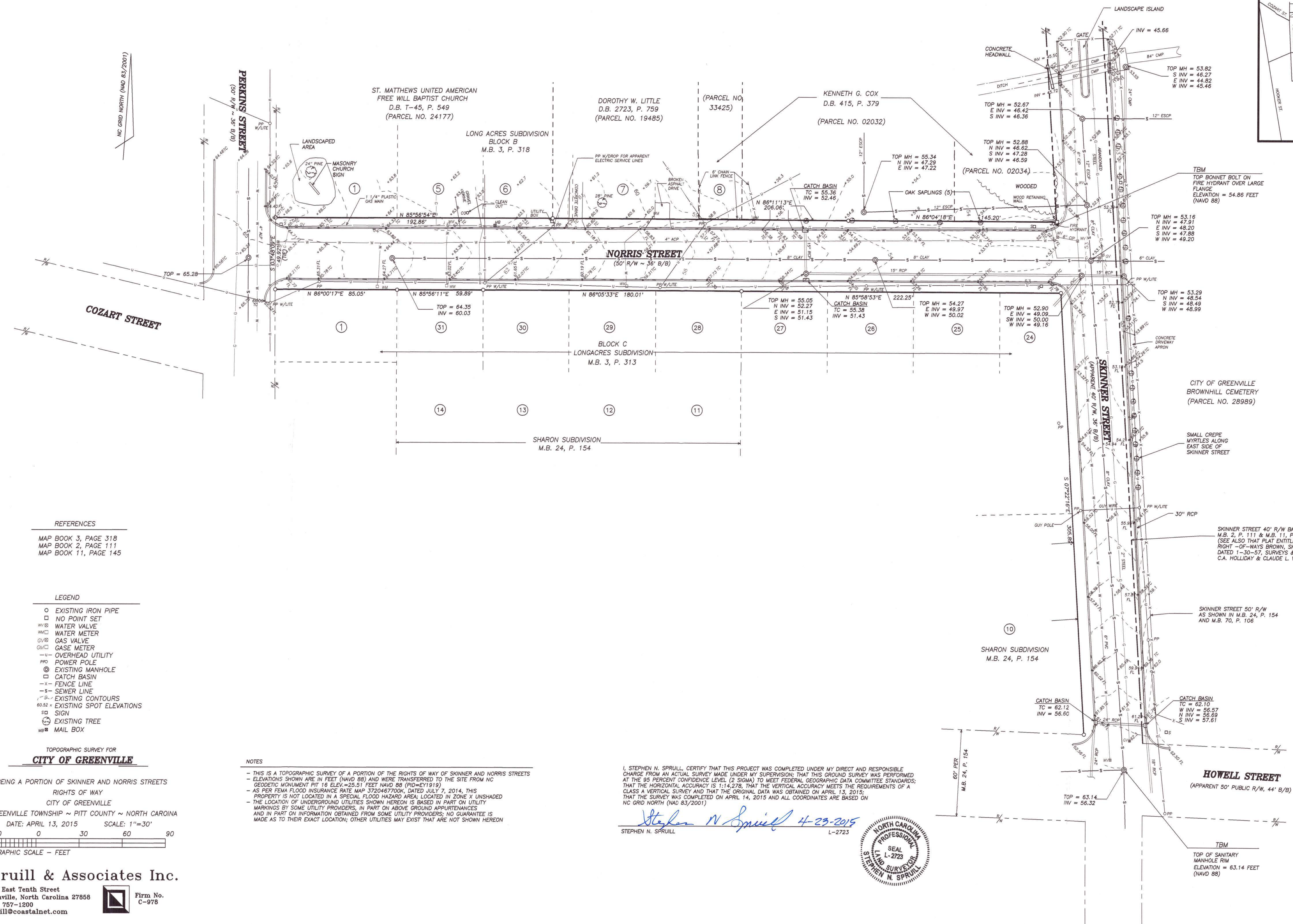
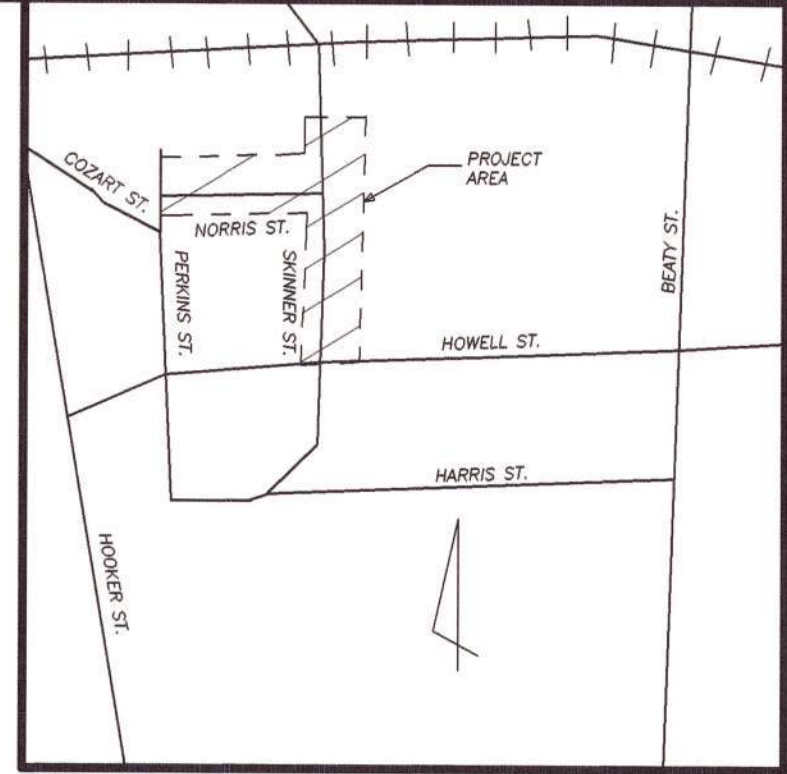


TOPOGRAPHIC SURVEY FOR  
**CITY OF GREENVILLE**  
CITY OF GREENVILLE  
GREENVILLE TOWNSHIP ~ PITT COUNTY ~ NORTH CAROLINA  
DATE: APRIL 22, 2015 SCALE: 1"=30'  
30 0 30 60 90  
GRAPHIC SCALE - FEET

**Sprull & Associates Inc.**  
2747 East Tenth Street  
Greenville, North Carolina 27858  
(852) 757-1200  
sprull@coastalnet.com



Firm No.  
C-978



**REFERENCES**  
 MAP BOOK 3, PAGE 318  
 MAP BOOK 2, PAGE 111  
 MAP BOOK 11, PAGE 145

- LEGEND**
- EXISTING IRON PIPE
  - NO POINT SET
  - WV WATER VALVE
  - WM WATER METER
  - GV GAS VALVE
  - GM GASE METER
  - U— OVERHEAD UTILITY
  - PP POWER POLE
  - ⊙ EXISTING MANHOLE
  - CATCH BASIN
  - X- FENCE LINE
  - S- SEWER LINE
  - E- EXISTING CONTOURS
  - 60.52 x EXISTING SPOT ELEVATIONS
  - SD SIGN
  - ⊙ EXISTING TREE
  - MB MAIL BOX

**TOPOGRAPHIC SURVEY FOR  
 CITY OF GREENVILLE**

BEING A PORTION OF SKINNER AND NORRIS STREETS  
 RIGHTS OF WAY  
 CITY OF GREENVILLE  
 GREENVILLE TOWNSHIP ~ PITT COUNTY ~ NORTH CAROLINA  
 DATE: APRIL 13, 2015 SCALE: 1"=30'  
 30 0 30 60 90  
 GRAPHIC SCALE - FEET

**NOTES**

- THIS IS A TOPOGRAPHIC SURVEY OF A PORTION OF THE RIGHTS OF WAY OF SKINNER AND NORRIS STREETS
- ELEVATIONS SHOWN ARE IN FEET (NAVD 88) AND WERE TRANSFERRED TO THE SITE FROM NC GEODETIC MONUMENT PIT 16 ELEV.=25.51 FEET NAVD 88 (PID=EY1919)
- AS PER FEMA FLOOD INSURANCE RATE MAP 3720467700K, DATED JULY 7, 2014, THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA LOCATED IN ZONE X UNSHADED
- THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON IS BASED IN PART ON UTILITY MARKINGS BY SOME UTILITY PROVIDERS, IN PART ON ABOVE GROUND APPURTENANCES AND IN PART ON INFORMATION OBTAINED FROM SOME UTILITY PROVIDERS; NO GUARANTEE IS MADE AS TO THEIR EXACT LOCATION; OTHER UTILITIES MAY EXIST THAT ARE NOT SHOWN HEREON

I, STEPHEN N. SPRULL, CERTIFY THAT THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THIS GROUND SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL (2 SIGMA) TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS; THAT THE HORIZONTAL ACCURACY IS 1:14,278, THAT THE VERTICAL ACCURACY MEETS THE REQUIREMENTS OF A CLASS A VERTICAL SURVEY AND THAT THE ORIGINAL DATA WAS OBTAINED ON APRIL 13, 2015, THAT THE SURVEY WAS COMPLETED ON APRIL 14, 2015 AND ALL COORDINATES ARE BASED ON NC GRID NORTH (NAD 83/2001)

*Stephen N. Sprull* 4-23-2015  
 STEPHEN N. SPRULL L-2723



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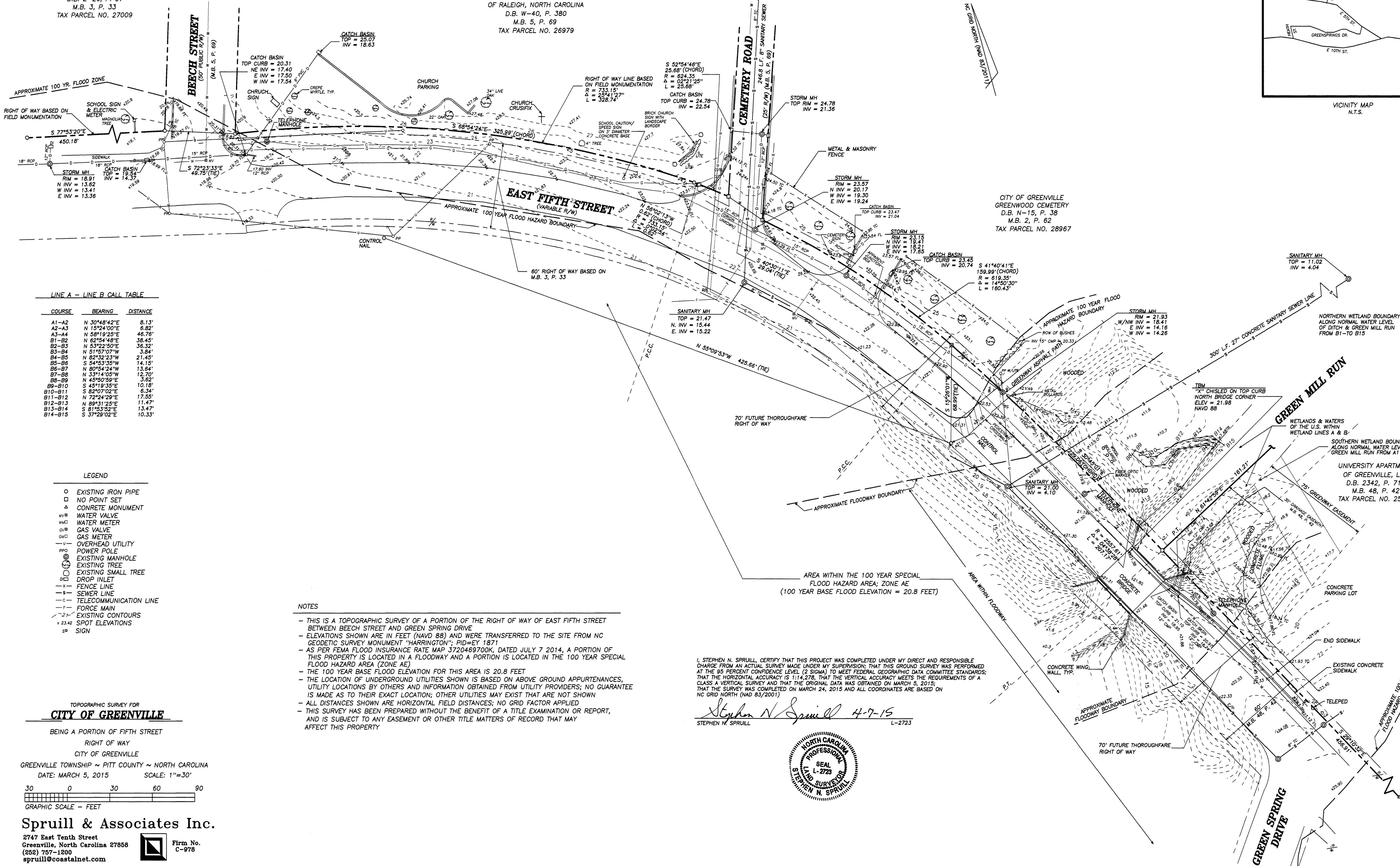


VINCENT S. WATERS, BISHOP OF THE  
 ROMAN CATHOLIC DIOCESE  
 OF RALEIGH, NORTH CAROLINA  
 D.B. Z-26, P. 97  
 M.B. 3, P. 33  
 TAX PARCEL NO. 27009

VINCENT S. WATERS, BISHOP OF THE  
 ROMAN CATHOLIC DIOCESE  
 OF RALEIGH, NORTH CAROLINA  
 D.B. W-40, P. 380  
 M.B. 5, P. 69  
 TAX PARCEL NO. 26979

CITY OF GREENVILLE  
 GREENWOOD CEMETERY  
 D.B. N-15, P. 38  
 M.B. 2, P. 62  
 TAX PARCEL NO. 28967

VICINITY MAP  
 N.T.S.



LINE A - LINE B CALL TABLE

COURSE	BEARING	DISTANCE
A1-A2	N 30°48'42"E	8.13'
A2-A3	N 15°24'00"E	8.82'
A3-A4	N 58°19'25"E	46.78'
B1-B2	N 62°54'48"E	38.45'
B2-B3	N 53°22'30"E	38.32'
B3-B4	N 51°57'07"W	3.84'
B4-B5	N 82°32'23"W	21.45'
B5-B6	S 54°53'35"W	14.15'
B6-B7	N 80°54'24"W	13.84'
B7-B8	N 33°14'05"W	12.70'
B8-B9	N 45°50'59"E	3.62'
B9-B10	S 45°19'35"E	10.18'
B10-B11	S 82°07'02"E	6.34'
B11-B12	N 72°24'29"E	17.55'
B12-B13	N 89°31'25"E	11.47'
B13-B14	S 89°31'25"E	13.47'
B14-B15	S 37°29'02"E	10.33'

LEGEND

- EXISTING IRON PIPE
- NO POINT SET
- △ CONCRETE MONUMENT
- W/V WATER VALVE
- W/M WATER METER
- G/V GAS VALVE
- G/M GAS METER
- OVERHEAD UTILITY
- POWER POLE
- ⊙ EXISTING MANHOLE
- ⊙ EXISTING TREE
- ⊙ EXISTING SMALL TREE
- ⊙ DROP INLET
- - - FENCE LINE
- - - SEWER LINE
- - - TELECOMMUNICATION LINE
- - - FORCE MAIN
- - - EXISTING CONTOURS
- SPOT ELEVATIONS
- SP SIGN

NOTES

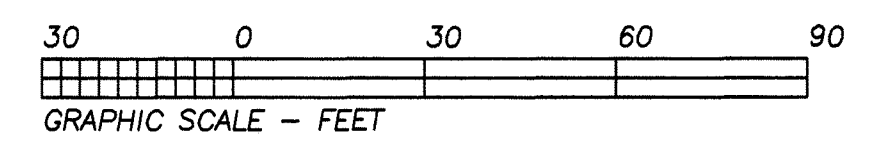
- THIS IS A TOPOGRAPHIC SURVEY OF A PORTION OF THE RIGHT OF WAY OF EAST FIFTH STREET BETWEEN BEECH STREET AND GREEN SPRING DRIVE
- ELEVATIONS SHOWN ARE IN FEET (NAVD 88) AND WERE TRANSFERRED TO THE SITE FROM NC GEODETIC SURVEY MONUMENT "HARRINGTON"; PID=EY 1871
- AS PER FEMA FLOOD INSURANCE RATE MAP 3720469700K, DATED JULY 7 2014, A PORTION OF THIS PROPERTY IS LOCATED IN A FLOODWAY AND A PORTION IS LOCATED IN THE 100 YEAR SPECIAL FLOOD HAZARD AREA (ZONE AE)
- THE 100 YEAR BASE FLOOD ELEVATION FOR THIS AREA IS 20.8 FEET
- THE LOCATION OF UNDERGROUND UTILITIES SHOWN IS BASED ON ABOVE GROUND APPURTENANCES, UTILITY LOCATIONS BY OTHERS AND INFORMATION OBTAINED FROM UTILITY PROVIDERS; NO GUARANTEE IS MADE AS TO THEIR EXACT LOCATION; OTHER UTILITIES MAY EXIST THAT ARE NOT SHOWN
- ALL DISTANCES SHOWN ARE HORIZONTAL FIELD DISTANCES; NO GRID FACTOR APPLIED
- THIS SURVEY HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE EXAMINATION OR REPORT, AND IS SUBJECT TO ANY EASEMENT OR OTHER TITLE MATTERS OF RECORD THAT MAY AFFECT THIS PROPERTY

I, STEPHEN N. SPRULL, CERTIFY THAT THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THIS GROUND SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL (2 SIGMA) TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS; THAT THE HORIZONTAL ACCURACY IS 1:14,278, THAT THE VERTICAL ACCURACY MEETS THE REQUIREMENTS OF A CLASS A VERTICAL SURVEY AND THAT THE ORIGINAL DATA WAS OBTAINED ON MARCH 5, 2015; THAT THE SURVEY WAS COMPLETED ON MARCH 24, 2015 AND ALL COORDINATES ARE BASED ON NC GRID NORTH (NAD 83/2011)

*Stephen N. Sprull* 4-7-15  
 STEPHEN N. SPRULL L-2723



TOPOGRAPHIC SURVEY FOR  
**CITY OF GREENVILLE**  
 BEING A PORTION OF FIFTH STREET  
 RIGHT OF WAY  
 CITY OF GREENVILLE  
 GREENVILLE TOWNSHIP ~ PITT COUNTY ~ NORTH CAROLINA  
 DATE: MARCH 5, 2015 SCALE: 1"=30'



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