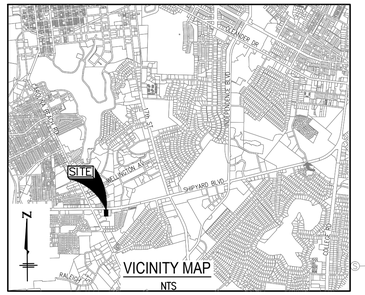
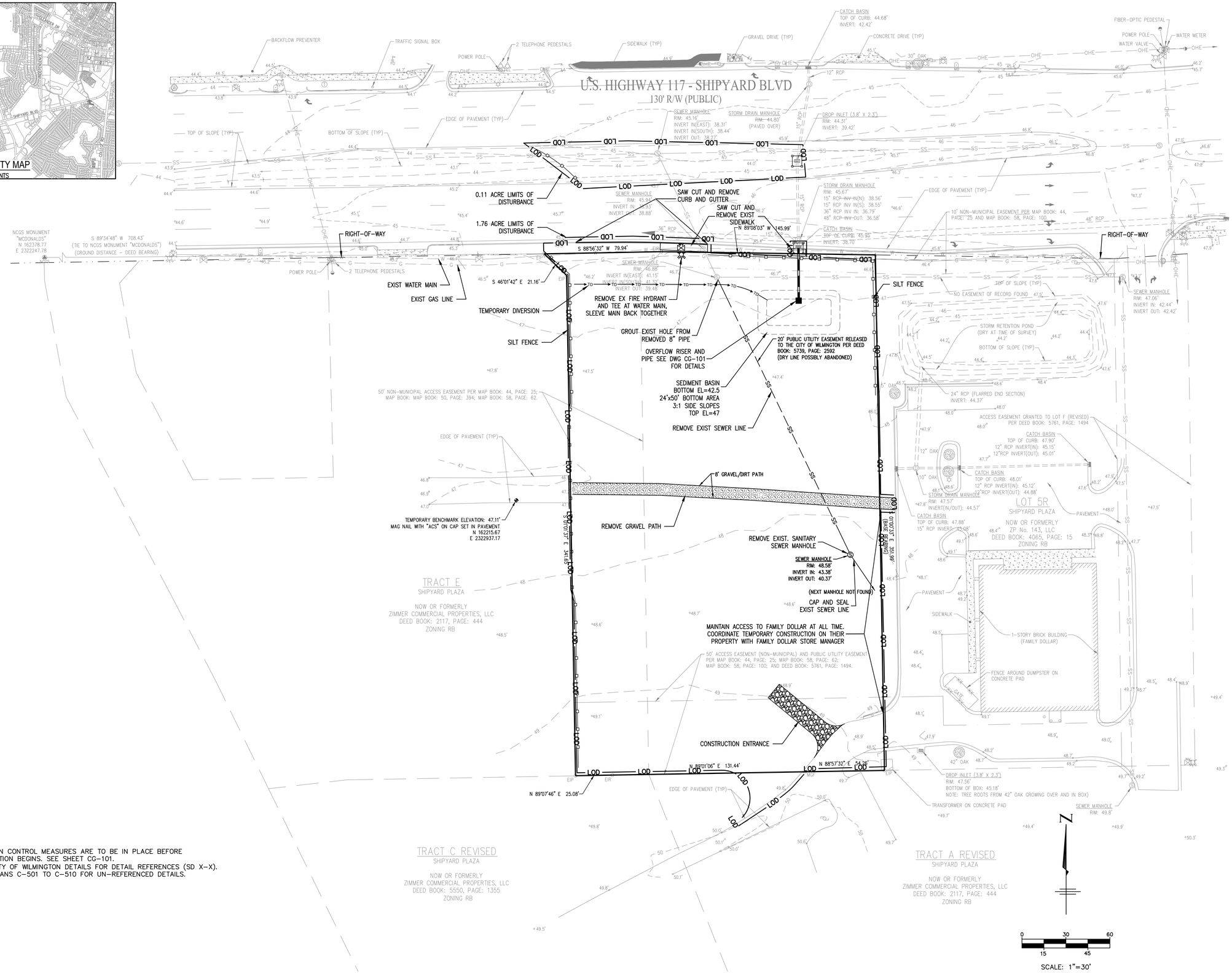




NOTES:
1. EROSION CONTROL MEASURES ARE TO BE IN PLACE BEFORE DEMOLITION BEGINS. SEE SHEET CG-101.
2. SEE CITY OF WILMINGTON DETAILS FOR DETAIL REFERENCES (SD X-X).
3. SEE PLANS C-501 TO C-510 FOR UN-REFERENCED DETAILS.

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600
Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100
Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950
www.beckermorgan.com

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

Sep 29 2016 1:27 PM

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

EXISTING CONDITIONS AND DEMOLITION PLAN

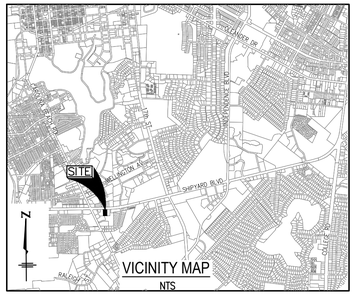
ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY | PROJ MGR: LML

CD-101

COPYRIGHT © 2016



GENERAL NOTES

1. THE CITY HAS MADE ALL POSSIBLE ATTEMPTS TO LOCATE EXISTING UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD–VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION BY OBSERVATION, ELECTRONIC DEVICES, HAND DIGGING AND PERSONAL CONTACT WITH THE UTILITY COMPANIES. NOTIFY THE CITY OF ANY CONFLICTS. ANY DAMAGE TO UTILITIES INCURRED DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR IS RESPONSIBLE FOR FINES OR LOST SERVICE REVENUE. CONTACT "CAROLINA ONE CALL" (1–800–632–4949) AND AFFECTED UTILITY OWNERS.
2. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIARIZED WITH EXISTING CONDITIONS BOTH ON AND IMMEDIATELY ADJACENT TO THE SITE.
3. ALL MATERIALS AND CONSTRUCTION PRACTICES ARE TO BE IN ACCORDANCE WITH THE CURRENT CITY OF WILMINGTON DETAILS AND SPECIFICATIONS. WORK WITHIN THE NCDOT RIGHT OF WAY SHALL BE IN ACCORDANCE WITH NCDOT STANDARDS
4. REFER TO LANDSCAPE DRAWINGS FOR ADDITIONAL REQUIREMENTS.
5. MUCKING: CONTRACTOR SHALL COORDINATE WITH CITY REPRESENTATIVES AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY SOFT AREAS.
6. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
7. MAINTAIN EROSION AND SEDIMENT CONTROL PROCEDURES DURING THE ENTIRE CONSTRUCTION PERIOD. CONTROL DEBRIS AND LOOSE SOIL ON ADJACENT STREETS THROUGH DAILY CLEANING.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE CONNECTION/RECONNECTION AND/OR THE RELOCATION OF ALL EXISTING UTILITIES WITH UTILITY OWNER.
9. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AT THE SITE. FURTHERMORE THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR QUESTIONS TO THE CITY PRIOR TO INSTALLATION.
10. ALL PAVEMENT BASE AND SUBGRADE SHALL CONFORM TO NCDOT STANDARDS INCLUDING WORKMANSHIP, MATERIALS AND EQUIPMENT AND IN ACCORDANCE WITH THE SPECIFICATIONS. SITE DETAILS WITH REFERENCES SD X–XX SHALL CONFORM TO THE LATEST EDITION OF THE CITY OF WILMINGTON TECHNICAL STANDARDS AND SPECIFICATION MANUAL. APPROPRIATE BARRICADES, SIGNS, LIGHTS OR OTHER TRAFFIC CONTROL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH NCDOT, CITY OF WILMINGTON, AND MUTCD STANDARDS.
11. TOPSOIL SHALL BE STOCKPILED SEPARATE FROM EXCAVATED MATERIAL, ONSITE AND READY FOR REUSE.
12. EXISTING TOPOGRAPHY, STRUCTURES, UTILITIES AND SITE FEATURES ARE GENERALLY SHOWN SCREENED AND/OR LIGHT LINES. NEW FINISH GRADE, STRUCTURES, UTILITIES AND SITE FEATURES ARE GENERALLY SHOWN AS HEAVY LINES.
13. ALL RADIUS CALLOUTS ARE TO EDGE OF PAVEMENT.
14. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30" TO 10'.
15. ALL PAVEMENT MARKINGS IN THE PUBLIC RIGHT OF WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND NCDOT STANDARDS.
16. ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD STANDARDS.
17. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT OF WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
18. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
19. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
20. CONTACT TRAFFIC ENGINEERING AT (910)341–7888 FORTY–EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
21. STABLE, PERMANENT VEGETATIVE COVER MUST BE EVIDENT IN ORDER TO PASS THE FINAL INSPECTION FOR C/O.
22. DIMENSIONS AND RADIUSES AT CURBS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
23. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341–5888 FOR MORE DETAILS. IN CERTAIN CASES AND ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
24. INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
25. A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO RECORDING OF THE FINAL PLAT.
26. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINE FROM 30" – 10'
27. AN ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES.

GEOTECHNICAL NOTES

1. GEOTECHNICAL SUBSURFACE CONDITIONS OF THIS PROJECT CAN BE FOUND IN THE GEOTECHNICAL REPORT PREPARED BY CATLIN ENGINEERS AND SCIENTISTS, DATED MARCH 2016.
2. INFORMATION CONTAINED IN THE GEOTECHNICAL REPORT DATED MARCH 2016 IS LIMITED, BASED ON DATA OBTAINED FROM BORING LOGS AND LABORATORY TESTING THAT SHOW SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATION AND TIME INVESTIGATED AND ONLY TO THE DEPTH PENETRATED. SUBSURFACE CONDITIONS AND GROUNDWATER LEVELS AT OTHER LOCATIONS OR DEPTHS MAY DIFFER FROM CONDITIONS OCCURRING AT INVESTIGATED LOCATIONS. THE PASSAGE OF TIME MAY ALSO RESULT IN CHANGED CONDITIONS AT THESE LOCATIONS. IF, DURING CONSTRUCTION, SUBSURFACE CONDITIONS ARE FOUND TO VARY FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT, GEOTECHNICAL RECOMMENDATIONS SHOULD BE RE–EVALUATED.
3. THE GEOTECHNICAL REPORT INCLUDES BOTH FACTUAL AND INTERPRETED INFORMATION. FACTUAL INFORMATION IS DEFINED AS OBJECTIVE DATA BASED ON DIRECT OBSERVATIONS, SUCH AS BORING LOGS AND LABORATORY TESTING RESULTS. INTERPRETED INFORMATION OR GEOTECHNICAL ENGINEERING INTERPRETATION IS BASED ON THE ENGINEERING JUDGMENT, CORRELATION OR EXTRAPOLATION FROM FACTUAL INFORMATION. NO WARRANTIES, EXPLICIT OR IMPLIED, ARE PROVIDED FOR INTERPRETED INFORMATION.

DESIGNER'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST WILMINGTON STANDARDS AND SPECIFICATIONS FOR STORM WATER MANAGEMENT AND CHAPTER 20 OF THE CODE OF ORDINANCES OF THE CITY OF WILMINGTON."

SIGNATURE:
GALEN M JAMISON, PE / PROJECT ENGINEER .

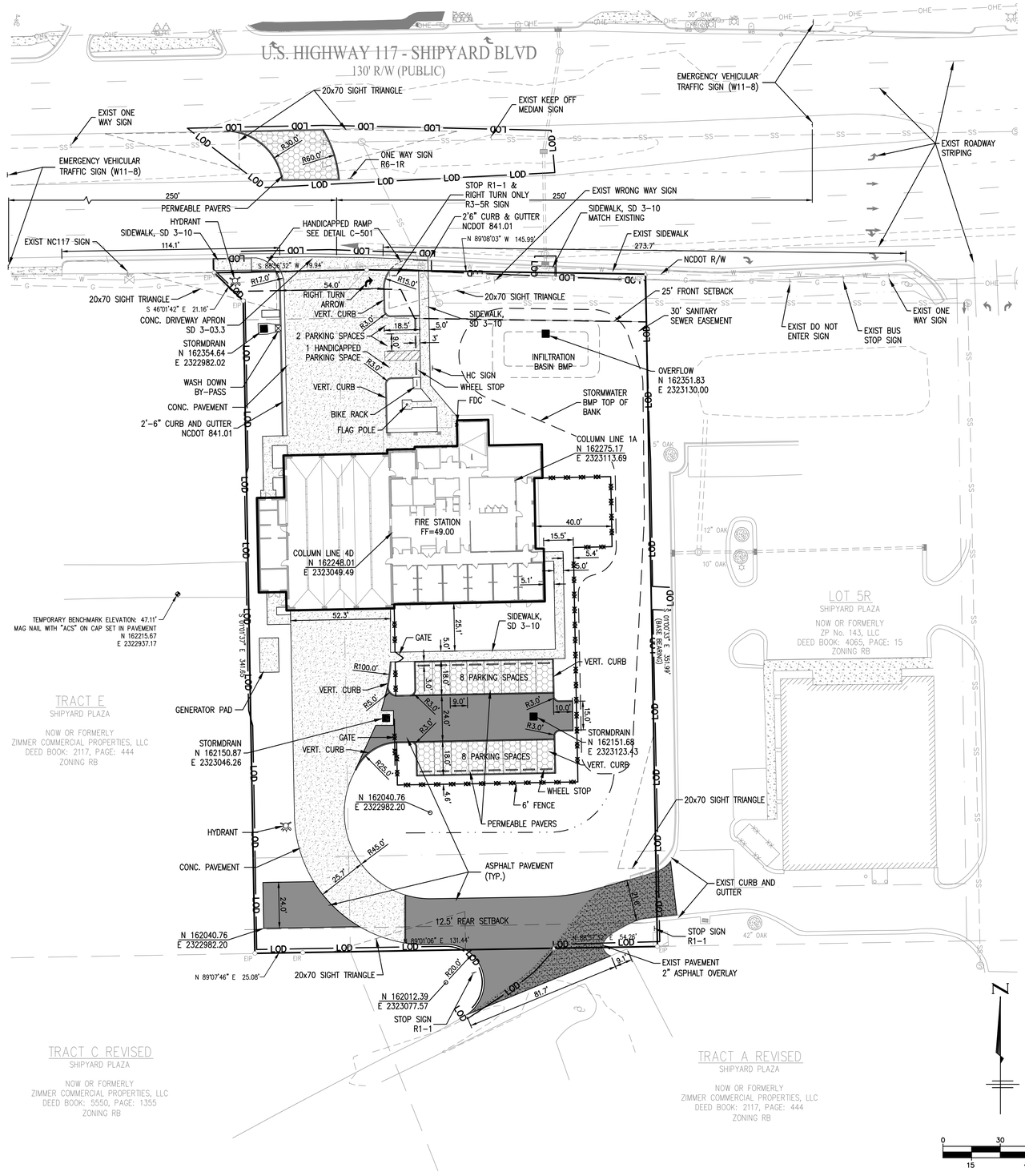
DATE: _____ REGISTRATION NUMBER: 037531

OWNER'S/DEVELOPER'S CERTIFICATION

"I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, OR ALL OF THE THESE, WILL BE DONE PURSUANT TO THE PLAN AND THAT THE APPLICABLE STORMWATER MANAGEMENT CONDITIONS AND REQUIREMENTS OF THE CITY OF WILMINGTON, THE STATE OF NORTH CAROLINA AND THE FEDERAL GOVERNMENT AND ITS AGENCIES ARE HEREBY MADE PART OF THIS PLAN."

SIGNATURE:
PRINTED NAME AND TITLE: _____

DATE: _____



SITE DATA

AREA = 1.72 ACRES
PIN # R06018–010–016–000
ZONING = RB (REGIONAL BUSINESS)
PRINCIPAL USAGE = FIRE STATION
CAMA LAND USE CLASSIFICATION = URBAN
PROPOSED BUILDING AREA = 11,788 SF
TYPE OF CONSTRUCTION: II–B
BUILDING HEIGHT = 26'

BUILDING SET BACK REQUIREMENTS
FRONT YARD ..... 25' ..... 74.7' PROPOSED
REAR YARD ..... 12.5' ..... 157.1' PROPOSED
SIDE YARD ..... NONE ..... 6.7' & 70.5' PROPOSED

OFF STREET PARKING REQUIREMENTS
MIN. SPACE SIZE = 8.5' WIDE x 18' LONG
NUMBER OF SPACES REQUIRED
FIRE STATION CREW
1 SPACE PER 2 PERSONS
(36 / 2) = 18 SPACES

TOTAL PARKING SPACES REQUIRED = 18 (1 HANDICAPPED REQ'D)

SPACES PROVIDED: 18 – 9'x18' SPACES
+ 1 – HANDICAPPED SPACES
19 TOTAL SPACES

EXISTING SITE CONSISTS OF GRASS, NO TREES/WOODS

EXISTING ONSITE COVERAGE
ASPHALT ..... 1,140.1 SF
GRAVEL PATH ..... 0 SF (1763 SF REMOVED)
TOTAL EXIST ..... 1,140.1 SF

PROPOSED ONSITE COVERAGE
BUILDING ..... 11,830.92 SF = 15.79%
CONC. & ASPHALT PAVEMENT..... 20,738.07 SF
PERVIOUS PAVERS ..... 2,595.86 SF
TOTAL PROPOSED ..... 35,164.85 SF

TOTAL PROPERTY IMPERVIOUS ..... 36,304.95 SF = 47.0%
TOTAL PROPERTY PERVIOUS AREA ..... 39,710.45 SF

PROPOSED OFFSITE COVERAGE
ASPHALT PAVEMENT ..... 860.89 SF
TOTAL PROPOSED IMPERVIOUS ..... 37,165.84 SF

WATER SYSTEM OWNER = CAPE FEAR PUBLIC UTILITY AUTHORITY
CURRENT WATER USE = 0 GPD
PROPOSED WATER USE = 1,200 GPD

SANITARY SEWER OWNER = CAPE FEAR PUBLIC UTILITY AUTHORITY
CURRENT SEWER USE = 0 GPD
PROPOSED SEWER USE = 1,200 GPD

ROLL OUTS WILL BE USED FOR SOLID WASTE

NO WETLANDS HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA
NO HISTORIC OR ARCHAEOLOGICAL SITES HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA

PROJECT SITE'S USGS SOIL TYPES = (Wa) WAKULLA SAND
(Kr) KUREB SAND

NOTES

1. PROJECT SITE IS NOT LOCATED WITHIN 100 YEAR FLOODPLAIN. REFER TO FEMA MAP 3720312600J, PANEL 37017
2. SEE CITY OF WILMINGTON DETAILS FOR DETAIL REFERENCES (SD X–X).
3. SEE FHWA MUTCD FOR SIGN REFERENCES (R1–X).
4. SEE PLANS C–501 TO C–510 FOR UN–REFERENCED DETAILS.

SURVEY NOTES

1. EXISTING TOPOGRAPHIC SURVEY DATA SHOWN WAS SURVEYED BY ATLANTIC COAST SURVEY, PLLC, WILMINGTON, N.C.. HORIZONTAL REFERENCE DATUM NAD 83. VERTICAL DATUM NAVD 88.

Approved Construction Plan
Name Date
Planning _____
Traffic _____
Fire _____

CITY OF WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit #_____
Signed: _____

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600
Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100
Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950
www.beckermorgan.com

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 037531 GALEN M. JAMISON

Sep 29 2016 1:27 PM

PROJECT TITLE
CITY OF WILMINGTON FIRE DEPARTMENT
FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE
SITE PLAN

ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY | PROJ MGR: LML

CS-101

COPYRIGHT © 2016

EROSION CONTROL MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF – PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. INSPECT SEDIMENT TRAPS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT, AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE–HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN DESIGNATED DISPOSAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT
3. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
4. ALL AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
5. GRAVEL CONSTRUCTION ENTRANCE TO BE CLEANED WHEN SEDIMENT ACCUMULATIONS ARE VISIBLE OR SEDIMENT IS DEPOSITED ON THE ASPHALT AND STONE WILL BE PERIODICALLY TOP DRESSED WITH 2 INCHES OF #4 STONE TO MAINTAIN 6 INCH DEPTH.
6. INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1½" OR GREATER) RAINFALL EVENT. CLEAR THE WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

EROSION CONTROL NOTES

1. ANY CONSTRUCTION ACTIVITY BEYOND THE 1.87 ACRE LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE STATE EROSION CONTROL ORDINANCE AND IS SUBJECT TO FINES.
2. CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN ROAD RIGHT OF WAYS UNLESS OTHERWISE DESIGNATED TO REMAIN.
3. CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITH IN THE LIMITS OF CONSTRUCTION.
4. CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY UNSUITABLE SOILS.
5. CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
6. THE CONTRACTOR SHALL FURNISH ANY REQUIRED BORROW MATERIALS FROM A PROPERLY PERMITTED OFF–SITE FACILITY.
7.

a. SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND–DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:
b. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND–DISTURBING ACTIVITY.
c. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND–DISTURBING ACTIVITY.
d. CONDITIONS – IN MEETING THE STABILIZATION REQUIREMENTS ABOVE, THE FOLLOWING CONDITIONS OR EXEMPTIONS SHALL APPLY:
e. EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE.
f. ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY THE GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE ARE STEEPER THAN 3:1, THE 7 DAY REQUIREMENT APPLIES.
g. ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT.
h. SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT.
i. ALTHOUGH STABILIZATION IS USUALLY SPECIFIED AS GROUND COVER, OTHER METHODS, SUCH AS CHEMICAL STABILIZATION, MAY BE ALLOWED ON A CASE BY CASE BASIS.
j. FOR PORTIONS OF PROJECTS WITHIN THE SEDIMENT CONTROL COMMISSION DEFINED "HIGH QUALITY WATER ZONE" (15A NCAC 04A.0105), STABILIZATION WITH GROUND COVER SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS OF THE SITE WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACT.
k. PORTIONS OF A SITE THAT ARE LOWER IN ELEVATION THAN ADJACENT DISCHARGE LOCATIONS AND ARE NOT EXPECTED TO DISCHARGE DURING CONSTRUCTION MAY BE EXEMPT FROM THE TEMPORARY GROUND COVER REQUIREMENTS IF IDENTIFIED ON THE APPROVED E&SC PLAN OR ADDED BY THE PERMITTING AUTHORITY.

8. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE STATE ENGINEERING DEPARTMENT.
9. SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
10. ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
11. IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 CALENDAR DAYS, ALL DISTURBED AREAS MUST BE SEEDED, MULCHED, AND TACKED UNLESS WRITTEN APPROVAL IS GRANTED BY THE EROSION CONTROL OFFICER.
12. PRIOR TO CONSTRUCTING THE INFILTRATION BASIN BMP, ALL ACCUMULATED SEDIMENT IN THE SEDIMENT TRAP SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED TO A PERMITTED LOCATION.

CONSTRUCTION SEQUENCE

1. OBTAIN ALL NECESSARY PERMIT APPROVALS PRIOR TO ANY LAND DISTURBING ACTIVITY.
2. HOLD A PRE–CONSTRUCTION MEETING WITH THE EROSION CONTROL INSPECTOR.
3. INSTALL GRAVEL CONSTRUCTION ENTRANCE, INLET PROTECTION AND SILT FENCE, SEDIMENT BASIN, COMMENCE DEMOLITION, CLEARING AND ROUGH GRADING.
4. ROUGH GRADE SITE AND INSTALL UNDERGROUND UTILITIES.
5. INSTALL PAVEMENT BASE AND BEGIN BUILDING CONSTRUCTION.
6. ONCE BUILDING EXTERIOR WORK IS NEAR COMPLETE, PAVE ROADWAYS AND PARKING AREAS AND POUR CONC. WALKS.
7. PROVIDE TEMPORARY PROTECTION MEASURES AND DEVICES AS REQUIRED UNTIL UNDERGROUND UTILITIES AND PAVEMENT IS COMPLETE AND FINAL GRADES ARE STABILIZED WITH TEMPORARY VEGETATIVE COVER.
8. STABILIZE (FERTILIZE, SEED, AND MULCH) ALL DISTURBED AREAS AS SOON AS FINAL GRADES ARE ESTABLISHED.
9. ONCE CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS ARE STABILIZED, OBTAIN NCDENR'S APPROVAL TO REMOVE TEMPORARY EROSION CONTROL MEASURES.

GRADING NOTES

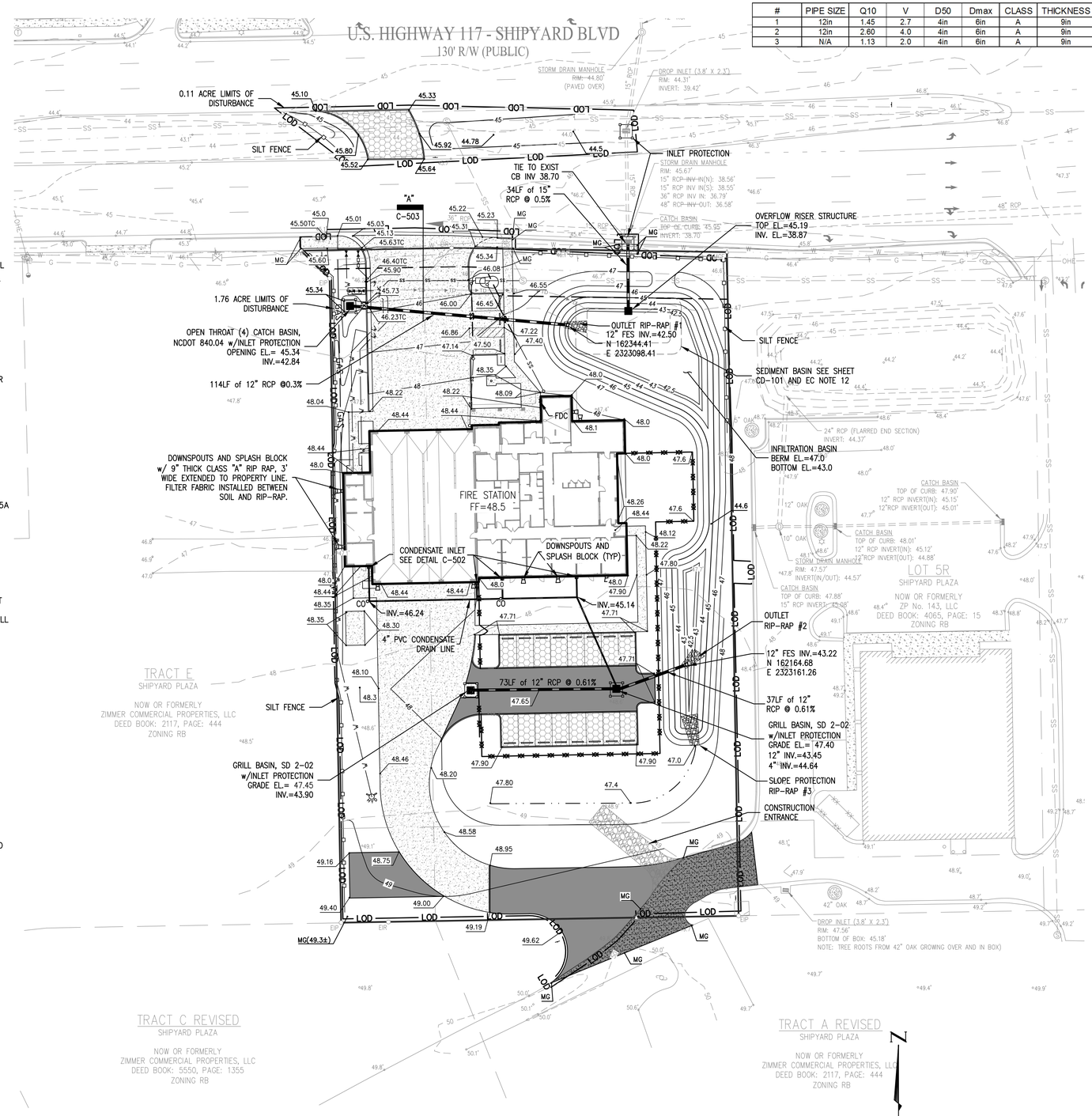
1. INITIATE EROSION CONTROL SEQUENCE BEFORE BEGINNING CLEARING, GRUBBING AND GRADING OPERATIONS.
2. CLEAR AREAS TO BE GRADED OF ALL VEGETATION. PROTECT VEGETATION BEYOND GRADING LIMITS.
3. STRIP TOPSOIL TO FULL DEPTH IN AREAS TO BE GRADED AND STOCKPILE. INSTALL SILT FENCE AROUND STOCKPILED MATERIAL.
4. COMPACT ALL FILL AREAS TO 95% OF MAXIMUM DENSITY.
5. ALL BANKS AND SWALE SIDE SLOPES SHALL BE GRADED WITH NO GREATER THAN 3:1 SLOPES.
6. ALL AREAS ARE TO BE GRADED SO THAT NO AREAS OF STANDING WATER OCCUR.
7. PROPOSED SPOT ELEVATIONS ARE SHOWN AT FINISHED GRADE.
8. OPERATOR SHALL FIELD VERIFY EXISTING TOPOGRAPHY IN RELATION TO THE PROPOSED GRADES TO ENSURE DRAINAGE IN THE DIRECTIONS INDICATED ON THE PLAN.

SEED SCHEDULE

1. FOLLOW RECOMMENDATIONS OF SOIL TEST OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LBS/ACRE 10–10–10 FERTILIZER.
2. APPLY 4,000 LBS/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL.
3. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.
4. REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
5. RESEED AND MULCH AREAS WHERE SEEDING EMERGENCE IS POOR, OR WHEN EROSION OCCURS, AS SOON AS POSSIBLE. DO NOT MOW. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE.

STABILIZATION TIMEFRAMES

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALE, DITCHES, SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH



RIP-RAP SCHEDULE

#	PIPE SIZE	Q10	V	D50	Dmax	CLASS	THICKNESS	La	A	W
1	12in	1.45	2.7	4in	6in	A	9in	4.0'	3.00'	5.00'
2	12in	2.60	4.0	4in	6in	A	9in	4.0'	3.00'	5.00'
3	N/A	1.13	2.0	4in	6in	A	9in	16.0'	6.0'	9.0'

TEMPORARY SEEDING

GRASS TYPE	AMOUNT/ 1000 S.F.	TIME OF SEEDING	INITIAL
RYE GRAIN	1–2 LBS.	AUG 15 – DEC 31	25 LBS. 10–10–10
GERMAN MILLET	1–2 LBS.	MAY 1 – AUG 14	25 LBS. 10–10–10
RYE GRAIN AND ANNUAL LESPEDEZA	2–3 LBS. 1–1.5 LBS	JAN 1 – APR 30	25 LBS. 10–10–10

PERMANENT SEEDING

GRASS TYPE	AMOUNT/ 1000 S.F.	TIME OF SEEDING	INITIAL
BERMUDA, COMMON	1–2 LBS.	APRIL THRU JUNE	25 LBS. 10–10–10
FESCUE, TALL (KENTUCKY 31)	5–7 LBS.	JUNE THRU AUG. FEB. THRU OCT.	25 LBS. 10–10–10
SERICEA LESPEDEZA (SLOPES)	1–2 LBS.	MARCH THRU APRIL	25 LBS. 10–10–10

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600
Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100
Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950
www.beckermorgan.com

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

Sep 29 2016 1:29 PM

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

GRADING, DRAINAGE & EROSION CONTROL PLAN

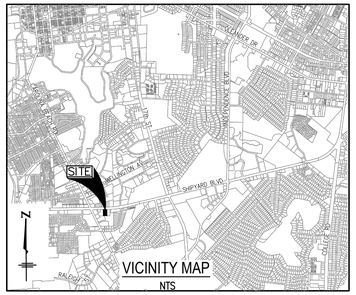
ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY | PROJ MGR: LML

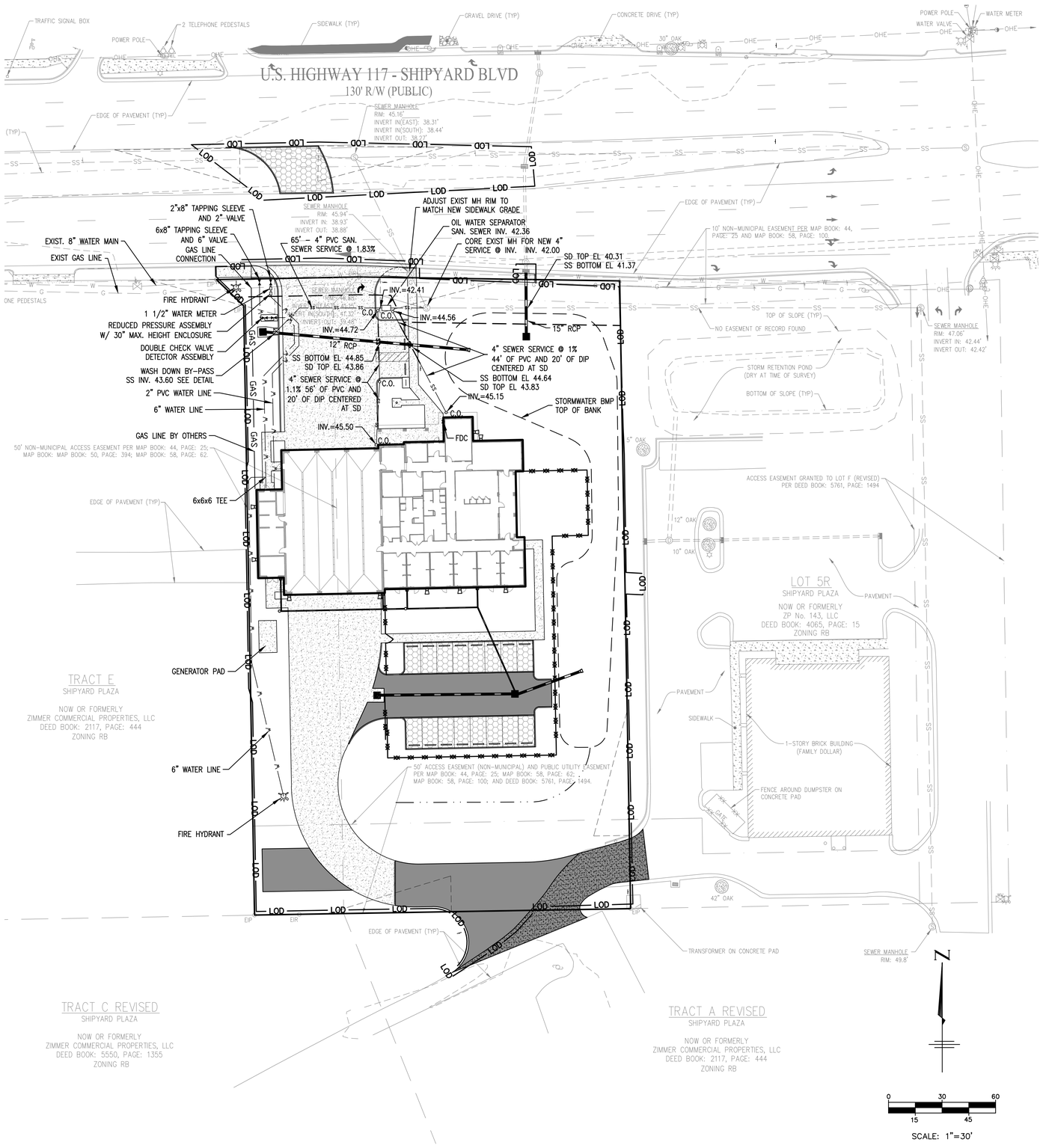
CG-101

COPYRIGHT © 2016



NOTES

1. WATER AND SANITARY SEWER SHALL BE IN ACCORDANCE WITH THE CURRENT CFPUA SPECIFICATIONS AND DETAILS.
2. SEE SHEETS C-506 – C-510 FOR WATER AND SANITARY SEWER DETAILS.
3. REFER TO SHEET CG-101 FOR STORM DRAIN INFORMATION.
4. REFER TO ELECTRICAL PLANS FOR ADDITIONAL INFORMATION.
5. STORM SEWER SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON TECHNICAL STANDARDS AND SPECIFICATION MANUAL.
6. NEW FIRE HYDRANTS MUST BE IN SERVICES PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED TO THE JOB SITE.
7. COORDINATE SITE LIGHTING CONSTRUCTION WITH DUKE ENERGY PROGRESS



BECKER MORGAN GROUP

ARCHITECTURE PLANNING

Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600

Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100

Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950

www.beckermorgan.com

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

Sep 29 2016 1:29 PM

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

UTILITY PLAN

ISSUE BLOCK

MARK	DATE	DESCRIPTION

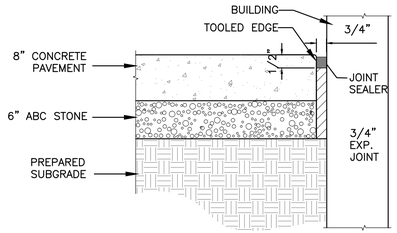
PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY | PROJ MGR: LML

CU-101

COPYRIGHT © 2016

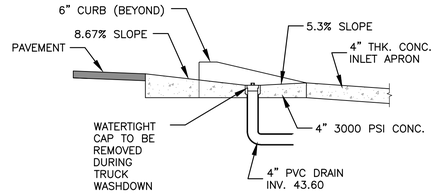
ASPHALT PAVEMENT SECTION

NOT TO SCALE

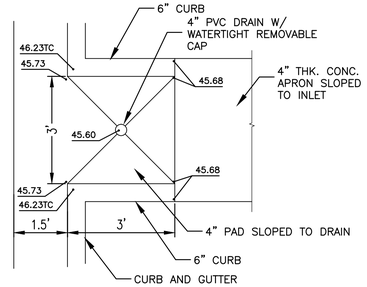


EXPANSION JOINT

NOT TO SCALE



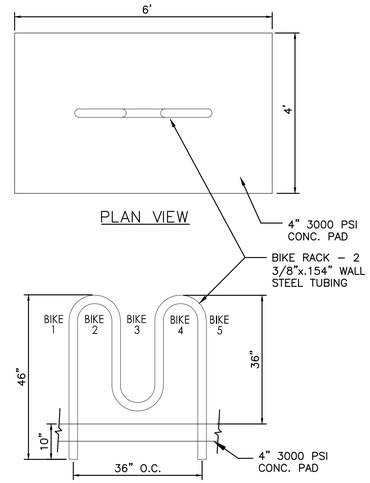
SECTION



PLAN VIEW

WASH DOWN BY-PASS

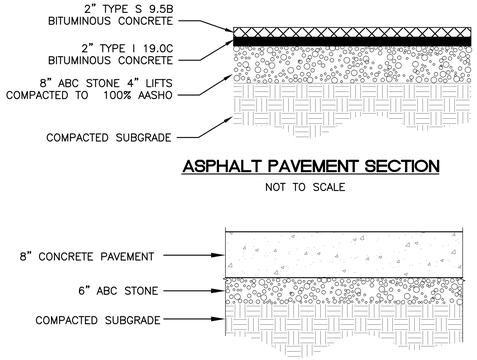
NOT TO SCALE



FRONT VIEW

BIKE RAKE DETAIL

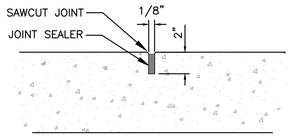
NOT TO SCALE



NOTE:
1. ALL CONCRETE PAVEMENT SHALL BE CONSTRUCTION IN ACCORDANCE WITH NCDOT SPECIFICATIONS USING 650 PSI (FLEXURAL) CONCRETE, CLASS PAVEMENT.
2. CONTRACTOR TO SUBMIT CONCRETE JOINT PLAN AND DETAILS.

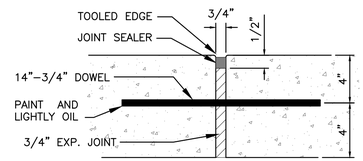
CONCRETE PAVEMENT SECTION

NOT TO SCALE



CONTROL JOINT

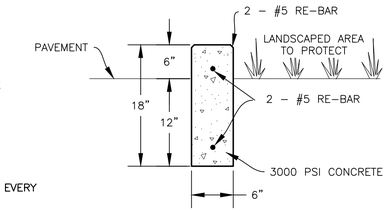
NOT TO SCALE



NOTE:
1. CONSTRUCTION JOINT DOWELS ARE TO BE INSTALLED EVERY 12" ALONG JOINT.

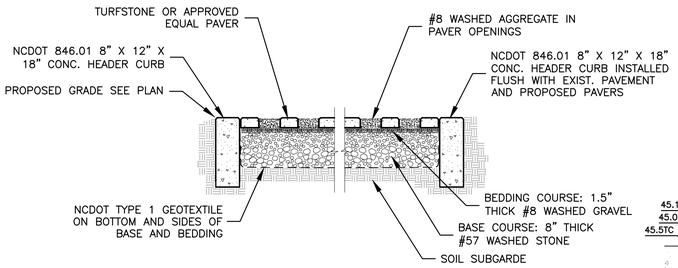
CONSTRUCTION JOINT

NOT TO SCALE



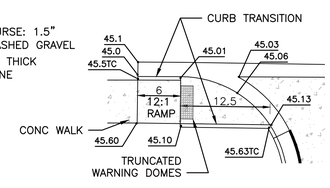
VERTICAL CURB DETAIL

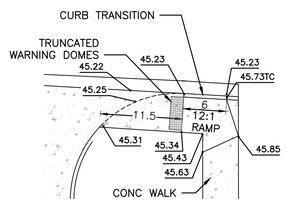
NOT TO SCALE



PERMEABLE PAVER DETAIL

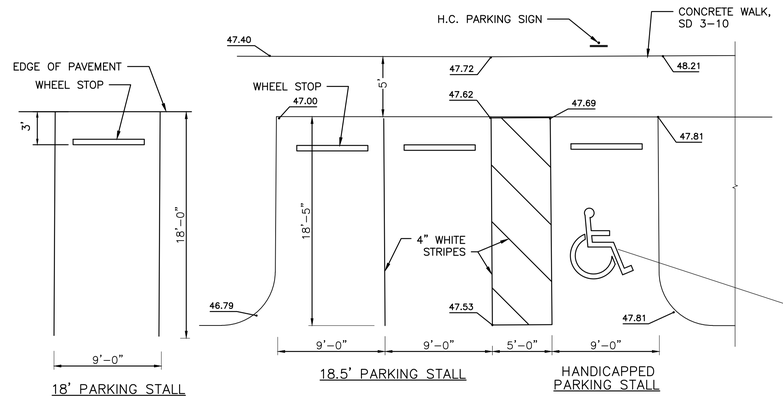
NOT TO SCALE

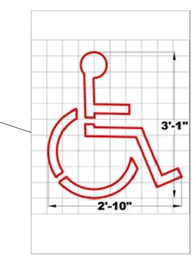




HANDICAPPED RAMPS AT R/W

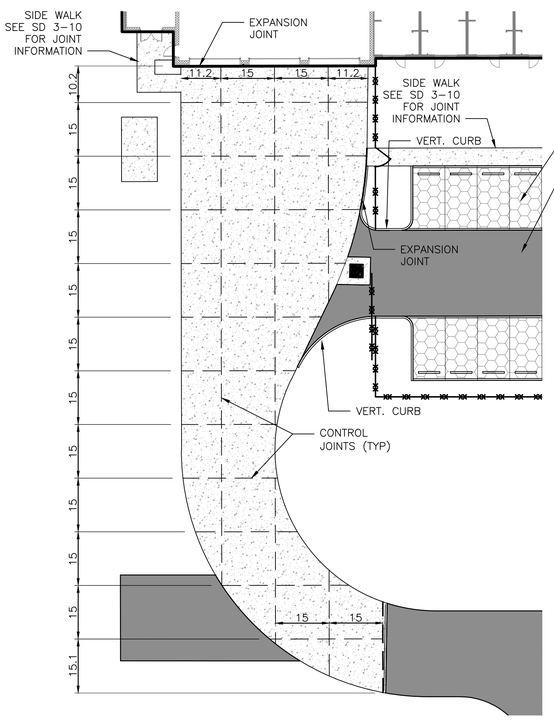
NOT TO SCALE



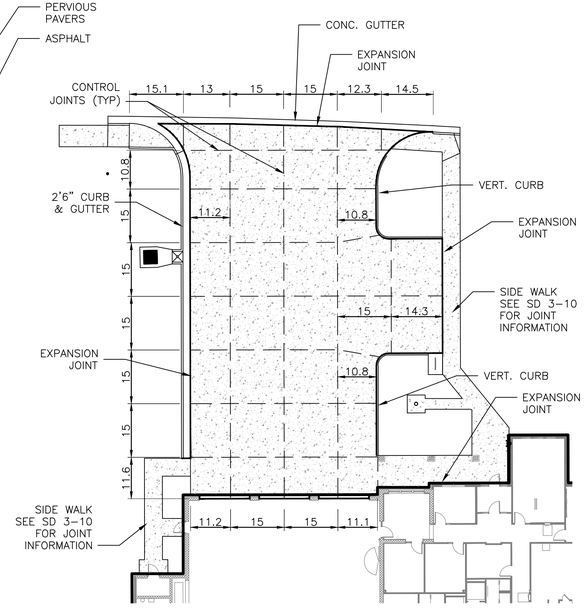


PARKING DETAIL

NOT TO SCALE

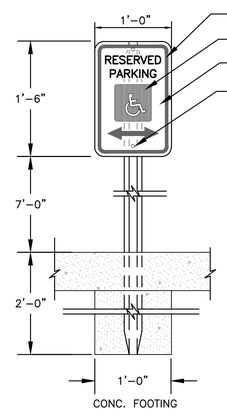


NOTE:
1. SEE SHEET CG–101 FOR GRADING AND ADDITIONAL REQUIREMENTS



CONCRETE PAVEMENT JOINT LOCATION PLAN

SCALE: 1"=20'

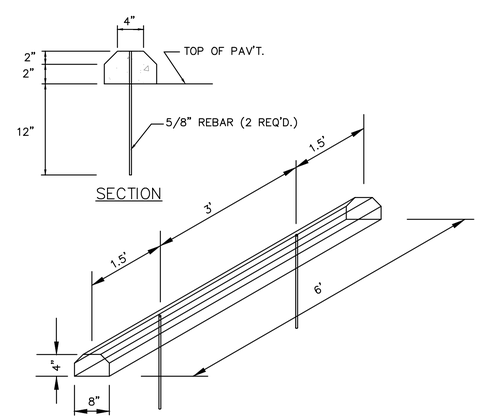


- LEGEND & BORDER – GREEN
- WHITE SYMBOL ON BLUE BACKGROUND
- WHITE BACKGROUND
- 3/8" HOLES LOCATED FOR ALIGNMENT WITH HOLE DRILLED ON 1" CENTERS IN METAL POST. (MOUNT WITH 5/16"x 2 1/4" BOLTS, TOP AND BOTTOM OF SIGN.)

NOTES
1. METAL POSTS TO BE GALVANIZED. ALL BOLTS, NUTS, WASHERS AND SCREWS MUST BE RUSTPROOF.
2. CONCRETE FOR FOOTING SHALL BE OF PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I.
3. SIGNS WILL BE FABRICATED BY USING A REFLECTING COATING IN THE SYMBOL, MESSAGE AND BORDERS APPLIED TO A SHEET ALUMINUM BACKING (0.80" IN THICKNESS).
4. MESSAGE LETTERING SHALL BE UPPER CASE (SERIES B) 2" HIGH IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. THE SYMBOL IS COMPOSED OF TWO ELEMENTS, A WHITE WHEEL– CHAIR FIGURE (WHICH SHOULD ALWAYS FACE RIGHT) ON A SQUARE BACKGROUND, INTERNATIONAL BLUE IN COLOR (FED. STD. 595a, COLOR #15180).
6. SIGN POST SHALL BE MIN. 2'–0" CLEAR FROM BACK OF CURB.

TYPE R7-8 SIGN FOR THE PHYSICALLY HANDICAPPED

NOT TO SCALE



WHEEL STOP DETAIL

NOT TO SCALE

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600
Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100
Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950
www.beckermorgan.com

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

Sep 29 2016 1:36 PM

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

DETAILS

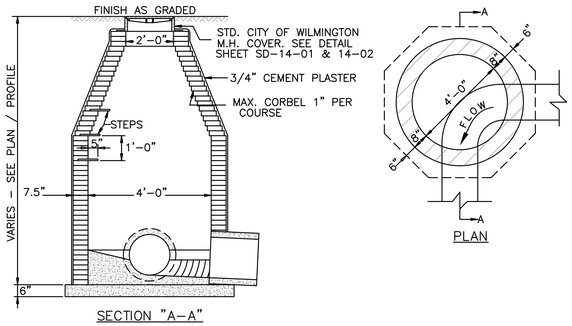
ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY | PROJ MGR: LML

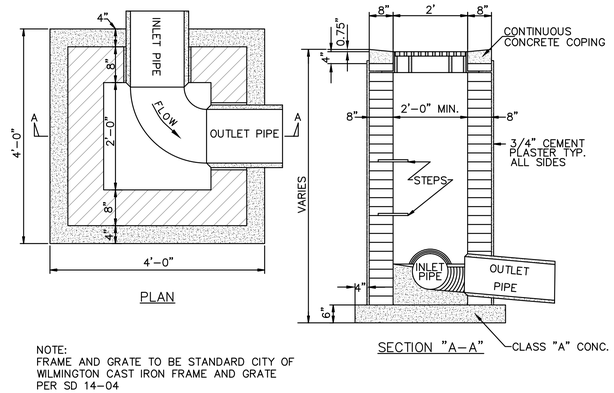
C-501

COPYRIGHT © 2016



GUIDELINES FOR STORM DRAIN MANHOLE

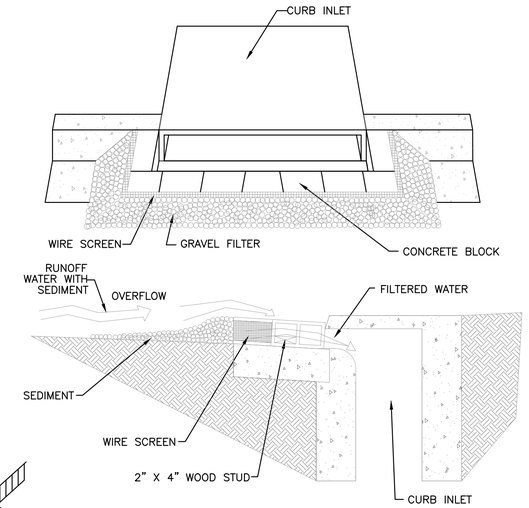
NOT TO SCALE



NOTE:
FRAME AND GRATE TO BE STANDARD CITY OF WILMINGTON CAST IRON FRAME AND GRATE PER SD 14-04

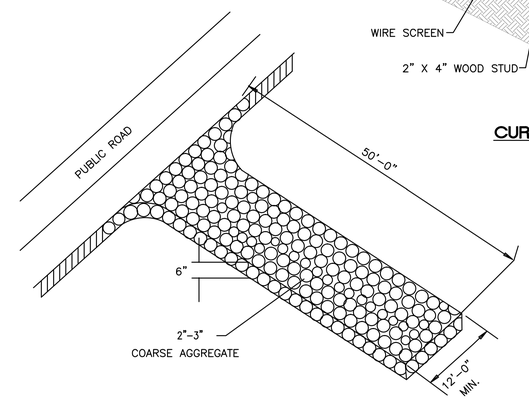
GRILL BASIN

NOT TO SCALE



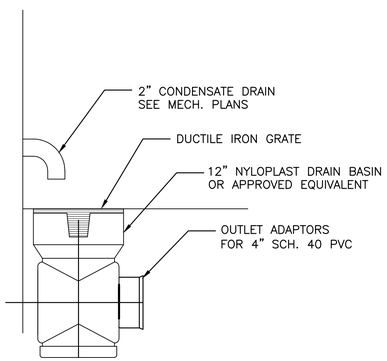
CURB INLET PROTECTION

NOT TO SCALE



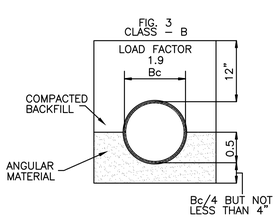
CONSTRUCTION ENTRANCE/EXIT

NOT TO SCALE



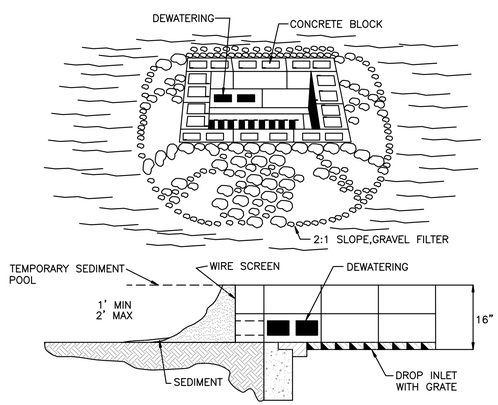
CONDENSATE DRAIN INLET

NOT TO SCALE



GUIDELINES FOR BEDDING DETAILS, STORM SEWER CLASSES (B + C)

NOT TO SCALE

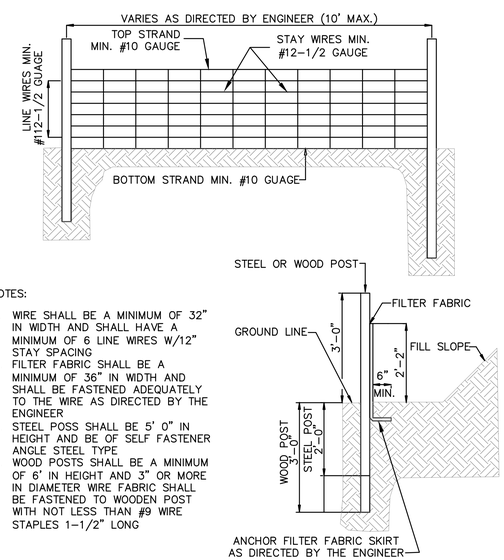


CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2" BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
3. USE CLEAN GRAVEL, 3/4 TO 1/2-INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. D.O.T #57 WASHED STONE IS RECOMMENDED.

DROP INLET PROTECTION

NOT TO SCALE



NOTES:

1. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES W/12" STAY SPACING
2. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE AS DIRECTED BY THE ENGINEER
3. STEEL POSS SHALL BE 5' 0" IN HEIGHT AND BE OF SELF FASTENER ANGLE STEEL TYPE
4. WOOD POSTS SHALL BE A MINIMUM OF 6' IN HEIGHT AND 3" OR MORE IN DIAMETER WIRE FABRIC SHALL BE FASTENED TO WOODEN POST WITH NOT LESS THAN #9 WIRE STAPLES 1-1/2" LONG

GUIDELINES FOR TEMPORARY SILT FENCE DETAIL

NOT TO SCALE

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600
Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100
Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950
www.beckermorgan.com

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

Sep 29 2016 1:37 PM

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

DETAILS

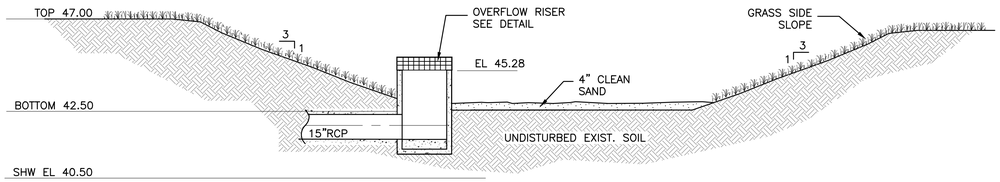
ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY | PROJ MGR: LML

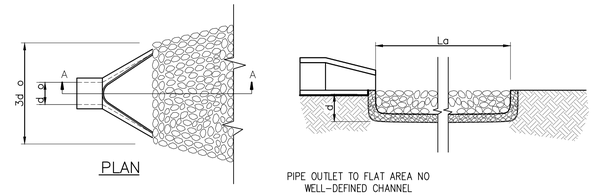
C-502

COPYRIGHT © 2016



INFILTRATION BASIN SECTION

NOT TO SCALE

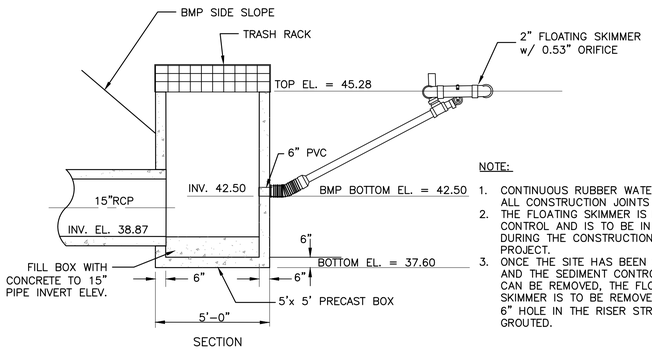


NOTES:

1. Lo IS THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6'.
3. IN A WELL - DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

OUTLET PROTECTION

NOT TO SCALE

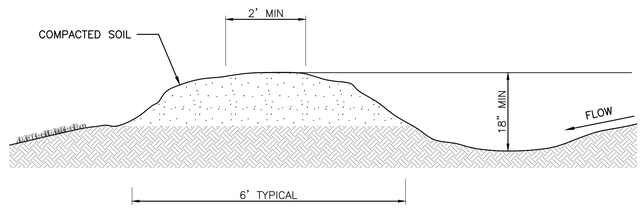


NOTE:

1. CONTINUOUS RUBBER WATER STOP AT ALL CONSTRUCTION JOINTS
2. THE FLOATING SKIMMER IS FOR EROSION CONTROL AND IS TO BE IN PLACE DURING THE CONSTRUCTION OF THE PROJECT.
3. ONCE THE SITE HAS BEEN STABILIZED AND THE SEDIMENT CONTROL MEASURES CAN BE REMOVED, THE FLOATING SKIMMER IS TO BE REMOVED AND THE 6" HOLE IN THE RISER STRUCTURE GROUTED.

OVERFLOW STRUCTURE

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. FILL AND COMPACT, TO NATURAL GROUND LEVEL OR ABOVE, ALL DITCHES AND GULLIES THAT WILL BE CROSSED BY MACHINERY.
2. DISK THE BASE OF THE DIKE BEFORE PLACING FILL.
3. ENSURE THAT THE CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.
4. COMPACT THE DIKE BY TRACKING WITH CONSTRUCTION EQUIPMENT.
5. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT AFTER IT HAS BEEN COMPACTED.
6. LEAVE SUFFICIENT AREA ALONG THE DIKE TO PERMIT MACHINE RE-GRADING AND CLEANOUT.
7. IMMEDIATELY SEED AND MULCH THE DIKE AFTER ITS CONSTRUCTION, AND STABILIZE THE FLOW PORTION IN ACCORDANCE WITH DESIGN REQUIREMENTS.

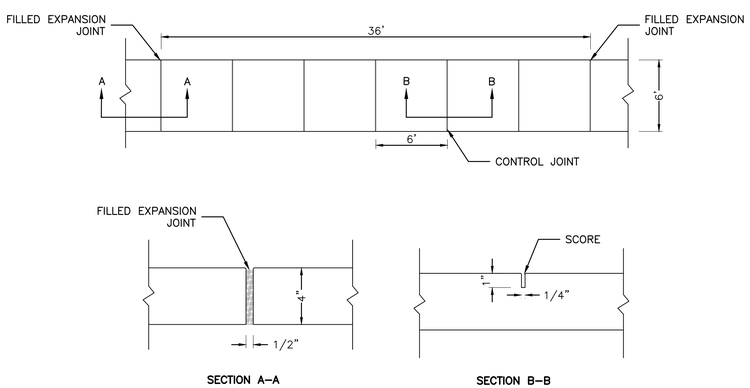
MAINTENANCE

INSPECT DIVERSION DIKES ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIKE.

CHECK OUTLETS, AND MAKE TIMELY REPAIRS AS NEEDED TO AVOID GULLY FORMATION. WHEN THE AREA ABOVE THE TEMPORARY DIVERSION DIKE IS PERMANENTLY STABILIZED, REMOVE THE DIKE, AND FILL AND STABILIZE THE CHANNEL TO BLEND WITH THE NATURAL SURFACE.

TEMPORARY DIVERSION DIKE

NOT TO SCALE

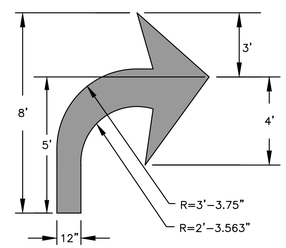


NOTES:

1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "A" - 3,000 PSI.
5. MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL
6. 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
7. MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
8. MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
9. MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

SIDEWALK DETAIL (SD 3-10)

NOT TO SCALE



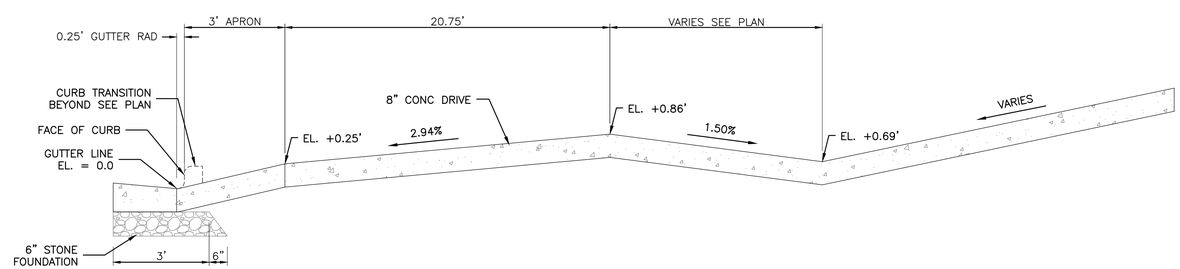
RIGHT OR LEFT
TURN ARROW

GENERAL NOTES

1-PAVEMENT MARKINGS, SYMBOLS AND DIMENSIONS SHALL BE DESIGNED PER MUTCD WITH APPROVAL FROM CITY TRAFFIC ENGINEERING, AND INSTALLED IN ACCORDANCE WITH NCDOT DIVISION 12 SPECIFICATIONS. SEE SD 11-01.

PAVEMENT MARKINGS AND SYMBOLS (SD 11-03)

NOT TO SCALE



DRIVEWAY SECTION "A"

NOT TO SCALE

BECKER MORGAN GROUP
ARCHITECTURE
PLANNING
Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600
Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100
Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950
www.beckermorgan.com

CATLIN
Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

Sep 29 2016 1:37 PM

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

DETAILS

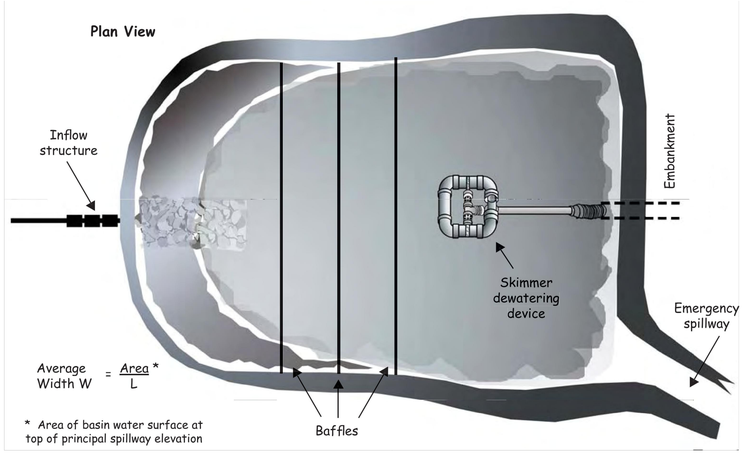
ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY | PROJ MGR: LML

C-503

COPYRIGHT © 2016



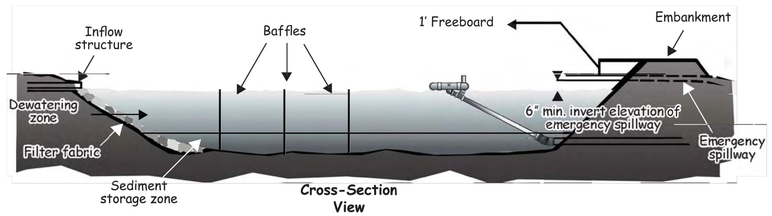


Figure 6.64c Example of a sediment basin with a skimmer outlet and emergency spillway. From Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

CONSTRUCTION SPECIFICATIONS

SKIMMER SEDIMENT BASIN

1. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED
2. ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
3. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
4. PLACE THE BARREL (TYPICALLY 4–INCH SCHEDULE 40 PVC PIPE) ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4–INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
5. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, OR AS DESIGNED.
6. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
7. EARTHEN SPILLWAYS–INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8–INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS. (ADAPTED FROM "A MANUAL FOR DESIGNING, INSTALLING AND MAINTAINING SKIMMER SEDIMENT BASINS." FEBRUARY, 1999. J. W. FAIRCLOTH & SON.).
8. INLETS–DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT–LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY (REFERENCES: RUNOFF CONTROL MEASURES AND OUTLET PROTECTION).
9. EROSION CONTROL––CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION (REFERENCES: SURFACE STABILIZATION).
10. INSTALL POROUS BAFFLES AS SPECIFIED IN PRACTICE 6.65, POROUS BAJJFES.
11. AFTER ALL THE SEDIMENT–PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY (REFERENCES: SURFACE STABILIZATION).

MAINTENANCE

INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE–HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE–HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE–ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
CHECK THE FABRIC– LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

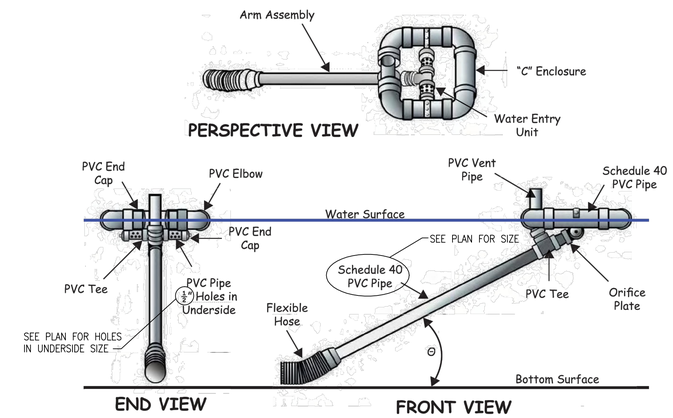
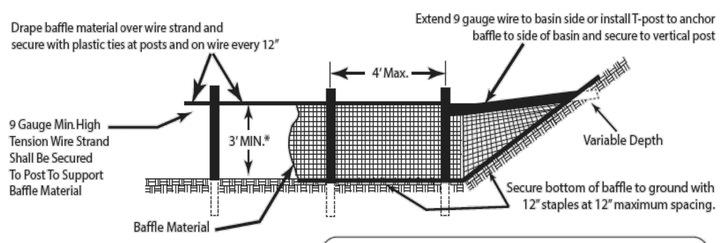


Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

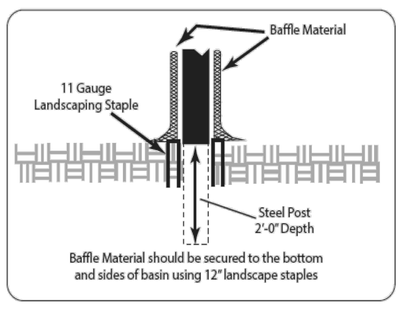
SKIMMER SEDIMENT BASIN

NOT TO SCALE



* If the temporary sediment basin will be converted to a permanent stormwater basin of greater depth, the baffle height should be based on the pool depth during use as a temporary sediment basin.

Note: Install three (3) coir fiber baffles in basins at drainage outlets with a spacing of 1/4 the basin length. Two (2) coir fiber baffles can be installed in the basins less than 20 ft. in length with a spacing of 1/3 the basin length.



SEDIMENT BASIN BAFFLE DETAIL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

MATERIALS:
1. USE MATTING MADE OF 100% COCONUT FIBER (COIR) TWINE WOVEN INTO HIGH STRENGTH MATRIX WITH THE PROPERTIES SHOWN IN TABLE 6.65A.
2. STAPLES SHOULD BE MADE OF 0.125 INCH DIAMETER NEW STEEL WIRE FORMED INTO A 'U' SHAPE NOT LESS THAN 12 INCHES IN LENGTH WITH A THROAT OF 1 INCH IN WIDTH. THE STAPLES ANCHOR THE POROUS BAFFLES INTO THE SIDES AND BOTTOM OF THE BASIN.
3. ENSURE THAT STEEL POSTS FOR POROUS BAFFLES ARE OF A SUFFICIENT HEIGHT TO SUPPORT BAFFLES AT DESIRED HEIGHT. POSTS SHOULD BE APPROXIMATELY 1–3/8" WIDE MEASURED PARALLEL TO THE FENCE, AND HAVE A MINIMUM WEIGHT OF 1.25 LB/LINEAR FT. THE POSTS MUST BE EQUIPPED WITH AN ANCHOR PLATE HAVING A MINIMUM AREA OF 14.0 SQUARE INCHES AND BE OF THE SELF–FASTENER ANGLE STEEL TYPE TO HAVE A MEANS OF RETAINING WIRE AND COIR FIBER MAT IN THE DESIRED POSITION WITHOUT DISPLACEMENT.
4. USE 9–GAUGE HIGH TENSION WIRE FOR SUPPORT WIRE.

SPECIFICATIONS FOR POROUS BAFFLE MATERIAL:

COIR FIBER BAFFLE MATERIAL PROPERTY REQUIREMENTS:

THICKNESS	0.30 IN. MINIMUM
TENSILE STRENGTH (WET)	900 X 680 LB/FT MINIMUM
ELONGATION (WET)	69% X 34% MAXIMUM
FLOW VELOCITY	10–12 FT/SEC
WEIGHT	20 OZ/SY (680 G/M^2) MINIMUM
MINIMUM WIDTH	6.5 FEET
OPEN AREA	50% MAXIMUM

CONSTRUCTION:
1. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
2. INSTALL THE COIR FIBER BAFFLES IMMEDIATELY UPON EXCAVATION OF THE BASINS.
3. INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP (PRACTICE 6.62, SEDIMENT FENCE).
4. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES AND SPACED A MAXIMUM OF 4 FEET APART. THE TOP OF THE FABRIC SHOULD BE A MINIMUM OF 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE A MINIMUM OF 2 INCHES LOWER THAN THE TOP OF THE EARTHEN EMBANKMENT.
5. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.
6. ATTACH A 9 GAUGE HIGH TENSION WIRE STRAND TO THE STEEL POSTS AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION WITH PLASTIC TIES OR WIRE FASTENERS TO PREVENT SAGGING. IF THE TEMPORARY SEDIMENT BASIN WILL BE CONVERTED TO A PERMANENT STORMWATER BASIN OF A GREATER DEPTH, THE BAFFLE HEIGHT SHOULD BE BASED ON THE POOL DEPTH DURING USE AS A TEMPORARY SEDIMENT BASIN.
7. EXTEND 9 GAUGE MINIMUM HIGH TENSION WIRE STRAND TO SIDE OF BASIN OR INSTALL STEEL T–POSTS TO ANCHOR BAFFLE TO SIDE OF BASIN AND SECURE TO VERTICAL END POSTS AS SHOWN IN FIGURE 6.65B.
8. DRAPE THE COIR FIBER MAT OVER THE WIRE STRAND MOUNTED AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION. SECURE THE COIR FIBER MAT TO THE WIRE STRAND WITH PLASTIC TIES OR WIRE FASTENERS. ANCHOR THE MATTING TO THE SIDES AND FLOOR OF THE BASIN WITH 12 INCH WIRE STAPLES, APPROXIMATELY 1 FT APART, ALONG THE BOTTOM AND SIDE SLOPES OF THE BASIN.
9. DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN
10. ADJUSTMENTS MAY BE REQUIRED IN THE STAPLING REQUIREMENTS TO FIT INDIVIDUAL SITE CONDITIONS.

MAINTENANCE REQUIREMENTS:
INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL, TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES.
TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT, AND REPLACE IF DAMAGED DURING CLEANOUT OPERATIONS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.
AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600
Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100
Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950
www.beckermorgan.com

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

Sep 29 2016 1:37 PM

PROJECT TITLE
CITY OF WILMINGTON FIRE DEPARTMENT
FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE
DETAILS

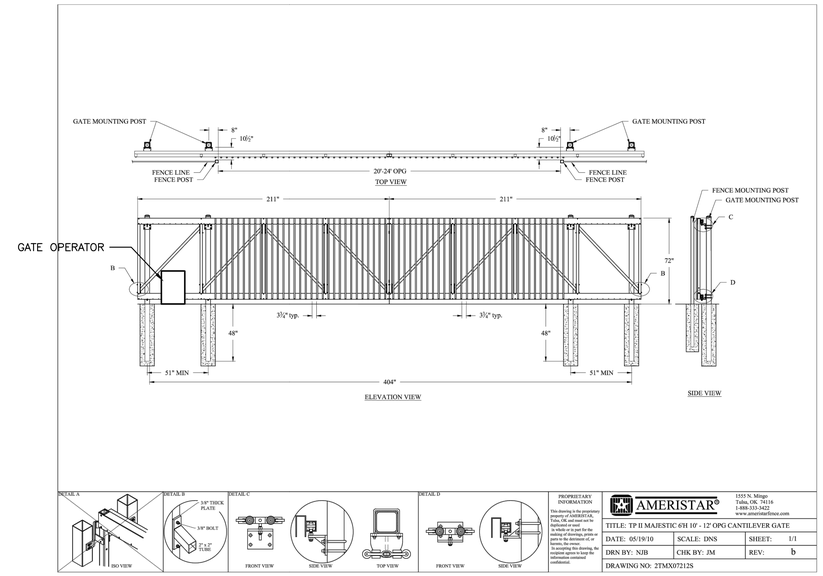
ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY | PROJ MGR: LML

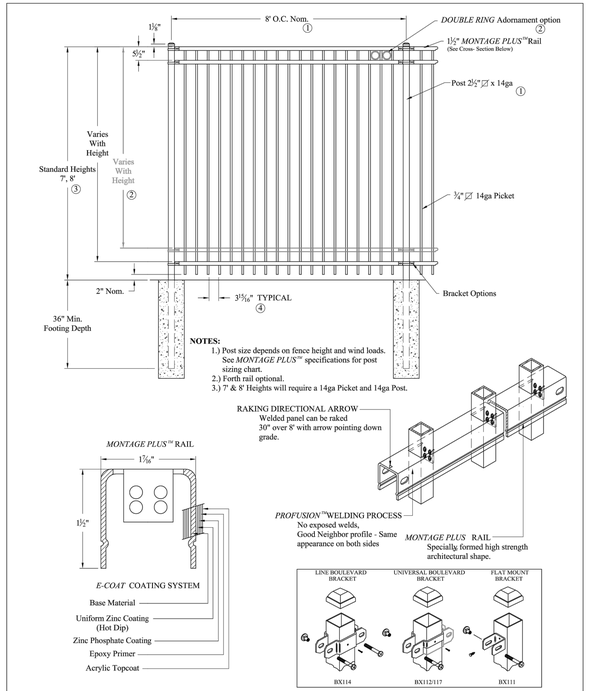
C-504

COPYRIGHT © 2016



WROUGHT IRON CANTILEVER SLIDE GATE DETAIL

BASEIS OF DESIGN



NOTES:

1.) Post size depends on fence height and wind loads. See *MONTAGE PLUS™* specifications for post sizing chart.
2.) Forth rail optional.
3.) 7 & 8' Heights will require a 14ga Picket and 14ga Post.

COMMERCIAL STRENGTH WELDED STEEL PANEL
PRE-ASSEMBLED

Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.

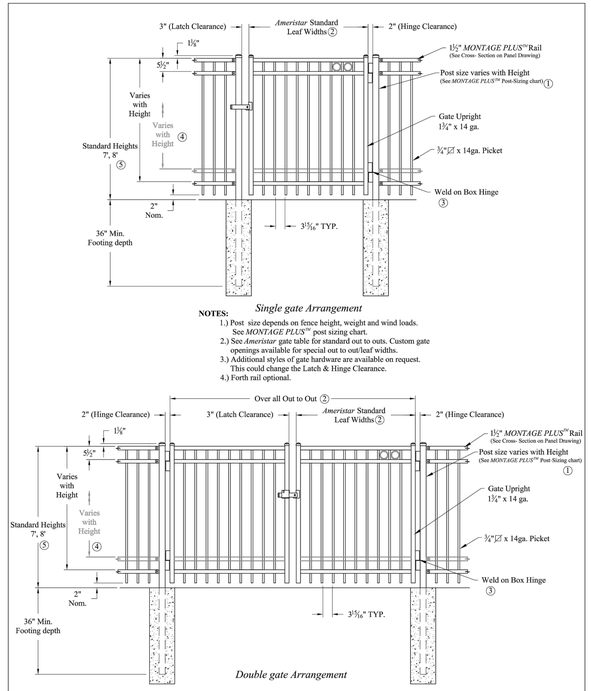
IRMISO7-8

MONTAGE COMMERCIAL MAJESTIC 3/4-RAIL		
DR: NJB	SH . 1of 1	SCALE: DO NOT SCALE
CK: BS	Date 09/21/11	REV: d

AMERISTAR®
1555 N. Mingo
Tulsa, OK 74116
1-888-333-3422
www.ameristarfence.com

WROUGHT IRON FENCE SECTION

BASEIS OF DESIGN



Single gate Arrangement

NOTES:

1.) Post size depends on fence height, weight and wind loads. See *MONTAGE PLUS™* post sizing chart.
2.) See *Ameristar* gate table for standard out to outs. Custom gate openings available for special out to out/leaf widths.
3.) Additional styles of gate hardware are available on request. This could change the Latch & Hinge Clearance.
4.) Forth rail optional.

Double gate Arrangement

COMMERCIAL STRENGTH WELDED STEEL GATES

Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.

IRMISO7-8

MONTAGE COMMERCIAL MAJESTIC 3/4-RAIL SGL & DBL GATE		
DR: RTM	SH . 1of 1	SCALE: DO NOT SCALE
CK: ME	Date 6/25/10	REV: c

AMERISTAR®
1555 N. Mingo
Tulsa, OK 74116
1-888-333-3422
www.ameristarfence.com

WROUGHT IRON GATE DETAIL

BASEIS OF DESIGN

BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600

Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100

Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950

www.beckermorgan.com

CATLIN
Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 029630 JACLYN M. JAMISON

Sep 29 2016 1:39 PM

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

DETAILS

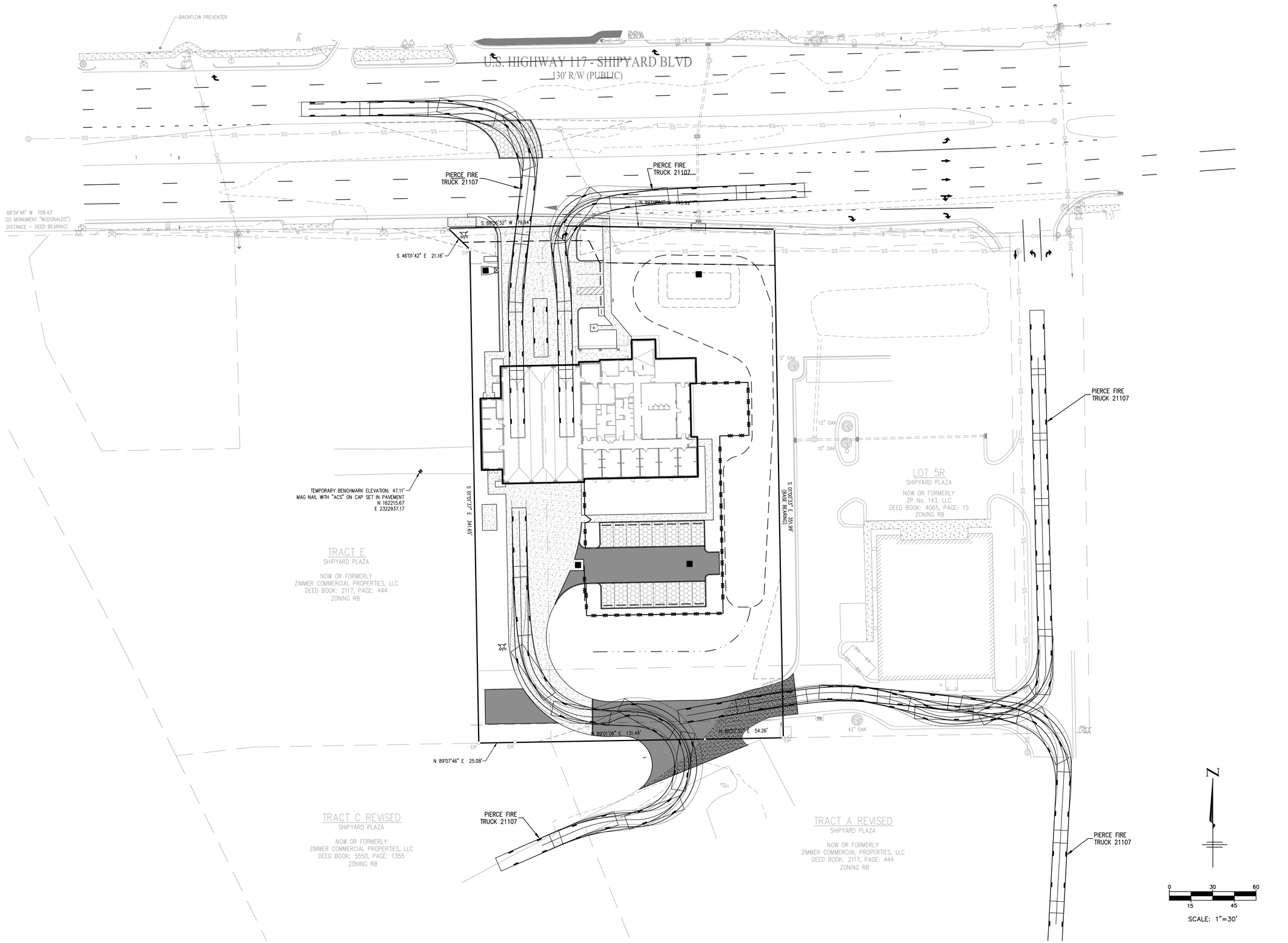
ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00
DATE: 6/30/2016
SCALE:
DRAWN BY: EJS / NMY
PROJ MGR: LML

C-505

COPYRIGHT © 2016



BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600

Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100

Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950

www.beckermorgan.com

CATLIN
Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5

680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

FIRE TRUCK
TURNING SIMULATION

ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00

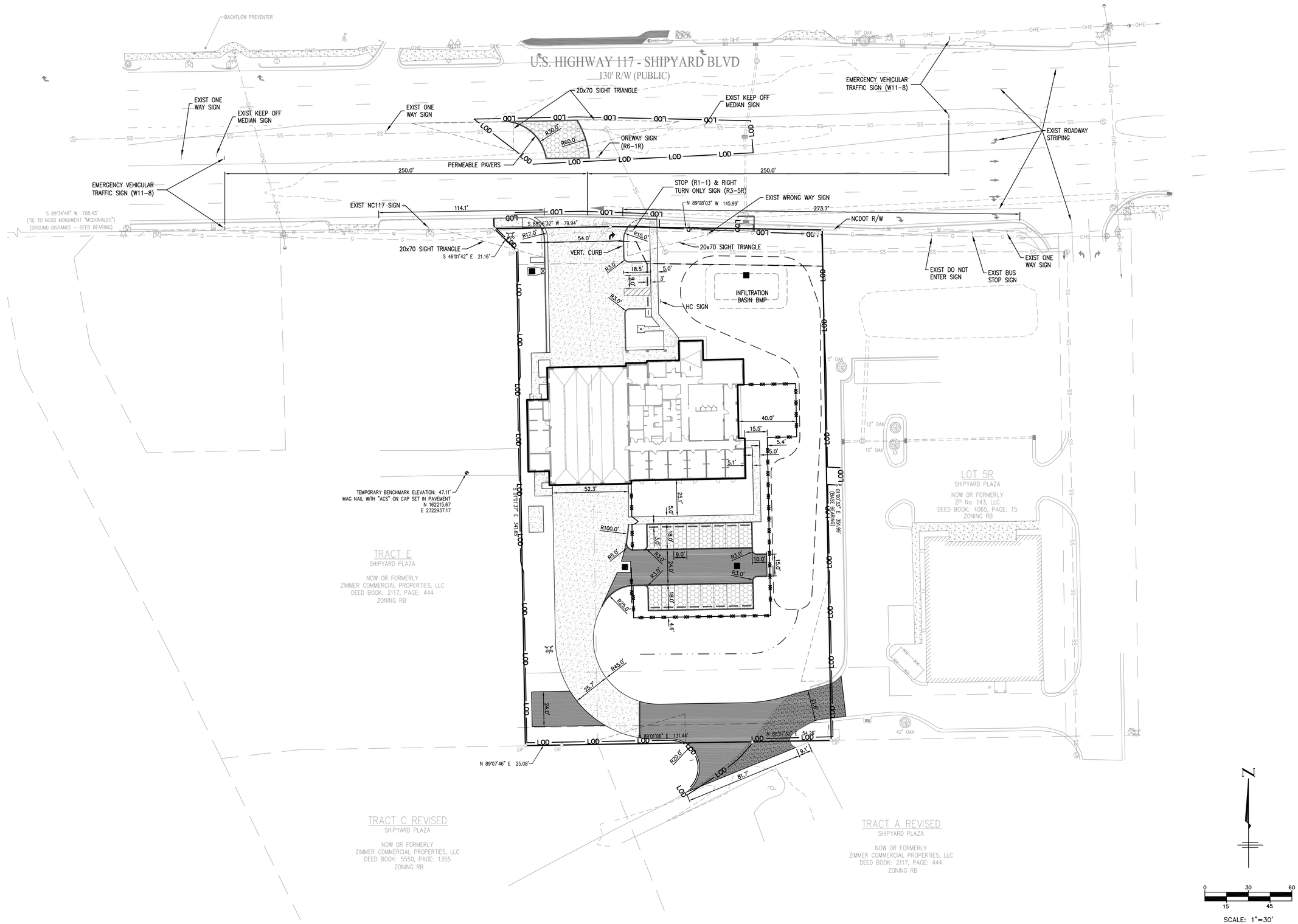
DATE: 6/30/2016

SCALE:

DRAWN BY: EJS / NMY | PROJ MGR: LML

FIG-A

COPYRIGHT © 2016



BECKER MORGAN GROUP

ARCHITECTURE
PLANNING

Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600

Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100

Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950

www.beckermorgan.com

CATLIN
Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0685

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5

680 SHIPYARD BLVD.
WILMINGTON, NC

SHEET TITLE

US Hwy 117
EMERGENCY TRAFFIC
SIGNALIZATION

ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO: 2015028.00

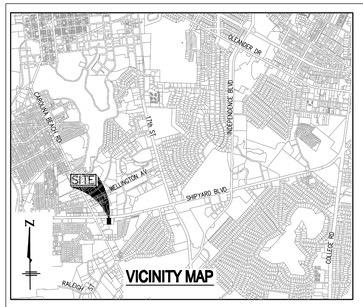
DATE: 6/30/2016

SCALE:

DRAWN BY: EJS / NMY | PROJ MGR: LML

FIG-B

COPYRIGHT © 2016



STREET YARD

225.93' FRONTAGE – 54' DRIVEWAY = 171.93'
171.93' X 25 MULTIPLYER = 4,298.25 S.F. REQUIRED STREET YARD
4,298.25 S.F. REQUIRED STREET YARD
4,480 S.F. STREET YARD PROVIDED
(595 + 201 + 3,684 S.F. = 4,480 S.F.)

FOUNDATION PLANTING

FRONT FACADE 17.5' X 36.5' = 639 S.F.
639 S.F. X 12% =77 S.F.

77 S.F. REQUIRED FRONT FOUNDATION PLANTING
602 S.F. PROVIDED FRONT FOUNDATION PLANTING

REAR FACADE 17.5' X 79' = 1,383 S.F.
1,383 S.F. X 12% = 166 S.F.

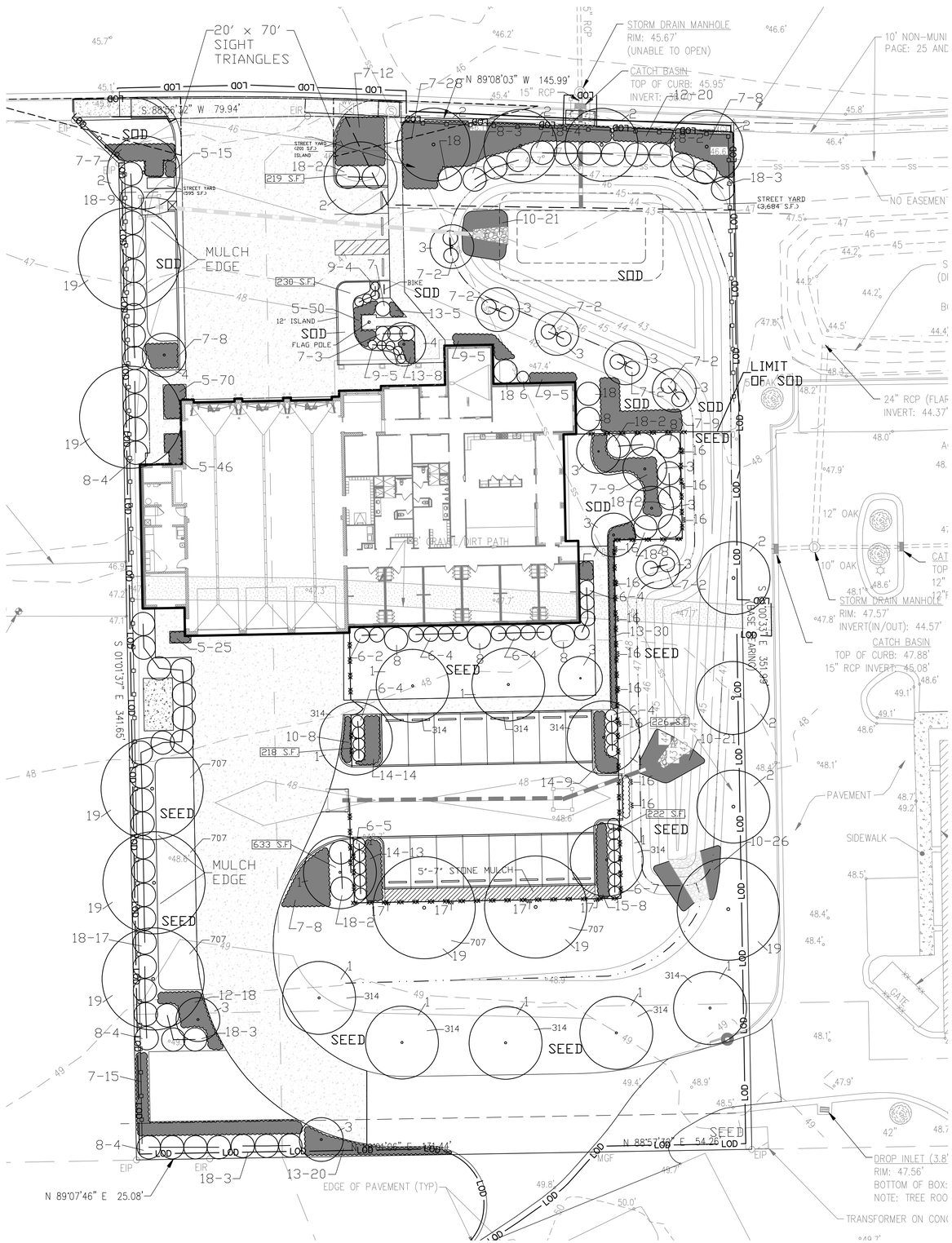
166 S.F. REQUIRED REAR FOUNDATION PLANTING
2,149 S.F. PROVIDED REAR FOUNDATION PLANTING

PARKING AREA SHADE REQUIREMENTS 20%

TOTAL PARKING AREA 20,454 S.F. X 20 % = 4,090 S.F.

TOTAL SHADE REQUIRED 4,090 S.F.
TOTAL SHADE PROVIDED 7,303 S.F.

TREE REQUIRED 26
1.72 ACRES X 15 TREES PER ACRE = 25.8 OR 26 TREES
TREES PROVIDED 32



FIRE STATION #5 PLANT LIST								
KEY NO.	QUANTITY	BOTANICAL NAME	COMMON NAME	ROOT	CAL.	HT.	REMARKS	NOTE
1	10	PISTACIA CHINENSIS	PISTACHIO	WB	3"-3 1/2"	10'-12'		LARGE TREE
2	8	PRUNUS SERRULATA	YOSHINO CHERRY	WB	2 1/2"-3"	10'-12'		LARGE TREE
3	12	LAGERSTROEMIA INDICA	CREPE MYRTLE	WB		8'-10'	VAR. MUSKAGEE	SMALL TREE
4	2	ACER PALMATUM	JAPANESE MAPLE	25 GAL.	2 1/2"	8'-0"	VAR. BLOODGOOD	SMALL TREE
5	186	OPHIOPOGON JAPONICUS	MONDO GRASS	1 GAL.			1' O.C.	GROUND COVER
6	31	ILEX VOMITORIA NANA	DWARF YAUPON	3 GAL.			4' O.C.	SHRUBS
7	118	JUNIPERUS DAVURICA PARSONI	PARSONS JUNIPER	3 GAL.			5' O.C.	GROUND COVER
8	24	PITTOSPORUM TOBIRA	PITTOSPORUM	7 GAL.			8' O.C.	SHRUBS
9	19	PITTOSPORUM TOBIRA NANA	WHEELER'S DWARF	3 GAL.			3' O.C.	GROUND COVER
10	76	HEMEROCALLIS HYBRIDA	DAYLILLY	1 GAL.			3' O.C. STELLA D'ORE	GROUND COVER
11	13	HEMEROCALLIS HYBRIDA	DAYLILLY	1 GAL.			3' O.C. HYPERION	GROUND COVER
12	18	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	3 GAL.			2' O.C.	SHRUB
13	50	CALAMAGROSTIS BRACHYTRICHA	KOREAN FEATHER REED GRASS	1 GAL.			2' O.C.	GROUND COVER
14	33	PENNISETUM ALOPECUROIDES "CASSIAN"	DWARF FOUNTAIN GRASS	3 GAL.			3' O.C.	GROUND COVER
15	8	PENNISETUM ALOPECUROIDES "TOKYO"	GIANT FOUNTAIN GRASS	3 GAL.			3' O.C.	GROUND COVER
16	11	PYRACANTHA KODIZUMMI	FORMOSA FIRETHORN	5 GAL.				GROUND COVER
17	4	ROSA BANKSIAE	BANKS ROSE	5 GAL.				GROUND COVER
18	50	AZALEA INDICA	INDIAN AZALEA	5 GAL.			1' O.C. FORMOSA	SHRUB
19	8	QUERCUS PHELLOS	WILLOW OAK	WB	3"-3 1/2"			LARGE TREE

NOTE:
The key number refers to the Plant List. Where there is only one number, it is the key number and the Quantity is one. Where there are two numbers connected by a dash, the first is the key number and the second is the quantity required for the planting bed indicated. **(One year maintenance & warranty on all plant material from time of final inspection following planting.)**

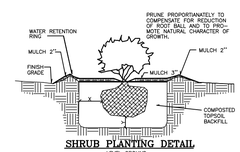
B&B = Ball and Burlap
WB = Wire Basket
Cont. = Container grown

All plant bed areas shall be covered in a minimum of 5" to 7" of gray stone mulch.(Sample & source to be provided to landscape architect for approval)

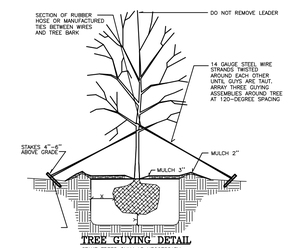
THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND FLAGGING ALL UNDERGROUND UTILITIES PRIOR TO PROCEEDING WITH ANY EXCAVATION WORK. IF ANY DAMAGE IS DONE TO EXISTING OR NEW UTILITIES, ALL NECESSARY REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO COST TO THE OWNER.

CALL: 1-800-632-4949 TO LOCATE UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
GAS LINES MAY BE LOCATED ON SITE. CONTRACTOR TO VERIFY WITH OWNER OR OWNERS REPRESENTATIVE PRIOR TO PROCEEDING WITH ANY EXCAVATION.

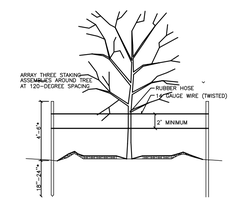
NOTE:
THE PLANT QUANTITIES SHOWN ON THE PLANT LIST ARE PROVIDED AS A CONVENIENCE TO THE CONTRACTOR. IN THE EVENT THERE IS A DIFFERANCE IN QUANTITY BETWEEN PLANT QUANTITIES IN THE PLANT LIST AND PLANT QUANTITIES ON THE PLAN, THE CONTRACTOR SHALL USE THE QUANTITY SHOWN ON THE PLAN. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY QUANTITY DIFFERANCE.



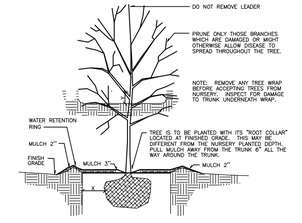
SHRUB PLANTING DETAIL
EVEL GROUND
NOT TO SCALE



TREE GUYING DETAIL
STAKE TREES ONLY AS NECCESSARY
REMOVE GUY WIRES AFTER ONE YEAR



TREE STAKING DETAIL
STAKE TREES ONLY AS NECCESSARY
REMOVAL GUY WIRES AFTER ONE YEAR
* SOME VARIATION IS ALLOWABLE



TREE PLANTING DETAIL
LEVEL GROUND
NOT TO SCALE

SCHEDULE FOR PLANTING HOLE SIZE		
BARE ROOT, BALL OR CONTAINER SIZE		
#	X	Y
5"-12"	6"	3"
12"-36"	12"	6"
36" AND UP	1/2W	12"

LEGEND

GROUND COVER

PROPOSED TREES

PROPOSED SHRUBS

HOWARD T. CAPPS & ASSOCIATES, INC. CORPORATE C-97 NORTH CAROLINA

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 289 HOWARD T. CAPPS

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		

CITY OF WILMINGTON NORTH CAROLINA
Public Service● Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date:_____ Permit #_____
Signed: _____

BECKER MORGAN GROUP
ARCHITECTURE PLANNING
Wilmington, NC
3205 Randall Parkway, Suite 211
Wilmington, NC 28403
910.341.7600
Salisbury, MD
312 West Main St. Suite 300
Salisbury, MD 21801
410.546.9100
Dover, DE
309 S Governors Ave
Dover, DE 19904
302.734.7950
www.beckermorgan.com

CATLIN Engineers and Scientists
220 Old Dairy Road
Wilmington, NC 28405
Corporate Licensure No. for Engineering Services C-0585

HTCA
Howard T. Capps & Associates, Inc.
Land Planning Landscape Architecture
4014 Oleander Drive, Suite 102
Wilmington, North Carolina 28403
Phone: (910) 264-1996

PROJECT TITLE

CITY OF WILMINGTON FIRE DEPARTMENT

FIRE STATION No. 5
680 SHIPYARD BLVD.
WILMINGTON, NC 28403

SHEET TITLE

LANDSCAPE PLAN

ISSUE BLOCK

MARK	DATE	DESCRIPTION

PROJECT NO:	xxx
DATE:	AUGUST 1, 2016
SCALE:	1"=20'
DRAWN BY: LML, KAG	PROJ MGR: LML

SHEET L-1

COPYRIGHT © 2016