

WAKE COUNTY NOTES

FINAL ZONING AND SITE IMPROVEMENT INSPECTION SHALL BE REQUIRED TO VERIFY SITE PLAN COMPLIANCE BE DONE BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED BY WAKE COUNTY BUILDING INSPECTIONS

DETERIORATED OR DEAD SCREENING SHALL BE REPAIRED OR REPLACED WITHIN SIX MONTHS

NO PERMANENT CONSTRUCTION CAN OCCUR WITHIN BUFFER YARDS

SEPTIC TANKS, SEPTIC DRAIN LINES ARE PROHIBITED IN REQUIRED BUFFERYARDS

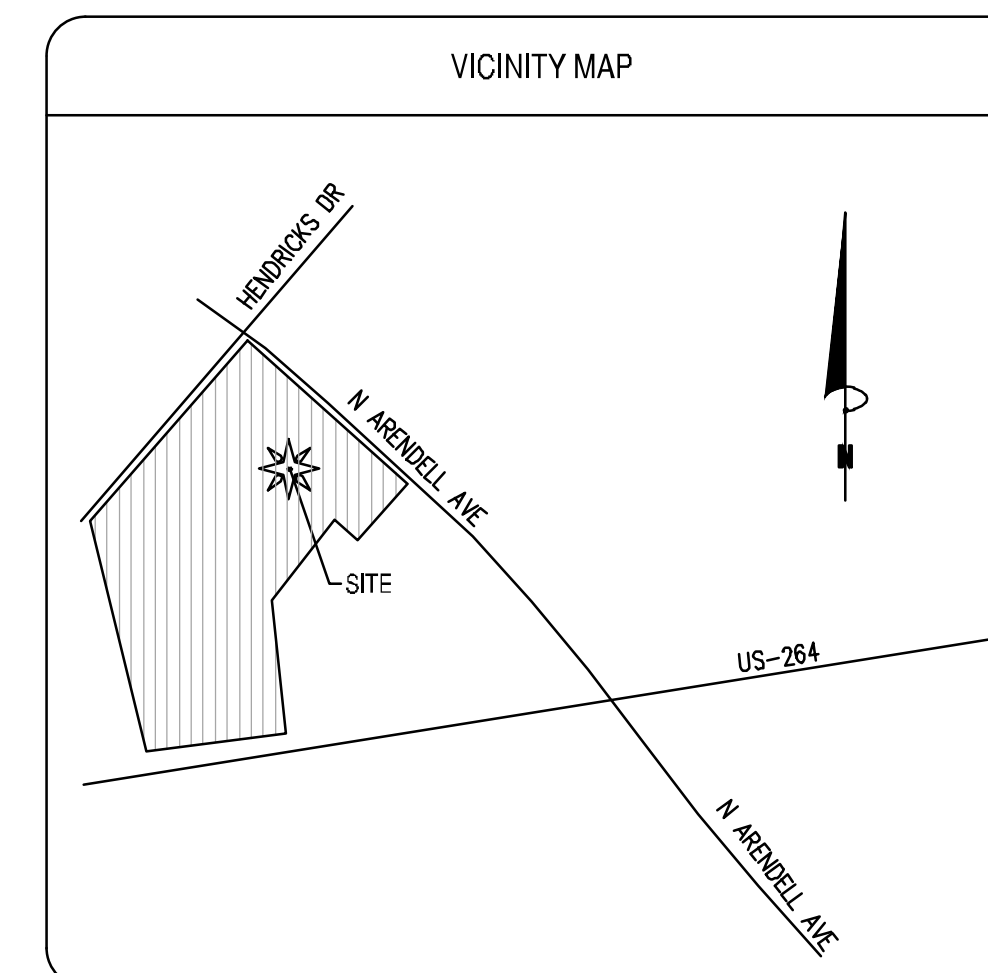
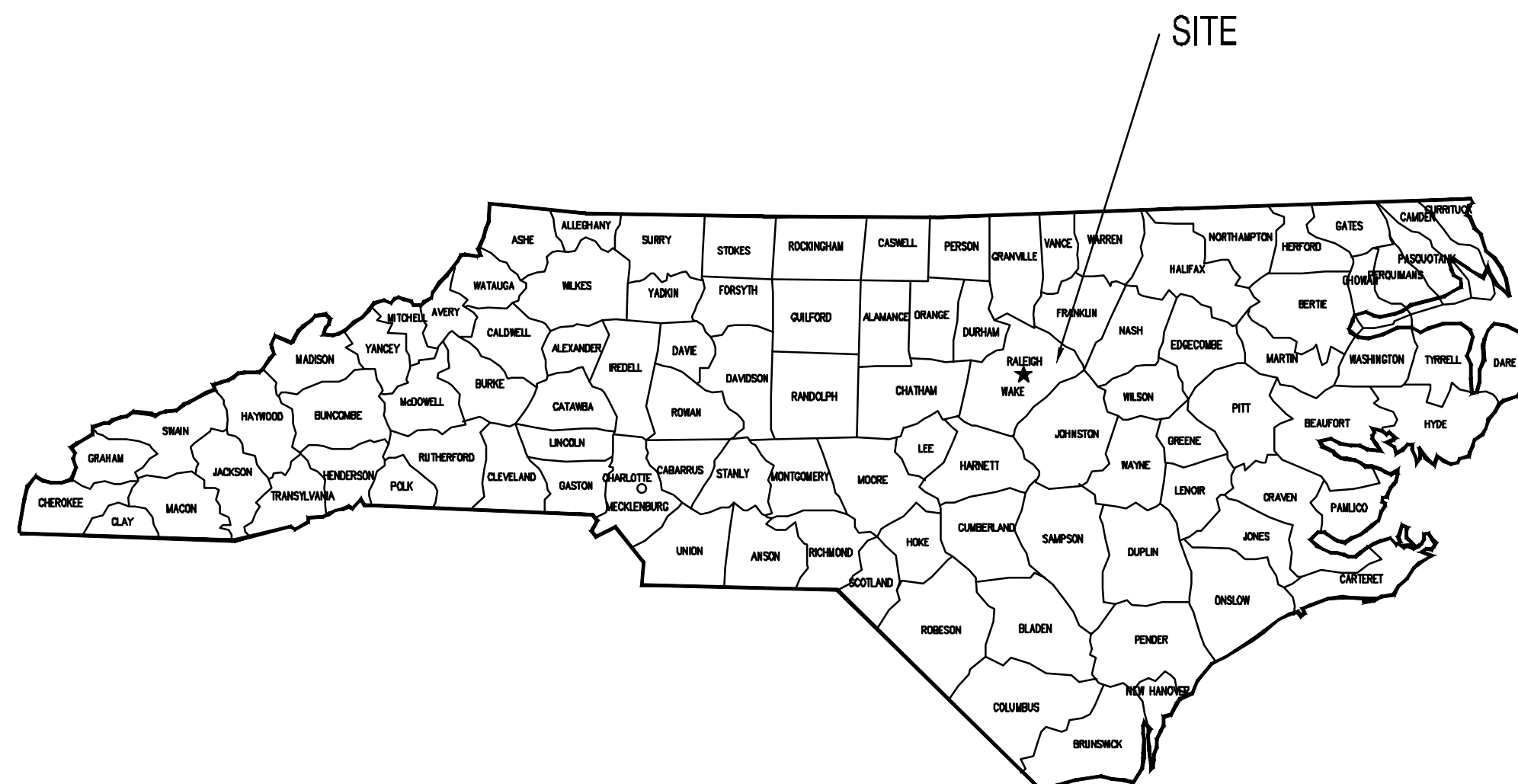
STORMWATER RETENTION AND DETENTION FACILITIES, STORAGE TANKS FOR ANY PURPOSE, UTILITY SUBSTATIONS, AND 3 BUILDINGS HOUSING UTILITY SUBSTATIONS AND BUILDINGS HOUSING UTILITY COMMODITIES OR EQUIPMENT ARE ALSO PROHIBITED IN REQUIRED BUFFERYARDS.

CONSTRUCTION DOCUMENTS

Proposed Rocket Wash

Project ID# 796479

N. Arendell Avenue & Hendricks Drive
Zebulon, North Carolina
Wake County



Know what's below.
Call before you dig.

DEVELOPER
Bell Commercial
Attn. Baker Bell
120 Wind Chime Court
Raleigh, NC 27615
(919) 803-8169
baker@bellcommercial.com

CIVIL ENGINEER
Bowman North Carolina, Ltd.
4006 Barrett Drive, Suite 104
Raleigh, NC 27609
(919) 553-6570
mlowder@bowman.com
FIRM# F-1445

CURRENT PROPERTY OWNERS

Speedway, LLC
Property Tax Department
539 S. Main Street
Findlay, OH 45840

IMPERVIOUS SUMMARY TABLE			
ON-SITE AREA = 429,809 SF (9.867 AC)			
BUILDINGS	2,880 SF	0.07 ACRES	0.67 % OF AREA
PAVEMENT	41,610 SF	0.96 ACRES	9.68 % OF AREA
SIDEWALK	4,510 SF	0.10 ACRES	10.49 % OF AREA
TOTAL IMPERVIOUS AREA	49,000 SF	1.12 ACRES	11.40 % OF AREA
GREEN/OPEN SPACE	380,809 SF	8.74 ACRES	88.60 % OF AREA
EXISTING IMPERVIOUS AREA	3,604 SF	0.08 ACRES	0.84 % OF AREA
INCREASE IN IMPERVIOUS AREA	45,396 SF	1.04 ACRE	

DEVELOPMENT DATA	
DEVELOPMENT NAME:	ROCKET EXPRESS
STREET ADDRESS:	N. ARENDELL AVENUE ZEBULON, NC WAKE COUNTY
PROJECT ID#	796479
PROPERTY IDENTIFICATION # (PIN):	2705-09-183X, 2706-00-2456, 2706-00-3316, 2706-00-3279, 2706-00-4241
PROPERTY #:	0111710, 0030085, 0057144, 0058906, 0039958
DEED BOOK/PAGE:	12474-2357
EXISTING ZONING:	HC-HEAVY COMMERCIAL
WATERSHED DISTRICT:	NONE
FLOOD ZONE:	NONE
TOTAL SITE ACRES:	429,809 SF (9.87 AC)
INSIDE TOWN LIMITS:	YES
EXISTING USE:	VACANT
PROPOSED BUILDING USE:	CAR WASH AND OUTPARCELS
PROPOSED TOTAL BUILDING AREA:	2,880 SF (CAR WASH)
MAX BUILDING HEIGHT:	50 FT
MIN LOT AREA:	6,000 SF
MIN LOT WIDTH:	50 FT
MAX. LOT COVERAGE:	80%
FRONT SETBACK:	30 FT
SIDE SETBACK (STREET):	30 FT
SIDE SETBACK (INTERIOR):	0, 5 FT IF PROVIDED
REAR SETBACK:	0' IF ABUTTED BY AN ALLEY, OTHERWISE 25FT
PARKING REQUIREMENTS:	2 PER WASH BAY
TOTAL PROVIDED:	25 (22 VACUUM SPACES + 3 EMPLOYEE SPACES)
ACCESSIBLE SPACES PROVIDED:	1
LOADING AREA:	1 PROVIDED
STACKING SPACES:	3 REQUIRED, 9 PROVIDED
BICYCLE SPACES:	2 REQUIRED, 2 PROVIDED
LANDSCAPE BUFFERS:	10FT TYPE A BUFFER (ADJACENT HC) 15FT STREETSCAPE BUFFER

UTILITY SERVICE NOTES	
WATER SERVICE	GENERAL CONTRACTOR TO PROVIDE AND INSTALL A WATER SERVICE LINE FROM MAIN TO BUILDING PER MUNICIPAL REQUIREMENTS. CONTACT: CITY OF RALEIGH UTILITY DEPARTMENT TELEPHONE: 919-857-4540
ELECTRIC SERVICE	"POWER CO." TO PROVIDE UNDERGROUND 120/208/3 PHASE SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL TWO 4" DIA. CONDUIT W/ PULL WIRE TO UTILITY COMPANY POINT OF CONNECTION. CONTACT: PROGRESS ENERGY TELEPHONE: 800-636-0581
TELEPHONE SERVICE	"TELEPHONE CO." TO PROVIDE NEW UNDERGROUND SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" DIA. PVC CONDUIT W/ PULL WIRE FROM PHONE PANEL BOARD TO UTILITY COMPANY POINT OF CONNECTION. CONTACT: PROGRESS ENERGY TELEPHONE: 919-857-4540
SANITARY SEWER	GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" SCHEDULE 40 PVC FROM SANITARY SEWER SYSTEM TO LAST CLEAN OUT OUTSIDE OF BUILDING. (MIN. 1% SLOPE). PROVIDE CLEAN OUTS EVERY 75' (TYPICAL). CONTACT: CITY OF RALEIGH UTILITY DEPARTMENT TELEPHONE: 919-857-4540
NATURAL GAS	GENERAL CONTRACTOR TO COORDINATE WITH NATURAL GAS UTILITY FOR SERVICE LINE TO PROPOSED BUILDING. CONTACT: CITY OF RALEIGH UTILITY DEPARTMENT TELEPHONE: 919-857-4540

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT

APPROVED
EROSION CONTROL S- _____
STORMWATER MGMT. S- _____
FLOOD STUDY S- _____
DATE _____

ENVIRONMENTAL CONSULTANT SIGNATURE

PUBLIC Water Distribution/Extension System

The City of Raleigh consents to the construction and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit # _____ W- _____
Authorization to Construct _____ See digital signature

PUBLIC Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit # _____ S- _____
Authorization to Construct _____ See digital signature

ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for **contacting the Public Utilities Department at (919) 996-4540** at least **twenty four hours** prior to beginning any of their construction.

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of **monetary fines** and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for **Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the **City of Raleigh**.

PRECONSTRUCTION NOTE
A PRE-CONSTRUCTION MEETING IS REQUIRED WITH THE TOWN OF ZEBULON CONSTRUCTION INSPECTOR. CONTACT JASON AT 919-790-5640.

Sheet List Table	
Sheet Number	Sheet Title
C1.0	COVER SHEET
C1.1	GENERAL NOTES, ABBREVIATIONS, AND LEGEND
C2.0	DEMOLITION PLAN
C2.1	EROSION CONTROL PLAN - INITIAL
C2.2	EROSION CONTROL PLAN - FINAL
C2.3	EROSION CONTROL NOTES
C2.4	NORTH CAROLINA GENERAL PERMIT (NCG01)
C3.0	SITE PLAN
C3.1	ROADWAY
C4.0	GRADING & DRAINAGE PLAN
C5.0	UTILITY PLAN
C5.1	SANITARY SEWER PLAN AND PROFILE
C5.2	EROSION CONTROL DETAILS
C6.1	EROSION CONTROL DETAILS
C6.2	CONSTRUCTION DETAILS
C6.3A	CONSTRUCTION DETAILS
C6.3B	CONSTRUCTION DETAILS
C6.3C	CONSTRUCTION DETAILS
C6.3D	CONSTRUCTION DETAILS
C6.3E	ROADWAY CONSTRUCTION TYPICAL SECTIONS
C6.4A	SEWER DETAILS
C6.4B	SEWER DETAILS
C6.4C	SEWER DETAILS
C6.5	WATER DETAILS
C6.6	STORMWATER MANAGEMENT DETAILS
C6.7	STORMWATER MANAGEMENT DETAILS
C6.8	STORMWATER MANAGEMENT DETAILS
C7.0	LANDSCAPE PLAN
A-1.0	OVERALL BUILDING LAYOUT
A-1.1	OVERALL LAYOUT - UPPER STORY
A-2.0	ELEVATIONS
A-2.1	ELEVATIONS
ES-1	SITE LIGHTING PHOTOMETRIC PLAN
ES-2	SITE LIGHTING FIXTURES
ES-3	SITE LIGHTING FIXTURES

Bowman

Bowman North Carolina Ltd.
4006 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 553-6570
bowman.com

COVER SHEET
Rocket Wash
Arendell Ave
Project ID# 796479

Zebulon, NC

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION



PLAN STATUS	
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H:
JOB No.	220094-01-002
DATE	June 20, 2022
FILE No.	220094-01-002

SHEET C1.0

EXISTING	LEGEND	PROPOSED
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	LOT LINE	
	RIGHT OF WAY	
	CENTERLINE	
	FLOOD PLAIN	
	LIMITS OF CONSTRUCTION	
	LIMITS OF DISTURBANCE	
	SWALE / STREAM FLOWLINE	
	OVERFLOW RELIEF PATH	
	FENCE LINE	
	EASEMENT	
	EDGE OF PAVEMENT	
	VERTICAL CURB AND GUTTER	
	MOUNTABLE CURB AND GUTTER	
	CONCRETE SIDEWALK	
	ASPHALT SIDEWALK	
	HANDICAP PARKING	
	SIGHT TRIANGLE	
	SIGN(S)	
	PARKING PERMIT INDICATOR	
	VEHICLES PER DAY INDICATOR	
	TEST PIT	
	MONITORING WELL	
	MAJOR CONTOUR	
	MINOR CONTOUR	
	GRADE BREAK	
	RIDGELINE	
	SPOT ELEVATION	
	RIP RAP	
	WATER LINE	
	WATER METER	
	WATER VALVE	
	WATER REDUCER	
	WATER FITTINGS	
	FIRE HYDRANT	
	SANITARY LINE	
	SANITARY MANHOLE	
	SANITARY CLEANOUT	
	STORM SEWER PIPE	
	STORM SEWER MANHOLE	
	STORM SEWER INLET	
	STORM SEWER FLARED END SECTION	
	STORM SEWER HEADWALL	
	OVERHEAD UTILITY	
	UNDERGROUND ELECTRIC	
	OVERHEAD ELECTRIC	
	UTILITY POLE	
	STREET LIGHT	
	CABLE TV SERVICE	
	TELECOM SERVICE	
	FIBER OPTIC SERVICE	
	NATURAL GAS SERVICE	
	TREE	
	TREE LINE	
	WETLANDS	

ABBREVIATIONS	DESCRIPTION
A	AREA OF ARLC
AASHTO	AMERICAN ASSOCIATION OF STATE HWY & TRANS. OFFICIALS
AB	AS-BUILT
AC	ACRE
AD	ALGEBRAIC DIFFERENCE IN GRADE
AE	ACCESS EASEMENT
ADJ	ADJACENT
AGGR	AGGREGATE
AHD	AHEAD
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APT	ANGLE POINT
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
B	BREADTH
BOC	BACK OF CURB
BF	BASEMENT FLOOR
BLDG	BUILDING
BW	BENCHMARK
BMP	BEST MANAGEMENT PRACTICES (WATER QUALITY)
BOV	BLOW OFF VALVE
BRG	BEARING
BRL	BUILDING RESTRICTION LINE
BVCE	BEGINNING VERTICAL CURVE ELEVATION
BVCS	BEGINNING VERTICAL CURVE STATION
BW	BOTTOM OF WALL
c.e	CENTER CORRECTION ON VERTICAL CURVE
C	CORRECTION COEFFICIENT
CATV	CABLE TELEVISION
C&G	CURB AND GUTTER
CB	CATCH BASIN
CBR	CALIFORNIA BEARING RATIO
CC	CENTER TO CENTER
CFC	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CQ(R)	CURB AND GUTTER (REVERSE SLOPE)
CHRG	CHORD
QP	CHORD BEARING
C	CENTERLINE
CLR	CLEAR
CM	CUBIC METERS
QMP	CORRUGATED METAL PIPE
QMS	CUBIC METERS PER SECOND
ON	RUNOFF CURVE NUMBER
CONT	CONTINUOUS
CONC	CONCRETE
OPP	CORRUGATED PLASTIC PIPE
CS	CURB STOP
CT	CURT
CTR	CENTER
CTRL	CONTROL LINE
CT	CUBIC YARD
D	DEPTH
DA	DRAINAGE AREA
DB	DEED BOOK
DB	DIVERSION DIKE
DET	DETAIL
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DR	DROP INLET
DIST	DISTANCE
DL	DOMESTIC LINE
DM	DROP MANHOLE
DM	DOMESTIC
DR	DRIVE DRAIN
DRN	DRAINAGE
DRNG	DRAINAGE AREA
DU	DOWN SPOUT
DU	DWELLING UNITS
DWG	DRAWING
D/W	DRIVEWAY
DELTA	DELTA
E	EASTING/EAST
EA	EACH
EBL	EAST BOUND LANE
EC	EROSION CONTROL
ECB	EROSION CONTROL BLANKET
EG	EDGE OF GUTTER
EGL	ENERGY GRADIENT LINE
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATION
ENGR	ENGINEER
ENT	ENTRANCE
EOA	EDGE OF ASPHALT
EOP	EDGE OF CONCRETE
EOP	EDGE OF PAVEMENT
EQUIP	EQUIPMENT
ESMT	EASEMENT
ETD	EXISTING TO BE DEMOLISHED
ETR	EXISTING TO REMAIN
ETRL	EXISTING TO BE RELOCATED
ETRP	EXISTING TO BE REPLACED
EVCE	ENDING VERTICAL CURVE ELEVATION
EVCS	ENDING VERTICAL CURVE STATION
EW	END WALL
EX	EXISTING
EQC	ENVIRONMENTAL QUALITY CORRIDOR
F	FIRE LINE
FAR	FLOOR AREA RATIO
FCC	FACE OF CURB
FD	FLOOR DRAIN
FES	FLARED END SECTION
FF	FIRST FLOOR OR FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FND	FOUNDATION
FOY	FOYER
FP	FLOOD PLAIN
FPS	FEET PER SECOND
FS	FIRE SERVICE OR FACTOR OF SAFETY
FT	FOOT OR FEET
G	GAS
GAR	GARAGE
GB	GRADE BREAK
GFA	GROSS FLOOR AREA
GR	GUARD RAIL OR GRATE INLET
UD	GATE VALVE
H	HEAD
HC	HANDICAP
HB	HORIZONTAL BEND
HBP	HOT BITUMINOUS PAVEMENT
HCL	HYDRAULIC GRADE LINE
HRZ	HORIZONTAL
HP	HIGH POINT
HR	HAND RAIL
HT	HEIGHT
HW	HEADWATER
I	RAINFALL INTENSITY
ID	INSIDE DIAMETER OR IDENTIFICATION
IE	INVERT ELEVATION
INCH	INCH
INV	INVERT
IP	IRON PIPE
IPF	IRON PIPE FOUND
IRS	IRON PIPE SET
IRR	IRRIGATION
JB	JUNCTION BOX
JNT	JOINT
K	SIGHT DISTANCE COEFFICIENT OR RATE OF VERTICAL CURVATURE
Ke	CULVERT ENTRANCE LOSS COEFFICIENT
L	LENGTH
LAT	LATERAL
LCG	LINEAR CLEARING & GRADING
LF	LINEAR FEET
LP	LIP OF PAN
LL	LOWER LEVEL
LOS	LINE OF SIGHT
LP	LOW POINT
LS	LOADING SPACE
LT	LEFT
M	MONUMENT FOUND
MAX	MAXIMUM
ME	MATCH EXISTING
MECH	MECHANICAL
MH	MANHOLE
MI	MILE
MIN	MINIMUM
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MS	MEAN STRIP
MSL	MEAN SEA LEVEL
N	NORTHINGS/NORTH
N/A	NOT APPLICABLE
NBL	NORTH BOUND LANE
NOV	NOW OR FORMERLY
N/F	NET FLOOR AREA
NUM	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OBJ	OBJECT
OD	OUTSIDE DIAMETER
OH	OVERHANG
O/H	OVERHEAD CABLE
OHE	OVERHEAD ELECTRIC
OHT	OVERHEAD TELEPHONE
P	PERIMETER
P	PROPERTY LINE
P&P	PLAN AND PROFILE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	POINT OF CURB RETURN
PCEP	POINT OF CURVE EDGE OF PAVEMENT
PCTC	POINT OF CURVATURE TOP OF CURB
PI	POINT OF INTERSECTION
PG	PAGE
PGL	POINT OF GRADE LINE
PRC	POINT OF REVERSE CURVATURE
PRELIM	PRELIMINARY
PROP	PROPOSED
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE PIPE OR POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PRC	POINT OF VERTICAL REVERSE CURVE
Q (cfs)	AMOUNT OF RUNOFF (FLOW RATE)
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RDCR	REDUCER
RD	ROAD OR ROOF DRAIN
REQD	REQUIRED
REDO	REQUIRED
RET	RETAINING
REV	REVISION
RFP	ROADWAY GRADING PLAN
RMA	RESOURCE MANAGEMENT AREA
ROM	REMOTE OUTSIDE MONITOR
RPA	RESOURCE PROTECTION AREA
RR	RAILROAD
RT	ROUTE
RT	ROUTE
R/W & ROW	RIGHT OF WAY
S	SPEED OR SLOPE
SAN	SANITARY SEWER
SANMH	SANITARY SEWER MANHOLE
SBL	SOUTH BOUND LANE
SCH	SCHEDULE
SD	SIGHT DISTANCE
SEC	SECTION
SEW	SEWER
SFF	SQUARE FEET
SH	SHOULDER
SP	SPACE OR SITE PLAN
SPEC	SPECIFICATIONS
STA	STATION
STD	STANDARD
STK	STACK
STM	STORM SEWER
STMH	STORM SEWER MANHOLE
STR	STRUCTURE
SVC	SERVICE
S/W	SIDEWALK
SWM	STORM WATER MANAGEMENT
SY	CROSS SLOPE
SY	SQUARE YARD
T	TANGENT
TB	TOP OF BANK OR TEST BORING
TBR	TO BE REMOVED
TOC	TOP OF CURB
TE	TIME OF CONCENTRATION
TEL	TELEPHONE
TEMP	TEMPORARY
TH	TEST HOLE
TOP	TOP OF FOUNDATION
TOP	TOP OF PIPE
TP	TEST PIT OR TREE PROTECTION
TW	TOP OF WALL OR TAILWATER
TYP	TYPICAL
UE	UTILITY EASEMENT
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UCC	UNDERGROUND CABLE
UD	UNDERDRAIN
UL	UPPER LEVEL
UP	UTILITY POLE
USGS	US GEOLOGICAL SURVEY
UTIL	UTILITY
V OR VCL	VOLUME
V OR VEL	VELOCITY
VAN	HANDICAPPED VAN PARKING SPACE
VB	VERTICAL BEND
VC	VERTICAL CURVE
VF	VERTICAL FOOT
W	WEIGHT OR WIDTH
WBL	WEST BOUND LANE
WL	WATER LINE
WM	WATER METER
WM	WATER MAIN
W/TB	WITH THRUST BLOCK
WSEL	WATER SURFACE ELEVATION
WV	WATER VALVE
XING	CROSSING
XF	TRANSFORMER
YI	YARD INLET
YR	YEAR

LEGEND NOTES

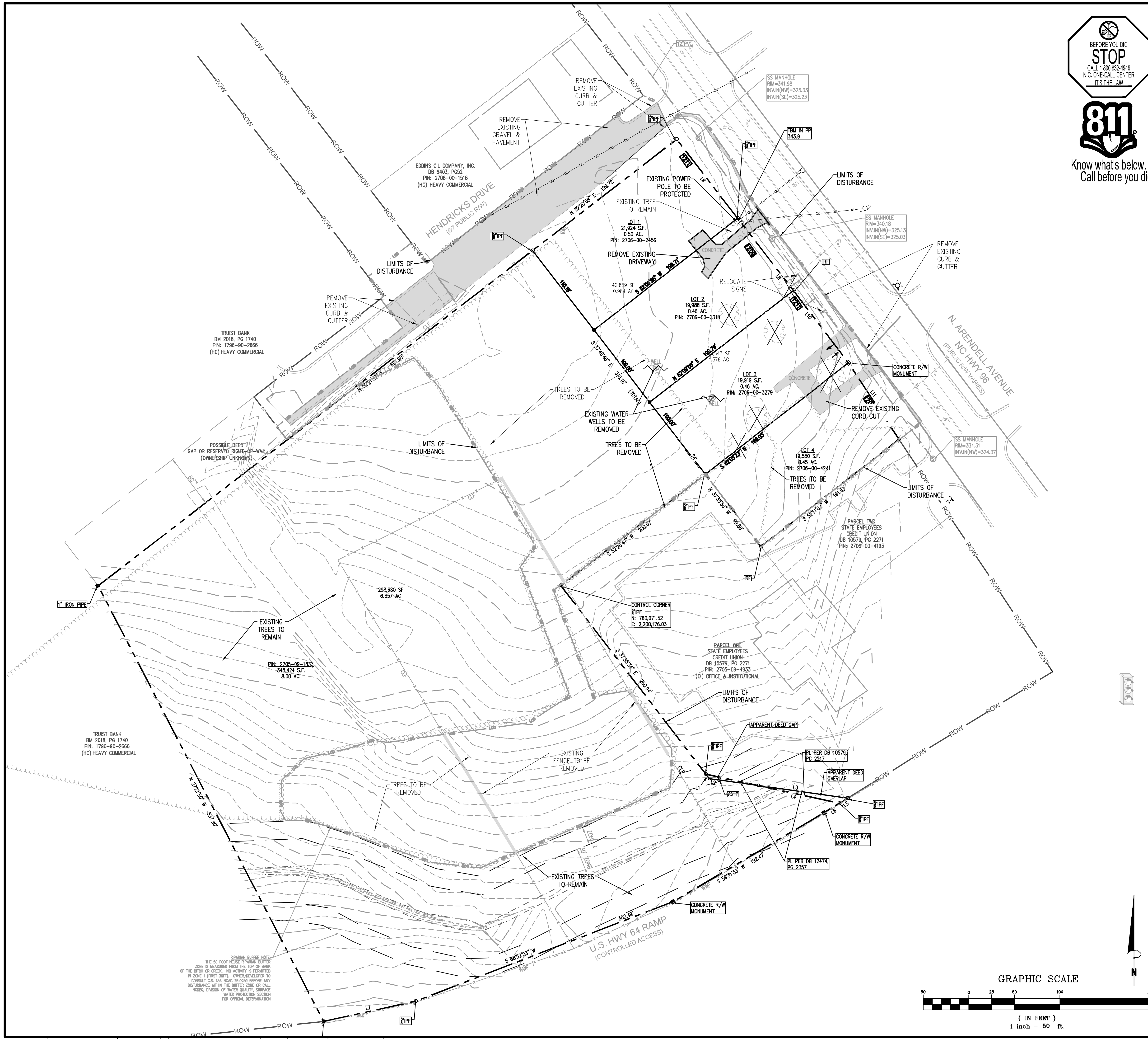
- THIS IS A STANDARD SHEET. THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.
- ADDITIONAL LEGENDS AND NOTES MAY BE FOUND ON OTHER SHEETS ASSOCIATED WITH THIS PLAN. THESE LEGENDS AND NOTES ARE TO BE REFERENCED IN ADDITION TO THIS STANDARD SHEET.

GENERAL NOTES

- UTILITY CONFLICTS: ALL EXISTING UTILITIES SHOWN WERE COMPILED USING THE BEST AVAILABLE INFORMATION AND FIELD OBSERVATION. BOWMAN NORTH CAROLINA LTD DOES NOT GUARANTEE THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON. CONTRACTOR TO BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF AND PROTECTING ALL EXISTING UTILITIES, INCLUDING THOSE NOT SHOWN OR SHOWN INCORRECTLY ON THE PLANS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IN A TIMELY FASHION TO THE SATISFACTION OF THE APPROPRIATE GOVERNING AGENCY AND THE OWNER OF THE IMPACTED UTILITY AT THE CONTRACTOR'S EXPENSE.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS FOR THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT THE JOB SITE AT ALL TIMES THE APPROPRIATE GOVERNING AGENCY'S PUBLIC WORKS MANUAL, ALL APPROVED EASEMENT AGREEMENTS, AND ONE (1) SIGNED COPY OF THE PLANS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY FOR ANY VARIANCE TO THE ABOVE DOCUMENTS.
- CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARDS, SPECIFICATIONS, PERMITS, BONDS, ETC., WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND MUST COMPLY WITH OSHA REGULATIONS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER AND ENGINEER OF ANY PROBLEM CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
- THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS/HER CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAY AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
- THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION. THE APPROPRIATE FIRE DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSURES AND IN THE EVENT THAT ANY FIRE HYDRANTS ARE TO BE TEMPORARILY REMOVED FROM SERVICE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING AT LEAST 48 HOURS ADVANCED NOTICE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING WATER SYSTEM AND FOR OBSERVATIONS AND/OR INSPECTIONS REQUIRED.
- THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS OR OTHER DEVICES NECESSARY FOR SAFE TRAFFIC CONTROL IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS MODIFIED BY THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE APPROPRIATE GOVERNING AGENCY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT FOR WORK WITHIN THE RIGHT-OF-WAY.
- THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF NORTH CAROLINA AT 1-800-632-4949 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ANY AFFECTED UTILITY COMPANY.
- THE CONTRACTOR SHALL OBTAIN COPIES OF THE "SOILS AND INVESTIGATION" REPORT FROM GEOTECHNICAL ENGINEER ALONG WITH THE "PAVEMENT THICKNESS DESIGN REPORT". THE CONTRACTOR MUST HAVE COPIES OF SAME ON THE SITE AT ALL TIMES.
- THE CONTRACTOR IS REQUIRED TO PROVIDE AS-CONSTRUCTED HORIZONTAL AND VERTICAL CONSTRUCTION INFORMATION, INCLUDING THE LOCATIONS OF ALL SANITARY LINES AND SERVICES, WATER LINES AND SERVICES, AND OTHER UTILITY LINES AND SERVICES TO THE ENGINEER FOR PREPARATION OF AS-BUILT DOCUMENTS.
- LIMITS OF CONSTRUCTION EASEMENTS AND RIGHTS-OF-WAY SHALL BE DELINEATED WITH TEMPORARY STAKING BY THE CONTRACTOR. SAFETY FENCING SHALL BE PER APPROPRIATE GOVERNING AGENCY.
- WHERE EXCAVATION IS REQUIRED UNDER EXISTING ASPHALT OR CONCRETE PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO EFFECT A SMOOTH, STRAIGHT-CUT EDGE. ASPHALT PATCH SHALL BE PER APPROPRIATE GOVERNING AGENCY STANDARDS.
- REFER TO FINAL RECORDED PLAT FOR ACTUAL LOT, TRACT, PARCEL, AND EASEMENT LOCATIONS AND DESIGNATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAYS AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
- THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY TO THE PROJECT WORK SITE (SEE THE EROSION CONTROL PLAN). THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY (IF APPLICABLE) TO COMPLETE THE CONSTRUCTION AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- WATER WILL BE PROVIDED BY THE CONTRACTOR TO KEEP WIND EROSION IN CHECK. USE OF WATER AS A DUST PREVENTATIVE SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF THE WORK.
- ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.
- ANY CONSTRUCTION DEBRIS OR MUD TRACKING IN THE PUBLIC RIGHT-OF-WAY RESULTING FROM THIS DEVELOPMENT SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY THE DEVELOPMENT AND SHALL PROPERLY BARRICADE THE SITE UNTIL CLEAN UP OR REPAIR IS COMPLETE.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO GRADE STREET CORES, RIGHT-OF-WAY TEMPLATES, AND LOTS ACCORDING TO GRADING INSTRUCTIONS SHOWN ON PLANS.
- STREET CONTOURS SHOWN AT PROPOSED STREET LOCATIONS REPRESENT FINISHED GRADE ELEVATION TO TOP OF ASPHALT.
- COMPACTION FILL MATERIAL SHALL BE COMPACTED ACCORDING TO THE APPROPRIATE GOVERNING AGENCY REGULATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- TOLERANCE ROUGH GRADING: TOLERANCE SHALL BE +/- 0.1 FEET.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ALL APPROPRIATE PERMITS FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAVE BEEN OBTAINED PRIOR TO GRADING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL TEMPORARY WATER DIVERSION/CONTROL DEVICES AND EROSION CONTROL DEVICES NECESSARY TO PROTECT ADJACENT PROPERTIES, WATERWAYS AND PUBLIC RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF SAID DEVICES THROUGHOUT CONSTRUCTION AND UNTIL THE PERMANENT PROTECTION NECESSARY HAS BEEN COMPLETED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE MOST CURRENT APPROVED ARCHITECTURAL/MECHANICAL/ELECTRICAL/PLUMBING/STRUCTURAL PLANS AND COORDINATE SAME WITH THE SITE PLAN, PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
- WHEN DURING THE COURSE OF CONSTRUCTION, ANY OBJECT OF AN UNUSUAL NATURE IS ENCOUNTERED, THE CONTRACTOR SHALL CEASE WORK IN THAT AREA AND IMMEDIATELY NOTIFY THE OWNER, APPROPRIATE GOVERNING AGENCY, AND/OR THE ARCHITECT/ENGINEER.
- THE EXISTING UNDERGROUND UTILITIES SHOW HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.
- ALL STEPS WITH THREE OR MORE RISERS SHALL HAVE HAND RAILS, PER LOCAL CODE.
- A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF EXISTING ROAD TO PROPOSED CURB AND GUTTER AND/OR PROPOSED EDGE OF PAVEMENT TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY. REMOVE AND RECONSTRUCT EXISTING PAVEMENT AND/OR CURB AS DICTATED BY FIELD CONDITIONS TO PROVIDE POSITIVE DRAINAGE AT TIE-IN-POINTS.
- OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1 1/2 INCH DEPTH; ANY COST ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.
- ALL RIGHT-OF-WAY DEDICATED FOR PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED.
- AN AIR QUALITY PERMIT SHALL BE OBTAINED IF REQUIRED.
- ANY LIGHTING SHOWN HEREON IS AS SPECIFIED BY THE CLIENT AND IS INCLUDED FOR INFORMATION PURPOSES ONLY, AS DIRECTED BY THE OWNER AND/OR PUBLIC AGENCY REQUIREMENTS. BOWMAN CONSULTING GROUP, LTD. HAS NOT PERFORMED THE LIGHTING DESIGN, AND THEREFORE DOES NOT WARRANT AND IS NOT RESPONSIBLE FOR THE DEGREE AND/OR ADEQUACY OF ILLUMINATION ON THIS PROJECT.
- THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL RESIDENCES WITHIN VICINITY OF THE PROPERTY BOUNDARY TEN (10) DAYS PRIOR TO ANY BLASTING IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY REQUIREMENTS.
- NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITY LINES OR STRUCTURES. BLASTING TO BE EXTENDED 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.
- ALL RETAINING WALLS 4' IN HEIGHT AND OVER (MEASURED FROM BOTTOM OF FOOTER TO TOP OF WALL) REQUIRE A SEPARATE BUILDING PERMIT.
- THE APPROVAL OF THIS PLAN DOES NOT CONSTITUTE THE APPROVAL OF FUTURE WORK.
- ALL HANDICAPPED SPACES SHALL HAVE AN ABOVE GRADE IDENTIFICATION SIGN MEETING APPROPRIATE GOVERNING AGENCY STANDARDS.
- WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET OR DRIVE AISLE, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY STANDARDS.
- REFER TO THE TOWN OF ZEBULON STREET STANDARDS AND SPECIFICATIONS MANUAL FOR APPLICABLE CONSTRUCTION REQUIREMENTS WITHIN THE TOWN OF ZEBULON.

GENERAL NOTES (CONT.)

- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFIRMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING EXECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BOUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING ROADS AND UTILITIES WHICH OCCURS AS A RESULT OF THE PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.
- ALL STREET CUT AND PATCH WORK IN PUBLIC RIGHT-OF-WAY REQUIRED FOR UTILITIES INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CITY, COUNTY, AND/OR APPROPRIATE GOVERNING AGENCY STANDARDS AND SPECIFICATIONS. REFER TO THE TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS MANUAL.
- THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION FOR THE CONTRACTOR TO TRESPASS ON OFF-SITE PROPERTIES.
- THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- THESE PLANS MAKE NO REPRESENTATION AS TO THE SUBSURFACE CONDITIONS AND THE PRESENCE OF SUBSURFACE WATER OR THE NEED FOR SUBSURFACE DRAINAGE FACILITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING ALL NECESSARY INSPECTIONS.
- EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
- ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER.
- THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES PRIOR TO BEGINNING OF ANY CONSTRUCTION ON THE PROJECT. IF CONFLICTS ARE DISCOVERED AS A RESULT OF TEST HOLE FINDINGS, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.
- EXCAVATION SUPPORT SYSTEMS SHALL CONFORM TO THE PROVISIONS OF OSHA CONSTRUCTION STANDARD 29 CFR PART 1926 SUBPART P, OR CURRENT EDITION.
- AT LOCATIONS WHERE THE FINAL SURFACE COURSE OF ASPHALT PAVEMENT IS TO BE FEATHERED INTO THE EXISTING SURFACE COURSE, THE EXISTING SURFACE COURSE IS TO BE SCABBLED TO A MINIMUM DEPTH OF 1" AND A TACK COAT APPLIED PRIOR TO FINAL PAVING TO INSURE A SMOOTH, WELL BONDED JOINT.
- ANY NEW PAVEMENT OPENED TO TRAFFIC SHALL RECEIVE A TACK COAT PRIOR TO PLACEMENT OF ANY OVERLYING ASPHALT COURSE.
- ALL SIDEWALKS TO BE 4" THICK CONCRETE UNLESS OTHERWISE SHOWN ON THE PLAN.



UTILITY STATEMENT
 THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

CAUTIONARY NOTE
 THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE BASED ON ABOVE GROUND EVIDENCE OR INFORMATION GATHERED DURING THE FIELD SURVEY PORTION OF THIS PROJECT. AS SUCH, THIS INFORMATION IS SPECULATIVE IN NATURE, ONLY AND SHOULD NOT BE CONSTRUED AS FACT. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF THE UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF ANY AND ALL CONSTRUCTION.

DEMOLITION LEGEND

	EXISTING TO REMAIN
	EXISTING TO BE DEMOLISHED/REMOVED
	EXISTING TO BE ABANDONED IN PLACE
	EXISTING TO BE RELOCATED
	EXISTING TREE TO BE REMOVED
	LIMITS OF DISTURBANCE
	EXISTING ASPHALT/CONCRETE/GRAVEL TO BE DEMOLISHED/REMOVED
	EXISTING BUILDING OR STRUCTURE TO BE DEMOLISHED/REMOVED
	EXISTING CURB AND GUTTER TO BE REMOVED
	EXISTING UTILITY TO BE REMOVED

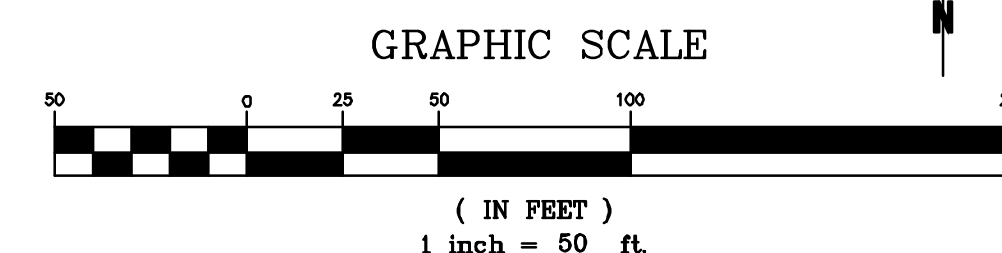
EROSION CONTROL NOTES:
 AN EROSION AND SEDIMENTATION CONTROL PERMIT SHALL BE REQUIRED BY WAKE COUNTY PRIOR TO START OF CONSTRUCTION.

SURVEY NOTE:
 ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY: NEWCOMB LAND SURVEYORS, LLC.

STREAM/WETLAND NOTE:
 THERE IS AN EXISTING STREAM FEATURE ON THE PROPOSED PARCEL. NO IMPACTS TO THE STREAM ARE PROPOSED.

FLOOD ZONE NOTE:
 THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FEMA FLOOD PANELS 3720179600K, 3720270600K, 3720179500K, & 3720270500K, DATED JULY 19, 2022. MAPS SUBJECT TO CHANGE BY FEMA.

- DEMOLITION NOTES**
- THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO DEMOLITION.
 - THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY THE OWNER.
 - IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS AND PAY FEES REQUIRED FOR DEMOLITION AND HAUL-OFF FROM THE APPROPRIATE AUTHORITIES.
 - THE CONTRACTOR SHALL PREPARE ALL DOCUMENTS AND ACQUIRE APPROPRIATE PERMITS AS REQUIRED PRIOR TO THE COMMENCEMENT OF DEMOLITION.
 - THE DEMOLITION PLAN IS INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK. IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY PRIOR TO WORK.
 - CONTRACTOR TO COMPLETELY DEMOLISH AND DISPOSE OF OFFSITE IN A LAWFUL MANNER EXISTING BUILDINGS, INCLUDING FOUNDATIONS AND ALL APPURTENANCES LOCATED ON AND AROUND THE PROPERTY INCLUDING BUT NOT LIMITED TO BOLLARDS, GAS METERS, AIR CONDITIONING UNITS, SIGNS, CURBS, SIDEWALKS, ELECTRIC METERS, FENCING, ETC.
 - REMOVE AND DISPOSE OF ANY SIDEWALK, FENCES, STAIRS, WALLS, FOUNDATIONS, CONDUITS, LIGHT POLE BASES, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED LANDFILL.
 - REMOVE AND/OR PLUG EXISTING UTILITIES SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO COORDINATE REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
 - THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED, OR AS OTHERWISE NOTED. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTEND OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED.
 - THE CONTRACTOR SHALL ARRANGE FOR RESETTING OF CURB BOXES, VALVE BOXES AND REMOVAL AND/OR RELOCATION OF OVERHEAD UTILITIES AND POLES WITH THE APPROPRIATE UTILITY COMPANY.
 - INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
 - THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACE. FINISH SURFACE TO BE REMOVED OR DEMOLISHED SHALL BE CUT ALONG LINES OF JOINTS WHICH WILL PERMIT A NEAT SURFACE WHEN RESTORED.
 - SAWOUT AT INTERFACE OF PAVEMENT OR CURB TO REMAIN. SAWOUT EXISTING PAVEMENT.
 - ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.
 - DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
 - SHOULD ANY UNCHARTERED OR INCORRECTLY CHARTERED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
 - ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.
 - THE PROPERTY SELLER SHALL PUMP OUT BUILDING FUEL, GREASE TRAPS, AND WASTE OIL TANKS (IF ANY ARE ENCOUNTERED) AND REMOVE FUEL TO AN APPROVED DISPOSAL AREA BY AN APPROPRIATELY LICENSED WASTE OIL HANDLING CONTRACTOR IN STRICT ACCORDANCE WITH FEDERAL AND STATE REQUIREMENTS BEFORE CONSTRUCTION BEGINS.
 - THE CONTRACTOR SHALL PROPERLY AND LEGALLY DISPOSE OF ALL DEMOLITION DEBRIS OFF OF THE SITE.



Bowman

Bowman North Carolina Ltd.
 4006 BARRETT DR
 Suite 104
 RALEIGH, NC 27609
 Phone: (919) 655-6570
 bowman.com
 Bowman North Carolina Ltd.

DEMOLITION PLAN
 Rocket Wash
 Arendell Ave
 Project ID#796479

Zebulon, NC Wake County

PRELIMINARY
 DO NOT
 USE FOR
 CONSTRUCTION



PLAN STATUS

6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX
SCALE	H: CHKD
JOB No.	220094-01-002
	220097-01-002
DATE	June 20, 2022
FILE No.	220094-01-002
	220097-01-002

SHEET C2.0

EROSION CONTROL NARRATIVE:
ROCKET XPRSS, TOWN OF ZEBULON, WAKE COUNTY, NC

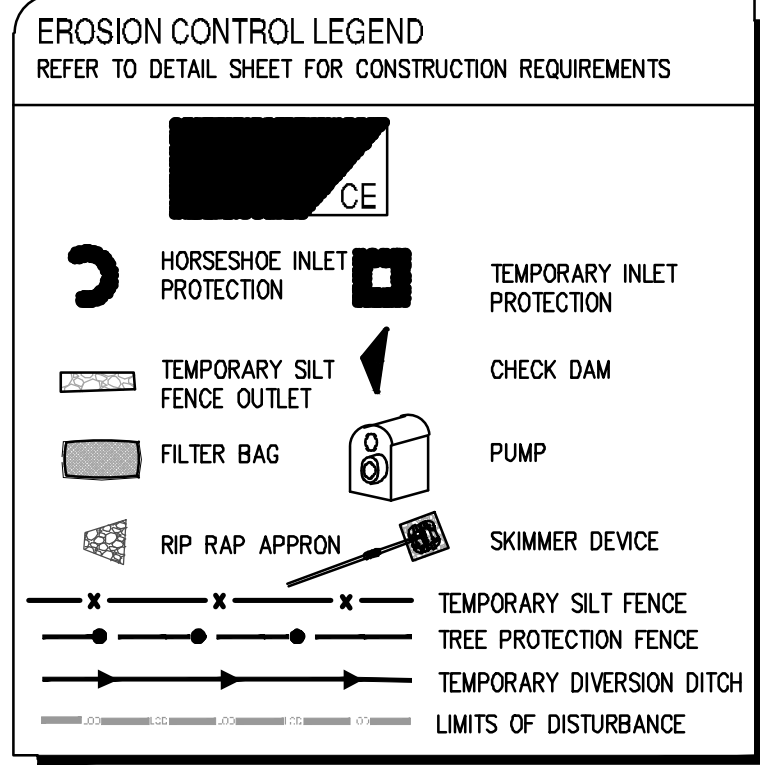
CONTRACTOR WILL FIRST INSTALL THE CONSTRUCTION ENTRANCE. THE CONTRACTOR SHALL THEN MOBILIZE ON SITE AND INSTALL THE TEMPORARY EROSION CONTROL DEVICES INCLUDING SILT FENCE, INLET PROTECTION, SKIMMER BASIN, AND OTHER DEVICES IN ACCORDANCE WITH THE PLANS (CLEARING ONLY AS NECESSARY TO INSTALL THESE ITEMS). BEGIN DEMOLITION, CLEARING AND SITE GRADING OPERATIONS. STABILIZATION OF EXISTING STRUCTURES IS REQUIRED IMMEDIATELY AFTER INSTALLATION. THE ON-SITE STORM SEWER SYSTEM CAN NOW BE INSTALLED. IMMEDIATELY AFTER AN INLET IS INSTALLED, INLET PROTECTION SHALL BE PROPERLY INSTALLED ON THE STRUCTURE. THE ON-SITE SANITARY SEWER AND WATER SYSTEMS MAY ALSO BE INSTALLED ONCE THE SITE IS BROUGHT UP TO GRADE. THE SITE PAD WILL BE PREPARED FOR THE PROPOSED BUILDING. THE ROUGH GRADE WILL THEN BE ESTABLISHED FOR THE SITE. INSTALLATION OF CURB AND GUTTER WILL THEN BE PERFORMED. BASE STONE WILL THEN BE PLACED AND FINE GRADED. ALL DISTURBED AREAS WILL BE DRESSED AND SEEDED. REMOVE ALL INLET PROTECTION FROM STORM STRUCTURES WHEN PAVING IS TO BEGIN. PAVING AND STRIPING WILL THEN BE COMPLETED. FINALIZE STORMWATER POND STRUCTURE ONCE UPSTREAM AREAS HAVE BEEN STABILIZED (REMOVE ACCUMULATED SEDIMENT). ALL LANDSCAPING WILL BE COMPLETED. THE ON-SITE STORM SEWER SYSTEM SHALL BE CLEANED OF ANY ACCUMULATED SEDIMENT WHICH SHALL BE DISPOSED OF IN A LAWFUL MANNER. ALL ACCUMULATED SEDIMENT BEHIND SILT FENCE AND OTHER SEDIMENT DEVICES SHALL BE REMOVED AND DISPOSED OF IN A LAWFUL MANNER. ACCORDING TO THE GROUND STABILIZATION REQUIREMENTS ON THIS SHEET, REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES FROM THE SITE. CONTRACTOR SHALL MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL LAND DISTURBANCE AND FINAL VEGETATION STABILIZATION OF THE SITE.

THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE INTENDED TO TRAP ANY STORMWATER RUNOFF FROM THE CONSTRUCTION SITE AND DETAIN IT LONG ENOUGH FOR SEDIMENT AND POLLUTANTS TO SETTLE OUT OF THE STORMWATER BEFORE DISCHARGE. VARIOUS EROSION CONTROL MEASURES ARE USED TO PREVENT POLLUTANT-LADEN STORMWATER RUNOFF FROM FLOWING ONTO ADJACENT PROPERTIES.

TRUST BANK
BM 2018, PG 1740
PIN: 1796-90-2666
(HC) HEAVY COMMERCIAL

TRUST BANK
BM 2018, PG 1740
PIN: 1796-90-2666
(HC) HEAVY COMMERCIAL

- BASIN REMOVAL SEQUENCE:**
- SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
 - REMOVE BASINS AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
 - PERFORM SEEDING PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
 - INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
 - WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL ENGINEER/CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.
- NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.



STABILIZATION TIMEFRAME

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
BASIN & TEMPORARY DIVERSION DITCHES	IMMEDIATELY	NONE
PERIMETER DICES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) 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 50FT IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES

GROUND COVER REQUIREMENTS:

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, ACCORDING TO THE FOLLOWING CHART, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RETAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS ACCORDING TO THE FOLLOWING CHART FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

NOTE TO CONTRACTOR:
EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL.

- WAKE COUNTY CONSTRUCTION SEQUENCE:**
- SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A LAND-DISTURBING PERMIT.
 - INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASINS, WAKE COUNTY SKIMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
 - CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769 FOR AN ON-SITE INSPECTION BY THE WATERSHED MANAGER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
 - BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
 - INSTALL STORM SEWER, IF SHOWN, AND PROTECT CATCH BASIN CURB INLETS WITH BLOCK AND GRAVEL INLET CONTROLS. PROTECT AREA DRAIN/YARD INLETS WITH STANDARD INLET PROTECTION, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
 - STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. PREPARE A SEEDBED, FERTILIZE, LIME, SEED, MULCH AND ASPHALT TACK ALL BARE AREAS WITHIN THE STABILIZATION TIMEFRAME OF COMPLETION OF ANY PHASE OF CONSTRUCTION OR STOPPAGE OF WORK ON ANY PHASE OF CONSTRUCTION.
 - CONTRACTOR TO CONTACT PROJECT ENGINEER BETWEEN SEDIMENT AND EROSION CONTROL PHASES OF DEVELOPMENT AND FOR THE REMOVAL OR CONVERSION OF SEDIMENT AND EROSION CONTROL MEASURES.
 - WAKE COUNTY OR JURISDICTIONAL MUNICIPALITY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.
 - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769 FOR AN INSPECTION BY THE WATERSHED MANAGER.
 - IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
 - WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A CERTIFICATE OF COMPLETION.

BASIN NOTES

- SKIMMER BASIN DESIGN BASED ON 3 DAYS TO DRAIN.
- BASIN AND DIVERSIONS SHALL BE SEEDED, MULCHED AND ANCHORED/LINED AND PINNED UPON INSTALLATION OF MEASURES.

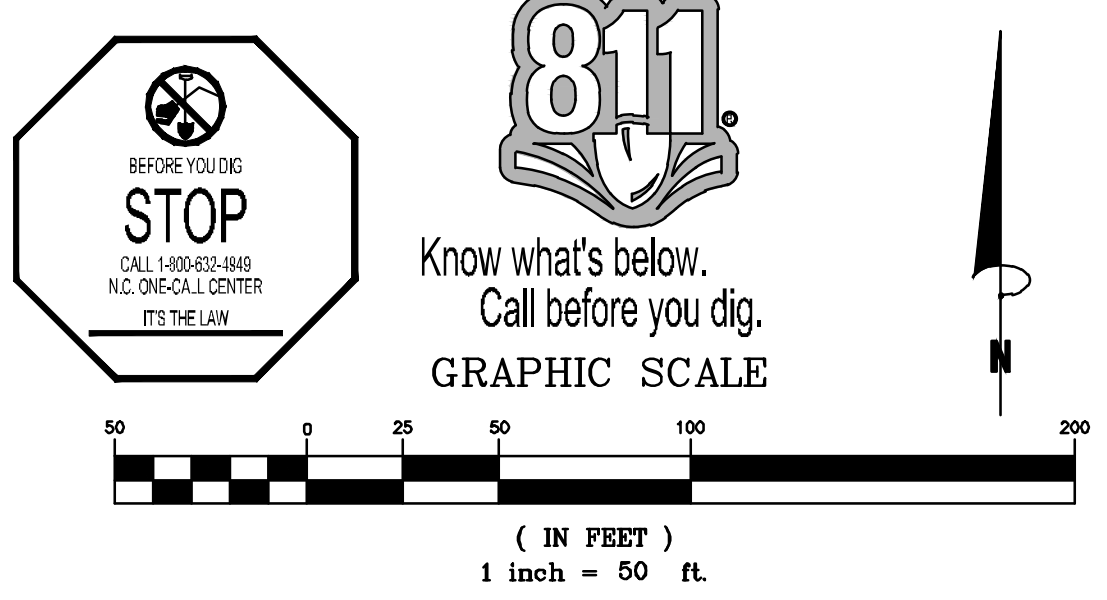
NOTE TO CONTRACTOR:
THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE WAKE COUNTY OR NEEDED PERMITTED SITE THAT IS APPROPRIATE FOR THE INTENDED USE (I.E. APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR WITHIN THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER APPLICABLE WAKE COUNTY OR NEEDED PERMITS.

CONSTRUCTION NOTE
ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF WAKE COUNTY SPECIFICATIONS AND STANDARD DETAILS

- EROSION CONTROL NOTES**
- REFER TO GENERAL NOTES SHEET FOR ADDITIONAL EROSION CONTROL REQUIREMENTS.
 - REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.
 - REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER FOR THE DEVELOPMENT.

- STACKPILE DESIGN CRITERIA:**
- A 25-FOOT TEMPORARY MAINTENANCE AND ACCESS EASEMENT SHALL BE SHOWN AROUND ALL PROPOSED STACKPILES (EROSION CONTROL MEASURES SURROUNDING THE STACKPILE SHALL BE SHOWN AT THE OUTER LIMIT OF THIS EASEMENT).
 - STACKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES.
 - STACKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
 - STACKPILE SLOPES SHALL BE 2:1 OR FLATTER.
 - APPROVED BMP'S SHALL BE SHOWN ON A PLAN TO CONTROL ANY POTENTIAL SEDIMENT LOSS FROM A STACKPILE.
 - STACKPILES ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
 - ANY CONCENTRATED FLOW LIKELY TO AFFECT THE STACKPILE SHALL BE DIVERTED TO AN APPROVED BMP.
 - OFF-SITE SPILL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY UDD AND STATE REGULATIONS. ALL SPILL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL, PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND NON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-19-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).

- STACKPILE MAINTENANCE REQUIREMENTS:**
- SEEDING OR COVERING STACKPILES WITH TAPPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TAPPS SHOULD BE KEPT IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
 - IF A STACKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STACKPILE.
 - THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STACKPILE IS IN USE.
 - ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).



Bowman

Bowman North Carolina Ltd.
4006 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 555-6570
bowman.com
Bowman North Carolina Ltd.

EROSION CONTROL PLAN - INITIAL

Rocket Wash
Arendell Ave
Zebulon, NC
Project ID#796479

Wake County

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION



PLAN STATUS

6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H: 1" = 40'
	V: 1" = 40'
JOB No.	220094-01-002
	220097-01-002
DATE	June 20, 2022
FILE No.	220094-01-002
	220097-01-002

SHEET **C2.1**

EROSION CONTROL NARRATIVE:

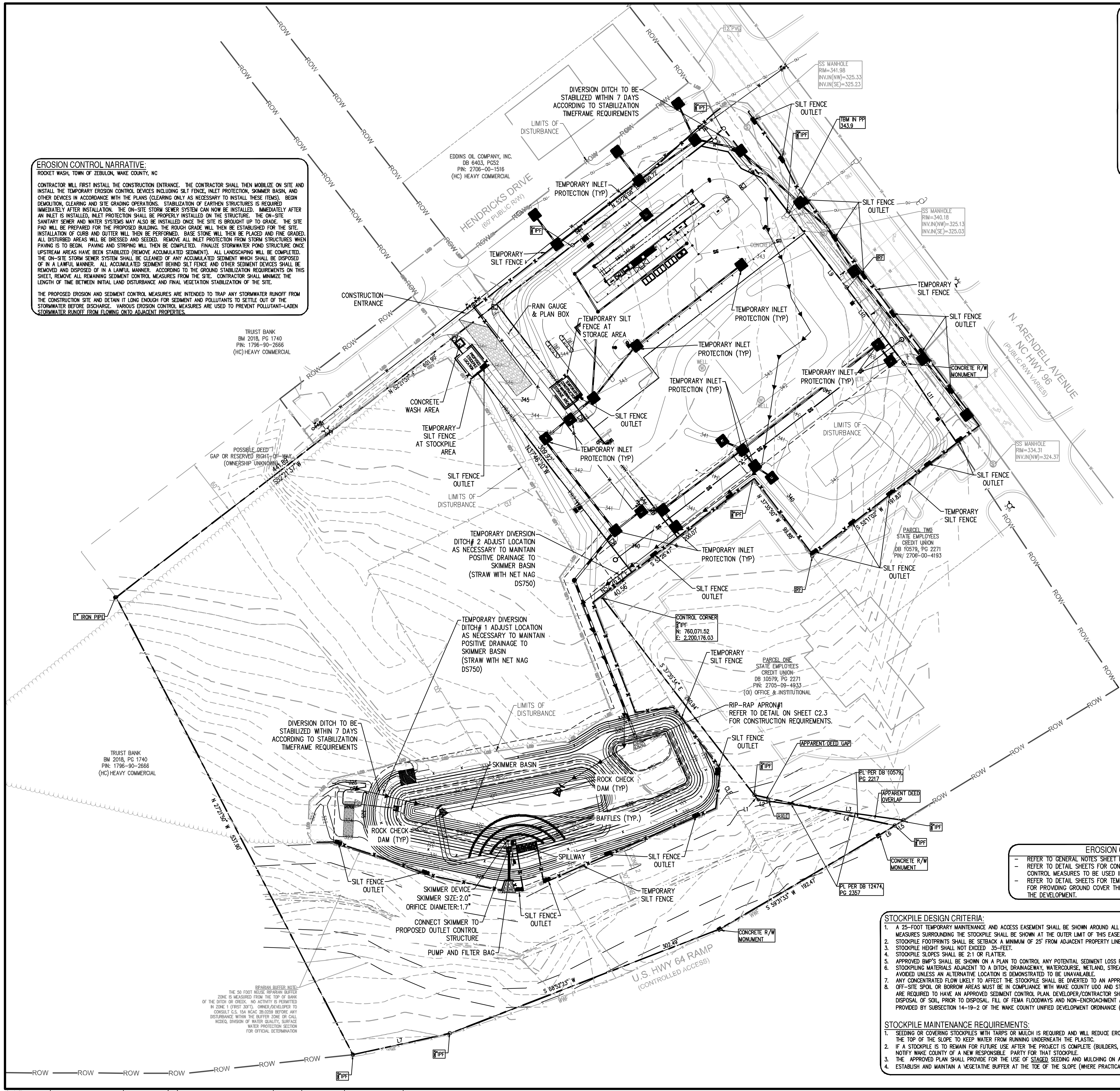
CONTRACTOR WILL FIRST INSTALL THE CONSTRUCTION ENTRANCE. THE CONTRACTOR SHALL THEN MOBILIZE ON SITE AND INSTALL THE TEMPORARY EROSION CONTROL DEVICES INCLUDING SILT FENCE, INLET PROTECTION, SKIMMER BASIN, AND OTHER DEVICES IN ACCORDANCE WITH THE PLANS (CLEARING ONLY AS NECESSARY TO INSTALL THESE ITEMS). BEGIN DEMOLITION, CLEARING AND SITE GRADING OPERATIONS. STABILIZATION OF EXISTING STRUCTURES IS REQUIRED IMMEDIATELY AFTER INSTALLATION. THE ON-SITE STORM SEWER SYSTEM CAN NOW BE INSTALLED. IMMEDIATELY AFTER AN INLET IS INSTALLED, INLET PROTECTION SHALL BE PROPERLY INSTALLED ON THE STRUCTURE. THE ON-SITE SANITARY SEWER AND WATER SYSTEMS MAY ALSO BE INSTALLED ONCE THE SITE IS BROUGHT UP TO GRADE. THE SITE PAD WILL BE PREPARED FOR THE PROPOSED BUILDING. THE ROUGH GRADE WILL THEN BE ESTABLISHED FOR THE SITE. INSTALLATION OF CURB AND GUTTER WILL THEN BE PERFORMED. BASE STONE WILL THEN BE PLACED AND FINE GRADED. ALL DISTURBED AREAS WILL BE DRESSED AND SEEDING. REMOVE ALL INLET PROTECTION FROM STORM STRUCTURES WHEN PAVING IS TO BEGIN. PAVING AND STRIPING WILL THEN BE COMPLETED. FINALIZE STORMWATER POND STRUCTURE ONCE UPSTREAM AREAS HAVE BEEN STABILIZED (REMOVE ACCUMULATED SEDIMENT). ALL LANDSCAPING WILL BE COMPLETED. THE ON-SITE STORM SEWER SYSTEM SHALL BE CLEANED OF ANY ACCUMULATED SEDIMENT WHICH SHALL BE DISPOSED OF IN A LAWFUL MANNER. ALL ACCUMULATED SEDIMENT BEHIND SILT FENCE AND OTHER SEDIMENT DEVICES SHALL BE REMOVED AND DISPOSED OF IN A LAWFUL MANNER, ACCORDING TO THE GROUND STABILIZATION REQUIREMENTS ON THIS SHEET. REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES FROM THE SITE. CONTRACTOR SHALL MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL LAND DISTURBANCE AND FINAL VEGETATION STABILIZATION OF THE SITE.

THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE INTENDED TO TRAP ANY STORMWATER RUNOFF FROM THE CONSTRUCTION SITE AND DETAIN IT LONG ENOUGH FOR SEDIMENT AND POLLUTANTS TO SETTLE OUT OF THE STORMWATER BEFORE DISCHARGE. VARIOUS EROSION CONTROL MEASURES ARE USED TO PREVENT POLLUTANT-LOADED STORMWATER RUNOFF FROM FLOWING ONTO ADJACENT PROPERTIES.

TRUST BANK
BM 2018, PG 1740
PIN: 1796-90-2666
(HC) HEAVY COMMERCIAL

TRUST BANK
BM 2018, PG 1740
PIN: 1796-90-2666
(HC) HEAVY COMMERCIAL

SEPARATE BUFFER ZONE:
THE 50 FOOT BUFFER ZONE SHALL BE MEASURED FROM THE TOP OF BANK OF THE DITCH OR CHECK. NO ACTIVITY IS PROHIBITED IN ZONE 1 (FIRST 30 FT). OWNER/DEVELOPER TO CONSIDER 15 MIN BUFFER ZONE BEFORE ANY DISTURBANCE WITHIN THE BUFFER ZONE OR CALL LOCAL DIVISION OF WATER QUALITY SURFACE WATER PROTECTION SECTION FOR OFFICIAL DETERMINATION.



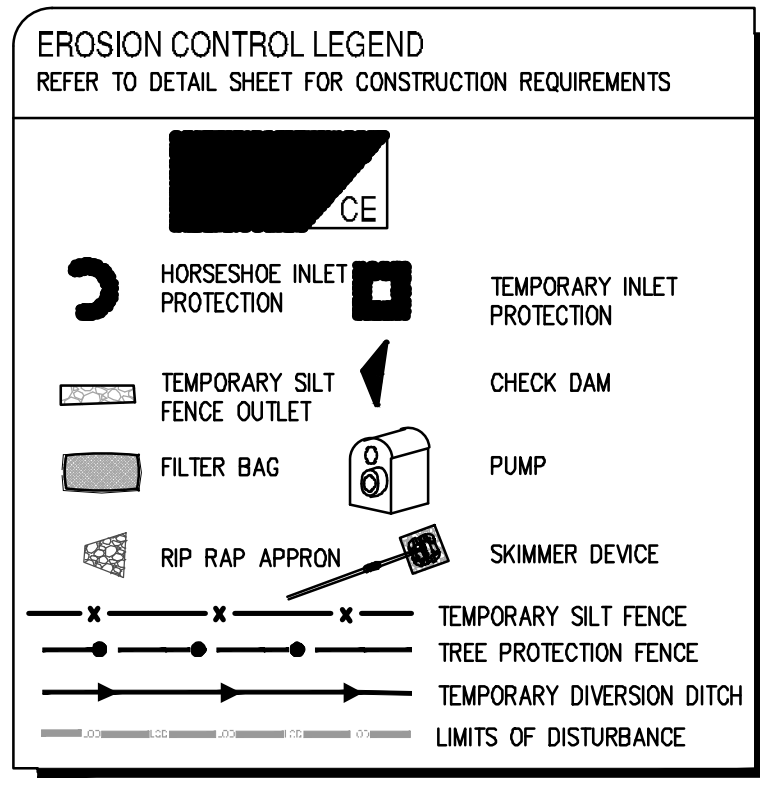
BASIN REMOVAL SEQUENCE:

- SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
- REMOVE BASINS AND ASSOCIATED TEMPORARY DIVERSION DITCHES, IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- PERFORM SEEDING PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
- INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
- WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL ENGINEER/CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.

NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.

STABILIZATION TIMEFRAME

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
BASIN & TEMPORARY DIVERSION DITCHES	IMMEDIATELY	NONE
PERIMETER DICES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) 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 50FT IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES



THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, ACCORDING TO THE FOLLOWING CHART, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RETAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS ACCORDING TO THE FOLLOWING CHART FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

NOTE TO CONTRACTOR:
EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL.

- WAKE COUNTY CONSTRUCTION SEQUENCE:**
- SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A LAND-DISTURBING PERMIT.
 - INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASINS, WAKE COUNTY SKIMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
 - CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769 FOR AN ON-SITE INSPECTION BY THE WATERSHED MANAGER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
 - BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
 - INSTALL STORM SEWER, IF SHOWN, AND PROTECT CATCH BASIN CURB INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, PROTECT AREA DRAIN/YARD INLETS WITH STANDARD INLET PROTECTION, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
 - STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. PREPARE A SEEDBED, FERTILIZE, LIME, SEED, MULCH AND ASPHALT TACK ALL BARE AREAS WITHIN WAKE COUNTY STABILIZATION TIMEFRAME OF COMPLETION OF ANY PHASE OF CONSTRUCTION OR STOPPAGE OF WORK ON ANY PHASE OF CONSTRUCTION.
 - CONTRACTOR TO CONTACT PROJECT ENGINEER BETWEEN SEDIMENT AND EROSION CONTROL PHASES OF DEVELOPMENT AND FOR THE REMOVAL OR CONVERSION OF SEDIMENT AND EROSION CONTROL MEASURES.
 - WAKE COUNTY OR JURISDICTIONAL MUNICIPALITY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.
 - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769 FOR AN INSPECTION BY THE WATERSHED MANAGER.
 - IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
 - WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A CERTIFICATE OF COMPLETION.

BASIN NOTES

- SKIMMER BASIN DESIGN BASED ON 3 DAYS TO DRAIN.
- BASIN AND DIVERSIONS SHALL BE SEED, MULCHED AND ANCHORED/LINED AND PINNED UPON INSTALLATION OF MEASURES.

NOTE TO CONTRACTOR:
THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE WAKE COUNTY OR NEEDED PERMITTED SITE THAT IS APPROPRIATE FOR THE INTENDED USE (I.E. APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR WITHIN THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER APPLICABLE WAKE COUNTY OR NEEDED PERMITS.

CONSTRUCTION NOTE
ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF WAKE COUNTY SPECIFICATIONS AND STANDARD DETAILS.

- EROSION CONTROL NOTES**
- REFER TO GENERAL NOTES SHEET FOR ADDITIONAL EROSION CONTROL REQUIREMENTS.
 - REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.
 - REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER FOR THE DEVELOPMENT.

- STACKPILE DESIGN CRITERIA:**
- A 25-FOOT TEMPORARY MAINTENANCE AND ACCESS EASEMENT SHALL BE SHOWN AROUND ALL PROPOSED STACKPILES (EROSION CONTROL MEASURES SURROUNDING THE STACKPILE SHALL BE SHOWN AT THE OUTER LIMIT OF THIS EASEMENT).
 - STACKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES.
 - STACKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
 - STACKPILE SLOPES SHALL BE 2:1 OR FLATTER.
 - APPROVED BMP'S SHALL BE SHOWN ON A PLAN TO CONTROL ANY POTENTIAL SEDIMENT LOSS FROM A STACKPILE.
 - STACKPILES ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
 - ANY CONCENTRATED FLOW LIKELY TO AFFECT THE STACKPILE SHALL BE DIVERTED TO AN APPROVED BMP.
 - OFF-SITE SPOIL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY UDO AND STATE REGULATIONS. ALL SPOIL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFF-SITE DISPOSAL OF SOIL, PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND NON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-19-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).

- STACKPILE MAINTENANCE REQUIREMENTS:**
- SEEDING OR COVERING STACKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEPT IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
 - IF A STACKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STACKPILE.
 - THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STACKPILE IS IN USE.
 - ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

811 Know what's below. Call before you dig. GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

Bowman

Bowman North Carolina Ltd.
4006 BARRIETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 555-6570
bowman.com
Bowman North Carolina Ltd.

EROSION CONTROL PLAN - FINAL

Rocket Wash
Arendell Ave
Zebulon, NC
Project ID#796479

PRELIMINARY DO NOT USE FOR CONSTRUCTION

PLAN STATUS

6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN
	XXX CHKD
SCALE	H: 1" = 40'
	V: 1" = 40'
JOB No.	220094-01-002
	220097-01-002
DATE	June 20, 2022
FILE No.	220094-01-002
	220097-01-002

SHEET **C2.2**

EROSION CONTROL NOTES:

REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.

REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER FOR THE DEVELOPMENT.

Basin Notes:

SKIMMER BASIN DESIGN BASED ON 3 DAYS TO DRAIN.

Basin and diversions shall be seeded, mulched and anchored/lined and pinned upon installation of measures.

NOTE TO CONTRACTOR:

EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL

NOTE TO CONTRACTOR:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE NCEQ PERMITTED SITE THAT IS APPROPRIATE FOR THE INTENDED USE (I.E. APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR UNTIL THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER ACTIVE APPLICABLE NCEQ PERMITS.

EROSION CONTROL NOTES:

- TOTAL AREA DISTURBED = 5.50 ACRES
TOTAL SITE AREA = 9.87 ACRES
SOIL TYPE = RAWLINGS-IRON COMPLEX AND WEDOWEE SANDY LOAM
- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NCEQ EROSION AND SEDIMENT CONTROL HANDBOOK
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS.
- CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCEQ EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. A REVISED PLAN SHOWING OFF-SITE IMPACTS SHOULD BE SUBMITTED AND APPROVED PRIOR TO ANY OFF-SITE GRADING. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO NCEQ FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDING AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RE-SEED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NCEQ SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
- WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA. SIX INCHES OF STONE SHALL BE USED FOR THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
- ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP-SLOPE LAND DISTURBANCE TAKES PLACE.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS COMPLETED.
- DURING DE-WATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

EROSION CONTROL NARRATIVE:

ROCKET CARWASH, TOWN OF ZEBULON, WAKE COUNTY, NC

CONTRACTOR WILL FIRST INSTALL THE CONSTRUCTION ENTRANCE. THE CONTRACTOR SHALL THEN MOBILIZE ON SITE AND INSTALL THE TEMPORARY EROSION CONTROL DEVICES INCLUDING SILT FENCE, INLET PROTECTION, SKIMMER BASINS, AND OTHER DEVICES IN ACCORDANCE WITH THE PLANS (CLEARING ONLY AS NECESSARY TO INSTALL THESE ITEMS). BEGIN DEMOLITION, CLEARING AND SITE GRADING OPERATIONS. STABILIZATION OF EARTHEN STRUCTURES IS REQUIRED IMMEDIATELY AFTER INSTALLATION. THE ON-SITE STORM SEWER SYSTEM AND THE LEVEL-SPREADER FILTER STRIP CAN NOW BE INSTALLED. IMMEDIATELY AFTER AN INLET IS INSTALLED, INLET PROTECTION SHALL BE PROPERLY INSTALLED ON THE STRUCTURE. ONCE THE SITE IS READY TO BRING UP TO GRADE, REMOVE SKIMMER BASIN #2. THE ON-SITE SANITARY SEWER AND WATER SYSTEMS MAY ALSO BE INSTALLED ONCE THE SITE IS BROUGHT UP TO GRADE. THE SITE PAD WILL BE PREPARED FOR THE PROPOSED BUILDING. THE ROUGH GRADE WILL THEN BE ESTABLISHED FOR THE SITE. INSTALLATION OF CURB AND GUTTER WILL THEN BE PERFORMED. BASE STONE WILL THEN BE PLACED AND FINE GRADED. ALL DISTURBED AREAS WILL BE DRESSED AND SEED. REMOVE ALL INLET PROTECTION FROM STORM STRUCTURES WHEN PAVING IS TO BEGIN. PAVING AND STRIPING WILL THEN BE COMPLETED. FINALIZE STORMWATER POND STRUCTURE AND DISCHARGE PIPES ONCE UPSTREAM AREAS HAVE BEEN STABILIZED (REMOVE ACCUMULATED SEDIMENT). ALL LANDSCAPING WILL BE COMPLETED. THE ON-SITE STORM SEWER SYSTEM SHALL BE CLEANED OF ANY ACCUMULATED SEDIMENT WHICH SHALL BE DISPOSED OF IN A LAWFUL MANNER. ALL ACCUMULATED SEDIMENT BEHIND SILT FENCE AND OTHER SEDIMENT DEVICES SHALL BE REMOVED AND DISPOSED OF IN A LAWFUL MANNER. ACCORDING TO THE GROUND STABILIZATION REQUIREMENTS ON THIS SHEET, REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES FROM THE SITE. CONTRACTOR SHALL MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL LAND DISTURBANCE AND FINAL VEGETATION STABILIZATION OF THE SITE.

THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE INTENDED TO TRAP ANY STORMWATER RUNOFF FROM THE CONSTRUCTION SITE AND DETAIN IT LONG ENOUGH FOR SEDIMENT AND POLLUTANTS TO SETTLE OUT OF THE STORMWATER BEFORE DISCHARGE. VARIOUS EROSION CONTROL MEASURES ARE USED TO PREVENT POLLUTANT-LADEN STORMWATER RUNOFF FROM FLOWING ONTO ADJACENT PROPERTIES.

GENERAL NOTES:

- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC. THAT MAY BE REQUIRED.
- THE CONTRACTOR SHALL NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EVERY OFFSET, TRANSITION, FITTING, ETC. THAT MAY BE REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
- THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
- CONTRACTOR SHALL MAINTAIN AN "AS BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE ENGINEER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE OWNER.
- IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE WRITTEN PERMISSION OF THE OWNER.
- THE CONTRACTOR MUST, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY HIM, HIS EMPLOYEES OR HIS WORK. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.

SEDIMENT & EROSION CONTROL NOTES:

- THE EROSION AND SEDIMENTATION CONTROL MEASURES (BMPs) WERE DESIGNED USING THE NORTH CAROLINA NCEQ REQUIREMENTS AND SHALL BE INSTALLED ACCORDINGLY. CONTRACTOR SHALL PERFORM ALL ACTIVITIES IN STRICT COMPLIANCE WITH THE NORTH CAROLINA NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (GENERAL PERMIT).
- REFER TO THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS FOR EROSION CONTROL DETAILS AND DESIGN TABLES FOR SEDIMENT BASINS, DIVERSION DITCHES, AND CULVERTS, SLOPE DRAINS, RIP-RAP APRONS AND OTHER EROSION CONTROL MEASURES.
- EXISTING BOUNDARIES, TOPOGRAPHY, 100-YR FLOODPLAIN, UTILITY AND ROAD INFORMATION TAKEN FROM AN EXISTING CONDITIONS SURVEY. ALL EXISTING INFORMATION IS TO BE FIELD VERIFIED BY THE CONTRACTOR.
- SEE THE LANDSCAPE PLAN FOR LOCATIONS OF PROPOSED PLANTINGS AND FINAL STABILIZATION.
- TEMPORARY DIVERSION DITCHES AND BERMS SHALL BE MAINTAINED AS THE SITE IS BROUGHT TO GRADE.
- DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE EROSION CONTROL INSPECTORS SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- SEE THE GENERAL NOTES SHEET AND THE GRADING AND DRAINAGE PLAN FOR OTHER NOTES REGARDING GRADING ACTIVITIES.
- SEE SITE PLAN, GRADING AND DRAINAGE PLAN, UTILITY PLAN, PLANTING PLAN AND OTHER PLAN SHEETS FOR DETAILED DESIGN INFORMATION OF PERMANENT SITE APPURTENANCES SHOWN ON THIS SHEET.
- WHERE THE LIMITS OF DISTURBANCE AND TEMPORARY FENCE (SF, SF-PF, OR PF) LIMITS ARE ADJACENT, THE TEMPORARY FENCE LINE IS THE LIMITS OF DISTURBANCE. THE LINE TYPES ARE SHOWN SEPARATED FOR ILLUSTRATIVE PURPOSES ONLY.
- CONTRACTOR SHALL NOT DISTURB ANY EXISTING VEGETATIVE GROUND COVER OR TREES OUTSIDE OF THE LIMITS OF DISTURBANCE OR WITHIN ANY REQUIRED BUFFER LIMITS UNLESS OTHERWISE NOTED OR ILLUSTRATED.
- PROVIDE CONTROLS OF POLLUTANTS, INCLUDING, BUT NOT LIMITED TO DUST CONTROL, DE-WATERING, SOLID WASTE DISPOSAL, AND HAZARDOUS MATERIALS.
- CLEAR ONLY AS REQUIRED TO INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES. MASS CLEARING AND GRUBBING CAN BEGIN ONLY AFTER ALL DOWNSTREAM MEASURES HAVE BEEN INSTALLED.
- USE ROCK OR WASHED STONE TO BRING CONSTRUCTION EXIT TO GRADE. IMPLEMENT WHEEL WASHES AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION.
- DIVERT STORM WATER RUNOFF OFF THE FACE OF THE SEDIMENT BASIN SLOPES USING DIVERSION DITCHES AND SLOPE DRAINS. CONTRACTOR SHALL MAINTAIN AND RELOCATE DIVERSION DITCHES AND SLOPE DRAINS TO ENSURE STORM WATER RUNOFF DOES NOT ERODE THE FACE OF FINAL SLOPES.
- MAINTAIN POSITIVE FLOW TO THE SEDIMENT BASINS THROUGHOUT ALL PHASES OF CONSTRUCTION. PLACE EXCAVATED SOILS ALONG DOWNSTREAM EDGE OF THE DIVERSION DITCHES TO PROVIDE ADDITIONAL CAPACITY.
- REFER TO THE GRADING AND DRAINAGE PLAN FOR FINAL SITE AND PAVEMENT GRADES AND ELEVATIONS OF THE PROPOSED STORM SEWER SYSTEMS.
- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE APPROVED EROSION AND SEDIMENT CONTROL DRAWINGS DURING CONSTRUCTION OPERATIONS.
- GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
- ALL WORK SHALL BE CONFINED TO PERMIT LIMITS SHOWN ON PLANS. UNLESS OTHERWISE NOTED, THE SITE PLAN PROPERTY LIMITS SHALL BE CONSIDERED THE PERMIT LIMITS.
- SUFFICIENT EROSION CONTROL PRACTICES MUST BE INSTALLED AND MAINTAINED TO RETAIN SEDIMENT WITHIN THE BOUNDARIES OF THE SITE.
- ADDITIONAL EROSION CONTROL MEASURES OR SILT BARRIERS TO BE PLACED AS SHOWN AND/OR DIRECTED BY THE PROJECT ENGINEER AND/OR LOCAL JURISDICTIONAL INSPECTOR.
- FOR ALL CONSTRUCTION ALONG AND/OR ACROSS WATERWAYS, BANK PROTECTION AND STABILIZATION SHALL BE REQUIRED AS PER LOCAL JURISDICTIONAL EROSION CONTROL LAWS.
- ALL TREE PROTECTION AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION AND SHALL BE MAINTAINED IN PROPER WORKING ORDER UNTIL ALL DISTURBED AREAS ARE STABILIZED AND GROUND COVER IS ESTABLISHED. CONSTRUCTION ENTRANCE PADS SHALL BE INSTALLED BY THE CONTRACTOR AT CONSTRUCTION ACCESS POINTS PRIOR TO LAND DISTURBANCE.
- ALL EASEMENTS DISTURBED MUST BE DRESSED AND GRASSED TO CONTROL EROSION IN ACCORDANCE WITH EASEMENT PLATS PRIOR TO ACCEPTANCE.
- CONSTRUCTION LIMITS SHALL NOT BE EXCEEDED WITHOUT THE APPROVAL OF NCEQ INSPECTOR.

NORTH CAROLINA CONSTRUCTION GENERAL PERMIT NOTE:

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (NOI) form requesting a Certificate of Coverage (COC) under the NCG010000 Construction Stormwater General Permit. This form MUST be submitted prior to the commencement of any land disturbing activity on the above named project. The NOI form may be accessed at deq.nc.gov/NGC01. Please direct questions about the NOI form to Paul Clark at Paul.Clark@ncdenr.gov.

After you submit a complete and correct NOI Form, a COC will be emailed to you within three business days. Initially, DEMLR will not charge a fee for coverage under the NCG01 permit. However, on or after May 1, 2019, a \$100 fee will be charged annually. This fee is to be sent to the DEMLR Stormwater Central Office staff in Raleigh.

- Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:
- The approved E&S plan as well as any approved deviation.
 - The NCG01 permit and the COC, once it is received.
 - Records of inspections made during the previous 30 days.
 - The Certificate of Approval

NOTIFICATION OF COMBINED SELF-MONITORING AND SELF-INSPECTION FORM:

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, DWO AND DEMLR DEVELOPED A COMBINED FORM. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE FORM CAN BE ACCESSED AT: [HTTP://PORTAL.NC DENR.ORG/WEB/LR/EROSION](http://portal.ncdenr.org/web/LR/EROSION)

IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CALL THE APPLICABLE NCDENR REGIONAL OFFICE: (RALEIGH: 919-791-4200) (FAYETTEVILLE: 910-433-3300) (WILMINGTON: 910-796-7215) (WASHINGTON: 252-946-6481) (WINSTON-SALEM: 336-771-5000) (MOORESVILLE: 704-663-1699) (ASHEVILLE: 828-296-4500).

TREE PROTECTION NOTES:

- THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS. THE CONTRACTOR IS ALSO REQUESTED TO SAVE ALL OTHER EXISTING TREES AND SHRUBS WHERE POSSIBLE.
- WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER AND IMMEDIATELY COVER ALL ROOT CUT SURFACES LARGER THAN TWO INCHES IN DIAMETER WITH TREE WOUND DRESSING. USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK.
- NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
- NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/GRADED AREAS.
- TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, CLEARING, GRADING OR CONSTRUCTION BEGINS AND IS NOT TO BE REMOVED UNTIL AFTER CONSTRUCTION.
- TREE PROTECTION FENCE IS TO BE LOCATED 1 FOOT PER TREE DIAMETER INCH AWAY FROM THE TREE.

Bowman

Bowman North Carolina Ltd.
4006 BARRIETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919)558-6570
bowman.com
Bowman North Carolina Ltd.

EROSION CONTROL NOTES

Rocket Wash
Arendell Ave

Wake County

Project ID#796479

Zebulon, NC

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION



DATE	DESCRIPTION
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H: N/A V: N/A
JOB No.	220094-01-002 220097-01-002
DATE	June 20, 2022
FILE No.	220094-01-002 220097-01-002

SHEET C2.3

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCGO1 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCGO1 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Required Ground Stabilization Timeframes	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HOW) Zones	7	None
(c) Slopes steeper than 3:1	7	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -10 days for Falls Lake Watershed
(d) Slopes 3:1 to 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HOW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HOW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulch and watered Hydroseeding Roll-on erosion control products with or without temporary grass seed Appropriate erosion control products Planting seedlings 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulch and watered Seeding the fabric such as permanent silt reinforcement matting Hydroseeding Straw or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Roll-on erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structure.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Pile litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

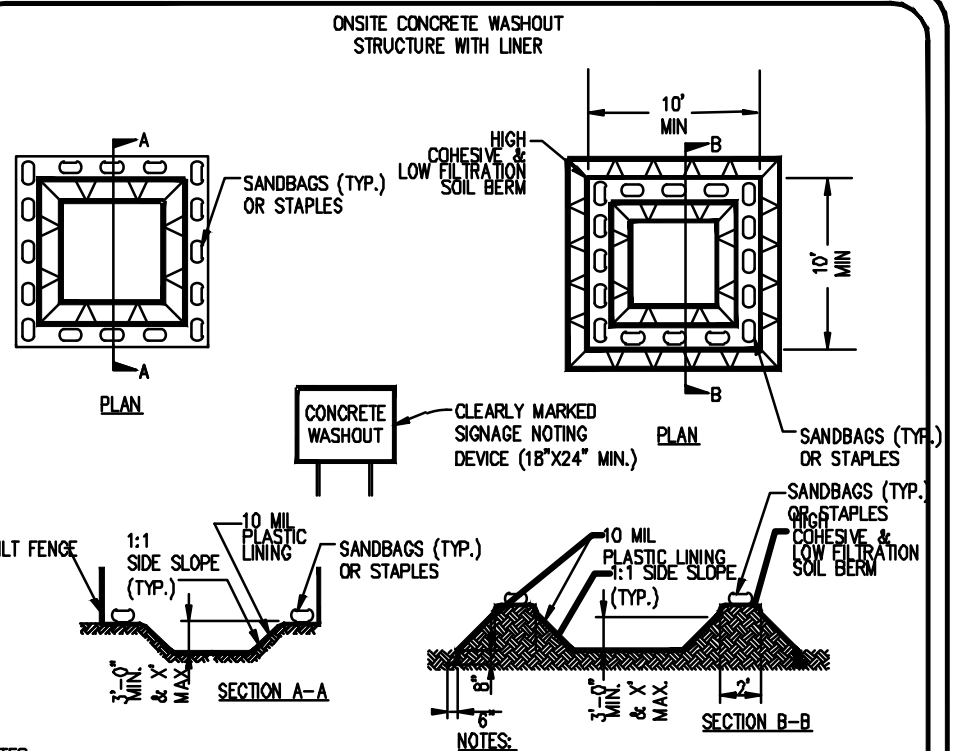
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint wastebats at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, staked and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating units.

EROSION STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate erosion-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment control and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with all faces installed along top of slope with a minimum offset of five feet from the toe of slope.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SOURCE NOTING DEVICE.

CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Install, or recycle, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method of product to be used, contact your approved authority for review and approval. If local standards are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective cut or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove loadings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining loadings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION
Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the inspection record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Drainage maintained in good working order	Daily	1. Only rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no independent rainfall information is available, record the cumulative rain measurement for those unattended days (and the wet/dry state if a rain inspection is needed). Events which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-measuring device approved by the Division.
(2) EESC Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch at 30 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures are operating properly. 5. Description of measures not working properly. 6. Description of corrective actions taken. 7. Identification of the discharge outlets inspected. 8. Date and time of the inspection. 9. Name of the person performing the inspection. 10. Indication of whether the measures are operating properly. 11. Description of corrective actions taken, such as silt fences, blocking of transport holes in ditches, etc.
(3) Silt water discharge outlets (SUDs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch at 30 hours	1. Identification of the discharge outlets inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures are operating properly. 5. Description of corrective actions taken, such as silt fences, blocking of transport holes in ditches, etc.
(4) Number of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch at 30 hours	1. Identification of the discharge outlets inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures are operating properly. 5. Description of corrective actions taken, such as silt fences, blocking of transport holes in ditches, etc.
(5) Silt water discharge outlets (SUDs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch at 30 hours	1. Identification of the discharge outlets inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures are operating properly. 5. Description of corrective actions taken, such as silt fences, blocking of transport holes in ditches, etc.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading in which the EESC measures, covering and stabilizing, installation of storm drainage facilities, completion of all land disturbing activity, construction or re-vegetation, permanent ground cover. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures are operating properly. 5. Description of corrective actions taken, such as silt fences, blocking of transport holes in ditches, etc.

NOTE: The rain inspection meets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING
1. EESC Plan Documentation
The approved EESC plan as well as any approved deviation shall be kept on the site. The approved EESC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the EESC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each EESC Measure has been installed and does not significantly deviate from the location, dimensions and relative elevations shown on the approved EESC Plan.	Initial and date each EESC Measure on a copy of the approved EESC Plan or electronic data and sign an inspection report that lists each EESC Measure shown on the approved EESC Plan. This documentation is required upon the initial installation of the EESC Measures or if the EESC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved EESC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved EESC Plan.	Initial and date a copy of the approved EESC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(d) The maintenance and repair requirements for all EESC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to EESC Measures.	Initial and date a copy of the approved EESC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

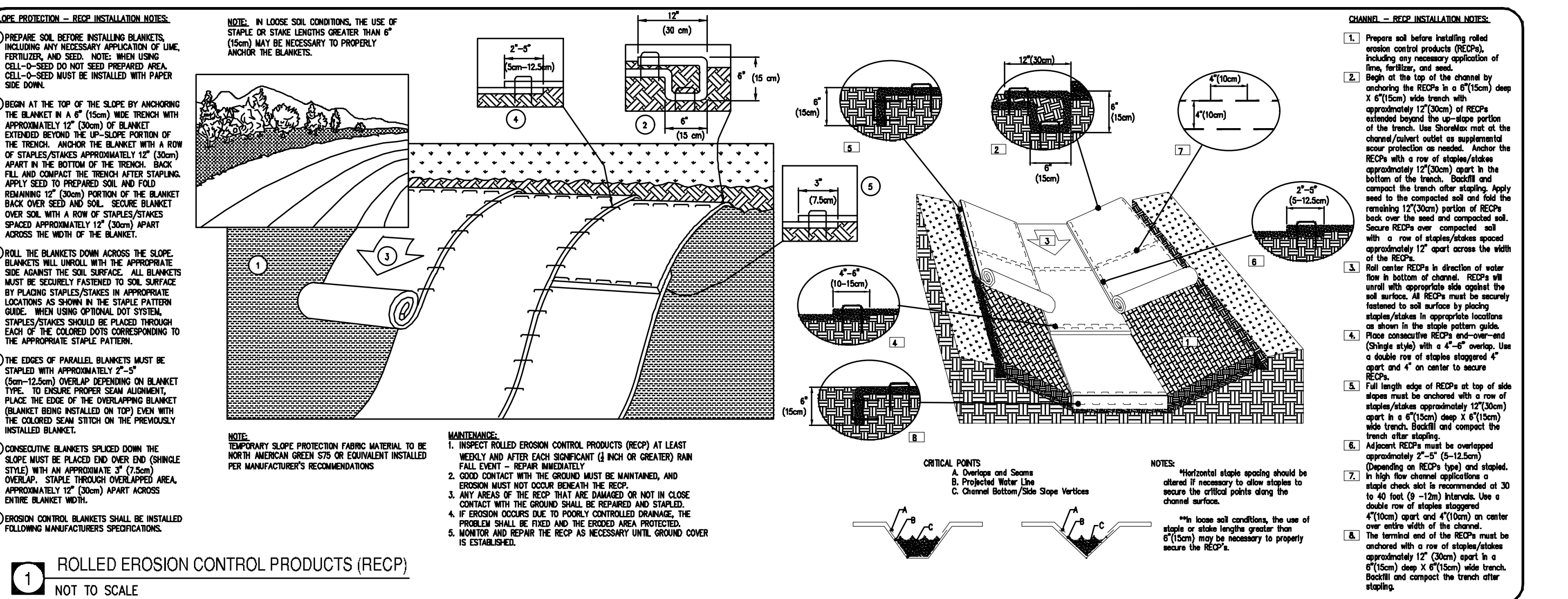
2. Additional Documentation to be Kept on Site
In addition to the EESC plan documents above, the following items shall be kept on the site and available for inspection at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-stored records in lieu of the required paper copies will be allowed if shown to provide equal access and utility on the hard-copy records.
- Documentation to be Retained for Three Years
All data used to complete the e-NIS and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

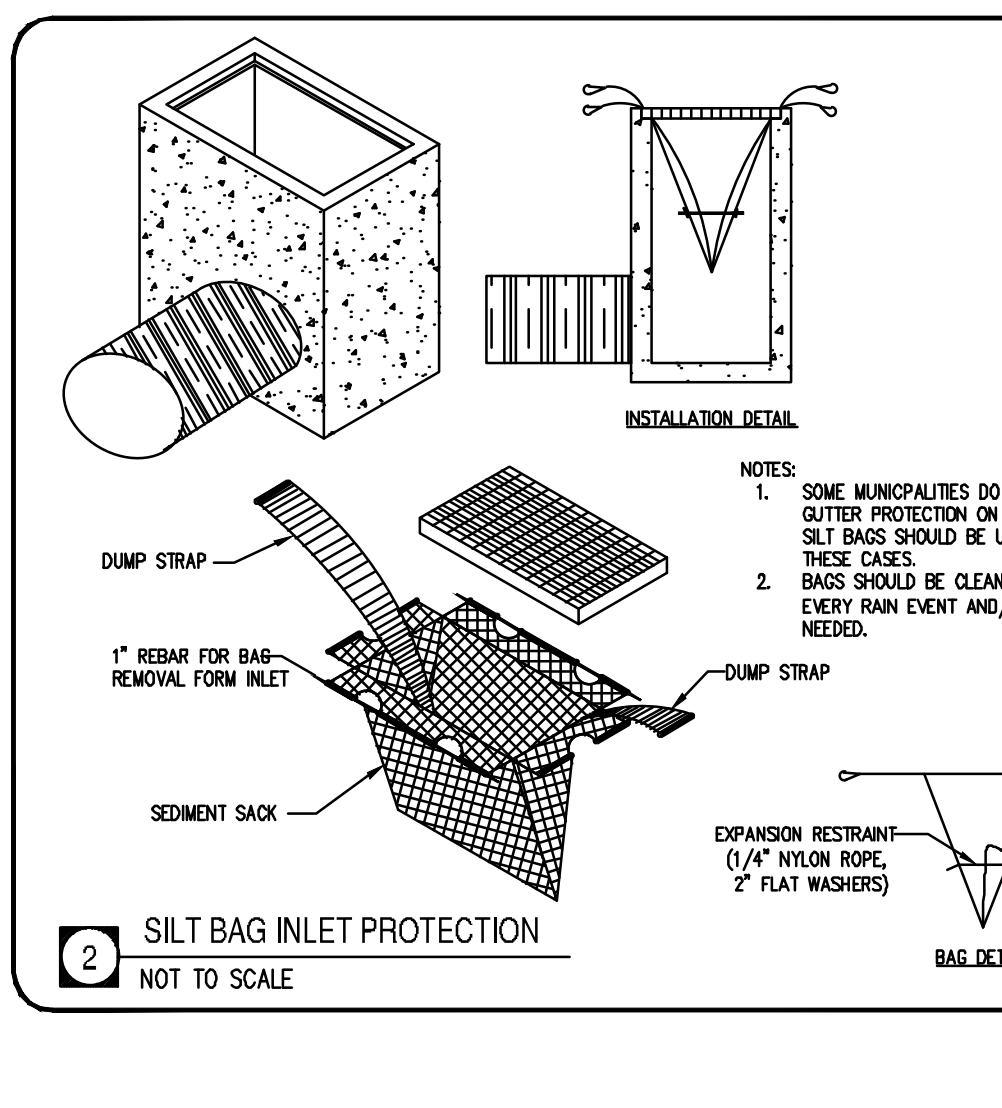
PART II, SECTION G, ITEM (4) DRAIN DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The EESC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the EESC plan authority has approved these items.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (4) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sized, designed and maintained dewatering tanks, wet traps, and filtration systems.
- Vegetated, upland areas of the sites or a properly designed stone pile is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SOURCE NOTING DEVICE.



NOTES:
1. SOME MANIPULATES DO NOT ALLOW CUTTER PROTECTION IN PUBLIC ROADS. SILT BAGS SHOULD BE USED WITH THESE CASES.
2. BAGS SHOULD BE CLEANED OUT AFTER EVERY RAIN EVENT AND/OR AS NEEDED.

Bowman
Bowman North Carolina Ltd.
4006 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 955-6570
bowman.com
Bowman North Carolina Ltd.
Wake County
Zebulon, NC
Project ID# 736479

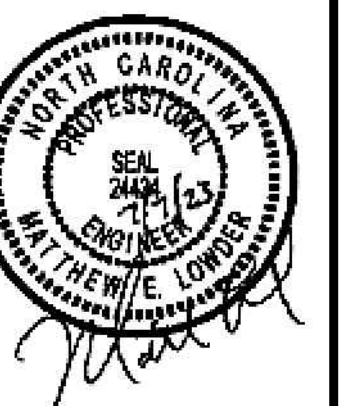
NORTH CAROLINA GENERAL PERMIT (NCGO1)
Rocket Wash
Arendell Ave
Zebulon, NC
Project ID# 736479

PRELIMINARY DO NOT USE FOR CONSTRUCTION

PLAN STATUS
6/20/22 SITE PLAN SUBMITTAL
10/21/22 PER TOWN REVIEW
4/28/23 PER TOWN REVIEW
7/07/23 WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL XXX
SCALE	H: N/A V: N/A
JOB No.	220094-01-002
DATE	June 20, 2022
FILE No.	220094-01-002

SHEET **C2.4**



DATE	DESCRIPTION
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION	MEL	XXX
220094-01-002	DESIGN	MEL	CHKD
220097-01-002	DRAWN	Y	
220094-01-002	JOB No.		
220094-01-002	DATE		
220097-01-002	FILE No.		

GENERAL NOTES

- THE CONTRACTOR SHALL EMPLOY ALL NECESSARY BARRICADES, SIGNS, FENCES, FLASHING LIGHTS, FLAGMEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED BY TOWN OF ZEBULON AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, FOR DETAILS OF TRAFFIC CONTROL STANDARDS AND DEVICES.
- THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION.
- APPROVAL OF THESE PLANS IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
- COORDINATE ALL CURB AND STREET GRADES IN INTERSECTIONS WITH INSPECTOR.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION "STANDARD DETAILS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND APPLICABLE CODES AND ORDINANCES. THE CONTRACTOR SHALL MAINTAIN A CURRENT EDITION OF THE STATE AND LOCAL CODES, ORDINANCES, STANDARD SPECIFICATION AND STANDARD DETAILS ON THE PROJECT SITE FOR REFERENCE DURING CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND SHALL REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS THE OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY. CONTRACTOR SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING WITH WORK.
- THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
- THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
- THE CONTRACTOR SHALL REPAIR, RESURFACE, RECONSTRUCT OR REFINISH ANY AREAS DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, HIS SUBCONTRACTORS OR SUPPLIERS AT NO ADDITIONAL COST TO THE OWNER.
- ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF TRUCK DOCKS, EXIT DOORS, SIDEWALKS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
- ALL PAINT STRIPING, PAVEMENT MARKINGS, AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR AS OTHERWISE SPECIFIED. ALL REFERENCED SIGN STANDARDS ARE TAKEN FROM THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". ALL NEW SIGNS SHALL BE MOUNTED ON GALVANIZED POSTS AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- CONTRACTOR SHALL INSTALL ACCESSIBLE RAMPS PER LOCAL MUNICIPALITY AND ADA STANDARDS AT ALL DRIVE AND BUILDING LOCATIONS AS REQUIRED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENTS FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.
- ACCESSIBLE RAMPS TO BE PROVIDED IN ACCORDANCE WITH NCDOT AND TOWN OF ZEBULON STANDARDS.
- ALL PLANTING ISLANDS WITH A SHADE TREE SHALL BE A MINIMUM OF 350 SQUARE FEET.
- ALL SIDEWALKS MUST BE ACCESSIBLE TO PERSONS WHO ARE BLIND, HAVE LOW VISION AND PEOPLE WITH MOBILITY DISABILITIES. PEDESTRIAN EXISTING ROUTES AND ALTERNATE PEDESTRIAN ROUTES DURING CONSTRUCTION WILL BE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG), 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

SIGHT TRIANGLE NOTE

WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN, NO OBSTRUCTION BETWEEN TWO (2) FEET AND EIGHT (8) FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION OR THE NEAREST TRAVELED WAY, IF NO CURBING EXISTS.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS

NOTE: THE MAINTENANCE OF ALL OPEN SPACE ON THE PROPERTY WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER OR THE ASSOCIATED DEVELOPMENT OWNERS ASSOCIATION

NOTE: THE PROPOSED PROJECT SIGN WILL REQUIRE A SIGN PERMIT REVIEW THROUGH THE TOWN OF ZEBULON PLANNING DEPARTMENT

GENERAL NOTES

- Property line and right-of-way monuments shall not be disturbed by construction. If disturbed, they shall be reset to their original locations at the Contractor's expense by a Registered Land Surveyor.
- Proof Roll Building and all parking areas. Notify Owner of any unacceptable areas.
- Building dimensions shown on the Civil Engineering Plans are for reference purposes only. Contractor shall use the Architectural and Structural Plans for exact Building dimensions.
- All site dimensions are referenced to the back of curb or edge of paving unless otherwise noted.
- All sidewalks, curb and gutter, street paving, curb cuts, driveway approaches, handicap ramps, etc. constructed outside the property line in the right-of-way shall conform to all municipal and/or State specifications and requirements.
- All disturbance incurred to any adjoining property due to construction or demolition shall be restored to the previous condition or better, and to the satisfaction of the City or State Authority.



LEGEND	QTY.
	1
	5

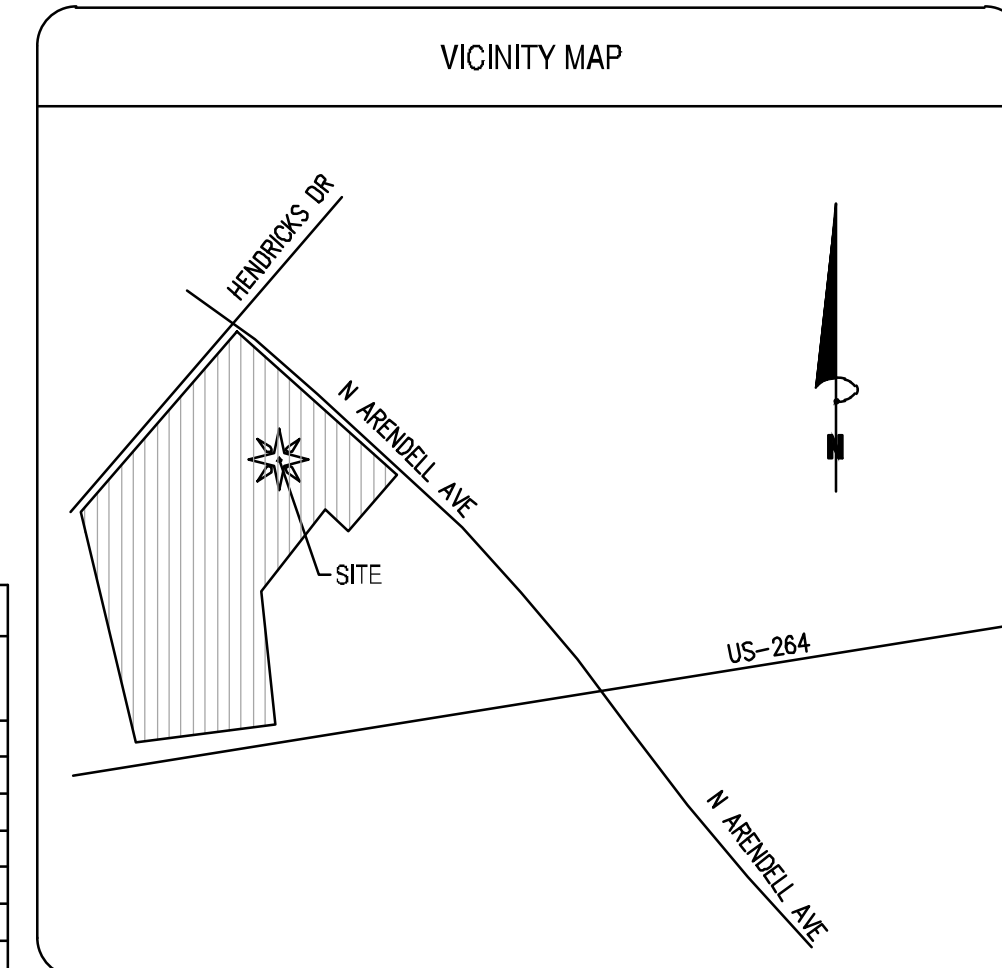
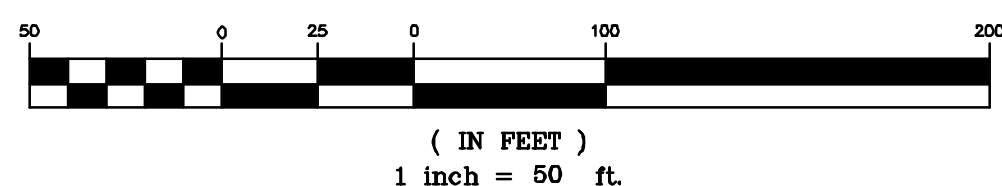
DEVELOPMENT DATA

DEVELOPMENT NAME:	ROCKET EXPRESS
STREET ADDRESS:	N. ARENDELL AVENUE
	ZEBULON, NC WAKE COUNTY
PROJECT ID#	736479
PROPERTY IDENTIFICATION # (PIN):	2706-08-1833, 2706-00-2456, 2706-00-3318, 2706-00-3279, 2706-00-4241
PROPERTY #:	011170, 0030085, 0057144, 0058906, 0038956
DEED BOOK/PAGE:	12474-2357
EXISTING ZONING:	HC-HEAVY COMMERCIAL
WATERSHED DISTRICT:	NONE
FLOOD ZONE:	NONE
TOTAL SITE ACRES:	429,809 SF (9.87 AC)
INSIDE TOWN LIMITS:	YES
EXISTING USE:	VACANT
PROPOSED BUILDING USE:	CAR WASH AND OUTPARCELS
PROPOSED TOTAL BUILDING AREA:	2,880 SF (CAR WASH)
MAX BUILDING HEIGHT:	50 FT
MIN LOT AREA:	6,000 SF
MIN LOT WIDTH:	50 FT
MAX LOT COVERAGE:	80%
FRONT SETBACK:	30 FT
SIDE SETBACK (STREET):	30 FT
SIDE SETBACK (INTERIOR):	0, 5 FT IF PROVIDED
REAR SETBACK:	0 IF ABUTTED BY AN ALLEY, OTHERWISE 25 FT
PARKING REQUIREMENTS:	2 PER WASH BAY
TOTAL PROVIDED:	25 (22 VACUUM SPACES + 3 EMPLOYEE SPACES)
ACCESSIBLE SPACES PROVIDED:	1
LOADING AREA:	1 PROVIDED
STACKING SPACES:	3 REQUIRED, 3 PROVIDED
BICYCLE SPACES:	2 REQUIRED, 2 PROVIDED
LANDSCAPE BUFFERS:	10 FT TYPE A BUFFER (ADJACENT HC) 15 FT STREETSCAPE BUFFER

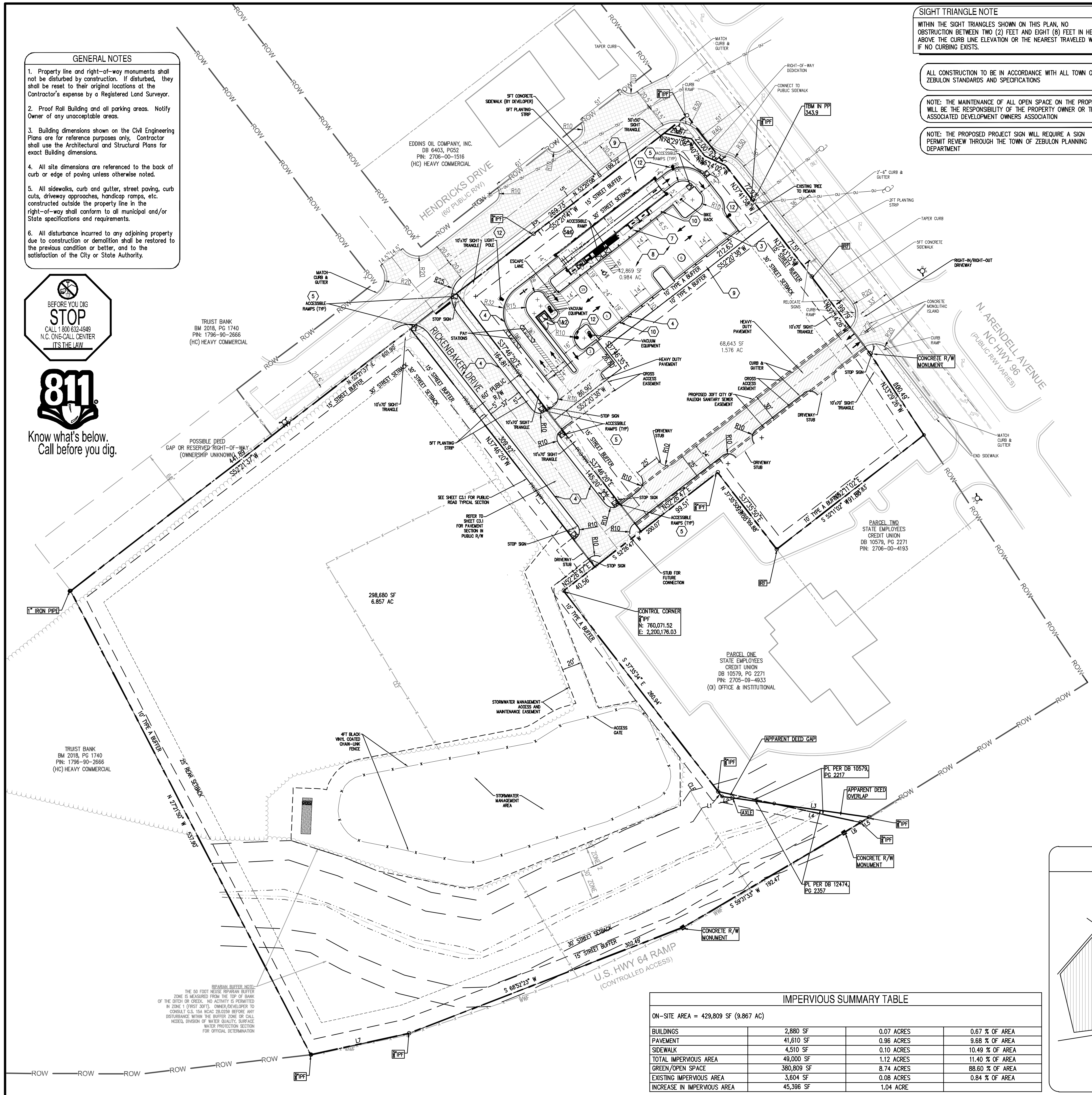
SITE KEYNOTES

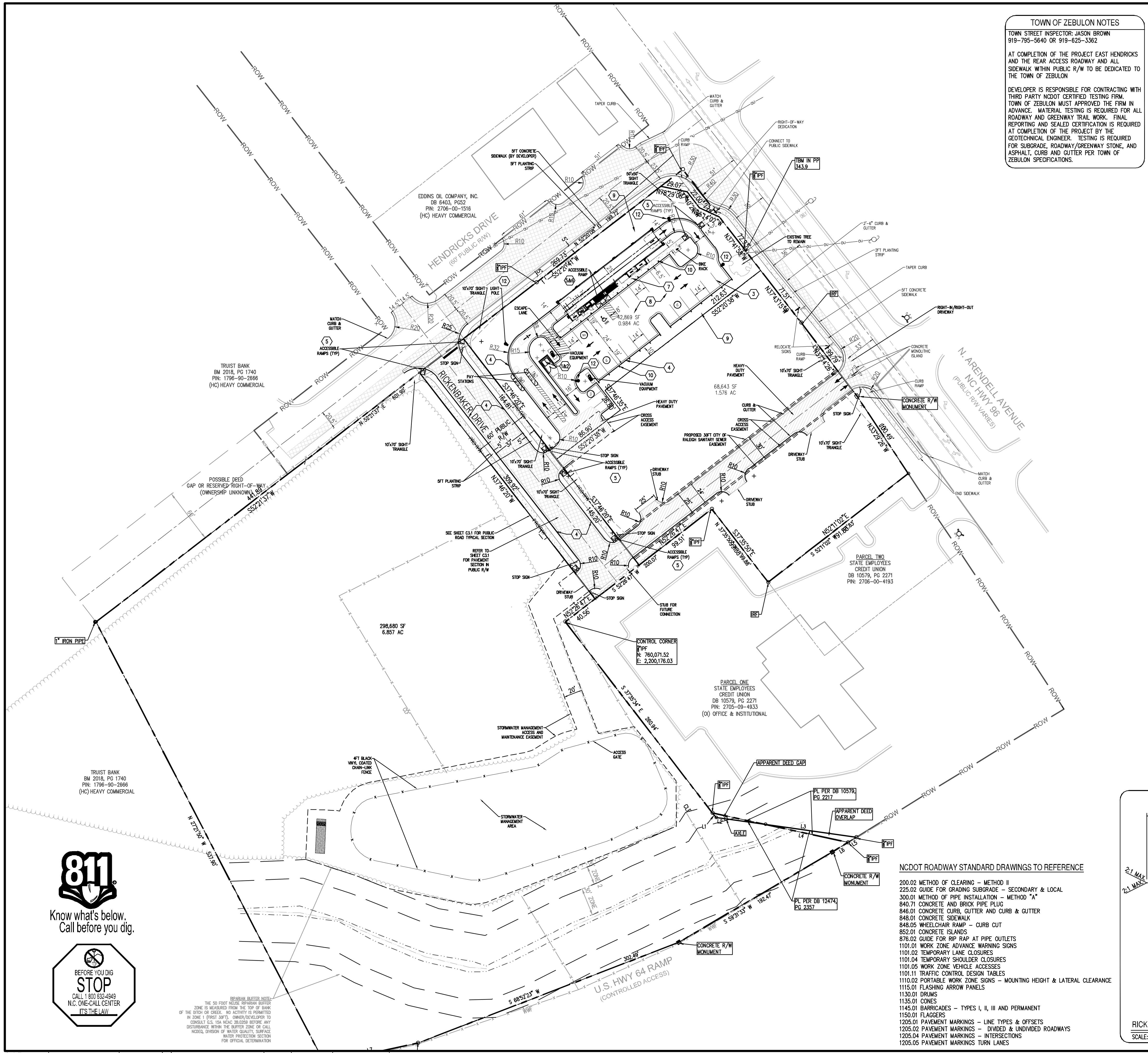
- DUMPSTER ENCLOSURE
- INSTALL NEW CONCRETE PAD OF 4000 PSI BROOM FINISHED CONCRETE WITH 6"x6"x 1/8" WWF STEEL REINFORCEMENT. REFER TO DETAIL SHEET
- ASPHALT PAVEMENT PARKING LINES 4" WIDE PAINTED WHITE
- CONSTRUCT 6" HIGH CONC. CURB & GUTTER CONTINUOUS AROUND SITE. BACKFILL TO TOP OF CURB. REFER TO DETAIL
- PROVIDE HANDICAP RAMP PER FEDERAL & LOCAL ACCESSIBILITY REQUIREMENTS. REFER TO DETAIL
- HANDICAP PARKING SIGN. REFER TO DETAIL SHEET
- NEW BROOM FINISHED CONCRETE SIDEWALK SLOPED AT 1/8" FT. MAX. FOR POSITIVE DRAINAGE.
- ASPHALT PAVEMENT DESIGN AS PER GEOTECHNICAL REPORT SPECIFICATIONS.
 [Symbol] STANDARD DUTY ASPHALT PAVEMENT
 [Symbol] HEAVY DUTY ASPHALT PAVEMENT
 [Symbol] CONCRETE PAVEMENT
- LANDSCAPING - SEE LANDSCAPING PLAN.
- VACUUM BOOM SYSTEM
- SEEDED AREA
- SITE LIGHT
- PROPOSED PARKING COUNT

GRAPHIC SCALE



IMPERVIOUS SUMMARY TABLE			
ON-SITE AREA =	429,809 SF (9.867 AC)		
BUILDINGS	2,880 SF	0.07 ACRES	0.67 % OF AREA
PAVEMENT	41,610 SF	0.96 ACRES	9.68 % OF AREA
SIDEWALK	4,510 SF	0.10 ACRES	10.49 % OF AREA
TOTAL IMPERVIOUS AREA	49,000 SF	1.12 ACRES	11.40 % OF AREA
GREEN/OPEN SPACE	380,809 SF	8.74 ACRES	88.60 % OF AREA
EXISTING IMPERVIOUS AREA	3,604 SF	0.08 ACRES	0.84 % OF AREA
INCREASE IN IMPERVIOUS AREA	45,396 SF	1.04 ACRE	





TOWN OF ZEBULON NOTES
 TOWN STREET INSPECTOR: JASON BROWN
 919-795-5640 OR 919-625-3362

AT COMPLETION OF THE PROJECT EAST HENDRICKS AND THE REAR ACCESS ROADWAY AND ALL SIDEWALK WITHIN PUBLIC R/W TO BE DEDICATED TO THE TOWN OF ZEBULON

DEVELOPER IS RESPONSIBLE FOR CONTRACTING WITH THIRD PARTY NCDOT CERTIFIED TESTING FIRM. TOWN OF ZEBULON MUST APPROVE THE FIRM IN ADVANCE. MATERIAL TESTING IS REQUIRED FOR ALL ROADWAY AND GREENWAY TRAIL WORK. FINAL REPORTING AND SEALED CERTIFICATION IS REQUIRED AT COMPLETION OF THE PROJECT BY THE GEOTECHNICAL ENGINEER. TESTING IS REQUIRED FOR SUBGRADE, ROADWAY/GREENWAY STONE, AND ASPHALT, CURB AND GUTTER PER TOWN OF ZEBULON SPECIFICATIONS.

TRAFFIC CONTROL NOTES

THE DISTRICT OFFICE OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO CONSTRUCTION.

TRAFFIC MUST BE MAINTAINED AT ALL TIMES AND TRAFFIC CONTROL MUST COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND WITH THE CURRENT EDITION OF THE NCDOT STANDARDS AND SPECIFICATIONS.

ALL LANES OF TRAFFIC ARE TO BE OPEN DURING THE HOURS OF 6:00 AM TO 9:00 AM AND FROM 4:00 PM TO 6:00 PM. A MINIMUM OF ONE 12-FOOT LANE SHALL BE MAINTAINED AT ALL TIMES.

ALL ROADWAY SIGNS WHICH ARE TO BE REMOVED DURING CONSTRUCTION ARE TO BE REINSTALLED AS SOON AS POSSIBLE.

DURING NON-WORKING HOURS, EQUIPMENT IS TO BE PARKED AS CLOSE TO THE RIGHT OF WAY LINE AS POSSIBLE AND BE PROPERLY BARRICADED IN ORDER TO PREVENT ANY EQUIPMENT OBSTRUCTION WITHIN THE TRAVEL LANE.

ALL CONTRACTORS DOING WORK WITHIN STATE RIGHT OF WAY ARE TO HAVE A COPY OF THESE PLANS ON THE JOB SITE.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WITHIN 5' OF AN OPEN TRAVEL LANE, THE CONTRACTOR SHALL CLOSE THE OPEN TRAVEL LANE ADJACENT TO THE WORK AREA USING APPROPRIATE TRAFFIC CONTROL MEANS AND METHODS UNLESS WORK IN THAT AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

THE CONTRACTOR SHALL NOT WORK SIMULTANEOUSLY ON BOTH SIDES OF AN OPEN TRAVEL WAY WITHIN THE SAME LOCATION ON A TWO-LANE, TWO-WAY ROAD.

THE MAXIMUM LENGTH OF A LANE CLOSURE ON THE PROJECT SHALL BE ONE MILE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

THE CONTRACTOR SHALL BACKFILL AT 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF OF MORE THAN 3".

WHEN BACKFILL IS REQUIRED, IT SHALL BE AT NO EXPENSE TO THE OWNER.

THE MAXIMUM DIFFERENCE IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC SHALL BE 2".

WHEN LANE CLOSURES ARE NOT IN EFFECT, CHANNELIZING DEVICES IN WORK AREAS SHALL BE SPACED NO GREATER THAN TWICE THE POSTED SPEED LIMIT, EXCEPT 10' ON-CENTER IN RADIUS, AND SHALL BE SET 3' OFF THE EDGE OF AN OPEN TRAVEL WAY.

DURING INSTALLATION, PROPER TRAFFIC CONTROL DEVICES, SIGNS, ETC. BE INSTALLED TO ENSURE PUBLIC SAFETY IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS

ALL DISTURBED AREAS ARE TO BE FULLY RESTORED TO NCDOT MINIMUM ROADWAY STANDARDS.

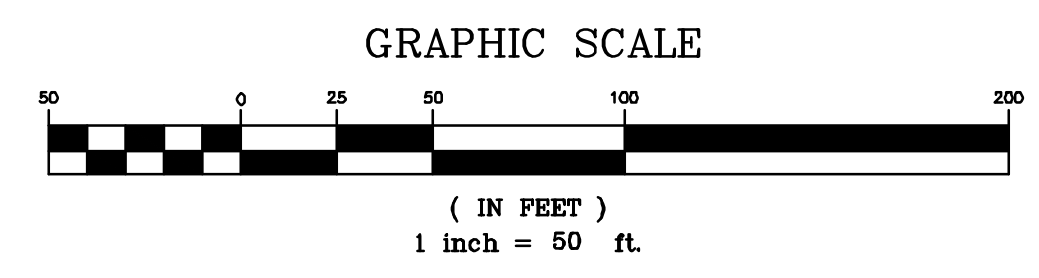
MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NCDOT ROADWAY STANDARDS AND SPECIFICATIONS (LATEST EDITION).

PAVEMENT MARKING SCHEDULE

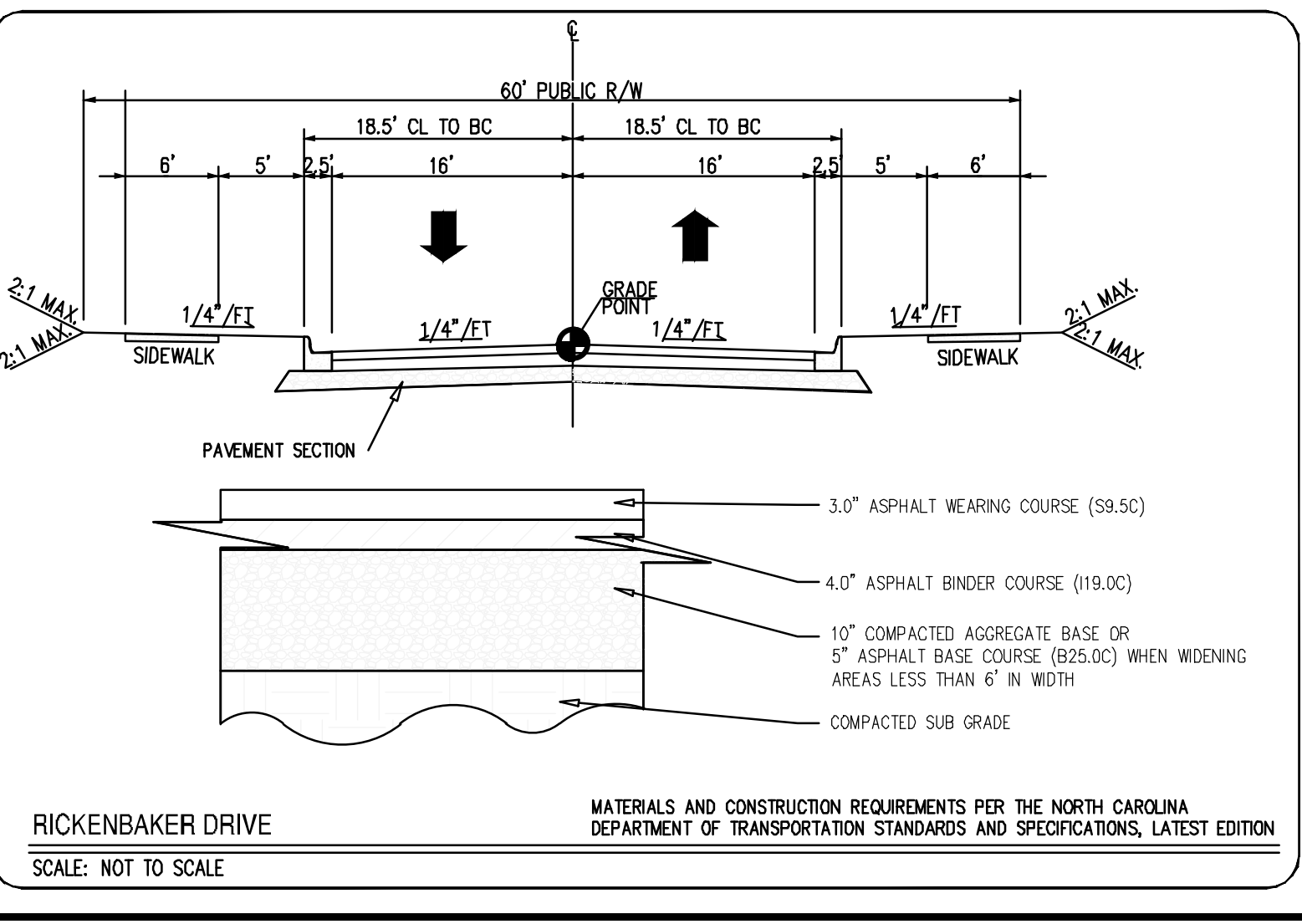
TA	WHITE EDGE LINE (4",90M)	---
TI	NCDOT STD DETAIL 1205.01	---
TH	DOUBLE YELLOW CENTERLINE (4",90M)	==
TI	NCDOT STD DETAIL 1205.01	==
TH	YELLOW LANE LINE (4",90M)	-.-.-
TI	NCDOT STD DETAIL 1205.01	-.-.-
TC	3" WHITE MINI-SKIP LINE (4",90M)	-.-.-
TI	NCDOT STD DETAIL 1205.01	-.-.-
TD	10' WHITE SKIP LINE (4",90M)	-.-.-
TI	NCDOT STD DETAIL 1205.01	-.-.-
TE	WHITE SOLID LANE LINE (4",90M)	---
TI	NCDOT STD DETAIL 1205.01	---
UA	LEFT TURN LANE ARROW (90M)	→
TI	NCDOT STD DETAIL 1205.08	→
UB	RIGHT TURN LANE ARROW (90M)	↘
TI	NCDOT STD DETAIL 1205.08	↘
UC	STRAIGHT ARROW (90M)	→
TI	NCDOT STD DETAIL 1205.08	→
UD	COMBO LEFT/STRAIGHT TURN LANE ARROW (90M)	→↘
TI	NCDOT STD DETAIL 1205.08	→↘
UE	COMBO RIGHT/STRAIGHT TURN LANE ARROW (90M)	↘→
TI	NCDOT STD DETAIL 1205.08	↘→
TV	YELLOW DIAGONAL LINES (4",90M)	///
TI	NCDOT STD DETAIL 1205.09	///
TY	3" YELLOW MINI-SKIP LINES (4",90M)	-.-.-
TI	NCDOT STD DETAIL 1205.01	-.-.-
TF	YELLOW SKIP CENTER LINES (4",90M)	-.-.-
TI	NCDOT STD DETAIL 1205.01	-.-.-
TZ	STOP BAR (24",90M)	---
TI	NCDOT STD DETAIL 1205.01	---
I	12" YIELD LINE SYMBOL (90M)	▽▽
TI	NCDOT STD DETAIL 1205.08 (THIS SHEET)	▽▽

ALL PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC PER NCDOT REQUIREMENTS

CONTRACTOR TO INSTALL MARKINGS PER NCDOT STANDARD MANUALS AND LOCATIONS TO BE COORDINATED WITH THESE DEPARTMENTS PRIOR TO FINAL INSTALLATION.



- NCDOT ROADWAY STANDARD DRAWINGS TO REFERENCE**
- 200.02 METHOD OF CLEARING - METHOD II
 - 225.02 GUIDE FOR GRADING SUBGRADE - SECONDARY & LOCAL
 - 300.01 METHOD OF PIPE INSTALLATION - METHOD "A"
 - 840.71 CONCRETE AND BRICK PIPE PLUG
 - 848.01 CONCRETE CURB, GUTTER AND CURB & GUTTER
 - 848.01 CONCRETE SIDEWALK
 - 848.05 WHEELCHAIR RAMP - CURB CUT
 - 852.01 CONCRETE ISLANDS
 - 876.02 GUIDE FOR RIP RAP AT PIPE OUTLETS
 - 1101.01 WORK ZONE ADVANCE WARNING SIGNS
 - 1101.02 TEMPORARY LANE CLOSURES
 - 1101.04 TEMPORARY SHOULDER CLOSURES
 - 1101.05 WORK ZONE VEHICLE ACCESSES
 - 1101.11 TRAFFIC CONTROL DESIGN TABLES
 - 1110.02 PORTABLE WORK ZONE SIGNS - MOUNTING HEIGHT & LATERAL CLEARANCE
 - 1115.01 FLASHING ARROW PANELS
 - 1130.01 DRUMS
 - 1135.01 CONES
 - 1145.01 BARRICADES - TYPES I, II, III AND PERMANENT
 - 1150.01 FLAGGERS
 - 1205.01 PAVEMENT MARKINGS - LINE TYPES & OFFSETS
 - 1205.02 PAVEMENT MARKINGS - DIVIDED & UNDIVIDED ROADWAYS
 - 1205.04 PAVEMENT MARKINGS - INTERSECTIONS
 - 1205.05 PAVEMENT MARKINGS TURN LANES



Bowman

Bowman North Carolina Ltd.
 4006 BARRIETT DR
 Suite 104
 RALEIGH, NC 27609
 Phone: (919)555-6570
 bowman.com

Wake County

ROADWAY
 Rocket Wash
 Arendell Ave
 Project ID#796479

Zebulon, NC

PRELIMINARY
 DO NOT
 USE FOR
 CONSTRUCTION



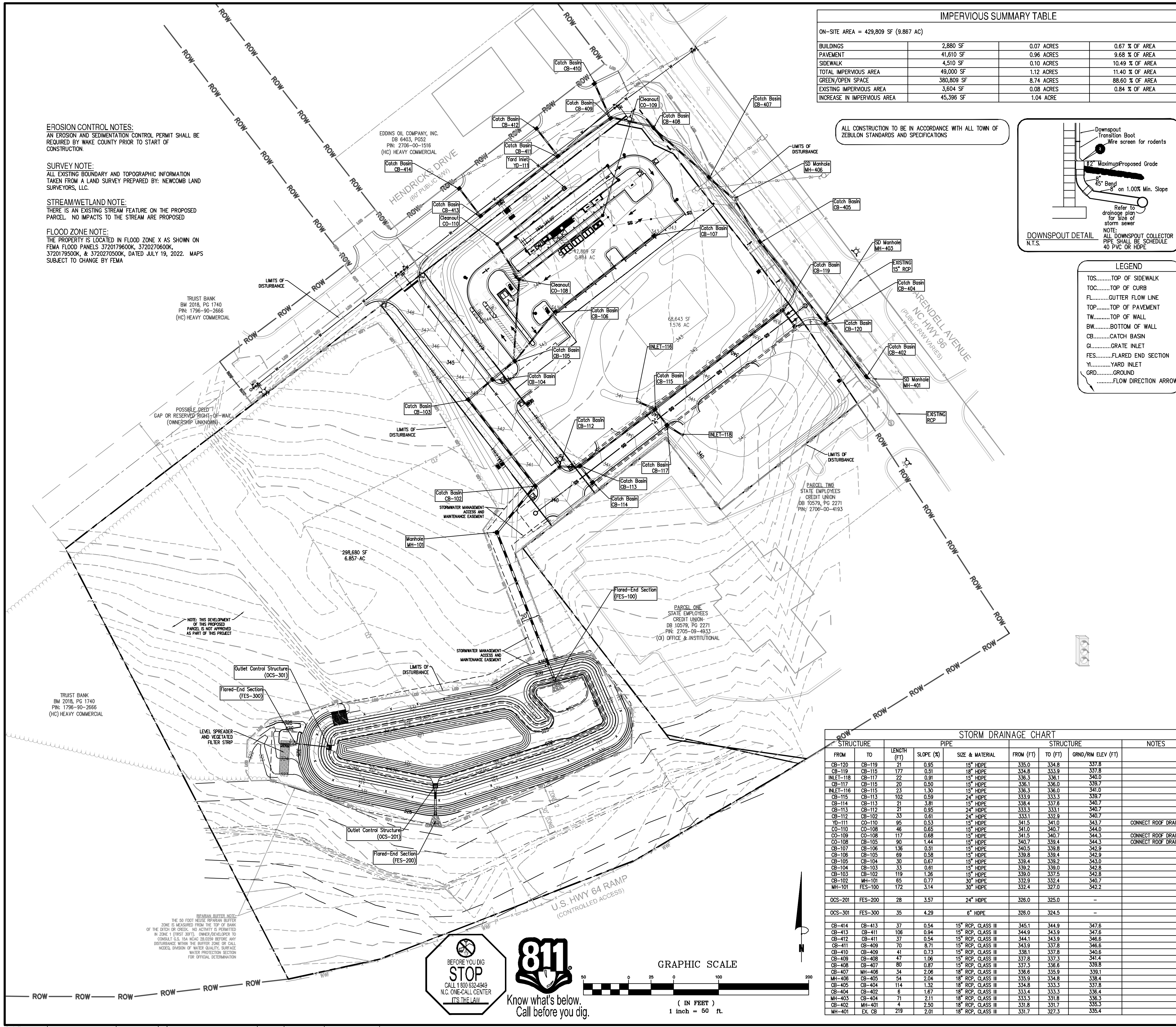
PLAN STATUS

6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H
JOB No.	220094-01-002
	220097-01-002
DATE	June 20, 2022
FILE No.	220094-01-002
	220097-01-002

SHEET **C3.1**





IMPERVIOUS SUMMARY TABLE

ON-SITE AREA = 429,809 SF (9.867 AC)

BUILDINGS	2,880 SF	0.07 ACRES	0.67 % OF AREA
PAVEMENT	41,610 SF	0.96 ACRES	9.68 % OF AREA
SIDEWALK	4,510 SF	0.10 ACRES	10.49 % OF AREA
TOTAL IMPERVIOUS AREA	49,000 SF	1.12 ACRES	11.40 % OF AREA
GREEN/OPEN SPACE	380,809 SF	8.74 ACRES	88.60 % OF AREA
EXISTING IMPERVIOUS AREA	3,604 SF	0.08 ACRES	0.84 % OF AREA
INCREASE IN IMPERVIOUS AREA	45,396 SF	1.04 ACRE	

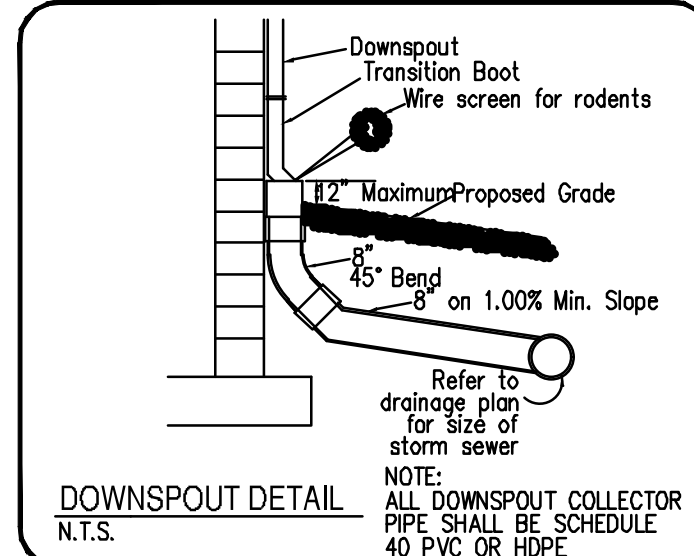
EROSION CONTROL NOTES:
 AN EROSION AND SEDIMENTATION CONTROL PERMIT SHALL BE REQUIRED BY WAKE COUNTY PRIOR TO START OF CONSTRUCTION.

SURVEY NOTE:
 ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY: NEWCOMB LAND SURVEYORS, LLC.

STREAM/WETLAND NOTE:
 THERE IS AN EXISTING STREAM FEATURE ON THE PROPOSED PARCEL. NO IMPACTS TO THE STREAM ARE PROPOSED.

FLOOD ZONE NOTE:
 THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FEMA FLOOD PANELS 3720179600K, 3720270600K, 3720179500K, & 3720270500K, DATED JULY 19, 2022. MAPS SUBJECT TO CHANGE BY FEMA

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS



LEGEND

- TOS.....TOP OF SIDEWALK
- TOC.....TOP OF CURB
- FL.....GUTTER FLOW LINE
- TOP.....TOP OF PAVEMENT
- TW.....TOP OF WALL
- BW.....BOTTOM OF WALL
- CB.....CATCH BASIN
- GI.....GRATE INLET
- FES.....FLARED END SECTION
- YI.....YARD INLET
- GRD.....GROUND
-FLOW DIRECTION ARROW

- GRADING NOTES:**
- REFER TO THE SITE PLAN FOR RELATED NOTES.
 - ALL CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
 - ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAKING.
 - THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
 - LIMITS OF CLEARING SHOWN ON GRADING PLAN ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS, OR OTHER GRADING REQUIREMENTS.
 - THE PROPOSED CONTOURS SHOWN IN DRIVES AND PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
 - THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET OVERLAND.
 - ANY GRADING, BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN, IS PROHIBITED.
 - LAND DISTURBANCE WITHOUT AN APPROVED ESC PLAN IS PROHIBITED.
 - STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON DENuded AREAS AND ESPECIALLY WHEN THE CONSTRUCTION SEQUENCE REQUIRES IT.
 - ALL GRADED AREAS ARE TO BE STABILIZED (SEEDED OR LANDSCAPED) WITHIN 14 DAYS OF HAVING REACHED FINAL GRADE.
 - EXISTING GRADES, CONTOURS, UTILITIES AND OTHER EXISTING FEATURES FROM FIELD RUN SURVEY.
 - THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DEWATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS PURSUANT TO THE WORK INDICATED ON THESE DRAWINGS. THE DESIGN ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE DESIGN(S) TO INSTALL SAID ITEMS.
 - THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATION, ELEVATION, AND DIMENSIONS OF EXIT DOORS, RAMPS, BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
 - ALL FILL MATERIALS, EXISTING BUILDING FOUNDATIONS, PAVEMENT AND UTILITY STRUCTURES, TOPSOIL, AND ANY OTHER DELETERIOUS MATERIALS SHALL BE COMPLETELY REMOVED FROM WITHIN THE BEARING ZONE BELOW THE STRUCTURE.
 - ALL FOUNDATION EXCAVATION SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE TO DETERMINE WHETHER UNSUITABLE MATERIAL MUST BE REMOVED. UNSUITABLE MATERIAL SHALL BE REMOVED, BACKFILLED AND COMPACTED AS REQUIRED BY THE GEOTECHNICAL REPRESENTATIVE.
 - ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED OR DEPICTED.
 - THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
 - CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
 - CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
 - ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER.
 - CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.

- DRAINAGE NOTES:**
- A MINIMUM GRADE OF 0.50 % SHALL BE MAINTAINED ON ALL PIPES, UNLESS OTHERWISE NOTED.
 - PIPE LENGTHS AND SLOPES INDICATED ON THE PLANS ARE APPROXIMATE ONLY.
 - UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
 - A. NO MORE THAN 500 LF OF TRENCH MAY BE OPENED AT ONE TIME.
 - B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
 - C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
 - D. MATERIAL USED FOR BACK-FILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
 - E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL REGULATIONS.
 - F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
 - CATCH BASINS, MANHOLES, FRAMES, GRATES, ETC. SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE TOWN OF ZEBULON STANDARD DRAWINGS AND SPECIFICATIONS.
 - ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
 - STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
 - TYPE 1: RCP, CLASS III PER ASTM C-76, WITH FLEXIBLE PLASTIC BITUMEN GASKETS AT JOINTS.
 - TYPE 2: HIGH DENSITY POLYETHYLENE PIPE (HDPE) - AASHTO DESIGNATION M252 TYPE S, M294 TYPE S AND MPT-97 TYPE S, SMOOTH INTERIOR/ANNULAR EXTERIOR. ONLY PERMITTED WHEN SPECIFICALLY INDICATED ON THE CONSTRUCTION DRAWINGS. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER'S INSTALLATION GUIDELINES. PIPE JOINTS AND FITTINGS SHALL BE WATER TIGHT.
 - ALL STORM DRAINAGE WITHIN THE PUBLIC ROADS SHALL BE CLASS III REINFORCED CONCRETE PIPE UNLESS OTHERWISE NOTED.
 - EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE SILT AND DEBRIS.
 - IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
 - ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUDED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
 - PRECAST STRUCTURES MAYBE USED AT CONTRACTORS OPTION.
 - ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
 - STRUCTURE TOP ELEVATIONS SHOWN HERE ARE APPROXIMATE. CONTRACTOR SHALL ADJUST AS NECESSARY.
 - RIM ELEVATIONS AS NOTED ARE TO THE GUTTER FLOW LINE.

STORM DRAINAGE CHART

STRUCTURE		PIPE		STRUCTURE		NOTES
FROM	TO	LENGTH (FT)	SLOPE (%)	FROM (FT)	TO (FT)	
CB-120	CB-119	21	0.95	335.0	334.8	337.8
CB-119	CB-115	177	0.51	334.8	333.9	337.8
INLET-118	CB-117	22	0.91	336.3	336.1	340.0
CB-117	CB-115	20	0.50	336.1	336.0	339.7
INLET-116	CB-115	23	1.30	336.3	336.0	341.0
CB-115	CB-113	102	0.59	333.9	333.3	338.7
CB-114	CB-113	21	3.81	338.4	337.8	340.7
CB-113	CB-112	21	0.93	333.3	333.1	340.7
CB-112	CB-102	33	0.61	333.1	332.9	340.7
YD-111	CB-110	95	0.53	341.5	341.0	343.7
CB-110	CB-108	46	0.65	341.0	340.7	344.0
CB-109	CB-108	117	0.68	341.5	340.7	344.3
CB-108	CB-105	90	1.44	340.7	339.4	344.3
CB-107	CB-106	136	0.51	340.5	339.8	342.9
CB-106	CB-105	69	0.58	339.8	339.4	342.9
CB-105	CB-104	30	0.67	339.4	339.2	343.0
CB-104	CB-103	33	0.61	339.2	339.0	342.9
CB-103	CB-102	119	1.26	339.0	337.5	342.8
CB-102	MH-101	65	0.77	337.9	337.4	340.7
MH-101	FES-100	172	3.14	337.4	327.0	342.2
OCS-201	FES-200	28	3.57	326.0	325.0	-
OCS-301	FES-300	35	4.29	326.0	324.5	-
CB-414	CB-413	37	0.54	345.1	344.9	347.6
CB-413	CB-411	106	0.94	344.9	343.9	347.6
CB-412	CB-411	37	0.54	344.1	343.9	346.6
CB-411	CB-409	70	8.71	343.9	337.8	346.6
CB-410	CB-409	41	0.73	338.1	337.8	346.6
CB-409	CB-408	47	1.06	337.8	337.3	341.4
CB-408	CB-407	80	0.87	337.3	336.6	339.8
CB-407	MH-406	34	2.06	336.6	335.9	339.1
MH-406	CB-405	54	2.04	335.9	334.8	338.4
CB-405	CB-404	114	1.32	334.8	333.3	337.8
CB-404	CB-402	6	1.67	333.4	333.3	336.4
MH-403	CB-404	71	2.11	333.3	331.8	336.3
CB-402	MH-401	4	2.50	331.8	331.7	335.3
MH-401	EX CB	218	2.01	331.7	327.3	335.4

811 Know what's below. Call before you dig.

BEFORE YOU DIG STOP CALL 1-800-632-4349 N.C. ONE-CALL CENTER IT'S THE LAW

GRAPHIC SCALE (IN FEET) 1 inch = 60 ft.

Bowman

Bowman North Carolina Ltd.
 4006 BARRIETT DR
 Suite 104
 RALEIGH, NC 27609
 Phone: (919) 555-6570
 bowman.com

GRADING & DRAINAGE PLAN

Rocket Wash
 Arendell Ave
 Project ID#796479

Wake County
 Zebulon, NC

PRELIMINARY DO NOT USE FOR CONSTRUCTION

PLAN STATUS
 6/20/22 SITE PLAN SUBMITTAL
 10/21/22 PER TOWN REVIEW
 4/28/23 PER TOWN REVIEW
 7/07/23 WAKE COUNTY SUBMISSION

DATE DESCRIPTION
 MEL DESIGN MEL DRAWN XXX CHKD
 SCALE H:
 JOB No. 220094-01-002
 220097-01-002
 DATE June 20, 2022
 FILE No. 220094-01-002
 220097-01-002

SHEET C4.0

UTILITY SERVICE NOTES

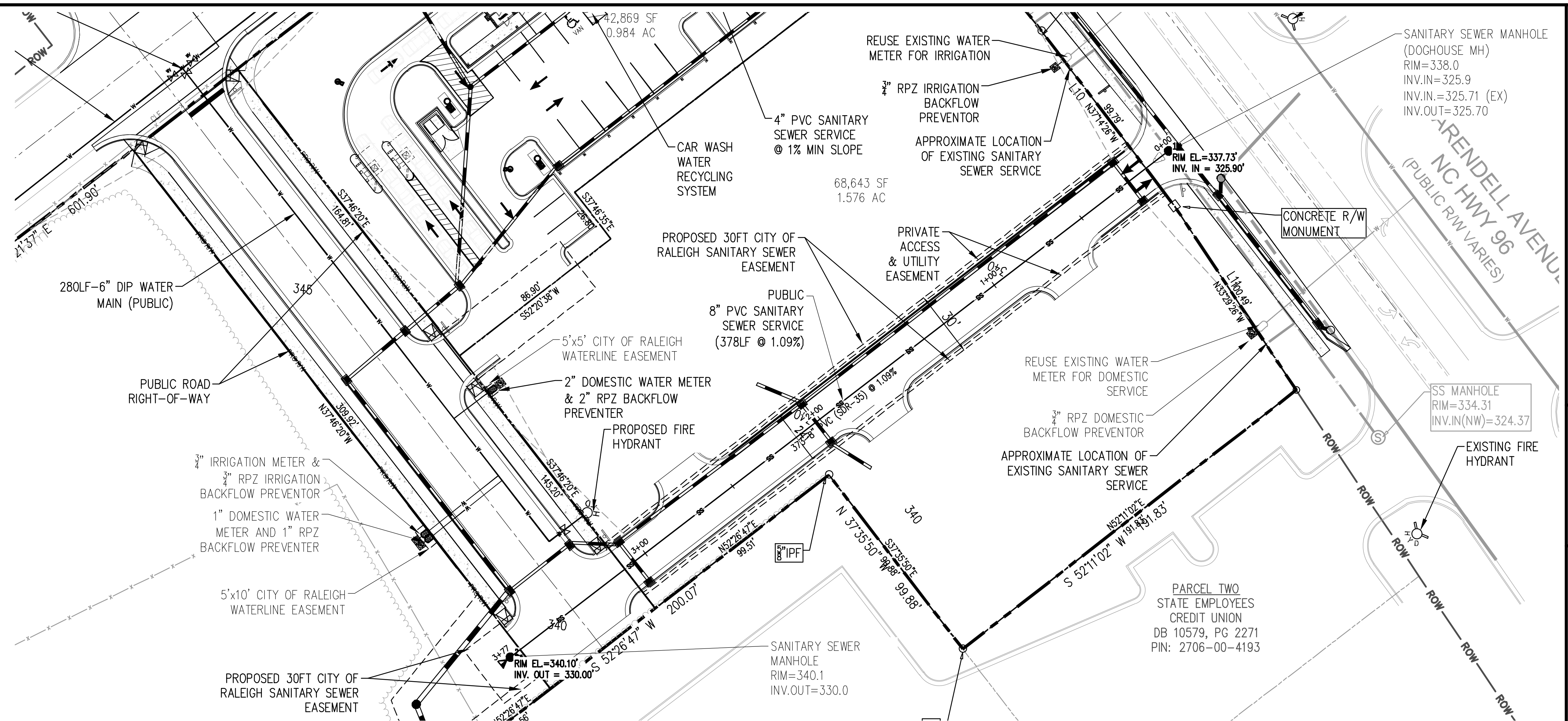
WATER SERVICE
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 1" WATER SERVICE LINE FROM MAIN TO BUILDING PER MUNICIPAL REQUIREMENTS.
CONTACT: CITY OF RALEIGH UTILITY DEPARTMENT
TELEPHONE: 919-857-4540

ELECTRIC SERVICE
"POWER CO." TO PROVIDE UNDERGROUND 120/208/3 PHASE SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL TWO 4" DIA. CONDUIT W/ PULL WIRE TO UTILITY COMPANY POINT OF CONNECTION.
CONTACT: PROGRESS ENERGY
TELEPHONE: 800-636-0581

TELEPHONE SERVICE
"TELEPHONE CO." TO PROVIDE NEW UNDERGROUND SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" DIA. PVC CONDUIT W/ PULL WIRE FROM PHONE PANEL BOARD TO UTILITY COMPANY POINT OF CONNECTION.
CONTACT: TELEPHONE
TELEPHONE:

SANITARY SEWER
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" SCHEDULE 40 PVC FROM EXISTING SANITARY SEWER SYSTEM TO LAST CLEAN OUT OUTSIDE OF BUILDING (MIN. 1% SLOPE). PROVIDE CLEAN OUTS EVERY 75' (TYPICAL).
CONTACT: CITY OF RALEIGH UTILITY DEPARTMENT
TELEPHONE: 919-857-4540

NATURAL GAS
GENERAL CONTRACTOR TO COORDINATE WITH NATURAL GAS UTILITY FOR SERVICE LINE TO PROPOSED BUILDING.
CONTACT: TELEPHONE:



CONDITION OF APPROVAL

A PLAT WILL NEED TO BE RECORDED WITH THE REGISTER OF DEEDS FOR ALL EASEMENT DEDICATIONS

PUBLIC Water Distribution/Extension System

The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____

Authorization to Construct See digital signature

PUBLIC Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____

Authorization to Construct See digital signature

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

- STANDARD UTILITY NOTES:**
- All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
- Utility separation requirements:
 - A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to watertight specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well.
 - When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter.
 - Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to watertight specifications.
 - 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer.
 - Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 24" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-41 & S-49).
 - All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required.
 - Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction.
 - Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department.
 - 3.0' minimum cover is required on all water mains & sewer forcemains. 4.0' minimum cover is required on all reuse mains.
 - It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning top at main & removal of service from ROW or easement per CORPUD Handbook procedure.
 - Install 2" PVC copper water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. NOTE: It is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure.
 - Install 4" PVC sewer services @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum.
 - Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole.
 - All environmental permits applicable to the project must be obtained from NDDM, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.
 - NDDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction.
 - Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the CORPUD FOG Program Coordinator prior to issuance of a Building Permit. Contact Stephen Calverley at (919) 996-2334 or Stephen.Calverley@raleighnc.gov for more information.
 - Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. Contact Joanie Helvey at (919) 212-5923 or joanie.helvey@raleighnc.gov for more information.

PUBLIC Water Distribution/Extension System

The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____

Authorization to Construct See digital signature

PUBLIC Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # _____

Authorization to Construct See digital signature

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

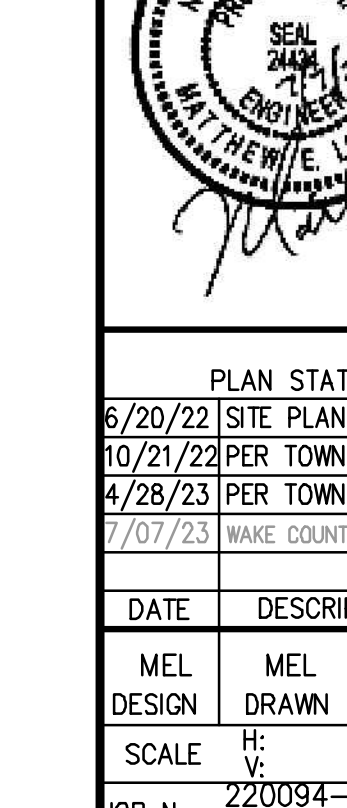
Failure to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

811

Know what's below.
Call before you dig.

STOP

BEFORE YOU DIG
CALL 1-800-632-4949
N.C. ONE-CALL CENTER
IT'S THE LAW.



Bowman

Bowman North Carolina Ltd.
4006 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 955-6570
bowman.com

SANITARY SEWER PLAN AND PROFILE

Rocket Wash
Arendell Ave
Project ID#796479

Zebulon, NC Wake County

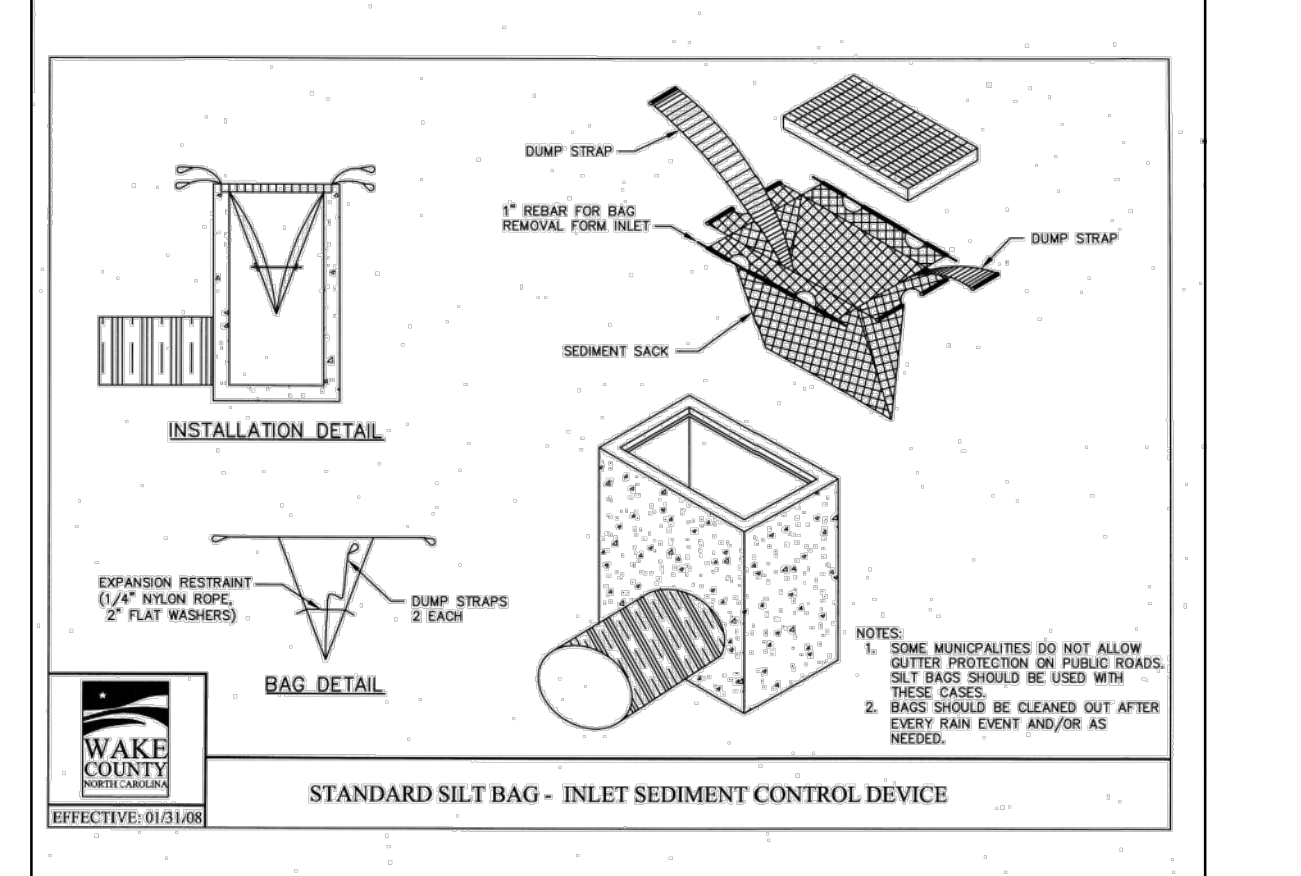
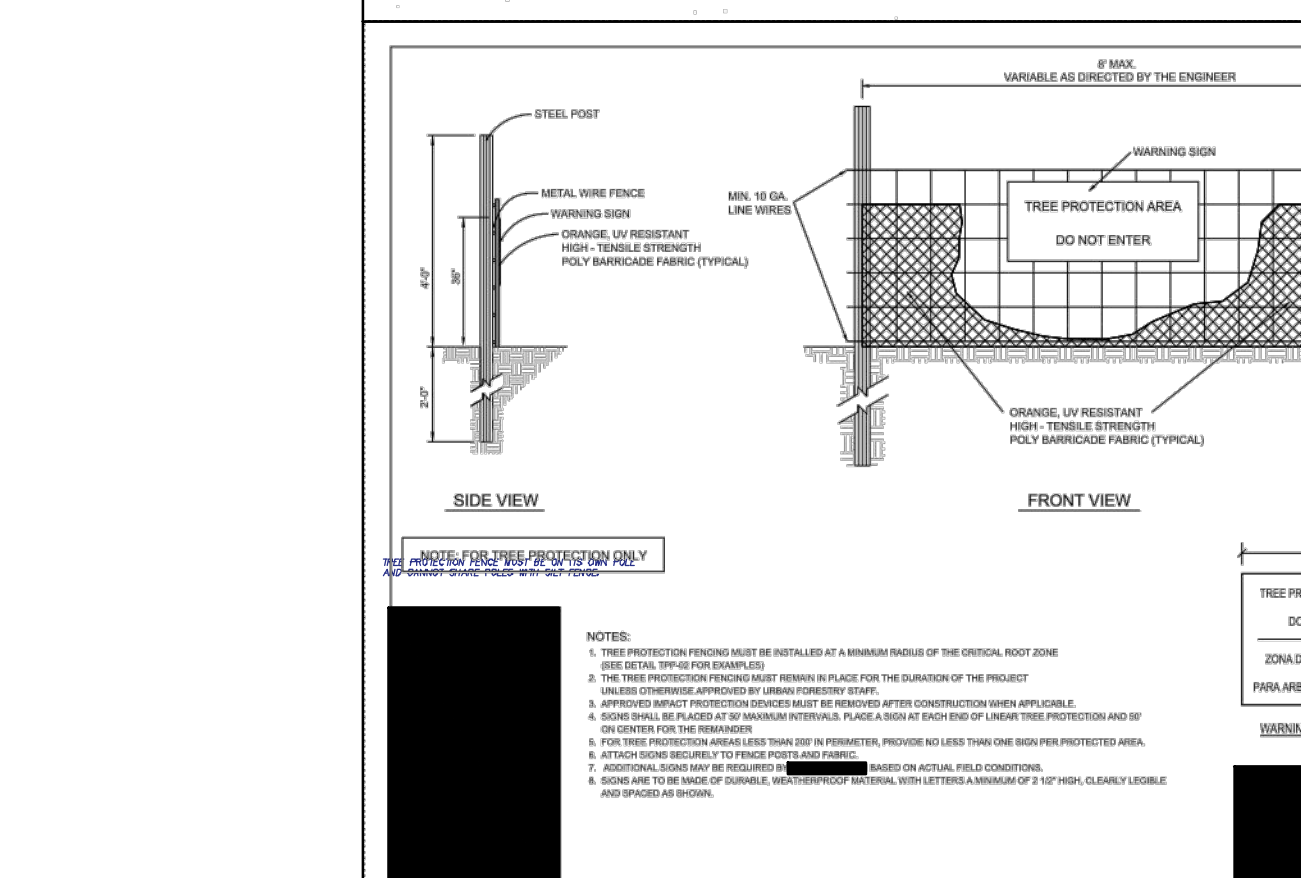
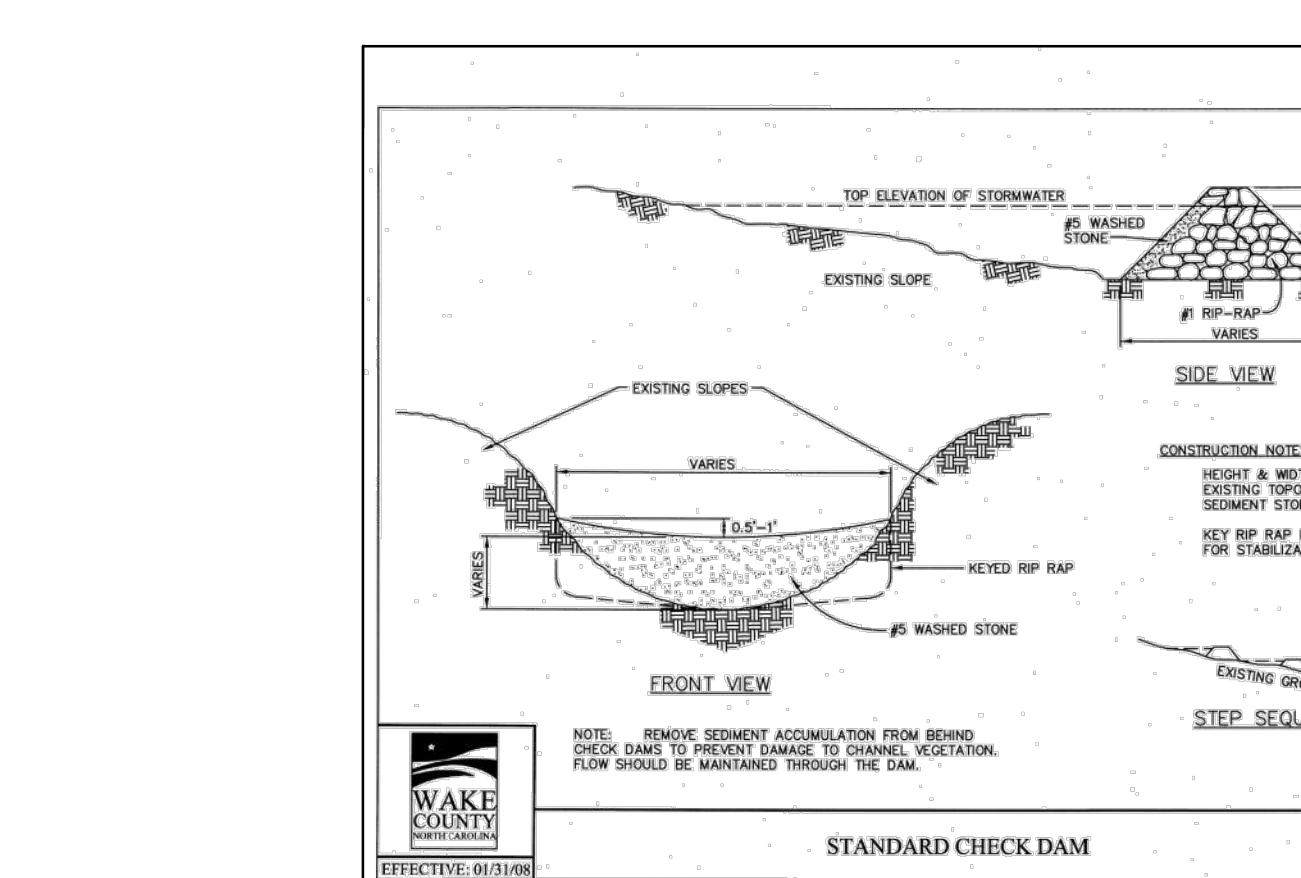
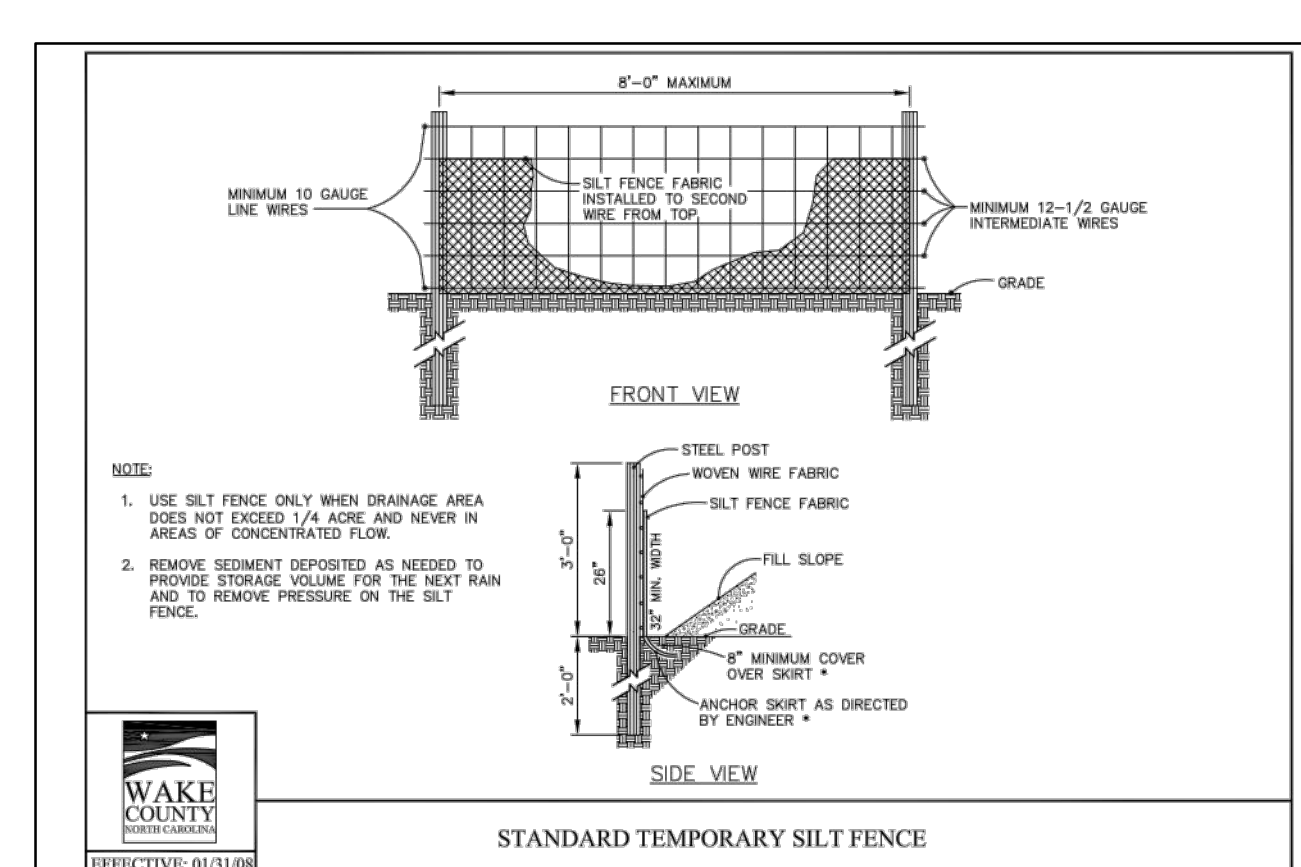
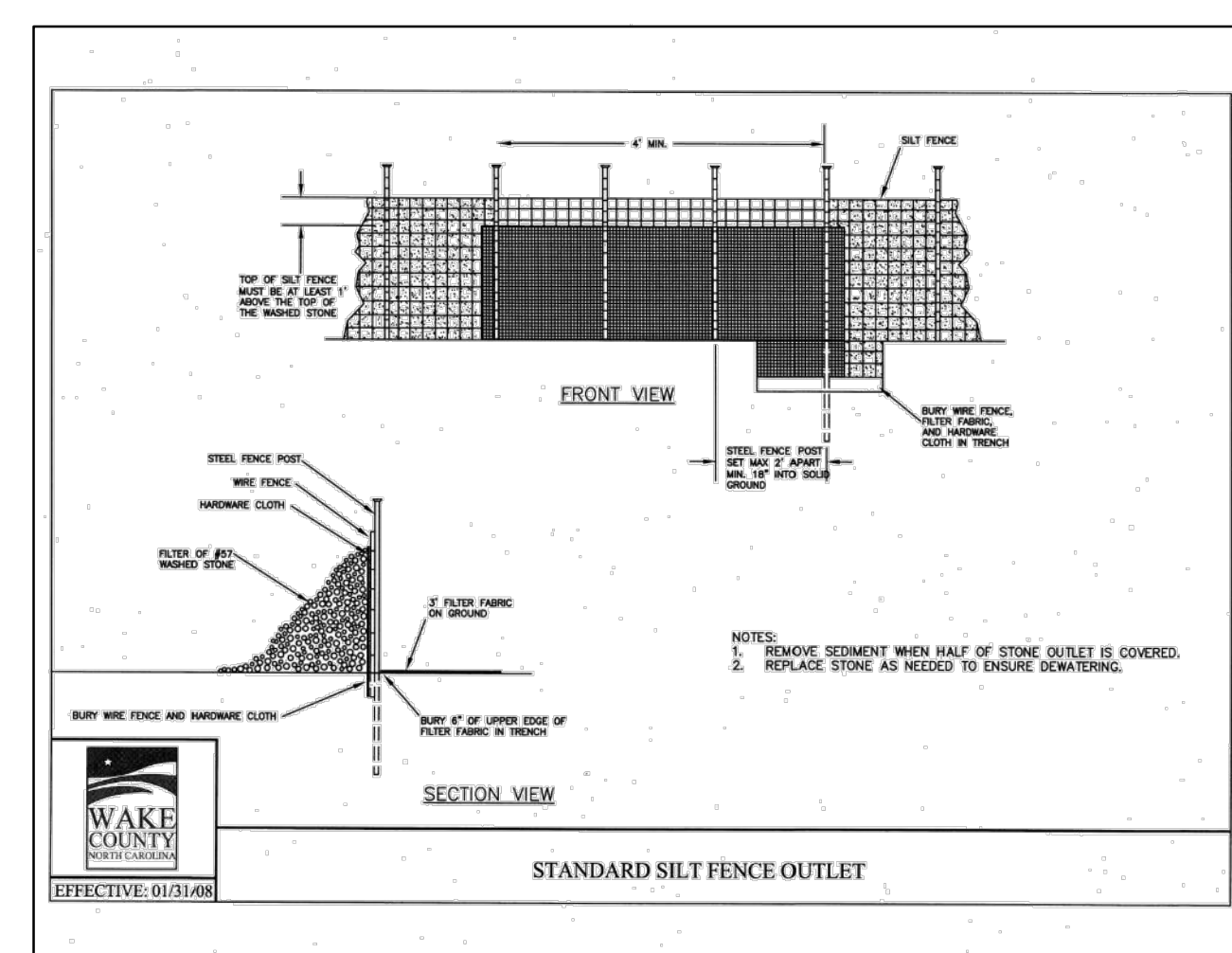
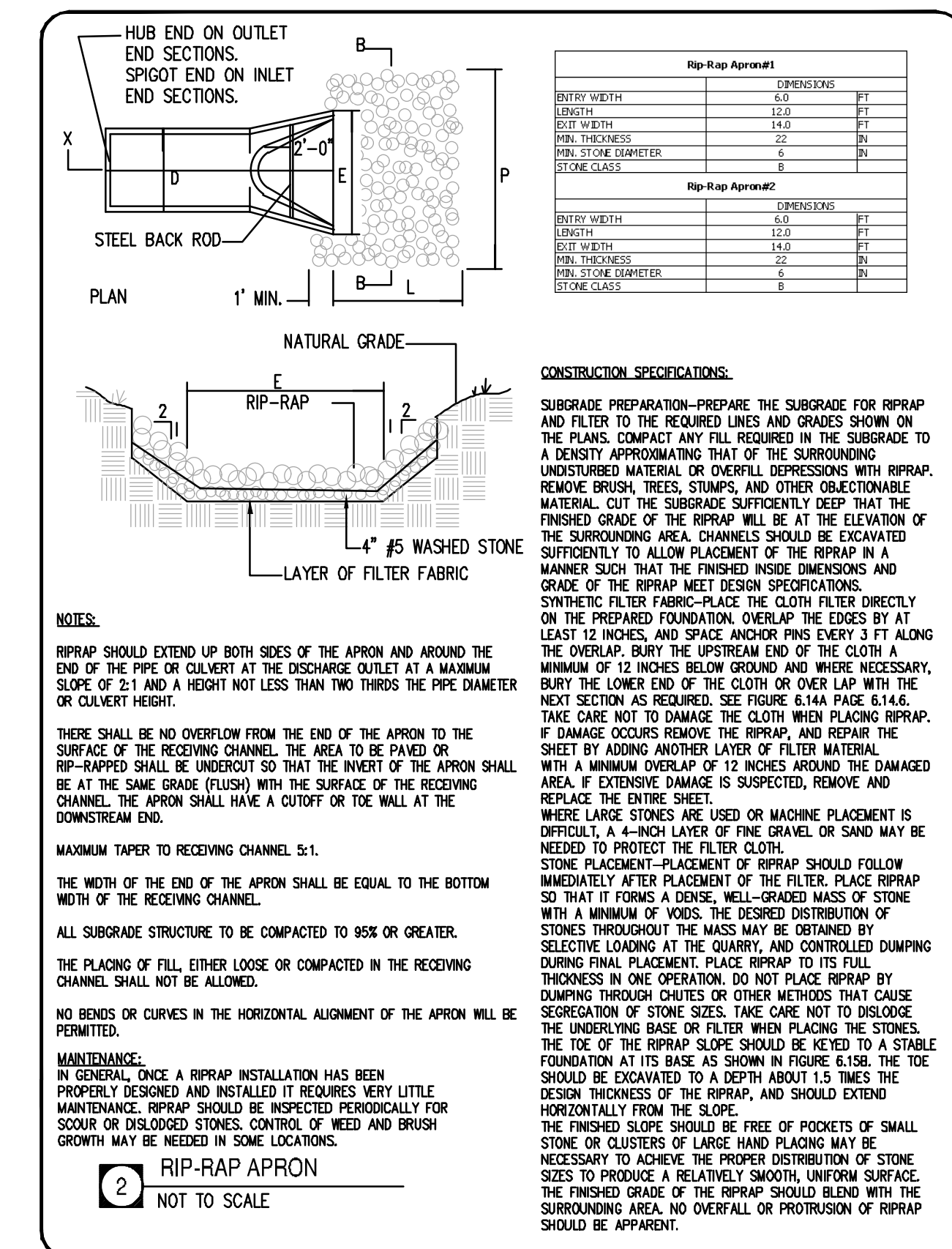
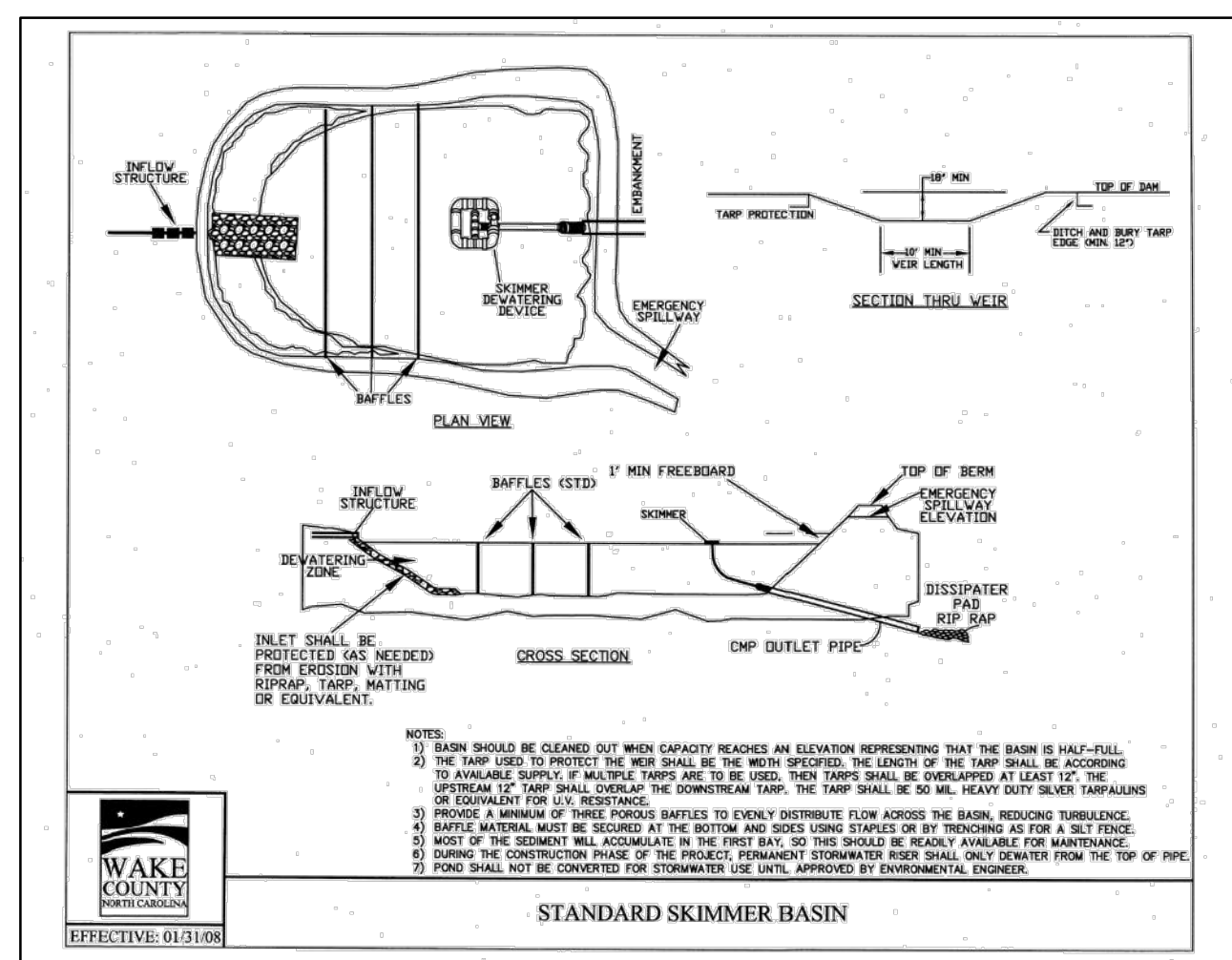
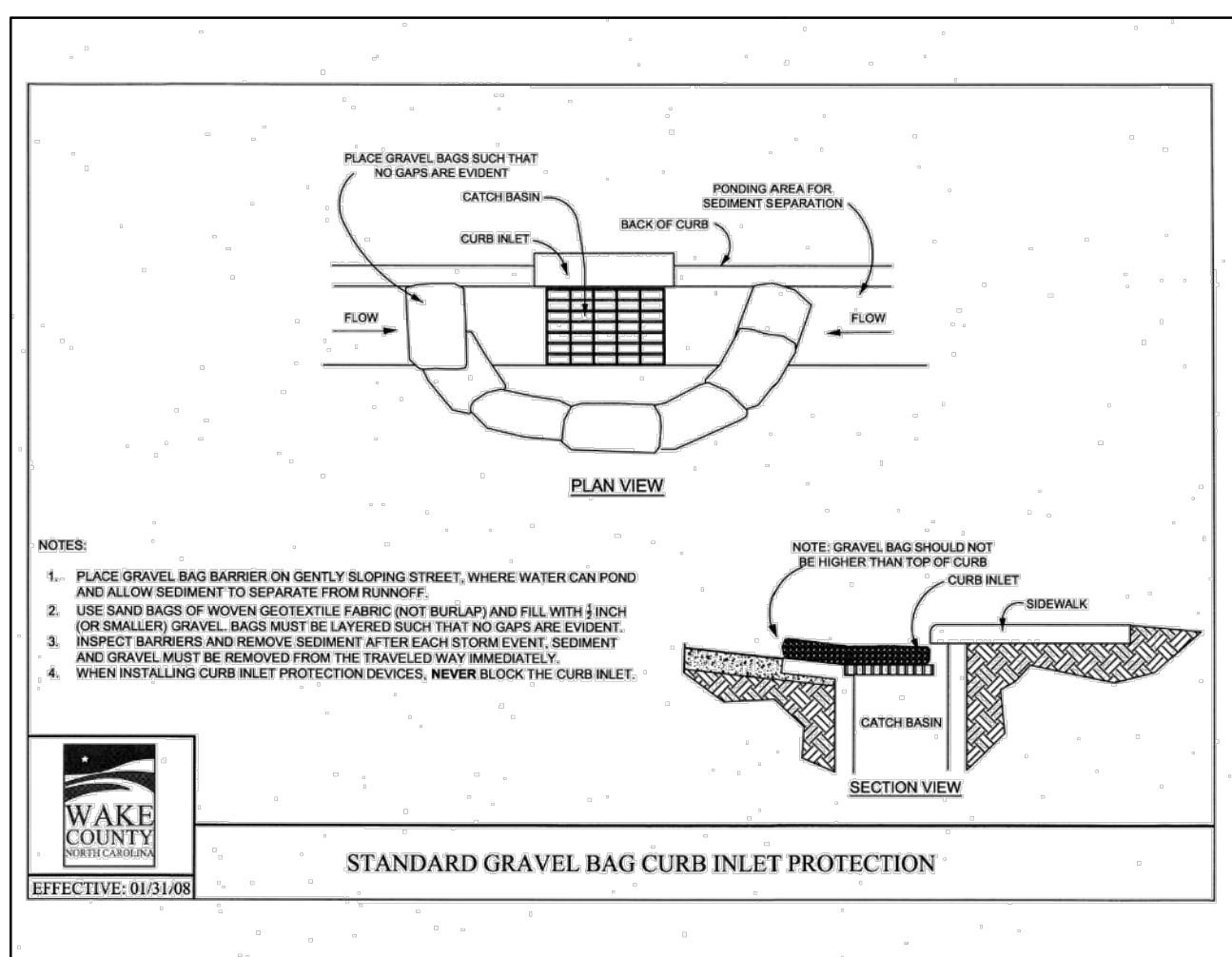
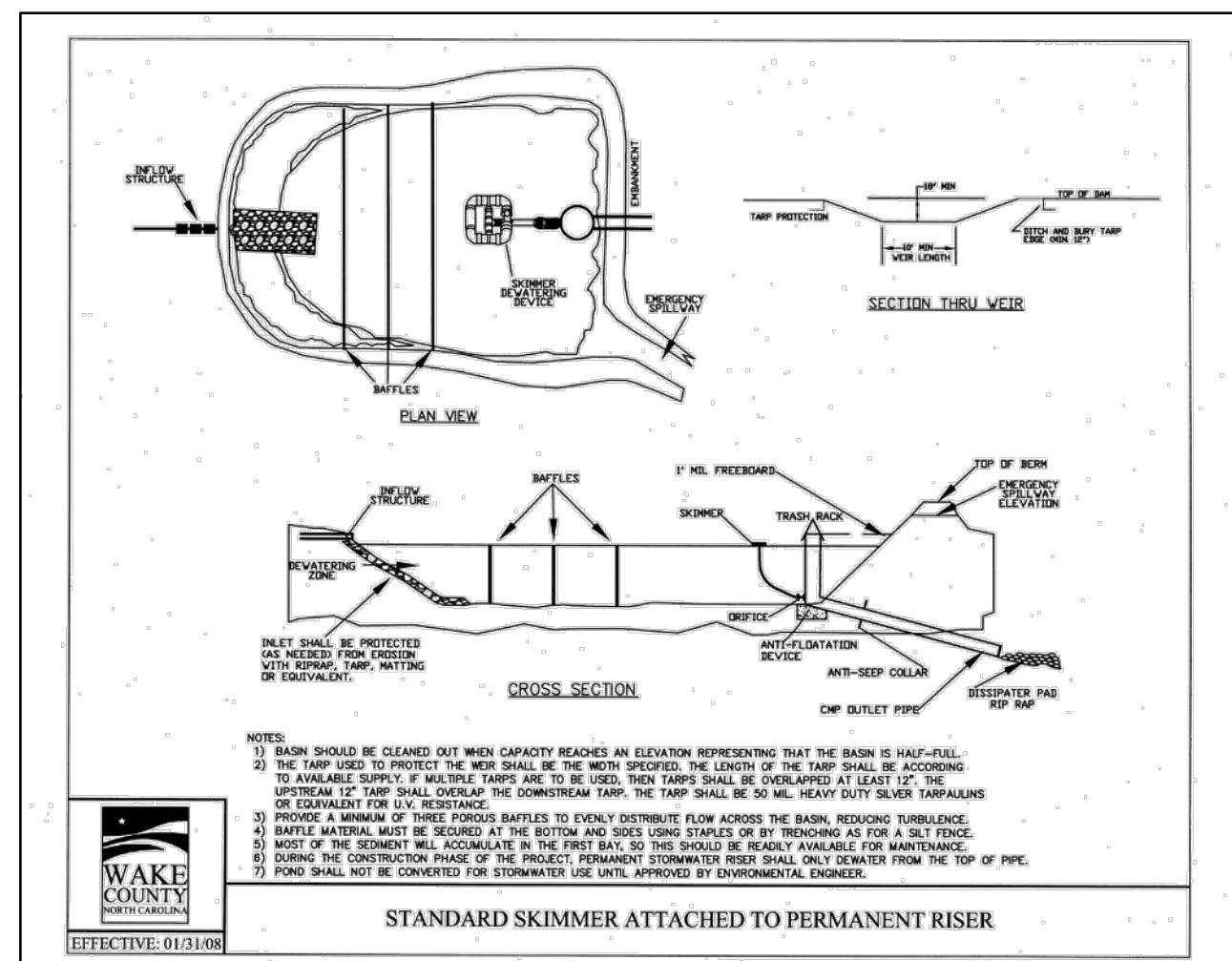
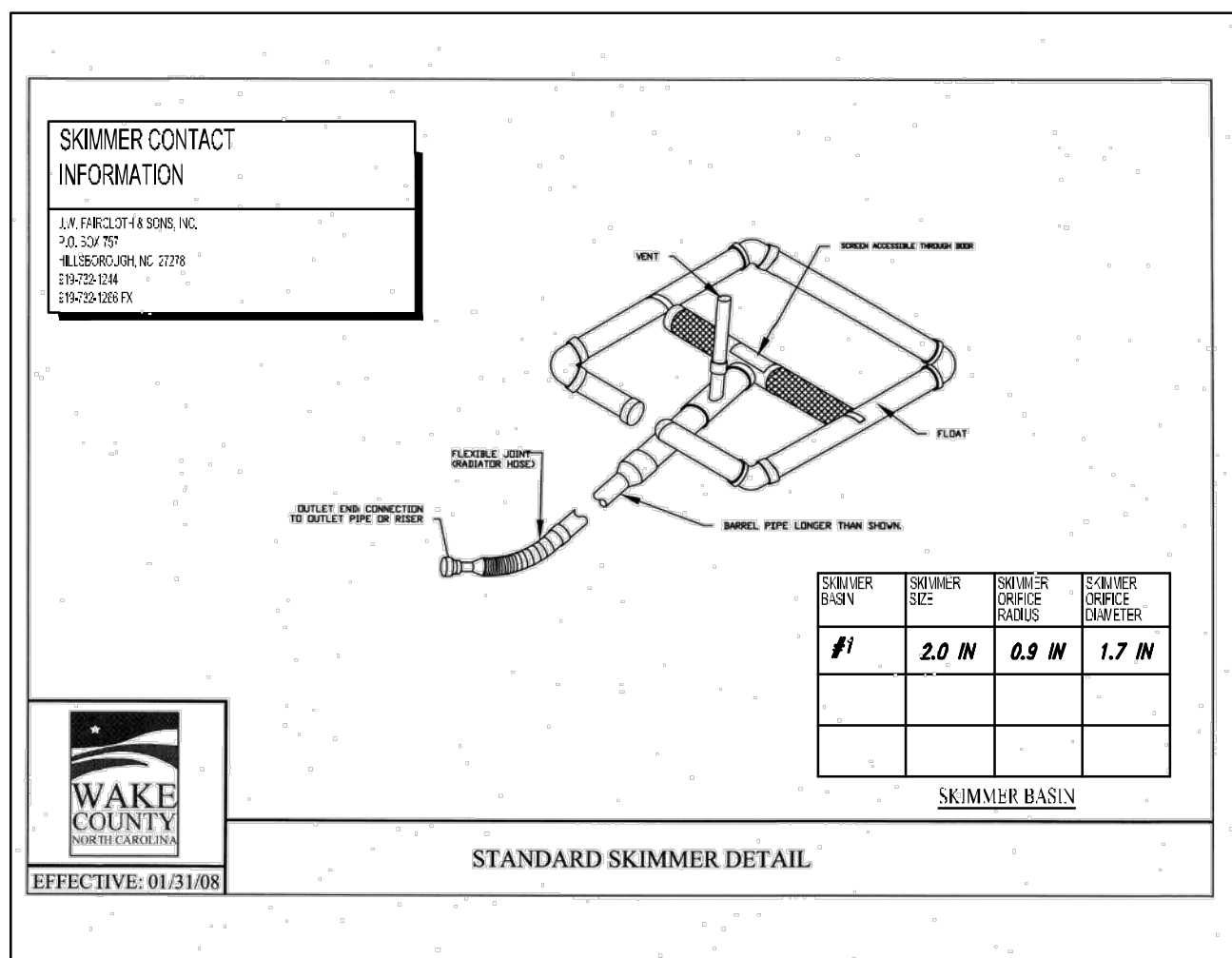
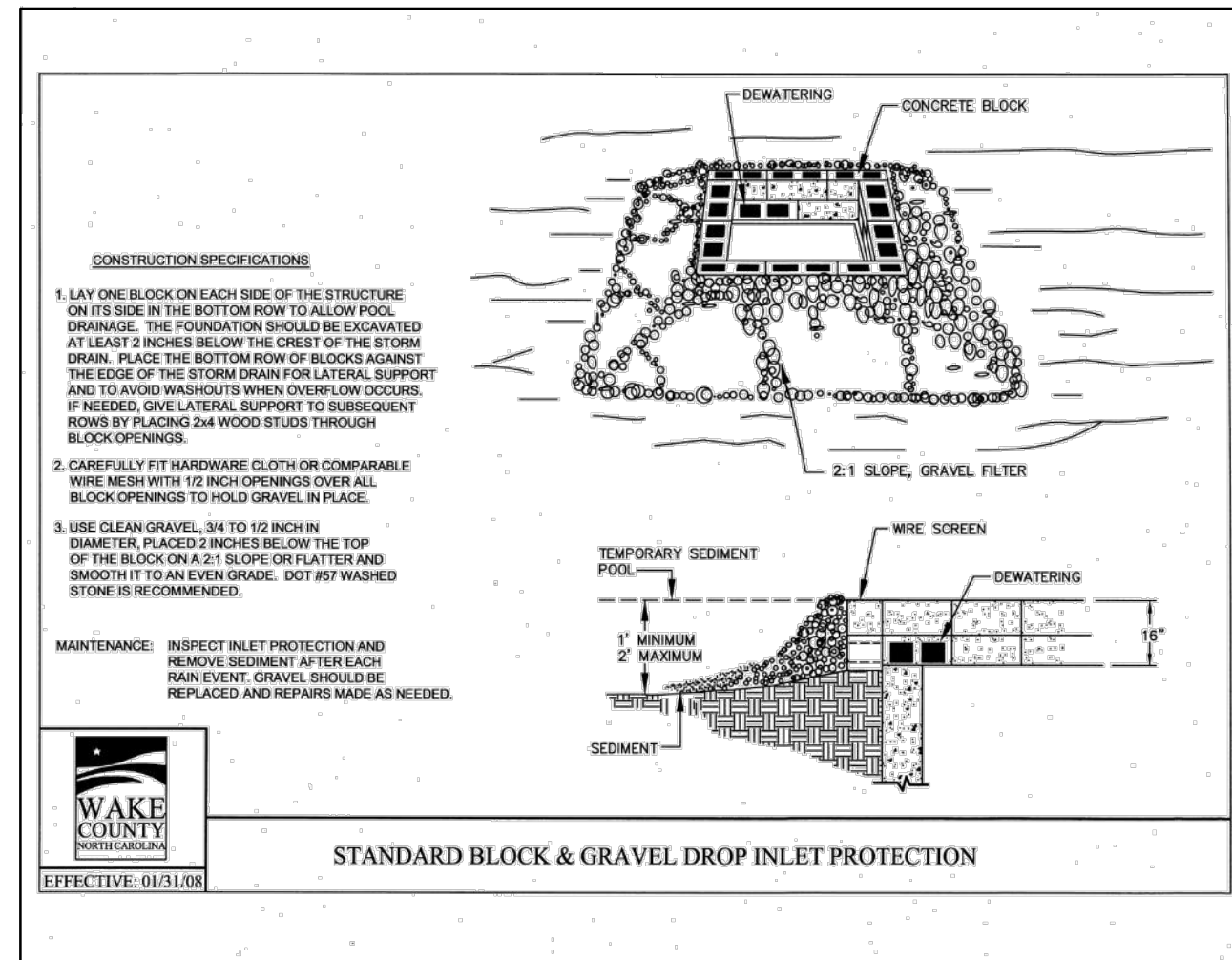
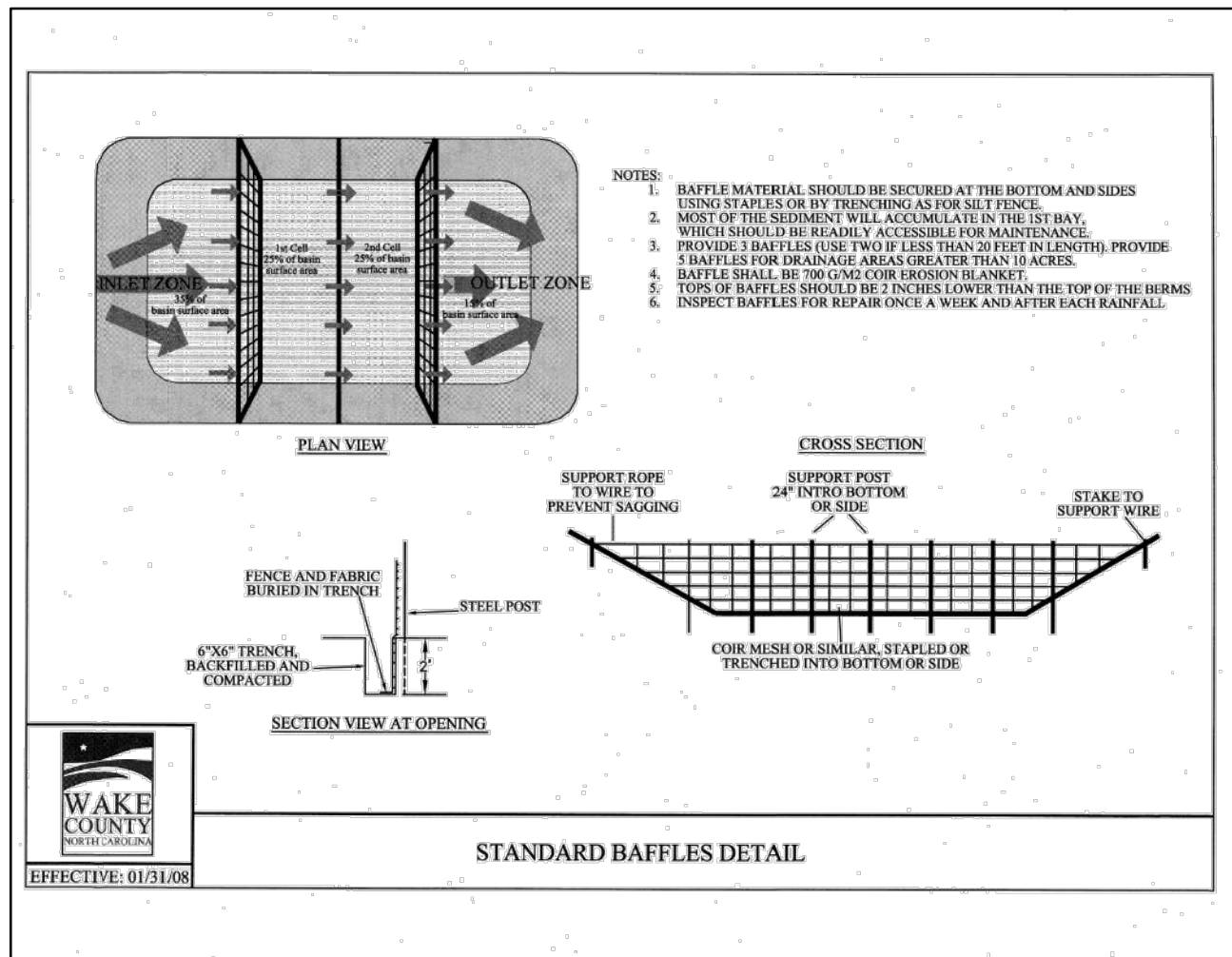
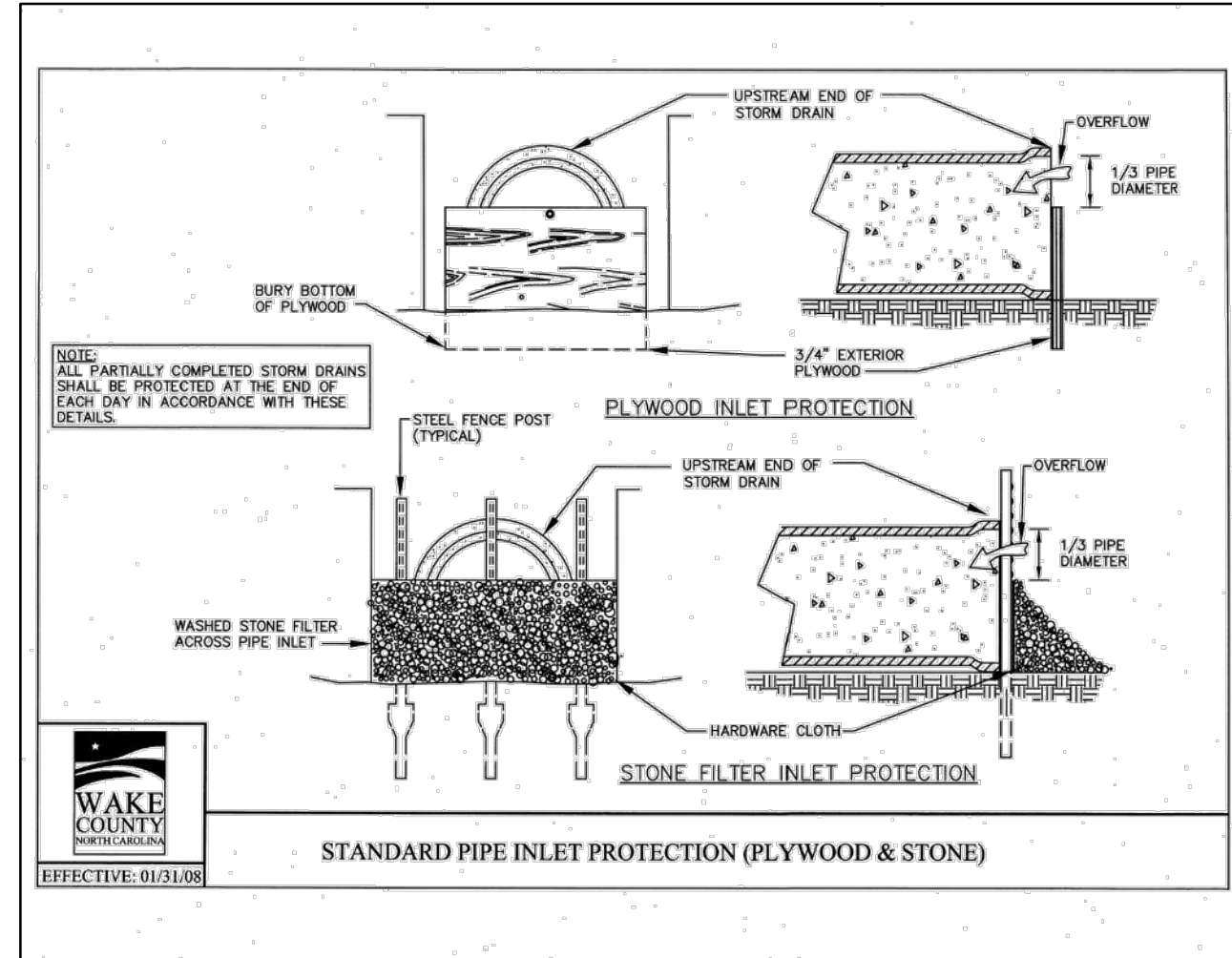
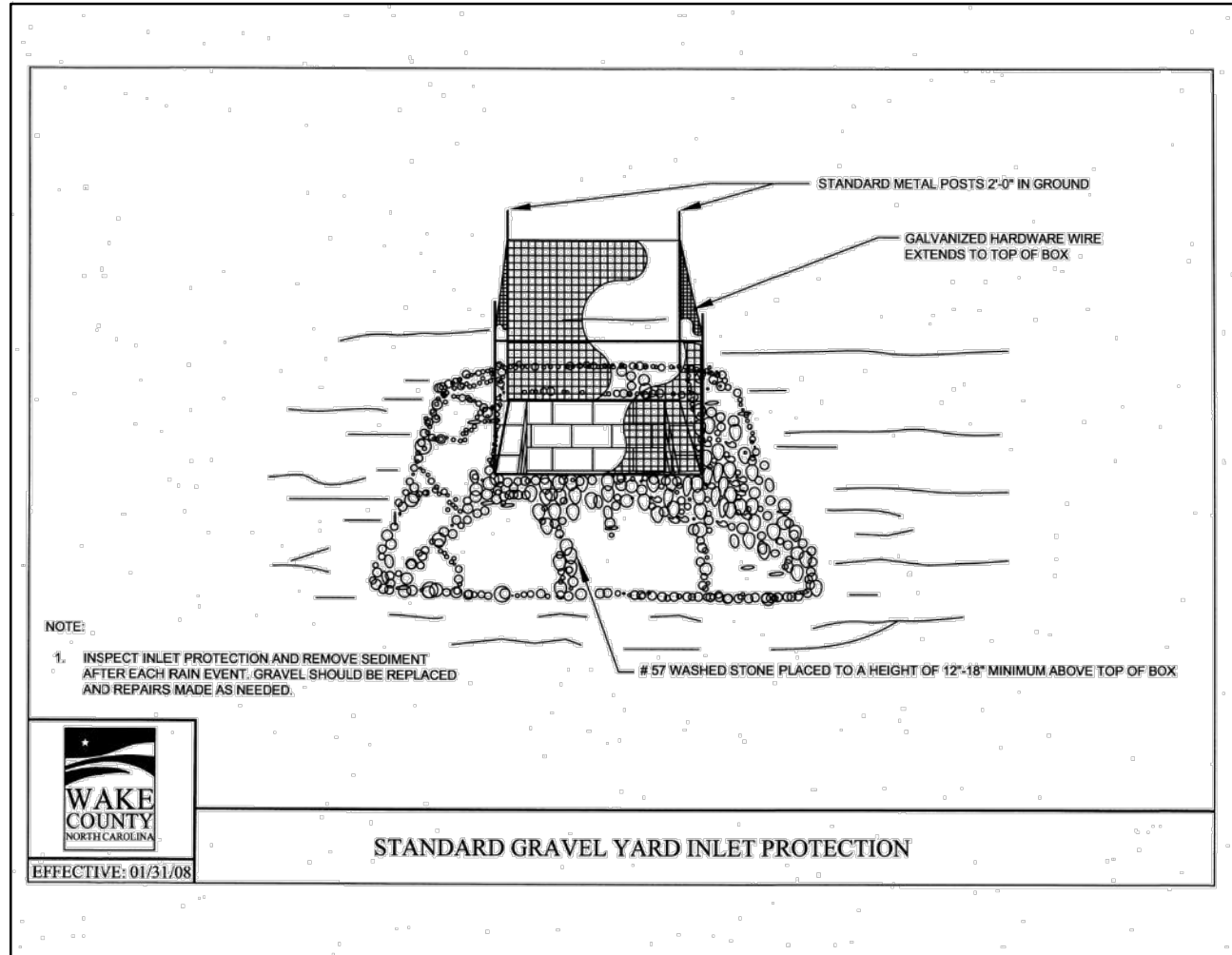
PRELIMINARY DO NOT USE FOR CONSTRUCTION

PLAN STATUS

6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H:
JOB No.	220094-01-002 220097-01-002
DATE	June 20, 2022
FILE No.	220094-01-002 220097-01-002

SHEET **C5.1**



Bowman

Bowman North Carolina Ltd.
4006 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919)555-6570
bowman.com

Wake County

Project #796479
Arendell Ave
Rocket Wash

Zebulon, NC

EROSION CONTROL DETAILS

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION

PLAN STATUS

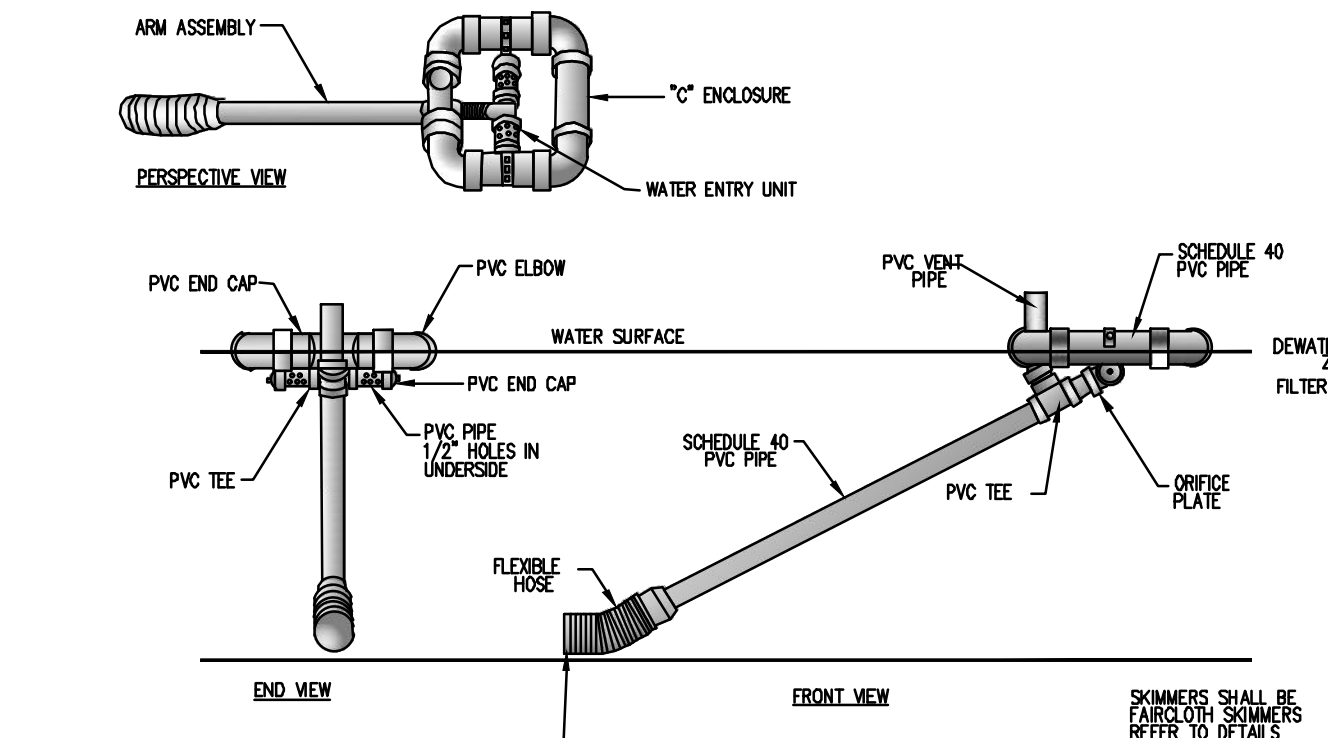
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION	DESIGNER	DRAWN	CHKD
MEL	MEL	XXX		
SCALE	H/1/4	V/N/A		
JOB No.	220094-01-002			
DATE	June 20, 2022			
FILE No.	220094-01-002			
	220097-01-002			

SHEET C6.0

SEDIMENT BASIN REQUIREMENTS:

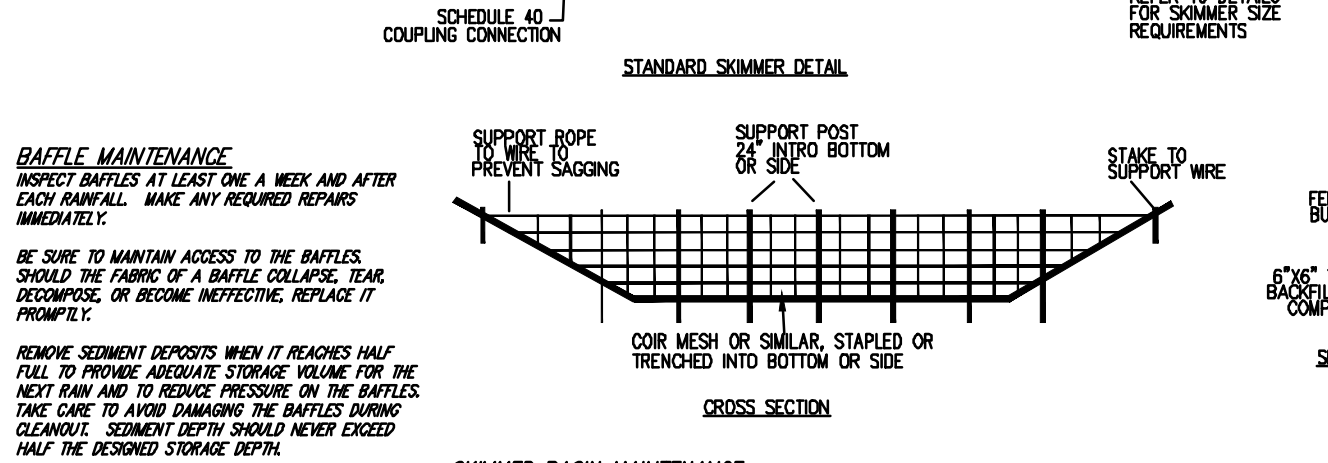
- OUTLET STRUCTURES SHALL BE UTILIZED THAT WITHDRAW WATER FROM THE SURFACE.
- FOR BASINS OR TRAPS THAT HAVE A DRAINAGE AREA OF LESS THAN 10 ACRES, DRAIN-DOWN DESIGNS SPECIFIED IN THE DIVISION OF LAND RESOURCES OR DELEGATED LOCAL PROGRAM REQUIREMENTS ARE ACCEPTABLE.
- CHEMICAL TREATMENT:
 - ALL TREATMENT CHEMICALS MUST BE STORED IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER STORM-RESISTANT COVER OR SURROUNDED BY SECONDARY CONTAINMENT STRUCTURES DESIGNED TO PROTECT ADJACENT SURFACE WATERS.
 - ALL TREATMENT CHEMICALS MUST BE USED IN ACCORDANCE WITH Dosing SPECIFICATIONS AND APPLICATION RATES PROVIDED BY THE MANUFACTURER, SUPPLIER AND AS SPECIFIED BY THE DIVISION OF WATER QUALITY.
 - THE PERMITTEE MUST ONLY USE CHEMICALS THAT HAVE BEEN APPROVED BY THE NC DIVISION OF WATER QUALITY AND POSTED ON THEIR NORTH CAROLINA DIVISION OF WATER QUALITY APPROVED PAM/FLOCCULANT LIST FOUND ON THEIR WEB SITE AT: <http://portal.ncdwr.com/wq/wq/na/na/>.
 - THE PERMITTEE MUST ROUTE SKIMMER TREATMENT WITH POLYMERS, FLOCCULANTS, OR OTHER TREATMENT CHEMICALS THROUGH SKIMMER TRAPPING, FILTERING, AND/OR SETTLING DEVICES TO ENSURE ADEQUATE REMOVAL OF SEDIMENT FLOCCULANT PRIOR TO DISCHARGE TO SURFACE WATERS.
- DISCHARGE REQUIREMENT - DISCHARGES MUST MEET THE STATUTORY REQUIREMENTS OF THE SEDIMENT POLLUTION CONTROL ACT AND UTILIZE THE PROVISIONS OF SECTION 874 OF THE DESIGN AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL TO ASSURE THAT BUFFERS AND VEGETATED AREAS WILL BE USED TO REDUCE THE POTENTIAL FOR VISIBLE SILTATION OUTSIDE OF THE 25X BUFFER ZONE NEAREST THE LAND-RESTORING ACTIVITY.



Skimmer Basin #1			
SURFACE AREA REQUIRED	8,682	SF	
SURFACE AREA PROVIDED	9,350	SF	
VOLUME REQUIRED	9,966	CF	
VOLUME PROVIDED	16,964	CF	
STORAGE DEPTH	2.0	FT	
STORAGE ELEVATION	170	x	55 FT 329.00
TOP OF DAM	178	x	63 FT 331.00
EMGY. SPILLWAY LENGTH	19	FT	329.50
BOTTOM OF BASIN	162	x	47 FT 327.00
SKIMMER SIZE	2.0	IN	
SKIMMER ORIFICE DIAMETER	1.7	IN	
SKIMMER ORIFICE RADIUS	0.9	IN	
SIDESLOPES	2:1		

NOTES:

- BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY BENDING AS FOR SILE FENCE.
- MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
- PROVIDE 5 BAFFLES (ONE TWO IF LESS THAN 10 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
- BAFFLES SHALL BE 12" HIGH AND 12" WIDE.
- TOPS OF BAFFLES SHOULD BE 2" BELOW THE TOP OF THE BERMS.
- IMPACT BUFFERS FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL.



DATA BLOCK											
BASIN	DRAINAGE AREA (ACRES)	DESIGN FLOW (CFS)	DESIGN STORAGE (CU YD)	DESIGN STORAGE (CU FT)	DESIGN STORAGE (CU YD)	DESIGN STORAGE (CU FT)	DESIGN STORAGE (CU YD)	DESIGN STORAGE (CU FT)	DESIGN STORAGE (CU YD)	DESIGN STORAGE (CU FT)	
1	5.54	5.54	20.0	AM	AM	1.0	2.0	4.0	19	1.5	5.0

BAFFLE MAINTENANCE:

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 GET MATED OR OTHERWISE BECOME INOPERATIVE, 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 BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANING. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGN STORAGE DEPTH.

AFTER THE CONTINUING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNDESIRABLE SEDIMENT DEPOSITS FROM THE AREA TO GRADE AND STABILIZE IT.

SKIMMER BASIN MAINTENANCE:

INSPECT SKIMMER BASIN 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 IMMEDIATELY IT CAN BE CLEANED. CLEAN THE SKIMMER 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.

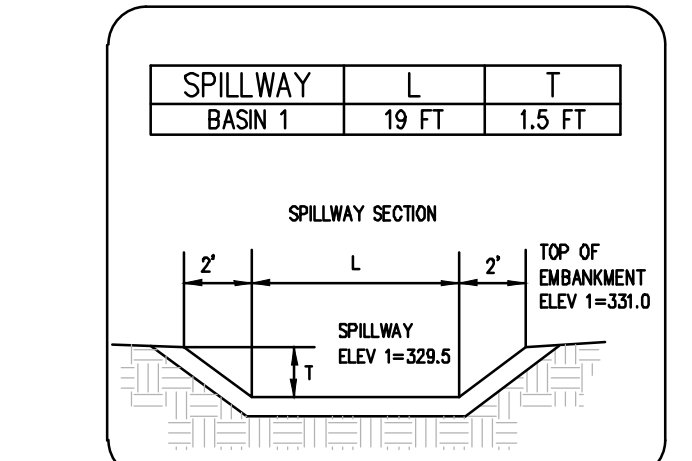
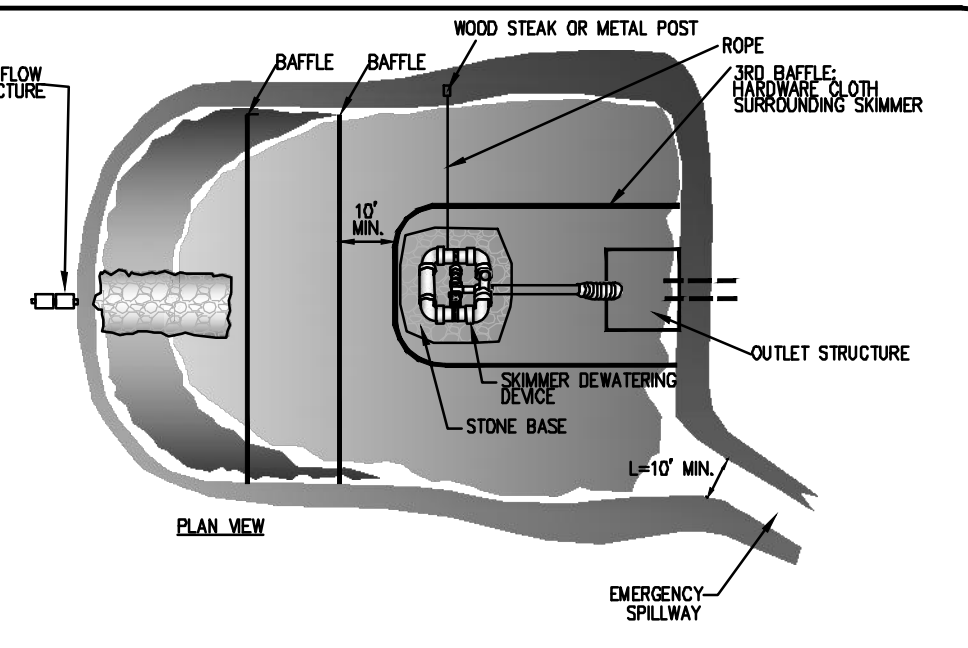
IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY ARISING ON THE ROPE, WILL MAKE THE SKIMMER ROB UP AND DOWN AND DISCLOSE THE BERMS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE BERMS. ALSO CHECK THE ORIFICE HOSE THE SKIMMER TO SEE IF IT IS CLOGGED. IF SO, REMOVE THE CLOG.

IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REPAIRED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLOWING 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 BUILT FOR EROSION DAMAGE AND REPAIR THE EMBANKMENT FOR PILING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.

FROSTING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM FLOODING WITH ICE.

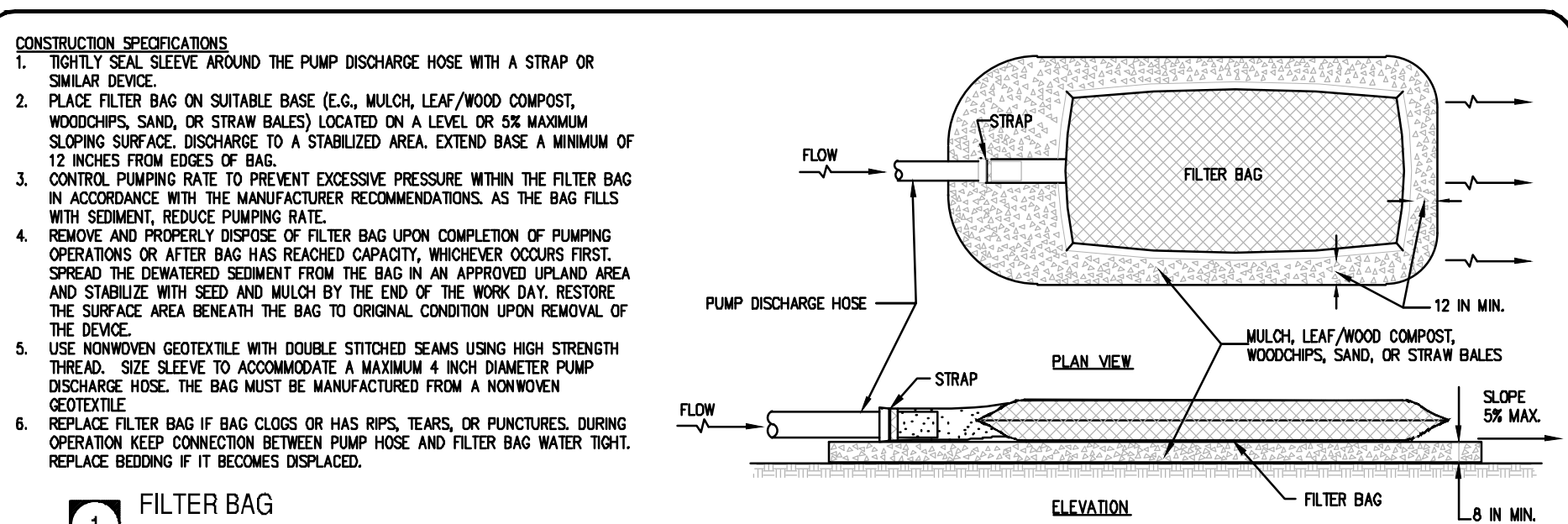
1 SKIMMER BASIN NOT TO SCALE



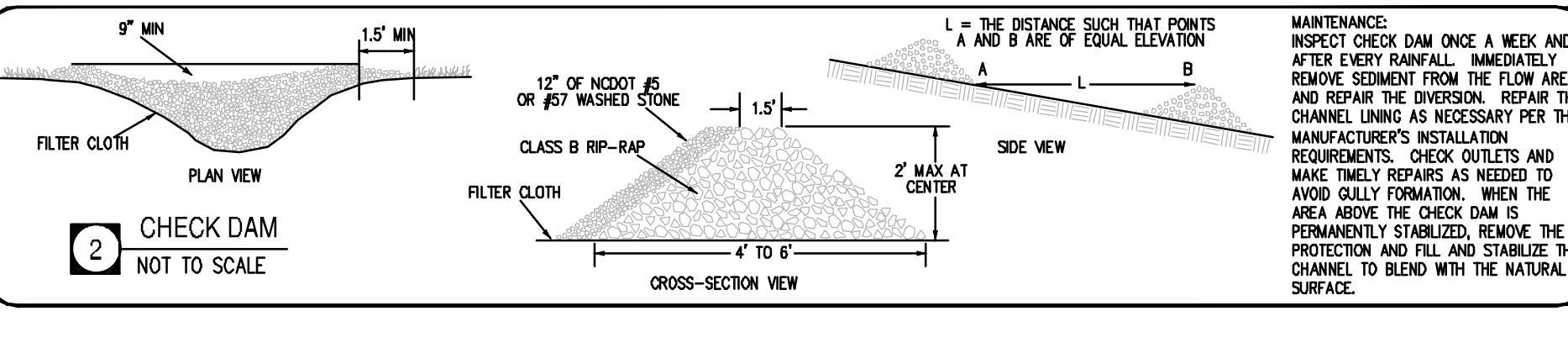
CONSTRUCTION SPECIFICATIONS:

- 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.
- PROTECT THE FILL MATERIAL FROM THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT EXCEEDING 8 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 8 INCHES TO ALLOW FOR SETTLEMENT.
- SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMER 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.
- PLACE THE BARREL (TYPICALLY 4-INCH SCHEDULE 40 PVC PIPE) ON A FIRM, SMOOTH FOUNDATION OF IMPROVED SOIL. DO NOT USE PERISHABLE 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 HANDHOLES. PLACE A MIN. DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONTACT BE INSTALLED BY CUTTING A TRENCH UNDER THE DAM AFTER THE EMBANKMENT IS COMPLETE.
- ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS OR AS DESIGNED.
- LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLOODE JOINT AT THE MILE 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.
- 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 A UNLINED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND OVER 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 CUT INTO 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 SECTIONS SHOULD OVERLAP THE LOWER SECTIONS SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC WITH A TRENCH WITH STAPLES OR PINS.
- MULCH- 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 BARRIAGE EFFICIENCY.
- EROSION CONTROL-CONSTRUCT THE STRUCTURE SO THAT THE EXPOSED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMBANKMENT WITH VEGETATION AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PROPOSED SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
- INSTALL PIVOT BAFFLES AS SPECIFIED IN PRACTICE 6.8.5, PIVOT BAFFLES.
- 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 ADJACENT AREAS AND STABILIZE PROPERLY.

2 CHECK DAM NOT TO SCALE



1 FILTER BAG NOT TO SCALE



2 CHECK DAM NOT TO SCALE

TEMPORARY SEEDING SPECIFICATIONS/SCHEDULE

Date	Type	Planting Rate
March - Oct.	Browtop Millet	40 lbs/acre
Nov - Feb.	Wheat	120 lbs/acre

SEEDBED PREPARATION:

- CHEST COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- RIP THE ENTIRE AREA TO SIX INCHES DEEP.
- REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE SEEDING MIXTURE).
- CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
- SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR OUTPACK AFTER SEEDING.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN FIVE DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- CONSULT SAEC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

PERMANENT SEEDING SPECIFICATIONS/SCHEDULE

Date	Type	Planting Rate
Aug 15 - Nov 1	Deer Tongue	300 lbs/acre
Nov 1 - Mar 1	Deer Tongue & Abruzzi Rye	300 lbs/acre
Mar 1 - Apr 15	Deer Tongue	300 lbs/acre
Apr 14 - Jun 30	Hulled Common Bermudagrass	25 lbs/acre
Jul 1 - Aug 15	Deer Tongue & Browtop Millet or Sorghum-Sudan Hybrids	240 lbs/acre - Deer Tongue: 35 lbs/acre Browtop Millet or Sorghum-Sudan Hybrids: 30 lbs/acre

FOR SHOULDERS, SIDE DITCHES, SLOPES (3:1 - 2:1)

Date	Type	Planting Rate
Mar 1 - Jun 1	Switchgrass & Add Deer Tongue or add Hulled Common Bermudagrass	50 lbs/acre (Switchgrass) 240 lbs/acre
Jun 1 - Sep 1	Deer Tongue & Browtop Millet or Sorghum-Sudan Hybrids	240 lbs/acre Deer Tongue: 35 lbs/acre Browtop Millet or Sorghum-Sudan Hybrids: 30 lbs/acre
Sep 1 - Mar 1	Switchgrass & Add Deer Tongue or Add Abruzzi Rye	70 lbs/acre Switchgrass: 240 lbs/acre Deer Tongue: 25 lbs/acre

CONSULT SAEC ENGINEER FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF BENEDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

*** TEMPORARY: RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHAVED OUT.

SEEDING MIXTURE:

AGRICULTURE LIMESTONE: 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)

FERTILIZER: 1,000 LBS/ACRE - 10-10-10

SUPERPHOSPHATE: 500 LBS/ACRE - 20% ANALYSIS

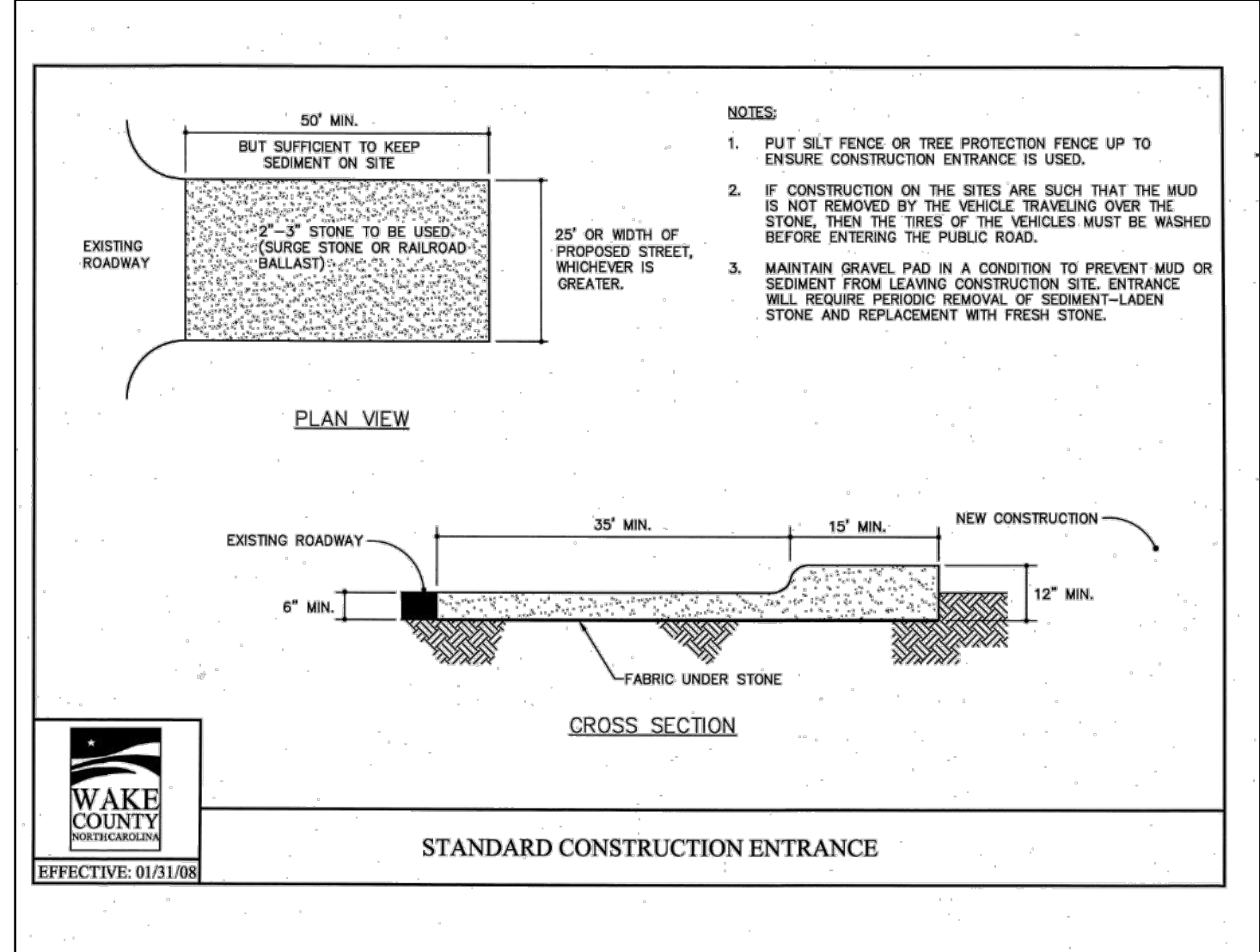
MULCH: 2 TONS/ACRE - SMALL GRASS STRAW

ANCHOR: ASPHALT EMULSION AT 400 GALS/ACRE

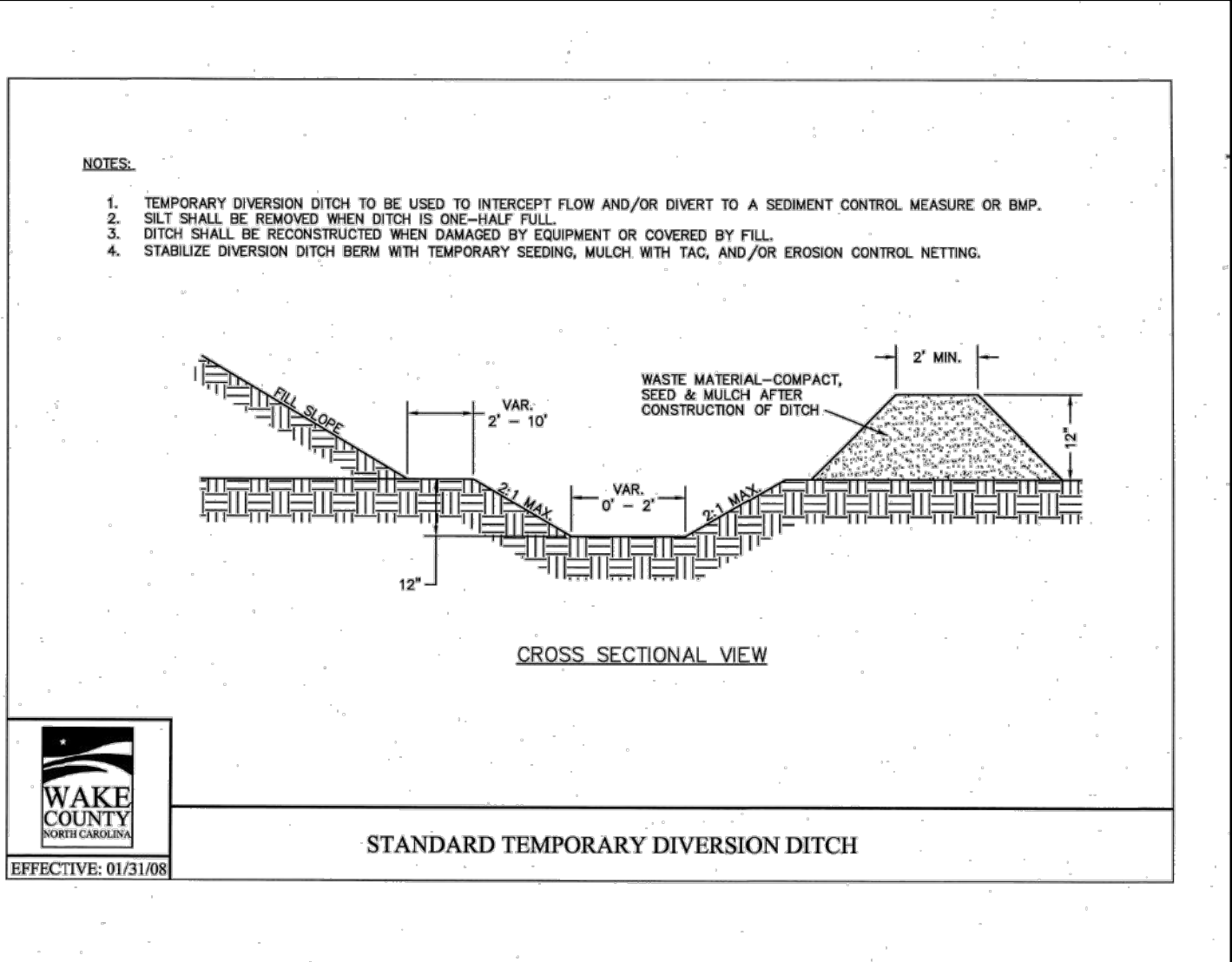
CONSULT SAEC ENGINEER FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF BENEDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

*** TEMPORARY: RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHAVED OUT.

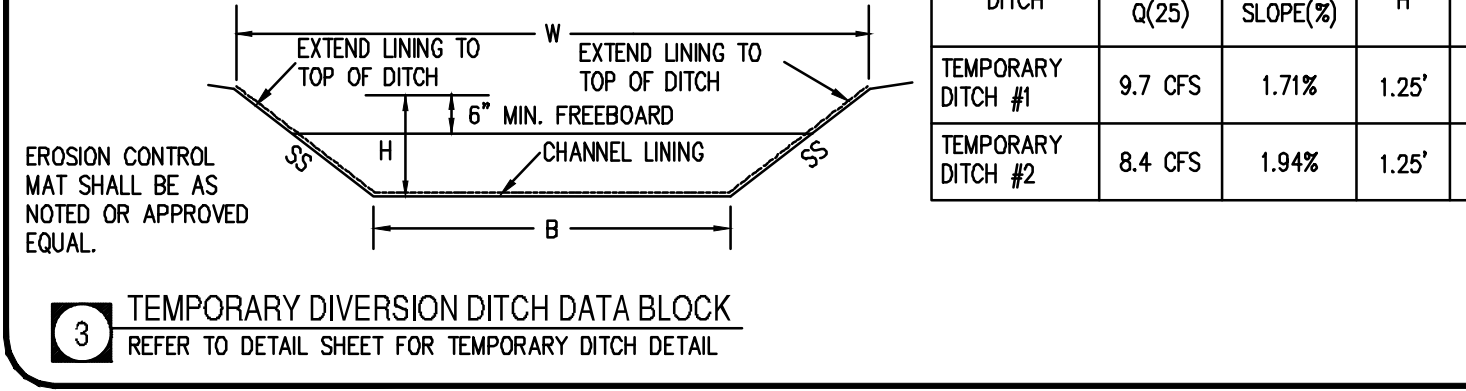
3 TEMPORARY SEEDING NOT TO SCALE



STANDARD CONSTRUCTION ENTRANCE



STANDARD TEMPORARY DIVERSION DITCH



TEMPORARY DIVERSION DITCH DATA BLOCK REFER TO DETAIL SHEET FOR TEMPORARY DITCH DETAIL

DITCH	FLOW Q(25)	LONG. SLOPE(%)	H	B	W	SS	CHANNEL LINING
TEMPORARY DITCH #1	9.7 CFS	1.71%	1.25'	1.0'	6.0'	2:1	C125BN
TEMPORARY DITCH #2	8.4 CFS	1.94%	1.25'	1.0'	6.0'	2:1	C125BN

8. Inspect all seeded areas and make necessary repairs or reseeding within the planting season, if possible. If stand should be more than 60% damaged, re-establish following the original lime, fertilizer and seeding rates.

9. Consult Wake County Soil & Water or NC State Cooperative Extension on maintenance treatment and fertilization after permanent cover is established.

Seeding Specifications

NPDES Stormwater Discharge Permit for Construction Activities (NC001-471/19) NCEQ/Division of Energy, Mineral and Land Resources

Mixture	Planting Rate
Agricultural Limestone	2 tons/acre (3 tons/acre in clay soils)
Fertilizer	1,000 lbs/acre - 10-10-10
Superphosphate	500 lbs/acre - 20% analysis
Mulch	2 tons/acre - small grain straw
Anchor	Asphalt emulsion at 400 gals/acre

Seeding Schedule

For Shoulders, Side Ditches, Slopes (Max 3:1):

Date	Type	Planting Rate
Aug 15 - Nov 1	Tall Fescue	300 lbs/acre
Nov 1 - Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1 - Apr 15	Tall Fescue	300 lbs/acre
Apr 15 - Jun 30	Bermudagrass	25 lbs/acre
Jul 1 - Aug 15	Tall Fescue AND Browtop Millet or Sorghum-Sudan Hybrids***	125 lbs/acre (Tall Fescue): 35 lbs/acre (Browtop Millet); 30 lbs/acre (Sorghum-Sudan Hybrids)

Seedbed Preparation:

- Chest compacted areas and spread topsoil three inches deep over adverse soil conditions, if available.
- Rip the entire area to six inches deep.
- Remove all loose rock, roots and other obstructions, leaving surface reasonably smooth and uniform.
- Apply agricultural lime, fertilizer and superphosphate uniformly and mix with soil (see mixture below).
- Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared four to six inches deep.
- Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or outpack after seeding.
- Mulch immediately after seeding and anchor mulch.

SEEDING SPECIFICATIONS

Bowman

Bowman North Carolina Ltd.
4006 BARRIETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 555-6570
bowman.com

Wake County
Project ID#736479

EROSION CONTROL DETAILS
Rocket Wash
Arendell Ave
Zebulon, NC

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION

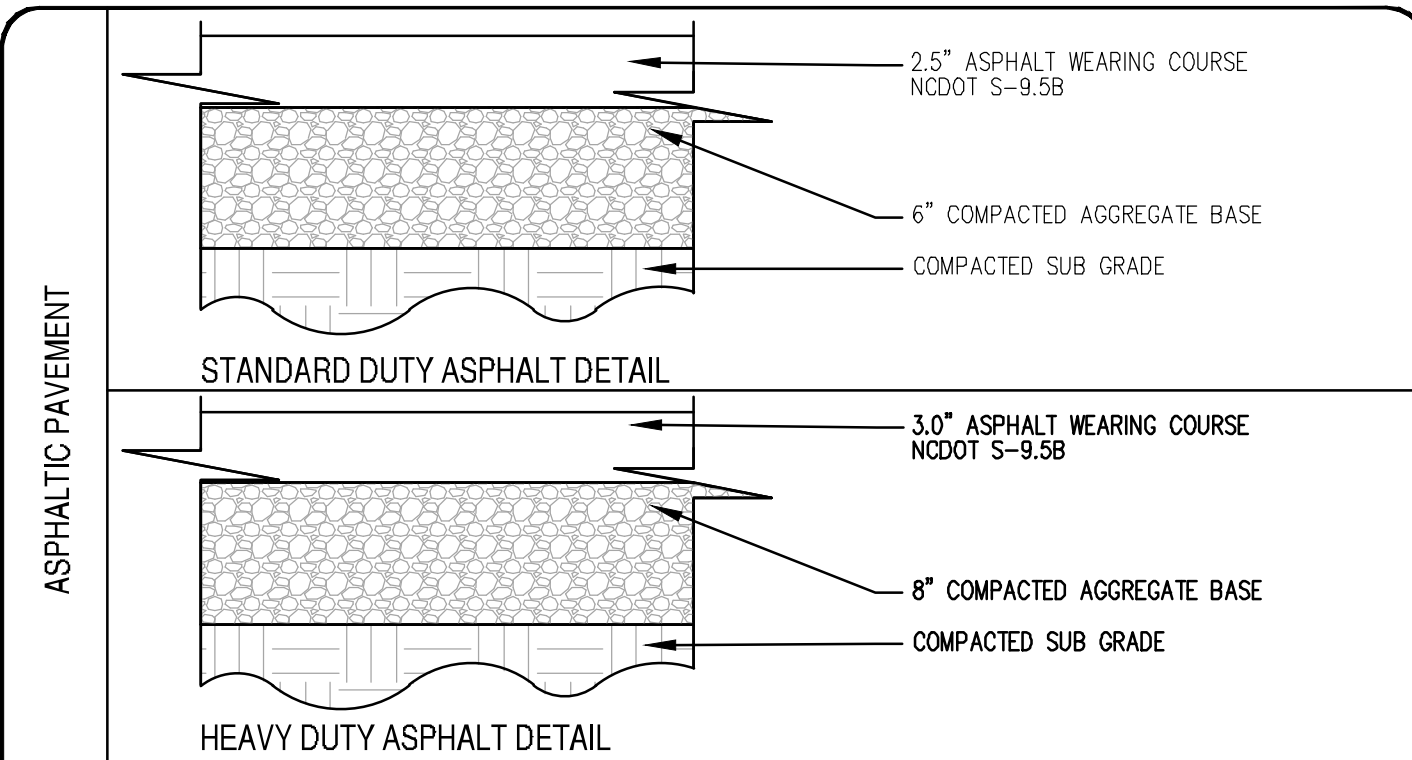


PLAN STATUS

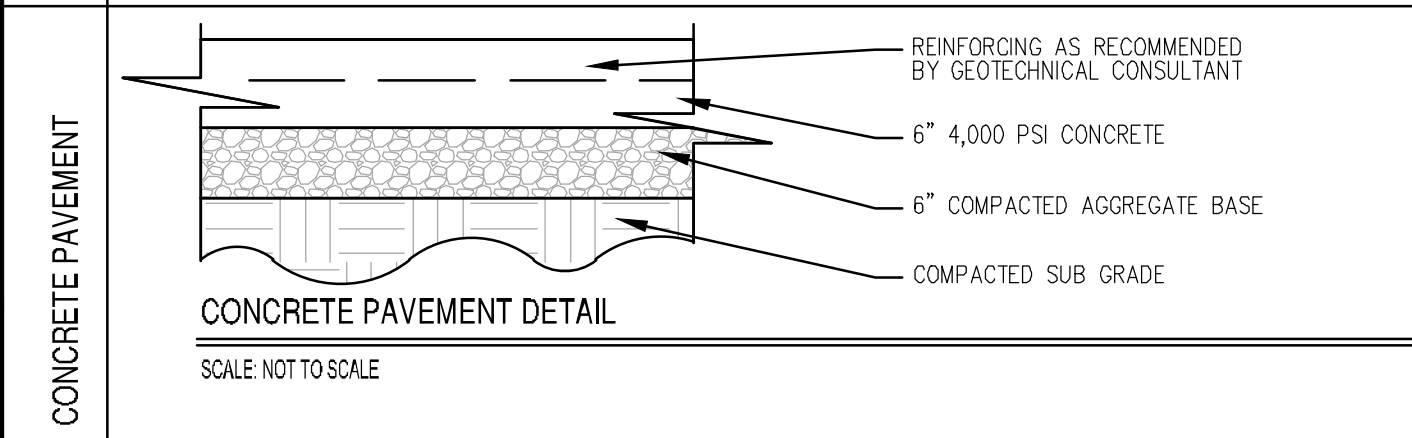
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE DESCRIPTION

MEL DESIGN	MEL DRAWN	XXX CHKD
SCALE	H: 1/4" = 1'	V: 1" = 10'
JOB No.	220094-01-002	220097-01-002
DATE	June 20, 2022	
FILE No.	220094-01-002	220097-01-002

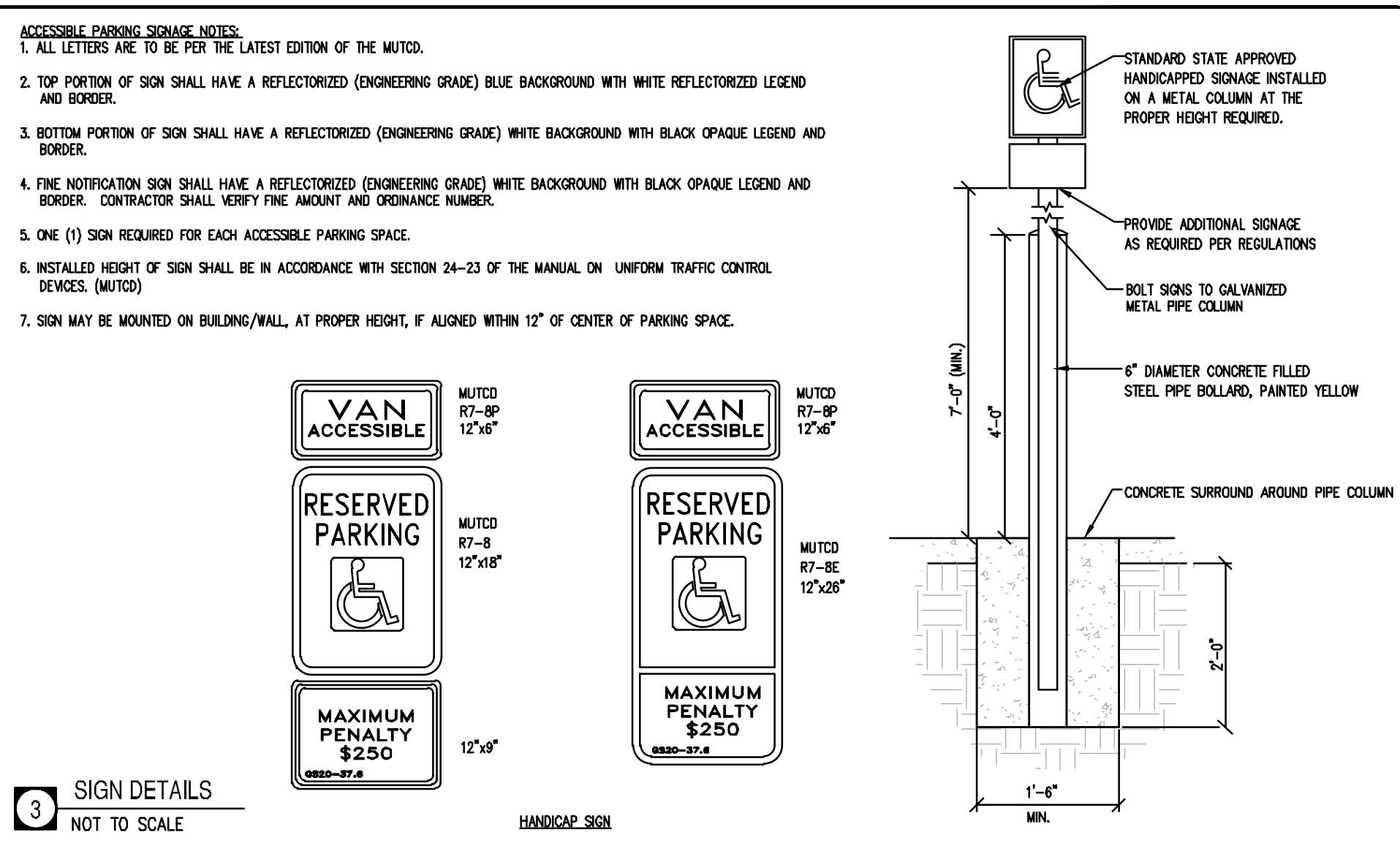


REFER TO SHEET C3.1 FOR PUBLIC ROAD PAVEMENT SECTION

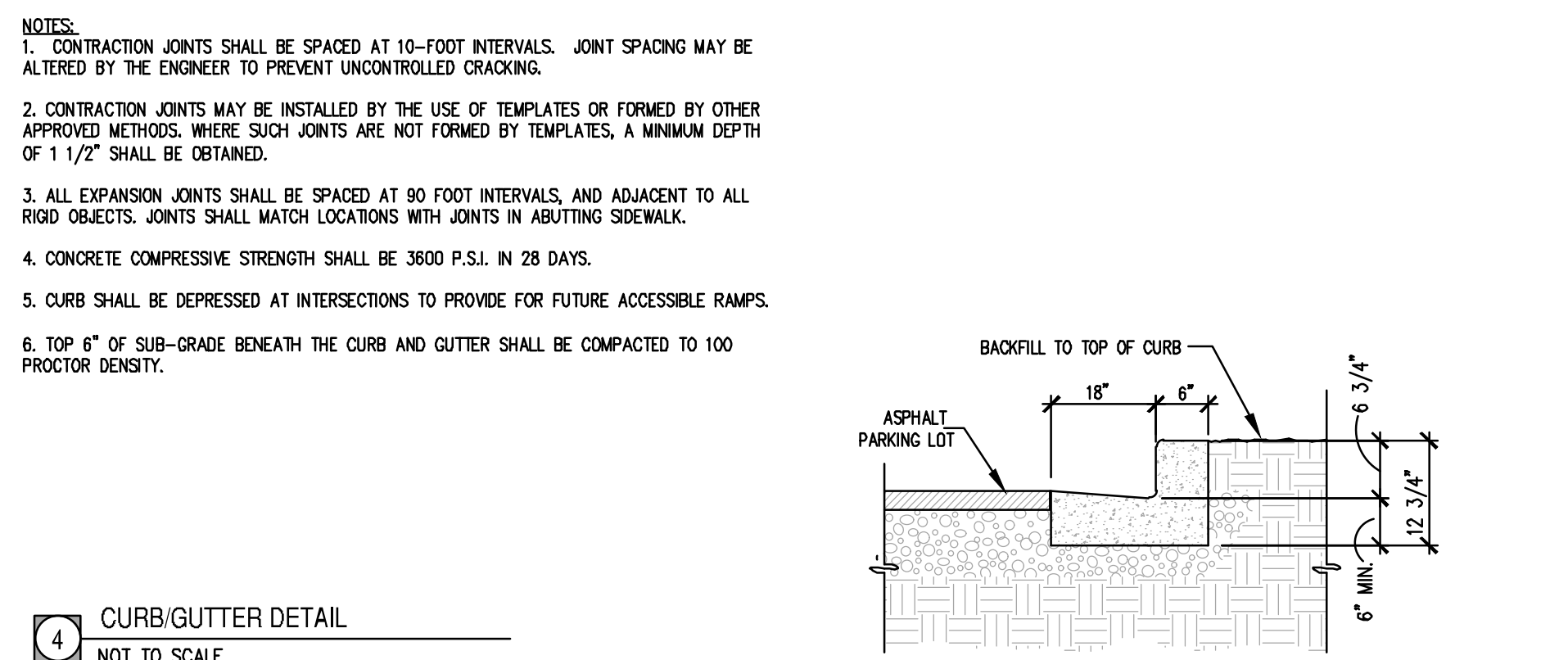


1 PAVEMENT DETAILS
NOT TO SCALE

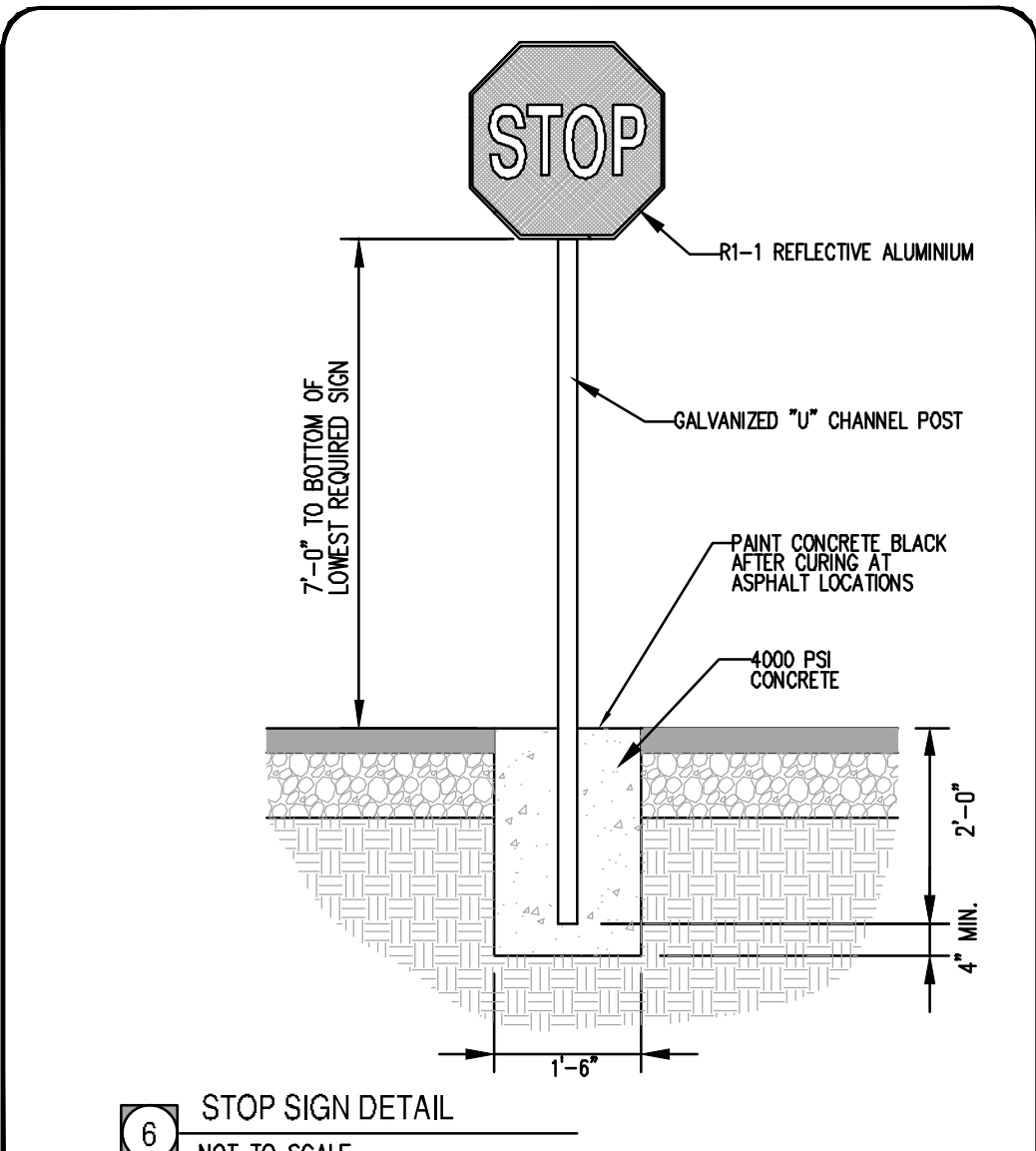
REFER TO NC DOT DRIVEWAY PERMIT FOR ADDITIONAL REQUIREMENTS
REFER TO PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS
MATERIALS AND CONSTRUCTION REQUIREMENTS PER THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION



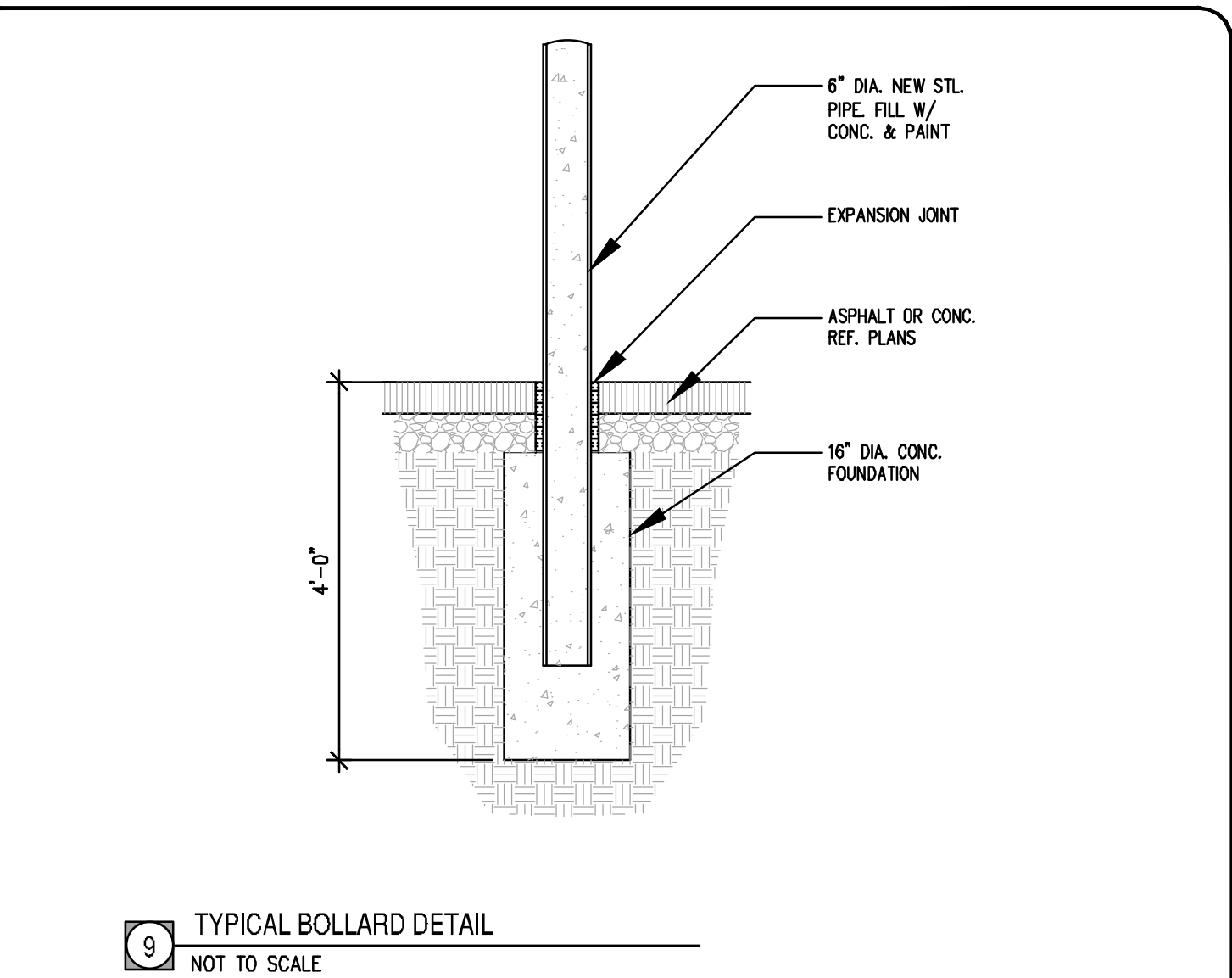
3 SIGN DETAILS
NOT TO SCALE



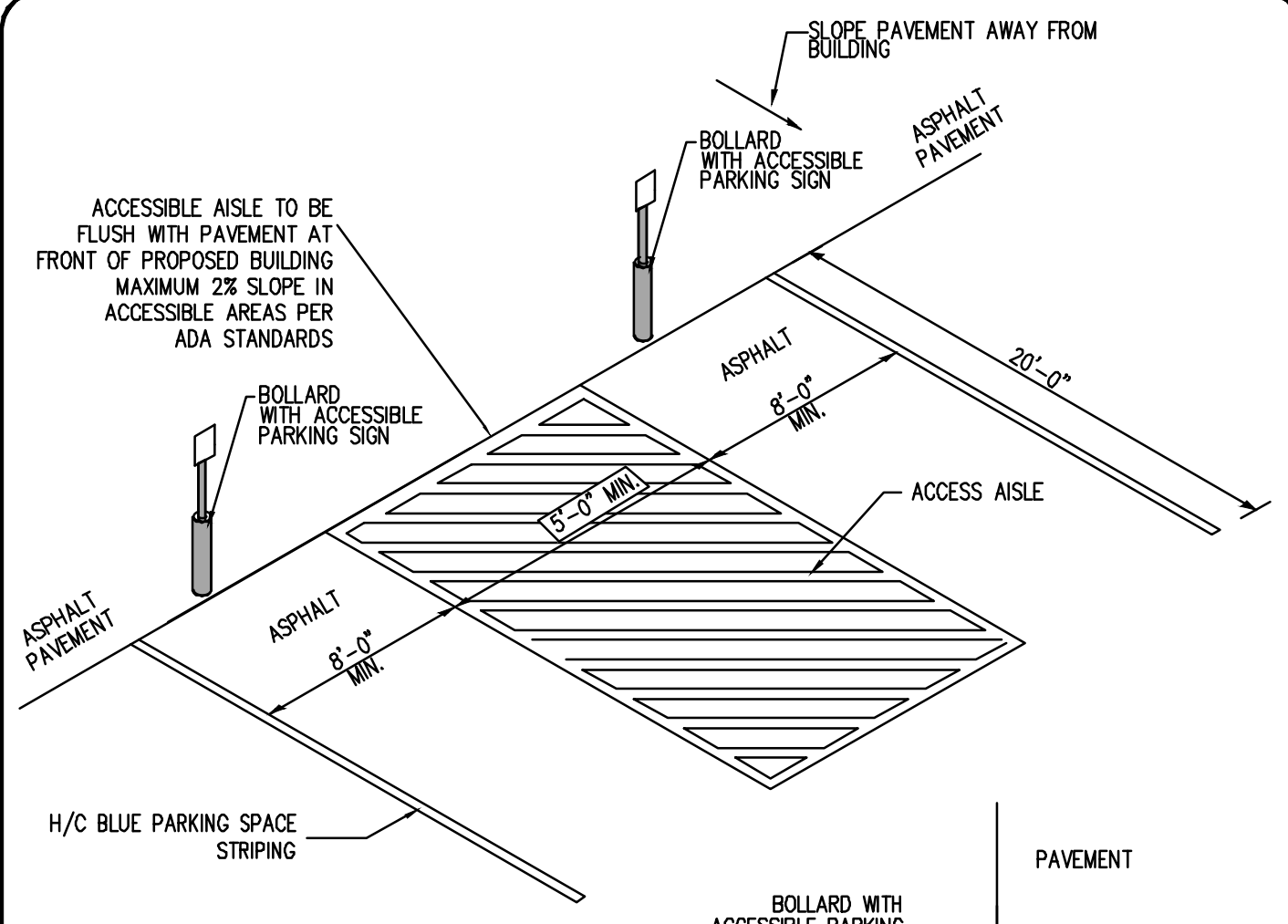
4 CURB/GUTTER DETAIL
NOT TO SCALE



6 STOP SIGN DETAIL
NOT TO SCALE

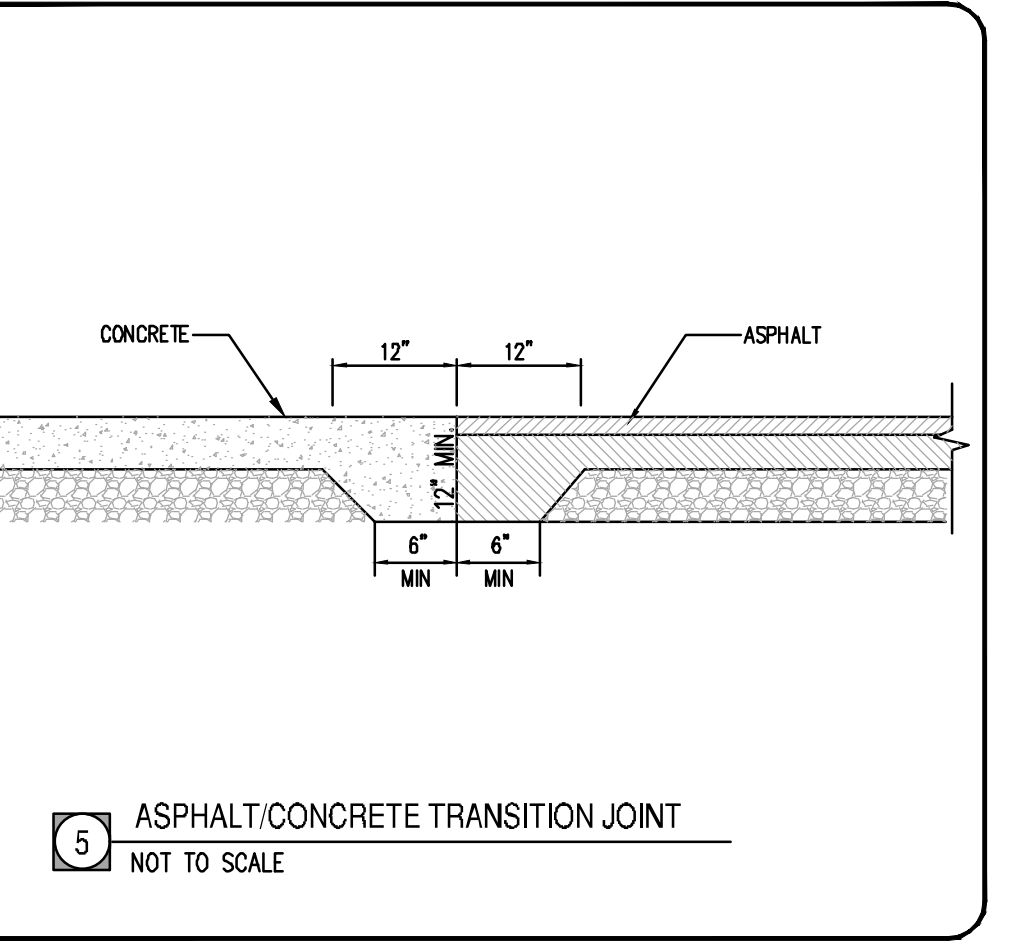


9 TYPICAL BOLLARD DETAIL
NOT TO SCALE

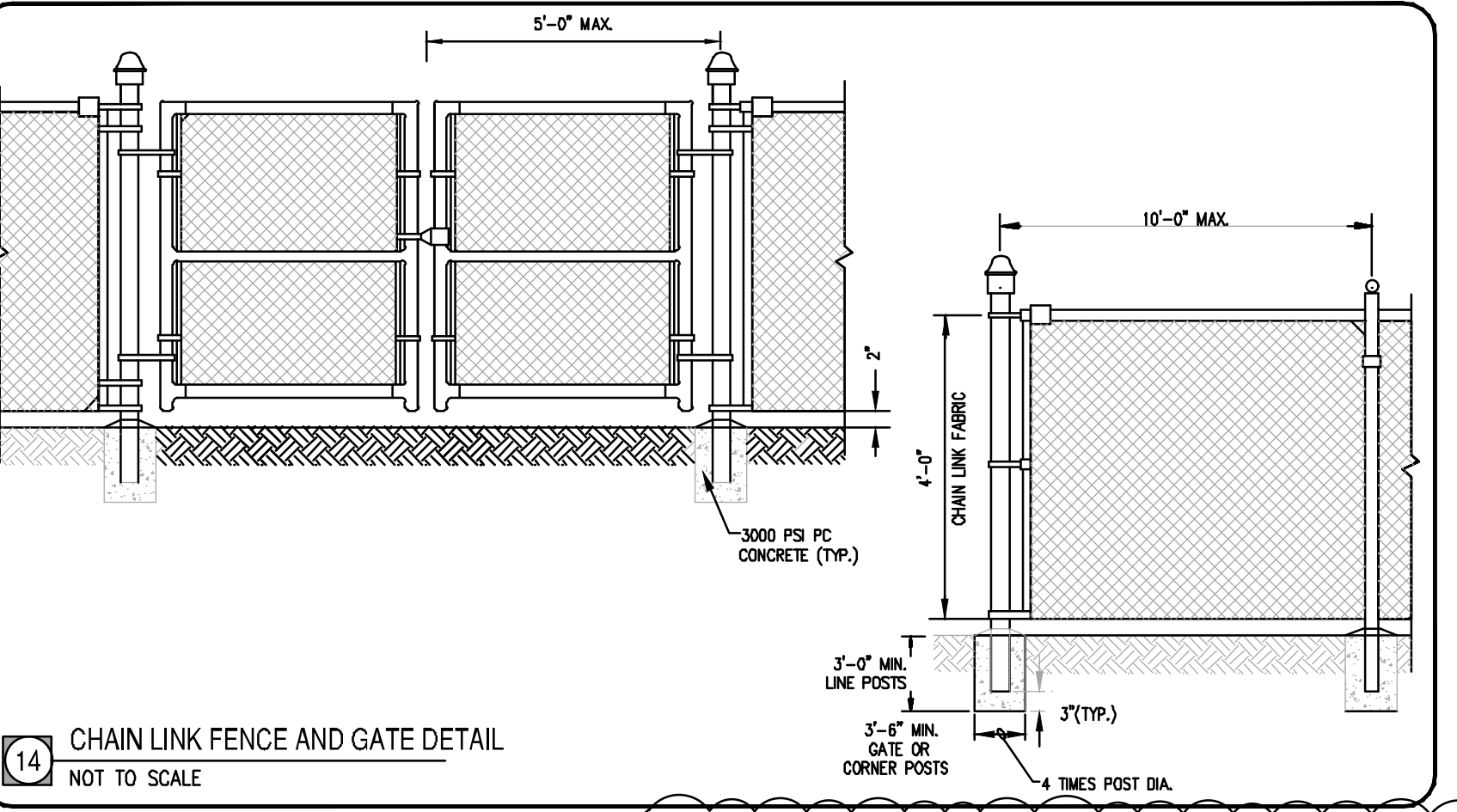


2 ACCESSIBLE PARKING DETAIL
NOT TO SCALE

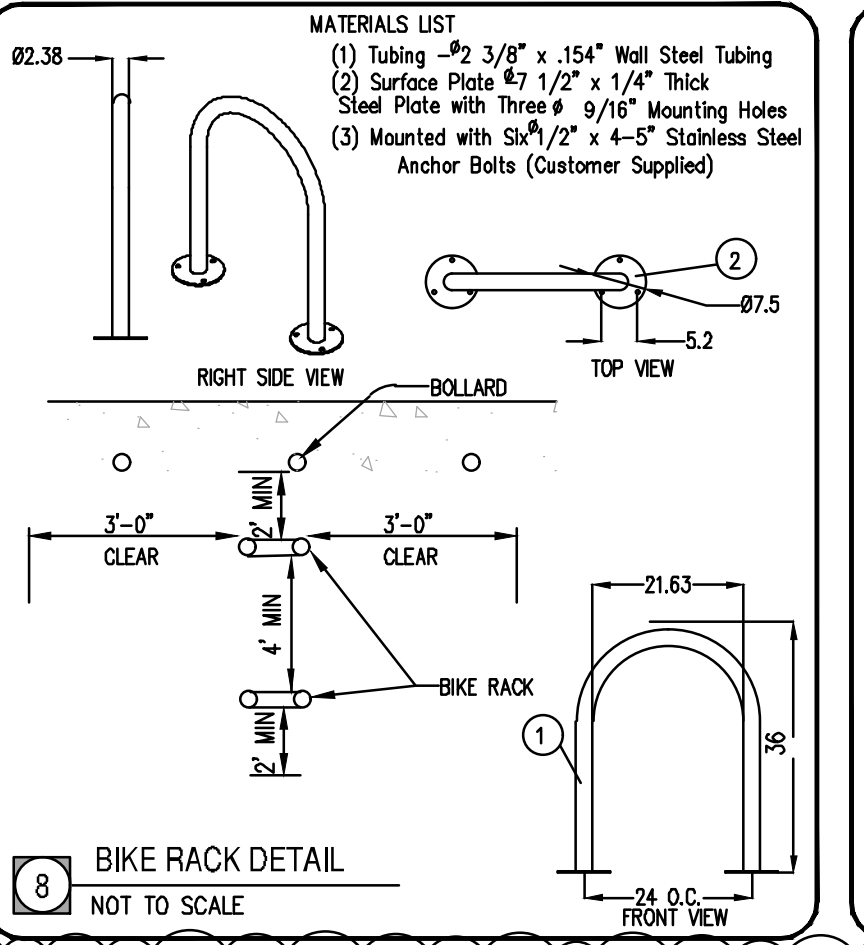
NOTE: ALL ACCESSIBLE RAMP AND ACCESS AISLES SHALL MEET ALL CODES AND ADAAG REGULATIONS.



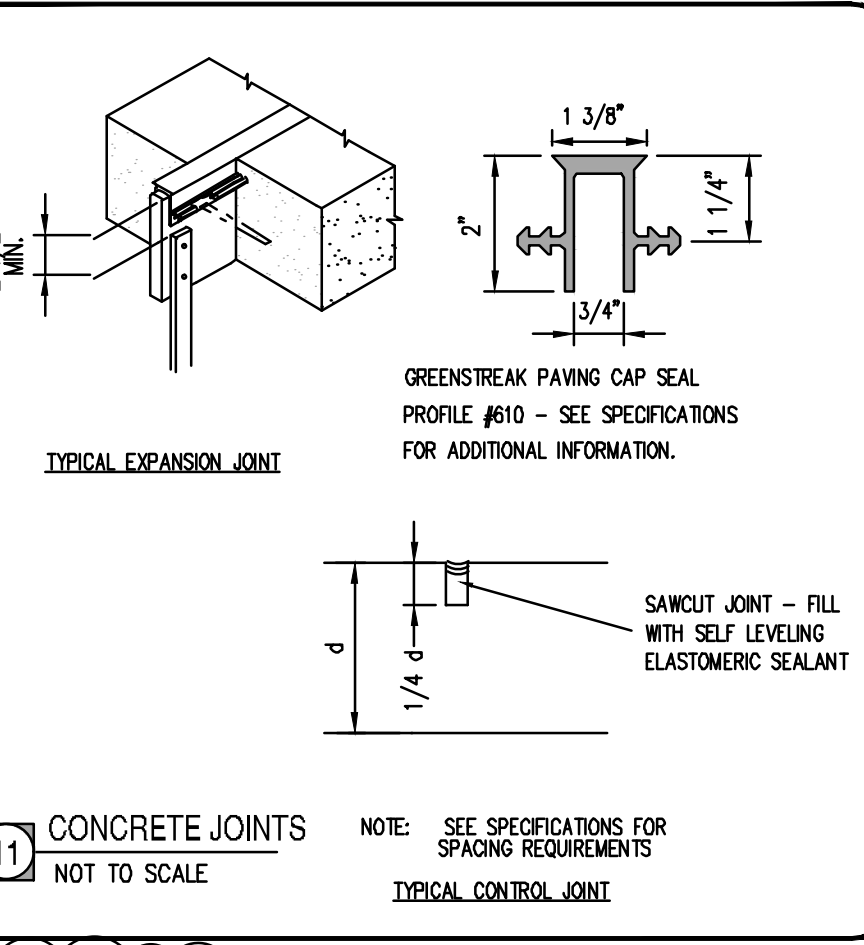
5 ASPHALT/CONCRETE TRANSITION JOINT
NOT TO SCALE



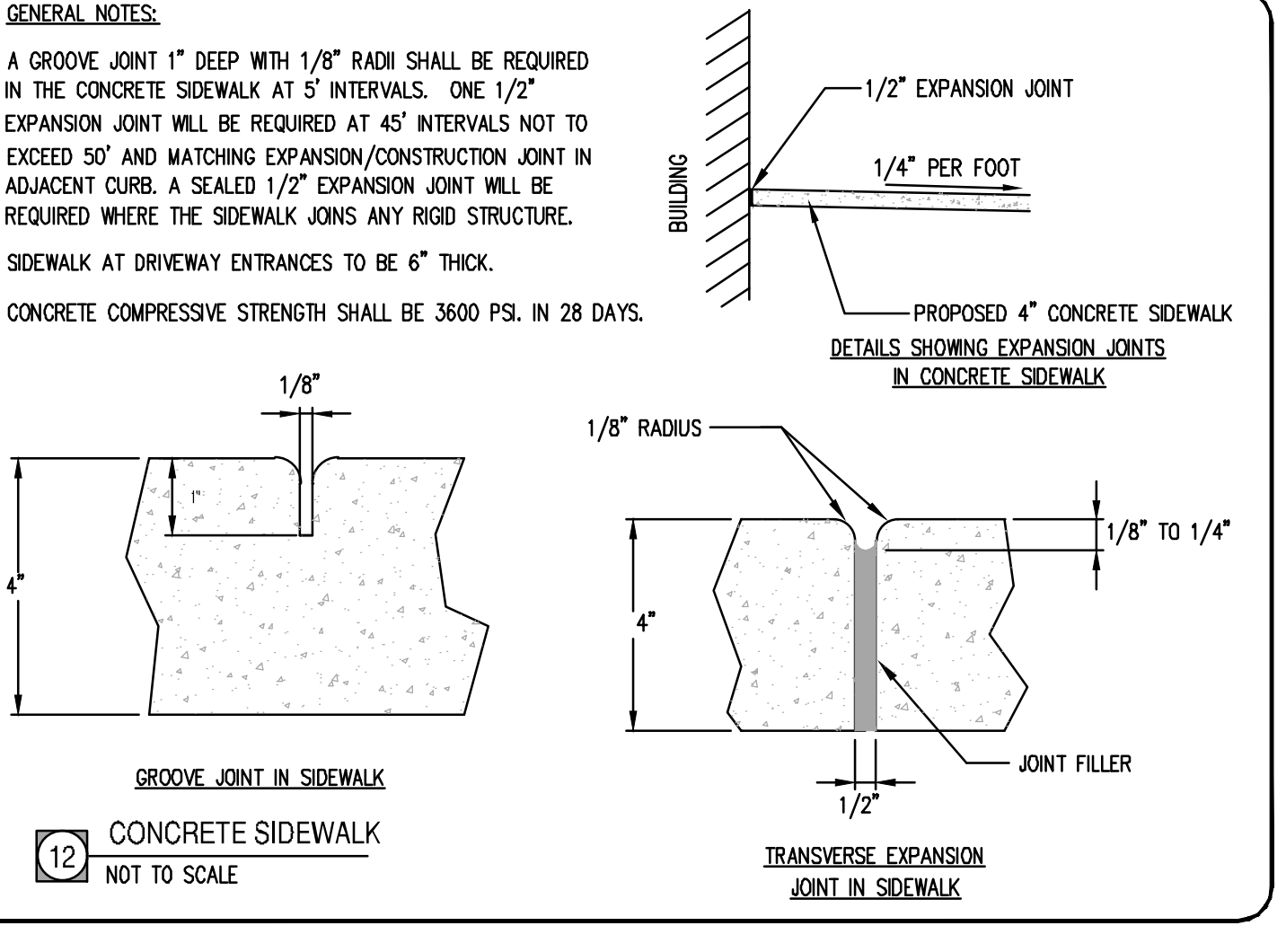
14 CHAIN LINK FENCE AND GATE DETAIL
NOT TO SCALE



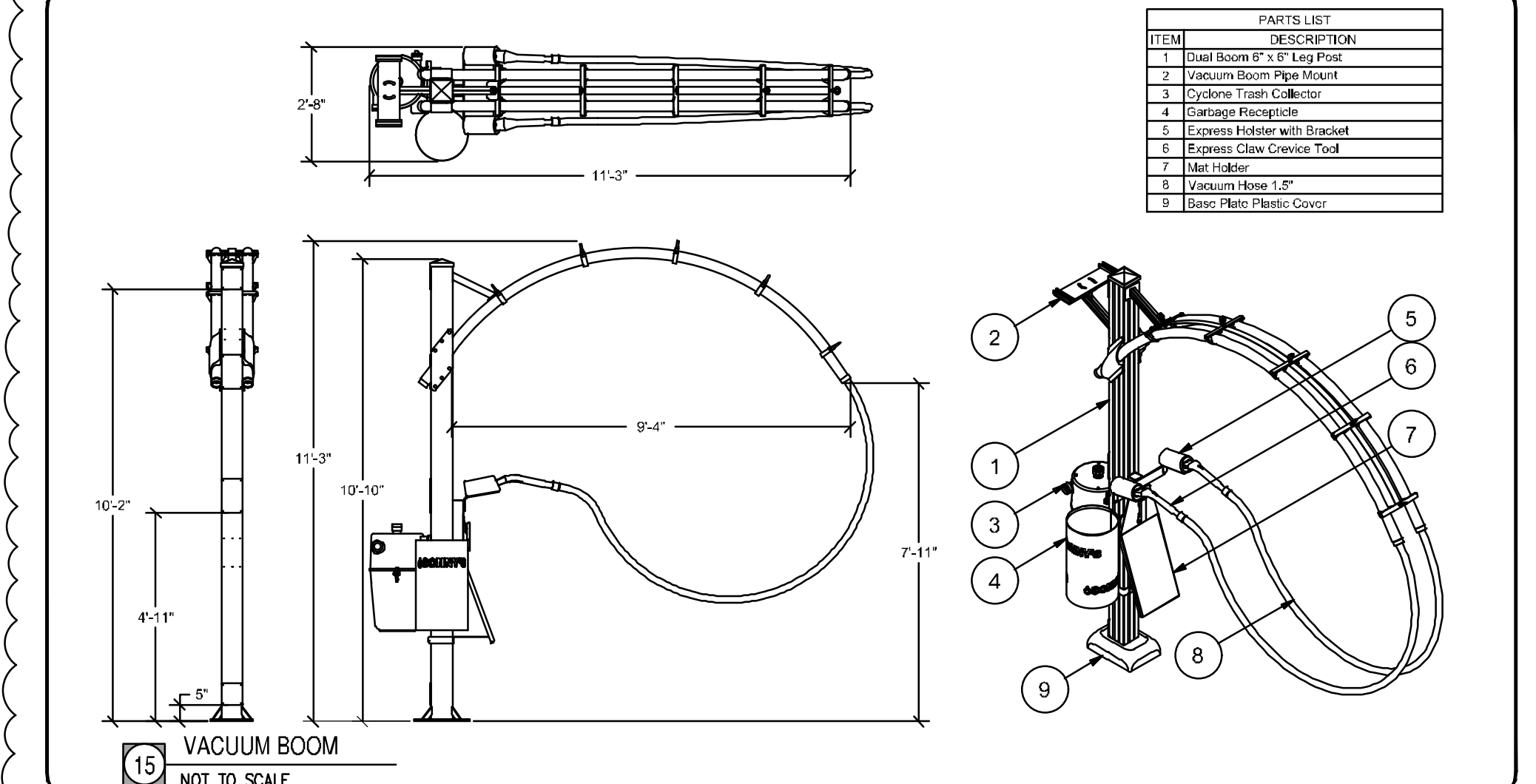
8 BIKE RACK DETAIL
NOT TO SCALE



11 CONCRETE JOINTS
NOT TO SCALE



12 CONCRETE SIDEWALK
NOT TO SCALE



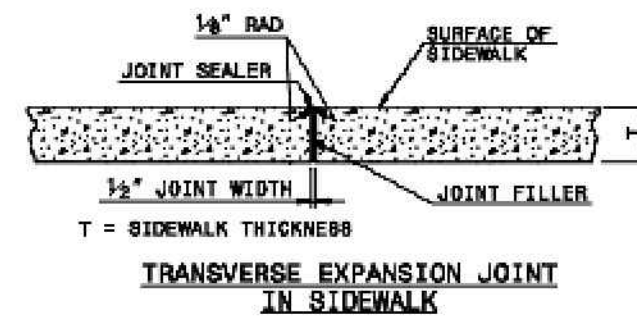
15 VACUUM BOOM
NOT TO SCALE

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION

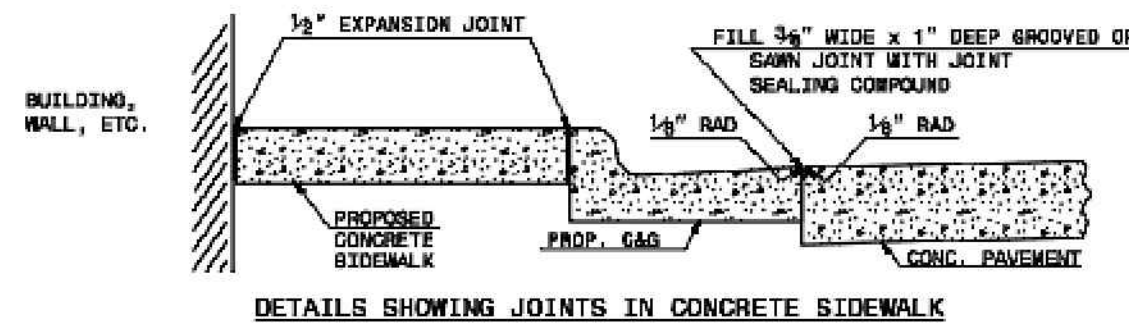


PLAN STATUS		
6/20/22	SITE PLAN SUBMITTAL	
10/21/22	PER TOWN REVIEW	
4/28/23	PER TOWN REVIEW	
7/07/23	WAKE COUNTY SUBMISSION	
DATE	DESCRIPTION	
MEL DESIGN	MEL DRAWN	XXX CHKD
SCALE	1" = 1'-0"	
JOB No.	220094-01-002	
DATE	June 20, 2022	
FILE No.	220094-01-002	

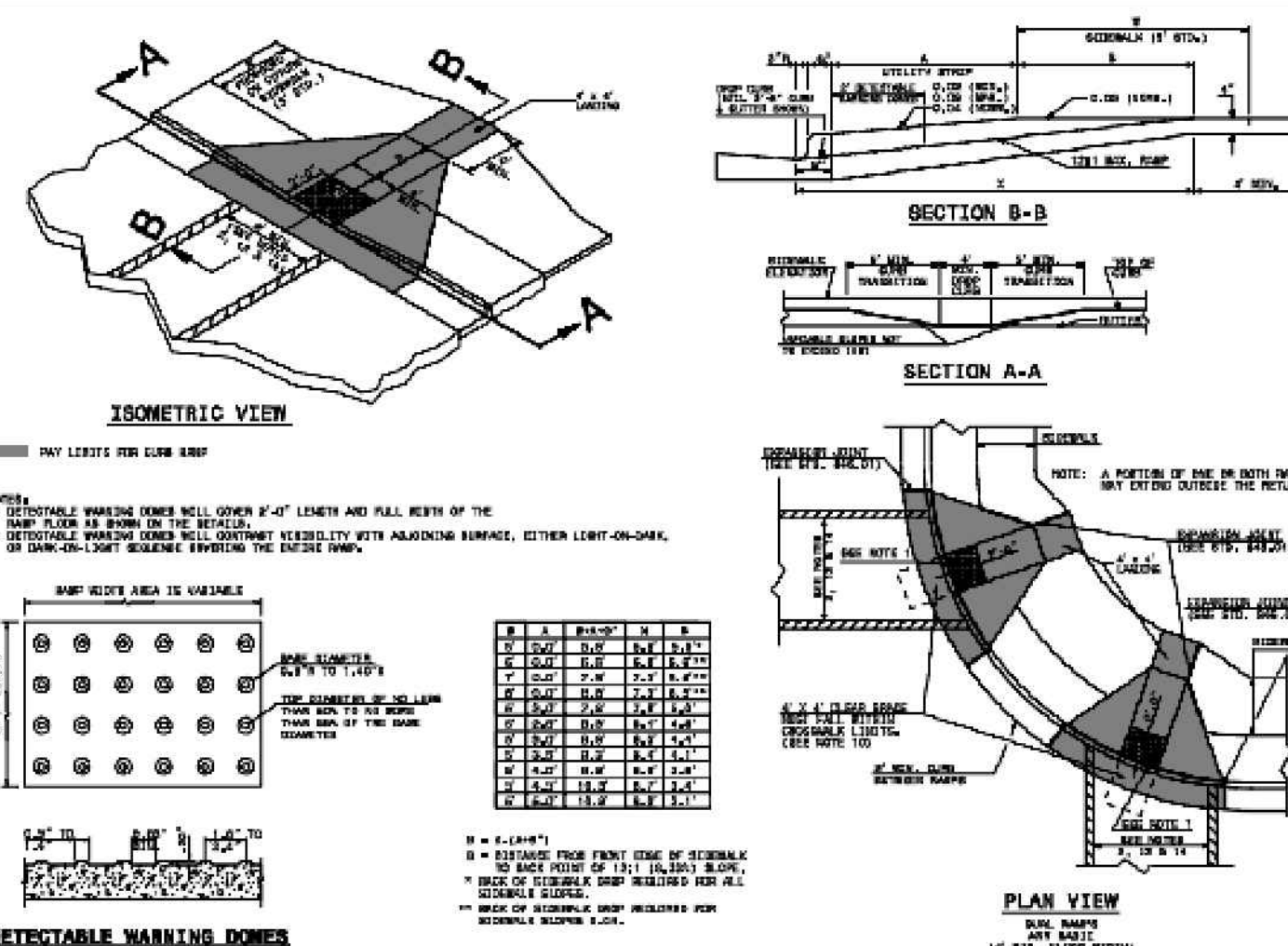
NOTES:
 CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.
 PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADIUS IN THE CONCRETE SIDEWALK AT 5' INTERVALS.
 ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
 SEE STD. DWG. 848.05 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



TRANSVERSE EXPANSION JOINT IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK



DETECTABLE WARNING DOMES

WALKWAY	WALKWAY WIDTH	WALKWAY LENGTH	WALKWAY AREA
1	5'-0"	10'-0"	50.00
2	5'-0"	15'-0"	75.00
3	5'-0"	20'-0"	100.00
4	5'-0"	25'-0"	125.00
5	5'-0"	30'-0"	150.00
6	5'-0"	35'-0"	175.00
7	5'-0"	40'-0"	200.00
8	5'-0"	45'-0"	225.00
9	5'-0"	50'-0"	250.00
10	5'-0"	55'-0"	275.00
11	5'-0"	60'-0"	300.00
12	5'-0"	65'-0"	325.00
13	5'-0"	70'-0"	350.00
14	5'-0"	75'-0"	375.00
15	5'-0"	80'-0"	400.00
16	5'-0"	85'-0"	425.00
17	5'-0"	90'-0"	450.00
18	5'-0"	95'-0"	475.00
19	5'-0"	100'-0"	500.00

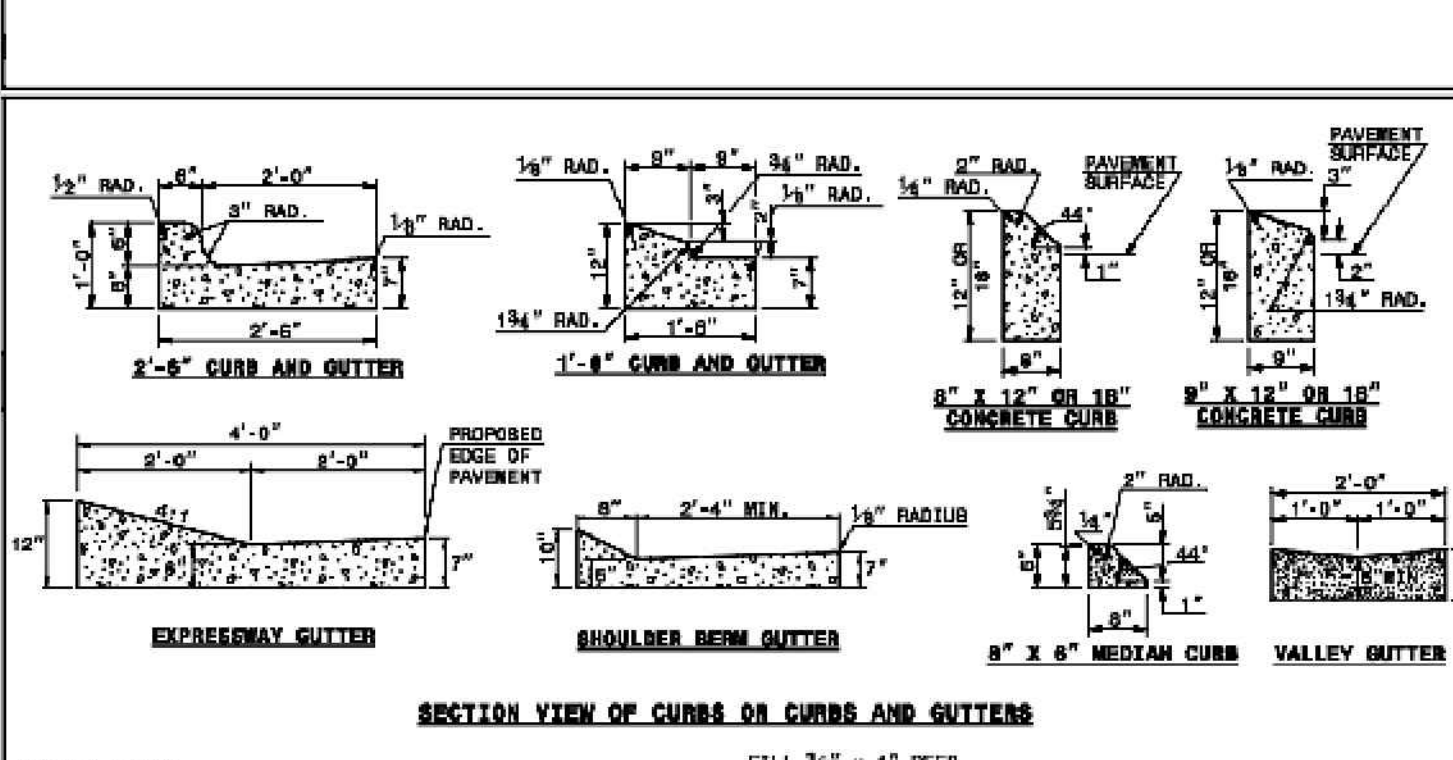
PLAN VIEW

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
 CONCRETE SIDEWALK
 SHEET # OF #
 848.01

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
 CURB RAMP
 PROPOSED CURB AND GUTTER
 SHEET # OF #
 848.05

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
 CURB RAMP
 PROPOSED CURB AND GUTTER
 SHEET # OF #
 848.05

NOTES:
 1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
 2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SURVEY AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
 3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS TO A 4" CLEAR SPACE AT THE EDGE OF THE CURB RAMP SHALL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
 4. SET BACK DISTANCE FROM 24520E CROSSWALK MARKING TO REAR EDGE OF TRAVEL LANE IS 4' MINIMUM.
 5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
 6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
 7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
 8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 0.33% MAXIMUM.
 9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
 10. CONSTRUCT THE EDGE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
 11. CONSTRUCT THE COUNTER SLOPE OF THE CUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
 12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
 13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
 14. SMALL DIMENSIONALIZATION ISLANDS THAT CAN NOT PROVIDE A 5'x5' LANDING AT THE TOP OF A RAMP, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
 15. CURB RAMPS WITH REVERSED SLOPE MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
 16. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
 17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSWALK SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE NOTED.
 18. CURB RAMPS THROUGH MEDIAN ISLANDS, SIDEWALK RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL ORDER.



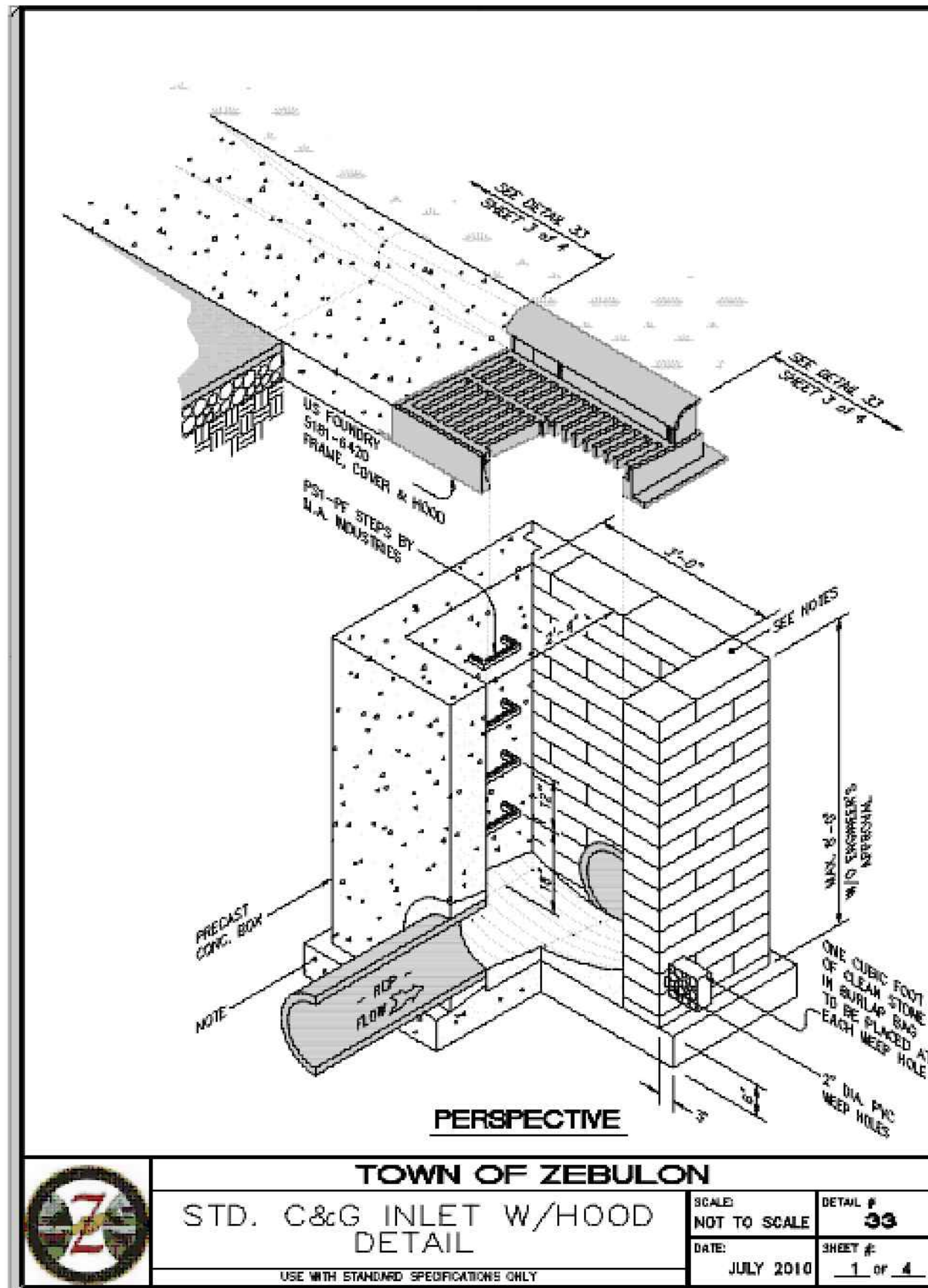
SECTION VIEW OF CURBS OR CURBS AND GUTTERS
 GENERAL NOTES:
 -PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
 -JOINT BRADING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
 -CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
 -CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1/2" DEEP.
 -FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 6"x6" MEDIAN CURB WITH JOINT FILLER AND SEALER.
 -SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.
 -FILL 3/4" x 1/2" DEEP GROOVES OR SAW JOINTS WITH JOINT SEALER.
 -FILL 1/2" x 1/2" DEEP JOINTS WITH JOINT SEALER.
 -FILL 1/2" x 1/2" DEEP JOINTS WITH JOINT SEALER.

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
 CURB RAMP
 PROPOSED CURB AND GUTTER
 SHEET # OF #
 848.05

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
 CURB RAMPS
 NOTES
 SHEET # OF #
 848.05

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
 CONCRETE CURB, GUTTER AND CURB & GUTTER
 SHEET # OF #
 846.01

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
 CURB RAMP
 PROPOSED CURB AND GUTTER
 SHEET # OF #
 848.05

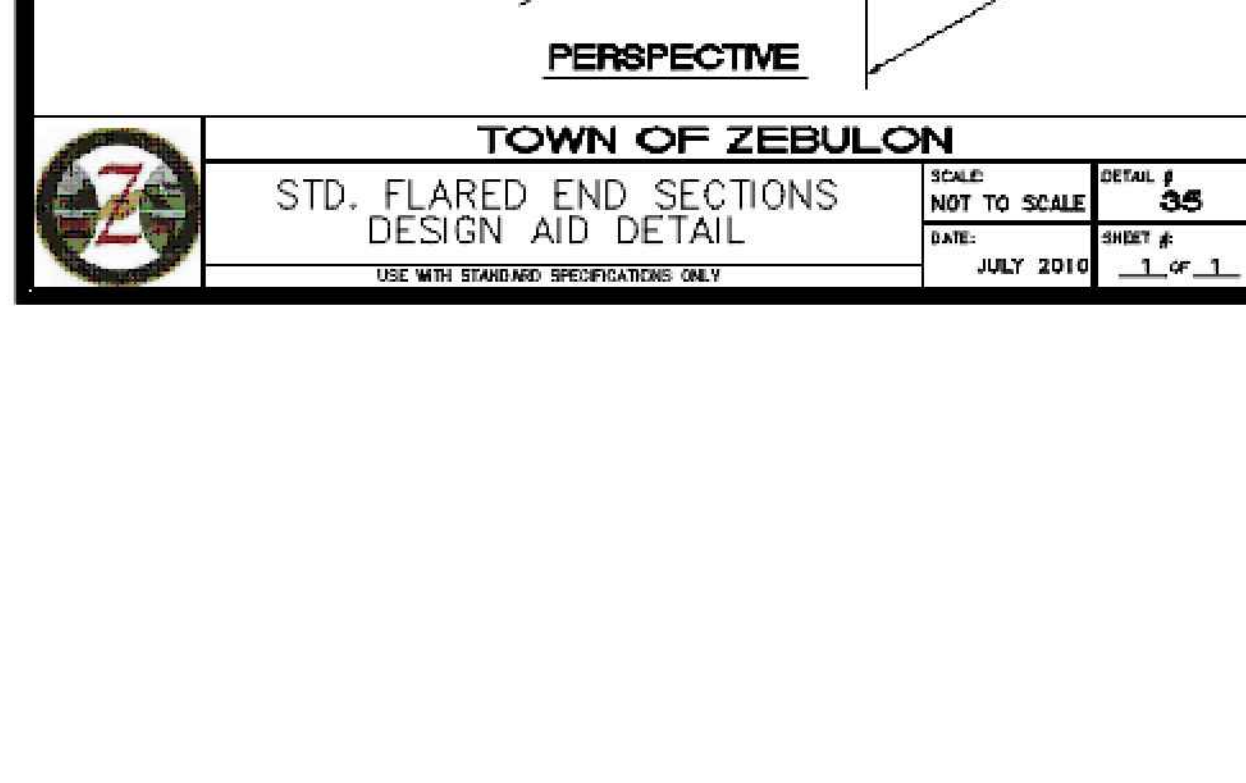


TOWN OF ZEBULON
 STD. C&G INLET W/HOOD DETAIL
 SCALE: NOT TO SCALE
 SHEET # 33
 DATE: JULY 2010

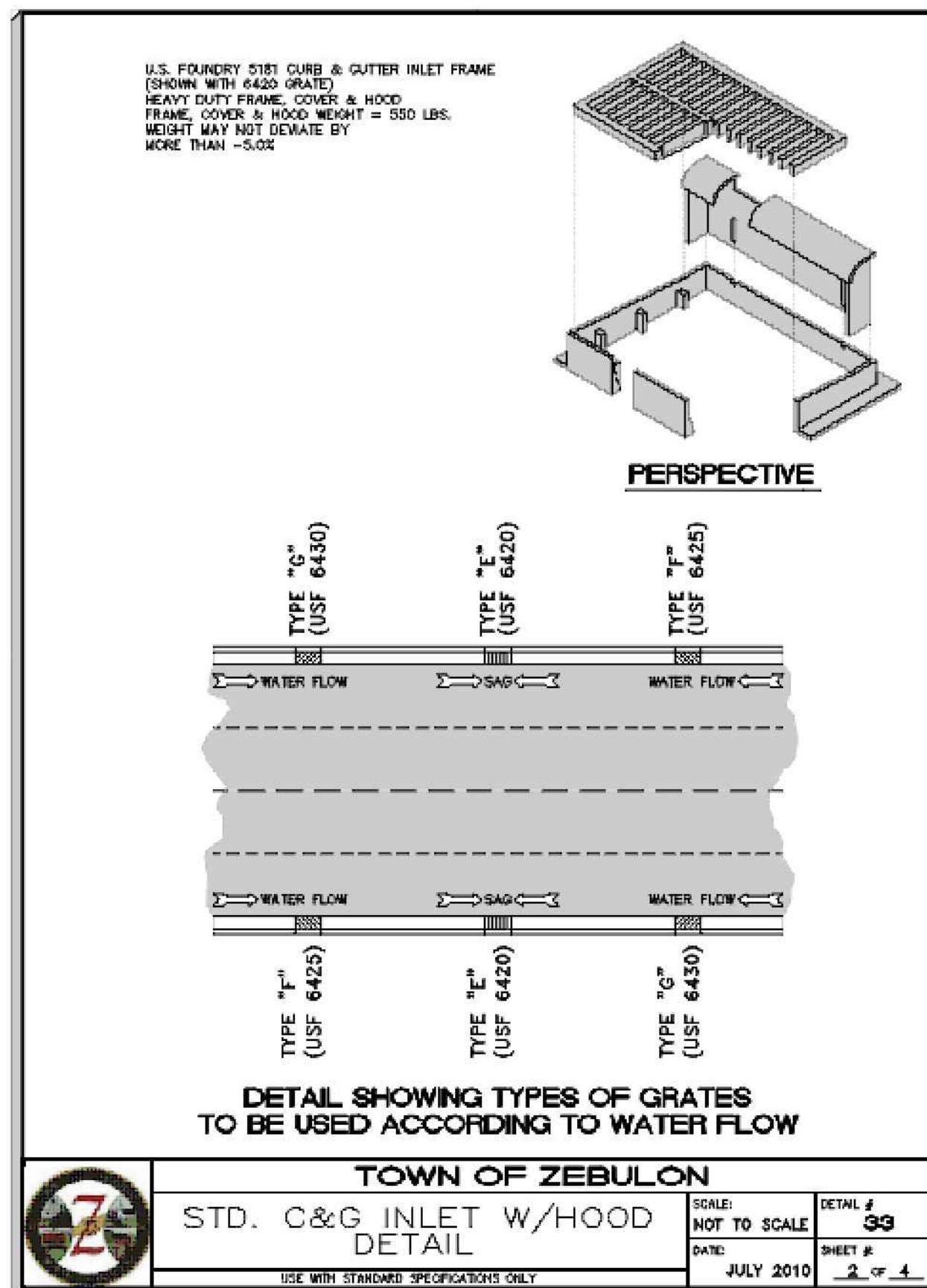
END SECTION DIMENSIONS

DIA.	A	B	C	D	E
15"	7"	2'-3 1/4"	3'-11 1/2"	6'-2 3/4"	2'-6"
18"	9"	2'-3"	3'-11 3/4"	6'-2 3/4"	3'-0"
34"	9"	3'-3"	3'-1"	6'-8"	3'-11 3/4"
30"	1'-0"	4'-6 1/2"	1'-10 1/2"	6'-5"	5'-0"
36"	1'-4"	5'-0"	3'-10 1/2"	6'-1 1/2"	5'-11"
42"	1'-10 1/4"	5'-1 3/8"	3'-1"	6'-2 3/8"	6'-5 1/4"

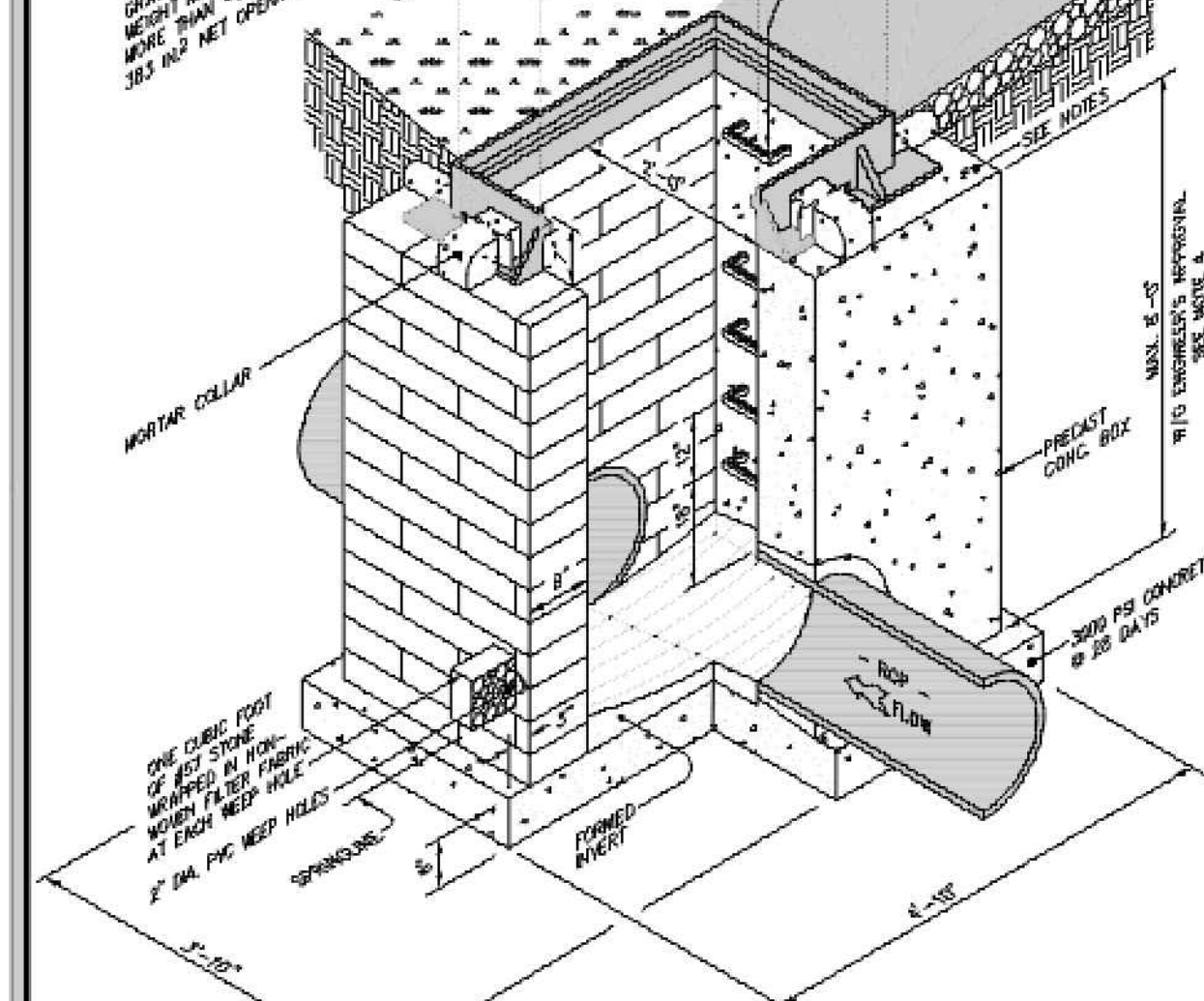
NOTES:
 1. DESIGN OF END-SECTION SHALL CONFORM TO STANDARD REINFORCED SECTIONAL CONCRETE CULVERT PIPE.
 2. ANY TWIN BARREL SYSTEM GREATER THAN 42" RCP REQUIRES A HEADWALL.
 3. ANY SYSTEM OF MORE THAN 2 PIPES REQUIRES A HEADWALL.
 4. SEE NCDOT "ROADWAY STANDARD DRAWINGS" FOR HEADWALL CONSTRUCTION DETAILS.



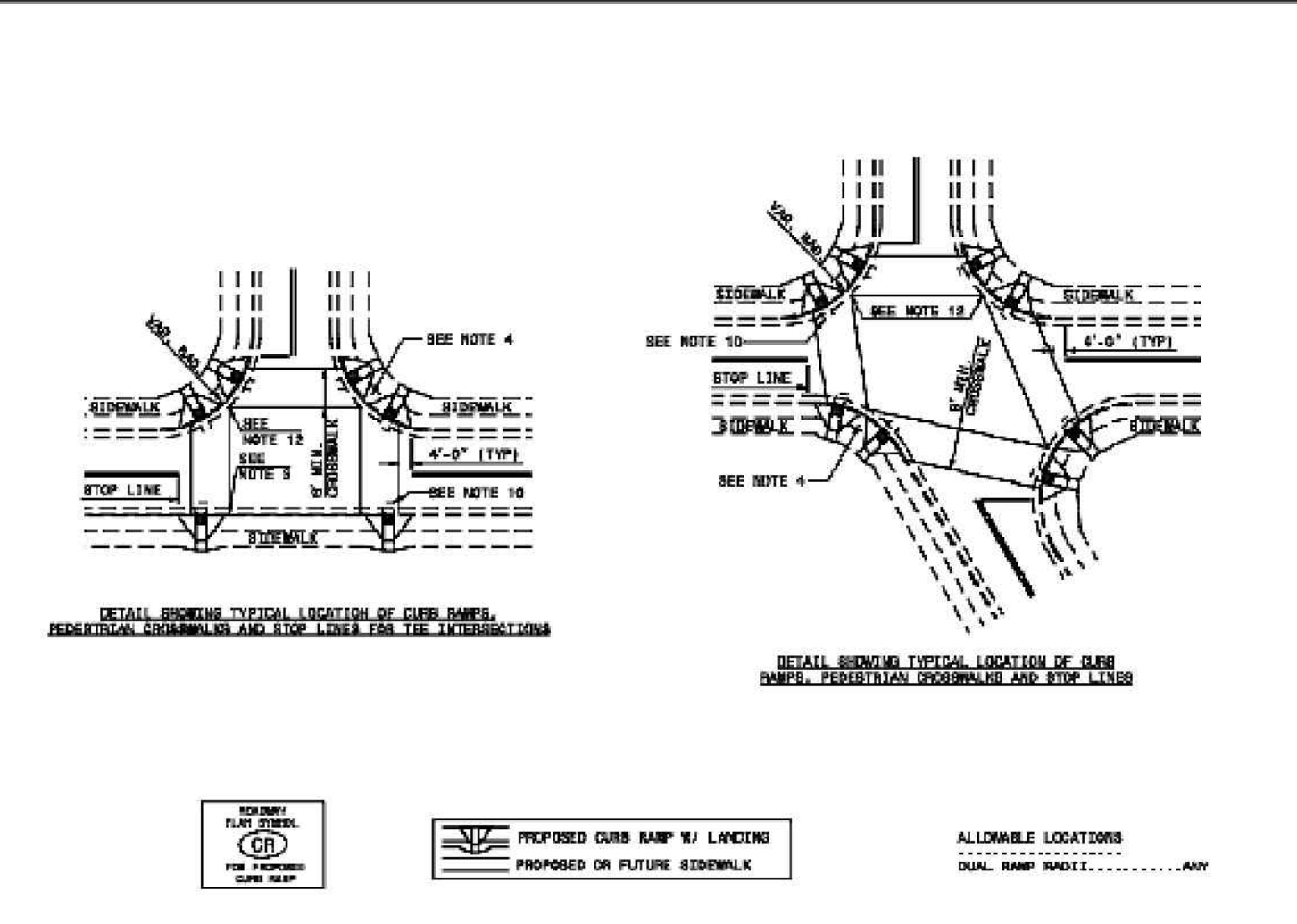
TOWN OF ZEBULON
 STD. FLARED END SECTIONS DESIGN END DETAIL
 SCALE: NOT TO SCALE
 SHEET # 35
 DATE: JULY 2010



TOWN OF ZEBULON
 STD. C&G INLET W/HOOD DETAIL
 SCALE: NOT TO SCALE
 SHEET # 33
 DATE: JULY 2010



TOWN OF ZEBULON
 2x3 DROP INLET
 SCALE: NOT TO SCALE
 SHEET # 34
 DATE: JULY 2010



STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
 CURB RAMP
 PROPOSED CURB AND GUTTER
 SHEET # OF #
 848.05

Bowman

Bowman North Carolina Ltd.
 4006 BARRETT DR
 Suite 104
 RALEIGH, NC 27609
 Phone: (919) 555-6570
 bowman.com

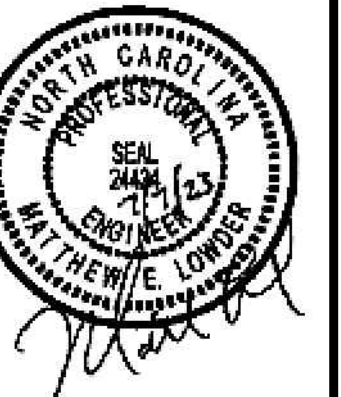
CONSTRUCTION DETAILS
 Rocket Wash
 Arendell Ave
 Zebulon, NC
 Project ID#736479
 Wake County

PRELIMINARY
 DO NOT
 USE FOR
 CONSTRUCTION

PLAN STATUS
 6/20/22 SITE PLAN SUBMITTAL
 10/21/22 PER TOWN REVIEW
 4/28/23 PER TOWN REVIEW
 7/07/23 WAKE COUNTY SUBMISSION

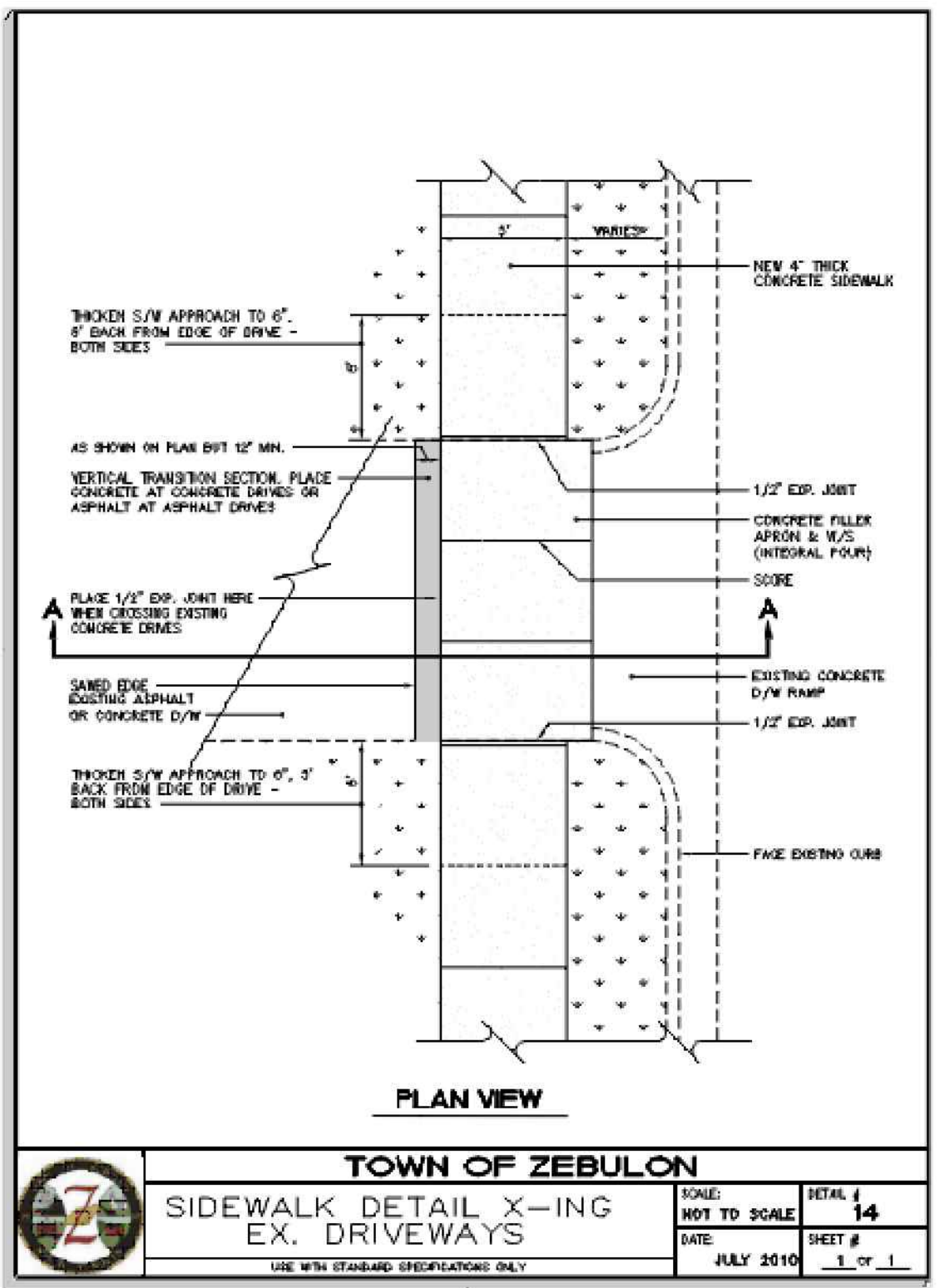
DATE DESCRIPTION
 MEL DESIGN MEL DRAWN XXX CHKD
 SCALE: H:
 V:
 JOB No. 220094-01-002
 220097-01-002
 DATE June 20, 2022
 FILE No. 220094-01-002
 220097-01-002

SHEET C6.3A

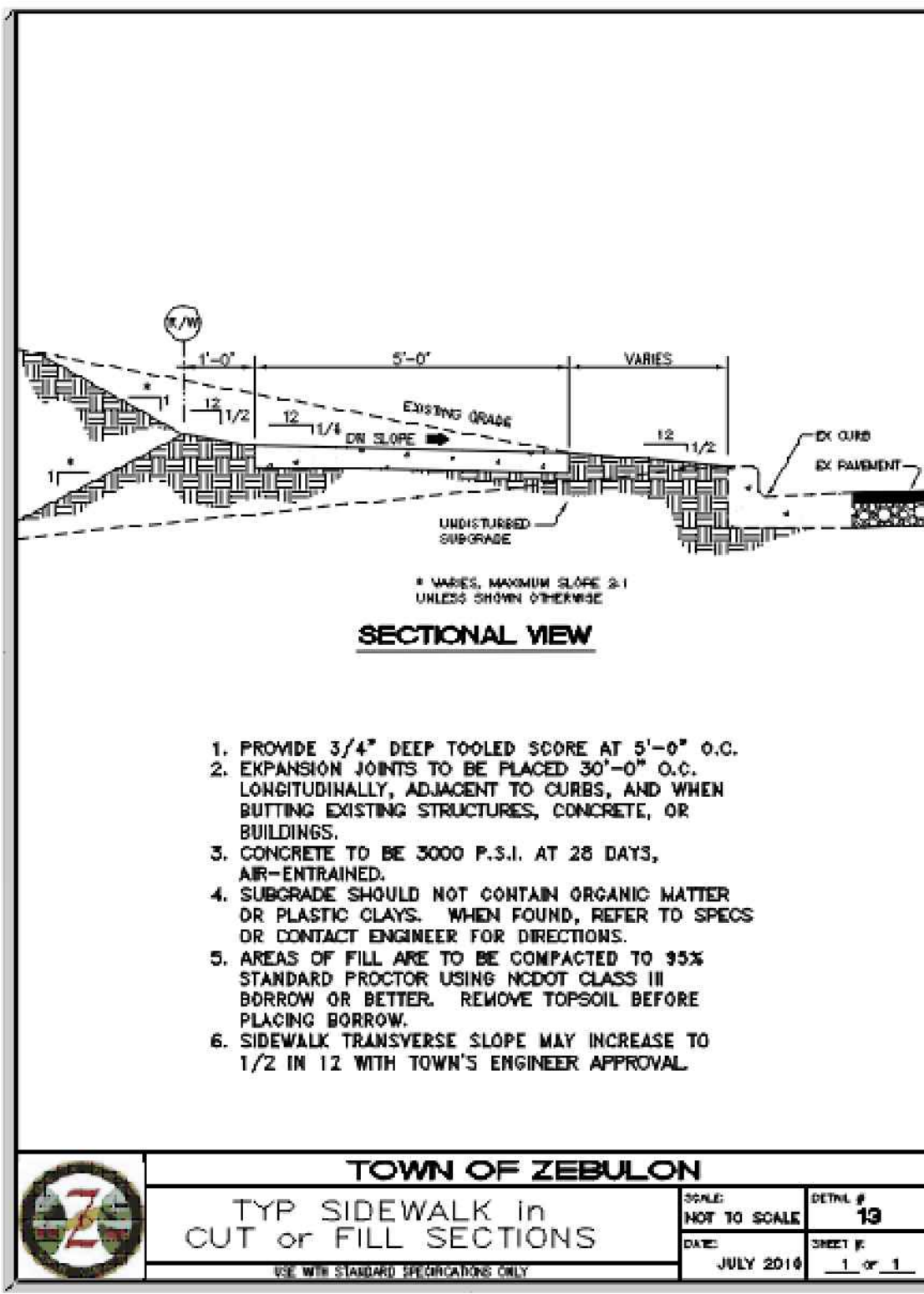


DATE	DESCRIPTION
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

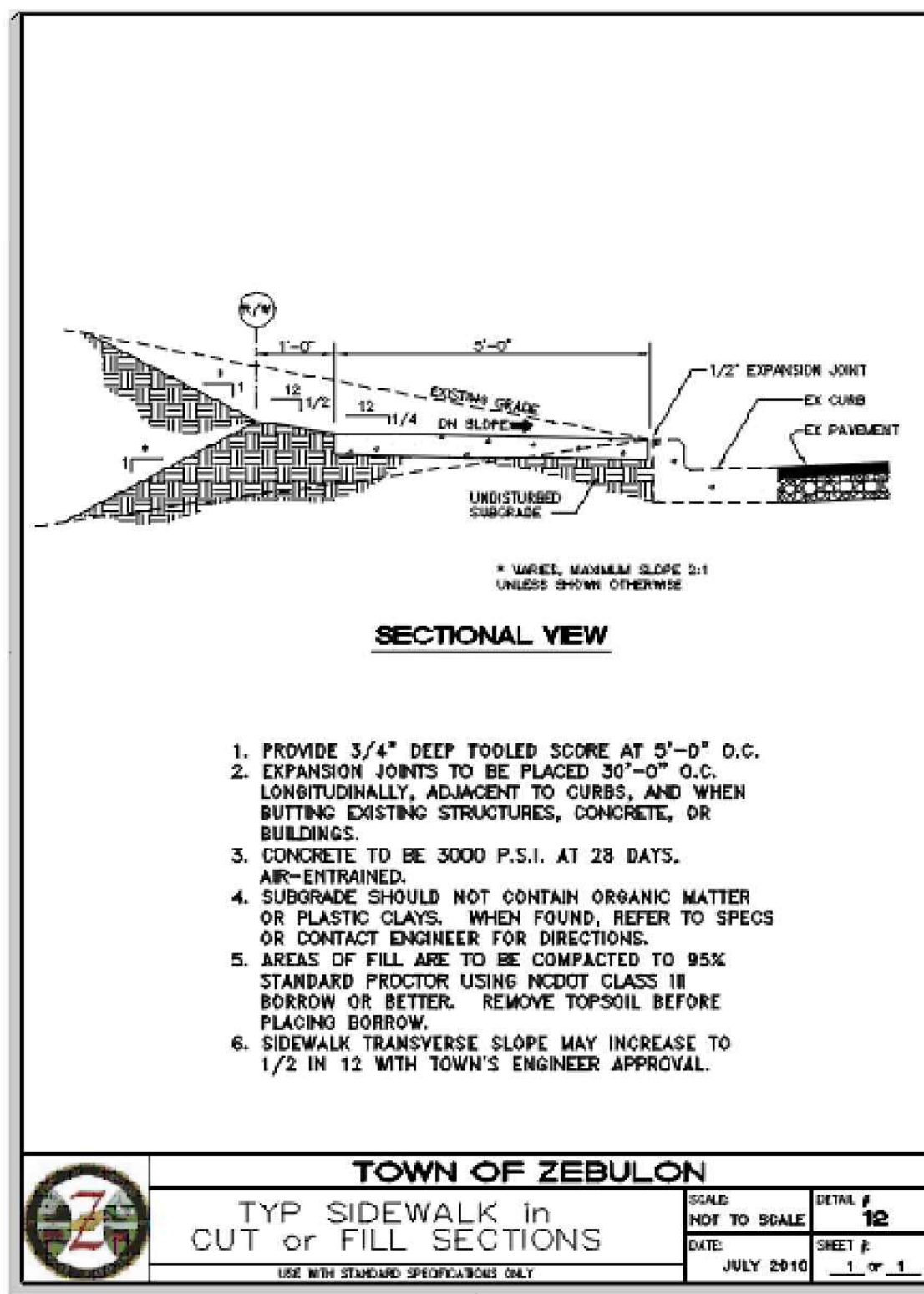
DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN
SCALE	XXX CHKD
JOB No.	220094-01-002
DATE	220097-01-002
FILE No.	June 20, 2022
	220094-01-002
	220097-01-002



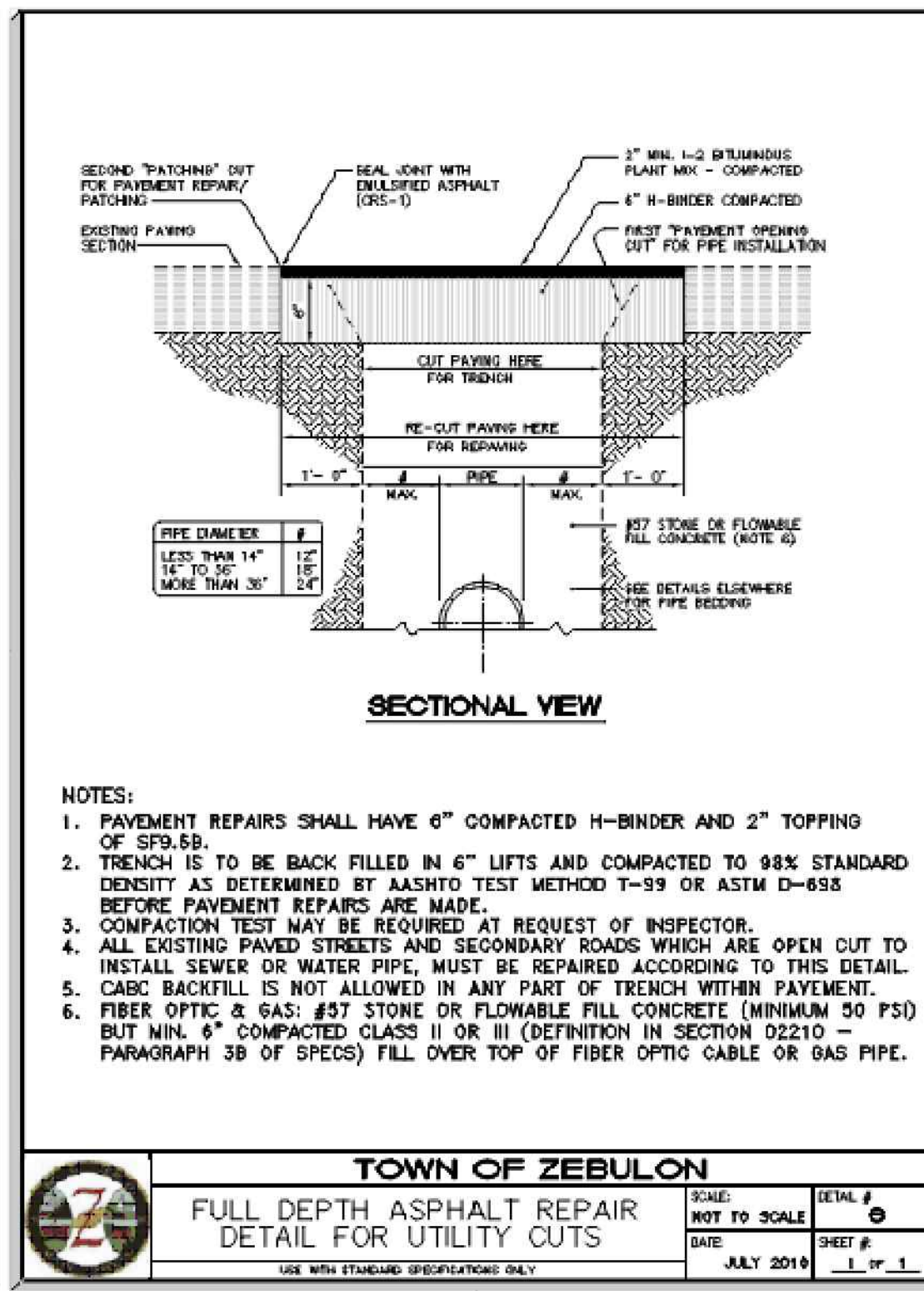
TOWN OF ZEBULON
SIDEWALK DETAIL X-ING EX. DRIVEWAYS
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 14 OF 1



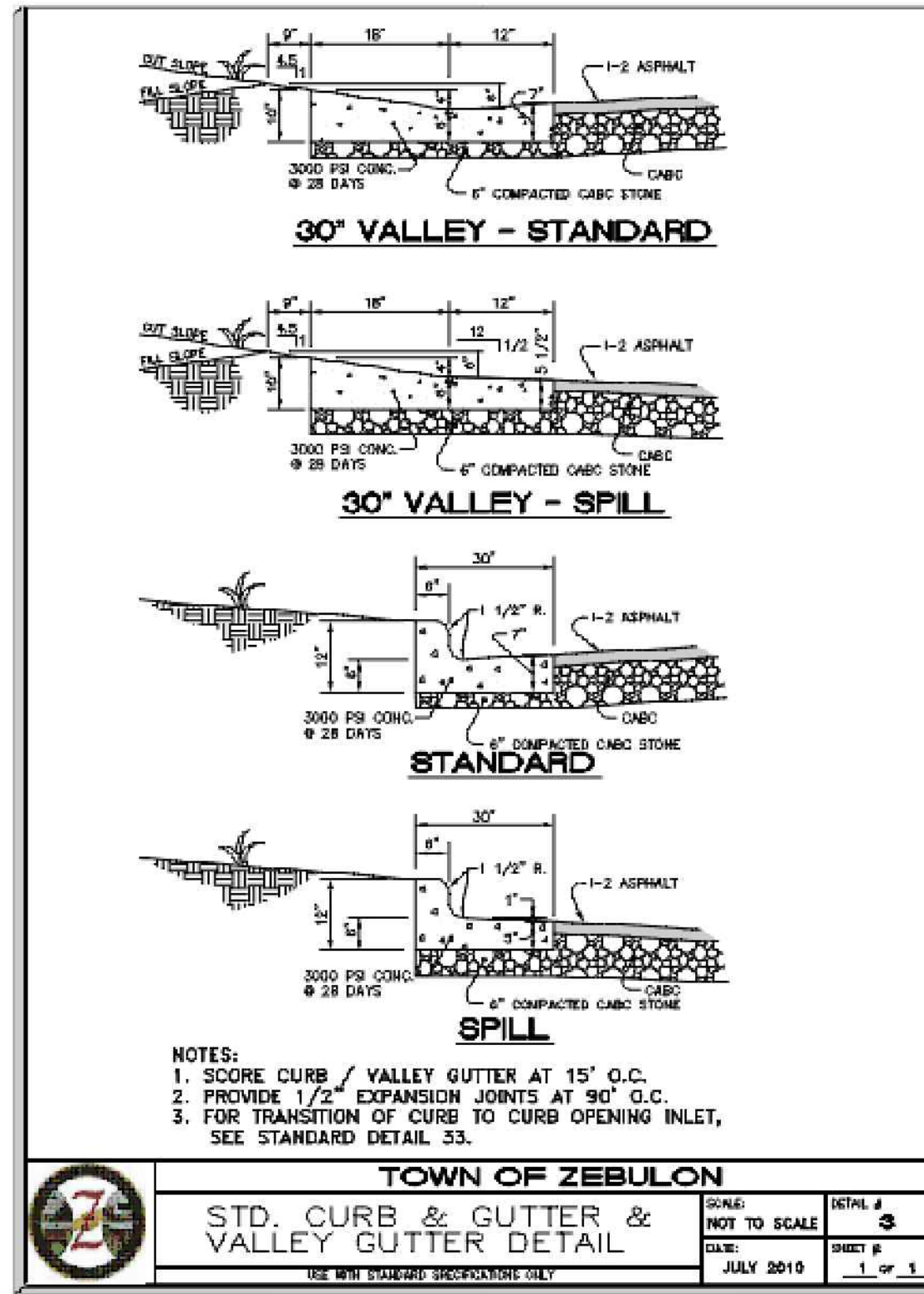
TOWN OF ZEBULON
TYP SIDEWALK in CUT or FILL SECTIONS
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 13 OF 1



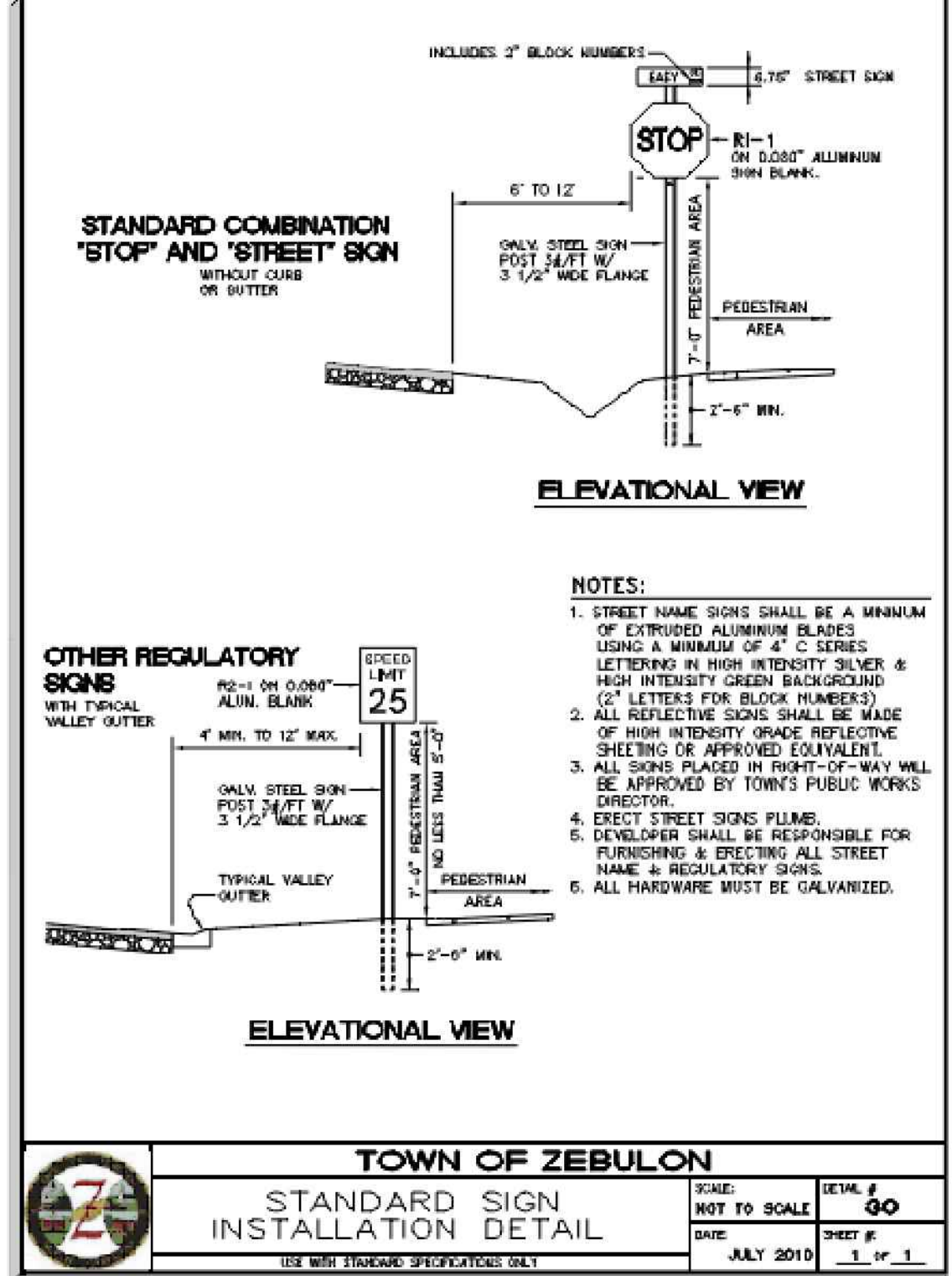
TOWN OF ZEBULON
TYP SIDEWALK in CUT or FILL SECTIONS
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 12 OF 1



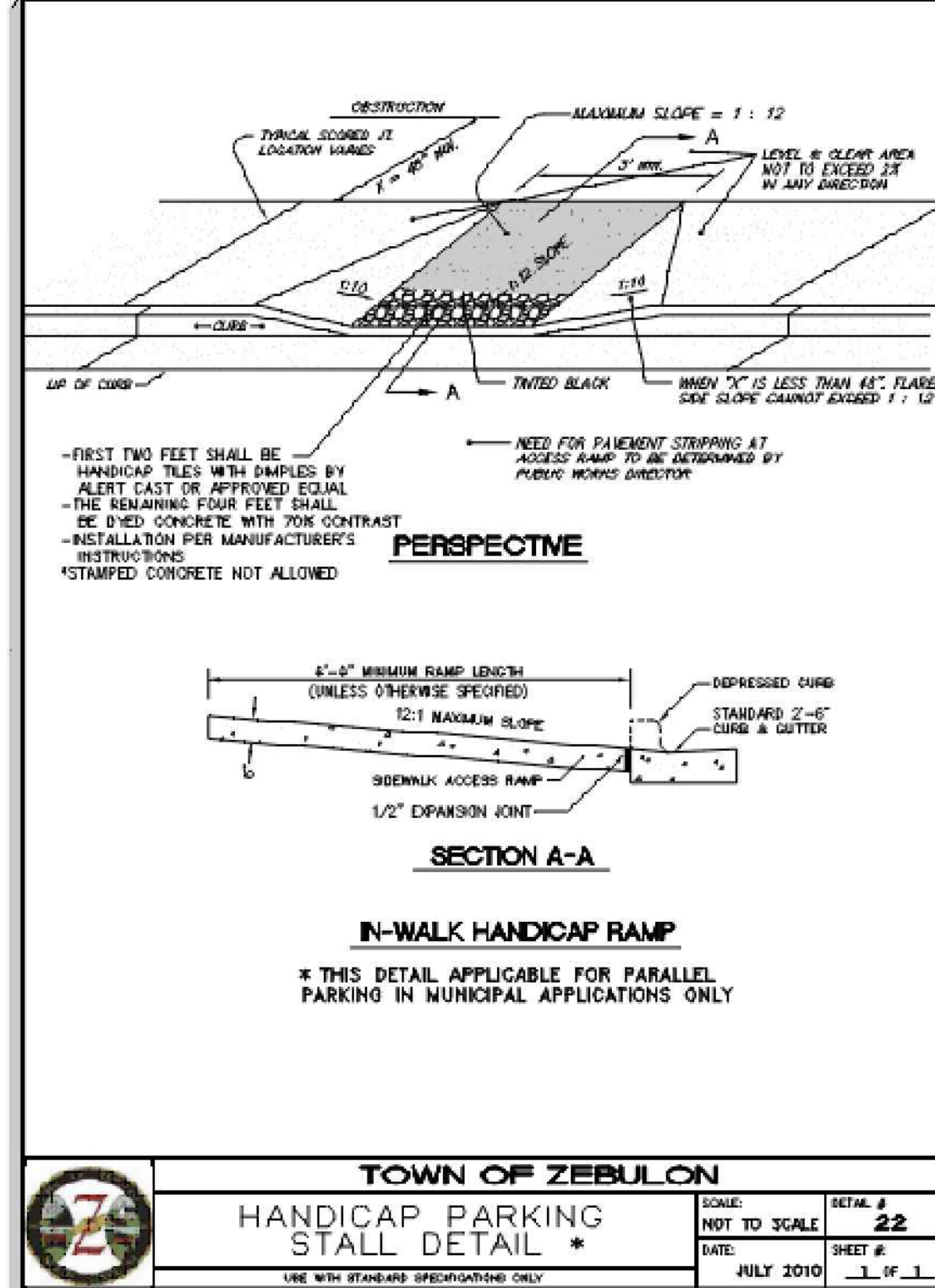
TOWN OF ZEBULON
FULL DEPTH ASPHALT REPAIR DETAIL FOR UTILITY CUTS
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 9 OF 1



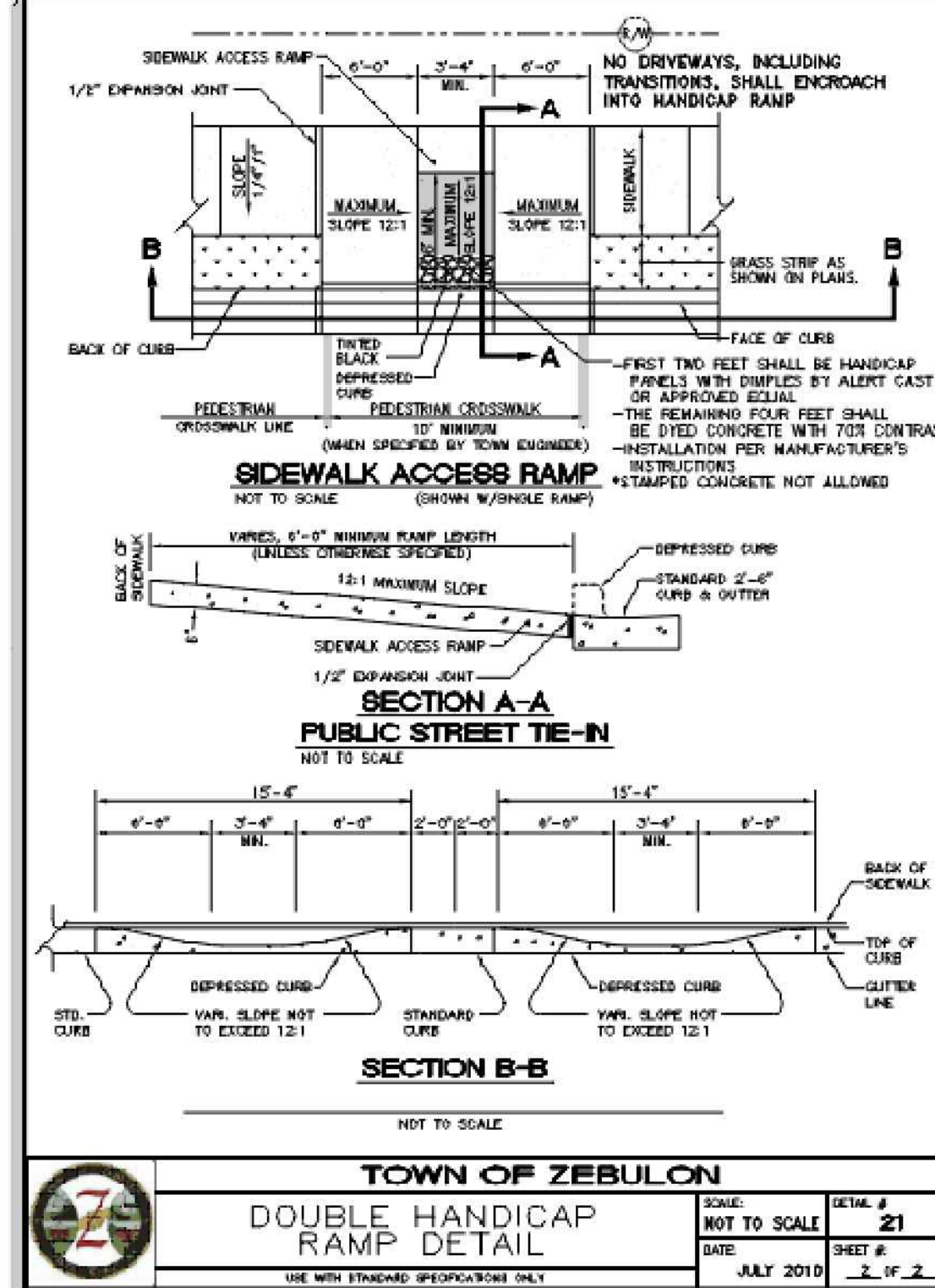
TOWN OF ZEBULON
STD. CURB & GUTTER & VALLEY GUTTER DETAIL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 3 OF 1



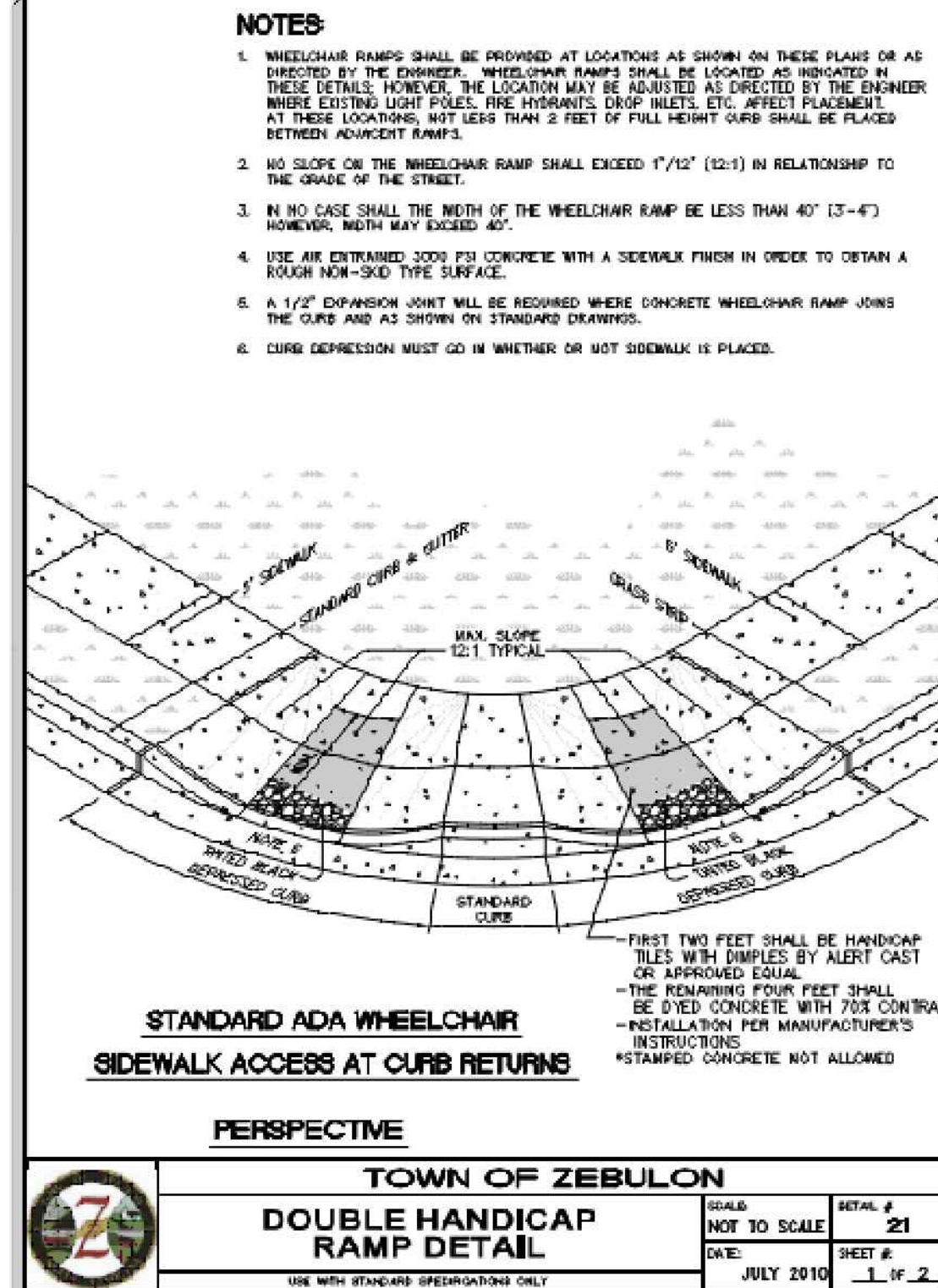
TOWN OF ZEBULON
STANDARD SIGN INSTALLATION DETAIL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 60 OF 1



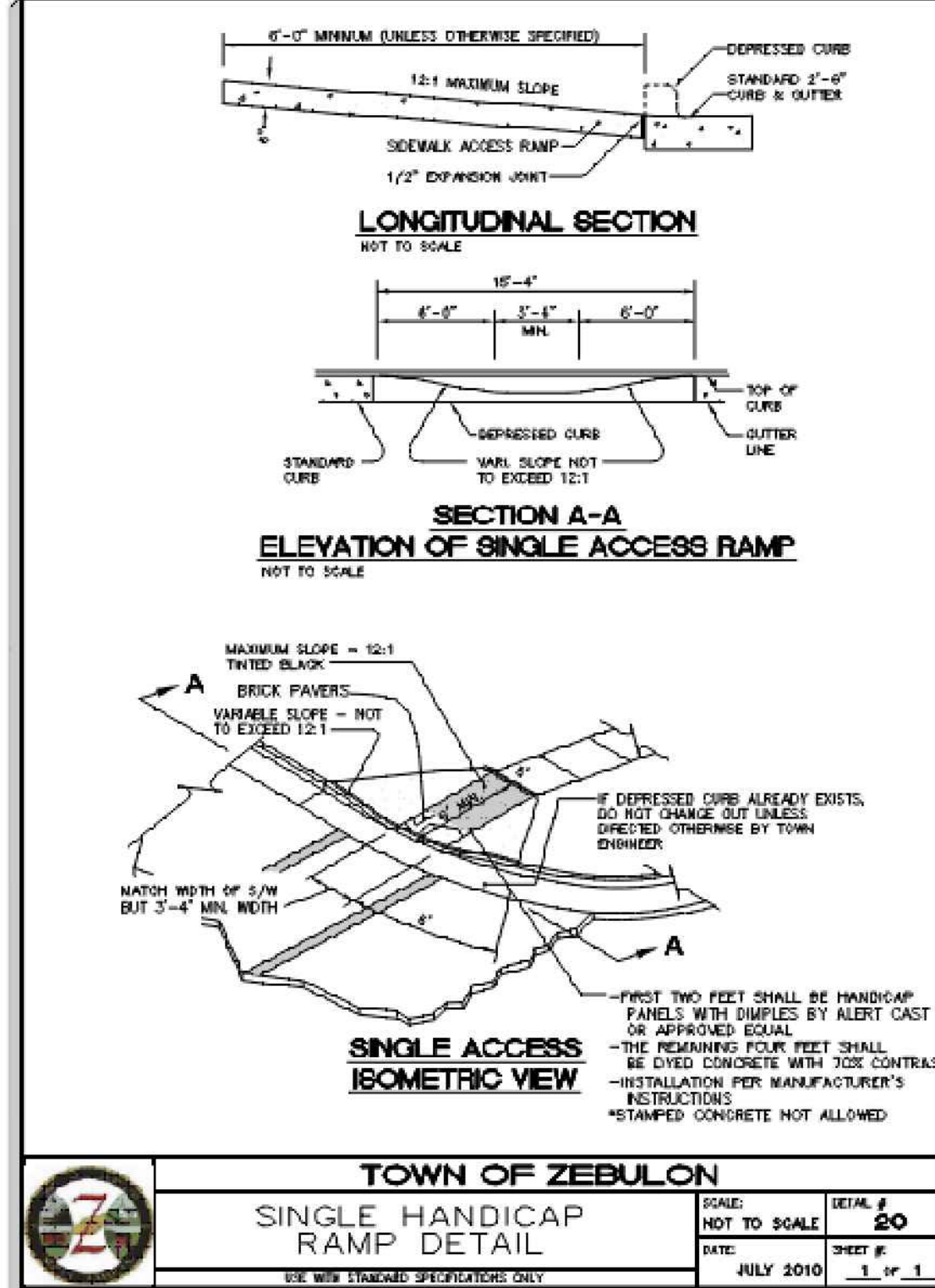
TOWN OF ZEBULON
HANDICAP PARKING STALL DETAIL *
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 22 OF 1



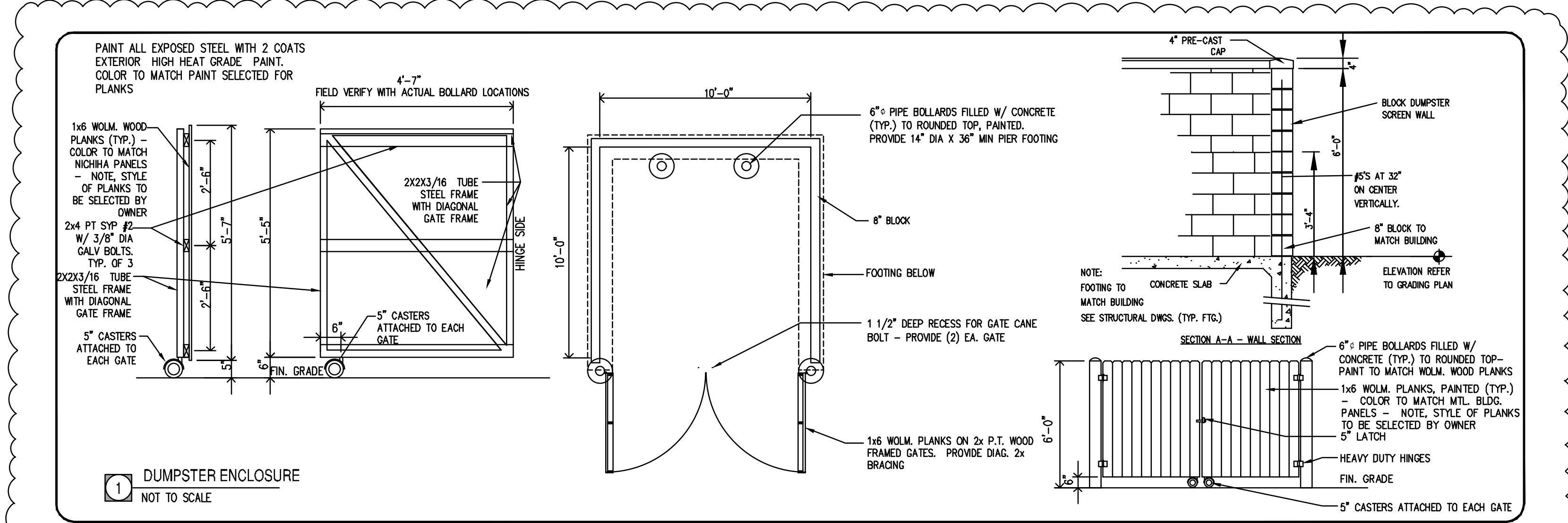
TOWN OF ZEBULON
DOUBLE HANDICAP RAMP DETAIL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 21 OF 2



TOWN OF ZEBULON
DOUBLE HANDICAP RAMP DETAIL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 21 OF 2



TOWN OF ZEBULON
SINGLE HANDICAP RAMP DETAIL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 20 OF 1

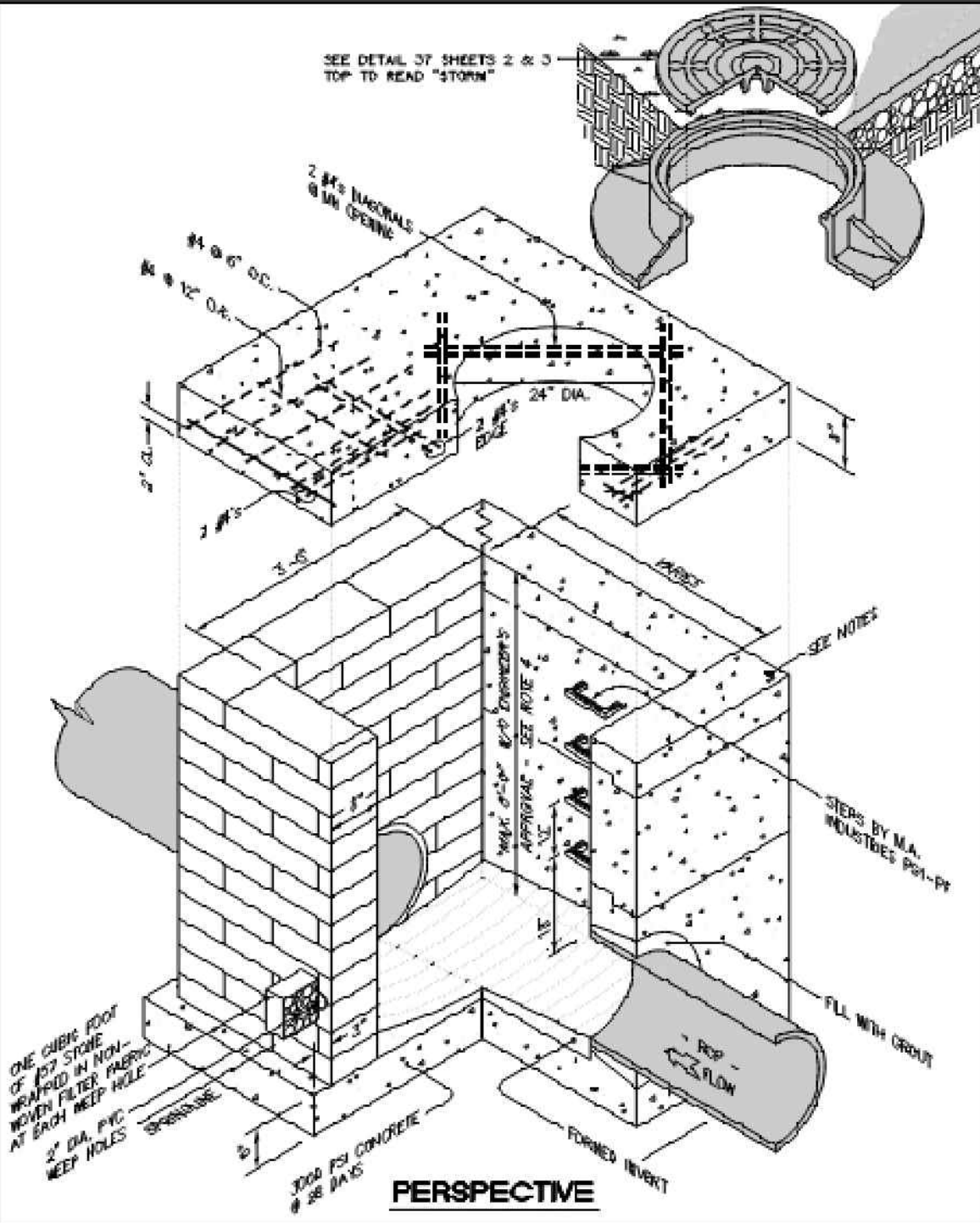


DUMPSTER ENCLOSURE
NOT TO SCALE

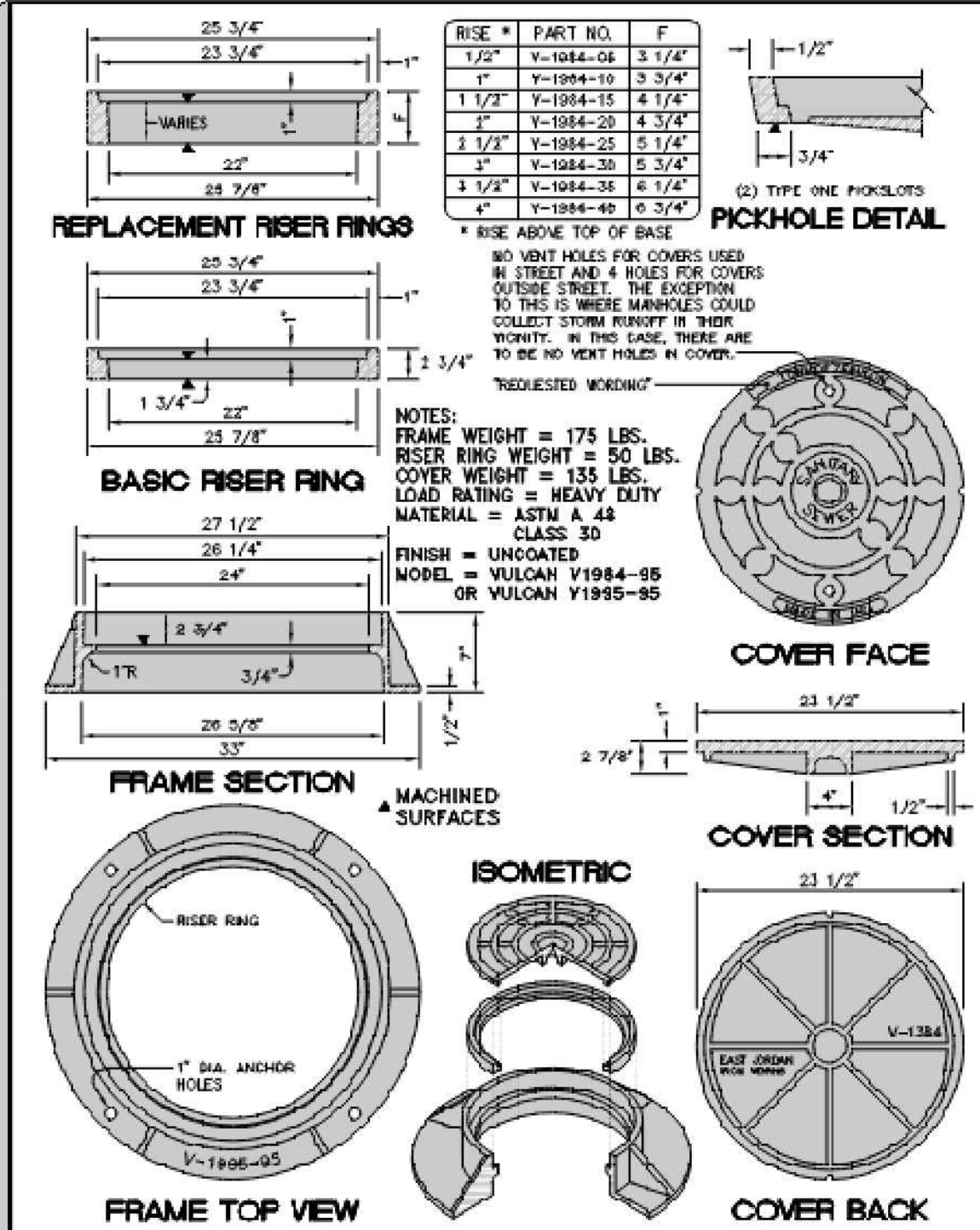
Installation Type	Bedding Thickness	Haunch Outer Bedding	Lower Side
Type 1	3/4" minimum, not less than 36 mm (1 1/2"). If rock foundation, use 3/4" minimum, not less than 150 mm (6").	90# Category I or 90# Category II	90# Category I, 90# Category II, or 100# Category III
Type 2	3/4" minimum, not less than 36 mm (1 1/2"). If rock foundation, use 3/4" minimum, not less than 150 mm (6").	90# Category I or 90# Category II	90# Category I, 90# Category II, or 25# Category II
Type 3	3/4" minimum, not less than 36 mm (1 1/2"). If rock foundation, use 3/4" minimum, not less than 150 mm (6").	90# Category I, or 90# Category II	90# Category I, 90# Category II, or 25# Category II
Type 4	3/4" minimum, not less than 36 mm (1 1/2"). If rock foundation, use 3/4" minimum, not less than 150 mm (6").	No compaction required, except if Category II.	No compaction required, except if Category II.

- Notes:**
- Compaction and soils symbols - i.e. "90# Category I" refers to Category I soil materials with minimum standard Proctor compaction of 90%. See Table 1 for equivalent modified Proctor values.
 - The trench top elevation shall be no lower than 0.1 H below finished grade or, for roadways, its top shall be no lower than an elevation of 0.3 m (1') below the bottom of the pavement base material.
 - Soil in bedding and haunch zones shall be compacted to at least the same compaction as specified for the majority of soil in the backfill zone.
 - The trench width shall be wider than shown if required for adequate space to attain the specified compaction in the haunch and bedding zone.
 - For trench walls that are within 10 degrees of vertical, the compaction or firmness of the soil in the trench walls and lower side zone need not be considered.
 - For trench walls with greater than 10 degree slope that consist of embankment, the lower side shall be compacted to at least the same compaction as specified for the soil in the backfill zone.
 - Type 1 installation = relatively high quality material & high compaction effort. Type 4 installation = little or no control over material and compaction.

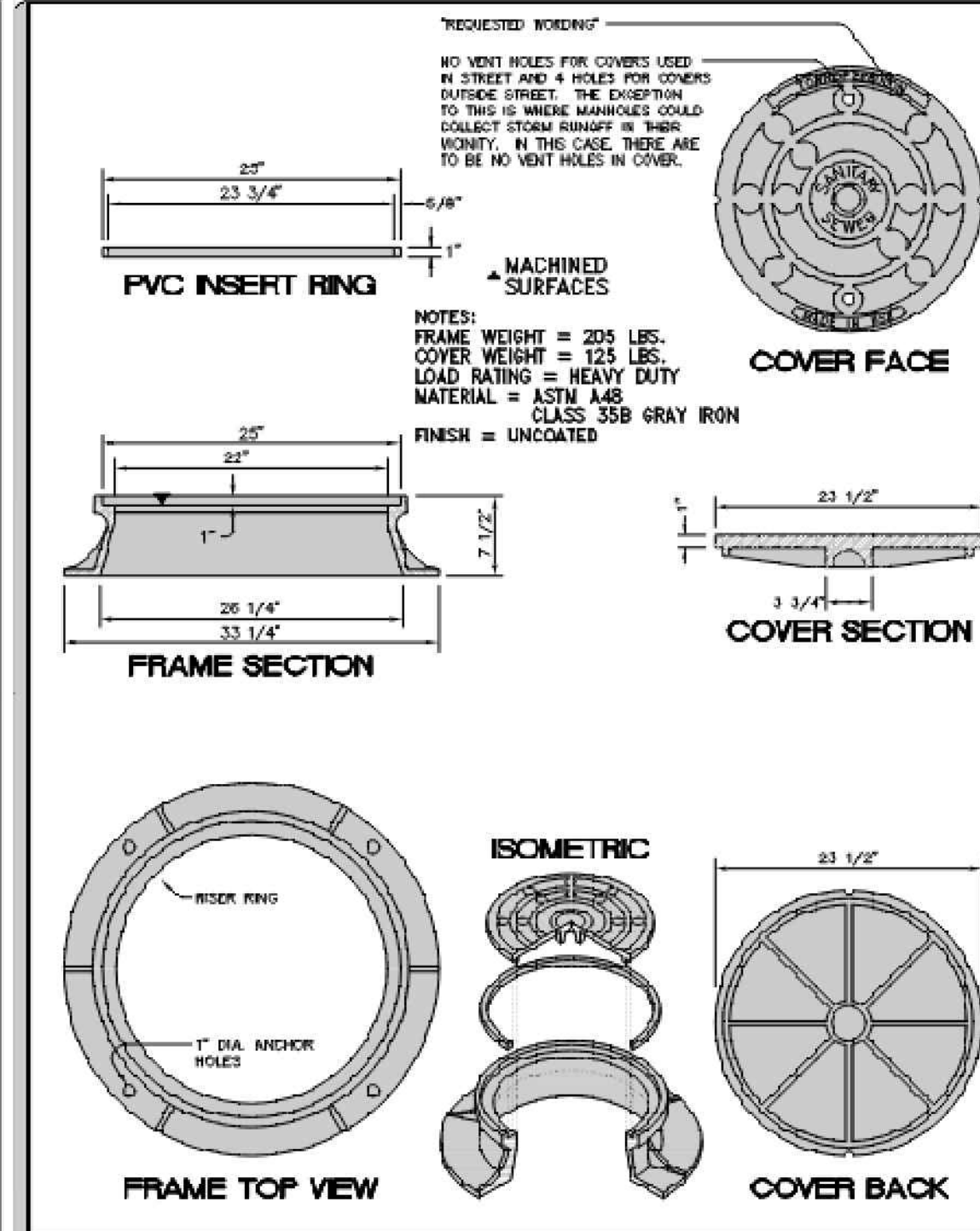
TOWN OF ZEBULON
STD. TRENCH INSTALLATION (TRENCH CONDITION SHOWN)
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 36 OF 3



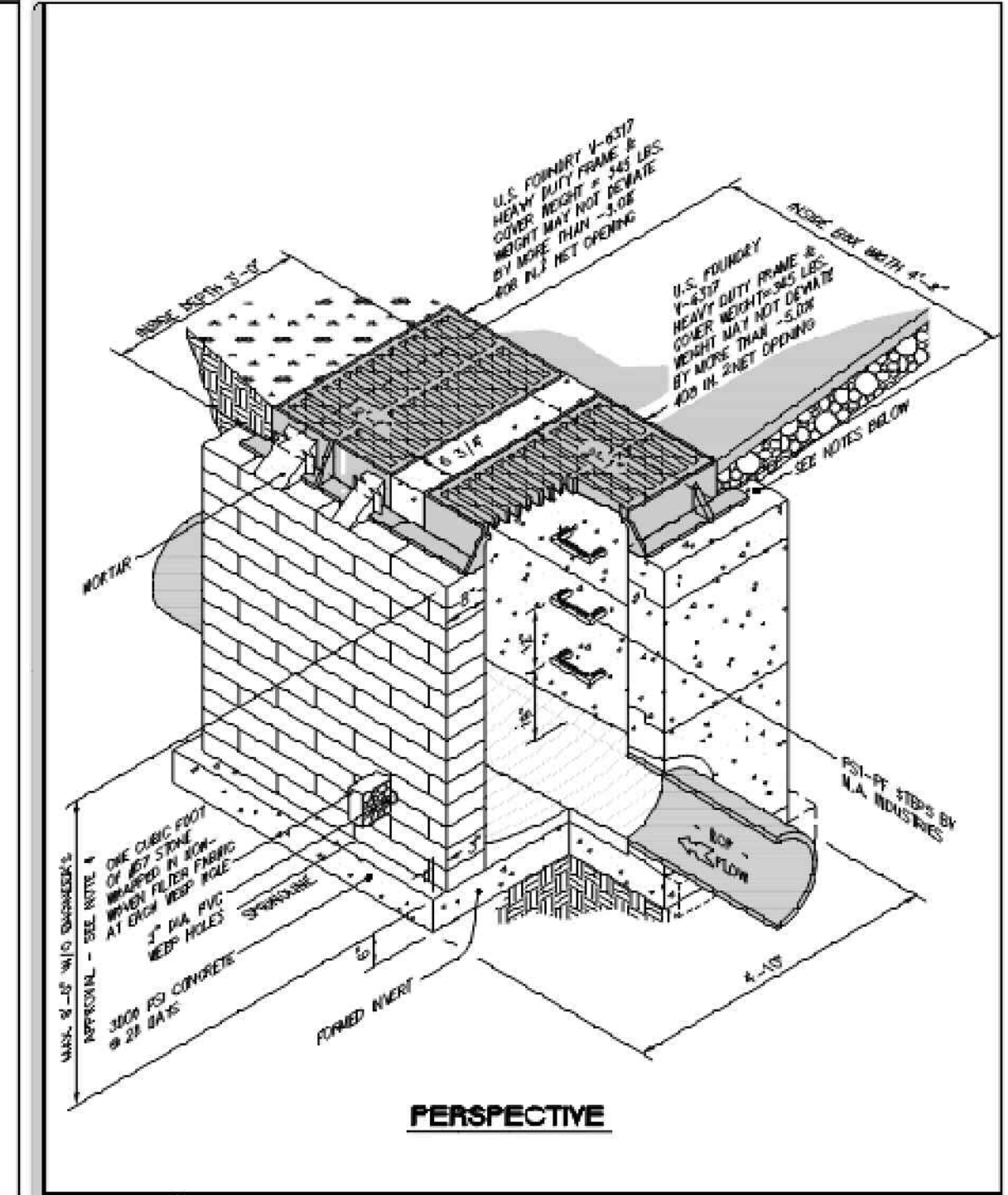
TOWN OF ZEBULON
STD. M.H. J.B. VARIABLE LENGTH
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 37 OF 3



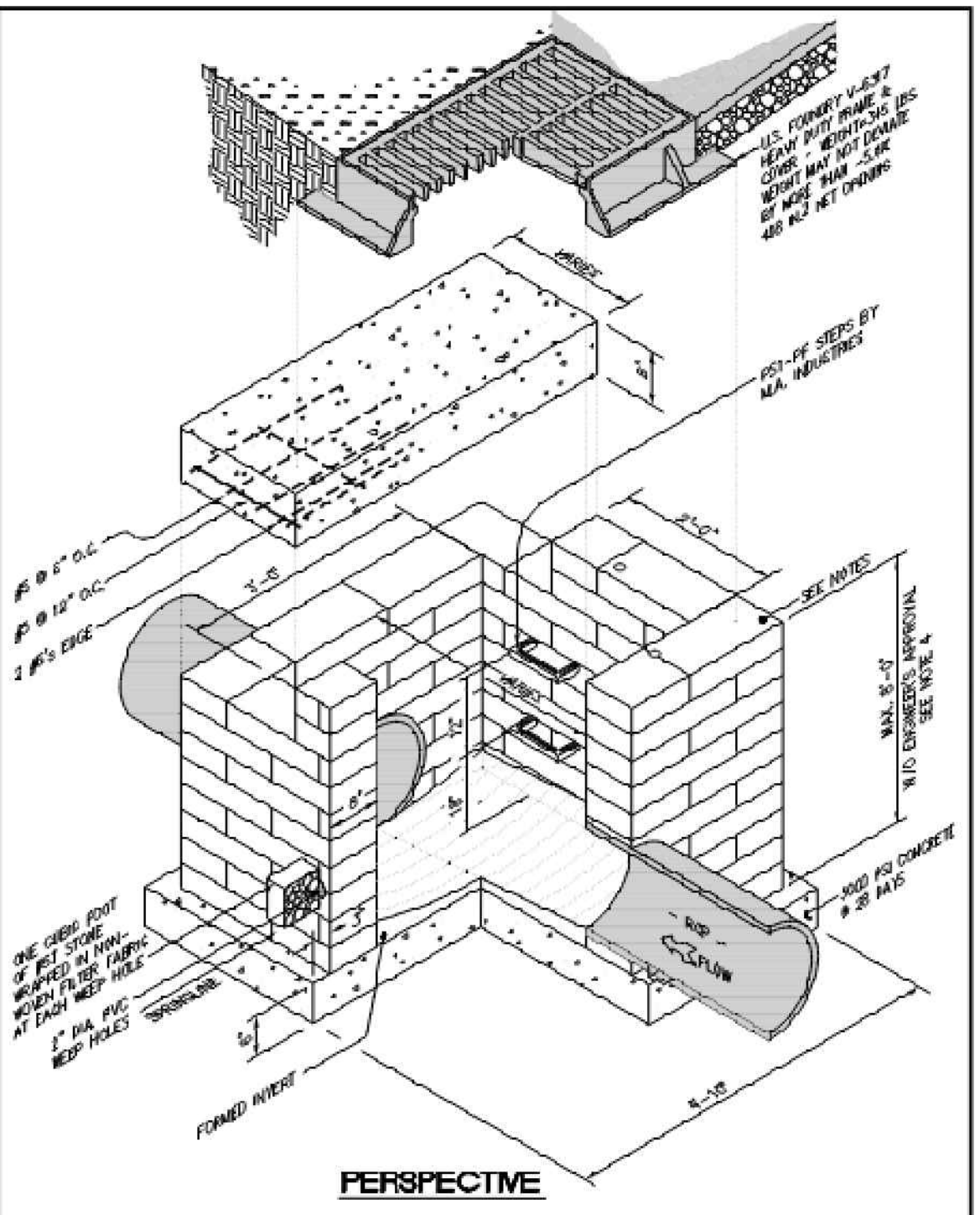
TOWN OF ZEBULON
STANDARD MANHOLE COVER & RING ADJUSTABLE - EAST JORDAN IRON WORKS Y-1984
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 37 OF 3



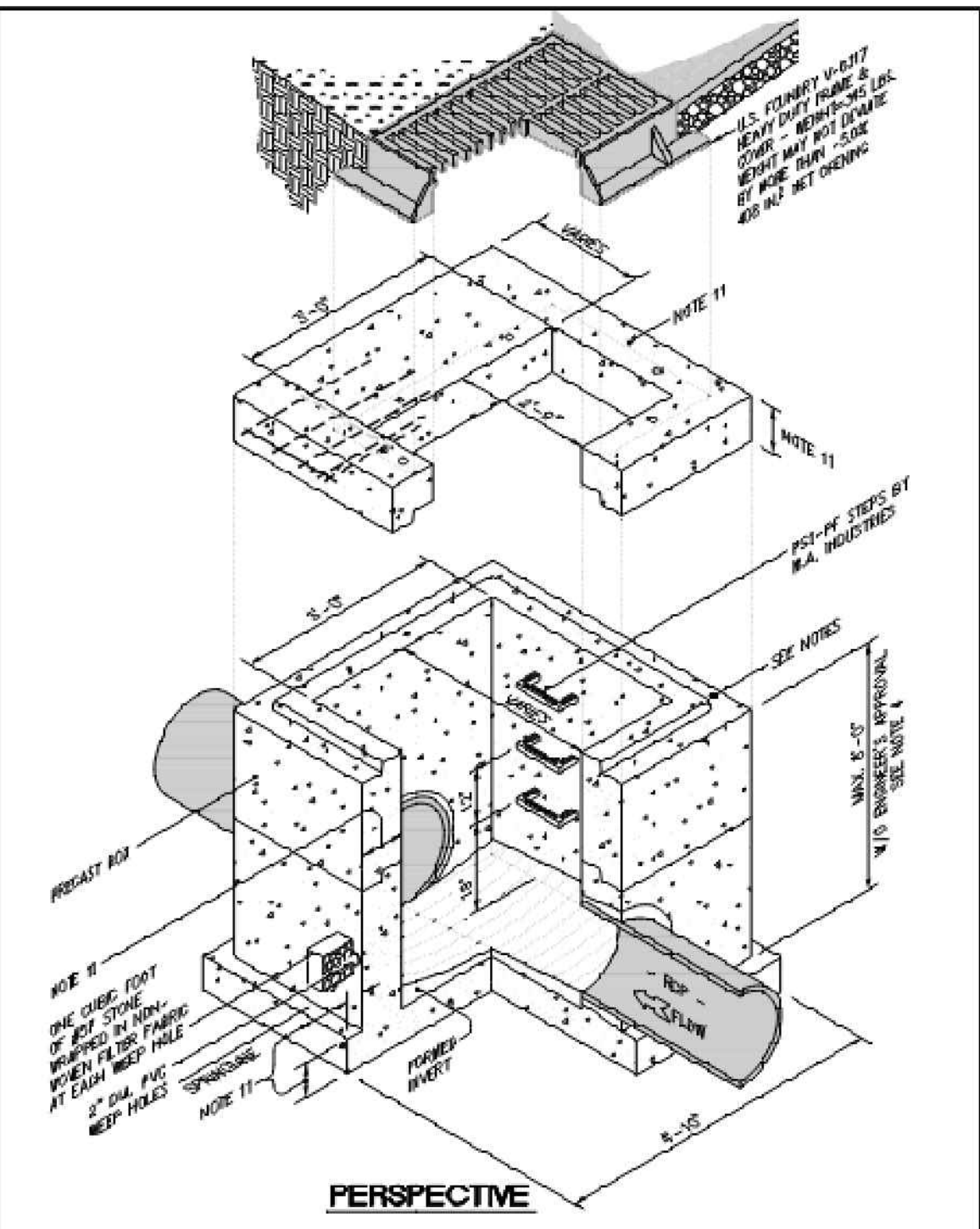
TOWN OF ZEBULON
STANDARD MANHOLE & RING US FOUNDRY 700 KL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 37 OF 3



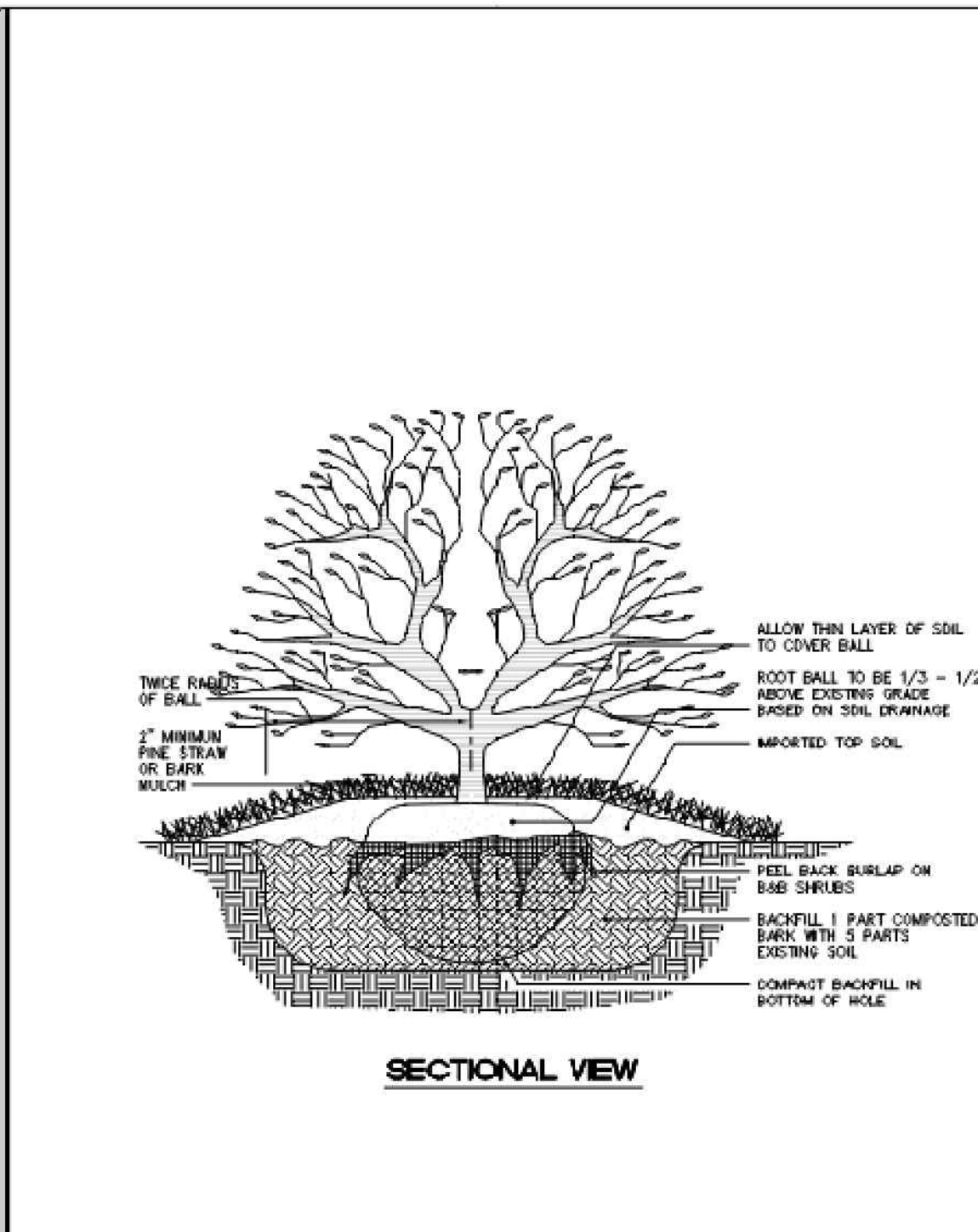
TOWN OF ZEBULON
STD. MULTIPLE 2' x 3' CATCH BASIN DETAIL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 38 OF 1



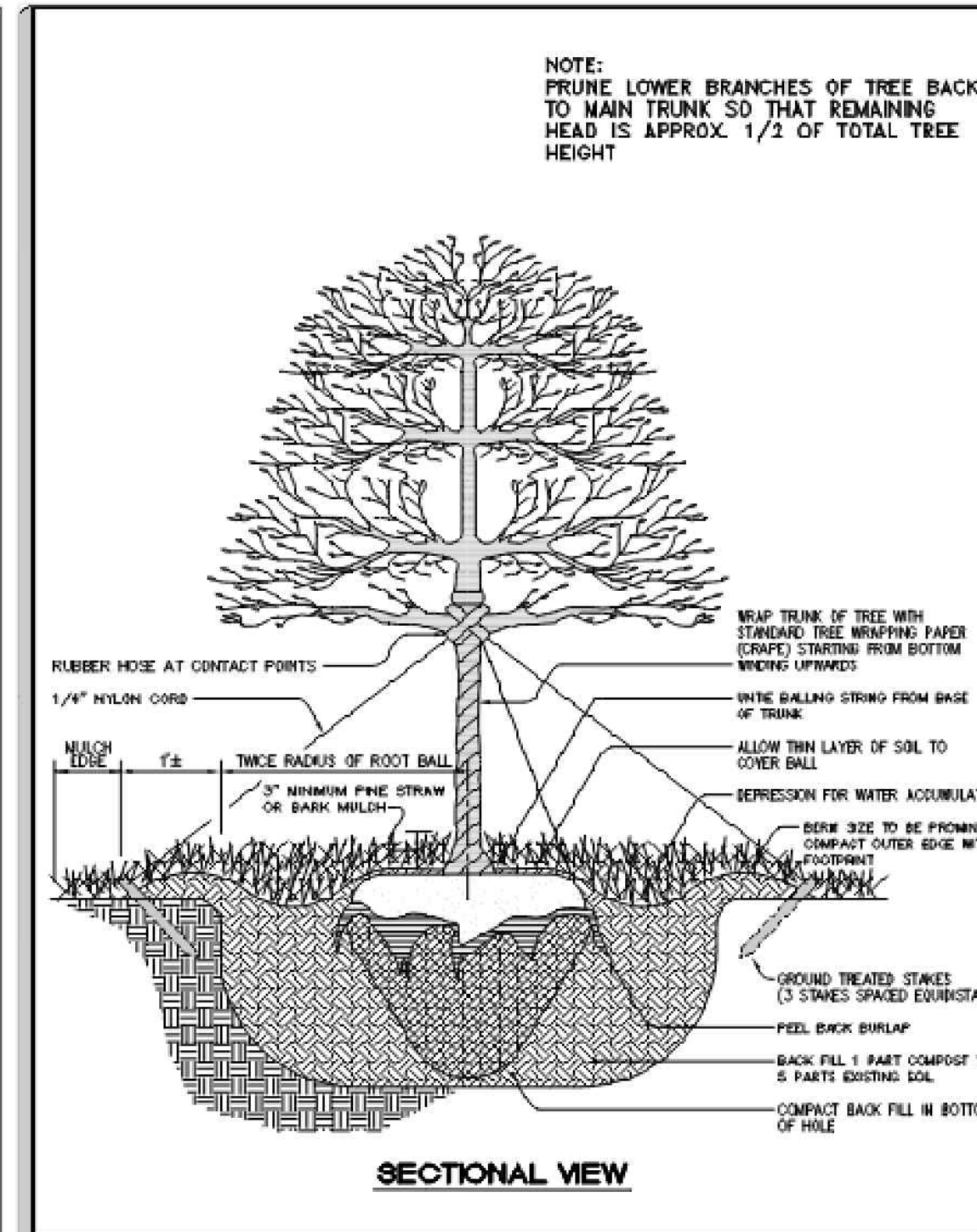
TOWN OF ZEBULON
STD. 3' x VARIABLE LENGTH BOX WITH 2' x 3' C.B.
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 39 OF 3



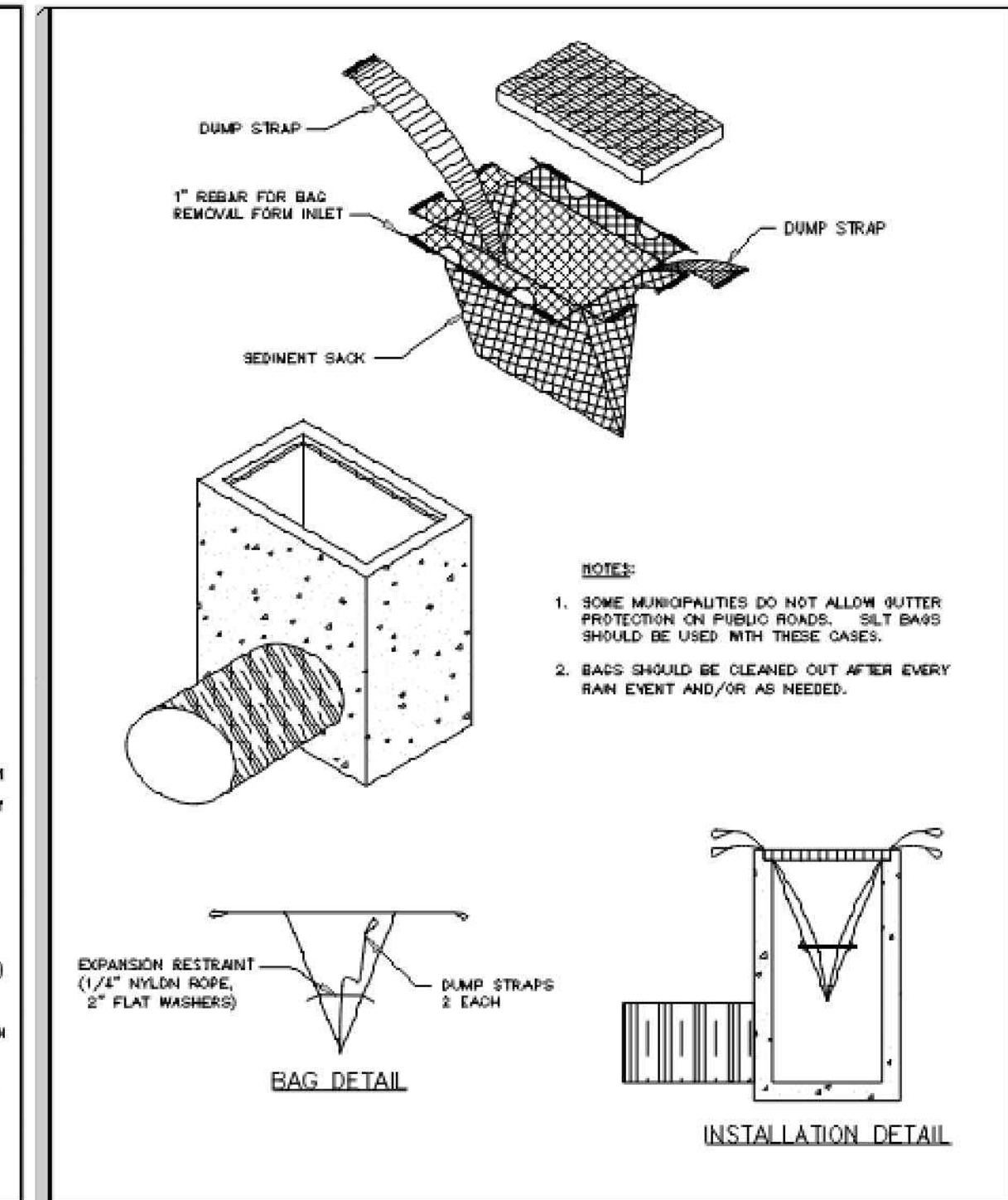
TOWN OF ZEBULON
STD. 3' x VARIABLE LENGTH PRECAST BOX WITH 2' x 3' C.B.
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 39 OF 3



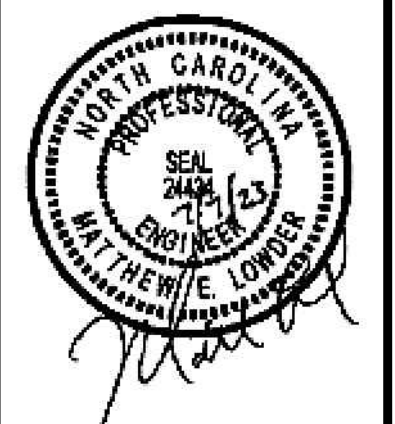
TOWN OF ZEBULON
TYPICAL SHRUB PLANTING DETAIL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 43 OF 1



TOWN OF ZEBULON
TYPICAL TREE STAKING and PLANTING DETAIL
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 44 OF 1

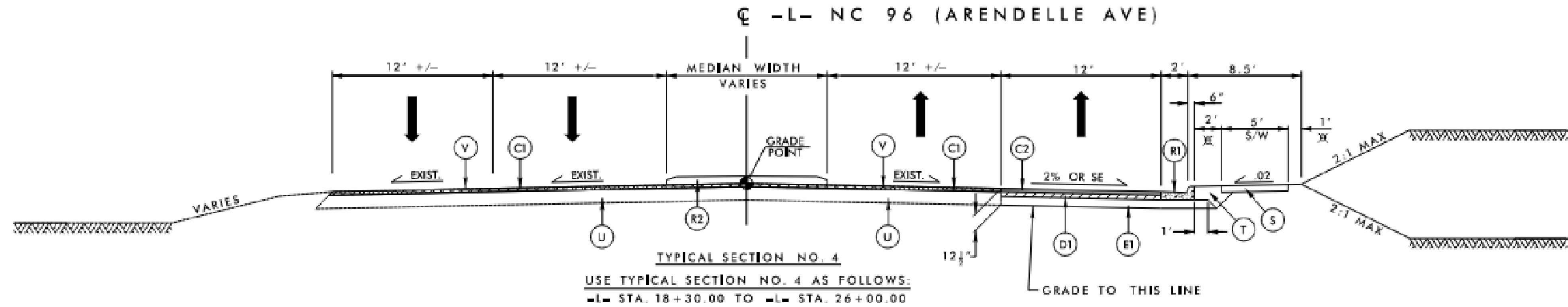


TOWN OF ZEBULON
CATCH BASIN - SEDIMENT CONTROL DEVICES
SCALE: NOT TO SCALE
DATE: JULY 2010
SHEET # 50 OF 1



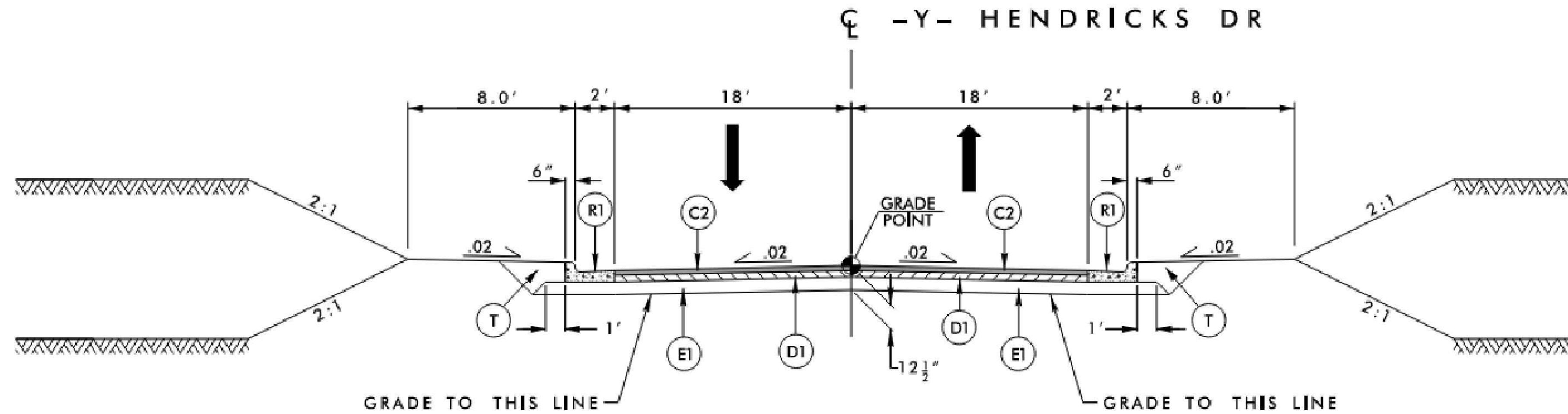
DATE	DESCRIPTION
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL	MEL XXX
DESIGN	DRAWN CHKD
SCALE	H: V:
JOB No.	220094-01-002 220097-01-002
DATE	June 20, 2022
FILE No.	220094-01-002 220097-01-002

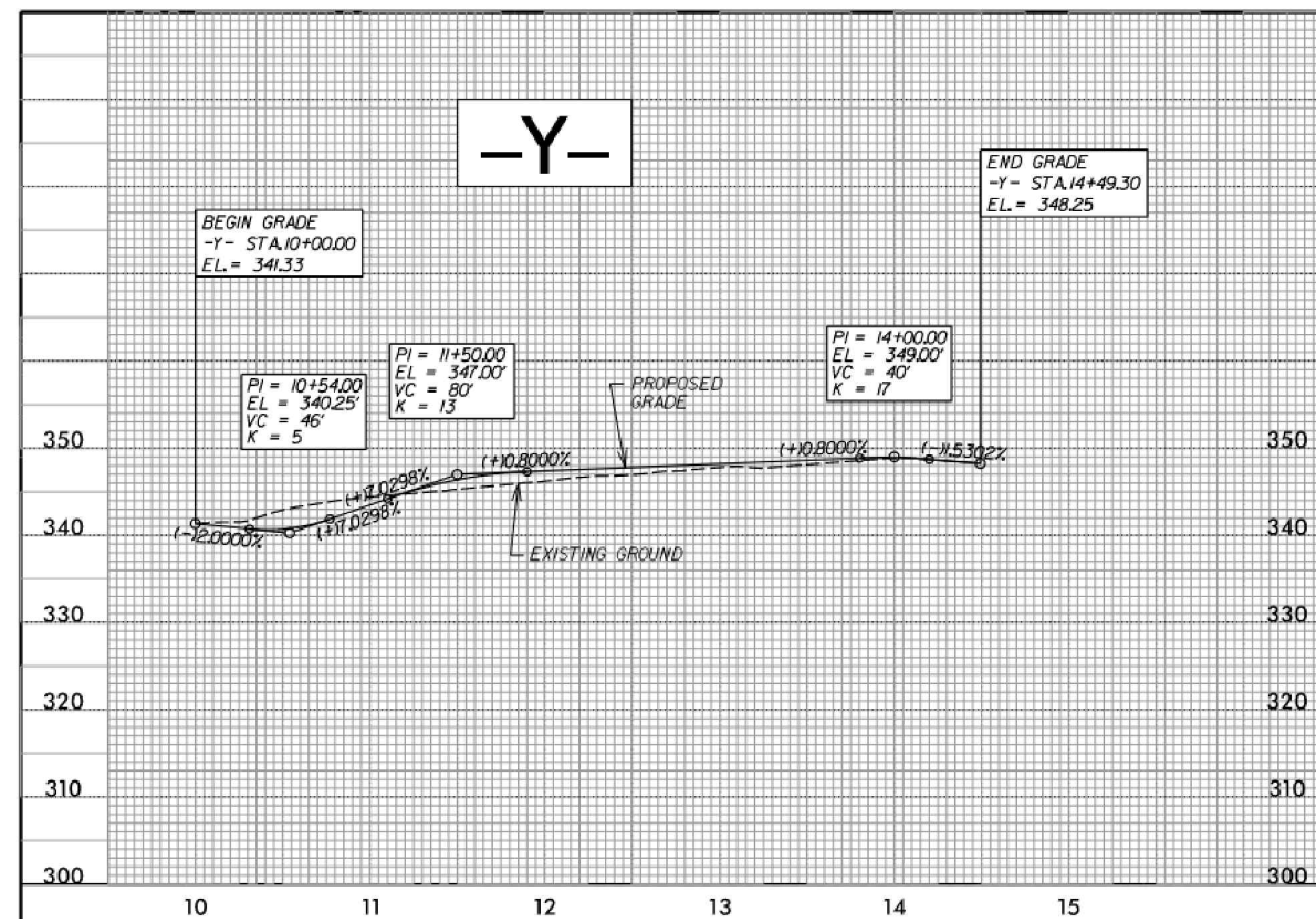


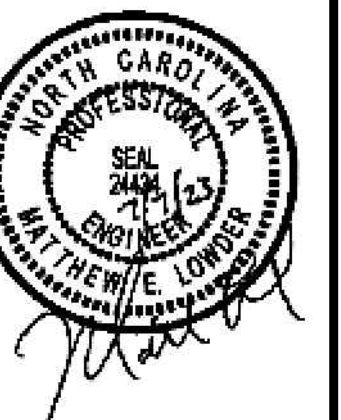
PAVEMENT SCHEDULE	
C1	1.5" S9.5C
C2	3" S9.5C
D1	4" I19.0C
D2	VAR I19.0C
E1	4" B25.0C
R1	2'-6" CURB & GUTTER
R2	CONCRETE MOUNTABLE MEDIAN
R3	2'-0" VALLEY GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILL OF ASPHALT PAVEMENT AT 1.5" DEPTH. (REPLACE WITH 1.5" OF S9.5C)
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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



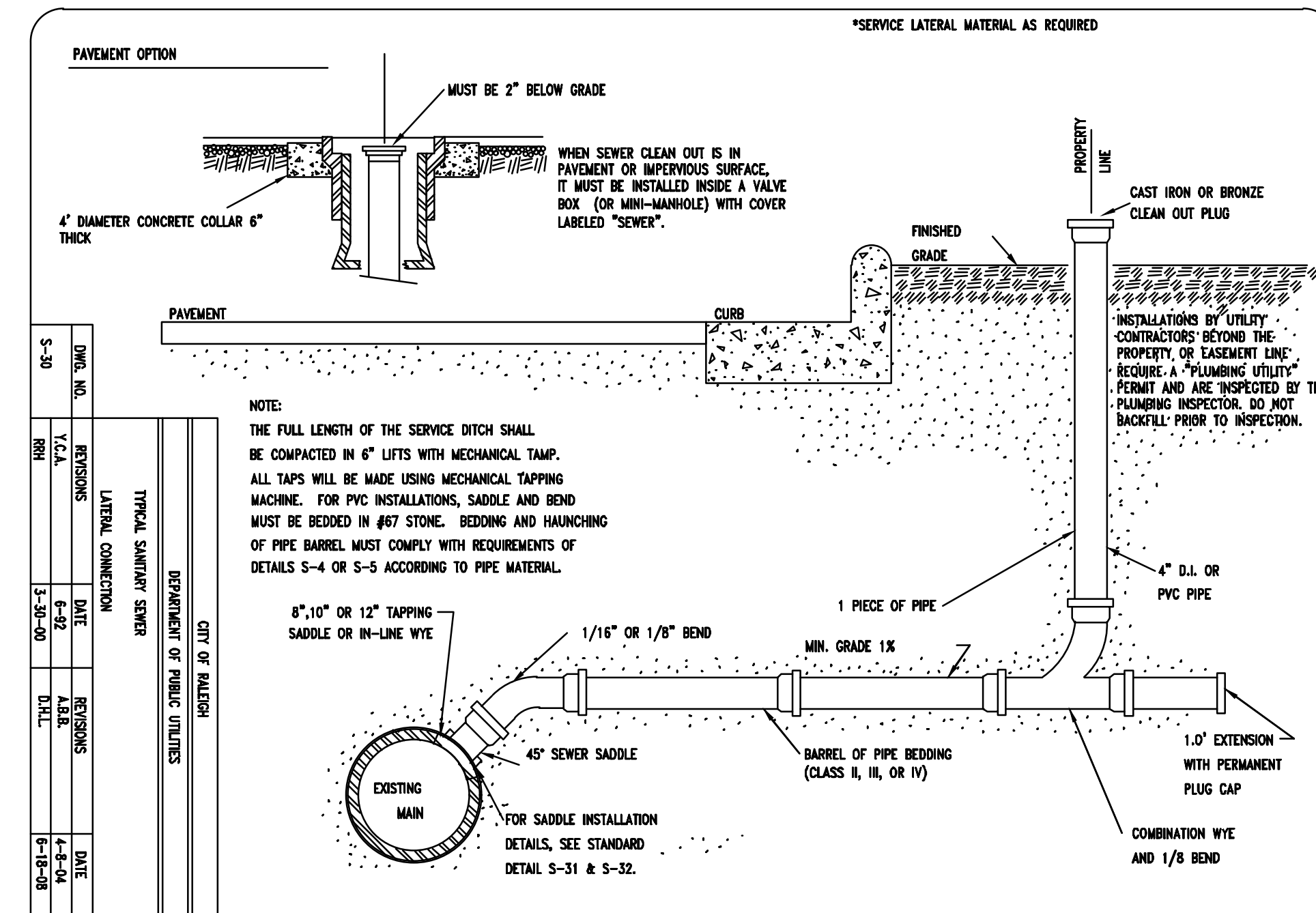
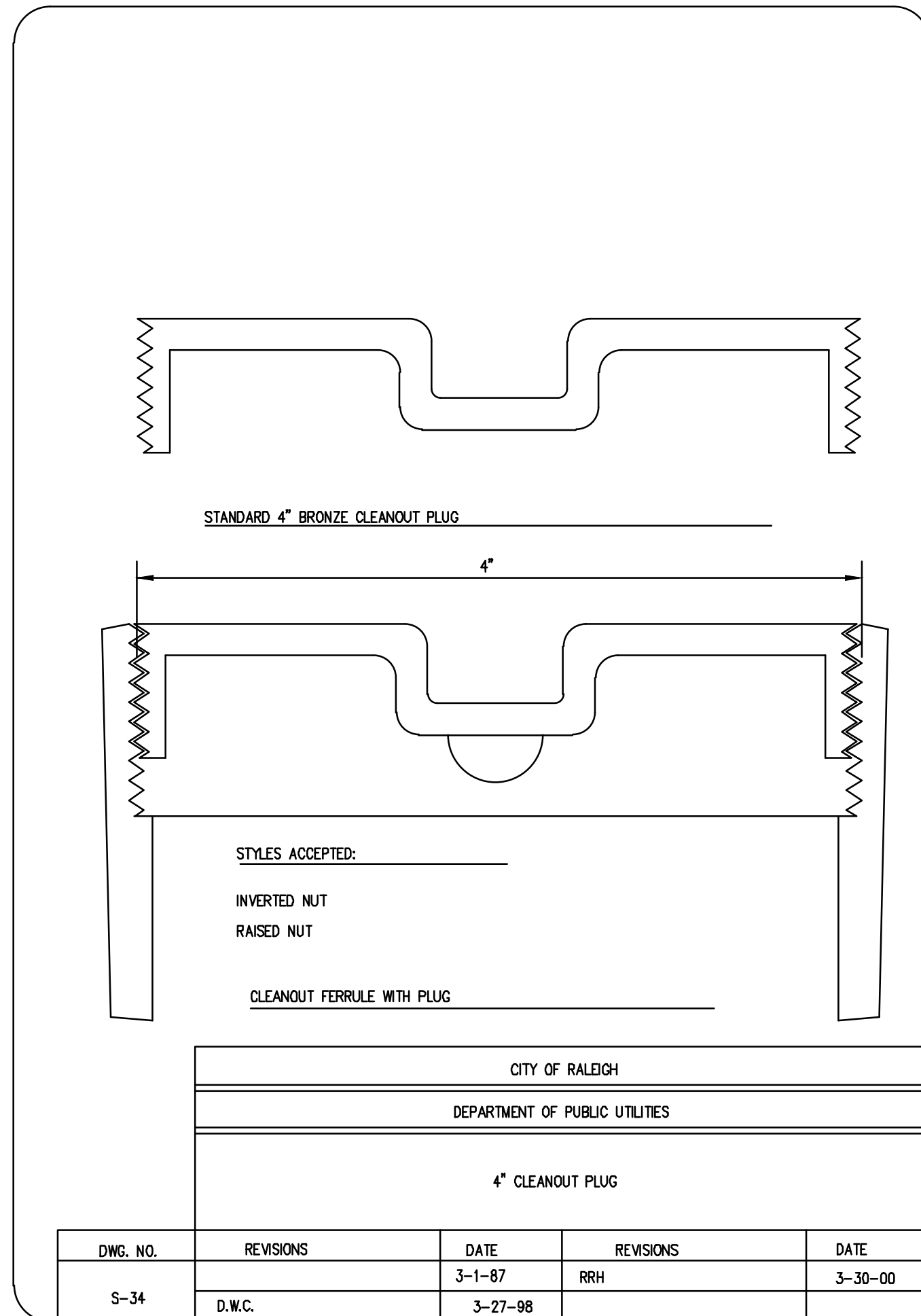
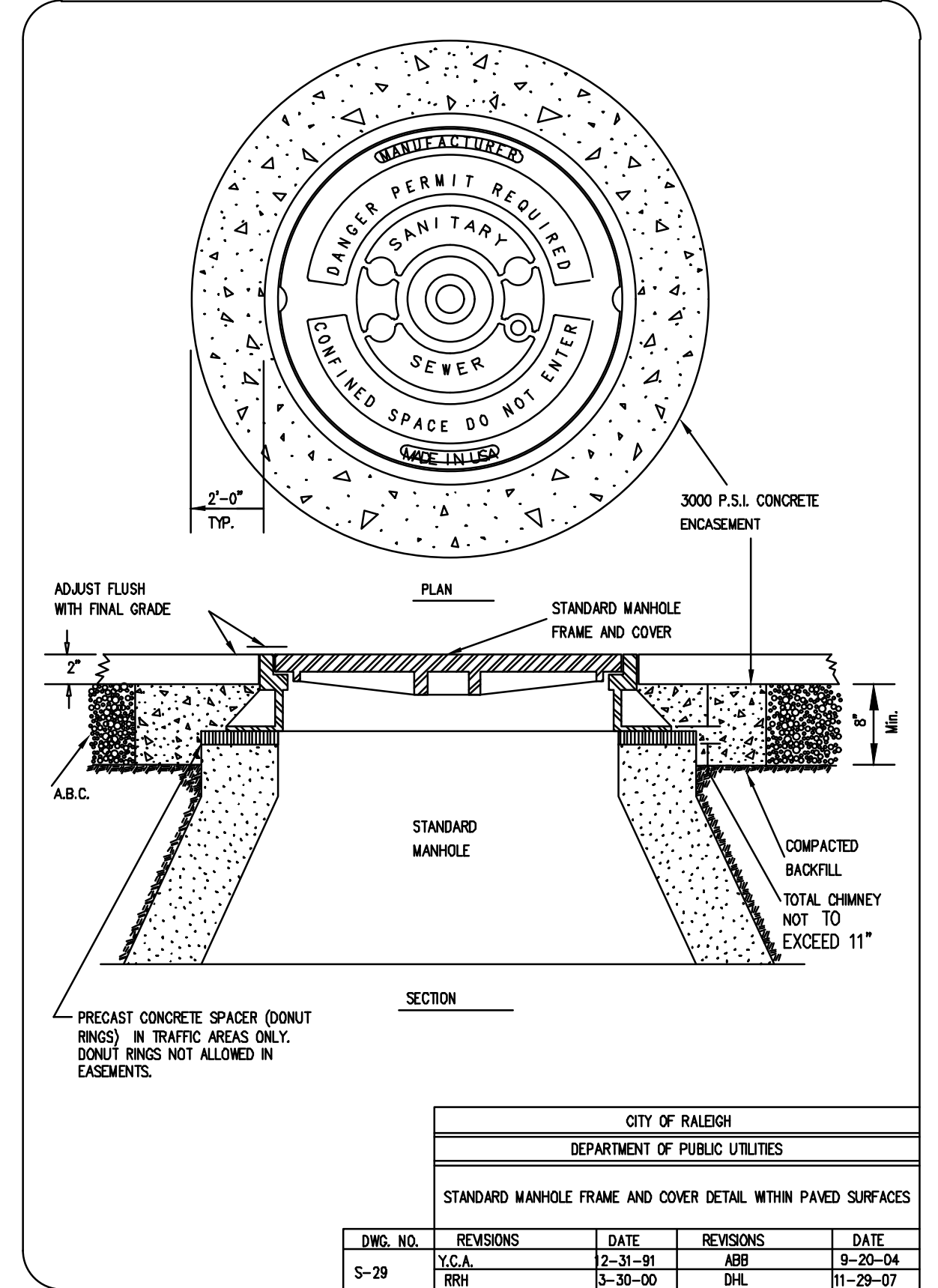
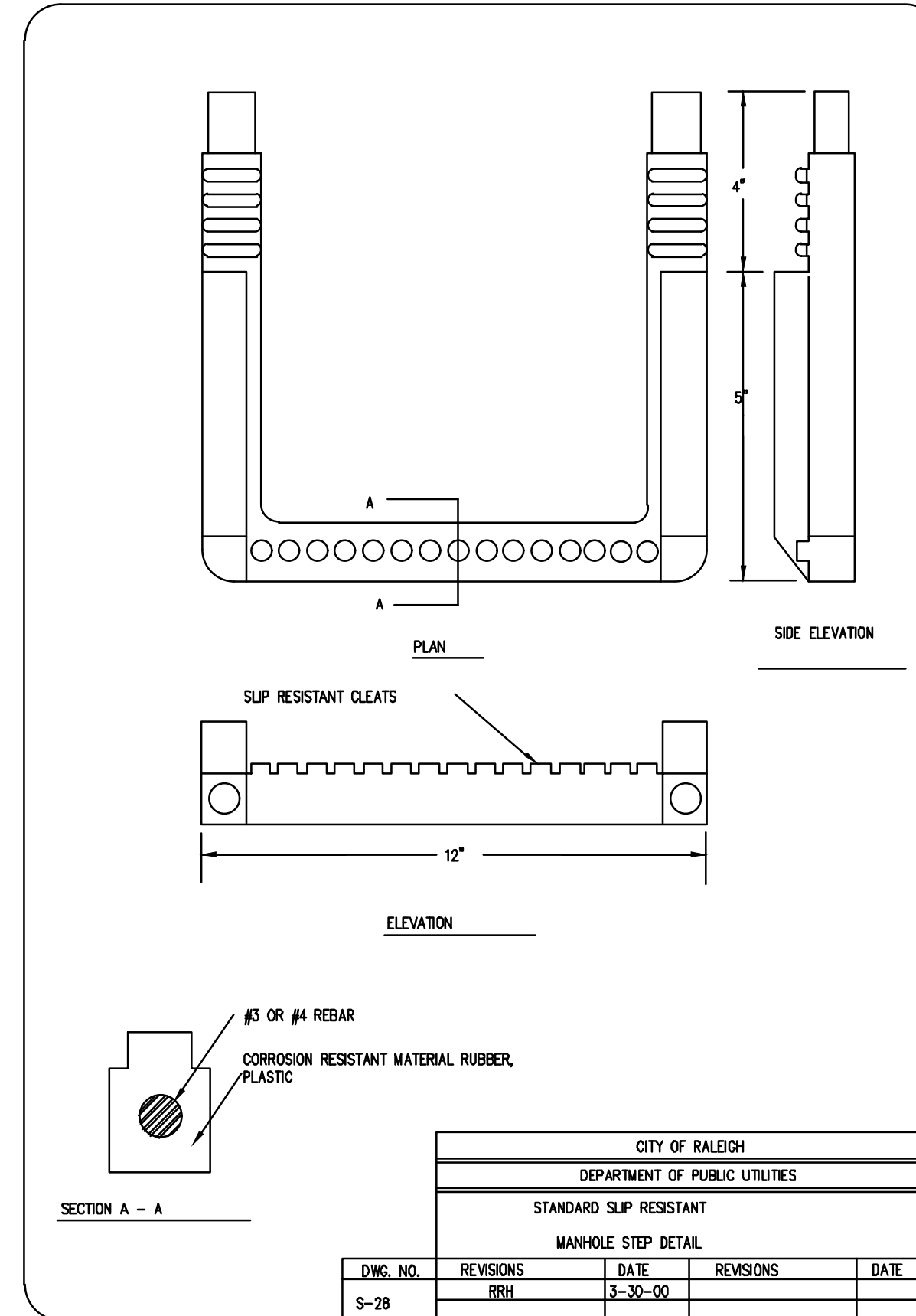
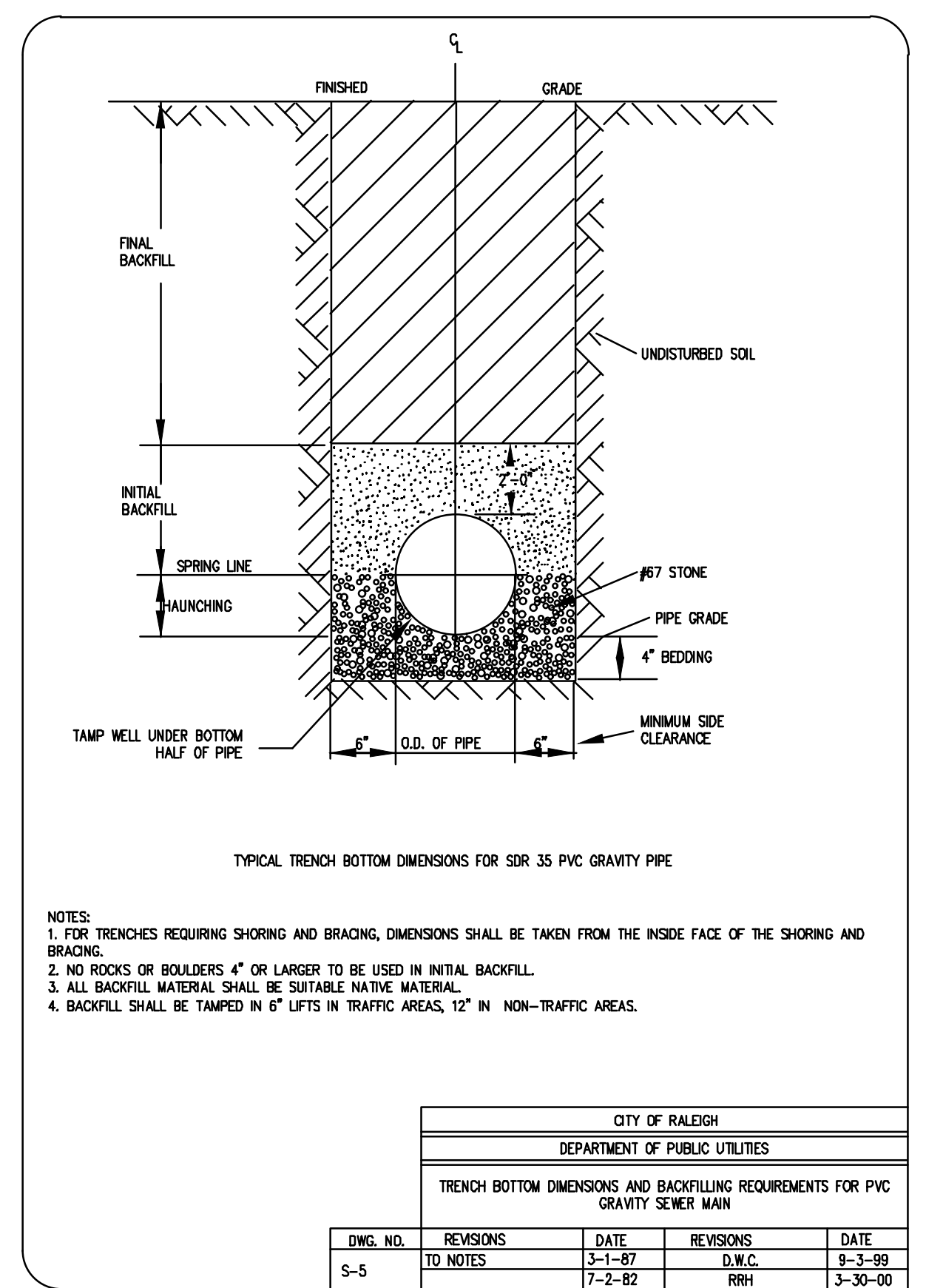
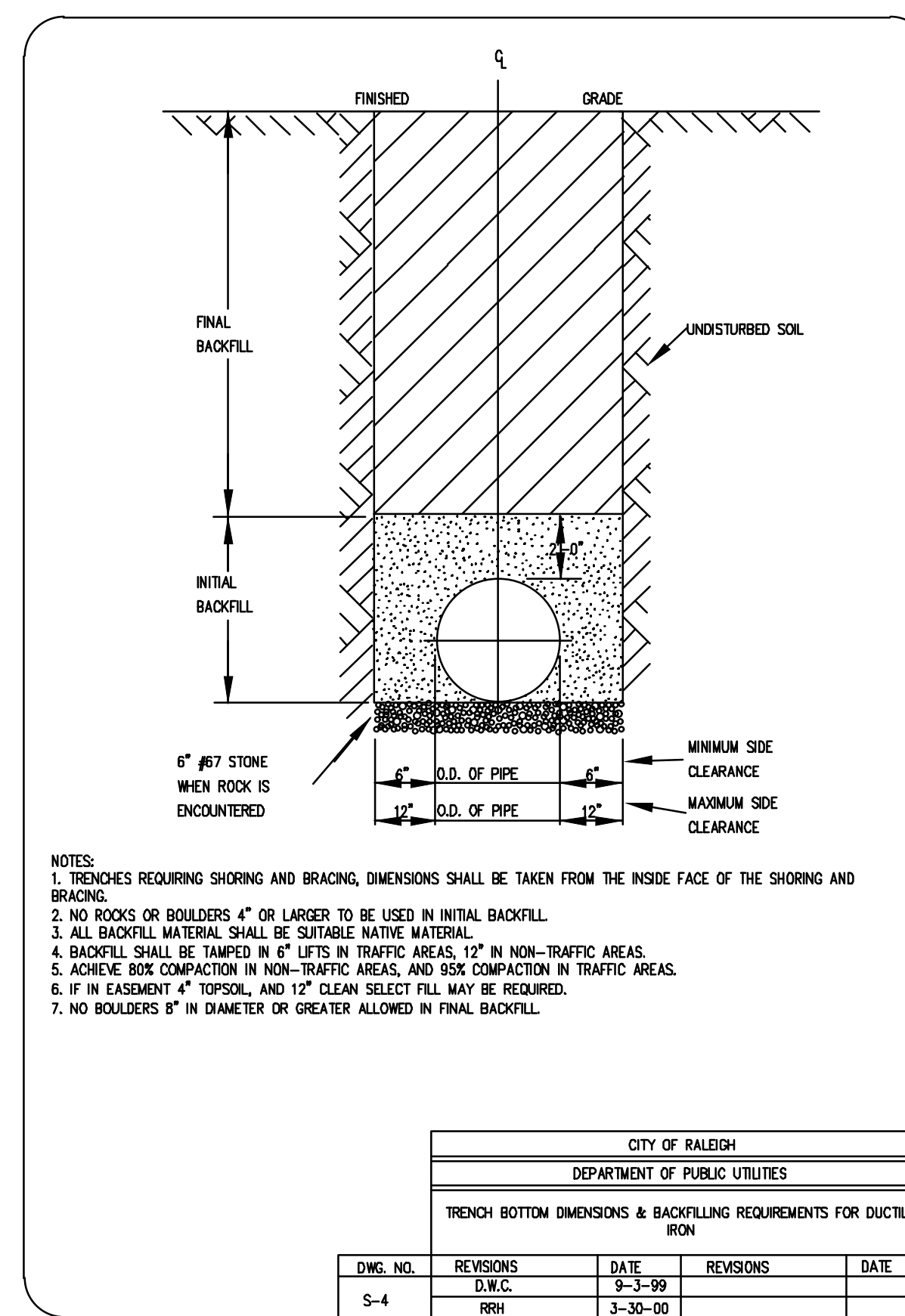
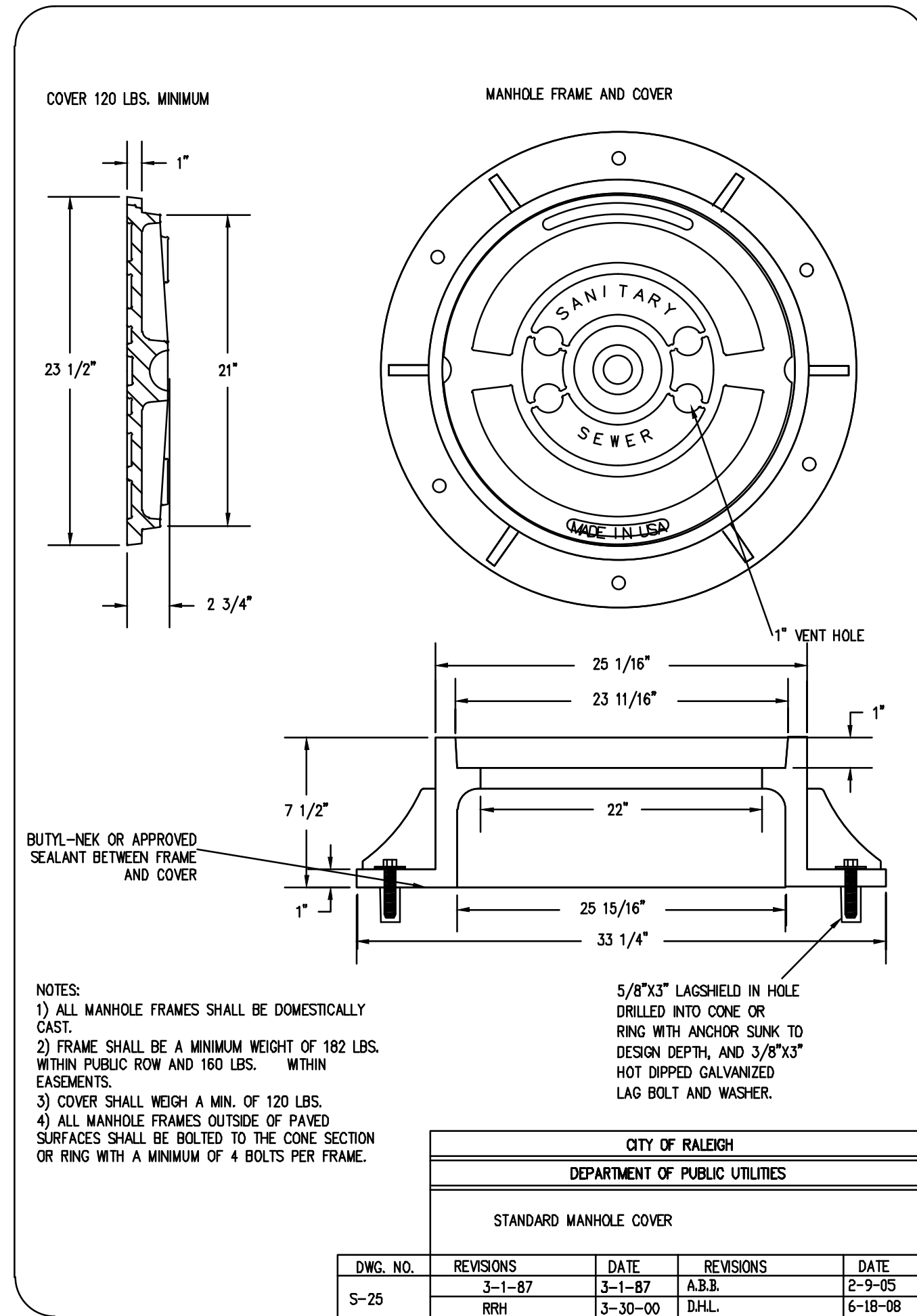
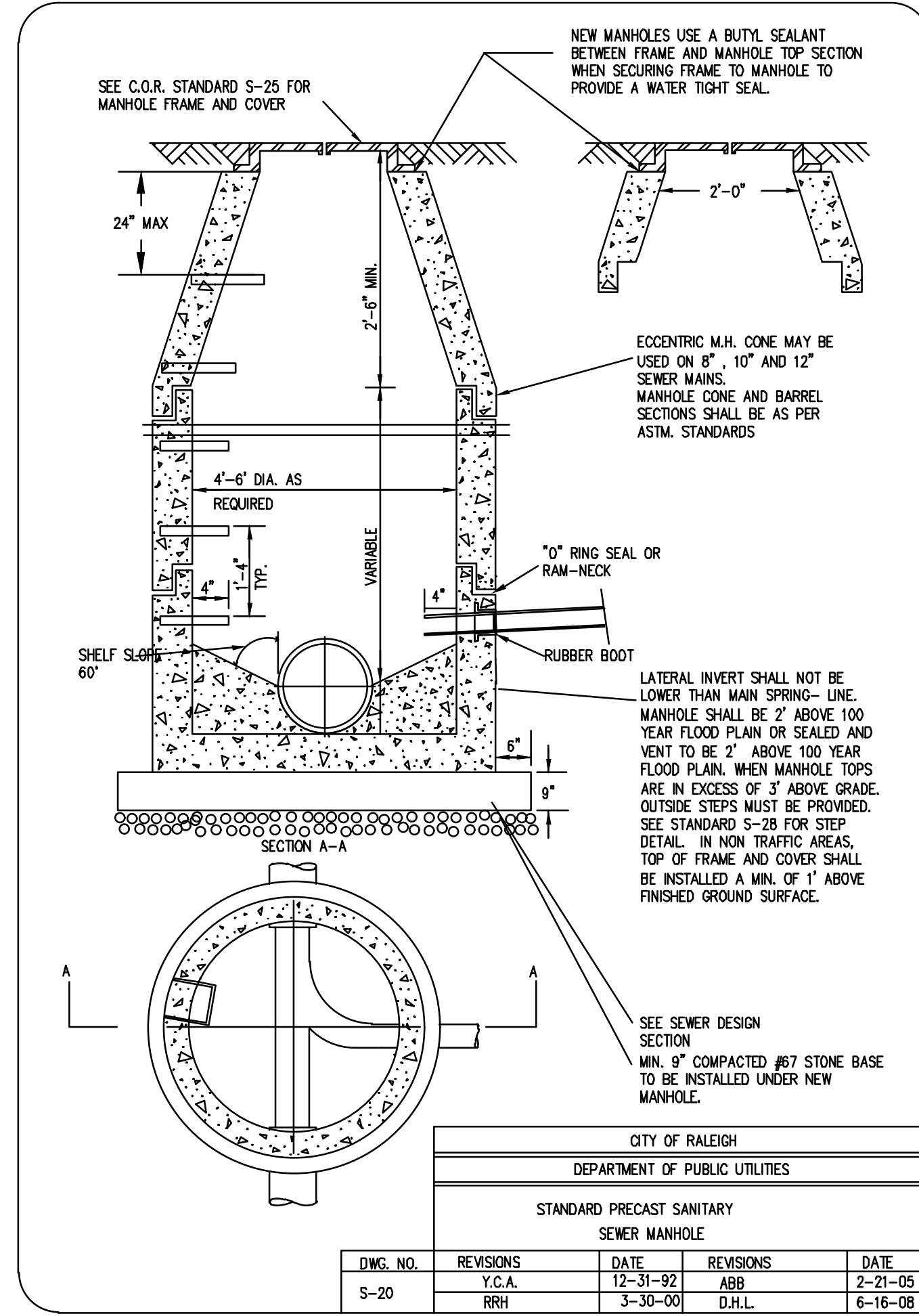
TYPICAL SECTION NO. 7
 USE TYPICAL SECTION NO. 7 AS FOLLOWS:
 -Y- STA. 10+34.00 TO -Y- STA. 14+16.63





DATE	DESCRIPTION
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESIGN	DRAWN	CHKD
	MEL	XXX	
	SCALE	H:	
	JOB No.	220094-01-002	
	DATE	June 20, 2022	
	FILE No.	220094-01-002	



PUBLIC Water Distribution/Extension System

The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit # _____
Authorization to Construct _____ See digital signature

PUBLIC Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

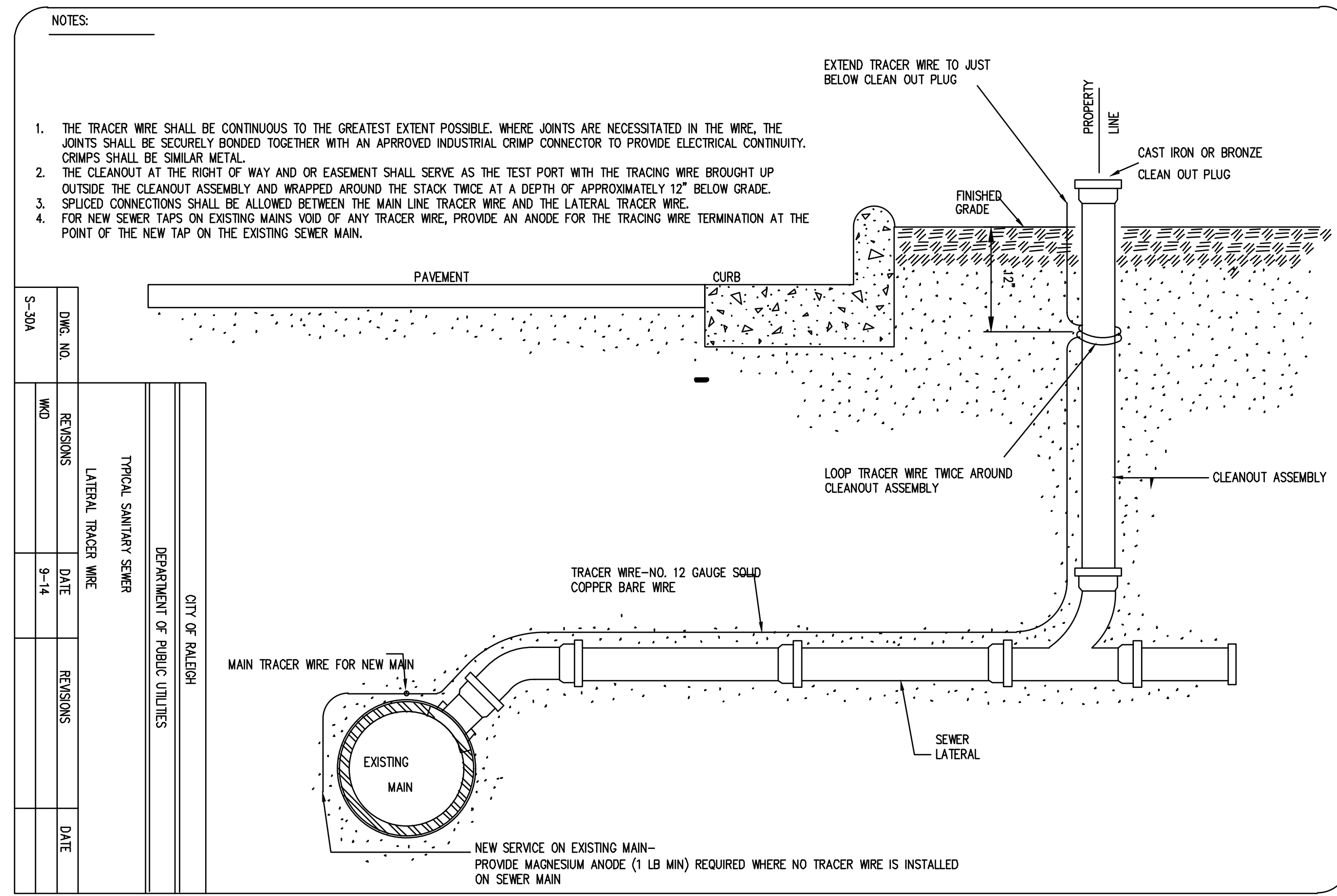
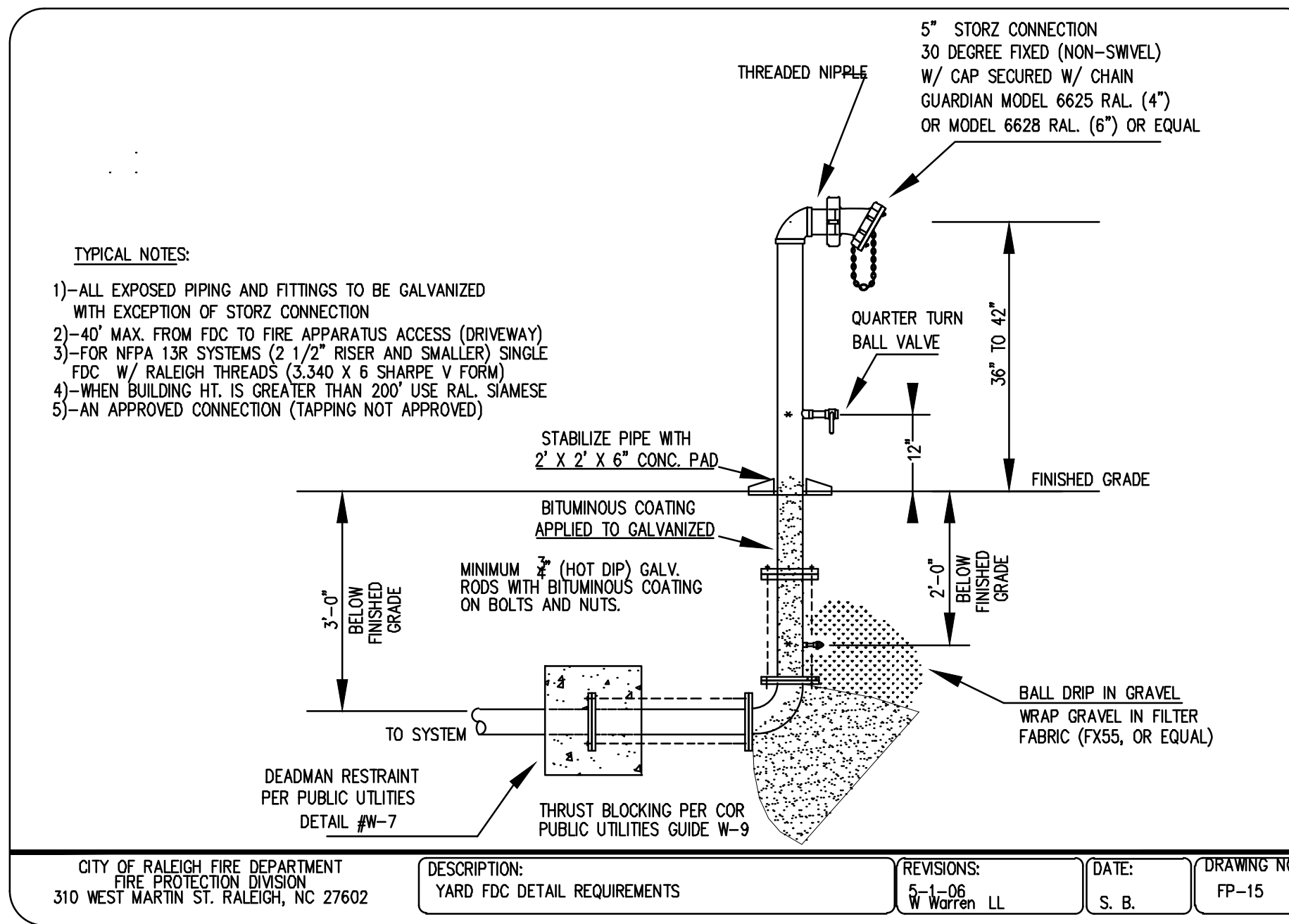
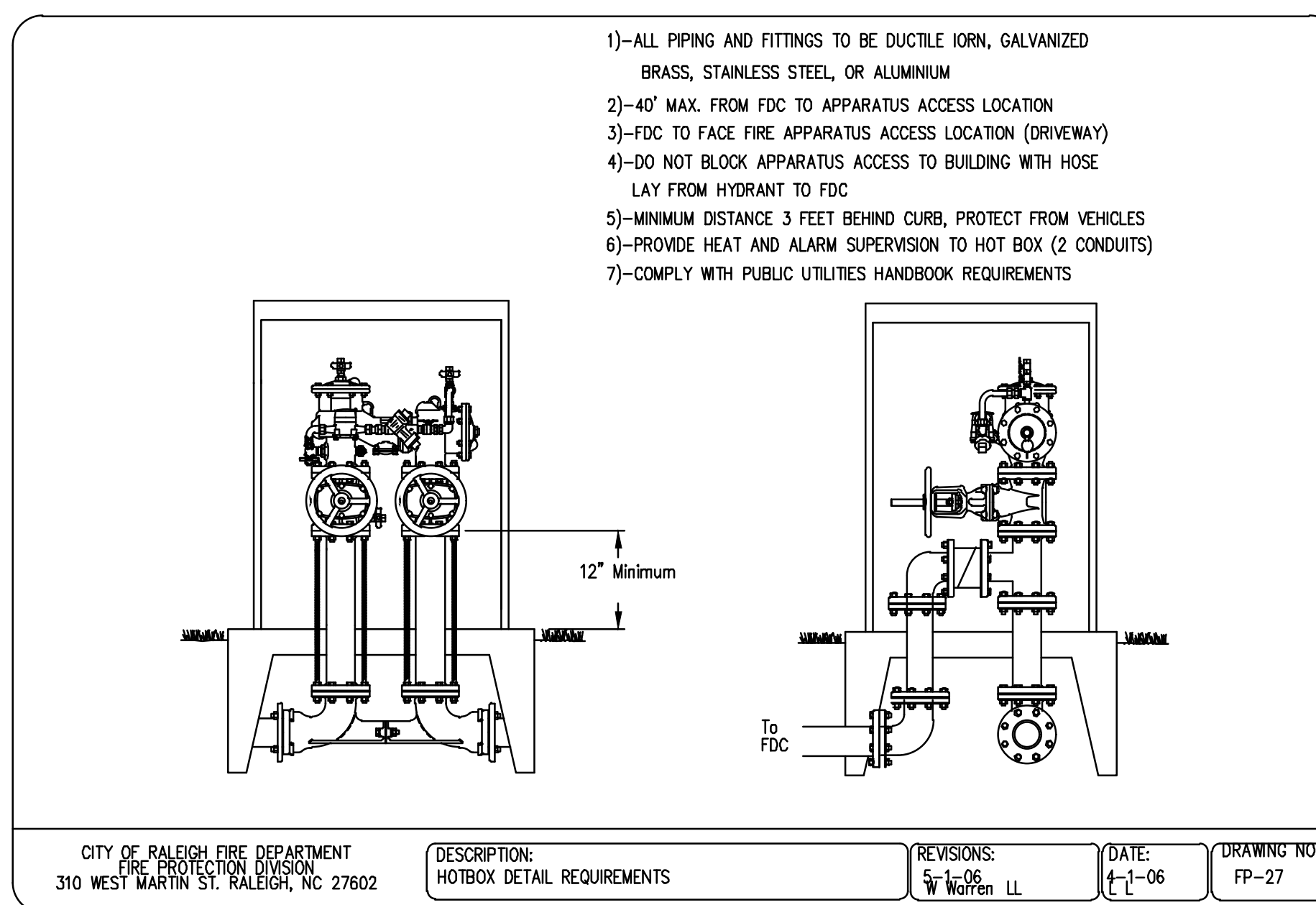
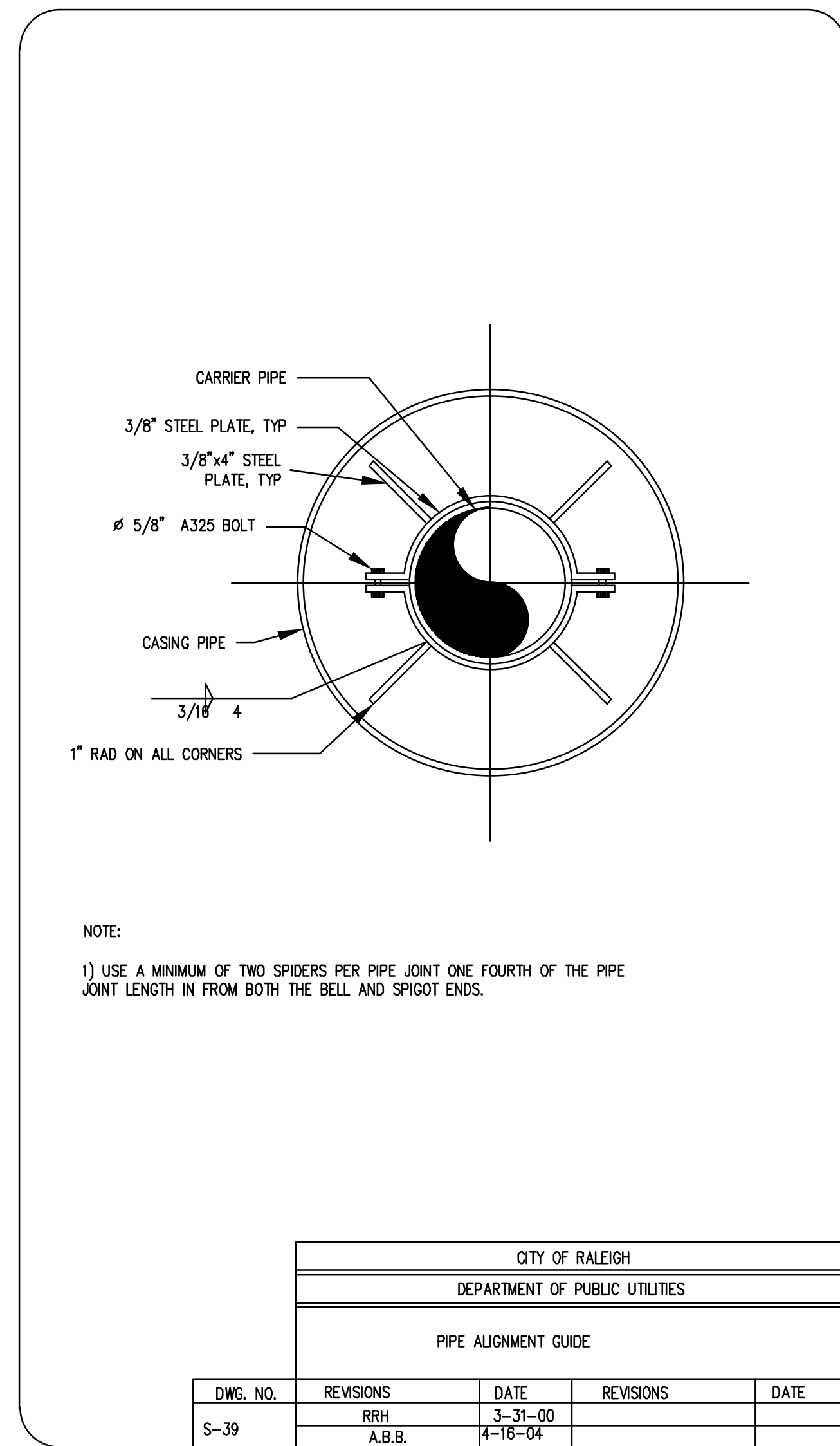
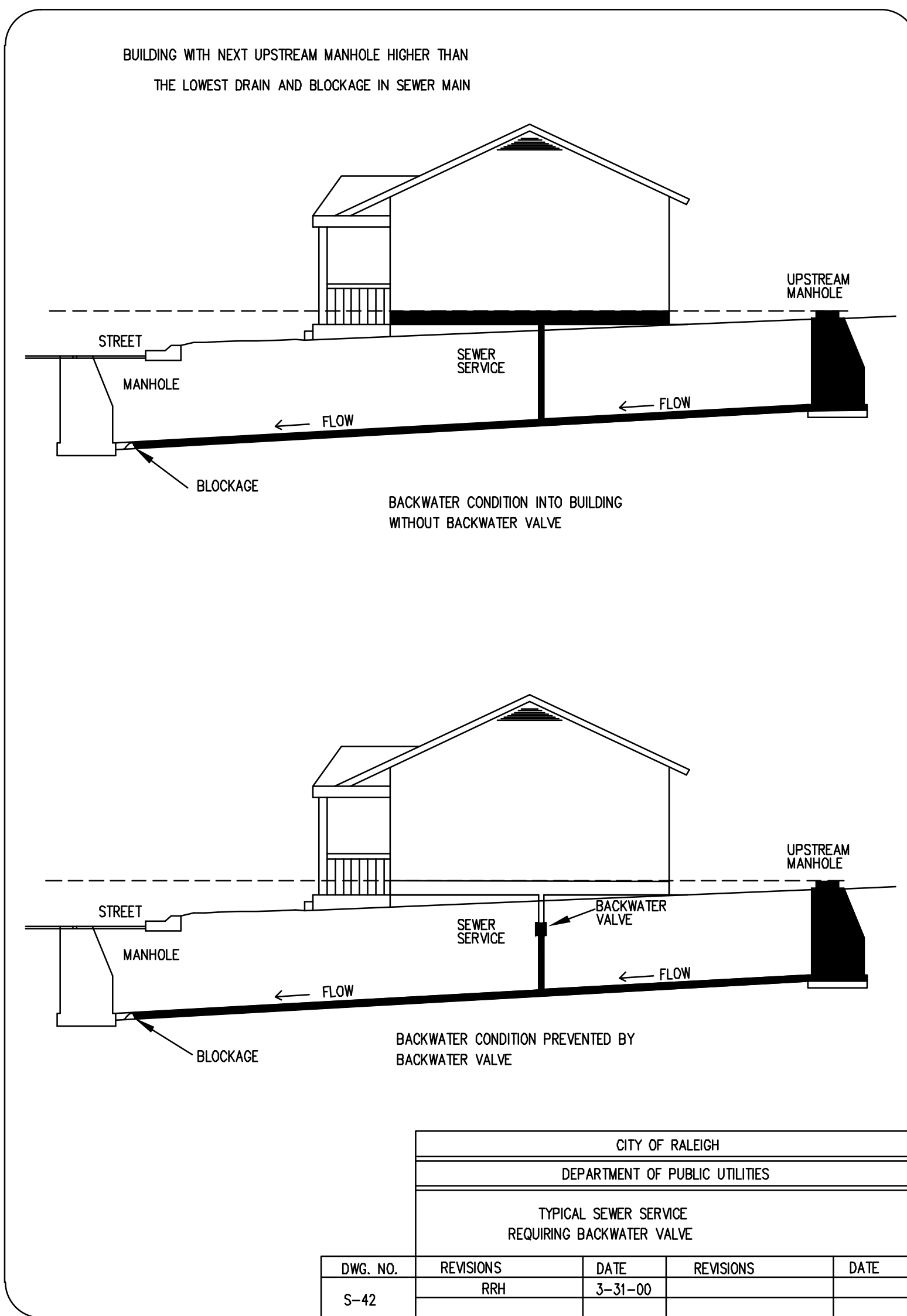
City of Raleigh
Public Utilities Department Permit # _____
Authorization to Construct _____ See digital signature

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in those plans, is responsible for contacting the Public Utilities Department at (919)996-4560 at least **twenty four hours** prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.



Bowman

Bowman North Carolina Ltd.
4006 BARRIETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919)555-6570
bowman.com
Bowman North Carolina Ltd.

SEWER DETAILS
Rocket Wash
Arendell Ave
Project ID#796479
Wake County
Zebulon, NC

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION



PLAN STATUS	
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H:
JOB No.	220094-01-002
DATE	June 20, 2022
FILE No.	220094-01-002
	220097-01-002

ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919)996-4540 at least **twenty four hours** prior to beginning any of their construction.

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of **monetary fines** and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for **Inspection, Install a Downstream Plug**, have **Permitted Plans** on the **Jobsite**, or any other **Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the **City of Raleigh**.

PUBLIC Water Distribution/Extension System

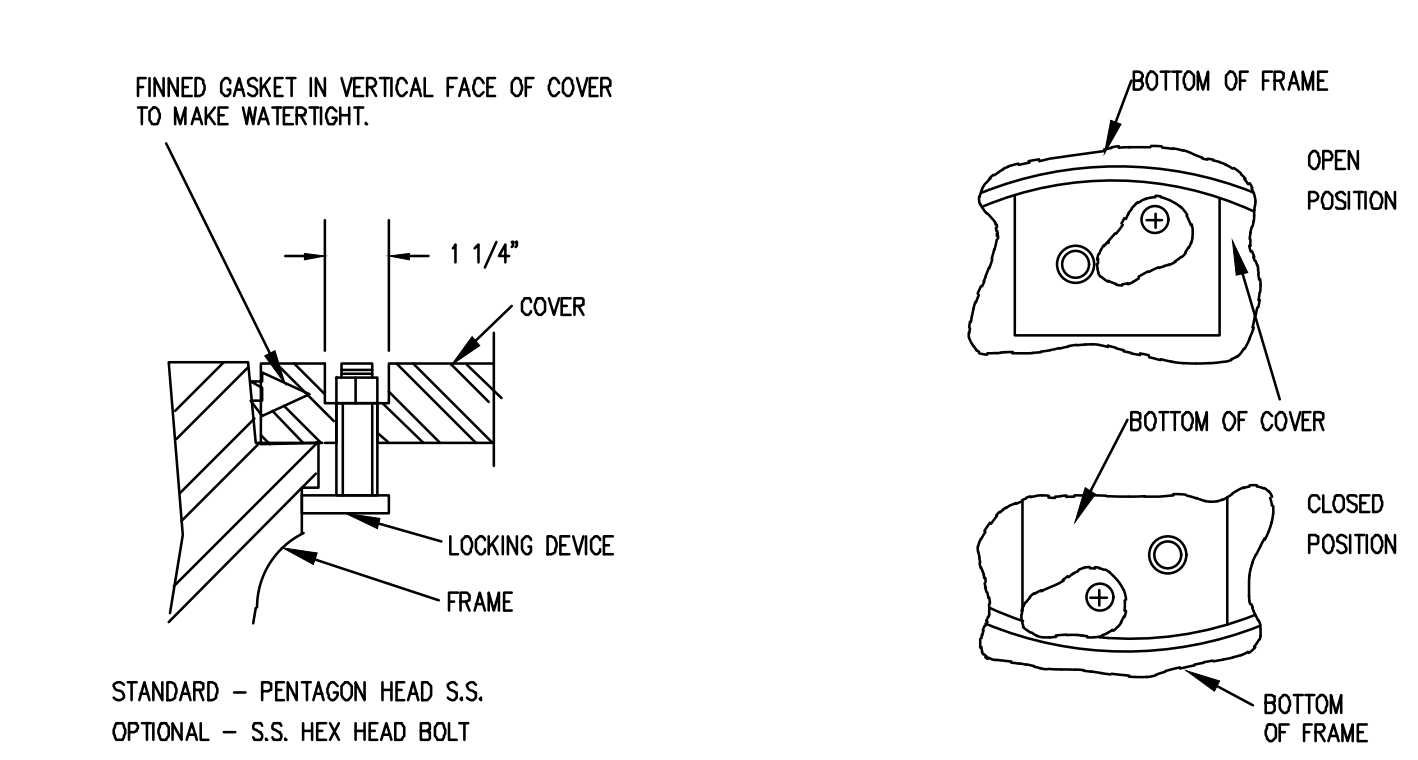
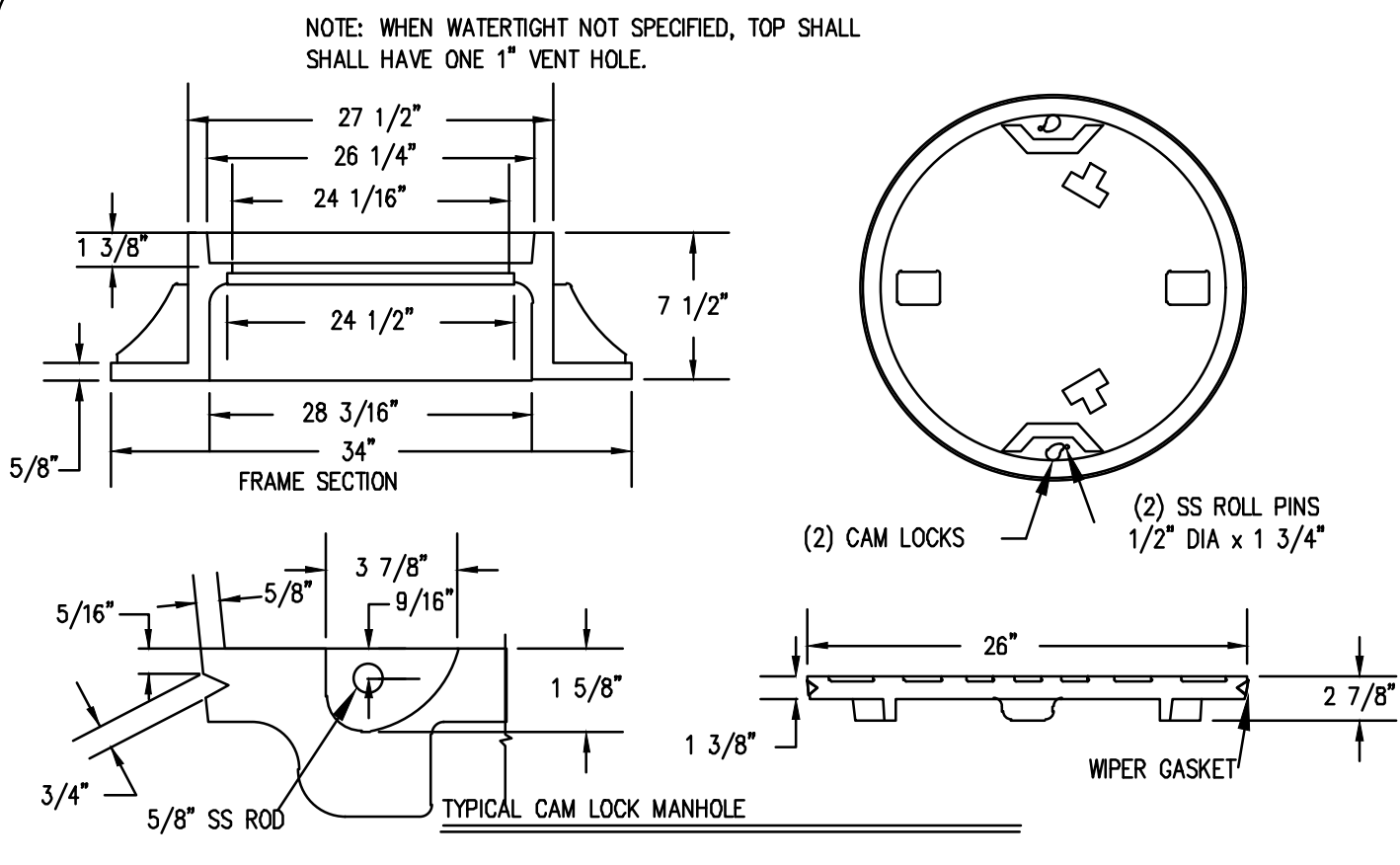
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit # _____
Authorization to Construct _____ See digital signature

PUBLIC Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

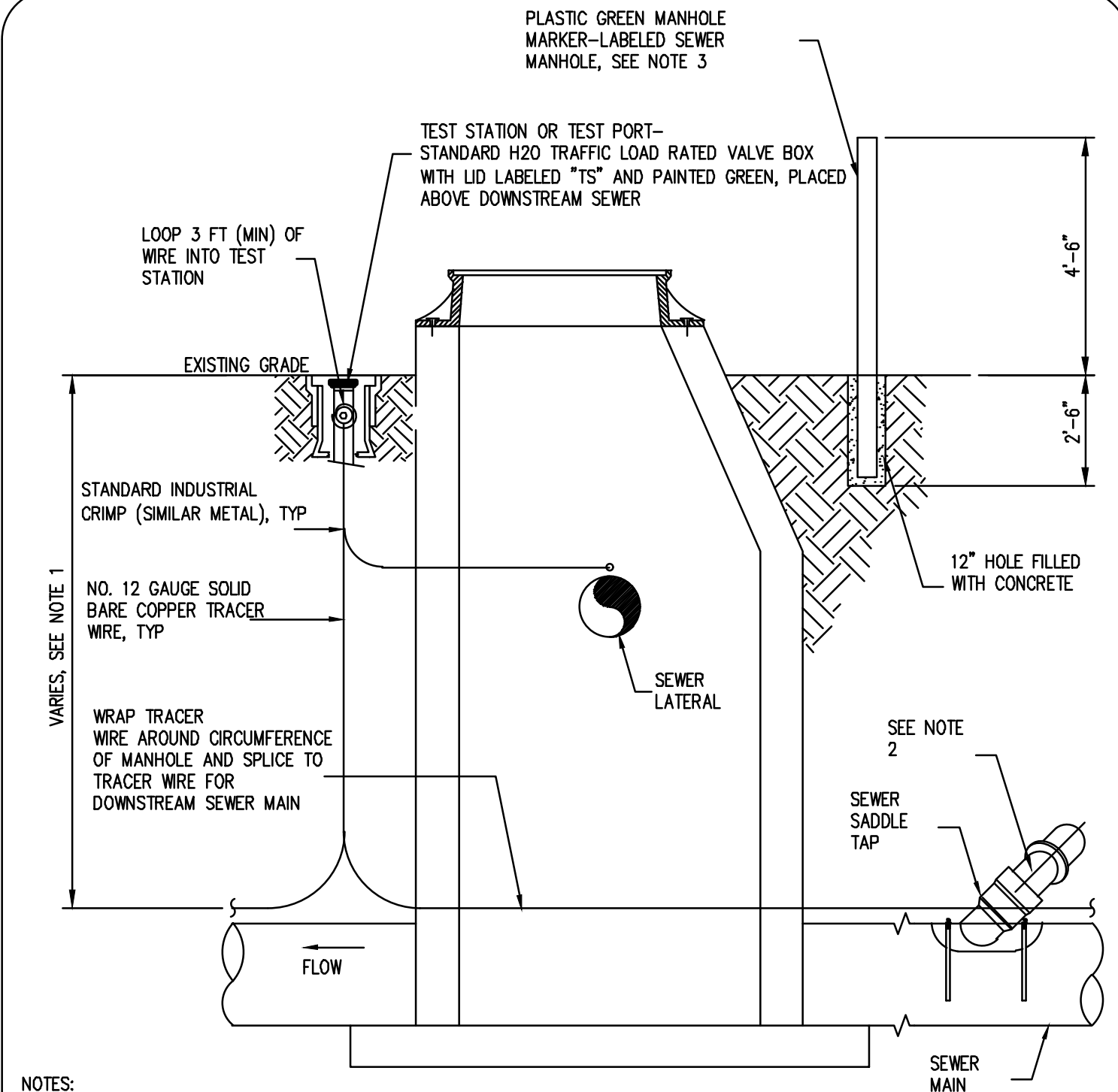
City of Raleigh
Public Utilities Department Permit # _____
Authorization to Construct _____ See digital signature



TYPICAL LOCKING DEVICE

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
WATER-TIGHT MANHOLE FRAME				
WITH CAM LOCK COVER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-27	RRH	3-30-00		
	DHL	6-18-08		

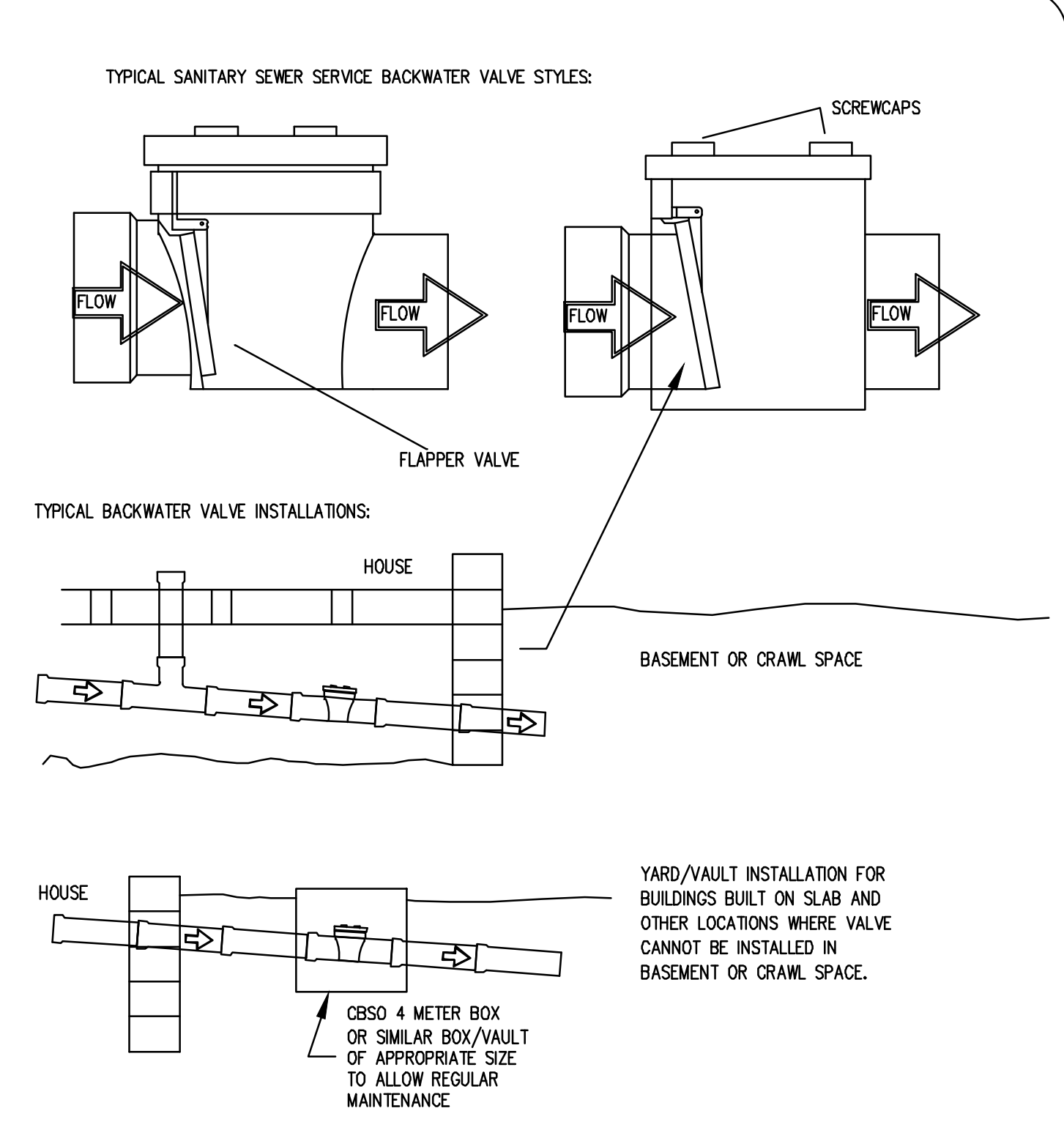
RING MUST BE ANCHORED IN ACCORDANCE WITH S-25



VARIES, SEE NOTE 1

- NOTES:
1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. FOR GRAVITY MAIN AND OR LATERAL INSTALLATIONS LESS THAN 8 FT, THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAID FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 8 FT, THE TRACING WIRE SHALL BE INSTALLED AT A DEPTH OF 7-8 FT. THE WIRE SHALL BE PROTECTED FROM DAMAGE DURING THE EXECUTION OF THE WORK. NO BREAKS OF CUTS IN THE TRACER WIRE SHALL BE PERMITTED.
 2. WHERE LATERAL TAPS ARE MADE BY SERVICE SADDLES, THE TRACER WIRE SHALL NOT BE ALLOWED TO BE PLACED BETWEEN THE SADDLE AND MAIN.
 3. MANHOLE MARKERS SHALL BE PLACED ADJACENT TO MANHOLES AT THE DISCRETION OF OWNER OR OWNER'S REPRESENTATIVE.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
GRAVITY SEWER MAIN TRACER WIRE AND MANHOLE MARKER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20A	WKD	09-14		



NOTES:

1. INSTALLATIONS OF GREATER THAN 4' IN DEPTH MAY REQUIRE MANHOLE.
2. VALVES MUST BE INSTALLED IN A LOCATION AT WHICH THEY CAN BE CLEANED AND SERVICED REGULARLY.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER SERVICE BACK-WATER VALVE INSTALLATION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-38	RRH	3-31-00		

PUBLIC Water Distribution/Extension System

The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit # VJ
Authorization to Construct See digital signature

PUBLIC Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit # S
Authorization to Construct See digital signature

ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919)996-4540 at least **twenty four hours** prior to beginning any of their construction.

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of **monetary fines** and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for **Inspection, Install a Downstream Plug**, have **Permitted Plans** on the **Jobsite**, or any other **Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the **City of Raleigh**.



Bowman North Carolina Ltd.
4006 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919)955-6570
bowman.com
Bowman North Carolina Ltd.

SEWER DETAILS
Rocket Wash
Arendell Ave
Project ID#796479
Zebulon, NC
Wake County

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION



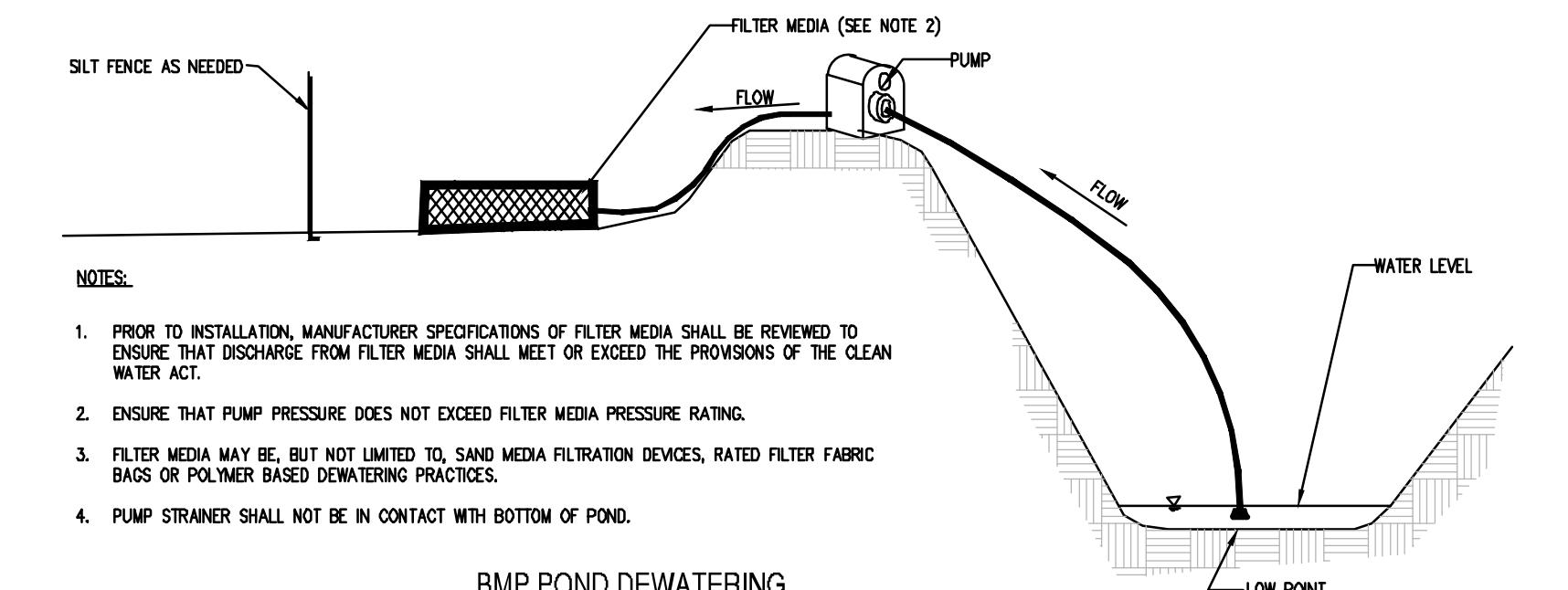
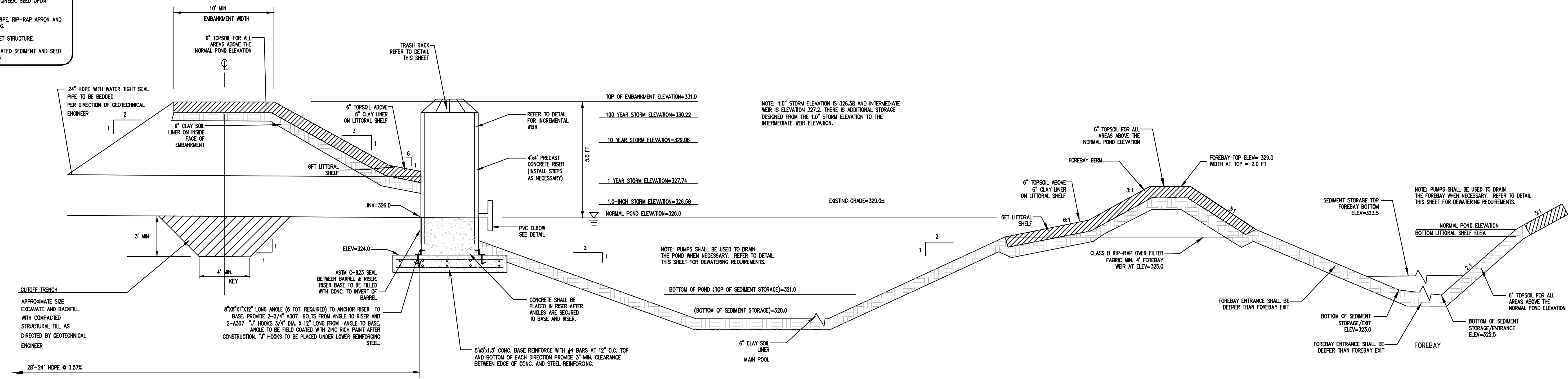
PLAN STATUS	
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H
JOB No.	220094-01-002
DATE	June 20, 2022
FILE No.	220094-01-002
	220097-01-002

SHEET C6.4C

CONSTRUCTION SEQUENCE FOR WET DETENTION POND:

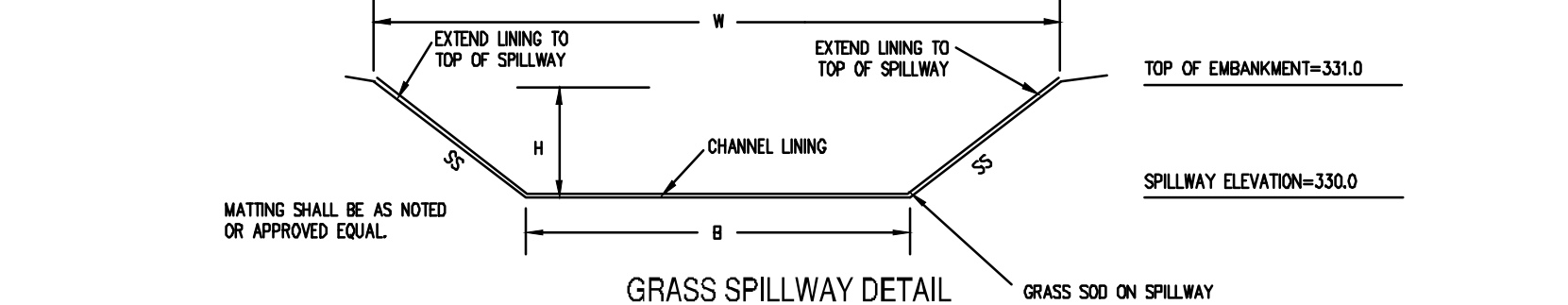
1. INSTALL EROSION CONTROLS.
2. CONSTRUCT DAM BASE AND AREAS BELOW THE NORMAL POOL. CONSTRUCTION TO BE PERFORMED UNDER THE INSPECTION OF THE GEOTECHNICAL ENGINEER. SEE UPON COMPLETION.
3. INSTALL OUTLET PIPE, RIP-RAP APRON AND STONE FILTER RING.
4. CONSTRUCT OUTLET STRUCTURE.
5. REMOVE ACCUMULATED SEDIMENT AND SEED UPON COMPLETION.



STORMWATER MANAGEMENT NOTES:

1. THE DEVELOPER OR HIS AGENT SHALL CONTACT THE DESIGN ENGINEER WHEN THE BEST MANAGEMENT PRACTICES ARE CONSTRUCTED AND ABOUT TO BECOME OPERATIONAL, SO A FINAL INSPECTION CAN BE PERFORMED TO DETERMINE COMPLIANCE WITH THE APPROVED PLAN CAN BE PERFORMED.
2. ANNUAL MAINTENANCE INSPECTION AND REPORT REQUIRED - THE OWNER OF A PERMITTED STRUCTURAL STORMWATER BMP/CONTROL SHALL ANNUALLY SUBMIT A MAINTENANCE AND INSPECTION REPORT FOR EACH BMP TO THE STORMWATER ADMINISTRATOR. ANNUAL INSPECTIONS SHALL BEGIN WITHIN ONE YEAR OF THE RECORDATION OF ANY DEED(S) SHOWING STORMWATER BMP/CONTROL STRUCTURES.
3. UPON COMPLETION OF THE PROJECT, AND BEFORE A CERTIFICATE OF OCCUPANCY SHALL BE GRANTED, THE ENGINEER OF RECORD SHALL CERTIFY THAT THE COMPLETED PROJECT IS IN ACCORDANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS AND DESIGNS.
4. A FINAL INSPECTION OF THE SITE AND STORMWATER MANAGEMENT BMP/CONTROLS TO BE SCHEDULED WITH AND COMPLETED BY THE PROJECT ENGINEER.
5. NCEQ AND THEIR ASSIGNS HAVE RIGHT TO ACCESS THE STORMWATER CONTROL(S) FOR INSPECTIONS OR MAINTENANCE AS NECESSARY.
6. THE ENGINEER'S CERTIFICATION OF COMPLIANCE WILL BE REQUIRED PRIOR TO THE FINAL PLAT OR CERTIFICATE OF OCCUPANCY. THE STORMWATER CONTROL IS TO BE INSPECTED TO ENSURE IT IS FUNCTIONING AS DESIGNED AND HAS FULL DESIGN VOLUME PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY.
7. THE PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING THE STORMWATER CONTROL(S) ACCORDING TO THE APPROVED MAINTENANCE PLAN AND DIRECTION OF NCEQ.

SPILLWAY	FLOW Q(100)	LONG SLOPE(%)	H	B	W	SS	CHANNEL LINING	TOP OF EMBANKMENT ELEVATION	SPILLWAY ELEVATION
GRASS SPILLWAY	29.43 CFS	50.0%	1.0'	10.0'	16.0'	3:1	STRAW WITH NET NAG SHOREMAX W/ P550	331.0	330.0



STAGE (FT)	ELEVATION (FT)	CONTOUR AREA (SF)	INCREMENTAL STORAGE (CF)	TOTAL STORAGE (CF)
0.0	326.0	16,315	0	0
0.5	326.5	16,280	8,649	8,649
1.0	327.0	19,435	9,429	18,078
1.2	327.2	19,905	3,334	22,012 (WV)
2.0	328.0	21,795	16,680	38,692
3.0	329.0	24,205	23,000	61,692
4.0	330.0	26,910	25,558	87,249
5.0	331.0	29,225	26,068	113,317

SEEDBED PREPARATION:

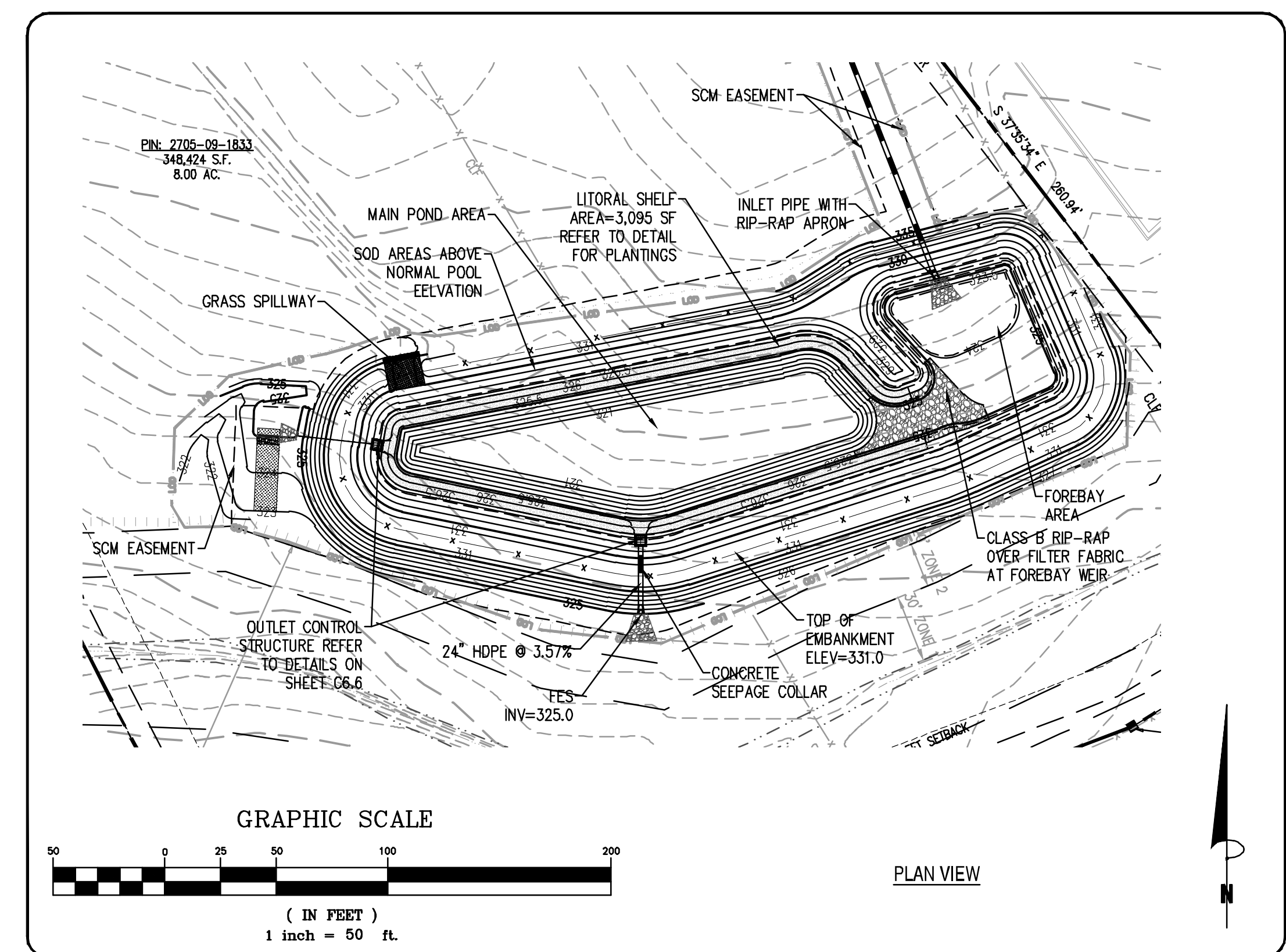
1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE SEEDING MIXTURES).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDING AREAS AND MAKE NECESSARY REPAIRS OR RE-SEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN BOX DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT SMC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

LANDSCAPING NOTES:

- ALL LANDSCAPING SHALL BE IN COMPLIANCE WITH THE NEEDED BMP REQUIREMENTS.
- LANDSCAPE CONTRACTOR SHALL PROVIDE A TWO-YEAR WARRANTY FOR BMP PLANTING SURVIVAL/REPLACEMENT. AT THE END OF THE FIRST YEAR AND AT THE END OF THE TWO-YEAR WARRANTY PERIOD, ALL PLANTS THAT DO NOT SURVIVE MUST BE REPLACED.
- ESTABLISHMENT PROCEDURES, SUCH AS CONTROL OF INVASIVE WEEDS, ANIMAL AND VANDAL DAMAGE, MULCHING, RE-STAKING, WATERING, AND MESH OR TUBE PROTECTION REPLACEMENT, SHALL BE IMPLEMENTED TO THE EXTENT NEEDED TO ENSURE PLANT SURVIVAL. STAKING MUST BE REMOVED AFTER ESTABLISHMENT (APPROXIMATELY 12 MONTHS), TO PREVENT GROUND STRANGLING OF ALL WOODY PLANTS.
- SOD WITHIN BMP AND SURROUNDING AREAS TO BE BERBERIS OR CENTROPHE GRASS.
- GRASS OR MIDFLOWER SEED MUST BE APPLIED AT THE RATES SPECIFIED BY THE SUPPLIERS. IF PLANT ESTABLISHMENT CANNOT BE ACHIEVED WITH SEEDING BY THE TIME OF SUBSTANTIAL COMPLETION OF THE STORMWATER FACILITY PORTION OF THE PROJECT, THEN THE CONTRACTOR SHALL PLANT THE AREA WITH MIDFLOWER SOD, PLUGS, CONTAINER PLANTS, OR OTHER MEANS TO COMPLETE THE SPECIFIED PLANTING AND PROTECT AGAINST EROSION BEFORE WATER IS ALLOWED TO ENTER THE STORMWATER BMP FACILITY.
- ALL MATERIALS SHALL BE ACQUIRED FROM AN APPROVED NCEQ PLANT VENDOR. PLANT MATERIAL SHALL BE PURCHASED FROM A LOCAL SOURCE TO ENSURE SURVIVABILITY. LOCAL VENDORS FOR THIS SITE INCLUDE:
- CULL DE NATIVE PLANT NURSERY 919-962-5366
 - CROWNING WILD NURSERY 919-599-5361
 - NC FOREST SERVICE 919-731-7988
 - PLANT DELIGHTS NURSERY 919-772-4784
 - THORNE, NATIVE TREES 919-553-9927
- IMMEDIATELY AFTER THE WET DETENTION BASIN IS ESTABLISHED, THE PLANTS ON THE VEGETATED SHELF AND PERIMETER OF THE BASIN SHOULD BE WATERED TWICE WEEKLY IF NEEDED UNTIL THE PLANTS BECOME ESTABLISHED (COMMONLY SIX WEEKS).
- NO PORTION OF THE WET DETENTION POND SHOULD BE FERTILIZED AFTER THE FIRST INITIAL FERTILIZATION THAT IS REQUIRED TO ESTABLISH THE PLANTS ON THE VEGETATED SHELF.

LANDSCAPING NOTES:

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGARDING LANDSCAPING.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A HEALTHY STAND OF GRASS ON ALL SEEDING AREAS.
3. CONTRACTOR SHALL PROVIDE NATURAL TOPSOIL THAT IS FERTILE, FRAGILE, WITHOUT MIXTURE OF SUBSOIL MATERIALS, AND OBTAINED FROM A WELL-DRAINED, AVAILABLE SITE. IT SHALL NOT CONTAIN SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL BE SCREENED AND FREE FROM CLAY, LUMPS, STONES, ROOTS, PLANTS, OR SIMILAR SUBSTANCES 1" OR MORE IN DIAMETER, DEBRIS, OR OTHER OBJECTS WHICH MIGHT BE A HINDERANCE TO PLANTING OPERATIONS. TOPSOIL SHALL CONTAIN AT LEAST 4-OR ORGANIC MATTER BY WEIGHT AND HAVE A PH RANGE OF 5.5 TO 7.0.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATERING AND THE MAINTENANCE OF ALL LANDSCAPED AREAS UNTIL THE LATER OF (a) THIRTY (30) DAYS FOLLOWING THE PLANTING OF THE GRASS AND SHRUBS, OR (b) THE DATE THAT STORE OPENS FOR BUSINESS TO THE PUBLIC. CONTRACTOR SHALL ALSO BE RESPONSIBILITY FOR THE SURVIVAL OF THE BMP PLANTING MATERIALS DURING THE TWO-YEAR WARRANTY PERIOD AND SHALL REPLACE ALL PLANTS THAT DO NOT SURVIVE AT THE END OF THE FIRST YEAR AND AT THE END OF THE SECOND YEAR OF THE WARRANTY PERIOD.
5. CONTRACTOR TO VERIFY QUANTITIES PRIOR TO COMMENCING WORK.
6. ANY DISTURBED AREAS NOT SCHEDULED FOR HARDSCAPE, PLANTINGS, OR MULCH SHALL BE SEEDED LAWN. REFER TO SITE PLAN FOR LOCATION OF AREAS TO BE SEEDED.
7. NO PLANT SUBSTITUTIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
8. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL, SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 18" NEW TOPSOIL, OR TILL AND AMEND THE TOP 18" OF EXISTING SOIL TO MEET TOPSOIL PLANTING MIX STANDARDS FOR TREES.
9. ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS, WATER, PHONE, AND ELECTRICAL LINES).



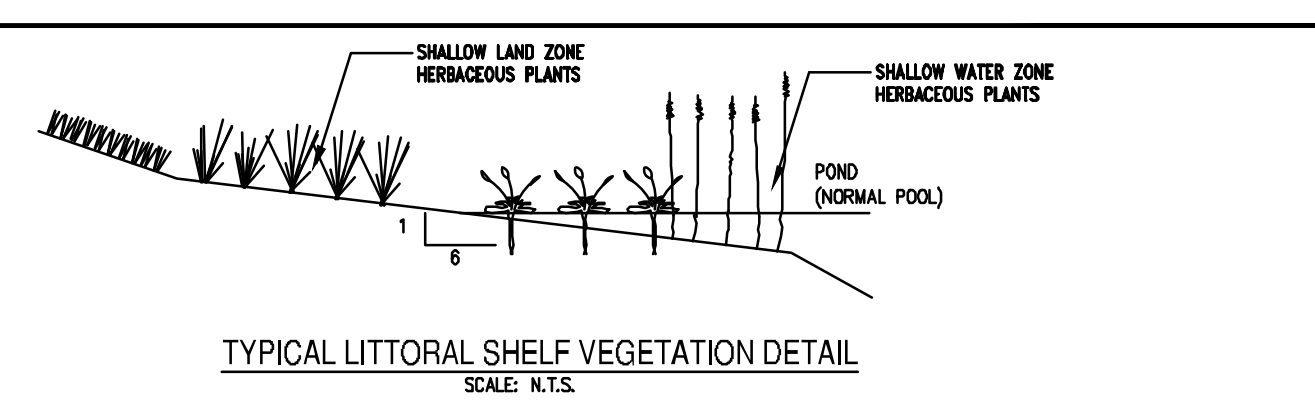
STORMWATER MANAGEMENT DESIGN WET DETENTION POND:

RIVER BASIN: NEUSE
RECEIVING STREAM: LITTLE RIVER
STREAM INDEX: 27-57-(7.5)
STREAM CLASS: WS-I(H)N(S)W(CA)
HUC: 0302020115
PROJECT COORDINATES: 35.837933N, -78.324658W

POND DESIGN SUMMARY

DRAINAGE AREA TO POND	PRE-DEVELOPED TO POND	POST-DEVELOPED THROUGH POND	POST DEVELOPED THROUGH BYPASS	POST DEVELOPED COMBINED
8.04 ACRES	8.04 AC	1.82 AC	70.0	70.0
1.68 ACRES	9.87	91.9	10 MIN	10 MIN
4.06 ACRES	15.4 MIN	5 MIN		

1.0" STORM EVENT: 9.529 CFS, 2,650 CFS, 0.072 CFS, 1,503 CFS, 2,856 CFS
1-YEAR STORM EVENT: 30.57 CFS, 52.56 CFS, 8.549 CFS, 5,549 CFS, 14,10 CFS
100-YEAR STORM EVENT: 60.79 CFS, 84.82 CFS, 29.43 CFS, 11.68 CFS, 41.11 CFS



SCIENTIFIC NAME	COMMON NAME	PLANTING ZONE	QUANTITY	NURSERY CONTAINER TYPE	SPACING	PLANTING SEASON
<i>Juncus effusus</i>	Soft Rush	SHALLOW LAND	129	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Iris virginica</i>	Blue Flag Iris	SHALLOW LAND	129	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Schoenoplectus tabernaemontani</i>	Soft Stem Bulrush	SHALLOW LAND	129	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Eupatoriadelphus maculatus</i>	Spotted Trumpetweed	SHALLOW WATER	129	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Eupatoriadelphus fistulosus</i>	Joe-Pye Weed	SHALLOW WATER	129	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Rhynchospora colorata</i>	Starrush Whitelot	SHALLOW WATER	129	PEAT POT	6' O.C.	SPRING/SUMMER

TYPICAL LITTORAL SHELF PLANTING SCHEDULE

STORMWATER MANAGEMENT SYSTEM DETAILS

NOT TO SCALE

Bowman North Carolina Ltd.
4006 BARRIETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919)555-6570
bowman.com

STORMWATER MANAGEMENT DETAILS

Rocket Wash
Arendell Ave
Project ID#796479

Wake County
Zebulon, NC

PRELIMINARY DO NOT USE FOR CONSTRUCTION



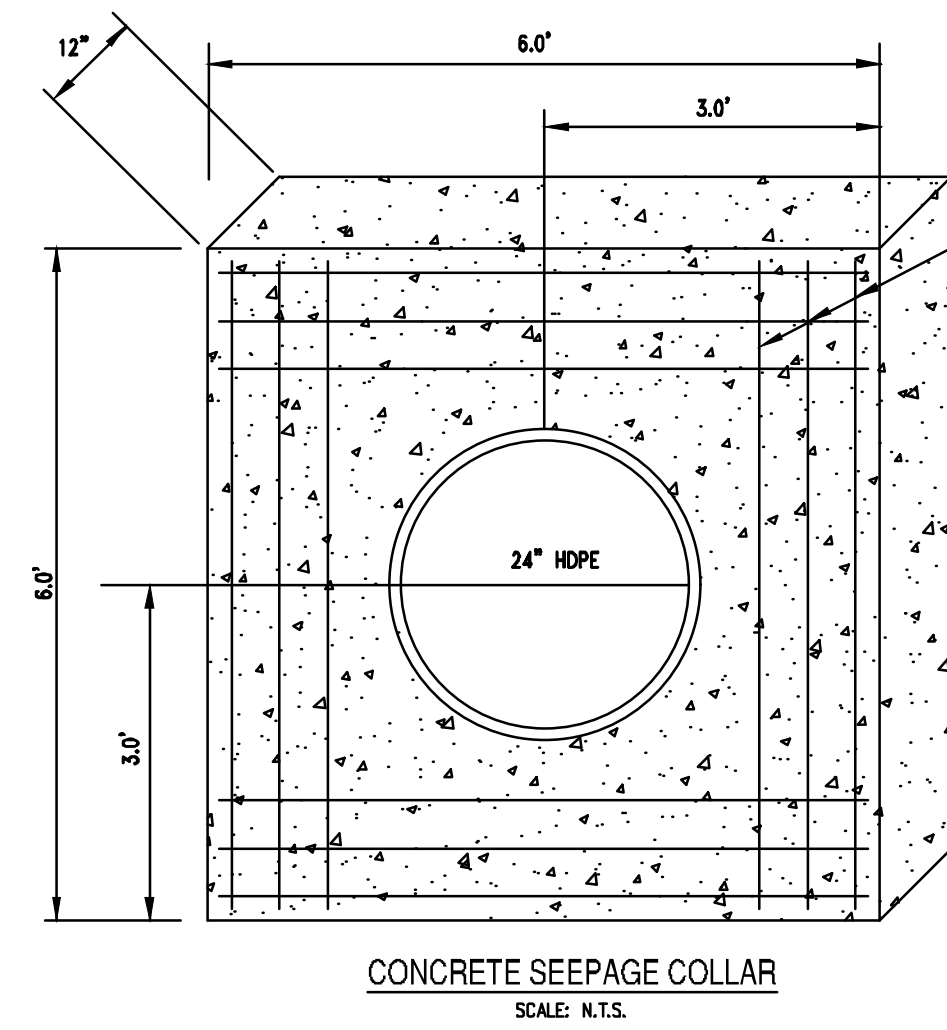
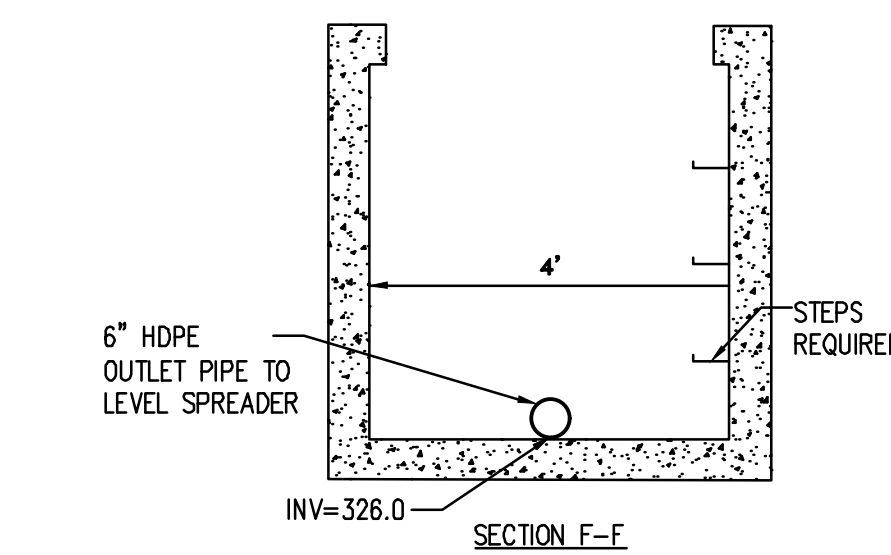
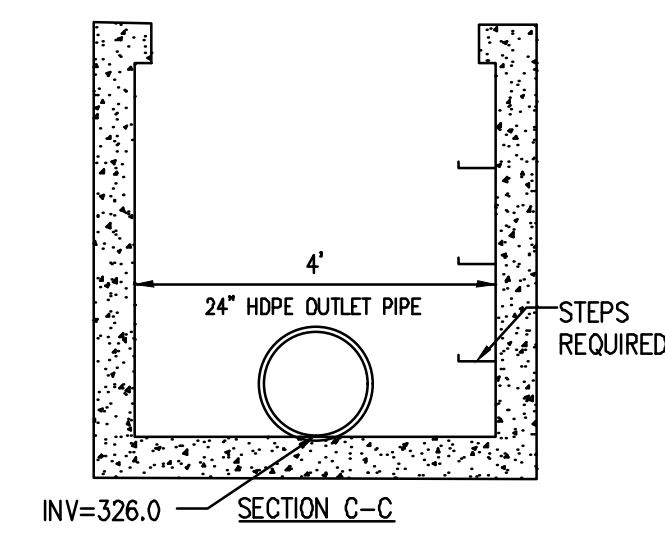
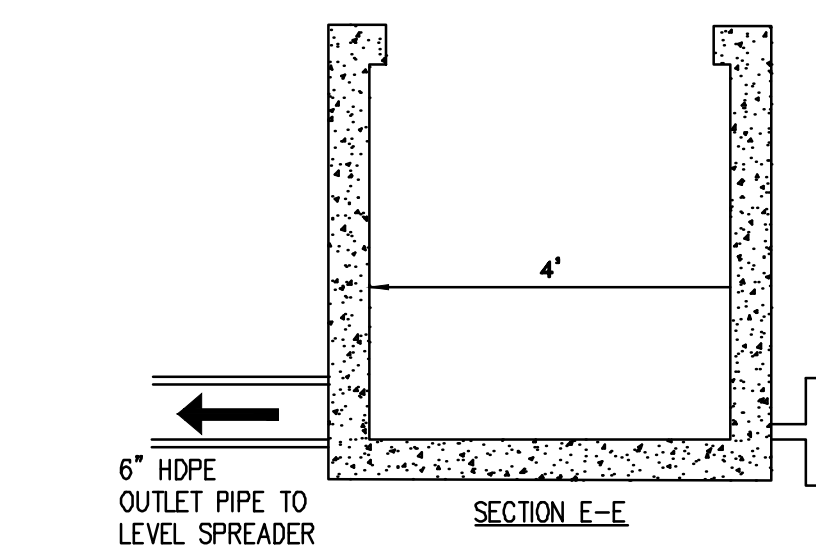
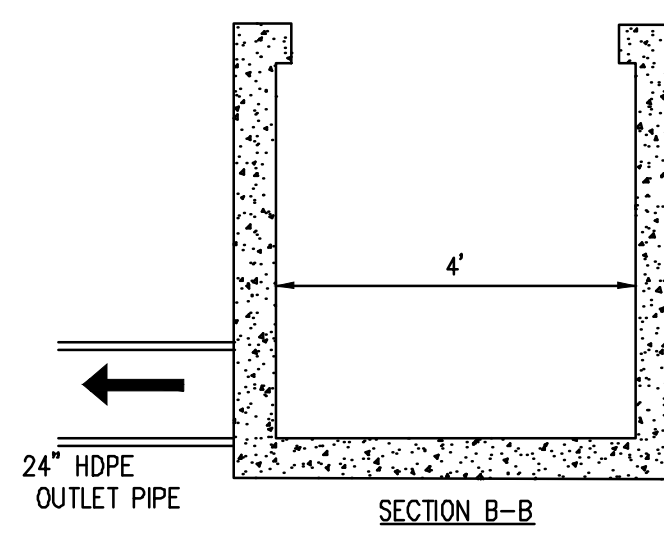
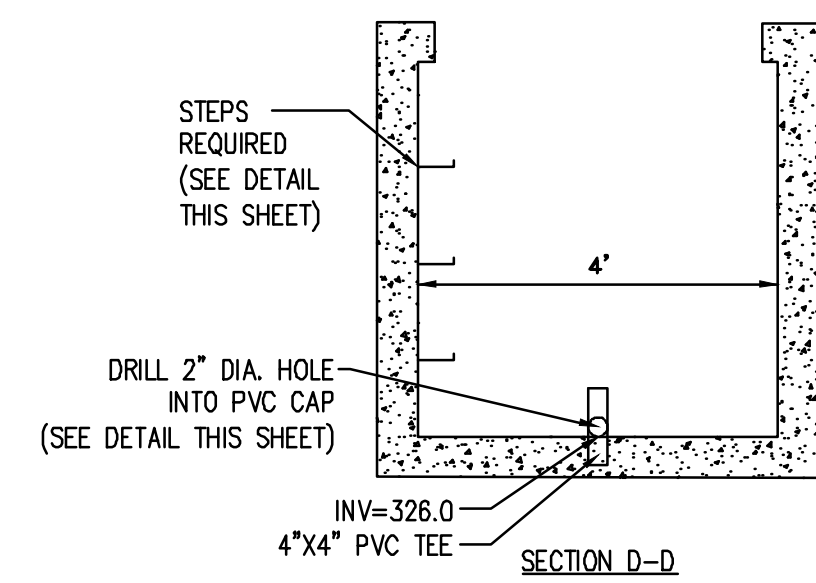
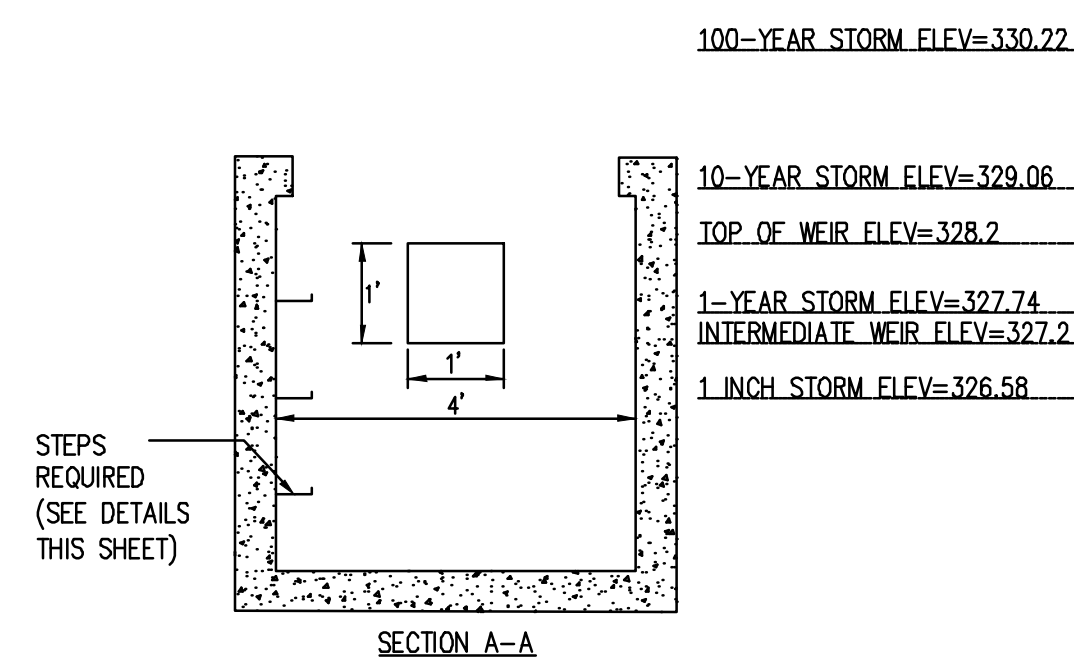
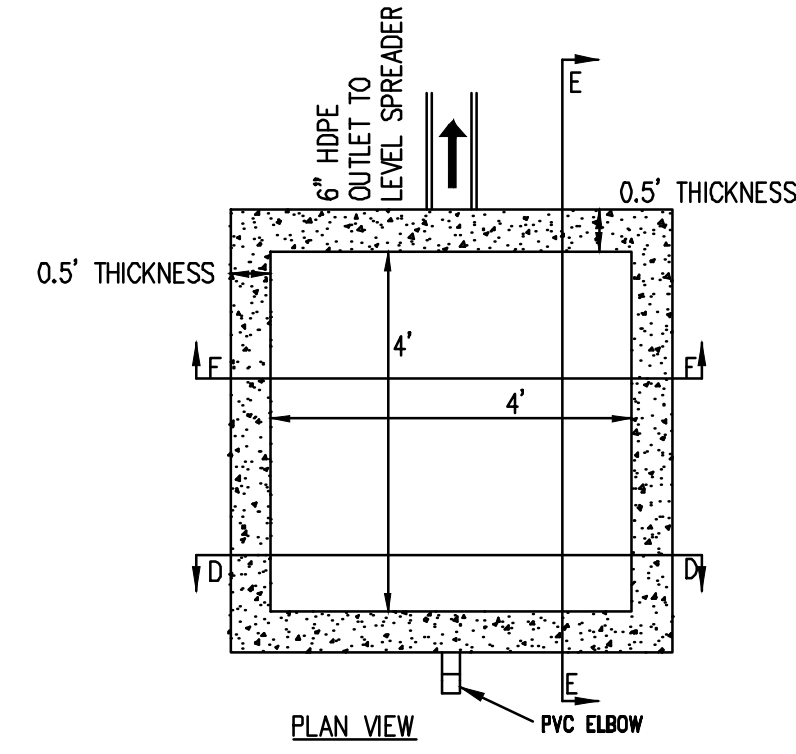
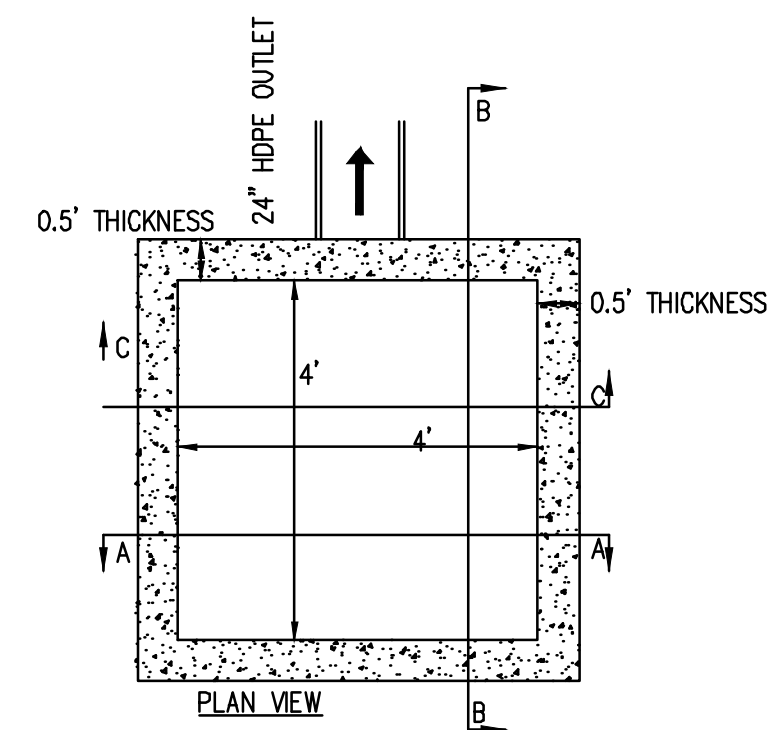
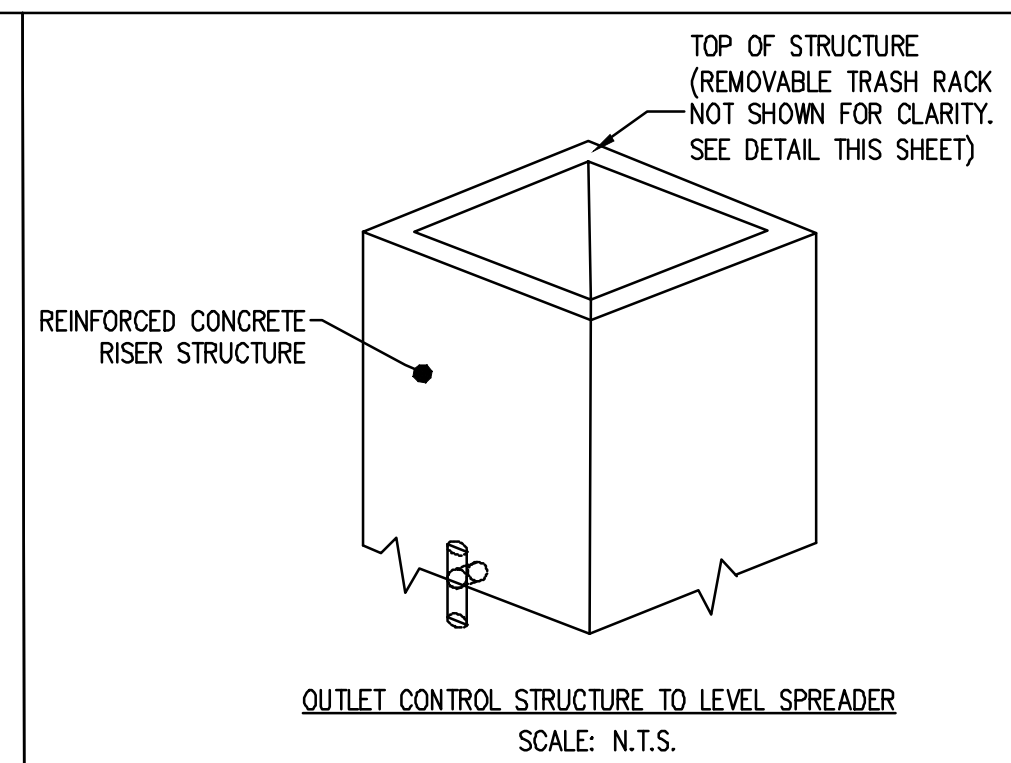
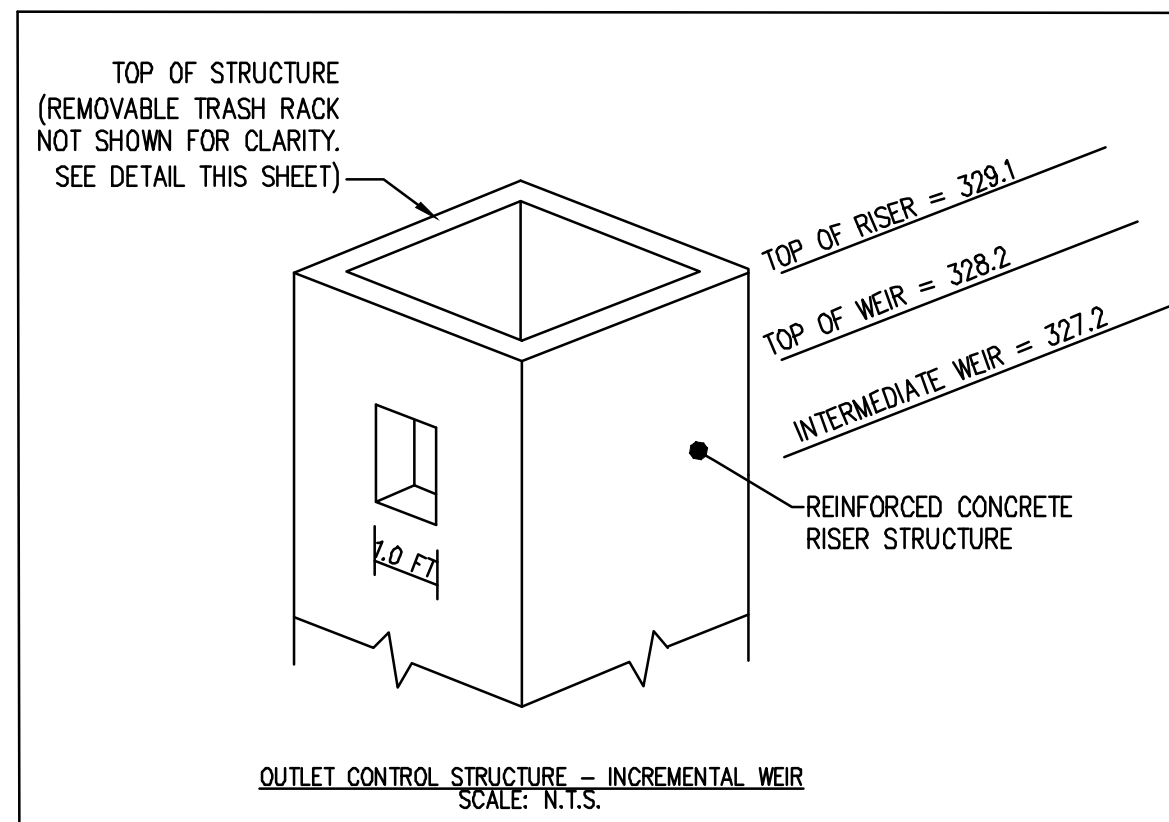
PLAN STATUS

6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE DESCRIPTION

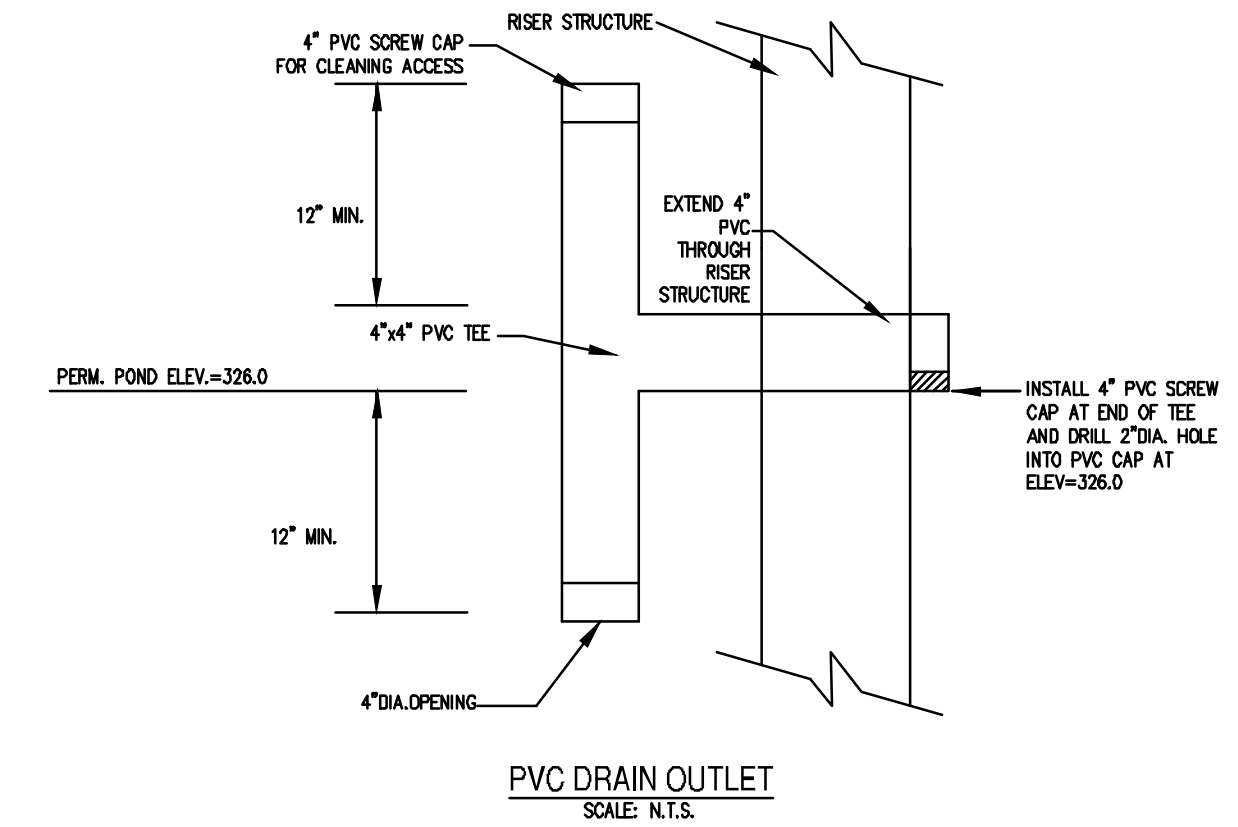
MEL DESIGN	MEL DRAWN	XXX CHKD
SCALE	H: 1" = 30'	V: 1" = 30'
JOB No.	220094-01-002	220097-01-002
DATE	June 20, 2022	
FILE No.	220094-01-002	220097-01-002

SHEET **C6.6**

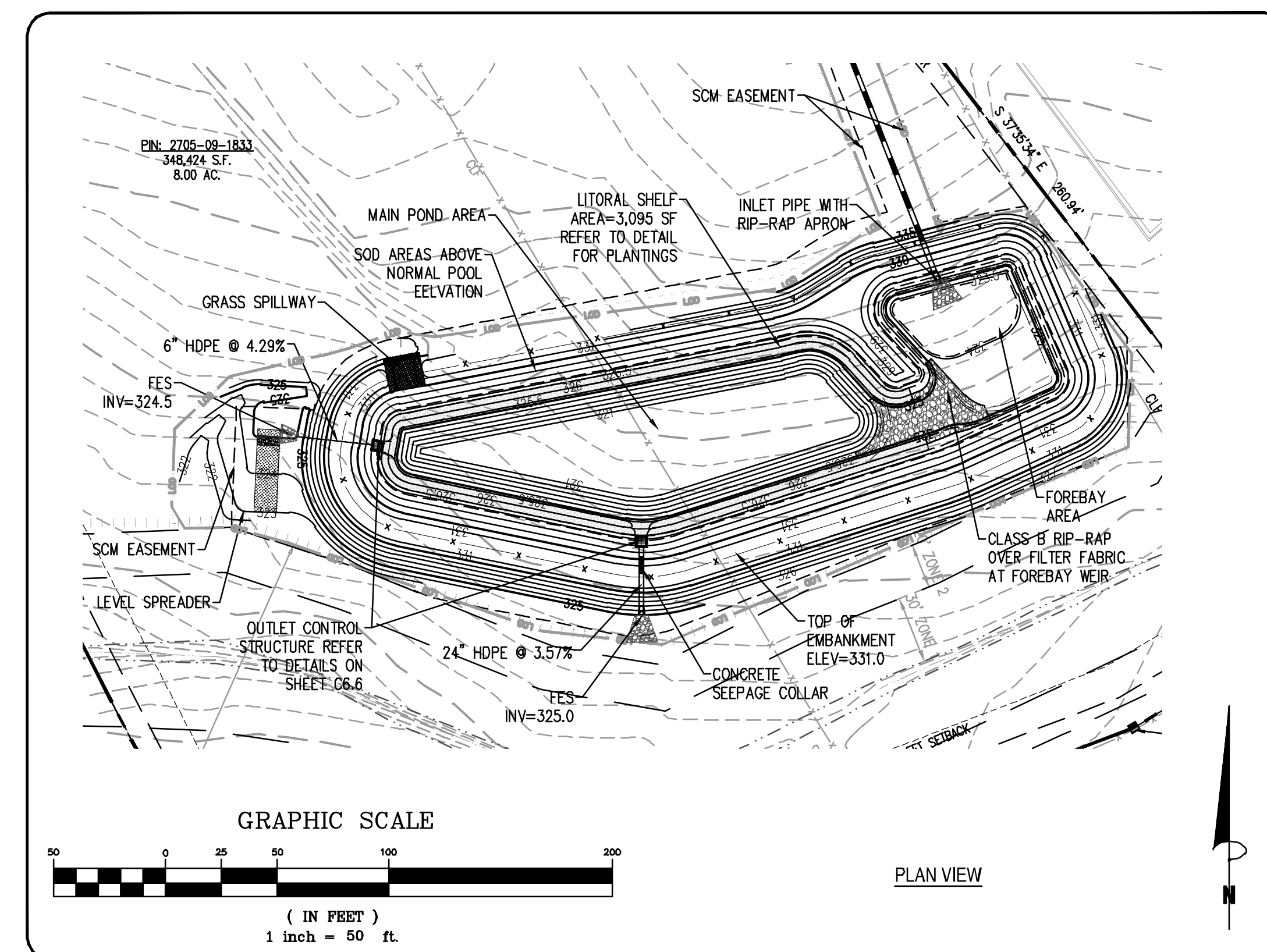
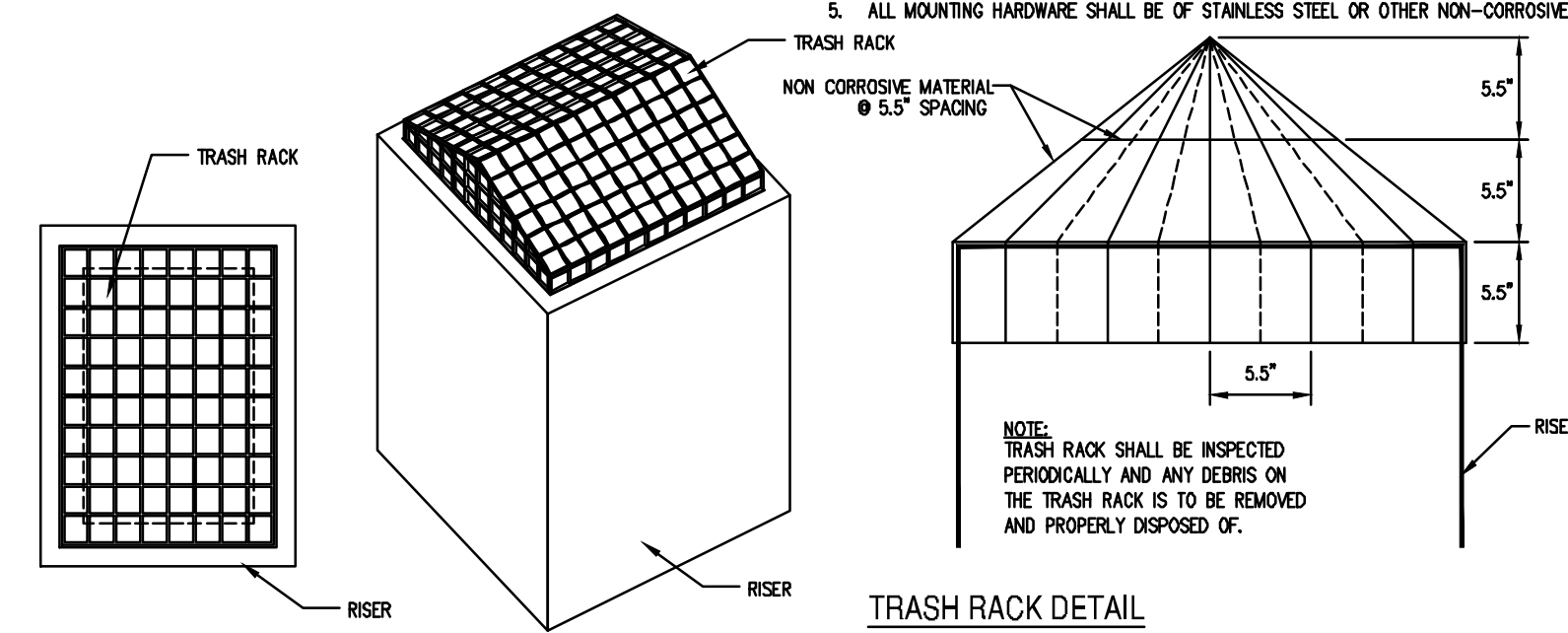


#4 REBAR @ 12" OC IN FRONT & REAR FACE OF COLLAR. REBAR TO HAVE 3" MIN. CONC. COVER FROM EDGE OR FACE OF COLLAR

- NOTES:
1. ALL CONCRETE TO BE 3000 PSI NON-FLY ASH.
 2. APPLY 2" THICK WRAP OF ASPHALTIC CEMENT AROUND DISCHARGE PIPE 6" BEYOND PLANNED SEEPAGE COLLAR ON BOTH SIDES.
 3. APPLY ADDITIONAL ASPHALTIC CEMENT AT PIPE/SEEPAGE COLLAR INTERFACE ON UPSTREAM FACES.
 4. TO BE FIELD INSPECTED BY GEOTECHNICAL ENGINEER. ASPHALTIC CEMENT TO MEET OR EXCEED FEDERAL SPECIFICATION SS-153 TYPE 1. ASTM-D-2822-75 TYPE 1.



- NOTES:
1. SEE DESIGN PLANS FOR SPECIFIED DIMENSIONS OF RISER.
 2. TRASH RACK DIMENSION CRITERIA SPECIFIED IS APPROXIMATE AND VARIES BY MANUFACTURER.
 3. INSTALLATION OF TRASH RACK SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 4. ALL COMPONENTS OF TRASH RACK SHALL BE OF STAINLESS STEEL OR OTHER NON-CORROSIVE MATERIAL.
 5. ALL MOUNTING HARDWARE SHALL BE OF STAINLESS STEEL OR OTHER NON-CORROSIVE MATERIAL.



Bowman

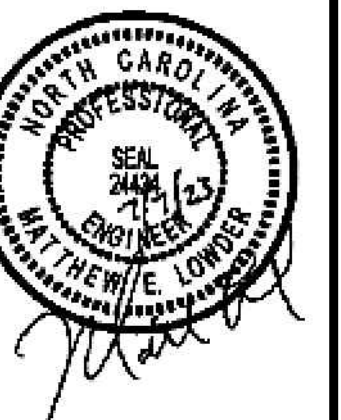
Bowman North Carolina Ltd.
4006 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919)555-6570
bowman.com
Bowman North Carolina Ltd.

STORMWATER MANAGEMENT DETAILS

Rocket Wash
Arendell Ave
Zebulon, NC

Project ID#796479 Wake County

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION

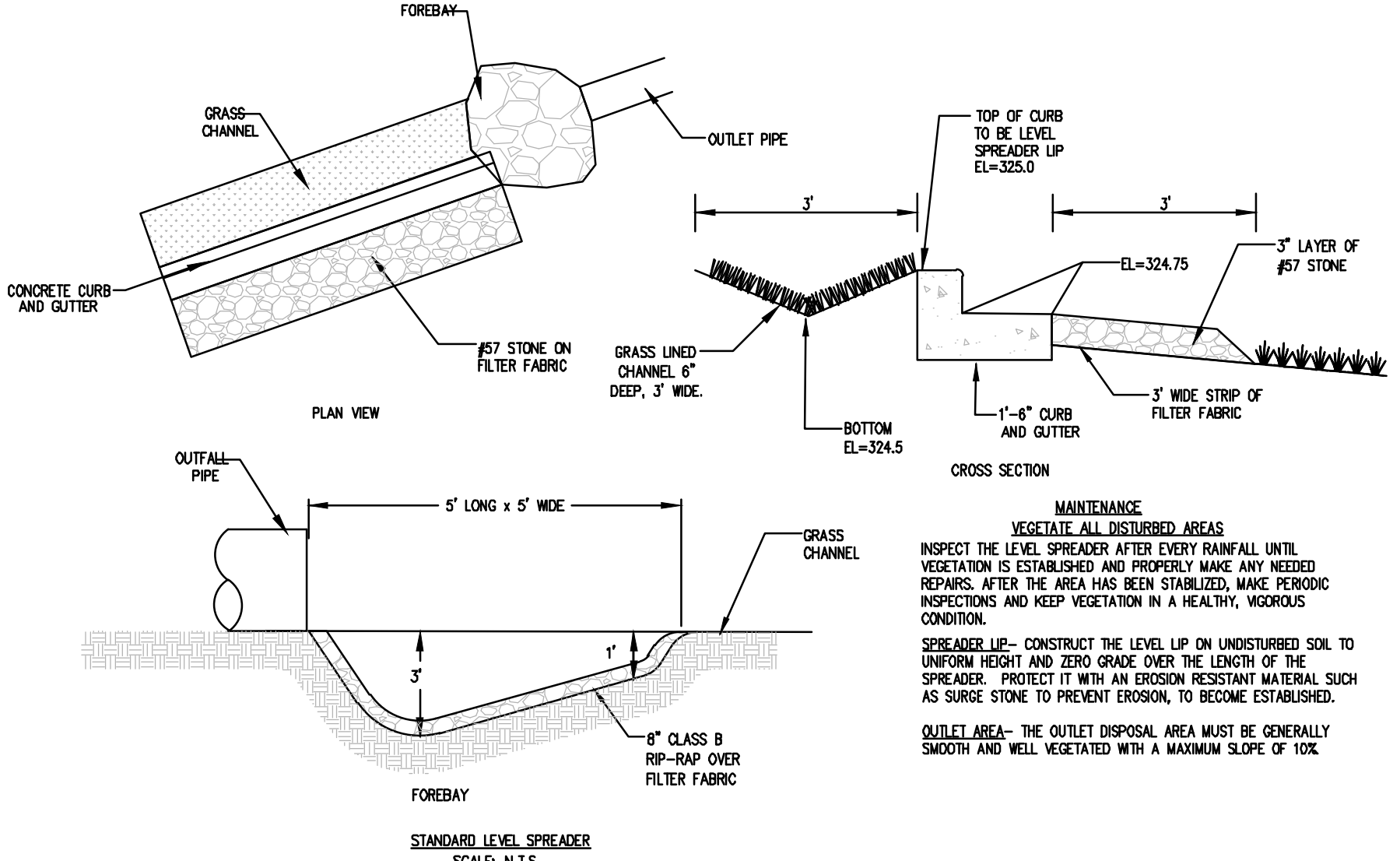


DATE	DESCRIPTION
6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

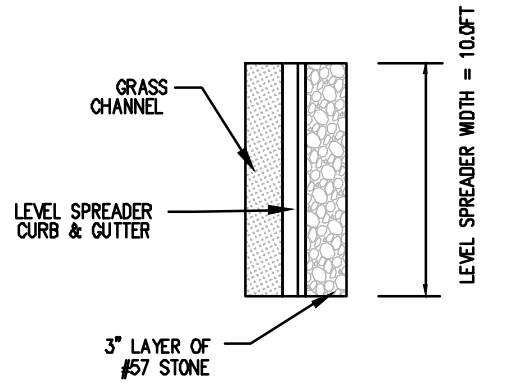
DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN
SCALE	XXX CHKD
JOB No.	V: 1" = XXX'
DATE	220094-01-002
FILE No.	220097-01-002

SHEET C6.7

SCM element:	Potential problems:	How to remediate the problem:
The entire wetland	Trash/debris is present.	Remove the trash/debris.
The perimeter of wetland	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
Inlet device	The inlet pipe is clogged (if applicable).	Unclog the pipe. Dispose of the sediment in a location where it will not cause impacts to streams or the SCM.
	The inlet pipe is cracked or otherwise damaged (if applicable).	Repair or replace the pipe.
Forebay	Erosion is occurring in the swale (if applicable).	Regrade the swale if necessary and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Sediment has accumulated in the forebay to a depth of less than 15" or that inhibits the forebay from functioning well.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
Deep pool, shallow water and shallow land areas	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If a pesticide is used, wipe it on the plants rather than spraying.
Embayment	Algal growth covers over 30% of the deep pool and shallow water areas.	Consult a professional to remove and control the algal growth.
	Cattails, phragmites or other invasive plants cover 30% of the deep pool and shallow water areas.	Remove the invasive plants by hand or by wiping them with pesticide (do not spray) – consult a professional.
	The temporary inundation zone remains flooded more than 5 days after a storm event.	Unclog the outlet device immediately.
Micropool	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if necessary.
	Sediment has accumulated and reduced the depth to 75% of the original design depth of the deep pools.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
	A tree has started to grow on the embankment.	If tree is <6" in diameter, remove the tree. If the tree is >6" in diameter, consult a dam safety specialist to remove the tree.
Outlet Structure	An annual inspection by an appropriate professional shows that the embankment needs repair.	Make all needed repairs.
	Evidence of muskrat or beaver activity is present.	Consult a professional to remove muskrats or beavers and repair any holes or erosion.
Receiving water	Sediment has accumulated and reduced the depth to 75% of the original design depth.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
Receiving water	The outlet device is damaged.	Repair or replace the outlet device.
	Erosion or other signs of damage have occurred at the outlet.	Repair the damage and improve the flow dissipation structure.
Receiving water	Discharges from the wetland are causing erosion or sedimentation in the receiving water.	Contact the local NCDQ Regional Office.



- CONSTRUCTION SPECIFICATIONS**
1. THE MATTING SHOULD BE A MINIMUM OF 4 FEET WIDE EXTENDING 6 INCHES OVER THE LIP AND BURIED 6 INCHES DEEP IN A VERTICAL TRENCH ON THE LOWER EDGE. THE UPPER EDGE SHOULD BUTT AGAINST SMOOTHLY CUT SOIL AND BE SECURELY HELD IN PLACE WITH CLOSELY SPACED HEAVY DUTY WIRE STAPLES AT LEAST 12 INCHES LONG.
 2. ENSURE THAT THE SPREADER IS LEVEL, FOR UNIFORM SPREADING OF STORM RUNOFF.
 3. CONSTRUCT THE LEVEL SPREADER ON UNDISTURBED SOIL (NOT ON FILL).
 4. CONSTRUCT A 20 FOOT TRANSITION SECTION FROM THE DIVERSION CHANNEL TO BLEND SMOOTHLY WITH THE WIDTH AND DEPTH OF THE LEVEL SPREADER.
 5. DISPENSE RUNOFF FROM THE SPREADER ACROSS A PROPERLY STABILIZED SLOPE. NOT TO EXCEED 10% MAKE SURE THAT THE SLOPE IS SUFFICIENTLY SMOOTH TO KEEP THE FLOW FROM CONCENTRATING.
 6. IMMEDIATELY AFTER ITS CONSTRUCTION, APPROPRIATELY SEED AND MULCH THE ENTIRE DISTURBED AREA OF THE LEVEL SPREADER.



LEVEL SPREADER
SCALE: N.T.S.

GRASS NOTE:
GRASS SHALL BE EITHER HYBRID BERMU DA GRASS OR CENTIPEDE

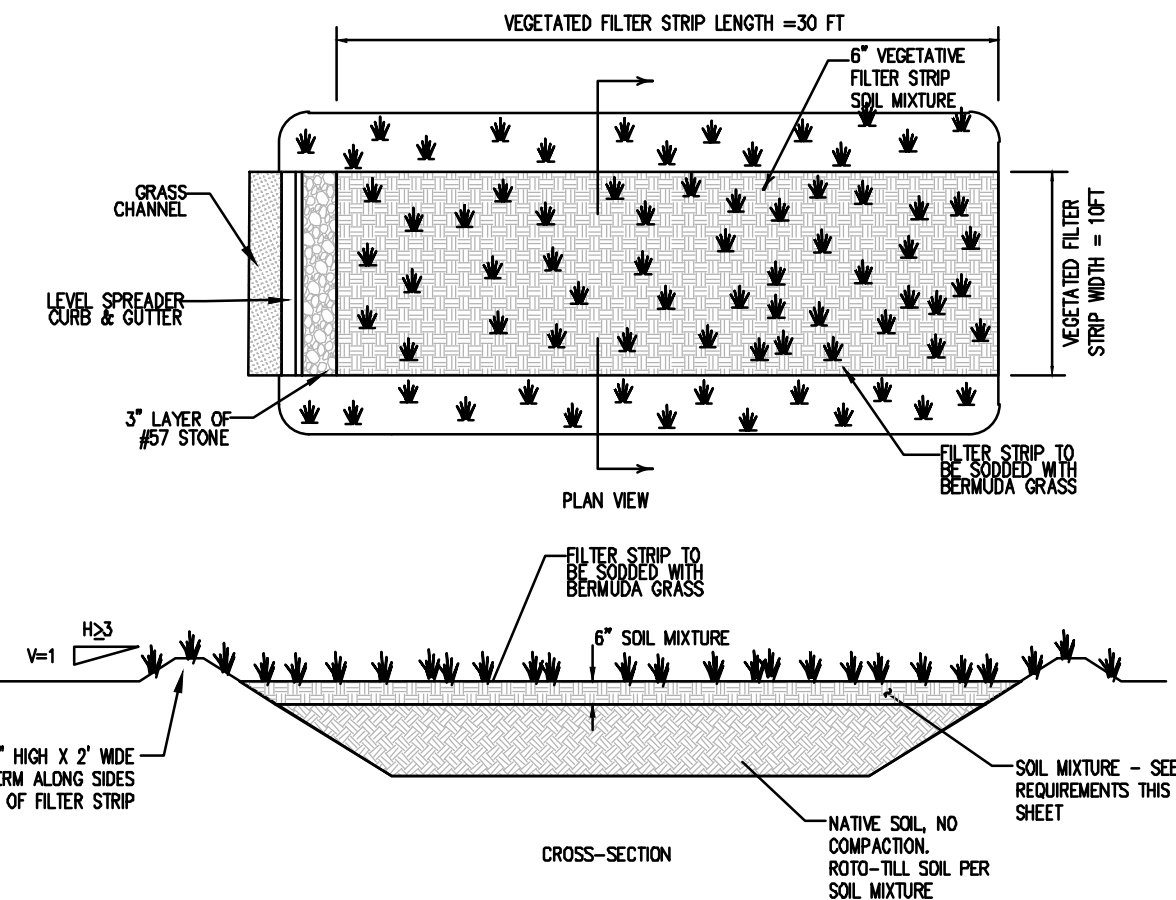
VEGETATIVE FILTER STRIP - SOIL MIXTURE

ITEM	PERCENT BY WEIGHT	MATERIAL
SAND	85-88%	CONSTRUCTION SAND
FINES	8%-12%	SILT
ORGANIC MATTER	3%-5%	COMPOST/PEAT MOSS

SOIL MIXTURE SHALL BE PLACED AND GRADED USING LOW GROUND-CONTACT PRESSURE EQUIPMENT OR BY EXCAVATORS AND/OR GRADERS OPERATING ON THE GROUND ADJACENT TO THE VEGETATIVE FILTER STRIP FACILITY. NO HEAVY EQUIPMENT SHALL BE USED WITHIN THE PERIMETER OF THE VEGETATIVE FILTER STRIP FACILITY BEFORE, DURING, OR AFTER THE PLACEMENT OF THE SOIL MIXTURE. THE SOIL MIXTURE SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 4 INCHES FOR THE ENTIRE AREA OF THE VEGETATIVE FILTER STRIP FACILITY. IF THE SOIL MIXTURE BECOMES CONTAMINATED DURING THE CONSTRUCTION OF THE VEGETATIVE FILTER STRIP FACILITY, THE CONTAMINATED MATERIAL SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED MATERIAL AT NO ADDITIONAL COST. FINAL GRADING OF THE VEGETATIVE FILTER STRIP SHALL BE PERFORMED AFTER A 24-HOUR SETTLING PERIOD. FINAL ELEVATIONS SHALL BE WITHIN 2 INCHES OF ELEVATIONS SHOWN ON THE CONTRACT PLANS.

THE SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES EXCLUDING MULCH. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE VEGETATIVE FILTER STRIP AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.

PRIOR TO PLACING THE SOIL MIXTURE, THE BOTTOM OF THE EXCAVATION SHALL BE ROTO-TILLED TO A MINIMUM DEPTH OF 6 INCHES TO ALLEVIATE ANY COMPACTION OF THE FACILITY BOTTOM. ANY SUBSTITUTED METHOD FOR ROTO-TILLING MUST BE APPROVED BY THE ENGINEER PRIOR TO USE. ANY PONDING WATER SHALL BE REMOVED FROM THE BOTTOM OF THE FACILITY AND THE SOIL SHALL BE FRABLE BEFORE ROTO-TILLING.

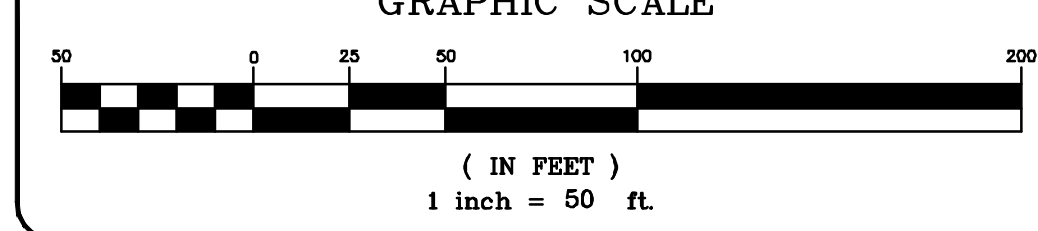
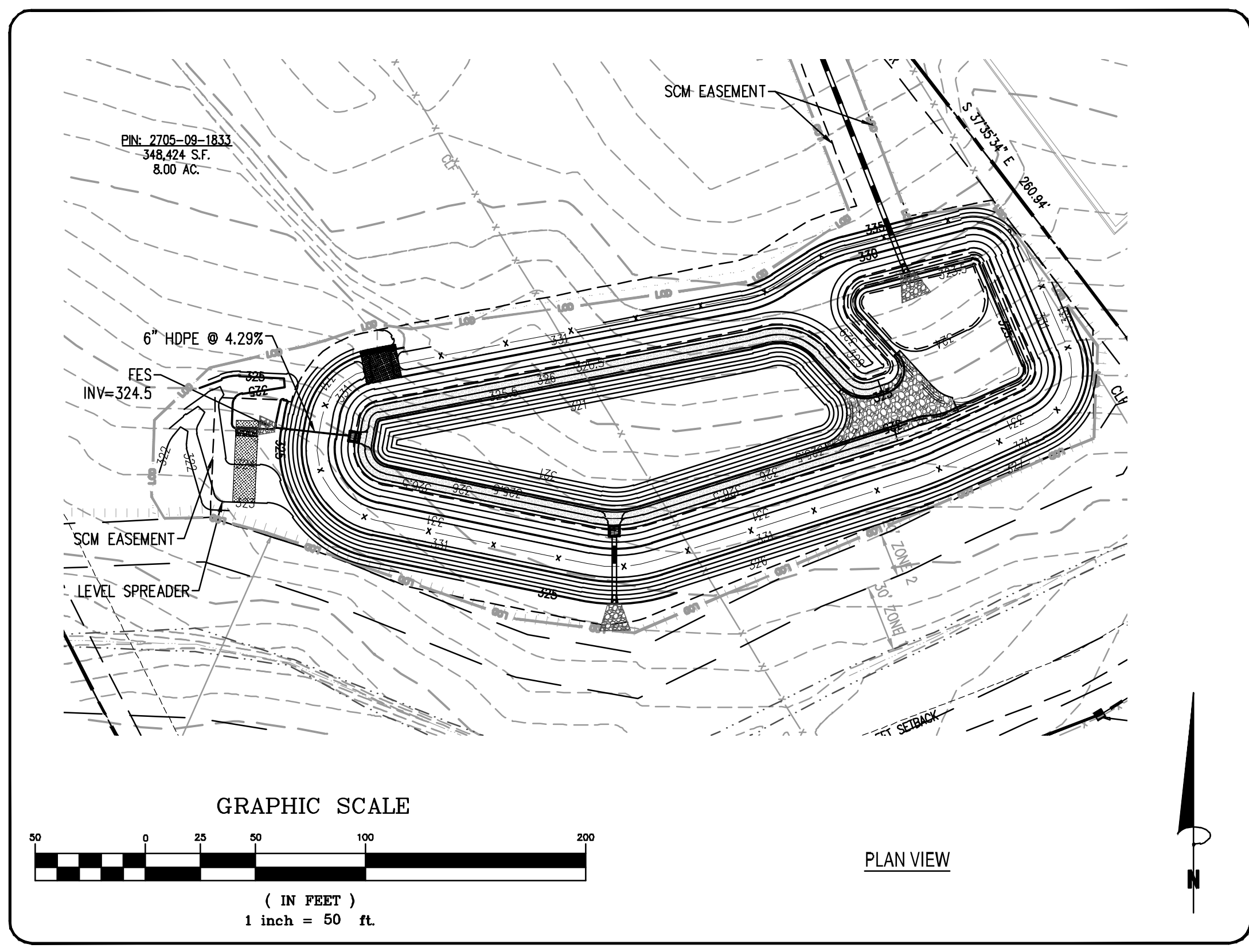


VEGETATIVE FILTER STRIP
SCALE: N.T.S.

OPERATION & MAINTENANCE

North Carolina storm water rules require annual inspections by the regulating agency of level spreader-filter strip areas as a minimum. More frequent inspections by the land owner or system operator are strongly encouraged to ensure the proper operation of level spreader-filter strip areas.

- A. Rainfall Event**
 1. Inspect the SCM after every runoff-producing rainfall event.
- B. Monthly Inspection**
 1. Inspect the SCM monthly
 2. Check the level spreader-filter strip area side slopes; remove trash and repair eroded areas before the next rainfall event.
 3. Check the vegetation and rock filters for sediment accumulation, erosion and proper operation of the flow spreader mechanism and repair as necessary.
 4. Visually inspect and repair soil erosion on a monthly basis.
 5. Remove any silt or debris that has accumulated on the filter.
 6. Remove and replace all dead and diseased vegetation considered beyond treatment. This should be done twice a year, once in the spring and once in the fall. Treat all diseased trees and shrubs that are not beyond treatment as needed.
- C. Quarterly Inspection**
 1. Inspect the collection system (i.e. catch basins, pipes and grass swales) for proper functioning. Clear accumulated trash from basin aprons and basin bottoms. Check piping for obstructions.
 2. Check SCM inlet pipes for undercutting, replace rip-rap and repair broken pipes.
 3. Remove grassed swales, including the vegetated filter if applicable, twice a year as necessary. Repair eroded areas immediately.
- D. Six Month Inspection**
 1. Remove accumulated sediment from the bottom of the outlet structure or other areas where accumulated sediment is noted.
 2. Inspect the embankment taking note of any wet areas where water may be seeping through the soil.
- E. General Inspection**
 1. Maximum grass height is to be 6in.
 2. No woody vegetation shall be allowed to grow in the bio-retention area.
 3. Debris shall be removed from blocking the inlet and outlet structures and from areas of potential clogging.
 4. Periodic removal of dead vegetation shall be accomplished.
 5. All components of the level spreader-filter strip system must be kept in good working order.



Bowman North Carolina Ltd.
4006 BARRRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 555-6570
bowman.com
Bowman North Carolina Ltd.

STORMWATER MANAGEMENT DETAILS
Rocket Wash
Arendell Ave
Zebulon, NC
Project ID#796479
Wake County

PRELIMINARY
DO NOT
USE FOR
CONSTRUCTION

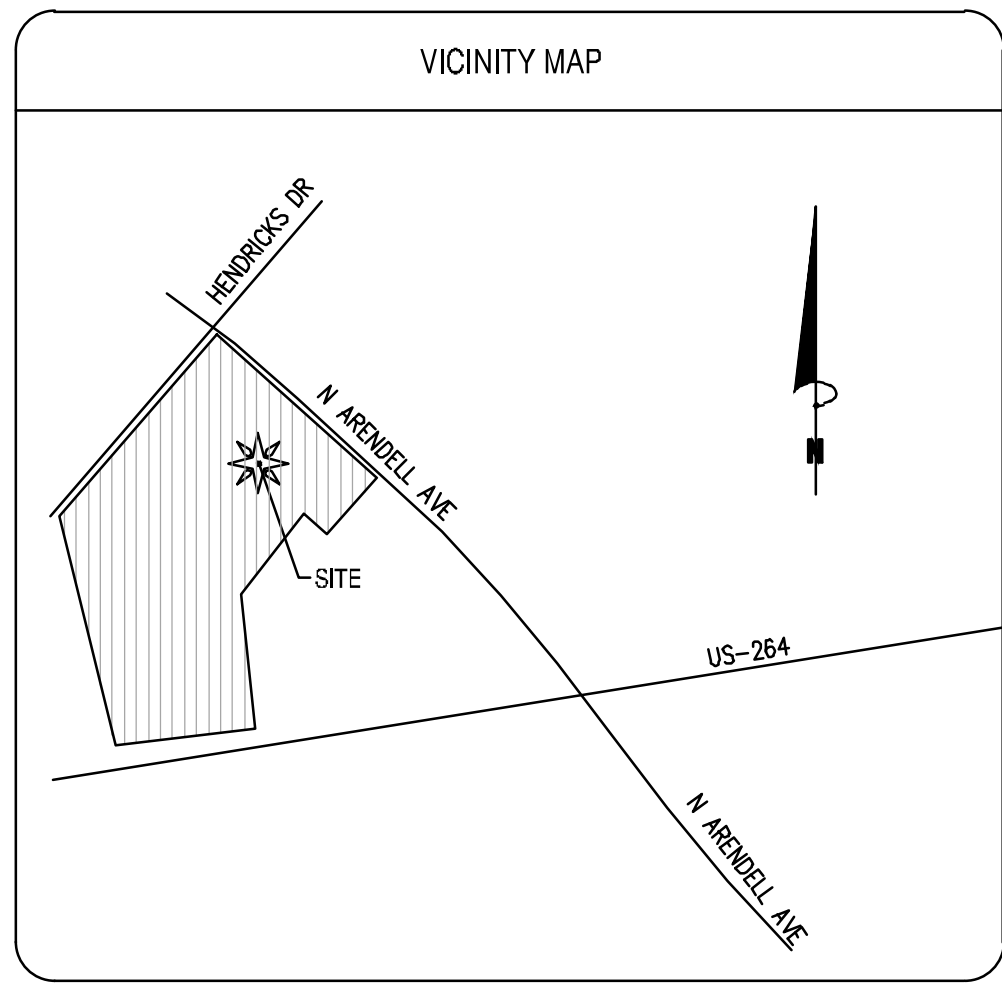


PLAN STATUS

6/20/22	SITE PLAN SUBMITTAL
10/21/22	PER TOWN REVIEW
4/28/23	PER TOWN REVIEW
7/07/23	WAKE COUNTY SUBMISSION

DATE	DESCRIPTION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H: 1" = XXX' V: 1" = XXX'
JOB No.	220094-01-002 220097-01-002
DATE	June 20, 2022
FILE No.	220094-01-002 220097-01-002

SHEET **C6.8**



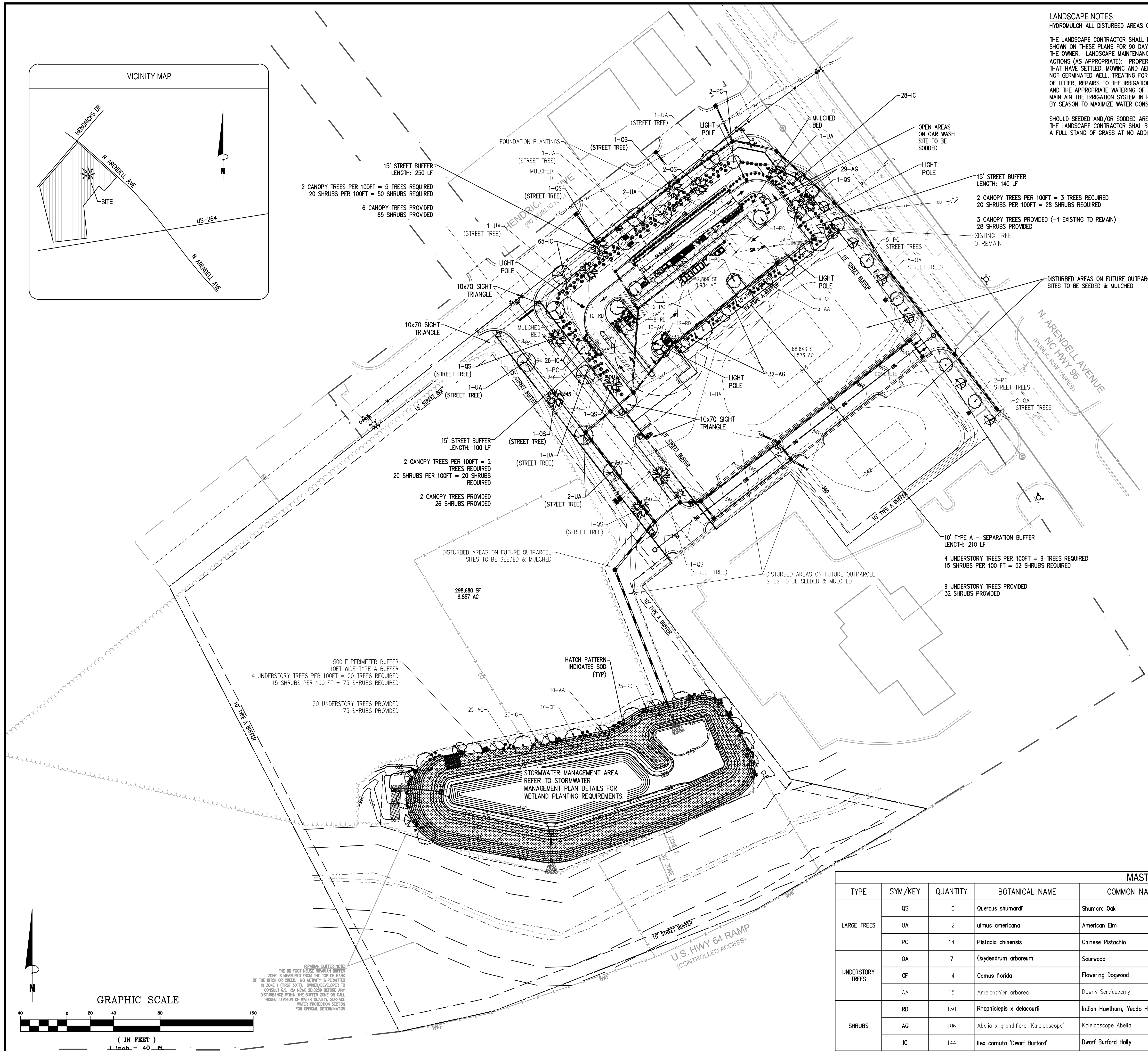
LANDSCAPE NOTES:
 HYDROMULCH ALL DISTURBED AREAS OUTSIDE OF PROPERTY LIMITS (UNLESS SHOWN AS SOD).
 THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTling OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES, REPLACEMENT OF MULCH, REMOVAL OF UTILER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION.
 SHOULD SEEDDED AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL STAND OF GRASS AT NO ADDITIONAL COST TO THE OWNER.



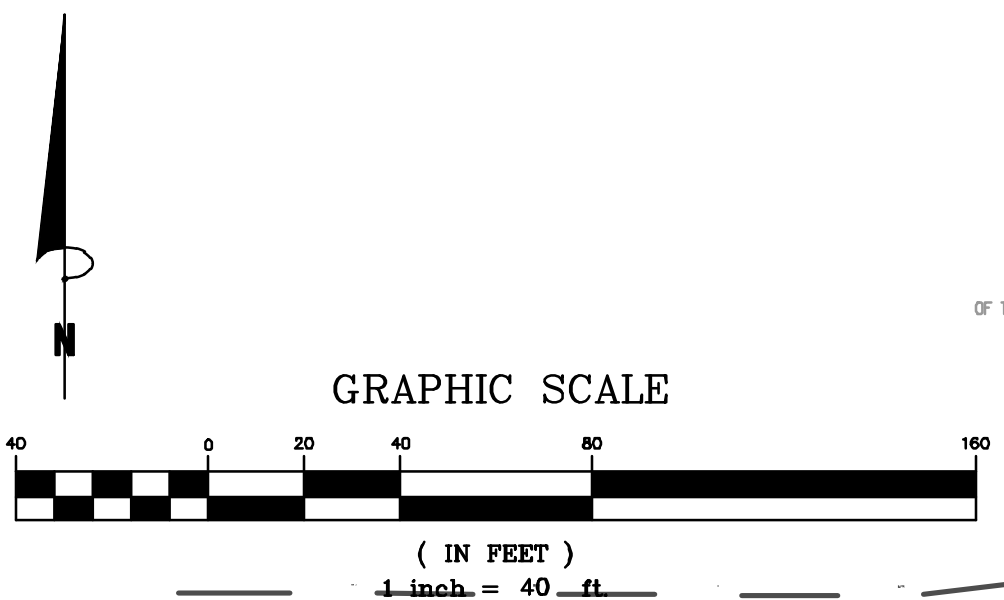
IRRIGATION NOTE:
 IRRIGATION SYSTEM TO BE A DESIGN-BUILD SYSTEM PROVIDED BY THE CONTRACTOR. IRRIGATION HEADS TO BE A MINIMUM OF 3" FROM EDGE OF CURB LINE. ALL LANDSCAPE BEDS TO HAVE CUT EDGE OR COMMERCIAL EDGING MATERIAL INSTALLED FULLY SEPARATING THE MULCH BED FROM ADJACENT LAWN AREA. ANY TREES OVER 2" CALIPER MUST BE STAKED AND TIED.

- LANDSCAPING NOTES:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING ALL REQUIRED LANDSCAPING FOR THE ENTIRE SITE, TO INCLUDE BUT NOT LIMITED TO: SODDED/SEEDDED AREAS, SHRUB BEDS, PARKING LOT ISLANDS, ROADSIDE SIGN BASE(S) AND MONUMENT PLANTERS.
 - CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGARDING LANDSCAPING.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A HEALTHY STAND OF GRASS ON ALL SEEDDED AREAS.
 - IN THE EVENT THAT PLANTING BEDS AND MULCH ARE REQUIRED, THE CONTRACTOR SHALL INSTALL BLACK FABRIC WEED BLOCK LANDSCAPE MESH UNDER THE MULCH TO PREVENT WEED GROWTH.
 - CONTRACTOR SHALL PROVIDE NATURAL TOPSOIL THAT IS FERTILE, FRIABLE, WITHOUT MIXTURE OF SUBSOIL MATERIALS, AND OBTAINED FROM A WELL DRAINED, AVAILABLE SITE. IT SHALL NOT CONTAIN SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL BE SCREENED AND FREE FROM CLAY, LUMPS, STONES, ROOTS, PLANTS, OR SIMILAR SUBSTANCES 1" OR MORE IN DIAMETER, DEBRIS, OR OTHER OBJECTS WHICH MIGHT BE A HINDERANCE TO PLANTING OPERATIONS. TOPSOIL SHALL CONTAIN AT LEAST 4-6% ORGANIC MATTER BY WEIGHT AND HAVE A PH RANGE OF 5.5 TO 7.0.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATERING AND THE MAINTENANCE OF ALL LANDSCAPED AREAS UNTIL THE LATER OF: (a) THIRTY (30) DAYS FOLLOWING THE PLANTING OF THE GRASS AND SHRUBS, OR (b) THE DATE THAT BUILDINGS OPEN FOR BUSINESS TO THE PUBLIC.
 - GENERAL CONTRACTOR IS TO CLEAN ENTIRE SITE OF ALL CONSTRUCTION DEBRIS AND RAKE ALL GRASS AREAS.
 - PROVIDE LANDSCAPE PLANS TO OWNER AND AS REQUIRED BY LOCAL JURISDICTION TO THE BLDG. DEPT. FOR REVIEW AND APPROVAL PRIOR TO START OF WORK.
 - ALL LANDSCAPING, TREES, SHRUBS, ETC. SHALL NOT INTERFERE WITH THE VISIBILITY OF PROJECT SIGNAGE.
 - CONTRACTOR TO VERIFY QUANTITIES PRIOR TO COMMENCING WORK.
 - OPEN AREAS WITHIN PLANTING BEDS SHALL BE MULCHED.

- GENERAL LANDSCAPE NOTES:**
- ANY DISTURBED AREAS NOT SCHEDULED FOR HARDSCAPE, PLANTINGS, OR MULCH SHALL BE SEEDDED LAWN.
 - NO PLANT SUBSTITUTIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE.
 - ALL PLANT AND BED LINE LOCATIONS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
 - ALL PLANTINGS SHALL BE INSTALLED WITH THE SPECIFIED LAYER OF MULCH. REFERENCE DETAILS AND SPECIFICATIONS FOR DEPTH AND TYPE OF MULCH. ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS AND SHALL BE SEPARATED FROM TURF GRASS AREAS.
 - GRASS COVERAGE TO EXTEND FROM PROPERTY LINES TO BACK OF CITY SIDEWALKS AND/OR CURBS.
 - MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER (FOR SINGLE STEM TREES). ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 8 FEET TALL.
 - ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
 - FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 18" NEW TOPSOIL, OR TILL AND AMEND THE TOP 18" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES.
 - LARGE MATURING TREES MAY NOT BE PLANTED WHERE THERE ARE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.
 - ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS, WATER, PHONE, AND ELECTRICAL LINES.)
 - ATTENTION LANDSCAPER: NOTIFY OWNER OF ANY SIGN, POWER LINE, OR OTHER CONFLICTS BEFORE PLANTING NEW TREES.



MASTER PLANT LIST											
TYPE	SYM/KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SYMBOL	CALIPER	HEIGHT	SPREAD	ROOT	SPACING	OTHER
LARGE TREES	QS	10	<i>Quercus shumardii</i>	Shumard Oak	[Symbol]	2.5"	8' MIN		B&B	AS SHOWN	
	UA	12	<i>Ulmus americana</i>	American Elm	[Symbol]	2.5"	8' MIN		B&B	AS SHOWN	
	PC	14	<i>Pistacia chinensis</i>	Chinese Pistachio	[Symbol]	2.5"	8' MIN		B&B	AS SHOWN	
UNDERSTORY TREES	OA	7	<i>Oxydendrum arboreum</i>	Sourwood	[Symbol]	1.5"	4' MIN		B&B	AS SHOWN	
	CF	14	<i>Camus florida</i>	Flowering Dogwood	[Symbol]	1.5"	4' MIN		B&B	AS SHOWN	
	AA	15	<i>Amelanchier arborea</i>	Downy Serviceberry	[Symbol]	1.5"	4' MIN		B&B	AS SHOWN	
SHRUBS	RD	130	<i>Rhaphiolepis x delacourii</i>	Indian Hawthorn, Yeddo Hawthorn	[Symbol]	-	18" MIN		3 GAL	AS SHOWN	
	AG	106	<i>Abelia x grandiflora 'Kaleidoscope'</i>	Kaleidoscope Abelia	[Symbol]	-	18" MIN		3 GAL	AS SHOWN	
	IC	144	<i>Ilex cornuta 'Dwarf Burford'</i>	Dwarf Burford Holly	[Symbol]	-	18" MIN		3 GAL	AS SHOWN	



Bowman

Bowman North Carolina Ltd.
 4006 BARRIETT DR
 Suite 104
 RALEIGH, NC 27609
 Phone: (919) 955-6570
 bowman.com

Wake County

LANDSCAPE PLAN
 Rocket Wash
 Arendell Ave
 Project ID#796479

Zebulon, NC

PRELIMINARY
 DO NOT
 USE FOR
 CONSTRUCTION

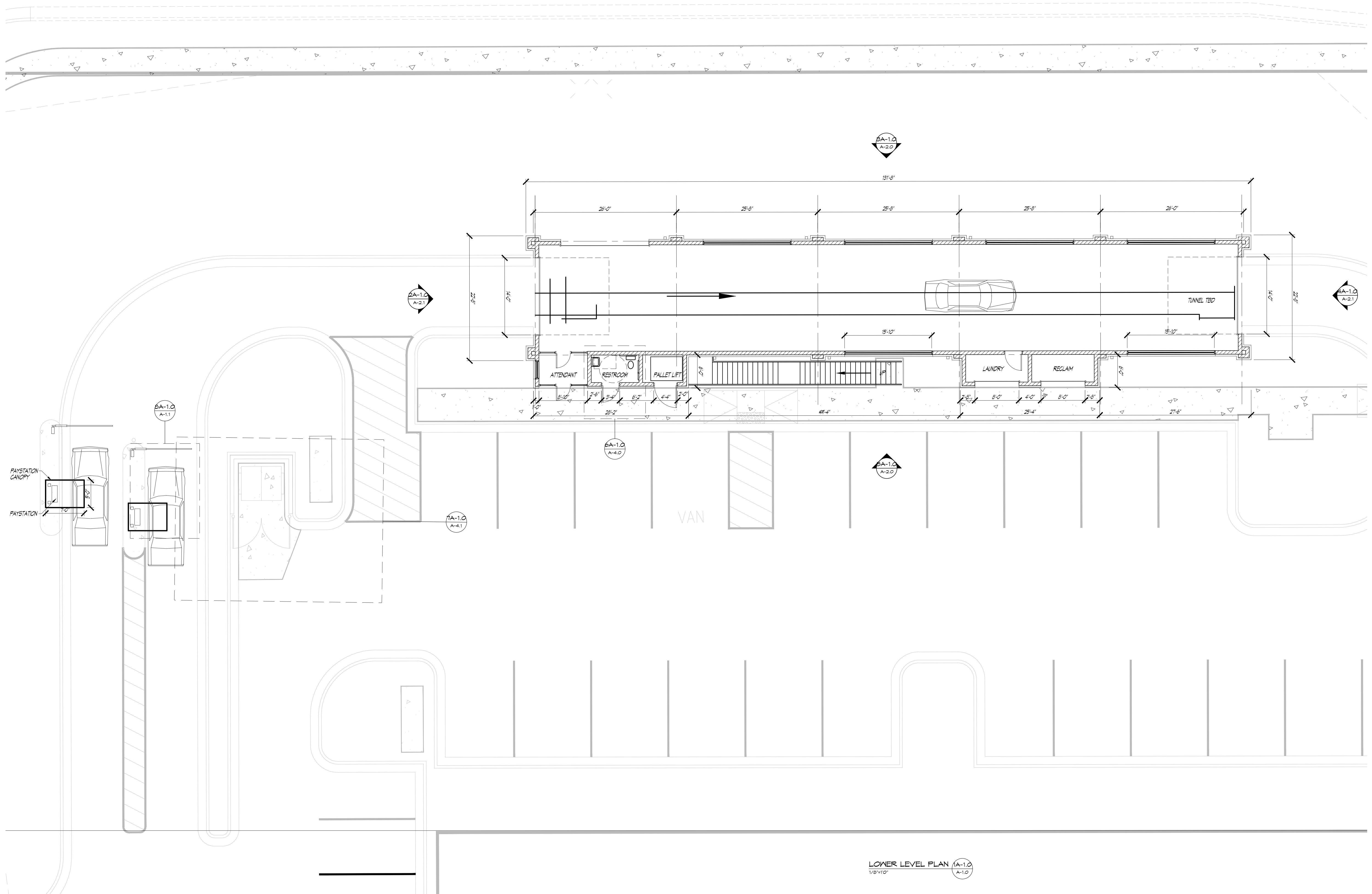


PLAN STATUS		
6/20/22	SITE PLAN SUBMITTAL	
10/21/22	PER TOWN REVIEW	
4/28/23	PER TOWN REVIEW	
7/07/23	WAKE COUNTY SUBMISSION	
DATE	DESCRIPTION	
MEL DESIGN	MEL DRAWN	XXX CHKD
SCALE	H: V:	
JOB No.	220094-01-002	220097-01-002
DATE	June 20, 2022	
FILE No.	220094-01-002	220097-01-002

SHEET C7.0

PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW ONLY

North State
Design Group, plc
101 WEST LEBANON STREET SUITE 102
MOUNT AIRY, NC 27030
OFFICE: 743-999-6734
WWW.NSDGRP.COM



CAR WASH
ROCKET WASH - ZEBULON
ZEBULON, NC
OVERALL LAYOUT

PRE-SEAL REVISIONS	BY	DATE

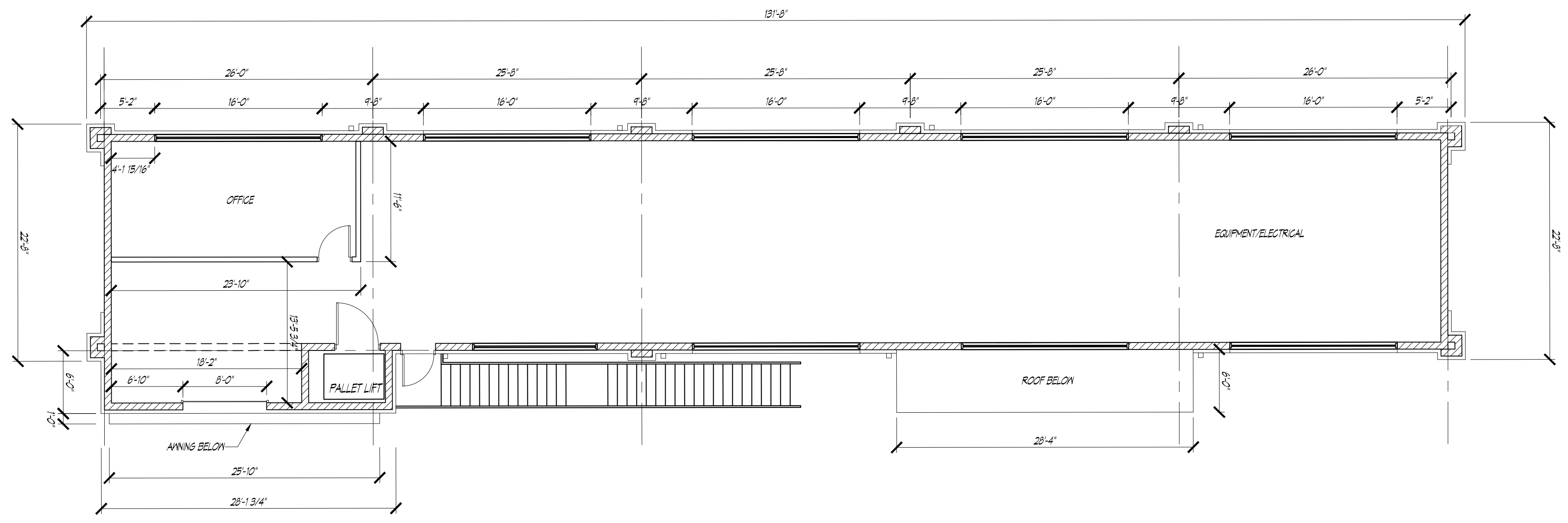
PRELIMINARY
DATE
03.14.2023
PROJECT NO.
23-1004
DRAWN BY
M. FARRINGTON

LOWER LEVEL PLAN (A-1.0)
1/8"=1'-0"

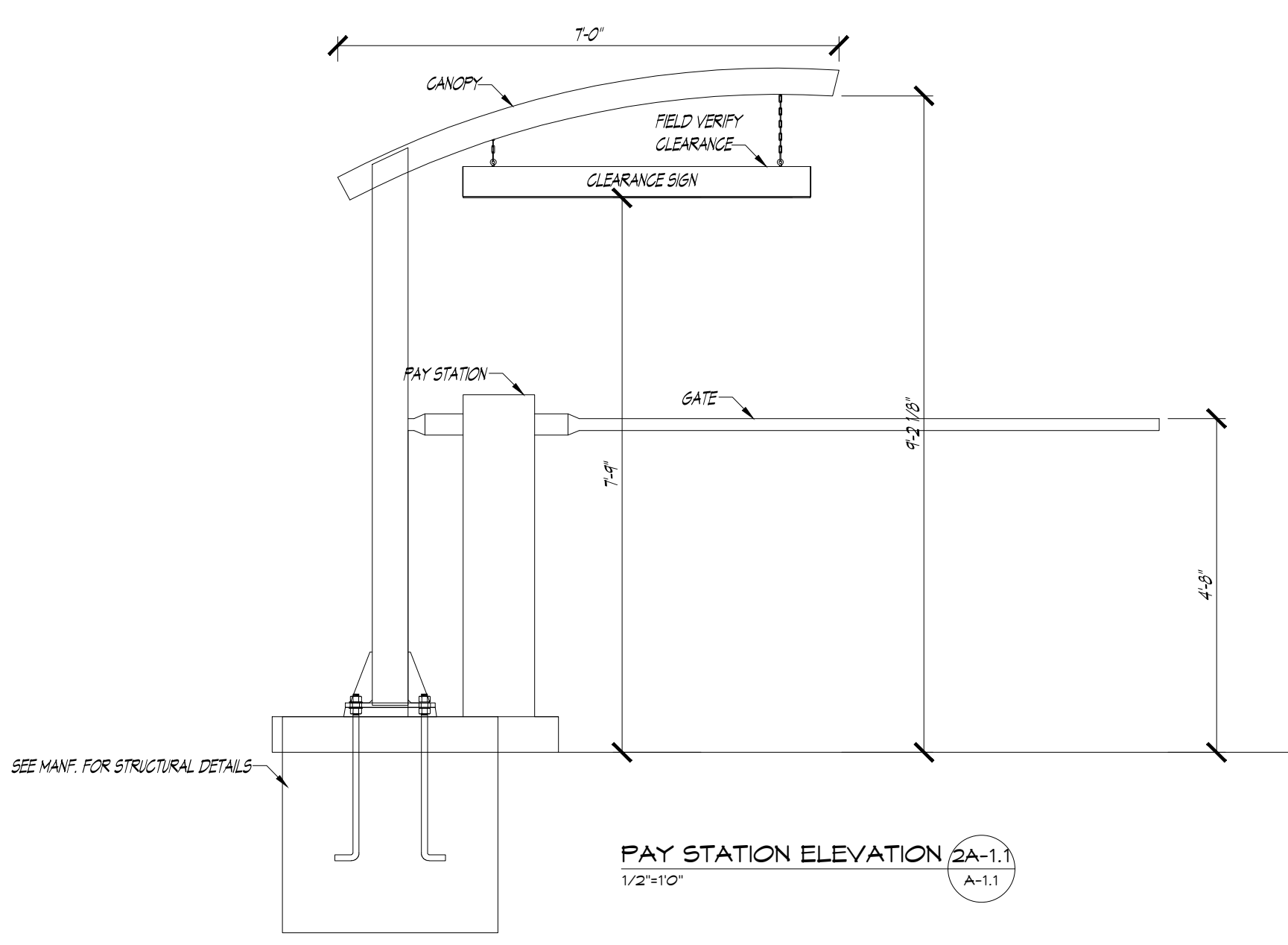
SHEET
A-1.0

PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW ONLY

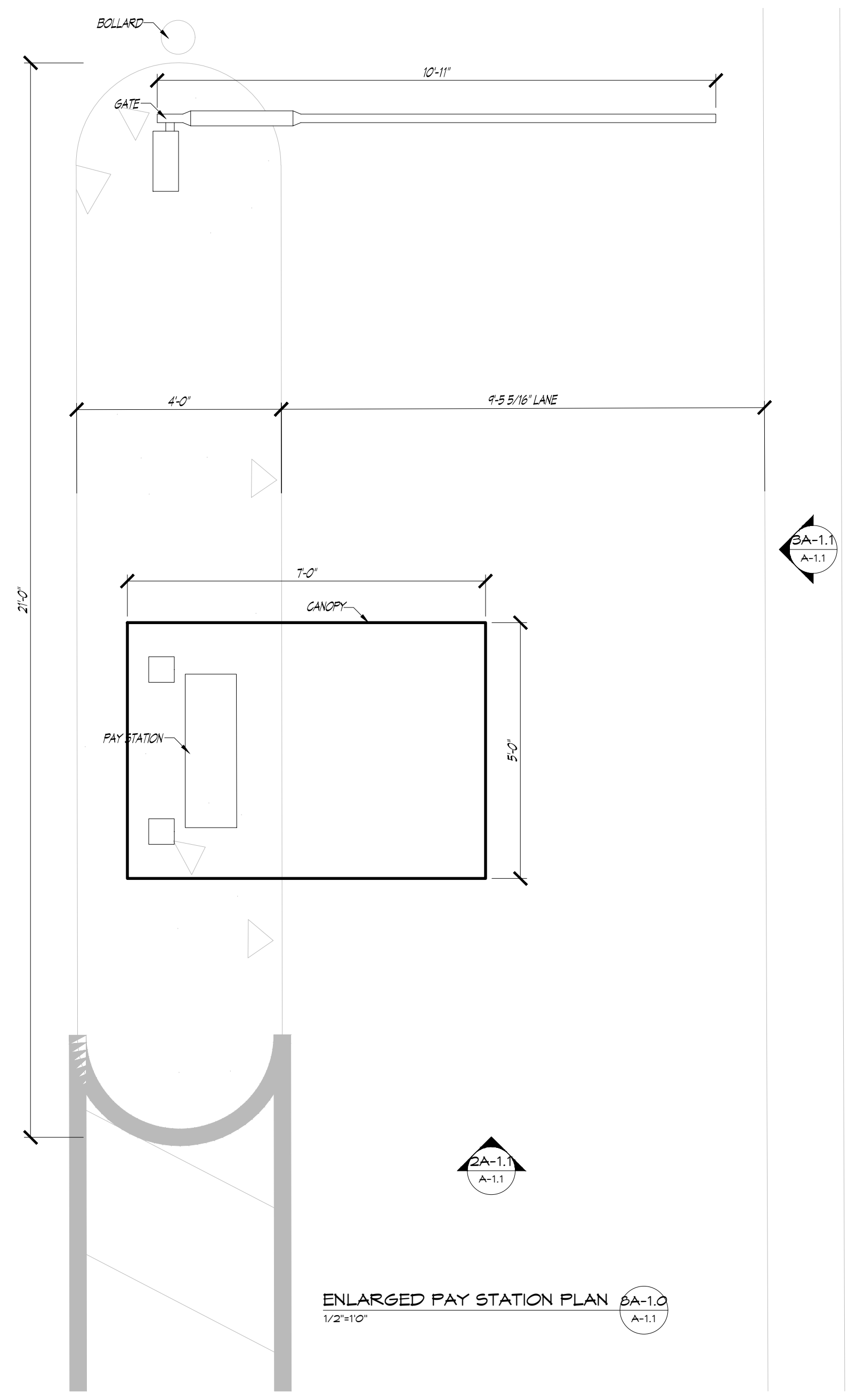
North State
Design Group, plc
101 WEST LEBANON STREET SUITE 102
MOUNT AIRY, NC 27030
OFFICE: 743-999-6734
WWW.NSDGRP.COM



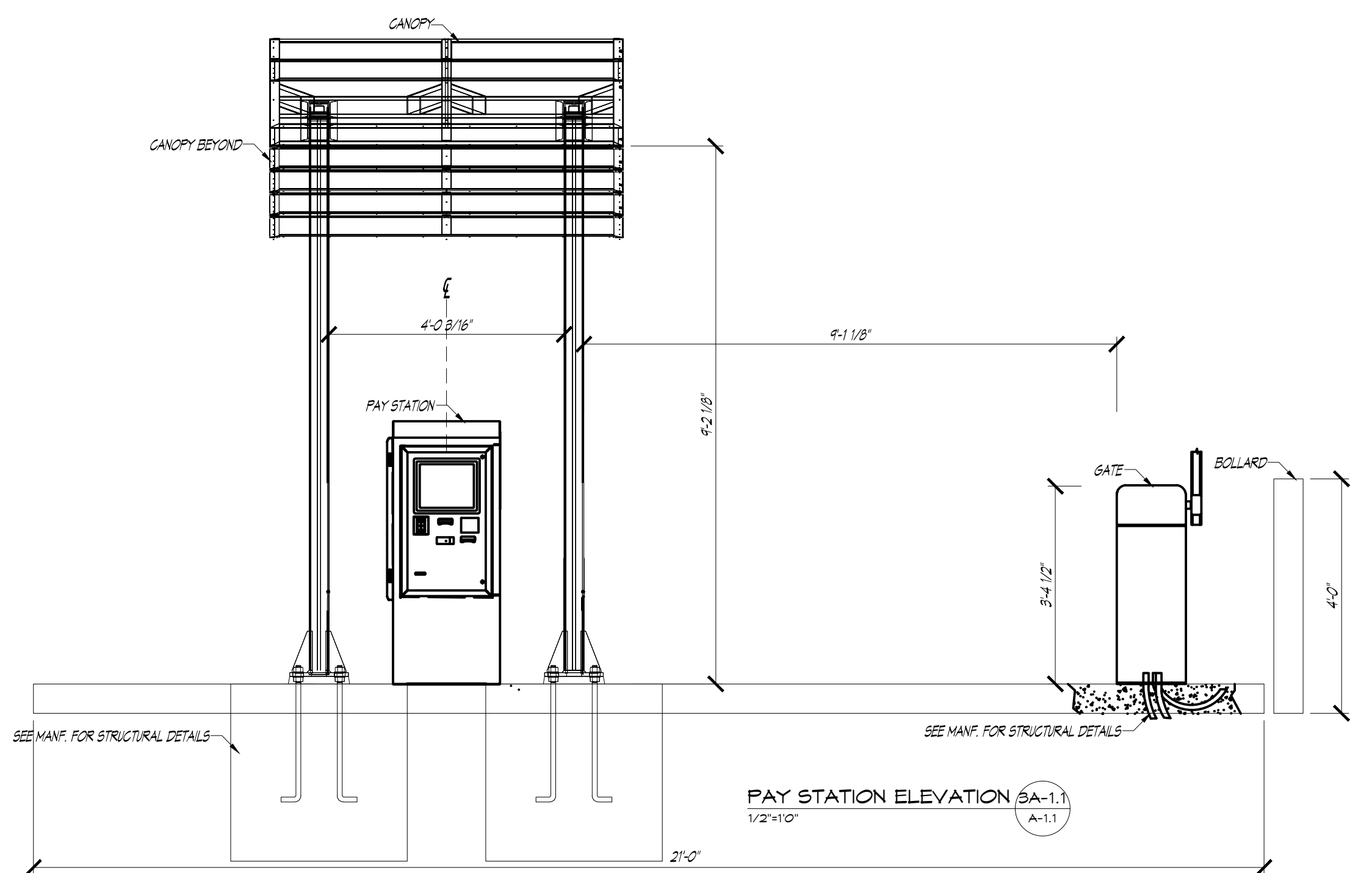
UPPER LEVEL PLAN (1A-1.1)
1/8"=1'-0"



PAY STATION ELEVATION (2A-1.1)
1/2"=1'-0"



ENLARGED PAY STATION PLAN (2A-1.0)
1/2"=1'-0"



PAY STATION ELEVATION (2A-1.1)
1/2"=1'-0"

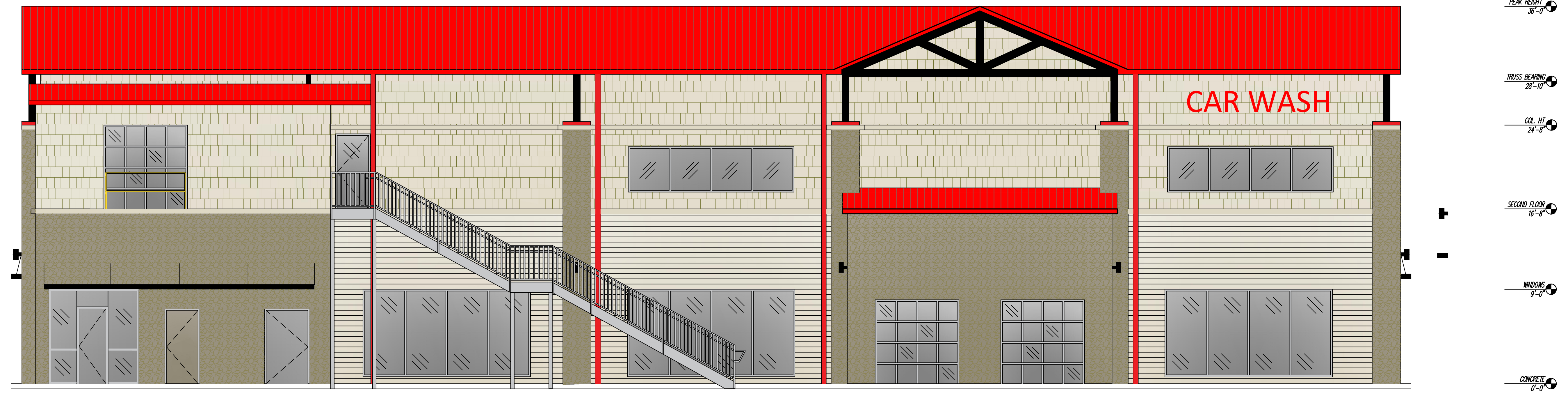
CAR WASH
ROCKET WASH - ZEBULON
ZEBULON, NC
OVERALL LAYOUT - UPPER STORY

PRE-SEAL REVISIONS	BY DATE

PRELIMINARY
DATE: 03.14.2023
PROJECT NO: 23-1004
DRAWN BY: M. FARRINGTON
SHEET: **A-1.1**

**PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW ONLY**

North State
Design Group, plc
101 WEST LEBANON STREET, SUITE 102
MOUNT AIRY, NC 27030
OFFICE: 743-999-6734
WWW.NSDGRP.COM

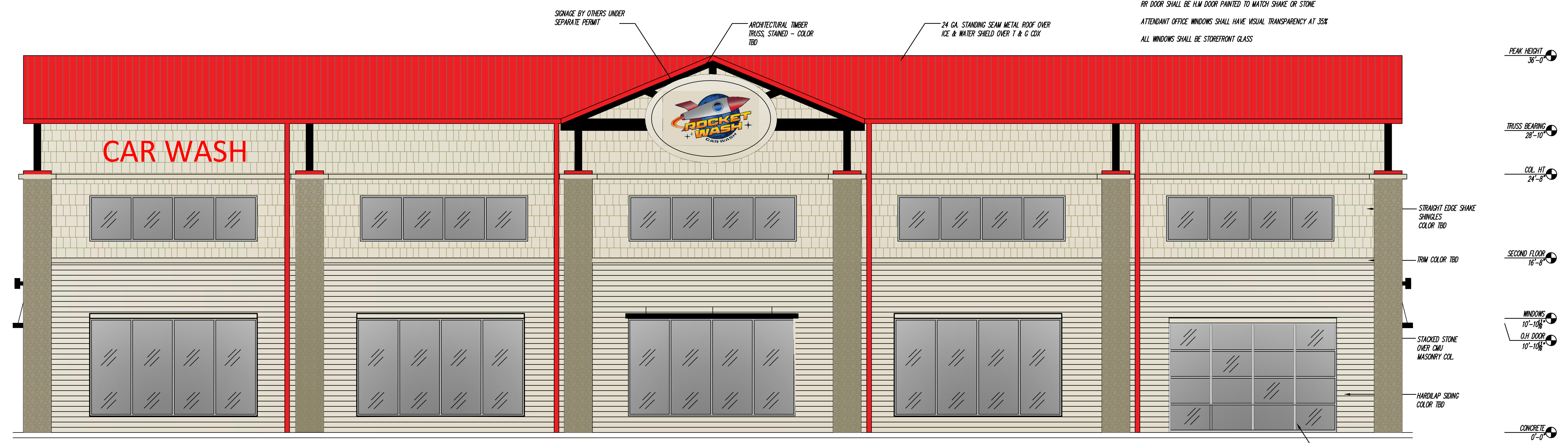


ELEVATION - TERTIARY
3/16"=1'0"
#A-1.0
A-2.0

NOTE:
SECONDARY WALLS SHALL BE CONFIGURED SO THAT ≥ 30% OF THE GROUND FLOOR & ≥ 20% OF ANY SECOND FLOOR FACADE IS OCCUPIED BY
→ VISUALLY TRANSPARENT WINDOWS OR DOORS W/ REGULAR SPACING
→ FALSE OR OPAQUE WINDOWS/DOORS W/ REGULAR SPACING
→ ARTICULATED WALL FORMS DESIGNED TO MIMIC WINDOW OPENINGS THAT ALSO INCLUDE AN OVERHANG OR AWNING

PROVIDED PERCENTAGES
→ UPPER STORY - APPROX. 20.4%
→ LOWER STORY - APPROX. 32.2%

ALL UPPER & LOWER STORY WINDOWS & DOORS SHALL BE OPAQUE OR FALSE EXCEPT RR DOOR & ATTENDANT OFFICE
RR DOOR SHALL BE HM DOOR PAINTED TO MATCH SHAKE OR STONE
ATTENDANT OFFICE WINDOWS SHALL HAVE VISUAL TRANSPARENCY AT 35%
ALL WINDOWS SHALL BE STOREFRONT GLASS



ELEVATION - SECONDARY
3/16"=1'0"
#A-1.0
A-2.0

CAR WASH
ROCKET WASH - ZEBULON
ZEBULON, NC
ELEVATIONS

PRE-SEAL REVISIONS	BY DATE

PRELIMINARY
DATE
03.14.2023
PROJECT NO.
23-1004
DRAWN BY
M. FARRINGTON
SHEET

A-2.0

**PRELIMINARY
NOT FOR CONSTRUCTION
FOR REVIEW ONLY**

North State
Design Group, plc
101 WEST LEBANON STREET, SUITE 102
MOUNT AIRY, NC 27030
OFFICE: 743-999-6734
WWW.NSDGRP.COM

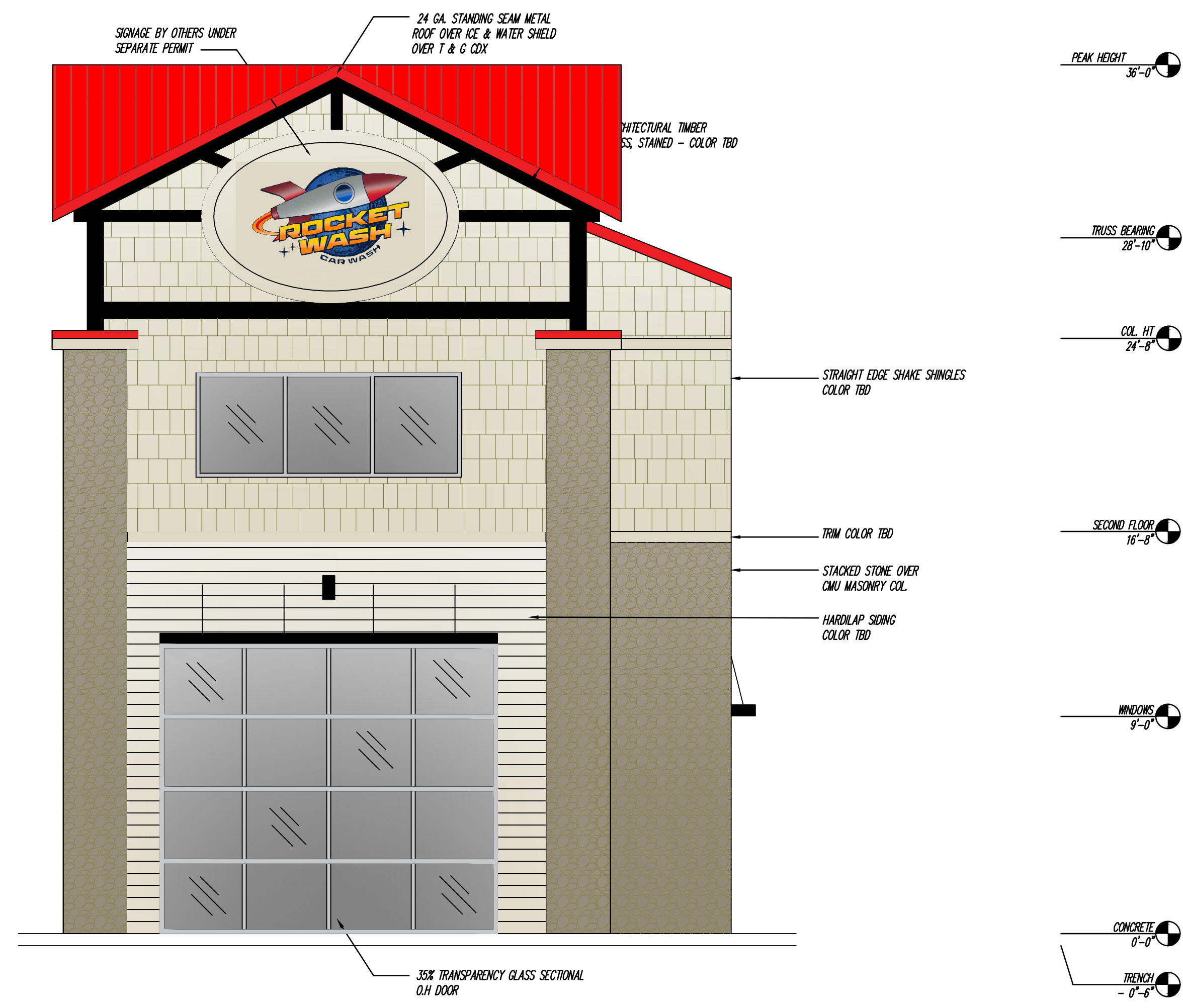
NOTE:
PRIMARY WALLS SHALL BE CONFIGURED SO THAT:
~ ≥ 40% OF FIRST FLOOR PORTION OF THE PRIMARY WALL IS OCCUPIED BY VISUALLY TRANSPARENT WINDOWS OR DOORS
~ ≥ 30% OF A SECOND FLOOR PORTION OF THE PRIMARY WALL (IF PROVIDED) IS OCCUPIED BY VISUALLY TRANSPARENT WINDOWS OR DOORS
~ A WINDOW OR FUNCTIONAL GENERAL ACCESS DOORWAY IS LOCATED ≥ 20 FEET ALONG THE FACADE
~ NO MORE THAN 50% OF ANY SINGLE WINDOW OR DOOR IS OBSTRUCTED BY A WINDOW SIGN OR OTHER OPAQUE DISPLAY

PROVIDED PERCENTAGES:
~ UPPER STORY – APPROX. 40.2%
~ LOWER STORY – APPROX. 31.9%

ALL WINDOWS & DOORS SHALL HAVE VISUAL TRANSPARENCY AT 35%
ALL WINDOWS SHALL BE STOREFRONT GLASS



ELEVATION – PRIMARY A-1.0
A-2.1
1/4"=1'0"

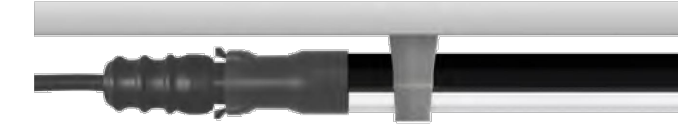
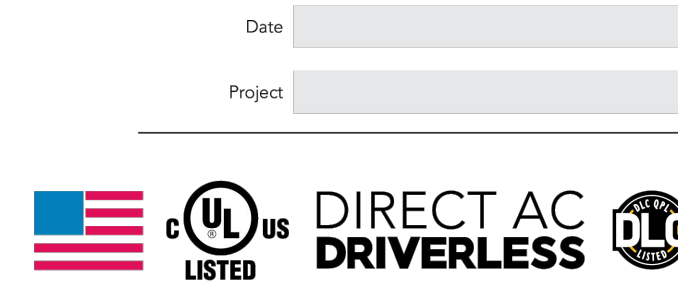


ELEVATION – TERTIARY A-1.0
A-2.1
1/4"=1'0"

CAR WASH
ROCKET WASH – ZEBULON
ZEBULON, NC
ELEVATIONS

PRE-SEAL REVISIONS	BY DATE

PRELIMINARY
DATE 03.14.2023
PROJECT NO. 23-1004
DRAWN BY M. FARRINGTON
SHEET A-2.1



Low-Profile, Driverless Linkable IP67 LED Linear Luminaire

Product Features

Maintenance-Free Driverless Design
Connects directly to AC line voltage without an LED driver or electrolytic capacitors, for extreme reliability and lifetime. Requires zero maintenance.

Easy to Install Quick-Connect Cabling
Convenient push-and-click connectors and cabling make GPX Series fixtures easy to install and daisy chain.

Coextruded Copolyester/Aluminum Housing
Our patented process combines copolyester and aluminum together, with no seals or gaskets. The result is a single piece enclosure with excellent heat-sinking characteristics for long lifetime.

Superior Chemical & UV Resistance
Seamless polymer outer shell provides IP67 ingress protection and is specialized for superior chemical resistance. An additional protective coating is available which integrates a UV inhibitor and UV blocker for outdoor applications.

Performance Summary

Delivered Light Output: Up to 8,000 Lumens
Efficacy: 130 LPW
CRI: Typical 85 CRI
CCT: 3000K & 4000K
Lifetime: Designed to last 100,000 Hours at 25°C
Warranty: 5 Years (See ggled.net for Terms)
Mounting: Ceiling or Wall
Protection Class: IP67
Voltage: 120 VAC or 277 VAC Input
Maximum Run Length: Refer to the Table on Page 2
Ambient Temperature: -40°C to 55°C

Ordering Information

Product	Length	Lumen Output	Color Temp.	Lens Diffusion	UV Protection	Through Wired	Voltage
GPX							
2 2' Foot	SO Standard Output 400 Lumens/ft	50K Standard 4000 Lumens	40K*	GC Clear Lens	Blank No Coating, Reset for Indoor Use	Blank No Coating, Reset for Indoor Use	120V 120 VAC Input
4 4' Foot	HO*	40K*	40K*	GC Clear Lens	Blank No Coating, Reset for Indoor Use	SE Single-End Coating	277V 277 VAC Input
6 6' Foot	HO*	40K*	40K*	GC Clear Lens	Blank No Coating, Reset for Indoor Use	SE Single-End Coating	277V 277 VAC Input
8 8' Foot	HO*	40K*	40K*	GC Clear Lens	Blank No Coating, Reset for Indoor Use	SE Single-End Coating	277V 277 VAC Input

Power & Connection Accessories

Cable	Type	Length	Wire	Mounting Hardware	Description
GPX-JMP-1	Jumper	1ft	18 AWG SJTW	GPX-MNT-AM	Non-Metallic Quick Latch
GPX-JMP-2	Jumper	2ft	18 AWG SJTW	GPX-MNT-SS	Stainless Steel Bolt Latch
GPX-JMP-4	Jumper	4ft	18 AWG SJTW		
GPX-JMP-8	Jumper	8ft	18 AWG SJTW		
GPX-LDR-10	Leader Cable	10ft	18 AWG SJTW		
GPX-LDR-25	Leader Cable	25ft	18 AWG SJTW		

STRONG. SIMPLE. COMPACT.



Low-Profile, Driverless Linkable IP67 LED Linear Luminaire

Product Specifications

Construction & Materials
Convenient push-and-click connectors let you easily and rapidly install Leader Cables and Jumper Cables. Multiple cable lengths support a variety of layouts.
Integrated aluminum heat spreader.

Seamless polymeric outer shell provides IP67 ingress protection and is specialized for superior chemical resistance. An additional protective coating is available which integrates a UV inhibitor and UV blocker for outdoor applications.

All G&G luminaires and components (with the exception of our LED boards and drivers) are proudly manufactured and assembled in the USA.

Electrical System

Power Factor: 0.97 nominal
Input Power: Stays consistent over life.
Temperature Rating: Designed to operate in temperatures -40°C to 55°C.
Total Harmonic Distortion: < 20%

Regulatory Qualifications

cULus Listed
UL Listed for Wet Locations
DLC Listed
NEMA 4X Rated



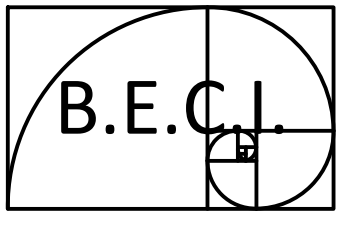
Lumen & Power Data

Length & Output	Lumens	Wattage	Amps @120V	Amps @277V
GPX-20	1000	9	0.075	0.030
GPX-30	1500	14	0.110	0.040
GPX-40	2000	19	0.150	0.060
GPX-50	2500	24	0.200	0.080
GPX-60	3000	29	0.240	0.100
GPX-70	3500	34	0.280	0.120
GPX-80	4000	39	0.320	0.140
GPX-90	4500	44	0.360	0.160
GPX-100	5000	49	0.400	0.180

Maximum Fixture Run

	GPX-20 (20')	GPX-30 (30')	GPX-40 (40')	GPX-50 (50')	GPX-60 (60')	GPX-70 (70')	GPX-80 (80')	GPX-90 (90')	GPX-100 (100')
120VAC	40 (100')	37 (93')	34 (85')	31 (78')	28 (71')	25 (64')	22 (56')	19 (48')	16 (41')
277VAC	59 (149')	54 (137')	49 (124')	44 (111')	39 (99')	34 (85')	29 (74')	24 (61')	19 (48')

STRONG. SIMPLE. COMPACT.



J. Wade White Jr., P.E.
P.O. Box 1722
Blair Mountain, NC 27041
(836) 353-3781
jwhite@bceci.com
BCECI Engineering Company
Firm License Number: C-1053

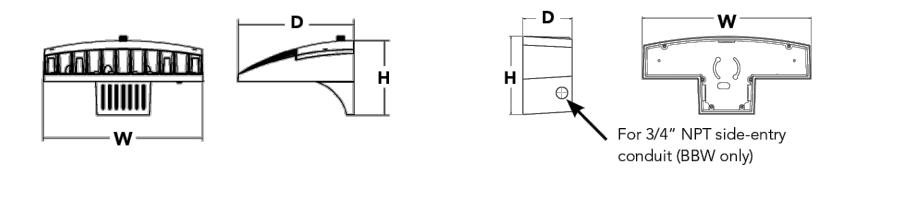
This plan and all associated notes, schedules, and specifications are the property of Brite Engineering Consultants, Inc. Use of these plans other than for the specific project and location is prohibited. Unauthorized use will be subject to legal action.



D-Series Size 1 LED Wall Luminaire

Specifications Luminaire
Width: 13-3/4" (34.9 cm)
Depth: 10" (25.4 cm)
Height: 6-3/8" (16.2 cm)

Back Box (BBW, E20WC)
Width: 13-3/4" (34.9 cm)
Depth: 4" (10.2 cm)
Height: 6-3/8" (16.2 cm)



Ordering Information

Series	LEDs	Drive Current	Color Temperature	Distribution	Voltage	Mounting	Control Options
DSXW1 LED	10C 10 LEDs (opt engine)	350 350mA	30K 3000K	T2S Type II Short	MOLT ¹ 120 ¹	Shipped included (blank) Surface mounting bracket	Shipped installed Photometric cell, button type ⁸
	530 530 mA	40K 4000K	T2M Type II Medium	208 ¹			
	700 700 mA	50K 5000K	T3S Type III Short	208 ¹			
	20C 20 LEDs (bwp engines)	1000 1000 mA (A) ¹⁰	AMBC Amber phosphor converted	T3M Type III Medium	240 ¹		
				T4M Type IV Medium	277 ¹		
				TFM Type IV Medium	347 ¹⁴		
				480 ¹⁴			

Accessories
DSXW1-1 House side (left) per left/right
DSXW1-2 Bid-deterrent spikes
DSXW1-3 Bid-deterrent spikes
DSXW1-4 House side shield¹¹
SPD Surge surge protection¹²

Performance Data

Lumen Output
Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Contact factory for performance data for any configurations not shown here.

LED	Wattage (typical)	System Wattage	Beam Type	Beam Angle	Beam Diameter @ 10'	Beam Diameter @ 20'	Beam Diameter @ 30'	Beam Diameter @ 40'	Beam Diameter @ 50'	Beam Diameter @ 60'	Beam Diameter @ 70'	Beam Diameter @ 80'	Beam Diameter @ 90'	Beam Diameter @ 100'						
10C (10 LEDs)	13W	13.5W	T2S	10°	1.415	0.0	0.1	1.399	1.520	0.0	0.1	1.172	1.538	0.0	0.1	1.184	884	0.0	1.1	69
					1.189	0.0	0.1	1.189	1.448	0.0	0.1	1.115	1.458	0.0	0.1	1.125	892	0.0	1.1	66
					1.199	0.0	0.1	1.199	1.501	0.0	0.1	1.116	1.512	0.0	0.1	1.116	884	0.0	1.1	68
					1.186	0.0	0.1	1.186	1.488	0.0	0.1	1.116	1.497	0.0	0.1	1.116	876	0.0	1.1	67
					1.187	0.0	0.1	1.184	1.458	0.0	0.1	1.112	1.462	0.0	0.1	1.113	858	0.0	1.1	66
					1.411	0.0	0.1	1.399	1.515	0.0	0.1	1.112	1.525	0.0	0.1	1.112	892	0.0	1.1	69
	19W	19.5W	T2M	10°	2.095	1.0	0.1	1.988	2.295	1.0	0.1	1.116	2.259	1.0	0.1	1.117	1.264	0.0	1.1	67
					1.957	1.0	0.1	1.893	2.192	1.0	0.1	1.115	2.115	1.0	0.1	1.115	1.205	0.0	1.1	63
					1.957	1.0	0.1	1.988	2.198	1.0	0.1	1.116	2.212	1.0	0.1	1.116	1.256	0.0	1.1	66
					2.019	1.0	0.1	1.986	2.199	1.0	0.1	1.114	2.172	1.0	0.1	1.114	1.227	0.0	1.1	65
					1.970	1.0	0.1	1.984	2.115	1.0	0.1	1.113	2.129	1.0	0.1	1.113	1.212	0.0	1.1	64
					2.097	0.0	0.1	1.988	2.198	1.0	0.1	1.116	2.212	1.0	0.1	1.116	1.256	0.0	1.1	66
20W	20.5W	T3M	10°	2.632	1.0	0.1	1.891	2.816	1.0	0.1	1.108	2.814	1.0	0.1	1.109	1.544	0.0	1.1	59	
				2.699	1.0	0.1	1.891	2.816	1.0	0.1	1.108	2.814	1.0	0.1	1.108	1.544	0.0	1.1	59	
				2.699	1.0	0.1	1.891	2.816	1.0	0.1	1.108	2.814	1.0	0.1	1.108	1.544	0.0	1.1	59	
				2.699	1.0	0.1	1.891	2.816	1.0	0.1	1.108	2.814	1.0	0.1	1.108	1.544	0.0	1.1	59	
				2.699	1.0	0.1	1.891	2.816	1.0	0.1	1.108	2.814	1.0	0.1	1.108	1.544	0.0	1.1	59	
				2.699	1.0	0.1	1.891	2.816	1.0	0.1	1.108	2.814	1.0	0.1	1.108	1.544	0.0	1.1	59	
39W	39.5W	T3M	10°	3.532	1.0	0.1	1.901	3.771	1.0	0.1	1.07	3.794	1.0	0.1	1.07	2.130	1.0	1.1	55	
				3.532	1.0	0.1	1.901	3.771	1.0	0.1	1.07	3.794	1.0	0.1	1.07	2.130	1.0	1.1	55	
				3.532	1.0	0.1	1.901	3.771	1.0	0.1	1.07	3.794	1.0	0.1	1.07	2.130	1.0	1.1	55	
				3.532	1.0	0.1	1.901	3.771	1.0	0.1	1.07	3.794	1.0	0.1	1.07	2.130	1.0	1.1	55	
				3.532	1.0	0.1	1.901	3.771	1.0	0.1	1.07	3.794	1.0	0.1	1.07	2.130	1.0	1.1	55	
				3.532	1.0	0.1	1.901	3.771	1.0	0.1	1.07	3.794	1.0	0.1	1.07	2.130	1.0	1.1	55	
35W	35.5W	T3M	10°	3.607	1.0	0.1	1.901	3.873	1.0	0.1	1.06	3.938	1.0	0.1	1.06	2.210	1.0	1.1	57	
				3.607	1.0	0.1	1.901	3.873	1.0	0.1	1.06	3.938	1.0	0.1	1.06	2.210	1.0	1.1	57	
				3.607	1.0	0.1	1.901	3.873	1.0	0.1	1.06	3.938	1.0	0.1	1.06	2.210	1.0	1.1	57	
				3.607	1.0	0.1	1.901	3.873	1.0	0.1	1.06	3.938	1.0	0.1	1.06	2.210	1.0	1.1	57	
				3.607	1.0	0.1	1.901	3.873	1.0	0.1	1.06	3.938	1.0	0.1	1.06	2.210	1.0	1.1	57	
				3.607	1.0	0.1	1.901	3.873	1.0	0.1	1.06	3.938	1.0	0.1	1.06	2.210	1.0	1.1	57	
21W	21.5W	T3M	10°	2.830	1.0	0.1	1.133	3.038	1.0	0.1	1.132	3.047	1.0	0.1	1.132	1.777	1.0	1.1	77	
				2.830	1.0	0.1	1.133	3.038	1.0	0.1	1.132	3.047	1.0	0.1	1.132	1.777	1.0	1.1	77	
				2.830	1.0	0.1	1.133	3.038	1.0	0.1	1.132	3.047	1.0	0.1	1.132	1.777	1.0	1.1	77	
				2.830	1.0	0.1	1.133	3.038	1.0	0.1	1.132	3.047	1.0	0.1	1.132	1.777	1.0	1.1	77	
				2.830	1.0	0.1	1.133	3.038	1.0	0.1	1.132	3.047	1.0	0.1	1.132	1.777	1.0	1.1	77	
				2.830	1.0	0.1	1.133	3.038	1.0	0.1	1.132	3.047	1.0	0.1	1.132	1.777	1.0	1.1	77	
530 mA	530W	T3M	10°	4.033	1.0	0.1	1.115	4.331	1.0	0.1	1.124	4.339	1.0	0.1	1.125	2.477	1.0	1.1	71	
				4.033	1.0	0.1	1.115	4.331	1.0	0.1	1.124	4.339	1.0	0.1	1.125	2.477	1.0	1.1	71	
				4.033	1.0	0.1	1.115	4.331	1.0	0.1	1.124	4.339	1.0	0.1	1.125	2.477	1.0	1.1	71	
				4.033	1.0	0.1	1.115	4.331	1.0	0.1	1.124	4.339	1.0	0.1	1.125	2.477	1.0	1.1	71	
				4.033	1.0	0.1	1.115	4.331	1.0	0.1	1.124	4.339	1.0	0.1	1.125	2.477				

