



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

April 21, 2021

SCO ID No. 20-21752-01A

ADDENDUM No. 2

Modular Office Relocation to NCDOT Buncombe County Maintenance Yard

ITEM	REFERENCE	DESCRIPTION
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Drawings:

- | | | |
|----|---|--|
| 1. | VFE101, CDN101,
CSN101, CGN101,
CCN101, CCN501,
CUN101, SPC101,
SPC102, SPC103,
SPC104 | Refer to Civil Drawings. Delete the original set in its entirety, and substitute the Civil Drawing set attached to Addendum No. 2. |
| 2. | Advertisement
For Bids | The Bid Date and the location of the Bid Opening are unchanged . |

Mark D. Gibson RA
Architectural Supervisor
NCDOT Facilities Design Unit
919-707-4550

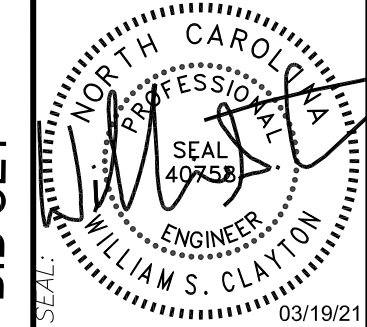
Cc: Michael D. Mountcastle, PE Director NCDOT Facilities Management
William S. Clayton PE, Clayton Engineering & Design, PLLC
Brian M. Ross PE, Ross Linden Engineers PC
Donald R. Brittain PE, Brittain Engineering, Inc.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
FACILITIES MANAGEMENT UNIT
1525 MAIL SERVICE CENTER
RALEIGH, NC 27699-1525

Telephone: (919) 707-4540
Fax: (919) 715-0399
Customer Service: 1-877-368-4968

Location:
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

Website: ncdot.gov



DESIGNED BY:
NCDOT FACILITIES DESIGN UNIT
 ARCHITECT & ENGINEERS
 1 SOUTH WILMINGTON STREET
 RALEIGH, NORTH CAROLINA 27601
 PHONE: 919/715-0399



CONSULTANT:
CLAYTON ENGINEERING & DESIGN
 1209 9TH AVE. NE, PO BOX 2351
 HICKORY, NORTH CAROLINA 28601
 PHONE: 888-455-3468

EXISTING CONDITIONS

PROJECT TITLE:
**Modular Unit Relocation to
 NCDOT Buncombe County
 Maintenance Yard**
 NCDOT HIGHWAY DIVISION 13
 ASHEVILLE, NORTH CAROLINA

STATE CONSTRUCTION
 ID.# 20-21752-01A

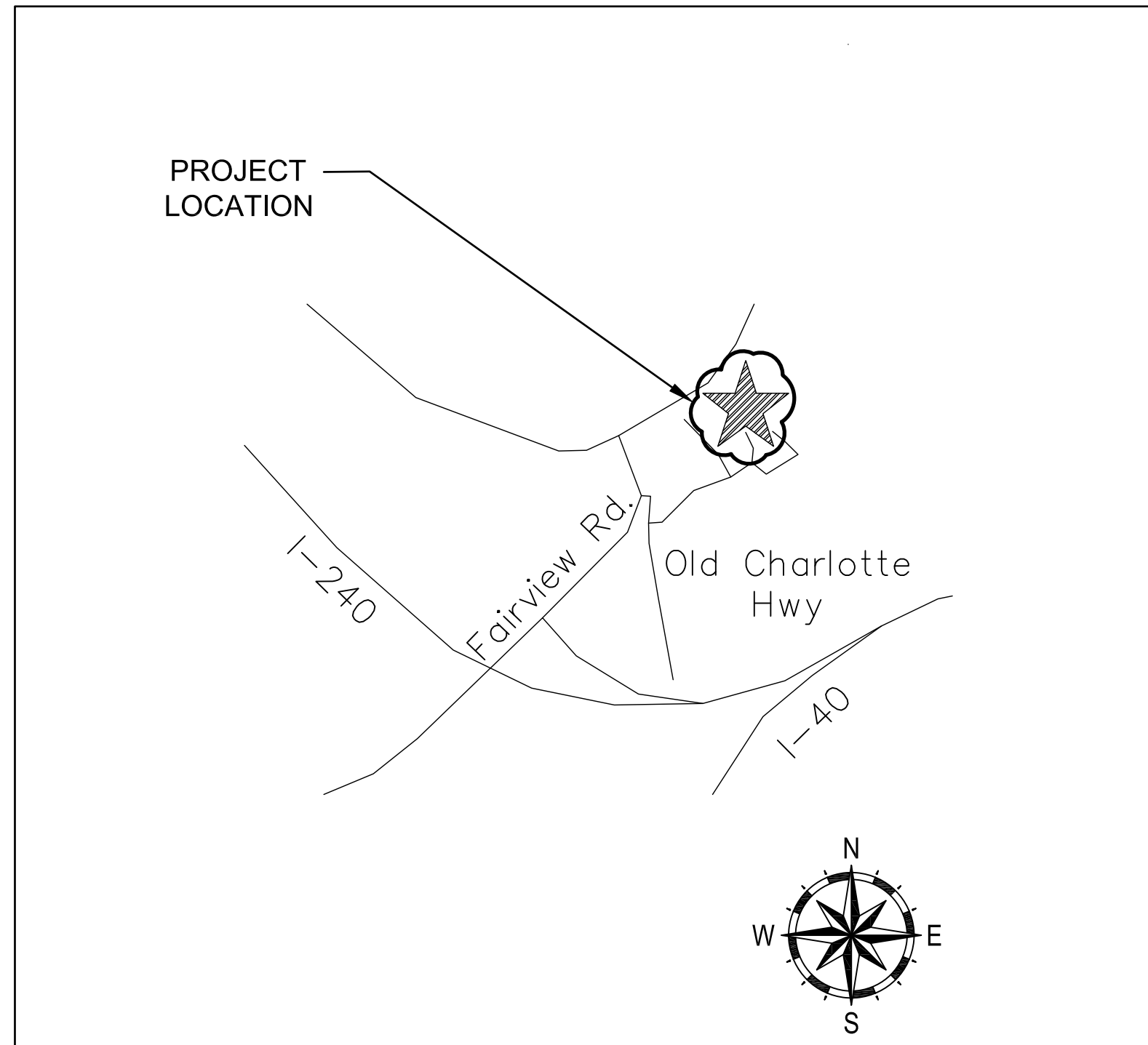
ASSET NUMBER:
 CO.# SITE.# BLDG.#
 11 - 23 - XX

REVISIONS	
NO.	DATE

DATE ISSUED: 3/19/21
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 CHECKED BY:

SHEET NO.

VFE101



LOCATION MAP
 SCALE: N.T.S.

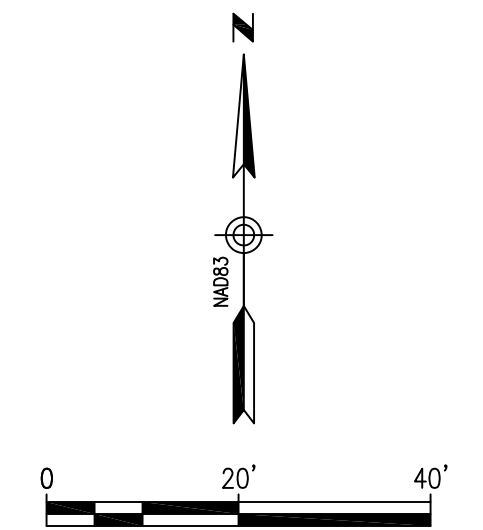
NOTES THIS SHEET:

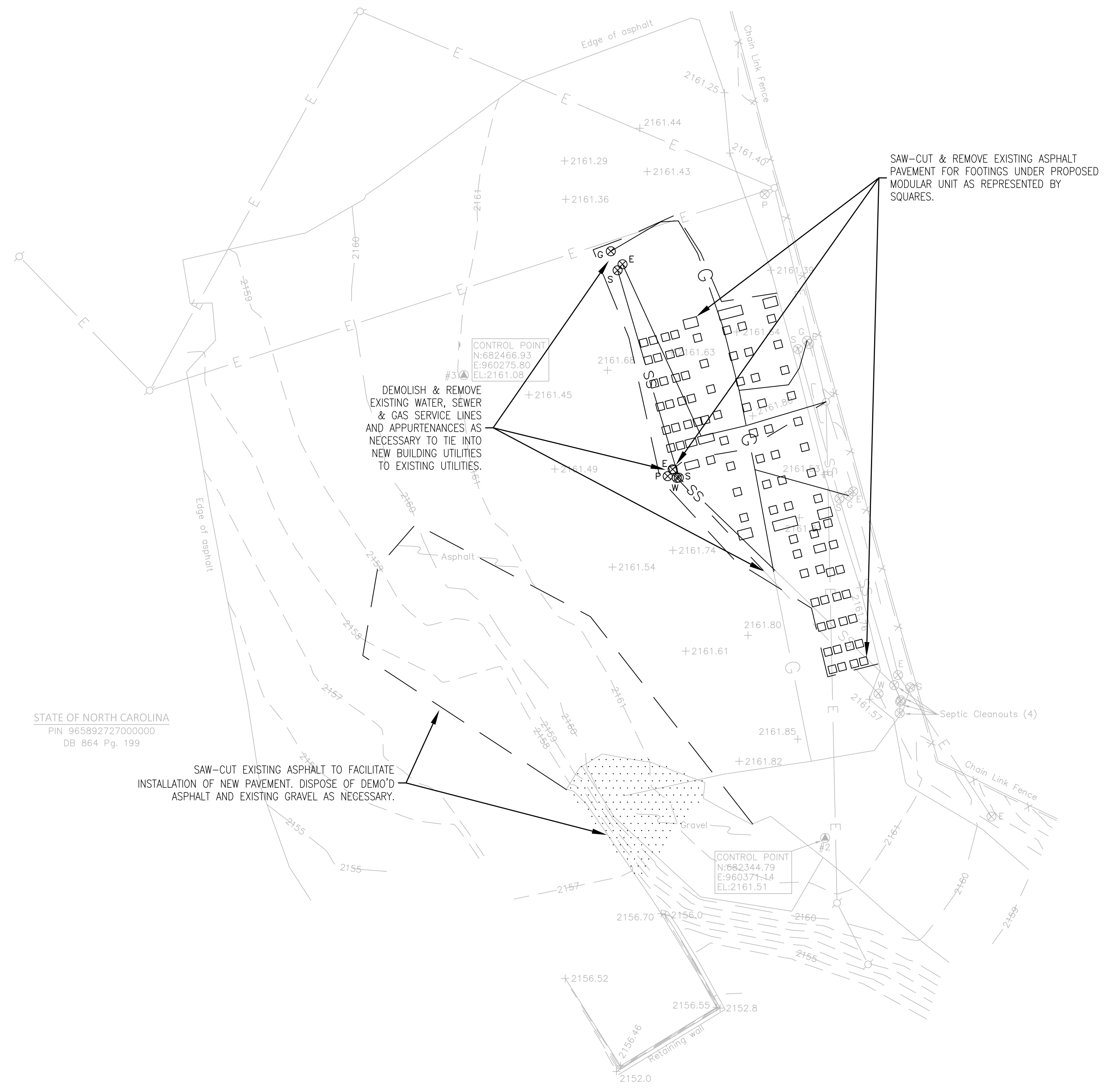
1. SURVEY PERFORMED BY: BEN PATTON LAND SURVEYING, PLLC
2. CONTRACTOR RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS SURVEY.
3. PARCEL ID NO. = 965892727000000
4. SITE ZONING = RIVER
5. PROJECT SITE ACREAGE = 50.50 ACRES
6. SUBJECT PROPERTY IS IN DESIGNATED FLOOD ZONE "X"
 (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN)
 (FIRM PANEL 3700966800J)



STATE OF NORTH CAROLINA
 PIN 965892727000000
 DB 864 Pg. 199

EXISTING CONDITIONS
 SCALE: 1" = 20'



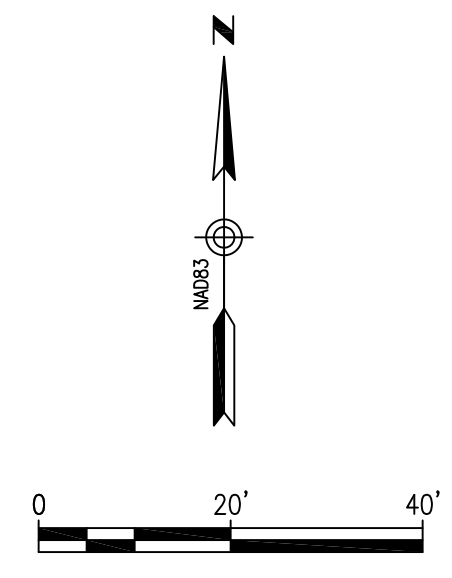


STATE OF NORTH CAROLINA
 PIN 965892727000000
 DB 864 Pg. 199

SAW-CUT EXISTING ASPHALT TO FACILITATE
 INSTALLATION OF NEW PAVEMENT, DISPOSE OF DEMO'D
 ASPHALT AND EXISTING GRAVEL AS NECESSARY.

DEMOLISH & REMOVE
 EXISTING WATER, SEWER
 & GAS SERVICE LINES
 AND APPURTENANCES AS
 NECESSARY TO TIE INTO
 NEW BUILDING UTILITIES
 TO EXISTING UTILITIES.

SAW-CUT & REMOVE EXISTING ASPHALT
 PAVEMENT FOR FOOTINGS UNDER PROPOSED
 MODULAR UNIT AS REPRESENTED BY
 SQUARES.



DEMOLITION PLAN
 SCALE: 1"=20'

- NOTES THIS SHEET:**
1. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DEMOLITION WITH THE ARCHITECT, ENGINEER, AND OWNER.
 2. THE SAFETY OF ALL IS OF UTMOST IMPORTANCE. ALL SAFETY PRECAUTIONS POSSIBLE TO BE TAKEN TO ENSURE THE SAFETY OF ALL.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY DRAINAGE AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE ON THE SITE.
 4. CONTINUAL SAFE PEDESTRIAN ACCESS IS TO BE PROVIDED.

CONSTRUCTION DOCUMENTS

WILLIAM S. CLAYTON
 ARCHITECT & ENGINEERS

DESIGNED BY:
NC DOT FACILITIES DESIGN UNIT
 ARCHITECT & ENGINEERS

1 SOUTH WILMINGTON STREET
 RALEIGH, NORTH CAROLINA 27601
 PHONE: 919/707-4540 FAX: 919/715-0399

CONSULTANT:
CLAYTON
 ENGINEERING & DESIGN

1209 9TH AVE NE, PO BOX 2351
 HICKORY, NORTH CAROLINA 28601
 PHONE: 828-655-3466

DRAWING TITLE / DESCRIPTION:
DEMOLITION PLAN

PROJECT TITLE:
**Modular Unit Relocation to
 NCDOT Buncombe County
 Maintenance Yard**

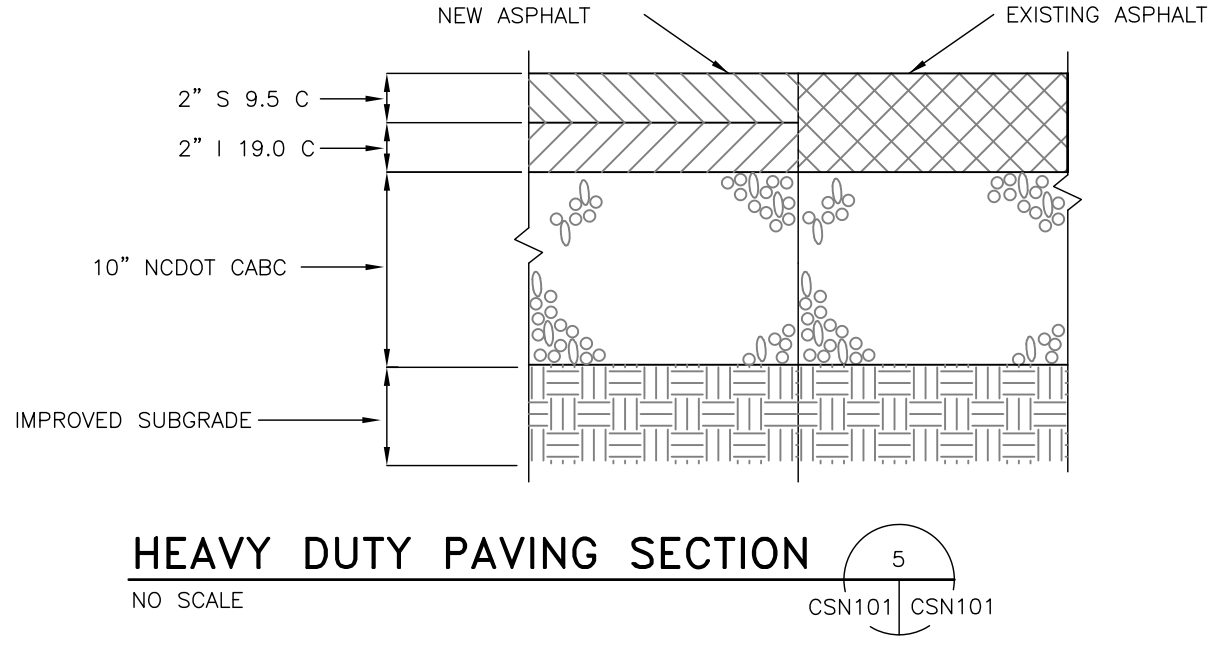
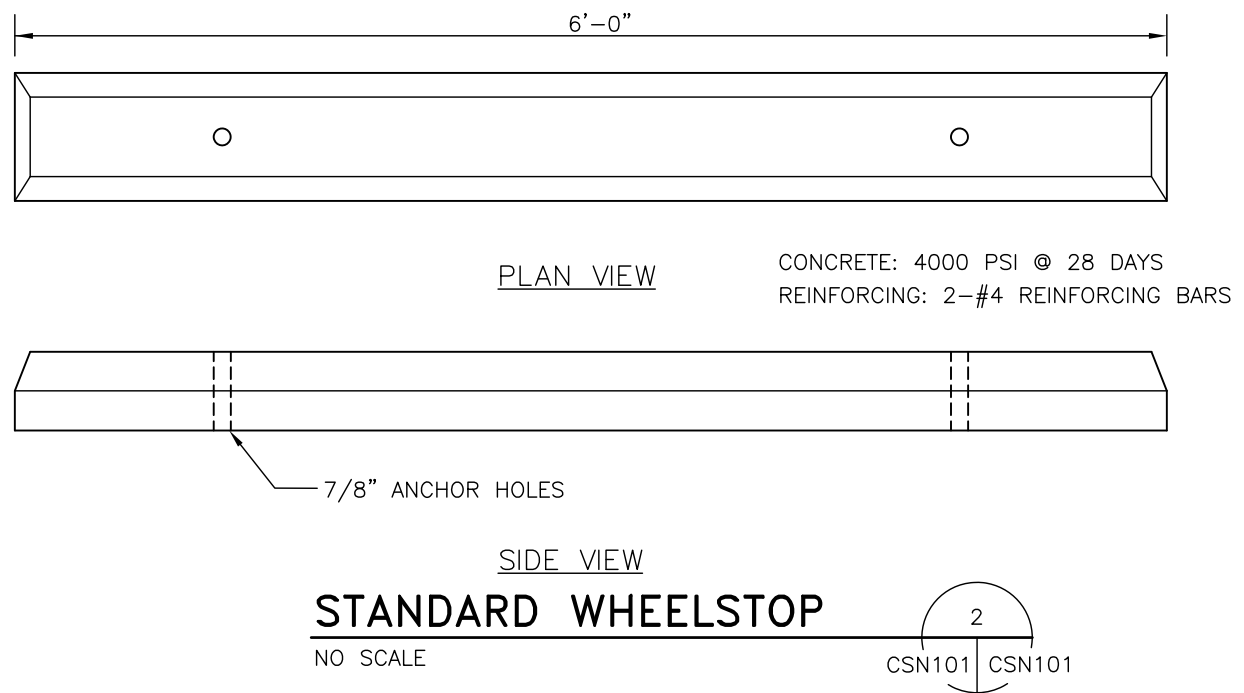
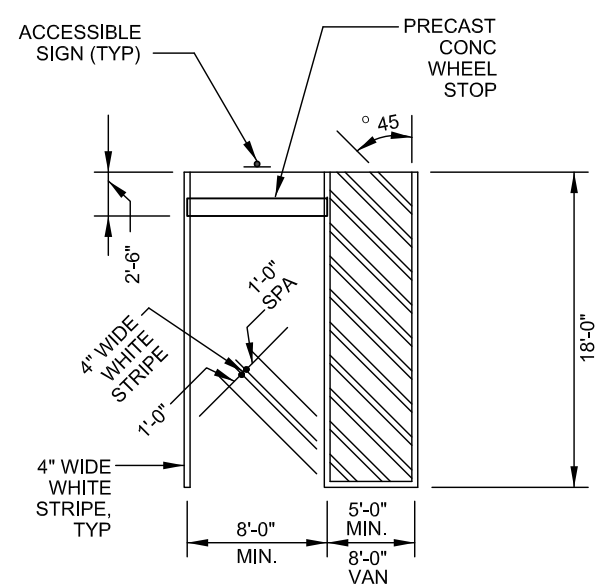
STATE CONSTRUCTION
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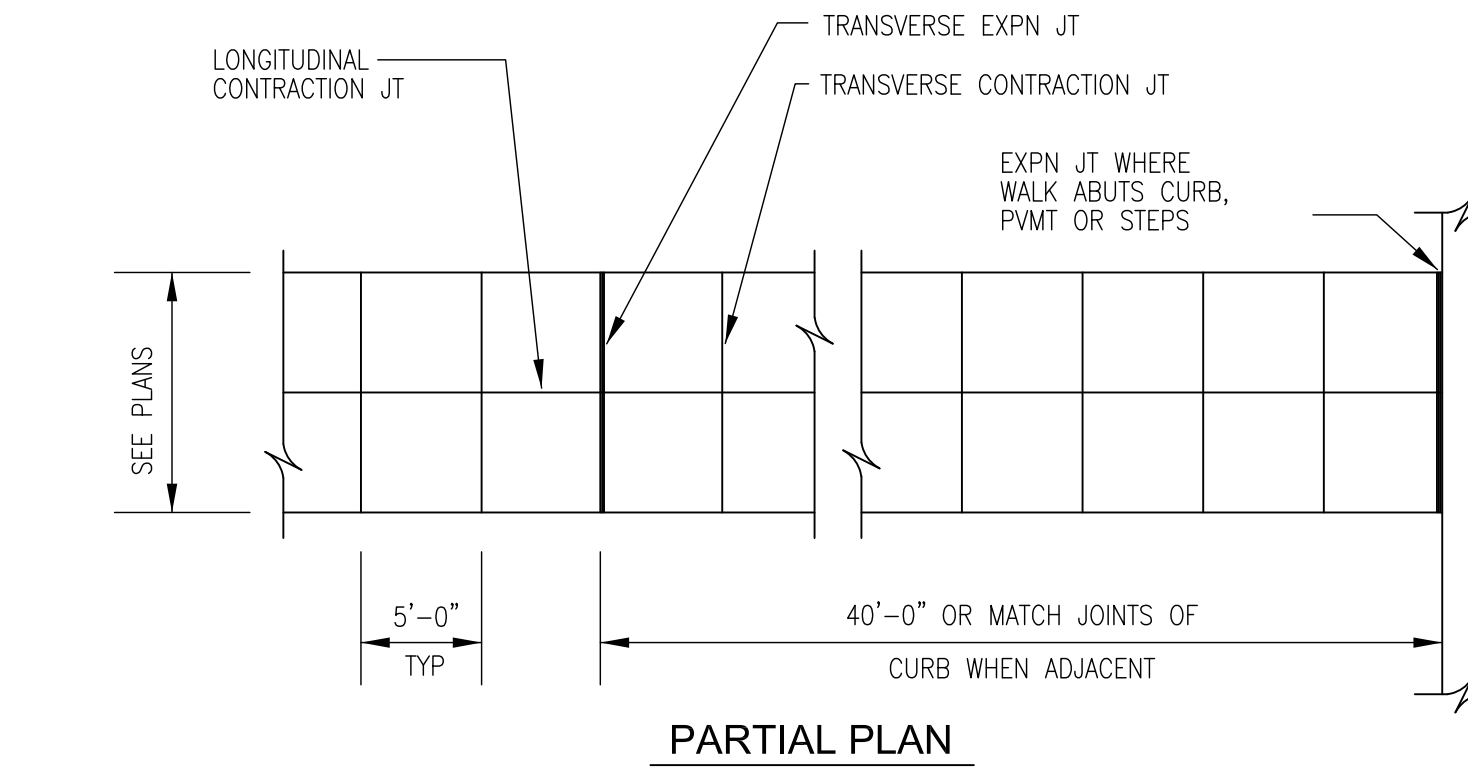
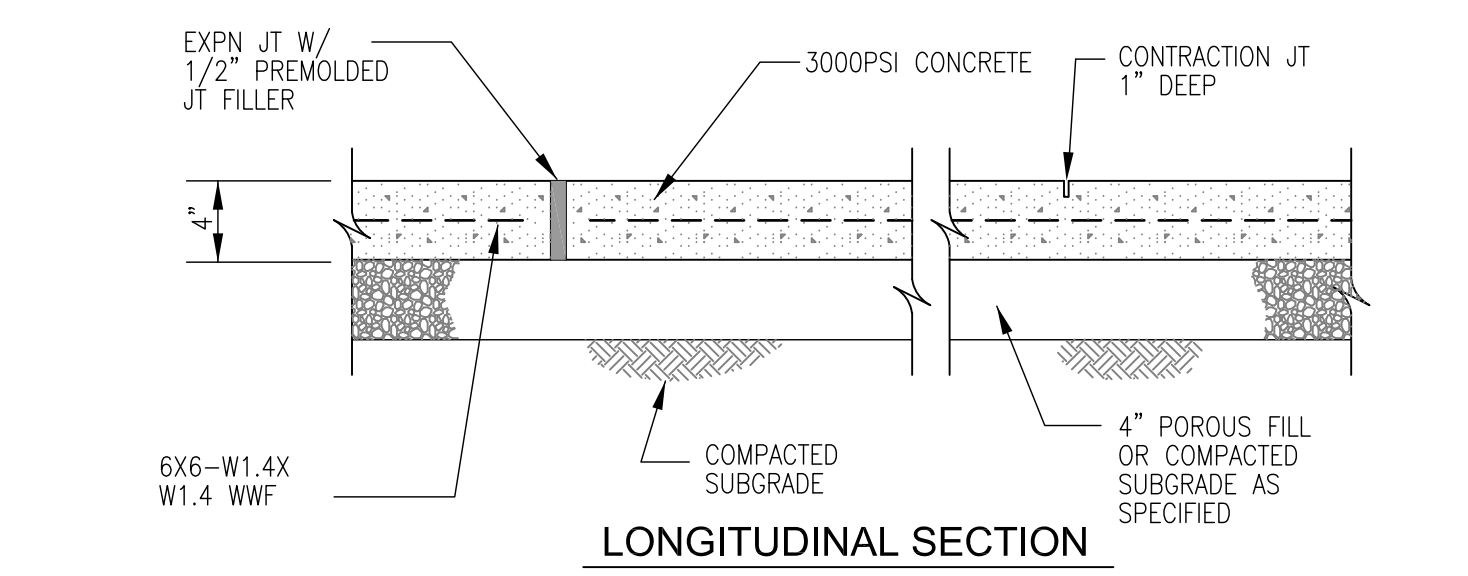
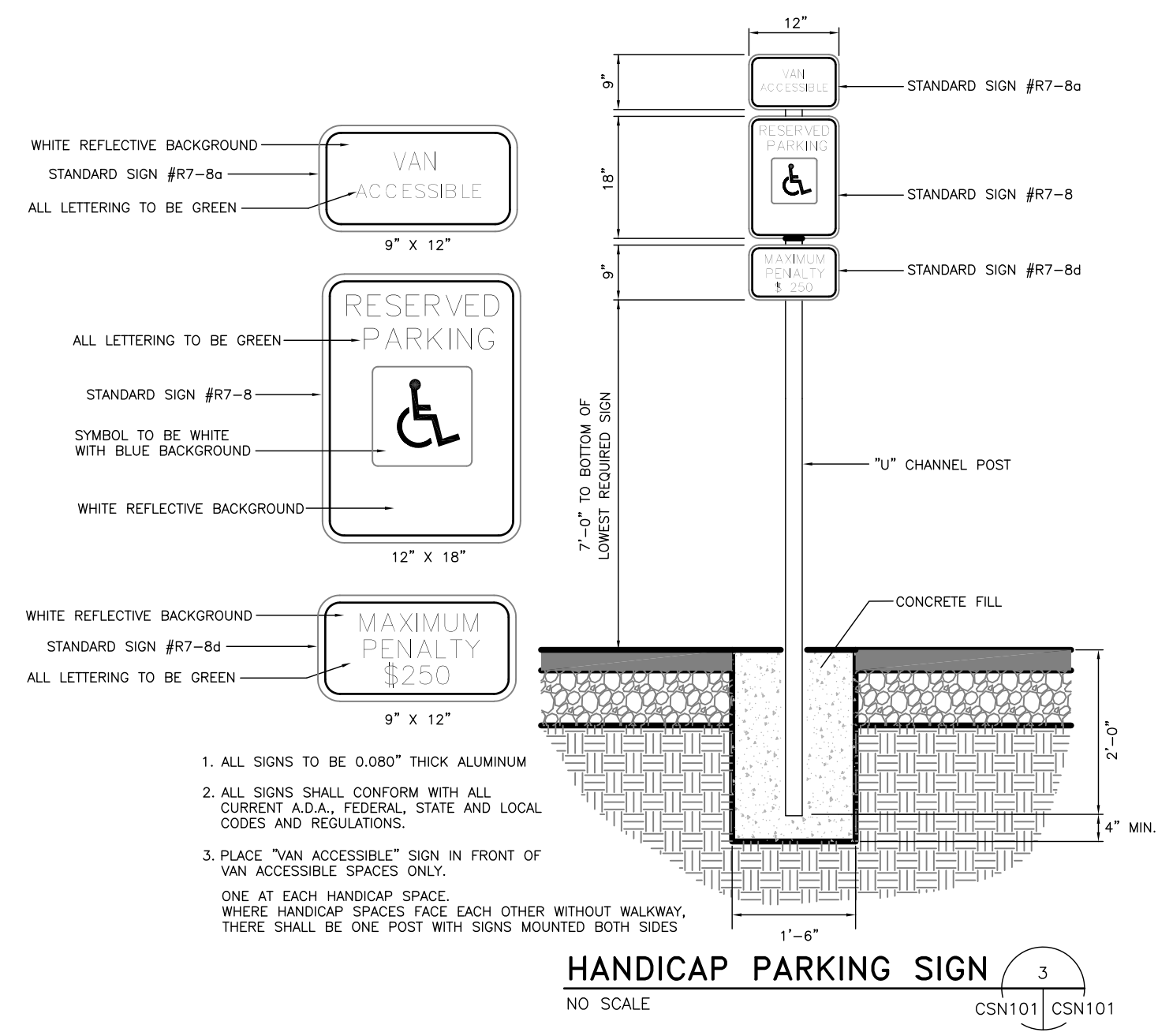
REVISIONS
 NO. DATE

DATE ISSUED: 3/19/21
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CDN101

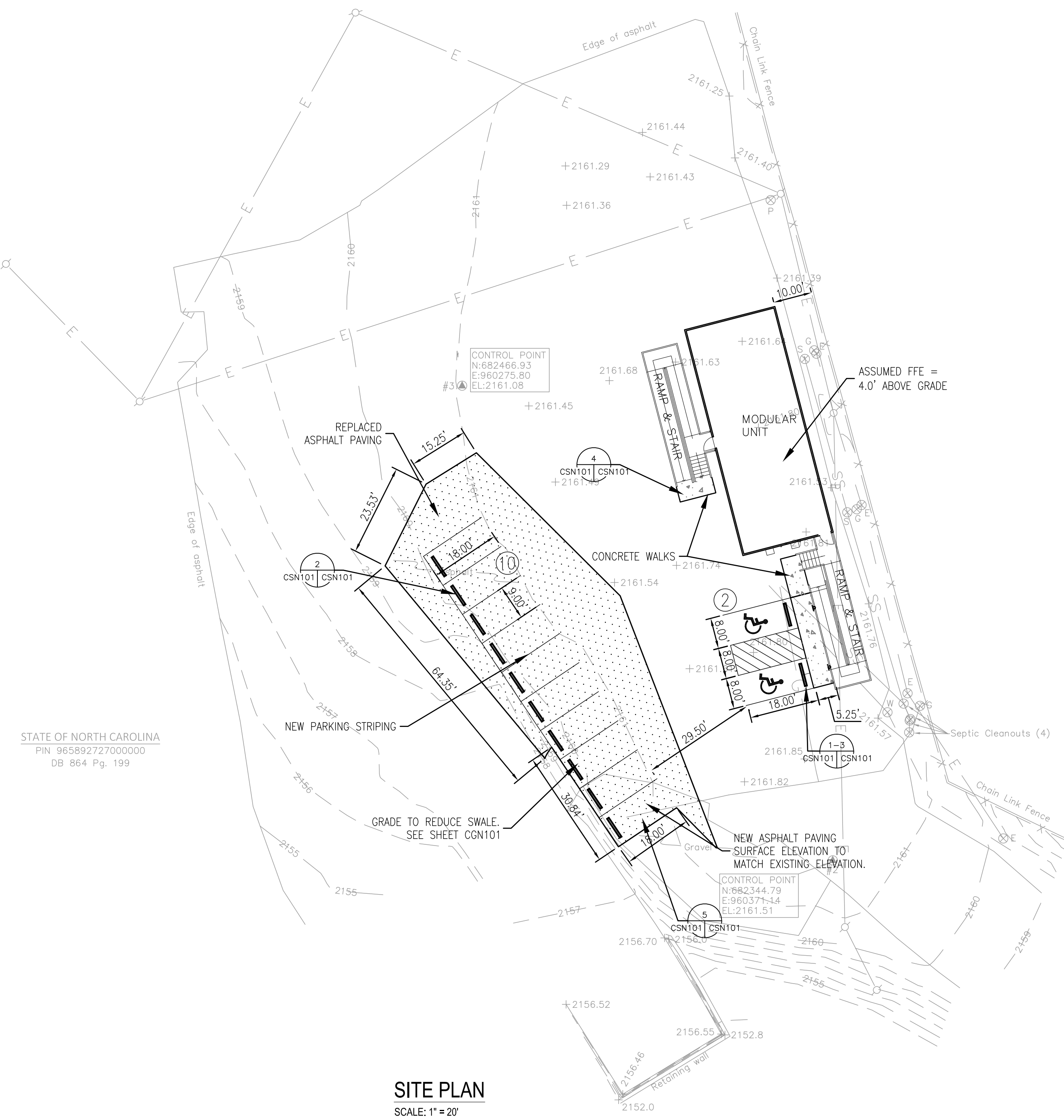


HANDICAP PARKING SPACE DETAIL



STANDARD SIDEWALK DETAILS

WALK WIDTH	LONGITUDINAL CONTRACTION JOINT
- 5'-11"	NONE
6'-0" - 7'-11"	ONE ALONG WALK AT CENTERLINE
8'-0" - 12'-0"	TWO ALONG WALK AT THIRD POINTS

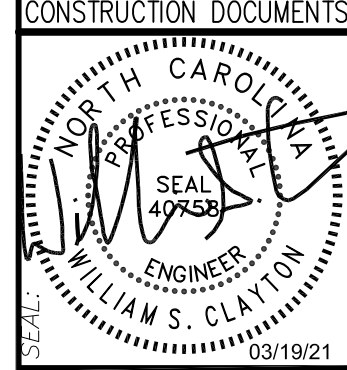
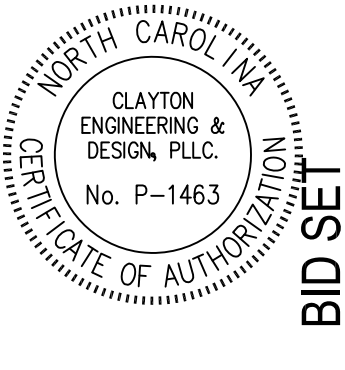
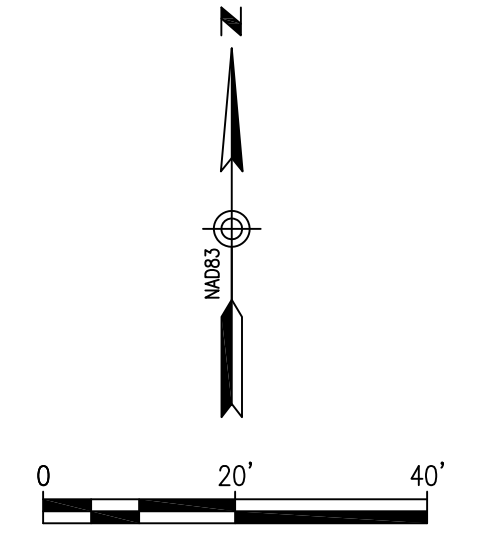


PROJECT DETAILS

- OWNER NORTH CAROLINA DOT
- PARCEL I.D. NO. = 965892727000000
- SITE ZONING = RIVER
- TOTAL SITE ACREAGE = 50.50 ACRES.
- BUILDING SIZE: SQ FT PROVIDED: SPACES
- IMPERVIOUS AREA: NO INCREASE

NOTES THIS SHEET:

- THE OWNER SHALL SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE STATE CONSTRUCTION OFFICE ENGINEERING DIVISION BEFORE ANY WORK BEGINS. THE OWNER SHALL NOTIFY THE STATE CONSTRUCTION OFFICE AT LEAST 7 CALENDAR DAYS PRIOR TO COMMENCING ANY WORK ON THE SITE. FAILURE TO PROVIDE REQUIRED NOTICE SHALL RESULT IN THE OWNERS RESPONSIBILITY TO UNCOVER ANY PRIOR BELOW-GRADE WORK FOR VISUAL INSPECTION BY THE ENGINEERING DIVISION.
- COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR.
- ALL ROAD IMPROVEMENTS ARE TO BE COORDINATED WITH STATE CONSTRUCTION OFFICE AND NCDOT ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
- IN ROLLING AND HILLY TERRAINS, SWEEPING OF THE STONE BASE AND/OR APPLICATION OF A TACK COAT MAY BE REQUIRED NEAR INTERSECTIONS. THESE REQUIREMENTS SHALL BE ESTABLISHED BY THE INSPECTOR BASED ON FIELD CONDITIONS.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED IN WRITING FROM PROPERTY OWNERS.
- IN ORDER TO ENSURE PROPER DRAINAGE, KEEP A MINIMUM OF 0.5% SLOPE ON THE CURB.
- POLE BASES AND ELECTRICAL DESIGN FOR PARKING LOT LIGHT POLES SHALL BE SUBMITTED PRIOR TO BEGINNING INSTALLATION.
- UNSATURABLE SUBBASE MATERIAL NOT IDENTIFIED BY THE SOIL TESTS, BUT LOCATED DURING CONSTRUCTION, MUST BE REMOVED FROM THE RIGHT-OF-WAY AND REPLACED WITH BACKFILL.
- WHERE VERTICAL CURB AND GUTTER EXIST, ALL DRIVEWAY RAMPS SHALL BE CONSTRUCTED OF PORTLAND CEMENT A MINIMUM OF 6-INCHES DEEP. THE RAMP MUST RISE 4-INCHES ABOVE THE FLOW LINE OF THE GUTTER AT A POINT NO CLOSER THAN 2- FEET FROM THE GUTTER.
- ALL WORK TO BE COMPLETED IN NCDOT R/W TO BE COORDINATED WITH NCDOT.



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 HICKORY, NORTH CAROLINA 28601
 PHONE: 866-655-3466

CIVIL SITE PLAN

Modular Unit Relocation to NCDOT Buncombe County Maintenance Yard

STATE CONSTRUCTION ID# 20-21752-01A

ASSET NUMBER: CO.# SITE.# BLDG.#
 11 = 23 = XX

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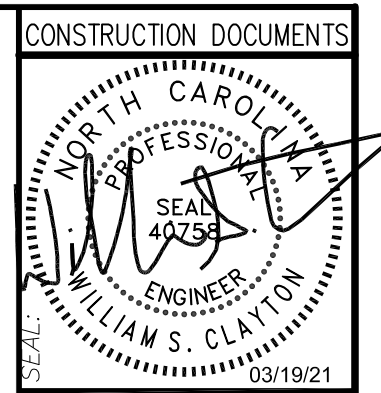
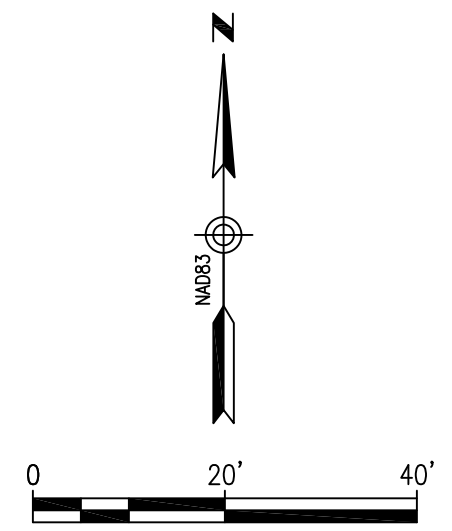
CSN101

NOTES THIS SHEET:

1. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES AT HIS OWN INITIATIVE AND EXPENSE.
2. THE CONTRACTOR SHALL COORDINATE FINISHED PAVEMENT GRADES WITH ELEVATIONS AND LOCATIONS OF EXISTING ROADS AND STREETS.
3. NO WORK SHALL COMMENCE ON SITE UNTIL A LAND DISTURBING PERMIT IS ISSUED BY THE APPROPRIATE AGENCY.
4. LENGTHS OF LINES INDICATED ON THE DRAWING FOR UTILITY SYSTEMS ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR DETERMINING THE EXACT AMOUNT OF PIPING REQUIRED TO FURNISH A COMPLETE WORKING SYSTEM IN ACCORDANCE WITH THE INTENT OF THE DRAWINGS.
5. DIMENSIONS AND COORDINATES SHOWN AT CURB ARE TO FACE OF CURB. COORDINATES SHOWN AT CURB INLETS ARE AT CENTER OF CURB INLET. SPOT ELEVATIONS SHOWN AT CURB INLETS ARE AT TOP OF CURB. SPOT ELEVATIONS SHOWN ON DROP INLETS ARE AT TOP OF INLETS.
6. FINISH CONTOURS SHOWN ARE TO TOP OF TOPSOIL, TOP OF PAVEMENT, TOP OF SIDEWALK, ETC. CONTRACTOR SHALL PROVIDE GRADE TO SUBGRADE ELEVATION REQUIRED. PAVEMENT SECTIONS AND SIDEWALK SECTIONS ARE PROVIDED FOR REFERENCE ONLY.
7. PROVIDE POSITIVE DRAINAGE AT ALL GRADED AREAS. PROVIDE UNIFORM (STRAIGHT) GRADE BETWEEN SPOT ELEVATIONS, FINISH CONTOURS, TOP OF INLETS, ETC.
8. FOR CONTINUATION OF ROOF DRAINAGE SEE PLUMBING PLANS

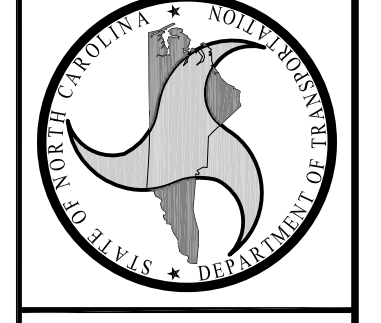


GRADING & DRAINAGE PLAN
SCALE: 1"=20'



BID SET

DESIGNED BY:
NCDOT FACILITIES DESIGN UNIT
ARCHITECT & ENGINEERS
1 SOUTH WILMINGTON STREET
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CONSULTANT:
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1209 9TH AVE NE, PO BOX 2351
HICKORY, NORTH CAROLINA 28601
PHONE: 828-655-3466

DRAWING TITLE / DESCRIPTION:
GRADING PLAN

PROJECT TITLE:
**Modular Unit Relocation to
NCDOT Buncombe County
Maintenance Yard**
NCDOT HIGHWAY DIVISION 13
ASHEVILLE, NORTH CAROLINA

STATE CONSTRUCTION
ID.# 20-21752-01A

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EROSION CONTROL NOTE:
 PER NCDOT AND NPDES REQUIREMENTS, GROUND STABILIZATION MUST OCCUR WITHIN 7 DAYS ON PERIMETER AREAS AND SLOPES STEEPER THAN 3:1, AND GROUND STABILIZATION MUST OCCUR WITHIN 14 DAYS ON OTHER AREAS.

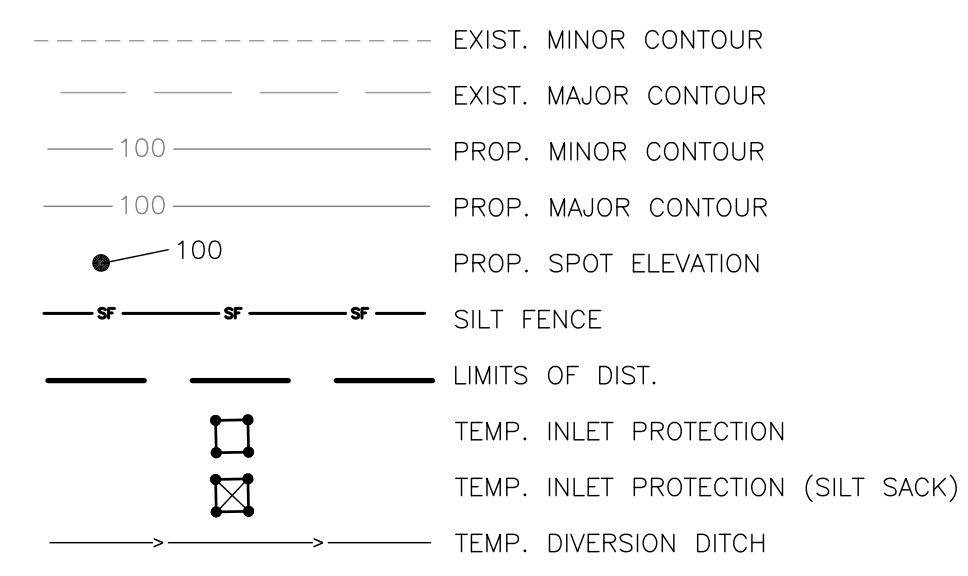
THE PURPOSE OF THE EROSION CONTROL MEASURES, SHOWN ON THESE PLANS, SHALL BE TO PRECLUDE THE TRANSPORT OF ALL WATERBORNE SEDIMENTS, RESULTING FROM CONSTRUCTION ACTIVITIES, FROM ENTERING ONTO ADJACENT PROPERTIES OR STATE WATERS. IF FIELD INSPECTION REVEALS THE INADEQUACY OF THE PLAN TO CONFINE SEDIMENT TO THE PROJECT SITE, APPROPRIATE MODIFICATIONS WILL BE MADE TO CORRECT ANY PLAN DEFICIENCIES.

GROUND COVER: WHENEVER LAND-DISTURBING ACTIVITY IS UNDERTAKEN ON A TRACT COMPRISING MORE THAN ONE ACRE, IF MORE THAN ONE CONTIGUOUS ACRE IS UNCOVERED,

GRADE SLOPES & FILLS: 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.

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 OWNER(S).

GRADING AND EROSION CONTROL LEGEND

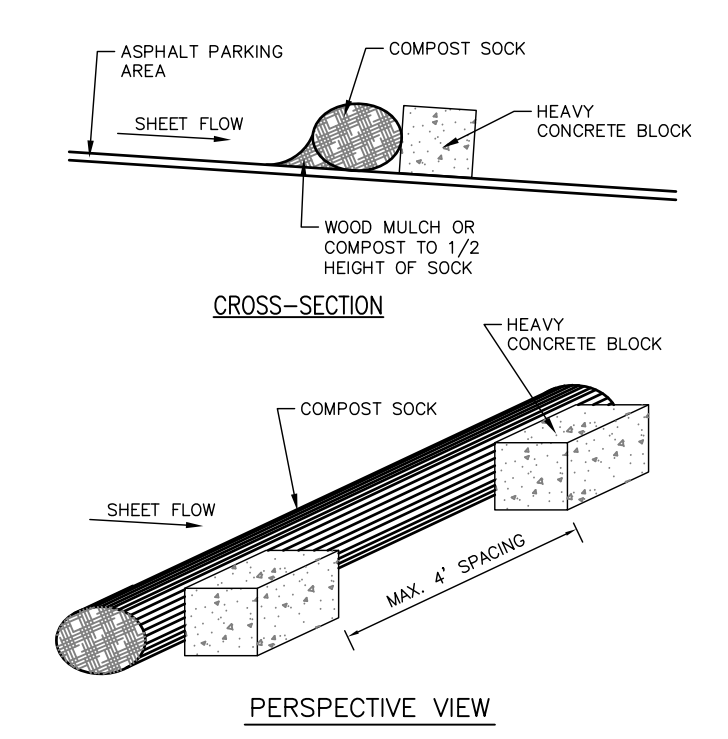
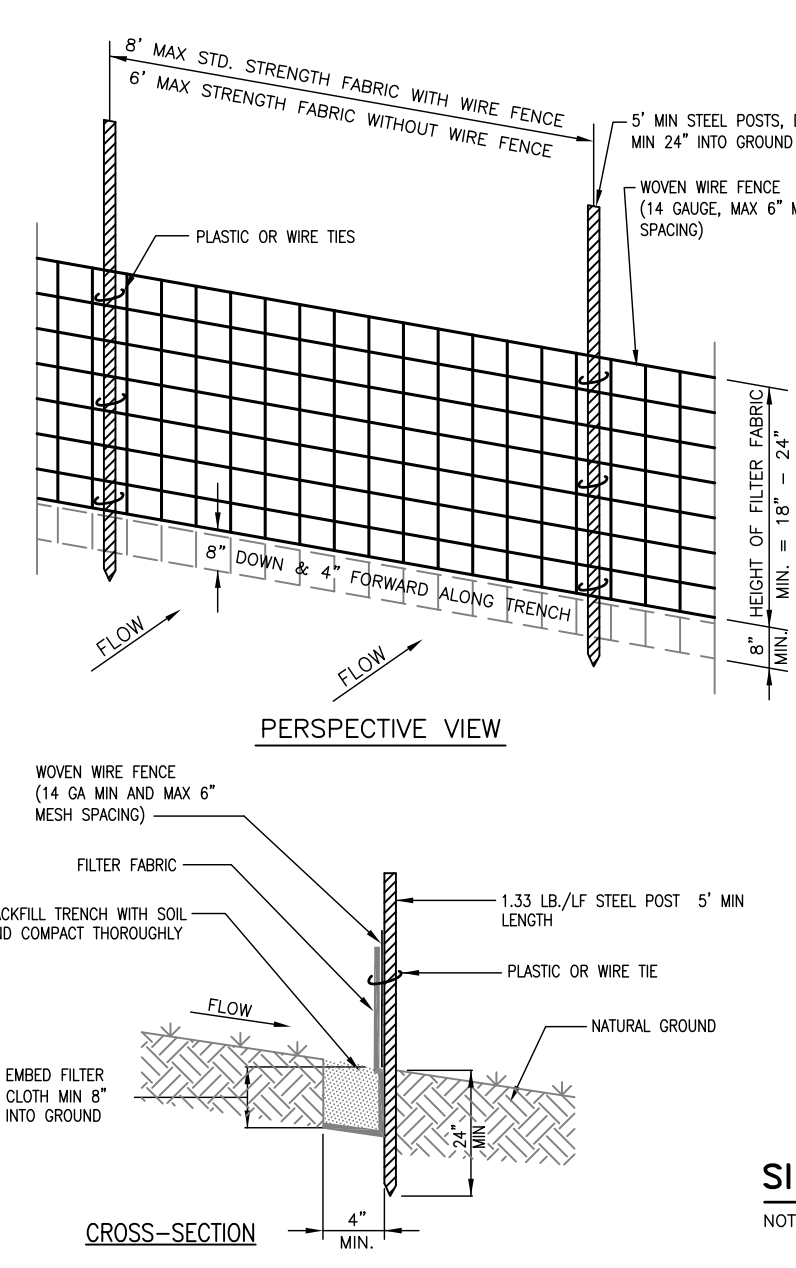


EROSION AND SEDIMENT CONTROL NOTES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PROCEDURES APPROVED BY NCDOT AND BUNCOMBE COUNTY. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH ALL APPROVED PROCEDURES WHICH MAY BE PERTINENT TO THE PROJECT.
 - ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED BY A TEMPORARY CONSTRUCTION ENTRANCE TO PREVENT TRACKING OF MUD ONTO PUBLIC RIGHT-OF-WAYS. AN ENTRANCE PERMIT FROM NCDOT IS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN STATE RIGHT-OF-WAYS.
 - SEDIMENT CONTROL DEVICES, SUCH AS SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, CHECK DAMS OR OTHER MEASURES NOT LOCATED IN PROPOSED FILL OR EXCAVATION AREAS, SHALL BE CONSTRUCTED PRIOR TO ALL OTHER LAND DISTURBANCE. AN ON-SITE PRE-CONSTRUCTION MEETING WILL BE HELD BETWEEN THE ENGINEER AND THE CONTRACTOR TO IDENTIFY THOSE MEASURES TO BE INITIALLY INSTALLED.
 - MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH PROCEDURES APPROVED BY NCDOT & BUNCOMBE COUNTY. MAINTENANCE WILL INCLUDE THE REPAIR OF MEASURES DAMAGED BY ANY SUBCONTRACTOR INCLUDING THOSE OF THE PUBLIC UTILITY COMPANIES. AT THE PRECONSTRUCTION MEETING, THE CONTRACTOR WILL SUPPLY THE OWNER WITH THE NAME OF THE INDIVIDUAL WHO WILL BE RESPONSIBLE FOR ENSURING MAINTENANCE OF INSTALLED MEASURES ON A DAILY BASIS.
 - SURFACE FLOWS OVER CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER REDIRECTING FLOWS FROM TRANSVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO SAFELY LOWER WATER DOWNSLOPE WITHOUT CAUSING EROSION.
 - SEDIMENT CONTROL MEASURES MAY REQUIRE MINOR FIELD ADJUSTMENTS AT THE TIME OF CONSTRUCTION TO INSURE THEIR INTENDED PURPOSE IS ACCOMPLISHED.
 - THE CONTRACTOR SHALL STRIP AND PILE TOPSOIL AT THE LOCATIONS SHOWN ON THIS PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE SHALL BE PLACED AT THE TOE OF THE STOCKPILE AFTER STRIPPING OF TOPSOIL IS COMPLETE.
 - THE CONTRACTOR SHALL COMPLETE DRAINAGE FACILITIES WITHIN 30 DAYS FOLLOWING COMPLETION OF ROUGH GRADING AT ANY POINT WITHIN THE PROJECT. THE INSTALLATION OF DRAINAGE FACILITIES SHALL TAKE PRECEDENCE OVER ALL UNDERGROUND UTILITIES. OUTFALL DITCHES FROM DRAINAGE STRUCTURES SHALL BE STABILIZED IMMEDIATELY AFTER CONSTRUCTION OF SAME. THIS INCLUDES INSTALLATION OF EROSION CONTROL STONE WHERE REQUIRED.
 - TEMPORARY VEGETATIVE COVER SHALL BE PROVIDED IN ALL AREAS, WHICH ARE NOT DESIGNATED FOR PAVING, UNDERGROUND UTILITIES OR STRUCTURAL USES. SUCH AREAS SHALL NOT BE EXPOSED FOR PERIODS EXCEEDING 10 DAYS. TEMPORARY VEGETATIVE COVER MAY BE ELIMINATED IN FAVOR OF FINAL VEGETATIVE COVER IF CONSTRUCTION AND SEASONAL CONDITIONS PERMIT.
 - ALL AREAS DESIGNATED FOR PAVING, UNDERGROUND UTILITIES, AND STRUCTURAL USE SHALL BE STABILIZED AS SOON AS POSSIBLE, BUT NOT EXCEEDING 10 DAYS FOLLOWING INSTALLATION. NO MORE THAN 300' OF SANITARY SEWER, STORM SEWER, OR WATER LINES ARE TO BE OPEN AT ONE TIME.
 - THE TERM SEEDING, FINAL VEGETATIVE COVER OR STABILIZATION, ON THIS PLAN SHALL MEAN THE SUCCESSFUL GERMINATION AND ESTABLISHMENT OF A STABLE GRASS COVER FROM A PROPERLY PREPARED SEEDBED CONTAINING THE SPECIFIED AMOUNTS OF SEED, LIME, AND FERTILIZER. IRRIGATION SHALL BE REQUIRED AS NECESSARY TO ENSURE ESTABLISHMENT OF GRASS COVER.
 - ALL SLOPES STEEPER THAN 3:1 SHALL REQUIRE THE USE OF EROSION CONTROL BLANKETS SUCH AS EXFLOSION BLANKETS TO AID IN THE ESTABLISHMENT OF A VEGETATIVE COVER. INSTALLATION SHALL BE IN ACCORDANCE WITH MULCHING AND MANUFACTURER'S INSTRUCTIONS.
 - INLET PROTECTION SHALL BE PROVIDED FOR ALL STORM DRAIN INLETS AS SOON AS PRACTICAL FOLLOWING CONSTRUCTION OF SAME. REPLACE TEMPORARY INLET PROTECTION WITH SILT SACK, AFTER INSTALLING FRAME, GRATE, AND CURB AND GUTTER.
 - BASE COURSE MATERIAL SHALL BE PLACED IN ALL STREET & PARKING AREAS WITHIN 30 DAYS OF FINAL GRADING.
 - TEMPORARY EROSION CONTROL MEASURES ARE NOT TO BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED. AFTER STABILIZATION IS COMPLETE, ALL MEASURES SHALL BE REMOVED AFTER NCDOT INSPECTION AND RELEASE. TRAPPED SEDIMENT SHALL BE SPREAD AND SEEDED.
 - SEE CCN501 FOR SEEDING, SEED BED PREPARATION AND MAINTENANCE SCHEDULE.
 - TOTAL DISTURBED AREA = 0.30 ACRES.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EROSION CONTROL PLAN APPROVAL IF NECESSARY FOR ANY RELATED BORROW AREA.
 - OFF-SITE WASTE OR BORROW AREAS SHALL BE APPROVED BY BUNCOMBE COUNTY PRIOR TO THE IMPORT OF ANY BORROW OR EXPORT OF ANY WASTE TO OR FROM THE PROJECT SITE.
- NOTE: REFERENCING STORM DRAINAGE WAS REMOVED. NO STORM DRAINAGE IS PROPOSED FOR THIS PROJECT.

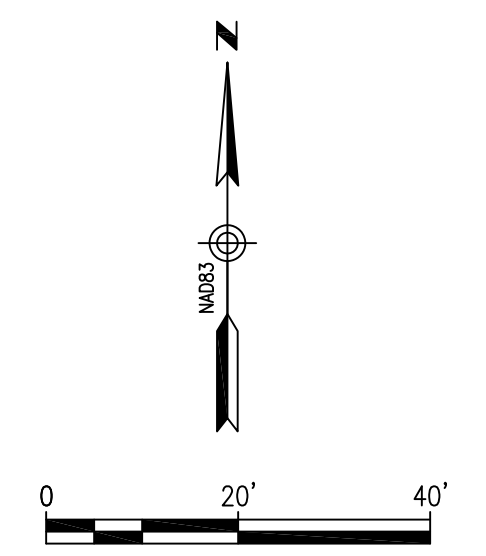
- CONSTRUCTION SPECIFICATIONS:**
- CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
 - ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE.
 - CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
 - SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UP-SLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH FASTENED SECURELY TO THE UP-SLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UP-SLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
 - WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.
 - EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
 - EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UP-SLOPE FROM THE BARRIER.
 - PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
 - BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
 - DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.
- MAINTENANCE:**
- INSPECT SEDIMENT FENCES ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
- REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE
 NOT TO SCALE



COMPOST SOCK INSTALLATION DETAIL
 NOT TO SCALE

STATE OF NORTH CAROLINA
 PIN 965892727000000
 DB 864 Pg. 199



PRECONSTRUCTION EROSION CONTROL PLAN
 SCALE: 1" = 20'

CONSTRUCTION DOCUMENTS

BID SET

DESIGNED BY: NCDOT FACILITIES DESIGN UNIT ARCHITECT & ENGINEERS

CONSULTANT: CLAYTON ENGINEERING & DESIGN

PROJECT TITLE / DESCRIPTION: Modular Unit Relocation to NCDOT Buncombe County Maintenance Yard

STATE CONSTRUCTION ID.# 20-21752-01A

ASSET NUMBER: CO.# SITE.# BLDG.# 11 - 23 - XX

REVISIONS NO. DATE

DATE ISSUED: 3/19/21

DRAWN BY: CHECKED BY:

SHEET NO. CCN101

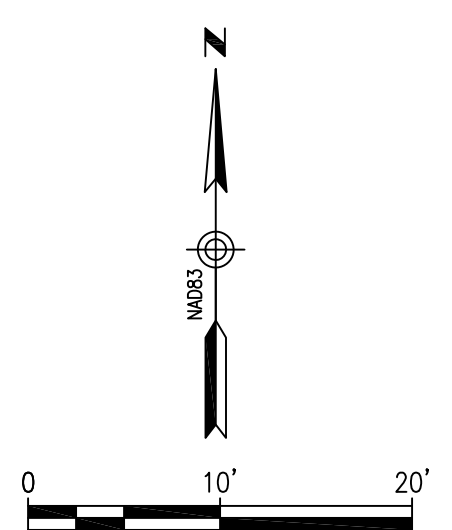
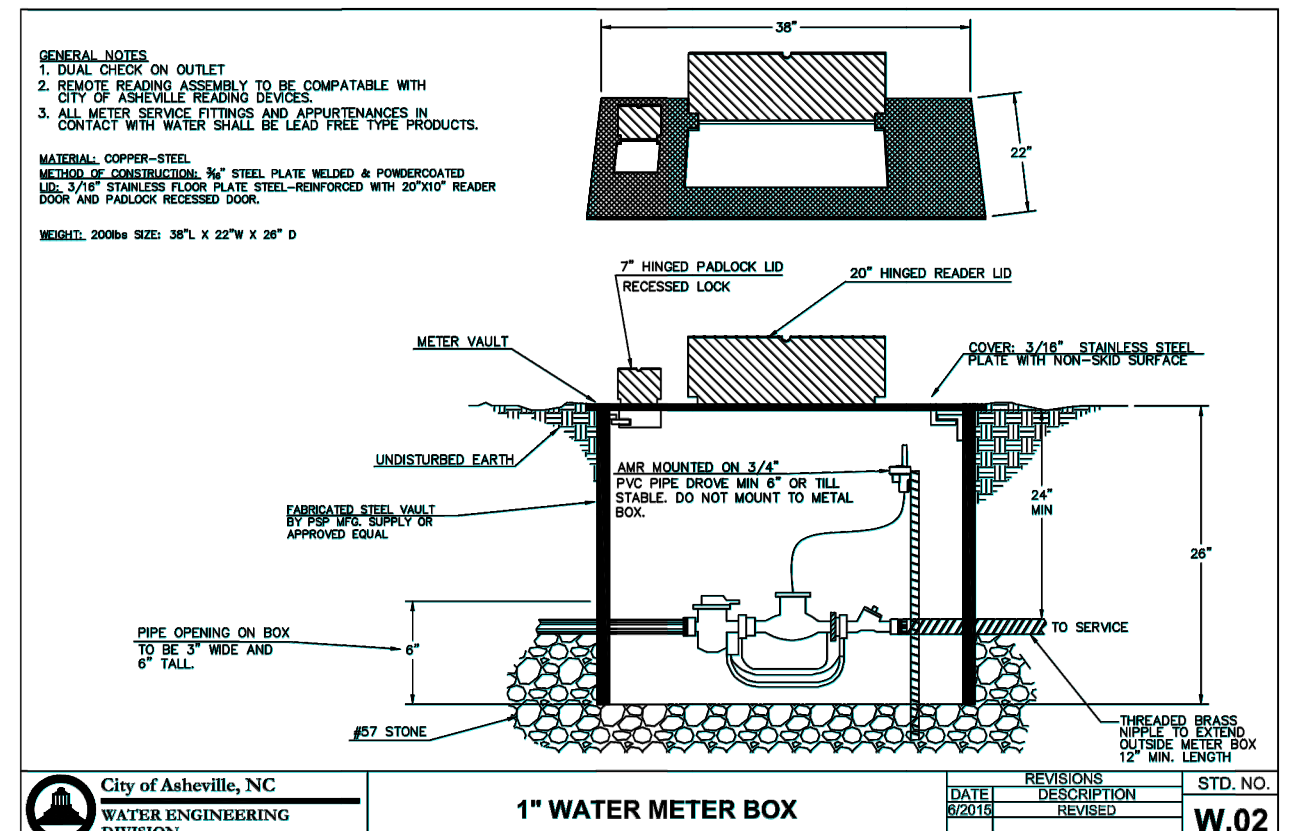
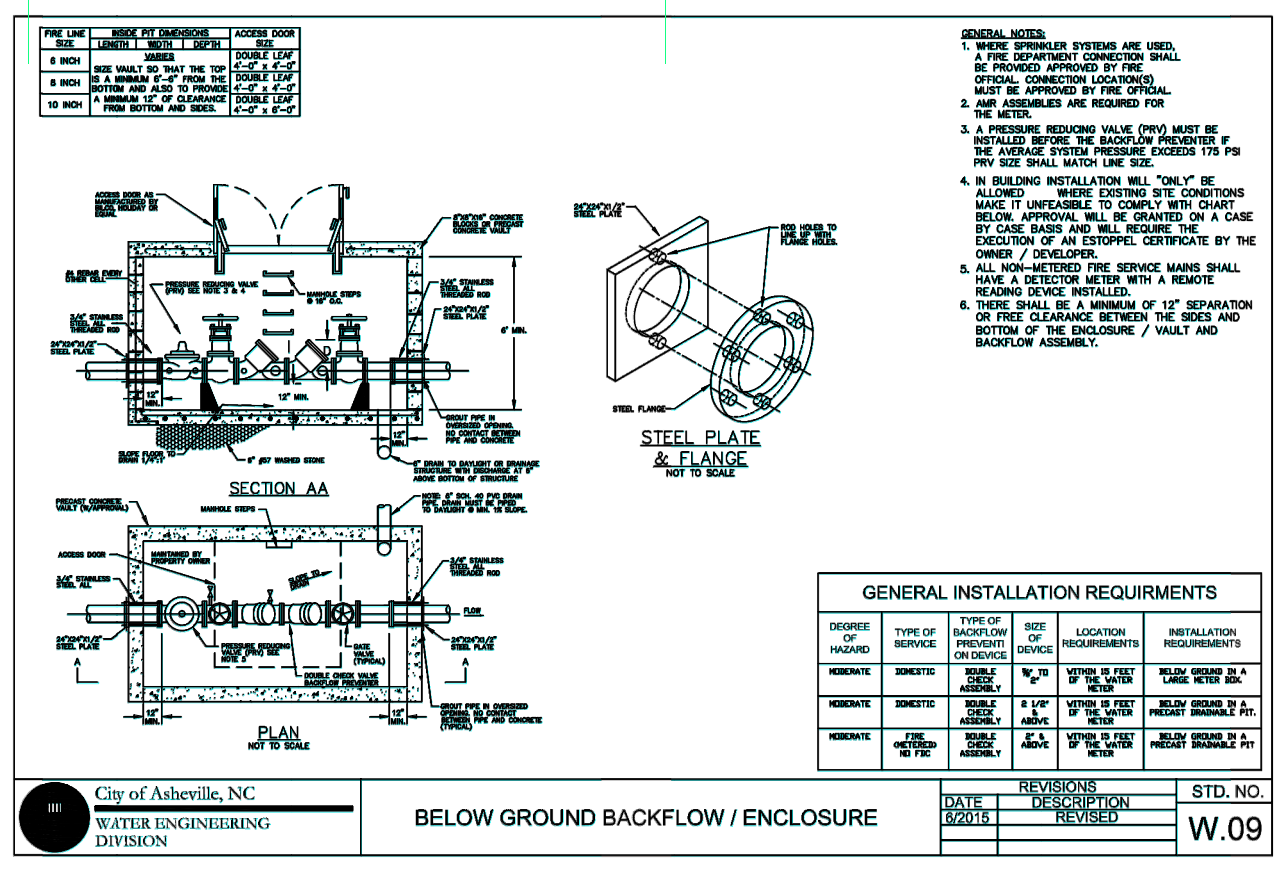
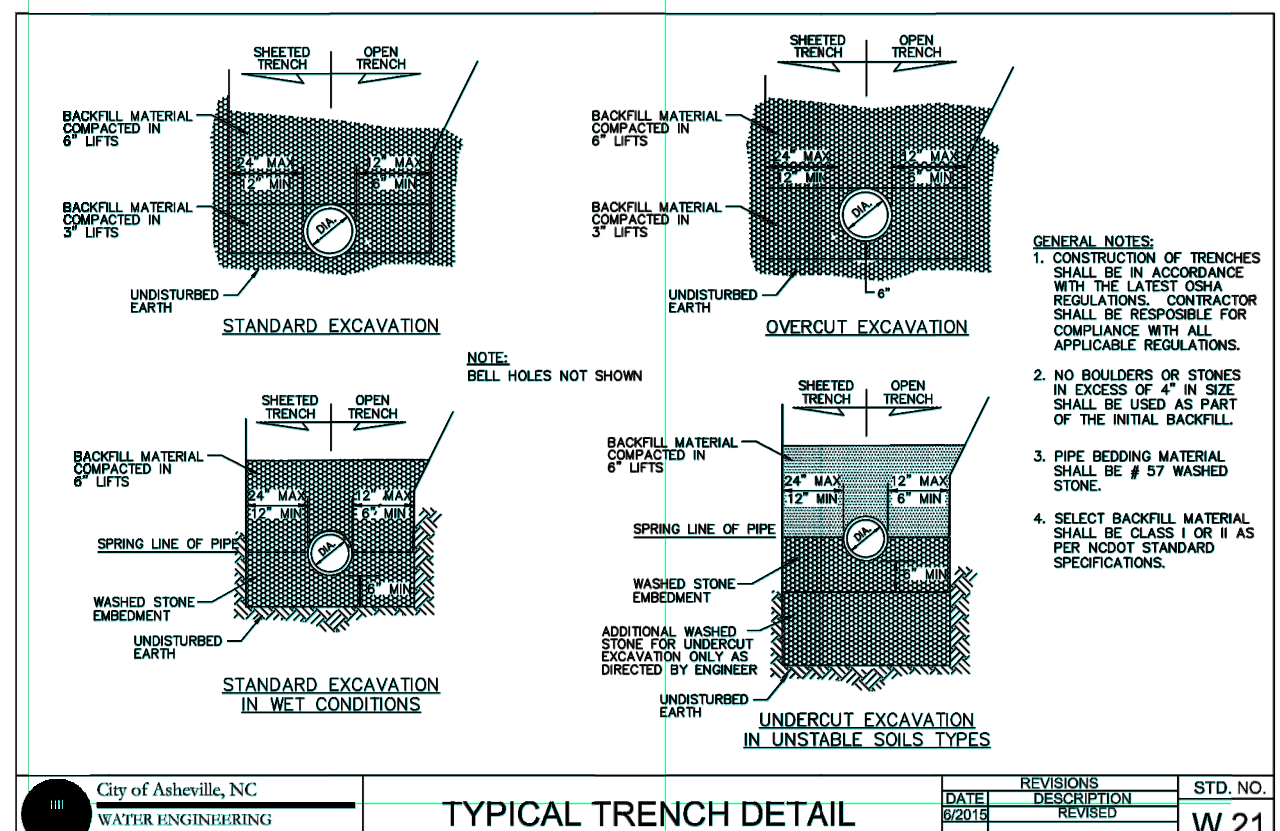
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NOTES THIS SHEET:

- BELOW GRADE WATERLINE PIPING SHALL BE 3" PVC, SDR 13.5 CL 315. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH 15A NCAC CHAPTER 18C.
- THE CONTRACTOR SHALL GUARANTEE THE COMPLETE PLUMBING SYSTEM AGAINST DEFECTS DUE TO FAULTY MATERIALS, FAULTY WORKMANSHIP OR FAILURE DUE TO NEGLIGENCE OF THE CONTRACTOR. THE GUARANTEE PERIOD SHALL BEGIN ON THE DATE OF THE FINAL ACCEPTANCE AND SHALL CONTINUE FOR A PERIOD OF 12 MONTHS FROM ACCEPTANCE DURING WHICH TIME THE CONTRACTOR SHALL MAKE GOOD SUCH DEFECTIVE WORKMANSHIP AND MATERIALS AND ANY DAMAGE RESULTING THEREFROM, WITHIN A REASONABLE TIME OF NOTICE GIVEN BY THE OWNER.
- BELOW GRADE SANITARY SEWER PIPING SHALL BE D.I.P. ALL PIPE JOINTS SHALL BE OF AN INTEGRAL BELL AND SPIGOT OF THE SAME MATERIAL AS THE PIPE WITH A SOLID CROSS-SECTION RUBBER "O" RING SECURELY LOCKED IN PLACE AT THE POINT OF MANUFACTURE. SERVICE SADDLES AND OTHER FITTINGS SHALL BE SUPPLIED BY THE PIPE MANUFACTURER AND SHALL BE OF THE SAME MATERIAL AND TYPE OF CONSTRUCTION AS THE PIPE MATERIAL.
- AT COMPLETION OF WORK, CONTRACTOR SHALL PROVIDE A COMPLETE SET OF OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT TO THE OWNER. CONTRACTOR SHALL COORDINATE PROPOSED UNDERGROUND UTILITIES W/ THE UTILITIES AS SHOWN ON THE PLUMBING AND MECHANICAL SITE PLANS.
- CONTRACTOR SHALL INSTALL NEW SANITARY SEWER LINE IN ACCORDANCE WITH 15A NCAC 2T. 0305.
- CONTRACTOR SHALL MAINTAIN 10 FT MINIMUM HORIZONTAL SEPARATION BETWEEN NEW WATERLINE AND EXISTING SEWER LINES, AND AT CROSSINGS, WATERLINE MUST CROSS ABOVE THE EXISTING SEWER LINE WITH A MINIMUM CLEARANCE OF 18 INCHES.
- NEW WATERLINE TO HAVE A MINIMUM COVER OF 3 FT.
- CONTRACTOR SHALL OBTAIN PERMITS REQUIRED FOR WATER MAIN EXTENSION AND FOR CONSTRUCTION OF SANITARY SEWER LINES.
- SEE PME PLANS FOR SEWER CONTINUATION.
- SEE PME PLANS FOR WATER CONTINUATION.

UTILITY NOTES

- CONCRETE BLOCKING (3000 PSI) TO BE PLACED AT ALL BENDS OR AS REQUIRED UNLESS MEGA LUGS OR RESTRAINED JOINTS ARE USED.
- STANDARD DEPTH OF COVER TO BE 3 FEET EXCEPT AT VALVE OR HYDRANT LOCATIONS OR OTHER SPECIAL SITUATIONS. COVER IS BASED ON ELEVATION BELOW EDGE OF PAVEMENT OR AS INDICATED ON THE PLANS.
- PROVIDE FLOURED IN PLACE CONCRETE PADS (18"x18"x6") OR CONCRETE DONUTS MAY BE USED AS AN ALTERNATIVE AT THE DISCRETION OF THE UTILITIES INSPECTOR) AT ALL VALVE BOXES.
- EXTENSIONS FOR VALVE BOXES, WHEN REQUIRED, ARE TO BE VALVE BOXES OR DIP (NO PVC OR C-900).
- ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO THE STANDARD DETAILS OR AS REQUIRED BY THE NCDOT.
- PAVEMENT CUTS ARE TO BE REPLACED IMMEDIATELY AFTER BACKFILLING OF INITIAL CUT EITHER WITH PERMANENT REPLACEMENT OR A TEMPORARY REPLACEMENT OF 10" OF BASE IF APPROVED BY THE CITY OR NCDOT.
- REPAIRS TO MAIN BREAKS
 - SOLID SLEEVES TO BE USED FOR CONNECTING SPIGOT ENDS SHALL BE OF THE LONG BODY TYPE.
 - ALL REPAIRS SHALL BE INSPECTED BY CITY BEFORE BACKFILLING.
- IN ANY INSTANCE WHERE IT WILL BE NECESSARY TO HAVE THE WATER SHUT OFF ON EXISTING MAINS IN ORDER TO MAKE A TIE-IN, THE WORK MUST BE DONE BY CITY FORCES OR A CONTRACTOR WORKING FOR THE CITY, SCHEDULED 48 HOURS TO 7 DAYS IN ADVANCE DEPENDING ON THE LOCATION AND TYPES OF BUSINESSES THAT WILL BE AFFECTED.
- WHEN A WATER MAIN CROSSES AN EXISTING SEWER MAIN, THE CONTRACTOR IS TO REPLACE THE SEWER PIPE SPANNING THE DITCH WITH DUCTILE IRON PIPE WHEN THE FOLLOWING CONDITIONS OCCUR:
 - WHEN A WATER MAIN IS OVER A SEWER MAIN AND THE VERTICAL DISTANCE BETWEEN THE TWO MAINS IS 18-INCHES OR LESS (MINIMUM 12" CLEARANCE BETWEEN WATER AND SEWER MAINS).
 - WHEN A WATER MAIN IS OVER A SEWER MAIN AND THE VERTICAL DISTANCE BETWEEN THE TWO MAINS IS 18-INCHES OR LESS (MINIMUM 12" CLEARANCE BETWEEN WATER AND SEWER MAINS).
- WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 10' HORIZONTAL SEPARATION FROM SEWER LINES. WHERE THIS IS NOT POSSIBLE, BOTH WATER LINE AND SEWER LINE SHALL BE DUCTILE IRON PIPE.
- WATER LINES SHALL BE DISINFECTED AND HYDROSTATICALLY TESTED IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS.
- ALL PLANS SHALL MEET ALL FEDERAL, STATE, AND LOCAL UTILITY PROVIDER REGULATIONS, DESIGN CRITERIA, AND CONSTRUCTION STANDARDS.
- ALL UNDERGROUND LINES OUTSIDE BUILDING FOOTPRINT, EXCEPT LAWN IRRIGATION LINES, SHALL BE REQUIRED TO HAVE A WARNING TAPE INSTALLED IN BACKFILL BETWEEN 6 INCHES TO 24 INCHES BELOW FINISHED GRADE DIRECTLY OVER PIPING.
- METALLIC LINES SHALL BE IDENTIFIED WITH DURABLE PRINTED PLASTIC WARNING TAPES, MINIMUM 3 INCHES WIDE WITH LETTERING TO IDENTIFY BURIED LINE BELOW.
- NON-METALLIC PIPES, OTHER THAN GAS LINES, SHALL BE IDENTIFIED BY DETECTABLE WARNING TAPE, MINIMUM TWO 2 INCHES WIDE, WITH LETTERING TO IDENTIFY BURIED LINE BELOW.
- THE AMENDED 2018 NCPD ADDED SECTION 306.2.4 TRACER WIRE, FOR PLASTIC SEWER PIPE, AN INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO AND OVER THE FULL LENGTH OF THE PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER SHALL TERMINATE AT THE CLEANOUT BETWEEN THE BUILDING DRAIN AND THE BUILDING SEWER. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 14 AWG AND INSULATION TYPE SHALL BE LISTED FOR DIRECT BURIAL.



UTILITY PLAN
 SCALE: 1" = 10'

SECTION 01568 SEDIMENT AND EROSION CONTROL

PART 1 GENERAL

- 1.1 SECTION INCLUDES
A. Erosion and sediment control shall be provided during the entire construction period as specified herein.
1.2 REFERENCED SECTIONS
A. Section 02820 - Grassing
1.3 REQUIREMENTS
A. Contractor shall comply with all local, state and federal laws, ordinances, rules and regulations pertaining to erosion and sediment control...

PART 3 EXECUTION

- 3.1 EROSION AND SEDIMENT CONTROL MEASURES
A. Contractor shall take all measures to control erosion and sedimentation along pipeline rights-of-way, at the construction site, including borrow and waste areas and temporary access roads...
3.2 EMERGENCY CONDITIONS
A. Unusually intense storms cause temporary control measures to fail, prompt restoration and cleanup of sediment deposits shall be made...

SECTION 02220 EXCAVATION AND BACKFILL

1. GENERAL

- 1.1 RELATED DOCUMENTS
1.1.1. Requirements of the General and Supplemental Conditions apply to all Work in this Section. Provide all labor, materials, equipment, and services indicated on the Drawings...
1.2.1. The extent of excavation and backfill is limited to the areas of construction, and includes (but is not necessarily limited to) stockpiling of topsoil, site grading, excavation of footings and trenches...
1.3.1. REFERENCED STANDARDS: Unless otherwise indicated, all referenced standards shall be the latest edition available at the time of bidding...

SECTION 02050 DEMOLITION AND REMOVAL

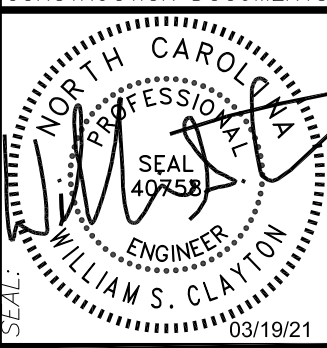
PART 1 GENERAL

- 1.1 RELATED DOCUMENTS
A. GENERAL: Requirements of the General and Supplemental Conditions apply to all Work in this Section. Provide all labor, material, equipment, and services indicated on the Drawings...
1.2 DESCRIPTION OF WORK
A. GENERAL: The demolition of existing vegetation in indicated areas, removal of stringing and curb and gutter, removal/reworking/verification of stone base, as well as demolition of sections of the existing utilities...
1.3 REQUIREMENTS
A. GENERAL: The work includes demolition or removal of all construction indicated or specified. Do not begin demolition until authorization is received from the Engineer...

3.2.0.b (CONTINUED)

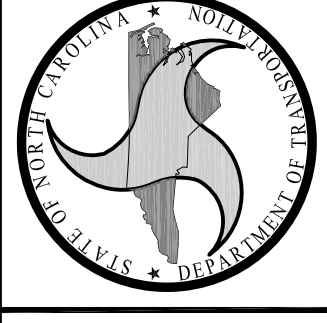
- (1) Before any structure or embankment is built on or against the rock, clean from the rock, clean from the rock all vegetation, dirt, sand, clay, boulders, scum, excessively cracked rock, loose fragments, ice, snow, and other objectionable substances. Use picking, boring, wedging, streams of water under sufficient pressure, stiff brushes, hammers, steam jets, and other effective means to accomplish this cleaning...
3.3.2 BACKFILL AROUND STRUCTURES
3.3.2.1 GENERAL: Unless otherwise specified or indicated on the Drawings, use suitable material for backfill which was removed in the course of making the construction excavations...
3.3.2.2 PREPARATION OF ROCK SURFACES
3.3.2.2.1 GENERAL: Whenever so directed during the process of the work, remove all dirt and loose rock from designated areas and clean the surface of the rock thoroughly...

CONSTRUCTION DOCUMENTS



BID SET

DESIGNED BY: NCDOT FACILITIES DESIGN UNIT ARCHITECT & ENGINEERS



CONSULTANT: CLAYTON ENGINEERING & DESIGN 1009 9TH AVE. NE, BOX 28801, RALEIGH, NORTH CAROLINA 27601

PROJECT SPECIFICATIONS

Modular Unit Relocation to NCDOT Buncombe County Maintenance Yard

STATE CONSTRUCTION ID# 20-21752-01A

ASSET NUMBER: CO.# SITE# BLDG.# 11 = 23 = XX

Table with columns: REVISIONS, NO., DATE

DATE ISSUED: 3/19/21 DRAWN BY: CHECKED BY: SHEET NO.

SECTION 02222 - EXCAVATION, BACKFILLING, AND COMPACTING FOR UTILITIES

PART 1 - GENERAL

- 1.01 SUMMARY
1.02 RELATED REQUIREMENTS
1.03 SUBMITTALS
A. Shop drawings or details pertaining to site utilities are not required unless use of materials, methods, equipment or procedures contrary to drawings or these specifications are proposed.

PART 2 - PRODUCTS

- A. Bedding Material: Processed sand and gravel free from clay lumps, organic or other deleterious material and complying with following gradation requirements:
U.S. Sieve Size Percent Passing (by weight)
1 inch 100
3/4-inch 90-100
3/8-inch 20-55
No. 4 10-10
No. 8 0-5

PART 3 - EXECUTION

- 3.01 SUMMARY
A. Set all lines, elevations and grades for utility and drainage system work and control system for duration of work, including careful maintenance of bench marks, property corners, monuments or other reference points. Maintain in operating condition existing utilities, active utilities and drainage systems encountered in utility installation.

3.02 EXCAVATION, TRENCHING AND BACKFILLING

- A. Perform excavation as indicated for specified depths. During excavation, stockpile materials suitable for backfilling in orderly manner far enough from bank of trench to avoid overloading, slides or cave-ins.
B. Remove excavated materials not required or not suitable for backfilling or embankments and waste off-site. Any structures discovered during excavation(s) shall be disposed of as specified.

3.03 TRENCH EXCAVATION

- A. The local utility companies shall be contacted before excavation shall Dig trench at proper width and depth for laying pipe, conduits or cut trench banks as nearly vertical as practical and remove stones as necessary to avoid point-bearing.
B. All trench excavation side walls greater than 5 feet in depth shall be sloped, shoring, sheeted, braced or other wise supported by means of the sufficient strength to protect the workmen within them in accordance with the applicable rules and regulations established for construction by the Department of Labor, Occupational Safety and Health Administration and by local ordinances.

- 1. Water Mains: 36" to top of pipe barrel
2. Sanitary Sewer: Elevations and grades as indicated on drawings.
3. Storm Sewer: Depths, elevations and grades as shown on drawings.

3.04 SHEETING AND BRACING

Provide sheeting and bracing, when necessary, in trenches and other excavations where protection of workmen required. Sheeting may be removed after sufficient backfilling to protect against damaging or injurious caving.

3.05 PIPE BEDDING

Accurately cut trenches for pipe or conduit that is installed to designed elevations and grades to line and grade from 4" below bottom of pipe and to width as specified. Place 4" of bedding material, compact in bottom of trench, and accurately shape to conform to lower portion of pipe barrel. After pipe installation, place select backfill as determined in Section 02200, and compact in maximum 8" layers measured loose to the top of the trench.

3.06 TRENCH BACKFILLING

- A. Criteria: Trenches shall not be backfilled until required tests are performed and the utility systems comply with and are accepted by applicable governing authorities. Backfilling trenches as specified, if improperly backfilled, reopen to depth required to obtain proper compaction. Backfill and compact, as specified, to properly correct condition in an acceptable manner.
B. Backfilling: After pipe or conduit has been installed, bedded and tested as specified, backfill trench or structure excavation with specified material placed in 8" maximum loose lifts. Compact to minimum density of 95% of optimum density in accordance with ASTM D 698.

SECTION 02401 - WATER VALVES, VALVE BOXES, AIR RELIEF VALVES AND TAPPING SLEEVE & VALVES

1.1 INTRODUCTION

This section covers the requirements for furnishing and installing the abovementioned items and their respective appurtenances as detailed on the plans. This shall include all labor, equipment, materials and incidentals that are necessary to complete installation of subject items in accordance with the plans and specifications. All supplied materials shall be of a type and class as specified herein. This section will specify storage and handling, excavation, bedding, laying and coupling of joints and backfilling. All construction shall be as specified, as herein, unless written deviation is received from the Engineer. Work under this section shall be measured by the actual number of components and paid for at unit prices established in the Contract.

1.2 CATALOG CUT SUBMITTALS

Contractor shall submit 4 copies of catalog cuts to Engineer for review for all materials that are required to complete the work as described in the associated plans. Engineer will retain two sets of original submittals and return two sets to the Contractor with the appropriate response annotated.

1.3 STORAGE AND HANDLING

The Contractor shall inspect the materials upon receipt for visible defects prior to off loading. The Contractor shall unload all valves and appurtenances as so to avoid any deformation or other injury. The Contractor shall implement appropriate measures during storage such that no storm water may pass through or encumber the material. All materials shall be stored in such a manner that they will drain and so protect them from contamination or freezing. If any material is found to be defective during installation, then some material shall be removed and replaced with appropriate quality and type at the Contractors expense.

1.4 MATERIALS

- A. Gate Valves:
All Gate Valves shall as a minimum reflect a rating of 200 psi, contain cleareway equal to the full nominal diameter of the adjoining pipe, be open left operation (counterclockwise), reflect the name and date of manufacture, be of non-rising stem type, contain a directional arrow for operation cast into the body, have a 2" opening nut for control and contain Mechanical Joint connections. All requirements shall be met unless specified on the plans or directed by the Engineer in writing. All materials shall withstand a hydraulic test pressure of equal to twice the rated pressure and Contractor shall provide written proof of test from manufacturer upon request.
A.1 Resilient Seated Wedge Valve:
Gate Valves 2" through 36" diameter shall be of cast iron or ductile iron body, resilient seated wedge type valves conforming to the requirements of AWWA Standard C 509 and/or AWWA Standard C 500. Unless specifically approved in writing by the Engineer all valves shall be from one manufacturer and all parts interchangeable.

Gate valves shall conform to ASTM A-536 as it relates to cast iron or ductile iron manufacturer of the body, bonnet and gate. Shell thickness of components shall conform to the thickness in Table 2, Sect. 4.4 of AWWA Standard C 509 or AWWA Standard C 500 as appropriate. Valve body and bonnet coating shall conform to AWWA Standard C 550 and include fusion bonded epoxy coating for the interior and exterior surfaces of the valve. The gate shall be completely covered with a rubber coating securely fixed to oil ferrous surfaces. The gate and rubber coating shall conform to ASTM D429. Valve stems shall be of cast bronze construction. Valves shall contain a stuffing box, which located above the thrust collar, which will contain O-rings for sealing. The valve shall be of type construction that allows replacement of the ring seals while the valve is fully open and under pressure. Valves 16" and larger in diameter shall be designed and constructed in such a manner as to include beveled reduction gears to reduce the number of turns and torque required to operate valves.

A.2 Double Disc Valves:
Gate valves larger than 36" diameter shall be ductile iron body, double disc parallel seat conforming to AWWA Standard C 500. All valves shall be from one manufacturer with interchangeable parts. Gate valves shall conform with ASTM A 536 as it relates to manufacturer of body, bonnet and gate constructed of ductile iron. Entire valve body and bonnet shall be coated on interior and exterior surfaces.

Gates shall be constructed of cast iron smooth and continuous without pockets on either face. Cam surfaces shall be open to the bottom. Gate ring seals shall be inserted into a dovetail groove under pressure and make up a single insertable finish. Gate valves shall operate as a bottom wedging design with a two-part wedge contact. Wedge and Hook shall be separate castings. Valve stems shall be of cast bronze construction. Valves shall contain a stuffing box, which located above the thrust collar, which will contain O-rings for sealing. The valve shall be of type construction that allows replacement of the ring seals while the valve is fully open and under pressure. Valves 16" and larger in diameter shall be designed and constructed in such a manner as to include beveled reduction gears to reduce the number of turns and torque required to operate valves. All rollers, tracks and scrapers shall be of bronze casting. Bypasses shall be supplied and installed as a part of all valves. Bypass shall be a minimum of 3" diameter and operating mechanism shall be of resilient seated wedge type.

B. Valve Boxes:
All valve boxes shall be adjustable screw type with a base sized to fit over the valve yoke and a lid with "water" cast integral. All valve boxes shall be constructed of domestic or foreign cast iron that complies with the requirements of ASTM A 48. Valve boxes shall be the appropriate range of adjustment for the site and Contractor should minimize the use of extensions.

C. Air Valve:
All air valves shall operate as both an air/vacuum valve and air release valve simultaneously in one unit. The air/vacuum portion of the appurtenance shall operate such that during the filling operation, or when necessary, it will allow large amounts of air to be expelled from the line to avoid substantially compressing air in the line and also operate to effectively allow air to reenter the line in the case that internal pressures would approach negative values, such as happens with fire breaks or siphonages. The air release portion of the valve shall operate such that it automatically releases minute amounts of air as necessary while in service. All air valves shall contain a rating of 150 psi with a test rating of 300 psi. Body and cover shall be manufactured of cast iron conforming to ASTM A126, Class B. The float shall be stainless steel with stainless steel guide and rated to withstand ultimate system surge pressure successfully. Valves 4" and larger shall have floats of stainless steel guides and rated to withstand ultimate system surge pressure successfully. The body and cover shall be constructed of cast iron and be concentrically located. All internal parts shall be stainless steel or Buna-N rubber.

D. Tapping Sleeve and Valve:
All sleeves shall have flanged outlet of appropriate size and strength to accommodate the tapping valve. Tapping valve shall be resilient seat, wedge gate valve design with each flange capable of accepting the sleeve, tap machine face, or mechanical joint connection to adjacent pipe. Tapping sleeves up to 12" shall be Stainless Steel Wrap Around type. Tapping sleeves 12" and larger shall be Ductile Iron Full Body type. All tapping sleeve and valves shall be of the size and type detailed on the plans. Stainless steel tapping sleeves shall be constructed of two-piece stainless steel jointed by grade 18-8 stainless steel bolts. The gasket shall be girded virgin SBR compound rated for water service per ASTM D2000 full range pipe coverage. Outlet pipe shall be constructed of grade 18-8 stainless steel and be schedule 5. All sleeves shall contain a 1/2" test outlet with brass plug for the purpose of air testing the sleeve. All connections to the existing system shall be coordinated with the Water Purveyor having jurisdiction.

1.5 INSTALLATION

A. Excavation:
This section shall cover the excavation and proper disposal of any and all materials disturbed during the construction of trenches which is further defined as all excavation necessary for the proper installation storm or sanitary sewers and any appurtenances and waterlines and any appurtenances. This section shall further cover any work deemed appropriate by the Engineer. Excavation shall be done to the lines and grades as depicted or detailed on the plans or as directed by the Engineer. All work involving this section shall be coordinated with any Grading, Site Utility work or other construction on the project site and shall be maintained satisfactorily so that adequate drainage is provided at all times. Any roots that protrude into the trench lines shall be trimmed flush with the trench walls. All excavation shall be open cut unless otherwise specified on the plans or specifically authorized by the Engineer. If after excavation the bottom of the proposed trench is found to contain rock, materials which can not be removed with standard and prudent construction equipment or is unsuitable for providing a uniform bearing surface then same material shall be removed to a depth not less than 8" below proposed depth, backfilled with approved material and compacted. Excavation widths shall be such that not less than one full diameter of the pipe is clear between the outside face of the pipe and each closest trench wall or inside face sheeting, shoring, or trench box as necessary. Excavated materials to be used during backfill operation shall be suitable material, significantly free from debris and/or rocks and approved by the Engineer. Acceptable material which is excavated shall be neatly and compactly deposited at the sides of the trench where space provides but at least 2' from the closest side of the trench. When stockpiling of material is required, the Contractor at his expense shall do so at an approved site and this site shall be kept and neat to avoid unsightly appearance. Stockpiling shall be arranged to allow for natural drainage without pollution of water by erosion.

B. Sheeting, Bracing and Trench Boxes:
As appropriate reference to OSHA Regulation 1926.652(b), the Contractor will be required to keep the sides of excavation vertical by sheet, bracing or the use of trench boxes to prevent movement by slides or settling of the side, to prevent injury or displacement of pipe or appurtenance or diminished the required working space adjacent to pipe. Furthermore, the Contractor may be required, for the purpose of preventing injury to persons, property or structures, to leave sheeting or bracing in place. All measures employed, when required, shall extend a minimum of 18" above existing grade and a maximum of 48" above grade. In no case shall timbers, beams or other sheeting/bracing materials be left in the trench, which may form or promote voids that cannot easily be corrected during the backfilling operation or compaction of backfill. It is agreed upon by these specifications that where it is necessary to leave sheeting or bracing in place and backfilled that the Owner is under no obligation to pay Contractor for time or materials involved in constructing such measures. Contractor shall assume and accept any and all risk associated with or encumbered by failure to implement proper and necessary sheeting, bracing or trench box use on any excavation and will be held responsible for caving, settlement and all other damages resulting there from.

C. Valves:
Prior to each installation, the Contractor shall make sure the interior is wiped clean and the valve is test operated by opening and closing. All valves shall be set with the operating mechanism plumb and at the location depicted on the plans. Initial backfill shall be thoroughly compacted by hand around the valve body to a distance of 12" in all directions and compaction by mechanical means such as vibratory trench roller or striking compactor shall be thoroughly achieved to a distance of 3' 0" each side.

D. Valve Boxes:
A valve box shall be installed over every underground valve. All valve boxes shall be set plumb with the valve; the operating mechanism of the valve shall be centered in the top opening and their lid flush with finished grade.

E. Air Valves:
All air valves shall be installed in a cast iron meter box with a minimum of 18" by 24" clear inside dimension and at the exact location as depicted on the plans.

F. Tapping Sleeve and Valve:
All tapping sleeves shall be installed at the exact location as depicted on the plans. All tapping sleeves shall be installed per strict conformance with manufactures specification, flange perfectly horizontal with existing pipe and bolts tightened with a torque wrench to the proper specification. All tapping valves shall follow valve installation requirements. The tapping sleeve shall be air tested prior to performing the tap into the existing line.

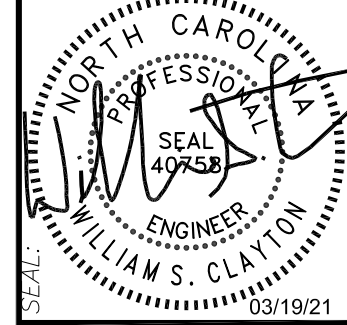
1.6 BACKFILLING AND COMPACTION

A. Trenches shall be backfilled immediately upon approval of pipeline construction.
B. Roadways and Crossing:
Full depth and width of trench shall be backfilled by placing material in uniform layers not to exceed 12" thick and shall be thoroughly compacted by approved mechanical compactors under optimum moisture conditions. Composition of the trench shall be 95% as determined by Standard Proctor Test for all areas outside the paved area and any depth exceeding 18" below finished surface of asphalt. The top 18" of any trench directly under pavement or within 36" of the edge of pavement shall be compacted to 100% as determined by Standard Proctor Test. If existing material is not suitable for obtaining compaction then select backfill shall be used when requested by the Engineer. All paving and base course affected shall be removed and replaced with new material of equal or better quality with like texture and color as the adjacent pavement. All backfill methods shall be in strict compliance with manufacturer's recommendations and all methods shall be instituted such that no damage, misalignment, or unjointing of the pipe or appurtenances is experienced. Backfill shall be kept free of organics (grasses, sticks, stumps, roots etc.), stones (all stones over 1" diameter within first 12" of backfill and all stones over 2.5" diameter for the remainder of the backfill), any frozen soil or other soil which is not suitable for backfill (highly plastic clay) or any other objectionable items. All backfill shall be installed and graded in a manner that erosion or saturation will not negatively affect the backfilled area. Heavy equipment shall not be used on any pipe or appurtenance until it has been properly backfilled and has minimum cover as required by the plans. Where any part of the required cover is above proposed finished grade, the Contractor shall place, maintain and lastly remove such material at no additional cost to the Owner. Any pipe or appurtenance, which becomes mis-aligned, shows excessive settlement or has been damaged by the Contractor shall be corrected or replaced as deemed necessary by the Engineer/Owner at no additional cost to the Owner. Prior to acceptance, the Contractor shall properly maintain all installations in such a manner that they will operate without failure.

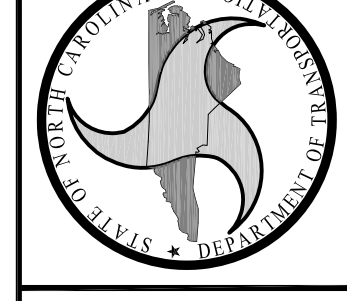
C. Finish Grading:
All areas disturbed shall be graded to a continuous finish without irregularities or abrupt changes and shall not consist of areas, which will retain water or cause foreseeable future maintenance. Prior to acceptance, all debris, excess material, trash or any unsightly occurrence shall be removed and the project site shall be in a neat and satisfactory condition.

SECTION REMOVED, NO PROPOSED UTILITY STRUCTURES ON SITE

CONSTRUCTION DOCUMENTS



BID SET
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1209 9TH AVE. NE. PO. BOX 2351
HICKORY, NORTH CAROLINA 28601
PHONE: 828-456-3456

PROJECT SPECIFICATIONS

Modular Unit Relocation to
NC DOT Buncombe County
Maintenance Yard
NC DOT HIGHWAY DIVISION 13
ASHEVILLE, NORTH CAROLINA

STATE CONSTRUCTION
ID.# 20-21752-01A

ASSET NUMBER:
CO.# SITE.# BLDG.#
11 = 23 = XX

Table with 2 columns: REVISIONS NO., DATE

DATE ISSUED: 3/19/21
DRAWN BY:
CHECKED BY:

SHEET NO.

SPC102

