

THE VILLAS AT MURRAYVILLE FITNESS CENTER FACILITY

CAPE FEAR TOWNSHIP NEW HANOVER COUNTY, NORTH CAROLINA SITE CONSTRUCTION DRAWINGS

NEW HANOVER COUNTY REVIEW SET ISSUED FEBRUARY 4, 2019

CIVIL DRAWING INDEX:

COVER SHEET	C-00
EXISTING CONDITIONS & TREE SURVEY	C-01
DEMOLITION PLAN	C-02
OVERALL SITE PROPERTY MAP	C-03
SITE LAYOUT PLAN	C-04
UTILITY PLAN	C-05
GRADING AND DRAINAGE PLAN	C-06
EROSION & SEDIMENT CONTROL PLAN	C-07
SITE HYDROLOGY PLAN	C-08
LANDSCAPING PLAN	L-01
NOTES AND DETAILS	D-01
NOTES AND DETAILS	D-02
NOTES AND DETAILS	D-03
NOTES AND DETAILS	D-04
NOTES AND DETAILS	D-05
TOTAL NUMBER OF SHEETS:	15

LEGEND

WATER		SITE DEVELOPMENT		MISCELLANEOUS UTILITIES	
—W—	EXISTING WATER LINE	—SS—	EX. STORM SEWER PIPE	⬮	EX. LIGHT POLE
—W—	WATERLINE	—SS—	PROPOSED STORM SEWER	⬮	EX. LIGHT (WALL PACK)
⊕	EX. VALVE	⊕	EX. STORM STRUCTURE	⬮	PROPOSED LIGHT POLE
⊕	PROPOSED WATER VALVE	⊕	CATCH BASIN	⬮	EX. UTILITY POLE
⊕	POST INDICATOR VALVE (PIV)	⊕	DROP INLET	⬮	UTILITY POLE
⊕	EX. WATER METER	⊕	EX. STORM SEWER MANHOLE	⬮	EX. GUY WIRE
⊕	WATER METER	⊕	STORM SEWER MANHOLE	⬮	EX. ELECTRICAL METER
⊕	EX. FIRE HYDRANT	—RD—	EX. ROOF DRAIN LEADER	—OHP—	EX. OVERHEAD ELECTRIC LINE
⊕	FIRE HYDRANT	—RD—	ROOF DRAIN LEADER	—OHP—	PROPOSED OVERHEAD ELECTRIC LINE
⊕	REDUCER FITTING	⊕	EX. ROOF DRAIN DOWNSPOUT	—UGP—	EX. UNDERGROUND ELECTRIC LINE
⊕	PLUG FITTING	⊕	ROOF DRAIN DOWNSPOUT	—UGP—	PROPOSED UNDERGROUND ELECTRIC LINE
—W—	WATERLINE TEE	—W—	EX. CURB AND GUTTER	⬮	EX. TELEPHONE PEDESTAL
—W—	WATERLINE CROSS	—W—	CURB AND GUTTER	⬮	TELEPHONE PEDESTAL
⊕	FIRE DEPARTMENT CONNECTION (FDC)	—W—	EXISTING PROPERTY LINE	⬮	EX. TELEPHONE MANHOLE
⊕	WATERLINE BLOWOFF	—W—	PROPERTY LINE	—OHT—	EX. OVERHEAD TELEPHONE LINE
⊕	EX. WELL CASING	⊕	BENCHMARK AND/OR SURVEY CONTROL MARKER	—OHT—	OVERHEAD TELEPHONE LINE
SANITARY SEWER		⊕	SOIL BORING LOCATION	—OFG—	EX. OVERHEAD FIBER LINE
—SS—	EXISTING SANITARY SEWER	⊕	LIMITS OF DISTURBANCE	—OFG—	OVERHEAD FIBER LINE
—SAN—	SANITARY SEWER MAIN	⊕	EX. TREE	⬮	EX. CABLE PEDESTAL
⊕	EX. SEWER MANHOLE	⊕	EX. SHRUB	—OHC—	EX. OVERHEAD COMMUNICATIONS LINE
⊕	SEWER MANHOLE	⊕	EX. FENCE	—OHC—	OVERHEAD COMMUNICATIONS LINE
⊕	CLEANOUT	⊕	PROPOSED FENCE	—UGC—	EX. UNDERGROUND COMMUNICATIONS LINE
⊕	EXISTING CLEANOUT	⊕	EX. TOPOGRAPHIC CONTOUR	—UGC—	UNDERGROUND COMMUNICATIONS LINE
NATURAL GAS		⊕	PROPOSED TOPOGRAPHIC CONTOUR	—OHU—	EX. OVERHEAD UTILITY LINE-MULTIPLE UTILITIES
—G—	EX. GAS LINE	⊕	PROPOSED SPOT ELEVATION	⬮	BOLLARD
—G—	GAS LINE	⊕	EX. SIGN	⬮	PROPERTY MARKER/IRON PIPE
⊕	EX. GAS VALVE	⊕	SIGN	⬮	EX. SURVEY MONUMENT
⊕	EX. GAS METER				



VICINITY MAP
SCALE: NTS

CIVIL SERIES DRAWING ABBREVIATIONS:

@/I-AT AC-ACRE AFG- ABOVE FINISHED GRADE APPR-APPROXIMATE ASSY-ASSEMBLY B/C-BOTTOM OF CURB BOC-BACK OF CURB B/L-BASE LINE BM-BOOK OF MAPS BMP-BEST MANAGEMENT PRACTICE BW-BOTTOM OF WALL CB-CATCH BASIN C&G-CURB AND GUTTER CL-CENTERLINE CL-CLASS CMP-CORRUGATED METAL PIPE CO-CLEANOUT COMM-COMMUNICATIONS CONC-CONCRETE CONN-CONNECTION CY-CUBIC YARD DB-DEED BOOK DCV-DOUBLE CHECK VALVE DDCV-DOUBLE DETECTOR CHECK VALVE DI-DROP INLET DIP-DUCTILE IRON PIPE DR-DRIVEWAY	DS-DOWNSPOUT EA-EACH EIP-EXISTING IRON PIPE ELEC-ELECTRICAL EIP-EDGE OF PAVEMENT EX-EXISTING F/C-FACE OF CURB FDC-FIRE DEPARTMENT CONNECTION FFE-FINISHED FLOOR ELEVATION FG-FINISHED GRADE FH-FIRE HYDRANT F/L-FLOW LINE FM-FORCE MAIN FT-FOOT G-GAS GND-GROUND GV-GATE VALVE HDPE-HIGH DENSITY POLYETHYLENE HORIZ-HORIZONTAL IN-INCHES INV-INVERT IP-IRON PIPE IPS-IRON PIPE SET L-LENGTH LF-LINEAR FOOT LP-LIGHT POLE LS-LIFT STATION	MECH-MECHANICAL MH-MANHOLE MIN-MINIMUM MJ-MECHANICAL JOINT NIC-NOT IN CONTRACT OHE-OVERHEAD ELECTRIC OHP-OVERHEAD POWER OHT-OVERHEAD TELEPHONE PB-PLAT BOOK PC-POINT OF CURVATURE PED-PEDESTRIAN PG-PAGE PH-PHASE PI-POINT OF INTERSECTION PIV-POST INDICATOR VALVE PKG-PARKING PL-PROPERTY LINE PS-PUMP STATION PT-POINT OF TANGENCY PP-POWER POLE PVC-POLYVINYL CHLORIDE PVMT-PAVEMENT PWR-POWER R-RADIUS RD-ROOF DRAIN RJ-RESTRAINED JOINT RPZ-REDUCED PRESSURE ZONE	R/W-RIGHT OF WAY REQD-REQUIRED RCP-REINFORCED CONCRETE PIPE SAN-SANITARY SEWER SDWK-SIDEWALK SF-SQUARE FOOT SPT-SPOT GRADE SS-SANITARY SEWER STA-STATION STD-STANDARD STM-STORM STMH-STORM SEWER MANHOLE SWM-STORMWATER MANAGEMENT T-TELEPHONE T/C-TOP OF CURB TOM-TELEPHONE MANHOLE TS&V-TAPPING SLEEVE AND VALVE UGE-UNDERGROUND ELECTRIC UNK-UNKNOWN UP-UTILITY POLE VAR-VARIABLE VERT-VERTICAL W/-WITH WM-WATER METER W/O-WITHOUT WL-WATERLINE WSEL-WATER SERVICE ELEVATION WV-WATER VALVE
---	--	---	---

SURVEY DATUM INFORMATION
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH
NEW HANOVER COUNTY AND NCDEQ STANDARDS AND
SPECIFICATIONS.

Civil Engineer

Shipman Engineering, PLLC
NC License # P-1963
137 Middlegreen Place
Holly Springs, NC 27540
919.900.0006
Contact: Zak Shipman, PE
zak@shipmanengineering.com

Land Surveyor

Charles F. Riggs & Associates, Inc.
NC Firm License C-730
502 New Bridge Street
Jacksonville, NC 28541
910.455.0877
Contact: Mr. James Lewis, PLS
jameslewis@riggslandnc.com

Developer

Hawthorne Residential Partners
806 Green Valley Road, Suite 311
Greensboro, NC 27408
336.880.3484
Contact: Ms. Beverly Greear
bgreear@hrpliving.com

Architect

Planworx Architecture
5711 Six Forks Road Suite 100
Raleigh, NC 27609
919.424.1950
Contact: Mr. Ken Braswell
kenbraswell@planworx.com

SHIPMAN
ENGINEERING
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006
SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP
WAKE COUNTY, NORTH CAROLINA
COVER SHEET

SHEET NUMBER:
C-00

N. COLLEGE ROAD (NC HWY 132)
VARIABLE WIDTH PUBLIC R/W

4' CHAIN LINK FENCE

EX. 8" WATER (FROM RECORDS)

N 18°22'11" (BOUNDARY BEARING FROM RECORDS) 88.90'

APPT. INFO SIGN

EX. CATCH BASIN
RIM 34.73
INV. 30.73

TBM-MAG NAIL
EL. 35.06 (NAVD 88)

EX. SSMH
RIM 35.62
INV. IN 30.62 (N)
INV. OUT 30.52 (E)

ASPHALT

EX. CONC. C&G

EX. DUMPSTER ENCLOSURE (CONCRETE)

EX. DROP INLET
RIM 32.70
INV. 29.48 +/-

7' PLASTIC FENCE

EX. SIDEWALK

RAMP

PAVILION GRILLS

UG LP TANK

FIRE PIT

HAMMOCK

LIGHT POLE

24" ROP

SCALE: 1 IN = 10 FT
SCALE IN FEET HORIZONTAL

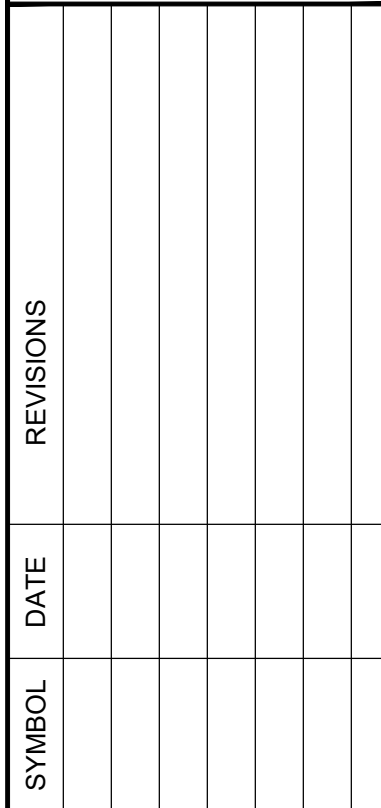
GENERAL NOTES:

- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY CHARLES F. RIGGS AND ASSOCIATES, INC. (DATED DECEMBER 20, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
- REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
- NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
- AREAS COMPUTED BY THE COORDINATE METHOD.
- THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
- ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
- THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720314900K DATED AUGUST 28, 2018.
- REFER TO SEALED TOPOGRAPHICAL SURVEY BY CHARLES F. RIGGS AND ASSOCIATES, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
- NO INVESTIGATION HAS BEEN PERFORMED AS TO THE PRESENCE OF WETLANDS, STREAMS, SURFACE WATERS, RIPARIAN BUFFERS, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS.

SURVEY LEGEND

- LIGHT POLE
- EX. SPOT GRADE
- UTILITY POLE
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- WATER METER
- SIGN
- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- FENCE LINE
- SANITARY SEWER LINE
- WATER MAIN
- NATURAL GAS MAIN
- TELEPHONE LINE
- MARKED UTILITY LINE
- MINOR TOPOGRAPHICAL CONTOUR
- MAJOR TOPOGRAPHICAL CONTOUR

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.



DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

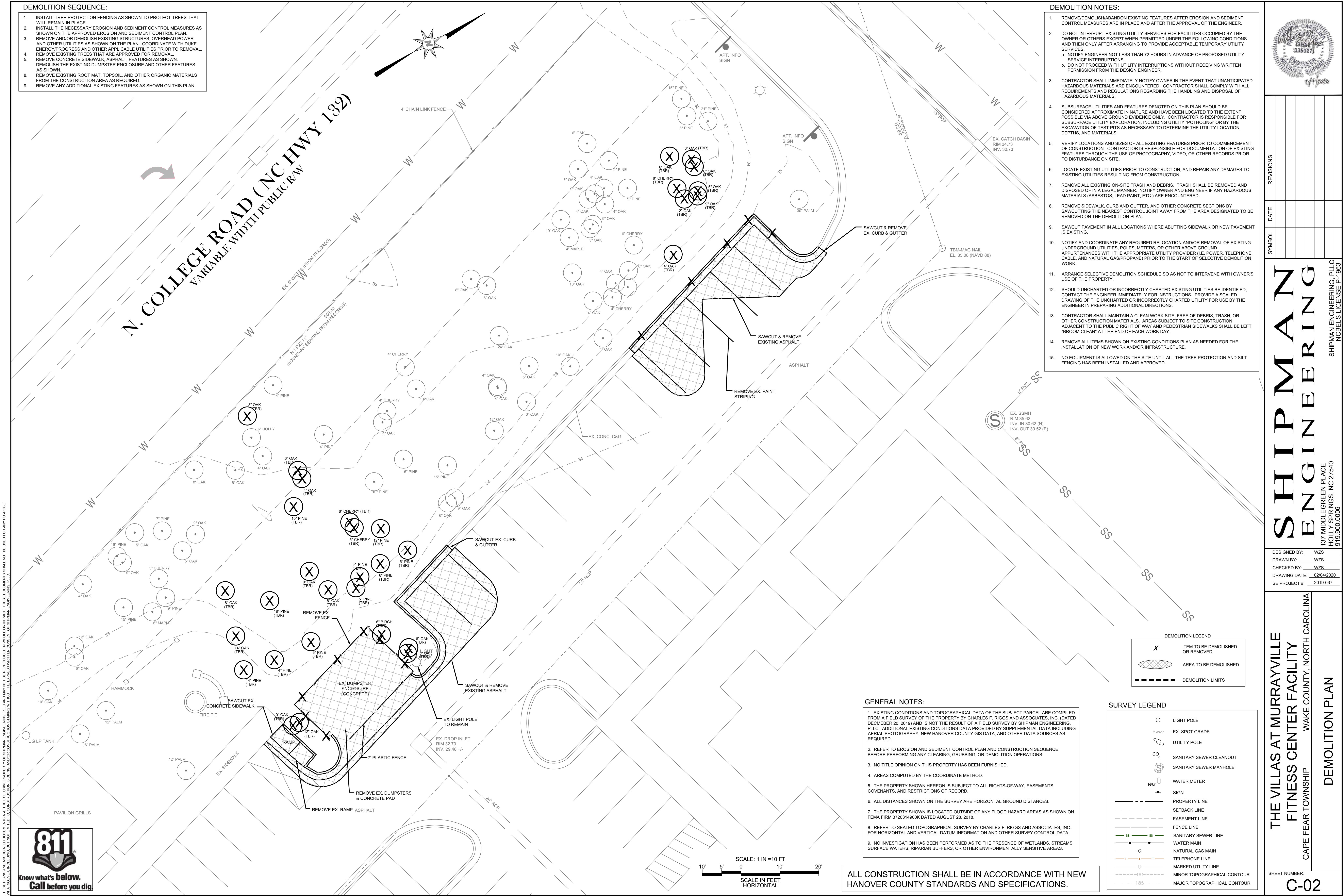
THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP WAKE COUNTY, NORTH CAROLINA
EXISTING CONDITIONS & TREE SURVEY

SHEET NUMBER:
C-01

C-01

DEMOLITION SEQUENCE:

1. INSTALL TREE PROTECTION FENCING AS SHOWN TO PROTECT TREES THAT WILL REMAIN IN PLACE.
2. INSTALL THE NECESSARY EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
3. REMOVE AND/OR DEMOLISH EXISTING STRUCTURES, OVERHEAD POWER AND OTHER UTILITIES AS SHOWN ON THE PLAN. COORDINATE WITH DUKE ENERGY/PROGRESS AND OTHER APPLICABLE UTILITIES PRIOR TO REMOVAL.
4. REMOVE EXISTING TREES THAT ARE APPROVED FOR REMOVAL.
5. REMOVE CONCRETE SIDEWALK, ASPHALT, FEATURES AS SHOWN.
6. DEMOLISH THE EXISTING DUMPSTER ENCLOSURE AND OTHER FEATURES AS SHOWN.
7. REMOVE EXISTING ROOT MAT, TOPSOIL, AND OTHER ORGANIC MATERIALS FROM THE CONSTRUCTION AREA AS REQUIRED.
8. REMOVE ANY ADDITIONAL EXISTING FEATURES AS SHOWN ON THIS PLAN.



DEMOLITION NOTES:

1. REMOVE/DEMOLISH/ABANDON EXISTING FEATURES AFTER EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE AND AFTER THE APPROVAL OF THE ENGINEER.
2. DO NOT INTERRUPT EXISTING UTILITY SERVICES FOR FACILITIES OCCUPIED BY THE OWNER OR OTHERS EXCEPT WHEN PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE ACCEPTABLE TEMPORARY UTILITY SERVICES.
 - a. NOTIFY ENGINEER NOT LESS THAN 72 HOURS IN ADVANCE OF PROPOSED UTILITY SERVICE INTERRUPTIONS.
 - b. DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT RECEIVING WRITTEN PERMISSION FROM THE DESIGN ENGINEER.
3. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER IN THE EVENT THAT UNANTICIPATED HAZARDOUS MATERIALS ARE ENCOUNTERED. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AND REGULATIONS REGARDING THE HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS.
4. SUBSURFACE UTILITIES AND FEATURES DENOTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND HAVE BEEN LOCATED TO THE EXTENT POSSIBLE VIA ABOVE GROUND EVIDENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION, INCLUDING UTILITY "POTHOLING" OR BY THE EXCAVATION OF TEST PITS AS NECESSARY TO DETERMINE THE UTILITY LOCATION, DEPTHS, AND MATERIALS.
5. VERIFY LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTATION OF EXISTING FEATURES THROUGH THE USE OF PHOTOGRAPHY, VIDEO, OR OTHER RECORDS PRIOR TO DISTURBANCE ON SITE.
6. LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND REPAIR ANY DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION.
7. REMOVE ALL EXISTING ON-SITE TRASH AND DEBRIS. TRASH SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER. NOTIFY OWNER AND ENGINEER IF ANY HAZARDOUS MATERIALS (ASBESTOS, LEAD PAINT, ETC.) ARE ENCOUNTERED.
8. REMOVE SIDEWALK, CURB AND GUTTER, AND OTHER CONCRETE SECTIONS BY SAWCUTTING THE NEAREST CONTROL JOINT AWAY FROM THE AREA DESIGNATED TO BE REMOVED ON THE DEMOLITION PLAN.
9. SAWCUT PAVEMENT IN ALL LOCATIONS WHERE ABUTTING SIDEWALK OR NEW PAVEMENT IS EXISTING.
10. NOTIFY AND COORDINATE ANY REQUIRED RELOCATION AND/OR REMOVAL OF EXISTING UNDERGROUND UTILITIES, POLES, METERS, OR OTHER ABOVE GROUND APPURTENANCES WITH THE APPROPRIATE UTILITY PROVIDER (I.E. POWER, TELEPHONE, CABLE, AND NATURAL GAS/PROPANE) PRIOR TO THE START OF SELECTIVE DEMOLITION WORK.
11. ARRANGE SELECTIVE DEMOLITION SCHEDULE SO AS NOT TO INTERFERE WITH OWNER'S USE OF THE PROPERTY.
12. SHOULD UNCHARTED OR INCORRECTLY CHARTED EXISTING UTILITIES BE IDENTIFIED, CONTACT THE ENGINEER IMMEDIATELY FOR INSTRUCTIONS. PROVIDE A SCALED DRAWING OF THE UNCHARTED OR INCORRECTLY CHARTED UTILITY FOR USE BY THE ENGINEER IN PREPARING ADDITIONAL DIRECTIONS.
13. CONTRACTOR SHALL MAINTAIN A CLEAN WORK SITE, FREE OF DEBRIS, TRASH, OR OTHER CONSTRUCTION MATERIALS. AREAS SUBJECT TO SITE CONSTRUCTION ADJACENT TO THE PUBLIC RIGHT OF WAY AND PEDESTRIAN SIDEWALKS SHALL BE LEFT "BROOM CLEAN" AT THE END OF EACH WORK DAY.
14. REMOVE ALL ITEMS SHOWN ON EXISTING CONDITIONS PLAN AS NEEDED FOR THE INSTALLATION OF NEW WORK AND/OR INFRASTRUCTURE.
15. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL THE TREE PROTECTION AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.

GENERAL NOTES:

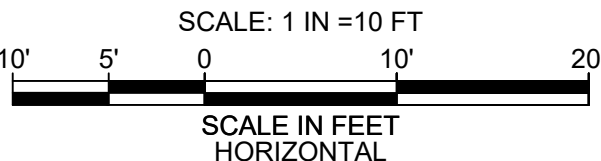
1. EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY CHARLES F. RIGGS AND ASSOCIATES, INC. (DATED DECEMBER 20, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
2. REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
3. NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
4. AREAS COMPUTED BY THE COORDINATE METHOD.
5. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
6. ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
7. THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720314900K DATED AUGUST 28, 2018.
8. REFER TO SEALED TOPOGRAPHICAL SURVEY BY CHARLES F. RIGGS AND ASSOCIATES, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
9. NO INVESTIGATION HAS BEEN PERFORMED AS TO THE PRESENCE OF WETLANDS, STREAMS, SURFACE WATERS, RIPARIAN BUFFERS, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS.

SURVEY LEGEND

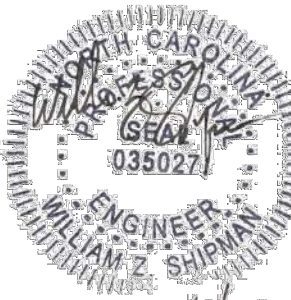
- LIGHT POLE
- EX. SPOT GRADE
- UTILITY POLE
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- WATER METER
- SIGN
- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- FENCE LINE
- SANITARY SEWER LINE
- WATER MAIN
- NATURAL GAS MAIN
- TELEPHONE LINE
- MARKED UTILITY LINE
- MINOR TOPOGRAPHICAL CONTOUR
- MAJOR TOPOGRAPHICAL CONTOUR

DEMOLITION LEGEND

- ITEM TO BE DEMOLISHED OR REMOVED
- AREA TO BE DEMOLISHED
- DEMOLITION LIMITS



ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.



REVISIONS	DATE	SYMBOL

SHIPMAN ENGINEERING
SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

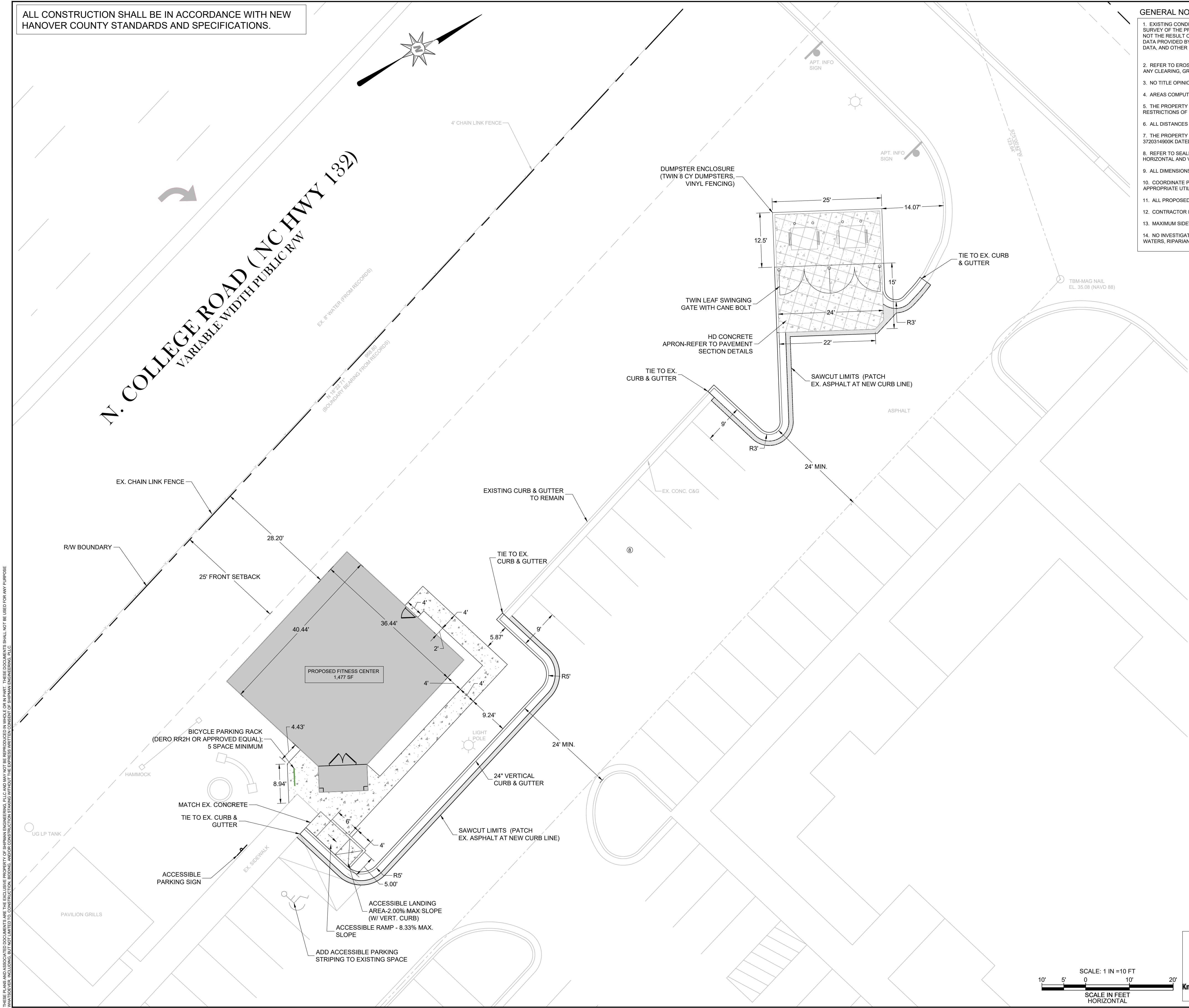
DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP WAKE COUNTY, NORTH CAROLINA
DEMOLITION PLAN

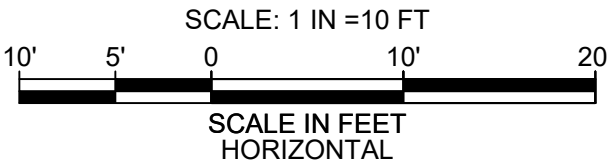
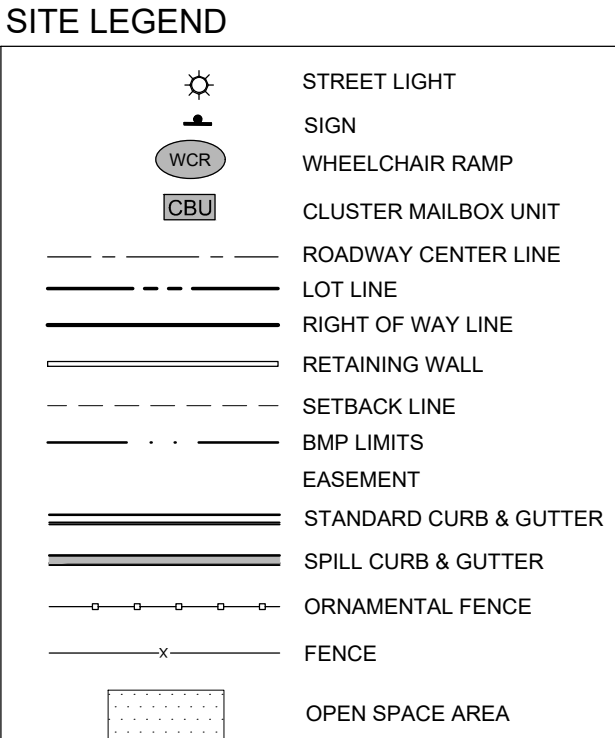
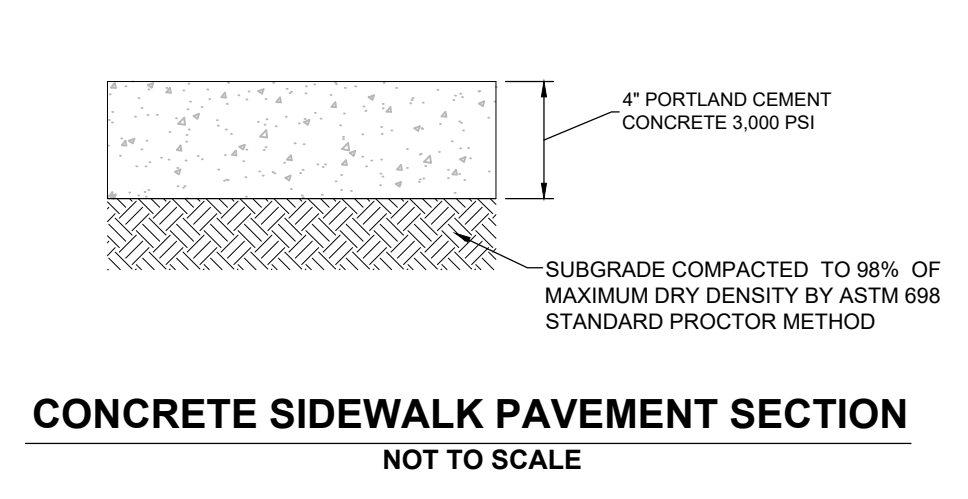
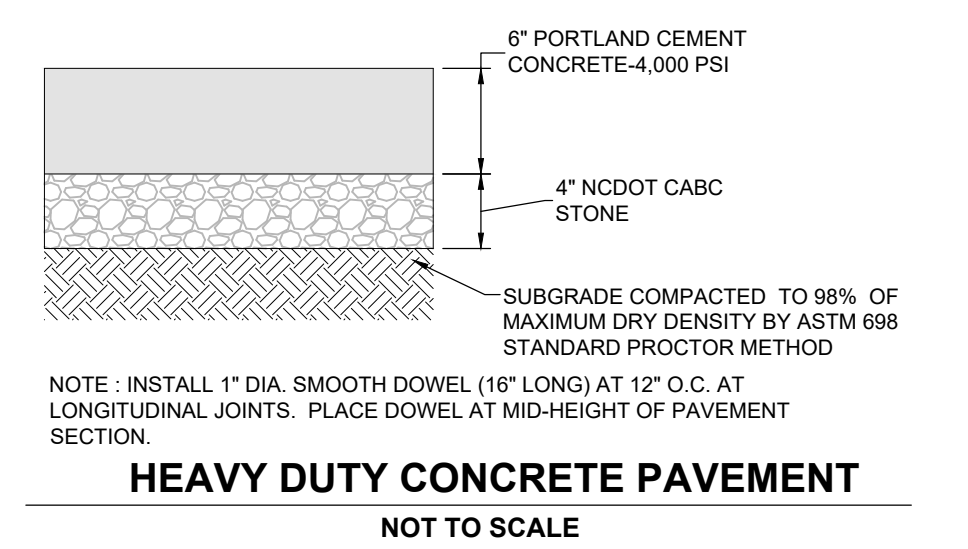
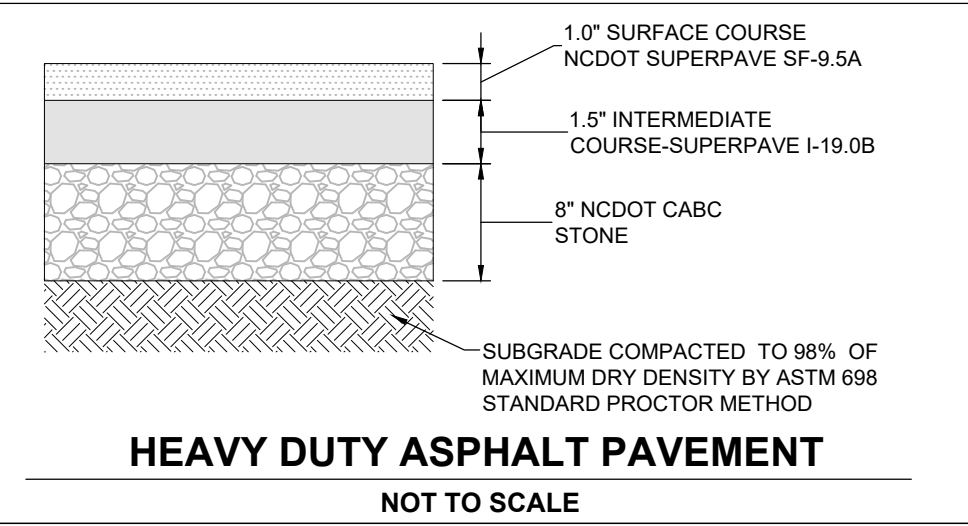
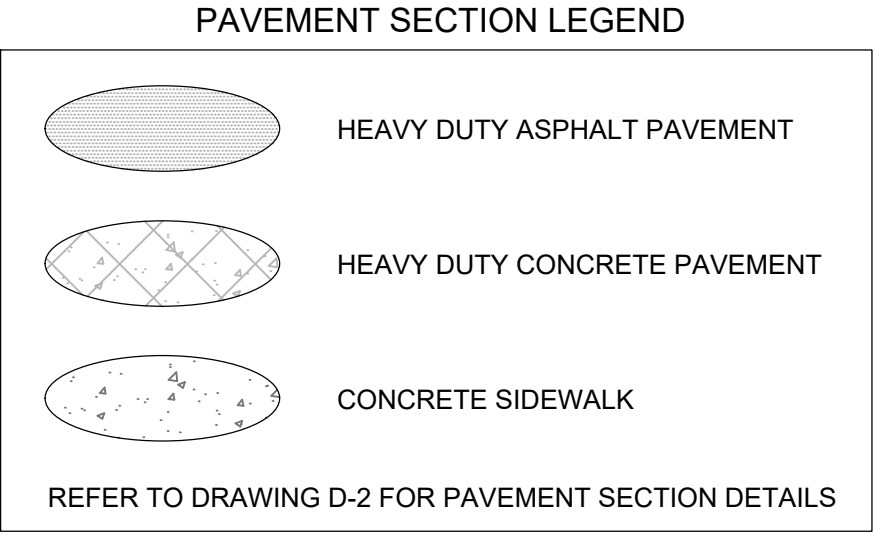
SHEET NUMBER:
C-02



ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.



- GENERAL NOTES:**
- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY CHARLES F. RIGGS AND ASSOCIATES, INC. (DATED DECEMBER 20, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
 - REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
 - NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
 - AREAS COMPUTED BY THE COORDINATE METHOD.
 - THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
 - ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
 - THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720314900K DATED AUGUST 28, 2018.
 - REFER TO SEALED TOPOGRAPHICAL SURVEY BY CHARLES F. RIGGS AND ASSOCIATES, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
 - ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
 - COORDINATE POWER, TELEPHONE, CABLE, AND OTHER UNDERGROUND UTILITY INSTALLATION WITH THE APPROPRIATE UTILITY PROVIDER AND NEW HANOVER COUNTY.
 - ALL PROPOSED SIGNAGE WILL COMPLY WITH THE NEW HANOVER COUNTY SIGN ORDINANCE.
 - CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.
 - MAXIMUM SIDEWALK CROSS SLOPE IS 2% (1/4 INCH PER FOOT).
 - NO INVESTIGATION HAS BEEN PERFORMED AS TO THE PRESENCE OF WETLANDS, STREAMS, SURFACE WATERS, RIPARIAN BUFFERS, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS.



REVISIONS	DATE	SYMBOL

SHIPMAN ENGINEERING

SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963

137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0066

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP
WAKE COUNTY, NORTH CAROLINA

ENLARGED SITE LAYOUT

SHEET NUMBER:
C-04

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.

LOCATION OF SANITARY SEWERS IN RELATION TO WATER AND STORM SEWERS:

A. SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT SEPARATION, THE APPROPRIATE REVIEWING AGENCY (DEH OR DENR) MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER MAIN, PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

B. IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE OR ANYTIME THE SEWER IS OVER THE WATER MAIN, BOTH WATER MAIN AND SEWER MUST BE CONSTRUCTED OF FERROUS PIPE COMPLYING WITH PUBLIC WATER SUPPLY DESIGN STANDARDS AND BE PRESSURE TESTED TO 150 PSI TO ASSURE WATERTIGHTNESS BEFORE BACKFILLING.

C. A 24 INCH VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR FERROUS PIPE SPECIFIED.

CROSSINGS:

A. SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

B. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, ONE OF THE FOLLOWING METHODS MUST BE SPECIFIED

I. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED OF FERROUS PIPE AND SHALL BE PRESSURE TESTED AT 150 PSI TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING, OR

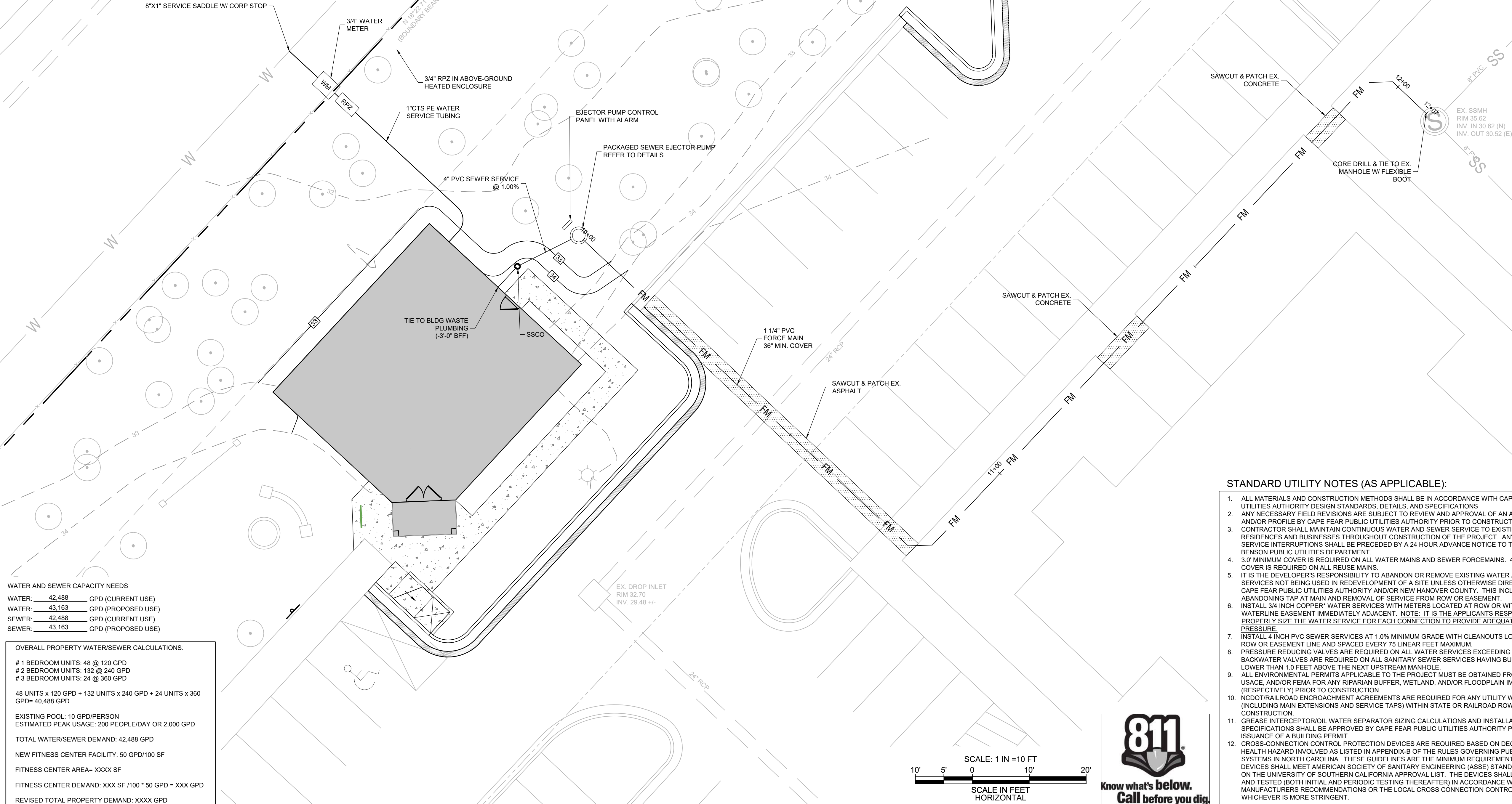
II. EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING. MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE REGULATORY AGENCY OF USE IN WATER MAIN CONSTRUCTION.

NOTE: WATER AND SANITARY SEWER SERVICE LATERALS TO BE PRIVATELY OWNED AND MAINTAINED.

WATER AND SEWER CAPACITY NEEDS
WATER: 42,488 GPD (CURRENT USE)
WATER: 43,163 GPD (PROPOSED USE)
SEWER: 42,488 GPD (CURRENT USE)
SEWER: 43,163 GPD (PROPOSED USE)

OVERALL PROPERTY WATER/SEWER CALCULATIONS:
1 BEDROOM UNITS: 48 @ 120 GPD
2 BEDROOM UNITS: 132 @ 240 GPD
3 BEDROOM UNITS: 24 @ 360 GPD
48 UNITS x 120 GPD + 132 UNITS x 240 GPD + 24 UNITS x 360 GPD= 40,488 GPD
EXISTING POOL: 10 GPD/PERSON
ESTIMATED PEAK USAGE: 200 PEOPLE/DAY OR 2,000 GPD
TOTAL WATER/SEWER DEMAND: 42,488 GPD
NEW FITNESS CENTER FACILITY: 50 GPD/100 SF
FITNESS CENTER AREA= XXXX SF
FITNESS CENTER DEMAND: XXX SF /100 * 50 GPD = XXX GPD
REVISED TOTAL PROPERTY DEMAND: XXXX GPD

N. COLLEGE ROAD (NC HWY 132)
VARIABLE WIDTH PUBLIC ROW



STANDARD UTILITY NOTES (AS APPLICABLE):

- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CAPE FEAR PUBLIC UTILITIES AUTHORITY DESIGN STANDARDS, DETAILS, AND SPECIFICATIONS
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW AND APPROVAL OF AN AMENDED PLAN AND/OR PROFILE BY CAPE FEAR PUBLIC UTILITIES AUTHORITY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER AND SEWER SERVICE TO EXISTING RESIDENCES AND BUSINESSES THROUGHOUT CONSTRUCTION OF THE PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE TOWN OF BENSON PUBLIC UTILITIES DEPARTMENT.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS AND SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER AND SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CAPE FEAR PUBLIC UTILITIES AUTHORITY AND/OR NEW HANOVER COUNTY. THIS INCLUDES ABANDONING TAP AT MAIN AND REMOVAL OF SERVICE FROM ROW OR EASEMENT.
- INSTALL 3/4 INCH 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 AND PRESSURE.
- INSTALL 4 INCH PVC SEWER SERVICES AT 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE AND 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 FEET ABOVE THE NEXT UPSTREAM MANHOLE.
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE, AND/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND, AND/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
- NCDOT/RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS AND SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
- GREASE INTERCEPTOR/OIL WATER SEPARATOR SIZING CALCULATIONS AND INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY CAPE FEAR PUBLIC UTILITIES AUTHORITY PRIOR TO ISSUANCE OF A BUILDING PERMIT.
- 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 MANUFACTURERS RECOMMENDATIONS OR THE LOCAL CROSS CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT.

UTILITY LEGEND

- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- TEE
- THRUST (REACTION) BLOCKING
- BLOW OFF VALVE
- WATER METER
- BACKFLOW PREVENTER
- CLEANOUT
- SANITARY MANHOLE
- FLARED END SECTION
- RISER STRUCTURE
- CATCH BASIN
- YARD INLET
- WATER LINE
- SANITARY SEWER LINE
- STORM DRAIN LINE

GENERAL NOTES:

- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY CHARLES F. RIGGS AND ASSOCIATES, INC. (DATED DECEMBER 20, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
- REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
- NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
- AREAS COMPUTED BY THE COORDINATE METHOD.
- THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
- ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
- THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720314600K DATED AUGUST 28, 2019.
- REFER TO SEALED TOPOGRAPHICAL SURVEY BY CHARLES F. RIGGS AND ASSOCIATES, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
- ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL FIELD LOCATE SPILL CURB AS NEEDED FOR PROPER DRAINAGE. SPILL CURB LOCATIONS ARE NOT INDICATED ON THIS PLAN.
- COORDINATE POWER, TELEPHONE, CABLE, AND OTHER UNDERGROUND UTILITY INSTALLATION WITH THE APPROPRIATE UTILITY PROVIDER AND NEW HANOVER COUNTY AS NECESSARY.
- ALL PROPOSED SIGNAGE WILL COMPLY WITH THE NEW HANOVER COUNTY SIGN ORDINANCE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.
- MAXIMUM SIDEWALK CROSS SLOPE IS 2% (1/4 INCH PER FOOT).
- THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FDC POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN THE WATER METER AND ANY REQUIRED BACKFLOW PREVENTION DEVICES.
- MAINTAIN A MINIMUM OF 3' COVER OVER ALL WATER PIPING.
- ALL SANITARY SEWER CLEANOUTS IN PAVEMENT AREAS SHALL BE TRAFFIC RATED.

SHIPMAN
ENGINEERING
SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

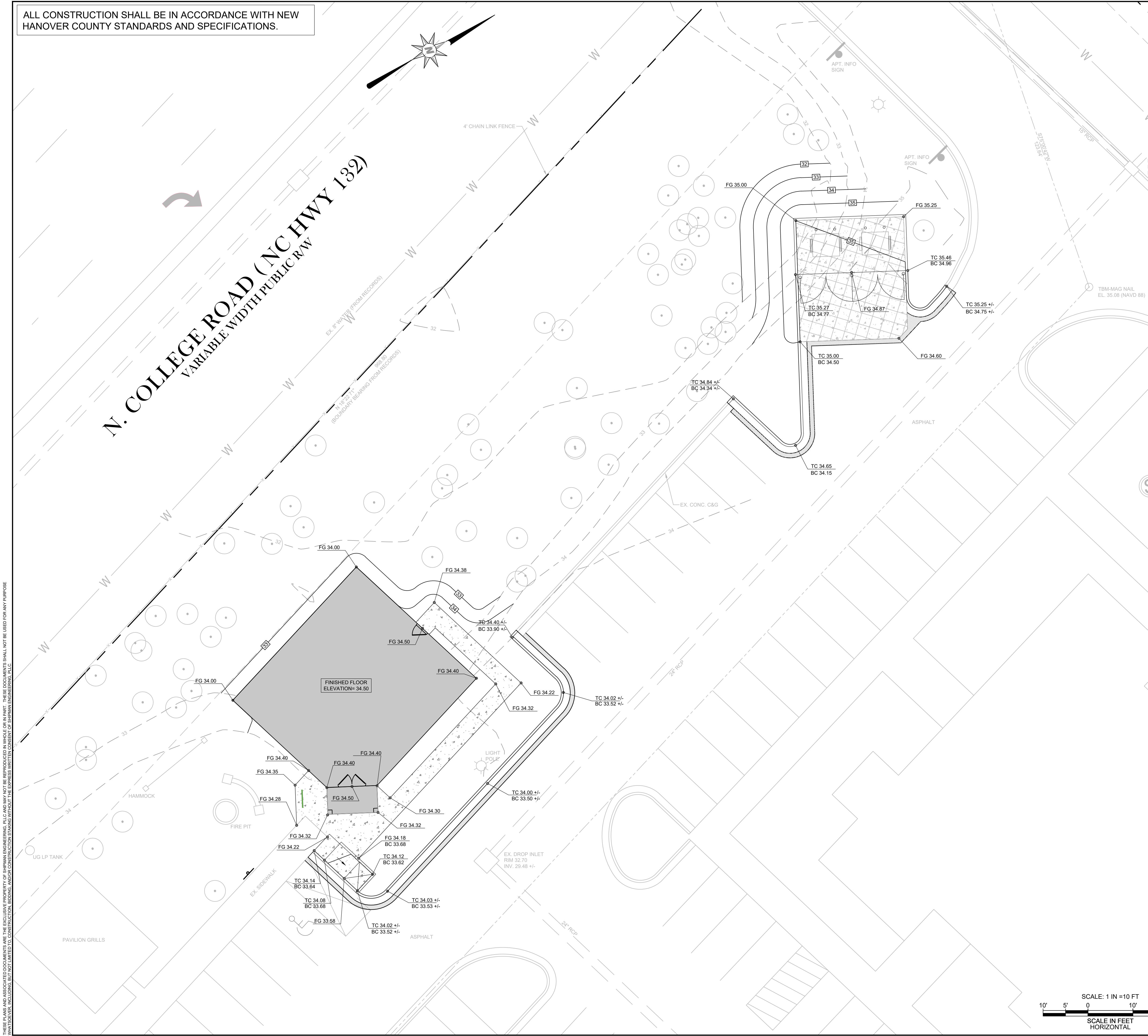
THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP WAKE COUNTY, NORTH CAROLINA
UTILITY PLAN

SHEET NUMBER:
C-05

SCALE: 1 IN = 10 FT
10' 5' 0 10' 20'
SCALE IN FEET
HORIZONTAL



ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.



GENERAL NOTES:

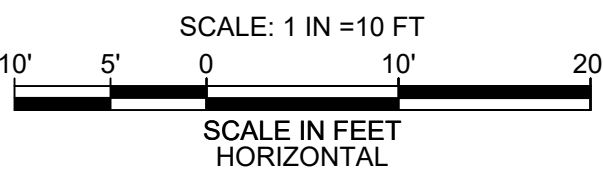
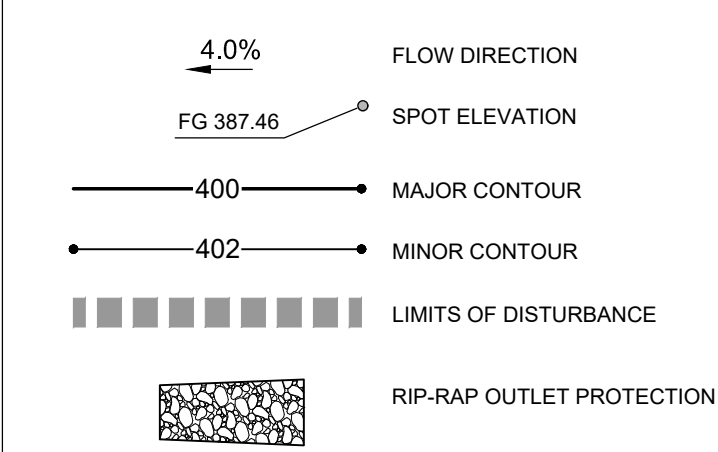
- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY CHARLES F. RIGGS AND ASSOCIATES, INC. (DATED DECEMBER 20, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
- REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
- NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
- AREAS COMPUTED BY THE COORDINATE METHOD.
- THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
- ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
- THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720314900K DATED AUGUST 28, 2019.
- REFER TO SEALED TOPOGRAPHICAL SURVEY BY CHARLES F. RIGGS AND ASSOCIATES, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
- ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL FIELD LOCATE SPILL CURB AS NEEDED FOR PROPER DRAINAGE. SPILL CURB LOCATIONS ARE NOT INDICATED ON THIS PLAN.
- COORDINATE POWER, TELEPHONE, CABLE, AND OTHER UNDERGROUND UTILITY INSTALLATION WITH THE APPROPRIATE UTILITY PROVIDER AND NEW HANOVER COUNTY AS NECESSARY.
- ALL PROPOSED SIGNAGE WILL COMPLY WITH THE NEW HANOVER COUNTY SIGN ORDINANCE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.
- MAXIMUM SIDEWALK CROSS SLOPE IS 2% (1/4 INCH PER FOOT).
- MAINTAIN A MINIMUM OF 3" COVER OVER ALL WATER PIPING.
- ALL SANITARY SEWER CLEANOUTS IN PAVEMENT AREAS SHALL BE TRAFFIC RATED.

IMPORTANT GRADING NOTES:

- LANDINGS OUTSIDE ALL DOORS SHALL BE SIZED PER THE NORTH CAROLINA BUILDING CODE (NCBC), BE AT THE SAME ELEVATION AS THE FFE, AND SHALL HAVE A MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL.
- THE SLOPES IN THE H.C. PARKING SPACE/ACCESS AISLE AREA SHALL NOT EXCEED 2% IN ANY DIRECTION INCLUDING IN THE DIAGONAL.
- THERE SHALL BE LEVEL TURNING AREAS (MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL) ON ALL SIDEWALKS WHERE AN INTERSECTING SIDEWALK CONNECTS WITH IT.
- THERE SHALL BE NO DESIGNATED PEDESTRIAN ROUTES/SIDEWALKS WITHIN THE SITE, EXCEPT WHERE LABELED AS A RAMP WITH RAILS, WHICH EXCEED A 5% SLOPE IN THE DIRECTION OF TRAVEL AND A 2% CROSS SLOPE.
- ALL PEDESTRIAN ROUTES >5% (1/20), IF ANY, ARE LABELED AS 'RAMPS' SHOWING SLOPES, LEVEL LANDINGS AT TOP AND BOTTOM (MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL), RAILINGS/GUARDRAILS, AND SHALL COMPLY WITH NCBC.
- ALL STAIRS SHALL HAVE SLIGHTLY SLOPED LANDINGS (MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL) AT THE TOP AND BOTTOM AND SHALL COMPLY WITH THE NCBC.
- ALL RETAINING WALLS >4" REQUIRE A BUILDING PERMIT FROM BUILDING INSPECTIONS.
- STAIRS/STEPS WITH LESS THAN A 12" ELEVATION CHANGE SHALL COMPLY WITH NCBC 1003.5.

NOTE: CONTRACTOR SHALL FINE GRADE AREAS AROUND BUILDING FOUNDATIONS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE. THE MINIMUM SLOPE AWAY FROM THE FOUNDATION IS 1/4" PER FOOT OR 2%, FOR A MINIMUM DISTANCE OF 10 FEET AWAY FROM THE FOUNDATION PERIMETER.

UTILITY LEGEND



THE VILLAS AT MURRAYVILLE

FITNESS CENTER FACILITY

CAPE FEAR TOWNSHIP

WAKE COUNTY, NORTH CAROLINA

DESIGNED BY: WZS

DRAWN BY: WZS

CHECKED BY: WZS

DRAWING DATE: 02/04/2020

SE PROJECT #: 2019-037

GRADING & DRAINAGE PLAN

C-06

SHIPMAN ENGINEERING

137 MIDDLEGREEN PLACE

HOLLY SPRINGS, NC 27540

919.900.0066

SHIPMAN ENGINEERING, PLLC

NCBELS LICENSE P-1963

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.

EROSION CONTROL CONSTRUCTION SEQUENCE:

1. A LAND DISTURBANCE PRECONSTRUCTION CONFERENCE IS REQUIRED PRIOR TO ANY DISTURBANCE ON SITE. THIS PRECONSTRUCTION CONFERENCE MAY BE COMBINED WITH OTHER PRECONSTRUCTION MEETINGS AS NECESSARY. THE MEETING SHALL BE BETWEEN THE OWNER, NEW HANOVER COUNTY INSPECTIONS STAFF (IF REQUIRED), THE ENGINEER, AND GENERAL CONTRACTOR. THE CONTRACTOR SHALL SCHEDULE THE MEETING TO OCCUR AT LEAST 48 HOURS PRIOR TO ANY DISTURBANCE ON SITE.
2. INSTALL SILT FENCE AROUND THE PERIMETER OF THE WORK SITE, DISTURBING ONLY THOSE AREAS NECESSARY TO INSTALL THE FENCE. REMOVE EXISTING FEATURES AS NEEDED TO INSTALL THE FENCE, AS OUTLINED ON THE DEMOLITION PLAN.
3. PLACE PEDESTRIAN BARRICADES ON SIDEWALKS AS SHOWN ON THE DEMOLITION PLAN AND EROSION CONTROL PLAN.
4. ONCE SILT FENCE IS INSTALLED, BEGIN CLEARING, GRUBBING, AND STRIPING OF THE SITE. STRIP AND STOCKPILE TOPSOIL FOR SIFTING, DRYING, AND TESTING.
5. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT AND SIDEWALK AS SHOWN ON THE DEMOLITION PLAN. DISPOSE OF CONSTRUCTION DEBRIS IN AN APPROVED LANDFILL.
6. BEGIN ROUGH GRADING THE SITE TO CREATE A BUILDING PAD AS NEEDED. PLACE FILL MATERIAL UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER.
7. BEGIN CONSTRUCTION OF NEW BUILDING FACILITY, INCLUDING THE NEW DUMPSTER ENCLOSURE.
8. INSTALL ROOF DRAINAGE LEADERS, DRAIN TILE, AND OTHER STORMWATER PIPING.
9. INSTALL CONCRETE FLATWORK AND SIDEWALK AREAS. COMPLETE FINE GRADING OF ANY DISTURBED AREAS.
10. STRIPE PARKING LOT AND INSTALL FINAL SITE IMPROVEMENTS (BOLLARDS, WHEEL STOPS, ETC.).
11. INSTALL LANDSCAPING SHRUBS, TREES, AND GROUND COVER. STABILIZE ALL REMAINING DISTURBED AREAS WITH PERMANENT SEEDING OR SOD AS SHOWN ON THE LANDSCAPING PLANS.
12. ONCE SITE IS PERMANENTLY STABILIZED, REMOVE ALL SILT FENCE AND OTHER TEMPORARY EROSION CONTROL MEASURES. STABILIZE REMAINING FINAL AREAS ALTERED DURING THE REMOVAL OF EROSION CONTROL MEASURES.

N. COLLEGE ROAD (NC HWY 132)
VARIABLE WIDTH PUBLIC R/W

SILT FENCE OUTLET (TYP.)

PRESERVE EX. TREE

LATITUDE: 34°17'14"N
LONGITUDE: 77°52'08"W

SILT FENCE OUTLET (TYP.)

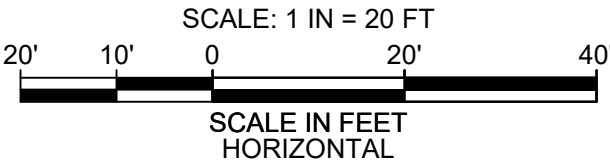
SILT FENCE

LIMITS OF DISTURBANCE

LIMITS OF DISTURBANCE

INSTALL SILT BAG INTO DROP INLET GRATE-REFER TO DETAIL

TOTAL DISTURBED AREA:
7,550 SF (0.173 AC.)



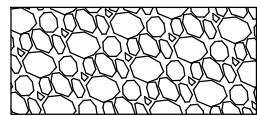
GENERAL NOTES:

1. EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY CHARLES F. RIGGS AND ASSOCIATES, INC. (DATED DECEMBER 20, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
2. NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
3. AREAS COMPUTED BY THE COORDINATE METHOD.
4. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
5. ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
6. THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720314800K DATED AUGUST 28, 2019.
7. REFER TO SEALED TOPOGRAPHICAL SURVEY BY CHARLES F. RIGGS AND ASSOCIATES, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
8. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
9. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.
10. APPROVAL OF THIS PLAN IS NOT AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE DISTURBANCE, APPROVAL MUST BE OBTAINED FROM ADJACENT PROPERTY OWNERS PRIOR TO ANY OFFSITE CONSTRUCTION ACTIVITY.

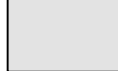
GROUND COVER STABILIZATION SCHEDULE:

1. STABILIZE BASINS WITH GROUND COVER IMMEDIATELY AFTER INSTALLATION.
2. STABILIZE DIVERSION DITCHES INTENDED TO BE IN SERVICE FOR 30 DAYS OR MORE WITH TEMPORARY SEEDING AND EROSION CONTROL NETTING.
3. FOR ALL AREAS OF MODERATE AND/OR STEEP SLOPES, PROVIDE TEMPORARY GROUND COVER IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF 14 DAYS.
4. PROVIDE GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN 14 CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND DISTURBING ACTIVITY.
5. ESTABLISH PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION WITHIN 14 CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT AND/OR PRIOR TO FINAL INSPECTION.

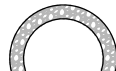
EROSION CONTROL LEGEND



CONSTRUCTION ENTRANCE/EXIT



SEDIMENT TRAP BOTTOM AREA



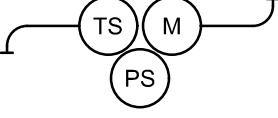
RIP RAP FILTER DAM



SILT FENCE OUTLET



STRAW WATTLE



TEMP. SEED/MULCH/PERM. SEED



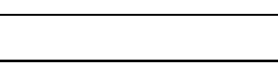
OUTLET PROTECTION



SKIMMER DEVICE W/ OUTLET PIPE



INLET PROTECTION



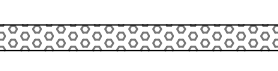
DIVERSION DITCH



SILT FENCE



TREE PROTECTION FENCE



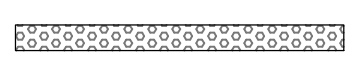
COIR MESH SEDIMENT BAFFLES



DISTURBANCE LIMITS



DRAINAGE AREA LIMITS



DITCH LINER-ECSP-2 POLY TURF REINFORCEMENT MAT



DITCH LINER-ECSC-3 COCONUT TURF REINFORCEMENT MAT



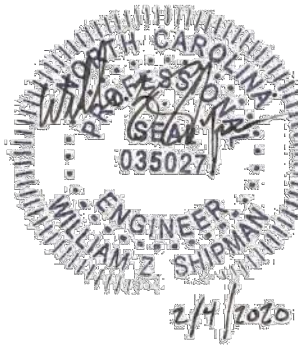
SLOPE MATTING-ECSC-3 COCONUT TURF REINFORCEMENT MAT

NPDES STABILIZATION TABLE

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

NPDES PERMIT NCG 010000 PLAN NOTES:

1. ACCORDING TO NPDES NCG 010000 EFFECTIVE AUGUST 3, 2011: THE PLANS SHALL CONFORM TO GROUND STABILIZATION REQUIREMENTS OF SECTION II.B.2 GROUND STABILIZATION.
2. ACCORDING TO NPDES NCG 010000 EFFECTIVE AUGUST 3, 2011: THE SEDIMENT BASINS SHALL CONFORM TO SURFACE WITHDRAWAL REQUIREMENTS OF SECTION II.B.4 SEDIMENT BASINS.



REVISIONS

DATE

SYMBOL

SHIPMAN
ENGINEERING

SHIPMAN ENGINEERING, PLLC
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

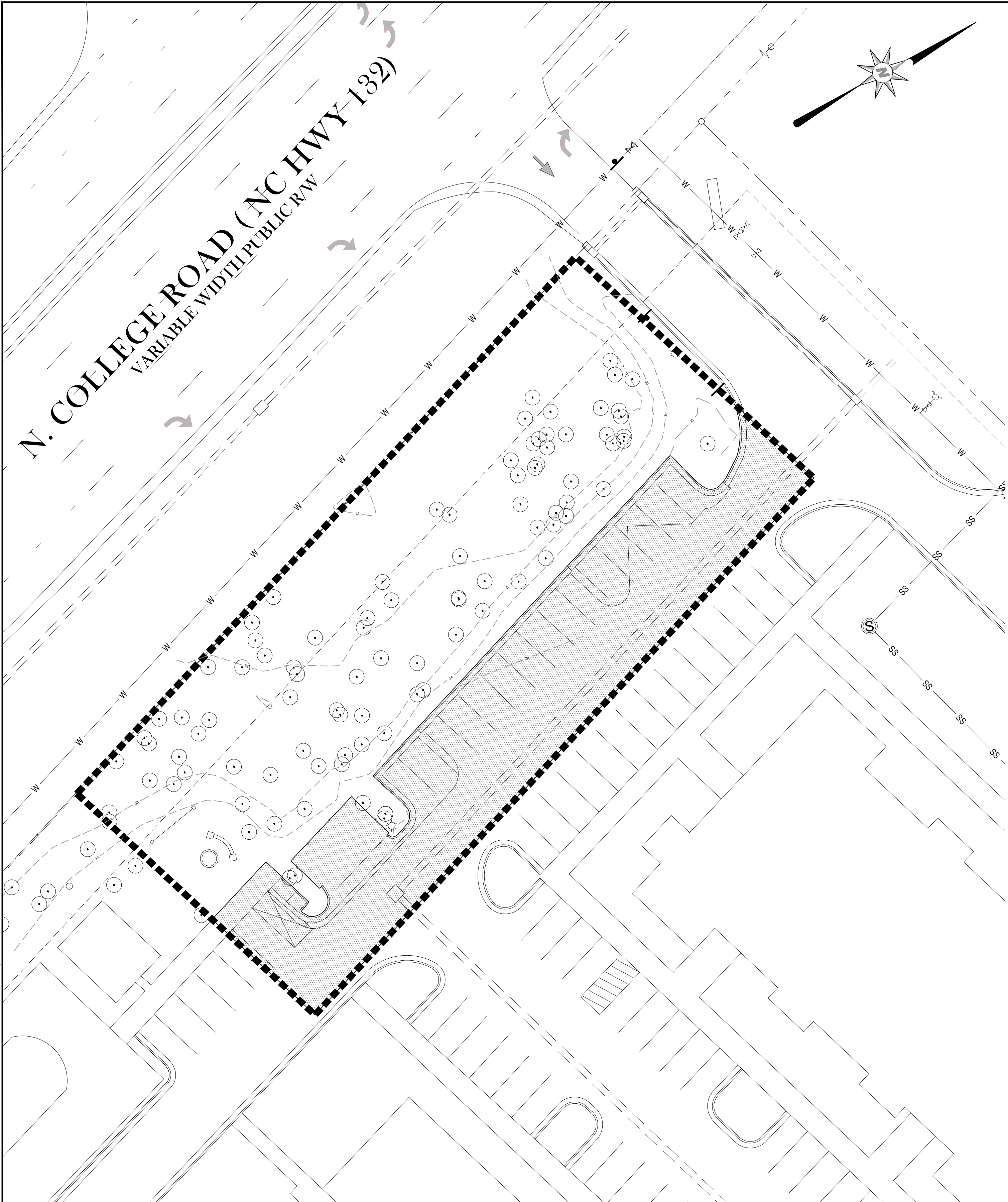
THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP WAKE COUNTY, NORTH CAROLINA

EROSION CONTROL PLAN

SHEET NUMBER:

C-07

THESE PLANS AND ASSOCIATED DOCUMENTS ARE THE EXCLUSIVE PROPERTY OF SHIPMAN ENGINEERING, PLLC AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART. THESE DOCUMENTS SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN THAT SPECIFICALLY AUTHORIZED BY SHIPMAN ENGINEERING, PLLC. ANY UNAUTHORIZED REPRODUCTION OR USE OF THESE DOCUMENTS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SHIPMAN ENGINEERING, PLLC.



PRE-DEVELOPMENT IMPERVIOUS EXHIBIT
SCALE: 1"=20'

STORMWATER IMPERVIOUS SUMMARY

TOTAL WET-POND DRAINAGE AREA:	897,168 SF
EXISTING IMPERVIOUS AREA:	338,953 SF
PROPOSED IMPERVIOUS AREA:	340,202 SF
NET IMPERVIOUS AREA INCREASE:	1,249 SF
EXISTING DRAINAGE BASIN CURVE NUMBER (FAIR CONDITION):	72
MODIFIED DRAINAGE BASIN CURVE NUMBER (FAIR CONDITION):	72

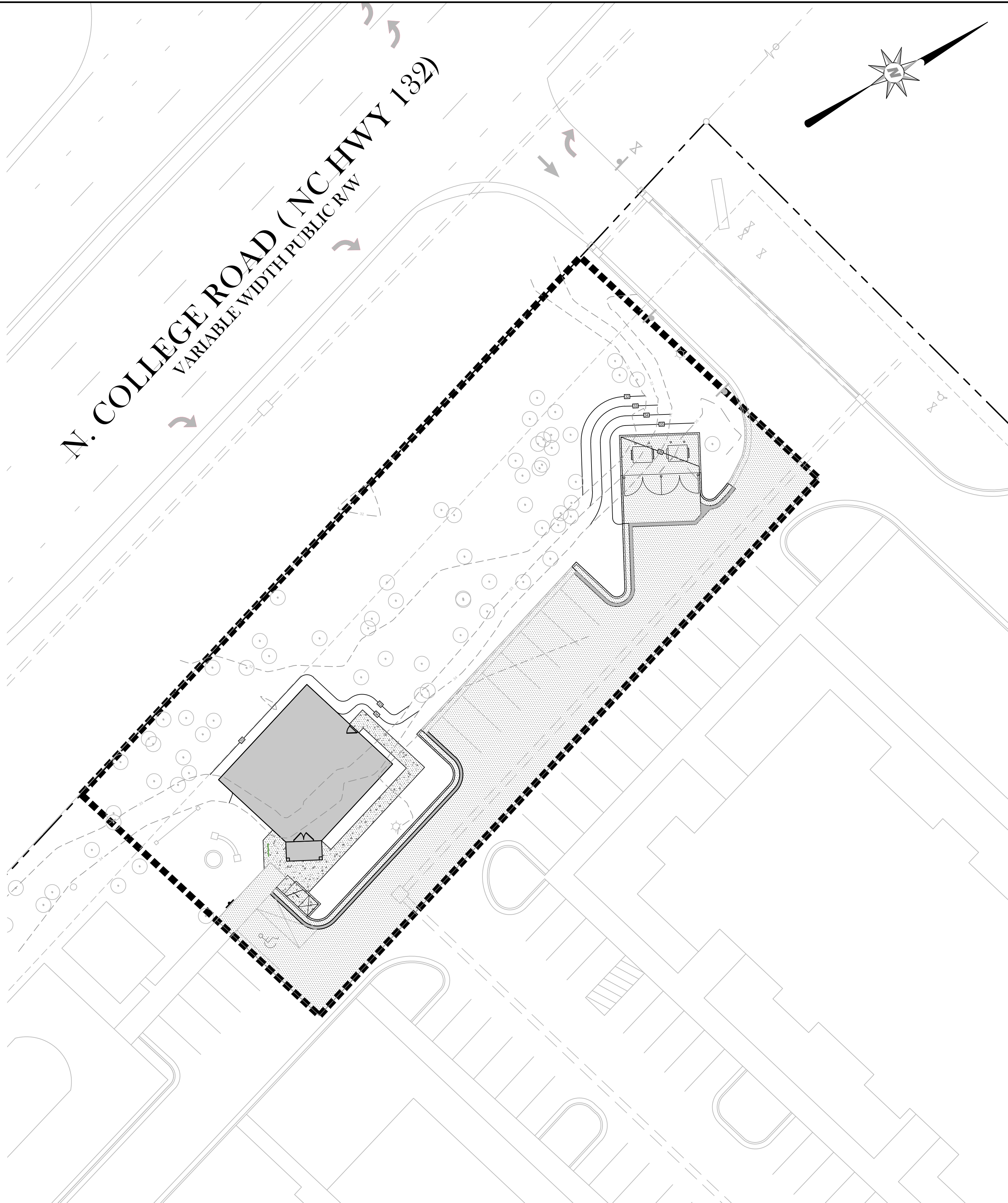
SINCE CURVE NUMBER REMAINS THE SAME AS THE ORIGINAL DEVELOPED CONDITION, WE CONCLUDE THAT NO ADDITIONAL PRE/POST PEAK FLOW ATTENUATION IS REQUIRED AND THE EXISTING WET DETENTION POND WILL OPERATE AS ORIGINALLY DESIGNED WITH NO REQUIRED MODIFICATIONS.

NCDEQ STATE STORMWATER DESIGN SUMMARY:

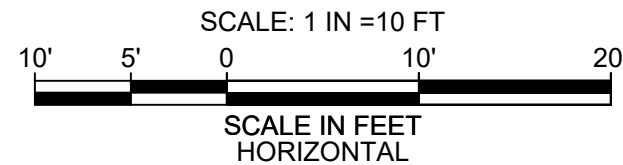
ORIGINAL WATER QUALITY VOLUME REQUIRED (1- INCH):	29,160 CF	ORIGINAL REQUIRED SURFACE AREA:	9,271 SF
MODIFIED WATER QUALITY VOLUME REQUIRED (1-INCH):	29,253 CF	MODIFIED REQUIRED SURFACE AREA:	9,309 SF
PROVIDED WATER QUALITY VOLUME:	33,524 CF	PROVIDED SURFACE AREA, EX. POND:	32,519 SF

EXISTING POND DRAWDOWN TIME: 2.8 DAYS
REVISED POND DRAWDOWN TIME: 2.65 DAYS

NOTE: DRAWDOWN TIME FOR REVISED CONDITION CALCULATED USING CURRENT DRAWDOWN ORIFICE EQUATIONS (RESULTING IN DIFFERENT TIME TO DRAWDOWN)



POST-DEVELOPMENT IMPERVIOUS EXHIBIT
SCALE: 1"=20'



ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.

THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP WAKE COUNTY, NORTH CAROLINA
SITE HYDROLOGY PLAN

SHEET NUMBER:
C-08

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

SHIPMAN
ENGINEERING
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963

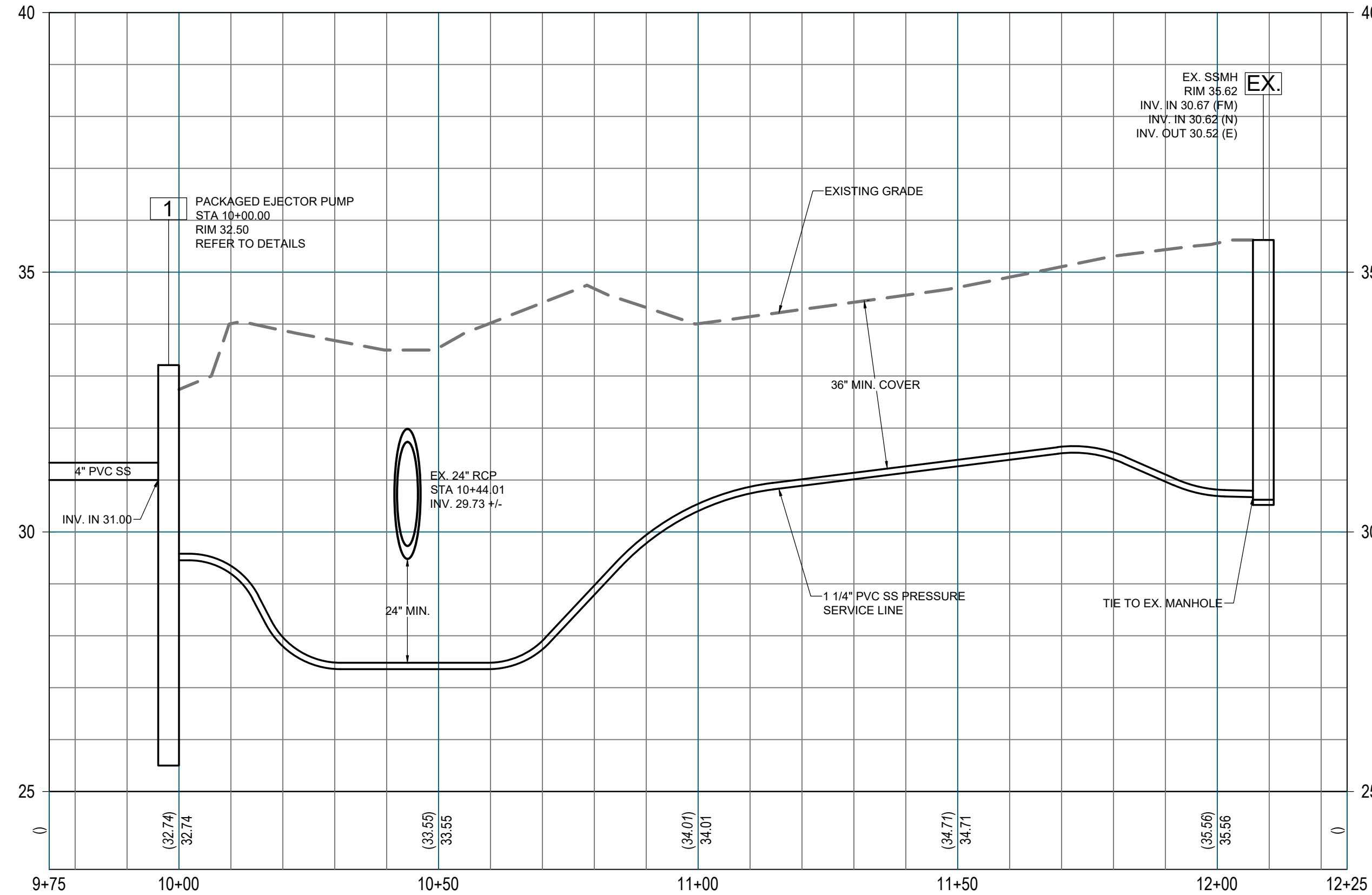
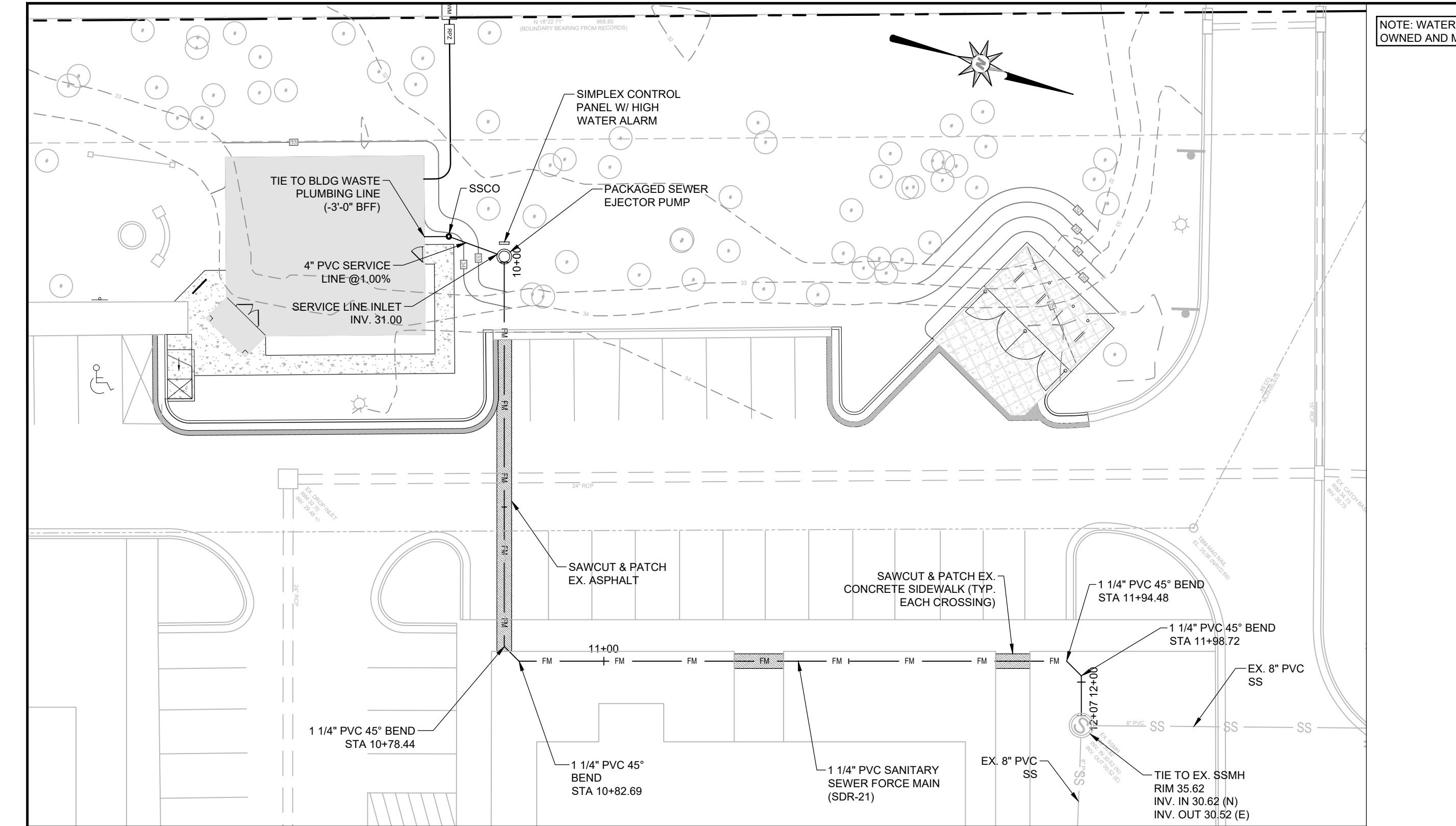
SYMBOL

DATE

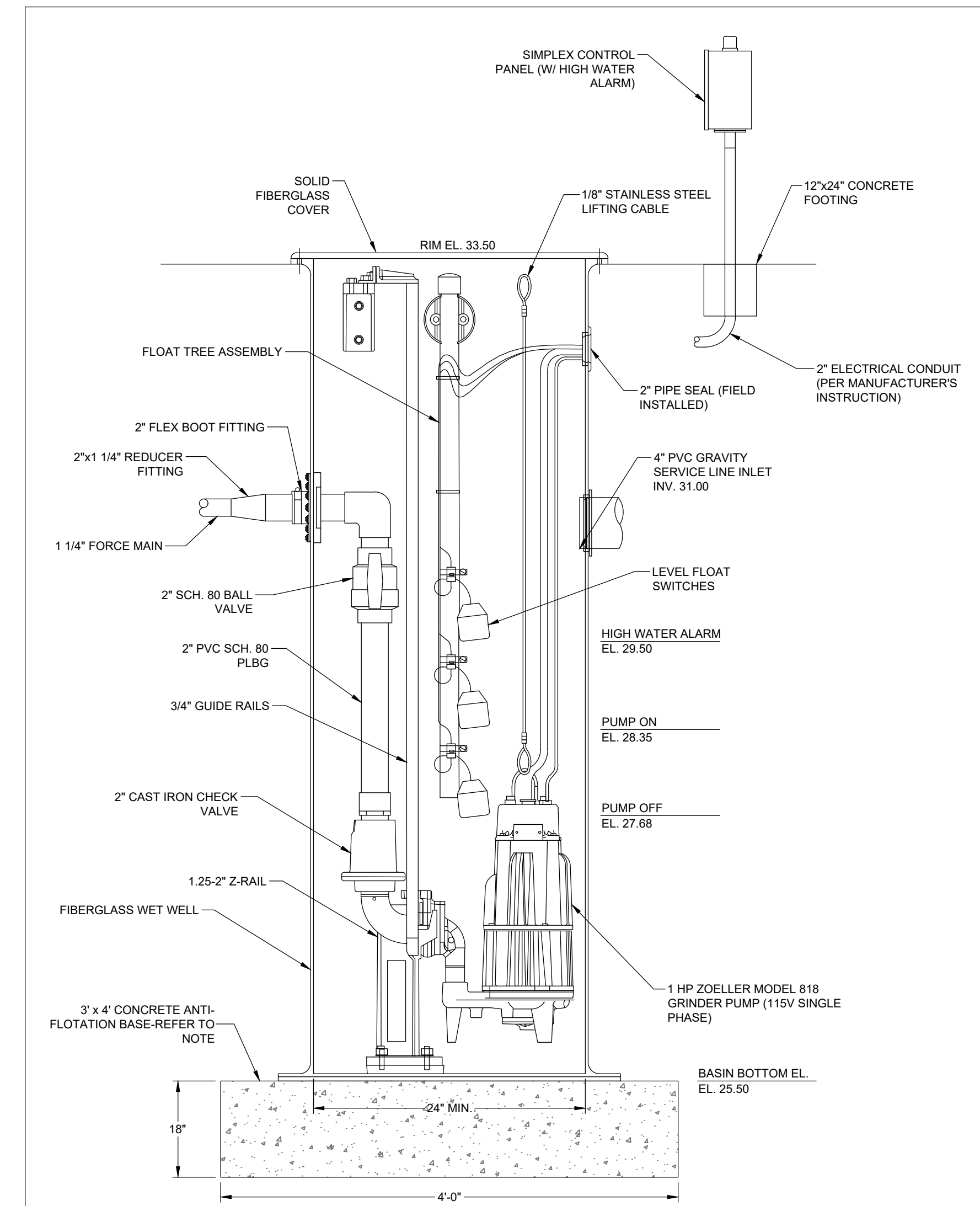
REVISIONS



THESE PLANS AND ASSOCIATED DOCUMENTS ARE THE EXCLUSIVE PROPERTY OF SHIPMAN ENGINEERING, PLLC AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART. THESE DOCUMENTS SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN THAT SPECIFICALLY AUTHORIZED BY SHIPMAN ENGINEERING, PLLC. ANY UNAUTHORIZED REPRODUCTION OR USE OF THESE DOCUMENTS IS PROHIBITED AND WILL BE PROSECUTED TO THE FULL EXTENT OF THE LAW.



ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.



IMPORTANT NOTES:

- THE PACKAGED PUMP STATION MANUFACTURER SHALL SUPPLY A SIMPLEX CONTROL PANEL FOR AUTOMATIC PUMPS AS A COMPONENT OF THE PACKAGED SYSTEM.
- THE CONTROL PANEL SHALL INCLUDE AN AUDIBLE/VISUAL HIGH WATER ALARM.
- CONTROL PANEL ENCLOSURE SHALL COMPLY WITH NEMA 4X AND SHALL FEATURE A HAND-OFF-AUTO TOGGLE FOR EACH PUMP, GREEN PUMP RUN PILOT LIGHT, AND ALARM TEST AND SILENCE SWITCHES.

GENERAL NOTES:

- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY CHARLES F. RIGGS AND ASSOCIATES, INC. (DATED DECEMBER 20, 2019) AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
- REFER TO EROSION AND SEDIMENT CONTROL PLAN AND CONSTRUCTION SEQUENCE BEFORE PERFORMING ANY CLEARING, GRUBBING, OR DEMOLITION OPERATIONS.
- NO TITLE OPINION ON THIS PROPERTY HAS BEEN FURNISHED.
- AREAS COMPUTED BY THE COORDINATE METHOD.
- THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD.
- ALL DISTANCES SHOWN ON THE SURVEY ARE HORIZONTAL GROUND DISTANCES.
- THE PROPERTY SHOWN IS LOCATED OUTSIDE OF ANY FLOOD HAZARD AREAS AS SHOWN ON FEMA FIRM 3720314900K DATED AUGUST 28, 2019.
- REFER TO SEALED TOPOGRAPHICAL SURVEY BY CHARLES F. RIGGS AND ASSOCIATES, INC. FOR HORIZONTAL AND VERTICAL DATUM INFORMATION AND OTHER SURVEY CONTROL DATA.
- ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL FIELD LOCATE SPILL CURB AS NEEDED FOR PROPER DRAINAGE. SPILL CURB LOCATIONS ARE NOT INDICATED ON THIS PLAN.
- COORDINATE POWER, TELEPHONE, CABLE, AND OTHER UNDERGROUND UTILITY INSTALLATION WITH THE APPROPRIATE UTILITY PROVIDER AND NEW HANOVER COUNTY AS NECESSARY.
- ALL PROPOSED SIGNAGE WILL COMPLY WITH THE NEW HANOVER COUNTY SIGN ORDINANCE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL GRADES PRIOR TO THE START OF CONSTRUCTION.
- MAXIMUM SIDEWALK CROSS SLOPE IS 2% (1/4 INCH PER FOOT).
- THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FDC POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN THE WATER METER AND ANY REQUIRED BACKFLOW PREVENTION DEVICES.
- MAINTAIN A MINIMUM OF 3' COVER OVER ALL WATER PIPING.
- ALL SANITARY SEWER CLEANOUTS IN PAVEMENT AREAS SHALL BE TRAFFIC RATED.

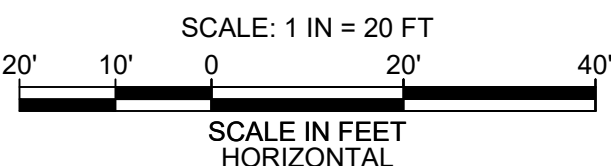
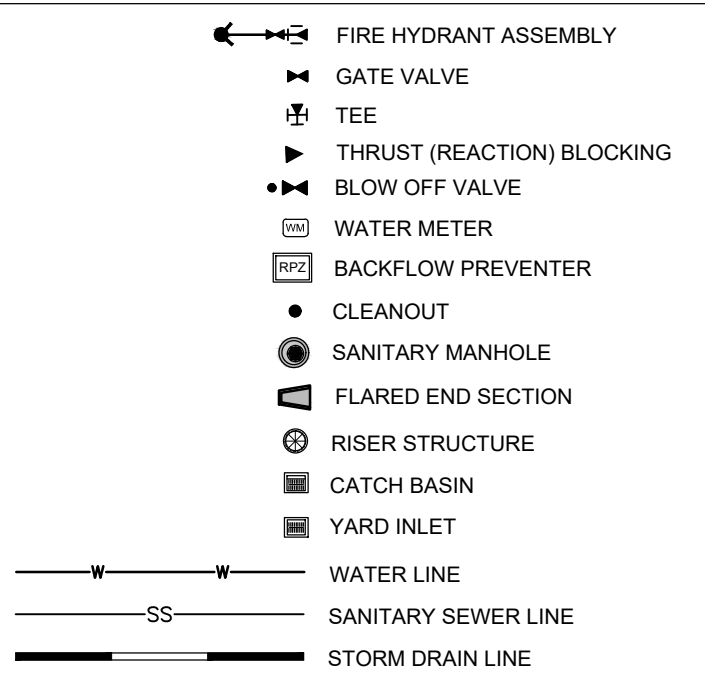
LOCATION OF SANITARY SEWERS IN RELATION TO WATER AND STORM SEWERS:

- A. SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT SEPARATION, THE APPROPRIATE REVIEWING AGENCY (DEH OR DENR) MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATER MAIN, PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELVE LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
- B. IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE OR ANYTIME THE SEWER IS OVER THE WATER MAIN, BOTH WATER MAIN AND SEWER MUST BE CONSTRUCTED OF FERROUS PIPE COMPLYING WITH PUBLIC WATER SUPPLY DESIGN STANDARDS AND BE PRESSURE TESTED TO 150 PSI TO ASSURE WATERTIGHTNESS BEFORE BACKFILLING.
- C. A 24 INCH VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR FERROUS PIPE SPECIFIED.
- CROSSINGS:
- A. SEWERS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
- B. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, ONE OF THE FOLLOWING METHODS MUST BE SPECIFIED
- THE SEWER SHALL BE DESIGNED AND CONSTRUCTED OF FERROUS PIPE AND SHALL BE PRESSURE TESTED AT 150 PSI TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING, OR
 - EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10 FEET ON BOTH SIDES OF THE CROSSING. MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE REGULATORY AGENCY OF USE IN WATER MAIN CONSTRUCTION.

STANDARD UTILITY NOTES (AS APPLICABLE):

- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CAPE FEAR PUBLIC UTILITIES AUTHORITY DESIGN STANDARDS, DETAILS, AND SPECIFICATIONS.
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW AND APPROVAL OF AN AMENDED PLAN AND/OR PROFILE BY CAPE FEAR PUBLIC UTILITIES AUTHORITY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER AND SEWER SERVICE TO EXISTING RESIDENCES AND BUSINESSES THROUGHOUT CONSTRUCTION OF THE PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE TOWN OF BENSON PUBLIC UTILITIES DEPARTMENT.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS AND SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER AND SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CAPE FEAR PUBLIC UTILITIES AUTHORITY AND/OR NEW HANOVER COUNTY. THIS INCLUDES ABANDONING TAP AT MAIN AND REMOVAL OF SERVICE FROM ROW OR EASEMENT.
- INSTALL 3/4 INCH COPPER" WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'x2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANTS RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW AND PRESSURE.
- INSTALL 4 INCH PVC SEWER SERVICES AT 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE AND 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 FEET ABOVE THE NEXT UPSTREAM MANHOLE.
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE, AND/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND, AND/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
- NCDOT RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS AND SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
- GREASE INTERCEPTOR/OIL WATER SEPARATOR SIZING CALCULATIONS AND INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY CAPE FEAR PUBLIC UTILITIES AUTHORITY PRIOR TO ISSUANCE OF A BUILDING PERMIT.
- CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD 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 MANUFACTURERS RECOMMENDATIONS OR THE LOCAL CROSS CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT.

UTILITY LEGEND



WILLIAM F. SHIPMAN
0350271
2/1/2020

REVISIONS	DATE	SYMBOL

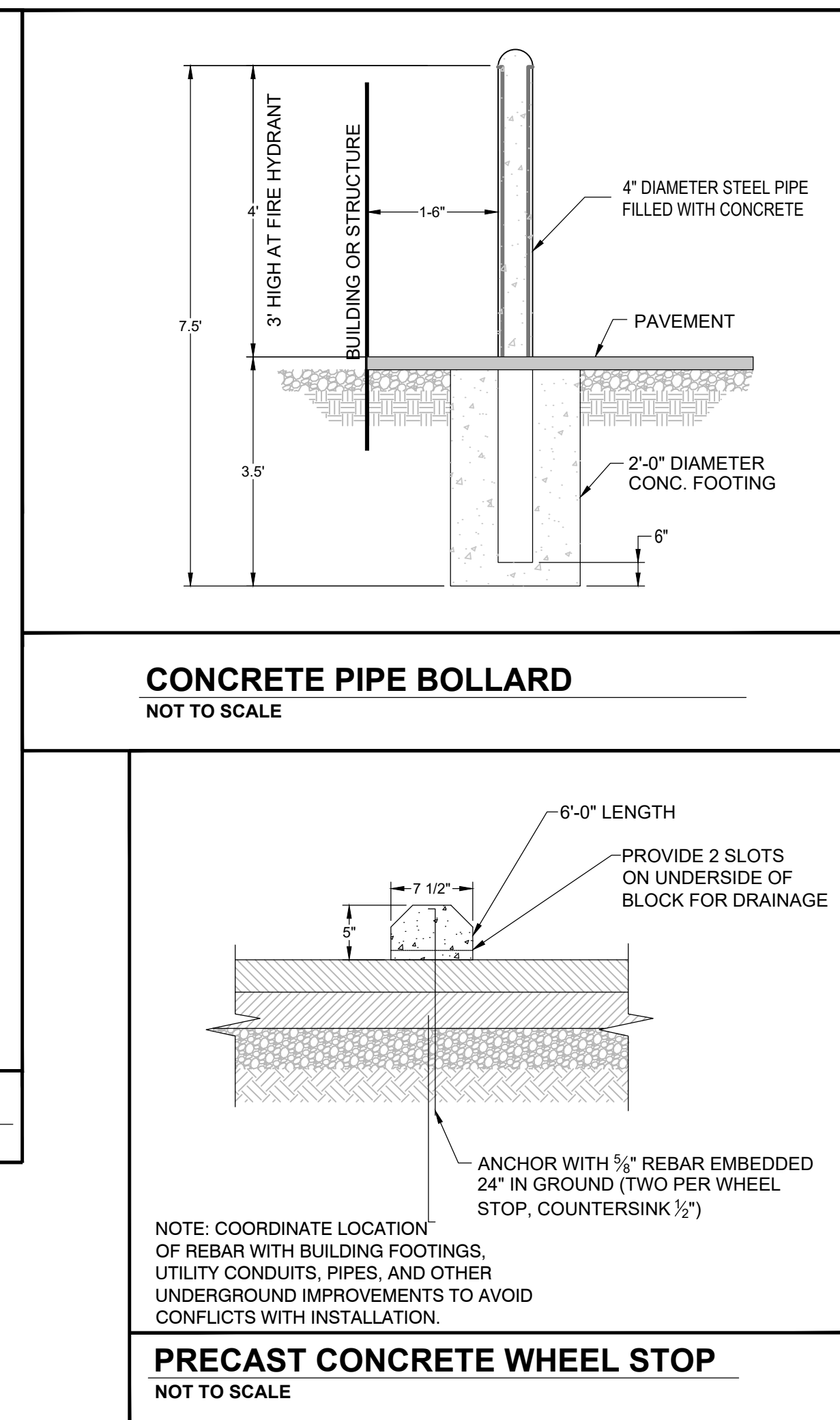
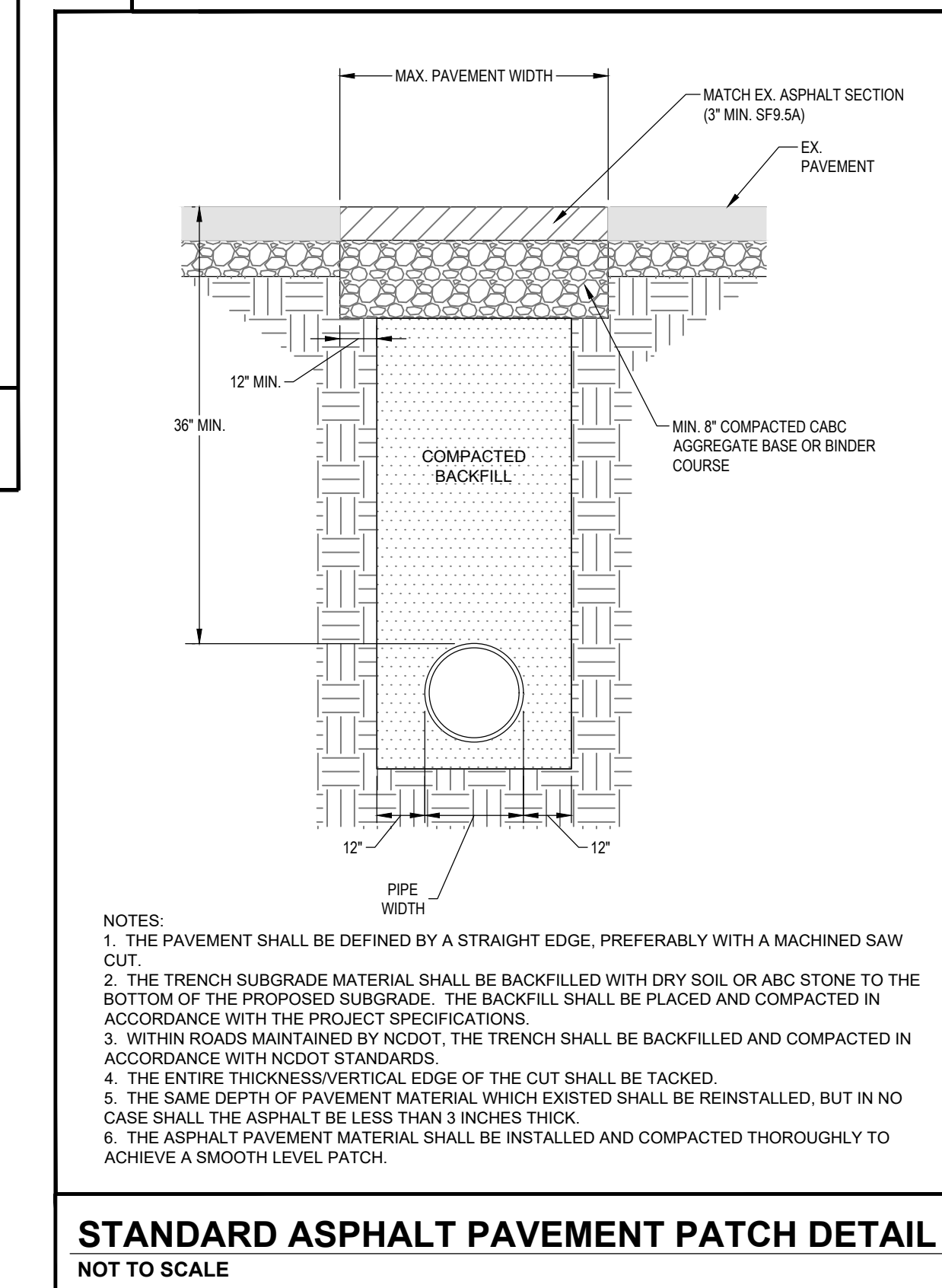
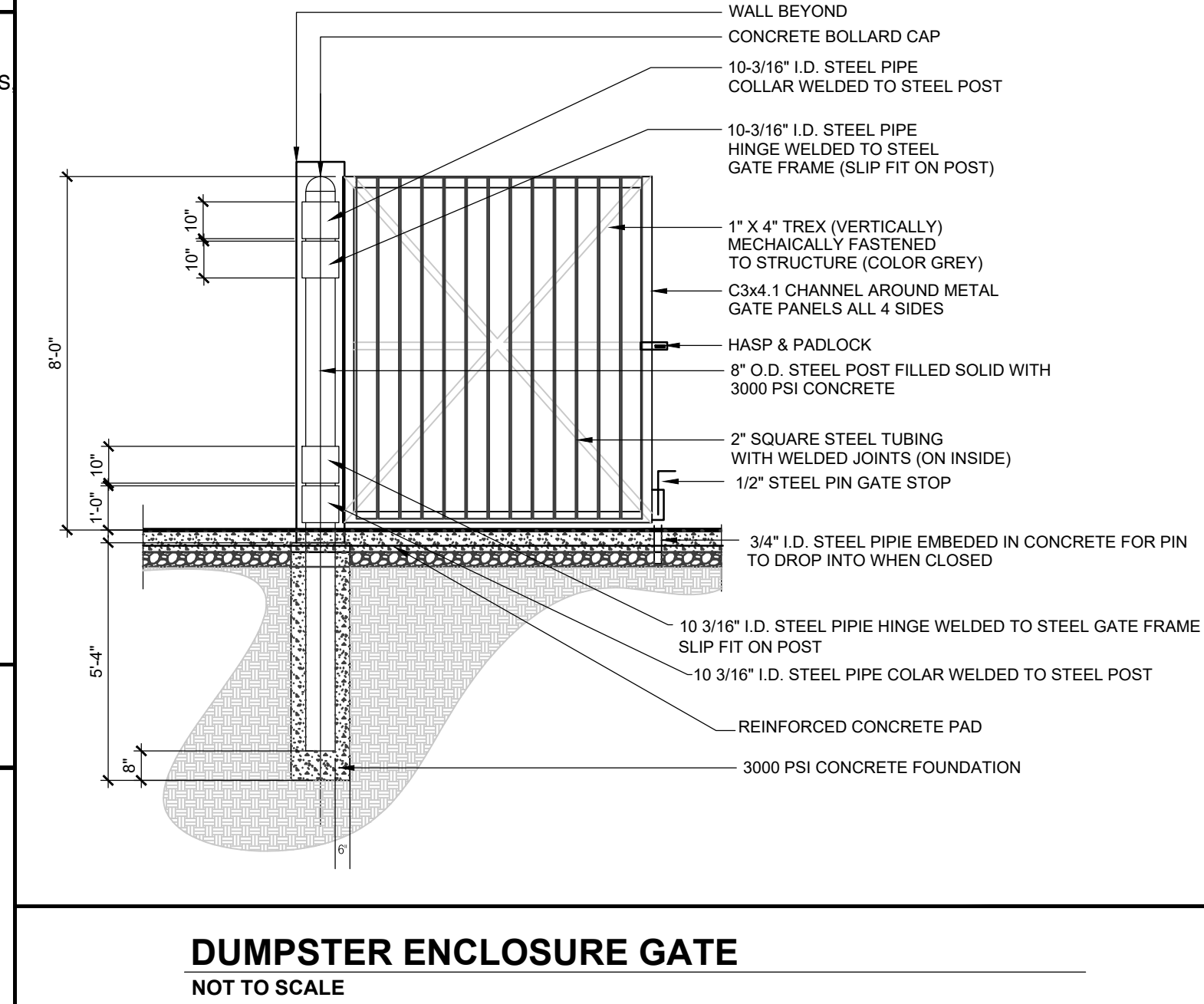
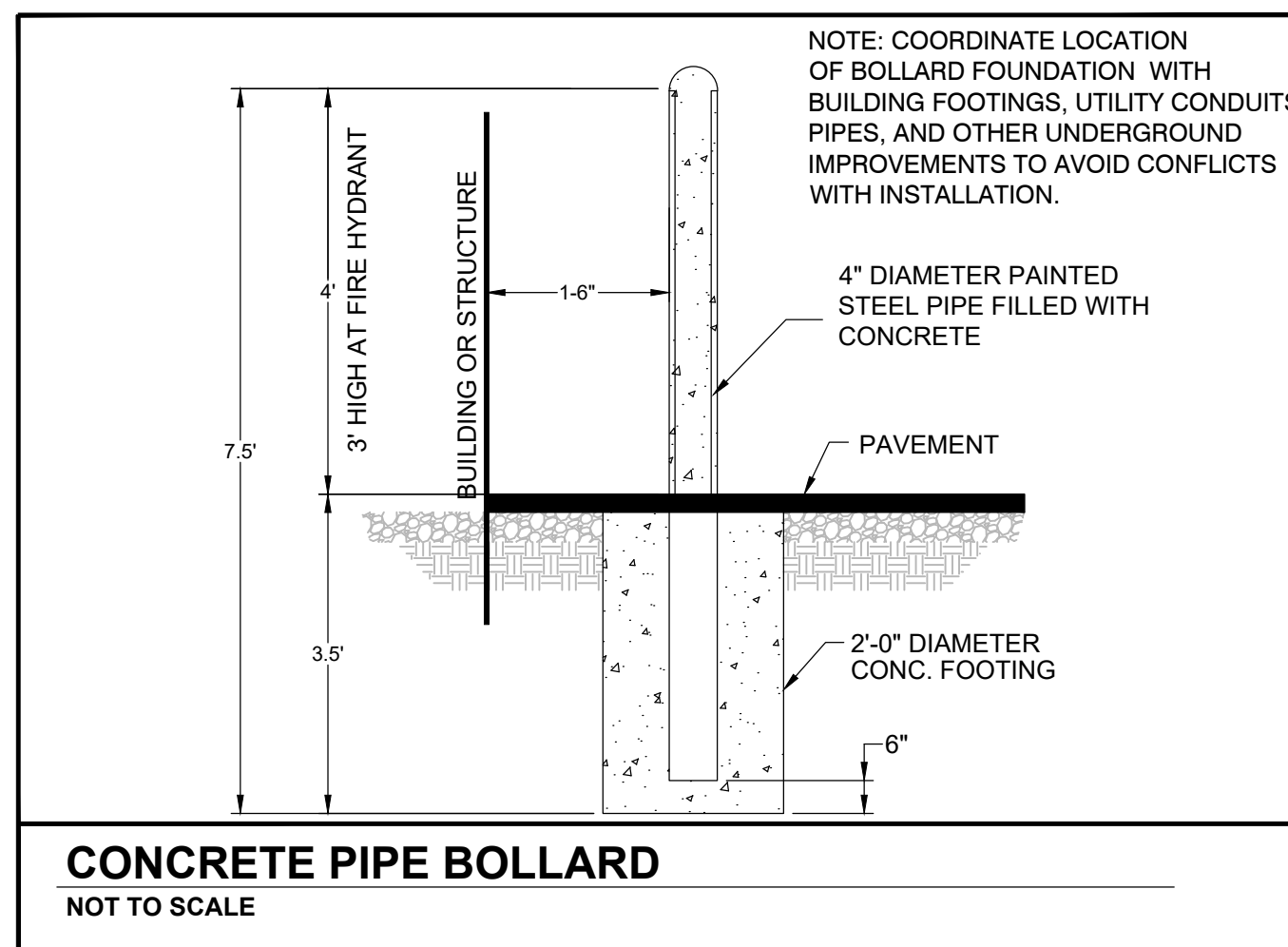
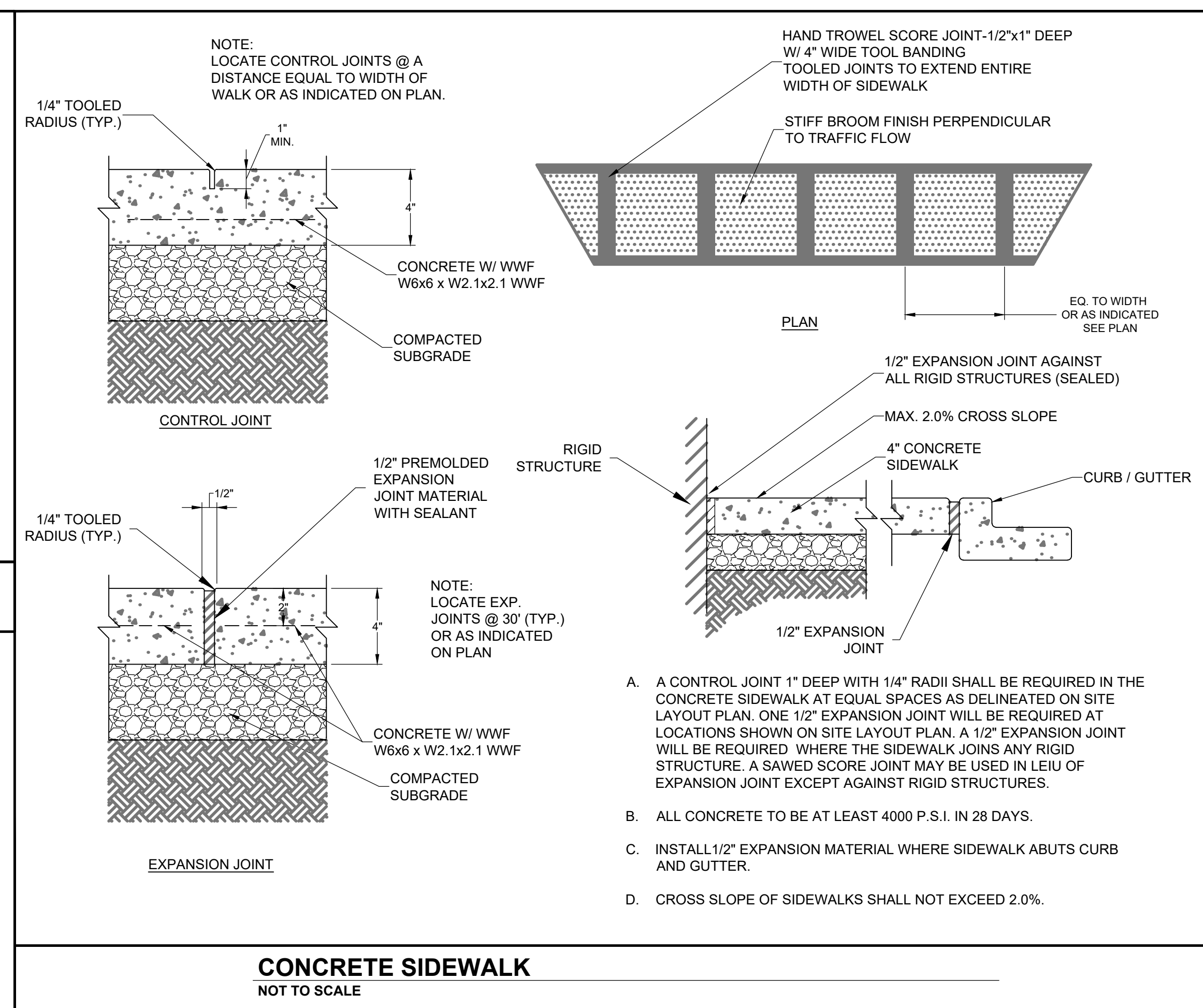
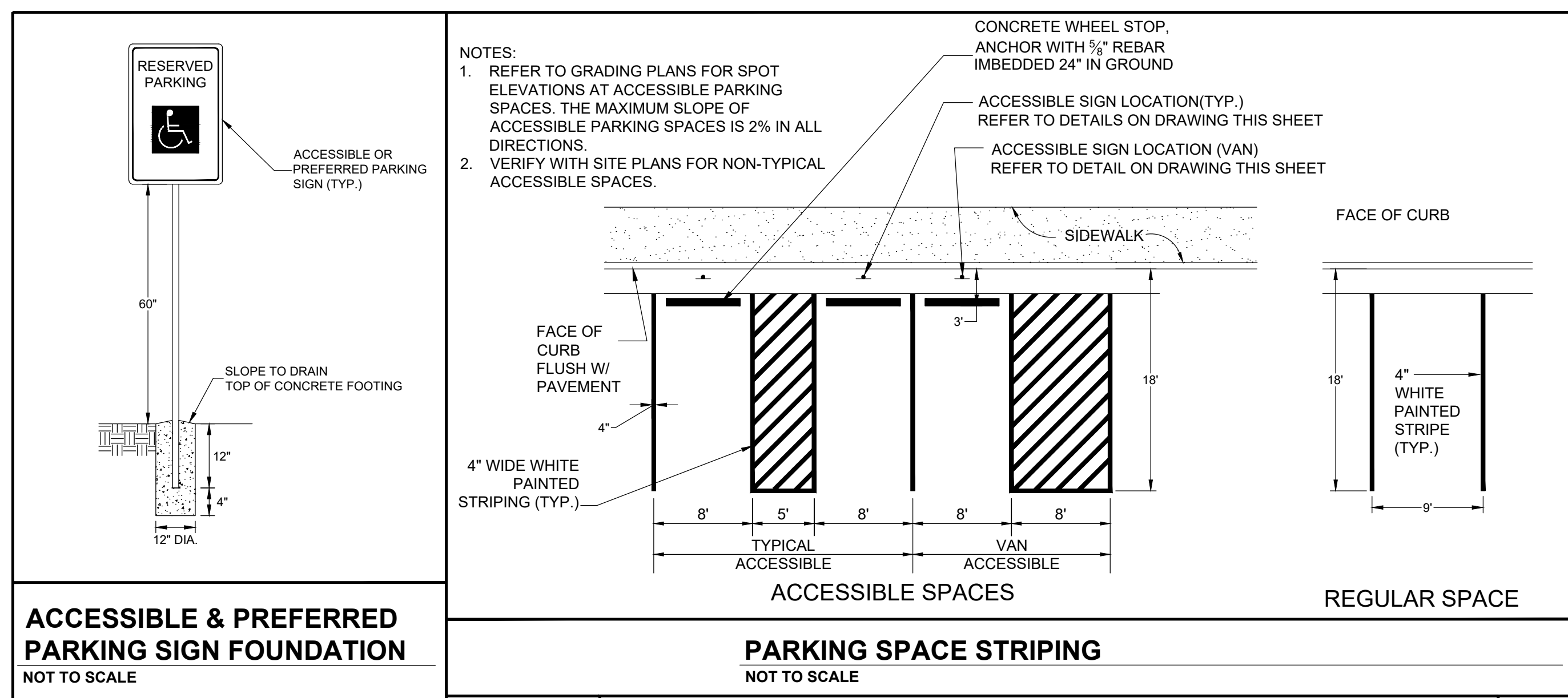
SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963

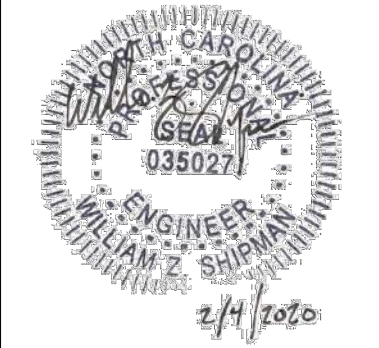
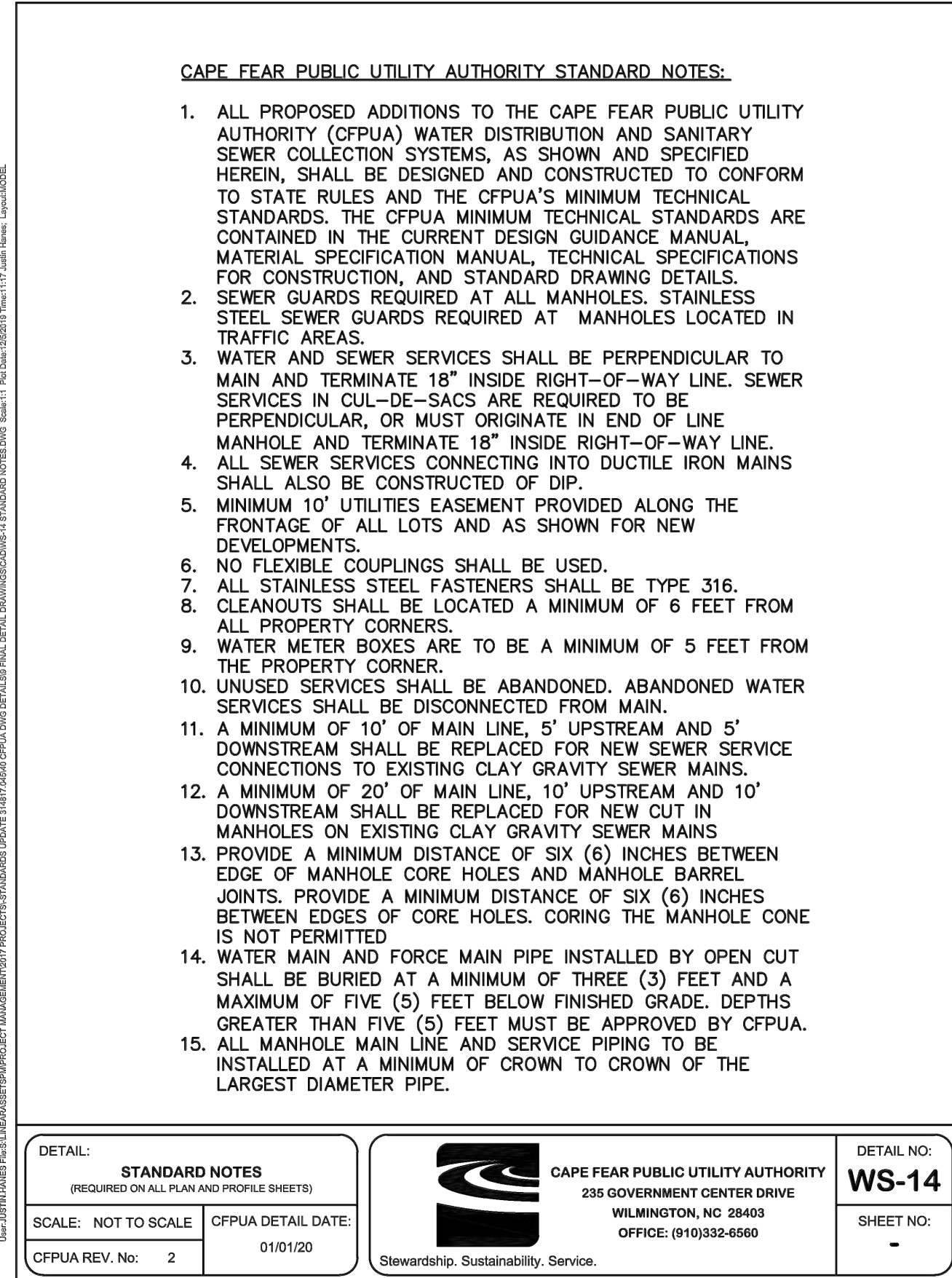
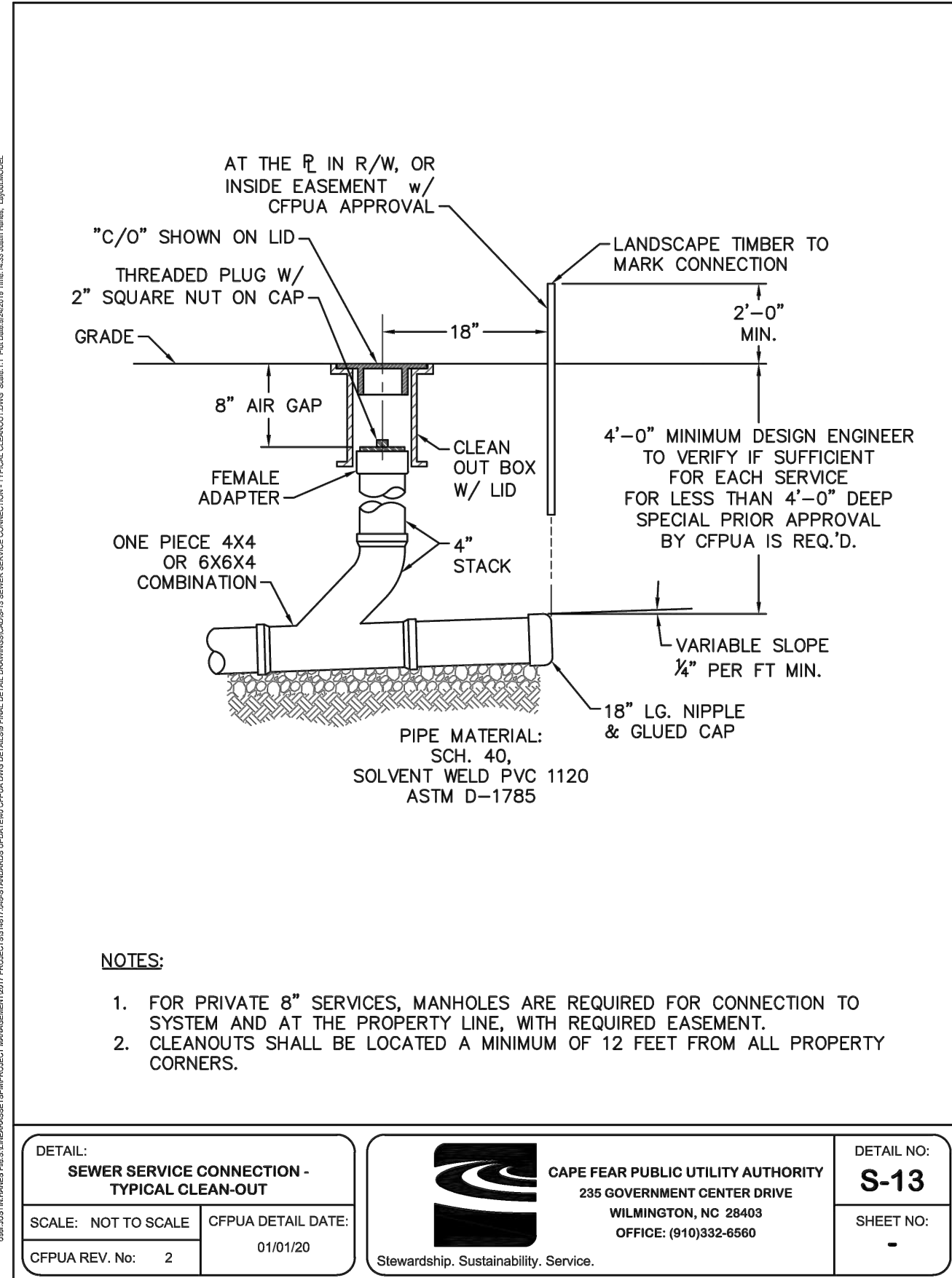
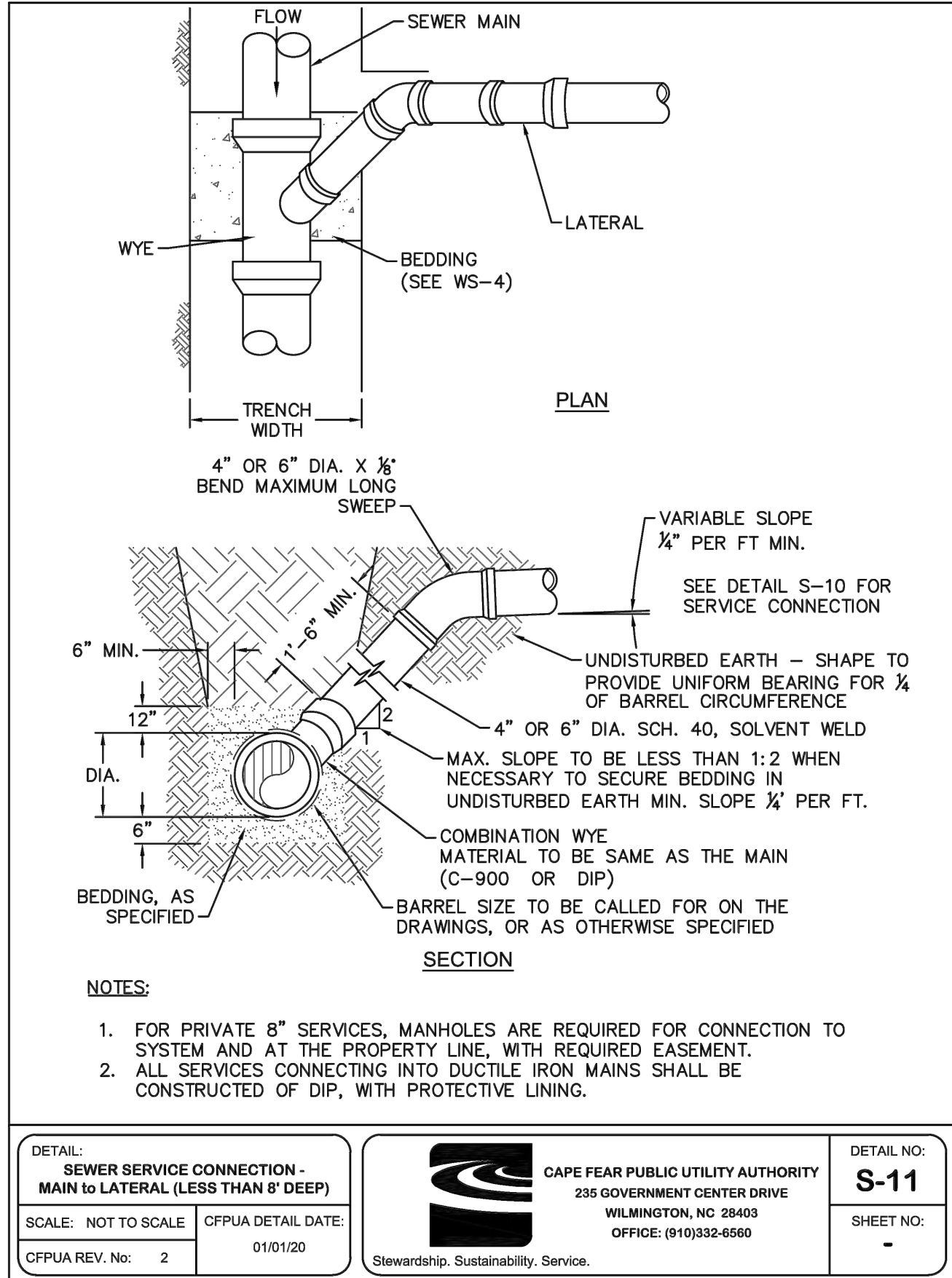
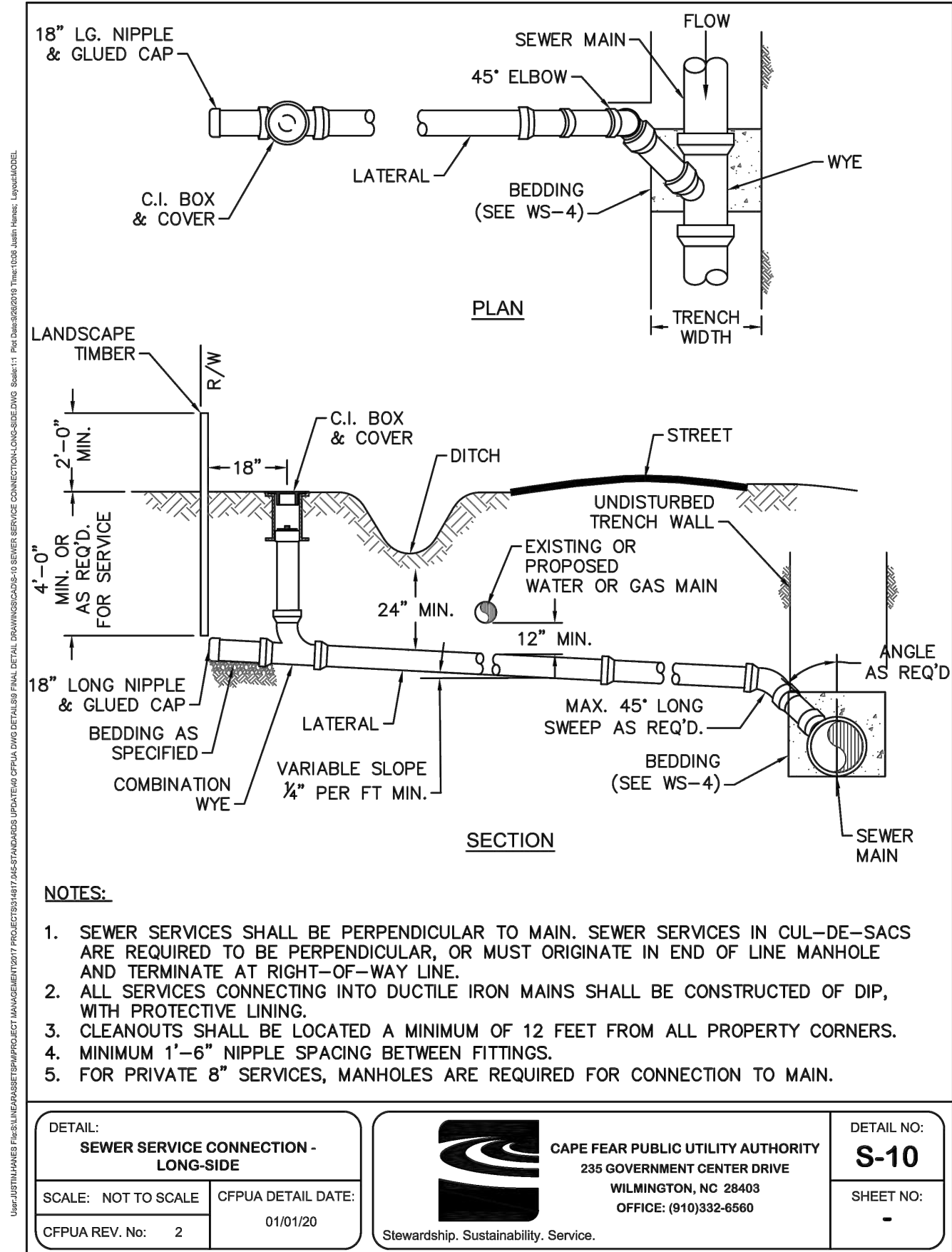
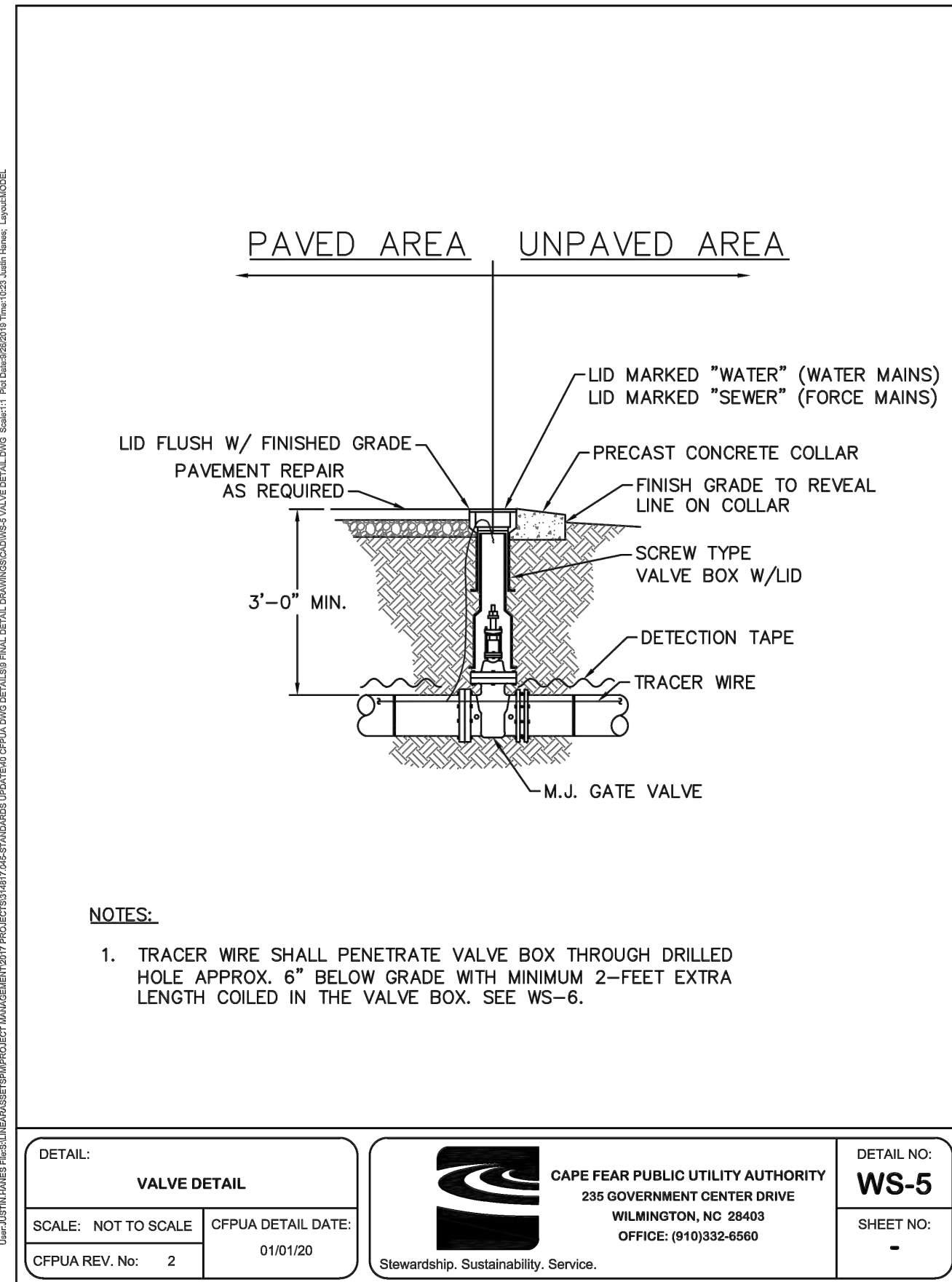
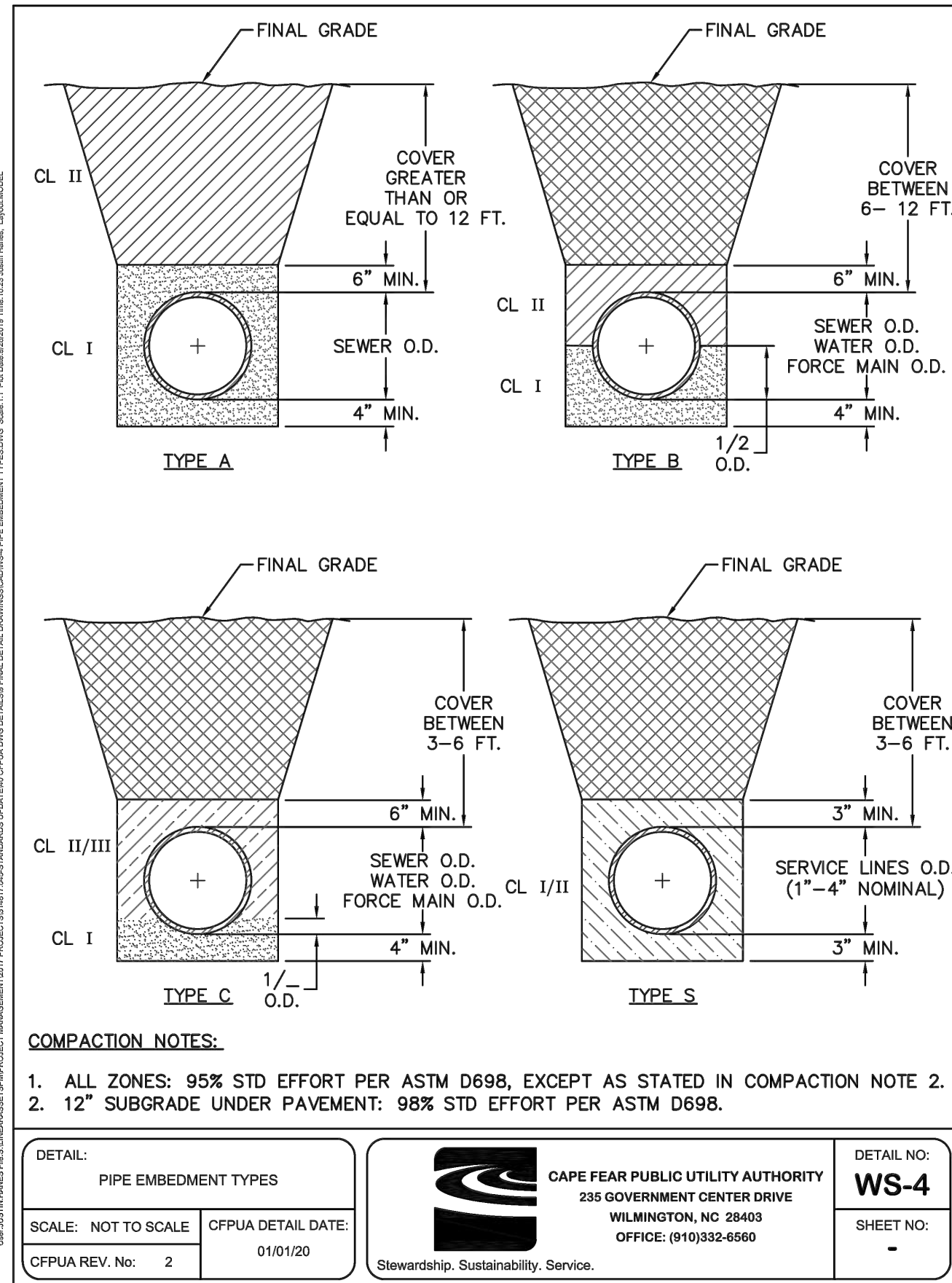
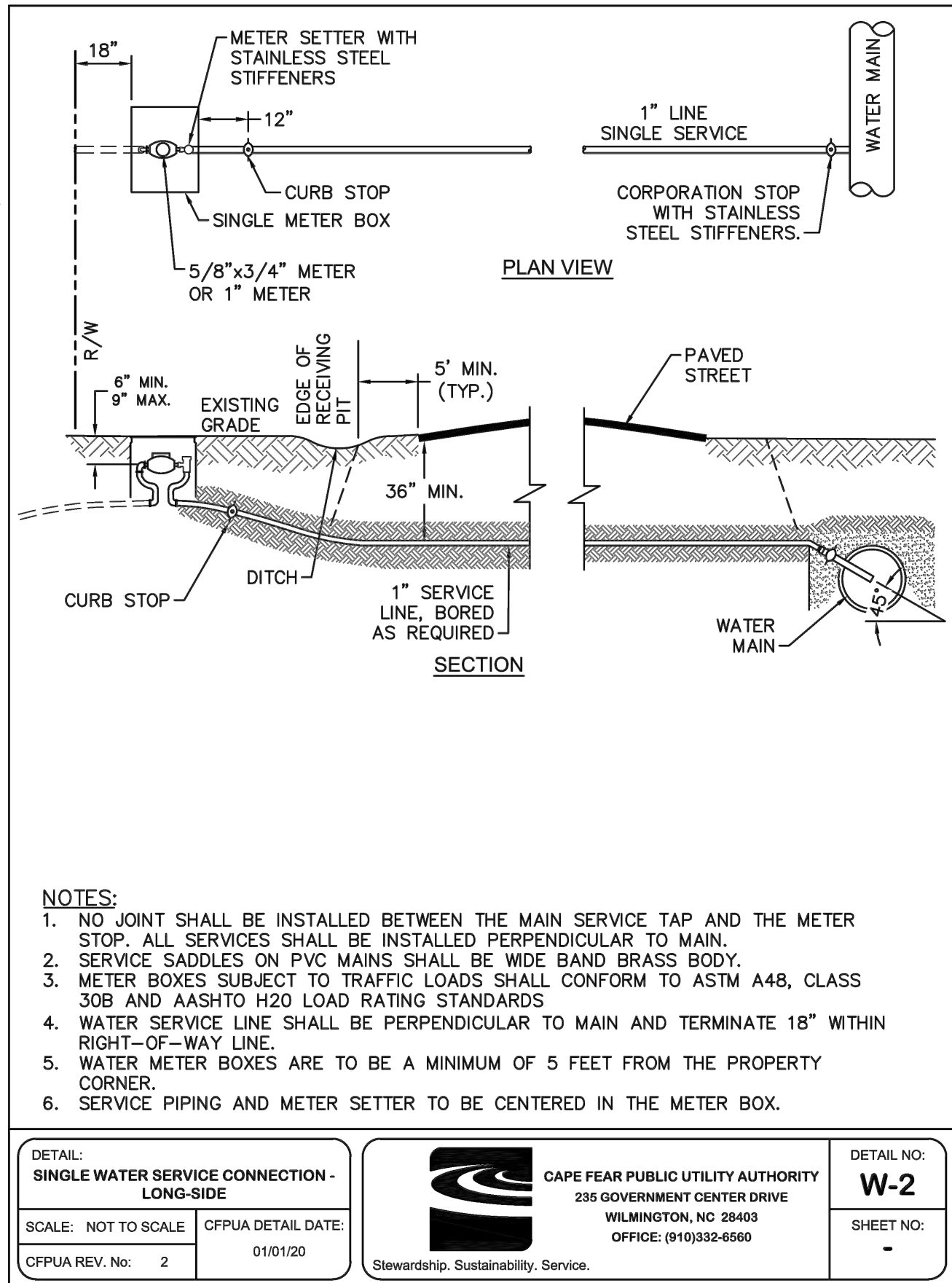
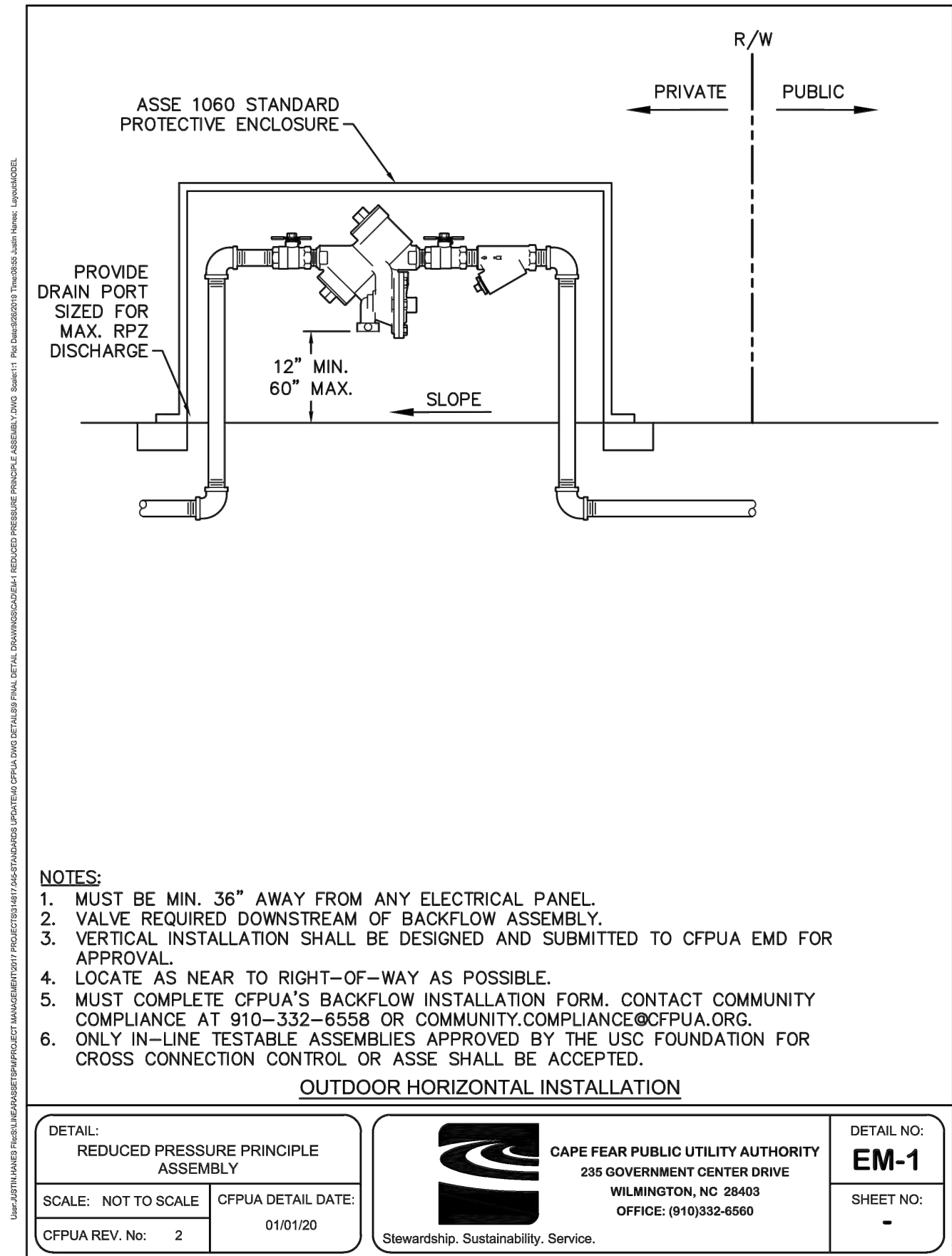
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP
WAKE COUNTY, NORTH CAROLINA

SEWER EJECTOR PUMP
PLAN & PROFILE

SHEET NUMBER:
C-09





REVISIONS	DATE	SYMBOL

SHIPMAN ENGINEERING

SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963

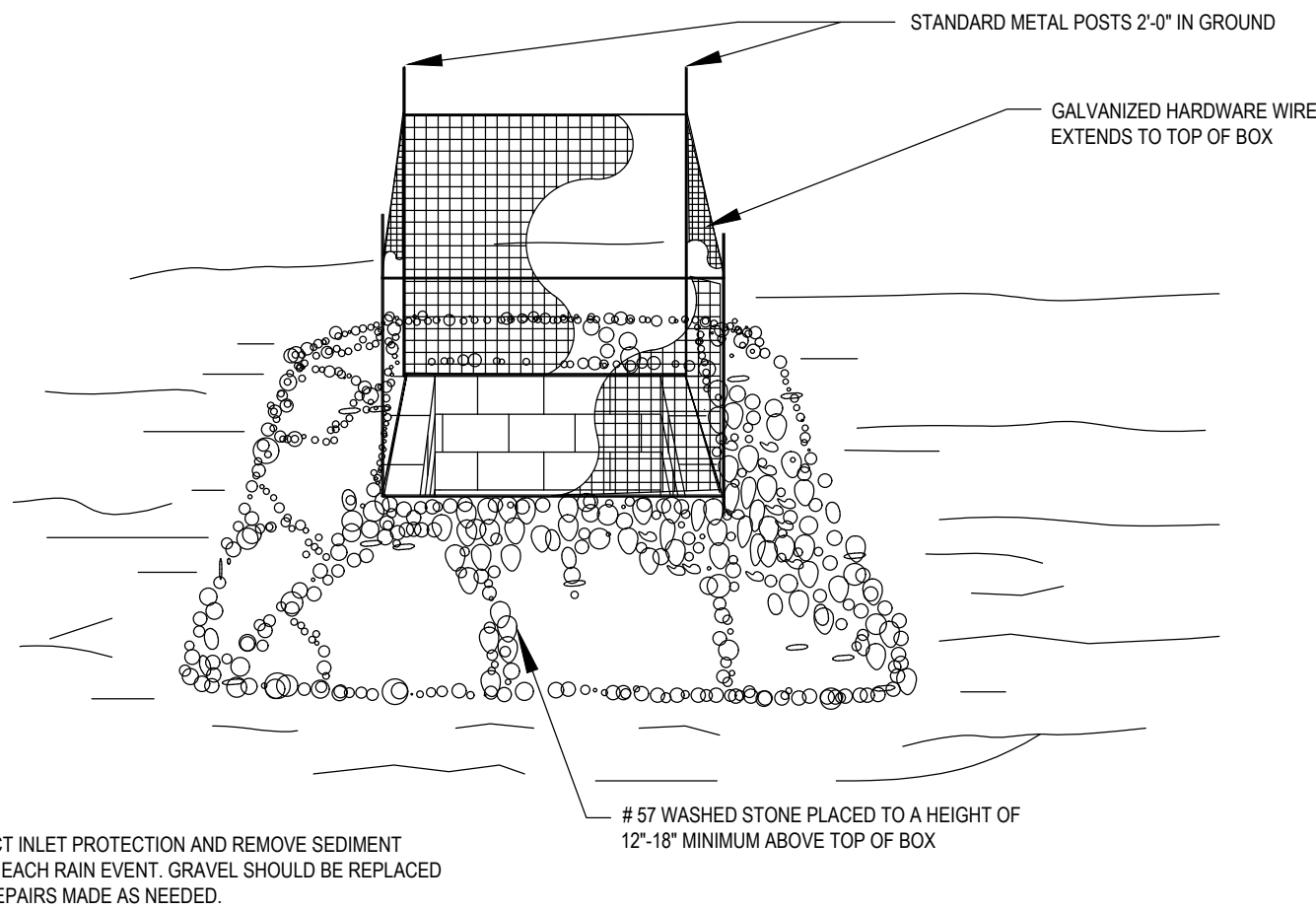
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

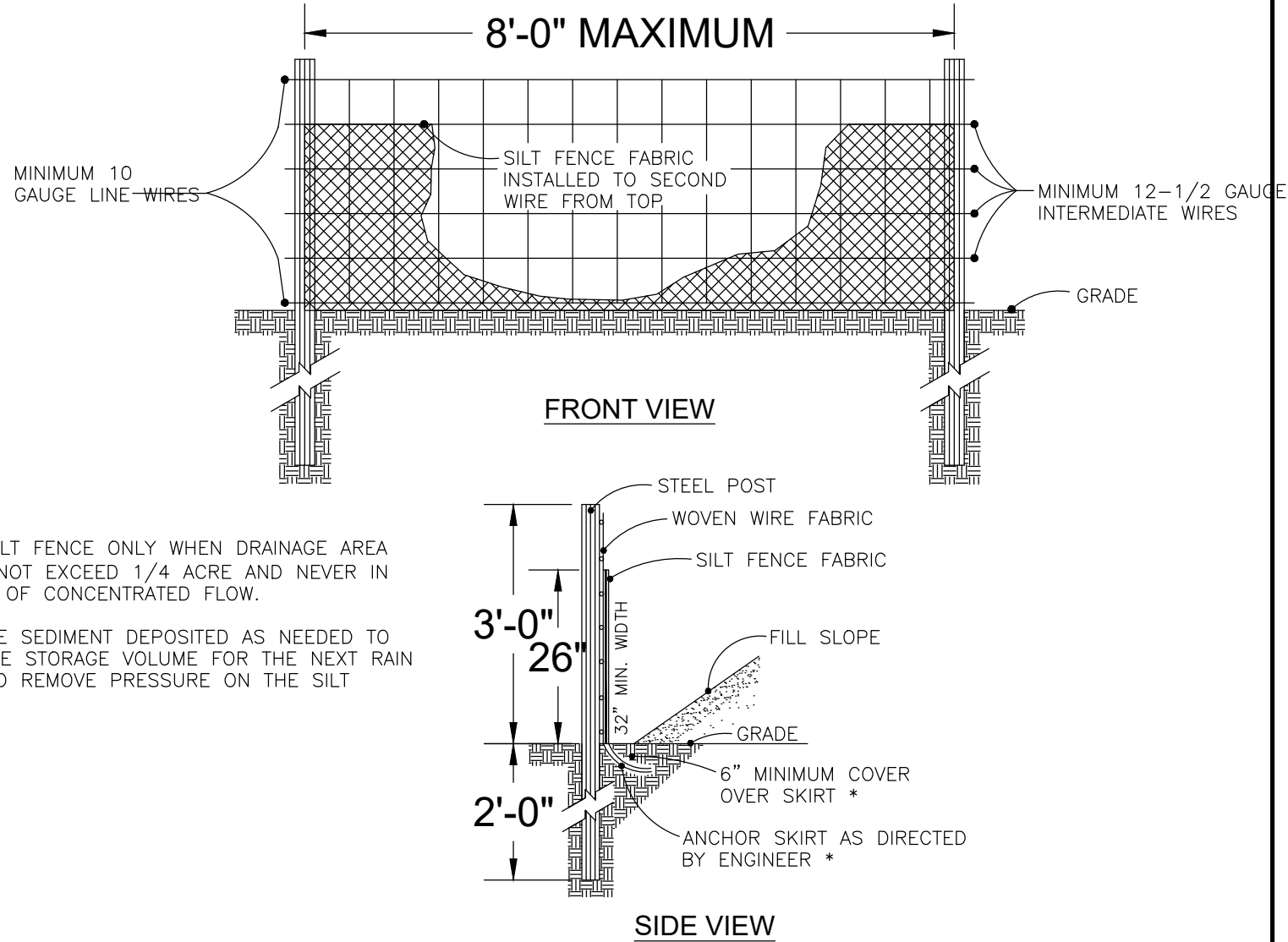
THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP
WAKE COUNTY, NORTH CAROLINA

UTILITY DETAILS

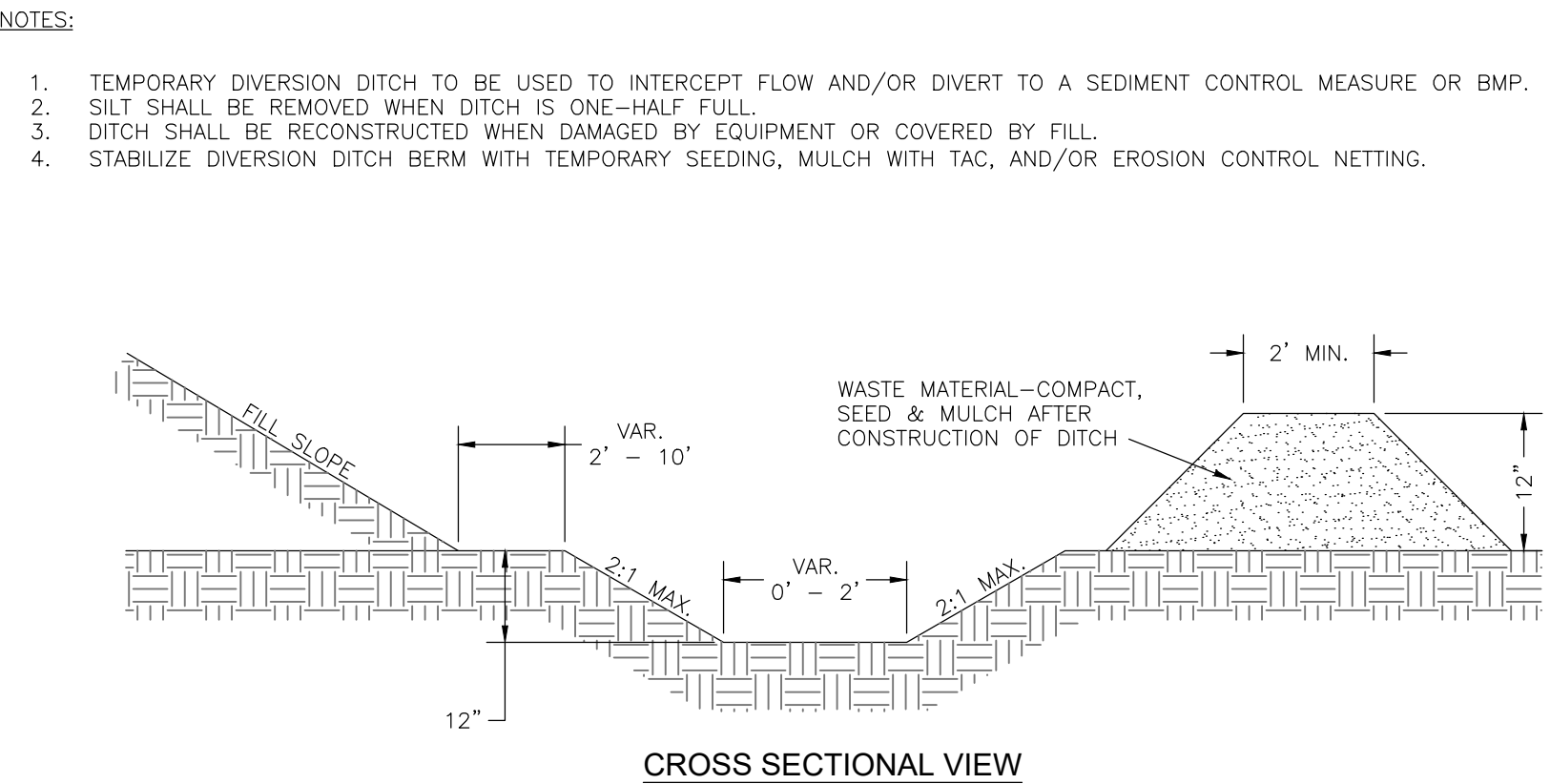
THESE PLANS AND ASSOCIATED DOCUMENTS ARE THE EXCLUSIVE PROPERTY OF SHIPMAN ENGINEERING, PLLC AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART. THESE DOCUMENTS SHALL NOT BE USED FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.



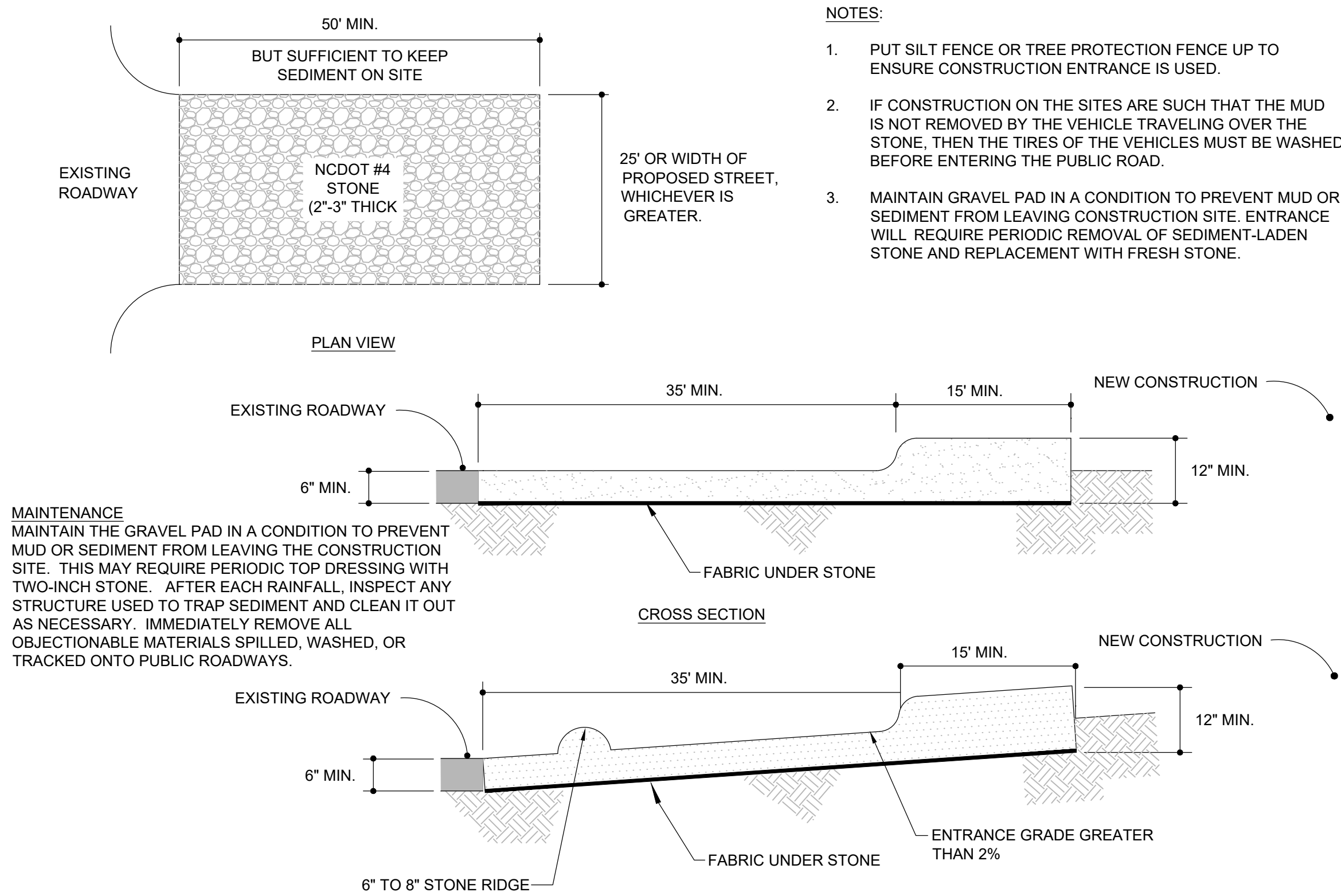
STANDARD GRAVEL YARD INLET PROTECTION
NOT TO SCALE



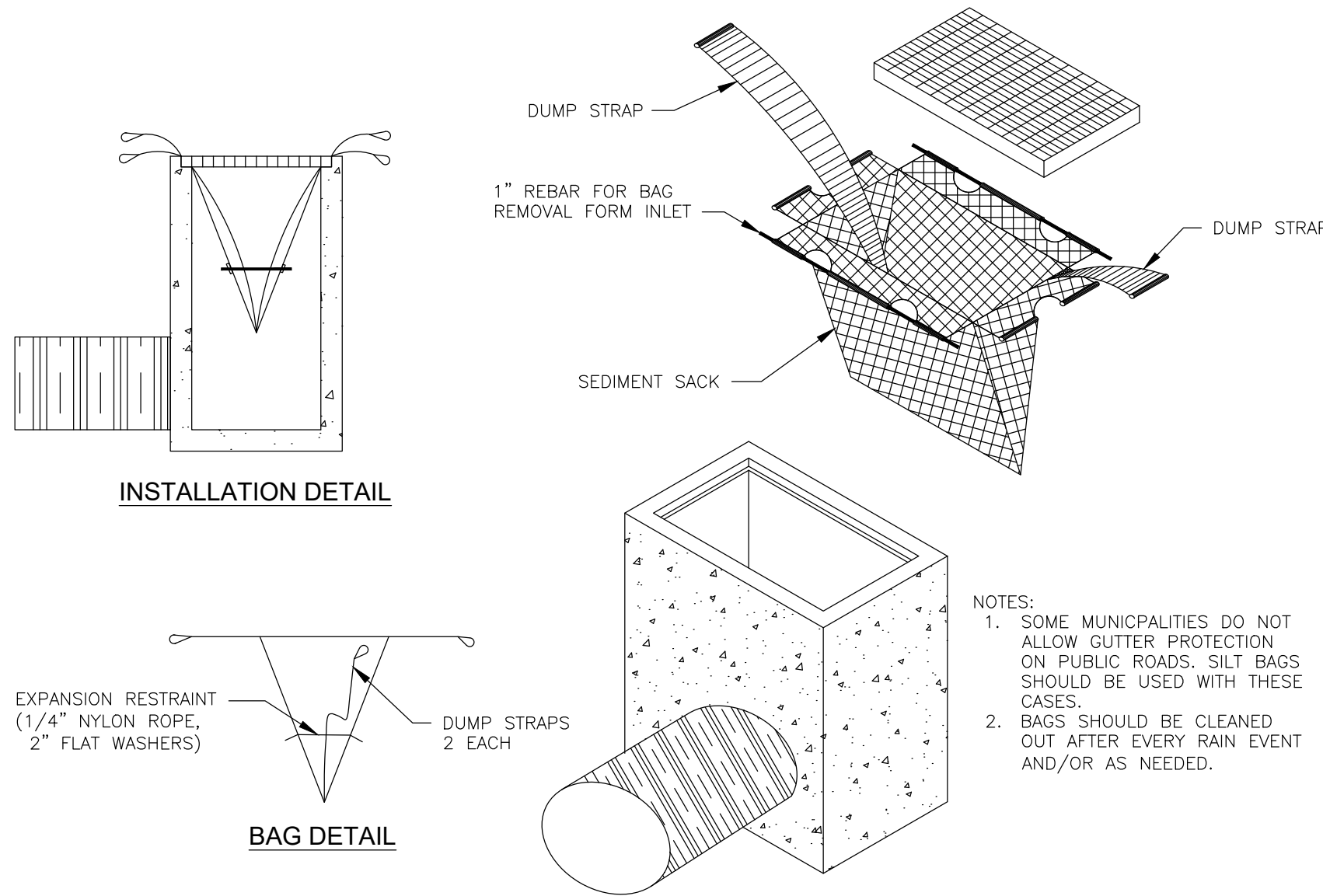
STANDARD TEMPORARY SILT FENCE
NOT TO SCALE



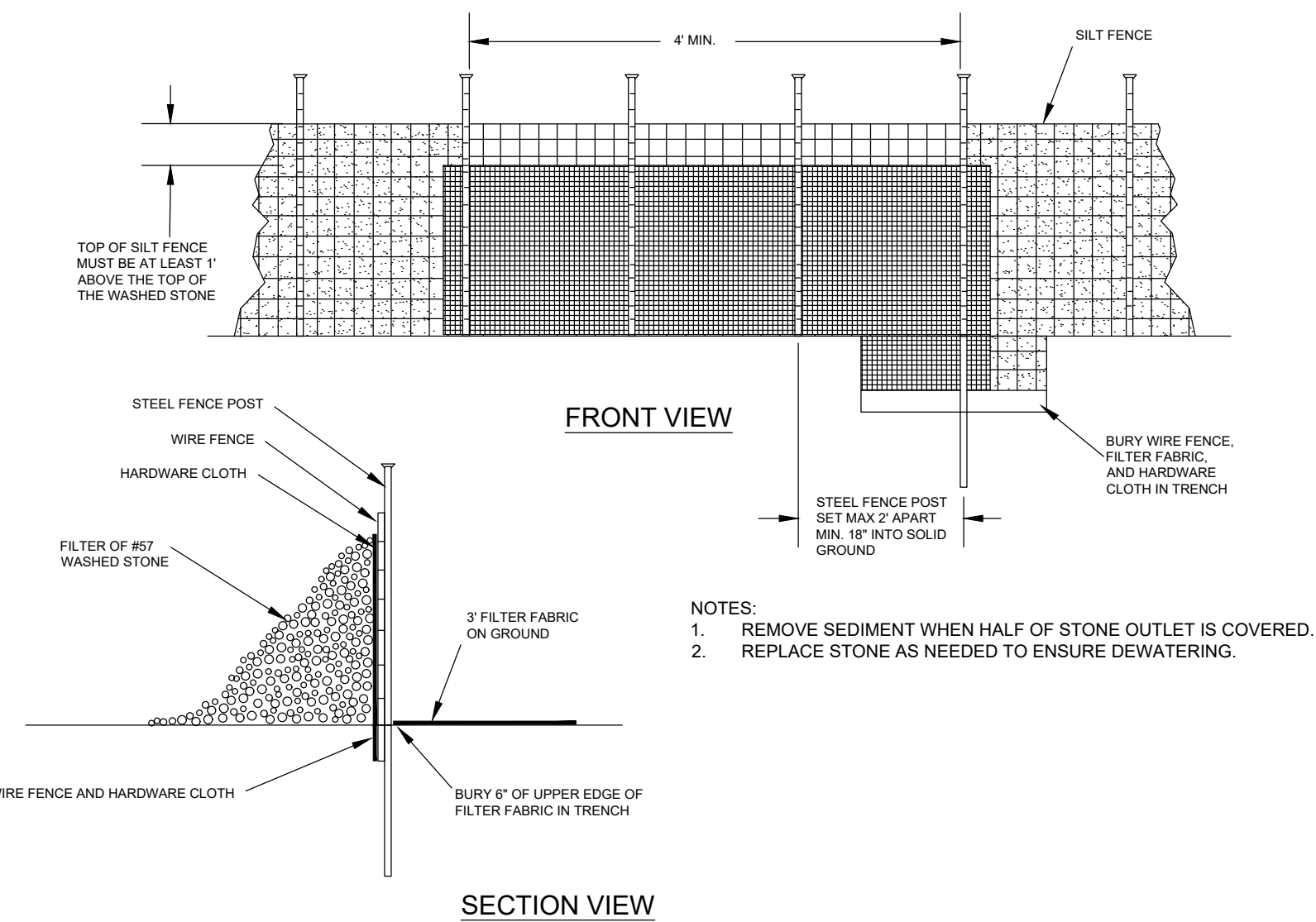
STANDARD TEMPORARY DIVERSION DITCH
NOT TO SCALE



TEMPORARY CONSTRUCTION ENTRANCE (NCDENR 6.06)
NOT TO SCALE



STANDARD SILT BAG-INLET SEDIMENT CONTROL DEVICE
NOT TO SCALE



STANDARD SILT FENCE OUTLET
NOT TO SCALE

Slope Installation
Instructions EXCEL SS-2
All Natural

Step 1 - Site Preparation
Prepare site to design profile and grade. Remove debris, rocks, clods, etc. Ground surface should be smooth prior to installation to ensure blanket remains in contact with slope.

Step 2 - Seeding
Seeding of site should be conducted to design requirements or to follow local or state seeding requirements as necessary.

Step 3 - Staple Selection
At a minimum, 6 in. long by 1 in. crown, 11 gauge staples are to be used to secure the blanket to the ground surface. Installation in rocky, sandy or other loose soil may require longer staples.

Step 4 - Excavate Anchor Trench and Secure Blanket
Excavate a trench along the top of the slope to secure the upstream end of the blanket. The trench should run along the length of the installation, be 6 in. wide and 6 in. deep. Staple blanket along bottom of trench, fill with compacted soil, overlap blanket towards toe of slope and secure with row of staples (shown in Figures A, E and F).

Step 5 - Secure Body of Blanket
Roll blanket down slope from anchor trench. Staple body of blanket following the pattern shown in Figure D. Leave end of blanket unstapled to allow for overlap shown in Figure B. Place downstream blanket underneath upstream blanket to form shingle pattern. Staple seam as shown in Figure E. Secure downstream blanket with stapling pattern shown in Figure D. Stapling pattern shown in Figure D reflects minimum staples to be used. More staples may be required to ensure blanket is sufficiently secured to resist mowers and foot traffic and to ensure blanket is in contact with soil surface over the entire area of blanket. Further, critical points require additional staples. Critical points are identified in Figure G.

Step 6 - Continue Along Slope - Complete Installation
Overlap adjacent blankets as shown in Figure C and repeat Step 5. Secure toe of slope using stapling pattern shown in Figure E. Secure edges of installation by stapling at 1.0' intervals along the terminal edge.

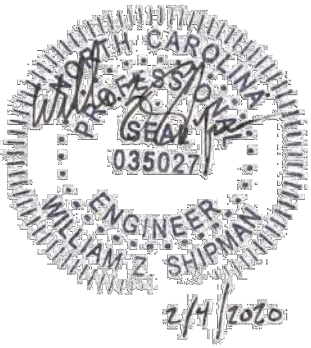
* Drawings Not to Scale

Figure A - Plan View
Figure B - Profile View
Figure C - Cross Section View
Figure D - Plan View
Figure E - Plan View
Figure F - Profile View
Figure G - Critical Point Securing

Product Application/Equivalency Specifications
Excel SS-2 All Natural is produced by Western Excelsior and consists of a temporary Rolled Erosion Control Product (RECP) comprised of a 100% certified weed free agricultural straw matrix mechanically (stitch) bound between two, biodegradable jute/scrims nets (top and bottom). The expected longevity of Excel SS-2 All Natural is approximately 12 months (actual longevity dependent on field and climatic conditions). Excel SS-2 All Natural is manufactured to include physical properties sufficient to provide the intended longevity and performance. Product specifications may be found on document WE_EXCEL_SS2AN_SPEC and performance information may be found on document WE_EXCEL_SS2AN_PERF. All documents are available from Western Excelsior Technical Support or www.westernexcelsior.com. Additional to above, equivalent products to Excel SS-2 All Natural must meet identical criteria as Excel SS-2 All Natural as follows:
1. Consist of debris free and 100% certified weed free biodegradable jute/scrims nets.
2. Sufficient tensile strength, thickness and coverage to maintain integrity during installation and ensure material performance.
3. Listing within AASHTO NTPED database.
4. Meet ECTC specification for category 2D products.

Document # WE_EXCEL_SS2AN_SII

PRELIMINARY-NOT FOR CONSTRUCTION



REVISIONS
DATE
SYMBOL

SHIPMAN ENGINEERING
SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963
137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP
WAKE COUNTY, NORTH CAROLINA
EROSION CONTROL DETAILS

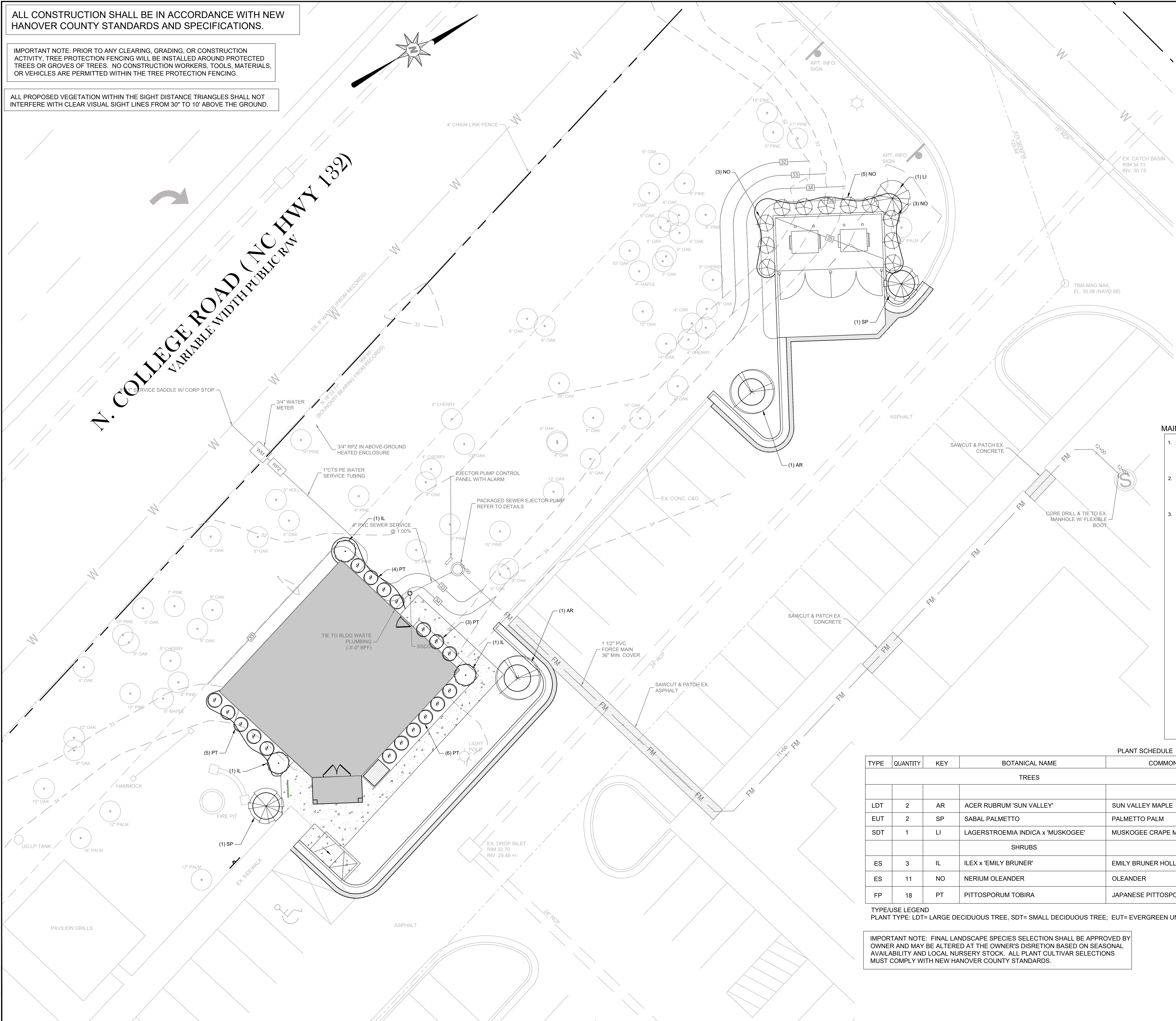
SHEET NUMBER:
D-03

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.

IMPORTANT NOTE: PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.

ALL PROPOSED VEGETATION WITHIN THE SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10' ABOVE THE GROUND.

THESE PLANS AND ASSOCIATED DOCUMENTS ARE THE EXCLUSIVE PROPERTY OF SHIPMAN ENGINEERING, PLLC AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART. THESE DOCUMENTS SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY SHIPMAN ENGINEERING, PLLC. ANY REUSE OR MODIFICATION OF THESE DOCUMENTS WITHOUT THE WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC IS STRICTLY PROHIBITED.



GENERAL NOTES:

- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY CHARLES F. RIGGS AND ASSOCIATES, INC. (DATED DECEMBER 20, 2019), AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING, PLLC. ADDITIONAL EXISTING CONDITIONS DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
- PRIOR TO THE COMMENCEMENT OF ANY ACTIVITIES REQUIRING A BUILDING OR ZONING PERMIT AN ON-SITE PRECONSTRUCTION MEETING IS REQUIRED BETWEEN THE DEVELOPER AND NEW HANOVER COUNTY INSPECTION STAFF TO REVIEW PROCEDURES FOR THE PROTECTION AND MANAGEMENT OF ALL LANDSCAPE ELEMENTS THAT ARE TO REMAIN AS IDENTIFIED ON THE LANDSCAPING PLANS.
- CONTACT THE NO ONE CALL CENTER (811) FOR LOCATIONS OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF FIVE FEET FROM WATER AND SEWER CONNECTIONS. NOTIFY THE ENGINEER IF ANY CONFLICTS OR DISCREPANCIES ARE NOTED.
- VERIFY ALL PLANT MATERIAL QUANTITIES ON THE PLAN PRIOR TO BIDDING. PLANT LIST TOTALS ARE SHOWN FOR CONVENIENCE ONLY AND SHALL BE CONFIRMED PRIOR TO SUBMITTING BIDS.
- PROVIDE PLANT MATERIALS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY INDICATED ON THE PLANS, UNLESS EXPRESS WRITTEN PERMISSION IS ISSUED FROM THE OWNER OR THE ENGINEER INDICATING OTHERWISE. FINAL PLANT SELECTION MAY BE SUBJECT TO SEASONAL AVAILABILITY AND MAY BE ALTERED OR MODIFIED BY THE OWNER AS DESIRED.
- ALL PLANT MATERIALS AND INSTALLATION SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". IF SPECIFIED PLANT MATERIAL IS NOT AVAILABLE, SUBMIT PROOF OF NON-AVAILABILITY TO THE ENGINEER, TOGETHER WITH PROPOSAL FOR THE USE OF EQUIVALENT MATERIAL, VARIETIES, OR CULTIVARS.
- PROVIDE AND INSTALL ALL PLANTS AS IN ACCORDANCE WITH DETAILS AND CONTRACT SPECIFICATIONS.

CONSTRUCTION/INSTALLATION:

- THE OWNER AND/OR ENGINEER RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION, AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK".
- LABEL AT LEAST ONE TREE AND SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING THE DESIGNATION OF BOTANICAL AND COMMON NAME.
- INSTALL LANDSCAPE PLANTINGS AT ENTRANCES/EXITS AND PARKING AREAS ACCORDING TO PLANS SO THAT MATERIALS WILL NOT INTERFERE WITH SIGHT DISTANCES.
- CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER. CONTRACTOR SHALL NOTIFY THE OWNER OF CONDITIONS WHICH AFFECTS THE GUARANTEE.

INSPECTIONS/GUARANTEE:

- UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY THE COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A FINAL INSPECTION BY THE ENGINEER.
- ALL EXTERIOR PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR AFTER DATE OF FINAL INSPECTION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. DEFECTS RESULTING FROM NEGLIGENCE BY THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND THE CONTRACTORS CONTROL ARE NOT THE RESPONSIBILITY OF THE CONTRACTOR.
- PLANT MATERIAL QUANTITIES AND SIZES WILL BE INSPECTED FOR COMPLIANCE WITH APPROVED PLANS BY A SITE PLAN REVIEW AGENT OF THE PLANNING DEPARTMENT PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY.
- REMOVE ALL GUY WIRES AND STAKES 12 MONTHS AFTER INSTALLATION.

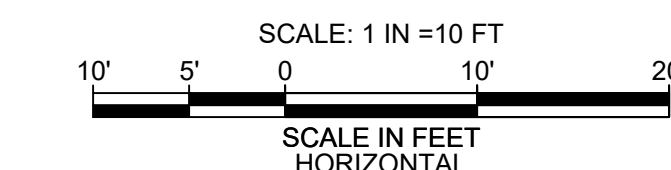
MAINTENANCE NOTES:

- THE OWNERS OF THE PROPERTY SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL REQUIRED LANDSCAPING BY KEEPING LAWNS MOWED, ALL PLANTS MAINTAINED AS DISEASE FREE, ALL PLANTING BEDS GROOMED AND KEPT WEED FREE (EXCEPT IN AREAS OF PRESERVED EXISTING NATURAL VEGETATION (I.E. THICKETS), AND KEPT FREE FROM TRASH, DEBRIS AND OTHER OBJECTIONABLE MATERIALS.
- THE REPLACEMENT OF ANY REQUIRED PLANTING, WHICH IS REMOVED OR DIES AFTER THE DATE OF PLANTING, SUCH REPLACEMENT SHALL OCCUR DURING THE NEXT PLANTING SEASON; AND, THE REPLACEMENT OF ANY TREE IN A TREE SAVE AREA, WHICH IS REMOVED OR DIES AFTER THE DATE OF APPROVAL OF A PRESERVATION LANDSCAPE PLAN, SUCH REPLACEMENT SHALL OCCUR DURING THE NEXT PLANTING SEASON.
- THE OWNERS OF THE PROPERTY AND THEIR AGENTS, HEIRS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, PRESERVATION AND MAINTENANCE OF ALL PLANTINGS AND PHYSICAL FEATURES SHOWN ON THIS PLAN. THE OWNERS SHALL BE RESPONSIBLE FOR ANNUAL MAINTENANCE OF THE VEGETATION TO INCLUDE BUT NOT LIMITED TO:
 - FERTILIZATION: LAWN: FERTILIZE LAWNS TWICE PER YEAR (FEBRUARY 15-MARCH 15 AND AGAIN SEPT. 1- OCTOBER 31) ACCORDING TO SOIL TEST. FERTILIZE WARM SEASON GRASSES ONCE DURING GROWING SEASON PER SOIL TEST.
 - PRUNING: PRUNING SHALL BE LIMITED TO REMOVAL OF DEAD WOOD OR BRANCHES FOR TREES OR FOR SIGHT DISTANCES/SAFETY REASONS. THE SHIGO STANDARDS SHOULD BE ADHERED TO. THE PRUNING OF SHRUBS SHALL BE LIMITED TO THE PRUNING NECESSARY TO MAINTAIN THE NATURAL SHAPE OF THE PLANT EXCEPT FOR SHEARED HEDGES.
 - PEST CONTROL: PRE-EMERGENT WEED CONTROL FOR LAWNS AND SHRUB BEDS MAY BE APPLIED IN FEBRUARY. CHEMICAL TREATMENT FOR INSECT INFESTATION AND DISEASE MAY BE APPLIED AND SHALL BE SPECIFIC TO THE PROBLEM.
 - MULCHING: MULCHING SHALL BE MAINTAINED AT A DEPTH OF 2-3" IN PLANT BEDS. MULCH SHALL BE REAPPLIED EVERY TWO YEARS.
 - MOWING: PRIMARY FESCUE LAWNS SHALL BE MAINTAINED AT A HEIGHT OF 3" AND SHALL BE MOWED APPROXIMATELY 30 TIMES PER YEAR. SECONDARY TURF AREAS MAY BE MAINTAINED HIGHER AND LESS FREQUENTLY. WARM SEASON GRASSES SHALL BE MOWED AS NEEDED DURING THE GROWING SEASON TO MAINTAIN THE RECOMMENDED HEIGHT OF THE SPECIES OF TURF GRASS.
 - PLANT PROTECTION: AVOID EXCESS INTRUSION INTO THE ROOT ZONE AREA OF ESTABLISHED PLANTINGS.
 - WATERING: IF ANY IRRIGATION SYSTEM IS UTILIZED, THE SYSTEM SHALL BE REGULATED TO PROVIDE APPROXIMATELY 1" OF RAINFALL PER WEEK DURING THE GROWING SEASON.
 - FAILURE TO MAINTAIN ALL PLANTINGS IN ACCORDANCE WITH THIS PLAN MAY CONSTITUTE A VIOLATION OF THE LAND DEVELOPMENT ORDINANCE AND MAY RESULT IN FINES.

PLANT SCHEDULE						
TYPE	QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	PLANTING SIZE	COMMENTS
TREES						
LDT	2	AR	ACER RUBRUM 'SUN VALLEY'	SUN VALLEY MAPLE	1.5" CAL. MINIMUM	B&B
EUT	2	SP	SABAL PALMETTO	PALMETTO PALM	8' HEIGHT, MIN.	B&B
SDT	1	LI	LAGERSTROEMIA INDICA x 'MUSKOGEE'	MUSKOGEE CRAPE MYRTLE	8' HEIGHT, MULTI-STEM	B&B
SHRUBS						
ES	3	IL	ILEX x 'EMILY BRUNER'	EMILY BRUNER HOLLY	24" HEIGHT MIN.	CONTAINER
ES	11	NO	NERIUM OLEANDER	OLEANDER	24" HEIGHT MIN.	CONTAINER
FP	18	PT	PITTSOPORUM TOBIRA	JAPANESE PITTSOPORUM	24" HEIGHT MIN.	CONTAINER

TYPE/USE LEGEND
PLANT TYPE: LDT= LARGE DECIDUOUS TREE; SDT= SMALL DECIDUOUS TREE; EUT= EVERGREEN UNDERSTORY TREE; BUFF= BUFFER SHRUB; FB= FOUNDATION PLANTING

IMPORTANT NOTE: FINAL LANDSCAPE SPECIES SELECTION SHALL BE APPROVED BY OWNER AND MAY BE ALTERED AT THE OWNER'S DISCRETION BASED ON SEASONAL AVAILABILITY AND LOCAL NURSERY STOCK. ALL PLANT CULTIVAR SELECTIONS MUST COMPLY WITH NEW HANOVER COUNTY STANDARDS.



SHIPMAN
ENGINEERING

SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963

THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY

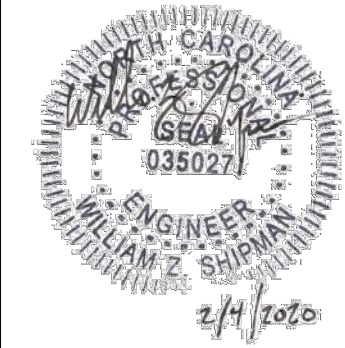
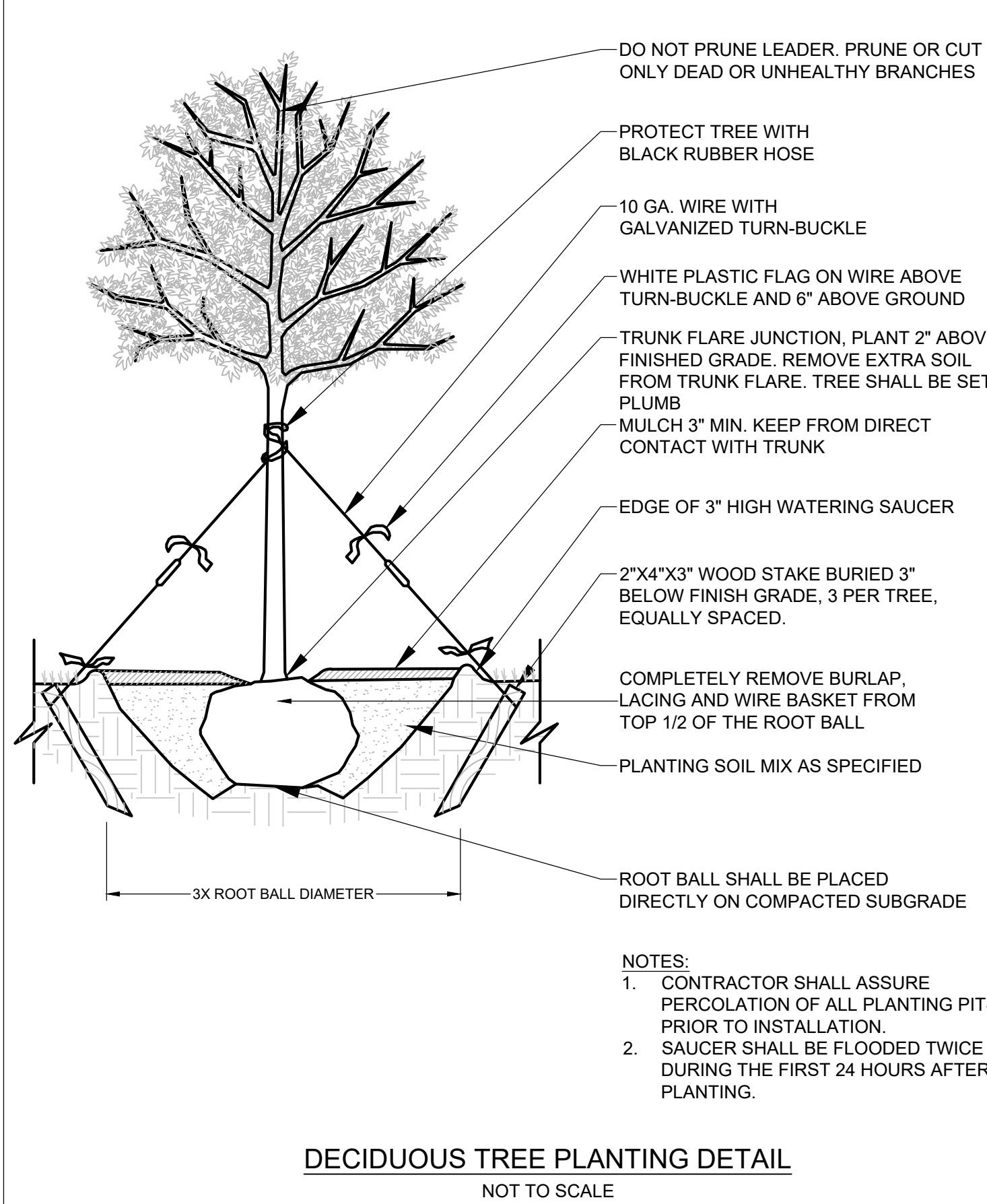
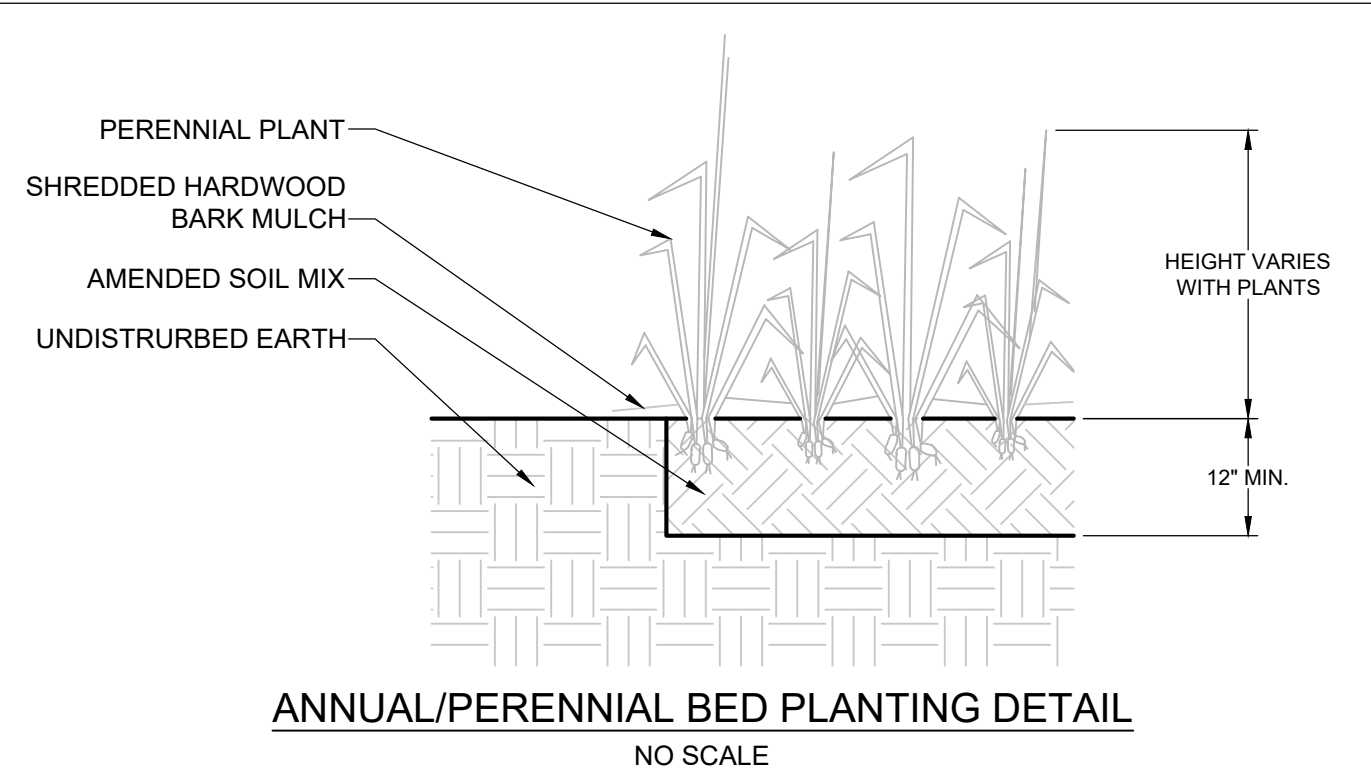
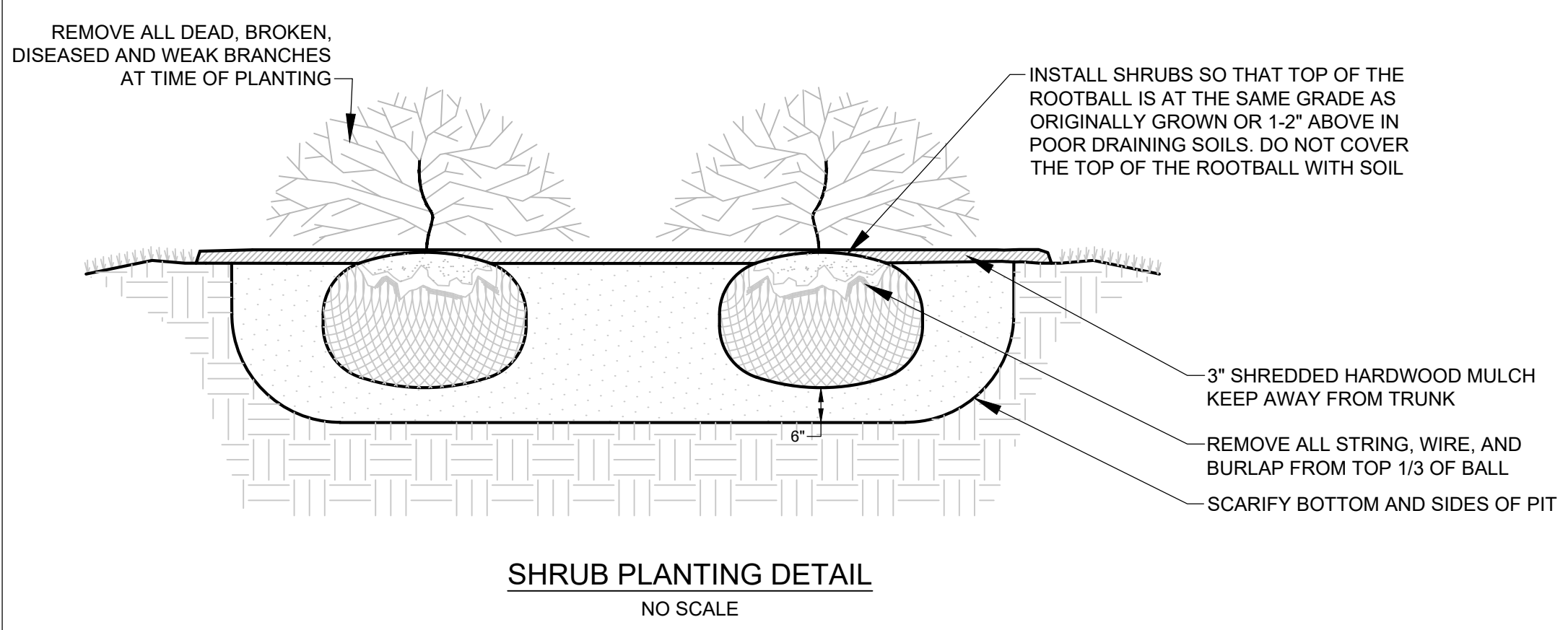
CAPE FEAR TOWNSHIP
WAKE COUNTY, NORTH CAROLINA

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

LANDSCAPING PLAN

SHEET NUMBER:
L-01

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.



SYMBOL	DATE	REVISIONS

SHIPMAN
ENGINEERING

SHIPMAN ENGINEERING, PLLC
NCBELS LICENSE P-1963

137 MIDDLEGREEN PLACE
HOLLY SPRINGS, NC 27540
919.900.0006

DESIGNED BY: WZS
DRAWN BY: WZS
CHECKED BY: WZS
DRAWING DATE: 02/04/2020
SE PROJECT #: 2019-037

THE VILLAS AT MURRAYVILLE
FITNESS CENTER FACILITY
CAPE FEAR TOWNSHIP WAKE COUNTY, NORTH CAROLINA

LANDSCAPING DETAILS

SHEET NUMBER:
L-02



THESE PLANS AND ASSOCIATED DOCUMENTS ARE THE EXCLUSIVE PROPERTY OF SHIPMAN ENGINEERING, PLLC AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART. THESE DOCUMENTS SHALL NOT BE USED FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF SHIPMAN ENGINEERING, PLLC.

ROOF PLAN VENT CALCULATIONS

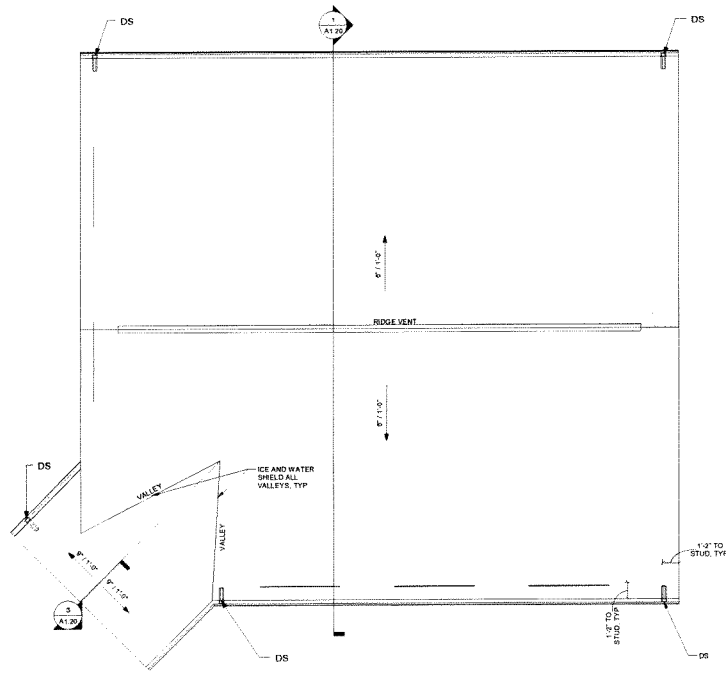
AREA NUMBER	AREA OF SPACE VENTILATED	NET FREE VENTILATING AREA REQUIRED	CONTINUOUS SOFFIT VENT: FREE AREA	# OF LOW GRAVITY VENTS (SUPPLEMENTAL SOFFIT VENTS)	LOW GRAVITY VENT NET FREE AREA	RIDGE VENT: NET FREE VENTILATING AREA	# OF HIGH GRAVITY VENTS (SUPPLEMENTAL ROOF VENTS)	HIGH GRAVITY VENT NET FREE AREA	TOTAL NET FREE VENTILATING AREA PROVIDED
1	1477	4.92	4.02	0	0	10.76	0	0	14.78

NOTES:

- CONTINUOUS SOFFIT VENT EQUAL TO CertainTeed Fiber Cement Perforated Soffit-6.9 SQ. IN. PER FT. (.048 SQFT.)
- LOW GRAVITY VENT EQUAL TO AIR VENT INC. EV16912-56 SQ. IN. PER VENT. (.38 SQFT.)
- HIGH GRAVITY VENT EQUAL TO MASTER FLOW R144-140 SQ. IN. PER VENT. (.372 SQFT.)
- HIGH RIDGE VENT EQUAL TO AIR VENT INC. FV101-18 SQ. IN. PER VENT. (.125 SQFT.)

ROOF PLAN NOTES

- MAXIMUM ATTIC AREA BETWEEN DRAFT STOPS = 3,000 S.F.
- DS = DOWNSPOUT AS SPECIFIED
- DRAFT STOPPING TO BE MIN. 1/2" GYP BOARD



ROOF PLAN
1/4" = 1'-0"

WALLS LEGEND

STANDARD STUD WALL INT. OR EXT.
IF EXT. SEE ELEVATIONS FOR SIDING STYLE
THICKNESS OF WALL NOTED IN PLAN NOTES
OR AT WALL LOCATIONS

FLOOR PLAN GENERAL NOTES

WALLS
ALL WALLS ARE DRAWN 5/16" THICK U.N.D.
ARC'D WALLS ARE DRAWN AT 45 DEGREES U.N.D.

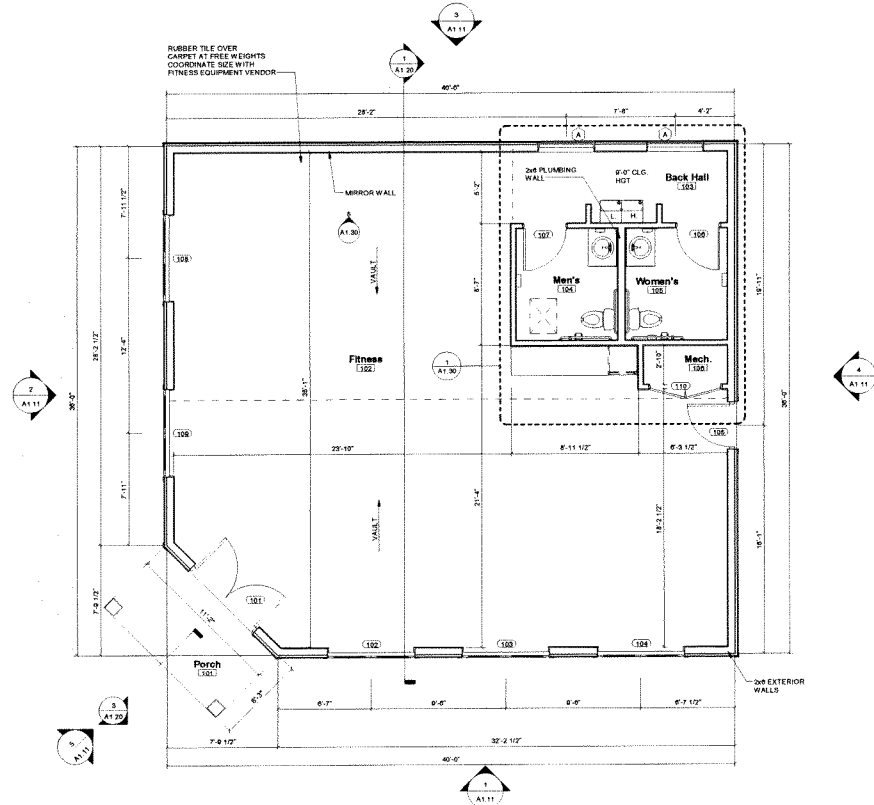
ATTIC ACCESS
ATTIC ACCESS SHALL BE PROVIDED BY BUILDER ACCORDING TO CODE

WALL / CEILING HEIGHTS
WALL AND CEILING HEIGHTS NOTES ARE BASED ON NORMAL WALL 9'2" (I.E. A 10'-1 1/8" ACTUAL WALL HEIGHT IS LABELED 10'-0" ON PLANS) TYPICAL CEILING HEIGHT IS 10'-0" U.N.D.

NOTE: ANY STRUCTURAL INFORMATION SHOWN IS FOR REFERENCE ONLY AND TO BE CONFIRMED ON THE APPROPRIATE STRUCTURAL SHEETS. IF THERE ARE ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL AND STRUCTURAL SHEETS, THE INFORMATION SHOWN ON THE STRUCTURAL SHEETS WILL OVERRIDE ANY ARCHITECTURAL INFORMATION SHOWN AND SHOULD BE REPORTED TO PLANNING ARCHITECTURE P.A. FOR CONFIRMATION BEFORE CONSTRUCTION

SQUARE FOOTAGE

NAME	AREA
Hatched	1410 SF
Porch	87 SF



FLOOR PLAN
1/4" = 1'-0"

Planworx
ARCHITECTURE, P.A.
5711 1st Ave. S.W., Suite 100, Raleigh, NC 27609
(919) 844-1000
www.planworx.com



Hawthorne Commons Fitness Center
Hawthorne Residential Partners
4907 Old Mears Rd., Wilmington, NC
Permit Review Set

PROCESS DATE:	2/5/15
ISSUE DATE:	
REVISIONS	DESCRIPTION
1	ISSUE FOR CONSTRUCTION

PROJECT NO: 024114

DRAWN BY: R. Chidlow

CHECKED BY: P. Henschen

SHEET TITLE: First Floor Plan

SHEET NUMBER: A1.10

1. All drawings are to be coordinated with all site information by owner and contractor, and applicable codes. 2. Planworx Architecture, P.A., is not responsible for construction variations from the information depicted. 3. Planworx Architecture, P.A., retains ownership of all designs depicted and original herein. 4. Planworx Architecture, P.A., will not assume any liability for expenses associated with review and comments on these drawings unless offered by written construction change as a result of Planworx Architecture, P.A. design. 5. Planworx Architecture, P.A., is not responsible for obtaining, maintaining, or regulating construction costs associated with these plans. 6. Copyright 2015, Planworx Architecture, P.A., All rights reserved. Reproduction of this sheet, in whole or in part, is strictly prohibited. Plans may be used only by client. Unauthorised use is strictly prohibited. PLANS NOT VALID FOR CONSTRUCTION W/O APPROPRIATE PROFESSIONAL SEALS.