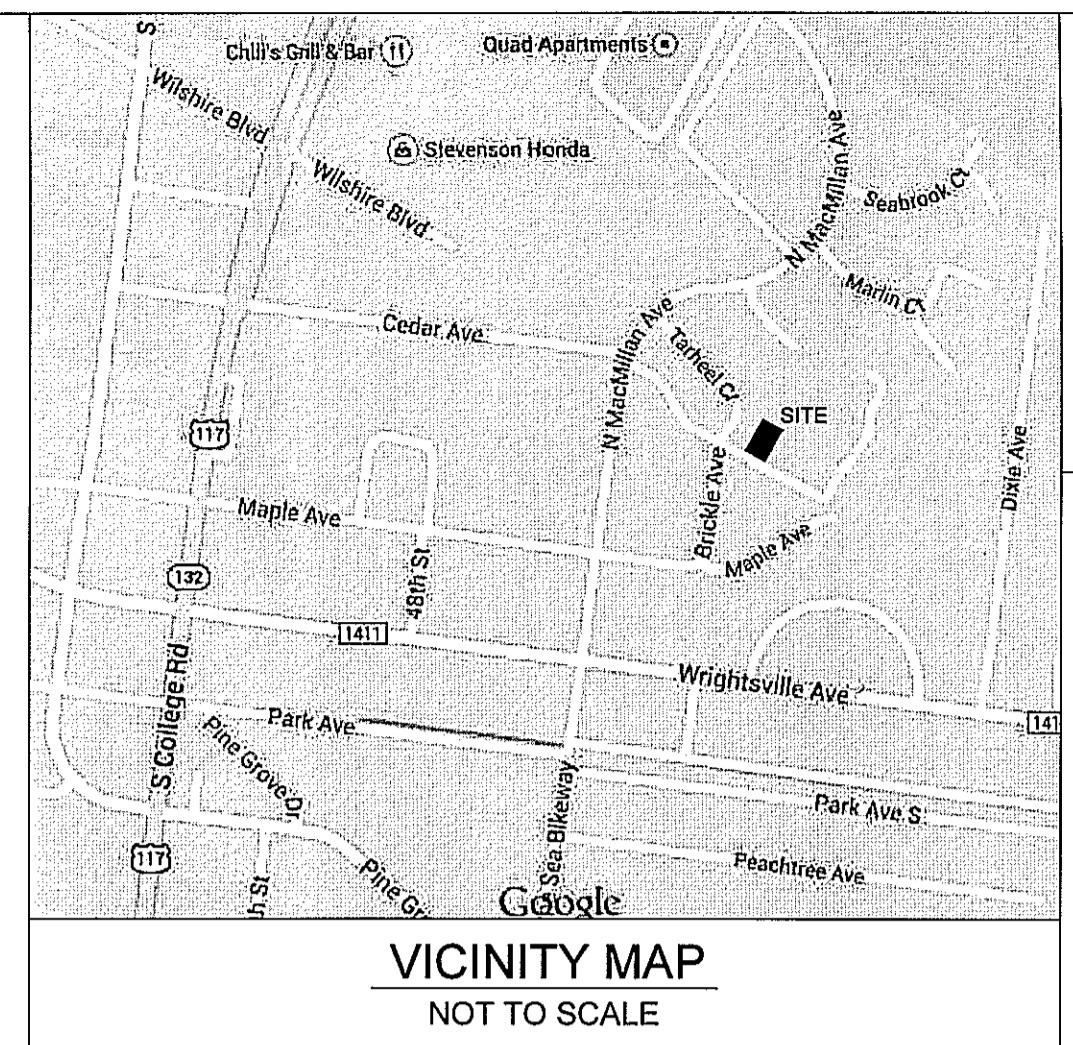
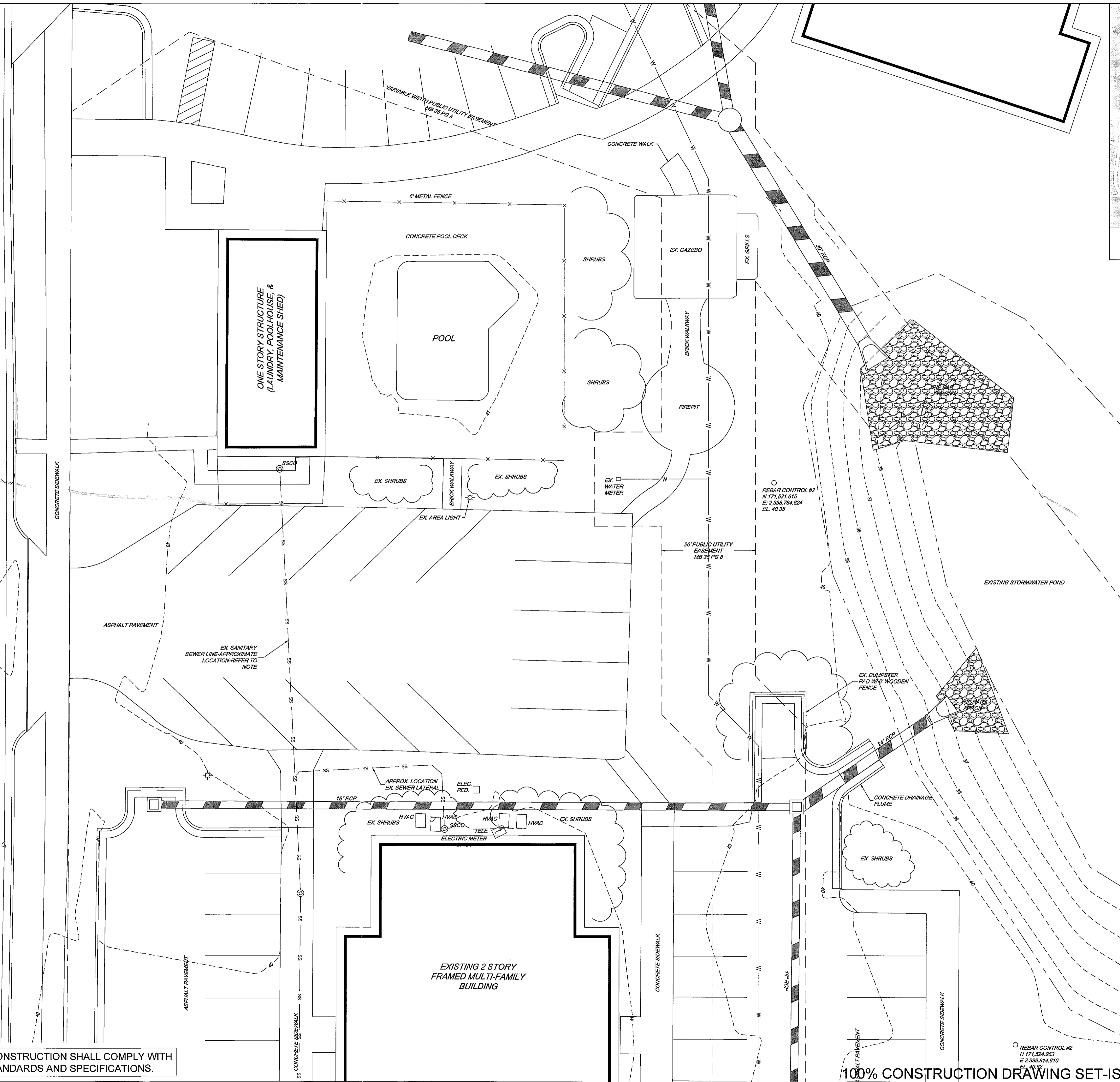


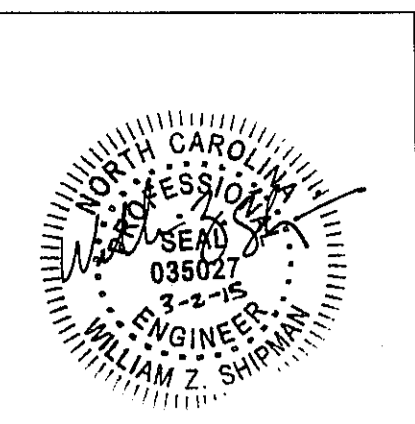
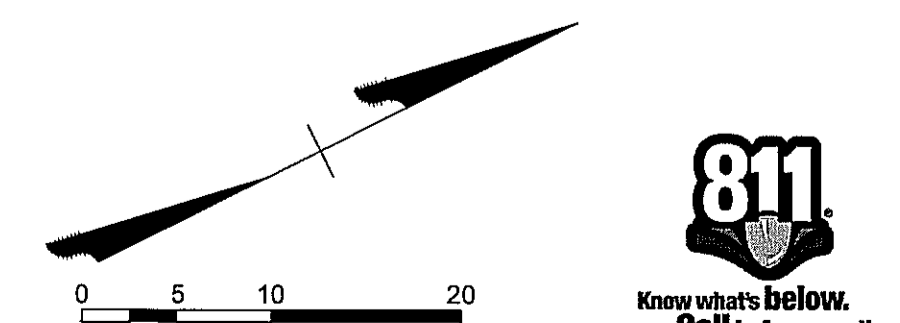
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OLD MEARES ROAD 60' PUBLIC RW

IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.



- GENERAL SURVEY NOTES:**
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 - 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 IN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE AND FUTURE CONDITIONS 1% ANNUAL CHANCE FLOODPLANE PER FEMA FIRM MAP NUMBER 3720313700J (PANEL 3137) DATED 04/03/08.
 - VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83



REVISIONS	DATE	SYMBOL

SHIPMAN ENGINEERING GROUP

NCBELS LICENSE P-1274
WWW.SHIPMANENGINEERINGGROUP.COM

1076 CLASSIC ROAD | APEX, NC 27539
919.629.8204

DESIGNED BY: Z. SHIPMAN
DRAWN BY: Z. SHIPMAN
CHECKED BY: Z. SHIPMAN
DRAWING DATE: 2-3-15
SEG PROJECT #: 150128

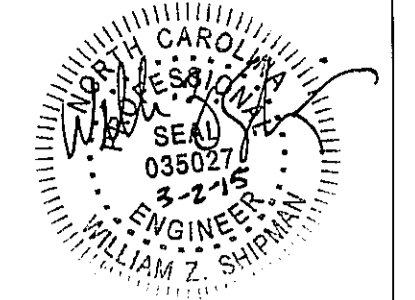
HAWTHORNE COMMONS FITNESS CENTER
4907 OLD MEARES ROAD
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

EXISTING CONDITIONS SURVEY



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IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.



SYMBOL	DATE	REVISIONS


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 ENGINEERING GROUP

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DESIGNED BY: Z. SHIPMAN
 DRAWN BY: Z. SHIPMAN
 CHECKED BY: Z. SHIPMAN
 DRAWING DATE: 2-3-15
 SEG PROJECT #: 150128

HAWTHORNE COMMONS FITNESS CENTER
 4907 OLD MEARS ROAD
 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

DEMOLITION PLAN

SHEET NUMBER:
C-102



0 25 50 100

100% CONSTRUCTION DRAWING SET-ISSUED FOR REGULATORY REVIEW

GENERAL SURVEY NOTES:

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- VERTICAL DATUM: NAVD83
- HORIZONTAL DATUM: NAD83

SITE DATA TABLE

PROJECT NAME:	HAWTHORNE COMMONS FITNESS CENTER ADDITION	
PROPERTY OWNER:	MCMILLAN WILMINGTON, LLC	
PHYSICAL ADDRESS:	4907 OLD MEARES ROAD	
PROPERTY PIN:	R05519-004-001-000	
PROJECT AREA:	0.18 ACRES	
PROPERTY AREA:	8.82 ACRES	
ZONING DISTRICT:	MF-M	
OVERLAY DISTRICT:	N/A	
BUILDING SETBACKS:	REQUIRED MIN.:	APPROXIMATE ACTUAL:
	FRONT: 35'	FRONT: 87.77'
	SIDE: 20'	REAR: 148.98'
	REAR: 25'	
BUILDING SIZE:	1,477 SF	
BUILDING LOT COVERAGE:	EX. RESIDENTIAL BUILDINGS: 76,060 SF (FROM RECORDS)	
	EX. LAUNDRY/POOLHOUSE/MAINTENANCE: 1120 SF	
	PROPOSED FITNESS CENTER: 1,477 SF	
	TOTAL BUILDING AREA: 77,657 SF	
	BLC % = 77,657 SF / (8.82 AC * 43560) = 20.21%	
BUILDING HEIGHT:	19'-0"	
NUMBER OF STORIES:	1	
IMPERVIOUS AREAS:		
EXISTING BUILDINGS:	76,172 SF	PROPOSED BUILDINGS: 77,681 SF
EXISTING ASPHALT & CURB:	115,158 SF	PROPOSED ASPHALT & CURB: 112,855 SF
EXISTING CONCRETE:	37,878 SF	PROPOSED CONCRETE: 38,577 SF
EXISTING, TOTAL SITE:	229,008 SF	PROPOSED, TOTAL SITE: 228,923 SF
CAMA LAND USE CLASSIFICATION:	DEVELOPED	

PARKING CALCULATIONS:

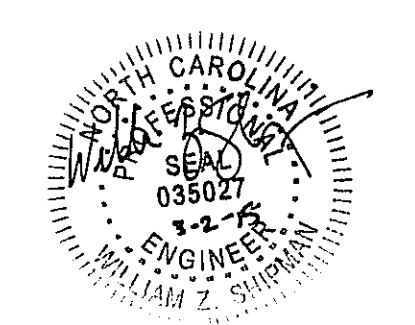
EXISTING RESIDENTIAL UNIT COUNT:	
# OF 1 BEDROOM UNITS:	78
# OF 2 BEDROOM UNITS:	80
PROPOSED FITNESS CENTER ADDITION:	1,477 SF
CITY OF WILMINGTON REQUIRED PARKING CRITERIA:	
1 BEDROOM RESIDENTIAL:	1.5 SPACES PER UNIT
2 BEDROOM RESIDENTIAL:	2 SPACES PER UNIT
FITNESS CENTER:	1 SPACE PER 400 SF MIN 1 SPACE PER 200 SF MAX
REQUIRED PARKING:	
1 BEDROOM RESIDENTIAL:	117 SPACES
2 BEDROOM RESIDENTIAL:	160 SPACES
FITNESS CENTER:	4 SPACES MINIMUM 8 SPACES MAXIMUM
TOTAL MINIMUM REQUIRED:	281 SPACES
PROVIDED PARKING:	
EX. PARKING SPACES-MAIN BLDGS:	276
EX. PARKING SPACES-STORAGE LOT:	13
TOTAL EXISTING:	289
PROPOSED FINAL PARKING:	
EX. PARKING SPACES-MAIN BLDGS TO REMAIN:	276
PROPOSED SPACES IN FITNESS CENTER LOT:	7
TOTAL PARKING SPACES:	283
NEW ACCESSIBLE PARKING REQ'D:	1
NEW ACCESSIBLE PARKING PROVIDED:	1

CITY OF WILMINGTON STANDARD NOTES:

- PRIOR TO CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING, OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
- NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED AND APPROVED. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING REGARDING THE INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
- CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
- CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
- TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKINGS PRIOR TO ACTUAL STRIPING.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREA SHALL BE WHITE.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
- STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
- TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.
- ANY BROKEN OR MISSING SIDEWALK PANELS WILL BE REPLACED.
- CONTACT KAREN DIXON AT 910-341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
- WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CPFA) DETAILS AND SPECIFICATIONS.
- PROJECT SHALL COMPLY WITH CPFA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 910-343-3910 FOR INFORMATION.
- IF THE CONTRACTOR DESIRES CPFA WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
- ANY IRRIGATION SYSTEM SUPPLIED BY CPFA WATER SHALL COMPLY WITH THE CPFA CROSS CONNECTION CONTROL REGULATIONS. CALL 910-343-3910 FOR INFORMATION.
- ANY IRRIGATION SYSTEMS SHALL BE EQUIPPED WITH A RAIN AND FREEZE SENSOR.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CPFA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCOCHR OR ASSE.
- CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES, AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.
- CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- UNDERGROUND FIRE LINES MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-341-0896.
- NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND SURFACE WITHIN THE SITE DISTANCE.
- CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-452-4649 PRIOR TO DOING ANY DIGGING, CLEARING, OR GRADING.

WATER AND SEWER CAPACITY NEEDS

WATER:	41,920	GPD (CURRENT USE)
WATER:	42,658	GPD (PROPOSED USE)
SEWER:	41,920	GPD (CURRENT USE)
SEWER:	42,658	GPD (PROPOSED USE)



REVISIONS	DATE	SYMBOL

SHIPMAN ENGINEERING GROUP

NCBELS LICENSE P-1274
WWW.SHIPMANENGINEERINGGROUP.COM

1076 CLASSIC ROAD / APEX, NC 27539
919.629.8204

DESIGNED BY:	Z. SHIPMAN
DRAWN BY:	Z. SHIPMAN
CHECKED BY:	Z. SHIPMAN
DRAWING DATE:	2-3-15
SEG PROJECT #:	150128

HAWTHORNE COMMONS FITNESS CENTER
4907 OLD MEARES ROAD
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

SITE LAYOUT PLAN

SHEET NUMBER: **C-200**

**OLD MEARES ROAD
60' PUBLIC RW**

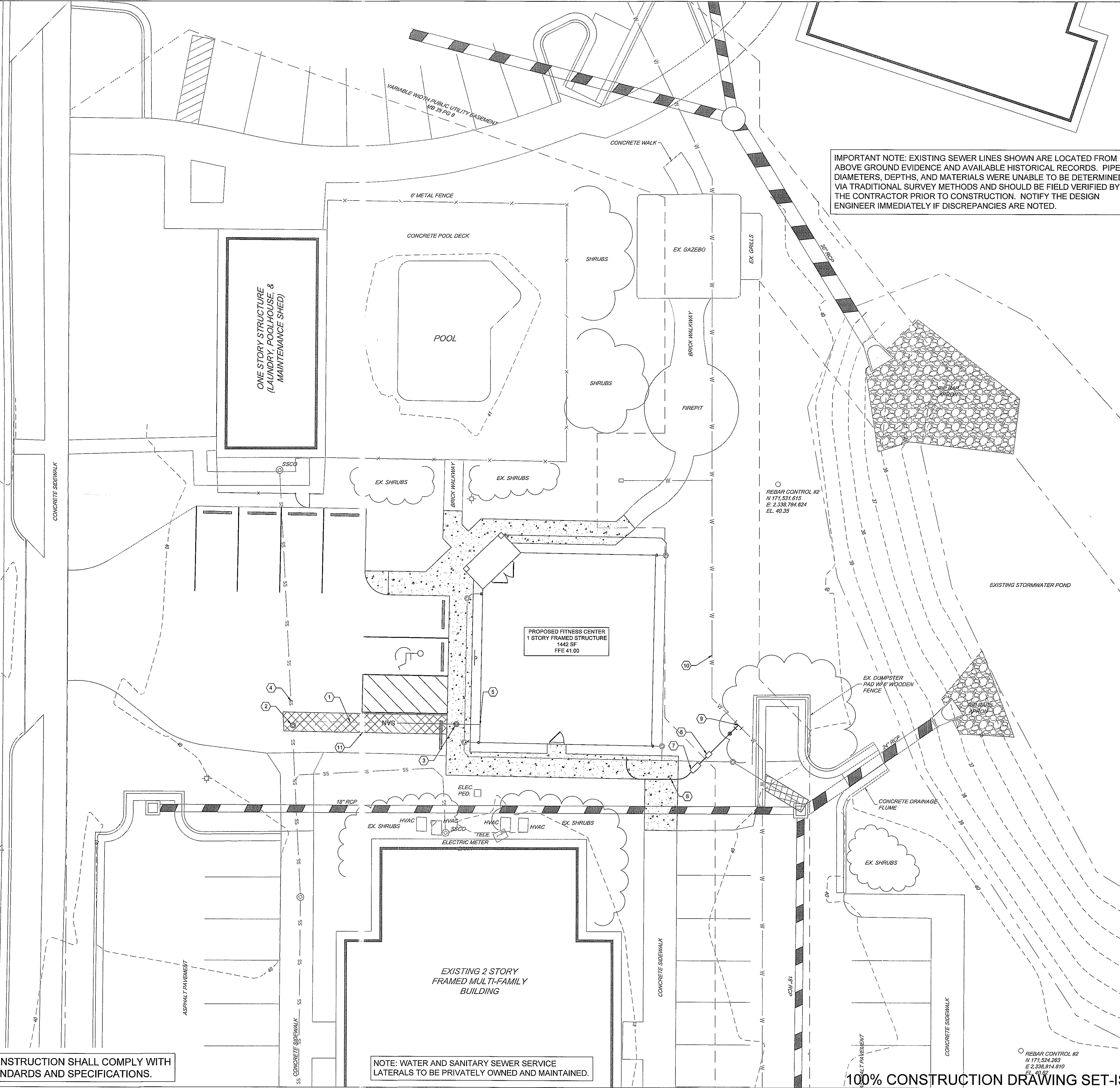
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100% CONSTRUCTION DRAWING SET-ISSUED FOR REGULATORY REVIEW

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OLD MEARES ROAD 60' PUBLIC RW



IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

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

IMPORTANT NOTE: EXISTING SEWER LINES SHOWN ARE LOCATED FROM ABOVE GROUND EVIDENCE AND AVAILABLE HISTORICAL RECORDS. PIPE DIAMETERS, DEPTHS, AND MATERIALS WERE UNABLE TO BE DETERMINED VIA TRADITIONAL SURVEY METHODS AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF DISCREPANCIES ARE NOTED.

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- COMPLY WITH LOCAL SPECIFICATIONS WITH REGARDS TO MATERIALS, INSTALLATION, AND TESTING OF THE WATER AND SEWER LINES. IN THE EVENT OF A CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN UNLESS OTHERWISE NOTED ON THE PLANS.
- COORDINATE WITH ALL APPROPRIATE UTILITY PROVIDERS FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. WATER AND SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) STANDARDS AND SPECIFICATIONS.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS AND/OR TESTING REQUIRED BY CODES OR UTILITY SERVICE PROVIDERS SHALL BE PERFORMED PRIOR TO THE FINAL CONNECTION OF SERVICE.
- CONTRACTOR SHALL NOTIFY CFPUA INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
- CONTRACTOR SHALL MAINTAIN MINIMUM COVER REQUIREMENTS ON ALL WATER AND SEWER LINES AT ALL TIMES DURING CONSTRUCTION.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.
- EXISTING UNDERGROUND UTILITY LINES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND FIELD VERIFIED PRIOR TO CONSTRUCTION ACTIVITY.

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

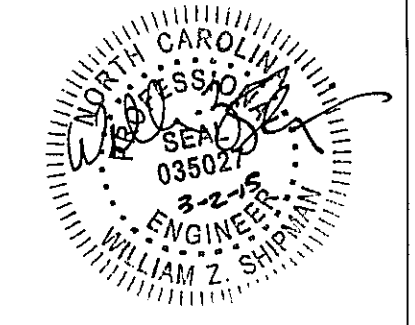
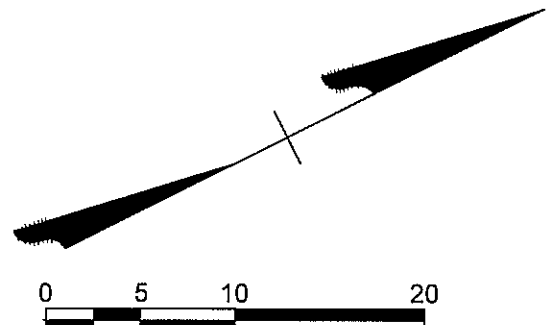
- SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A 10 FOOT SEPARATION, THE APPROPRIATE REVIEWING AGENCY (DEH OR DENR) MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, 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.
 - 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.
 - A 24 INCH VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR FERROUS PIPE SPECIFIED.
- CROSSINGS:
- 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.
 - 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.

NCAC 2T WASTEWATER FLOW RATE CALCULATION:

FITNESS CENTER, EXERCISE CENTER: 50 GALLONS/100 SF
PROPOSED SEWER DEMAND: 721 GALLONS PER DAY
PROPOSED WATER DEMAND: 721 GALLONS PER DAY

UTILITY KEYNOTES

- 40 LF 4" PVC PRIVATE SANITARY SEWER LATERAL-MIN. SLOPE 1/8" PER FOOT (1.00%) REFER TO NOTE THIS SHEET
- SANITARY SEWER CLEANOUT ON EXISTING LINE-INSTALL TRAFFIC RATED IRON CLEANOUT COVER BOX-ESTIMATED INVERT 37.81
- SANITARY SEWER CLEANOUT
- EXISTING SANITARY SEWER LINE-DEPTH AND MATERIAL UNKNOWN REFER TO NOTE
- TIE TO EXISTING BUILDING WASTE SYSTEM-INVT. 38.50
- 31 LF 1" CTS-PE WATER SERVICE TUBING-SDR 9 ASTM 2737 (PRIVATE)
- 1" RPZ BACKFLOW PREVENTION DEVICE IN ABOVE-GROUND HEATED ENCLOSURE
- 1" WATER METER IN BELOW GRADE CARSON 1015-12 BLACK BOX
- 1" x 8" SERVICE SADDLE WITH MCDONALD MODEL 747019-22 CORPORATION STOP AND STAINLESS STEEL STIFFENERS
- EXISTING 6" PVC WATERLINE-DEPTH UNKNOWN
- OPEN CUT EXISTING PAVEMENT AND INSTALL PERMANENT PATCH



REVISIONS	DATE	SYMBOL

SHIPMAN ENGINEERING GROUP
 NOBELS LICENSE # 1274
 WWW.SHIPMANENGINEERINGGROUP.COM
 1076 CLASSIC ROAD / APEX, NC 27539
 919.629.8204

DESIGNED BY: Z SHIPMAN
 DRAWN BY: Z SHIPMAN
 CHECKED BY: Z SHIPMAN
 DRAWING DATE: 2-3-15
 SEG PROJECT #: 150128

HAWTHORNE COMMONS FITNESS CENTER
 4907 OLD MEARES ROAD
 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA
 SHEET NUMBER:
C-201

SITE UTILITY PLAN

100% CONSTRUCTION DRAWING SET-ISSUED FOR REGULATORY REVIEW



REVISIONS	DATE	SYMBOL

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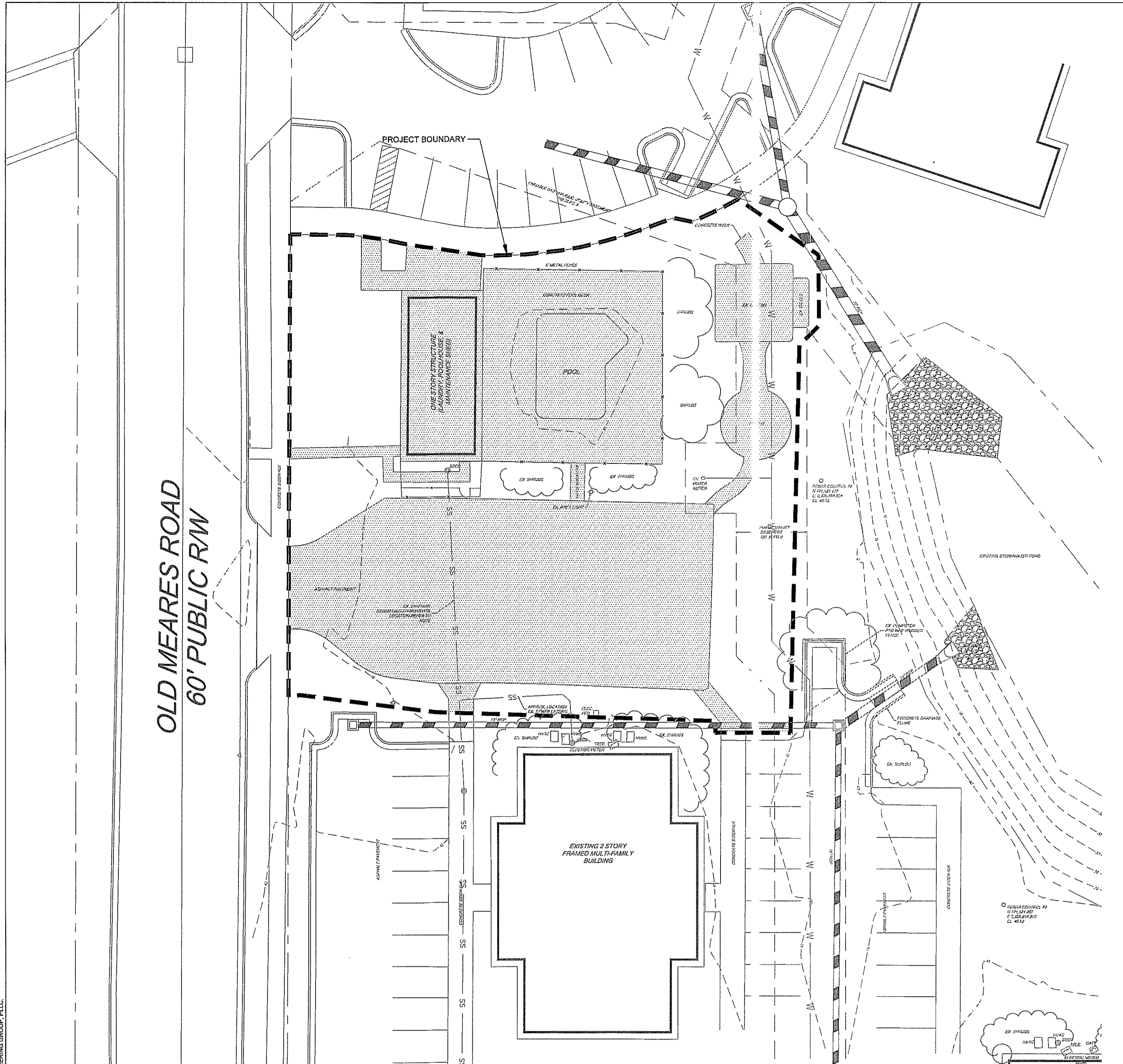
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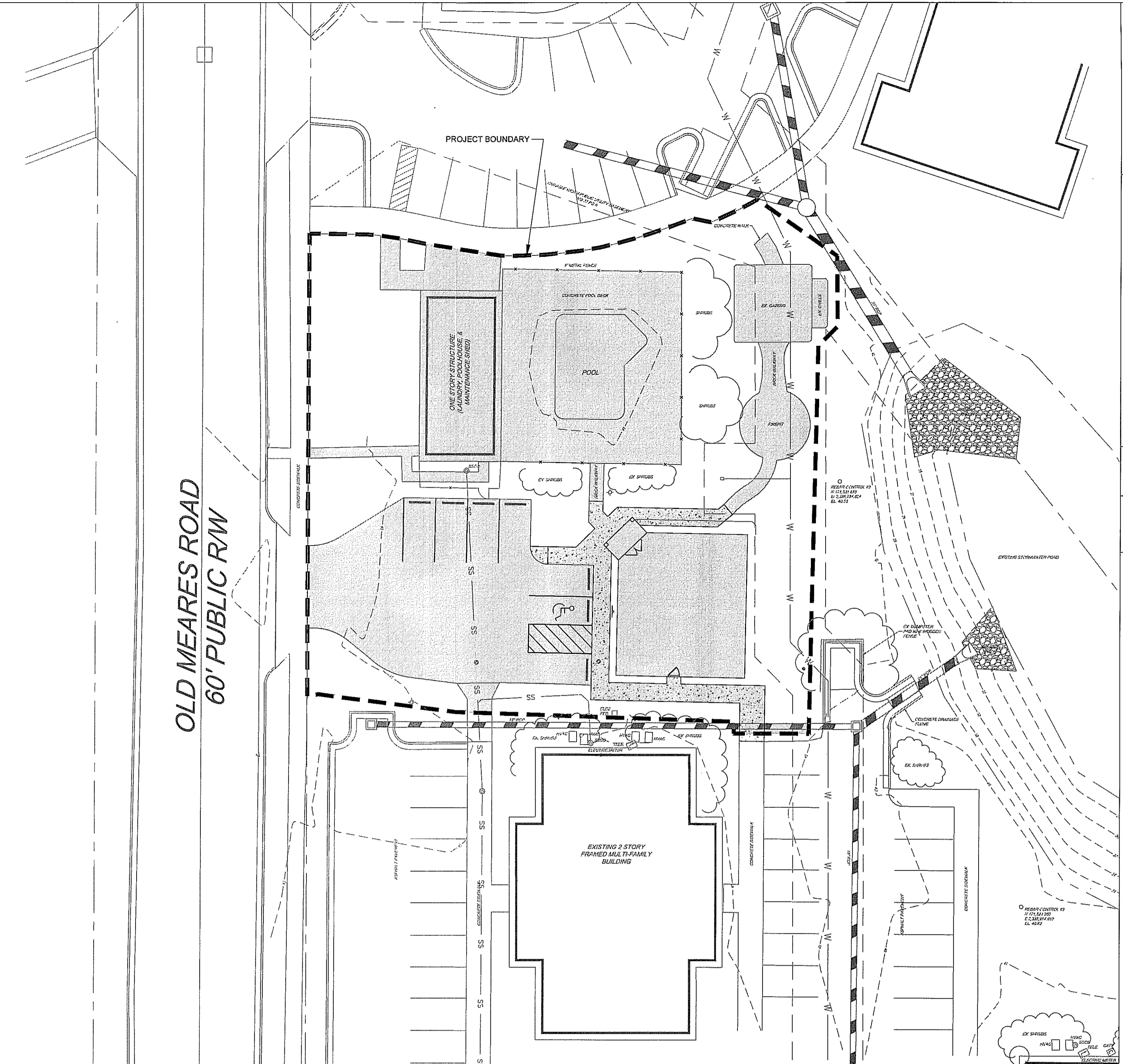
HAWTHORNE COMMONS FITNESS CENTER
4907 OLD MEARS ROAD
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

SITE HYDROLOGY PLAN

SHEET NUMBER: C-203



PRE-DEVELOPMENT DRAINAGE AREA AND IMPERVIOUS AREAS
SCALE: 1"=20'



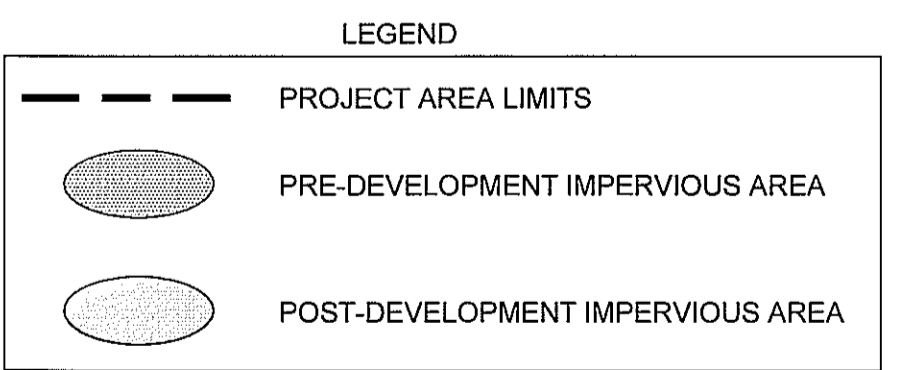
POST-DEVELOPMENT DRAINAGE AREA AND IMPERVIOUS AREAS
SCALE: 1"=20'

SITE HYDROLOGY ANALYSIS

TOTAL SITE AREA: 19,495 SF (0.448 AC.)
PRE-DEVELOPMENT IMPERVIOUS AREA: 11,462 SF (0.26 AC.)
POST DEVELOPMENT IMPERVIOUS AREA: 11,377 SF (0.26 AC.)
IMPERVIOUS INCREASE: -85 SF TOTAL

OVERALL SITE IMPERVIOUS CALCULATIONS:

EXISTING BUILDINGS:	76,172 SF	PROPOSED BUILDINGS:	77,881 SF
EXISTING ASPHALT & CURB:	115,158 SF	PROPOSED ASPHALT & CURB:	112,665 SF
EXISTING CONCRETE:	37,676 SF	PROPOSED CONCRETE:	38,577 SF
EXISTING, TOTAL SITE:	228,008 SF	PROPOSED, TOTAL SITE:	228,923 SF



GENERAL NOTES:

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- COORDINATE WITH ALL APPROPRIATE UTILITY PROVIDERS FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. WATER AND SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH OLD NORTH UTILITY SERVICES STANDARDS AND SPECIFICATIONS.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS AND/OR TESTING REQUIRED BY CODES OR UTILITY SERVICE PROVIDERS SHALL BE PERFORMED PRIOR TO THE FINAL CONNECTION OF SERVICE.
- CONTRACTOR SHALL NOTIFY OLD NORTH UTILITY SERVICE INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
- CONTRACTOR SHALL MAINTAIN MINIMUM COVER REQUIREMENTS ON ALL WATER AND SEWER LINES AT ALL TIMES DURING CONSTRUCTION.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO BACKFILLING.
- EXISTING UNDERGROUND UTILITY LINES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND FIELD VERIFIED PRIOR TO CONSTRUCTION ACTIVITY.

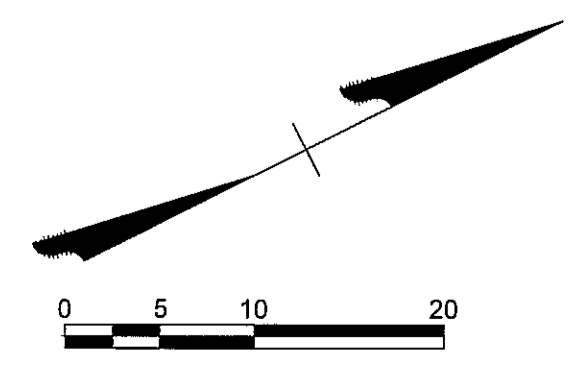
NCDENR STORMWATER PERMIT INFORMATION

THIS SITE IS COVERED UNDER EXISTING NCDENR DIVISION OF WATER QUALITY PERMIT 920613, ISSUED OCTOBER 5, 1992.

THE PERMIT ALLOCATED 14,400 SQUARE FEET OF FUTURE IMPERVIOUS AREA DENOTED AS "TENNIS COURTS OR RECREATIONAL AREA".

RECEIVING WATER BODY: BRADLEY CREEK
WATERSHED CLASSIFICATION: SC-HQW

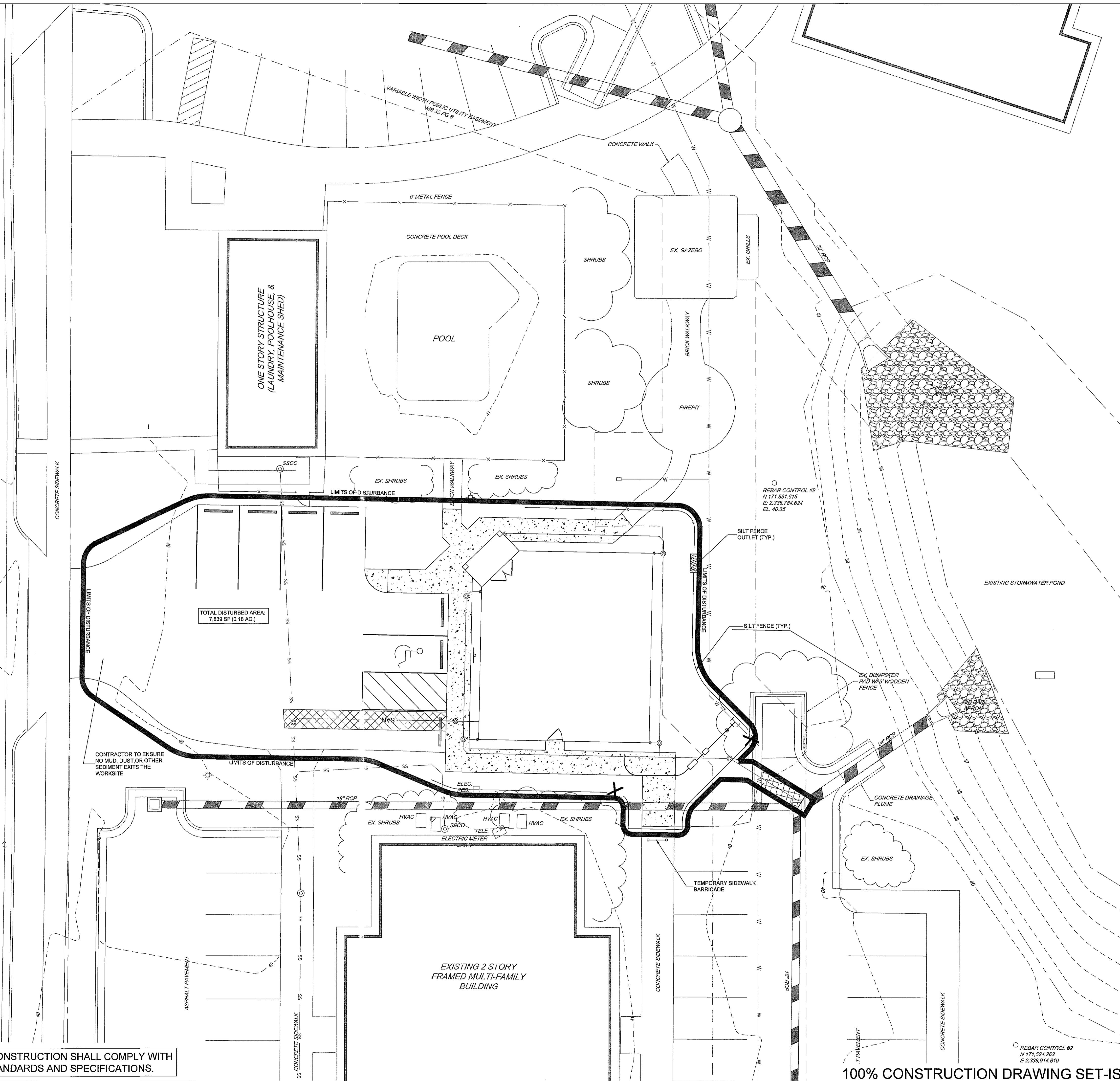
IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.



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OLD MEARES ROAD 60' PUBLIC RW

IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

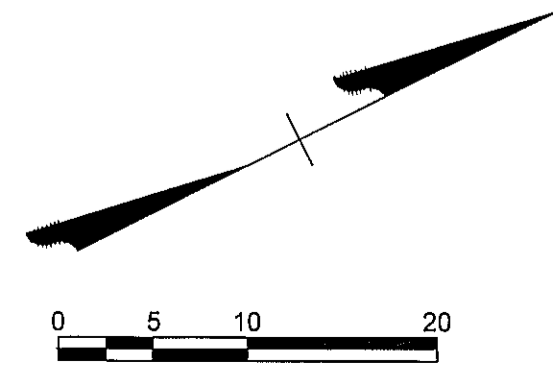


GENERAL NOTES:

- EXISTING CONDITIONS AND TOPOGRAPHICAL DATA OF THE SUBJECT PARCEL ARE COMPILED FROM A FIELD SURVEY OF THE PROPERTY BY STROUD ENGINEERING PA, DATED NOVEMBER 6, 2014, AND IS NOT THE RESULT OF A FIELD SURVEY BY SHIPMAN ENGINEERING GROUP, PLLC. ADDITIONAL EXISTING CONDITION DATA PROVIDED BY SUPPLEMENTAL DATA INCLUDING AERIAL PHOTOGRAPHY, NEW HANOVER COUNTY GIS DATA, AND OTHER DATA SOURCES AS REQUIRED.
- COMPLY WITH LOCAL SPECIFICATIONS WITH REGARDS TO MATERIALS, INSTALLATION, AND TESTING OF THE WATER AND SEWER LINES. IN THE EVENT OF A CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN UNLESS OTHERWISE NOTED ON THE PLANS.
- COORDINATE WITH ALL APPROPRIATE UTILITY PROVIDERS FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. WATER AND SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) STANDARDS AND SPECIFICATIONS.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS AND/OR TESTING REQUIRED BY CODES OR UTILITY SERVICE PROVIDERS SHALL BE PERFORMED PRIOR TO THE FINAL CONNECTION OF SERVICE.
- EXISTING UNDERGROUND UTILITY LINES SHOWN SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND FIELD VERIFIED PRIOR TO CONSTRUCTION ACTIVITY.

EROSION CONTROL CONSTRUCTION SEQUENCE:

- 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.
- 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.
- PLACE PEDESTRIAN BARRICADES ON SIDEWALKS AS SHOWN ON THE DEMOLITION PLAN AND EROSION CONTROL PLAN.
- ONCE SILT FENCE IS INSTALLED, BEGIN CLEARING, GRUBBING, AND STRIPING OF THE SITE. STRIP AND STOCKPILE TOPSOIL FOR SIFTING, DRYING, AND TESTING.
- SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT AND SIDEWALK AS SHOWN ON THE DEMOLITION PLAN. DISPOSE OF CONSTRUCTION DEBRIS IN AN APPROVED LANDFILL.
- BEGIN ROUGH GRADING THE SITE TO CREATE A BUILDING PAD AS NEEDED. PLACE FILL MATERIAL UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER.
- BEGIN CONSTRUCTION OF NEW BUILDING FACILITY.
- INSTALL ROOF DRAINAGE LEADERS, DRAIN TILE, AND OTHER STORMWATER PIPING.
- INSTALL CONCRETE FLATWORK AND SIDEWALK AREAS. COMPLETE FINE GRADING OF ANY DISTURBED AREAS.
- RESTORE PARKING LOT AND INSTALL FINAL SITE IMPROVEMENTS (BOLLARDS, WHEEL STOPS, ETC.).
- INSTALL LANDSCAPING SHRUBS, TREES, AND GROUND COVER. STABILIZE ALL REMAINING DISTURBED AREAS WITH PERMANENT SEEDING OR SOD AS SHOWN ON THE LANDSCAPING PLANS.
- 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.



SYMBOL	DATE	REVISIONS

SHIPMAN
ENGINEERING GROUP

1076 CLASSIC ROAD / APEX, NC 27539
919.629.8204

WWW.SHIPMANENGINEERINGGROUP.COM

DESIGNED BY:	Z. SHIPMAN
DRAWN BY:	Z. SHIPMAN
CHECKED BY:	Z. SHIPMAN
DRAWING DATE:	2-3-15
SEG PROJECT #:	150128

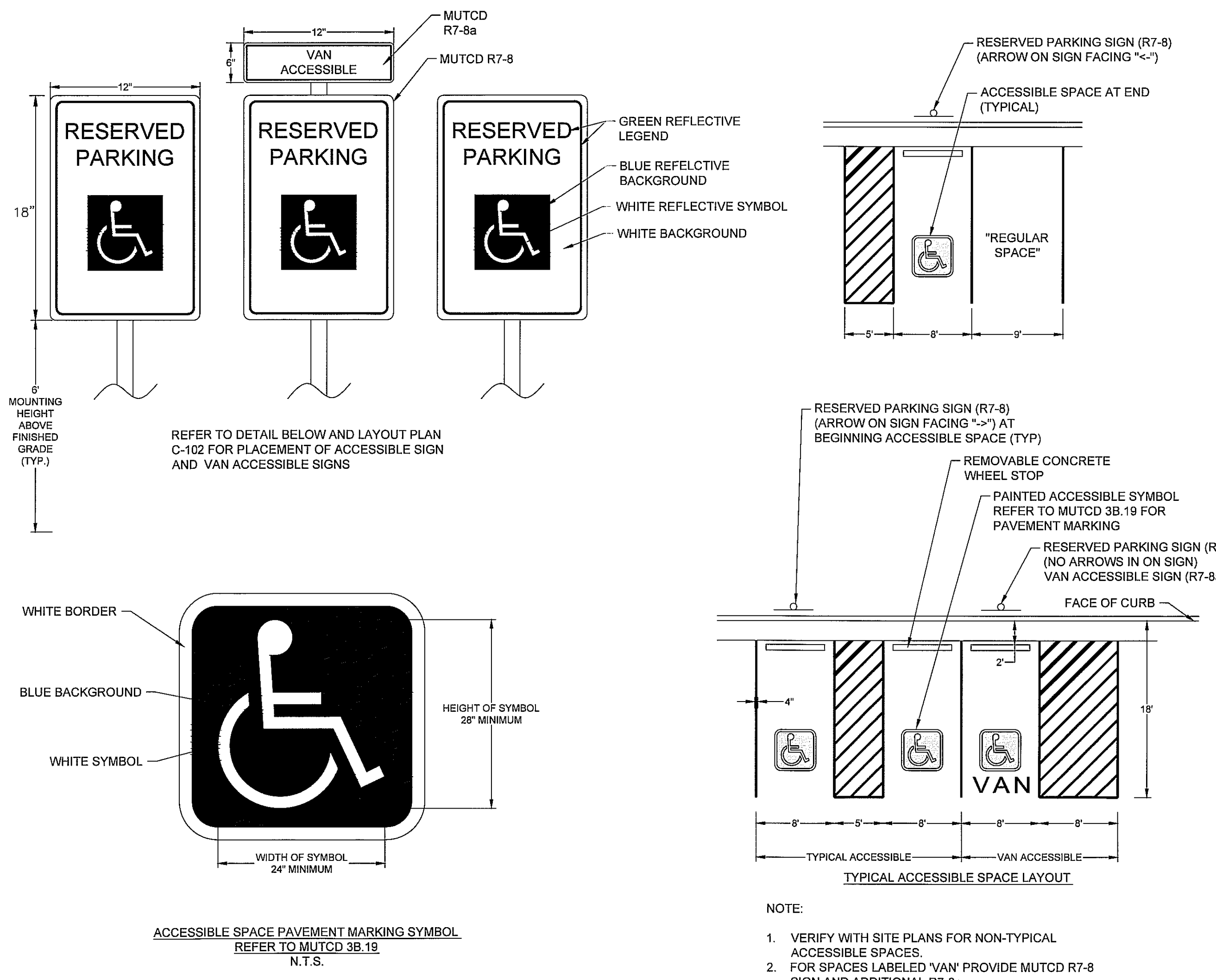
HAWTHORNE COMMONS FITNESS CENTER
4907 OLD MEARES ROAD
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

EROSION CONTROL PLAN

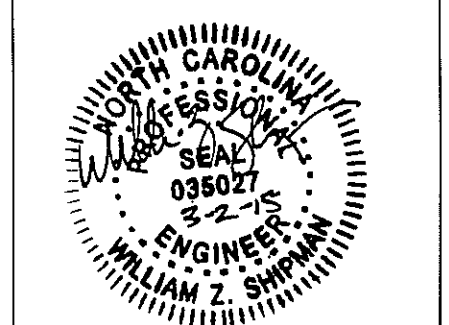
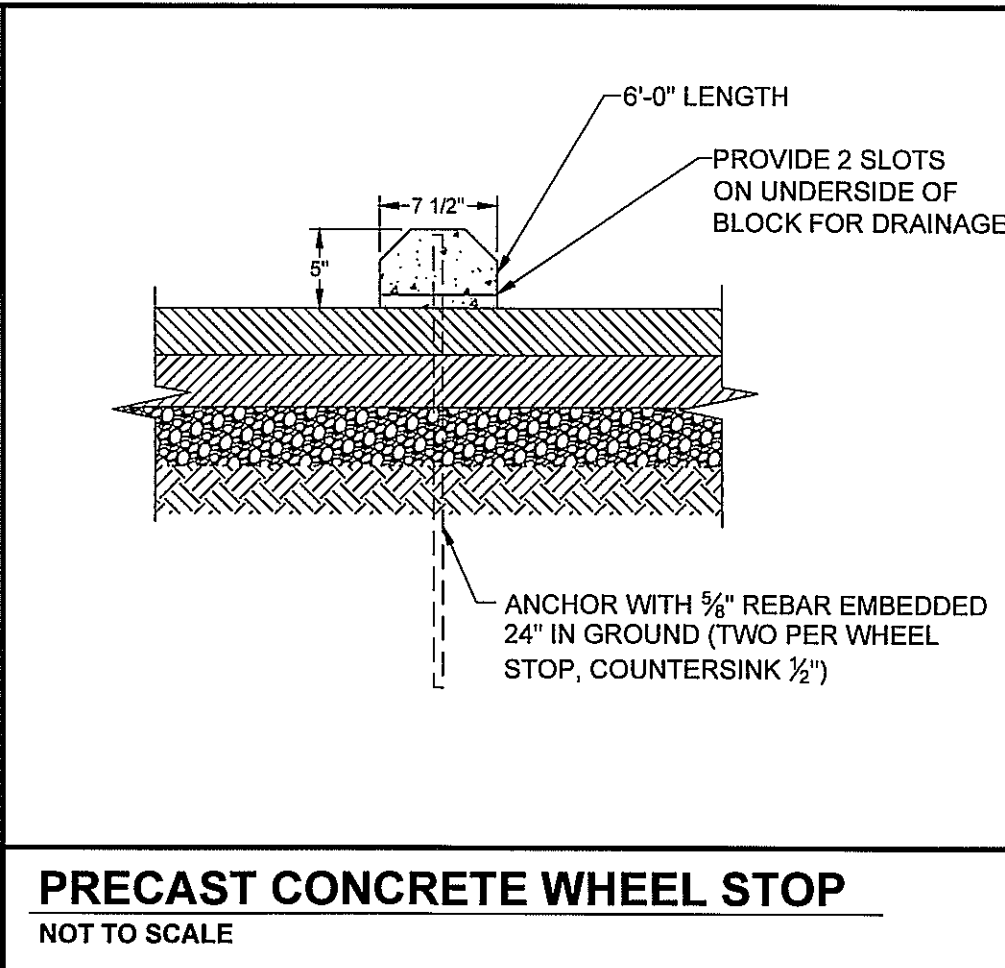
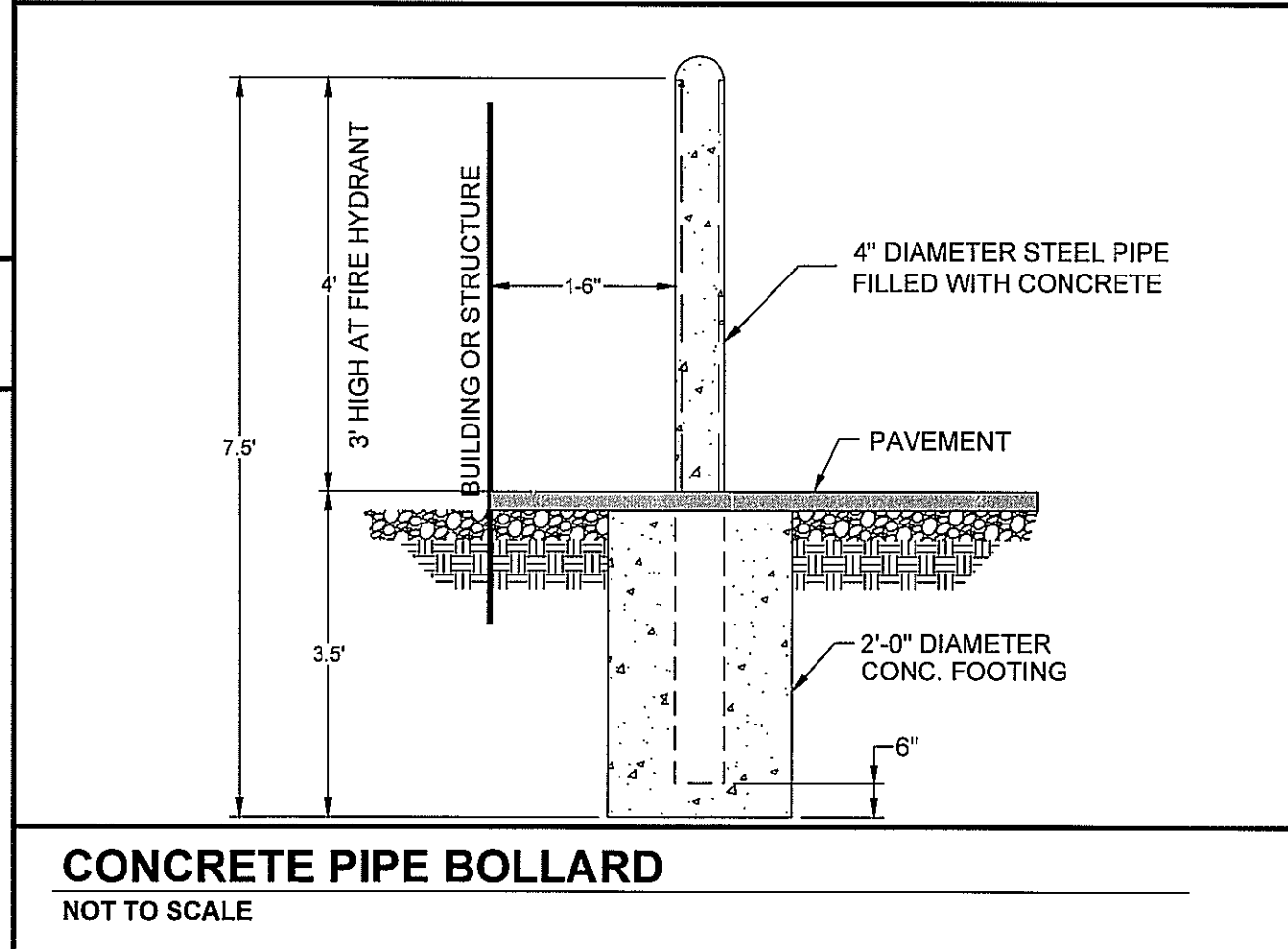
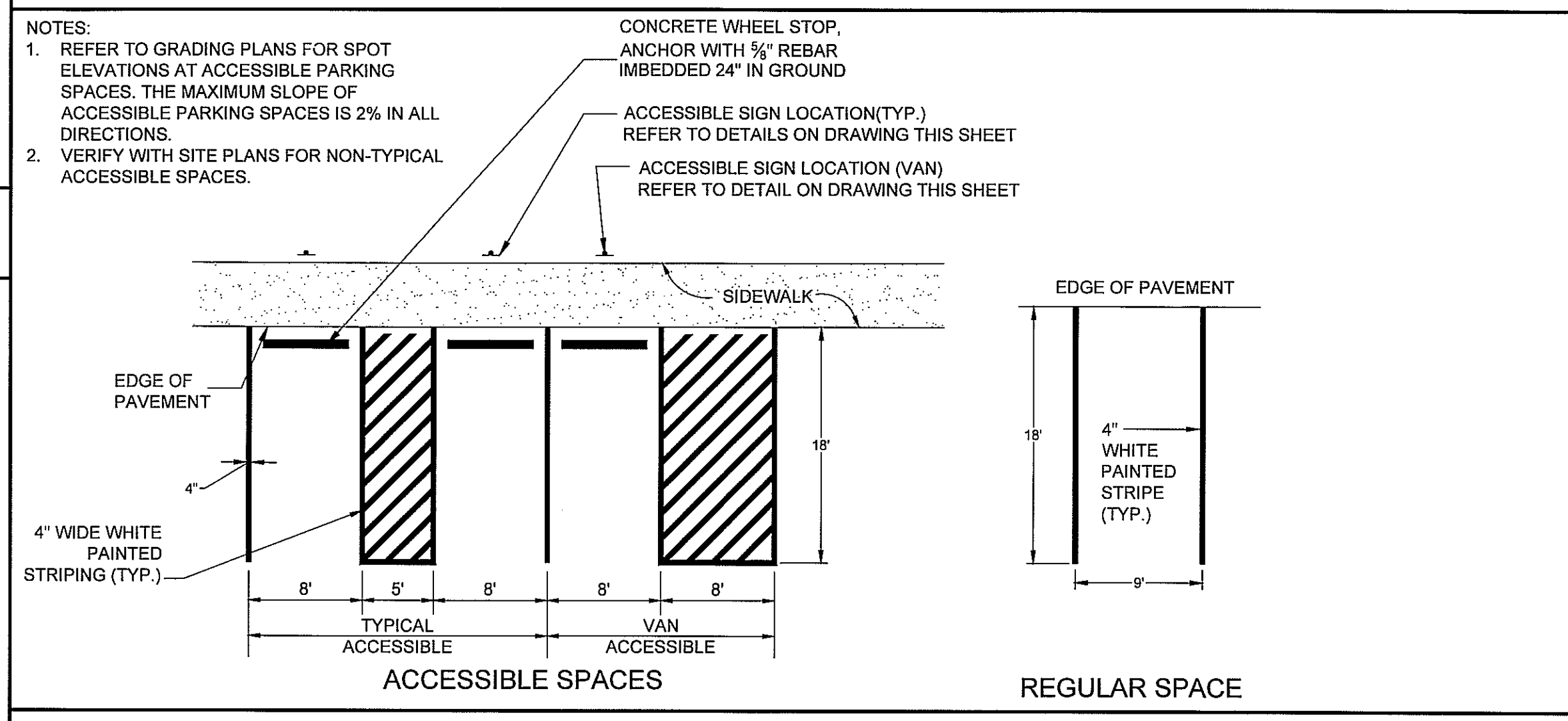
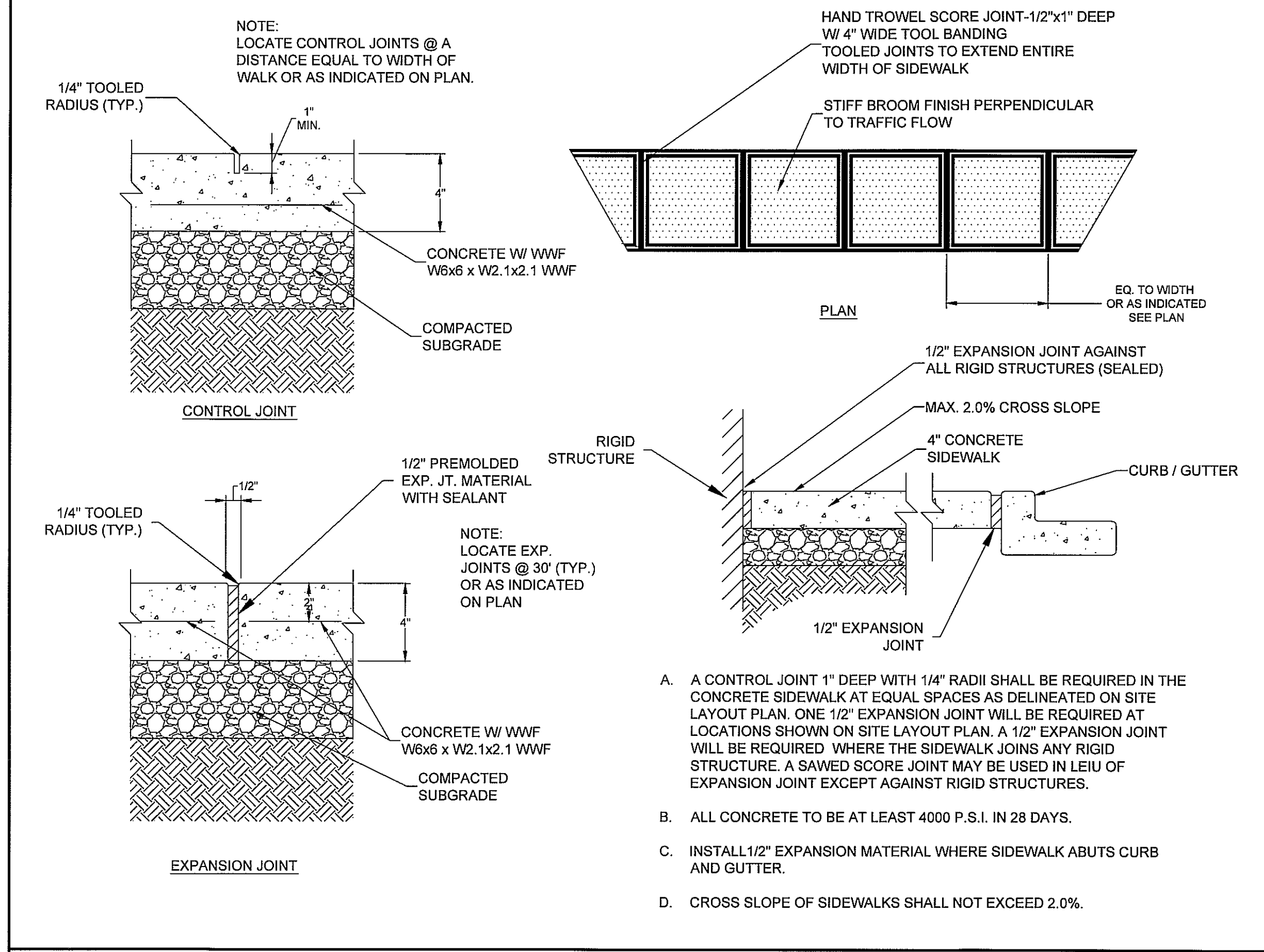
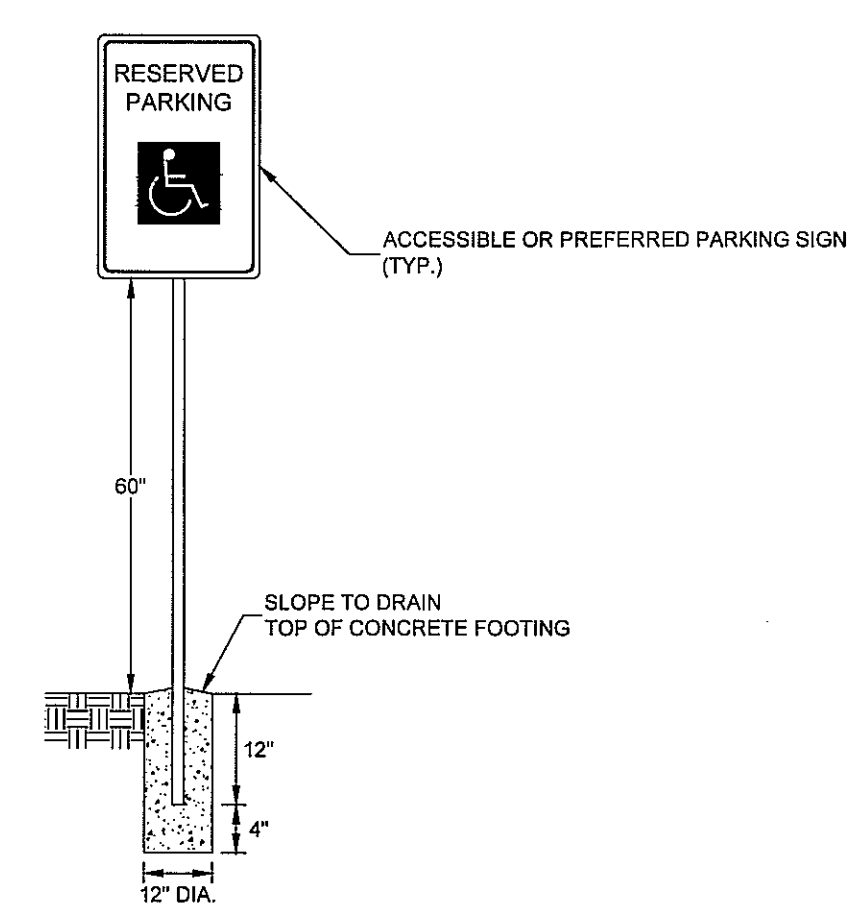
SHEET NUMBER:
C-204

100% CONSTRUCTION DRAWING SET-ISSUED FOR REGULATORY REVIEW





ACCESSIBLE PARKING SPACE MARKING AND SIGNAGE
 NOT TO SCALE



REVISIONS	DATE	SYMBOL

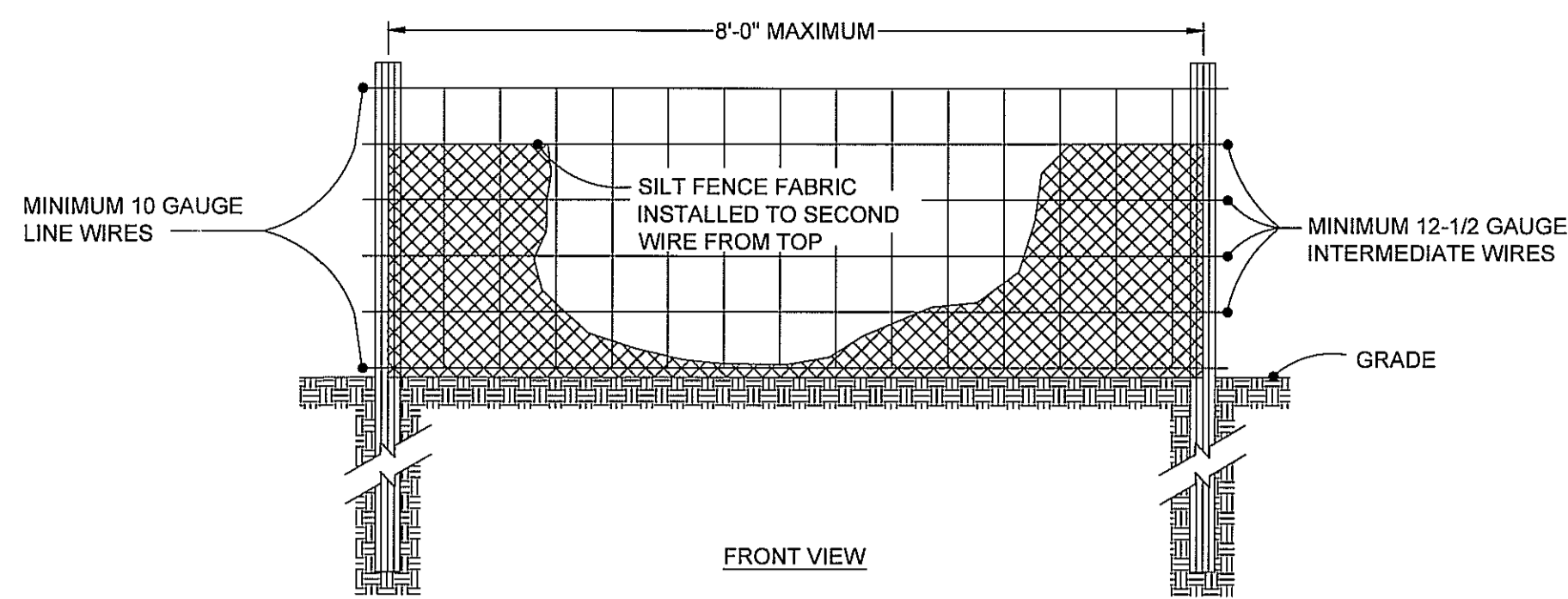
SHIPMAN
 ENGINEERING GROUP

1076 CLASSIC ROAD / APEX, NC 27539
 919.629.6204

DESIGNED BY: Z. SHIPMAN
 DRAWN BY: Z. SHIPMAN
 CHECKED BY: Z. SHIPMAN
 DRAWING DATE: 2-3-15
 SEG PROJECT #: 150128

HAWTHORNE COMMONS FITNESS CENTER
 4907 OLD MEARS ROAD
 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

NOTES AND DETAILS



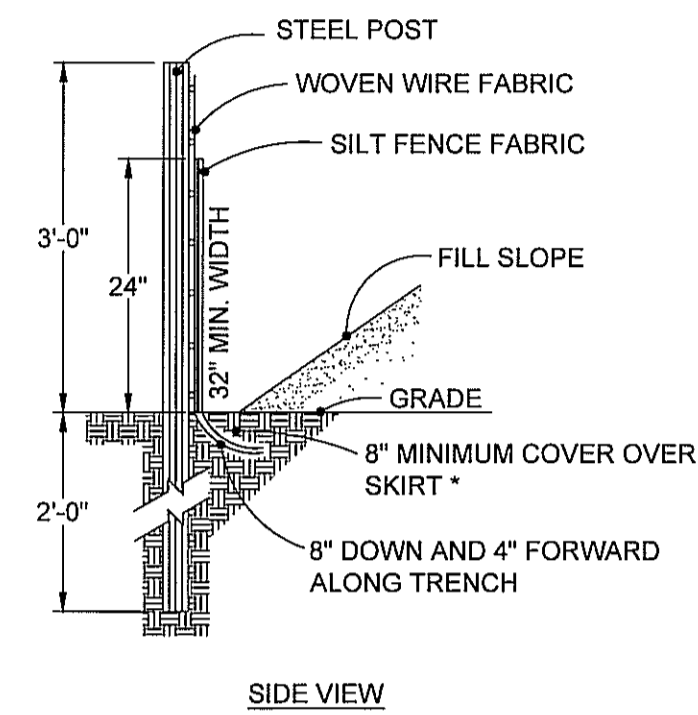
NOTE:
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

MAINTENANCE
INSPECT SEDIMENT FENCES AT LEAST 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.

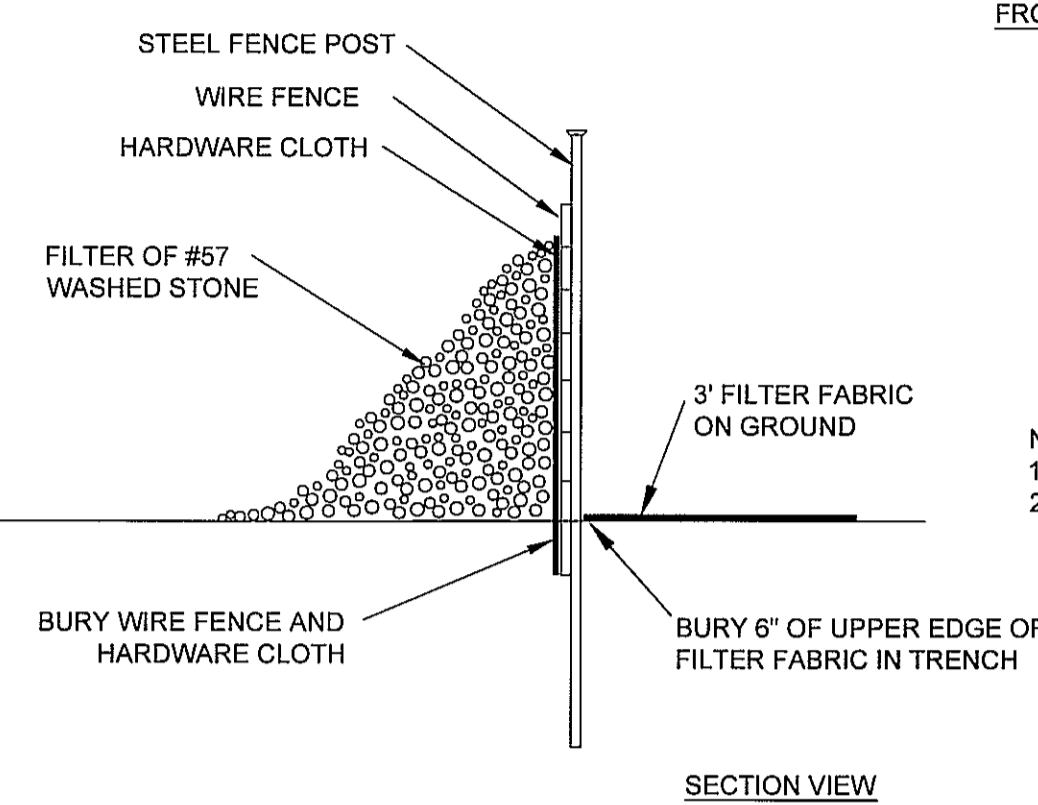
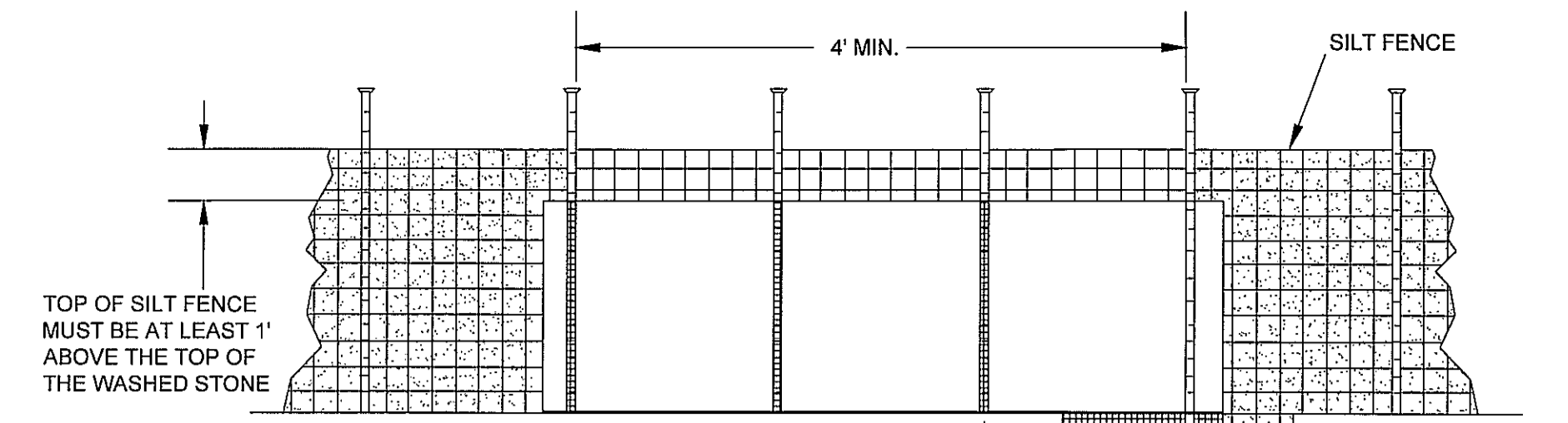
REMOVE SEDIMENT DEPOSITS WHEN DEPTH OF SEDIMENT REACHES 12" TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

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 (NCDENR 6.62)

NOT TO SCALE

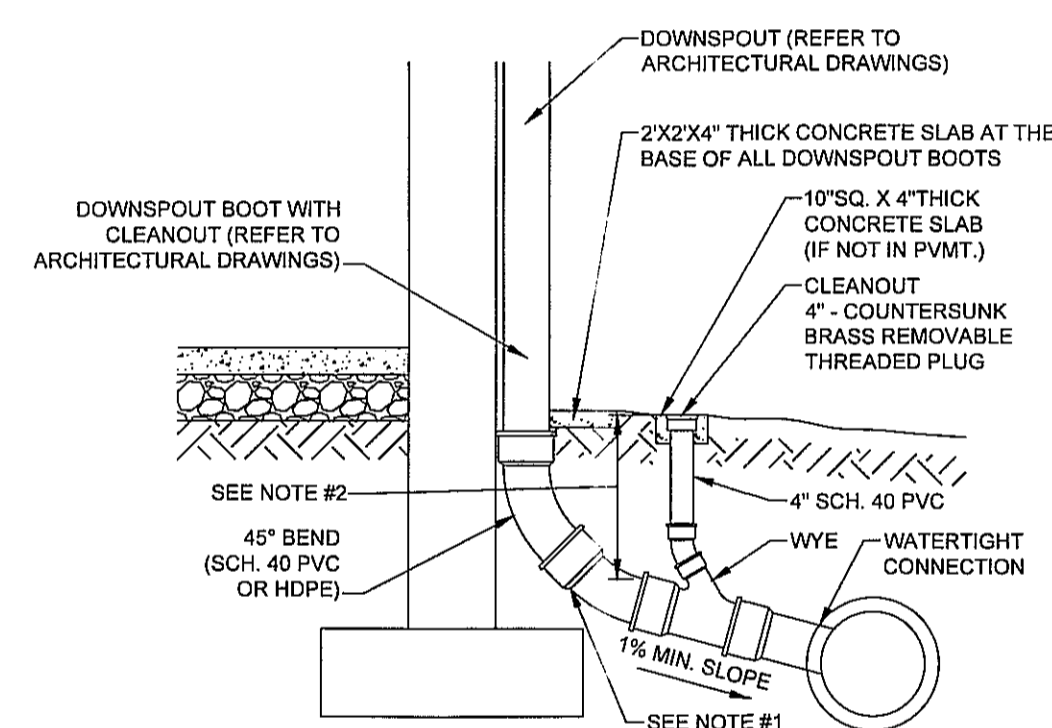


NOTES:
1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

MAINTENANCE
SEE SILT FENCE THIS SHEET FOR MAINTENANCE INFORMATION.

SILT FENCE OUTLET (NCDENR 6.62)

NOT TO SCALE



NOTES:
1. MAINTAIN A WATERTIGHT CONNECTION AT ALL PIPE CONNECTIONS BELOW GRADE.
2. MINIMUM DEPTH OF COVER IS ONE (1) FOOT, FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE OR HDPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.

DOWNSPOUT COLLECTOR

NOT TO SCALE

(TS) TEMPORARY SEEDING

SEEDING MIXTURE

COOL SEASON SEPTEMBER 1 - FEBRUARY 28

SPECIES	RATE (LB/ACRE)
SOFT RED WINTER WHEAT	120

WARM SEASON MARCH 1 - AUGUST 31

SPECIES	RATE (LB/ACRE)
GERMAN, BROWN TOP, OR FOX TAIL MILLET	65

SOIL AMENDMENTS

TILL SOIL TO A DEPTH OF 4". APPLY LIME AT A RATE OF 70 LB PER 100 SF, OR 1.5 TONS PER ACRE. APPLY 10-20-20 FERTILIZER AT A RATE OF 20 LBS PER 1000 SF OR 850 LBS PER ACRE. THE FERTILIZER SHOULD BE EITHER SLOW TIME RELEASE OR APPLIED IN TWO APPLICATIONS, HALF AT TIME OF PLANTING AND THE SECOND HALF AFTER PERMANENT SEED GERMINATES.

MULCH

APPLY 4,000 LB/ACRE STRAW. THE GROUND SHOULD BE COMPLETELY COVERED WITH NO BARE SPOT LARGER THAN A QUARTER, THEN TACKED WITH EMULSIFIED ASPHALT. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE HEAVY ENOUGH THAT THE ENTIRE AREA APPEARS BLACK IN COLOR.

MAINTENANCE

REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

EROSION CONTROL MATTING SHALL BE PROVIDED ON ALL SLOPES 3:1 AND GREATER.

(PS) PERMANENT SEEDING

PERMANENT SODDING:

PROVIDE BERMUDA SOD IN ACCORDANCE WITH LANDSCAPE DRAWINGS REFER TO MAINTENANCE SPECIFICATIONS AND REQUIREMENTS FOR PERMANENT SODDING.

PREPARE SEEDBED BY RIPPING, CHISELING, HARROWING, OR PLOWING TO DEPTH OF SIX INCHES SO AS TO PRODUCE A LOOSE, FRABLE SURFACE. REMOVE ALL STONES, BOULDERS, STUMPS, OR DEBRIS FROM THE SURFACE WHICH WOULD PROHIBIT GERMINATION OR PLANT GROWTH.

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST, OR APPLY 300 LBS/ACRE 10-10-10 FERTILIZER.

PERMANENT SEEDINGS:

COOL SEASON SEPTEMBER 1 - FEBRUARY 28

SPECIES	RATE (LB/ACRE)
SOFT RED WINTER WHEAT	50
COMMON BERMUDA (HULLED)	25
COMMON BERMUDA (UNHULLED)	25

WARM SEASON MARCH 1 - AUGUST 31

SPECIES	RATE (LB/ACRE)
GERMAN, BROWN TOP, OR FOX TAIL MILLET	50
COMMON BERMUDA (HULLED)	50

SOIL AMENDMENTS

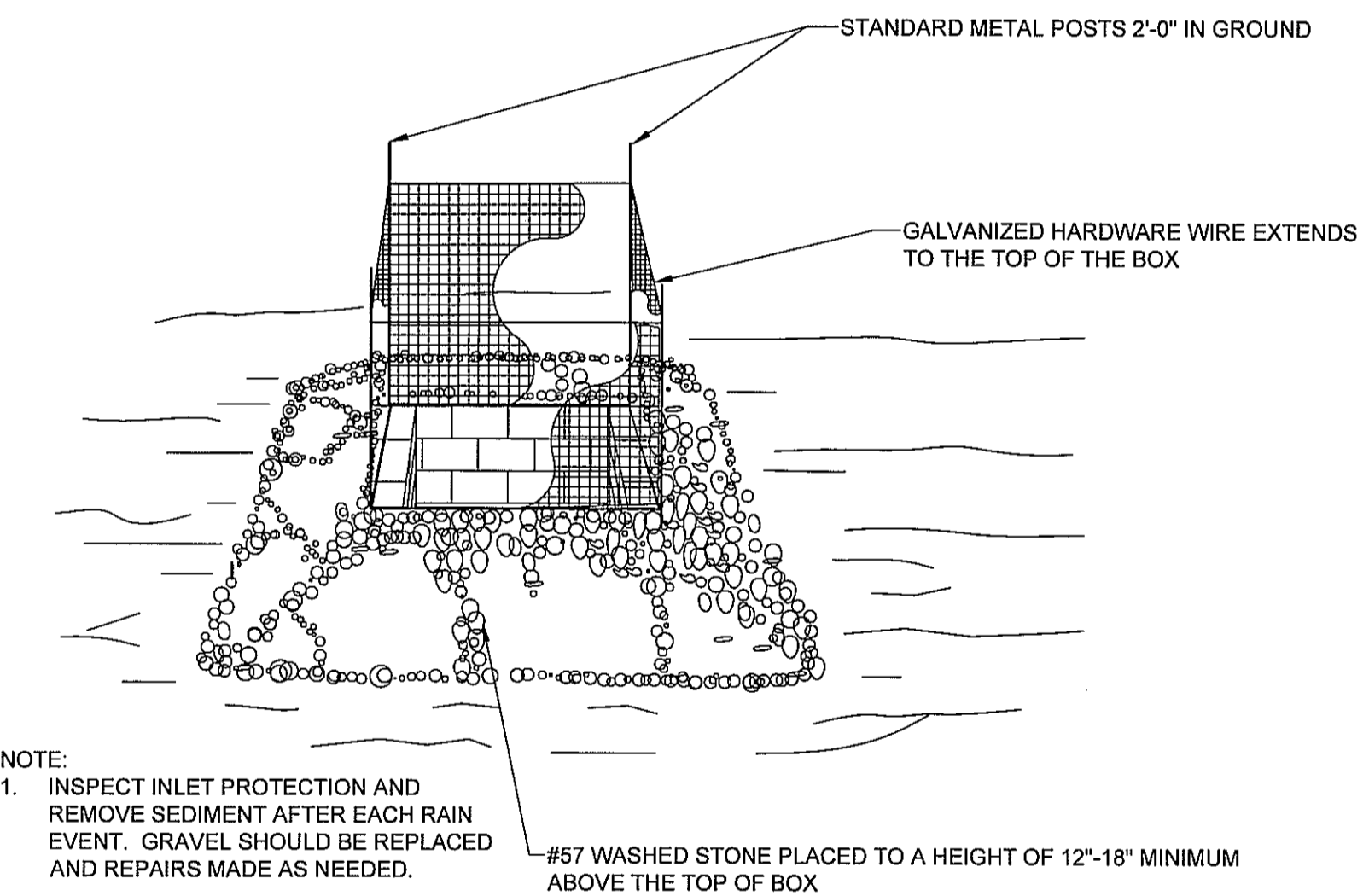
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MAINTENANCE

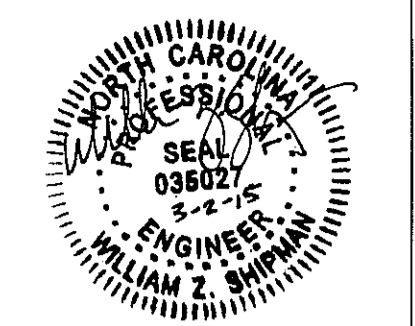
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.



NOTE:
1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.

HARDWARE CLOTH AND GRAVEL INLET PROTECTION

NOT TO SCALE



REVISIONS	DATE	SYMBOL

SHIPMAN ENGINEERING GROUP
 NOBEL LICENSE P-1274
 WWW.SHIPMANENGINEERINGGROUP.COM
 1076 CLASSIC ROAD JAPEX, NC 27539
 919.629.8204

DESIGNED BY:	Z. SHIPMAN
DRAWN BY:	Z. SHIPMAN
CHECKED BY:	Z. SHIPMAN
DRAWING DATE:	2-3-15
SEG PROJECT #:	150128

HAWTHORNE COMMONS FITNESS CENTER
 4907 OLD MEARS ROAD
 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA
 SHEET NUMBER:
NOTES AND DETAILS
C-301

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IMPORTANT NOTE: ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.

OLD MEARES ROAD
60' PUBLIC RW

CONCRETE SIDEWALK

ONE STORY STRUCTURE
(LAUNDRY, POOLHOUSE, &
MAINTENANCE SHED)

POOL

SEASONAL
FLOWERING
ANNUALS

PROPOSED FITNESS CENTER
1,477 SF

EXIST'G

GENERAL NOTES:

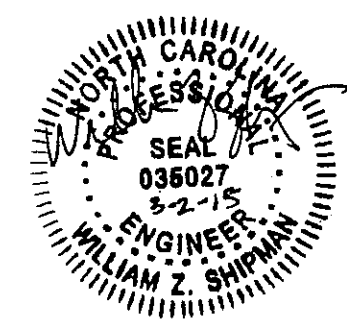
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- PRIOR TO THE COMMENCEMENT OF ANY ACTIVITIES REQUIRING A BUILDING OR ZONING PERMIT AN ON-SITE PRECONSTRUCTION MEETING IS REQUIRED BETWEEN THE DEVELOPER AND CITY OF WILMINGTON INSPECTION STAFF TO REVIEW PROCEDURES FOR THE PROTECTION AND MANAGEMENT OF ALL LANDSCAPE ELEMENTS THAT ARE TO REMAIN AS IDENTIFIED ON THE LANDSCAPING PLANS.
- CONTACT THE NC 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 CONTRACTOR'S 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.



SYMBOL	DATE	REVISIONS

SHIPMAN
ENGINEERING GROUP

NC REG. LICENSE # 1974
WWW.SHIPMANENGINEERINGGROUP.COM

1076 CLASSIC ROAD | APEX, NC 27539
919.829.8204

DESIGNED BY: Z. SHIPMAN
DRAWN BY: Z. SHIPMAN
CHECKED BY: Z. SHIPMAN
DRAWING DATE: 2-3-15
SEG PROJECT #: 150128

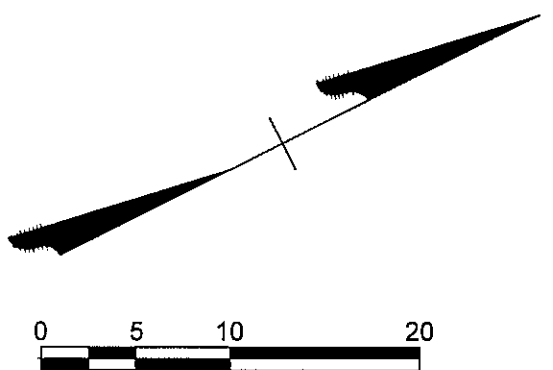
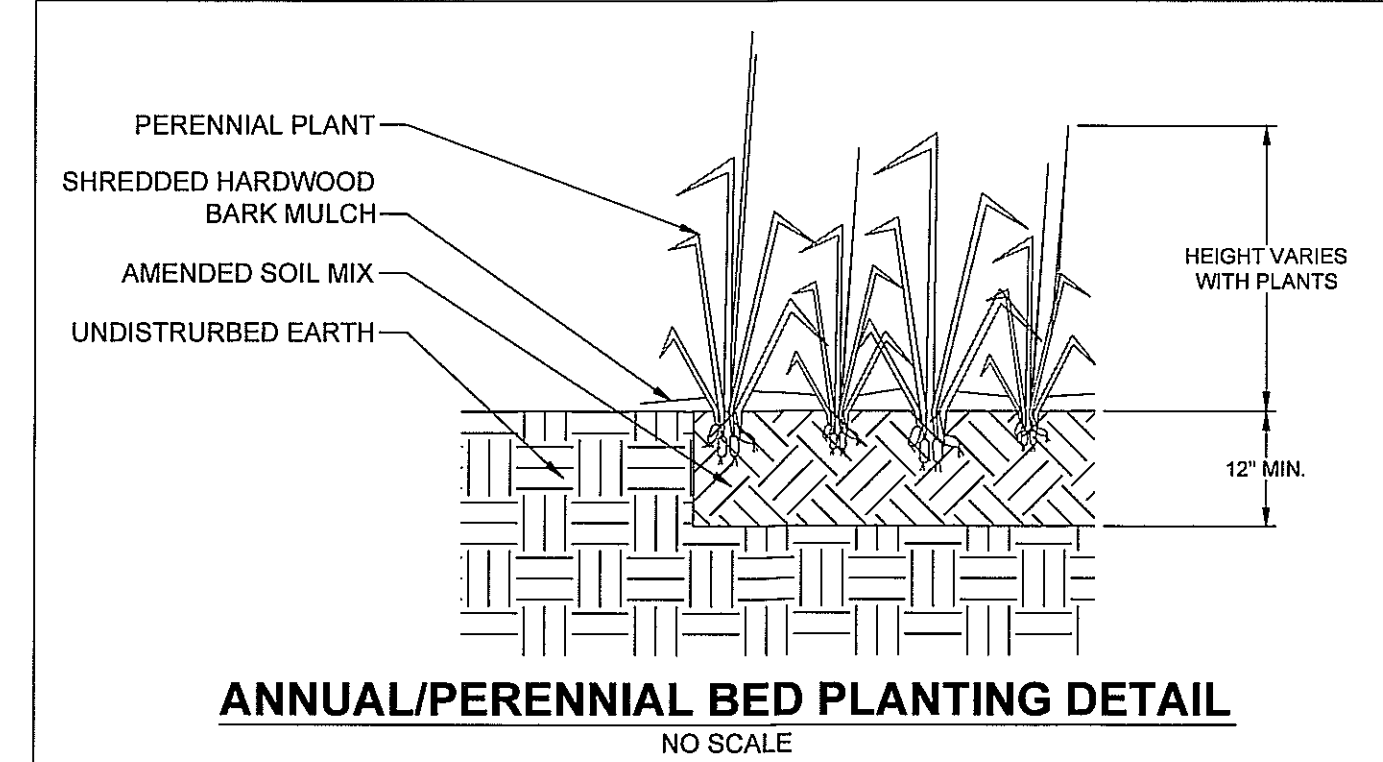
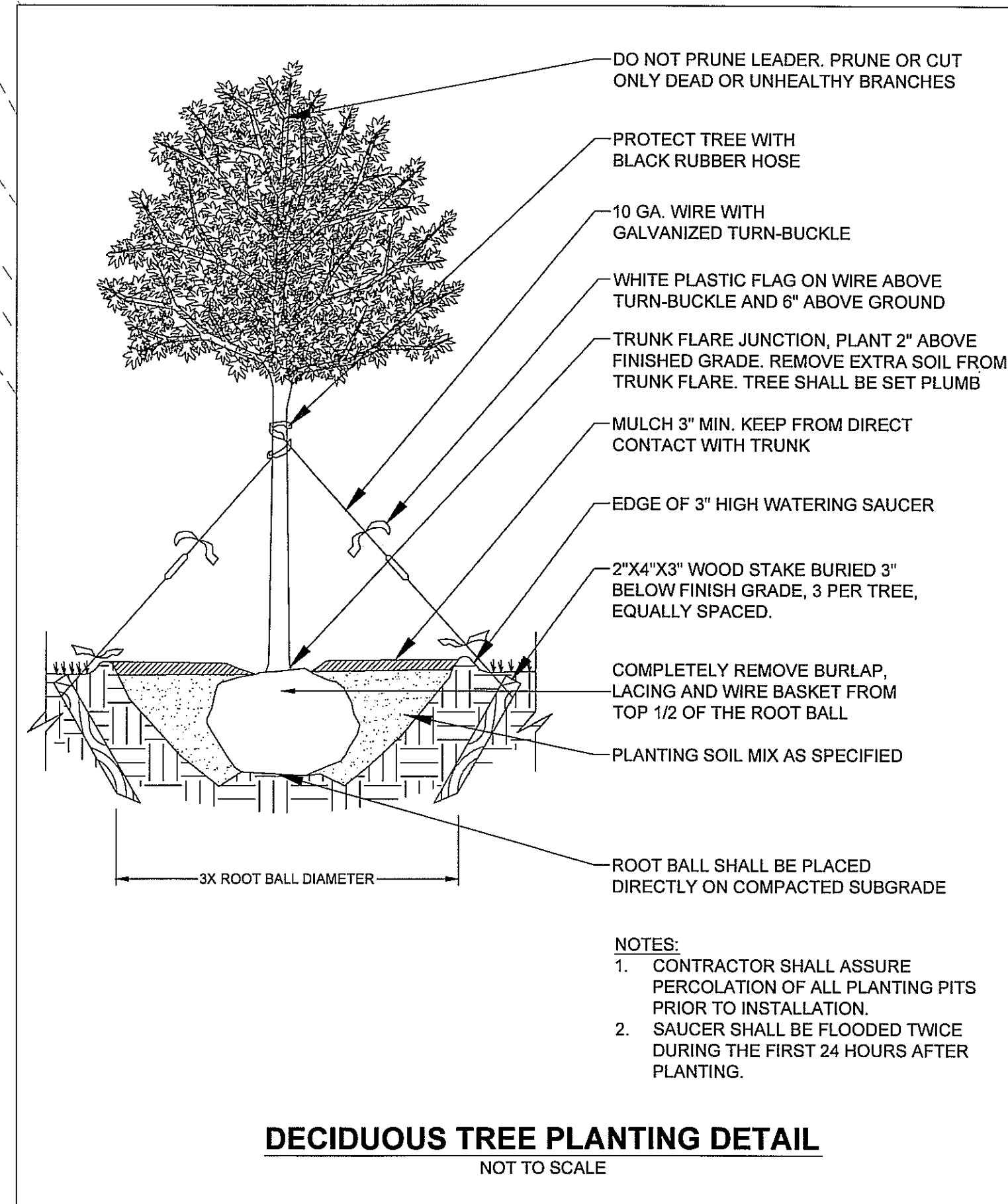
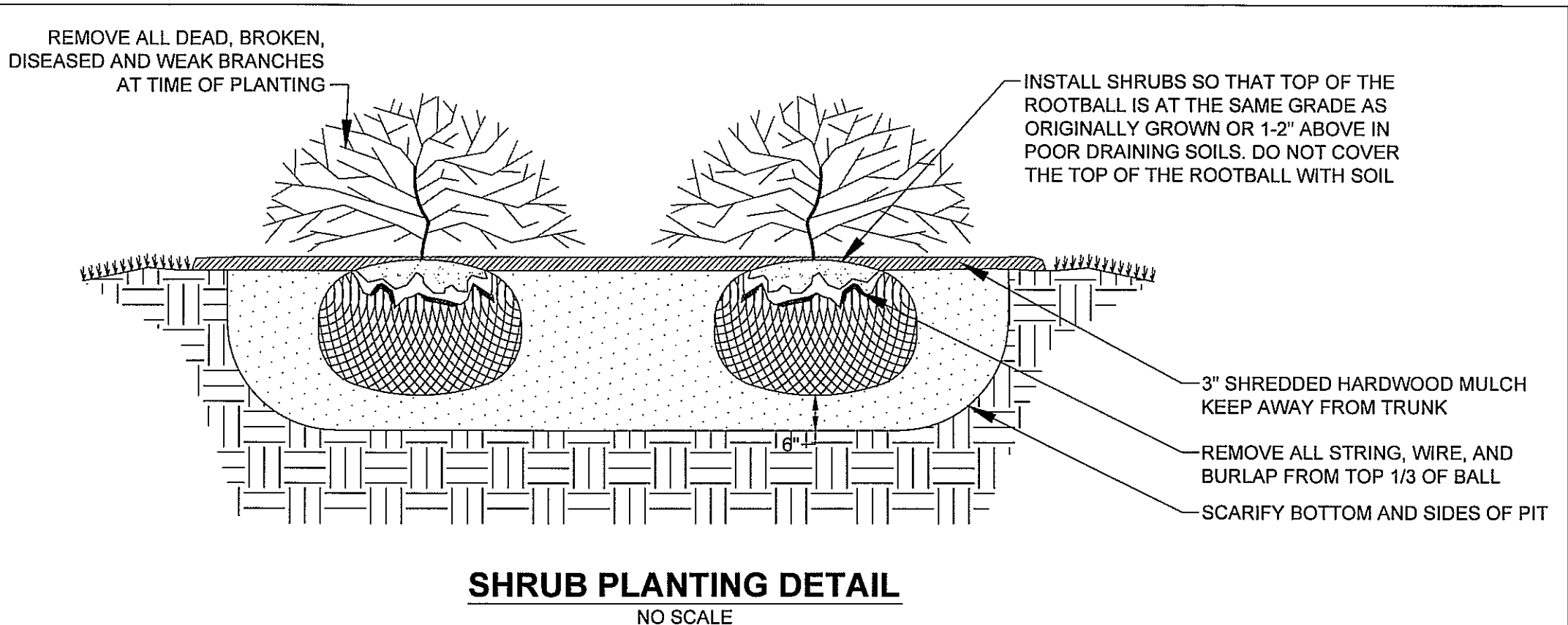
HAWTHORNE COMMONS FITNESS CENTER
4907 OLD MEARS ROAD
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

LANDSCAPING PLAN

SHEET NUMBER:
L-101

PLANT LIST

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT TYPE	COMMENTS
TREES						
LI	2	LAGERSTROEMIA INDICA 'MUSKOGEE'	MUSKOGEE CRAPE MYRTLE	1.5" CALIPER	B&B	SINGLE STEM ONLY
PS	3	PRUNUS SERRULATA 'KWANZAN'	KWANZAN FLOWERING CHERRY	2" CALIPER	B&B	SINGLE STEM ONLY, 8' MIN. HEIGHT
SHRUBS						
NO	2	NERIUM OLEANDER	OLEANDER	24" SPREAD	CONT.	24" MIN. HEIGHT; SELECT DENSE/FULL PLANTS
PT	23	PITTOSPORUM TOBIRA	JAPANESE PITTOSPORUM	24" SPREAD	CONT.	SELECT DENSE/FULL PLANTS
RX	4	ROSA X 'KNOCKOUT'	KNOCKOUT ROSE	24" SPREAD	CONT.	24" MIN. HEIGHT; SELECT DENSE/FULL PLANTS



100% CONSTRUCTION DRAWING SET-ISSUED FOR REGULATORY REVIEW

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