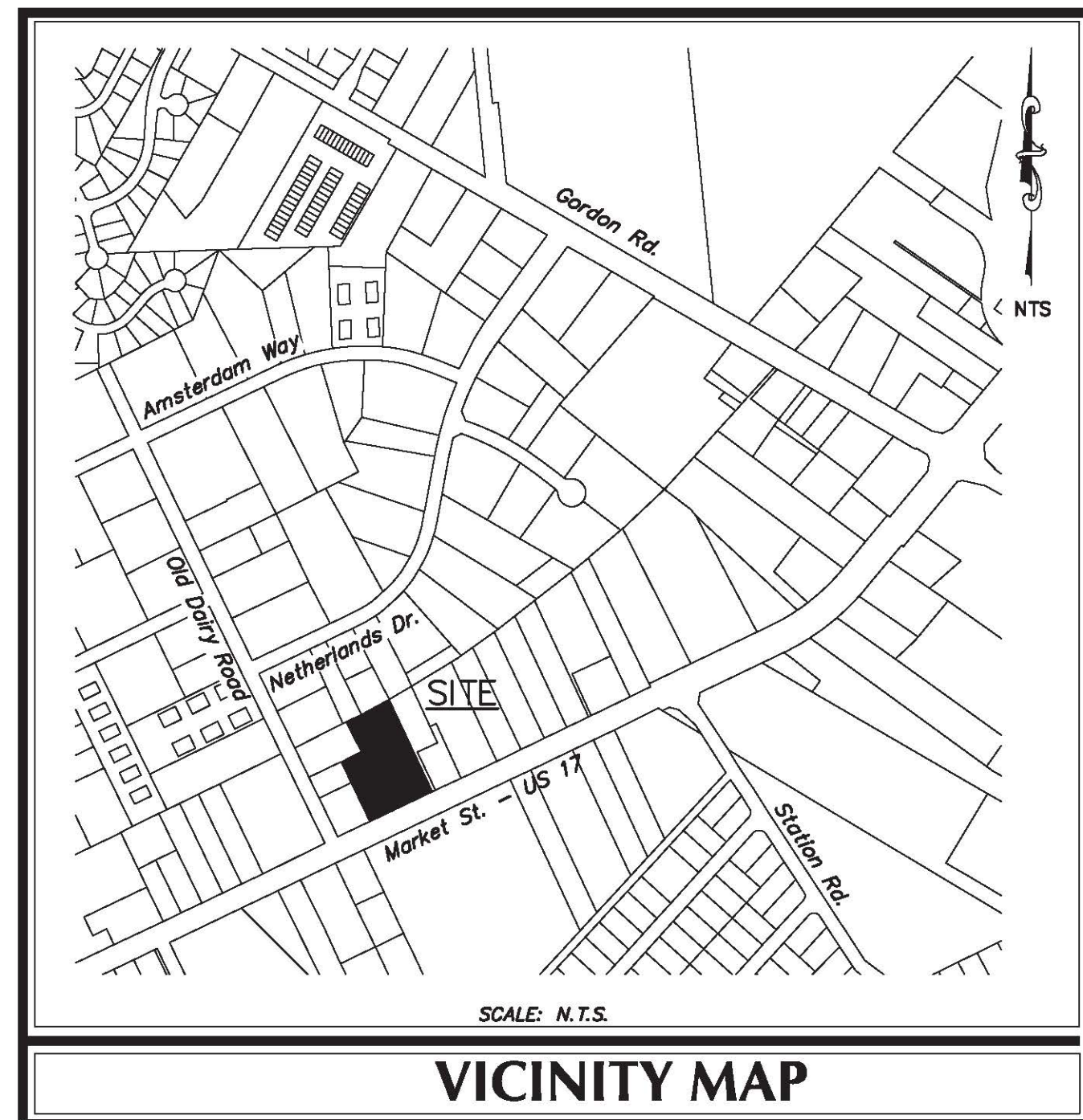
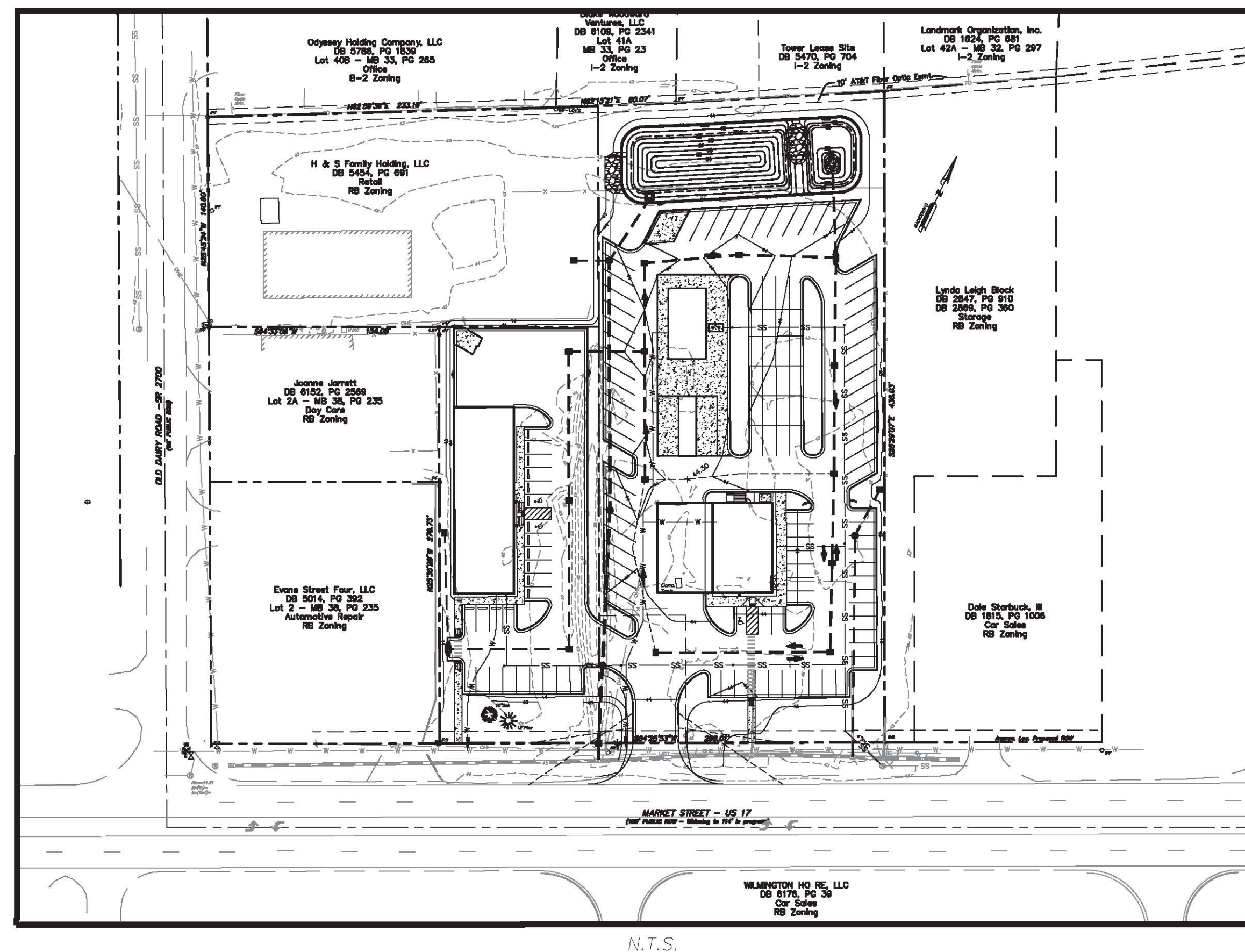


Site Development For
6721 MARKET
JULY, 2020
WILMINGTON, NORTH CAROLINA

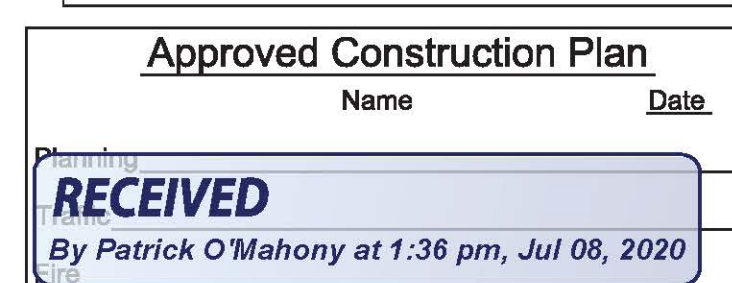
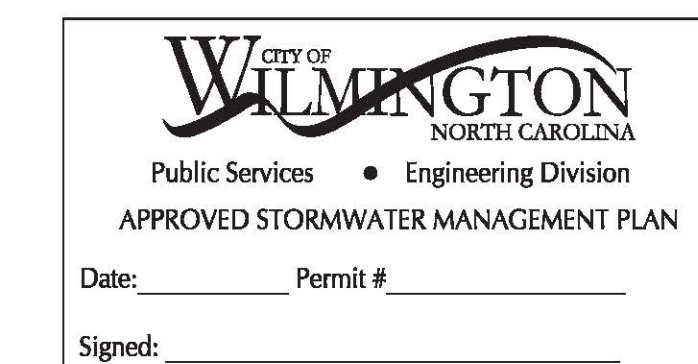


LEGEND		
DESCRIPTION	EXISTING	PROPOSED
PROPERTY BOUNDARY	_____	_____
EASEMENT	_____	_____
STREAM	_____	_____
STRUCTURE	_____	_____
MINOR CONTOURS	---8---	---8---
MAJOR CONTOURS	---10---	---10---
GAS LINE	---G---	---G---
OVERHEAD POWER	---OHP---	---OHP---
WATER LINE	---W---	---W---
SANITARY SEWER LINE	---SS---	---SS---
SANITARY SEWER MANHOLE	⊙	⊙
STORM DRAINAGE PIPE	_____	_____
STORM DRAINAGE STRUCTURE	○ □	● ■
TREE	11" OAK ●	● ■
CONCRETE	▨	▨
SILT FENCE	— SF —	— SF —
TREE PROTECTION FENCE	— TP —	— TP —
FIRE HYDRANT ASSEMBLY	⋈	⋈



OWNER
H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401
TEL: 910-763-5411
cfisher@coastal-realty.com

PORT CITY CONSULTING ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032
mhargrove@ec.rr.com



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SHT L-1 & 2	LANDSCAPE PLAN

SITE DATA TABLE	
GENERAL NOTES:	
1. NEW HANOVER COUNTY PARCEL NOS: PID R04320-001-018-000 (6717 MARKET STREET) PID R04320-001-022-000 (6719 MARKET STREET) PID R04320-001-002-000 (6721 MARKET STREET) PID R04320-001-003-000 (6725 MARKET STREET)	
2. TOTAL AREA: 2.57 AC±	
3. EXISTING ZONING: RB - REGIONAL BUSINESS	
4. BUILDING USES: ENTERPRISE RENTAL CAR OFFICE (2,400 SF) TYPE 2B ENTERPRISE RENTAL CAR CANOPY (2,220 SF) TYPE 2B ENTERPRISE CAR WASH (1,197 SF) TYPE 2B ENTERPRISE FUEL ISLAND & CANOPY (1,600 SF) OFFICE BUILDING (5,000 SF) TYPE 3B	
5. CAMA LAND USE: URBAN	
6. NO PART OF THIS PROPERTY IS WITHIN ZONE X OR ZONE AE PER FEMA FLOOD INSURANCE RATE MAP #3720315800K, EFFECTIVE DATE AUGUST 28, 2018.	
DEVELOPMENT DATA:	
Total Tract Area = 149,861 SF = 2.57 ac	
Totals Disturbed Area = 2.9 ac	
Max. Bldg. Hgts. - 35' Mean Roof	
Enterprise Rental Bldg - 21 ft - 1 Story Office Bldg - 18 ft - 1 Story Car Wash - 18 ft - 1 Story	
Setbacks:	Enterprise Car Wash Office
Front 25 ft 100 ft 257 ft 100 ft	
Side 0 ft 75 ft 119 ft 10 ft	
Rear 15 ft 267 ft 129 ft 199 ft	
Existing Impervious Surface BUA:	
Ex Bldg - 3,592 S.F.	
Ex Pavement - 9,114 S.F.	
Ex Concrete - 6,756 S.F.	
Ex Gravel/Dirt Drive - 13,358 S.F.	
Total - 32,798 S.F.	
Proposed Impervious Surface BUA:	
Bldg (enclosed) - 8,597 S.F. (5.74% Building Lot Coverage)	
Canopy Roof top - 3,820 S.F.	
Pavement - 61,733 S.F.	
Generator Pad - 40 S.F.	
Sidewalk - 2,500 S.F.	
Total - 76,690 S.F.	
Parking Requirements:	
Car Rental Office: 1/200 - 1/300 sf (2,400 sf Building)	
= Max - 12 Spaces Provided - 12 Spaces	
Min - 8 Spaces 1 HC Required - 1 Provided	
Rest of spaces is for rental cars	
Total number of spaces is 103 (for customers and car rentals)	
Office: 1/200 - 1/300 sf (5,000 sf Building)	
= Max - 25 Spaces Provided - 25 Spaces	
Min - 17 Spaces 1 HC Required - 2 HC Provided	
Trash will be handled by Dumpster for Enterprise Car Rental	
Trash will be handled by Dumpster for the Office Building	
Trip Generation:	
Enterprise Car Rental (715) - AM Peak - 21; PM Peak - 32	
Office (715) - AM Peak - 9; PM Peak - 9	
Utility Capacity Requests:	
Proposed Sewer Capacity:	
Car Rental: 10 Employees @ 25 gpd - 250 gpd	
Retail: 4 plumbing fixtures @ 125 gpd/fixture - 500 gpd	

COORDINATION NOTES

1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. ALL WORK IS TO BE IN ACCORDANCE WITH NEW HANOVER COUNTY, THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) AND THE STATE OF NORTH CAROLINA.
3. THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THE PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR TO PERFORM SITE IMPROVEMENT STAKEOUT(S).
4. ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.

GENERAL NOTES:

1. EXISTING TOPOGRAPHY, BOUNDARY AND UTILITIES, HAVE BEEN PREPARED BY FIELD SURVEY BY DAVID EDWARDS LAND SURVEYING, PLLC. ELEVATIONS SHOWN ARE IN NAVD 88 AND HORIZONTAL IS NAD83-2011.
2. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF ALL EXISTING UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF DITCHING OPERATIONS BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES. IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF TRENCHING OPERATIONS SO AS TO ELIMINATE OR MINIMIZE DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING LOSS OF UTILITY REVENUES. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
3. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAGMEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE DOT.
5. ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.
6. ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.
7. CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 1 (800) 632-4949 AND ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
8. CONTRACTOR SHALL REMOVE ASPHALT, AGGREGATE BASE COURSE, AND CONCRETE CURB & GUTTER WITHIN LIMITS OF DEMOLITION AS SHOWN ON PLAN.

DEMOLITION NOTES

1. CONTRACTOR TO COORDINATE WITH THE OWNER TO PROPERLY MAINTAIN OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY
2. CONTRACTOR IS TO WALK THE SITE AND BECOME FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND WILL BE UNCLASSIFIED EXCAVATION.
3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE PADS, CONCRETE DITCHES, FOUNDATIONS, SLABS, STEPS AND STRUCTURES; ABANDONED UTILITIES, BUILDINGS, PAVEMENTS AND ALL MATERIALS CLEARED AND STRIPPED TO THE EXTENT NECESSARY AS DIRECTED BY THE SOILS ENGINEER FOR THE INSTALLATION OF THE NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING AND AS SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO OWNER.
5. ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS BY THE CONTRACTOR.
6. EXISTING UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION
7. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.
8. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVER HEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.
9. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
10. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
11. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL NOTES:

1. CLEAR AND REMOVE FROM SITE ALL TREES, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN DESIGNATED CLEARING LIMITS.
2. PLANT GRASS OVER ALL GRADED AREAS AS SHOWN IN THE TABLE ON THIS SHEET OF CEASE OF ANY GRADING ACTIVITY.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION MEASURES
4. DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED, CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY.
5. WATER, FERTILIZE, MOW AND MAINTAIN SPRIGGED, SODDED AND PLANTED AREAS UNTIL FINAL APPROVAL BY NEW HANOVER COUNTY.
6. ANY BORROW MATERIAL BROUGHT ONTO SITE MUST BE FROM A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.
7. ANY EXCESS MATERIAL REMOVED FROM SITE MUST BE HAULED TO A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.

MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. ANY SEDIMENT THAT IS TRACKED INTO THE STREET WILL BE IMMEDIATELY REMOVED.
3. SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. SILT FENCE STAKES WILL BE SPACED 6 FEET APART UNLESS A WIRE BACKING IS USED WITH 8 FOOT STAKE SPACING.
4. INSPECT INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.
- INSPECT SILT SACKS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE SILT SACK OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE THE SILT SACK DURING SEDIMENT REMOVAL. REPLACE AS NEEDED.
5. INSPECT SKIMMER SEDIMENT BASINS AS LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT BASIN IS $\frac{1}{2}$ FULL.
- IF THE SKIMMER IS CLOGGED WITH TRASH, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
- IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER. CHECK FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND THERE DEBRIS FROM THE SKIMMER AND POOL AREAS. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE..
6. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDD AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.

PERMANENT SEEDING SCHEDULE

Seeding Mixture

	RATE (LB/ACRE)
CAROLINA COASTAL SEED MIX (BLEND)	200
20.35% GULF ANNUAL RYEGRASS	
30.30% BROWNTOP MILLET	
29.75% FAWN TALL FESCUE	
9.65% CREEPING RED FESCUE	
7.4% UNHULLED BERMUDAGRASS	
0.55% CENTIPEDEGRASS	

Seeding Dates

MARCH - JUNE

Soil Amendments

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 300 LB/ACRE 10-10-10 FERTILIZER.

Mulch

DO NOT MULCH.

Maintenance

FERTILIZE VERY SPARINGLY LB/ACRE NITROGEN IN SPRING WITH NO PHOSPHORUS. CENTIPEDE GRASS CANNOT TOLERATE HIGH PH OR EXCESS FERTILIZER.

TEMPORARY SEEDING-LATE WINTER/EARLY SPRING

Seeding Mixture

WINTER AND EARLY SPRING

SPECIES	
Rye (GRAIN)	
ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	
OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.	
SUMMER	
SPECIES	RATE (LB/ACRE)
GERMAN MILLET	120
	50
FALL	
SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	40

Seeding dates

COASTAL PLAIN - DEC:1-APR. 15 - LATE WINTER AND EARLY SPRING
APRIL 15 - AUG. 15 - SUMMER
AUG. 15 - DEC. 30 - FALL

Soil amendments

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

Mulch

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

Maintenance

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

GENERAL GRADING NOTES

1. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF SUCH UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF THE DITCHING OPERATION BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF THE TRENCHING OPERATIONS SO AS TO AVOID AND PREVENT DAMAGE TO THE EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING BUT NOT LIMITED TO REPAIRS AND LOSS SERVICE REVENUE. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
2. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
3. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAG MEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE MCDOT.
4. ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, FENCING, ETC... SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE OR BURNED IF PROPER PERMITS ARE RECEIVED.

SITE NOTES

1. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND R.O.W.'S PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.
3. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
4. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
7. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
8. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
9. IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE GIVEN TO THE OWNER FOR REVIEW, NO DEPARTURES FROM THE CONTRACT DOCUMENT SHALL BE MADE WITHOUT THE PERMISSION OF THE OWNER.
10. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE OTHER OBSTRUCTIONS OR FROM DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT NORTH CAROLINA ONE CALL" TOLL FREE 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NONSUBSCRIBING UTILITIES.
11. ALL PERMITS RELATIVE TO PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION
12. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY, AND LOCAL CODES.
13. FOR BUILDING DIMENSIONS, SEE ARCHITECTURAL DRAWINGS.
14. ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.
15. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
16. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

GENERAL STORM SEWER NOTES

1. ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NEW HANOVER COUNTY AND THE STATE OF NORTH CAROLINA REQUIREMENTS AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
2. BEDDING FOR ALL STORM SEWER PIPE SHALL BE AS SPECIFIED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND MANUFACTURER SPECIFICATIONS.
3. ALL STORM SEWER PIPES SHOWN AS RCP ON THE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

EXISTING UTILITY NOTES

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
2. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

UTILITY CONTACTS:

1. CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING AND DIGGING. 1-800-632-4949

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TWELVE WORKING DAYS PRIOR TO ANY EXCAVATION OR DEMOLITION.

CONTACT "CAROLINA ONE CALL" AT 1-800-632-4949 or 811	
EMERGENCY DIAL 911	POLICE - FIRE - RESCUE



APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

6721 MARKET

NEW HANOVER COUNTY

NORTH CAROLINA

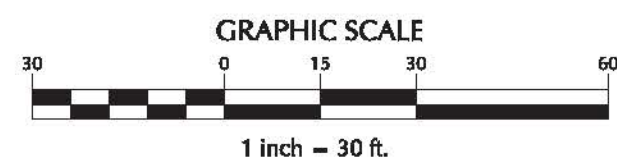
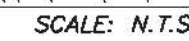
H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401

PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

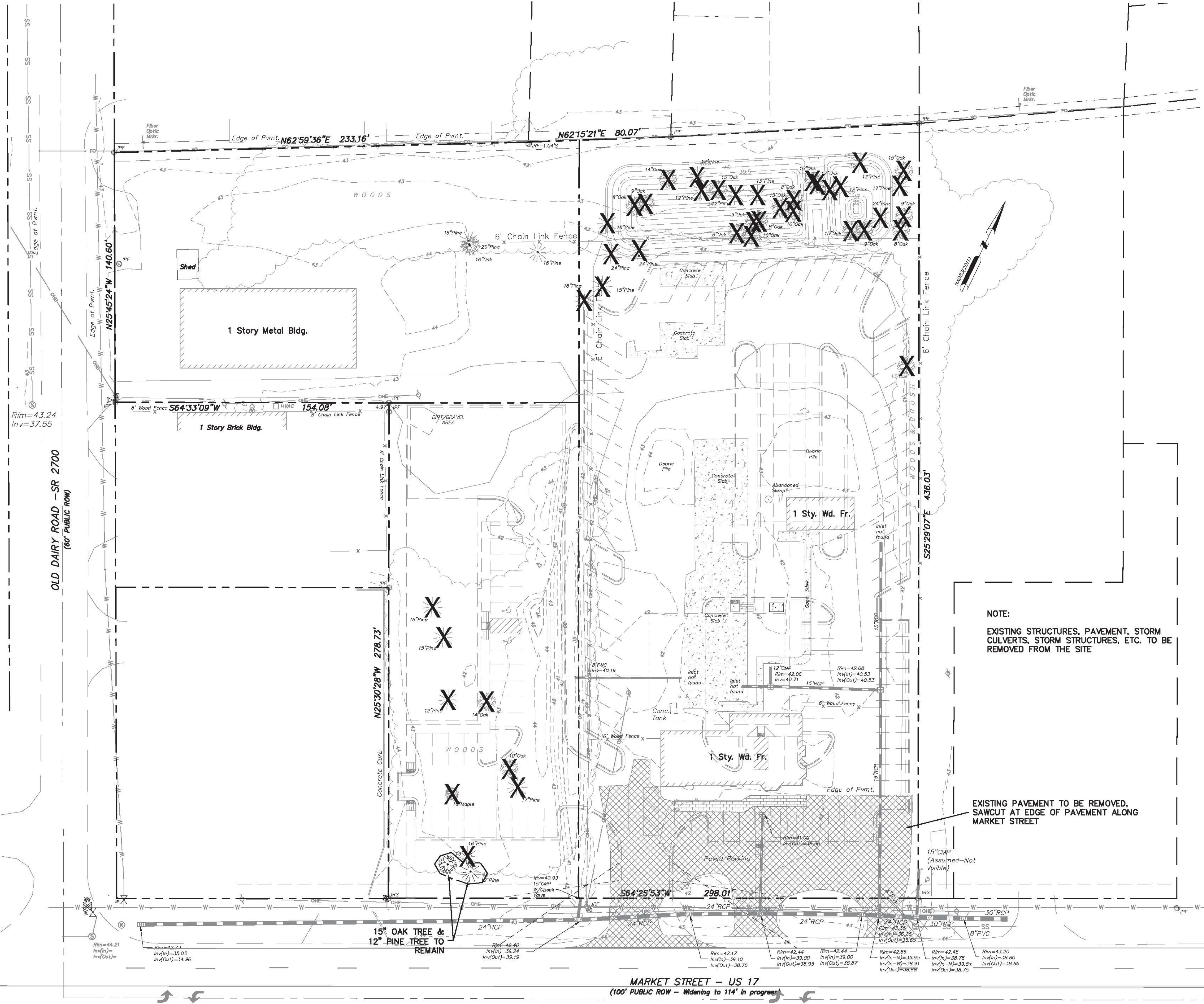
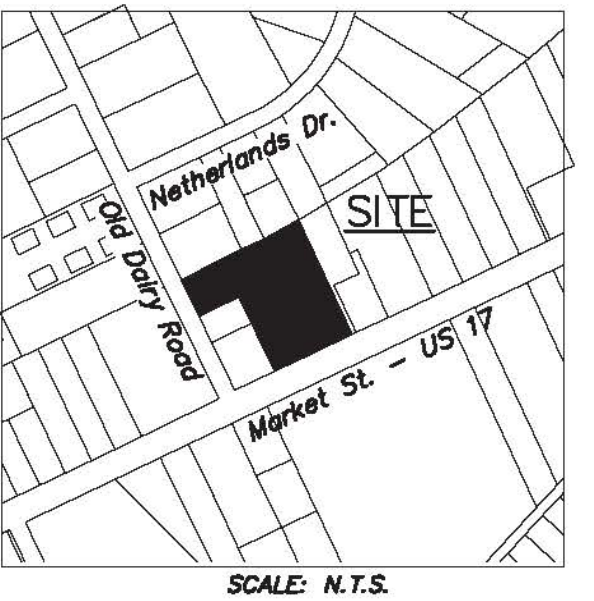
GENERAL NOTES

Sheet No.

C-1



Sheet No.
C-2



NOTE:
EXISTING STRUCTURES, PAVEMENT, STORM
CULVERTS, STORM STRUCTURES, ETC. TO BE
REMOVED FROM THE SITE

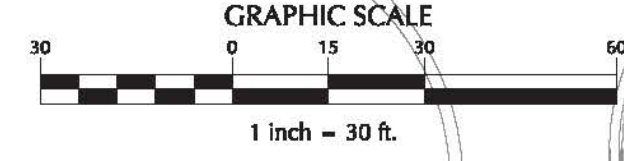
EXISTING PAVEMENT TO BE REMOVED,
SAWCUT AT EDGE OF PAVEMENT ALONG
MARKET STREET

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____
Signed: _____

Approved Construction Plan

	Name	Date
Planning		
Traffic		
Fire		



No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2020
Checked By	MNH	Job No.	

6721 MARKET

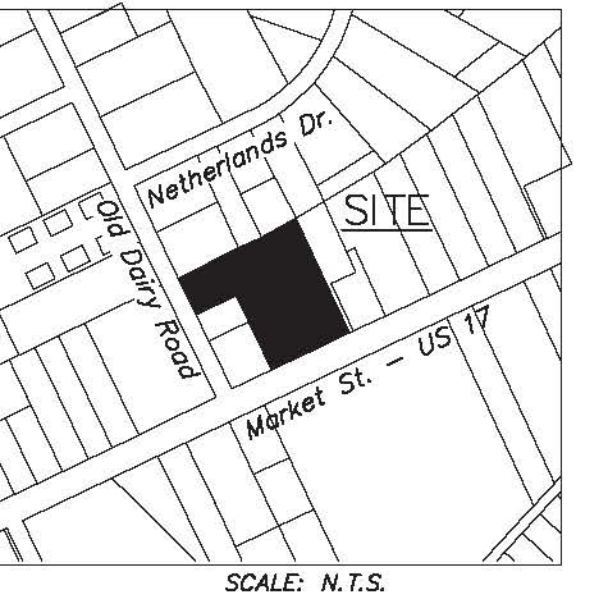
WILMINGTON NORTH CAROLINA

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WILMINGTON, NC 28401

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6216 STONEBRIDGE ROAD
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TREE REMOVAL PLAN

Sheet No.
C-2.1



Odyssey Holding Company, LLC
DB 5786, PG 1839
Lot 40B - MB 33, PG 265
Office
B-2 Zoning

Blake Woodward
Ventures, LLC
DB 6109, PG 2341
Lot 41A
MB 33, PG 23
Office
I-2 Zoning

Tower Lease Site
DB 5470, PG 704
I-2 Zoning

Landmark Organization, Inc.
DB 1624, PG 681
Lot 42A - MB 32, PG 297
I-2 Zoning

H & S Family Holding, LLC
DB 5454, PG 691
Retail
RB Zoning

Joanne Jarrett
DB 6152, PG 2569
Lot 2A - MB 38, PG 235
Day Care
RB Zoning

Evans Street Four, LLC
DB 5014, PG 392
Lot 2 - MB 38, PG 235
Automotive Repair
RB Zoning

Lynda Leigh Block
DB 2847, PG 910
DB 2869, PG 360
Storage
RB Zoning

Dale Starbuck, III
DB 1815, PG 1006
Car Sales
RB Zoning

WILMINGTON HO RE, LLC
DB 6176, PG 39
Car Sales
RB Zoning

NOTES:

PRIOR TO ANY 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.

ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO THE PUBLIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.

ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.

ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.

CONTACT 811 PRIOR TO CONTACTING CITY OF WILMINGTON, TRAFFIC ENGINEERING REGARDING THE UTILITIES IN ROW.

ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.

CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 PRIOR TO DOING AND DIGGING, CLEARING, OR GRADING.

CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY

A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS.

A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC DIVISION AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO RECORDING THE FINAL PLAT.

TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS

WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) DETAILS AND SPECIFICATIONS

PROJECT SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) 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 CFPUA 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

CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION

NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE TRIANGULAR SIGHT DISTANCE

LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.

ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.

CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY FOR ALL COMMERCIAL BUILDINGS THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER SIGNAL LEVELS MEET SECTION 510 REQUIREMENTS OF THE 2018 NC FIRE CODE.

NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS DELIVERED TO THE JOB SITE.

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

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

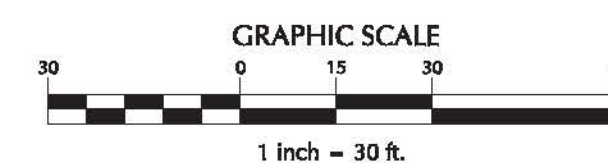
Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____
Traffic _____
Fire _____



6721 MARKET

WILMINGTON

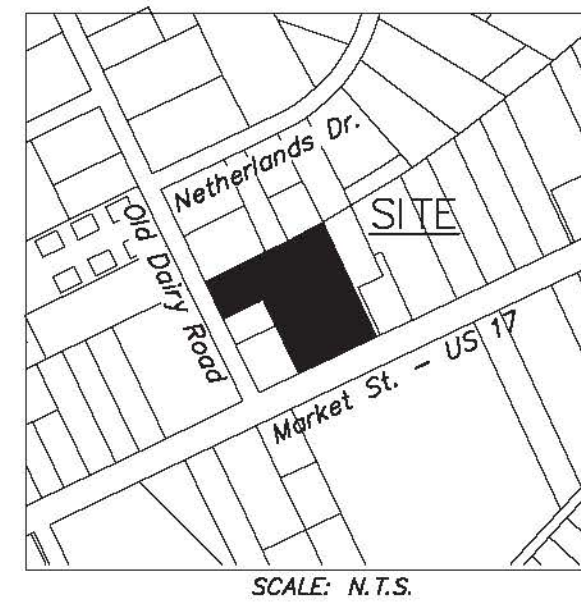
NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC
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WILMINGTON, NC 28401

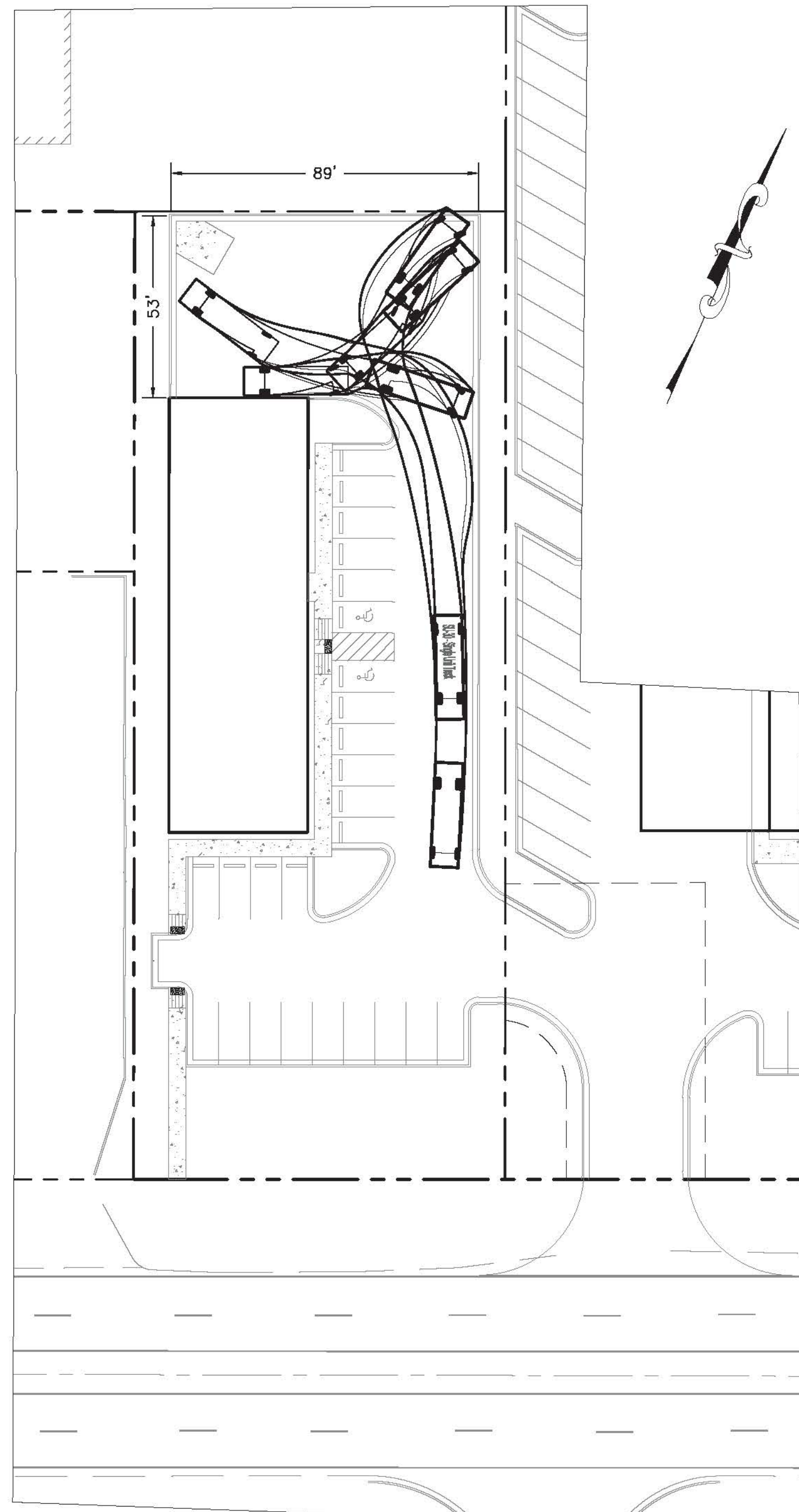
PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

SITE PLAN

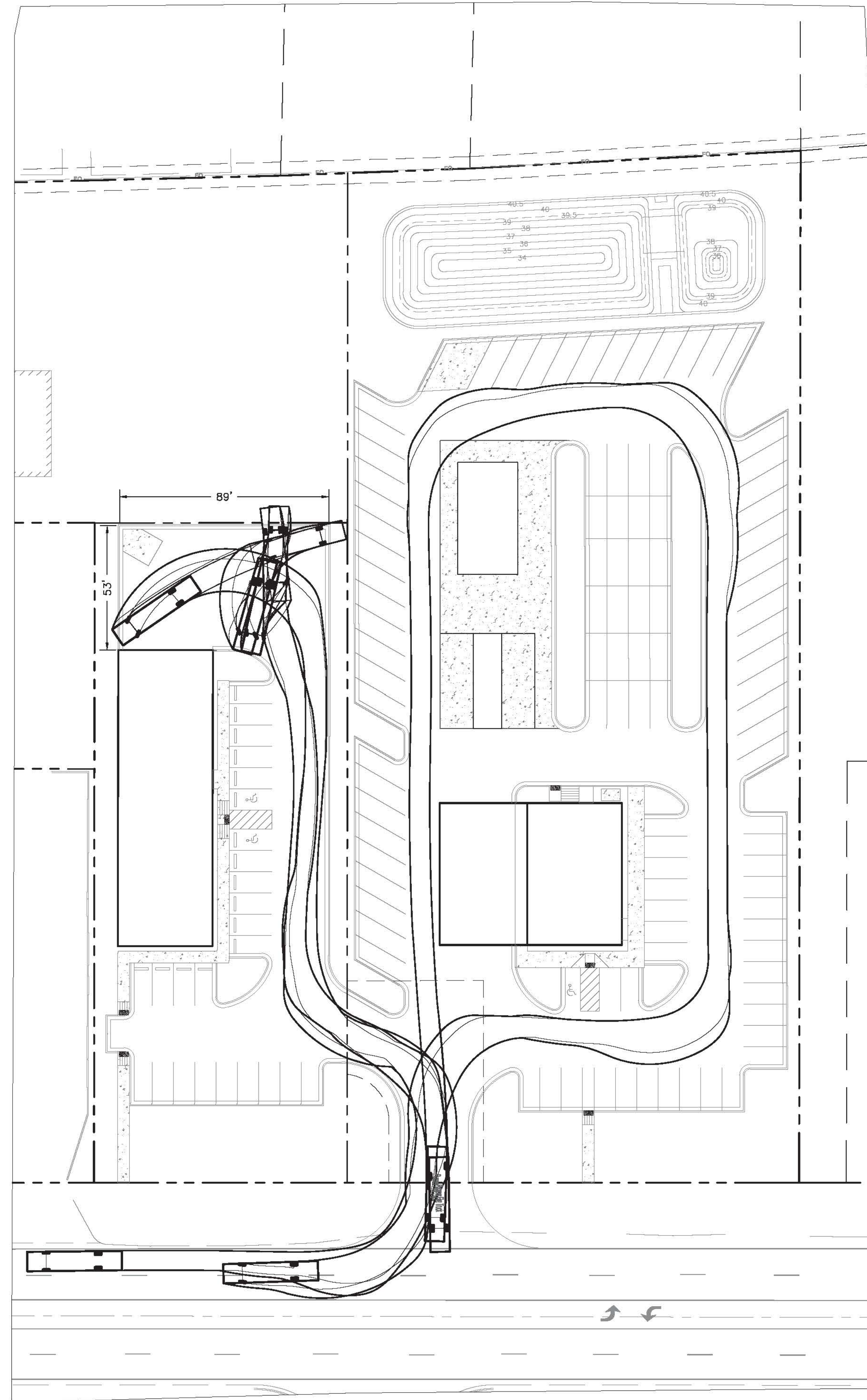
Sheet No.
C-3



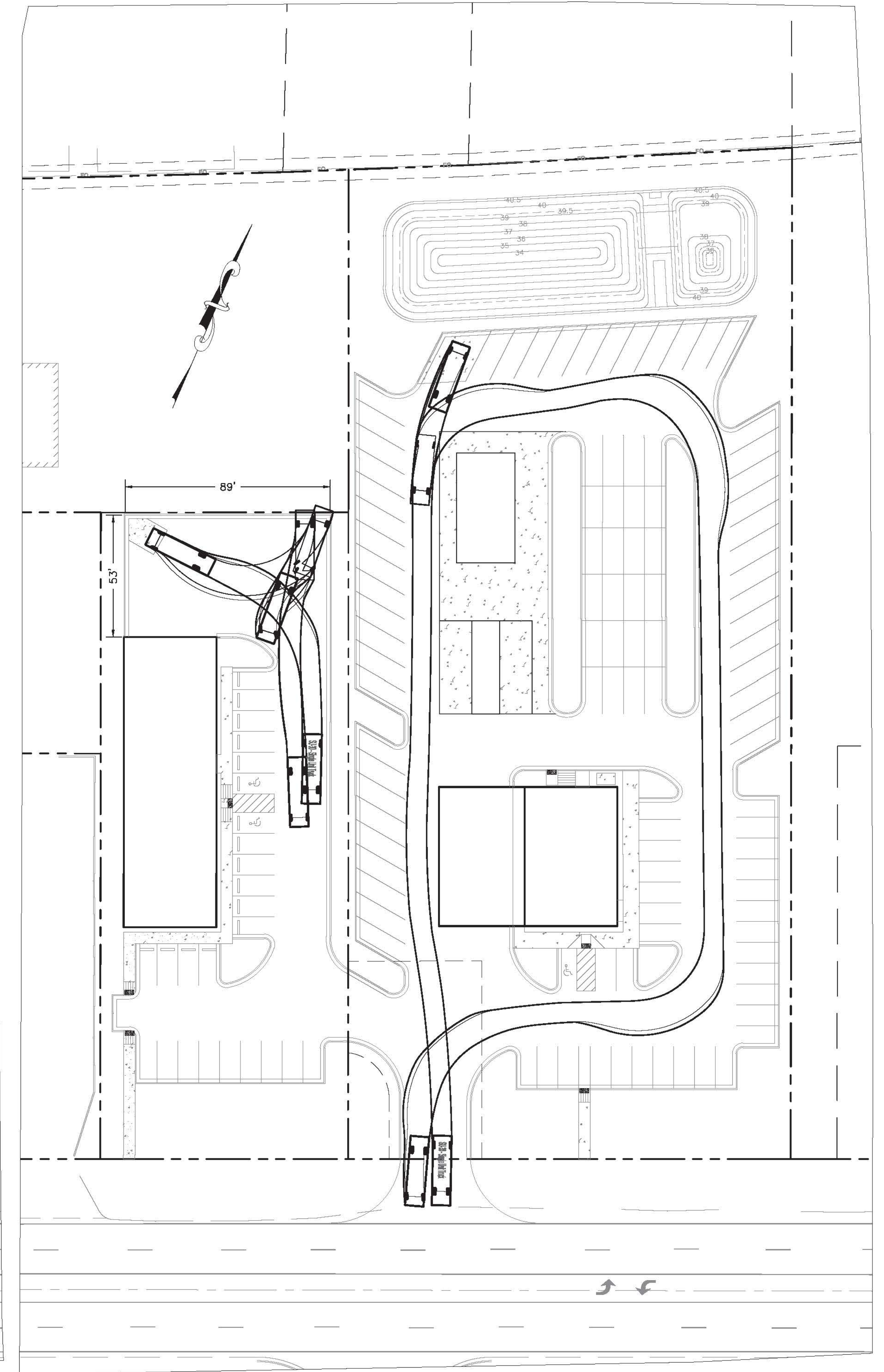
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LOADING TEMPLATE



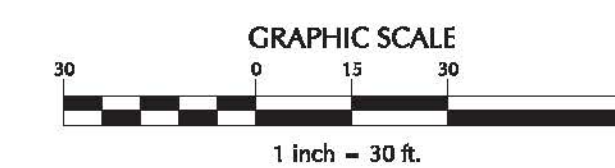
FIRE TRUCK TEMPLATE



GARBAGE TRUCK TEMPLATE

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
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Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2020
Checked By	MNH	Job No.	

WILMINGTON

6721 MARKET

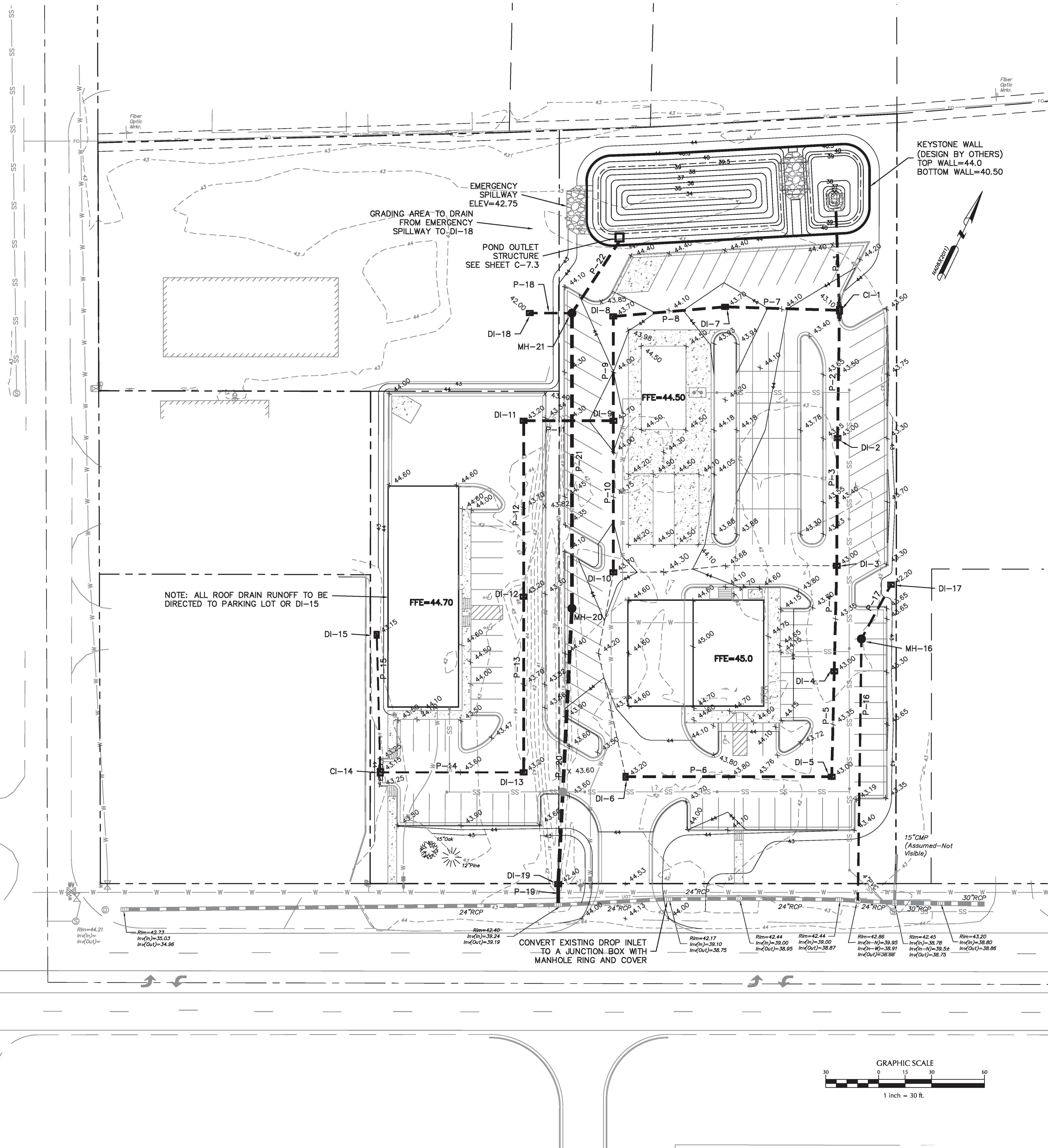
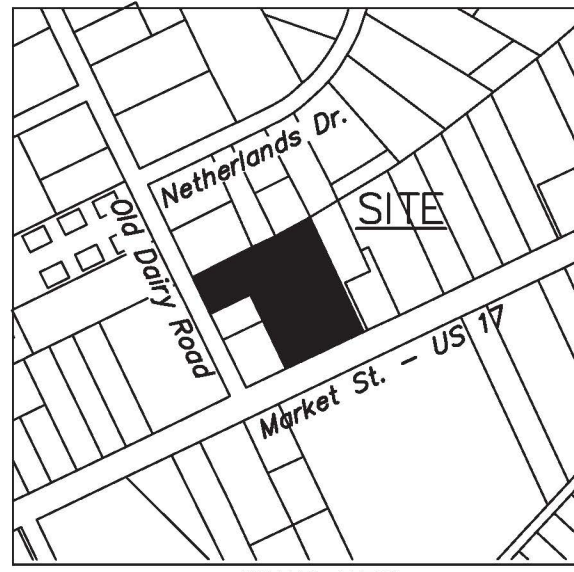
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TRUCK TURNING TEMPLATE

Sheet No.
C-3.1



Line ID	Line Length (ft)	Veloc (ft/s)	Pipe Size (in)	Pipe Slope (%)	Inv Elev Dn (ft)	Inv Elev Up (ft)	Grnd/Rim Dn (ft)	Grnd/Rim Up (ft)
P-1	56	2.08	30	0.30	37.00	37.17	N/A	43.10
P-2	72	2.70	18	1.28	37.17	38.10	43.10	43.00
P-3	72	3.56	15	1.15	38.10	38.93	43.00	43.00
P-4	60	2.44	15	0.30	38.93	39.11	43.00	43.00
P-5	60	1.74	15	0.30	39.11	39.29	43.00	43.00
P-6	117	1.18	15	0.40	39.29	39.76	43.00	43.20
P-7	65	3.01	18	0.31	37.17	37.37	43.10	43.70
P-8	63	2.64	18	0.30	37.37	37.56	43.70	43.70
P-9	59	2.43	18	0.30	37.56	37.74	43.70	43.70
P-10	86	0.70	15	2.29	37.74	39.70	43.70	43.70
P-11	51	1.73	18	0.30	37.74	37.89	43.70	43.20
P-12	100	1.35	18	0.30	37.89	38.19	43.20	43.20
P-13	100	1.41	15	0.30	38.19	38.49	43.20	43.20
P-14	81	0.93	15	0.30	38.49	38.73	43.20	43.15
P-15	78	1.01	12	1.63	38.73	40.00	43.15	43.10
P-16	148	2.70	15	0.30	39.95	40.39	42.86	43.34
P-17	35	2.18	15	0.30	40.39	40.50	43.34	42.20
P-18	24	1.91	15	0.29	40.24	40.31	44.05	42.00
P-19	11	5.41	24	0.28	39.24	39.27	42.40	42.40
P-20	156	4.50	24	0.30	39.27	39.74	42.40	44.35
P-21	167	4.42	24	0.30	39.74	40.24	44.35	44.05
P-22	49	5.72	18	0.53	40.24	40.40	44.05	42.30

NOTE:
P-1 THRU P-14 TO BE RCP CL III
P-15 THRU P-22 TO BE HDPE

NOTE: NO WETLANDS EXIST ON SITE

	Inv Elev Up (ft)	Grnd/Rim Up (ft)
CI-1	37.17	43.10
DI-2	38.10	43.00
DI-3	38.93	43.00
DI-4	39.11	43.00
DI-5	39.29	43.00
DI-6	39.76	43.20
DI-7	37.37	43.70
DI-8	37.56	43.70
DI-9	37.74	43.70
DI-10	39.70	43.70
DI-11	37.89	43.20
DI-12	38.19	43.20
DI-13	38.49	43.20
DI-14	38.73	43.15
DI-15	40.00	43.10
MH-16	40.39	43.34
DI-17	40.50	42.20
DI-18	40.31	42.00
DI-19	39.27	42.40
MH-20	39.74	44.35
MH-21	40.24	44.05

CI - CURB INLET
DI - DROP INLET
MH - MANHOLE



APPROVED STORMWATER MANAGEMENT PLAN

Date: Permit #

Signed:

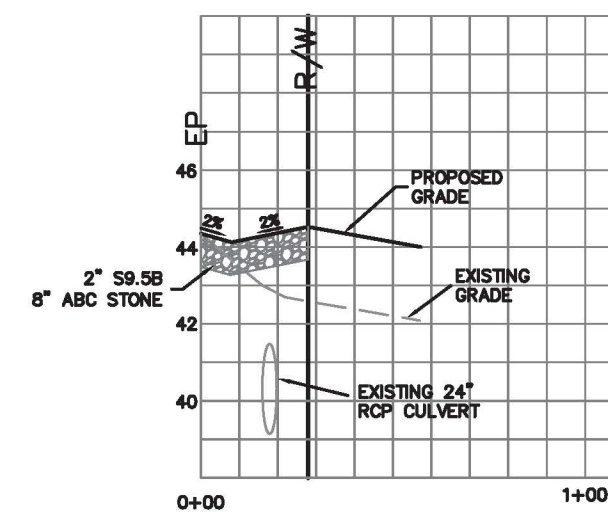
Approved Construction Plan

Name Date

Planning

Traffic

Fire



ENTRANCE DRIVEWAY PROFILE

7/10/2020

No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2020
Checked By	MNH	Job No.	

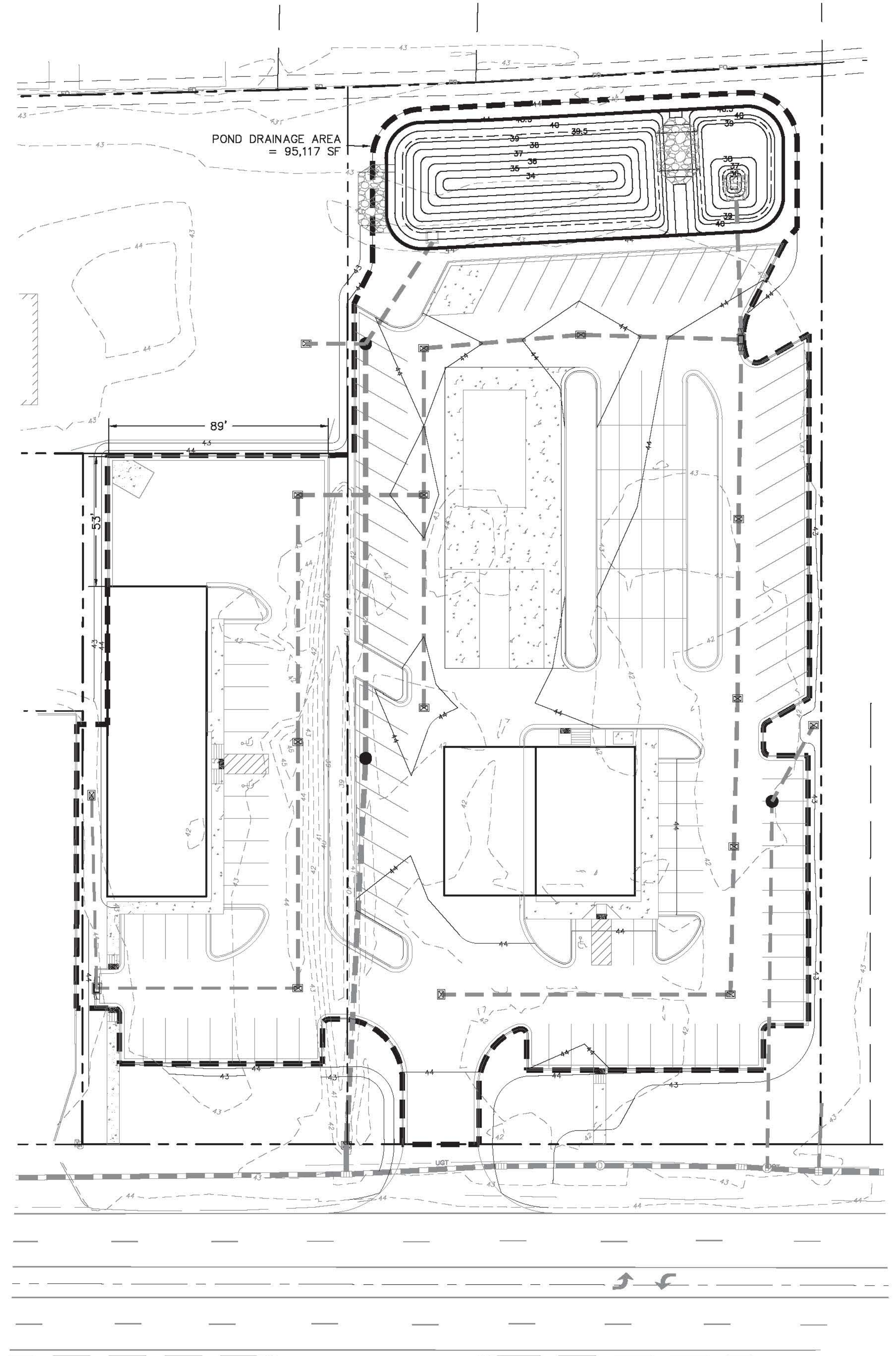
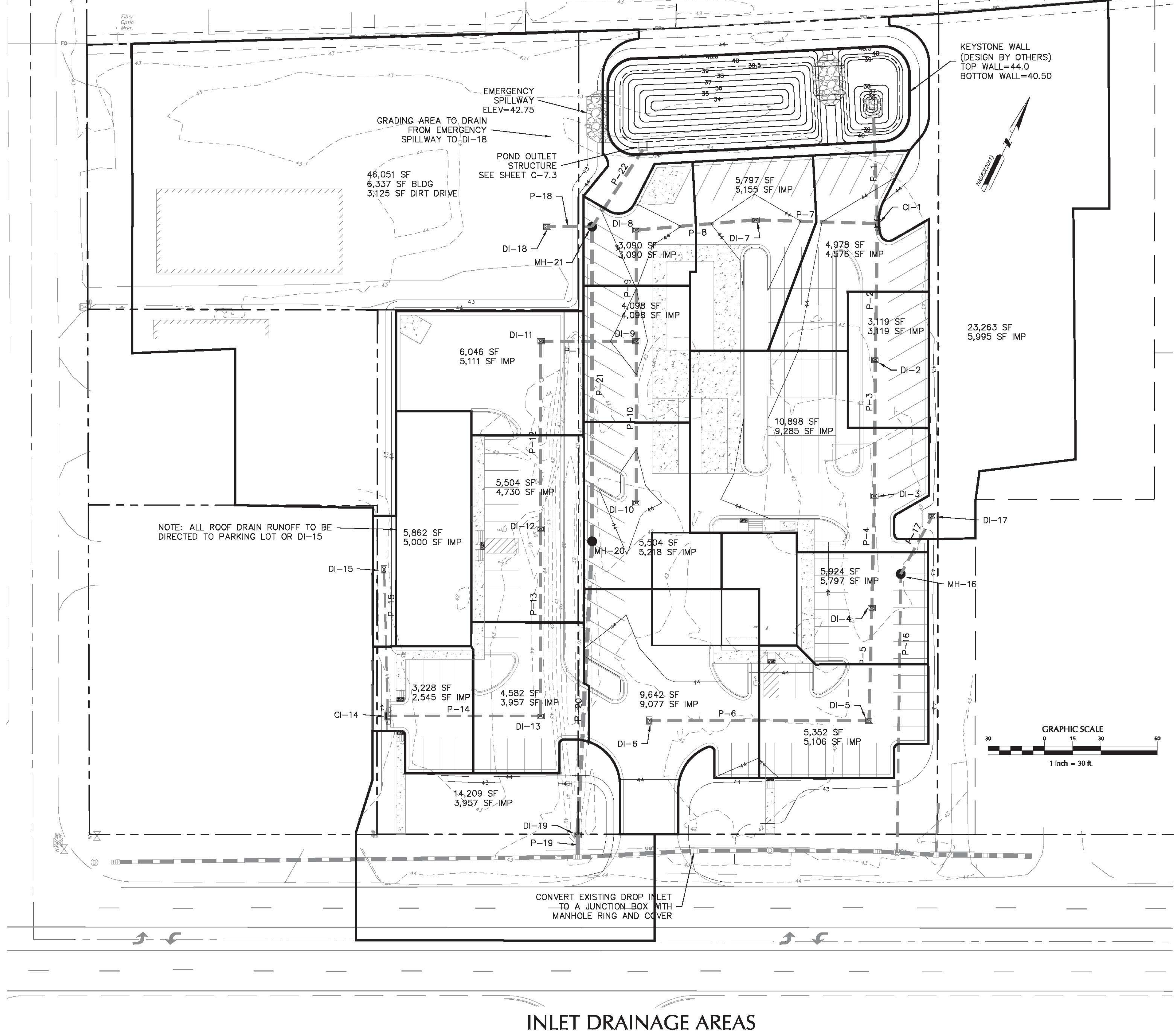
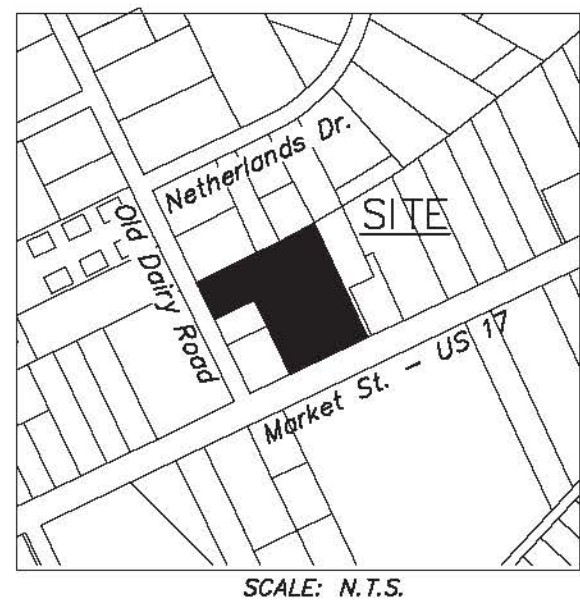
6721 MARKET
WILMINGTON
NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401

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GRADING & DRAINAGE PLAN

Sheet No.
C-4



POND DRAINAGE AREA

City of WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
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Approved Construction Plan
Name _____ Date _____
Planning _____
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Fire _____

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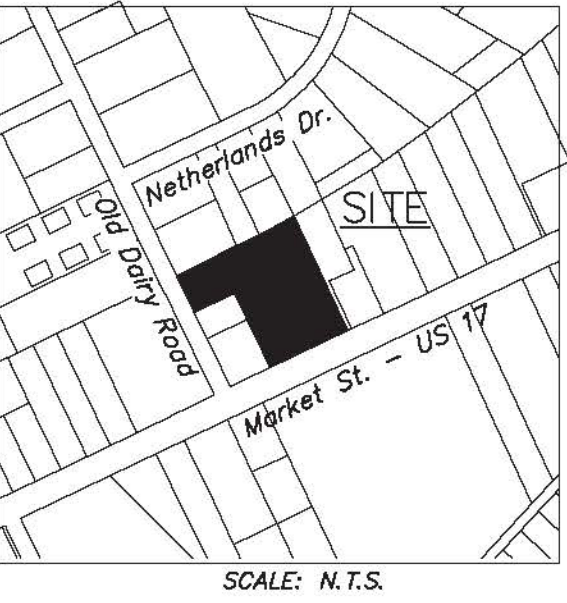
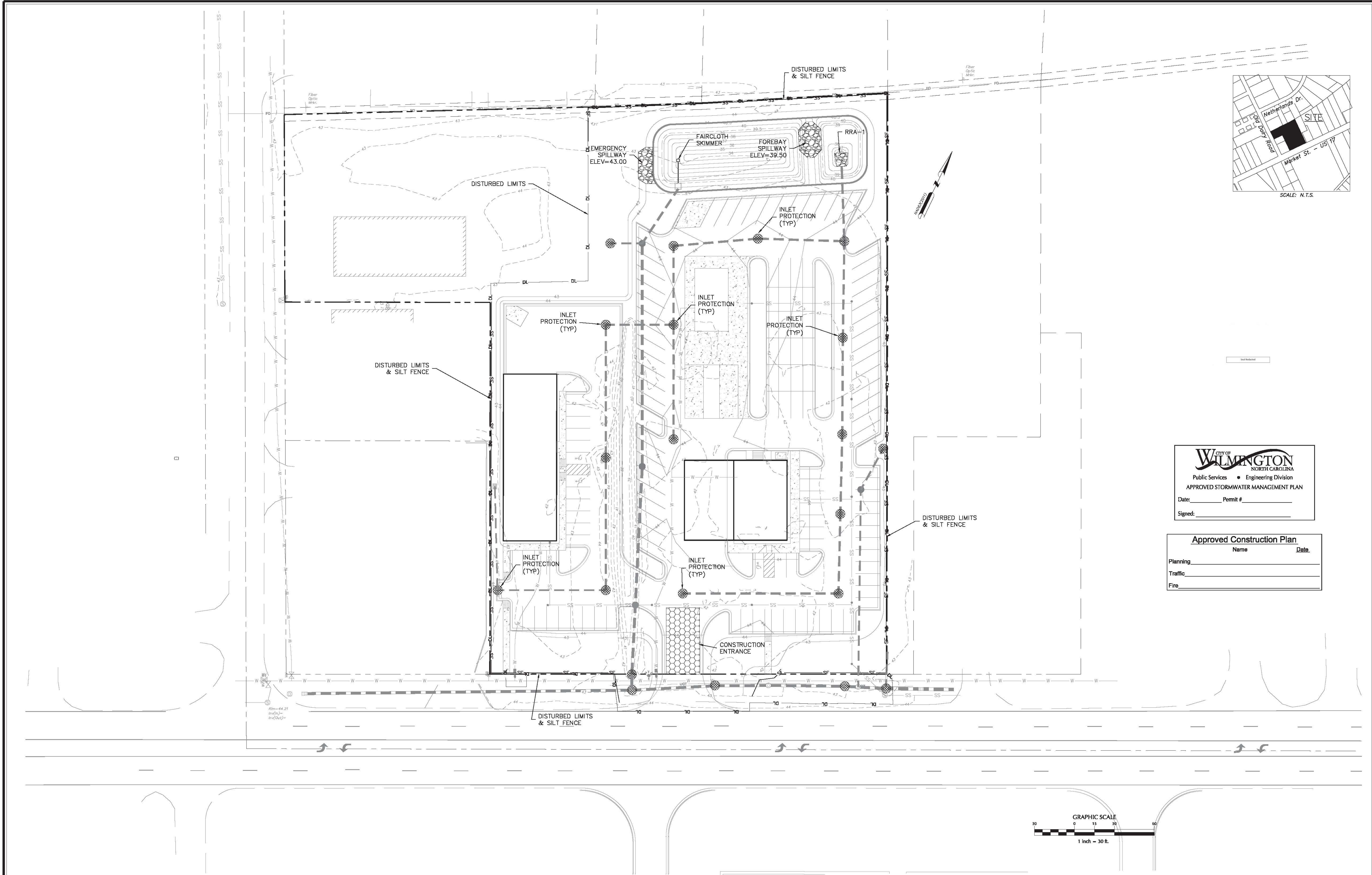
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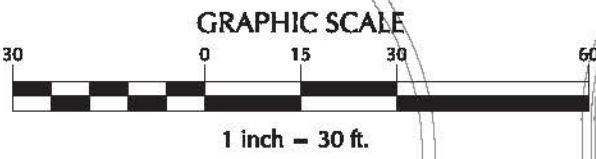
DRAINAGE AREAS

Sheet No.
C-4.1

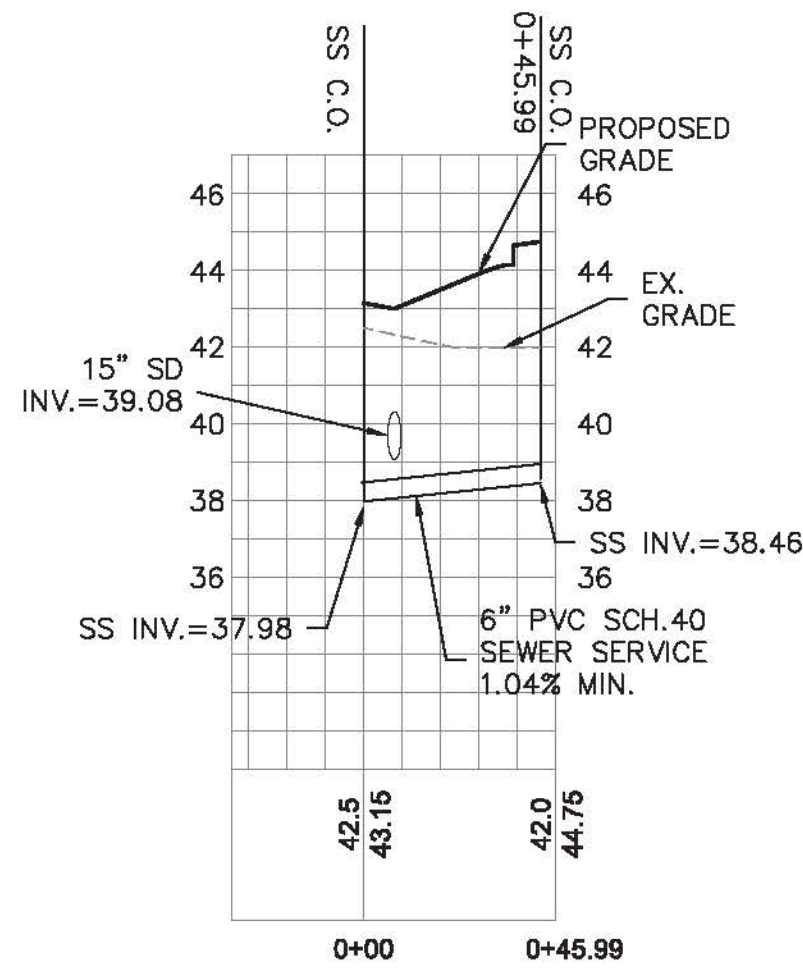
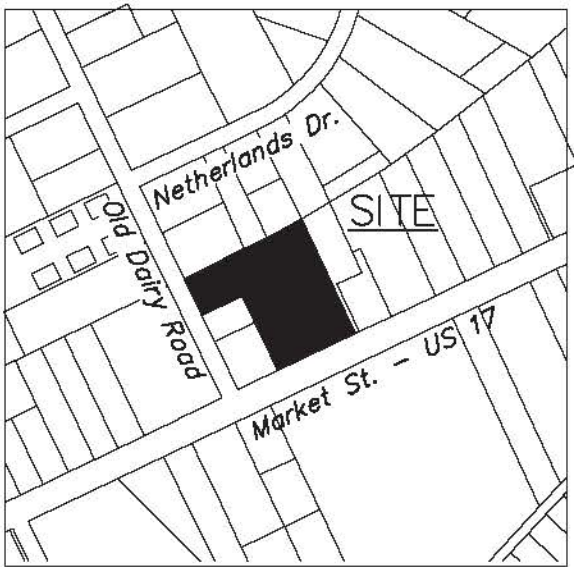


CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
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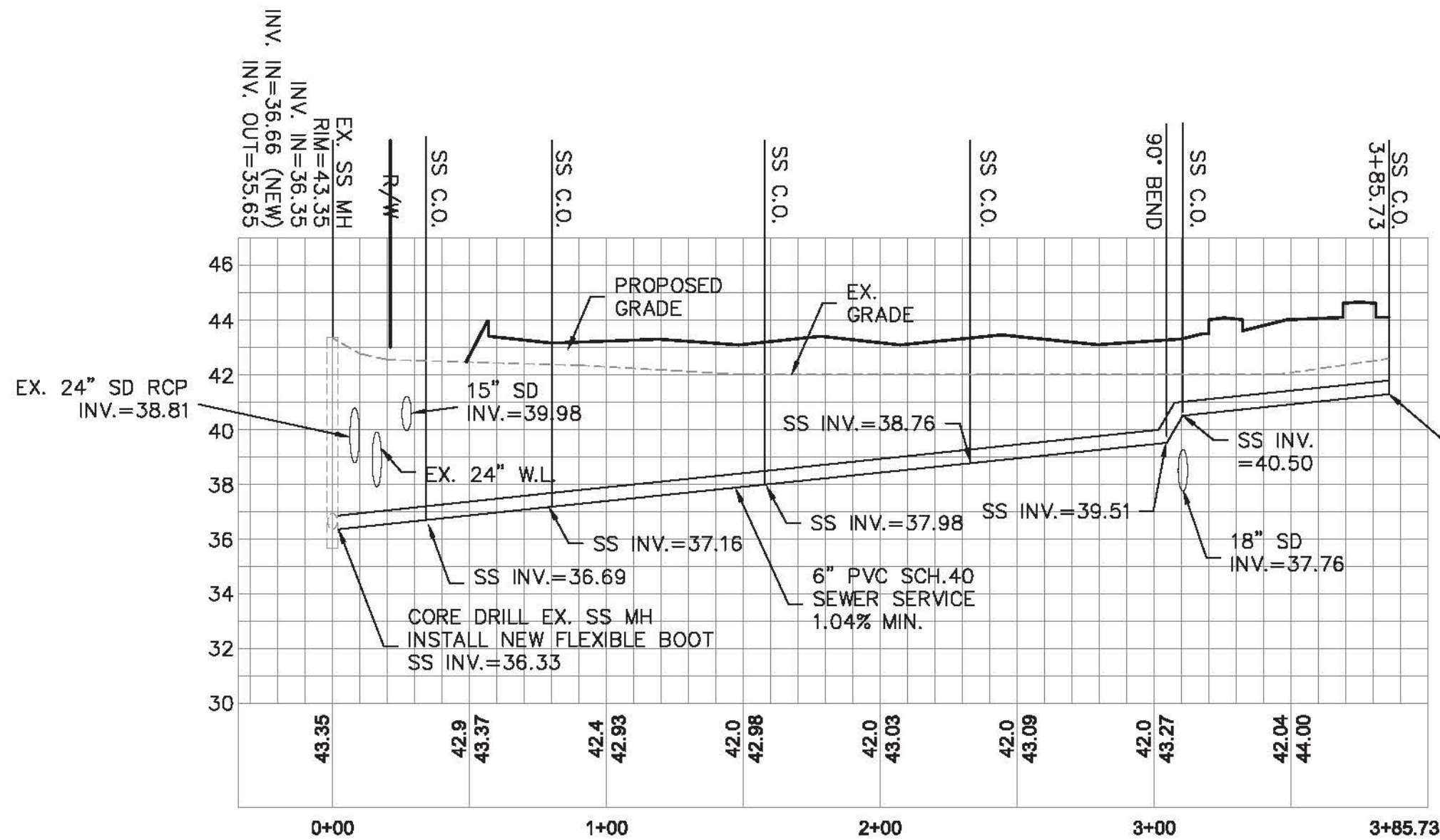
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				Drawn By MNH	Date JULY, 2020					
				Checked By	Job No.					
				MNH						



ENTERPRISE OFFICE BUILDING
SEWER SERVICE

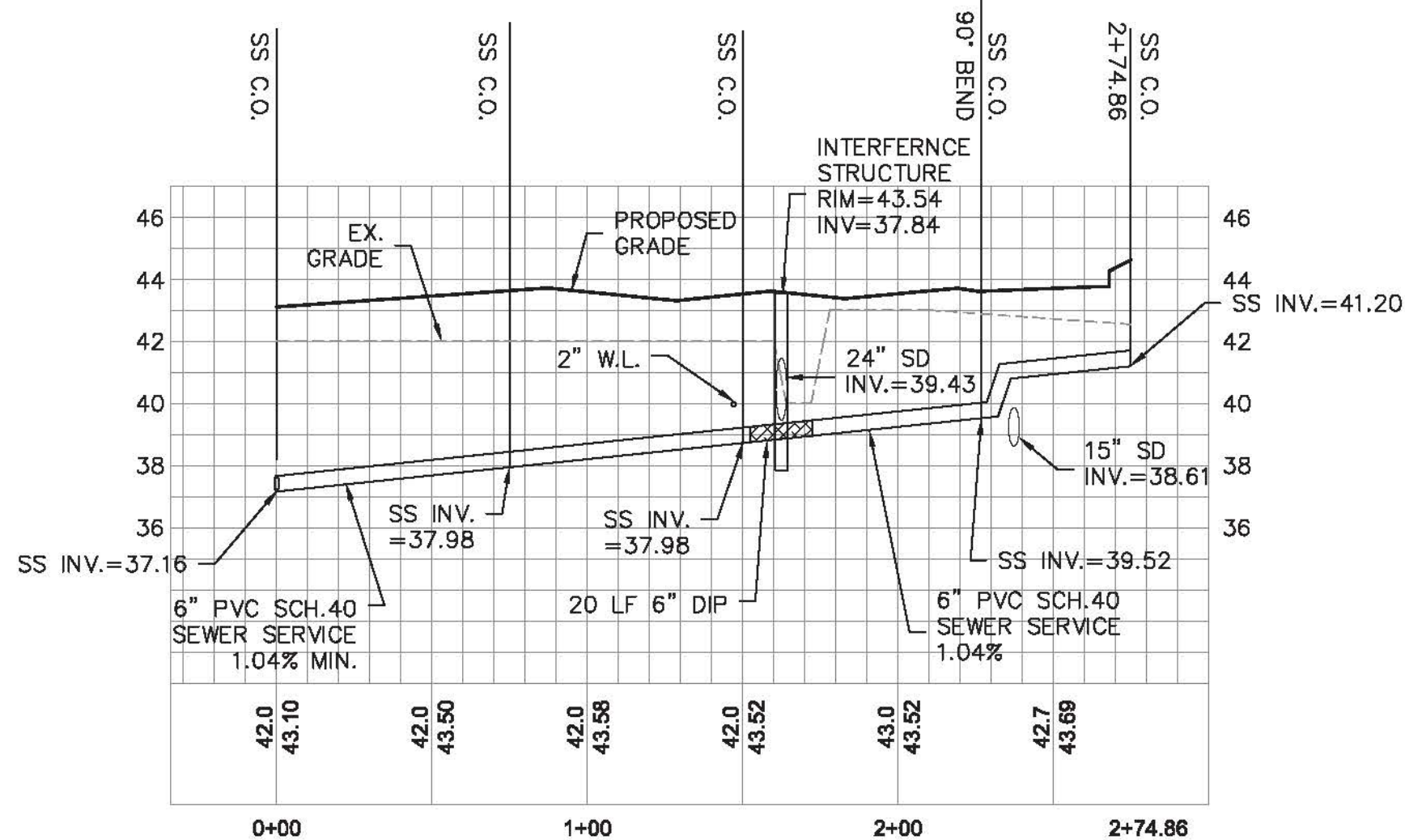
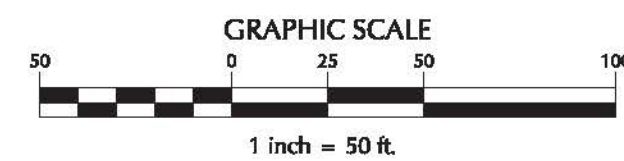
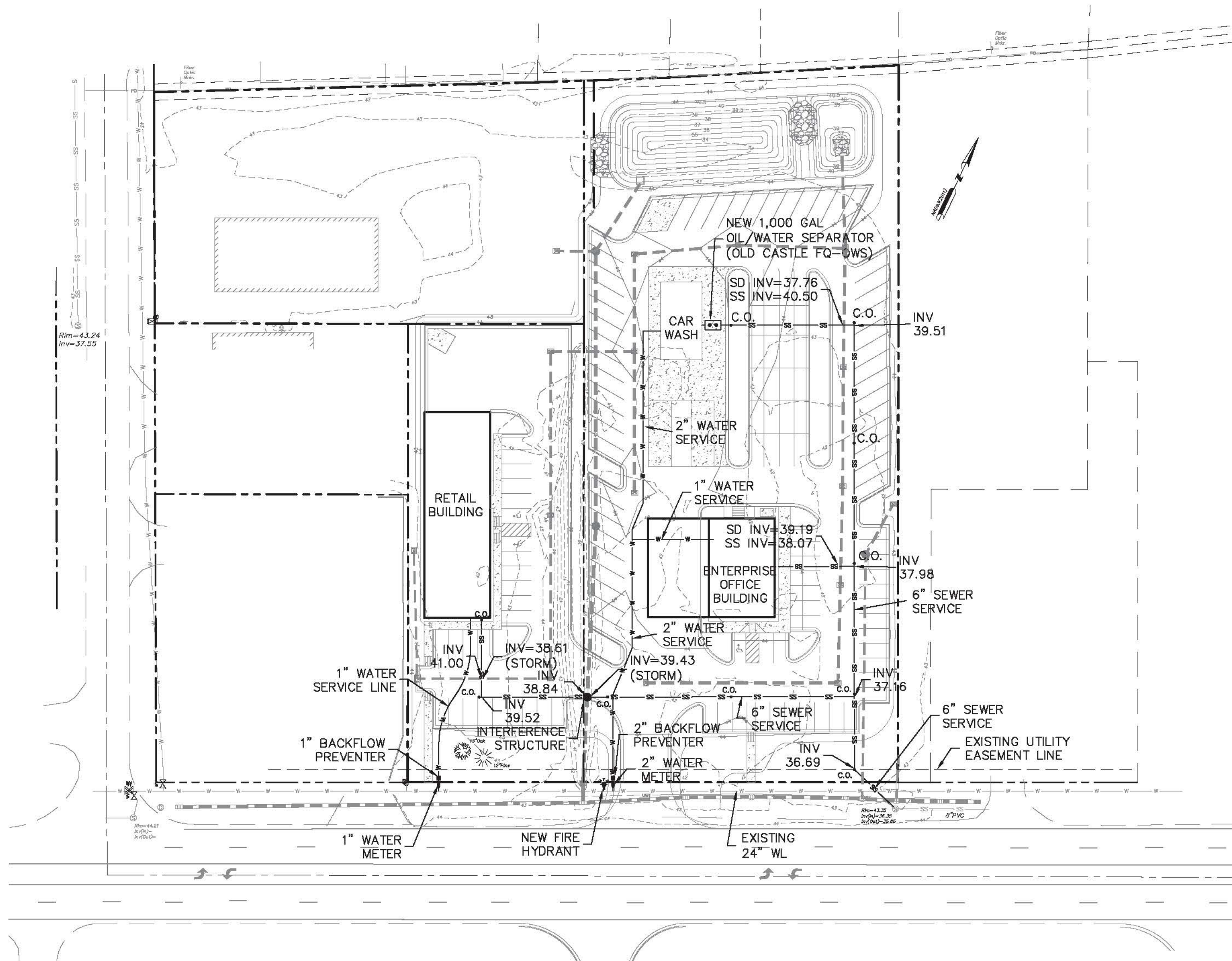
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EX. SS MH TO CARWASH SEWER SERVICE

PROFILE
1"=50' (HORZ.)
1"=5' (VERT.)



RETAIL BUILDING SEWER SERVICE

Fire & Life Safety Notes:

- Contractor shall maintain an all weather access for emergency vehicles at all times during construction.
- Hydrants must be brought into service prior to combustible materials delivered to the job site.
- Landscaping or parking cannot block or impede fire hydrants. A 3-foot clear space shall be maintained around the circumference of hydrants at all times.
- Additional fire protection and/or accessibility requirements may be required due to any special circumstances concerning the project.
- Private Underground Fire Lines require a separate underground fire line permit from the Wilmington Fire and Life Safety Division (910-343-0696).
- Contractor shall submit a Radio Signal Strength Study for all commercial buildings that demonstrates that existing emergency responder radio signal levels meet the requirements of Section 510 and of 2018 NC Fire Code.
- The FDC must be within 150' of a fire hydrant & within 40' of fire apparatus placement.
- Installation of security gates across a fire apparatus road or parking lot shall be approved by the fire department.

CFPUA STANDARD SEWER NOTES:

- ALL PROPOSED ADDITIONS TO THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) WATER DISTRIBUTION AND SANITARY SEWER COLLECTION SYSTEMS, AS SHOWN AND SPECIFIED HEREIN, SHALL BE DESIGNED AND CONSTRUCTED TO CONFORM TO STATE RULES AND CFPUA'S MINIMUM TECHNICAL STANDARDS. THE CFPUA MINIMUM TECHNICAL STANDARDS ARE CONTAINED IN THE CURRENT DESIGN GUIDANCE MANUAL, MATERIAL SPECIFICATIONS MANUAL, TECHNICAL SPECIFICATIONS FOR CONSTRUCTION, AND STANDARD DRAWING DETAILS.
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREA.
- WATER & SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE 18" INSIDE RIGHT-OF-WAY. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN MANHOLE AND TERMINATE 18" INSIDE RIGHT-OF-WAY LINE.
- ALL SEWER SERVICES CONNECTING INTO DUCTILE IRON MAINS SHALL ALSO BE CONSTRUCTED OF DIP.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.
- CLEANOUTS SHALL BE LOCATED A MINIMUM OF 6 FEET FROM ALL PROPERTY CORNERS.
- WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNERS.
- UNUSED SERVICES SHALL BE ABANDONED, ABANDONED WATER SERVICES SHALL BE DISCONNECTED FROM MAIN.
- A MINIMUM OF 10' OF MAIN LINE, 5' UPSTREAM AND 5' DOWNSTREAM SHALL BE REPLACED FOR NEW SEWER SERVICES CONNECTIONS ON EXISTING CLAY GRAVITY SEWER MAINS.
- A MINIMUM OF 20' OF MAIN LINE, 10' UPSTREAM AND 10' DOWNSTREAM SHALL BE REPLACED FOR NEW CUT IN MANHOLES ON EXISTING CLAY GRAVITY SEWER MAINS.
- PROVIDE A MINIMUM DISTANCE OF SIX (6) INCHES BETWEEN EDGES OF CORE HOLES. CORING THE MANHOLE CONE IS NOT PERMITTED.
- WATER MAIN AND FORCE MAIN PIPE INSTALLED BY OPEN CUT SHALL BE BURIED AT A MINIMUM OF THREE (3) FEET AND A MAXIMUM OF FIVE (5) FEET MUST BE APPROVED BY CFPUA.
- ALL MANHOLE MAIN LINE AND SERVICE PIPING TO BE INSTALLED AT A MINIMUM OF CROWN TO CROWN OF HTE LARGEST DIAMETER PIPE.

No.	Revision	Date	By

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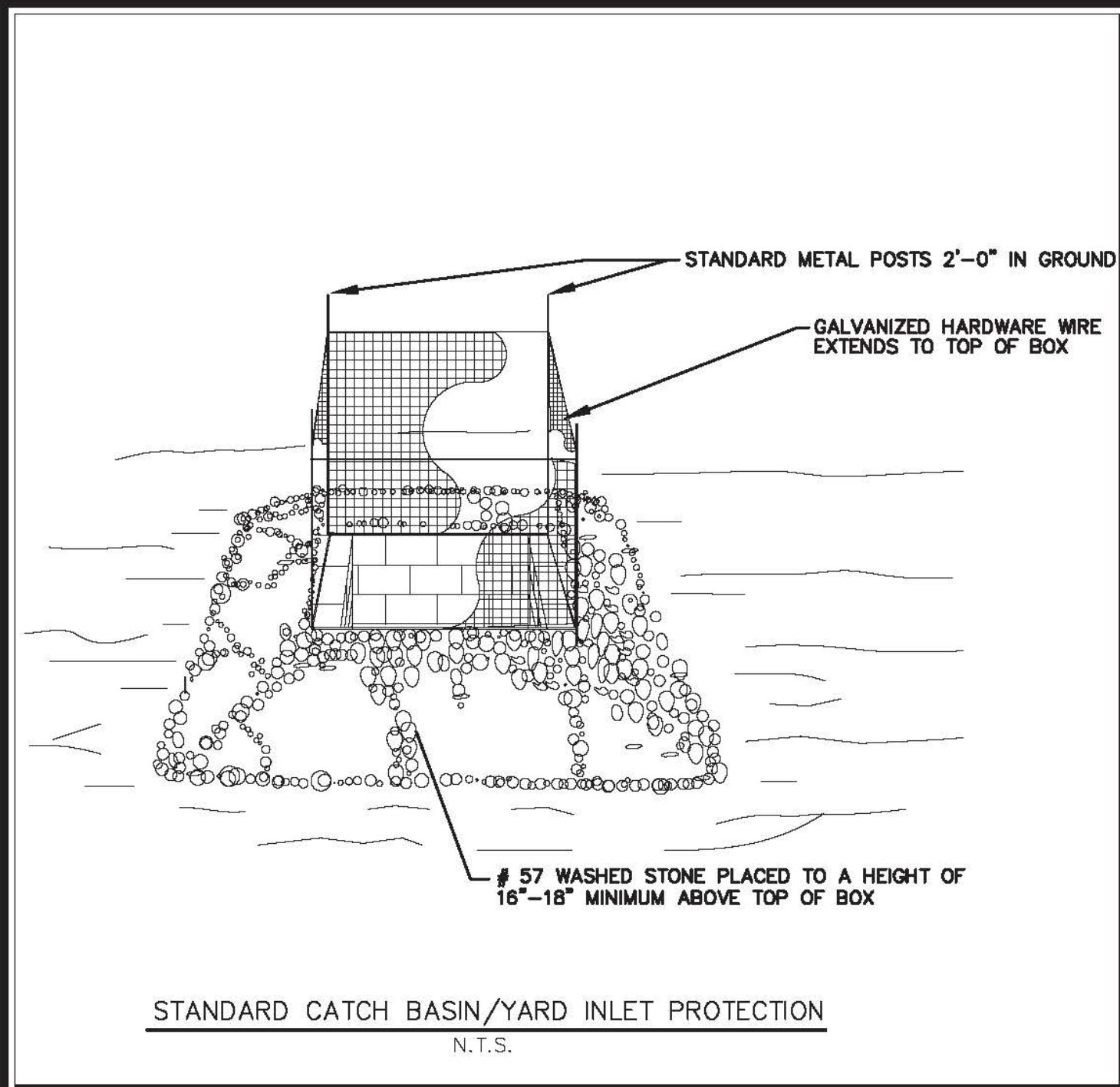
6721 MARKET	NORTH CAROLINA
WILMINGTON	

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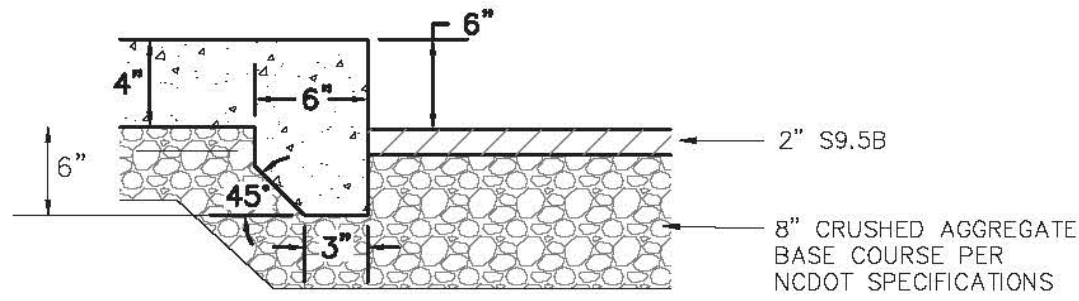
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910-599-1744 LICENSE No. P-1032

UTILITY PLAN

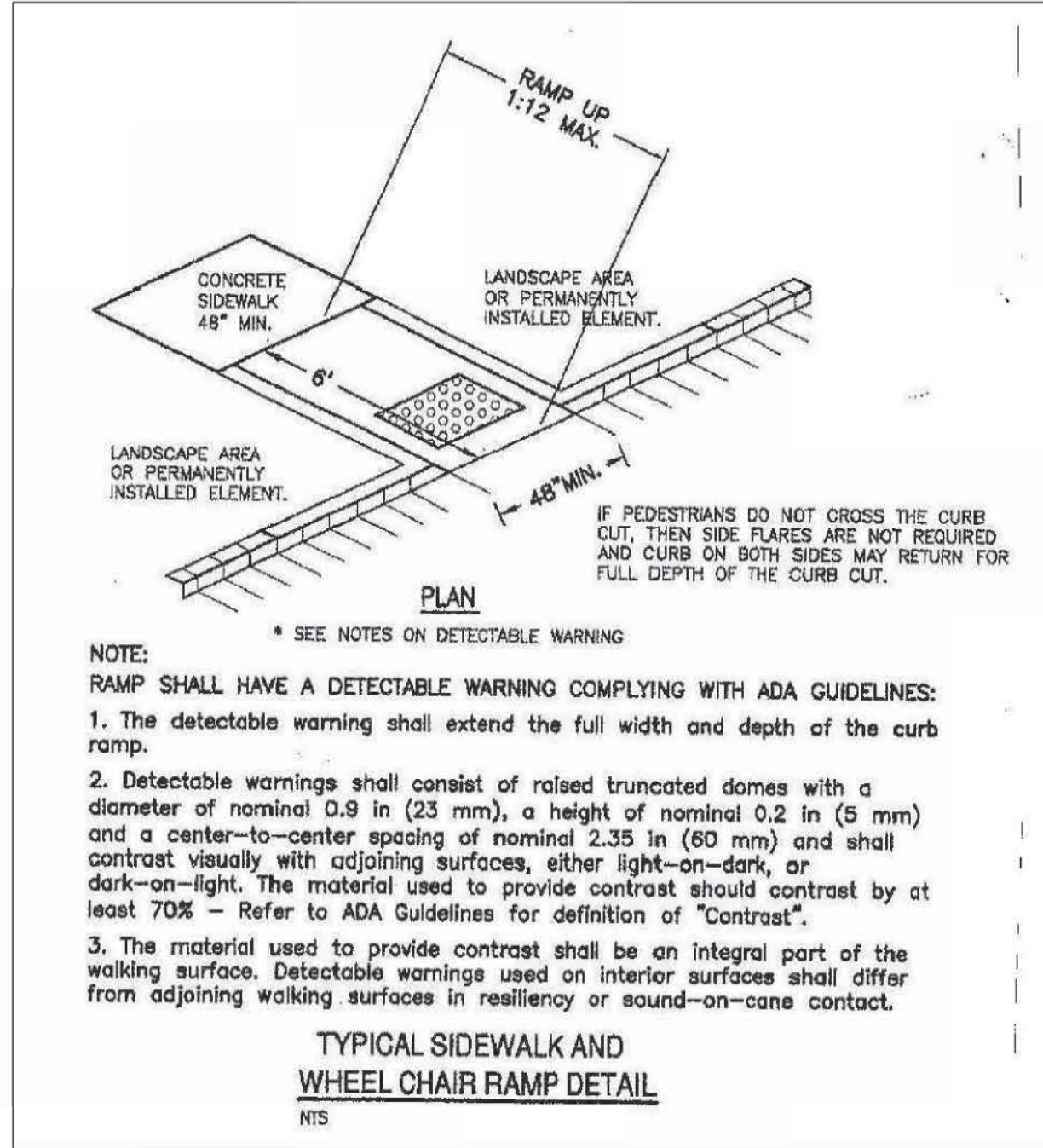
Sheet No.
C-6.0



STANDARD CATCH BASIN/YARD INLET PROTECTION
N.T.S.

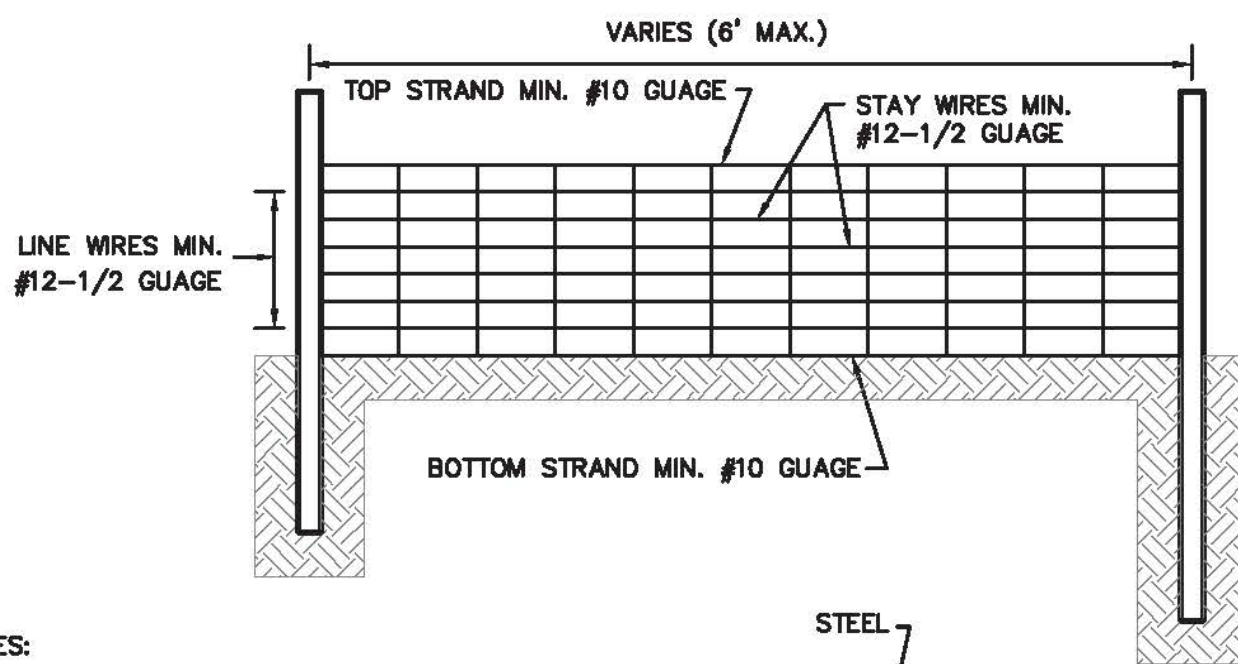


TURN-DOWN SIDEWALK
N.T.S.



NOTE:
RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH ADA GUIDELINES:
1. The detectable warning shall extend the full width and depth of the curb ramp.
2. Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 in (23 mm), a height of nominal 0.2 in (5 mm) and a center-to-center spacing of nominal 2.35 in (60 mm) and shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light. The material used to provide contrast should contrast by at least 70% - Refer to ADA Guidelines for definition of "Contrast".
3. The material used to provide contrast shall be an integral part of the walking surface. Detectable warnings used on interior surfaces shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact.

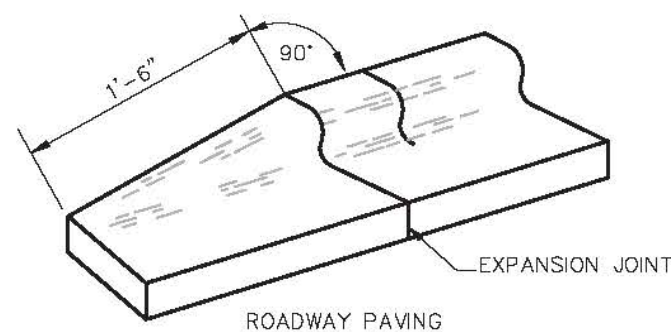
TYPICAL SIDEWALK AND
WHEELCHAIR RAMP DETAIL
N.T.S.



- NOTES:
1. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES W/12" STAY SPACING
 2. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE
 3. STEEL POST SHALL BE 5' 0" IN HEIGHT AND BE OF SELF FASTENER ANGLE STEEL TYPE

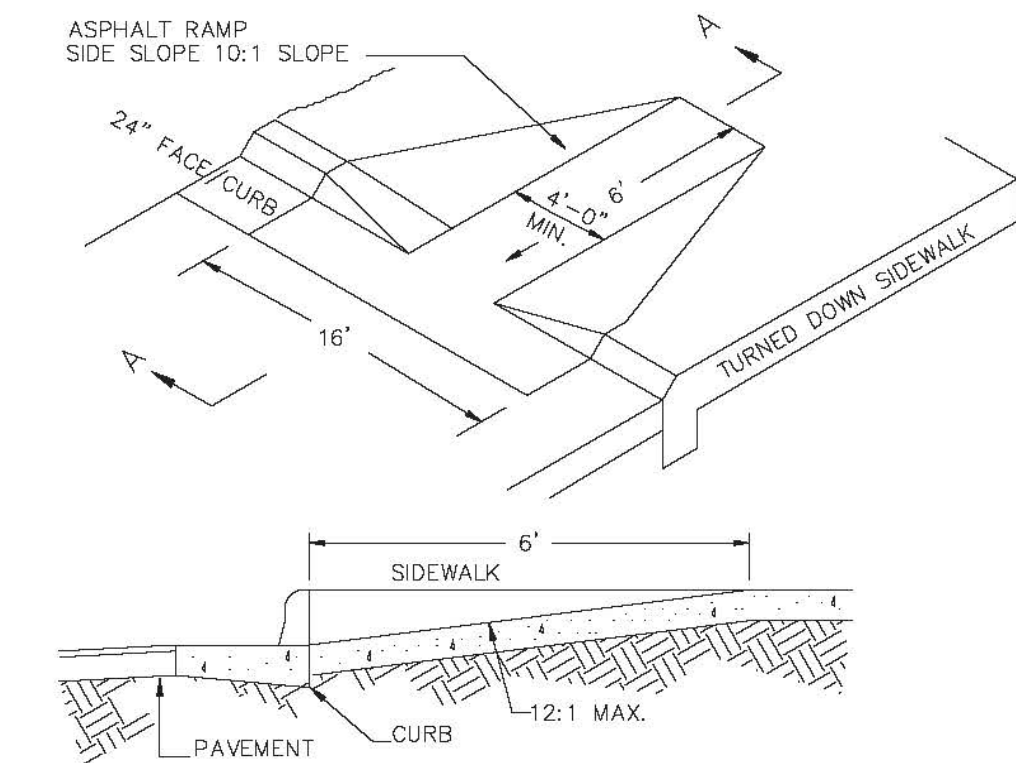
CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____

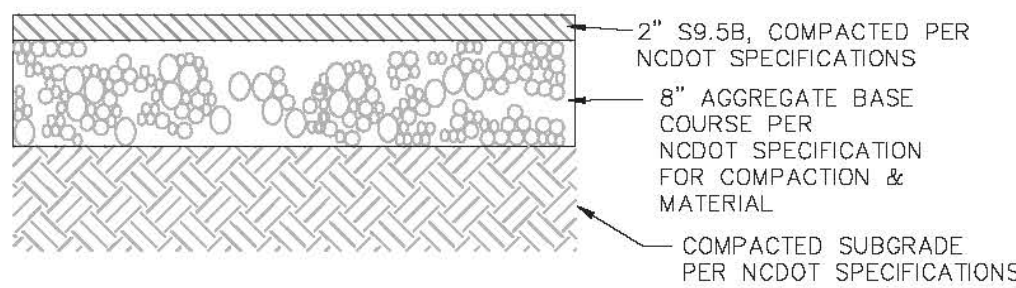


24" CURB & GUTTER
TERMINATION DETAIL

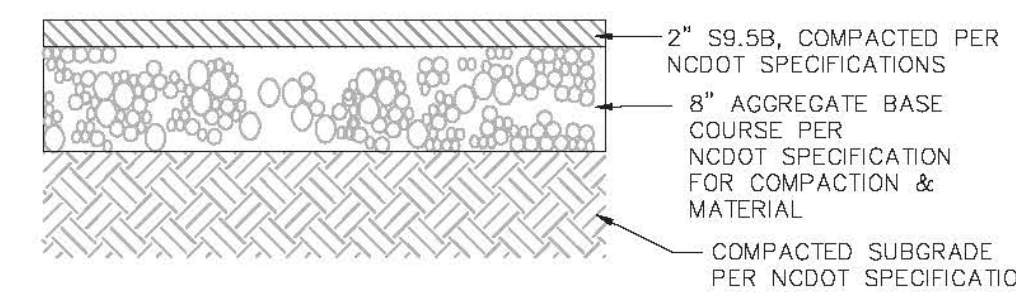
CURB AND GUTTER
N.T.S.



SECTION A-A
WHEELCHAIR RAMP (DROP CURB)
N.T.S.

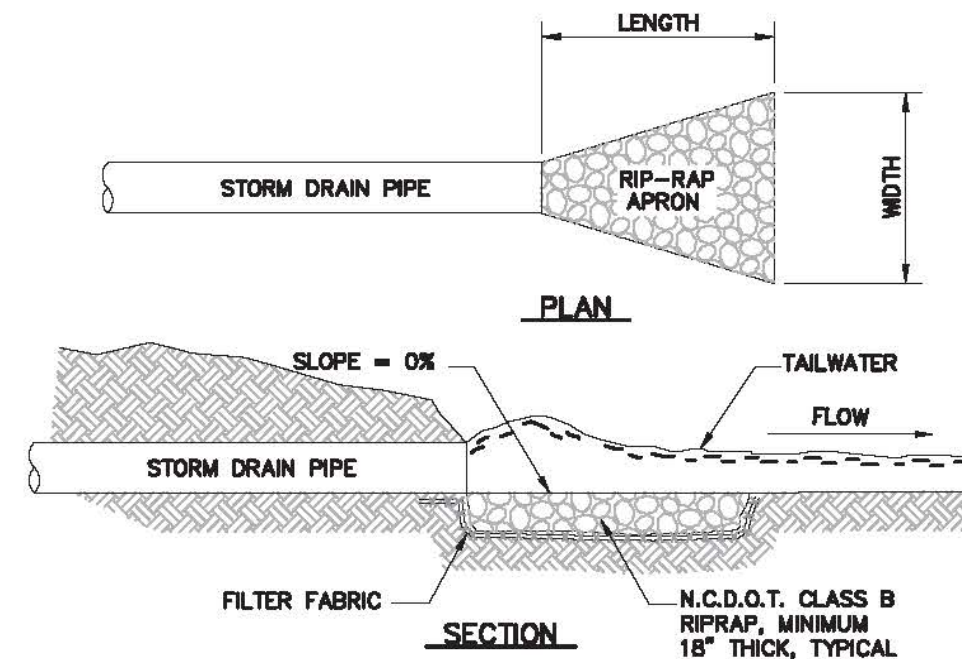


PARKING LOT PAVEMENT DETAIL
N.T.S.



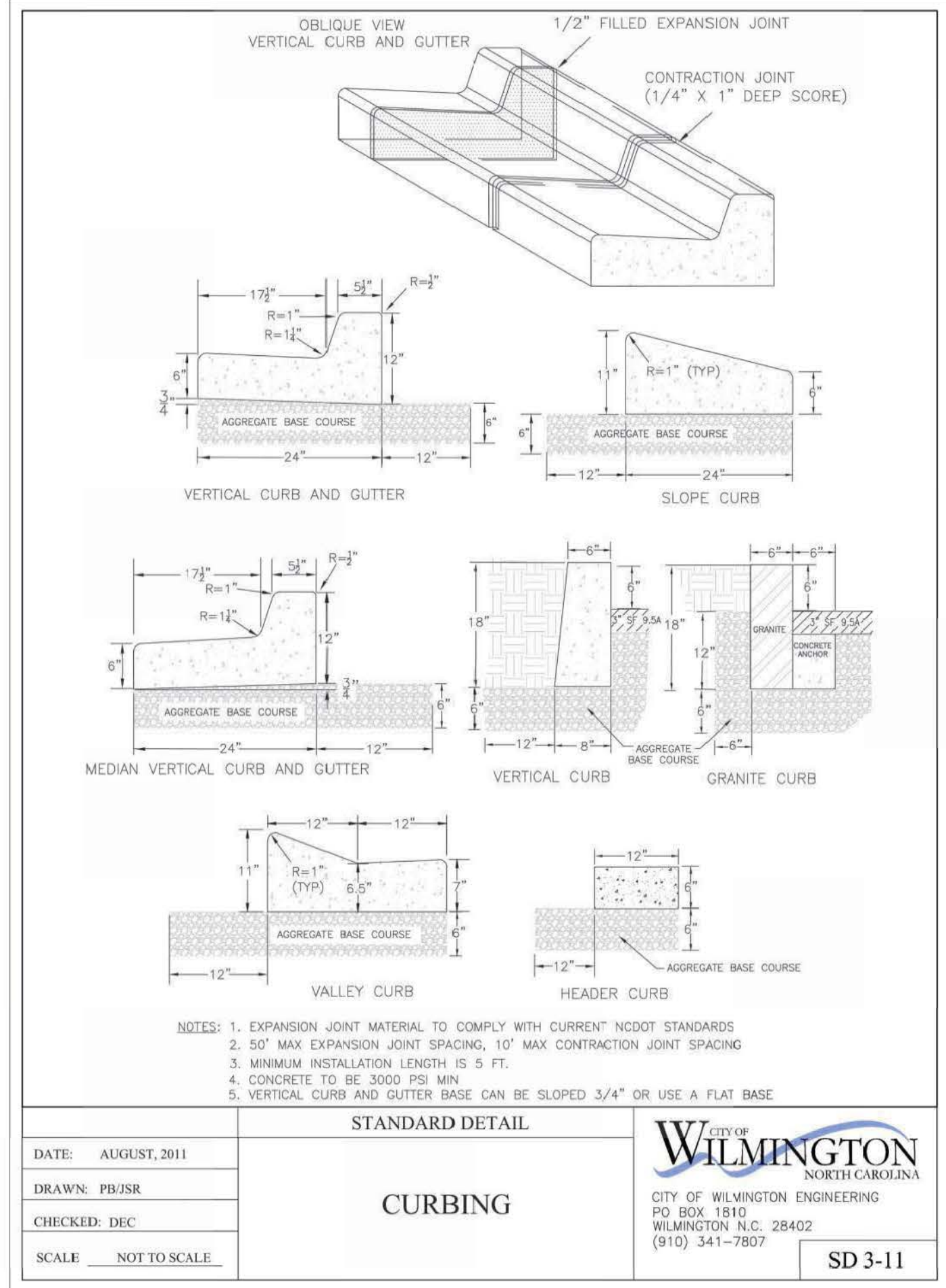
PAVING DETAIL WITHIN NCDOT R/W
N.T.S.

SILT FENCE
N.T.S.

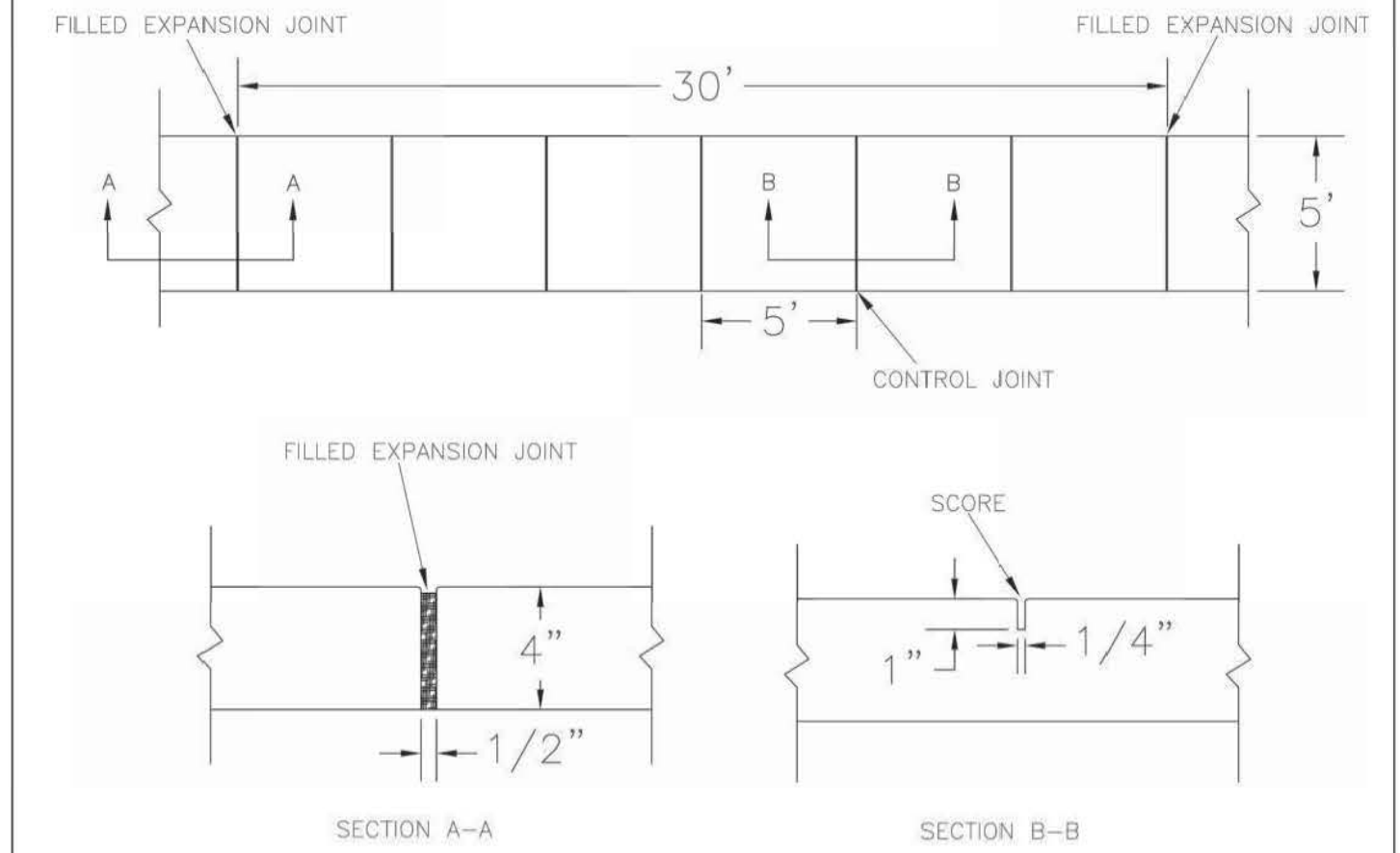


RIP-RAP SCHEDULE				
#	PIPE DIA. (IN.)	LENGTH (FT.)	UPSTREAM WIDTH (FT.)	DOWNSIDE WIDTH (FT.)
RRA-1	30"	10.0	7.5'	10.0

RIP-RAP APRON
N.T.S.

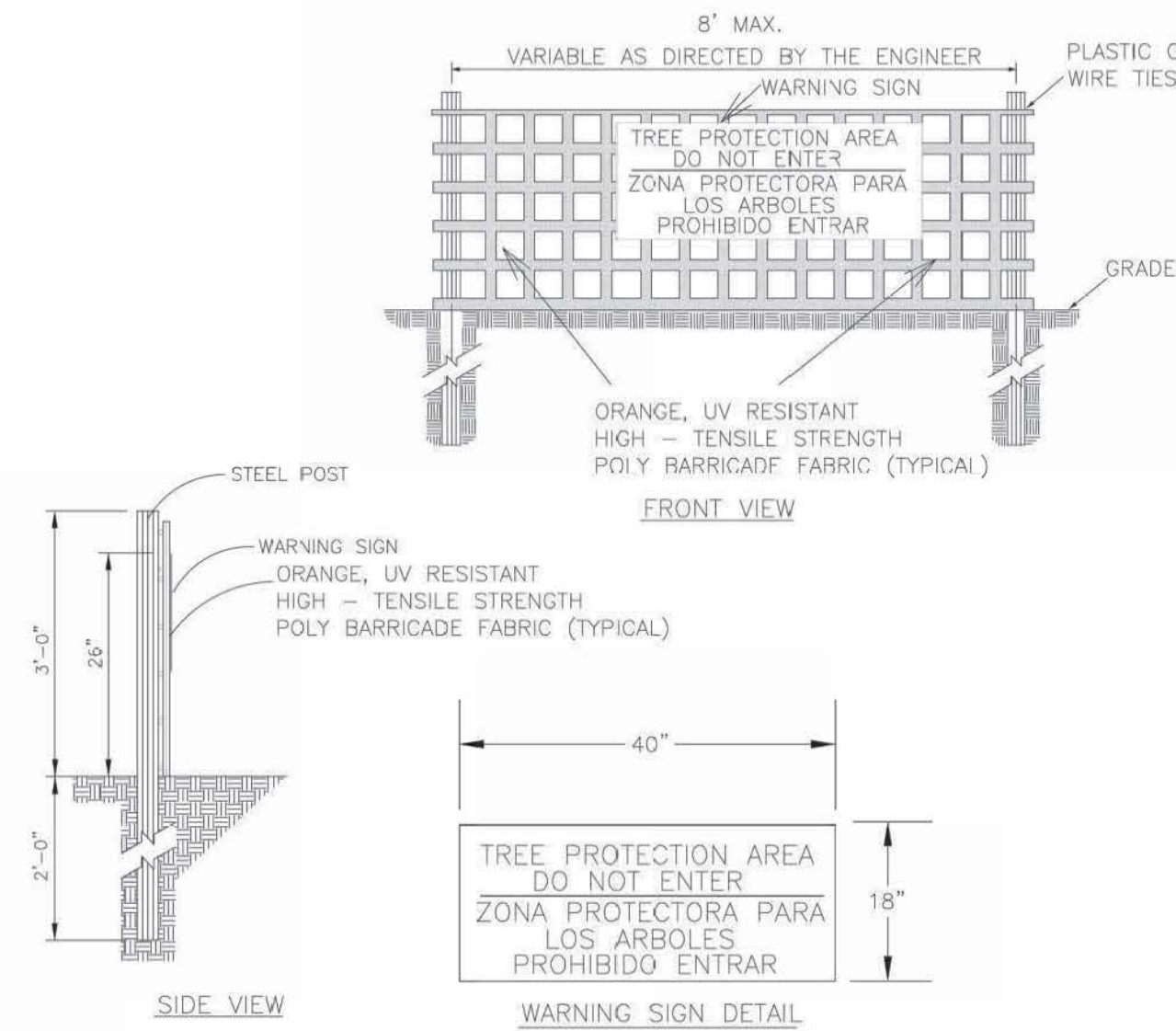


STANDARD DETAIL
CURBING
DATE: AUGUST, 2011
DRAWN: PBJSR
CHECKED: DEC
SCALE: NOT TO SCALE
CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 3-11



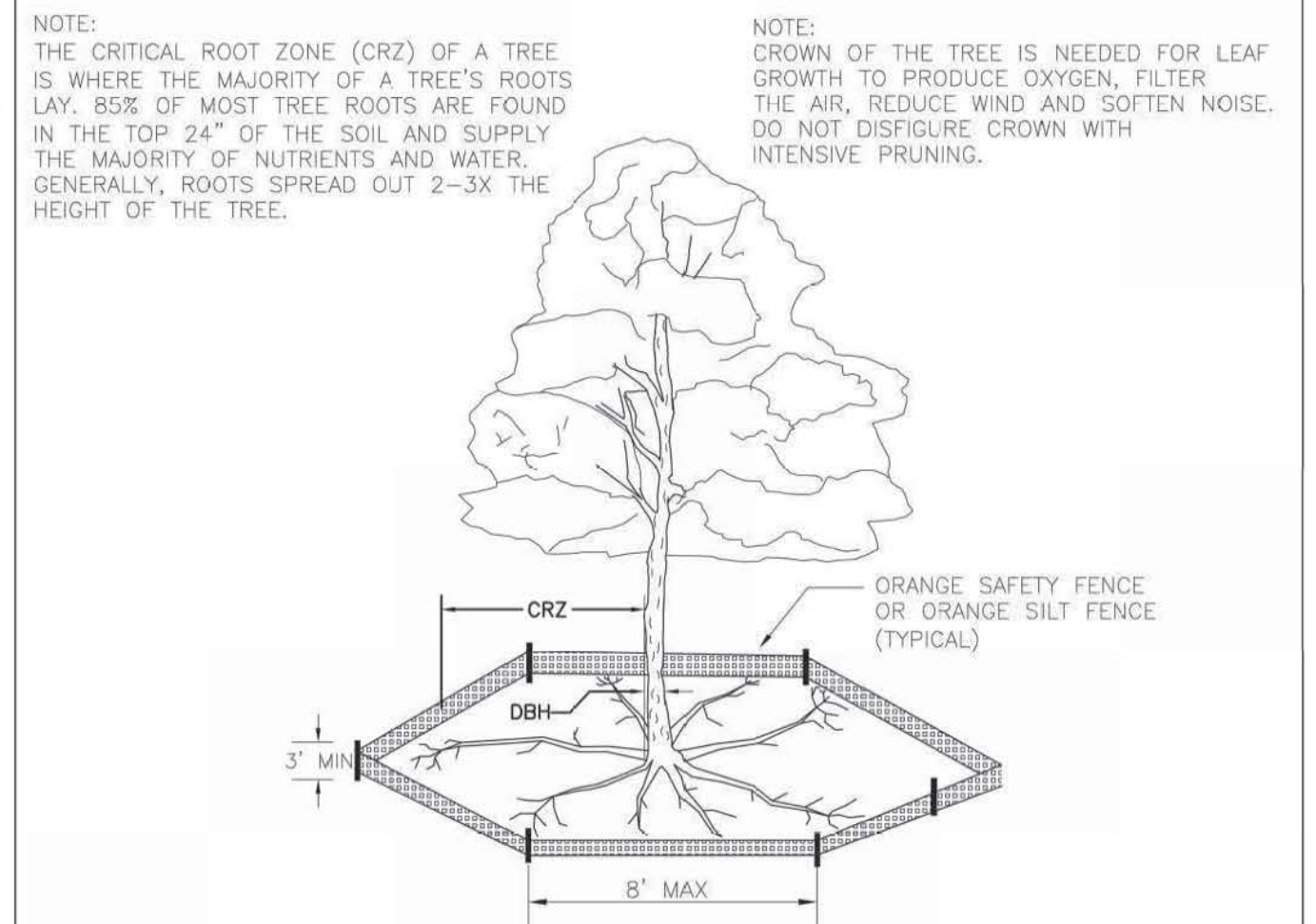
- NOTES:
1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
 2. SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
 3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
 4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION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

STANDARD DETAIL
SIDEWALK
DATE: OCTOBER, 2010
DRAWN: PBJSR
CHECKED: DEC
SCALE: NOT TO SCALE
CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 3-10



- NOTES:
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
 2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
 3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
 4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
 5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
 6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
DATE: JAN, 2015
DRAWN BY: JSR
CHECKED BY: RDG, P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 15-09



- NOTE:
THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.
- NOTE:
CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.
- NOTES:
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
 2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
 3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
 4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
 5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
 6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
DATE: JAN, 2015
DRAWN BY: JSR
CHECKED BY: RDG, P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 15-09

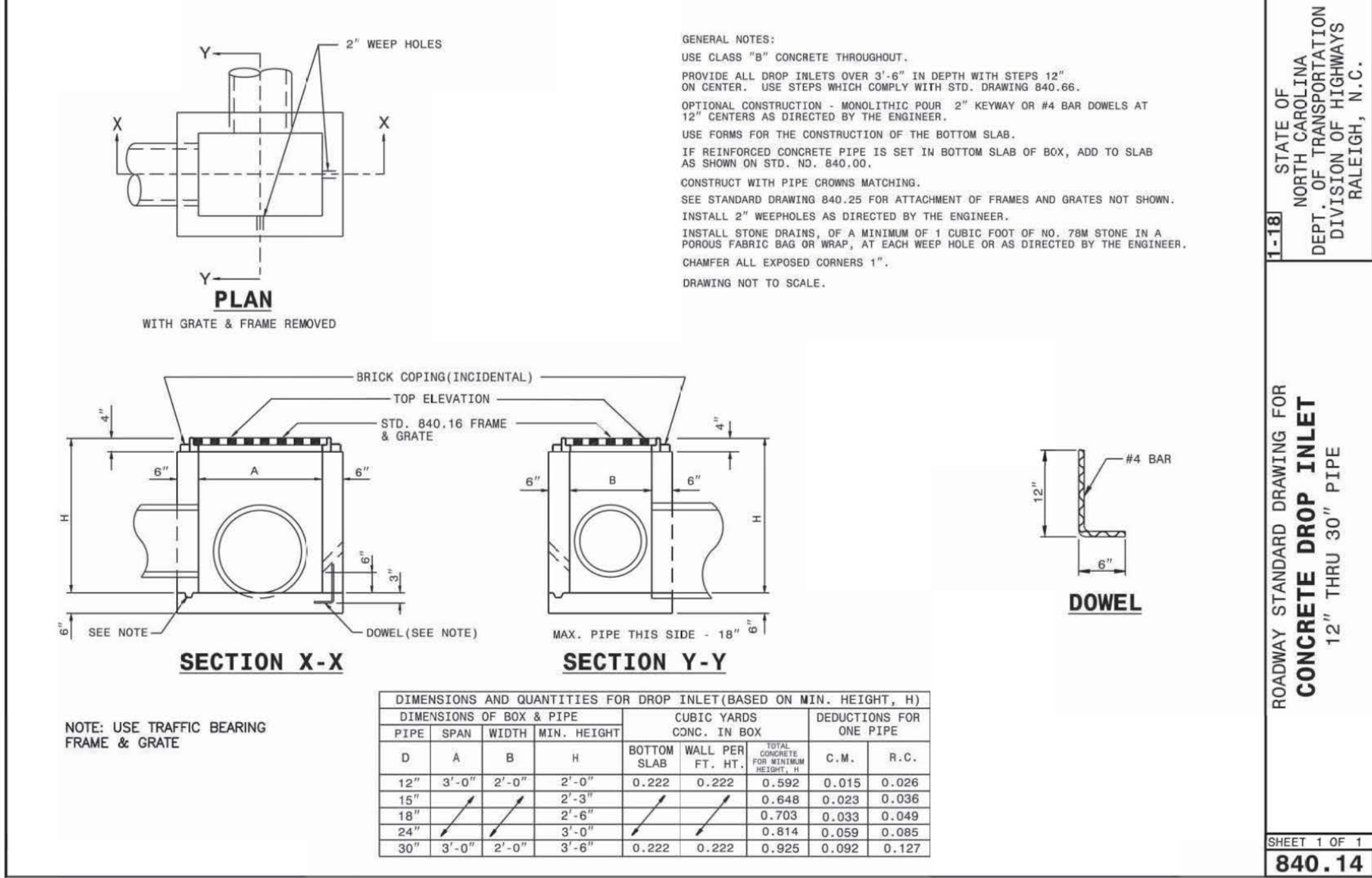
No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2020
Checked By	MNH	Job No.	

6721 MARKET
NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401

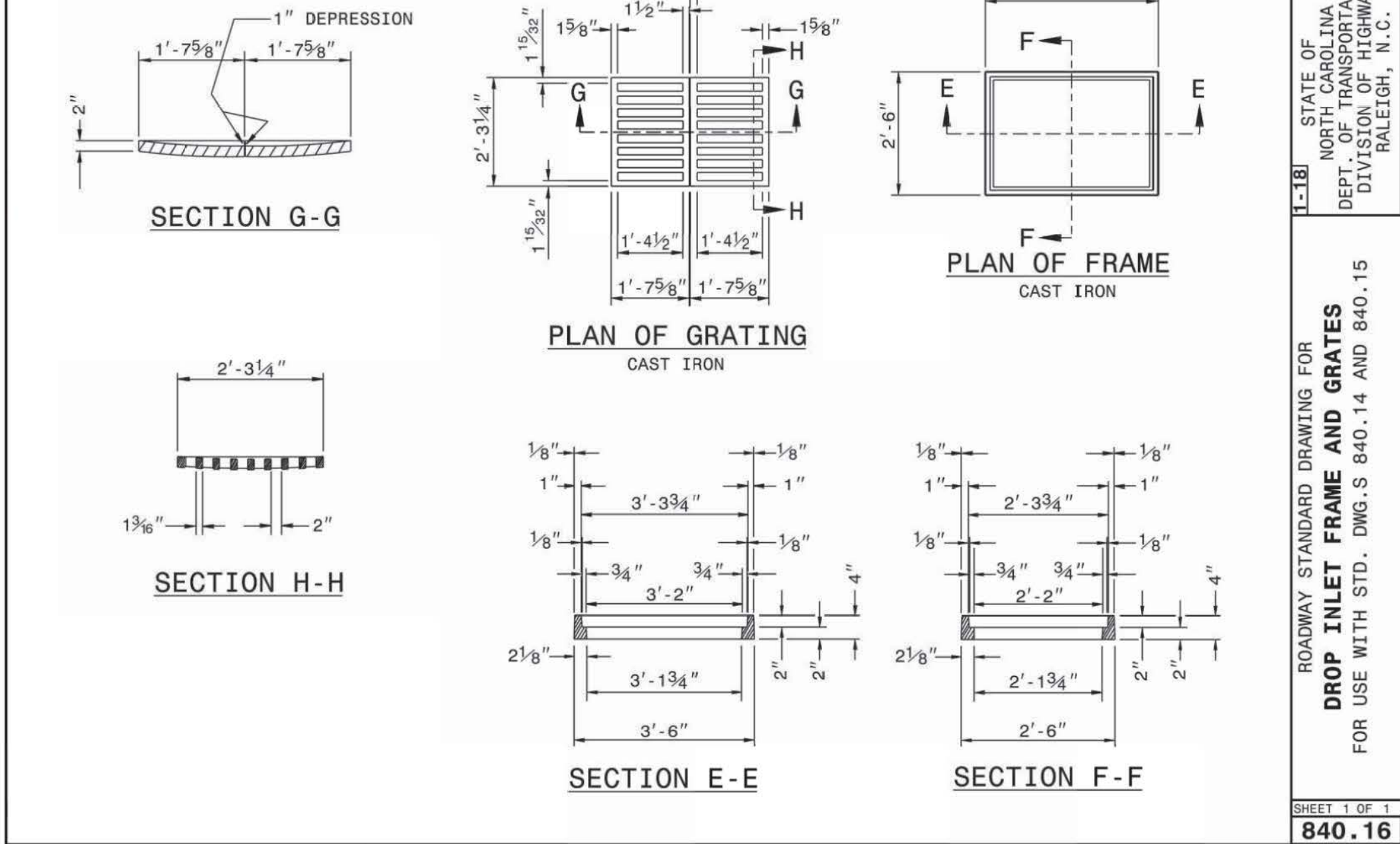
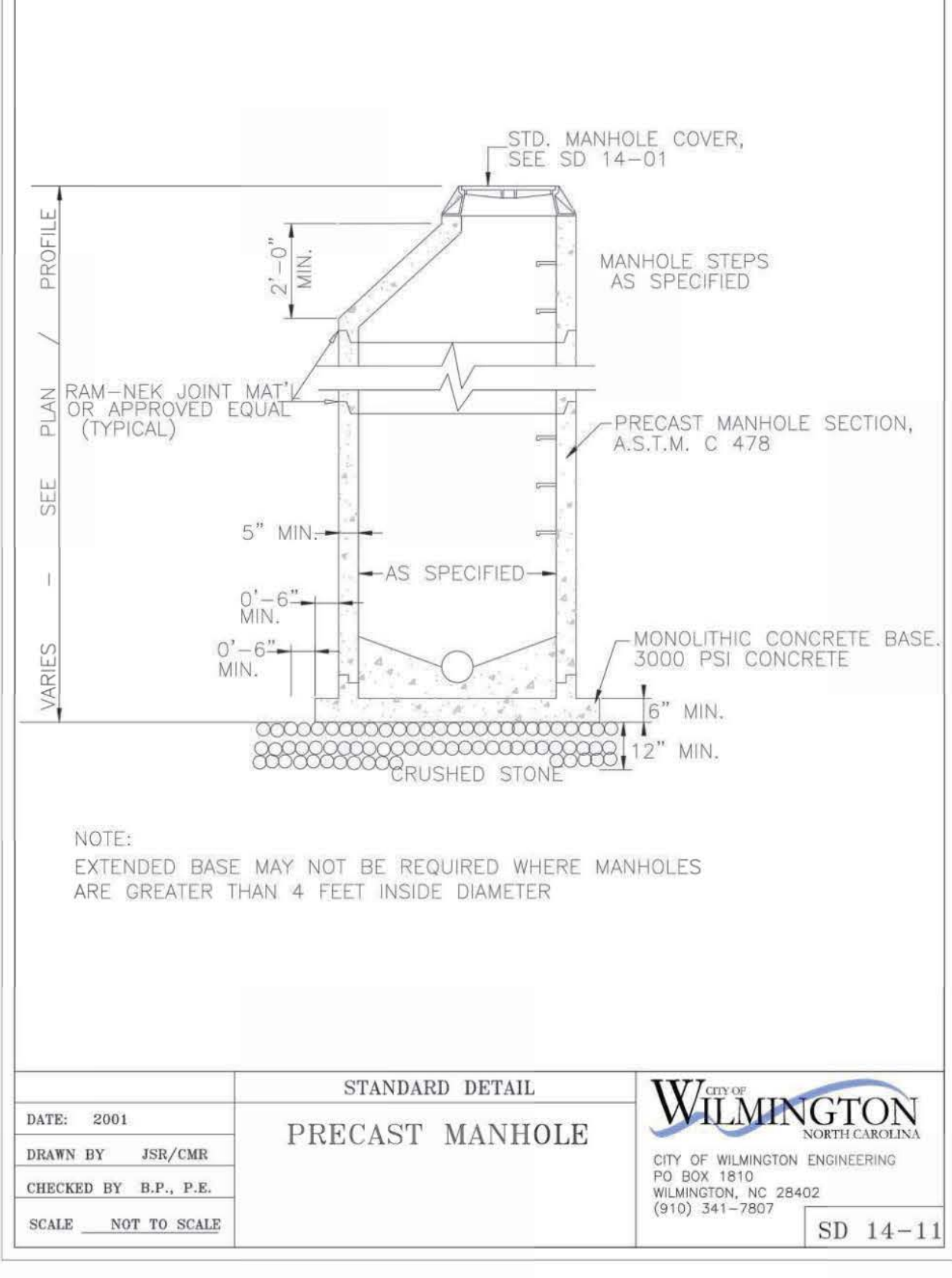
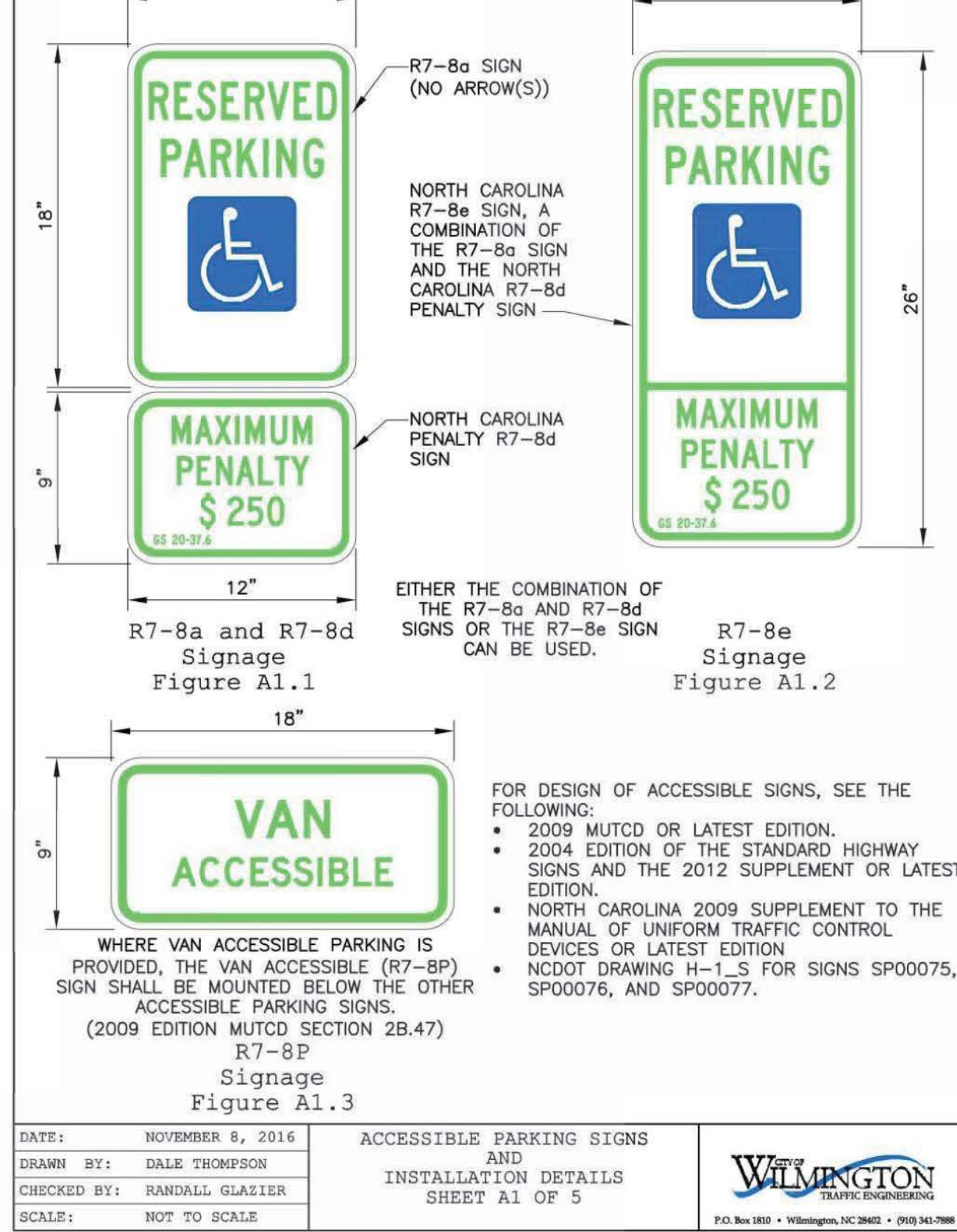
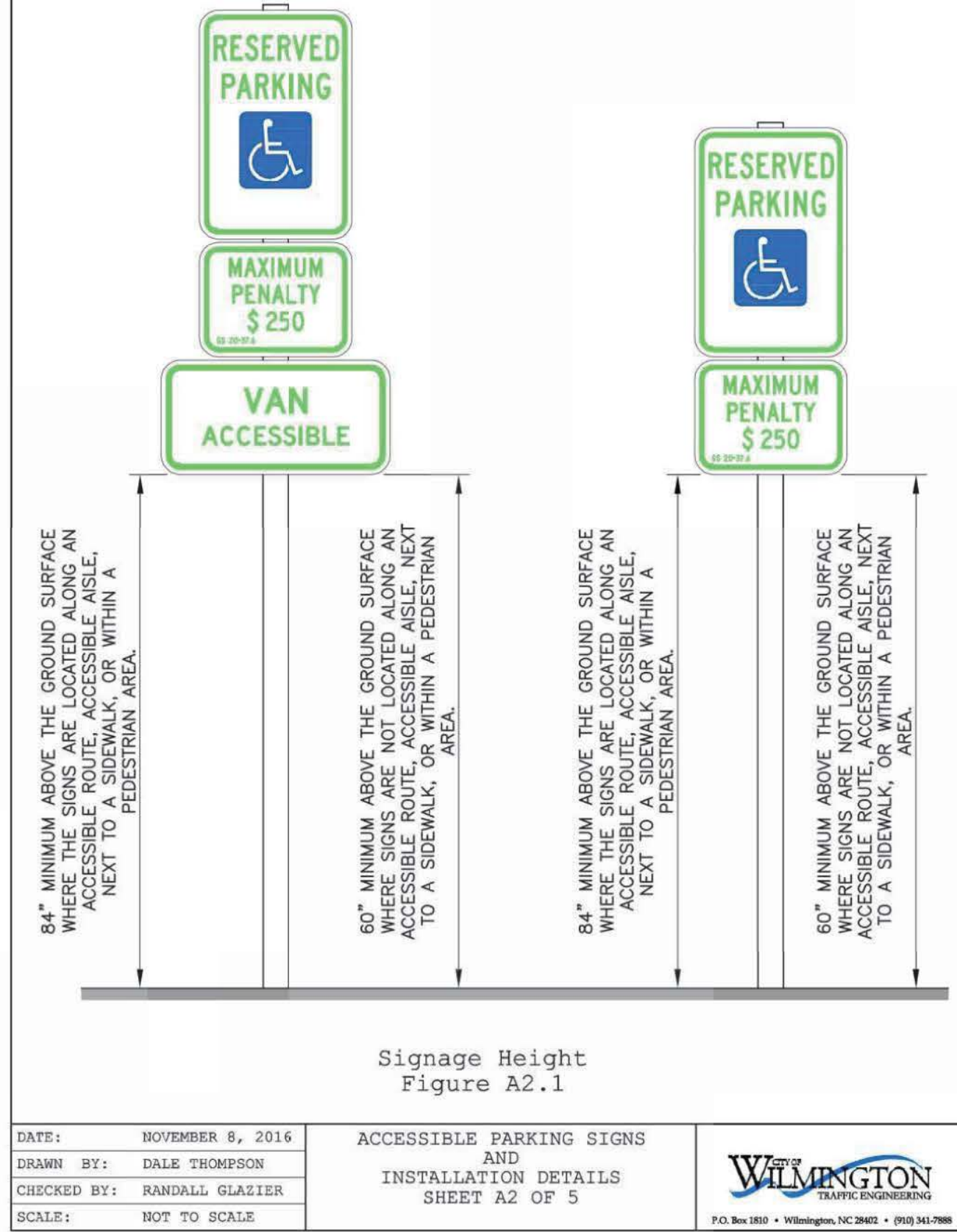
MISCELLANEOUS DETAILS
Sheet No. C-7.0



1-18 STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

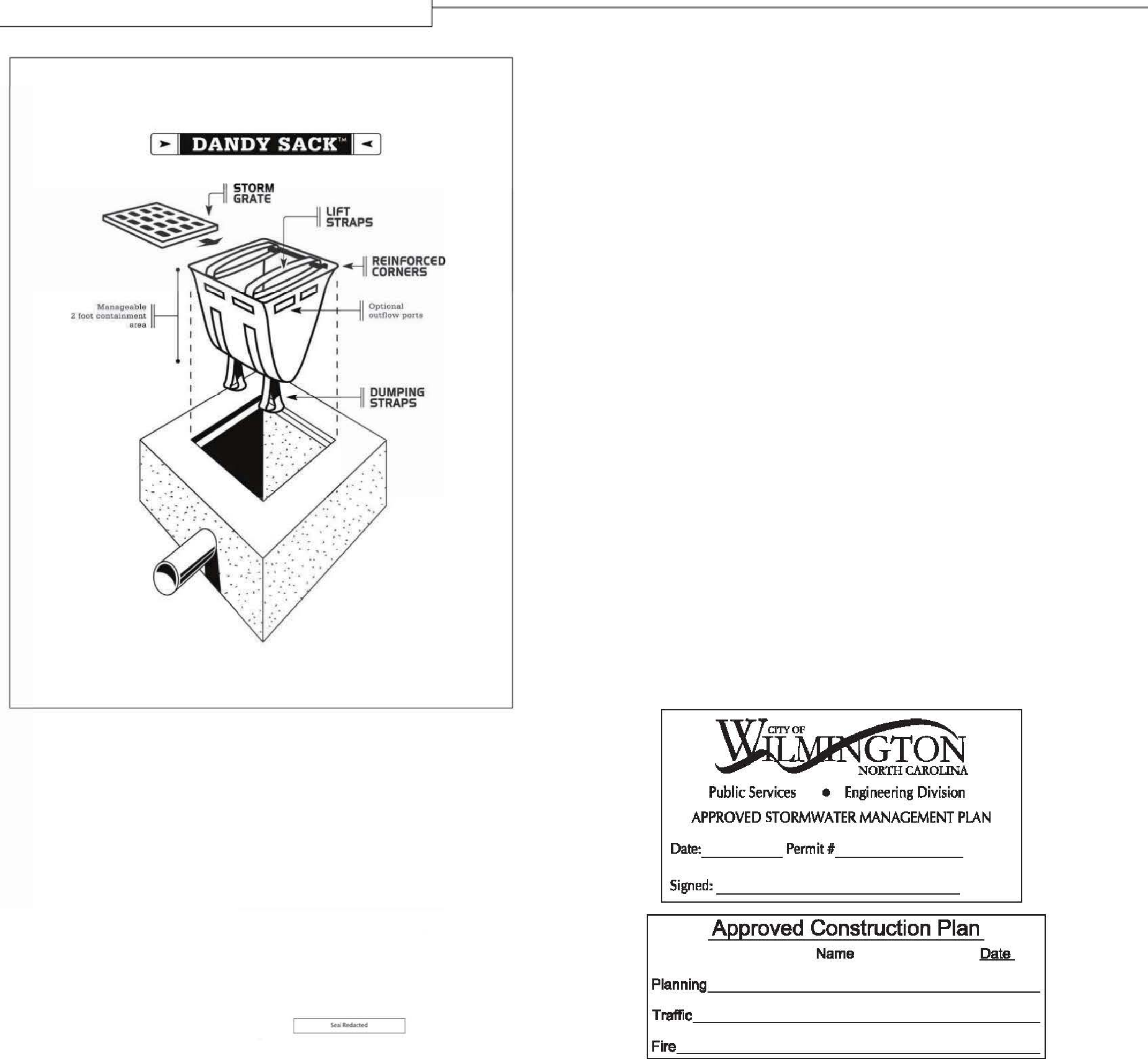
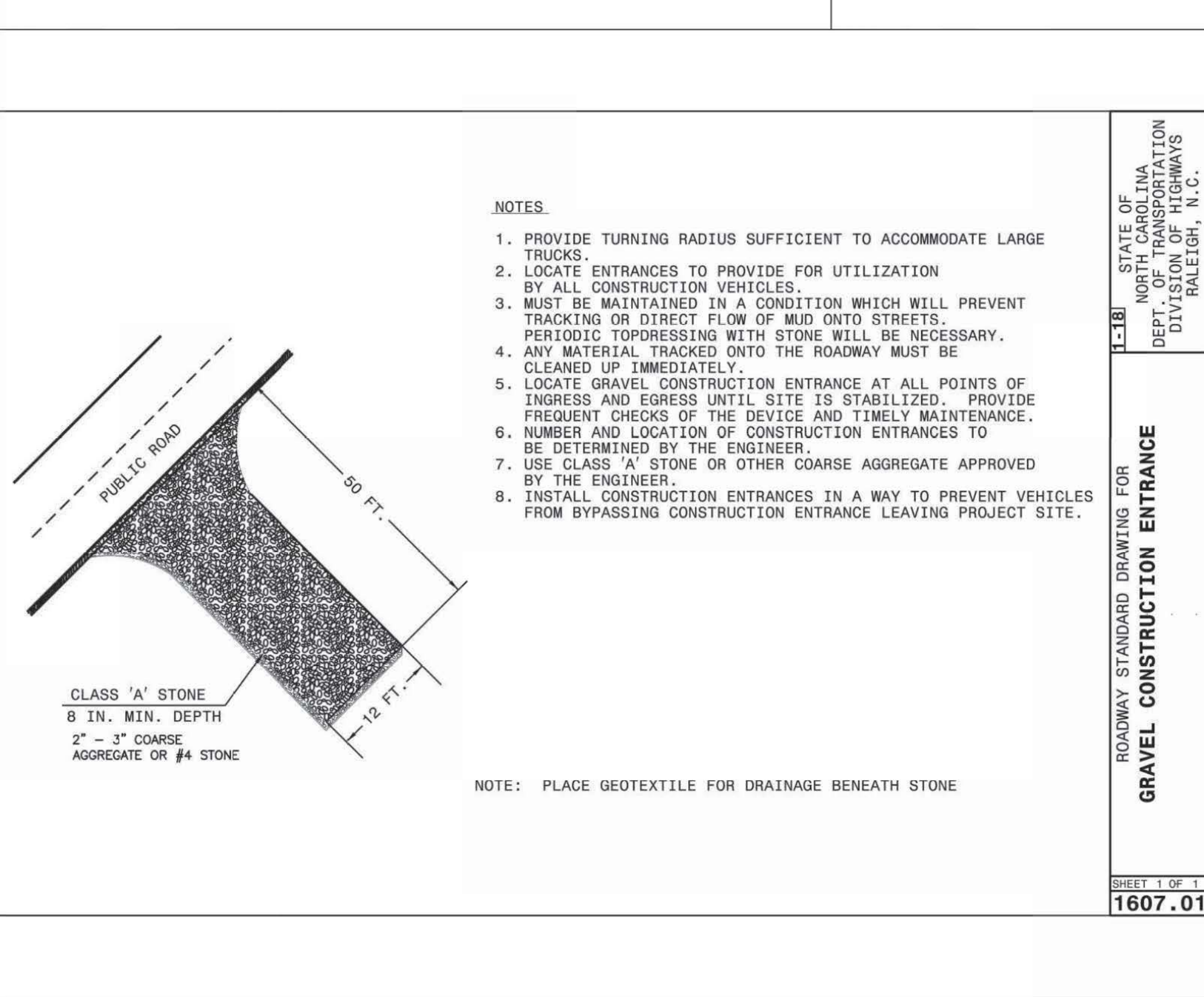
SHEET 1 OF 1
840.14



1-18 STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1
840.16



No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2020
Checked By	MNH	Job No.	

6721 MARKET

WILMINGTON

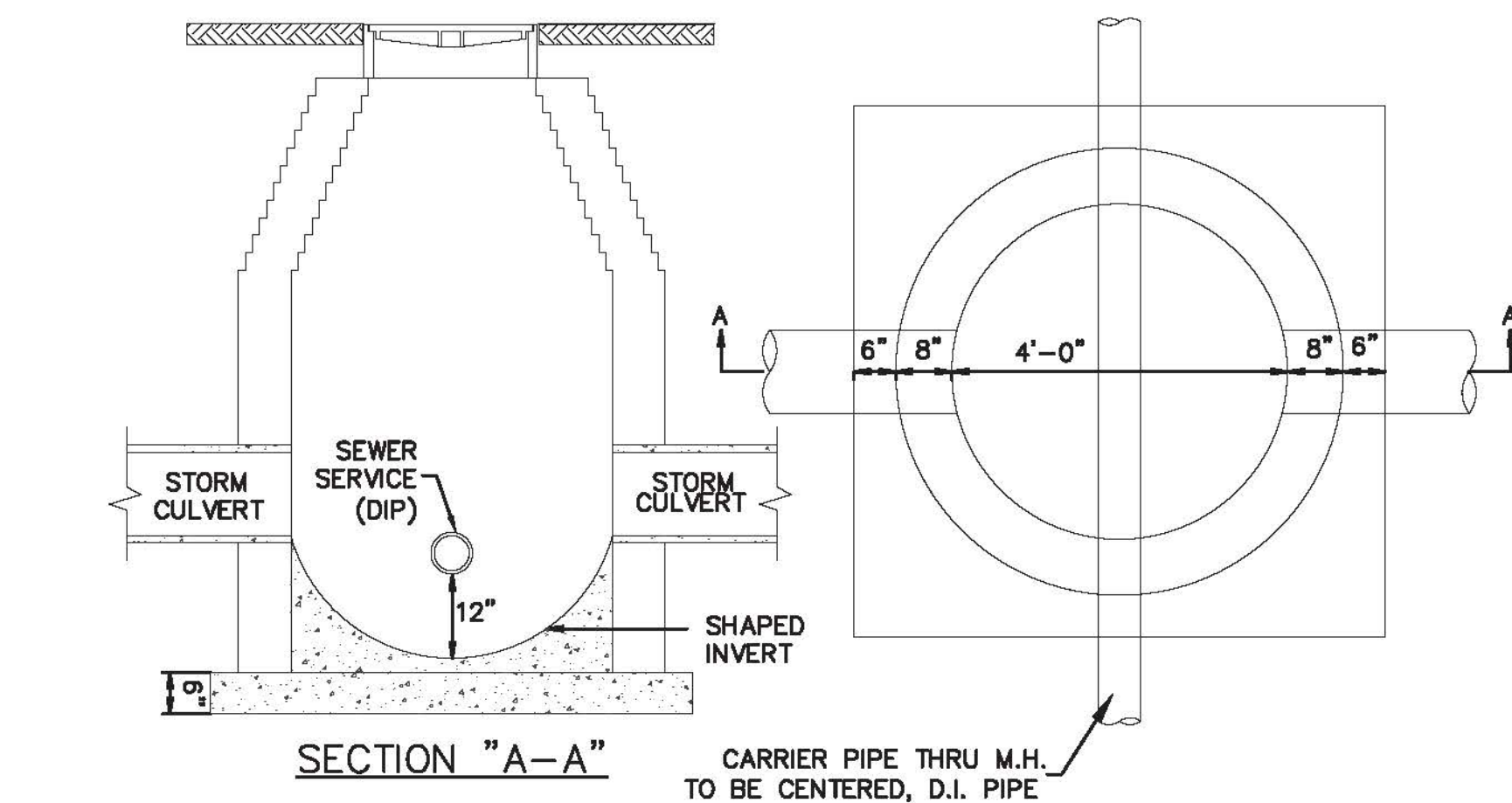
NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401

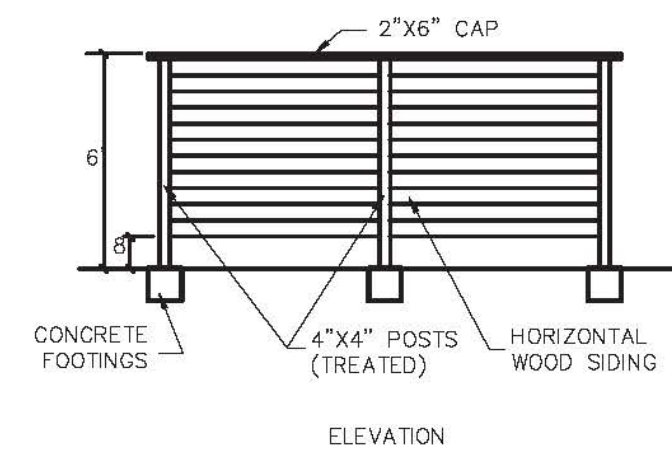
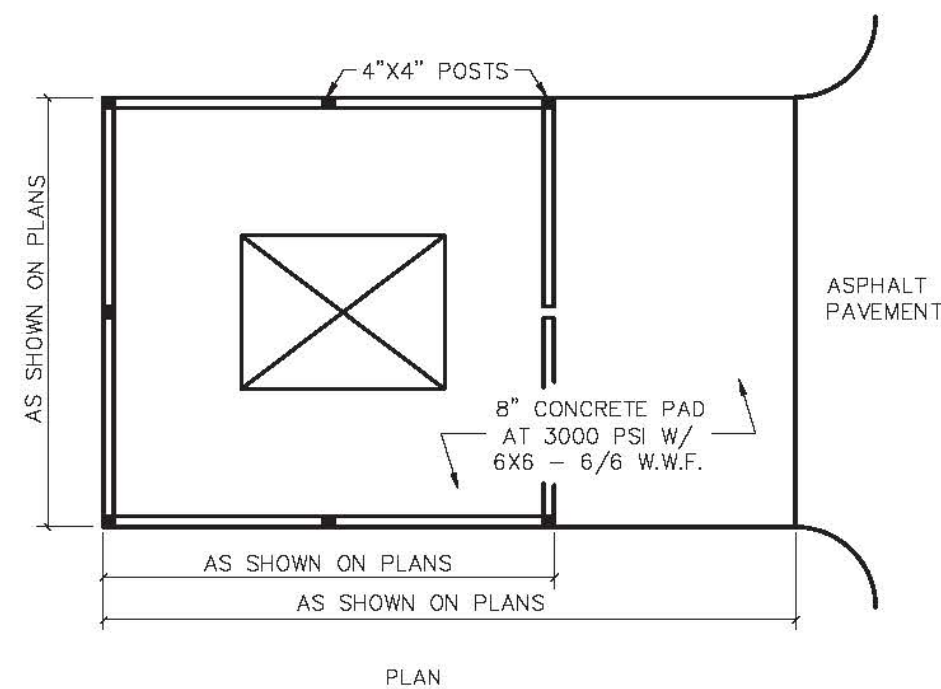
PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

MISCELLANEOUS DETAILS

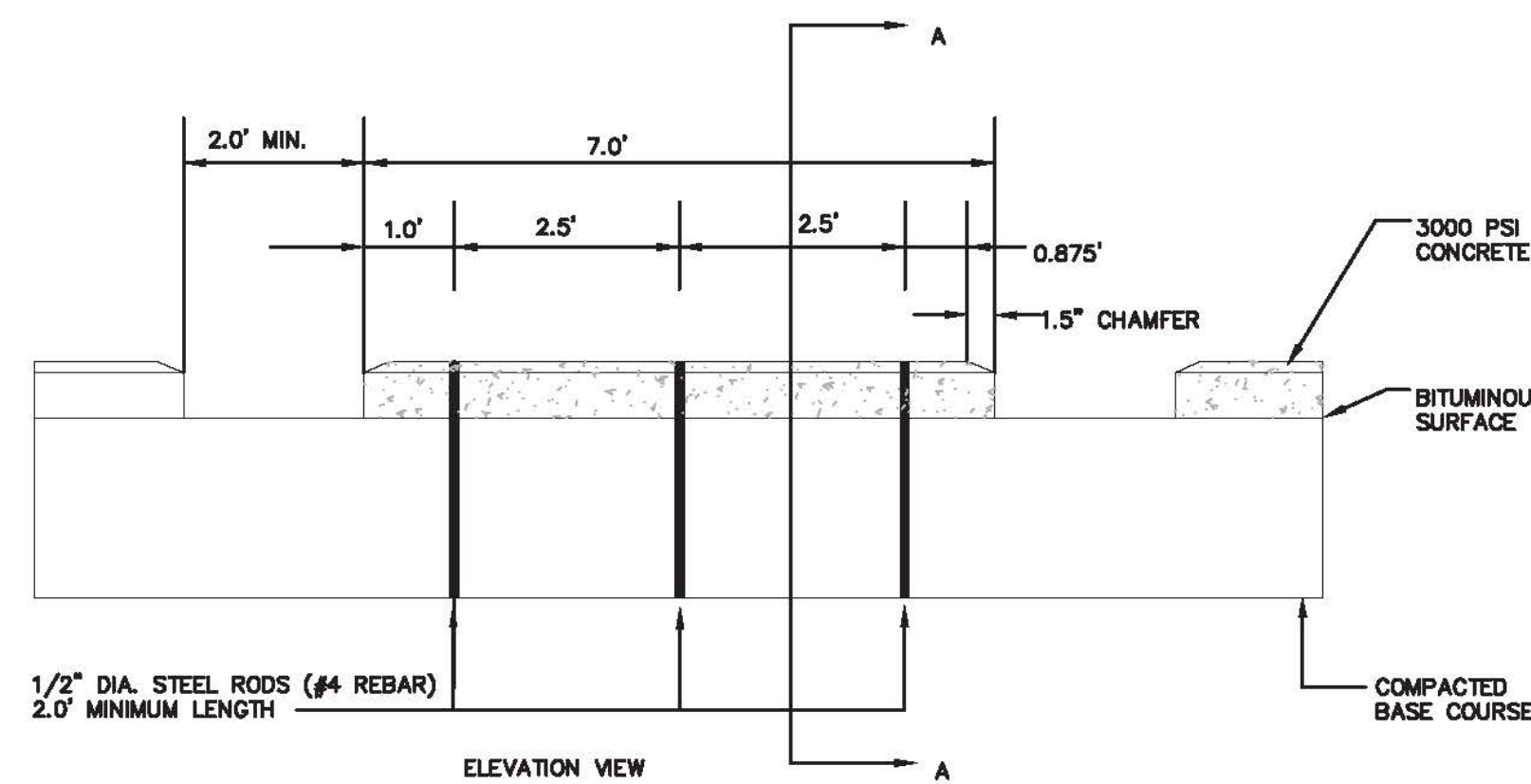
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C-7.1



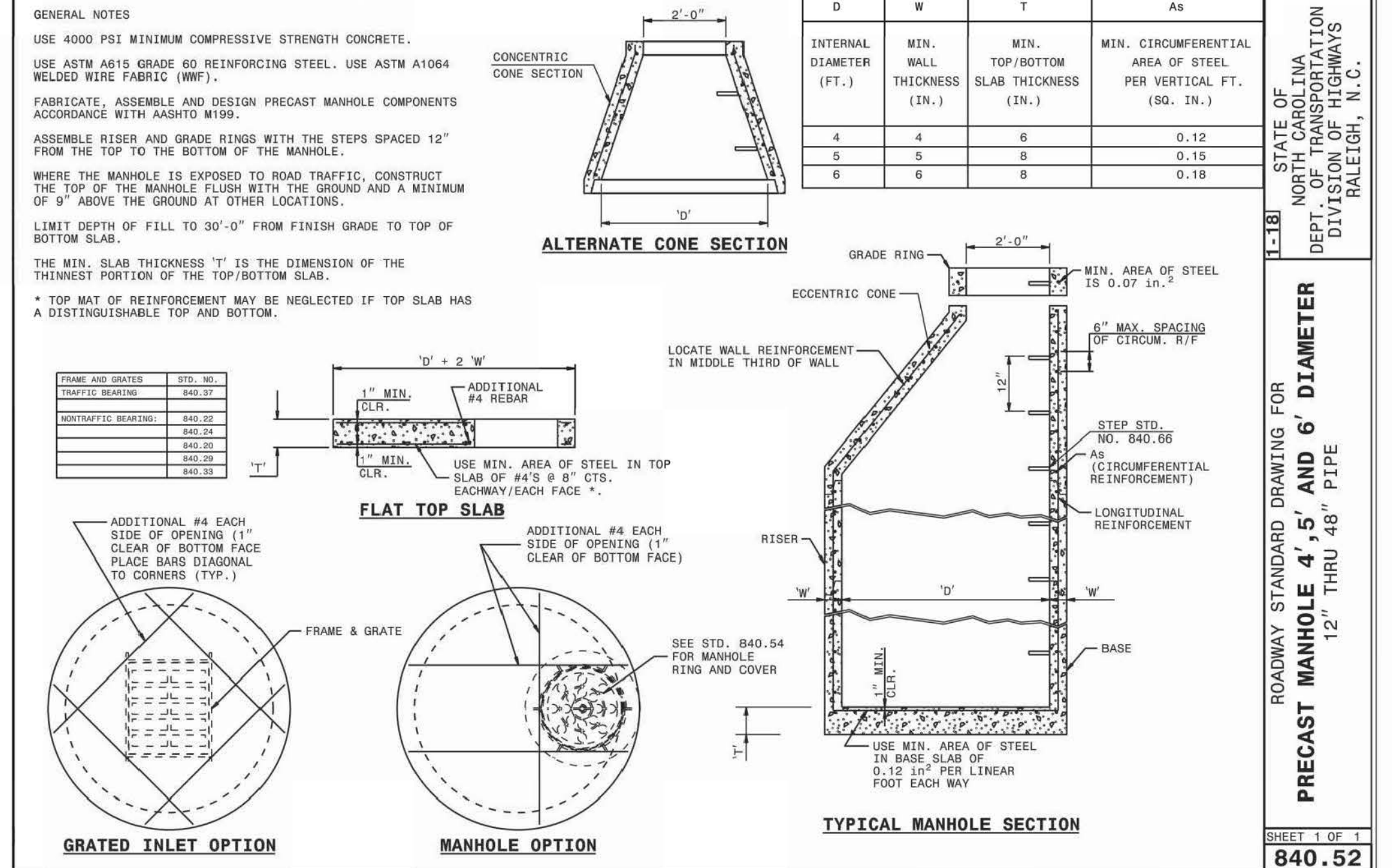
SECTION "A-A"
INTERFERENCE STORM DRAIN MANHOLE
NOT TO SCALE



DUMPSTER PAD & ENCLOSURE DETAIL
N.T.S.



WHEEL STOP DETAIL
N.T.S.



Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2020
Checked By	MNH	Job No.	

WILMINGTON

6721 MARKET

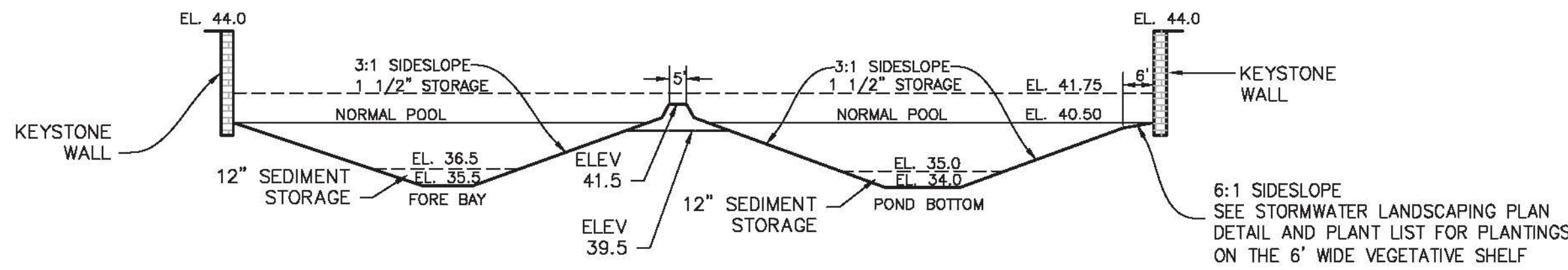
NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401

PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

MISCELLANEOUS DETAILS

Sheet No.
C-7.2

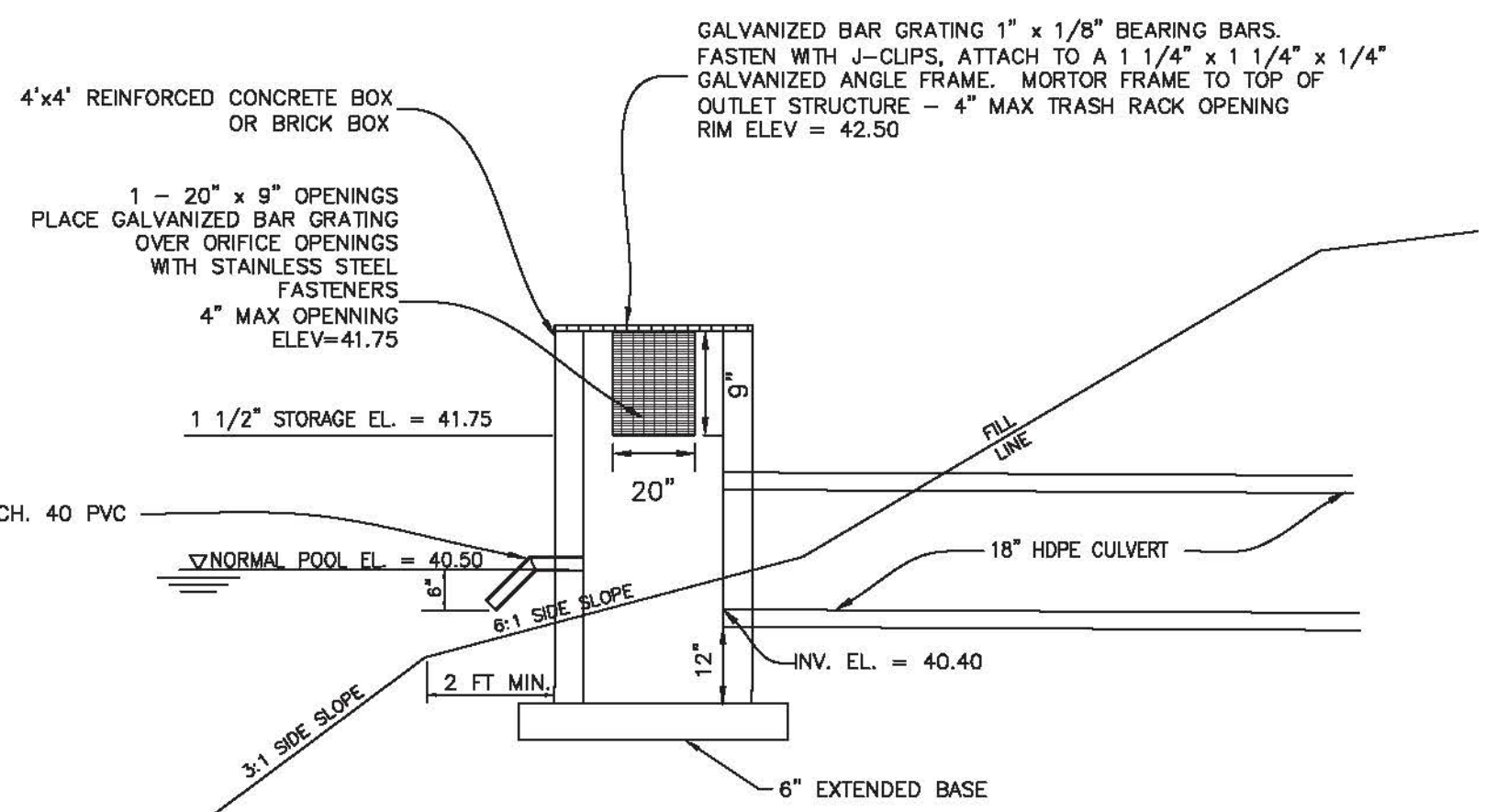
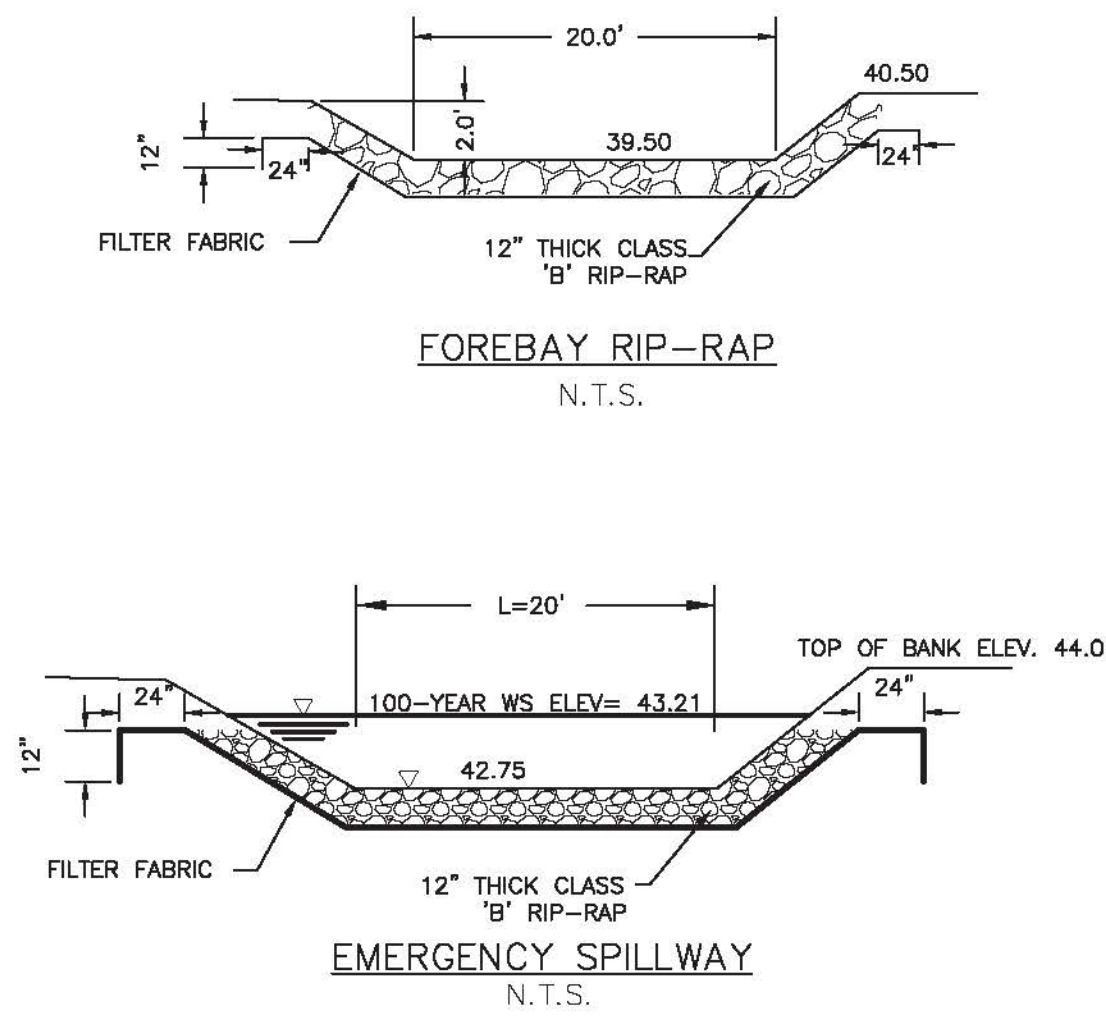


NORMAL POOL ELEVATION	SHELF BOTTOM ELEVATION	POND DEPTH (FT)	VOLUME SHELF (CF)	POND BOTTOM SHELF AREA (SF)	SURFACE AREA PROVIDED (SF)	SURFACE AREA REQUIRED (SF)	PERIMETER PERMANENT POOL (LF)	AVERAGE POND DEPTH (FT)
40.5	39.5	5.5	927	3,854	5,485	5,003	309	3.5

POND CROSS-SECTION
N.T.S.

NOTES:

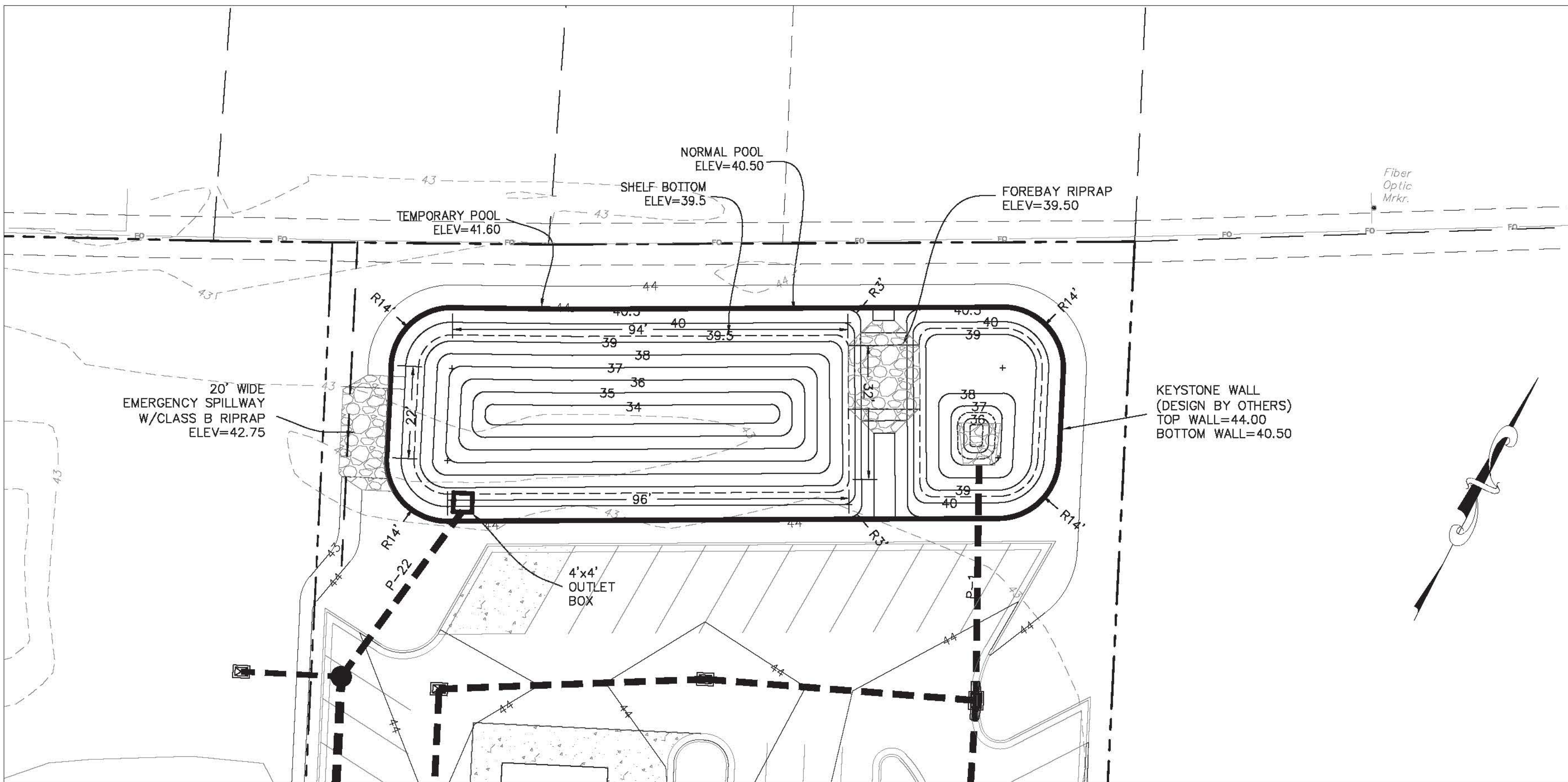
- DO NOT PLANT TREES WITHIN 10 FEET OF THE INLET OR OUTLET PIPES, SPILLWAYS OR FLOW SPREADERS. TREE SPECIES WITH WATER-SEEKING ROOTS SUCH AS WEeping WILLOWS AND POPLARS, SHOULD BE AVOIDED WITHIN 50 FEET OF PIPES OR MANMADE STRUCTURES. EVERGREEN TREES WHICH PRODUCE RELATIVELY LITTLE LEAF-FALL ARE PREFERRED IN AREAS DRAINING TO DETENTION DEVICES. TREES SHOULD BE SET BACK SO THAT BRANCHES DO NOT EXTEND OVER THE PERMANENT POOL.



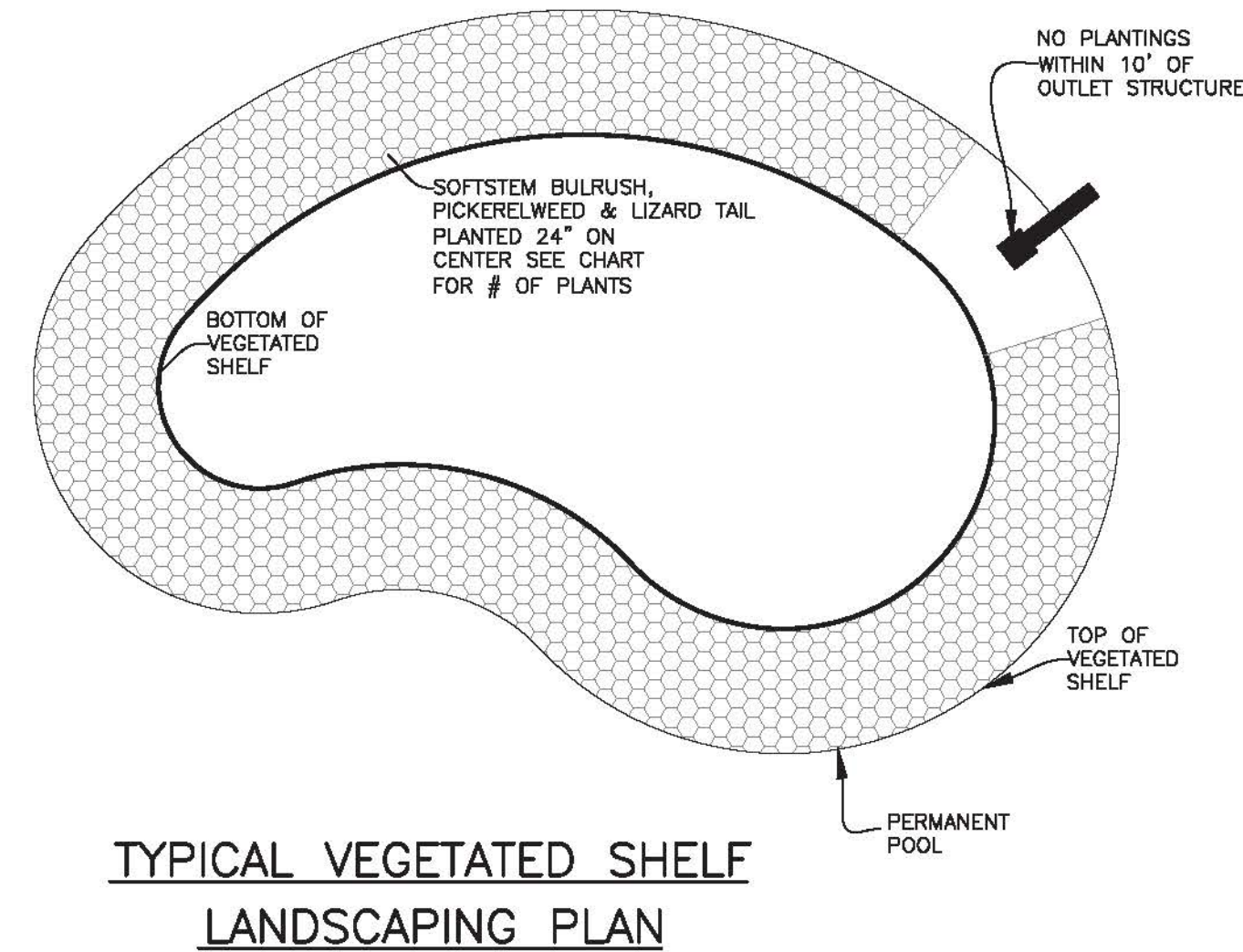
OUTLET STRUCTURE DETAIL
N.T.S.

NOTES:

- DESIGN ELEVATIONS FOR WET DETENTION BASIN ARE TO AN ELEVATION OF 35.0 IN THE MAIN POND AND 36.5 IN THE FOREBAY WITH SEDIMENT STORAGE DOWN TO 34.0 IN THE MAIN POND AND 35.5 IN THE FOREBAY.
- ALL IMPERVIOUS SITE AREA TO BE DRAINED TO PROPOSED STORM SEWER SYSTEM AND DISCHARGED TO THE WET DETENTION POND.
- POND WILL BE PUMPED DOWN BY MECHANICAL MEANS IN CASE OF EMERGENCY.
- PRIOR TO USE AS A WET DETENTION BASIN, SEDIMENT BASIN WILL BE MUCKED OUT.
- ALL SLOPES ABOVE & BELOW PERMANENT POOL TO BE 3:1 MAX.



City of Wilmington North Carolina Public Services Engineering Division APPROVED STORMWATER MANAGEMENT PLAN Date: Permit #: Signed: Approved Construction Plan Name Date Planning Traffic Fire



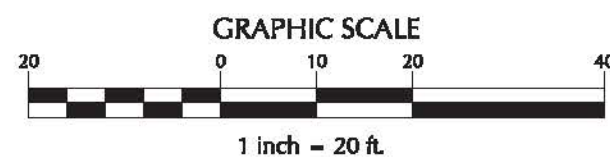
VEGETATIVE SHELF = 1,465 S.F. @ 1 PLANT PER 4 SF (24" O.C.) - 366 PLANTS							
PLANT TYPE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER	HEIGHT	NOTES
HERBACEOUS	122	Schoenplectus tabernaemontani	Softstem Bulrush	CONT.	4" Pot		24" O.C.
	122	Pontederia cordata	Pickereelweed	CONT.	4" Pot		24" O.C.
	122	Saururus cernuus	Lizard Tail	CONT.	4" Pot		24" O.C.

NOTES:

- NO PLANTINGS WITHIN 10' OF OUTLET STRUCTURE.
- BECAUSE MOST STORMWATER BASINS ARE EXCAVATED TO DEEP SUB-SOILS, THEY OFTEN LACK THE NUTRIENTS AND ORGANIC MATTER NEEDED TO SUPPORT VIGOROUS GROWTH OF PLANTS. ALL LANDSCAPE MATERIAL, INCLUDING GRASS, SHOULD BE PLANTED IN GOOD TOPSOIL. NATIVE UNDERLYING SOILS MAY BE SUITABLE FOR PLANTING IF AMENDED WITH 4 INCHES OF WELL-AGED COMPOST TILLED INTO THE SUBGRADE. COMPOST SHOULD MEET SPECIFICATIONS FOR GRADE A COMPOST QUALITY.
- A MINIMUM ONE-YEAR WARRANTY PERIOD STIPULATING REQUIREMENTS FOR PLANT SURVIVAL/REPLACEMENT.








SHALLOW WATER



GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

Temporary and Permanent Groundcover*

STABILIZATION TIMEFRAMES (Effective Aug. 3, 2011)		
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.

*-For Falls Lake watershed, in disturbed areas where grading activities are incomplete, provide temporary groundcover no later than seven (7) days for slopes steeper than 3:1; ten (10) days for slopes equal to or flatter than 3:1; fourteen (14) days for areas with no slope.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none">• Temporary grass seed covered with straw or other mulches and tackifiers• Hydroseeding• Rolled erosion control products with or without temporary grass seed• Appropriately applied straw or other mulch• Plastic sheeting	<ul style="list-style-type: none">• Permanent grass seed covered with straw or other mulches and tackifiers• Geotextile fabrics such as permanent soil reinforcement matting• Hydroseeding• Shrubs or other permanent plantings covered with mulch• Uniform and evenly distributed ground cover sufficient to restrain erosion• Structural methods such as concrete, asphalt or retaining walls

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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



EQUIPMENT AND VEHICLE MAINTENANCE

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

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number of waste containers on site to manage the quantity of waste produced.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow.
8. Dispose waste off-site at an approved disposal facility.

PAINT AND OTHER LIQUID WASTE

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

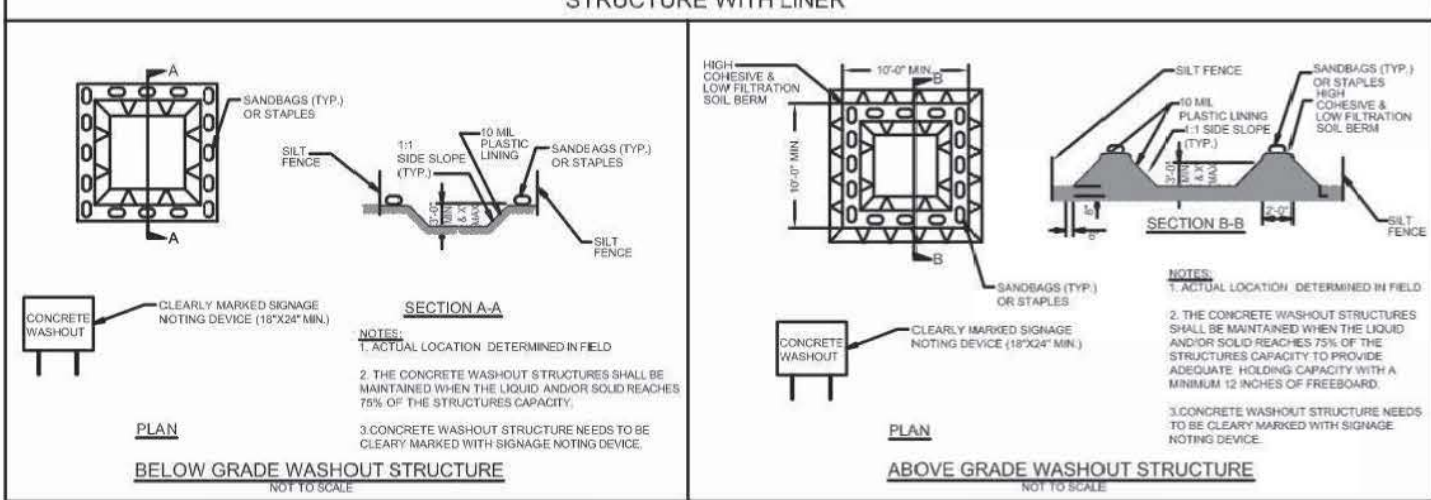
PORTABLE TOILETS

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

EARTHEN STOCKPILE MANAGEMENT

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

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



CONCRETE WASHOUTS

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

HERBICIDES, PESTICIDES AND RODENTICIDES

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

HAZARDOUS AND TOXIC WASTE

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

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 03/01/19

6721 MARKET

WILMINGTON

NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401

PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

NCG01 GROUND STABILIZATION
& MATERIALS HANDLING

Sheet No.
C-7.4

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

Inspect	Frequency (during normal business hours)	Inspection records must include [40 CFR 122.41]:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Corrective actions taken, and 7. Date of actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Actions taken to correct/prevent sedimentation, and 7. Date of actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Date of actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Evidence and actions taken to reduce sediment contributions, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.

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



PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

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

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This general permit as well as the certificate of coverage, after it is received.
- (b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
- (c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
- (b) Oil spills if:
- They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).

- (a) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

- (b) Anticipated bypasses and unanticipated bypasses.

- (c) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none">Within 24 hours, an oral or electronic notification.Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none">Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none">A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none">Within 24 hours, an oral or electronic notification.Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	<ul style="list-style-type: none">Within 24 hours, an oral or electronic notification.Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6).Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 03/01/19

WILMINGTON

CITY OF

NORTH CAROLINA

Public Services

Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____

Approved Construction Plan

Name

Date

Planning _____

Traffic _____

Fire _____

No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2020
Checked By	MNH	Job No.	

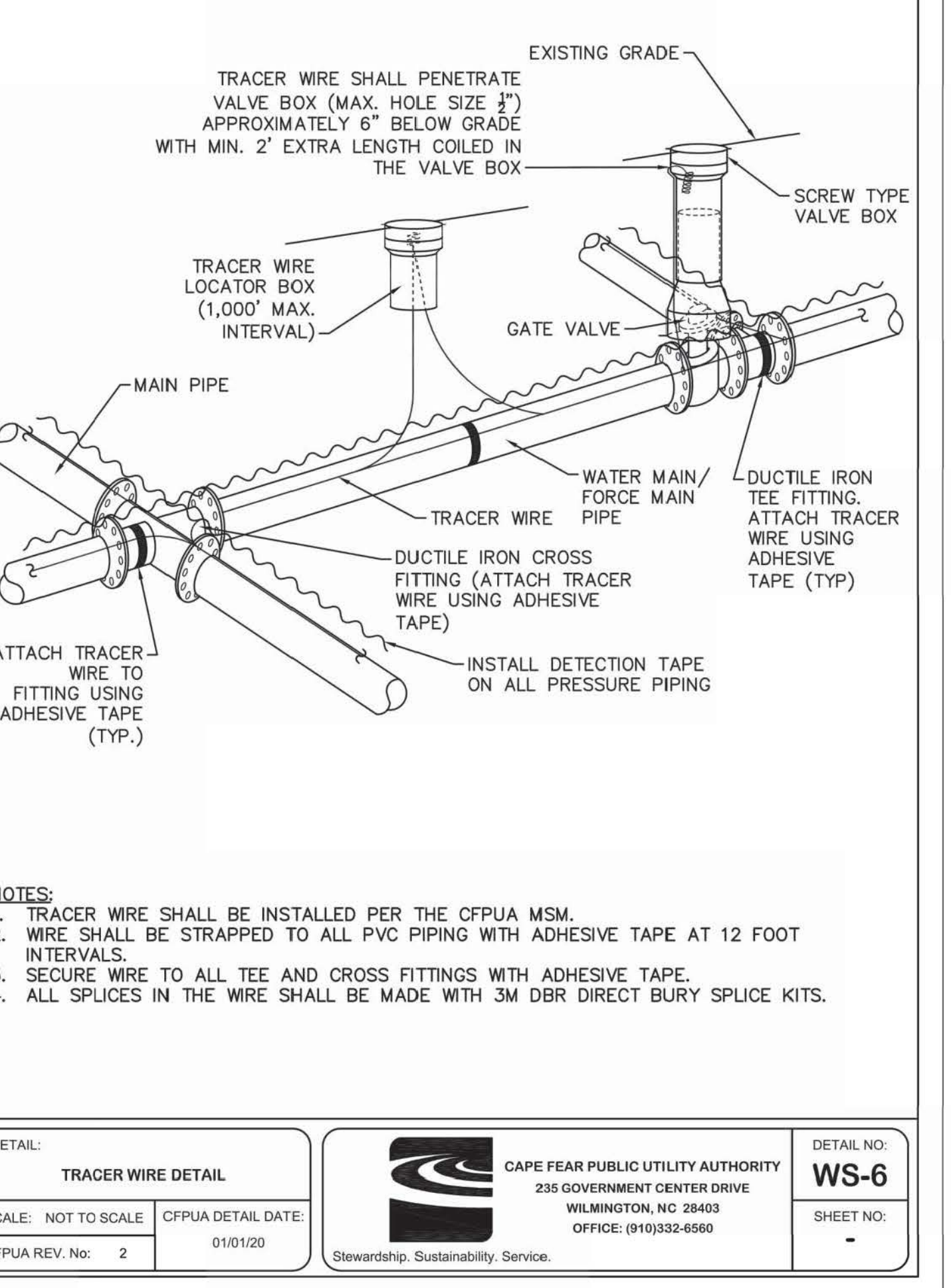
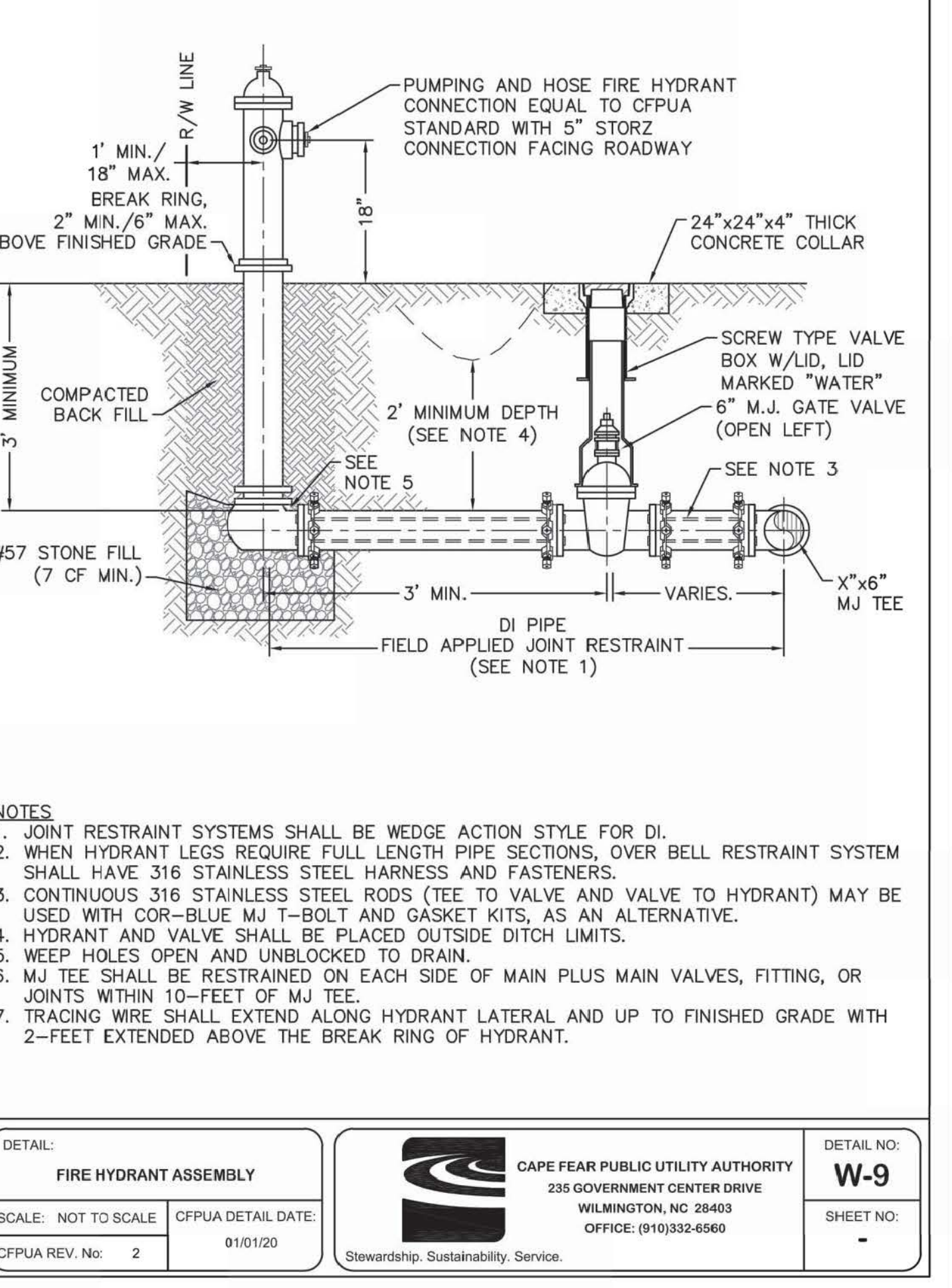
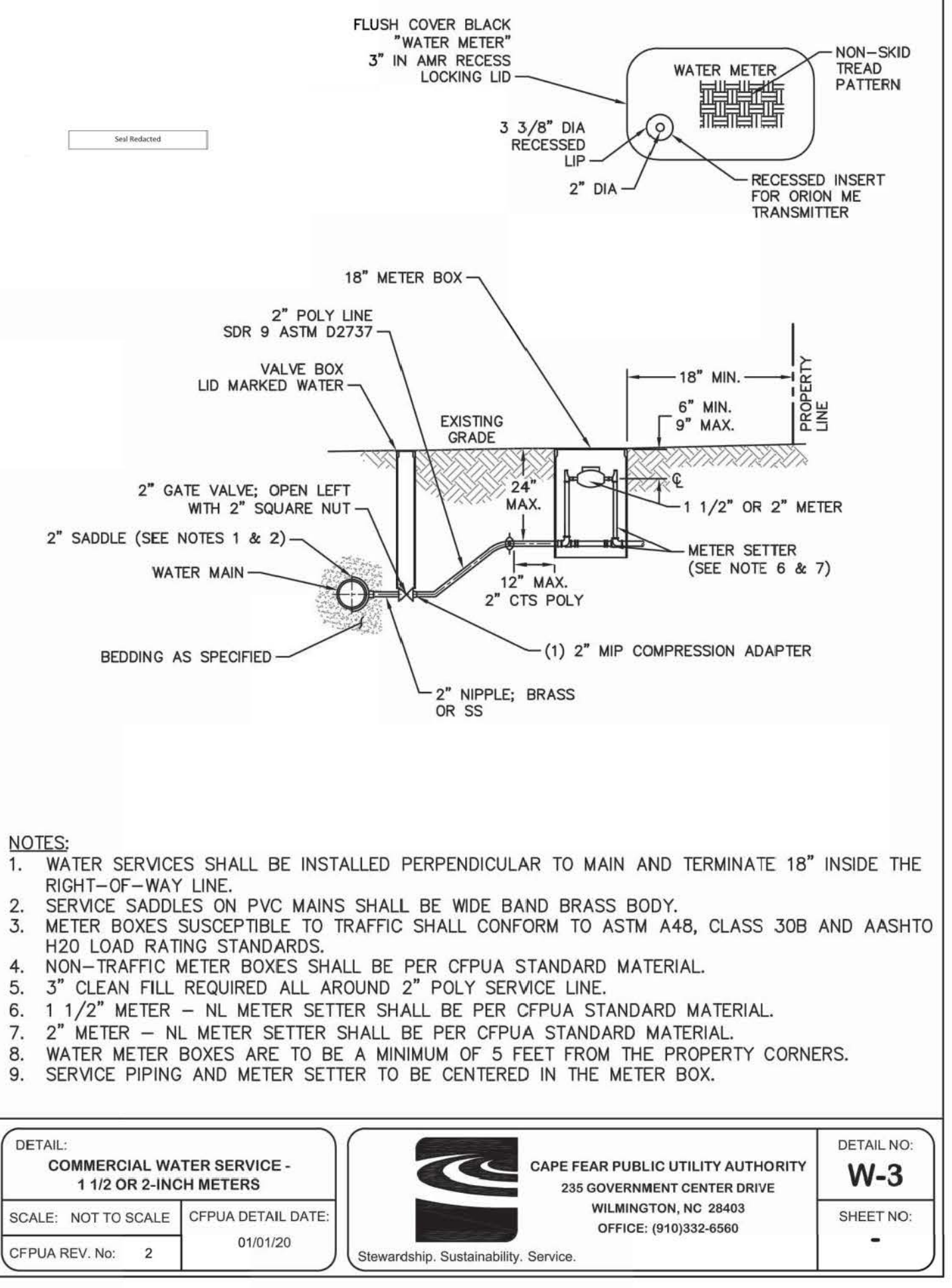
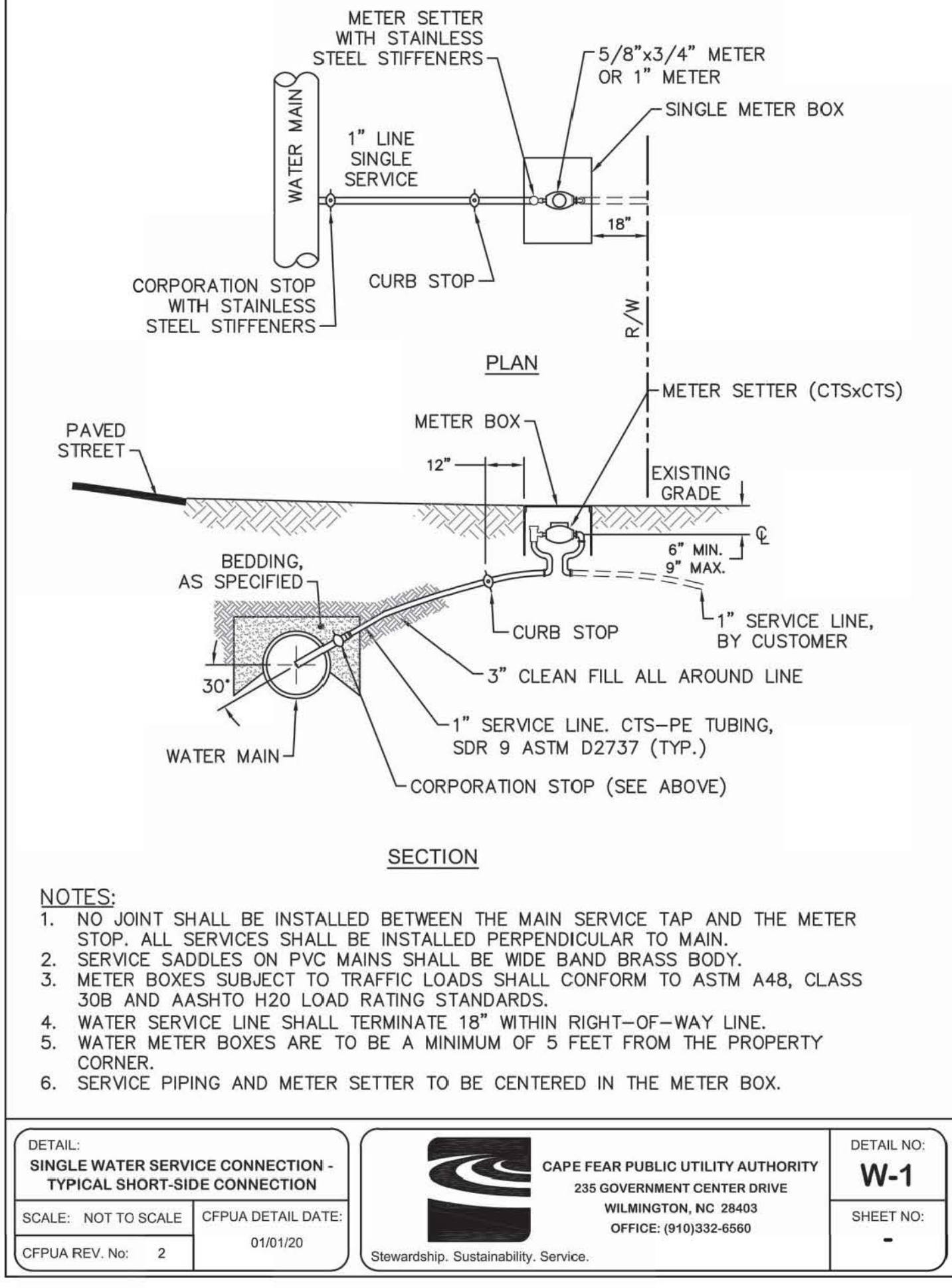
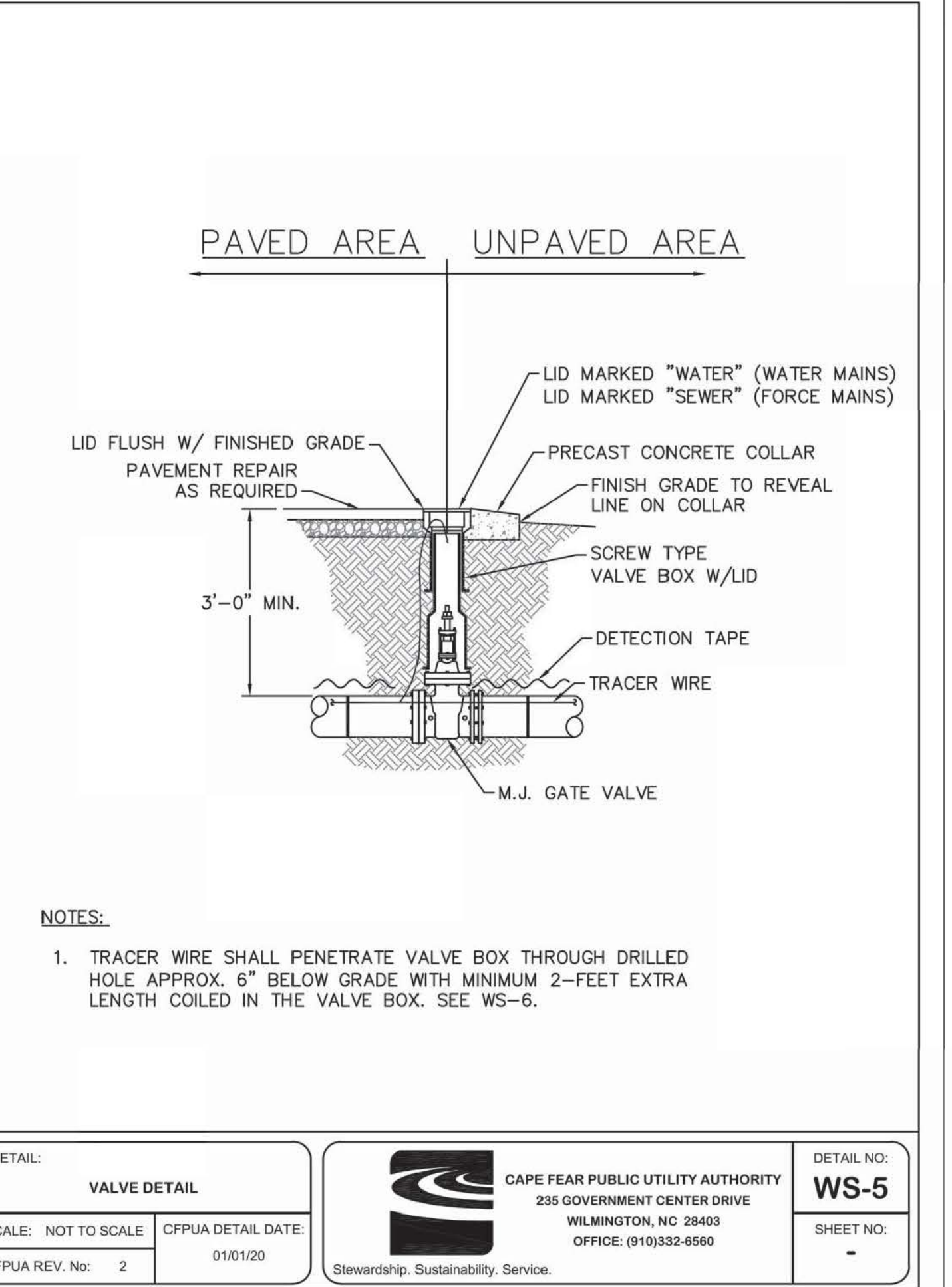
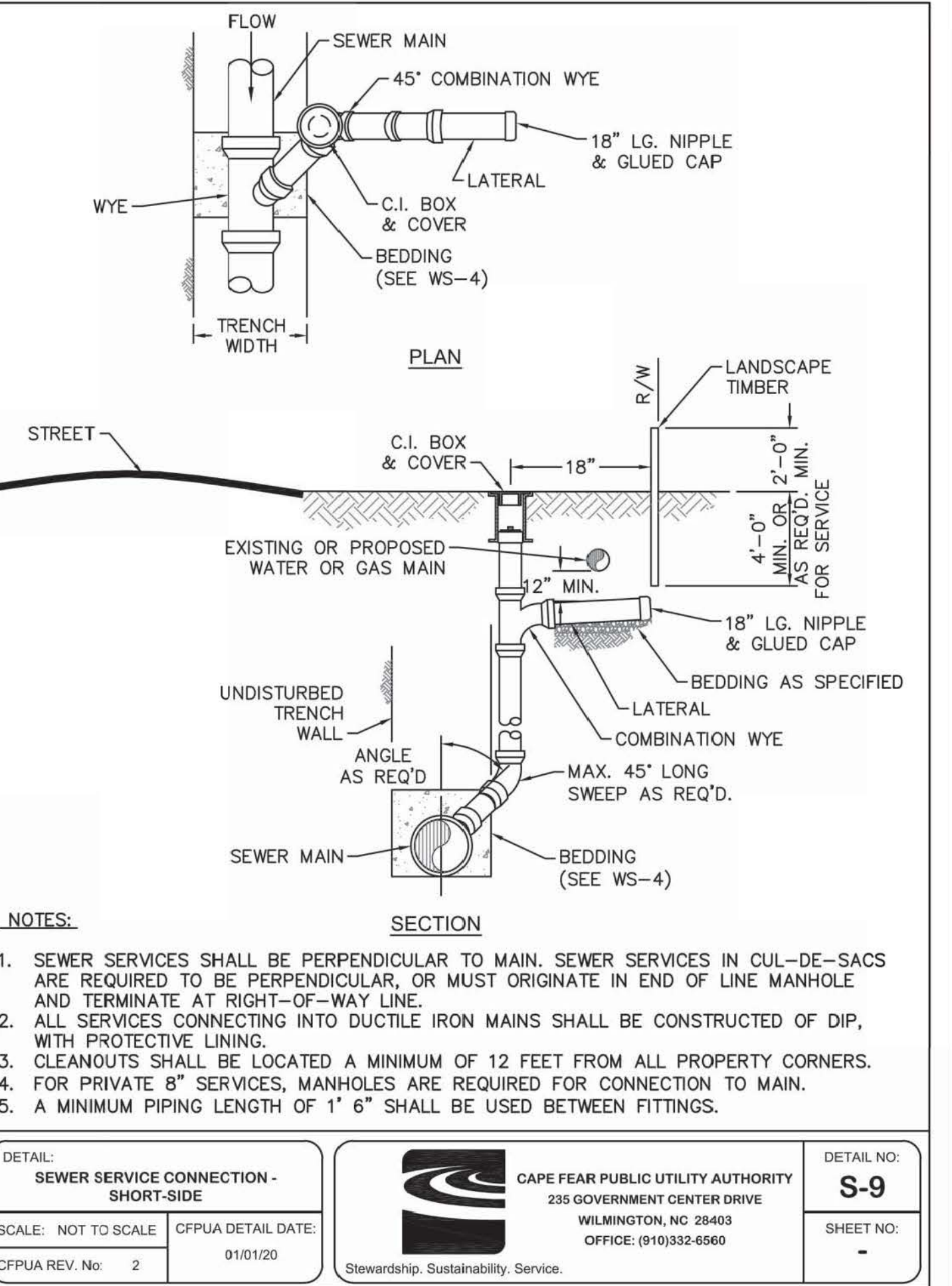
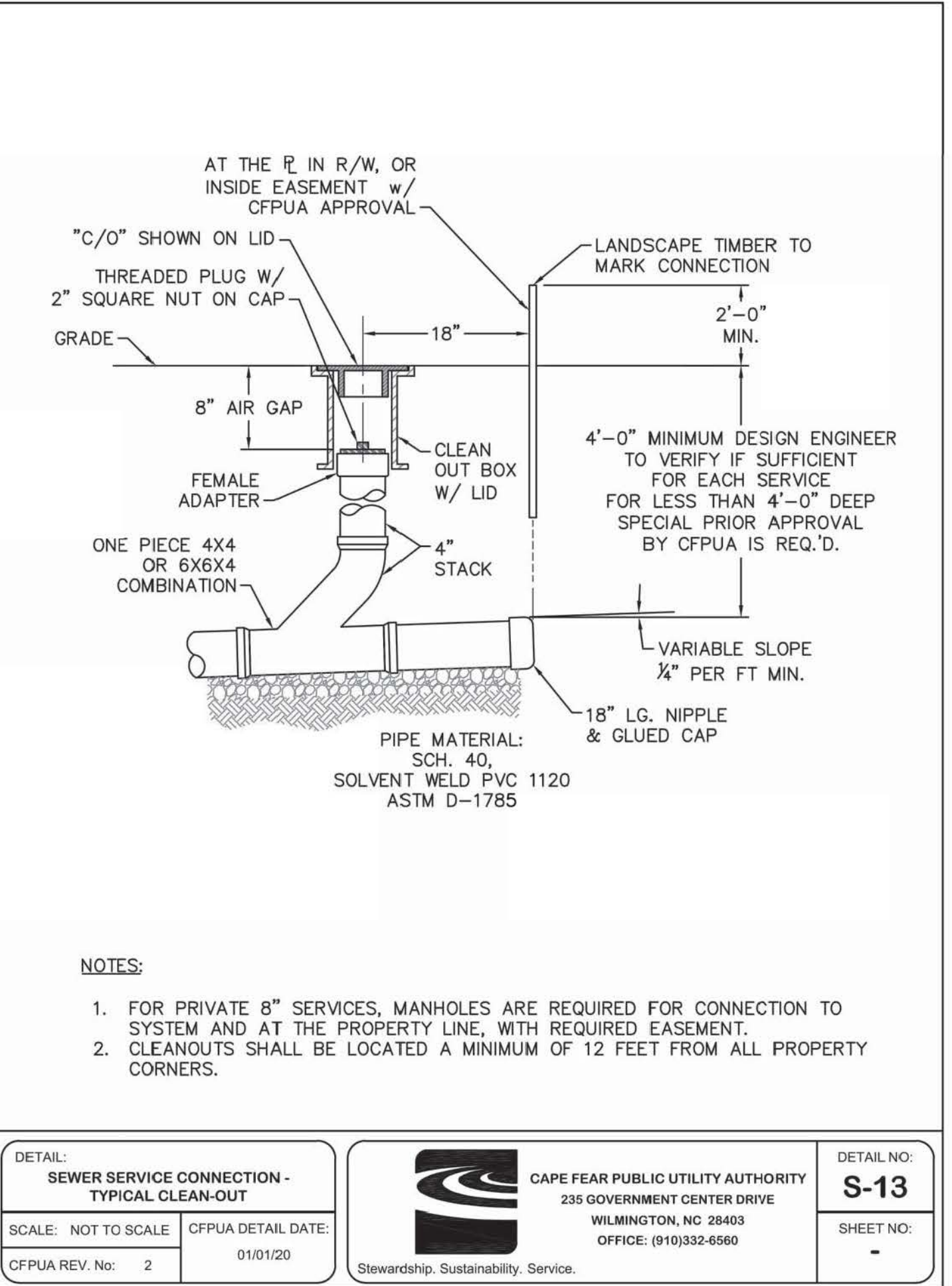
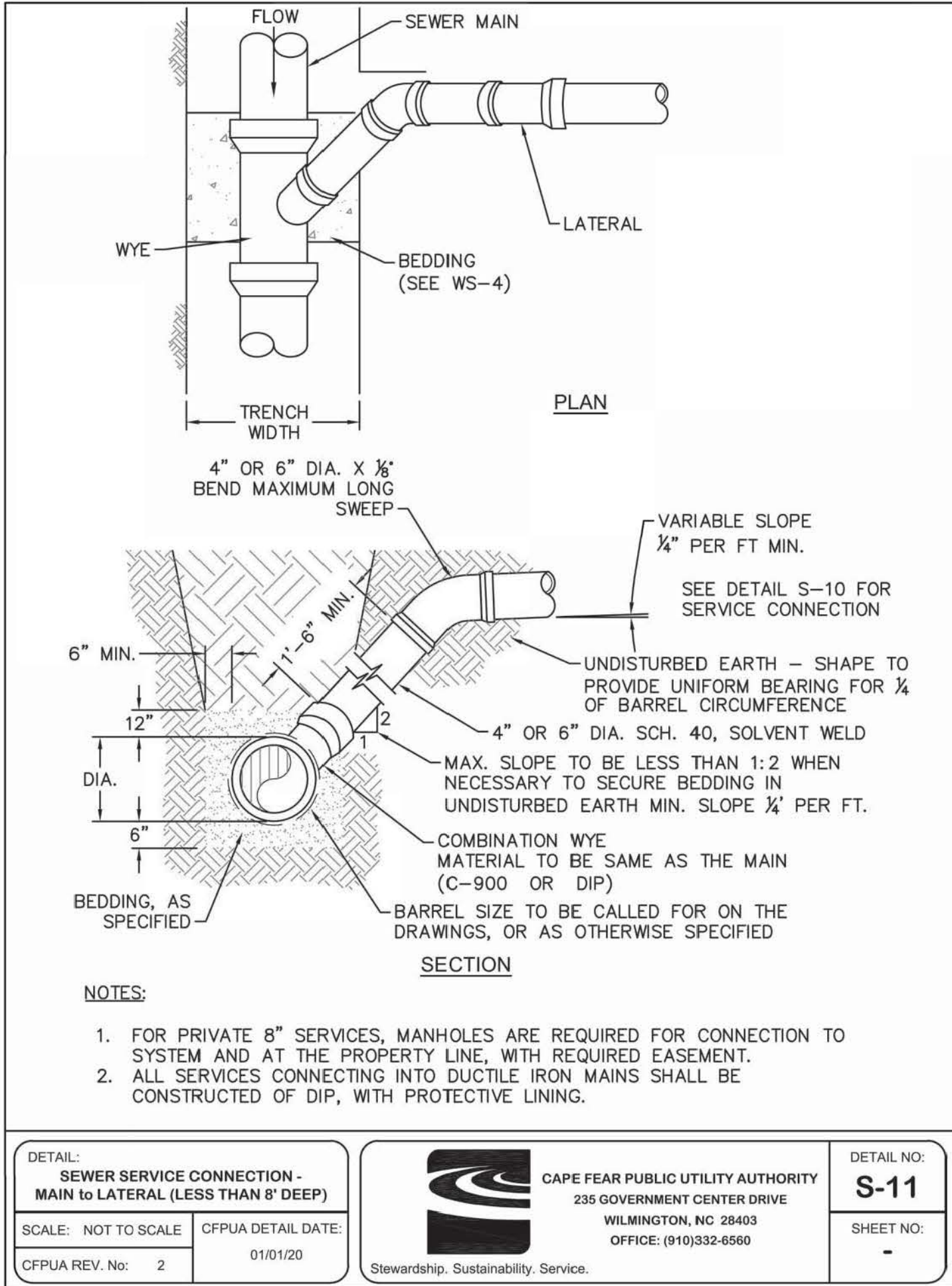
6721 MARKET	WILMINGTON	NORTH CAROLINA
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H & S FAMILY HOLDINGS, LLC	1608 MARKET STREET	WILMINGTON, NC 28401
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PORT CITY CONSULTING	ENGINEERS, PLLC	6216 STONEBRIDGE ROAD	WILMINGTON, NC 28409	910-599-1744	LICENSE No. P-1032
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NCG01 - SELF INSPECTION, RECORDKEEPING AND REPORTING
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Sheet No.	C-7.5
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No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2020
Checked By	MNH	Job No.	

6721 MARKET

WILMINGTON

NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC

1608 MARKET STREET

WILMINGTON, NC 28401

PORT CITY CONSULTING ENGINEERS, PLLC

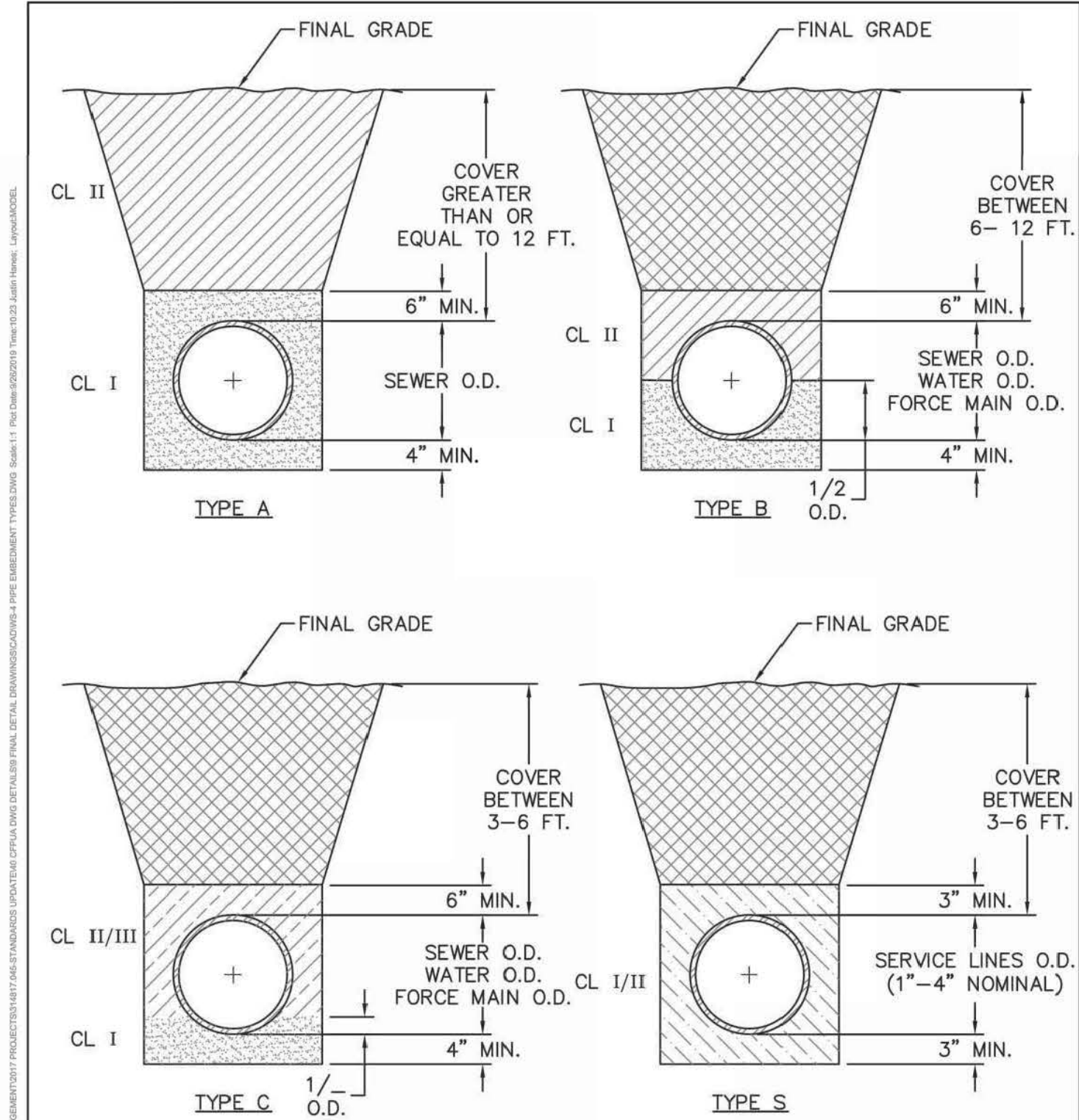
6216 STONEBRIDGE ROAD

WILMINGTON, NC 28409

910-599-1744 LICENSE No. P-1032

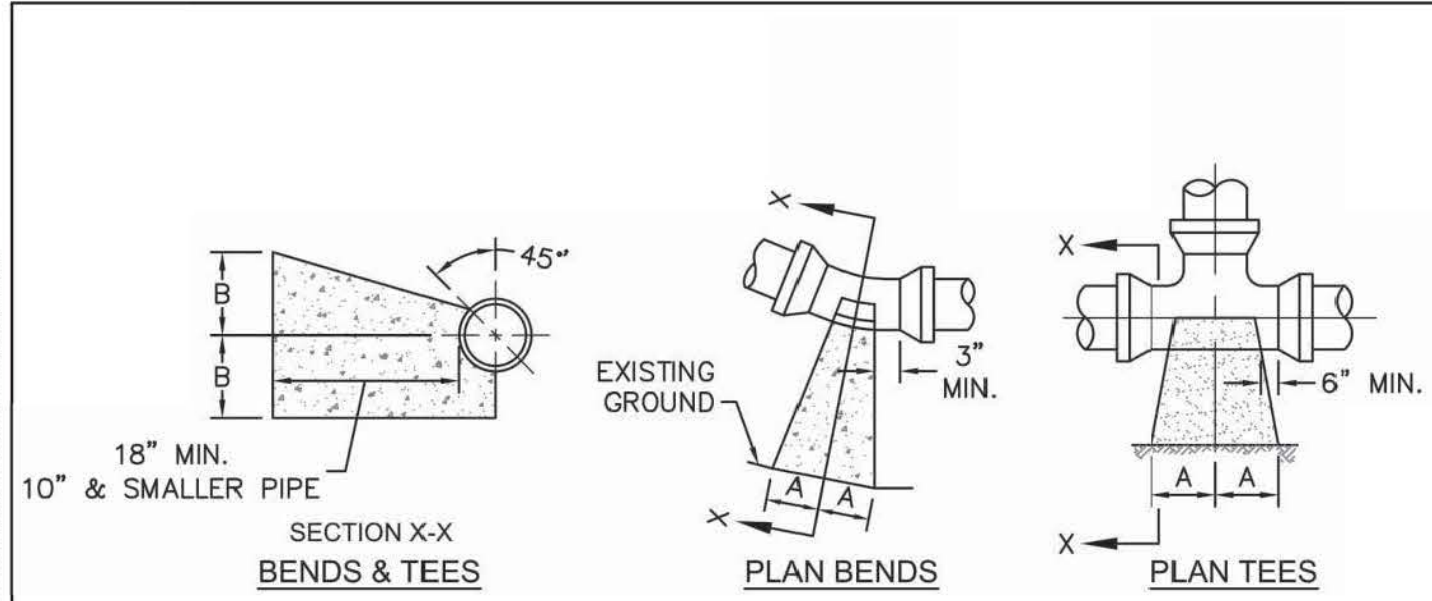
CFPUA WATER & SANITARY SEWER STANDARD DETAILS

Sheet No. C-8.0



- COMPACTION NOTES:**
1. ALL ZONES: 95% STD EFFORT PER ASTM D698, EXCEPT AS STATED IN COMPACTION NOTE 2.
 2. 12" SUBGRADE UNDER PAVEMENT: 98% STD EFFORT PER ASTM D698.

DETAIL: PIPE EMBEDMENT TYPES		 CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: WS-4 SHEET NO: -
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/20		
CFPUA REV. No: 2			



SIZE	90° BENDS		45° BENDS		22-1/2° BENDS		TEES/PLUGS		45° VERT. BENDS
	A	B	A	B	A	B	A	B	
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

- NOTES:**
1. THRUST BLOCKING IS NOT PERMITTED EXCEPT IN SPECIAL INSTALLATIONS WHERE DESIGNED BY ENGINEER AND APPROVED BY CFPWA.
 2. ALLOW 7-DAY MINIMUM CONCRETE CURE TIME BEFORE PLACING LOAD ON THRUST BLOCK.
 3. BASED ON 160 PSI TEST PRESSURE AND 2,000 PSF SOIL BEARING CAPACITY.
 4. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
 5. PIPE & FITTINGS TO BE WRAPPED IN 10 MIL PLASTIC PRIOR TO THRUST BLOCK BEING POURED.

DETAIL: THRUST BLOCK		 CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: WS-13 SHEET NO: -
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/20		
CFPUA REV. No: 2			

- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:**
1. ALL PROPOSED ADDITIONS TO THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) WATER DISTRIBUTION AND SANITARY SEWER COLLECTION SYSTEMS, AS SHOWN AND SPECIFIED HEREIN, SHALL BE DESIGNED AND CONSTRUCTED TO CONFORM TO STATE RULES AND THE CFPWA'S MINIMUM TECHNICAL STANDARDS. THE CFPWA MINIMUM TECHNICAL STANDARDS ARE CONTAINED IN THE CURRENT DESIGN GUIDANCE MANUAL, MATERIAL SPECIFICATION MANUAL, TECHNICAL SPECIFICATIONS FOR CONSTRUCTION, AND STANDARD DRAWING DETAILS.
 2. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
 3. WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE 18" INSIDE RIGHT-OF-WAY LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN END OF LINE MANHOLE AND TERMINATE 18" INSIDE RIGHT-OF-WAY LINE.
 4. ALL SEWER SERVICES CONNECTING INTO DUCTILE IRON MAINS SHALL ALSO BE CONSTRUCTED OF DIP.
 5. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
 6. NO FLEXIBLE COUPLINGS SHALL BE USED.
 7. ALL STAINLESS STEEL FASTENERS SHALL BE TYPE 316.
 8. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 6 FEET FROM ALL PROPERTY CORNERS.
 9. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.
 10. UNUSED SERVICES SHALL BE ABANDONED. ABANDONED WATER SERVICES SHALL BE DISCONNECTED FROM MAIN.
 11. A MINIMUM OF 10' OF MAIN LINE, 5' UPSTREAM AND 5' DOWNSTREAM SHALL BE REPLACED FOR NEW SEWER SERVICE CONNECTIONS TO EXISTING CLAY GRAVITY SEWER MAINS.
 12. A MINIMUM OF 20' OF MAIN LINE, 10' UPSTREAM AND 10' DOWNSTREAM SHALL BE REPLACED FOR NEW CUT IN MANHOLES ON EXISTING CLAY GRAVITY SEWER MAINS.
 13. PROVIDE A MINIMUM DISTANCE OF SIX (6) INCHES BETWEEN EDGE OF MANHOLE CORE HOLES AND MANHOLE BARREL JOINTS. PROVIDE A MINIMUM DISTANCE OF SIX (6) INCHES BETWEEN EDGES OF CORE HOLES. CORING THE MANHOLE CONE IS NOT PERMITTED.
 14. WATER MAIN AND FORCE MAIN PIPE INSTALLED BY OPEN CUT SHALL BE BURIED AT A MINIMUM OF THREE (3) FEET AND A MAXIMUM OF FIVE (5) FEET BELOW FINISHED GRADE. DEPTHS GREATER THAN FIVE (5) FEET MUST BE APPROVED BY CFPWA.
 15. ALL MANHOLE MAIN LINE AND SERVICE PIPING TO BE INSTALLED AT A MINIMUM OF CROWN TO CROWN OF THE LARGEST DIAMETER PIPE.

DETAIL: STANDARD NOTES (REQUIRED ON ALL PLAN AND PROFILE SHEETS)		 CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560 Stewardship, Sustainability, Service.	DETAIL NO: WS-14 SHEET NO: -
SCALE: NOT TO SCALE	CFPUA DETAIL DATE: 01/01/20		
CFPUA REV. No: 2			

No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JULY, 2019
Checked By	MNH	Job No.	

6721 MARKET

WILMINGTON

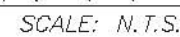
NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401

PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

CFPUA WATER & SANITARY SEWER
STANDARD DETAILS

Sheet No.
C-8.1

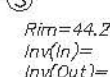


Project Owner: H&S Family Holdings, LLC
1608 Market Street, Wilmington, NC 28401

Proposed Buildings (both) Footprint:	7,400 SF
Proposed Parking Lot:	51,590 SF

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.

Note: All proposed vegetation within sight triangles shall not interfere with clear visual sight lines from 30" to 10', per city sec 18-556 CotW LDC.



25' WIDE x 268' LENGTH = 6,700 S.F. TOTAL
-331 S.F. IMPERVIOUS (2.2%) - WALKWAYS (NO PARKING)
6,369 S.F./600 S.F. = 11 STREET TREES REQUIRED
11 STREET TREES PROVIDED
11 x 6 = 66 SHRUBS REQUIRED
66 SHRUBS PROVIDED

2.5 ACRES x 15 = 38 TREES REQUIRED
51 TREES PROVIDED

INTERIOR AREA 51,590 S.F. TOTAL IMPERVIOUS SURFACE x 35% = 18,057 S.F.
18,057 S.F. / 707 S.F. = 26 CANOPY TREES REQUIRED
26 CANOPY TREES PROVIDED

PERIMETER LANDSCAPE
10' WIDE x 280' LENGTH
 $280' / 27' = 10$ PERIMETER TREES REQUIRED
10 PERIMETER TREES PROVIDED

SHRUB BUFFER AT PARKING AREAS ADJACENT TO R.O.W.
MINIMUM 3' HT., 5' O.C.

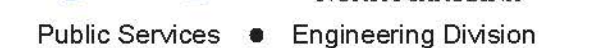
151 L.F. x 18' BUILDING HEIGHT = 2,718 S.F.
2,718 S.F. x 12% = 326 S.F. LANDSCAPE AREA REQUIRED
375 S.F. LANDSCAPE AREA PROVIDED

100 L.F. x 21' BUILDING HEIGHT = 2,100 S.F.
2,100 S.F. x 12% = 252 S.F. LANDSCAPE AREA REQUIRED
253 S.F. LANDSCAPE AREA PROVIDED

15" DBH	OAK	3 CREDITS
12" DBH	PINE	3 CREDITS
TOTAL		6 CREDITS

13" DBH OAK
16" DBH PINE
29" DBH TOTAL (100% MITIGATION) / 3 = 10 REPLACEMENT TREES REQUIRED

10 REPLACEMENT - 6 CREDIT = 4 REPLACEMENT TREES REQUIRED
4 REPLACEMENT TREES PROVIDED



APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _

Traffic

Fire



No.	Revision	Date	By

Designer	H+W	Scale	AS SHOWN
Drawn By	H+W	Date	July 7, 2020
Checked By	H+W	Job No.	

6721 MARKET

WILMINGTON

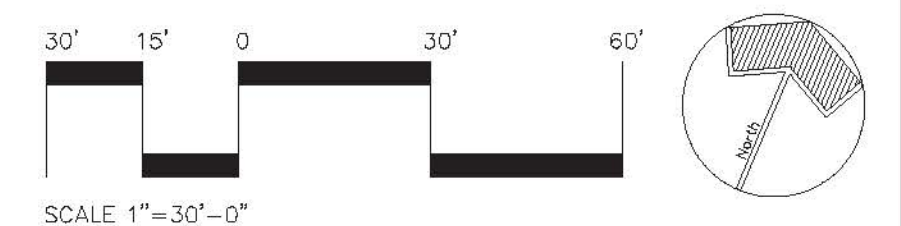
NORTH CAROLINA

H & S FAMILY HOLDINGS, LLC
1608 MARKET STREET
WILMINGTON, NC 28401

PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

PLANTING PLAN

Sheet No. 1



No.	Revision	Date	By

Designer	H+W	Scale	AS SHOWN
Drawn By	H+W	Date	July 7, 2020
Checked By	H+W	Job No.	

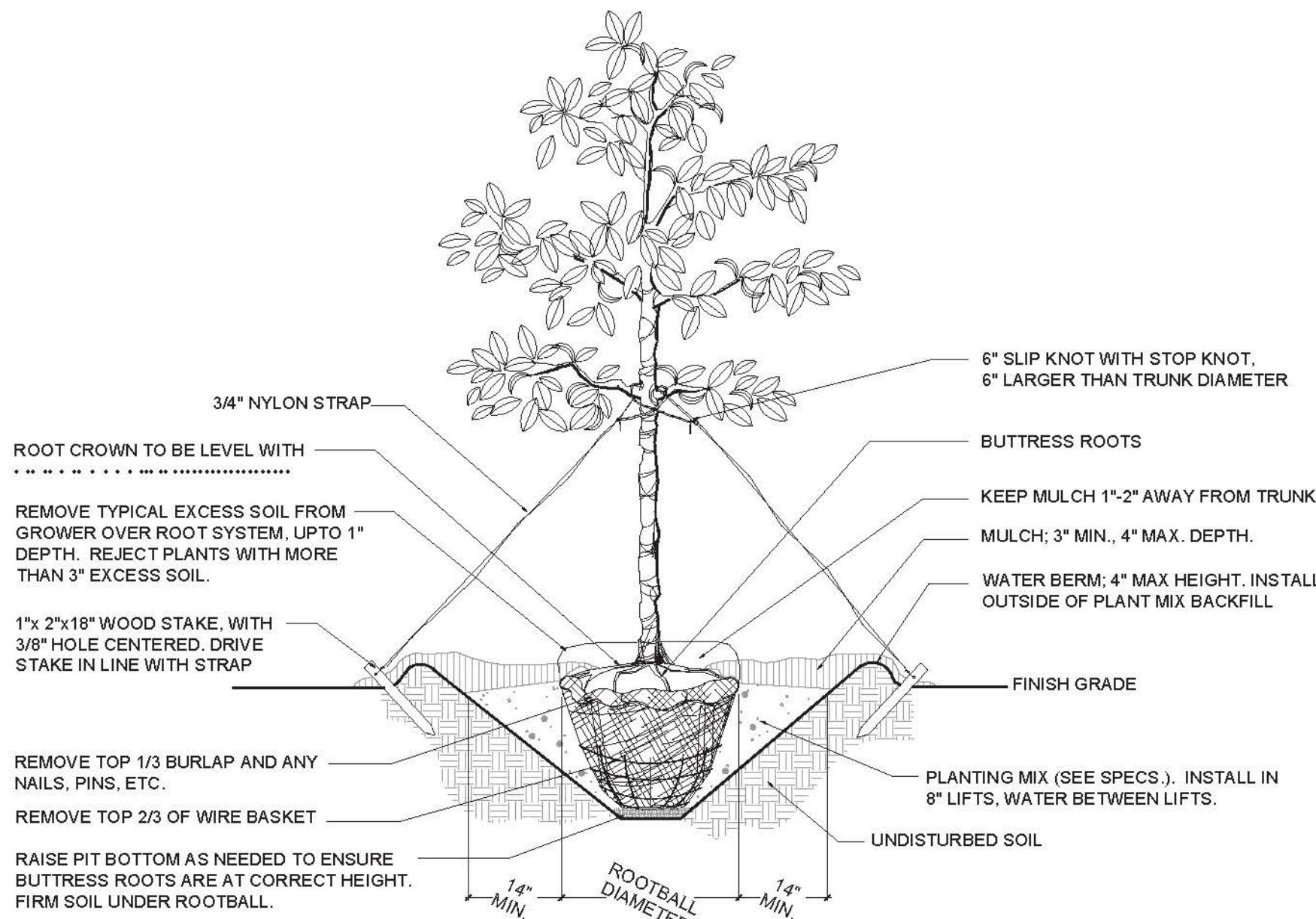
6721 MARKET	
WILMINGTON	NORTH CAROLINA

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1608 MARKET STREET
WILMINGTON, NC 28401

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ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-10322

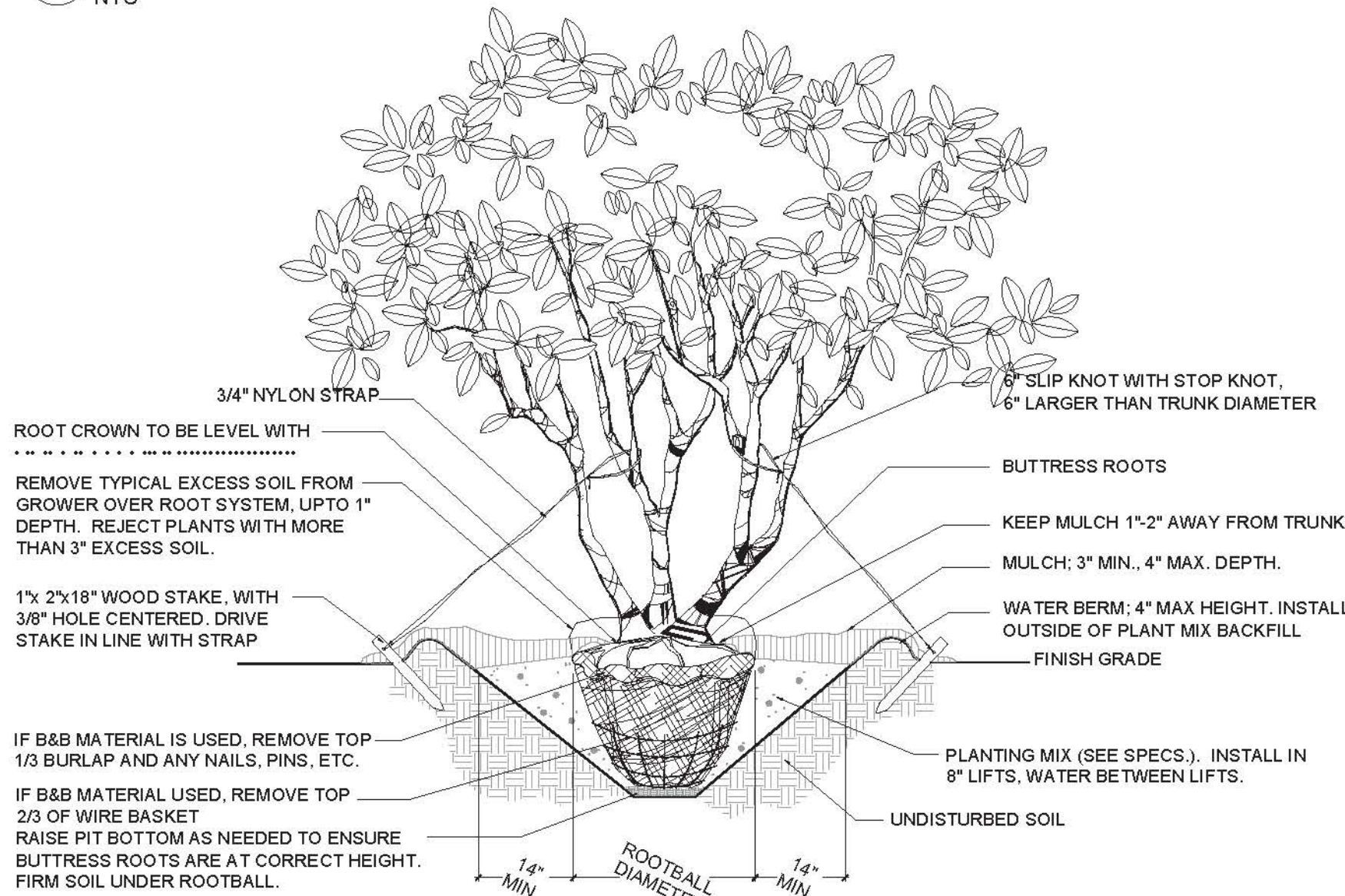
PLANTING LIST, NOTES, DETAILS

Sheet No.
L-2



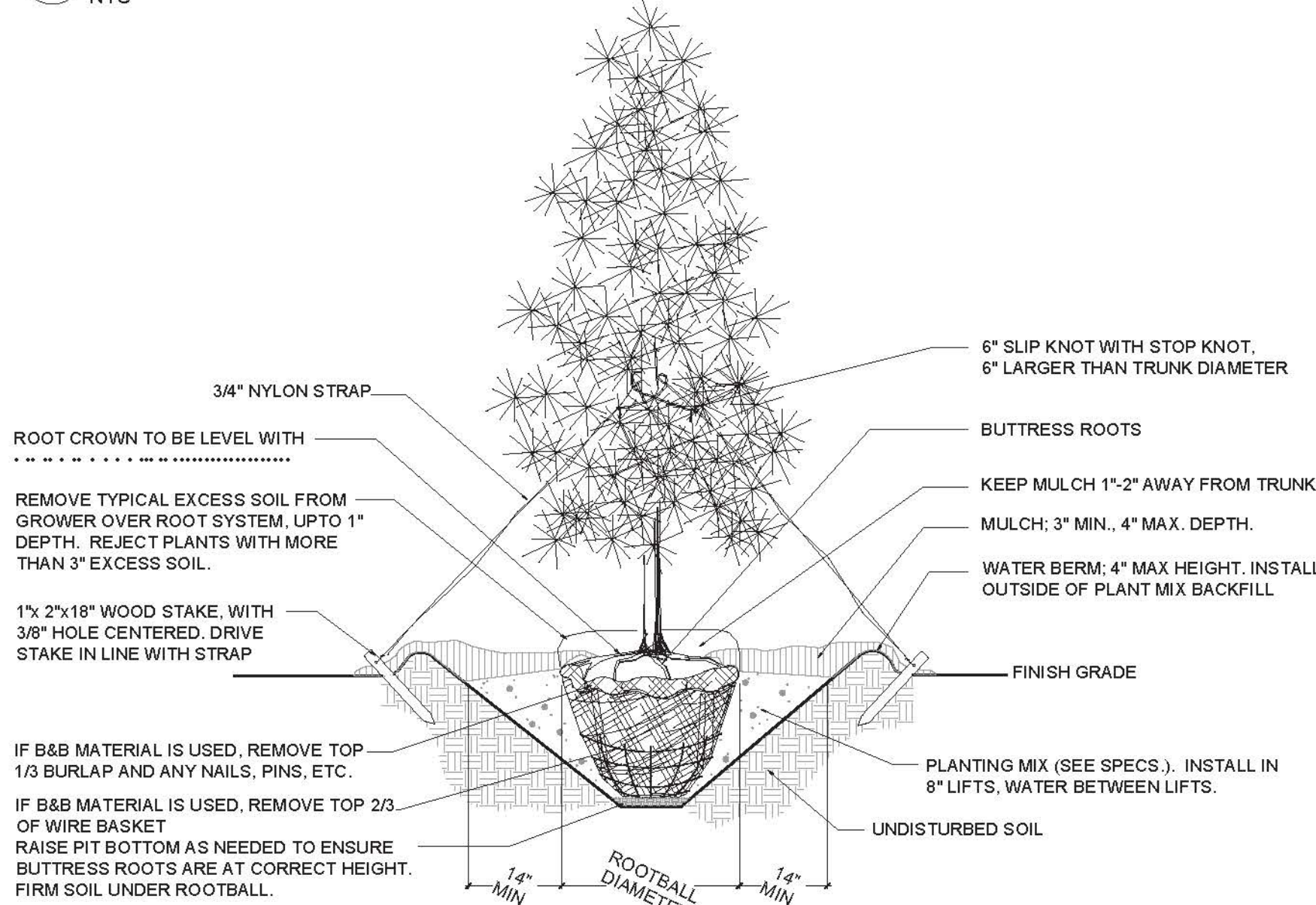
SINGLE STEM TREE INSTALLATION DETAIL

NTS



MULTI-STEM TREE INSTALLATION DETAIL

NTS

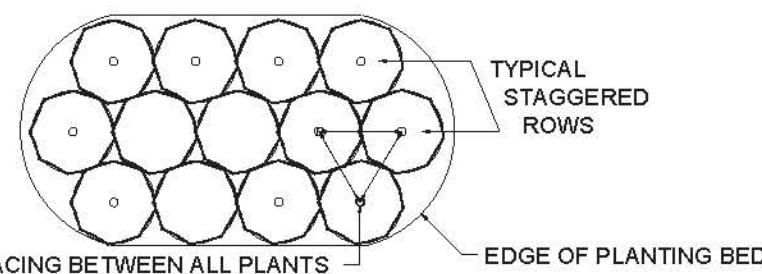


EVERGREEN TREE INSTALLATION DETAIL

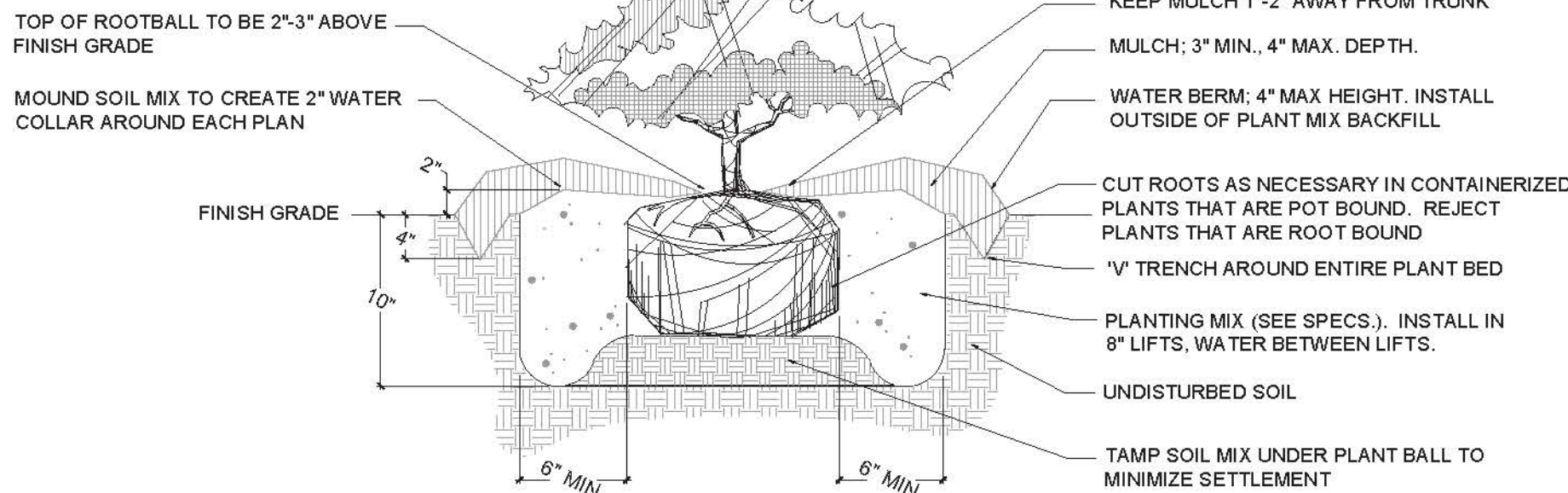
NTS

NOTES:

1. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
2. INSTALL TOP OF PLANT BALL 2" ABOVE ADJACENT GRADE
3. TAMP PLANT SOIL MIX FIRMLY IN 8" LIFTS AROUND PLANT BALL
4. SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



TYPICAL PLANTING BED LAYOUT



SHRUB INSTALLATION DETAIL

NTS

PLANT LIST

KEY	QTY.	SCIENTIFIC NAME	COMMON NAME	HEIGHT/ SPREAD	CAL.	GAL. CONT.	REMARKS
TREES							
IN	14	ILEX X NELLIE R STEVENS	NELLIE STEVENS HOLLY	6'-8" HT		15	MATCHED SPECIMEN, FULL FULL TO GROUND
LI	34	LAGERSTROEMIA INDICA	CATAWBA CRAPE MYRTLE	6'-8" HT		15	MATCHED SPECIMEN, FULL MULTI-TRUNK, MIN. 3 TRUNKS
QT	21	QUERCUS TEXANA	NUTTALL OAK	12'-14' HT	2.5"		MATCHED SPECIMEN, FULL STRAIGHT TRUNK
ZS	13	ZELKOVA SERRATA	JAPANESE ZELKOVA	12'-14' HT	2.5"		MATCHED SPECIMEN, FULL STRAIGHT TRUNK
SHRUBS AND GROUNDCOVER							
LJ	79	LIGUSTRUM JAPONICUM EAST BAY	EAST BAY LIGUSTRUM	18"-24" HT		3	FULL, 36" O.C.
LIM	541	LIRIOPE MUSCARI 'EVERGREEN GIANT'	LIRIOPE	8"-12" HT		1	FULL, 24" O.C.
ICS	72	ILEX CRENATA SOFT TOUCH HOLLY	SOFT TOUCH HOLLY	18"-24" HT		3	FULL, 30" O.C.
VIA	5	VIBURNUM AWABUKI CHINDO	CHINDO VIBURNUM	36"-42" HT		10	FULL
LAWN AND MULCH							
SOD - BERMUDA, SEE LOCATIONS ON PLANTING PLAN							
MULCH - PINE STRAW							

GENERAL PLANTING NOTES

1. PRIOR TO EXCAVATIONS, CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 TO ASCERTAIN LOCATIONS OF ELECTRICAL CABLES, CONDUIT, UTILITY LINES, OIL TANKS, GAS LINES, TELEPHONE LINES, WATER LINES, CABLE LINES, SANITARY SEWER LINES, SUPPLY LINES, SUBSURFACE DRAINAGE, AND IRRIGATION LINES, ETC. NOTIFY THE CITY SHOULD THE ABOVE MENTIONED SUBSURFACE IMPROVEMENTS PRESENT AN OBSTRUCTION IN LOCATIONS DESIGNATED FOR PLANTING. IN SUCH SITUATIONS, PROCEED AFTER THE OWNERS HAS APPROVED AN ALTERNATE LOCATION. DAMAGE INCURRED BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR IN A TIMELY MANNER TO THE SATISFACTION OF THE OWNER. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITIES IN THE PLANT SCHEDULE. ANY DISCREPANCIES BETWEEN QUANTITIES ON THE PLANS AND THE PLANT SCHEDULE SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. ANY FIELD ADJUSTMENTS OR QUANTITY ADJUSTMENTS MUST BE AUTHORIZED PRIOR TO PLANTING.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PLANTING PITS PERCOLATE PROPERLY PRIOR TO PLANTING INSTALLATION.
3. WHERE PROPOSED TREE LOCATIONS CONFLICT WITH EXISTING UTILITIES, TREES MAY BE FIELD ADJUSTED UNDER THE DIRECTION OF THE CITY INSPECTOR.

PLANT MATERIAL NOTES

1. ALL PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN.
2. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN HEALTHY CONDITION FOR ONE YEAR AFTER ACCEPTANCE BY THE OWNER.
3. TREES SUPPLIED MUST HAVE BEEN PROPERLY PLANTED AND GROWN IN THE NURSERY. THE ROOT CROWN (ALSO CALLED THE TRUNK FLARE) SHALL BE EVIDENT NEAR THE TOP OF THE GROUND. ANY EXCESS SOIL UP TO 3 INCHES COVERING THE CROWN WILL HAVE TO BE REMOVED CAREFULLY BY HAND, IN ORDER TO PREVENT ROOT SCRAPES. THE TREE IS THEN TO BE PLANTED WITH THE ROOT CROWN IN PROPER RELATION TO THE SURROUNDING GRADE. ANY TREES WITH MORE THAN 3 INCHES OF SOIL ON TOP OF THE ROOT CROWN WILL BE REJECTED. THE NURSERY OWNERS MAY DIG OVERSIZE BALLS AND REMOVE THE SOIL IN ORDER FOR THE ROOT SYSTEM DIAMETER (WHICH IS THE REQUIRED ROOT BALL DIAMETER) TO MEET THE SPECIFICATION FOR THE TRUNK CALIPER REQUIRED.
4. BALL AND BURLAPPED (B&B) PLANTS MUST HAVE FIRM, NATURAL BALLS OF EARTH, OF DIAMETER NOT LESS THAN RECOMMENDED IN THE "TREE AND SHRUB TRANSPLANTING MANUAL", AND BE OF SUFFICIENT DEPTH TO INCLUDE THE FIBROUS AND FEEDING ROOTS. PLANTS MOVED WITH A BALL WILL NOT BE ACCEPTED IF THE BALL IS DRY, CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATIONS.
5. CONTAINERIZED PLANTS SHALL HAVE A ROOT SYSTEM SUFFICIENT ENOUGH IN DEVELOPMENT TO HOLD THE SOIL INTACT WHEN REMOVED FROM THE CONTAINER. THE ROOT SYSTEM SHALL NOT BE ROOT BOUND, A CONDITION WHERE THE ROOT SYSTEM IS DENSE IN MASS, EXCESSIVELY INTERTWINED, AND HAS ESTABLISHED A CIRCULAR GROWTH PATTERN.
6. ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI, 1990, PART 1, "SHADE AND FLOWERING TREES").

TREE PLANTING NOTES

1. REMOVE ALL TREATED OR PLASTIC-COATED BURLAP, STRAPPING, WIRE OR NYLON TWINE FROM ROOTBALL. AFTER SETTING IN HOLE, CUT AWAY 2/3 OF WIRE BASKET, IF ANY, AND TOP 1/3 OF BURLAP.
2. SOAK ROOTBALL AND PIT IMMEDIATELY AFTER INSTALLATION.
3. TOP OF ROOTBALL TO BE 2" ABOVE ADJACENT UPHILL GRADE. DO NOT PLACE ADDITIONAL SOIL ON TOP OF ROOTBALL.
4. CONSTRUCT 4" HIGH SAUCER (WATER BERM) OUTSIDE OF PLANT MIX BACKFILL.
5. STAKES FOR TREE SUPPORT (LESS THAN 3" CAL.) SHALL BE CONSTRUCTION GRADE PRESSURE TREATED PINE, NOMINAL SIZE OF 2in. x 2in. x 18in. LONG AND POINTED AT ONE END. GUYING FABRIC SHALL BE ARBORTAPE, AS MANUFACTURED BY NEPTCO, PAWTUCKET, RI. (401) 722-5500 (OR APPROVED EQUAL). COLOR SHALL BE OLIVE DRAB.
6. STAKE TREES 3" CAL. OR GREATER WITH "DUCK BILL" ANCHORS DRIVEN INTO UNDISTURBED SOIL. GUYING FABRIC SHALL BE 3/4" NYLON STRAPPING.

PLANTING MIX NOTES

1. PLANTING MIX MAY BE DEVELOPED BY AMENDING THE EXISTING SOIL OR REMOVING THE EXISTING SOIL AND REPLACING WITH NEW PLANTING MIX. IT SHALL BE UNIFORM COMPOSITION THROUGHOUT, WITH A MIXTURE OF SUBSOIL. IT SHALL BE FREE OF STONES, LUMPS, LIVE PLANTS AND THEIR ROOTS, STICKS, AND OTHER EXTRANEANEOUS MATTER.
2. PLANTING MIX SHALL NOT BE USED WHILE IN A FROZEN OR MUDDY CONDITION.
3. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS THE PLANTING MIX SHALL CONTAIN THE FOLLOWING SPECIFIED PERCENTAGES OF CONSTITUENTS:
CLAY - MINIMUM 10% - MAXIMUM 20%
SILT - MINIMUM 30% - MAXIMUM 50%
ORGANIC MATERIAL - MINIMUM 5% - MAXIMUM 8%
SAND - BALANCE OF MIX
4. THE PLANTING MIX SHALL HAVE THE FOLLOWING NUTRIENTS AT THE SPECIFIED PERCENT BASE SATURATION, TO BE DETERMINED BY SOIL TEST CONDUCTED BY THE CONTRACTOR.
CALCIUM - 55% TO 80%
MAGNESIUM - 10% TO 30%
POTASSIUM - 5% TO 8%
5. ORGANIC MATERIAL IS DEFINED AS COMPOST/HUMUS SUCH AS SAWDUST OR LEAF MOLD THAT HAS COMPLETED THE DECOMPRESSION PROCESS. PERCENTAGE OF ORGANIC MATTER SHALL BE DETERMINED BY LOSS OF IGNITION, OF MOISTURE FREE SAMPLES DRIED AT 65 DEGREES.
6. PLANTING MIX SHALL HAVE AN ACIDITY RANGE OF pH 5.5 TO 7.0.

FERTILIZER NOTES

1. SHRUB AND GROUNDCOVER FERTILIZER, FROM THE FOLLOWING:
PRODUCT ANALYSIS APPL. RATE
Ornamental plant fertilizer 12-6-6 2 lbs/100 Sq. Ft. or
Ornamental plant fertilizer 14-7-7 2 lbs/100 Sq. Ft.
2. SHRUB AND GROUNDCOVER FERTILIZER SHALL HAVE 50% WATER INSOLUBLE NITROGEN, THE CHLORINE CONTENT IS NOT TO EXCEED 5%.
3. NO TREE FERTILIZER IS TO BE APPLIED AT TIME OF PLANTING.
4. TREE FERTILIZER IS TO BE APPLIED AT THE 6 MONTH OR 12 MONTH WARRANTY INSPECTION TIME, WHICHEVER IS CLOSER TO EARLY SPRING BEGINNING GROWTH.
5. TREE FERTILIZER, FROM THE FOLLOWING:
PRODUCT ANALYSIS APPL. RATE
Ornamental tree fertilizer 31-7-7 1cup/1 inch caliper, or
Ornamental tree fertilizer 12-6-6 1 cup/ inch caliper
6. TREE FERTILIZER SHALL HAVE 50% WATER INSOLUBLE NITROGEN, THE CHLORINE CONTENT IS NOT TO EXCEED 5%.
7. SOURCE OF NITROGEN SHALL BE UREA FORMALDEHYDE OR A SIMILAR SLOW RELEASE SOURCE.

MULCH

1. PINE STRAW MULCH SHALL BE FREE OF ANY FOREIGN MATERIALS, PIECES LARGER THAN 4 INCHES, AND/OR GREEN WOOD.

WATER

1. WATER SHALL BE FREE FROM OIL, ACIDS, ALKALIS, SALTS OR ANY OTHER SUBSTANCE THAT IS TOXIC OR OTHERWISE HARMFUL TO VEGETATION.
2. ALL LANDSCAPE AND TURF AREAS IRRIGATED (100% COVERAGE). LANDSCAPE CONTRACTOR SHALL PROVIDE COMPLETE IRRIGATION DESIGN TO BE APPROVED BY OWNER PRIOR TO CONSTRUCTION. TURF AREAS TO BE SEPARATE ZONES FROM PLANTING AREAS.

TURF AND GRASSES

1. SEED
A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.
B. Seed Species: CENTIPEDEGRASS (EREMOCHLOA OPHIUROIDES)
C. Seed Species: Seed of grass with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed.
2. TURFGRASS SOD
A. Turfgrass Sod: Certified, complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.
B. Turfgrass Species: BERMUDAGRASS (CYNODON DACTYLON)
C. Turfgrass Species: Sod of grass with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed.